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GOVERNMENT PRINTING OFFICE.
1910.

ERRATA.

806,765, page 91, in heading, assignment, after the word "assignor" insert the words *of one-half*.

806,870, page 131, in heading, title of invention, for "Crushing-Roll" read *Crushing-Rolls*.

807,174, page 230, in heading, after residence of patentee insert *assignor of one-half to David McCune, of Denver, Colo.*

807,692, page 438, in heading, assignment, residence of assignee, for "Hamilton, Ohio" read *Cincinnati, Ohio.*

808,714, page 1205, in heading after residence of patentee, insert *Henry H. Bowman, administrator of estate of said Gabriel Carlson, deceased.*

808,880, page 1336, in heading, residence of patentee, for "Chicago, Ill." read *Oak Park, Ill.*

46,696, (Design,) page 496, in heading, assignment, name of assignee, after the abbreviation "Co." strike out the comma.

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TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	1	Ohio	33	6
Arkansas	3	1	Oklahoma	1	.....
California	23	3	Oregon	7	2
Colorado	16	1	Pennsylvania	30	4
Connecticut	22	1	Rhode Island	5	.....
Delaware	.....	1	South Carolina	.....	.....
Florida	4	.....	South Dakota	5	.....
Georgia	3	.....	Tennessee	2	3
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Illinois	26	10	Utah	1	.....
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Iowa	10	.....	Virginia	.....	2
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Kentucky	7	1	West Virginia	7	.....
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Massachusetts	43	2	Alaska, District of	.....	.....
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North Dakota	3	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
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Austria-Hungary	.....	.....	Newfoundland	.....	.....
Belgium	.....	.....	New South Wales	.....	.....
Brazil	.....	.....	New Zealand	1	.....
British West Indies	.....	.....	Norway	.....	.....
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Cuba	.....	.....	Spain	.....	.....
Denmark	.....	.....	St. Lucia, West Indies	.....	.....
Ecuador	.....	.....	Sweden	2	.....
England	19	6	Switzerland	.....	.....
France	5	.....	Transvaal, South Africa	2	.....
Germany	27	.....	Victoria	.....	.....
Haiti	.....	.....	Western Australia	.....	.....
Ireland	.....	.....			
Italy	3	.....	Total to citizens of foreign countries	66	8
Japan	.....	.....			
Mexico	.....	.....			

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The Patent Office will furnish photographic prints of any unbound drawing, foreign or domestic, which may be in its possession. These prints will be made only in two sizes, 8 by 13 at 15 cents per sheet and 10 by 15 at 25 cents per sheet.

Prints of drawings of pending, abandoned, forfeited, or informal cases and of caveats may be had in either of the above-named sizes.

Prints of United States or foreign patent drawings will be made only in the 10 by 15 size.

In ordering copies of drawings of foreign patents cited as references, applicants must state the date and number thereof, the name of the patentee, the country in which such patent was granted, and the class and subclass in which the patent is classified. If the class and subclass were not given in the Office letter citing the patent, the applicant must state the serial number of the application in which it was cited, the number of the action therein, the name of the inventor, and the title of the invention.

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BOUND VOLUMES CANNOT BE USED FOR MAKING PRINTS.

Failure to give the fullest data whereby the mounted drawing may be found will cause unnecessary delay and correspondence.

Applicants and attorneys are strongly urged to file a set of prints, small size, or order them to be made by the Office at the time of filing an application. Such procedure will save delay later, if correction of the drawing is desired or required.

Amendments to Amendments.

RULE 74. When an amendatory clause is amended, it must be wholly rewritten, so that no interlineation or erasure shall appear in the clause, as finally amended, when the application is passed to issue. If the number or nature of the amendments shall render it otherwise difficult to consider the case or to arrange the papers for printing or copying, the Examiner or Commissioner may require the entire specification to be rewritten.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business April 26, 1910.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Mar. 16	Mar. 26	363
269	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Jan. 12	Mar. 9	330
179	3. Annealing and Tempering; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Mar. 28	Apr. 12	131
263	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Mar. 9	Mar. 22	454
167	5. Bookbinding; Harvesters; Jewelry; Mats.	Feb. 8	Feb. 18	409
318	6. Bleaching and Dyeing; Chemistry; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Mar. 26	Mar. 25	208
313	7. Educational Appliances; Clutches; Games and Toys; Mechanical Movements; Nut and Bolt Locks; Optics; Velocipedes.	Mar. 14	Mar. 9	363
161	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Mar. 26	Apr. 4	208
143	9. Air and Gas Pumps; Fire-Extinguishers; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Sewerage; Wind-Wheels.	Dec. 18	Jan. 20	444
295	10. Carriages and Wagons.....	Feb. 19	Mar. 3	290
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Buttons, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Mar. 30	Mar. 26	256
224	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Mar. 12	Mar. 19	235
220	13. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, Etc.	Feb. 19	Mar. 24	521
207	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Feb. 15	Mar. 23	426
220	15. Bread, Pastry, and Confection Making; Coating; Food; Glues; Laminated Sheets and Fabrics; Liquid Coating Compositions; Paper-Making; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Feb. 23	Apr. 11	514
109	16. Telegraphy; Telephony.....	Feb. 15	Feb. 12	384
203	17. Matrix-Making; Paper Manufacture; Printing; Type-Bar Making.	Mar. 26	Mar. 26	165
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Jan. 6	Jan. 7	327
226	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Jan. 21	Mar. 14	370
139	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Locking; Safes; Understanding.	Mar. 22	Apr. 2	223
112	21. Brakes and Other Carding; Cloth Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Feb. 11	Mar. 25	414
249	22. Assembling; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance Ships.	Nov. 27	Jan. 31	784
279	23. Accessories; Coin-Handling; Hoisting; Recorders; Registers; Time-Measuring Mechanisms.	Mar. 26	Mar. 20	375

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
145	24. Apparel; Apparel Apparatus; Electricity, Medical and Surgical; Sewing-Machines; Surgery.	Mar. 26	Mar. 26	494
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Apr. 4	Apr. 6	172
100	26. Electric Heating and Rheostats; Electricity, Generation; Motive Power.	Dec. 22	Feb. 3	491
373	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Mar. 11	Mar. 11	363
66	28. Electric Railways; Internal-Combustion Engines.	Jan. 14	Feb. 23	540
147	29. Coopering; Fire-Escapes; Ladders; Reels; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Jan. 17	Mar. 7	489
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Feb. 9	Apr. 9	401
172	31. Alcohol; Ammonia, Water and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Feb. 7	Mar. 8	374
378	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Fine Arts; Packaging Liquids; Refrigeration.	Mar. 3	Apr. 1	372
164	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Feb. 28	Feb. 1	370
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fastenings.	Feb. 9	Mar. 18	341
344	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Feb. 11	Apr. 8	467
264	36. Drafting; Dress; Engraving; Measuring Instruments; Photography.	Feb. 8	Mar. 7	469
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Dec. 27	Feb. 4	577
378	38. Artesian and Oil Wells; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working.	Feb. 7	Feb. 10	626
221	39. Baths and Closets; Water Distribution.	Jan. 10	Mar. 14	608
260	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 4	Feb. 23	570
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Jan. 20	Feb. 18	501
279	42. Electric Signaling; Railway Signaling; Signals.	Dec. 1	Mar. 11	420

Oldest new case, Nov. 27; oldest amended, Jan. 7.

Total number of applications awaiting action..... 12,978

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
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	Designs.....	Apr. 2	Apr. 12	127
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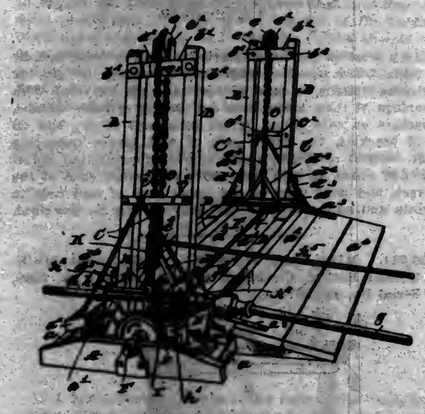
Trade-Marks.

Extra copies of the trade-mark portion of the GAZETTE, which will be sold separately, may be obtained singly or in quantities for five cents each. Coupons will be taken in payment thereof.

PATENTS

GRANTED MAY 3, 1910.

956,507. **WAGON JACK OR ELEVATOR.** ALONZO T. ADAMS, Marseilles, Ill., assignor to Marseilles Manufacturing Company, Marseilles, Ill., a Corporation of Illinois. Filed June 15, 1909. Serial No. 502,282.



1. In a wagon-jack, a base, a reversible inclined dumping-frame pivoted on the base, means to hold the frame in inclined position toward either side of the base, a wheel-frame slidingly mounted on the dumping frame, and means on the dumping-frame for raising and lowering the wheel-frame and movable with the frame toward either side of the base.

2. In a wagon-jack, a base, a reversible inclined dumping-frame pivoted on the base, means to hold the frame in inclined position toward either side of the base, a wheel-frame slidingly mounted on the dumping-frame, pulleys on the dumping frame and movable therewith toward either side of the base, flexible connections from the wheel-frame passing over the pulleys, and means to operate the flexible connections to raise and lower the wheel-frame on the dumping-frame.

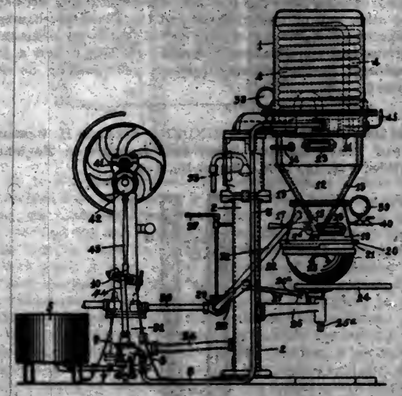
3. In a wagon jack, a base, uprights movably mounted on the base and providing a dumping-frame, a wheel-frame in sliding engagement with the dumping frame and adapted to support the end of a wagon, means on the uprights for raising and lowering the wheel-frame on the uprights and movable therewith toward either side of the base, and means for inclining the uprights toward either side of the base.

4. In a wagon jack, a base, uprights movably mounted on the base and providing a dumping-frame, a wheel-frame in sliding engagement with the dumping-frame and adapted to support the end of a wagon, means on the uprights for raising and lowering the wheel-frame on the uprights and movable therewith toward either side of the base, and braces to hold the uprights in inclined position toward either side of the base.

5. In a wagon jack, a base, uprights movably mounted on the base and providing a dumping-frame, a wheel-frame in sliding engagement with the dumping-frame and adapted to support the end of a wagon, pulleys on the uprights and movable therewith toward either side of the base, flexible connections running over the pulleys for raising and lowering the wheel-frame on the uprights, and braces to hold the uprights inclined toward either side of the base.

[Claims 6 to 17 not printed in the Gazette.]

956,508. **VACUUM-PAN.** GEORGE S. BAKER, London, England. Filed Jan. 30, 1909. Serial No. 475,224.



1. In a machine for the purpose described the combination of a steam heated chamber, a boiling coil therein adapted to receive the material to be heated, a valved discharge receiver in communication with said coil, means for producing a vacuum in said receiver, an auxiliary chamber adapted to be placed in communication with said receiver by means of its valve, a permanent communication between the receiver and the vacuum producing means, a valved communication between said means and the auxiliary discharge chamber and a separable discharge pan adapted to be hermetically connected to the auxiliary discharge chamber when the latter is in communication with the vacuum producing means.

2. In a machine for the purpose described the combination of a steam heated dome, a boiling coil therein, means for supplying said coil with the substance to be treated, a valved discharge receiver in communication with the coil, means for producing a vacuum in said receiver, an auxiliary chamber open below inclosing the valved portion of said receiver, packing inserted in the edge of said auxiliary chamber, a permanent communication between the receiver and the vacuum producing means, a valved communication between said means and the auxiliary chamber, and a separable pan adapted to close the open end of said auxiliary chamber and to hermetically contact with said packing when the chamber is in communication with the vacuum producing means.

3. In a machine for the purpose described the combination of a steam heated dome, a column supporting same, a boiling coil within said dome, means for supplying said coil with syrup, a receiver in communication with said coil, a discharge valve at the lower end of said receiver, an auxiliary chamber normally open at its lower end inclosing said discharge valve, packing material inserted in the lower edge of said auxiliary chamber, a double act-

ing vacuum pump cylinder, a permanent communication through the column between one end of the pump cylinder and the receiver, communications between the other end of said cylinder and the auxiliary chamber respectively, a cock for closing one of said latter communications and simultaneously opening the other, and a separable pan adapted to close the open end of said auxiliary chamber and to hermetically contact with the packing thereof when said chamber is in communication with the vacuum pump.

4. In a machine for the purpose described the combination of a steam heated dome, a column supporting same, a boiling coil within said dome, means for supplying said coil with syrup, a receiver in communication with said coil, a discharge valve at the lower end of said receiver, an auxiliary chamber normally open at one end inclosing said discharge valve, packing material inserted in the lower edge of said auxiliary chamber, a pan adapted to close the open end of said chamber and to contact with said packing, a vacuum pump cylinder, a permanent communication through the column between one end of the pump cylinder and the receiver, communications between the other end of said cylinder and the auxiliary chamber respectively, a cock for closing one of said latter communications and simultaneously opening the other, and a jet condenser in the column aforesaid substantially as described.

956,509. LOOSE-LEAF BINDER. RICHARD H. BARLOW and PERCY BARTON, Bury, near Manchester, England. Filed Feb. 18, 1908. Serial No. 416,517.

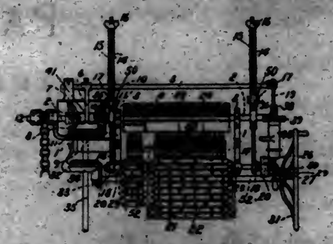


1. A loose leaf binder comprising two hollow bars each of flattened cross section and each having a hole in one of its wider faces near each end and each bar also having V shaped and notched ridges within it arranged near the said holes and serving as guides, in combination with two half covers and means for flexibly hinging such covers to the bars, a flexible cord passing through the holes in the faces of the bars and means within the bars whereby the cord is caused to draw the bars together or allow them to separate, substantially as herein set forth.

2. In a loose leaf binder, a hollow clamping bar having holes in one of its faces, and a hole in one end, two screw-threaded spindles rotatably mounted in the bar, a nut on each spindle, and flexible clamping means connected to the nuts and passing out through the said holes, in combination with a further clamping bar, also having holes in one of its faces, and through which the said clamping means pass and within which further bar, the clamping means at their opposite ends are secured, substantially as herein set forth.

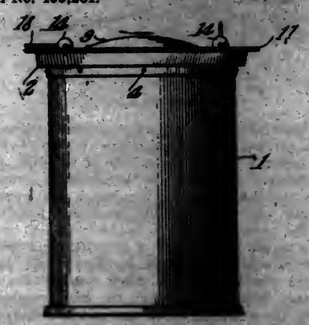
3. In a loose leaf binder, a hollow clamping bar of flattened cross section having a large aperture in one of its wider faces and a plate for closing the same and also having holes in its other wider face, one near each end, and also having a hole in one end and V-shaped ridges with notches upon its interior, substantially as herein set forth.

956,510. PATTERN MECHANISM FOR WEAVING. GEORGE BEAUMONT, Dunedin, New Zealand, assignor of one-half to Robert Glendining, Dunedin, New Zealand. Filed July 10, 1907. Serial No. 383,094.



In a loom of the class described, a lag cylinder spindle a main frame provided with slotted bearings for the lag cylinder spindle, a pair of vertical rods provided with bearings at their lower ends for the lag cylinder spindle, brackets on said frame, levers fulcrumed at one end on said brackets, the other ends of said levers embracing said vertical rods with a pivotal sliding connection, spiral springs coiled on said rods above said other ends of the levers, and wing nuts at the upper ends of said rods to retain and adjust said springs, substantially as described.

956,511. MILK-CAN, TOP-RIM, COVER, AND LOCK. ROBERT BELITZ, Cleveland, Wis. Filed May 29, 1909. Serial No. 499,261.



1. A device of the class described comprising a can provided with an outstanding bead; a cover for the can; and a bail disposed transversely of the cover and pivoted thereto, the bail being terminally provided with inwardly extended fingers arranged to engage the bead when the bail is tilted.

2. A device of the class described comprising a can provided with an outstanding bead; a cover for the can; and a bail disposed transversely of the cover and pivoted thereto, the bail being terminally provided with inwardly extended fingers arranged to engage the bead when the bail is tilted into approximate parallelism with the cover.

3. A device of the class described comprising a can provided with an outstanding bead; a cover for the can; lugs rising from the cover and provided upon their adjacent faces with outstanding ribs; a resilient bail disposed transversely of the cover and pivotally mounted in the lugs, the bail being arranged to bear normally against the ribs; and being terminally provided with inwardly extended fingers arranged to engage the bead when the bail is tilted into approximate parallelism with the cover, one set of the notches being engageable by the bail when the fingers thereof are in engagement with the bead and the rectangularly disposed set thereof being engageable by the bail when the fingers thereof are out of engagement with the bead.

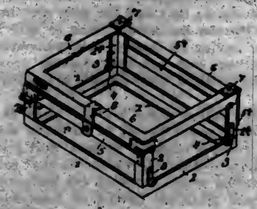
4. A device of the class described comprising a can provided with an outstanding bead; a cover for the can; lugs rising from the cover and provided upon their adjacent

faces with outstanding ribs having notches therein; a resilient bail disposed transversely of the cover and pivotally mounted in the lugs, the bail being arranged to bear normally against the ribs, and being terminally provided with inwardly extended fingers arranged to engage the bead when the bail is tilted into approximate parallelism with the cover, the notches being engageable by the bail when the bail is thus tilted.

5. A device of the class described comprising a can provided with an outstanding bead; a cover for the can; lugs rising from the cover and provided upon their adjacent faces with outstanding ribs having rectangularly disposed notches therein, a resilient bail disposed transversely of the cover and pivotally mounted in the lugs, the bail being arranged to bear normally against the ribs, and being terminally provided with inwardly extended fingers arranged to engage the bead when the bail is tilted into approximate parallelism with the cover, one set of the notches being engageable by the bail when the fingers thereof are in engagement with the bead and the rectangularly disposed set thereof being engageable by the bail when the fingers thereof are out of engagement with the bead.

[Claim 6 not printed in the Gazette.]

956,512. KNOCKDOWN BOX. ALBERT N. BENDER, Milwaukee, Wis. Filed Sept. 17, 1909. Serial No. 518,134.

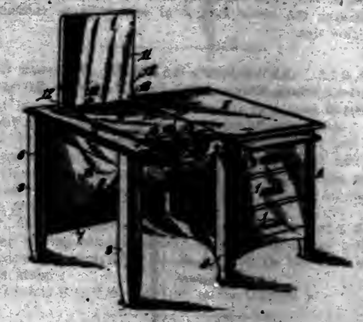


1. A knock-down box comprising rectangular angle-iron bottom frame, angle-iron standards in rule joint connection with the corners of the bottom frame, the standards being flush with the inner vertical webs of said angle-iron frame, brace-bars connecting the front and rear standards, a top angle-iron frame in hinge connection with one pair of the standards, side, end and bottom boards having interlocked joints fitted within the bottom angle-iron frame and standards, and a cover-board fitted within the top angle-iron frame.

2. A knock-down box comprising a pair of duplicate rigid rectangular top and bottom frames, the frames being composed of angle-iron stretches having their horizontal flanges inwardly disposed, front and rear angle-iron corner standards in flush joint connection with the front and rear corners of the top and bottom frames, axially alined pairs of hinge-members carried by the front and rear corner standards, ears carried by the vertical stretches of the side flanges of the bottom frame which ears are in hinge connection with the hinge-members of the corner standards, the axis of the ears and hinge-members being disposed upon at the intersecting point of the side flanges of said bottom frame and the adjacent edges of the corner standards, a pair of hinge-members extending rearwardly from the top face of the rear stretch of the top frame and other hinge-members extending upwardly from the rear corner standards and above the plane of the top frame, the members being in hinge connection with the aforesaid top frame members whereby the said top frame may be folded back upon the rear corner standards when the box is collapsed, and braces connecting the front and rear pair of corner standards.

956,513. TYPE-WRITER DESK. CHARLES W. BICKEL, Evansville, Ind. Filed Apr. 28, 1909. Serial No. 492,661.

1. In a typewriter desk, the combination of a flat top having an opening, a typewriter compartment under the opening, a swinging typewriter support consisting of two plates arranged at an angle to each other and of different lengths, one for holding the typewriter and the other for closing the opening when the typewriter is not in use, means for hingedly securing the support to the table top at the rear of the opening thereof, a member extending across the front of the opening and located at a distance from the said means greater than the length of one plate and less than the length of the other plate for holding the said support in open or closed position, and a device for releasably connecting the shorter plate with the said member.

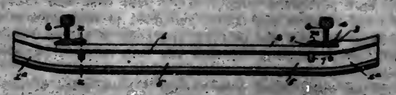


2. In a typewriter desk, the combination of a table top provided with an opening, a compartment under the opening, an L-shaped typewriter carrier movable in and out of the opening and including a long plate adapted to close the opening when the carrier is in closed position and a short plate, a cross bar at the front of the opening on which the long plate rests when the carrier is closed, and a spring-pressed bolt arranged on the short plate to engage the cross-bar to hold the carrier in open position.

3. A typewriter desk comprising a table top having an opening, a compartment under the opening, a swinging typewriter support consisting of two right-angularly disposed plates of different lengths, the longer plate serving to form a closure for the opening when the said support is in closed position, a member on which the longer plate rests when the support is in closed position, means for securing a typewriter to the shorter plate, a device on the shorter plate for automatically engaging the said member to hold the support in open position, and means for manually releasing said device to move the support to closed position in the compartment.

4. A typewriter desk comprising a table top having an opening and a compartment under the opening, a swinging typewriter support consisting of two plates arranged at an angle to each other, means for hinging the support at the rear end of the opening, a cross bar at the front end of the opening set below the table top and inwardly from the front edge thereof, one of said plates being arranged to directly engage the cross bar and serving to form a closure for the said opening when the support is in closed position, the other plate constituting a base for the typewriter, and a spring-pressed bolt carried by the last-mentioned plate and adapted to engage the cross bar.

956,514. RAILWAY-TRACK CONSTRUCTION. JOSEPH W. BLOWER, Columbus, Ohio. Filed Jan. 28, 1910. Serial No. 540,576.



1. In a railway track construction, the combination with ties formed of sections of track rails, the ball of each of said tie rails having formed therein on each side of the center of the length of the tie a horizontal recess, of track

rails mounted upon said ties and having their outwardly projecting base portions engaging said tie recesses, and means for locking the inner base flanges of the track rails in connection with the tie.

2. In a railway track construction, the combination with ties each comprising a body formed of a section of track rail, the terminal members of which are inclined upward and the upper side of which is formed on each side of the center of its length, with a horizontal recess as described, of track rails mounted upon said ties, the outer flanges of said rails engaging said tie recesses, and means for locking the inner flanges of said rails in connection with said ties.

956,515. REVOLVING HAMMER. WHEELER BOYD, Idaho Springs, Colo. Filed July 17, 1909. Serial No. 508,162.



A revolving hammer having a body comprising spaced plates or bars, oppositely disposed edge projections on said plates or bars, and arranged adjacent the ends thereof, transverse pins extending through and adapted to lend increased strength to said edge projections and also adapted to connect the plates or bars together, and transverse bolts extending through the plates or bars and arranged back of the edge projections and the transverse pins therein, in combination with heads having shanks arranged between the plates or bars of the body and pivotally mounted on the transverse bolts, and also having the bevels *f*.

956,516. CASE FOR HOLDING TALKING-MACHINE RECORDS. HENRY C. BROWN, Woodbury, N. J. Filed Feb. 19, 1909. Serial No. 478,816.

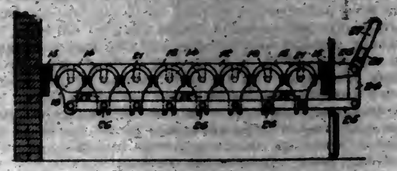


1. A case having a base, sides hinged thereto, independent partitions supported by said base and movable thereon between said sides, and fixed to said sides straps passing through the bottoms and ends of said partitions, said straps passing through the ends of said partitions being disposed in the median sections thereof.

2. An open ended case having a base, sides hinged to said base, a top hinged to one of said sides and having a flap adapted to engage the other of said sides, between said sides independent partitions having bottom and end eyelets extending therethrough, and extending through said eyelets straps detachably connected to said sides.

3. The combination of a series of independent partitions, elastic straps connected with opposite edges of said partitions, members exterior to said partitions and connected with said straps, said partitions being movable independently of said straps, and said straps acting to draw said members and partitions together to subject to pressure articles held between them.

956,517. FURNACE-GRATE. THOMAS DAWSON, Livingston Manor, N. Y. Filed Mar. 23, 1909. Serial No. 485,332.



1. A hollow slotted grate bar for furnaces formed convex on its upper side and provided with a concave chamber beneath, said grate bar having heads closing said concave chamber at its ends, said end heads being provided with pivots, so that said bar may rock in a fulcrum which is within the horizontal plane of said heads, and said grate-bar having an intermediate transverse strengthening web filling said concave chamber crosswise and being provided with a downwardly extending operating arm.

2. A hollow slotted grate bar for furnaces cast in a single piece and formed convex at its upper side and provided with a concave chamber beneath, said grate bar having end heads provided with pivots, so that said bar may rock on a fulcrum which is within the horisontal plane of said heads, said grate bar having an intermediate transverse strengthening web filling said concave chamber crosswise and being provided with a downwardly extending operating arm, said end heads closing the ends of said chamber and serving, in coöperation with said intermediate web, to stiffen the hollow grate bar and prevent the same from warping.

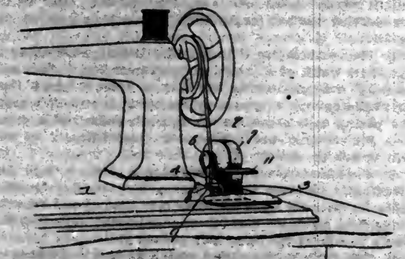
3. In a furnace grate, the combination with a frame, comprising side bars having open-topped slots, of a series of hollow rocking grate bars having end heads provided with pivot pins loosely fitting in said slots, said bars being thus adapted to rock on fulcrums which are within the horisontal plane of said heads, and each of said grate bars being hollow and having transverse slots and a curved upper surface, a concave lower surface, to provide a recess or chamber, and a centrally disposed transverse strengthening web filling said chamber crosswise and being provided with a depending operating arm, an operating lever for shaking the grate, and links or bars jointed to said operating lever and provided with pins engaged by the operating arms of said rocking grate bars.

4. In a furnace grate, the combination with a frame comprising side bars having open topped slots, of a series of hollow rocking grate bars having end heads provided with pivot pins loosely fitting in said slots, said bars being thus adapted to rock on fulcrums which are within the horisontal plane of said heads, and each of said grate bars having a convex slotted upper surface, a concave lower surface to form a chamber, and a centrally disposed transverse strengthening web filling said chamber crosswise and being provided with a depending operating arm having an open slot at its lower end, an operating lever for shaking the grate, and links or bars jointed to said operating lever and provided with pins engaged by the slotted lower end portions of the said operating arms of said grate bars.

5. In a furnace grate, the combination with a frame comprising side bars having open topped slots, of a series of hollow rocking grate bars having end heads provided with pivot pins loosely fitting in said slots, said bars being thus adapted to rock on fulcrums which are within the

horisontal plane of said heads, and each of said grate bars having a convex, slotted upper surface, a concave lower surface to form a chamber, a centrally disposed transverse strengthening web filling said chamber crosswise and being provided with a depending operating arm having an open slot at its lower end, an operating lever for shaking the grate, and links or bars jointed to said operating lever and provided with pins engaged by the slotted portions of the said operating arms of said grate bars, said operating lever having a removable handle.

956,518. SCISSORS-SHARPENER. ISAAC O. DAY, Ottumwa, Iowa. Filed June 26, 1908. Serial No. 440,537.



A device of the kind described comprising a base plate, a bracket carried by the rear edge of said plate, a shaft mounted in said bracket, a pulley fixed on the shaft, a grinding wheel fixed on the shaft, a forwardly and upwardly curved arm, a rest plate supported by said arm in advance of the grinding wheel, and inclined with respect to the base plate, and a pin carried by the bracket below and slightly in advance of the pulley, as and for the purpose set forth.

956,519. ELECTRODE FOR ARC-LAMPS. GEORGE M. DYOTT, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 28, 1906. Serial No. 314,213.



1. An electrode comprising a block of iron having a plurality of end recesses and titanic material contained within the recesses.

2. An electrode comprising a block of metal having a low fusing point, said block having a plurality of recesses, and material having a higher fusing point contained within the recesses.

3. An electrode comprising a block of iron having a plurality of end recesses and the oxid of a metal having a higher fusing point contained within the recesses.

956,520. FLIGHT ATTACHMENT FOR CONVEYERS. ALBERT J. FRANK, Breckenridge, Minn. Filed Apr. 28, 1909. Serial No. 491,662.

1. The combination with a conveyer belt, of a flexible strap having one end flatly secured on the belt, and a conveyer flight secured to the free end of said strap.



2. The combination with a conveyer belt; of an uniformly flexible strap having one end flatly secured on the belt, and a conveyer flight secured to the free end of said strap.

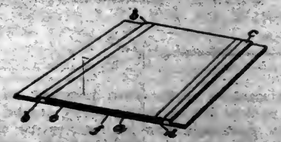
3. The combination with a conveyer belt; of a flexible strap having the same width and thickness throughout and having one end secured to the belt, and a conveyer flight flatly secured on the free end of said strap.

4. The combination with a flexible conveyer belt; of a strap of flexible material similar in material and cross sectional dimensions to the belt and having one end secured on, and a conveyer flight flatly secured to the free end of said strap.

5. The combination with a conveyer belt; of a flexible strap having one end fixedly secured flat on the belt, and a conveyer flight detachably secured to the free end of said strap.

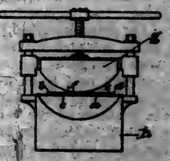
[Claims 6 to 9 not printed in the Gazette.]

956,521. PLATE-HOLDER FOR USE IN BENDING ELECTROTYPE-PLATES. PATRICK M. FURLONG, New York, N. Y. Filed Jan. 14, 1909, Serial No. 472,209. Renewed Feb. 4, 1910. Serial No. 542,071.



In a device for the purpose described, a plate-holder consisting of a flat sheet of resilient material having rigid therewith near each edge guides or cleats, and independent adjustable wedge-shaped members engageable with said cleats or guides and with the opposite edges of an interposed electrotype plate for holding said plate firmly between the guides or cleats with the confined edges parallel to the axis of the bend and thus preventing the stretching of said electrotype plate while being bent or curved.

956,522. METHOD OF BENDING ELECTROTYPE-PLATES. PATRICK M. FURLONG, New York, N. Y. Filed Jan. 14, 1909, Serial No. 472,210. Renewed Feb. 4, 1910. Serial No. 542,072.



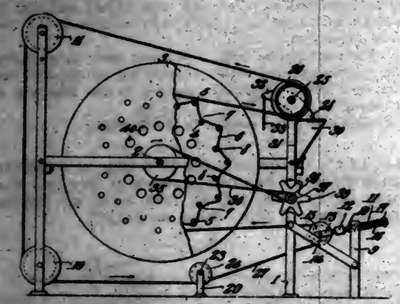
1. The herein described method of bending or curving electrotype plates, which consists in confining the edges of the plate parallel to the axis of the bend or curve and then bending or curving said plate while held against stretching.

2. The herein described method of bending or curving an electrotype plate which consists in placing the flat electrotype plate upon a support with the printing surface downward, interposing an anti-abrasion member, tightly confining the sides of the electrotype plate parallel to the axis of the bend and then bending the plate.

3. The herein described method of bending or curving electrotype plates which consists in tightly wedging the opposite sides thereof against a support and confining said sides parallel to the axis of the curve, then subjecting the same to the action of curved dies, then removing the holding means and allowing the support by its resiliency to assume its original flat condition.

4. The herein described method of bending an electrotype plate which consists in placing upon a support a resilient bed, placing on said bed an electrotype plate with the printing surface downward, then firmly holding the opposite sides parallel to the axis of the curve and against expansion, then pressing between curved dies and then removing the holding means and allowing the support and bed to assume its original flat condition by reason of their resiliency.

956,523. MACHINE FOR CLEANING BAGS. NORMAN E. GARDNER, Easton, Pa. Filed Apr. 3, 1909. Serial No. 487,640.



1. In a machine of the class described, an actuating drum, an endless belt extending partly around the drum, a normally stationary stop for intercepting objects discharged from between the drum and belt, and revoluble means adjacent the stop for directing the intercepted bags between the drum and the belt.

2. In a machine of the class described an actuating drum, an endless belt extending partly around the drum, a normally stationary reticulated screen for intercepting objects discharged from between the drum and belt and revoluble means adjacent the screen for directing the intercepted bags between the drum and the belt.

3. A machine of the class described including a supporting structure, a drum mounted for rotation therein, a belt extending partly around the drum, a normally stationary reticulated screen adjacent the belt and the drum and disposed in the path of objects discharged from between the belt and the drum, said screen having a reticulated covering and a beater mounted for rotation between the separator and the belt.

4. A machine of the class described including a supporting structure, a drum mounted for rotation therein, and having a reticulated peripheral portion, an endless belt extending partly around said drum and bearing on said peripheral portion, a normally stationary reticulated screen interposed between portions of the belt and adjacent the drum and in the path of objects discharged from between the drum and the belt, and a rotary beater below the screen and adjacent the belt.

5. A machine of the class described including a supporting structure, a drum mounted for rotation within the structure and having a reticulated peripheral portion, an endless belt extending partly around the drum, portions of the belt being extended in one direction from the drum and spaced apart, and a normally stationary screen interposed between the spaced portions of the belt and in the path of objects discharged from between the drum and the belt.

[Claims 6 and 7 not printed in the Gazette.]

956,524. COVER-FASTENER. FRANK W. GARRETT, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 4, 1906. Serial No. 333,130.



1. The combination with a casing having an opening in one side the dimensions of which are less than those of the side, of a cover of such dimensions as to cover the opening and project beyond its edges, a single longitudinally adjustable locking bar of approximately the same length as the cover and supported thereby, and means for shifting the bar longitudinally to lock and unlock the cover.

2. The combination with a casing having an opening in one of its walls, of a cover having greater length than said opening, a single locking bar also of greater length than said opening and supported by the cover to project beneath the casing wall at either one or both ends, and a crank arm for moving said locking bar longitudinally to lock and unlock the cover.

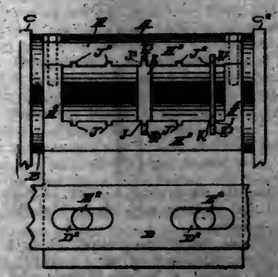
3. A commutator cover comprising a plate, a single longitudinally movable locking bar supported thereby at a material distance from the inner side thereof and an actuating lever having a member in engagement with said bar, and a handle at the outer side of said plate.

4. The combination with a casing having an opening, of a cover plate for said opening having dependent lugs and stirrups, a single locking bar supported by said lugs and stirrups, and a lever for moving the locking bar longitudinally on its supports to insert one of its ends beneath the casing wall or to withdraw it therefrom.

5. The combination with a casing having an opening, of a cover plate for said opening having position studs and supporting lugs and stirrups on its inner side, a single locking bar supported by said lugs and stirrups and a lever for moving said bar longitudinally to insert one of its ends beneath the casing wall or to withdraw it therefrom.

[Claims 6 and 7 not printed in the Gazette.]

956,525. ADJUSTABLE MECHANISM FOR FEEDING METAL HOOPS, BANDS, STRIPS, OR BARS TO ROLLS. FRANCIS F. GANOE, Monessen, Pa., assignor to Luther A. Burrell, Cincinnati, Ohio. Filed Feb. 23, 1909. Serial No. 479,564.



1. In a mechanism for guiding metal hoop to the rolls, the rolls, a frame provided with grooves at right angles to the axes of the rolls, and partitions of different thicknesses adapted to enter said grooves, and to be slid out therefrom, substantially as and for the purposes specified.

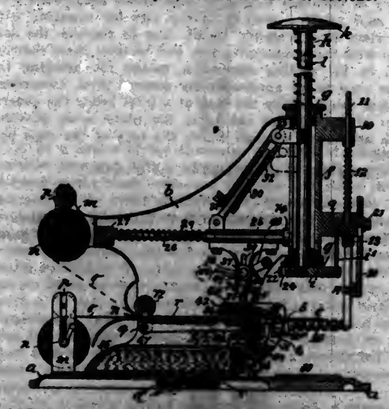
2. In a mechanism for guiding metal hoop to the rolls, the rolls, a frame provided with grooves at right angles to the axes of the rolls, and partitions combined therewith, the partitions being of different thicknesses, and provided with edges and located in certain of said grooves, the partitions being capable of being drawn out from the grooves and replaced therein, substantially as and for the purposes specified.

3. In a mechanism for guiding hoop to the rolls, the rolls, a frame provided with grooves at right angles to the axes of the rolls, and partitions adapted to enter said grooves and removable therefrom, the rolls being located immediately at the rear of the said frame, the partitions having rear ends concaved above and concaved below, and conforming to the convexity of each roll, and their said rear ends being close to said rolls, the partitions provided with projections at their front ends for limiting their proximity in reference to the said rolls, substantially as and for the purposes specified.

4. In a mechanism for guiding hoop to the rolls, the rolls, a frame provided with grooves at right angles to the axes of the rolls, and partitions of various thicknesses adapted to enter said grooves and removable therefrom, the rolls being located immediately at the rear of said frame, the partitions having their rear ends concaved above and concaved below, and conforming to the convexity of each roll, and their said rear ends being close to said rolls, substantially as and for the purposes specified.

5. In a mechanism for guiding hoop to the rolls, the rolls, a frame provided with grooves at right angles to the axes of the rolls, and partitions of various thicknesses adapted to enter said grooves and removable therefrom, the rolls being located immediately at the rear of said frame, the partitions having rear ends concaved above and concaved below, and conforming to the convexity of each roll, and their said rear ends being close to said rolls, the partitions provided at their front portion with projections for limiting their proximity in reference to said rolls, substantially as and for the purposes specified.

956,526. APPARATUS FOR AFFIXING POSTAGE-STAMPS, LABELS, OR THE LIKE, AND FOR SELLING POSTAGE-STAMPS. ERNEST HAAS, Manchester, England. Filed May 2, 1908. Serial No. 430,628.



1. In an apparatus for affixing postage stamps, labels and the like and for selling postage stamps, a plunger operated stamp ribbon feeding device, comprising a hinged feed table, means for vertically moving the said table independently of the frame of the apparatus, a spring influenced feed slide above the said table, a feed foot vertically movable in the said slide, automatic means for raising and lowering the said feed foot and a telescopic rod having an abutment connecting the said plunger and slide loosely together, all combined substantially as and for the purpose set forth.

2. In an apparatus for affixing postage stamps, labels and the like and for selling postage stamps, a plunger operated stamp ribbon feeding device, comprising a hinged feed table, means for vertically moving the said table independently of the frame of the apparatus, a spring influenced feed slide above the said table, a lever fulcrumed in front of the said feed slide with its free end pointing rearward and having cam projections with inclines for raising the said feed foot, all combined substantially as and for the purpose set forth.

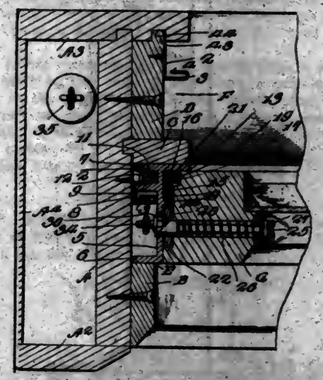
3. In an apparatus for affixing postage stamps, labels and the like and for selling postage stamps, a plunger operated stamp ribbon feeding device, comprising a hinged feed table, means for vertically moving the said table independently of the frame of the apparatus, a spring influenced feed slide above the said table, a feed foot vertically movable in the said slide and means for regulating the feed of the stamp ribbon, consisting of a projection on the feed foot, a plate fixed adjustably in relation to the said projection having an aperture through which the said projection can drop, all combined substantially as and for the purpose set forth.

4. In an apparatus for affixing postage stamps, labels and the like and for selling postage stamps, a plunger operated stamp ribbon feeding device, comprising a hinged stamp ribbon feed table having a longitudinally ribbed face and a damping medium opening across the said ribbed face dividing it into two parts, all combined substantially as and for the purpose set forth.

5. In an apparatus for affixing postage stamps, labels and the like and for selling postage stamps, a hinged vertically movable stamp ribbon feed table, springs supporting it, a damping medium carried thereby, and means for raising and lowering the damping medium on the said feed table independently of the movement of the latter, all combined substantially as and for the purpose set forth.

[Claims 6 to 12 not printed in the Gazette.]

956,527. PIVOTED SLIDING WINDOW. MICHAEL HEBERLE, Brooklyn, N. Y. Filed Apr. 2, 1909. Serial No. 487,389.



1. In a window, the combination with a window frame having a sash channel, of a sash, a slide on each side of the sash, to which the sash is pivoted, said slide having laterally projecting spaced flanges, a weather strip located between said flanges and contacting with the face of the sash channel, and a wedge holding the strip in place.

2. In a window, the combination with a window frame having a sash channel, and a metallic strip attached to said channel, having an outwardly extending flange, the margin of which is inwardly folded, of a sash, a slide on each side of the sash, to which the sash is pivoted, said slide having laterally projecting spaced flanges, a metallic strip, the body portion of which is carried between said flanges and the margin of which extends beyond one of said flanges and is outwardly turned to engage with the inwardly folded flange of the frame strip, and means for holding said strip in place between the said flanges.

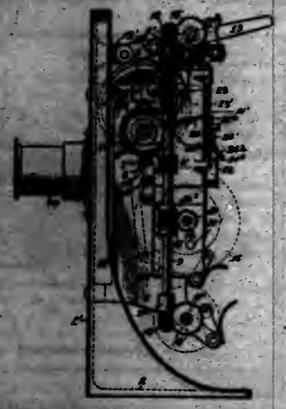
3. In a window, the combination with a window frame having a sash channel, and a metallic strip attached to

said channel, having an outwardly extending flange, the margin of which is inwardly folded, of a sash, a slide on each side of the sash, to which the sash is pivoted, said slide having laterally projecting spaced flanges, a metallic strip, the body portion of which is carried between said flanges and the margin of which extends beyond one of said flanges and is outwardly turned to engage with the inwardly folded flange of the frame strip, means for holding said strip in place between the said flanges, and a wedge inserted between the flanges and holding said strip to the slide.

4. In a window, the combination with a window frame having a sash channel and a metallic strip extending along the sash channel and having an outwardly extending flange, the margin of which flange is inwardly folded, of a sash, a slide on each side of the sash, to which the sash is pivoted, said slide having spaced, laterally projecting flanges, and a weather strip carried between said flanges and interlocking with the channel strip.

5. In a window, the combination with a window frame having a sash channel, and a strip having an outwardly extending flange, the margin of which is inwardly folded, of a sash, a slide on the side of the sash, to which the sash is pivoted, said slide having laterally projecting marginal flanges and an intermediate laterally projecting flange adjacent to one of the marginal flanges, a metallic strip, the body portion of which is folded between the two adjacent flanges, and a wedge holding the strip in place, the margin of the strip extending over and upon one of said flanges and then being outwardly turned to engage within the inwardly folded flange of the channel strip.

956,528. KINETOSCOPE. LEWIS HAYS, New York, N. Y. Filed Apr. 15, 1909. Serial No. 490,191.



1. In a kinetoscope the combination of an apertured film support, a film retainer coöperative with said support and having an opening alined with the aperture in said support, a pintle on which said retainer is hinged, a shiftable closure on said retainer, a centrifugal governor, and a connection between said closure and said governor embodying a sliding connection on said pintle.

2. In a kinetoscope, the combination of a hinged film retainer, a hinged aperture closure, a centrifugal governor and a connection between said governor and said closure embodying means for shifting the connection axially of the hinge axis of said retainer.

3. In a kinetoscope, the combination of a pair of vibratory frames each comprising a pair of side arms and a cross bar, shutters secured to the said cross bars, a pair of oppositely extending pins to each of which each of said frames is pivoted, a driving mechanism, and a connection between said frames and said driving mechanism.

4. In a kinetoscope, the combination of a pair of vibratory frames each comprising a pair of side arms and a cross bar, shutters secured to said cross bars, oppositely extending pins to which each of said frames is pivoted, a rock arm fulcrumed intermediate its ends, a pair of links extending from said frames to the opposite ends of said rock arm, a driving mechanism, and a crank pin driven thereby and linked to said rock arm.

956,529. LEVELER FOR JAR-CAPS. WILLIAM H. HONESS, Hartford, Conn., assignor of one-half to Beech-Nut Packing Company, Canajoharie, N. Y., a Corporation of New York, and one-fourth to William A. Lorenz, Hartford, Conn. Filed Dec. 12, 1904. Serial No. 236,476.



1. A leveler for a plurality of flaring or shouldered jar caps, provided with a plurality of openings for engaging the cap rims whereby the leveler is supported.

2. A leveler for a plurality of flaring or shouldered jar caps, comprising a plate having a plurality of openings for engaging the cap rims whereby the leveler is supported, the plate being also provided with turned-over edges to stiffen the plate.

3. In jar handling devices, the combination of means for holding a plurality of jars in a particular position, and a leveler provided with a plurality of openings, located in approximate accordance with the said position of the jars for engaging with the rims of a plurality of jar caps to register them with their respective jars.

4. In jar handling devices the combination of a tray for holding a plurality of jars in a predetermined position relative to each other, and a leveler provided with a plurality of openings located in substantial accordance with the said relative position of the jars for engaging with the rims of a plurality of jar caps to register the said caps with their respective jars and to level them thereon.

5. In jar sealing apparatus, means for bringing the loose caps to an approximately general level, comprising a plate supported by the caps at a level below the general level of the tops of the caps, the plate being provided with apertures, through which the tops of the caps protrude.

[Claims 6 to 8 not printed in the Gazette.]

956,530. ATTACHMENT FOR TELEPHONES. ARBN G. HOWARD, Holdrege, Nebr. Filed Mar. 9, 1909. Serial No. 482,807.



1. In an attachment, for telephones, toothed disks, spring tongues each having a particular pitch in position to be engaged, respectively, by said tongues, and means for imparting a compound movement to said disks.

2. In a telephone attachment, a toothed disk, a spring, a sound emitting tongue, and means actuated by said spring for giving said disk a partial rotation and a vertical movement, as and for the purpose set forth.

3. In an attachment for telephones, a frame swinging in a vertical plane, toothed disks rotatably mounted in said frame, sound emitting tongues having a different pitch engaged respectively by said tongues upon movement of the frame and rotation of the disks, and means for rotating said disks and simultaneously swinging said frames.

4. In an attachment for telephones, sound emitting tongues, a spring, a winding lever for said spring, means operated by the upwinding of said spring for engaging and sounding said tongues, locking means, and a tripping mechanism for releasing the locking means, said tripping mechanism being automatically operated upon the removal of the telephone receiver from the receiver hook.

5. In a telephone attachment, a signal mechanism, means for operating said signal mechanism during the time a receiver is removed from the hook, locking means coöperating with the signal mechanism, and a tripping means for said locking means, the tripping means coöperating with and being held in inoperative position by the receiver hook.

[Claims 6 to 11 not printed in the Gazette.]

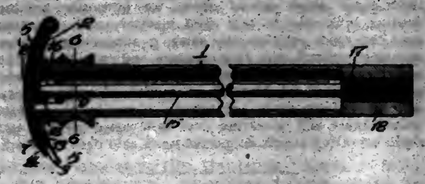
956,531. AUTOMATIC GAS-FIXTURE. EDWIN M. JOHNSON, Philadelphia, Pa. Filed Feb. 8, 1909. Serial No. 476,694.



1. In a device of the character described, a connecting member provided with a valve retaining chamber, threads formed on the inner surface of its outer end, other threads formed on the outer surface of its inner end, said inner end being beveled, a hose connecting and valve seating member having its inner end beveled to coincide with the beveled end of the adjacent member, threads formed on the outer surface of its outer end, a connector having threads on its inner surface adapted to connect said members together, a ball valve resting within the valve retaining chamber, a spiral spring also resting within said chamber for normally holding the ball valve against its seat, and a valve operating member having a corrugated body and a stem adapted to open the valve when the connection retaining the same is joined to the gas fixture.

2. In a device of the character described, a connecting member provided with a valve retaining chamber, the inner end of said valve chamber being beveled, a hose connecting and valve seating member having its inner end beveled to coincide with the beveled end of the valve chamber, a connector for detachably securing said members together in such a way that their beveled faces rest against one another, a ball valve resting within the valve retaining chamber, a spiral spring mounted in said chamber for normally holding said ball valve in contact with its seat, a gas hose adapted to be mounted on the outer end of the hose connecting member, a valve operating member having a corrugated body, and a stem carried by said gas hose so that when said hose is placed on the hose connecting member, the stem of the operating member will press the ball valve away from its seat against the action of the coil spring, as specified and for the purpose set forth.

956,532. SAFETY-RAZOR. HENRY A. KISSELHORST, St. Louis, Mo. Filed Jan. 2, 1909. Serial No. 470,521.



1. In a safety razor, the combination with a head, guard teeth carried by said head, a pair of clamping plates hinged to said head, one of which plates is flexible, of a thin, narrow blade adapted to be clamped between the free edges of said plates.

2. In a safety razor, the combination with a head, guard teeth on said head, a pair of clamping plates hinged to said head, one of which plates is flexible, of a thin, narrow blade arranged between the free edges of said plates and means whereby said plates are clamped together to grip the blade.

3. In a safety razor of the class described, a curved head therefor guard teeth on said head, a rigid plate hinged to one side of the head, a flexible plate hinged to the head and occupying a position between said head and the hinged plate, whereby a thin narrow blade may be detachably arranged between the free edges of the flexible plate and the hinged plate.

4. In a safety razor of the class described, a holder, a curved head therefor guard teeth on said head, a rigid plate hinged to one side of the head, a flexible plate hinged to the head and occupying a position between said head and the hinged plate, a thin narrow blade detachably arranged between the free edges of the flexible plate and the hinged plate, and means whereby the flexible plate and the hinged plate are rigidly held against the head of the holder.

5. A safety razor, comprising a curved plate, a series of guard teeth on one edge of said plate, a pair of plates hinged to the opposite edge of the curved plate, one of which pair of plates is flexible, and a thin narrow blade detachably held between the free edges of the pair of hinged plates.

[Claims 6 to 10 not printed in the Gazette.]

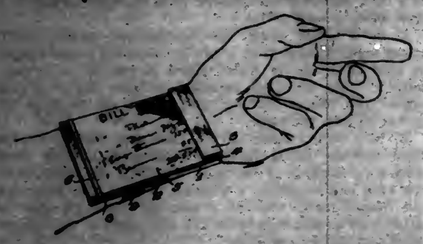
956,533. MARINE BICYCLE. CARL F. KRAUSE and RUDOLF C. KRAUSE, Westfield, Wis. Filed July 1, 1909. Serial No. 505,476.



1. In an apparatus of the class described, two boats spaced apart, an upwardly directed base member extending longitudinally of each boat, each base member being provided with spaced recesses, transverse members engaging in said recesses and secured to said base members, deck members connected to said transverse member with their inner edges spaced apart, an upwardly arching housing connected to said deck members and extending over the space between the same, a supporting member connected beneath said transverse members and extending at the ends forwardly and rearwardly of the deck members, chain wheels mounted for rotation upon said supporting members, an endless chain carrying a plurality of paddles spaced apart and operating over said chain wheels, and chain operating means supported upon said deck members.

2. In an apparatus of the class described, two boats spaced apart, deck members carried by said boats with their inner edges spaced apart, an upwardly arching housing connected to said deck members and extending over the space between the same, a supporting member connected beneath said deck members and extending at the ends forwardly and rearwardly of the deck members, chain wheels mounted for rotation upon said supporting member, an endless chain carrying a plurality of paddles spaced apart and operating over said chain wheels, and chain operating means supported upon said deck members.

956,534. PAD-HOLDER. LONNIE A. LARRY, Spokane, Wash., assignor of one-half to Chester L. Jessen, Spokane, Wash. Filed June 3, 1909. Serial No. 499,981.



1. The herein described pad holder, comprising a frame formed with laterally spaced slots, a strip of flexible material passed through said slots and provided at its ends with fastening devices, and a pad retaining band secured to said base.

2. As a new article of manufacture, the herein described pad holder comprising a base provided at one end with means for holding one end of a pad and also provided with side flanges and with recesses in said flanges between the opposite ends of the base, and a pad retaining band secured to the base and extending across the upper face thereof and through said recesses.

3. As a new article of manufacture, the herein described pad comprising a base formed at one end with means for holding one end of the pad and with side flanges formed at the opposite end of the base, with recesses, the base being formed in transverse alinement with said recesses with slots forming a tongue and a pad retaining band encircling said base and passing through said tongue and recesses, as and for the purpose set forth.

956,535. PNEUMATIC CLEANER. AUGUSTUS LOTZ, San Francisco, Cal. Filed Feb. 13, 1906. Serial No. 300,964.

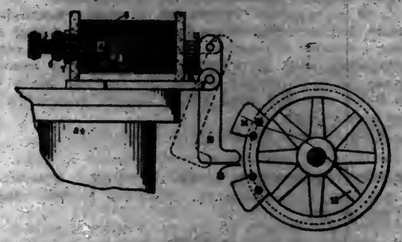


1. A pneumatic cleaner having a head with a central air exhaust outlet, a pair of impervious elastic strips projecting from the bottom of said head adapted to make close contact with the surface to be cleaned and constituting a shallow open-end channel communicating with said air exhaust.

2. A pneumatic cleaner having an elongated head provided with a central air outlet, a pair of impervious elastic strips arranged longitudinally on the bottom of said head and parallel with its sides and adapted to make close contact with the surface to be cleaned and constituting therewith an open-end air conduit connecting with said exhaust outlet and brushes arranged on both sides of said strips and adapted also to make close contact with the surface to be cleaned, as and for the purposes described.

3. A pneumatic cleaner having a head with a central air exhaust outlet, rows of bristles on the bottom thereof, and an impervious flexible depending strip arranged between the rows of bristles.

956,536. INTERLOCKING SAFETY DEVICE FOR ELEVATORS. ROBERT P. LUMLEY and HENRY G. HILLMAN, New York, N. Y., assignors to Public Safety Company, Washington, D. C., a Corporation of Delaware. Filed Oct. 5, 1906. Serial No. 337,661.



1. In an elevator the combination of a car and a landing, a door at said landing, a movable power controlling device for the car having two spaced engaging parts, means operated from the car for moving said device, an electro-magnetically operated finger controlled from the door at said landing and mounted adjacent to said device and movable into position to be engaged by said engaging parts when the controlling device is operated and cooperating with said engaging parts thereon to limit the movement of said device by the operator so as to permit but a slow movement of the car in either direction.

2. In an elevator the combination with a car, a landing and a door at said landing, of mechanism including a valve controlling wheel and means operated from the car for moving said wheel for controlling the application of power to said car, two shoulders or stops on the wheel, a movable finger mounted adjacent to the wheel, electromagnetic means for moving the finger in between the stops to be engaged thereby, a switch controlled by the door for governing the operation of said electro-magnetic means, said stops on the wheel being spaced apart so as to have a movement relative to and limited by the finger after the finger has been moved into locking position, for permitting limited operation of the wheel from the car for moving the latter.

3. In an elevator the combination with a car, controlling means operated from the car, a movable finger having an engaging and a non-engaging position cooperating with part of the controller mechanism to be engaged thereby, said finger being narrower than the cooperating and engaging part of said mechanism, thereby accommodating all idle play of said mechanism and permitting a movement of the car of about ten feet per minute while the finger is in its engaging position, a solenoid operating on said finger, an electric circuit for controlling said solenoid, and a switch in said circuit for controlling said solenoid to move the finger.

4. In an elevator, the combination with a car, and a landing, of an elevator controlling mechanism having engaging parts thereon, a movable finger having an engaging and a non-engaging position and cooperating with the engaging parts of said mechanism, the finger being narrower than the engaging part of said mechanism, thereby accommodating all idle play of said mechanism and permitting movement of the car of about ten feet per minute while the finger is in its engaging position, a solenoid operating on said finger, a normally open electric circuit for energizing said solenoid, and a switch at said landing for controlling said circuit to move the finger.

5. In an elevator the combination with a car, a landing and a gate at said landing, controlling mechanism for the car including a valve wheel, an emergency switch on the car, a switch operated by said gate, spaced stops on said wheel, a movable finger on the wheel having an engaging and a non-engaging position for cooperating with said stops, the latter being spaced apart so as to accommodate all idle play of the wheel and permit a movement of about ten feet per minute of the car while the finger is in its engaging position, a solenoid operating on said finger, and an electric circuit including said emergency switch, gate switch and solenoid.

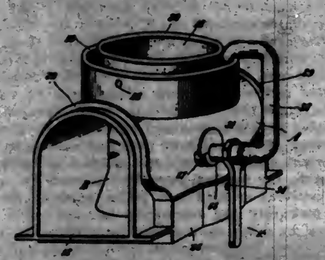
[Claim 6 not printed in the Gazette.]

956,537. RAILROAD-TIE. FRANK MATEJKA, Rogers, Tex. Filed May 15, 1908. Serial No. 433,091.



In a railway tie the combination of a solid rectangular body of plastic material, a vertical reinforcing plate embedded longitudinally throughout said body, alternate oppositely extending retaining flanges struck out from said plate, upwardly extending rail holding portions integrally formed near the ends of said plate comprising integral bifurcations projecting above said plastic body, one leg of said bifurcation being shaped to fit over the lower flange of the rail and the other leg of the bifurcation extending vertically to the opposite side and slightly above the lower flange of the rail, and locking plates shaped to fit the rail and bolted to the vertical legs of said bifurcations above the height of said flanges.

956,538. WATER-COOLED VALVE. WILLIAM C. MITCHELL, Sydney, Nova Scotia, Canada. Filed Jan. 3, 1910. Serial No. 536,218.



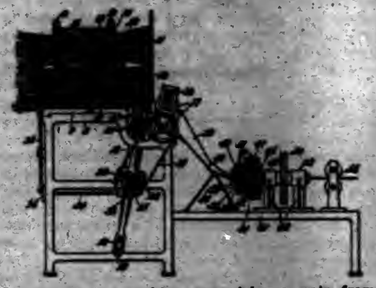
1. A fourway reversing valve having ports on opposite sides and in the top and bottom, an open trough around the top port, troughs on the side extending longitudinally between the side ports and inclosed passageways connecting said last mentioned troughs.

2. A fourway reversing valve having ports on opposite sides and in the top and bottom, an open trough around the top port, troughs on the side extending longitudinally between the side ports, inclosed passageways connecting said last mentioned troughs and guiding flanges on the surface of the valve adapted to guide the water overflowing from the top trough to the lower troughs.

3. A fourway reversing valve comprising a casing, top, bottom and side ports, a hollow butterfly in the casing, a trough formed on the exterior of the casing around the upper port, conducting means extending from the butterfly to said trough and lower troughs along the side of the casing connected by passageways passing beneath the side ports.

4. A fourway reversing valve comprising a casing, top, bottom and side ports, a hollow butterfly in the casing, a trough formed on the exterior of the casing around the upper port, conducting means extending from the butterfly to said trough and lower troughs along the side of the casing connected by passageways passing beneath the side ports, said casing being formed with bearings for the trunnions on the butterfly, and the said bearings having flanges at their edges adapted to prevent the water flowing over the same.

956,539. GRASS-TWINE MACHINE. LOUIS J. MONAHAN, Oshkosh, Wis. Filed Sept. 7, 1909. Serial No. 516,444.



1. A grass twine machine, comprising a main frame, a reciprocating carriage mounted on the main frame, means for reciprocating the carriage, feed rollers positioned adjacent to the carriage, means for rotating the feed rollers, nippers adapted and constructed to grasp material carried by the carriage and move it to a position to be engaged by the feed rollers, means for oscillating the nippers, and means for separating the nipper jaws.

2. A grass twine machine, comprising a main frame, a reciprocating carriage mounted on the main frame, means for reciprocating the carriage, feed rollers positioned adjacent to the carriage, means for rotating the feed rollers, nippers adapted and constructed to grasp material carried by the carriage and move it to a position to be engaged by the feed rollers, means for oscillating the nippers, and cams for separating the nipper jaws.

3. A grass twine machine, comprising a main frame, a reciprocating carriage mounted on the main frame, means for reciprocating the carriage, feed rollers positioned adjacent to the carriage, means for rotating the feed rollers, nippers adapted and constructed to grasp material carried by the carriage and move it to a position where it will be engaged by the rollers, means for oscillating the nippers, cams for separating the nipper jaws, means for receiving and converging material engaged by the rollers, and a mechanism for wrapping twine around the converged material.

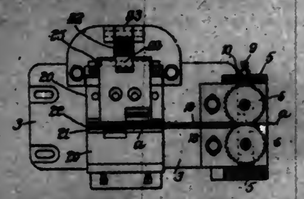
4. A grass twine machine, comprising a main frame, a reciprocating carriage mounted on the main frame, means for reciprocating the carriage, feed rollers mounted on the main frame adjacent to the carriage, means for rotating the feed rollers, a plurality of nippers pivotally and slidably connected to the main frame, cams mounted on the frame for operating said nippers to cause them to grasp material carried by the carriage and move it to a position where it will be engaged by the rollers, means for rotating said cams, means for receiving and converging material engaged by the rollers, and a tubular shaft positioned to receive the converged material and provided with means for winding a twine thereabout.

5. A grass twine machine, comprising a main frame, a reciprocable carriage mounted on the frame, means for reciprocating said carriage, feed rollers mounted on the frame adjacent to the carriage, means for reciprocating the carriage, a plurality of nipper members pivotally mounted on the frame, cams mounted on the frame for oscillating said members, material grasping levers pivotally connected to said members, auxiliary cams mounted on

the frame for operating said levers, a twine wrapping mechanism, and a converging means for receiving material from the feed rollers and directing it to the twine wrapping mechanism.

[Claims 6 to 18 not printed in the Gazette.]

956,540. MACHINE FOR MAKING CORRUGATED AND SAW-TOOTHED METAL FASTENER-STRIPS. ELLIOTT S. NORTON, Chicago, Ill., assignor to Acme Flexible Clasp Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 18, 1907. Serial No. 352,920.



1. In a machine of the character described, the combination of means for clamping a cross-corrugated metal strip in position to be operated upon, and a cutting tool movable crosswise of the strip diagonally with relation thereto for severing therefrom at a single operation the metal between a median longitudinal line of the corrugations and the ridges of the latter.

2. In a machine of the character described, the combination of means for clamping a cross-corrugated metal strip in position to be operated upon, and cutting tools mounted diagonally with relation to each other and movable diagonally of the strip to sever therefrom at a single operation on opposite sides the metal between a median longitudinal line of the corrugations and the ridges of the same.

3. In a machine of the character described, the combination of means for clamping a cross-corrugated metal strip in position to be operated upon, and cutting tools mounted diagonally with relation to each other and movable diagonally of the strip to sever therefrom at a single operation on opposite sides the metal between a median longitudinal line of the corrugations and the ridges of the same, said tools being off-set with relation to each other for simultaneous operation on the strip.

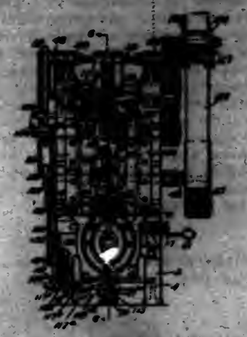
4. In a machine of the character described, the combination of means for clamping a cross-corrugated metal strip in position to be operated upon, a cutting tool movable cross-wise of the strip diagonally with relation thereto for severing therefrom at a single operation the metal between a median longitudinal line of the corrugations and the ridges of the same, and means for reciprocating said tool comprising a press head and an adjustable bearing block carried thereby and having an inclined side to actuate the tool.

5. In a machine of the character described, the combination of means for clamping a cross-corrugated metal strip in position to be operated upon, cutting tools mounted diagonally with relation to each other and movable diagonally of the strip to sever therefrom at a single operation the metal between a median longitudinal line of the corrugations and the ridges of the same, and means for actuating said tools comprising a press head and a pair of adjustable bearing blocks with reversely inclined sides to actuate the tools.

[Claims 6 to 10 not printed in the Gazette.]

956,541. METAL-BENDING MACHINE. HENRY H. PARMENTER, Newport, R. I. Filed Feb. 23, 1907. Serial No. 358,002.

1. In a machine of the type described, a mandrel having a spiral peripheral groove and adapted to form a support for the metal bar to be bent, bending rollers operatively mounted relative to said mandrel at opposite sides of its bar supporting portion, and means for imparting simultaneous longitudinal and lateral bending movement to said rollers and relative to their length to cause them to engage said bar and bend it into said groove to form a spiral link.



2. In a machine of the type described, a mandrel adapted to form a support for the metal bar to be bent, bending rollers operatively mounted relative to said mandrel at opposite sides of its bar supporting portion, operatively controlled means for imparting simultaneous longitudinal and lateral bending movement to said rollers and relative to their length to cause them to engage said bar and bend it to form a spiral link, and means actuated by said operative controlled means for effecting subsequent and relative movement between the link thus formed and the mandrel on which it is supported for displacing and releasing said link at the conclusion of the bending operation.

3. In a machine of the type described, a cam plate having an opening, a former or mandrel supported therein and on which the metal bar to be bent is centrally supported, means guided by said cam plate for engaging the bar thus supported and bending its arms around said mandrel, and means operable at the conclusion of said bending operation for effecting relative displacement of said mandrel and the bar supported thereon to release the latter and permit its removal from the machine.

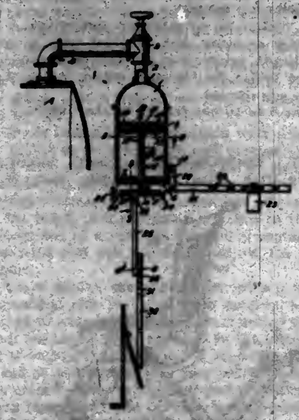
4. In a machine of the type described, a pair of vertical cam plates arranged one in front of the other, a supporting former or mandrel mounted between them, a pair of bending rollers mounted to reciprocate between said cam plates and at opposite sides of said former, and means for reciprocating said rollers, each of said cam plates having a pair of curvilinear slots arranged on opposite sides of said former and parallel or conforming to the contour of the adjacent peripheral portions thereof and in which said rollers are also slidably mounted, thereby to guide the bending movement thereof, the opposed lateral portions of said cam plates adjacent said slots having forwardly and rearwardly inclined roller engaging faces to move said rollers longitudinally of their length to effect opposite lateral movement of the arms of the bar or rod supported on said former and simultaneously with the curvilinear vertical movement, said former having a peripheral groove the portions of which adjacent to said cam plates are parallel to the inclined faces of their roller directing faces.

5. In a machine of the type described, a mandrel or former on which the bar or rod to be bent is supported, bending rollers having means for moving them to bend the bar around said mandrel, and auxiliary means for imparting to said rollers a movement transversely to the plane of their travel to effect similar bending of the arms of said bar.

[Claims 6 to 18 not printed in the Gazette.]

956,542. AUTOMATIC DAMPER CONTROL. HJALMAR PETERSON, Falun, Wis. Filed Dec. 16, 1909. Serial No. 533,362.

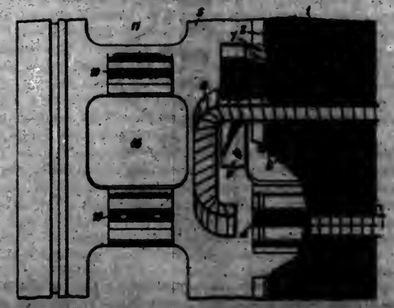
1. An automatic damper control comprising a damper, a cylindrical casing, having an inlet port at its upper extremity and a transverse bridge at the lower, a piston reciprocating in said casing, a piston rod secured to said piston and reciprocating in said bridge, having a longitudinal bore in its upper extremity, a lever pivoted to said casing through the instrumentality of a link, having means for securing the weight at one extremity and a



pair of outwardly extending ears at the other, said lever being connected to said piston rod, a screw swiveled in said ears, a sleeve threaded on said screw, and a vertically adjustable damper rod pivotally secured to said sleeve, as and for the purpose set forth.

2. An automatic damper control comprising a cylindrical casing, having an inlet port at its upper extremity and a transverse bridge at the lower, a piston reciprocating in said casing, a partially hollow piston rod secured to said piston and reciprocating in said bridge, a lever pivoted to said casing through the instrumentality of a link, having an adjustable weight at one extremity and the other extremity being secured to the piston rod, a damper rod pivotally connected to said lever, means whereby the stroke of the piston may be regulated in various ratios to the stroke of the damper rod, and a drain cock at the lower extremity of the hollow portion of said piston rod adapted to remove the water of condensation from above the piston.

956,543. DYNAMO-ELECTRIC MACHINE. CHARLES A. PEILANDER and THOMAS S. SCOTT, Pittsburg, Pa., assignors to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 6, 1906. Serial No. 299,760.



1. In a dynamo-electric machine, the combination with a set of brush holders and a core structure having dovetail-shaped projections, of a supporting frame for the core structure having recesses for the projections and recesses in substantial alinement therewith in which the brush holders are seated and secured.

2. In a dynamo-electric machine, the combination with a set of brush holders and a core structure, of a supporting frame for the core structure having recesses to cooperate with the core structure and alined recesses in which the brush holders are seated and secured.

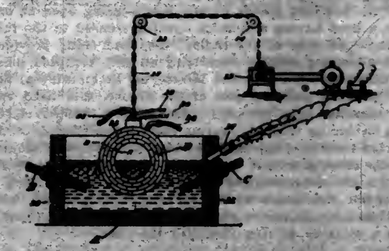
3. In a dynamo-electric machine, the combination with a set of brush holders and a core structure, of a supporting frame for the core structure having two sets of recesses that are respectively in substantial alinement, in one set of which the brush holders are seated and secured, and means coöperating with the other set to secure the core structure to the supporting frame.

4. In a dynamo-electric machine, the combination with a set of brush holders and a core structure, of a supporting frame for the core structure having two sets of alined recesses, in one set of which the brush holders are seated and secured, and means coöperating with the other set to secure the core structure to the supporting frame.

5. In a dynamo-electric machine, the combination with a frame or shell having symmetrically disposed openings and recesses or grooves alternating circumferentially therewith, of a laminated core and brush holders having projections that fit into said recesses or grooves.

[Claims 6 and 7 not printed in the Gazette.]

956,544. COMBINED ELECTRIC ARC OR RESISTANCE AND INDUCTION FURNACE. JAMES H. REID, Newark, N. J. Filed Feb. 2, 1909. Serial No. 475,908.



1. An electric furnace having electrodes for heating the same, and means wholly within the furnace for producing heat by induction.

2. An electric furnace having electrodes and means for passing a current through the same from an external source of power and means independent of the current passing through the electrodes for inducing a heating current between them.

3. An electric furnace having a suspended induction heating coil adapted to be lowered into the charge.

4. An electric furnace having a suspended induction heating coil adapted to be lowered into the charge, and means for circulating a cooling medium around the interior of the induction heating coil.

5. An electric furnace having a suspended annular induction heating coil adapted to be lowered into the charge.

[Claims 6 and 7 not printed in the Gazette.]

956,545. FORCE-FEED SEEDER. THEODORE B. ROWELL, Beaver Dam, Wis. Filed June 8, 1908. Serial No. 437,220.

1. A force-feed seeder comprising a drive-shaft, a revoluble disk provided with a hub carried by the shaft, notches in the face of the disk, a casing having an apertured bearing-boss for the disk hub and an open end, the casing being provided with a seed-discharge opening and a radially disposed guide-slot located to one side of the revoluble disk, a slidable gate-strip fitted in the casing guide-slot and adapted to have its lower edge in engagement with the hub-portion of the disk, a stripper-finger

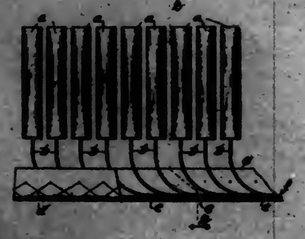
carried by the gate-strip in frictional contact with one face of said disk and arranged to partially encircle its hub, a flanged ring fitted to the open end of said casing, internal longitudinal ribs projecting from the ring for engagement with the notches of said disk, a head fitted over the flanged ring, and means for securing the head to the aforesaid casing.



2. A force-feed seeder comprising a drive-shaft, a disk provided with a hub carried by the shaft, notches in the face of the disk, a casing provided with a seed-discharge opening and a radially disposed guide-slot located to one side of the disk, a gate-strip fitted in the casing guide-slot and adapted to have its lower edge in engagement with the hub portion of the disk, a stripper-finger projecting from the gate-strip, the stripper being arranged to partially encircle said hub-portion of the disk, a ring loosely fitted over said disk, means in connection with the aforesaid disk and ring whereby the latter is rotated, and a bearing for the ring in connection with the casing.

3. A force-feed seeder having a cup-casing open at one side, a head having a circular opening secured to the face of the open side of the casing, the head being provided with a bearing surface comprising an uninterrupted inner annular countersunk groove intersected by an annular flat face parallel with the axis of the groove, said head and cup constituting a two-part housing, an internally ribbed ring having an external bearing surface conforming to the bearing surface of the head in which it is revolubly mounted, the bearing surface of the ring being wholly supported within the uninterrupted bearing surface of the head, a revoluble disk fitted within the ring and provided with notches for engagement with the internal ribs of said ring, and a rotatory driving shaft for the disk.

956,546. PYROTECHNICS. LOUIS SCHULMAN and JOSEPH SCHULMAN, New York, N. Y., assignors to American Fire Cracker Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Dec. 22, 1906. Serial No. 349,081.



1. An article of manufacture comprising a plurality of pyrotechnic devices each provided with a fuse, and a display pyrotechnic element common to the said devices and connected to the fuses thereof.

2. An article of manufacture comprising a plurality of firecrackers provided with fuses, and a display pyrotechnic element to which the fuses of the said firecrackers are connected.

3. An article of manufacture comprising a plurality of firecrackers each provided with a fuse, a display pyrotechnic element common to the said firecrackers and connected to the fuses thereof, and an extended fuse combined with the said pyrotechnic element and the other said fuses.

4. An article of manufacture comprising a bunch of pyrotechnic devices each provided with a fuse, and a trough-shaped pyrotechnic element within which the ends of the fuses are secured.

5. An article of manufacture comprising a bunch of pyrotechnic elements each provided with a fuse, and a trough-shaped pyrotechnic element consisting of an impregnated folded flexible strip within which the ends of the fuses are secured.

[Claims 6 to 10 not printed in the Gazette.]

956,547. ROCKING-CHAIR. JOHN SMITH, Bingham Canyon, Utah. Filed Jan. 28, 1909. Serial No. 473,915.



A chair of the character described, comprising a seat supporting frame, the front connecting member of which is notched or recessed, rockers for said frame provided with elongated rear extensions, a filler frame having a slidable engagement with said seat frame, a seat having one portion in rigid engagement with said filler frame, slide strips carried by the other portion of said seat, said slide strips being provided with transverse openings and fitting the notches or recesses in the front connecting member of the seat frame, a strap passing through said transverse opening for limiting the sliding movement of said strips, and means for adjusting said seat.

956,548. BRUSH-HOLDER FOR DYNAMO-ELECTRIC MACHINES. EGBERT M. TINGLEY, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 4, 1906. Serial No. 309,910.



1. In a brush holder, the combination with a box having a supporting arm and a longitudinal ventilating passage, and a carbon brush, of a direct-acting spring which operates within said box and is insulated from the carbon brush.

2. In a brush holder, the combination with a box having a longitudinal ventilating passage at one side, a carbon brush and a direct-acting spring which slide readily therethrough, and an insulating block interposed between the brush and the spring, of means for regulating the pressure exerted by the spring.

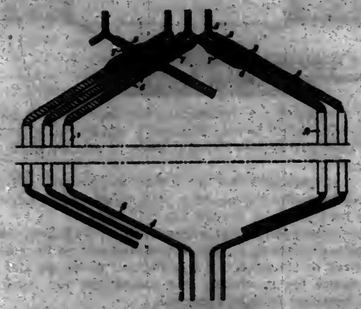
3. In a brush holder, the combination with a box having a side ventilating passage open at both ends, a carbon brush and a direct-acting zig-zag spring which slide therethrough, and an insulating block interposed between the brush and the spring, of a support attached to the outer end of the spring, and means for adjustably fastening the support to the box.

4. In a brush holder, the combination with a box having a slot in one of its side walls, and notches along the sides of the slot, a carbon brush adapted to slide in the box, a direct-acting zig-zag spring located in said box, an insulating block attached to the inner end of the spring to engage the brush, and a support attached to the outer end of said spring, of a rack bracket and clamping device coöperating with said side notches to adjust the position of the support.

5. In a brush holder, the combination with a box having a longitudinal side slot and cross notches, a carbon brush adapted to slide in the box, a direct-acting spring in said box, an insulating block attached to the inner end of the spring to engage the brush, and a support attached to the outer end of said spring, of a rack bracket adapted to engage the cross notches of the box, and a binding screw for clamping the support and the rack bracket together.

[Claims 6 to 8 not printed in the Gazette.]

956,549. DYNAMO-ELECTRIC MACHINE. EGBERT M. TINGLEY, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 3, 1906, Serial No. 346,087. Renewed Sept. 30, 1909. Serial No. 520,326.



1. In a dynamo-electric machine, the combination with an armature winding comprising a plurality of coils each of which consists of two parallel straight portions and substantially V-shaped end-connecting portions, of relatively short spacing and insulating blocks located near the point of the V-shaped end connecting portions and between both the adjacent sides and the adjacent edges of said portions, and means for fastening the respective side and edge blocks to adjacent coils.

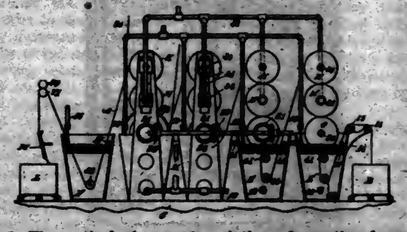
2. In a dynamo-electric machine, the combination with an armature winding comprising a plurality of coils each of which consists of two parallel straight portions and substantially V-shaped end-connecting portions, of spacing and insulating blocks disposed between the end portions of the adjacent coils and held in position by insulating wrappings that surround the coils.

3. In a dynamo-electric machine, the combination with an armature winding comprising a plurality of coils each of which consists of two parallel straight portions and substantially V-shaped end-connecting portions, of means interposed between adjacent sides and between adjacent edges of said end-connecting portions for so supporting and separating said portions as to interfere with the ventilation of the winding to a minimum degree.

4. In a dynamo-electric machine, the combination with an armature winding comprising a plurality of coils, of insulating blocks bound to the coils by an insulating wrapping for so stiffening and separating the winding as to interfere with the coil ventilation to a minimum degree.

5. In a dynamo-electric machine, the combination with an armature winding comprising a plurality of coils each of which consists of two parallel straight portions and substantially V-shaped end-connecting portions, of short spacing and insulating blocks located near the point of the V-shaped end connecting portions and between the adjacent surfaces thereof, and insulating wrappings for said portions which hold the spacing blocks in position.

956,550. FINISHING PROCESS. ROBERT T. TODD, Lawrence, and RICHARD B. BATTY, Methuen, Mass. Filed Aug. 2, 1909. Serial No. 510,756.



1. The method of preparing cloth made partly of wool fiber for dyeing, which consists of passing it continuously under tension through boiling hot water, then subjecting it to the action of live steam and to pressure, repeating this a plurality of times and then passing it through cool water as described.

2. The method of preparing cloth made of wool fiber for dyeing, which consists of passing it continuously under tension through boiling hot water, then subjecting it to the action of live steam and to rotary pressure, repeating this a plurality of times, thence passing it through cool water, then folding it as described.

3. The method of preparing fabrics of wool or worsted for dyeing, which consists of passing it continuously under tension through boiling hot water, then saturating it with live steam and subjecting it to pressure, thence passing it through cool water as described.

4. The method of preparing cloth made partly of wool fiber for dyeing, which consists of passing it continuously under tension through boiling hot water, then subjecting it to the action of live steam and while so subjected passing it between pressure rolls, repeating this a plurality of times and thence passing it through cool water as described.

5. The method of preparing cloth made of wool fiber for dyeing, which consists of passing it continuously under tension through boiling hot water, subjecting it to the action of live steam and while so subjected passing it between pressure rolls, repeating this a plurality of times, thence passing it through cool water, and then folding it as described.

[Claim 6 not printed in the Gazette.]

956,551. COMPOUND FOR USE IN PREPARING SIZING COMPOSITIONS. ABEL VERMEISTCH, Lawrence, Mass., and NOEL VERMEULEN, Pawtucket, R. I. Filed July 28, 1909. Serial No. 509,132.

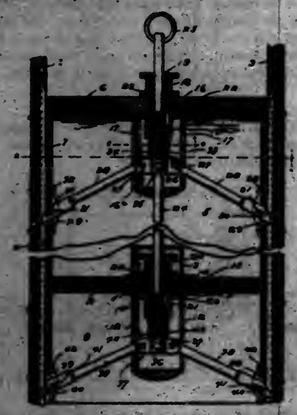
1. The herein described composition of matter consisting of water, copper sulfate, sodium borate, hydrous silicate of magnesia, and flour substantially as described and for the purpose specified.

2. The herein described composition of matter for preparing warps for weaving consisting of water, 250 gal-

lons, copper sulfate 1¼ ounces, sodium borate 5 ounces, hydrous silicate of magnesia 9¾ ounces, flour 9¾ ounces.

3. The herein described composition of matter consisting of copper sulfate, sodium borate, hydrous silicate of magnesia, and flour substantially as described and for the purpose specified.

956,552. SAFETY ATTACHMENT FOR ELEVATORS. PETER WALKER, Dickerson, Miss. Filed Mar. 30, 1909. Serial No. 486,762.



1. The combination with a well and side-racks therefor, of a cage positioned in said well, said cage provided with a top, a casing provided with a closed bottom, and fixedly secured at its upper portion to the end face of the top of said cage, said casing provided with side-openings, a vertically-movable shaft extending through the top and through said casing, a spring mounted upon said shaft within said casing, sectional inclosing means within said casing and surrounding said spring, one of the sections of said casing means carried by the top and another section of said casing means movable with said shaft, and means carried by the shaft and movable therewith and extending through the side-openings of said casing and engaging the side-racks for holding the cage in a fixed position in the well.

2. A device of the character described comprising a well, side racks therefor, a cage therein and provided with upper and lower alined openings, a casing surrounding each opening, a guiding sleeve extending through the same, a lifting rod extending through said guiding sleeves, collars mounted on said rod and each carrying a tube, a spring seated upon each collar and inclosed by the tube carried thereby, and locking arms projecting from each collar and having their free ends held in position to engage with said side racks when a strain is removed from said lifting rod.

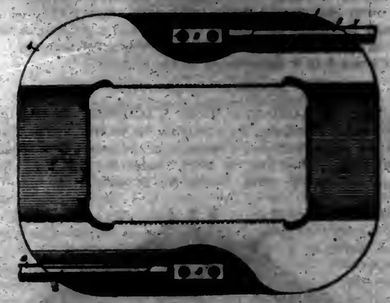
3. A device of the character described comprising a well, side racks therefor, a cage therein, upper and lower pendent casings in said cage the sides of which are slotted, a lifting rod passing through said cage and said casings, collars mounted upon said rod, one being located within each casing, oppositely projecting arms carried by each collar and passing through the slotted sides of the casings and having their free ends passing through the sides of the cage, and a spring seated upon each collar and exerting a pressure upon said rod to force said arms into engagement with the side racks of the well.

4. A device of the character described comprising a cage provided with upper and lower alined openings, a pendent casing surrounding each opening and provided with side slots, a guiding sleeve fitting each opening, a lifting rod projecting through the said guiding sleeves, collars mounted on said lifting rod, one of said collars being within each casing, a tube carried by each collar and surrounding said rod, a spring seated upon each collar and coiled about said rod with its upper end bearing upon the guiding sleeve, and locking arms having a pivotal connection with each collar and having their free ends projecting through the sides of the cage.

5. In a safety device for elevators, the combination with a well and its side racks, of a cage, a rod passing therethrough and having a connection with a hoisting cable, an upper and a lower casing carried by said cage and surrounding said rod, said casings being provided with side slots, upper and lower guiding sleeves carried by said cage and each having a recessed end which projects into one of the casings, a collar located within each casing and mounted on said rod, a spring coiled about said rod between each collar and the adjacent guiding sleeve, oppositely projecting arms carried by each collar and extending through the slotted sides of the casings and the sides of the cage and adapted to be forced into engagement with said side racks when strain is removed from said rod.

[Claim 6 not printed in the Gazette.]

956,553. COIL-SHIELD FOR DYNAMO-ELECTRIC MACHINES. JOHN E. WEBSTER, Pittsburg, and FRANK DUFF, Allegheny, Pa., assignors to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 28, 1906. Serial No. 314,209.



1. A shield for a dynamo-electric machine coil and its leads, said shield having diagonally opposite edge portions bent partially around the coil leads to protect them from injury.

2. A projecting shield for a field magnet coil and leads of a dynamo-electric machine, said shield having edge portions bent partially around the coil leads.

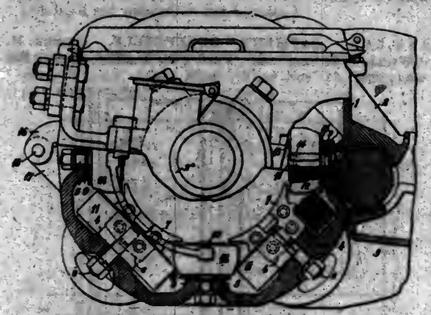
3. A shield for a field magnet coil of a dynamo-electric machine comprising a plate adapted to fit over the coil and cut away at its sides to avoid the coil terminals and having means for protecting and supporting the conductor leads adjacent to said terminals.

4. A shield or guard for a field magnet coil of a dynamo-electric machine comprising a plate cut away at opposite sides to avoid the coil terminals and having projections adapted to engage the inner surfaces of the coil, and a curved edge portion adjacent to each terminal to receive the corresponding conductor lead.

5. A shield or guard for a field magnet coil of a dynamo-electric machine comprising a plate cut away at opposite sides to avoid the coil terminals and having projections adapted to engage the inner surfaces of the coil, and edge portions adapted to partially surround the conductor leads to protect them from vibratory strains.

956,554. DYNAMO-ELECTRIC MACHINE. JOHN E. WEBSTER and JOSEPH L. DAVIS, Pittsburg, Pa., assignors, by mesne assignments, to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 9, 1906. Serial No. 305,975.

1. In a dynamo-electric machine, the combination with a magnetizable frame having a plurality of main polar projections and auxiliary or interpolar projections secured to the frame between the main projections, said frame being divided into two parts and hinge-connected, of coils for the interpolar projections and resilient means for supporting the coils across the dividing plane of the field frame.



2. In a dynamo-electric machine, the combination with a magnetizable frame comprising two hinge-connected parts and a plurality of polar projections, and coils mounted on the projections, of means for supporting the coils and for guiding the frame sections when they are swung on their hinges.

3. In a dynamo-electric machine, the combination with a magnetizable frame comprising two hinge-connected parts and having a plurality of polar projections adjacent to the plane of division in the frame, of coils for said projections and resilient means for supporting the coils and for maintaining a predetermined relative position between the two parts of the frame.

4. In a dynamo-electric machine, the combination with a field magnet frame having polar projections and coils mounted on said projections, of spring frames having side and end strips which are curved in opposite directions and are interposed between the coils and the frame.

5. In a dynamo-electric machine, the combination with a field magnet frame, a plurality of polar projections secured thereto and coils mounted on the projections, of resilient spacers interposed between the coils and the frame and comprising sheet metal punchings riveted together substantially in the form of a rectangle, the side and end punchings being bowed in opposite directions.

[Claims 6 and 7 not printed in the Gazette.]
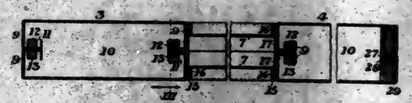
956,555. EDIBLE-NUT CRACKER. HELEN I. WEED, Buffalo, N. Y. Filed Apr. 2, 1909. Serial No. 487,514.



In a nut cracker, a base, one or more conical supports on said base, each of said supports containing a smooth depression in the apex thereof, adapted to receive a nut when held in any circumferential position by the operator, substantially as set forth.

956,556. METAL STRUCTURE. PETER M. WEAN, Youngstown, Ohio, assignor to The General Fireproofing Company, New York, N. Y., a Corporation of Ohio. Filed Mar. 11, 1908. Serial No. 420,877.

1. A metallic frame structure, composed of two abutted, complementary, plates or sheets having rail and stile portions, and constituting the entire frame structure, said plates or sheets having inturned flanges at the edges of each of the rail and stile portions, and key members driven through the rail and stile members and engaging said flanges to secure the two plates or sheets together, said key members extending vertically of the stiles and horizontally of the rails, and some of said members being extended into the corners of the structure so as to be common to both the rails and the stiles; substantially as described.



2. A metallic frame structure, composed of two abutted, complementary, plates or sheets having rail and stile portions, and constituting the entire frame structure, said plates or sheets having inturned flanges at the edges of each of the rail and stile portions, and key members driven through the rail and stile members and engaging said flanges to secure the two plates or sheets together, said key members extending vertically of the stiles and horizontally of the rails, and some of the vertical key members extending substantially the full thickness of the interior of the structure to form a solid reinforcement for an edge of the structure; substantially as described.

3. A metallic frame structure, composed of two abutted, complementary, plates or sheets having rail and stile portions, and constituting the entire frame structure, said plates or sheets having inturned flanges at the edges of each of the rail and stile portions, and key members driven through the rail and stile members and engaging said flanges to secure the two plates or sheets together, said key members extending vertically of the stiles and horizontally of the rails, and some of said keys having wedge portions within the structure, together with members which are engaged by said portions to lock the keys; substantially as described.

4. A metallic frame structure, composed of two abutted, complementary, plates or sheets having rail and stile portions, and constituting the entire frame structure, said plates or sheets having inturned flanges at the edges of each of the rail and stile portions, and key members driven through the rail and stile members and engaging said flanges to secure the two plates or sheets together, said key members extending vertically of the stiles and horizontally of the rails, and some of said members being extended into the corners of the structure so as to be common to both the rails and the stiles, together with moldings having portions extending into the structure and also secured by the keys; substantially as described.

5. A metallic frame structure, composed of two abutted, complementary, plates or sheets having rail and stile portions, and constituting the entire frame structure, said plates or sheets having inturned flanges at the edges of each of the rail and stile portions, and key members driven through the rail and stile members and engaging said flanges to secure the two plates or sheets together, said key members extending vertically of the stiles and horizontally of the rails, the keys at the outer edges of the structure being extended into the corners of the structure to substantially meet each other; substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

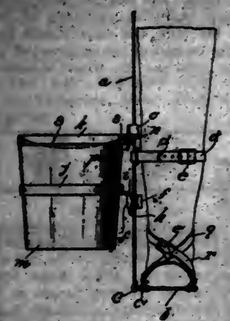
956,557. PAIL-HOLDER. JOSEPH WEINMANN, Duluth, Minn. Filed Dec. 16, 1909. Serial No. 533,263.

1. A pail-holder consisting of a pail-support; pail-holding devices carried thereby; a foot-plate attached to said pail-support; and means for fastening the latter in place.

2. A pail-holder consisting of a pail-support; pail-holding devices carried thereby; means for fastening said pail-support in place; and a foot-plate mounted on said pail-support free to turn.

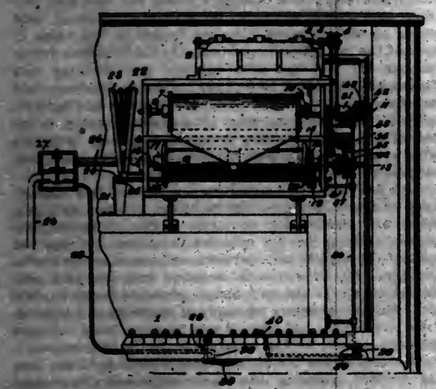
3. A pail-holder consisting of a pail-support; pail-holding devices carried thereby; means for fastening said pail-

support in place; and a foot-plate mounted on said pail-support free to turn and provided with fastening devices.



4. A pail-holder consisting of a leg-brace; a foot-plate attached thereto; and a ring adapted to hold a pail and carried by said leg-brace.

956,558. AUTOMATIC PLAYER. JOHN A. WEBER, New York, N. Y. Filed May 28, 1906. Serial No. 435,461.



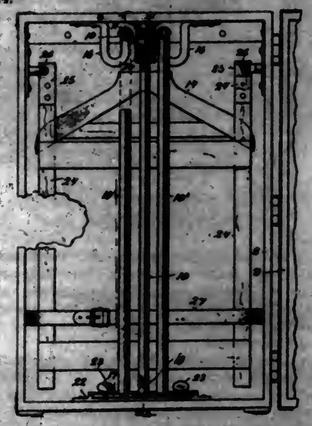
1. In an automatic player, the combination of a continuously driven rotating part, a wind-on roller spring pressed to carry one of its ends against the end of the rotating part, and manually operable means acting on the wind-on roller to carry its end away from the rotating part and thereby stop further rotation of said roller without interfering with the rotation of the rotating part.

2. In an automatic player, the combination of a driven spindle, a disk fixed on the spindle, a wind-on roller loose on the spindle, a spring acting on the roller to keep it normally in end-contact with the disk, a pneumatic, valve means adapted at will to operate the pneumatic, and a member operated from the pneumatic to contact with the roller and carry it out of its said end-contact with the disk.

3. In an automatic player, the combination of a motor, a music roll shaft, a rotating part, a wind-on roller in frictional end-contact with the rotating part, and clutch means for at will connecting the motor to the music roll shaft and disconnecting it from the rotating part as in rewinding the music sheet, and vice versa for connecting the motor to the rotating part and disconnecting it from the music roll shaft to drive the rotating part and wind-on roller to unwind the music sheet.

4. In an automatic player, the combination of a music roll shaft, a wind-on roller, a motor, a pin clutch between the motor and the music roll shaft, a second pin clutch between the motor and the wind-on roller, and a friction disk rotating with the driven member of the second pin clutch, said friction disk being in driving contact with the wind-on roller.

956,559. GARMENT-RECEPTACLE. GEORGE H. WEBSTER, Racine, Wis. Filed Feb. 2, 1910. Serial No. 541,824.



1. A receptacle, a horizontal rod, means by which the rod is permanently suspended in the receptacle to afford clearance throughout its length for slidable garment-hangers having direct primary support thereon, an extension rod in swing-union at one end with the rod aforesaid, a bar attached to the other end of the extension rod, a standard in swing-connection with the bar, and a fastening device carried by said bar for securing the same within said receptacle, said extension rod and standard being then parallel to one another at right-angles to said horizontal rod.

2. A receptacle, a horizontal rod suspended in the receptacle for the support of slidable garment-hangers, an extension-rod in swing-union at one end with the rod aforesaid, a standard in similar union with the other end of the extension-rod, a nut engaging a screw-threaded end of the standard, and a nut-engaging device in the upper front portion of said receptacle.

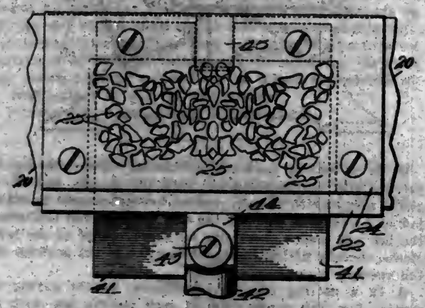
3. A receptacle, a horizontal rod suspended in the receptacle for the support of slidable garment-hangers, an extension-rod in swing-union at one end with the rod aforesaid, a standard in similar union with the other end of the extension-rod, a thumb-screw carried by the union of said extension-rod and standard for engagement with a socket in the lower front portion of said receptacle, a nut run on a screw-threaded end of the aforesaid standard, and a nut-engaging device in the upper front portion of the aforesaid receptacle.

4. A receptacle having the bottom thereof provided with a step, a horizontal rod suspended in the receptacle for the support of slidable garment-hangers, an extension-rod in swing-union at one end with the rod aforesaid, a bar secured to the other end of the extension-rod and engageable with said step, means in connection with the bar for detachably securing the same in the step, a standard in swing-connection at one end, with the bar, and a combined lengthening and locking device in connection with the other end of the standard.

5. A receptacle, a pair of parallel horizontal rods suspended in the receptacle for the support of slidable garment-hangers, extension-rods having ends thereof in swing-union with the rods aforesaid, a bar connecting the other ends of the extension-rods, means in connection with the bar for detachably securing the same in a seat with which the bottom of the receptacle is provided, a standard in swing-union at one end with said bar, a nut adjustable on the other end of the standard, and a nut-engaging device in the upper front portion of said receptacle.

[Claim 6 not printed in the Gazette.]

956,560. APPARATUS FOR MAKING COMBS, &c. JOSEPH WILCOX, Athol, Mass. Filed Nov. 13, 1909. Serial No. 527,820.



1. In a device of the character described, the combination of a base, a perforated die plate carried thereby, a set of die punches adapted to be forced down through the perforated plate, said base having an opening under the die plate through which the waste passes, and a flat plate removably carried by said base and located under the perforated plate over said opening to support the same while the die punches are operating upon it.

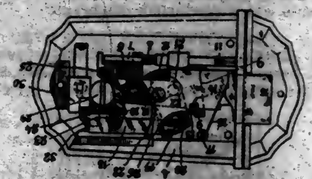
2. In a device of the character described, the combination of a supporting base having an open center, a perforated die plate supported upon said base at its edges, said base having a horizontal passage therein immediately below the die plate, a set of die punches corresponding in form and position with the perforations in the die plate and adapted to be forced down through them, and a removable plate supported near its edges by said base, fitting in said passage in the base, and located directly under the die plate for supporting the spaces between the perforations thereof while the die punches are operating.

3. In a device of the character described, the combination of a base having an open center, a perforated die plate supported upon said base at its edges, said base having a horizontal opening therein immediately below the die plate, a set of die punches corresponding in form and position with the perforations in the die plate and adapted to be forced down through them, a removable steel plate fitting in said passage in the base and located directly under the die plate for supporting the spaces between the perforations thereof while the die punches are operating, a handle fixed to said plate for operating it, and a buffer mounted on the end of the handle for engaging the front of the base and limiting the position of the die plate.

4. A die plate for making hair ornaments of plastic material comprising a support for a blank, a perforated plate fixed to the support, and a plunger having a cast metal head provided with a dove-tailed opening in its lower surface with ribs on the walls, punches located in said depression and extending perpendicularly to the face of the plunger, and a body of relatively soft cast metal introduced into said depression around said ribs and punches flush with the bottom of the head for holding the punches in position.

956,561. LOCK. JOHN H. WILKINS, Newark, N. J. Filed July 28, 1908. Serial No. 444,936.

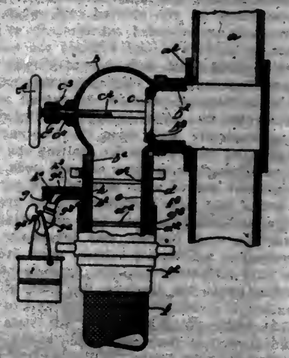
1. In a locking device, a latch adapted to be operated when said device is being used, a spring actuated bolt held within said device by a tumbler, a shoulder upon said latch adapted to operate said tumbler and release said bolt when said latch is operated, a second tumbler adapted to engage and hold said bolt in its projected position and a third tumbler having sliding bearing within said second tumbler and means for operating said third tumbler whereby said second tumbler is disengaged from said bolt and the same is withdrawn.



2. In a locking device, a latch adapted to be operated when said device is being used, a spring actuated bolt held within said device by a tumbler, a shoulder upon said latch adapted to operate said tumbler and release said bolt when said latch is operated, a second tumbler adapted to engage and hold said bolt in its projected position and a third tumbler having a projection engaging a curved slot within said second tumbler and means for operating said third tumbler whereby said second tumbler is disengaged from said bolt and the same is withdrawn, and means for locking said bolt in its withdrawn position.

3. In a locking device, a spring actuated latch adapted to be operated when said device is being used, a spring actuated bolt held within said device by a spring actuated tumbler, a shoulder upon said latch adapted to operate said tumbler and release said bolt when said latch is operated, a second spring actuated tumbler adapted to engage and hold said bolt in its projected position and a third tumbler engaging an irregular opening within said second tumbler and means for operating said third tumbler whereby said second tumbler may be disengaged by key or knob from said bolt and the same withdrawn.

956,562. ANTIDRIP DEVICE FOR FIRE-HOSE. HARRY F. BEERS and HERMON C. BUMPUS, New York, N. Y. Filed Sept. 27, 1909. Serial No. 519,661.



1. The combination with a standpipe of a hose coupling having a downwardly directed member with which the hose is adapted to be connected, said downwardly directed member being provided with a destructible diaphragm and at one side thereof with a drain device.

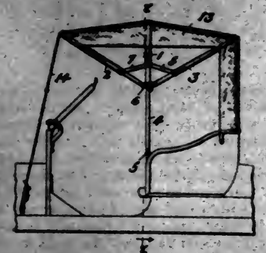
2. The herein described means for connecting a hose with a standpipe comprising a coupling provided with a valve and a member with which the hose is adapted to be connected, said member being provided with a destructible diaphragm.

3. The herein described means for connecting a hose with a standpipe comprising a coupling provided with a valve and a member with which the hose is adapted to be

connected, said member being provided with a destructible diaphragm and at one side thereof with a drain device which is normally open and adapted to be closed by pressure in the coupling.

4. The combination with a standpipe of a hose coupling provided with a valve and a projecting member with which a hose is adapted to be connected, said member being provided with a destructible diaphragm.

956,563. HOOD FOR ROAD-VEHICLES. CLOVIS BERTRAND, Barnes, London, England. Filed Dec. 12, 1908. Serial No. 467,282.

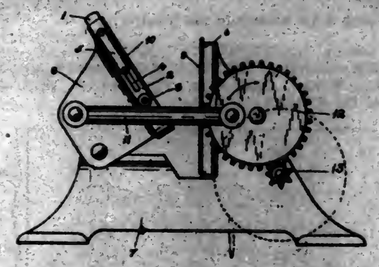


1. In folding hoods for road vehicles the combination of a supporting rod upon each side of a vehicle, pivots connecting the lower ends of such supporting rods to said vehicle, a main hoop-like member to extend across the vehicle having its two ends straight and tubular to fit over and telescopically move upon the free ends of said pivoted supporting rods, means for limiting the telescopic motion of said hoop-like member on said rods, a sliding sleeve-like bracket located upon each of said pivoted rods below the end of said main hoop-like member, free to slide on said rods and provided with lugs projecting forward and rearward on each bracket, two subsidiary hoop-like members extending across said vehicle, pivot pins uniting the ends of said subsidiary hoop-like members to said lugs on said sliding sleeve-like brackets, pivoted links connecting said subsidiary hoop-like members to said main hoop-like member, and means for holding the sleeve-like brackets stationary on the pivoted rods when the said hoop-like members are extended, substantially as set forth.

2. In folding hoods for road vehicles the combination of a supporting rod upon each side of a vehicle, pivots connecting the lower ends of such supporting rods to said vehicle, a main hoop-like member to extend across the vehicle having its two ends straight and tubular to fit over and telescopically move upon the free ends of said pivoted supporting rods, means for limiting the telescopic motion of said hoop-like member on said rods, a sliding sleeve-like bracket located upon each of said pivoted rods below the end of said main hoop-like member, free to slide on said rods, and provided with lugs projecting forward and rearward on each bracket, two subsidiary hoop-like members extending across said vehicle, pivot pins uniting the ends of said subsidiary hoop-like members to said lugs on said sliding sleeve-like brackets, two links at each side of the framework pivoted to each other and to the adjacent straight and tubular portion of the main hoop-like member and pivoted at their outer ends to the subsidiary hoop-like members, and means for holding the sleeve-like brackets stationary on the pivoted rods when the said hoop-like members are extended, substantially as set forth.

956,564. GUARD FOR CUTTING-MACHINES. SAMUEL B. BRANDAIRD, Grand Rapids, DANIEL B. UHL, Grandville, and FREDERICK W. KOCH, Grand Rapids, Mich.; said Uhl and said Koch assignors, by direct and mesne assignments, to Daniel K. Ide. Filed July 26, 1909. Serial No. 509,713.

1. A guard for cutting machines and similar devices having a movable jaw, such guard comprising an arm-lifting bar, guides upon the moving jaw and carrying the arm-lifting bar and means carried by the main frame making contact with the guard as the moving jaw closes, whereby the guard bar is moved across the position of the operator's arm.



2. In a cutting machine, or similar device having a moving jaw, the combination with the moving jaw of a guard arm carried thereby, guides loosely connecting such jaw and such arm, whereby the arm may rise and fall upon the jaw and means contacting with such guard as the jaw closes, thereby lifting the guard bar across the position of the operator's arm.

3. In a cutting machine, or similar device having a moving jaw, the combination of such moving jaw with a guard arm slidable thereon and rising and falling upon such jaw, means carried by such guard arm for making contact with the operating crank arm and a crank arm pivoted at one end to the moving jaw and at the other end to the driving mechanism, whereby, upon each revolution of the driving mechanism, the guard is made to rise and fall upon the moving jaw.

956,565. LEATHER-COMPRESSING MECHANISM FOR SHOE-FINISHING MACHINES. HARRY B. BORNSIDE, Providence, R. I. Filed Sept. 3, 1909. Serial No. 516,017.



1. A leather compressing mechanism having end frames, rolls rotatably supported by the end frames, means for adjusting the position of the rolls relative to each other, means for revolving the rolls and means for feeding leather to the rolls by gravity.

2. A leather compressing mechanism having end frames, rolls rotatably supported by the end frames, means for adjusting the position of the rolls relative to each other, means for automatically holding the rolls in an open adjusted position, means for revolving the rolls and means for feeding leather to the rolls by gravity.

3. A leather compressing mechanism comprising end frames, rolls rotatably supported by the end frames, means for adjusting the rolls relative to each other, means for automatically holding the rolls in an open adjusted position, means for revolving the rolls and means forming a mouth in the top of the mechanism to feed leather by gravity to the rolls.

4. A leather compressing mechanism comprising end frames, front and back rolls rotatably supported in the end frames, means for adjusting the front roll relative to the back roll, springs intermediate the rolls adapted to automatically hold the rolls in an open adjusted position; means for exerting a spring tension on the back roll, means for adjusting the spring tension on the back roll, means for revolving the rolls and downwardly curved plates which with the end frames form a mouth in the top of the mechanism to feed leather by gravity to the rolls.

5. A leather compressing mechanism comprising end frames, journal blocks supported in horizontal guide ways in the end frames, front and back rolls rotatably supported in the journal blocks, means for adjusting the front roll relative to the back roll, springs intermediate and engaging with the journal blocks and adapted to automatically hold the rolls in an open adjusted position, heavy springs engaging with the journal blocks of the back roll, means for adjusting the tension of the heavy springs on the journal blocks, stops on the end frames engaging with the journal blocks of the back roll to limit the forward movement of the back roll, means for revolving the rolls and means forming a mouth in the top of the mechanism to feed leather by gravity to the rolls.

[Claims 6 to 8 not printed in the Gazette.]

956,566. FOUNTAIN-SQUEEGEE. CHARLES BROWN, Chicago, Ill., assignor of forty-nine one-hundredths to Jasper Mason Smith, Chicago, Ill. Filed Sept. 30, 1908. Serial No. 455,585.



1. In a device of the class described a casing having an inner upwardly extending wall providing a reservoir, a binding and reinforcing member having a groove therein, a deflector integral with said reinforcing strip and extending upwardly in the casing and a squeegee strip secured in said groove in said member.

2. A squeegee embracing a head, a squeegee strip secured thereto, said head providing a reservoir for the water collected by the squeegee and a passage for the water from the squeegee to the reservoir and a removable deflector acting to deliver the water from the squeegee strip into the reservoir.

3. A squeegee embracing a head, a squeegee strip removably secured thereto, said head provided with an opening adjacent the squeegee strip, a reservoir for the water collected by the squeegee, and a curved deflector independent of the head acting to direct the water collected by the squeegee into the reservoir.

4. A squeegee embracing a casing having an inner wall extending upwardly to nearly the top providing a reservoir therein for the water collected by the squeegee and a removable deflector providing a passage between the same and said wall and adapted to direct the water into the reservoir.

5. A squeegee head containing a reservoir for the water collected by the squeegee, a deflector independent of the head providing a passage between the same and a wall of the reservoir leading from the squeegee to the top of the chamber for delivering the water into the reservoir.

[Claims 6 to 18 not printed in the Gazette.]

956,567. SENSITIZED SURFACE OR FILM FOR PHOTOGRAPHIC PURPOSES. WILLIAM H. CALDWELL, Mallaig, Scotland. Filed Apr. 24, 1906. Serial No. 313,103.

1. As a new article of manufacture, a sensitive photographic surface comprising a vehicle, a photographic sensitive salt and an ammonia derivative.

2. As a new article of manufacture, a sensitive photographic surface containing a silver salt and an ammonia derivative.

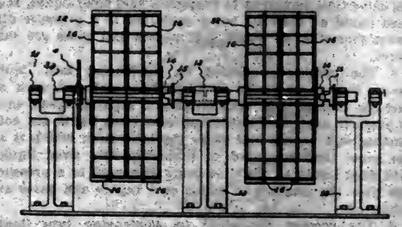
3. As a new article of manufacture, a sensitive photographic surface comprising a vehicle, a halogen salt, and an ammonia derivative.

4. As a new article of manufacture a sensitive photographic surface comprising a colloid vehicle, a halogen salt, and an ammonia derivative of the kind set forth.

5. As a new article of manufacture a sensitive photographic surface comprising a vehicle, a halogen silver salt, and an ammonia derivative of the kind set forth.

[Claims 6 to 14 not printed in the Gazette.]

956,568. DEVICE FOR PRESERVING EGGS. DAVID A. CALLAWAY, Pueblo, Colo., assignor of one-fourth to H. G. De Tienne and one-fourth to Lyman I. Henry, Pueblo, Colo. Filed Sept. 26, 1907. Serial No. 394,732.



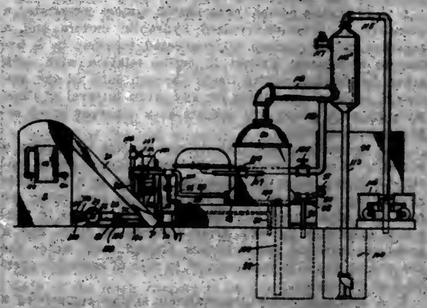
1. In a device for preserving eggs, an egg-package containing-rack having seats thereon, and a bar arranged to be moved laterally for engagement with and disengagement from said seats, said bar being adapted to retain egg-packages in the rack.

2. In a device for preserving eggs, an egg-package containing-rack having transverse members, there being an aperture in one and a slot in another of said members, a spring adjacent to said slot, and a bar arranged for removable engagement with said aperture and slot and to be retained therein by said spring, whereby the egg-packages are retained in said rack.

3. A device for preserving eggs, comprising a shaft, means for rotating said shaft, an egg-package containing-rack loosely mounted on said shaft, and means whereby the rotation of said shaft is imparted to said cabe.

4. A device for preserving eggs, comprising a shaft, means for rotating said shaft, an egg-package containing-rack loosely mounted on said shaft, and a clutch cooperating to rotate said case.

956,569. DESTRUCTION OF GARBAGE AND RECOVERY OF BY-PRODUCTS. WALTER M. CROSS, Kansas City, Mo. Filed July 27, 1908. Serial No. 445,563. Renewed Oct. 23, 1909. Serial No. 524,230.



1. The process consisting in condensing into liquid vapors and gases produced by heating material, such as garbage, then fixing said liquid, said fixed liquid being employed for condensing said vapors and gases the heat from which is at the same time employed to evaporate said fixed liquid, said fixed liquid at the time being subjected to a pressure less than that to which said vapors and gases are subjected.

2. The process consisting in condensing into liquid vapors and gases produced by heating material, such as garbage, then fixing said liquid, and employing said fixed liquid for condensing said vapors and gases, the heat from which is at the same time employed to evaporate said fixed liquid, said fixed liquid being at the time subjected to a pressure different than that to which said vapors and gases are subjected.

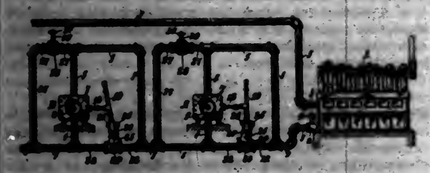
3. The process consisting in condensing into liquid vapors and gases produced by heating material, such as garbage, then mixing with said liquid a fixing agent, such as sulfuric acid, and employing said fixed liquid for condensing said vapors and gases the heat from which is at the same time employed to evaporate said fixed liquid, said fixed liquid at the time being subjected to a pressure different from that to which said vapors and gases are subjected.

4. The process consisting in condensing into liquid vapors and gases produced by heating material, such as garbage, then mixing with said liquid a fixing agent, such as sulfuric acid, and employing said fixed liquid for condensing said vapors and gases the heat from which is at the same time employed to evaporate said fixed liquid, said fixed liquid at the time being subjected to a pressure less than the pressure to which said vapors and gases are subjected.

5. The process consisting in condensing into liquid vapors and gases produced by heating material, such as garbage, then fixing said liquid, employing said fixed liquid for condensing said vapors and gases the heat from which is employed to evaporate said fixed liquid to a syrupy constituency, said fixed liquid at the time being subjected to a pressure different from that to which said vapors and gases are subjected, and then evaporating said syrupy liquid by heat derived from said vapors and gases.

[Claims 6 to 15 not printed in the Gazette.]

956,570. HYDRAULIC POWER-TRANSMISSION SYSTEM. ALBERT V. T. DAY, New York, N. Y., assignor to Conrad Hubert, New York, N. Y. Filed June 20, 1907. Serial No. 379,894.



1. A hydraulic power transmission system comprising a plurality of pressure-actuated hydraulic motors and a constant delivery pump all connected together in a hydraulic circulatory system in series relation with each other for forcing motive liquid through each of the motors in constant quantities for any given interval of time, whereby each motor will operate at a constant speed regardless of its load.

2. A hydraulic power transmission system comprising a plurality of pressure-actuated hydraulic motors and a constant delivery pump all connected together in a hydraulic circulatory system in series relation with each other for forcing motive liquid through each of the motors in constant quantities for any given interval of time, and a pressure-controlled safety-bypass around each motor for the motive liquid to pass through in case of excessive overload on the motor.

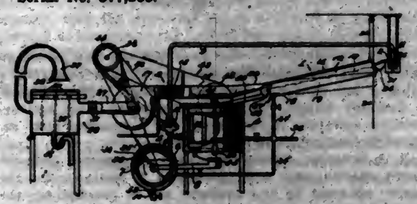
3. A hydraulic power transmission system comprising a plurality of hydraulic motors and a constant delivery pump all connected together in a hydraulic circulatory system in series relation with each other for forcing motive liquid through each of the motors in constant quantities for any given interval of time, and means for each motor actuated concurrently with the shutting down of the motor for opening a passage around the motor for the motive liquid so that any motor may be shut down without shutting down the pump, whereby the motors may be operated independently of each other.

4. A hydraulic power transmission system comprising a plurality of hydraulic motors and a constant delivery pump all connected together in a hydraulic circulatory system in series relation with each other for forcing motive liquid through each of the motors in constant quantities for any given interval of time, each motor including means for changing the liquid consuming capacity of the motor per cycle of operation, whereby the speed of motor operation may be changed while the volume of motive liquid passing through the motor in a given interval of time remains the same.

5. A hydraulic power transmission system comprising a circulating conduit for a hydraulic circulatory system, a plurality of hydraulic motors hydraulically connected in the system in series relation with each other, means for circulating a power transmitting liquid in the conduit at a substantially constant rate of movement at any given point for compelling each motor to operate at a constant speed regardless of the amount of its load, each motor including means for varying the capacity of the motor as to volume of motive liquid consumed per cycle, and a manual device for controlling the last-named means to change the speed of operation of the motor.

[Claims 6 to 14 not printed in the Gazette.]

956,571. MILK-CONDENSER. WALTER DEHETRE and WILFRED DEHETRE, Compton, Cal. Filed June 4, 1907. Serial No. 377,255.



1. A milk condenser comprising an aerator having a steam-jacketed inclined trough, a distributer for delivery of milk to the upper end of the aerator, means for the supply of heated air to the lower end of the aerator, a steam-jacketed tank to receive milk from the aerator, a steam-jacketed circulating pump adapted to receive the milk from the tank by a conduit and to give it rotary motion and force it through a peripheral outlet at its top into a conducting pipe connecting said pump with the distributer.

2. A milk condenser comprising a tank, a steam jacket circulating pump having a peripheral outlet, and adapted to receive milk, means to deliver milk from the tank to the cylinder of said circulating pump, means to whirl milk around in the cylinder, means to convey milk from the outlet, a box to receive the milk thus conveyed, said box being provided with an outlet, a trough to receive milk from the outlet of the box, an inclined trough to receive milk from the first mentioned trough, said inclined trough being provided with steps and arranged to deliver milk to the tank.

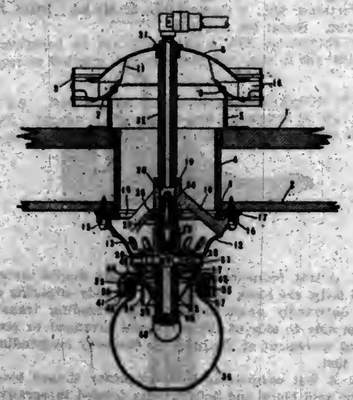
3. A milk condenser comprising a tank; means to heat the tank; a circulating pump provided with a cylinder having a peripheral outlet; means to heat the cylinder; a conduit to supply milk from the tank to the cylinder of the circulating pump; a revoluble blade in the circulating pump; a pipe communicating with the peripheral outlet; a pump for forcing milk through the pipe; a box; said peripheral outlet communicating with the pipe below the level of the box; a trough; said box being at the upper side of the trough and having an outlet to deliver milk to such trough; an inclined trough; a cover for the same; said inclined trough being open from end to end and adapted to deliver milk to the tank, and means to force hot air through said trough.

4. In a milk condenser, an aerator in the form of an inclined covered trough open at both ends, pivoted at one end and having means for raising or depressing its other end, provided throughout its length with transverse steps having plane surfaces, with means for forcing hot air over the upper surfaces of the steps, means for supplying milk at its upper end and for conducting it from its lower end.

5. An aerator comprising an inclined stepped trough, a blower to discharge into said trough, means for supplying the blower with purified air, means for heating such air, means for supplying milk to the upper end of the trough, a pipe discharging into such means, a circulating pump opening into such pipe, means for rotating milk in the circulating pump, means for heating the circulating pump, and means for conducting milk from the aerator to said circulating pump.

[Claims 6 and 7 not printed in the Gazette.]

956,572. GAS-LAMP. ROBERT M. DIXON, East Orange, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed June 22, 1906. Serial No. 322,821.



1. A gas lighting apparatus comprising, in combination, a hollow upright cylinder passing through the ceiling of the railway car or similar structure to be illuminated, and forming a chimney, an annular member depending from the ceiling and having a plurality of converging arms, a lamp body, connections between the lamp body and central portions of said arms adapted to support said lamp body from said arms, and a gasway descending centrally through said chimney and attached to said arms.

2. A gas lighting apparatus comprising, in combination, an annular member having a peripheral perforate portion in the shape of an inverted, truncated cone, a plurality of arms converging inwardly from the periphery of said member, and means supporting a lamp body from said arms.

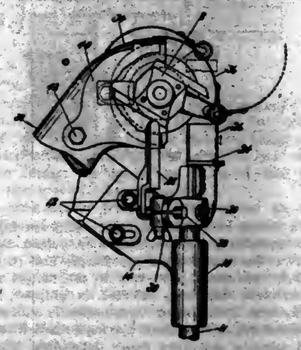
3. A gas lighting apparatus comprising, in combination, an upright hollow cylinder extending through a ceiling and forming a chimney, an annular member arranged at the lower end of said cylinder and having a plurality of upwardly converging arms joined together within said cylinder, a lamp body below said member, and connections extending from said lamp body to the joined ends of said arms.

4. An apparatus of the class described comprising, in combination, a hollow cylinder passing through a ceiling and forming a chimney, a ventilator overlying said cylinder, an annular member underlying said cylinder, and a tension member passing centrally down said chimney and secured at one end to said ventilator and at the other end to said member.

5. In gas lighting apparatus of the class described, in combination, a lamp body, a member depending from the ceiling of the structure to be lighted and having a plurality of arms extending inwardly from the periphery of said member to form a coupling, and means for suspending said lamp body from said coupling.

[Claims 6 to 18 not printed in the Gazette.]

956,573. SHIELD FOR TOOLS. MARY E. ELLIOTT, Lawrence, Mass., executrix of Alvin D. Elliott, deceased, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 24, 1905. Serial No. 251,798.



1. In a heel breasting machine in which the heel to be breasted is moved across the path of a rotary cutter the combination with said cutter of a shield arranged to extend normally over the cutter the entire width of its acting part and constructed to be progressively moved to expose said acting part as the heel is fed across said path.

2. A machine of the class described, having in combination, a rotary cutter, a work support arranged for movement to bring the work into contact with the cutter and a shield arranged to normally cover the acting portion of the cutter and to be progressively displaced to expose said acting portion as the work support is moved toward said cutter.

3. In a machine of the class described, a tool, a shield for the tool arranged independently of the tool and movable to expose said tool, a work support arranged to support the work normally out of operative relation to the tool and movable relatively to the tool to bring the work into contact with the tool, and means for controlling said shield in accordance with the position of the work support.

4. In a machine of the class described, a tool, a work support arranged to support the work normally out of operative relation to the tool, and movable in a fixed path to bring the work into the path of the tool, means permitting the path of the work support to be varied, and a shield for the tool movable to expose the tool, and arranged in the path of the work support to be actuated by said support.

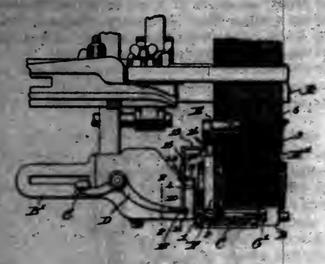
5. In a machine of the class described, a rotary tool, a work support arranged to support the work normally out of contact with the tool and movable to bring the work into the path of an acting part of the tool, a casing for the tool having a section adjacent said acting part of the tool movable to expose said part and arranged in the path of the work support to be actuated by said support.

[Claims 6 and 7 not printed in the Gazette.]

956,574. THIN-PLACE-DETECTING MECHANISM FOR LOOMS. HAYNES D. EUBANKS, West Durham, N. C., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Apr. 1, 1909. Serial No. 487,906.

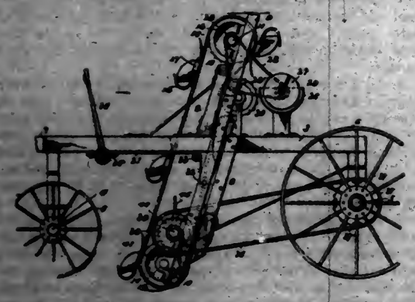
1. In a loom, a reciprocating temple, a thin-place detector, a shipper, releasing means therefor, including a

rearwardly extended, pivoted dog, a bunter fixedly mounted on and movable with the temple, and having its forward end upturned, and means controlled by the detector to normally maintain the dog elevated above the path of the upturned end of the bunter, detection of a thin place by the detector acting through said latter means to lower the dog into the path of and to be moved by the bunter on the forward movement of the temple, to effect shipper release.



2. In a loom, in combination, a reciprocating temple, a bunter movable therewith, means to permit lateral adjustment of the bunter upon the temple and to hold said bunter from movement relatively to the temple when lateral adjustment has been effected, a shipper, releasing means therefor including a longitudinally slotted, pivotally mounted dog, a rock-shaft having attached rearwardly extended arms, a detecting finger depending from one of said arms and normally resting upon the cloth adjacent the fell, the other arm being out-turned and extended loosely through the slot in the dog and maintaining the latter out of the path of the bunter, and means on and adjustable lengthwise of said arm and coöperating with opposite sides of the dog, to prevent lateral movement thereof, turning of the rock-shaft upon detection of a thin place in the cloth acting through the second-named arm to move the dog into the path of the bunter, to thereby effect the actuation of the shipper releasing means.

956,575. STONE-GATHERER. GEORGE H. FORD, Niagara Falls, N. Y. Filed Mar. 25, 1909. Serial No. 485,751.



1. In a stone gatherer, a wheeled truck, spaced inclined guides carried by the truck, a conveyer frame slidably mounted for vertical movement between said guides, an endless conveyer carried by said frame and provided with a plurality of gathering devices, a shaft journaled on the truck, and flexible connections secured to the body of the truck and having their intermediate portions extending through the conveyer frame for attachment to the shaft, thereby to raise and lower the conveyer frame.

2. In a stone gatherer, a wheeled truck, oppositely disposed guiding members carried by the truck, a conveyer frame slidably mounted for vertical movement between the guiding members and provided with rollers, there being similar rollers journaled on the truck, a conveyer carried by the adjustable frame, a shaft, chains secured to the truck and extending over the rollers for attachment to the shaft, and means for rotating the shaft to effect the vertical adjustment of the conveyer.

3. In a stone gatherer, a wheeled truck, a frame mounted for vertical movement on the truck, a conveyer carried by the frame, a plurality of spaced gathering devices carried by the conveyer, a transverse shaft having a ratchet secured thereto, flexible connections secured to the truck and extending through the vertical frame for attachment to the shaft, and a lever pivotally mounted on the truck and provided with a pawl arranged to engage the teeth on the ratchet for rotating the shaft to effect the vertical adjustment of the conveyer.

956,576. BLOCK-LAST. EDWIN L. GODING, Sanford, Me., assignor to O. A. Miller Treeing Machine Company, Portland, Me., a Corporation of Maine. Filed June 6, 1902. Serial No. 110,406.



1. A last, comprising complementary shaped instep block and body, the block having upon its body engaging surface an outwardly projecting portion extending transversely from side to side of the block and arranged to resist upward movement of the block on the body longitudinally of the last.

2. A last comprising complementary shaped block and body, said block and body having formed integrally therewith interlocking portions intermediate the ends of the block arranged to resist upward movement of the block upon the body.

3. A last comprising complementary shaped instep block and body, the block having formed integrally therewith an outwardly extending projection on its body engaging surfaces arranged to resist upward movement of the block upon the body.

4. A last comprising complementary shaped block and body, the block having formed integrally therewith an outwardly projecting portion on its body engaging surface constructed to resist upward movement of the block upon the body, said portion being provided with a forwardly extending shoulder at its lower extremity arranged to resist downward movement of the block on the body.

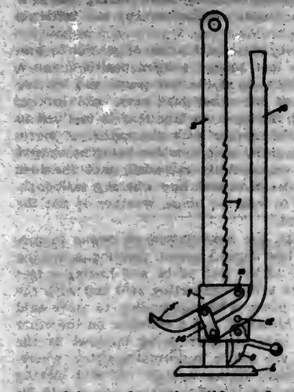
5. A block last, comprising complementary shaped block and body, the upper portion of the contacting surfaces of the two members immediately below the upper end of the block being deflected to form an obstruction to the removal of the block.

[Claims 6 to 10 not printed in the Gazette.]

956,577. LIFTING-JACK. AUGUST HALVORSON, Spokane, Wash. Filed Oct. 4, 1909. Serial No. 520,844.

1. A lifting jack comprising a standard, a slide mounted thereon, means for locking the slide on the standard, a lifting arm pivoted to the slide, a hand lever fulcrumed on the slide, and a link connecting the hand lever and the arm.

2. A lifting jack comprising a standard, a slide mounted thereon, means for locking the slide on the standard, a lifting arm pivoted at one of its ends to the slide, a hand lever fulcrumed on the slide, and a link connecting the hand lever to the arm, intermediate the ends of the latter.



956,578. ROPE FOR POWER-TRANSMISSION PURPOSES. HENRY K. HOLSMAN and CLARENCE H. BRYAN, Chicago, Ill. Filed Aug. 11, 1906. Serial No. 330,139.



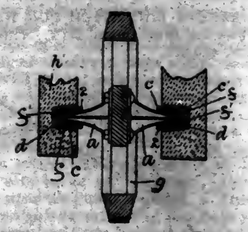
1. A rope for power transmission purposes composed of the linked chain flexible in all directions, with the four parallel ropes fitting in the angles formed by the links and extending in straight lines when the chain as a whole is straight, and a covering surrounding the chain and filling to hold them together in proper relationship and furnish a suitable engaging surface for the coöperating pulley.

2. A rope for power transmission purposes composed of the linked chain flexible in all directions, with the four ropes fitting in the angles formed by the links, the blocks 12 passing through said links, and a covering surrounding the chain and filling to hold them together in proper relationship and furnish a suitable engaging surface for the coöperating pulley.

3. A rope for power transmission purposes composed of the plain straight link chain flexible in all directions, with the four parallel ropes fitting in the angles formed by the links and extending in straight lines when the chain is straight, and a covering surrounding the chain and ropes to hold them together in proper relationship and furnish a suitable engaging surface for the coöperating pulley.

956,579. AXLE AND BEARING FOR VEHICLES. HENRY HOULDSWORTH, Keighley, England. Filed Nov. 20, 1908. Serial No. 464,065.

1. The combination with an axle of cup shaped thimbles secured to the ends of the axle to rotate therewith, the exterior of the closed ends of said thimbles being substantially hemispherical, and bushings in which said thimbles are free to rotate, the ends of said bushings contacting with the ends of said thimbles.



2. The combination with an axle of cup shaped thimbles secured to the ends of the axle to rotate therewith, the exterior of the closed ends of said thimbles being substantially hemispherical, and bushings in which said thimbles are free to rotate, the inner end walls of said bushing being also substantially hemispherical.

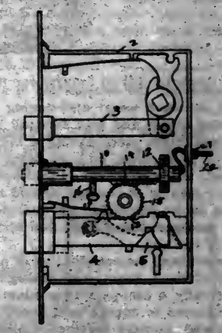
3. The combination with an axle having an angular cross section, of cup shaped thimbles fitting over the ends of said axle, and having substantially hemispherical ends, and bushings in which the said thimbles are free to rotate.

4. The combination with an axle of cup shaped thimbles secured to the ends of the axle to rotate therewith, said thimbles having substantially hemispherical ends, bushings in which said thimbles are free to rotate, detachable bearings for said bushings.

5. The combination with an axle, of cup shaped thimbles secured to the ends of the axle to rotate therewith, said thimbles having substantially hemispherical ends, bushings in which said thimbles are free to rotate, wheels operatively connected with said axle, and spacing means between said wheels.

[Claims 6 to 8 not printed in the Gazette.]

956,580. LOCK-ALARM. JAMES F. HOWARD, Spokane, Wash. Filed June 10, 1909. Serial No. 501,321.

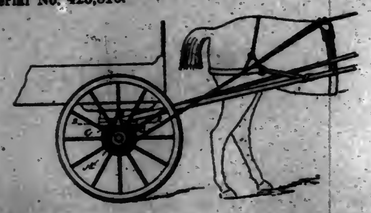


1. In an alarm, the combination with an electric circuit, including a signal; of a lock having a pair of bolts provided with racks, a pinion in mesh with the racks, one of the bolts being connected to the circuit, and said bolt being rotatable to disengage its rack from the pinion, keepers for the bolts, and a contact carried by the keeper of the rotatable bolt engageable thereby when it is shot.

2. In an alarm, the combination with an electric circuit including a signal; of a lock having a pair of bolts provided with racks, a pinion in mesh with the racks, one of the bolts being connected to the circuit, and said bolt being rotatable to disengage its rack from the pinion, a lock casing having a slot, a stem projecting from the rota-

table bolt through the slot of the lock casing to the outside thereof, keepers for the bolts, and a contact carried by the keeper of the rotatable bolt engageable thereby when it is shot.

956,581. SAFETY LINE-HITCH FOR WAGONS. MARLON JOHNSTON, Binghamton, N. Y. Filed Apr. 8, 1908. Serial No. 425,816.



In a device of the character described, the combination with the wheel of a band having slots formed therein, means engaging the spokes and passing through said slots for adjustably securing the band in position upon the wheel, said band having ratchet teeth formed on its face opposite the spokes, an inwardly and an outwardly projecting flange formed on the band, a movable support in which said flanges are engaged mounted on the band, a spring pressed pawl normally held in engagement with the ratchet teeth pivotally secured to the inner side of the movable support, means inserted in the movable support and engaging the pawl for releasing the same, and a double hook rein holding device secured on the outer side of the movable support.

956,582. LAST. HERMAN KEIL, Washington, D. C., assignor, by mesne assignments, to The Premier Last Company, Great River, N. Y., a Corporation of New York. Filed June 12, 1902. Serial No. 111,403.



1. In a hinged last, the combination of a fore-part hinge plate formed of sheet metal and having a hook formed above the hinge center and bent forward therefrom laterally, a heel-part hinge plate having a lug projecting forward from its upper edge, said lug being adapted to engage said hook, the engagement of said hook and lug serving to prevent opening of the last beyond normal position, and a locking device pivoted to the heel-plate and bearing against said fore-part hinge plate and serving to prevent the collapse of the last.

2. In a hinged last, the combination of a fore-part hinge plate formed of sheet metal, and having a hook bent up therefrom laterally, a heel-part hinge plate having a shoulder that is adapted to engage said hook, the engagement of said hook and shoulder serving to prevent opening of the last beyond normal position, and a locking piece pivoted to the heel-plate, and bearing against said fore-part hinge-plate and serving to prevent the collapse of the last, said locking piece having its bearing end inclined to a line connecting said end with the center of movement of said locking piece, and the fore-part hinge plate having a correspondingly shaped surface, whereby, said locking piece is enabled to take up lost motion.

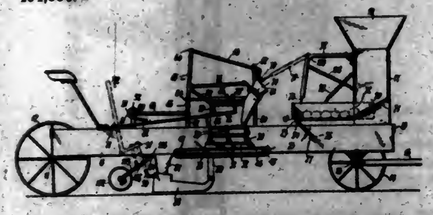
3. In a hinged last, the combination of means to prevent opening of the last beyond normal position, and a locking piece pivoted to one of the last parts, and bearing against a shoulder on the other last part, said locking piece at its free end, having a surface that is inclined to a line connecting said surface with the center of movement of the locking piece, said shoulder being complemental to said locking-piece whereby said locking piece is adapted to lock the hinge, whether or not the latter is entirely open.

4. In a hinged last, the combination of means to prevent opening of the last beyond normal position, and a locking piece pivoted to one of the last parts, and bearing against a shoulder on the other last part, said locking piece at its free end, having a surface that is inclined to a line connecting said surface with the center of movement of the locking piece, said shoulder being so shaped that when the last is normally extended, said shoulder will be inclined to the aforesaid line whereby said locking piece is adapted to lock the hinge, whether or not the latter is entirely open.

5. In a hinged last, the combination of means to prevent opening of the last beyond normal position, a locking piece pivoted on one of the last parts, and having a free end that is oblique to a line connecting said end with the pivot of the locking piece, a spring tending to move said locking piece in one direction, and a shoulder on the other of said last parts, said shoulder being inclined to the aforesaid line, when the last is in normal position, whereby, the pressure of said spring against the said locking piece, tends to cause the latter to travel along said inclined shoulder to take up lost motion.

[Claims 6 to 16 not printed in the Gazette.]

956,583. POTATO-PLANTING MACHINE. THOMAS J. KELLY, Fosston, Minn. Filed May 10, 1909. Serial No. 494,956.



1. In a potato planter, a wheeled support, a hopper rising from the said support and having a discharge opening, a tray pivotally connected to the hopper and in communication with its discharge opening and adapted for raising and lowering movement on its pivot, a cutter carried by the support, a tilting chute disposed above the cutter, mechanism for delivering a single potato from the tray to the chute, means centering the potato relative to the cutter, presser means acting upon the potato to effect the severing thereof by the cutter, and mechanism for delivering severed pieces of potato to an open furrow.

2. In a potato planter, a wheeled frame, a hopper supported by said frame, a tilting tray communicating with the hopper, a cutter device supported by the frame, a chute leading to the cutter device, a cutoff for said chute, means to engage a single potato in the tray, mechanism for transferring a potato supported by the potato engaging means to the chute, a connection between the cutoff and last named mechanism, and a single delivery means below said cutoff device to deposit said severed pieces of a potato to the ground.

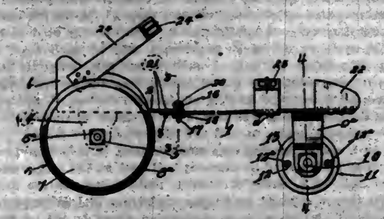
3. In a potato planter, a wheeled frame, a hopper supported by said frame, a tilting tray communicating with the hopper, a cutter device supported by the frame, a chute leading to the cutter device, a cutoff for said chute, means to engage a single potato in the tray, mechanism for transferring a potato supported by the potato engaging means to the chute, a connection between the cutoff and last named mechanism, a single delivery means below said cutoff device to deliver severed pieces of potatoes to the ground, driven connections operative by a pair of the wheels of the frame to impart movement simultaneously to the transferring mechanism and the single delivery means.

4. In a machine of the class described, a hopper, a shaking tray in communication with the hopper, a cutter, mechanism conveying a single potato from the tray to the cutter and mechanism successively delivering a single piece of potato to the ground.

5. In a machine of the class described, a hopper, a shaking tray in communication with the hopper, a cutter, mechanism conveying a single potato from the tray to the cutter, mechanism successively delivering a single piece of potato to the ground, and means driven upon the travel of the machine to simultaneously operate said mechanisms.

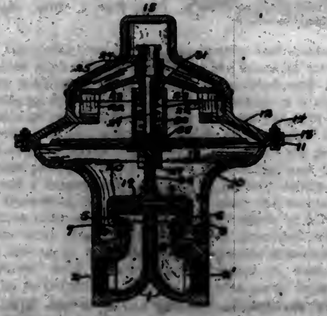
[Claims 6 to 8 not printed in the Gazette.]

956,584. ROLLER-SKATE. ORLANDO KIRKHAM, Marshalltown, Iowa. Filed July 29, 1909. Serial No. 510,157.



In a roller skate, the combination of a foot plate having a front and rear section lapped a short distance at their meeting ends and each provided with a longitudinal slot, the rear section having a series of openings in its forward end, an eye bolt working in said slots, an arm passing transversely through the eye thereof and provided with downturned extremities adapted to be received in certain of the openings of the rear sections, whereby the foot plate may be adjusted longitudinally, and means for fastening the skate to the shoe of the user.

956,585. FLUID-REGULATOR. GEORGE J. LEBER, Cleveland, Ohio. Filed June 8, 1908. Serial No. 437,287.



1. In a device of the character described, a casing, a chambered valve seat arranged within said casing and having openings in the side walls thereof, an inlet port communicating with one of said chambers and an outlet port communicating with the other chamber, a hollow valve arranged to telescope with said valve seat so as to control the openings therein and form a passageway for the fluid from the inlet chamber to the outlet chamber, a diaphragm arranged above said valve seat, means for admitting the fluid to said casing so as to exert a pressure on said diaphragm and means operatively connecting said valve and said diaphragm.

2. In a device of the character described, a casing, a chambered valve seat arranged within said casing and having openings in the side walls thereof, an inlet port communicating with one of the chambers and an outlet port communicating with the other chamber, a hollow valve arranged to telescope with said valve seat so as to control the openings therein and form a passageway for the fluid from the inlet chamber to the outlet chamber, said valve having an opening through which the fluid may pass to the interior of said casing, a diaphragm arranged above said valve seat and means for operatively connecting said diaphragm with said valve.

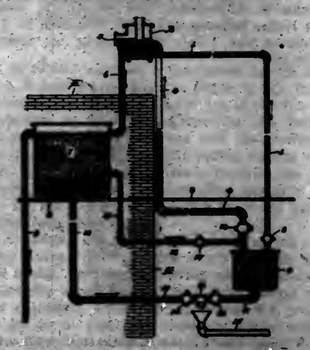
3. In a device of the character described, a casing, a chambered valve seat arranged within said casing and having openings in the side walls thereof, an inlet port communicating with one of said chambers, an outlet port communicating with the other chamber, a hollow valve arranged to telescope with said valve seat so as to control the openings therein and form a passageway for the fluid from the inlet chamber to the outlet chamber, said valve having an opening through which the fluid may pass to the interior of said casing, a diaphragm arranged above said seat, means operatively connecting said valve and said diaphragm and means for yieldingly holding said diaphragm against upward movement.

4. In a device of the character described, a casing, a chambered valve seat arranged within said casing and having openings in the side walls thereof, an inlet port communicating with one of said chambers, an outlet port communicating with the other chamber, a hollow valve arranged to telescope with said valve seat so as to control the openings therein and form a passageway for the fluid from the inlet chamber to the outlet chamber, said valve having an opening through which the fluid may pass to the interior of said casing, a diaphragm arranged above said valve seat, means operatively connecting said valve and said diaphragm and a spring for yieldingly holding said diaphragm against upward movement.

5. In a device of the character described a casing provided with intake and outlet ports, a hollow valve seat arranged in said casing so as to cut off communication between the intake and outlet ports except through the valve seat, a partition dividing the interior of said valve seat into chambers, said chambers being provided with openings, a diaphragm arranged in said casing above said valve seat, a valve arranged to close the openings in said valve seat, said valve being provided with an opening, an operative connection between said valve and said diaphragm and means for yieldingly resisting the upward movement of said diaphragm.

[Claims 6 to 9 not printed in the Gazette.]

956,586. TAR-DISPLACEMENT SYSTEM. ERNEST F. LLOYD, Detroit, Mich. Filed Oct. 7, 1907, Serial No. 396,179. Renewed Dec. 27, 1909. Serial No. 535,154.



1. In a tar displacement system, the combination with a hydraulic main, an overflow for said main, and a dis-

displacement tank supported below the level of said main and connected thereto to receive tar gravitating therefrom, of means for drawing the tar from the displacement tank, and a liquor supply tank to receive the liquor from the overflow connected to the displacement tank to discharge liquor into the same when the tar is drawn off to maintain the level of the liquor in the hydraulic main.

3. In a tar displacement system, the combination with a hydraulic main, of an overflow for said main, a displacement tank supported below the level of said main, a pipe connecting said main and tank to conduct the tar contained in the main into the tank, a valve in said pipe, a supply tank to receive the liquor from the overflow, a pipe connecting the supply tank and the displacement tank, a valve in said pipe, and means for drawing the tar from the displacement tank.

4. In a tar displacement system, the combination with a hydraulic main, of an overflow for said main, a displacement tank, a pipe connecting the said main and tank, a return pipe connecting said tank and main, a valve in said pipe, a valve controlled discharge pipe connected to the displacement tank, a supply tank, a pipe connecting the overflow of the main with said supply tank to conduct the liquor from the main thereto, an overflow for the supply tank and a valve controlled pipe connecting the supply tank with the displacement tank.

4. In a tar displacement system, the combination with a hydraulic main, of an overflow for said main, a displacement tank supported below the level of the main, a tar flow pipe connected to said main at one end and to the tank at its opposite end, a valve in said pipe, a return pipe connected at one end with the top of the displacement tank and at its opposite end with the main, a valve in said return pipe, a supply tank to receive the liquor from the overflow, a pipe connected at one end to the supply tank and at its opposite end to the top of the displacement tank, and a valve in said pipe.

5. In a tar displacement system, the combination with a hydraulic main and a liquor overflow for said main, of a displacement tank supported below the level of said main, a tar flow pipe connected at its upper end to the bottom of the main and at its lower end to the top of the displacement tank, a valve in said pipe, a valve for drawing off the tar in the displacement tank, a supply tank to receive the liquor from the overflow supported above the level of the displacement tank, a pipe connected at its upper end to the supply tank, and at its lower end to the displacement tank, and a valve in said pipe whereby when the discharge valve is opened to draw the tar from the displacement tank, the flow of tar is forced by the flow of liquor from the supply tank and the displacement tank filled.

[Claims 6 to 8 not printed in the Gazette.]

956,587. ROLLER-BEARING WITH ANGULAR ROLLS. CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed Sept. 22, 1909. Serial No. 518,927.



1. In a roller bearing, the combination, with a hub having a conical seat and a collar at the smaller end of such seat, of a series of conical rolls fitted to the conical seat and having their ends fitted to the said collar, each roll having a neck at the larger end, a cage with pockets fitted to the sides of the several rolls, a casing having tapering seat to embrace the said rolls and an annular recess at the larger end of such seat, and a clamp-ring fitted to turn in such recess and fitted to the necks of the said rolls and operating to confine the rolls in contact with the collar.

2. In a roller bearing, the combination, with a hub having a conical seat, of a series of conical rolls fitted thereto and having each a central stud upon its larger end inclined to the axis of the bearing, a clamp-ring arranged to embrace all of the studs to resist expansion of the rolls upon their seat, a casing having a tapering seat to embrace the said rolls and an annular recess at the larger end of such seat to inclose the clamp-ring, and an adjusting-ring secured adjustably in the casing with a series of balls fitted to seats upon the clamp-ring and upon the adjusting-ring.

3. In a roller bearing, the combination, with a hub having a conical seat and an annular ball-seat at the larger end of such conical seat, of a series of conical rolls fitted to the conical seat, each roll having a neck at the larger end, a casing having a tapering seat to embrace the said rolls and an annular recess at the larger end of such seat, a clamp-ring fitted to turn in such recess and fitted to the necks of the rolls, and an adjusting-ring held adjustably in the said recess and having an annular ball-seat opposed to the ball-seat upon the hub with a series of balls fitted to the opposed seats, as and for the purpose set forth.

4. In a roller bearing, the combination, with a hub having a conical seat and an annular ball-seat at the larger end of the hub, of a series of conical rolls fitted thereto and having each a central stud upon its larger end inclined to the axis of the bearing, a clamp-ring fitted to all of the said studs, a casing having a tapering seat embracing the series of rolls and an annular recess at the larger end of such seat extending beyond the larger end of the hub and threaded internally, the adjusting-ring p screwed within the casing, a series of balls fitted to ball-seats in the clamp-ring and the said adjusting-ring, the adjusting-ring o screwed within the casing and having an annular ball-seat opposed to the ball-seat upon the hub, balls o fitted to the two seats and means for securing the rings p and o within the casing when adjusted.

956,588. COMBINED ROLL AND BALL BEARING. CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed Nov. 1, 1909. Serial No. 525,609.



1. An anti-friction bearing having a hub with doubly conical seats and a casing with tapering seats opposed to the seats on the hub, and two series of balls and rolls adapted and arranged to roll between the seats upon the hub and casing, the balls of the two series and the rolls of the two series being arranged in pairs with the members of each pair in contact.

2. An anti-friction bearing having a hub with doubly conical seats and shoulders at the smaller ends of the seats, a casing with tapering seats opposed to the seats on the hub, and two series of alternate balls and rolls fitted respectively to the opposed seats with the ends of the rolls contiguous to the said shoulders.

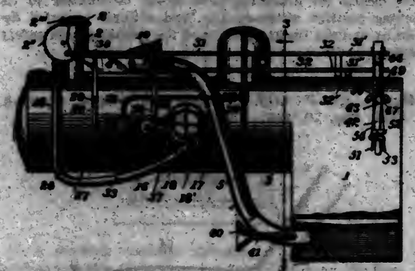
3. An anti-friction bearing having a hub with doubly conical seats and shoulders at the smaller ends of the seats, a casing with tapering seats opposed to the seats on the hub, and two series of alternate balls and rolls fitted respectively to the opposed seats with the ends of the rolls contiguous to the said shoulders, the balls of the two series and the rolls of the two series being arranged in alternate pairs, with the members of each pair in contact.

4. An anti-friction bearing having a hub with doubly conical seats and a casing with tapering seats opposed to the seats on the hub, two series of balls and rolls fitted between the seats upon the hub and casing, the balls of the two series and the rolls of the two series being arranged in pairs with the members of each pair in contact, and a cage for guiding the two series of balls and rolls within the casing.

5. An anti-friction bearing having a hub with doubly conical seats and a casing with tapering seats opposed to the seats on the hub, two series of balls and rolls fitted between the seats upon the hub and casing, the balls of the two series and the rolls of the two series being arranged in alternate pairs with the members of each pair in contact, the rolls being beveled at their contiguous ends to increase their bearing surface, a cage for guiding the balls and rolls in their movement within the casing, and one of the tapering seats within the casing being secured removably and adjustably therein to facilitate the assembling and regulation of the parts.

[Claims 6 and 7 not printed in the Gazette.]

956,589. SPARK-ARRESTER AND SMOKE-CONSUMER. WILLIAM T. LUPTON and JAMES M. LUPTON, Berkeley county, W. Va. Filed Mar. 9, 1909. Serial No. 482,247.



1. In apparatus for eliminating sparks and smoke, the combination with a furnace and a smoke stack, of a return pipe from said stack to said furnace provided with a lateral discharge vent opening to permit escape of a portion of products of combustion, a deflector adjacent said opening extending in the general direction of movement of the products of combustion impinging thereagainst for guiding the heavier particles away from said opening, and means for causing a forced circulation through said return pipe.

2. In apparatus for eliminating sparks and smoke, the combination with a furnace and a smoke stack, of a return pipe from said stack to said furnace provided with a screened discharge vent opening, a movable deflector pivoted adjacent said opening and arranged to close said opening or to deflect the heavier particles away from said opening, and means for creating a forced circulation through said return pipe.

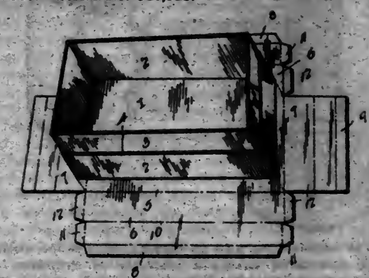
3. In apparatus for eliminating sparks and smoke, the combination with a locomotive furnace and smoke stack, of a return pipe from said stack to said furnace provided with a discharge vent opening, a rearwardly discharging hood for said vent opening, a deflector for the heavier particles adjacent said vent opening, and means for causing the circulation of products of combustion through said return pipe.

4. In apparatus for eliminating sparks and smoke, the combination with a furnace and a smoke stack, of a return pipe from said stack to said furnace provided with a discharge vent opening, means for injecting air into the return pipe to create a forced circulation from said stack, and an auxiliary circulation forcing means at the delivery end of said pipe, of less capacity than said injecting means.

5. In apparatus for eliminating sparks and smoke, the combination with a furnace and its discharge flue, of a return pipe from said flue to said furnace, a pump for forcing the return circulation from said flue through said return pipe, a motor connected to drive said pump, a movable closure for the discharge of said flue, and an operating connection for controlling both said motor and said movable closure.

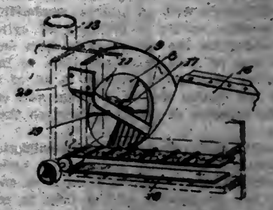
[Claims 6 to 17 not printed in the Gazette.]

956,590. BLANK FOR COVERING SHOULDERED-NECK BOXES. JOHN P. MARKEBY, Brooklyn, N. Y. Filed Sept. 4, 1908. Serial No. 451,697. Renewed Sept. 15, 1909. Serial No. 517,915.



A covering blank for a shouldered neck box comprising a body portion substantially of the shape of the box bottom, flap portions adapted to cover the box sides from the bottom up to the shoulder, and flap extensions adapted to cover the neck from the shoulder upward.

956,591. GRAIN-SAVING DEVICE. JOHN MARSHALL, Sibley, Iowa. Filed Nov. 24, 1909. Serial No. 529,702.



1. In a threshing machine, a fan casing having an eye, a conveyer, means for feeding the straw to the fan, and means extending partially across the eye of the fan casing and independent of the fan for directing the grain dislodged from the straw at said fan into the conveyer.

2. In a threshing machine, a fan casing having an eye, a conveyer, means for feeding straw through the eye in the fan casing, and a deflector extending partially across the eye in the fan casing for directing the grain dislodged by the straw into the conveyer.

3. In a threshing machine, a fan casing having an eye, a conveyer, means for feeding the straw through the eye in the fan casing, and a plate having one end thereof extending partially across the eye in the fan casing and its other end extending within the conveyer for positively directing the grain dislodged from the straw into said conveyer.

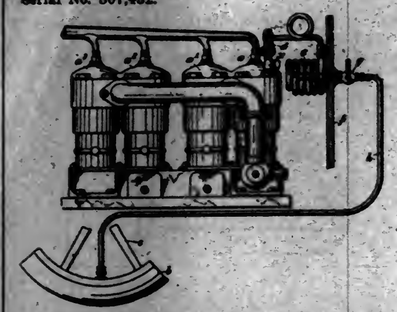
4. In a threshing machine, a fan casing having an eye, a conveyer extending from the fan casing to the threshing

cylinder, means for feeding straw through the eye in the fan casing, and a deflector extending partially across the eye in the fan casing for positively directing the loose grains dislodged from the straw into said conveyer.

5. In a threshing machine, a fan casing having an eye, a conveyer, means for feeding the straw through the eye in the fan casing, and an inclined plate extending from the conveyer casing to the eye in the fan casing and provided with a depending flange for positively directing the grains dislodged from the straw into said conveyer.

[Claims 6 and 7 not printed in the Gazette.]

956,592. TIRE-INFLATER FOR AUTOMOBILES. HIRAM P. MAXIM, Hartford, Conn. Filed July 13, 1909. Serial No. 507,432.



1. The combination with an internal combustion engine for an automobile having a plurality of cylinders, of means for conducting the burned gases from one of said cylinders to one or another of the tires to inflate the same, and means for cutting out ignition in all of the other cylinders of the engine during inflation.

2. The combination with an internal combustion engine for an automobile having a plurality of cylinders, of means for conducting the burned gases from one of said cylinders to one or another of the tires to inflate the same, means for cutting out ignition in all of the other cylinders of the engine during inflation and means for cooling the gases between the cylinder and the tire.

3. The combination with an internal combustion engine for an automobile having a plurality of cylinders, of means for conducting the burned gases from one of said cylinders to one or another of the tires to inflate the same, means for cutting out ignition in all of the other cylinders of the engine during inflation and means for equalizing the pressure of the gases between the cylinder and the tire.

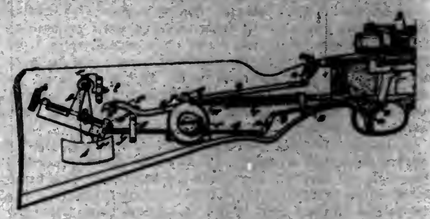
4. The combination with an internal combustion engine for an automobile having a plurality of cylinders, of means for conducting the burned gases from one of said cylinders to one or another of the tires to inflate the same, means for cutting out ignition in all of the other cylinders of the engine during inflation, and means for cooling the gases between the cylinder and the tire and for equalizing the pressure of the gases between the cylinder and the tire.

5. The combination with an internal combustion engine for an automobile having a plurality of cylinders, of a pipe coil to receive the burned gases from one of said cylinders, means to conduct the gases from said coil to one or another of the tires to inflate the same, and means for cutting out ignition in all of the other cylinders of the engine during inflation.

[Claims 6 to 8 not printed in the Gazette.]

956,593. FIRING MECHANISM FOR FIREARMS. ARMIN MÜLLER, Domaine Ruhleben, near Spandau, Germany. Filed Mar. 30, 1908. Serial No. 422,237.

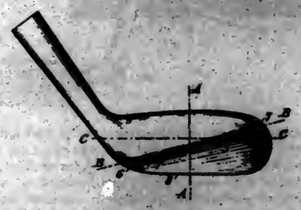
1. In a firearm, the combination of a rotatable disk having a locking arm, a rod, a spring for moving said rod rearwardly, a trigger connected with said rod, said disk being in one position adapted to hold said rod in its locked position, a breech bolt and means adapted to be operated by said breech bolt for turning said disk to its locking position, a catch device for holding said disk in its locked position and a gravity operated mechanism for releasing said catch device.



2. In a firearm having a gravity operated mechanism for controlling the firing of the cartridge when said firearm reaches a given elevation, a safety mechanism adapted to prevent the arbitrary release of said controlling mechanism when it is not intended that the latter shall act, and means for adjusting said safety mechanism to its locking position automatically.

3. In a firearm having a gravity operated mechanism for controlling the firing of the cartridge when said firearm reaches a given elevation, a safety mechanism adapted to prevent the arbitrary release of said controlling mechanism when it is not intended that the latter shall act, means for adjusting said safety mechanism to its locking position automatically, and a finger operated device at or near the trigger guard for releasing said safety device.

956,594. GOLF-CLUB. DAVID MYLES, Dundee, Scotland. Filed Aug. 20, 1907. Serial No. 389,880.

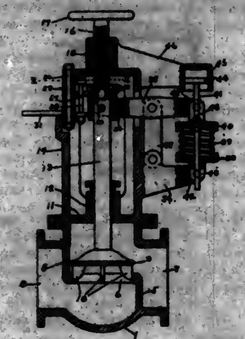


A metal golf club comprising a head having an elliptical conical enlargement on its rear face the longer axis of the cone lying at an angle to the longitudinal center of the head, the lower part of said enlargement pointing toward the heel and the higher part toward the toe.

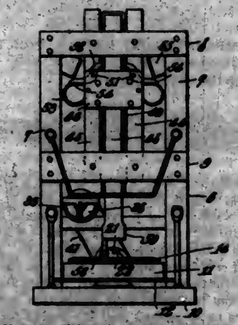
956,595. COMBINED AUTOMATIC THROTTLE AND STOP VALVE. ROBERT A. MCKEE, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Apr. 14, 1906. Serial No. 311,686.

1. The combination of a valve, manually operable screw-threaded means for moving said valve, means for connecting said valve with said screw-threaded means, means for automatically closing said valve, and movable means for disconnecting said connecting means, said disconnecting means being free from interference by said screw-threaded means during any manual operation thereof.

2. The combination of a valve, manually operable screw-threaded means for moving said valve, means for connecting said valve with said screw-threaded means, means for automatically closing said valve by separation from said screw-threaded means, and movable means for disconnecting said connecting means.



956,596. MOLDING-MACHINE. WILLIAM O'CONNOR, Smith, Mich. Filed Mar. 1, 1909. Serial No. 480,540.



1. A molding machine including a supporting base, a mold supporting table mounted for rotation on the base, a tamping element movable to operative position within the mold, while the latter is in a state of rest, means for feeding material to said mold, a plate slidably mounted on the base, a pawl carried by the plate and adapted to engage the teeth on the table to rotate the latter with a step by step movement, a rack carried by the plate, an operating shaft, a connection between the operating shaft and tamping element, and a toothed disk carried by the shaft and adapted to engage the rack on the plate for reciprocating the latter.

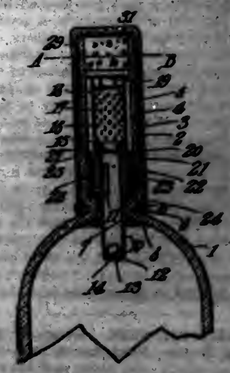
2. A molding machine including a supporting base, a mold supporting table mounted for rotation on the base with a step-by-step movement and provided with peripheral teeth, a tamping element movable to operative position within the mold, during each period of rest of said mold a spring pressed plate slidably mounted on the base, a pawl carried by said plate and adapted to engage the teeth on the table for rotating the latter with a step by step movement, a ratchet secured to said plate, a main operating shaft, a connection between the tamping element and operating shaft, a toothed disk carried by the operating shaft and adapted to engage the rack on the plate for raising the latter, a trough, a conveyer operating within the trough, and means for transmitting motion from the main operating shaft to the conveyer.

3. A molding machine including a supporting base, a mold supporting table mounted for rotation on the base with a step-by-step movement and provided with peripheral teeth, a tamping element movable to operative position within the mold, during each period of rest of the latter a plate slidably mounted on the supporting base, a pawl carried by the plate and adapted to engage the teeth on the table for rotating the latter, a spring bearing against one end of the plate, a rack carried by said plate, an operating shaft, a pitman forming a connection between the operating shaft and tamping element, a trough, a feed screw mounted for rotation within the trough, and means for transmitting motion from the main shaft to the feed screw.

4. A molding machine including a supporting base, a mold supporting frame mounted for rotation with a step-by-step movement on the base and provided with peripheral teeth, a vertically disposed frame arranged in the rear of the table, a carriage mounted for vertical movement on said frame, a tamping element carried by the carriage and normally locked against downward movement, means for feeding material to the mold, while the latter revolves a plate slidably mounted on the supporting base and provided with a pawl arranged to engage the teeth on the table for rotating the latter, an operating shaft, a pitman forming a connection between the operating shaft and carriage for reciprocating the latter, and means for intermittently disengaging the tamping element from engagement with the carriage, thereby to permit the latter to move to operative position within the mold at each period of rest of the latter.

5. A molding machine including a mold carrying table, a frame, a carriage slidably mounted for vertical movement on the frame and including spaced longitudinal bars connected by transverse plates, a tamping element slidably mounted between the longitudinal bars of the carriage and provided with ratchet teeth, spring pressed pawls normally supported in engagement with the teeth of the tamping element, a main operating shaft, a connection between the operating shaft and carriage for reciprocating the latter, stop plates disposed in the path of movement of the pawls for intermittently disengaging the latter from the teeth on the tamping element, thereby to permit the latter to drop by gravity within the mold, and means operable by said shaft for rotating the table.

956,597. NON-REFILLABLE BOTTLE. MIGUEL PEREZ, Chicago, Ill. Filed May 29, 1909. Serial No. 499,187.



1. The combination with a bottle neck, of a tubular casing therein, a foraminous tube extending through the casing, a slidable tube mounted in the casing and having one end formed into a valve seat and provided with a valve stop at its other end; said slidable tube being adapted to enter the foraminous tube and being imperforate through the greater portion of its length and provided near its top end with lateral ports adapted to establish communication with the foraminous tube when the bottle is inverted, and a valve mounted within the said slidable tube.

2. A receptacle having a neck, a valve casing disposed within said neck having terminal and interfitting intermediate sections, the lower section being slidingly mounted in the interfitting intermediate sections and provided with a valve seat, the upper section having an imperforate top constituting a stop to limit the movement of the lower section, a stop carried by the lower section, the peripheral edges of said stop being extended to produce a flange adapted to slidingly fit the interior walls of the upper section and adapted for contact with the imperforate top of said section, and a guard disk carried by the upper section in spaced relation to the top thereof whereby to prevent the insertion of a wire or other instrument for tampering with the valve casing.

3. A receptacle having a neck, a valve casing disposed within said neck having terminal and interfitting intermediate sections, the inner intermediate section having its lateral walls extended to produce a flange constituting a stop shoulder for contact with the adjacent end of one of the terminal sections, said inner member having a bore adapted to slidingly receive the other terminal section, a valve seat carried by the lower terminal section, a valve engaging said seat and adapted to gravitate in said lower terminal member, an imperforate top carried by said lower member constituting a stop to limit the movement of said valve and to form a compartment in said lower terminal member, and a transverse perforated guard disk carried by the upper member, said guard disk having its peripheral edges extended to produce a flange to slidingly fit the adjacent interior walls of the neck whereby to prevent the insertion of a tool for tampering with the valve casing.

4. A receptacle having a neck provided with a chamber, a valve casing disposed within said neck comprising terminal and intermediate sections, the outer intermediate section being adapted to engage and snugly fit the interior walls of said chamber, said outer section having an axial bore adapted to snugly conform to the contour of the outer surface of the inner intermediate member, a valve seat carried by the lower terminal member, said valve seat having a passage communicating with the neck of the bottle and adapted to permit the flow of the contents thereof through said valve seat, a valve engaging said seat, a guard plate carried by said upper member provided with a plurality of annular openings to permit the discharge of the contents of said receptacle and a means for positively holding said casing in said chambered neck.

5. A receptacle having a neck provided with a chamber having interior terminal stop shoulders, a sectional valve casing having telescoping terminal members, and interfitting intermediate members, the outer intermediate member being adapted to conform to the contour of the interior walls of said section and being terminally adapted for contact with stop shoulders thereof whereby to prevent said member from being forced into the body of said receptacle or pulled upward through the neck of the bottle, said outer member axially seating the inner intermediate member, said inner member being terminally adapted to receive the upper terminal member and to slidingly fit the lower telescoping terminal member, and a spring combined with said outer intermediate member to engage the stop shoulders of said chamber and impinge the top surface of said member whereby to positively hold the valve casing seated in said chamber.

[Claim 6 not printed in the Gazette.]

904,592. CHALK-LINE REEL. RUBEN L. PICKERING, Falling Spring, W. Va. Filed Nov. 9, 1909. Serial No. 527,019.

1. In a chalk line reel, a pair of plates having depressed portions, said depressed portions being provided with rods for rigidly connecting the two plates together, one of said plates having a central depression, said central depression being provided with apertures, a sleeve extending between said plates and capable of rotation, a rotatable plate mounted in said central depression, and having an aperture adapted to be brought into registration with said first named apertures, a handle pivotally mounted on said revolving plate, a lug carried by said handle and adapted to engage the aperture in said revolving plate and one of the apertures in said central depression, for locking said cylinder against rotation.



2. In a chalk line reel, a pair of plates connected together by rods, a sleeve disposed between said plates and capable of rotation, one of said plates having a depression, a rotatable plate mounted in said depression, said rotatable plate being rigidly connected with a rod, said rod being adapted to rotate said sleeve, a handle carried by said rotatable plate and adapted to lock said rotatable plate against rotation.

3. In a chalk line reel, the combination of a pair of oppositely disposed plates, a sleeve arranged between said plates, said sleeve having an enlarged end forming a cup, a spring arm pivotally mounted on one of said plates, a cover connected with said spring arm and adapted to form a closure for said cup, and a foldable handle mounted on said closure.

904,599. REGISTERING DEVICE FOR BILLIARD-TABLES. GEORGE C. POLLAY, Ithaca, N. Y. Filed Nov. 27, 1909. Serial No. 530,227.



1. The combination with a wire having a series of slidable counters arranged thereon, and a stop at one end of said series of counters; of a graduated scale disposed adjacent said counters and extending parallel with said wire, and movable in a line parallel with said wire; a projection carried by said scale and adapted to engage the end one of said series of counters which is most remote from the stop aforesaid; means whereby said projection may yield to permit counters to be pushed past it; means for preventing movement of said scale in the direction in which the counters are to be moved and permitting movement thereof in the opposite direction; and means for moving said scale in a direction opposite to that in which said counters are to be moved.

2. The combination with a wire having a series of slidable counters arranged thereon, and a stop at one end of said series of counters; of a second wire located beneath and extending parallel with said first mentioned wire; a graduated scale supported by and movable longitudinally of said second wire, and located beneath said series of counters; a projection located at one end of said scale and adapted to engage the end one of said series of counters which is most remote from the stop aforesaid; means whereby said projection may yield to permit counters to be pushed past it; means for preventing movement of said scale in the direction in which the counters are to be moved and permitting movement thereof in the opposite direction; and means for moving said scale in a direction opposite to that in which said counters are to be moved.

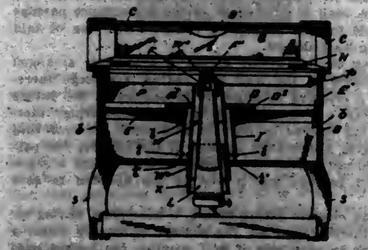
3. The combination with a wire having a series of slidable counters arranged thereon, and a stop at one end of said series of counters; of a second wire located beneath and extending parallel with said first mentioned wire; a graduated scale supported by and movable longitudinally of said second wire, and located beneath said series of counters; a projection located at one end of said scale and adapted to engage the end one of said series of counters which is most remote from the stop aforesaid; means whereby said projection may yield to permit counters to be pushed past it; a clutch member carried by said scale and adapted to engage said second wire to thereby prevent movement of said scale in the direction in which the counters are to be moved and permitting movement thereof in the opposite direction; and means for moving said scale in a direction opposite to that in which said counters are to be moved.

4. The combination with a wire having a series of slidable counters arranged thereon, and a stop at one end of said series of counters; of a second wire located beneath and extending parallel with said first mentioned wire; a graduated scale supported by and movable longitudinally of said second wire, and located beneath said series of counters; a projection located at one end of said scale and adapted to engage the end one of said series of counters which is most remote from the stop aforesaid; means whereby the end of said scale upon which said projection is located may yield and move away from said second wire to thereby permit counters to be pushed past it; a clutch member located at the other end of said scale and adapted to engage said first mentioned wire to prevent movement of said scale in the direction in which the counters are to be moved, and to permit movement of said scale in the opposite direction; and means for moving said scale in a direction opposite to that in which said counters are to be moved.

5. The combination with a wire having a series of slidable counters arranged thereon, and a stop at one end of said series of counters; of a second wire located beneath and extending parallel with said first mentioned wire; a graduated scale movable longitudinally of said second wire, and located beneath said series of counters; a projection located at one end of said scale and adapted to engage the end one of said series of counters which is most remote from the stop aforesaid; a spring member secured to and located adjacent that end of said scale which is provided with the projection as aforesaid, said spring member being in sliding engagement with said first mentioned wire whereby the end of said scale upon which said projection is located is yieldably supported from said second wire by means of said spring member; a supporting member located at the other end of said scale and being also in sliding engagement with said second wire; a clutch member located adjacent said supporting member and adapted to engage said first mentioned wire to prevent movement of said scale in the direction in which the counters are to be moved, and to permit movement of said scale in the opposite direction; and means for moving said scale in a direction opposite to that in which said counters are to be moved.

[Claims 6 to 8 not printed in the Gazette.]

956,600. INCUBATOR. LOUIS N. POSTER, Blair, Nebr., assignor to The Rayo Incubator Company, Blair, Nebr., a Corporation of Nebraska. Filed Feb. 7, 1908. Serial No. 414,799.



1. In an incubator, the combination with a substantially rectangular casing having outlets through its sides near its corners, supports therefor, a hinged cover, and an egg tray within the casing between its cover and bottom; of a source of heat exterior to the casing and having a main flue rising through the center of its bottom and through

said egg tray, a heater movably supported by the body of the casing and comprising flues of substantially H-shape whose extremities lead to said outlets, and connections between said main flue and the heater.

2. In an incubator, the combination with a casing having outlets through its sides near its corners, a cover therefor, and an egg tray within the casing between its cover and bottom; of a source of heat having a main flue rising through the bottom of the casing and the center of the egg tray, and an H-shaped heater disconnected from the cover and having a central hood detachably communicating with the upper end of said flue and its extremities communicating with said outlets.

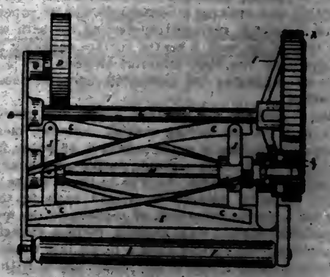
3. In an incubator, the combination with a casing having outlets near its corners, supports therefor, a cover, and an egg tray within the casing between its cover and bottom; of a source of heat having a main flue rising through the bottom of the casing and the center of the egg tray, and an H-shaped heater having a central hood detachably communicating with the upper end of said flue, the extremities of one of its parallel arms pivotally engaging two of said outlets and the extremities of the other arm movably engaging the remaining outlets.

4. In an incubator, the combination with a substantially rectangular casing having holes through its sides near its rear corners and notches in the upper edges of its sides near its front corners, a cover hinged to the casing, and an egg tray therein; of a source of heat having a main flue rising centrally within the casing, and an H-shaped heater having a hood detachably communicating with said flue and four extremities of which two are journaled in said holes and the others normally rest in said notches.

5. In an incubator, the combination with a substantially rectangular casing having holes through its sides near its rear corners and notches in the upper edges of its sides near its front corners, cushions within said notches, a cover hinged to the casing along its rear, and an egg tray; of a source of heat having a main flue rising centrally within the casing, an H-shaped heater detachably communicating with said flue, and reduced nipples in its four extremities of which two are journaled in said holes and the others normally rest in said notches.

[Claims 6 to 13 not printed in the Gazette.]

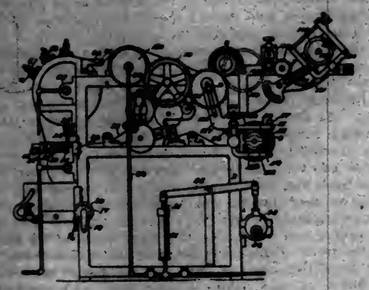
956,601. LAWN-MOWER. WILLIAM M. POTTER, Syracuse, N. Y., assignor to E. C. Stearns & Co., Syracuse, N. Y. Filed Apr. 16, 1909. Serial No. 490,395.



1. In a lawn mower, a casing-plate arranged on one side of the machine, a thin plate arranged on the opposite side and a tie-rod connecting said plates, said plates and tie rod forming the frame, and in combination therewith a single drive wheel journaled on the casing plate, a fixed knife supported on the frame, a shaft journaled between the plates, a ball-bearing for the shaft, curved knives fixed on the shaft, operative connections between the drive-wheel and the shaft, a roller journaled between the plates at the rear of the machine, and a supporting guide wheel journaled in the thin plate at the front of the machine.

2. In a lawn mower, the combination with a casing-plate arranged on one side of the machine, a thin plate arranged on the opposite side and a tie-rod connecting said plates, of a single drive wheel journaled on the casing plates, a fixed knife supported between the plates, a rotary cutter journaled between the plates, operative connections between the drive-wheel and the cutter, an elongated roller journaled between the plates at the rear of the machine, and a supporting guide wheel journaled in the thin plate at the front of the machine, said supporting guide wheel being arranged on the inner face of the thin plate, substantially as shown.

956,602. COATING-MACHINE. JOHN R. PULSIFER, Rochester, N. Y., assignor, by mesne assignments, to Empire Paper Company, Portland, Me., a Corporation of Maine. Filed Mar. 8, 1906. Serial No. 304,807.



1. In a machine for paraffinizing paper, the combination with a coating material bath, a movable surface dipping therein, a surface for dispersing said material and a surface for chilling it, of means for guiding and drawing a web of paper over said surfaces successively to apply the material, impregnate the fibers of the papers therewith while in the liquid condition and then convert it into a solid state and devices for distributing the coating material as the web passes over the dispersing surface.

2. In a coating machine, the combination with means for guiding and drawing a continuous web of paper and a bath, of a movable surface transferring the bath material to one face of the web, a heated surface engaging the web and dispersing the bath material thereon and a chilled surface also engaging the web on its uncoated face to set the coating.

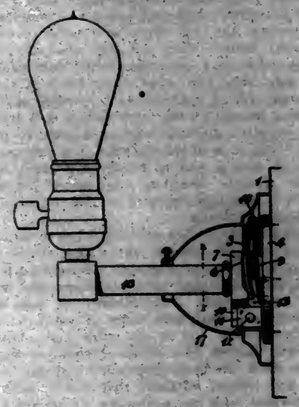
3. In a machine for coating paper, the combination with a bath for containing coating material, means for drawing and guiding a continuous web of paper in proximity to the bath, of a movable surface traveling in the bath and contacting with the web to transfer the coating material adhering thereto from said bath to the web, means for adjusting the area of contact of the web with said movable surface and another surface engaging the web to convert the coating from a liquid into a solid state.

4. In a coating machine, the combination with means for guiding and drawing a continuous web of paper, a bath for containing coating material and a roller dipping into the bath and applying the coating material to the web, of means for adjusting the area of contact of the web on the roller and adjustable driving devices for rotating the latter at variable speeds relatively to the movement of the web.

5. In a coating machine, the combination with means for guiding and drawing a continuous web of paper, a coating material bath and an applying roller rotating therein and contacting with one face of the paper, of a revolving cylinder engaging the uncoated face of the web to retain the coating material in liquid condition, a cylinder also engaging the uncoated face of the web to convert the coating material into a solid state and means for revolving the roller and cylinder, means for heating the bath, applying roller and dispersing cylinder and means for chilling the converting cylinder.

[Claims 6 to 19 not printed in the Gazette.]

956,603. ELECTRIC-FIXTURE FITTING. EDWARD C. RUTH, Mount Vernon, N. Y. Filed Nov. 6, 1909. Serial No. 526,500.



1. In an electric fixture fitting, a base plate arranged to be secured to the wall and having a passage therethrough, a coupling arranged to be secured to the fixture and having a passage therethrough, coöperating interlocking lugs carried by both of said parts, each of said parts having a clearance passage at the side for the passage of circuit wires.

2. In an electric fixture fitting, a base plate arranged to be secured to the wall and having a passage therethrough, a coupling arranged to be secured to the fixture and having a passage therethrough, coöperating interlocking lugs carried by both of said parts, each of said parts having a clearance passage at the side for the passage of circuit wires, one of said lugs being hook-shaped.

3. In an electric fixture fitting, a base plate arranged to be secured to the wall and having a passage therethrough, a coupling arranged to be secured to the fixture and having a passage therethrough, coöperating interlocking lugs on opposite sides of the passage through said base plate, each of said parts having a clearance passage at the side for the passage of circuit wires, one of said lugs being hook-shaped.

4. In an electric fixture fitting, a base plate arranged to be secured to the wall and having a passage therethrough, a coupling arranged to be secured to the fixture and having a passage therethrough, coöperating interlocking lugs carried by both of said parts, each of said parts having a clearance passage at the side for the passage of circuit wires, certain of said lugs having a registering pin passage and a locking pin adapted to said passage.

5. In an electric fixture fitting, a base plate having an opening therethrough for the passage of circuit wires, a hooked lug on each side of said opening, the hooked ends of said lugs projecting in the same direction, a coupling arranged to be secured to the stem of a fixture, lugs arranged to engage with the hooked lugs on the base plate, and means to prevent the accidental disengagement of said parts when assembled.

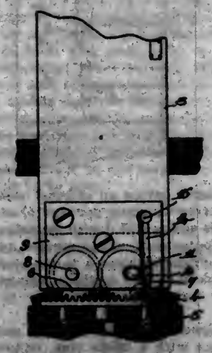
[Claim 6 not printed in the Gazette.]

956,604. ICE-SEVERING DEVICE. GEORGE F. SAVOY, Pewaukee, Wis. Filed May 3, 1909. Serial No. 493,498.



In a device for severing ice by electrically generated heat, an angular severing blade of high resistance, an electric conductor leading from an electric generator to said blade, and an electric conductor leading from said blade back to said generator.

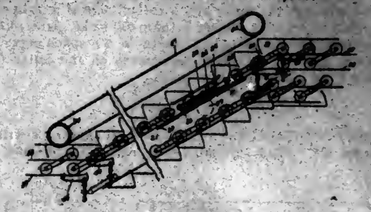
956,605. LOCKING DEVICE FOR ROTATIVE PARTS. FREDERICK A. SCHLUNS, Revere, Mass. Filed Feb. 2, 1909. Serial No. 475,550.



1. In a device of the class described, the combination with a fixed beveled gear, of a rotative element mounted to rotate about the axis of said gear, two beveled gears carried by the rotative element and both constantly meshing with the fixed gear, one of said latter gears being movable in its bearing toward and from the other gear whereby when the rotative element revolves in one direction said gears are disconnected while when the rotative element is turned in the opposite direction, said gears are brought into mesh thereby to lock said element from rotation.

2. In a device of the class described, the combination with a fixed gear, of a rotative element mounted to rotate about the axis of said gear, two gears carried by the rotative element and both meshing with the fixed gear, one of said latter gears being movable into and out of mesh with the other gear, and means to control the movement of the movable gear.

956,606. CONVEYER. CHARLES D. SHERBORN, Yonkers, N. Y. Filed June 6, 1906, Serial No. 320,405. Renewed June 26, 1909. Serial No. 504,647.



1. In a device of the class described, a way providing an inclined and horizontal trackage, a series of steps normally traveling on said way, and means to equalize the risers when the steps are stationary.

2. In a device of the class described, a way providing an inclined and horizontal trackage, a series of steps normally traveling on said way, and means at the intersection of the inclined and horizontal portions of the run to equalize the risers when the steps are stationary.

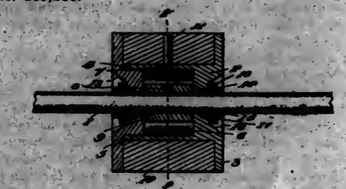
3. In a device of the class described, a way providing an inclined and horizontal trackage, a series of steps normally traveling on said way, and movable members at the intersection of the inclined and horizontal portions of the run to raise a step above its normal line of travel.

4. In a device of the class described, a way providing an inclined and horizontal trackage, a series of steps normally traveling on said way, and movable members at the intersection of the inclined and horizontal portions of the run to lower a step below its normal line of travel.

5. In a device of the class described, a way providing an inclined and horizontal trackage, a series of steps normally traveling on said way, and movable track-sections to equalize the risers when the steps are stationary.

[Claims 6 to 31 not printed in the Gazette.]

956,607. SELF-OILING PULLEY. GEORGE A. SNYDER, Montgomery, Mich., assignor of one-half to Arleas C. Overly, Camden, Mich. Filed Aug. 18, 1908. Serial No. 449,183.

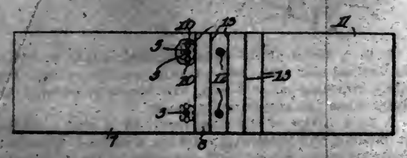


1. A pulley formed of two lateral sections adapted to be engaged with each other to form a barrel and inclosing an oil chamber, a cylindrical non-metallic body portion surrounding the barrel, said body portion and barrel having alined passages leading to the oil holding chamber, a plug closing the passages through the body portion and barrel and holding the body portion to the barrel, and a collar located within the barrel but of smaller diameter than the same, said collar being approximately equal in length to the space between the inner faces of the sections forming the pulley and being thereby adapted to hold the pulley from lateral movement, and means on the collar for holding it in place on a shaft.

2. A pulley comprising a hub made in two sections, one of said sections having an outwardly projecting flange and a transversely extending cylindrical barrel, the other of said sections having a hub adapted to enter and have screw threaded engagement with the interior of the barrel and provided with an outwardly projecting flange, a cylindrical non-metallic body portion surrounding the barrel and held between the flanges of the hub, said body

portion and barrel having alining passages, a plug closing the passages through the body portion and barrel, stuffing boxes on each of the hubs adapted to surround a shaft passing through the hubs, and a collar located within the barrel but of smaller diameter than the same, said collar being approximately equal in length to the space between the inner faces of the hubs, and means on the collar for holding it in place upon the shaft.

956,608. BOOKBINDING. EUGENE J. SULLIVAN, Roaring Spring, Pa. Filed July 20, 1909. Serial No. 508,560.



1. In a book binding, in combination with a back, covers flexibly joined thereto, shanks, heads at one end of said shanks, flattened plate portions at their opposite end and means, carried by said plate portions, for securing said shanks to said cover.

2. In a book binding, in combination with a back, covers flexibly joined thereto, shanks, heads at one end of said shanks, flattened plate portions at their opposite end, means, carried by said plate portions, for securing said shanks to one of said covers and resilient means in said other cover for clamping said cover to said shanks.

3. In a book binding, in combination with a back, covers flexibly joined thereto, one of said covers being provided with perforations interposed between slots, shanks adapted to fit said perforations, plates secured to said shanks, projections on said plates adapted to be received by said slots and resilient means provided in the other cover for clamping said covers in place.

4. In a book binding, in combination with a back, covers flexibly joined thereto, shanks, heads at one end of said shanks, flattened plate portions at their opposite end, means, carried by said plate portions, for securing said shanks to one of said covers, resilient means in said other cover for clamping said cover to said shanks and spaced transverse flexible portions in said cover, as and for the purposes set forth.

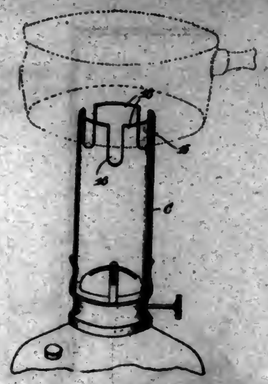
5. In a book binding, in combination with a back, covers flexibly joined thereto, one of said covers being provided with perforations interposed between slots, shanks adapted to fit said perforations, plates secured to said shanks, projections on said plates adapted to be received by said slots, resilient means provided in the other cover for clamping said covers in place and spaced transverse flexible portions in said latter cover, as and for the purposes set forth.

956,609. LAMP-CHIMNEY. PALMER TENNANT, Hagerstown, Md. Filed Nov. 25, 1907. Serial No. 403,701.

1. A glass lamp chimney adapted to support a heating vessel said lamp chimney being provided at its upper extremity with straight, approximately vertical side walls indented by notches to form a plurality of horizontally curved uprights, approximately vertical lips or lugs with extended horizontal upper edges to firmly support a heating vessel placed directly thereon.

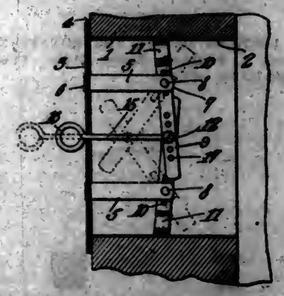
2. A lamp chimney adapted to directly support a heating vessel upon its upper extremity, said chimney being formed of approximately equal thickness throughout and the side walls, at the upper end of the chimney, being straight, approximately vertical, disposed within the minor perimeter of any subjacent portion of the chimney, and formed with a level, approximately horizontal upper edge forming an extended support for a heating vessel placed thereon; said approximately vertical side walls being apertured for the escape laterally of products of combustion.

3. A glass lamp chimney adapted to support a heating vessel, the walls of the upper portion of said chimney



being approximately parallel to its axis and formed with apertures for the escape of the products of combustion.

956,610. FLUE-STOPPER. GEORGE O. TRUAX, Good Thunder, Minn. Filed May 26, 1909. Serial No. 498,410.



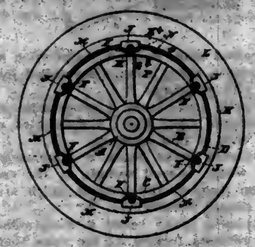
1. A flue stopper having an external member, an internal member having clamping portions pivoted together at their inner ends and provided with yieldable clamping portions at their outer ends, strips secured to said external member, and terminally pivoted to the clamping portions of said inner member, and means combined with said internal member for adjusting the same to operative position.

2. A flue stopper having an external member provided on its inner face with a fabric ring, adjustable clamping members pivotally connected together at one end and terminating in yielding clamping portions, strips secured at one end to said external member and pivotally connected at the other to said clamping members, and a pull-rod assembled with said clamping members and projecting through said external member whereby to adjust the clamping members to operative position.

3. A flue stopper having a cushioned outer member adapted to form a closure for a flue, an adjustable inner member terminating in yielding transverse loops for engagement with the inner thimble of a flue, spaced strips secured to said outer member and supporting said inner member, and a pull rod pivotally connected to said inner member and projecting through said outer member whereby to adjust the clamping members to operative position.

4. A flue stopper having an outer member having spaced strips secured to its inner face, said strips being provided terminally with transversely disposed pivot pins, an inner member having spaced yielding clamping portions provided with adjustable pivotally connected shanks, said shanks having longitudinal grooves adapted to slidingly fit the transverse pivot pins of the strips whereby to permit the lateral adjustment of said shanks, and a pull rod assembled with said inner clamping members and operating to hold the clamping portions in engagement with the inner thimble of a flue.

956,611. AUTOMOBILE-WHEEL. WILLY TISCHBEIN, Hanover, Germany. Filed July 29, 1908. Serial No. 446,017.



1. A wheel provided with a main rim having an aperture, an auxiliary rim circumferentially spaced therefrom, means for detachably securing said auxiliary rim in position on the main rim, projections on one of said rims in the circumferential space between said rim located on either side of said aperture, a single projection on the other rim also in said circumferential space adapted to enter the space between said two projections to prevent creeping of the auxiliary rim, said single projection being provided with an aperture arranged to aline with the aperture in the main rim for the accommodation of the valve stem.

2. A wheel provided with a main rim having an aperture, an auxiliary rim circumferentially spaced therefrom, means for detachably securing the auxiliary rim in position on the main rim, projections on said main rim in the circumferential space between said rims located on either side of said aperture, a single projection on said auxiliary rim also in said circumferential space arranged to enter the space between said two projections to prevent creeping of the auxiliary rim, said projection on the auxiliary rim being provided with an aperture adapted to aline with the aperture in the main rim for the accommodation of the valve stem.

956,612. LEATHER CUP. ISAAC H. VENN, Yonkers, N. Y., assignor to Otis Elevator Company, East Orange, N. J., a Corporation of New Jersey. Filed Sept. 25, 1902. Serial No. 124,864.



1. As an article of manufacture, a packing having its peripheral portion upset and solidified.

2. As an article of manufacture, a dried leather packing cup having its peripheral portion upset and solidified.

3. As an article of manufacture, a packing cup having a smooth peripheral edge and the peripheral portion upset and condensed.

4. As an article of manufacture, a cup-shaped leather packing with a bottom having a central opening and a cylinder or wall portion hardened, compressed or solidified to a greater extent than the said bottom.

5. As a new article of manufacture, a leather cup having its peripheral flange upset and solidified.

[Claims 6 to 13 not printed in the Gazette.]

956,613. SUPPLY-CASE. HOWARD F. WALLACE, Los Angeles, Cal. Filed Apr. 27, 1909. Serial No. 492,900.



1. A case for the purposes stated, comprising a tray having walls, article receptacles formed as separate boxes resting on said tray and arranged in rows, covers for said receptacles and strip means extending between said rows of article receptacles, and provided above said receptacles with means for retaining and guiding the covers of said receptacles, said strip means being removably held in position by the receptacles and the walls of the tray.

2. A case for the purposes stated, comprising a tray having walls, article receptacles resting on said tray and arranged in rows, covers for said receptacles strip means extending between said rows of article receptacles and provided above said receptacles with means for retaining and guiding the covers of said receptacles, the number of covers in each row being one less than the number of receptacles to enable sliding movement of the covers to expose any one of the receptacles.

3. A case for the purposes stated, comprising a tray having walls, article receptacles formed as separate boxes resting on said tray and arranged in rows, covers for said receptacles strip means extending between said rows of article receptacles and provided above said receptacles with means for retaining and guiding the covers of said receptacles, the number of covers in each row being one less than the number of receptacles to enable sliding movement of the covers to expose any one of the receptacles, each of said strip means comprising angle strips with flanges extending over and under the covers said strip means being removably supported within the tray by engagement with the receptacles and the walls of the tray.

4. A case for the purposes stated, comprising a tray having walls, article receptacles formed as separate boxes resting on said tray and arranged in rows, covers for said receptacles strip means extending between said rows of article receptacles and provided above said receptacles with means for retaining and guiding the covers of said receptacles, the number of covers in each row being one less than the number of receptacles to enable sliding movement of the covers to expose any one of the receptacles, and an angle strip at the forward and rear ends of the separating strip means and having a flange extending over said strip means to hold the same in place said strip means being removably supported within the tray by engagement with the receptacles and the walls of the tray.

5. In a case for the purpose stated, a tray, a plurality of rows of boxes removably resting on the bottom of the tray, a pair of stripe extending between each of the adjacent rows of boxes and having outwardly directed flanges extending over the tops of said boxes, strip means extending between said pair of strips and having outwardly directed flanges extending above the first named flanges to form longitudinal grooves, and covers for said boxes slidably mounted in said grooves, the number of covers being one less than the number of boxes in each row.

[Claim 6 not printed in the Gazette.]

956,614. METALLIC SCREEN. HARRY A. WAY, Burlington, Vt. Filed Oct. 27, 1908, Serial No. 459,796. Renewed Sept. 1, 1909. Serial No. 515,612.

In a metallic screen, a screen frame having bars made from one continuous strip of sheet metal, folded upon

itself first transversely along the diagonal lines 1 at the points where the corners are to be located, and then lon-



gitudinally and centrally along the lines 2 to form frame bars between the folds of which the screen fabric is held.

956,615. BEEHIVE-ENTRANCE GUARD AND SWARM-CONTROLLER. GEORGE T. WHITTEN, Hartford, Conn. Filed Jan. 20, 1910. Serial No. 540,792.



1. An attachment for a beehive which has an upper and lower opening, said attachment having means which permits the egress only of bees from the bottom opening of the hive, and a casing adapted to inclose said egress opening and the opening above, whereby returning bees are prevented from entering through the bottom opening, and are directed to the upper opening into the hive.

2. An attachment for hives having means which permit the egress of bees from the bottom of the hive, and a casing inclosing the opening at the bottom and an entrance opening at the top, said casing being telescopic, whereby it may be raised to inclose an opening into a hive placed on top of the original hive.

3. A casing designed to be attached to a beehive over the opening, said casing being extensible so that it may be arranged to inclose the opening to a hive temporarily placed on top of the original hive.

4. The combination with a beehive having openings at the bottom, of guard walls arranged adjacent to the openings at the bottom of the hive, spring fingers arranged to permit the egress but prevent the entrance of bees between said walls, through the openings at the bottom of the hive, a super with an opening therein to, and a casing inclosing the guarded openings at the bottom of the hive and also the opening to the super.

5. An attachment adapted to be secured to the front of a beehive, having a telescopic casing with an opening through the front at the bottom, a queen excluder arranged adjacent to said opening, and spring fingers arranged to guard the opening through the bottom of the front of the hive and while allowing the egress of bees through said opening preventing the entrance to the hive of bees therethrough.

956,616. BRAKE-BEAM. CHARLES H. WILLIAMS, Jr., Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed July 24, 1909. Serial No. 509,826.



1. In a trussed brake beam, a compression member and a tension member, there being a dovetailed joint between the ends of said members.

2. In a trussed brake beam, a compression member and a tension member, there being a dovetailed wedge joint between the ends of said members.

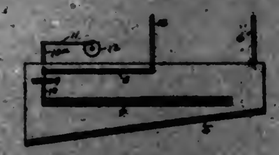
3. In a trussed brake beam, a compression member, there being wedge shaped sockets at the ends thereof, and a tension member, the ends of which are seated in said wedge shaped sockets.

4. In a trussed brake beam, a compression member, there being recesses formed at the ends thereof, which recesses are dovetailed in cross section, and a tension member, the ends of which are seated in the recesses.

5. In a trussed brake beam, a compression member, thrust blocks located in the ends thereof, there being wedge shaped recesses formed in said thrust blocks, and a tension member, the ends of which are seated in said recesses.

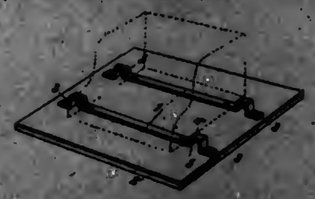
[Claims 6 to 22 not printed in the Gazette.]

956,617. GRAIN-SEPARATOR. HUSTON S. ADAMS, Harrington, Wash. Filed Aug. 5, 1909. Serial No. 511,296.



In a grain separator, a grain shoe, hangers supporting one of the ends thereof, superposed screens in the shoe, one of the screens being made fast to the shoe, and the other screen swinging independent thereof, a rock shaft mounted in the walls of the separator, and passing loosely through the walls of the shoe, levers fastened to rock shaft intermediate their ends, and connected on opposite sides of the rock shaft to one of the ends of the screens, hangers supporting the other end of the independently swinging screen, and means for operating the rock shaft.

956,618. SOUND-ABSORBING DEVICE FOR TYPEWRITERS. EDWIN BALTHEY, Glen Echo, Md., assignor to Louis E. Baltzley, Washington, D. C. Filed July 1, 1907. Serial No. 381,706.



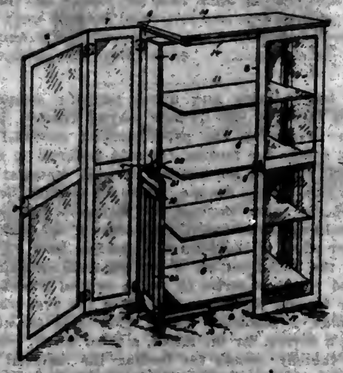
1. In a typewriter attachment for absorbing the shock and sound of the type bars and carriage of the typewriter, a loop made of suitable material having vertical and horizontal resilience, means for attaching it to a desk, and means for attaching it to a typewriter.

2. In a typewriter attachment for absorbing the shock and sound of the type bars and carriage of the typewriter, a metal loop having vertical and horizontal resilience, means for attaching it to a desk, and detachable means for attaching it to a typewriter.

3. A sound absorbing supporting device for typewriters, comprising typewriter and desk engaging members, and the device being bent between such members vertically and horizontally to form legs of unequal length, the longer leg being connected to the desk engaging member.

4. A supporting device for typewriters, consisting of a metal strip bent at its ends to form legs of unequal length at each end, the longer leg being the desk engaging part.

956,619. COMBINED CHINA-CABINET AND TABLE. JAMES H. BENNETT, Detroit, Mich., assignor of two-thirds to Willard E. Merritt, Chatham, Canada, and one-third to Archibald J. McKinnon, Detroit, Mich. Filed July 19, 1909. Serial No. 508,293.



1. A device of the character described comprising a cabinet having a back, ends hinged to the back and doors hinged to the ends, a pedestal to the upper end of which the cabinet is pivotally attached intermediate its upper and lower ends, and foldable legs on the pedestal adapted to be extended when the cabinet is turned to horisontal position and to be folded and inclosed by the back ends and doors of the cabinet when said cabinet is in vertical position.

2. A device of the character described comprising a cabinet adapted to be turned to horisontal position for use as a table, a pedestal having posts extending upward at each side of the cabinet, bearings on the posts, trunnions on the cabinet engaging the bearings, foldable legs upon the pedestal, means on the trunnions for transmitting motion when the cabinet is turned, and mechanism actuated by said means for operating the foldable legs.

3. A device of the character described comprising a cabinet adapted to be turned to a horizontal position for use as a table, a supporting pedestal having posts extending upward at each side of the cabinet and connected by a base, means for pivotally supporting the cabinet upon the upper ends of the posts, legs pivotally attached to the pedestal, gears carried by the pivots of the cabinet, shafts journaled in the posts and provided with gears in mesh with the gears on the pivots, and means connecting the lower ends of the shafts with the pivoted legs to operate said legs by the turning of the shafts when the cabinet is turned.

4. A device of the character described comprising a cabinet adapted to be turned to a horizontal position for use as a table, a supporting pedestal having posts extending upward at each side of the cabinet, bearings on the upper ends of the posts, trunnions on the cabinet engaging the bearings, gears secured to the trunnions, shafts journaled in the posts, gears on the upper ends of the shafts engaging the gears on the trunnions, cranks on the lower ends of the shafts, legs pivotally attached to the pedestal, and links connecting the cranks to the legs to turn the legs when the shafts are turned by the turning of the cabinet.

5. A device of the character described comprising a cabinet adapted to be turned from a vertical to a horisontal position for use as a table, a pedestal for supporting the cabinet, bearings on the upper ends of the pedestal trunnions on the cabinet engaging the bearings, gears on the trunnions, shafts mounted in bearings on the pedestal, gears on the upper ends of the shafts engaging the gears on the trunnions, cranks on the lower ends of the shafts, legs pivoted at one end to the pedestal, slides carried by the pedestal, links connecting the cranks and the slides, and links connecting the pivoted legs to the slides.

[Claims 6 and 7 not printed in the Gazette.]

956,620. METHOD OF BURNING BRICK. JOSIAH Q. BENNETT and ROBERT A. PARRY, Cambridge, Mass., assignors to Boston Brick Company, Boston, Mass., a Corporation of Massachusetts. Filed July 1, 1908. Serial No. 441,300.



The process of burning brick which consists in clearing the kiln by burning anthracite coal under forced draft at the ends of the arches and wood in the center of the arches and then settling the kiln by burning bituminous coal under forced draft at the ends of the arches and wood in the center of the arches.

956,621. FLASK. WILLIAM C. BOERNSCHUTZ, Kalamazoo, Mich., assignor of two-thirds to William Thompson and Dwight Curtenius, Kalamazoo, Mich. Filed Jan. 31, 1910. Serial No. 541,047.



1. In a molding device, the combination with a drag, cope and parting plate, of a guide member on said drag; a guide member on said parting plate connected thereto by a blade spring, said spring being secured at a central point to said parting plate and at its ends to said guide; and an adjustable guide member on said cope, said guide members being V-shaped in cross section, the guide member on said drag being adapted to receive the guide member on said parting plate and the guide member on said cope being adapted to receive the guide member on said drag.

2. In a molding device, the combination with a drag, cope and parting plate of a guide member on said drag; a guide member on said parting plate connected thereto by

a blade spring, said spring being secured at a central point to said parting plate and at its ends to said guide; and an adjustable guide member on said cope, the guide member on said drag being adapted to receive the guide member on said parting plate and the guide member on said cope being adapted to receive the guide member on said drag.

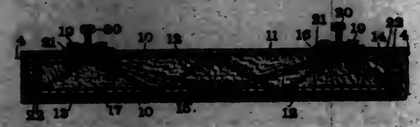
3. In a molding device, the combination with a drag, cope and parting plate, of a guide member on said drag; a guide member on said parting plate yieldably connected thereto; and a guide member on said cope, said guide members being V-shaped in cross section, the guide member on said drag being adapted to receive the guide member on said parting plate and the guide member on said cope being adapted to receive the guide member on said drag.

4. In a molding device, the combination with a drag, cope and parting plate, of a guide member on said drag; a guide member on said parting plate yieldably connected thereto; and a guide member on said cope, the guide member on said drag being adapted to receive the guide member on said parting plate and the guide member on said cope being adapted to receive the guide member on said drag.

5. In a molding device, the combination with a drag, cope and parting plate provided with hinge members, of a guide member on said drag; a guide member on said parting plate yieldably connected thereto; and a guide member on said cope, the guide member on said drag being adapted to receive the guide member on said parting plate and the guide member on said cope being adapted to receive the guide member on said drag.

[Claims 6 to 14 not printed in the Gazette.]

956,622. RAILWAY-TIE. JOHN P. BOOGHER, St. Louis, Mo. Filed May 17, 1909. Serial No. 496,838.



1. In a railway tie, the combination with a perforated metallic casing conforming substantially to the exterior of the tie, of a pair of reinforcing rods in the lower part of the casing, and a second pair of reinforcing rods in the upper part of said casing said upper and lower rods being in contact and connected at their central parts.

2. In a railway tie, the combination with a perforated metallic casing conforming substantially to the exterior of the tie, a pair of reinforcing rods in the lower part of said casing, a second pair of reinforcing rods having their central portions bent downwardly and connected to said first named reinforcing rods.

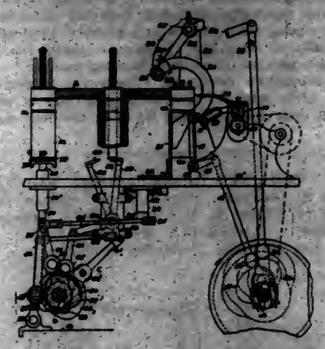
3. In a railway tie, the combination with a perforated metallic casing conforming substantially to the exterior of the tie, of a series of oppositely inclined perforated metallic partitions dividing the interior of said casing, a pair of reinforcing rods in the lower part of said casing and a second pair of reinforcing rods in the upper part of said casing, said second pair of rods being bent downwardly in their central portions and secured to said first pair of rods.

4. In a railway tie, the combination with a body of concrete, of metallic reinforcements therefor, a pair of metallic uprights embedded in each end of the tie, each of said uprights being provided with a slightly twisted bore of angular cross-section, and spikes adapted to conform to the bore of said uprights and hold the rails by friction.

5. In a railway tie, the combination with a body of concrete, of metallic reinforcements therefor, a pair of metallic uprights embedded in each end of the tie, each of said uprights being provided with a slightly twisted bore of angular cross-section and the lower end of each of said pair of uprights being connected by an integral cross piece, and spikes adapted to conform to the bore of said uprights and hold the rails by friction.

[Claim 6 not printed in the Gazette.]

956,623. MACHINE FOR MAKING PAPER BAGS AND FOR PACKETING TOBACCO AND OTHER MATERIALS. EDWARD L. BRACY, Scotland Neck, N. C., assignor to Richard Harvey Wright, Durham, N. C. Filed Mar. 6, 1909. Serial No. 481,697.



1. A bag forming and filling machine comprising a wheel, a series of bag formers carried thereby, a tilting rest for presenting the paper making material to the formers, means for feeding the said material to the rest, segmental arms 20 for holding the said material against the two sides of the former, means for folding the bottom edges of the paper to form the bottom of the bag, bars 49 for holding the folded vertical edges of the bags against the inner edges of the former, a yielding path 73 for preventing the folded bottom of the bag from swinging open, a second wheel, a series of molds carried thereby, plungers for forcing the paper bags from the first wheel into said molds, a segmental plate below said second wheel forming a bottom for the molds, a third wheel, receptacles carried thereby, means for feeding the material to said receptacles, means for positioning said receptacles over the bags in the molds, means for forcing the material from the receptacles into the bags, means for closing the upper ends of the bags, and means for ejecting the filled and closed bags from the mold.

2. A bag forming and filling machine comprising a horizontal wheel h, hollow formers carried by said wheel, means for feeding the bag forming material to said formers, means for folding said material around the sides and bottom of said formers to form a bag with an open top, pistons in said formers, means for giving said wheel an intermittent rotary motion, a second wheel o located below the horizontal plane of the first wheel, molds carried by said second wheel, means for giving said wheel an intermittent rotary motion, a reciprocating cross head having a projection thereon adapted to engage with the piston to cause the same to force the bag from the former into the mold, a segmental plate located below the second wheel forming a bottom for some of the molds, a third wheel, 2, located above the horizontal plane of the second wheel, receptacles carried by said third wheel, means for feeding material to said receptacle, a plunger operated by the cross head for forcing the material from the receptacle into the bags in the molds, a reciprocating plunger for slightly raising the bag out of the mold, means for folding over the top edges of the bag while in its raised position to close the same, and a plunger operated by the cross head for ejecting the closed bags from the molds.

3. A bag forming and filling machine comprising a forming device comprising formers, and a device for feeding the paper against the outer edges of the former which consists of the feeding rollers 10, a tilting rest receiving the paper from the rollers, guide bars arranged over the rest, means for tilting the rest to bring the paper against the former, and a slotted arm connecting the rest with the guide bars, whereby the guide bars will be carried out of the way when the rest is moved against the former.

4. In a device of the class described, a wheel h having formers thereon, means for folding the bag forming material around the former, means for holding the folded edges of the bag against the inner edge of the former while the wheel is being rotated, said means consisting of a bar 49, a bracket secured to the wheel, guide rods in said bracket secured to the bar 49, a spring for normally holding the bar 49 out of contact with the bag, a fixed cam, and a roller connected with the bar 49 engaging with the cam.

5. In a device of the class described, a wheel h, formers thereon, means for feeding the bag forming material to the formers, means for folding the material around the former, means for folding the bottom edges of the material over the bottom of the former, said folding operation leaving end tabs 57 on the bottom of the bag, a trough located below the said wheel, a spring-urged bottom in said trough engaging with the bottom of the bag, cross pieces 75 carrying the sides of the trough and providing spaces 76, said sides leaving a space between themselves and the bottom of the trough through which the tabs project into the spaces 76, said sides having gaps therein, spring arms adapted to project into said gaps to force the tabs upwardly against the sides of the bag, and means for reciprocating said spring arms.

956,624. JAW-TRAP. JOHN E. BROCK, Mayoworth, Wyo. Filed June 7, 1909. Serial No. 500,560.



In a jaw trap, a base plate having jaws separately pivoted upon a fixed part thereof, one of which is mounted for lateral movement at its pivot, a closing spring for said jaws, a lateral extension from said plate, a pivot post thereon outside of one jaw when in opened position, a bait arm pivoted upon said post and provided with a recessed portion beneath the trigger shoulder thereof and of greater dimension vertically and longitudinally than that of the jaw at its point of contact with said shoulder, and a lifting arm for said bait arm having a horizontal portion and a depending stop portion therefrom disposed at the opposite side of the pivot post from the trigger shoulder.

956,625. JOINT-TIE FOR CUSHION-TIRES. FREDERICK BUOB, Cincinnati, Ohio. Filed Mar. 30, 1908. Serial No. 424,020.



A tie for cushion-tires, consisting of an elongated, flat piece of metal provided with projections which are formed by cutting the metal on opposite edges and at alternate points inwardly and at an acute angle to said edges and by bending part of the separated metal upwardly.

956,626. WEIGHING-SCOOP. DANIEL J. CLOPTON, Gainesville, Fla. Filed June 18, 1909. Serial No. 502,941.

A weighing scale comprising a scoop body, a graduated stem projecting therefrom, a handle in which the stem slides, said handle being provided with a groove, a weighing spring in the handle on which the stem rests, a rack faced longitudinal rib on the stem working in the groove in the handle, and a thumb operated spring catch mounted in the handle and adapted to be moved into and out of



engagement with the rack faced rib to hold the stem against movement in the handle.

956,627. ART OF TUNNEL CONSTRUCTION. JOHN P. CONKLING, New York, N. Y. Filed Nov. 11, 1907. Serial No. 401,779.



1. Adjusting tunnel linings by regulating the density and pressure of the ground surrounding the tunnel, by means of removing part of the surrounding ground from place where its density and pressure is too great, substantially as set forth.

2. Adjusting tunnel linings by regulating the density and pressure of the ground surrounding the tunnel, by means of injecting earthy material into the ground surrounding the tunnel where its density and pressure is too light, substantially as set forth.

3. Adjusting tunnel linings by regulating the density and pressure of the ground surrounding the tunnel by means of removing part of the surrounding ground from place where its density and pressure is too great, and injecting earthy material into the ground surrounding the tunnel where its density and pressure is too light, substantially as set forth.

4. Adjusting tunnel linings by increasing the pressure on the outside of that side of the tunnel opposite to the direction in which it is desired to move the tunnel, and decreasing the pressure on the outside of that side of the tunnel opposite, substantially as set forth.

5. Adjusting tunnel linings by means of moving part of the ground surrounding the tunnel lining, from the outside of one side of the tunnel to the outside of the opposite side of the tunnel, substantially as herein set forth.

956,628. METALLIC TIE. ELI CROMIN, Norton, N. Mex. Filed June 24, 1909. Serial No. 504,151.

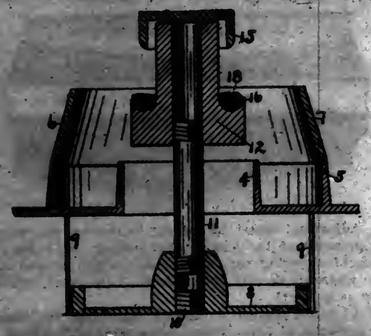


1. The combination of a metallic tie having upper and lower horizontal portions connected together by a web portion, rail-engaging plates mounted upon said upper horizontal portion, transversely disposed plates below said upper horizontal portion penetrating said web, and means penetrating the upper horizontal portion, the transversely

disposed plates below said upper horizontal portion and the rail-engaging plates to hold the rail engaging plates in position.

2. The combination of a metallic tie having upper and lower horizontal portions connected together by a web portion, rail-engaging plates mounted upon the upper horizontal portion, a member 5 arranged upon each of the said rail-engaging plates and provided with an upturned portion, said web having a transverse opening below the upper horizontal portion, a plate disposed in said opening and below the upper horizontal portion, bolts penetrating the upper horizontal portion, the plate there-below, a rail-engaging plate and the said member, and nuts threaded upon said bolts, one of which being engaged by the upturned portion of said member to prevent displacement of it.

956,629. OIL-BURNER. HARRY M. DAGGETT, Oakland, Cal. Filed July 6, 1909. Serial No. 506,112.



1. In an oil burner, a plate having an opening therein, a pair of annular flanges surrounding said opening, an oil supply pipe passing through said opening and having a burner head, a loose cap carried by said burner head, half annular rings forming means to confine the air passing through the opening in the plate, and means to regulate the supply of fuel to the burner, substantially as described.

2. In an oil burner, a plate having a hole therein, a pair of annular flanges surrounding said hole and integral with said plate, a drip pan carried by the plate, an oil supply pipe passing through the drip pan, a flanged burner head carried by the top of the oil pipe, a loose cap on the burner head, and means to regulate the supply of oil to the burner, substantially as described.

3. In an oil burner, a plate having an opening therein and having two annular flanges surrounding said opening, two half annular rings carried by one of said flanges, a drip pan supported by the flanged plate, a pipe extending from the drip pan through the flanged plate, a burner head having a flange at its base on the upper end of the pipe from the drip pan, a loose cap carried by the burner head, and means to regulate the supply of fuel to the burner, substantially as described.

956,630. WHIFFLETREE-HOOK. THOMAS B. EWER, Fort Des Moines, Iowa. Filed Jan. 2, 1909. Serial No. 470,513.

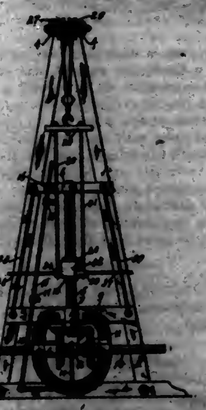


1. A whiffletree hook including a cuff composed of sections detachably interlocked at one end, a fastening device piercing the other end of the sections and connecting the same to clamp a whiffletree, and a split ring having laterally separable members, one of the members being integral with one of the sections of the cuff and maintaining the split ring in spaced relation with the said cuff, and the other member being pivotally connected with the cuff by the said fastening device.

2. A whiffletree hook including a cuff composed of sections detachably interlocked at the rear ends, a fastening device piercing the front ends of the sections to clamp the whiffletree, and a vertically disposed split ring composed of substantially hook-shaped upper and lower members, the lower member being formed integral with one of the sections of the cuff and maintaining the split ring in fixed relation with the same, and the upper member being pivoted to the lower member by the said fastening device.

3. A whiffletree hook including a cuff composed of sections detachably interlocked at their rear ends and provided at their front ends with abutting portions and having spaced projecting portions, a fastening device piercing the spaced projecting portions and connecting the sections to clamp a whiffletree, and a vertically disposed split ring composed of upper and lower hook-shaped members, one of the members being formed integral with one of the said projecting portions and maintaining the split ring in fixed relation with the cuff, and the other member being provided with an eye arranged in the space between the said projecting portions of the cuff and pivoted to the same by the said fastening device.

956,631. WAGON-JACK. FERDINAND J. FELDT, Peoria, Ill., assignor to J. A. Engel & Company, Peoria, Ill., a Corporation of Illinois. Filed July 19, 1907. Serial No. 384,497.



1. In a wagon dump, the combination with raising means, comprising a frame structure carrying ropes and pulleys at its top portion and underneath which a wagon is adapted to be driven and to be raised from a point above, of a screw connected with said frame structure, gear and shifting clutch connection between said screw and the source of power, a nut operated by said screw, a shiftable lever connected with the clutch, and means connected with said lever operable through the movement of the nut, to cause the clutch to be automatically shifted.

2. In a device of the class described, the combination with a screw carrying a nut and with means carried above said nut adapted to engage a wagon, of a casting rockably connected with the nut on the screw and suitably connected with means provided for raising the wagon.

3. In a device of the class described, the combination with means for raising the wagon, comprising standards, rope and pulley parts adapted to be operated from an elevated point to raise the wagon, of a rotary screw, a non-rotary nut on said screw, a casting rockably connected with said screw and suitably connected with the means adapted to engage the wagon.

4. In a wagon dumping device comprising an upright frame structure, pulleys arranged in the upper portions thereof carrying two ropes adapted to extend to either side of the wagon and raise the same from a point above, the combination therewith of a rotatable screw supported in the standards, a non-rotatable nut on said screw, a hanger frame rockably connected with said nut and means for operating said raising means.

5. In a device of the class described, the combination with wagon raising means, of rope and pulley connections therewith, a rotary screw, and a non-rotatable nut thereon, and means associated with said nut and in a rockable relation therewith connected with the rope and pulley means for raising and means connected with said rockable part to prevent the nut from turning.

[Claims 6 to 15 not printed in the Gazette.]

956,632. TOY BUILDING-BLOCK. STANLEY W. FINCH, Washington, D.C. Filed Dec. 8, 1909. Serial No. 532,122.



1. In combination, a plurality of toy building-blocks; an elastic band for holding said blocks together; and means for securing the band thereto.

2. In combination, a plurality of toy building-blocks; an elastic band for holding said blocks together; and means carried by the blocks for securing the band thereto.

3. In combination, a plurality of toy building-blocks; means carried by each block adjacent to the outer faces thereof for admitting of the attachment of an elastic band thereto; and an elastic band engaging such means and thereby securing the blocks in their desired position.

4. In combination, a plurality of toy building-blocks; an elastic band for holding said blocks together; and means for holding and securing the band in place in axial alinement with at least one of said blocks.

5. In combination, a plurality of toy building-blocks; an elastic band for holding said blocks together; and means located adjacent to the outer face of each of said blocks for attachment of the elastic band thereto, said means being located adjacent to the center of such faces.

[Claims 6 to 20 not printed in the Gazette.]

956,633. CAR-TRUCK SIDE FRAME AND JOURNAL-BOX. GEORGE G. FLOYD, Granite City, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Dec. 2, 1909. Serial No. 531,146.



1. In a railway car-truck, the combination of a side-frame, a journal-box, and a socket and rib bearing between said frame and box permitting a rocking adjustment of the box transversely of the frame, substantially as described.

2. In a railway car-truck, the combination of a side-frame having a socket or groove therein above the journal-box, and a journal-box having a rib on the top thereof and adapted to fit in said socket or groove, thereby permitting a rocking adjustment of the box transversely of the frame, substantially as described.

3. In a railway car-truck, the combination of a side-frame, a journal-box, and emergency means to prevent separation of said frame and box, said means being normally out of contact with said box, substantially as described.

4. In a railway car-truck, the combination of a side-frame, a journal-box, and emergency means to prevent separation of said frame and box, said means being wholly supported by said frame and normally out of contact with said box, substantially as described.

5. In a railway car-truck, the combination of a side-frame, an apertured journal-box, and an emergency bolt to prevent separation of such frame and box and extended through the aperture of the latter, such bolt being smaller in cross-section than the hole of said box, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

956,634. NECK-YOKE. GEORGE W. FRAME, Fairfield, Iowa. Filed June 12, 1909. Serial No. 501,793.



1. A device of the character described comprising a main frame adapted for engagement with a neck yoke, a pole supporting eye mounted therein for universal movement, and a spring plate carried by said eye and having end arms for engaging a pole and also engaging with a holdback attachment.

2. A device of the character described comprising a main frame adapted for attachment with a neck yoke, a pole supporting eye having a pivotal and yielding movement therein, and a plate carried by said eye for engaging a pole and also holding said frame to said pole.

3. A device of the character described comprising a frame provided with a neck yoke rest, a pole supporting eye pivotally and yieldingly mounted in said frame, and a plate carried by said eye and having end arms for engagement with a vehicle pole.

4. A device of the character described comprising a frame, a pole supporting eye having a universal movement therein, a plate loosely mounted on said eye, and end arms carried by said plate for engagement with a vehicle pole.

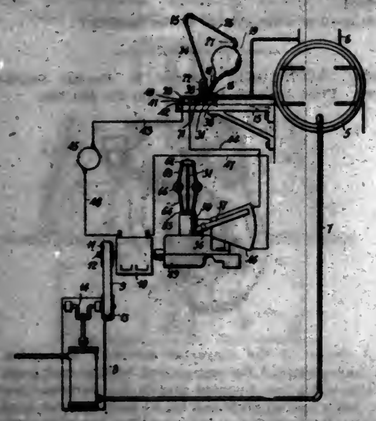
5. A device of the character described comprising a frame, a pole supporting eye loosely mounted therein, a plate loosely mounted on said eye, and end arms carried by said plate for engaging a vehicle pole and also for holding said frame to a pole.

[Claims 6 to 15 not printed in the Gazette.]

956,635. STEAM-BOILER REGULATOR AND FEEDER. VICTOR GARBARINO, Malden, Mass. Filed Dec. 31, 1907. Serial No. 408,718.

1. The combination with a boiler, of a pipe connected with the interior of said boiler, a bracket supported adjacent the boiler, a pair of spaced uprights carried by said bracket, a pipe section rotatably mounted in said uprights with one end disposed in the bore of said pipe so as to form a continuation thereof and having its other end closed, a pipe arm communicating with the bore of said section and extending laterally therefrom in upward incli-

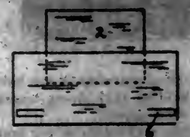
nation, a trap mounted on the upper end of said pipe arm with its interior in communication with the bore of said arm whereby communication between the trap and boiler is had so that the level of the water in the trap will vary with the level of the water in the boiler, the weight of said trap when the water therein has reached a predetermined level being adapted to rotate said pipe section in one direction, means for rotating said pipe section in the opposite direction against the influence of the weight of the trap when the water therein falls beneath a predetermined level, a water supply pump connected with the boiler means for actuating the pump, and means carried by said pipe section for instituting the operation of the pump actuating means when said pipe section is rotated in one direction under the influence of the weight of the trap and for rendering said pump actuating means inactive when said pipe section is rotated in the opposite direction against the influence of the weight of the trap.



2. The combination with a boiler, of a pipe connected with the interior of said boiler, a bracket supported adjacent the boiler, a pair of spaced uprights carried by said bracket, a pipe section rotatably mounted in said uprights with one end disposed in the bore of said pipe so as to form a continuation thereof and having its other end closed, a pipe arm communicating with the bore of said section and extending laterally therefrom in upward inclination, a trap mounted on the upper end of said pipe arm with its interior in communication with the bore of said arm whereby communication between the trap and boiler is had so that the level of the water in the trap will vary with the level of the water in the boiler, the weight of said trap when the water therein has reached a predetermined level being adapted to rotate said pipe section in one direction, means for rotating said pipe section in the opposite direction against the influence of the weight of the trap when the water therein falls beneath a predetermined level, a water supply pump connected with the boiler, an electric circuit, a motor for actuating the pump in said circuit a switch in said circuit operatively connected with said pipe section so that when said pipe section is rotated in one direction under the influence of the weight of the trap the switch will be opened and when said pipe section is rotated in the opposite direction against the influence of the weight of the trap, the switch will be closed.

3. The combination with a boiler and its steam dome, of a pipe connected with the interior of said boiler, a bracket supported adjacent the boiler, a pair of spaced uprights carried by said bracket, a pipe section rotatably mounted in said uprights with one end disposed in the bore of said pipe so as to form a continuation thereof and having its other end closed, a pipe arm communicating with the bore of said section and extending laterally therefrom in upward inclination, a trap mounted on the upper end of said pipe arm with its interior in communication with the bore of said arm whereby communication between the trap and boiler is had so that the level of the water in the trap will vary with the level of the water in the boiler, the weight of said trap when the water therein has reached a predetermined level being adapted to rotate said pipe section in one direction, means for rotating said pipe section in the opposite direction against the influence of the weight of the trap when the water therein falls beneath a predetermined level, a water supply pump connected with the boiler means for actuating the pump, means carried by said pipe section for instituting the operation of the pump actuating means when said pipe section is rotated in one direction under the influence of the weight of the trap and for rendering said pump actuating means inactive when said pipe section is rotated in the opposite direction against the influence of the weight of the trap, a second pipe connected with the interior of the steam dome, a lug formed on said first named pipe, a union rotatably supported by said lug and the second named pipe and having its bore in communication with the bore of the latter, and a pipe connecting said trap and union.

956,636. MAILING-TUBE. HOMER L. GRAY, Alameda, Cal. Filed June 5, 1909. Serial No. 500,321.



1. In a mailing tube, a cylindrical tube, and a rolled wrapper within the tube, said rolled wrapper having tabs adapted to project from the tube and be secured on the outside thereof, substantially as described.

2. In a mailing tube, a cylindrical tube, and a rolled wrapper within the tube, said rolled wrapper comprising a rectangular sheet having a tab at each end thereof which is adapted to project from the tube and be secured on the outside thereof at each end of the tube, as set forth.

3. In a package, a cylindrical tube, a parcel, and a wrapping for said parcel comprising a rectangular sheet of material having a tab at each end thereof, said tab secured to the outside of the tube at each end thereof, the remainder of the projecting portion of said sheet material being crumpled within the tube at the ends thereof, as set forth.

956,637. BRAKE-BEAM. PHILIP B. HARRISON, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 4, 1909. Serial No. 516,282.



1. In a brake beam, the combination with a compression member, of a thrust block having inwardly extending walls or legs, whose extremities are connected by a seat member, a tension rod having a shouldered portion in engagement with said seat member and means for placing tension in said tension member.

2. In a brake beam, the combination with a compression member, of a thrust block having a stirrup member extending inwardly from said thrust block in alinement with the tension member, and a tension member connected to said stirrup.

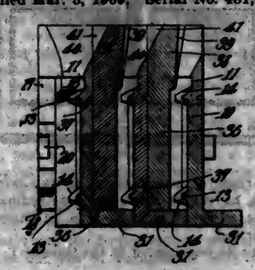
3. In a brake beam, the combination with a compression member, of a thrust block, inwardly extending walls or legs, whose extremities are connected by a seat member, a tension member with a head on its end in engagement with said seat member and means for placing tension in said tension member.

4. In a brake beam, the combination with a compression member, of a thrust block, inwardly extending walls or legs, whose extremities are connected by a seat member, and a tension member having an adjustable nut on its end in engagement with the said seat member.

5. A thrust block for brake beams, provided with a seat for a compression member, and a stirrup-like extension for attachment of the tension member.

[Claims 6 to 9 not printed in the Gazette.]

956,638. CAR-BRASS MOLD. GEORGE L. HOFFAR, Laurel, Miss. Filed Mar. 3, 1909. Serial No. 481,093.



1. In a mold of the class described, a series of like sections each having two opposite molding faces and provided with an interchangeable member on one of said faces for the formation of the concave faces of car brasses, said members being provided at their upper ends with lugs shaped to form portions of the gates.

2. A mold section having a central vertical web, the rear face of the section at opposite sides of the web being provided with inclined faces, the rear face of the web and the corresponding or alining portions of the faces being recessed, one of said faces having a projecting rib that terminates short of the bottom of the section and the other face being provided at the top with a projecting lug, the front face of each section having at the bottom an angular flange arranged to fit within the angular rear face of an adjacent section, one side of the front face being provided with a flange adapted to fit against the lug of a mating section, and an auxiliary member arranged to fit against the front face of the web and to shape the concave face of the brass, the auxiliary member and the upper end of the central web being shaped to form independent gateways to adjacent mold spaces.

3. A movable mold formed of a series of like nesting sections having two opposite molding faces and provided with interfitting ribs projecting from both said faces and each having an extension at its upper end, and a shaping member secured to the front face of each section and having a vertical lug at its upper end to bear against the extension of the upper end of the section and to coact therewith to provide gate-ways to the adjacent molding spaces.

4. A mold section having a central, vertical web, the rear face of the section at opposite sides of the web being provided with inclined faces, the rear face of the web and the corresponding or alining portions of the faces being recessed, one of said faces having a projecting rib that terminates short of the bottom of the section and the other face being provided at the top with a projecting lug, the front face of each section having at the bottom an angular flange arranged to fit within the angular rear face of an adjacent section, one side of the front face being provided with a flange adapted to fit against the lug of a mating section, and the upper end of the central web being shaped to form independent gateways to adjacent mold spaces.

956,639. CHURN. FRANK O. HOMER, JOSEPH T. VOTLEN, and ISAAC L. ISAACSON, Klotze, N. D. Filed June 15, 1909. Serial No. 502,312.



1. A churn comprising a support, a revolving body journaled thereon and having a tubular journal, means for revolving said body, a stationary shaft extending through the tubular journal and into one end of the body, means for anchoring the outer end of said shaft, a socket upon the inner end of said shaft, a stationary dasher having at one end a head to enter said socket, a spring device for retaining said head in said socket, and means for supporting the other end of the dasher from the opposite end of the body.

2. A churn comprising a support, a revolving body journaled thereon and having a tubular journal, means for revolving said body, a stationary shaft extending through the tubular journal and into one end of the body, means for anchoring the outer end of said shaft, a socket upon the inner end of said shaft, a stationary dasher having at one end a head to enter said socket, a spring device for retaining said head in the socket, a pivot arranged upon the inner face of the opposite end of the body and an adjusting and pivot screw arranged in the other end of the dasher to engage said pivot.

3. A churn comprising a support having standards provided at their upper ends with bearing recesses, a revolving body having journals removably mounted in said bearing recesses, one of said journals being hollow, means upon the other journal for revolving the body, an anchoring bracket secured to one of said standards and having a notched upper end, a stationary shaft arranged in said hollow journal and having a notched end to engage said notched portion of the anchoring bracket, and a stationary dasher arranged in the body on the inner end of said shaft.

4. A churn comprising a support, a revolving body journaled thereon and having a tubular journal, a stationary shaft extending through said tubular journal and formed at its inner end with an enlargement containing a socket, the walls of the latter being notched, means for anchoring the outer end of said shaft, a stationary dasher having at one end a head to enter the socket in the enlargement on said shaft, a longitudinally bowed spring secured at its ends to the dasher and having on its central portion a lug disposed adjacent to the head on the dasher and adapted to enter one of the notches in the walls of the socket on said shaft, and means for supporting the other end of the dasher from the opposite end of the body.

956,640. TWINE-DISPENSING DEVICE. LEWIS H. HOUSTON, Parral, W. Va. Filed Oct. 12, 1909. Serial No. 522,279.



A device of the character described, comprising a supporting frame adapted to carry a roll of twine, brackets

removably secured to the lower portion of said frame and having eyes on the free ends thereof, a rod having a horizontally bent portion extending through and carried by the eyes on said brackets, the free end of said horizontal portion being bent at right angles thereto and secured to said frame and said rod proper inclined downwardly at substantially an obtuse angle to the vertical plane of said frame, and a weight slidably mounted on said inclined rod with means thereon for engaging the twine, the portion of one of said brackets between the horizontal portion of said rod and the frame forming a guide for said twine.

956,641. CUSPIDOR-CLEANER. EDMUND HUDDART, Barneston, Nebr. Filed Dec. 8, 1908. Serial No. 465,376.



A device of the character described, comprising a handle, a sleeve capable of vertical movement on said handle, said sleeve having two upwardly and outwardly inclined flanges integral with the lower portion of said sleeve, said flanges extending in opposite directions and having apertures therein, an adjusting screw for the retention of said sleeve on said handle, brushes secured to the undersides of said flanges and having the inner ends of their tops cut to conform to the shape of said handle, an additional sleeve secured to the lower end of said handle, said additional sleeve having laterally extending flanges and a brush secured to said flanges, said brush being axially disposed with relation to said handle.

956,642. OFFICE-PARTITION AND THE LIKE. HENRY KLEIN, New York, N. Y. Filed Apr. 27, 1909. Serial No. 492,491.

1. A partition comprising longitudinally extensible pilasters, in combination with means for securing said pilasters to the floor and to the ceiling, and interchangeable panels between and fitted to the edges of said pilasters, substantially as described.

2. A partition comprising pilasters provided with extension members, in combination with top panels between and fixed to said members, and panels fitted to the edges of the pilasters below said top panels, substantially as described.

3. A partition comprising pilasters composed of slidably telescoped sections, whereby each pilaster is rendered extensible, the upper ends of said pilasters having means for fixing the same to the ceiling, the lower ends thereof having means for fixing the same to the floor, means for fixing the sections of each pilaster together in the desired adjustment, the longitudinal edges of said pilaster sections being formed to receive the partition panels, and partition panels, substantially as described.

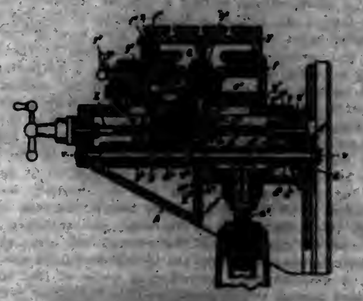
4. A partition comprising pilasters, each composed of parallel longitudinally adjustable sections, whereby the pilasters are rendered extensible, the side edges of each section of a pilaster longitudinally formed to receive the partition panels, and means whereby the sections can be fixed together in the desired adjustment.



5. As an article of manufacture, an extensible pilaster for partitions, having its side edges longitudinally formed to receive the adjacent sections of a partition, substantially as described.

[Claims 6 to 23 not printed in the Gazette.]

956,643. MILLING-MACHINE. RICHARD K. LE BLOND and WILLIAM F. GROENE, Cincinnati, Ohio, assignors to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio, a Corporation of Ohio. Filed June 6, 1908. Serial No. 437,084.



1. In a milling machine the combination of a knee, a saddle upon the knee, a table upon the saddle, a horizontal driving spindle mounted in the knee, an elevating screw for the knee, gear wheels coupling the driving spindle and the elevating screw, a feed screw for the saddle mounted in the knee, gear wheels coupling the spindle and said feed screw, a bracket carried by the saddle and engaging the feed screw to effect the feed of the saddle, a pinion upon the driving spindle, a gear wheel mounted upon the bracket and intermeshing with the pinion upon the driving spindle, a feed screw in the table, and means for coupling the feed screw of the table and the gear wheel carried by the bracket.

2. In a milling machine the combination of a knee, a saddle, a vertical feed for the knee, a cross feed for the saddle, a driving spindle mounted in the knee, a sliding clutch splined upon the driving spindle, and a sliding clutch splined upon the cross feed and engaging the clutch upon the driving spindle, the sliding clutch upon the spindle being adapted to couple the said spindle to the vertical feed, and the sliding clutch upon the cross feed screw being adapted to couple the cross feed screw to the driving spindle and means for moving the clutches to effect the aforesaid coupling of the driving spindle to the vertical and to the cross feeds.

3. In a milling machine the combination of a saddle, a table mounted upon the saddle, a feed screw for the table, a bracket carried by the saddle, a block nut secured to the bracket, a pinion adapted to convey rotation to the feed screw of the table, said pinion being carried by the bracket and having an enlarged bore, and a cross feed screw for the saddle, passing with clearance through the bore of the pinion and engaging the block nut.

4. In a milling machine the combination of a knee, a saddle mounted upon the knee, means for feeding the saddle upon the knee, a table mounted upon the saddle, a driving spindle mounted in the knee, means of coupling the driving spindle of the knee with the feed box, an elongated pinion secured upon the driving spindle of the knee, a feed screw for the table, a bracket upon the saddle and intermediate gears mounted upon the bracket and coupling the feed screw of the table and the elongated pinion upon the driving spindle.

5. In a milling machine the combination of a knee, a saddle mounted to reciprocate transversely upon the knee, a base swiveled upon the saddle, a table mounted to reciprocate upon the swivel base, a feed screw mounted in the swivel base and engaging the table, a central vertical shaft mounted in the saddle, means for coupling said shaft and the table feed screw, a cross feed screw for the saddle and a driving spindle both mounted in the knee vertically beneath said vertical shaft, and gear wheels coupling the vertical shaft and the driving spindle and adapted to move adjacent to but out of engagement with the cross feed screw.

[Claims 6 and 7 not printed in the Gazette.]

956,644. RAILWAY-SWITCH. JAMES R. MERRITT, Atlanta, Ga. Filed Jan. 17, 1910. Serial No. 538,502.



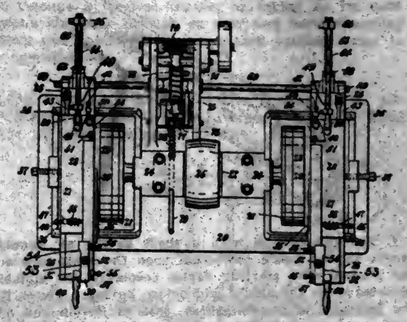
1. A device of the class described comprising spaced ties; a switch-point slidable upon the ties; a bridle secured to the switch-point; a plate secured to the bridle and arranged to abut terminally against the switch-point, the plate being disposed flush with the upper faces of the ties and having its edges in sliding contact with the ties.

2. A device of the class described comprising spaced ties; switch-points movable thereon; a bridle connecting the switch-points; and a plate secured to the bridle and having its upper face flush with the upper faces of the ties and entirely housing that portion of the bridle which is between the ties and between the switch points.

3. A device of the class described comprising spaced ties; switch-points movable thereon; a bridle connecting the switch-points; a plate secured to the bridle flush with the upper faces of the ties and constituting a complete closure for the area defined by the switch-points and the ties; and an anti-friction device connecting the ties and constituting a support for the bridle.

4. A device of the class described comprising spaced ties cut away upon their upper faces at their adjacent edges to define seats; switch points slidable upon the ties; a bridle connecting the switch-points; a plate secured to the bridle and slidable in the seats flush with the upper faces of the ties, the plate constituting a complete closure for the area defined by the switch-points and the ties.

956,645. MACHINE FOR GRINDING CUTLERY-BLADES AND THE LIKE. THOMAS R. MOORE, Walden, N. Y. Filed Nov. 2, 1908. Serial No. 460,566.



1. In a machine for grinding blades, a grinding ring, a carriage having a holder for the blade-blank, means for pressing said holder to hold the blank against said ring until the latter has cut into the blank to sufficient depth, means for then moving said carriage and holder to carry said blank along said ring to complete the grinding, adjustable means for controlling the finish to be imparted to the blade at its edge, and independently adjustable means for controlling the finish to be imparted to the blade at its back; substantially as set forth.

2. In a machine for grinding blades, a grinding ring, a carriage having a holder for the blade-blank, means for pressing said holder to hold the blank against said ring until the latter has cut into the blank to sufficient depth, means for then moving said carriage and holder to carry said blank along said ring to complete the grinding, a former carried by the carriage for controlling the finish to be imparted to the blade at its back, means for adjusting said former, and a stationary part against which said former moves for effecting its movement and that of the blade-blank; substantially as set forth.

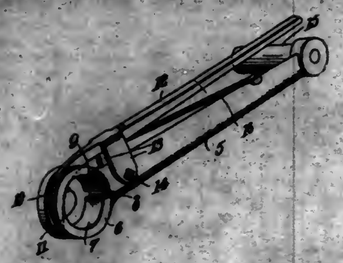
3. In a machine for grinding blades, a grinding ring, a carriage at the side thereof, a bar on said carriage having means for holding the blade-blank, a transverse spring connected with said bar and whose tension is exerted to draw the bar in a direction from said ring, means for resisting the lateral movement of said bar at its forward end in a direction from said ring, a pivoted arm on the carriage hinged to the other end of said bar, means for controlling the initial position of said arm, and driving mechanism for first acting on said arm to move said bar to present the blade-blank to said ring and then effecting the travel of said carriage for moving the blank along the ring to complete the grinding; substantially as set forth.

4. In a machine for grinding blades, a grinding ring, a carriage having a holder for the blade-blank, means for pressing said holder to hold the blank against said ring until the latter has cut into the blank to sufficient depth, and means for then moving said carriage and holder to carry said blank along said ring to complete the grinding, said holder having means for supporting the blade-blank at its back and a stud for engaging the same at its "kick;" substantially as set forth.

5. In a machine for grinding blades, a grinding ring, a carriage having a holder for the blade-blank, means for pressing said holder to hold the blank against said ring until the latter has cut into the blank to sufficient depth, and means for then moving said carriage and holder to carry said blank along said ring to complete the grinding, said holder having means for supporting the blade-blank at its back, a stud for engaging the same at its "kick" and means for locking the same at its tang; substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

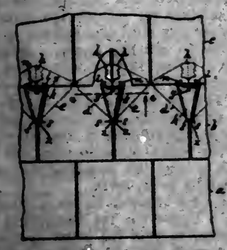
956,646. ENGINE-STARTER. EPHRAIM N. RITTASE, Manchester, Md. Filed Feb. 8, 1909. Serial No. 476,754.



1. The combination with a shaft having an annular groove therein and a projection upon the shaft adjacent the groove, of a starting device revolubly and slidably mounted upon the shaft, said device having a recess for the reception of the projection, said projection and one wall of the recess constituting means for transmitting motion to the shaft from the starting device prior to the movement of the shaft under its own power and said projection and the other wall of the recess coöperating to automatically disengage the starting device from the projection immediately subsequent to the movement of the shaft under its own power, and a spring controlled lever carried by the starting device and having one end disposed to be automatically seated within the annular groove during the movement of the starting device upon the shaft, the other end of said lever being depressible to unseat the lever from the groove.

2. The combination with a shaft and a projection thereon, said shaft having an annular groove therein, of a crank having a shaft-receiving portion, said crank being revolubly and slidably mounted on the shaft, there being an elongated slot within the shaft-receiving portion of the crank, means upon the crank for engaging the projection to rotate the shaft in one direction, said means and projection coöperating to shift the crank longitudinally of the shaft and out of engagement with the projection when the shaft starts under its own power, and a spring-controlled lever carried by the crank and having one end normally projecting through the slot and disposed to be automatically seated within the groove during the completion of the sliding movement of the crank away from the projection, one end of said lever being disposed adjacent the handle portion of the crank.

956,647. SNOW-GUARD. HENRY H. SALLS and MORRIS WOOL, Burlington, Vt. Filed Feb. 11, 1910. Serial No. 543,301.



1. A snow-guard for building-roofs, comprising a pair of flat wings or plates, and a funnel-shaped hollow structure centrally located between and connecting said wings thus constituting substantially parallel grooves at the lines of connection of the wings and funnel, whereby the wings may be slid under two adjacent slates whose edges enter into said grooves and the funnel extend over the adjacent portions of the slates, for the purpose set forth.

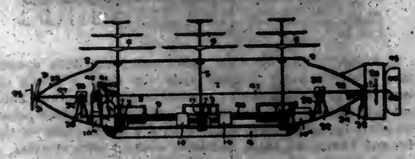
2. In a snow-guard for building-roofs, a pair of flat wings or plates, a funnel-shaped hollow structure centrally located between and connecting said wings thus constituting substantially parallel grooves at the lines of connection of the wings and funnel, and folds extending outwardly from the adjacent edges of the two wings above the funnel, whereby when the guard is in position the wings extend under two adjacent slates in one row and the folds extend under a slate in the next higher row, for the purpose set forth.

3. In a snow-guard for building-roofs, a pair of flat wings or plates, a funnel-shaped hollow structure centrally located between and connecting said wings thus constituting substantially parallel grooves at the lines of connection of the wings and funnel, and raised folds curved in cross section and extending outwardly from the adjacent edges of the two wings above the funnel, whereby when the guard is in position the wings extend under two adjacent slates in one row and the folds extend under a slate in the next higher row, for the purpose set forth.

4. In a snow-guard for building-roofs, a pair of flat wings or plates, a funnel-shaped hollow structure centrally located between and connecting said wings thus constituting substantially parallel grooves at the lines of connection of the wings and funnel, and folds extending outwardly from the adjacent edges of the two wings above the funnel, the upper edge of said funnel being provided next and on opposite sides of the adjacent edges of the wings with notches whereby when the guard is in position with the wings under two adjacent slates in one row and the folds under a slate in the next higher row the edges of the notches overlap the slate in the next higher row, for the purpose set forth.

5. In a snow-guard for building-roofs, a pair of flat wings or plates, a funnel-shaped hollow structure centrally located between and connecting said wings thus constituting substantially parallel grooves at the lines of connection of the wings and funnel, a spring disposed in the funnel near its upper or larger end said spring corresponding substantially in shape with the curve of the funnel and being parallel with the upper edge thereof and secured at its ends to the funnel, substantially as set forth.

956,648. DEVICE FOR AERIAL NAVIGATION. HENRY C. SCHANZE, Sr., Camden, N. J. Filed Nov. 25, 1908. Serial No. 464,345.



1. A device of the character described, comprising a housing, propellers arranged at the forward and rear ends of said housing, shafts carrying said propellers, quadrants secured to the ends of said housing, one of said quadrants extending upwardly and the other quadrant extending downwardly, with journals supporting said shafts arranged for movement in said quadrants in opposite arcs in a vertical direction, motors for actuating said shafts, a common connecting means between the casing of said motors, means for adjusting said propellers, said motor casings being pivotally supported in position.

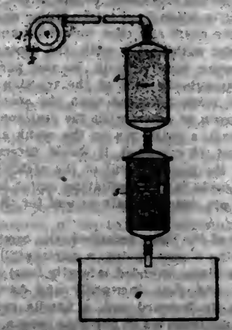
2. A device of the character described, comprising a car, propellers arranged at the forward and rear ends of said car, shafts carrying said propellers, quadrants arranged at the ends of said car and extending in opposite arcs in a vertical direction, journals for said shafts arranged in said quadrants, motors having their casings pivotally mounted in said car, said motors being adapted to actuate the shafts of said propellers, pendent bars connected to the casings of said motors, and common connecting means between said pendants, and adjusting means for effecting simultaneously the adjustment of the castings of said motors, accordingly affecting the disposition of said propellers at different angles to the car.

956,649. RIDING-SADDLE. CLARKE W. SHEPHERD, Spring Hill, W. Va. Filed Sept. 29, 1908. Serial No. 455,297.



A stirrup attachment, comprising a guard with an opening adjacent its bottom for the insertion of a strap and having its rearward end bent at right angles to the body portion and the forward end bent outwardly, and a plate having its inner side edge and rear end bent to form a continuous depending flange, the upper face of said plate being adapted to have a stirrup rest thereon, and said shield secured adjacent its bottom to the depending flange of said plate, whereby the shield is held and the rear angular portion formed thereon.

956,650. METHOD OF FREEING FERMENTED MASH AND THE LIKE FROM NOXIOUS ODORS AND FLAVORS. ARTHUR P. STITZEL, Louisville, Ky. Filed Nov. 18, 1909. Serial No. 528,744.

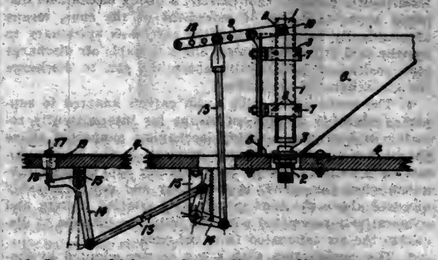


1. The method of freeing fermented mash and the like for distilled liquors, from noxious odors and flavors prior to distillation, consisting in forcing the fermented liquor first through a medium capable of taking up its solid particles and then through an odor and flavor-absorbing medium.

2. The method of freeing fermented mash and the like for distilled liquors, from noxious odors and flavors prior to distillation, which consists in pumping the fermented material through sand and thereby removing its solid particles, and thence passing the strained liquid through powdered charcoal.

3. The method of distilling whisky, brandy and spirits, which consists in freeing the fermented mash, pomace or cider, prior to distillation, from noxious odors and flavors contained therein, by forcing the fermented liquor first through a medium capable of taking up its solid particles and then through an odor and flavor-absorbing medium and finally distilling the thus purified liquor in any approved way.

956,651. VEHICLE AND LOCOMOTIVE SANDING APPARATUS. JOHN TAYLOR, Liverpool, England. Filed Nov. 12, 1909. Serial No. 527,686.



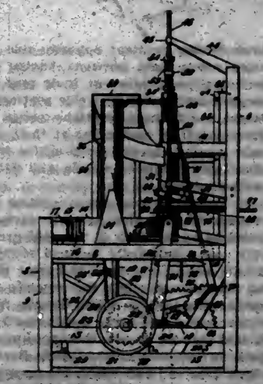
1. In a vehicle or locomotive sanding apparatus, a throughway tube having its interior unobstructed adapted to serve as a means for controlling the passage of sand to the conveyer or discharge conduit; substantially as set forth.

2. In vehicle or locomotive sanding apparatus, a tubular valve adapted to be raised and lowered, and having an unobstructed passage arranged in line with the discharge conduit, and adapted to operate in conjunction with the nozzle of the discharge conduit for controlling the outlet of sand; substantially as and for the purposes set forth.

3. In a vehicle or locomotive sanding apparatus, a tube having an unobstructed interior extending between a point above the discharge conduit of the sand container, and near the bottom of same, and a point above the upper sand level of the container.

4. In vehicle or locomotive sanding apparatus, a lift valve adapted to control the supply of sand; a foot operated part; connections connecting the said foot operated part and the valve; and a spring normally inactive on said foot operated part, and adapted to be operated thereby when moved an abnormal amount; substantially as set forth.

956,652. CAN-FILLER. WILLIAM F. THOMAS, Chanute, Kans. Filed Apr. 1, 1909. Serial No. 487,370.



1. The combination with a can carrier, of means for rotating said carrier, a filling mechanism mounted above the

path of movement of the cans, means for actuating said mechanism to fill the cans, and means movable with relation to the filling mechanism to discharge the air exhausted from the cans.

2. The combination with a can carrier, of means for rotating said carrier, a filling mechanism supported above the path of movement of the cans, means for actuating said mechanism to fill the cans, means movably disposed above the cans for discharging the air exhausted therefrom, and means for moving said last named means simultaneously with the actuation of said filling mechanism.

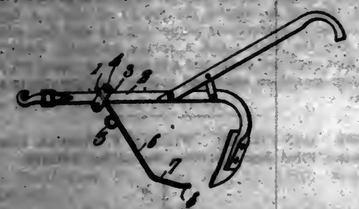
3. The combination with a can carrier, of means for intermittently rotating said carrier, a filling mechanism disposed above the path of movement of the cans, means automatically actuated when the carrier is stationary to operate said filling mechanism and a movable air discharge pipe positioned eccentrically above the can to discharge the air exhausted therefrom.

4. The combination with a can carrier adapted to support a plurality of cans, of means for intermittently rotating said carrier, a filling mechanism supported above the carrier adapted to supply material to the cans, automatically actuated means for operating said filling mechanism when the carrier is stationary and means movably disposed above the cans in eccentric relation thereto and cooperatively associated with the filling mechanism to discharge the air exhausted from the cans.

5. The combination with a can carrier adapted to support a plurality of cans, of means for intermittently rotating said carrier, means for holding the carrier against rotation at the end of its intermittent movement, a filling mechanism supported above the path of movement of the cans, means for automatically actuating said mechanism to force the material into the cans, a hopper for feeding said filling mechanism and means movably positioned above the cans adjacent to the open end thereof and cooperatively associated with the filling mechanism adapted to discharge the air exhausted from the cans upon the entrance of the material and to return the juices discharged with the air to the feed hopper.

[Claims 6 to 24 not printed in the Gazette.]

956,653. WEED-HOOK. CHARLES P. THOMPSON, Patoka, Ind. Filed Feb. 17, 1910. Serial No. 544,445.

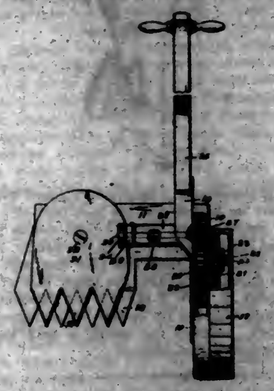


1. A weed hook having resilient opposite side portions spaced from each other, said portions having sections which converge toward each other at their rear end and are inclined downwardly, the opposite side portions having sections with which the first said sections merge, the last said sections diverging from each other at their rear end, the opposite side portions having extremities which diverge from each other at their rear ends, and with which the last said sections merge.

2. A weed hook formed from a single resilient rod having an arched intermediate portion and coils formed in its opposite side portions at the ends of the said arched portions, rearwardly and downwardly inclined sections with which the said coils merge, said sections having their rear ends converging toward each other, the opposite side portions of the hook having sections which diverge from each other at their rear ends and with the forward ends of which the first said sections merge, the opposite side portions of the hook having extremities which diverge from each other at their rear end and which are approximately horizontal and with the forward ends of which the rear ends of the last said sections merge.

3. A weed hook formed from a single resilient rod having an arched intermediate portion, the opposite side portions of said hook having coils with which the ends of the arched portion merge, the opposite side portions of the hook having its side sections which converge toward each other at their lower ends and with the upper ends of which the said coils merge, the opposite side portions of the hook having sections which diverge from each other at their rear ends and with the forward ends of which the said first sections merge, the last said sections being disposed at angles to the first said sections, the opposite side portions of the hook having extremities which diverge from each other at their rear ends and which are approximately horizontal and with the forward ends of which the rear ends of the last said sections merge, the said extremities being pitched at angles to the last said sections.

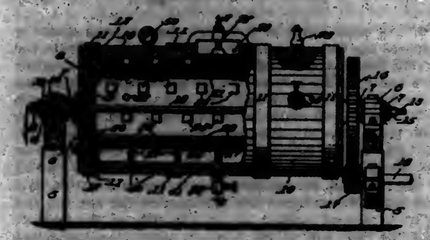
956,654. LAWN-TRIMMER. ORLA H. WATKINS, Ames, Iowa. Filed June 1, 1909. Serial No. 499,300.



1. In a device of the class described, the combination of a frame, a handle connected to the frame, a traction wheel in the frame, a shaft extended laterally from the frame, means interposed between the traction wheel and the shaft for imparting a rotary movement to the latter, a horizontally disposed cutter blade fixed to the frame and extended laterally under the shaft and then forwardly and provided at its forward edge with cutter teeth, the central portions of said teeth being substantially in the perpendicular plane passing through the axis of the traction wheel, an oscillating cutter blade mounted upon the stationary one having teeth thereon to co-act with the stationary teeth, a crank on said shaft, a crank pin on the crank arranged in such position that, if extended, it would intersect a line perpendicular to the pivotal point of the oscillating cutter blade, a slotted guide in the oscillating cutter blade to receive said crank pin, substantially as and for the purposes stated.

2. In a device of the class described, the combination of a frame comprising a gear casing, a horizontally disposed stationary cutter blade extended laterally from one side of the gear casing and then forwardly and having cutter teeth formed on its forward end, a handle connected to said frame, an axle mounted in the gear casing, a traction wheel fixed to said axle and having an internal gear, a shaft rotatably mounted in the casing, a pinion thereon to mesh with the internal gear, a larger pinion on the same shaft contained within the gear casing, a spring actuated ratchet device for permitting the traction wheel to turn rearwardly without turning the last mentioned pinion, a shaft mounted in the frame, a small pinion on the shaft in mesh with the last mentioned large pinion, a crank on said shaft, a crank pin fixed to the crank and inclined in a direction, which, if extended, would intersect a line perpendicular to the central portion of the stationary cutter plate, an oscillating cutter plate mounted on the stationary one, a slotted guide on the oscillating cutter plate to receive said crank pin, the cutter teeth on said stationary and oscillating plates being arranged with their central portions substantially in the perpendicular plane passing through the axis of the traction wheel, substantially as and for the purposes stated.

956,655. CYANID-BARREL. BENJAMIN O. WEBB, Los Angeles, Cal. Filed Dec. 17, 1909. Serial No. 533,707.



1. A device of the class described, comprising a barrel structure mounted upon a horisontal axis and adapted to revolve thereon, a horisontal perforated floor within the barrel and dividing its interior into upper and lower compartments, knobs projecting from the inner surface of the lateral walls of the barrel, means for introducing materials to the upper compartment of the barrel, means for introducing fluids to the upper part of the barrel, and means for withdrawing liquids from the lower part of the barrel beneath the perforated floor therein.

2. A device of the class described, comprising a barrel structure mounted upon a horisontal axis and adapted to revolve thereon, a horisontal perforated floor within the barrel and dividing its interior into upper and lower compartments, knobs projecting from the inner surface of the lateral walls of the barrel, means for introducing materials to the upper compartment of the barrel, means for introducing fluids to the upper part of the barrel, means for withdrawing liquids from the lower part of the barrel beneath the perforated floor therein, and means for washing out the interior of the barrel.

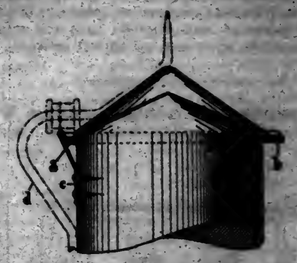
3. In a device of the class described, a washing nozzle, comprising a nipple projecting into the barrel interior, and a cone shaped deflector mounted on the end of the nipple.

4. A device of the class described, comprising a barrel structure mounted upon a horisontal axis and adapted to revolve thereon, a horisontal perforated floor within the barrel and dividing its interior into upper and lower compartments, knobs projecting from the inner surface of the lateral walls of the barrel, means for introducing materials to the upper compartment of the barrel, means for introducing fluids to the upper part of the barrel, means for withdrawing liquids from the lower part of the barrel beneath the perforated floor therein, means for washing out the interior of the barrel comprising a nipple projecting into the barrel interior, and a cone shaped deflector mounted on one end of the nipple.

5. A device of the class described, comprising a barrel structure mounted upon a horisontal axis and adapted to revolve thereon, a horisontal perforated floor within the barrel and dividing its interior into upper and lower compartments, knobs projecting from the inner surface of the lateral walls of the barrel, means for introducing materials to the upper compartment of the barrel, means for introducing fluids to the upper part of the barrel, means for withdrawing liquids from the lower part of the barrel beneath the perforated floor therein, means for washing out the interior of the barrel comprising a nipple projecting into the barrel interior, a cone shaped deflector mounted on the end of the nipple, pressure indicating means, and means for relieving any excess gas pressure in the barrel interior.

[Claims 6 to 10 not printed in the Gazette.]

956,656. PROTECTING MEANS FOR MASTS, POLES, OR THE LIKE. OTTO F. WRIELIG, Burg Lede, near Beuel, Germany. Filed Apr. 20, 1909. Serial No. 491,149.



1. A protecting cap or cover for masts, poles or the like, consisting of a conical metallic cover or cap, its lower edge being up-turned to form a trough, a lateral discharge lip from said trough providing an outlet for the purpose of conveniently discharging rain or snow-water, and hook shaped strips or members fitting over the upturned edge to hold the cap in position and secured to the mast or the like below the said cap.

2. A protecting cap or cover for masts, poles or the like, consisting of a conical metallic cover or cap, its lower edge being upturned to form a trough, a lateral discharge lip from said trough providing an outlet for the purpose of conveniently discharging rain or snow-water, and hook shaped strips or members fitting over the up-turned edge to hold the cap in position and secured to the mast or the like below the said cap, said cap being also provided with a groove.

956,657. UMBRELLA-RUNNER. FRANK WETTEROTH, St. Louis, Mo., assignor to Zittlosen Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 1, 1909. Serial No. 515,615.

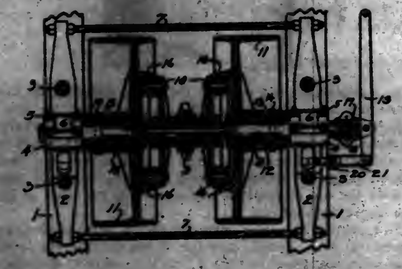


1. In combination with a cylinder surrounding and moving upon the central stick of an umbrella, an annular hub formed of a single piece of thin metal indented at intervals into a plurality of depending sockets and prolonged between said sockets into a plurality of tongues, said sockets closed interiorly, laterally and beneath and open above and exteriorly, said tongues rebent and retaining a ring passing above each of said sockets, open hooks upon an extremity of umbrella rods detachably retained in said sockets in engagement with said ring, and means afforded by the conformation of said sockets whereby lateral movement of said rods therein inserted is prevented.

2. An umbrella runner comprising a corrugated cylindrical member adapted to ride upon the customary central stick of such an article, and surmounted by an outstanding annular hub, said hub formed of a single piece of thin metal divisible into a base portion substantially at right angles to said cylindrical member, said base portion integral with and interrupted at intervals by depending sockets and prolonged at the intervals between said sockets into inwardly bent tongues gripping a ring disposed above

sockets, the conformation of said sockets affording means for the retention of open hooks, upon an extremity of umbrella rods, in engagement with said ring, said conformation likewise affording means for the ready release of said hooks from said engagement, means to prevent the lateral movement of said umbrella rods and means for retaining said hub upon said cylindrical member.

956,658. DRIVING MECHANISM. CHARLES W. WILLETTS, Seattle, Wash. Filed Oct. 19, 1909. Serial No. 523,520.



1. In a driving mechanism, the combination of a longitudinally adjustable rotatable shaft; a power transmitting sprocket wheel mounted thereon; friction wheels mounted on the shaft on each side of said sprocket wheel; two oppositely rotating drive pulleys loosely mounted on said shaft and having friction cups formed on their inner sides adjacent to and adapted to be engaged by said friction wheels; means for holding said pulleys against lateral movement; and means for moving said shaft in longitudinal direction to bring one or the other of said friction wheels into or out of engagement with the corresponding friction cup.

2. In a driving mechanism, the combination with a fixed support; of a pair of castings adjustably mounted thereon; a pair of adjustable connecting rods joining said castings; a longitudinally adjustable rotatable shaft mounted in said castings; a power transmitting sprocket wheel mounted on said shaft; friction wheels mounted on the shaft on each side of said sprocket wheel; two oppositely rotating drive pulleys loosely mounted on said shaft and having friction cups formed on their inner sides adjacent to and adapted to be engaged by said friction wheels; means for holding said pulleys against lateral movement; and a lever pivoted to one of said castings and engaging the shaft whereby the longitudinal position thereof relatively to said casting is controlled to bring one or the other of said friction wheels into or out of engagement with the corresponding friction cup.

3. In a driving mechanism, the combination with a fixed support; of a pair of parallel castings adjustably mounted thereon; a pair of adjustable connecting rods joining said castings; bearings formed on said castings and provided with reversible caps having receptacles for lubricants therein, said bearings and caps being divided in a plane at 45 degrees with the base of said castings; a longitudinally adjustable rotatable shaft mounted in said bearings; a power transmitting sprocket wheel centrally mounted on said shaft; friction wheels mounted on the shaft on each side of said sprocket wheel; two oppositely rotating drive pulleys loosely mounted on said shaft and having friction cups formed on their inner sides adjacent to and adapted to be engaged by said friction wheels; means for holding said pulleys against lateral movement; and a lever pivoted to one of said castings and engaging the shaft whereby the longitudinal position thereof relatively to said casting is controlled to bring one or the other of said friction wheels into or out of engagement with the corresponding friction cup.

956,659. JOURNAL-BOX. GEORGE A. WOODMAN, Chicago, Ill., assignor to Kirby Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed May 4, 1909. Serial No. 493,929.



1. The combination of a car axle box having a centrally disposed lug thereon, said lug being bored for a pintle and having cams at one end on opposite sides of the pintle bore and a spring chamber at the other end, a lid having a hood to partly cover said lug and provided with ends to lie opposite the ends of the box lug, said ends of the hood being bored for the pintle and one of said ends having cams on its inner side complementary to the cams on the lug, a pintle arranged in said bores to hinge the lid to the box, and an expansion spring confined within said chamber and bearing at one end against the box lug and at its other end against one of the ends of the hood to hold the cam end of the hood in operative engagement with the cam end of the lug.

2. The combination of a car axle box having an opening therein, a hollow lug on the box centrally disposed above said opening, oppositely disposed cams at one end of said lug, an annular shoulder within the lug dividing it into a spring chamber open at its outer end and another chamber between the shoulder and the cam end of the lug, said shoulder and cam end of the lug being bored to receive a pintle, a lid having a hood to partly cover said lug, said hood having ends to lie opposite the ends of the lug and one of said ends having cams complementary to the cams on the lug to engage therewith, an expansion spring confined within the spring chamber between the shoulder and one end of the hood, and a pintle secured against endwise movement in the ends of the hood to hinge the lid to the box lug.

956,660. JOURNAL-BOX. GEORGE A. WOODMAN, Chicago, Ill., assignor to Kirby Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed May 14, 1909. Serial No. 496,007.



1. The combination of a car axle box having a lug and ears projecting forwardly from the lug beyond the front of the box, a lid hinged to the lug and having a hood for the lug and a housing below the hood, a pin pivotally engaged with the ears and arranged in the housing substantially parallel with the front of the box when the lid is closed, a movable thimble carried by the lid in the housing separate from and independent of the box and provided with an opening for the lower end of the pin, and a compression spring on the pin arranged to bear on the thimble.

2. The combination of a car axle box having a lug and ears thereon, a lid hinged to the lug and provided with a housing, a pin pivotally engaged with the ears and arranged in said housing, a movable thimble separate from and independent of the box and carried by the lid in engagement with the lower end of the pin, and a compression spring on the pin arranged to press the thimble inward toward the box when the lid is closed.

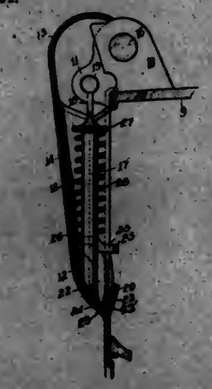
3. The combination of a car axle box, a lid hinged to the box, a keeper on the inner side of the lid, a pin pivotally connected to the box, a movable thimble separate from and independent of the box and held on the lid by the keeper and provided with an opening for the lower end of the pin, and a compression spring on the pin arranged to press the thimble inward toward the box when the lid is closed and outward away from the box when the lid is opened.

4. The combination of a car axle box, a lid hinged to the box, a keeper on the inner side of the lid, a pin pivotally connected to the box, a thimble separate from and independent of the box and loosely held on the lid by the keeper and provided with an opening for the lower end of the pin, said keeper having a concave surface and said thimble having a convex surface to engage said concave surface, and a compression spring on the pin arranged to bear on the thimble, said thimble being movable up and down under the pressure of the spring in a plane substantially parallel with the lid and adapted to have its lower end engage the lid when the latter is opened and clear the lid when the latter is closed.

5. The combination of a car axle box, a lid hinged to the box, a keeper on the inner side of the lid, a pin pivotally connected to the box, a movable thimble separate from and independent of the box and loosely held on the lid by the keeper and provided with an opening for the lower end of the pin, said thimble being higher in front of than behind said pin, and a compression spring on the pin arranged to bear on said high part of the thimble.

[Claims 6 and 7 not printed in the Gazette.]

956,661. JOURNAL-BOX. GEORGE A. WOODMAN, Chicago, Ill., assignor to Kirby Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed July 23, 1909. Serial No. 509,094.



1. The combination of a car axle box having a lug and ears projecting forwardly beyond the front of the box, a lid hinged to the lug and having a hood for the lug, a housing below the hood extending approximately to the lower edge of the lid and a pocket at the lower end of the housing, a pin pivotally engaged with the ears and arranged in the housing substantially parallel with the front of the box when the lid is closed, a loose thimble having its lower end seated in said pocket and engaged with said pin, and a spring on the pin arranged to bear on the thimble and force the lower end of the thimble rearwardly when the lid is closed and forwardly when the lid is open, thereby applying the pressure of the spring to the lid in open and closed positions adjacent to its lower edge.

2. The combination of a car axle box having a lug and ears projecting forwardly beyond the front of the box, a lid hinged to the lug and having a hood for the lug and a housing below the hood extending approximately to the lower edge of the lid, an upwardly extending lip on the inner side of the lid at the lower end of the housing to form a pocket, a pin pivotally engaged with the ears and arranged in the housing substantially parallel with the front of the box when the lid is closed, a loose thimble having its lower end seated in said pocket and engaged with said lip, said thimble having an opening for the pin, and a spring on the pin arranged to bear on the thimble and force the lower end of the thimble rearwardly against the lip when the lid is closed and forwardly against the lower end of the housing when the lid is open, thereby applying the pressure of the spring to the lid in open and closed positions adjacent to its lower edge.

3. The combination of a car axle box having a lug and ears projecting forwardly beyond the front of the box, a lid hinged to the lug and having a hood for the lug and a housing below the hood extending approximately to the lower edge of the lid, an upwardly extending lip on the lid at the lower end of the housing to form a pocket, a pin pivotally engaged with the ears and arranged in the housing substantially parallel with the front of the box when the lid is closed, a loose skeleton thimble separate from and independent of the box and having a toe at its lower end seated in said pocket against the lip, and a spring on the pin arranged to bear on the thimble in front of the pin to force the toe of the thimble rearwardly against the lip when the lid is closed and forwardly against the housing when the lid is open, thereby applying the pressure of the spring to the lid in open and closed positions adjacent to its lower edge.

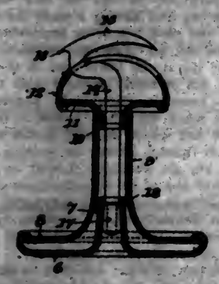
4. The combination of a car axle box having a lug and ears projecting forwardly beyond the front of the box, a lid hinged to the lug and having a hood for the lug and a housing below the hood extending approximately to the lower edge of the lid, an upwardly extending lip on the lid at the lower end of the housing to form a pocket, a pin pivotally engaged with the ears and arranged in the housing substantially parallel with the front of the box when the lid is closed, a loose skeleton thimble separate from and independent of the box and having a toe at its lower end seated in said pocket, said lip having a concave surface and said toe having a convex surface engaging said concave surface, said thimble being higher in front of the pin than behind the pin and having a guard behind the pin to prevent disengagement thereof from the thimble, and a spring on the pin arranged to bear on the high point of the thimble in front of the pin and force the toe of the thimble rearwardly against the lip when the lid is closed and forwardly against the housing when the lid is open, thereby applying the pressure of the spring to the lid in open and closed positions adjacent to its lower edge.

5. The combination of a car axle box having a lug and ears projecting forwardly beyond the front of the box, a lid hinged to the lug and having a hood for the lug and a housing below the hood, said ears having openings therein, a pin having a flat head and trunnions projecting outwardly from said head, said head being inwardly bent or curved to permit the trunnions to be arranged in position opposite the openings in the ears and adapted to be straightened out to enter the openings in said trunnions, a thimble carried by the lid at the lower end of the housing, and a spring arranged on said pin to press upon said thimble.

956,662. COLLAR-BUTTON. FREDERICK M. YONKMAN and NICHOLAS YONKMAN, Milwaukee, Wis. Filed July 22, 1909. Serial No. 508,897.

1. A hollow collar-button having the head thereof provided with a slot, and a slidable hook normally engaging said slot approximately flush with said head, except for

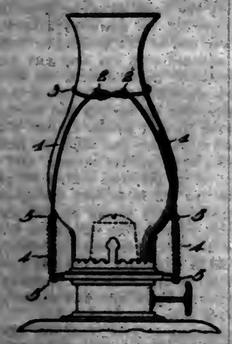
an outwardly projecting lug with which said hook is provided, the hook-shank being guided in the button-shank in which it has limited outward movement.



3. A hollow collar-button having a slotted head, and a slidable hook that normally engages the head-slot, the shank of the hook being guided in the shank of the button with which it has wedging engagement when said hook is withdrawn from normal position.

3. A hollow collar-button having a slotted head and partly taper-bore shank, a slidable hook that normally engages the head-slot, the hook-shank being guided in the button-shank, and a conical wedge-sleeve on said button-shank engageable with the taper portion of said button-shank bore when said hook is withdrawn from normal position.

956,663. LAMP-CHIMNEY HOLDER. GILBERT E. ALPERIN, Mount Olive, N. C. Filed Sept. 16, 1909. Serial No. 518,040.



1. A chimney holder comprising two loop-shaped flexible elements, eyes formed on the opposite sides of the looped ends of each of said elements to receive the side portions of the other element, whereby the looped ends of the latter are slidably connected together to form an adjustable chimney engaging ring, coiled springs secured to the outer ends of said loop-shaped elements, and means to secure the outer ends of the springs to the lamp burner.

2. A chimney holder comprising two wire strips bent intermediately of their ends to form loop-shaped elements, each element having the free ends thereof twisted together and provided near the bent central portion thereof with oppositely disposed eyes, the side members of one element being slidably engaged with the eyes of the other element, and coiled springs secured at one end to the twisted ends of the respective elements and adapted to be connected at their other ends to a lamp burner.

956,664. BELL-SUPPORT. PHILIP C. ARNOLD, East Hampton, Conn., assignor to Bevin Brothers Manufacturing Company, East Hampton, Conn., a Corporation of Connecticut. Filed Nov. 4, 1909. Serial No. 526,267.



1. An arm having its end dish-shaped, a rest supported upon the edge of the dish-shaped part, a bolt projecting through the arm and rest, a bell supported by the head of the bolt, and a nut secured to the bolt against said rest.

2. An arm having a groove extending lengthwise thereof and with its end enlarged and of dish-shape, said groove extending into the recess formed by said dish-shaped end, a rest supported on the edge of said dish-shaped end, a bolt extending through said end and rest, a bell supported by the head of said bolt, and a nut secured to the bolt against said rest.

3. An arm having its end dish-shaped, a rest supported on the edge of said dish-shaped part, a bolt projecting through the arm and rest, a bell supported by the head of the bolt, and a capped nut secured to and inclosing the end of the bolt and thrusting against said rest.

4. An arm having a groove extending lengthwise thereof and with its end enlarged and of dish-shape, the said groove extending into the recess formed by said dish-shaped end, a rest shaped to conform to the shape of said dish-shaped end and resting upon its edge and closing the upper part of the recess therein, a bolt extending through the arm and rest, a bell supported by the head of the bolt, and a capped nut secured to and inclosing the end of the bolt and thrusting against said rest.

5. An arm having its end dish-shaped, a rest located against the edge of said dish-shaped part, a bolt projecting through the arm and rest, a bell supported by the head of the bolt, and a nut engaging the bolt to secure the bell in position.

956,665. APPARATUS FOR SEWAGE DISPOSAL. BURTON J. ASHLEY, Chicago, Ill. Filed Sept. 19, 1907. Serial No. 393,616.



1. The combination in an apparatus for the purification of sewage, of a perforated pipe or passage buried below the surface of the soil, a body of filtering material in contact with said perforated pipe or passage, the said perforated pipe or passage communicating with the source of sewage, but closed to the inlet of air except through the filtering material, an air passage communicating with said filtering material and means for exhausting the air from the filter bed.

2. The combination in an apparatus for the purification of sewage, of a receiving tank and aerating and purifying means adapted to receive the overflow from said tank, said means comprising a perforated pipe or passage buried below the surface of the soil, a bed of filtering material in contact with said perforated pipe or passage, the said perforated pipe or passage communicating with the source of sewage, but closed to the inlet of air except through the filtering material, an air passage communicating with said filtering material and means for exhausting the air from the filter bed.

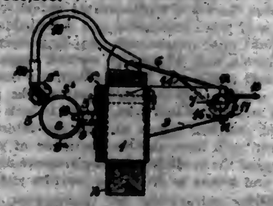
3. The combination in an apparatus for the purification of sewage, of a receiving tank and aerating and purifying means adapted to receive the overflow from said tank, said means comprising a perforated pipe or passage extending beneath the surface of the earth embedded in a bed of filtering material having direct contact with the surrounding soil, an air passage and means for exhausting the air from the filter bed communicating with said filtering material but not in direct communication with said perforated pipe or passage.

4. The combination in an apparatus for the purification of sewage, of a perforated pipe or passage buried below the surface of the soil and embedded in a bed of filtering material, the said perforated pipe or passage communicating with the source of sewage, but closed to the inlet of air except through the filtering material, an air passage leading from the surface of the earth to the bed of filtering material whereby the air before entering the said perforated pipe or passage traverses the said air passage and the filtering material and means for exhausting the air from the filter bed.

5. The combination in an apparatus for the purification of sewage, of a receiving tank and aerating and purifying means comprising a perforated pipe or passage leading from said tank and traversing an underground bed of filtering material, said pipe or passage communicating with the source of sewage, but closed to the inlet of air except through the said filtering material, and a perforated air passage traversing said filtering material adjacent the pipe or passage leading from the tank, means for supplying air to the said perforated air passage and means for exhausting the air from the said perforated pipe or passage leading from the tank whereby a current of air is induced through the said apparatus traversing successively the perforated air passage, the filtering material, and the perforated pipe or passage leading from the tank.

[Claims 6 to 24 not printed in the Gazette.]

956,666. BRUSH-HOLDER FOR DYNAMO-ELECTRIC MACHINES. CARL B. AUEL, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed July 9, 1906. Serial No. 325,295.



1. A brush holder for dynamo-electric machines comprising a sheet metal box having a bulging portion at one side and projecting arms at the other side, a brush in said box, a socket clamp attached to the bulging portion, a shaft supported near the ends of the arms, a spring coiled about the shaft and having an intermediate loop, a pressure finger one end of which is bent partially around the shaft, and the other end of which projects through the loop in the spring to engage one end of the brush.

2. A brush holder for dynamo-electric machines comprising a sheet metal box having top and bottom openings and projecting arms at one side provided with holes, a pin shaft supported in said holes, a sheet metal finger one end of which is bent partially around said pin shaft and the other end of which extends over the top opening in the box to engage a brush located therein, and a spring acting upon said finger.

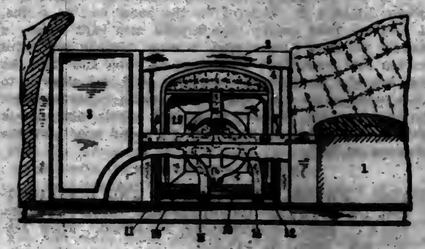
3. A brush holder for dynamo-electric machines comprising a sheet metal box having projecting arms at one side, supporting means for the box, a pin shaft supported by the arms near their ends, a spring coiled about the shaft and having two groups of convolutions and a loop between said groups, and a sheet metal pressure finger having curved ends, one of which is free and the other of which partially surrounds the shaft and substantially the middle portion of which is engaged by the spring loop to press the free end against a brush located in said box.

4. A brush holder for dynamo-electric machines comprising a sheet metal box having projecting arms at one side, projecting teeth located near the end of one of said arms and disposed in the arc of a circle, a pin shaft supported by the arms in concentric relation to the arc of said teeth, a spring coiled about the shaft and having two groups of convolutions and a projecting loop between said groups, a sheet metal pressure finger one end of which partially surrounds the shaft and substantially the middle portion of which is engaged by the loop, and a crank-shaped pressure-regulating pin which is attached to one end of the shaft and is adapted to engage the teeth.

5. A brush holder for dynamo-electric machines comprising a sheet metal box having laterally projecting arms at one side, a two-part sheet metal socket clamp at the opposite side, a sheet metal finger pivotally supported between said arms and having a free end, and a spring for pressing the free end of said finger against a brush located in the box.

[Claims 6 to 10 not printed in the Gazette.]

956,667. VEHICLE-SEAT. WILLARD B. BASCOM, New York, N. Y. Filed May 8, 1909. Serial No. 494,848.



1. A folding seat for vehicles comprising vertical guideways adapted to be secured to a vehicle, a seat support movable in said guideways, a seat on said support adapted to be moved with the support to or from a horizontal position and also adapted to be moved on the support to space the same from the guideways when in use, and means for supporting the seat in a horizontal plane when in use.

2. A folding seat for vehicles comprising vertical guideways adapted to be secured to a vehicle, a support shaft movable vertically in the guideways, a yoke adapted to be moved with the shaft to or from a horizontal position, a turntable carried on the yoke and slidable thereon to space the same from the guides when the seat is in use, a seat on the turntable, and means for supporting the seat in a horizontal plane when in use.

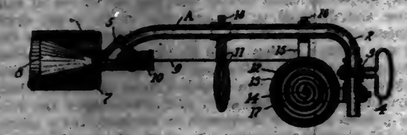
3. A folding vehicle seat comprising vertical guideways adapted to be secured to a vehicle; a shaft movable vertically in said guideways; a yoke movable with and revoluble on said shaft; a turntable provided with a slot movably mounted on the yoke through the slot; a seat on the turntable; and means for supporting the seat in a horizontal plane when in use.

4. A folding vehicle seat comprising vertical guideways adapted to be secured to a vehicle; a shaft movable in said guideways; a yoke revoluble and slidable on said shaft; a turntable on said yoke; a seat on the turntable; and means for supporting the seat in a horizontal plane when in use.

5. A folding vehicle seat comprising a seat support; a turntable provided with a keyhole slot mounted thereon; a stud or bolt with a flattened shank secured to the support, and extending through the slot whereby the turntable may be slid along the support and revolved thereon when the stud has engaged the enlargement in the slot.

[Claims 6 and 7 not printed in the Gazette.]

956,668. FLUE-CLEANER. VALENTINE G. BECKER, St. Paul, Minn. Filed Feb. 11, 1909. Serial No. 477,372.

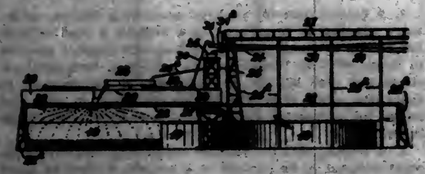


1. A flue cleaner of the class described comprising a nozzle adapted to be fitted to the outer end of a flue, a pressure fluid supply pipe tapped into said nozzle, a spreader for the pressure fluid slidable within said nozzle, said spreader being smaller than the diameter of the flue to leave an intermediate passage, and means for retracting said spreader.

2. A flue cleaner of the class described comprising a nozzle adapted to be fitted to the outer end of a flue, a source of steam supply, a cone slidably fitted within said nozzle and slightly smaller at its outer end than the inner diameter of said flue whereby to spread the steam and allow it to pass between the cone and flue, and spring retracted means for said cone.

3. A flue cleaner of the class described comprising a nozzle adapted to be fitted to the outer end of a flue, a pressure fluid supply pipe tapped into said nozzle, a handle for said supply pipe, a cone slidably supported within said nozzle and smaller at its outer end than the flue whereby to spread the pressure fluid and allow it to pass between the cone and flue, a spring retracted spool having rotatable support upon said supply pipe and a flexible connection between said cone and spool for the purpose set forth.

956,669. MEANS FOR HANDLING AND DISTRIBUTING DEWATERED CRUSHED-ORE PRODUCTS, &c. HANS C. BEHR, Johannesburg, Transvaal. Filed Jan. 27, 1906. Serial No. 412,810.



1. In a dewatering plant such as described, in combination, a plurality of vessels and a transportable dewatering device adapted to discharge the dewatered product into any one of said vessels.

2. In a dewatering plant such as described, in combination, a plurality of vessels, a carriage, and a dewatering device movable with said carriage adapted to discharge the dewatered product into any one of said vessels.

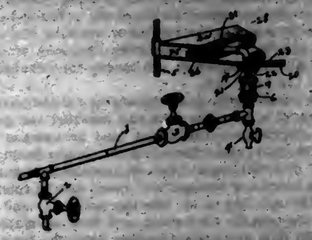
3. In a dewatering plant such as described, in combination, a plurality of vessels, a carriage, a dewatering device transportable with said carriage and adapted to discharge the dewatered product into any one of said vessels, means for conveying to the dewatering device the mixture to be dewatered, and means for removing the separated liquid from the dewatering device.

4. In a dewatering plant such as described, in combination, a plurality of vessels, a carriage, a dewatering device movable with said carriage and adapted to discharge the dewatered product into any one of said vessels, means for conveying the mixture to the dewatering device when the latter is in position to discharge the dewatered product into any one of said vessels, and means for removing the separated liquid from the dewatering device.

5. In a dewatering plant such as described, in combination, a plurality of vessels, a carriage, a dewatering device movable with said carriage and adapted to discharge the dewatered product into any one of said vessels, means for conveying the mixture to the dewatering device when the latter is in position to discharge the dewatered product into any one of said vessels, means for regulating said supply, and means for removing the separated liquid from the dewatering device.

[Claims 6 to 20 not printed in the Gazette.]

956,670. FLUE-BLOWER. GEORGE W. BERNAUER, St. Charles, Mo. Filed June 28, 1909. Serial No. 504,835.



1. A flue blower, comprising a pressure-fluid supply pipe, drain and pressure control valves thereupon, a nozzle adjacent the boiler flues, a double-seated swivel joint, detachable and adjustable means to open and close said joint, means to audibly and visibly indicate the position of said nozzle relative to said flues, means to direct the location and movement of said nozzle, means to lock the same into desired position, a compartment, a slidable and adjustable member within said compartment and supporting the weight of said nozzle, means to view the interior of said compartment, said flues and the operation of said nozzle, and means to assist the propulsion of said pressure-fluid through said flues.

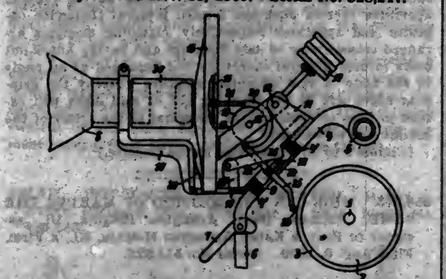
2. A flue blower, comprising a pressure-fluid supply pipe, drain and pressure control valves thereupon and a nozzle at a terminus thereof, a double-seated swivel joint in contiguity to said pipe, adjustable and detachable means to hold said joint in or release said joint from operative position, a slidable and adjustable member supporting the weight of said nozzle and situated within a compartment, means for audibly and visibly indicating the position of said nozzle relative to said flues, means to lock said nozzle into desired position, means to view the interior of said compartment, said flues and the operation of said nozzle, means to assist the propulsion of the pressure-fluid through said flues, and means to direct the location and movement of said nozzle.

3. A flue blower, comprising a pressure-fluid supply pipe, drain and pressure control valves thereupon, a nozzle at a terminus of said pipe, perforated throughout one aspect of its longitudinal extent and normally retained in juxtaposition to the angle formed by the juncture of the rear wall and a side wall of the boiler housing, a double-seated swivel joint in contiguity to said supply pipe, adjustable and detachable means to hold said joint in or release said joint from operative position, a compartment situated chiefly within the boiler housing, a slidable and adjustable member adjacent a leg of said supply pipe, supporting the weight of said nozzle and situated within said housing, means for indicating the position of said nozzle relative to said flues, means for locking said nozzle into desired position, means to assist the propulsion of said pressure-fluid through said flues, and means to direct the location and movement of said nozzle.

4. A flue blower, comprising a pressure-fluid supply pipe, drain and pressure control valves thereupon and a nozzle at a terminus of said pipe, a double-seated swivel joint positioned upon two contiguous sections of said pipe and governing the connection thereof, detachable and adjustable means adjacent thereto for readily closing or opening said joint, a device in juxtaposition to said supply pipe for audibly and visibly indicating the position of said nozzle relative to said flues, a compartment retaining a slidable and adjustable member supporting the weight of said nozzle, means to direct the location and movement of said nozzle, means to lock the same into desired position, means to view the interior of said compartment, said flues and the operation of said nozzle, and means to assist the propulsion of said pressure-fluid through said flues.

5. A flue blower, comprising a pressure-fluid supply pipe, drain and pressure control valves thereon, and a nozzle or vent at a terminus of said pipe and adjacent said flues, a two-part double seated swivel joint engaged upon said pipe, said parts of said joint comprising complementary tubular collars bounding compartments surmounting pipe extremities, an external seat at, approximately, the base of one of said tubular collars and an internal seat at, approximately, the base of the other or outer collar, a bearing surface or shoulder surmounting said outer collar, a plurality of apertures extending vertically therethrough and forming grooves in the external wall of said collar, an apertured pedestal surrounding and loosely mounted upon said supply pipe and beneath said external seat and members adapted to move within said apertures and grooves to bring said parts of said joint into or out of operative position, a compartment located chiefly within the boiler housing, a leg of said supply pipe extending therethrough, an adjustable member upon said section of pipe and supporting the weight of said nozzle, means for audibly and visibly indicating the position of said nozzle relative to said flues, means to direct the location and movement of said nozzle, means to lock the same into desired position, and means to assist the propulsion of the pressure-fluid through said flues.

956,671. PHONOGRAPH. REINHOLD BRANDT, Berlin, Germany. Filed Nov. 15, 1909. Serial No. 528,247.



1. In a phonograph, the combination with a record, a needle coöperating therewith, and a diaphragm, of a carrying arm, an oscillatory support mounted on the carrying arm, the diaphragm being carried by said oscillatory support, a rocking support for the needle, a friction disk carried by the diaphragm support, and a band operating over said disk and respectively connected to the diaphragm and needle.

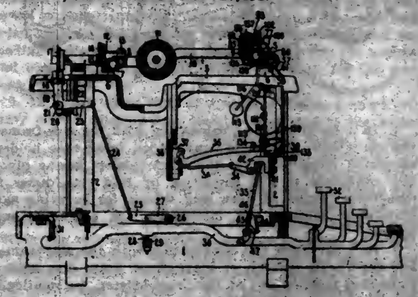
2. In a phonograph, the combination with a record, of a diaphragm a counterbalanced oscillatory support therefor, a friction disk carried by said support, a needle coöperating with the record, and a band operating over the disk, and connected, respectively, to the diaphragm and needle.

3. In a phonograph, the combination with a record, of a diaphragm, a support therefor, a pivoted carrier arm, said support being mounted for oscillatory movement on said arm, a friction disk carried by said support, a needle coöperating with the record, a movable support for the needle, and a band operating over the friction disk and connected, respectively, to the diaphragm and needle.

4. In a phonograph, the combination with a record, of a diaphragm, a support therefor, a pivoted carrier arm, said support being mounted for oscillatory movement on said carrier arm, a friction disk carried by said support, a needle coöperating with said record, a movable support to which the needle is pivotally connected, and a band operating over the friction disk, and connected, respectively, to the needle and diaphragm.

5. In a phonograph, the combination with a record, of a pivoted supporting arm, a frame carried thereby, a rocking support carried by said frame, a diaphragm carrier supported on said rocking support, a needle also pivotally connected to said frame, and means carried by the diaphragm support, and connected, respectively, to the diaphragm and needle, for relieving the pressure of the needle against the record.

956,672. TYPE-WRITING MACHINE. EDGAR H. BERRY, New York, N. Y., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed Feb. 21, 1908. Serial No. 417,182.



1. In a typewriting machine, the combination of a carriage, a margin stop, and a final stop, indicators carried by said stops, and a scale with which said indicators cooperate, said stops being adjustable and constructed so that the indicators of both stops may simultaneously cooperate with the same index on the scale.

2. In a typewriting machine, the combination of a carriage, a margin stop, and a final stop, indicators carried by said stops, and a scale with which said indicators coöperate, and stops being adjustable and constructed so that the indicators of both stops may simultaneously coöperate with the same index on the scale, and so that the stops may overlap to bring their contact or arresting faces into coincidence.

3. In a typewriting machine, the combination of a carriage, a margin stop, a final stop, a coöperative stop operative to co-act with both the margin and final stops at different points in the travel of the carriage or at a single point, a scale, indicators on the margin and final stops which coöperate with said scale either at different index points thereon or at the same index, and means for moving the said coöperative stop out of coöperative relation with said margin stop.

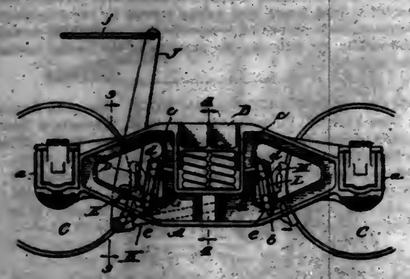
4. In a typewriting machine, the combination of a carriage, a scale at the front of the machine, a margin stop, an indicator carried by said margin stop and coöperative with said scale, a final stop, an indicator carried by said final stop and coöperative with said scale, a coöperative stop operative to co-act with the margin and final stops at different points in the travel of the carriage or to co-act with both the margin and final stops at a single point, and means for moving the said coöperative stop out of cooperative relation with said margin stop, all of the stops being carried at the front of the machine where they are readily accessible to the operator for adjustment and manipulation.

5. In a typewriting machine, the combination of a carriage, a scale at the front of the machine, margin and final margin stops, each of said stops being independently adjustable and each carrying an indicator coöperative with

said scale, line lock and final stops, each of said line lock and final stops being independently adjustable, and a cooperative stop, all of said stops being carried at the front of the machine where they are readily accessible to the operator for adjustment and manipulation.

[Claims 6 to 15 not printed in the Gazette.]

956,672. BEAMLESS BRAKE MECHANISM FOR RAILWAY-CARS. WILLIAM P. BETTENDORF, Davenport, Iowa. Filed Dec. 18, 1909. Serial No. 533,818.



1. In a car-truck the combination with the side-frames, and car-wheels thereof, of brake-shoes, brake-shoe holders supported independent of the truck-bolster, means pivotally connected to and supported by said side-frames in transverse planes between said wheels for carrying said brake-shoe holders, and mechanism for actuating said means.

2. In a car-truck the combination with the side-frames, and car-wheels thereof, of brake-shoes, brake-shoe holders supported independent of the truck-bolster, automatically returnable means pivotally connected to and supported by said side-frames in transverse planes between said wheels for carrying said brake-shoe holders, and mechanism for actuating said means.

3. In a car-truck the combination with the side-frames, and car-wheels thereof, of brake-shoes, brake-shoe holders, gravity returnable means pivotally connected to and supported by said side-frames in transverse planes between said wheels for carrying said brake-shoe holders, and mechanism for actuating said means.

4. In a car-truck the combination with the side-frames, and car-wheels thereof, of brake-shoes, brake-shoe holders supported independent of the truck-bolster, brackets pivotally connected to and supported by said side-frames in transverse planes between said wheels for carrying said brake-shoe holders, and mechanism for actuating said brackets.

5. In a car-truck the combination with the side-frames, and car-wheels thereof, of brake-shoes, brake-shoe holders supported independent of the truck-bolster, means pivotally connected to and supported by said side-frames in transverse planes between said wheels to which said brake-shoe holders are pivotally connected, and mechanism for actuating said means.

[Claims 6 to 22 not printed in the Gazette.]

956,674. SWITCH OR OUTLET BOX. WILLIAM A. BONNELL, Brooklyn, N. Y., assignor to Hattie W. F. Bonnell, Brooklyn, N. Y. Filed May 29, 1909. Serial No. 499,190.

1. An electric appliance for electric conduits comprising a box or casing, having a conduit aperture therein, a stationary bushing therein spaced away from the wall thereof opposite said aperture and a clamping member interposed between said bushing and said wall and having a knock-out disk formed integral therewith, said disk arranged to stand closely adjacent to said wall whereby the conduit is gripped at the greatest distance from its end within said box.

2. An electrical appliance comprising a box or casing, having conduit apertures therein bushings formed integral therewith at the bottom thereof opposite said apertures respectively, the outer ends of said bushings being spaced away from the walls of said box and a clamping member interposed between said bushings and the walls of the box and having one or more knock-out disks formed integral therewith, so arranged as to lie closely adjacent to the wall of said box.



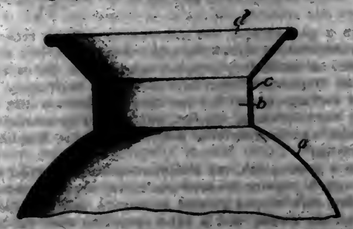
3. An electrical appliance for electric conduits comprising a box or casing, bushings formed integral therewith at the bottom thereof, and spaced away from the walls of said box, said casing having apertures in said walls in alinement with said bushings, clamping members interposed between said bushings and said walls and having knock-out disks formed integral therewith and arranged to lie close to and close said apertures whereby when said disks are removed, the raw edges left thereby will form gripping edges for the conduits considerably removed from the inner ends of said bushings.

4. An electrical appliance for electric conduits having spirally arranged armor comprising a box or casing having conduit apertures therein bushings formed integral therewith adjacent the walls thereof and spaced away from said walls opposite said apertures respectively, clamping members adapted to be interposed between said bushings and walls and having knock-out disks formed integral therewith, said disks being arranged at an angle to the body of said clamping member whereby when said disks are broken out the edges left thereby will extend in line substantially coincident with the spiral of the armor of said conduits to more effectually grip said conduits.

5. In an electrical appliance for electric conduits having spirally arranged armor, a box or casing having conduit apertures therein bushings formed integral therewith opposite said apertures respectively, clamping members arranged transversely of said bushings and having knock-out disks formed integral therewith and arranged at an angle to the body of said clamping members whereby the gripping edges left by the breaking out of said disks will extend in lines coincident with the spiral of the armor of the conduits to be secured.

[Claims 6 to 10 not printed in the Gazette.]

956,675. MILK-CAN AND METHOD OF MAKING THE SAME. RICHARD BRAY, Arlington Heights, Ill., assignor to Bray & Kates, Arlington Heights, Ill., a Firm. Filed Aug. 9, 1909. Serial No. 511,922.



1. A milk-can, comprising in combination a breast and double-walled neck, the inner wall of the neck consisting of an integral extension of the breast, and said two neck walls being connected at their upper edges.

2. A milk-can, comprising in combination a breast and a double-walled neck, each of the two walls of the neck extending from the top to the bottom of the neck, and the inner wall consisting of an integral extension of the breast.

3. A milk-can, comprising in combination a breast and a double-walled neck, each of the two walls of the neck being shaped alike throughout the length of the neck, and the inner wall consisting of an integral extension of the breast.

4. A milk-can, comprising in combination a breast and a double-walled neck, each of the two walls of the neck embodying a cylindrical lower portion and a flaring upper portion, and the inner wall consisting of an integral extension of the breast.

5. The method of making a combined milk-can breast and neck, which consists in forming a breast portion with a cylindrical extension at the upper end of the breast, then surrounding said extension with a collar or outer wall, and then shaping said two last-named pieces together.

[Claim 6 not printed in the Gazette.]

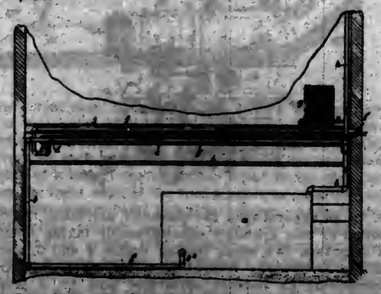
956,676. SEPARATOR FOR ANTIFRICTION-BEARINGS. FRED E. BRIGHT, Philadelphia, Pa. Filed June 9, 1908. Serial No. 437,546.



1. A separator for anti-friction bearings comprising a spherically formed separating element and a lateral retaining element connected thereto, the said retaining element being distinct and independent from the retaining element of any other separator.

2. A separator for anti-friction bearings comprising a spherically formed separating element and a lateral retaining element connected thereto, the said retaining element being distinct and independent from the retaining element of any other separator, and the separating element being formed with a peripheral groove therein.

956,677. HOT-WATER HEATING SYSTEM. HARRY L. BAUCH, Portland, Oreg. Filed Mar. 1, 1909. Serial No. 480,786.



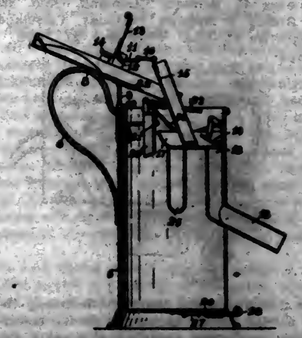
1. In a hot water heating system, a boiler, a short primary circuit pipe leading directly from and to the boiler, a casing encompassing the intermediate course of the primary circuit pipe, and constituting a secondary heating chamber, a radiator and out-leading and in-leading connections between the secondary heating chamber and the radiator; and the section of the primary circuit pipe within the secondary heating chamber provided with outlet and inlet orifices located relative to the hottest and coolest portions of said primary circuit, for the purpose set forth.

2. In a hot water heating system, a boiler, a short primary circuit pipe leading directly from and to the boiler and including a horizontal intermediate course; a pipe-like casing encompassing the intermediate course of the primary circuit pipe, and constituting a secondary heating chamber, a radiator and out-leading and in-leading connections between the secondary heating chamber and the radiator; and the section of the primary circuit pipe within the secondary heating chamber provided with outlet and inlet orifices located relative to the hottest and coolest portions of said primary circuit, for the purpose set forth.

3. In a hot water heating system, a boiler, a short primary circuit pipe leading directly from and to the boiler; a casing encompassing the intermediate course of the primary circuit pipe, and constituting a secondary heating chamber, a radiator and out-leading and in-leading connections between the secondary heating chamber and the radiator; and the section of the primary circuit pipe within the secondary heating chamber provided with outlet and inlet orifices, said orifices and said out-leading and in-leading radiator connections located relative to the hottest and coolest portions of said primary circuit, for the purpose set forth.

4. In a hot water heating system, a boiler, a short primary circuit pipe leading directly from and to the boiler and including a horizontal intermediate course; a pipe-like casing encompassing the intermediate course of the primary circuit pipe, and constituting a secondary heating chamber, a radiator and out-leading and in-leading connections between the secondary heating chamber and the radiator; and the section of the primary circuit pipe within the secondary heating chamber provided with outlet and inlet orifices, said orifices and said out-leading and in-leading radiator connections located relative to the hottest and coolest portions of said primary circuit, for the purpose set forth.

956,678. EGG-SEPARATOR. MARTIN BUERMEISTER, Worcester, Mass. Filed Jan. 6, 1910. Serial No. 536,675.



1. A device of the class described, comprising an inclined run way to receive the contents of an egg, a gate extending laterally of said run way to separate the yolk from the white of the egg, and means for conducting the separated parts into different receivers.

2. A device of the class described, comprising an inclined run way to receive the contents of an egg; a gate extending laterally of said run way constructed to obstruct the yolk of the egg but allow the white to flow past; means for receiving the white, means for emptying this white into a receptacle, and means for releasing the yolk and conducting it into a second receptacle.

3. A device of the class described, comprising an inclined run way to receive the contents of an egg, a gate

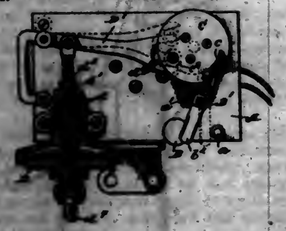
extending laterally of said run way constructed to obstruct the yolk but to allow the white to flow past, a rocking platform constructed to receive the white of the egg and to be rocked by the weight of the same to discharge its contents, and means connecting this platform with the gate whereby the rocking of the former raises the latter and allows the yolk to pass into a receptacle.

4. A device of the class described, comprising an inclined run way to receive the contents of an egg, a gate extending laterally of said run way constructed to obstruct the passage in the run way of the yolk of the egg but to allow the white to flow past, a rocking platform constructed to receive the white of the egg and to be rotated by the weight of the same, a receiving vessel under said platform, means connecting this platform with the gate whereby the rotating of the former raises the latter and allows the yolk to pass into a yolk receptacle, said yolk receptacle being movably mounted so that the weight of the yolk causes it to swing downward to discharge its contents, and means connecting this vessel with a gate in the vessel whereby the swing of the yolk receptacle raises this gate and allows the white of the egg to pass out of the first vessel into a white receptacle.

5. A device of the class described, comprising an inclined run way to receive the contents of an egg, a gate extending laterally of said run way constructed to obstruct the passage in the run way of the yolk of the egg but to allow the white to flow past, a rocking platform constructed to receive the white of the egg and to be rotated by the weight of the same, a receiving vessel under said platform, a link connecting this platform with the gate whereby the rotating of the former raises the latter and allows the yolk to pass into a yolk receptacle, said yolk receptacle being so mounted that the weight of the yolk causes it to swing downward to discharge its contents, means for returning this yolk receptacle to its normal position after discharge, and a link connecting this receptacle with a gate in the vessel whereby swinging of the receptacle raises this gate and allows the white of the egg in the vessel to pass into a white receptacle.

[Claim 6 not printed in the Gazette.]

956,679. ELECTRIC SWITCH. JOSEPH H. CHAMP and THEODORE H. SCHUTT, Cleveland, Ohio, assignors to The Bishop & Babcock Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 27, 1908. Serial No. 464,694.



1. In a device of the character described, the combination of a fixed contact member, a pivotal contact member, a member oscillatory about an axis other than that of said pivotal contact member and having a peripheral notch adapted to engage the pivotal member to open and close the circuit but permitting limited movement relatively to said pivotal contact member without such actuation, and a tension spring connected to said actuating member eccentrically of its axis, whereby said actuating member is maintained in a position either to open or close said pivotal contact member.

2. In a device of the character described, the combination of a fixed contact member, a pivotal contact member, an actuating member for the latter oscillatory about an axis other than that of said pivotal contact member and having limited movement relatively to said pivotal member, a spring connected to said actuating member eccentrically of its axis, whereby said actuating member is maintained in a position either to open or close said pivotal contact member, and a second oscillatory member connected to operate said actuating member and having limited movement relatively to the same.

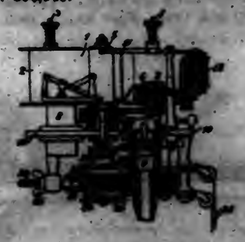
3. In a device of the character described, the combination of a fixed contact member, a pivotal contact member, an oscillatory member having a peripheral notch adapted to engage said pivotal contact member to open and close the same but permitting limited movement relatively thereto without such actuation, a tension spring connected to said actuating member eccentrically of its axis, whereby said actuating member is maintained in a position either to open or close said pivotal contact member, and a lever having a forked end engaging said actuating member to oscillate the same while still permitting limited movement relatively thereto.

4. In a device of the character described, the combination of a fixed contact member, a movable contact member, an actuating member for the latter having limited movement relatively to the same, means adapted to maintain said actuating member in a position either to open or close said movable contact member, a lever having a forked end engaging said actuating member to oscillate the same while still permitting limited movement relatively thereto, a diaphragm chamber connected with a pressure supply line, a diaphragm within said chamber and adapted to operate said lever, a tension member connected with said diaphragm, and means whereby the diaphragm will operate said lever only under a predetermined pressure in said supply line.

5. In a device of the character described, the combination of a fixed contact member, a movable contact member, an actuating member for the latter having limited movement relatively to the same, means adapted to maintain said actuating member in a position either to open or close said movable contact member, a lever having a forked end engaging said actuating member to oscillate the same while still permitting limited movement relatively thereto, a primary diaphragm chamber adapted to be connected with a pressure supply line, a diaphragm within said chamber and adapted, when the chamber is thus connected, to operate said lever, a valve controlling connection between such primary diaphragm chamber and supply line, a secondary diaphragm chamber connected with said supply line, and a diaphragm within said secondary chamber and adapted to operate said control valve.

[Claims 6 to 12 not printed in the Gazette.]

956,680. STEAM-ENGINE POWER-GAGE. GIUSEPPE CIPOLLINA, Genoa, Italy, assignor to Gaspare Bernati and Luigi Cecchi, Genoa, Italy. Filed Oct. 11, 1907. Serial No. 396,949.



1. In an apparatus of the character described, the combination of two cylinders simultaneously taking differential diagrams, two paper feeding drums 4 and 5, one of which is frictionally rotated from the other, said drum 4 comprising an endwise adjustable cone 13, a divided roll 15 upon the cone and an elastic sleeve surrounding the roll 15, a sleeve 17 carrying the drum 4, a rotatable shaft 18 to which the said sleeve 17 is secured and means for continuously rotating the shaft 18.

2. In an apparatus of the character described, the combination of two cylinders simultaneously taking differential diagrams, paper feeding drums 4 and 5, one of which is frictionally rotated from the other, a rotatable shaft 18 on which the drum 4 is loosely mounted and means for rotating said shaft comprising a sleeve secured thereto and carrying the drum 4, a sleeve 21 loose on a cylindrical portion of shaft 18, disks 23, 24, loosely carried by the sleeve 21, a clutch between each of said disks and the latter sleeve and operating as described, a cord attached at one end to each of the disks, and adapted to wind thereon, and a return spring also attached to each disk, and coöperating as and for the purpose set forth.

3. In an apparatus of the character described, the combination of two cylinders simultaneously taking differential diagrams, two paper feeding drums 4 and 5, a rotatable shaft on which drum 4 is loosely mounted, a sleeve secured to said shaft and carrying the drum 4, a sleeve 21 loose on the shaft 18 and having teeth at its upper end, disks 23, 24, loose on sleeve 21, a clutch between each disk and the sleeve 21 and operating as described, means for rotating the disks in one direction, return springs operating to turn the disks in the opposite direction as set forth, a clutch 22 slidingly mounted on a squared part of shaft 18, and adapted to engage the said teeth of sleeve 21, electro-magnetically operated levers 31, 32 arranged to operate the indicator points as described, and also the clutch 22.

4. In an apparatus of the character described, the combination of two cylinders simultaneously taking differential diagrams, indicator points arranged as described, two paper feeding drums 4 and 5, a rotatable shaft on which drum 4 is loosely mounted, a sleeve secured to said shaft and carrying the drum 4, a sleeve 21 loose on the shaft 18, and having teeth at its upper end, disks 23, 24, loose on sleeve 21, a clutch between each disk and the sleeve 21 and operating as described, means for rotating the disks in one direction, return springs operating to turn the disks in the opposite direction as set forth, a clutch 22 slidingly mounted on a squared part of shaft 18, and adapted to engage the said teeth of sleeve 21, electro-magnetically operated levers 31, 32, arranged to operate the indicator points as described, and also the clutch 22, a ratchet wheel 36 geared on shaft 18, and spring actuated pawls 37, 38 arranged and adapted to actuate the ratchet wheel as described.

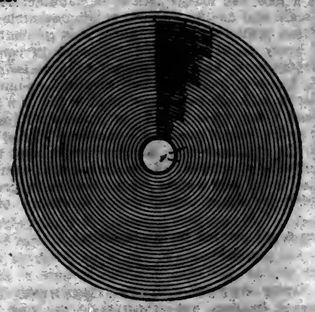
956,681. FOOT-REST. CHARLES E. CLARKE, Winthrop, Mass., assignor to Puritan Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 17, 1909. Serial No. 483,896.



1. In a foot rest, the combination with a base or support, of two pairs of links pivoted thereto, and a foot-supporting member pivotally sustained by said links, the front link of each pair being shorter than the rear link and being of a length approximately equal to the distance between the front edge of the foot-supporting member and the point where said front link pivots thereto whereby the foot-supporting member may be folded flat against the base or may be swung into operative position with its front edge resting against the support or base substantially in line with the points where the shorter links pivot to the base and with said links extending substantially parallel to the plane of the foot-supporting member.

2. In a foot rest, the combination with a base or support, of a foot-supporting member, a plurality of pairs of links pivotally connected to the foot-supporting member and also pivotally connected to the base or support, the link of each pair nearest the front edge of the foot-supporting member being longer than the other link of the pair and substantially equal to the distance between the front edge of the foot-supporting member and the point where said front link is pivoted thereto and the distance between the points where the links of each pair are pivoted to the foot-supporting member being less than the distance between the points where the links are pivoted to the support.

956,682. COMPUTING-SCALE DIAL. JOSEPH E. COCHRAN, Elkhart, Ind. Filed Aug. 26, 1907. Serial No. 390,148.



1. As a new and useful article of manufacture a computing scale having a plurality of concentric rows of graduations, all of said graduations excepting every tenth one being numbered in consecutive series from one to nine and every tenth one bearing a number constituting a multiple of ten, and the numbers comprising the second set being set off from said numbers one to nine so as to be out of the line thereof, and a third series of numbers larger than the second said numbers arranged in a line concentric with the first said numbers, each of the third said numbers being arranged adjacent one of the second said numbers but set off therefrom and from the first said series in a different concentric line.

2. As a new and useful article of manufacture a computing scale dial having a plurality of concentric rows of graduations, all of said graduations excepting every tenth one being numbered in consecutive series from one to nine, said tenth graduation bearing a number constituting a multiple of ten arranged in a row concentric with and set off from the first said series of numbers, and a third series of numbers arranged respectively adjacent the second said numbers greater in amount than the second said numbers adjacent to which they are respectively located, the second said numbers being arranged in the same concentric line as the said graduations and the third series of numbers being arranged at one side and the first said series of numbers at the other side of said row of graduations.

3. As a new and useful article of manufacture a computing scale dial having a plurality of concentric rows of graduations, all of said graduations excepting every tenth one being numbered in consecutive series from one to nine and said numbers being located in a row at one side of the row of graduations and parallel therewith, every tenth graduation being numbered by a number constituting a multiple of ten and the latter said numbers being arranged at the opposite side of the said row of graduations and in a line concentric therewith, and a third set of numbers each constituting a multiple of ten arranged one on every tenth graduation at a position between the first and second said numbers and offset with respect to the other two sets of numbers.

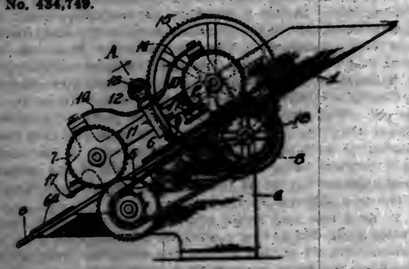
4. As a new and useful article of manufacture a computing scale dial having a plurality of concentric lines forming concentric spaces, a row of graduations indicated parallel with said lines in each of said spaces, all of said graduations in each row being numbered in consecutive

series from one to nine and said numbers being arranged in a concentric row in each of said spaces between said row of graduations and one of the concentric lines contiguous thereto, every tenth graduation in each of said spaces bearing a number constituting a multiple of ten arranged in a line concentric with said row of graduations and within each of said spaces but between the row of graduations and the one of the said concentric lines on the side of the said graduations opposite to that on which the first said numbers indicating said graduations are located and every tenth graduation also bearing a third number constituting ten or a multiple of ten arranged directly in line with the said row of graduations.

5. As a new and useful article of manufacture a computing scale dial having a plurality of concentric rows of graduations indicating money, all of said graduations excepting every tenth one being numbered in consecutive series from one to nine and every tenth one bearing two separate numbers indicating two separate amounts, each of the latter said numbers being equal to ten or a multiple of ten and being offset in different concentric rows from the first said series of numbers, a marginal row of graduations on the dial spaced to indicate weight, and two separate numbers of different values arranged at every whole pound one of the said weight graduations and representing respectively a whole pound and a plurality of whole pounds.

[Claim 6 not printed in the Gazette.]

956,683. PIE-CRUST-FORMING MACHINE. OLIVER COLBORNE, Chicago, Ill. Filed May 25, 1908. Serial No. 434,749.



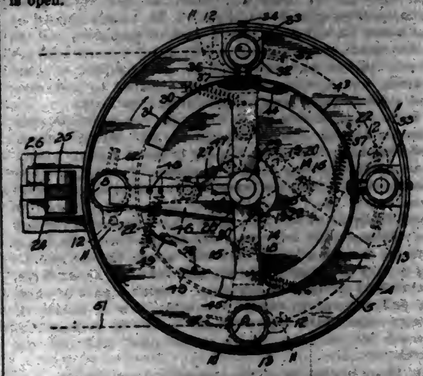
1. The combination of mechanism adapted to form a mass of plastic material into a strip of substantially uniform cross-section, means for feeding said strip lengthwise, a cutter mounted to operate intermittently across the path of said strip for cutting the same into a series of sections of substantially uniform size as it is fed along, and means for rolling said sections so as to form each into a flat sheet of substantially uniform thickness, said cutter being curved and concave toward the direction from which said strip is fed.

2. In a pie crust forming device, the combination of two pairs of opposed rollers journaled on substantially parallel axes, means for feeding dough from one pair to the other, and a cutter located between said pairs of rollers and adapted to cut the dough into sections of uniform length in its passage between said rollers, the second pair of rollers being driven at a considerably greater peripheral speed than the first pair.

956,684. PIE-FILLING MACHINE. OLIVER COLBORNE, Chicago, Ill. Filed Apr. 3, 1909. Serial No. 487,739.

1. A pie filling machine, comprising a rotary tank, a measuring nozzle in the bottom thereof, means adapted to open and close the outlet end of said nozzle, and means adapted to close the inlet end of said nozzle and to force material from the outlet end when said outlet end thereof is open.

2. A pie filling machine, comprising a rotary tank, a measuring nozzle opening therefrom and adapted to be filled from the contents of the tank, means adapted to normally close the outlet end of said nozzle, and means adapted to close the inlet end of said nozzle and force the contents of the nozzle to flow out when said outlet end is open.



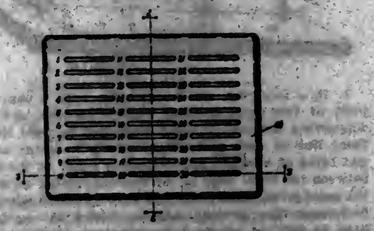
3. A pie filling machine, comprising a rotary tank adapted to contain filling material, a nozzle removably mounted in said tank flush with the bottom thereof, and adapted to receive filling material from said tank, a plunger adapted to be moved into and out of the nozzle, a valve controlling the outlet end of said nozzle, and means for opening said valve when the plunger enters the nozzle.

4. A pie filling machine, comprising a rotary tank, a measuring nozzle communicating therewith, a plunger supported in the tank in alinement with said nozzle and adapted to fit closely therein, means for forcing said plunger into the nozzle, a valve controlling the outlet end of said nozzle, and means for automatically operating said valve and plunger to discharge measured quantities of material while said tank is in motion.

5. A pie filling machine, comprising a tank mounted to rotate on a vertically disposed axis, a measuring nozzle on said tank, a closure for the outlet of said nozzle, a plunger mounted in the tank and adapted to control communication between the tank and nozzle, and means operated through the rotation of the tank and adapted to operate said closure and plunger to discharge successive measured quantities of material from the tank.

[Claims 6 to 13 not printed in the Gazette.]

956,685. SAVINGS-BANK. RALPH W. CRARY, Sturgeon Bay, Wis. Filed Dec. 16, 1909. Serial No. 533,437.



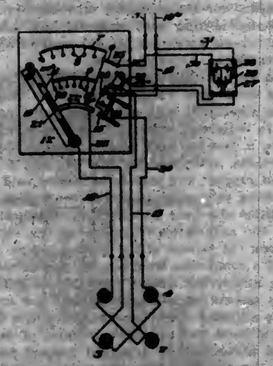
1. A savings bank comprising a container having a plurality of coin-receiving perforations formed through one wall thereof, a correspondingly-perforated holding-plate, and means for holding said holding-plate in correlation with the perforated wall of the container, whereby a frangible sheet may be retained over the perforations.

2. A savings bank comprising a container having a plurality of coin-receiving perforations formed through one wall thereof, a correspondingly-perforated holding-plate mounted within the container and having struts, and a cover member having interlocking connections with the container and engaging the struts of the holding-plate so as to retain a frangible sheet between the holding-plate and the perforated wall of the container.

3. A savings bank comprising a container having a plurality of coin-receiving perforations formed through one wall thereof, a correspondingly-perforated holding-plate, and means for holding said holding-plate in correlation with the perforated wall of the container, whereby a frangible sheet may be retained over the perforations, the container also having a circular bill-receiving perforation formed through one wall thereof.

4. A savings bank comprising a container having a plurality of coin-receiving perforations formed through one wall thereof, a correspondingly-perforated holding-plate mounted within the container and having struts, and a cover member having interlocking connections with the container and engaging the struts of the holding-plate so as to retain a frangible sheet between the holding-plate and the perforated wall of the container, the container also having a circular bill-receiving perforation formed through one wall thereof.

956,686. PHASE-SPLITTER. HENRY H. CUTLER, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 9, 1905. Serial No. 249,258.

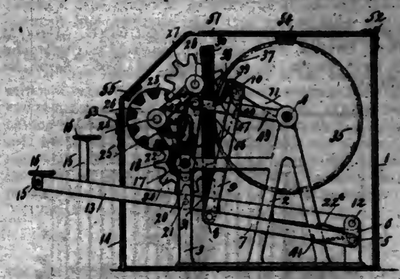


1. The combination with an alternating current motor, of a phase splitter for starting said motor, adapted to connect the field windings of said motor in parallel paths, and comprising a separate resistance for each of said paths, said resistances being such as to supply said field windings with currents of different phase, a resistance common to each of said first resistances for reducing the voltage of the current supplied to said field windings when connected in parallel, and a single movable member for adjusting said resistances.

2. The combination with an alternating current motor, of a phase splitter for starting the same, adapted to connect the field windings of said motor in two parallel paths, and comprising an adjustable inductive resistance arranged in one of said paths, an adjustable non-inductive resistance arranged in the other of said paths, a third resistance common to both of said paths for decreasing the voltage of the current supplied to said windings when connected in parallel relation and a single movable member for adjusting said resistances.

3. The combination with an alternating current motor, of a phase splitter for starting the same, adapted to connect the field windings of the motor in two parallel paths, and comprising an adjustable inductive resistance arranged in one of said paths, an adjustable non-inductive resistance arranged in the other of said paths, a third resistance common to both of said paths for reducing the voltage of the current supplied to said field windings, and means for removing all of said resistance from the circuit of said field windings and connecting said field windings in series.

956,687. COMPUTING-MACHINE. JOHN M. DALY, Chicago, Ill., assignor of one-half to Christopher L. Daly, Peoria, Ill. Filed Apr. 11, 1904. Serial No. 202,552.



1. Mechanism for computing the tonnage resistance in trains of cars, comprising one or more registering wheels, keys for operating said wheels, each bearing one or more numerals, a stop-member for each key, having irregular acting portions and arranged to limit the stroke of said keys as they are depressed, means operated by said keys after a predetermined number of strokes thereof for automatically changing the position of said stop-members and thereby the stroke of the keys, the operation of the keys causing the registering wheels to add and to display amounts at variance to the amounts appearing on said keys, and with each change of position of the stop-members to cause the registering wheels to add an increased or decreased amount according as the stroke of said keys are changed.

2. Mechanism for computing the tonnage resistance in trains of cars, comprising one or more registering wheels, a link-frame, a plurality of key-bars either one of which will operate the link frame, connections between the link-frame and the registering wheels, means for limiting the stroke of each key-bar as it is depressed, and means operated by the key-bars for changing the position of the limiting means after a predetermined number of strokes of said key-bars, the stroke of said keys if fully depressed, being invariable between each change of the limiting means, and variable with each change of said limiting means.

3. Mechanism for computing the tonnage resistance in trains of cars, comprising a pair of registering wheels, one of said wheels adapted to make one tenth of a revolution with every revolution of the second wheel, key-bars adapted to operate said last mentioned wheel, means operated by said last mentioned wheel for imparting movement to said first mentioned wheel, means for limiting the stroke of each key-bar as it is depressed, and means operated by the key-bars for changing the position of the limiting means after a predetermined number of strokes of said key-bars, the stroke of said keys if fully depressed being invariable between each change of the limiting means, and variable with each change of said limiting means.

4. In combination, a plurality of key-bars, a registering wheel adapted to register up to one thousand tons, connections between the registering wheel and the key-bars, means for limiting the stroke of each key-bar as it is depressed, and means operated by the key-bars for changing the position of the limiting means after a predetermined number of strokes of said key-bars, the stroke of said keys if fully depressed being invariable between each change of the limiting means, and variable with each change of said limiting means.

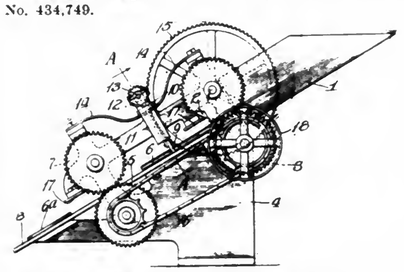
5. In combination, a plurality of key-bars, mechanism for limiting the length of stroke of said key-bars, means operated by said key-bars for automatically changing the position of the limiting mechanism and thereby change the

series from one to nine and said numbers being arranged in a concentric row in each of said spaces between said row of graduations and one of the concentric lines contiguous thereto, every tenth graduation in each of said spaces bearing a number constituting a multiple of ten arranged in a line concentric with said row of graduations and within each of said spaces but between the row of graduations and the one of the said concentric lines on the side of the said graduations opposite to that on which the first said numbers indicating said graduations are located and every tenth graduation also bearing a third number constituting ten or a multiple of ten arranged directly in line with the said row of graduations.

5. As a new and useful article of manufacture a computing scale dial having a plurality of concentric rows of graduations indicating money, all of said graduations excepting every tenth one being numbered in consecutive series from one to nine and every tenth one bearing two separate numbers indicating two separate amounts, each of the latter said numbers being equal to ten or a multiple of ten and being offset in different concentric rows from the first said series of numbers, a marginal row of graduations on the dial spaced to indicate weight, and two separate numbers of different values arranged at every whole pound one of the said weight graduations and representing respectively a whole pound and a plurality of whole pounds.

[Claim 6 not printed in the Gazette.]

956,683. PIE-CRUST-FORMING MACHINE. OLIVER COLBORNE, Chicago, Ill. Filed May 25, 1908. Serial No. 434,749.



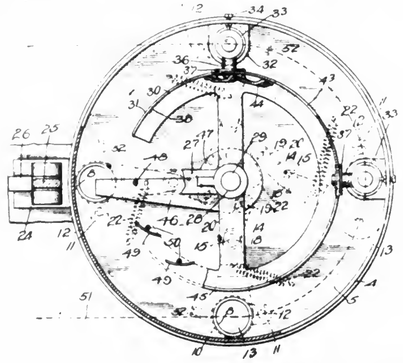
1. The combination of mechanism adapted to form a mass of plastic material into a strip of substantially uniform cross-section, means for feeding said strip lengthwise, a cutter mounted to operate intermittently across the path of said strip for cutting the same into a series of sections of substantially uniform size as it is fed along, and means for rolling said sections so as to form each into a flat sheet of substantially uniform thickness, said cutter being curved and concave toward the direction from which said strip is fed.

2. In a pie crust forming device, the combination of two pairs of opposed rollers journaled on substantially parallel axes, means for feeding dough from one pair to the other, and a cutter located between said pairs of rollers and adapted to cut the dough into sections of uniform length in its passage between said rollers, the second pair of rollers being driven at a considerably greater peripheral speed than the first pair.

956,684. PIE-FILLING MACHINE. OLIVER COLBORNE, Chicago, Ill. Filed Apr. 3, 1909. Serial No. 487,739.

1. A pie filling machine, comprising a rotary tank, a measuring nozzle in the bottom thereof, means adapted to open and close the outlet end of said nozzle, and means adapted to close the inlet end of said nozzle and to force material from the outlet end when said outlet end thereof is open.

2. A pie filling machine, comprising a rotary tank, a measuring nozzle opening therefrom and adapted to be filled from the contents of the tank, means adapted to normally close the outlet end of said nozzle, and means adapted to close the inlet end of said nozzle and force the contents of the nozzle to flow out when said outlet end is open.



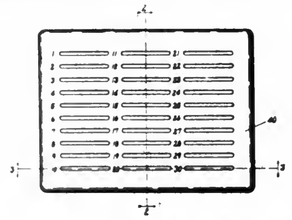
3. A pie filling machine, comprising a rotary tank adapted to contain filling material, a nozzle removably mounted in said tank flush with the bottom thereof, and adapted to receive filling material from said tank, a plunger adapted to be moved into and out of the nozzle, a valve controlling the outlet end of said nozzle, and means for opening said valve when the plunger enters the nozzle.

4. A pie filling machine, comprising a rotary tank, a measuring nozzle communicating therewith, a plunger supported in the tank in alinement with said nozzle and adapted to fit closely therein, means for forcing said plunger into the nozzle, a valve controlling the outlet end of said nozzle, and means for automatically operating said valve and plunger to discharge measured quantities of material while said tank is in motion.

5. A pie filling machine, comprising a tank mounted to rotate on a vertically disposed axis, a measuring nozzle on said tank, a closure for the outlet of said nozzle, a plunger mounted in the tank and adapted to control communication between the tank and nozzle, and means operated through the rotation of the tank and adapted to operate said closure and plunger to discharge successive measured quantities of material from the tank.

[Claims 6 to 13 not printed in the Gazette.]

956,685. SAVINGS-BANK. RALPH W. CRARY, Sturgeon Bay, Wis. Filed Dec. 16, 1909. Serial No. 533,437.



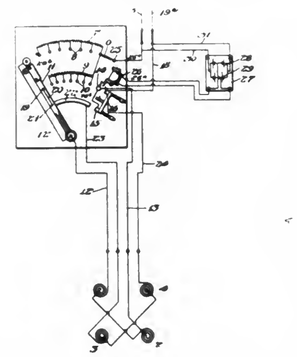
1. A savings bank comprising a container having a plurality of coin-receiving perforations formed through one wall thereof, a correspondingly-perforated holding-plate, and means for holding said holding-plate in correlation with the perforated wall of the container, whereby a frangible sheet may be retained over the perforations.

2. A savings bank comprising a container having a plurality of coin-receiving perforations formed through one wall thereof, a correspondingly-perforated holding-plate mounted within the container and having struts, and a cover member having interlocking connections with the container and engaging the struts of the holding-plate so as to retain a frangible sheet between the holding-plate and the perforated wall of the container.

3. A savings bank comprising a container having a plurality of coin-receiving perforations formed through one wall thereof, a correspondingly-perforated holding-plate, and means for holding said holding-plate in correlation with the perforated wall of the container, whereby a frangible sheet may be retained over the perforations, the container also having a circular bill-receiving perforation formed through one wall thereof.

4. A savings bank comprising a container having a plurality of coin-receiving perforations formed through one wall thereof, a correspondingly-perforated holding-plate mounted within the container and having struts, and a cover member having interlocking connections with the container and engaging the struts of the holding-plate so as to retain a frangible sheet between the holding-plate and the perforated wall of the container, the container also having a circular bill-receiving perforation formed through one wall thereof.

956,686. PHASE-SPLITTER. HENRY H. CUTLER, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 9, 1905. Serial No. 249,258.

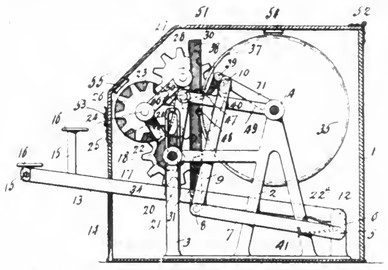


1. The combination with an alternating current motor, of a phase splitter for starting said motor, adapted to connect the field windings of said motor in parallel paths, and comprising a separate resistance for each of said paths, said resistances being such as to supply said field windings with currents of different phase, a resistance common to each of said first resistances for reducing the voltage of the current supplied to said field windings when connected in parallel, and a single movable member for adjusting said resistances.

2. The combination with an alternating current motor, of a phase splitter for starting the same, adapted to connect the field windings of said motor in two parallel paths, and comprising an adjustable inductive resistance arranged in one of said paths, an adjustable non-inductive resistance arranged in the other of said paths, a third resistance common to both of said paths for decreasing the voltage of the current supplied to said windings when connected in parallel relation and a single movable member for adjusting said resistances.

3. The combination with an alternating current motor, of a phase splitter for starting the same, adapted to connect the field windings of the motor in two parallel paths, and comprising an adjustable inductive resistance arranged in one of said paths, an adjustable non-inductive resistance arranged in the other of said paths, a third resistance common to both of said paths for reducing the voltage of the current supplied to said field windings, and means for removing all of said resistance from the circuit of said field windings and connecting said field windings in series.

956,687. COMPUTING-MACHINE. JOHN M. DALY, Chicago, Ill., assignor of one-half to Christopher L. Daly, Peoria, Ill. Filed Apr. 11, 1904. Serial No. 202,552.



1. Mechanism for computing the tonnage resistance in trains of cars, comprising one or more registering wheels, keys for operating said wheels, each bearing one or more numerals, a stop-member for each key, having irregular acting portions and arranged to limit the stroke of said keys as they are depressed, means operated by said keys after a predetermined number of strokes thereof for automatically changing the position of said stop-members and thereby the stroke of the keys, the operation of the keys causing the registering wheels to add and to display amounts at variance to the amounts appearing on said keys, and with each change of position of the stop-members to cause the registering wheels to add an increased or decreased amount according as the stroke of said keys are changed.

2. Mechanism for computing the tonnage resistance in trains of cars, comprising one or more registering wheels, a link-frame, a plurality of key-bars either one of which will operate the link frame, connections between the link-frame and the registering wheels, means for limiting the stroke of each key-bar as it is depressed, and means operated by the key-bars for changing the position of the limiting means after a predetermined number of strokes of said key-bars, the stroke of said keys if fully depressed, being invariable between each change of the limiting means, and variable with each change of said limiting means.

3. Mechanism for computing the tonnage resistance in trains of cars, comprising a pair of registering wheels, one of said wheels adapted to make one tenth of a revolution with every revolution of the second wheel, key-bars adapted to operate said last mentioned wheel, means operated by said last mentioned wheel for imparting movement to said first mentioned wheel, means for limiting the stroke of each key-bar as it is depressed, and means operated by the key-bars for changing the position of the limiting means after a predetermined number of strokes of said key-bars, the stroke of said keys if fully depressed being invariable between each change of the limiting means, and variable with each change of said limiting means.

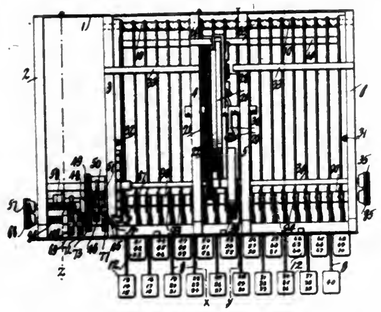
4. In combination, a plurality of key-bars, a registering wheel adapted to register up to one thousand tons, connections between the registering wheel and the key-bars, means for limiting the stroke of each key-bar as it is depressed, and means operated by the key-bars for changing the position of the limiting means after a predetermined number of strokes of said key-bars, the stroke of said keys if fully depressed being invariable between each change of the limiting means, and variable with each change of said limiting means.

5. In combination, a plurality of key-bars, mechanism for limiting the length of stroke of said key-bars, means operated by said key-bars for automatically changing the position of the limiting mechanism and thereby change the

distance which the key-bars may be moved, a pair of registering wheels, one adapted to register up to one thousand tons and the two wheels combined adapted to register up to ten thousand tons, connections between the key-bars and first mentioned wheel, and means operated by the first mentioned wheel for actuating its mate at pre-determined intervals.

[Claims 6 to 10 not printed in the Gazette.]

956,688. TONNAGE-EQUATING MACHINE. JOHN M. DALY, Chicago, Ill., assignor of one-half to Christopher L. Daly, Peoria, Ill. Filed Aug. 15, 1905. Serial No. 274,342.



1. In a device of the character described, a key, mechanism for limiting the stroke of said key, means for changing the position of said limiting mechanism after a predetermined number of strokes of said key, and thereby change the distance of stroke of said key, and means cooperating with said key for locking it against return movement until it haa made its full stroke.

2. In a device of the character described, registering mechanism, a key for operating said mechanism, mechanism for limiting the stroke of said key, means for changing the position of the limiting mechanism after a predetermined number of strokes of said key, and thereby change the distance of stroke of said key, and means cooperating with said key for locking it against return movement until it has made its full stroke.

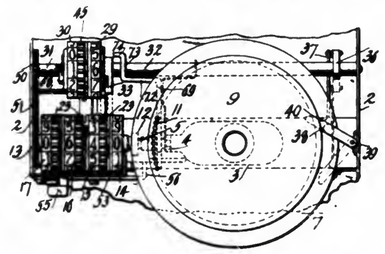
3. In a device of the character described, a key, means for limiting the stroke of said key, and mechanism independent of the limiting means and coöperating with said key for locking the same against return movement until it haa made its full stroke.

4. In a device of the character described, a key-bar, a finger carrying a spring blade carried by said key-bar, a ratchet bar adapted to be engaged by the said blade, means adapted to engage the finger for throwing forward the blade to engage the teeth of the ratchet bar in the downward movement of the key-bar to prevent its return until the key-bar has reached the limit of its stroke, and means positioned in the path of movement of the finger whereby the finger is moved upwardly forcing the blade inwardly and out of the path of the teeth of the ratchet bar.

5. In a device of the character described, a key-bar containing one or more characters, mechanism for limiting the stroke of said key, means for changing the position of the limiting mechanism after a predetermined number of strokes of said key, and thereby change the distance of stroke of said key, a ratchet bar in proximity to the movement of said key-bar, and means carried by said key-bar adapted to engage the teeth of the ratchet bar in the downward movement of the key, and until the same reaches the limit of its stroke when the said means is automatically moved into a position to be out of engagement of said ratchet bar, in the return movement of said key-bar.

[Claims 6 to 42 not printed in the Gazette.]

956,689. COMPUTING-MACHINE. JOHN M. DALY, Chicago, Ill., assignor of one-half to Christopher L. Daly, Peoria, Ill. Filed Jan. 30, 1907. Serial No. 354,908.



1. In a computing machine, registering mechanism, comprising numbering wheels operating in uniform sequence, means for operating said wheels, pinions associated with said wheels, a support for said pinions, means for moving said support and pinions axially of said wheels, means for automatically locking said support, and means dependent upon a reverse operation of said register operating means for releasing said locking means.

2. In a computing machine, registering mechanism, comprising numbering wheels operating in uniform sequence, means for operating said wheels, pinions associated with said wheels, a reciprocally arranged support for said pinions, means for reciprocating said support, means for automatically locking said support, and means dependent upon a reverse operation of said register operating means for releasing said locking means.

3. In a computing machine, registering mechanism, comprising numbering wheels operating in uniform sequence, pinions associated with said wheels for imparting movement to adjacent wheels, instrumentalities for accomplishing a forward and reverse movement of said wheels and pinions, a support for said pinions, a lever for moving said support and pinions axially of said wheels, means for locking said support, means controlled by the instrumentalities aforesaid for releasing said locking means, and means for automatically returning the support and pinions upon the release of the locking means.

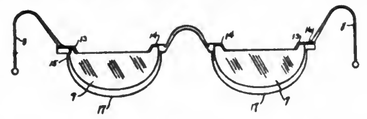
4. In a computing machine, registering mechanism, comprising numbering wheels operating in uniform sequence, pinions associated with said wheels for imparting movement to adjacent wheels, instrumentalities for accomplishing a forward and reverse movement of said wheels and pinions, a reciprocally arranged support for said pinions, a lever for reciprocating said support, means for locking said support, means controlled by the instrumentalities aforesaid for releasing said locking means, and means for automatically returning the support and pinions upon the release of the locking means.

5. In a computing machine, the combination of registering mechanism, comprising numbering wheels operating in uniform sequence, a tallying device also comprising numbering wheels operating in uniform sequence, means for simultaneously operating the register and tallying wheels, gearing interposed between said register and tallying wheels, pinions associated with both sets of wheels, a support for said pinions, means for moving said support and pinions axially of the wheels, means for automatically locking said support, and means dependent upon a reverse operation of said register and tallying operating means for releasing said locking means.

[Claims 6 to 31 not printed in the Gazette.]

956,690. SPECTACLES. JAMES W. DONALDSON, Houston, Tex. Filed Nov. 9, 1909. Serial No. 526,956.

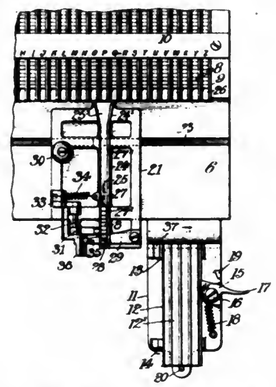
1. An eye glass comprising a nose bridge, a semi-elliptical frame mounted on each side of said nose bridge, a lens mounted in each frame and having its upper edge disposed beneath the normal line of vision and also being provided with upwardly projecting shoulders at each end, and a pair of prongs formed on each frame extending inwardly thereof and engaging with the said shoulders, so as to prevent the lateral spreading of said frames.



2. An eye glass comprising a nose bridge, a semi-elliptical frame mounted on each side of said nose bridge, each frame being reinforced at its central portion, a lens mounted in each frame and having its upper edge disposed beneath the normal line of vision and also being provided with upwardly projecting shoulders at each end, and a pair of prongs formed on each frame extending inwardly thereof and engaging with the said shoulders, so as to prevent the lateral spreading of said frames.

3. An eye glass comprising a nose bridge, a semi-elliptical frame mounted on each side of said nose bridge, a lens mounted on each frame and having its upper edge disposed beneath the normal line of vision, shoulders carried by each end of the said lens and means carried by the frame for engaging with the shoulders to prevent the lateral spreading of said frame.

956,691. TYPE-SETTING CASE. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 1, 1909. Serial No. 480,596.



1. A type-setting case comprising a bed having a plurality of type channels thereon, an address holder removably secured on the bed with its type channels substantially parallel with the channels of the bed, and a setting frame freely movable across the bed between the channels and the address holder, and having a type groove to receive type at one end from the channels, and to discharge the type at the other end into the holder.

2. A type setting case comprising a bed having a plurality of type channels thereon, means for supporting an address holder on the bed, a setting frame freely movable across the bed between the channels and the address holder and having a type groove to receive type at one end from the channels, the type channels on the bed, address holder and setting frame all extending in the same direction, and means for registering said setting frame with the address holder.

3. A type setting case comprising a bed having a plurality of type channels thereon, an arm projecting from the lower edge of said bed, means for securing an address holder on said arm, and a setting frame freely movable across the bed between the channels and the address holder and having a type groove to receive type at one end from the channels and discharge said type at the other end into said holder.

4. A type setting case comprising a bed having a plurality of type channels thereon, an arm projecting from the lower edge of said bed, means for securing an address holder on said arm, a setting frame freely movable across the bed between the channels and the address holder and having a type groove to receive type at one end from the channels and discharge said type at the other end into said holder, and means for registering said setting frame with the address holder.

5. A type setting case comprising a bed having a plurality of type channels thereon, and a setting frame freely movable across the bed and comprising an address holder having a groove therein to receive type from the channels, said holder having an inturned flange on one side projecting partly across the groove to partly overlap and engage the type and said flange being cut away between its ends to leave the type groove exposed for its entire width.

[Claims 6 to 14 not printed in the Gazette.]

956,692. TYPE-HOLDER. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 1, 1909. Serial No. 480,599.



1. A type holder having a type groove and an opening therein, and means secured to one side of said holder and provided with a curved portion extending through said opening into the holder, for normally retaining the type therein, but adapted to yield under abnormal downward pressure of the type to permit the type to be discharged from the holder.

2. A type holder having a type groove and an opening therein and means secured to one side of said holder and provided with a yielding curved portion extending through said opening into the holder, normally retaining the type therein, but permitting the type to be discharged under abnormal pressure.

3. A type holder having a type groove and an opening therein and lips stamped up therefrom, and a spring metal plate having its ends engaged with said lips and provided with a bowl between its ends which projects through said opening into the type groove.

4. A type holder having a type groove and an opening adjacent one end thereof, and a spring metal plate having a bow which projects through said opening into the type groove, the end of said plate removed from said end of the groove being securely fastened to the holder and the other end of said plate being movable relative to the holder.

956,693. LINEN-SMOOTHER. CARLETON ELLIS, Larchmont, N. Y., assignor to Fulton Chemical Company, a Corporation of New York. Filed Apr. 9, 1909. Serial No. 488,955.

1. A linen smoother comprising a comparatively hard body of waxy material containing an acid-neutralizing body of waxy nature and an antiseptic body said smoother being devoid of sensible alkalinity.

2. A linen smoother comprising a body of waxy material containing a heavy metal soap and an antiseptic body.

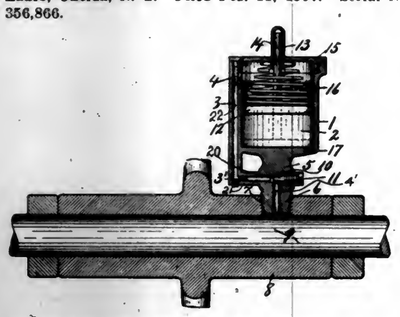
3. A linen smoother comprising a body of waxy material containing a zinc soap and an antiseptic body.

4. A linen smoother comprising a body of waxy material containing an acid-neutralizing body and boric acid.

5. A linen smoother comprising talc, a wax, an acid-neutralizing body and an antiseptic.

[Claims 6 to 8 not printed in the Gazette.]

956,694. AUTOMATIC LUBRICATOR. FERRAND F. ELLIS, Oneida, N. Y. Filed Feb. 11, 1907. Serial No. 356,866.

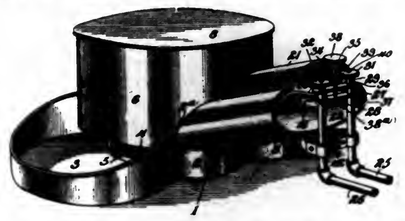


An automatic lubricator comprising a hollow cylindrical body portion provided at its bottom with an exteriorly arranged shank terminating in a threaded nipple having a vertical channel, and adapted to be secured to a rotatable element, said body portion having its wall formed with an extension, said extension provided with a vertical passage, there being a lateral offset formed integral with said shank and having a lateral passage therethrough, said lateral passage forming a continuation of said vertical passage, said body portion provided with a port for establishing communication between said vertical passage and the interior of the body portion, said shank having a lateral aperture therethrough and said lateral aperture communicating intermediate its ends with said vertical channel and forming the continuation of said lateral passage, said lateral aperture having its inner part gradually contracting, a valve extending into said lateral aperture and projecting within said contracted portion thereof at the point of communication between the lateral aperture and said vertical channel, a closure detachably secured to said body portion, a tubular guide member extending through said closure and having a closed outer end, a piston operating in said body portion and having a stem projecting into said guide, and a spring surrounding the inner portion of said guide member and engaging said piston.

956,695. CRUDE-OIL BURNER. LEON FETTY, Hutchinson, Kans. Filed July 20, 1909. Serial No. 508,643.

1. A burner of the class described including a burner casing provided with an outer steam chamber and having a mixing chamber extending into and surrounded by the steam chamber, said burner casing being also provided with means for supplying water to the steam chamber and fuel to the mixing chamber, and a flame pan or base having an imperforate bottom and provided with a seat supporting the burner casing and having an extension projecting beyond the burner casing for directing the flame upward.

2. A burner of the class described including a burner casing provided with an outer steam chamber and having a mixing chamber extending into and surrounded by the steam chamber, said burner casing being also provided with means for supplying water to the steam chamber and fuel to the mixing chamber, and a flame pan or base having an imperforate bottom and supporting the burner casing and provided with a plurality of extensions having marginal flanges and arranged to direct the flame upward.
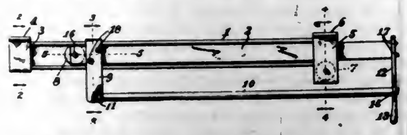


3. A burner of the class described including a burner casing provided with a steam chamber and having a mixing chamber, said burner casing being also provided with means for supplying water to the steam chamber and fuel to the mixing chamber, and a flame pan or base having a marginal flange recessed to receive the casing, said base or flame pan being extended beyond the casing and adapted to direct the flame upward.

4. A burner of the class described including a burner casing provided with an outer steam chamber and having a mixing chamber extending into and surrounded by the steam chamber, said burner casing being also provided with means for supplying water to the steam chamber and fuel to the mixing chamber, and a flame pan or base consisting of an imperforate bottom, and a marginal flange and extending beyond the casing for directing the flame upward, said base or flame pan being also provided with an inner upwardly extending flange forming a drip chamber.

5. A burner of the class described including a burner casing provided with a steam chamber and having a mixing chamber, said burner casing being also provided with means for supplying water to the steam chamber and fuel to the mixing chamber, and a flame pan or base consisting of a bottom, and a marginal flange extending beyond the casing for directing the flame upward, said base or flame pan being provided beneath the casing with a central depression and having an annular flange surrounding the same and forming a drip chamber.

[Claims 6 to 14 not printed in the Gazette.]

956,696. GARMENT-SUPPORTING SLIDE FOR WARDROBES. CHARLES L. FROST, Grand Rapids, Mich. Filed Aug. 23, 1909. Serial No. 514,182.



1. A garment support for wardrobes consisting of a single channel bar having a channel, in one vertical side only, a flat bar slidable in said channel, means for supporting the channel bar in a wardrobe, and means for suspending garment hangers below the sliding bar and supported thereby.

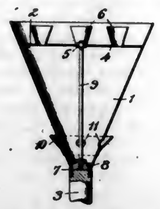
2. A garment support for wardrobes comprising a single channel bar having a channel in one vertical side only, a single flat bar longitudinally movable in said channel, clips attached to the channel bar and adapted to be secured in a wardrobe, one of said clips embracing both bars and retaining the flat bar in the channel bar, a hanger attached to the rear of the flat bar and movably embracing the channel bar to retain the flat bar in the channel, and a rod suspended below the flat bar and supported thereby.

3. A garment support for wardrobes, comprising a channel bar having a single channel in one of its vertical sides only, a flat bar longitudinally movable in the said channel, means for supporting the channel bar in a wardrobe, means for retaining the flat bar in the channel, a roller supported beneath the outer end of the channel bar and supporting the flat bar, a roller on the inner end of the flat bar traversing the said channel, and a rod suspended from the flat bar and carried thereby.

4. A garment support for wardrobes, comprising a bar having a channel in one side only, a flat bar longitudinally movable in said channel, clips secured to the respective ends of the channel bar and having outwardly turned upper ends perforated for screws, the clip at the outer end of the channel bar also being extended downward beneath the front end of the same, a roller journaled in the said clip and carrying the flat bar, a roller on the inner end of the flat bar traversing the channel of the channel bar, hangers attached to the respective ends of the flat bar and extending downward therefrom, and a rod supported by said hangers.

5. A garment support for wardrobes, comprising a channel bar having a channel in one side only, clips attached to the respective ends of the channel bar and having outwardly turned upper ends perforated for screws, said channel bar having the lower flange cut way at the front end and said clip extended downward below the same, a roller journaled in the lower part of the clip and carrying the flat bar, the flat bar also having a recess in its rear end, a roller in the said recess adapted to traverse the said channel and journaled on a stud fixed in the flat bar, hangers attached to the respective ends of the flat bar and extending downward therefrom, and a rod supported by said hangers.

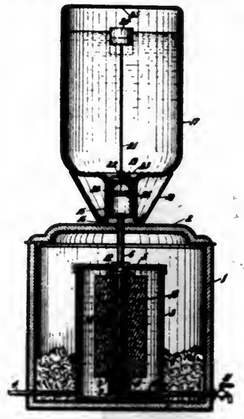
956,697. POUNDER. CHARLEY FRY, Denver, Colo. Filed July 8, 1909. Serial No. 506,549.



In a pounder, the combination of a stem, a ferrule threaded upper, and projecting beyond, one end of said stem, a conical shell having its smaller end fitting upon said ferrule, a bushing threaded within the projecting end of said ferrule, and provided with a central threaded bore, a rod extending axially through said shell and having its inner end threaded within the bore of said bushing, and a cover plate fitting within the enlarged end of said shell and embodying central means to detachably engage the outer end of said rod.

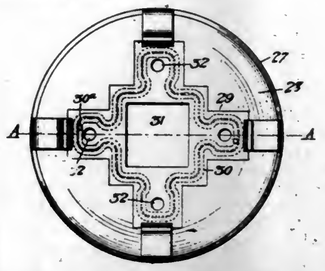
956,698. WATER-FILTER. MAXIMILIAN GESSLER, Milwaukee, Wis. Filed Dec. 18, 1909. Serial No. 533,923.

A filter, comprising an outer casing, a cover therefor, an inner casing contained within the outer casing, means for admitting water under pressure to the inner casing, the space between the inner casing and the outer casing being adapted to receive ice for cooling the water within the inner casing, a filter stone within the inner casing, a tube leading therefrom through the cover of the outer casing, a flanged gasket surrounding the tube, a cylindrical casing threaded on the upper end of the tube and bearing on the gasket, an inverted glass bottle mounted on the cover by having the cylindrical casing fitting within the neck portion thereof and having its mouth fitted upon the flanged gasket, a guard on the cover surrounding the neck of the bottle to hide the cylindrical casing from view, said bottle constituting a reservoir to receive filtered water from the tube through the cylindrical casing, inwardly extending flanges at the upper end of the cylindrical casing forming



a valve seat, a valve contained within the cylindrical casing to close communication between the tube and the reservoir when seated on the flange, an arched guide on the cylindrical casing, a stem connected with the valve and slidably mounted through the guide, and a float carried by the stem for closing the valve when the water reaches a predetermined level in the reservoir, there being a vent opening in the upper portion of the reservoir.

956,699. CROWN OR COVER OF ELECTRIC FURNACES. PAUL GIROD, Ugine, France. Filed July 26, 1907. Serial No. 385,673.



1. A cover for electric furnaces, comprising a frame of refractory material, a water cooled mass of metal of limited area supported in the frame and having electrode openings, and a metal band surrounding the frame and defining the outer edge of the cover.

2. A cover for electric furnaces and the like, comprising a frame of refractory brick, a metallic casting supported in the frame and having electrode openings, cooling pipes embedded in the casting about the openings, and a metal band surrounding frame.

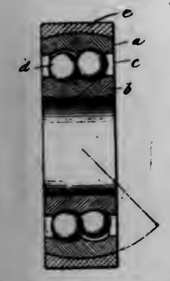
3. A cover for electric furnaces and the like, comprising a frame of refractory brickwork, a water cooled mass of metal of limited area supported in the frame and having electrode openings, a metal band surrounding the frame, braces extending from the metal band to the said mass of metal.

4. A cover for electric furnaces and the like comprising a frame of refractory brick, a water-cooled iron mass of limited area supported in the frame and having electrode openings, and an iron band surrounding the frame and defining the outer edge of the cover.

5. A cover for electric furnaces and the like comprising a frame of refractory brick, a cast iron mass supported in the frame and having electrode openings, wrought iron cooling pipes embedded in the cast iron about the openings, and an iron band surrounding the frame.

[Claim 6 not printed in the Gazette.]

956,700. ANTIFRICTION-BEARING. MAX GOHLKE, Berlin, and BERTHOLD EITNER, Reinickendorf-West, near Berlin, Germany. Filed Feb. 2, 1910. Serial No. 541,438.



1. The combination of an anti-friction bearing having a convexly-formed outer surface with an external casing ring therefor having a corresponding concavely-formed inner surface, the said external ring having substantially continuous and uninterrupted edges at the sides of its concavely-formed surface, and one or both of the parts being sufficiently elastic to permit of assemblage and disassemblage by deformation.

2. The combination of an anti-friction bearing having a convexly-formed outer surface with an external casing ring therefor having a corresponding concavely-formed inner surface, the said external ring having substantially continuous and uninterrupted edges at the sides of its concavely-formed surface, and one or both of the parts being sufficiently elastic to permit of the insertion and removal of the bearing transversely thereto.

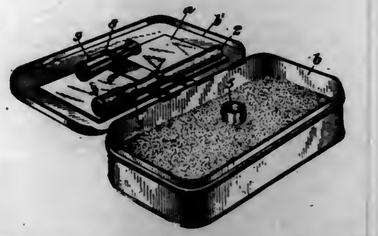
3. The combination of an anti-friction bearing having a convexly-formed outer surface with an external casing ring therefor having a corresponding concavely-formed inner surface, the said external ring having substantially continuous and uninterrupted edges at the sides of its concavely-formed surface, and one or both of the parts being sufficiently elastic to permit of assemblage and disassemblage by deformation, and the external casing ring being formed with a cylindrical outer surface.

956,701. SMOKER'S OUTFIT. WILLIAM GOSS, Newark, N. J. Filed May 18, 1907. Serial No. 374,437. Renewed Sept. 30, 1909. Serial No. 520,379.

1. A smoker's outfit, comprising a box for holding loose tobacco, a mandrel on which are rolled cigarette wrappers, and a support mounted within the box for holding the wrapper after removal from the mandrel and while being filled, substantially as set forth.

2. A smoker's outfit, comprising a box for holding loose tobacco having a movable cover, and a tubular support for holding a cigarette wrapper while it is being filled rising from the bottom of the box, the cover being arranged to fit over and close the upper open end of the tubular support when in place upon the box, substantially as set forth.

3. In a smoker's outfit, the combination of a mandrel about which the cigarette paper is wrapped, a separable ferrule at one end thereof provided with an annular rib arranged to operate as a guide for the paper, and a ring arranged to be slipped over the ferrule and coöperate therewith in holding the paper after it has been formed into a tubular wrapper, substantially as set forth.



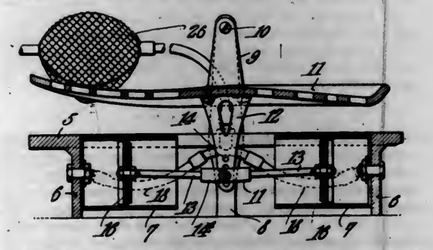
4. In a smoker's outfit, the combination of a mandrel upon which the cigarette wrapper is formed, a separable ferrule adapted to be applied at one end of the mandrel and having an annular rib arranged to constitute a guide in placing the paper, a ring adapted to be slipped over the ferrule and coöperate therewith in holding the wrapper after it has been formed on the mandrel into a tube, and a support in which the tubular cigarette wrapper is inserted while being filled, substantially as set forth.

956,702. METALLIC WEATHER-STRIP. ALBERT E. GOULD, Grand Rapids, Mich. Filed May 4, 1908. Serial No. 430,676.



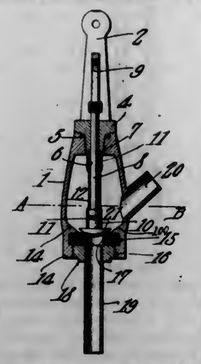
The combination of a window jamb having a plane surface next the sash, a sash having two grooves spaced apart materially less than the thickness of the sash and having a tongue therebetween, a strip of sheet metal folded twice at right angles and having its middle portion secured to the surface of the tongue between the grooves and having its parallel sides free in the grooves, and a strip of sheet metal folded longitudinally at right angles and attached to the plane surface of the jamb, and also having its parallel sides inserted in the grooves in the sash and flexibly embracing the strip on the sash.

956,703. FOOT-PUMP. HARRY O. HARRISON, Wichita, Kans. Filed June 28, 1909. Serial No. 504,838.



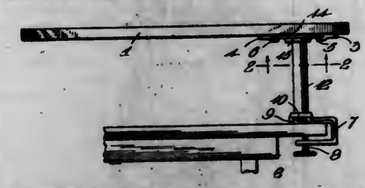
An air pump comprising a base having depending flanges at its ends whereby it is supported above the floor, axially alined cylinders secured to the flanges, a piston working in each cylinder, rods connected to the pistons, standards rising from the base intermediate its ends, a treadle mounted between the standards, and pivotally connected thereto, a depending bracket arm on the treadle, and a connection between the said bracket arm and the outer ends of the piston rods.

956,704. BOTTLING DEVICE. ROLAND L. HEPLER, Kewanee, Ill. Filed Oct. 22, 1909. Serial No. 524,060.



A device of the class described consisting of a hollow body having, adjacent its lower end, an annular shoulder, the upper face of which is downwardly inclined; a resilient ring removably held against the lower face of said shoulder; a tube secured in the lower end of the body and communicating with the opening in the ring; there being an inclined spout in the body positioned to discharge upon the inclined face of the shoulder; a plug threaded into the top of the body and provided with a reduced lower end defining a shoulder in the plug; a plunger arranged to reciprocate in the plug and manipulable from the outside of the body; a resilient cylinder fitting closely about the plunger and the reduced end of the plug and abutting against the shoulder of the plug; there being a head upon the lower end of the plunger adapted to be advanced against the ring by contact with the cylinder, the head constituting a means for maintaining the cylinder against engagement between the ring and the head; the plug being rotatable to compress the cylinder against the head.

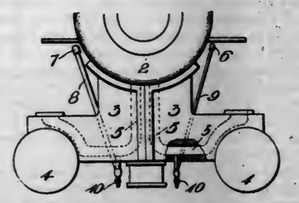
956,705. SLEEVE-BOARD. FRED HOFACKER, Portland, Me. Filed Aug. 19, 1909. Serial No. 513,677.



A sleeve board having a socket therein, a pair of retaining members on opposite sides of the socket, a supporting standard, a table carried thereby and having a notch adapted to register with one of the retaining members, and a bolt holding the parts of the supporting standard together which projects through the table and enters the socket to hold the table in operative engagement with the retaining members.

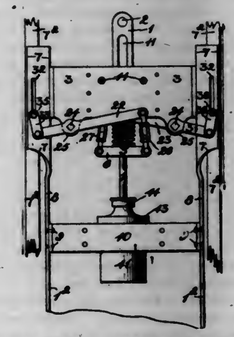
956,706. LOCOMOTIVE BLOWER AND AIR-PUMP-EXHAUST PIPE. FRANK L. HOLCOMB, Kingston, N. Y. Filed June 7, 1909. Serial No. 500,470.

In a locomotive having a cylinder saddle provided with exhaust passages, means for connecting the blower and exhaust pipes with the exhaust passages in the cylinder saddle, said means comprising a pair of vertical downwardly inclined conducting pipes arranged at opposite sides of the locomotive and connected at their upper ends, respectively, with the blower and exhaust pipes and horizontal forwardly extending extension pipes connected at



their rear ends with the lower ends of the vertical downwardly inclined pipes and extending forwardly beneath the cylinder saddle to the exhaust passages thereof and drain cocks at the lower ends of the vertical downwardly inclined pipes.

956,707. SAFETY MECHANISM FOR MINE SKIPS AND CAGES. HENRY E. HYDE, Johannesburg, Transvaal. Filed May 18, 1908. Serial No. 433,552.



1. In a safety brake mechanism for the vehicles of hoisting apparatus, the combination with the vehicle and runners therefor of means for applying a gradually increasing brake pressure on the sides of the runners to retard the movement of the falling vehicle comprising, in combination, a draw bar, a king spring, a cross-head rigid with the draw bar, a pair of levers adjustably and pivotally connected at one end to the crosshead, a pair of shorter levers rigid with the first mentioned levers, upwardly and inwardly inclined guides fixed to the vehicle and traversing the runners, wedge shaped brake members in said guides at the sides of the runners, connections between the aforementioned levers and wedge shaped brake members, means for retarding the downward movement of the draw bar, independent brake members and means actuated by or through the medium of the draw bar for causing said independent brake members to come into contact with the front faces of the runners to check the falling vehicle immediately it becomes unsupported to prevent it gaining any appreciable acceleration of velocity.

2. In a safety brake mechanism for the vehicles of hoisting apparatus, the combination with the vehicle and runners therefor of means for applying a gradually increasing brake pressure on the sides of the runners to retard the movement of the falling vehicle comprising, in combination, a draw bar, a king spring, a crosshead rigid with the draw bar, a pair of levers adjustably and pivotally connected at one end to the crosshead, a pair of shorter levers rigid with the first mentioned levers, upwardly and inwardly inclined guides fixed to the vehicle and traversing the runners, wedge shaped brake members in said

guides at the sides of the runners, connections between the aforementioned levers and wedge shaped brake members, means for retarding the downward movement of the draw bar, independent flat brake members in the aforesaid guides and parallel with the front faces of the runners, and means actuated by the draw bar for causing said independent flat brake members to have frictional contact with the front faces of the runners to check the falling vehicle immediately it becomes unsupported to prevent it acquiring any appreciable acceleration of velocity, said latter means comprising a pair of bell-crank levers operatively connected with the draw bar, rods connecting the bell-crank levers with the flat brake plates, and springs for operating said flat brake plates when the bell-cranks are released by the draw bar.

3. In a safety brake mechanism for the vehicles of hoisting apparatus, the combination with the vehicle and runners therefor of means for applying a gradually increasing brake pressure on the sides of the runners to retard the movement of the falling vehicle, comprising, in combination, a draw bar, a king spring, a crosshead rigid with the draw bar, a pair of levers adjustably and pivotally connected at one end to the crosshead, a pair of shorter levers rigid with the first mentioned levers, upwardly and inwardly inclined guides fixed to the vehicle and traversing the runners, wedge shaped brake members in said guides at the sides of the runners, connections between the aforementioned levers and wedge shaped brake members, means for retarding the downward movement of the draw bar comprising a fluid holding cylinder and a piston in said cylinder connected with the draw bar said piston having passages placing the opposite ends of the cylinder in communication, independent brake members and means actuated by or through the medium of the draw bar for causing said independent brake members to come into contact with the front faces of the runners to check the falling vehicle immediately it becomes unsupported to prevent it gaining any appreciable acceleration of velocity.

4. In a safety brake mechanism for the vehicles of hoisting apparatus, in combination a vehicle and runners therefor, a draw bar having an elongated slot, a crosshead fixed to the draw bar and a piston fixed to the draw bar, said piston having passages placing opposite sides of the piston in communication, a fluid holding cylinder, a cover therefor through which the draw bar projects, a gland in said cover around the draw bar, means for charging the cylinder, a frame comprising a pair of parallel head plates and distance pieces secured between them, a pair of bell-crank levers, pins supported by the head plates on which the bell-crank levers are fulcrumed, a pin connecting the arms of the bell-crank levers and engaging the slot in the draw bar, guides inwardly inclined from the bottom to the top fixed to the vehicle and adapted to traverse the runners, said guides having elongated vertical slots, flat brake members in said guides, rods pivotally connecting the bell-crank levers with the flat brake plates and springs which are placed in compression in the normal running of the vehicle and serve for moving said flat brake plates into contact with the runners on the downward movement of the draw bar, a pair of levers pivotally supported in the frame, adjustable rods connecting said latter levers with the crosshead, a pair of shorter levers rigid with the latter levers, wedge shaped brake members in the inclined guides at the sides of the runners, links connecting the levers with said wedge shaped brake members, the connection between said links and brake members being adapted to traverse the elongated vertical slots in the guides, and springs for retaining said wedge shaped brake members in their inoperative positions in the guides in the normal running of the vehicle.

956,708. MILK-TESTING BOTTLE. AAGE JENSEN, Eureka, Cal. Filed Oct. 16, 1909. Serial No. 522,951.

1. A testing bottle comprising a bulb or main body portion, a graduated tube leading from the top thereof, and a filling tube connected with said tube, substantially parallel with the graduated tube, said filling tube having an overflow hole on the same plane, transverse to said filling and graduated tubes, as the zero mark on said graduated tube, substantially as described.

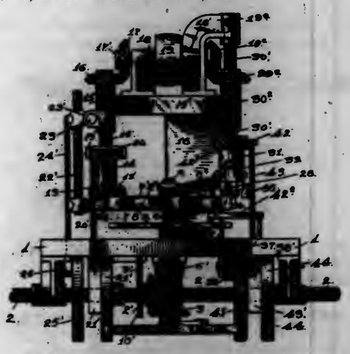


2. A testing bottle comprising a bulb or main body portion, a graduated tube extending upward from the top thereof, a filling tube connected with said top, and having a tubular extension therefrom, into said body portion, bent at its outer end toward said top, substantially as described.

3. A testing bottle comprising a bulb or main body portion, a graduated tube extending upward from the top thereof, and a tube leading to said top and formed at the top into a funnel through which the central axial line of the bottle extends, substantially as described.

4. A testing bottle comprising a bulb or body portion, a filling tube for supplying liquid to said body portion and having its upper or supply end located on the axial line of said bulb or body portion, and having therein an overflow outlet, a graduated tube connected to said body portion, and having the zero graduation on the same plane, transverse to said axial line, as said outlet, said filling tube extending downward into said body portion and bent in an upward direction therein, substantially as described.

956,709. CAN-END-FLANGING AND HEAD-SEAMING APPARATUS. AXEL JOHNSON, Oakland, Cal. Filed Feb. 13, 1909. Serial No. 477,661.



1. In an apparatus for the described purpose, the combination with the frame thereof, of a vertically disposed rotatable spindle extended above the bed of the frame, of means for imparting a step rotation to said spindle, a carrier disk provided with a series of semi-circular molds secured to and carried by the vertical spindle, devices for delivering open ended cans to the semi-circular molds of the carrier disk, clamping means co-acting with the semi-circular molds of the carrier disk to clamp a can therein, devices for actuating said clamping means to clamp the cans and release the same, flanging rolls for engaging the open end of the held can and flanging the same outwardly, mechanism for rotating the flanging rolls and imparting vertical movement thereto to place the same into and out of engagement with the open end of the held can, a device for delivering heads to the carrier disk for the flanged cans carried thereby, crimping and seaming rolls for turning the flange of the can head onto the flanged open end of the can and seaming the crimped flange and the flange of the open can onto the body of the can, mechanism for imparting rotation to the crimping and seaming rolls, devices for successively moving the same toward and from the flanged end of the can, and means for moving the open ended flanged can into and out of the sphere of the crimping and seaming rolls.

2. In an apparatus for the described purpose, the combination with the frame thereof, of a vertically disposed rotatable spindle extended above the bed of the frame, of means for imparting a step rotation thereto, a carrier disk provided with a series of semi-circular molds for receiving open ended filled cans, devices for delivering filled cans to the carrier disk, means co-acting with said disk for holding the filled can within the semi-circular molds thereof, driven flanging rolls for flanging the open end of the held filled can, means for moving said rolls toward and from the open end of the can, device for delivering can heads for the flanged can during the intermittent travel of the carrier disk, rotary driven crimping rolls and seaming rolls for securing a can head to a flanged can, mechanism for successively actuating the crimping rolls and the seaming rolls to first turn the flange of the can head beneath the flange of the can and secondly to seam the crimped can head flange and the flange of the can to the body thereof, and devices for advancing the flanged can toward the crimping rolls and the seaming rolls and holding the same with its head loosely applied thereto against rotation during the action of the rolls, and removing the same from within the sphere of the said rolls after the head has been seamed onto the filled can.

3. The combination with an intermittently rotating can carrier having segmental can receiving molds in its periphery, of a stationary can supporting plate, a rotary seaming head having seaming rollers, upper and lower clamp disks for holding the can stationary during the seaming operation, a movable segmental mold for clamping the can in the segmental mold of the carrier and can body flanging means coöperating with said carrier, substantially as specified.

4. The combination with an intermittently rotating can carrier having segmental can receiving molds in its periphery, of a stationary can supporting plate, a rotary seaming head having seaming rollers, upper and lower clamp disks for holding the can stationary during the seaming operation, a movable segmental mold for clamping the can in the segmental mold of the carrier, and a rotary head having can body flanging rolls coöperating with said carrier, substantially as specified.

5. In an apparatus for the described purpose, the combination with a carrier disk provided with a series of semi-circular molds, a can head seat formed in each of the series of said molds, devices for holding open ended cans in the semi-circular molds of the carrier disk, means for imparting an intermittent or step rotation to the said disk, mechanism thrown into action during rotary travel of the carrier disk for flanging the open end of a can carried thereby, a device for delivering can heads to the seat within the semi-circular molds of the carrier disk, a plurality of rolls acting successively to crimp the flange of the can head to the flanged end of the held can and seam the crimped flange to the body of the held can, and devices for moving the crimping rolls and seaming rolls into and out of contact with the flange of the held can.

[Claims 6 to 20 not printed in the Gazette.]

956,710. COAT-COLLAR. CHARLES KAUFMAN, Chicago, Ill. Filed Jan. 14, 1010. Serial No. 538,022.

1. In a combination turn-down and military collar, a stiffening structure consisting of a blank of uniform stiffness having the material thereof folded longitudinally to form an upwardly curved plait, said plait tapering from a substantial width at the center of the plait to a less width at the ends of the plait, and said plait being folded back against the blank, for the purpose set forth.



2. In a combination turn-down and military collar, a stiffening structure consisting of a blank of uniform stiffness having the material thereof folded longitudinally to form an upwardly curved plait, said plait tapering from a substantial width at the center of the plait to a less width at the ends of the plait and said plait being folded back against the blank and secured thereto by stitching adjacent the inner edge of the plait, for the purpose set forth.

3. In a combination turn-down and military collar, a stiffening member comprising an elongated blank of uniform stiffness having one of its longitudinal edges curved outwardly, said blank being folded longitudinally to form a plait of such length as to approach, but stop short of, the curved edge of the blank, said plait tapering from a substantial width at the center to a less width at the ends, and said plait being folded back against the blank, for the purpose set forth.

4. In a combination turn-down and military collar, a stiffening structure therefor comprising a strip of material of uniform stiffness folded on a curved line extending longitudinally thereof and secured together along another line which is, at its ends, close to the edge formed by such folding, whereby a flap is formed, the flap being joined to the body of the structure on a curved line.

5. In a combination turn-down and military collar, a stiffening structure comprising a strip of water-proof material, a strip of stiffening material of uniform stiffness, and a layer of waterproof cementing material interposed between said first and second-named strips and uniting the same, said stiffening structure being folded longitudinally to form an upwardly curved plait, said plait tapering from a substantial width at the center of the plait to a less width at the ends of the plait, and said plait being folded back against the blank, for the purpose set forth.

956,711. MITER-BLOCK. EDGAR C. KELLOGG, Washington, D. C. Filed Feb. 9, 1910. Serial No. 542,921.

1. A fastening for joints comprising members which are held in contact with each other and having recesses in their meeting edges, the marginal edges of said recesses being undercut, key blocks seated in said recesses and having portions thefeof extending underneath said undercut edges, wedges interposed between the blocks and adapted to bear frictionally against each other and against said blocks to hold the same in locked relation.

2. A key or miter block for corners of frames, etc., comprising, in combination with the sections of the frame having recesses formed in the meeting edges thereof, the marginal edges of said recesses being undercut, key blocks having beveled ends engaging the undercut ends of the recesses and an angular beveled side engaging the under-

cut edges of the sides of the recess, wedges interposed between the blocks and adapted to hold the outer edges thereof in engagement with the undercut edges of the recesses.

3. A key or miter block for corners of frames, etc., comprising, in combination with the meeting edges of a frame which are held at angles to each other, the adjacent meeting edges of the sections having each a recess therein which is contracted at its entrance and having undercut marginal walls, key blocks having ends at one side beveled and conforming to and engaging the marginal edges of the recesses, a space intervening between the blocks, and wedges positioned in said space and adapted to bear against each other and the adjacent edges of the blocks to hold the same in locked relation.

956,712. WEDGE-EXPANDING DEVICE. FRIEDRICH C. KRUGER, Hanover, Germany. Filed Oct. 15, 1909. Serial No. 522,765.

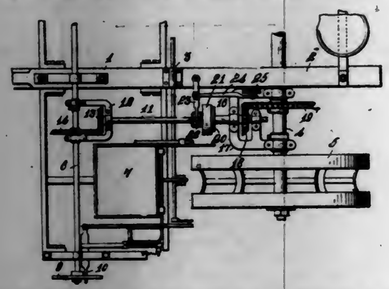


1. In combination an expansible body composed of parts relatively movable, circular grooved pieces movably arranged in said parts, and a member having inclined projections engaging in said grooves and adapted to coöperate with said grooves to separate the parts of the expansible body.

2. In combination two movable parts, circular plates sunk in said parts, said plates being capable of rotation and provided with grooves, a member having projections engaging in the grooves of said rotatable plates, said projections being set at an angle to cause relative motion of the parts when the member carrying the same is moved, substantially as described.

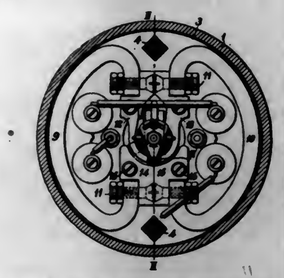
3. In a wedge expanding device having two movable parts with circular incisions, a loose circular plate with a central groove in each incision, and an operative member with projections set at an angle adapted to engage in the grooves of the circular plates.

956,713. CORN-PLANTER. HERMEN F. LOTZ, Ironton, Mo. Filed Jan. 13, 1910. Serial No. 537,882.



In a corn planter, a driving and supporting axle, a power transmitting gear fixedly mounted on said axle, a shaft supporting yoke arranged on said axle, a sleeve revolubly mounted in said yoke, a gear arranged on one end of said sleeve and adapted to engage the gear on said axle whereby the sleeve is continuously driven, a clutch member on the opposite end of said sleeve, a valve operating shaft, a gear fixedly mounted on said shaft, a yoke arranged on the shaft, a power transmitting shaft having its forward end revolubly mounted in said yoke, a gear on said end of the shaft and adapted to engage the gear on said valve operating shaft, a clutch member slidably keyed to said power transmitting shaft whereby the latter is free to move longitudinally through said clutch member and through said revolubly mounted sleeve, and a lever operatively connected with the clutch member on said shaft whereby the latter is thrown into and out of engagement with the clutch member on said sleeve, thereby operatively connecting the sleeve with said power transmitting shaft to drive the latter.

956,714. ELECTRICAL MEASURING INSTRUMENT. PAUL MACGAHAN, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 3, 1907. Serial No. 391,217.



1. In an electrical measuring instrument, the combination with two independently mounted magnets having pole pieces of one polarity that abut against each other to form a substantially semi-annular pole member, and pole pieces of the other polarity that abut against each other to form a pole member separated from the other pole member by a substantially semi-cylindrical air gap, of a movable coil threaded upon the semi-annular pole member.

2. In an electrical measuring instrument, the combination with two independently mounted magnets provided with abutting annularly curved pole pieces, and abutting pole pieces having cylindrically curved faces separated from said annularly curved pole pieces by a narrow air gap, of a movable coil threaded upon the annularly curved pole pieces.

3. In an electrical measuring instrument, a field magnet comprising two independently mounted permanent magnets having annularly curved pole pieces that abut against each other to form a substantially semi-annular pole member and concave pole pieces that abut against each other and partially embrace said annularly curved pole pieces but are separated therefrom by a semi-cylindrical air gap.

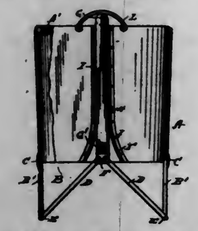
4. In an electrical measuring instrument, the combination with two independently mounted curved magnets disposed in the same plane and provided with annularly curved abutting pole pieces and concave abutting pole pieces forming two-part pole members that are separated from each other by a semi-cylindrical air gap, of a movable coil threaded upon the annularly curved pole pieces and mounted independently of the said magnets.

5. In an electrical measuring instrument, the combination with two independently mounted permanent magnets having pole pieces which abut against each other to form pole members separated by a cylindrically curved air gap, of an independently mounted coil surrounding one of said pole members and having one side located and movable in said air gap.

956,715. FRUIT-BUCKET. THEODORE MEIXNER, Winchester, Wash. Filed Feb. 18, 1909. Serial No. 478,688.

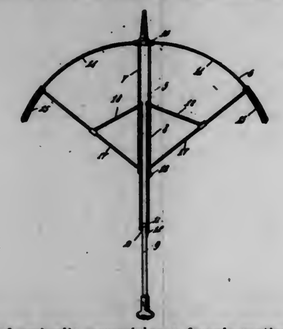
1. A fruit bucket having shields secured to opposing sides thereof, pendent portions extending within said shields, a spring holding catch engaging said pendent portions, and a bisected bottom connected to said pendent portions.

2. A fruit bucket provided with opposing, inclined or tapering sides, opposing parallel sides adjacent to said opposing inclined or tapering sides, handles on said opposing parallel sides, a bail extending across the top of said fruit bucket, pendent portions extending from said



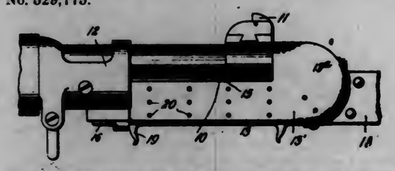
bail, mortises in said pendent portions, in combination with spring catches supporting said pendent portions through the medium of said mortises, links attached to said pendent portions, and a bisected bottom connected to said links and to said tapering sides.

956,716. FOLDING UMBRELLA. CLARENCE F. MILLER, Mariette, Mich. Filed July 16, 1909. Serial No. 507,993.



A folded umbrella comprising a ferrule section provided with oppositely arranged longitudinal slots, a second section telescoping into the first section and a handle section telescoping into the said second section, telescoping ribs having their inner ends pivoted to the ferrule section, brace rods having their outer ends pivoted to the outer sections of the ribs and their inner ends pivoted to the inner end of the ferrule section and connecting rods having their outer ends pivoted to the brace rods and their inner ends extending through the slots of the ferrule section and pivoted to the inner end of the second-named section.

956,717. SILENCER FOR FIREARMS. ROBERT A. MOORE, Chicago, Ill., assignor, by mesne assignments, to The Moore Silencer Company, New York, N. Y., a Corporation of New York. Filed Nov. 24, 1909. Serial No. 529,775.



1. The hereindescribed silencer comprising, in combination with a gun barrel, a casing having a bore in alinement with the gun bore and extending thence rearwardly along the said barrel, means to secure the casing to the gun barrel, and a divider within the casing movable across said casing bore and spaced therefrom, substantially as set forth.

2. In combination with a gun muzzle, a casing secured thereto and having a bore in alinement with the gun bore and also having a plurality of gas vents, and means mounted within the casing and movable across the casing bore and spaced therefrom whereby the rush of gases within the casing will cause cool air to rush into the casing through its bore.

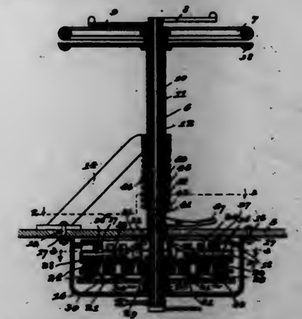
3. In combination with a gun muzzle, a casing secured thereto and having a bore in alinement with the gun bore, a diaphragm within the casing forming a plurality of chambers and also having a bore, and a member mounted in said diaphragm, a portion of said member being movable across the space between the casing and diaphragm bores and spaced therefrom.

4. The hereindescribed silencer comprising a casing having a bore and a plurality of gas vents, a diaphragm within the casing forming a plurality of chambers, and a member extending through said diaphragm and connected thereto, said member being movable across the casing bore and spaced therefrom.

5. The hereindescribed silencer comprising a hollow casing having a bore and a plurality of gas vents, a diaphragm within the casing dividing the same into a plurality of chambers, a portion of said vents leading outward from one chamber and another portion from the other chamber, said diaphragm having an opening in alinement with the casing bore, and a divider extending through said diaphragm opening and pivoted to the diaphragm, the inner portion of the divider constituting a wing to be operated by the gases under compression and the outer portion of the divider being movable across the bore of the casing, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

956,718. STEERING DEVICE. HERBERT S. MUSTIN, Chicago, Ill., assignor to Austin Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 28, 1909. Serial No. 492,750.



1. In a steering device for power-propelled mowers, rollers, and the like, the combination with a steering column, of a transmission drum mounted coaxially with said steering column, and driving connections between said steering column and transmission drum adapted to impart to the latter a variable extent of turning movement relative to the turning movement of said steering column.

2. In a steering device for power-propelled mowers, rollers, and the like, the combination with a steering column, of a transmission drum loosely mounted on said steering column, variable-speed driving connections between said steering column and transmission drum, and manually operable means whereby said driving connections may be caused to impart to said drum a turning movement either coextensive with or less than the turning movement of said steering column.

cut edges of the sides of the recess, wedges interposed between the blocks and adapted to hold the outer edges thereof in engagement with the undercut edges of the recesses.

3. A key or miter block for corners of frames, etc., comprising, in combination with the meeting edges of a frame which are held at angles to each other, the adjacent meeting edges of the sections having each a recess therein which is contracted at its entrance and having undercut marginal walls, key blocks having ends at one side beveled and conforming to and engaging the marginal edges of the recesses, a space intervening between the blocks, and wedges positioned in said space and adapted to bear against each other and the adjacent edges of the blocks to hold the same in locked relation.

956,712. WEDGE-EXPANDING DEVICE. FRIEDRICH C. KAUSE, Hanover, Germany. Filed Oct. 15, 1909. Serial No. 522,765.

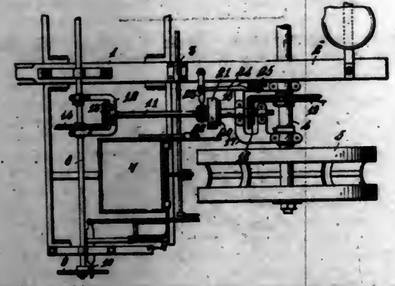


1. In combination an expansible body composed of parts relatively movable, circular grooved pieces movably arranged in said parts, and a member having inclined projections engaging in said grooves and adapted to coöperate with said grooves to separate the parts of the expansible body.

2. In combination two movable parts, circular plates sunk in said parts, said plates being capable of rotation and provided with grooves, a member having projections engaging in the grooves of said rotatable plates, said projections being set at an angle to cause relative motion of the parts when the member carrying the same is moved, substantially as described.

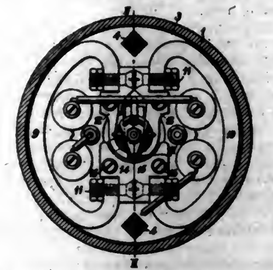
3. In a wedge expanding device having two movable parts with circular incisions, a loose circular plate with a central groove in each incision, and an operative member with projections set at an angle adapted to engage in the grooves of the circular plates.

956,713. CORN-PLANTER. HERMEN F. LOTZ, Ironton, Mo. Filed Jan. 13, 1910. Serial No. 537,882.



In a corn planter, a driving and supporting axle, a power transmitting gear fixedly mounted on said axle, a shaft supporting yoke arranged on said axle, a sleeve revolubly mounted in said yoke, a gear arranged on one end of said sleeve and adapted to engage the gear on said axle whereby the sleeve is continuously driven, a clutch member on the opposite end of said sleeve, a valve operating shaft, a gear fixedly mounted on said shaft, a yoke arranged on the shaft, a power transmitting shaft having its forward end revolubly mounted in said yoke, a gear on said end of the shaft and adapted to engage the gear on said valve operating shaft, a clutch member slidably keyed to said power transmitting shaft whereby the latter is free to move longitudinally through said clutch member and through said revolubly mounted sleeve, and a lever operatively connected with the clutch member on said shaft whereby the latter is thrown into and out of engagement with the clutch member on said sleeve, thereby operatively connecting the sleeve with said power transmitting shaft to drive the latter.

956,714. ELECTRICAL MEASURING INSTRUMENT. PAUL MACGAHAN, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 3, 1907. Serial No. 391,217.



1. In an electrical measuring instrument, the combination with two independently mounted magnets having pole pieces of one polarity that abut against each other to form a substantially semi-annular pole member, and pole pieces of the other polarity that abut against each other to form a pole member separated from the other pole member by a substantially semi-cylindrical air gap, of a movable coil threaded upon the semi-annular pole member.

2. In an electrical measuring instrument, the combination with two independently mounted magnets provided with abutting annularly curved pole pieces, and abutting pole pieces having cylindrically curved faces separated from said annularly curved pole pieces by a narrow air gap, of a movable coil threaded upon the annularly curved pole pieces.

3. In an electrical measuring instrument, a field magnet comprising two independently mounted permanent magnets having annularly curved pole pieces that abut against each other to form a substantially semi-annular pole member and concave pole pieces that abut against each other and partially embrace said annularly curved pole pieces but are separated therefrom by a semi-cylindrical air gap.

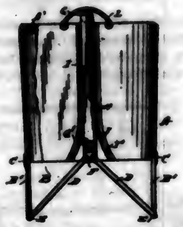
4. In an electrical measuring instrument, the combination with two independently mounted curved magnets disposed in the same plane and provided with annularly curved abutting pole pieces and concave abutting pole pieces forming two-part pole members that are separated from each other by a semi-cylindrical air gap, of a movable coil threaded upon the annularly curved pole pieces and mounted independently of the said magnets.

5. In an electrical measuring instrument, the combination with two independently mounted permanent magnets having pole pieces which abut against each other to form pole members separated by a cylindrically curved air gap, of an independently mounted coil surrounding one of said pole members and having one side located and movable in said air gap.

956,715. FRUIT-BUCKET. THEODORE MEIXNER, Winchester, Wash. Filed Feb. 18, 1909. Serial No. 478,688.

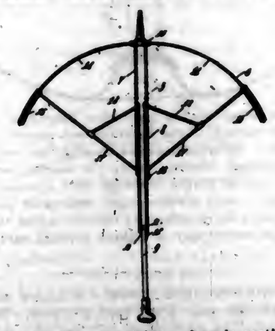
1. A fruit bucket having shields secured to opposing sides thereof, pendent portions extending within said shields, a spring holding catch engaging said pendent portions, and a bisected bottom connected to said pendent portions.

2. A fruit bucket provided with opposing, inclined or tapering sides, opposing parallel sides adjacent to said opposing inclined or tapering sides, handles on said opposing parallel sides, a bail extending across the top of said fruit bucket, pendent portions extending from said



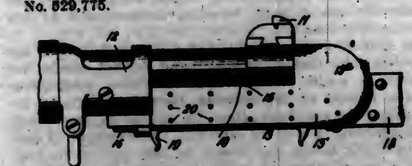
bail, mortises in said pendent portions, in combination with spring catches supporting said pendent portions through the medium of said mortises, links attached to said pendent portions, and a bisected bottom connected to said links and to said tapering sides.

956,716. FOLDING UMBRELLA. CLARENCE F. MILLER, Mariette, Mich. Filed July 16, 1909. Serial No. 507,993.



A folded umbrella comprising a ferrule section provided with oppositely arranged longitudinal slots, a second section telescoping into the first section and a handle section telescoping into the said second section, telescoping ribs having their inner ends pivoted to the ferrule section, brace rods having their outer ends pivoted to the outer sections of the ribs and their inner ends pivoted to the inner end of the ferrule section and connecting rods having their outer ends pivoted to the brace rods and their inner ends extending through the slots of the ferrule section and pivoted to the inner end of the second-named section.

956,717. SILENCER FOR FIREARMS. ROBERT A. MOORE, Chicago, Ill., assignor, by mesne assignments, to The Moore Silencer Company, New York, N. Y., a Corporation of New York. Filed Nov. 24, 1909. Serial No. 529,775.



1. The hereindescribed silencer comprising, in combination with a gun barrel, a casing having a bore in alinement with the gun bore and extending thence rearwardly along the said barrel, means to secure the casing to the gun barrel, and a divider within the casing movable across said casing bore and spaced therefrom, substantially as set forth.

2. In combination with a gun muzzle, a casing secured thereto and having a bore in alinement with the gun bore and also having a plurality of gas vents, and means mounted within the casing and movable across the casing bore and spaced therefrom whereby the rush of gases within the casing will cause cool air to rush into the casing through its bore.

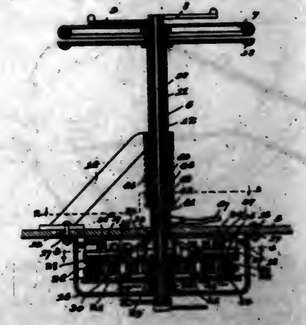
3. In combination with a gun muzzle, a casing secured thereto and having a bore in alinement with the gun bore, a diaphragm within the casing forming a plurality of chambers and also having a bore, and a member mounted in said diaphragm, a portion of said member being movable across the space between the casing and diaphragm bores and spaced therefrom.

4. The hereindescribed silencer comprising a casing having a bore and a plurality of gas vents, a diaphragm within the casing forming a plurality of chambers, and a member extending through said diaphragm and connected thereto, said member being movable across the casing bore and spaced therefrom.

5. The hereindescribed silencer comprising a hollow casing having a bore and a plurality of gas vents, a diaphragm within the casing dividing the same into a plurality of chambers, a portion of said vents leading outward from one chamber and another portion from the other chamber, said diaphragm having an opening in alinement with the casing bore, and a divider extending through said diaphragm opening and pivoted to the diaphragm, the inner portion of the divider constituting a wing to be operated by the gases under compression and the outer portion of the divider being movable across the bore of the casing, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

956,718. STEERING DEVICE. HERBERT S. MUSTIN, Chicago, Ill., assignor to Austin Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 28, 1909. Serial No. 492,750.



1. In a steering device for power-propelled mowers, rollers, and the like, the combination with a steering column, of a transmission drum mounted coaxially with said steering column, and driving connections between said steering column and transmission drum adapted to impart to the latter a variable extent of turning movement relative to the turning movement of said steering column.

2. In a steering device for power-propelled mowers, rollers, and the like, the combination with a steering column, of a transmission drum loosely mounted on said steering column, variable-speed driving connections between said steering column and transmission drum, and manually operable means whereby said driving connections may be caused to impart to said drum a turning movement either coextensive with or less than the turning movement of said steering column.

3. In a steering device for power-propelled mowers, rollers, and the like, the combination with a steering column, of a transmission drum loosely mounted on said steering column, an internal gear also loosely mounted on said steering column, a central gear fast on said steering column, a planet gear rotatably mounted on said drum between and meshing with said central gear and said internal gear, a stationary member adjacent to said drum, and manually controlled means for locking said internal gear to either said stationary member or said drum.

4. In a steering device for power-propelled mowers, rollers, and the like, the combination with a steering column, of a transmission drum loosely mounted on said steering column and formed with an annular series of locking notches, an internal gear also loosely mounted on said steering column, a central gear fast on said steering column, a planet gear rotatably mounted on said drum between and meshing with said central gear and said internal gear, a stationary ring having a series of locking notches opposite said drum, locking dogs mounted on said internal gear, and manually controlled means for effecting the locking engagement of said dogs with the notches of either said stationary ring or said drum.

5. In a steering device for power-propelled mowers, rollers, and the like, the combination with a steering column, of a transmission drum loosely mounted on said steering column and formed with an annular series of locking notches, an internal gear also loosely mounted on said steering column, a central gear fast on said steering column, a planet gear rotatably mounted on said drum between and meshing with said central gear and said internal gear, a stationary ring having a series of locking notches opposite said drum, locking dogs pivotally mounted on said internal gear and normally engaging the notches of said drum, spring-actuated means mounted on said steering column for throwing said locking dogs into engagement with the notches of said stationary ring, and manually operable means for retracting said dog-actuating means.

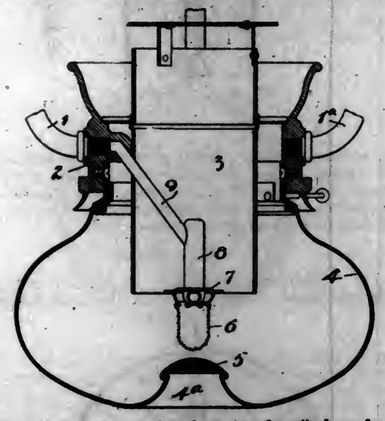
956,719. GRAIN-SEPARATOR FOR ATTACHMENT TO THRESHING-MACHINES. WILLIAM J. MCADAMS, Ruby, Tex. Filed Oct. 26, 1909. Serial No. 524,725.



1. In a device of the class described, a stacker attachment, comprising a hood adaptable to telescopic connection with the discharge end of a pneumatic stacker, having its upper wall curved downwardly at its discharge end and an outwardly inclined floor, and provided with a vertical series of integrally formed transverse slats adjacent to the discharge end; lateral hooked rods pivotally attached to the said hood and adapted to secure the discharge duct in attachment therewith; and a discharge duct, one end having lateral openings adapted to engage the lateral hooked rods pivotally attached to the hood and the floor thereof provided with a transverse series of longitudinal, notched strips, all substantially as set forth.

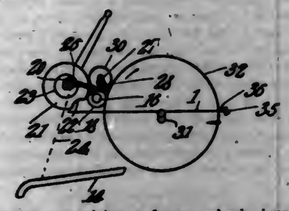
2. In a pneumatic stacker attachment, the combination of a hood adapted to telescopic connection with the discharge end of a pneumatic stacker, having its upper wall curved downwardly at its discharge opening, and an outwardly inclined floor and provided with a vertical series of integrally formed transverse slats adjacent to the discharge opening and lateral hooked rods pivotally attached to the hood, with a discharge duct having lateral openings adapted to engage the lateral hooked rods pivotally attached to the hood, and provided with a transverse series of longitudinal, notched strips, all substantially as described.

956,720. LAMP. CHARLES A. MCCUNE, Jersey City, N. J., assignor to The Commercial Acetylene Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 22, 1910. Serial No. 539,518.



In a gas lamp of the character described, a frame, an inverted burner of the incandescent mantle type carried thereby, a globe also carried thereby, the latter having a central opening directly under the mantle, and a protecting perforated screen covering said opening and arranged close to said mantle—said perforated portion extending across said opening and directly under the mantle whereby said burner may be lighted through said screened opening.

956,721. DRIVING MECHANISM. WILLIAM A. MCKINNEY, Gainesville, Ga. Filed Sept. 27, 1909. Serial No. 519,828.



1. A tractor comprising a frame, wheels journaled for independent rotation at the opposite sides thereof, an engine mounted upon the frame, separate means located at the opposite sides of the frame for transmitting movement from the engine to the wheels independently, and means for independently reversing the movement of said transmitting means.

2. A tractor comprising a frame, wheels located at the opposite sides thereof, and journaled for independent rotation, an engine mounted upon the frame, independent means located at the opposite sides of the frame for transmitting movement from the engine to the wheels independently, means for reversing the movement of each transmitting means, and means for interrupting the rotation of one of the wheels while the other is in rotation.

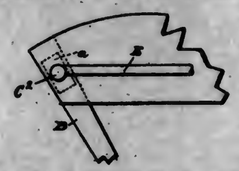
3. A tractor comprising a frame, wheels journaled for independent rotation at the opposite sides thereof, an engine mounted upon the frame, transmission means located at the opposite sides of the frame and adapted to transmit motion from the engine to the wheels independently, said transmission means being susceptible of independent manipulation to cause the wheels to rotate independently in either of two directions or to bring the wheels to a state of rest.

4. A tractor comprising a frame, wheels journaled for independent rotation at the opposite sides thereof, an engine mounted upon the frame, spring retained counter shafts journaled upon the frame, friction means for transmitting movement from the engine shaft to the counter shafts, means for transmitting movement from the respective counter shafts to the wheels, and means for moving the counter shafts independently against the tension of their springs to interrupt the frictional connection between the engine shaft and the counter shaft.

5. A tractor comprising a frame, wheels journaled for independent rotation at the opposite sides thereof, an engine mounted upon the frame, spring retained counter shafts journaled for rotation upon the frame, said counter shafts having cranks, friction wheels journaled upon the cranks, and frictionally connected with the engine shaft, means for transmitting movement from the friction wheels to the respective wheels located at the opposite sides of the frame, and means for moving the counter shafts independently against their retaining springs to interrupt the frictional connection between the friction wheels and the engine shaft.

[Claims 6 and 7 not printed in the Gazette.]

956,722. TOP-PROP. FRED A. NEIDER, Augusta, Ky. Filed June 15, 1908. Serial No. 438,448.



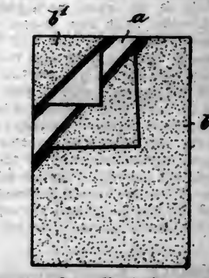
1. The combination of a stud having an integrally formed head, means for securing said stud to a carriage top, a brace rod for the carriage top mounted on said stud, a nut having a seat, adapted to engage the head on said stud, and a coiled spring mounted on said stud for holding said brace rod in place, and for holding the seat on said nut in positive engagement with said head.

2. The combination of a stud having an integrally formed angular head, means for securing said stud to a carriage top, a brace rod mounted on said stud, a nut having an angular bore, corresponding to the shape of said head, and a seat for said head, out of alinement with the bore, and a thimble mounted on said stud for holding said rod in place and for forcing said nut outwardly, whereby said head is caused to engage the seat provided on the nut.

3. In a carriage prop the combination of a member of a carriage top, a stud secured to the member and provided with an integrally formed angular head, a covering material through which the stud projects, a nut provided with an angular bore, corresponding to the shape of the head and having a seat for the head, out of alinement with the bore, a brace rod mounted on the stud, a coiled spring for holding the covering material and said brace rod in place, and for forcing said nut outwardly, whereby the head of the stud is caused to engage the seat provided on the nut.

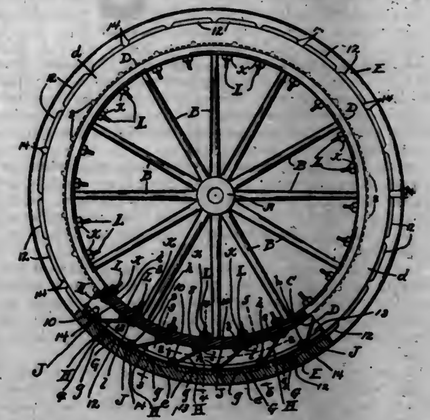
956,723. PROCESS FOR MOUNTING PHOTOGRAPHS, ENGRAVINGS, OR THE LIKE IN A DRY CONDITION. JULIUS NEUBRONNER, Cronberg, Taunus, Germany. Filed July 18, 1908. Serial No. 444,212.

1. The process for adhesively mounting photographs and paper engravings, which consists in coating paper on both of its sides with a solution of gutta-percha, exposing the same to heat rays, placing the paper thus treated between a mount and the article to be mounted thereon, and then applying a hot iron over the same.



2. The process for adhesively mounting photographs and paper engravings, which consists in coating paper on both of its sides with a solution of gutta-percha, allowing to dry, then exposing the paper thus treated to the action of a degree of heat suitable for causing the gutta-percha to enter the pores of the paper, allowing to dry, placing the paper thus treated between a mount and the article to be adhesively mounted thereon, and then applying a hot iron over the same.

956,724. VEHICLE-WHEEL. CHARLES B. NICHOLS, Rockport, Ohio. Filed Aug. 9, 1909. Serial No. 511,939.

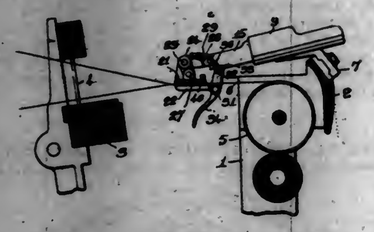


1. In a vehicle-wheel, the combination, with the rim of the wheel, and a tire extending circumferentially of the rim and enough larger in internal diameter than the external diameter of the rim to form an annular space between the tire and the rim, of a tire-holder comprising sections extending along the inner circumferentially extending surface of the tire, adjacent sections of the tire-holder being provided at their adjacent ends with lugs which are arranged in line transversely of the said sections and pivoted together parallelly with the axis of the wheel, and leaf-springs arranged between the rim and the sections of the tire-holder and spaced and extending circumferentially of the rim, each spring being attached at one end to the rim and bearing at its other end outwardly against adjacent lugs of adjacent sections of the tire-holder.

2. In a vehicle-wheel, the combination, with the rim of the wheel, and a tire extending circumferentially of the rim and enough larger in internal diameter than the external diameter of the rim to form an annular space between the tire and the rim, of a tire-holder comprising

metal sections extending along the inner circumferentially extending surface of the tire, adjacent sections of the tire-holder being pivoted together at their adjacent ends parallelly with the axis of the wheel, each section of the tire-holder being provided with two flanges overlapping opposite sides respectively of the tire and having two inner laterally spaced flanges projecting into and partially across the aforesaid space; a metal band extending circumferentially of the rim and provided with two flanges loosely overlapping the outer side of opposite inner flanges respectively of each section of the tire-holder; leaf-springs arranged between the said band and the tire-holder and extending and spaced circumferentially of the rim, each spring bearing at one end outwardly against adjacent ends of adjacent sections of the tire-holder, and means whereby the said spring and the aforesaid band are removably secured at the other end of the spring to the rim.

956,725. LOOM-TEMPLE. JONAS NORTHROP, Hopedale, Mass., assignor to William F. Draper, Hopedale, Mass. Filed Dec. 16, 1908. Serial No. 467,745.



1. A loom temple comprising two jaws relatively movable to clamp a fabric passing between them, and means for so moving the jaws, one of said jaws being provided with a cloth engaging portion the extent of which is reduced adjacent the selvage engaging edge of the jaw to avoid injury to the cloth selvage.

2. A loom temple comprising two jaws, and means for relatively moving them to clamp and release a fabric between the jaws, one of said jaws being provided with a plurality of groups of fabric engaging teeth, the number of teeth in the groups being reduced adjacent the selvage engaging edge of the jaw.

3. A loom temple comprising two jaws, and means for moving said jaws relatively to clamp and release a fabric between them, one of said jaws having a plurality of fabric engaging portions, the fabric engaging extent of which is reduced adjacent the selvage engaging edge of the jaw.

4. A jaw temple for looms, comprising two jaws relatively movable for clamping and unclamping a fabric between them, one of said jaws being provided with a plurality of groups of fabric engaging teeth, said groups being separated by untoothed portions of greater extent than the distance between the teeth of a group, and the extent of the groups of fabric engaging teeth being reduced adjacent the selvage edge of the jaw.

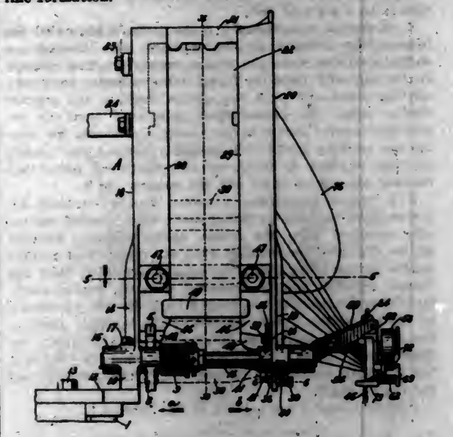
5. A jaw temple having one of its jaws provided with fabric engaging teeth formed by intersecting cuts, one of which extends at an inclination to the direction of cloth movement through the temple.

[Claims 6 to 15 not printed in the Gazette.]

956,726. FILLING-REPLENISHING LOOM. JONAS NORTHROP, Hopedale, Mass., assignor to William F. Draper, Hopedale, Mass. Filed June 11, 1909. Serial No. 501,482.

1. In a filling replenishing loom, a filling carrier supply hopper having a lower portion to contain filling carriers in single line formation, and an enlarged upper portion to contain filling carriers in staggered relation and cause the filling carriers to wedge between each other and an adjacent wall of the hopper.

2. In a filling replenishing loom, a filling carrier supply hopper formed with a compartment having a lower portion to contain filling carriers in single line formation, and an upper portion to contain filling carriers in plural line formation.



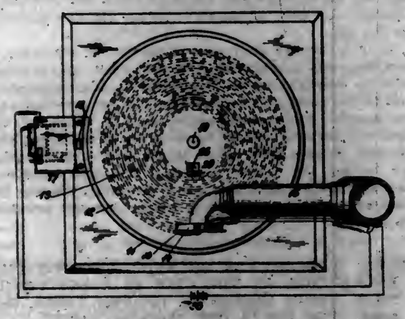
3. In a filling replenishing loom, a filling carrier supply hopper formed with a single compartment having a lower portion to deliver filling carriers singly to transferring position, and an upper portion to contain filling carriers in plural line formation with the carriers disposed in staggered relation.

4. In a filling replenishing loom, a filling carrier supply hopper having a lower portion to deliver filling carriers singly to transferring position, and an enlarged upper portion to contain filling carriers in plural line formation, said enlarged upper portion gradually contracting downward into the lower portion to arrange the filling carriers in single line formation as they move toward transferring position.

5. In a filling replenishing loom, a filling carrier supply hopper provided with an enlarged upper portion to contain filling carriers in staggered relation, and having a slot for the passage of the filling ends.

[Claims 6 to 23 not printed in the Gazette.]

956,727. SOUND-REPRODUCING MACHINE AND RECORD THEREFOR. FREDERICK H. OSBORN, Garrison, N. Y. Filed Dec. 4, 1908, Serial No. 465,921. Renewed Jan. 26, 1910. Serial No. 540,272.

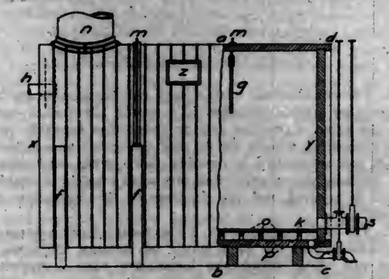


1. In a sound reproducing machine, the combination with a record carrier and a record carried thereby, the said record being provided with a sound groove having a deeper portion at the termination thereof, of a reproducer provided with a stylus and a traveling arm therefor, circuit closing means including a member carried by the said reproducer and traveling arm and held normally out of contact with the face of the record while the stylus is traveling along the greater portion of the said sound groove but being allowed to engage the face of the said record when the stylus reaches the deeper portion of the said sound groove, and an electric stopping means, the circuit for which is arranged to be controlled by the engagement of the said contact member with the face of the said record.

2. In a sound reproducing machine, the combination with a rotatable record carrier and a record carried thereby, the said record being provided with a sound groove having a deeper portion at the termination thereof and provided with a circuit closing element in proximity thereto, the face of the said circuit closing element being substantially flush with the face of the said record, of a reproducer provided with a stylus and a traveling arm therefor, a circuit closing element carried by the said reproducer and traveling arm, the said circuit closing element being normally out of contact with the face of the said record but arranged to be lowered to engage the circuit closing element carried by the record when the stylus reaches the deeper portion of the groove, and an electric stopping device the circuit for which is arranged to be closed by the coengagement of the two said circuit closing elements.

3. In a sound reproducing machine, the combination with a rotatable record carrier and a record carried thereby, the said record being provided with a sound groove having a deeper portion at the termination thereof and having a metallic plate located in proximity thereto, the face thereof being substantially flush with the face of the said record, of a reproducer provided with a stylus and a traveling arm therefor, two contact elements carried by the said reproducer and traveling arm, the said elements being normally insulated from each other and held out of contact with the face of the said record during the time the stylus is traveling through the greater portion of the said sound groove, the said elements being arranged to be lowered to the level of the face of the record and to be engaged by the metallic plate carried by the said record when the said stylus reaches the deeper portion of the sound groove, and an electric stopping device, the circuit for which is arranged to be closed by the engagement of the two said contact elements with the said metallic plate.
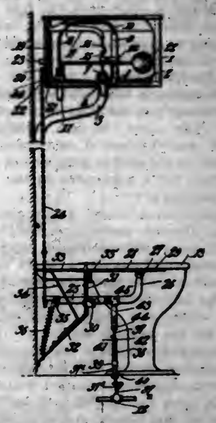
956,728. MACHINE TO MANUFACTURE SODA AND SULFITE WOOD-PULP. PERLEY B. PALMER, Orono, Me. Filed May 20, 1909. Serial No. 497,368.



1. The combination in a blow-pit used in the manufacture of soda and sulfite wood-pulp of a cylindrical receptacle or pit placed horizontally, as above described, with a filter as above described.

2. The combination in a blow-pit used in the manufacture of soda or sulfite wood-pulp, of a cylindrical pit placed horizontally, as above described, and a hanging target or butt, as above described and set forth.

956,729. ANTIFREEZING-CLOSET. NILS PETERSON, Moscow, Idaho, assignor of one-third to Charles L. Thompson, Moscow, Idaho. Filed July 13, 1909. Serial No. 507,390.



1. The combination with a supporting bracket, of an operating lever fulcrumed on and passing through the said bracket, an outlet valve connected with and operated by the rear end of the lever, an inlet valve connected with and operated by the front end of the lever, a hinged seat bearing upon the front end of the lever to operate the same, a finger adjustably secured to the rear end of the lever, and a spring having one end secured to the said finger and its other end secured below the lever.

2. The combination of a bracket composed of angular plates secured together, one of said plates having a cut-away portion to provide a guiding slot, and the other plate being provided with a projection on its front side adjacent the said slot, a lever fulcrumed upon the said projection and passing through the said slot, and inlet and outlet valves connected with and operated by the opposite ends of the said lever.

3. The combination of a bracket, an operating lever fulcrumed on and passing through the said bracket, an outlet valve connected with the rear end of the lever, a supply valve arranged below the front end of the lever, a vertically disposed rod connected with the supply valve, a sleeve adjustably secured to the upper end of the said rod and having a pin and slot connection with the front end of the operating lever, a guide for the valve rod, a spring coiled around the rod above the said guide and bearing on the guide, and a collar adjustably secured on the rod and bearing against the upper end of the spring.

956,730. STENCILING APPARATUS. ADOLPH POKORNY, St. Paul, Minn. Filed May 11, 1909. Serial No. 495,228.



1. Stenciling means of the class described comprising in combination with a stencil plate, a board formed with a pair of scales one of said scales beginning at a point

midway of the other scale, and an adjustable straight edge registering with the shorter scale.

2. In combination a board provided with a pivotally supported bar turnable into and out of contact with the face of said board, a chart upon the face of said bar, and parallel scales upon the face of said board, one of said scales beginning at a point midway of the other scale and said scales and chart being subdivided in the manner and for the purpose set forth.

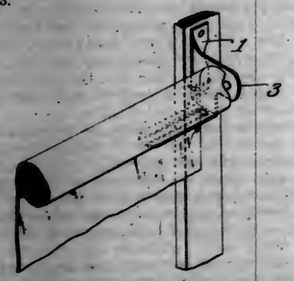
3. In combination a board, a bar supported upon the face of said board and turnable into and out of contact therewith, a chart upon the face of said bar, a pair of spaced scales upon the face of said board, and a straight edge adjustable in connection with one of said scales, said scales and chart being subdivided in the manner and for the purpose set forth.

4. In combination a board, a bar pivotally supported upon the face thereof, springs normally tending to hold said bar in contact with said board, cams for turning the bar out of contact therewith, a chart upon the face of said bar, a pair of scales upon the face of said board, and a straight edge adjustable in connection with one of said scales, said scales and chart being subdivided in the manner and for the purpose set forth.

5. In combination a stencil plate having stencil openings of predetermined size cut therethrough, a board, a bar turnable into and out of contact with the face of said board, a chart upon the face of said bar a pair of scales upon the face of said board, and a straight edge adjustable in connection with one of said scales, said scales and chart being proportioned to each other, and said chart being subdivided in relation to the sizes of the stencil openings in the manner and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

956,731. WINDOW-SHADE FIXTURE. ALBERT J. POTTER, Lakeland, Fla. Filed Oct. 6, 1909. Serial No. 521,263.



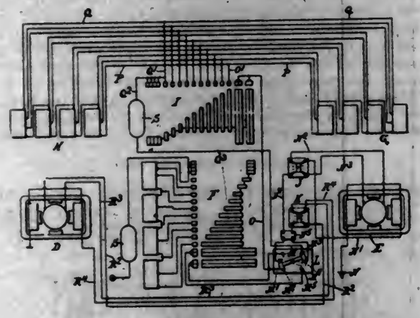
1. A shade fixture fashioned from a single piece of flat metal and comprising a base adapted to receive support engaging means, the base being provided with an integrally formed arm outstanding from the inner edge thereof in a plane substantially normal to the plane of the base and adapted to receive a shade support, the arm being provided with an integrally formed lip, depending from the lower edge of the arm in a common plane with the arm, the lip being bent inwardly to dispose its end in a plane substantially normal to the plane of the arm and lip, said end being slotted throughout a portion of its length to form spaced, shade receiving arms.

2. A shade fixture fashioned from a single piece of flat metal and comprising a base adapted to receive support engaging means, the base being provided with an integrally formed arm outstanding from the inner edge thereof in a plane substantially normal to the plane of the base and adapted to receive a shade support, the arm being provided with an integrally formed lip, depending from the lower edge of the arm in a common plane with the arm, the lip being bent inwardly to dispose its end in a plane substantially normal to the plane of the arm and lip, said end being slotted throughout a portion of its length to form spaced, shade receiving arms, there being a rounded flange upon the end of the lip, at the edge of the slotted portion thereof.

3. A shade fixture fashioned from a single piece of flat metal and comprising a base adapted to receive support engaging means, the base being provided with an integrally formed arm outstanding from the inner edge thereof in a plane substantially normal to the plane of the base and adapted to receive a shade support, the arm being provided with an integrally formed lip, depending from the lower edge of the arm in a common plane with the arm, the lip being bent inwardly to dispose its end in a plane substantially normal to the plane of the arm and lip, said end being slotted throughout a portion of its length to form spaced, shade receiving arms, there being a flaring notch in the lower edge of the first named arm between the base and the lip.

4. A shade fixture fashioned from a single piece of flat metal and comprising a base adapted to receive support engaging means, the base being provided with an integrally formed arm outstanding from the inner edge thereof in a plane substantially normal to the plane of the base and adapted to receive a shade support, the arm being provided with an integrally formed lip, depending from the lower edge of the arm in a common plane with the arm, the lip being bent inwardly to dispose its ends in a plane substantially normal to the plane of the arm and lip, said end being slotted throughout a portion of its length to form spaced, shade receiving arms, there being a rounded flange upon the end of the lip at the edge of the slotted portion thereof and the first named arm being provided, in its lower edge, between the base and the lip, with a flaring notch.

956,732. RACK-RAIL LOCOMOTIVE. CHARLES A. PRATT, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 28, 1907. Serial No. 354,426.



1. The combination with a rack rail locomotive having supporting wheels therefor of a motor adapted to operate the same, a positive driving connection separate from the supporting wheels for driving the motor as a dynamo when the locomotive is running down grade, and means for utilizing the current thus developed whereby a braking effect is secured and the progress of the locomotive retarded.

2. The combination with a locomotive having supporting wheels therefor of a motor for driving the same, a rack rail along which the locomotive runs, a sprocket wheel on the locomotive engaging the rack, a positive connection between the motor and the sprocket wheel, whereby the sprocket wheel may either be driven or its rotation resisted, two controllers for the motor one for controlling it when it is running as a motor, and the other when it is running as a dynamo, a reversing switch associated with one controller and means for preventing one controller from becoming operative while the other is in operation.

3. The combination with a locomotive having supporting wheels therefor of a motor for driving the same, a rack rail along which the locomotive runs, a positive connection between the motor and the rack rail, two controllers for the motor one for controlling it when it is running as a motor, and the other when it is running as a dynamo, a reversing switch associated with one controller and means for preventing one controller from becoming operative while the other is in operation, an operative connection between said means and the reversing switch and a series of braking rheostats connected with one of said controllers.

4. The combination with a rack rail locomotive having supporting wheels therefor of a motor adapted to operate it, means separate from the supporting wheels for positively driving the motor as a dynamo when the locomotive is running down grade, and controlling apparatus for controlling the current of said motor when acting as a dynamo, for the purpose of securing a braking effect on the locomotive.

5. The combination with a locomotive of a motor for driving the same, a rack rail along which the locomotive runs, a positive connection between the motor and the rack rail, two controllers for the motor one for controlling it when it is running as a motor, and the other for controlling it when it is running as a dynamo and non-frictional means for resisting the movement of the locomotive when one controller is in use.

[Claims 6 to 10 not printed in the Gazette.]

956,733. STRUT FOR AUTOMATIC SPRINKLERS. GEORGE I. ROCKWOOD, Worcester, Mass. Filed Dec. 11, 1908. Serial No. 467,015.



1. A brace for an automatic sprinkler, comprising members arranged to separate by a rocking movement of one member around the end of the other member, but held from such separation by a block of fusible material attached to the fulcrum member by a nonfusible means of attachment beyond the swinging end of the rocking member, said block of fusible material arranged to inclose said swinging end.

2. A brace for an automatic sprinkler, comprising members arranged to separate by a rocking movement of one member around the end of the other member, and a block of fusible material attached by a nonfusible means of attachment to said fulcrum member and arranged to contact with the swinging end of the rocking member to prevent the separation of said members, said nonfusible means arranged beyond said swinging end in order to exert no direct force against its movement.

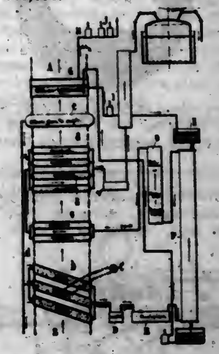
3. A brace for an automatic sprinkler, comprising separate members having surfaces in contact and arranged to separate by a rocking movement of one member around the end of the other member, a block of fusible material capable of being softened by a predetermined degree of heat in contact with the outer side of the swinging end of said rocking member opposite to said contacting surfaces, and nonfusible means of attaching said block to said fulcrum member beyond said swinging end.

4. A brace for an automatic sprinkler, comprising members arranged to be separated by strain upon said brace, a block of fusible material arranged to contact with the outer side of the swinging member, and a staple of nonfusible material inclosed in said block with its ends attached to the stationary member.

5. A brace for an automatic sprinkler comprising separate members having surfaces in contact parallel with the line of strain upon said brace, a block of fusible material in contact with the contacting surface of one member and arranged to contact with the outer side of the other member parallel with said contacting surfaces, and a staple of nonfusible material passing through said block with its ends attached to said first member.

[Claims 6 to 8 not printed in the Gazette.]

956,734. PROCESS OF MANUFACTURING METHANE OR OF MIXTURES OF METHANE AND HYDROGEN. PAUL SABATIER, Toulouse, France. Filed Aug. 11, 1908. Serial No. 448,058.



1. The process of making methane consisting in passing steam over carbon confined in a retort maintained at a constant temperature to produce water-gas of constant composition, then removing the carbon dioxid from the resulting gaseous product and passing the carbon dioxid free gases over heated nickel, for the purpose described.

2. The process of making methane consisting in passing steam over carbon confined in retorts maintained at a temperature of about 970° C., to produce water gas of constant composition, then removing the carbon dioxid from the resulting gaseous product and passing the carbon dioxid free gases over heated nickel, for the purpose described.

3. The process of making methane consisting in passing steam over carbon confined in retorts maintained at a temperature to produce water gas of constant composition, then passing the resulting gases first through an alkali carbonate solution to remove the greater part of the carbon dioxid, and then through an alkali hydrate solution to remove the remainder of the carbon dioxid, and finally passing the carbon dioxid free gases over heated nickel, for the purpose described.

4. The process of making methane consisting in passing steam over carbon confined in retorts maintained at a constant temperature to produce water gas of a constant composition, freeing the resulting gaseous product of carbon dioxid and sulfur compounds by passing the gases in contact with an alkali carbonate solution to remove the larger part of the carbon dioxid, then in an alkali hydrate to remove the remainder of the same, then over heated copper to remove the sulfur, and finally passing the purified gases over heated nickel, for the purpose described.

956,735. VEHICLE-WHEEL TIRE. ANTONY T. SCARAMUZZI, Paterson, N. J. Filed Sept. 18, 1909. Serial No. 518,368.

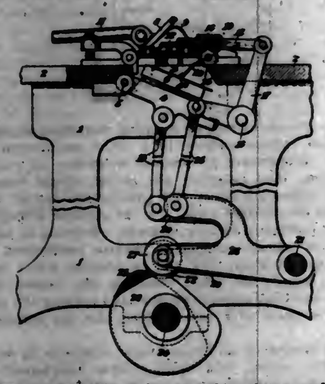
The combination of the rim of a vehicle wheel, a tire proper having its lateral edges interlocked with the rim and spaced continuously from each other, an inner tube arranged in the tire-proper, and a puncture-resisting medium interposed between the tire-proper and the inner tube and comprising an endless series of puncture-resisting devices articulatively connected with each other and arranged in the tread-portion of the tire between the tire-

proper and the inner tube and stiff flexible strips receiving between them said devices and each having its lateral edges abutting against each other opposite the space be-



tween the lateral edges of the tire-proper, both edges of the outer strip engaging the rim between said lateral edges of the tire-proper, substantially as described.

956,736. DISCHARGING DEVICE FOR ENVELOP-MACHINES. FERDINAND L. SCHMIDT, New York, N. Y. Filed June 20, 1907. Serial No. 379,870.



1. The combination of a movable platen and envelop flap folders, of a discharging device carried by one of said flap folders and operating in the direction of discharge of the envelop to insure the detachment of the envelop from said folders and discharge the same from said platen.

2. The combination of a movable tilting platen and envelop flap folders, of a discharging device fastened on one of said flap folders and operated positively by the oscillation of said flap folder to engage with and insure the detachment of the envelop from said folders and discharge the same from said platen.

3. The combination with a tilting platen and envelop flap folders provided with slots, of envelop discharging devices carried by and moving with one of said folders, said devices adapted to pass through said slots and insure detachment of the envelop from the folders and discharge the same from the platen.

4. The combination with a tilting platen and envelop flap folders, one of said folders having capacity of movement in excess of that necessary to fold the envelop flap, of envelop discharge fingers rigidly attached to said folder and movable in the direction of the discharge of the envelop and operating to insure detachment of the envelop from the folders and discharge the same from the platen.

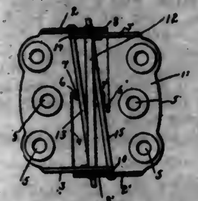
5. The combination of a movable platen and envelop flap folders, of a discharging device comprising fingers fixed on one of said flap folders and movable therewith in the direction of the discharge, said discharging device adapted to engage said envelop and force it from the platen.

956,737. FLEXIBLE SHAFTING. DANIEL SCHOENING, Bergedorf, Germany. Filed Dec. 22, 1908. Serial No. 468,704.



A flexible shafting comprising a first tubular member, having a series of spaced inwardly extending claws, and a second tubular member telescoped by the first member and having a series of apertures engaged by the claws and extending at right angles to the axis of said second member, and a beveled integral rim that forms a longitudinal prolongation of said member.

956,738. DOOR-HINGE. FRANK SCHWARZ, Chicago, Ill. Filed Aug. 21, 1909. Serial No. 513,983.



1. In combination, a door hinge comprising two hinge members pivotally connected together, one of said members having an arm, said arm being provided with a rack, and a spring rod carried by the other member engaging with the rack.

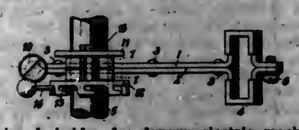
2. In combination, a door hinge comprising two hinged members, each of said members being provided with a rack, and spring rods carried by the members engaging the racks.

3. In combination, a door hinge comprising two hinged members, one of said members having an arm formed with a rack, and a rod carried by the other member engaging with said rack.

4. In combination, a door hinge comprising two hinged members, one of said members being formed with an arm having a rack thereon, a rod carried by the other member engaging with said rack, and a spring arm carried by said last member engaging the rod.

5. In combination, a door hinge member comprising a central portion and two end laterally disposed arms, one of said arms being provided with a rack formed thereon, a spring arm formed with a bifurcated end arranged on the central part of said member, a second hinge member having a central part and two laterally disposed end arms, a pintle connecting the end arms of the members, said second member having a spring arm located on its central part and a rack on one of its end arms, and rods secured to the members engaging the racks of the end arms.

956,739. BRUSH-HOLDER. ROBERT SIEGFRIED, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 3, 1906. Serial No. 341,906.



1. A brush holder for dynamo-electric machines comprising two side by side sheet metal pieces riveted together in close engagement except at one end where they are spread apart and bent to form a box for the brush.

2. A brush holder for dynamo-electric machines comprising two side by side sheet metal pieces riveted together in close engagement but spread apart at one place to form a box for the brush and at another place for the reception of means for exerting pressure upon the brush.

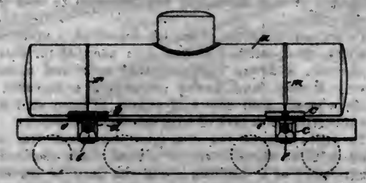
3. A brush holder for dynamo-electric machines comprising two side by side sheet metal pieces riveted together in close engagement but spread apart and bent at one end to form a box for the brush and provided with lateral projections near the other end between which is supported means for exerting pressure upon the brush.

4. A brush holder for dynamo-electric machines comprising two side by side sheet metal pieces riveted together in close engagement but spread apart and bent at one end to form a box for the brush and provided with lateral projections between which is supported a spring whereby pressure may be exerted upon the brush.

5. A brush holder for dynamo-electric machines comprising two side by side sheet metal pieces riveted together in close engagement but spread apart and bent at one end to form a box for the brush and provided with projections between which is supported a spring, whereby pressure may be exerted upon the brush, and means for adjusting the pressure that may be exerted upon the brush.

[Claims 6 to 10 not printed in the Gazette.]

956,740. CAR STRUCTURE. ABRAM E. SMITH, Brooklyn, N. Y. Filed June 18, 1909. Serial No. 502,958.



1. A car structure including a tank, an under-frame therefor, longitudinally of which the tank extends, and two tank supports beneath the tank, to one of which supports the tank is rigidly secured, and which support is supported by a body bolster belonging to the under-frame, whereby the tank is fixed with respect to the under-frame where it engages said support, the tank being free to slide upon the companion tank support thereby permitting longitudinal movement of the portion of the tank carried thereby with respect to the under-frame, whereby expansion and contraction of the tank longitudinally thereof may occur without rupture.

2. A car structure including a tank, an under-frame therefor, longitudinally of which the tank extends, and two tank supports beneath the tank, one adjacent to each end thereof, to one of which supports the tank is rigidly secured, and which support is rigid with respect to the under-frame, whereby the tank is fixed with respect to the under-frame where it engages said support, the companion tank support permitting longitudinal movement of the portion of the tank carried thereby with respect to the under-frame, whereby expansion and contraction of the tank longitudinally thereof may occur without rupture.

3. A car structure including a tank, an under-frame having two body bolsters and two tank supports, one carried by each body bolster, to one of which supports the tank is rigidly secured, and which support is rigid with respect to the body bolster carrying it, whereby the tank is fixed with respect to the under-frame where it engages said support, the companion tank support permitting longitudinal movement of the portion of the tank carried thereby with respect to the under-frame, whereby expansion and contraction of the tank longitudinally thereof may occur without rupture.

4. A car structure including a tank, an under-frame having two body bolsters and two tank supports, one carried by each body bolster, to one of which supports the tank is rigidly secured, and which support is rigid with respect to the body bolster carrying it, whereby the tank is fixed with respect to the under-frame where it engages said support, the companion tank support permitting longitudinal movement of the portion of the tank carried thereby with respect to the under-frame, whereby expansion and contraction of the tank longitudinally thereof may occur without rupture, and a tank band having its ends in engagement with the body bolster and passing over the tank in the neighborhood of its said second support to hold the tank upon the second support while permitting the aforesaid longitudinal movement of the tank.

5. A car structure including a tank, and an under-frame therefor longitudinally of which the tank extends, said tank being rigidly attached near one of its ends to the under-frame and being free to move longitudinally of the under-frame throughout the portion of its length from its said place of attachment to its other end upon expansion and contraction of the tank.

[Claims 6 to 9 not printed in the Gazette.]

956,741. NURSING BOTTLE AND NIPPLE. DE WANE B. SMITH, Deerfield, N. Y. Filed Feb. 24, 1908. Serial No. 417,289.



1. A nursing bottle comprising a receptacle having an open top or mouth equal in diameter to the body of the receptacle, or substantially so, and having a flange at its top, combined with a closure consisting of an elastic body having a beaded or thickened flange adapted to engage the top of the receptacle beneath the said flange on the latter, said closure having a relatively thin diaphragm portion immediately above and contiguous to the said beaded or thickened flange, said diaphragm portion extending approximately at a right angle to said beaded or thickened flange, and a nipple portion immediately above said diaphragm portion and having upwardly converging walls.

2. A nursing bottle comprising a receptacle having an open top or mouth equal in diameter to the body of the receptacle, or substantially so, and having a flange at its top, combined with a closure consisting of an elastic body having a beaded or thickened flange adapted to engage the top of the receptacle beneath the said flange on the latter, said closure having a diaphragm portion immediately above the beaded flange thereon, and a nipple portion extending upward from the said diaphragm portion and having upwardly converging walls, said converging walls being thickened from said diaphragm portion to a point about half way to the end or top of the nipple.

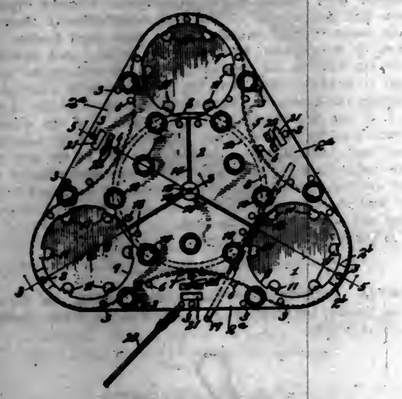
3. A closure, for wide-mouthed nursing bottles, consisting of an elastic body having at its base a beaded or thickened flange to engage a flange on the bottle, a diaphragm portion immediately above and approximately at a right angle to said beaded flange, and an eccentrically arranged nipple portion extending upward from said diaphragm portion.

956,742. HEATING APPLIANCE. CHARLES C. SPENGLER, Rockford, and HENRY T. SIDWAY, Chicago, Ill., assignors to Henry T. Sidway & Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 23, 1908. Serial No. 464,034.

1. A heating appliance comprising two plates and a wall extending between said plates adjacent to the margins thereof, said plates having openings therein, one of said plates being formed in sections, the central portions of adjacent edges of said sections being spaced apart.

2. A heating appliance comprising a hollow structure having openings therein, a heat-deflector in said struc-

ture, one wall of said structure being formed in sections, the central portions of adjacent edges of said sections being spaced apart, and a rivet connecting said central portions with the tip of said deflector.



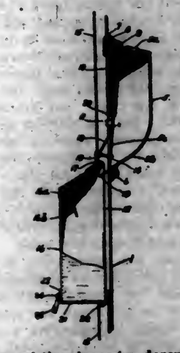
3. An appliance adapted to be set loosely upon the top of a stove for distributing the heat from one burner of such stove to a plurality of cooking utensils placed on said appliance, said appliance consisting of two plates spaced apart and secured together in parallel relation, a marginal wall extending between said plates, the lower plate having an opening therein to register with a burner of a stove, and the upper plate having a plurality of openings therein, which latter openings are out of register with the opening in the lower plate, the upper plate being adapted to support utensils placed over the openings in said upper plate, and a deflector secured upon the under side of the upper plate directly above the opening in the lower plate and adjacent the inner edges of the openings in the upper plate, for directing the heated gases from the opening in the lower plate to the openings in the upper plate.

4. A relatively thin appliance adapted to be set loosely upon the top of a stove for distributing the heat from one burner of such stove to a plurality of cooking utensils placed on said appliance, said appliance consisting of two plates spaced apart, rivets securing said plates together in parallel relation, a narrow marginal wall extending between said plates, the lower plate having an opening therein to register with a burner of a stove, and the upper plate having a plurality of openings therein, which latter openings are out of register with the opening in the lower plate, said marginal wall being bent so as to cause the heated gases entering the lower opening to pass directly to the openings in the upper plate, said upper plate having raised portions surrounding the openings in the upper plate to space from said upper plate utensils placed over the openings in said upper plate, and a deflector secured upon the under side of the upper plate directly above the opening in the lower plate, for directing the heated gases from the opening in the lower plate to the openings in the upper plate.

956,743. MAIL-COLLECTING APPARATUS. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed Oct. 16, 1909. Serial No. 522,927.

1. In apparatus of the character described, a stationary receptacle, and means comprising an elevator car and a receptacle movable therewith whereby said stationary receptacle is opened and discharges its contents into said movable receptacle.

2. In apparatus of the character described, a stationary receptacle having an outlet, a door for controlling said outlet, and means comprising an elevator car and a receptacle movable therewith whereby said door is opened and the contents of said stationary receptacle is discharged into said movable receptacle.



3. In apparatus of the character described, a stationary box having an aperture adapted for delivering mail thereto and an aperture adapted for discharging said mail, mechanism for controlling said last named aperture, and means comprising an elevator car and a receptacle movable therewith whereby said mechanism is operated and the contents of said stationary box delivered to said movable receptacle.

4. In apparatus of the character described, a stationary box having an opening, a sliding door adapted for closing said opening, a device engaging said door and movable relatively thereto, and means comprising a movable receptacle whereby said device is caused to open said door in one direction of travel of said movable receptacle.

5. In apparatus of the character described, the combination with an elevator car of several boxes disposed on different floors of a building along the path of travel of said elevator car and means operated by the movement of said car whereby said boxes are caused to deliver their contents to said car.

[Claims 6 to 8 not printed in the Gazette.]

956,744. ROAD-GRADER. HENRY SUNDERMAN, Madison, Nebr. Filed Sept. 11, 1909. Serial No. 517,338.



1. A road grader including a front scraper blade arranged at an angle to the line of draft, a rear blade set at the opposite angle to the line of draft and arranged to counteract the side draft produced by the front blade, and a draft device connected with the front scraper blade intermediate of the ends thereof.

2. A road grader including a front transversely disposed scraper blade arranged in a substantially vertical plane, a rear transverse blade set at an inclination and extending downwardly and rearwardly and arranged to pack the dirt after the surface has been scraped by the front blade, and a draft device connected with the front scraper blade intermediate of the ends thereof.

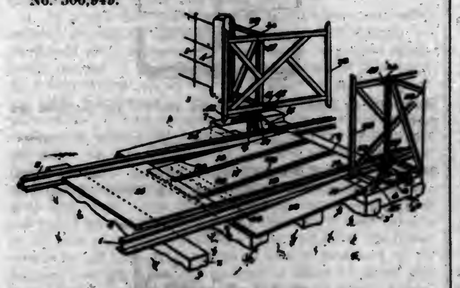
3. A road grader including a front transverse scraper blade arranged at an angle to the line of draft and set in substantially a vertical position, a rear reversely arranged blade set at an angle to the line of draft and arranged at an acute angle to the front blade, said rear blade being also inclined downwardly and rearwardly to pack the dirt after the same has been graded or scraped by the front blade, and a draft device connected with the front scraper blade intermediate of the ends thereof.

4. A road grader including a front transverse blade set at an angle to the line of draft and provided with an extensible section, and a rear reversely arranged blade set at an opposite angle to the line of draft and adjustable transversely of the machine to arrange it to correspond with the adjustment of the front blade.

5. A road grader including a transversely disposed scraper blade provided with an extensible section pivoted to the scraper blade to provide a vertical adjustment, and adjustable along the scraper blade to vary the length thereof.

[Claims 6 to 28 not printed in the Gazette.]

956,745. CATTLE-GUARD. EDWARD J. THOMAS, Elphinstone, Manitoba, Canada. Filed June 8, 1909. Serial No. 500,949.



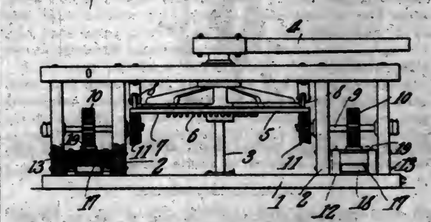
1. In a cattle guard, the combination with a suitably mounted cross shaft located beneath the rails of a track, said shaft being designed to actuate an opposing set of gates to obstruct passage along the track, of a forward depressible platform adapted when depressed to rotate the shaft, and a rear depressible platform having bars extending therefrom and secured forwardly through arms with the shaft, a cross rod carried by the forward platform, and rollers located at the ends of the rod and operating within slots provided in the bars, as and for the purpose specified.

2. In a cattle guard adapted to obstruct passage along the track, the combination with a suitably mounted cross shaft located beneath the rails of the track, said cross shaft being adapted to operate opposing gates located to the sides of the track, of adjustable sleeves secured to the shaft and having arms extending from the opposite sides thereof, a front platform supported forwardly by brackets from one set of arms and resting rearwardly on one of the ties supporting the rails, a rear platform having forwardly extending bars secured thereto, said bars having their free ends turned downwardly and pivotally secured to the remaining pair of arms, a cross rod secured to the front platform and having rollers at the ends thereof, said rollers operating within slots formed in the bars, as and for the purpose specified.

956,746. PRESS-SWEEP. RICHARD A. WAKEFIELD, Midway, Tex. Filed Oct. 9, 1909. Serial No. 521,959.

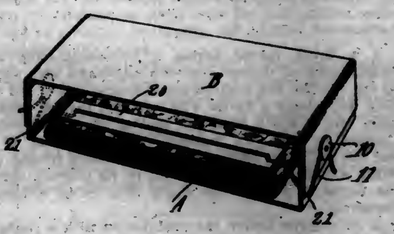
1. A power mechanism for presses comprising an approximately rectangular frame, uprights mounted upon the frame and spaced from the ends thereof, stub shafts journaled for rotation in the frame and said uprights, gear wheels fixed to the stub shafts and located between the ends of the frame and the uprights, beveled pinions fixed to the inner ends of the stub shafts, an arbor journaled for rotation in the frame, a sweep attached thereto, and a master wheel carried by the arbor and having means adapted to engage the beveled pinion.

2. A power mechanism for presses comprising an approximately rectangular frame, uprights mounted upon the frame and spaced from the ends thereof, means for attaching press plunger rods guide troughs to the ends of the frame and said uprights, stub shafts journaled for rotation in the ends of the frame and in said uprights, gear wheels carried by the stub shafts and located between the ends of the frame and the uprights, beveled pinions fixed to the inner ends of the stub shafts, an arbor journaled for rotation at the middle of the frame, a sweep attached to



the arbor, a master wheel fixed to the arbor and located between the upper and lower sides of the frame, said master wheel having upon its under side several sets of gear teeth separated by spaces and adapted to engage the beveled pinions upon the stub shafts, and rollers journaled in the frame and bearing upon the upper side of the master wheel in the vicinity of its periphery and above the beveled pinion.

956,747. BOX-FASTENER. EARL P. WARFIELD, Washington, D. C., assignor of one-third to Alvin L. Newmyer and one-half to Monroe S. Snyder, Washington, D. C. Filed July 22, 1908. Serial No. 444,843.



1. The combination with a box including a body portion and cover, a garment engaging strip disposed within the box, securing buttons fastened to the opposite side walls of the cover, and a cord having one end thereof secured to one of the buttons and its other end passing through openings formed in the opposite sides of the body of the box for attachment to the other button, the intermediate portion of the cord being arranged to bear against the garment engaging strip.

2. The combination with a box including a body portion and cover, buttons secured to the opposite walls of the cover, a garment engaging strip disposed within the box, and a flexible medium extending transversely through the box for attachment to the adjacent buttons for yieldably supporting said strip in engagement with a garment.

956,748. CUTTER FOR WOOD-SCREW-CUTTING MACHINES. GUSTAV WEBER, Hagen, Westphalia, Germany. Filed Sept. 24, 1904. Serial No. 255,728.

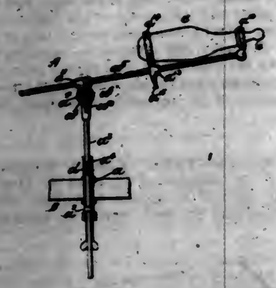
In a wood screw cutting machine for making very small screws the combination with a frame, of a holder fixed to said frame, a clamp for holding the screw blank, an adjustable hollow spindle rotatably held in said holder, means for rotating said spindle, and a cutter, comprising a

head provided with cutting threads on its circumference and having at its front end a cavity, the said head being



formed on a double conical shaft, firmly held in said hollow spindle and adapted to rotate therewith.

956,749. BOTTLE-HOLDER. ALBERT H. ALLEN, Wakefield, Mass. Filed July 17, 1908. Serial No. 444,009.

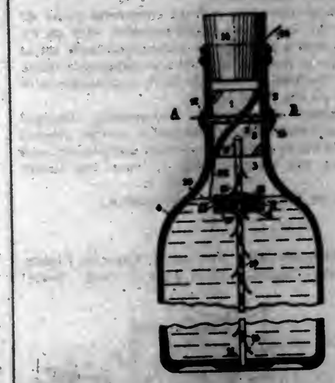


1. A bottle holder having a bottle-supporting arm, flanges mounted thereon relatively adjustable with respect to one another and adapted and arranged to the end that they may clamp a bottle with a nipple thereon between them, one of which flanges is adapted when the bottle is clamped to bear with pressure against its head or top end and the nipple affixed thereto and passing through said flange whereby the flange will act by its pressure against the bottle to prevent the nipple from being withdrawn therefrom.

2. In a bottle holder, the combination with a clamp, of a main supporting rod extensionally and rotarily adjustable in said clamp, means for securing said rod to said clamp whereby such adjustment may be obtained, a separate bottle-holding arm, an adjustable clamp for securing said arm to said rod by which said arm may be turned to occupy and maintain a position in parallel alinement with said rod or be turned on an arc to extend outwardly from said rod and occupy and maintain an angular position with respect thereto and in the same or substantially the same plane therewith, means for securing said arm to said adjustable clamp whereby the arm may be extensionally adjustable with respect to said clamp, and means arranged on said arm for retaining a bottle, said means comprising separate members relatively adjustable with respect to one another and adapted when in an engaging position to hold the bottle clamped between them.

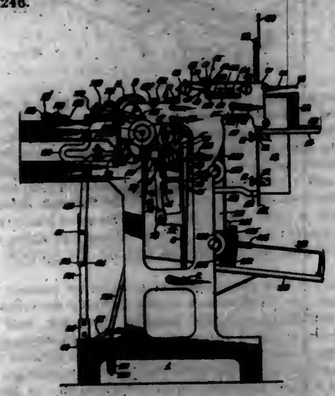
956,750. SAFETY DEVICE FOR ANTIREFILLABLE BOTTLES. JEAN B. ARSAC, Le Puy, France. Filed Oct. 6, 1909. Serial No. 521,348.

A safety device for preventing fraudulous addition of any liquid in any vessel, comprising a core having helicoidal grooves, a transverse channel, a circular groove and a spring in the said channel, a central rod having laterally projecting thorns which act like springs and whose ends are turned down, a floater loosely mounted on said central rod so that it can freely turn and descend on the same but is prevented from ascending by said lateral thorns, sub-



stantially as described and shown and for the purpose set forth.

956,751. CYLINDER PRINTING-PRESS. JOHN H. BARR, Kansas City, Mo. Filed Aug. 12, 1908. Serial No. 448,246.



1. In a printing press, a printing-plate-carrying roller suitably driven, an impression cylinder held yieldingly toward said plate and geared to said roller, a gripper mechanism carried by the cylinder and consisting of jaws bearing a hinged relation, an envelop or paper-sheet-supporting plate contiguous to the cylinder, means to open said jaws as the cylinder revolves, means to project the gripper mechanism beyond the periphery of the plate as it passes the latter, and means to close said jaws as such passage is made and cause them to pick up the sheet of paper or envelop and draw it from said plate.

2. In a printing press, a printing-plate-carrying roller, suitably driven, an impression cylinder held yieldingly toward said plate and geared to said roller, a gripper mechanism carried by the cylinder and consisting of jaws bearing a hinged relation, an envelop or paper-sheet supporting plate contiguous to the cylinder, means to open said jaws as the cylinder revolves, means to project the gripper mechanism beyond the periphery of the plate as it passes the latter, an arm intercepting the path of forward movement of a sheet of paper or envelop upon said plate, and means as the gripper mechanism passes said plate to close the jaws and cause them in such closing movement to

first move said intercepting arm out of the path of said envelop or sheet of paper and then close upon and draw the latter forwardly off the plate.

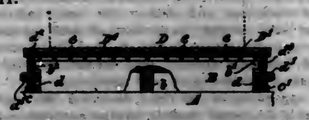
3. In a printing press, a printing-plate-carrying roller suitably driven, an impression cylinder held yieldingly toward said plate and geared to said roller, a gripper mechanism carried by the cylinder and consisting of jaws bearing a hinged relation, an envelop or sheet of paper supporting plate contiguous to the cylinder, means to open said jaws as the cylinder revolves, means to project the gripper mechanism beyond the periphery of the plate as it passes the latter, an arm intercepting the path of forward movement of a sheet of paper or envelop upon said plate, means as the gripper mechanism passes said plate to close the jaws and cause them in such closing movement to first move said intercepting arm out of the path of said envelop or sheet of paper and then close upon and draw the latter forwardly off the plate, and means to return said arm to its original position after the envelop or sheet of paper has been wholly withdrawn from the plate.

4. In a printing press, a printing-plate-carrying roller suitably driven, an impression cylinder held yieldingly toward said plate and geared to said roller, a gripper mechanism carried by the cylinder and consisting of jaws bearing a hinged relation, an envelop or sheet of paper supporting plate contiguous to the cylinder, means to open said jaws as the cylinder revolves, means to project the gripper mechanism beyond the periphery of the plate as it passes the latter, an arm intercepting the path of forward movement of a sheet of paper or envelop upon said plate, means as the gripper mechanism passes said plate to close the jaws and cause them in such closing movement to first move said intercepting arm out of the path of said envelop or sheet of paper and then close upon and draw the latter forwardly off the plate, means to return said arm to its original position after the envelop or sheet of paper has been wholly withdrawn from the plate, and means whereby the cylinder is moved away from but not out of gear with said roller after the envelop or sheet of paper has received its impression from said printing plate.

5. In a cylinder printing press, the combination of a printing roller, a cylinder geared to said roller, yielding means holding the cylinder in the plane of movement of the printing surface of the roller, oscillatory arms supporting the cylinder, rock-arms pivotally carried by said cylinder-supporting arms and held with their free ends pressed yieldingly therefrom, levers pivotally carried by said rock-arms, means holding said levers inoperative with respect to the cylinder-supporting arms, means rotatable with the said roller for imparting endwise movement to said levers toward the cylinder-supporting arms, means to trip the means holding said levers in said inoperative position, means to throw said levers to operative position after said holding means is tripped, and means to swing said rock-arms toward the cylinder-supporting arms to cause said levers to swing the cylinder-supporting arms and withdraw the cylinder from the plane of movement of the printing surface of said roller without throwing said roller and cylinder out of gear.

[Claims 6 to 21 not printed in the Gazette.]

956,752. HYDRAULIC PRESS. HENRY J. BELLAMY, Bridge-of-Weir, Scotland, assignor to Thomas Vansittart Bowater, Frederick William Bowater, and Frank Henry Bowater, London, England, a Copartnership trading as W. V. Bowater & Sons. Filed Aug. 2, 1909. Serial No. 510,811.



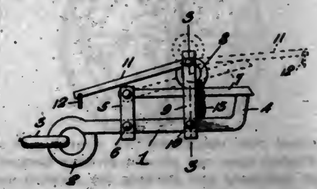
1. A truck having a table adapted to serve as a baling table, said table having elongated openings, and bars arranged in said openings and lying normally below the upper edges of said openings, so as to permit the insertion of binding bands above them and said bars being mounted to permit their upward movement relatively to said table.

2. A truck comprising a table D having slots D^3, bars D^4 fitting in said slots, said bars normally lying below the upper edges of said slots and being mounted to permit their upward movement in said slots.

3. The combination with a press having a base and a truck having a table adapted to be moved over said base, said table having slots, and movable bars in said slots, said bars being adapted to engage said base and to be moved upwardly relatively to said table.

4. A truck having a table, means for supporting said table, said means being adapted to permit the upward and downward movement of said table, said table having elongated openings and bars in said openings, said bars lying normally below the upper edges of said openings, and being adapted to move upward relatively to said table when the latter is depressed.

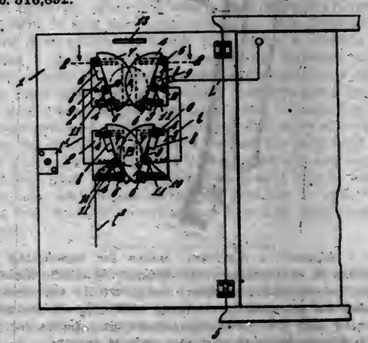
956,753. COUPLING. FRED C. BOWLES, Groton, S. D. Filed July 15, 1909. Serial No. 507,786.



1. A coupling comprising a body, a link holding member integral with the body, standards carried by the body, a latching bar pivoted to one of the standards and adapted to engage the link holding member, a spring for normally forcing the latching bar away from the link holding member, and an eccentric for locking the latching bar against the tension of the spring.

2. A coupling comprising a body, a link holding member integral with the body, a pair of standards pivoted to the body, a latching bar pivoted to one set of standards and operating within the other set of standards, a spring for normally forcing the latching bar away from the standards, and an eccentric pivoted to one set of standards for locking the latching bar against the tension of the spring in engagement with the link holding member.

956,754. COIN-CONTROLLED TELEPHONE. ROBERT L. BOWMAN, Knoxville, Tenn. Filed Sept. 9, 1909. Serial No. 516,892.



In a device of the class described, a socketed base, a pair of supporting plates secured to the base and each having separate slots arranged over the sockets in the base, substantially Z-shaped coin testing and retaining

members, bolts passing through said members to secure the same independently adjustable on the plates, whereby their lower ends may be held together to form a restricted opening to permit the passage of coins of certain denominations and to hold coins of the proper denominations, ears struck up from the attaching flanges of said members, and binding screws passing through said ears to secure the line terminals to said members.

956,755. ANIMAL-POKE. WALTER BUSWER, Malcolm, Nebr. Filed June 26, 1909. Serial No. 504,533.



An animal poke comprising two pivoted yoke sections, a stop formed upon one of said sections preventing the rearward movement and limiting the forward movement of said sections, a lateral extension formed upon the extremity of the upper section, an angular bar secured to said lower section and having its lower extremity laterally extended, and a plurality of spurs secured to said sections and extending rearwardly thereof.

956,756. BOX AND PACKAGE ELEVATING APPARATUS. ALICE O. BRIGANCE, Navasota, Tex. Filed Nov. 9, 1909. Serial No. 527,048.



1. A support, a platform, means for supporting said platform on said support, said supporting means including a resilient clamping member, means within the clamping member for frictionally engaging said support, means for relieving said frictional engagement, and means for raising and lowering said platform on said support.

2. A support, a clamp on said support, a platform supported by said clamp, means for holding said clamp out of action, and means for simultaneously releasing said holding means and pushing an article off of said platform.

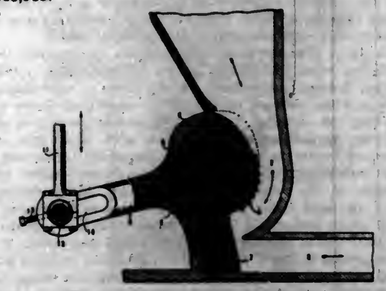
3. A support, a clamp on said support, a platform carried by said clamp, said clamp including a resilient clamping member, and support engaging spreader members within said clamping member and having arms projecting through said clamping member, means for holding said arms in a position to cause said spreader members to disengage said support, and means for moving said holding means out of engagement with said arms to permit said spreader members to be tightly held in engagement with said support.

4. A support, a clamp on said support, a platform carried by said clamp, said clamp including a resilient clamping member, and support engaging spreader members within said clamping member and having arms projecting through said clamping member, means for holding said arms in a position to cause said spreader members to disengage said support, means for moving said holding means out of engagement with said arms to permit said spreader members to be tightly held in engagement with said support, and means for simultaneously pushing an article off of said platform.

5. A support, a clamp on said support, a platform carried by said clamp, said clamp including a resilient clamping member, support engaging spreader members within said clamping member and having arms projecting through said clamping member, means for holding said arms in a position to cause said spreader members to disengage said support, means for moving said holding means out of engagement with said arms to permit said spreader members to be frictionally held in engagement with said support, and a cable and pulley device for raising and lowering said platform.

[Claims 6 to 19 not printed in the Gazette.]

956,757. STOKING APPARATUS. GEORGE W. BULLEY, New York, N. Y. Filed Dec. 3, 1906. Serial No. 345,989.



1. In an apparatus of the class described, in combination, a hopper, a conduit, a pivotally mounted member in said hopper, and means for oscillating said member to crush the material and feed the same to the conduit when moving in one direction and force the crushed material delivered to the conduit therethrough when moved in the opposite direction.

2. In apparatus of the class described, in combination, a receptacle, a conduit, a pivotally mounted member provided with ratchet teeth projecting into said receptacle and adapted to engage the contents thereof, means adapted to move said member alternately in opposite directions whereby said teeth upon the forward stroke of said member will propel the contents of said receptacle in a predetermined direction and deliver the same adjacent the mouth of said conduit, a portion of said member being adapted upon its return stroke to feed the material thus delivered into said conduit, and means adapted to vary the extent of movement of said member.

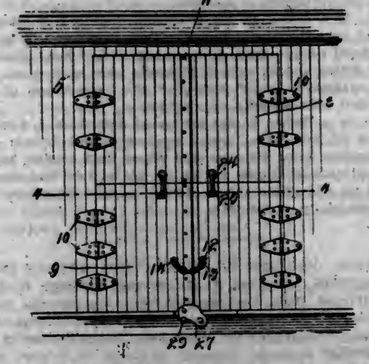
3. In apparatus of the class described, in combination, a hopper, a discharge conduit, means adapted to feed material from said hopper to said discharge conduit including a pivotally-mounted member provided with a pair of abutments, one of which is adapted upon the forward movement of said member to swing into the material and crush the same and the other of which is adapted upon the rearward movement of said member to swing toward said discharge conduit and force the crushed material thereinto, and means adapted to oscillate said pivotally-mounted member, the axis of said pivotally-mounted member being disposed between said abutments whereby said abutments are alternately operative.

4. In apparatus of the class described, in combination, a receptacle, a discharge conduit disposed beneath said receptacle, a pivotally-mounted member provided with a pair of abutments, one of which forms a wall of said receptacle and is adapted to be thrown thereinto upon the forward movement of said member to crush the contents thereof and the other of which is adapted to swing toward the mouth of said discharge conduit upon the return movement of said member, said receptacle being so disposed as to discharge into the path of travel of said second-mentioned abutment, and means adapted to oscillate said pivotally-mounted member.

5. In apparatus of the class described, in combination, a conduit, a hopper, means leading from said hopper to said conduit, a member pivotally mounted adjacent said means and provided with a pair of abutments, one of which is adapted to swing into and crush the material passing from said hopper to said conduit and the other of which is adapted to swing toward and away from the mouth of said conduit and force the crushed material thereinto, said pivotally-mounted member being provided with ratchet teeth disposed between said abutments and adapted to engage and tend to feed the material from one of said abutments into the path of travel of the other thereof, and means adapted to oscillate said pivotally-mounted member, the axis of said pivotally-mounted member being disposed between said abutments, whereby said abutments are alternately operative.

[Claim 6 not printed in the Gazette.]

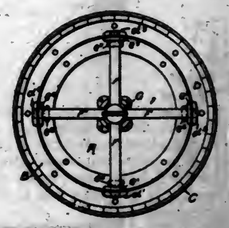
956,758. CAR-DOOR. GUSTIE A. CARLSON, Buda, Nebr. Filed Oct. 4, 1909. Serial No. 520,884.



1. The combination with a door frame, of hinged upper and lower door sections carried by the frame, members mounted transversely in the lower door section and having eye terminals protruding from the inner faces of the latter, and also stud terminals protruding from the outer faces of said lower door sections, a movable section having openings receiving the eye terminals, and means engaging the eye terminals to lock said movable section to the said lower door section, and means on the upper door section engageable with the stud terminals to lock the said upper and lower door sections together.

2. The combination with a door frame, of hinged upper and lower door sections carried by the frame, members mounted transversely in the lower door section and having eye terminals protruding from the inner faces of the latter, also stud terminals protruding from the outer faces of the said lower door section, guide rods mounted on the inner face of the door frame at opposite sides thereof near its upper end, a movable section having connection with the said guide rods, and provided with openings receiving the eye terminals, a hook loosely connected to one eye terminal and adapted to be engaged in the other eye terminal locking the said movable section to the lower door section and also securing the latter door sections together, and hooks pivotally connected to the upper door section and engageable with the stud terminals to lock the said upper and lower door sections together.

956,759. BARREL-HEAD FASTENER. JOSEPH N. CLOUSE, St. Louis, Mo., assignor, by mesne assignments, to The Patent Heading Company, a Corporation of Ohio. Filed June 18, 1908. Serial No. 439,233.



1. A barrel head comprising in combination with an annular rim located within the upper end of the barrel, a head adapted to fit within said rim, an annular plate having a series of pockets formed adjacent its inner periphery located on said rim, a base plate secured centrally to said head, upwardly projecting ears formed in pairs around the periphery of said base plate, concentric cam surfaces projected downwardly from said base plate, a circular disk having a series of cam grooves which intersect at the center of said disk which is disposed concentrically of said base plate and said disk lying within said upwardly projecting ears, a plurality of arms operatively connected to said cam grooves and projecting through said pairs of ears and being adapted to be projected beyond the said head into said pockets, and a pin for operating said disk and having right angular projections for acting upon said cam surfaces to lock said head.

2. A barrel head comprising in combination with an annular rim located within the upper end of the barrel, a head adapted to fit within said rim, an annular plate having a series of pockets formed adjacent its inner periphery located on said rim, a base plate secured centrally to said head, upwardly projecting ears formed in pairs around the periphery of said base plate, concentric cam surfaces projected downwardly from said base plate, a circular disk having a series of cam grooves which intersect at the center of said disk which is disposed concentrically of said base plate said disk lying within said upwardly projecting ears, a plurality of arms operatively connected to said cam grooves and projecting through said pairs of ears and being adapted to be projected beyond the said head into said pockets, a pin projected through said disk and through said base plate being adapted to turn said disk to operate said bars, and means carried by said pin to operate on said cam surfaces to draw said bars and base plate together.

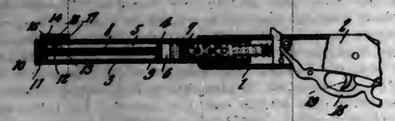
956,760. TRICK WATER-GUN. ERASTUS DE MOULIN, Greenville, Ill. Original application filed Apr. 17, 1909, Serial No. 490,505. Divided and this application filed Feb. 3, 1910. Serial No. 541,719.

1. A trick gun having a reversible sight provided with a discharge passage.

2. A trick gun having a revolubie sight provided with a discharge passage.

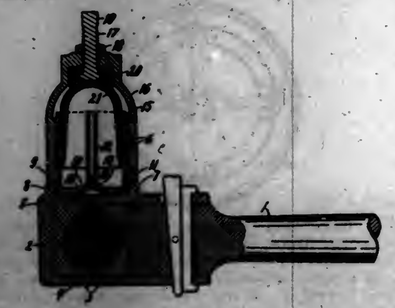
3. A trick gun having a chamber to receive a pro-

jectable substance, a forwardly extending barrel communicating with said chamber, and a sight communicating with



the interior of said barrel and having a discharge passage, said sight being movably mounted upon the barrel.

956,761. GREASE-CUP. KNUT O. DUFVA and AXEL E. DUFVA, St. Paul, Minn., assignors of one-third to Frederick Widmark, St. Paul, Minn. Filed Mar. 1, 1909, Serial No. 480,726. Renewed Nov. 15, 1909. Serial No. 528,144.



1. In a grease-cup, a cup having means for securing its bottom to the part of machinery to be lubricated, a comparatively light tube extending upward from the bottom of the cup to the top of it and forming one of the outlets for the grease through the bottom of the cup, said bottom having one or more other oil holes near the tube, a cap screw-threaded downwardly upon the outer sides of the cup, a feed screw through the top of the cap, and a hollow plunger moving vertically in the cup and having its upper end closed and attached to the lower end of the feed screw.

2. In a grease-cup, a cup having means for securing its bottom to the part of machinery to be lubricated, a comparatively light tube extending upward from the bottom of the cup to the top of it and forming one of the outlets for the grease through the bottom of the cup, said bottom having one or more other oil holes near the tube, a cap screw-threaded downwardly upon the outer sides of the cup, a feed screw through the top of the cap, and a hollow plunger moving vertically in the cup and having its upper end closed and attached to the lower end of the feed screw, said screw being swivel jointed to the plunger.

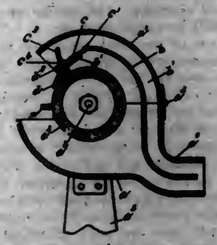
3. In a grease-cup, a cup having means for securing its bottom to the part of machinery to be lubricated, a comparatively light tube extending upward from the bottom of the cup to the top of it and forming one of the outlets for the grease through the bottom of the cup, said bottom having one or more other oil holes near the tube, a cap screw-threaded downwardly upon the outer sides of the cup, a feed screw through the top of the cap, and a hollow plunger moving vertically in the cup and having its upper end closed and attached to the lower end of the feed screw, said plunger being internally tapered upward for the purpose set forth.

4. In a grease-cup, a cup having means for securing its bottom to the part of machinery to be lubricated, a comparatively light tube extending upward from the bottom of the cup to the top of it and forming one of the outlets for the grease through the bottom of the cup, said bottom having one or more other oil holes near the tube, a cap screw-threaded downwardly upon the outer sides of the cup, a feed screw through the top of the cap, and a hollow plunger moving vertically in the cup and having its upper end closed and attached to the lower end of the feed screw, said screw being swivel-jointed to the plunger; and provided with a shoulder to engage the inner side of the top of the cap to prevent contact of the plunger with the cap.

5. A grease-cup having telescoping parts screw threaded together so as to produce air pressure by screwing them together, one of the parts having outlet holes for the grease and extending inward into the cup from one of said holes an open tube for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

956,762. HOOD FOR EMERY-WHEELS. GEORGE W. FURROW, Troy, Ohio. Filed Feb. 21, 1910. Serial No. 545,079.



1. In a device of the character described, a wheel, a hood, for said wheel formed with a work opening at the forward portion thereof, and a conduit in said hood closed to the wheel and extending upwardly over said wheel, substantially as specified.

2. In a device of the character described, a wheel, a hood for said wheel formed with a work opening at its forward portion, and a conduit in said hood closed to the wheel and extending upwardly over said wheel, said conduit beginning at a point coincident with said work opening, substantially as specified.

3. In a device of the character described, a wheel, a hood for said wheel formed with a work opening at the forward portion thereof, a conduit in said hood closed to the wheel and extending upwardly over said wheel, and an adjustable hinged portion at the forward end of said conduit, substantially as specified.

4. In a device of the character described, a wheel, a hood for said wheel, and a conduit formed in said hood extending upwardly over said wheel, said conduit having an adjustable hinged portion at the forward end thereof, and an adjustable shield carried by said hinged portion, substantially as specified.

956,763. PROCESS OF SEPARATING METALS IN SOLUTION. WALTER S. GATES and HERBERT H. DOW, Midland, Mich., assignors, by mesne assignments, to The Ontario Nickel Company, Limited, Worthington, Canada, a Corporation. Filed Feb. 12, 1906. Serial No. 300,728.

1. In a process of separating iron, copper and nickel, in solution, the steps which consist in precipitating the same from their solution in the form of relatively insoluble basic compounds, one compound, however, varying from the other in its degree of solubility; and then successively purifying the less soluble compound of any inclusions of a more soluble compound by subjecting such compounds to agitation in a solution containing a soluble salt of the metal forming the less soluble compound until such included compound is substantially dissolved out.

2. In a process of separating iron and nickel in solution, the steps which consist in adding to a portion of the solution a reagent capable of producing a less soluble precipitate with the iron than with the nickel; removing the iron precipitate; and then subjecting such precipitate to a prolonged agitation in another portion of the original iron-nickel solution until said nickel precipitate is substantially dissolved out.

3. In a process of purifying an iron precipitate of inclusions of hydrates and basic carbonates of copper and nickel, said iron precipitate being slightly less soluble than said hydrates and carbonates, the step which consists in subjecting said precipitate to agitation in a solution containing soluble iron salts until inclusions of said hydrates and carbonates are substantially dissolved out.

4. In a process of purifying ferric hydrate of inclusions of hydrates and basic carbonates of copper and nickel, the step which consists in subjecting said ferric hydrate to agitation in a solution containing soluble iron salts until said inclusions of hydrates and basic carbonates are substantially dissolved out.

5. In a process of separating iron, copper and nickel, in solution, the steps which consist in adding to a portion of the solution a reagent capable of producing a less soluble precipitate with the iron than with the copper and nickel; removing the iron precipitate; adding the same to another portion of the original iron-copper-nickel solution; subjecting the mixture to agitation until the iron precipitate is substantially freed of any inclusions of copper and nickel precipitate; removing the iron precipitate; returning the filtrate to another portion of the original iron-copper-nickel solution, to which is being added as described above, a reagent capable of producing an insoluble precipitate with the iron; adding to the copper-nickel solution remaining after the removal of the iron precipitate a reagent capable of producing a less soluble precipitate with the copper than with the nickel; removing the copper precipitate; and, then subjecting such copper precipitate to agitation in another portion of the copper-nickel solution until it is substantially purified of any inclusions of nickel precipitate.

[Claims 6 to 15 not printed in the Gazette.]

956,764. PROCESS OF PRODUCING LITHOGRAPHIC-PRINTING PLATES. WILLIAM GEBR, Berlin, Germany. Filed May 4, 1909. Serial No. 493,855.

1. The process of producing lithographic-printing plates, which consists in electro-depositing a layer of nickel on a cathode plate whose surface is grained in such a manner as to impart to the surface of the nickel layer a character adapted for lithographic printing, electro-depositing on such nickel layer a backing layer of metal, and separating the combined plate from the cathode.

2. The process of producing lithographic-printing plates, which consists in electro-depositing a layer of nickel on a cathode plate whose surface is grained in such a manner as to impart to the surface of the nickel layer a character adapted for lithographic printing, electro-depositing on such nickel layer a backing layer of zinc, and separating the combined plate from the cathode.

956,765. CENTER-PUNCH. RICHARD A. HOGGE, Louisiana, Mo., assignor to Fredrick M. McCracken, Louisiana, Mo. Filed Oct. 4, 1909. Serial No. 520,863.

1. A center punch provided with positioning devices which consist of pivotally mounted members that are adapted to rest stationary on the work when the impression tool is actuated, and means for adjusting the points or lower ends of said members relatively to the impression tool of the punch.

2. A center punch provided with movable positioning devices that are adapted to rest upon the work and thus arrange the impression device in proper position, an actuating member for adjusting said devices, and means for locking said actuating member.

3. A center punch provided with a plurality of pivotally mounted positioning devices, a rotatable member having cam-shaped surfaces which impart movement to said devices, and means for locking said member.

4. A center punch having a sleeve mounted on the shank of the punch, positioning devices pivotally connected to said sleeve, and means carried by said sleeve for adjusting said devices.



5. A center punch having a sleeve mounted on the shank of the punch, positioning devices pivotally connected to said sleeve, and a rotatable member carried by said sleeve and provided with cam-shaped surfaces that coöperate with said devices to impart movement thereto.

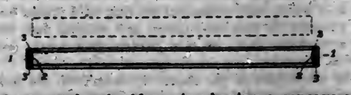
[Claims 6 to 11 not printed in the Gazette.]

956,766. SHUTTER-BOWER. FRANK E. HUMPHREY and FRANK H. PATRICK, St. Johnsbury, Vt. Filed Nov. 29, 1909. Serial No. 530,424.



The combination with a window casing and a swinging window, a slotted bar pivoted at one end to the window casing, a second bar pivoted to the window and having an adjustable sliding and pivotal connection with the slotted bar, a lateral shoulder on the slotted bar adjacent the pivot point thereof, and a pivoted catch on the second bar adapted to engage with the shoulder when the window is in closed position.

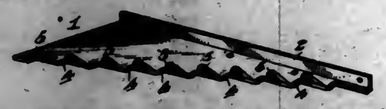
956,767. EMBROIDERY-RING. GEORGE P. JAMESON, Bridgeport, Conn., assignor to The Thomas P. Taylor Co., Bridgeport, Conn., a Corporation of Connecticut. Filed July 13, 1909. Serial No. 507,351.



A sheet metal embroidery ring having a concavo-convex felt facing applied around said ring and confined thereto

solely at the edges, the concave surface of said facing being clear of the main body of the ring while the convex surface constitutes the outer or grasping surface.

956,768. PLOWSHARE FOR GRUBBING-PLOWS, &c. CHRISTMAN D. JAUER, Karnes City, Tex. Filed Nov. 10, 1909. Serial No. 527,337.



1. A plowshare of the class described consisting of a thin blade tapered forwardly and provided at its outer edge with teeth arranged to cut and tear up a stump.

2. A plowshare of the class described consisting of a thin forwardly tapered blade having a longitudinal attaching portion at its inner side edge and provided at its outer side edge with teeth disposed at an acute angle to the attaching portion and arranged to cut and tear up a stump.

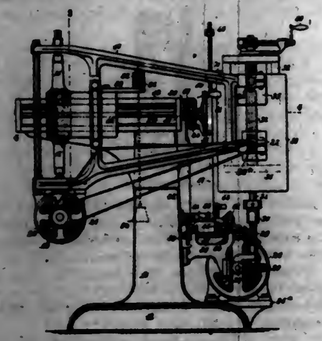
3. A plowshare of the class described consisting of a thin horizontal forwardly tapered blade having an approximately vertical attaching flange at its inner side and provided at its outer side with teeth disposed at an acute angle to the said flange and arranged to cut and tear up a stump.

4. A plowshare of the class described consisting of a thin blade having an angularly disposed edge provided at intervals with approximately horizontal teeth beveled to form cutting edges.

5. A plowshare of the class described consisting of a thin blade having an angularly disposed edge provided at intervals with approximately horisontal teeth beveled at the upper and lower faces of the blade to form intermediate cutting edges.

[Claims 6 to 19 not printed in the Gazette.]

956,769. MACHINE FOR ENGRAVING OR SINKING DIES. JOSEPH F. KELLER and WILLIAM A. WARMAN, New York, N. Y., assignors to Keller Mechanical Engraving Company, New York, N. Y., a Corporation of New York. Filed Aug. 7, 1909. Serial No. 511,700.



1. In a machine of the character described, the combination with a vertically reciprocating plate, of the model and work secured to said plate, a horisontally swinging frame, a tracer carried by said frame in contact with said model, a rotating cutting tool carried by said frame in contact with said work, and means for moving said frame horisontally whereby to feed said tracer and cutting tool horisontally across the faces of said pattern and work, substantially as described.

2. In a machine of the character described, the combination with a vertically reciprocating plate, of the model and work secured to said plate, a reversing motor indirectly connected with and operating said plate, a horisontally sliding plate, a horisontally swinging frame pivoted to said sliding plate, a tracing tool carried by said swinging frame, a rotating cutting tool carried by said frame, means for holding said tracing and cutting tools in contact with the model and work, respectively, and means for feeding said plate and frame in a horisontal direction whereby to move said tracer and cutting tool across the faces of the model and work respectively, substantially as described.

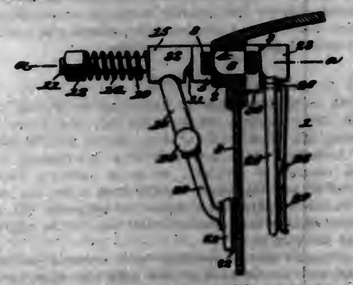
3. In a machine of the character described, the combination with a vertically reciprocating plate, of a reversing motor indirectly secured thereto for operating said plate, the model and work secured to said plate, a horisontally sliding plate, means for feeding said sliding plate in a horizontal direction, a horisontally swinging frame pivoted to said sliding plate, a tracer carried by said frame and held in contact with said model, a cutting tool carried by said frame in contact with said work, and means moving with said frame and connected with said cutting tool for rotating the latter, substantially as described.

4. In a machine of the character described, the combination with a vertically reciprocating plate, of a motor connected with and operating said plate, an automatic switch connected with said motor and engaging with said plate for reversing said motor and limiting the travel of said plate, the model and work connected with said plate, a sliding plate mounted on the frame of the machine, a horizontally swinging frame pivoted to said sliding plate, a tracer carried by said swinging frame, a cutting tool carried by said swinging frame, means for retaining said tracer and cutting tool in contact with the model and work respectively, a motor mounted on said frame and connected with said cutting tool for rotating the latter, and feeding mechanism connected with said sliding plate, and with the first-mentioned motor for automatically feeding said sliding plate and parts connected therewith in a horisontal direction, whereby said tracer and cutting tool are fed across the faces of said pattern and work respectively, substantially as described.

5. The combination with a screw, of a casing loosely mounted on said screw, a crank arm loosely mounted on said screw and secured to said casing, a cam fitting in said casing and tightly secured to said screw, an adjustable roller located between said cam and said casing, a stop for limiting the movement of said crank arm, and a friction drive connected to said crank arm, substantially as described.

[Claim 6 not printed in the Gazette.]

956,770. WINDOW-WIPING DEVICE. CARL A. KELLOGG, Battle Creek, Mich. Filed Mar. 4, 1907. Serial No. 360,532.



1. A window wiping device comprising a part mounted for movement, a bearing for said part, a wiper actuated from said part and adapted, upon movement thereof, to be moved across the window to wipe the same, and releasable means capable of operation to hold the wiper against movement.

2. A window wiping device comprising a shaft mounted for turning movement, a bearing for said shaft, a laterally directed arm capable of movement lengthwise along said shaft and adapted to turn in unison therewith, a wiper on said arm and adapted, when said shaft is turned, to be moved across the window to wipe the same, and yielding means capable of operation to move said arm lengthwise along the shaft in a direction to press the wiper upon the window.

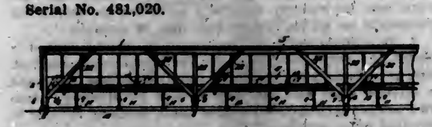
3. A window wiping device, comprising a part mounted for movement, a bearing for said part, an arm movable in unison with said part, a handle connected with said part for moving the same, a wiper carried by the arm and adapted, in the operation of said movable part, to be moved across the window to wipe the same, and a detent device carried by the handle and adapted for operation to lock said movable part against movement relatively to the bearing.

4. A window wiping device, comprising a part mounted for movement, a bearing for said part, a wiper carried by said part and adapted, upon operation thereof, to be moved across the window to wipe the same, said wiper being also adapted for movement in and out of contact with the window, and means for holding the wiper against operation when moved out of contact with the window.

5. A window wiping device, comprising a part mounted for movement, a bearing for said part, a wiper carried by said part and adapted, upon operation thereof, to be moved across the window to wipe the same, means adapted, upon movement of said part in one direction, to withdraw the wiper from contact upon the window, and means for locking the movable part against operation when said part is moved to withdraw the wiper from contact upon the window.

[Claims 6 to 11 not printed in the Gazette.]

956,771. PORTABLE GREENHOUSE OR THE LIKE. EDWARD C. KLINE, Streator, Ill. Filed Mar. 3, 1909. Serial No. 481,020.



1. A portable structure of the kind described, comprising side walls, a roof therefor, stringers arranged in pairs at intervals transversely the structure near the lower edges of said side walls, a plurality of temporary supporting wheels and means for securing said wheels to the structure at said stringers.

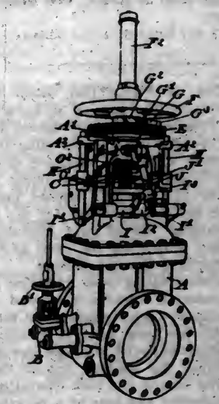
2. In a portable building of the kind described, the combination of side walls, a roof therefor, a plurality of stringers arranged in pairs transversely the building near the lower edges of the walls, a plurality of temporary supporting wheels arranged between the stringers of each of said pairs near each of the ends thereof, and means for removably securing said wheels in position.

3. A portable green house of the kind described comprising the combination of walls and a suitable roof therefor, a plurality of stringers arranged in pairs transversely the house, a plurality of wheels arranged between and substantially at the ends of said stringers comprising a pair, means for removably securing said wheels in position and temporary ways for said wheels.

4. In a portable green house of considerable length relative to its width and in combination, side walls and a roof therefor, a plurality of stringers connecting said walls and arranged in pairs at intervals throughout the length thereof, roof bracing and supporting members supported by said stringers, a heating system including pipes carried by the stringers, a plurality of substantially permanent supporting members for said side walls, a plurality of temporary supporting wheels for said structure arranged at intervals along the side walls, and means for removably securing the said wheels to said stringers.

5. In a transversely movable building for covering plant beds and in combination, side and end walls and a suitable roof therefor, stringers arranged in pairs at intervals connecting said side walls, said stringers beveled on the lower edges thereof, removable means for substantially permanently supporting the building, heating system pipes arranged within said structure and carried thereby, wheels positioned proximate to the side walls between the stringers comprising a pair, means for securing said wheels in position, and removable ways for said wheels connecting the covered bed with an adjacent plot of ground.

956,772. VALVE-OPERATING MECHANISM. PAUL W. KNAUF, Cynwyd, Pa., assignor to Schulte and Koerting Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 22, 1908. Serial No. 449,785.



1. In combination, a valve, a rotatable valve actuating member, an axially movable and rotatable hand wheel, a rotatable power actuated wheel, clutch mechanism dependent upon the axial position of the hand wheel for connecting said member and hand wheel together in one axial position of the hand wheel and for connecting said member to the power actuated wheel in another axial position of the hand wheel, and means for moving said hand wheel axially.

2. In combination, a valve, a rotatable valve actuating member, an axially movable and rotatable hand wheel, a rotatable power actuated wheel, clutch mechanism dependent upon the axial position of the hand wheel for connecting said member and hand wheel together in one axial position of the hand wheel and for connecting said member to the power actuated wheel in another axial position of the hand wheel, and means engaging the periphery of the hand wheel for moving and holding the latter out of the position in which it is clutched to said member.

3. In combination, a valve, a rotatable valve actuating member, an axially movable and rotatable hand wheel, a rotatable power actuated wheel, clutch mechanism dependent upon the axial position of the hand wheel for connecting said member and hand wheel together in one axial position of the hand wheel and for connecting said member and the power actuated wheel in another axial position of the hand wheel, a rock shaft and connections operated thereby for engaging the periphery of the hand wheel to move and hold the latter out of the position in which it is clutched to said member.

4. In combination, a valve, a rotatable valve actuating member, an axially movable and rotatable hand wheel, a rotatable power actuated wheel, clutch mechanism dependent upon the axial position of the hand wheel for connecting said member and hand wheel together in one axial position of the hand wheel and for connecting said member and power actuated wheel in another axial position of the hand wheel, a plurality of members free to move in a direction parallel to the axis of the hand wheel and arranged in line with the periphery of the hand wheel, and

means for moving said members to cause them to engage the periphery of the hand wheel and move the latter axially.

5. In combination, a valve, a rotatable valve actuating member, an axially movable and rotatable hand wheel, a rotatable power actuated wheel, clutch mechanism dependent upon the axial position of the hand wheel for connecting said member and hand wheel together in one axial position of the hand wheel and for connecting said wheel to the power actuated wheel in another axial position of the hand wheel, a plurality of members free to move in a direction parallel to the axis of the hand wheel and arranged in line with the periphery of the hand wheel, a rock shaft having arms which engage and move said members when the rock shaft is turned, and means for turning said rock shaft.

[Claims 6 and 7 not printed in the Gazette.]

956,773. PROCESS OF TREATING ORES AND CARBONIFEROUS EARTHS. ALFRED A. LOCKWOOD, London, England. Filed Nov. 15, 1909. Serial No. 528,164.

1. In a process for treating ores, agitating the ore with a mixture comprising water, an insoluble metallic compound containing oxygen and an oily liquid which has been so treated that it contains a minute quantity of a metallic compound insoluble in water for the purpose of preventing the washing out of said insoluble metallic compound, and then separating the oiled particles from the unoiled particles by a flotation process.

2. In a process for treating ores, agitating the ore in the presence of water, a metallic compound containing oxygen added to raise the specific gravity of the bath and an oily liquid which has been made to contain a minute quantity of a metallic compound insoluble in water for the purpose of preventing the washing out of the metallic compound containing oxygen, and then separating the oiled particles from the unoiled particles by a flotation process.

956,774. STREET-CAR. WILFRID LUMLEY, Conneaut, Ohio. Filed Nov. 1, 1909. Serial No. 525,607.



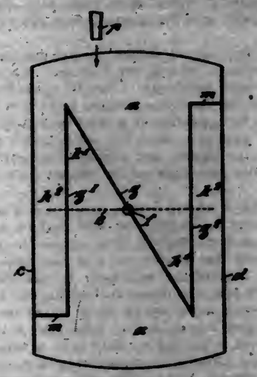
1. A passenger car having at its front end a motorman's vestibule, and an opening through the front end only of the car for the ingress and egress of passengers, and means operable from the motorman's vestibule for closing said opening.

2. A passenger car devoid of a rear platform and having at its front end a glass-inclosed vestibule narrower than the car whereby passageways are left on each side of the vestibule between the sides of the car, two openings in the front ends of the car at the ends of said passageways.

3. A passenger car devoid of a rear platform and having at its front end a glass-inclosed vestibule narrower than the car whereby passageways are left on each side of the vestibule between the sides of the car, two openings in the front ends of the car at the ends of said passageways, doors for closing said openings, and mechanism operable only from the vestibule for opening and closing said doors.

4. A passenger car devoid of a rear platform and having at its front end a glass-inclosed vestibule narrower than the car whereby passageways are left on each side of the vestibule between the sides of the car, two openings in the front ends of the car at the ends of said passageways, there being an inclosed space behind said vestibule and between said passageways for the cashier.

956,775. RECEPTACLE FOR LIQUID-WEIGHING MACHINES. HEINRICH W. METZE, Zehlendorf, near Berlin, Germany. Filed Nov. 6, 1909. Serial No. 526,542.

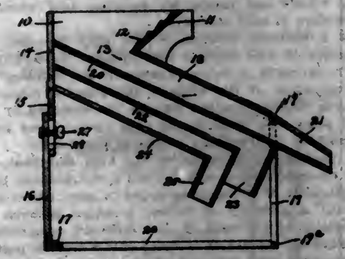


1. In a liquid weighing machine of the type described a rotatable weighing receptacle, comprising side walls and a division plate dividing said receptacle into two compartments, said division plate being inclined for part of its length upwardly toward the pouring edge, substantially as described.

2. In a liquid weighing machine of the type described a rotatable weighing receptacle, comprising side walls and a division plate dividing said receptacle into two compartments, said division plate being inclined for part of its length upwardly toward the pouring edge and then bent downwardly to form a pocket at the side of the receptacle on which the pouring edge is situated.

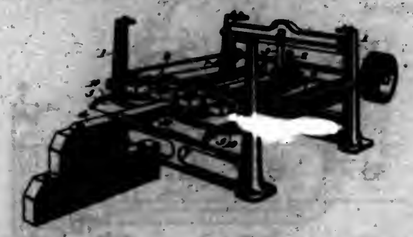
3. In a liquid weighing machine of the type described, a weighing lever, a receptacle for the liquid to be weighed, said receptacle being rotatably mounted on said lever and a division plate within said receptacle for dividing it into two compartments, said division plate being of N-form in vertical cross section.

956,776. SEPARATOR. MICHAEL MCCOY, Dexter, Minn. Filed Feb. 8, 1909. Serial No. 476,607.



A gravity separator comprising a hopper having a rearward wall, side walls and a front wall, a standard section hinged to the lower end of the rearward wall of the hopper and adapted to be folded to lie against said wall at times, said standard section having a slot therein, a supporting upright provided with an immovable bolt adjustably and detachably connected with the lower portion of the standard section through the medium of the slot, a pivot rod engaged in the forward portion of the downwardly extending portions of the side walls, supporting uprights pivoted upon the outer ends of the pivot rod, a transverse base member hinged to the lower end of the first named supporting upright, said upright being foldable to lie horizontally at times, forwardly convergent brace rods secured to the ends of the transverse base member, and to the lower end of the forward upright, said standard section being movable with respect to the first named supporting upright to shift the hopper pivotally with the pivot rod as a center.

956,777. CONCENTRATOR. PETER MCFARLANE, Central City, Colo. Filed May 18, 1907. Serial No. 374,339.



In a concentrator, a bumping table having its working face curved longitudinally of the length of the table and also transversely of its length, and means for feeding pulp onto the concave face of the table at the side thereof, substantially as described.

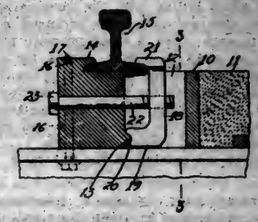
956,778. ADJUSTABLE SPARK-PLUG. JEFFERSON S. PALMER, Clark, S. D. Filed Jan. 16, 1908. Serial No. 411,182.



A hollow sparking plug comprising a shell with an enlarged chambered portion therein terminating in an inclined shoulder, the interior of said shell being contracted beyond the shoulder the one end of the shell having a semi-cylindrical bridge loop, a screw fitted in an aperture therein and having terminal points, an insulating plug provided with an enlarged chambered portion adjacent to its inner end terminating in a shoulder and provided with a beading upon its circumference a short distance from its inner end, said beading adapted to rest upon the inclined shoulder in the shell with the portion of the plug beyond said beading extending into the contracted portion of the opening beyond said chambered part, a headed screw passing through a longitudinal aperture in said plug and having its head seated upon said shoulder at the inner end of said chambered portion formed in the inner end of the plug, a contracted pin extension upon the head of said screw and forming a terminal, a cap fitted over the outer end of the plug and through which said screw passes, a nut upon the threaded portion of the screw, and a gland about said plug and engaging said shell, as shown and described.

956,779. METAL RAILWAY-TIE. JOHN H. PENNEY, Hixon, Tenn. Filed July 12, 1909. Serial No. 507,117.

1. A metallic tie having rail engaging projections at the ends and vertical recesses near the projections with a bearing rib in each recess, a clamp member for each recess and having a bearing groove at one end engaging the rib and a laterally directed head adapted to bear over the tie flange of a rail, and means for forcibly moving said clamp member.



2. A metallic tie having rail engaging projections at the ends and vertical recesses near the projections with a bearing rib in each recess, a clamp member for each recess and having a bearing groove at one end engaging the rib and a laterally directed head adapted to bear over the tie flange of the rail, and clamp bolts operating through said clamp members and the body of the tie.

3. A metallic tie having an intermediate longitudinal recess and vertical recesses near its ends, each end recess having a bearing rib therein, a filling element for said intermediate recess, a clamp member for each end recess and having a bearing groove at one end engaging the rib and a laterally directed head adapted to bear over the flange of a rail, and means for forcibly moving said clamp member.

956,780. ROLLING-MILL FOR ROLLING CAR-WHEELS. CASIMIR VON PHILP, Bethlehem, Pa., assignor to Bethlehem Steel Co., Bethlehem, Pa., a Corporation of Pennsylvania. Filed Feb. 3, 1909. Serial No. 475,860.



1. In a car wheel rolling mill, the combination of axially adjustable web reducing rolls arranged with their axes inclined to each other, a tread pressure roll adjustably mounted to coact therewith, means for advancing the tread pressure roll and means connected to the tread pressure roll to act therewith for axially advancing the web reducing rolls.

2. In a car wheel rolling mill, the combination of axially adjustable web reducing rolls arranged with their axes inclined to each other, a tread pressure roll adjustably mounted to coact therewith, means for advancing the tread pressure roll and means connected to the tread pressure roll to act therewith for axially advancing the web reducing rolls, said last named means comprising sliding thrust bearings and connections for moving them simultaneously with the advance of the tread pressure roll.

3. In a car wheel rolling mill, the combination of axially adjustable web reducing rolls arranged with their axes inclined to each other, a tread pressure roll adjustably mounted to coact therewith, means for advancing the tread pressure roll, means connected to the tread pressure roll to act therewith for axially advancing the web reducing rolls, and tread rolls having bearings movable with the said tread pressure roll.

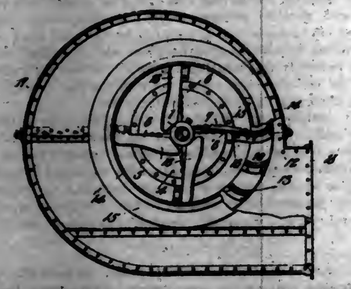
4. In a car wheel rolling mill, the combination of axially adjustable web reducing rolls arranged with their axes inclined to each other, a tread pressure roll adjustably mounted to coact therewith, means for advancing the

tread pressure roll, means connected to the tread pressure roll to act therewith for axially advancing the web reducing rolls, edging rolls, and means for horizontally advancing and retreating the edging rolls.

5. In a car wheel rolling mill, the combination of axially adjustable web reducing rolls arranged with their axes inclined to each other, a tread pressure roll adjustably mounted to coact therewith, means for advancing the tread pressure roll, means connected to the tread pressure roll to act therewith for axially advancing the web reducing rolls, edging rolls, means for horizontally advancing and retreating the edging rolls, and tread rolls mounted to advance and retreat therewith.

[Claims 6 to 12 not printed in the Gazette.]

956,781. ROTARY FAN. JAMES R. ROBINSON, Mount Lebanon, Pa. Filed Mar. 23, 1909. Serial No. 485,184.



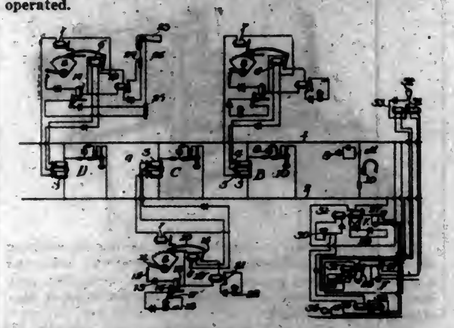
1. In a blast fan, a rotor having an axially extended intake orifice, a conical hub with the apex extending into the intake orifice, and main fan blades extending in a substantially direct line from the hub of the rotor to near the periphery thereof and from thence continued in a forward curve to the periphery, said main blades also extending axially beyond the axially extended intake orifice and there curved in the direction of rotation, the main fan blades at and beyond the intake orifice being co-extensive with the distance from the hub to the periphery of the intake orifice.

2. In a blast fan, a rotor having an axially extended intake orifice, a conical hub with the apex extending into the intake orifice, main fan blades extending in a substantially direct line from the hub of the rotor to near the periphery thereof and from thence continued in a forward curve to the periphery, said main blades also extending axially beyond the axially extended intake orifice and there co-extensive with the distance from the hub to the periphery of the said intake orifice, said blades beyond the intake orifice being curved in the direction of rotation, and peripheral fan blades between the main fan blades.

3. In a blast fan, a rotor having at each end an axially extended intake orifice, a hub formed of two conical members joined at their bases and having their apices extending into the intake orifice, a central annular web extending radially from the joined bases of the hub members to the periphery of the rotor, main fan blades extending in a substantially direct line from the hub of the rotor to near the periphery thereof and from thence continued in a forward curve to the periphery and also extending axially from the web to a point beyond the axial extension of the intake orifice, said axial extensions of the main fan blades being co-extensive with the distance from the hub to the periphery of the said intake orifice and curved in the direction of rotation, and peripheral fan blades between the main fan blades.

956,782. SIGNALING SYSTEM. HARRY O. RUGH, Sandwich, Ill., assignor to Sandwich Electric Company, Sandwich, Ill., a Corporation of Illinois. Filed Feb. 15, 1909. Serial No. 478,088.

1. A signaling system comprising a signal sending station and a plurality of signal-receiving stations, united by a line circuit, a step-by-step signal-controlling device at each signal-receiving station, different positions of said step-by-step devices corresponding respectively to operative positions for the different signal-receiving stations, a plurality of signal controlling means at each signal-receiving station under the control of said step-by-step devices, and switching instrumentalities at the signal-sending station whereby with a given operative position of a step-by-step device, either signal controlling means may be selectively operated.



2. A signaling system comprising a signal-sending station and a plurality of signal-receiving stations, united by a line circuit, a step-by-step signal-controlling device at each signal-receiving station, different positions of said step-by-step devices corresponding respectively to operative positions for the different signal-receiving stations, signaling means capable of giving unlike indications at each signal-receiving station under the control of said step-by-step devices, and switching instrumentalities at the signal-sending station whereby with a given operative position of a step-by-step device its associated signaling means may be selectively operated to give either of the unlike indications aforesaid.

3. In a signaling system, a central station, and sub-stations each having a signal-receiving device consisting of a circuit-closing element, and signaling means whose operative actuation is controlled by said element, and switching devices at the central station for operating said circuit-closing element and with a given position of said circuit closing element operating said signaling means in either of a plurality of different ways.

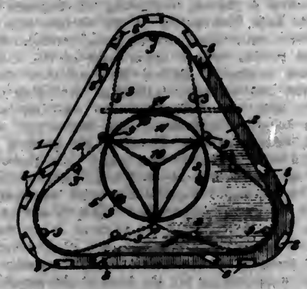
4. In a signaling system, a central station, and sub-stations each having a signal-receiving device consisting of a circuit-closing element and signaling means capable of giving unlike indications, whose operative actuations is controlled by said element, and switching devices at the central station for operating said circuit closing element and causing a selective actuation of said signaling means to give either of the unlike indications aforesaid with a given position of said circuit-closing element.

5. A step-by-step device having under its control selective signaling means, in combination with switching means at a central station to operate said signaling means in either of a plurality of different ways with a given operative position of said step-by-step device.

[Claims 6 to 19 not printed in the Gazette.]

956,783. HEATING APPLIANCE. CHARLES C. SPENGLER, Rockford, and HENRY T. SIDWAY, Chicago, Ill., assignors to Henry T. Sidway & Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 25, 1909. Serial No. 473,974.

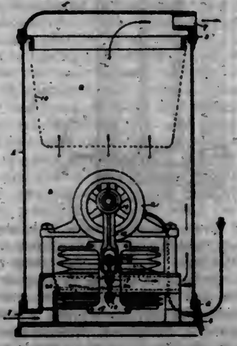
1. A heating appliance comprising two plates, the lower plate having an opening centrally thereof, the upper plate having a plurality of openings therein, side walls lying between said plates, means connecting said plates together, said connecting means holding said side walls in place, and a heat deflector of pyramidal form fixed to said upper plate above the opening in said lower plate, certain of said connecting means being positioned to hold the middle portions of said side walls inwardly toward said deflector, the sides of said deflector facing the openings in said upper plate and the corners of said deflector lying adjacent said inwardly extending portions of said side walls.



2. A heating appliance comprising two substantially triangular plates, the lower plate having an opening centrally thereof, the upper plate having an opening in each of its corners, side walls lying between said plates, means connecting said plates together, said connecting means holding said side walls in place, and a heat deflector of three-sided pyramidal form fixed to said upper plate above the opening in said lower plate, each of the sides of said deflector facing one of the openings in said upper plate.

3. A heating appliance comprising a hollow structure having an opening in its lower wall and a plurality of openings in its upper wall, the side walls of the structure extending inwardly toward the center of the structure at points between the upper openings, and a pyramidal heat deflector in said structure positioned so that each of the sides of said deflector will deflect heat entering the opening in the lower wall toward one of the openings in the upper wall.

956,784. PORTABLE VACUUM-PUMP. JOSEPH H. TEMPLIN, Philadelphia, Pa. Filed Nov. 13, 1909. Serial No. 527,924.



1. As an improved article of manufacture, a casing having a bottom or base, said base provided with an outlet, a cover for said casing provided with an inlet, said cover removably attached and sealable to said casing thereby forming a vacuum chamber, vacuum producing means secured to said bottom or base, a motor operatively connected with said vacuum producing means, said motor and said vacuum producing means being located wholly within said vacuum chamber, and furthermore said vacuum producing means and said motor being wholly secured to said bottom or base and having no contact whatsoever with the side-walls or top of said vacuum chamber, all in combination as and for the purpose set forth.

2. As an improved article of manufacture, a casing having a detachable cover and base forming a vacuum chamber, in combination with vacuum producing means, means for driving said vacuum producing means, said driving means and said vacuum producing means being located wholly within said vacuum chamber and secured to said vacuum-chamber-base, whereby said means can be removed as a whole from said vacuum chamber.

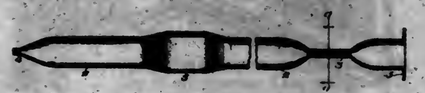
3. A vacuum-chamber-casing, a detachable cover for said casing provided with an inlet, a detachable base for said casing provided with an outlet, vacuum producing means secured to said base, a motor operatively connected to said vacuum producing means, said motor and said vacuum producing means being wholly located within said vacuum chamber, all in combination as and for the purpose set forth.

4. As an improved article of manufacture, a casing having a bottom or base, said base provided with an outlet, a detachable and sealable cover for said casing, said elements forming a vacuum chamber, said cover provided with an inlet adapted to receive a suction hose, vacuum producing means secured to said bottom or base, a motor operatively connected with said vacuum producing means, said motor and said vacuum producing means having no contact whatsoever with the side walls nor with the cover or top of said vacuum chamber, said vacuum producing means and said bottom or base adapted to receive a resilient packing or buffer disposed between the contact face of said vacuum producing means and the contact face of said bottom or base, to which contact face said vacuum producing means is secured, all in combination as and for the purpose set forth.

5. In a portable vacuum pump, a pump-chamber, a reciprocating displacing member or piston located in or attached to said chamber, a pair of lugs disposed on the side of said displacing member or piston mechanism, a straight flexible member disposed between said pair of lugs, one end of said member being secured to one of said lugs, the opposite end of said member being secured to the other lug, a crank-shaft provided with a crank pin, a connecting rod pivotally connected at one end with said crank pin, the opposite end of said connecting rod adapted to be clamped to the middle portion of said flexible member, said flexible member, said supporting lugs and said connecting rod being disposed longitudinally in line with each other in the direction of the travel of said displacing member, whereby a practically rigid connection longitudinally as well as a slight flexibility or resilience transversely of said flexible member is attained all in combination with means for driving said crank-shaft as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

956,785. MUFFLER. WILLIS O. THOMAS, Janesville, Wis., assignor to Owen Thomas Motor Car Company, Janesville, Wis., a Corporation of Wisconsin. Filed June 16, 1909. Serial No. 502,409.

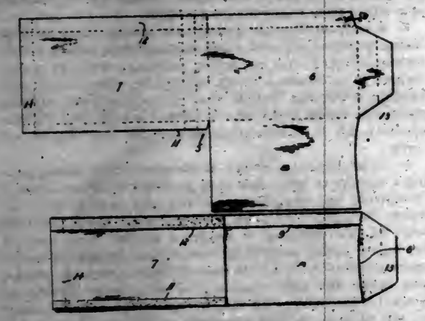


1. In a muffler, the combination with a conduit provided with a plurality of elongated substantially closed chambers serially connected together by constricted passages formed by flattening the sides of the conduit.

2. A muffler comprising a pipe having a plurality of elongated chambers serially communicating with each other through constricted passages formed by flattening the sides of the pipe, said constricted passages being alternately disposed at right angles to each other.

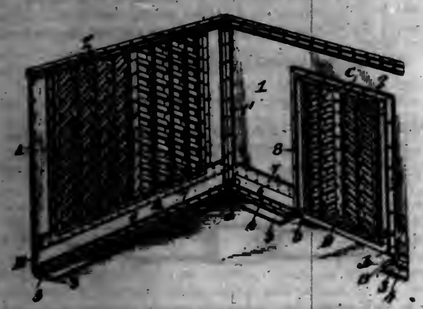
3. A muffler comprising a pipe having a plurality of elongated chambers serially communicating with each other through constricted passages formed by flattening the sides of the pipe, a plurality of said passages being disposed at an angle to others of said passages.

956,786. ENVELOP. NANCY TOOMER, Fitzgerald, Ga. Filed July 19, 1909. Serial No. 508,317.



An envelop comprising a front flap provided on one side with a marginal strip and at one end with a folded locking tongue having a gummed surface, said front flap being further provided on its opposite side with a pocket flap, the latter being foldable over the inner face of the front flap and secured to the marginal strip by a row of stitching, a back flap combined with one end of the front flap and of greater length than the latter, said back flap being foldable over one face of the pocket flap and having one end portion rebent upon itself and secured to one end of the pocket flap and its opposite end portion bent upon itself and constituting a sealing flap insertible between the folded portions of the locking tongue, and marginal strips combined with the opposite sides of the back flap having gummed surfaces to bear on the pocket flap and marginal strip of the front flap.

956,787. INTERCHANGEABLE BOTTOM FOR JAIL-CELL WALLS. DAVID F. YOUNGBLOOD, San Antonio, Tex. Filed Mar. 15, 1909. Serial No. 483,517.

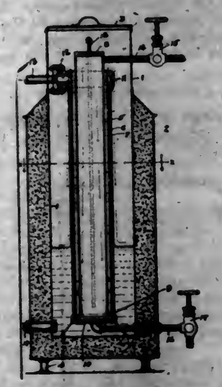


1. A wall construction for jail cells comprising a base section consisting of a plate disposed in a vertical plane and extending along the bottom of the wall, an upper section including a grating consisting of members having their lower ends terminating at the bottom edge of the upper section, said upper section being arranged with its lower edge resting on the upper ege of the said plate of the base section, a batten disposed over the joint between the two sections, and fastenings extending through the batten and the sections of the wall for securing the parts together, certain of the fastenings securing the lower ends of the members of the grating to the batten.

2. A wall construction for jail cells comprising a base section consisting of a plate disposed in a vertical plane and extending along the bottom of the cell, an upper section including a grating consisting of members having their lower ends terminating at the bottom edge of the upper section, said upper section being arranged with its lower edge resting on the upper edge of the said plate of the base section, a batten disposed over the joint between the two sections, fastenings extending through the batten and the sections of the wall for securing the parts together, certain of the fastenings securing the lower ends of the members of the grating to the batten, said batten being of less length than the width of the wall, and vertically-disposed angle irons secured to the ends of the wall for connection with adjacent walls, each angle iron being composed of separable sections meeting at the joint between the two sections of the wall.

3. A wall construction for jail cells comprising upper and lower sections arranged with the bottom edge of the upper section resting on the top edge of the lower section to form a horizontally-disposed butt joint, angle irons extending along the vertical edges of the sections and secured thereto for connection with adjacent walls, the angle irons of each section meeting in a joint in line with the butt joint between the sections, battens disposed between the angle irons at the ends of the wall and covering the butt joint between the sections, and means for fastening the battens to the sections of the wall.

956,788. LIQUID-COOLER. JAMES ALLAN, Omaha, Nebr., assignor to Larsen-Baker Ice Machine Co., a Corporation of Nebraska. Filed July 26, 1909. Serial No. 509,742.

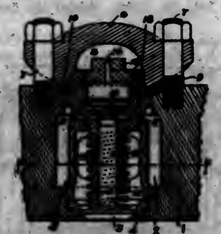


1. In a liquid cooling device, three vertically disposed concentrically arranged pipes, caps arranged to close the upper end of the inner pipe and the lower end of the outer pipe, annular means arranged to connect the upper ends of the outer and intermediate pipes and the lower ends of the intermediate and inner pipes, means arranged to permit the flow of a refrigerant through the inner pipe and between the intermediate and outer pipes, and a liquid supply pipe arranged to discharge at the bottom of the space between the inner and intermediate pipes, so as to cause a flow of liquid upward through said space, overflowing the annular means connecting the outer and intermediate pipes and flowing down over the outside of the outer pipe.

2. In a liquid cooling device, three vertically disposed concentrically arranged pipes, caps arranged to close the upper end of the inner pipe and the lower end of the outer pipe, annular means arranged to connect the upper ends of the outer and intermediate pipes and the lower ends of the intermediate and inner pipes, means arranged to permit the flow of a refrigerant through the inner pipe and between the intermediate and outer pipes, a liquid supply pipe extending into and discharging at the bottom of the space between the inner and intermediate pipes, and a tank inclosing said pipes for the purpose described.

3. In a liquid cooling device, an insulated tank, a series of pipes arranged vertically within said tank, the said pipes being disposed concentrically with each other and connected to form and inclose an inner space, an intermediate space and an outer space, the outer space connecting with the inner space at the bottom thereof, refrigerant supply and discharge pipes connected with the inner and outer pipes respectively to permit a flow of refrigerant through the outer and inner spaces, and a liquid supply pipe extending into and discharging near the bottom of the intermediate space, the said intermediate space being open at the top so that the liquid may overflow and pass down over the outside of the outer pipe into the tank.

956,789. DISCHARGE-VALVE FOR ELASTIC-FLUID COMPRESSORS. JAMES ALLAN, Omaha, Nebr., assignor to Larsen-Baker Ice Machine Co., a Corporation of Nebraska. Filed July 26, 1909. Serial No. 509,743.



1. In a discharge valve mechanism for elastic-fluid compressors, in combination, a valve, a stem thereon, a piston abutting upon said stem but not rigidly connected therewith, and means forming a chamber at the end of the piston opposite the valve, there being ports arranged to permit a relatively slow equalising of pressures upon the ends of the piston, whereby the opening of the valve will be retarded and the closing thereof unretarded by the piston.

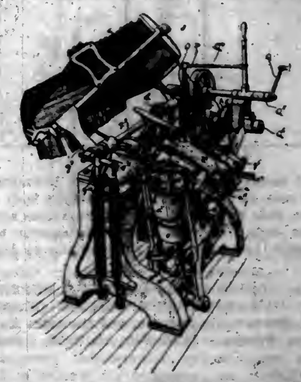
2. In a discharge valve mechanism for elastic-fluid compressors, in combination, a cylinder, a piston movable therein, a valve having a stem adapted to engage the piston and move the same toward one end of the cylinder when the valve is opened, and a casing inclosing the valve and piston, there being ports in said casing communicating with each end of the cylinder, said ports being so proportioned as to retard the escape of gas from the end of the cylinder opposite the valve stem but not to retard the escape from the end of the cylinder adjoining the valve stem, and the relation of the piston and valve stem being such that the same may separate when the valve closes, for the purpose described.

3. In a discharge valve mechanism for elastic-fluid compressors, in combination a valve, a vertically disposed cylinder, a piston movable therein, the cylinder being adapted to retard movement of the piston therein, and means connecting the valve and piston whereby the piston may be raised by the valve, but said connecting means being separable so that the valve may not actuate the piston downwardly.

4. In a discharge valve mechanism for elastic-fluid compressors, in combination, a valve, a cylinder, a cushion piston disposed in said cylinder, the cylinder being arranged to permit a relatively slow movement of the piston therein, and separable means connecting the valve and piston whereby the piston will retard movement of the valve in one direction but not in the other direction.

5. In a discharge valve mechanism for elastic-fluid compressors, in combination, a valve, a valve stem, a casing, a guide formed by the casing, a spring engaging the valve to actuate the same toward its seat, a cylinder formed in the casing, a piston movable in said cylinder and engageable by the valve stem, and a cap having a vent therein to permit a restricted escape of gas from the end of the cylinder opposite the valve stem, whereby the piston may retard opening of the valve but not retard the closing movement thereof, and the piston return slowly to reëngage the valve stem while the valve remains closed.

956,790. LINOTYPE-MACHINE. JAMES B. ALLEN, Detroit, Mich. Filed Oct. 5, 1906. Serial No. 337,618.



1. In a linotype machine, the combination with the melting pot, means for tilting the same, a bearing for the pot consisting of a shaft, a sleeve surrounding the shaft and set screws in the frame of the machine having their ends engaging and supporting said sleeve.

2. In a linotype machine, the combination with a melting pot, a plunger therein, a rotary shaft, a cam on said shaft, a rod connected to the plunger, a cross head on the rod, a pair of rods connected to each side of the cross head, and a link connecting said rods with the cam.

3. In a linotype machine, the combination with a melting pot, means for tilting the same, and means for preventing the tilting of said pot when the line is too long or too short.

4. In a linotype machine, means for rotating the spacers comprising a shaft on which the spacers are arranged, a gear secured to said shaft, a rack operating said gear, a weighted two armed lever having one arm connected with said rack, an adjustable double faced wedge engaging with the other arm of said lever, and means for reciprocating said wedge to reciprocate the rack.

5. In a linotype machine, the combination with the shaft, spacers carried thereby, a pinion on the shaft, a rack adapted to engage the pinion, means for reciprocating the rack, a melting pot, a lever adapted to tilt the pot, and means controlled by the reciprocating means for engaging said lever at certain times for preventing tilting of the pot.

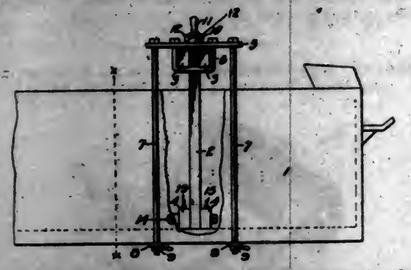
[Claims 6 to 48 not printed in the Gazette.]

956,791. ADJUSTABLE LIVE-STOCK STANCHION FOR WAGONS. OLIVER T. AUSTINSON, Lyle, Minn. Filed Dec. 2, 1909. Serial No. 530,901.

1. The combination with a wagon body, of an adjustable partition having a stanchion for holding live-stock, and means for adjustably clamping it to the body, substantially as described.

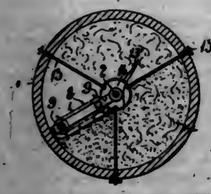
2. In combination with a wagon body, a stanchion device having vertical members connected at top and bottom with cross pieces, adjustable stanchions for holding live-stock operating between said cross pieces, and suitable means for detachably securing said device transversely in a wagon body, substantially as described.

3. A device for holding live-stock in wagons, consisting of upright members at each side of the wagon body, connected at bottom by cross pieces resting on the floor and at top by cross pieces projecting over the sides of the body, adjustable stanchions between said cross pieces, transverse arms fastened to the ends of the said top cross



pieces and secured thereto by means of U-shaped rods, and brace rods on the outside of the wagon body having their upper ends secured to the said transverse arms and their lower ends removably connected together by rods passing under the wagon body, substantially as described.

956,792. DEVICE FOR EMPTYING SUPERPHOSPHATE OUT OF DECOMPOSITION-CHAMBERS. KNUT J. BUSKOW, Helsingborg, and MELCHER EKEDAHL, Limhamn, Sweden. Filed Feb. 23, 1909. Serial No. 479,480.

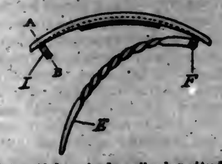


1. Means for emptying a decomposition chamber of superphosphate comprising a decomposition chamber the inner walls of which or parts thereof are in horizontal section curved upon a circle, a vertical shaft arranged in the center of said circle, a support for excavating tools pivotally carried by said shaft, and adapted to be swung through the chamber along the bottom of the same, means for turning said support on its shaft through the chamber, excavating tools movably mounted in said support and means for moving said tools relatively to their support in a direction from the periphery toward the center of the decomposition chamber.

2. Means for emptying a decomposition chamber of superphosphate comprising a decomposition chamber the inner walls of which or parts thereof are in horizontal section curved upon a circle, radially arranged, removable vertical walls by which the chamber is subdivided into sections, a vertical shaft arranged in the center of said circle, a support for excavating tools pivotally carried by said shaft and adapted to be swung through the chamber along the bottom of the same, means for turning said support on its shaft through the chamber, excavating tools movably mounted in said support and means for moving said tools relatively to their support in a direction from the periphery against the center of the decomposition chamber.

3. Means for emptying a decomposition chamber of superphosphate, comprising a vertical shaft, a support pivoted on said shaft, movable excavating tools on said support, means for turning said support through the chamber along the bottom of the same, and means for moving the tools relatively to their support in a direction from the outer walls of the chamber toward said shaft, and a discharge outlet adjacent said shaft.

956,793. BARRETTE. ALFRED BURKE, Leominster, Mass. Filed Sept. 23, 1908. Serial No. 454,328.

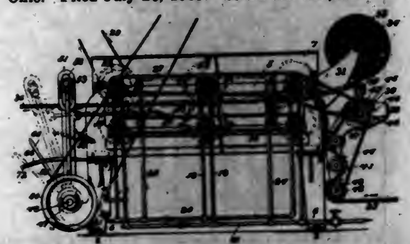


1. In a toilet article a body, ribs longitudinally disposed on the body and separated from each other, the said ribs having their facing edges recessed, a twisted pin adapted to lie in the recesses of the ribs, and means for holding the pin in operative relation to the body and ribs.

2. In a toilet article, a body, a twisted pin, means for holding the pin in operative relation to the body, and means on the body adapted to coact with the twisted pin.

3. In a toilet article, a body, a twisted pin, means for holding the twisted pin in operative relation to the body, and recessed ribs with which the pin coacts.

956,794. DOUBLE-FACER. FRANK BUSALD, Coshocton, Ohio. Filed July 26, 1909. Serial No. 509,561.



1. In a machine of the class described, means for feeding a strip of single faced corrugated paper and a strip of facing paper through the machine, means for applying adhesive material to one side of the corrugated paper before its passage through the machine, means for heating said strips of paper and pressing them together, a frame mounted for oscillation at one end of the machine, a cutting blade slidably mounted on the oscillating frame, and means operatively connected with the oscillating frame and actuated by the feeding mechanism for reciprocating the cutting blade intermittently, thereby to cut the composite strip into predetermined lengths.

2. In a machine of the class described, a supporting frame, upper and lower sets of hollow feed rollers journaled in the supporting frame and spaced apart to produce an intermediate passage for the reception of a strip of single faced corrugated paper and a strip of facing paper, means for feeding said strips through said passage to produce a composite strip, and a cutting device mounted for oscillation on one end of the frame and operable by the paper feeding mechanism for intermittently cutting said composite sheet into predetermined lengths.

3. In a machine of the class described, a supporting frame, a plurality of sets of hollow feed rollers journaled in the frame and spaced apart to produce an intermediate passage, means for heating said rollers, independent sprocket chains connecting each set of rollers, a lug carried by one of the sprocket chains, means for feeding a strip of single faced corrugated paper and a strip of facing paper through the passage between the feed rollers, an oscillating frame disposed at one end of the machine and provided with a cutting blade, and an arm carried by the oscillating frame and extended into the path of movement of the lug on said sprocket chain for actuating the cutting blade to sever the material into predetermined lengths.

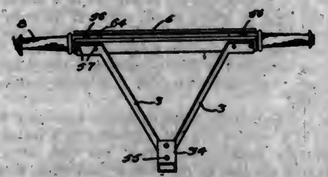
4. In a machine of the class described, a supporting frame, upper and lower sets of feed rollers in the frame

and spaced apart to produce an intermediate passage, steam chests disposed between the feed rollers of each set, means for heating the feed rollers, means for feeding a strip of single faced corrugated paper and a strip of facing paper through the passage to produce a composite strip, a frame mounted for oscillation at one end of the machine and provided with a table, a cutting blade mounted for reciprocation on the oscillating frame, means for rotating the upper and lower sets of feed rollers, an arm projecting from the oscillating frame, and a lug arranged to travel with the lower set of feed rollers and adapted to engage the arm for actuating the cutting blade.

5. In a machine of the class described, a supporting frame, means for feeding a strip of single faced corrugated paper and a strip of facing paper through the machine to form a composite strip, a shaft mounted for rotation at one end of the machine and provided with an eccentric, a frame mounted for oscillation on the shaft, a cutting blade mounted for reciprocation in the oscillating frame, a rod forming a connection between the cutting blade and eccentric, and means forming a connection between the oscillating frame and the paper feeding means for actuating the cutting blade to cut or sever the composite strip into predetermined lengths.

[Claims 6 to 13 not printed in the Gazette.]

956,795. WAGON RUNNING-GEAR. EUGENE BUSWELL and THOMAS CASCADEN, Jr., Waterloo, Iowa; said Buswell assignor to said Cascaden. Filed Oct. 24, 1908. Serial No. 459,315.



1. In combination, carrying-wheels, spindle-bearing transversely-socketed bodies having said wheels rotatably mounted on their spindles, and detachable paired connections between and secured to said bodies to hold them in one fixed alinement.

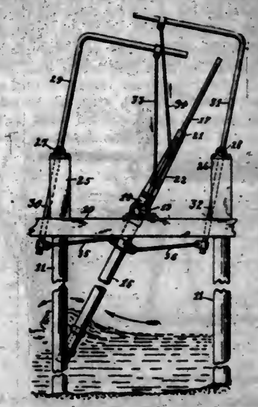
2. In combination, carrying-wheels, an axle for said carrying-wheels composed of transversely-socketed shanks having outwardly-projecting spindles upon which said wheels are rotatably mounted, and a pair of parallel bars whose ends are secured to the adjacent shanks of said spindles.

956,796. WAVE-MOTOR. JAMES M. BUTLER, Los Angeles, Cal., assignor of one-fourth to Joshua G. de Turk, Los Angeles, Cal. Filed June 23, 1909. Serial No. 508,783.

1. In a wave motor, the combination of an oscillating pump cylinder and piston therefor, of a motor element secured thereto, a pivotally mounted actuating mechanism connected to the pump cylinder and piston, said mechanism adapted to actuate the piston on a movement of the cylinder.

2. In a wave motor, the combination of a supporting structure, of a pair of pump cylinders suspended therefrom, each being provided with a piston, a plane surface mounted between said cylinders, and a toggle mechanism pivotally mounted on said supporting structure and pivotally secured to the pump cylinders and pistons.

3. In a wave motor, the combination of a pair of oscillating pump cylinders provided with pistons, a motor element slidingly connected to the lower end of said cylinders, a pair of rock shafts journaled in bearings located at the front and rear of said cylinders, each of said rock shafts being provided with a downwardly and upwardly extending arm rigidly secured thereto, and a connecting rod pivotally secured to each of the arms of said rock shafts, the lower of said rods engaging said pump cylinders and the upper rods engaging the pistons of said cylinders.

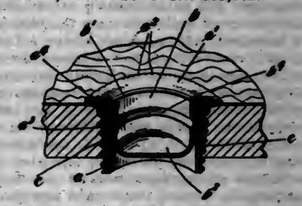


4. In a wave motor, the combination of a pair of oscillating pump cylinders and pistons therefor, of a motor element mounted therebetween, and means to actuate the pistons on an oscillation of the cylinders.

5. In a wave motor, the combination of a pair of oscillating pump cylinders and pistons therefor, of a motor element mounted therebetween, and a toggle mechanism adapted to actuate the pistons on an oscillation of the cylinders.

[Claim 6 not printed in the Gazette.]

956,797. BUNG. JOHN T. DELANEY, Worcester, Mass. Filed Feb. 25, 1907. Serial No. 359,272.

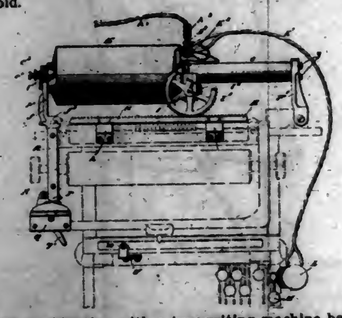


In a bung closure, the combination of an externally threaded removable metal bushing having a counter-sunk ledge at one end and an internal permanent annular depression near the outer end, and adapted to be secured in a bung hole, a soft metal bung therefor having substantially cylindrical side walls fitting the inner side of the bushing at the outer end thereof and spaced therefrom between said outer end and the inner end of the bung throughout the length of the latter, and having an annular projection extending toward said depression and formed in the wall of the bung intermediate of the ends thereof while the latter is in place for holding the bung in position, an outwardly shouldered flange at one end fitting on said counter-sunk ledge, the end of the bung being flush with the end of the bushing, and an integral wall at the other end convex toward the interior of the barrel or the like to which the bung is applied, and a packing ring inserted between the bung and bushing in the space between the same, and having an annular projection entering said depression and receiving the projection on the bung.

956,798. ELECTRICALLY-OPERATED TYPE-WRITER. CHARLES S. DU BELLE, Williamsport, Pa. Filed June 8, 1909. Serial No. 500,617.

1. In combination with a typewriting machine having a reciprocating carriage, an electrically operated carriage-

return mechanism comprising a solenoid mounted on the machine and rigidly secured thereto and provided with a reciprocating core having a direct gear-connection with said carriage, for returning the latter to initial position, and suitable electrical connections including a carriage-return key for closing an electric circuit through the solenoid.



2. In combination with a typewriting machine having a reciprocating carriage, an electrically operated carriage-return mechanism mounted on the machine and comprising a solenoid provided with a reciprocating core air-cushioned at one end and having a direct gear-connection with said carriage, for returning the latter to initial position, said air-cushion being active against the inrush of the core near the completion of its inward movement, and suitable electrical connections including a switch with a key at the keyboard for closing an electric circuit through the solenoid.

3. In combination with a typewriting machine, an electrically operated carriage-return mechanism comprising a solenoid mounted on the machine and provided with a reciprocating core and an air-cushion at one end active against the inrush of said core near the completion of its inward movement only; said core having a direct gear-connection with said carriage, for returning the latter to initial position, means for automatically line-spacing the platen on the return movement of the carriage, and suitable electrical connections including a key-controlled switch for closing an electric circuit through the solenoid.

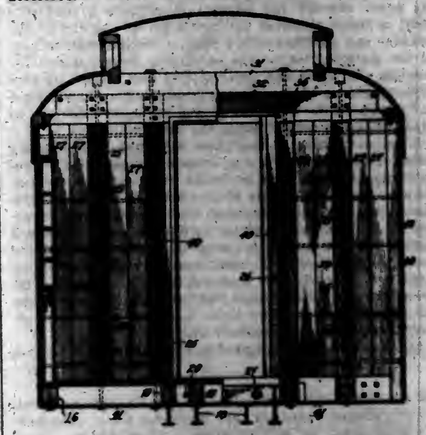
4. In combination with a typewriting machine having a reciprocating carriage, an electrically operated carriage-return mechanism comprising a solenoid mounted on the machine and rigidly secured thereto and provided with a reciprocating core having a direct gear-connection with said carriage, for returning the latter to initial position, and suitable electrical connections including a carriage-return key for closing an electric circuit through the solenoid, together with means for automatically line spacing the platen on the return movement of the carriage.

5. A typewriter or similar machine having a reciprocating carriage and a platen, and means for automatically line spacing the platen upon the return movement of the carriage, in combination with an electrically operated carriage-return mechanism comprising a solenoid provided with a reciprocating core and an air-cushion active against the inrush of the core near the end of its inward movement only; said core having a direct gear-connection with said carriage for returning the latter to initial position after movement in the opposite direction, and suitable electrical connections including a key at the keyboard for closing an electric circuit through the solenoid.

[Claims 6 to 13 not printed in the Gazette.]

956,799. ANTITELESCOPING CONSTRUCTION FOR CARS. THOMAS DUNBAR, Chicago, Ill., assignor to The Pullman Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 27, 1909. Serial No. 534,942.

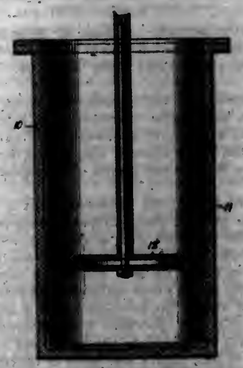
1. In a construction of the character described, the combination of a wooden end-sill having metallic reinforcement, a wooden face carline, a metal plate secured to the latter, I-beam posts secured to said sill and having their webs extended at the tops and fastened to said plate, and planks disposed between said posts, substantially as described.



2. In a construction of the character described, the combination of a wooden end-sill reinforced by a metallic bulb-beam, the bulb of which is cut away at its ends on one side, and metallic corner posts bearing against the web of said bulb-beam at such cut-away portions, the car end-wall being composed of said corner posts, intermediate metallic posts, and planks between such posts, substantially as described.

3. In a construction of the character described, the combination of a wooden end-sill reinforced by a metallic bulb-a reinforcing metallic bulb-beam, the bulb of which is cut away on one side at the ends of said beam, a face carline, a metal reinforcing plate secured to said carline, metal corner posts bearing against the web of said bulb-beam at the places where the bulb is omitted, intermediate metallic upright posts secured to said end sill and having their webs extended at their tops and fastened to said face carline and its reinforcing plate, substantially as described.

956,800. PROCESS FOR TREATING METALLIC SLIMES. JAMES DUNSTONE, Dollar Bay, Mich. Filed Nov. 2, 1908. Serial No. 460,715.

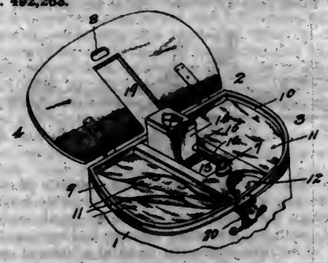


1. The process consisting in agitating copper slimes in the presence of an emulsion of oil, an aqueous solution of sodium nitrate, and an acid adapted to decompose the sodium nitrate, and collecting the portion floated.

2. The process consisting in agitating copper slimes in the presence of an emulsion of kerosene oil, an aqueous solution of sodium nitrate, and an acid adapted to decompose the sodium nitrate, and collecting the portion floated.

3. The process consisting in agitating copper slimes in the presence of an emulsion of kerosene oil, an aqueous solution of sodium nitrate, and sulfuric acid, and collecting the portion floated.

956,801. CLOSURE FOR FISHING OR OTHER BASKETS. ROBERT E. EATON, Union, Oreg., assignor of one-fourth to Will Wright, Denver, Colo., and one-fourth to C. W. Jones, Union, Oreg. Filed Apr. 26, 1909. Serial No. 492,263.



1. The combination with a receptacle, of a closure having an opening and an auxiliary receptacle slidingly mounted in the said closure adapted to close said opening in the closure when moved into a certain position and to uncover it when moved into another position.

2. The combination with a receptacle, of a closure for said receptacle, a cover for said closure, means whereby said cover may be lifted independently of the closure or in unison therewith, an auxiliary receptacle slidingly mounted in said closure and adapted when in one position to cover an opening extending through both the closure and the cover, and when in another position to uncover the said opening.

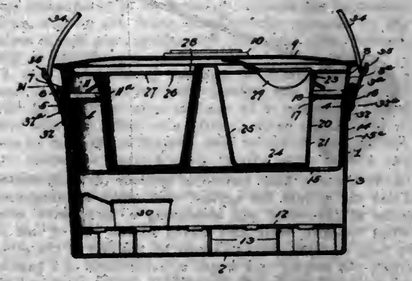
3. The combination with a receptacle, of a closure having an opening in its top, an auxiliary receptacle mounted on said closure and adapted to close the opening aforesaid when in one position and to uncover it when in another position, a cover for said closure having an opening corresponding to the opening exposing the opening in the closure and the auxiliary receptacle and means for moving the cover independently of the closure and the auxiliary receptacle or in unison at will.

4. In a top for a fishing basket, composed of two parts forming a hollow closure and having a central opening extending through both of said parts so as to provide access to the basket without moving the closure, a bait box adapted to close said opening when moved into a certain position and to uncover it when moved into another position, compartments within said hollow closure for the reception of fishing tackle, means for locking the parts of the closure together whereby the two parts thereof and the bait box may be moved in unison or independently at will.

5. The combination with a receptacle, of a two-part closure having an opening through both parts of the closure and an auxiliary cover or slide mounted in said closure and adapted to close said opening in the closure when moved into a certain position and to uncover it when moved to another position.

956,802. COOKER. GEORGE G. FOX, Kittanning, Pa., assignor of one-fourth to Jesse K. Johnston, Charleroi, Pa. Filed Apr. 21, 1909. Serial No. 491,361.

1. In a cooker, a main receptacle having a projection or ledge formed on its interior adjacent to the top and its sides slanting inwardly above said ledge, a deep pan suspended in the upper part of the main receptacle and having a perforated bottom and an outwardly curved flange on its upper edge, resting on and fitting over the ledge on the main receptacle, a disk apertured for the support of cooking utensils, and the passage of steam, said disk resting on the curved flanged edge of the pan, a deep pan extending through said disk and resting on the bottom of the first-mentioned deep pan, there being a space between the sides of said pans, and a cover having depending sides sprung into frictional engagement with the inwardly slanting sides of the main receptacle at its top, and resting on said disk, there being a space between the top of the second deep receptacle and the top of the cover.



2. In a cooker, a main receptacle having a projection or ledge formed on its interior adjacent to the top, and its sides slanting inwardly above said ledge, a deep pan suspended in the upper part of the main receptacle, and having a perforated bottom, and an outwardly curved flange on its upper edge resting on and fitting over the ledge on the main receptacle, a disk apertured for the support of cooking utensils, and the passage of steam, said disk resting on the curved flanged edge of the pan, a deep pan extending through said disk, and resting on the bottom of the first-mentioned deep pan, there being a space between the sides of said pans, a disk resting on the top of the second deep pan and having a central aperture, and a number of apertures for supporting culinary vessels, a flat disk with a central truncated cone located in the second deep pan and having the cone projecting through the said apertured disk, and a cover with depending sides held in frictional engagement with the slanting side portions of the main receptacle, and resting on the first-mentioned perforated disk.

3. In a cooker, the combination of a primary receptacle provided with a continuous groove formed in the outer faces of the sides, said groove producing a continuous horizontal shoulder extending into the receptacle, said receptacle provided above the shoulder with a portion constituting an overhanging edge or flange having a bead, an article-supporting disk resting upon the shoulder, and a cover provided with a depending flange having a continuous beaded edge, said beaded edge adapted to be passed down into the receptacle within the upper portion and engaging the article-supporting disk for clamping the same against the shoulder, the depending flange of the cover being provided with a continuous socket-flange upon its outer face and the beaded upper edge of the primary receptacle normally engaging said socket, whereby the beaded edge of the receptacle and the cover constitute an interlocking fastening-device for securing the cover and article-supporting member in an assembled position.

956,803. FISH AND FRUIT NET. JOHN F. FROMM, Rochester, N. Y. Filed July 14, 1909. Serial No. 507,646.

1. In a net, a hoop formed of sections pivotally united at one end to fold flat against each other, interengaging means at the other end embodying a plate with overturned opposite edges and affixed to the end of one of the hoop sections, and means carried by the end of the other section and serving as a means of attachment of a handle.

2. In a net, a hoop formed of sections, pivotally united at one end to fold flat against each other, interengaging means at the other end embodying a plate with overturned opposite edges and affixed to the end of one of the hoop sections, means carried by the end of the other section and serving as a means of attachment of a handle, and a channeled member embracing the pivoted ends of the sections.



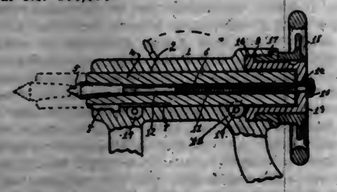
3. In a net, a hoop formed of sections pivotally united at one end to fold flat against each other, interengaging means at the other end embodying a plate with overturned opposite edges and affixed to the end of one of the hoop sections, means carried by the end of the other section and serving as a means of attachment of a handle, and means on the handle for holding the latter at any desired angle relative to the hoop.

4. In a net, two pivotally united sections, a plate having an opening and formed with overturned top and bottom edges fixed to the free end of one section, and a screw fixed to the free end of the other section and engageable through said opening in said plate.

5. In a net, pivotally united sections, a plate having an opening and formed with overturned top and bottom edges, said plate being fixed to the free end of one section, a screw fixed to the free end of the other section and engageable over said opening in said plate, and a plate fixed to the other section and receivable between said overturned top and bottom edges.

[Claims 6 and 7 not printed in the Gazette.]

956,804. TAIL-STOCK. WILLIAM A. GREAVES, Cincinnati, Ohio, assignor to Greaves, Klusman and Company, Cincinnati, Ohio, a Copartnership. Filed Feb. 8, 1909. Serial No. 476,696.



1. In a tail stock, the combination of a barrel formed with a bore and with a counter bore, a spindle movable longitudinally within the bore, a spindle screw adjustably threaded therein, a thimble secured to said screw and provided with a hand wheel for rotating the thimble with the screw, said thimble being rotatively seated within the counter bore, and adjustable means for preventing the longitudinal movement thereof with the screw.

2. A tail stock comprising a barrel formed with a bore and with a counterbore, a spindle longitudinally movable within the bore, a screw threaded within the spindle, a thimble secured thereto and rotatively seated within the counterbore, and a collar adjustably threaded within the counterbore for maintaining the thimble therein.

3. In a tail stock, the combination with a barrel formed with a longitudinal bore, and with transverse openings intersecting said bore, and a spindle movable within said bore, of a pair of similar clamping plugs slidably mounted within each of said transverse openings, a bolt loosely inserted through one and adjustably threaded at one end in the other plug of each of said pairs, pinions splined on the opposite end of the respective bolts and in contact with the adjacent plug, adjusting nuts on the bolts for the pinions, and a segmental gear provided with a handle and journaled at a fixed point and in continuous engagement with the pinions whereby the clamping plugs may be simultaneously actuated in either of opposite directions for clamping or for releasing the spindle.

956,805. TUBE-CUTTER. EMANUEL C. HELLER and ARTENAOUS J. EMRICK, Germantown, Ohio, assignors of one-third to Willard Lincoln Hutchinson, Germantown, Ohio. Filed June 12, 1909. Serial No. 501,834.



1. In a tube cutter, a cutter head, a plurality of cutters carried thereby, an expanding member movable longitudinally through the cutter-head, a tubular shank connected detachably with the expanding member and composed of a plurality of sections connected in axial alinement, means for guiding the expanding rod through the tubular shank, a nut engaging the expanding rod and bearing against the guide means, means for rotating the tubular shank and the cutter head, and a supporting member for the tubular shank comprising a collar having an obliquely disposed shouldered flange, and hook bolts extending through the latter; and means for supporting the tubular shank for rotation and against longitudinal movement with reference to the supporting member.

2. In a tube-cutter, a cutter-head, a plurality of cutters carried thereby, an expanding member movable longitudinally through the cutter-head, a tubular shank detachably connected with the expanding member and composed of a plurality of sections connected in axial alinement, means for guiding the expanding member through the tubular shank, a nut engaging the expanding member and bearing against the guiding means, means for rotating the tubular shank and the cutter-head, a supporting member for the tubular shank having an obliquely disposed shouldered flange, hook bolts extending through the flange, and means for supporting the tubular shank for rotation and against longitudinal movement with reference to the supporting member.

956,806. SPOKE AND FELLY CLIP. JOHN HUMPHREYS, Henderson, Ky. Filed June 29, 1909. Serial No. 505,043.

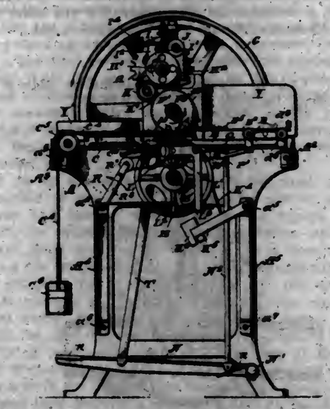


1. A device of the class described comprising a spoke-engaging member having felly-engaging means for preventing the lateral movement of the spoke with respect to the felly, and a felly-engaging member comprising a base-portion having its ends respectively bent to form upstanding ears adapted to engage on either side of the felly and to be secured thereto by a common fastening means, said last named member being interlocked with the first named member to prevent the longitudinal movement of the spoke along the felly.

2. A device of the class described comprising a member having a spoke-receiving socket and felly-engaging means, said means comprising oppositely extending lips, ears extending oppositely and transversely from each lip and adapted to engage the opposite sides of the felly and thereby prevent lateral movement of the spoke with respect to the felly, said member being provided between the said lips with a cut-out portion, and a felly-engaging member adapted to be fitted in the said cut-out portion and thereby prevent longitudinal movement of the said spoke along the felly.

3. A device of the class described comprising a member having a spoke-receiving socket and felly-engaging means, said means comprising lips extending from the member at opposite sides of the socket, ears extending oppositely and transversely from each lip and adapted to engage the opposite sides of the felly and thereby prevent lateral movement of the spoke with respect to the felly, said member also having a cut-out portion located between the lips and above the spoke socket, and a felly-engaging member comprising a base-portion having its ends respectively bent to form upstanding ears adapted to respectively engage either side of the felly and to be secured thereto by a common fastening means, the said base-portion adapted to be fitted within the recess of the spoke-engaging member and thereby prevent longitudinal movement of the said spoke along the felly.

956,807. PLATE-PRINTING MACHINE. ROBERT H. KIRK, Cleveland, Ohio, assignor to The Long Arm System Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 11, 1905. Serial No. 269,232.



1. In a plate printing machine, the combination with a frame, a bed roller journaled therein, and an impression roller in the form of a segment of a cylinder mounted above said bed roller, of a plate carriage mounted to vibrate on said frame between said rollers, a card carrier, with means for automatically moving same toward and coupling same to said plate carriage, means for automatically uncoupling said card carrier when it returns to the initial position, automatic means for holding the card carrier in the initial position until released, a strap connected to the plate carriage, with a weight suspended therefrom, a stiff strip connected to said strap, and intermittently acting friction rollers acting upon said strap and strip for imparting a frictional feed to said plate carriage independent of the pressure between the impression rollers, substantially as described.

2. In a plate printing machine, the combination with a frame, a bed roller journaled therein, and an impression roller in the form of a segment of a cylinder mounted above said bed roller, of a plate carriage mounted to vibrate on said frame between said rollers, a card carrier, with means for automatically moving same toward and coupling same to said plate carriage, means for automatically uncoupling said card carrier when it returns to the initial position, automatic means for holding the card carrier in the initial position until released, a strap connected to the plate carriage, with a weight suspended therefrom, a stiff strip connected to said strap, and intermittently acting friction rollers acting upon said strap and strip for imparting a frictional feed to said plate carriage independent of the pressure between the impression rollers, and an ink roller automatically operated by the motion of said plate carriage for inking the plate, substantially as described.

3. In a plate printing machine, the combination with a frame, a bed roller journaled therein, and an impression roller in the form of a segment of a cylinder mounted above said bed roller, of a plate carriage mounted to vibrate on said frame between said rollers, a card carrier, with means for automatically moving same toward and coupling same to said plate carriage, means for automatically uncoupling said card carrier when it returns to the initial position, automatic means for holding the card carrier in the initial position until released, a strap connected to the plate carriage, with a weight suspended therefrom, a stiff strip connected to said strap, and intermittently acting friction rollers acting upon said strap and strip for imparting a frictional feed to said plate carriage independent of the pressure between the impression rollers, with means for holding the card normally at an angle on said card carrier and causing it to project above and clear of the plate, except when pressed between the rollers, substantially as described.

4. In a plate printing machine, the combination with a frame, a bed roller journaled therein, and an impression roller in the form of a segment of a cylinder mounted above said bed roller, of a plate carriage mounted to vibrate on said frame between said rollers, a card carrier, with means for automatically moving same toward and coupling same to said plate carriage, means for automtically uncoupling said card carrier when it returns to the initial position, automatic means for holding the card carrier in the initial position until released, a strap connected to the plate carriage, with a weight suspended therefrom, a stiff strip connected to said strap, and intermittently acting friction rollers acting upon said strap and strip for imparting a frictional feed to said plate carriage independent of the pressure between the impression rollers, and an ink roller automatically operated by the motion of said plate carriage for inking the plate, with means for holding the card normally at an angle on said card carrier and causing it to project above and clear of the plate, except when pressed between the rollers, substantially as described.

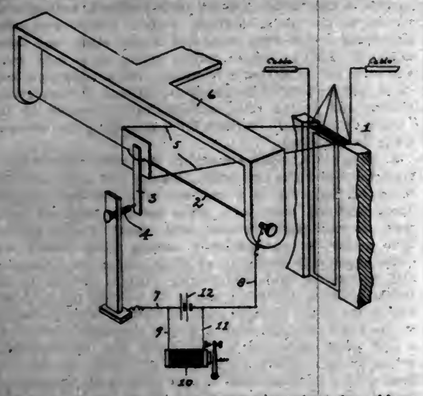
5. In a plate printing machine, the combination with a frame, and impression rollers journaled in said frame, of a plate carriage mounted to vibrate on said frame between said impression rollers, and a card carrier provided with a series of resilient fingers for gripping the card and holding it at an angle in the card carrier, a rod journaled in said card carrier and having a flat face normally resting beneath said gripping fingers and allowing the same to grip the card but lifting said gripping fingers when said rod is rocked, substantially as described.

[Claims 6 to 50 not printed in the Gazette.]

956,808. TELEGRAPHIC RELAY. ISIDOR KITSEE, Philadelphia, Pa. Filed Jan. 27, 1908. Serial No. 412,919.

1. In cable telegraphy, a receiving organism comprising a movable coil in the region of a stationary magnetic field, two relaying contacts therefor, one relaying contact movable and suspended on a conducting thread, the second relaying contact stationary, a localised source of current, one pole connected to the stationary contact and the second pole connected to the conducting thread; a second circuit for said source of current and a translating device in said second circuit.

2. In combination with a sensitive relaying device, a battery normally short circuited through the relaying means and provided with a second circuit containing necessary translating device, the short circuit adapted to be broken through the movement of the movable part of the relaying arrangement due to the incoming impulse.



3. In cable telegraphy, a relay connected to the cable, a movable conductor suspended with the aid of a conducting thread and means therefor to operate the same with the aid of the movable part of the relay proper, a stationary contact normally connecting with the movable conductor, a source of current normally short circuited through the stationary and movable conductor, a second circuit for said source of current and necessary translating device in said second circuit.

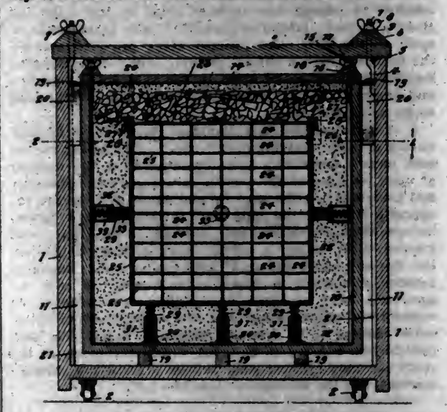
956,809. MATCH BOX AND HOLDER. FRANK O. KULLANDER, Kensington, Minn. Filed June 15, 1909. Serial No. 502,269.



As a new article of manufacture, the herein described receptacle, a casing adapted to receive the receptacle and provided at one end with an opening and at its opposite end with slots in its sides, the receptacle being provided with a cover flap formed with a recessed edge, said flap being provided with side arms attached to the ends of said flap and arranged to work in said slots, the arms being formed at their extremities with notches adapted to engage the ends of the slots whereby to hold the flap in an oblique position relative to the front of the casing and said arms being also formed at their attached ends and on their edges opposite to the first named notches, with other notches adapted to engage said slots to lock the flap in a closed position, the arms being curved to hold the receptacle slightly protruding from the casing so as to expose said opening, as and for the purpose set forth.

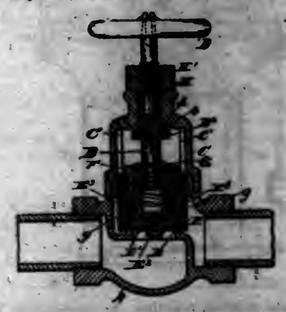
956,810. SHIPPING-RECEPTACLE. FRANK I. LAMASNEY and FORRESTER H. PIERCE, Beverly Farms, Mass. Filed Apr. 27, 1909. Serial No. 492,552.

1. A shipping crate comprising inner and outer boxes with an air space between them, spacing blocks extending across the bottom and vertically near the top upon all sides, a lining to the inner box extended outwardly at its top upon all sides closing the top of said space, an inner receptacle within the inner box, yielding means allowing movement of said inner receptacle in all directions, a plurality of removable compartment trays within the inner receptacle, and independent air-tight closures for said receptacle and for the inner and outer boxes.



2. A refrigerating shipping crate comprising inner and outer wooden boxes, spacing means therebetween, a metallic lining to the inner box, a metallic inner receptacle within the inner box with a space therebetween, elastic cushions between the inner box and the said receptacle allowing of limited freedom of movement of the inner receptacle, a metallic air-tight closure for the inner receptacle, and closures for the inner and outer boxes.

956,811. VALVE. FREDERICK LEADBEATER, Detroit, Mich. Filed Sept. 16, 1909. Serial No. 517,970.



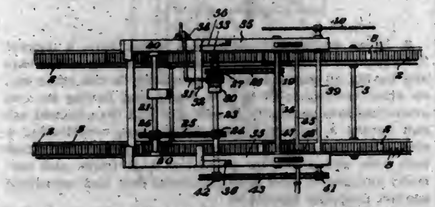
1. In a valve, a body portion, a bonnet secured thereto, a valve stem provided with right and left hand threads, a flange integral with said stem adapted to be seated against the wall of the bonnet, a packing disk carried by said flange, a thimble having a screw-threaded engagement with the valve stem and provided with projecting lugs, a sleeve encircling the thimble notched to receive said lugs, said thimble adapted for screw-threaded engagement with the valve, the valve, a nut engaging said valve stem adapted to force the flange of the valve stem to its seat, and means for securing said nut against accidental displacement, substantially as described.

2. In a valve, a body, a bonnet secured thereto, a valve stem provided with right and left hand threads, a flange carried by said stem adapted to be seated against the wall of the bonnet, a thimble having a screw-threaded engagement with the valve stem, a sleeve encircling said thimble.

means for locking said parts together, said sleeve screw-threaded to receive the valve, the valve, a nut engaging the other screw-threaded portion of said stem adapted to force said flange to its seat, and means for locking the same when adjusted, substantially as described.

3. In a valve, a body, a bonnet secured thereto, said bonnet provided with guides, a valve grooved to receive the guides, a sleeve having a screw-threaded engagement with the valve, a thimble having a screw-threaded engagement with the valve stem and an interlocking engagement with the sleeve, a flange carried by said stem adapted to be forced to a seat against the valve bonnet body but free to turn, a nut engaging said stem adapted to hold said flange against its seat, and means for securing said nut when adjusted, substantially as described.

956,812. ICE-SAW. JOHN H. MAPES, Burlington, Iowa. Filed Apr. 13, 1909. Serial No. 489,579.



1. In an apparatus of the character described, a carriage, toothed driving wheels upon which the carriage is supported and by which it is propelled, a power shaft, a countershaft mounted parallel to the power shaft, gearing between the power shaft and the countershaft, a sprocket wheel freely rotatable upon the countershaft, a clutch connecting the sprocket wheel to its shaft, a shaft on which the propelling wheels are mounted, a sprocket wheel thereon, a sprocket chain connecting said last named sprocket wheel with the sprocket wheel on the countershaft, a frame pivoted upon the carriage for vertical movement, a saw mandrel carried thereon, a saw on the mandrel, a sprocket wheel on the countershaft, and a chain connecting the mandrel sprocket wheel and the countershaft sprocket wheel.

2. In an apparatus of the class described, a carriage composed of spaced side pieces, axles carried in the side pieces and having toothed propelling wheels, a power shaft, an intermediate shaft, connections between the power shaft and the intermediate shaft, connections between the intermediate shaft and one of said axles, means for throwing the axles out of gear with the intermediate shaft, opposed saw frames pivoted upon the carriage, the axial center of the saw-carrying frame being coincident with the said intermediate shaft, the end of said saw-carrying frame extending beyond the end of the carriage and projecting downward, a mandrel carrying a saw and mounted in the pivoted saw frame, in the downwardly projecting ends thereof, a sprocket wheel on the end of said mandrel, a sprocket wheel on said intermediate shaft, a sprocket chain connecting the two wheels, upwardly and rearwardly extending curved bars mounted in the saw frame, said bars being toothed, a shaft in the saw frame having gears engaging the toothed bars, and a pawl and ratchet mechanism for holding the shaft from rotation.

956,813. APPARATUS FOR PRODUCING A MOTOR FLUID. HUDSON MAXIM, Brooklyn, N. Y. Original application filed Mar. 23, 1899, Serial No. 710,192. Divided and this application filed May 12, 1904. Serial No. 207,710. Renewed Dec. 12, 1904. Serial No. 236,584.

1. In an apparatus for producing a motor fluid, the combination of a closed combustion chamber containing a self-combustible material, a reservoir containing a fluid, a spraying or atomizing device introduced between the reservoir and combustion chamber, and means actuated by the products of combustion and forcing the liquid from the reservoir through said spraying or atomizing device into the combustion chamber.



2. In an apparatus for producing a motor fluid, the combination of a closed combustion chamber containing a self-combustible material, a reservoir containing a fluid, a spraying or atomizing device introduced between the reservoir and combustion chamber, and means actuated by the products of combustion exerting a pressure per area unit upon the fluid in the reservoir exceeding the pressure per area unit in the combustion chamber, and thereby forcing the liquid from the reservoir through said spraying device or atomizer into the combustion chamber.

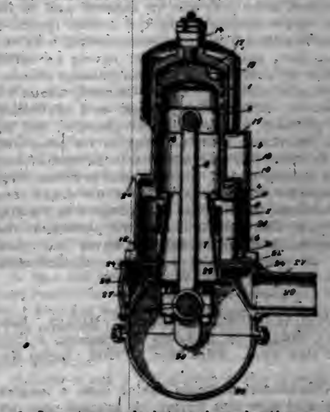
3. In an apparatus for producing a motor fluid, the combination of a closed combustion chamber containing a self-combustible material, a spraying or atomizing device leading into said chamber, a reservoir connected with said device and containing a liquid, and a differential piston element having its greater area exposed to the products of combustion and its lesser area operating on the liquid in the reservoir, whereby the pressure per area unit on the liquid in the reservoir will exceed the pressure per area unit of the products of combustion.

4. In an apparatus for producing a motor fluid, the combination of a closed combustion chamber containing a self-combustible material, a spraying or atomizing device leading into said chamber, a reservoir connected with said device and containing liquid, and a movable wall to said reservoir having a greater area exposed to the products of combustion than is exposed to the liquid in the reservoir.

5. In an apparatus for producing a motor fluid, the combination of a combustion chamber containing a self-combustible material, a cooling fluid surrounding said material, and means mixing said fluid in the form of spray or vapor with the products of combustion of said material.

[Claims 6 to 18 not printed in the Gazette.]

956,814. TWO-CYCLE INTERNAL-COMBUSTION ENGINE. ERNEST A. MEYER, Freeport, Pa. Filed Mar. 22, 1909. Serial No. 485,018.



1. In a two cycle internal combustion engine, the combination with the cylinder provided with co-axial portions of different diameters, a stationary piston within the portion of larger diameter and a moving piston having portions of different diameters working in said co-axial portions of the cylinder and a portion working upon the stationary piston, thereby forming an explosion chamber

at the inner end of the piston and a pump chamber at the outer end of the piston, said explosion chamber being provided with a fuel inlet port, and an exhaust port in its lateral walls, opened and closed by the moving piston the pump chamber having an outlet port at its outer end communicating with the inlet port of the explosion chamber, said stationary piston having a central aperture for the connecting rod, a chamber surrounding said aperture, a port at its inner end located in its lateral wall and opened and closed by the pump portion of the moving piston, a crank case adjacent to the outer end of the cylinder and stationary piston, provided with an aperture for the connecting rod, and having a chambered portion adjacent to said aperture, but separated from the interior of the crank case, said chambered portion having apertures communicating with the chamber in the stationary piston, and an inlet aperture at the exterior of the crank case.

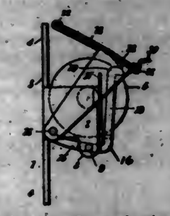
2. In a two cycle internal combustion engine, the combination with the cylinder provided with co-axial portions of different diameters, a stationary piston within the portion of larger diameter and a moving piston having portions of different diameters working in said co-axial portions of the cylinder and a portion working upon the stationary piston, thereby forming an explosion chamber at the inner end of the piston and a pump chamber at the outer end of the piston, said explosion chamber being provided with a fuel inlet port, and an exhaust port in its lateral walls, opened and closed by the moving piston, a transfer chamber adjacent to the fuel inlet port and communicating therewith adjacent to one end, said pump chamber having an inlet port at its inner end communicating with the atmosphere and opened and closed by the pump portion of the moving piston, and having an outlet port at its outer end communicating with the transfer chamber by a transfer passage, said transfer passage opening into the transfer chamber at a point adjacent to the fuel inlet port, a passage for admitting fuel to the transfer passage, a check valve for the fuel admission passage and a throttling device for the fuel admission passage.

3. In a two cycle internal combustion engine, the combination with the cylinder provided with co-axial portions of different diameters, a stationary piston within the portion of larger diameter and a moving piston having portions of different diameters working in said co-axial portions of the cylinder and a portion working upon the stationary piston, thereby forming an explosion chamber at the inner end of the piston and a pump chamber at the outer end of the piston, said explosion chamber being provided with a fuel inlet port and an exhaust port in its lateral walls, opened and closed by the moving piston, a transfer chamber adjacent to and communicating with the said fuel inlet port, the pump chamber having an outlet port adjacent to its outer end, a transfer passage connecting said outlet port with the transfer chamber, means for admitting fuel to the transfer passage, said stationary piston being provided with an annular chamber, and an inlet port in its lateral wall, adjacent to its inner end communicating therewith and adapted to be opened and closed by the moving piston, a crank case provided with a chamber separate from the interior of the crank case and having openings on its upper face adapted to register with apertures in the annular chambered portion of the stationary piston, said chambered portion of the crank case having an exterior inlet aperture communicating therewith.

956,815. ANNUNCIATOR. CHRISTIAN MILLER, New York, N. Y., assignor to Edwards & Company, a Corporation of New York. Filed Mar. 6, 1909. Serial No. 481,746.

1. In an annunciator, a frame having ears, a magnet fixed between said ears and having an exposed pole, an armature journaled in said frame and having an arm projecting into proximity to said pole and a rearwardly projecting arm constituting a stop, a spring for normally separating said armature from said pole, and a shutter pivoted in said frame and normally engaged by said first mentioned arm and restrained against dropping thereby.

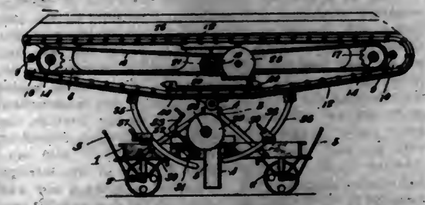
2. In an annunciator, a frame having ears with downwardly projecting portions, a magnet riveted to one of said ears and having an exposed pole between said ears, an armature journaled between said portions and having an arm projecting upwardly in proximity to said pole, a spring fixed to said arm and engaging the pole, and a shutter having rearwardly extending arms extending outside said ears and pivoted thereto, said shutter having a lip engaging the arm of said armature.



3. In an annunciator, a frame having ears, a magnet fixed between said ears and secured to one only of the ears and having an exposed pole in proximity to the other ear, an armature journaled in said frame and having an arm projecting into proximity to said pole and the adjacent ear and having a rearwardly projecting arm constituting a stop, a spring for normally separating said armature from said pole, and a shutter pivoted in said frame and normally engaged by said first mentioned arm and restrained against dropping thereby.

4. In an annunciator, a frame having ears with downwardly projecting portions, a magnet riveted to one only of said ears and having an exposed pole adjacent to the other ear, an armature journaled between said portions and having an arm projecting upwardly in proximity to said pole and to the adjacent ear, a spring fixed to said arm and engaging the pole, and a shutter having rearwardly extending arms extended outside said ears and pivoted thereto, said shutter having a lip engaging the arm of said armature.

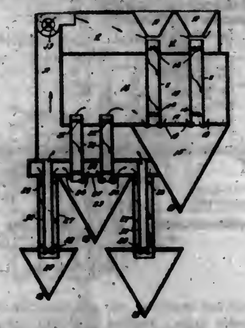
956,816. PORTABLE LOADER. MILLARD E. MOOG and CHARLES A. GARDNER, Chicago, Ill.; said Gardner assignor to said Moog. Filed Dec. 8, 1908. Serial No. 465,756.



1. In a portable loader, a supporting truck, guides arranged on said truck, supporting bars slidably mounted in said guides, a conveyer body pivotally mounted on the upper ends of said supporting bars, adjusting racks secured to said supporting bars, a shaft journaled on said truck, a worm gearing whereby said shaft is revolved in one direction or the other, gear pinions fixedly mounted on said shaft and adapted to engage the rack bars on said supporting bars whereby said conveyer body is raised and lowered, holding bars connected to said conveyer body, and clamping devices mounted on said truck to receive said holding bars whereby said conveyer body is held at various angles of inclination.

2. In a portable loader, a wheeled truck, a conveyer body pivotally and adjustably mounted on said truck, said body comprising longitudinally disposed parallel side plates, sprocket gear shafts mounted at each end of said plates, sprocket gears on said shafts, endless conveyer chains arranged around the gears, a conveyer apron secured to said chains, drive shafts geared to said sprocket gear shafts, a main drive shaft, a sprocket gear connection between said main drive shaft and the shafts at the ends of said conveyer, a clutch connection between said main drive shaft and the sprocket gears thereon, and a motor arranged in said conveyer body and operatively connected with said main drive shaft.

956,817. GRADER. LAWRENCE N. MORSCHER, Lawrence, Kans., assignor to William J. Ehrsam, Enterprise, Kans., and Lawrence N. Morscher, Lawrence, Kans., cotrustees. Filed Oct. 19, 1908. Serial No. 458,555.



1. The combination, with a stream-defining conduit and means associated therewith for producing a helical movement of the stream whereby particles suspended in the stream will form an envelop for the fluid stream, of a closed receiving chamber into which the delivery end of the conduit is projected, said receiving chamber having an outlet opening surrounding the delivery end of the conduit behind the same, and means for causing the flow of a particle-laden fluid stream through said conduit and said outlet opening, for the purpose set forth.

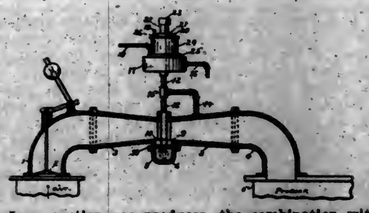
2. The combination, with a stream-defining conduit and deflectors arranged therein for producing a helical movement of the stream whereby particles suspended in the stream will form an envelop for the fluid stream, of a closed receiving chamber into which the delivery end of the conduit is projected, said receiving chamber having an outlet opening surrounding the delivery end of the conduit behind the same, and means for causing the flow of a particle-laden fluid stream through said conduit and said outlet opening for the purpose set forth.

3. The combination, with a stream-defining conduit and means associated therewith for producing a helical movement of the stream whereby particles suspended in the stream will form an envelop for the fluid stream, of a closed receiving chamber into which the delivery end of the conduit is projected, said receiving chamber having an outlet opening surrounding the delivery end of the conduit behind the same, a second stream-defining conduit, arranged to receive the material passing through said outlet from the receiving chamber, means associated therewith for producing a helical movement of the stream therein whereby particles suspended in the stream will form an envelop for the fluid stream, a second closed receiving chamber into which the delivery end of said second conduit is projected, an extraction conduit arranged centrally within the said second stream-defining conduit with its inner end inside of the discharge end of said second conduit, and means for establishing fluid currents through said conduits.

4. The combination, with a stream-defining conduit and deflectors arranged therein for producing a helical movement of the stream whereby particles suspended in the stream will form an envelop for the fluid stream, of a closed receiving chamber into which the delivery end of the conduit is projected, said receiving chamber having an outlet opening surrounding the delivery end of the conduit behind the same, a second stream-defining conduit arranged to receive the material passing through said outlet from the receiving chamber, means associated therewith for producing a helical movement of the stream therein whereby particles suspended in the stream will form an envelop for the fluid stream, a second closed receiving chamber into which the delivery end of said second conduit is projected, an extraction conduit arranged centrally within the said second stream-defining conduit with its inner end inside of the discharge end of said second conduit, and means for establishing fluid currents through said conduits.

5. The combination, with a stream-defining conduit, of a closed receiving chamber into which said conduit is projected, an extraction conduit arranged centrally within the first mentioned conduit with its inner end inside of the discharge end of the first mentioned conduit, means associated with said first mentioned conduit for producing a helical movement of the stream in said conduit, and means for producing fluid currents in said conduits.

956,818. AUTOMATIC WATER-REGULATOR FOR GAS-PRODUCERS. JOHN P. NAWN, Philadelphia, Pa., assignor of one-half to George Schilling, Philadelphia, Pa. Filed June 30, 1909. Serial No. 505,250.



1. In a suction gas producer, the combination with a water pressure receptacle provided with means for admitting water below the normal water level therein and a discharge pipe from said receptacle to the producer whose outlet is above the inlet level of the supply, means integral with said pressure receptacle to prevent a siphon of the water from said supply to said discharge pipe.

2. In a suction gas producer, the combination with a water pressure receptacle provided with means for admitting water below the normal water level therein and a discharge pipe from said receptacle to the producer whose outlet is above the inlet level of the supply, an aperture in said pressure receptacle above the normal water level therein.

3. In a suction gas producer, the combination with a water pressure receptacle provided with means for admitting water below the normal water level therein and a discharge pipe from said receptacle to the producer whose outlet is above the inlet level of the supply, an aperture in said pressure receptacle above the normal water level therein, and means to adjust the opening thereof.

4. In a gas producer, the combination with a water pressure receptacle connected thereto having the water supply inlet disposed below the discharge outlet to the producer, of an aperture in said receptacle located above the water level therein.

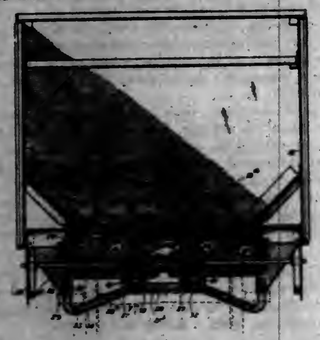
5. In a gas producer, the combination with a water pressure receptacle connected thereto having the water supply inlet disposed below the discharge outlet to the producer, of an aperture in said receptacle located above the normal water level therein, and means to adjust the opening of said aperture.

[Claims 6 and 7 not printed in the Gazette.]

956,819. DUMP-CAR. JOHN O. NEIKIRK, Morgan Park, Ill., assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed Oct. 21, 1909. Serial No. 523,849.

1. In a dump car having central discharge openings, a plurality of hinged doors meeting at the center line of

the car and having their outer edges turned at an angle to their bodies and hinged beyond said edges and above the plane of said bodies, movable supporting and operating shafts for said doors, tracks for said shafts supported by the frame of the car, and means for moving said shafts along the tracks.



2. In a dump car having central discharge openings, a plurality of hinged doors arranged in parallel rows longitudinally of the car and hinged adjacent the outer edges of the discharge openings, said doors having their outer edges turned upwardly and hinged above the plane of the bodies of the doors and their opposite edges meeting along the longitudinal center line of the discharge openings, movable supporting and operating shafts for said doors, guiding and supporting bars for said shafts adapted to cause the doors to close when the shafts are moved toward the center of the car, and means for effecting such movement of the shafts.

3. In a dump car having central discharge openings, and a series of dump doors hinged near the outer edges of said openings, supporting and operating shafts for said doors, tracks for said shafts supported by the car frame, and means for moving said shafts upon said tracks.

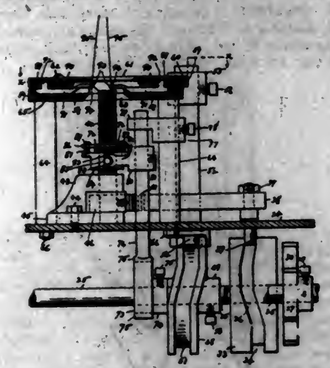
4. In a dump car having central discharge openings and dump doors hinged near the outer edges of said openings, supporting and operating shafts for said doors, tracks for said shafts sloping upwardly from their outer portions to a horizontal portion near the center of the car, racks on said sloping portions of said tracks, pinions on said shafts engaging said racks, and means for rotating said shafts.

5. In a dump car having central discharge openings, dump doors hinged near the outer edges of said openings, movable supporting and operating shafts for said doors, tracks for said shafts, racks on said tracks, pinions on said shafts engaging said racks, a worm gear on each of said shafts, a worm meshing with each of said gears, a power shaft arranged transversely of said supporting and operating shafts and on which said worms are slidably and nonrotatively mounted, and movable bearing blocks holding said worm gearing in mesh, said blocks being slidably mounted on said power shaft and adapted to travel with said supporting and operating shafts.

[Claims 6 to 25 not printed in the Gazette.]

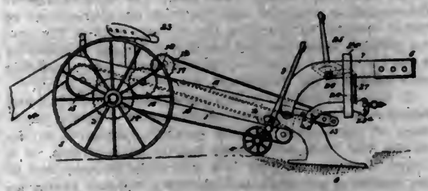
956,820. KNITTING-MACHINE. GEORGE T. NICHOLLS, Providence, R. I. Filed May 6, 1909. Serial No. 494,484.

1. In a knitting machine, the combination of a rotatable shaft; a needle tube; means to oscillate the tube operated from the shaft; needles slidably mounted on the tube; means actuated by the shaft for giving alternately up and down movements to the needles upon the tube; a stationary ring-shaped base concentric with but above the needle tube and supported by standards from the bed of the machine and provided with a plurality of radial grooves; a ring-shaped cover concentric with said base and mounted movably on the base and having a zigzag cam way disposed in a circle concentric with said cover; means actuated by the shaft and adapted to give an oscillatory movement to said cover; and a plurality of radially directed thread carriers slidably mounted respectively in said radial grooves of the base each having a projection slidably mounted in said cam way and each provided at its inner end with an eye for carrying thread.



2. In a knitting machine, the combination of a rotatable shaft; a needle tube; needles movably mounted on the tube; a horizontally supported base with a central aperture and provided with a plurality of radially directed grooves; a plurality of thread carriers radially directed and slidable in said grooves; means actuated by the shaft to give oscillatory movement to the needle tube; means actuated by the shaft to give vertical reciprocation to the needles; and means actuated by the shaft to give periodical movements to the thread carriers in said grooves alternately to and from the needles but above the needle tube.

956,821. BEET-HARVESTING MACHINE. JOHN E. NIX, Desoto, Mo., assignor of one-half to T. O. Fauber, Desoto, Mo. Filed Apr. 21, 1908. Serial No. 428,405.

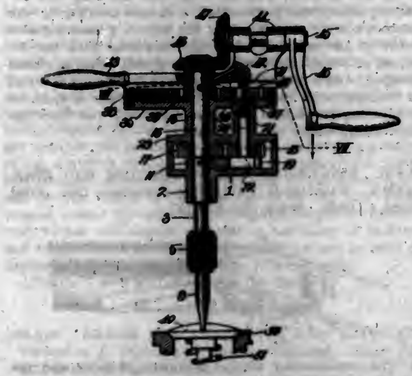


1. In a machine for harvesting beets and the like, the combination of means for lifting the beets, upper and lower endless aprons inclined upwardly and rearwardly with their opposing portions spaced apart and arranged to receive the beets between them, means for operating the endless aprons to cause their opposing portions to travel rearwardly at a variable rate of speed, the upper apron terminating short of the rear end of the lower apron and moving relatively faster than said lower apron, and a chute for receiving the beets from the aprons and directing the same to one side of the machine.

2. In a machine for harvesting beets and the like, the combination of means for lifting the beets, an endless apron arranged to receive the beets from the lifting means, a second endless apron located above the first mentioned endless apron and overhanging the lifting means and projecting forward of the lower apron, said upper apron terminating short of the rear end of the lower apron and moving relatively faster than said lower apron, and means for receiving the beets from the lower or first mentioned apron and directing the same to one side of the machine.

3. In a machine for harvesting beets or the like, the combination of means for lifting the beets, a lower endless apron arranged to receive the beets from the lifting means, an upper endless apron spaced from the lower apron and extending forward thereof to overhang the said lifting means and terminating short of the upper rear end of the lower apron, means for operating the endless aprons to cause their opposing portions to travel rearwardly at a variable rate of speed, and a chute for receiving the beets from the lower apron and directing the same to one side of the machine.

956,822. GRINDING-TOOL. MILLARD F. PARSONS, Kansas City, Kans. Filed Dec. 3, 1909. Serial No. 531,233.



1. A grinding tool, comprising an oscillatory shaft, a shaft in line with the oscillatory shaft, a shaft out of alinement with the first-named shafts, means for rotating the shaft in alinement with the oscillatory shaft, means whereby the rotation of said alined shaft shall cause the said third shaft to travel in a circle around the axis of said alined shaft, means whereby said alined shaft shall impart rotation to said third shaft without interfering with its circular travel, and means whereby said third shaft shall impart oscillatory movement to the oscillatory shaft.

2. A grinding tool, comprising an oscillatory shaft, an arm projecting therefrom, a rotary wheel disposed with its axis out of alinement with that of said shaft, means whereby the rotation of said wheel shall effect oscillatory movement of said shaft, a shaft alined with the oscillatory shaft and provided with a gear-wheel meshing with the first-named gear-wheel, means for imparting movement to the said alined shaft, and means for causing the gear-wheel through which oscillatory motion is imparted to the oscillatory shaft, to travel as a planet around the gear-wheel on the said alined shaft without interfering with the rotation of each around its own axis.

3. A grinding tool, comprising an oscillatory shaft, an arm projecting therefrom, a rotary wheel disposed with its axis out of alinement with that of said shaft, means whereby the rotation of said wheel shall effect oscillatory movement of said shaft, a shaft alined with the oscillatory shaft and provided with a gear-wheel meshing with the first-named gear-wheel, means for imparting movement to the said alined shaft, a gear-wheel arranged concentrically with respect to the axis of said alined shaft, means whereby the rotation of the last-named shaft shall impart rotation to the last-named gear-wheel, and means whereby the rotation of said last-named gear-wheel shall cause the gear-wheel connected to impart oscillatory movement to said oscillatory shaft, to travel as a planet-gear around the gear-wheel intermeshing with and driving the same.

4. A grinding tool, comprising a casing provided with a pair of vertically alined bearings and a third bearing eccentrically of the first-named bearings, shafts journaled in said alined bearings and projecting into the casing at their adjacent ends, a parallel shaft journaled in the third bearing, gear-wheels mounted upon one of the first-named shafts and the third shaft and meshing together, a pin projecting from the gear-wheel on the third shaft parallel with the latter, an arm rigidly mounted on the first-named shaft not provided with a gear-wheel and provided with a longitudinal slot receiving said pin, a gear-wheel bearing a fixed relation to the casing and arranged concentrically around one of the said first-named shafts, a gear-pinion mounted on the first-named shaft surrounding the said gear-wheel, a frame journaled on the shaft provided with the gear-pinion, an idler gear-wheel meshing with the said gear-pinion and said surrounding gear-wheel, a part journaled upon the shaft provided with the pinion and provided with a stub-shaft forming a journal for said idler gear-wheel, a shaft journaled in said part and provided with a crank handle at one end and a miter gear at the other, and a miter gear secured upon the upper end of the shaft provided with a gear-pinion and meshing with the first-named miter gear.

5. A grinding tool, comprising a casing provided with a pair of vertically alined bearings and a third bearing eccentrically of the first-named bearings, shafts journaled in said alined bearings and projecting into the casing at their adjacent ends, a parallel shaft journaled in the third bearing, gear-wheels mounted upon one of the first-named shafts and the third shaft and meshing together, a pin projecting from the gear-wheel on the third shaft parallel with the latter, an arm rigidly mounted on the first-named shaft not provided with a gear-wheel and provided with a longitudinal slot for receiving said pin, a gear-wheel bearing a fixed relation to the casing and arranged concentrically around one of the said first-named shafts, a gear-pinion mounted on the first-named shaft surrounding the said gear-wheel, a frame journaled on the shaft provided with the gear-pinion, an idler gear-wheel meshing with the said gear-pinion and said surrounding gear-wheel, a part journaled upon the shaft provided with the pinion and provided with a stub-shaft forming a journal for said idler gear-wheel, a shaft journaled in said part and provided with a crank handle at one end and a miter gear at the other, a miter gear secured upon the upper end of the shaft provided with a gear-pinion and meshing with the first-named miter gear, and a bit carried by and in longitudinal alinement with the shaft equipped with the slotted arm.

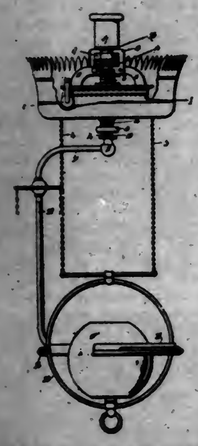
956,823. EXTENSION LIGHT-FIXTURE. CONRAD M. PITEL, Meriden, Conn. Filed June 14, 1909. Serial No. 502,070.

1. A suspension device comprising a spring drum, a vertical tubular shaft upon which it is mounted, a yoke above said drum and also fixed to said shaft, a tube which extends through said shaft, levers pivoted to opposite ends of said yoke and formed at their lower ends with shoes adapted to bear upon the top of said drum, a frame mounted at the upper end of said tube, said levers having slotted connection with said frame, and an adjusting nut at the bottom of said tube, whereby the frame may be raised or lowered with respect to the drum to increase or diminish the friction upon the drum.

2. A suspension device comprising a spring drum, a vertical tubular shaft upon which it is mounted, a yoke above said drum and also fixed to said shaft, levers pivoted to opposite ends of said yoke and formed at their lower ends with shoes adapted to bear upon the top of said drum, a tube which extends through said shaft, a frame mounted at the upper end of said tube, said levers having slotted connection with said frame, an adjusting nut at the bottom of said tube, and a spring between said nut and shaft.

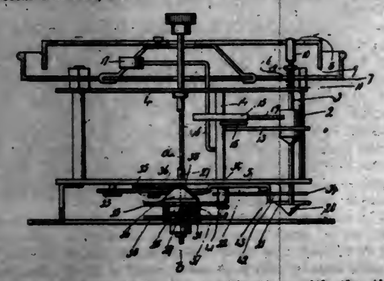
3. A suspension device comprising a spring drum, a vertical tubular shaft upon which it is mounted, a yoke above said drum and also fixed to said shaft, levers pivoted to opposite ends of said yoke and formed at their lower ends

with shoes adapted to bear upon the top of said drum, a tube which extends through said shaft, a frame mounted at the upper end of said tube, said levers having slotted connection with said frame, a nipple swiveled to said frame, and a conductor pipe extending from said nipple down through said tube, and a conducting arm from the lower end of said pipe out to one side beyond the extension device to a burner.



4. A suspension device comprising a spring drum, a vertical tubular shaft upon which it is mounted, a yoke above said drum and also fixed to said shaft, levers pivoted to opposite ends of said yoke and formed at their lower ends with shoes adapted to bear upon the top of said drum, a tube which extends through said shaft, a frame mounted at the upper end of said tube, said levers having slotted connection with said frame, a nipple swiveled to said frame, a conductor pipe extending from said nipple down through said tube, an arm connected to said tube extending to one side and beyond the extension device, a harp-band suspended from said drum, a burner below said band, said band formed with an annular groove, and flexible connections from said conductor pipe to the band.

956,824. ALARM-CLOCK. WILSON E. PORTER, New Haven, Conn., assignor to New Haven Clock Company, New Haven, Conn., a Corporation. Filed Feb. 26, 1910. Serial No. 546,223.



1. In an alarm-clock, the combination with the time-mechanism thereof, of an alarm-mechanism including a stop-wire, a manually operable push-rod, a stop-plug mounted thereupon for coaction with the stop-wire in arresting the alarm-mechanism, a detent on the push-rod, a lever coacting with the detent for holding the push-rod in its operating position, and a cone carried by the alarm cam of the alarm-mechanism and coacting with the lever for automatically releasing the said detent and hence the push-rod, preparatory to sounding the alarm.

2. In an alarm-clock, the combination with the time-mechanism thereof, of an alarm-mechanism, a push-rod for stopping the alarm-mechanism, a lever coacting with the push-rod for normally detaining the same in its operating position, and a laterally movable cone driven by the time-train and coacting with the lever for moving the same to release the push-rod.

3. In an alarm-clock, the combination with the time-mechanism thereof, of an alarm-mechanism, a push-rod for arresting the alarm-mechanism, a lever coacting with the push-rod, a warning-wire carried by the said lever and also coacting with the push-rod, and a laterally movable cone driven by the time-train and coacting with the said lever for releasing the same from the push-rod.

4. In an alarm-clock, the combination with the time-mechanism thereof, of an alarm-mechanism including a stop-wire, a manually operated push-rod, a stop-plug carried by the said rod and coacting with the stop-wire for arresting the alarm-mechanism, a detent carried by the push-rod, a lever coacting with the detent, a warning-wire carried by the said lever and also coacting with the detent, an alarm-setting shaft, an alarm-cam wheel mounted thereupon, and a cone carried by the said alarm-cam wheel and coacting with the edge of the lever which it operates for releasing the detent from the said lever and from the said warning-wire.

956,825. SINGLE-TRIGGER MECHANISM FOR FIREARMS. WILLIAM H. PRICE, San Francisco, Cal. Filed June 4, 1909. Serial No. 500,157.



1. The combination with a plurality of locks and the sears thereof, of a firing mechanism comprising a single trigger, a spring-pressed carrier, a horizontally turnable switch tongue pivoted to the front end of said carrier, an adjustable switch with which the carrier tongue engages during its forward movement, whereby the fixed tongue is retained in position to engage the sear of one lock upon the first pull of the trigger, and the movable tongue shifted to engage the sear of the other lock upon a second pull.

2. The combination with a plurality of locks and the sears thereof, of a single trigger having a catch upon the upper edge of its blade, a mechanically and transversely turnable switch point pivoted on the front portion of the trigger blade, a spring-pressed carrier having a transversely turnable switch point upon its front end, said point being adapted to engage the first named switch point to be turned to one side or the other, a spring-actuated lever with which the rear of the carrier bar is engaged, said spring acting to force the carrier bar downward and forward, a pin projecting from the carrier bar, a latch with which the pin is engaged when the carrier bar is withdrawn, the carrier bar being lifted, and said pin being disengaged by the first pull of the trigger, a notch upon the carrier bar which engages the catch on the trigger blade, after the first barrel has been discharged, said engagement being released by the relaxation of the trigger pull to allow the carrier bar and its switch to be moved forwardly into engagement with the fixed switch, and in position to engage the sear of the second barrel upon the second pull of the trigger.

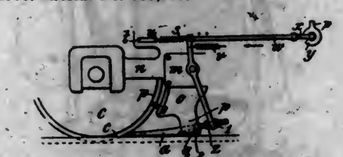
3. The combination with a plurality of locks and the sears thereof, of a single trigger, a carrier bar, a spring-actuated lever by which said bar is pressed forward and downward, a switch tongue pivoted to the front of the bar, a second switch tongue pivoted to turn horizontally upon the trigger blade, and means for locking said tongue to one side or the other whereby the carrier tongue is automatically shifted from the position to engage one sear, to a position to engage the other sear, by successive pulls of the trigger.

4. The combination with a plurality of locks and the sears thereof, of a single trigger having a switch point pivoted thereto, means by which it may be turned horizontally to one side or the other, a carrier having a switch point pivoted to its front end so as to engage the first named switch point, and be automatically turned to one side or the other, a fulcrumed spring-pressed lever to which the rear end of the carrier is pivoted, a rod by which the lever and carrier are retracted when the gun is opened, a latch by which the parts are retained in their retracted position, said latch being disengaged upon the first pull of the trigger and its tongue raised to engage the sear of the first barrel, a second latch by which the carrier engages the trigger after the first pull, said second latch being released by the relaxation of the pull upon the trigger to allow the carrier to move to its ultimate forward position and its switch tongue be turned in position to engage with the sear of the second lock.

5. The combination with a plurality of sears, and the locks thereof, of a longitudinally reciprocating spring-pressed carrier, a latch by which it is retained in an extreme retracted position after the gun has been opened and closed, a single trigger adapted to engage and raise the carrier to disengage its first latch, a catch carried by the trigger by which the forward movement of the carrier is arrested after the discharge of the first barrel, said latch being released by the relaxation of the pull upon the trigger to allow the carrier to move to its extreme forward position, a switch tongue pivoted to the front of the carrier and turnable horizontally to one side or the other, a second switch tongue pivoted in line with the first named tongue, means for turning said second tongue so that the first tongue will engage one side or the other of said second tongue, and itself be automatically turned by such engagement so as to engage the sear of either lock.

[Claims 6 to 9 not printed in the Gazette.]

956,826. BRAKE FOR TRAMWAYS AND RAILWAYS. PERCIVAL J. PRINGLE, Sidmouth, England. Filed July 12, 1907. Serial No. 383,509.



1. The combination with a wheel of a tramway or railway vehicle, of a skid brake for co-acting in, and with, the rail groove only, and means for operating said skid, for the purposes specified.

2. The combination with a wheel of a tramway or railway vehicle, of a bar shaped to the general contour of the upper part of the rail groove to act with said groove only as a skid, and means for advancing and withdrawing said bar toward, and from, said wheel, for the purposes specified.

3. The combination with a skid brake co-acting in, and with, the rail groove and with a wheel of a tramway or railway vehicle, of another brake block operated by, and from, the skid, for the purposes specified.

4. The combination with a skid brake co-acting in, and with, the rail groove and with a wheel of a tramway or railway vehicle, of another brake block for acting upon another surface relatively to said skid, and a pivoted lever connecting said skid and block for operating said block from said skid, for the purposes specified.

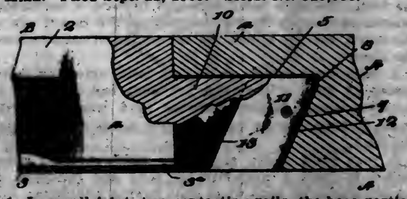
956,827. COMBINATION GAME-BLOCKS. CHARLES H. RIETZ, St. Louis, Mo., assignor to Robert E. Renfro, Carbondale, Ill. Filed June 22, 1907. Serial No. 380,862.

The herein described combination game blocks, comprising a set of fifty-six blocks divided into four equal sets of fourteen each, namely, a suit of diamonds, a suit of hearts, a suit of clubs, and a suit of spades, the faces of all the blocks being of uniform color and the faces of all the blocks being divided into two spaces and thirteen blocks of each suit being provided respectively in the spaces on one side of the dividing line with diamond, heart, club and spade symbols printed in a color in contrast to the faces of the blocks, and the opposite spaces on the faces of the four suits of thirteen blocks provided with the letters and numbers, A, 2, 3, 4, 5, 6, 7, 8, 9, 10, J, Q, K, printed in



the same color as the symbols in the opposite spaces on the same blocks, but in contrasting color to the face of the block, and the remaining or fourteenth block of each suit being provided on its front face with respectively a double diamond, a double heart, a double club, and a double spade symbol, printed in the same respective color as the symbols and characters appearing on the thirteen blocks of each suit and the said double symbols appearing on the fourteenth block of each suit being separated by a dividing line.

956,828. RAIL-JOINT. CHARLES D. RUSSELL, St. Paul, Minn. Filed Sept. 22, 1909. Serial No. 519,053.

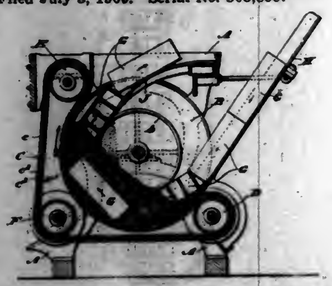


1. In a rail joint, two contacting rails, the base portion of one rail being formed with a mortise and the base portion of the other rail being provided with a projecting tenon adapted to be received within the mortise, the mortise having a dovetail enlargement at its end and being formed with an end wall inclined upwardly and away from the end of the rail, the sides of said enlarged portion of the mortise being upwardly and inwardly inclined, the tenon on the other rail having an enlarged dove-tail head, the end of the tenon being inclined upwardly and outwardly, said enlarged dovetailed end of the tenon gradually narrowing from its lower edge to its upper, in conformity to the shape of the said tenon.

2. In a rail joint, two contacting rails, the head of one rail being formed with a tenon projecting from the base portion of the rail and less in height than the rail, said tenon having a dove-tail head, the sides of said head diverging downward and the end face of said head being inclined downwardly and inwardly, the inner margin of the dove-tail head being parallel to the outer end face thereof, the other of said rails having therein a mortise to receive said tenon.

3. In a rail joint, two contacting rails, the ends of both rails being solid and having sides extending directly downward from the head of the rail to the face thereof, the end of one rail being formed with a tenon projecting from the base portion of the rail and less in height than the rail, said tenon having a dove-tailed head, the sides of which diverge downward and outward, the end face of said head being inclined downwardly and inwardly, the inner margin of the dove-tailed head being parallel to the outer end face thereof, the end of the other of said rails having therein a mortise of the same shape as said tenon, said mortise opening on the bottom of the rail.

956,829. MOLD-SANDER. DAVID P. SANDERS, Lancaster, Pa. Filed July 3, 1909. Serial No. 505,899.



1. In a mold-sander, an endless mold-conveying apron guided to form a concavity for sand and composed of closely-arranged flexibly-connected slats which abut and close joints when concaved to receive the sand and convey the molds.

2. In a mold-sander, an endless mold-conveying apron guided to form a concavity for sand and composed of flexibly-connected slats having interfitting rabbeted edges making lapped upper and lower flanges on adjacent edges of contiguous slats.

3. In a mold-sander, an endless mold-conveying apron guided to form a concavity for sand and composed of slats arranged transversely of and fastened upon endless flexible belts, the slats being arranged to form a continuous smooth surface on the concave side of the curved run of the apron, thereby preventing the falling of sand between the slats.

4. In a mold-sander, an endless mold conveying apron guided to form a concavity for sand and composed of closely-arranged flexibly-connected hard wood slats, the apron in its concavity conveying the molds and retaining the sand.

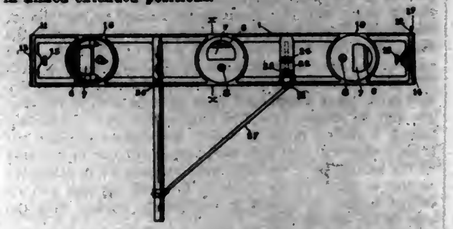
5. In a mold-sander, an endless mold-conveying apron guided to form a concavity for sand and composed of flexibly-connected hard wood slats having interfitting rabbeted edges making lapped upper and lower flanges on adjacent edges of contiguous hard wood slats.

[Claim 6 not printed in the Gazette.]

956,830. LEVEL. JACOB SCHMID, Detroit, Mich. Filed Apr. 13, 1909. Serial No. 489,713.

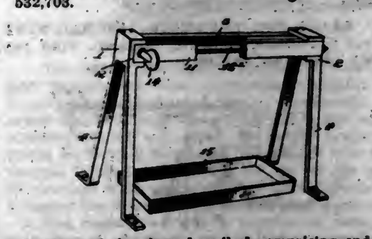
1. A level comprising a rectangular frame having a jack staff socket in one side near one end thereof and a slide block adjustable transversely to the frame in the same side near the other end thereof, adapted to receive a bracket for a jack staff, a level tube adjustably secured between the frame ends near the other side thereof, and plummet tubes each adjustably secured in the frame near one end and perpendicular to the sides.

2. A level comprising a rectangular frame having a jack staff socket in one side near one end thereof and a slide block adjustable transversely to the frame in the same side near the other end thereof, adapted to receive a bracket of a jack staff, a level tube adjustably secured between the frame ends near the other side thereof, plummet tubes each adjustably secured in the frame near one end perpendicular to the sides, a sight plate transversely movable in each end of the frame, and means for holding the plates in alined extended positions.



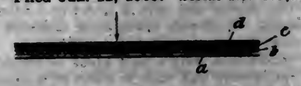
3. A level comprising a rectangular frame having a central circular aperture counterbored at each end, a level tube holder consisting of a base rotatable in one end of the aperture, a cover rotatable in the other end, a clamping screw securing the cover and base, flanges on the base, and flanges on the cover interlocking with the base flanges, a level tube eccentric to the holder center supported by the flanges opposite view holes in the cover and base and adjacent side of the frame, plummet tube holders corresponding to the level tube holders in apertures near the ends of the frame, plummet tubes therein, a block sliding transversely in the frame between the level tube and one of the plummet tubes, and means for securing the block in adjusted position.

956,831. DIAPER-CLEANER. GRACE M. SCOTT, Washington, D. C., assignor of one-half to Lena Helbeno, Washington, D. C. Filed Dec. 11, 1909. Serial No. 532,703.



A device of the class described comprising end frames, a fixed jaw supported by the frames, a spring tension hinge member supported by one end frame, a movable jaw operatively connected at one end with the hinge member, means at the opposite end of the movable jaw adjustably connected with the said fixed jaw, and a horizontally disposed blade carried by the said movable jaw.

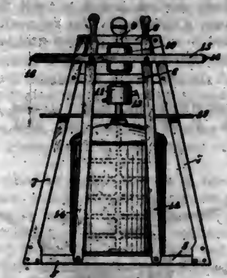
956,832. FILTER. THEOBALD F. SEITZ, Kreuznach, Germany. Filed Jan. 12, 1909. Serial No. 471,929.



1. A filtering unit capable of being inserted in a filter apparatus, consisting of intimately connected strata, each stratum being homogeneous in respect to its porosity and the different strata having pores of different degrees of fineness, the several strata being arranged transversely to the direction of flow of liquid therethrough.

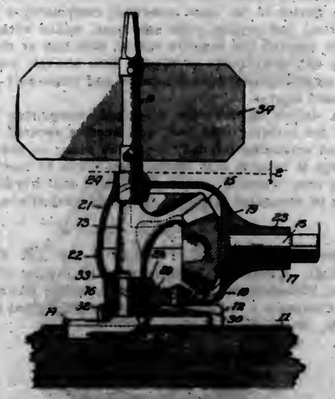
2. The process of making a unit of filtering material consisting in depositing by suspension in liquid and removal of liquid, a stratum of fibers having a greater degree of permeability on a previously deposited stratum of fibers having a lesser degree of permeability, thereby forming intimately connected but well defined strata of different degrees of permeability.

956,833. CHURN. WILLIAM F. SMITHDEAL, Salisbury, N. C. Filed Apr. 30, 1909. Serial No. 493,123.



The combination in a churn, of an open pyramidal churn frame adapted to inclose the churn receptacle and having head-blocks, a vertical dasher operating shaft removably journaled in the head-blocks and having a belt-wheel arranged therebetween, an operating lever fulcrumed at its inner end to the frame and projecting upwardly at one side thereof, a cross-bar attached to the lever, and a guide for the lever, arranged on one side of the frame, a belt passing about the pulley and connected to the opposite ends of the cross-bar, drawing the lever to the guide.

956,834. SWITCH-STAND. EUGENE N. STROM, Chicago, Ill., assignor to Pettibone, Mulliken & Company, a Corporation of Illinois. Filed Mar. 18, 1910. Serial No. 550,252.



1. In a switch-stand of the character described, the combination of a rod carrying a crank, a stand-base provided with an opening of dimensions adapting the rod with the crank thereon to be inserted through it into place, a partial bearing for said rod in the opening, a journal-cap in said opening coöperating with and completing the bearing to rotatably confine the rod, means for rigidly securing said cap and base together, and means for turning said rod to throw the switch.

2. In a switch-stand of the character described, the combination of a rod carrying a crank, a one-piece stand-base provided with an opening of dimensions adapting the rod with the crank thereon to be inserted through it into place, a partial bearing for said rod in the opening, a journal-cap in said opening coöperating with and completing the bearing to rotatably confine the rod, means for rigidly securing said cap and base together, and means for turning said rod to throw the switch.

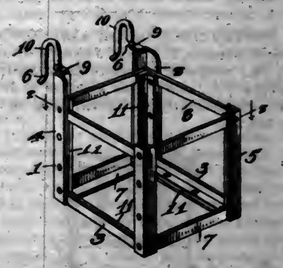
3. In a switch-stand of the character described, the combination of a rod carrying a crank, a stand-base provided with an opening having a recess in its wall and of dimensions adapting the rod with the crank thereon to be inserted through it into place, a partial bearing for said rod in the opening, a journal-cap in said opening coöperating with and completing the bearing to rotatably confine the rod, an arm on the cap, means for rigidly securing said arm and base together, and means for turning said rod to throw the switch.

4. In a switch-stand of the character described, the combination of a rod carrying a crank, a stand-base provided with an opening having a recess in its wall and of dimensions adapting the rod with the crank thereon to be inserted through it into place, a partial bearing for said rod in the opening, a journal-cap in said opening coöperating with and completing the bearing to rotatably confine the rod, an arm on the cap having a recess in its end registering with said first-named recess to form a rivet-hole, a rivet in said hole rigidly securing said arm and base together, and means for rotating said rod to throw the switch.

5. In a switch-stand of the character described, the combination of a rod carrying a crank, a stand-base provided with an opening of dimensions adapting the rod with the crank thereon to be inserted through it into place, a partial bearing for said rod in the opening, a journal-cap in said opening coöperating with and completing the bearing to rotatably confine the rod, means for rigidly securing said cap and base together, a shoulder on the rod below said bearing, a mutilated collar on the rod above said bearing coöperating with the shoulder to prevent lengthwise movement of the rod in the bearing, and means for turning said rod to throw the switch.

[Claims 6 and 7 not printed in the Gazette.]

956,835. CAN-CARRIER. FRANCIS L. TAULMAN, Barnes, Kans. Filed June 21, 1909. Serial No. 503,498.

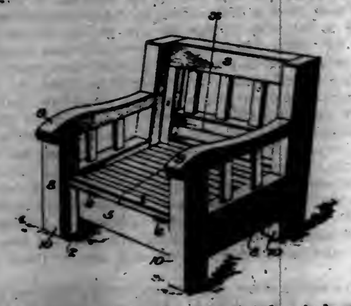


The herein described can carrier for use on a vehicle, comprising a rectangular rack frame consisting of two side frames, each formed from a single piece of angle metal cut and bent to provide a bottom side bar and corner uprights, angle metal bottom bars uniting the two side frames, a bar bent into rectangular shape and uniting the upper portions of the four corner uprights, downturned hooks formed integral with the upper ends of the inturned flanges of the corner uprights of one side frame, protecting covering upon said hooks to prevent marring of the vehicle springs with which they are engaged, and protecting strips secured to the inner faces of the corner uprights and to the upper faces of the inturned flanges of said bottom side bars.

956,836. CONVERTIBLE CHAIR AND COUCH. HENRY TIEDEMANN, Camden, N. J., and JAMES U. CLARKE, Philadelphia, Pa., assignors of one-third to Emil Guenther, Philadelphia, Pa.; said Clarke assignor to Jacob Jarden Guenther, Philadelphia, Pa. Filed May 15, 1909. Serial No. 496,264.

1. In a device of the character stated, a body portion with spaced slats and a relatively fixed compartment beneath said slats, and side frames each movable with relation to the body portion and having slats adapted to inter-

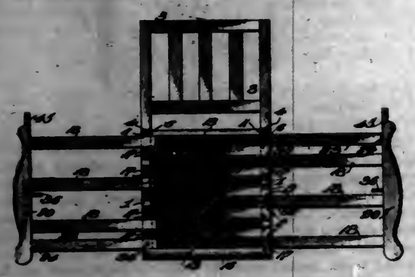
fit with the slats of the body portion, the slats of the body portion and side frames forming a cover to said compartment.



2. In a device of the character stated, a body portion with spaced slats and a relatively fixed compartment beneath said slats, side frames each movable with relation to the body portion and having slats adapted to interfit with the slats of the body portion, the slats of the body portion and side frames forming a cover to said compartment, and a movably mounted front to said compartment accessible when the side frames are in their closed position.

3. In a device of the character stated, a body portion with slats spaced apart and a compartment beneath said slats, a plurality of side frames each movable laterally with relation to the body portion, slats carried by each side frame and adapted to interfit with the slats of the body portion and forming a cover to said compartment, and an automatically acting lock to hold the side frames to the body portion in their closed position.

956,837. CONVERTIBLE CHAIR AND COUCH. HENRY TIEDEMANN, Camden, N. J., and JAMES U. CLARKE, Philadelphia, Pa., assignors of one-third to Emil Guenther, Philadelphia, Pa.; said Clarke assignor to Jacob Jarden Guenther, Philadelphia, Pa. Filed June 25, 1909. Serial No. 504,232.

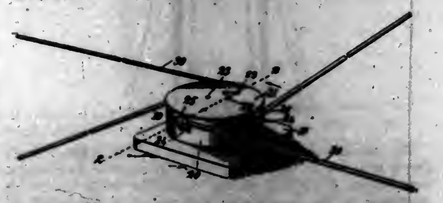


1. In a chair, the combination of a body having a compartment therein, a door for said compartment forming the front of said body, an adjustable back hinged to said body, means to lock said back in one position, a plurality of side frames, slats on each side frame spaced apart and adapted to interfit with said body portion to form a supporting surface in substantially the same horizontal plane, and a lock for securing said side frames to said body portion.

2. In a chair, the combination of a body portion having a plurality of slats therein spaced apart, a plurality of side frame slats on each side frame adapted to interfit with said body portion slats, means to lock said side frames to said body portion, a detachable slat for each side frame, and means to secure said detachable slat in position when said side frames are in extended position.

3. In a chair, the combination of a body portion having a plurality of slats therein spaced apart, a plurality of side frame slats on each side frame adapted to interfit with said body portion slats, means to lock said side frames to said body portion, a stop to limit the movement of each side frame, a detachable slat for each side frame, and a back hinged to said body portion and means to support said back in different positions.

956,838. AMUSEMENT DEVICE. JAMES J. TRIANOR, New York, N. Y. Filed Dec. 22, 1908. Serial No. 468,719.



1. A device of the class described having a movable cylindrical hub, means for actuating said hub, and hurdles extending tangentially from said hub.

2. A device of the class described, comprising a hub, means for rotating said hub, and hurdles secured to said hub and extending laterally from the same so that when said hub is rotated said hurdles can serve as moving obstacles over which a person can jump.

3. A device of the class described, comprising a base, a hub pivoted upon said base, means within said hub for causing the same to rotate, the said hub having sleeves, and elongated members constituting hurdles and removably mounted in said sleeves.

4. A device of the class described, comprising a base, a cylindrical hub pivoted upon said base, means within said hub for causing the same to rotate, said hub at the sides having cut away portions formed into sleeves, and elongated members constituting hurdles and removably mounted in said sleeves.

5. A device of the class described, comprising a hub, means for rotating said hub, and hurdles secured to said hub and extending laterally from the same, so that when said hub is rotated said hurdles can serve as moving obstacles over which a person can jump, said hurdles consisting of elongated members devoid of projections.

956,839. METHOD OF PUMPING AIR OR OTHER FLUID. THEODORE WIEDEMANN and JOSEPH H. TEMPLIN, Philadelphia, Pa., assignors to Keller Manufacturing Company, a Corporation of Delaware. Filed Sept. 9, 1909. Serial No. 516,942.



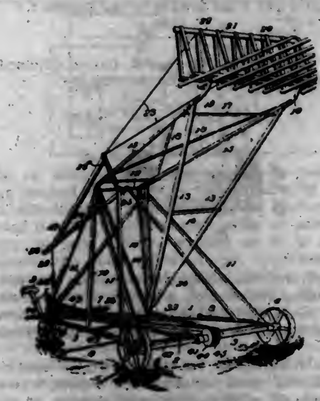
1. The method of producing and maintaining a vacuum which is variable when the load varies, which consists in exhausting air from a vacuum space by producing alternately higher and lower pressure in a given space, and in limiting the lowest pressure in said given space by the amount of space it contains.

2. The method of producing and maintaining a variable vacuum, which consists in exhausting air from the vacuum space by producing alternately higher and lower pressure within a given space, separating the impurities from the air in the vacuum space, and in limiting the lowest pressure in said given space by the amount of space which it contains.

3. The method of pumping from a vacuum space to a pressure space, which consists in exhausting air from the vacuum space by means of a member having a to and fro motion, discharging said air into a confined pressure space to which said member is immediately and freely exposed, and then utilizing the pressure in said pressure space to aid in imparting to said member its return movement.

4. The method of producing and maintaining a vacuum varying in accordance with the load at the inlet to the vacuum space, which consists in exhausting air from the vacuum space by producing alternately higher and lower pressure within a given space, and in limiting the lowest pressure in said given space by the amount of space which it contains, and thereby unload the motive power for the air exhausting element at a point of predetermined load.

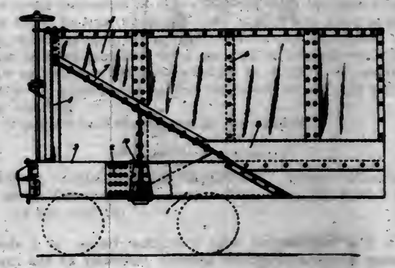
956,840. STACKER. FRANK WYATT, Salina, Kans., assignor to The F. Wyatt Manufacturing Company, Salina, Kans. Filed Dec. 28, 1908, Serial No. 469,588. Renewed Oct. 5, 1909. Serial No. 521,163.



1. In a stacker, a supporting framework, a shaft held thereon in an elevated position, a rake support mounted to rock on said shaft, a rake carried by said support and pivotally mounted thereon, a lever fulcrumed on said shaft and operatively connected to said rake, said lever embodying an arm extending rearwardly from the shaft, a link rod connected to and depending from said arm, another link rod having an extensible connection with the first named link rod and connected at its lower end to the framework, a latch plate connected to said first named link rod, a trip lever designed to engage said latch plate, and a support for said trip lever.

2. In a stacker, the combination of a supporting framework, a shaft mounted thereon in an elevated position, a rake support mounted to rock on said shaft, a rake having a pivoted connection with said rake support, an angular lever fulcrumed on said shaft, one arm of said lever being operatively connected to said rake, a link rod depending from the other arm of said lever, another link rod having an extensible connection with the first named link rod and secured to the supporting framework, a latch plate carried by the first named link rod, a sleeve carried by the other link rod and engaging the first named link rod, a spring encircling said link rods between the latch plate and sleeve, a trip lever designed to engage said latch plate, and a support for said trip lever.

956,841. CAR-UNDERFRAME. ANTON BECKER, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio, a Corporation of Ohio. Filed Jan. 25, 1909. Serial No. 473,994.



1. In a hopper car a body bolster formed of an integral plate embracing the sides of the center sill and extending above the same, an integral flange formed thereon and riveted to the center sill, an inclined flange at the upper end of said bolster plate underlying the hopper floor sheets and riveted thereto, the ends of said bolster plate being secured to the sides of the car, and a bracket member interposed between said bolster plate and floor sheet and secured thereto.

2. In a hopper car an integral bolster plate having an integral continuous flange along its lower edge, and a continuous flange along its upper edge and forming a seat for the floor sheets and secured at its ends to the sides of the car, a bracket member interposed between said bolster plate and floor sheet and secured thereto, and having a lateral bearing against the vertical web of the center sill.

3. In a hopper car, a bolster plate applied to the center sills by means of a continuous integral flange thereon, a flange carried upon the upper edge of said bolster plate to form a seat for the hopper floor sheets, a bracket interposed between said bolster plate and floor sheets and secured thereto through a continuous flange formed upon two sides thereof, said bracket at its lower end overlapping the vertical web of the center sill and bearing laterally thereupon.

4. In a hopper car an integral bolster plate extending upwardly above the center sills and forming a seat for the hopper floor sheets, a triangular bracket member flanged on two of its sides to engage said bolster plate and floor sheets and being riveted thereto and at its lower end having a lateral bearing against the center sill.

5. In a hopper car, a bolster plate cut away to be applied to the center sills and having a continuous flange formed along its lower edge, a continuous flange provided along its upper edge to form a seat for the floor sheets, an angle member riveted thereto along the lower edge at each side of the center sills, a compression plate extending from side to side of the car underneath the center sills and secured to said bolster plate and angle members, means for securing said bolster plate to the sides of the car, and bracket members interposed between the bolster plate and the floor sheets and secured thereto and having lateral bearings upon the center sills.

[Claim 6 not printed in the Gazette.]

956,842. VERTICALLY-ADJUSTABLE SHADE-HANGER. WILLIAM B. CASWELL, Newport, R. I., assignor of one-half to Annie E. Caswell, Newport, R. I. Filed Nov. 27, 1909. Serial No. 530,164.



1. The combination with a window frame, of a shade hanger comprising guides secured vertically at the inner faces of the jambs of the window frame, slide members having bases disposed substantially in abutting relation to the inner faces of the jambs and connected to the guides for vertically sliding movement, and wings integral with and projecting perpendicularly from the bases and extending inwardly toward each other, shade supporting brackets carried by the respective wings, pulleys mounted at the upper corners of the window frame, and a flexible suspension member passing about the pulleys and attached to the slide members for raising and lowering the same, the bases of the slide members being cut away at their upper ends and terminating below the upper edges of the wings, whereby to afford clearance for the pulleys when the slide members are positioned at the upper ends of the guides.

2. An adjustable shade hanger including a slide member having a vertically disposed base and a wing projecting perpendicularly from the base at one vertical edge thereof, a vertically disposed fixed guide in which the other vertical edge of the base is slidably mounted, a shade supporting bracket having a base formed with a horisontal adjusting slot and abutting against the face of the wing opposite to the base, a single fastening device passing through the slot and inserted through the wing to secure the bracket in adjusted position relative thereto, and means carried by the wing and engaging the base of the bracket to maintain the same against turning movement about the fastening device as a pivot.

3. An adjustable shade hanger including a slide member having a vertically disposed base and a wing projecting perpendicularly from the base at one vertical edge thereof, a vertically disposed fixed guide in which the other vertical edge of the base is slidably mounted, a shade supporting bracket having a base formed with a horizontal slot and abutting against the face of the wing opposite to the base, and a single fastening device passing through the slot and inserted through the wing to secure the bracket in adjusted position relative thereto, the wing having a spur struck therefrom and projecting through the slot and operating in the same to maintain the bracket against turning movement about the fastening device as a pivot.

4. An adjustable shade hanger including a slide member comprising a vertically disposed base and a wing projecting perpendicularly from the base at one longitudinal edge thereof, a vertically disposed fixed guide to which the base is slidably connected, the wing being formed with a horizontally elongated opening and with a pair of lugs outstanding from one face of the wing at the opposite ends of the opening, a shade supporting bracket having a base abutting against the opposite face of the wing from the lugs, the base being formed with a horizontal slot registering with said elongated opening and relatively longer than the same, a nut abutting against the wing between the pair of lugs, and a bolt inserted through the registering slot and opening and working through the nut to hold the bracket in adjusted position relative to the wing, the said pair of lugs engaging the nut to hold the same against turning movement.

5. An adjustable shade hanger including a slide member comprising a vertically disposed base and a wing projecting perpendicularly from the base at one vertical edge thereof, a fixed guide to which the other vertical edge of the base is slidably connected, the wing being formed with a horizontally elongated opening and with lugs outstanding from one face of the wing at the opposite ends of said opening, a shade supporting bracket having a base abutting against the opposite face of the wing from the lugs and formed with a longitudinal slot registering with the elongated opening and relatively longer than the same, a nut abutting against the wing between the spaced lugs and held thereby against turning movement, a bolt inserted through the slot and opening and working through the nut, the wing having a spur struck therefrom and operating in the slot to maintain the bracket against turning movement about the bolt as a pivot, the base of the slide member having an ear struck therefrom intermediate of its vertical edges, the ear outstanding from one face of the base and being formed in its lower edge with a recess, and a suspension cord adapted to raise and lower the slide and having a knotted end detachably engaged in the recess at the lower edge of the ear.

[Claims 6 and 7 not printed in the Gazette.]

956,843. DENTURE. EDWARD B. CRANE, California, Mo. Filed Nov. 24, 1909. Serial No. 529,690.



1. A denture, comprising a metallic base in which teeth are embedded and secured, a section of vulcanizable rubber held mechanically to the base section and a section of flexible unvulcanizable rubber secured to the vulcanizable section.

2. In a denture, the combination with a metallic base section having teeth embedded and secured therein and having integral walls provided with recesses, of a section of vulcanizable rubber applied to the base section and secured thereto by means of said recesses and a section of flexible rubber having projecting walls and air chambers formed therein, which last mentioned section is secured to the vulcanizable section by adhesion.

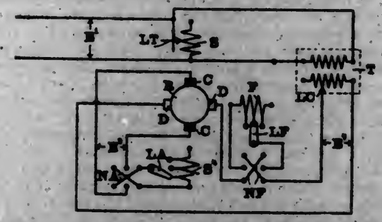
3. In a lower denture, the combination with a metallic base section having teeth embedded and secured therein and integral projecting walls formed on the base section there being dove tail recesses formed in the margins of said walls, of a section of vulcanizable rubber applied to the base section and held thereto by means of said recesses, there being an irregular surface formed on the lower face of the vulcanizable section and a section of flexible rubber secured to the vulcanizable section by means of said irregular surface and any suitable adhesive substance, projecting walls formed integral with the flexible section and air chambers formed in the upper face of the flexible section between said walls, whereby the denture is cushioned against the ridge and secured in place upon the ridge by suction.

956,844. SPIKE. WILLIS S. CROFUTT, New Haven, Conn., assignor of one-half to John C. Doody, New Haven, Conn. Filed Aug. 27, 1909. Serial No. 514,924.



A spike having a rectangular shank and a head, said shank formed with a spear-shaped wedge on its rear wall extending downward from the head and tapered to merge into the shank.

956,845. SINGLE-PHASE ALTERNATE-CURRENT MOTOR AND GENERATOR. VALRE A. FYNN, London, England. Filed Dec. 19, 1906. Serial No. 348,659.



1. In an alternating current motor, the combination with an induced member, of an inducing member provided with a main inducing winding, means for conductively introducing into the induced member along an axis coinciding with the main inducing winding, an E. M. F. of approximately the same phase as that impressed on the main inducing winding, and exciting brushes for permitting an exciting current to flow through the induced member along an axis displaced from that of the main inducing winding, said exciting current being generated in the said induced member by the rotation thereof and said induced member being so constructed that all of the exciting currents generated therein will close through brushes.

2. In an alternating current motor, the combination with an induced member, of an inducing member provided with a main inducing winding, means for varying the volts per turn in said winding, means for conductively introducing into the induced member along an axis coinciding with the main inducing winding an E. M. F. of approximately the same phase as that impressed on the main inducing winding, and exciting brushes for permitting an exciting current to flow through the induced member along an axis displaced from that of the main inducing winding, said exciting current being derived from the induced member, and said induced member being so constructed that all of the exciting currents generated therein will close through brushes.

3. In an alternating current motor, the combination with an induced member, of an inducing member provided with a main inducing winding, means for conductively introducing into the induced member along an axis coinciding with the main inducing winding, an E. M. F. of approximately the same phase as that impressed on the main inducing winding, means for permitting an exciting current to flow through the induced member along an axis displaced from that of the main inducing winding, said exciting current being derived from the said induced member, and means for impressing a compensating E. M. F. on the exciting circuit.

4. In an alternating current motor, the combination with a stationary member provided with a main inducing winding, of an induced member closed by way of brushes along an axis displaced from that of the main inducing winding, and an auxiliary winding on the stator in inductive relation to the main inducing winding and connected in series with the induced member along an axis coinciding with that of the main inducing winding.

5. In an alternating current motor, the combination with a stationary member provided with a main inducing winding and a field winding displaced from said main inducing winding, of an induced member, said induced member being connected in series relation with the field winding along an axis displaced from that of the main inducing winding, and means for conductively impressing on said induced member along an axis coinciding with the axis of the main inducing winding an E. M. F. of substantially the same phase as that impressed on the said inducing winding.

[Claims 6 to 9 not printed in the Gazette.]

956,846. CALCULATING-MACHINE. HENRY GOLDMAN, Berlin-Friedenau, Germany. Filed Apr. 23, 1908. Serial No. 428,772.



1. In a calculating machine, the combination with a counting wheel, of a chain for driving said counting-wheel and normally disconnected therefrom, and of means for temporarily moving the chain into engagement with the wheel, said means comprising a main lever, a supplementary lever operable by the main lever, and a chain-shift lever carried by the main lever and engaged by the supplementary lever.

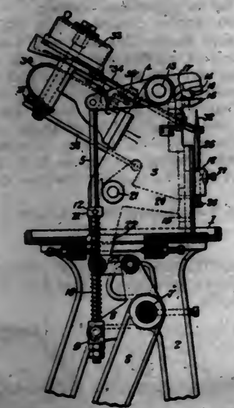
2. In a calculating machine, means for operating a counting-wheel, and comprising a main lever pivoted at its rear end, a supplementary lever pivoted at its forward end and engaging with the main lever, a chain-shift lever pivotally carried by the main lever and engaged by the supplementary lever, and an endless chain surrounding the parts mentioned and in position to be moved by the chain-shift lever.

956,847. MACHINE FOR ATTACHING GLOVE-FASTENERS. JOHN H. GOSS and GEORGE R. LEGGETT, Waterbury, Conn., assignors to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed June 28, 1909. Serial No. 504,822.

1. In a machine for attaching glove fasteners, the combination of a clamping device for clamping the glove to which the fasteners are to be applied and thereafter automatically releasing it, as many eyelet-supporting pins as there are eyelets to be inserted at one operation, provided with means for accurately supporting said eyelets, means to feed the eyelets to said pins, detachable needles applicable to said pins above the eyelets supported thereon, and means to move the pins toward the clamping device and cause the needles to displace without cutting the threads of the glove and insert the eyelets in the openings so made.

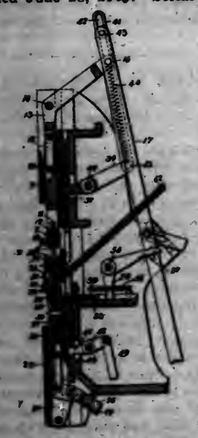
2. In a machine for attaching glove fasteners, the combination of means to clamp the glove, a slide arranged beneath and in line with said means, means to reciprocate said slide toward and from said clamping means, a pin arranged in said slide and provided with an eyelet-receiving projection, means to deposit eyelets periodically upon said pin, and a removable needle having a shank adapted to be inserted in the pin in line with the eyelet thereon.

3. In a machine for attaching glove fasteners, the combination of an eyelet-feeding mechanism, means to control the passage of eyelets from said feeding mechanism, a plurality of pins, and means to move them vertically and to aline them with the discharge end of said feeding mechanism, and each having an eyelet-receiving projection, fabric piercing needles on said pins and above the eyelets thereon, and means to support a glove above the pins, so as to effect the piercing of the glove and the depositing of the eyelets in the holes in the glove resulting from such piercing.



4. In a machine for attaching glove fasteners, a vertically movable glove piercing and eyelet-inserting mechanism, and a glove clamping mechanism having a fixed jaw and a movable jaw, a common operating mechanism comprising a main rock-lever, a spring tension rod connecting the movable jaw of the clamping device and the rock-lever, and a rock-lever for actuating the glove-piercing and eyelet-inserting mechanism also connected with the said main rock-lever.

956,848. MACHINE FOR ATTACHING GLOVE-FASTENERS. JOHN H. GOSS and GEORGE R. LEGGETT, Waterbury, Conn., assignors to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed June 28, 1909. Serial No. 504,823.



1. In a machine for attaching glove fasteners, the combination of grippers, means to move them toward and from one another, with needles and means to move them toward and through the grippers and the glove held thereby, and eyelet-supports and means to move them toward the grippers and into conjunction with the needles so that the needles will enter and engage the eyelets and hold them, and means to move the grippers conjointly when closed upon the glove to force the glove upon the eyelets while held by the needles.

2. In a machine for attaching glove fasteners, the combination of gripping jaws arranged to approach each other from opposite directions, slides upon which they are mounted, means to further move said grippers conjointly while gripping an article, needles and means to move them downwardly toward and through the grippers and the article held therein, eyelet-supports and means to move them toward the grippers and into operative conjunction with the needles, at which time the grippers receive their conjoint movement downwardly toward the eyelet-supports, to insert the eyelets in the holes in the article made by the needles.

3. In a machine for attaching glove fasteners, vertically reciprocating slides movable toward and from one another, gripping jaws mounted horizontally on said slides and movable with them, a slide having needles fixed thereon, and a slide having disappearing eyelet-supports thereon, said needle-slide and eyelet-supporting slide arranged respectively above and below the gripping jaws, and means to move them toward the gripping jaws, in combination with means to move the gripping jaw slides conjointly in one direction while holding the glove and thereby force the eyelets into the holes made in the glove by the needles.

4. In a machine for attaching glove fasteners, the combination of an upper slide and means to move it up and down, a plurality of needles fixed to and movable with said slide, a lower slide and means to move it toward and from the upper slide, a plurality of eyelet-supports mounted upon said lower slide and movable with it and having eyelet centering pins to receive the eyelets and present them to the needles and then disappear under the pressure of the needles, an eyelet feeding mechanism, vertically reciprocating slides having horizontally projecting parallel gripping jaws extending between and in line with the needles, and means to give the said gripping jaws and slides a conjoint downward movement, in addition to their individual downward movement, so as to force the material grasped between the jaws down upon the eyelets held in the eyelet-supports and cause them to enter holes made in the glove by the needles and while the said eyelets are centered upon and engaged by the needles.

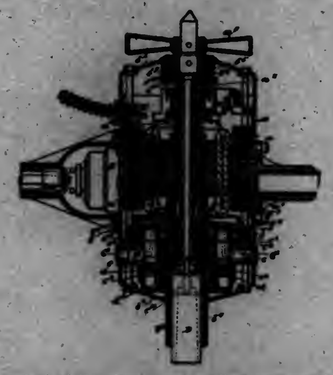
5. In a machine for attaching glove fasteners, the combination of an upper slide and means to move it up and down, a plurality of needles fixed to and movable with said slide, a lower slide and means to move it toward and from the upper slide, a plurality of eyelet-supports mounted upon said lower slide and movable with it and having eyelet centering pins to receive the eyelets and present them to the needles and then disappear under the pressure of the needles, an eyelet feeding mechanism, vertically reciprocating slides having horizontally projecting parallel gripping jaws extending between and in line with the needles, means to give the said gripping jaws and slides a conjoint downward movement, in addition to their individual downward movement, so as to force the material grasped between the jaws down upon the eyelets held in the eyelet-supports and cause them to enter the holes made in the glove by the needles and while the said eyelets are centered upon and engaged by the needles, and mechanism to receive the thus set or inserted eyelets and cap them.

[Claim 6 not printed in the Gazette.]

956,849. PORTABLE ELECTRIC DRILL. WILLIAM C. HAFFMEISTER, Cleveland, Ohio, assignor, by mesne assignments, to The Van Dorn & Dutton Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 11, 1908. Serial No. 466,960.

1. In a tool of the character described, the combination with a motor and a casing therefor; of a transversely disposed supporting member within said casing near one

end thereof, the motor shaft being journaled in said member and the other casing end; a tool spindle mounted in such first-named casing end; a gear borne by the inner end of said spindle; a driving pinion on the adjacent end of said motor-shaft; an intermediate shaft extending through and journaled in said supporting member; a pinion on its lower end meshing with said spindle gear; a gear on its upper end meshing with said driving pinion; and thrust bearings for the upper end of said intermediate shaft.



2. In a tool of the character described, the combination with a motor and a casing therefor; of a transversely disposed supporting member within said casing near one end thereof, the motor-shaft being journaled in said member and the other casing end; a tool spindle mounted in such first-named casing end; a gear borne by the inner end of said spindle; a driving pinion on the adjacent end of the motor-shaft; an intermediate shaft extending through and journaled in said supporting member; a pinion on its lower end meshing with said spindle gear; a gear on its upper end meshing with said driving pinion, the upper face of said last-named gear forming one part of a ball race; a cap mounted upon said supporting member and inclosing said gear, said cap bearing the other part of such race; and a ball race between said gear and member, whereby an end-thrust bearing is provided for said intermediate shaft.

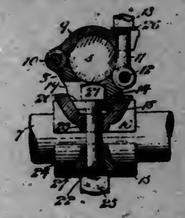
3. In a tool of the character described, the combination with a motor and a casing therefor; of a transversely disposed supporting member within said casing near one end thereof, the motor-shaft being journaled in said member and the other casing end; a tool spindle mounted in such first-named casing end; a gear borne by the inner end of said spindle; a driving pinion on the adjacent end of the motor-shaft; intermediate shafts extending through and journaled in said supporting member; a pinion on the lower end of each such intermediate shaft meshing with said spindle gear; a gear on such shaft's upper end meshing with said driving pinion, the upper face of said last-named gear being recessed to form one part of a ball race; a cap mounted upon said supporting member and inclosing said gear, said cap including a central plate adjustably secured therein and bearing the other part of such race; and a ball race between said gear and member, whereby an end-thrust bearing is provided for said intermediate shaft.

4. In a tool of the character described, the combination with a motor and a casing therefor; of a transversely disposed supporting member within said casing near one end thereof, the motor-shaft being journaled in said member and the other casing end; a tool spindle mounted in such first-named casing end; a gear borne by the inner end of said spindle; a driving pinion on the adjacent end of the motor-shaft; intermediate shafts extending through and journaled in said supporting member; a pinion on the lower end of each such intermediate shaft meshing with said spindle gear; a gear on each shaft's upper end meshing with said driving pinion, the upper face of said last-named gear being recessed to form one part of a ball race; a cap mounted upon said supporting member and inclosing said gear, said cap including a central plate screw-threaded in said cap and bearing the other part of such race; a circular flange on the under side of said cap, said gear bearing a washer exteriorly fitted to said flange; and a ball race between said gear and member.

5. In a tool of the character described, the combination with a motor and a casing therefor; of a transversely disposed supporting member within said casing near one end thereof, the motor-shaft being journaled in said member and the other casing end; a tool spindle mounted in such first-named casing end; a gear borne by the inner end of said spindle; a driving pinion on the adjacent end of said motor-shaft; an intermediate shaft extending through and journaled in said supporting member; a pinion on its lower end meshing with said spindle gear; a gear on its upper end meshing with said driving pinion; and an oil chamber in said supporting member opening exteriorly through said casing and communicating interiorly with the bearing of said intermediate shaft, the latter being provided with a passage adapted to connect said oil chamber with the upper face of the gear borne by said shaft.

[Claims 6 to 12 not printed in the Gazette.]

956,850. MOUNTING FOR DRILLS. CHARLES C. HANSEN, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 2, 1908. Serial No. 451,442.



1. In a mounting for drills, a suitable support, a clamp engaging the support having a recess therein, a clamp engaging the drill having a cone fitted to said recess and provided with a lateral opening through its wall for the passage of a bolt head and a single bolt for securing the drill clamp cone within the support clamp recess and the support clamp to the support in the desired adjustments.

2. In a mounting for drills, a suitable support, a clamp engaging the support having a recess therein, a clamp engaging the drill having a cone fitted to said recess and provided with an opening through its wall, the said opening having different widths for the passage of the head and shank of a bolt and a bolt for securing the drill clamp cone within the support clamp recess and the support clamp to the support in the desired adjustments.

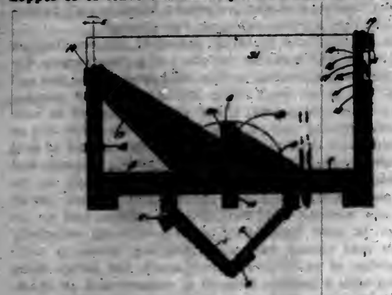
3. In a mounting for drills, a suitable support, a support-clamp comprising two members hinged together one of said members having a recess therein, a drill clamp comprising two members hinged together one of said members having a cone fitted to said recess in one of the support clamp members and provided with an opening extending laterally through its wall for receiving and seating a bolt, means for securing the drill clamp on to the drill and a bolt for securing the drill clamp cone within its recess and the support clamp to its support in the desired adjustments.

956,851. DUMP-CAR. HARRY S. HART, Chicago, Ill., assignor to Rodger Ballast Car Company, a Corporation of Illinois. Filed Dec. 10, 1909. Serial No. 532,357.

1. In a car of the class described comprising a hopper portion and vertically adjustable swinging car sides.

2. In a car of the class described comprising a hopper portion, vertically adjustable swinging car sides, and a movable floor over the hopper portion.

3. In a car of the class described, a central longitudinal hopper, side frames, vertically moving side sections hinged at their upper edges to said side frames, and movable floor sections adjustable to lie horizontally over said central hopper or to leave the same open and unobstructed.

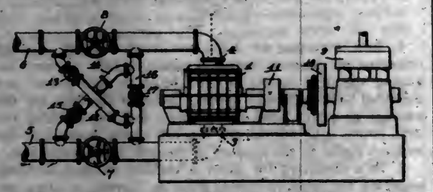


4. In a car of the class described, a central longitudinal hopper, side frames, vertically movable side sections hinged at their upper edges to said side frames, and movable floor sections hinged longitudinally over the central part of said hopper.

5. In a car of the class described, a central longitudinal hopper, side frames, vertically movable side sections hinged at their upper edges to said side frames, movable floor sections hinged longitudinally over the central part of said hopper, and means for holding said movable floor sections in raised position to leave said hopper unobstructed.

[Claims 6 to 14 not printed in the Gazette.]

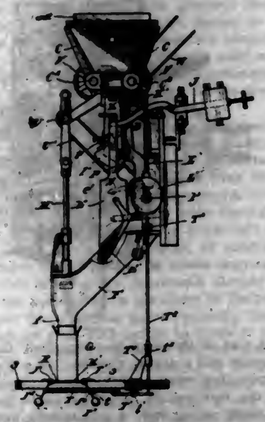
956,852. GAS-ENGINE STARTER. GEORGE C. HICKS, Jr., Connersville, Ind., assignor to The P. H. & F. M. Roots Company, Connersville, Ind. Filed Jan. 12, 1910. Serial No. 537,587.



1. Gas engine starting mechanism comprising, a gas engine, a pump connected therewith and adapted to be driven thereby, a suction-pipe connected with the inlet of the pump, a discharge pipe connected with the outlet of the pump, a valve in the suction-pipe, a valve in the discharge pipe, a first conduit placing a point in the suction-pipe between the pump and the valve in the suction-pipe in communication with the discharge-pipe at a point outwardly beyond the valve in the discharge-pipe, a second conduit placing a point in the discharge-pipe between the pump and the valve in the discharge-pipe in communication with a point in the suction-pipe outwardly beyond the valve in the suction-pipe, and a valve in each of said conduits, combined substantially as set forth, whereby pressure from the discharge-pipe may go to the inlet of the pump and cause the pump to act as a motor to temporarily drive the gas engine in normal direction.

2. Gas engine starting mechanism comprising, a gas engine, a pump connected therewith and adapted to be driven thereby, a suction-pipe connected with the inlet of the pump, a discharge-pipe connected with the outlet of the pump, a valve in the suction-pipe, a valve in the discharge-pipe, a first conduit placing a point in the suction-pipe between the pump and the valve in the suction-pipe in communication with the discharge-pipe at a point outwardly beyond the valve in the discharge-pipe, a second conduit placing a point in the discharge-pipe between the pump and the valve in the discharge-pipe in communication with the point in the suction-pipe outwardly beyond the valve in the suction-pipe, and a valve in each of said conduits, a by-pass conduit placing the suction-pipe and discharge-pipe in communication at points between their valves and the pump, and a valve in said by-pass conduit, combined substantially as set forth.

956,853. AUTOMATIC WEIGHING-MACHINE. GEORGE HOEPNER, Chicago, Ill. Filed July 20, 1908. Serial No. 444,316.



1. In a weighing machine, a weighing receptacle, means independent of the receptacle for separating from a mass of material the main portion of the load for the receptacle and forming a restricted passage to deliver a drip, and means actuated by the receptacle for admitting the main load and the drip to the receptacle and for checking the drip upon the completion of the load.

2. In a weighing machine, a weighing receptacle, a supply hopper, an auxiliary hopper, means independent of the receptacle for delivering the main portion of a load for the receptacle from the supply hopper to the auxiliary hopper and forming a drip passage between the hoppers, a discharge gate associated with said auxiliary hopper, and means on said receptacle for actuating said gate.

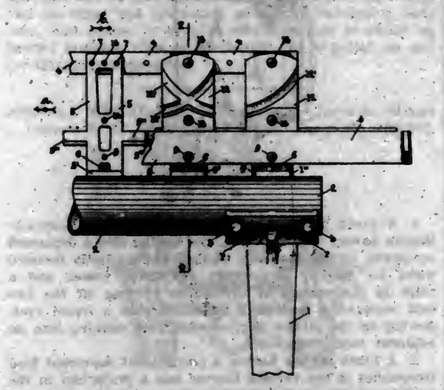
3. In a weighing machine, a weighing receptacle, a supply hopper, an auxiliary hopper, a gate between said hoppers, means for actuating said gate so as to deposit a portion of a load for the receptacle and then reduce the gate-opening to a drip passage, a discharge gate on said auxiliary hopper, and means on said receptacle for actuating said latter gate.

4. In a weighing machine, a hopper, a discharge gate associated with said hopper, said gate being constructed and arranged to assume automatically the open position and the closed position after passing a predetermined position in one direction or the other, a weighing receptacle, and a lost motion connection between said gate and said receptacle for causing the gate to be carried past said predetermined position upon the ascent and the descent of the receptacle, said connection being so arranged as to leave the receptacle free of the gate when the receptacle is in its raised position.

5. In a weighing machine, a hopper, a discharge gate associated with said hopper, said gate being constructed and arranged to assume the open and the closed positions automatically after passing a predetermined position depending upon the direction in which it approaches said predetermined position, a weighing receptacle, and means associated with said receptacle for moving said gate past said predetermined position both upon the ascent and the descent of the receptacle.

[Claims 6 to 21 not printed in the Gazette.]

956,854. LAY FOR NARROW-WARE LOOMS. ELBRIDGE R. HOLMES, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Mar. 31, 1908. Serial No. 424,403.



1. In a narrow ware loom, the combination with the lay swords provided with extensions or brackets having concave seats, of a tubular lay beam extending across the loom and secured in said concave seats, and a series of vertically extending stands each of which is provided with a foot partly encircling the upper part of the said tubular lay beam and rigidly attached thereto.

2. In a narrow ware loom, the combination with the lay swords, having a circular shaped extension or bracket thereon, and a tubular pipe secured to said extensions or brackets, of a series of vertically extending stands, each having a foot, the outer part of which extends upon a flattened surface on the upper side of said tubular pipe and is secured thereto, and the rear part of which extends into an undercut portion on the rear of said tubular pipe.

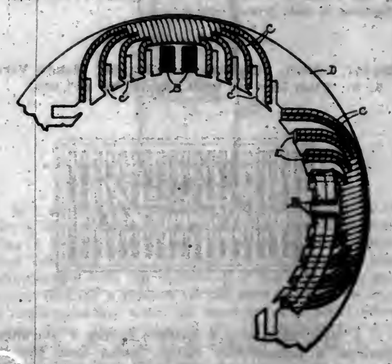
3. In a narrow ware loom, the combination with the lay swords, having a circular shaped extension or bracket thereon, and a tubular pipe secured to said extensions or brackets, of a series of vertically extending stands, each having a foot, the outer part of which extends upon a flattened surface on the upper side of said tubular pipe and is secured thereto, and the rear part of which extends into an undercut portion on the rear of said tubular pipe, and a wood bar extending upon the front side of said stands and secured thereto, for a longitudinally moving rack, and guide blocks for the swivel shuttles secured to said vertically extending stands.

956,855. DYNAMO-ELECTRIC MACHINE. FRED B. HOWELL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 14, 1907. Serial No. 397,275.

1. In a dynamo-electric machine, a core having open slots adapted to receive a distributed winding, the slots being overhung on one side only, the sides of the slots for each pole of the winding being parallel and all the slots for each pole being overhung on the same side, and a distributed polar winding in said slots, the winding for each pole comprising two sets of form-wound coils placed side by side in said slots, each set of coils being bodily removable.

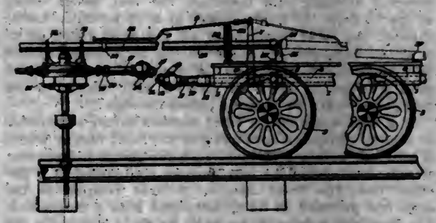
2. In a dynamo-electric machine, a core having open slots adapted to receive a distributed winding, the slots being overhung on one side only, the sides of the slots for each pole of the winding being parallel and all the slots for each pole being overhung on the same side, and a distributed winding in said slots, the winding for each pole comprising two sets of form-wound coils placed side by side in said slots, the coils of each set being bound together and bodily removable, and means for securing said sets in the slots.

3. In a dynamo-electric machine, a stator core provided with a concentrated winding and a distributed winding, the latter being carried in open slots overhung on one side only, the sides of the slots for each pole of the distributed winding being parallel and all the slots for each pole being overhung on the same side, said distributed winding comprising two sets per pole of form wound coils placed side by side in said slots, each set of coils being bodily removable.



4. In a dynamo-electric machine, a stator core provided with a concentrated winding and a distributed winding, the latter being carried in open slots overhung on one side only, all the slots for each pole of the distributed winding being overhung on the same side and the sides of the slots for each pole being parallel, said distributed winding comprising two sets per pole of form-wound coils placed side by side in the slots, the coils of each set being bound together and bodily removable.

956,856. CRANE. HENRY W. JACOBS, Topeka, Kans. Filed Nov. 23, 1908. Serial No. 464,050.



1. In a device of the character described, a movable support, a crane lever arm thereon, a power driven tool supported upon said arm, and a pivotal support for the arm upon the movable support to permit the arm to be folded backwardly on the movable support when not in use.

2. In a device of the character described, the combination of a crane lever arm, a power driven tool and a spring support to counterbalance the weight of the lever arm and tool.

3. In a device of the character described, the combination of a crane lever arm, a power driven tool supported by the end thereof, power connections for driving said tool and means supported by the crane lever arm for controlling the starting and stopping of said power connections.

4. In a device of the character described, the combination of a crane lever arm, a power driven tool supported by the end thereof, power connections for driving said tool, and a hand-operated lever supported by the crane lever arm for controlling the starting and stopping of said power connections.

5. In a device of the character described, a movable support, a crane lever arm attached thereto, a power-driven tool supported upon said lever arm, power-operating devices for said tool carried by said movable support, power connections for connecting the power-operating devices to said tool, and a hand-operated lever directly supported by the crane lever arm for controlling the starting and stopping of said power connections.

956,857. SIGN. GEORGE E. JENNINGS, Mount Vernon, N. Y. Filed May 20, 1909. Serial No. 497,163.



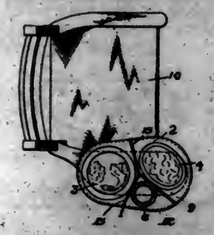
1. A sign comprising a member having a plurality of openings, a permanently visible design upon the front face of said member independent of said openings, and a rear member maintained at a distance from the front member in fixed relation to the same and provided with a design adapted to be seen through said openings and arranged in such relation to the openings in the front member as to cause apparent movement of the visible parts of the rear design when an observer passes the sign, the first named design remaining unchanged in appearance at all times from any angle of vision.

2. A sign comprising a front member provided with a plurality of similarly disposed openings, a design superimposed upon the front of said member and partially covering said openings, and a rear member maintained at a distance from the front member in fixed relation to the same and provided with a suitable design adapted to be observed through said openings, the rear design being so spaced from the front member as to be partially visible through the front openings at all angles of vision so as to cause apparent movement of the rear design behind said superimposed design by the changing relation of the solid portions of the front member with respect to the rear design when an observer passes the sign.

3. A sign comprising a front member having a plurality of similarly disposed openings and the front face of which is provided with a permanently visible design independent of said openings, and a rear member maintained at a distance from the front member in fixed relation to the same and provided on its forward face with a design having lines and spaces at an angle to the openings of the front member adapted to be seen through said openings, the lines on the rear member being partially visible through the front openings and partially obscured by the solid parts of the front member.

4. A sign comprising a front member provided with a plurality of parallel openings and solid portions located at an angle to the horizontal and provided on the front face with a permanently visible design independent of said openings, a rear member located at a suitable distance from the front member and provided with a design having substantially parallel lines and spaces located at an angle to the openings and solid portions of the front member to cause the appearance of undulating motion of the visible parts of the rear design when an observer passes the sign all parts of the sign being maintained in fixed relation to each other at all times.

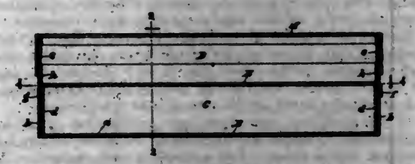
956,858. LUNCH-PLATTER. LOU B. KAUFFMANN, New York, N. Y., assignor of one-half to William S. Salway, New York, N. Y. Filed Jan. 21, 1910. Serial No. 539,407.



1. A lunch platter having a depressed food receptacle therein having inclined walls, and having also a depressed receptacle having partially vertical and partially inclined walls for holding a beverage containing vessel, and a ridge in the surface of the platter cutting off the two said receptacles from each other, whereby a liquid overflowing on the platter is prevented from running into an adjacent food receptacle.

2. A lunch platter having a plurality of depressed food receptacles in the surface thereof and a projection in the surface of the platter cutting off one of said depressed food receptacles from another, whereby a liquid overflowing on the face of the platter from one of said food holding depressions is prevented from running into another of said food holding depressions.

956,859. BOX. JACOB S. LAUTERBACH, New York, N. Y. Filed Sept. 2, 1909. Serial No. 515,856.



1. In a box of the class described the combination of a body having a weakened intermediate portion, a partition within said body, and a wire supported upon said partition adjacent to said weakened portion adapted to divide said body along said weakened portion, as and for the purpose described.

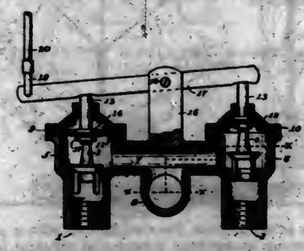
2. In a box of the class described the combination of a body, a partition within said body extending to the walls thereof so as to constitute one side of a closed compartment within said body, and a wire supported by said partition near the edges thereof said partition having one of its ends attached inside the body and its other end projecting through a body wall, said wire being adapted to cut through the body walls adjacent thereto when the outside end of said wire is pulled outwardly, substantially as and for the purpose described.

3. In a box of the class described the combination of a body provided with walls having weakened lines, a partition within said body having its edges adjacent to said weakened lines so as to form a closed compartment within said body, and a wire supported by said partition arranged between said partition edges and the body walls adapted to divide said walls along said weakened lines substantially as and for the purpose described.

4. In a box of the class described the combination of a body provided with walls having weakened lines, a partition within and attached to said walls having its edges adjacent to said weakened lines, supporting means for said partition, and a wire attached to and bordering the edges of said partition with one end of said wire outside of said box, said wire being adapted to divide said body walls along said weakened lines when pulled outwardly, substantially as and for the purpose described.

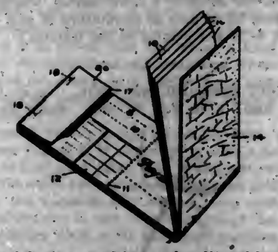
5. In a box of the class described, the combination of a body provided with walls each of which has a weakened line, said lines all lying in the same plane, a wire arranged within said body so as to be adjacent to each weakened line, one end of said wire being attached inside said body and its other end projecting outwardly through a body wall, and means to support said wire and to resist its inward pressure when its projecting end is pulled, as and for the purpose described.

956,860. MIXING-VALVE. JAMES J. LAWLER, Mount Vernon, N. Y. Filed June 1, 1908. Serial No. 436,097.



In a mixing valve, a pair of valve chambers, one of said chambers provided with a hot water inlet and the other of said chambers with a cold water inlet, means to constitute a conduit communicating with each of said chambers and provided with an outlet, each of said valve chambers provided with a valve seat, a valvular body arranged in each of said chambers and adapted to engage the seat in its respective chamber, a diaphragm extending across the top of each of said chambers and bearing against the valvular body in the chamber, a cap for closing each of said chambers, arranged above the diaphragm and securing the diaphragm in position, a stem arranged above and engaging and disconnected from each of said diaphragms, said stems extending through said caps, a pedestal formed integral with the means to constitute said conduit, and a lever fulcrumed to said pedestal and detachably engaging said stems and adapted when shifted to move the stem to adjust the valvular body, said valvular body being independent of the lever and stem whereby they can automatically act to shut off back pressure from the outlet.

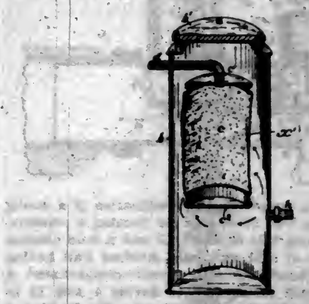
956,861. CHECK-BOOK. MARSHALL T. LEVEY, Indianapolis, Ind. Filed Dec. 30, 1909. Serial No. 535,544.



1. A check-book comprising a plurality of leaves, a back arranged beneath said leaves, a flap, composed of stiffer material than that employed in the leaves and back, forming a catch for the free ends of the leaves and back when the latter are folded over and pushed thereunder, and a fastener for securing the leaves, back and flap together.

2. A check-book comprising a plurality of leaves, a back arranged beneath said leaves, a flap, composed of stiffer material than that employed in the leaves and back, forming a catch for the free ends of the leaves and back when the latter are folded over and pushed thereunder, a fastener for securing the leaves, back and flap together, and a binder pasted around the fastened ends of the leaves, back and flap and adapted to conceal the fastener and impart a finished appearance to the book.

956,862. VACUUM DUST-REMOVER. JOHN G. MEYER, Portland, Oreg. Filed Dec. 31, 1908. Serial No. 470,262.



1. In a vacuum dust remover, the combination of a receiver, a dust filter within the receiver, said filter comprising a hollow body formed of fabric with the fibers thereof extending from the outer surface, a suction pipe communicating with the upper end of the dust filter, said pipe also forming a support for the dust receiver, an inlet pipe communicating with the receiver at a point below the dust filter, the suction of the air through the dust filter causing the latter to be vibrated to shake the accumulated dust from the fibers.

2. In a vacuum dust remover, the combination of a dust receiver provided with an inlet orifice, a dust filter within and spaced from the inner walls of the dust receiver, said filter comprising a hollow body of fabric provided with fibers extending outwardly therefrom into the space formed between the filter and receiver, a suction conduit extending through the wall of the dust receiver and into the dust filter the suction in the conduit drawing the dust from the inlet orifice toward and into contact with the extended fibers and as the latter is vibrated by the action of the air current the accumulated dust falls into the receptacle.

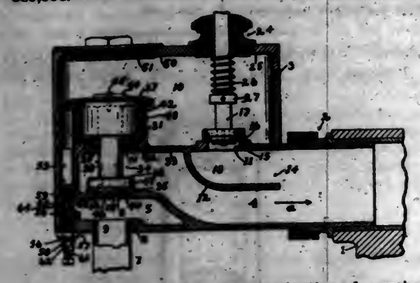
3. In a vacuum dust remover, the combination of a dust receiver provided with an inlet orifice, a dust filter suspended within the receiver, said filter comprising a hollow body of fabric having outwardly extended fibers, the filter being spaced from the walls of the receiver to provide a space entirely around said filter, a suction conduit extending into the filter, the inlet orifice being below the bottom of the filter whereby the suction of air in the conduit will draw the dust laden air in the space against the extended fibers and the vibration of the filter by the action of said air will shake the accumulated dust from the fibers.

4. In a vacuum dust remover, the combination of a receiver provided with an inlet orifice, a dust filter within and spaced from the walls of the receiver and consisting of upper and lower heads connected by a fabric body having outwardly extended fibers, means for suspending the filter in the receptacle to permit the lower head and body to vibrate under the influence of the air current and means for creating a suction from the inside of the filter to cause the dust ladened air to contact with the extended fibers, the inlet orifice being below the bottom of the filter.

5. In a vacuum dust remover, the combination of a receiver provided with an inlet orifice, a dust filter within the receiver and spaced from the walls thereof, said filter comprising a hollow body made of fabric having outwardly extended fibers, end heads having flanges over which the ends of the fabric body are secured, and a suction conduit extending through the wall of the receiver and the upper head of the filter to cause the dust ladened air to contact with the extended fibers.

[Claim 6 not printed in the Gazette.]

956,863. FLUSHING APPARATUS. PAUL S. MILLICH, Hamilton, Ohio. Filed Aug. 24, 1907. Serial No. 389,934.



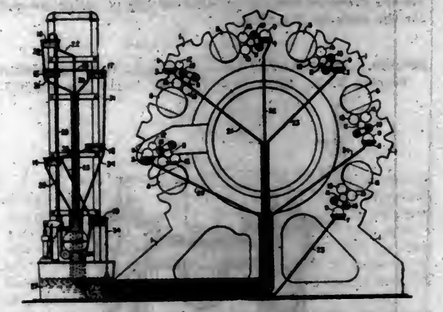
1. In a flushing apparatus, the combination of a casing having a dividing wall 33 therein for forming a pressure-compartment at one side of said wall and a fluid passage at the other side of said wall, said dividing wall having an exit-port 11 therein for said pressure-compartment, a valve therefor, said casing further having a web 12 in said fluid-passage opposite said exit-port for forming a cavity 13 opposite said exit-port which extends parallel with said fluid-passage and having a mouth 14 which opens in the directions of extension of said cavity and fluid-passage whereby the streams of water passing through said exit-port from said pressure-compartment and through said fluid-passage are directed into the same direction by contact with said web and continued in the same direction after passing said web, said fluid-passage comprising a fluid-chamber having an inlet-port, a valve therefor extending through said dividing wall and having a backing-face in said pressure-compartment of greater diameter than the diameter of said inlet-port, and a by-pass between said fluid-chamber and pressure-compartment, substantially as described.

2. In a flushing apparatus, the combination of a casing having a dividing wall 33 therein for forming a pressure-compartment at one side of said wall and a fluid-passage at the other side of said wall, said dividing-wall having an exit-port 11 therein for said pressure-compartment, said casing further having a web 12 in said fluid-passage opposite said exit-port forming a cavity 13 opposite said exit-port which is closed at its back by said web and has a mouth 14 opening toward the discharge-end of said fluid-passage, the said web, cavity and mouth being located within the longitudinal projections of the walls of the discharge-end of said fluid-passage, whereby the streams of water passing through said exit-port from said pressure-compartment and through said fluid-passage are directed into the same direction by contact with said web, said fluid-passage comprising a fluid-chamber having an inlet-port, said casing further having a by-pass between said fluid-chamber and pressure-compartment, a valve for said exit-port, a valve for said inlet-port passing through said dividing wall and having a backing-face in said pressure-compartment of greater diameter than said inlet-port, and a valve in said by-pass, said valves movable in directions parallel with each other and located in different longitudinal planes, substantially as described.

956,864. PRESS. GEORGE E. PANCOAST, Brooklyn, N. Y., assignor to American Lithographic Company, a Corporation of New York. Filed Jan. 29, 1900. Serial No. 3,100.

1. In a printing press, the combination with a plurality of distributing mechanisms arranged at different levels, of a plurality of devices located at corresponding levels for supplying said distributing mechanisms with liquid, means for furnishing an excess of liquid to one of said devices, and an overflow for carrying the excess of the liquid to a lower device, whereby a supply of liquid may be maintained in said devices.

2. In a printing press, the combination with a plurality of distributing mechanisms arranged at different levels, of a plurality of devices located at corresponding levels for supplying said distributing mechanisms with liquid, means for furnishing an excess of liquid to one of the devices, an overflow for carrying the excess of the liquid to a lower device, and an overflow for carrying an excess of liquid from said lower device, whereby a supply of liquid may be maintained in said devices at a desired level or head.



3. In a printing press, the combination with a plurality of distributing mechanisms arranged at different levels, of a plurality of devices located at corresponding levels for supplying said distributing mechanisms with liquid, means for furnishing an excess of liquid to the highest one of the devices, and an overflow for carrying the excess of liquid from each device to the next lower device, whereby a supply of liquid may be maintained in each device at a desired level or head.

4. In a printing press, the combination with a plurality of distributing mechanisms arranged at different levels, of a plurality of devices located at corresponding levels for supplying said distributing mechanisms with liquid, means for furnishing an excess of liquid to the highest one of the devices, an overflow for carrying the excess of liquid from each device to the next lower device, and an overflow for carrying away any excess of liquid from the lowest device, whereby a supply of liquid may be maintained in each device at a desired level or head.

5. In a lithographic printing press, the combination with a plurality of damping mechanisms arranged at different levels, of a plurality of devices located at corresponding levels for supplying the damping mechanisms with damping liquid, means for furnishing an excess of damping liquid to one of the devices, and an overflow for carrying the excess of the liquid to a lower device, whereby a supply of damping liquid may be maintained in said devices.

[Claims 6 to 39 not printed in the Gazette.]

956,865. HAT-REMODELING TOOL. ISAAC C. REILY, Natches, Miss. Filed Nov. 22, 1909. Serial No. 529,362.



1. A device of the class set forth, consisting of a handle whose grasping portion is set at an obtuse angle to its shank and whose shank is provided with a cylindrical pin projecting from its end, said pin being provided with a lateral lug at its extremity, and a remodeling block provided with a hole in one of its non-working faces adapted to interlock with said pin and thereby lock the block rotatably upon the end of the handle, the axis of said pin being at a right angle to said non-working face.

2. In a tool for the purpose set forth, the combination of a handle having a cylindrical pin projecting from its end, a block having an approximately crescent shape, with its outer wall flat and its inner wall rounded inwardly and downwardly, said block having a hole in its non-working face for the reception of said pin, means for locking the pin removably and rotatably in said hole, the axis of said pin extending in the same general direction as the working faces of the block.

956,866. STOP-COCK. ZEPHANIAH L. SAULT, Somerville, Mass. Filed Aug. 28, 1909. Serial No. 515,074.



1. A stop cock comprising a casing having a longitudinal passage and a transverse socket, a plug valve contained in said socket and having a transverse aperture adapted to aline with said passage, said valve being tapered and in threaded engagement with the socket, whereby in being turned it is respectively withdrawn from and forced into tight engagement with the enveloping walls of the socket, a flange on the valve outside of said casing and an elastic impervious washer contained between the casing and said flange, said washer being compressed by the endwise movement of the valve due to the threaded engagement thereof with the socket, when turned so as to close the passage, whereby leakage past the valve to the exterior of the casing is prevented.

2. A non-leaking stopcock comprising a casing having a longitudinal passage, a plug valve set into said casing transversely of the passage and provided with a projecting stem, a washer surrounding said stem and a head on said stem between which and the casing said washer is contained, the valve being in threaded engagement with the casing, whereby in turning it to close the cock, said washer is compressed and leakage around the valve stem is prevented.

3. A stopcock comprising a casing, a plug valve contained therein and having a projecting stem, said valve being in threaded engagement with the casing, so that in being closed it is moved into the latter, a head upon the outer end of the valve stem and a resilient washer between said head and the casing, said washer being sufficiently resilient to take up the end motion of the valve when being closed or opened.

4. A stopcock having a plug valve threaded therein, so that in being turned it is moved in or out, a head on the projecting end of said valve, and a resilient washer surrounding said stem, and compressed between said head and the body of the stopcock, said washer being sufficiently resilient to permit the in and out movement of the valve and to pack the latter when in its outermost position.

956,867. FILLING-MACHINE. FRANK C. H. STRASBURGER, Chicago, Ill., assignor to Bottlers Machinery Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 2, 1909. Serial No. 510,878.

1. In a counter-pressure filling machine, the combination of a liquid tank, a liquid valve, a diaphragm connected to said valve, said diaphragm being subjected on one side thereof to the pressure in the tank, and means for supplying a counter-pressure to the bottle and at the same time opening communication to supply sufficient pressure on the other side of the diaphragm to counter-balance the said pressure in the tank and permit the valve to open.



2. In a counter-pressure filling machine, the combination of a liquid tank, a filling tube depending from the tank, a casing on the tank surrounding the filling tube, an air inlet in the casing, a spring-pressed valve in the casing normally closing said air inlet, a sleeve surrounding said filling tube and rigid with the air valve, an air passage between the filling tube and the air valve, a port in the sleeve, a liquid valve, a diaphragm connected to said liquid valve, said diaphragm being subjected on one side thereof to the pressure in the tank, and means for raising said air valve to admit pressure from the air inlet through the port and the passage between the air valve and filling tube to counter-balance the tank pressure on the diaphragm and open the liquid valve.

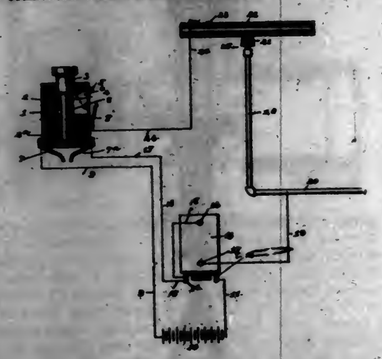
3. In a counter-pressure filling machine, the combination of a liquid tank, a filling tube depending from the tank, a casing on the tank surrounding the filling tube, an air inlet in the casing, a spring-pressed valve in the casing normally closing said air inlet, a sleeve surrounding said filling tube and rigid with the air valve, an air outlet passage between the sleeve and the filling tube, another air outlet passage between the sleeve and the casing, a port in the sleeve, a head on the sleeve, a centering bell on the filling tube, an air passage between the filling tube and the bell, a liquid valve, a diaphragm connected to said liquid valve, said diaphragm being subjected on one side thereof to the pressure in the tank and said bell being movable vertically to engage said head and unseat the air valve to admit counter-pressure to the bottle and a counter-balancing pressure on the diaphragm to open the liquid valve.

4. In a counter-pressure filling machine, the combination of a liquid tank, a casing on the tank, a filling tube depending from the tank and through said casing, a liquid valve at the lower end of the tube, a rod fastened to the liquid valve and extending up through the tube into the tank, a pressure controlled diaphragm within the tank for operating the rod, an air inlet in the casing, an air valve within the casing to close said inlet, a sleeve on the filling tube extending down from the air valve through the casing, an air passage between the sleeve and filling tube and extending up between the air valve and filling tube, an air passage between the sleeve and the casing, and a port connecting the passages.

956,868. GAS-FIRE-LIGHTING DEVICE. CHARLES C. VAIL, Columbus, Ohio. Filed Mar. 11, 1909. Serial No. 482,660.

1. In a gas heater igniting device, the combination with a button of non-conducting material, a spring actuated

contact pin working through said button and normally elevated, and a contact arm projecting laterally from said pin and extending through a slotted opening in said button, of a contact strip connected with said button below said slot, and normally separated contact strips below said button and adapted to be engaged by said pin, and a wire connected with each of said strips.



2. In a gas heater igniting device, the combination with a button body, comprising a spring actuated contact pin adapted to be projected through said button against the tension of said spring, contact members adapted to be connected by said pin when said pin is projected, a contact strip, an arm projecting from said pin, a gas burner, a pipe leading thereto, an induction coil, a battery, wires leading from the first named contact members respectively through said battery to the terminals of the primary winding of the induction coil, a connection between one terminal of the secondary winding of the coil and one of the primary winding terminals of said coil, a connection between the remaining secondary winding terminal and said gas pipe, a wire leading from a point adjacent said gas terminal to the contact strip, and a platinum point on said burner near the terminal of said last mentioned wire.

956,869. SEWING-CLAMP. GARRY P. VAN WYE, New York, N. Y. Filed Jan. 18, 1908. Serial No. 411,547.



1. A sewing clamp comprising two clamping members one of which is adapted to secure the device to a support and the other to hold the sewing, or material, one of said clamping members being pivotally mounted on the other, and means to lock the pivotally mounted member on the other in different positions.

2. A sewing clamp comprising two clamping members, one of said clamping members being adapted to secure the device to a support, and the other being adapted to hold the material or sewing, said members being pivotally connected, one of said members having engaging means, and the other member having a plurality of oppositely disposed engaging means equally distant from said pivotal connection whereby said members may be locked together in different positions.

3. A sewing clamp comprising two clamping members, one of said clamping members being adapted to secure the device to a support, and the other clamping member being adapted to hold the material, or sewing, one of said members having a projection, and the other member having a plurality of cavities, said projection and cavities being so disposed that the cavities may be engaged successively by said projection.

4. A sewing clamp comprising two longitudinal plates pivotally connected to a support, a sliding sleeve on said plates serving to draw the clamping ends of said plates together and assisting the pivotal connection in holding the plates parallel, and means to lock said plates in different positions on said support.

5. A sewing clamp comprising two longitudinal plates pivotally connected to a support, a sliding sleeve on said plates adapted to force the clamping ends together and hold said plates parallel, one of said plates being thicker than the other, and means to lock said plates in different positions on said support.

[Claims 6 to 9 not printed in the Gazette.]

956,870. REFRACTORY WATERPROOF INSULATING COMPOUND. WILLIAM H. WRIGHT and JOSEPH HOFFMAN, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed Sept. 4, 1903. Serial No. 172,009.

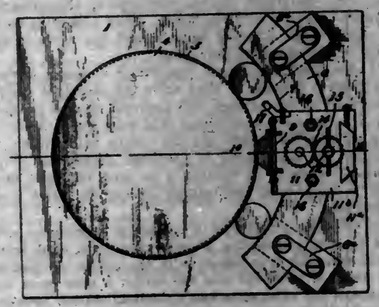
1. An insulating compound, consisting of soapstone, a refractory adulterant, and slightly fused cryolite.

2. An insulating compound, consisting of soapstone, clay and slightly fused cryolite.

3. An insulating compound, consisting of soapstone, clay and cryolite, ground, moistened, mixed, compressed and fired sufficiently to slightly fuse the cryolite.

4. An artificial stone consisting of ground soapstone, a refractory adulterant, and cryolite fused sufficiently to bind the ingredients together but without destroying the physical characteristics of the soapstone.

956,871. BLANK-TRIMMING MACHINE. ALFRED W. AINSWORTH, SAMUEL J. PUTNAM, and KARL A. EDSTROM, Denver, Colo. Filed Feb. 25, 1908. Serial No. 417,744.



1. The combination with a milling former and its shoe, forming a run-way for a blank, of cutters located on each side of the runway and adapted to remove metal up-set by the former and shoe.

2. The combination with a milling former and its shoe, forming a run-way for a blank, of cutters located on each side of the run-way and rigidly connected together and free to move together transversely to the run-way, for removing metal up-set by the former and shoe.

3. The combination with a milling former and its shoe, forming a run-way for a blank, of elongated double edge cutters located on each side of the run-way, and adapted to remove metal up-set by the former and shoe.

4. The combination with a milling former and its shoe, forming a run-way for a blank, of elongated double edged cutters located on each side of the run-way, and rigidly connected together and free to move together transversely to the run-way, for removing metal up-set by the former and shoe.

5. In combination with a milling disk and its fixed shoe, forming a run-way for a blank, of a frame consisting of two parts, cutters carried by each part of the frame and on opposite sides of the run-way and means for causing the two parts of the frame to approach and recede from the plane of the run-way in unison.

[Claims 6 to 8 not printed in the Gazette.]

956,872. FISH-BAIT. FRANKLIN A. ALGER, Grand Rapids, Mich. Filed Apr. 26, 1909. Serial No. 492,847.



1. A fish bait, comprising a body adapted to normally float at the surface of water, an integral U shaped plate embracing the front of the body, an eye in the front end of the body to which the middle of the plate is attached, and arms detachably securing the ends of the plate to the opposite sides of the body, and also adapted to attach hooks to the body.

2. A fish bait, comprising a fish shaped body, an eye inserted in the front end of the body, a U shaped integral plate embracing the front end of the body, an upwardly projecting eye on the front of the plate through which the shank of the first named eye extends, and detachable fastenings at the respective sides of the body engaging and supporting the rear ends of the plate in fixed upwardly and rearwardly inclined relation to the body.

3. A fish bait, comprising a fish-shaped body, an arm rotative in the body and projecting therefrom, a hook having an eye to receive the arm, and a plate engaged by the end of the arm to detachably secure the hook thereon.

4. A fish bait, comprising a body having arms rotatively inserted in its sides, an inclined plate detachably connected to the arms and supported thereby at the rear, and a screw to adjust and support the front of the plate.

5. A fish bait, comprising a fish-shaped body, arms pivoted in the sides of the body and extending forward and upward, a U-shaped plate having openings engaged by the arms, an eye on the forward part of the plate, and a screw inserted in the eye to support and hold the plate.

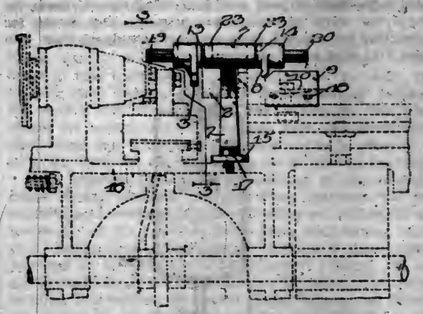
[Claim 6 not printed in the Gazette.]

956,873. LAWN-MOWER SHARPENER. HARRY R. ATWATER, Cleveland, Ohio, assignor to The Osborn Manufacturing Co., Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 30, 1905. Serial No. 276,389.



In a lawn mower sharpener, the combination with a handle of general tubular form split longitudinally along one side and having two projecting lips, one on each side of the opening thus provided, each lip being provided with an offset extending throughout its length; of an abrasive tool fitted in said offsets and removably secured between said lips, the inner surfaces of said lips respectively, being of complementary helical contour and forming a continuous helical guideway between the lips from end to end of the handle, whereby the face of said abrasive tool is at all times presented at an unvariable angle to a lawn mower blade as said sharpener is moved thereabout, and means for drawing said lips together to retain said tool in place therebetween.

956,874. STOCK-STOP FOR AUTOMATIC SCREW-MACHINES AND THE LIKE. CLARENCE B. ATWOOD, Belvidere, Ill., assignor to National Sewing Machine Company, Belvidere, Ill., a Corporation of Illinois. Filed Oct. 1, 1908. Serial No. 455,697.



1. In a device for the purpose described, the combination with stock-holding means and a tool carriage mounted on the same axis therewith, of a stop movable on an axis parallel to the first said axis, and means operated by the tool carriage for moving said stop into and out of line with the stock.

2. In a device for the purpose described, the combination with stock-holding means and a tool carriage mounted on the same axis therewith, of a stop oscillatable on an axis parallel to the first said axis, and means operated by the tool carriage for oscillating said stop into and out of line with the stock.

3. In a device for the purpose described, the combination with stock-holding means, of a tool carriage movable axially toward and away from said stock-holding means, a stop oscillatable on an axis parallel to the axis of said tool carriage, and means reciprocated by the tool carriage for moving said stop into and out of line with the stock.

4. In a device for the purpose described, the combination with a stock holding means rotatable on an axis and a reciprocable tool carriage, of a stop oscillatable on an axis parallel to the first said axis, an arm mounted to swing about the oscillating axis of said stop, said arm being adjustable axially but held against relative angular movement with respect to said stop, and means rigidly mounted on said carriage for oscillating said arm.

5. In a device for the purpose described, the combination with a head stock adapted to hold work to be operated upon, and a tail stock adapted to carry a tool for operating upon said work, said stocks being suitably mounted to provide a relative movement toward and away from each other, of a stop movable on an axis parallel to the line of said relative movement, and means operated by one of said stocks for moving said stop into and out of line with the work.

[Claims 6 and 7 not printed in the Gazette.]

956,875. FLUSHING DEVICE. FOSTER W. BASSETT and WILLIAM A. HUNTER, Jr., Los Angeles, Cal. Filed Apr. 12, 1909. Serial No. 489,535.

1. In a flushing apparatus, an annular water chamber, a casing connected with the lower end thereof, a central valve chamber surrounded by the annular water chamber, a valve normally closing communication between the water chamber and said casing, a tank for supplying water to the water chamber, means for elevating said valve into the central valve chamber to permit water to flow from the water chamber into the said casing, and means for producing a partial vacuum in the central valve chamber to hold said valve from its seat.

2. In a flushing apparatus, an annular water chamber, a casing connected with the lower end thereof, a central valve chamber surrounded by the annular water chamber, a valve normally closing communication between the water

chamber and said casing, a tank for supplying water to the water chamber, means for elevating said valve into the central valve chamber to permit water to flow from the water chamber into the said casing, means for producing a partial vacuum in the central valve chamber to hold said valve from its seat, said tank being closed, means for supplying water thereto under pressure, and means for admitting air to said tank as the water flows from said tank into said water chamber.



3. In a flushing apparatus, an annular water chamber, a casing connected with the lower end thereof, a central valve chamber surrounded by the annular water chamber, a valve normally closing communication between the water chamber and said casing, a tank for supplying water to the water chamber, means for elevating said valve into the central valve chamber to permit water to flow from the water chamber into the said casing, means for producing a partial vacuum in the central valve chamber to hold said valve from its seat, said tank being closed, means for supplying water thereto under pressure, means for admitting air to said tank as the water flows from said tank into said water chamber, and means for admitting air to said casing below said valve.

4. In a flushing device, a central valve chamber, an annular water chamber surrounding the valve chamber, a series of longitudinal air passages extending along the wall of said valve chamber, the upper ends of the air passages being in communication with the upper part of the valve chamber, the lower ends of said air passages extending to the bottom of the valve chamber, a casing at the lower end of the water chamber, a valve normally closing communication between said casing and said water chamber, means for mechanically lifting said valve into the central valve chamber to permit water to flow from the water chamber into the casing and produce a suction through the air passages tending to hold said valve elevated in the central valve chamber.

5. In a flushing device, a central valve chamber, an annular water chamber surrounding the valve chamber, a series of longitudinal air passages extending along the wall of said valve chamber, the upper ends of the air passages being in communication with the upper part of the valve chamber, the lower ends of said air passages extending to the bottom of the valve chamber, a casing at the lower end of the water chamber, a valve normally closing communication between said casing and said water chamber, means for mechanically lifting said valve into the central valve chamber to permit water to flow from the water chamber into the casing and produce a suction through the air passages tending to hold said valve elevated in the central valve chamber, a closed tank for delivering water to the water chamber, means for supplying water under pressure to said tank, a guide at the upper end of said tank, a valve stem slidable in said guide, an air valve frictionally slidable on said stem and normally closing an air opening in said tank, and a float valve carried on said valve stem for operating the latter.

[Claims 6 to 10 not printed in the Gazette.]

956,876. FILLING-MACHINE. CHARLES L. BASTIAN, Chicago, Ill., assignor to Bottlers Machinery Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 11, 1907. Serial No. 351,761.



1. In a filling machine, the combination of a filling tube, a sleeve loosely mounted on said tube and movable thereon with the bottle while the bottle is being adjusted in filling position prior to the admission of the liquid thereto, said sleeve being adapted to extend into the bottle to provide a passage independent from the fluid passage to permit the escape of air or gas from the bottle while being filled, and a guide-bell for the bottle carried by and movable on the sleeve and with the sleeve on the filling tube.

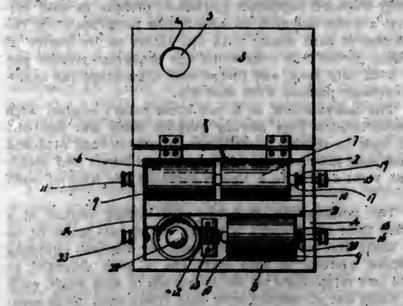
2. In a filling machine, the combination of a filling tube, a head on the tube, a sleeve loosely mounted on said tube and movable thereon with the bottle between the lower end of the tube and the head while the bottle is being adjusted in filling position, said tube opening into the bottle at a point remote from the end of said sleeve and said sleeve being adapted to extend into the bottle and permit the escape of air or gas therefrom while being filled, and a guide-bell for the bottle carried by and movable on and with the sleeve.

3. In a filling machine, the combination of a filling tube, a sleeve loosely mounted on said tube and movable thereon with the bottle while the bottle is being adjusted in filling position, said sleeve being adapted to extend into the bottle and permit the escape of air or gas therefrom while being filled, a collar on the upper end of the sleeve, a peripheral flange at the lower end of the sleeve, and a guide-bell for the bottle movable on the sleeve between said collar and flange and movable with the sleeve on the filling tube.

4. In a filling machine, the combination of a filling tube, a head on said tube, a collar at the lower end of the tube, a sleeve loosely mounted on the tube and movable thereon between the head and said collar while the bottle is being adjusted in filling position, said sleeve being adapted to extend into the bottle and permit the escape of air or gas therefrom while being filled, a collar on the upper end of said sleeve, a peripheral flange at the lower end of said sleeve, and a guide-bell movable on and with the sleeve and relatively thereto between said collar and flange.

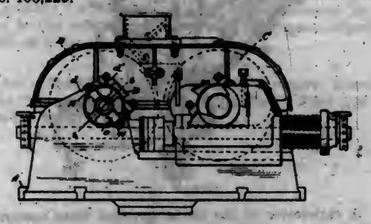
5. In a filling machine, the combination of a liquid tank, a filling tube, a liquid valve, a head on said tube, an air connection between the tank and said head, a sleeve loosely mounted on the tube and movable thereon while the bottle is being adjusted in filling position and having an air passage therethrough to connect with the air connection in the head, said sleeve being adapted to extend into the bottle and permit the escape of air or gas therefrom while being filled, and a guide-bell on the sleeve and movable therewith and relatively thereto.

956,877. TESTER FOR ELECTRIC BLASTING-FUSES. FRANCIS BRATTIN, Leete Island, Conn. Filed Feb. 23, 1909. Serial No. 479,424.



A tester for electric blasting fuses comprising a box, a bracket in said box, a battery cell between said bracket and one end of the box, an electric lamp between said bracket and the other end of said box, a pair of batteries opposite said light and battery, connections for the batteries at one end of the box, and binding posts at the opposite end in connection with said light and batteries, whereby when the circuit is closed, said lamp will be lighted and the electric current regulated.

956,878. CRUSHING-ROLL. RICHARD BERNHARD, Milwaukee, Wis., assignor to Power and Mining Machinery Company, Cudahy, Wis. Filed Dec. 12, 1907. Serial No. 406,229.



1. In crushing rolls, the combination of the machine frame, a roll shaft, an annular bearing shell rigidly secured to the frame and having oppositely facing bearing surfaces, and a thrust-collar adjustably secured on the shaft between the said oppositely facing bearing surfaces, said collar having a part exposed to the exterior of said shell, whereby said collar may be engaged and adjusted inwardly or outwardly with respect to the shaft, substantially as set forth.

2. In crushing rolls, the combination of the machine frame, the roll shaft, the anular bearing shell rigidly secured to the frame and having oppositely facing bearing surfaces, the adjustable thrust-collar secured by screw-threads on said shaft between said oppositely facing surfaces, and means for locking the collar in adjusted position, said collar having a part exposed to the exterior of said shell, whereby the collar may be engaged and turned forward or backward to effect longitudinal adjustment of the shaft, substantially as set forth.

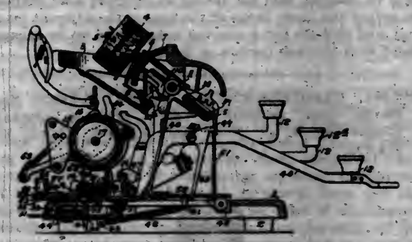
3. In crushing rolls, the combination of the machine frame, the roll shaft, the anular bearing shell rigidly secured to the frame and having oppositely facing bearing surfaces, an adjustable thrust-collar secured by screw-threads on said shaft between said oppositely facing surfaces, and means for locking the collar in adjusted position, said collar having a hub extension projecting to the exterior of the shell and adapted to be engaged and turned forward or backward to effect a longitudinal adjustment of the shaft, substantially as set forth.

4. In crushing rolls, the combination of the machine frame having sectional roll-supporting bearings, a roll shaft in said bearings, the thrust-collar on the shaft, the bearing shell having oppositely facing bearing surfaces to receive the thrust-collar, and releasable fastening means for holding the shell against axial movement, said shell being free when said fastening means is released to be lifted with the roll shaft from its supporting bearings.

5. In crushing rolls, the combination of the machine frame having sectional roll-supporting bearings, the roll shaft in said bearings, the thrust-collar on said shaft adjacent one of the bearings, the bearing shell having oppositely facing bearing surfaces to receive said thrust-collar mounted on an end face of the adjacent bearing, the engaging surfaces of the shell and bearing being constructed to allow free vertical movement of the former, and fastening means to detachably secure the shell rigidly to the bearing, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

956,879. TYPE-WRITING MACHINE. GEORGE C. BLICKENSDERFER, Stamford, Conn. Filed Aug. 8, 1907. Serial No. 387,608.



1. In a typewriting machine, the combination with a carriage having feeding means thereon, of a coöperating feeder, means whereby said feeder may be caused to engage with and be disengaged from the means on the carriage, and may be given a step-by-step advancing means to positively feed the carriage during the printing operation, and means whereby said step-by-step advancing movement of the feeder may be caused to occur in either direction whereby the machine is capacitated to write in either direction.

2. In a typewriting machine, the combination with a carriage having a rack, of a coöperating feeding block, means whereby said block may be caused to engage with and be disengaged from the carriage and may be given a step-by-step advancing movement to positively feed the carriage during the printing operation, and means whereby said step-by-step advancing movement of the block may be caused to occur in either direction whereby the machine is capacitated to write in either direction.

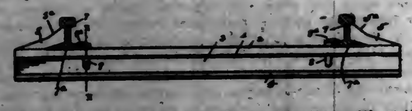
3. In a typewriting machine, the combination with a carriage, of a type mechanism, a bank of keys, a spacer, a carriage operating spring, means whereby the operation either of a key or the spacer places the spring under operating tension, carriage advancing means operated by the spring, and means whereby the spring may be caused to advance the carriage in either direction.

4. In a typewriting machine, the combination with a carriage, of a removable type mechanism, a bank of keys, a spacer, a carriage operating spring, means whereby the operation either of a key or the spacer places the spring under operating tension, carriage advancing means operated by the spring, and means whereby the spring may be caused to advance the carriage in either direction.

5. In a typewriting machine, the combination with a carriage, of a type mechanism, a bank of keys, a spacer, a carriage operating spring, means whereby the operation either of a key or the spacer places the spring under operating tension, a feeder actuated by the spring, and means including a cam whereby the spring may be caused to actuate the feeder to move the carriage in either direction.

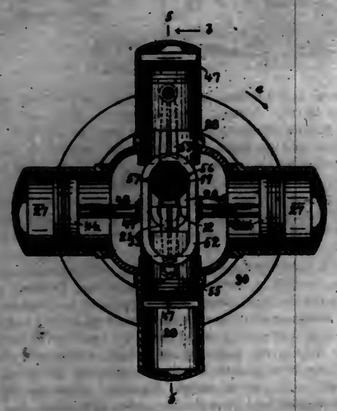
[Claims 6 to 15 not printed in the Gazette.]

956,880. RAILWAY-TRACK CONSTRUCTION. JOSEPH W. BLOWER, Columbus, Ohio. Filed Jan. 17, 1910. Serial No. 538,358.



In a railway construction, the combination with a tie body comprising a section of track rail, a brace member welded to the upper side of said tie at each end thereof, said brace member having an inwardly extending and upwardly inclined portion, said tie rail having a pin receiving opening formed through its head portion and extended into its web, of a track rail of T form having a flanged base as shown, said track rail adapted to be supported upon said tie and to have one of its flanges engage the recess beneath the inwardly extending portion of said tie brace member, and a locking pin adapted to be driven into said tie opening, said pin having an enlarged head adapted to engage the inner flange of the base of the adjacent track rail, and said pin being adapted to be spread by its engagement with the web portion of the tie rail.

956,881. GASOLENE-ENGINE. JOHN C. BONNETT, New Haven, Conn., assignor to Taylor, Stiles & Company, Riegelsville, N. J. Filed Mar. 5, 1909. Serial No. 481,300.



1. A rotary engine comprising a fixed crank-shaft, a rotary crank-case on said shaft and provided with a plurality of charging and explosion cylinders, the two types of cylinders being separate from and independent of each other, pistons in said cylinders, a member mounted to rotate and reciprocate on the crank-pin, piston-rods connecting certain of said pistons with said member, and piston-rods connecting certain others of said pistons with said pin.

2. A rotary engine comprising a fixed crank-shaft, a rotary crank-case mounted on said shaft and provided with alternately-arranged charging and explosion cylinders, pistons in said cylinders, and connecting means between said pistons and the crank-pin of said shaft, such means comprising a member mounted to rotate and reciprocate on the crank-pin, piston-rods connecting the charging-cylinder pistons with such member, and piston-rods connecting the explosion-cylinder pistons with said pin, and being arranged and adapted to reach a perfectly balanced condition in every 90° of revolution, whereby an approximately perfectly balanced condition of the engine obtains at each degree of revolution.

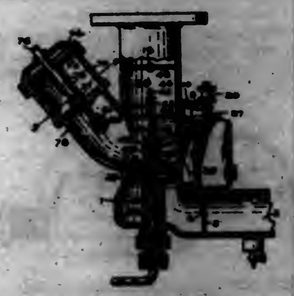
3. The combination, in a rotary engine, of a fixed crank-shaft, a rotary crank-case mounted on such shaft and provided with oppositely-disposed charging cylinders and oppositely-disposed explosion cylinders, pistons in said cylinders, a yoke mounted to rotate and reciprocate on the crank-pin of said shaft, with the latter as its center of rotation, piston-rods connecting the charging-cylinder pistons with said yoke, and piston-rods connecting the explosion-cylinder pistons with said pin.

4. The combination, in a two cycle rotary engine, with a double-banded yoke having parallel sides and semi-circular ends to receive a crank-pin, of piston-rods attached to said yoke intermediate of its ends and bands and standing at right-angles to a line connecting the axes of such ends.

5. The combination, in a two-cycle rotary engine, of a vertical fixed crank-shaft, a rotary crank-case mounted on such shaft and provided with oppositely-disposed charging cylinders, pistons in said cylinders, a yoke mounted to rotate and reciprocate on the crank-pin of said shaft, such yoke being out of contact with said crank-case, rings separated by balls between said yoke and pin, and piston-rods connecting the charging-cylinder pistons with said yoke.

[Claims 6 to 27 not printed in the Gazette.]

956,882. FLOATLESS CARBURETER. MARTIN C. BAIGHT, Indianapolis, Ind., assignor of one-half to Charles W. Meikel, Indianapolis, Ind. Filed July 23, 1908. Serial No. 444,955.



1. A carbureter of the above specified class comprising a body portion provided with a primary and secondary air intake and a gas outlet port, an auxiliary oil reservoir arranged adjacent to said body, a valve to admit oil to said reservoir, an oil spraying valve communicating with said oil reservoir, means adapted to maintain a uniform oil level within said oil reservoir, a throttle valve within both the primary and secondary air intakes, means for applying tension on the valve in the secondary air intake, a throttle valve within the gas outlet port, and a single means for imparting synchronical movement to actuate the aforesaid oil admission valve, the valve in the primary air intake, the valve in the said gas outlet port, and to relax the tension on the valve in the secondary air intake.

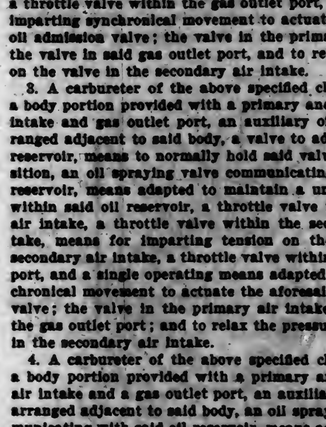
2. A carbureter of the above specified class comprising a body portion provided with a primary and secondary air intake and a gas outlet port, an auxiliary oil reservoir arranged adjacent to said body, a valve to admit oil to said reservoir, an oil spraying valve communicating with said oil reservoir, means adapted to maintain a uniform oil level within said oil reservoir, a throttle valve within both the primary and secondary air intakes, means for imparting tension on the valve in the secondary air intake, a throttle valve within the gas outlet port, and a single operating means adapted to impart synchronical movement to actuate the valve in the primary air intake, the valve in the primary air intake; the valve in the gas outlet port; and to relax the tension on the valve in the secondary air intake.

3. A carbureter of the above specified class comprising a body portion provided with a primary and secondary air intake and gas outlet port, an auxiliary oil reservoir arranged adjacent to said body, a valve to admit oil to said reservoir, means to normally hold said valve in closed position, an oil spraying valve communicating with said oil reservoir, means adapted to maintain a uniform oil level within said oil reservoir, a throttle valve in the primary air intake, a throttle valve within the secondary air intake, means for imparting tension on the valve in the secondary air intake, a throttle valve within the gas outlet port, and a single operating means adapted to impart synchronical movement to actuate the aforesaid oil admission valve; the valve in the primary air intake; the valve in the gas outlet port; and to relax the pressure on the valve in the secondary air intake.

4. A carbureter of the above specified class comprising a body portion provided with a primary and a secondary air intake and a gas outlet port, an auxiliary oil reservoir arranged adjacent to said body, an oil spraying valve communicating with said oil reservoir, means adapted to maintain a uniform oil level within said reservoir, a throttle valve arranged within both the primary and secondary air intakes, means for imparting tension on the valve in the secondary air intake, and a single operating means adapted to actuate the throttle valve in said primary air intake, and relax the pressure on the valve in the secondary air intake.

5. A carbureter of the above specified class comprising a body portion provided with a primary and a secondary air intake and a gas outlet port, an auxiliary oil reservoir arranged adjacent to said body, an oil spraying valve communicating with said oil reservoir, means adapted to maintain a uniform oil level within said oil reservoir, a throttle valve arranged within both the primary and secondary air intakes, means for imparting tension on the valve in the secondary air intake, a single operating means adapted to impart synchronical movement to actuate the valve in the primary air intake, and to relax the pressure on the valve in the secondary air intake, and means adapted to return said throttle valves to normal.

956,883. HANDLE FOR OIL-CANS. JOSEPH BOOTHBY and CHARLES A. BROWN, Marietta, Ohio. Filed Apr. 22, 1909. Serial No. 491,532.



1. The combination with an oil can having a nipple, and a discharge spout removably connected to said nipple, of a handle to which the can is pivotally connected, a rod slidably mounted on the handle, a bracket arm having an opening in which the aforesaid nipple is received, and a pivotal connection between said bracket arm and the rod.

2. The combination with an oil can having a nipple, and a shouldered discharge spout removably connected to the nipple, of a handle to which the can is pivotally connected, a rod slidably mounted on the handle, a bracket arm mounted on the aforesaid nipple below the shoulder of the discharge spout, and a pivotal connection between said bracket arm and the rod.

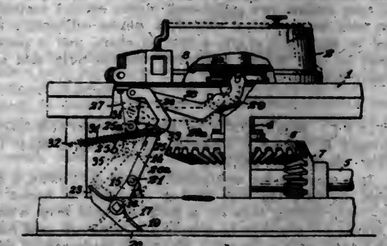
956,884. INNER TUBE FOR PNEUMATIC TIRES. JOHN H. BROWN, West Hoboken, N. J., assignor to Brown Perfection Tube Company. Filed Nov. 24, 1909. Serial No. 529,738.



1. In combination, a restraining casing, an inflatable tube within the casing and a substantially non-yielding strip of material permanently secured to the inflatable tube along peripheral lines spaced apart, the portion of the inflatable tube between said peripheral lines being normally in a non-compressed condition and having a greater normal width than the width of the non-yielding material between said lines and adapted to be forced into the circumferential plane of the tube when the tube is inflated.

2. In combination, a restraining casing, an inflatable tube within the casing, a substantially non-yielding strip of material permanently secured to the inflatable tube along peripheral lines spaced apart and a strip of yielding material secured at its edges along peripheral lines exterior to the strip of non-yielding material, the portion of inflatable tube between said peripheral lines and the portion of yielding strip between its lines of attachment both having a greater normal width than the width of the non-yielding material between said lines and adapted to be forced into circumferential planes on the outer and inner sides of the non-yielding strip when the tube is inflated.

956,885. WIRE-DRAWING MACHINE. ELBERT H. CARROLL, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Aug. 30, 1909. Serial No. 515,262.



1. In a wire drawing machine comprising a rotatable wire drawing block, a driving mechanism and clutch members between said driving mechanism and said rotatable block, of mechanism for separating said clutching members, comprising a foot treadle and a toggle-joint connection between the foot treadle and the clutching mechanism.

2. The combination with a rotatable wire drawing block, of clutching members for connecting said block with

the driving power, and mechanism for disconnecting said clutching members, comprising a toggle-joint, and means for throwing the members of said toggle-joint past their centers at will.

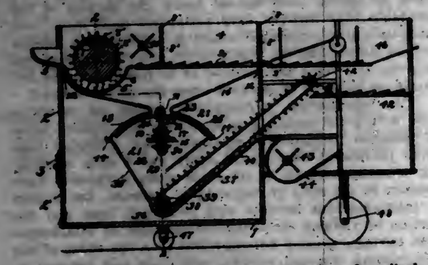
3. The combination with a wire drawing block and a clutching mechanism between said block and the driving power, of mechanism for engaging and disengaging said clutching mechanism, consisting of a swinging yoke, a rocking shaft provided with a foot treadle, and a toggle-joint connection between said rocking shaft and said yoke.

4. The combination with a rotatable wire drawing block and a clutching mechanism for connecting said block with the driving power, of clutch disengaging mechanism comprising a toggle-joint, means for throwing the members of said toggle-joint past their centers at will, and a spring with its tension applied to actuate said toggle-joint in disengaging said clutching mechanism.

5. The combination with a rotatable wire drawing block and a clutching mechanism for connecting said block with the driving power, of a clutch disengaging mechanism, consisting of a swinging yoke, a rocking shaft provided with a foot treadle, a toggle-joint connection between said yoke and said rocking shaft, and a spring with its tension applied to actuate said toggle-joint connection in disengaging said clutching mechanism.

[Claims 6 to 9 not printed in the Gazette.]

956,886. CLOVER-HULLER. JOHN W. CLUTTER, Rockford, Ohio. Filed Aug. 10, 1909. Serial No. 512,138.

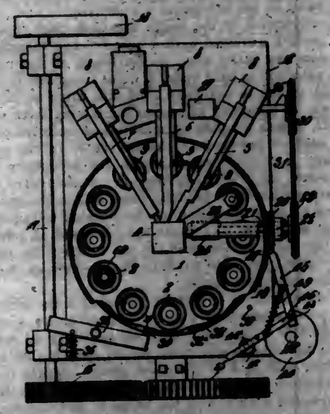


The combination in a machine of the class described, of a hopper having a centrally disposed discharge opening, a dome-shaped rasp casing surrounding said discharge opening, a supporting bar held below said rasp casing, a bearing carried by said bar, adjusting screws carried by said bearing, a stub shaft passing through said bearing having an extending collar, a bearing plate loosely carried by said shaft and resting upon said screws, a hollow semi-spherical rubber having a rasp surface for coaction with said rasp casing, two spiral feed blades carried centrally upon said semispherical rubber, a pinion adjustably secured to said stub shaft, a driving shaft, and a pinion carried by said driving shaft for coaction with said adjustably held pinion.

956,887. MACHINE FOR MAKING BOTTLE-CAPS. ROBERT B. COCHRAN, Charlotte, N. C. Filed Mar. 11, 1909. Serial No. 482,723.

1. In a machine for making bottle caps or crowns, a rotatable die carrying disk having a peripheral series of gear teeth, feeding rolls for a strip of metal from which the blanks for the caps or crowns are to be cut, said rolls having their axes of rotation above and substantially parallel with the plane of the active face of the disk, common connections between the rolls for their simultaneous actuation, and a gear wheel connected to one of the rolls and engaging the gear teeth on the periphery of the die carrying disk.

2. In a machine of the character described, a rotatable die carrying disk having a peripheral series of gear teeth, two spaced parallel shafts each carrying a feed roller and having their longitudinal axes above and parallel with the plane of the active face of the disk, sprocket wheels, one on each shaft, a sprocket chain connecting the sprocket wheels, and a gear wheel upon one of the shafts engaging the gear teeth in the periphery of the die carrying disk.



3. In a machine for making bottle caps or crowns, a rotatable die carrying disk having a peripheral series of bevel gear teeth, feeding rolls for a strip of metal from which the blanks for the caps or crowns are to be cut, said rolls having their axes of rotation above and substantially parallel with the plane of the active face of the disk, common connections between the rolls for their simultaneous actuation, and a bevel gear wheel connected to one of the rolls engaging the gear teeth on the periphery of the die carrying disk.

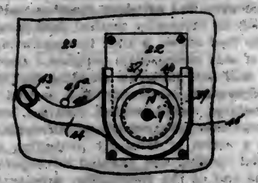
4. In a machine of the character described, a rotatable die carrier having a continuous series of notches in its periphery, a rotatable disk adjacent to the carrier, a pawl mounted on the disk and having its active end in operative relation to the notches in the periphery of the die carrier, a bar connected to the pawl carrying disk at the point of connection of said pawl with the disk, a pivotal support for the bar, through which the bar is slidable, and a spring connected at one end to the pawl and at the other end to the bar between the pivotal support of the latter and its connection with the pawl carrying disk.

5. In a machine of the character described, a rotatable die carrier having a continuous series of notches in its periphery and also a continuous series of recesses in its periphery distinct from the notches, a rotatable disk adjacent to the carrier, a pawl mounted on the disk and having its active end in operative relation to the notches in the periphery of the die carrier, a bar connected to the pawl carrying disk at the point of connection of said pawl with the disk, a pivoted support for the bar through which the latter is slidable, a spring connected at one end to the pawl and at the other end to the bar between the pivotal support of the latter and its connection with the pawl carrying disk, and a yieldable detent having a constant tendency toward the die carrier and provided at its active end with a member adapted to move into the recesses under the normal tendency of the detent, and to be moved out of said recesses by the rotative movement of the carrier.

[Claims 6 to 8 not printed in the Gazette.]

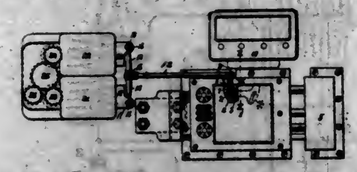
956,888. SEWING-MACHINE. SAM L. COHEN, New York, N. Y. Filed Aug. 2, 1909. Serial No. 510,715.

In a sewing machine, a needle-plate, a sewing needle, a rotary presser-foot adapted to keep the material to be sewed in contact with said feed-dog, a locator comprising a frame pivoted to said needle-plate adapted to receive the material to be sewed, the said frame being semi-circular at one end thereof and open at the other end thereof, the center of curvature of said semi-circular end being coincident with the center of said rotary presser-foot,



when said frame has been moved to locate the article therein under said presser-foot, and means adapted to rotate said presser-foot.

956,889. CONTROLLING DEVICE FOR BOLT-OPERATING MECHANISMS. GEORGE L. DAMON, Pittsburg, Pa. Filed Aug. 24, 1908. Serial No. 449,975.



1. The combination with an automatic bolt operating mechanism and a time lock for controlling the same, of a plurality of dial locks, and means actuated by said dial locks independently of the time-lock whereby the movement of the bolt-operating mechanism may be controlled after its release by the time-lock.

2. The combination with an automatic bolt-operating mechanism and a time lock, of a lever by means of which said bolt-operating mechanism is controlled by the time lock, a second lever for controlling the bolt operating mechanism independently of both the time lock and the other lever, and a combination dial lock for operating said second lever, each of said levers being operable independently of the other lever.

3. The combination with two combination locks actuated by a single gear, of an automatic bolt-operating mechanism provided with a release-lever, means operated by said locks for controlling the movement of said release lever, a time lock, and means operated by said time lock and independently of the means operated by the combination locks, whereby the time-lock is adapted to control the movement of the release lever independently of the control exerted by said combination locks.

4. In combination with an automatic bolt-operating mechanism and a time-lock provided with means for automatically controlling the operation of said automatic mechanism; of a combination lock; and means connecting the combination lock to the automatic bolt-operating mechanism whereby the former is adapted to control the action of the latter when not under the control of said time lock, said last-named means acting independently of the time-lock.

5. In combination with an automatic bolt-operating mechanism including a release lever; of a pair of levers, each of which is adapted to engage the release-lever; and means for actuating either lever of said pair independently of the other.

[Claims 6 to 10 not printed in the Gazette.]

956,890. CHARGING APPARATUS. FRED H. DANIELS, Worcester, Mass. Filed Aug. 21, 1900. Serial No. 514,000.

1. Furnace charging apparatus comprising a reciprocating pusher bar having means arranged to contact with and push blanks supported beneath said bar into the furnace, a track for said pusher bar, a rotary driving motor and gearing operatively connecting said motor and pusher bar; substantially as described.



2. Apparatus for charging furnaces comprising a slide-way on which blanks are transferred to the furnace, a reciprocating pusher arranged to travel above the slide-way and having a pivoted pusher arm contacting with said blanks, a rotary driving motor and gearing operatively connecting said motor with the pusher; substantially as described.

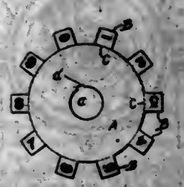
3. Apparatus for charging furnaces comprising a supporting slide-way for the blanks, a pusher bar arranged to reciprocate over and above the slide-way, said bar having a toothed rack attached thereto, guides for the bar, a rotary driving motor and gearing operatively connecting said motor with the rack on said bar; substantially as described.

4. Apparatus for charging furnaces comprising a slide-way on which blanks are supported, a track adjacent thereto, a pusher bar arranged to reciprocate over the slide-way and track having a pivoted pusher finger adapted to contact with the blanks, a rotary driving motor and gearing operatively connecting the motor with said pusher bar; substantially as described.

5. Apparatus for charging furnaces comprising a slide-way on which the blanks are supported and moved into the furnace, a track above the slide-way, a reciprocating pusher bar mounted upon and adapted to travel on said track, said pusher bar having a toothed rack secured thereto, a rotary driving motor and means operatively connecting the motor with the rack on said pusher bar; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

956,891. PRINTING-WHEEL. ISAAC S. DEMENT, St. Nicholas, Fla. Filed Aug. 23, 1909. Serial No. 514,210.



1. In a printing wheel, a sheet metal member provided with a body portion, and provided with a plurality of lugs arranged in planes which are concentric to the axis of the wheel, in combination with an additional member joined to the first named member, said additional member provided with an annular flange having an aperture therethrough, said members respectively provided with apertures concentric to said axis.

2. In a printing wheel, a sheet metal member provided with a body portion, and provided with a plurality of lugs arranged in planes which are concentric to the axis of the wheel, in combination with an additional member joined to the first named member, such members respectively provided with apertures concentric to such axis, and a tongue forced out from one of such members and arranged to connect the members adjacent to the concentric apertures.

3. In a printing wheel, a sheet metal member provided with a body portion, and provided with a plurality of lugs arranged in planes which are concentric to the axis of the wheel, in combination with an additional member, pro-

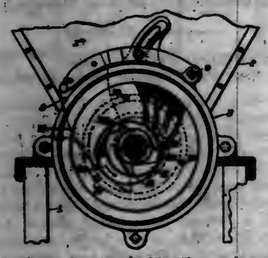
vided with an annular flange having an aperture therethrough, joined to the first named member, such members respectively provided with apertures concentric to such axis, and one of such members provided with a tongue forced out therefrom and arranged to connect the members adjacent to the concentric apertures.

4. In a printing wheel a sheet metal member provided with a body portion and provided with a plurality of lugs respectively arranged in planes which are concentric to the axis of the wheel, in combination with an additional sheet metal member provided with a body portion and with a cylindrical portion, such cylindrical portion having an aperture therethrough, such members joined together so that the cylindrical portion of the last named member forms the periphery of the wheel between the lugs of the first named member and the aperture in the cylindrical portion arranged to come between two of such lugs, and such members provided with apertures concentric with the axis of the wheel.

5. In a printing wheel a sheet metal member provided with a body portion and provided with a plurality of lugs respectively arranged in planes which are concentric to the axis of the wheel, in combination with an additional sheet metal member provided with a body portion and with a cylindrical portion, such cylindrical portion having an aperture therethrough, such members joined together so that the cylindrical portion of the last named member forms the periphery of the wheel between the lugs of the first named member and the aperture in the cylindrical portion arranged to come between two of such lugs, and such members provided with apertures concentric with the axis of the wheel, and one of such members provided with a tongue forced out therefrom and arranged to connect the members adjacent to the concentric apertures.

[Claims 6 and 7 not printed in the Gazette.]

956,892. FEED-GRINDER. SAMUEL K. DENNIS and FRANK W. RICE, Chicago, Ill., assignors to International Harvester Company, a Corporation of New Jersey. Filed Aug. 3, 1907. Serial No. 386,941.

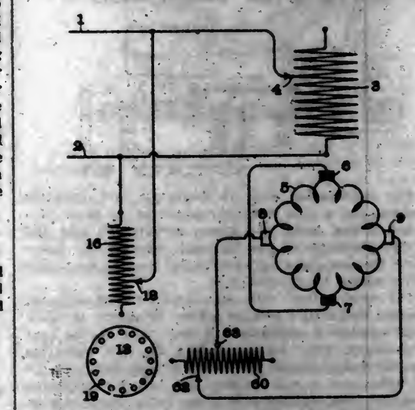


1. In a feed grinder, in combination, a hopper, a grinding chamber, a feed shaft and screw thereon mounted to rotate in the bottom of said hopper, peripheral teeth formed on the end of said screw adjacent to the grinding chamber, a grinding disk fixed to said shaft, a coöperating stationary disk located within said grinding chamber and provided with an eccentric feed opening surrounding said feed screw, and a series of inwardly projecting teeth formed in said eccentric feed opening and adapted to cooperate with the teeth on the end of the feed screw, substantially as and for the purpose described.

2. In a feed grinder, in combination, a hopper, a grinding chamber, a feed shaft and screw thereon mounted to rotate in the bottom of said hopper, peripheral teeth formed on the end of said screw adjacent to the grinding chamber, a grinding disk fixed to said shaft, a coöperating stationary disk located within said grinding chamber and provided with an eccentric feed opening surrounding said feed screw, and a series of inwardly projecting teeth formed in said eccentric feed opening on the section thereof which lies nearest the feed screw and adapted to cooperate with the teeth on the end of the feed screw, substantially as and for the purpose specified.

3. In a feed grinder, in combination, a hopper, a grinding chamber, a feed shaft and screw thereon mounted to rotate in the bottom of said hopper, a dividing wall between said hopper and grinding chamber, said wall being provided with an internally toothed feed passageway surrounding the feed screw, a slide for regulating the extent of opening of said passageway, peripheral teeth formed on the end of said feed screw, a grinding disk fixed to said shaft, a coöperating stationary disk located within said grinding chamber and provided with an eccentric feed opening across said passageway and surrounding said feed screw, and a series of inwardly projecting teeth in the eccentric feed opening and adapted to coöperate with the teeth on the end of the feed screw, substantially as and for the purpose described.

956,893. ALTERNATING-CURRENT MOTOR. VALÈRE A. FYNN, London, England. Original application filed Dec. 19, 1906, Serial No. 348,659. Divided and this application filed Mar. 6, 1909. Serial No. 481,762.



1. In an alternating current motor, the combination with an inducing member provided with a main inducing winding, of an induced member short-circuited along an axis approximately coinciding with that of the main inducing winding, and means for introducing into said induced member along another axis an E. M. F. approximately in phase quadrature to that impressed on the main inducing winding.

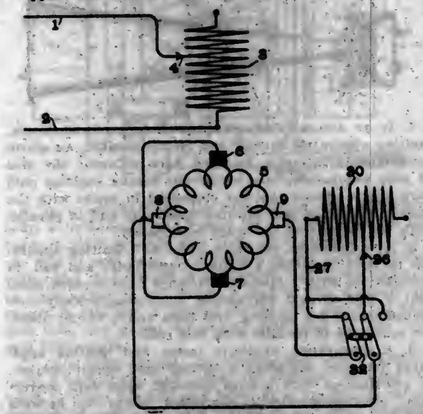
2. In an alternating current motor, the combination with an inducing member provided with a main inducing winding, of an induced member provided with a commuted winding short-circuited along an axis approximately coinciding with that of the main inducing winding, and means for introducing into said induced member along another axis an E. M. F. approximately in phase quadrature to that impressed on the main inducing winding.

3. In an alternating current motor, the combination with a stationary member provided with a main inducing winding, of an induced member short-circuited along an axis approximately coinciding with that of the main inducing winding, and a phase converter connected in series relation with the induced member along another axis.

4. In an alternating current motor, the combination with a stationary member provided with a main inducing winding, of an induced member provided with a commuted winding short-circuited along an axis approximately coinciding with that of the main inducing winding, and a phase converter connected in series relation with the induced member along another axis.

5. In an alternating current motor, the combination with an inducing member provided with a main inducing winding, of an induced member short-circuited along an axis approximately coinciding with that of the main inducing winding, means for introducing into said induced member along another axis an E. M. F. approximately in phase quadrature to that impressed on the main inducing winding, and means for varying the volts per turn in said main inducing winding.

956,894. ALTERNATING-CURRENT MOTOR. VALÈRE A. FYNN, London, England. Original application filed Dec. 19, 1906, Serial No. 348,659. Divided and this application filed Mar. 6, 1909. Serial No. 481,765.



1. In an alternating current motor, the combination with an induced member, of an inducing member provided with a main inducing winding and a field winding displaced from said main inducing winding, means for short-circuiting the induced member coaxially with the main inducing winding, means for forming a local circuit including only said field winding and the induced member along an axis displaced from that of the inducing winding, and means for varying the magnitude of the flux produced by said field winding.

2. In an alternating current motor, the combination with an induced member, of an inducing member provided with a main inducing winding and a field winding displaced from said main inducing winding, means for short-circuiting the induced member coaxially with the main inducing winding, means for forming a local circuit including only said field winding and the induced member along an axis displaced from that of the inducing winding, and means for varying the direction of the flux produced by said field winding.

3. In an alternating current motor, the combination with an induced member, of an inducing member provided with a main inducing winding and a field winding displaced from said main inducing winding, means for short-circuiting the induced member coaxially with the main inducing winding, means for forming a local circuit including only said field winding and the induced member along an axis displaced from that of the inducing winding, and a movable contact for varying the effective turns of said field winding.

4. In an alternating current motor, the combination with an induced member, of an inducing member provided with a main inducing winding and a field winding displaced from said main inducing winding, means for short-circuiting the induced member coaxially with the main inducing winding, means for forming a local circuit including only said field winding and the induced member along an axis displaced from that of the inducing winding, and means for varying the volts per turn in the main inducing winding.

5. In an alternating current motor, the combination with an induced member, of an inducing member provided with a main inducing winding and a field winding displaced from said main inducing winding, means for short-circuiting the induced member coaxially with the main inducing winding, means for forming a local circuit including only said field winding and the induced member along an axis displaced from that of the inducing winding, means for varying the direction of the flux produced by said field winding, and means for varying the volts per turn in the main inducing winding.

[Claim 6 not printed in the Gazette.]

956,895. SELF-FILLING FOUNTAIN-PEN. BENJAMIN GRIESHABER, Chicago, Ill. Filed Aug. 9, 1909. Serial No. 511,873.



1. A self filling fountain pen comprising a barrel closed at one end and open at the other and having a slot disposed longitudinally between its ends, a pen section screw threaded into the open end of the barrel, a sleeve secured to the pen section within the barrel and projecting beneath said slot, stops on said sleeve, an elastic ink reservoir arranged within the barrel and fastened to the pen section, a presser bar adapted to operate upon said ink reservoir, and a finger-piece engaged with said presser-bar and projecting up through the slot in said barrel, whereby the finger-piece may be rotated with the barrel relatively to the sleeve, said rotation being limited by engagement of the finger-piece with the stops on the sleeve.

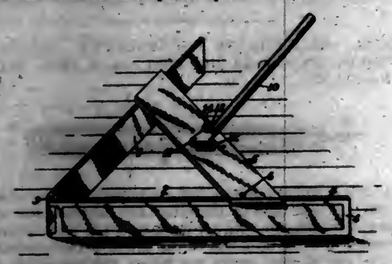
2. A self filling fountain pen comprising a barrel closed at one end and open at the other end and having a longitudinal slot between said ends, a pen section screw-threaded in the open end of said barrel, a sleeve mounted on the pen section within the barrel, an elastic ink reservoir arranged within the sleeve and barrel and engaged with said pen section, a presser bar resting upon said ink reservoir and arranged partly within the sleeve, said sleeve having a longitudinal slot opening at the other end thereof and a recess adjacent to said end, and a finger piece on the presser bar projecting up through the slot in the barrel and arranged to operate in said recess and over-hang the adjacent portion of the sleeve to lock the presser bar against depression.

3. A self filling fountain pen comprising a pen section, a relatively rotatably movable barrel mounted on the pen section and provided with a longitudinal slot between its ends, a sleeve mounted on the pen section within the barrel and provided at its other end with a longitudinal slot and a recess adjacent to said slot, the walls of said recess and slot providing stops, an elastic ink reservoir arranged within the sleeve and barrel and mounted on the pen section, a presser bar resting on the ink reservoir and partly within the sleeve, and a finger piece projecting up through the slot in the barrel and fastened at one end to the presser bar to operate in said recess and slot of the sleeve, said presser bar, finger piece and barrel being rotatable between said stops to carry the finger piece into alinement with the slot in the sleeve and permit the presser bar to be depressed and into engagement with the sleeve opposite the recess to lock the presser bar.

956,896. FOLDABLE HAND SNOW-PLOW. EDWARD H. GROSS, Stamford, Conn. Filed June 16, 1909. Serial No. 502,453.

1. A collapsible snow plow or scraper comprising a plurality of side-members pivotally connected at one end and adapted, when closed to inoperative position, to lie in approximately parallel relation and, when opened to operative position, to lie at an angle to each other, and a spacing-member shiftably attached to one of said side-members and occupying a position substantially parallel thereto when in inoperative position and engaging with the other side-member when both members are opened to operative position.

2. A collapsible snow plow comprising two side-members hingedly connected at one end to permit them to lie in approximately parallel relation when in one position and adapted to be opened to occupy positions at an angle to each other, and a spacing-member connected to one of said side-members and shiftable to lie substantially parallel to said side-member when positioned in parallel relation to the other side-member, and to lie at angle thereto when said side-members are spread apart.
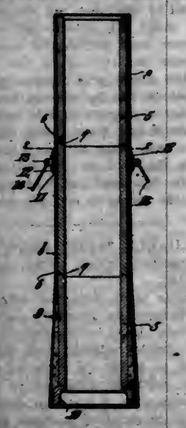


3. A collapsible snow plow or scraper comprising a plurality of side-members pivotally connected at one end whereby, when closed together in inoperative position, said side-members lie in approximately parallel relation and, when spread apart to inoperative position, said members lie at an angle to each other, a spacing-member shiftably attached to one of said side-members and occupying a position substantially parallel thereto when in inoperative position and movable to engage said other side-member when said members are spread apart to occupy their operative position, and plow-moving means connecting with said spacing-member and foldable therewith into a position approximately parallel to said side-members.

4. In a snow-plow, the combination with a pair of side boards pivoted together, of a brace-bar pivotally secured to one of said side boards and removably secured to the other of said side boards.

5. In a snow-plow, the combination with a pair of side boards pivoted together, of a brace-bar pivotally secured to one of said side boards and removably secured to the other of said side boards, and a handle pivoted to said cross bar.

[Claims 6 to 8 not printed in the Gazette.]

956,897. SMOKE-STACK. ALBERT HENRY, Nebraska City, Nebr. Filed May 27, 1909. Serial No. 498,607.



A stack comprising a series of hollow tile sections assembled endwise, a metallic casing surrounding the sections, the upper and lower ends of the casing extending over the ends of the upper and lower tile sections for binding said sections together, and a filler of cement between the casing and tile sections.

956,898. SIGNALING-HORN, &c. MILLER R. HUTCHISON, Bronxville, N. Y. Filed Oct. 2, 1906. Serial No. 280,910.



1. In an automobile provided with an explosive motor, igniting apparatus, battery and circuit breaker, an alarm comprising a laterally flattened horn adjacent the side of said automobile, electromagnetic means exciting said horn, and a circuit therefor connected in series with the circuit breaker of said igniting apparatus and in parallel with the primary of the spark coil thereof.

2. An automobile, explosive motor and igniting apparatus therefor including a battery, interrupter and coil, in combination with a laterally flattened horn secured adjacent a side of said automobile, electromagnetically controlled means for exciting said horn and a circuit therefor connected in parallel with said coil.

3. A conveyance, explosive motor and igniting apparatus therefor, including a battery and circuit breaker, in combination with a horn mounted upon said conveyance, electromagnetically controlled means for exciting said horn and a circuit therefor connected in series with said battery and circuit breaker, and in parallel with the sparking coil of said igniting apparatus.

4. A conveyance, explosive motor and igniting apparatus therefor, including a battery, interrupter and coil, in combination with a horn mounted upon said conveyance, electromagnetically controlled means for exciting said horn and a circuit therefor connected in parallel with said coil.

5. A conveyance, explosive motor and electric igniting apparatus therefor including a battery, interrupter, and commutator coil in combination with a horn mounted upon said conveyance, electromagnetically operated means for exciting said horn and a circuit therefor connected in parallel with said coil and in series with said battery, interrupter and commutator.

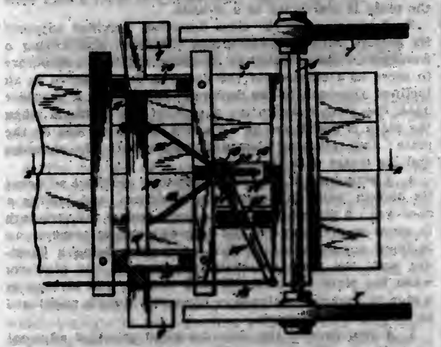
[Claims 6 to 31 not printed in the Gazette.]

956,899. VEHICLE-BRAKE. CHARLES E. JACKSON, Bushnell, Ill., assignor of one-half to himself and one-half to James Henry Spiker, Bushnell, Ill. Continuation of application Serial No. 468,943, filed Dec. 23, 1908. This application filed Sept. 22, 1909. Serial No. 519,096.

1. A vehicle brake comprising a shoe-carrying bar, a lever having an elongated longitudinal slot, a bolt carrying a friction roller, said friction roller being received by said slot, rod connections between said bolt and said shoe-carrying bar, said rod connections being disposed in different horizontal planes and having said bolt fixed to their convergent ends.

2. A vehicle brake comprising a shoe-carrying bar, a lever, means for actuating said lever, a bracket having an elongated slot, a bolt, rod connections between said bolt and said shoe-carrying bar, said lever having an elongated slot, and a friction roller carried by said bolt and received by the slot of said lever, said bolt also being received by the slot of said bracket.

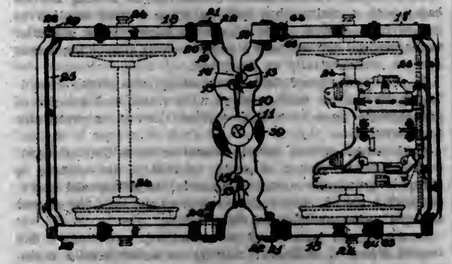
3. In a vehicle-brake, the combination with a vehicle-body, a brake-beam and means for slidingly securing the beam in place beneath said body, of a slotted lever, a stud or bolt connected with said lever, a guiding device for compelling a straight backward and forward movement of said stud or bolt when said lever is operated, and connections between said stud or bolt and said brake-beam.



4. In a vehicle-brake, the combination with a vehicle-body, a brake-beam and means for slidingly securing the beam in place beneath said body, of a bracket or bar at one side of said beam, said bracket or bar being provided with a slot that extends in a direction that is substantially at right angles to said beam, a stud or bolt slidingly arranged in said slot, a pivoted slotted lever connected with said bolt, and means connecting said stud or bolt with said brake-beam.

5. In a vehicle-brake, the combination with a vehicle-body, a brake-beam and means for slidingly securing the beam in place beneath said body, of a bracket or bar at one side of said beam, said bracket or bar being provided with a slot extending at substantially right angles to the said beam, a pivoted lever having a slot in one end, a stud or bolt extending through both of said slots, and means connecting said stud or bolt with said brake-beam.

956,900. CAR-TRUCK. CHARLES H. KNOBBS, Elizabeth, N. J., assignor of one-fourth to George L. Hirtzel, Jr., and one-fourth to Abe J. David, Elizabeth, N. J. Filed July 14, 1908. Serial No. 443,423. Renewed Mar. 22, 1910. Serial No. 551,004.



1. A car-truck comprising two members in swinging relation with a car-body and with each other whereby the axles can be placed out of parallel relation, and means on the opposite sides of the truck and operated from the car-body to automatically cause the members to swing on each other when they swing on the car-body.

2. A car-truck comprising two members in swinging relation to a car-body and with each other, coöperating center bars on the members to permit the swinging of the members on each other, means on the truck and operated by the movement of the body to cause the members to swing on each other, and a pivoted connection between each member and its center bar to permit a vertical movement of each member on its center bar.

3. A car-truck comprising two members, each member having a center bar, the center bars coöperating to hold the two members in swinging relation horizontally with each other and also with a car body, the members being adapted to swing vertically on the horizontally pivoted center bars.

4. A car truck comprising two horizontally swinging members pivoted at the center of their adjoining edges, pins in pairs on each side of the pivot, a lever engaging each pair of pins, and a pin projecting from each lever and providing for its manipulation.

5. A car-truck comprising two horizontally swinging members pivoted at the center of their adjoining edges, pins in pairs on each side of the pivot, a lever on each pair of pins, the lever being pivoted on one pin and having a slot to receive and operate the other pin, and means for simultaneously operating the levers to cause the members to swing on each other.

[Claims 6 to 16 not printed in the Gazette.]

956,901. FUEL-BRIQUET. DAVID C. MCCAN, Los Angeles, Cal. Filed Mar. 9, 1909. Serial No. 482,381.



1. A binding element for artificial fuel and the like, consisting of a ligneous strip tapering inwardly from its respective ends, and terminating in a boss approximately centrally thereof, in combination with a body of carbonaceous waste compressed thereabout, said body having rounded ends.

2. A fuel block comprising a body of loose waste compressed to have rounded ends, and a rigid binder for said body, comprising a wooden strip tapering inwardly from its ends to approximately centrally thereof, and terminating in a central boss.

3. A fuel block comprising a body of loose waste compressed to have rounded ends, and a rigid binder for and of the same material as said body, said binder consisting of a rectangular strip tapering inwardly from its ends, and terminating approximately centrally thereof in a reinforcing boss.

4. A fuel block comprising a body of loose wood particles compressed about a rigid binder of the same material, said binder comprising a rectangular strip extending longitudinally of the entire length of said body of compressed material, and tapering inwardly from its ends, said tapering portions of said strip terminating approximately centrally of the length thereof in a reinforcing boss whose height is on a line approximately with the incipient points of said tapering portions.

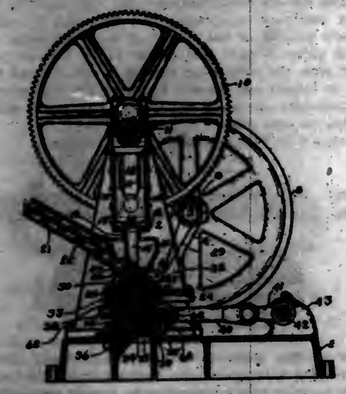
956,902. FUEL-PRESS. DAVID C. MCCAN, Los Angeles, Cal. Filed June 14, 1909. Serial No. 502,148.

1. In a fuel press, a mold comprising a stationary section and a movable section, a plunger operating in said mold, and means to move said movable section in one direction to discharge the contents of said mold, and in the opposite direction to close the compression chamber previous to the complete recession of said plunger from the compression chamber.

2. In a fuel press, a mold comprising a stationary section and a movable section, said mold having a dome-shaped bottom, a plunger operating in said mold and provided with a dome-shaped shoe, a conical agitator and force feed communicating with the interior of said mold, means to operate said agitator, means to move said movable section upon the recession of the plunger, ejecting means carried by said mold and operable by the movement thereof in one direction, and means to operate said moving means.

3. In a fuel press, the combination with a base and standards mounted thereon, said base being provided with a discharge opening, of a sectional mold on said base, said

mold having a dome-shaped bottom, a plunger provided with a dome-shaped shoe and arranged to operate in said mold, geared means to operate said plunger, a rotatory force feed above said mold, an ejecting mechanism connected with said mold, and a geared cam to move one section of said mold and actuate said ejecting means to cause a discharge of the contents of the mold through the discharge opening in said base.

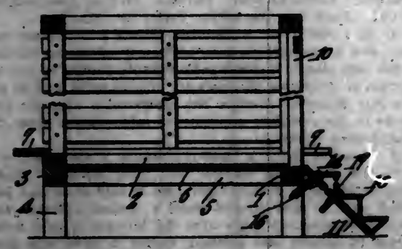


4. In a fuel block machine, the combination with a base having a discharge opening and a plurality of standards mounted on said base, of a sectional mold on said base, a hopper, a feed therefor, a rotating agitator between said hopper and said mold, a plunger arranged to operate in said mold, geared means journaled in said standards to actuate said plunger, an ejecting mechanism connected with said mold, and means to move one section of said mold in one direction to operate said ejecting mechanism and discharge a fuel block through the discharge opening in said base, said means also being arranged to move said section in the opposite direction previous to the recession of the plunger from the mold, and to hold said section locked during the compression stroke of the plunger in the mold.

5. In a fuel press, a sectional mold, a plunger operating therein, an ejecting plunger in each section of said mold, means on said mold to operate and trip said ejecting plungers, and means to move one section of said mold to control both said ejecting plungers.

[Claims 6 to 15 not printed in the Gazette.]

956,903. CORN-CRIB. ROBERT D. RALSTON, Wilscot, Ga. Filed Feb. 10, 1910. Serial No. 543,034.



1. A building provided adjacent its bottom with an outstanding platform extended entirely around the building and having anti-friction surfaces.

2. A structure of the class described provided adjacent its bottom with an outstanding platform, and having a doorway; a plate hinged at its lower end to the structure to serve as a closure for the doorway and to serve as an inclined approach to the doorway; there being a shoulder upon the plate constituting a part of the platform when the plate is positioned as a closure.

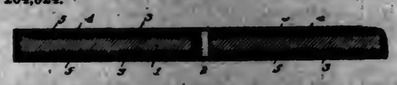
3. A structure of the class described provided adjacent its bottom with an outstanding platform, and having a doorway; a plate hinged at its lower end to the structure to serve as a closure for the doorway and to serve as an inclined approach to the doorway; there being a shoulder upon the plate constituting a part of the platform when the plate is positioned as a closure; stairs carried by the plate; and retaining elements uniting both the shoulder and the stairs with the plate.

4. A structure of the class described provided adjacent its bottom with an outstanding platform, and having a door-way; a plate hinged at its lower end to the structure to serve as a closure for the door-way and to serve as an inclined approach to the door-way; there being a shoulder upon the plate constituting a part of the platform when the plate is positioned as a closure, and serving as a stop to engage the structure when the plate is positioned as an inclined approach.

5. A structure of the class described provided adjacent its bottom with an outstanding platform, and having a door-way; a plate hinged at its lower end to the structure to serve as a closure for the door-way and adapted to be disposed in inclined position in front of the structure; there being a shoulder upon the platform constituting a part of the platform when the plate is positioned as a closure, and serving as a stop to engage the structure when the plate is inclined; and steps mounted upon the plate to be housed within the structure when the plate is positioned as a closure.

[Claims 6 to 11 not printed in the Gazette.]

956,904. SOUND-RECORD TABLET. JOSEPH SANDERS, Washington, D. C. Filed Apr. 20, 1904. Serial No. 204,024.



1. A sound record tablet consisting of a base of stiff fibrous material, with a sizing which softens when heated applied to its surface, and a layer of gramophone record material upon the sizing, substantially as described.

2. A sound record tablet consisting of a stiff fibrous base, with a sizing that softens when heated applied to its surface, and a layer of gramophone record material superimposed thereon and a sound-record groove impressed therein, substantially as described.

3. A sound record tablet consisting of a disk of cardboard, having its surface sized with rosin, and a layer of gramophone record material applied thereto, substantially as described.

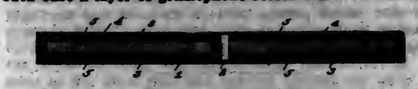
4. A sound record tablet consisting of a disk of cardboard, with a sizing of rosin applied to its surface, a layer of gramophone record material superimposed thereon, and a sound record groove impressed into the record material, substantially as described.

5. As a new article of manufacture, a normally flat record blank of sufficient rigidity to substantially maintain its normal shape in ordinary handling, said blank having a homogeneous core or center made up of a porous body of fibrous material and a bond of size permeating said body, a surface coating of size on said body and a surface of plastic gramophone material on the coating of size, said plastic material being adapted to receive and retain impressions, substantially as described.

[Claims 6 to 50 not printed in the Gazette.]

956,905. PROCESS OF MAKING SOUND-RECORD TABLETS. JOSEPH SANDERS, Washington, D. C. Original application filed Apr. 20, 1904, Serial No. 204,024. Divided and this application filed Mar. 30, 1905. Serial No. 252,840.

1. The process of making sound record tablet blanks, which consists in impregnating an absorbent base with a material that softens under heat, and then producing upon such base a layer of gramophone record material.



2. The process of making sound record tablet blanks, which consists in impregnating a fibrous base with a material that softens under heat, and then producing upon such base a layer of gramophone record material.

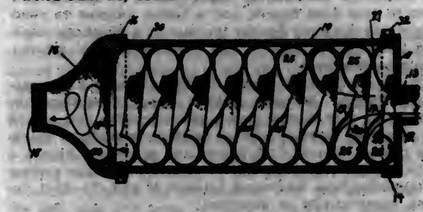
3. The process of making sound record tablet blanks, which consists in impregnating a disk of fibrous material with thermoplastic material and then producing upon such disk a layer of gramophone record material.

4. The process of making sound record tablet blanks, which consists in producing a thermoplastic fibrous base and then covering the same with thermoplastic record material.

5. The process of making sound record tablet blanks, which consists in impregnating a fibrous base with thermoplastic material, and then producing upon such base a layer of gramophone record material containing shellac.

[Claims 6 to 17 not printed in the Gazette.]

956,906. MUFFLER. EDWARD D. SIZER, Sizerville, Pa. Filed Jan. 24, 1910. Serial No. 539,737.



1. A device of the class described comprising a spiral casing and said casing having a spiral slot co-extensive with the length of said casing.

2. A device of the class described comprising a spiral casing having a spiral slot co-extensive with the length of said casing, and said casing formed of separable sections.

3. A device of the class described comprising a spiral casing, said casing provided with a spiral slot co-extensive with the length of said casing, said casing formed of separable sections, and each of said sections having its greatest dimension semi-circular.

4. A device of the class described comprising a spiral casing, said casing being provided with a spiral slot co-extensive with the length of said casing, said casing formed of separable sections, each of said sections having its greatest dimension semi-circular, and the cross-section of a said section being in the form of a figure 6.

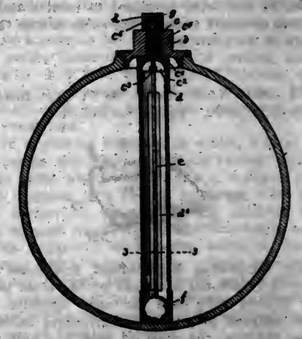
5. A device of the class described comprising a spiral casing, said casing having a spiral slot co-extensive with the length of said casing, said passage formed of separable sections, each of said sections having its greatest dimension semi-circular, and the cross-section of a said section being in the form of a figure 6, said sections provided within a cylindrical casing, and a conical nozzle upon one end thereof and a closure cap upon the other.

[Claims 6 to 11 not printed in the Gazette.]

956,907. TANK-INDICATOR. JOHN R. SMITH, Bradford, Mass., assignor to Robert A. Jordan, trustee, Brookline, Mass. Filed Oct. 14, 1908. Serial No. 457,615.

1. In combination with a removable tank-closure having a passage therethrough, an indicator-rod mounted to slide in said passage, and having a float thereon of less diameter than the closure and means for limiting the movement of said rod with relation to said closure to prevent disconnection thereof when the closure is removed from the tank, substantially as described.

2. In combination with a removable tank-closure having a passage therethrough, a float-indicator-rod mounted to slide in said passage, means for closing said passage and holding said rod in depressed position, and means for limiting the movement of said rod with relation to said closure to prevent disconnection thereof when the closure is removed from the tank, substantially as described.



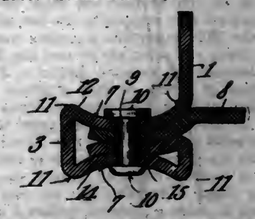
3. In combination with a removable tank-closure having a passage therethrough, an indicator-rod mounted to slide in said passage, and having a float thereon of less diameter than the closure and means for limiting the movement of said rod in said passage to prevent withdrawal of the rod from said passage when the closure is removed from the tank, substantially as described.

4. In combination with a removable tank-closure having a passage therethrough, an indicator-rod mounted to slide in said passage and having a retaining head at its outer end, and a float at its inner end of less diameter than the closure substantially as described.

5. In combination with a tank-closure having a threaded aperture therethrough, and having a screw plug threaded in said aperture provided with a head at its inner end and a longitudinal bore, an indicator-rod mounted to slide in said bore, and a guiding device for said float connected to said head, substantially as described.

[Claim 6 not printed in the Gazette.]

956,908. GALVANIZED-IRON TANK. GEORGE A. TRACHTE and ARTHUR F. TRACHTE, Madison, Wis. Filed Aug. 27, 1909. Serial No. 514,918.



1. A tank comprising a body having its edge outbent to form a flange, the flange being bent sharply upon itself, inwardly, to form a rim, the rim, in approximate alinement with the body, being sharply bent upon itself, outwardly, to form a binding end, located between the flange and the rim; and a bottom extended beyond the body and inclosed peripherally between the flange, and the binding end, the flange and the rim being concaved toward each other to engage the bottom and the binding end; and retaining elements extended through the rim, the bottom, the binding end, and the flange.

2. A tank comprising a body having its edge outbent to form a flange, the flange being bent sharply upon itself, inwardly, to form a rim, the rim, in approximate alinement with the body, being sharply bent upon itself, out-

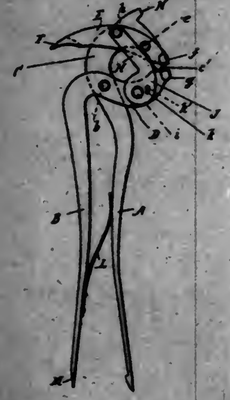
wardly, to form a binding end, located between the flange and the rim; and a bottom extended beyond the body and inclosed peripherally between the flange and the binding end, the flange and the rim being concaved toward each other to engage the bottom and the binding end; and retaining elements extended through the rim, the bottom, the binding end, and the flange, the concavity of the flange and the rim being arranged to receive the ends of the retaining elements to house the same within the planes of the ends of the concavities.

956,909. BUCKLE. PERRY R. TUTTLE, Rozel, Kans. Filed Nov. 13, 1909. Serial No. 527,890.



A buckle comprising longitudinal and cross bars, a tongue centrally pivoted upon one of the cross bars, lugs integrally formed with said bar upon opposite sides of the tongue adapted to prevent longitudinal movement of the tongue thereon, the ends of said bar and the connected ends of the longitudinal bars being enlarged to form projections thereon, and a spring formed from a single length of wire coiled around said cross bar between the lugs and said projections, the central portion of said spring being outwardly and downwardly extended to form a bight portion engaging with the under side of said tongue, the extremities of said wire being coiled about and fixed to the longitudinal bars of the frame beyond said projections.

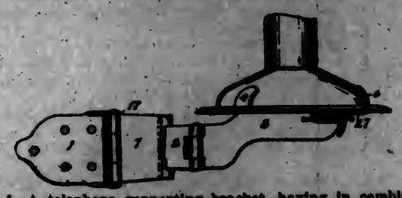
956,910. TONGS FOR SHEET METAL. FRANK J. VEIOX, Warner, S. D. Filed May 24, 1909. Serial No. 497,994.



1. The combination, with the crossed and pivoted handles, one handle having a hook-shaped portion, and the other handle having a curved portion provided with a laterally projecting jaw at its end, of a lever pivoted near one end to the said hook-shaped portion and provided at its shorter end with a laterally projecting jaw arranged opposite the aforesaid jaw, and a crossbar pivoted to the longer end portion of the said lever and to the said curved portion between its pivot and jaw.

2. The combination, with the crossed and pivoted handles, one handle having a hook-shaped portion, and the other handle having a curved portion provided with a laterally projecting jaw at its end, of a lever pivoted near one end to the said hook-shaped portion and provided at its shorter end with a laterally projecting jaw arranged opposite the aforesaid jaw, and a crossbar pivoted to the longer end portion of the said lever and to the said curved portion between its pivot and jaw, said crossbar having a projecting side portion which forms a stop for the material grasped between the said jaws.

956,911. TELEPHONE-BRACKET. ROLLO M. VICK, Detroit, Mich. Filed May 10, 1909. Serial No. 495,159.



1. A telephone supporting bracket, having in combination a plurality of pivotally connected arms, an apertured table supported by one of said arms, a plurality of overhanging fingers fixed about the peripheral portion of said table, a pivotally supported arm adapted to swing beneath the table in a plane parallel therewith, a portion of said arm extending through said aperture and constituting an additional overhanging finger located in opposed relation to said fixed fingers, and a spring adapted to yieldingly hold the same against the base of a telephone standard interposed between it and the fixed fingers, substantially as described.

2. In combination with a bracket arm, a table supported thereby, inwardly inclined fingers fixed about the peripheral edge thereof, and a pivoted spring arm having an upwardly projecting finger portion, arranged in opposing relation to said fixed fingers and extending through a cut-away portion of the table to yieldingly engage against a telephone base interposed between it and the fixed fingers, substantially as described.

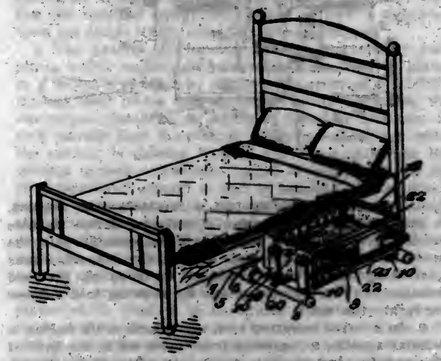
956,912. FLEXIBLE SHAFT-COUPLING. JULIUS W. WALTERS, Glens Falls, N. Y., assignor to Mechanical Devices Company, Albany, N. Y., a Corporation of New York. Filed Dec. 15, 1908. Serial No. 467,631.



A flexible coupling for shafts comprising a body portion having its opposite sides provided with spherical seats, each seat having a recess extending within the body portion on diametrically opposite sides of the seat, said recesses having their outer walls in parallelism with the axis of the body portion, independent ball members arranged in said seats, end plates secured to said body portion for confining the ball members, each plate having recesses complemental to the recesses of the body portion to provide an elongated recess, U-shaped wear plates located within the recesses, and pivot pins projecting from the ball members and having their projecting ends positioned in said recesses within the wear plates, the portion of the recesses within the said wear plates being of a length to permit free movements of the pins in the direction of length of the recesses.

956,913. ROCKING CRIB. WILLIAM B. WALTON and NATHAN H. KEIM, Eveleth, Minn. Filed Oct. 5, 1909. Serial No. 521,096.

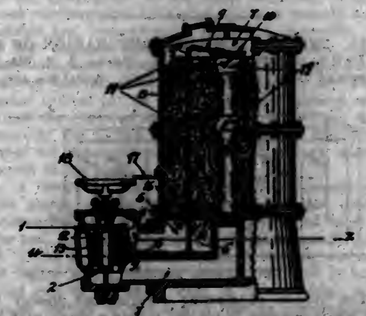
1. The combination with a bed, of a supporting frame including relatively stationary tubular members having means for attachment to a bed and provided with longitudinally disposed slots, rods slidably mounted in the tubular members, a crib mounted for rocking movement between said rods, parallel links, each having one end thereof pivotally connected with the crib, pivot pins extending through the other ends of the links and engaging the adjacent rods, and anti-friction rollers carried by some of the pivot pins and bearing against the walls of the slots in the stationary tubular members.



2. The combination with a bed, of a supporting frame including relatively stationary tubular members having means for attachment to a bed and provided with longitudinally disposed slots, rod sections slidably mounted on the tubular members, a crib mounted for rocking movement between the rod sections, parallel links forming a pivotal connection between the crib and rod sections, and upstanding members carried by said rod sections and extending through the slots in the stationary sections and constituting stops for engagement with the side rails of the bed, said crib being movable to operative position at one side of the bed and to inoperative position beneath said bed.

3. The combination with a bed, of a supporting frame including relatively stationary tubular members having means for attachment to a bed and provided with longitudinally disposed slots, rods slidably mounted in the tubular members, a crib mounted for rocking movement between said rods, parallel links, each having one end thereof pivotally connected with the crib, and pivot pins extending through the other ends of the links and through the slots in the stationary tubular members and engaging the adjacent rods.

956,914. FILTER AND CONTROLLING-VALVE THEREFOR. PAUL S. WARD, Covington, Ky., assignor to Lynn-Superior Company, Cincinnati, Ohio, a Corporation of Ohio. Filed June 7, 1909. Serial No. 500,769.



1. In an apparatus for filtering water, a filter chamber, a valve casing connected therewith comprising a three ported body and a valve so ported as to provide for closed, filtering to service, filtering to waste, washing to waste, by-pass to service, drain top, and drain bottom of filter, conditions.

2. In an apparatus for filtering water, a filter chamber, a valve casing connected therewith, comprising a three ported body and a valve so ported as to provide for closed, filtering to service, filtering to waste, washing to waste, by-pass to service, drain top, drain bottom of filter, emergency service pipe drain, and sewer flushing, conditions.

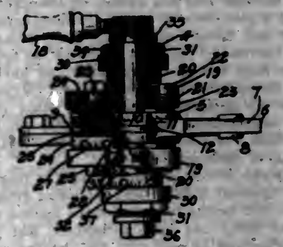
3. In an apparatus for filtering water, a filter chamber, a valve casing connected therewith having ports lined substantially in a row, and a valve coacting with said ports to provide passages for closed, filtering, filtering to waste, washing, by-pass to service, drain top, and drain bottom, conditions.

4. In an apparatus for filtering water, a filter chamber, a valve casing connected therewith having inlet, outlet, and waste ports, lined substantially in a row, a valve having ports disposed in a row to coöperate with said body ports to accomplish closed, filtering, filtering to waste, washing, by-pass, top drain, and bottom drain, conditions.

5. In an apparatus for filtering water, a three ported valve casing, and a valve therein, a filter body comprising chambers for filtered and unfiltered water with filtering material between, and a jet or nozzle in communication with a port of the valve casing and directed into the sediment at top of filtering medium.

[Claims 6 to 10 not printed in the Gazette.]

956,915. SAW-SHAPER. ALBERT E. WHITE, Eau Claire, Wis. Filed Aug. 10, 1908. Serial No. 447,683.



1. In a saw shaper, an anvil adapted to rest on the teeth and bear on the point of the tooth that is being shaped on the upper side thereof with a rolling pressure, in combination, with a stop plate having a part extending under the tooth and bearing only on the under side thereof below and out of contact with its point.

2. In a saw shaper, a stationary anvil adapted to rest on the teeth and bear on the point of a tooth that is being shaped with a rolling pressure, in combination with a stop plate having a part to extend in under the point where the anvil contacts with a tooth and engage the tooth that is being shaped below and out of contact with the point thereof, and said stop plate being adjustable to vary the point of engagement of said part with the tooth.

3. In a saw shaper, an anvil adapted to rest on the teeth and bear on the point of a tooth that is being shaped with a rolling pressure, a shaft, a stop plate having a rocking movement thereon and provided with a part adapted to extend in under the anvil and the under side only of the tooth that is being shaped and engage the edge of the tooth below the point thereof, and means whereby said plate is rendered adjustable on said shaft.

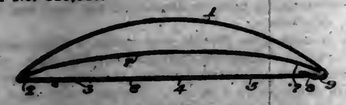
4. In a saw shaper, an anvil adapted to rest on the tip of the teeth to be shaped, a shaft, a plate mounted thereon and having a part to engage the edge of a tooth below said anvil and said plate having a transverse slot therein and a bolt passing through said slot and whereby said plate has a limited oscillating adjustment, substantially as described.

5. In a saw shaper, an anvil adapted to rest on the teeth and bear on the point of a tooth that is being shaped with a rolling pressure, a stop plate having a part to engage the edge of a tooth below and independent of

said anvil and said stop plate having an opening between which and said anvil the point of the tooth is inserted, and said plate projecting on the under side only of a tooth and contacting therewith beneath the point where the anvil bears on the upper side of the tooth.

[Claims 6 to 21 not printed in the Gazette.]

956,916. DISPLAY-CARD. THEODORE E. WIEDERSEIM, Jr., Philadelphia, Pa., assignor to Ketterlinus Lithographic Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 1, 1909. Serial No. 525,647.



1. In a device of the character stated, a rear leaf having a background thereon, a front leaf extending from one end of the rear leaf and having representations thereon forming portions of a picture complementary to the background and being suitably cut away, and an intermediate leaf having representations thereon forming portions of a picture complementary to the background and the other representations, said intermediate leaf being suitably cut away and extending from the other end of said rear leaf and said leaves being of different lengths.

2. In a device of the character stated, a rear leaf having a background thereon, a front leaf extending from one end of the rear leaf and having representations thereon forming a portion of a picture complementary to the background and being suitably cut away, means for securing the free end of the front leaf with the opposite end of the rear leaf, and an intermediate leaf having representations thereon forming a portion of a picture complementary to the background and to the other representations, said intermediate leaf being suitably cut away and extending from the other end of said rear leaf and said leaves being of different lengths.

3. In a device of the character stated, a rear leaf carrying a background, a front leaf extending from one end of said rear leaf having representations thereon and being suitably cut away and an intermediate leaf extending from the other end of said rear leaf, having representations thereon and being suitably cut away, said leaves being of different lengths and said intermediate leaf being adapted to abut a suitable stop when said rear leaf is bowed in order to assure a position between said leaves at a suitable distance away from each and said background and representations being complementary.

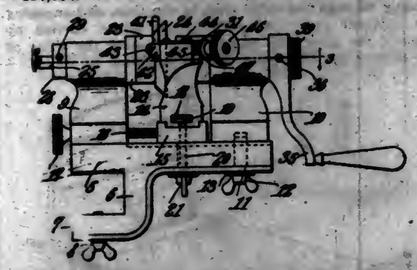
4. In a device of the character stated, a rear leaf carrying a background, a front leaf extending from one end of said rear leaf having representations thereon and being suitably cut away, an intermediate leaf extending from the other end of said rear leaf, having representations thereon and being suitably cut away, said leaves being of different lengths and said intermediate leaf being adapted to abut a suitable stop when said rear leaf is bowed in order to assure a position between said leaves at a suitable distance away from each, said background and representations being complementary, and means for holding the leaves in operative position.

956,917. HAT-GUARD. ROBERT S. WIESENFELD, Baltimore, Md. Filed Dec. 2, 1909. Serial No. 530,935.



A guard of the character described, comprising a metallic ring, having saw-tooth prongs projecting inwardly from its edge to engage the material of a hat, a piece of perforate metal secured to the inside of the ring, and means for securing the guard to the material of the hat.

956,918. VALVE-RESEATING TOOL. THOMAS B. WILLIAMS, Orange, Mass., assignor to The Leavitt Machine Co., Orange, Mass. Filed May 24, 1909. Serial No. 497,957.



1. In a valve reseating tool, a rotatable work support, a rotatable member carrying a centering device movable in the direction of its length into engagement with the work for clamping the same against the support, means carried by the rotatable member for coupling the said member to the work, and means for rotating said member to rotate the work.

2. In a valve reseating tool, a rotatable work holder, a tubular spindle, a centering point mounted in the bore of the spindle, and movable in the direction of its length into engagement with the work for clamping the same against the holder, means for coupling the spindle to the work, and means for rotating the spindle.
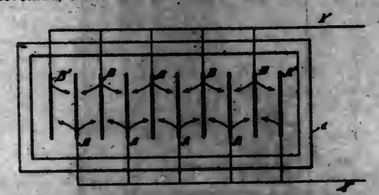
3. In a valve reseating tool, a work holder in which the work is mounted to rotate therewith, a tubular spindle, a centering point mounted in the bore of the spindle, and movable in the direction of its length into engagement with the work for clamping the same to the holder, and a finger carried by the spindle and engageable with a slot in the work, whereby the latter is coupled to the spindle.

4. In a valve reseating tool, a bed, a rotatable work holder on the bed, a bearing on the bed, a tubular spindle mounted in said bearing, and having an enlargement at one end engageable with one end of the bearing, driving means fitted to the other end of the spindle and engageable with the other end of the bearing, a centering device mounted in the bore of the spindle, and movable therein in the direction of its length into engagement with the work for clamping the same to the work holder, and means for coupling the spindle to the work.

5. In a valve reseating tool, axially alined rotatable members, one of said members having means for supporting the work, a centering device carried by the other member, and slidable in the direction of its length into engagement with the work for clamping the same to the first mentioned member, and means for coupling the second mentioned member to the work.

[Claims 6 and 7 not printed in the Gazette.]

956,919. PROCESS FOR THE PREPARATION OF SECONDARY-BATTERY PLATES. FRANK A. R. WRIGHT, Cleveland, Ohio. Filed Mar. 27, 1909. Serial No. 486,132.

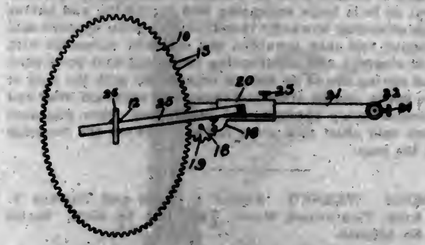


1. The process of forming peroxid and spongy lead plates which consists in placing within a single tank having a suitable electrolyte therein two series of lead plates, the plates of each series being electrically connected with each other in parallel relation said electrolyte containing an oxidising chemical substance in such quantity as to produce lead peroxid upon anode plates, sending a current through the plates and the electrolyte in one direction during which time one series of plates remains substantially unchanged while lead peroxid is deposited upon the other series of plates, then passing the current in the reverse direction through the plates and the electrolyte whereby the peroxid previously formed upon the one series of plates is completely reduced to spongy lead and the required amount of peroxid of lead is deposited upon the plates which were formerly unchanged.

2. The process of forming peroxid and spongy lead plates which consists in immersing a plurality of plates in a suitable electrolyte, sending a current of electricity through said plates and electrolyte in one direction, the electrolyte containing an oxidising chemical substance in such amount that the cathode plates are unaffected when the current is passing through the plates, allowing the current to pass a sufficient length of time until the desired deposit of peroxid of lead is formed upon the anode plates, then reversing the passage of the current through said plates and electrolyte and allowing the current to pass a sufficient length of time to reduce the peroxid of lead previously formed to spongy lead and to build up peroxid of lead upon the plates previously unaffected.

3. The process of forming peroxid and spongy lead plates which consists in immersing a plurality of plates in an electrolyte, said electrolyte comprising sulfuric acid and an oxidising chemical substance, sending a current of electricity through said plates and electrolyte in one direction and then reversing the direction of the current through said plates and the electrolyte, the oxidising chemical being present in the electrolyte bath in such quantities, so that when the current is first allowed to pass lead peroxid will be formed upon the anode plates and when the current is reversed the peroxid of lead will likewise form upon the anode plates.

956,920. CURVE-SCRIBER. ODILO A. ZEIER, Madison, Wis.; John Zeier administrator of said Odilo A. Zeier, deceased. Filed Sept. 29, 1908. Serial No. 455,319. Renewed Dec. 27, 1909. Serial No. 535,152.



1. An instrument of the class described comprising spaced concentrically connected plates, a radially disposed revoluble arm concentrically connected therewith, a second arm engaged slidably with the first arm, resilient means coengaged therebetween to hold the last arm normally at the inner limit of its movement, a cross-head member carried by the second arm and engaged slidably against the edges of the plates, and a marking member carried by the second arm and adjustable longitudinally thereof for demarcation of figures of various sizes upon rotation of the arms.

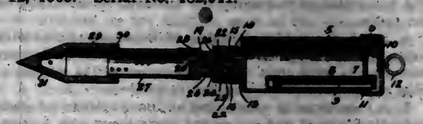
2. A device of the class described comprising spaced guide plates, a revoluble arm concentrically coengaged therebetween, said arm carrying a perforated head at its outer end, a second arm engaged slidably through the head and having a similar head engaged slidably around the first arm, a spring engaged between the head to hold the second arm at the inner limit of its movement, a guide member carried by the second arm in engagement with the periphery of the plate for radial reciprocation of the second arm upon rotation of the other two arms, a longitudinally adjustable pencil-holding member carried by the second arm and means for rotating the arm.

3. A device of the class described comprising a guide plate, an arm pivoted centrally thereof, said arm having a second arm slidably engaged thereon, spring means engaged between the arms to hold the second arm normally at the inner limit of its movement, means carried by the second arm for engagement with the periphery of the plate, to induce a reciprocation of the second arm upon rotation of the arms, the second arm carrying a longitudinally extending sleeve, a pencil-holding member slidably engaged in the sleeve, means for securing said pencil holder adjustably at various points of its movement, a revoluble operating member disposed centrally of the plate, and connections between the operating member and the second arm for rotation thereof.

4. An article of the class described including a guide plate, an arm pivoted centrally thereof, said arm having a perforated head portion at its outer end, a second arm engaged slidably in the head and provided with a similar perforated head receiving the first arm slidably therethrough, spring means engaged between the heads to hold the second arm normally at the inner limit of its movement, the second arm having a lateral extension turned inwardly to form a sleeve, a pencil-holding member engaged slidably in the sleeve, a clamp member carried by the sleeve and means carried by the second arm in engagement with the periphery of the plate for radial reciprocation of said arm and pencil holder upon rotation of the arms.

5. An article of the class described including a guide plate, a central pivot shaft carried thereby, an arm pivoted thereon, said arm being stamped from sheet material and having its outer end turned laterally and perforated, a second similar arm engaged slidably through the perforations and having its inner end similarly turned and perforated and receiving the first arm slidably therethrough, a spring engaged between the latter turned portion to hold the second arm normally at the inner limit of its movement, means carried by the second arm in engagement with the periphery of the plate to radially reciprocate said arm upon rotation of the arms, said arm having a lateral extension at its outer end bent to form a sleeve, a pencil holder carried in said sleeve radially slidable with relation to the plate, clamp means for adjustably securing the pencil holder in the sleeve, a revoluble key carried centrally of the plate, said key having a transverse passage therethrough, an arm engaged slidably in the passage and secured at its outer end to the second named arm for rotation of the arms upon manipulation of the key.

956,921. COMBINED SOLDERING-IRON AND BLOW-TORCH. HARRY E. ADAMS, Pittsburg, Pa. Filed Mar. 12, 1909. Serial No. 482,941.



1. In a device of the character described, the combination with a fuel receiving body portion, of a filling plug, an air compressing device, and a cap adapted to inclose said plug and a portion of said air compressing device.

2. In a device of the character described, the combination with a fuel receiving body portion, of a filling plug, an air compressing device, a cap adapted to inclose said plug and a portion of said air compressing device, and a suspending member carried by said cap.

3. A valve mechanism comprising a head having a longitudinally disposed discharge port formed therein, transverse ports extending in opposite directions through said head and from said discharge port a longitudinal port communicating with each of the transverse ports and an independent valve threaded into each of the transverse ports and adapted to control the passage of fluid through said ports.

4. In a device of the character described, the combination with a fuel receiving body portion having a neck, of a valve head threaded upon said neck, a pair of independently actuated valves carried by said valve head, a common discharge port from said valve head, a blow torch head threaded upon said valve head, and a soldering iron head threaded upon said blow torch head.

5. In a device of the character described, the combination with a fuel receiving body portion having a neck, of a valve head threaded upon said neck, a pair of independently actuated valves carried by said valve head, a common discharge port from said valve head, a blow torch head threaded upon said valve head, and a soldering iron head threaded upon said blow torch head, said soldering iron head being hollow and there being diagonal openings formed through the wall of the soldering iron head from the forward end of the hollow portion thereof to the face thereof.

[Claim 6 not printed in the Gazette.]

956,922. PHONOGRAPH-RECORD MOLD. EDWARD L. AIKEN, East Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Oct. 12, 1905. Serial No. 282,365.



1. A tubular mold having an inwardly extending lower portion surrounding an aperture, said portion merging into the main portion by a gentle curve, substantially as set forth.

2. A tubular mold having a lower tapering portion extending inward and downward and terminating in a central opening, said tapering portion merging into the main portion by a gentle curve, substantially as set forth.

3. A tubular mold having a lower tapering portion extending inward and downward, and terminating in a central opening, said tapering portion gently curving toward the horizontal as it reaches the opening, substantially as set forth.

4. A tubular mold comprising an inner cylindrical shell extending inward at its lower end, a cylindrical backing surrounding said shell and a ring covering the bottom of said shell, substantially as set forth.

5. A tubular mold comprising an inner cylindrical shell, extending inward and downward at its lower end, a cylindrical backing surrounding said shell and a ring covering the bottom of said shell, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

956,923. BOTTLE-CLOSURE. FRANK A. ANTHONY and JAMES P. CEBGO, Amsterdam, N. Y. Filed Aug. 19, 1909. Serial No. 513,650.

1. The combination with the neck of a bottle having a mouth-opening; of a stopper adapted to close said opening; a pivot-wire encircling the neck of the bottle; a lever having loops embracing said pivot-wire and extending upwardly substantially vertically therefrom to a point opposite said stopper, and then inwardly substantially horizontally, and pivotally connected at its inner end with said stopper, said lever having a downwardly and outwardly extending handle; and a spring coiled around said pivot-wire, and having its ends engageable, respectively, with said handle and with the body of the bottle.



2. The combination with the neck of a bottle having a mouth-opening; of a stopper adapted to close said opening and having a stopper-guiding stud projecting from said stopper within the mouth of the bottle; a pivot-wire encircling the neck of the bottle; a lever having loops embracing said pivot-wire and extending upwardly substantially vertically therefrom to a point opposite said stopper, and then inwardly substantially horizontally, and pivotally connected at its inner end with said stopper, said lever having a downwardly and outwardly extending handle; and a spring coiled around said pivot-wire, and having its ends engageable, respectively, with said handle and with the body of the bottle.

3. The combination with the neck of a bottle having a mouth-opening; of a stopper adapted to close said opening; a pivot-wire embracing the neck of the bottle; a lever comprising a piece of wire having its middle portion bent to form a handle-loop and intermediate portions bent to form loops embracing said pivot-wire, and having legs extending upwardly therefrom to a point opposite said stopper, and then inwardly, and pivotally connected with said stopper; and a coil-spring embracing said pivot-wire, and having its ends engageable, respectively, with said handle-loop and the body of the bottle.

4. The combination with the neck of a bottle having a mouth-opening; of a stopper adapted to close said opening; a lever comprising a piece of wire having its middle portion bent to form a handle-loop, one of the branches of which is formed with an offset and intermediate portions bent to form loops embracing said pivot-wire, and having legs extending upwardly therefrom to a point opposite said stopper, and then inwardly, and pivotally connected with said stopper; and a coil-spring embracing said pivot-wire, and having one of its ends in engagement with the body of the bottle, and its other end engageable with said offset and movable freely through said handle-loop when displaced from said offset to a point midway between the branches of the loop.

956,924. WRENCH. SIDNEY D. ATOR and THOMAS F. ATOR, Plentywood, Mont. Filed Dec. 18, 1909. Serial No. 533,843.

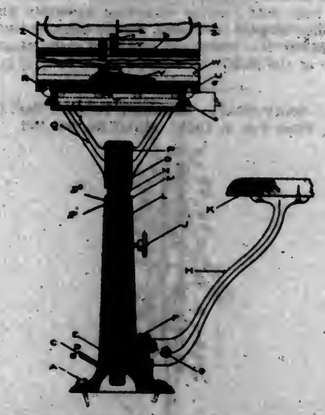


1. A wrench including a shank having a fixed jaw and provided with teeth, a movable jaw slidably mounted on the shank and having one edge thereof provided with a longitudinal extension bearing against the adjacent face of the shank and its other edge formed with a circular head, there being stop shoulders formed on the movable jaw, an operating lever pivotally mounted on the movable jaw and provided with a socket for the reception of said head, spaced plates carried by the operating lever and embracing the shank and extension of the sliding jaw for engagement with the stop shoulders on the latter, and a spring pressed pawl pivotally mounted on the operating lever between the guide plates thereof for engagement with the teeth on the shank.

2. A wrench including a shank having a fixed jaw and provided with teeth, a movable jaw slidably mounted on the shank, an operating lever pivotally mounted on the movable jaw and provided with spaced rigid guide plates embracing the shank, there being a socket formed in the operating lever, a pawl pivotally mounted in the socket of the operating lever and having its free end projecting beyond the lower edges of the guide plates for engagement with the teeth on the shank, and a spring secured to the operating lever and extending within the socket for engagement with the adjacent face of the pawl.

3. A wrench including a shank having a fixed jaw and provided with spaced teeth, a movable jaw slidably mounted on the shank and having one edge thereof provided with a longitudinal extension adapted to bear against one side of the shank and its other edge formed with a substantially circular head, an operating lever pivotally mounted on the sliding jaw and provided with a socket for the reception of the head, spaced guide plates carried by the operating lever and embracing the shank for engagement with the extension of the sliding plate, and a spring pressed pawl carried by the locking lever and adapted to engage the teeth on the shank for forcing the movable jaw in the direction of the fixed jaw when the operating lever is actuated.

956,925. ASSORTING AND ROUTING CASE FOR POST-OFFICES. CHARLES H. H. BAILEY, South Braintree, Mass. Filed July 8, 1909. Serial No. 506,629.



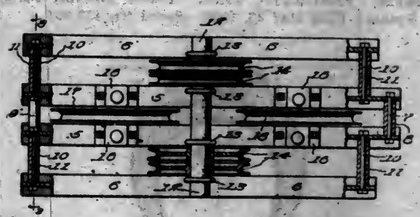
1. In post-office furniture, a hub having upturned divergent branches socketed in their upper portions, rollers mounted in the sockets, a case or head having upright sides horizontally grooved from front to back on their inner faces, and fixedly attached to the branches outside said rollers, a shelf member forming the bottom of the case, slidably mounted in said grooves and supported by the rollers and adapted to be extended at the back or the front of the case, an upright supporting base, and a revoluble, vertically adjustable connection between the base and the hub and rigidly secured to the latter.

2. In post-office furniture, a case or head having compartments, a horizontally slidable shelf member adapted to be extended at the back or the front of the case, a drawer carried by said member and accessible from the back or front of the case, a supporting base, and a revoluble connection between it and the case.

3. In post-office furniture, a supporting base, a case mounted thereon and having a series of removable shelves, wires bent to form vertical partitions above and below a given shelf, and means to fixedly sustain the partition wires independently of the shelves, whereby the latter can be pulled outward to release material resting thereon between adjacent partitions.

4. In post-office furniture, a case having parallel upright sides and open at its back and front, a series of horizontal shelves carried by the sides, a sliding shelf member at the bottom of the case and adapted to be pulled outward at the front or back to form a projecting shelf, and a stationary piece immediately above said member midway between the front and back of the case, to increase the effective depth of the sliding member when pulled outward in either direction.

956,926. CROWN-BLOCK. FRANK S. BARKELEW, Los Angeles, Cal. Filed Nov. 8, 1909. Serial No. 526,755.



1. A block, comprising a frame made up of four beams arranged parallel to each other, means to connect the beams together and hold them from each other, a transverse shaft mounted on the beams and extending across the upper parts thereof, a sheave mounted on the shaft in each of the spaces adjacent the outermost beams, and a sheave mounted on the beams on each side of the transverse shaft, the last named sheaves being between the two inner beams.

2. A block, comprising a frame made up of four beams arranged parallel to each other, means to rigidly connect the beams together and hold them spaced from each other, a transverse shaft extending across the tops of the beams, means to secure the shaft to the beams, a plurality of sheaves mounted on the shaft in each of the spaces adjacent the outermost beams, and a sheave mounted on the beams at each side of the transverse shaft, the last named sheaves being between the inner two beams and having their axes parallel to the shaft.

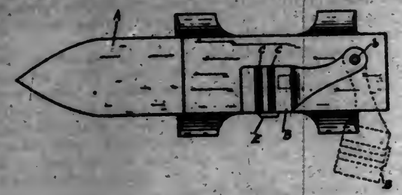
3. A block, comprising a frame made up of four beams arranged parallel to each other, means to hold the beams in spaced relation to each other, a shaft secured across the beams and crossing the three spaces between them, a sheave mounted on the shaft in each of the spaces adjacent the outer beams, and a pair of sheaves mounted on the center beams and lying between the center beams one on each side of the transverse shaft.

4. A block, comprising a frame made up of four beams arranged parallel to each other, means to hold the beams in spaced relation to each other, a shaft secured across the beams and crossing the three spaces between them, a plurality of sheaves mounted on the shaft in each of the spaces adjacent the outer beams, and a pair of sheaves mounted on the center beams and lying between the center beams one on each side of the transverse shaft.

956,927. CALK-WELDING ATTACHMENT FOR ANVILS. ANDREW F. BECK, Milwaukee, Wis. Filed Nov. 26, 1909. Serial No. 529,874.

1. The combination with an anvil, provided with a cylindrical socket, of a welding plate, resting upon the upper surface of the anvil, and having a pivot pin entered in said socket, said welding plate being provided with welding grooves, and also having a depending lip adapted to engage the side of the anvil when the plate is in position of use.

2. The combination with an anvil, of a detachable welding plate pivotally connected with the upper surface



thereof, and adapted to swing in a horizontal plane, said welding plate being provided with calk receiving grooves.

956,928. PNEUMATIC TIRE. ADRIEN BONNET, Paris, France. Filed May 20, 1908. Serial No. 433,804.



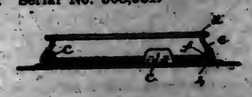
In a pneumatic tire, the combination of an inner tube, an outer cover for the inner tube, an inner tread-band of crescent-shaped cross-section and having a central annular groove in the outer face thereof, the face of said band being transversely curved adjacent to said groove, an outer leather tread-band secured to and conforming to the faces of said groove and the curved face adjacent thereto, and a circlet or ring having flattened inner, outer and side faces and fitting snugly in said groove, the depth of said groove being much greater than the depth of said circlet.

956,929. DEVICE FOR GREASING COOKING UTENSILS. FRED R. BRADBURY, East Brownfield, Me. Filed Nov. 30, 1909. Serial No. 530,693.



A device of the character described comprising a cup-shaped container having an open end, the closed end of such container being provided with a central opening, a piston rod slidably mounted in said opening, a stirrup secured to the outside of the closed end of the container and provided with an opening in alinement with the opening in such end so as to provide an auxiliary bearing for the piston rod at a point spaced from the end of the container, a knob or button secured to the outer end of such piston rod and a piston secured to the other end thereof and adapted to snugly fit and normally lie within said container, said rod being of such length that when the knob or button is moved into contact with said stirrup said piston is moved entirely outside of and beyond the open end of said container, a flexible fabric extending over the open end of the container and a hoop encircling the container adjacent its open end and serving to bind the fabric thereto and secure the same in position.

956,930. SPINNING-RING. EDWARD A. BRIGHAM, Grafton, Mass., assignor to Rotary Ring Spinning Company, Boston, Mass., a Corporation of Delaware. Filed July 22, 1909. Serial No. 508,931.

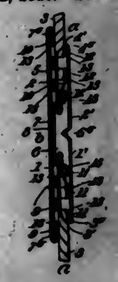


1. A rotary spinning ring, having at its upper end a traveler race, the body of said ring flaring outwardly and downwardly from said race and having an internal flange greater in internal diameter than said race, over which surface may project the retaining lips or tongues of a ring holder.

2. A rotary spinning ring comprising a body, and a traveler race at the upper end of the body, the internal diameter of said ring being greatest between the upper and lower ends, and least at the traveler race, in combination with retaining tongues arranged outside a circle commensurate with the interior of said race, said tongues extending upwardly and outwardly and adapted to loosely engage the interior of the ring between the lower end and said part of greatest diameter of the ring.

3. A rotary spinning ring comprising a body, and a traveler race at the upper end of the body, the internal diameter of said ring being least at the traveler race, greater at the lower end, and greatest between its upper and lower ends, in combination with retaining tongues arranged outside a circle commensurate with the interior of said race, said tongues extending upwardly and outwardly and adapted to loosely engage the interior of the ring between the lower end and said part of greatest diameter of the ring.

956,931. SNAP-SEAL. EDWARD J. BROOKS, East Orange, N. J. Filed Feb. 2, 1910. Serial No. 541,582.



1. The combination, in a snap seal, of a flexible shackle of flat wire and a substantially flat seal part, united at one of the shackle ends; said shackle having at its other end a resilient terminal hook, and said seal part containing a sheet-metal center piece having a flat body and transverse catch portions integral with said body substantially parallel therewith and constructed with inturned effective edges forming successive holds for said hook within the seal part.

2. The combination, in a snap seal, of a flexible shackle of flat wire and a substantially flat seal part, united at one of the shackle ends; said shackle having at its other end a resilient terminal hook, and said seal part containing a sheet-metal center piece having a flat body and transverse catch portions integral with said body and substantially parallel therewith, forming successive holds for said hook within the seal part, supplemental catch portions of said body of the center piece being also constructed with inturned edges forming alternative holds for the hook.

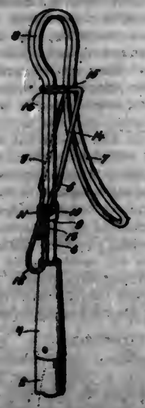
3. In combination with a flexible shackle of flat wire having a resilient terminal hook at each end, a flat label member at the front of the seal part, a substantially flat sheet-metal back member provided on its back with a pair of endwise adjoining tunnel-shaped projections forming an inlet and passage for each shackle end and constructed with inturned edges at each inlet, and a center piece of sheet-metal having a flat body held between said label member and said back member and catch portions projecting into each of said passages and forming successive holds parallel with said body for the respective hooks.

4. The combination, in a snap seal, of a flexible shackle of flat wire and a seal part, united at one of the shackle ends; said seal part having an inlet and passage for the other shackle end, and containing catch portions which project into said passage and form successive hook holds, and said other shackle end having a resilient terminal hook to interact with said hook holds within the seal part and a combined shank stiffener and inlet guard in the form of a helical coil of the flat wire suitably adjacent to said hook and arranged to interact with said inlet of the seal part.

5. The combination, in a snap seal, of a flexible shackle of flat wire and a seal part, united at one of the shackle ends; said seal part having an inlet and passage for the other shackle end and containing catch portions which project into said passage and form successive hook holds, and said other shackle end having a resilient terminal hook to interact with said hook holds within the seal part and a combined shank stiffener and inlet guard in the form of a helical coil of the flat wire suitably adjacent to said hook, the back of the hook being in line with one side of said coil, whereby the full diameter of the coil is made to project in line with the hook.

[Claim 6 not printed in the Gazette.]

956,932. SHEPHERD'S CROOK. MARSDEN L. BURCH, Chicago, Ill., assignor to A. Jackman, Lewistown, Mont. Filed May 27, 1909. Serial No. 498,617.



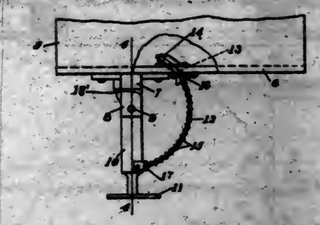
1. The combination with a shepherd's crook, of a lever pivotally connected therewith and formed of a single piece of bent wire having a double guard portion extending directly across the throat of the crook and straddling both legs thereof, the two parts of such guard being united by a loop of the wire, substantially as described.

2. The combination with a shepherd's crook, of a guard lever pivotally supported by the stem of the crook and formed of wire shaped to constitute a thumb piece extending toward the staff of the crook, and a guard adapted to lie across the throat of the crook, the guard straddling the said stem, substantially as described.

3. The combination with a shepherd's crook, of a clip secured to the stem thereof, a lever pivotally supported in the clip and having an arm extending outward from the supporting pivot and arranged to normally lie across the space between the stem and the free arm of the crook, the arm at its outer end being bent backward to constitute a guard lying directly across the throat of the crook and straddling both legs thereof, substantially as described.

4. The combination with a shepherd's crook, of a clip secured to the stem thereof, a lever formed of bent wire pivoted in the said clip, the said wire being shaped to form a thumb piece arranged adjacent to the stem of the crook, a pair of arms, 14, extending outward on either side of the crook and a guard uniting the ends of the arms, straddling the crook and normally lying across the throat thereof, and a spring for holding the lever in normal position, substantially as described.

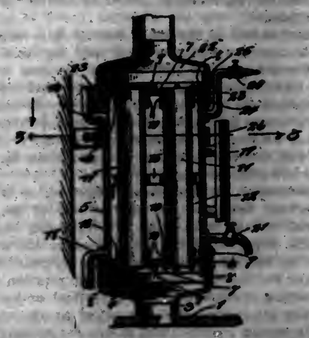
956,933. VEHICLE-STEP. ALBERT L. BURNS, Mill Creek, Okla. Filed Apr. 20, 1909. Serial No. 491,079.



1. A device of the class described comprising a hinged step adapted to swing rearward and having an offset portion provided with a notch, an inclined rod extending upward from the step and adapted to pass freely through the body of the vehicle, a spring disposed on the rod and holding the step normally in proper position for use, and a spring catch normally engaging the notch to aid in holding the hinged step in normal position.

2. A device of the class described comprising a hanger, a step hinged to said hanger and adapted to swing rearward and having a notch in its upper extremity, a curved brace rod extending upward and rearward from the step and adapted to pass freely through the bottom of a vehicle, an expansion spring coiled about said brace rod to hold the step in normal operative position, an adjusting nut mounted at the free end of the brace rod, and a spring catch member on said hanger and arranged in the path of movement of the step and adapted to engage the notch therein to aid in holding the step in normal operative position.

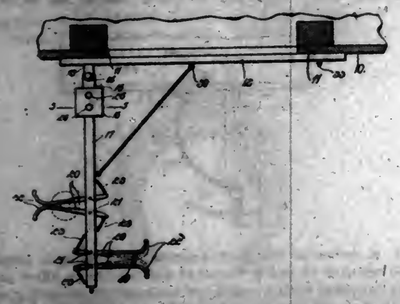
956,934. STOVEPIPE WATER-HEATER. JOHN F. BUSBY and JOHN F. BUSBY, Jr., Concord, Cal. Filed Aug. 29, 1907. Serial No. 390,655.



In a water heating device for attachment to a stovepipe, the combination of a cylindrical casing provided with end

inclosing cups having openings whereby heat from the stove may enter and leave the casing, a plurality of heating tubes vertically arranged within said casing and provided with annular shoulders, plates having flanged apertures to receive the ends of the tubes and to engage said shoulders to maintain said tubes in vertical positions, said casing having interior annular shoulders at either end against which the plates are disposed, and a spider plate disposed centrally upon the interior of the casing to assist in holding the tubes in vertical positions, as and for the purpose specified.

956,935. MAIL-BAG CATCHER AND DELIVERY APPARATUS. CLAYTON D. BUSS, Easton, Pa. Filed June 12, 1909. Serial No. 501,846. Renewed Apr. 1, 1910. Serial No. 552,906.



1. In mechanism of the class described, a supporting means adapted to be mounted upon a moving car, a swinging arm pivoted to said means, bag holding devices extending in opposite directions from each other and arranged in spaced relation upon said arm, means for locking the holding devices in either vertical or horizontal position, means for spreading one of said holding devices, and means for holding the arm against movement when in either operative or inoperative position.

2. The combination with a car, of mail bag catching and delivery mechanism carried thereby, an arm supporting said mechanism, means for locking the mechanism in either a vertical or horizontal plane, and means for holding the arm against movement when in operative or inoperative position.

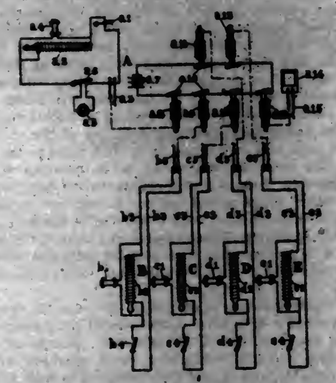
3. In mechanism of the class described, a supporting board, a U-shaped bracket secured near one end of said board, a block hinged to said bracket, an arm rotatably supported by the block, bag holding devices carried by the arm and extending in opposite directions with respect to each other, and means for locking the arm against rotation to hold the bag holding devices in either vertical or horizontal plane.

4. In mechanism of the class described, a supporting board, a U-shaped bracket secured near one end of said board, a block hinged to said bracket, an arm rotatably supported by the block, bag holding devices carried by the arm and extending in opposite directions with respect to each other, means for locking the arm against rotation to hold the bag holding devices in either vertical or horizontal plane, and means for locking the arm when in an outwardly or inwardly swung position.

5. In mechanism of the class described, a U-shaped bracket secured near one end to the side of the car, a block hinged to said bracket, an arm rotatably supported by the block, bag holding devices carried by the arm and extending in opposite directions with respect to each other, means for locking the arm against rotation to hold the bag holding devices in either a vertical or horizontal plane, means for locking the arm when in an outwardly or inwardly swung position, and means for holding one of the bag holding devices in an open position.

[Claim 6 not printed in the Gazette.]

956,936. APPARATUS FOR TEACHING WIRELESS TELEGRAPHY. FRANK E. BUNLEE, Detroit, Mich., assignor to American Wireless Institute, a Corporation of Arizona. Filed June 26, 1909. Serial No. 504,417.



1. Wireless telegraphy instruction apparatus comprising a sending circuit consisting of a sending key, an adjustable core resistance coil, a buzzer and a generator in series, receiving circuits each consisting of an adjustable core resistance coil and a telephone receiver in shunt around the coil, and means for connecting the sending circuit in series with one or more receiving circuits.

2. Wireless telegraphy instruction apparatus comprising a sending circuit consisting of a sending key, an adjustable core resistance coil, a buzzer and a generator in series, receiving circuits each consisting of an adjustable core resistance coil and a telephone receiver in shunt around the coil, jacks in series in the sending circuit, and a plug terminating each receiving circuit.

3. Wireless telegraphy instruction apparatus comprising a sending circuit consisting of a sending key, an adjustable core resistance coil, a telephone receiver in shunt around the coil, a buzzer and a generator in series, a telephone transmitter adapted to be momentarily cut into the circuit, receiving circuits each consisting of an adjustable core resistance coil and a telephone receiver in shunt around the coil, and means for connecting the sending circuit in series with one or more receiving circuits.

4. Wireless telegraphy apparatus comprising a sending circuit, including means adapted to imitate in a receiver the sounds of a wireless telegraph transmitting set, and receiving circuits adapted to be thrown into series with the sending circuits and provided with receivers in which the imitation sounds are received and with means for intensifying or decreasing the sounds.

956,937. ADVERTISING DEVICE. HARRY W. CADWELL, Detroit, Mich., assignor to Frederick Stearns & Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 22, 1909. Serial No. 485,055.

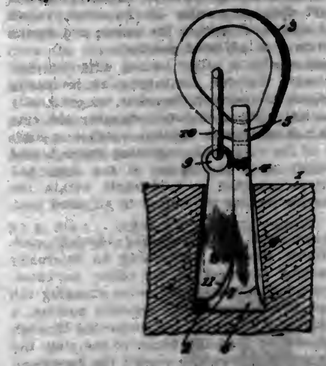


1. An advertising device, comprising a stoppered container of transpareat material, and a movable advertising medium therein occupying the major portion of the container interior.

2. An advertising device, comprising a transparent fluid container, a sealed hollow transparent body or capsule arranged within the container, the capsule being of a size to occupy the major portion of the container interior, and a label within the capsule.

3. An advertising device, comprising an elongated glass bottle, terminating in a narrow neck portion, an elongated sealed glass capsule therein of a size to occupy the major portion of the botle interior, and a label within the capsule adapted to bear advertising matter.

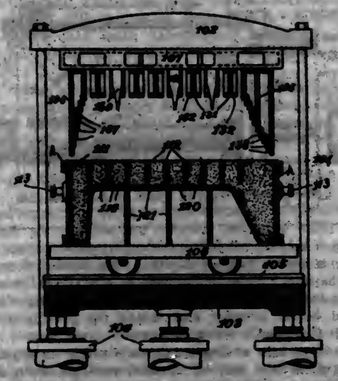
956,938. LEWIS. LUIGI CIARDELLI, Barre, Vt. Filed Sept. 18, 1909. Serial No. 518,311.



1. In a lewis, the combination with two members of unequal length and having reversely curved abutting sides, of a lifting shackle connected directly to the longer member of the pair, and a shackle connecting the shorter member with the lifting shackle, the combined length of the shorter member and its shackle connection being greater than that of the longer member, whereby the lifting force is exerted upon said longer member only, as set forth.

2. In a lewis, the combination with a member having an eye at its upper end and provided with an enlarged foot and curved sides, of a shackle threaded through the eye of said member, a second member having a reversely curved side and provided with an eye at its upper end, and a shackle threaded through said eye and connecting with the shackle threaded through the eye of said first member and lying loosely therein, whereby the lifting force is exerted upon said first member only, as set forth.

956,939. MOLDING APPARATUS. EDWIN E. CARTER, Warren, Ohio, assignor to The Day Ward Company, Warren, Ohio, a Corporation of Ohio. Filed Feb. 24, 1909. Serial No. 479,823.



1. In an apparatus of the kind described, the combination with a flask-member, of compression elements consisting of wedges, the effective surfaces of which are formed into steps.

2. In an apparatus of the kind described, the combination with a flask-member, of compression elements consisting of wedges, the effective surfaces of which are formed into steps having vertical and horizontal surfaces.

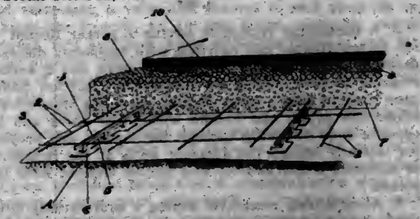
3. In an apparatus of the kind described, the combination with a flask-member, of compression elements consisting of wedges, the effective surfaces of which are formed into steps having angular surfaces.

4. In an apparatus of the kind described, a compressor comprising presser heads with horizontal surfaces and wedges with horizontal and vertical surfaces.

5. In apparatus of the character described, a compressing member provided with a series of sand-engaging steps of different heights.

[Claims 6 to 18 not printed in the Gazette.]

956,940. OILED CONCRETE ROADWAY. EDWARD M. CHADBOURNE, San Francisco, Cal. Filed Aug. 4, 1909. Serial No. 511,169.



1. The method of roadway construction which consists in preparing a suitable sub-grade and spreading a suitable layer of concrete thereover, and while this concrete is still in a plastic condition covering it with coarse rock thereby forming pockets in the top surface thereof, allowing the concrete with its rock coating to set into a solid structure, oiling the surface of the foundation so formed, so as to fill the pockets with oil of asphaltic base, then applying a layer of screening to the oil sufficient to take up the oil, and then subjecting the oiled surface to pressure.

2. The method of roadway construction which comprehends preparing a suitable concrete foundation for the roadway, which foundation comprises a concrete slab extending over the roadway, and while this concrete is still in a plastic condition, forming pockets, of approximately an inch or more in depth on its surface, filling these pockets with a heavy asphaltic oil and then applying fine screenings to absorb the oil in the pockets, and rolling the plastic mixture so formed to compact the same in the pockets.

3. The method of constructing a cement macadam roadway consisting of placing a layer of reinforced concrete on the sub-grade and while in a plastic condition providing its surface with oil retaining pockets, pouring a coating of heavy asphaltic oil over the surface to fill the pockets, and spreading a layer of fine screenings over the oil to absorb the oil.

4. The method of roadway construction which comprises the following steps in substantially the following order, to-wit: first, the preparation of a suitable sub-grade; second, the laying of a suitable concrete slab over this sub-grade and forming in the top of this slab pockets of approximately an inch or more in depth; third, filling these pockets with a heavy oil, which oil is normally in condition to be absorbed at ordinary temperatures; and fourth, spreading a layer of screenings over the oiled surface of the road-bed, said layer of screenings being approximately an inch in thickness, and causing the screenings to sink into the oil in the pockets and fill the pockets.

956,941. PAPER BAG OR SACK. THOMAS E. CHAPMAN, Pittsburg, Pa. Filed Mar. 16, 1909. Serial No. 483,723.

1. A containing receptacle having a pocket formed therein, a flexible securing element housed within the

pocket and having its intermediate portion arranged to form a plurality of loops extending transversely across the pocket and its opposite ends extended laterally beyond the adjacent walls of the receptacle in a plane at substantially right angles to the transverse plane of the loops to facilitate the withdrawal of the securing element from said pocket.



2. A containing receptacle having a pocket formed in the bottom thereof and provided with oppositely disposed passages communicating with said pockets, and a flexible securing element having its intermediate portion folded upon itself to form a series of loops extending transversely across the pocket and housed within the latter and its opposite ends extending through the passage and projecting laterally beyond the adjacent walls of the receptacle to facilitate withdrawal of said flexible element from the pocket.

3. A containing receptacle having a substantially elliptical shaped pocket formed in the bottom thereof and provided with oppositely disposed passages communicating with said pocket, a flexible element having its intermediate portions arranged to form a series of loops housed within and extending transversely across the pocket and its opposite ends extended through the passages and projected laterally beyond the adjacent walls of the receptacle to form finger-pieces.

4. A containing receptacle having a strip secured to the bottom thereof and spaced from said bottom to form a centrally disposed pocket having longitudinal passages communicating therewith, and a flexible securing element having its intermediate portion folded upon itself to form a series of loops housed within and extending transversely across said pocket and its opposite ends extending through the passages in a plane at substantially right angles to the plane of the loops.

5. A paper bag having a reinforcing strip secured to the bottom thereof and having portions of said strip spaced from the bottom of the bag to produce a centrally disposed pocket having oppositely disposed longitudinal passages communicating with said pocket, and a cord loosely housed within the pocket and having its intermediate portion folded upon itself to form a series of transverse loops and its opposite ends extending through the passages and projecting laterally beyond the adjacent walls of the bag in a plane at substantially right angles to the loops.

956,942. CONDIMENT-HOLDER. GEORGE B. CLEMMER, Trenton, N. J. Filed Mar. 18, 1910. Serial No. 550,237.



1. In a condiment holder, the combination of a cellar having adjacent compartments, a ring detachably connected to the cellar, a hemispherical perforated cover attached to the ring, a detachable rock-shaft disposed equatorially of the cover, semi-circular valves within the cover and attached to said rock-shaft, and means for locking the valves in adjusted position.

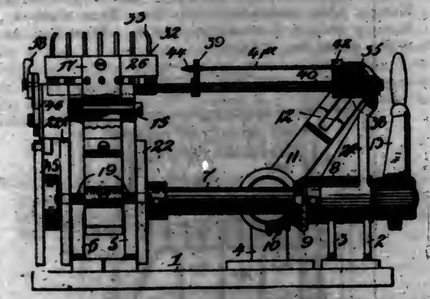
2. In a condiment holder, the combination of a cellar having adjacent compartments, a flanged ring detachably connected to the cellar, a hemispherical perforated cover having a flange adapted to engage under the flange of the ring, a rock-shaft disposed axially of the cover, valves attached to said rock-shaft within the cover, and means for locking the valves in adjusted position.

3. In combination with a cellar having adjacent compartments; a closure therefor, comprising an internally flanged ring engaging the neck of the cellar, an externally flanged hemispherical perforated cover engaging the ring and provided with diametrically opposite notches, a shaft disposed axially of the cover and projecting through said notches and resting upon the flange of the ring, and semi-circular valves attached to said shaft within the cover, and means for locking the valves in adjusted position.

4. In combination with a cellar having adjacent compartments; a closure therefor, comprising an internally flanged ring engaging the neck of the cellar, an externally flanged hemispherical perforated cover engaging the ring and provided with diametrically opposite notches, a shaft disposed axially of the cover and projecting through said notches and resting upon the flange of the ring, the flange of the ring having a notch to permit the disengagement of the shaft from the ring when the parts are to be separated, or the engagement of the shaft with the ring, when the parts are assembled, and valves attached to said shaft within the cover.

5. In a condiment holder, the combination of a cellar having adjacent compartments, a flanged ring detachably connected to the cellar, a hemispherical perforated cover having a flange adapted to engage under the flange of the ring to secure the cover to the ring, a shaft disposed axially of the cover, valves attached to said rock-shaft, a notched piece on the outer end of the shaft, and a spring detent adapted to engage said notched piece to lock the shaft and valves in adjusted position.

956,943. MANTLE-SEWING MACHINE. SAMUEL COHN, New York, N. Y., assignor to The Machine Mantle Sewing Company, New York, N. Y., a Corporation of New York. Filed May 13, 1907. Serial No. 373,195.



1. In a mantle sewing machine, a center crimper comprising a double row of vertical rods having free upper ends, the upper ends of the rods of the several rows converging toward each other, means for crimping a mantle on said center crimper and means for passing a string through the mantle when crimped.

2. In a mantle sewing machine, a center crimper, comprising a double row of upright resilient rods, having free ends, means for crimping the mantle on the center crimper and adapted to force the ends of the rods of the several rows together, and means for passing a string through the mantle while crimped.

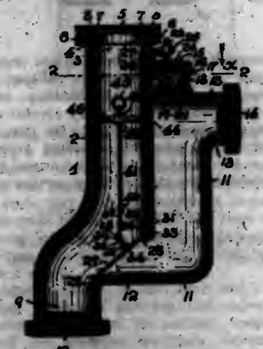
3. In a mantle sewing machine, a center crimper comprising a double row of upright resilient rods, having free and converging ends, means for crimping a mantle on the center crimper and adapted to force the converging ends of the rods of the several rows together, and means for passing a string through the mantle while crimped.

4. In a mantle sewing machine, a center crimper comprising a double row of upright resilient rods having free, chamfered, and converging upper ends, means for crimping a mantle on the center crimper and adapted to force the chamfered ends of the rods of the several rows together, and means for passing a string through the mantle while crimped.

5. A center crimper composed of a series of laterally projecting supports, a series of upright rods having free and converging ends and means for holding said rods in proper relation to one another.

[Claims 6 to 16 not printed in the Gazette.]

956,944. RETURN CHECK-VALVE. JOHN COLLIS, Newark, N. J. Filed Nov. 16, 1909. Serial No. 528,844.



1. A return check-valve comprising a main chambered valve-casing, a disk slidably arranged in said valve-casing, said disk having a restricted opening, said casing being provided with an outlet, an auxiliary water-collecting chamber connected with said valve-casing, said water-collecting chamber being formed with an inlet and being also in communication with the interior of said main valve-casing, means for conveying air and steam into said valve-casing and above the disk therein, a valve-disk in said means of communication from said water-collecting chamber into said main valve-casing, and a means of mechanical connection between said sliding disk and said valve-disk.

2. A return check-valve comprising a main chambered valve-casing, a disk slidably arranged in said valve casing, said disk having a restricted opening, said casing being provided with an outlet, an auxiliary water-collecting chamber connected with said valve-casing, said water-collecting chamber being formed with an inlet and being also in communication with the interior of said main valve-casing, a valve-disk in said means of communication from said water-collecting chamber into said main valve-casing, an air and steam conveying means between said auxiliary water-collecting chamber and the upper interior portion of said main valve-casing, and a means of mechanical connection between said sliding disk and said valve-disk.

3. A return check-valve comprising a main chambered valve-casing, a disk slidably arranged in said valve-casing, said disk having a restricted opening, said casing being provided with an outlet, an auxiliary water-collecting chamber connected with said valve-casing, said water-collecting chamber being formed with an inlet and being also in communication with the interior of said main valve-casing, means for conveying air and steam into said valve-casing and above the disk therein, an angularly disposed valve-seat located in said means of communication between said water-collecting chamber and said main valve-casing, a pivot-pin extending across said main valve-casing at a point above said valve-seat, a valve-disk secured to said pivot-pin in a hinge-like manner, and a means of mechanical connection between said sliding disk and said valve-disk.

4. A return check-valve comprising a main chambered valve-casing, a disk slidably arranged in said valve-casing, said disk having a restricted opening, said casing being provided with an outlet, an auxiliary water-collecting chamber connected with said valve-casing, said water-collecting chamber being formed with an inlet and being also in communication with the interior of said main valve-casing, an angularly disposed valve-seat located in said means of communication between said water-collecting chamber and said main valve-casing, a pivot-pin extending across said main valve-casing at a point above said valve-seat, a valve-disk secured to said pivot-pin in a hinge-like manner, an air and steam conveying means between said auxiliary water-collecting chamber and the upper interior portion of said main valve-casing, and a means of mechanical connection between said sliding disk and said valve-disk.

5. A return check-valve comprising a main chambered valve-casing, said casing being provided with an outlet, an auxiliary water-collecting chamber connected with said valve-casing, said water-collecting chamber being formed with an inlet and being also in communication with the interior of said main valve-casing, a valve-disk in said means of communication from said water-collecting chamber into said main valve-casing, a second disk slidably arranged in the upper end-portion of said valve-casing, and a connecting means between said last-mentioned disk and said valve-disk.

[Claims 6 to 17 not printed in the Gazette.]

956,945. SUPPORTING-SADDLE FOR RUNNING-BOARDS. WILLIAM F. CREMEAN, Logan, Ohio. Filed Jan. 15, 1910. Serial No. 538,181.



1. A saddle for running boards for car roofs comprising a horizontal section adapted to support running boards, means for fastening said section to a car roof, lugs on the upper side of said horizontal section and disposed between the running boards, and retaining caps adapted to engage said lugs and edges of the boards, to hold said running boards on the horizontal section.

2. A saddle for running boards for car roofs comprising a horizontal section adapted to support running boards, means for fastening said section to a car roof, lugs on the upper side of said horizontal section and disposed between the running boards, retaining caps adapted to engage said lugs and edges of the boards, to hold the running boards on the horizontal section, and means engaging the running boards for preventing their displacement in the direction of their length.

3. A saddle for running boards for car roofs comprising a base adapted to fit over the center and inclined sides of a car roof, a horizontal section made integral with said base and adapted to receive and support running boards, means for securing the base to a car roof, and means between the running boards adapted to be detachably connected to the horizontal section and firmly clamp the running boards at their edges to the saddle.

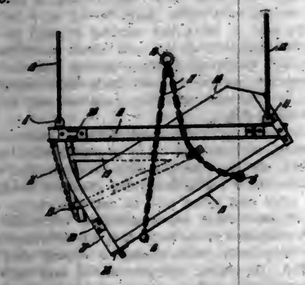
4. A saddle for running boards for car roofs comprising a horizontal section adapted to support running boards, means for fastening said section to a car roof, lugs on the upper side of said horizontal section provided with openings, retaining caps provided with openings register-

ing with said lug openings and adapted to be seated over said lugs and hold the running boards on the horizontal section, and pins passing through the openings of said lugs and caps.

5. A saddle for running boards for car roofs comprising a horizontal section adapted to support running boards, means for fastening said section to a car roof, integral lugs on the upper side of said horizontal section and between the running boards, retaining caps adapted to removably engage said lugs and edges of the running boards, to hold the running boards on the horizontal section, and means engaging the running boards for preventing their displacement in the direction of their length.

[Claim 6 not printed in the Gazette.]

956,946. HOISTING-BUCKET. VERNON H. CRITES, Huntington, W. Va. Filed June 21, 1909. Serial No. 503,463.

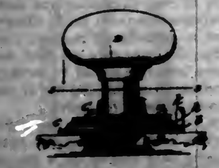


1. In a hoisting device, a frame, an open front bucket hinged thereto, stops on said bucket to support the free end of the frame, a door pivotally attached to the bucket, and elements connecting the door and the frame to open said door when the bucket swings on its pivots to a predetermined position.

2. In a hoisting device, a frame, an open front bucket hinged thereto, stops on said bucket to support the free end of the frame, hoisting chain attaching means fixed on said bucket, limit elements attached to the frame to check the downward movement of said frame at a predetermined point, a door pivotally attached to the bucket, and chains connecting the door and frame to limit the downward movement of the door when the bucket swings on its pivots to a predetermined position.

3. In a hoisting device, a frame, an open front bucket hinged thereto, stops on said bucket to support the free end of the frame, bridle chains connecting each side of said bucket, one end of the bridle being connected adjacent the pivot point of the bucket and the other remote therefrom, limit elements attached to the frame to check the downward movement of said frame at a predetermined point, a door pivotally attached to the bucket, and chains connecting the door and the frame to open said door when the bucket swings on its pivots to a predetermined position.

956,947. KNOB-SPINDLE FASTENER. WILLIAM CURLETT, San Francisco, Cal. Filed Apr. 21, 1909, Serial No. 491,236. Renewed Mar. 31, 1910. Serial No. 552,634.



In a knob-spindle fastener, a casing comprising an escutcheon, and a back-plate connected with the escutcheon and formed in part by a spring strip integral with the plate at one end and divided therefrom by slits extending to the edge of the plate and having a protuberance adjacent its free end, in combination with a slidable bolt guided in the casing, between the escutcheon and the back plate thereof, and having a depression adapted to coöperate with the said protuberance of the spring strip.

956,948. PNEUMATIC TIRE. HARRY L. DAZEY, Dallas, Tex. Filed Apr. 21, 1908. Serial No. 428,415.



A tire provided with a metallic armor embedded therein consisting of approximately U-shaped rectangular links alternately arranged and flexibly connected together at their corners whereby any pivotal movement of the links is in a plane transverse to the tire, and straight longitudinal linked members extending around the tire for securing the inner edges of the armor in place and being embedded in the rim engaging portion of the tire.

956,949. REVOLVING TILTABLE CHAIR. MARK DEXTER, Kenomi, Nebr. Filed Dec. 6, 1909. Serial No. 531,711.

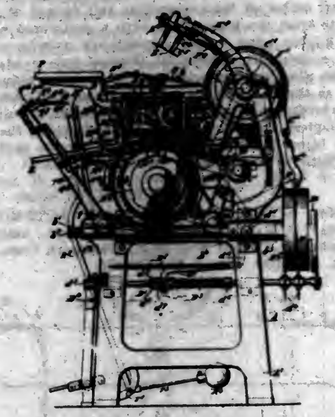


1. In a chair, upper and lower horisontal supports a post extending through one support and partially through the other, uprights arranged on either side of said post, a brace pivotally connected to the seat of said chair and having its lower end disposed between the post and one of said uprights, said chair being tiltable, said brace being capable of limiting the tilting action of said chair.

2. A chair of the class described having a seat pivotally mounted on a transverse support, said chair being capable of a rotary motion, a brace pivotally connected with said seat and capable of limiting the upward movement of said seat.

3. In a chair, upper and lower horisontal supports a post extending through one support and partially through the other, uprights arranged on either side of said post, a brace pivotally connected to the seat of said chair and having its lower end disposed between the post and one of said uprights, said chair being tiltable, said brace being capable of limiting the tilting action of said chair, said post being provided with an annular recess near the upper end thereof and means for engaging said recess, for preventing the displacement of said chair.

956,950. MACHINE FOR FOLDING BLANKS FOR CUFFS AND THE LIKE. WALTER L. DIXON, Milford, Mass., assignor to Reece Folding Machine Company, Boston, Mass., a Corporation of Maine. Filed Oct. 14, 1907. Serial No. 397,440.



1. In a folding machine, a main shaft and a power controller having a neutral position and movable in one direction therefrom to start the machine, means whereby when started the machine continues automatically to the end of one cycle and then automatically stops, and said controller movable in another direction from neutral for instantaneously stopping the machine before the end of a cycle; combined with blank-infolding mechanism actuated from the main shaft.

2. In a folding machine, a main shaft and a power controller having a neutral position and movable in one direction therefrom to start the machine, means whereby when started the machine continues automatically to the end of one cycle and then automatically stops, and said controller movable in another direction for instantaneously stopping the machine before the end of a cycle, and means for holding said controller in operative position whereby the machine will run continuously without stopping at cycle ends; combined with blank-infolding mechanism actuated from the main shaft.

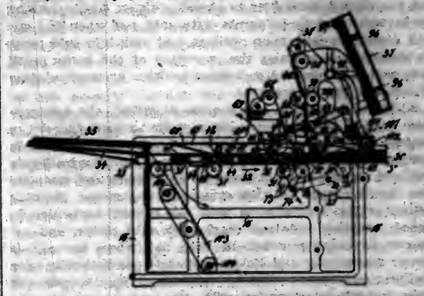
3. In a folding machine, a controller which may be shifted out of normal, means for setting the main shaft in revolution when said controller is so shifted, said means adapted to maintain the shaft in revolution until the end of a cycle of movement and then cause it to stop, and a part for maintaining said controller out of normal whereby the machine may operate for cycle after cycle without stoppage; combined with blank-infolding mechanism actuated from the main shaft.

4. In a folding machine, fast and loose pulleys, a main shaft, a spring, a power controller adapted to effect the shifting of a power belt from the loose to fast pulley against the resistance of said spring, a part set in movement by said main shaft and adapted to maintain the belt on the fast pulley after said controller is released, and a second and stronger spring interposed in the belt shifting mechanism, whereby on reversing the position of said controller said stronger spring may be sprung, the belt shifted against said spring, and the machine stopped whenever desired; combined with blank-infolding mechanism actuated from the main shaft.

5. In a folding machine the combination of a templet, templet carrying arms, a bell crank lever as g', g^3, adjustable connections between lever part g' and said arms, and a power cam against which lever part g^3 bears by the weight of the templet, whereby said cam may raise said templet or the same may at will be lifted by hand.

[Claims 6 to 78 not printed in the Gazette.]

956,951. COPYING-MACHINE. MAX DRACHMANN, Berlin, Germany. Filed Oct. 15, 1909. Serial No. 522,721.



1. In combination in a machine of the type described two press rollers, a slidable frame, a copying table rotatably carried by said slidable frame and adapted to pass between said rollers, means for rotating said table through 180 degrees at the end of each copying process.

2. In combination in a machine of the type described a roller, a rotatable table, means for effecting the rotation, said table and roller being relatively movable, a movable gripping catch on said table for holding a paper sheet to the same and means for operating said gripping catch.

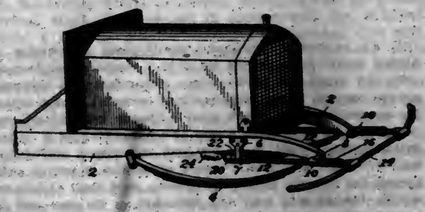
3. In combination in a machine of the type described a frame, a roller rotatably supported in said frame, a rotatable table supported on said frame, means for rotating the table said table and roller being relatively movable, a movable gripping catch on said table for holding a paper sheet to the same, a fixed ledge on the machine frame and means articulated to said gripping catch and co-acting with said fixed ledge for operating said catch as required.

4. In combination in a machine of the type described two rollers, a table movable between said rollers, a movable rack having two rows of teeth thereon and pinions on the spindle of said rollers and engaging in said rack.

5. In combination in a machine of the type described, two rollers, a table free to reciprocate in a tangential path between said rollers, means for pressing said rollers on to said table to fixedly engage the same and means for rotating said rollers backward and forward through a desired angle.

[Claims 6 to 18 not printed in the Gazette.]

956,952. AUTOMATIC STOPPING DEVICE FOR MOTOR-VEHICLES. VICTOR EMDEN and FRANK H. DEARBORN, New York, N. Y. Filed Feb. 16, 1910. Serial No. 544,180.



1. In an apparatus of the class described, the combination with a motor vehicle, of a guide carried thereby, a contact device having a rod fitting said guide and provided with a circuit-controller arranged to normally occupy a closed position, and a locking device arranged to cooperate with said rod when the circuit-controller is in open position and maintain said parts in condition to prevent the operation of the motor until said parts are restored to normal position by manipulation of the lock by the operator.

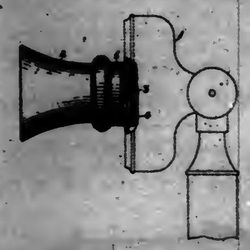
2. In an apparatus of the class described, the combination with a motor vehicle, of a guide carried thereby, a

contact device having a rod fitting said guide and provided with a circuit controller, yielding means for holding the circuit controller in closed position, and a locking device arranged to coöperate with said rod when the circuit controller is in open position and maintain said parts in condition to prevent the operation of the motor until said parts are restored to normal position by manipulation of the lock by the operator.

3. In an apparatus of the class described, the combination with a motor vehicle, of a guide carried thereby, a contact device provided with a rod arranged to slide in said guide, said rod having notches, a circuit controller on said rod arranged to contact with said sleeve and complete the circuit of the ignition system of the motor, yielding means acting normally to hold the circuit controller in closed position, a detent carried by said sleeve and arranged to enter a notch in said rod when the rod is moved rearwardly and hold the circuit controller in open position, and means whereby said detent may be removed from locking engagement with the rod to permit the yielding means to restore the circuit controller to closed position.

4. In an apparatus of the class described, the combination with a motor vehicle, of a sleeve carried thereby, a contact device provided with a rod arranged to slide in said sleeve, said rod having notches, a cap at the end of the rod arranged to abut against said sleeve, a circuit controller on said rod arranged to contact with said sleeve and complete the circuit of the ignition system of the motor, yielding means acting normally to hold the circuit controller in closed position, a detent carried by said sleeve and arranged to enter a notch in said rod when the rod is moved rearwardly and hold the circuit controller in open position, and means whereby said detent may be removed from locking engagement with the rod to permit the yielding means to restore the circuit controller to closed position.

956,953. ANTISEPTIC TELEPHONE-MOUTHPIECE. WILLIAM M. ENGLISH and HARRY M. LICHTENSTEIN, San Francisco, Cal. Filed Oct. 7, 1909. Serial No. 521,514.

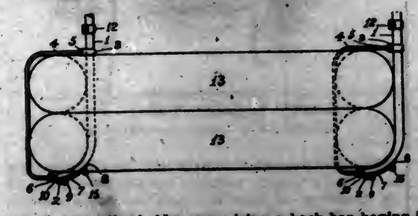


1. An antiseptic telephone mouth-piece comprising a flaring mouth-piece proper made in a single piece, formed near the inner end with a deep circumferential internal groove adapted to receive absorbent material, and a union for connecting said mouth piece with the transmitter, secured within the mouth piece, and consisting of a cylindrical metallic shell, formed at one end with a perforated wall arranged within said mouth piece wholly behind said groove but in close proximity thereto, said shell extending wholly behind said wall and threaded on its rear end to screw within the central socket of the transmitter, substantially as described.

2. An antiseptic telephone mouth-piece comprising a flaring mouth-piece proper, and a union for connecting said mouth-piece with the transmitter, consisting of a cylindrical metallic shell threaded to screw within the central socket of the transmitter and formed at the end remote from the transmitter with a perforated wall, the mouth-piece being formed immediately outside said wall with a deep circumferential internal groove adapted to receive absorbent material, said shell being formed with slots in the wall and the part of the shell adjacent thereto, whereby said part can be compressed to enter said mouth-piece, substantially as described.

3. An antiseptic telephone mouth-piece, comprising a flaring mouth-piece proper, and a union for connecting said mouth-piece with the transmitter, consisting of a cylindrical metallic shell threaded to screw within the central socket of the transmitter and formed at the end remote from the transmitter with a perforated wall, the mouth-piece being formed immediately outside said wall with a deep, circumferential internal groove adapted to receive absorbent material, said shell being formed with slots in the wall and the part of the shell adjacent thereto, whereby said part can be compressed to enter said mouth-piece, and being also formed with knobs, the mouth-piece being formed with sockets to receive said knobs, substantially as described.

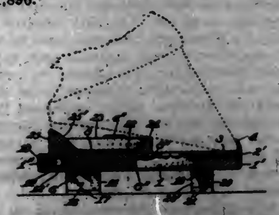
956,954. SPARE-TIRE HOLDER FOR AUTOMOBILES. JOHAN E. FAHLSTROM, Bridgeport, Conn., assignor of one-half to Clifford B. Hickox, Bridgeport, Conn. Filed Oct. 15, 1909. Serial No. 522,736.



1. A spare tire holder comprising a back bar having its outer end terminating in a hook, a collar slidable on said bar, a latch bar having one end pivoted to said collar and having its opposite end formed with a hook, a locking lever having a handle at one end and a hook at the other, the back face of said hook being extended to form a cam face which conformably engages in said hook of the back bar, and a link connected with the hook on the latch bar and the hook on the locking lever.

2. A spare tire holder comprising a back bar having its outer end terminating in a hook, a collar slidable on said bar, a latch bar having one end pivoted to said collar and having its opposite end formed with a hook, a locking lever having a handle at one end and a hook at the other, the back face of said hook being extended to form a cam face which conformably engages in said hook of the back bar, a link connected with the hook on the latch bar and the hook on the locking lever said locking lever being formed with an opening, and a staple carried by the back bar to be received in said opening of the locking lever, said staple being adapted to receive a suitable lock.

956,955. HORSEHOOF APPLIANCE. CHARLES E. FEAR, Indianapolis, Ind. Filed Oct. 9, 1909. Serial No. 521,896.



1. Hoof appliances comprising two hingedly connected curved shoe parts, a frog-support supported by the two shoe parts, and a filling plate slidingly mounted on the frog-support to coöperate therewith.

2. Hoof appliances comprising two curved shoe parts having each a frog-supporting plate thereon between its end portions and a socket in one of the end portions between the end and the plate, said plates being imperforate and adapted to slide in contact each with the other, a pivot connecting the opposite end portions of the shoe parts together, and expanding appliances insertible removably in the sockets.

3. Hoof appliances comprising two connected curved shoe parts, a frog-support supported by the two parts, and a filling plate to rest upon the frog-support and having forwardly converging upturned flange portions on opposite edges and also a projection on the rear end portion thereof, the projection having a sloping forward side presented toward the converging flange portions.

956,956. PALLET SETTING AND ADJUSTING TOOL. LEMUEL E. GARNETT, Chanute, Kans. Filed Aug. 3, 1909. Serial No. 511,049.



1. A pallet setting and adjusting tool comprising a pair of pivoted jaws for holding a pallet between the same, and levers mounted on said jaws for forcing the stones into the stone sockets of the pallets.

2. A pallet setting and adjusting tool comprising a pair of spring actuated jaws, adjustable jaw faces carried by said jaws for holding the pallet between the same and levers carried by said jaws for operating on the stones of the pallet.

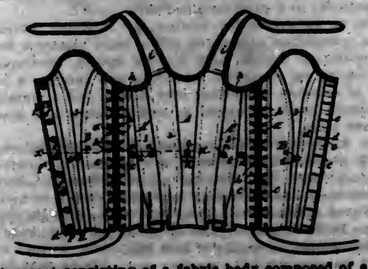
3. A pallet setting and adjusting tool comprising a pair of levers provided with handles, springs for forcing said handles apart, jaw faces carried by said jaws for holding a pallet, and pivoted levers mounted upon the respective jaws for operating upon the pallet stones.

4. A tool of the kind described comprising a pair of spring actuated jaws for holding a pallet between the same, and levers carried by the respective jaws adapted to operate upon the stones of the pallet.

5. A tool of the kind described comprising a pair of jaws provided with enlarged flattened heads, jaw faces adjustably mounted on said jaws for holding the pallet between the jaws, and pivoted levers for operating upon the stones of the pallet.

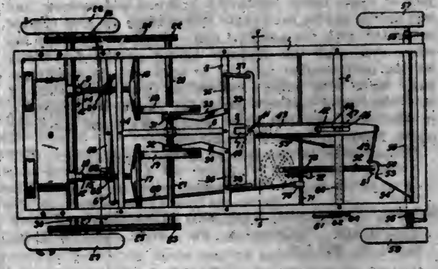
[Claims 6 to 11 not printed in the Gazette.]

956,957. CORSET. HENRY W. GILBERT and EVA M. MARTIN, Meadville, Pa., assignors to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed May 2, 1908. Serial No. 430,497.



A corset consisting of a fabric body composed of a back section and two front sections, and having its top edges formed with increased downward curvatures at the underarm portions, the said back section formed with side extensions, the rear edge portions of the front sections and adjacent edge portions of the extensions being hemmed and formed thereat with pockets, stays consisting of looped wire disposed in the pockets, eyelets fastened to the said front sections and extensions and arranged between the hemmed edges and stays, elastic lacings passing through the eyelets for adjustably and yieldingly connecting said front sections and extensions, the front edges of the front sections each provided with two parallel hems and one of the said front sections provided with button-holes between the two hems, the front edge of the other front sections provided with a pocket between its two hems, a wire stay disposed in said pocket, a series of tape loops attached to the latter section at the hem farthest from the edge thereof, buttons secured to said loops and arranged correspondingly with the aforesaid button-holes, shoulder-straps sewed to the top edge of the back section, said straps being tapered from their permanently attached ends partway toward their free ends and curved longitudinally and formed with wide transverse attaching edges to maintain them flat and secure on the shoulders of the wearer, the free ends of the straps being detachably and adjustably connected to the top portions of the aforesaid front sections, and waist-band attaching means consisting of a series of tape loops fastened to the corset body adjacent to the stay-pockets and provided with buttons as set forth and shown.

956,958. FRICTION DRIVE MECHANISM. O PETER GRAU, Long Green, Md., assignor of one-half to Henry Walter Grau, Long Green, Md. Filed July 22, 1908. Serial No. 444,798.



1. The combination, with a pair of parallel driving shafts, and a friction disk secured to one end of each shaft, of a pair of driven shafts disposed at right angles to the driving shafts; a friction pulley slidable upon each driven shaft and arranged in contact with the adjacent disk; a movable member operatively connected with said pulleys; and separate actuating devices connected with said member for simultaneously shifting both pulleys toward or from the centers of the adjacent disks, to vary the speed of rotation of said driven shafts, and for simultaneously shifting either pulley toward and the other pulley from the centers of the adjacent disks, to cause one of the driven shafts to rotate at a higher rate of speed than the other.

2. The combination, with a frame, a pair of parallel driving shafts carried thereby and a friction disk secured to one end of each shaft, of a pair of alining driven shafts carried by the frame and disposed at right angles to said driving shafts; a friction pulley slidable upon each driven shaft and arranged in contact with the adjacent disk; a member carried by the frame and connected at its opposite ends with said pulleys; and means for moving said member forward or backward, to simultaneously shift both pulleys toward or from the centers of the adjacent disks, to vary the speed of rotation of said driven shafts.

3. The combination, with a frame, a pair of parallel driving shafts carried thereby, and a friction disk se-

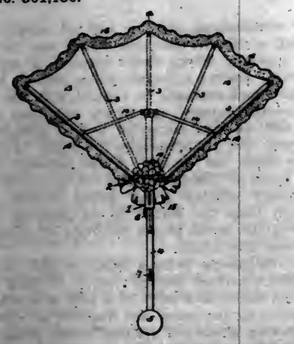
cured to one end of each shaft, of a pair of alining driven shafts carried by the frame and disposed at right angles to the driving shafts; a friction pulley slidable upon each driven shaft and arranged in contact with the adjacent disk; a rocking member carried by the frame and connected at opposite ends with the adjacent pulleys; means for moving said member bodily backward or forward, for simultaneously shifting both pulleys toward or from the centers of the adjacent disks; and separate means for rocking said member in either direction, to simultaneously shift either pulley toward and the other pulley from the centers of said disks, to cause one of the driven shafts to rotate at a higher rate of speed than the other.

4. The combination, with a frame, a pair of parallel driving shafts carried thereby, and a friction disk secured to one end of each shaft, of a pair of alining driven shafts carried by the frame and disposed at right angles to the driving shafts; a friction pulley slidable upon each driven shaft and arranged in contact with the adjacent disk; a rocking member carried by the frame; a pair of angle levers interposed between said member and the driven shafts, each angle lever having one arm thereof connected with the adjacent end of said member, and the other arm connected with the adjacent pulley; and means for moving said member bodily forward or backward, to simultaneously shift both pulleys toward or from the centers of the adjacent disks.

5. The combination, with a frame, a pair of parallel driving shafts carried thereby, and a friction disk secured to one end of each shaft, of a pair of alining driven shafts carried by the frame and disposed at right angles to the driving shafts; a friction pulley slidable upon each driven shaft and arranged in contact with the adjacent disk; a rocking member carried by the frame; a pair of angle levers interposed between said member and said driven shafts, each angle lever having one arm thereof connected with the adjacent end of said member, and the other arm with the adjacent pulley; means for bodily moving said member forward or backward, to simultaneously shift both pulleys toward or from the centers of said disks; and separate means for rocking said member, to simultaneously shift either pulley toward and the other pulley from the centers of said disks.

[Claims 6 to 18 not printed in the Gazette.]

956,959. COMBINED FAN AND SUNSHADE. RUDOLF GREENFIELD, Philadelphia, Pa. Filed June 9, 1909. Serial No. 501,150.



1. A combined fan and sunshade having a cover fabric, a guide member with ribs pivoted thereto at their inner ends and connected to the cover fabric at their outer ends, a rod slidably mounted on said member, and stretcher bars connecting the inner end of said rod with the outermost ribs of the series, the other end of the rod projecting beyond the guide member whereby it can be operated from beyond the same to spread or contract the ribs.

2. A combined fan and sunshade having a cover fabric, a guide member with ribs pivoted thereto at their inner ends and connected to the cover fabric at their outer ends, a rod slidably mounted on said member, and stretcher bars connecting the inner end of said rod with the outermost ribs of the series, and extending transversely across the series of ribs, the other end of the rod projecting beyond the guide member whereby it can be operated from beyond the same to spread or contract the ribs.

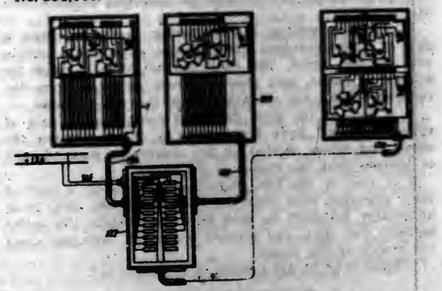
3. A combined fan and sun shade having a cover fabric, a member with ribs pivoted thereto at their inner ends and connected to said cover fabric at their outer ends, a rod guided on said pivot member, and stretcher bars connecting the inner end of said rod with the outermost ribs of the series but disconnected from the intermediate ribs.

4. A combined fan and sun shade having a cover fabric, a member to which are pivoted the inner ends of a series of ribs which are connected at their outer ends to said cover fabric, a rod guided on said pivot member, and having, at its inner end, a guide which slides upon the central rib of the series, and stretcher bars connecting said inner end of the rod with the outermost ribs of the series.

5. A combined fan and sun shade having a cover fabric, a member to which are pivoted the inner ends of a series of ribs which are connected at their outer ends to said cover fabric, a rod guided on said pivot member, and having, at its inner end, a guide which slides upon the central rib of the series, and stretcher bars connecting said inner end of the rod with the outermost ribs of the series, and extending transversely across the series of ribs.

[Claim 6 not printed in the Gazette.]

956,960. APPARATUS FOR TRANSMITTING AND RECEIVING INFORMATION. JOHN L. HALL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 5, 1907. Serial No. 396,088.



1. In an apparatus for sending and receiving information, a transmitter comprising two or more movable members bearing indicia, electromagnetic means for moving said elements, a plurality of switches controlling said means, and a plurality of rotatable cams for actuating said switches in a predetermined order.

2. In an apparatus for sending and receiving information, a transmitter comprising one or more rotatable dials and oscillatory targets, both bearing indicia, electromagnetic means for operating said dials and targets, a plurality of switches controlling said means, and a plurality of rotatable cams for actuating said switches in a predetermined order.

3. In an apparatus for sending and receiving information, a transmitter comprising a rotatable dial and an oscillatory target, both bearing indicia, individual electromagnetic means for operating said dial and target, and a plurality of switches controlling said means and arranged to cause an oscillation of said target at the completion of a predetermined movement of said dial.

4. In an apparatus for sending and receiving information, a transmitter comprising a rotatable dial, and means for rotating said dial comprising a plurality of electromagnets connected in parallel and having their pole pieces spaced at equal distances apart, and a polarized armature having bifurcated ends adapted to span the space between two pole pieces.

5. In an apparatus for sending and receiving information, a transmitter comprising a rotatable dial, and means for rotating said dial a certain number of equal angular movements comprising a set of field electromagnets in number equal to one-half of said movements, and a polarized armature having each pole of the same width as a field pole piece and containing a notch equal in width to the space between two field pole pieces.

[Claims 6 to 11 not printed in the Gazette.]

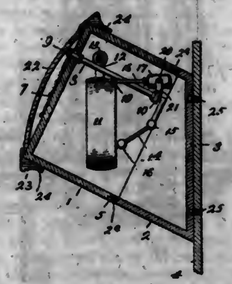
956,961. COMBINED SHOVEL AND SCOOP. ANTHONY F. HAMMERSCHMIDT, Grand Rapids, Mich. Filed Sept. 13, 1909. Serial No. 517,403.



1. The combination with a shovel, of an attachment for converting it into a scoop comprising the back piece provided with means for attaching it to the shovel handle, and the notched side pieces adapted to engage the side edges of the blade.

2. The combination with a shovel, of an attachment for converting it into a scoop, comprising the back piece provided with a spring clip for attaching it to the shovel handle, the top piece and the side pieces having notched lower edges to engage the opposite side edges of the shovel blade, those lower portions of the sides in rear of the slots lying above the blade, while those portions in front of the slots lie below the blade.

956,962. GRADOMETER. ELBERT A. HAMMETT and EDWARD H. CLARK, Kansas City, Mo. Filed June 18, 1909. Serial No. 502,942.



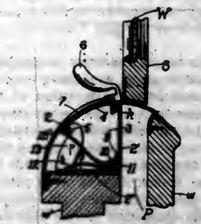
1. A gradometer, comprising, in combination, a case having a dial, a pointer operative over said dial, a shaft mounted longitudinally of said case and carrying said pointer and having a crank arm disposed at an angle to the vertical plane through the axis of said shaft, a weight suspended to swing longitudinally of said shaft, and means flexibly connecting said crank arm and the lower part of said weight.

2. A gradometer, comprising, in combination, a case having a dial, a pointer operative over said dial, a rotatable shaft carrying said pointer and having a crank arm extending to one side, a weight suspended to oscillate longitudinally of said shaft, and universal joint and shaft connections between the lower part of said weight and the free end of said crank arm.

3. A gradometer, comprising, in combination, a case having a dial, a pointer operative over said dial, a rotatable shaft carrying said pointer and having a crank arm extending to one side, a weight having a point of suspension above said shaft and hanging below said shaft, and a link connecting said crank arm and said weight.

4. A gradometer, comprising, in combination, a cylindrical casing, having a dial at one end, a pointer adapted to traverse said dial, a shaft rotatably mounted in said casing and carrying said pointer, an oscillatory weight suspended to swing longitudinally of said shaft, said weight having its points of suspension above said shaft, and having its bulk hanging therebelow, an eccentric element formed on said shaft and a rod connecting said eccentric element and said weight and forming with said eccentric element a toggle lever connection between said weight and said shaft.

956,963. SASH-LOCK. GUSTAVE HARMUTH, St. Louis, Mo. Filed July 28, 1909. Serial No. 510,105.



1. In combination with a sliding sash closing by an upward movement, a curved casing wall at the base of the window-frame, an oscillating apron bearing against the inner face of said wall, springs for forcing the apron outwardly to span the bottom of the lower sash-rail, and means located within the casing for arresting the movement of the apron when projected the proper distance beyond the curved casing wall aforesaid.

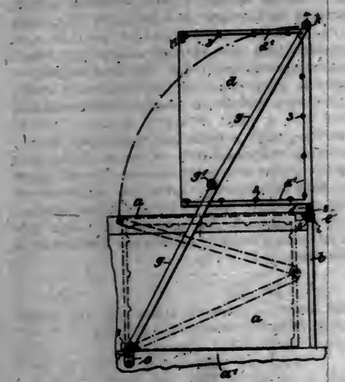
2. In combination with a sliding sash closing by an upward movement, a curved wall at the base of the window frame, an oscillating apron bearing against the inner face of the curved wall, a series of dilating springs for projecting the apron across the base of the bottom sash-rail for an elevated position of the sash, a bead formed at the lower edge of the apron, and a series of arresting devices engaging the bead for a properly projected position of the apron.

3. In combination with a sliding sash, a hollow sill provided with an outer curved wall, a curved oscillating apron bearing against the inner face of said wall, the latter being provided with a recess along its upper edge, an arm carried by the apron and operating in said recess, a pocket for the reception of the sash when lowered, springs for projecting the apron for a raised position of the sash across the pocket and under the bottom sash-rail, a series of members provided with terminal arresting shoulders, the lower edge of the apron being provided with a bead for engaging said shoulders when projected across the pocket and under the sash rail, substantially as described.

956,964. WIND-SHIELD FOR AUTOMOBILES. JOHN N. HAUS, New York, N. Y. Filed Oct. 16, 1909. Serial No. 522,926.

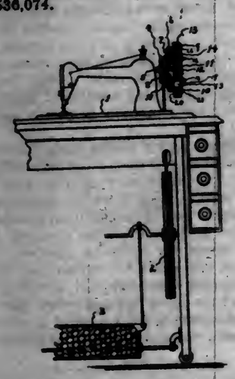
1. A wind-shield for automobiles, comprising two similar vertically divisible parts, side hinged brace arms, means for pivoting the same at their lower ends to the main frame of the machine, means for pivoting same at their upper ends to the ends of the wind-shield parts,

means for pivotally connecting the lower ends of the wind-shield parts to the dash-board, whereby the wind-shield parts may be swung from an alined transverse position of use to parallel positions of disuse and also with the unfolding and bowing of the brace arms said parts may be swung downward at the sides of the machine.



2. A wind-shield for automobiles, comprising two similar vertically divisible parts, each part comprising a plate of glass and a metal frame, pivot pins at the respective ends of the side members of the metal frame parts, clip members secured to the dash-board and having pins, support brackets having socket ends receiving the pins of the clip members and the pins at the lower ends of the upright parts of the metal frame, sleeves with pivot pins at the upper ends of the side frame parts, side hinged brace arms at their upper ends connected to the pins of said sleeves and at their lower ends to the pins of brackets secured to the main frame, whereby the wind-shield parts may swing from transverse and vertical positions of alinement into parallel vertical positions and then downward out of the way.

956,965. SEWING-MACHINE ATTACHMENT. HOWARD HOLFORTY, Omaha, Nebr. Filed Jan. 3, 1910. Serial No. 536,074.



In a device of the character described, the combination with a shaft mounted pulley, said shaft and pulley having a projecting part disposed outwardly of the plane of the pulley and in alinement with the axis of the shaft, of a disk having a greater diameter than the pulley and consisting of a circular core portion formed with a central opening within which said projecting part lies, a hook member passing through a radial slot in said core member, a second hook member passing through an arcuate slot formed in the core member substantially diametrically opposite the radial slot, a rim member comprising a ring, L-shaped in cross section, one portion of said ring lying against the vertical outer face of the core member, and the other portion of said ring encircling and engaging the periphery of the core member, a grinding and polishing ring secured to and removable with said L-shaped ring, and fastening devices passing through the outer face of said L-shaped ring and entering said core member.

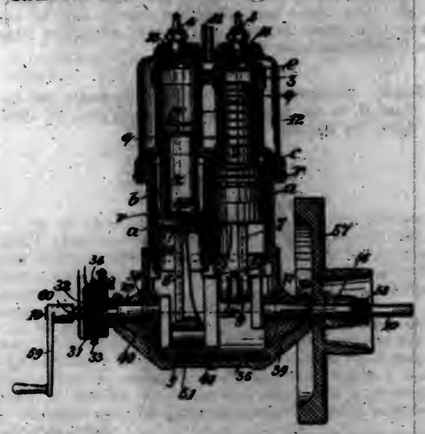
956,966. CURTAIN FOR VESTIBULE-CARS. EDWARD C. HOLMES, Ludlow, Ky. Filed June 13, 1908. Serial No. 438,378.



1. In a device of the character specified, in combination with the curtain roller and curtain, and a handle for holding the curtain, with a bar slidingly mounted on said handle, a flexible strip secured to the curtain roller and separate from the curtain, and a plate secured to the sliding bar, provided with slots to receive the end of the flexible strip and to detachably secure the same thereto.

2. In a device of the character specified, in combination with the curtain roller and curtain of a handle for holding the curtain, a bar slidingly mounted on said handle, and a flexible connection therefor with the curtain roller of shorter length than the curtain, and a pivoted catch with prongs in opposite direction, one prong engaging the handle, and the other the sliding bar, and said catch being provided with a hook at the rear of said prongs.

956,967. INTERNAL-COMBUSTION ENGINE. JAMES H. HOPKINS, Manchester, England. Filed Aug. 31, 1909. Serial No. 515,535.



1. In an internal combustion engine, a pair of cylinders of integral twin formation and differential bores, a charge admission port in the wall of each large and an exhaust port in the wall of each small bore cylinder, means for linking the said two charge admission ports and exhaust ports respectively together, a joint charge admission pipe and a joint exhaust pipe connected with the respective linking means, a charge outlet port in the wall of each large and a charge inlet port in the wall of each small bore cylinder superposed above the said charge admission

ports and means for crosswise connecting the said charge outlet and inlet ports and thereby transferring the charge from the large to the small bore cylinders, all combined substantially as and for the purpose set forth.

2. In an internal combustion engine, a pair of cylinders of integral twin formation and differential bores, a charge admission port in the wall of each large and an exhaust port in the wall of each small bore cylinder, means for linking the said two charge admission ports and exhaust ports respectively together, a joint charge admission pipe and a joint exhaust pipe connected with the respective linking means, a charge outlet port in the wall of each large and a charge inlet port in the wall of each small bore cylinder superposed above the said charge admission ports, the said ports consisting each partly of a slot and partly of a series of holes, all combined substantially as and for the purpose set forth.

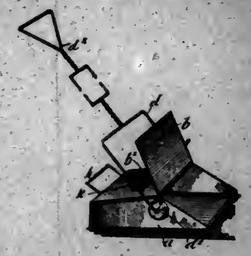
3. In an internal combustion engine, a pair of cylinders of integral twin formation and differential bores, a charge admission port in the wall of each large and an exhaust port in the wall of each small bore cylinder, means for linking the said two charge admission ports and exhaust ports respectively together, a joint charge admission pipe and a joint exhaust pipe connected with the respective linking means, a charge outlet port in the wall of each large and a charge inlet port in the wall of each small bore cylinder superposed above the said charge admission ports and means for crosswise connecting the said charge outlet and inlet ports and thereby transferring the charge from the large to the small bore cylinders, the said means consisting of a cross over connection piece having two passages independently crossing each other and located over the said outlets from the pump chambers and inlets of the explosion chambers, all combined substantially as and for the purpose set forth.

4. In an internal combustion engine, a pair of cylinders of integral twin formation and differential bores, a charge admission port in the wall of each large and an exhaust port in the wall of each small bore cylinder, means for linking the said two charge admission ports and exhaust ports respectively together, a joint charge admission pipe and a joint exhaust pipe connected with the respective linking means, a charge outlet port in the wall of each large and a charge inlet port in the wall of each small bore cylinder superposed above the said charge admission port and means for crosswise connecting the said charge outlet and inlet ports and thereby transferring the charge from the large to the small bore cylinders, a double trunk differential piston in each cylinder, the large diameter piston of one of which during its outstroke creates a vacuum and at the end of its outstroke uncovers the said charge admission port and on its instroke compresses the charge in its cylinder before the small diameter piston in the explosion chamber of the other cylinder uncovers the respective inlet port, all combined substantially as and for the purpose set forth.

5. In an internal combustion engine, a pair of cylinders of integral twin formation and differential bores, a charge admission port in the wall of each large and an exhaust port in the wall of each small bore cylinder, means for linking the said two charge admission ports and exhaust ports respectively together, a joint charge admission pipe and a joint exhaust pipe connected with the respective linking means, a charge outlet port in the wall of each large and a charge inlet port in the wall of each small bore cylinder superposed above the said charge admission port and means for crosswise connecting the said charge outlet and inlet ports and thereby transferring the charge from the large to the small bore cylinders, a double trunk differential piston in each of the said cylinders, the small diameter piston of one of which during its outstroke first uncovers the respective exhaust port and at the end of its outstroke uncovers the respective inlet port to permit the compressed charge in the pump space of the opposite cylinder to enter the said explosion chamber for ignition, all combined substantially as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

956,968. DUST-PAN. FRANK HUBERT, New York, N. Y. Filed Dec. 17, 1908. Serial No. 467,973.

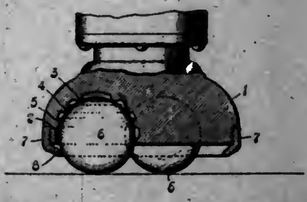


1. In a dust-pan, the combination of a pan, a lid hinged to the same, a suspension-bail for the pan, and a stay on the lid provided with ears, said stay resting on the top of the pan to support the lid and bail in upwardly-inclined position and connecting the lid with the bail so that the lid is automatically closed when the pan is suspended by the bail.

2. In a dust-pan, the combination of a pan, a lid hinged thereto, a stay on the back of the lid formed of a single piece of wire and provided with ears at right angles to the lid, and a suspension-bail pivoted to the pan and guided in the ears of said stay.

3. In a dust-pan, the combination of a pan, a lid hinged to the same, a bail pivoted to the pan, a wire-stay on the lid arranged to rest by its intermediate connecting portion on the top-wall of the pan to support the lid and bail in open position, and ears formed integral with the stay and at right angles with the lid.

956,969. BALL-CASTER. DENNIS B. HUSSEY, St. Louis, Mo. Filed Feb. 11, 1910. Serial No. 543,272.



1. A ball caster, comprising a body having a pocket therein and provided with a plurality of endless concentric ribs in said pocket, and a ball seated in said pocket and resting against said ribs.

2. A ball caster, comprising a body having a pocket therein and provided with a plurality of endless concentric ribs in said pocket, a ball seated in said pocket and resting against said ribs, and a retaining ring secured to said body and having an inwardly extending flange located beneath the body whereby said ball is held within said pocket.

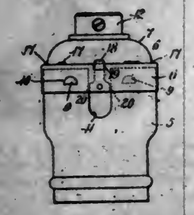
956,970. CASING FOR ELECTRIC-LAMP SOCKETS. ARTHUR L. JACOBS, Boston, Mass., assignor, by mesne assignments, to Jennie M. Jacobs, Boston, Mass. Filed Nov. 15, 1909. Serial No. 527,963.

1. A socket casing having, in combination, a shell, and a cap in two parts having interengaging means constructed to be moved into and out of interengagement with each other, whereby said parts may be locked against relative rotation.

2. A socket casing having, in combination, a shell, and a cap in two parts rotatably mounted one on the other and having provision to lock the same against relative rotation in opposite directions.

3. A socket casing having, in combination, a shell, and a cap in two parts rotatably mounted one on the other and having means to lock the same against relative rotation in opposite directions and prevent separation of said parts.

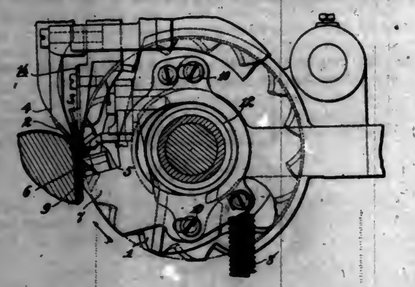
4. A socket casing having, in combination, a shell, and a cap in two parts one of which is provided with a series of indentations and the other of which carries means to enter said indentations to lock said parts against relative rotation.



5. A socket casing having, in combination, a shell, and a cap in two parts one of which is provided with a series of indentations and resilient means on the other of said parts to enter said indentations thereby to lock said parts against relative rotation.

[Claims 6 to 25 not printed in the Gazette.]

956,971. INSEAM-TRIMMING MACHINE. ALBERT E. JOHNSON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 5, 1909. Serial No. 511,424.



1. An inseam trimming machine, having, in combination, a trimming knife, and relatively yielding crease and channel guides for continuously engaging the crease and lip of a welted shoe to position the shoe with relation to the trimming knife, substantially as described.

2. An inseam trimming machine, having, in combination, a trimming knife, a crease guide arranged to enter the crease between the upper and welt of a welted shoe, and means for continuously pressing the guide into the crease during the trimming operation, substantially as described.

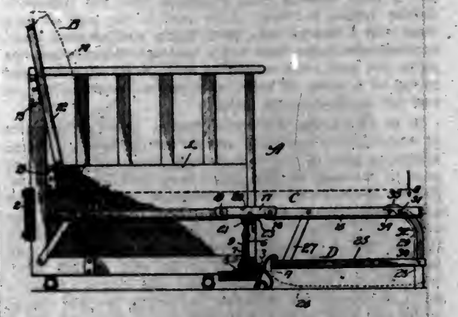
3. An inseam trimming machine, having, in combination, a trimming knife, a crease guide arranged to enter the crease between the upper and welt of a welted shoe, and a yielding guide arranged to engage the lip of the insole and continuously hold the shoe against the crease guide, substantially as described.

4. An inseam trimming machine, having, in combination, a cylindrical trimming knife, a crease guide arranged to enter the crease between the upper and welt of a welted shoe, a channel guide mounted to move in an arc substantially concentric with the axis of the cutter, and means for holding the channel guide against the lip of the insole during the trimming operation, substantially as described.

5. An inseam trimming machine, having, in combination, a trimming knife, and means for guiding a shoe comprising a roll for engaging the channel of the insole and a sole gage arranged to engage the sole inside of the channel roll, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

956,972. SOFA-BED. SOLOMON KARPEN, Chicago, Ill., assignor to S. Karpen & Bros., Chicago, Ill., a Corporation of West Virginia. Filed Apr. 5, 1909. Serial No. 488,095.



1. In a structure of the character set forth, the combination of a frame, a seat adapted to swing forwardly, a bed-truss located beneath the front portion of said seat and carried by said frame, an intermediate bed-section pivotally mounted on said truss, front and rear bed-sections pivotally connected with said intermediate section and normally housed beneath said seat, links pivotally connecting the front portion of said seat with the front bed-section, and legs connected with the rear portion of said seat and with the front bed-section, said legs having slidable engagement with one of the members with which they are connected, so that the seat may drop away from the front bed-section when the bed is unfolded.

2. In a structure of the character set forth, the combination of a main frame, comprising end-standards constituting arms for a sofa, a front connecting-member joining the lower front corners of said standards, bed-supporting standards rising from said front connecting-member adjacent to said end-standards, an intermediate bed-section pivotally supported on said bed-standards, front and rear bed-sections pivotally connected with said intermediate section, the front-section normally occupying a position above the rear-section, and a seat surmounting the front bed-section in the folded condition of the bed and linked to said front bed-section.

3. In a structure of the character set forth, the combination of a main frame, a seat, a folded bed normally housed in said main frame beneath said seat, links connecting the front portion of said seat with the front section of said bed, and legs pivotally connected with the rear portion of said seat and having pin and slot connection with the front bed-section, for the purpose set forth.

4. In a structure of the character set forth, the combination of a main frame, a seat adapted to swing forwardly, a truss supported by said frame beneath the front portion of said seat, an intermediate bed-section pivotally connected with said truss and normally occupying a substantially vertical position beneath the front portion of said seat, front and rear bed-sections pivotally connected with said intermediate section and occupying a folded relation beneath said seat, links connecting the front portion of said seat with the front bed-section near the pivots of the front bed-section, and legs having pivotal connection with the rear portion of said seat and having pin and slot connection with said front bed-section near the free edge thereof.

5. In a structure of the character set forth, the combination of a main frame comprising end-standards and connecting members, a stationary back connected with said end-standards, a seat adapted to swing forwardly, a bed-truss supported on said frame beneath the front portion of said seat, a folded bed normally housed beneath said seat and comprising an intermediate section pivoted on said truss and front and rear sections pivotally connected with said intermediate section, and connections between said seat and the front bed-section permitting the seat to drop away from the front bed-section when the structure is converted into bed-form.

[Claims 6 to 8 not printed in the Gazette.]

956,973. BUGGY-EVENER. EMIL A. KAST, Brush, Colo. Filed Oct. 13, 1909. Serial No. 522,363.

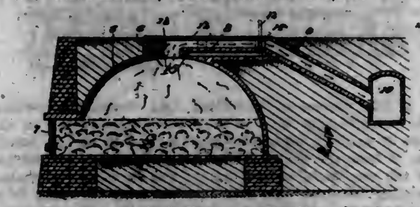


1. In a device of the character described, the combination with a lower resilient carrying member, of an upper resilient carrying member, both of which are similarly constructed and yielding to the draft of the horses, said upper member having its opposite ends in the form of threaded pins arranged to extend through suitable openings within said lower member.

2. The herein described evener, comprising a base bar having a flat central section provided with a bolt opening, from which the bar is continued in opposite directions to form two oppositely positioned bending sections which extend in a plane at right angles to said central section, each end of the bar again being bent horizontal and provided with a pin opening, of a top bar comprising a flat central portion having a bolt opening from which the bar is continued in opposite directions in two upwardly curving bowed portions from which this top member is continued in two flat bending sections extending in a plane at right angles to the plane of said central portion, said upper bar ending at each end in a laterally extending threaded pin arranged to extend through the pin openings within said base bar, and nuts upon said pin.

3. In a device of the character described, the combination of two resilient bars of flat metal bent or twisted along their length to form central horizontal portions and terminal ends formed in the same direction, the portions of said bars between said central portions and ends being arranged in a vertical position, and means for connecting the terminal ends of said bars, as and for the purpose described.

956,974. COKE-OVEN. WILLIAM J. KEARNS, Fairchance, Pa. Filed Mar. 27, 1909. Serial No. 486,150.



1. A coke oven including a combustion chamber and having a tunnel head provided with a feed opening, the walls of the tunnel head being formed with an air passage partially surrounding the feed opening therein, a conductor communicating with the combustion chamber at said feed opening and having its bottom wall provided with intersecting longitudinal and transverse air passages communicating with the air passage surrounding the feed opening and also with the atmosphere but separated from and independent of the interior of said combustion chamber and conductor respectively, to permit the circulation of cold air within said passages without coming in contact with the products of combustion in either the chamber or conductor.

2. A coke oven including a combustion chamber and having a tunnel head provided with a feed opening, a conductor communicating with the interior of the coke oven at said feed opening and having its walls provided with vertical air passages in communication with the atmosphere, there being a plurality of intersecting longitudinal and horizontal air passages formed in the bottom of said conductor and partially encircling the tunnel head, all of said passages being separated from and independent of the combustion chamber and conductor respectively, thereby to permit the circulation of cold air within said passages without coming in contact with the products of combustion in either the chamber or conductor.

3. A coke oven including a combustion chamber and having a tunnel head provided with a circumferential air passage and a central feed opening, a main flue spaced from the oven and disposed in a plane below the feed opening, a downwardly inclined conductor forming a source of communication between the main flue and tunnel head at the feed opening therein, there being a plurality of intersecting longitudinal and transverse air passages formed in the bottom wall of the conductor and communicating with the air passage in the tunnel head, vertical openings formed in the opposite side walls of said conductor and communicating with the longitudinal and transverse passages and also with the atmosphere, and a plurality of removable slabs forming the top wall of the conductor, one of said slabs forming a closure for the feed opening and another constituting a valve for controlling the products of combustion to the main flue, said passages in the conductor and tunnel head being separated from and independent of the combustion chamber and conductor respectively, to permit the circulation of cold air within said passages without commingling with the products of combustion in either the chamber or said conductor.

956,975. PUMPING APPARATUS FOR VACUUM-CLEANERS AND THE LIKE. WILLIAM H. KELLER, Philadelphia, Pa., assignor to Keller Manufacturing Company, a Corporation of Delaware. Filed June 28, 1909. Serial No. 503,922.



1. In a pumping mechanism, the combination with a motor, a motor shaft capable of limited longitudinal movement in its bearings, and a reciprocating follower for the pumping mechanism, of a connecting rod connected to the motor shaft to be actuated by the same in a plane at a right angle to it and having one end in juxtaposition to the follower, and connecting means between said end and the follower and constructed to admit of movement of the end of the connecting rod parallel to the longitudinal movement of the motor shaft and prevent relative pivotal movement between the connecting rod and follower.

2. In a pumping mechanism, the combination with a motor, a motor shaft capable of limited longitudinal move-

ment in its bearings and a reciprocating follower for the pumping mechanism, of a connecting rod connected to the motor shaft to be actuated by the same in a plane at a right angle to it and having one end adjacent to the follower, and a pin common to the follower and connecting rod and parallel to the motor shaft and having longitudinal play in one of said elements, whereby the connecting rod will be permitted to follow the longitudinal movement of the shaft while maintaining its operative connection with the follower and whereby relative pivotal movement between the connecting rod and follower is prevented.

3. In a pumping mechanism, the combination with a motor and a motor-shaft capable of longitudinal movement in its bearings, of a reciprocating follower for the pumping mechanism, a connecting-rod connected to the motor-shaft to be actuated by the same and having one end adjacent to the follower, and a plurality of pins common to the follower and connecting-rod and parallel to the motor-shaft and having longitudinal play in one of said elements, whereby the connecting rod will be permitted to follow the longitudinal movement of the shaft and pivotal movement between the follower and connecting-rod will be prevented.

4. In a pumping mechanism, the combination with a motor, a motor shaft capable of longitudinal movement in its bearings and a reciprocating follower for the pumping mechanism, of a connecting rod connected to the motor shaft to be actuated by the same in a plane at a right angle to it and having one end adjacent to the follower, and a pin projecting from the follower parallel to the motor shaft and engaging an opening in the connecting rod to admit of the latter following the longitudinal play of the motor shaft while maintaining its operative connection with the follower and preventing relative pivotal movement between the follower and connecting rod.

5. In a pumping mechanism, the combination with a motor, a motor-shaft capable of longitudinal movement in its bearings, and a reciprocating follower for the pumping mechanism, of a connecting-rod connected to the motor-shaft to be actuated by the same and having one end adjacent to the follower and formed with a plurality of openings, and a plurality of pins projecting from the follower parallel to the motor shaft and engaging the openings in the connecting-rod to admit of the latter following the longitudinal play of the motor-shaft and to prevent pivotal movement by the connecting-rod in its relation to the follower.

[Claims 6 and 7 not printed in the Gazette.]

956,976. CAR-COUPLING. JOSEPH KELSO, Pittsburg, Pa., assignor to The McConway & Torley Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Mar. 5, 1909. Serial No. 481,352.



1. In a car coupler, the combination with a coupler head, of a knuckle pivotally mounted thereon, a lock for retaining said knuckle in coupled position, and a knuckle-opener member operating within said coupler head and movable rearwardly toward the shank of the coupler to force said knuckle to open position.

2. In a car coupler, the combination with a coupler head provided with a mouth for the entrance of the tail of a knuckle, of a knuckle provided with a tail, a lock for engaging the knuckle tail to lock the knuckle in coupled position, and a pivoted knuckle-opener member which is rotatable rearwardly away from the mouth of the coupler head to force said knuckle to open position.

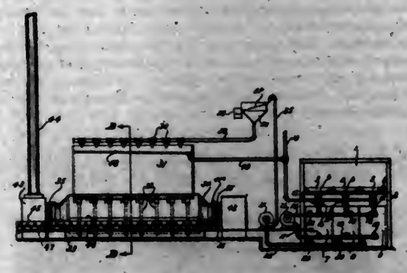
3. In a car coupler, the combination with a coupler-head, of a knuckle pivotally mounted thereon, a pivoted lock for locking said knuckle in coupled position, and a pivoted knuckle-opener member, said lock and knuckle-opener member having a common pivotal center, and said lock being intermediate of the knuckle-engaging portion of the knuckle-opener and its pivotal center.

4. In a car coupler, the combination with a coupler head which is formed upon one side with means for pivotally mounting a knuckle thereon and upon the opposite side with a guard arm, of a knuckle pivotally mounted upon said coupler head, a rotatable lock pivotally mounted upon said guard arm, and a knuckle-opener member rigidly connected to said lock, said lock and said knuckle-opener being both movable rearwardly to unlock said knuckle and force it to open position.

5. In a car coupler, the combination with a coupler head, of a knuckle pivotally mounted thereon, said knuckle being provided upon its tail portion with a knuckle-opener engaging face which extends from a point adjacent to the knuckle-pin opening in the knuckle toward the inner end of said knuckle, a lock for said knuckle, said lock being pivotally mounted upon the coupler head upon the guard-arm side thereof on a vertical pivot pin, and a knuckle-opener member rigidly connected to said lock and extending beyond the knuckle engaging face thereof toward the knuckle side of the coupler head, said knuckle-opener member being rotatable rearwardly to open said knuckle.

[Claims 6 to 10 not printed in the Gazette.]

956,977. PROCESS OF HYDRATING LIME. WILLIAM H. KEMLER, Ashland, Ky. Filed May 12, 1909. Serial No. 495,458.



1. The process of hydrating lime comprising, slaking the calcined lime in a suitable receptacle, adding an excess of water thereto, agitating the mass by rapidly pumping it from the top of the receptacle back into the bottom of the receptacle, separating out the uncalcined material, settling the lime pulp and then applying the pulp to a revolving heated cylinder to drive off the excess moisture.

2. The process of hydrating lime comprising placing the calcined lime in a receptacle and adding enough water to slake or break up the lime, adding an excess of water and rapidly pumping the mass from the top of the receptacle back into the bottom of the receptacle to throw the lime upwardly in the receptacle, running the mass through a screen to separate out the uncalcined material, settling the lime pulp in a settling tank, applying the pulp to a revolving heated cylinder, and scraping the dried residue therefrom.

3. The process of hydrating lime comprising, slaking the calcined lime in a suitable receptacle, adding an excess of water and agitating the mass from the bottom of the receptacle upwardly, running the mass through a screen, separating the lime pulp from the water, then placing the pulp on a revolving cylinder to drive off the excess moisture.

956,978. TRAP-DOOR FOR VESTIBULE-CARS. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed May 17, 1909. Serial No. 496,479.



1. A door of the character described comprising a metal plate having one side bent upward, then backward over the plate, then downward to the plate, and a permanent fastening between said downward bend and the plate, said bends forming an envelop adapted to receive the parts of a spring hinge.

2. A door of the type described comprising a metal plate having one side bent to form an envelop for a spring hinge and the remaining sides bent upward and inwardly flanged, said flanges lying flush with the top of the envelop, a filling of plastic material in the recess or chamber so formed, and a tread covering of suitable material overlying said filling flush with said flanges.

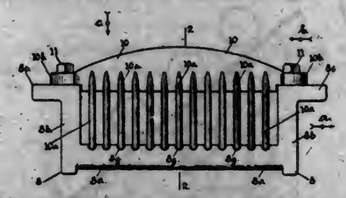
3. A door of the type described comprising a metal plate having one side bent to form an envelop for a spring hinge, the remaining sides upturned to form stiffening edges for the door, and the central portion of the plate pressed into the recess or chamber so formed in panel shape.

956,979. METHOD OF MAKING A PLASTIC MASS FROM COMPOUND OF TUNGSTEN, &c. HANS KREUSLER, Wilmersdorf, near Berlin, Germany, assignor to Siemens & Halske A. G., Berlin, Germany, a Corporation of Germany. Filed June 22, 1907. Serial No. 380,356.

1. A method of making a plastic mass from compounds of tungsten consisting in heating dry acid tungstate of ammonium in a vacuum to about 270° C. until ammonia is no longer generated, in allowing the heated mass to cool, and in then placing the same in hot water whereby a viscous paste is obtained.

2. A method of making a plastic mass from compounds of tungsten consisting in heating dry acid tungstate of ammonium in vacuum to about 270° C. until ammonia is no longer generated, in allowing the heated mass to cool, and in then boiling the same in water, whereby a viscous mass is obtained.

956,980. SHEDDING MECHANISM FOR LOOMS. PETER LABONTE, Fall River, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Feb. 1, 1909. Serial No. 475,346.



A hook guiding rack or grate for dobbies and the like, comprising a lower part or member provided with side extensions adapted to be secured to the frame, and an upper part or member provided with integral dents or bars, and means for removably attaching the said upper part or member to the said side extensions of the lower part or member; whereby should a dent or bar become broken the said upper part or member may be removed, leaving the cross-bar of the said lower part or member in position to support the hooks.

956,981. APPARATUS FOR THE MANUFACTURE OF TIN-PLATE. JOSEPH A. LAMP and SAVENIOUS C. STINER, McKeesport, Pa. Filed May 1, 1909. Serial No. 493,418.



1. In apparatus for treating plates preparatory to coating, the combination of a vat, traveling chains therein, elongated contact lugs on said chains arranged at an angle to each other and adapted to engage opposite faces of the plate.

2. In apparatus for treating plates preparatory to coating, the combination of a vat, traveling chains therein, contact lugs on said chains having knife edges arranged at an angle to each other adapted to engage opposite faces of the plate.

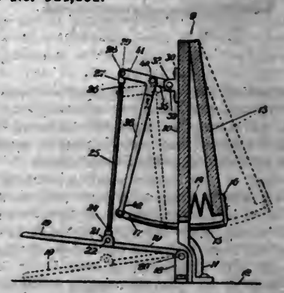
3. In apparatus for treating plates preparatory to coating, the combination of a vat, traveling chains therein, elongated contact lugs on said chains arranged at right angles to each other and adapted to engage opposite faces of the plate.

4. In apparatus for treating plates preparatory to coating, the combination of a vat, traveling chains therein, contact lugs on said chains having knife edges arranged at right angles to each other and adapted to engage opposite faces of the plate.

5. In apparatus for treating plates preparatory to coating, the combination of a vat, traveling chains therein, elongated contact lugs on said chains engaging opposite points on the faces of said plate, a second vat, traveling chains therein, elongated contact lugs on said chains at right angles to the lugs of the first mentioned chains.

[Claims 6 to 21 not printed in the Gazette.]

956,982. BELLOWS-ACTUATING MECHANISM. ROBERT LASRICH, New York, N. Y. Filed Aug. 24, 1909. Serial No. 514,461.



1. The combination with a bellows having fixed and movable parts articulated together at their upper ends, of a bell-crank lever, a link interposed between and pivotally connecting the angular part of said lever to said fixed part near the upper ends of the fixed and movable parts, means pivotally connecting one arm of said bell-crank lever with the lower end of the movable part, a pedal, and means linking the other arm of said bell-crank lever with said pedal.

2. The combination, with a bellows having a fixed and a movable part, of a link pivoted at its inner end to the upper part of said fixed part, a bell-crank lever pivoted at its angular part to the outer end of said link, means pivotally connecting one arm of said lever to said movable part of the bellows, a pedal pivoted at one end, and a rod linking said pedal and the other arm of said lever together, and pivotally connected with the pedal at a point intermediate its pivoted and free ends.

956,963. BRACKET. CHRISTIAN F. LAUN, Waterville, Conn., assignor to Berbecker & Rowland Manufacturing Company, Waterville, Conn., a Corporation of Connecticut. Filed Nov. 4, 1909. Serial No. 526,162.



1. A bracket for use in connection with a curtain pole, comprising a vertical plate for attachment of the bracket in place, said plate being bent at right angles and then into a vertical arm, said arm being formed by bending the metal over upon itself and provided near its lower end with a spherical retaining projection, substantially as described.

2. The combination with a curtain pole provided on each end with a ball having openings therein, of brackets each comprising a vertical attaching plate bent at right angles into a horizontal plate and then into a vertical arm, said arm being formed by bending the metal over and upon itself and provided near its lower end with a retaining spherical projection adapted when the parts are assembled, to be contained within the ball on the end of said pole, substantially as described.

956,984. WELDING THIN TUBING. HERMANN LEMP, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 16, 1907. Serial No. 393,034.



1. The method of electrically welding sections of thin metallic tubing which consists in inclosing the ends of said sections in jackets of weldable material, bringing said ends into contact and simultaneously welding the abutting ends of the tubing and of the jackets.

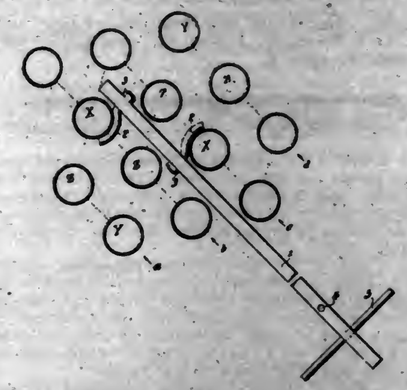
2. The method of electrically welding sections of thin metallic tubing which consists in providing each end of each section with a separate inclosing jacket of weldable material and considerably thicker than said tubing and then welding the ends while so enveloped by passage of current through both tubing and jackets.

3. The method of electrically welding sections of thin metallic tubing, which consists in providing each of the abutting ends of said sections with a jacket of weldable material, bringing the ends to be welded into contact under pressure and then passing a heavy current through both the abutting end of tubing and jacket.

4. The method of electrically welding sections of thin metallic tubing, which consists in mechanically attaching to the end of each section a jacket of weldable material, and then welding the ends by passage of current while so enveloped.

5. The method of electrically welding sections of thin metallic tubing, which consists in tapering the ends of said sections and providing them with external screw-threads, counterboring the end of a jacket of weldable material and providing it with internal screw-threads, uniting said section and jacket by screwing them together, abutting the ends of such jacketed tube sections, and welding said ends by passage of current.

956,985. BOILER-TUBE SPREADER. JOHN J. MAHER, Philadelphia, Pa., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Nov. 16, 1908. Serial No. 462,893.



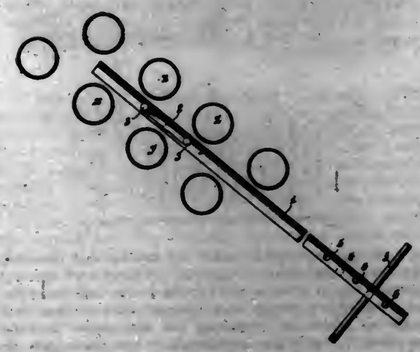
1. A boiler tube spreader comprising a bar having adjacent one end thereof oppositely extending curved arms, said arms lying on opposite sides of the bar and rigidly secured thereto, the curvature of the arms being such that one arm may engage the under side and the other arm engage the upper side of succeeding tubes of adjacent rows.

2. A boiler tube spreader comprising a bar having adjacent one end thereof oppositely-extending curved arms, said arms lying on opposite sides of the bar and rigidly secured thereto.

3. A boiler tube spreader comprising a bar having adjacent one end thereof oppositely-extending curved arms, said arms being disposed on opposite sides of the bar in the same plane and rigidly secured thereto.

4. A boiler tube spreader comprising a bar having adjacent one end thereof oppositely-extending curved arms, said arms lying on opposite sides of the bar and spaced apart and rigidly secured thereto.

956,986. BOILER-TUBE SPREADER. JOHN J. MAHER, Philadelphia, Pa., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Nov. 16, 1908. Serial No. 462,894.



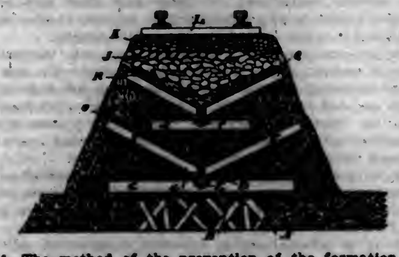
1. A boiler tube spreader comprising a bar having adjacent one end thereof a spreader member formed of oppositely-extending curved arms rigidly secured to the bar.

2. A boiler tube spreader comprising a bar having adjacent one end thereof a spreader member formed of oppositely-extending arms rigidly secured to the bar, and means for adjusting said spreader member toward and from the bar.

3. A boiler tube spreader comprising a bar and a spreader member formed of oppositely-extending arms, said arms being rigidly secured to said bar and projecting laterally therefrom on the same side of the bar.

4. A boiler tube spreader comprising a bar having a socket formed therein, a spreader member having a threaded head engaging said socket, and a bolt on said head to adjust the spreader member toward and from the bar.

956,987. METHOD AND CONSTRUCTION FOR THE PREVENTION OF SINK-HOLES IN RAILROAD-BEDS. DAVID MARCONI, Rennie, Manitoba, Canada. Filed July 6, 1909. Serial No. 506,238.



1. The method of the prevention of the formation of sink-holes in railroad-beds, which consists in building in with the road-bed, in two side rows, a plurality of logs placed at the angle of highest efficiency.

2. The method of the prevention of the formation of sink-holes in railroad-beds, which consists in building in with the road-bed, supporting logs, and resting upon the supporting logs, in two side rows, a plurality of logs placed at the angle of highest efficiency.

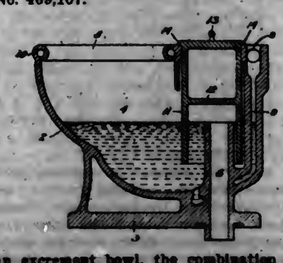
3. The method of the prevention of the formation of sink-holes in railroad-beds, which consists in filling in the sink-holes with suitable material; then bridging it over with cross-logs, and then building in with the road-bed, in two side rows, a plurality of logs placed at the angle of highest efficiency, and carried by said cross-logs.

4. The method of repairing sink-holes in railroad beds, which consists in placing in the cavity a plurality of logs placed at the angle of highest efficiency, and then filling up the cavity with the desired material.

5. The method of preventing the spreading of railroad beds which consists in building in with the road-bed, in two side-rows, a plurality of logs placed at the angle of highest efficiency.

[Claims 6 to 9 not printed in the Gazette.]

956,988. WATER-CLOSET. WILLIAM G. MILLER, Ross township, Allegheny county, Pa. Filed Dec. 24, 1908. Serial No. 469,107.



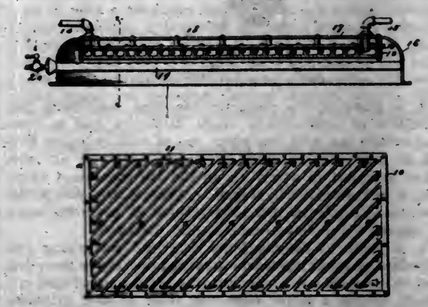
1. In an excrement bowl, the combination of a main bowl having an upwardly extending integral outlet conduit, and a surrounding coping with an intervening space, forming with the bowl and its conduit a dissectible siphon, substantially as set forth.

2. In an excrement bowl, the combination of a main bowl having an upwardly extending integral outlet conduit, and a surrounding coping with an intervening eccentrically located space, forming with the bowl and its conduit a dissectible siphon, substantially as set forth.

3. In combination, an excrement bowl having a main bowl cavity and an upwardly extending integral outlet conduit projecting into the main cavity and at one side thereof and having an upper coping-receiving aperture, and a coping adapted to be fitted thereinto and surrounding the upper end of the outlet conduit with an intervening eccentrically arranged opening, providing a dissectible trap or siphon structure, substantially as set forth.

4. In a device of the class described, the combination with a bowl having an outlet conduit extending upwardly into the bowl cavity, of a coping inserted downwardly into the bowl cavity and provided with a transverse partition and extended lower walls adapted to embrace the terminal of the conduit with an intervening space, substantially as set forth.

956,989. WATER-HEATER. HOWARD N. MOODY, New Orleans, La. Filed May 1, 1909. Serial No. 493,294.



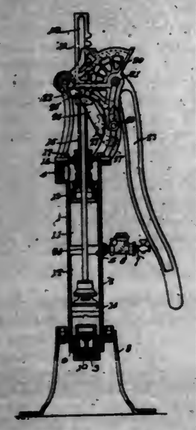
1. A water heater comprising a rectangular pan having diagonal ribs extending alternately from opposite sides to provide a continuous winding channel extending from one corner of the pan to the opposite diagonal corner, said ribs being of a minimum length at the beginning of the channel thence increasing gradually to a maximum in the central portion and thence decreasing again to a minimum at the termination, and a cover for said pan provided with inlet and outlet connections leading to and from the above mentioned channel.

2. A water heater comprising a rectangular pan having diagonal ribs extending alternately from the sides, the ribs decreasing in length at opposite corners and each rib terminating short of the opposite side to leave a space of substantially equal area to the space between the ribs thereby providing a continuous channel of constant area leading from one corner of the pan to the opposite diagonal corner and winding from one side to the other of said pan, a cover for said pan provided with inlet and outlet connections leading into and from said channel, and a supporting casing for the pan.

956,990. PUMP. PHILIP A. MYERS, Ashland, and HARRY A. TOULMIN, Springfield, Ohio, assignors to F. E. Myers and Brother, Ashland, Ohio. Filed Feb. 11, 1909. Serial No. 477,299.

1. In a pump of the character described, intercommunicating cylinders, one having a water inlet, the other a water discharge, and the latter an air inlet, a piston and its rod for each cylinder operating in opposite directions, the piston in the cylinder having the air supply and water discharge having a greater stroke than the other piston, and means to so actuate said pistons.

2. A pump of the character described comprising two cylinders of substantially equal diameters and in communication one with the other, one of said cylinders having an inlet and the other having an outlet, an air inlet valve arranged to admit air to the last-mentioned cylinder, a piston in each of said cylinders having unequal strokes, and means for so actuating said pistons.



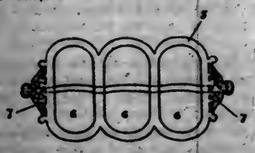
3. A pump of the character described comprising two cylinders of substantially equal diameters and in communication one with the other, one of said cylinders having an inlet and the other having an outlet, an air inlet valve arranged to admit air to the last-mentioned cylinder, a piston in each of said cylinders, and means for simultaneously actuating said pistons to move the same in opposite directions and unequal distances.

4. A pump of the character described comprising two cylinders of equal diameters arranged one above the other and in communication one with the other, one of said cylinders having a water inlet, the other of said cylinders having an air inlet and an outlet, a piston in each of said cylinders, and means for moving the piston in the upper cylinder a greater distance than the piston in the lower cylinder is moved.

5. A pump of the character described comprising two cylinders of substantially equal diameters arranged one above the other and in communication one with the other, one of said cylinders having a water inlet, the other of said cylinders having an air inlet and an outlet, a piston in each of said cylinders, and means for simultaneously actuating said pistons in opposite directions, said actuating means being arranged to move the piston in the upper cylinder a greater distance than the piston in the lower cylinder is moved.

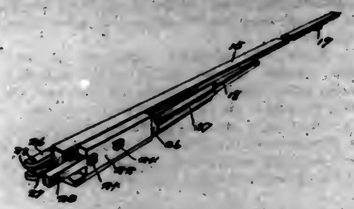
[Claims 6 to 9 not printed in the Gazette.]

956,991. PUFF-FORMING BARRETTE. MAURICE B. NATHANSON, Leominster, Mass. Filed May 28, 1909. Serial No. 498,959.



In a barrette, a body having hair receiving openings therein and a tongue having a series of shoulders projecting into the said openings for pressing hair through the openings to form puffs, and means for holding the tongue in its adjusted position.

956,992. FROGLESS SWITCH. JOHN J. NEWMAN, Rockwood, Pa. Filed Sept. 28, 1909. Serial No. 519,217.



1. In a railway switch, the main track rail, a switch tongue, a siding rail, and a plate extending beneath the two and secured to the same to give rigidity thereto, said plate extending diagonally and beyond the joint between the switch tongue and the inner side track rail, said switch tongue being provided with a vertical faced wedge extended laterally beyond the edge of the tongue.

2. In a railway switch, the main track rail, the siding rail, a switch tongue, a rail integral therewith, and a plate extending beneath the same and disposed diagonally with one end beyond the joint between the switch tongue and the inner side track rail, said switch tongue being provided with a vertical faced wedge extended laterally beyond the edge of the tongue.

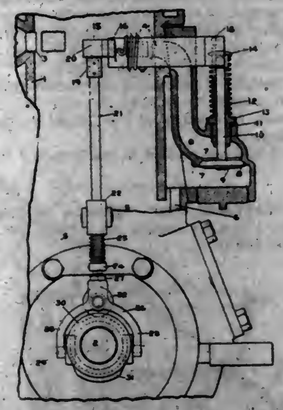
3. In a railway switch, a switch tongue provided with a vertical faced wedge extended laterally beyond the edge of the tongue to engage the adjacent rail to prevent lateral movement of the switch tongue.

4. In a railway switch, a switch tongue and rail in one piece and a vertical faced wedge carried by the tongue and projected laterally beyond the side thereof to engage the adjacent rail to prevent lateral movement of the switch tongue.

5. In a railway switch, a switch tongue and rail in one piece with unbroken upper surface, the base and web of the rail portion thereof being beveled and tapered, and a wedge carried by the side of said tongue and projected laterally beyond the edge thereof.

[Claims 6 to 18 not printed in the Gazette.]

956,993. TWO-CYCLE ENGINE. CHARLES B. PAGE, Baltimore, Md. Filed Oct. 17, 1907. Serial No. 397,889.



1. In a two-cycle engine, an exhaust port, an admission port behind the exhaust port, a compression chamber, a passage from the compression chamber to the admission port, a puppet valve in the passage opening toward the compression chamber, a valve gear normally opening the valve at each revolution, including a cam, a cam follower carried by a sliding rod, a pivotally mounted

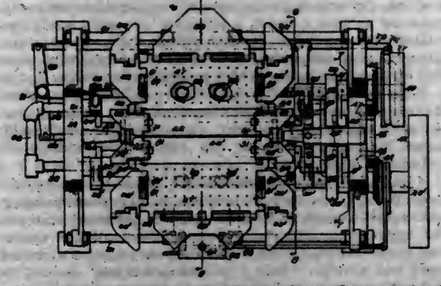
sliding bearing for the rod, a valve actuating member, a hit and miss connection, one member of which is carried by the sliding rod and the other by the valve actuating member, and a governor acting when the engine reaches an abnormal speed to move the cam and the cam follower, oscillating the sliding rod, moving the hit or miss gear out of contact, thereby placing the valve gear in in-operative position.

2. In a two-cycle engine, a cut-off valve in the transfer passage, valve gear normally adapted to open the valve at each revolution, including a cam, a sliding rod mounted to oscillate about a transverse axis a cam follower carried by the rod, an actuating member normally engaged by the rod to open the valve at each revolution and means actuated by a change of speed for sliding the cam in the direction of its axis, thereby oscillating the sliding rod and moving it out of engagement with the actuator block.

3. In a two-cycle engine, a cut-off valve in the transfer passage, valve gear adapted normally to open the valve at each revolution, including a cam, a sliding rod mounted to oscillate about a transverse axis a cam follower, carried by the rod, a hit or miss gear, one member of which is carried by the sliding rod, and means actuated by the change of speed for sliding the cam axially thereby oscillating the sliding rod and placing the gear in in-operative position.

4. In a two-cycle engine, a cut-off valve in the transfer passage opening against supply pressure, valve gear normally operating to open the valve at each revolution, including a rotating cam, a sliding rod mounted to oscillate about a transverse axis a cam follower carried by the rod, and a hit or miss gear, one member of which is carried by the sliding rod and means actuated by change of speed for moving the cam thereby oscillating the lever, and placing the gear in in-operative position.

956,994. BREAD-WRAPPING MACHINE. IRA F. PECK, Providence, R. I., assignor to Benjamin A. Ball and Henri A. Sévigné, Boston, Mass. Filed May 8, 1909. Serial No. 494,820.



1. In a machine for wrapping a sheet of paper about an article, a bed for the wrapping sheet with the article lying in the center thereof, side plates and end plates hinged to the bed and adapted to fold the sheet upwardly against the sides and ends of the article, corner plates hinged to the side plates and adapted to fold the projecting corners of the paper against the ends of the article, top plates hinged to the corner plates, and top plates hinged to the side plates, all of said top plates being adapted to fold the upwardly projecting portions of the paper toward each other and upon the top of the article.

2. In a machine for wrapping a sheet of paper about an article, a bed for supporting a sheet of paper with the article thereon, means for applying paste to the under side of a sheet so supported, a plurality of plates hingedly connected to the bed for folding the sheet upwardly against the sides and ends of the article, and a plurality of plates hingedly connected to said first plurality of plates for holding the upturned portions of the sheet against the ends and top of the article, said plates lying initially in the plane of the bed and operating in such order as to fold the paste-laden portion lastly and to fold the other portions so as to be confined by the paste-laden portion.

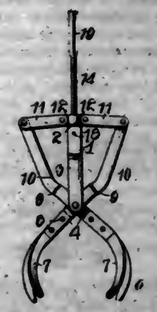
3. In a machine for wrapping a sheet of paper about an article, a bed for supporting a sheet of wrapping paper with the article thereon, a paste reservoir having a nozzle arranged to discharge paste upon the marginal portion of the paper in its initial position in the folding devices, means for controlling the flow of paste from the reservoir, a plurality of hingedly connected plates adapted to fold the paper over the sides, ends and top of the article, and means for actuating said plates in a predetermined order so as to cause the paste laden portion to engage the opposite portion after the other portions have been folded inwardly so as to be confined thereby.

4. In a machine for wrapping a sheet of paper about an article, a bed for supporting a sheet of wrapping paper with the article thereon, means for wrapping the marginal portion of the paper over the sides, ends, and top of the article, including hollow plates having ports extending through the work-engaging face to the interior, and conduits terminating in the chambers within said plates whereby said chambers may be evacuated.

5. In a machine for wrapping a sheet of paper about an article, a bed composed of movable sections adapted to lie in a horizontal plane and there support a sheet of wrapping paper with a loaf thereon, and to separate so as to form a discharge opening through which the article may gravitate, a plurality of plates hingedly connected with the bed and adapted to fold the marginal portion of the paper over the sides, ends and top of the article, means for actuating the plates so as to wrap the article, and means for releasing the bed sections at the completion of the wrapping operation so as to discharge the article thereon.

[Claims 6 to 12 not printed in the Gazette.]

956,995. GRAPPLE. PETER L. PETERSON, Kelvin, N. D. Filed Mar. 2, 1910. Serial No. 546,889.



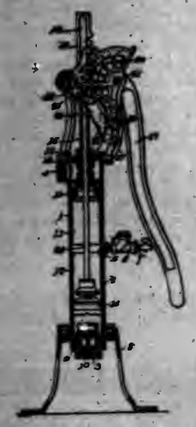
1. A device of the character described comprising a body, a pair of gripping levers fulcrumed thereon, a screw having a swivel connection with the body, a traveling nut on the screw, and operative connections between the nut and levers.

2. A device of the character described comprising a body of inverted U-shape, a pair of crossed levers fulcrumed intermediate their ends in the lower portion of the body and having gripping jaws or prongs at their lower extremities, an upright screw having its lower end swiveled in the top of the body, a traveling nut on said screw, and links connecting said nut to the upper extremities of the levers.

956,996. FUSE. ALONZO E. PORTER, Pompton Lakes, N. J., assignor of one-fourth to Eugene P. Searing, Jersey City, N. J.; Mary Le Fevre Porter administratrix of said Alonzo E. Porter, deceased. Filed June 29, 1908. Serial No. 440,955.

1. A fuse comprising a casing having a substantially cylindrical body portion with one end closed, an enlarged

2. A pump of the character described comprising two cylinders of substantially equal diameters and in communication one with the other, one of said cylinders having an inlet and the other having an outlet, an air inlet valve arranged to admit air to the last-mentioned cylinder, a piston in each of said cylinders having unequal strokes, and means for so actuating said pistons.



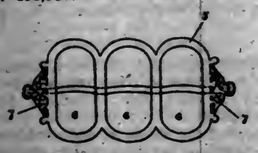
3. A pump of the character described comprising two cylinders of substantially equal diameters and in communication one with the other, one of said cylinders having an inlet and the other having an outlet, an air inlet valve arranged to admit air to the last-mentioned cylinder, a piston in each of said cylinders, and means for simultaneously actuating said pistons to move the same in opposite directions and unequal distances.

4. A pump of the character described comprising two cylinders of equal diameters arranged one above the other and in communication one with the other, one of said cylinders having a water inlet, the other of said cylinders having an air inlet and an outlet, a piston in each of said cylinders, and means for moving the piston in the upper cylinder a greater distance than the piston in the lower cylinder is moved.

5. A pump of the character described comprising two cylinders of substantially equal diameters arranged one above the other and in communication one with the other, one of said cylinders having a water inlet, the other of said cylinders having an air inlet and an outlet, a piston in each of said cylinders, and means for simultaneously actuating said pistons in opposite directions, said actuating means being arranged to move the piston in the upper cylinder a greater distance than the piston in the lower cylinder is moved.

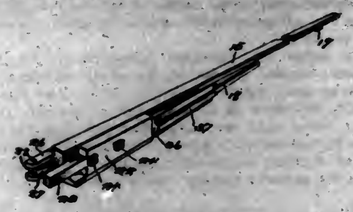
[Claims 6 to 9 not printed in the Gazette.]

956,991. PUFF-FORMING BARRETTE. MAURICE B. NATHANSON, Leominster, Mass. Filed May 28, 1909. Serial No. 498,959.



In a barrette, a body having hair receiving openings therein and a tongue having a series of shoulders projecting into the said openings for pressing hair through the openings to form puffs, and means for holding the tongue in its adjusted position.

956,992. FROGLESS SWITCH. JOHN J. NEWMAN, Rockwood, Pa. Filed Sept. 23, 1909. Serial No. 519,217.



1. In a railway switch, the main track rail, a switch tongue, a siding rail, and a plate extending beneath the two and secured to the same to give rigidity thereto, said plate extending diagonally and beyond the joint between the switch tongue and the inner side track rail, said switch tongue being provided with a vertical faced wedge extended laterally beyond the edge of the tongue.

2. In a railway switch, the main track rail, the siding rail, a switch tongue, a rail integral therewith, and a plate extending beneath the same and disposed diagonally with one end beyond the joint between the switch tongue and the inner side track rail, said switch tongue being provided with a vertical faced wedge extended laterally beyond the edge of the tongue.

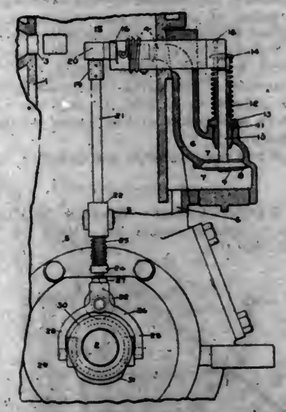
3. In a railway switch, a switch tongue provided with a vertical faced wedge extended laterally beyond the edge of the tongue to engage the adjacent rail to prevent lateral movement of the switch tongue.

4. In a railway switch, a switch tongue and rail in one piece and a vertical faced wedge carried by the tongue and projected laterally beyond the side thereof to engage the adjacent rail to prevent lateral movement of the switch tongue.

5. In a railway switch, a switch tongue and rail in one piece with unbroken upper surface, the base and web of the rail portion thereof being beveled and tapered, and a wedge carried by the side of said tongue and projected laterally beyond the edge thereof.

[Claims 6 to 18 not printed in the Gazette.]

956,993. TWO-CYCLE ENGINE. CHARLES B. PAGE, Baltimore, Md. Filed Oct. 17, 1907. Serial No. 397,889.



1. In a two-cycle engine, an exhaust port, an admission port behind the exhaust port, a compression chamber, a passage from the compression chamber to the admission port, a puppet valve in the passage opening toward the compression chamber, a valve gear normally opening the valve at each revolution, including a cam, a cam follower carried by a sliding rod, a pivotally mounted

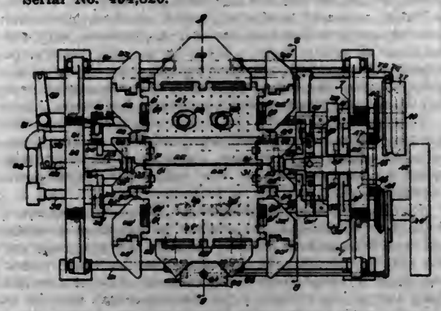
sliding bearing for the rod, a valve actuating member, a hit and miss connection, one member of which is carried by the sliding rod and the other by the valve actuating member, and a governor acting when the engine reaches an abnormal speed to move the cam and the cam follower, oscillating the sliding rod, moving the hit or miss gear out of contact, thereby placing the valve gear in in-operative position.

2. In a two-cycle engine, a cut-off valve in the transfer passage, valve gear normally adapted to open the valve at each revolution, including a cam, a sliding rod mounted to oscillate about a transverse axis a cam follower carried by the rod, an actuating member normally engaged by the rod to open the valve at each revolution and means actuated by a change of speed for sliding the cam in the direction of its axis, thereby oscillating the sliding rod and moving it out of engagement with the actuator block.

3. In a two-cycle engine, a cut-off valve in the transfer passage, valve gear adapted normally to open the valve at each revolution, including a cam, a sliding rod mounted to oscillate about a transverse axis a cam follower, carried by the rod, a hit or miss gear, one member of which is carried by the sliding rod, and means actuated by the change of speed for sliding the cam axially thereby oscillating the sliding rod and placing the gear in in-operative position.

4. In a two-cycle engine, a cut-off valve in the transfer passage opening against supply pressure, valve gear normally operating to open the valve at each revolution, including a rotating cam, a sliding rod mounted to oscillate about a transverse axis a cam follower carried by the rod, and a hit or miss gear, one member of which is carried by the sliding rod and means actuated by change of speed for moving the cam thereby oscillating the lever, and placing the gear in in-operative position.

956,994. BREAD-WRAPPING MACHINE. IRA F. PECK, Providence, R. I., assignor to Benjamin A. Ball and Henri A. Sévigné, Boston, Mass. Filed May 8, 1909. Serial No. 494,820.



1. In a machine for wrapping a sheet of paper about an article, a bed for the wrapping sheet with the article lying in the center thereof, side plates and end plates hinged to the bed and adapted to fold the sheet upwardly against the sides and ends of the article, corner plates hinged to the side plates and adapted to fold the projecting corners of the paper against the ends of the article, top plates hinged to the corner plates, and top plates hinged to the side plates, all of said top plates being adapted to fold the upwardly projecting portions of the paper toward each other and upon the top of the article.

2. In a machine for wrapping a sheet of paper about an article, a bed for supporting a sheet of paper with the article thereon, means for applying paste to the under side of a sheet so supported, a plurality of plates hingedly connected to the bed for folding the sheet upwardly against the sides and ends of the article, and a plurality of plates hingedly connected to said first plurality of plates for holding the upturned portions of the sheet against the ends and top of the article, said plates lying initially in the plane of the bed and operating in such order as to fold the paste-laden portion lastly and to fold the other portions so as to be confined by the paste-laden portion.

3. In a machine for wrapping a sheet of paper about an article, a bed for supporting a sheet of wrapping paper with the article thereon, a paste reservoir having a nozzle arranged to discharge paste upon the marginal portion of the paper in its initial position in the folding devices, means for controlling the flow of paste from the reservoir, a plurality of hingedly connected plates adapted to fold the paper over the sides, ends and top of the article, and means for actuating said plates in a predetermined order so as to cause the paste laden portion to engage the opposite portion after the other portions have been folded inwardly so as to be confined thereby.

4. In a machine for wrapping a sheet of paper about an article, a bed for supporting a sheet of wrapping paper with the article thereon, means for wrapping the marginal portion of the paper over the sides, ends, and top of the article, including hollow plates having ports extending through the work-engaging face to the interior, and conduits terminating in the chambers within said plates whereby said chambers may be evacuated.

5. In a machine for wrapping a sheet of paper about an article, a bed composed of movable sections adapted to lie in a horizontal plane and there support a sheet of wrapping paper with a loaf thereon, and to separate so as to form a discharge opening through which the article may gravitate, a plurality of plates hingedly connected with the bed and adapted to fold the marginal portion of the paper over the sides, ends and top of the article, means for actuating the plates so as to wrap the article, and means for releasing the bed sections at the completion of the wrapping operation so as to discharge the article thereon.

[Claims 6 to 12 not printed in the Gazette.]

956,995. GRAPPLE. PETER L. PETERSON, Kelvin, N. D. Filed Mar. 2, 1910. Serial No. 546,889.



1. A device of the character described comprising a body, a pair of gripping levers fulcrumed thereon, a screw having a swivel connection with the body, a traveling nut on the screw, and operative connections between the nut and levers.

2. A device of the character described comprising a body of inverted U-shape, a pair of crossed levers fulcrumed intermediate their ends in the lower portion of the body and having gripping jaws or prongs at their lower extremities, an upright screw having its lower end swiveled in the top of the body, a traveling nut on said screw, and links connecting said nut to the upper extremities of the levers.

956,996. FUSE. ALONZO E. PORTER, Pompton Lakes, N. J., assignor of one-fourth to Eugene P. Searing, Jersey City, N. J.; Mary Le Fevre Porter administratrix of said Alonzo E. Porter, deceased. Filed June 29, 1908. Serial No. 440,955.

1. A fuse comprising a casing having a substantially cylindrical body portion with one end closed, an enlarged

mouth portion having an inclined lower part, and an annular rib forming an annular groove below the mouth portion, a fulminate contained within the casing, terminals arranged in the casing, a plug member having openings therethrough for the reception of the ends of the terminals and adapted to be passed into said casing through the open end and to seal the body portion of the casing above the fulminate within the casing and a filling arranged above the plug member.



2. A fuse comprising a casing having a body portion, an enlarged mouth portion having an inclined lower part, and an annular rib forming an annular groove within the casing below the mouth portion, a fulminate within the casing, terminals arranged in the casing, and a plug member having openings therethrough for the reception of the ends of the terminals.

3. A fuse comprising a casing having a body portion, an enlarged mouth portion, and an annular rib below the mouth portion, a fulminate within the casing, terminals arranged in the casing, a plug member of compressible material holding the ends of the terminals and adapted to seal the body portion of the casing above the fulminate and filling arranged above the plug member.

4. A fuse comprising a casing having a substantially cylindrical body portion with one end closed, an enlarged mouth portion having an inclined lower part, and an annular rib forming a groove below the mouth portion, a fulminate within the casing, terminals arranged in the casing, a wood plug member holding the ends of the terminals adapted to be passed into the casing through the open end and a filling arranged above the plug member within the casing.

956,997. BODY-BOLSTER. OSWALD S. PULLIAM, Pittsburg, Pa. Filed June 19, 1907. Serial No. 379,688.



1. The combination with center-sills of channel form, of a body-bolster comprising a compression-member having an opening to receive the center-sills and formed with flat bearing faces extending from the opening toward the ends of the bolster, a tension-member, and inner end-members fitted into the center-sills, a center-plate casting having upright members projecting into the opening and arranged in contact with the center-sills, said center-sills being respectively located between and secured to an inner end-member and an upright member, said center casting having a compression-member extending over and beyond the opening, one of the compression-members formed with a recess and the other with a projection adapted to enter the recess, and means for securing the tension-member to the upper flanges of the center-sills.

2. A body-bolster comprising a tension-member, a compression-member formed with a center-sill receiving-opening, a downwardly projecting lug on the compression-member, and a center-plate casting having a compression-member extending over the opening and formed with a recess to receive the lug.

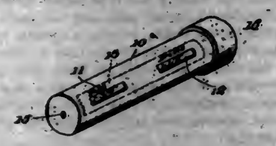
3. A body-bolster comprising a tension-member, a compression-member formed with a center-sill receiving-opening and a lug on each side of the opening, and a center-plate casting having a compression-member extending over the opening and lying outside of the same and provided with recesses to receive the lugs.

4. A body-bolster comprising two separable members constituting the main portions of the top, web and bottom of the bolster, and a central top-plate having hooked-flanges joining the top members of the bolster.

5. A body-bolster comprising two separable members constituting the main portions of the top, web and bottom of the bolster, a central top-plate having hooked flanges joining the top-members of the bolster, and a center-plate connecting the bottom-members of the bolster.

[Claims 6 to 9 not printed in the Gazette.]

956,998. COMPUTING DEVICE. WILLIAM J. RAINEY, Grove City, Pa. Filed June 9, 1909. Serial No. 501,083.



1. A computing device including a hollow cylinder having openings in one side thereof and arranged in longitudinal alinement, a strip of transparent material disposed in said cylinder to close the openings, a drum located in said cylinder and adapted for rotation therein, said drum bearing columns of numerals for registration with the openings, a set-screw loosely carried through the closed end of said cylinder and engaged with said drum for retaining the same in position, a cap engaged over the open end of said cylinder and secured against the end of said drum, and a pin of angular cross-section secured through said cap and into the end of said drum.

2. A computing device including a hollow cylinder closed at one end and having openings in one side thereof, a drum rotatably positioned within said cylinder and bearing configurations thereon for registration with the openings in said cylinder, a set-screw secured through the closed end of said cylinder and with said drum, and a cap secured upon one end of said drum for engagement over the open end of said cylinder to rotate said drum.

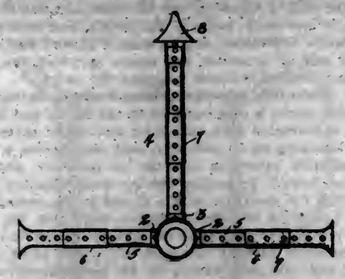
3. A computing device including a cylindrical member having openings in one side thereof, a drum rotatably positioned within said cylinder, and a cap secured to said drum for engagement over one end of said cylinder to rotate said drum.

4. A computing device including a cylinder having openings in one side thereof, a drum having corresponding characters located in columns upon the periphery thereof for registration with the openings in said cylinder, and a cap carried by said drum and frictionally engaged over the open end of said cylinder to rotate said drum.

5. A computing device including a cylinder having openings formed in one side thereof and in longitudinal alinement, a drum located in said cylinder and adapted to rotate therein, said drum having corresponding columns of configurations for simultaneous registration with the openings in said cylinder, a cap carried upon one end of said drum and engaged over the open end of said cylinder to frictionally retain said drum in adjusted position, and a set-screw engaged through the opposite end of said cylinder and into said drum for retaining the same within the cylinder.

956,999. VENTILATOR. LAZARUS L. RANDLE, Muldon, Miss. Filed Jan. 12, 1909. Serial No. 471,946.

A ventilator of the class described comprising a central hollow pipe union having radially projecting tubular branches disposed in the same plane and a vertical tubular branch at right angles thereto, perforated hollow tubes connected to said radial branches, each tube being formed of a plurality of separable sections, the said tubes being formed with outer open flared ends, a hollow perforated tube connected to the vertical branch and being formed of



a plurality of separable sections, and a conical-shaped hood mounted at the uppermost free end of the last named tube.

957,000. FLOOR AND CEILING PLATE. HENRY J. ROBINSON, Cleveland, Ohio. Filed Mar. 6, 1909. Serial No. 481,567.



1. A plate for inclosing pipes or the like, made in sections; elements borne by said sections adapted to loosely intergage when the latter are properly assembled; and means contacting with one of said elements and adapted to retain said elements in engagement, said means being rendered operative only by the interposition of a pipe between said sections.

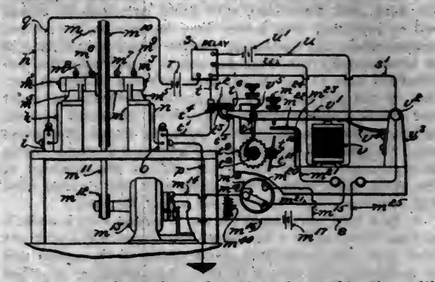
2. A plate for inclosing pipes or the like made in sections; elements borne by said sections adapted to loosely intergage when the latter are properly assembled; and resilient means contacting with one of said elements and adapted to retain said elements in engagement, said means being rendered operative only by the interposition of a pipe between said sections.

3. A plate for inclosing pipes or the like made in sections; elements borne by said sections adapted to loosely intergage when the latter are properly assembled; and a spring member borne by each of said sections and contacting with one of said elements and adapted to retain said elements in engagement only when a pipe is interposed between said sections.

4. An annular plate for inclosing pipes or the like, comprising similar sections; complementary lugs and recesses on said sections adapted to loosely intergage when the latter are properly assembled; and substantially straight spring members held in said sections transversely of the central opening of the plate and contacting with said lugs and adapted, only when pressed outwardly by the interposition of a pipe between said sections, to retain said lugs in said recesses.

5. An annular plate for inclosing pipes or the like, comprising two similar sections formed with flanges on their inner edges; complementary lugs and recesses on said flanges adapted to loosely intergage when said sections are properly assembled; and substantially straight spring members secured at one end to said flanges and lying transversely of the central opening in the plate, the free ends of said members extending into proximity to the recesses in said flanges, and said springs being adapted, when their central portions are pressed outwardly by the interposition of a pipe between said sections, to retain said lugs in said recesses.

957,001. WIRELESS TELEGRAPHY. FREDERICK G. SARGENT, Graniteville, Mass. Filed Nov. 9, 1905. Serial No. 286,456.



1. In a wireless telegraph system the combination with a coherer in which loose comminuted cohering material is employed, and a receiving instrument, of a rotary motor which by movement of rotation of constant direction imparted to the coherer effects decoherence, and circuit-connections by which rotation of the motor is occasioned when the Hertz waves act.

2. In a wireless telegraph system, in combination, the receiving instrument, the coherer containing loose comminuted cohering material, a rotary motor operatively connected with the coherer to occasion decoherence, and a motor-circuit which is closed by the action of the said instrument in receiving.

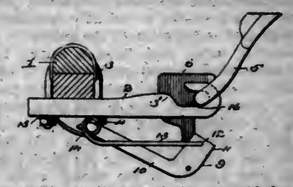
3. Receiving apparatus of a wireless telegraph system provided with a circuit-breaker for the local circuit, connected with the relay-circuit and operating to break the direct connection between relay and coherer to compel all the Hertz waves to pass through coherer, and establish an indirect connection therebetween.

4. Receiving apparatus of a wireless telegraph system provided with a circuit-breaker for the local circuit, connected with the vibrator of the receiving instrument to open the direct connection between coherer and relay to compel all the Hertz waves to pass through coherer, and establish indirect connection therebetween by means of the said vibrator.

5. Receiving apparatus of a wireless telegraph system provided with a circuit-breaker for the local circuit, connected with the vibrator of the receiving instrument to open the circuit to relay to compel all the Herts waves to pass through coherer, and means to retard the subsequent closing of the said circuit to give time to receive the action of the said waves.

[Claims 6 to 9 not printed in the Gazette.]

957,002. THILL-COUPLING. ALBERT C. SCHEELE, Butte, Mont. Filed June 5, 1909. Serial No. 500,244.



1. In a thill coupling, a tie bar provided with a hook and with a thickened portion opposite the end of the hook, a locking hook having a thickened head and a relatively narrow portion adjoining the head, such locking hook cooperating with the hook first mentioned, said hooks arranged to assume a position at right angles with each other and to engage and positively lock a thill iron, independently of other means, when the contacting portion of such thill iron is in substantially the same horizontal plane with the longitudinal axis of the tie bar and with the thickened portion of the locking hook, and means for preventing the displacement of the parts.

2. In a thill coupling, a tie bar provided with a hook and with a thickened portion opposite the end of the hook, a locking hook having a thickened head coöperating with the hook first mentioned, said hooks arranged to engage and to positively lock a thill iron, independently of other means, when the contacting portion of such thill iron is in substantially the same horizontal plane with the longitudinal axis of the tie bar and with the thickened portion of the locking hook, the opening between the point and shank of each of the hooks being elongated and extending substantially parallel with the shank, the hooks when in operative position being arranged at right angles to each other, means for preventing the displacement of the parts comprising a lever pivoted to the locking hook and a spring connected with one end of the lever.

3. In a thill coupling, a tie bar provided with a hook, a locking hook having a thickened head coöperating with the hook first mentioned, said hooks arranged to engage and to positively lock the thill iron, independently of other means, when the contacting portion of such thill iron is in substantially the same horizontal plane with the longitudinal axis of the tie bar and with the thickened portion of the locking hook, the opening between the point and shank of each of the hooks being elongated and extending substantially parallel with the shank, the hooks when in operative position being arranged at right angles to each other, means for preventing displacement of the parts, comprising a lever pivoted to the locking hook and a spring connected with one end of the lever.

957,003. LUBRICATING-VALVE. CARL SENN, Oakland, and DAVID C. DEMAREST, San Francisco, Cal. Filed Mar. 16, 1909. Serial No. 483,685.



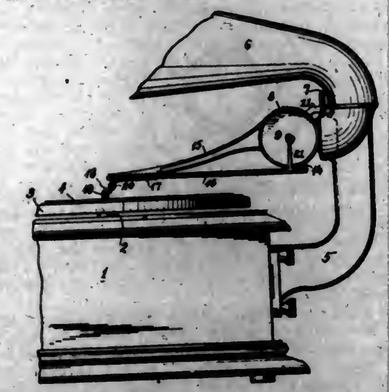
1. A lubricating valve comprising a casing having a conical chamber, and a conical plug fitting in the chamber, said casing having an inlet and an outlet port registering with a corresponding port in the plug, said casing inclosing an oil reservoir, said plug having an air port connecting the aforesaid port in the plug with the top of the reservoir, and said plug having oil ducts connecting the reservoir with pockets in the casing, and which pockets are in communication with said first-named port in the plug when the plug is turned to cut off communication between said inlet and outlet ports in the casing.

2. A lubricating valve comprising a casing having a conical chamber, and a conical plug fitting in the chamber, said casing having an inlet and an outlet port registering with a corresponding port in the plug, said casing inclosing an oil reservoir, said plug having an air port connecting the aforesaid port in the plug with the top of the reservoir, and said plug having oil ducts connecting the reservoir with pockets in the casing, which pockets are in communication with said first-named port in the plug when the plug is turned to cut off communication between said inlet and outlet ports in the casing, and said casing having a screw cup-shaped cap forming a closure and a bottom for said oil reservoir.

3. A lubricating valve comprising a casing having a conical chamber, and a conical plug fitting in the chamber, said casing having an inlet and an outlet port registering with a corresponding port in the plug, said casing inclosing an oil reservoir, said plug having an air port connecting the aforesaid port in the plug with the top of the reservoir, and said plug having oil ducts connecting the reservoir with pockets in the casing, which pockets are in communication with said first-named port in the plug when the plug is turned to cut off communication between said inlet and outlet ports in the casing, said casing having a screw cup-shaped cap forming a closure and a bottom for said oil reservoir, and means by which the reservoir may be filled without inverting the valve.

4. A lubricating valve comprising a casing having inlet and outlet ports, a plug turnable in the casing and having a port registerable with said inlet and outlet ports, said casing inclosing an oil reservoir, said plug having a tubular projection extending into the oil reservoir, and said plug and tubular projection having communicating ducts connecting the reservoir with a pocket in the casing, and which pocket is in communication only with the first-named port in the plug when the latter is turned to cut off communication between the inlet and outlet ports in the casing, and said plug having an air port connecting the first-named port in the plug with the oil reservoir.

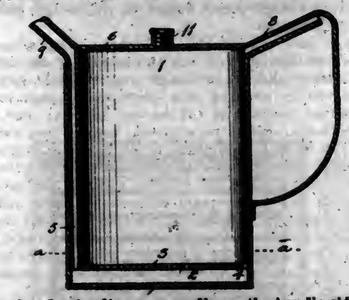
957,004. TALKING-MACHINE. HORACE SHEBLE and THOMAS KRAEMER, Philadelphia, Pa., assignors to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 21, 1908. Serial No. 468,559.



In a talking-machine, a motor-box, a turn-table for a disk sound-record supported thereby, a supporting-arm extending upwardly from the motor-box, a horn mounted thereon, a tubular member mounted on said arm to turn about a vertical axis and having an opening therethrough in communication with the opening through the horn, a sound-box rigidly secured to said member and communicating therewith, an arm rigidly connected to said tubular member and sound box and projecting outwardly therefrom over the sound-record on said turn-table, a rock-shaft pivotally mounted at one end in a bearing movable with said tubular member and at the other end in the end of said arm distant from the sound-box, a lever carried by said rock-shaft at one end thereof and coacting with the diaphragm of the sound-box, a stylus-support carried by said rock-shaft at the opposite end thereof, a stylus carried by said stylus-lever and adapted to track in the groove of a record on said turn-table, and a spring acting on said rock-shaft to turn it in one direction, substantially as set forth.

957,005. MEASURING AND DISPENSING CAN OR TANK. ALVIN G. SHERMAN, Detroit, Mich. Filed Dec. 16, 1908. Serial No. 467,738.

A measuring and dispensing can having a diaphragm a storage chamber and a measuring chamber and with a passage through said diaphragm adjacent to the wall of the receptacle and on the handle side thereof, a discharge conduit from the measuring chamber leading along the side of the storage chamber to the top of said receptacle and adapted to completely discharge the measuring chamber when the receptacle is tilted, a handle, and a vent tube projecting from the side of said vessel at the top



thereof and extending rearwardly on the handle side thereof to a distance to prevent the discharge of any part of the contents therethrough when the vessel is tilted to fully discharge the measuring chamber, substantially as described.

957,006. METHOD OF AND APPARATUS FOR PRODUCING GAS. EDWIN E. SLICK, Pittsburg, Pa. Filed July 17, 1909. Serial No. 508,088.

1. The method of producing gas, consisting in maintaining combustible portions of the charge within a gas producer, feeding fresh carbonaceous material thereto and withdrawing ashes therefrom in the usual manner, and pushing one layer or zone of the charge bodily in a lateral path and relative to another zone or layer of the charge, one layer or zone being supported upon the other, substantially as described.

2. The method of producing gas, consisting in maintaining a charge within a gas producer, feeding carbonaceous material thereto and withdrawing the ashes therefrom in the usual manner, and pushing an intermediate layer or zone of the charge bodily sidewise in a lateral path relatively to the portion above and below the same, substantially as described.

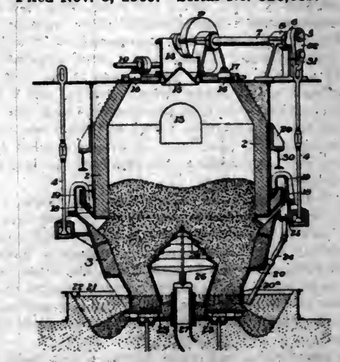
3. A gas producer having a pusher arranged to act upon an intermediate zone of the fuel bed, and connections arranged to move the pusher transversely of the bed, substantially as described.

4. A gas producer having an intermediate transversely movable section, and connections arranged to actuate said section transversely of the charge, substantially as described.

5. A transversely divided gas producer, one section of the producer having connections arranged to move it transversely relatively to another section, substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

957,007. GAS-PRODUCER. EDWIN E. SLICK, Pittsburg, Pa. Filed Nov. 3, 1909. Serial No. 526,082.



1. A gas producer divided transversely into sections, having an annular movable bottom section, and having means arranged to move the bottom section without rotation thereof and shift the position of its contents relatively to the materials in another section of the producer during the operation of said producer; substantially as described.

2. A gas producer divided transversely into a stationary top and an annular movable bottom section and having means arranged to move the bottom section without rotation thereof and shift at least part of its contents relatively to the materials in said top section of the producer during the operation of said producer; substantially as described.

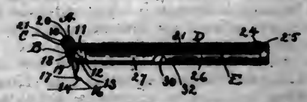
3. A gas producer divided transversely into sections and having a vertically and horizontally movable bottom section, means for moving the bottom section and a water seal between the adjoining ends of said sections adapted to prevent escape of gases from between the sections of the producer; substantially as described.

4. A gas producer divided transversely into sections, having a suspended bottom section, means for swinging the suspended section, a water trough on the lower end of the top section and a depending flange on said bottom section extending into the water in said trough and arranged to maintain a water sealed joint between the sections and prevent escape of gases therethrough.

5. A gas producer divided transversely into a stationary top and a swinging bottom section and having means arranged to swing the bottom section and move materials therein relatively to the top section and its contents during the operation of the producer; substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

957,008. SAFETY-RAZOR. CHARLES F. SMITH, New Britain, Conn., assignor to Landers, Frary and Clark, New Britain, Conn., a Corporation. Filed May 17, 1909. Serial No. 496,344.



1. In a safety razor, a flat, thin, sheet metal blade having a cylindrical guide lug adjacent to its back edge, a combined spring holder and a guard formed of sheet metal and comprising two clamping members suitably spaced and a hollow back by which the said clamping members are united, and a second spring holder formed of sheet metal and comprising two clamping members suitably

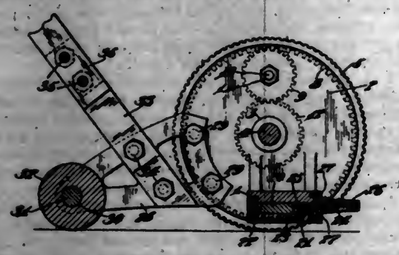
spaced, one of the said members having a safety guard formed thereon, and a hollow back that connects the said two members and into which second holder the said first holder and blade are adapted to be received and held.

2. In a safety razor, a flat, thin, sheet metal blade having a cylindrical guide lug adjacent to its back edge, a holder formed of sheet metal and comprising two clamping members suitably spaced and a hollow back by which the said clamping members are united, and a second spring holder formed of sheet metal, and comprising two clamping members suitably spaced, one of the said members having a safety guard formed thereon, and a hollow back that connects the said two members and into which second holder the said first holder and blade are adapted to be received and held, with a handle secured to and extending at a right angle to the length of the said second spring holder.

3. In a safety razor having a removable blade, a blade having a back edge, a short guide lug on said back edge, a blade back fitting and adapted to receive said guide lug and provided with blade clamping members, a holder fitting and adapted to receive said blade and blade back as a unit, clamping members on said holder adapted to clamp said blade and blade back as a unit, and a guard comprising an extension of one of said clamping members on said blade holder.

4. In combination in a razor having a removable blade, a handle, and a stropping device, the said handle tubular in formation, having an open end, otherwise complete and unbroken in its inclosing walls and provided with an internal screw thread adjacent said end, the said stropping device generally tubular in formation, receivable within said handle, provided adjacent one end with a screw thread adapted to fit and be received by the said screw thread on said handle, and at the extreme end having a tip suitable for manipulation in inserting and withdrawing said stropping device and for a finish for the said handle.

957,009. LAWN-MOWER. JOSIAH H. SMITH, Philadelphia, Pa., assignor to William H. Tigerman, Philadelphia, Pa. Filed July 19, 1909. Serial No. 508,848.



1. In a lawn mower, the combination with a casting, and vertical disk like portions at the ends of the casting, having alined openings, of a shaft or axle in said openings, traction wheels loose on said shaft and located around the disk like portions of the casting, internal gear teeth in said wheels, pinions transmitting motion from said internal gear teeth to said shaft, a cam keyed on said shaft, and having an annular cam groove, a bottom plate secured to the bottom of the casting, a bar mounted to slide between said bottom plate and said casting, a cutter or knife secured on said bar, and a post on said bar projecting into the groove in the cam.

2. In a lawn mower, the combination with a casting, and vertical disk like portions at the ends of the casting, having alined openings, of a shaft or axle in said openings, traction wheels loose on said shaft and located around the disk like portions of the casting, internal gear teeth in said wheels, pinions supported on the disk like portions meshing with the internal gear teeth, other pinions keyed to the shaft and meshing with the first mentioned pinions, a cam keyed on said shaft and having an annular groove, one of said disk like portions of the casting forming a housing for said cam, a bottom plate secured to the bottom of the casting, a bar mounted to slide on said bottom plate, a post on said bar projecting into the groove in the cam, a knife or cutter on said bar, and a guard bar secured to said casting and bottom plate, and having slotted guard fingers in which said knife or cutter reciprocates.

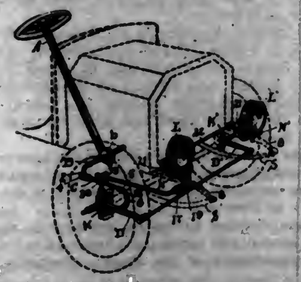
3. In a lawn mower, the combination with a casting, and vertical disk like portions at the ends of the casting, having alined openings, of a shaft or axle in said openings, traction wheels loose on said shaft and located around the disk like portions of the casting, internal gear teeth in said wheels, pinions transmitting motion from said internal gear teeth to said shaft, a cam keyed on said shaft, and having an annular cam groove, a bottom plate secured to the bottom of the casting, a cutter bar mounted to slide on the bottom plate between the same and the casting, a post on said bar, a roller on said post located in the groove in the cam, a guard bar secured to said casting and plate, comprising a series of guard fingers having closed outer ends, and a cutter blade or knife secured to said cutter bar and movable in the guard fingers.

4. In a lawn mower, the combination with a casting, and vertical disk like portions at the ends of the casting, having alined openings, of a shaft or axle in said openings, traction wheels loose on said shaft and located around the disk like portions of the casting, internal gear teeth in said wheels, pinions supported on the disk like portions and meshing with the internal gear teeth, other pinions keyed to the shaft and meshing with the first mentioned pinions, a cam keyed on said shaft and having an annular cam groove, one of said disk like portions of the casting forming a housing for said cam, a bottom plate secured to the bottom of the casting and forming a chamber, a cutter bar mounted to slide on said bottom plate, a post on said bar, a roller on said post located in the groove of the cam, a guard bar secured to said casting and plate, and comprising a series of guard fingers having closed outer ends, and a cutter blade or knife secured to said cutter bar and movable in the guard fingers.

5. In a lawn mower, the combination with a casting, and vertical disk like portions at the ends of the casting, having alined openings, of a shaft or axle in said openings, traction wheels loose on said shaft and located around the disk like portions of the casting, internal gear teeth in said wheels, pinions transmitting motion from said internal gear teeth to said shaft, a cam keyed on said shaft, and having an annular cam groove, a bottom plate secured to the bottom of the casting, a cutter or knife secured on said bar, a post on said bar projecting into the groove in the cam, rearwardly projecting brackets secured to the disk like portions, a roller supported in said brackets, a handle, and angle brackets securing the handle to said first mentioned brackets.

[Claims 6 to 8 not printed in the Gazette.]

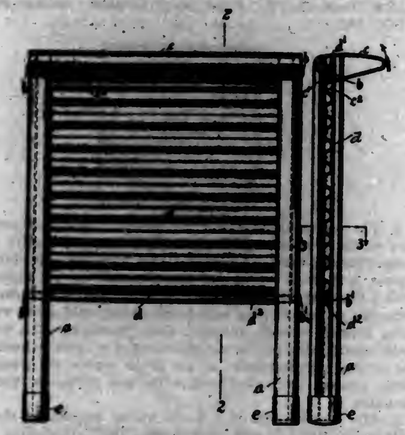
957,010. MEANS FOR AUTOMATICALLY CONTROLLING LAMPS ON VEHICLES. ROY G. STANLEY, Clyde, Ohio. Filed Aug. 14, 1909. Serial No. 512,834.



In devices of the kind described, a vehicle frame having forwardly projecting portions at its front and concave

sockets immediately upon the top thereof, in combination with lamp supporting yokes provided with substantially semi-spherical balls seated in said sockets and one of said yokes having an arm extending beneath and within the sides of said frame, operating connections with the said arm, and a link connection between said yokes.

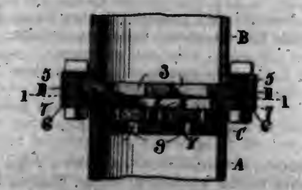
957,011. WASHBOARD. JOHN STEENAD, Jersey City, N. J. Filed Aug. 25, 1909. Serial No. 514,567.



1. A wash-board frame, composed of open tubular side-bars, formed of a blank of sheet metal, folded and having its edges turned in, leaving an opening into the interior of the fold; ties joining the side-bars together; a top-piece, formed of a blank of sheet metal, having an open coil at one end, and the opposite end bent over to form a resilient support, the top-piece being joined to the side-bars by one of the ties, joining the latter together, substantially as herein shown and described.

2. A wash-board frame, composed of side-bars formed of a blank of sheet metal, folded and having its edges turned in, leaving an opening into the interior of the fold, ties, set with their ends between the inturned edges of the side-bars and secured to the side-bars; a top-piece, formed of a blank of sheet metal, having an open coil at one end, and the opposite end bent over to form a resilient support; the top-piece being joined to the side-bars by one of the ties joining the latter together, substantially as herein shown and described.

957,012. VALVE. JAMES STONE, Cleveland, Ohio. Filed Sept. 19, 1907. Serial No. 393,620.



1. A valve chamber having a diaphragm on one side provided with a series of diagonal inlet passages, a free disk shaped valve in said chamber having fluid passages through the same on a different radius from said inlet passages, and a fixed opposite diaphragm having passages registering with those in said valve.

2. A valve chamber having at its bottom a disk shaped member C provided with a series of diagonal inlet passages in a circle and a disk shaped valve free to rotate in said chamber and having open passages in a circle out of the radius of said inlet passages and said valve adapted to seat over and close said inlet passages and a diaphragm D over the top of said member C having passages registering with those of said valve.

957,013. WATER-BOTTLE. THEODORE G. STRATER, West Tisbury, Mass. Filed June 30, 1909. Serial No. 505,135.



1. A water bottle comprising a body portion having a filling opening at one end and a normally-closed air inlet at the other end, a removable closure for the filling-opening, and a lifting device located wholly within the plane of the air inlet end of the body, by which handle the body can be held suspended in inverted position, said device including means to open the air inlet by grasping such lifting device to invert and suspend the bottle.

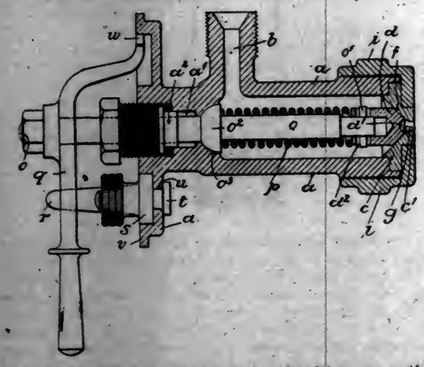
2. A water bottle comprising a metallic canister having a filling opening and an air inlet independent of and at a distance from such opening, a removable closure for the filling opening, a spring-seated valve to normally close the air inlet, a handle connected with the canister and having a movable member, and a connecting stem directly attached at one end to the movable member of the handle and at its other end attached directly to the valve to unseat the valve when the handle is grasped to lift the canister.

3. A water bottle comprising a metallic canister having a filling opening at one end, the opposite end being concaved and provided with an air inlet, a removable closure for the filling opening, a transverse handle member fixedly attached to the canister wholly within its concave end, a movable handle member adjacent the inner side of the fixed member and having a rigidly attached stem provided with a valve for the air inlet, and a spring to normally seat the valve and separate the handle members, relative movement of the latter one toward the other when both members are grasped to lift the canister in inverted position unseating the valve and thereby opening the air inlet.

957,014. SPRAYING APPARATUS. JOHN I. THORNYCROFT, Chiswick, England. Filed Jan. 4, 1907. Serial No. 350,825.

1. Liquid spraying apparatus comprising coacting main nozzle elements the outer of which is provided with a tubular discharge orifice extending forwardly beyond the inner element, said nozzle elements having inter-engaging parts arranged to form by and between them the walls of a narrow liquid discharge passage that is arranged to discharge liquid obliquely against the inner surface of the wall of said discharge orifice, is completely bounded all around its contour by the said interengaging parts, which can be opened to varying extents by axial movement of one of said nozzle elements relatively to the other nozzle element and which can be closed by relative axial movement of said nozzle elements in the opposite direction.

2. Liquid spraying apparatus comprising coacting main nozzle elements that are constantly in contact with each other and the outer of which is provided with a forwardly extending discharge orifice, said nozzle elements having inter-engaging parts arranged to form by and between them the walls of a plurality of separate liquid discharge passages each of which is arranged to discharge liquid in an inclined direction against the inner surface of the wall of said discharge orifice and is completely bounded all around its contour by the said inter-engaging parts and all of which can be opened simultaneously to varying extents by axial movement of one of said nozzle elements relatively to but while still maintained in contact with the other nozzle element and which can be closed by relative axial movement of said nozzle elements in the opposite direction.



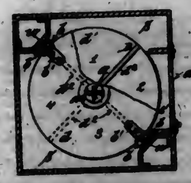
3. Liquid spraying apparatus comprising co-acting main nozzle elements that are constantly in contact with each other and the outer of which is provided with a forwardly extending tubular discharge orifice, said nozzle elements having inter-engaging parts arranged to form by and between them the walls of a narrow liquid discharge passage that is inclined inwardly toward said discharge orifice but obliquely to the axis thereof and is completely bounded all around its contour by the said inter-engaging parts, the cross sectional area of said discharge passage being varied by axial movement of one of said nozzle elements relatively to but while still maintained in contact with the other nozzle element and which can be closed by relative axial movement of said elements in the opposite direction.

4. Liquid spraying apparatus comprising co-acting main nozzle elements that are constantly in contact with each other and the outer of which is provided with a contracted forwardly extending tubular discharge orifice the inner surface of whose wall is of curved shape in longitudinal section at its inner end, said nozzle elements having inter-engaging parts arranged to form by and between them the walls of a plurality of separate liquid discharge passages each of which is inclined obliquely across the axis of the orifice so as to discharge liquid in an inclined direction against the inner surface of the wall of said discharge orifice, and each of which passages is completely bounded all around its contour by the said inter-engaging parts and can be opened and closed to varying extents by axial movement of one of said nozzle elements relatively to but while still maintained in contact with the other nozzle element.

5. In liquid spraying apparatus, a liquid discharge nozzle comprising a fixed element having a forwardly extending discharge orifice and a movable element, said elements having parts arranged to at all times fit one into the other and form between them a liquid discharge passage inclined obliquely across the axis of the discharge nozzle so as to discharge liquid in an inclined direction against the inner surface of the wall of said discharge orifice and closed in all around by the inter-engaging parts, said inter-engaging parts being arranged to move toward each other and close said discharge passage by combined rotary and axial movement of the movable element of the nozzle in one direction and to move apart to open the said passage to varying extents by combined rotary and axial movement of the said movable element in the opposite direction.

[Claims 6 to 22 not printed in the Gazette.]

957,015. DUMB-WAITER. WILLIAM B. UPDEGRAFF, New York, N. Y. Filed Mar. 7, 1910. Serial No. 547,782.



1. The combination of a dumb waiter capable of rotation on its vertical axis, and divided into a plurality of compartments, means for raising and lowering said dumb waiter, a shaft in which the dumb waiter travels formed with a plurality of openings, and a guide way in said shaft engaging and controlling said dumb waiter, said guide way being formed between adjacent shaft openings, with portions constituting partial convolutions of a spiral whereby the several compartments in the dumb waiter are respectively brought into coincidence with their particular shaft openings.

2. The combination of a dumb waiter capable of rotation on its vertical axis, and divided into a plurality of compartments, means for raising and lowering said dumb waiter, a shaft in which the dumb waiter travels formed with a plurality of openings, guide ways in said shaft engaging and controlling said dumb water, each of said guide ways being formed, between adjacent shaft openings, with portions constituting partial convolutions of a spiral whereby the several compartments in the dumb waiter are respectively brought into coincidence with their particular shaft openings.

3. The combination of a dumb waiter capable of rotation on its vertical axis, and divided into a plurality of compartments, means for raising and lowering said dumb waiter, a shaft in which the dumb waiter travels formed with a plurality of openings, guide ways in said shaft engaging and controlling said dumb waiter, said guide ways being formed with vertical portions adjacent to the shaft openings and being also formed between said vertical portions and adjacent shaft openings, with portions constituting partial convolutions of a spiral, whereby the several compartments in the dumb waiter are respectively brought into coincidence and alinement with their particular shaft openings.

957,016. TOILET ACCESSORY. OLIVE VALE, Alameda, Cal. Filed Feb. 23, 1909. Serial No. 479,596.

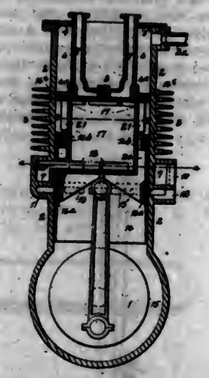


1. An article of manufacture comprising a box provided with a cover having an annular flange forming a central chamber, an absorbent pad located in said chamber and provided with a capillary imprinting surface, and an expansive hoop engaging the edge of said pad and clamping the latter against said flange.

2. An article of manufacture comprising a box provided with a cover having a concave portion, said cover being provided with an annular flange, an annular flange forming a central chamber, an absorbent pad located in said chamber and provided with a capillary imprinting surface, an expansive hoop engaging the edge of said pad and clamping the latter against said flange, and a handle extending diametrically across said cover.

3. An article of manufacture comprising a box having its lower edge rolled, a mirror having its edge engaging the rolled edge of the box, a spring disk bearing against the back of said mirror, and a cover for said box provided with an absorbent pad removably secured therein.

957,017. GAS-ENGINE. LOUIS C. VANDERLIP, Elkhart, Ind. Filed May 21, 1908. Serial No. 434,005.



1. In a gas engine, the combination of a cylinder having a compression chamber therein, a second cylinder adapted to reciprocate in the first named cylinder and to compress the charge in said compression chamber, a projection from the first named cylinder fitting within the other of said cylinders closing one end of the same, the other end being otherwise closed, a port in the second cylinder permanently communicating with said compression chamber and adapted to be uncovered by said projection at one end of the movement of the last named cylinder to permit the charge to flow therethrough from said compression chamber and to be covered by said projection during the remainder of the stroke of said cylinder, for the purpose described, and an exhaust port in the second cylinder adapted to register with an exhaust outlet at the time the port is uncovered by said projection.

2. In a gas engine, the combination of a cylinder having a compression chamber, a second cylinder adapted to reciprocate in the first named cylinder and to compress gas in said compression chamber, and provided with an internal combustion chamber formed therein, said second cylinder being provided with cooling ribs extending from its outer wall and within the first named cylinder, a space being left between said cylinders closed by a partition on said second cylinder at one end and open at the other end to said compression chamber, an intake port 19 in said second cylinder opening into the combustion chamber and to the space between the cylinders, means for controlling said port, said port being so located as to admit gas to the combustion chamber from said compression chamber through said space.

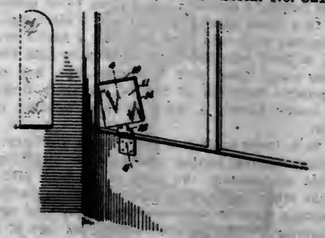
3. In a gas engine, the combination of a cylinder, a piston adapted to reciprocate in said cylinder and provided with an internal combustion chamber, a port through the wall of said piston communicating with said combustion chamber, and means for controlling the same, a compression chamber in said cylinder upon one side of said piston, a passageway in the wall of said piston surrounding said combustion chamber and communicating with said compression chamber and, toward the end of the stroke during which compression takes place in the compression chamber, with said combustion chamber, an opening at the periphery of said piston communicating with said passageway, said cylinder being provided with an induction aperture, said aperture and said opening from said passageway being so located that they shall register with each other toward the end of the stroke in which a charge is to be drawn into the compression chamber to permit the charge to enter said compression chamber.

4. In a gas engine, the combination of a cylinder having a crank case, a piston adapted to compress a charge in said crank case, said piston having a combustion chamber formed therein, a projection from said cylinder fitting into said chamber and closing one end thereof, the other end being otherwise closed, a port in the wall of said chamber adapted to pass beyond said projection toward the end of the stroke during which said piston compresses a charge in said compression chamber, to permit a charge to pass into said combustion chamber, said piston being provided with a passageway communicating with said port and with said compression chamber.

5. In a gas engine, the combination of a cylinder having a crank case, a piston adapted to compress a charge in said crank case, said piston having a combustion chamber formed therein, a projection from said cylinder fitting into said chamber and closing one end of said chamber, the other end being otherwise closed, a port in the wall of said chamber adapted to pass beyond said projection toward the end of the stroke of said piston during which it compresses a charge in said compression chamber, said piston being provided with a passage communicating with said port and with said compression chamber, said passage opening at the outer side of said piston toward the end remote from said crank case, said cylinder being provided with a port adapted to register with the side opening of said passage toward the end of the stroke following the working stroke of the piston.

[Claim 6 not printed in the Gazette.]

957,018. TRAIN-ORDER HOLDER. ALFRED W. VICK, Savannah, Ga. Filed Oct. 7, 1909. Serial No. 521,482.



1. A holder suitable for train orders, comprising covers hinged together, one of the covers having a groove extending crosswise thereof, and a spring clamp secured at its inner end to the grooved cover and opening at its opposite end, constructed to press the order against the cover into the said groove.

2. A holder suitable for train orders, comprising covers hinged together, each cover having a spring clamp at its inner side to bind the orders against the covers, with the inner sides of the clamps fixed to the respective covers and the outer sides thereof extending along the outer edges of the covers approximately parallel thereto and opening outwardly therefrom for the insertion and removal of the orders.

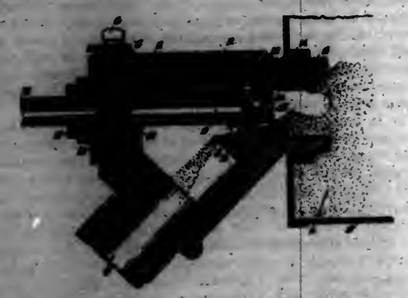
3. A holder suitable for train orders, comprising two covers hinged together, each cover having a transverse groove near its top and bottom, clamping strips arranged in the grooves of each of the covers and secured thereto at their inner ends, and clamping strips securing the first-named clamping strips of each cover together at their opposite and free ends.

4. A holder suitable for train orders, comprising covers hinged together, each cover having a clamp arranged to bind the order to the inner face thereof, with the hinged portion of one cover having a stop adapted to bear against the other cover and prevent the separation of the covers beyond a predetermined point.

5. A holder suitable for train orders, having two covers hinged together, and a bracket removably engaged with one of said covers and supporting the holder at an angle suitable for reading and tending to cause the other cover to swing open under the action of gravity.

[Claims 6 and 7 not printed in the Gazette.]

957,019. TRACK-SANDER. JOHN H. WATTERS, Augusta, Ga. Filed Jan. 13, 1910. Serial No. 537,808.



1. In a track sander, a sand box, a casing opening thereinto, and an air conveyer leading into said sand box and adapted to direct a stream of air against the body of sand in said box, said air conveyer having a passage of reduced diameter in advance of its discharge and having a movable valve member controlling said passage.

2. In a track sander, a sand box, a discharge pipe communicating with said sand box, and means for directing a jet of fluid into the body of sand in a direction opposite to that in which the sand flows to the discharge pipe, said means having a movable, controlling valve member.

3. In a track sander, a sand box, a discharge pipe communicating with said sand box, and a nozzle for directing a jet of fluid into the body of sand in said box in a direction away from said discharge pipe, and opposed to the general direction of flow of the sand in discharging, said nozzle having a movable valve member controlling the jet.

4. In a track sander, a sand box, a discharge pipe, and a nozzle member having openings for directing two jets of fluid one against the body of sand in said sand box and the other toward said pipe to create a partial vacuum to cause a flow of sand into said pipe, said nozzle member having a valve member controlling one of said openings, said valve member being capable of limited movement.

5. In a track sander, a sand box having a discharge pipe, means for creating a partial vacuum within said pipe, and a nozzle having a loose valve member and serving to direct a jet fluid against the body of sand at a point adjacent to the mouth of said pipe.

[Claims 6 to 10 not printed in the Gazette.]

957,020. BOND-TESTER. JOHN B. WEST, Syracuse, N. Y. Filed Feb. 1, 1906. Serial No. 298,980.

1. In a device of the class described, a tubular handle provided with projecting feet, contact terminals secured to the free ends of said feet, a tube of insulating material, a primary coil wound upon said tube and closely fitting within said handle, and securing means for fixedly positioning the same therein, said coil being positioned in spaced relation from the top of said handle, an insulated extension provided on the bottom of said coil, conductors extending through said extension, and electrical connectors between said conductors and said contact terminals, means for making and breaking the circuit between the primary coil and said terminals, a secondary coil slidable longitudinally within the primary coil, rod conductors, said secondary coil provided with spring terminals in contact with the rod conductors, binding posts positioned on the top of said handle, conductors between said rods and binding posts, means for communicating the degree of adjustment of the sliding coil, and a receiver in electrical connection between said binding posts.

2. In a device of the class described, a tubular handle provided with projecting feet, contact terminals secured to the free ends of said feet, a tube of insulating material, a primary coil wound upon said tube and closely fitting within said handle, and securing means for fixedly positioning the same therein, said coil being positioned in spaced relation from the top of said handle, an insulated extension provided on the bottom of said coil, conductors extending through said extension, and electrical connectors between said conductors and said contact terminals, said extension provided with a cut away portion at one side thereof, a resiliently-mounted make and break switch positioned in said cut away portion and in circuit between the primary coil and one of said contact terminals, a secondary coil slidable longitudinally within the primary coil, and a receiver in circuit with the secondary coil.



3. In a device of the class described, a tubular handle provided with projecting feet, contact terminals secured to the free ends of said feet, a tube of insulating material, a primary coil wound upon said tube and closely fitting within said handle, and securing means for fixedly positioning the same therein, said coil being positioned in spaced relation from the top of said handle, an insulated extension provided on the bottom of said coil, conductors extending through said extension, and electrical connectors between said conductors and said contact terminals, said extension provided with a cut away portion at one side thereof, a resiliently-mounted make and break switch positioned in said cut away portion and in circuit between the primary coil and one of said contact terminals, a secondary coil slidable longitudinally within the primary coil, said secondary coil provided with a core and one terminal of said coil in contact therewith, two spring contacts positioned upon the upper end of the secondary coil, one of said contacts in circuit with said core and the other contact connected with the other terminal of said coil, rods positioned interiorly and longitudinally of said handle and oppositely-arranged, said spring contacts having slidable connections with said rods, and a receiver in circuit with said rod.

4. In a device of the class described, a tubular handle provided with projecting feet, contact terminals secured to the free ends of said feet, a tube of insulating material, a primary coil wound upon said tube and closely fitting within said handle, and securing means for fixedly positioning the same therein, said coil being positioned in spaced relation from the top of said handle, an insulated extension provided on the bottom of said coil, conductors extending through said extension, and electrical connectors between said conductors and said contact terminals, said extension provided with a cut away portion at one side thereof, a resiliently-mounted make and break switch positioned in said cut away portion and in circuit between the primary coil and one of said contact terminals, a secondary coil slidable longitudinally within the primary coil, said secondary coil provided with a core and one terminal of said coil in contact therewith, two spring contacts positioned upon the upper end of the secondary coil, one of said contacts in circuit with said core and the other contact connected with the other terminal of said coil, rods positioned interiorly and longitudinally of said handle and oppositely-arranged, said spring contacts having slidable connections with said rods, and a receiver in circuit with said rods, said handle provided with a longitudinal slot above the primary coil, a head provided upon said secondary coil, a spring pressed handpiece carried by said head and projecting through said slot, an index finger provided upon said hand piece and graduations provided upon said handle adjacent said slot.

957,021. ANTICREEPING DEVICE FOR RAILS. BENJAMIN WOLHAUPTER, New York, N. Y. Filed July 13, 1909. Serial No. 507,437.



1. An anti-creeping device for rails, comprising spaced rail-gripping elements, and a device pivoted thereto for effecting the gripping action of said elements.

2. An anti-creeping device for rails, comprising spaced rail-embracing and gripping jaws, and a rail-engaging device pivoted thereto for effecting the gripping action of said jaws.

3. An anti-creeping device for rails, comprising spaced connected rail-embracing and gripping jaws, and a cam device pivoted to and between the jaws and engaging the under side of the rail for effecting the gripping action of said jaws.

4. In an anti-creeping device for rails, rail-engaging elements, a connection between the elements, and a swinging actuating device pivotally mounted on the connection.

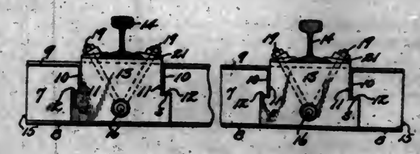
5. In an anti-creeping device for rails, rail-engaging elements, a tie connecting the elements, and a swinging actuating device journaled on the connection and having a track tie-engaging element.

[Claims 6 to 18 not printed in the Gazette.]

957,022. RAIL TIE AND FASTENING. BENJAMIN WOLHAUPTER, New York, N. Y. Filed July 27, 1909. Serial No. 509,893.

1. A tie comprising a frame bar composed of an I-beam having openings in its upper flange, and rail bearing cushions resting on the lower flange of the beam and registering in said openings in the upper flange.

2. A tie comprising a frame bar composed of an I-beam having its upper flange cut away to provide openings therein, and wooden rail-bearing cushions resting on the lower flange of the beam and projecting through and registering in said openings in the upper flange.



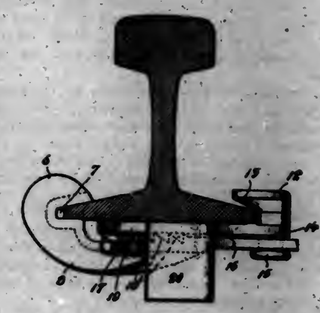
3. A tie, comprising a frame bar composed of an I-beam having its upper flanges cut-away and downturned to form pockets having side walls, and rail-bearing cushions located in the pockets between the side walls.

4. A tie, comprising a frame bar composed of a web having an upper flange, portions of which are cut-away and downturned, and a rail-bearing cushion located between and interlocked with the downturned portions.

5. A tie, comprising a frame bar composed of an I-beam, the upper flanges of which are cut-away and downturned to form side walls, and coacting rail-bearing cushions resting on the lower flanges, interposed between and interlocked with the side walls, and projecting through the cut-away portions of the upper flanges.

[Claims 6 to 18 not printed in the Gazette.]

957,023. ANTICREEPING DEVICE FOR RAILS. BENJAMIN WOLHAUPTER, New York, N. Y. Filed Feb. 1, 1910. Serial No. 541,231.



1. In an anti-creeping device for rails, rail-embracing elements relatively slidable toward each other and also relatively rotatable, and means for effecting both their said rotatable and sliding movements.

2. In an anti-creeping device for rails, rail-embracing elements relatively slidable toward each other, and also relatively rotatable, and coacting means carried by the elements for effecting their relative sliding movement by the relative rotary movement.

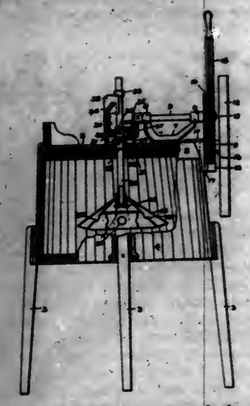
3. In an anti-creeping device for rails, a relatively fixed rail-engaging jaw, a second jaw having a swinging movement on a fulcrum slidable transversely of the rail, and means for effecting the movement of the second jaw.

4. An anti-creeping device for rails, comprising a pair of rail gripping elements, one of which has a fulcrum that is shiftable on the other transversely of the rail.

5. An anti-creeping device for rails comprising a pair of opposing rail gripping elements, one of which has a fulcrum that is shiftable on the other transversely of the rail, and means for effecting the relative shifting of the rail gripping elements through longitudinal movement of the rail.

[Claims 6 to 18 not printed in the Gazette.]

957,024. WASHING-MACHINE. WILLIAM H. WYMAN, Oshkosh, Wis., assignor to John G. Seelig, Ripon, Wis. Filed Sept. 17, 1909. Serial No. 518,197.



1. In a washing machine, a tub, a dasher arranged in said tub, a vertical shaft secured to said dasher and extending through the top of said tub, a guiding member for guiding said vertical shaft in its movement, said guiding member being formed with an arc-shaped guide-way, a roller connected with said vertical shaft and engaging said guide-way, a yoke connected with said vertical shaft, a crank connected with said yoke, a shaft connected with said crank, and means connected with said last mentioned shaft for rotating the same, whereby power is conveyed to said yoke for raising vertically said vertically positioned shaft, which movement will cause said roller in said guide-way to be moved for partially rotating said vertically mounted shaft at the same time that the same is raised.

2. A washing machine comprising in its construction power applying mechanism attached to the frame and mechanism for operating the dasher, consisting of a power shaft supported by the cover, a crank carried by the power shaft, a yoke adapted to ride the crank pin, forks integral with the yoke, a tubular dasher shaft carried by the forks of the yoke, an annular attachment to the dasher shaft interposed between the forks of the yoke, a lug integral with said annular attachment carrying a roller, a semi-circular standard attached to the cover and provided with a spiral slot in which said roller is permitted to travel, and a dasher attached to the base of the tubular dasher shaft, substantially as shown.

957,025. MOP-HEAD. WALTER H. ZACHRY, Atlanta, Ga. Filed Dec. 4, 1909. Serial No. 531,344.

1. A device of the class described, comprising a bolt consisting of a threaded stem and a head provided with a transverse kerf, and having at opposite sides of the head resilient lateral extensions, each of said extensions being bent over upon itself to grasp the material of the mop, the free end of the extension being adjacent to the stem, a handle, a ferrule on the handle, said handle having a recess in its end, an internally threaded sleeve in the recess for receiving the stem, means on the sleeve for holding it in place, and a cover plate substantially conical in shape and having a threaded opening in its apex through which the stem passes, the bent over portions of the extensions engaging the inner surface of the plate.

2. A device of the character specified, comprising a bolt having a threaded stem and a head provided with oppositely-extending lateral extensions, said extensions being bent over upon themselves toward the stem for the purpose specified, a substantially conical cover plate having a threaded opening in its apex through which the stem passes, the inner surface of the plate engaging the bent over portions, a handle having a recess in the end thereof, and an internally threaded sleeve in the recess for receiving the stem.



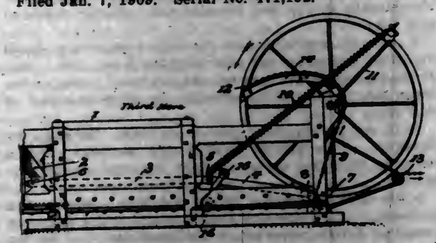
3. A device of the class described, comprising a bolt comprising a threaded stem and a head, said head having oppositely extending resilient lateral extensions, the ends of the extensions being bent over toward the stem for the purpose specified, a handle threaded onto the stem, and a cover plate between the handle and the head of the stem, and having a threaded opening through which the stem passes.

4. In a device of the class described, a mop head comprising a bolt having a threaded stem and a head having lateral extensions, the free ends of which are bent over upon themselves toward the stem for the purpose specified, a sleeve having a threaded opening for receiving the stem, and a conical cover plate having a threaded opening through which the stem passes and engaging the extensions with its inner face.

5. A device of the class described, comprising a bolt having a threaded stem and a head provided with lateral resilient extensions, the free ends of the extensions being bent over upon themselves toward the stem for fastening the mop material therebetween, a handle threaded onto the stem, a sleeve in the end of the handle and having a threaded opening for the stem, and means between the sleeve and the head for engaging the said ends to clamp them on the mop material, when the sleeve is turned toward the extensions.

[Claim 6 not printed in the Gazette.]

957,026. BALING-PRESS. JACOB BARENS, Altus, Ark. Filed Jan. 7, 1909. Serial No. 471,192.



1. In combination with a supporting frame having a baling chamber provided with a plunger, of pivotally connected toggle links, one of which is pivotally connected to the supporting frame and the other to the plunger, a trolley slidably mounted on one of the toggle links, a bull wheel journaled on the frame and provided with a cam, a guide pulley mounted on one of the toggle links, a second guide pulley mounted on the supporting frame, and a cable, one end of which is secured to the trolley and the other end thereof extending over said guide pulleys for attachment to the cam.

2. The combination with a supporting frame having a baling chamber provided with a plunger, of pivotally connected toggle links, one of which is pivotally connected to the plunger and the other provided with an angular terminal pivotally connected to the supporting frame, a guide pulley journaled on the angular terminal of one of the toggle links, a trolley slidably mounted on said angular toggle link, a guide pulley mounted on the supporting frame, a bull wheel having a cam, a flexible element having one end thereof secured to the trolley and its other end passed over the guide pulleys for attachment to the bull wheel, an arm extending laterally from the supporting frame and a spring forming a connection between the outer end of the arm and the pivotal connection between the toggle links.

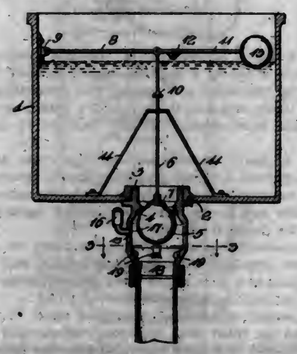
3. In a baling press the combination with a supporting frame having a baling chamber and provided with a plunger, of pivotally connected toggle links, one of which is pivotally connected with the plunger and the other provided with a deflected terminal for pivotal connection with the supporting frame, a trolley slidably mounted on the deflected toggle link, a guide pulley journaled on the deflected toggle link, a similar guide pulley journaled on the frame, a bull wheel having a cam secured thereto, a flexible element having one end thereof secured to the trolley and its other end passing over the guide pulleys for attachment to the bull wheel, an arm extending upwardly from the supporting frame, a spring having one end thereof secured to the arm and its other end fastened to the toggle links at their pivotal juncture, a draft cable encircling the bull wheel and a bracket extending laterally from the supporting frame and having a roller mounted for rotation thereon and adapted to receive and guide the draft cable.

4. In power applying means, the combination of toggle links, a guide pulley applied to one of the toggle links near the outer end thereof, a trolley mounted to move upon the toggle link provided with said guide pulley, a second guide pulley arranged within the radius of the joint between the toggle links, and a draft chain or like connection passed around said guide pulleys and attached to the said trolley.

5. In power applying means the combination of toggle links, a bull wheel, means for operating the bull wheel by a direct pull, a cam applied to a side of the bull wheel, a trolley slidably mounted on one of the links and connecting means between said cam and trolley.

[Claim 6 not printed in the Gazette.]

957,027. FLUSHING-VALVE. FOSTER W. BASSETT and WILLIAM A. HUNTER, Jr., Los Angeles, Cal. Filed June 11, 1909. Serial No. 501,559.



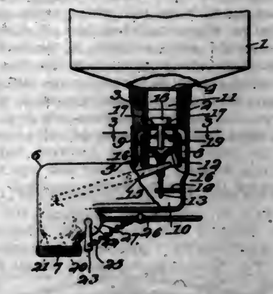
1. A flushing valve mechanism comprising a water tank, a float pivotally supported within the tank, a rod vertically movable in the tank connected to the float, and an air tank for increasing the force of the water falling from beneath the flushing valve.

2. A tank, a flushing pipe connected with the tank formed with a valve seat, an air chamber connected to the flushing pipe, a ball valve movable against the valve seat of the flushing pipe, a vertical arm connected to the ball valve, means for guiding the vertical arm, a jointed lever connected to the vertical arm and a float connected to the jointed lever.

3. A tank, a jointed lever pivotally mounted within the tank, a float mounted on the lever, a vertical rod pivoted to the lever, means for guiding the vertical rod, a stop lug formed on the vertical rod, a ball valve carried by the vertical rod, a flushing pipe connected to the tank and an air chamber connected to the flushing pipe.

4. A tank, a flushing pipe connected to the tank, a ball valve for closing communication between the flushing pipe and the tank, a float connected to the ball valve and an air chamber connected to the flushing pipe for increasing the force of the initial quantity of water discharged from the flushing pipe.

957,028. FLUSHING-VALVE MECHANISM. FOSTER W. BASSETT and WILLIAM A. HUNTER, Jr., Los Angeles, Cal. Filed June 11, 1909. Serial No. 501,560.



1. Means for holding a quantity of water comprising a pressure tank, an angularly formed conduit connected with the pressure tank, said conduit being formed with ports communicating with a chamber in said conduit and said tank, a valve for controlling said ports and a valve coacting with the first mentioned valve for controlling the discharge of water from the conduit.

2. A flushing valve mechanism comprising a pressure tank, a conduit communicating with the pressure tank, a slide valve for controlling the passage of water from the tank to the conduit, a second valve coacting with the first mentioned valve and means for causing the pressure in a supply pipe to hold said valves to their normal positions.

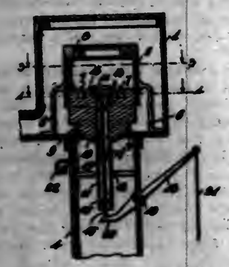
3. A flushing valve mechanism comprising a pressure tank, a conduit connected with the pressure tank, a plurality of chambers, a slide valve dividing the chambers, a second valve coacting with the slide valve, and means for causing the valves to occupy their normal positions by the pressure of water from a supply pipe.

4. A flushing valve mechanism comprising a pressure tank, a compartment communicating with said tank, a slide valve controlling the compartment, a lever connected with the slide valve, a ball valve connected with the lever, and means for utilizing water pressure for causing the valves to occupy their normal positions comprising a three-way valve connected to the conduit.

5. A flushing valve mechanism comprising a pressure tank, a conduit connected with the pressure tank and communicating therewith, a plurality of chambers, a valve for controlling the passage of water from the pressure tank through said chambers, a lever connected to the valve pivotally secured to the conduit, a ball valve secured to one end of the lever, means for controlling the entrance of water into the chambers and the pressure tank, and means for guiding the movement of the first mentioned valve.

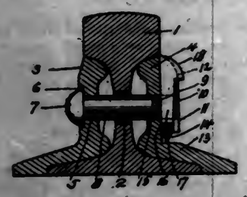
[Claims 6 to 10 not printed in the Gazette.]

957,029. FLUSHING-VALVE. FOSTER W. BASSETT and WILLIAM A. HUNTER, Jr., Los Angeles, Cal. Filed June 28, 1909. Serial No. 504,792.



A flushing valve mechanism comprising a main flushing pipe, an outer valve casing communicating with said pipe, an inner casing supported in the outer casing and communicating therewith, said inner casing having triangular openings therein, a valve formed with a semi-spherical seat portion movable in the inner casing and adapted when seated to close the broad end of said triangular openings, a second valve movable in the first mentioned valve, a conduit extending through the first mentioned valve and arranged to be closed by the second valve, a snifting valve for controlling the admission of air to the flushing pipe, and means to operate said first and second valves one after the other, the second valve being operated first and the first valve being operated last to permit communication between the conduit and pipe and to completely uncover the said triangular openings.

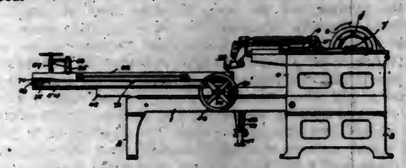
957,030. RAIL-JOINT. ABRAHAM R. BERRYMAN, East Altoona, Pa. Filed Aug. 12, 1909. Serial No. 512,485.



In a rail joint, the combination with rails, of splice bars bracing the sides of said rails, one of said splice bars having the outer vertical face thereof provided with an enlargement, said enlargement having the top and end edges thereof beveled and the lower edge spaced from the lateral portion of said splice bar to form a longitudinal groove, said splice bar and said enlargement having openings formed therein, said enlargement having vertical slots intersecting said openings, bolts adapted to extend through said splice bars and said rails, said bolts having the ends thereof provided with slots adapted to vertically aline with the slots of said enlargement, and keys driven in the slots of said enlargement and said bolts and adapted to have the ends thereof spread in the groove formed by the bottom edge of said enlargement and the lateral portion of the splice bar, substantially as described.

957,031. METAL-SCRAPING MACHINE. PERCY R. BISSELL, Waterbury, Conn., assignor to The Waterbury Farrell Foundry and Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Mar. 14, 1908. Serial No. 421,020.

1. The combination with the bed; of a platen mounted thereon; a carriage movable endwise on said platen and having a rack and pinion connection therewith; a table manually movable upon said carriage; and manually actuated lever means connected with the opposite ends of said platen for lifting said platen, carriage and table from said bed.



2. The combination with the bed; of a platen mounted thereon; a carriage movable endwise upon said platen; a table manually movable crosswise upon said carriage; companion levers pivotally connected with the opposite ends of said bed and arranged to act upon said platen; and a treadle having connection with said levers.

3. The combination with a bed; of a platen thereon; a shaft rotatably mounted in said platen; a pinion on said shaft; a carriage mounted on said platen; a rack on said carriage, the teeth of which are engaged by the teeth of said pinion; a table manually movable crosswise upon said carriage; and means for moving said platen, carriage and table as a unit from said bed, said means comprising manually actuated levers connected at their inner ends to a treadle, and having connection at their outer ends with a part on said platen.

4. The combination with the reciprocating carriage having a rounded top in cross section and a lug on said rounded portion between the ends of said carriage having a flat top; of a table manually movable crosswise thereon, supported only at its ends and by the said lug.

5. The combination with the bed; of a platen thereon; a carriage movable upon said platen in the direction of its length; a rail upon each end of said carriage; a table movable crosswise upon said carriage; rolls at each end of said table which contact with said rails and support said table at its ends; and companion rolls mounted in said table so that the axes thereof are at substantially a right angle to the aforesaid rolls and contact with said rails to prevent endwise movement of said table upon said carriage.

957,032. DENTAL ATTACHMENT. WILLIAM J. BRADY, Kansas City, Mo. Filed Apr. 17, 1909. Serial No. 490,489.



1. In a dental attachment of the class specified, a band to encircle a tooth, a tubular sheath secured to one extremity of the band and having the remaining band extremity freely movable therein, and a clamping means engaging the band extremities and inclosed by the tubular sheath.

2. In a dental attachment of the class specified, a band to encircle a tooth, a tubular sheath mounted on the band extremities, and a clamping means engaging the band extremities and having a screw-threaded surface which is covered by the said sheath.

3. A dental attachment having a band to encircle a tooth and provided with clamping means, and a tubular sheath fixed to a part of the band and inclosing the major portion of the clamping means.

4. A dental attachment having a band to encircle a tooth and provided with clamping means, and a tubular sheath fixed to the band and inclosing the major portion of the clamping means, the clamping means being out of contact with relation to the sheath.

5. A dental attachment having a clamping band to encircle a tooth and provided with a tubular sheath to which one extremity of the band is fixed, the opposite extremity of the band being movable in the sheath, and a clamping means engaging the extremities of the band and projecting into and having the major portion thereof covered by the sheath, the part of the clamping means within the sheath being out of contact with relation to the latter.

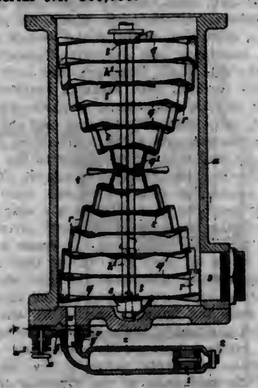
[Claims 6 to 10 not printed in the Gazette.]

957,033. PADLOCK. AUGUST M. H. DE BRUYCKER, New York, N. Y. Filed July 17, 1909. Serial No. 508,155.



A padlock comprising a hasp having its side arms provided with notches on their inner faces, a bolt comprising pivotally connected members having at one end outwardly extending hooks for engaging the notches, a spring between the members at the said end, a tumbler case secured between the members at the opposite end from the spring, and key controlled tumblers in the said casing for moving said members against the tension of the spring whereby to disengage the hooks from the notches, and a casing having sockets for receiving the arms of the hasp, and a cavity for the bolt and openings between the cavity and the sockets for the passage of the hooks.

957,034. APPARATUS FOR USE IN THE MANUFACTURE OF ELASTIC CELLULAR FILLING MATERIAL. ROBERT J. CALDWELL, New Southgate, and FRITS PFLEUMER, London, England. Filed July 23, 1909. Serial No. 509,099.



1. An apparatus for the manufacture of elastic cellular material for filling tires, cushions and other containers of variable capacity, said apparatus comprising a closed vessel capable of withstanding internal pressure, a piston movable in said vessel, and a collapsible stirrer in said vessel.

2. An apparatus for the purposes specified, said apparatus comprising a closed vessel capable of withstanding internal pressure, a piston movable in said vessel, a stirrer-spindle extending through said piston in said closed vessel, stirrer-blades movable axially on but rotatable with said spindle, and means for limiting the separation of said stirrer-blades.

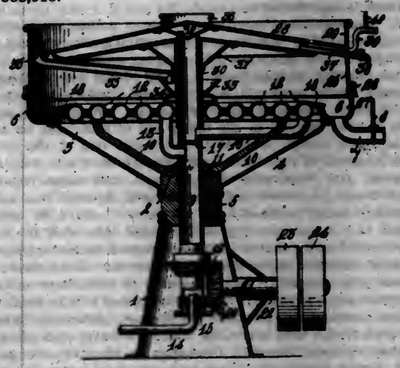
3. An apparatus for the purposes specified, said apparatus comprising a closed vessel capable of withstanding internal pressure, a piston movable in said vessel, a stirrer-spindle extending through said piston in said closed vessel, stirrer-blades movable axially on but rotatable with said spindle, a stirrer-blade rotatably mounted on said piston, a stirrer-blade fixed to the end of said spindle and hooks at the ends of stirrer-blades for engaging adjacent stirrer-blades.

4. An apparatus for the purposes specified, said apparatus comprising a closed vessel capable of withstanding internal pressure, a piston movable in said vessel, a spindle extending through said piston in said closed vessel, a spindle-bearing detachably supported on said closed vessel, stirrer-blades movable axially on but rotatable with said spindle, and means for limiting the separation of said stirrer-blades.

5. An apparatus for the purposes specified, said apparatus comprising a closed vessel capable of withstanding internal pressure, a piston movable in said vessel, a hydraulic cylinder detachably mounted on said closed vessel, a piston movable fluid-tight in said cylinder and connected to the piston in said closed vessel and a collapsible stirrer in said vessel.

[Claims 6 to 16 not printed in the Gazette.]

957,035. PASTEURIZER. HANS CHRISTENSEN, Fort Atkinson, Wis., assignor of one-half to Charles Palm, Fort Atkinson, Wis. Filed Jan. 3, 1910. Serial No. 535,913.



1. A device of the character described comprising a supporting base, a revolubly mounted coil arranged above said base, an inclined steam chamber arranged over said coil, means to discharge the liquid onto said chamber, and means whereby the liquid is conducted from said chamber to said coil over which the liquid is passed in a thin sheet by the centrifugal action of the revolving coil.

2. A pasteurizer comprising a base, a tubular shaft revolubly mounted therein, a coil secured to said shaft and revolved thereby, means whereby steam is admitted to and passed through said coil, a steam chamber arranged above the coil, said chamber being inclined from its center toward its outer edges, means to conduct the steam from said coil to said chamber, a milk distributing receptacle arranged above said chamber and adapted to discharge milk on the upper surface thereof, a milk conducting tube connected with the upper surface of said heating chamber, and means whereby the milk or other liquid is discharged onto the coil from said conducting tube and is

spread outwardly in a thin sheet over the coil by the centrifugal action thereof.
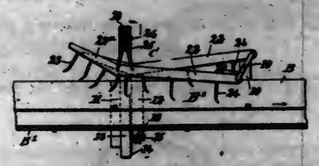
3. A pasteuriser comprising a hollow base, a tubular shaft revolubly mounted in said base, a driving mechanism connected with said shaft, a bowl arranged on the upper end of the base, a heating coil secured to and revolved by said shaft, a milk trough arranged around the upper edge of said bowl, a milk conducting flange secured to the coil and projecting over the adjacent edge of the trough, a steam chamber arranged above said coil and trough, said chamber being inclined from its center to its outer edges, a liquid retaining flange around the outer edge of said chamber, a milk receptacle arranged above the center of the chamber whereby milk is evenly distributed over the upper surface of the chamber, a milk conducting pipe connected with said upper surface, and means whereby the milk from said tube is evenly distributed onto said heating coil and is thrown across the same in a thin sheet by the centrifugal action of the coil and is discharged therefrom over said flange and into said trough.

4. A pasteuriser comprising a base, a hollow steam conducting shaft revolubly mounted in said base, a steam inlet pipe connected with the lower end of said shaft, means whereby the latter is driven, a bowl arranged on the upper end of said base, a heating coil connected to and revolved by said shaft, a steam conducting pipe to connect the inner end of said coil with the lower portion of said shaft whereby steam passes from the shaft to the coil, a steam discharge pipe to connect the outer end of the coil with the upper portion of said shaft, a trough secured to the upper end of said bowl, an annular rim adapted to be removably engaged with said trough, a steam chamber connected to said rim, said chamber being inclined from its center toward its outer edges, and connected on its under side with the upper discharge end of said tubular shaft whereby the steam discharged from said coil is conducted to said steam chamber, and a milk distributing receptacle arranged above the upper surface of said steam chamber.

5. A pasteuriser comprising a base, a hollow shaft revolubly mounted in said base, a supporting spider secured to said shaft and having a ball bearing engaging with the upper portion of said base, a spiral steam coil arranged on said spider, said coil being soldered together to form a solid plate, means whereby steam is conducted to said coil, a bowl secured to the upper end of said base, an annular milk trough secured to the upper end of the bowl and adapted to receive the milk passed over said coil, an annular rim removably engaged with and supported by said trough, a steam chamber secured to said rim, said chamber being inclined from its center toward its outer edges and communicating on its under side with the upper end of said tubular shaft, a steam deflector arranged in said chamber above the upper open end of the shaft, a guide tube secured to the under side of said chamber and adapted to be engaged with the upper end of the shaft, a funnel secured to said tube, an annular deflecting flange secured to the tube below the lower discharge end of said funnel whereby the milk therefrom is directed onto said coil, a milk distributing receptacle arranged above the upper surface of said steam chamber, a milk conducting tube to connect said upper surface of the chamber with said funnel, a milk retaining flange arranged around the outer edge of the upper surface of said steam chamber, a drain pipe and cock, and a condensed steam discharge pipe connected with said steam chamber.

957,036. GRAIN SPREADER AND FEEDER. ALVIN CLARK, Portland, Oreg. Filed Sept. 12, 1908, Serial No. 452,715. Renewed Mar. 23, 1910. Serial No. 551,194.

1. A spreading and feeding device for grain, comprising a supply mechanism for the grain, arms adapted to reciprocate over the grain supply, the said arms having a rear straight portion and an upwardly inclined forward portion, teeth carried by the said arms, the teeth of the forward portions of the arms having their terminals bent in a forward direction and the teeth of the rear portions of the arms having their terminals bent in the opposite direction, means connected with the rear portions of the arms for operating the same, swinging hangers connected with the said arms, and means for raising and lowering the said hangers to adjust the said arms toward and from the grain supply.



2. In spreading devices for grain feed mechanisms, rotary reciprocating arms having a rear section substantially straight and a forward integral section shorter than the rear section and upwardly inclined, and teeth for the two sections the teeth of the forward upwardly inclined section having their terminals bent in direction of the receiving end of the feed mechanism, and the teeth of the rear straight section having their terminals bent in the opposite direction.

3. The combination with a grain feed mechanism for threshers and the like, of a crank shaft mounted to turn, a cross bar extending above the feed mechanism, means for raising and lowering said cross bar, arms having a rear straight portion and an upwardly inclined forward portion, teeth carried by the said arms, having separating and spreading action relatively to the grain, the teeth of the upwardly inclined forward portions of said arms having their terminals bent in direction of the receiving end of the feed mechanism, and the teeth of the rear straight portions of said arms having their terminals bent in the opposite direction, the rear ends of said arms being pivotally connected with the crank arms of said crank shaft, hangers carried by the said cross bar and connected with the said arms at the angle formed by the junction of the forward and rear portions of said arms, and means for turning the crank shaft.

4. The combination with a grain feed mechanism for threshers and the like, of a crank shaft mounted above the feed mechanism, pairs of parallel standards at opposite sides of the feed mechanism and extending below the bottom of the same, racks having vertical guided movement between said parallel standards, a cross bar connecting said racks at their upper ends, swinging hangers carried by said cross bar, arms connected with the crank arms of said crank shaft and with said hangers, teeth carried by the said arms, having separating and spreading action relatively to the grain, means for rotating the crank shaft, a shaft journaled in the bottom portions of two of said standards and extending beneath the feed mechanism, the said shaft being provided with pinions in mesh with the teeth of said racks, a ratchet wheel secured to one end of said shaft, a pawl engaging said ratchet wheel, and a crank for turning said shaft.

5. The combination with a feed mechanism of a threshing machine, of rear standards secured to the feed mechanism at opposite sides, parallel standards at each side of the feed mechanism forward of said rear standards, a crank shaft mounted to revolve in the rear standards, means for rotating the said crank shaft, arms pivotally connected at their rear ends with the crank arms of the crank shaft, racks at each side of the feed mechanism having guided vertical movement between the said parallel standards, a cross bar connecting the racks at their upper ends, swinging hangers carried by the cross bar for the forward portions of the said arms, the arms having their rear portions practically straight and their forward portions upwardly inclined, the hangers connecting with the said arms at the junction of their forward and rear portions, teeth carried by the said arms, the teeth on the forward portions of the arms having their terminals bent and pointing in a forward direction and the teeth on the rear portions of the arms having their terminals bent and pointing in a rearward direction, two of said parallel standards having bearings at their bottom portions, a shaft mounted to turn in said bearings and extending beneath the feed mechanism, and pinions carried by said shaft and meshing with teeth of the racks.

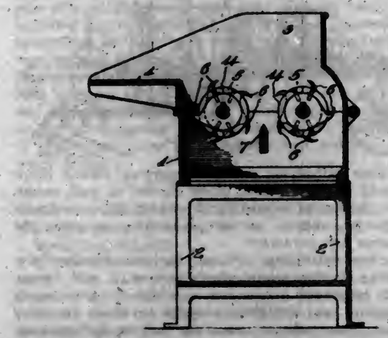
957,037. TOP FOR PEPPER-BOXES AND THE LIKE. EVERETT CRUIKSHANK, Jersey City, N. J., and UDO W. BOCK, New York, N. Y., assignors to Farrington & Whitney, New York, N. Y., a Corporation of New York. Filed Nov. 2, 1909. Serial No. 525,875.



1. A top for containers comprising a cap having a slot therein, said cap being arranged to be secured to the outlet end of a container, a removable cap arranged to cooperate with the first mentioned cap, said removable cap having a plurality of relatively small perforations in its outer end, a removable sealing device arranged to be held between both of said caps and to completely close the slotted and perforated portions of both of said caps against the passage of material in either direction through the same, and means to hold the slotted and perforated portions of said caps apart after said sealing device is removed.

2. A top for containers comprising a cap having a slot therein, said cap being arranged to be secured to the outlet end of a container, a removable cap arranged to cooperate with the first mentioned cap, said removable cap having a plurality of small perforations in its outer end, a removable sealing device arranged to be held between both of said caps and to completely close the slotted and perforated portions of both of said caps respectively against the passage of material in either direction through each of said caps, and a spacing shoulder on one of said caps arranged to engage the other to furnish a space for said sealing device and to separate the perforated and slotted portions of said caps after said device is removed.

957,038. ICE-CHIPPING MACHINE. WILLIAM Z. DALGETY and FERDINAND P. DALGETY, Rochester N. Y. Filed Mar. 5, 1909. Serial No. 481,528.



An ice chipping machine of the character described, comprising a supporting frame, a chipping box on said frame, parallel shafts revolubly mounted in said box, a series of gears connected to said shafts, a driving pulley to operate said gears, a plurality of cylinders arranged on said shafts, knives secured between the cylinders and projecting outwardly from their peripheries, a plurality of gage rings removably mounted on certain of said cylinders to coact therewith to form multi-diametered supports for the ice, said rings arranged to limit the cutting depth of certain of said knives, and a stationary blade arranged intermediate the shafts parallel with and below the same.

957,039. VAT DYE. JOSEPH DEINET, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed May 15, 1909, Serial No. 496,111. Renewed Mar. 18, 1910. Serial No. 550,294.

The herein described new vat dyestuff of the anthracene series which is the 1-benzoylamino-4-methoxyanthraquinone, which dyestuff is, after being dried and pulverized, an orange red powder which is soluble in pyridin with a yellow color; soluble in concentrated sulfuric acid with a brown color; giving an orange vat with hydrosulfite and caustic soda lye, which vat dyes the textile fiber beautiful poncean-red shades, substantially as described.

957,040. ORANGE VAT DYE. JOSEPH DEINET, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed May 12, 1909, Serial No. 495,449. Renewed Mar. 18, 1910. Serial No. 550,295.

1. The herein-described new vat dyestuffs of the anthracene series which can be obtained from benzoyl chlorid and a triaminoanthraquinone, which dyestuffs are, after being dried and pulverized, colored powders practically insoluble in water, soluble in concentrated sulfuric acid with a yellow to red color; giving from orange to red vats with hydrosulfite and caustic soda lye, which vats dye the textile fiber from yellow to red shades, substantially as described.

2. The herein-described new vat dyestuff of the anthracene series which is the 1.2.4-tribenzoyltriaminoanthraquinone, which dyestuff is, after being dried and pulverized, an orange powder which is soluble in pyridin with an orange-yellow color; soluble in concentrated sulfuric acid with a dull orange-red color; giving an orange-red vat with hydrosulfite and caustic soda lye, which vat dyes the textile fiber orange shades, substantially as described.

957,041. VAT DYE. JOSEPH DEINET, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed May 12, 1909, Serial No. 495,450. Renewed Mar. 18, 1910. Serial No. 550,296.

1. The herein described new vat dyestuffs of the anthracene series which can be obtained from benzoyl chlorid and an aminoanthraquinone, which dyestuffs are, after being dried and pulverized, colored powders practically insoluble in water, soluble in concentrated sulfuric acid with a yellow to red to violet to brown color; giving from orange to red to brown vats with hydrosulfite and caustic soda lye, which vats dye the textile fiber from yellow to red to violet to brown shades, substantially as described.

2. The herein described new vat dyestuff of the anthracene series which is the 1-benzoylaminoanthraquinone, which dyestuff is, after being dried and pulverized, a yellow powder which is soluble in pyridin with a yellow color; soluble in concentrated sulfuric acid with an orange color; giving a dark-red vat with hydrosulfite and caustic soda lye, which vat dyes the textile fiber beautiful yellow shades, substantially as described.

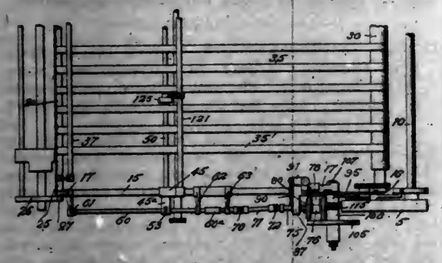
957,042. VAT DYE. JOSEPH DEINET, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed May 12, 1909, Serial No. 495,456. Renewed Mar. 18, 1910. Serial No. 550,297.

1. The herein described new vat dyestuffs of the anthracene series which can be obtained from benzoyl chlorid and a diaminoanthraquinone, which dyestuffs are, after

being dried and pulverized, colored powders practically insoluble in water, soluble in concentrated sulfuric acid with a yellow to red to violet to brown color; giving from orange to red to brown vats with hydrosulfite and caustic soda lye, which vats dye the textile fiber from yellow to red to blue to brown shades, substantially as described.

2. The herein described new vat dyestuffs of the anthracene series which is the 1.4-dibenzoyldiaminoanthraquinone, which dyestuff is, after being dried and pulverized, an orange powder which is soluble in pyridin with an orange color; soluble in concentrated sulfuric acid with a blood-red color; giving a red-violet vat with hydrosulfite and caustic soda lye, which vat dyes the textile fiber beautiful yellow-red shades, substantially as described.

957,043. SHEET-CONVEYING MACHINE. TALBOT C. DEXTER, Pearl River, N. Y., assignor to Dexter Folder Company, Pearl River, N. Y., a Corporation of New York. Filed Aug. 13, 1909. Ser. No. 512,708.



1. A sheet conveyer having in combination suitable sheet conveying means, and frictional driving mechanism for said conveying means including a driving disk, a plurality of friction wheels operated by said driving disk, and means for automatically and successively moving said wheels into and out of frictional contact with said driving disk at different radial distances from the center of said disk.

2. A sheet conveyer having in combination suitable slow down sheet conveying means, a frictional driving disk, a plurality of friction wheels operated by said driving disk and arranged to drive said sheet conveying means, and means for alternately and successively moving said friction wheels into and out of peripheral contact with said driving disk.

3. A sheet conveyer having in combination suitable sheet conveying surfaces, and frictional driving mechanism therefor including a driving disk, a shaft geared to said conveying surfaces, a plurality of friction wheels mounted upon said shaft and operated by said driving disk, and means for automatically and successively moving said friction wheels into and out of peripheral contact with said driving disk.

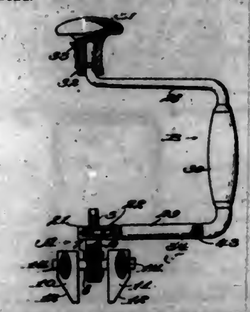
4. The combination of sheet conveying means, with an adjustable driving shaft, two friction wheels mounted upon said adjustable shaft, a friction driving disk, and controlling mechanism adapted to automatically adjust said shaft to intermittently and alternately move said friction wheels into engagement with said disk.

5. The combination of sheet conveying means, with a driving shaft having an adjustable section, two friction wheels mounted upon said adjustable shaft section, a friction driving disk, and controlling mechanism adapted to intermittently and alternately move said friction wheels into engagement with said disk.

[Claims 6 to 13 not printed in the Gazette.]

957,044. COMBINATION-TOOL. CHARLES DRUCK, Shaw, Oreg. Filed July 2, 1909. Serial No. 505,700.

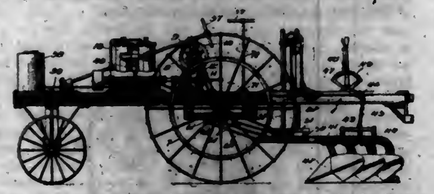
1. In an implement of the class described, the combination of a tool-head comprising shank and stem portions, the shank having a longitudinal slot formed therein; a cross-bar inserted through said slot and arranged for endwise and sidewise adjustment bodily in the same; means carried by said shank and arranged upon opposite sides of said bar, for retaining the latter in adjusted position; and an operating handle connected with the stem of the tool-head.



2. In an implement of the class described, the combination of a tool-head comprising a stem and a threaded longitudinally-slotted shank; a cross-bar inserted through said slot and arranged for endwise and sidewise adjustment bodily therein; a pair of collars threaded upon the shank on opposite sides of said bar, for retaining the latter in adjusted position; and an operating handle connected with the stem of the tool-head.

3. In an implement of the class described, the combination of a tool-head comprising stem and shank portions, the shank having a longitudinal slot formed therein; a cross-bar inserted through said slot and arranged for endwise and sidewise adjustment bodily therein; means carried by said shank and arranged upon opposite sides of said bar, for retaining the latter in adjusted position; a cap mounted upon the stem and formed with a pair of intersecting passages through one of which said stem extends; a ratchet secured to said stem and arranged within the other passage; a pair of dogs mounted within said other passage and arranged for engagement with said ratchet; a shiftable member carried by said cap and arranged for movement into position to release or engage either or both of said dogs; and an operating handle connected with said cap.

957,045. PLOW. BENJAMIN M. EDELEN, Jr., Bryantown, Md. Filed June 29, 1909. Serial No. 505,026.



1. A plow embodying a frame, carrying wheels therefor, a gang of plow beams, plows carried by said beams, a flexibly suspended hanger bar by which the plow beams are supported, and an oscillatory annulus to which the plow beams are connected.

2. A plow embodying a frame, carrying wheels therefor, a gang of plow beams, plows carried by said beams, a flexibly suspended hanger bar by which the plow beams are supported, an oscillatory annulus to which the plow beams are connected, and means for turning said annulus.

3. A plow embodying a frame, carrying wheels therefor, a gang of plow beams, plows carried by said beams, a flexibly suspended hanger bar by which the plow beams are supported, an oscillatory annulus to which the plow beams are connected, and a hand-operated shaft geared to said annulus for turning the latter.

4. A plow embodying a frame, carrying wheels therefor, a gang of plows, a flexibly suspended hanger bar by which the plows are supported, a toothed oscillatory annulus to which the plow beams are connected, and an operating shaft having a pinion coöperating with the toothed annulus for turning the latter.

5. A plow embodying a frame, carrying wheels therefor, a gang of plows, a flexibly suspended hanger bar by which the plow beams are supported, an oscillatory annulus to which the plows are connected, and means for raising and lowering said hanger bar.

[Claims 6 to 9 not printed in the Gazette.]

957,046. FEED-BAG. GEORGE B. F. EMERICK, Joliet, Ill. Filed May 5, 1909. Serial No. 494,034.



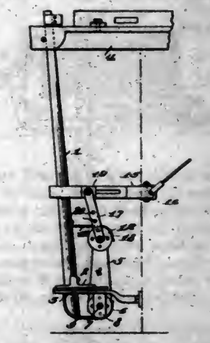
1. The herein described nose bag supporting device comprising a base element and an arm pivotally connected thereto, the said arm comprising inner and outer members pivotally joined together and foldable one upon the other, the said inner member having a longitudinal slot, a catch having oppositely curved forwardly projecting spring arms, and a securing screw for said catch operating in the said slot of the inner member, said catch serving when the members are folded together to engage and hold the outer member.

2. The herein described nose bag supporting device comprising a base element provided at its ends with a pair of fixed jaws to engage one side of a hame of a harness and at the center with a movable jaw and an operating screw for clamping said jaw against the opposite side of the hame, said base element being further provided on its front side with a lug, a supporting arm comprising an inner and outer members pivotally joined together and foldable one upon the other, said inner member being pivotally connected to the said lug of the said base member, and a nose bag having a ring at its upper end said ring being pivotally connected to the outer end of the outer member, one of said members having a catch to engage the other to secure the said members together when folded.

957,047. PICKER-STICK CHECK FOR LOOMS. SAYERS D. EUBANKS, Durham, N. C. Filed Aug. 11, 1909. Serial No. 512,816.

1. The combination with a rocker bed and a picker stick, of a stationary vertical upstanding arm mounted adjacent the rocker bed, a square-shanked bolt projecting laterally from the upper end of the arm, a sleeve conformably fitted over the bolt, a pulley surrounding the sleeve, a coil spring having an end connected to the pulley and a strap connecting the pulley and the picker stick.

2. The combination with a picker stick and a lug strap, of a spring wound pulley spaced from the picker stick and arranged at some distance above the lower end thereof, and below the lug strap, a strap connecting the pulley and the picker stick and an arm connected to the lug strap and constructed for adjustable connection at the center of the pulley.

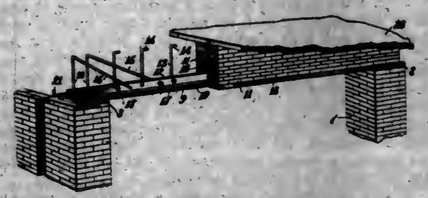


3. The combination with a picker stick, a lug strap, and an arm, of a bolt projecting laterally from the arm, a spring wound pulley mounted on the bolt, a strap connecting the bolt and the picker stick, a link secured to the lug strap and a screw securing the end of the link adjustably to the bolt.

4. The combination with a rocker bed having a bracket, a picker stick and a lug strap, of a stationary vertical arm secured to the bracket and upstanding from the rocker bed, a picker stick tensioning device provided at the upper end of the arm, and a link pivoted to the arm and to the lug strap, the link supporting the latter.

5. The combination with a rocker bed having a bracket, a picker stick, and a lug strap, of a spring-wound pulley supported between the rocker bed and the lug strap, a strap connecting the pulley and the picker stick, and a link pivoted co-axially with the pulley and also pivoted to the lug strap and constituting a support for the latter.

957,048. COMPOSITE BEAM STRUCTURE. WILLIAM P. FRANCIS, Pensacola, Fla. Filed Aug. 21, 1909. Serial No. 513,937.



A composite beam structure comprising a metal beam having a central vertical extension and lateral extensions rabbeted at the outer edge; a plurality of vertically disposed anchor rods secured to said metal beam; a plurality of truss rods secured to said metal beam between the ends thereof and having vertical extensions connected to the said beam at the ends thereof; masonry construction mounted upon said metal beam to encompass the said anchor rods and truss rods to immovably hold the same; a tile facing consisting of a plurality of suitable tiles extended across the bottom of said metal beam; and metal securing devices fixedly secured in said tiles and folded over the rabbeted portions of said metal beam for holding the said tiles upon said beam.

957,049. TRAP. MARCUS L. FRENCH, Onida, S. D. Filed Sept. 11, 1909. Serial No. 517,200.

In combination, an auxiliary frame adapted to removably engage a main frame, screens on the auxiliary frame, one of the said screens having inclined portions and the

said screens having their edges in engagement and the intermediate portions of the screens spaced apart to form a chamber, a door hingedly secured on one of the screens,



for gaining access to the chamber, and screw-threaded means engaging the auxiliary frame and the said screens, for detachably securing the auxiliary frame to the main frame.

957,050. TELAUTOGRAPH INSTRUMENT. ALPHONSUS L. GOLDEN, Oakland, Cal. Filed Dec. 15, 1908. Serial No. 467,614.



1. In a telautograph system, a plurality of sets of magnets, one magnet of each set having a split winding, each branch of said split winding having in series with it one of the other magnets of the set, a source of current connected with one of said split windings, a writing instrument associated with each set of magnets and pivotal connections between the core of each magnet and its writing instrument and electrical connections between the sets of magnets, the said apparatus constituting means for causing a writing instrument of one set to reproduce the motions of the writing instrument of another set.

2. In a telautograph instrument, a plurality of magnets having movable cores, a universal joint connected with all of said cores, a lever pivoted in said joint, and a writing instrument pivotally secured to said lever.

3. In a telautograph instrument, a plurality of magnets having movable cores, a universal joint connecting said cores together, a lever pivoted to said universal joint, a support for said magnets, a second universal joint secured to said support, pivotal connections between the second universal joint and said lever, and a writing instrument pivotally connected to said lever.

4. In a telautograph instrument, a base, a plurality of magnets secured to said base and each provided with a movable core and having their axes extending toward a common center, a universal joint located at said common center and having pivotal connections with each of said cores, a second universal joint secured to said base, a swiveled arm, a writing instrument secured to said swiveled arm, and a lever having pivotal connections with each of said universal joints and with said arm.

5. In a telautograph instrument, a base provided with an opening, three magnets, each having a movable core secured to said base with their axes pointing to a common center, a universal joint having pivotal connections with each of said movable cores, a second universal joint disposed in the opening in said base, a swivel arm, a swivel post secured to said base and swivel arm, a writing instrument secured to said arm, a rod pivotally secured to said arm and arranged to extend through an opening in said swivel post, and a lever having pivotal connections with said arm and with each of said universal joints.

957,051. CLEANER FOR MAINS AND PIPES. HUGH A. GREENAN and FRANK O. REDFORD, Louisville, Ky., assignors to American Water Main Cleaning and Contracting Co., Louisville, Ky. Filed May 20, 1909. Serial No. 497,150.



1. A cleaner for mains and pipes comprising resilient strips, scraper blades mounted on the strips, a block to which one of the ends of the strips are fastened, a stem on the other ends of the strips, a block having sockets into which the stems loosely extend, springs seating in the sockets and bearing on the stems, and a connection between the blocks.

2. A cleaner for mains and pipes comprising resilient strips, scraper blades mounted on the strips, a block to which the strips are fastened at one of their ends, a block for securing the other ends of the strips, and means for independently and yieldingly connecting said ends of the strips to the last-mentioned block.

3. A cleaner for mains and pipes comprising a scraper member, a piston for propelling the same, said piston being located to the rear of said member, stems projecting from the piston in advance of the member, and a connection between the outer ends of the stems and the member.

4. A cleaner for mains and pipes comprising a scraper member, a piston for propelling the same, said piston being located to the rear of said member, stems projecting from the piston in advance of the member, a cross head carried by the stems in front of the member, and a connection between the cross-head and the member.

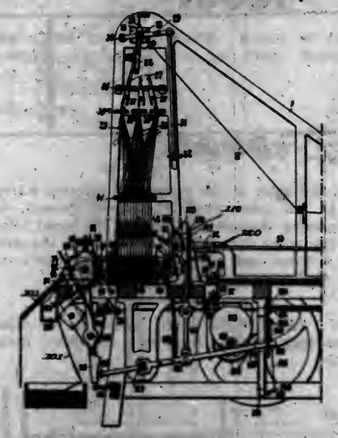
5. A cleaner for mains and pipes comprising a scraper member, a piston for propelling the same, said piston being located to the rear of said member, stems projecting from the piston in advance of the member, a cross head carried by the stems in front of the member, and a hook on the cross head connected to the front end of the member.

[Claims 6 and 7 not printed in the Gazette.]

957,052. CARD-CUTTING MACHINE. WALTHER GREBEN, Crefeld, Germany. Filed Nov. 10, 1909. Serial No. 527,138.

1. In a card-cutting machine, the combination with an auxiliary jacquard device comprising a blade and hooks (13) resting thereon, of a punching device controlled by the cords of said jacquard device, mechanism for operating said punching device, driving means for actuating said mechanism, switching means for causing said driving means to coact with said mechanism, reading-in means comprising a row of vertically-movable needles connected with said hooks, and a jointed lever for moving said needles and subsequently actuating said switching means.

2. In a card-cutting machine, the combination, with an auxiliary jacquard device comprising a blade and hooks (13) resting thereon, of a punching device controlled by the cords of said jacquard device, mechanism for operating said punching device, driving means for actuating said mechanism, switching means for causing said driving means to coact with said mechanism, reading-in means comprising a row of vertically-movable needles connected with said hooks, and a jointed lever for lowering said needle, said lever being provided with a switching device adapted to coact with, operate and be disconnected from said switching means after said needles have been lowered.



3. In a card-cutting machine, the combination, with an auxiliary jacquard device comprising a blade and hooks (13) resting thereon, of a punching device controlled by the cords of said jacquard device, a cylinder revoluble in front of said punching device, mechanism for operating said punching device, driving means for actuating said mechanism, switching means for causing said driving means to coact with said mechanism; reading-in means comprising a vertically-movable plate, a row of needles on the latter, and a jointed lever (10) movably connected with said plate for lowering the same and adapted to coact with said switching means, said needles being connected with said hooks; feeding means for feeding a pattern under said needles, and means adapted to be operated by said lever for rotating said cylinder and actuating said feeding means.

4. In a card-cutting machine, the combination, with an auxiliary jacquard device comprising a blade and hooks (13) resting thereon, of reading-in means comprising a row of vertically-movable needles connected with said hooks, a punching device controlled by the cords of said jacquard device, a perforated plate movable in front of said punching device, a lever adapted to oscillate said plate, a pivoted arm, means connecting said arm with said blade, a second pivoted arm adapted to actuate said punching device, a slide having two faces adapted to coact with and rock said arms in succession, a two-armed lever pivotally connected with said slide and coacting with and adapted to rock said former lever, a continuously rotating eccentric, and means for causing said eccentric intermittently to rock said two-armed lever.

5. In a card-cutting machine, the combination, with an auxiliary jacquard device comprising a blade and hooks (13) resting thereon, of reading-in means comprising a row of vertically-movable needles connected with said hooks, a punching device controlled by the cords of said jacquard device, a perforated plate movable in front of said punching device, a lever adapted to oscillate said plate, a pivoted arm adapted to actuate said punching device, a slide adapted to coact with and rock said arm, a two-armed lever pivotally connected with said slide and coacting with and adapted to rock said former lever, a continuously rotating eccentric, and means for causing said eccentric intermittently to rock said two-armed lever.

[Claims 6 to 10 not printed in the Gazette.]

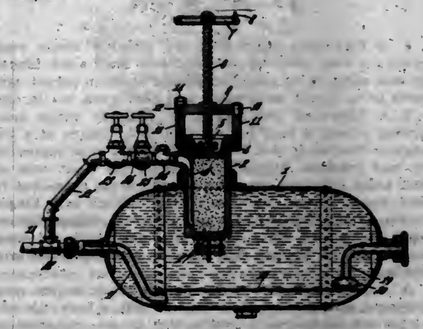
957,053. CHEESE-COVER. EUGENE D. HALL, Iuka, Miss. Filed Aug. 18, 1909. Serial No. 513,490.



1. The herein described cheese screen or cover comprising a pair of sections or members connected together for movement toward and from each other and means to secure the same on the cutter knife of the cheese cutter.

2. The herein described cheese cover or screen comprising a pair of members connected together on one side and springs to close said members and clamp them on opposite sides of the knife of the cheese cutter.

957,054. CHEMICAL FIRE-ENGINE. EDWARD M. E. HANSEN, St. Louis, Mo. Filed Aug. 2, 1909. Serial No. 510,738.



1. A chemical fire engine comprising a main tank, a charging cylinder provided with a longitudinal water and acid port mounted thereon and projecting thereinto, a charging piston in the cylinder, operating means for the piston, a check valve at the lower end of the cylinder, means for admitting water into one end of the tank, a water by-pass conduit communicating with the water and acid discharge port of the charging cylinder and manually operated valves to control the supply of the water and acid through said port.

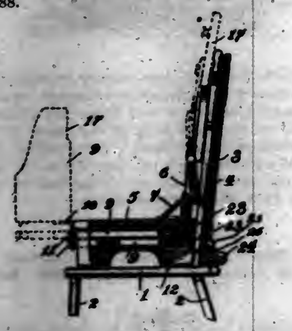
2. A chemical fire engine comprising a main tank, a charging cylinder mounted thereon and projecting thereinto, means for charging the tank with water, a piston in the charging cylinder, an operating screw having a ball and socket connection with the piston and means for passing either acid or water into the lower end of the cylinder with means for controlling the passage of said acid and water.

3. A chemical fire engine comprising a main tank, a charging cylinder mounted thereon and projecting thereinto, a piston in the cylinder, a horizontal supporting plate pivoted to swing over the upper end of the cylinder, means for holding the free end of said plate in normal position or over the top of the cylinder, an operating screw having a swivel connection with the piston screwing through said supporting plate, a downwardly opening check valve at the lower end of the charging cylinder and means for charging the tank with water, an outlet for the extinguishing fluid and means for passing either a quantity of acid or water through the lower end of the charging cylinder.

4. A chemical fire engine comprising a main tank, a horizontal perforated copper diaphragm in the bottom thereof, means for admitting water into the tank beneath

the diaphragm, an outlet for the water, a charging cylinder, a piston therein, means for operating the piston and means for passing a quantity of water or acid into the lower end of the charging cylinder.

957,055. ADJUSTABLE HIGH CHAIR. HANS P. HANSEN, Denver, Colo. Filed Oct. 9, 1909. Serial No. 521,888.



1. A high-chair attachment for ordinary chairs comprising a seat, side supports for said seat, arms hinged to said supports by means of headed studs to permit said arms to be folded underneath said seat when not in use.

2. A high-chair attachment for ordinary chairs comprising a seat, a back secured thereto by means of a triangular bracket at each side, arms adapted to be supported by said brackets, hinges connected to the front ends of said arms, side supports for said seat, studs connected to said supports, said studs extending through said hinges to permit the arms to be swung upon the hinges, turned upon the headed studs and swung underneath the seat, and means for holding said arms in position underneath the seat.

3. A high-chair attachment for ordinary chairs comprising a seat, side supports for said seat, a back connected to said seat, arms provided with hinges connected to said supports by means of headed studs, a tray connected to the back of the attachmeat by means of slotted brackets, and latches underneath the tray engaging catches on the front ends of the arms.

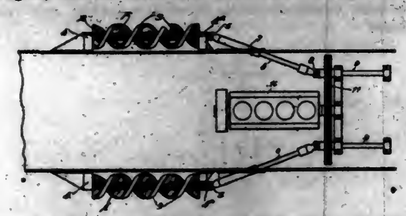
4. A high-chair attachment for ordinary chairs comprising a seat, side supports for said seat adapted to rest upon the seat of an ordinary chair, arms extending backward from said side supports, pivoted brackets connected to said arms for engaging the side posts of the chair back, thumb screws for holding said brackets in adjusted positions, arms supported upon the seat and provided with hinges at their front edges, studs projecting through the hinges and connected to the side supports, a tray connected to the back of the attachment by brackets having angularly disposed slots, and latches for holding said tray in operative position.

5. A high-chair attachment for ordinary chairs comprising a seat, side supports and a back connected to said seat, supports pivotally connected to said seat, studs connected to said supports and extending through arcuate slots in said seat, slotted brackets connected to said supports and adapted to be adjustably connected to the side posts of a chair back, arms hinged to said supports by means of studs, and a tray connected to the back of the attachment by means of slotted brackets.

[Claim 6 not printed in the Gazette.]

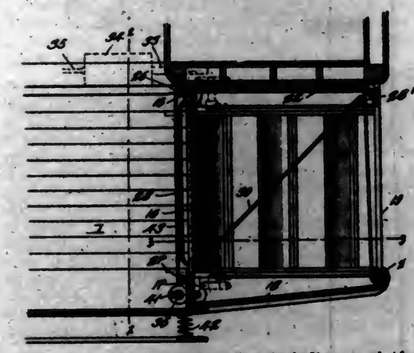
957,056. PROPELLER. WALLACE D. HAYNES, Oakland, Cal. Filed Sept. 1, 1909. Serial No. 515,717.

The combination with a vessel, of propellers journaled upon each side of the run or bilge of the vessel, said propellers being in the form of spirally disposed blades having a number of turns about a central shaft, said blades having a wide peripheral rim projecting upon each side so as to form spiral channels around the shaft, hangers fixedly secured to the outer sides of the vessel, the rear hangers serving as thrust bearings for the shafts of the propellers, said shafts extending through the forward hangers, tubular sleeves of substantial length passing



through the sides of the vessel and forming water-tight joints at the point where they pass through, driving shafts passing through said sleeves, universal joints between the outer ends of the shafts and the propeller shafts, a motor, and gearing between the same and the driving shafts for operating the propellers.

957,057. PASSENGER-CAR. HERMAN C. HEFFNER, Martinsburg, W. Va. Filed Mar. 12, 1909. Serial No. 482,954.



1. A car vestibule construction including a platform, steps secured to one edge thereof, inner and outer doors arranged at the respective ends of the step space, and door actuated means for simultaneously opening both of said doors and projecting the steps into operative position.

2. A car vestibule construction including a platform, collapsible steps having hinged connection with the platform, inner and outer doors closing the step space, and means for operating said doors and steps simultaneously, said means arranging a portion of the steps in alinement with the outer door when the parts are in closed positions.

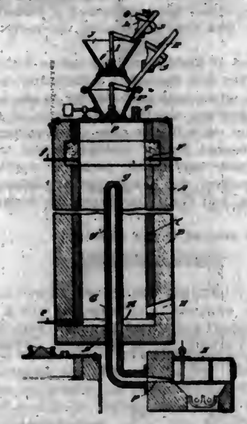
3. A car vestibule construction including a platform, steps connected thereto, an inner door mounted for swinging movement, an outer door mounted for sliding movement, connections between the inner door and outer door whereby the opening or closing movement of the former will induce a similar movement of the latter, means for operating the inner door, and means intermediate the door operating means and the steps to actuate the latter in the movement of the door operating means.

4. A car vestibule construction including a platform, steps movably connected to the edge of the platform, inner and outer doors closing the step space, a power shaft arranged below the platform, means actuated by the movement of the power shaft to simultaneously operate the doors and steps, and manually controlled power means for actuating the power shaft.

5. A car vestibule construction including a platform, steps movably connected to the edge of the platform, inner and outer doors closing the step space, a power shaft arranged below the platform, means actuated by the movement of the power shaft to simultaneously operate the doors and steps, manually controlled power means for actuating the power shaft, and hand operated means for operating the doors and steps in a direction reverse to that incident to the power means.

[Claim 6 not printed in the Gazette.]

957,058. ELECTRIC FURNACE. HIRAM W. HIXON, Philadelphia, Pa. Filed Nov. 30, 1909. Serial No. 530,575.



1. In an electric furnace for smelting zinc, a casing, a non-conducting refractory lining for said casing, upper and lower electrodes, a central tube of refractory material projecting through the bottom of said casing and extending upwardly into said furnace, communicating passages between the interior of the furnace and the interior of the tube for the passage of zinc vapor, an exit pipe at the upper part of the furnace for withdrawing certain diluting gases, and charging means arranged to prevent the escape of vapors, and the entrance of air.

2. In an electric furnace, a casing, a non-conducting refractory lining for said casing, upper and lower electrodes, a central tube of refractory material projecting through the bottom of said casing and extending upwardly into said furnace, upwardly inclined passages in said tube establishing communication between the interior of the furnace and the interior of the tube, an exit pipe for withdrawing certain gases, a two-compartment hopper provided with closures for preventing the escape of gases or vapors from the furnace or the entrance of air and means for locking and unlocking each of said closures.

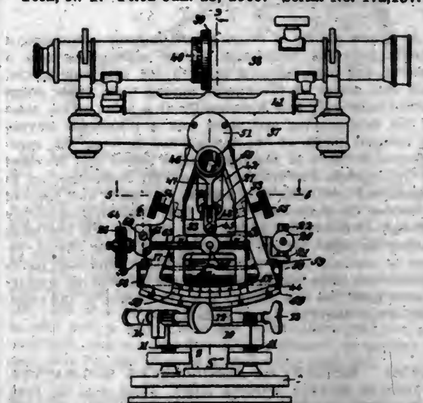
3. An electric furnace comprising a casing, a refractory lining therefor, upper and lower electrodes, the lower electrode constituting the interior bottom of the furnace, and a central tube of refractory material projecting upwardly through the bottom of said furnace, said tube being closed at its upper end and being provided with upwardly inclined passages establishing communication between the interior of the furnace and the interior of the tube, that portion of the tube near the electrode being solid to prevent the entrance of slag or other foreign matter.

4. In an electric furnace, a casing, a refractory lining therefor, upper and lower electrodes, a central tube of refractory material having passages establishing communication between the interior of the furnace and the interior of the tube, a condenser communicating with said tube at the lower end thereof, an exit pipe at the top of the furnace above said upper electrode for withdrawing gases and a double compartment hopper, each compartment having a conical closure arranged to project into the bottom of the compartment and operated independently of the other closure for preventing the escape of the gases or the entrance of air during the charging operation.

5. In an electric furnace, a casing, a refractory lining therefor, upper and lower electrodes, means for preventing the entrance of air during the charging operation, means for withdrawing certain diluting gases from the furnace, and separate means for withdrawing the zinc vapor.

[Claim 6 not printed in the Gazette.]

957,059. LINE-CLINOMETER. EDWARD H. HOLDEN, New York, N. Y. Filed Jan. 13, 1909. Serial No. 472,137.



1. The combination of a member normally fixed in position, a slide movable relatively to said member, a telescope mounted upon said slide and adapted to turn in a substantially vertical plane, means controllable at will for moving said slide relatively to said fixed member so as to shift the position of said telescope bodily in relation to said member normally fixed in position, means for indicating the position of said slide relatively to said fixed member, and mechanism for indicating the degree of inclination of said telescope from a predetermined position.

2. The combination of a fixed member, a slide movable relatively to the same, a bracket connected with said slide and extending upwardly therefrom, a shaft journaled in said bracket and located at a little distance above said slide, a sector, means controllable at will for adjusting the general position of said sector relatively to said fixed frame member, another sector, the same being connected with said shaft and disposed adjacent to said first-mentioned sector, and indicating mechanism for disclosing the relative positions of said sectors.

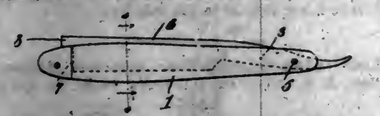
3. The combination of a fixed member, a slide movable relatively to the same, a bracket mounted upon said slide, a sector supported by said bracket and adapted to turn relatively to the same, another sector supported by said bracket and likewise adapted to turn relatively thereto, means controllable at will for temporarily fixing the position of one of said sectors relatively to said fixed member, and means for indicating the relative positions of the two sectors.

4. The combination of a fixed member, a slide movable relatively to the same, a bracket carried by said slide, a plurality of sectors journaled relatively to said bracket and movable independently of each other, a reading glass, mechanism mounted upon one of said sectors for supporting said reading glass, an index mark carried by said slide and adapted to be observed through said reading glass, and means for fixing the sector carrying said reading glass.

5. The combination of a fixed member, a slide movable relatively to the same, a bracket mounted upon said slide, a shaft supported by said bracket, a plurality of sectors

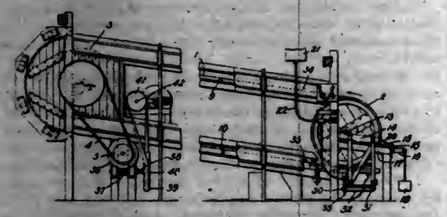
mounted upon said shaft and movable relatively to each other, means controllable at will for temporarily securing one of said sectors in a definite position relatively to said slide, and indicating mechanism for disclosing the relative positions of the two sectors.

957,060. RAZOR. GEORGE F. HOLLON, Waco, Tex. Filed Nov. 22, 1907. Serial No. 403,335.



As a new article of manufacture, a razor comprising a handle including identically formed side pieces and a spacing end piece secured between the said side pieces, said side pieces of the handle having their upper edges curved outwardly and downwardly at a point at the sides of the said spacing end piece, and a thin blade having an integral shank at one end pivoted between the opposite end portions of the handle side pieces and provided at its opposite end with an outwardly extending lug to engage and rest upon said spacing end piece and adapted to expose the outer edge of the said blade approximately throughout the length of the same, said spacing end piece having its outer surface curved to conform to the curvature of the said upper surfaces of the handle side pieces so that the inner edge portion of the lug will be slightly spaced from the spacing end piece to permit of the insertion of the finger in opening the blade.

957,061. METHOD OF DESICCATING EGG-BATTER. JOHN M. HUSSEY, Wichita, Kans. Filed Aug. 25, 1909. Serial No. 514,545.



1. The method of desiccating egg batter which consists in applying a thin film thereof to a traveling carrier, subjecting said film while upon the carrier to the action of a heated drying medium, successively superimposing a plurality of films upon said first film and subjecting each of said succeeding films to the action of said heated drying medium, varying the period of application for a succeeding film in accordance with the temperature of the drying medium and the degree of moisture contained in a previously deposited film, and finally removing the superposed films.

2. The method of desiccating egg batter which consists in applying a thin film thereof to a traveling carrier, subjecting said film while upon the carrier to the action of a heated drying medium, successively superimposing a plurality of films upon said first film and subjecting each of said succeeding films to the action of said heated drying medium, controlling the degree of moisture in a previously applied film at the time of superposition of a succeeding film by controlling the period for such superposition, and finally removing the superposed films.

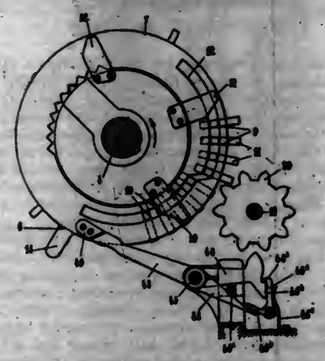
3. The method of desiccating egg batter, which consists in applying a thin film thereof to a traveling carrier, subjecting the film while upon said carrier to the action of a drying medium during a period of constant humidity and temperature of such medium, successively superimposing a plurality of films upon said first film, and subjecting each of said succeeding films to the action of said drying medium, varying the period of application for a succeeding film during such period of constant humidity and temperature of the drying medium, thereby to vary the degree of moisture in a deposited film when the next succeeding film is superposed thereon, and finally removing the superposed films.

4. The method of desiccating egg batter which consists in applying a thin film thereof to a traveling carrier, subjecting said film while upon the carrier to the action of a heated drying medium, superposing a series of such films, each in turn being subjected to the action of the heated drying medium before the next is superposed thereon, varying the period of application for said films in accordance with a variation either in temperature or humidity of the drying medium, and finally removing the series of superposed films.

5. The method of desiccating egg batter which consists in applying a thin film thereof to a traveling carrier, subjecting the film while upon said carrier to the action of a heated drying medium, superposing a series of such films, one upon another, each film in turn being subjected to the action of the heated drying medium before the next is superposed thereon, varying the period of application for said films to control the percentage of moisture in the superposed films, and finally removing the series of superposed films.

[Claim 6 not printed in the Gazette.]

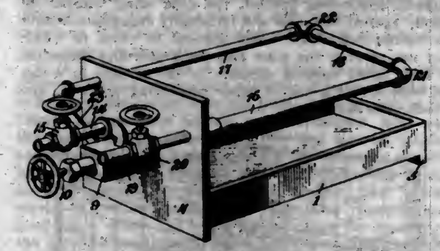
957,062. CALCULATING-MACHINE. ERWIN JAHNZ, Berlin, Germany, assignor to Grimme, Natalis & Co. Kommanditgesellschaft auf Aktien, Braunschweig, Brunswick, Germany, a Corporation of Germany. Filed Oct. 27, 1909. Serial No. 524,819.



In a calculating machine, the combination with a rotary value transmitting element, and a rotary value receiving element operatively connected therewith by gear teeth, of a locking device for said receiving element engaging between gear teeth connected with said receiving element and adapted to be thrown out of locking position upon rotation of the receiving element, means to arrest said locking device in non-locking position, and means actuated by said transmitting element to positively throw said arresting means out of operation.

957,063. CRUDE-OIL BURNER. CHARLES A. JAPHET, Moran, Kans. Filed Sept. 11, 1909. Serial No. 517,212.

In combination with a stove having a grate and provided with an opening, an oil burner attachment comprising a shallow rectangular pan extending into the stove through the opening in the same and provided at its front end with an enlarged front wall extending beyond the bottom and side walls of the pan and forming a closure flange and completely closing the opening of the stove to confine the flame entirely within the same, said pan being also provided at its inner end with a depending leg arranged to rest upon the grate of the stove for supporting the pan in a horizontal position, a burner supported by the enlarged front wall, and piping constituting a



steam generator and arranged above the plane of the pan and extending around the same and being substantially co-extensive with the area thereof.

957,064. TOP FOR JARS. CHARLES R. KERRAN, Bloomington, Ill. Filed Mar. 31, 1909. Serial No. 486,899.



1. A closure for receptacles comprising an inner sealing disk of compressible material saturated with a sticky fusible material and adapted to rest directly upon the rim of the receptacle, an outer sealing disk backing the same, and a cap to inclose said disks and adapted to engage the receptacle.

2. A closure for receptacles comprising a sealing disk of porous compressible material saturated with a sticky fusible substance, said disk adapted to rest directly upon the rim of the receptacle, and a cap to inclose said disk and adapted for engagement with a receptacle.

3. A closure for receptacles comprising an inner sealing disk of porous compressible material saturated with a sticky fusible substance, and adapted to rest directly upon the rim of the receptacle, an outer sealing disk of compressible material backing said inner disk, and a cap inclosing said disks and adapted for engagement with a receptacle.

4. A closure for receptacles comprising an inner sealing disk of porous compressible material saturated with a sticky fusible substance and adapted to rest directly upon the rim of the receptacle, an outer sealing disk of compressible material backing said inner disk, a moisture-proof disk upon the inner face of said inner disk and of less diameter than the same, and a cap to inclose said inner and outer disks and adapted for engagement with a receptacle.

5. A closure for receptacles comprising a cap having an open center top and a threaded flange, the wall of the top being inclined inwardly and downwardly, an inner disk of porous compressible material saturated with a sticky fusible material and adapted to fit within the cap and rest directly upon the rim of the receptacle, and an outer disk of compressible material adapted to fit within the cap and to bear against said inclined wall.

[Claims 6 to 12 not printed in the Gazette.]

957,065. SAFETY-GATE. EDWARD KRANCHER, New York, N. Y. Filed July 20, 1909. Serial No. 508,620.

1. A device of the character described, comprising an inclosing member, a bolt mounted therein and movable relatively thereto, means for mounting said inclosing member upon a car or the like, means for actuating said bolt, a rod carried by said bolt and movable relatively to the latter, and a spring disposed intermediate said rod and said bolt.

2. The combination of a casing, means for mounting the same upon a car or the like, a bolt slidably mounted within said casing, and a chain connected with said bolt and provided with means whereby it may be secured to some other car or the like, said chain including a spring for giving it resilience.



3. The combination of a panel to be supported upon a car, a casing mounted upon said panel, a bolt slidably mounted within said casing, a rod carried by said bolt, a spring connection from said rod to said bolt for cushioning movements of said rod relatively to said bolt, a spring for retracting said bolt, and mechanism controllable from another car for actuating said bolt.

4. The combination of a plurality of cars, a gate slidably mounted upon one of said cars and having generally the form of a longitudinal bolt, a rod movable relatively to said bolt, a spring disposed intermediate said rod and said bolt, and a connection from said bolt to another of said cars for the purpose of actuating said bolt.

957,066. WORK-BASKET. SAMUEL KROHNENGOLD, New York, and ALBERT RAPHAEL, Brooklyn, N. Y. Filed Oct. 30, 1908. Serial No. 460,300.

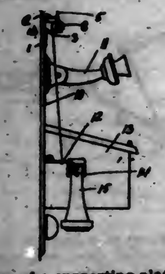


In a work table attachment, the combination with a work table of a hanger on the same, a portable stool, a folding basket pivoted at one corner to the hanger and connected at an opposite side to the stool whereby it is adapted to fold or unfold as the stool is moved to or from the table.

957,067. ATTACHMENT FOR TELEPHONES. JOSEPH KUHN, Pittsburg, Pa. Filed Sept. 15, 1909. Serial No. 517,946.

1. The combination of a supporting plate having its top formed with an outwardly extending stop flange and further having at each side thereof below the flange a

forwardly projecting apertured lug, a shaft journaled in said lugs and projecting outwardly from one of the lugs, a sign plate fixed to said shaft and normally maintained at an elevated vertical position against said stop, and releasable means connected with the projecting end of the shaft for normally holding the sign plate in an elevated vertical position and adapted when released to allow the sign plate to automatically swing by gravity to a lowered vertical position.



2. The combination of a supporting plate having its top formed with an outwardly extending stop flange and further having at each side thereof below the flange a forwardly projecting apertured lug, a shaft journaled in said lugs and projecting outwardly from one of the lugs, a sign plate fixed to said shaft and normally maintained at an elevated vertical position against said stop, a pulley fixed to the projecting end of the shaft, and a releasable means connected with said pulley for normally maintaining said sign plate in an elevated vertical position and adapted when released to allow said sign plate to swing to a lowered vertical position.

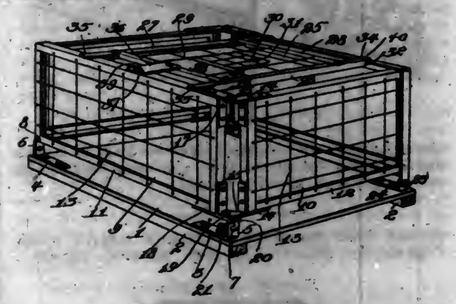
3. The combination of a supporting plate having its top formed with an outwardly extending stop flange and further having at each side thereof below the flange a forwardly projecting apertured lug, a shaft journaled in said lugs and projecting outwardly from one of the lugs, a sign plate fixed to said shaft and normally maintained at an elevated vertical position against said stop, a pulley carried by the projecting end of said shaft, a flexible member connected to the pulley, and a releasable lever attached to the flexible member and normally maintaining said sign plate in an upper vertical position and adapted when released to allow said sign plate to swing by gravity to a lowered vertical position.

4. The combination of a plate provided with an angular disposed portion at its top constituting a stop, a rotatable shaft carried by the support, a sign plate fixed to the support and normally held in an elevated vertical position against said stop, and a releasable means connected to the shaft and adapted to normally maintain said sign plate in an elevated vertical position and when released to allow said sign plate to automatically swing to a lowered vertical position.

957,068. COOP OR CRATE. ODELON J. LA BAUVE, Edna, Tex. Filed Jan. 17, 1908. Serial No. 411,309.

1. A coop or crate comprising a bottom having supporting brackets secured thereon near the corners and provided with upwardly projecting angular members, a part of the brackets having stop shoulders, sides and ends, angle brackets secured to the upper and lower corners of the sides and ends and having extensions pivotally connected, a part of the angle brackets at the lower corners of the sides terminating in pintles extending thereunder and movably engaging the adjacent supporting brackets, the sides also having depending extensions at their corners pivotally connected to the supporting brackets provided with the shoulders, and a removable cover.

2. A coop or crate comprising a bottom, supporting brackets secured on the bottom adjacent to the corners, sides and ends, the sides and ends having upper and lower angle brackets provided with extensions pivotally connected, the lower angle bracket at one end of each of the sides being formed with a pintle to engage the adjacent supporting bracket, the ends being foldable inwardly against the sides and terminally engageable within the extremities of the sides opposed to those to which they are pivoted, the sides also being pivotally connected at their lower corners opposite to the corners to which the ends are attached to other supporting brackets, and a removable cover.



3. A coop or crate comprising a bottom, infolding sides movably secured on the bottom, ends having one extremity of each pivotally connected to portions of the sides and foldable inwardly against the latter, the connected portions of the ends being at a distance from the adjacent ends of the sides, the free extremities of the ends being freely movable into adjacent extremities of the sides and frictionally held in the latter when the coop is erected in operative condition, the said free extremities of the ends being also readily withdrawable from the adjacent extremities of the sides to fold the coop or crate, and a removable cover.

957,069. COOP OR CRATE. ODELON J. LA BAUVE, Edna, Tex. Filed Aug. 17, 1909. Serial No. 513,297.



1. In a coop or crate, the combination of a bottom, a frame ring held over the bottom, an upper frame ring above the former ring, a top supported within the upper ring, and inwardly folding connecting members between the rings and movably attached to the latter, the connecting members between the rings being associated by means of hinge joints and some of the connecting members at a distance from the joints being provided with locking means projectable into portions of the joints in planes at right angles to the latter.

2. In a coop or crate, a bottom, a frame ring held over the bottom, an upper frame ring having a top disposed therein, and intermediately jointed connecting members interposed between and movably attached to the rings, some of the connecting members being provided with projectable locking means to extend over and engage a portion of the joints in planes at right angles to the latter.

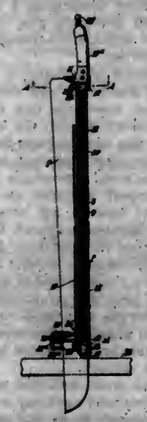
3. In a coop or crate, a bottom, frame devices mounted over the bottom, connecting members interposed between and loosely associated with the frame devices and provided with intermediate hinge joints, a portion of the hinge joints having projecting members, and locking means carried by some of the connecting members at a distance from the joints thereof and projectable into engagement with the said projecting members in planes at right angles to the latter.

4. In a coop or crate, a bottom, frame devices mounted over the bottom, connecting members interposed between and loosely associated with the frame devices, each of the connecting members having an intermediate joint and the parts thereof respectively provided with a bearing tongue and a bearing bar on which the tongue is adapted to bear to obstruct outward movement of the connecting members beyond a predetermined extent, and locking means carried by some of the connecting members and projectable across the joints of the latter for sustaining the unfolded condition of the remaining members and the frame devices, the locking means operating in planes at right angles to the joints.

5. In a coop or crate, a bottom, a frame ring held over the bottom, an upper frame ring, a top supported within the latter and provided with a gate, and intermediately jointed connecting members interposed between and movably associated with the rings, some of the connecting members being provided with spring-actuated means projectable into the adjacent joints to prevent movement of the latter and of the remaining members.

[Claim 6 not printed in the Gazette.]

957,070. CLOTH-CUTTER. MAX LANGMAN, New York, N. Y. Filed Sept. 8, 1909. Serial No. 516,698.



1. A device of the character described, comprising a blade, a guide rod disposed parallel to said blade, a carriage through which said guide rod extends, said carriage being provided with rollers, a handle connected with said blade and with said guide rod for the purpose of actuating said blade, and revoluble sharpening members carried by said carriage and provided with surfaces for engaging said blade.

2. A device of the character described, comprising a carriage to be moved along a table, a blade to be reciprocated relatively to said table, a guide rod connected with said blade, a spiral spring encircling said guide rod and adapted to press said carriage toward said table, means for actuating said blade and said guide rod relatively to said table, grinding rollers journaled upon said carriage, and connections from said blade to said grinding rollers for the purpose of enabling the motions of said blade to turn said grinding rollers.

3. The combination of a carriage, a blade connected with said carriage and movable relatively thereto, grinding mechanism mounted upon said carriage, and means controllable by motions of said blade for actuating said grinding mechanism.

4. The combination of a carriage, grinding mechanism carried thereby, a blade movable relatively to said grinding mechanism, means controllable by movements of said blade for actuating movements of said grinding mechanism, and means controllable at will for temporarily securing said carriage rigid in relation to said blade.

5. A device of the character described, comprising a carriage, a blade movable relatively thereto, a guide rod movable relatively to said carriage and disposed parallel to a portion of said blade, a spring encircling said guide rod, means controllable at will for securing said carriage rigid in relation to said guide rod, and mechanism controllable by movements of said blade relatively to said carriage for sharpening said blade.

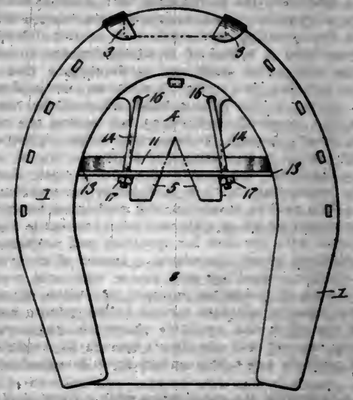
[Claims 6 to 13 not printed in the Gazette.]

957,071. EYEGLASS-MOUNTING. JAMES T. LAUGHLIN, Boise, Idaho. Filed Apr. 6, 1909. Serial No. 488,320.



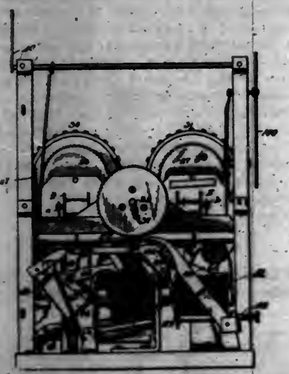
A mounting for eyeglasses consisting of a single piece of spring-wire, said mounting comprising a bow-spring shaped to rest upon and engage the bridge of the nose, a guard extending beyond the bow-spring at each end thereof, the material of each guard extending downwardly to a point below the horizontal axes of the lenses and forming a fold, and thence upwardly to a point beyond the bow-spring and terminating in a loop, said folds each lying in a plane at right angles to the lens whereby to grasp the flesh of the nose of the wearer, said terminal loops serving as axes of adjustment of the glasses, and lens engaging clamps integral with the bow-spring.

957,072. HORSESHOE. JOHN B. LOCKER, St. Louis, Mo. Filed June 5, 1909. Serial No. 500,252.



A calk plate for application to the under side of a horse shoe and provided with means for clamping said plate to said shoe, in combination with a shield plate bearing under the calk plate having means at its front end detachably connecting the shield plate to the calk plate and heel calks detachably connecting the heel plate to the calk plate, said heel calks being removable.

957,073. TAXIMETER. JOHN G. MACPHERSON, Philadelphia, Pa., assignor, by direct and mesne assignments, to The MacPherson Company, Incorporated, a Corporation of Delaware. Filed Oct. 8, 1909. Serial No. 521,777.



1. In a taximeter, the combination with a clock, and an indicating mechanism, of means in operative relation with said clock for operating said mechanism at two different rates, comprising a source of electrical energy, circuits connecting said source with said mechanism, a ring of insulation carrying two series of contacts, and two separate contacts carried by the minute hand arbor of the clock and rotatable therewith, the closure of said circuits being controlled by said series of contacts and said contacts of the arbor.

2. In a taximeter, the combination with a clock, mechanism for registering the fare, mechanism for printing a receipt of fare paid by passenger, and mechanism for making a permanent record of cash received, of means in operative relation with said clock for operating said mechanisms at two different rates, comprising a source of electrical energy, circuits connecting said source with said mechanisms, and two separate contacts carried by the minute hand arbor of the clock and rotatable therewith, the closure of said circuits being controlled by said series of contacts and said contacts of the arbor.

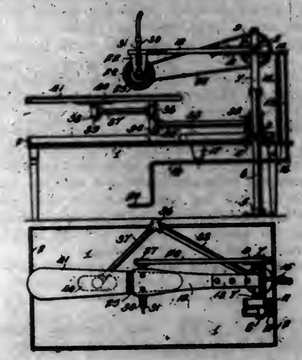
3. In a taximeter, the combination with a clock, and an indicating mechanism, of means in operative relation with the clock for operating said mechanism at two different rates, comprising a source of electrical energy, circuits connecting said source with said mechanism, a ring of insulation carrying two series of contacts, two separate contacts carried by the minute hand arbor of the clock, and rotatable therewith, and means for causing one and only one circuit through its respective series of contact and arbor contact to be energized at a time.

4. In a taximeter, the combination with a clock, mechanism for registering the fare, mechanism for printing a receipt of fare paid by passenger, and mechanism for making a permanent record of cash received, of means in operative relation with the clock for operating said mechanism at two different rates, comprising a source of electrical energy, circuits connecting said source with said mechanisms, a ring of insulation carrying two series of contacts, two separate contacts carried by the minute hand arbor of the clock and rotatable therewith, and means for causing one and only one circuit through its respective series of contacts and arbor contact to be energized at a time.

5. In a taximeter, the combination with a clock, and an indicating mechanism, of means for operating said mechanism at two different rates through the medium of said clock, comprising a source of electrical energy, circuits connecting said source with said mechanism, a ring of insulation carrying two series of contacts, two separate contacts carried by and rotatable with the minute hand arbor of the clock, means for causing one and only one circuit through its respective series of contacts and arbor contact to be energized at one time, and means for operating the indicating mechanism to indicate an initial fare and also to close the circuit between either series of contacts and its arbor contact.

[Claims 6 to 21 not printed in the Gazette.]

957,074. SCOURING-MACHINE. HOMER F. MARSHALL, North Adams, and WARREN F. CLARK, Pittsfield, Mass., assignors to Berkshire Machine Company, Pittsfield, Mass., a Corporation of Massachusetts. Filed June 16, 1909. Serial No. 502,542.



1. A scouring machine comprising a pan, a vertically adjustable arm located above the pan, a revoluble brush upon the arm, and an angularly adjustable work support movable beneath the brush.

2. A scouring machine comprising a pan, a pivotally mounted arm located above the pan and disposed thereabove, a work support above the pan adapted for horizontal angular adjustment beneath the brush, and means for normally holding the brush spaced from said support.

3. A machine of the class described comprising a pan, a vertically adjustable arm, a revoluble brush carried by the arm, a work support mounted above the pan and adapted for movement beneath the brush, spring means for normally holding the brush spaced from the support, and means for actuating the said arm so that the brush can be forced into engagement with said support.

4. A machine of the class described comprising a pan, a vertically extending post, a revoluble arm upon the post, a work support connected with said revoluble arm and adapted for horizontal angular adjustment above the pan, and a vertically movable brush adapted to be brought into engagement with said support.

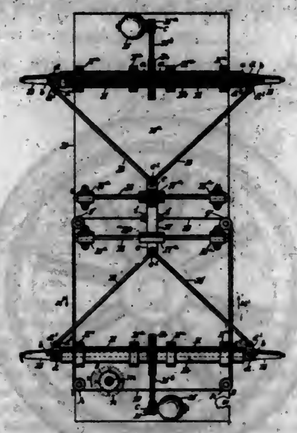
5. A machine of the class described comprising a pan, a fixed support, a horizontally swinging arm mounted upon said support and disposed above the pan, an angularly adjustable horizontally disposed work support carried by said arm, and a vertically adjustable brush located above the said work support.

[Claims 6 to 9 not printed in the Gazette.]

957,075. RUNNING-GEAR FOR VEHICLES. DAVID H. MASTERS, Cliff, N. Mex., assignor of one-half to Arthur L. Clark, Cliff, N. Mex. Filed Sept. 9, 1909. Serial No. 452,222.

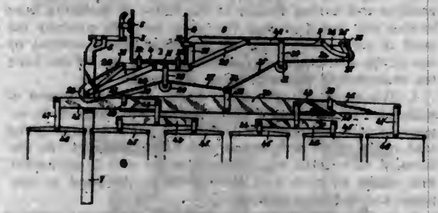
1. The combination with a vehicle body, of a flexible axle in bar form and supporting the body, spindles on the ends of the axle, and means engaging the axle for its rotation.

2. The combination with a vehicle body, of a hollow bolster on the bottom of said body near each end thereof, each bolster being formed in half sections that are alined with each other, a flexible axle rotatable in each bolster, said axle being in bar form and having shank-ends projected therefrom, independent means for rotating each axle, spindles secured on said shanks and adapted by resilience of the axles to receive lateral rocking movement, and means for the manual control of the movement of the spindles.



3. In running gears for motor vehicles, the combination with a body, of a sectional bolster secured to the under side of the body with the inner ends of the sections spaced a short distance from each other, a rotatable flexible axle in bar form in the bolster and having shank ends, spindles secured to the shank ends, a sprocket gear wheel secured on the axle between the inner ends of the sections of the bolster, a motor, a sprocket wheel on the driving shaft of the motor, and a chain connecting the said gear wheel and pinion.

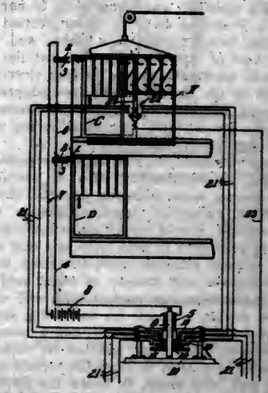
957,076. SIX-HORSE DRAFT MECHANISM. HERMAN MESSMAN, Kentland, Ind. Filed Apr. 3, 1909. Serial No. 487,628.



1. In a draft mechanism of the class described, in combination, a substantially rectangular plow frame, a draw bar having a shank rigidly attached to the forward end of said frame and having a body offset rearwardly from said shank and connected to the same by a right-angle extension, said extension lying against the side of said frame, means for attaching said extension to said frame, a main tree, means for attaching a plurality of draft animals to said main tree, and means for connecting said main tree with said draw bar at a plurality of points.

2. In a draft mechanism of the class described, in combination, a substantially rectangular frame having a forward cross bar and substantially parallel side bars, a pole attached to one of said side bars and extending forwardly therefrom, a draw bar having a body with a shank offset therefrom, means for attaching said draw bar to said frame at a forward corner thereof, a main tree, chains connecting said main tree with said draw bar at a plurality of points, a tripletree carried by said main tree having a long arm projecting across said pole and having a short arm projecting inwardly, a triple tree attached to the other end of said main tree having a long arm projecting outwardly and a short arm projecting inwardly, doubletrees attached respectively to the short arms of said tripletrees, and swingletrees attached to the outer ends of said tripletrees and to the ends of said doubletrees.

957,077. AUTOMATIC CONTROL DEVICE FOR ELEVATORS. LOUIS J. MILKE, Baltimore, Md. Filed Jan. 29, 1909. Serial No. 475,054.



1. A safety-mechanism for electrically-propelled elevators, comprising, in combination with an elevator-car, hoisting-and-lowering speed-changing circuits, having terminals, an armature-member carrying circuit-make-and-break members disposed in proximity to said terminals, a solenoid adapted, when energized, to attract said armature-member and thereby to bring said circuit-make-and-break members into contact with said terminals to complete the circuit, a circuit for energizing said solenoid, terminal-members in said circuit, and a member carried by the elevator-shaft door adapted to contact with said terminal-members, thus to close the circuit when the door is closed and, vice-versa, to break the circuit when the door is open.

2. A safety-mechanism for electrically-propelled elevators, comprising, in combination with an elevator-car, hoisting-and-lowering speed-changing circuits, having terminals, an armature-member carrying circuit-make-and-break members disposed in proximity to said terminals, a solenoid adapted, when energized, to attract said armature-member and thereby to bring said circuit-make-and-break members into contact with said terminals to complete the circuit, the upper portion of said armature-member being formed as a piston and working in the central bore of said solenoid, a circuit for energizing said solenoid, terminal-members in said circuit, and a member carried by the elevator-shaft door adapted to contact with said terminal-members, thus to close the circuit, when the door is closed, and, vice-versa, to break the circuit when the door is open.

3. A safety-mechanism for electrically-propelled elevators, comprising, in combination with an elevator-car, hoisting-and-lowering speed-changing circuits, having terminals, an armature-member carrying circuit-make-and-break members disposed in proximity to said terminals, a solenoid adapted, when energized, to attract said armature-member and thereby to bring said circuit-make-and-break members into contact with said terminals to complete the circuit, perforated means closing the upper end of the central bore of said solenoid, the upper portion of said armature-member being formed as a piston and working in the central bore of said solenoid, a circuit for energizing said solenoid, terminal-members in said circuit, and a member carried by the elevator-shaft door adapted, when the door is closed, to contact with said terminal-members, thus to close the circuit, and, vice versa, when the door is open, to break the circuit.

4. A safety-mechanism for electrically-propelled elevators, comprising, in combination with an elevator-car, hoisting-and-lowering speed-changing circuits, having terminals, an armature-member carrying circuit-make-and-break members disposed in proximity to said terminals, a solenoid adapted, when energized, to attract said armature-member and thereby to bring said circuit-make-and-break members into contact with said terminals to complete the circuit, means closing the upper end of the central bore of said solenoid, and comprising, in part, a set-screw having a V shaped slot, the upper portion of said armature-member being formed as a piston and working in the central bore of said solenoid, a circuit for energizing said solenoid, terminal-members in said circuit, and a member carried by the elevator-shaft door adapted, when the door is closed, to contact with said terminal-members, thus to close the circuit, and, vice versa, when the door is open, to break the circuit.

5. A safety-mechanism for electrically-propelled elevators, comprising, in combination with an elevator-car, hoisting-and-lowering speed-changing circuits, having terminals, a vertically-disposed armature-member carrying horizontally-disposed, spaced circuit-make-and-brake members disposed in proximity to said terminals and of differing lengths, a solenoid adapted, when energized, to attract said armature-member and thereby to bring said circuit-make-and-break members into contact with said terminals to complete the circuit, a circuit for energizing said solenoid, terminal-members in said circuit, and a member carried by the elevator-shaft door adapted to contact with said terminal-members, thus to close the circuit when the door is closed and, vice versa, to break the circuit when the door is opened.

[Claims 6 and 7 not printed in the Gazette.]

957,078. BRUSH. CARL MILLER, Rochester, N. Y. Filed May 15, 1909. Serial No. 496,168.



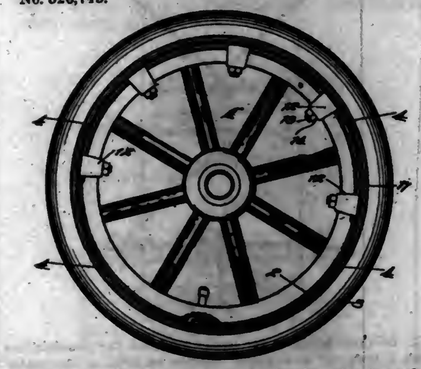
The herein described brush comprising a back having a series of longitudinal grooves therein, said grooves being provided with openings which extend through the under surface of the back, longitudinal wires having bristles connected thereto, tubes for inclosing said wires, said tubes with the inclosed wires being secured in said grooves, said tubes each having a recess at one end, a fastener extending through the back and into said recess for preventing the rotation of said tubes, and a latch pivoted to the outer end of the brush back for preventing the longitudinal movement of said tubes and for permitting the latter to be removed with the bristles.

957,079. VEHICLE-WHEEL LUBRICATOR. WILLIAM MORRIS, Brookport, Ill. Filed May 28, 1909. Serial No. 496,923.



In combination, a lubricator comprising a receptacle, a head at the outer end of the receptacle having an opening and a transverse guide-way, a slide arranged to operate in said guide-way, and to normally close the opening in the head of the lubricator and provided with an opening to register with the opening of said head, a spring for holding said slide in its normal position, and a spring-actuated stem located within the lubricator and having a head at its outer end to bear against the inner side of said slide and to close the opening thereof when the slide is drawn outward.

957,080. DEMOUNTABLE WHEEL-RIM. HARRY J. MORTENSEN, Oakland, Cal. Filed Nov. 8, 1909. Serial No. 526,743.



1. The combination with a wheel, of a rim formed of sections, a band surrounding said sections having one end secured to one of the sections, and means engaging the other end of the band for constricting the band and holding the sections in interlocked position.

2. The combination with a wheel, of a rim formed of a series of removably secured sections, a band circumscribing the rim having one end secured to one of said sections and having the opposite end free, and means engaging the free end of the band for moving the same and thereby constricting said band about the sections and holding the latter in interlocked position.

3. A demountable rim consisting of sections forming an annulus and having flanges at the sides, an inclosing band having one end fixed and the other movable whereby the band is constricted about the sections, means carried by one of the sections and engaging the free end of the band for constricting and expanding the band.

4. The combination with a wheel, of a rim formed of segments, the meeting ends of which are adapted to engage to form a continuous annulus, a band surrounding said rim sections having one end fixed to one of the sections, a slide with which the opposite end is connected, and means to move said slide to cause the band to compress and hold the sections.
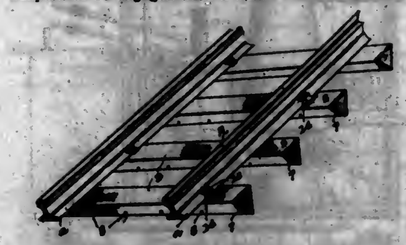
5. A demountable rim consisting of segmental sections having a tire-engaging flange on one edge, and a continuous surrounding, movable, opposing tire-engaging flange, an inclosing flat band having one end fixed to one of the sections, a movable slide to which the other end is attached, and means to constrict and lock the band about the sections.

[Claim 6 not printed in the Gazette.]

957,081. RAILROAD-TIE. JAIRUS B. MCMILLAN, North Vernon, Ind. Filed Aug. 30, 1909. Serial No. 515,247.

1. A railroad tie comprising a metallic casing having a triangular shape in cross section, the base of the triangle being adapted to support a rail and the apex of the triangle being downward when in place, a core of artificial stone filling said casing, and rail-attaching means embedded in the core and projecting through the casing on the upper face of the tie.

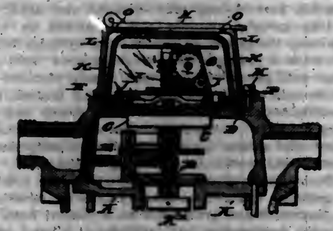
2. A railroad tie comprising a triangular metallic casing closed at its ends, the base of the triangle being adapted to support a rail and the apex of the triangle being downward when in place, a core of artificial stone filling the metallic casing, bolts passing transversely through the core and casing, and bolts embedded at one end of the core and passing up through the upper face of the tie, said bolts being formed on their inner ends with heads with which the artificial stone core engages, said bolts being adapted to be engaged with a rail.



3. A railroad tie comprising a metallic casing, triangular in cross section, the base of the triangle being adapted to support a rail, and the apex of the triangle being downward when in place, a core of artificial stone filling the interior of the casing, bolts projecting through the casing, the inner ends of the bolts being received within the core, and caps closing the ends of the casing, said caps being formed integral with the body of the closed casing and folded over said ends.

4. A railroad tie comprising a casing having a top plate, side flaps and end flaps, the side flaps being bent downward and inward toward each other, the end flaps being folded against the ends of the side flaps, the edges of the end flaps being bent over upon the side flaps and riveted thereto, a filling of artificial stone, and rail-attaching devices having heads located inside the casing and engaged by the filling and projecting upward from the upper face of the tie.

957,082. METER-REGISTER. LEWIS H. NASH, South Norwalk, Conn., assignor to National Meter Company, New York, N. Y., a Corporation of New York. Filed June 2, 1906. Serial No. 319,946.

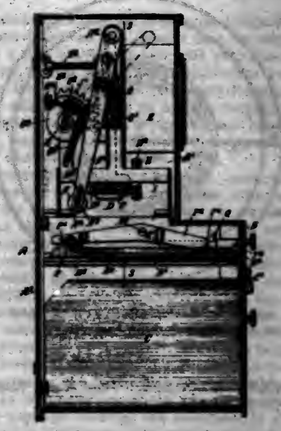


1. In a meter, the combination with a registering mechanism, of means for operating said mechanism including a magnet, and a magnetic shield composed of a plurality of layers of magnetic material, with an intervening air space between them, said shield inclosing said magnet.

2. In a meter the combination with a registering mechanism, of means for operating the latter including a magnet, and means for preventing the influencing of the magnet by unfavorable magnetic forces, said means including a protecting shield composed of a plurality of layers of magnetic material with an intervening air space between said layers, and a covering extending over said shield.

3. In a meter, the combination with the registering mechanism, a magnet therefor, a second magnet operating the first mentioned magnet, means for protecting the first mentioned magnet against unfavorable magnetic forces, such means comprising a shield formed of a plurality of layers of magnetic material with intervening air spaces between the layers.

957,083. DEPOSITING-BOX AND TIME-STAMP. CARL A. NAUCK, Little Rock, Ark. Filed Dec. 2, 1909. Serial No. 531,083.



1. A depositing box and time stamp, comprising a casing having a drawer dividing the casing into an upper compartment and a lower receiving box, a time stamp in the said upper compartment and adapted to stamp an article in the said drawer at the time the drawer is closed, and means for delivering the stamped article to the said receiving box on opening the drawer.

2. A depositing box and time stamp, comprising a casing having a drawer dividing the casing into an upper compartment and a lower receiving box, a time stamp in the said upper compartment and adapted to stamp an article in the said drawer at the time the drawer is closed, manually-controlled means for moving the said time stamp bodily into and out of stamping engagement with the article, and means for delivering the stamped article to the said receiving box on opening the drawer.

3. A depositing box and time stamp, comprising a drawer for receiving the article to be stamped, a bodily movable time stamp adapted to be moved into and out of engagement with the article at the time the latter is in the closed drawer, and means for removing the article from the drawer after the article is stamped.

4. A depositing box and time stamp, comprising a drawer for receiving the article to be stamped, a bodily movable time stamp adapted to be moved into and out of stamping engagement with the article at the time the latter is in the closed drawer, means for removing the article from the drawer after the article is stamped and the drawer is opened, and manually-controlled means for moving the said time stamp.

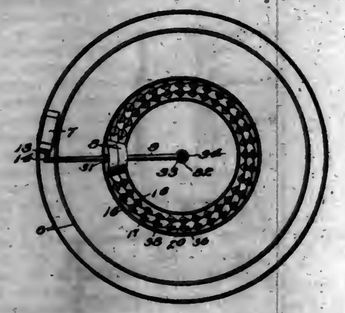
5. A depositing box and time stamp, comprising a drawer for receiving the article to be stamped, a bodily movable time stamp adapted to be moved into and out of stamping engagement with the article at the time the latter is in the closed drawer, means for removing the article from the drawer after the article is stamped and the drawer is opened, manually-controlled means for moving the said time stamp, and a clock-work having connection with the said time stamp to set the latter.

[Claims 6 to 13 not printed in the Gazette.]

957,084. AIR-COMPRESSOR. ALFRED T. NEWELL, Birmingham, Ala. Filed Mar. 26, 1909. Serial No. 485,868.

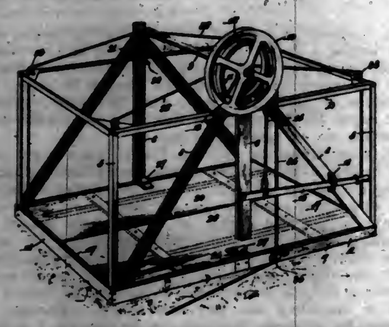
In a non-rotatable air-compressor, the combination of inner and outer circular concentric tracks, an axle pivoted at one end at the center of said tracks and extending radially over the same, a roller carried by said axle and

located on the inner track, pumps under said track, having operating means actuated by the passage of the roller



thereover, and a motor mounted on the outer track and connected to the outer end of the axle.

957,085. MANURE-LOADER. JOHN NOLD, Tolstoy, S. D. Filed Sept. 29, 1909. Serial No. 520,110.

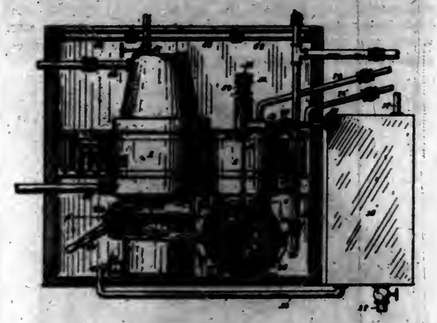


1. In a device of the character described, a frame, a dumping platform having tilting leaves, spring-actuated latch members engaging the leaves adjacent to their outer edges to support them normally in approximately horizontal position, hoisting means for the platform, means for disengaging the latches when the platform reaches a predetermined elevation, and means for retaining the releasing means in engagement with the tilting leaves until the platform begins to descend, thereby preventing the leaves from tilting until the descent has commenced.

2. In a device of the character described, a dumping platform having tilting leaves, hoisting means for said platform, brake means for checking the descent of the platform, catches engaging the tilting leaves to support the latter normally in approximately horizontal position, catch releasing means consisting of movably supporting rollers adapted to engage the leaves, and roller engaging brackets supported to hold the rollers temporarily in engagement with the leaves.

3. In a device of the character described, a dumping platform having tilting leaves, hoisting means for said platform, brake means to support the platform at various elevations, and to check the descent thereof, spring-actuated catches supported adjacent to the outer edges of the platform leaves to sustain said leaves normally in horizontal position, yokes supported pivotally upon the leaves adjacent to their outer edges, rollers carried by said yokes and adapted to actuate the catches to disengage the latter from the leaves, and suitably supported brackets adapted to engage the rollers to actuate the catches and to temporarily hold said rollers in engagement with the leaves to keep the latter from tilting.

957,086. MEANS FOR GENERATING POWER. ALFRED PELLETIER, Chicago, Ill. Filed Sept. 18, 1909. Serial No. 518,446.



1. In a device of the class described, the combination of a receiving cylinder, a heating cylinder in axial alinement therewith; pistons operating in said cylinders and connected by a hollow piston rod; a continuous open passage through said piston rod and each of said pistons; a check valve in said piston rod; fluid cooling means; an open connection between said fluid cooling means and said receiving cylinder; a check valve in said last named connection; and means for utilizing heated compressed fluid for generating power, substantially as described.

2. In a device of the class described, the combination of a receiving cylinder; a heating cylinder in axial alinement therewith; sun coils connected with said heating cylinder; pistons operating in said cylinders and connected by a hollow piston rod; a continuous open passage through said piston rod and each of said pistons; a check valve in said piston rod; fluid cooling means; an open connection between said cooling means and said receiving cylinder; a check valve in said last named connection; and means for utilizing heated compressed fluid for the generating power, substantially as described.

3. In a device of the class described, the combination of a receiving cylinder; a heating cylinder in axial alinement therewith and provided with a conical head; a heating jacket surrounding said cylinder and head; pistons operating in said cylinder and connected by a hollow piston rod, the piston in the heating cylinder being provided with a conical end, a continuous open passage through said piston rod and each of said pistons; a check valve in said piston rod; fluid cooling means; an open connection between said fluid cooling means and said receiving cylinder; a check valve in said last named connection; and means for utilizing heated compressed fluid for generating power, substantially as described.

4. In a device of the class described, the combination of a receiving cylinder; a heating cylinder in axial alinement therewith and provided with a conical head, a heating jacket surrounding said cylinder and head; sun coils connected with said heating jacket; pistons operating in said cylinder and connected by a hollow piston rod, the piston in the heating cylinder being provided with a conical head; a continuous open passage through said piston rod and each of said pistons; a check valve in said piston rod; fluid cooling means; an open connection between said fluid cooling means and said receiving cylinder; a check valve in said last named connection; and means for utilizing heated compressed fluid for generating power, substantially as described.

5. In a device of the class described, the combination of a receiving cylinder; a heating cylinder in axial alinement therewith; pistons operating in said cylinder and connected by a hollow piston rod; a continuous open passage through said piston rod and each of said pistons; a check valve in said piston rods; fluid cooling means; an open connection between said fluid cooling means and said receiving cylinder; a check valve in said last named connection; a power piston operating in said power cylinder; a crank shaft connected with said power piston; a rocker shaft and arm adapted to operate said plungers; a cam carried by said crank shaft; and a link connected with said rocker shaft and carrying a roller running on said cam and adapted to operate said rocker arm, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

957,087. COUPLING FOR AIR-BRAKE PIPES. LOUIS A. PETERSON, Hannaford, N. D. Filed June 29, 1909. Serial No. 504,978.



1. A pipe coupling embodying a hollow body, a support having a guideway, a slide mounted to reciprocate in said guideway, the said slide having spaced depending members, a universal joint connection between the body and said members of the slide, and means for establishing an air-tight detachable connection between the meeting ends of two of said bodies.

2. A pipe coupling, embodying a hollow body, a guide box supported on the bottom of a car, a slide reciprocal in the guide box and having depending arms, a universal joint connection between the hollow body and the said depending arms of the slide, an air supply for the body, and means for establishing an air-tight detachable connection between the meeting ends of two of said bodies.

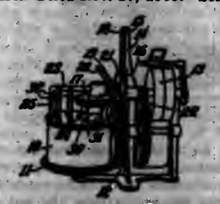
3. A pipe coupling, comprising a slide having downwardly projecting members, a hollow body, open at one end and carried by said members of the slide, a pipe supplying air under pressure to said body, a valve normally closing the open end, and means for opening said valve when two of said bodies are coupled together at their open ends.

4. A pipe coupling, comprising a guide box supported on the bottom of a car, a slide mounted to reciprocate longitudinally in the guide box and having downwardly projecting spaced arms, a hollow coupling body, a universal joint connection between the coupling body and the said arms, a sealing valve in the coupling body which is opened by the impact of a similar coupling body, and means for supplying air under pressure within the body of the coupling and that is controlled by the valve.

5. In combination, a car, a car coupling thereon, an air brake pipe coupling, a bar slidable on the car and carrying the pipe coupling, a spring connecting one end of the pipe coupling with the slidable bar, and a spring connecting the forward end of said bar with the car coupling.

[Claims 6 to 14 not printed in the Gazette.]

957,088. MIXING-MACHINERY. GUNTHER H. PETRI, Boston, Mass. Filed Nov. 17, 1909. Serial No. 528,453.



1. In combination, mixing apparatus, comprising a can, mixing arms arranged eccentrically therein and means to rotate the can and arms diversely; a cover for the can stationarily mounted, having an opening through which the mixing arms enter the can; a cover for said opening; and means whereby the second cover rotates with said arms.

2. In combination, mixing apparatus, comprising a can, means to move the can in a definite path; a mixing device located in a field stationary over said path; means to impart motion to said device in its stationary position, diverse from the motion of the can; a stationarily mounted cover over said path having an opening including the field of movement of said mixing device where it passes through the cover; and an auxiliary cover covering said opening, supported and moving with said device.

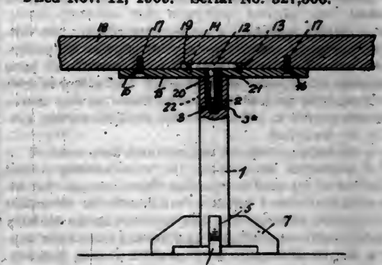
3. In combination, mixing apparatus, comprising a can, mixing arms set at distances from each other and means to rotate the can and arms diversely; a stationary cover for the can having an opening in which the mixing arms are; the cover for said opening, occupying space between the arms, comprising a disk arranged perpendicular to the axis of rotation of the arms and having its material slit at the periphery, forming ears, attached to said arms.

4. In mixing apparatus, a rotating can, arms within it; means to raise and lower them with respect to the can; means to rotate one of the mixing arms, one being stationary; and covers for the can, one mounted on the rotating arm and covering the field of its rotation, said field being eccentric to the rotation of the can; the other on the stationary arm and covering the remainder of the can.

5. In mixing apparatus, the combination of a rotating can; a stationary cover therefor having eccentrically an opening for entrance of rotating mixing arms; there being means to support such mixing arms; and a cover for said opening sustained by said support.

[Claim 6 not printed in the Gazette.]

957,089. TABLE. JOHN PFRENZINGER, Pittsburg, Pa. Filed Nov. 11, 1909. Serial No. 527,506.

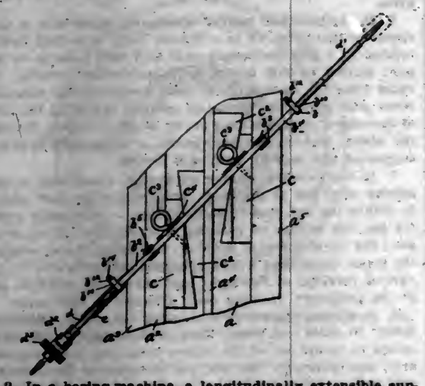


In a table, in combination, a top having a recess in its lower face, a batten arranged against the lower face of said top and having an opening, a stem plate fixed to the upper face of the batten and extending into said recess, a stem carried by the stem plate and projecting through said opening and having a socket in its lower end, means for securing the batten against the lower face of the table top, a pedestal having a plurality of legs at its lower end and abutting at its upper end against the lower face of the batten, said pedestal having its upper end formed with a stepped socket providing a shoulder against which abuts the lower end of the stem, a detachable dowel pin mounted in the lower portion of said stepped socket, projecting above the shoulder and extending into the socket formed in the lower end of the stem and a locking member engaging with the pedestal and pin for locking the latter in position.

957,090. BORING-MACHINE. EDWIN PRESCOTT, Arlington, Mass. Filed Nov. 16, 1908. Serial No. 462,773.

1. In a boring-machine, a supporting-frame, two substantially alined bit-guides borne by it, means for attaching said frame to a window-frame with the bit guides at opposite sides thereof, and a tool-carrier slidably sup-

ported by said supporting-frame having means for supporting a bit in alinement with said bit-guides, substantially as described.



2. In a boring-machine, a longitudinally extensible supporting-frame, two substantially alined bit-guides borne by it, means for attaching said frame to a window-frame with the bit-guides at opposite sides thereof, and a tool-carrier slidably supported by said frame having means for supporting a bit in alinement with said bit-guides, substantially as described.

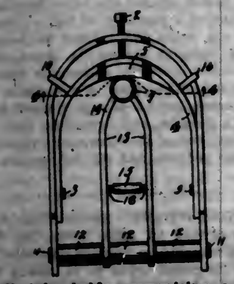
3. In a boring-machine, a supporting-frame, two substantially alined bit-guides borne by it, adjustable means for attaching said frame to a window-frame with the bit guides at opposite sides thereof, and a tool-carrier slidably supported by said frame having means for supporting a bit in alinement with said bit-guides, substantially as described.

4. In a boring-machine, a supporting-frame, two bit-guides borne by it, means for attaching said frame to a window-frame with the bit-guides at opposite sides thereof, and a tool carrier slidably supported by said supporting-frame having means for supporting a bit in alinement with said bit-guides, substantially as described.

5. In a boring-machine, a supporting-frame adapted to support a reversible tool-carrier, two substantially alined bit-guides borne by said supporting-frame, means for attaching said frame to a window-frame with the bit-guides at opposite sides thereof, a reversible tool-carrier slidably supported by said supporting-frame having means for supporting a bit in alinement with said bit-guides, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

957,091. WELL-TUBE HOLDER. LYMAN L. PRESTON, Dripping Springs, Tex., assignor of one-third to Jesse T. Smith, Dripping Springs, Tex. Filed July 9, 1909. Serial No. 506,764.



1. A well tube holder comprising a U-shaped yoke, a jaw member pivotally and slidably mounted in said yoke and provided with stops, a pin connecting the opposite sides of the yoke, clamping arms pivotally mounted on said pin, threaded studs projecting inwardly from said arms, a turn buckle for adjusting the arms, and a binding screw for forcing the jaw member against the pipe.

2. A well tube holder comprising a U-shaped yoke, a pin extending across the yoke and located adjacent the terminals of the yoke, a series of sleeves upon the pin, a jaw member slidably and pivotally mounted in the yoke, stops carried by the jaw member, a binding screw extending through the yoke and bearing upon the jaw member, clamping arms pivoted on the pin and a turn-buckle connecting the arms and serving to move the free ends of said arms to and from each other.

957,092. LINER FOR CENTRIFUGAL LIQUID-SEPARATORS. CARL A. F. RAMSTRÖM, Stockholm, Sweden. Filed Jan. 3, 1906. Serial No. 294,365.



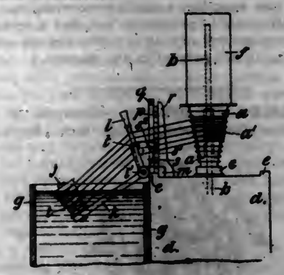
1. A liner for centrifugal liquid separators consisting of partition walls mounted near to each other in the drum, having both surfaces finely rifled, the rifles in one surface crossing the rifles of the other side.

2. A liner for centrifugal liquid separators consisting of partition walls mounted near to each other in the drum, which walls have a finely rifled surface the rifles in facing adjacent walls crossing each other at an angle.

3. In a centrifugal separator, the combination with the drum, of liner plates provided with rifles on both sides, those on one side being substantially continuous and at an angle with those on the other side.

4. A liner for centrifugal separators consisting of partition walls mounted in the drum with their surfaces near each other across the radius of the drum, said surfaces being finely rifled, the riffling of the side toward the center of the drum being deeper than the riffling of the side toward the wall of the drum.

957,093. WIRE-DRAWING MACHINERY. ANDREW RATHBONE, Warrington, England. Filed Dec. 8, 1909. Serial No. 531,982.



1. Apparatus for continuously drawing wire, comprising in combination, a driven block, a pulley over which the wire is passed, a vessel adapted to contain liquid, and means for moving the pulley into and out of the liquid contained in said vessel and for holding the pulley in two positions, namely, when it is in the liquid, and when it is up and out of the liquid.

2. Apparatus for continuously drawing wire, comprising in combination, a driven block, a vessel adapted to contain liquid, a pulley over which the wire is passed, said pulley being adapted to be moved up and down and in and out of the liquid contained in said vessel, and means for holding the pulley in two positions, namely, when it is in the liquid, and when it is up and out of the liquid.

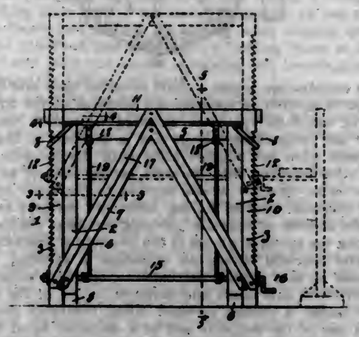
3. Apparatus for continuously drawing wire, comprising in combination, a driven block, a vessel adapted to contain liquid, a pulley over which the wire is passed, said pulley being adapted to be moved up and down and in and out of the liquid contained in said vessel, a pivotally mounted support for the pulley, and means for holding the pulley support in two positions, namely, when the pulley is in the liquid, and when it is up and out of the liquid.

4. Apparatus for continuously drawing wire, comprising in combination, a driven block, a vessel adapted to contain liquid, a pulley over which the wire is passed, a lever adapted to move said pulley up and down and in and out of the liquid contained in said vessel, and means for holding the lever in two positions, namely, when the pulley is in the liquid, and when it is up and out of the liquid.

5. Apparatus for continuously drawing wire, comprising in combination, a driven block, a vessel adapted to contain liquid, a pulley over which the wire is passed, a pivotally mounted support for the pulley, a lever connected with the support for moving it, and means for holding the support in two positions, that is, when the pulley is in the liquid, and when it is out of the liquid.

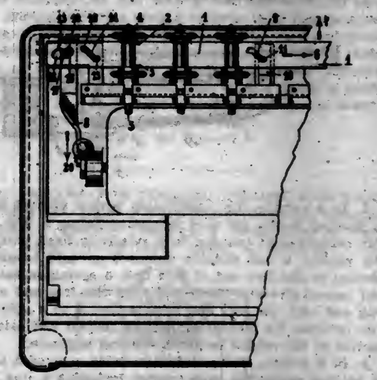
[Claims 6 to 10 not printed in the Gazette.]

957,094. ADJUSTABLE TRESTLE. GEORGE H. RATLEDGE, Sr., Colorado Springs, Colo. Filed July 27, 1909. Serial No. 509,827.



In a trestle of the class described, an outer and an inner frame, said outer frame being slidably connected with the inner frame, the sides of the inner frame comprising a pair of spaced members, the upper connecting bar of the inner frame projecting beyond the side members, the outer frame having its vertical members provided with teeth upon their outer faces, and with vertical grooves upon their inner faces, the grooves of the outer frame being adapted for the reception of the projections of the inner frame, the lower portions of the side members of the outer frame being bifurcated, a shaft connecting the upper walls provided by the bifurcations and extending through the spaced vertical members of the inner frame, a bar for the shaft, a flexible connection between the shaft and the top bar of the inner frame, and loosely mounted bales upon the inner frame adapted to contact the teeth of the outer frame.

957,095. REVERSING MECHANISM FOR CALCULATING-MACHINES. ROBERT REIN, Berlin, Germany. Filed Nov. 11, 1909. Serial No. 527,511.



1. In a machine of the class described the combination of a shaft, a pair of reversing wheels mounted on the shaft, a shiftable bar mounted between the reversing wheels, a support for said bar, a pin and an angularly disposed slot formed between the reversing bar and its support, an operating rod coöperating with the reversing bar, a pin and a horizontally disposed slot formed between the reversing bar and the operating rod, whereby the movement of the operating rod will move the reversing bar in two directions and shift the position of the reversing wheels.

2. In a reversing mechanism for a calculating machine, the combination of reversing wheels, a reversing bar disposed between the reversing wheels, and having slots which at their ends are straight and at their center incline, pins fitting in said slots, an operating bar, a pin and slot formed between the operating bar and the reversing bar, whereby when the operating bar is moved a backward and forward motion will be imparted to the reversing bar to shift the position of the reversing wheels simultaneously.
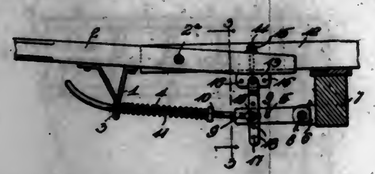
3. In a reversing mechanism for a calculating machine, the combination of a plurality of reversing wheels arranged in connected pairs, a reversing bar fitting between the pairs of reversing wheels and formed with slots having end straight portions and intermediate oblique portions, stationary pins engaging the slots, said reversing bar being also formed with a slot having oblique ends and an intermediate straight portion an operating bar, and a pin extending therefrom and engaging the last mentioned slot, whereby when the operating bar is moved, forward or backward an endwise movement will be imparted to the reversing bar.

4. In a reversing mechanism for a calculating machine, the combination of a plurality of reversing wheels arranged in connected pairs, a reversing bar fitting between the pairs of reversing wheels, supporting means for said bar, pins and slots formed between the reversing bar and the supporting means each of said slots having end straight portions and an intermediate oblique portion, an operating rod, a pin and a slot formed between the operating rod and the reversing rod, said latter slot having end oblique portions and a straight intermediate portion, whereby when the operating rod is moved, the reversing bar will be moved backward or forward and endwise.

5. In a calculating machine, the combination of a plurality of connected gears, a reversing bar fitting between the plurality of connected gears, an operating rod, means coöperating with the operating rod and the reversing bar for moving the latter forward or rearward and laterally when said operating bar is moved to shift the position of the reversing gears and lock the reversing bar in either of its extreme positions.

[Claim 6 not printed in the Gazette.]

957,096. SPRING-SUPPORT FOR VEHICLE-TONGUES. WILLIAM F. RESCHKE, Wichita, Kans. Filed Dec. 6, 1909. Serial No. 531,603.



1. In a vehicle, the combination with a pivoted tongue, of holding means for said tongue including a link pivotally connected at one end to a relatively fixed portion of the vehicle, a rod slidably mounted on said tongue and pivoted to the free end of said link, a spring on said rod, and means pivotally connected with the free end of said link and with the rear end of said tongue at a point midway between the pivotal connection thereof and said fixed portion of the vehicle to which the link is pivoted.

2. In a vehicle, the combination with a pivoted tongue, of holding means for said tongue, including a link pivotally connected at one end to a relatively fixed portion of the vehicle, a bracket depending from said tongue, a rod slidable in said bracket and pivoted to the free end of said link, a coiled spring on said rod between said link and bracket, and a strap adjustably and pivotally connected at one end with the free end of said link, and at its other end with the rear end of the tongue at a point midway between the pivotal connection of the tongue and said fixed portion of the vehicle.

957,097. STEAM-CONTROLLING DEVICE. GIUSEPPE RASTUCCI, Naples, Italy. Filed Mar. 19, 1909. Serial No. 484,441.



1. A device for throttling, drying and superheating steam, comprising a member provided with passages and means for regulating the area of said passages, said member being interposed between the steam supply and distributing means.

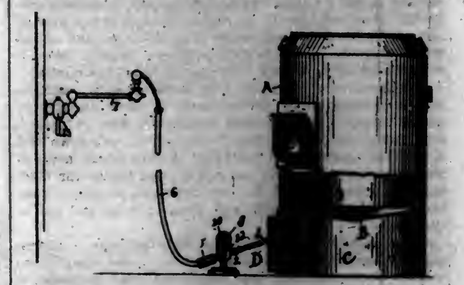
2. A device for throttling, drying and superheating steam, comprising a member provided with passages, means for regulating the area of said passages, and means for holding said area-regulating means at a fixed position.

3. A device for throttling, drying and superheating steam comprising a sectional casing, a fixed slotted shell, a correspondingly slotted valve mounted on said shell, and means for rotating said valve to diminish the area of the slots in the shell.

4. A device for throttling, drying and superheating steam, comprising a sectional casing, a fixed shell provided with openings therethrough, a rotatable valve, provided with correspondingly shaped openings, mounted on said shell, said valve being provided with gear-teeth, and a worm-shaft arranged to operate said valve to regulate the area of the openings in the shell.

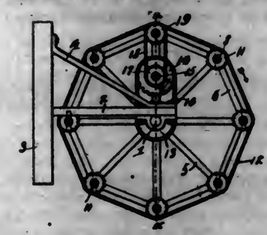
5. A device for throttling, drying and superheating steam, having in combination, a sectional casing, a fixed shell provided with openings therethrough, a rotatable valve, provided with correspondingly shaped openings, mounted in said shell, said valve being provided with gear-teeth, a worm-shaft, and means for rotating said shaft to operate the valve, whereby the area of the openings in the shell may be regulated.

957,098. BURNER. JOHN J. RIEHL, Cleveland, Ohio. Filed June 4, 1909. Serial No. 500,179.



A burner of the class described comprising a bracket having a vertical series of openings formed therein, a head adapted for vertical adjustment in the openings formed in said bracket, said head being arranged for angular adjustment, means upon the bracket for holding the head in its adjusted position, a nozzle carried by the head and a fuel conveying pipe connected with the said nozzle.

957,099. WATER-WHEEL. ROY P. ROBINSON, Brilliant, Ohio. Filed June 28, 1909. Serial No. 504,796.



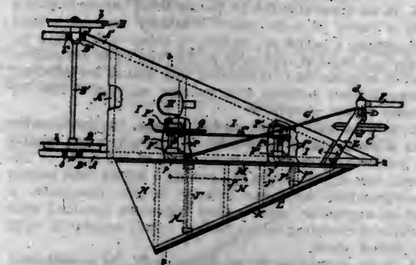
In combination beams, a shaft mounted upon said beams, supports secured to opposite end portions of the shaft to rotate therewith, journals mounted upon said supports near the outer edges thereof and in position so that the journals upon one support aline with the journals upon the other support, said journals having sockets at their inner ends, sprocket wheels secured to the outer ends of said journals, paddles having their end portions secured in the sockets of opposite journals, sprocket chains connecting the sprocket wheels of the two sets of journals, one of said journals having an extension, a sprocket wheel secured to said journal extension, a sprocket wheel concentric with said shaft and fastened to one of the aforesaid beams, a second sprocket wheel rotatably mounted upon one of the supports and of a diameter equal to the fixed sprocket wheel, a sprocket chain connecting the two sprocket wheels, a sprocket wheel fast to the sprocket wheel mounted upon said support and equal in diameter to the sprocket wheel mounted upon the aforesaid journal extension, and a sprocket chain connecting the sprocket wheels of the journal extension and the rotatable sprocket wheel mounted upon said support.

957,100. SCREEN-DOOR. BYRD C. ROCKWELL, Malvern, Ark. Filed Mar. 18, 1909. Serial No. 483,180.



A screen door having a stile provided with a longitudinal groove in one edge near one face and with a thin longitudinal groove in said face defining a bead extending toward but terminating short of the groove in the edge of the stile whereby an integral molding is formed, the groove in the face of the stile being located in a plane between the base and the open side or mouth of the groove in the edge of the stile to facilitate the separation of the molding from the stile, and wire cloth secured in the groove in the edge of the stile.

957,101. MACHINE FOR CUTTING BRUSH. GUSTAVE E. ROOSE, Wetaskiwin, Alberta, Canada, assignor of one-half to William James McNamara, Wetaskiwin, Canada. Filed Sept. 4, 1908. Serial No. 451,753.



1. In a machine for cutting brush, the combination with a triangular frame, of an axle carried adjustably at the rear normally at a right angle with one side, wheels upon said axle having cutting flanges, a guide wheel at the apex, a vertical spindle having a lower crank end upon which said guide wheel is journaled and an upper crank end to which the tongue is pivoted, a bracket secured adjustably near the apex of the frame in which said spindle is journaled, a draft-rod secured to said frame and held loosely by said bracket, a top upon said frame forming a platform, a driver's seat secured to said frame, a triangular cutting table carried vertically adjustable on one side of the frame and having its cutting edge sloping from the apex rearward and outwardly, a cutting blade at the edge of said table and means of raising and lowering said table, substantially as set forth.

2. In a machine for cutting brush, the combination with a long low and narrow vehicle having wheels with cutting flanges at its extremities, of a triangular cutting table having one side close to one of the sides of the vehicle, a knife bar forming the outer obliquely projecting edge of said table, a knife-blade secured to said bar, a top on said table, a back board on the edge of said table adjacent to the vehicle, and means for raising and lowering said table, substantially as set forth.

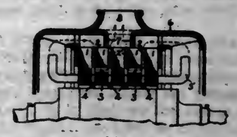
3. In a machine for cutting brush, the combination with a long low and narrow vehicle substantially triangular in plan having wheels with cutting flanges at its extremities, means of guiding and propelling the same, crank shafts journaled transversely to said vehicle and having long crank pins projecting at one side, means of rocking one of said shafts, means of connecting said shafts and causing them to act in unison, a triangular cutting table to the bottom of which said crank pins are journaled, a knife-bar at the outer edge of said table and a knife blade secured to said bar, substantially as set forth.

4. In a machine for cutting brush, the combination with a long low and narrow vehicle substantially triangular in plan having wheels with cutting flanges at its extremities, means of guiding and propelling the same, crank shafts journaled transversely to said vehicle and having crank pins projecting at one side, a hand lever secured upon one of said shafts, a rocking lever secured upon each of said shafts, a pitman connecting said rocking levers, a triangular cutting table carried upon the crank pins aforesaid and which are journaled thereto, a knife-bar secured to the obliquely projecting edge of said table and a double edged knife blade secured to said knife bar, substantially as set forth.

5. In a machine for cutting brush, the combination of a long low and narrow vehicle substantially triangular in plan having wheels with cutting flanges at its extremities, an axle carrying the rear wheels, bearings in which said axle is journaled having slotted holes in their feet to allow adjustment of their position on the frame, means of guiding and propelling said vehicle, a triangular cutting table carried at one side of said vehicle, a knife bar forming the outer obliquely projecting edge of said table, a knife blade secured to said bar and means of raising and lowering said table, substantially as set forth.

[Claim 6 not printed in the Gazette.]

957,102. MEANS FOR COOLING DYNAMO-ELECTRIC MACHINES. HERMAN ROOS, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Oct. 18, 1907. Serial No. 398,029.



1. In a dynamo electric machine, a rotary member, a stationary laminated core body having radial inlet and outlet ventilating spaces and axial channels connecting the spaces, and separating blocks to close the inlet and outlet spaces against the rotary member.

2. In a dynamo-electric machine, a rotary member, a stationary laminated core body having radial inlet and outlet ventilating spaces, axial channels connecting the spaces so arranged that cooling air flows into the inlet spaces, through the axial channels and out through the outlet spaces, said inlet spaces being alternately distributed with said outlet spaces, and separating blocks to close the inlet spaces against the rotary member.

3. In a dynamo-electric machine, a rotary member, a stationary laminated core body having radial inlet and outlet ventilating spaces and axial channels connecting the spaces, and separating blocks to separate the inlet spaces from the rotary member.

4. In a dynamo-electric machine, a casing having inlet and outlet chambers, a stationary laminated core body having radial inlet and outlet ventilating spaces and axial channels connecting the spaces, and separating blocks to close the inlet and outlet spaces on the inner periphery of the core body and also the inlet spaces against the outlet chamber and the outlet spaces against the inlet chamber, said inlet spaces communicating with said inlet chamber, and said outlet spaces with said outlet chamber.

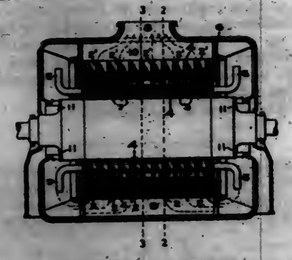
5. In a dynamo-electric machine, a casing having entrance chambers at both ends for the admission of air and inlet and outlet chambers, said entrance chambers communicating with said inlet chambers, a funnel communicating with said outlet chamber or chambers, a stationary laminated core body having radial inlet and outlet ventilating spaces and axial channels connecting the spaces, and separating blocks to close the inlet and outlet spaces on the inner periphery of the core body and also the inlet spaces against the outlet chamber and the outlet spaces against the inlet chamber, said inlet spaces communicating with said inlet chamber and said outlet spaces with said outlet chamber.

[Claims 6 to 8 not printed in the Gazette.]

957,103. MEANS FOR COOLING DYNAMO-ELECTRIC MACHINES. HERMAN ROOS, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Original application filed Oct. 18, 1907, Serial No. 398,029. Divided and this application filed Nov. 23, 1909. Serial No. 529,566.

1. In a dynamo-electric machine, a rotary member, a stationary laminated core body having radial inlet and outlet ventilating spaces, axial channels connecting the

spaces so arranged that cooling air flows into the inlet spaces, through the axial channels and out through the outlet spaces, and separating blocks to close the inlet spaces and partially close the outlet spaces from said rotary member.



2. In a dynamo-electric machine, a casing having inlet and outlet chambers, a stationary laminated core body having radial inlet and outlet ventilating spaces and axial channels connecting the spaces, and separating blocks to close the inlet spaces and partially close the outlet spaces on the inner periphery of the core body, and also to close the inlet spaces against the outlet chamber and the outlet spaces against the inlet chamber, said inlet spaces communicating with said inlet chamber, and said outlet spaces with said outlet chamber.

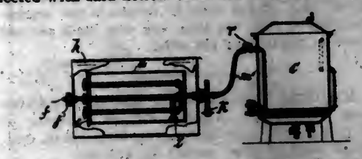
3. In a dynamo-electric machine, a casing having inlet and outlet chambers, a stationary laminated core body having radial inlet and outlet ventilating spaces and axial channels connecting the spaces, and separating blocks to close the inlet spaces and partially close the outlet spaces on the inner periphery of the core body, and also to close the inlet spaces against the outlet chamber and the outlet spaces against the inlet chamber, said inlet spaces communicating with said inlet chamber throughout a portion only of the outer periphery of the core body and said outlet spaces with said outlet chamber throughout a portion only of the outer periphery of the core body.

4. In a dynamo-electric machine, a rotary member, fans secured to both ends of said rotary member, a casing having entrance chambers at both ends for the admission of air and inlet and outlet chambers, said entrance chamber communicating with said inlet chamber or chambers, a funnel communicating with said outlet chamber or chambers, a stationary laminated core body having radial inlet and outlet ventilating spaces and axial channels connecting the spaces, and separating blocks to close the inlet spaces and partially close the outlet spaces on the inner periphery of the core body and also to close the inlet spaces against the outlet chamber and the outlet spaces against the inlet chamber, said inlet spaces communicating with said inlet chamber throughout a portion only of the outer periphery of the core body and said outlet spaces with said outlet chamber throughout a portion only of the outer periphery of the core body.

5. In a dynamo-electric machine, a rotary member, a stationary laminated core body having radial inlet and outlet ventilating spaces and axial channels connecting the spaces, and separating blocks to close the inlet spaces and partially close the outlet spaces from said rotary member.

957,104. APPARATUS FOR PRODUCING KEFIR POWDER. ARTHUR ROSENBERGER, Berlin, Germany. Filed June 29, 1908. Serial No. 440,998.

1. In an apparatus for producing kefir, the combination with a casing provided with end walls, one of said end walls having an opening therein, a rotatable valve for said opening, of shafts having bearings in said end walls, a receptacle rigidly mounted on said shafts, said receptacle being provided with a removable front wall, a series of perforated tubes extending longitudinally within said receptacle, said tubes having open ends adjacent one end wall of the casing, removable closures for said openings, one of the aforesaid shafts being hollow and having angular connections with the series of tubes, an angular tube leading from said connections, said tube having communication with the interior of the receptacle, and means connected with said hollow shaft for rotating same.

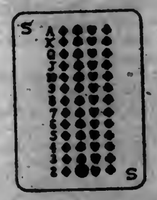


2. In an apparatus for producing kefir, the combination with a casing of a receptacle rotatably mounted within said casing, a series of perforated tubes within said receptacle, a vacuum apparatus in the form of an evaporator located adjacent said receptacle, and means for effecting communication between said vacuum apparatus and the interior of the receptacle.

3. In an apparatus for producing kefir, the combination with a casing, of a receptacle within said casing, shafts for said receptacle rotatably mounted in the walls of the casing, one of said shafts comprising a hollow tube having communication with the interior of the receptacle, a vacuum apparatus, said vacuum apparatus provided with suitable evaporating means having valved connection with the hollow shaft.

4. In an apparatus for producing kefir, the combination with a stationary casing, of a receptacle one of said end walls being provided with an opening, a valve for said opening whereby access may be had to the interior casing, a removable cover for the receptacle adjacent said end, a series of tubes rigidly carried within the receptacle, and means in geared connection with the receptacle for rotating the same.

957,105. PLAYING OR GAME CARD. WILLIS W. RUSSELL, Highland Park, N. J., assignor to Mary N. Russell, Milltown, N. J. Filed Mar. 19, 1909. Serial No. 484,474.



1. A deck of playing or game cards including a substitute card provided with denominating characters which correspond to all of the cards composing the deck whereby the substitute card may be appropriately marked on its face to take the place of any other card of the deck, the size shape and the appearance of the back of the substitute card corresponding precisely with the remaining cards of the deck.

2. As a new article of manufacture a substitute card adapted to replace any one of the cards of a deck of playing cards and provided with indications of the suits and denominations of the various cards of the deck.

957,106. WICK-STOP LAMP-BURNER. EDWARD S. SANDERSON, Waterbury, Conn., assignor, by mesne assignments, to Dressel Railway Lamp Works, New York, N. Y., a Corporation of New York. Filed Jan. 27, 1910. Serial No. 540,870.

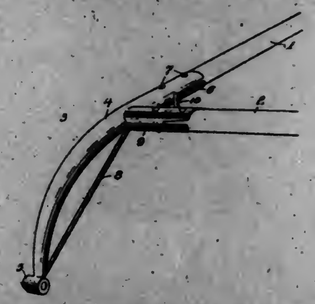
1. A wick-stop lamp-burner, having shouldered upper and lower portions, a wick-raiser, and a clip applied to the wick-raiser and held in place between and under tension by engagement with the shouldered portions of the burner.

2. A wick-stop lamp-burner, having upper and lower portions provided with opposite shoulders, a wick-raiser comprising a shaft and star-wheels thereon, and a friction device composed of an open tube-like portion embracing



the shaft between the star-wheels and having diverging arms engaged and held under tension by and between the said shoulders.

957,107. THILL-IRON. THEODORE H. SCHLARMANN, Breese, Ill. Filed Apr. 1, 1908. Serial No. 424,675.



The herein described thill iron comprising a curved tubular member having a rounded portion provided with a closed end having a transversely formed eye, the member having its open end slitted longitudinally at its opposite sides to provide compressible clamping portions, an integral truss brace member extending from the eye to the body of the tube, an integral transverse tubular socket member having its free end slitted at opposite sides to provide compressible clamping portions, and an integral brace connecting the socket with the outer end of the tubular member.

967,108. NAIL-HOLDER FOR HAMMERS. HENRY SCHNEIDER, New York, N. Y. Filed Dec. 26, 1908. Serial No. 469,187.



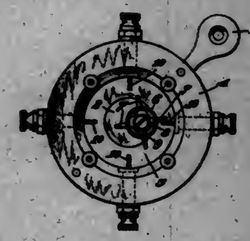
1. A hammer provided on its head with a plurality of abutments located different distances from the face of the hammer head, and nail holders on the said hammer head and formed of two members forming a nail retainer at the adjacent sides and below one abutment and single resilient nail retainers at the other sides of the said members, one below each of the other abutments.

2. A hammer provided with a nail retainer formed of two members curved to fit the hammer head, the adjacent resilient sides of the members being curved toward each other and terminating in outwardly bent entrance flanges, and tongues struck up from the said members and bent toward each other.

3. A hammer provided with a nail retainer formed of two members curved to fit the hammer head, the adjacent resilient sides of the members being curved toward each other and terminating in outwardly bent entrance flanges, and tongues struck up from the said members and bent toward each other, each member terminating at its outer end in a single resilient nail retainer.

4. A hammer provided on its head with a plurality of abutments located different distances from the face of the hammer head, and nail holders on the hammer head, said holders being formed of two resilient members, each having one end curved outwardly and terminating in a flange, and its other end formed with a recess on its inner face, said members being secured to the hammer head with their curved ends adjacent to each other and below an abutment and with their other ends below the other abutments.

957,109. INTERNAL-COMBUSTION-ENGINE TIMER. JOSEPH A. SCHNEIDER, Lakeport, Cal., assignor of two-thirds to Andrew A. Brown, San Francisco, Cal. Filed June 29, 1909. Serial No. 505,078.



1. In an electrical timer, an exterior annular casing, a shaft revoluble about the common center, a pin fixed eccentrically to the end of said shaft, a hub revoluble upon the pin, widely separated contact points projecting inwardly from the interior of the case, and widely separated points projecting outwardly from the circumference of the revoluble hub and coacting with the first-named points to impart an intermittent rotation to the hub.

2. An electrical timer consisting of a fixed annular casing having inwardly projecting contact points, a centrally journaled turnable shaft, a sleeve mounted to turn upon said shaft, a pin projecting eccentrically from the end of the shaft into the interior of the casing, a hub having widely separated radially projecting contact points projecting beyond its circumference and each adapted to be carried into successive relation with the points of the casing whereby the hub is intermittently rotated, and an elastic device pressing upon the hub to retard the rotary movement thereof.

3. In a commutator or timer an intermittently revoluble and eccentric traveling member, a wiper projecting beyond the circumference thereof and carried thereby and corresponding widely separated fixed points coacting therewith.

4. An intermittently revoluble and eccentrically traveling member having a plurality of projecting points or wipers arranged at equal distances around the circumferences and projecting outwardly therefrom, and fixed points corresponding with the number of independent ignitions, and over which the wipers successively pass.

5. A device or timer for producing intermittent electrical contacts, said device including fixed circularly disposed arms, a hub having radially projecting arms or blades, an eccentrically intermittently revoluble pin or shaft upon which the hub is turnable to sweep its arms successively across the fixed arms.

957,110. SHOCK-ABSORBER FOR TUNGSTEN-LAMPS. FREDERICK SCHWARTZ and LEO KLEINMANN, New York, N. Y., assignors to Shapiro & Aronson, Brooklyn, N. Y., a Firm. Filed May 6, 1909. Serial No. 494,212.



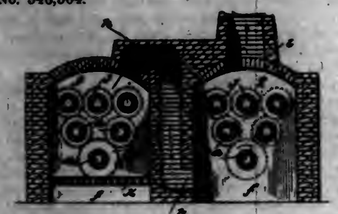
1. A shock absorber for a lamp hanger, comprising a pair of shells having their edges overlapping and adapted to rock one upon the other, said shells forming a closed chamber and a tension spring extending across said chamber, connecting said shells and adapted to absorb a shock.

2. A shock absorber for a lamp hanger, consisting of a pair of curved shells telescoping at their edges, forming a closed chamber, and a tension spring attached to the inner side of said shells at substantially diametrically opposite points and extending across said chamber, said spring affording means for holding said shells together and permitting a rocking movement of said shells with respect to each other.

3. A shock absorber for a lamp hanger, consisting of a pair of curved shells telescoping at their edges, nipples mounted in said shells diametrically opposite to each other and adapted to attach the shock absorber in position, and a spring connecting said nipples and holding said shells together.

4. A shock absorber for a lamp hanger, consisting of a pair of oppositely disposed substantially hemispherical shells telescoping at their edges, nipples mounted in said shells diametrically opposite to each other and having threaded necks projecting inward, and a coil spring engaging the threads of said necks and holding said shells together.

957,111. APPARATUS FOR REDUCING TIN. ROBERT W. SCOTT, London, England. Filed Feb. 28, 1910. Serial No. 546,504.

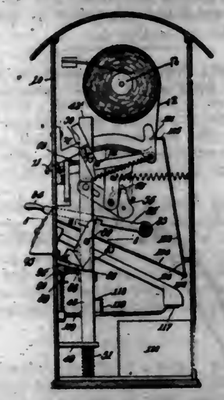


1. The combination in an apparatus for reducing tin of a furnace having therein a preliminary drying chamber, and a combustion chamber, a flue connecting said chambers, an exit flue from the drying chamber, and a series of tubes arranged in a nest in each chamber, said tubes being furnished with detachable caps at their ends, a connection from a source of producer gas at one end of each tube, and a burner at the other end, and means for causing a rotation of said tubes.

2. The combination in an apparatus for reducing tin of a furnace having therein a preliminary drying chamber, a combustion chamber, a flue connecting said chambers, an exit flue from the drying chamber, and a series of rotatable tubes arranged in each chamber, said tubes being furnished with detachable capped ends, toothed gears on the gears whereby they may rotatably engage with each other and connected to a source of power, a connection from a source of producer gas at one end of each tube, and a burner at the other end.

3. The combination in an apparatus for reducing tin, of a furnace having therein a preliminary drying chamber and a combustion chamber, a flue connecting said chambers, an exit flue from the drying chamber, and a series of tubes extending through said chambers and open at both ends, a series of rotatable tubes having capped ends and mounted to revolve in the said first named tubes, means for causing a simultaneous rotation of said rotatable tubes, and a connection from a source of producer gas at one end of each of said tubes, and a burner at the other end thereof.

957,112. STAMP-VENDING MACHINE. FRANK J. SCHUMANN, Bethlehem, Pa. Original application filed Sept. 29, 1908, Serial No. 455,314. Divided and this application filed Jan. 12, 1909. Serial No. 471,910.



1. In a stamp vending machine, a casing having a discharge slot and a coin slot, means for feeding predetermined lengths of a stamp strip through the discharge slot, and means for blocking the coin slot having a constant tendency to the active position and held against movement toward the active position by the presence of a single run of the stamp strip directed toward the discharge slot.

2. In a stamp vending machine, a casing having a discharge slot, and a coin slot, means for feeding predetermined lengths of a stamp strip in the direction of the discharge slot, a stamp strip guide having a recess, a pivoted lever having an arm bearing against the stamp strip and arranged to enter the recess when the stamp strip is exhausted, and a coin slot locking member carried by said lever.

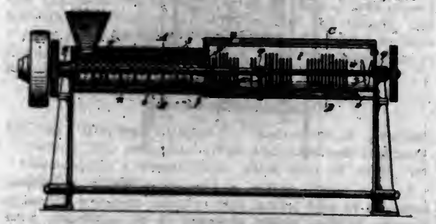
3. In a stamp vending machine, a casing having a discharge slot, a revoluble member having an entrance chute for the coin, a recessed guide over which the stamp strip passes, means for feeding predetermined lengths of the stamp strip in the direction of the discharge slot, a lever pivoted within the casing and having an arm bearing against the stamp strip and arranged to enter the recess when the stamp strip is exhausted, and a plate carried by said lever and arranged to engage said revoluble member to prevent rotative movement thereof, said plate serving also to block the coin chute.

4. In a vending machine, an operating rod within the machine, a manually operable lever, a shaft carrying the same, an arm carried by said shaft, a lever mounted on the rod and normally out of the path of movement of said arm, a locking lever engaging the rod carried lever and normally holding the same in inoperative position, and a coin chute having a revoluble section whereby an entered coin may be brought into engagement with the locking lever to move the latter to release position.

5. In a vending machine, an operating rod within the casing of the machine, a manually operable lever, a shaft carrying the same, an arm on said shaft, a lever pivoted to the rod and having a flanged shoulder, said lever being normally held out of the path of movement of the arm, a locking lever having a tongue engaging the flange, and means whereby a deposited coin is brought into engagement with the locking lever to move the latter to release position.

[Claims 6 to 10 not printed in the Gazette.]

957,113. APPARATUS FOR THE TREATMENT OR PREPARATION OF SUGAR. EDWARD SHAW, London, England. Filed Dec. 23, 1904. Serial No. 238,079.



1. In apparatus for the treatment of sugars of the kind referred to, an inclosed chamber adapted to receive heated syrup, means for retarding the cooling of syrup within said chamber, means for stirring heated syrup within said chamber, a second chamber arranged in line with said first mentioned chamber, a restricted communication between the two said chambers and means for feeding forward syrup in said chambers.

2. In apparatus for the treatment of sugars of the kind referred to, an inclosed chamber adapted to receive heated syrup, means for retarding the cooling of syrup within said chamber, a second chamber arranged in line with said first mentioned chamber, a restricted communication between the two said chambers, a rotary shaft extending through both said chambers and blades on said shaft adapted to stir syrup within said chambers and to feed it forward.

3. In apparatus for the treatment of sugars of the kind referred to, an externally steam heated pipe, means for forcing syrup therethrough, means for separating the steam from the syrup as it leaves the heated pipe, an inclosed chamber into which heated syrup from said pipe is delivered, means for stirring heated syrup within said chamber, a second chamber arranged in line with said first mentioned chamber, a restricted communication between the two said chambers and means for feeding forward syrup in said chambers.

4. In apparatus for the treatment of sugar, a closed trough internally lagged with wood, a hopper communicating with said trough near one end thereof, a second trough partially lagged with wood communicating with that end of said closed trough remote from said hopper, a perforated plate between the two said troughs, a steam outlet from said second chamber, an outlet from said second chamber for crystalline sugar, a rotary shaft extending through both said troughs, means for rotating said shaft, blades on said shaft within said closed trough adapted to feed forward the material toward said second trough, blades on said shaft within said second trough adapted to break up the material, and a screw blade on said shaft within said second trough adapted to cause the material to travel therethrough.

5. In apparatus for the treatment of sugar, a syrup supply tank, a steam heated chamber, a coil of pipe located within said steam heated chamber, a pump adapted to force syrup from said tank through said coil, an inclined steam jacketed vessel into which said coil discharges, a pipe at the upper end of said jacketed vessel through which steam is led away, a hopper arranged to receive syrup from said inclined vessel, an inclosed mixing chamber with which said hopper communicates, and through which the syrup is passed and which is adapted to retard the dissipation of heat, a second chamber receiving the crystallized mass from said inclosed mixing chamber, a steam outlet from said second chamber, and means for stirring and breaking up the crystallized mass in said second chamber.

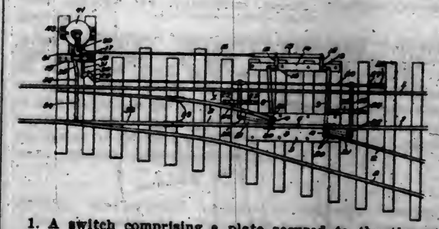
[Claim 6 not printed in the Gazette.]

957,114. ELLIPSOGRAPH. JOHN R. SHEA, Oshkosh, Wis. Filed Apr. 15, 1908. Serial No. 427,206.



An ellipsograph comprising a single top bar, a pair of bottom bars, a slide mounted upon the bottom bars and provided with a lateral handhold, an arm pivoted to the top bar, an arm pivotally connected to the slide and connecting the first mentioned arm and the slide, means adjustably secured to both of the arms provided with pivotally interlocking members for connecting the arms for pivotal movement, a marker arm connected with said second mentioned arm and movable therewith, a rotatable shaft carried by the slide and bodily movable therein, and connecting the second mentioned arm and marker arm, and a marker adjustably carried by the marker arm.

957,115. RAILWAY-SWITCH. GEORGE SHIMP and ISAAC H. WILTON, Patoka, Ill. Filed July 15, 1909. Serial No. 507,777.



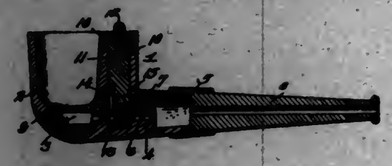
1. A switch comprising a plate secured to the ties at the point of junction of the siding and the main track, a frog pivotally mounted on said plate, locking bars mounted in bearings to lock said frog in adjusted position, a switch stand, switch points, and switch mechanism for moving the locking bars, shifting the frog and moving the points by the movement of a single lever, said switch mechanism comprising a curved lever provided with a slot, connections extending to the points and an operating lever and lock.

2. A switch comprising a plate supported upon the ties, a frog pivoted to said plate, bearing blocks for said frog, locking bars extending through said bearing blocks, levers connected to said locking bars, a switch stand, switch points, a lever, a lock for said lever, connections between said lever and switch points, said connections comprising a pivoted two-armed lever having a curved and slotted upper end through which the operating lever extends.

957,116. SMOKING-PIPE. JOHAN SJAASTRAM, Steamboat Springs, Colo. Filed June 28, 1909. Serial No. 504,852.

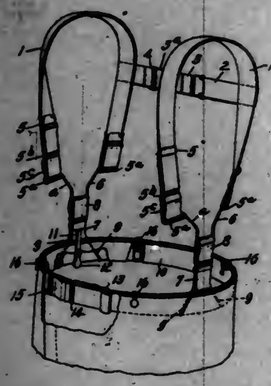
1. A pipe bowl having a laterally extending stem at its lower end provided with longitudinally extending vertically spaced bores, one of which opens into the lower portion of the bowl and the other through the front wall of the bottom thereof, a well arranged in said extension and communicating with said bores at their outer end, a vertical chamber arranged at the rear of said bowl and communicating at its lower end with said upper and lower bores, a plug valve operable in said chamber and having apertures extending transversely therethrough at right

angles to each other, and a longitudinally extending groove formed in one face of said plug communicating at its lower end with the lowermost aperture, the upper aperture being arranged to aline with the upper bore in the pipe bowl.



2. A pipe bowl having a laterally extending stem at its lower end provided with longitudinally extending vertically spaced bores, a well arranged at the outer end of said stem, the upper bore opening at one end into the bowl and at its other end into said well and the lower bore opening at one end into said well and at its other end through the front wall of the bottom thereof, a vertical chamber arranged at the rear of said bowl and communicating at its lower end with said upper and lower bores, a rotary plug valve operable in said chamber and having vent spaced apertures extending transversely therethrough at right angles to each other, a longitudinally extending groove formed in one face of said plug and communicating at its lower end with said lower aperture, a transversely extending groove arranged in the upper end of said plug, and means for engaging said groove to lock said plug in adjusted position.

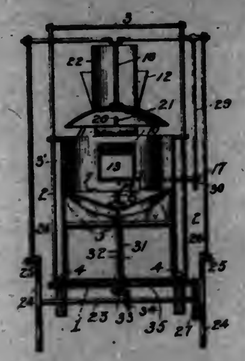
957,117. GARMENT-SUPPORTER. GEORGE H. SNOW, Walpole, Mass. Filed July 24, 1908. Serial No. 445,127.



1. A garment supporter comprising in combination shoulder straps having front terminal connecting members, a metallic connector for the opposite ends of each strap having divergent ends, a clasp attached to the intermediate portion of each connector, and a metallic hanger attached by its intermediate portion to each connector and having downwardly divergent ends for connection to a garment belt or band.

2. A trousers supporter comprising in combination shoulder straps having separated ends, a wire connector secured to the opposite ends of each strap and positively spacing said ends apart, a clasp attached to the intermediate portion of each connector, a substantially inverted V shaped wire hanger attached by its intermediate portion to each clasp and having hooked lower ends, and a trousers supporting belt sustained by said hooked ends and having means for connecting it to the trousers.

957,118. POTATO-CUTTER. JEROME SNYDER, Barberton, Ohio. Filed Sept. 27, 1909. Serial No. 519,671.



1. In a potato cutter, a supporting frame, a cylinder arranged in said frame, said cylinder having a discharge opening, cutting blades arranged in said cylinder, automatically operated potato supporting doors arranged above said blades, a hopper, a feed chute to connect said hopper to said cylinder, a plunger slidably mounted in said cylinder and adapted to force the potatoes discharged therein on to said blades, whereby the potatoes are cut, a plunger operating bar slidably mounted on said frame, a suitably driven operating shaft, crank wheels mounted on said shaft, operating rods to connect said crank wheels with said plunger operating bar, whereby said plunger is reciprocated in said cylinder, a discharging mechanism arranged in said cylinder below said cutting blades, said mechanism comprising a revolubly mounted shaft, radially projecting blades arranged on said shaft and operated thereby to bring the cut potatoes over the discharge opening in said cylinder, and means whereby said shaft is geared to the plunger operating shaft.

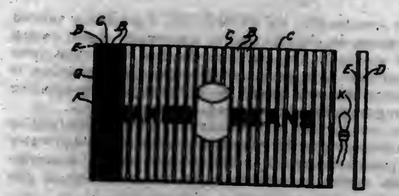
2. In a potato cutter, a suitably mounted cylinder, cutting blades arranged therein, a plurality of weight-controlled potato supporting doors arranged in said cylinder above said blades, a potato feeding mechanism, means whereby the potatoes fed into said cylinder are forced into engagement with and cut by said blades and a discharging mechanism arranged in said cylinder beneath said cutting blades, said mechanism comprising a revolubly mounted shaft provided with a plurality of radial projecting wings which divide the lower end of the cylinder into a corresponding number of compartments adapted to receive the sliced pieces of the potatoes, and means to rotate said discharging mechanism.

3. In a potato cutter of the class described, an upright cylinder, a pair of intersecting cutting blades arranged in said cylinder, weight-controlled downwardly inclined potato supporting doors arranged in said cylinder above and adapted to support a potato over the point of intersection of said blades, whereby the potato, when cut, is divided into four parts, a potato feeding mechanism arranged at one side of the cylinder above said doors, a plunger movable in said cylinder and adapted to open said doors to permit the potatoes to fall upon the cutting blades and to subsequently force the potatoes against the cutting blades, a plunger operating mechanism, and means operated by said mechanism to control the feeding of the potatoes to the cylinder.

4. In a potato cutter of the class described, an upright cylinder, cutting knives arranged therein, potato supporting means arranged in the cylinder above said cutting knives, a hopper arranged at one side of the cylinder, a feed chute between the hopper and cylinder, a plunger mounted to move in the cylinder, a plunger operating mechanism, a pivoted weight-controlled door mounted in the lower end of the feed chute to control the passage of the potatoes from the hopper to the cylinder, and means of connection between the plunger operating mechanism and the door, whereby the latter is swung into closed position upon the upward movement of the plunger.

5. In a potato cutter of the class described, an upright cylinder, cutting knives arranged therein, potato supporting means arranged in the cylinder above said cutting knives, a hopper arranged at one side of the cylinder, a feed chute between the hopper and cylinder, a plunger mounted to move in the cylinder, a plunger operating mechanism, a pivoted weight-controlled door mounted in the lower end of the feed chute to control the passage of the potatoes from the hopper to the cylinder, and means of connection between the plunger operating mechanism and the door, whereby the latter is swung into closed position upon the upward movement of the plunger, and a cover plate carried by the plunger and adapted to close the lower end of the feed spout when the plunger is in lowered or operative position.

957,119. DISPLAY DEVICE. ALEXANDER S. SPIEGEL, Chicago, Ill., assignor to The Attractograph Company, Chicago, Ill., a Corporation. Filed Apr. 13, 1908. Serial No. 426,781.



1. The combination with a sheet of transparent material, of a plurality of opaque lines arranged on such sheet to obtain intervening clear spaces, and a surface on which are a plurality of color lines, the color lines and opaque lines being at an angle to each other, and such opaque lines and the lines of color separated by a space not less than the thickness of the transparent sheet; substantially as described.

2. The combination with a sheet of transparent material, of a plurality of opaque lines arranged thereon to obtain intervening clear spaces, and a surface on which are a plurality of color lines all of such color lines arranged so that each thereof is exposed to the view of an observer at a given point through a plurality of the clear spaces, and the plane of such opaque lines at an angle to the plane of the colored lines and such planes separated at their nearest point by not less than the thickness of the transparent sheet; substantially as described.

3. The combination with a sheet of transparent material having plurality of opaque lines arranged thereon to obtain intervening clear spaces, and a surface on which are a plurality of color lines, such color lines being arranged at an angle to the clear spaces so as to be exposed to the view of an observer stationed at a given point through a plurality of the clear spaces, substantially as described.

4. The combination with a sheet of transparent material having plurality of opaque lines arranged thereon to obtain intervening clear spaces, and an additional sheet of material such additional sheet pervious to light and provided with a plurality of color lines, all of such color lines arranged so as to cross the lines of clear spaces and thus be exposed to the view of an observer stationed at a given point through a plurality of the clear spaces, substantially as described.

5. The combination with a sheet of transparent material, of a plurality of opaque lines arranged on such sheet to obtain intervening clear spaces, and an additional sheet of material, such additional sheet pervious to light and provided with a plurality of color lines, all of such color lines arranged so that each thereof is exposed to the view of an observer stationed at a given point through a plurality of the clear spaces, and such sheets fixed in different and other than parallel planes, with means to obtain illumination of the color lines, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

957,120. ADVERTISING APPARATUS. ALEXANDER S. SPIEGEL, Chicago, Ill., assignor to The Attractograph Company, Chicago, Ill., a Corporation. Filed Mar. 22, 1909. Serial No. 485,015.

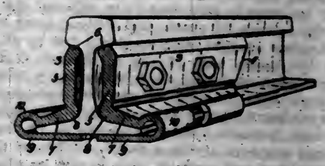


1. In combination in an advertising device, a member provided with opaque lines and intervening spaces, a design carried upon the opaque lines and a second design showing through the intervening spaces, substantially as described.

2. In combination with a member provided with opaque lines and intervening spaces, a design made up of parallel lines and carried wholly by the opaque lines, the intervening spaces being made translucent, a second member in rear of the first carrying a design, and means for illuminating the design on the rear member to cause it to show through the translucent spaces, substantially as described.

3. In combination with a screen member having opaque lines, a design or symbol made up of parallel lines carried on the opaque lines, intervening translucent spaces, a member in rear of the screen member carrying a design or symbol, means for giving movement to one member in relation to the other and illuminating means for causing the design on the rear member to show through the translucent spaces, substantially as described.

957,121. RAIL-JOINT. ARTHUR L. STANFORD, Chicago, Ill., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Jan. 9, 1909. Serial No. 471,494.



1. In combination with two abutting rail sections, a pair of splice bars, each comprising a body portion, a side flange, a base flange, and a loop connecting the base flange with the side flange, said loop being formed to have an inner diameter greater than the most contracted space between the base flange and the side flange, said splice bars being beveled at their ends from top to bottom in opposite directions, substantially as described.

2. In combination with two abutting rail sections, a pair of splice bars, each comprising a body portion, a side flange, a base flange, and a loop connecting the base flange with the side flange, said loop springing from the flat base flange and rounding up above the level of the side flange at the point of connection therewith, affording an inner opening of greater diameter than the most contracted space between the base flange and the side flange, said splice bars being beveled at their ends from top to bottom in opposite directions, substantially as described.

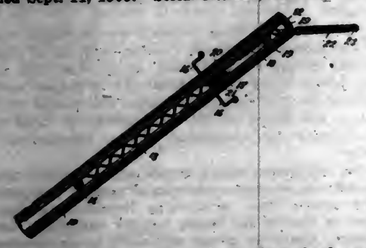
3. In combination with two abutting rail sections, a pair of splice bars, each comprising a vertical body por-

tion, a side flange and a connected base flange, the side flanges and the base flanges serving to clamp the flanges of the rail sections, and the adjacent ends of the companion splice bars being beveled from top to bottom in opposite directions, substantially as described.

4. In combination with the abutting rail sections, a rail joint comprising two splice bars having their adjacent ends beveled from top to bottom in opposite directions, substantially as described.

5. In a rail joint, the combination with the rails, of oppositely arranged separate joint bars engaging beneath the rail heads, and each of which joint bars comprises a body portion, a foot flange having continuous contact with the upper side of the rail flange from a point near the rail web to the extreme outer edge of the rail flange, a horizontal inwardly extending base section underlying the rail bottom, and a bend integrally connecting the base section with the said foot flange, said bend springing from the base section and rounding up above the level of the foot flange at the point of connection therewith, affording an inner opening of greater diameter than the most contracted space between the base section and the foot flange.

957,122. WASHBOARD. DAVID STEIN, New York, N. Y. Filed Sept. 11, 1909. Serial No. 517,208.



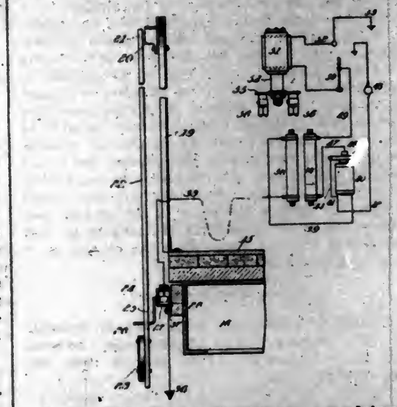
1. A wash-board having a frame formed of a single piece of channel iron bent to form two substantially parallel side members and a transverse top member, a body portion formed of two sections, the lower section formed of corrugated sheet metal with its edges extending into the grooves in said side members and constituting a rubbing surface, and the other section extending from adjacent the upper edge of said corrugated sheet to the transverse member of the frame, and two shelves extending outwardly in opposite directions from adjacent the upper edge of the corrugated sheet, said shelves being formed of a single piece of sheet metal having a fold or plicature inclosing the upper edge of the corrugated sheet, the second-mentioned section of the body having a fold adjacent its lower edge for receiving the first-mentioned fold.

2. A wash-board having a frame including oppositely-disposed side members and a transverse or top member, each of said members having a groove or channel therein, a body formed of two sections, each having its edges disposed within the grooves of said side members and substantially in the same plane, and two shelves formed of a single piece of metal having an upwardly-extending fold or plicature receiving the upper edge of one of said body sections, and the other of said sections having a fold adjacent its lower edge for receiving said first-mentioned fold.

957,123. ELEVATOR SAFETY DEVICE. SAMUEL S. STOLP, Glencoe, Ill., assignor of one-half to William J. C. Kenyon, Chicago, Ill. Filed Oct. 4, 1909. Serial No. 520,958.

1. In combination, an elevator car, a pendulum carried by the same, an electric circuit, a switch controlling said circuit, a mechanical connection from said pendulum to said switch, and means controlled by the circuit for shutting off power from the elevator car.

2. In combination, an elevator car, a pendulum pivotally supported on the same, mechanism adapted to be actuated by said pendulum, and means controlled by said mechanism for shutting off power from the elevator car.



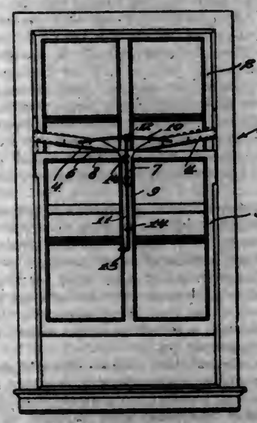
3. In combination, an elevator car, a pendulum carried by the same, an electric circuit, a normally closed switch in said circuit on the car, a mechanical connection from the pendulum to open the switch when the pendulum is deflected, and means controlled by the circuit for shutting off power from the elevator car.

4. In combination, an elevator car, a switch controlling the main electric power circuit for operating said elevator car, a pendulum carried by the car, and means for operating said switch automatically by the deflection of the pendulum.

5. In combination, an elevator car, a pendulum carried thereby, an electric switch in the main power circuit for the elevator, an electromagnet and associated circuit for operating said switch, a relay with a back contact adapted to close the last named circuit, a circuit through the relay magnet, a normally closed switch in said last named circuit on the car, and a mechanical connection from said switch to the pendulum to open the switch when the pendulum is deflected.

[Claim 6 not printed in the Gazette.]

957,124. WINDOW-LOCK. JOHN F. SYDOW, Gatesville, Tex. Filed Sept. 2, 1909. Serial No. 515,782.



1. In a sash fastener, the combination of a spring member comprising a flat metal strip, and an attaching tongue formed integral therewith said strip being adapted to rest upon the upper rail of a sash; and a pair of locking members attached to the ends of said strip.

2. In a sash fastener, the combination of a spring member adapted for attachment to the sash; a pair of locking members carried by the spring member at its opposite ends and adapted to bind against the window frame at their outer ends under the pressure of said spring member; a flexible connection between said locking members; and means for flexing said connection, to release said locking members from engagement with said frame.

3. In a sash fastener, the combination of a flat spring strip provided with a tongue adapted for attachment to the sash; a pair of locking members carried by said strip at its opposite ends and adapted to bind at their outer ends against the window frame under the spring pressure of the strip; a bridge-piece connecting said locking members; and a slidable rod connected to said bridge for flexing the same to release said locking members from engagement with said frame.

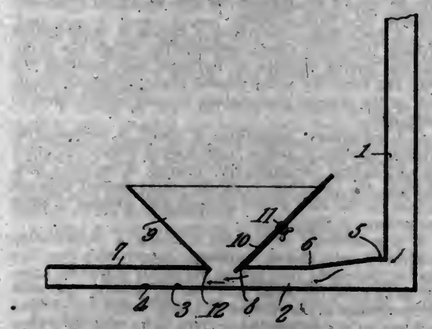
4. A sash fastener comprising in combination a flat spring strip adapted for attachment to the sash and to rest upon the upper rail thereof; and a pair of locking bars carried by said strip at its opposite ends and adapted to bind against the window frame at their outer ends under the spring pressure of said strip.

957,125. VAT DYE. PAUL THOMASCHEWSKI, Vohwinkel, near Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed May 12, 1909, Serial No. 495,475. Renewed Mar. 18, 1910. Serial No. 550,299.

1. The herein described new vat dyestuffs of the anthracene series which are aminoanthraquinones containing substituted benzoyl groups which dyestuffs are, after being dried and pulverized, colored powders practically insoluble in water, soluble in concentrated sulfuric acid with a yellow to red to brown color; giving from orange to red to brown vats with hydrosulfite and caustic soda lye, which vats dye the textile fiber from yellow to red to brown shades, substantially as described.

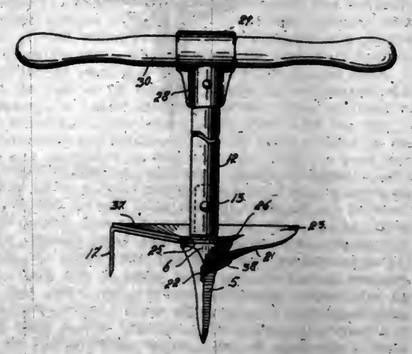
2. The herein described new vat dyestuff of the anthracene series which is the ortho-oxy-benzoyl-1-aminoanthraquinone, which dyestuff is, after being dried and pulverized, a yellow powder which is soluble in pyridin with a yellow color; soluble in concentrated sulfuric acid with an orange color; giving a yellow-red vat with hydrosulfite and caustic soda lye, which vat dyes the textile fiber beautiful greenish-yellow shades, substantially as described.

957,126. PNEUMATIC COTTON-SEED CONVEYER. BENJAMIN W. TILLEY and BENJAMIN F. TILLEY, Bearcreek, La. Filed Sept. 24, 1909. Serial No. 519,384.



A pneumatic conveyer comprising a horizontal air trunk and an approximately vertical air trunk communicating therewith, said horizontal trunk having a lower imperforate side provided with a flat, level, horizontal, plane upper surface, the horizontal trunk for a distance from its point of juncture with the vertical trunk being of the same cross sectional area as the vertical trunk, the top of the horizontal trunk at a point removed from the vertical trunk having a section inclined downwardly away from the vertical trunk whereby the cross sectional area of the horizontal trunk is reduced, the horizontal trunk at its reduced length having in its top an opening, a hopper located over said opening, an adjustable valve located in the hopper against that side thereof toward the vertical trunk and projecting into the horizontal trunk and inclined downwardly away from the vertical trunk, said hopper having at its lower edge opposite the valve a flange which projects into the horizontal trunk and lies approximately parallel to the plane of the valve.

957,127. POST-HOLE DIGGER. RICHARD H. VESEY, Denver, Colo., assignor to Truman E. Stevens, Omaha, Nebr., and Christopher C. Denny, Chicago Heights, Ill. Filed Jan. 16, 1909. Serial No. 472,681.



1. The combination with an operating stem, of two members, one of which is fast on the stem, while the other is loose thereon, both members having their outer free edges highest, and being downwardly inclined therefrom to the stem, the member fast on the stem being provided with a depending, vertically disposed blade, while the loose member is provided with a blade bent downwardly from the body of the member, and having its cutting edge downwardly inclined from its outer extremity, the loose member being provided with a stop which is engaged by the fast member during the forward rotation of the device, whereby the loose member is caused to rotate with the fast member, each member of the device having an area less than that of a circle, and the two members being arranged to overlap to leave a space between them to permit the dirt to pass above the blades during the digging operation, substantially as described.

2. A post-hole digger, comprising a stem whose lower extremity is hollow, a point having a shoulder at its upper extremity, a pin projecting upwardly from said shoulder and entering the hollow lower extremity of the stem, means for securing the said pin to the stem, a digger member, supported by a shoulder with which the point is provided, the said member being downwardly inclined from its outer free edge, which is highest, and secured to the point, whereby it rotates therewith, and provided with a depending cutting blade, mounted to travel in a circle and defining the circumference of the hole, a second correspondingly shaped member, loosely mounted on the stem, and having a transversely disposed downwardly deflected cutting blade, whose cutting edge is transversely inclined from its outer extremity downwardly, one of the members having an off-set which the other member engages when the loose member is at either limit of movement, the fast member having a limited independent travel in either direction, the area of each member being less than that of a circle and the two members being arranged

one above the other, whereby they are adapted to overlap when the device is rearwardly rotated, leaving a space between the members, while, when the stem is given a partial turn in the reverse direction, the said space is closed for the purpose set forth.

957,128. POST-HOLE DIGGER. RICHARD H. VESEY, Denver, Colo., assignor to Truman E. Stevens, Omaha, Nebr., and Christopher C. Denny, Chicago Heights, Ill. Filed Mar. 18, 1908, Serial No. 421,955. Renewed June 21, 1909. Serial No. 503,424.



1. A post-hole digger, comprising a shaft provided at its lower extremity with a centering point, a cutter loosely mounted on the shaft, an actuating closure fast on the shaft, adjacent the cutter, the cutter and closure being dish-shaped, their outer free edges being highest, while the said members slope gradually downwardly the entire distance from their free outer edges to the shaft, and an interlocking connection between the cutter and the actuating device, whereby as the shaft is turned, the cutter is actuated, the cutter being equipped with a blade bent downwardly from its body portion, substantially as described.

2. A post-hole digger, comprising a shaft, a cutter, loosely mounted on the lower part of the shaft and composed of two separated segments, whose outer free edges are highest, the said segments sloping gradually downwardly the entire distance from their free outer edges to the shaft, each segment having a blade downwardly inclined from one of its extremities, and an actuating device fast on the shaft above the cutter, the said device being also composed of two separated segmental members, of such area as to approximately close the spaces between the two members of the cutters, when the shaft is properly adjusted, the said actuating device sloping downwardly from its free outer edge which is highest toward the shaft, and means for interlocking the actuating device, and the cutter, whereby as the shaft and the said device are rotated, the cutter is carried therewith, substantially as described.

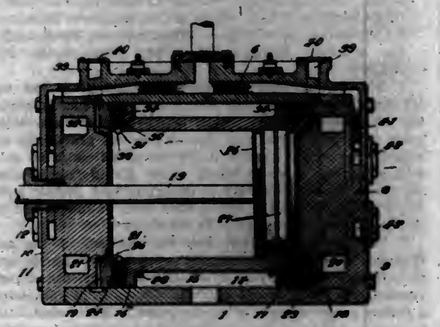
3. A post-hole digger, comprising a shaft, a cutter device, mounted on the lower extremity of the shaft and composed of two segmental members, both members sloping gradually downwardly the entire distance from their free outer edges, to the shaft, each member having a downwardly inclined blade for cutting purposes, a second device mounted on the shaft and also composed of two segmental members, one of the said devices being fast on the shaft and the other device loose thereon, the second device also sloping gradually downwardly from its free outer edge, which is highest, corresponding with the incline of the segmental cutting members, and an interlocking connection between the two devices, whereby the turning of the shaft actuates the cutter, substantially as described.

4. A post-hole digger, comprising a shaft, a cutter loosely mounted on the lower portion of the shaft and composed of two separated segments, an actuating device fast on the shaft above the cutter, the latter being provided with two upwardly projecting stops located on opposite sides of the axis, of the shaft, the said stops being located in the path of the actuating device, when the shaft is rotated in either direction, whereby as the shaft is rotated for digging purposes, the cutter is carried along with the shaft and the actuating device, the latter being allowed a limited movement in a direction the reverse of the movement for cutting purposes, whereby the segments of the actuating device may be brought into register with the spaces between the segments of the cutter, the cutter and actuating device being highest at their outer free edges, from which they slope gradually downwardly the entire distance to the shaft, substantially as described.

5. A post-hole digger, comprising a shaft and cutter mounted on the shaft and composed of a body portion, whose outer free edge is highest, from which the cutter slopes gradually downwardly the entire distance to the shaft, and a cutter blade with which the body portion is provided, the said blade being downwardly inclined from the body portion of the cutter, and also from the outer edge of the blade.

[Claims 6 and 7 not printed in the Gazette.]

957,129. COMPRESSOR. GOVERNOR D. WARREN, Denver, Colo. Filed Dec. 1, 1905, Serial No. 289,803. Renewed Sept. 24, 1909. Serial No. 519,407.



1. A compressor, comprising a casing, a reciprocating cylinder therein, a piston reciprocating within the cylinder, and means at each end of the cylinder for coupling the piston to the cylinder.

2. A compressor, comprising a casing, a reciprocating cylinder therein, a piston reciprocating within the cylinder, and a spring plunger carried by the cylinder for coupling the piston thereto.

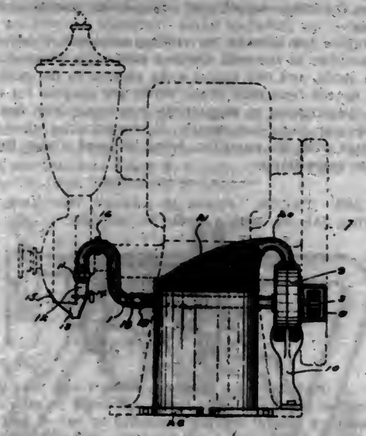
3. A compressor, comprising a casing, a reciprocating cylinder therein, a piston reciprocating within the cylinder and having recesses in its outer face adjacent the ends, and inwardly spring-pressed plungers carried by the ends of the cylinder and adapted to enter said recesses in the piston.

4. A compressor, comprising a casing, a reciprocating cylinder therein, a piston reciprocating within the cylinder and having circumferential grooves in its outer face, adjacent the ends, and inwardly spring-pressed plungers carried by the ends of the cylinder and adapted to enter the grooves in the piston.

5. A compressor, comprising a casing, a reciprocating cylinder therein, and of a diameter considerably less than that of the casing, and having outwardly extending annular flanges at the ends, and bearing against the inner circumference of the cylinder, a piston within the cylinder and having circumferential grooves in its outer face adjacent the ends, and inwardly spring-pressed plungers carried by the annular flanges at the ends of the cylinder and adapted to enter the grooves in the piston.

[Claims 6 to 18 not printed in the Gazette.]

957,130. COFFEE-CHAFF EXTRACTOR. EDGAR T. WEAR, Oakland, Cal., assignor, by mesne assignments, of one-half to Frank F. Wear, San Francisco, Cal. Filed Apr. 6, 1909. Serial No. 488,224.



1. A device of the character described comprising a suction pipe adapted for detachable connection with an outlet of a grinding machine, a discharge pipe receiving the material from the suction pipe, a hopper-shaped screen into which said discharge pipe delivers and which permits the air to escape, a receptacle in communication with said screen, and a screen carried by said receptacle and provided with air-deflecting means.

2. A device of the character described comprising a suction pipe adapted for detachable connection with an outlet of a grinding machine, a discharge pipe communicating with said suction pipe, a screen into which said discharge pipe delivers, a receptacle in communication with said screen, and a screen mounted in said receptacle and provided with air deflectors.

3. A device of the character described comprising a suction pipe adapted for detachable engagement with an outlet of a grinding machine, means for creating a suction in said pipe, a discharge pipe in communication with the suction pipe, a screen connected to said discharge pipe which permits escape of air, a receptacle also connected with said screen, and a second screen carried by said receptacle and provided with air deflectors.

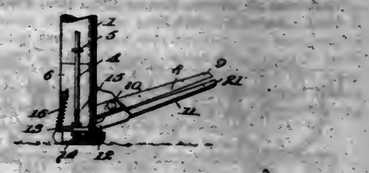
4. A device of the character described comprising a suction pipe adapted for connection with a discharge outlet of a grinding machine, means for creating a suction therein, a discharge pipe in communication with the suction pipe, a hopper-shaped screen having one end connected with said discharge pipe, a receptacle having its upper end surrounded by said hopper-shaped screen, and a screen suspended within said receptacle and provided with air deflectors.

5. A device of the character described comprising a suction pipe, adapted for engagement with an outlet of a grinding machine, means for creating a suction therein, a discharge pipe in communication with the suction pipe, a receptacle, a screening connection between said discharge pipe and said receptacle, and a second screen suspended within said receptacle.

[Claims 6 to 8 not printed in the Gazette.]

957,131. APPARATUS FOR THINNING PLANTS. EMMET F. WEBB, Oayka, Miss. Filed July 21, 1909. Serial No. 508,705.

1. In a device for thinning plants, the combination of a standard; a transversely and upwardly inclined blade so pivoted that when it is swung open it is at substantially a right angle to the standard; a stationary blade coacting therewith and means for swinging said pivoted blade on its pivot, substantially as described.



2. In a device for thinning plants, the combination of a standard; a transversely and upwardly inclined pivoted blade; a stationary blade coacting with said pivoted blade; and means for swinging said pivoted blade on its pivot, whereby when the blades are closed the plant is severed at an oblique angle, substantially as described.
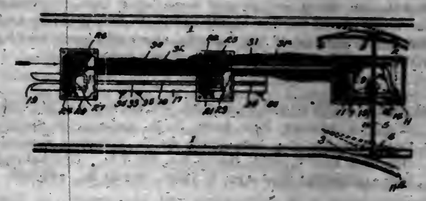
3. In a device for thinning plants, the combination of a standard; a handle therefor; a transversely and upwardly inclined pivoted blade; a stationary blade coacting with said pivoted blade; and means for swinging said pivoted blade on its pivot, whereby when the blades are brought together the plant may be severed at an oblique angle.

4. In a device for thinning plants, the combination of a standard; a handle attached thereto; a lug attached to the standard; a stationary blade rigid with the lug; a transversely and upwardly inclined blade pivoted to the lug and coacting with the stationary blade; a push button; a rod connecting said blade and push button; and a spring for normally holding said blade open away from said stationary blade, substantially as described.

5. In a device for thinning plants, the combination of a standard provided with a handle and a push button; a stationary blade, coacting with the pivoted blade and rigid with said standard and upwardly and transversely inclined with relation to the axis thereof; a blade pivoted to said stationary blade and adapted to be operated by said push button; and a connection between said push button and said blade, substantially as described.

[Claim 6 not printed in the Gazette.]

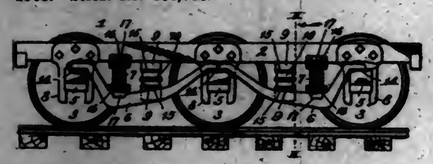
957,132. SWITCH APPARATUS. WILLIAM H. WEBAT, Newnan, Ga. Filed June 11, 1909. Serial No. 501,521.



1. In combination with switch points, oppositely disposed bell cranks connected thereto, a guide element, switch operating shafts each having a crank element connected to one of the bell cranks and having an operating member movable into and out of line with the guide element, and a car-carried tappet movable into and out of operative relation to the guide element to engage and operate either or both of the said operating members of the said shafts.

2. In combination with switch points and operating means therefor including crank elements disposed at a distance apart, a guide slot rail the guide slot of which is in line with said crank elements, cams with which said guide slot rail is provided and a car-carried vertically removable tappet having an element to actuate the said crank members, the said cams operating to move said tappet element upwardly as the same passes said cams.

957,133. INSULATOR FOR RAILWAY-TRUCKS. JAMES M. WOOD, Kansas City, Mo.; Sam B. Strother, administrator of said James M. Wood, deceased, assignor to Katherine G. Smith, Kansas City, Mo. Filed Dec. 22, 1908. Serial No. 468,736.



In a railway truck, the combination of a journal-box, a journal mounted therein, a bearing for said journal, a wedge for securing said bearing in position, and an inverted V-shaped insulator interposed between said bearing and the wedge.

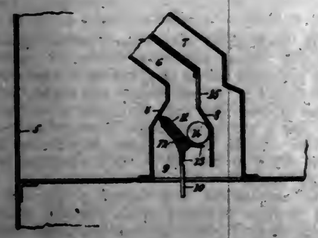
957,134. CANDELABRUM. CHARLES YOOS, New York, N. Y., assignor to Bensiger Brothers, New York, N. Y., a Corporation of New York. Filed June 15, 1909. Serial No. 502,195.



1. A candelabrum having a frame, a plurality of candle holders having saddles attached to said frame, said candle holders having sockets overhanging said frame, and bobaches having cylindrical necks received in said sockets, having a substantially conical form above said sockets and having a composition of a high thermal conductivity, the lower ends of said necks being open to permit the unconsumed portion of the candle to fall through.

2. A candelabrum having a receptacle, a plurality of posts extending upwardly therefrom, a ring substantially concentric with the receptacle and supported upon said posts, a plurality of candle holders, each having a saddle secured to said ring, a socket overhanging said ring, and a bobache having a cylindrical neck received in said socket, the lower end of said neck being open to permit the unconsumed portion of the candle to fall through, and the upper portion of the bobache above the neck having a substantially conical form above the socket.

957,135. COIN-DIRECTOR FOR VENDING-MACHINES. WILLIAM ASBURY, New York, N. Y., assignor to Square Deal Machine Co., New York, N. Y. Original application filed May 9, 1908, Serial No. 431,779. Divided and this application filed Apr. 1, 1909. Serial No. 487,139.



1. In a coin director for vending machines, a coin chute, the walls of which diverge downwardly for a distance, a guide arm pivoted in the coin chute with its terminal disposed in the diverging portion of the coin chute, two depending tappet arms secured to the said arm and spaced from each other, and a partition in the coin chute disposed in the path of the tappet arms, with which the tappet arms are adapted for engaging to support the arm, one tappet arm being spaced from the wall of the coin chute when the other tappet arm engages the partition respectively.

2. In a coin director for vending machines, a coin chute, a partition in the coin chute, a guide arm pivoted in the coin chute, and two tappet arms secured to the guide arm and spaced from each other, which are adapted for engaging the partition to support the arm away from the walls of the coin chute respectively, the tappet arms when not in contact with the partition, being disposed within the coin chute respectively.

957,136. TRUCK. FRANK M. ASHLEY, New York, N. Y. Filed July 30, 1909. Serial No. 510,358.



1. A truck having a platform, a front and rear bracket connected thereto, a cross-frame connected to each of said brackets, a pivotal bearing supported by one of said cross-frames and a spring carried by the adjacent bracket to effect a relative yielding movement of said bracket and cross-frame.

2. A truck having a platform, a front and rear bracket connected thereto, a cross-frame connected to each of said brackets, a box bearing supported by one of said cross-frames, and a spring carried by the adjacent bracket to effect a relative yielding movement of said bracket and cross-frame.

3. A truck having a platform, a front and rear bracket formed of sheet metal connected thereto, a cross-frame formed of sheet metal connected to each of said brackets, a box bearing supported by one of said cross-frames, a spring carried by the adjacent bracket to effect a relative yielding movement of said bracket and cross frame, and a guide adapted to limit the relative yielding movement.

4. A truck having a platform, a front and rear bracket connected thereto, a cross frame connected to each of said brackets, two side frames connecting each of said cross-frames and having boxes provided with annular bearings, and axles having bearing surfaces adapted to fit said annular bearings.

5. A truck having a platform, a front and rear bracket formed of sheet metal connected thereto, a cross frame connected to each of said brackets, two side frames formed of sheet metal and connecting each of said cross-frames and having boxes connected rigidly to said side frames and provided with annular bearings, and axles having bearing surfaces adapted to fit said annular bearings.

[Claim 6 not printed in the Gazette.]

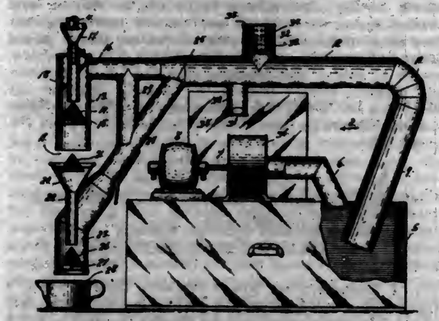
957,137. CONTAINER FOR FOOD PRODUCTS. LEO H. BAEKELAND, Yonkers, N. Y. Filed Oct. 8, 1909. Serial No. 521,890.



1. As a new article of manufacture, a container for food-products consisting of a metallic receptacle provided with an interior protective layer including an infusible, insoluble condensation product of phenols and formaldehyde.

2. As a new article of manufacture, a container for food products consisting of a metallic receptacle provided with an interior protective layer including an infusible, insoluble condensation product of phenols and formaldehyde in conjunction with suitable fillers.

957,138. COFFEE-CLEANING APPARATUS. WILLIAM D. BALCOM, Greeley, Colo., assignor of one-half to Nella C. Balcom, Greeley, Colo., one-fourth to John W. Morey, and one-fourth to Edgar E. Sellers, Denver, Colo. Filed June 21, 1909. Serial No. 503,360.



1. In coffee cleaning apparatus, the combination of a conduit member, containing a cone-shaped spreader perforated to permit the passage of coffee therethrough, suction producing means connected with the conduit, above the spreader and means connected with the upper part of the conduit for feeding the material to be cleaned thereinto, and discharging it upon the spreader, the lower extremity of the conduit being open.

2. The combination of a vertically disposed coffee cleaning conduit member, open at its lower extremity, suction producing apparatus in communication with its upper extremity, a spreader located therein and perforated to permit the passage of coffee, means for feeding the material to be cleaned into the said conduit, and a second conduit member, equipped with a spreader also perforated to permit the passage of coffee and located below the suction influence acting through the first named conduit for the purpose set forth.

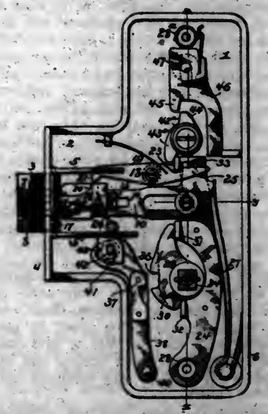
3. In apparatus of the class described, the combination of two coffee cleaning conduit members, vertically arranged and in alinement with each other, a spreader located in each conduit member, suction producing apparatus communicating with the individual conduit members, above the spreaders in each, the conduit members being separated by a dead air space and a third member located in the dead air space and forming communication between the first named conduit members for the purpose set forth.

4. In apparatus of the class described, the combination of two coffee cleaning conduit members, each equipped with a cone shaped spreader perforated to permit the passage of coffee, suction producing apparatus communicating with both conduit members, the suction influence, however being weaker upon the lower member than upon the upper member and a conduit member interposed between the first named conduit members and forming a communication for the passage of the material to be cleaned from the upper to the lower member, the third conduit being located in the dead air space between the two members and equipped with a spreader upon which the material falls after passing beyond the suction influence of the uppermost member.

5. In coffee cleaning apparatus, the combination of two coffee cleaning conduit members, a cone-shaped spreader located in each conduit member and perforated to permit the passage of coffe, the said conduit members being separated by a dead air space, the two members being vertically disposed and in alinement, the one with the other, a suction producing apparatus communicating with both conduit members above their respective spreaders, the distance between the suction source and the lower conduit member being greater than that between the same source and the upper conduit member, and a third conduit member located in the dead air space between the two members and forming a passage way for the material falling from the upper member, the third conduit member having a spreader device for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

957,139. COMBINED RIM AND MORTISE LOCK. CHARLES A. BERRY, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Nov. 1, 1905. Serial No. 285,465.



1. The combination with a latch bolt, key and outer knob mechanisms for retracting said bolt and means for dogging the key and outer knob mechanisms, of a deadlocking tumbler pivoted to the stem of the bolt, and a sliding plate also carried by the bolt and adapted when the door is open to engage the deadlocking tumbler and hold it in an inoperative position, and to release said tumbler when the door is closed.

2. The combination with a latch bolt, and outer knob a device for dogging said bolt when the latter is in its locking position, and a key mechanism actuated from the outside of the door, of deadlocking mechanism whereby the outer knob may be deadlocked, and additional deadlocking mechanism for both the key and outer knob, and means on the inside of the door for actuating said key and outer knob deadlocking mechanism.

3. The combination with a latch bolt, knobs mechanism and an independent key mechanism, of a lever common to the knobs and key mechanism for retracting the bolt and means for dogging said lever against the knobs and key mechanism, the said latch bolt when thus dogged being free to move when the door is open, so as to permit the door to be closed, without first freeing the knobs.

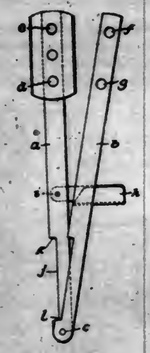
4. The combination with a pivoted latch bolt and its sliding stem, of a lever pivoted to and carried by said sliding stem, longitudinally sliding means carried by said bolt and actuated by engagement with the strike plate, for holding said dead locking lever in an inoperative position when the door is open, and knob actuated mechanism also engaging said dead locking lever for releasing same when the knob is turned.

5. The combination with a face or escutcheon plate having an edge flange extending wholly around same, of a latch bolt, a lever for retracting same, the said latch bolt having a loose connection with the lever whereby it may be moved independently of said lever, knob and key

mechanisms engaging said lever and adapted to move same in a direction to retract the bolt and means for deadlocking the knob and key mechanisms, all of said movable parts being assembled on and carried by the escutcheon plate.

[Claims 6 to 9 not printed in the Gazette.]

957,140. RAZOR-STROPPER. JOHN G. BESTGEN, Quincy, Mass., assignor to King of All Stropper Company, Boston, Mass., a Corporation of Massachusetts. Filed June 21, 1909. Serial No. 503,270.



1. A device of the class described, comprising clamping members adapted at each of their ends to clamp and position a blade flatwise between them and hinged together at their ends to swing apart in planes substantially parallel with the flat face of said blade, and locking means intermediate said hinged and clamping ends of said device for locking said members in clamping position.

2. A device of the class described, comprising clamping members provided with blade holding and positioning means at each end thereof and means for locking a blade between said clamping members in different positions.

3. A razor blade stropper, comprising blade holding and positioning means constructed and adapted to engage a razor blade between its opposite edges only to present the blade at the proper angle to the strop for sharpening, leaving both edges exposed, and means intermediate the ends of the clamping members to lock the same to hold the blade in different positions.

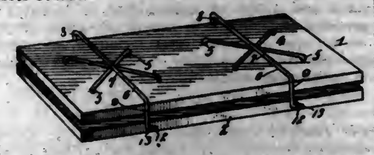
4. A razor blade stropper comprising, in combination, blade clamping members hinged together at one of their ends and adapted at their opposite ends to clamp between them a blade to be sharpened, a locking member coöperating with said clamping members intermediate their lengths to lock the same in blade clamping position, and means including said locking member as an element for holding and positioning a blade to be sharpened at or near the hinged ends of said clamping members.

5. A razor blade stropper comprising, in combination, separable blade clamping members, means at one of the ends of said members to hold a blade to be sharpened, locking means to lock said clamping members in blade clamping position, and means including said locking members as an element for locking and positioning an additional blade to be sharpened at or in the vicinity of the opposite ends of said clamping members.

[Claims 6 to 12 not printed in the Gazette.]

957,141. GARMENT-PRESSER. JOSEPH BISCHOW, Boston, Mass. Filed July 16, 1909. Serial No. 508,022.

1. A clothes pressing device comprising a pair of presser boards, one having crossed spring wires on its outer side, bails to bear on the said crossed spring wires and means to detachably connect the bails to one of the presser boards and cause the bails to coact with the crossed spring wires to press an article between said presser boards.



2. A clothes presser comprising a pair of presser boards one having crossed spring wires on its outer side with their ends attached thereto and bails detachably connected to the other presser board and to bear on said crossed spring wires, secure said presser boards together and cause them to exert pressure on an article placed between them.

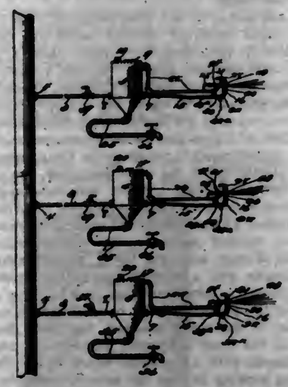
957,142. LOCOMOTIVE ASH-PAN. ANDREW J. BRODHEAD, Greenville, Pa. Filed Nov. 16, 1908. Serial No. 462,759.



1. A locomotive ash pan, comprising tapered walls, a ring detachably carried thereby near their lower edges, said ring having upon opposite sides bearing recesses, a series of sections, V-shaped in cross section, having journals mounted in said recesses and providing transverse spaces between the sections, means for retaining the journals of the sections in the recesses, and means for operating all sections in unison.

2. An ash pan having a sectional tilting bottom, each section of which comprises a body V-shaped in cross section having a vertical grid and two oppositely extending grids at each end, and a journal stud into which all grids converge and form a support for each end of the section, said grids also forming two openings in the ends of each section, as and for the purpose set forth.

957,143. BURNER. ALBERT C. BUTLER, Mineral Wells, Tex. Filed Nov. 24, 1909. Serial No. 529,804.



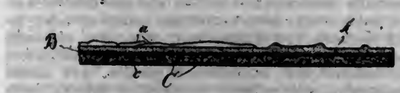
1. In a hydrocarbon burner apparatus, an oil tank, a vertical pipe within the oil tank having an opening in its upper end, an air supply pipe connected to the tank and to the lower end of the vertical pipe, an oil delivering pipe connected to the lower part of the tank, an air delivering pipe connected to the upper end of the tank, and a burner having independent connections with the air and oil delivering pipes.

2. In a hydro-carbon burner apparatus, an oil tank having a T-shaped conduit arranged therein comprising a vertical portion and two lateral horizontal portions, means for connecting said portions, the vertical portion having an opening in its upper end for the discharge of air and one of the lateral portions having an oil inlet opening, and a plug closing communication between said lateral portions and the other lateral portion.

3. In a hydro-carbon burner apparatus, an oil tank having a T-shaped conduit arranged therein whereby air may be conveyed through the tank and projected above the level of the oil, said T-shaped conduit comprising a vertical portion and two lateral horizontal portions, means for connecting said portions together, one of said horizontal lateral portions having an opening therein through which the oil is forced to the burner, the two horizontal portions having arranged between them a plug to deflect the incoming air into the vertical portion whereby the same may reach the space above the level of the oil.

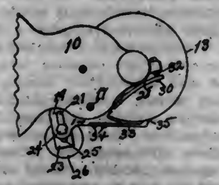
4. In a hydro-carbon burner apparatus, an oil tank having a T-shaped conduit arranged therein whereby air may be conveyed through the tank and projected above the level of the oil, said T-shaped conduit comprising a vertical portion and two lateral horizontal portions, means for connecting said portions together, one of said horizontal lateral portions having an opening therein through which the oil is forced to the burner, the two horizontal portions having arranged between them a plug to deflect the incoming air into the vertical portion whereby the same may reach the space above the level of the oil, the burner proper having needle valves for the control of the oil and air, said burner proper having conduit connections with the oil supply and the air supply above the level of the oil, and means for conveying air to the tank.

957,144. PLASTER-BOARD. ERLING BYE and KRISTIAN BUER, Brooklyn, N. Y. Filed Sept. 16, 1909. Serial No. 518,038.



A hereindescribed plaster board comprising a layer of plaster of paris, a strip of loose open mesh burlap applied thereto while the plaster of paris is yet plastic, a layer of loose cocoanut fiber applied to the burlap, with whose meshes and fibers the cocoanut fibers commingle, and a second layer of plaster of paris which thoroughly impregnates the meshes and fibers of the burlap and the other fibers applied thereto, substantially as set forth.

957,145. LAWN-MOWER. GEORGE A. CULVER, Clarinda, Iowa. Filed Nov. 2, 1908. Serial No. 460,585.



1. In a lawn mower, housings, a reel-shaft mounted on and connecting said housings, a knife-bar arranged parallel with and for oscillation to and from said reel-shaft, vertically slotted arms projecting rearwardly from end portions of said knife-bar, bearing-blocks mounted on and adjustable vertically of said slotted arms, a roller carried by said blocks, a knife on said bar, arms extending forwardly and upwardly from end portions of said bar, and adjusting bolts mounted vertically in forward end portions of said housings and engaging the latter arms.

2. In a lawn mower, housings, a reel shaft mounted on and connecting said housings, a knife bar mounted on and connecting said housings parallel with the reel shaft, slotted arms on and extending rearwardly from said knife bar, a roller journaled on and adjustable vertically of said slotted arms, arms on and extending forwardly from said knife bar, adjusting bolts in the housings and engaging said forwardly-extending arms, and a knife on said bar parallel with the reel shaft.

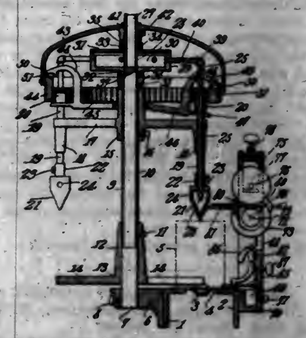
3. In a lawn mower, housings, a reel shaft mounted on and connecting forward end portions of said housings, a knife bar journaled on said housings parallel with and at the rear of said reel shaft, a roller adjustably mounted on said knife bar at the rear of the axis thereof, a knife on said bar parallel with the reel shaft, arms extending forwardly from ends of the knife bar and beneath the forward ends of the housings, and adjusting devices connecting the forward ends of said arms and the housings.

4. In a lawn mower, housings, a reel shaft mounted on and connecting forward end portions of said housings, a knife bar extending transversely of said housings parallel with and at the rear of said reel shaft, ears on end portions of said knife bar and journaled to said housings, arms extending rearwardly from said knife bar and formed with vertical slots, screws vertically adjustable in and extending through the slots of the arms, bearing blocks on said screws between the arms, a shaft journaled in said bearing blocks below the screws, a roller on said shaft, arms extending forward from ends of the knife bar and beneath the forward ends of the housings, adjusting devices connecting the forward ends of said arms and housings, and a knife on said bar parallel with the reel shaft.

957,146. VAT DYE. JOSEPH DEINET, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed May 15, 1909, Serial No. 496,110. Renewed Mar. 18, 1910. Serial No. 550,293.

The herein described new vat dyestuff of the anthracene series which is the 1-benzoyl-amino-4-oxy-anthraquinone, which dyestuff is, after being dried and pulverized, a red powder which is soluble in pyridin with a yellow-red color; soluble in concentrated sulfuric acid with a red color; giving a yellow-red vat with hydrosulfite and caustic soda lye, which vat dyes the textile fiber bluish-red shades, substantially as described.

957,147. CAN-VENT-SOLDERING MACHINE. ELMER C. DICKEY, Kokomo, Ind. Filed Mar. 19, 1909. Serial No. 484,492.



1. In a can vent soldering machine, a circular series of soldering irons or coppers having both orbital and axial rotation, a circular track having at one point a constantly active depression, means coacting with the track for main-

taining the soldering coppers in an elevated position except at the depression in the track, a conveyer for cans having a straight path past the series of coppers tangent to the path of the points of the latter coincident with the depression in the track, and means actuated by cans upon the conveyer for causing rotation of the series of coppers.

2. In a can vent soldering machine, a circular series of soldering irons or coppers having both orbital and axial rotation, a circular track having at one point a constantly active depression and provided with a circular series of gear teeth on the inner face, means coacting with said track for maintaining the soldering coppers in an elevated position except at the depression in the track, pinions, one for each soldering copper, said pinions being connected positively to each copper in constant engagement with the circular series of gear teeth or rack, a conveyer for cans having a straight path past the series of coppers and tangent to the path of the points of the latter coincident with the depression in the track, and means actuated by the cans upon the conveyer for causing the rotation of the series of coppers.

3. In a can vent soldering machine, a circular series of soldering irons or coppers having both orbital and axial rotation, a circular track having at one point a constantly active depression and at another point another depression, a manually operable gate for normally maintaining the second depression in the track inactive, means coacting with the track for maintaining the soldering coppers in an elevated position except at the active depression in the track and responsive to the second named depression when the latter is active, a conveyer for cans having a straight path past the series of coppers and tangent to the path of the points of the latter coincident with the depression in the track which is constantly active, and means actuated by the cans upon the conveyer for causing the rotation of the series of coppers.

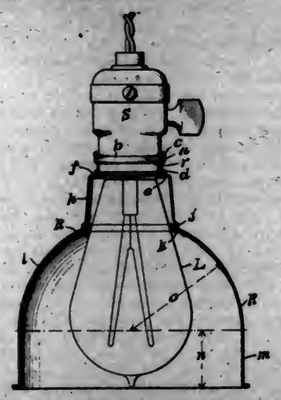
4. In a can vent soldering machine, a circular series of soldering irons or coppers having both orbital and axial rotation, a circular track having at one point a constantly active depression, means coacting with the track for maintaining the soldering coppers in an elevated position except at the depression in the track, a conveyer for cans having a straight path past the series of coppers and tangent to the path of the points of the latter coincident with the depression in the track, means actuated by the cans upon the conveyer for causing rotation of the series of coppers, and means also actuated by the cans upon the conveyer for causing the feeding of solder to the soldering coppers.

5. In a can vent soldering machine, a circular series of soldering irons or coppers having both orbital and axial rotation, a circular track having at one point a constantly active depression and at another point a normally inactive depression, manually operable means for maintaining the second named depression in the normally inactive condition and capable of rendering the said second named depression active, means coacting with the track for maintaining the soldering coppers in an elevated position except at the depression in the track which is normally active and also responsive to the second named depression when the latter is active, means coincident with the second named depression for applying cleaning fluid to the soldering coppers, a conveyer for the cans having a straight path past the series of coppers and tangent to the path of the points of the latter coincident with the first named depression in the track, means actuated by the cans upon the conveyer for causing the rotation of the series of coppers, and means actuated by the cans for feeding solder to the coppers.

[Claims 6 to 11 not printed in the Gazette.]

957,148. REFLECTOR AND ATTACHMENT THEREFOR. HENRY D'OLIER, Jr., Rutherford, N. J. Filed Apr. 15, 1909. Serial No. 490,007.

1. The combination with an electric incandescent lamp, of a sheet metal reflector comprising a substantially hemispherical portion with a substantially cylindrical extension integral therewith, the interior surface of said substantially hemispherical portion and the interior surface of said substantially cylindrical extension being reflecting surfaces, and means for supporting said reflector in operative relation with respect to said lamp, the lamp filament having a considerable length or extent as compared with the reflector dimensions.



2. As an article of manufacture, a sheet metal reflector for electric incandescent lamps comprising a substantially hemispherical portion with a substantially cylindrical extension integral therewith, the interior surface of said substantially hemispherical portion and the interior surface of said substantially cylindrical extension being reflecting surfaces, said cylindrical extension having a length substantially equal to one-half the radius of said hemispherical portion.

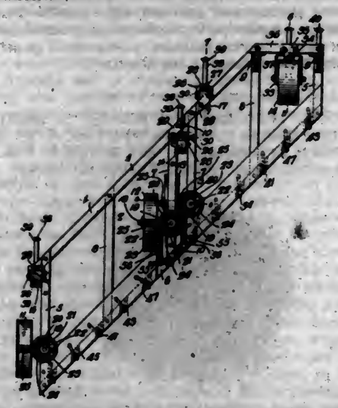
3. The combination with an electric incandescent lamp, of a sheet metal reflector comprising a substantially hemispherical portion having a substantially cylindrical extension integral therewith, the interior surface of said substantially hemispherical portion and the interior surface of said substantially cylindrical extension being reflecting surfaces, the substantially cylindrical extension having a length approximately equal to one-half the radius of the substantially hemispherical portion, and means for supporting said reflector in operative relation with respect to said lamp, the lamp filament having a considerable length or extent as compared with the reflector dimensions.

4. The combination with an electric incandescent lamp, of a sheet metal reflector attached thereto, the lamp axis being at an angle with the reflector axis, said reflector comprising a substantially hemispherical portion and a substantially cylindrical extension integral therewith, the interior surface of said substantially hemispherical portion and the interior surface of said substantially cylindrical extension being reflecting surfaces, the lamp filament having a considerable length or extent as compared with the reflector dimensions.

5. The combination with a lamp socket, of an electric incandescent lamp supported thereby, a sheet metal reflector having a substantially hemispherical portion and a substantially cylindrical extension integral therewith, the surface of said substantially hemispherical portion and the surface of said substantially cylindrical extension being reflecting surfaces, the lamp filament having a considerable length or extent as compared with the reflector dimensions, and means for rotatably supporting said reflector upon said socket with the axis of said lamp at an angle with the axis of said reflector.

957,149. GANG-PLOW. DAVID J. ELLIOTT, Monte Vista, Colo. Filed Sept. 8, 1909. Serial No. 516,792.

1. A gang plow comprising a rhomboid frame composed of pivotally connected sections having front and rear diagonal bars, plows supported by the rear diagonal bars of the frame sections, supporting wheels adjustably connected with the rear portions of the frame sections, caster wheels adjustably connected with the front portions of the frame sections, and draft devices connected with said caster wheels.



2. A gang plow comprising a rhomboid frame composed of pivotally connected sections having front and rear diagonal bars, main supporting wheels adjustably connected with the inner rear corner portions of the sections and outer rear corner portion of one of the sections, a main caster wheel adjustably connected with the front outer corner portion of the other section, auxiliary caster wheels adjustably connected with the inner front corner portion of said section, and the inner and outer front corner portions of the other section, plows carried by the rear diagonal bars of the frame sections, and draft devices connected with said caster wheels.

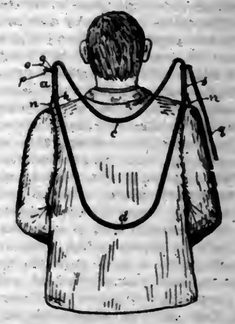
3. A gang plow comprising a rhomboid frame composed of pivotally connected sections having front and rear diagonal bars, main supporting wheels adjustably connected with the inner rear corner portions of the sections and outer rear corner portion of one of the sections, a main caster wheel adjustably connected with the front outer corner portion of the other section, auxiliary caster wheels adjustably connected with the inner front corner portion of said section, and the inner and outer front corner portions of the other section, plows carried by the rear diagonal bars of the frame sections, draft devices connected with said caster wheels, and a draft connection upon the frame section carrying said main caster wheel and arranged outwardly beyond the latter.

4. A gang plow comprising a rhomboid frame embodying longitudinally divided pivotally connected sections having front and rear diagonal bars, plows supported by the rear diagonal bars of said sections, carrying wheels supporting the rear portions of the frame sections, screw shafts for adjusting the same, caster wheels upon the front portions of the frame sections and adjustably connected therewith, and draft devices carried by one of said frame sections and said caster wheels.

957,150. TAILOR'S LEVEL. ANTON ERICKSON, Portland, Oreg. Filed July 12, 1909. Serial No. 507,254.

1. A leveling device comprising two sight tubes, flexible tubes connecting the top ends and the bottom ends of the two sight tubes with each other, means securing the flexible tube ends removably in place on the top and bottom ends of the sight tubes, and a chalk-holder on one or both of the tubes.

2. A leveling device comprising two sight tubes, flexible tubes connecting the top ends and the bottom ends of the two sight tubes with each other, means securing the flexible tube ends removably in place on the top and bottom ends of the sight tubes, a pin provided on one or both of the sight tubes and adapted to fasten on a garment, and a chalk holder on one or both of the tubes.



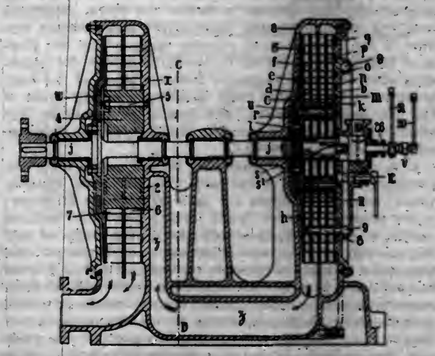
3. A leveling device comprising two sight tubes, a foot on each of the tubes, flexible tubes connecting the top ends and the bottom ends of the two sight tubes with each other, means securing the flexible tube ends removably in place on the top and bottom ends of the sight tubes, a pin provided on one or both of the sight tubes and adapted to fasten on a garment, and a chalk holder on one or both of the tubes.

4. A leveling device comprising two sight tubes each consisting of a tubular metal case and a glass tube therein contained, a flexible tube connecting the top ends and a second flexible tube connecting the bottom ends of the glass tubes of the two sight tubes with each other, the ends of the metal case having exterior threads, caps on said threaded case ends, the heads of said caps being perforated and adapted to clamp in place the flexible tube ends on the ends of the glass tube within the case, and a chalk-holder on one of the caps.

5. A leveling device comprising two sight tubes each consisting of a tubular metal case and a glass tube therein contained, a foot on each of the tubes, a flexible tube connecting the top ends and a second flexible tube connecting the bottom ends of the glass tubes of the two sight tubes with each other, the ends of the metal case having exterior threads, caps on said threaded case ends, the heads of said caps being perforated and adapted to clamp in place the flexible tube ends on the ends of the glass tube within the case, and a chalk-holder on one of the caps.

[Claim 6 not printed in the Gazette.]

957,151. STEAM-TURBINE. THOMAS FALVEY, London, England. Filed Feb. 28, 1910. Serial No. 546,274.



1. A steam turbine comprising a high pressure turbine provided with sets of forward and backward running

vanes; exhaust chambers for each of said sets of vanes; a low pressure turbine; pipes leading from said exhaust chambers to openings in a body part in the center of said low pressure turbine; sets of forward and backward running vanes in said low pressure turbine; peripheral grooves in said body part in communication with said openings respectively, and adapted to deliver steam exhausted from the forward running vanes of the high pressure turbine to the inner forward running vanes of the low pressure turbine and adapted to similarly deliver the steam exhausted from the backward running vanes of the high pressure turbine to the inner backward running vanes of the low pressure turbine, substantially as set forth.

2. A steam turbine comprising a high pressure turbine provided with sets of forward and backward running vanes; exhaust chambers for each of said sets of vanes; a low pressure turbine; pipes leading from said exhaust chambers to openings in a body part in the center of said low pressure turbine; sets of forward and backward running vanes in said low pressure turbine; peripheral grooves in said body part in communication with said openings respectively, and adapted to deliver the steam exhausted from the forward running vanes of the high pressure turbine to the inner forward running vanes of the low pressure turbine and adapted to similarly deliver the steam exhausted from the backward running vanes of the high pressure turbine to the inner backward running vanes of the low pressure turbine, and means for admitting live steam to the outer series of vanes of the high pressure turbine, substantially as set forth.

3. A steam turbine comprising a high pressure turbine provided with sets of forward and backward running vanes; exhaust chambers for each of said sets of vanes; a low pressure turbine; pipes leading from said exhaust chambers to openings in a body part in the center of said low pressure turbine; sets of forward and backward running vanes in said low pressure turbine; peripheral grooves in said body part in communication with said openings respectively, and adapted to deliver the steam exhausted from the forward running vanes of the high pressure turbine to the inner forward running vanes of the low pressure turbine and adapted to similarly deliver the steam exhausted from the backward running vanes of the high pressure turbine to the inner backward running vanes of the low pressure turbine, and means for admitting live steam to pipes adapted to deliver the exhaust steam from the high pressure turbine to the low pressure turbine, substantially as set forth.

4. A steam turbine comprising a high pressure turbine provided with sets of forward and backward running vanes; exhaust chambers for each of said sets of vanes; a low pressure turbine; pipes leading from said exhaust chambers to openings in a body part of the center of said low pressure turbine; sets of forward and backward running vanes in said low pressure turbine; peripheral grooves in said body part in communication with said openings respectively, and adapted to deliver the steam exhausted from the forward running vanes of the high pressure turbine to the inner forward running vanes of the low pressure turbine and adapted to similarly deliver the steam exhausted from the backward running vanes of the high pressure turbine to the inner backward running vanes of the low pressure turbine, and means for admitting live steam to the series of vanes in the low pressure turbine, substantially as set forth.

5. A steam turbine comprising a high pressure turbine provided with sets of forward and backward running vanes; exhaust chambers for each of said sets of vanes; a low pressure turbine; pipes leading from said exhaust chambers to openings in a body part in the center of said low pressure turbine; sets of forward and backward running vanes in said low pressure turbine; peripheral grooves in said body part in communication with said openings respectively and adapted to deliver the steam exhausted from the forward running vanes of the high pressure turbine to the inner forward running vanes of the low pressure turbine and adapted to similarly deliver the steam exhausted from the backward running vanes of the high pressure turbine to the inner backward running vanes of the low pressure turbine; a regulating valve comprising a body-portion having in its thickness outwardly curving passages made of a form and direction adapted to cause the steam to strike the first series of moving vanes, and a tubular member adapted to be partially revolved in said body portion and provided with suitable ports for establishing communication between the steam supply and said outwardly curving passages, substantially as set forth.

[Claim 6 not printed in the Gazette.]

957,152. PROCESS FOR MAKING A RESILIENT FIBER. SAMUEL A. FLOWER, New York, N. Y.; Charles E. Flower administrator of said Samuel A. Flower, deceased. Filed Oct. 10, 1907. Serial No. 396,841.



1. The process of making a resilient fiber consisting in treating a vegetable fiber to an alkali to make it resilient, neutralizing any excess of alkali present by an acid solution, then setting the fiber in a bath of aniline, and finally drying the product.

2. The process of making a resilient fiber consisting in treating coir fiber to an alkali to make it resilient, next neutralizing any excess of alkali present by an acid solution, then setting it in a bath of aniline and finally drying the product.

3. The process of making resilient fiber consisting in treating a vegetable fiber in a bath of caustic soda to make it resilient, next neutralizing any excess of alkali present in a solution of acetic acid, then setting the fiber in a bath of aniline and finally drying the product.

4. The process of making a resilient fiber for lubricating packing consisting in treating coir fiber in a bath of caustic soda to make the fiber resilient, neutralizing any excess of alkali present in a bath of acetic acid, then setting the fiber in a bath of aniline and finally drying the product.

957,153. PIGMENT WITH BASIS OF CALCIUM CYANAMID AND PROCESS OF MAKING SAME. ROBERTO FULLONI, Rome, Italy. Filed Mar. 14, 1910. Serial No. 549,342.

1. A basic material for paints consisting of a salt of cyanamid in combination with a metallic salt.

2. In a paint, the combination of a vehicle and a salt of cyanamid.

3. In a paint, the combination of a vehicle, a salt of cyanamid and a metallic salt.

4. In a paint, the combination of a vehicle, calcium cyanamid and a metallic salt.

5. In a paint, the combination of a vehicle, calcium cyanamid and a sulfate of a metal.

[Claims 6 to 10 not printed in the Gazette.]

957,154. EMBROIDERY-STILETTO. BENNO GALLINEK, New York, N. Y. Filed Oct. 11, 1909. Serial No. 522,103.



1. A blade having a piercing end adapted to be thrust into the material to be operated upon and also having a shank, all in combination with a gage device movably mounted on said shank and having a stop portion at one end to limit the depth of the thrust of said piercing end, said gage device having a spiral way and said shank having a lateral projection extending into said spiral way, whereby a rotation of said gage device relatively to said shank will effect a longitudinal movement of said stop portion along said piercing end to adjust its depth of thrust.

2. In an embroidery stiletto, a shank having a tapered fabric piercing end; a rigid gage device having a fabric engaging stop portion at one end and mounted on said shank, said gage device and shank having provisions for relative screw engagement whereby a relative manual rotation will adjust the position of said stop portion relatively to said fabric piercing end, the mounting of said gage device on said shank and the provisions for its relative screw engagement therewith being capable of preventing movement of said stop portion from its adjusted position during the fabric piercing operations of the stiletto.

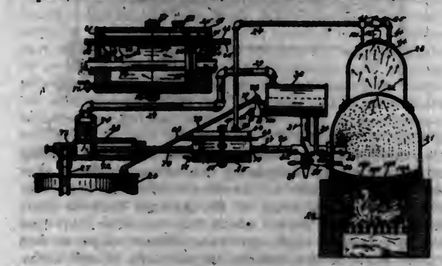
3. In an embroidery stiletto, a shank having a tapered fabric piercing end; a gage device comprising a rigid wire spiral of open convolutions encircling and frictionally engaging said shank and having a stop portion for said fabric piercing end; and a lateral projection from said shank extending between adjacent convolutions whereby a relative rotation of said shank and gage device will cause a relative longitudinal movement of the same, to adjust said stop portion along said tapered fabric piercing end and to maintain it in adjusted position when engaging fabric so as to limit the depth of thrust of said end.

4. In an embroidery stiletto, a shank having a tapered fabric piercing end; a gage device comprising a rigid wire spiral of open convolutions encircling said shank and having a stop portion at one end; and a lateral projection from said shank extending between adjacent convolutions whereby a relative rotation of said shank and gage device will cause a relative longitudinal movement of the same to adjust the position of said stop portion, said lateral projection having provisions for clamping said gage device in adjusted position.

5. In an embroidery stiletto, a shank having a tapered fabric piercing end; a rigid gage device comprising a wire spiral of open convolutions mounted on said shank and having relative screw engagement therewith, said gage device having a stop portion adjustable along said fabric piercing end; and a clamping thumb screw having a stem passing between adjacent convolutions of said gage device and engaging the body of said shank whereby said gage device may be set in adjusted position by screwing said thumb screw home.

[Claim 6 not printed in the Gazette.]

957,155. STEAM-BOILER. WILLIAM M. GENTLE, Southport, Ind. Filed Jan. 10, 1907. Serial No. 351,596.



1. The combination of a steam boiler, a pumping cylinder connected with the boiler, a pair of separated pistons in said cylinder, a yielding connection between the pistons so that there is a space normally between said pistons, a water pipe entering the cylinder between the pistons, and means for actuating the piston remote from the outlet of the cylinder, whereby the back pressure from the boiler against the next piston in said cylinder will correspondingly diminish the space between the pistons.

2. A steam boiler, a water-tank, a tube extending into the boiler, the portion thereof within the boiler being perforated to form a spraying nozzle, a conduit from the water-tank to said tube, a pair of pistons and piston rods operable in said tube, a yielding connection between the piston rods of the two pistons that holds one piston normally a certain distance in advance of the other, and a stop to limit the forward movement of the advancing piston, whereby the chamber between the two pistons receives a certain volume of water, and it is conveyed by said pistons to the nozzle and discharges after the movement of the advancing piston is stopped.

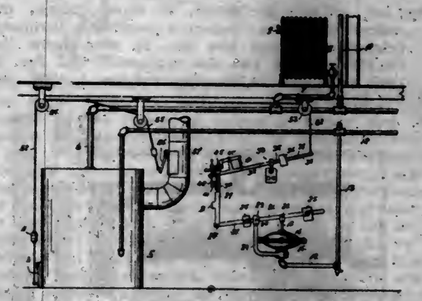
3. A steam boiler, a water-tank, a tube entering the boiler with a spray nozzle on the inner end thereof, a conduit leading from the tank to said tube, a pair of pistons in said tube, piston rods for said pistons, the rod for the advancing piston extending centrally into the rod for the rear piston, said rear piston having a chamber for a portion of its length, a spring coiled within said chamber around the rod of the advancing piston tending to force said pistons apart, a stop to limit the outward movement of the advancing piston rod, means for moving the rear piston rod, and means for stopping the advancing piston.

4. A steam boiler, a water-tank, a tube under said water-tank extending into said boiler with the inner ends closed and perforations through the upper wall of said tube, a conduit extending down from the water tank to said tube so that water will flow from the tank to said tube by gravity, a pair of pistons in said tube, piston rods therefor, the piston rod of the advancing piston being yieldingly mounted in the piston rod of the rear piston so that there is a space between them normally, and means for operating said rear piston from a point to the rear of the inlet from the water tank until the advancing piston is stopped by the end of the tube, whereby the space between the pistons will be filled by water from the tank and that body of water will be bodily conveyed to the nozzle end of the tube and, after the advancing piston is stopped, will be sprayed out by the further movement of the rear piston, substantially as set forth.

5. The combination of a steam boiler, a water tank for supplying water thereto, and means for regulating the charge of water in said tank, so that said charge of water will never be so great as to generate steam beyond the capacity of the boiler.

[Claims 6 to 10 not printed in the Gazette.]

957,156. HEATING SYSTEM. FRANK C. GOFF, Denver, Colo. Filed Feb. 28, 1908. Serial No. 418,251.



1. In means for regulating heating systems, the combination of a motor, constantly controlled by the system pressure, regulating devices, a suitable connection between the said devices and the motor, whereby the devices are given a predetermined movement when the system pressure acting on the motor, reaches a predetermined degree, means for locking the regulating devices in the said position, and connections between the motor and the said regulating devices, whereby when the pressure within the system reaches a predetermined lower degree, the

regulating devices are actuated to trip the locking means, whereby the aforesaid movement of the regulating devices is reversed.

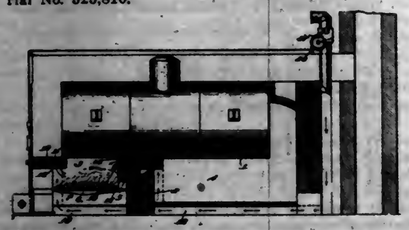
2. In means for regulating heating systems, the combination of a motor constantly controlled by the system pressure, regulating devices, a suitable connection between the said devices and the motor, whereby the devices are given a predetermined movement when the system pressure acting on the motor reaches a predetermined degree above atmospheric pressure, means for locking the regulating devices in the said position, and connections between the motor and the said regulating devices, whereby when the pressure within the system reaches a predetermined degree below atmospheric pressure, the regulating devices are actuated to trip the locking means, whereby the aforesaid movement of the regulating devices is reversed, and a connection between the locking means and the regulating devices, whereby when the system pressure acting on the motor fluctuates between atmospheric pressure and the said predetermined degree below atmospheric pressure, the regulating devices are actuated to trip the locking means, whereby the aforesaid predetermined movement of the regulating devices is reversed.

957,157. PROCESS FOR CLEANING IRON ORES. EDWARD F. GOLTRA, St. Louis, Mo. Filed Jan. 4, 1910. Serial No. 536,403.

1. The herein described process of treating iron ores containing most clay etc. as a gangue, which consists in heating the ore and its gangue at a temperature and for a period sufficient to drive off the moisture and to render the gangue easily separable from the ore, tumbling the ore and its gangue to shake loose the gangue from the ore and to pulverise the gangue by said tumbling action, and subjecting the ore and gangue to a strong gaseous blast which sweeps, cleans and removes the gongue from the ore.

2. The herein described process of treating iron ores containing moist clay etc. as a gangue, which consists in calcining the lumps of ore and its gangue at a temperature and for a period sufficient to expose and dry out the gangue and to render it easily separable from the ore, to drive off the moisture and volatile matter, tumbling the ore and its gangue to shake loose the gangue from the ore and to pulverise the gangue by said tumbling action of the lumps, and subjecting the ore and gangue to a strong gaseous blast which sweeps, cleans and removes the gangue from the ore.

957,158. FURNACE. JOSEPH W. HAYS, Chicago, Ill., assignor to Carb-Ox Company, a Corporation of Illinois. Original application filed Apr. 28, 1904, Serial No. 205,297. Divided and this application filed Jan. 5, 1906, Serial No. 294,793. Renewed Nov. 1, 1909. Serial No. 525,810.



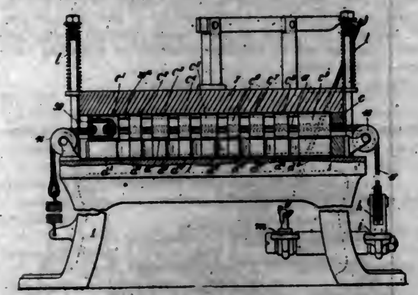
1. In a furnace, in combination with the combustion chamber, a conduit for supplying air thereto; a damper in such conduit for regulating the air supply; a cylinder and piston therein, the cylinder having water supply and waste connections, the piston being operatively connected with the damper for opening and closing the latter; a valve which controls the water supply and operative connections from the fuel door to such valve for opening and closing the valve when the door is opened and closed; a valve in the waste connection, and operating connections from the fuel door for closing it when the door is opened and opening it when the door is closed.

2. In a furnace, in combination with the combustion chamber, a conduit for supplying air thereto; a damper for controlling the air supply through such conduit, a cylinder and a piston therein, the cylinder having water supply and waste connections, the piston being operatively connected with the damper for opening and closing the latter; a valve in the waste connection adjustable at will to regulate the rate of waste; a by-pass pipe leading around such valve; a second valve in the by-pass pipe, and means for opening and closing such second valve.

3. In a furnace, in combination with the combustion chamber, a conduit for supplying air thereto; a damper for controlling the air supply through such conduit; a cylinder and a piston therein, the cylinder having water supply and waste connections, the piston being operatively connected with the damper for opening and closing the latter; a valve in the waste connection adjustable at will to regulate the rate of waste; a by-pass pipe leading around such valve; a second valve in the by-pass pipe, and connections thereto from the fuel door for closing the valve when the door opens and opening it when the door closes.

4. In a furnace, the combination of a grate; a fire-box above said grate; an air-inlet for discharging air into said fire-box above the grate; adjustable means for controlling the maximum amount of air delivered by said air-inlet; a damper operated independently of said means and adapted to control the passage of air through said air-inlet, said damper having an aperture through the same for determining the minimum quantity of air passing through said inlet; a slide for adjusting the area of the opening through said damper; means controlled by the movement of opening of the door of the furnace for opening said damper, and a timing device adapted to automatically close said damper in a predetermined interval of time after the opening of same.

957,159. APPARATUS FOR PLAITING PAPER. CHRISTIAN R. HEISER, London, England. Filed Oct. 1. 1909. Serial No. 520,576.



1. Apparatus for producing plaited paper for packing and like purposes, comprising two series of spaced bars adapted to co-act with one another to first simultaneously grip predetermined areas of the material between their mutually opposed faces, means for thereafter traveling said bars to close them and cause adjacent edges of said gripped parts of the material to meet, one of said series of bars having means for causing the material intervening between adjacent edges of said gripped parts and whereon no pressure is applied initially to become automatically folded, as the bars close, in the spaces separating adjacent bars of the other series whereby the sheet of material is formed at one side with a series of spaced plaits or folds alternating with plane areas.

2. Apparatus for continuously producing sheets of plaited paper for packing and like purposes comprising successive series of spaced bars adapted to co-act in succession with another series of spaced bars to simultaneously grip predetermined areas of successive lengths of the material between their mutually opposed faces, means for traveling said bars to close them and cause adjacent edges of said gripped parts of the material to meet, one of said series of bars having means for causing the material intervening between adjacent edges of said gripped parts and whereon no pressure is applied initially to become automatically folded, as the bars close, in the spaces separating adjacent bars of the other series whereby the sheet of material is formed at one side with a series of spaced plaits or folds alternating with plane areas, means for locking together said adjacent bars, and means for releasing said adjacent bars whereby to permit of the withdrawal from the machine of the plaited article.

3. Apparatus for continuously producing sheets of plaited paper for packing and like purposes comprising successive series of spaced bars adapted to co-act in succession with another series of spaced bars to simultaneously grip predetermined areas of successive lengths of the material between their mutually opposed faces, means for traveling said bars to close them and cause adjacent edges of said gripped parts of the material to meet, one of said series of bars having means for causing the material intervening between adjacent edges of said gripped parts and whereon no pressure is applied initially to become automatically folded, as the bars close, in the spaces separating adjacent bars of one series whereby the material is formed at one side with a series of spaced plaits or folds alternating with plane areas, means for locking together said adjacent bars, means for further traveling one series of bars, means to cause the application to the underside of each of said lengths of plaited material of an additional backing sheet whereby to hold said meeting adjacent edges to permanently retain the correct relative positions of the folds, and means for releasing said adjacent bars to permit the withdrawal from the machine of the plaited article.

4. Apparatus for producing plaited paper for packing and like purposes, comprising a series of loosely connected spaced creaser bars and a series of loosely connected spaced abutment bars, the bars of each series being separated by a distance equal to twice the height of a plait and being adapted to simultaneously grip predetermined areas of the paper between their mutually opposed faces, and means for simultaneously traveling both series of bars to close them and cause adjacent edges of the gripped parts of the paper to meet, said series of abutment bars having means for causing the paper intervening between adjacent edges of said gripped parts and whereon no pressure is applied initially to become automatically folded and gripped between successive creaser bars.

5. Apparatus for continuously producing plaited paper for packing and like purposes, comprising an intermittently movable endless band constituted by successive series of spaced bars, a mutually opposed series of spaced bars with which each series of the endless band is adapted to co-act in succession to simultaneously grip predetermined areas of several lengths of paper, means for traveling said co-acting bars to close them and cause adjacent edges of the gripped parts of the paper to meet, one of said series of bars having means for causing the material intervening between adjacent edges of said gripped parts and whereon no pressure is applied initially to become automatically folded as the bars of such series close between adjacent bars of said intermittently movable series, means for locking together the bars of the closed series, and means for releasing the bars of the closed series.

[Claims 6 to 8 not printed in the Gazette.]

957,160. HINGE. EDWIN F. HULBERT, South Norwalk, Conn. Filed May 4, 1909. Serial No. 493,816.

1. The combination with parts to be hinged together, of a bracket secured to one of said parts, a thimble secured to the other part and formed with a smooth bore, a hinge post mounted in the bore of the thimble and of a length greater than the length of the thimble whereby the hinge post will have a limited free movement in the thimble, and a pivotal connection between the bracket and hinge post.

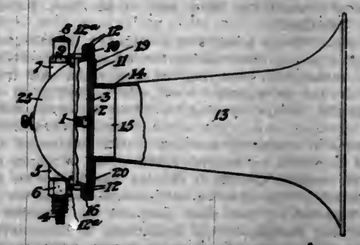


2. The combination with parts to be hinged together, of a bracket secured to one of said parts, a thimble mounted in the other part, nuts screwed on said thimble and securing the same to such part, a hinge post mounted for a limited movement in said thimble, and a pivotal connection between said hinge post and said bracket.

3. The combination with parts to be hinged together of a bracket secured to one of said parts, a thimble secured to the other part, a hinge post mounted for movement in said thimble, a screw working in one end of said post and limiting the movement thereof in one direction, and a pivotal connection between said bracket and said hinge post.

4. A hinge, comprising a bracket, a hinge post, a pintle extending laterally from said hinge post and in which the bracket is pivotally mounted, a thimble mounted on said hinge post and exteriorly threaded, nuts working on said thimble, and a screw working in one end of said post to limit the relative movement of the post and thimble.

957,161. DIAPHRAGM-ACTUATED HORN AND RESONATOR THEREFOR. MILLER R. HUTCHISON, Summit, N. J. Original application filed May 16, 1907, Serial No. 373,946. Divided and this application filed May 6, 1909. Serial No. 494,399.



1. A signal device comprising a vibratory diaphragm, and means for applying power for forcibly vibrating the central portions thereof to produce a definite note of definite normally uniform frequency, in combination with a casing member having an annular wall, and a straight resonator rigidly secured over the opening through said wall with its longitudinal axis at right angles to the plane of the diaphragm and with its opening end parallel thereto, said annular wall being arranged close to but normally out of contact with the central or vibrating portions of the diaphragm and forming therewith a thin annular space, the clearance between the diaphragm and casing at points adjacent the central opening being only slightly greater than the maximum amplitude of the diaphragm vibrations, said opening having an internal diameter more than one-third the diameter of the vibrating portion of the diaphragm, the body portion of said resonator being formed with slightly diverging walls and being relatively short and thick proportionally to the diameter of said opening; together with means for securing said device with the longitudinal axis of said resonator approximately horizontal, for the purpose described.

2. A signal device comprising a vibratory diaphragm, means for applying power for forcibly vibrating the diaphragm so as to produce a definite note of definite normally uniform frequency, and a casing for the front of the diaphragm having a front wall forming a space in front of the diaphragm and provided with an opening for the sound waves, in combination with a horn or resonator secured around said opening, the resonator being formed toward its open end with a laterally flattened portion having an approximately straight longitudinal axis and terminating in a bell mouth having its lateral diameter less than its vertical diameter and means for securing the device with the said straight axis approximately parallel to the ground and with the greater diameter thereof approximately perpendicular to the ground, for the purpose described.

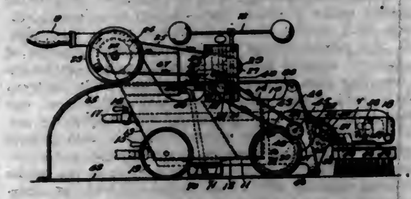
3. A signal device comprising a vibratory diaphragm, a rear casing and a front casing formed with coöperating annular surfaces for clamping the diaphragm, said front casing having an annular front wall formed with an approximately central opening for the escape of the sound waves, arranged close to but normally out of contact with the central or vibratory portions of the diaphragm and forming therewith an annular space which at points adjacent the central opening is thin as compared with the radial width of the annulus, said opening having an internal diameter not less than one-third the diameter of the vibrating portion of the diaphragm, in combination with a resonator secured over said opening, said opening and the base of the resonator being circular and substantially concentric with the diaphragm whereby the peripheral boundary of said opening extends opposite substantially equivibratory portions of said diaphragm, the resonator being vertically flared and laterally flattened toward its open end and terminating in an oval bell mouth, one of said casings being provided with a bracket extending laterally thereof to a distance greater than the flattened side of the mouth of the resonator and adapted to be secured to a vertical support with the major diameter of the resonator disposed vertically, together with means for applying power for forcibly vibrating said diaphragm by repeated forcible impacts displacing said diaphragm in a direction toward the front wall of the case, for the purpose described.

4. A signal device comprising a vibratory diaphragm, a rear casing and a front casing formed with coöperating annular surfaces for clamping the diaphragm, said front casing having an annular front wall formed with an approximately central opening for the escape of the sound waves, arranged close to but normally out of contact with the central or vibratory portions of the diaphragm and forming therewith an annular space which at points adjacent the central opening is thin as compared with the radial width of the annulus, said opening having an internal diameter not less than one-third the diameter of the vibrating portion of the diaphragm, in combination with a resonator secured over said opening, said opening and the base of the resonator being circular and substantially concentric with the diaphragm whereby the peripheral boundary of said opening extends opposite substantially equivibratory portions of said diaphragm, the resonator having its longitudinal axis straight and perpendicular to the plane of the diaphragm and having walls vertically flared and laterally flattened toward its open end and terminating in an oval bell mouth, one of said casings being provided with a bracket extending laterally thereof at right angles to both the longitudinal axis and the major diameter of the resonator and to a distance greater than the flattened side of the mouth of the resonator and adapted to be secured to a vertical support with the major diameter of the resonator disposed vertically, said device being provided with vertically alined diametrically opposite exit openings communicating respectively with the upper and lower portions of the annular space in front of the diaphragm, for the purpose described.

5. A diaphragm horn comprising a vibratory diaphragm, means for applying power for forcibly vibrating said diaphragm to produce a definite note of definite normally uniform frequency, a casing for the front of the diaphragm, having a front wall forming a space in front of said diaphragm, and formed with an opening for escape of the sound waves, in combination with a resonator secured over said opening, said opening and the base of the resonator being circular and having an internal diameter approximately one-third to two-thirds that of the vibratory portion of the diaphragm, the resonator being vertically flared and laterally flattened toward its open end, and terminating in a bell mouth having its lateral diameter less than its vertical diameter, and means for securing the device with the greater diameter of the resonator substantially vertical.

[Claims 6 to 13 not printed in the Gazette.]

957,162. SCRUBBING-MACHINE. GEORGE JACIUK, Chicago, Ill. Filed Sept. 16, 1909. Serial No. 518,002

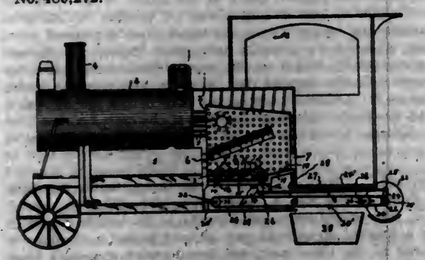


1. The combination of a wheeled tank having forwardly extending side pieces at the front thereof, a cross piece between said side pieces, a plurality of longitudinally movable scrubbers located side by side under said cross piece, screws extending through the cross piece, springs connected to the lower ends of the screws and having a slidable connection at the backs of the scrubbers, means to reciprocate the scrubbers, and means to supply water from the tank to the scrubbers, the screws being adjustable to vary the pressure of the springs of the backs of the scrubbers.

2. The combination of a wheeled tank having forwardly extending side pieces at the front thereof, a plurality of reciprocating scrubbers located side by side in front of the tank, springs bearing slidably on said scrubbers, a fixed support for said springs extending across between the side pieces, means to reciprocate the scrubbers, including a shaft extending across between the side pieces and operatively connected to the scrubbers, and means to supply water from the tank to the scrubbers.

3. The combination of a wheeled tank, a plurality of reciprocating scrubbers mounted side by side at the front thereof, the scrubbers having backs with grooves in the top thereof, a series of springs connected to the frame of the tank and fitting in said grooves to permit movement of the scrubbers, means to reciprocate the scrubbers, and means to supply water from the tank to the scrubbers.

957,163. STRAW-BURNING FURNACE. ANDREW G. JOHNSON, Sutton, Nebr. Filed Apr. 12, 1909. Serial No. 489,272.



1. In a straw burning furnace, the combination with a continuously rotating driving member, of a crank shaft having a plurality of cranks set at varying angles thereto, a plurality of grate bars mounted longitudinally of the furnace and in pairs, said grate bars being engaged by the crank shaft and said pairs being spaced from each other a considerably greater distance than the distance between the bars of each pair, the connection of the grate bars with the crank shaft serving to impart a walking movement to said bars, the movement of the bars of a pair being in unison, but the movement of said pairs of bars being alternate, an ash pit beneath said bars having an open rear end and a closed bottom, a rearwardly moving scraper traveling over the floor of said ash pit, connections between the driving member and the scraper, a swinging arm, a pawl and ratchet connection between said arm and said crank shaft, and a connection between said swinging arm and said driving member whereby the movement of the crank shaft is rendered an intermittent one.

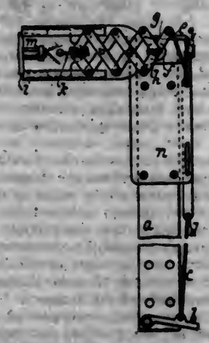
2. In a straw burning furnace, the combination with a plurality of grate bars mounted in pairs, said pairs being spaced from each other a considerably greater distance than the distance between the bars of each pair, of means for imparting a "walking" movement to said grate bars, the movement of the two bars of a pair being in unison, but the movement of said pairs being alternate.

3. In a straw burning furnace, the combination with a plurality of grate bars mounted in pairs, said pairs being spaced from each other a considerably greater distance than the distance between the bars of each pair, of means for imparting a "walking" movement to said grate bars, the movement of the two bars of a pair being in unison, but the movement of said pairs being alternate and intermittent.

4. In a straw burning furnace, the combination with a plurality of grate bars mounted in pairs, said pairs being spaced from each other a considerably greater distance than the distance between the bars of each pair, of means for imparting a "walking" movement to said grate bars, an ash pit beneath said bars having an open rear end and a closed bottom, and a rearwardly moving scraper traveling over the floor of said ash pit to remove the ash from the straw burned on the grates.

5. In a straw burning furnace, the combination with a plurality of grate bars mounted in pairs, said pairs being spaced from each other a considerably greater distance than the distance between the bars of each pair, of means for imparting a "walking" movement to said grate bars, an ash pit beneath said bars having an open rear end and a closed bottom, and a rearwardly moving scraper traveling over the floor of said ash pit to remove the ash from the straw burned on the grates, said scraper comprising an endless belt and a plurality of scraper blades carried thereby.

957,164. SIGNALING DEVICE. ISAAC R. JOHNSON and GEORGE MICHAELS, New York, N. Y. Filed Aug. 12, 1909. Serial No. 512,605.



1. The combination, with a swinging support; of a normally concealed signal carried by the support; and means for swinging said support into operative position and for simultaneously shifting said signal into exposed position.

2. The combination, with a swinging support; of a signal carried by the support; a set of lazy-tongs connected with said support and said signal; and operating means connected with said tongs for simultaneously moving said support into operative position and extending said signal.

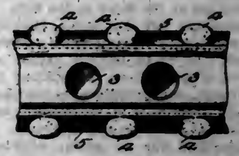
3. The combination, with a swinging support, and a normally concealed indicator carried thereby; of means for simultaneously swinging said support into operative position and exposing the indicator; and an illuminating device attached to said indicator.

4. The combination, with a base and a swinging casing connected thereto; of an indicator carried by the casing and normally concealed within the same; and means for simultaneously swinging said casing into operative position and projecting said indicator outwardly of said casing.

5. The combination, with a base and a swinging casing connected thereto; of an indicator carried by the casing and normally concealed within the same; means for simultaneously swinging said casing into operative position and projecting said indicator outwardly of said casing; and an illuminating device attached to said indicator.

[Claim 6 not printed in the Gazette.]

957,165. ANTISKIDDING-TIRE. IVA B. KEMPSHALL, Boston, Mass. Filed Jan. 19, 1910. Serial No. 538,853.



1. An anti-skidding tire for motor driven vehicles, having the tread surface provided with a series of pockets and having at each side of the tread surface a series of projections each terminating at its outer end adjacent to the tread surface, the projections being located alternately with the openings and wholly therebetween so as to be entirely out of line therewith, whereby the engagement of such projections with the roadway will not raise the pockets from the roadway to interfere with the effective suction action thereof.

2. An anti-skidding tire for motor driven vehicles, having the tread surface provided with a series of pockets and having at each side of the tread surface a series of projections each merging at its outer end in the tire short of the tread surface, and each pocket being located between a pair of projections at each side of the tire and entirely out of alinement with such projections, whereby the engagement of such projections with the roadway will not raise the pockets from the roadway to interfere with the effective suction action thereof.

3. An anti-skidding tire for motor driven vehicles, having a tread portion provided with a series of pockets, the tread portion having each side thereof off-set from the side of the tire, and a series of projections located at each side of the tire with their outer ends terminating adjacent to the offset of the tread, said projections being located alternately with the pockets and wholly therebetween so as to be entirely out of line with the openings, whereby the engagement of such projections with the roadway will not raise the pockets from the roadway to interfere with the effective suction action thereof.

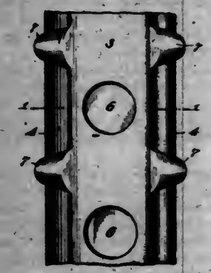
4. An anti-skidding tire for motor driven vehicles, having a tread portion provided with a series of chambers or pockets, the tread portion having each side thereof off-set from the side of the tire, and a series of projections located at each side of the tire with their outer ends terminating at the off-set of the tread.

5. An anti-skidding tire for motor driven vehicles, having a tread portion provided with a series of chambers or

pockets, the tread portion having each side thereof off-set from the side of the tire, and a series of oval formed projections located at each side of the tire with their outer ends terminating at the off-set of the tread.

[Claims 6 to 9 not printed in the Gazette.]

957,166. VEHICLE-TIRE. IVA B. KEMPSHALL, Boston, Mass. Filed Mar. 21, 1910. Serial No. 550,562.

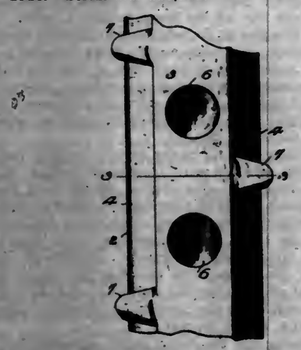


1. An anti-skidding tire for motor vehicles, having a tread portion provided with a series of chambers or pockets, the tread portion having at the sides thereof a series of projections terminating at the tread and level therewith, said compression chambers being located alternately with the projections at the sides of the tire.

2. An anti-skidding tire for motor vehicles, having a tread portion provided with a series of compression chambers or pockets, the tread portion having at the sides thereof a series of projections terminating at the tread and level therewith, said compression chambers being located alternately with pairs of projections disposed opposite to each other at the sides of the tire.

3. An anti-skidding tire for motor vehicles, having a tread portion provided with a series of chambers or pockets, a tread portion having at the sides thereof a series of projections terminating at the tread and level therewith, certain of said projections being located between certain of said compression chambers.

957,167. TIRE. IVA B. KEMPSHALL, Boston, Mass., assignor to Kempshall Tire Company, a Corporation of Maine. Original application filed Mar. 21, 1910, Serial No. 550,562. Divided and this application filed Apr. 2, 1910. Serial No. 553,121.



1. An anti-skidding tire for motor vehicles, having a tread portion provided with a series of chambers, or pockets, the tread portion having at the sides thereof a series of projections terminating at the tread and level therewith, said chambers being located alternately with the projections at the sides of the tire and said projections being also alternately located.

2. An anti-skidding tire for motor vehicles, having a tread portion provided with a series of chambers or pockets, the tread portion having at the sides thereof a series of projections terminating at the tread and level therewith, there being one of the projections on one side of the tire between two compression chambers or pockets, and there being one of the projections on the opposite side of the tire between one of the before mentioned compression chambers or pockets and the next succeeding compression chamber or pocket, and the sides of the tire opposite to where the projections are located being free of the projections.

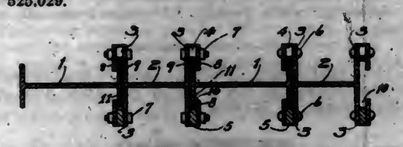
957,168. TIRE. IVA B. KEMPSHALL, Boston, Mass., assignor to Kempshall Tire Company, a Corporation of Maine. Original application filed Jan. 19, 1910, Serial No. 538,853. Divided and this application filed Apr. 2, 1910. Serial No. 553,122.



1. An anti-skidding tire for motor-driven vehicles, having a tread portion provided with a series of chambers or pockets, the tread portion having each side thereof off-set from the side of the tire, and a series of projections located at each side of the tire with their outer ends terminating at the off-set of the tread, a pair of said projections being located in alinement with a pocket.

2. An anti-skidding tire for motor-driven vehicles, having a tread portion convex in cross section, the tread portion having each side thereof off-set from the side of the tire, said off-set portions being wholly within the plane of the outermost surface of the convex tread, and a series of projections located at each side of the tire with their outer ends terminating at the off-set of the tread, a pair of said projections being located in alinement with a pocket.

957,169. METAL SHEET-PILING. FRANK N. KNEAS, Norristown, Pa. Filed Oct. 28, 1909. Serial No. 525,029.



1. In metal sheet piling, a composite member composed of a metallic shape of H section, wood spacers on the outside faces of the flanges, metallic bars superimposed on the wood spacers and projecting inwardly beyond edges of the spacers and forming a plurality of grooves, and secondary members with flanges engaging in said grooves.

2. In metal sheet piling, members of H shape, and spacers and metallic strips on the outside faces of the flanges to form grooves between the flanges and the strips, the grooves being limited at the edges by the spacers.

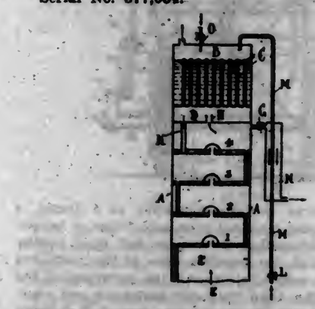
3. In metal sheet piling, members of H shape composed of a central web portion and straight flanges at substantial right angles therewith, compressible spacers secured in proximity to the edges of the flanges and metallic bars fastened to the flanges through the spacers forming grooves outside of the flanges.

4. In metal sheet piling, members of H shape composed of a central web portion and two substantially straight parallel flanges, bars spaced from the flanges and bolts for regulating the distance between the flanges and the bars and uniting the bars to the flanges.

5. In metal sheet piling, members of H shape composed of a central web portion and two substantially parallel flanges, bars, means for spacing the bars from the outer faces of the flanges, adjoining I shaped members having flanges overlapped by the bars, connections through the bars, spacing means and flanges of the H shaped members, and means for tightening the connection.

[Claims 6 to 13 not printed in the Gazette.]

957,170. SEPARATION OF GASES FROM THEIR MIXTURES. RENÉ J. LÉVY and ANDRÉ HELBRONNER, Paris, France, assignors to La Société l'Air Liquide (Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude,) Paris, France. Filed June 3, 1907. Serial No. 377,054.



1. A process for the separation of a gaseous mixture into its constituents, consisting in separating the same after liquefaction into its constituents by rectification effected under pressure, and reliquefying the more volatile constituent resulting therefrom while still under pressure by causing it to vaporise under a lower pressure the less volatile constituent resulting from the separation.

2. A process for the separation of a gaseous mixture into its constituents consisting in separating the same after liquefaction into its constituents by rectification effected under pressure, reliquefying the more volatile gaseous constituent resulting therefrom while still under pressure by causing it to vaporise under a lower pressure the less volatile constituent resulting from the separation, and utilising the reliquefied constituent to purify by rectification the gaseous constituent.

3. A process for the separation of air into oxygen and nitrogen, consisting in separating the same after liquefaction effected under pressure, and reliquefying the pressure by causing it to vaporise under a lower pressure the liquid oxygen resulting from the separation.

4. A process for the separation of air into oxygen and nitrogen, consisting in separating the same after liquefaction into liquid oxygen and gases rich in nitrogen by rectification effected under pressure, reliquefying the gaseous nitrogen resulting therefrom while still under pressure by causing it to vaporise under a lower pressure the liquid oxygen resulting from the separation, and utilising the reliquefied nitrogen to purify by a further rectification the gases already rich in nitrogen resulting from the initial rectification.

5. A process for the separation of air into oxygen and nitrogen, consisting in separating the same after liquefaction into liquid oxygen and gases rich in nitrogen by rectification effected under pressure, reliquefying some of the nitrogen while still under pressure by vaporizing under a lower pressure the liquid oxygen resulting from the separation, utilising the coldness of the remaining portion of nitrogen during its passage to the exchangers to cool the liquid oxygen under pressure prior to its being reduced to the aforesaid lower pressure, and utilising the reliquefied nitrogen to purify by a further rectification the gases already rich in nitrogen resulting from the initial rectification.

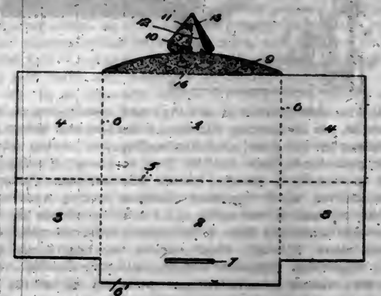
[Claims 6 to 8 not printed in the Gazette.]

957,171. SHELL FOR CARTRIDGES. ADAM LOEB, Portland, Oreg. Filed Dec. 14, 1908. Serial No. 467,559.



A cartridge shell formed of a thin material open and comprising a cylindrical body portion tapered at one end to form a conical inner flaring chamber, and a cylindrical reduced portion open at its outer end and projecting outwardly from the tapered end.

957,172. COMBINED LETTER-SHEET AND ENVELOP. EDWARD MAREN-COVICK, Buffalo, N. Y. Filed May 21, 1909. Serial No. 497,527.



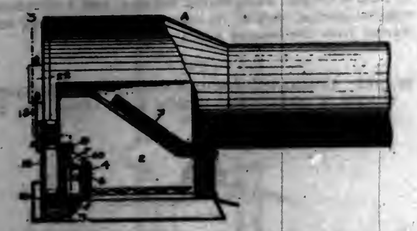
1. A combined letter sheet and envelop comprising a front and a rear wall having flaps formed integrally therewith at their ends, said flaps being adapted to be folded to lie in a plane parallel with the said front and rear walls, a sealing tongue carried by the front wall adapted to be engaged with the rear wall and an auxiliary tongue carried by the sealing tongue, said auxiliary tongue having a gummed portion upon each side, one of said gummed portions being adapted to be engaged with one of the flaps of the front wall and the other gummed portion being adapted to be engaged with one of the flaps of the rear wall.

2. A combined letter sheet and envelop comprising a front and a rear wall adapted to normally occupy a common plane with each other, end flaps carried by the front wall and disposed normally in a common plane therewith, end flaps carried by the rear wall and normally disposed in a common plane therewith, said front wall and said rear wall being adapted to be folded to lie in parallel relation to each other, said end flaps being adapted to be folded to lie in juxtaposition with each other and in a plane parallel with the said front wall and the said rear wall respectively, said rear wall having a slot formed therein, a sealing tongue carried by the front wall, said sealing tongue having a gummed portion adapted to be secured to the rear wall and an auxiliary tongue carried by the sealing tongue, said auxiliary tongue having a gummed portion upon each side, said tongue being adapted to be inserted in the slot formed in the rear wall whereby one of its gummed portions can be engaged with one of the end flaps of the rear wall and the gummed portion engaged with one of the end flaps of the front wall.

957,173. FUEL-ECONOMIZER. EDWIN R. PHILLIPS, El Paso, Tex. Filed Oct. 19, 1908. Serial No. 458,457.

1. The combination of a boiler and a fire-box, a door therefor, an air-heating box within the fire-box and adjacent to and below the door, a protecting shelf between the door and the outlet end of the air-heating box, an arch in the fire-box arranged at an incline and extending from a point above and adjacent to the door downwardly toward the rear of the fire-box, said arch operating to prevent the gases coming in contact with the boiler and assisting in

retaining at a very high temperature the released gases from the fuel, and also superheating the air as it escapes into the fire-box from the air-box, said air-heating box having an air inlet near the bottom, vertical flues in the air-heating box and an expansion chamber near the top of said box into which the flues discharge, the hot air being let into the fire-box above the fuel, and means controlled by the door for admitting air into the air-heating box.



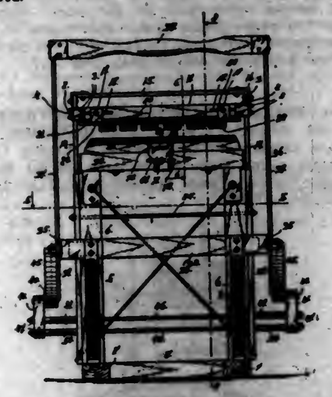
2. The combination of a boiler and its fire-box, a door therefor, an air-heating box in the fire-box and below and adjacent to the door, said air-heating box having an air inlet near its bottom, vertical flues in the air-heating box and an expansion chamber within said box into which the flues deliver, said expansion chamber having a cover of bricks inclined downwardly and inwardly within the furnace and below the door, said bricks having air outlets between them, through which outlets the heated air from said expansion chamber escapes into the fire-box above the fuel, means for admitting air into the air-heating box, an arch in the fire-box arranged at an incline and extending substantially diagonally through the fire-box from a point substantially over the door to the boiler, and dividing the fire-box into two chambers, said arch assisting in retaining at a high temperature the released gases from the fuel, and superheating the air as it escapes into the fire-box from the air-heating box.

3. The combination of a boiler and its fire-box, a plurality of slidable doors closing a charging opening in the fire-box, an air-box within the fire-box, and adjacent to, parallel with, and below the door, said air-box having inlets at its lower end, coacting dampers controlling said inlets, the air-box being provided with an expansion or superheating chamber having constricted outlets, means for protecting said outlets and preventing their becoming clogged, said doors being connected to open simultaneously, means carried by each door whereby the dampers are lifted synchronously, and means governing the lowering of said dampers.

4. The combination with a boiler and its fire-box, of an air-box located at the front lower corner of the fire-box and having a superheating chamber from which air is directed upwardly and rearwardly through inclined passages whose combined area is less than the area of inlet flues of the superheating chamber, slidable doors for closing a charging opening of the fire-box, dampers for controlling the admission of air into the air-box, said doors being connected by a link and lever, whereby they are operable in unison, and each being adapted to engage flexible members secured upon pivoted arms, said arms being linked to rods upon each of which said dampers are secured, whereby when said doors are opened the dampers are actuated, and means adapted to govern the descent of the dampers, said means including a cylinder, a piston having suitable valves reciprocal in said cylinder and a rod secured to said piston, and an arm carried by said piston-rod, the outer end of said arm being guided in a suitable slide and carrying said damper-rod.

957,174. BRICKMAKING-MACHINE. GEORGE W. TAYLOR, Denver, Colo. Filed May 14, 1909. Serial No. 496,077.

1 In a brick making machine the combination with a stationary support, of members mounted to slide vertically upon the support, a press having arms pivotally connected with the slidable members, the said arms being provided with a plurality of perforations, whereby the press may be vertically adjusted upon the said arms, substantially as described.



2. A brick making machine consisting of a frame, a mold and mold casing mounted upon said frame, a hopper hinged to the mold casing, the hopper and mold having transverse partitions, the opposite sides of the partitions being arranged in vertical alinement, the partitions of the hopper being thicker than the mold partitions and overlapping the latter on opposite sides as means of forming a primary brick shaping chamber relatively smaller than the mold chamber, substantially as described.

3. A brick making machine comprising an upright frame composed of two separated standards having transversely alined vertical slots, members slidingly engaging the standards of the frame on opposite sides, a rod connecting the said slidable members, other rods passing through the slots in the uprights and projecting beyond the same, an operating device pivotally mounted on the frame and having separated parallel arms, cams attached to the lower extremities of the arms and having outwardly projecting flanges, pins adapted to engage the flanges of the cams, a holder upon which said pins are mounted, the said holder being connected with the rods passing through the uprights of the frame, substantially as described.

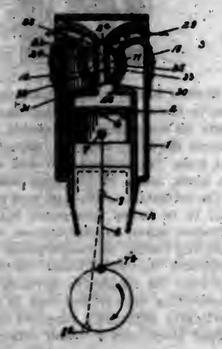
4. A brick making machine comprising an upright frame, including two separated vertically disposed, longitudinally slotted standards, members vertically slidable on the standards, means for imparting the vertical movement to the said members, a mold mounted on the frame, and a press having arms pivotally connected with the vertically slidable members, the latter being located on opposite sides of the frame, and means passing through the slots of the standards and connecting the vertically sliding members on the opposite sides of the frame, substantially as described.

REISSUES.

13,108. ROTARY VALVE. LEE A. FRAYER and CHARLES O. HOWARD, Columbus, Ohio, assignors, by mesne assignments, to The Kouns Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 22, 1909. Serial No. 491,657. Original No. 908,656, dated Jan. 5, 1909, Serial No. 392,548.

1. In an explosive engine a rotary valve journaled adjacent its ends in bearings whereby it is maintained out of contact with the valve chamber walls, said valve having a passageway therethrough adapted at one point in each half revolution to admit a charge to the explosion chamber, and at another point in each half-revolution to permit the discharge of the burned gases therethrough, and means for driving said valve.

2. In an explosive engine a rotary valve journaled in bearings adjacent its ends whereby said valve is maintained out of contact with the valve chamber walls, said valve having a passageway therethrough, packing rings mounted on said valve at each side of said passageway, said valve in each half-revolution thereof admitting the charge, providing a head against which the explosion takes place, and affording egress for the burned gases.



3. In an explosive engine a rotary valve having a diametrical passageway therethrough and journaled adjacent its ends in bearings whereby said valve is maintained out of contact with the valve chamber walls, packing rings mounted on said valve adjacent said passageway, means for positively actuating said valve to cause the same during each half revolution thereof to admit the charge, to provide a head against which compression and explosion may take place, and to permit the escape of the burned gases.

4. A rotary valve having a transverse passageway therethrough, said valve being chambered to admit a cooling fluid, bearings for said valve adjacent its ends whereby the said vlave is maintained out of contact with the valve chamber walls, packing rings adjacent said passageway, and mechanical means for actuating said valve, the inlet and exhaust passages being so arranged relative to said passageway that at each half revolution of said valve, the charge is admitted, compressed and fired, and the burned gases permitted to escape.

5. In an explosive engine a cylindrical rotary valve journaled in bearings adjacent its ends whereby said valve is maintained out of contact with the valve chamber walls, said valve having a fuel passageway formed diametrically therethrough, packing rings mounted on said valve adjacent said fuel passageway, and sealing means introduced between said valve and the adjacent valve chamber walls.

6. In an explosive engine a cylindrical rotary valve having a fuel passageway formed diametrically therethrough journaled in bearings adjacent its ends, whereby said valve is maintained out of contact with the valve chamber walls, packing rings mounted on said valve adjacent said passageway to prevent the escape of the fuel longitudinally of said valve, sealing means adapted to prevent the escape of fuel circumferentially of said valve, and mechanical means for actuating said valve.

7. In an explosive engine a rotary valve having a fuel passageway therethrough, said valve being journaled in bearings adjacent its ends whereby said valve is maintained out of contact with the valve chamber walls, fluid sealing means provided between said valve and valve chamber walls to prevent the escape of the fuel circumferentially of said valve, and additional means to prevent the escape of said fuel longitudinally of said valve.

8. In an explosive engine a rotary valve having a fuel passageway therethrough journaled in bearings adjacent its ends whereby said valve is maintained out of contact with the valve chamber walls, fluid sealing means between said valve chamber walls and said valve to prevent the escape of said fuel circumferentially of said valve, and means to prevent the escape of fuel longitudinally of said valve, said valve in each half revolution thereof operating to admit the charge, to provide a head against which the explosion takes place and to afford egress for the burned gases.

9. In an explosive engine a rotary valve having a fuel passageway therethrough journaled in bearings adjacent its ends whereby said valve is maintained out of contact with the valve chamber walls, fluid sealing means between said valve chamber walls and said valve and longitudinal packing strips between said valve chamber walls and said valve to prevent the escape of said fuel circumferentially of said valve and means to prevent the escape of said fuel longitudinally of said valve.

10. In an explosive engine a rotary valve having a fuel passageway therethrough journaled in bearings adjacent its ends whereby said valve is maintained out of contact with the valve chamber walls, spring pressed longitudinal packing strips on said valve to prevent the escape of said fuel circumferentially of said valve, and packing rings on said valve to prevent the escape of said fuel longitudinally of said valve, and means for actuating said valve.

11. In an explosive engine a rotary valve having a fuel passageway therethrough journaled in bearings adjacent its ends whereby said valve is maintained out of contact with the valve chamber walls, spring pressed longitudinal packing strips on said valve to prevent the escape of said fuel circumferentially of said valve, fluid sealing means introduced into the valve chamber between said valve and valve chamber walls to prevent the escape of said fuel circumferentially of said valve, and packing rings on said valve to prevent the escape of said fuel longitudinally of said valve, and means for actuating said valve.

12. In an explosive engine, a rotary valve having a fuel passageway therethrough, a valve case, a bearing for said valve for maintaining the same out of frictional contact with its case and fluid sealing means between said valve and its case.

13. In an explosion engine, a ported cylinder, a rotary valve controlling the port of said cylinder, a bearing for said valve for maintaining the same out of frictional contact with its seat, and means for sealing the valve upon its seat.

14. In an explosion engine, a ported valve seat and a ported valve out of frictional contact therewith movable parallel to said seat, and means for sealing between said valve and its seat.

15. In an explosion engine, a ported valve seat and a ported valve out of frictional contact therewith movable parallel to said seat, and means for introducing a sealing fluid between the valve and its seat.

13,109. ADVERTISING APPARATUS. ALEXANDER S. SPIEGEL, Chicago, Ill., assignor to The Attractograph Company, Chicago, Ill., a Corporation. Filed Mar. 20, 1909. Serial No. 484,832. Original No. 911,561, dated Feb. 2, 1909, Serial No. 424,860.



1. The combination of a frame and a transparent plate provided with a screen consisting of opaque lines or bars on the back face thereof, with an additional plate movably mounted back of the transparent plate, a plurality of designs on the front face of the additional plate, a color scheme consisting of bars or lines of different colors on the additional plate, such designs and such bars and lines of color respectively formed of parts which are relatively associated the same as the lines or bars forming

the screen are associated, and such additional plate constructed of material which permits the passage therethrough of rays of light, means to diffuse the rays of light and means to impart movement to the additional plate; substantially as described.

2. The combination of a frame and a transparent plate provided with a screen consisting of opaque lines or bars on the back face thereof, with an additional plate movably mounted back of the transparent plate, a plurality of designs on the front face of the additional plate, a color scheme consisting of bars or lines of different colors on the additional plate, such designs and such bars or lines of color respectively formed of parts which are relatively associated the same as the lines or bars forming the screen are associated, and such color lines arranged so that a plurality of colors are exposed to view at a given time between any two of the lines or bars of the screen and such additional plate constructed of material which permits the passage therethrough of rays of light, means to diffuse the rays of light, means to impart movement to the additional plate relative to the transparent plate, and means to obtain light back of the additional plate; substantially as described.

3. The combination of a frame and a transparent plate, provided with a screen consisting of opaque lines or bars on the back face thereof, with an additional plate movably mounted back of the transparent plate, a plurality of designs on the front face of the additional plate, a color scheme consisting of a plurality of designs of different colors on the additional plate, the designs on the front of the additional plate and the color design respectively formed of parts which are relatively associated the same as the lines or bars forming the screen are associated, and such additional plate constructed of material which permits the passage therethrough of rays of light, means to diffuse the rays of light which are transmitted through the plates, means to obtain light back of the plates and means to give motion to the additional plate, substantially as described.

4. The combination of a frame and a transparent plate provided with a screen consisting of opaque lines or bars on the back face thereof, with an additional plate movably mounted back of the transparent plate, a plurality of designs on the front face of the additional plate, a color scheme consisting of a plurality of designs in different colors on the back of the additional plate, the designs on the front of the additional plate respectively formed of parts which are relatively associated the same as the lines or bars forming the screen are associated, and the color lines on the back thereof alternating in regular order, and such additional plate constructed of material which permits the passage therethrough of rays of light, and means to obtain light back of the plates and means to give motion to the additional plate, substantially as described.

5. The combination of a frame and a plate provided with a screen consisting of opaque parallel lines, with an additional plate movably mounted back of the screen, the said additional plate having a back ground composed of parallel lines of color covering the surface of said plate, said lines crossing the open spaces of the screen to give a dissolving color effect in the movement of the parts and a design independent of the background and composed of parallel opaque lines carried by said additional plate, said design caused to appear and disappear by the movement of the parts, substantially as described.

13,110. FIRELESS BAKER. ALVIN T. THOITS and JOHN G. GRONBERG, Grand Rapids, Mich., assignors to Caloric Fireless Cookstove Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Mar. 24, 1909. Serial No. 485,558. Original No. 898,527, dated Sept. 15, 1908, Serial No. 414,287.

1. In a fireless baker, the combination of a case, a heat insulating lining and a fire-proof lining in the case, a removable rack in the case, and one or more heating bodies one of which is adjustably supported by the rack.

2. In a fireless baker, the combination of a case, a heat insulating and fire-proof lining in the case, heating blocks, and a removable rack in the case, said rack having spaced apart and super-posed supports for the blocks the upper support being vertically adjustable.



3. In a fireless baker, a case, heat insulating and fire-proof lining in the case, a tray, vertical rods attached to the tray near its corners and connected in pairs by transverse members forming handles, adjustable supports on the vertical rods, two super-posed and removable heating blocks, one block being in the tray and the other block resting on the adjustable supports, and a vessel to contain the material to be baked interposed between said blocks.

4. In a fireless baker, in combination with a case having a heat insulating lining, two superposed blocks of steatite, a tray to support the lower block, vertical rods attached to the tray near its respective corners, horizontal upper members connecting the vertical rods in pairs and forming handles, vertically adjustable supports on the rods to support the upper block, and a vessel interposed between the blocks.

5. In a fireless baker, the combination of a case, a fire-proof lining within the same, a removable rack in the case, and a plurality of heating bodies, one of which is adjustably supported by the rack.

6. In a fireless baker, the combination of a case having a cooking chamber with heat-insulating material in such case, and two heating bodies, one in the bottom of such chamber, the other suspended in the chamber, so as to leave a space between the two heating bodies for the food receptacle, one of said heating bodies adjustably supported.

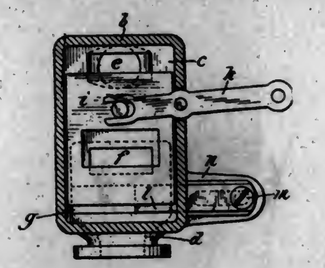
7. In a fireless baker the combination of a case having a cooking chamber comprising a food receptacle space with heat-insulating material surrounding such chamber and a plurality of removable heating bodies mounted in said chamber and means for adjusting the distance between such bodies in order to permit the use of cooking receptacles of different sizes.

8. In a fireless baker the combination of a case having a cooking chamber comprising a food receptacle space with heat-insulating material surrounding such chamber and a plurality of removable heating bodies mounted in said chamber and a rack supporting them, said rack providing adjustable means for varying the distance between the heating bodies, and means for adjusting the distance between such bodies in order to permit the use of cooking receptacles of different sizes.

13,111. CARBURETER. WILLIAM H. C. HIGGINS, Jr., Laporte, Ind., assignor, by direct and mesne assignments, to M. Rumely Company, Laporte, Ind., a Corporation of Indiana. Filed Jan. 10, 1910. Serial No. 537,867. Original No. 856,638, dated June 11, 1907, Serial No. 326,021.

1. A carbureter comprising a mixing chamber provided with a fuel inlet, two air admission ports, and a delivery port, means actuated externally of the carbureter for varying simultaneously the effective area of all of said ports, and independent means also actuated externally of the carbureter for varying the effective area of one of the air admission ports.

2. A carbureter comprising a mixing chamber provided with a fuel inlet, a port for the delivery of the mixture and a plurality of ports for the admission of air, positively actuated means to open and close the delivery port and one of said air ports and positively actuated means to close and open coördinately another of said air ports in opposition, the effective areas of the delivery-port and of the air-admission ports being substantially equal when the delivery port is fully open and as the delivery port is gradually closed the area of the air-admission ports being always equal to or less than their area when the delivery port is fully open.



3. A carbureter comprising a mixing chamber provided with a fuel inlet, a delivery port for the mixture, and a plurality of air inlet ports, means to open and close the delivery port and one of the inlet ports, means actuating simultaneously therewith, to close and open another of the inlet ports, and means to adjust the effective area of the last named inlet port.

4. A carbureter comprising a mixing chamber provided with a fuel inlet, a port for the delivery of the mixture, and two ports for the inlet of air, and a valve coöperating with said ports to open the delivery port and one of the air ports and simultaneously close the other of the air inlet ports, and vice versa, the effective areas of the delivery-port and of the air-admission ports being substantially equal when the delivery-port is fully open and as the delivery port is gradually closed the area of the air-admission ports being always equal to or less than their area when the delivery port is fully open.

5. A carbureter comprising a mixing chamber provided with a fuel inlet, a port for the delivery of the mixture and two ports for the inlet of air, a valve coöperating with said ports to open the delivery port and one of the air ports and simultaneously close the other of the air inlet ports and vice versa, and means to adjust the effective area of the last named inlet port.

6. A carbureter comprising a mixing-chamber having a fuel-inlet, a port for the delivery of the mixture and an air-inlet, in combination with positively actuated means to simultaneously open and close the delivery-port and a part of the air-inlet and close and open coördinately another portion of the air-inlet in opposition, the effective areas of the delivery port and of the air-admission port being substantially equal when the delivery port is fully open and as the delivery port is gradually closed the area of the air-admission port being always equal to or less than its area when the delivery port is fully open.

7. A carbureter comprising a mixing-chamber having a fuel-inlet, a port for the delivery of the mixture, and an air-inlet, in combination with positively actuated means to simultaneously open and close the delivery port and a part of the air-inlet and close and open coördinately another portion of the air-inlet in opposition, and separate means for separately adjusting the effective area of one such part of the air-inlet.

8. A carbureter comprising a mixing-chamber provided with a fuel-inlet, a port for the delivery of the mixture, a plurality of ports for the admission of air, means positively actuated to open and close the delivery port and one of said air-ports and close and open coördinately another of said air-ports in opposition, the effective areas of the delivery port and of the air-admission port being substantially equal when the delivery port is fully open and as the delivery port is gradually closed the area of the air-admission port being always equal to or less than its area when the delivery port is fully open.

9. In a carbureter, a mixing-chamber having a fuel-inlet adapted to vary its feed responsive to variations in the vacuum in the mixing-chamber, and an air-inlet and a mixture-outlet, in combination with means for simultaneously but unequally varying both of their effective areas during operation, and separate means for adjusting the effective area of one of them during such operation.

10. In a carbureter, a mixing-chamber having a fuel-inlet adapted to vary its feed responsive to variations in the vacuum in the mixing chamber, and an air-inlet and a mixture-outlet, in combination with means adapted to simultaneously but unequally vary their effective areas, the effective areas of the mixture-outlet and air-inlet being substantially equal when the mixture outlet is fully open and as the mixture outlet is gradually closed the area of the air-inlet being always equal to or less than its area when the delivery port is fully open.

11. In a carbureter, a mixing-chamber having a fuel-inlet, a mixture-outlet and an air-inlet, in combination with a valve to simultaneously vary the effective areas of the mixture-outlet and air-inlet, and a second valve to adjust that part of the air-inlet which is closed by the first valve when the carbureter is in operation at full load.

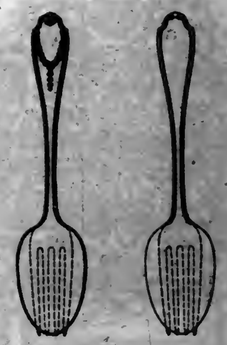
DESIGNS.

40,668. BOW-SOCKET FOR WATCHES. SIDNEY Y. BALL, Cleveland, Ohio, assignor to The Webb C. Ball Watch Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 20, 1909. Serial No. 534,219. Term of patent 14 years.



The ornamental design for a bow socket for watches, as shown.

40,669. HANDLE FOR SPOONS, FORKS, AND SIMILAR ARTICLES. CHARLES OSBORNE, New York, N. Y. Filed Mar. 10, 1910. Serial No. 548,504. Term of patent 14 years.



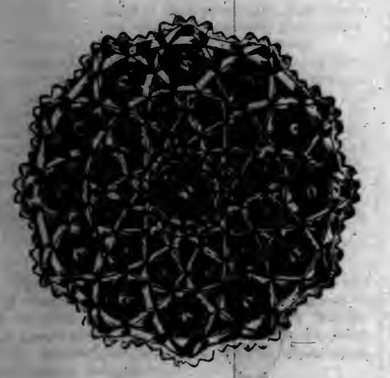
The ornamental design for a handle for a spoon, fork or similar article, as shown.

40,670. FORK. ANNA M. LATHAM, Portland, Me. Filed June 24, 1909. Serial No. 504,177. Term of patent 7 years.



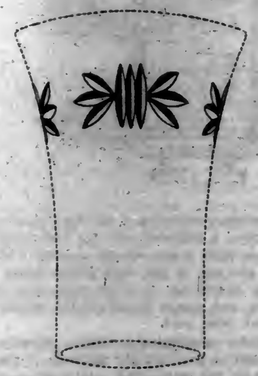
The ornamental design for a fork as shown and described.

40,671. CUT-GLASS DISH. ARTHUR E. MEIER, Chicago, Ill., assignor to Edward J. Koch & Company, Chicago, Ill., a Partnership. Filed Mar. 10, 1910. Serial No. 548,509. Term of patent 7 years.



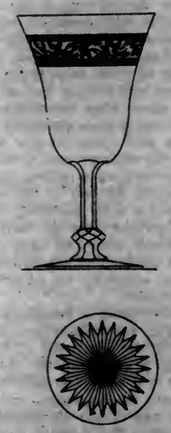
The ornamental design for a cut-glass dish, as shown.

40,672. GLASS VESSEL. JOHN J. HEBDY, Moundsville, W. Va., assignor to Fostoria Glass Company, Moundsville, W. Va., a Corporation of West Virginia. Filed Feb. 25, 1910. Serial No. 546,035. Term of patent 14 years.



The ornamental design for a glass vessel, as shown.

40,673. DRINKING VESSEL. ADRIEN GREDELUE, New York, N. Y., assignor to Louis Bessière, Paris, France. Filed Feb. 4, 1910. Serial No. 542,143. Term of patent 14 years.



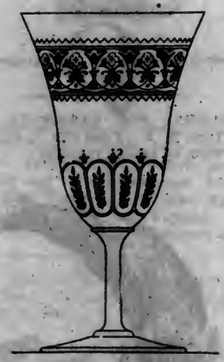
The ornamental design for a drinking vessel, as shown.

40,674. DRINKING VESSEL. ADRIEN GREDELUE, New York, N. Y., assignor to Louis Bessière, Paris, France. Filed Feb. 4, 1910. Serial No. 542,144. Term of patent 14 years.



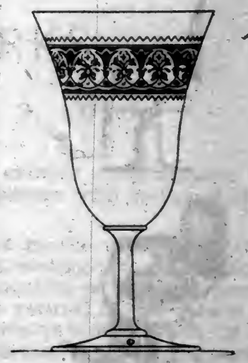
The ornamental design for a drinking vessel, as shown.

40,675. DRINKING VESSEL. ADRIEN GREDELUE, New York, N. Y., assignor to Louis Bessière, Paris, France. Filed Feb. 4, 1910. Serial No. 542,145. Term of patent 14 years.



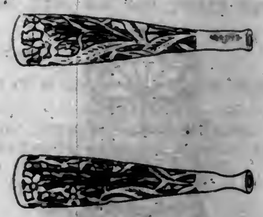
The ornamental design for a drinking vessel, as shown.

40,676. DRINKING VESSEL. ADRIEN GREDELUE, New York, N. Y., assignor to Louis Bessière, Paris, France. Filed Feb. 4, 1910. Serial No. 542,146. Term of patent 14 years.



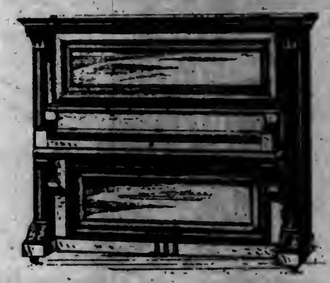
The ornamental design for a drinking vessel, as shown.

40,677. CIGAR OR CIGARETTE HOLDER. ARTHUR Q. WALSH, New York, N. Y. Filed Mar. 4, 1910. Serial No. 547,374. Term of patent 7 years.



The ornamental design for a cigar or cigarette holder, as shown.

40,678. PIANO-CASE. ALFRED C. ABRAMSON, Rockford, Ill., assignor to Haddorff Piano Company, Rockford, Ill., a Corporation of Illinois. Filed Feb. 23, 1910. Serial No. 545,549. Term of patent 3½ years.



The ornamental design for a piano case, as shown.

40,679. BARBER'S CHAIR. ERNEST E. KOKEN, deceased, St. Louis, Mo.; Walter F. Koken, executor. Filed Jan. 17, 1910. Serial No. 538,575. Term of patent 7 years.



The ornamental design for a barber's chair, as shown.

40,680. HEATING-STOVE. JAMES B. HOWARD, Indianapolis, Ind. Filed Feb. 25, 1910. Serial No. 546,037. Term of patent 14 years.



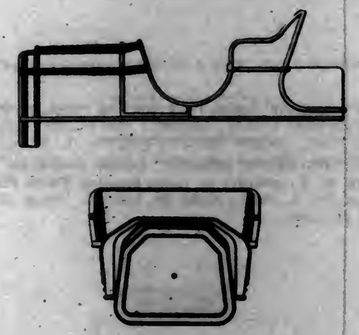


40,680.



The ornamental design for a heating stove, as shown.

40,681. AUTOMOBILE-BODY. EMIL GRUENFELDT, Cleveland, Ohio, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 1, 1910. Serial No. 541,404. Term of patent 7 years.



The ornamental design for an automobile body, as shown.

40,682. ORNAMENT FOR GARMENTS. ALFRED IRELAND, New York, N. Y. Filed Feb. 3, 1910. Serial No. 541,940. Term of patent 3½ years.



The ornamental design for an ornament for garments, as shown.

TRADE-MARKS

PUBLISHED MAY 3, 1910.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 25,803. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE WIRE GOODS COMPANY, Worcester, Mass. Filed Mar. 6, 1907. Used ten years.



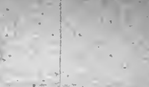
Particular description of goods.—Nails, Tacks, Screws, Screw-Eyes, Hooks, Staples, Chains, Iron Rings, Curtain Rods and Fixtures, Eyebolts, Wire Toasters and Broilers, Wire Racks, Blind and Awning Fixtures, Door-Springs, Spring-Cushions, Wire Washers, Wire Forks, Wire Beaters, Egg-Whips, Wire Mats, Wire Corn-Poppers, Wire Pot-Chains, Wire Draw-Pulls, and Wire Strainers and Sieves.

Ser. No. 27,988. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THURSTON & KINGSBURY, Bangor, Me. Filed June 8, 1907.



Particular description of goods.—Tea and Blended Coffee.

Ser. No. 28,736. (CLASS 2. RECEPTACLES.) SOCIÉTÉ EDOUARD BROUSSAUD ET ALFRED BONFILS, Angoulême, Entrechaux, France. Filed July 11, 1907.



No claim being made to the circle surrounding the letter "Z."

Particular description of goods.—Metallic Boxes for Inclosing Cigarette-Papers.

Ser. No. 35,564. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

40,679. BARBER'S CHAIR. ERNEST E. KOKEN, deceased, St. Louis, Mo.; Walter F. Koken, executor. Filed Jan. 17, 1910. Serial No. 538,575. Term of patent 7 years.



The ornamental design for a barber's chair, as shown.

40,680. HEATING-STOVE. JAMES B. HOWARD, Indianapolis, Ind. Filed Feb. 25, 1910. Serial No. 546,037. Term of patent 14 years.



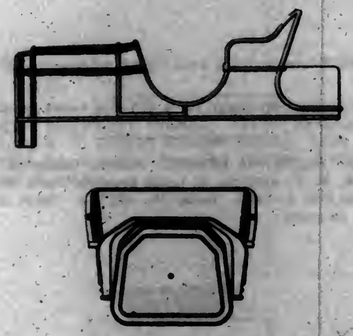


40,680.



The ornamental design for a heating stove, as shown.

40,681. AUTOMOBILE-BODY. EMIL GRUENFELDT, Cleveland, Ohio, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 1, 1910. Serial No. 541,404. Term of patent 7 years.



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TRADE-MARKS

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Ser. No. 25,803. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE WIRE GOODS COMPANY, Worcester, Mass. Filed Mar. 6, 1907. Used ten years.



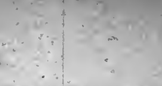
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Ser. No. 27,988. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THURSTON & KINGSBURY, Bangor, Me. Filed June 8, 1907.



Particular description of goods.—Tea and Blended Coffee.

Ser. No. 28,736. (CLASS 2. RECEPTACLES.) SOCIÉTÉ EDOUARD BROUSSAUD ET ALFRED BONFILS, Angoulême, Entrechaux, France. Filed July 11, 1907.



No claim being made to the circle surrounding the letter "Z."

Particular description of goods.—Metallic Boxes for Inclosing Cigarette-Papers.

Ser. No. 35,564. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelope, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 35,508. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908.



Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 36,018. (CLASS 33. GLASSWARE.) HOLOPHANE GLASS COMPANY, New York, N. Y. Filed July 9, 1908.

FLECFRAC

Particular description of goods.—Glassware Used for Modifying, Reflecting, Transmitting, Diffusing, and Directing Light.

Ser. No. 36,019. (CLASS 33. GLASSWARE.) HOLOPHANE GLASS COMPANY, New York, N. Y. Filed July 9, 1908.

LUNAR

Particular description of goods.—Glassware Used for Modifying, Reflecting, Transmitting, Diffusing, and Directing Light.

Ser. No. 36,020. (CLASS 33. GLASSWARE.) HOLOPHANE GLASS COMPANY, New York, N. Y. Filed July 9, 1908.

PRISMOLIER

Particular description of goods.—Glassware Used for Modifying, Reflecting, Transmitting, Diffusing, and Directing Light.

Ser. No. 36,021. (CLASS 33. GLASSWARE.) HOLOPHANE GLASS COMPANY, New York, N. Y. Filed July 9, 1908.

POLAR

Particular description of goods.—Glassware Used for Modifying, Reflecting, Transmitting, Diffusing, and Directing Light.

Ser. No. 36,022. (CLASS 33. GLASSWARE.) HOLOPHANE GLASS COMPANY, New York, N. Y. Filed July 9, 1908.

RAZLDAZL

Particular description of goods.—Glassware Used for Modifying, Reflecting, Transmitting, Diffusing, and Directing Light.

Ser. No. 36,366. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HEWLETT BROS. CO., Salt Lake City, Utah. Filed July 28, 1908.



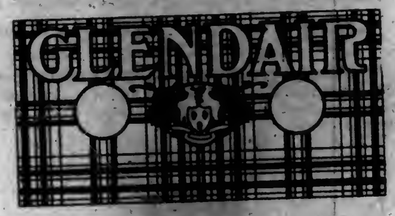
Particular description of goods.—Mustard, Spices, Pepper, and Flavoring Extracts.

Ser. No. 38,173. (CLASS 12. MASONRY MATERIALS.) ORNAMENTAL MARBLE & TILE COMPANY, Fond du Lac, Wis. Filed Oct. 21, 1908.

PETRIFO

Particular description of goods.—Artificial Marble, Plastic Mosaic Tile, Plastic Wall-Tile, Plastic Floor-Tile, Plastic Fireplace-Tile, Brick, Plastic Wall-Board, Plastic Wainscoting, and Plastic Base-Board.

Ser. No. 39,024. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EDWARD C. MATHEWSON, New York, N. Y. Filed Dec. 1, 1908.



Particular description of goods.—Butter, Dried Beef, Evaporated Milk, Tomato Relish, Apple-Butter, Eggs, and Pickles.

Ser. No. 39,323. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ELMO SISTERS, Pittsburg, Pa. Filed Dec. 15, 1908.



The portrait shown being that of Margaret Dryden.

Particular description of goods.—Massage-Creams, Rouges, Powder-Paste, and Hair-Tonics.

Ser. No. 39,865. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE MARTIN DENNIS COMPANY, Newark, N. J. Filed Jan. 13, 1909.

KROMOID

Particular description of goods.—Fillers of a Waxy Nature Used for Impregnating Hides After They are Tanned for the Purpose of Producing Sole-Leather.

Ser. No. 41,615. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE WESTERN CLOCK MFG. CO., La Salle, Ill. Filed Apr. 5, 1909.



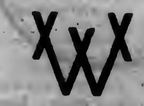
Particular description of goods.—Clocks and Watches.

Ser. No. 42,613. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) SOCIÉTÉ ANONYME DES ANCIENS ETABLISSEMENTS J. LAFRIQUE, Paris, France. Filed May 22, 1909.



Particular description of goods.—Dressed and Dyed Skins to be Used for Fur Goods.

Ser. No. 42,971. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE WHITLOCK COIL PIPE COMPANY, West Hartford, Conn. Filed June 11, 1909.



Particular description of goods.—Brass, Bronze, and Aluminum Castings.

Ser. No. 43,041. (CLASS 12. CONSTRUCTION MATERIALS.) SCHALKENBACH AND BUDKE, Jersey City, N. J. Filed June 16, 1909.

REX

Particular description of goods.—Skylights.

Ser. No. 43,106. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) BLISS BROTHERS COMPANY, Attleboro, Mass. Filed June 19, 1909. Used ten years.



Particular description of goods.—Charms, Bracelets, Precious-Metal Hat-Pins, and Precious-Metal-Mounted Ribbon Fobs.

Ser. No. 44,431. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) SMITH, KLINE & FRENCH COMPANY, Philadelphia, Pa. Filed Aug. 30, 1909.

Charina

Particular description of goods.—Tooth-Brushes.

Ser. No. 44,647. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. T. M. HURLBUT, Sebastopol, Cal. Filed Sept. 13, 1909.

OAKIFUGE

Particular description of goods.—A Remedy for Poison-Oak Poisoning.

Ser. No. 44,672. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STEPHEN B. TWINING, Yardley, Pa. Filed Sept. 13, 1909. Used ten years.

AFTON FARM

Particular description of goods.—Dressed Poultry.

Ser. No. 44,746. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE C. S. MOREY MERCANTILE CO., Denver, Colo. Filed Sept. 17, 1909.

MORADO

Particular description of goods.—Coffee, Tea, Strawberry Jam, Currant Jelly, Olives, Black Pepper, Vanilla Extract, Maple-Syrup, Cane-Syrup, Canned Corn, Canned Salmon, Seeded Raisins, Canned Peaches, and Rice.

Ser. No. 45,431. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE PARAFFINE PAINT COMPANY, San Francisco, Cal. Filed Oct. 20, 1909. Used ten years.



Particular description of goods.—Paint and Paint Compounds for Protective and Preservative Purposes.

Ser. No. 45,472. (CLASS 43. MALT EXTRACTS AND LIQUORS.) STANDARD BREWING COMPANY, Rochester, N. Y. Filed Oct. 22, 1909.



Particular description of goods.—Ales.

Ser. No. 45,532. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WALKER CHEMICAL COMPANY, Des Moines, Iowa. Filed Oct. 25, 1909.



The mask on the face of the woman, portions of her dress and hat, the ornamental leaf-like design, and the words "Cold Cream" being printed in red, no claim being made to the words "Theatrical Cold Cream."

Particular description of goods.—Cold-Cream.

Ser. No. 45,725. (CLASS 39. CLOTHING.) THOS. E. BROWN, Philadelphia, Pa. Filed Nov. 5, 1909.



Particular description of goods.—Hosiery.

Ser. No. 46,164. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) LAUTZ BROS. & CO., Buffalo, N. Y. Filed Nov. 29, 1909. Used ten years.

COTTON OIL

Particular description of goods.—Soap.

Ser. No. 46,278. (CLASS 39. CLOTHING.) MORRIS & CO., Baltimore, Md. Filed Dec. 4, 1909.

PAUL JONES

Particular description of goods.—Women's and Children's Blouses and Jumpers.

Ser. No. 46,367. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) L. N. WARD, Mobile, Ala. Filed Dec. 8, 1909.



Particular description of goods.—A Compound of Coffee and Chickory and Tea.

Ser. No. 46,541. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) CALVERT STOVE AND HEATING COMPANY, Baltimore, Md. Filed Dec. 15, 1909.

FARMER GIRL

Particular description of goods.—Cooking Stoves and Ranges.

Ser. No. 46,581. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE H. B. CLAFLIN COMPANY, New York, N. Y. Filed Dec. 17, 1909.



Particular description of goods.—Ribbons.

Ser. No. 46,647. (CLASS 39. CLOTHING.) DAVIS BROS., San Francisco, Cal. Filed Dec. 21, 1909.



The pictures shown being fanciful.

Particular description of goods.—Trousers, Overalls, Work-Shirts, Negligée and Dress Shirts Made of Soft and Finished Textiles, and Hosiery.

Ser. No. 46,946. (CLASS 37. PAPER AND STATIONERY. BLEISTIFT-FABRIK VORM. JOHANN FABER, A.-G., Nuremberg, Germany. Filed Jan. 7, 1910.

„APOLLO"

Particular description of goods.—Lead-Pencils, Colored Pencils, Slate-Pencils, Artists' Pencils, Copying-Pencils, Pencils with Movable Leads, Penholders, and Erasing-Rubber.

Ser. No. 46,962. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE H. D. LEE MERCANTILE COMPANY, Salina, Kans. Filed Jan. 7, 1910.



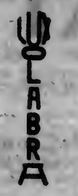
Particular description of goods.—Coffee and Canned Fruits and Vegetables.

Ser. No. 46,988. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ROBERT H. WOODRUM, Roanoke, Va. Filed Jan. 7, 1910.

CIDROLA

Particular description of goods.—Apple Juice.

Ser. No. 47,004. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE JANDUS ELECTRIC CO., Cleveland, Ohio. Filed Jan. 8, 1910.



Particular description of goods.—Electric Lighting Fixtures for Outdoor Illumination.

Ser. No. 47,149. (CLASS 7. CORDAGE.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Jan. 17, 1910.

NORLEIGH DIAMOND

Particular description of goods.—Braided Sash-Cord.

Ser. No. 47,150. (CLASS 33. GLASSWARE.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Jan. 17, 1910.

NORLEIGH DIAMOND

Particular description of goods.—Glass Lamp-Chimneys and Lantern-Globes.

Ser. No. 47,168. (CLASS 2. RECEPTACLES.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Jan. 17, 1910.

NORLEIGH DIAMOND

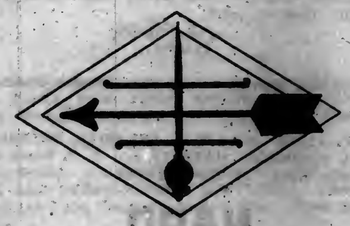
Particular description of goods.—Nail-Bags, Galvanized Pails, Oil-Cans, and Well-Buckets.

Ser. No. 47,196. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES V. COOPER, Downs, Kans. Filed Jan. 17, 1910.



Particular description of goods.—A Healing Remedy for Barb-Wire Cuts, Collar-Galls, Sore Necks, Burns, Bruises, Sore Teats of Cows, Distemper, Sore Throat, and Cough; a Remedy for Indigestion, Constipation, Fermentation, Bloating, and All other Forms of Colic and for Cornstalk or other Forage Poisoning.

Ser. No. 47,444. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) MOORE BROS. LIGHTNING ROD CO., Maryville, Mo. Filed Jan. 28, 1910.



Particular description of goods.—Lightning-Rods.

Ser. No. 47,463. (CLASS 33. GLASSWARE.) FOSTORIA GLASS COMPANY, Moundsville, W. Va. Filed Jan. 29, 1910.



Particular description of goods.—Water-Glasses, Wine-Glasses, Liquor-Glasses, Finger-Bowls, Finger-Bowl Plates, Custard-Glasses, Ice-Tea Glasses, Fruit-Glasses, Glass Cracker-Jars, Glass Punch-Bowls, Glass Decanters, Sherbet-Glasses, Glass Berry-Bowls, Nappies, Glass Cream-Pitchers, Glass Sugar-Holders, Glass Oil-Holders, Glass Salt-Shakers, Glass Stemware, Goblets, Glass Horseradish-Jars, Comports, Footed Nappies, and Glass Cheese-Plates and Covers Therefor.

Ser. No. 47,505. (CLASS 37. PAPER AND STATIONERY.) LASHER & LATHROP, INC., New York, N. Y. Filed Feb. 1, 1910. Used ten years.

Oak Mills

Particular description of goods.—Writing and Printing Paper.

Ser. No. 47,543. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE F. B. SHUSTER COMPANY, New Haven, Conn. Filed Feb. 2, 1910. Used ten years.

ROTARY

Particular description of goods.—Riveting-Machines.

Ser. No. 47,544. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE F. B. SHUSTER COMPANY, New Haven, Conn. Filed Feb. 2, 1910. Used ten years.

ELASTIC ROTARY

Particular description of goods.—Riveting-Machines.

Ser. No. 47,545. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE F. B. SHUSTER COMPANY, New Haven, Conn. Filed Feb. 2, 1910. Used ten years.

ELASTIC

Particular description of goods.—Riveting-Machines.

Ser. No: 47,548. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) C. T. PERRY & CO., Helena, Mont. Filed Feb. 2, 1910.

NAPO

Particular description of goods.—Soap-Powder.

Ser. No. 47,551. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE FRANKLIN MANUFACTURING COMPANY, New Haven, Conn. Filed Feb. 2, 1910.

CRACKERJACK

Particular description of goods.—Wire Straightening and Cutting-Off Machines.

Ser. No. 47,577. (CLASS 6. CMEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PAUL TOKAR, South Lorain, Ohio. Filed Feb. 3, 1910.

Lily

Particular description of goods.—Eye-Medicine.

Ser. No. 47,585. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) EDGAR ALLEN & CO. LIMITED, Sheffield, England. Filed Feb. 4, 1910. Used ten years.



Consisting of the representation of a running stag.
Particular description of goods.—Metal Castings and Forgings.

Ser. No. 47,586. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HOBSON, HOUGHTON & CO., LIMITED, Sheffield, England. Filed Feb. 4, 1910.



FEARLESS

Particular description of goods.—Files, and also for Machine-Knives, Machine-Tools, Twist-Drills, Milling and other Cutters, Mining, Rock-Boring, Wood-Boring, and Similar Drills, All of said Cutters and Drills Being Parts of Machinery.

Ser. No. 47,594. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE GEO. TILESTON MILLING COMPANY, St. Cloud, Minn. Filed Feb. 5, 1910.

LUCKY HIT

Particular description of goods.—Wheat-Flour.

Ser. No. 47,595. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE FRENCH MANUFACTURING COMPANY, St. Louis, Mo. Filed Feb. 5, 1910.

GYPSY QUEEN



The picture shown being fanciful.
Particular description of goods.—Baking-Powder, Baking-Soda, Bluing, Castor-Oil, and Turpentine for Medical Purposes.

Ser. No. 47,667. (CLASS 38. PRINTS AND PUBLICATIONS.) HUOTT PUBLISHING COMPANY, New York, N. Y. Filed Feb. 9, 1910.

POTTERY AND GLASS
GLASS AND POTTERY WORLD
"THE GREEN BOOK"

Particular description of goods.—Trade Journals.

Ser. No. 47,679. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ATLAS PRESERVING CO., Baltimore, Md. Filed Feb. 9, 1910.

PICK-ME-UP

Particular description of goods.—A Condiment Similar to a Chilli Sauce.

Ser. No. 47,747. (CLASS 39. CLOTHING.) JONATHAN PRESCOTT GROSVENOR, Worcester, Mass. Filed Feb. 11, 1910.



Particular description of goods.—Leather, Felt, and Cloth Shoes and Slippers.

Ser. No. 47,776. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE TROPICAL OIL COMPANY, Cleveland, Ohio. Filed Feb. 12, 1910.

"KRETO"

Particular description of goods.—Waterproof Paint.

Ser. No. 47,902. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ADA MARSH, New York, N. Y. Filed Feb. 18, 1910.



Particular description of goods.—A Cleaning-Paste for Gloves, Kid Shoes, and Wearing-Apparel.

Ser. No. 47,927. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) M-GREEN-FREVERT CO., Spokane, Wash. Filed Feb. 19, 1910.



The letters "W" being printed in red.
Particular description of goods.—A Soldering Fluid.

Ser. No. 48,047. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) EUGENE E. NICS, Philadelphia, Pa. Filed Feb. 26, 1910.

AVAST

Particular description of goods.—Oil Color Paints, Oil White Paints, Paste Paints, Roof-Paints, Ready-Mixed Paints; Enamel Paints; Fillers, Varnishes, and Stains.

Ser. No. 48,095. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) AMERICAN CIRCULAR LOOM COMPANY, Boston, Mass. Filed Mar. 1, 1910.

Xmet

Particular description of goods.—Metal Pipes.

Ser. No. 48,120. (CLASS 39. CLOTHING.) AETNA HOSIERY COMPANY, Worcester, Mass. Filed Mar. 2, 1910.

Uneeda

Particular description of goods.—Hosiery.

Ser. No. 48,200. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) RATHBONE, SARD & CO., Albany, N. Y.; Detroit, Mich., and Chicago and Aurora, Ill. Filed Mar. 4, 1910.

ACORN

Particular description of goods.—Heating Stoves, Ranges, and Furnaces.

Ser. No. 48,220. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAURICE F. SCHLESINGER, New York, N. Y. Filed Mar. 5, 1910.



Particular description of goods.—Salve for Eczema.

Ser. No. 48,227. (CLASS 38. PRINTS AND PUBLICATIONS.) THE J. J. PAPER CO., Ithaca, N. Y. Filed Mar. 5, 1910.



Particular description of goods.—Combined Labels and Covers for Fruit, Jelly, and Jam Receptacles.

Ser. No. 48,252. (CLASS 39. CLOTHING.) CURRICK, LEIKEN & BANDLER, New York, N. Y. Filed Mar. 7, 1910.

Madison Square

Particular description of goods.—Men's Waistcoats.

Ser. No. 48,256. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) SCHUT & KIBBE, INC., New Orleans, La. Filed Mar. 7, 1910.

S&K

Particular description of goods.—Logs and Lumber.

Ser. No. 48,328. (CLASS 38. PRINTS AND PUBLICATIONS.) RICHARD G. BADGER, Boston, Mass. Filed Mar. 10, 1910.

Poet Lore

Particular description of goods.—Bimonthly Magazines.

Ser. No. 48,353. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) BOWERS RUBBER WORKS, San Francisco, Cal. Filed Mar. 11, 1910. Used ten years.

CRACKPROOF

Particular description of goods.—Rubber Belts and Rubber Hose.

Ser. No. 48,361. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE MEISER DENTAL MANUFACTURING COMPANY, St. Louis, Mo. Filed Mar. 12, 1910.

HELIOS

Particular description of goods.—Dental Regulating Appliances Consisting in Spur-Wires, Retaining-Pipes, Expansion-Arches, Jack-Screws, Retracting-Screws, Heavy Band-Metal, Molar Clamp-Bands, Wrenches, and Bicuspid Clamp-Bands.

Ser. No. 48,379. (CLASS 12. CONSTRUCTION MATERIALS.) PEARL CLAY PRODUCTS COMPANY, Bradford, Pa. Filed Mar. 14, 1910.

Craftsman

Particular description of goods.—Bricks.

Ser. No. 48,473. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MARIN & GOLDBERG, Jersey City, N. J. Filed Mar. 16, 1910.

MARIGOLD

Particular description of goods.—Sliced Beef.

Ser. No. 48,488. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAS. H. FORBES TEA & COFFEE COMPANY, St. Louis, Mo. Filed Mar. 16, 1910.



The portrait being that of Martha Washington, deceased.

Particular description of goods.—Coffee.

Ser. No. 48,489. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAS. H. FORBES TEA & COFFEE COMPANY, St. Louis, Mo. Filed Mar. 16, 1910.

IUBILEE

Particular description of goods.—Coffee.

Ser. No. 48,490. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAS. H. FORBES TEA & COFFEE COMPANY, St. Louis, Mo. Filed Mar. 16, 1910.

BON TON

Particular description of goods.—Coffee.

Ser. No. 48,498. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) CENTURY CORK CO., New York, N. Y. Filed Mar. 17, 1910.

CENTO

Particular description of goods.—Composition Bottle-Stoppers.

Ser. No. 48,519. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) NEW YORK SPECIALTY CO., New York, N. Y. Filed Mar. 18, 1910.

SESCO

Particular description of goods.—Bottle-Stoppers.

Ser. No. 48,534. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AKERMAN & TUFFLEY, North San Diego, Cal. Filed Mar. 19, 1910.



Particular description of goods.—Canned Olives.

Ser. No. 48,541. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MOLINE PLOW CO., Moline, Ill. Filed Mar. 19, 1910.

LAY BY.

Particular description of goods.—Cultivators.

Ser. No. 48,590. (CLASS 39. CLOTHING.) ELY & WALKER DRY GOODS CO., St. Louis, Mo. Filed Mar. 21, 1910.



Particular description of goods.—Children's Outer Suits and Rompers.

Ser. No. 48,598. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) CAMBRIA STEEL COMPANY, Johnstown, Pa. Filed Mar. 22, 1910.

RESILIA

Particular description of goods.—Cast-Steel and Rolled-Steel Bars, Shapes, and Forgings Made Therefrom.

Ser. No. 48,594. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) CAMBRIA STEEL COMPANY, Johnstown, Pa. Filed Mar. 22, 1910.

ENDURIA

Particular description of goods.—Cast-Steel and Rolled-Steel Bars, Shapes, and Forgings Made Therefrom.

Ser. No. 48,603. (CLASS 48. MALT EXTRACTS AND LIQUORS.) PENNSYLVANIA CENTRAL BREWING COMPANY, Scranton, Pa. Filed Mar. 22, 1910.



Particular description of goods.—Beer.

Ser. No. 48,618. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANCIS S. WALKER, Fayette, Iowa. Filed Mar. 23, 1910.

ARCO

Particular description of goods.—An Antiseptic Germicide.

Ser. No. 48,625. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE REPUBLIC METALWARE COMPANY, Buffalo, N. Y. Filed Mar. 23, 1910.



Particular description of goods.—Tinware Kitchen and Household Utensils.

Ser. No. 48,631. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) CAMBRIA STEEL COMPANY, Johnstown, Pa. Filed Mar. 24, 1910.

TENSILIA

Particular description of goods.—Cast-Steel and Rolled-Steel Bars, Shapes, and Forgings Made Therefrom.

Ser. No. 48,632. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) CAMBRIA STEEL COMPANY, Johnstown, Pa. Filed Mar. 24, 1910.

DUCTILIA

Particular description of goods.—Cast-Steel and Rolled-Steel Bars, Shapes, and Forgings Made Therefrom.

Ser. No. 48,767. (CLASS 10. FERTILIZERS.) COMMERCIAL FERTILIZER CO., Montgomery, Ala. Filed Mar. 31, 1910.

RAINBOW

Particular description of goods.—Fertilizers.

Ser. No. 48,772. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) FRANK DAVIDSON, Brooklyn, N. Y. Filed Mar. 31, 1910.

ARISTO

Particular description of goods.—Compounds for Keeping Lenses and Plate-Glass Clear.

Ser. No. 48,777. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) COCHRANE MANUFACTURING CO., Dedham, Mass. Filed Mar. 31, 1910.



Particular description of goods.—Handkerchiefs.

Ser. No. 48,779. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) NEW ENGLAND LAUNDRY, Hartford, Conn. Filed Mar. 31, 1910.

NUTMEG

Particular description of goods.—Soap.

Ser. No. 48,780. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE J. B. WILLIAMS COMPANY, Glastonbury, Conn. Filed Mar. 31, 1910.

Moorland

Particular description of goods.—Soap.

Ser. No. 48,789. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ORTHOP CHEMICAL COMPANY, New York, N. Y. Filed Apr. 1, 1910.

AZTEC

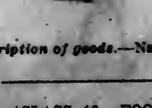
Particular description of goods.—An Insect-Exterminating Preparation.

Ser. No. 48,864. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE FISHER GOVERNOR COMPANY, Marshalltown, Iowa. Filed Apr. 5, 1910. Used ten years.

FISHER

Particular description of goods.—Valves.

Ser. No. 48,866. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CHARLES J. SHOAP, Rocky Mount, Va. Filed Apr. 6, 1910.



Particular description of goods.—Natural Mineral Water.

Ser. No. 48,879. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN T. REED, Baltimore, Md. Filed Apr. 6, 1910.

Lord Baltimore CANDIES

The word "Candies" not being claimed.
Particular description of goods.—Candies.

Ser. No. 49,016. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) CADWELL AND PARSONS, Buffalo, N. Y. Filed Apr. 11, 1910.



Particular description of goods.—Steel and Iron.

TRADE-MARKS

REGISTERED MAY 3, 1910.

77,695. QUEBRACHO TANNING EXTRACT. A. KLIPSTEIN & COMPANY, New York, N. Y.
Filed March 31, 1906. Serial No. 18,405. PUBLISHED MARCH 1, 1910.

77,696. SOAP. HERMAN AMSHOFF, Louisville, Ky.
Filed January 7, 1910. Serial No. 46,977. PUBLISHED MARCH 1, 1910.

77,697. DRY-BATTERY CELLS. ANHYDROUS BATTERY COMPANY, Chicago, Ill.
Filed October 7, 1909. Serial No. 45,186. PUBLISHED MARCH 1, 1910.

77,698. MONTHLY MAGAZINES. CHARLES A. BACON, Chicago, Ill.
Filed January 20, 1910. Serial No. 47,270. PUBLISHED MARCH 1, 1910.

77,699. MACARONI-PASTE FOODS. BIRMINGHAM MACARONI COMPANY, Birmingham, Ala.
Filed July 10, 1909. Serial No. 43,454. PUBLISHED MARCH 1, 1910.

77,700. COTTON GOODS IN THE PIECE. BONHAM COTTON MILLS, Bonham, Tex.
Filed March 15, 1909. Serial No. 41,192. PUBLISHED MAY 25, 1909.

77,701. WHEAT-FLOUR. BURRUS MILL & ELEVATOR COMPANY, Fort Worth, Tex.
Filed September 24, 1909. Serial No. 44,945. PUBLISHED MARCH 1, 1910.

77,702. SOAPS. F. C. CALVERT & Co., Manchester, England.
Filed July 21, 1909. Serial No. 43,676. PUBLISHED MARCH 1, 1910.

77,703. HANDKERCHIEFS. CARSON, PIRIE, SCOTT & Co., Chicago, Ill.
Filed August 2, 1909. Serial No. 43,928. PUBLISHED MARCH 1, 1910.

77,704. STITCHED CANVAS AND WOVEN BELTING. CARTON BELTING COMPANY, Berwick, Me., and Boston, Mass.
Filed November 24, 1909. Serial No. 46,103. PUBLISHED MARCH 1, 1910.

77,705. DOLLS. CHATTANOOGA MEDICINE Co., Chattanooga, Tenn.
Filed January 15, 1910. Serial No. 47,125. PUBLISHED MARCH 1, 1910.

77,706. LINIMENT FOR INTERNAL AND EXTERNAL USE. CALLIS CLARKE, Knoxville, Tenn.
Filed November 6, 1909. Serial No. 45,740. PUBLISHED FEBRUARY 1, 1910.

77,707. IRON AND STEEL. ALBERT COATES & Co., Manchester, England.
Filed November 8, 1909. Serial No. 45,766. PUBLISHED MARCH 1, 1910.

77,708. VERMICELLI AND MACARONI. P. DAUSSA & Co., New York, N. Y.
Filed January 3, 1910. Serial No. 46,878. PUBLISHED MARCH 1, 1910.

77,709. WHEAT-FLOUR. THE DAVIS MILLING COMPANY, St. Joseph, Mo.
Filed December 15, 1909. Serial No. 46,498. PUBLISHED MARCH 1, 1910.

77,710. FIRE AND WATER PROOF CEMENT FOR MENDING ALL KINDS OF KITCHEN UTENSILS AND RUBBER GOODS. PRIMROSE RALPH DE VORE, Columbus, Ohio.
Filed January 10, 1910. Serial No. 47,024. PUBLISHED MARCH 1, 1910.

77,711. WATCHES AND WATCH-MOVEMENTS. HIPP. DIDISHEIM & BRO., New York, N. Y.
Filed December 27, 1909. Serial No. 46,740. PUBLISHED MARCH 1, 1910.

77,712. PAPER BAGS. E-Z OPENER BAG COMPANY, Taylorville, Ill.
Filed January 14, 1909. Serial No. 39,893. PUBLISHED MARCH 30, 1909.

77,713. MOVING-PICTURE MACHINES. EDISON MANUFACTURING COMPANY, West Orange, N. J.
Filed January 20, 1910. Serial No. 47,259. PUBLISHED MARCH 1, 1910.

77,714. FILTERED WATER. THE ELECTROLYTIC PURIFYING COMPANY, Denver, Colo.
Filed January 6, 1909. Serial No. 39,731. PUBLISHED MARCH 1, 1910.

77,715. STOVES. THE ESTATE STOVE CO., Hamilton, Ohio.
Filed August 13, 1909. Serial No. 44,113. PUBLISHED MARCH 1, 1910.

77,716. CERTAIN TEXTILES. F. A. FOSTER & Co., New York, N. Y., assignor to F. A. Foster & Co. Inc., a Corporation of New York.
Filed July 13, 1908. Serial No. 36,085. PUBLISHED AUGUST 10, 1909.

77,717. COAL-TAR DYES. FARBENFABRIKEN OF ELBERFELD COMPANY, New York, N. Y.
Filed January 8, 1910. Serial No. 46,998. PUBLISHED MARCH 1, 1910.

77,718. PREPARED ROOFINGS. FORD MANUFACTURING COMPANY, Chicago, Ill.
Filed January 8, 1910. Serial No. 46,999. PUBLISHED MARCH 1, 1910.

77,719. PERFUMES. FREDERICK STEARNS & Co., Detroit, Mich.
Filed January 3, 1910. Serial No. 46,886. PUBLISHED MARCH 1, 1910.

77,720. COFFEE. THE G. B. FARRINGTON COMPANY, New York, N. Y.
Filed November 26, 1909. Serial No. 46,119. PUBLISHED MARCH 1, 1910.

77,721. COMBINED TALKING-MACHINE AND MOVING-PICTURE MACHINE. GAUMONT CO., New York, N. Y.
Filed April 16, 1909. Serial No. 41,826. PUBLISHED MARCH 1, 1910.

77,722. INTERIOR PLAYER-PIANOS. GEO. P. BENT COMPANY, Chicago, Ill.
Filed November 26, 1909. Serial No. 46,122. PUBLISHED MARCH 1, 1910.

77,723. INTERIOR PLAYER-PIANOS. GEO. P. BENT COMPANY, Chicago, Ill.
Filed November 26, 1909. Serial No. 46,123. PUBLISHED MARCH 1, 1910.

77,724. CANNED OYSTERS. GIBBS PRESERVING COMPANY, Baltimore, Md.
Filed November 18, 1909. Serial No. 45,985. PUBLISHED MARCH 1, 1910.

77,725. CANNED OYSTERS. GIBBS PRESERVING COMPANY, Baltimore, Md.
Filed November 18, 1909. Serial No. 45,987. PUBLISHED MARCH 1, 1910.

77,726. CANNED FRUITS. GOLDEN GATE PACKING COMPANY, San Jose, Cal.
Filed January 3, 1910. Serial No. 46,854. PUBLISHED MARCH 1, 1910.

77,727. REMEDY FOR WHITE DIARRHEA, ROUP, AND CHOLERA IN FOWLS. THE HANCOCK INOCULATUM CO., Salem, Va.
Filed November 15, 1909. Serial No. 45,889. PUBLISHED MARCH 1, 1910.

77,728. SACHET-POWDER. THE HENRY B. GILPIN CO., Baltimore, Md.
Filed December 29, 1909. Serial No. 46,792. PUBLISHED MARCH 1, 1910.

77,729. CERTAIN METALS AND METAL ARTICLES. HENRY ROSSELL & CO. LTD., Sheffield, England.
Filed September 7, 1909. Serial No. 44,554. PUBLISHED MARCH 1, 1910.

77,730. MACHINE-TOOLS. HENRY ROSSELL & CO. LTD., Sheffield, England.
Filed September 7, 1909. Serial No. 44,555. PUBLISHED MARCH 1, 1910.

77,731. CANNED FRUITS. HUNT BROTHERS COMPANY, San Francisco, Cal.
Filed January 3, 1910. Serial No. 46,876. PUBLISHED MARCH 1, 1910.

77,732. REMEDY FOR NERVE DISEASES. INDIANA PHARMACEUTICAL COMPANY, Fort Wayne and Indianapolis, Ind.
Filed January 7, 1910. Serial No. 46,960. PUBLISHED MARCH 1, 1910.

77,733. PREPARATION FOR ERADICATING WARTS. J. J. GEORGES & SON, INC., Washington, D. C.
Filed February 1, 1909. Serial No. 40,281. PUBLISHED MARCH 1, 1910.

77,734. ELECTROTYPES. WALTER C. JACOBS, Newark, N. J.
Filed August 23, 1909. Serial No. 44,300. PUBLISHED MARCH 1, 1910.

77,735. BITUMEN OR ASPHALTUM. JOHN S. LAMSON AND BROTHER, New York, N. Y.
Filed December 21, 1909. Serial No. 46,656. PUBLISHED MARCH 1, 1910.

77,736. COMBINED WASHSTANDS AND SCREENS. ANNA L. JONES, Lynchburg, Va.
Filed December 8, 1908. Serial No. 39,087. PUBLISHED MARCH 1, 1910.

77,737. PLASTIC COMPOSITION FOR FILLING SEAMS IN WOODWORK, &c. H. B. FRED. KUHLS, Brooklyn, N. Y.
Filed February 3, 1908. Serial No. 32,546. PUBLISHED MARCH 1, 1910.

77,738. COOKING-STOVES AND PORTABLE RANGES. LIBERTY STOVE COMPANY, Philadelphia, Pa.
Filed December 15, 1909. Serial No. 46,502. PUBLISHED MARCH 1, 1910.

77,739. MERCERIZED SPOOL AND SEWING COTTON THREAD. B. LONDON & SONS, New York, N. Y.
Filed November 23, 1909. Serial No. 46,085. PUBLISHED MARCH 1, 1910.

77,740. GIRLS' DRESSES. LOUIS SONN & CO., New York, N. Y.
Filed January 18, 1910. Serial No. 47,230. PUBLISHED MARCH 1, 1910.

77,741. METAL-POLISH. SARAH MASON, York, Pa.
Filed October 27, 1909. Serial No. 45,569. PUBLISHED MARCH 1, 1910.

77,742. FERMENT. MEAD JOHNSON & COMPANY, Jersey City, N. J.
Filed December 29, 1909. Serial No. 46,785. PUBLISHED MARCH 1, 1910.

77,743. FERMENT. MEAD JOHNSON & COMPANY, Jersey City, N. J.
Filed December 29, 1909. Serial No. 46,786. PUBLISHED MARCH 1, 1910.

77,744. FERMENT. MEAD JOHNSON & COMPANY, Jersey City, N. J.
Filed December 29, 1909. Serial No. 46,787. PUBLISHED MARCH 1, 1910.

77,745. CERTAIN CLOTHING. MICHAELS, STERN & Co., Rochester, N. Y.
Filed September 20, 1909. Serial No. 44,793. PUBLISHED MARCH 1, 1910.

77,746. ABDOMINAL BELTS. ROBERT E. MOORE, Philadelphia, Pa.
Filed November 22, 1909. Serial No. 46,056. PUBLISHED MARCH 1, 1910.

77,747. OINTMENT. RICHARD NEUBAUER, Portland, Oreg.
Filed December 27, 1909. Serial No. 46,727. PUBLISHED MARCH 1, 1910.

77,748. PERCOLATING COFFEE-POTS. THE NEW ENGLAND ENAMELING COMPANY, Middletown, Conn.
Filed July 26, 1909. Serial No. 43,789. PUBLISHED NOVEMBER 2, 1909.

77,749. LEATHER BOOTS AND SHOES. NORTHERN SHOE CO., Duluth, Minn.
Filed January 6, 1910. Serial No. 46,941. PUBLISHED MARCH 1, 1910.

77,750. LOCKS AND BOLTS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,163. PUBLISHED MARCH 1, 1910.

77,751. SQUARES AND WING-DIVIDERS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,179. PUBLISHED MARCH 1, 1910.

77,752. CERTAIN TOOLS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,188. PUBLISHED MARCH 1, 1910.

77,753. BAKING-POWDER. OLIVER-FINNIE CO., Memphis, Tenn.
Filed January 6, 1910. Serial No. 46,937. PUBLISHED MARCH 1, 1910.

77,754. MARINE AND FIELD GLASSES. PINKHAM & SMITH COMPANY, Boston, Mass.
Filed January 12, 1910. Serial No. 47,098. PUBLISHED MARCH 1, 1910.

77,755. WASHING COMPOUND. ANNE E. RAWLINS, St. Louis, Mo.
Filed December 31, 1909. Serial No. 46,826. PUBLISHED MARCH 1, 1910.

77,756. WORKING-GLOVES. CLAIR E. RHICKS, Jacksonville, Fla.
Filed December 31, 1909. Serial No. 46,830. PUBLISHED MARCH 1, 1910.

77,757. CERTAIN FOODS. REYNOLDS, DAVIS & COMPANY, Fort Smith, Ark.
Filed September 23, 1909. Serial No. 44,878. PUBLISHED MARCH 1, 1910.

77,758. CERTAIN CLOTHING. RICH-STIX DRY GOODS COMPANY, St. Louis, Mo.
Filed June 14, 1909. Serial No. 42,999. PUBLISHED OCTOBER 12, 1909.

77,759. SOAP AND SOAP POWDERS. ROACH BROTHERS, Fort Wayne, Ind.
Filed January 7, 1910. Serial No. 46,947. PUBLISHED MARCH 1, 1910.

77,760. BANJOS. THE RUDOLPH WURLITZER CO., Cincinnati, Ohio.
Filed September 3, 1908. Serial No. 37,139. PUBLISHED MARCH 1, 1910.

77,761. CERTAIN MUSICAL INSTRUMENTS. THE RUDOLPH WURLITZER CO., Cincinnati, Ohio.
Filed September 3, 1908. Serial No. 37,153. PUBLISHED MARCH 1, 1910.

77,762. FIRE-EXTINGUISHING APPARATUS. S. F. HAYWARD & Co., New York, N. Y.
Filed November 26, 1909. Serial No. 46,114. PUBLISHED MARCH 1, 1910.

77,763. TONIC PORT. JULES CHAMON DE ST. HUBERT, Hollister, Cal.
Filed March 30, 1907. Serial No. 26,847. PUBLISHED MARCH 1, 1910.

77,764. OINTMENT, HAIR-TONIC, AND SALVE. LOUIS SAMUELS, New York, N. Y.
Filed January 6, 1910. Serial No. 46,923. PUBLISHED MARCH 1, 1910.

77,765. CIGARS. SAN TELMO CIGAR MFG. CO., Detroit, Mich.
Filed November 30, 1909. Serial No. 46,187. PUBLISHED MARCH 1, 1910.

77,766. CIGARS. SAN TELMO CIGAR MFG. CO., Detroit, Mich.
Filed November 30, 1909. Serial No. 46,190. PUBLISHED MARCH 1, 1910.

77,767. CIGARS. SAN TELMO CIGAR MFG. CO., Detroit, Mich.
Filed November 30, 1909. Serial No. 46,193. PUBLISHED MARCH 1, 1910.

77,768. MEDICINAL PREPARATION FOR EXTERNAL USE. SAPA CHEMICAL CO., St. Louis, Mo.
Filed January 5, 1910. Serial No. 46,916. PUBLISHED MARCH 1, 1910.

77,769. LEATHER, RUBBER, AND CANVAS BOOTS AND SHOES. DAVID SOMMERS, Shamokin, Pa.
Filed July 23, 1909. Serial No. 43,701. PUBLISHED MARCH 1, 1910.

77,770. COTTON HANDKERCHIEFS NOT IN THE PIECE. TOOTAL BROADHURST LEE COMPANY LIMITED, Manchester, England.
Filed December 29, 1909. Serial No. 46,781. PUBLISHED MARCH 1, 1910.

77,771. COTTON HANDKERCHIEFS NOT IN THE PIECE. TOOTAL BROADHURST LEE COMPANY LIMITED, Manchester, England.
Filed December 29, 1909. Serial No. 46,782. PUBLISHED MARCH 1, 1910.

77,772. [WITHDRAWN.]

77,773. CERTAIN FOODS. WADHAMS & COMPANY, Portland, Oreg.
Filed October 9, 1909. Serial No. 45,229. PUBLISHED MARCH 1, 1910.

77,774. NAILS AND TACKS. THE WEATHER-PROOFING NAIL CO., Baltimore, Md.
Filed November 23, 1909. Serial No. 46,073. PUBLISHED MARCH 1, 1910.

77,775. OILED CLOTHING. WESTERN OILED CLOTHING CO., Kansas City, Mo.
Filed March 25, 1909. Serial No. 41,391. PUBLISHED MARCH 1, 1910.

77,776. CERTAIN MANHOLE-FITTINGS. WILLIAM HEISER AND SONS COMPANY, Buffalo, N. Y.
Filed December 18, 1909. Serial No. 46,601. PUBLISHED MARCH 1, 1910.

77,777. METHYL ALCOHOL. WOOD PRODUCTS CO., Buffalo, N. Y.
Filed November 22, 1909. Serial No. 46,070. PUBLISHED MARCH 1, 1910.

77,778. SEEDS. JAMES A. EVERITT, Indianapolis, Ind.
Filed July 17, 1909. Serial No. 43,579. PUBLISHED OCTOBER 12, 1909.

77,779. ELECTRIC LAMPS. GENERAL ELECTRIC COMPANY, Schenectady, N. Y.
Filed December 29, 1909. Serial No. 46,773. PUBLISHED MARCH 1, 1910.

77,780. ANTHRACITE COAL. WARNER G. MORTON, Albany, N. Y.
Filed December 22, 1909. Serial No. 46,681. PUBLISHED MARCH 1, 1910.

77,781. CORK. TANCREDO DA SILVA JORGE, Lisbon, Portugal.
Filed December 7, 1909. Serial No. 46,321. PUBLISHED MARCH 1, 1910.

77,782. CORK. TANCREDO DA SILVA JORGE, Lisbon, Portugal.
Filed December 7, 1909. Serial No. 46,320. PUBLISHED MARCH 1, 1910.

LABELS

REGISTERED MAY 3, 1910.

15,164.—*Title:* "SWEET HEARTS." (For Candy Hearts.) HUYLER'S, New York, N. Y. Filed February 19, 1910.

15,165.—*Title:* "SOLE-IN." (For Rendering Shoes Waterproof.) JOSEPH ZUCKERMAN, New York, N. Y. Filed April 6, 1910.

15,166.—*Title:* "BURLINGTON BREW." (For Beer.) KARLS LITHOGRAPHIC COMPANY, Rochester, N. Y. Filed December 31, 1909.

15,167.—*Title:* "WONDER BREW." (For Bottled Beer.) PETER SCHROEDER BREWING CO., Perham, Minn. Filed April 1, 1910.

15,168.—*Title:* "DECISION." (For Cigars.) E. A. KLINE & Co., Cleveland, Ohio. Filed April 7, 1910.

15,169.—*Title:* "NEW ORLEANS CREOLE COOKED OYSTERS." (For Canned Oysters.) BILOXI CANNING CO., Biloxi, Miss., and New Orleans, La. Filed April 20, 1910.

15,170.—*Title:* "BEAR'S EXQUISITE COLD CREAM." (For Ointment.) MONTAGUE M. BEAR, Chicago, Ill. Filed April 22, 1910.

PRINTS

REGISTERED MAY 3, 1910.

2,586.—*Title:* "ASK HER ANY TIME." (For Pureoxia Ginger-Ale.) THE W. F. POWERS COMPANY, New York, N. Y. Filed April 9, 1910.

2,587.—*Title:* "CHILDREN AND CLOCK." (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed March 24, 1910.

2,588.—*Title:* "ROADSIDE SCENE, AMERICAN FENCE." (For Wire Fences.) THE AMERICAN STEEL & WIRE COMPANY OF NEW JERSEY, Chicago, Ill. Filed March 10, 1910.

2,589.—*Title:* "LUXURIE." (For Cigars.) SHEPPARD-STRASSHEIM CO., Chicago, Ill. Filed April 20, 1910.

2,590.—*Title:* "LONG SERVICE OUTWEIGHS PRICE." (For Leather Belting.) ALEXANDER BROTHERS, Philadelphia, Pa. Filed April 16, 1910.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE POLAR KNITTING MILLS.

Decided April 16, 1910.

TRADE-MARKS—NAME OF APPLICANT—PECULIAR AND DISTINCTIVE MANNER OF WRITING.

Where the three words composing the name of the applicant are so formed that the tops of each show a continuous slant downward from beginning to end and all of the horizontal parts of the letters are provided with a representation of snow or ice, *Held* that the name is not printed or written in such peculiar and distinctive manner as to justify its registration as a trade-mark.

ON APPEAL.

TRADE-MARK FOR MUFFLERS, GLOVES, AND TOQUES.

Mr. Joshua R. H. Potts for the applicant.

MOORE, *Commissioner:*

This is an appeal from the action of the Examiner of Trade-Marks refusing to register as a mark for mufflers, gloves, and toques a conventional polar scene, to the right of which are printed the words "Polar Knitting Mills."

Registration was refused on the ground that the words "Polar Knitting Mills" are the name of applicant not written, printed, impressed, or woven in a particular or distinctive manner, as required by section 5 of the act of February 20, 1905.

The letters of which the words "Polar Knitting Mills" are composed are so formed that the tops of the same show a continuous slant downward from the beginning to the end of each word, and all of the horizontal or nearly horizontal parts of the letters are provided with a representation of snow or ice.

Applicant makes no contention that the conventional polar scene adds anything to the registrability of the mark, as appears from the following on page 3 of the brief:

While applicant's trade-mark is illustrated in the drawing as comprising both the name and the scene, no claim is made to the effect that the scene accompanying the name renders the mark as a whole registrable.

In fact such a contention could hardly be maintained under the ruling of the Court of Appeals of the District of Columbia in the case of *Johnson* v. *Brandau*, (139 O. G., 782; 32 App. D. C., 348.) He does contend, however, that the words "Polar Knitting Mills," while constituting the name of the applicant, are printed in a distinctive manner and that therefore the mark as a whole is registrable.

The question of what constitutes a distinctive display of an applicant's name arose in the case of *ex parte C. H. Alden Company*, (131 O. G., 2419,) in which the words "The Alden Shoe" were shown inclosed with a circle, associated with certain words descriptive of the goods. The word "Alden" was printed in letters of varying heights, so that the word presented the general form of an ellipse. After stating that the real question to be determined was whether the word "Alden" was printed in a distinctive manner the Commissioner said:

It is believed that the controlling principle underlying the requirement of the statute that a mere name unless written or printed in a distinctive manner may not be registered is that the distinctive manner in which the name is displayed must be of a character as to give such a distinct impression to the eye of the ordinary observer as to outweigh the significance of the mere name.

In *ex parte Mark Cross* (102 O. G., 622) it was stated that—

the peculiarities must dominate the mere name and reduce it to a position of relative obscurity.

Again, in the case of *ex parte A. Engelhard & Sons Company* (109 O. G., 1886) the guiding principle for such cases as the present was stated as follows:

To determine in any particular case whether the form of mark presented for registration is merely the name of the applicant, we may consider whether the use of the mere name printed in the ordinary way by a rival merchant would create confusion, for the reason that the impression created by the mark as used would be substantially the impression created by the mere name. Thus we may measure the relative values to be given to the mere name and those to be given to its formal attributes and accessories in the total visual effect produced. If the mere name printed in the ordinary way would create so nearly the impression created by this mark as to render the user of the mere name an infringer, then to protect this mark as a trade-mark would be to protect the mere name, to which the statute expressly refuses protection. If accessories are to save the mere name from the inhibition of the statute, they must rise into such relative importance and must so dwarf the mere name as to render this latter of minor importance in the whole effect produced upon the mind of the observer and to prevent such result of infringement as just mentioned. In fact, it seems to me that a due regard to the spirit of the statute requires the reduction of the name element in the mark to be carried so far that the name becomes a negligible or non-essential factor in the whole effect produced, so that if the rest of the mark should be changed it would not present a substantially different appearance.

Applying the principles set forth in these cases to the mark now up for consideration I am convinced that the refusal of the Examiner to register the mark was proper. The striking characteristic of the words as printed is merely that produced by the same words printed in ordinary type. A slant to the top of the letters and the slight snow effect are not believed sufficient to render the display distinctive within the meaning of the statute.

The decision of the Examiner of Trade-Marks is affirmed.

DECISIONS OF THE U. S. COURTS

Court of Appeals of the District of Columbia.

SCOTT AND SCOTT, EXECUTORS OF THE ESTATE OF WALTER SCOTT, DECEASED, *v.* CRUSE.

Decided February 1, 1910.

INTERFERENCE—PRIORITY—DILIGENCE.

Evidence considered and *Held* to show that C., who was the first to conceive the invention in issue, was exercising due diligence in reducing it to practice at the time S. entered the field and subsequently thereto.

Mr. F. B. Brock for the appellants.

Mr. M. B. Philipp and *Mr. J. Q. Rice* for the appellee.

SHEPARD, *C. J.*:

This is an interference proceeding involving priority of the invention described in the following issue:

1. In a casting-box the combination with a part maintained in a substantially vertical position, of a movable part having supporting devices, and a guide comprising tracks with which said supporting devices coöperate the movable part moving from a substantially vertical position, the supporting devices and guide being constructed and arranged so that the movable part is balanced for any position thereof.

2. In a casting-box, the combination with a part maintained in a substantially vertical position, of a movable part having two sets of supporting devices thereon, and a guide comprising two sets of tracks with which said devices coöperate, the movable part moving from a substantially horizontal to a substantially vertical position, the supporting devices and guide being constructed and arranged so that the movable part is balanced for every position thereof.

3. In a casting-box, the combination with a cover maintained in a substantially vertical position, of a movable body said body having two sets of supporting devices thereon, one set being arranged near the bottom thereof, and a guide with which said supporting devices coöperate, the supporting devices and guide being constructed and arranged so that the movable body is balanced for every position thereof.

The invention is an improved mold for casting stereotype-plates for use in printing-machines. It consists of a cover fixed in a vertical position, and a body movable on tracks from a horizontal to a vertical position into conjunction with the cover, the tracks being so formed that the movable body shall be in equilibrium at all points of its movement. After the movable body is thus brought to a vertical position it is brought into contact with the stationary cover, and locked thereto for the reception of the molten metal. Although the immovable vertical cover is a part of the combination of the issue, the gist of the invention is the mechanical movement consisting of the specially designed tracks by means of which the movable part of the mold is moved from its horizontal to a vertical position and equally balanced at all intermediate positions. When the two parts of the mold are brought into contact they are necessarily clamped or locked to effect the casting, but the locking device forms no part of the issue.

Walter Scott, who is now represented by his executors, filed his application on September 15, 1903. He has alleged conception and disclosure on April 6, 1901, but claims no reduction to practice save that affected by the filing of his application. He has taken no testimony to prove an earlier conception, and is confined therefore to his application date. Cruse, who filed January 6, 1904, alleges conception in the early part of July, 1902, making drawings August 15, construction of models September 16 and reduction to practice about December 1, 1902. The Examiner of Interferences found that Cruse conceived the invention in September, 1902, but had not reduced it to actual practice, before Scott filed. He awarded priority to Cruse, however, on the ground that he exercised due diligence in perfecting his machine and reducing to practice. On appeal to the Examiners-in-Chief, two of them concurred in a decision reversing the Examiner of Interferences. They held that while Cruse had made his machine about December 1, 1902, he had neither reduced it to practice before Scott filed, nor exercised diligence. One of them dissented on the ground that the invention consisted of a mechanical movement, the construction of which in operative form was a reduction to practice. The Commissioner, without passing upon the fact of reduction to practice, reversed the Examiners-in-Chief, and awarded priority to Cruse, on the ground that he exercised due diligence in perfecting and prosecuting his invention.

The evidence and the several propositions thereunder relating to reduction to practice and diligence have been discussed at length and with ability in the several decisions of the tribunals of the Patent Office.

The decisions render it unnecessary to review the evidence further. It is very clear that Cruse conceived the invention in the summer of 1902. We are inclined to the view that he actually reduced it to practice as a satisfactory casting-mold for the desired plates, certainly as early as the summer of 1903 by the use in the office of the *New York Herald*, but we need not decide that question. Passing it by we agree with the Commissioner that the evidence shows that Cruse, having conceived the invention in the summer of 1902, exercised reasonable diligence in perfecting and prosecuting it from that time until he filed his application for the patent. The evidence brings him clearly within the rule of diligence established by the cases cited in the decision of the Examiner of Interferences and the Commissioner.

The decision is affirmed, and this decision will be certified to the Commissioner of Patents as the law requires.

Affirmed.

Court of Appeals of the District of Columbia.

VON RECKLINGHAUSEN *v.* DEMPSTER.

Decided February 22, 1910.

1. INTERFERENCE — DIVISIONAL APPLICATION — ENTITLED TO DATE OF ORIGINAL AS DATE OF CONSTRUCTIVE REDUCTION TO PRACTICE.

A divisional application is entitled to the date of filing of the original application as a date of constructive reduction to practice whether the claims of the divisional application were presented in the earlier application or not. (*Saunders* v. *Miller*, 146 O. G., 505; 33 App. D. C., 456, distinguished.)

2. SAME—SAME—SAME.

Where as the result of an adverse decision in an interference all the claims of an application are rejected, *Held* that a divisional application filed within one year from the date of such rejection is entitled to the date of the original application as a date of constructive reduction to practice.

Mr. F. P. Warfield and *Mr. C. H. Duell* for the appellant.

Mr. A. G. Davis and *Mr. A. D. Lunt* for the appellee.

VAN ORSDEL, *J.*:

This is an appeal from the decision of the Commissioner of Patents in an interference proceeding. The Examiner of Interferences first awarded judgment of priority of invention to appellant, but this he reversed on rehearing, the latter decision being subsequently affirmed by the Board of Examiners-in-Chief and, in turn, by the Commissioner. The invention in issue relates to mercury-vapor lamps and is embodied in nine counts, the following, however, being sufficient to illustrate the invention for the purposes of this inquiry:

1. A vapor device comprising a movable container, normally-separated electrodes or contacts in said container and included in the main operating-circuit of the device, one of such electrodes being a conducting liquid, and automatic means for moving the container so as to make and break conductive connection between the said electrodes.

Appellant filed his application on December 13, 1904, which eventuated into a patent on July 18, 1905. He claims to have conceived the invention contained therein in October, 1903, and to have reduced the same to practice in October, 1904. Appellee filed an application, the one here in issue, on August 14, 1905. It was found by the Examiner of Interferences, and conceded by appellant, that appellee has established conception of the invention as early as the summer of 1901. For reduction to practice, appellee seeks to rely upon the date of the filing of an earlier application, the drawings and specification of which are identical with the application here in interference. Two methods in which the apparatus is capable of use were there presented. Both were covered by generic claims, but only one form was claimed specifically, as required by the rules of the Patent Office. All the claims of this application were subsequently involved in an interference and were rejected on February 25, 1905. No action thereon was taken by appellee until January 12, 1906, when several other claims were inserted by amendment, and subsequently refused by the Office. The application then became abandoned by lapse of time. In the meantime, on August 14, 1905, appellee filed the application here in issue, containing claims to the second species shown in the earlier application. It is contended that this should be considered as a division of the earlier application and, therefore, entitled to relate back to its filing date for a constructive reduction to practice. If this contention is correct, appellee, being the first to conceive and the first to reduce to practice, must prevail.

It is urged on behalf of the appellant that, as the filing of an allowable application is essential in order to constitute a constructive reduction to practice,

it was not until Dempster filed this so-called divisional application involved in this interference that he filed an allowable application for the invention involved herein.

This court in *Croskey* v. *Atterbury*, (9 App. D. C., 207; 76 O. G., 63,) answering the contention that the application there under consideration should not be considered as a constructive reduction to practice because—

it was not an allowable application at the time it was filed and did not become such until it was amended May 18, 1893, by inserting the claims in interference and the words "or in any suitable or known manner" in the original application,

defined the term "allowable application" as follows:

Under the statutes and rules of practice of the Patent Office a completed and allowable application is one which, with the specifications, drawings, and model, if any, required to be filed therewith, describe a patentable invention in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which it relates to make and use the same.

It is settled law that claims may be introduced into an application by amendment, and, if their subject-matter is sufficiently disclosed by the application as filed, even though not theretofore claimed, they may relate back to and receive all the benefits and advantages incident to the earlier filing date. It is equally well settled that if, under the rules of the Patent Office, division is required between the later claims and those previously contained in the application, the original and the divisional applications will be treated as continuous, and the date of the filing of the original will be accorded the applicant as the date of constructive reduction to practice for both. (*Duryea* v. *Rice*, 28 App. D. C., 423; 126 O. G., 1357; *Lotz* v. *Kenney*, 31 App. D. C., 205; 135 O. G., 1801.)

True, the claims to the invention here in issue were never specifically presented in the earlier case; but the effect cannot be other than the same. To hold that it was necessary for appellee to insert the claims in issue in the original application in order to obtain the benefit of its filing date before presenting them in the division, would be to require that which would involve considerable delay in the prosecution of the case and which could accomplish no beneficial purpose. No such rule seems to have been contemplated by the Commissioner in *Hopfelt* v. *Read*, (C. D., 1903, 319,) quoted with approval in *Duryea* v. *Rice*, *supra*, when, speaking of the question of constructive reduction to practice, he said:

This is so when two applications are pending contemporaneously and the first is not abandoned, whether the claims are presented in the original application itself, or in a later application filed as a division or a continuation of the original application, as in the second case the later application dates back to the earlier one. It is only necessary that the description in both applications shall be sufficient to support the claims. The fact that the Office practice may prohibit the prosecution and allowance of the claims in an earlier application does not prevent the applicant from availing himself of the earlier date of filing as his date of constructive reduction to practice, when he files a later application containing the same description and the claims based upon the same.

But counsel for appellant contend that the earlier application stood wholly rejected. It is true that the claims of the earlier application had been awarded to another party as the result of the former interference, but appellee was entitled to one year from February 25, 1905, in which to take such action as he desired. Within that time, he filed the application here in issue. Was there an

application pending in the Office to which the divisional application might attach? This is the question upon which the authorities seem to turn. Here we think there was. Until the period of one year had elapsed, this application was susceptible of amendment, and, if claims had been presented which met with the approval of the Patent Office, a valid patent could have been issued thereon. In fact, appellee presented an amendment which was acted upon by the Primary Examiner February 2, 1906.

Appellant relies upon the case of *Saunders* v. *Miller*, (33 App. D. C., 456; 146 O. G., 501,) in which this sentence appears:

The filing of the process application cannot be considered as constituting a constructive reduction to practice of the apparatus, for it was not the invention involved in the application.

It appears in that case that the appellant filed an application on February 24, 1905, for an improvement in rubber footwear with claims drawn to the process, claims to the article of manufacture or product being presented in a divisional application filed June 17, 1905. The process application became forfeited by the failure to pay the final fee. On September 8, 1906, within the period of two years allowed by law, appellant renewed his application, which was subsequently allowed. On January 10, 1907, appellant filed the application there in issue, containing claims to the apparatus described in appellee's process application. Appellee's application for the apparatus was filed June 19, 1905. The court was considering at the time it uttered the sentence just quoted whether the forfeiture of the process application containing a description of the apparatus, but no claims thereto, operated as an abandonment of the latter. It was held that it did not, as the inventions, so far as this point was concerned, were separate and distinct. The question of constructive reduction to practice had become immaterial, for the court had already accorded the appellant an actual reduction to practice in the summer of 1904, some months prior to the filing dates of either of the parties. Therefore, this sentence can be regarded only as *obiter dictum*.

The case of *Lotz* v. *Kenney*, *supra*, we think is decisive of this case. There the appellee had filed an application showing and describing the invention in issue, but not specifically claiming the same, and no claims were inserted thereto until after a patent had been issued to the appellant. On July 15, 1905, the Patent Office held these claims to be for a distinct and separate invention and required the appellee to restrict his application to the invention originally claimed. In the meantime, however, on June 1, 1905, the latter filed the application there in issue. We are unable to see any material difference between that case and the one at bar. There, as here, the claims in issue were not presented until after a patent had issued to the adverse party. Although these claims were first inserted in the original application, appellee did not await a ruling of the Patent Office as to the necessity of division, but incorporated them in a second application, no less distinct from the parent application than the one at bar; and yet the court held them to constitute a continuous transaction, saying:

It is quite clear that the invention of the issue was disclosed in the prior applications, though no specific claims therefor were made until after the issue of the patent to Lots. The claims could have been inserted therein by amendment, but for the rule of the Patent Office which does not permit a patent to issue for two separate inventions. Under such conditions, nothing remained but to file a new and divisional application, or to abandon this part of the invention.

The decision of the Commissioner of Patents is affirmed, and the clerk is directed to certify these proceedings as by law required.

Affirmed.

Court of Appeals of the District of Columbia.

WEINTRAUB *v.* HEWITT.

Decided March 1, 1910.

1. INTERFERENCE—PRIORITY—RIGHT TO MAKE THE CLAIMS.

In the device of W. each of the positive electrodes is connected to an individual or distinct coil of a polyphase generator. *Held* that W. is entitled to make the claims in issue, in which it is specified that each of the positive electrodes is connected to a separate source of current.

2. SAME—TESTIMONY—TAKING OF—DISCRETION OF THE COMMISSIONER OF PATENTS.

The question of allowing expert testimony to be taken in an interference is one which is entirely within the discretion of the Commissioner of Patents and which will not be reviewed upon appeal to the Court of Appeals of the District of Columbia.

Mr. A. G. Davis and *Mr. A. D. Lunt* for the appellant.

Mr. C. A. Terry for the appellee.

VAN ORSDEL, *J.*:

This is an appeal from the decision of the Commissioner of Patents in an interference proceeding. All three tribunals of the Patent Office awarded judgment of priority to appellee. The invention in issue relates to the operation of vapor electric lamps from an alternating-current source, and is defined in a single count, which reads as follows:

The combination of an hermetically-sealed inclosing chamber, a gas or vapor path therein, a plurality of positive electrodes and a common negative electrode, each of the positive electrodes being connected with a separate source of current.

The date of conception alleged by appellant in his preliminary statement is subsequent to the filing date of appellee's application, but it is contended that appellee is not entitled to make a claim corresponding to the count of the issue, because the phrase "a separate source of current" contained therein cannot be read on the appellee's device. Speaking generally of the invention in controversy and of the respective apparatus of the parties to this appeal in particular, the Board of Examiners-in-Chief said:

The invention involved in this interference is an apparatus adapted for use either as a lamp or as a rectifier for alternating currents. In order that such a device may be effective it has been found essential that the negative electrode be continuously excited by the passage of a current and that if this current ceases for any reason the lamp is extinguished. There can be no question that both parties show such apparatus in which this condition of continuous excitation of the negative electrode is maintained, but the devices are specifically different. Each instrument contains a plurality of anodes and a single cathode, the latter coacting with each of the anodes. Weintraub has a source of alternating current connected between one anode and the cathode which furnishes the main current and an additional source of current, which

is direct or continuous, connecting the other anode to the cathode, so that whatever the condition of the source of alternating current a direct current is constantly maintained. Hewitt on the other hand has each of his anodes connected to an individual or distinct coil of a polyphase generator of alternating current, the currents supplied to the several anodes being so related in phase that the impulses overlap; that is to say, conjointly they continually supply current to keep up the excitation of the cathode.

The claim here under consideration was first made by appellee and only presented by appellant on the suggestion of the Patent Office for the purposes of this interference. Hence, it must be given the meaning intended by the party with whom it originated and read in the light of his application. All of the tribunals of the Patent Office concurred in holding that the positive electrodes shown by appellee, each of which is—

connected to an individual or distinct coil of a polyphase generator of alternating current,

constitute separate sources of current within the meaning of the term as used in the art. In *Westinghouse Electric Mfg. Co.* v. *New England Granite Co.* (110 Fed. Rep., 753) the court, considering the question whether the different phases of a three-phase alternating current were "independent," said:

It is an evident fact that the defendant's circuits are operatively independent, and that, as the word "independent" is used by electricians, they are electrically independent. The word was used, as it was wont to be used by electricians, to mean independent in an electrical sense.

We see no reason, therefore, to disturb the unanimous decisions of the experts of the Patent Office on this point.

But it is contended by appellant that, if appellee is entitled to make this claim, the issue has different meanings when read on the two applications, and therefore no interference in fact exists. We are of the opinion that there is nothing in the prior art to warrant so narrow an interpretation. The object sought to be attained by the two inventions is the same—the continuous excitation of the negative electrode. It is true that, if the current through any one of the anodes in appellee's apparatus should fail, the operation of the device would be discontinued; while, in appellant's device, if the alternating current is interrupted, and then renewed, the lamp will restart without assistance, provided the direct current remains constant. This, however, can have no effect on the right to the basic claim here sought. If appellant's device is an improvement on that of appellee, he is entitled to claim it specifically as such, but not broadly.

Appellant also assigns as error the refusal of the Commissioner to grant a motion to permit him to take the testimony of experts. We fail to see wherein appellant has been damaged by this action; for, so far as the record discloses, everything which he desired to prove has been admitted by appellee. This matter, however, was one entirely within the discretion of the Commissioner, and one which we cannot review on appeal. In *Jones* v. *Starr*, (26 App. D. C., 64,) where testimony had been suppressed for irregularities in its taking, and a motion for leave to retake it had been denied, the court said:

The grant or refusal of the motion was clearly within the lawful discretion of the Commissioner. It is not such a decision as we can review. As an interlocutory proceeding we would not review it, and it is not one which should be reviewed as necessary or proper in connection with the final decision of priority. (*Westinghouse* v. *Duncan*, 2 App. D. C., 131; *Cross* v. *Phillips*, 14 App. D. C., 228; *Hulett* v. *Long*, 15 App. D. C., 284; *Allen* v. *United States*, *ante*, p. 8.)

The decision of the Commissioner is therefore affirmed, and the clerk is directed to certify these proceedings, as by law required.

Affirmed.

ADJUDICATED PATENTS.

The Bailey patent, No. 652,828, for a door check and closer, construed and *Held* not infringed. *E. L. Watrous Mfg. Co.* v. *American Hardware Mfg. Co.*, (C. C. A.,) 176 Fed. Rep., 96.

The Finch patent, No. 666,928, for eyeglasses, construed and *Held* not infringed. *Jones* v. *F. A. Hardy & Co.*, (C. C. A.,) 176 Fed. Rep., 99.

The Shem patent, No. 791,951, for a traveling crane, claims 1 and 2 *Held* void in view of the prior art; claims 3, 4, and 5 *Held* valid and infringed. *Morgan Engineering Co.* v. *Alliance Mach. Co.*, (C. C. A.,) 176 Fed. Rep., 100.

RECIPROCAL AGREEMENT WITH FOREIGN COUNTRIES RESPECTING COPYRIGHT.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA.
A PROCLAMATION.

Whereas it is provided by the act of Congress of March 4, 1909, entitled "An act to amend and consolidate the acts respecting copyright," that the benefits of said act, excepting the benefits under section 1 (e) thereof, as to which special conditions are imposed, shall extend to the work of an author or proprietor who is a citizen or subject of a foreign state or nation, only upon certain conditions set forth in section 8 of said act, to wit:

(a) When an alien author or proprietor shall be domiciled within the United States at the time of the first publication of his work; or

(b) When the foreign state or nation of which such author or proprietor is a citizen or subject grants, either by treaty, convention, agreement, or law, to citizens of the United States the benefit of copyright on substantially the same basis as to its own citizens, or copyright protection substantially equal to the protection secured to such foreign author under this act or by treaty; or when such foreign state or nation is a party to an international agreement which provides for reciprocity in the granting of copyright, by the terms of which agreement the United States may, at its pleasure, become a party thereto:

And, whereas, it is also provided by said section that "the existence of the reciprocal conditions aforesaid shall be determined by the President of the United States, by proclamation made from time to time as the purposes of this act may require:"

And, whereas satisfactory evidence has been received that in Austria, Belgium, Chile, Costa Rica, Cuba, Denmark, France, Germany, Great Britain and her possessions, Italy, Mexico, the Netherlands and possessions, Norway, Portugal, Spain, and Switzerland the law permits and since July 1, 1909, has permitted to citizens of the United States the benefit of copyright on substantially the same basis as to citizens of those countries:

Now, therefore, I, WILLIAM HOWARD TAFT, President of the United States of America, do declare and proclaim that one of the alternative conditions specified in section 8 of the act of March 4, 1909, is now fulfilled, and since July 1, 1909, has continuously been fulfilled, in respect to the citizens or subjects of Austria, Belgium, Chile, Costa Rica, Cuba, Denmark, France, Great Britain and her possessions, Italy, Mexico, the Netherlands and possessions, Norway, Portugal, Spain, and Switzerland, and that the citizens or subjects of the aforementioned countries are and since July 1, 1909, have been entitled to all of the benefits of the said act other than the benefits under section 1 (e) thereof, as to which the inquiry is still pending.

In testimony whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this ninth day of April, in the year of our Lord one thousand nine hundred and ten, and of the Independence of the United States of America the one hundred and thirty-fourth.

[SEAL.] WM. H. TAFT.

By the President:
P. C. KNOX,
Secretary of State.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 28, 1910.

Joseph Parker & Son, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Keith Paper Company, of Turners Falls, Mass., for registration of a trade-mark and a trade-mark registered to Joseph Parker & Son, of 27 Elm street, New Haven, Conn., and the receipt for the registered letter in which notice of this interference was mailed to Parker & Son being signed Joseph Parker & Son Co. instead of Joseph Parker & Son, notice is hereby given to the said Joseph Parker & Son, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 22, 1910.

Julian Alvarez, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Moore & Calvi, of 39 Water street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Julian Alvarez, of 919 Broadway, New York, N. Y., and the notice of said declaration sent by registered mail to the said Julian Alvarez having been returned undelivered, notice is hereby given to the said Julian Alvarez, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 21, 1910.

Strassheim & Jaeger, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Frederick W. Gardner, of 316 East Thirty-fourth street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Strassheim & Jaeger, of 173 and 175 South Water street, Chicago, Ill., and the notice of said declaration sent by registered mail to the said Strassheim & Jaeger having been returned undelivered, notice is hereby given to the said Strassheim & Jaeger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 21, 1910.

Hugo Pfabe, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Sugar Products Company, of Caro, Mich., for registration of a trade-mark and a trade-mark registered to Hugo Pfabe, of Chicago, Ill., and the notice of said declaration sent by registered mail to the said Hugo Pfabe having been returned undelivered, notice is hereby given to the said Hugo Pfabe, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 6, 1910.

Day, Rollins & Company, their assigns or legal representatives, take notice:

An interference exists in this Office between an application of Sparks Milling Company, of Alton, Ill., for registration of a trade-mark and a trade-mark registration to Day, Rollins & Company, of Minneapolis, Minn., and a notice of redeclaration of said interference which was sent by registered mail on January 26, 1910, to the said Day, Rollins & Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Day, Rollins & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 5, 1910.

Augustus W. Krieta, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of C. E. Sears & Company, of Circleville, Ohio, for registration of a trade-mark and trade-marks registered to Jane M. McMurray, of Frederick city, Md., and Augustus W. Krieta, Center Cross, Essex county, Va., and it appearing from the registry return receipt that the registered letter in which notice of this interference was mailed to the party Krieta was not delivered to him, but to Mrs. A. W. Krieta, notice is hereby given to the said Augustus W. Krieta, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 29, 1910.

Joseph P. Cooper & Son, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Theodore F. Baulig, of Egg Harbor, N. J., for registration of a trade-mark and a trade-mark registered to Joseph P. Cooper & Son, of 1901 Market street, Philadelphia, Pa., and the notice of said declaration sent by the Patent Office by registered mail to the said Joseph P. Cooper & Son having been returned undelivered, notice is hereby given to the said Joseph P. Cooper & Son, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

E. B. MOORE, *Commissioner.*

THE OFFICIAL GAZETTE OF THE United States Patent Office.

VOL. 154—NO. 2. TUESDAY, MAY 10, 1910. PRICE—$5 per year.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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ISSUE OF MAY 10, 1910.

Patents	685	No. 957,175 to No. 957,859, inclusive.
Designs	10	No. 40,683 to No. 40,692, inclusive.
Trade-Marks	107	No. 77,783 to No. 77,889, inclusive.
Labels	4	No. 15,171 to No. 15,174, inclusive.
Prints	None.	
Reissues	2	No. 13,112 to No. 13,114 inclusive.
Total	809	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	4	2	Ohio	44	7
Arkansas	4	1	Oklahoma	4	....
California	33	1	Oregon	6	....
Colorado	12	....	Pennsylvania	53	4
Connecticut	15	4	Rhode Island	8	1
Delaware	1	....	South Carolina	5	....
Florida	3	1	South Dakota	5	....
Georgia	1	1	Tennessee	4	....
Idaho	2	....	Texas	8	4
Illinois	57	10	Utah	4	....
Indiana	16	4	Vermont	....	1
Iowa	9	....	Virginia	2	2
Kansas	15	....	Washington	9	....
Kentucky	9	....	West Virginia	2	....
Louisiana	1	2	Wisconsin	21	1
Maine	1	....	Wyoming	1	....
Maryland	8	2			
Massachusetts	22	2	Alaska, District of	....	....
Michigan	20	4	Arizona Territory	1	....
Minnesota	11	4	District of Columbia	5	....
Mississippi	3	....	Hawaii Territory	1	....
Missouri	26	1	New Mexico Ter'y	1	....
Montana	1	....	Panama	....	....
Nebraska	3	1	Philippine Islands	....	....
Nevada	....	....	U. S. Army	....	....
New Hampshire	2	1	U. S. Navy	1	....
New Jersey	27	3			
New York	101	33	Total to citizens of the United States	613	97
North Carolina	7	....			
North Dakota	4	....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	....	....	Netherlands	....	1
Austria-Hungary	4	....	Newfoundland	....	....
Belgium	2	....	New South Wales	3	....
Brazil	....	....	New Zealand	1	....
British West Indies	....	....	Norway	....	....
Canada	11	....	Persia	....	....
Ceylon	....	1	Queensland	....	....
Chile	....	....	Russia	2	....
China	....	....	Scotland	1	1
Costa Rica	....	....	South Australia	....	....
Cuba	....	....	Spain	....	....
Denmark	1	....	Sweden	3	2
Ecuador	....	....	Switzerland	1	....
England	22	3	Tasmania	....	....
France	6	2	Transvaal, South Africa	....	....
Germany	20	2	Victoria	....	....
Haiti	....	....	Western Australia	1	....
Ireland	1	....			
Italy	2	1	Total to citizens of foreign countries	82	13
Japan	....	....			
Mexico	1	....			

Court of Appeals of the District of Columbia.

In view of the large number of cases on the calendar awaiting hearing, and in consideration of the time which must necessarily be consumed if the full four hours are taken in the argument as allowed by section 2 of Rule 8, it is by the court this day ordered that said section 2 of Rule 8 be, and the same is hereby, suspended for the term, and during which time only one hour on each side shall be allowed in the argument, unless by special leave the time is extended by the court before the argument is commenced, but such time may be apportioned between counsel on the same side, at their discretion. In all cases, however, a full and fair opening must be made.

[SEAL.] PER CURIAM.

May 4, 1910.

A true copy. Test:

HENRY W. HODGES,
Clerk of the Court of Appeals of the District of Columbia.

Full Names of Applicants.

• • • All applications which disclose the full name of the applicant in the preamble of the specification will be received and considered as a sufficient compliance with Rule 40 of the Rules of Practice. (Order 521.)

When the full first name of the applicant does not appear either in his signature or in the preamble to the specification, the Examiner will, in his first official letter, require an amendment supplying the omission, and he will not pass the application to issue until the omission has been supplied, unless an affidavit shall have been filed setting forth that the full first name of the applicant is the one originally given by him. (Order 600.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business May 3, 1910.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Flows; Seeders and Planters; Trees, Plants, and Flowers.	Mar. 29	Apr. 4	376
126	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Feb. 21	Mar. 14	326
173	3. Annealing and Tempering; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Apr. 4	Apr. 20	119
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Mar. 10	Mar. 29	434
167	5. Bookbinding; Harvesters; Jewelery; Music.	Mar. 2	Mar. 2	506
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Apr. 1	Apr. 4	306
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Mar. 23	Mar. 24	543
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Apr. 4	Apr. 5	213
142	9. Air and Gas Pumps; Fire-Extinguishers; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Sewerage; Wind-Wheels.	Jan. 17	Jan. 20	440
235	10. Carriages and Wagons	Feb. 10	Mar. 8	675
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Apr. 5	Mar. 30	262
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Apr. 2	Mar. 29	534
229	13. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, Etc.	Feb. 19	Mar. 28	509
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Mar. 2	Apr. 4	397
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Sheets and Fabrics; Liquid Coating Compositions; Paper-Making; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Mar. 1	Feb. 25	550
109	16. Telegraphy; Telephony	Feb. 15	Feb. 21	354
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Apr. 6	Mar. 23	152
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Jan. 20	Jan. 18	280
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Mar. 23	Mar. 19	354
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Apr. 4	Apr. 7	204
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Feb. 28	Apr. 1	407
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Dec. 4	Feb. 15	739
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 2	Apr. 2	347

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
144	24. Apparel; Apparel Apparatus; Electricity, Medical and Surgical; Sewing-Machines; Surgery.	Apr. 4	Apr. 4	506
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Apr. 12	Apr. 16	147
106	26. Electric Heating and Rheostats; Electricity, Generation; Motive Power.	Jan. 5	Feb. 8	448
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Mar. 25	Mar. 23	372
65	28. Electric Railways; Internal-Combustion Engines.	Feb. 19	Mar. 15	519
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Feb. 2	Mar. 17	474
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Mar. 22	Apr. 9	342
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Feb. 18	Mar. 16	347
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Fine Arts; Packaging Liquids; Refrigeration.	Apr. 4	Apr. 4	342
164	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 2	Feb. 8	517
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Mar. 18	Mar. 18	366
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Mar. 21	Apr. 18	651
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Feb. 11	Mar. 7	670
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Jan. 10	Feb. 5	806
378	38. Artesian and Oil Wells; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working.	Feb. 23	Feb. 26	595
321	39. Baths and Closets; Water Distribution.	Jan. 21	Mar. 18	616
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 4	Mar. 1	546
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Jan. 28	Feb. 19	608
279	42. Electric Signaling; Railway Signaling; Signals.	Dec. 1	Mar. 15	413

Oldest new case, Dec. 1; oldest amended, Jan. 18.

Total number of applications awaiting action..... 18,302

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Apr. 1	Apr. 23	766
	Designs	Apr. 4	Apr. 19	189
	Labels and Prints	Apr. 28	Apr. 30	12

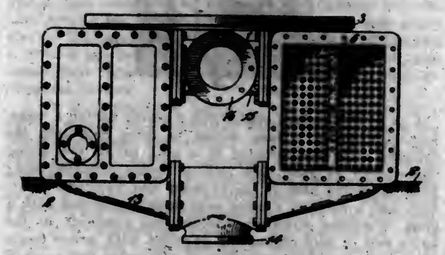
Trade-Marks.

Extra copies of the trade-mark portion of the GAZETTE, which will be sold separately, may be obtained single or in quantities for five cents each. Coupons will be taken in payment thereof.

PATENTS

GRANTED MAY 10, 1910.

957,175. SURFACE CONDENSER. LOUIS A. ALBERGER, Greenwich, Conn., assignor to Alberger Condenser Company, New York, N. Y., a Corporation of New York. Filed Aug. 12, 1907. Serial No. 388,135.



1. In a surface condenser, the combination of a shell containing a central steam space provided at one end with an opening to the atmosphere, two groups or nests of water-cooled tubes at each side of the steam space, the members of said groups or nests being arranged in a horizontal series, one group at each side carrying the cooling water in one direction and the other in the opposite direction, so that one group of tubes is colder than its companion group, and means for introducing cooling water into the condenser at one end thereof and withdrawing it from the same end, whereby at each side of the condenser a return circulation of the water from one end of the condenser to the other end and back to the first end again is effected, and means at each side of the condenser for dividing the colder group from the warmer group of tubes and thus allowing the steam to pass from contact with one group into contact with the companion group.

2. In a surface condenser the combination of a shell or frame, having a top inlet for the steam and a central inner steam space, the latter being provided with a free exhaust opening to the atmosphere and also with a manhole, two groups of tubes for the cooling water arranged at opposite sides of the steam space, and two other parallel companion groups for the cooling water alongside of the first-mentioned groups, the members of all of said groups of tubes being arranged in horizontal series, means for dividing the inner groups of tubes from the outer and providing an opening whereby the steam may pass from contact with the inner groups into contact with the outer groups, and means for introducing circulating water into said groups at one end of the condenser and withdrawing it from the same end of the condenser.

3. In a surface condenser, the combination with a steam motor, of a base therefor comprising condensing apparatus consisting essentially of a shell or frame into the top of which the steam passes from the motor, said shell having an inner steam space provided at one end with a free exhaust opening into the atmosphere and also with a manhole, groups or nests of tubes at opposite sides of the steam space, groups or nests of tubes parallel to the first-mentioned groups, and means for introducing circulating water at one end of the condenser first into the outer groups or nests of tubes and withdrawing it at the same end of the condenser from the inner groups or nests of tubes, whereby a return circulation is effected, the water flowing from one end of the condenser to the other end and back to the first end at each side of the steam space.

4. In a surface condenser, the combination with a steam motor, of a base therefor comprising condensing apparatus consisting essentially of a shell having an inner steam space which first receives the steam at the top from the motor, said steam space being furnished at one end with an exhaust opening to the atmosphere and also with a manhole, two parallel groups or nests of tubes at each side of the steam space, the members of said groups or nests being arranged in a horizontal series and separated from each other by dividing means which allows the steam to pass from the inner group to the outer group, means for introducing circulating water first at one end of the condenser into the outer groups of tubes and allowing it to traverse the length of the condenser and return through the inner groups of tubes so that it may be removed from the same end of the condenser where it enters, said end being opposite to the location of the exhaust opening and the manhole, whereby a return circulation of the water is effected, said water being colder in its first pass on each side of the condenser than it is in its second return pass.

5. In a surface condenser, the combination with a steam motor, of a base therefor comprising condensing apparatus consisting essentially of a shell having an inner steam space receiving the exhaust steam at the top from the motor, groups of water-cooled tubes at each side of said steam space, other groups of water-cooled tubes alongside the first-mentioned groups and parallel thereto, the groups at each side of the steam space being in a horizontal series, individual chambers at one end of the condenser belonging to each group of tubes, other chambers at the opposite end of the condenser arranged so that each chamber is common to two groups, means for introducing circulating water at one end of the chamber and removing it at the same end, so that the water may make one pass through a group of tubes at each side of the steam space and return to the first end of the condenser through the companion group, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

957,176. ADJUSTABLE SUPPORT FOR FURNITURE. GEORGE E. ANDERSON, Chicago, Ill., assignor to A. H. Andrews Co., Chicago, Ill., a Corporation of Illinois. Filed Mar. 31, 1900. Serial No. 486,974.

1. In mechanism of the class described, the combination of a pair of floor standard members, a bracket member carrying an article of furniture slidably engaging each of said standard members, a shaft journaled in one of said sets of members and slidable in an elongated slot in the other set of members, a rack on each of the last mentioned set of members, a compression member between the supporting members at opposite ends of the shaft, positively connected to the shaft by mechanism permitting longitudinal movement of the shaft, a pinion carried by said compression member in engagement with each of said racks and mechanism adapted to lock the outer ends of the shaft in such a way as to compress the supporting members adjacent to each end of the com-

pression member together against said compression member for the purposes set forth.



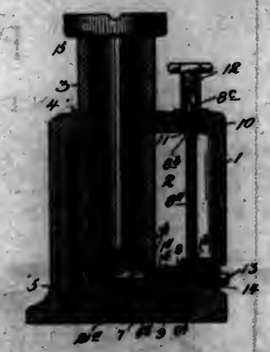
2. In mechanism of the class described, the combination of a pair of floor standard members, a bracket member carrying an article of furniture slidably engaging each of said standard members, a shaft journaled in one of said sets of members and slidable in an elongated slot in the other set of members, a rack on each of the last mentioned set of members, a compression member between the supporting members at opposite ends of the shaft inclosing said shaft, positively connected to the shaft by mechanism permitting longitudinal movement of the shaft, a pinion carried by said compression member in engagement with each of said racks and mechanism adapted to lock the outer ends of the shaft in such a way as to compress the supporting members adjacent to each end of the compression member together against said compression member for the purposes set forth.

3. In mechanism of the class described, the combination of a pair of floor standard members, a bracket member carrying an article of furniture slidably engaging each standard member, a shaft rotatably journaled and longitudinally movable in the floor standard members and passing through slots in the bracket members, a rack on each of said bracket members, a compression member between the supporting members at opposite ends of the shaft, positively connected to the shaft by mechanism permitting longitudinal movement of the shaft, a pinion carried by said compression member in engagement with each of said racks and mechanism adapted to lock the outer ends of the shaft in such a way as to compress the supporting members adjacent to each end of the compression member together against said compression member for the purposes set forth.

4. In mechanism of the class described, the combination of a pair of floor standard members, a bracket member carrying an article of furniture slidably engaging each standard member, a shaft rotatably journaled and longitudinally movable in the floor standard members and passing through slots in the bracket members, a rack on each of said bracket members, a compression member between the supporting members at opposite ends of the shaft inclosing said shaft, positively connected to the shaft by mechanism permitting longitudinal movement of the shaft, a pinion carried by said compression member in engagement with each of said racks and mechanism adapted to lock the outer ends of the shaft in such a way as to compress the supporting members adjacent to each end of the compression member together against said compression member for the purposes set forth.

5. In mechanism of the class described, the combination of a pair of floor standard members, a bracket carrying an article of furniture slidably engaging each standard member, a shaft journaled in the floor standard members and sliding in an elongated slot in the bracket members, a tube inclosing said shaft between the supporting members at opposite ends of the shaft, a rack rigidly secured to each of the last mentioned supporting members, a pinion formed by cutting the teeth thereof in the circumference of the tube upon the shaft meshing with each rack, and means at the ends of the shaft engaging the adjacent supporting members for locking the adjacent supporting members against the ends of the tube and mechanism independent from the locking means for rotating the shaft.

957,177. HYDRAULIC JACK. RICHARD W. BAKER, Roselle, N. J., assignor to The Watson-Stillman Company, a Corporation of New Jersey. Filed Mar. 18, 1908. Serial No. 421,827.



1. A hydraulic jack comprising a casing having a reservoir, a cylinder, a ram, means to force fluid into the cylinder, a passage located in a plug set in the casing independent of said fluid forcing means communicating with the lower part of the cylinder and with said reservoir, and a valve to control said passage provided with a stem extending upwardly through the reservoir to the outer side of said casing and provided with means above the casing to permit operation of said valve and a screw plug set in the casing against the first named plug to hold the latter in position.

2. A hydraulic jack comprising a casing having a reservoir, cylinder, a ram, means to charge said cylinder from said casing, a horizontal passage located in a plug set in the casing independent of said fluid forcing means communicating with said cylinder and having an upturned portion provided with a valve seat, and a valve for said seat having a stem extending upwardly through the reservoir and provided with means for operating the stem above the reservoir and a screw plug set in the casing and bearing against the first named plug to hold the latter in proper position.

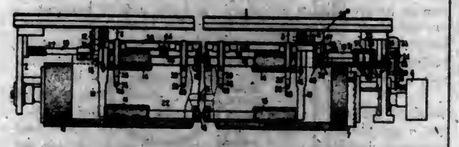
3. A hydraulic jack comprising a casing having a reservoir, a cylinder, a ram, means for charging said cylinder from said reservoir, a plug located in a bore in the casing transverse to the ram and having a passage communicating with a passage in the cylinder and having a lateral upwardly extending opening communicating with the reservoir and provided with a valve seat, and a valve for said seat having a stem passing upwardly through the reservoir and entering an opening in the casing alined with the lateral opening in the plug and provided with means adjacent the upper portion of the reservoir for operating said stem and valve.

4. A hydraulic jack comprising a casing having a reservoir, a cylinder, a ram, means for charging said cylinder from said reservoir, said cylinder having a passage and an exterior recess, a plug fitting said recess and located in a bore in the casing and having a bore communicating with said passage and provided with an upwardly extending outlet to communicate with said reservoir, a valve to control said outlet, and means to operate said valve.

5. A hydraulic jack comprising a casing having a reservoir, a cylinder, a ram, means for charging said cylinder from said reservoir, said cylinder having a passage and an exterior recess, a plug fitting said recess and located in a bore in the casing and having a bore communicating with said passage and provided with an upturned passage to communicate with said reservoir, a valve to control said passage provided with a stem extending upwardly through the reservoir, and means to operate said stem located adjacent the upper part of the reservoir.

[Claim 6 not printed in the Gazette.]

957,178. TYPE-WRITING MACHINE. EDWIN E. BARNEY, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Feb. 16, 1910. Serial No. 544,254.



1. In a typewriting machine, the combination of a platen, a paper stop constantly spring-pressed toward the platen, restraining devices normally separated but so related as to prevent said paper stop from reaching the platen, and means for changing the relationship between said restraining devices so that movement of said paper stop to the platen may take place, said means comprising a pivoted key lever operative from above the platen, and connections between the same and certain of said restraining devices.

2. In a typewriting machine, the combination of a platen, a paper stop constantly spring-pressed toward the platen, normally disconnected locking devices for said paper stop, said devices comprising a slide rod, means for setting said devices in interlocking relationship, and means for unlocking said devices, said means comprising a pivoted key lever loosely connected with said slide rod.

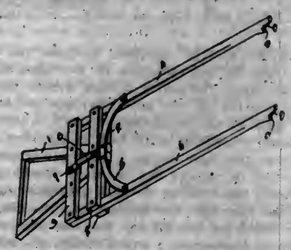
3. In a typewriting machine, the combination of a platen, a paper stop constantly spring-pressed toward the same, locking devices for said paper stop normally separated, a feed roller, key-controlled means for releasing said feed roller and setting said devices in interlocking relationship, and separate means for unlocking said devices, said separate means comprising a key lever in juxtaposition to the releasing key for the feed roller.

4. In a typewriting machine, the combination of a platen, a paper stop constantly spring-pressed toward the platen, locking devices for said paper stop normally disconnected and comprising a spring-pressed slide rod, a feed roller, means for releasing said feed roller and permitting said devices to be spring-pressed into locking engagement with each other, and separate means for snapping said devices out of locking relationship, said separate means comprising an upright key lever loosely connected to said slide rod.

5. In a typewriting machine, the combination of a platen, paper feeding devices, releasing means therefor comprising a key-controlled rock shaft, a paper stop, locking devices related for preventing movement of said paper stop to the platen normally, and means for rendering said locking devices ineffective, said last named means comprising a key-lever pivotally mounted on said rock shaft.

[Claims 6 to 9 not printed in the Gazette.]

957,179. DETACHABLE NECK-YOKE. JOHN BARRY, Jr., Antelope, Tex. Filed Jan. 7, 1910. Serial No. 536,881.



In combination with a pole or neck yoke having an opening formed therethrough, a combined staple and band formed from a single piece of metal and folded upon itself and having an eye portion, one of said arms being longer than the other and bent around in a binding position upon the pole and having its free end interlocking with the hooked shaped end of the short arm of the staple and a ring movably secured by the eye thus formed.

957,180. SOLDERING-TOOL. ALEXANDER A. BEDARD, Detroit, Mich. Filed May 21, 1909. Serial No. 497,481.



1. In a soldering tool, the combination of a chambered head, a cover hinged to the upper end of the same, a handle upon which the head is mounted, and a spring held device mounted on the handle to secure the cover in position.

2. In a soldering tool, the combination of a chambered head, a cover hinged to the upper end of the same, a valve for closing an opening in the cover, a handle for the head, and a rod normally held against the handle and connected to the valve at its lower end to hold the same in closing position.

3. In a soldering tool, the combination of a chambered head, a cover for the upper end of the same provided with an opening, a valve closing said opening, an upwardly extending stem secured to said valve, and a spring to hold said stem in proper position.

4. In a soldering tool, the combination of a stem having one end forked, a chambered soldering-head on the ends of the fork, a handle on the opposite end, a catch on said handle, a cover at the upper end of the head to close the opening, said cover having an opening, a valve to close the opening and having guide-fingers extending therethrough, a stem connected to said valve, a sleeve on the end of the stem, a spring within the sleeve to hold the same in engagement with the catch on the handle, said head having a passage through its lower end, a rod extending from the handle into the head to said passage, and spring-held means to force the end of the rod into said passage to close the same.

957,181. TRUSS-BAR. PAUL E. BERTIN and RENÉ L. BERTIN, New York, N. Y., assignors to Reinforcement Supply Company, New York, N. Y., a Corporation of New York. Filed July 23, 1906. Serial No. 327,466.



1. A truss bar, comprising a round rod and a bracket or loop of round wire, said bracket being secured to said rod by spirally wrapping its ends while hot around said

rod while it is cold and allowing the heated parts to cool in place.

2. As a new article of manufacture, a straight round bar having a series of wire or rod brackets, adjacent each end thereof, said brackets being substantially V shaped with one member vertically disposed to the rod and constituting a stirrup, and the other inclined toward the adjacent end of the bar and serving as a shearing member, the ends of the brackets having been while heated, spirally wrapped around the bar while cold and allowed to cool in place.

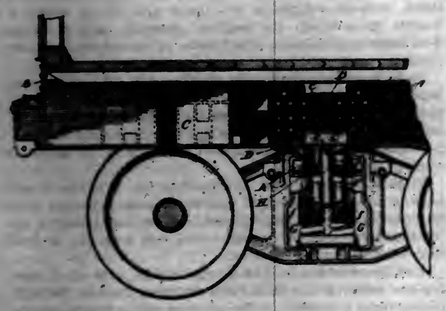
3. A truss bar having series of V shaped wire brackets secured rigidly thereon by having their ends while highly heated wound spirally around said bar and allowed to cool in place.

4. A truss bar comprising a relatively straight rod, and a series at each end of V shaped wire brackets one member of each of which stands substantially at right angles with said rod and the other inclined toward the adjacent end of the rod, said brackets being secured in place solely by the clamping action of their ends which while highly heated have been wound spirally upon the rod while it is cold, and allowed to cool in place.

5. A truss bar comprising a substantially straight round rod and a bracket consisting of a smaller round rod, preferably V-shaped, connected to said bar by having its ends highly heated and then while hot wound in opposite directions around the said bar and allowed to cool in place.

[Claim 6 not printed in the Gazette.]

957,182. UNDERFRAME FOR CARS. WILLIAM P. BETTENDORF, Davenport, Iowa. Filed Nov. 3, 1909. Serial No. 526,096.



1. An underframe for cars comprising a center-sill terminating between the end sills and bolsters thereof, and draft-sills the rear ends of which bend toward and lap past the ends of said center-sill at the intersecting plane of the body-bolsters.

2. An underframe for cars comprising a single I-beam center-sill and draft-sills that lap past the end of the center-sill between the upper and lower edges thereof in the intersecting plane of the body-bolsters.

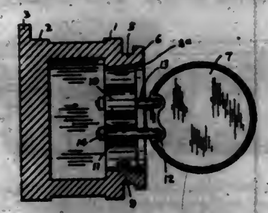
3. An underframe for cars comprising a single I-beam center-sill and cast-metal draft-sills that lap past the ends of the center-sills in the intersecting plane of the body-bolsters.

4. An underframe for cars comprising a single center-sill and cast-metal draft-sills that lap past the end of the center-sill between the upper and lower edges thereof in the intersecting plane of the body-bolsters.

5. An underframe for cars comprising a center-sill and draft-sills that lap past the end of the center-sill between the upper and lower edges thereof in the intersecting plane of the body-bolsters and are directly connected together.

[Claims 6 to 31 not printed in the Gazette.]

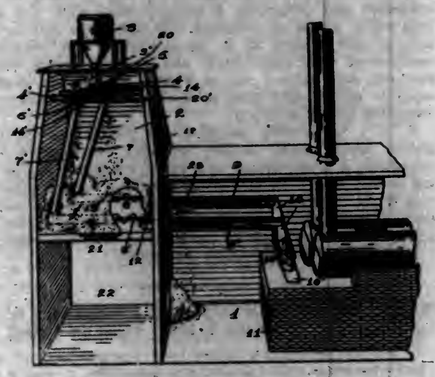
957,183. WALL-SAFE. CHARLES E. BLECHSCHMIDT, Connersville, Ind. Filed Nov. 19, 1909. Serial No. 528,886.



1. A safe comprising a hollow metallic body having a flanged door-ring formed integral with its front side the width of the door-opening at its rear edge being less than the width thereof at its front edge, and the interior of the said door ring being provided with an integrally formed lug to receive connections for the safe door, the said front side and the rear side of the aforesaid body being provided with flanges, and there being a longitudinal recess or depression in the front side.

2. In a safe of the kind described, a hollow metallic body having a flanged door-ring formed integral with its front side the interior surface of the said door-ring being rabbeted and provided with an integrally formed lug having holes transversely therethrough, a door having its peripheral surface of form to fit snugly the door-ring, hinged bars secured on the inner surface of the said door the main portions of said bars being slidably disposed in the holes of said lug, and means secured on the inner ends of the said hinged bars to prevent same from leaving the holes in the lug.

957,184. FEEDER FOR FURNACES. LOUIS P. BOLANDER, San Francisco, Cal. Filed May 13, 1909. Serial No. 495,635.



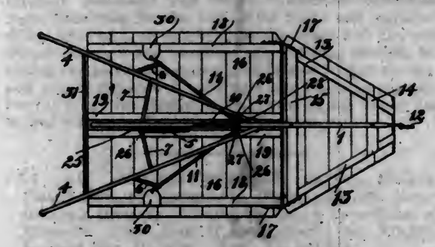
1. In a feeder for the described purpose, the combination with a bin for the reception of shavings, means for delivering shavings thereto, a trough within the bin for receiving a portion of the said shavings delivered into the bin, a feed worm within said trough, a downwardly extended chute connected with said trough for receiving shavings from the feed worm, a conveyer worm located within the bin to receive the shavings discharged from the said chute, the housing for said conveyer worm being formed by the shavings overflowing into the bin, a chute or housing extended beyond the bin and into which the conveyer worm discharges, a worm within the housing for receiving such discharged shavings, and a downward extended stack with which said housing connects for receiving and conveying the discharged shavings to the furnace.

2. A feeder for delivering shavings to a furnace without permitting the arching thereof, the same comprising a bin for the shavings, rotating means arranged in the upper portion thereof for receiving a portion of the shavings delivered into the bin, a downwardly extended chute into which such shavings are discharged by the rotating means, a conveyer within the bin and below said rotating means at a point adjacent the discharge end of the chute for receiving the shavings from said chute and forcing the same through the bin, and means for receiving the shavings from the said conveyer and delivering the same to the furnace to be fired.

3. A feeder for delivering shavings to a furnace without permitting the arching thereof, the same comprising a bin for the shavings, a plurality of rotating devices arranged in the upper portion of the bin for receiving a portion of the shavings delivered therein, a plurality of downwardly extended chutes into which the shavings are discharged by the rotating devices, a plurality of conveyers within the bin and below the rotating devices therein for receiving the shavings from the chutes and forcing the same through the arch formed by the shavings overflowing into the bin from the rotating devices, and means associated with said conveyers to receive the shavings therefrom and delivering the same to the furnace to be fired.

4. A feeder for delivering shavings to a furnace in proportion to the requirements thereof, the same comprising a receptacle for the shavings, means for delivering shavings thereto, rotating mechanism for receiving and diverting a portion of the falling shavings, a downwardly extended chute into which the diverted shavings are discharged, and means for taking the shavings from the said chute and delivering the same to the furnace, the said means being located in said bin below the rotating mechanism and connecting with the discharge end of the chute, whereby the material may be constantly delivered through the arch formed by the overflowing shavings in the bin.

957,185. HORSE-DRAG. WILLIAM C. BRAUN, Marysville, Ind. Filed Sept. 21, 1909. Serial No. 518,787.



In combination, a head section increasing in width toward its rear end, cross bars secured to said head section, a guide bar extending rearward from said cross bars, an operating lever pivoted to said guide bar, a rack segment secured to said guide bar, an operating pawl carried by said lever in engagement with said segment, two similar oblong drag wings pivotally held to said head, a securing ear carried by each drag wing, a collar slidably held upon said guide bar, a connecting rod extending from said collar to said lever, operating bars extending from said collar to each of said ears, two guiding handles secured to said guide bar, an inner brace rod extending from each handle to said guide bar, and a pivotally held outer brace rod extending from each of said operating bars to the adjacent guide handle.

957,186. JOURNAL-BOX. WENDELL R. BUSS, Grand Rapids, and ALVA J. FAIRBANKS, Holland, Mich.; said Fairbanks assignor to said Buss. Filed Jan. 19, 1910. Serial No. 538,887.

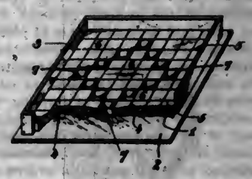
1. A journal box, comprising upwardly extended jaws having parallel surfaces, a cap member adjustable between the jaws, a bolt extending through openings in the jaws and held thereby, and keys having oppositely inclined downwardly diverging surfaces engaged and held by the bolt, said keys having inwardly extending holding members engaging the top of the cap.



2. A journal box, comprising a lower member having upwardly extended jaws with parallel vertical surfaces, an upper portion or cap vertically adjustable between the jaws, a bolt extending horizontally through openings in the jaws and held thereby, keys having downwardly diverging outer surfaces, inwardly and downwardly extended holding members on the keys engaging the upper portion or cap, and washers having inclined surfaces engaging the keys, and parallel surfaces engaged by the bolt-head and nut.

3. A journal box, comprising a lower box member having upwardly extended jaws with parallel surfaces, an upper box member or cap adjustable between said jaws, a bolt extending through openings in the jaws and through a slot in the upper box member or cap, keys having slots to receive the bolts and downwardly diverging outer surfaces, inwardly and downwardly extended holding members on the keys engaging the top of the box, and washers on the bolt having oppositely inclined surfaces to engage the keys and parallel surfaces engaged by the bolt-head and nut.

957,187. METHOD OF FORMING TILING. GEORGE P. CHAPPELL, New York, N. Y. Filed Mar. 13, 1909. Serial No. 483,270.



1. The herein described method of forming tiling which consists in placing a cementitious material upon a polished surface, scoring the same through to the polished surface to form a plurality of individual units before the material hardens, and securing said units together while in their initial position on said surface by a suitable backing.

2. The herein described method of forming tiling which consists in placing a cementitious material upon a polished surface, scoring the same through to the polished surface to form a plurality of individual units before the material hardens, and flexibly securing the backs of said individual units together while in their initial position on said surface.

3. The herein described method of forming tiling which consists in spreading a cementitious material upon a polished surface, allowing the same to become semi-hard, scoring the same through to the polished surface to form a plurality of individual members, and spreading a binding substance upon the exposed surfaces of said members

while in their initial position on said surface to bind them together.

4. The herein described method of forming tiling which consists in pouring a cementitious material upon a polished surface, allowing the same to become semi-hard, scoring the same through to the polished surface to form a plurality of individual members, spreading a binding substance upon the exposed surfaces of said members while in their initial position on said surface to bind them together, and scoring said binding substance to correspond with the scoring of said cementitious material.

5. The herein described method of forming tiling which consists in pouring a cementitious material upon a polished surface, allowing the same to become semi-hard, scoring the same through to the polished surface to form a plurality of individual members, spreading a binding substance upon the exposed surfaces of said members while in their initial position on said surface, and embedding a layer of flexible material within said binding substance.

[Claims 6 to 8 not printed in the Gazette.]

957,188. METHOD OF FORMING ORNAMENTAL TILING. GEORGE P. CHAPPELL, New York, N. Y. Filed Mar. 13, 1909. Serial No. 483,271.



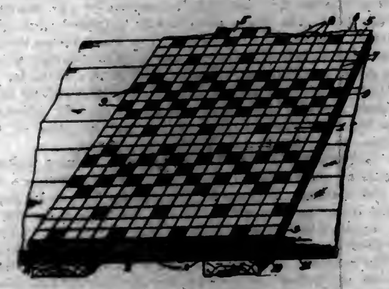
1. The herein disclosed method of forming ornamental tiling which consists in providing a sheet of suitable material having a smooth non-adherent upper exposed surface, projecting upon said surface a quantity of a plastic material and causing it to conform to a predetermined outline, then permitting said applied plastic material to acquire hardness without disturbing or operating upon the same, and then applying to the exposed portions of said sheet and in contact with said hardened mass of plastic material a suitable quantity of some other cementitious material differing in appearance from said plastic material but adhesive thereto, and permitting the same to harden.

2. The herein disclosed method of forming tiling which consists in providing a pattern having a suitable design, placing a sheet of transparent substance upon the same, applying a plastic material upon said substance in registry with said design so as to substantially overlie said design, and applying a plastic material having a different characteristic than said first plastic material but adhesive thereto to a portion of the transparent substance which is not covered by said first-mentioned material.

3. The herein disclosed method of forming tiling which consists in providing a pattern having a suitable design, placing a sheet of transparent substance upon the same, applying a plastic material upon said substance in registry with said design so as to substantially overlie said design, allowing the same to harden, and applying a plastic material having a different characteristic than said first plastic material but adhesive thereto to a portion of the transparent substance which is not covered by said first-mentioned plastic material.

957,189. TILE-BOARD. GEORGE P. CHAPPELL, New York, N. Y. Filed Mar. 13, 1909. Serial No. 483,272.

As an article of manufacture, a tile board consisting of a base of fibrous material provided with a layer of cementitious material secured to one surface thereof and completely covering the same, said layer of material being coextensive with the surface to which it is secured, the



opposite edges of said base being provided with a tongue and groove respectively.

957,190. COMBINATION CLAW AND PINCH BAR. MARCUS S. CLARKE, Houston, Tex., assignor of one-half to Edward L. Adreon, Jr., St. Louis, Mo. Filed Feb. 10, 1909. Serial No. 477,233.



1. The combination with a pinch bar of a U-shaped shackle pivotally mounted on one end of the bar, and there being a sharp edge formed on the lower end of said shackle.

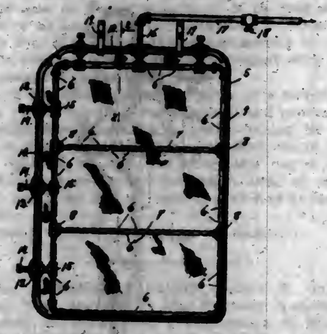
2. The combination with a pinch bar of a U-shaped shackle pivotally mounted on one end of the bar, and a pair of prongs formed integral with the lower end of said shackle.

3. The combination with a pinch bar of a U-shaped shackle pivotally mounted on one end of the bar, there being a sharp edge formed on the lower end of said shackle, and a pair of prongs formed integral with the lower end of said shackle.

4. The combination with a pinch bar, of a removable and reversible shackle, which shackle is provided on its lower end with a spike claw by means of which spikes may be pulled with said shackle.

5. The combination with a pinch bar, one end of which is bent laterally and pointed, of a removable and reversible shackle, which shackle is provided on its lower end with a spike claw by means of which spikes may be pulled with said shackle.

957,191. FILTER-BAG. ERNEST P. DARGIN, Denver, Colo., assignor to Mary E. Dargin, Denver, Colo. Filed Sept. 9, 1907. Serial No. 391,920.

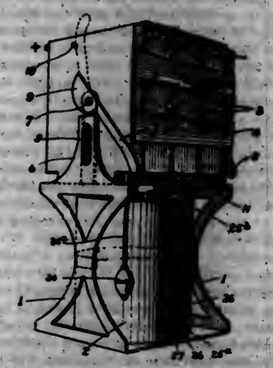


1. A filter bag comprising a perforated pipe frame covered with a filtering medium, bars located within the medium and screw threaded in said bars for preventing the sides of the filtering medium from coming together under the influence of the vacuum pull, and suitable means communicating with the perforated pipe frame for exhausting the bag, causing the exterior solution to enter the same through the filtering medium of which it is composed, and removing the solution from the bag, substantially as described.

2. A filter consisting of a bag composed of a filtering medium, a perforated pipe frame inserted in said bag, and transverse perforated pipes connecting the side bars of the said frame and adjustable bars for stretching the sides of the bag to the desired tension to prevent collapse under the influence of exhausting apparatus connected with the perforated frame, substantially as described.

3. In filtering apparatus, the combination of a rectangular perforated pipe frame, transverse perforated pipes connecting the side bars of the frame and communicating therewith, an exhaust pipe connected with the perforated frame, a bag composed of a filtering medium, inclosing the perforated frame, bars located within the bag, and screws threaded in said bars and engaging the perforated frame for stretching the fabric of the bag to the desired tension, substantially as described.

957,192. ELECTRIC BATTERY. FRANK A. DECKER, Philadelphia, Pa., assignor to Decker Electrical Manufacturing Company, Wilmington, Del., a Corporation of Delaware. Filed June 20, 1907. Serial No. 379,835. Renewed Nov. 11, 1909. Serial No. 527,570.



1. A battery having a nipple connected with its bottom and communicating with its interior, a tank having fixed thereto a box containing a hollow packing within which said nipple fits, a tube connected with said nipple and extending into said tank, and mechanism connected with said tank for forcing liquid therefrom through said tube and nipple into said battery.

2. A battery having a nipple communicating with the interior thereof, a tank having fixed thereon a box containing a hollow packing within which said nipple fits, said box having cams thereon and a cap having clips engaging said cams, a tube communicating with said nipple and extending into said tank, and mechanism connected with said tank for forcing liquid through said tube and nipple into said battery.

3. A battery, a frame, mechanism for reciprocating said battery in said frame, a tank, means whereby fluid connection is established and broken between said battery and tank through the operation of said mechanism, and means for forcing fluid from said tank into said battery.

4. A battery, a frame, ways for guiding the movements of said battery relatively to said frame, a lever whereby said battery is moved relatively to said frame, a tank held in said frame, and means whereby fluid connection is made and broken between said tank and battery.

5. A battery, a frame, ways for guiding the movements of said battery relatively to said frame, levers having cams thereon for moving said battery in said frame, a tank held in said frame, and means whereby fluid connection is made and broken between said tank and battery on moving the latter.

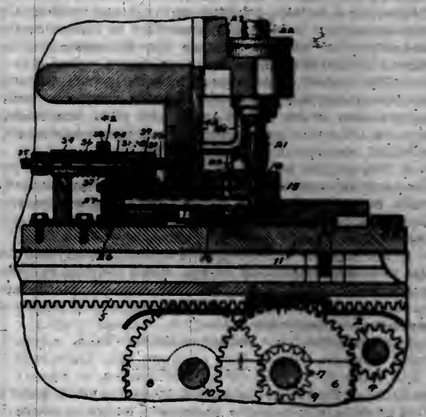
[Claim 6 not printed in the Gazette.]

957,193. PROCESS OF PREVENTING SURFACE OXIDATION OF RESISTANCE-CONDUCTORS. JOHN T. H. DEMPSTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 20, 1909. Serial No. 484,773.

1. The process of treating resistance conductors to prevent initial oxidation, which consists in applying thereto a readily oxidizable substance.

2. The process of treating resistance conductors to prevent initial oxidation, which consists in applying thereto a coating of carbon.

957,194. AUTOMATIC PNEUMATIC CHUCK. NATHAN M. DOEN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 15, 1906. Serial No. 330,660.



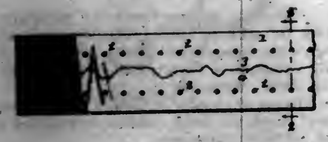
1. The combination with a reciprocating machine tool, of a work holder having a movable jaw, fluid pressure means to move said jaw to full open position and return it into positive engagement with the work irrespective of

the thickness thereof, and means actuated by the movements of the machine tool for controlling the movements of said fluid pressure means, said controlling means comprising a valve and a stop on the machine to engage said valve at a given point in the movement of the machine.

2. The combination with a machine tool having a reciprocating platen, of a work-holding chuck having a stationary jaw and a sliding jaw mounted on said platen, a movable abutment responsive to fluid pressure changes connected with said sliding jaw, means for automatically controlling said fluid pressure by the movements of said platen, and comprising a valve, and a stop on the machine to arrest said valve at a given point in the movement of said platen.

3. The combination with a machine tool having a reciprocating platen, of a work-holding chuck having a stationary jaw and a sliding jaw mounted on said platen, a cylinder also mounted on said platen, a piston connected with said sliding jaw, a valve sliding parallel with said platen, a spring actuating said valve in one direction, and a stop on the machine to arrest the valve and compress said spring at a given point in the movement of said platen.

957,195. METHOD OF RECORDING AND REPRODUCING SOUNDS. JOHN C. ENGLISH, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Oct. 14, 1905. Serial No. 282,733.



1. The method of forming commercial profile tapes for use in sound reproducing devices which consists in forming a master profile tape, and duplicating said master record by means of a suitable profiling machine upon a plurality of layers of paper tapes.

2. The method of forming commercial profile tapes for use in sound reproducing devices which consists in forming a master profile tape, using said master tape as a templet in a suitable profiling machine, and causing the cutting point of said profiling machine to reproduce the undulations of the master tape simultaneously on the edges of a plurality of stacked blank paper tapes.

3. The method of forming commercial profile tape for use in sound reproducing devices, which consists in forming a master profile metallic tape, and using said master tape as a templet for reproducing simultaneously a plurality of commercial duplicates thereof.

4. The method of forming commercial profile tape for use in sound reproducing devices, which consists in forming a master profile metallic tape, and using said master tape as a templet for reproducing simultaneously a plurality of commercial paper duplicates thereof.

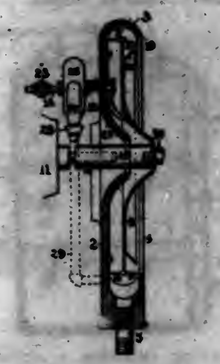
5. The method of forming commercial profile tapes for use in sound reproducing devices, which consists in forming a master profile tape and duplicating said master tape by means of a profiling machine acting upon a plurality of stacked and compressed tapes.

[Claims 6 and 7 not printed in the Gazette.]

957,196. METHOD OF MAKING PAPER AND SIMILAR MATERIAL PLIABLE. FERDINAND EVERS, Dusseldorf, Germany. Filed Sept. 8, 1909. Serial No. 516,775.

Method of making paper and similar materials pliable which consists in mixing a hydrated solution of inverted sugar with an ammonium salt, and saturating said material with the mixture thus obtained.

957,197. HUMIDIFIER. JOHN W. FRIES, Winston Salem, N. C. Filed Dec. 9, 1909. Serial No. 532,159.



1. In a humidifier, the combination of a rotatable disk having its outer portion provided with a laterally directed annular flange on one face, means to rotate the disk at a high velocity, means for delivering a liquid to the face of the disk opposite to that provided with the annular flange, and an annular row of obstructions arranged about the circumference of the disk and close to it against which the film of liquid driven outward from the disk by centrifugal force is projected and subdivided into vapor or mist and at the same time projected against outward air currents from the disk by the air guided action of the laterally projecting flange.

2. In a humidifier, the combination of a rotatable disk having its outer portion provided with a laterally directed annular flange on one face, means to rotate the disk at a high velocity, means for delivering a liquid to the face of the disk opposite to that provided with the annular flange, an annular row of obstructions arranged about the circumference of the disk and close to it against which the film of liquid driven outward from the disk by centrifugal force is projected and subdivided into vapor or mist and at the same time protected against outward air currents from the disk by the air guiding action of the laterally projecting flange, and a shielding case arranged around the annular row of obstructions and provided with an annular flange extending toward the disk so as to terminate approximately in alinement with its laterally projecting flange.

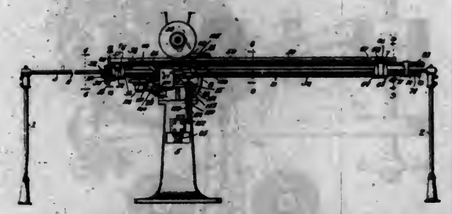
3. In a humidifier, the combination of a rotatable disk having its outer portion provided with a laterally directed annular flange on one face, means to rotate the disk at a high velocity, means for delivering a liquid to the face of the disk opposite to that provided with the annular flange, an annular row of obstructions arranged about the circumference of the disk and close to it against which the film of liquid driven outward from the disk by centrifugal force is projected and subdivided into vapor or mist and at the same time protected against outward air currents from the disk by the air guiding action of the laterally projecting flange, a shielded case arranged around the annular row of obstructions and provided with an annular flange extending toward the disk so as to terminate approximately in alinement with its laterally projecting flange, and means for creating a forced current of air around the outer edges of the shielding case for carrying away the vapor or mist which escapes from the case.

4. In a humidifier, the combination of a rotatable disk having its outer portion provided with a laterally directed annular flange on one face, means to rotate the disk at a high velocity, means for delivering a liquid to the face of the disk opposite to that provided with the annular flange, an annular row of obstructions arranged about the circumference of the disk and close to it against which the film of liquid driven outward from the disk by centrifugal force is projected and subdivided into vapor or mist and at the same time protected against outward air currents from the disk by the air guiding action of the laterally projecting flange and an inclosing case closed on one side and open on the other in front of the disk and provided with an annular gutter immediately outside of the annular row of obstructions and terminating in an edge inwardly directed to approximate alinement with the laterally projected flange of the disk.

5. In a humidifier, the combination of a motor, a disk secured to one end of the motor shaft and provided with an annular flange near its periphery having its surface arranged obliquely to the plane of the disk, means for supplying liquid to the disk, and an annular row of obstructions arranged about the peripheral edge of the disk against which the film of liquid is projected by the rotating disk.

[Claims 6 to 15 not printed in the Gazette.]

957,198. BUFFING-MACHINE. JOHN F. GAIL, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed July 19, 1909. Serial No. 508,339.



1. In a buffing machine of the class described, the combination of a plurality of buffing members, means for actuating said members, means for causing a plurality of reciprocations of an object to be buffed, first in the field of one buffing member and then in the field of another buffing member.

2. In a machine of the class described, the combination of a plurality of buffing members, means for actuating said buffing members, means for automatically shifting an object to be buffed from the field of one member to that of the other, and means for causing a plurality of reciprocations of the object in each field before shifting thereof to the next field.

3. In a machine of the class described, the combination of a plurality of buffing members, means for reciprocating the object in the fields of said buffing members, means for locking the object to be given a plurality of reciprocations first in one field, means for releasing the object, and means for shifting the object to the field of another buffing member after release of the object.

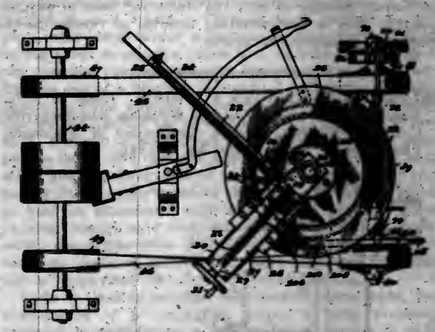
4. In a machine of the class described, the combination of a plurality of buffing members, means for automatically shifting an object from field to field of the buffing members to cause said object to be successively treated by said members, and means for indicating when the object has been treated by the last member.

5. In a machine of the class described, the combination of a plurality of buffing wheels, means for shifting an object to be treated from field to field of the wheels to be successively treated thereby, and means for causing bodily movement of said wheels over the object during the buffing operation.

[Claims 6 to 21 not printed in the Gazette.]

957,199. MACHINE FOR BENDING TUBES. JOHN F. GAIL, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed July 19, 1909. Serial No. 508,340.

1. In a machine of the character described, the combination of a rotary table, a gage secured to and rotatable with said table, a bender rotatable with said table, means to maintain the piece against said bender, means to compel the piece to turn with said table, means to rotate said bender a predetermined amount, and means to automatically return said bender to its initial position after having completed said predetermined rotation, substantially as described.



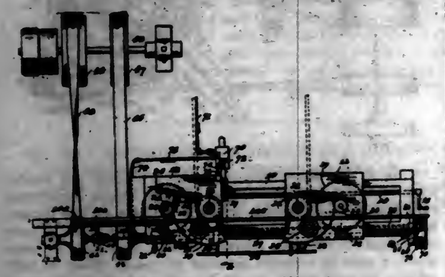
2. In a machine of the character described, the combination of an oscillatory bender, a shaft, means connecting said shaft to said bender whereby rotation of the former is transmitted to the latter, a brake for said shaft, a pair of oppositely-rotating pulleys loosely mounted on said shaft, a pair of clutches adapted to couple either of said pulleys to said shaft, a clutch rod connecting operating members of said clutches, a handle to shift said clutch rod to render one clutch operative and the brake inactive, means to lock said clutch rod in such shifted position, means acting on said clutch rod to shift the same to render the other clutch active, means to unlock said clutch rod when said bender has completed a predetermined angular movement, thereby permitting the second clutch to become operative and cause a reverse turning of said bender, and means to move said clutch rod into neutral position with both clutches out of action and to throw said brake into action when the bender has returned to its initial position, substantially as described.

3. In a machine of the character described, the combination of an oscillatory bender, a shaft, means connecting said shaft to said bender whereby rotation of the former is transmitted to the latter, a brake for said shaft, a pair of oppositely-rotating pulleys loosely mounted on said shaft, a pair of clutches adapted to couple either of said pulleys to said shaft, a clutch rod connecting operating members of said clutches, a brake rod connected to said brake, a spring acting on said rod tending to throw said brake out of action, means on said brake rod adapted to operatively connect said clutch rod and brake rod, a handle to shift said clutch rod to render one clutch operative and the brake inactive, means to lock said clutch rod in such shifted position, means acting on said clutch rod to shift the same to render the other clutch active, means to unlock said clutch rod when said bender has completed a predetermined angular movement, thereby permitting the second clutch to become operative and cause a reverse turning of said bender, and means to move said clutch rod into neutral position with both clutches out of action and to throw said brake into action when the bender has resumed its initial position, substantially as described.

4. In a machine of the character described, the combination of an oscillatory bender, a driving shaft, means connecting said shaft to said bender whereby rotation thereof is transmitted to the bender, forward and reverse drive pulleys loosely mounted on said shaft, a number of clutches adapted to couple either of said pulleys to said shaft, a clutch rod connecting operating members of said clutches, a handle to shift said clutch rod to render one clutch operative, latch mechanism to lock said clutch rod in its shifted position, cam mechanism controlled by the operation of the oscillatory bender to un-

latch said latch mechanism from the clutch rod after a period of movement of the oscillatory bender, means for automatically rendering the second clutch mechanism effective upon release of the latch mechanism whereby the oscillatory bender is driven in reverse direction, and cam mechanism controlled upon reverse movement of said oscillatory member to shift the clutch rod back to neutral position after a predetermined interval of reverse movement of the oscillatory bender.

957,200. TUBE-BENDING MACHINE. JOHN F. GAIL, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed July 19, 1909. Serial No. 508,341.



1. In a machine of the character described, the combination of a pair of forms, a bender adapted to rotate about each of said forms, a pair of manually-actuated sliding notched holders adapted to engage the tube to be bent adjacent to both of said forms to prevent distortion of the tube during the bending operation, and means to simultaneously rotate said benders whereby a tube introduced between said forms and benders may be bent in two places at the same time, substantially as described.

2. In a machine of the character described, the combination of a pair of forms, a bender adapted to rotate about each of said forms, means to simultaneously rotate said benders, whereby a tube introduced between said forms and benders may be bent in two places at the same time, means to automatically stop the turning of said benders and return them to their initial positions after the completion of a predetermined amount of angular turning, a brake for said rotating means, and means to automatically throw said brake into action when said benders reach their initial positions, substantially as described.

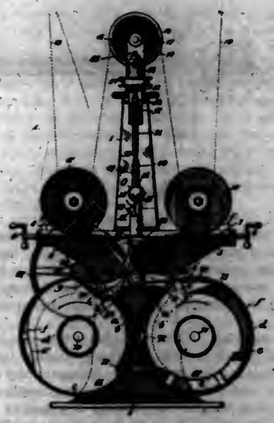
3. In a machine of the character described, the combination of a pair of forms, a bender adapted to rotate about each of said forms, means to simultaneously rotate said benders, whereby a tube introduced between said forms and benders may be bent in two places at the same time, movable holders to engage said tube adjacent to said forms to prevent distortion of the tube during the bending operation, means to automatically stop said benders and return them to their initial positions after the completion of a predetermined amount of angular turning, a brake for said bender rotating means, means to automatically throw said brake into operation when said benders reach their initial positions, and means to throw said brake out of action when said holders are moved into tube engaging position, substantially as described.

4. In a machine of the character described, the combination of a pair of forms, a pair of benders adapted to rotate about said forms, a driving shaft, driving connections between said shaft and benders, oppositely rotating pulleys loosely mounted on said shaft, clutches to operatively connect said pulleys to said shaft, means whereby one of said clutches may be rendered active to cause the simultaneous bending turning of said benders about their respective forms, a compressed fluid means to render said clutch inactive and the other clutch active upon completion of the required bending turning of said benders, means movable with one of said benders to control the actuation of said air operated clutch-controlling means, and means to render said second clutch inactive when the benders return to initial position, substantially as described.

5. In a machine of the character described, the combination of a form, a bender, means to turn said bender around said form whereby to bend a tube introduced between said form and bender, a brake for said turning means, means to automatically stop the bending turning of said bender and return it to initial position after the completion of a predetermined angular turning, and means to automatically throw said brake into action when said bender reaches its initial position, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

957,201. BUFFING MACHINERY. JOHN F. GAIL, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed Aug. 2, 1909. Serial No. 510,761.



1. In a machine of the class described, the combination of a buffing wheel, a carrier frame for supporting an object to be treated, automatic power driven mechanism for bodily moving said carrier frame and for axially rotating said carrier frame whereby the supported object is automatically positioned with reference to the buffing wheel, and means for rotating the object.

2. In a machine of the class described, the combination of a buffing wheel, a carrier frame for supporting an object to be treated, means for bodily moving said carrier frame, means for axially rotating said frame, said means being adapted to operate simultaneously to carry the supported object into various positions with reference to the buffing wheel and during treatment thereof.

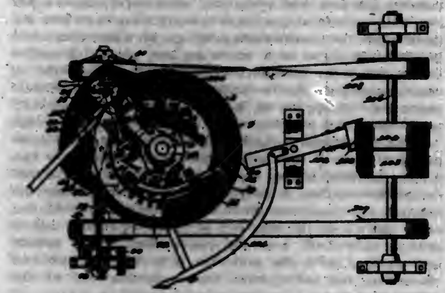
3. In a machine of the class described, the combination of a buffing wheel, a carrier frame supporting an object to be buffed, means for bodily swinging said carrier frame to engage the supported object with the buffing wheel, and means for axially rotating said carrier to change the positions of the object with reference to the buffing wheel when engaged thereby, said means being adapted to operate simultaneously.

4. In a machine of the class described, the combination of a buffing wheel, a carrier frame supporting an object to be buffed, means for bodily swinging said carrier to engage the supported object with the buffing wheel, means for axially rotating said carrier to change the positions of the object with reference to the buffing wheel when engaged thereby, and means for axially rotating the object during its application to the buffing wheel.

5. In a machine of the class described, the combination of a buffing wheel, a carrier frame for supporting an object to be buffed, means for bodily moving said carrier to bring the object into engagement with the buffing wheel, means for axially rotating said carrier, said bodily moving means and said axially rotating means being adapted to operate simultaneously to shift the positions of the object during application thereof to the buffing wheel, and means for rotating the object independently of the carrier movement.

[Claims 6 to 25 not printed in the Gazette.]

957,202. BENDING MACHINERY. JOHN F. GAIL, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed Aug. 2, 1909. Serial No. 510,762.



1. In a bending machine for bending blanks into curved shape, the combination of a stationary supporting frame, a forming block pivoted to said frame and having a forming surface corresponding to the shape into which the blanks are to be bent, said block having a hole at one end, a locking bar mounted to travel with said forming block and having a pin for passing through a hole at one end of a blank and into the forming block hole to clamp said end of the blank to the block, a companion block mounted on said frame adjacent said surface to form a gap, and means for rotating said block to draw the blank through said gap and thereby against said forming surface whereby said blank assumes the curvature of said surface.

2. In a bending machine for bending metal bars, the combination of a stationary supporting frame, a table rotatably pivoted in said frame, a forming block carried by said table and having a forming surface corresponding to the shape to which blank bars are to be bent, said block having a hole at one end, a bar suitably mounted on said table and carrying a pin at one end adapted to pass through a suitable hole at one end of a blank and into the hole of said block to lock said end of the blank to the block, lever mechanism for controlling said sliding bar, said lever mechanism being self locking when said bar has been moved thereby to clamp the blank to the block, a companion forming member mounted on said stationary frame adjacent said forming surface, and means for rotating said table to draw the blanks past said companion forming member whereby said blank is pressed against the forming surface to be bent in accordance with said surface.

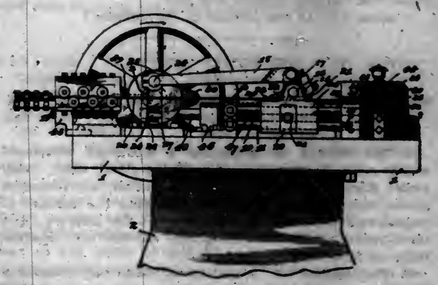
3. In a bending machine for bending angle bar blanks, the combination of a stationary supporting frame, a table rotatably pivoted in said frame, a forming block carried by the table and having a forming surface and a slot, means for clamping one end of one web of a blank to one end of said surface, said slot receiving the other web of the blank, a companion forming member mounted on said frame adjacent said surface, means for rotating said table to draw a clamped blank over said companion block whereby said first web is pressed by said companion block against said surface to assume the shape of said surface, the other web of the blank being received and formed by said slot during rotation of the table, a discharge plate passing through said block adjacent said slot, and cam mechanism operated upon rotation of said table to move said plate to eject the blank from said slot after formation thereof.

4. In a bending machine for bending angle bar blanks, the combination of a stationary supporting frame, a table pivoted in said frame, a forming block carried by the table, said block having a forming surface corresponding to the shape to which a blank is to be bent and having a slot running parallel with said surface, means for clamping one end of a blank to one end of said surface, a companion forming member mounted on said frame adjacent said surface, means for oscillating said table forward and back, one web of said blank being drawn past said companion block and pressed against said surface by said block and the other web of the blank entering said slot during forward movement of the table whereby the blank is bent in accordance with the forming block, a plate passing through said block adjacent said slot, cam mechanism connecting with said plate and actuated upon reverse movement of said table to move said plate into said slot to eject from said slot the formed blank.

5. In a bending machine for bending metal bars, the combination of a supporting frame, a table pivotally mounted in said frame, a forming block carried by said table and having a forming surface, means for clamping one end of a bar to said block, a companion forming member mounted on said frame adjacent said block, driving means for said table, a main forward driving member, a main reverse drive member, clutch mechanism for controlling connection of said forward and reverse main driving members with the driving means for the table, means for adjusting said clutch mechanism to connect the main forward driving member with the driving means whereby said table is moved forwardly to cause the bar to be drawn along the companion member and to be pressed thereby against the forming surface to be bent in accordance with said surface, means operating at the end of the forward movement of the table to automatically actuate the clutch mechanism to disconnect the main forward driving member and to connect the main reverse driving member with the driving means whereby said table is returned to its normal position and means automatically controlled to forcibly eject the formed bar from the machine at the end of the reverse movement.

[Claims 6 to 9 not printed in the Gazette.]

957,203. LINK-FORMING MACHINE. JOHN F. GAIL, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed Aug. 2, 1909. Serial No. 510,763.



1. In a link forming machine, the combination of a forming pin, a forming tongue, means for feeding a wire section into a forming plane between said pin and tongue, means for bodily carrying said tongue about said pin to bend the wire, and means for causing gradual movement of the wire away from the forming plane during the bending operation.

2. In a link forming machine, the combination of two parallel stationary mandrels, a forming pin extending from each mandrel, a forming sleeve journaled on each mandrel and having a forming tongue extending therefrom adjacent the corresponding pin, means for feeding wire sections into a forming plane between said tongues and pins, means for simultaneously rotating the sleeves to cause the tongues to carry the ends of a fed in section about the pins to form hooks, and means for automatically moving a link from the forming plane during formation thereof to make way for the feeding of a succeeding section into the forming plane.

3. In a link forming machine, the combination of two parallel and horisontal stationary mandrels, a forming pin extending forwardly from each mandrel, a forming sleeve journaled on each mandrel and having a forming tongue extending forwardly therefrom adjacent said pin, means for feeding wire sections into a vertical forming plane between said tongue and pins, means for simultaneously rotating said sleeves to cause the tongues to carry the ends of the fed in sections about said pins to form hooks, and an ejecting ridge at the end of each mandrel for moving a formed link forwardly out of the vertical forming plane to make way for feeding of a succeeding section into the plane.

4. In a link forming machine, the combination of rotatable forming sleeves each having a forming tongue extending from one end thereof, a pin within each sleeve, a cutting edge on one of said sleeves, a feed frame having a feed opening terminating with a sharp edge in the path of said cutting edge, means for feeding wire through said feed opening and between the tongues and pins, and means for rotating said sleeves to cause a section to be cut from the fed-in wire by the coöperating cutting edges and the ends of the section carried by said tongue about said pins to form hooks.

5. In a link forming machine, the combination of a supporting frame, two forming sleeves journaled in said frame and each having a forming tongue extending forwardly therefrom, a stationary pin within each sleeve and adjacent the sleeve tongue, said frame having a feed opening therethrough and the frame at the end of said feed opening engaging against one of said sleeves, the inner end of said opening forming a cutting edge, an extension from the sleeve adjacent said frame having a cutting edge for coöperating with the cutting edge of the frame, means for feeding wire through said opening between said cutting edges and between the forming tongues and pins, means for rotating said sleeve to first bring the cutting edges together to cut a section from the wire and then to cause the forming tongues to carry the ends to the section about the pins to form hooks, and means for automatically moving a link from the plane of the feed opening to make way for subsequent feeding of wire between the forming tongues and pins.

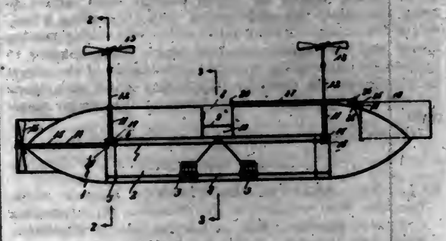
[Claims 6 to 15 not printed in the Gazette.]

957,204. PROCESS OF MAKING A MEDICINAL COMPOUND. ANTON GABICSAN, Chicago, Ill. Filed Feb. 7, 1910. Serial No. 542,610.

1. The method of preparing a medicinal compound which consists in mixing together Iceland moss, Irish moss; European centaury, mullen leaves, marshmallow leaves, horehound, and beer; then boiling the mixture to concentrate it; then adding honey to the mixture; and then boiling to further concentrate the mixture, substantially as described.

2. The method of preparing a medicinal compound which consists in mixing together one ounce of Iceland moss, one ounce of Irish moss, one ounce of European centaury, one ounce of mullen leaves, one ounce of marshmallow leaves, one ounce of horehound, and three quarts of beer; then boiling this mixture to concentrate it into one quart; then adding one quart of honey; and then boiling the mixture down to concentrate it into one quart, substantially as described.

957,205. AIRSHIP. RUDOLF GENDTA, New York, N. Y. Filed Apr. 29, 1909. Serial No. 493,012.



1. In an airship, the combination with motors, transmission gearings and propellers, of a rigid cigar-shaped gas balloon containing a lower compartment to receive the motors and the transmission gearings, an upper open compartment to serve as a passenger car, a pair of rudder blades, gears for transmitting movement to the latter, a central steering spindle carrying at one end one of said gears and terminating at its other end into the open compartment, and a steering wheel mounted on said free end.

2. In an airship, a rigid balloon having an upper compartment open at the top and serving as a passenger car, a pair of lateral rudder blades, a rod connecting said rudder blades together, a central longitudinal spindle extending from the upper margin of the car rearward, a vertical shaft carried by the rear end of the body of the ship, a gear on said shaft, a second gear carried by the spindle and meshing with the said first gear and a crank arm connecting the latter with the connecting rod of the rudder blades.

957,206. TALKING-MACHINE. ROBERT L. GIBSON, Philadelphia, Pa., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed May 2, 1905. Serial No. 258,442.



1. In a talking machine the combination of the bracket having a tubular end having a trackway for antifriction balls, a tubular arm carrying at one end a sound box, a flanged bushing secured to the other end of the tubular arm and having an external diameter smaller than the internal diameter of the tubular end of the bracket, antifriction balls arranged between the trackway and the flange of the bushing for supporting the pivoted end of the tubular arm, and a horn supported upon the tubular end of the bracket independent of the bushing and pivoted arm.

2. In a talking machine the combination of the bracket having a tubular end having a trackway for antifriction balls, a tubular arm carrying at one end a sound box, a flanged bushing secured to the other end of the tubular arm and having an external diameter smaller than the internal diameter of the tubular end of the bracket, antifriction balls arranged between the trackway and flange of the bushing for supporting the pivoted end of the tubular arm, a non-metallic washer surrounding the bushing and interposed between the upper end of the tubular arm and bottom of the tubular end of the bracket, and a horn supported upon the tubular end of the bracket independent of the bushing and pivoted arm.

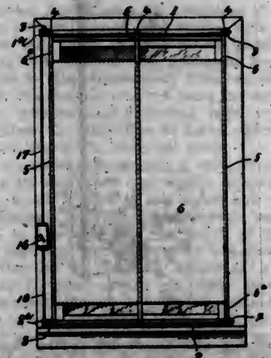
3. In a talking machine the combination of the bracket having a tubular end having a trackway for antifriction balls, a tubular arm consisting of a vertical pivoted part and a horizontal tubular part carrying at one end a sound box and having its other end pivoted to the vertical pivoted part so as to swing vertically about a transverse axis, a flanged bushing secured to the vertical tubular part of the arm and having an external diameter smaller than the internal diameter of the tubular end of the bracket, antifriction balls arranged between the trackway and flange of the bushing for supporting the pivoted end of the tubular arm, and a horn supported upon the tubular end of the bracket independent of the bushing and pivoted arm.

4. In a talking machine the combination of the bracket having a tubular end having a trackway for antifriction balls, a tubular arm consisting of a vertical pivoted part and a horizontal tubular part carrying at one end a sound box and having its other end pivoted to the vertical pivoted part so as to swing vertically about a transverse axis, a flanged bushing secured to the vertical tubular part of the arm and having an external diameter smaller than the internal diameter of the tubular end of the bracket, antifriction balls arranged between the trackway and flange of the bushing for supporting the pivoted end of the tubular arm, a spring catch to hold the horizontal tubular part of the arm in an elevated position upon the vertical tubular part, and a horn supported upon the tubular end of the bracket independent of the bushing and pivoted arm.

5. In a talking machine, the combination with a bracket having a tubular end provided with a groove for antifriction balls, a horn supported upon the tubular end, a tubular arm carrying at one end a sound box, and having its other end turned upward beneath the tubular end of the bracket, a flanged bushing secured upon the upwardly turned end of the tubular arm, and antifriction balls fitting into the groove of the tubular end of the bracket and supporting the flange of the bushing.

[Claims 6 to 28 not printed in the Gazette.]

957,207. WINDOW-SHADE. DARNEY C. HARRISON, Washington, D. C. Filed May 21, 1909. Serial No. 497,470.



1. In a window shade, the combination with two rollers supported horizontally one above the other, of a plurality of supporting tapes each having one end secured to one roller and the other end secured to the other roller, said tapes being of greater length than the distance between said rollers, a piece of shade material of less length than said tapes, secured thereto at portions separated transversely of the shade, a pair of driving pulleys supported intermediate said rollers, a driving belt connecting each of said driving pulleys with one of said rollers and actuating mechanism for simultaneously operating said driving pulleys.

2. In a window shade, the combination with two rollers supported horizontally one above the other, of a plurality of supporting tapes each having one end secured to one roller and the other end secured to the other roller, said tapes being of greater length than the distance between said rollers, a piece of shade material of less length than said tapes, secured thereto at portions separated transversely of the shade, a pair of driving pulleys supported intermediate said rollers, a driving belt connecting each of said pulleys with one of said rollers, a driving shaft provided with an actuating device, gearing connecting said driving shaft with said driving pulleys and a locking device for said driving shaft.

957,208. PENCIL-HOLDER. WILLIAM HENRICHS, Moro, Oreg., assignor of one-half to Hibbard S. McDaniel, Moro, Oreg. Filed Feb. 18, 1909. Serial No. 478,608.



1. A pencil holder comprising a single piece of wire doubled and connected for a portion of its length to form a clamping finger, the two branches of the wire being separated and looped laterally and rearwardly adjacent to said connected portion at one end thereof, a second lateral and rearwardly presented loop in each of said branches, and connections between said loops and first mentioned loops, the terminals of the branches being connected, and said terminals and the connections between the loops forming clamping jaws between which the pencil is received.

2. A pencil holder comprising a single piece of wire doubled and connected for a portion of its length to form a clamping finger, the two branches of the wire being separated beyond one end of the connected portion, and bent into clamping jaws between which the pencil is received, and connected at their ends.

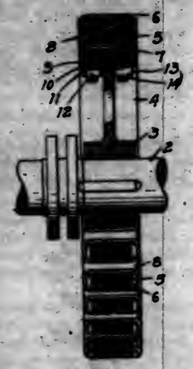
3. A pencil holder comprising a piece of wire doubled and connected for a portion of its length to form a clamping finger, the two branches of the wire being separated beyond one end of the connected portion, and bent into clamping jaws between which the pencil is received, and connected at their ends, and laterally projecting fingers at said ends engaging the pencil circumferentially.

957,209. ELECTRIC GENERATOR AND MOTOR. CHARLES T. HIBBARD, Minneapolis, Minn., assignor to Electric Machinery Company, Minneapolis, Minn., a Corporation of Minnesota. Filed July 24, 1908. Serial No. 445,148.

1. In an electric generator or motor, the combination, with a field spider having a solid peripheral rim, and a radial orifice therethrough, of a pole piece having a laminated tongue formed integrally with said pole piece and fitting within and passing through said radial orifice, a wedge fitting within a hole in said tongue and adapted to bear on the inside of said rim and draw the pole piece snugly against the periphery thereof, substantially as described.

2. In an electric generator or motor, the combination, with a field spider having a solid peripheral rim, and a radial orifice therethrough, of a pole piece having a laminated tongue fitting within and passing through said radial orifice, a wedge fitting within the hole in said tongue, and means for locking said wedge in said hole, substantially as described.

3. In an electric generator or motor, the combination, with a field spider, having a solid peripheral rim provided with a series of radial orifices therethrough, of pole pieces having laminated tongues fitting within and passing through said radial orifices and capable of independent insertion and removal, and means inside the rim for locking said tongues in said radial orifices.



4. In an electric generator, or motor, the combination, with a field spider having a solid peripheral rim provided with a series of radial orifices, of pole pieces having laminated tongues fitting within and passing through said radial orifices, wedges fitting within holes in said tongues and having a notch near one end and a plate also fitting within the hole in said tongues and having one end adapted to enter the notch in said wedge and its other end adapted to be bent at an angle to the middle portion of the plate, substantially as described.

5. In an electric generator or motor, the combination, with a field spider having a solid peripheral rim provided with a series of radial orifices therethrough, of pole pieces composed of a series of laminæ seated on said rim, some of the said laminæ being longer than others and forming laminated tongues which fit within and project through the radial orifices in said rim and said projection of said tongues having holes therethrough and wedges fitting within said holes and locking said tongues in said openings.

957,210. ROCKET. THOMAS G. HITT, Seattle, Wash. Filed June 11, 1909. Serial No. 501,656.



1. In a rocket, a body; a propelling charge therein; a guiding stick attached thereto; a plug formed of quick-burning powder tamped upon the propelling charge; a bursting charge located over the plug of powder; a plug of strong material rigidly secured in the shell above the bursting charge; a shell head extending above the plug of strong material; material for display mixed with powder for spreading it and located in the shell head; a closing cap, and a quick-match communicating past the bursting charge, between the said propelling charge and the powder for spreading the display material.

2. In a rocket, a shell having in its lower portion a propelling charge and in its head a display and distributing charge; a guiding stick secured to the shell; a bursting charge located between the propelling charge and the charge in the head and separated from the latter charge by a firmly fixed plug; a plug of quick-burning powder located between the propelling charge and the bursting charge, and a quick-match communicating between the propelling charge and the charge in the head.

3. In a rocket, a body; a propelling charge therein; a guiding stick attached to the body; a plug of quick-burning powder on top of the propelling charge; a bursting charge on top of the said plug, and a plug of strong material rigidly secured in the body over the bursting charge.

4. In a rocket, a shell; a guiding stick secured thereto; fireworks attached to the stick; a propelling charge and a bursting charge in the shell, and a quick-burning plug located between these two charges, whereby the rocket, in turning after the propelling charge burns out, is propelled in a different direction from its course of ascension.

5. In a rocket, a body; a guiding stick therefor; fireworks secured on the stick, and means for propelling the body, means for bursting it at its highest point of flight, and means for lighting the fireworks on the stick when at that highest point.

[Claims 6 to 8 not printed in the Gazette.]

957,211. FEEDING ATTACHMENT FOR SEWING-MACHINES. RICHARD K. HORMANN, San Diego, Cal. Filed Oct. 14, 1908. Serial No. 457,719.



1. A reversing attachment for sewing machine feeds adapted to be interposed in or removed from the driving mechanism comprising a train of mechanism for transmitting motion the ends of said train being adjacent each other, and adjustable means between the ends of said train for reversing the direction of the motion transmitted.

2. An attachment for sewing machines comprising a train of mechanism for transmitting motion, a removable plate carrying said mechanism, the ends of said train being adjacent each other and the said train including an adjustable cam for reversing the direction of the motion transmitted.

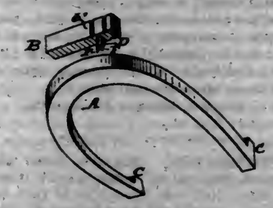
3. A reversing attachment for sewing machine feeds adapted to be interposed in the driving mechanism comprising two link arms pivotally secured together, a roller secured to said arms at the pivot joint, a cam having a V-shaped slot or groove in which said roller works, and means for moving said cam so as to bring said roller into either side of said slot as desired.

4. A reversing attachment for sewing machine feeds adapted to be interposed in the driving mechanism comprising two link arms pivotally secured together, a roller secured to said arms at the pivot joint, a longitudinally movable plate by the side of said arms provided with a heart-shaped slot or groove in which said roller works, and means for moving said plate longitudinally and retaining it in its end positions.

5. A reversing attachment for sewing machine feeds adapted to be interposed in the driving mechanism comprising two link arms pivotally secured together at an angle, a bell crank lever connected to the end of one of said arms and having a fixed pivotal support, roller secured to said link arms at the pivot joint, a longitudinally movable plate by the side of said link arms provided with a heart-shaped slot or groove in which said roller travels, and means for moving said plate longitudinally and retaining it in its end positions.

[Claims 6 to 14 not printed in the Gazette.]

957,212. HORSESHOE-CALK. EDWARD HUBER, Newport, Ky. Filed Nov. 11, 1908. Serial No. 462,016.



1. As an article of manufacture, a horse-shoe calk provided with a socket-opening and a pin seated therein and serving to hold the calk temporarily to its shoe until permanently welded thereto, said pin consisting of two parts substantially semi-cylindrical and seated with their flat sides against each other in the opening mentioned and beyond which they project, the projecting end of each part being cut to slant transversely from one of its edges to the other, the slant of one end being opposite to that of the other, whereby said projecting ends, when forced into a horse-shoe, are adapted to be forced edgewise apart in a direction parallel to their flat sides.

2. As an article of manufacture, a horse shoe calk provided with a tubular socket and with a substantially cylindrical pin which is fitted to this socket and which consists of contiguous, but laterally separable parts terminating each in a pointed end, the length of the pin exceeding the depth of the socket so as to permit the projecting portion of its parts to spread in a direction transverse to the axis of the pin when forced into a horse-shoe, whereby the calk is held to the shoe in position for welding by the projecting portion of the pin after being spread and embedded in the shoe and by its other portion which is seated in the socket of the calk to which it is fitted and which prevents it from spreading.

957,213. COIL FOR ELECTRICAL PURPOSES. ELBERT W. JOBBEY, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 26, 1905. Serial No. 284,556.

1. In a coil for electrical purposes, a tubular support of insulating material, a pair of staples, one secured to each end of said support, a winding on said support formed in two sections, one within the other, said sections being separated from each other by a strip of paper wound about the inner section, one end of the conductor forming one section being secured to one staple and one end of the conductor forming the other section being secured to the other staple, and a strip of conducting material fastened to said strip with one end projecting by one end of the coil sections with the free end of the conductor forming one section secured to the inner end of said conductor and the free end of the conductor forming the other section secured to the projecting end of said conductor.



2. In a coil for electrical purposes, a tubular support of insulating material, a pair of staples one secured to each end of said support, a winding on said support formed in two sections, one within the other, said sections being separated from each other by a strip of paper wound about the inner section one end of the conductor forming one section being secured to one staple and one end of the conductor forming the other section being secured to the other staple, a strip of conducting material fastened to said strip of paper with one end projecting by one end of the coil sections with the free end of the conductor forming one section secured to the inner end of said conductor and the free end of the conductor forming the other section secured to the projecting end of said conductor, and terminal conductors anchored to said support by said staples.

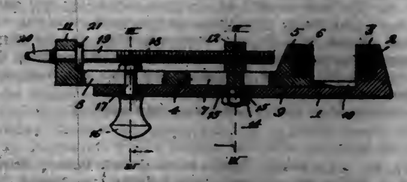
3. As an article of manufacture, a core of insulating material, terminal conductors stapled to said core, and a conductor coiled about said core with its terminals secured to said terminal conductors.

4. In combination, a coil support in the form of a tubular body of fibrous insulating material, a terminal conductor stapled to said support, and a conductor coiled about said support with one end connected to said terminal conductor.

5. In a coil for electrical purposes, a support, a winding on said support in two sections arranged one within the other, a layer of insulating material between the sections, a conductor mechanically supported by said insulating material, one terminal of each section of the winding being connected to said conductor.

[Claim 6 not printed in the Gazette.]

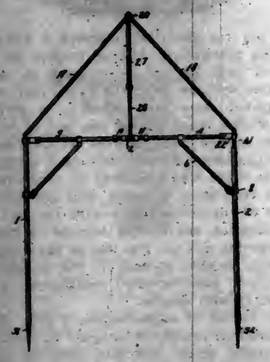
957,214. ADJUSTABLE WRENCH. CHARLES P. JOHNSON, Eureka, Kans. Filed Dec. 14, 1909. Serial No. 533,104.



1. A wrench consisting of a member, a jaw at one end of said member, a second member slidably-mounted upon the first member and forming in connection therewith a handle for the wrench, a jaw on one end of the second member adjacent the jaw on the first member, a bearing at the opposite end of said second member, a nut fixed to the first member and extending through a longitudinal slot in the second member, said nut having shoulders overlapping the second member to retain it in position upon the first member, a knob swiveled to the handle for revolving the wrench, said knob having a shank extending through the members to assist the nut in holding said members together, a screw journaled in the bearing and engaging the nut, and means for turning said screw.

2. A wrench consisting of a member having a longitudinal groove, a jaw at one end of said member, a second member slidably engaging the first member and provided with a rib fitting into the longitudinal slot thereof, a jaw on one end of the second member adjacent the jaw on the first member, a bearing at the opposite end of the second member, a nut projecting from the first member through the second member, a screw journaled in the bearing and engaging said nut, and means for turning said screw.

957,215. FRAME FOR TENTS. ADOLPHE JUIN, Chicago, Ill., assignor to Sydney H. Veal, New York, N. Y. Filed Feb. 9, 1909. Serial No. 476,932.



1. A tent frame comprising corner posts, two side bar sections hinged to each post, a roof bar hinged to and telescoping with each post, means for connecting said side bar sections and means for connecting said roof bars.

2. A tent frame comprising corner posts, side bars hinged to and connecting said corner posts, inclined roof bars, each formed in two parts hinged together and adapted to telescope with the corner posts and means for connecting the upper parts of said roof bars.

3. A tent frame comprising corner posts, side bar sections hinged to each post and roof bars hinged and telescoping with said posts, one of said bar sections engaging with part of a roof bar at each post to lock the same in position.

4. A tent frame comprising corner posts, side bar sections connected thereto, roof bars connected to said posts, intermediate side bar sections telescoping with the sections connected to the corner posts and end posts hinged to the intermediate side bar sections and to the roof bars.

5. A tent frame comprising corner posts, side bar sections hinged thereto, roof bars connected to said posts, hinged intermediate side bar sections telescoping with the other side bar section, extensible end posts hinged to said intermediate side bar sections.

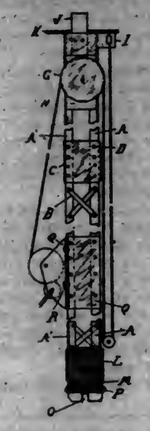
[Claims 6 to 12 not printed in the Gazette.]

957,216. GIN-POLE. WILLIAM R. KALES, Detroit, Mich., assignor to The Whitehead and Kales Iron Works, Detroit, Mich., a Corporation of Michigan. Filed May 21, 1909. Serial No. 497,429.

1. A gin pole comprising a plurality of sections of metallic column, means for detachably securing said sections to each other, a sheave carried by the upper section, and a plug secured to the lower section, constituting a supporting bearing.

2. A gin pole comprising a metallic column formed of a plurality of sections, and braces connecting said sections, a socket at the lower end of said column, and a wooden plug engaging said socket and forming a supporting bearing.

3. A gin pole comprising a metallic column, having a socket in its lower end, a wooden plug engaging said socket and having a cross slot therein for the engagement of a pinch bar.

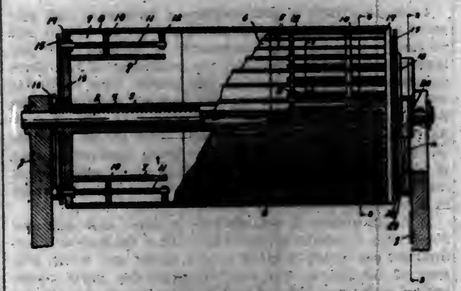


4. A gin pole comprising a metallic column, a socket formed at the lower end of said column, a wooden plug secured in said socket having a cross slot therein, and a metallic shoe for protecting the top of said cross slot.

5. A gin pole comprising a metallic column formed of angle bars at the corners and lattice bracing, the bars adjacent to the front side of the column being of greater section than those upon the rear side.

[Claims 6 to 10 not printed in the Gazette.]

957,217. SUCTION-BOX. JOHN F. KING and JAMES NEARY, Kalamazoo, Mich. Filed Aug. 7, 1909. Serial No. 511,777.



1. A suction roll, comprising a plurality of radially-disposed compartments, each compartment being provided with a head chamber; a foraminated outer wall; a suction connection arranged to successively connect with said compartments as the roll is revolved; heads arranged in said head chambers; and means for adjusting said heads comprising screws, toothed wheels on said screws, and a pair of oppositely facing racks supported so that either may be shifted into position to engage said toothed wheels as said roll is revolved.

2. A suction roll comprising a plurality of radially-disposed compartments, each compartment being provided with a head chamber; a foraminated outer wall; a suction connection arranged to successively connect with said compartments as the roll is revolved; heads arranged in said head chambers; and means for adjusting said heads comprising screws, toothed wheels on said screws, and a rack supported so that it may be shifted into position to engage said toothed wheels successively as said roll is revolved.

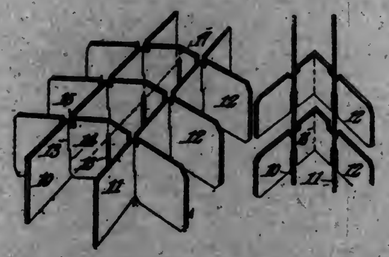
3. A suction roll comprising a plurality of radially-disposed compartments, each compartment being provided with a head chamber; a foraminated outer wall; a suction connection arranged to successively connect with said compartments as the roll is revolved; heads arranged in said head chambers; and means for adjusting said heads comprising screws, toothed wheels on said screws, and a member supported so that it may be shifted into position to engage said toothed wheel successively as said roll is revolved.

4. A suction roll comprising a foraminated outer wall, a body portion having radially-disposed partitions whereby said roll is provided with a plurality of radially-disposed compartments; cross-pieces connecting said partitions, said cross-pieces being disposed in alinement, thereby forming a ring about said body, their outer edges being curved in arcs of the same circle, and being flush with the outer edges of said radially-disposed partitions to coact therewith in supporting said outer wall; longitudinally-disposed partition walls between said radial walls whereby said compartments are provided with head chambers; end walls extending from said longitudinally-disposed partitions inwardly; ring-like members arranged to close the outer ends of said head chambers; heads adjustably arranged in said head chambers; and adjusting screws for said heads journaled in said head rings and cross-pieces.

5. A suction roll comprising a foraminated outer wall, a body portion having radially-disposed partitions whereby said roll is provided with a plurality of radially-disposed compartments; cross-pieces connecting said partitions, said cross-pieces being disposed in alinement, thereby forming a ring about said body, their outer edges being curved in arcs of the same circle, and being flush with the outer edges of said radially-disposed partitions to coact therewith in supporting said outer wall; longitudinally-disposed partition walls between said radial walls whereby said compartments are provided with head chambers; end walls extending from said longitudinally-disposed partitions inwardly; ring-like members arranged to close the outer ends of said head chambers; and heads adjustably arranged in said head chambers.

[Claims 6 to 11 not printed in the Gazette.]

957,218. EGG-BOX. CHARLES B. KLEFEKER, Newark, N. Y., assignor to Bloomer Bros. Company, Newark, N. Y. Filed July 22, 1909. Serial No. 508,999.

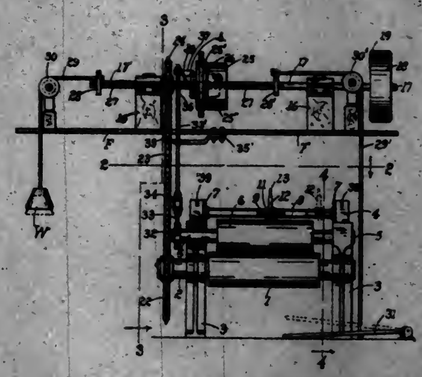


1. A folding partition structure comprising a plurality of longitudinal partitions in parallel relation and a plurality of cross partitions intersecting the longitudinal partitions and each movable on a longitudinal partition at the point of intersection about an axis at right angles to the length of the longitudinal partition, each cross partition being also foldable upon itself intermediate of adjacent longitudinal partitions and the entire structure folding without relative longitudinal movement of the longitudinal partitions.

2. A partition structure for egg boxes comprising longitudinal partitions in parallel relation, and transverse or cross partitions in pivotal connection with the longitudinal partitions and each foldable upon itself at an intermediate point between two adjacent longitudinal partitions.

3. A foldable partition structure for egg boxes comprising longitudinal partitions in parallel relation, and transverse or cross partitions in pivotal connection with and intersecting the longitudinal partitions, each cross partition being foldable upon itself at an intermediate point between two adjacent longitudinal partitions and there cut away for a portion of the length of the fold.

957,219. COMPOSITION-LEATHER MACHINE. FREDERICK KUKKUCK, St. Louis, Mo. Filed Dec. 6, 1909. Serial No. 531,685.



1. In a machine of the character described, a drum rotating about a fixed axis, a second drum bearing thereon and rotating about a movable axis, a drive-shaft, gearing interposed between said shaft and the first mentioned drum, a conveyer for feeding sheets between the drums and winding the same about the second mentioned drum, and means coupled to the movable drum and coöperating with the drive-shaft for arresting the rotation of the drums upon accumulation of sufficient material on the movable drum, during the continued rotation of the drive-shaft.

2. In a machine of the character described, a pair of coacting drums, means for feeding a sheet to one of the drums and winding the same thereon, a drive-shaft, a clutch for coupling said shaft to the feeding means aforesaid, and a controller coupled to the winding drum and actuated by the material wound thereon for releasing the clutch when a predetermined thickness of material has accumulated on the winding drum.

3. In a machine of the character described, a pair of coacting drums, means for rotating the drums and feeding a sheet of material adapted to wind on one of the drums, a drive-shaft, means for coupling the rotating means for the drums to the drive-shaft, and a controller coupled to the winding drum and responsive to the material accumulating thereon for uncoupling the rotating means from the drive-shaft with a predetermined thickness of the material accumulated on the winding drum.

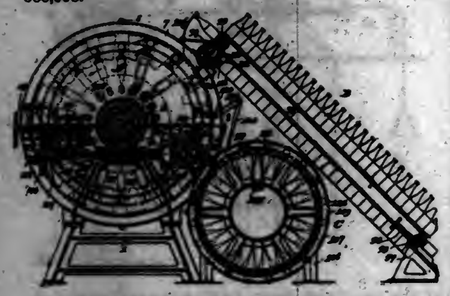
4. In a machine of the character described, a drum rotating about a fixed axis, a second drum resting thereon and rotating about a movable axis, a drive-shaft, an extension shaft therefor, clutch-members on said shafts, gearing interposed between the extension shaft and lower drum for actuating the drums, a conveyer for feeding sheets between the drums and winding the same about the upper drum, a clutch-controller coupled to the upper drum and normally maintaining the clutch-members in engagement, said controller being released from the clutch mechanism with a movement of the upper drum due to material accumulated thereon.

5. In a machine of the character described, a drum rotating about a fixed axis, a second drum resting thereon and rotating about a movable axis, a drive-shaft, an ex-

tension shaft therefor, clutch-members on said shafts, gearing interposed between the extension shaft and lower drum for imparting rotation to the drums, a conveyer for feeding sheet material between the drums and winding the same about the upper drum, an adjustable clutch-controller coupled to the upper drum and normally maintaining the clutch-members in engagement, said controller being released from the clutch upon a vertical displacement of the upper drum due to accumulated material thereon, and means for disengaging the clutch-members upon a release thereof by the controller.

[Claims 6 to 8 not printed in the Gazette.]

957,220. MACHINE FOR WASHING AND DRAINING SOILED BOTTLES. THOMAS D. KYLE, Chicago, and EDWARD H. WAUGH, Evanston, Ill.; said Waugh assignor to said Kyle. Filed Aug. 17, 1907. Serial No. 388,998.



1. In an organised machine for washing soiled bottles, the combination with a rotary bottle-washing mechanism, of bottle-introducing and discharging mechanisms in co-operative relation thereto, means for driving said bottle-washing mechanism at a relatively high speed during the washing operation, and means for driving said bottle-washing mechanism at a reduced speed during the loading and unloading operations, substantially as described.

2. In an organised machine for washing soiled bottles, the combination with a rotary bottle-washing mechanism, of bottle-introducing and discharging mechanisms in co-operative relation thereto, means for driving said bottle-washing mechanism at a relatively high speed during the washing operation, means for driving said bottle-washing mechanism at a low speed during the loading and unloading operations, and means for automatically shifting said high and low speed driving means concurrently with the commencement and termination of the washing operation, substantially as described.

3. In an organised machine for washing and draining soiled bottles, the combination with a bottle-washing mechanism, of a feeding-in conveyer for the soiled bottles, a draining mechanism, means for introducing the soiled bottles from said conveyer to said bottle-washing mechanism during the movement of the latter, means for discharging the washed bottles from said washing mechanism to said draining mechanism during the movement of said washing mechanism, and a discharge conveyer adapted to carry off the drained bottles from said draining mechanism, substantially as described.

4. In an organised machine for washing and draining soiled bottles, the combination with a rotary bottle-washing mechanism, and means for imparting a continuous turning movement thereto, of a rotary draining mechanism adapted to receive the washed bottles from the periphery of said washing mechanism, means for driving said washing mechanism at a relatively high speed during the washing operation, means for automatically slowing down the speed during the delivery of the cleaned bottles to the draining mechanism, and means for imparting an intermittent rotary movement to the draining mechanism from the continuous rotary movement of the washing mechanism, substantially as described.

5. In an organised machine for washing soiled bottles, the combination with a rotary carrier having rows of radially-arranged inner and outer bottle-holders, the latter of which are movable radially to clamp and release the bottles, and bars carrying said outer bottle-holders, of fixed circular guide-tracks engaging the ends of said bars, cam-tracks communicating at both ends with said circular guide-tracks, respectively, a feeding-in conveyer for the soiled bottles, and switches for diverting said bars into said cam-tracks whereby to retract said outer bottle-holders preliminary to the introduction of soiled bottles from said conveyer during the loading of the bottle-carrier, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

957,221. HAND FOR COMPTOMETERS. SAYERS B. LAMKIN, Dawson, N. Mex. Filed Nov. 1, 1909. Serial No. 525,814.



1. A key-operating attachment for comptometers and the like, comprising a plate provided with a plurality of sockets on one face corresponding in arrangement with the keys of the machine, and a smaller number of adjustable pins adapted to be placed in any of said sockets and whereby predetermined keys of the machine may be simultaneously operated by manually placing the plate over the keys and depressing the same.

2. A key-operating attachment for comptometers and the like comprising a "hand" consisting of a plate provided with a series of rows of sockets on one face corresponding in arrangement with a set of keys on a machine, and depending flanges on its under side whereby the plate may be properly positioned over the keys; with adjustable pins adapted to be removably engaged in any of said sockets whereby the predetermined keys on the machine may be simultaneously operated by placing the plate over the keys and depressing same.

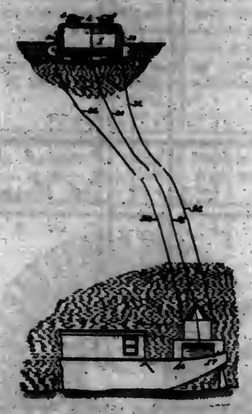
3. A key-operating attachment for comptometers and the like comprising a plate having a plurality of rows of sockets on its under side corresponding in arrangement with the keys on the machine, said sockets being numbered correspondingly with the keys, and depending flanges on the lower face and top and side of the plate whereby it may be correctly positioned over the keys previous to depression thereof; with a set of removable pins each adapted to be detachably secured in any one of the sockets.

4. A key-operating attachment for comptometers and the like comprising a mechanical "hand" having a plurality of rows of sockets on its under side corresponding in number and arrangement with the keys on the machine, said sockets being numbered correspondingly with the keys; a handle on the top of the "hand" opposite the sockets whereby it may be manipulated by hand, and means on the lower face of the "hand" whereby it may be correctly positioned over the keys previous to depression thereof; with removable pins adapted to be detachably secured in any of the sockets.

5. A key-operating attachment for comptometers and the like comprising a mechanical "hand" having a plurality of sockets on its under side corresponding in arrangement with the keys on the machine; a set of removable pins each adapted to be detachably secured in any of the sockets, said pins having rubber tips on their outer ends, and the sockets corresponding to the concaved keys on the comptometer being shallower than the other sockets.

[Claim 6 not printed in the Gazette.]

957,222. APPARATUS FOR LOCATING SUNKEN VESSELS. GEORGE B. LEA QUEE, Mount Iron, Minn. Filed May 17, 1909. Serial No. 496,611.



1. An apparatus for the location of sunken vessels, comprising a hollow buoy; an electric light carried by the buoy; batteries carried by the buoy; electrical contacts in the buoy, comprising two adjacent members insulated from each other and having contiguous cylindrical contact surfaces; an electric circuit including said batteries, light and contacts; and a weighted rocker carrying a conducting member having a cylindrical surface adapted to contact with said contact surfaces when the buoy is afloat, substantially as described.

2. An apparatus for the location of sunken vessels, comprising a hollow buoy; an electric light carried by the buoy; batteries carried by the buoy; electrical contacts in the buoy, comprising two adjacent members insulated from each other and having contiguous cylindrical contact surfaces; an electric circuit including said batteries, light and contacts; and a weighted rocker carrying a conducting member having a cylindrical surface adapted to contact with said contact surfaces when the buoy is afloat; and of a length less than the ordinary rock of the buoy on the waves, substantially as described.

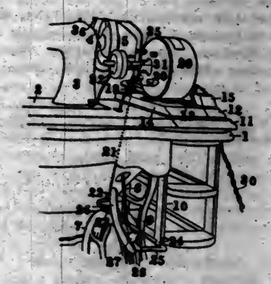
3. An apparatus for the location of sunken vessels, comprising the buoy 1 made in two air-tight compartments; electric lights 3 located in separate water-tight compartments, a weighted rocker 9 and divided contacts 11 for opening and closing the lighting circuit and a flexible connection between the buoy and vessel, substantially as described.

4. An apparatus for the location of sunken vessels, comprising the buoy 1 made in two air-tight compartments; electric lights located in separate water-tight compartments, a weighted rocker 9 and divided contacts 11 for opening and closing the lighting circuit, a suitable support for the buoy on the vessel, spring held catches 18 for securing the buoy to the support, float operated mechanism for releasing catches 18 and a flexible connection between the buoy and vessel, substantially as described.

5. An apparatus for the location of sunken vessels, comprising the buoy 1 made in two air-tight compartments, electric lights 3 located in separate water-tight compartments; a weighted rocker 9 and divided contacts 11 for opening and closing the lighting circuit, a suitable support for the buoy on the vessel, spring held catches 18 for securing the buoy to the support, float operated mechanism for releasing the catches 18, a wire 24 attached to the buoy, and a reel 25 for holding wire 24, substantially as described.

[Claim 6 not printed in the Gazette.]

957,223. DEVICE FOR OPERATING MOTORS FOR SEWING-MACHINES AND THE LIKE. WILLIAM LENHART, Cuyahoga Falls, Ohio. Filed Dec. 31, 1909. Serial No. 535,854.



1. A device of the class described comprising a supporting medium arranged to be positioned adjacent to a driven wheel, a pivoted lever arranged for vertical oscillation mounted on said support, a motor mounted on said lever, a friction wheel on the shaft of said motor arranged when said motor is oscillated in one plane to be thrown into and withdrawn from operative engagement with said wheel and a braking member arranged to be moved into and out of operative engagement with said wheel alternately with respect to the engagement of said friction wheel therewith.

2. A device of the class described comprising a hinged supporting medium arranged to be positioned adjacent to a driven wheel, a pivoted lever arranged for vertical oscillation mounted on said support, a motor mounted on said lever, a friction wheel on the shaft of said motor arranged when said motor is oscillated in one plane to be thrown into and withdrawn from operative engagement with said wheel and a braking member arranged to be moved into and out of operative engagement with said wheel alternately with respect to the engagement of said friction wheel therewith.

3. A device of the class described comprising a pivoted lever arranged to be mounted adjacent to the driven wheel, said lever arranged to oscillate in a plane parallel with the plane of said wheel, a motor mounted on said lever, a friction wheel mounted on the shaft of said motor, a braking member carried by said motor, said friction wheel and braking member arranged to be alternately brought into operative relation with said driven wheel by the oscillation of said lever and means connected with said lever and mounted on the support for said driven wheel for oscillating said lever.

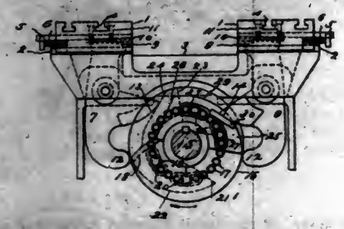
4. A device of the class described comprising a pivoted lever, a hinged support therefor, a friction wheel positioned adjacent to said support, a motor mounted on said lever, a friction wheel carried by the shaft of said motor, a braking member mounted on the latter, said friction wheel and braking member arranged to alternately engage said driven wheel due to the oscillations of said pivoted lever and means connected with said lever for oscillating the same when said hinged support is in one position, said support capable of being swung to a position to prevent engagement between said friction wheel, brake and driven wheel.

5. The combination with a sewing machine provided with a driven wheel and a table adjacent thereto, a support embodying a fixed and hinged portion, the fixed portion secured to said table, a pivoted lever mounted on the hinged portion of said support, a motor mounted on said lever provided with a friction wheel arranged to be driven thereby and a brake, said friction wheel and brake arranged to alternately engage said wheel when said lever is oscillated and when the hinged portion of said support is in one position and to be separated from said driven wheel when said hinged portion is moved to another position and means connected with said lever for oscillating

the same, said connection fashioned to permit of the swinging of the motor away from said driven wheel.

[Claims 6 to 9 not printed in the Gazette.]

957,224. CROSS-SLIDE-OPERATING MECHANISM. HARRY B. LESTER, Dayton, Ohio, assignor to The Davis Sewing Machine Company, Dayton, Ohio, a Corporation of Ohio. Filed Sept. 27, 1909. Serial No. 519,709.



1. The combination with a cross slide of a machine tool, of a lever engaging said slide, said lever having a part in one plane and a part offset therefrom, a shaft, and a cam rotatable with the shaft, said cam having a portion in one plane adapted to engage one part of the lever for moving it in one direction, and a portion offset therefrom for engaging the offset part of the lever for moving it in the opposite direction.

2. The combination with a cross slide of a machine tool, of a lever engaging said slide, said lever having a part in one plane and a part offset therefrom, a shaft, a disk fastened on said shaft, and a cam block adjustably secured to said disk, said cam block having a portion in one plane adapted to engage one part of said lever, and a portion offset therefrom and adapted to engage the offset part of said lever.

3. The combination with the cross slide of a machine tool, of a lever engaging said slide, said lever having a part in one plane and a part offset therefrom, a shaft and a cam rotatable with said shaft, said cam having a portion adapted to engage and move the lever first quickly and then slowly in one direction, and having a portion adapted to engage the offset part of said lever for moving the lever quickly in the opposite direction.

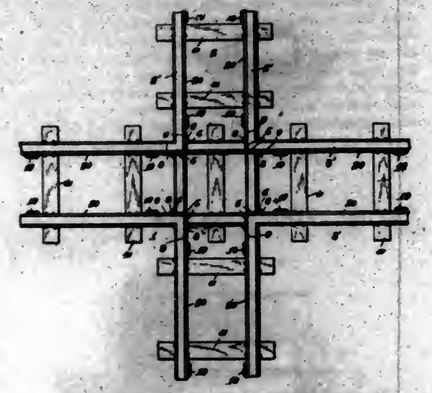
4. The combination with the cross slides of a machine tool, of levers engaging said slides, each of said levers having a part in one plane and a part offset therefrom, a shaft, and cams rotatable with said shaft, each of said cams having a portion in one plane adapted to engage a part of a lever, and a portion offset therefrom and adapted to engage the offset part of a lever.

5. The combination with the cross slides of a machine tool, of levers engaging said slides, each of said levers having a part in one plane and a part in a plane offset therefrom, a shaft, a disk fastened on said shaft, and cam blocks adjustably secured to opposite sides of said disk, each of said cam blocks having a portion adapted to engage a part of a lever, and having a portion offset therefrom and adapted to engage the offset part of a lever.

[Claim 6 not printed in the Gazette.]

957,225. RAILWAY-CROSSING. PHILLIP P. LEWIS, Chicago, Ill. Filed Sept. 11, 1909. Serial No. 517,267.

1. The combination with a railway crossing, the rails of each of the comprising tracks of which adjacent the inner edges of those of the other being formed with recesses for the reception of a car wheel flange, of rockable means coöperating with the comprising rails of each of the intersecting tracks adapted when actuated to span said recesses, and depressible means for actuating said spanning means, said depressible means comprising elongate bars positioned adjacent the inner sides of the ball of each of the track rails at either approach thereof to the track intersection, and an operative connection between said bars and said spanning means whereby the depression of the before named depressible bars arranged adjacent the rails of one track will effect the rocking actuation of the before named spanning means coöperating with the recesses in the rails of that track, said depressible means being adapted to be depressed to actuation by the flanges of the wheels of an approaching car, substantially as described.



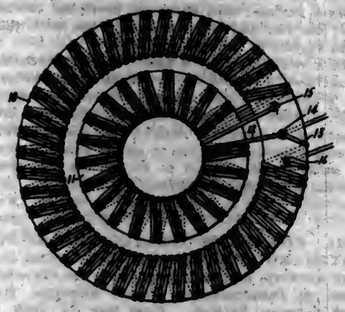
2. The combination with a railway crossing, the rails of each of the comprising tracks of which adjacent the inner edges of those of the other being formed with recesses for the reception of the car wheel flange, of rockable means coöperating with the comprising rails of each of the intersecting tracks adapted when actuated to span said recesses, and depressible means for actuating said spanning means, said depressible means comprising depressible elongate bars positioned adjacent the inner edge of the ball of each of the track rails at either approach thereof to the track intersection, an operative connection between said bars and said spanning means whereby the depression of the before named depressible bars arranged adjacent the rails of one track will effect the rocking actuation of the before named spanning means coöperating with the recesses in the rails of that track, said depressible means being positioned for actuation by the wheels of an approaching car, substantially as described.

3. The combination with a railway crossing, the rails of each of the comprising tracks of which adjacent the inner edges of those of the other being formed with recesses for the reception of a car wheel flange, of rockable levers coöperating with the comprising rails of each of the intersecting tracks, the upper end portions of said levers being formed for reception in said recesses to span the same, and depressible means for actuating said levers, said means comprising depressible elongate bars positioned adjacent the inner side of and in horizontal alinement with the ball of each of the track rails at either approach thereof to the track intersection, and operative connection between said bars and the lower edges of said levers whereby the depression of the before named depressible bars arranged adjacent the rails of each track will effect the rocking actuation of the levers coöperating with the recesses in the rails of that track, substantially as described.

4. The combination with a railway crossing, the rails of each of the comprising tracks of which adjacent the inner edges of those of the other being formed with recesses for the reception of a car wheel flange, of rockable angular levers coöperating with the comprising rails of each of the intersecting tracks, the upper end portions of said levers being formed for reception in said recesses to span the same, depressible means for actuating said levers, said means comprising depressible elongate bars positioned adjacent the inner side of and normally in horizontal alinement with the ball of each of the track rails at either approach thereof to the track intersection, elongate bars slidably mounted and horizontally extending beneath each of the track rails, an operative connection between each of said rods and depression bars arranged

adjacent the respective rail beneath which each rod is arranged, whereby depression of said depression bars causes the sliding actuation of said rods, bell crank levers connecting said rods and the lower ends of said spanning levers, whereby the sliding actuation of said rods causes the rocking actuation of said levers, said levers being so arranged that when said depression bars are in elevated position said levers will be in inoperative position, and when said bars are in depressed position said levers will be in operative position, and means for normally holding said levers in inoperative position, substantially as described.

957,226. ELECTRIC HEATER. JUDSON C. LOGAN, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Mar. 20, 1909. Serial No. 484,692.



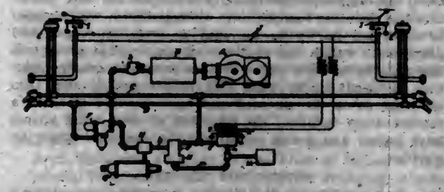
1. An electric heating unit comprising concentric spaced rings of insulation having two independent resistance conductors wound thereon adjacent each other and having three terminals, one of which is common to both windings.

2. An electric heater comprising concentric spaced rings of insulation having two independent resistance conductors wound thereon from a common terminal, one of which is wound first on the inner ring and then on the outer, while the other is wound first on the outer and then on the inner ring.

3. An electric heater comprising an inner and an outer ring of insulating material, and a plurality of independent resistance conductors wound upon said rings.

4. An electric heater comprising an inner and an outer ring of insulating material and a plurality of independent resistance conductors wound thereon adjacent each other and having a terminal common to both windings.

957,227. ELECTROPNEUMATIC AIR-BRAKE SYSTEM. GEORGE MACLOSKIE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 1, 1910. Serial No. 541,362.



1. In an air-brake system, in combination with the brake cylinder and a source of pressure therefor, a regulating reservoir, valve mechanism for admitting air from said source to, and exhausting air from, said regulating reservoir, electromagnetic means for operating said valve mechanism, valve mechanism for admitting air from said source to, and exhausting air from, the brake cylinder, and operating means therefor controlled jointly by the pressures in the brake cylinder and in said regulating reservoir.

2. In an air brake system, in combination with the brake cylinder and a source of pressure therefor, valve mechanism for admitting air from said source to, and exhausting air from, the brake cylinder, operating means therefor controlled jointly by brake cylinder pressure and a second pressure, and electromagnetic means for varying the amount of said second pressure.

3. In an air brake system, in combination with the brake cylinder and a source of pressure therefor, valve mechanism for admitting air from said source to, and exhausting air from, the brake cylinder, operating means therefor comprising a movable member subjected on one side to brake cylinder pressure, and electromagnetic means for producing a variable pressure on the opposite side of said member.

4. In an air brake system, in combination with the brake cylinder and a source of pressure therefor, a regulating reservoir, two valves for respectively admitting air from said source to, and exhausting air from, said regulating reservoir, a pair of electromagnets and control circuits therefor for operating said valves, valve mechanism for admitting air from said source to, and exhausting air from, said brake cylinder, and operating means therefor comprising a movable member subjected to the opposing pressures in the brake cylinder and in said regulating reservoir.

5. In an air brake system, in combination with the brake cylinder and a source of pressure therefor, a regulating reservoir, valve mechanism for admitting air from said source to, and exhausting air from, said regulating reservoir, electromagnetic means for operating said valve mechanism, valve mechanism for admitting air from said source to, and exhausting air from, the brake cylinder, and operating means therefor comprising a movable member subjected to the opposing pressures in the brake cylinder and in said regulating reservoir.

957,228. TOOL FOR WATCH MAKERS AND REPAIRERS. EDWARD N. MANN, Alma, Kans. Filed Apr. 28, 1909. Serial No. 492,666.

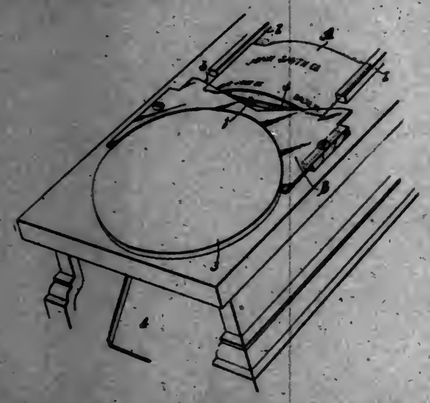


1. In a device of the character described, the combination with a horizontal supporting base, of a vertical standard rising therefrom and a head in which said standard terminates, a screw threaded into said head and having an opening formed in the lower portion thereof, a presser bar comprising an angular body portion, a reduced upper end and a bearing collar between said body portion and said reduced upper end, said reduced upper end entering the opening formed in the lower end of the screw and the lower end of said screw bearing against said collar, and a spring disposed between the underside of said collar and a portion of the head, substantially as shown and described.

2. In a device of the character described, the combination with a horizontal supporting base, of a vertical

standard rising therefrom and terminating in a vertical head, a screw threaded into said head and having an opening formed in the lower portion thereof, a presser bar comprising an angular body portion, a reduced upper end and a bearing collar between said bearing portion and said reduced upper end, said reduced upper end entering an opening formed in the lower end of the screw and the lower end of said screw bearing against said collar, a spring disposed between the under side of said collar and a portion of the head, said spring normally tending to force the presser bar upwardly and the angular portion of said presser bar traveling in an angular opening formed in the lower portion of said head, a cone, the base of which rests upon said horizontal base, a vertical stem having threaded engagement with said cone, a transverse head carried by said threaded stem, a pair of levers pivoted intermediate their ends to the extremities of said head, the upper ends of said levers being inturned and the lower ends of said levers engaging the face of the cone, and a spring disposed between said levers and normally tending to force their ends apart.

957,229. CARD-PRINTING MACHINE. MILES H. MANN, Louisiana, Mo., assignor to Buffum Tool Company, Louisiana, Mo., a Corporation of Missouri. Filed Oct. 20, 1909. Serial No. 523,612.



1. In a machine for printing cards and other articles, guides between which the cards travel, a discharge chute for receiving the cards, and means extending transversely of the machine for straightening out a buckled card and deflecting it downwardly into said discharge chute.

2. In a machine for printing cards and other articles, guides between which the cards travel, an inking plate arranged adjacent one end of said guides, and means arranged intermediate said guides and inking plate for straightening out a card that is buckled intermediate its ends.

3. In a machine for printing cards and other articles, guides between which the cards pass, an inking plate, a discharge chute, and means arranged between said guides and inking plate for straightening out a buckled card and deflecting it downwardly into said chute.

4. A card-printing machine provided with a guideway through which the cards travel, and oppositely inclined surfaces arranged adjacent one end of said guideway for straightening out a card which buckles intermediate its ends.

5. In a machine for printing cards and similar articles, a guide plate arranged in the path in which the cards travel and provided with oppositely inclined surfaces which are adapted to be engaged by a card that is buckled intermediate its ends and thus cause said card to straighten out.

[Claims 6 and 7 not printed in the Gazette.]

957,230. RERAILING-FROG. WALTER MARTLEY, Lebanon, Mo. Filed Nov. 26, 1909. Serial No. 529,983.



1. In a re-railing frog, a base comprising a sloping surface and a substantially level surface, said sloping surface being intermediate the ends of said base and having pivoted thereon a shiftable track member, and a guide rail crossing the base diagonally.

2. In a re-railing frog, a base comprising substantially level surfaces and a sloping surface intermediate the level surfaces, a shiftable track member on the sloping surface adapted to receive the tread of a car wheel and bear it to the upper level surface, a guide rail diagonally crossing the base and a slide-way comprising an extension of last said level surface, said slide-way overlying the top surface of the rail and its edge being flush with the inner vertical surface of the rail head.

3. In a re-railing frog, a base comprising substantially level surfaces, a sloping surface connecting said level surfaces, a shiftable track member pivoted on said sloping surface, a bent guide rail diagonally spanning the base, and adapted to direct the flange of the wheel to the slide-way, said slide-way comprising an extension of the upper level surface and adapted to overlie the rail tread and direct the wheel flange thereto.

957,231. PROCESS OF TREATING IMPURE COPPER MATTE AND ORES. HERMANN MASCHMEYER, Hoboken, near Antwerp, Belgium, assignor to The Corporation of Usini de Desargentation Société Anonyme, Hoboken, near Antwerp, Belgium. Filed Mar. 24, 1909. Serial No. 485,509.

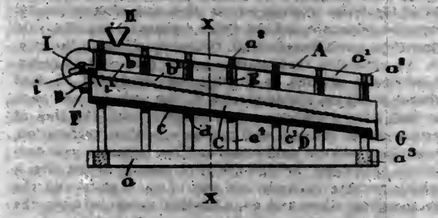
1. The process for eliminating lead arsenic, antimony and other impurities from impure cupriferous substances, consisting in converting such subetances into a sintered and agglomerated mass, which contains lead as silicate and the other impurities in a slagged form, while copper is contained partly as an oxid or metallic copper, and partly as a sulfid, and then smelting down the sintered and agglomerated mass in a reverberatory furnace; the resulting product being almost pure copper and a slag containing the lead and other impurities.

2. The process for eliminating lead arsenic, antimony and other impurities, from impure cupriferous substances, consisting in incorporating with such subetances a certain amount of copper oxid and converting it into a sintered and agglomerated mass, which contains lead as silicate and the other impurities in a slagged form, while copper is contained partly as an oxid or metallic copper, and partly as a sulfid, and then smelting down the sintered and agglomerated mass in a reverberatory furnace; the resulting product being almost pure copper and a slag containing the lead and other impurities.

3. The process for eliminating lead arsenic, antimony and other impurities from impure cupriferous substances, consisting in first converting such subetances into a sintered and agglomerated mass, which contains lead as silicate and the other impurities in a slagged form, while copper is contained partly as an oxid or metallic copper and partly as a sulfid, the contents of copper oxid present in the mass being kept higher than is necessary for the reaction between copper oxid and copper sulfid, and then smelting down the sintered and agglomerated mass in a reverberatory furnace; the resulting product being almost pure copper and a slag containing the lead and other impurities.

957,232. DRYING APPARATUS FOR PEAT AND THE LIKE. CHARLES A. MATHESON, Perth, Ontario, Canada, assignor to George Baxter Farmer, Perth, Canada. Filed Aug. 12, 1909. Serial No. 512,631.

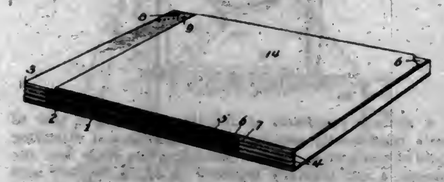
1. A peat drier comprising a suspended casing and a removable pan therein formed with a series of steps over which the peat is adapted to pass, and means for heating the pan and means for reciprocating the casing.



2. A peat drier comprising a suspended casing and a removable pan therein formed with a series of steps over which the peat is adapted to pass, means for heating the pan, means for reciprocating the casing, and a layer of heat insulating material between the pan and the casing.

3. A peat drier comprising a casing formed on the bottom with a plurality of transverse crossbars, a frame work flexible members extending through the frame work to the cross bar, and a removable pan in the casing over which the peat is adapted to pass, means for heating the pan, and means for reciprocating the casing.

957,233. MANIFOLDING BOOK OR PAD. BERT C. MAXWELL, Canton, Ohio, assignor to Julius Whiting, Jr., trustee, Canton, Ohio. Filed Feb. 27, 1908. Serial No. 418,047.

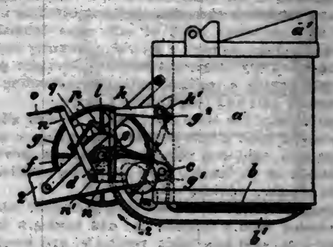


1. A manifolding book comprising a series of superposed sets of triplicating slips, each set including an entry-receiving section and the original and triplicate slips of each set being of the same length and bound into the book at their upper ends, and the entry receiving section being connected to the duplicate and triplicate slips, respectively, along its opposite edges, there being a line of perforations between said duplicate slip and said section and another between said section and said triplicate slip and suitable transfer coating on the under surfaces of the original and duplicate slips.

2. A manifolding book comprising a series of superposed sets of triplicating slips, each set formed from a single sheet of paper twice folded transversely intermediate of its ends and perforated or weakened along the line of the lower one of said folds and including an entry-receiving section, the original and triplicate slips being connected at the upper line of fold and bound together into the book, and the duplicate slip extending beyond the lower end of the original slip and being connected with the triplicate slip by the said section, there being a weakened or perforated line between said section and triplicate slip, and suitable transfer medium interposed between the original and duplicate and duplicate and triplicate slips.

957,234. EXCAVATOR. HANS F. MENCK, Gross-Flottbeck, Germany, assignor to The Firm of Menck & Hambrock, Gesellschaft mit Beschränkter Haftung, Altona-Ottensen, Germany. Filed Feb. 10, 1909. Serial No. 477,155.

1. In an excavator, the combination with a swinging support, a scoop mounted thereon, and a bottom hinged to the scoop, of a rotatable member mounted in the support, means operated by the movement of the bottom to rotate said member in opposite directions, and means to exert a braking action on the rotatable member.



2. In an excavator, the combination with a swinging support, a scoop mounted thereon and a bottom hinged to the scoop, of a rotatable member mounted in the support, means connected with the bottom to rotate said member in opposite directions, a brake disk connected with the latter and means to exert a braking action on the disk.

3. In an excavator, the combination with a swinging support, a scoop mounted thereon and a bottom hinged to the scoop, of a rotatable member mounted in the support, rigid means connected with the bottom to rotate said member in opposite directions, a brake disk connected with the latter and means to exert a braking action on the disk.

4. In an excavator, the combination with a swinging support, a scoop mounted thereon, and a bottom hinged to the scoop, of a rotatable member mounted in the support, rigid means connected with the bottom to rotate said member in opposite directions, a brake disk connected with the latter, a brake band surrounding the disk connected with the scoop, and means to actuate the band.

5. In an excavator, the combination with a swinging support, a scoop mounted thereon, and a bottom hinged to the scoop, of a shaft journaled in the support, means connected with the bottom to rotate the shaft in opposite directions, a brake disk, means to fix the latter to the shaft, a brake band surrounding the disk and means to regulate the action of the band.

[Claims 6 to 12 not printed in the Gazette.]

957,235. MAIL-HANDLING APPARATUS. MILO M. MILLER, GEORGE S. STEINBERGER, and WILLIAM H. HARGRAVES, Allentown, Pa., assignors of one-fourth to Charles M. W. Keck, Allentown, Pa. Filed Oct. 30, 1909. Serial No. 525,574.



1. In apparatus of the class described, a mail-bag receiving arm having an offset part adapted to receive and hold an annular member associated with the mail-bag, and provided at said offset part with a resilient member adapted to be engaged directly by said annular member.

2. In apparatus of the class described, an adjustable rod having a mail-bag catching arm, said arm having an elongated, substantially straight part, a curved part, and beyond the same a laterally disposed part secured to said rod, whereby said arm is offset from said rod, said arm

having associated therewith at said offset part a resilient member constituting a buffer.

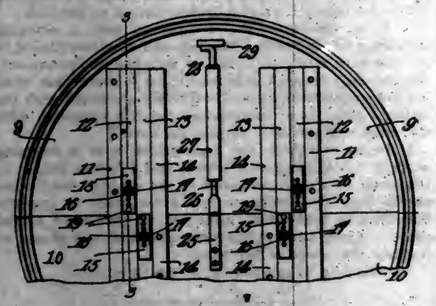
3. In apparatus of the class described, a rod having an extension, and oppositely extending mail-bag catching arms carried by said extension, each of said arms consisting of a downwardly disposed part, a lateral, outwardly curved part, and an upwardly offset, substantially straight part, said first part having a resilient extension extending toward said second part and constituting a buffer.

4. In apparatus of the class described, a member adapted to be mounted upon a railroad car and having a mail-bag catching arm, said arm being rotatable, and movable in the direction of its length, and means for resiliently holding said member against rotation.

5. In apparatus of the class described, a member adapted to be mounted upon a railroad car and having a mail-bag catching arm, said arm being rotatable, and movable in the direction of its length, means for resiliently holding said member against rotation, and means for locking said member against movement in the direction of its length.

[Claims 6 to 19 not printed in the Gazette.]

957,236. EXTENSION-TABLE. ROBERT M. MILLER, Montgomery, Pa. Filed Aug. 25, 1908. Serial No. 450,164.



1. An extension table having a vertically divided central pedestal, a board bolted to the top of each pedestal part, a rib at each end of each of said boards, a divided top, slides fastened thereto to enable the top to be drawn apart, slides disconnected from the table top movable longitudinally between the table top slides, a plate having a lug fastened to each of said independent slides adapted to rest on said ribs, said lugs entering each a notch in each of said ribs, bolts connecting the slides to said boards passing through said plates and ribs to permit said pedestal parts to oscillate, and independent means for connecting said pedestal parts and said divided top.

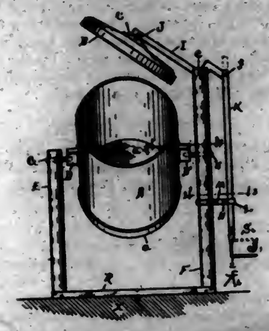
2. An extension table having a two part pedestal vertically divided, a board on each half pedestal, said boards being in parallel relation and one of said boards being longer than the other, a plate fastened to each end of each board and having a convex rib thereon parallel with the ribs on the other board, a divided table top, and outer and intermediate slides carried by the top between said boards and said top, the outer slides being connected to respective sections of the table top and the intermediate slides being attached each to one end of each board with the convex rib interposed.

3. An extension table having a two part central pedestal, a divided top supported on said pedestal by intervening slides, connections between certain slides and each half of the said table top, plates with convex ribs on each part of said pedestal between the same and the remaining slides, connections between the last named slides and the pedestals extending through the ribs, and means carried by the plates for rocking the pedestal and limiting the rocking movement.

4. An extension table having a two part central pedestal vertically divided, a divided top supported on said pedestal by slides, plates carried by the pedestal and each provided with a convex rib having a central perforation, certain of the slides resting on the ribs, and connections between the pedestals and the slides resting on the ribs, said connections extending through the perforations in the ribs.

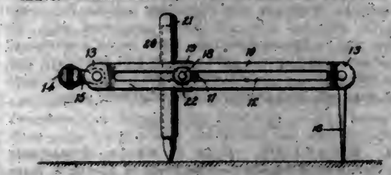
5. An extension table having a two part central pedestal vertically divided, a divided top supported on said pedestal by slides, plates carried by the pedestal and each provided with a transverse rib parallel with the line of division of the pedestal and having a central perforation, connections between said slides and the pedestal, said connections extending through the perforations in the ribs, a yielding member between one end of each plate and the corresponding slide, and an adjusting screw between the other end of the plate and the corresponding slide.

957,237. GARBAGE-RECEPTACLE. SARAH MOORMAN, Richmond, Ind. Filed Jan. 31, 1910. Serial No. 541,024.



A garbage receptacle or the like including a pair of posts permanently secured in the ground and extending upward thereabove, a brace connecting the posts near the ground, a can pivotally mounted to swing between said posts and supported thereby, said can having an unlimited rotary movement but adapted to normally assume an upright position, a cover for said can, a bail for said cover, said cover having means whereby it may be raised and lowered by one's foot, said means including an arm I, the longer portion of which extends over the center of said bail, a link J connecting the bail and said arm, a pivot by which said arm is carried by the upper end of one of said posts, a bar connected to said arm and extending down to near the ground and parallel with said post, a guide for said bar, and a tread *s* formed on the lower portion of said bar, and the cover when in position on the can being adapted to prevent the can from rotating or swinging, all substantially as shown and described.

957,238. COMPASS. WILLIAM L. MURPHY, Dorchester, Mass. Filed Dec. 21, 1909. Serial No. 534,298.

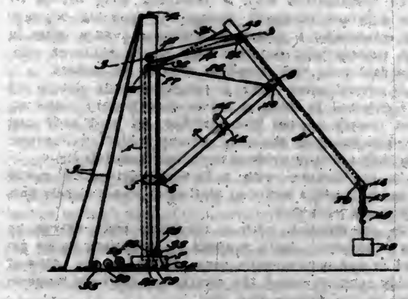


1. A compass comprising juxtaposed frame plates, an axis point projecting from one end of said plates and rotatively connected at its inner end thereto for movement between the same, a carriage between said plates adapted to receive a crayon, and clamping means for said carriage adjustable longitudinally of said plates.

2. A compass comprising juxtaposed frame plates, an axis point at one end thereof, a crayon carriage extending between said plates and comprising a pair of opposing clamping members, and means to compress said frame plates toward one another and upon said carriage and to simultaneously compress said clamping members upon a crayon inserted therebetween, said means being adjustable longitudinally of said frame plates.

3. A compass comprising a pair of juxtaposed frame plates, having opposing longitudinal slots and inwardly offset ends, a handle rigidly connecting one of the ends, an axis point having its inner ends rotatively connected between the opposite ends of said plates, a clamping screw upon one side of said plates having a threaded shank extending through said slots, a non-rotatable nut upon the opposite side of said plates into which said shank engages, and a crayon carriage between said frame plates comprising a pair of opposing crayon clamping members each having an angular portion through which said shank of said clamping screw passes.

957,239. DERRICK. JOHN MCVEIGH, Philadelphia, Pa., assignor of one-half to Daniel A. Dougherty, Philadelphia, Pa. Filed Dec. 29, 1909. Serial No. 535,512.



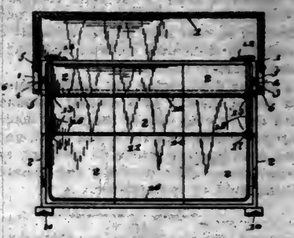
1. In a derrick, the combination with a mast and a beam, of a link pivotally connected at one end to the mast and at its outer end to the beam between the ends of the latter, and a pair of links pivotally connected to the beam and mast near their upper ends, substantially as set forth.

2. In a derrick, the combination with a mast and a beam, of a link pivotally connected at one end to the mast and at its outer end to the beam between the ends of the latter, links above the first mentioned link pivotally connecting the mast and the beam, and plates secured to the first mentioned link between their ends and between which the end of said beam is adapted to be secured when detached from said upper links.

3. In a derrick, the combination with a mast, of perforated plates secured to the mast at a point removed from its lower end, a beam, perforated plates secured to the beam between the ends of the latter, a link pivotally connected at its ends between the plates on the mast and the plates on the beam, perforated plates secured to the sides of said link, upper links pivotally secured to the mast and to the beam, said beam adapted to be swung to a position between the plates on the lower link and secured between the plates on the lower link.

4. In a derrick, the combination with a mast and a beam, of a link pivotally connecting the lower portion of the mast with the beam between the ends of the latter, an upper pair of links connecting the upper portions of the beam and mast, a lifting cable connected to the free end of the beam, a second cable connected to the beam at its pivotal juncture with the lower link, a third cable connected to the upper end of the beam, and means for operating said cables, substantially as set forth.

957,240. FOLDING BED. JOHN NAUGLE, Bedford, Ind. Filed May 7, 1909. Serial No. 494,599.



1. A clothes holding frame for folding beds comprising end tubular members hinged to the inside of the bed frame; longitudinal members connecting said end members; a U-shaped outside member telescoping into said end tubular members; and means for adjustably securing said U-shaped member in said end members, substantially as described.

2. In a folding bed, a casing; angular hinge members 3 secured to each end of said casing, said hinge members comprising an upwardly and an outwardly extending arm and a grooved supporting lug 5; and hinge members 4 secured to the bed frame, said hinge members comprising a horizontally extending plate and a flanged stud 6, substantially as described.

957,241. PRESSURE-EQUALIZING MECHANISM FOR CYLINDERS. GEORGE W. NISTLE, North Muskegon, Mich., assignor of one-third to Everett W. Brooks and one-third to Robert L. Gifford, Chicago, Ill. Filed May 9, 1908. Serial No. 431,958.



1. In a motive fluid engine, the combination with a cylinder and piston therein, of a conduit communicating directly with the driving side of the piston head at one end and at its other with the exhaust side of the engine, and a pressure operated check valve mechanism interposed in and controlling said conduit comprising a valve member, one side of which is subject to the varying working pressure in the cylinder and the other side of which is subject to the pressure from the exhaust side of the engine whereby the valve is controlled by cylinder pressure only and is shifted to open the conduit to admit fluid to the driving side of the cylinder from said other source whenever the pressure on the driving side of the piston head falls below the pressure on the exhaust side of the conduit.

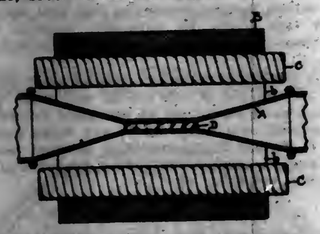
2. In a motive fluid engine, the combination with a steam chest, of a cylinder and a piston therein, a conduit communicating at one end directly with the driving side of the piston head independently of any connection with the steam chest, and at its other with the exhaust side of the engine, and a pressure operated check valve mechanism openable inwardly and operable to admit an equalizing fluid to the cylinder from the exhaust side of the engine whenever the pressure on the driving side of the piston head falls below the pressure in the exhaust side of the engine.

3. In combination, a valve casing, a piston reciprocating therein and dividing said casing member into two chambers, a cushioning chamber at each end of the piston rod sealed from communication with the adjacent main cham-

ber, main conduits leading into said main chamber on opposite sides of the piston head and other conduits leading from the respective sides of the main chamber to the respective cushioning chambers, said latter conduits being cross connected so that each affords constant communication between this cushioning chamber and that part of the main chamber remote therefrom.

4. In a motive fluid engine, the combination with a cylinder and piston therein, of a conduit communicating directly with the driving side of the piston made independent of any connection with the steam chest, and also communicating with another source of pressure, and a check valve mechanism openable inwardly and operable to admit an equalizing fluid to the cylinder.

957,242. DYNAMO-ELECTRIC MACHINE. JAKOB E. NORDGREATH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 13, 1908. Serial No. 426,654.



1. A dynamo-electric machine comprising an insulated pipe, a field magnet having poles extending on opposite sides of said pipe so as to produce a flux passing transversely through said pipe, the central portions of the opposite pole faces being substantially parallel with each other and the ends of the poles being beveled so that the pole faces make an acute angle with each other and consequently gradually recede from each other, and current terminals within the pipe where the pole faces are parallel.

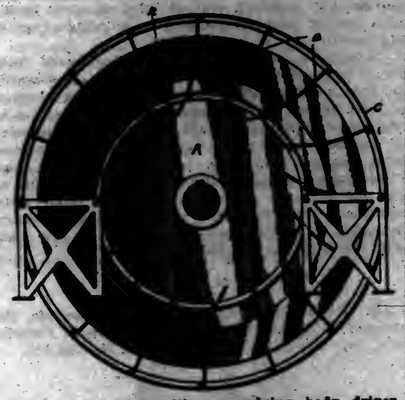
2. A dynamo electric machine comprising an insulated pipe of comparatively small cross section near its center and flaring at the ends, a field magnet and winding adapted to produce a flux passing transversely through said pipe, and current terminals within the central portion of said pipe on opposite sides of the path of said flux.

3. A dynamo electric machine comprising an insulated pipe of comparatively small cross section near its center and flaring at its ends, a field magnet and winding adapted to produce transversely through said pipe a flux comparatively strong at the central portion of the pipe, and gradually diminishing in strength toward its ends, and current terminals within the central portion of said pipe on opposite sides of the path of said flux.

4. A dynamo electric machine, comprising an insulated pipe of comparatively small cross section near its center and flaring at the ends, a field magnet and winding adapted to produce a flux passing transversely through said pipe, and current terminals within the central portion of said pipe on opposite sides of the path of said flux, the dimension of the central cross section of the pipe in the direction of the flux being much smaller than the dimension at right angles thereto.

5. A dynamo-electric machine comprising an insulated pipe, a field magnet having poles extending on opposite sides of said pipe so as to produce a flux passing transversely through said pipe, the central portions of the opposite pole faces being substantially parallel to each other and the ends of the pole being beveled so that the pole faces make an acute angle with each other and consequently gradually recede from each other, the portion of the pipe lying between the substantially parallel portions of the pole faces being of uniform cross section with the dimension in the direction of the flux much smaller than the dimension at right angles thereto, and current terminals within the central portion of said pipe on opposite sides of the path of said flux.

957,243. MEANS FOR DECREASING WINDAGE LOSSES. JAKOB E. NORDGREATH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 23, 1908. Serial No. 444,882.



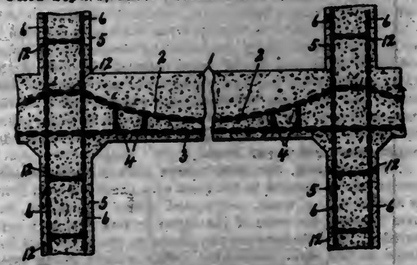
1. In combination with a revolving body driven by means external to itself, means for reducing windage losses comprising a series of stationary vanes lying in planes substantially perpendicular to the plane of rotation of said body and extending close to its surface.

2. In combination with a revolving body driven by means external to itself, a series of stationary vanes arranged closely around the periphery of said body and adapted to break up the eddy currents which the rotation of the body tends to produce in the surrounding air.

3. In combination with a fly-wheel driven by means external to itself, a series of stationary vanes closely surrounding its periphery.

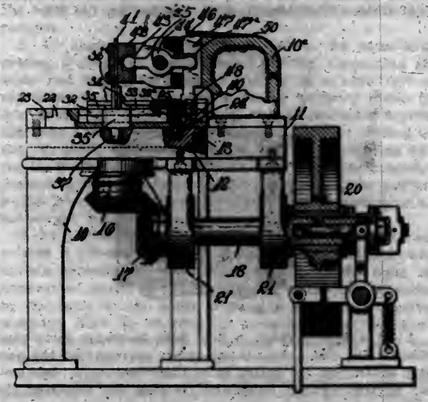
4. In combination with a revolving body driven by means external to itself, a series of stationary vanes arranged in and substantially perpendicular to the paths of the eddy currents which the rotation of the body tends to produce in the surrounding air.

957,244. REINFORCED CONCRETE. PIERREPONT B. NOYES, Oneida, N. Y., assignor to Oneida Community Limited, Oneida, N. Y., a Corporation of New York. Filed Sept. 3, 1907. Serial No. 391,191.



In reinforced concrete structures, a body of concrete, and an all chain reinforcement therefor comprising a plurality of series of chains adapted to be embedded within the concrete, each chain embodying a plurality of links interengaged to permit relative movement longitudinally of the chain when not embedded within the concrete, the chains of each series extending in the same general direction across those of the other series and firmly secured thereto at the points of intersection to hold the chains of each series against displacement during progressive building, the embedding of the chains providing a concrete bonding element extending actually through each link.

957,245. WIRE-BENDING MACHINE. WILLIAM H. PARKER, Passaic, N. J. Filed Apr. 29, 1909. Serial No. 493,087.



1. A wire forming machine comprising a main reciprocating slide, a second slide moving transversely in the first slide, opposed forming arms carried by the second slide, a plunger shaped to descend over the forming arms, and having opposite parts shaped to fit the forming arms, and means for delivering the wire to the forming arms from a position near the center of the plunger.

2. A wire bending machine comprising a main reciprocating slide, a second slide reciprocating transversely on the main slide, forming arms carried by the second slide, a plunger reciprocating opposite the forming arms, and having sections shaped to alternately fit the forming arms, means for delivering wire stock between the plunger and the forming arms, and mechanism operated from a single cam for working the two slides and the plunger.

3. A wire bending machine comprising a main reciprocating slide, a second slide moving transversely on the first slide and provided with opposite forming arms, shedder plates supported on the first slide and extending over the forming arms, and a plunger moving between the shedder plates and over the forming arms.

4. A wire bending machine comprising a main reciprocating slide, a second slide moving transversely on the first slide, forming arms carried by the second slide, and a hollow plunger having its surface on opposite sides of the bore shaped to fit the forming arms, whereby the wire stock can be fed through the hollow plunger between its wire shaping parts to the forming arms.

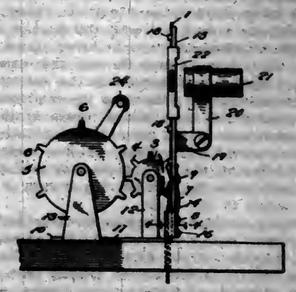
5. In a machine of the kind described, the combination with the reciprocating opposed forming arms and means for moving the arms bodily and transversely to their length, of a hollow plunger reciprocating opposite and having opposed parts fitting over the forming arms, and means for feeding wire through the said plunger between its wire shaping parts to the forming arms.

[Claims 6 to 11 not printed in the Gazette.]

957,246. MOVING-PICTURE MACHINE. CHARLES J. PAULSON, Karlskrona, Sweden. Filed Sept. 29, 1908. Serial No. 455,296. Renewed Aug. 2, 1909. Serial No. 510,880.

1. Driving mechanism for moving picture apparatus, comprising a toothed film-driving member, a toothed operating member adapted to engage therewith, the teeth on said members being spaced to impart a step-by-step movement to the film-driving member, and a resilient detent adapted to engage successively with the teeth of the film-driving member.

2. Driving mechanism for moving picture apparatus, comprising a toothed film-driving member, a toothed operating member adapted to engage therewith, the teeth on said members being spaced to impart a step-by-step movement to the film-driving member, and a resilient detent having a pocket adapted successively to receive and locate the ends of the teeth of the film-driving member.



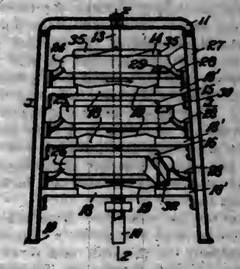
3. Driving mechanism for moving picture apparatus, comprising a toothed film driving member positioned to engage with the film and impart an intermittent movement thereto, and a resilient detent positioned to engage with the teeth of said driving member and adapted to locate said teeth successively in a predetermined position.

4. Driving mechanism for moving picture apparatus, comprising a toothed film driving member positioned on one side of said film and having its teeth arranged to enter successive openings in the film to impart an intermittent movement thereto, and a resilient detent positioned on the opposite side of the film engaging with the teeth of said driving member and adapted to locate said teeth successively in a predetermined position.

5. In a moving picture apparatus, a mount, film driving mechanism carried thereby, an upright film-guiding member removably carried by said mount, and a resilient detent secured to said member and adapted to arrest the film driving mechanism after each impulse.

[Claim 6 not printed in the Gazette.]

957,247. FORMING-MACHINE. GUNTHER H. PETRI, Boston, Mass. Filed Nov. 5, 1909. Serial No. 526,373.



1. A forming machine comprising the combination of a cylinder, a trough arranged in a plane perpendicular to the axis of the cylinder, one of these parts encircling the other; means to produce relative rotation between them whereby a mass there between will be rolled; another such cylinder and trough adjacent, the rotation being opposite; and means for transferring the mass from one trough to the other.

2. A forming machine comprising the combination of a cylinder, a trough arranged in a plane perpendicular to the axis of the cylinder, one of these parts encircling the other; means to produce relative rotation between them whereby a mass there between will be rolled; another such cylinder and trough adjacent, the rotation being opposite; and means for transferring the mass from one

trough to the other; said cylinders and troughs being all on one vertical axis.

3. A forming machine comprising the combination of a cylinder, a trough arranged in a plane perpendicular to the axis of the cylinder, one of these parts encircling the other; means to produce relative rotation between them whereby a mass there between will be rolled; another such cylinder and trough adjacent, the rotation being opposite; said cylinders and troughs being all on one vertical axis; there being a hole through the upper trough permitting a mass to fall thence into the lower trough.

4. A forming machine comprising the combination of a rotating cylinder and a stationary trough arranged in a plane perpendicular to the axis of the cylinder, one of these parts encircling the other; another such cylinder and trough adjacent, the cylinder rotating in the opposite direction; and means for transferring a mass of material from one trough to the other.

5. A forming machine comprising the combination of a rotating cylinder and a stationary trough arranged in a plane perpendicular to the axis of the cylinder, one of these parts encircling the other; another such cylinder and trough adjacent, all being on one vertical axis; and the second rotating in opposite direction; there being in the upper trough a place for entrance of material and an opening in the bottom of the trough adjacent thereto for discharge of material which has completed the circuit; and there being in the lower trough an entrance opening under said discharge opening.

[Claims 6 to 15 not printed in the Gazette.]

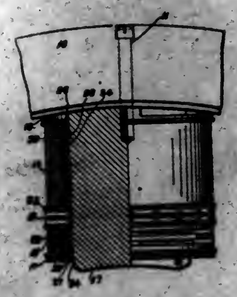
957,248. CHURN. WINFIELD S. PETTIT, West Cape May, N. J. Filed Dec. 28, 1909. Serial No. 535,370.



1. A device of the character described comprising a disk, a journal projecting through the center of the disk, dashers secured on the lower end of the journal, a pinion secured on the upper end of the journal, a journal pin projecting above the disk, a roller on said journal pin, a rack bar between said roller and said pinion and having its teeth in mesh with the teeth of the pinion, said rack bar having a longitudinal groove, a spring bar having rotary mounting at one end, a pin on said spring bar adapted to be positioned in said groove of the rack bar, said journal pin having a socket in its upper end, a stud on said spring bar adapted to enter said socket, and a knob on said spring bar.

2. A device of the character described comprising a disk adapted to serve as a cover for a receptacle, a journal supported centrally in the disk and screw threaded on its lower end, a pinion secured on the upper end of the journal, a journal pin projecting above the disk, a roller on said journal pin, a rack bar between said roller and said pinion and having its teeth in mesh with the teeth of the pinion, said rack bar having a longitudinal groove, a spring bar having rotary mounting at one end, a pin on said spring bar adapted to be positioned in said groove of the rack bar, said journal pin having a socket in its upper end, a stud on said spring bar adapted to enter said socket, and a knob on said spring bar, dashers comprising strips of metal bent into rectangular form and perforated at their ends to receive the screw threaded portion of the journal, nuts on the journal at opposite sides of the dashers clamping them to the journal, a pinion on the upper end of the journal, and a toothed rack bar in engagement with the pinion, substantially as described.

957,249. DYNAMO-ELECTRIC MACHINE. WILLIAM D. POMEROY, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed May 3, 1906. Serial No. 314,023.



1. In a field magnet, a field pole having a series and shunt coils, and a ventilating collar surrounding the pole and separating the series from the shunt coils, said collar having portions extending between the pole and the coils so as to separate the latter from the pole.

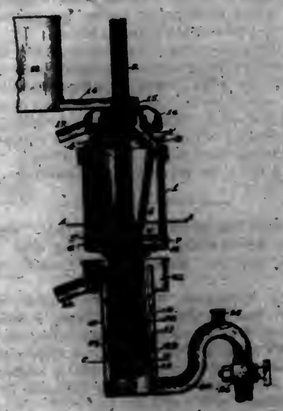
2. In a field magnet, a field pole having series and shunt coils, and a ribbed ventilating ring or collar surrounding the pole and separating the series and shunt coils from each other, said collar having portions extending between the pole and the coils so as to hold the latter from the pole and to provide ventilating passageways.

3. In a field magnet, a field pole, series and shunt coils on said pole, the field magnet being provided with ventilating passageways between the pole and coils, and a separating frame or collar between the series and shunt coils, said frame having ribs or partitions forming passageways which communicate with the passageways between the pole and coils.

4. In a field magnet, a field pole, series and shunt coils on said pole, and means for spacing said coils from the pole, said means comprising a ribbed collar between the series and shunt coils.

5. As an article of manufacture, a ventilating collar for field magnets comprising a plate having integral lateral ribs on the sides, and a plurality of lugs on the inner surface.

957,250. CENTRIFUGAL MACHINE FOR PURIFYING LIQUIDS. ANDREAS PONTÉN, Berkeley, Cal. Filed May 6, 1908. Serial No. 431,213.



1. An apparatus for purifying liquids, the same comprising a revoluble bowl provided with vent outlets for the escape of gases, an accelerator provided with radial inlets carried by the bowl for delivering liquid therein, a receiver located below the bowl for the reception of the purified liquid, and a tubular extension depending from the bowl for discharging the purified liquid into the said receiver.

2. An apparatus for purifying liquids, the same comprising a revoluble bowl, mechanism for supporting the same and imparting rotation thereto at a high rate of speed, an accelerator provided with a series of radial inlets carried by the said bowl, a conical extension depending from the accelerator, a stationary receiver located below the bowl, said receiver being filled to overflowing during the working of the apparatus, and a tubular extension depending from the bowl for the discharge of the purified liquid into the stationary receiver, said extension being submerged within the said receiver.

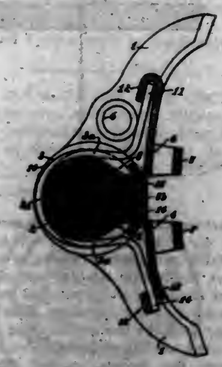
3. An apparatus for purifying liquids, the same comprising a revoluble bowl, a dividing plate provided with outlets arranged in the bottom portion of the bowl, an accelerator provided with a series of radial inlets carried by the bowl at its upper portion, a stationary receiver normally filled to overflowing arranged below the bowl, and a tubular extension depending from said bowl and extended within the stationary receiver.

4. An apparatus for the described purpose, the same comprising a revoluble bowl for the liquid to be treated, a tubular outlet extension depending from the said bowl, a stationary receiver normally filled to overflowing and within which the tubular depending outlet extension is submerged, and an air vented discharge pipe leading from the bottom portion of the stationary receiver.

5. In an apparatus for the described purpose, the combination with a revoluble bowl for the liquid to be treated, of means for supplying liquid thereto, of a stationary receiver normally filled to overflowing located below the bowl, a tubular outlet extension depending from the said bowl and extended into the receiver, a series of vertically extended radial wings or blades within the stationary receiver, and an air vented discharge pipe leading from the bottom portion of the said receiver.

[Claim 6 not printed in the Gazette.]

957,251. ADJUSTABLE BRAKE-HEAD. LEMUEL PORTER, Chicago, Ill. Filed Oct. 18, 1909. Serial No. 523,296.



1. A device of the character described comprising a brake head, a brake beam carrying the head, and a leaf spring sprung around the said beam and having its ends turned outwardly and detained by portions of the head, whereby the head is held in place on the beam and is capable of automatic adjustment therearound, substantially as set forth.

2. A device of the character described comprising a brake head, a brake beam carrying the head, and a leaf spring sprung over the beam and gripping the latter, the said spring having its ends detained by the head, whereby the latter is held in place on the beam and is capable of adjustment thereon, substantially as set forth.

3. A device of the character described comprising a brake head, a brake beam carrying the head and having a transverse recess therein, and a leaf spring sprung around the said beam in the said recess and having its ends turned outwardly and detained by the head, whereby the head is held in place on the beam and is capable of automatic adjustment therearound, substantially as set forth.

4. A device of the character described comprising a brake head, a brake beam carrying the head and having transverse recesses therein, and a leaf spring sprung around the said beam in the said recesses and having its ends turned outwardly and detained by the head, whereby the head is held in place on the beam and is capable of automatic adjustment therearound, substantially as set forth.

5. A device of the character described comprising a brake head, a brake beam carrying the head and having transverse recesses in opposite sides thereof, and a leaf spring sprung around the said beam in the said recesses and having its ends detained by the head, whereby the head is held in place on the beam and is capable of automatic adjustment therearound, the said recesses coming flush with the outer surface of the beam on opposite sides thereof whereby when the brake head is turned one-fourth of a revolution on the brake beam the latter spreads the said spring apart to permit the said head to be removed from the beam.

[Claims 6 to 21 not printed in the Gazette.]

957,252. REFRIGERATOR-CAR-HATCH CLOSURE. EDWARD POSSON, Chicago, Ill. Filed Dec. 29, 1908. Serial No. 469,746.



1. In a device of the class described, a car roof having an opening therein with downwardly converging walls, a cover adapted to overlie the opening, and a sealing plug attached to the cover but spaced slightly therefrom and adapted to be fitted within said converging walls.

2. In a device of the class described, a car roof having an opening therethrough, an inside ceiling below said roof with a corresponding opening, a Z-bar frame around said opening outside of the roof with one flange thereof directed inwardly across the opening, planks around the opening lying between said flange and the edge of the ceiling, and bolts through said flange, planks and ceiling.

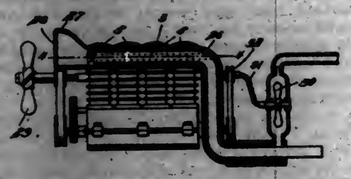
3. In a device of the class described, a car roof having an opening therein, a Z-bar frame around said opening on the outside of the roof, one flange thereof being directed inwardly across the opening, planks around said opening underneath said flange, and bolts securing said planks to said flange.

4. In a device of the class described, a car roof having an opening therein, a Z-bar frame around said opening on the outside of the roof, one flange thereof being directed inwardly across the opening, planks around said opening underneath said flange, and bolts securing said planks to said flange, the inside faces of said planks being beveled so as to make the walls of the opening converge downwardly.

5. In a device of the class described, a car roof having an opening therein, a cover adapted to overlie the opening, and a sealing plug attached to the cover on its inner face and spaced slightly therefrom and adapted to be fitted within the opening.

[Claims 6 to 11 not printed in the Gazette.]

957,253. AUTOMOBILE-HEATING APPLIANCE. CHARLES A. PRESCOTT, Brooklyn, N. Y. Filed June 17, 1909. Serial No. 502,788.



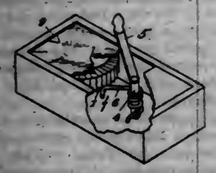
1. In an automobile provided with the usual body and internal combustion engine, the combination of an exhaust conduit for such engine, an air pipe surrounding said conduit, means for placing said pipe in communication with the automobile body, a tube extending through said exhaust conduit with its respective ends in free communication with said pipe, and means for forcing air through said pipe and tube, substantially as described.

2. In an automobile provided with the usual body and internal combustion engine, the combination of an exhaust conduit for such engine, an air pipe surrounding said conduit, means for placing said pipe in communication with the automobile body, a tube extending through said exhaust conduit with its respective ends in free communication with said pipe, a fan for forcing air through said pipe and tube, and connections to the engine for driving said fan, substantially as described.

3. In an automobile provided with the usual body and internal combustion engine, the combination of an exhaust conduit for such engine, an air pipe surrounding said conduit and provided with a flaring, open, forward end, a screen covering such open pipe end, a tube extending through said exhaust conduit with its respective ends in free communication with said air pipe, means for placing said air pipe in communication with the automobile body, and means for forcing air through said pipe and tube, substantially as described.

4. In an automobile provided with the usual body and multiple-cylinder internal combustion engine, the combination of a common exhaust conduit for the several engine cylinders, an air pipe surrounding said conduit, means for placing said pipe in communication with the automobile body, the several engine cylinders being provided with exhaust passages extending through said air pipe to said common conduit, a tube extending through said conduit with its respective ends in free communication with said air pipe, and means for forcing air through said pipe and tube, substantially as described.

957,254. GAME APPARATUS. ALFRED W. PROCTOR, New York, N. Y. Filed Nov. 18, 1908. Serial No. 463,123.



1. A game apparatus comprising a wheel having a notched periphery, a spring arm movable to engage the wheel and be tensioned and finally give the wheel a flilip by its continued displacement in the same direction, and means including parts relatively displaced by the movement of the wheel for indicating, upon the stoppage of the wheel, one of a plurality of possible results.

2. A game apparatus comprising a wheel having a notched periphery, an arbor having a spring arm angularly movable to engage the wheel and be tensioned and finally give the wheel a flilip by its continued displacement in the same direction, and means including parts relatively displaced by the movement of the wheel for indicating, upon the stoppage of the wheel, one of a plurality of possible results.

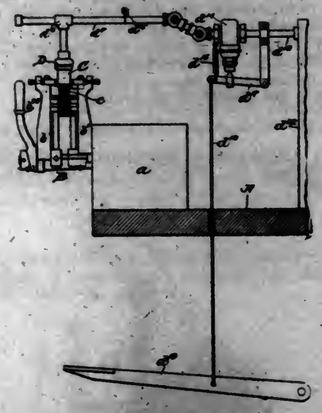
3. A game apparatus comprising a wheel having a notched periphery, an arbor having a spring arm rotatable through a complete turn to engage, be tensioned by, spin, and finally arrest the wheel with its notches in a predetermined relation, and means including parts relatively displaced by the movement of the wheel for indicating, upon the stoppage of the wheel, one of a plurality of possible results.

4. A game apparatus comprising a wheel having a notched periphery, an arbor having a spring arm with a rounded extremity rotatable through a complete turn to engage, be tensioned by, spin, and finally arrest the wheel with its notches in a predetermined relation, and means including parts relatively displaced by the movement of the wheel for indicating, upon the stoppage of the wheel, one of a plurality of possible results.

5. A game apparatus comprising a wheel having a notched periphery, an arbor having a crank and a spring arm adapted to be tensioned to spin the wheel repeatedly by continued rotative movements of said arm in the same direction, and means including parts relatively displaced by the movement of the wheel for indicating, upon the stoppage of the wheel, one of a plurality of possible results.

[Claim 6 not printed in the Gazette.]

957,255. APPARATUS FOR MAKING BRUSHES. GEORGE D. PUSHEE, Weston, Mass. Filed July 12, 1909. Serial No. 507,060.



1. In an apparatus of the character described in combination a vise for gripping the ferrule and bristles; means for supplying air under pressure to said ferrule; means to support the ferrule against said pressure; and means to support the bristles against said pressure.

2. In an apparatus of the character described in combination a vise for gripping the ferrule, plug and bristles; means for supplying air under pressure to said ferrule; means to support the ferrule against said pressure; means to support the bristles against said pressure; and means to support the plug against said pressure.

3. In an apparatus of the character described in combination a vise for holding parts of a brush in assembled position; means for supplying air under pressure to the ferrule while it is held by said vise; one or more fingers on one of the jaws of the vise adapted to penetrate the bunch of bristles below the ferrule and support the plug of the brush against said pressure.

4. In an apparatus of the character described in combination a vise for holding parts of a brush in assembled position; means for supplying air under pressure to the ferrule while it is held by said vise; and one or more projections on one of the jaws to support the ferrule.

5. In an apparatus of the character described in combination a vise for holding parts of a brush in assembled position; a movable nozzle adapted to be applied to one end of the ferrule; means to supply air under pressure to said nozzle; means engaging the end of the ferrule opposite the end thereof engaged by the nozzle for supporting the ferrule against the pressure of the nozzle.

[Claims 6 to 14 not printed in the Gazette.]

957,256. ELECTRIC SOLDERING-IRON. EDWIN W. RICE, Jr., Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 7, 1909. Serial No. 521,568.



1. An electric soldering iron comprising an electrically heated soldering tip, a handle therefor having conducting terminals extending therethrough, and an enlarged portion adjacent the tip for supporting it above the resting surface.

2. An electric soldering iron comprising an electrically heated soldering tip, a handle therefor composed of an elongated coiled spring, and an enlarged portion upon the handle for supporting the tip above the resting surface.

3. An electric soldering iron comprising an electrically heated soldering tip and a handle therefor composed of an elongated coiled spring having one end wound upon the tip, and a supporting portion larger than said end portion.

4. An electric soldering iron comprising an electrically heated soldering tip and a handle therefor composed of an elongated coiled spring having one end wound upon the tip, and a supporting coil adjacent the tip larger than the remainder of the handle.

5. An electric soldering iron comprising an electrically heated soldering tip, a handle therefor composed of an elongated coiled spring having one end wound upon the tip, and a terminal attaching member secured to the opposite end of the spring.

[Claims 6 and 7 not printed in the Gazette.]

957,257. FILM-HOLDER FOR OSCILLOGRAPHS. LEWIS T. ROBINSON and ROBERT MILLER, Jr., Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed Oct. 29, 1908. Serial No. 460,072.



1. In a film carrier, the combination with two rotatable film holders, of gearing between said holders comprising a reel connected to each holder, and a flexible band of substantially the same width as said reels and wound on both reels with one end secured to one reel and the other end secured to the other reel.

2. In a film carrier, the combination with two rotatable film holders, of a reel connected to each holder, and a ribbon of approximately the same thickness as the film fastened to and wound on both of said reels.

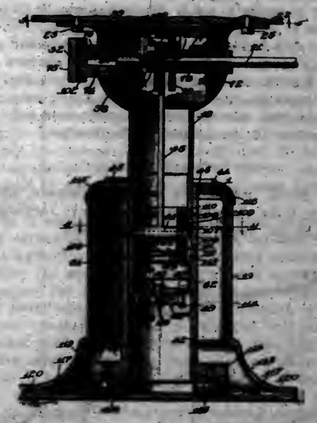
3. In a film carrier, the combination with two movable film holders, of positive variable speed gearing for actuating said holders in definite relation to each other and for varying progressively the relative speed of said holders, and a positive stop for one of said holders shifted by said gearing into locking position at a definite point in the movement of said gearing.

4. In a film carrier, the combination with two rotatable film holders, of gearing between said holders comprising a flexible band, and a lock thrown into engagement with either holder by said band.

5. In a film carrier, the combination with two movable film holders, of gearing for driving said holders in definite relation to each other, and a clutch between each of said holders and said gearing comprising a clutch member connected to each holder, and a coöperating clutch member rotated by said gearing independently of the first clutch member, one of said members having a plurality of recesses and the other a projection for entering any one of said recesses.

[Claims 6 to 28 not printed in the Gazette.]

957,258. HYDRAULIC BARBER'S CHAIR. HEROLD H. ROSS, Chicago, Ill., assignor to Theo. A. Koche Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 9, 1906. Serial No. 310,826.



1. The combination of a cylinder, a plunger fitted in said cylinder, a piston in said plunger and adapted to be reciprocated to raise the plunger, a longitudinally-movable rock-shaft, means connected with the piston and adapted to be connected with the rock-shaft whereby said piston may be reciprocated by rocking said shaft, means operated by longitudinal movement of the rock-shaft for connecting it with or disconnecting it from said piston, clamping mechanism, and clutch-mechanism operated by longitudinal movement of said rock-shaft for connecting it with or disconnecting it from said clamping mechanism whereby said clamping mechanism may be operated by the rocking of said shaft.

2. The combination of a cylinder, a plunger fitted therein, a piston operating in said plunger, a rock-shaft carried by the plunger, clamping mechanism carried by the plunger, means adapted to connect said piston with said rock-shaft whereby said piston may be actuated by the rocking of said shaft, and clutch-mechanism adapted to connect said rock-shaft with said clamping mechanism, said rock-shaft being movable longitudinally into operative connection with either said piston or said clamping mechanism or out of operative connection therewith.

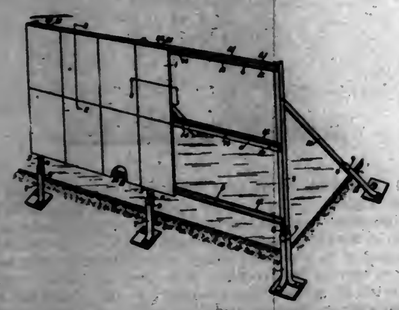
3. The combination of a cylinder closed at one end, a plunger fitted in said cylinder, a piston in said plunger and adapted to be reciprocated to move said plunger in said cylinder, valve mechanism coöperating with said piston for controlling the flow of fluid between the cylinder and plunger, a piston-rod connected with said piston, a rock-shaft, a locking sleeve carried by said rock-shaft, a nut for said sleeve, and means carried by said rock-shaft and movable into operative relation either with said piston-rod or with said nut, whereby said piston-rod may be reciprocated or said nut rotated by the rocking of said shaft.

4. The combination of a cylinder closed at one end, a plunger fitted in said cylinder, a piston in said plunger and adapted to be reciprocated to move said plunger in said cylinder, valve mechanism coöperating with said piston for controlling the flow of fluid between the cylinder and plunger, a piston-rod connected with said piston, a rock-shaft, a crank-disk mounted on said rock-shaft and connected with said piston-rod, a locking sleeve loosely mounted on said rock-shaft, a nut carried by said sleeve, and intermediate means keyed upon said rock-shaft and movable into engagement either with said crank-disk or said nut, whereby said piston may be reciprocated or said nut rotated by rocking said shaft.

5. The combination of a cylinder, a plunger fitted therein, a piston reciprocating in said plunger, valve mechanism, a piston-rod connected with said piston, a rock-shaft, a crank-disk loosely mounted on said rock-shaft, a plate mounted on said rock-shaft adjacent to said crank-disk, said crank-disk having a lug 104 adjacent to said plate forming a notch 82, said plate having a lug 95 adapted to enter said notch, a locking sleeve in which one end of said rock-shaft is fitted, a nut mounted on said sleeve, and means carried by said plate adapted to engage said nut for rotating the same, said rock-shaft being movable longitudinally to carry said plate into engagement either with said crank-disk or with said nut.

[Claims 6 to 13 not printed in the Gazette.]

957,259. SIGN. FREDERICK W. RUBY, Jackson, Mich., assignor to Ruby Manufacturing Company, Jackson, Mich. Filed Apr. 26, 1909. Serial No. 492,124.



1. In a sign, the combination of a plurality of panels formed of sheet metal; frames for said panels formed of angle iron arranged on the sides of the panels with the angle inwardly, the edges of the panels being folded over the edges of the frames, the ends of the outer arms of the said angle iron side pieces of the frames being offset rearwardly to form attaching members; interlapping joint strips secured on the inside of the outer arms of the side pieces of said panel frames, the joint strip on one edge of each panel being spaced from the frame to receive the joint strip of the adjacent panel when the edges of the panels are arranged to abut one against another; a supporting frame comprising pairs of facing supporting members adapted to receive the attaching members of said panels, one member of each pair of said supporting members being provided with notches spaced to receive the said attaching members of said panels and with longitudinal slots, said supporting members being arranged so that the lower edge of one panel abuts and rests upon the upper edge of the panel below; and panel retaining bolts through said panel frames engaging said slots in said supporting members.

2. In a sign, the combination of a plurality of panels formed of sheet metal; frames for said panels formed of angle iron arranged on the rear sides of the panels with the angles inwardly, the edges of the panels being folded over the edges of the frame, the ends of the outer arms of the said angle iron side pieces of the frames being offset rearwardly to form attaching members; a supporting frame comprising pairs of facing supporting members adapted to receive the attaching members of said panels, one member of each pair of said supporting members being provided with notches spaced to receive the said attaching members of said panels and with longitudinal slots; and panel retaining bolts for said panels arranged in said slots in said supporting member.

3. In a sign, the combination of a plurality of panels formed of sheet metal; frames for said panels formed of angle iron arranged on the rear sides of the panels with the angles inwardly, the edges of the panels being folded over the edges of the frame, the ends of the outer arms of the said angle iron side pieces of the frames being offset rearwardly to form attaching members; interlapping joint strips secured on the inside of the outer arms of the side pieces of said panel frames, the joint strips on one edge of each panel being spaced from the frame to receive the joint strip of the adjacent panel when the edges of the panels are arranged to abut one against another; and a supporting frame comprising pairs of facing supporting members adapted to receive the attaching members of said panels, one member of each pair of said supporting members being provided with notches spaced to receive the said attaching members of said panels, said supporting members being arranged so that the lower edge of one panel abuts and rests upon the upper edge of the panel below.

4. In a sign, the combination of a plurality of panels formed of sheet metal; frames for said panels formed of angle iron arranged on the rear sides of the panels with the angles inwardly, the edges of the panels being folded over the edges of the frames, the ends of the outer arms of the said angle iron side pieces of the frames being offset rearwardly to form attaching members; and a supporting frame comprising pairs of facing supporting members adapted to receive the attaching members of said panels, one member of each pair of said supporting members being provided with notches spaced to receive the said attaching members of said panels.

5. In a sign, the combination of a plurality of panels formed of sheet metal; frames for said panels formed of angle iron arranged on the rear sides of the angles with the angles inwardly, the edges of the panels being folded over the edges of the frame, the ends of the outer arms of the said angle iron side pieces of the frames being offset rearwardly to form attaching members; interlapping joint strips secured on the inside of the outer arms of the side pieces of said panel frames, the joint strips on one edge of each panel being spaced from the frame to receive the joint strip of the adjacent panel when the edges of the panels are arranged to abut one against another; a supporting frame comprising pairs of facing supporting members adapted to receive the attaching members of said panels, said supporting members being arranged so that the lower edge of one panel abuts and rests upon the upper edge of the panel below; and panel retaining bolts arranged through said supporting members.

[Claims 6 to 19 not printed in the Gazette.]

957,260. SACK-HOLDER. HIRAM B. SACKETT, Chicago, Ill. Filed Dec. 26, 1908. Serial No. 469,243.

A sack holder comprising an upright frame, a transverse support detachably mounted at the upper end of the frame, an open rectangular sack supporting frame hinged to the upper edge of the support whereby a portion of a sack may be clamped between the support and the sack supporting frame, a spring metal clamping arm pivoted to the inner face of the front piece of the supporting frame in position to swing in a vertical plane parallel



therewith and provided at its free end with a laterally extending U-shaped clamping portion adapted to straddle the front piece of the sack supporting frame and clamp portions of a sack against the inner and outer faces thereof, and a hopper removably mounted in the sack supporting frame.

957,261. ATTACHING-PLUG. HOWARD R. SARGENT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 1, 1907. Serial No. 395,457.



1. An attaching plug having a recessed body divided into two chambers, a line terminal in each chamber, and a removable inclosed fuse in each chamber.

2. An attaching plug having a recessed body divided into two chambers, a line terminal in each chamber, a removable inclosed fuse in each chamber, and a perforated diaphragm covering said fuses but affording access to said terminals.

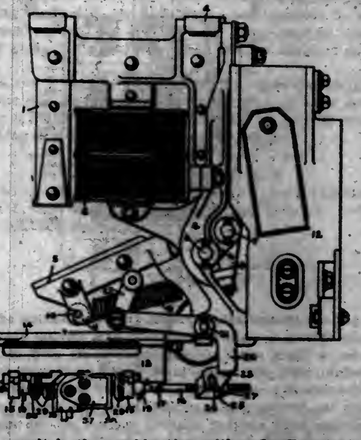
3. An attaching plug having a recessed body divided into two chambers, a line terminal in each chamber, a removable inclosed fuse in each chamber, a perforated diaphragm covering said fuses but affording access to said terminals, and a removable cap carrying branch-line terminals adapted to pass through said diaphragm.

4. An attaching plug having a recessed body, a transverse bar of insulation therein dividing it into two chambers, a pair of clamps in each chamber, a removable inclosed fuse received in each pair of clamps, a clip in each chamber connected with one of said clamps, and a cap carrying contacts to engage with said clips.

5. An attaching plug having a recessed body, a bar of insulation dividing said recess into two chambers, a diaphragm secured to said bar, a pair of clamps in each chamber, an inclosed fuse removably held in each pair of clamps, a clip in each chamber connected with one of said clamps, a cap having a hole for a cable, and contact blades inside of said cap adapted to pass through said diaphragm and enter said clips.

[Claim 6 not printed in the Gazette.]

957,262. INTERLOCKING SWITCH. ARTHUR C. SAVAGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 28, 1909. Serial No. 474,639.



1. In a switch, the combination with a fixed contact, of an actuating member having a combined longitudinal and sidewise movement, a movable contact yieldingly mounted to slide longitudinally along said actuating member, whereby the movable contact will first be brought into abutting engagement with the fixed contact and then will be caused to move sidewise over the same with a wiping movement.

2. In a switch, the combination with a fixed contact, of an actuating member, a movable contact mounted to slide longitudinally along said actuating member, a spring opposing the sliding movement of said movable contact, and means for giving the said actuating member a combined longitudinal and sidewise movement, whereby the movable contact will first be brought into abutting engagement with the fixed contact and then will be caused to move sidewise over the same with a wiping movement.

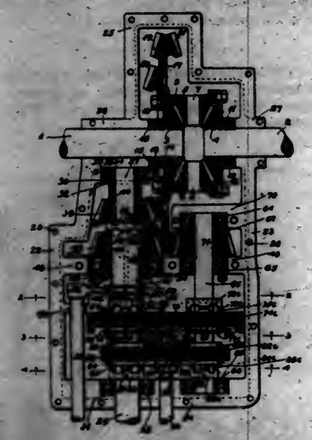
3. In a switch, the combination with a fixed contact, of an actuating member, a movable contact mounted to slide longitudinally along said actuating member, a spring opposing the sliding movement of said movable contact, and a link motion for giving the said actuating member a combined longitudinal and sidewise movement, whereby the movable contact will first be brought into abutting engagement with the fixed contact and then will be caused to move sidewise over the same with a wiping movement.

4. In combination, a supporting member, a pair of fixed contacts fastened to said supporting member, a rod arranged to move longitudinally and sidewise with respect to said supporting member, a contact member yieldingly mounted on said rod and arranged to complete the circuit across said fixed contacts, stops on said rod to limit the movement of the movable contact member, and automatic means for moving said rod.

5. In combination, a supporting member, a pair of fixed contacts fastened to said supporting member, a rod, a link motion for connecting said rod to said supporting member so that said rod moves longitudinally and sidewise with respect to the supporting member, a contact member yieldingly mounted on said rod and arranged to complete the circuit across said fixed contacts, stops on said rod to limit the movement of the movable contact member, and automatic means for moving said rod.

[Claims 6 to 9 not printed in the Gazette.]

957,263. TRANSMISSION SYSTEM. JOHN SCHLIG, Chicago, Ill. Filed Jan. 10, 1908. Serial No. 410,157.



1. In a transmission system, the combination of an axle to be driven, a main gear on said axle having gearing surfaces, a main shaft, driving pinions on said main shaft meshing with gearing surfaces on the main gear, means for independently connecting any one of said driving pinions with the driving shaft, an additional driving pinion always meshing with another gearing surface on the main gear, a counter shaft supporting said additional pinion, gearing mechanism on said driving shaft, gearing mechanism on said counter shaft, and clutch mechanism associated with said gearing mechanisms for connecting said main shaft with the counter shaft to cause either forward or reverse rotation of the counter shaft and of the additional pinion to thereby cause either forward or reverse rotation of the main gear.

2. In a transmission system of the class described, the combination of an axle to be driven, a main gear on said axle having gearing surfaces, a driving shaft at right angles to the axle and rotating always in one direction, forward driving pinions mounted on said driving shaft and always meshing with gearing surfaces on the main gear, clutch mechanism for independently causing connection of any one of the forward driving pinions with the driving shaft, a counter shaft, a driving pinion on said counter shaft always meshing with another gearing surface on the main gear, gearing mechanism normally idly mounted on the driving shaft and counter shaft, additional gearing mechanism also normally idly mounted on the driving and counter shafts, and clutch mechanism for connecting either one of said gearing mechanisms with the driving and counter shafts to cause either forward or reverse rotation of the counter shaft and the driving pinion thereon.

3. In a system of transmission, the combination of an axle to be driven, a main gear on said axle, a driving shaft, a counter shaft, a driving pinion on said counter shaft always meshing with the main gear, a set of gears always in mesh with each other, one gear of the set being on the driving shaft and the other gear on the counter shaft, clutch mechanism, and means for bodily moving the set of gears to cause the clutch mechanism to connect the gears of the set with the driving shaft and with the counter shaft whereby rotation is transmitted from the driving shaft to the counter shaft and the driving pinion and main gear.

4. In a transmission system of the class described, the combination of an axle to be driven, a main gear on said axle, a driving shaft, a secondary shaft, a driving pinion on said secondary shaft for engaging the main gear, a gear wheel on the drive shaft, a gear wheel on the secondary shaft, said gears always meshing, clutching mechanism, and means for bodily moving the gear wheels to render the clutch mechanism effective to connect the counter shaft in driving relation with the main shaft whereby the driving pinion will drive the main gear.

5. In a system of transmission of the class described, the combination of an axle to be driven, a main gear on said axle, a driving shaft at right angles to the axle, a counter shaft, a driving pinion on said counter shaft engaging the main gear, a gear wheel normally idly mounted on the drive shaft, a companion gear wheel normally idly mounted on the counter shaft, said gear wheels always meshing and each having clutch teeth, a clutch collar secured to each of the shafts, and means for bodily moving the gear wheels to carry their clutch teeth into engagement with the clutch collars whereby rotation is transmitted from the driving shaft to the counter shaft and to the driving pinion and main gear.

[Claims 6 to 13 not printed in the Gazette.]

957,264. COLLAPSIBLE DRINKING-CUP. MAX SHOLL, Chicago, Ill. Filed Dec. 1, 1909. Serial No. 530,892.



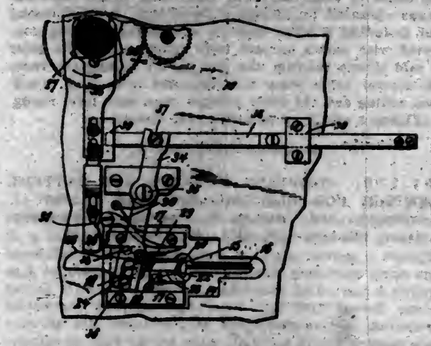
A collapsible drinking cup comprising an inner flexible substantially cylindrical body, said body consisting of a bottom, and lateral walls formed integral with said bottom, said bottom and lateral walls being formed of two originally flat sheets of flexible water-proof paper and an intermediate sheet of water-proof fabric interposed between the bottom-forming portions of said paper sheets, the said intermediate sheet being of less size than said other sheets, the peripheral edge portions of said sheets being crimped to form said lateral walls of said body; and a longitudinally foldable relatively rigid tubular casing inclosing said body and secured thereto at the upper edge thereof, substantially as described.

957,265. THREAD-TRIMMING MECHANISM. HARRIS W. SLATER, Lake Mahopac, N. Y., assignor to The National Machine Company, Mamaroneck, N. Y., a Corporation of New York. Filed Aug. 23, 1907. Serial No. 389,795.

1. In a two-thread sewing machine, the combination with stitching means including upper and lower thread mechanisms, and operating means therefor, of a thread gripping device for the lower thread, another thread gripping device for the upper thread, manual operating means for the two said grippers, mechanism including elements movable to inoperative positions upon the operation of the gripping devices by the said manual operating means, whereby subsequent movements of the said operating means will fail to operate the said gripping devices to grip or release the threads, and resetting means for the said elements automatically operated after subsequent operation of the stitching mechanism.

2. In a sewing machine, the combination with stitching mechanism, of a work clamp, a thread gripping device, manual operating means for the thread gripping device and the work clamp, a latch for locking the gripping device in its operated position, and means operated upon feeding movements of the work clamp to release the said latch.

3. A thread gripping and trimming device for the under thread of a two-thread sewing machine comprising a reciprocating slide, relatively movable gripping elements and relatively movable trimming elements all mounted upon said slide, manual operating means for reciprocating the said slide, tripping means for tripping the said elements upon the reciprocation of said slide, and re-setting means for the said elements, operating after the said slide has been returned to its normal position.



4. A thread gripping and trimming device for the under thread of a two-thread sewing machine comprising a reciprocating slide, relatively movable gripping elements and relatively movable trimming elements all mounted upon said slide, manual operating means for reciprocating the said slide, tripping means for tripping the said elements upon the reciprocation of said slide, and re-setting means for the said elements, operating after the said slide has been returned to its normal position, said re-setting means including a rotating cam.

5. In a two-thread sewing machine, the combination with a throat plate, of a slide mounted beneath same, a relatively stationary gripping jaw secured to said slide, a relatively stationary cutting blade also secured to said slide, a pivoted lever provided with a gripping jaw, and a cutting blade complemental to the said stationary gripping jaw and cutting blade, a spring normally tending to move the said lever to close the said movable gripping jaw and cutting blade, means operating upon the said lever while the slide is at rest to move the lever in a direction opposed by the tension of said spring, a latch for holding the parts in the last said position, and means operating upon the latch to trip same upon a reciprocating movement of said slide.

[Claim 6 not printed in the Gazette.]

957,266. GAME APPARATUS. JOHN R. SNOW, Philadelphia, Pa. Filed Sept. 1, 1908. Serial No. 451,180.



1. A toy, comprising an elastic member adapted to be cast into the air, said elastic member consisting of a relatively large ball connected by an elastic medium to a smaller ball, said elastic medium carrying a plurality of flexible tabs for producing a noise, said relatively large ball being adapted to travel in advance of said smaller ball by virtue of its weight.

2. In a toy, a staff, a member detachably secured to said staff and adapted to be cast into the air, said member comprising a plurality of balls connected by an elastic section.

3. In a toy, a staff, a member detachably secured to said staff and adapted to be cast into the air, said member comprising a plurality of balls connected together by an elastic section, and one of said balls being heavier than the other so as to travel foremost during the flight of said member.

4. In a toy, a staff, a member adapted to be detachably secured to said staff, comprising a plurality of balls connected by a flexible section, and a net carried by said staff for catching said member upon its return flight.

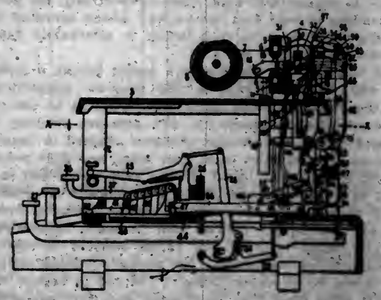
957,267. PROPHYLACTIC DRINKING VESSEL. JAMES L. SOWELL, Jasper, Ala. Filed July 17, 1909. Serial No. 508,194.



1. A drinking vessel comprising flexible side walls formed of uniform stiffness throughout, and a bottom having pointed tabs of different lengths arranged alternately about its periphery and attached along said side walls, whereby said side walls will be reinforced to produce a maximum stiffness adjacent said bottom and a portion of progressively decreasing stiffness extending therefrom, substantially as described.

2. A drinking vessel comprising side walls formed of a flexible band of uniform stiffness throughout, and a bottom provided on its periphery with two sets of pointed tabs of different lengths arranged alternately in a continuous series and attached along the outer surface of said band, thereby providing a progressively decreasing stiffness from the bottom through the portion of the flexible band reinforced by both sets of tabs, and a more gradually decreasing stiffness from said portion throughout the reinforcement of the longer set of pointed tabs alone, substantially as described.

957,268. TYPE-WRITING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Jan. 15, 1909. Serial No. 472,464



1. In a typewriting machine and in tabulator mechanism, the combination of a series of column stops, a key

operated stop, and column selecting devices including means controlled by the column stop to be arrested for bringing said key-operated stop into coöperation with said column stop to be arrested.

2. In a typewriting machine and in tabulator mechanism, the combination of a series of column stops, a series of key-operated stops, and column selecting devices including means operated by a selected one of said column stops for bringing one of said key-operated stops into coöperation with said selected column stop to arrest the carriage.

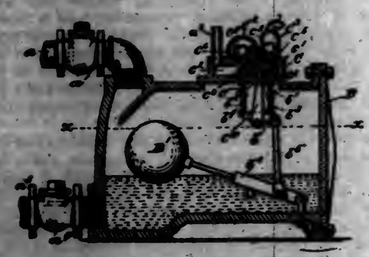
3. In a typewriting machine and in tabulator mechanism, the combination of a series of column stops, a key-operated stop, and means controlled by a column stop for projecting said key-operated stop into the path of said column stop.

4. In a typewriting machine and in tabulator mechanism, the combination of a series of column stops, a series of key-operated stops, and means controlled by a column stop for projecting the operated one of said key-operated stops into the path of said column stop.

5. In a typewriting machine and in tabulator mechanism, the combination of a carriage, a tabulator key, a stop connected with said key, means for holding said stop retracted when the key is depressed, and means operated by the carriage for releasing said holding means.

[Claims 6 to 49 not printed in the Gazette.]

957,269. VACUUM-TRAP. LESLIE P. STRONG, Cleveland, Ohio, assignor to The Clark Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 12, 1908. Serial No. 457,207.



1. A vacuum trap comprising a casing having a liquid inlet and discharge, vacuum and pressure connections with the casing interior, outwardly opening control valves in said connections, respectively, the pressure tending to close said valves, and means operated by changing liquid-level in said casing to alternately open said valves.

2. A vacuum trap comprising a casing having a liquid inlet and discharge, vacuum and pressure connections with the casing interior, outwardly opening ball valves adapted to control said connections, respectively, the pressure tending to seat said valves, and means operated by changing liquid-level in said casing to alternately raise said valves from their seats.

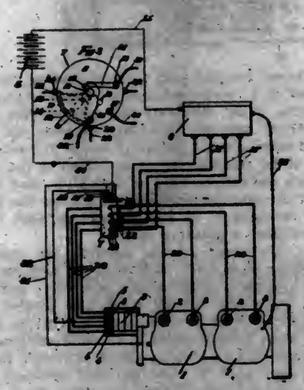
3. A vacuum trap comprising a casing having a liquid inlet and discharge, vacuum and pressure connections with the casing interior, ball valves adapted to control said connections, respectively, the pressure tending to seat said valves, reciprocable plungers adapted to engage the latter to raise them from their seats, and float means operated by changing liquid level in said casing and connected to reciprocate said plungers in opposite directions.

4. A vacuum trap comprising a casing having a liquid inlet and discharge, vacuum and pressure connections with the casing interior, ball valves adapted to control said connections, respectively, the pressure tending to seat said valves, reciprocable plungers adapted to engage the latter to raise them from their seats, and float means operated by changing liquid level in said casing and connected to reciprocate said plungers in opposite directions, the plunger for raising the vacuum control valve being thus actuated upon such liquid-level falling and the other plunger upon such level rising.

5. A vacuum trap comprising a casing having a liquid inlet and discharge, vacuum and atmospheric connections with the casing interior, ball valves adapted to control said connections, respectively, the atmospheric pressure tending to seat said valves, plungers adapted to engage the latter to raise the same from their seats, and float means operated by changing liquid-level in said casing and including a lever member, said plungers being connected with points on said lever lying on opposite sides of said lever's fulcrum, the plunger for raising the vacuum control valve being thus actuated upon such liquid-level falling and the other plunger upon such level rising.

[Claims 6 and 7 not printed in the Gazette.]

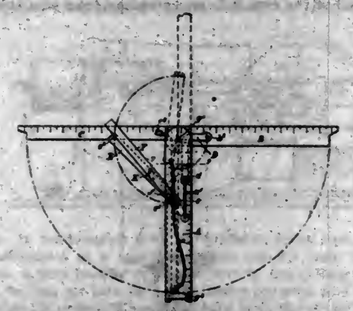
957,270. COMBINED MAGNETO AND BATTERY SWITCH FOR ELECTRIC IGNITERS. ALBERT J. STUDNICKA and CHARLES W. CAMPBELL, Minneapolis, Minn. Filed Nov. 18, 1908. Serial No. 463,167.



1. In an ignition mechanism for multi-cylinder explosive engines, a single sparking plug for each cylinder, a battery, a magneto, a common switch, a sparking coil having a multiplicity of secondary wires extending to said common switch, magneto secondary wires also extending to said common switch, secondary plug wires extending from said switch to the several sparking plugs, a primary sparking circuit including said battery and said common switch, and a primary magneto circuit including said common switch, substantially as described.

2. In an ignition mechanism for multi-cylinder explosive engines, a single sparking plug for each cylinder, a battery, a magneto, a common switch having a multiplicity of fixed and a multiplicity of movable contacts, a sparking coil having a multiplicity of secondary wires extending to fixed contacts of said switch, magneto secondary wires connecting said magneto to other fixed contacts of said common switch, secondary plug wires connecting the several sparking plugs to still other fixed contacts of said common switch, a primary sparking circuit including said battery and said common switch, and a primary magneto circuit including said common switch, the fixed and movable contacts of said common switch being so related that, in one position, they will close the secondary magneto circuits to said sparking plugs and break the primary magneto circuit and the primary and secondary sparking coil circuits, and in another position will close the primary and secondary sparking coil circuits and the primary magneto circuit and break the secondary magneto circuits.

957,271. TOOL. CHARLES C. TAINTOR, Elizabeth, N. J. Filed May 8, 1909. Serial No. 494,864.



1. In a tool of the character described, a fixed plate having a straight edge, an irregularly curved guide therein, a swinging blade having a straight edge and pivotally connected to said fixed plate, a brace having a straight edge connecting the free ends of said plate and blade and having a pivotal connection with said blade, and a sliding connection between said brace and said curved guide, whereby said brace is fixed against transverse movement relative to said curved guide, but has a longitudinal sliding movement on said curved guide.

2. A tool comprising a fixed plate, a swinging blade pivotally attached thereto, an elbow-brace pivotally attached to said swinging blade, and having a sliding connection in a slot in said fixed plate, a stop upon said swinging blade in the path of said brace adapted to stop said swinging blade when the same is at right-angles to said fixed plate, substantially as described.
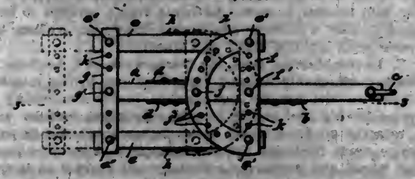
3. In a tool of the character described, a fixed plate, a swinging blade pivotally connected thereto, a brace pivotally connected to said swinging blade and having a sliding connection with a slot in said fixed plate, an auxiliary brace having the same sliding connection with said fixed plate and having its outer end free.

4. In a tool of the character described, a fixed plate, a swinging blade pivotally connected thereto, a brace having a fixed pivotal connection with said swinging blade at a fixed point near its inner end, and having a sliding connection with a slot in said fixed plate, a second swinging blade pivotally secured to said fixed plate and swinging independently of said first-mentioned blade, and a lock for locking said swinging blades at desired angle to each other.

5. In a tool of the character described, a fixed plate, a swinging blade pivotally connected thereto, a brace pivotally connected to said swinging blade and having a sliding connection with a slot in said fixed plate, an auxiliary brace having the same sliding connection with said fixed plate and having its outer end free, a second swinging blade pivotally secured to said fixed plate, and a lock for locking said swinging blades at desired angle to each other.

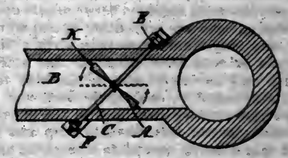
[Claims 6 to 9 not printed in the Gazette.]

957,272. PLOW. JAMES E. THOMPSON, Troy, Ala., assignor of one-half to W. R. White, Troy, Ala. Filed Jan. 12, 1910. Serial No. 537,758.



In a cultivator or plow, the combination of a central beam carrying a plow standard, two side beams each carrying a plow standard located forward of the central plow standard, cross bars extending across the beams and means for pivotally and detachably connecting them together at their points of intersection, the front cross-bar being provided with a segment projecting rearwardly from its rear edge and crossing the central beam, means for detachably and adjustably attaching this segment to the central beam at the point of intersection therewith, said front cross bar together with its segment being adapted to be reversed or turned over and said rear cross bar being adapted to be detached from the central beam and set back to bring the side plows back of the central plow.

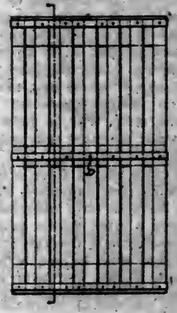
957,273. DEVICE FOR VARYING CHIMNEY-DRAFTS. HENRY J. TRAUTMANN and JAMES L. COPPING, London, England. Filed Dec. 22, 1908. Serial No. 468,822.



1. The combination with a smoke flue of a rotatable ventilating fan arranged therein in a fixed slanting direction relatively to the central line of the flue, and a throttling plate also arranged within the flue and having a circular opening and adapted to surround the fan.

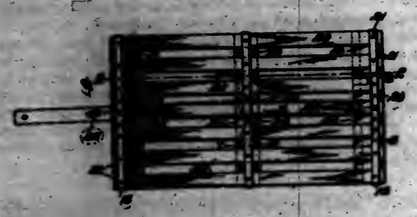
2. The combination with a smoke flue, of a rotatable ventilating fan arranged therein in a fixed slanting direction relatively to the central line of the flue, and a rotatable throttling plate pivotally mounted in the smoke flue and having a circular opening and adapted to be turned into the plane of the fan.

957,274. FOLDING POULTRY-COOP. ROBERT TRUMPOLD and ALBIN KOERNER, St. Louis, Mo. Filed Dec 12, 1907. Serial No. 406,174.



A folding poultry crate comprising a bottom, ends hinged to said bottom and adapted to fold inwardly thereon, a top, sides, each composed of a plurality of longitudinally extending sections hinged together and respectively hinged to both the top and the bottom, abutment strips on the ends of the top to prevent outward swinging of the ends when they are raised, and spring catches carried by the top which are positioned so that they are adapted to be engaged by the ends and to lock said ends when the latter are brought into raised position.

957,275. FOLDING COOP OR CRATE. ROBERT TRUMFOLD and ALBIN KOEHNER, St. Louis, Mo. Filed June 21, 1909. Serial No. 503,314.



1. In a folding coop or crate, a top comprising cross pieces, a series of longitudinal strips attached to said cross pieces, plates extending over said longitudinal strips, a longitudinally movable strip mounted between said cross pieces and said plates, guide blocks preventing lateral movement of the ends of said longitudinally movable strip, a latch block secured to one of said cross pieces at one side of said movable strip and having a hole in one side thereof, a metallic plate attached to said latch block and provided with a hole registering with the hole in the block, a latch pin rigidly connected to said movable strip and arranged to engage in said holes in said plate and block, and a stop block on the side of said movable strip opposite from said latch block and at a distance from said strip sufficient to permit movement of the latter to disengage said pin from said plate and block, substantially as specified.

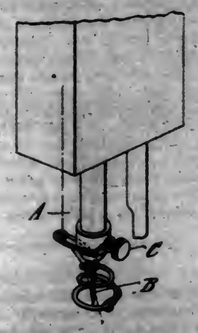
2. A crate or coop comprising a bottom, sides, ends, cross members extending from side to side, strips attached to said cross members, retaining blocks secured to certain of said cross members, plates extending over said strips and blocks, a strip movably mounted between said cross members and said plates within the space between said blocks, a latch block attached to another of said cross members, a latch pin on said movable strip engaging with said latch block, and a stop block attached to the same cross member to which said latch block is attached at a distance from said movable member sufficient to permit movement of the latter as required to disengage said latch pin from said latch block, substantially as specified.

3. A coop or crate comprising a bottom, sides, pivotally mounted ends, cross members at the upper edges of the sides, a latch block attached to one of said cross members, a movable strip, a latch device on said strip engaging with said latch block, strips attached to said cross members at a distance from said movable strip sufficient to permit movement of the latter as required to disengage said latch device from said latch block, plates secured to said last-named strips and extending over said movable strip, and devices connected to said movable strip whereby said strip will be held in position and whereby said pivotally mounted ends will be held in open position, substantially as specified.

4. In a coop or crate having sides, a bottom, and a top, the combination with ends supported in pivotal relation to the bottom, a movable strip mounted in and forming part of the top, and a latch device holding said movable strip, of devices binding said movable strip and said ends together whereby said strip is held in position independently of said latch device and said ends are held in proper open adjustment, substantially as specified.

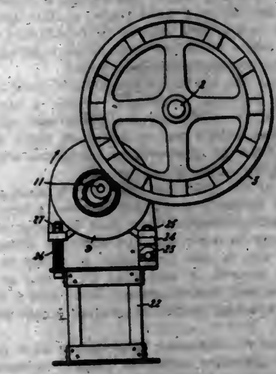
957,276. SEWING-MACHINE ATTACHMENT. MINOR E. TYNES, Gloster, Miss. Filed Nov. 15, 1909. Serial No. 528,172.

An attachment for sewing machines consisting of a single length of spring wire bent to form a spiral having its largest whirl at the bottom thereof, the lower end of the wire being secured to the adjoining whirl so as to form a continuous ring constituting the base of the attachment, the lower terminal of the wire being bent upward above the ring, and a needle-receiving eye formed by the upper or smallest whirl of the spiral, an arm extending from said eye, a horizontally disposed thread-receiving eye at the outer end of the arm, a finger extending from said thread-



receiving eye and above and substantially parallel with the arm, and a hook integral with the finger for engaging a projecting portion upon the needle-bar.

957,277. MOTOR-DRIVING MECHANISM. LOUIS E. UNDERWOOD, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 22, 1906. Serial No. 322,807.

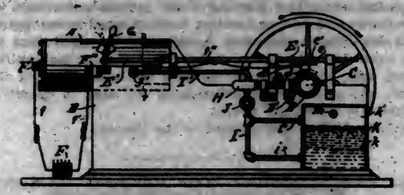


1. In combination, a machine comprising a wheel to be driven, an electric motor including a frame and a driving wheel, an annular member surrounding one of said wheels and engaged by both wheels, a support for the motor frame, and means tending to turn said frame to move the driving wheel toward the driven wheel.

2. In combination with the frame work of a machine to be driven, a bracket, parallel bolts for securing said bracket to the frame work, other bolts at an angle to the first-mentioned bolts for adjusting the relation between the bracket and the frame work, a wheel to be driven journaled in said frame work, a motor support pivoted to the said bracket, a motor having a frame secured to said support and a driving shaft, and frictional gearing between said driving shaft and wheel.

3. In combination with the frame work of a machine, a bracket detachably secured thereto, a supporting member hinged to the bracket, an electric motor comprising a frame having feet bolted to said supporting member and a rotating shaft, a wheel to be driven journaled in said frame work, frictional gearing between said rotating shaft and wheel, and means for adjusting said bracket to insure parallelism between said shaft and the axis of rotation of said wheel.

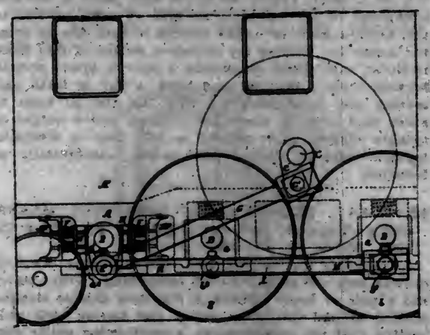
957,278. GASOLENE-ENGINE. EARL VANDERLIP, Alto, Mich., assignor of one-half to Arthur O. Bickford, Alto, Mich. Filed Mar. 20, 1909. Serial No. 486,641.



1. In combination with the cylinder, shaft, and igniting attachments of a gasolene engine, an air tight gasolene tank, a pipe leading from the tank to the cylinder, means for forcing air into said tank under pressure and for governing the pressure, a pipe leading from the air in the tank to the pipe that leads to the cylinder, a governor box in the line of the gasolene pipe, an arm entering the box and having an aperture through it in the line of the gasolene pipe, means for automatically actuating said arm to open and close the pipe between the tank and the cylinder, a contact plug connected with the shaft, a contact spring in position to be actuated by the contact plug to induce an electric circuit.

2. In combination with a gasolene engine cylinder, its main shaft and electrical connections, an air tight gasolene tank, a pipe leading therefrom to the cylinder, a pipe conducting air from the tank to the gasolene pipe, a governor box in the line of said gasolene pipe, an arm entering said box and having an aperture through it in the line of the gasolene pipe, a cone slidably mounted on the shaft, means for automatically sliding said cone on the shaft when the shaft revolves, a shoe on the governor arm to engage the cone and give longitudinal movement to the arm to open and close the passageway in the gasolene pipe, a contact plug on the apex of the cone, a rod in the electrical circuit of the engine, a spring on said rod in position to engage the contact plug as the cone revolves with the shaft and to be disconnected therefrom when the cone is moved from under the rod, and disconnect the electric circuit when the motion of the engine is above normal.

957,279. FLEXIBLE DRIVING CONNECTION. SAMUEL M. VAUCLAIN, Philadelphia, Pa., assignor, by mesne assignments, to Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 24, 1909. Serial No. 485,456.



1. The combination of an axle, a frame yieldingly mounted on the axle, a driving element rigidly secured to the frame, and a driven element on the axle, with a bearing mounted in the frame, a shaft in the bearing, and means for connecting said shaft with the driving and the driven elements, said bearing being yieldingly mounted so that it will compensate for the difference in the position of the driven and driving elements.

2. The combination of an axle, a frame yieldingly mounted on the axle, a driving shaft carried by the frame, a crank on the driving shaft, a crank connected to the axle, a crank shaft, a yielding bearing in which the crank shaft is mounted, and rods connecting the crank of the crank shaft, with said other cranks.

3. The combination with an axle, of a bearing mounted on the axle, a frame, springs between the bearing and the frame, a driving shaft mounted in bearings on the frame, a crank on the axle, a crank on the driving shaft, a crank shaft, a bearing therefor, springs allowing the bearing to yield under pressure, and rods connecting the crank of the crank shaft to said other cranks.

4. The combination of two axles, wheels thereon, bearings for the axles, a spring supported frame carried by the bearings, crank pins on the wheels, a rod connecting the two crank pins, a driving shaft mounted on the frame, a bearing on the frame, springs mounted on each side of the bearing to allow it to yield longitudinally, a crank shaft mounted in the bearing, a crank on the driving shaft, and a rod connecting the crank of the driving shaft with the crank shaft, said crank shaft being connected in turn to the crank upon one of the wheels of the axles.

5. The combination in an electric locomotive, of two axles, wheels having crank pins thereon, a rod connecting the two crank pins, boxes on the axles, a frame spring supported on the boxes, an electric motor carried by the frame, a driving shaft geared to the motor and rigidly mounted on the frame, a bearing mounted in the frame and having springs resting against each end thereof, said bearing being free to move longitudinally under pressure, with a crank shaft mounted in the bearing, a rod connecting the crank shaft with the driving shaft, and a rod connecting the crank shaft with the crank pin on one of the wheels of the locomotive.

[Claim 6 not printed in the Gazette.]

957,280. CUTTER MECHANISM FOR HARVESTERS. LUTHER T. VELEN, Cleburne, Kans. Original application filed Nov. 1, 1907, Serial No. 400,553. Divided and this application filed Aug. 19, 1908. Serial No. 449,331.



1. The combination with a cutter, of means for guiding the stalks thereto, means for reciprocating the cutter, a stationary guiding tongue for distributing stalks along the length of the cutter and a growth depressor located below the cutter.

2. In combination, a reciprocatory cutter, a guiding channel through which the stalks are directed against the cutter, a stationary guiding tongue by which the stalks are distributed along the length of the cutter, a stationary auxiliary cutter arranged at the end of the channel and slightly in advance of the reciprocatory cutter and a growth depressor located below the cutter.

3. In combination, a reciprocatory cutter, a channel through which the stalks are guided against said cutter, and a yieldably mounted weed depressor arranged under the cutter.

4. In combination, a cutting blade, a weed-depressing plate arranged under the blade and serving to depress small growth, said depressor being yieldable to permit the blade to engage the corn-stalks.

5. In combination, a cutter blade, a weed-depressing plate arranged under the blade and a spring forming a

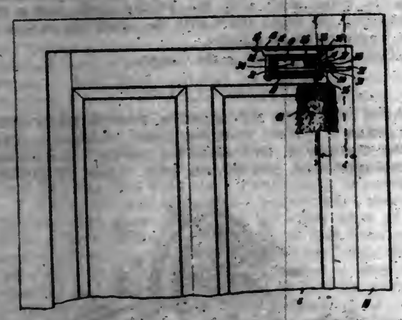
bearing for the depressor, said spring being yieldable to permit corn-stalks to come in contact with the blade.
[Claims 6 to 10 not printed in the Gazette.]

957,281. LACING-HOOK. ALFRED WEIGAND, Washington, D. C., assignor, by direct and mesne assignments, of one-half to Christian F. Schoenewolf, Baltimore, Md., and one-half to James E. Field, White Plains, N. Y. Filed Aug. 21, 1908, Serial No. 449,678. Renewed Oct. 2, 1909. Serial No. 520,680.



A device of the character described, comprising an eyelet having an annular offset around its upper edge, an extension on said offset extending upwardly from one side of the lateral edge thereof and about at a right angle thereto to elevated position above said eyelet then transversely thereof and then downwardly to a point slightly above the top of said annular portion and adjacent to the opposite side of the lateral edge of said portion, and finally curved inwardly and terminating on the line of the axis of said eyelet, said inwardly curved portion being rounded upon its inner lateral edge.

957,282. DOOR-CLOSER. HENRY J. WENTZ, Tripp, S. D. Filed Mar. 18, 1909. Serial No. 484,124.



1. The combination with a swinging door, of a frame, a spring controlled winding drum rotatably mounted in the frame and having exterior teeth, a band connected to said drum and to the door, and a safety device acted upon by the band and adapted to engage the teeth for locking the drum upon the closing of the door or the breaking of the band.

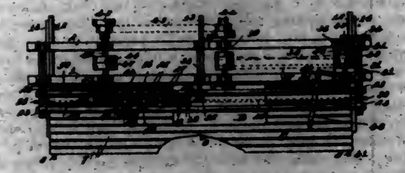
2. A door closer of the class described comprising a spring tension winding drum, a band adapted to be wound on and unwound from the drum and engageable with a door, and a safety device automatically operated upon the closing of a door or the breaking of the band for locking the drum against movement in one direction.

3. A door closer of the class described comprising a spring tension winding drum, a band adapted to be wound on and unwound from the drum and engageable with a door, a safety device automatically operated upon the closing of a door or the breaking of the band for locking the drum against movement in one direction, and a fly brush rotatably operated by the drum.

4. The combination with a swinging door of a frame, a spring controlled winding drum rotatably mounted in the frame and having exterior teeth, a band connected to said drum and to the door, a safety device acted upon by the band and adapted to engage the teeth for locking the drum upon the closing of the door or the breaking of the band, and a fly brush automatically operated upon the rotation of the drum.

5. The combination with a swinging door, of a frame, a spring controlled winding drum rotatably mounted in the frame and having exterior teeth, a band connected to said drum and to the door, a safety device acted upon by the band and adapted to engage the teeth for locking the drum upon the closing of the door or the breaking of the band, and guide means maintaining the band in operative relation to the safety device.
[Claims 6 to 8 not pirnted in the Gazette.]

957,283. SANDING AND RUBBING MACHINE. HENRY WESTPHAL, Manitowoc, Wis. Filed July 14, 1909. Serial No. 507,459.



1. In a machine of the type described, the combination of a head, guides on which said head is movable lengthwise of the machine, a block or blocks connected to said head so as to move therewith and to be freely movable toward and from the work independently of said head, through a relatively wide range of movement and with a practically uniform operating pressure and means for imparting reciprocating movement to said head together with said block or blocks, substantially as described.

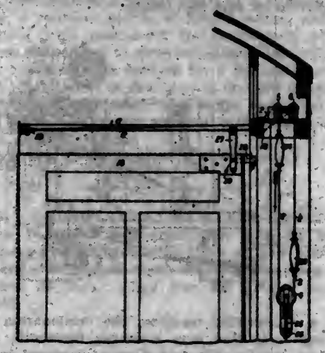
2. In a machine of the type described, the combination of a head, guides on which said head is movable lengthwise of the machine, an arm or arms pivoted to said head, a block or blocks pivoted to said arm or arms, and means for imparting reciprocating movement to said head, substantially as described.

3. In a machine of the type described, the combination of a head, guides on which said head is movable lengthwise of the machine, an arm or arms pivoted to said head, a block or blocks pivoted to said arm or arms and means for varying the operative weight of said block or blocks, said means comprising a lever or levers pivoted to said head, a link or links connecting said lever or levers to the arm or arms to which said block or blocks are pivoted, and a weight or weights applied to said lever or levers, substantially as described.

4. In a machine of the type described, the combination of a head, guides on which said head is movable lengthwise of the machine, an arm or arms pivoted to said head, a block or blocks pivoted to said arm or arms and means for varying the operative weight of said block or blocks, said means comprising a lever or levers pivoted between their ends upon said head, a link or links connecting said lever or levers with the arm or arms to which said block or blocks are pivoted, and a weight or weights adapted to be applied to said lever or levers at opposite sides of their pivotal points, substantially as described.

957,284. SLIDING-DOOR-OPERATING MEANS. PERCY WHEELER, Oldbury, England. Filed May 22, 1906. Serial No. 261,609.

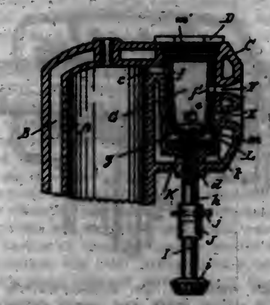
1. A device for opening and closing sliding doors of railway cars and other vehicles, comprising a lower pulley and a pair of upper pulleys, a traveling flexible element passing around the lower pulley and having both ends passing over the upper pulleys, a multiplying pulley connected to each end of said flexible element, a substantially horizontal traveling flexible element having one end secured to a stationary part and passing around one of the multiplying pulleys, a pair of stationary pulleys arranged at one side of the door, said traveling flexible element after leaving the multiplying pulley passing around the stationary pulleys at one side of the door and then around the pulley at the other side of the door, then around the other stationary pulley at the other side of the door, then around the other multiplying pulley, and having its end fastened to a stationary part, and means for connecting said horizontal traveling flexible element to the door.



2. An apparatus for opening and closing sliding doors of railway cars and other vehicles, comprising a substantially horizontal traveling flexible element arranged above the door and extending in two parallel lines, and having its ends connected to a stationary part, means for connecting said flexible element with the door, a vertically arranged operating flexible element extending in two vertical lines, pulleys for guiding said flexible elements, and multiplying pulleys secured to the ends of the operating flexible element and over which the traveling flexible element passes.

3. An apparatus for opening and closing sliding doors of railway cars, comprising a horizontally arranged traveling flexible element having its ends secured to stationary parts and arranged in two parallel lines, pulleys for guiding said traveling flexible element, means for connecting said flexible element to the door, means for unlocking the door by said connecting means, a vertically arranged operating flexible element extending in two parallel lines, pulleys for guiding said operating flexible element, and a multiplying pulley connected to each end of said operating flexible element and over which the traveling flexible element passes.

957,285. VALVE FOR GAS-ENGINES. ROBERT WHITE, Beaver Falls, Pa., assignor of one-half to E. S. Burns, Beaver Falls, Pa. Filed May 19, 1909. Serial No. 496,976.



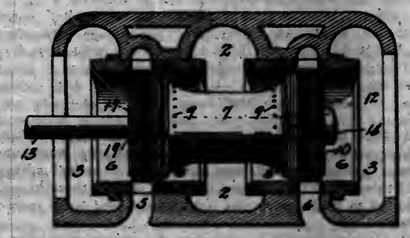
1. The combination, with a cylinder and a valve-casing having a main port between them, the said valve-casing having also an inlet port and an outlet port on the opposite side of it from the said main port and at different levels from the main port and from each other; of a hollow rotary valve journaled in the said valve-casing and provided at opposite sides with ports which place the main port in communication with the said inlet and outlet ports alternately as the valve is revolved.

2. The combination, with a cylinder and a conical valve-casing having a main port between them and at the larger end portion of the said casing, the said valve-casing having also an inlet port and an outlet port on the opposite side of it from the said main port, said inlet port being arranged at the smaller end portion of the casing and the said outlet port at its middle part; of a hollow and conical rotary valve journaled in the said valve-casing and provided at opposite sides with ports which place the said main port in communication with the said inlet and outlet ports alternately as the valve is revolved.

3. The combination, with a cylinder and a conical valve-casing having a main port between them, of a hollow and conical rotary valve journaled in the said casing, said casing and valve being provided with inlet and outlet ports which are placed in communication alternately with the said main port as the valve is revolved; of an expansion washer of white metal arranged between the smaller ends of the said valve and its casing and operating to move the valve longitudinally when the parts become heated.

4. The combination, with a cylinder and a conical valve-casing having a main port between them, of a hollow and conical rotary valve journaled in the said casing, said casing and valve being provided with inlet and outlet ports which are placed in communication alternately with the said main port as the valve is revolved; of an expansion washer of white metal arranged between the smaller ends of the said valve and its casing and operating to move the valve longitudinally when the parts become heated, and a bearing-plate provided with antifriction devices and supporting the said expansion washer and valve in the valve-casing.

957,286. PISTON-VALVE. JOHN T. WILSON, Jersey Shore, Pa. Filed Jan. 7, 1909. Serial No. 471,141.



1. The combination with a steam chest having ports and cages or bearing surfaces, of a piston valve provided at each end with recesses or spaces 15 and 17, the recess 17 being deeper than the recess 15; and packing rings within the said recesses, each of said packing rings having a single flange and a grooved outer surface, and the under surface of the flange in the space 17 being exposed to steam pressure when the valve is in operation.

2. The combination with a steam chest having ports and cages or bearing surfaces, of a piston valve provided at each end with recesses or spaces 15 and 17, the recess 17 being deeper than the recess 15; and packing rings within the said recesses; each of said packing rings being made integral and having free ends and provided at its inner and outer edges with plates to form steam-tight joints.

3. The combination with a steam chest having ports and cages or bearing surfaces, of a piston valve provided at each end with recesses or spaces 15 and 17, the recess 17 being deeper than the recess 15; and packing rings within the said recesses each having a single flange and a grooved outer surface; means, as holes 9 in flange 8, being provided for admitting steam under the inner edge of each packing ring.

4. The combination with a steam chest having ports and cages or bearing surfaces, of a piston valve provided at each end with recesses or spaces 15 and 17, the recess 17 being deeper than the recess 15; and packing rings within the said recesses; each of said packing rings having a grooved outer surface, and means for admitting steam to the grooves when the edge of the packing bears against the cage or bearing surface at the side of a port.

5. The combination with a steam chest having ports and cages or bearing surfaces, of a piston valve provided at each end with recesses or spaces 15 and 17, the recess 17 being deeper than the recess 15; and packing rings within the said recesses; each of said packing rings having V-shaped grooves at the central portion and each side of said V-shaped grooves a grooved outer surface, and means for admitting steam to the grooves when the edge of the packing bears against the cage or bearing surface at the side of a port.

[Claims 6 to 17 not printed in the Gazette.]

957,287. RESILIENT LAMP-SUPPORT. ALFRED WOODLEY, Montreal, Quebec, Canada, assignor to Universal Electric Economy Company, Limited, Montreal, Canada. Filed Jan. 3, 1910. Serial No. 536,009.



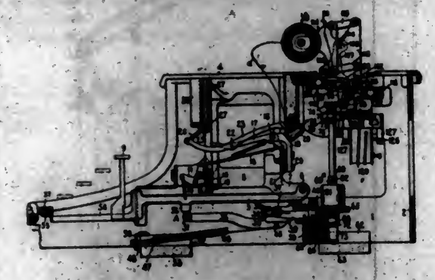
1. In a resilient lamp support, a helical spring having flaring ends and thimbles having converging walls and closely gripping the flaring ends of said helical spring, said thimbles having central threaded orifices therethrough adapted to screw on to the light fixture and lamp respectively.

2. In a resilient lamp support, the combination with a light fixture and a lamp supported from said light fixture, of a pair of thimbles secured to said light fixture and said lamp respectively, and a helical spring wound smaller in the central barrel portion exposed between the thimbles and having the larger ends thereof suitably secured to said thimbles.

957,288. TYPE-WRITING MACHINE. OSCAR WOODWARD, Montclair, N. J., assignor to Yost Writing Machine Company, Ilion, N. Y., a Corporation of New York. Filed Feb. 11, 1908. Serial No. 415,373.

1. In a typewriting machine, the combination of a power driven carriage, the power employed to move the carriage being applied intermediate the supports therefor, a feed rack located beneath the carriage about centrally thereof considered fore and aft of the machine, a feed pinion meshing with said rack, an upright shaft connected with said pinion, an escapement wheel operatively connected with said shaft, and key actuated escapement devices co-acting with said escapement wheel.

2. In a typewriting machine, the combination of a power driven carriage, the power employed to move the carriage being applied intermediate the supports therefor, a feed rack located beneath the carriage about centrally thereof considered fore and aft of the machine, a feed pinion meshing with said rack, an upright shaft connected with said pinion, an escapement wheel operatively connected with said shaft, a substantially horizontally disposed rock shaft, feed dogs carried by said substantially horizontally disposed rock shaft, and a universal bar which is also carried by said rock shaft.



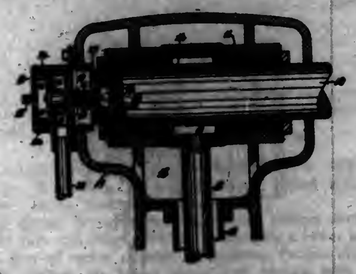
3. In a typewriting machine, the combination of an escapement rack, feed dogs co-acting therewith, a rock shaft which carries said feed dogs, a universal bar, and adjustable means for fixedly connecting the universal bar to said rock shaft, said adjustable means being operative to effect an adjustment of said universal bar relatively to said rock shaft.

4. In a typewriting machine, the combination of an escapement rack, feed dogs co-acting therewith, a rock shaft which carries said feed dogs, a universal bar, adjustable means for fixedly connecting the universal bar to said rock shaft, said adjustable means being operative to effect an adjustment of the universal bar relatively to said rock shaft, and key bearing levers co-acting directly with said universal bar.

5. In a typewriting machine, the combination of an escapement rack, feed dogs co-acting therewith, a rock shaft which carries said feed dogs, a universal bar carried by said rock shaft, and adjustable means for connecting said universal bar with said rock shaft and effecting an adjustment of the universal bar substantially around the pivotal axis of said rock shaft.

[Claims 6 to 19 not printed in the Gazette.]

957,289. SHAFT-OSCILLATOR. ALFRED H. WOUTERS, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio, jointly. Filed Mar. 6, 1907. Serial No. 360,869.



1. A shaft oscillator for dynamo-electric machines, comprising a rotary shaft, and means coöperating with said shaft for periodically applying fluid pressure against one end thereof.

2. In combination, a dynamo-electric machine, and an oscillator for the rotary member thereof comprising a rotary shaft, and means controlled by said shaft for intermittently supplying fluid pressure to move said shaft endwise.

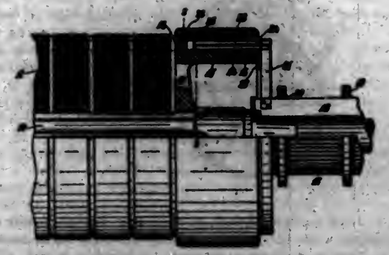
3. In combination, a dynamo-electric machine, a shaft therefor, and means coöperating with said shaft whereby the latter during its operation is recurrently moved longitudinally by fluid pressure.

4. In combination, a rotary shaft of a dynamo-electric machine, a constant source of fluid pressure, and means coöperating with said shaft for periodically admitting fluid from said source to move said shaft longitudinally.

5. In combination, a bearing for a dynamo-electric machine, a rotary shaft in said bearing one end of said shaft projecting into a chamber, and means controlled by the motion of the shaft for intermittently supplying fluid pressure to said chamber.

[Claims 6 to 14 not printed in the Gazette.]

957,290. DIRECT-CURRENT TURBO-GENERATOR. EDWIN C. WRIGHT, Newport, Ky., assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Nov. 30, 1906. Serial No. 345,599.



1. In a rotor for a dynamo-electric machine, a core, an end member therefor provided with a radial flange adjacent to the core, coils carried by said core and projecting beyond the end thereof through openings in said flange, and a ring surrounding the flange and the projecting portions of the coils, said ring and flange having interlocked parts which prevent axial movement of the ring.

2. In a rotor of a dynamo-electric machine, a slotted core, an end-member therefor, coils carried in the slots of said core and projecting beyond the end thereof through openings in said end-member, a ring surrounding the projecting portions of the coils and resting on said end-member, and means for retaining said ring on said end-member comprising a ridge or shoulder on one of said parts.

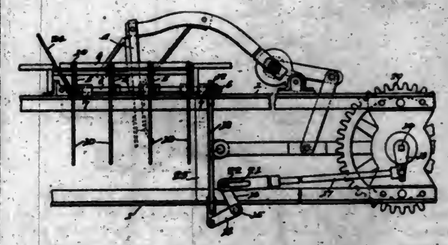
3. In a rotor of a dynamo-electric machine, a slotted laminated core, an end-member therefor, coils carried in the slots of said core and projecting beyond the end thereof through openings in said end-member, and a ring surrounding the projecting portions of the coils and resting on said end member, said ring and end-member having interfitting parts which maintain the ring in position.

4. In the rotor of a dynamo-electric machine, a core, an end-member therefor having a circumferentially projecting annular ridge and an axially projecting annular shoulder, a ring having an internal annular groove with which said ridge engages, and coils carried by said core and having projecting ends clamped between said ring and said shoulder.

5. In the rotor of a dynamo-electric machine, a slotted core, an end-member therefor having a circumferentially projecting annular ridge, coils in the slots of the core and having ends projecting beyond the core through said end member, and a rigid ring surrounding said projecting ends and provided with an internal groove with which said ridge engages, said ridge having an outer diameter which is less than the inner diameter of the ring save when the latter is at a higher temperature than the end-member.

[Claims 6 to 8 not printed in the Gazette.]

957,291. CONDENSER FOR HAY-PRESSES, &c. LEWIS B. WYGANT, Bellevue, Ohio, assignor to The Ohio Cultivator Company, Bellevue, Ohio, a Corporation of Ohio. Filed Apr. 28, 1909. Serial No. 492,642.



1. In a machine of the character described, the combination, with a frame having a feed opening therein, of condensing mechanism comprising condensing members arranged along the sides of said feed opening and supported normally in substantially horizontal positions, means for moving said condensing members into substantially vertical positions, feeding mechanism independent of said condensing mechanism and comprising a feeder supported normally above said feed opening and adapted to enter the same between said condensing members, and separate means for actuating said feeding mechanism.

2. In a machine of the character described, the combination, with a frame having a feed opening therein, of condensing mechanism comprising condensing members arranged along the sides of said feed opening and supported in substantially horizontal positions, means for moving said condensing members into substantially vertical positions, feeding mechanism independent of said condensing mechanism and comprising a feeder adapted to enter said feed opening, means for limiting the movement of said condensing members to prevent them from entering the path of said feeder, and separate means for actuating said feeding mechanism.

3. In a machine of the character described, the combination, with a frame having a feed opening therein, of a condensing mechanism comprising shafts journaled on opposite sides of said feed opening, groups of condensing arms secured to each of said shafts and normally supported in a substantially horizontal position, and means for actuating said shafts to move said condensing arms into substantially vertical positions, and feed mechanism independent of said condensing mechanism and comprising a feeder supported normally above said feed opening and adapted to enter the same between the two groups of condensing arms.

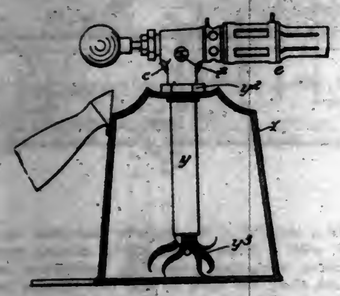
4. In a machine of the character described, the combination, with a frame having a feed opening therein, of a condensing mechanism comprising shafts journaled on opposite sides of said feed opening, groups of condensing arms secured to each of said shafts and normally supported in a substantially horizontal position, means for actuating said shafts to move said condensing arms into substantially vertical positions, a rod connected to each group of condensing arms and having a hook-shaped end, a stop carried by said frame and arranged to be engaged by the hook-shaped end of said rod, and feeding mechanism independent of said condensing mechanism and comprising a feeder adapted to enter said feed opening.

5. In a machine of the character described, the combination, with a frame having a feed opening, of a plurality

of groups of arms mounted on horizontal axes on opposite sides of said feed opening, a rod connecting the outer ends of the arms on each side of said feed opening, a second rod loosely mounted on said first-mentioned rod and having a hook-shaped lower end, and a stop carried by said frame and adapted to be engaged by the hook-shaped end of said last-mentioned rod.

[Claims 6 to 14 not printed in the Gazette.]

957,292. VAPOR-TORCH. THOMAS YATES, Sunnyhurst, Darwen, England. Filed May 28, 1909. Serial No. 498,863.



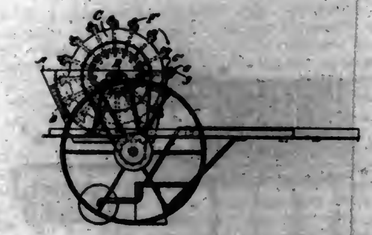
1. In a blow lamp, a burner provided with a wick tube, the body of the burner being provided with horizontal bores or passages which extend therethrough at right angles to each other and are in communication with each other and with the wick tube, said bores or passages being provided at one end with nozzle plugs, one of which is inclosed by a nozzle tube and serves as a main burner nozzle, and the other of which serves as an initial heating nozzle, a shield plate secured to the body of the burner in front of the initial heating nozzle and adapted to deflect the flame therefrom against the body of the burner, and valve rods passed into said bores or passages and provided with needle valves adapted to control said nozzle plugs.

2. In a blow lamp, a burner provided with a wick tube, the body of the burner being provided with horizontal bores or passages which extend therethrough at right angles to each other and are in communication with each other and with the wick tube, said bores or passages being provided at one end with nozzle plugs, one of which is inclosed by a nozzle tube and serves as a main burner nozzle, and the other of which serves as an initial heating nozzle, a shield plate secured to the body of the burner in front of the initial heating nozzle and adapted to deflect the flame therefrom against the body of the burner, and valve rods passed into said boxes or passages and provided with needle valves adapted to control said nozzle plugs, said valve rods being rotatable and longitudinally movable.

3. In a blow lamp, a burner provided with a wick tube, the body of the burner being provided with horizontal bores or passages which extend therethrough at right angles to each other and are in communication with each other and with the wick tube, said bores or passages being provided at one end with nozzle plugs, one of which is inclosed by a nozzle tube and serves as a main burner nozzle, and the other of which serves as an initial heating nozzle, a shield plate secured to the body of the burner in front of the initial heating nozzle and adapted to deflect the flame therefrom against the body of the burner, and valve rods passed into said bores or passages and provided with needle valves adapted to control said nozzle plugs, said valve rods being rotatable and longitudinally movable, and the valve rod, the valve of which controls the initial heating nozzle plug being provided with a spring which holds its valve normally seated.

957,293. POTATO-PLANTER. WILLIS J. YEARSLEY, West Chester, Pa. Filed May 29, 1909. Serial No. 499,158.

1. A potato planter having in combination a rotatable wheel, reciprocatory arms radially disposed on said wheel mounted in guideways thereon carrying spears at one end, their opposite ends having bearings, fixed runway for said bearings, concentric with said wheel above its horizontal diameter and eccentric to said wheel below said diameter, the eccentric portion of said runway containing opposing short curves, shields radially disposed on said wheel adjacent to said spears, a potato hopper, a potato seed holder secured inside of said hopper having flexible or expansible side and a passage way running lengthwise thereof tangential to the arc described by said shields and adapted to admit the projecting ends of said shields to pass between and under said expansible sides.



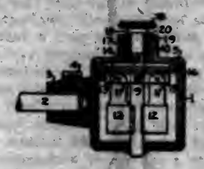
2. In a potato planter of the class described, the combination with the rotary pick up and discharge mechanism for the seed, of a hopper, a revoluble wheel, shields projecting from the periphery of said wheel, a flexible potato holder fixed to said hopper in the path of said shields and provided with a longitudinal passageway in alinement with and adapted to receive the projecting portion of said shields, and reciprocatory pickers fended by said shields, whereby the shields force the seed through said passageway until pierced by the pickers and subsequently hold the seed on the pickers until they are withdrawn.

3. In a potato planter a seed picking and feeding device comprising a revoluble wheel, reciprocatory arms radially mounted on said wheel having spears at one end, means for actuating said arms, means for fending the seed and forcing it on said spears, and a potato seed holder secured inside the hopper having flexible sides adapted to hold the seed potato in position to be pierced, said holder consisting of pivoted jaws having a space between them arranged tangential to said spears and said jaws adapted to yieldingly hold the seed potato between them.

4. In a potato planter, a seed feeding device comprising a revoluble wheel, a series of shields projecting from the periphery of said wheel, reciprocatory arms mounted radially on said wheel having spears at one end arranged opposite the projecting ends of said shields, means for holding and presenting the potato seed to said spears, runways arranged concentric to said wheel above its horizontal diameter and also eccentric below said diameter said eccentric portion of the runway having opposing sharp curves on opposite sides of the vertical diameter of the wheel, and bearings for said reciprocatory arms mounted in said runway.

5. In a potato planter of the class described employing a hopper, a revoluble wheel, picker arms mounted on said wheel, spears or pickers for said arms, and means for operating said arms, the combination of a potato seed holder fastened inside the hopper comprising a pair of pivoted jaws spaced apart in said hopper to form a passage way for the potato seed between them and also form an entrance for said spears and means attached to said wheel for traversing said seed therethrough.

957,294. TYPE-WRITING MACHINE. FRANK A. YOUNG, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed May 22, 1909. Serial No. 497,607.



1. In a speed governor for the power-driven carriage of a typewriting and tabulating machine, the combination with a casing, a spindle mounted in said casing, a pinion on said spindle to engage a part connected to the carriage, a friction plate, an opposing member, a head operated by said spindle, and a weight pivoted to said head and having a cam device operated by the weight to engage said plate to force it against said opposing member, of adjustable means extending to the exterior of the casing to effect relative adjustment between the friction plate and the cam device, in the direction of the axis of said spindle.

2. In a speed governor for the power-driven carriage of a typewriting and tabulating machine, the combination with a casing, a spindle mounted in said casing, a pinion on said spindle to engage a part connected to the carriage, a friction plate, an opposing member, a head operated by said spindle, and a weight pivoted to said head and having a cam device operated by the weight to engage said plate to force it against said opposing member, of adjustable means extending to the exterior of the casing to effect relative adjustment between the friction plate and the cam device, in the direction of the axis of said spindle, and means at the exterior of the casing to lock said adjustable means.

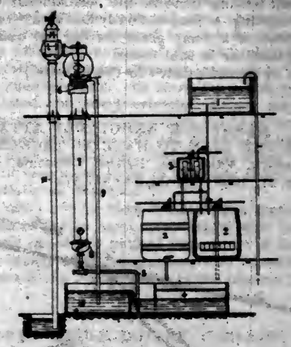
3. In a speed governor for the power-driven carriage of a typewriting and tabulating machine, the combination with a casing, a spindle mounted in said casing, a pinion on said spindle to engage a part connected to the carriage, a friction plate, an opposing member, a revoluble head, and a weight pivoted to said head and having a cam device operated by the weight to engage said plate to force it against said opposing member, of adjustable means extending to the exterior of the casing to effect relative adjustment between the friction plate and the cam device, in the direction of the axis of said spindle, said head fixed to said spindle.

4. In a speed governor for the power-driven carriage of a typewriting machine, the combination with a casing, a spindle mounted therein and having a pinion connected to the carriage, a friction plate, an opposing member, a head secured upon said spindle, and a weight pivoted to said head having a cam part to force said plate against said opposing member, of a member threaded into the casing, to raise and lower said spindle, to effect adjustment between the cam device and the friction plate, in the direction of the axis of said spindle.

5. In a speed governor for the power-driven carriage of a typewriting machine, the combination with a casing, a spindle mounted therein and having a pinion to engage a part connected to the carriage, a friction plate, an opposing member, a head secured upon said spindle, and a weight pivoted to said head and having a part to force said plate against said opposing member, of a bushing surrounding the spindle and threaded into the casing to raise and lower the spindle.

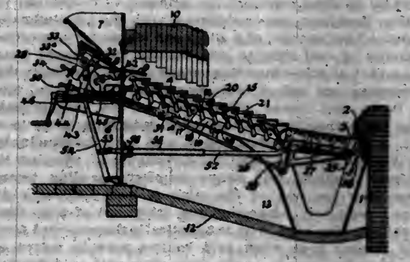
[Claim 6 not printed in the Gazette.]

957,295. PROCESS OF RECOVERING POTASH SALTS. AUGUSTO ALBERTI, Rome, Italy. Filed May 13, 1909. Serial No. 495,580.



Process of extracting potassium salts from the refuse liquor of the manufacture of tartaric acid, which consists in oxidizing the organic substances contained therein by adding to said liquor substances capable of developing hypochlorous acid, concentrating the purified mother-lye in a vacuum and crystallizing out the potassium salts.

957,296. MECHANICAL STOKER FOR FURNACES. FRANK C. ARMSTEAD, Pittsburg, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Oct. 18, 1906. Serial No. 339,520.



1. The combination with a furnace having a bridge wall a fuel feeding grate and dump grate at the inner end thereof, of an angle plate provided with a longitudinally-extending recess in one leg thereof and located between the dump grate and the bridge wall of the furnace, a bearing bar for the inner end of the dump grate frame, and a removable key for securing said bar in the recess of said angle plate.

2. In a self-feeding furnace having a bridge wall the combination with an angle plate provided with a longitudinally-extending recess in one leg thereof and located between the inner end of the furnace grate and the bridge wall thereof, of a bearing bar having longitudinally-projecting bearing lugs, of a dump grate having trunnions at its inner end supported on said bearing lugs, a removable key for securing said bar in the recess of said plate, and means for lowering and raising said dump grate on said trunnions.

3. In a self-feeding furnace, the combination with a feeding grate, a main shaft, an intermediate mechanism for effecting the operation of the grate, of a hinge-supported dumping grate, a drum on the main shaft, a chain and a rod connecting said drum with the free end of said dumping grate, a worm gear for rotating said drum and a locking device to relieve the drum and worm wheel of strains when the dumping grate is in the normal position.

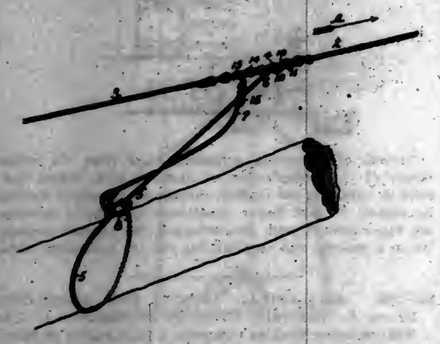
4. In a self-feeding furnace, the combination with an

angle plate having a longitudinally-extending recess in one leg thereof, of a dump grate bearing bar and a removable key for securing said bar in said recess.

5. In a self-feeding furnace, the combination with an angle plate having a longitudinally-extending recess in one leg thereof, of a dump grate bearing bar and means for securing said bar in said recess.

[Claims 6 to 13 not printed in the Gazette.]

957,297. MEANS FOR REMOVABLY ATTACHING LOGS OR THE LIKE TO HAULING-TACKLE. SYDNEY ASHDOWN, Vancouver, British Columbia, Canada. Filed May 21, 1909. Serial No. 497,471.



1. As a means for connecting a load to a longitudinally movable hauling rope and for automatically effecting its release therefrom, the combination with the longitudinally movable hauling rope, of a sling, and means for connecting the ends of said sling to said hauling rope, means forming a part of said connecting means for automatically disconnecting one end of said sling from said hauling rope at times, and means intermediate of the ends of said sling for connecting its sides together to form a slip loop.

2. A means for connecting a load to a longitudinally movable hauling rope and for automatically effecting its release therefrom, said means comprising a sling, means connecting one end of the sling to said hauling rope, means removably connecting the other end of said sling to said hauling rope to be automatically disconnected from said hauling rope when said hauling rope is moved in one direction, and to retain connection with said hauling rope when said hauling rope is moved in the opposite direction, means intermediate of the ends of the sling for connecting the two sides of the sling together to form a slip loop in the direction of the haul and to release that connection when the hauling rope is drawn in a given direction.

3. A means for connecting a load to a hauling rope and for automatically effecting its release therefrom, said means comprising the combination with a hauling rope of a sling both ends of which are connected to an adjacent position on the hauling rope, of a hook secured to the sling intermediate of the ends, the eye of the shank of the hook being connected to one length of the sling and the other length of the sling connected to a position adjacent to the bend of the hook.

4. In a device of the class described, the combination of a hauling tackle, of a sling, both ends of which are connected to the hauling tackle, one of said ends being connected to automatically release from the tackle when the hauling tackle is backwardly drawn, and a hook secured to the sling intermediate of the ends, the bend of which hook is secured to the non-releasing end of the sling.

5. In a device of the class described, the combination with the hauling tackle having a ring and a member provided with a key-hole slot, of a sling, one end of which is connected with said ring, and the other end of which is releasably held in said key-hole slot to be automatically released when the hauling tackle is backwardly drawn, and a member secured to the sling intermediate the ends of the bend and releasably engaging the releasable end of the sling.

957,298. CLOTHES-POUNDER. MANUEL J. BAKER and VALENTINE M. PIERCE, Buffalo, N. Y. Filed Feb. 1, 1910. Serial No. 541,299.



1. A suction pounder for laundry purposes comprising a funnel-shaped member having a series of apertures in the wall thereof, an oval-shaped apertured partition mounted within said member, a handle to the latter, a flexible diaphragm fixed within the member and positioned a slight distance below the outer marginal edge of said partition, a fixed plate engaging said diaphragm and having a space intervening between the marginal edge of the latter and the inner surface of the funnel-shaped member, which space is closed by the diaphragm, as set forth.

2. A suction pounder for laundry purposes comprising a funnel-shaped member having a series of apertures in the wall thereof, an oval-shaped apertured partition mounted within said member, a handle passing through the shank portion of the funnel-shaped member and fastened to the inner concaved face of the oval-shaped partition, a screw passing through said partition and engaging the end of the handle, a flexible diaphragm mounted upon the shank portion of said screw, a plate also mounted upon said screw and bearing against the outer face of said diaphragm, the diameter of said plate being less than the diameter of the diaphragm and the outer peripheral portion of the latter being adapted to bear yieldingly against the inner inclined wall of the funnel shaped member.

957,299. AIM-DIRECTOR. JOSEPH C. BARNES, Montrose, Colo. Filed July 27, 1909. Serial No. 509,837.



1. A device of the class described, comprising a cylindrical body having clamping jaws whereby said body can be mounted upon a gun barrel, a block adjustable transversely of said body and having a lamp socket, a lamp in said socket, a lens adjustably carried by said body and adapted to project a beam of light from said lamp, an insulating member mounted upon said body, a contact plate mounted upon said insulating member and having a contact finger engaging said lamp to form an electrical connection therewith, a source of electrical supply, and conductors adapted to contact respectively with said plate and the gun to include said lamp in the circuit of said source of supply.

2. A device of the class described, comprising a body fashioned from conducting material and having clamping jaws, whereby said body can be mounted upon a gun barrel, a block adjustable transversely of said body and having a lamp socket, a lamp in said socket, said body having a threaded part, a threaded lens-frame adjustably mounted in said threaded part of said body, a lens mounted in said frame and adapted to project a beam of light from said lamp, an insulating member mounted upon said body, a contact plate mounted upon said insulating member and having a contact finger engaging said lamp to form an electrical connection therewith, a source of electrical supply, and conductors adapted to contact respectively with said plate and the gun, to include said lamp in the circuit of said source of supply.

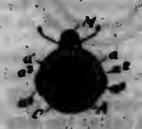
3. A device of the class described, comprising a body fashioned from conducting material and having clamping jaws, whereby said body can be mounted upon a gun barrel, a block having a threaded opening, a manually operable stem carried by said body and engaging said threaded opening to permit the adjustment of said block transversely of said body, said block having a lamp socket, a lamp in said socket, a lens adjustably carried by said body and adapted to project a beam of light from said lamp, and means including said lamp in an electrical circuit.

4. A device of the class described, comprising a body having clamping jaws, whereby said body can be mounted upon a gun barrel, a block adjustable transversely of said body, a lamp socket carried by said block, a lamp in said socket, means for including said lamp in circuit with a source of electrical supply, and a lens carried by said body and adapted to project a beam of light from said lamp.

5. A device of the class described, comprising a body adapted to be removably mounted upon a gun barrel, a guide rod extending transversely of said body, a block slidably located upon said rod, a lamp carried by said block, a lens for projecting a beam of light from said lamp, and a manually operable device for moving said block longitudinally of said rod.

[Claims 6 and 7 not printed in the Gazette.]

957,300. CABLE-CLIP. THOMAS J. BAUGH, Hopkinsville, Ky. Filed July 16, 1909. Serial No. 508,039.



1. A cable support comprising a messenger wire, and a one piece cable clip comprising a wide body and oppositely offset extensions at opposite ends thereof, with slots in the extensions and tongues formed on the body at the base of each extension, said body adapted to closely embrace a cable sheath, throughout substantially the entire circumference of the latter with the extension crossing each other between the messenger wire and the cable, then passing up over the messenger wire, crossing each other above the same and returning in the opposite directions so that their respective tongues will engage in their slots, all substantially as described.

2. A cable support comprising a messenger wire and a one piece cable clip having a broad body closely embracing the cable sheath, with its ends crossed above the same and beneath the messenger wire, and then looped around the latter in opposite directions and the ends secured to

the body, whereby extended support is provided for the cable.

3. A cable support comprising a messenger wire and a one piece cable clip having a broad body and extension ends crossed first beneath and then above the messenger wire, and terminally secured to opposite sides of the body whereby extended support of the cable sheath is secured, and vibration and crystallization prevented.

4. A one-piece cable clip having a broad body adapted to surround and effect extended surface contact with a cable sheath, a pair of extension bands or arms on opposite ends of said body adapted to pass under and be returned upon themselves over a supporting device, and means to secure the same to the body when so returned, substantially as described.

5. A cable clip or band comprising a rectangular body A having extension arms a, a' formed with terminal slots a^2, a^3, and oppositely pointed tongues a^4, a^5 formed in the body to engage said slots, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

957,301. BRUSH BOTTLE-CLEANING MACHINE. CHARLES BUCHHEIT, St. Louis, Mo. Filed Mar. 30, 1909. Serial No. 486,813.



1. In a brush-bottle-cleaning machine, the combination of a rotatable shaft; a bottom brush mounted upon the end of the shaft; a spiral brush mounted about the body of the shaft; an adjustable collar; a frame mounted on said collar and provided with a pocket; a cylindrical brush-body adapted to be mounted in said pocket and provided with inwardly projecting brushes; and means for retaining the brush-body in place within the pocket, substantially as described.

2. In a brush-bottle-cleaning machine, the combination of a rotatable shaft; a bottom brush mounted upon the end of the shaft; a spiral brush mounted about the body of the shaft; an adjustable collar; a frame mounted on said collar and provided with a pocket; a cylindrical brush-body adapted to be mounted in said pocket and provided with inwardly projecting brushes; and means for removably securing said brush-body in place within said pocket, substantially as described.

3. In a brush-bottle-cleaning machine, the combination of a rotatable shaft; a bottom brush mounted upon the end of the shaft; a spiral brush mounted about the body of the shaft; an adjustable collar; a frame mounted on said collar and provided with a pocket; a cylindrical brush-body adapted to be mounted in said pocket and provided with inwardly projecting brushes; means for retaining the brush-body in place within the pocket; and a resilient gasket carried by said collar and adapted to contact with the mouth of the bottle to be cleansed, substantially as described.

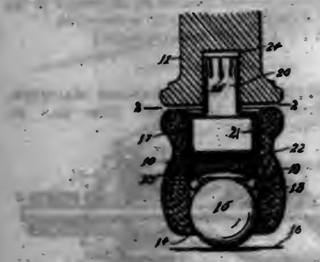
957,302. FENCE-WIRE CLAMP. THOMAS M. CADLE, Port Deposit, Md. Filed June 11, 1909. Serial No. 501,580.



A device of the class described comprising clamping bars arranged side by side and between which the fence members are located, a strap secured to one of the bars and extended at one end beyond the bar at an angle there-

to and directed laterally at the other end and provided with an aperture, and another strap connected to the other bar and provided with a central aperture and having a hook at one end engaging in the aperture of the first mentioned strap and extended at the other end in rod-like form and bent intermediate its ends upon itself to form a loop and with an eye at the terminal of the rod registering with the aperture of the strap, and a holding bolt extending through the adjacent bar and the aperture of the strap and the eye of the loop portion, and a clamp nut engaging the bolt and bearing upon the eye of the strap loop, and a link movable in said loop and bearing over the inclined terminal of the first mentioned strap.

957,303. BALL-CASTER. DIXON S. CARTER, Bloomingdale, Ind. Filed Aug. 27, 1909. Serial No. 515,094.



1. A ball caster comprising a body of non-conductive material and formed with a longitudinal bore and with a ball seat in the lower end of the bore, a relatively large ball supported upon said seat, a bearing member of non-conductive material movable within said body, a plurality of relatively small bearing balls between said larger ball and said bearing member, a coupling member, means for adjusting said coupling member within said bore, and a cushioning member of non-conductive material between said coupling member and bearing member.

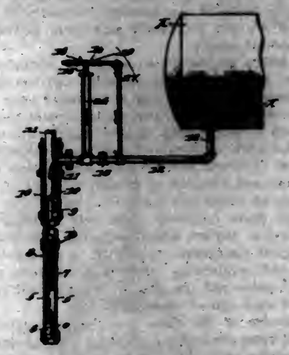
2. A ball caster comprising a body of non-conductive material and formed with a longitudinal bore, said bore having a ball seat at one end and internally threaded at the other end, a relatively large ball supported upon said seat, a bearing member of non-conductive material movable within said body, a plurality of relatively small bearing balls between said larger ball and said bearing member, a coupling member threaded at one end and engaging the threads of said body, and a cushioning member of non-conductive material between said coupling member and bearing member.

957,304. PNEUMATIC PRESSURE APPARATUS FOR WATER-TANKS. RALPH B. CARTER, Haworth, N. J., and JAMES L. MAULL, New York, N. Y. Filed Jan. 30, 1907. Serial No. 354,823.

1. The combination with a tank; of communicating cylinders of different transverse areas, a valved inlet to the small cylinder, a valved piston mounted to reciprocate within said cylinder, a piston within the other cylinder, means for reciprocating the pistons in unison, a pipe connecting the cylinders and tank, and a valved air inlet upon said pipe.

2. The combination with a tank; of connected cylinders of different transverse areas, the small cylinder having a valved inlet, a valved piston mounted to reciprocate within said cylinder, a piston mounted to reciprocate within the other cylinder, a rigid connection between the pistons, means for reciprocating the pistons, a connection between the cylinders and the tank, a valve within said connection for preventing back flow of fluid therethrough, and a valved air inlet upon said connection.

3. The combination with a storage receptacle, of means for supplying air and water thereto comprising a pump casing or barrel, a connection between the casing or barrel and the receptacle, a fluid chamber located in said connection and communicating with the atmosphere, an air pipe located between the fluid chamber and the receptacle, water displacing device in said barrel or casing, and a combined water and air displacing device arranged above the water displacing device.



4. The combination with a storage receptacle, of means for supplying water and air thereto comprising a pumping mechanism embracing in its construction a casing or barrel, displacement mechanism therein comprising a water displacing plunger and a combined water and air displacing plunger of relatively greater capacity than the water displacing plunger, a valve connection between the pump casing or barrel and the storage receptacle, a combined water and air chamber located in the connection between the pump and the valve in the connection, an air connection leading to the top of said chamber, an air supply line leading from said air connection to the connection between the pump and the receptacle and valves located in said air connection and air pipe.

957,305. SHADE-HOLDER. LEONE J. CASTONGUAY, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Feb. 26, 1909. Serial No. 480,093.

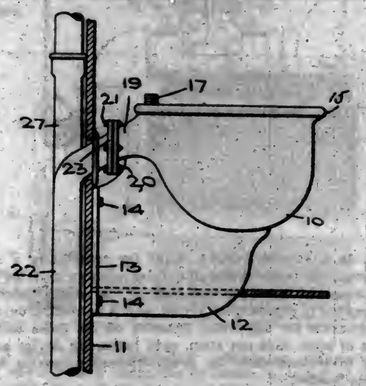


A shade holder, comprising a shell adapted to be secured to a socket and having two slots with notches, near its mouth where it receives the flanged neck of the shade, in combination with two spring clips each secured at one end to the shell and adapted when free to lie against the inner wall of the latter, and having adjacent to its secured end an inward bend *a* and its free end projecting through one of said slots, said spring clips adapted when their free ends are pressed toward each other to be engaged in said notches and to engage and hold the shade.

957,306. SIPHON-CLOSET. CHRISTIAN H. CHRISTENSEN, Palo Alto, Cal., assignor of forty-five one-hundredths to D. L. Sloan, Palo Alto, Cal. Filed July 7, 1909. Serial No. 506,829.

1. A device of the character described, the combination with a bowl, of a solid bracket integrally formed with the bottom of the bowl, and oppositely located flanges forming a part of said web for engagement with a wall to support the said bowl above the floor, said bracket having a cut-away portion, as and for the purpose described.

2. A siphon closet comprising a bowl, a solid bracket positioned beneath said bowl for supporting said bowl from a wall above a floor, a short arm of a siphon formed in said bowl, an inclined flanged neck extending rearwardly and downwardly from the upper extremity of said short arm and a long arm positioned in a wall curved forwardly and flanged at the upper end thereof for connection with said neck, said bracket having a rear cut-away portion for receiving the flanged portion of the neck.



3. A device of the character described, the combination with a bowl, of a solid bracket integrally cast with the bottom of the bowl, oppositely located flanges forming a part of said bracket for engagement with a wall to support said bowl above the floor, said bracket having a rear cut-away portion, the bottom of which bracket is adapted to extend through the floor whereby the bowl is supported a suitable distance above said floor, and a suitable siphon connection at the upper portion of the bowl with a discharge pipe.

957,307. EXPLOSIVE. CONRAD P. H. CLAESSEN, Berlin, Germany, assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed Jan. 12, 1909. Serial No. 471,861.

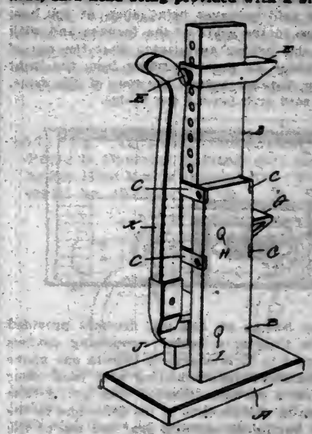
1. A waterproof blasting explosive compound composed of an intimate mixture of ammonium nitrate and a compound of aniln with an inorganic metallic salt, substantially as specified.

2. A waterproof blasting explosive compound composed of an intimate mixture of ammonium nitrate, a nitrate of an alkaline metal and a compound of aniln with an inorganic metallic salt, substantially as specified.

3. A waterproof blasting explosive, composed of a mixture of ammonium nitrate, potassium nitrate and a compound of aniln with an inorganic metallic salt, substantially as specified.

957,308. WAGON-JACK. MADISON G. COLBY, Franklin, N. H. Filed Jan. 11, 1909. Serial No. 471,760.

In a wagon jack of the kind described, the combination with a base provided with spaced standards connected together by spaced strips, of a lifting bar mounted between the said standards provided with a notched lower end, said bar being provided with an adjustable jaw and a rigid jaw, said rigid jaw extending out between said strips of the standards, a bushing secured in the notch of the lifting bar, a link provided with a head mounted in said bushing, a shaft provided with stud pins loosely mounted within an opening formed in said link, and a lever provided with a head pivotally mounted on a shaft between said standards, said head being provided with a bifurcated end, the



arms of the bifurcation being provided with oblique slots in which said stud pins are mounted.

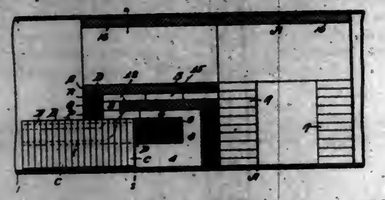
957,309. TIRE-GRIP. ALDON R. CORRINGTON, Hartley, Iowa. Filed July 7, 1908. Serial No. 442,370.

A tire grip comprising opposing side rings, each formed of sections of metal wire intermediately bent to form eyes and connected at their ends by interengaging end loops, cross chains extending between the eyes of the opposite rings, connecting members at each of the ends of the rings, said members having at one of their ends loops to engage the end ring loops, and having at their opposite ends hooks terminating in loops, cross chains extending between the latter loops of opposite rings, and short chains connecting the hooks of each of the rings, said connecting members being movable through the end links of said short chains to draw their respective cross chains tight.

957,310. FURNACE OF STEAM-BOILERS AND THE LIKE. WALTER G. CROSTHWAITE, Leeds, England, assignor, by mesne assignments, to The United Cigarette Machine Company, Limited, London, England, a Corporation of Great Britain. Filed Sept. 27, 1905. Serial No. 280,335.

1. In a furnace having an ash pit, a grate formed of fire-bars provided with openings therethrough extending the length of the grate, whereby to pre-heat the air passing therethrough, a bridge having a number of cham-

bers therein one above another and which communicate with one another out of line to form a tortuous passage, the lowermost of said passages being open at its base to the air passages in the grate of the furnace and with its ash pit, and also having an opening near the top of the rear of the bridge, an arch extending from the front of the bridge to a distance beyond the rear of the same, and supports for said arch beyond the bridge.



2. In a furnace having an ash pit, fire-bars provided with air conduits therein, a bridge comprising courses horizontally disposed to form chambers therein one above the other, said chambers communicating with each other out of line to form a tortuous passage open at its base to the air passages in the fire-bars of the grate and to the ash pit, and also having an opening near the top of the rear of the bridge, supports on each side of the furnace beyond the bridge, and an arch extending from the front of the bridge to a distance beyond its rear and supported partly by the bridge and partly by said supports.

3. In a furnace, a fire flue containing a grate formed of transverse fire-bars provided with air conduits therein and having an ash pit below the fire-bars, a bridge comprising courses horizontally disposed to form chambers therein one above the other, said chambers communicating with each other out of line to form a tortuous passage open at its base to the air conduits in the fire-bars of the grate and to the ash pit, and also having an opening near the top of the rear of the bridge, supports on each side of the furnace beyond the bridge and arranged to follow the contour of the flue, and an arch extending from the front of the bridge to a distance beyond its rear and supported partly by the bridge and partly by said supports.

4. In a furnace, a grate composed of bars placed close together and having transverse openings therethrough forming a series of air conduits, a second series of air conduits through said bars intermediate the first series, said second series terminating in upwardly disposed openings in the rearmost of said bars, a bridge partially overlying the grate and covering said openings and having formed therein a tortuous passage communicating with said air conduits, and an air conducting passage beneath the grate also communicating with said tortuous passage.

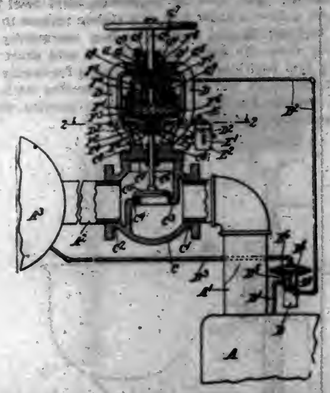
5. In a furnace, a grate composed of bars placed close together and having transverse openings therethrough forming a series of air conduits, a second series of air conduits through said bars intermediate the first series, said second series terminating in upwardly disposed openings in the rearmost of said bars, a bridge partially overlying the grate and covering said openings and having formed therein a tortuous heating passage communicating with the said second series of air conduits in the bars and with an air conducting passage beneath the grate, and provided above with an outlet for the heated air.

[Claims 6 and 7 not printed in the Gazette.]

957,311. STOP AND CHECK VALVE. GEORGE C. DAVIS and WALTER A. DALBY, Chicago, Ill., assignors to George M. Davis Regulator Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 7, 1908. Serial No. 461,475.

1. In a stop and check valve for controlling a steam passage, the combination of a valve with an exterior dash-pot removed from the influence of the steam associated therewith to regulate its action.

2. In a stop and check valve for controlling a steam passage, the combination of a valve with an exterior dash-pot removed from the influence of the steam associated therewith to regulate its action, and a balancing device to compensate for the steam pressure on the cross sectional area of such dash-pot stem.



3. In a stop and check valve for controlling a steam passage, the combination of a valve with an exterior dash-pot removed from the influence of the steam associated therewith to regulate its action, and a balancing device to compensate for the steam pressure on the cross sectional area of such dash-pot stem, said balancing device adjustable to accommodate for predetermined pressures in the steam header.

4. In a stop and check valve for controlling a steam passage, the combination of a valve with an exterior dash-pot removed from the influence of the steam associated therewith to regulate its action, and a balancing device to compensate for the steam pressure on the cross sectional area of such dash-pot stem, such balancing device consisting of a rock shaft associated with the movable part of the dash-pot and a weighted arm projecting therefrom.

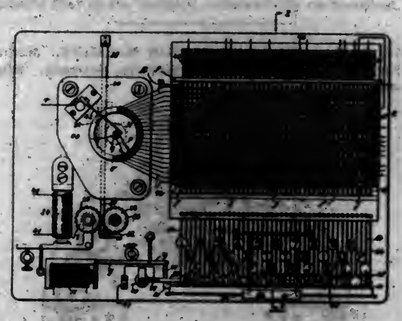
5. In a stop and check valve for controlling a steam passage, the combination of a valve with an exterior dash-pot removed from the influence of the steam associated therewith to regulate its action, and a balancing device to compensate for the steam pressure on the cross sectional area of such dash-pot stem, said balancing device adjustable to accommodate for predetermined pressures in the steam header, such balancing device consisting of a rock shaft associated with the movable part of the dash-pot and a weighted arm projecting therefrom.

[Claims 6 to 24 not printed in the Gazette.]

957,312. TELEGRAPHIC KEYBOARD TRANSMITTING APPARATUS. PATRICK B. DELANY, South Orange, N. J. Filed Feb. 5, 1906. Serial No. 299,514.

1. A key board transmitter comprising transmitting keys, one for each character or letter, a series of insulated contacts each having an individual circuit connection, contacts controlled by each key and circuit connections such that when a key is depressed the insulated contacts are connected in groups for the formation of the letter or character corresponding with the key depressed, a contact brush, means whereby, on depression of a key, the brush is caused to successively contact with those of the insulated contacts connected in circuit for the formation of the signal corresponding with the depressed key and means, acting after the completion of the signal, to restore the normal relation of the brush and series of insulated contacts by movement of one of said parts in such direction that the insulated contacts pass the brush in an order the reverse of that occurring when the signal is transmitted.

2. A key board transmitter comprising transmitting keys, one for each character or letter, a series of insulated contacts each having an individual circuit connection, contacts controlled by each key and circuit connections such that when a key is depressed the insulated contacts are connected in groups for the formation of the letter or character corresponding with the key depressed, a contact brush, means whereby, on depression of a key, the brush is caused to successively contact with those of the insulated contacts connected in circuit for the formation of the signal corresponding with the depressed key and electro-magnetic devices connected with an insulated contact beyond those connected for formation of the signal said electro-magnetic apparatus operating to effect restoration of the brush and series of contacts to normal relation.



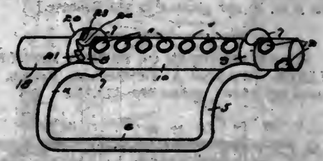
3. A key board transmitter comprising transmitting keys, one for each character or letter, a series of insulated contacts each having an individual circuit connection, contacts controlled by each key and circuit connections such that when a key is depressed, the insulated contacts are connected in groups for the formation of the letter or character corresponding with the key depressed, a contact brush, means whereby, on depression of a key, the brush is caused to successively contact with those of the insulated contacts connected in circuit for the formation of the signal corresponding with the depressed key, electro-magnetic devices connected with an insulated contact beyond those connected for formation of the signal said electro-magnetic apparatus operating to effect restoration of the brush and series of contacts to normal relation and mechanically acting means serving to control the circuit of said electro-magnetic devices after the brush has traversed all the contacts and thereby insuring retraction of the brush to normal position.

4. A key board transmitter comprising transmitting keys, one for each character or letter, a series of insulated contacts each having an individual circuit connection, contacts controlled by each key and circuit connections such that when a key is depressed, the insulated contacts are connected in groups for the formation of the letter or character corresponding with the key depressed, a contact brush, a spring whose reaction tends to hold the brush in normal relation to the series of contacts, means whereby, on depression of a key, the brush is caused to advance against the tension of said spring to successively contact with those of the insulated contacts connected in circuit for the formation of the signal corresponding with the depressed key and means acting after the completion of the signal to release the brush to be retracted to normal position by its spring.

5. A key board transmitter comprising transmitting keys, one for each character or letter, a series of insulated contacts each having an individual circuit connection, contacts controlled by each key and circuit connections such that when a key is depressed, the insulated contacts are connected in groups for the formation of the letter or character corresponding with the key depressed, a contact brush, a spring whose reaction tends to hold the brush in normal relation to the series of contacts, means whereby, on depression of a key, the brush is caused to advance against the tension of said spring to successively contact with those of the insulated contacts connected in circuit for the formation of the signal corresponding with the depressed key and electro-magnetic means connected with an insulated contact beyond those connected for the formation of the signal and acting to release the brush which is then retracted by its spring.

[Claims 6 to 18 not printed in the Gazette.]

957,313. TIRE-SLEEVE-FASTENING APPARATUS. PETER B. DONAHOO, Oakland, Cal., assignor of one-half to Roy Hunt Morris, Oakland, Cal. Filed May 29, 1909. Serial No. 499,236.



1. A device of the character described comprising a frame, a shaft rotatable therein, and a spring-pressed locking cap carried by said shaft and adapted to engage with said frame to prevent rotation of said shaft therein in one direction.

2. A device of the character described comprising a frame, a shaft rotatable therein, and an automatically actuated locking cap carried by said shaft for preventing the same rotating in one direction.

3. A device of the character described comprising a frame, a shaft journaled therein, a cap slidably mounted on said shaft, and means for automatically moving said cap on said shaft to cause the same to engage with said frame, to prevent rotation of said shaft in one direction.

4. A device of the character described comprising a frame, a shaft journaled therein, and a cap slidable on but rotatable with said shaft for engagement with said frame to prevent rotation of said shaft in one direction.

5. A device of the character described comprising a frame, a shaft rotatable therein and provided with a slotted and recessed end, a locking cap mounted on said end, a pin carried by said cap and projecting through the slot in the end of the shaft, and a spring in the recess of said end and adapted to force said cap into engagement with said frame to prevent rotation of said shaft in one direction.

[Claims 6 to 12 not printed in the Gazette.]

957,314. WATER SEAL. HERBERT H. DOW, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a Corporation of Michigan. Filed Nov. 6, 1907. Serial No. 400,997.



1. In a device of the character described, the combination with the two members to be joined, of an independent rotary liquid-retaining element engaging the contiguous ends of said members.

2. In a device of the character described, the combination with the two members to be joined, of an independent rotary liquid-retaining element engaging the contiguous ends of said members, and means for supplying a stream of liquid to said element.

3. In a device of the character described, the combination with the two members to be joined, of outwardly projecting flanges borne by the contiguous ends of said members respectively, an independent rotary liquid-retaining element engaging said flanges, and means for supplying a stream of liquid to said element.

4. In a device of the character described, the combination with the two members to be joined, of outwardly projecting flanges borne by the contiguous ends of said members, an independent annular rotary trough-like element opening inwardly and engaging said flanges, and means for supplying a stream of liquid to said element.

5. In a device of the character described, the combination with the two members to be joined, of two spaced annular outwardly projecting flanges borne by each of the contiguous ends of said members, an annular rotary trough-like element opening inwardly and engaging the two adjacent of said flanges, and means for supplying a stream of liquid to said element.

[Claims 6 to 10 not printed in the Gazette.]

957,315. SURGE-RELIEVER OR SAFETY DEVICE FOR TOW-LINES. WILLIAM A. DUNCANSON, Boston, Mass. Filed Jan. 22, 1909. Serial No. 473,752.



1. A safety device of the character stated, comprising an outer tubular member having a fixed internal head and longitudinal slots adjacent one end, an inner tubular member slidable lengthwise in the outer member and having a head at one end portion, and slots adjacent the other end, a rod engaging with said head and having a sliding fit in the head of the outer member, a bolt engaged with said rod and movable in slots of the outer member, a bolt carried by the outer member and movable in slots in the inner member, said bolts having means for engagement with tow line sections, and a spring interposed between the said heads and adapted to be compressed by an increase of strain on the tow line, the said slots and orifices providing a plurality of abutments for said bolts which limit the compressibility of the spring.

2. A safety device of the character stated, comprising inner and outer telescopic members provided with opposed internal heads forming the ends of an adjustable liquid chamber, the outer member having orifices communicating with said chamber, a spring which normally extends said members, and bolts slidable with each member relatively to the other member, and provided with means for engaging tow line sections, the liquid contained in said chamber retarding the compression of the spring when strain is exerted on the tow line.

957,316. PROCESS OF CURING HAIR. GEORGE E. DYCK, Chicago, Ill., assignor to Schwarzschild & Sulsberger Co., New York, N. Y., a Corporation of New York. Filed Nov. 19, 1908. Serial No. 463,280.

1. The method of curing hair to remove therefrom scurf, scales, or the like, which consists in subjecting the mass of hair removed from the body to the action of a digestant containing as ingredients the active principle or secretion of an animal's digestive organ, and means to render said principle or secretion active, substantially as described.

2. The method of curing hair to remove therefrom scurf, scales, or the like, which consists in subjecting the mass of hair removed from the body to the action of a digestant containing as ingredients one or more animal digestive organs, and means to render the active principle or secretion of said organs active, substantially as described.

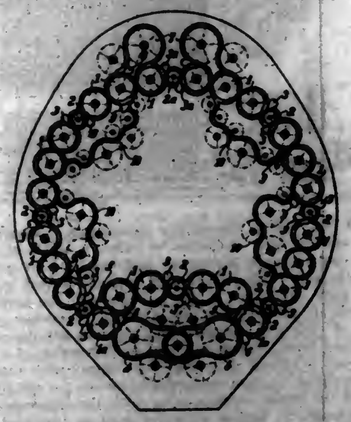
3. The method of curing hair to remove therefrom scurf, scales, or the like, which consists in subjecting the mass of hair removed from the body to the action of a heated digestant containing as ingredients the active principle or secretion of an animal's digestive organ, and means to render said principle or secretion active, the mass of hair being subjected to the action of such digestant for a sufficient period of time to digest the scurf, scales, or the like, and free the hair therefrom, substantially as described.

4. The method of curing hair to remove therefrom scurf, scales, or the like, which consists in subjecting the mass to the action of a heated digestant, one ingredient of which consists of one or more animal digestive organs, for a sufficient period of time to complete the digestion of said scurf, scales, or the like, thereby freeing the hair therefrom, substantially as described.

5. The method of curing hair to remove therefrom scurf, scales, or the like, which consists in subjecting the mass to the action of a digestant containing water, pepsin, and hydrochloric acid, whereby the digestion of said scurf, scales, or the like, frees the hair therefrom, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

957,317. PLAITING AND BOBBIN MACHINE. MORITZ EBELING and JULIUS HEASOG, Barmen, Germany. Filed Aug. 14, 1909. Serial No. 512,852.



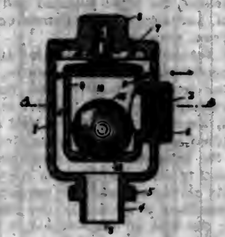
1. In a plaiting and bobbin machine, the combination of the plates arranged in various groups, intermediate plates interconnecting said groups and provided with switches, side tracks also interconnecting said groups and provided with switches, turn-plates at the ends of the series of groups, and plates (4) having an extended horseshoe shape and having crossing tracks and switches.

2. In combination in a plaiting and bobbin machine, plates arranged in groups, plates provided with switches arranged between said groups and connecting the same, turn plates at the ends of the series of said groups and plates having an extended horseshoe shape so arranged that their respective tracks interlock.

957,318. VALVE. CLIFFORD A. ELLIS, Bayonne, N. J., assignor to Standard Oil Company of New York, a Corporation of New York. Filed Sept. 14, 1907. Serial No. 392,861.

1. In a valve of the character described, the combination of an outer casing having an outlet opening in direct communication with the outer air, and an inlet opening, a valve casing located in said outer casing in direct communication with said outlet opening, said valve casing being spaced from said outer casing so as to form an inclosed chamber, said valve casing being provided with openings in communication with said chamber, and vertically operating gravity valves closing said openings in the valve casing, one of said valves being arranged to open when the pressure in the chamber exceeds that in the valve casing and the other of said valves being arranged to open when the pressure in the valve casing exceeds that in the chamber, substantially as described.

2. In a valve of the character described, the combination of an outer casing having an outlet opening in direct communication with the outer air, and an inlet opening, a valve casing located in said outer casing in direct communication with said outlet opening, said valve casing being provided with openings and spaced from said outer casing to form an inclosed chamber in communication with the inlet opening of the outer casing and with the outlet opening of said casing through the openings in said valve casing, and vertically operating gravity valves closing said openings in the valve casing, one of said valves being arranged to open when the pressure in the chamber exceeds that in the valve casing and the other of said valves being arranged to open when the pressure in the valve casing exceeds that in the chamber, substantially as described.



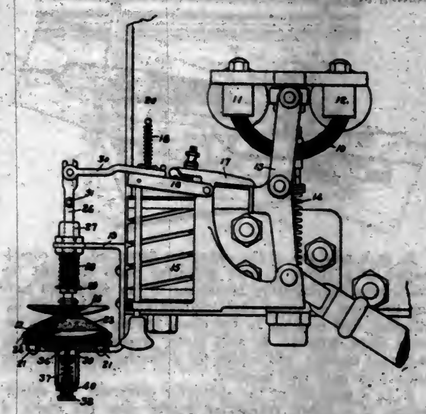
3. In a valve of the character described, the combination of a valve casing in open communication with the outer air, an outer casing spaced therefrom to form an inclosed chamber, said valve casing being provided with openings in communication with said chamber, and vertically operating gravity valves closing said openings, one of said valves being arranged to open when the pressure in the chamber exceeds that in the casing, and the other of said valves being arranged to open when the pressure in the casing exceeds that in the chamber, substantially as described.

4. In a valve of the character described, the combination of an outer casing having an outlet opening in communication with the outer air, and an inlet opening, a valve casing located in said outer casing and in direct communication with the outlet of said outer casing, said valve casing being spaced from said outer casing to form an inclosed chamber in communication with the inlet opening of the outer casing, said valve casing being provided with openings in communication with said chamber, a gravity valve having its seat in the valve casing for closing one of said openings therein, said valve being arranged to open when the pressure in the chamber exceeds that in the valve casing, a second gravity valve for closing the other opening in said valve casing, said valve having its seat on the valve casing and closing said second opening, said valve being arranged to open when the pressure in the valve casing exceeds that in the chamber, substantially as described.

5. In a valve of the character described, the combination of a casing provided with inlet and outlet openings, a valve casing positioned in the outer casing in direct communication with one of said openings, a chamber formed between the valve casing and the outer casing in direct communication with the other of said openings, said valve casing being provided with openings in communication with said chamber, a lift valve having its seat on the valve casing for closing one of said openings, said lift valve being arranged to open when the pressure in the valve casing exceeds that in the chamber, and a ball valve having its seat in said valve casing for closing the other of said openings, said ball valve being arranged to open when the pressure in the chamber exceeds that in the casing, substantially as described.

[Claim 6 not printed in the Gazette.]

957,319. CIRCUIT-BREAKER-RETARDING DEVICE. CHARLES E. EVELETH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 25, 1904. Serial No. 209,616.



1. A time limit-device comprising a movable element, a fluid-reservoir having a yielding wall moved by said element, a leak-opening in the reservoir for regulating the movement of said element, and means for freeing said element from the retarding action of the reservoir when the pressure upon the element exceeds a predetermined amount.

2. A time-limit device comprising a movable element, a fluid-reservoir having a yielding wall moved by said element, a leak-opening in the reservoir to regulate the movement of said element, and an escape-valve opening when the pressure upon the movable element exceeds a predetermined amount to permit free movement of said element.

3. The combination with a movable member, an electro-responsive device for exerting on said member a pressure dependent on current through said device, and a circuit controlling means actuated by said member at a definite point in its travel, of a fluid reservoir or container having a yielding wall connected to resist the movement of said member and a plurality of escape valves for the contained fluid arranged to operate at different pressures of said fluid.

4. The combination with a movable member, an electroresponsive device for exerting on said member a pressure dependent on the current through said device, and a circuit controlling means actuated by said member at a definite point in its travel, of a fluid reservoir or container having a yielding wall connected to resist the movement of said member, a small valve for regulating the emission of the contained fluid and a larger valve for permitting more rapid emission of fluid when a predetermined pressure is obtained.

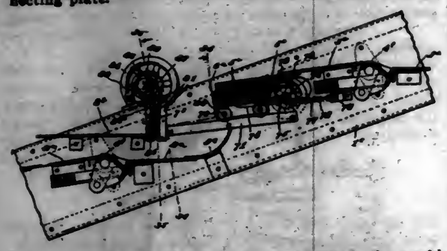
5. The combination with a circuit breaker, an electro-responsive device comprising an armature movable in response to current through said device and means whereby said armature trips said circuit breaker at a predetermined point in its travel, of a fluid reservoir or container having a yielding wall connected to said armature and a plurality of escape valves of different capacity for the contained fluid arranged to operate at different pressures of said fluid.

[Claims 6 to 10 not printed in the Gazette.]

957,320. SLATE-PICKER. CHARLES S. FARREE, Dunmore, Pa. Filed May 20, 1909. Serial No. 497,181.

1. In a machine of the character described, the combination of a flat, downwardly inclined, chute, transverse guides upon the chute, a plate slidably engaged with said guides for reciprocatory movement transversely of the

chute to engage slate or other flat material and deflect it laterally, an oscillatory feed member in the chute, and means actuated by the latter for reciprocating said deflecting plate.



2. In a machine of the character described, the combination of a chute, a slate deflecting plate mounted for transverse reciprocatory movement in the chute and having its front or upper edge inclined and notched, an oscillatory feed member in the chute having pockets to receive slate deflected by said plate, means for actuating said feed member, and means for actuating said deflecting plate from said feed member.

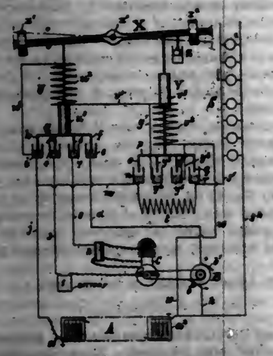
3. In a machine of the character described, the combination of a chute, transverse guides upon the chute, a plate slidably engaged with said guides for reciprocatory movement transversely of said chute to engage slate or other flat material and deflect it laterally, an oscillatory feed member, and a cam upon the latter for reciprocating said plate transversely of the chute.

4. In a machine of the character described, the combination of a chute, transverse guides upon the chute, a plate slidably engaged with said guides for reciprocatory movement transversely of said chute to engage slate or other flat material and deflect it laterally, an oscillatory feed member having pockets to receive slate deflected by said plate, means for actuating said plate, and means for actuating said feed member.

5. In a machine of the character described, the combination of a chute, an oscillatory feed member arranged therein and provided with pockets, a laterally reciprocating slate deflecting member arranged on said chute in advance of the feed member and actuated by the latter, and means for actuating said feed member.

[Claims 6 to 11 not printed in the Gazette.]

957,321. BATTERY CHARGING AND DISCHARGING SYSTEM. LOTHAR FIEDLER, Stoke Newington, London, England. Filed Feb. 25, 1907. Serial No. 359,256.

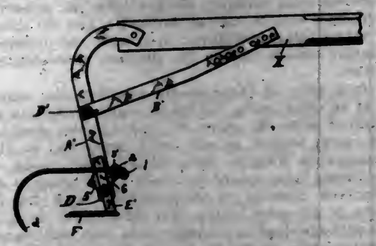


1. Means for automatically maintaining an accumulator in a charged condition, comprising a source of electricity, a circuit leading from the positive pole thereof to that pole of the accumulator which is positive on discharging, a shunt circuit, a pair of solenoids in said shunt circuit, and means adapted to open the charging circuit and short circuit one of the solenoids on the accumulator becoming fully charged and to close the charging circuit and cut in the said solenoid on the accumulator becoming sufficiently discharged.

2. Means for automatically maintaining an accumulator in a charged condition, comprising a source of electricity, a circuit leading from the positive pole thereof to that pole of the accumulator which is positive on discharging, a shunt circuit, a pair of solenoids in said shunt circuit, and means adapted to open the charging circuit and short circuit one of the solenoids on the accumulator becoming fully charged and to close the charging circuit and cut in the said solenoid on the accumulator becoming sufficiently discharged, comprising a switch in the charging circuit connected with the core of one solenoid, a switch in the shunt around the other solenoid and connected to the core thereof, and means for withdrawing the cores of the solenoids from their windings.

3. Means for automatically maintaining an accumulator in a charged condition, comprising a source of electricity, a circuit leading from the positive pole thereof to that pole of the accumulator which is positive on discharging, a shunt circuit, a pair of solenoids in said shunt circuit, and means adapted to open the charging circuit and short circuit one of the solenoids on the accumulator becoming fully charged and to close the charging circuit and cut in the said solenoid on the accumulator becoming sufficiently discharged, comprising a switch in the charging circuit connected with the core of one solenoid, a switch in the shunt around the other solenoid and connected to the core thereof, and a lever which tends to assume one position connected to the cores of both solenoids.

957,322. SWIVEL-ACTION CULTIVATOR ATTACHMENT. JOHN T. FOULKE, Richmond, Ind. Filed June 7, 1909. Serial No. 500,536.

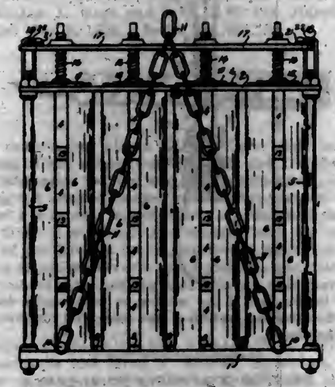


1. A swivel action cultivator attachment comprising a standard composed of duplicate parallel parts having its members spaced apart, oppositely disposed clips engaging the standard in front and rear, a bolt passing through said clips and between the members of the standard, a thimble surrounding the bolt and contacting with the forward clip, a plate secured to said thimble and adapted to rotate about said bolt, and a plurality of tines carried by said plate, all substantially as shown and described.

2. A swivel action cultivator attachment, comprising in combination with a standard having members spaced apart, a pair of oppositely disposed clips engaging the front and the rear edges of the standard, a bolt disposed through said clips and passing between the members of the standard, a thimble loosely surrounding the bolt and contacting with the forward clip, a plate having its central portion turned at an angle with reference to the end portions thereof and having an aperture through the center thereof in which is secured the forward end of said thimble.

3. A swivel action cultivator attachment, comprising in combination with a standard, a cultivator attachment pivoted in its center to the lower portion of the standard, said attachment comprising a plate having its central portion twisted at an angle with reference to the end portions thereof, a plurality of tines carried by said plate, and means for removably securing the tines in operative position, substantially as set forth.

957,323. CAN-ANTIBUCKLING PRESS. JOHN B. FROST, Buckley, Wash., assignor of one-half to Frank Wenke, Buckley, Wash. Filed Nov. 27, 1908. Serial No. 464,652.



1. In a device of the class described, the combination with a frame adapted to hold a stack of cans piled end to end; indenting pieces within the frame and adapted to be placed between adjacent cans to bend the end plates thereof inward; and means for applying pressure to the top of the stack of cans.

2. In a device of the class described, the combination with a frame adapted to hold a stack of cans piled end to end; indenting pieces within the frame and adapted to be placed between adjacent cans to bend the end plates thereof inward; a pressure plate removably attached to the frame; and means engaging the pressure plate for applying pressure to the top of the stack of cans.

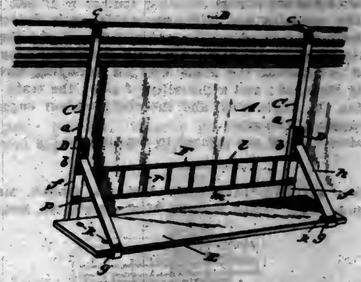
3. In a device of the class described, the combination with a frame adapted to hold a stack of cans piled end to end; indenting pieces within the frame and adapted to be placed between adjacent cans to bend the end plates thereof inward; a pressure plate removably attached to the frame; and adjustable means engaging the pressure plate for applying pressure to the top of the stack of cans.

4. In a device of the class described, the combination with a bed plate; guides secured to the bed plate and adapted to hold a stack of cans piled end to end therebetween; a top plate secured to said bed plate and having holes formed therein to permit the cans to pass therethrough; indenting pieces between the guides and adapted to be placed between adjacent cans to bend the end plates thereof inward; a pressure plate removably attached to the top plate; and adjustable means engaging the pressure plate for applying pressure to the top of the stack of cans.

5. In a device of the class described, the combination with a frame adapted to hold a stack of cans piled end to end and projecting through the top thereof; indenting pieces within the frame and adapted to be placed between adjacent cans to bend the end plates thereof inward; loop rods secured to the top of the frame and projecting upward therefrom; a pressure plate loosely mounted on one set of said loop rods and passing over the other set thereof; lock bars adapted to be placed above said pressure plate and through said loops; and adjustable means engaging said pressure plate for applying pressure to the top of the stack of cans.

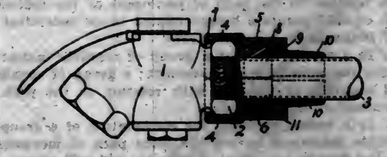
[Claim 6 not printed in the Gazette.]

957,324. HANGING CABINET. JULIUS GALL, Ableman, Wis. Filed Jan. 20, 1910. Serial No. 539,015.



In a hanging cabinet, the combination of hangers spaced apart and respectively comprising an upper section of thin sheet-metal having its upper portion bent into a hook; a lower section having a vertical portion comprising a front thickness and flanges thereon straddling the vertical edges of the upper section, an integral arm bent forwardly from the lower end of the said front thickness, an integral inclined portion bent upwardly from said arm and extending between the same and the vertical portion, and a set screw bearing in said inclined portion and the front thickness of the vertical portion and engaged with the upper section to serve the two-fold function of connecting said portion and adjustably fixing the lower section on the upper section; a back extending between and connected to the vertical portions of the lower sections; and a shelf carried on the arms of the said lower sections.

957,325. ANGLE-COCK AND TRAIN-PIPE CONNECTION. MYERS A. GARRETT, Chicago, Ill. Filed Oct. 26, 1909. Serial No. 524,616.



1. The combination with an angle cock interiorly threaded and provided with means at its exterior surface adapted to be engaged by a clamp, of a train pipe exteriorly threaded at the end; an exteriorly threaded clamp engaging the exterior surface of the angle cock; a flanged clamping nut interiorly threaded and engaging the threads of the clamp; and a gib fitting the exterior of the pipe and engaged by the flange of the clamping nut.

2. The combination with an angle cock interiorly threaded and provided with means at its exterior surface adapted to be engaged by a clamp, of a train pipe exteriorly threaded at the end; an exteriorly threaded clamp engaging the exterior surface of the angle cock; a flanged clamping nut interiorly threaded and engaging the threads of the clamp; and a plurality of gibs fitting the exterior of the pipe and engaged by the flange of the clamping nut.

3. The combination with an angle cock interiorly threaded and provided with means at its exterior surface adapted to be engaged by a clamp, of a train pipe exteriorly threaded at the end; an exteriorly threaded clamp engaging the exterior surface of the angle cock; a flanged clamping nut interiorly threaded and engaging the threads of the clamp; and a plurality of gibs each having an exterior inclined surface and the interior surfaces thereof fitting the exterior of the pipe and the inclined surfaces engaged by the flange of the clamping nut.

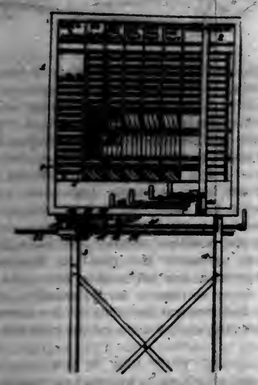
4. The combination with an angle cock interiorly threaded and provided with an exterior flange, of an exteriorly threaded clamp engaging the flanged exterior of

the angle cock; a clamping nut interiorly threaded; a threaded train pipe; and a gib which engages the exterior surface of the train pipe.

5. The combination with an angle cock interiorly threaded and provided with an exterior flange, of a threaded train pipe; an exteriorly threaded clamp engaging the flanged exterior of the angle cock; a clamping nut interiorly threaded; and a plurality of gibs; the train pipe engaging the angle cock, and the clamping nut engaging the clamp and the gibs.

[Claims 6 to 10 not printed in the Gazette.]

957,326. VOTING-MACHINE. WILLIAM GLENN, Mount Vernon, Iowa. Filed Mar. 27, 1906. Serial No. 308,332.



1. In a voting machine, the combination of a movable indicator; a series of counter mechanisms overlapping with relation to the path of movement of the indicator, each of said counters being adapted to be controlled by said indicator to register a vote.

2. In a voting machine a group of movable indicators having the same path of movement; a group of counters, said counters overlapping with relation to the path of movement of said indicators.

3. In a voting machine, the combination of a group of movable indicators having the same path of movement; a ballot face in operative relation to said indicators, confining said indicators to a single office; and a corresponding group of counters overlapping with relation to path of movement of said indicators.

4. In a voting machine, the combination of a group of movable indicators for an office; counters for each candidate in said office controlled by said indicators, said counters overlapping with relation to the movement of the indicators.

5. In a voting machine, the combination of a movable indicator; counters controlled by said indicator arranged in a plurality of planes along the path of movement of the indicator, said indicator being adapted to operate counters in different planes.

[Claims 6 to 29 not printed in the Gazette.]

957,327. SOLDERING IMPLEMENT. HARRY J. GREENE, North Brooksville, Me. Filed Feb. 16, 1910. Serial No. 544,215.

1. A soldering implement comprising a stock having a portion divided with confronting socket members at the terminals of the divided portion, a head having a globular terminal engaged by said socket members, a sleeve slidable upon said stock, a handle, and means operative by said handle for adjusting said sleeve longitudinally of said stock to compress said socket members upon said globular head portion and hold the head in any adjusted position.

2. A soldering implement comprising a stock having one portion threaded and the remaining portion divided with confronting socket members at the terminal of the divided portion, a head having a globular terminal engaged by said socket members, a sleeve slidable upon said



stock, a handle, and a nut carried by said handle and engaging the threaded portion of the stock and rotatively engaging the sleeve.

957,328. REINFORCED-CONCRETE SLEEPER. HUGO GRÖSZL, Vienna, Austria-Hungary. Filed Feb. 3, 1910. Serial No. 541,809.



1. In combination with a hollow reinforced concrete sleeper, track rails, a wear plate beneath each rail, the outer side of each wear plate having a spherical surface and a hooked projection for engaging the foot of the rail, vertical and inclined holding down bolts passing through holes in the wear plate and sleeper and extending into the hollow space of the latter, the bolts having hooked ends, sleeves mounted in the sleeper, and engaging the hooked ends of the bolts, nuts on the outer ends of the bolts, those on the inclined bolts fitting upon the spherical surface of the wear plate.

2. In combination with a hollow reinforced concrete sleeper, track rails, a wear plate beneath each rail, the outer side of each wear plate having a spherical surface and a hooked projection, approximately vertical bolts for holding down the inner side of the wear plate for directly taking up the tension, inclined bolts to hold down the outer side of the wear plate, both sets of bolts passing through relatively large holes in the wear plate and sleeper and extending into the hollow space of the latter, and means permitting the anchoring of the bolts.

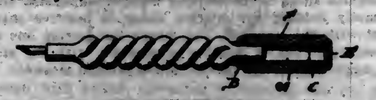
3. In combination with a hollow reinforced sleeper, track rails, means for maintaining them apart at a definite gage, vertical and inclined holding down bolts passing through holes, and extending into the hollow space in the sleeper, the bolts having hooked ends, sleeves mounted in the sleeper and engaging the hooked ends of the bolts for the purpose described.

4. In combination with a hollow reinforced sleeper, track rails, adjustable means for maintaining them apart at a definite gage, vertical and inclined holding down bolts passing through holes, and extending into the hollow space in the sleeper, the bolts having hooked ends, sleeves mounted in the sleeper and engaging the hooked ends of the bolts for the purpose described.

5. In combination with a hollow reinforced sleeper, track rails, vertical and inclined holding down bolts passing through holes and extending into the hollow space in the sleeper, the bolts having hooked ends, sleeves mounted in the sleeper and engaging the hooked ends of the bolts, and a hooked adjustable gage maintaining rod engaging the foot of a rail and disposed within the hollow space of the sleeper.

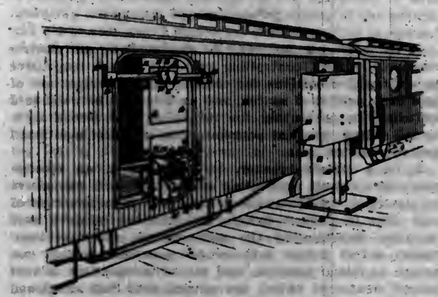
[Claim 6 not printed in the Gazette.]

957,329. ROTARY BLOTTER FOR PENHOLDERS. WILLIAM L. HARR and EARL E. WINNE, Hamilton, Mo. Filed May 3, 1909. Serial No. 493,720.



In combination with a hollow tubular shell having the opening in one end outwardly flaring and provided with a circumferential beading adjacent to said flaring end, said flaring end adapted to conform to and receive the tapering end of a penholder, a cap having a cylindrical shank portion fitted to said shell and forming with the circumference of the latter a bearing surface, a hollow cylindrical blotter mounted upon said bearing surface and held against longitudinal movement by said beading and flange of the cap.

957,330. MAIL-HANDLING APPARATUS. WILLIAM H. HARGRAVES and MILO M. MILLER, Allentown, Pa., assignors of one-third to Charles M. W. Keck, Allentown, Pa. Filed Feb. 24, 1910. Serial No. 545,669.



1. In apparatus of the class described, a mail-bag receiving arm provided with a recess, to adapt it to receive and hold an annular member associated with the bag, and provided at said recess with a resilient member constituting a buffer, and shaped to conform to said recess.

2. In apparatus of the class described, a mail-bag receiving arm having an offset part adapted to receive and hold an annular member associated with a mail-bag, and provided at said offset part with a resilient member adapted to be engaged directly by said annular member, said resilient member constituting a buffer and being shaped to conform to said offset part of said arm.

3. In apparatus of the class described, a rod having a mail-bag catching arm, said arm having an elongated, substantially straight part, a curved part, and beyond the same a laterally disposed part secured to said rod, whereby said arm is offset from said rod, said arm having associated therewith, at said curved part, a resilient member constituting a buffer bent to conform to said curved part.

4. In apparatus of the class described, a rod having an extension, oppositely-extending, mail-bag catching arms carried by said extension, each of said arms comprising a downwardly-disposed part, a lateral, outwardly curved part, and an upwardly offset, elongated part, said first part having a resilient buffer secured thereto and extending along said laterally curved part and shaped to conform thereto.

5. In apparatus of the class described, a swinging support adapted to be mounted at a doorway of a railroad car, and in a normal position, in the plane of the doorway, and a movable cradle mounted to swing upon said support, and adapted to receive and hold a mail bag for delivery.

[Claims 6 to 21 not printed in the Gazette.]

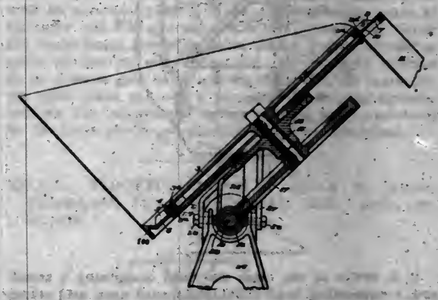
957,331. BRUSH. HARVEY W. HASCY, Brookline, Mass. Filed Sept. 3, 1909. Serial No. 516,106.



1. A brush comprising a ferrule having the bristles secured therein, said ferrule having integral base and side walls forming a cup, a rigid rib projecting from the base portion of the cup, a handle having a head formed with a slot engaging said rib, and a coupling securing the ferrule and head together.

2. A brush comprising a ferrule having the bristles secured therein and having a rigid rib projecting from its upper side, a handle having a head formed with a slot engaging said rib, and a coupling comprising a band surrounding both the head of the handle and the sides of the ferrule, the upper and lower edges of the coupling being turned inward to engage both the ferrule and head.

957,332. SEPARATING-MACHINE. HERBERT HASTINGS, Rochester, N. Y., assignor to German-American Button Co., Rochester, N. Y., a Corporation of New York. Filed July 3, 1908. Serial No. 441,719.



1. The combination with a feeder having a plurality of recesses therein open at their tops and their bottoms, of an inclined table arranged to coöperate with the feeder to support the articles in the recesses and to direct each article toward one wall of a recess, and a separating device over which the articles are carried having a plurality of openings of different sizes, the inner wall of each opening being arranged beyond the walls of recesses to which the articles are carried by the inclined table, so that the articles are supported in the recesses until the proper opening is reached.

2. The combination with a rotary feeder having recesses in its periphery open at their tops, bottoms and outer sides, of an inclined table arranged to coöperate with the feeder to support the articles in the recesses and to direct each article toward the inner side wall of the feeder, and a separating device over which the articles are carried by the feeder, having a plurality of openings of different sizes, the inner wall of each opening being arranged beyond the inner walls of recesses to which the articles are carried by the inclined table so that the articles are supported in the recesses until the proper opening is reached.

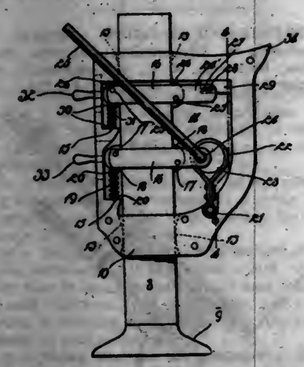
3. The combination with a feeder having a plurality of recesses open at their tops, their bottoms and their outer sides, of a table coöperating with the feeder to support the articles in the pockets, means for coöperating with those ends of the articles projecting from the outer sides of recesses of the feeder to move the articles into engagement with the inner side walls of said recesses and a separating device over which the articles are carried by the feeder.

4. The combination with a feeder having a plurality of recesses open at their tops, their bottoms, and their outer sides, of a table coöperating with the feeder to support the articles in the recesses, an inclined surface past which the recesses are carried to cause the portions of the articles projecting from the outer sides of the recesses to be forced toward the inner side walls of the recesses, and a separating device over which the articles are carried by the feeder.

5. The combination with a rotary feeder having a plurality of recesses in its periphery open at their tops, their bottoms, and their outer sides, of a table arranged to support the articles in the recesses, an inclined surface partially surrounding the feeder to coöperate with those ends of the articles projecting from the outer sides of the recesses, and a separating device over which the articles are carried by the feeder.

[Claims 6 to 11 not printed in the Gazette.]

957,333. LIFTING-JACK. JOHN M. HAWKINS, SILVESTER E. ADKINS, and WILLIS C. CALL, Spencer, Ind. Filed May 8, 1909. Serial No. 494,729.



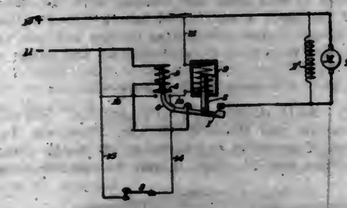
1. A device of the class described comprising a standard, a supporting head slidably mounted upon said standard, a plurality of clamping means arranged within said head and adapted to frictionally engage the standard and a shiftable eccentric having connection with the head and one of said clamping means for advancing the said head upon the standard.

2. A device of the class described comprising a standard, a supporting head slidably mounted upon said standard, a plurality of clamping means arranged within said head and adapted to frictionally engage the standard, a shiftable eccentric having connection with the head and one of said clamping means for advancing the said head upon the standard, and spring means acting upon the clamping means to normally hold the latter in positive engagement with the standard.

3. A device of the class described comprising a standard, a supporting head slidably mounted upon said standard, a plurality of clamping means arranged within said head and adapted to frictionally engage the standard, a shiftable eccentric having connection with the head and one of said clamping means for advancing the said head upon the standard, spring means acting upon the clamping means to normally hold the latter in positive engagement with the standard, and independent manually operable levers for releasing the clamping means from positive engagement with the standard against the action of the spring means.

4. A device of the class described comprising a standard, a movable member slidably supported upon the standard, superposed frictional shoes engaging opposite faces of the standards, links pivotally connecting the said shoes in pairs and disposed at opposite sides of the standard, an eccentric wheel, a strap loop surrounding said eccentric wheel and loosely connected to the movable member, a manually operable lever eccentrically connecting the said eccentric wheel to the links of one pair of friction shoes, means loosely connecting the links of the other pair of friction shoes to the movable member, expansion means normally holding the friction shoes in positive engagement with the standard, and means for moving one shoe of each pair out of positive engagement with the standard against the resistance of the expansion means.

957,334. CIRCUIT-BREAKER. CLARK T. HENDERSON, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed July 1, 1909. Serial No. 505,318.



1. In a circuit breaker, in combination, an electroresponsive circuit controlling switch, a switch responsive to abnormal conditions for causing the deënergization of said first mentioned switch, and an interlock between said switches for preventing the return of said second mentioned switch to initial position while said first mentioned switch remains open.

2. In a circuit breaker, in combination, an electroresponsive circuit controlling switch, a switch responsive to abnormal conditions for causing the deënergization of said first mentioned switch, an interlock between said switches necessitating the reclosure of said first mentioned switch before said second mentioned switch can return to initial position, and means independent of said second mentioned switch for causing said first mentioned switch to respond.

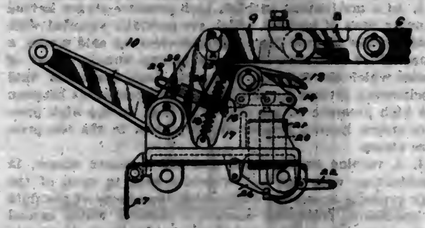
3. In a circuit breaker, in combination, an electroresponsive circuit controlling switch, a switch responsive to abnormal conditions for causing the deënergization of said first mentioned switch, an interlock between said switches necessitating the reclosure of said first mentioned switch before said second mentioned switch can return to initial position, and a normally open energizing circuit for said first mentioned switch independent of said second mentioned switch.

4. In a circuit breaker, in combination, an electroresponsive circuit controlling switch, a normally open energizing circuit therefor, a maintaining circuit for said switch, and a switch responsive to abnormal conditions for opening said maintaining circuit to cause said first mentioned switch to open, said first mentioned switch when open being arranged to prevent reclosure of said maintaining circuit.

5. In a circuit breaker, in combination, an electroresponsive circuit controlling switch, a normally open energizing circuit therefor, a maintaining circuit for said switch, and a switch responsive to abnormal conditions for opening said maintaining circuit to cause said first mentioned switch to open, said first mentioned switch when open being adapted to maintain said second mentioned switch in open position.

[Claims 6 to 10 not printed in the Gazette.]

957,335. AUTOMATIC CIRCUIT-BREAKER. CHARLES T. HEINTSCHEL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 10, 1906. Serial No. 452,396.



1. In an automatic switch or circuit breaker, the combination with switch operating mechanism and restraining means for holding the switch closed, of trip mechanism comprising a trip member biased by stored energy to move from normal position to tripping position and thereby engage said restraining means to trip the switch, and a resilient connection between said member and said mechanism whereby said member is reset in normal position by the movement of said operating mechanism incident to the closing of the switch.

2. In an automatic switch or circuit breaker, the combination with switch operating mechanism and restraining means for holding the switch closed, of a trip member biased by stored energy to move from normal position to tripping position and thereby actuate said restraining means to trip the switch, a resilient connection between said member and said mechanism whereby said member is reset in the normal position by the movement of said operating mechanism incident to the closing of the switch, and electroresponsive means for controlling the movement of said trip member from normal position to tripping position.

3. In an automatic non-closable circuit breaker having separable contacts, the combination with an operating member and a normally positive collapsible connection between said member and said contacts, said connection being set in non-collapsed position by movement of said member in one direction, whereby movement of said member in the other direction actuates said contacts, of a trip member for collapsing said connection, an energy-storing operating device for said trip member, and a resilient connection between said operating member and said trip member whereby said operating member during its movement to set said connection in non-collapsed position stores energy in said operating device.

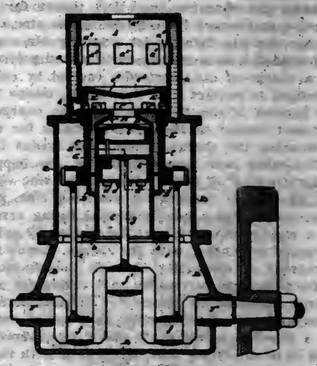
4. In an automatic non-closable circuit breaker having separable contacts, the combination with operating mechanism for the contacts comprising a normally positive collapsible connection, of a trip member biased by stored energy to move from the normal position to tripping position to collapse said connection, and a resilient connection whereby said operating mechanism during its movement to set said collapsible connection in non-collapsed position sets said trip member in normal position and thereby stores energy for moving said trip member into tripping position.

5. An automatic non-closable circuit breaker comprising separable contacts, an operating handle, a collapsible toggle for connecting said handle and said contacts, a trip member operated by stored energy to collapse said toggle, an energy-storing operating device for said trip member and means whereby the movement of said operating handle to straighten said toggle stores energy in said operating device.

[Claims 6 to 8 not printed in the Gazette.]

957,336. INTERNAL-COMBUSTION ENGINE. CHARLES W. HIGGS, London, England. Filed Aug. 28, 1909. Serial No. 515,085.

1. In an internal combustion engine, the combination with an outer cylinder and two oppositely moving pistons traveling one within the other, of a secondary intermediate cylinder separating the two pistons.



2. In an internal combustion engine, the combination with an outer cylinder and two oppositely moving pistons traveling one within the other, of a secondary intermediate cylinder in the form of a water jacket separating the two pistons and giving an internal cooling surface.

3. In an internal combustion engine the combination with an outer cylinder and two oppositely moving pistons, of a separating cylindrical water jacket between the pistons, having an overhanging flange at its inner end.

4. In an internal combustion engine having two oppositely moving telescopic pistons, a secondary separating cylinder between the pistons in the form of a water jacket, having exhaust ports at its outer end uncovered by the inner piston.

5. In an internal combustion engine, the combination with an external cylinder having a compression space at its outer end and admission channels immediately below the compression space, an outer piston having admission ports around its sides admitting the explosive mixture to its interior and an internally coned end, an inner piston with coned end and a secondary separating cylinder between the two pistons having exhaust ports uncovered by the inner piston, substantially as herein described.

957,337. ELECTRIC FURNACE. HIRAM W. HIXON, Philadelphia, Pa. Filed June 11, 1909. Serial No. 501,466.



1. In an electric furnace for smelting zinc, a casing provided with a non-conducting refractory lining for receiving the charge, upper and lower electrodes arranged to contact with the charge and adapted to connect with a

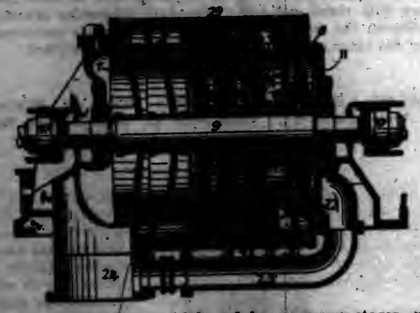
source of current, charging means arranged to operate so as to maintain the vapor density of the zinc in the furnace during the charging operation, means for separating the slag and means for condensing the zinc vapor.

2. In an electric furnace for smelting zinc, a hollow casing provided with a non-conducting lining arranged to receive a charge of ore, electrodes carried by said lining and arranged to contact with the charge, means for passing the current of electricity through the charge, a two compartment hopper carried by said casing for receiving and preheating the charge, independent means for opening and closing each compartment of the hopper, and means for drawing off and condensing the zinc vapor.

3. In an electric furnace for smelting zinc, a hollow casing provided with a non-conducting lining arranged to receive a charge of ore, electrodes carried by said lining and arranged to contact with the charge, means for passing a current of electricity through the charge, a two compartment hopper carried by said casing for receiving the charge, independent means for opening and closing each compartment of the hopper, said means comprising a shaft, a wheel upon said shaft, and a cone shaped closure arranged to be drawn up into engagement with the mouth of the compartment, a condenser, a passage leading from the lower part of said furnace to said condenser, said condenser comprising a pocket for collecting the slag and a compartment for condensing the zinc vapors and means for keeping the zinc in a volatilized state for passing over said pocket.

4. In an electric furnace for smelting zinc, a main casing provided with electrodes for smelting the charge, preheating means arranged to deliver a heated charge to said furnace, a tap hole at the bottom of said furnace, an exterior condenser communicating with said tap hole, and means for producing a series of electric arcs immediately above the tap hole for maintaining the zinc vapor in a gaseous condition while passing into the condenser.

957,338. MULTISTAGE TURBINE. FRANCIS HODGKINSON, Edgewood Park, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Feb. 26, 1907. Serial No. 359,468.



1. A turbine having high and low pressure stages, in combination with rows of wheel-buckets in each of the high-pressure stages for abstracting the energy of the motive fluid by successive fractions, a single row of wheel-buckets in each of the low-pressure stages for abstracting the energy of the fluid in each stage in a single operation, nozzles for expanding and discharging fluid to the high-pressure stages, nozzles or devices for discharging fluid to the low-pressure stages, and partitions which are located between the high-pressure stages only.

2. A turbine having high and low pressure stages, in combination with rows of wheel-buckets in each of the high-pressure stages, for abstracting the energy of the motive fluid by successive fractions, nozzles or devices which extend over a limited arc and discharge motive fluid against a portion only of the buckets in each of the high-pressure stages for abstracting the energy of the fluid in each stage by successive operations, nozzles or devices for the low-pressure stages which surround the wheel-shaft and discharge fluid against all of the wheel-buckets, and partitions which are located between the high-pressure stages only and support the high-pressure nozzles or devices.

3. In a multi-stage turbine, high-pressure stages having annular rows of buckets which are partially supplied with fluid, nozzles or fluid discharging devices for said stages, a plurality of low pressure stages having annular rows of blades which are fully supplied with fluid, nozzles or fluid discharging devices for said stages, and partitions between the high pressure stages only; the fluid in the high pressure stages having greater velocity than in the low-pressure stages.

4. A turbine having high and low pressure stages, in combination with rows of wheel buckets in each of the high pressure stages for abstracting the energy of the fluid by successive fractions, nozzles or devices which extend over a limited arc and discharge fluid against a portion only of said buckets in a given unit of time, a single annular row of wheel buckets in each of the low-pressure stages and nozzles or devices for the low-pressure stages which surround the wheel-shaft and discharge fluid against all of the wheel-buckets, and partitions which are located between the high-pressure stages only and support the high pressure nozzles or devices.

5. In a multi-stage elastic fluid turbine, a plurality of high-pressure stages, each of which includes a complete running wheel equipped with a plurality of rows of buckets for fractionally abstracting fluid energy and nozzles or devices for discharging fluid to the high-pressure stages, a plurality of low-pressure stages, the buckets of which are mounted on one or more drums or wheels, an annular row of nozzles or devices for each low pressure stage for discharging fluid to the entire row of buckets thereof and partitions which are located between the high pressure stages only.

[Claims 6 to 9 not printed in the Gazette.]

957,339. FLUID-PRESSURE MOTOR. HARRIS B. HOLT, Pittsburg, Pa., assignor of one-half to Charles A. Conn, Pittsburg, Pa. Filed June 14, 1909. Serial No. 502,068.



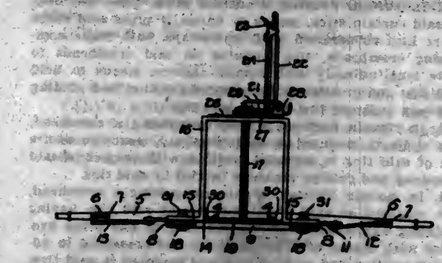
1. In a fluid pressure motor the combination of a casing having bearings adjacent to its ends, a wheel provided with spindles, sleeves engaging said spindles and forming the journals of the wheel, one of said sleeves being provided with means for attachment to a tool.

2. A wheel for fluid pressure motors formed of non-corrosive metal in combination with a spindle having the wheel keyed thereon and sleeves formed of hard metal secured to the spindle, one of said sleeves being provided with means for attachment to a tool.

957,340. HORSE-RELEASER. GEORGE W. HUFFMAN, Buckhorn, Mo. Filed Oct. 24, 1907. Serial No. 399,043.

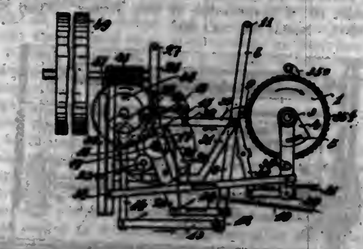
The combination with an axle and its shaft engaging clips, of a frame projecting forwardly of the axle, the said frame being detachably connected to said axle, and including spaced parallel side bars and a front cross bar, alining guide straps mounted on the side bars of the frame, a beam slidable in the guide straps and resting upon the side bars, rack teeth formed on one longitudinal edge of the beam, rigid pins pivotally connected to opposite ends of the beam and their free extremities being adapted to engage in the shaft clips, a bracket rising from the front cross bar of the frame, a vertical shaft journaled in the

cross bar and bracket, a cog gear fixed near the lower end of the shaft and meshing with the rack teeth, a perforated segment projecting laterally from the bracket, and a



throw lever fixed to the upper end of the shaft and having a locking pawl engaging in the perforated segment to hold the lever in adjusted position.

957,341. APPARATUS FOR THE AUTOMATIC OPENING AND CLOSING OF PIPES, VALVES, &c., AT FIXED INTERVALS. HUGO JACOBI, Leipsig, Germany. Filed June 16, 1906. Serial No. 321,972.



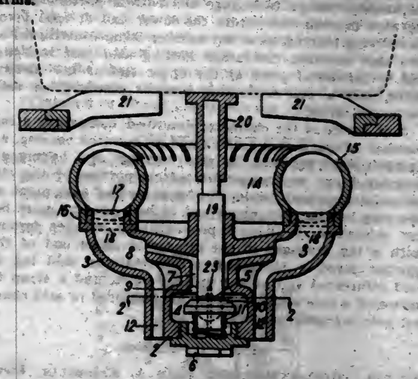
In an apparatus to automatically open and close the mouth of pipes, valves, and the like serving to conduct water, steam or the like the combination of a drum, a set of holes provided on said drum, an arresting mechanism coöperating with said holes, a second set of holes provided on said drum running parallel to the first set of holes, a peg engaging said second set of holes, a clock work means to operate said peg in accordance with said clock work, and means to forward said drum if said peg is out of engagement, substantially as described and for the purpose set forth.

957,342. AUTOMATIC GAS-BURNER. ROBERT G. JAMISON, Pittsburg, Pa., assignor of one-half to Charles M. Patterson, Pittsburg, Pa. Filed Mar. 17, 1909. Serial No. 484,001.

1. In a gas cooking stove, a burner comprising a casting provided with a gas inlet chamber and with oppositely arranged hollow arms and with air ports communicating with said hollow arms, a hollow distributing ring resting on and communicating with said hollow arms, and a valve controlling a passage between the gas inlet chamber and said hollow arms and provided with actuating means projecting above the burner.

2. In a gas cooking stove, a burner comprising a casting provided with a gas inlet chamber and oppositely arranged hollow arms and with air ports communicating with said hollow arms, a hollow distributing ring resting on and communicating with said hollow arms, a valve controlling communication between the gas chamber and the hollow arms and provided with a stem projecting above the burner, and a spring in the lower part of said casting and arranged to close said valve.

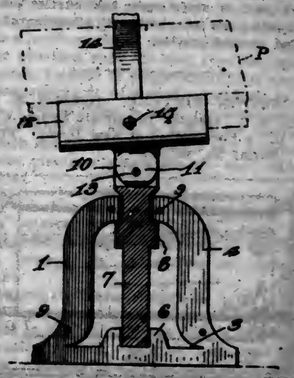
3. In a gas cooking stove, a burner comprising a casting provided with a gas inlet chamber and with oppositely arranged hollow arms, a burner ring resting on and communicating with said hollow arms, a valve controlling communication between the gas chamber and said hollow arms and provided with a stem projecting above the burner, a spring in the lower part of the casting arranged to close the valve, and a constantly open port affording communication between the gas chamber and said hollow arms.



4. In a gas cooking stove, the combination of a casting provided with a gas inlet chamber and with oppositely arranged hollow arms and with air ports communicating with said hollow arms, a hollow burner ring resting on ledges on the ends of said arms and removable therefrom and communicating with said hollow arms, and a valve controlling communication between the gas chamber and said hollow arms and provided with actuating means projecting above the burner.

5. In a gas cooking stove, the combination of a casting provided with a gas inlet chamber and oppositely arranged hollow arms and with air ports communicating with said hollow arms, a hollow, distributing ring resting on said arms and communicating with the passages therein, a valve controlling communication between the gas chamber and said hollow arms and provided with an upwardly projecting stem, a cast metal cap on the upper end of said stem, and a spring in the lower part of the casting arranged to close said valve.

957,343. MAST-CAP. BENJAMIN D. JENSEN, Chesterfield, Idaho. Filed Nov. 6, 1909. Serial No. 526,572.



1. A device of the character described, comprising a cap member having a step bearing and an elevated bearing, an upright pivot rotatable in said bearings and having an annular flange to engage the bottom portion of the elevated bearing and retain the lower end of said pivot in

the step bearing, a horizontal pivot at the top of said upright pivot, and a pole-supporting member mounted on said horizontal pivot.

2. A device of the character described, comprising a cap member having a step bearing and an elevated bearing, an upright pivot rotatable in said bearings and having an annular flange to engage the bottom portion of the elevated bearing and retain the lower end of said pivot in the step bearing, said cap member being constructed of two half sections, fastenings uniting said half sections, and a horizontal pivot at the upper end of the upright pivot, and a pole-supporting member mounted on said horizontal pivot.

3. A device of the character described, comprising a cap member having a step bearing and an elevated bearing, an upright pivot rotatable in said bearings and having an annular flange to engage the bottom portion of the elevated bearing and retain the lower end of said pivot in the step bearing, the upper end of said upright pivot being bifurcated, a channel pole-engaging member formed with a lug arranged in the bifurcated upper end of the upright pivot, a horizontal pivot retaining said lug in said bifurcated end of the upright pivot, and a strap to surround a pole and having its ends secured to said channel pole-engaging member.

957,344. HOG-GAMBREL. JOHN A. KAISERLIK, Stewartville, Minn. Filed June 22, 1907. Serial No. 380,266.



A device of the class set forth, comprising, a pair of integral and lateral spreader arms having loops upon their outer ends which are elongated downwardly and outwardly, hooks having free connection with said arms through said loops, an overhead carrier, a separable connection between said carrier and arms to suspend the latter and a pair of stops upon said carrier adapted to rigidly hold said arms in substantially horizontal position when coupled to said carrier.

957,345. CURTAIN-FIXTURE. HERBERT E. KEELER, New York, N. Y., assignor to Curtain Supply Company, Chicago, Ill., a Corporation of New Jersey. Filed Mar. 7, 1902. Serial No. 97,105.



1. In curtain fixtures, a spring-actuated curtain, a curtain stick mounted in said curtain, shoes mounted on said curtain stick to reciprocate with respect to each other and normally pressed apart, said shoes comprising crossheads and tips slidingly mounted on said crossheads and carrying guiding members to form adjustable length shoes.

2. In curtain fixtures, a curtain stick, shoes mounted on said curtain stick, means to normally press said shoes apart into coöperation with guideways, said shoes comprising crossheads, tips mounted on said crossheads to move longitudinally with respect thereto, means to hold said tips and crossheads in adjusted position and guiding members adjacent the ends of said tips.

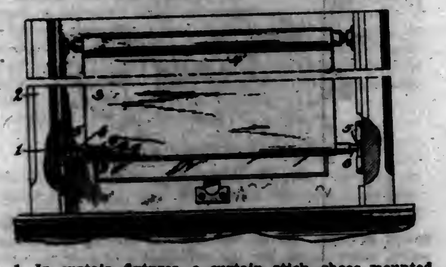
3. In curtain fixtures, a shoe comprising a crosshead, tips slidingly mounted on said crosshead, means to secure one of said tips in adjusted position with respect to said crosshead and guiding members carried by said tips.

4. In curtain fixtures, a shoe comprising a crosshead, tips mounted on said crosshead, one of said tips having a sliding adjustment with respect thereto and being provided with means to secure said tip and crosshead in adjusted position and guiding members mounted in said tips.

5. In curtain fixtures, a shoe comprising a crosshead, tips provided with guiding members secured to said crosshead, one of said tips being adjustable with respect to the other to form a shoe of adjustable length.

[Claims 6 to 28 not printed in the Gazette.]

957,346. CURTAIN-FIXTURE. HERBERT E. KEELER, New York, N. Y., assignor to Curtain Supply Company, Chicago, Ill., a Corporation of New Jersey. Filed Nov. 12, 1906. Serial No. 342,959.



1. In curtain fixtures, a curtain stick, shoes mounted to reciprocate on said stick, means to normally press said shoes apart into coöperation with guideways, said shoes comprising crossheads, tips provided with guiding members mounted on said crossheads to move longitudinally with respect thereto, springs between said tips and crossheads to form spring extensible telescoping shoes, guideways formed with slots to accommodate said guiding members and with locking means and locking members on said crossheads separated from one of the guiding members to engage said locking means and maintain said telescoping shoes in retracted position.

2. In curtain fixtures, a curtain stick, shoes comprising crossheads loosely mounted to reciprocate on said curtain stick, means to press said shoes apart, telescoping tips provided with guiding members mounted on said crossheads, spring acting means to automatically extend said telescoping shoes and locking means beyond said curtain stick to automatically lock said telescoping shoes in retracted position.

3. In curtain fixtures, a shoe comprising a crosshead, tips provided with guiding members secured to said crosshead, one of said tips having a limited telescoping connection with said crosshead, and a spring between said telescoping tip and crosshead to form an automatically extensible shoe.

4. In curtain fixtures, a curtain stick, shoes mounted on said curtain stick, means to normally press said shoes apart into coöperation with guideways, said shoes having tips mounted to slide thereon and means to normally force said tips apart into extended position forming automatically extensible shoes.

5. In curtain fixtures, a shoe comprising a crosshead, tips provided with guiding members secured to said cross

head, one of said tips being slidingly mounted on said crosshead and a spring between said tip and crosshead to form an automatically extensible connection between them.

[Claims 6 to 26 not printed in the Gazette.]

957,347. COMBINED STUFFING-BOX, GASKET, VALVE, AND SPRING. GUY L. KENNEDY, San Francisco, Cal., assignor to National Carbonated Liquid Co., San Francisco, Cal., a Corporation of California. Filed Sept. 2, 1909. Serial No. 515,972.



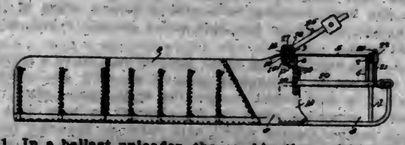
1. In combination with a casing provided with means for admitting and exhausting fluid therefrom, a device movable in said casing and having a stem, and a soft rubber conoidal shell having its base secured with an air-tight fit to said casing, and its central portion fitting air-tight around said stem, substantially as described.

2. In combination with a casing, a soft rubber shell having a flange secured to said casing, and a central device within the casing around which the shell fits air-tight and which is operatively connected to said shell to move therewith, substantially as described.

3. In combination with a casing formed to provide a passage for the flow of gas, a valve for closing said passage, comprising a soft rubber shell having its edge secured air-tight to said casing, a stem around which the center of the shell fits air-tight, and which is connected to said center to withdraw the same with the movement of said stem, and means moving with the shell for closing said passage, substantially as described.

4. In combination with a casing formed to provide a passage for fluid, a shell having its edge secured to said casing, a central stem around which said shell fits air-tight, said shell having a valve movable therewith and with the stem to close said passage, and the thickness of said shell being sufficient to provide force from the resilience of the rubber to hold said valve to its seat and close said passage, substantially as described.

957,348. BALLAST-UNLOADER. CHARLES B. KING and HARRY J. BARNHART, Marion, Ohio, assignors to The Marion Steam Shovel Company, Marion, Ohio, a Corporation of Ohio. Filed Sept. 20, 1909. Serial No. 518,501.



1. In a ballast unloader, the combination, with a plow, of a pilot comprising transverse frame members, fender plates, and a bracing plate extending transversely to said pilot, arranged between said frame members and rigidly secured at its edges to the respective frame members.

2. In a ballast unloader, the combination, with a plow, of a pilot comprising transverse frame members, and a plate of metal shaped to conform substantially to the contour of said frame members, arranged between the same and rigidly secured at its edges thereto.

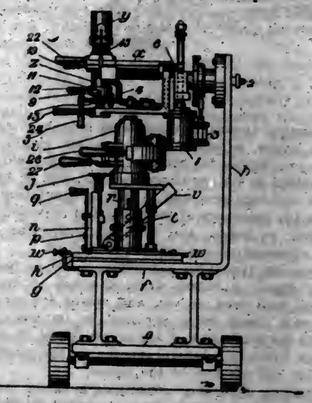
3. In a ballast unloader, the combination, with a plow, of a pilot comprising transverse frame members, angle irons secured to the adjacent faces of said frame members, and a plate arranged between said frame members and rigidly secured to said angle irons.

4. In a ballast unloader, the combination, with a plow, of a pilot comprising two arches, and a curved plate arranged between said arches and rigidly secured thereto.

5. In a ballast unloader, the combination, with a plow, of a pilot comprising two arches, fender plates connecting said arches at their lower ends, and a plate curved to conform to the shape of those portions of said arches lying above said fender plates and rigidly secured to said arches.

[Claims 6 to 18 not printed in the Gazette.]

957,349. MACHINE FOR MANUFACTURING GLASS BOTTLES, JARS, AND THE LIKE. FREDERICK W. KNOWLES and GEORGE W. INMAN, Thornhill Lees, near Dewsbury, England. Filed Aug. 6, 1909. Serial No. 511,614.



1. In a bottle-machine, the combination, with a main frame provided with a horizontal guide extending from back to front in the frame, of a slide movable in the said guide, a finishing mold secured to the said slide, a vertically slidable paddle carried by the said slide at the front part of the machine and in front of the said finishing mold, a reversible parison mold, said paddle and finishing mold being slidable back and forth under the parison mold, and a frame connecting the parison mold with the main frame and extending horizontally over the finishing mold when the paddle is directly under the parison mold.

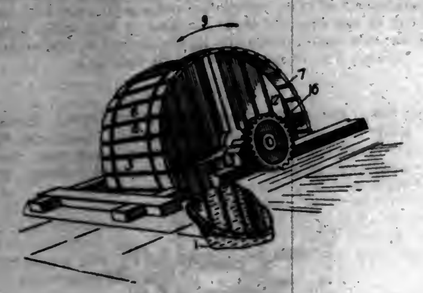
2. In a bottle-machine, the combination, with a plunger cylinder provided with an inlet pipe for compressed air and having a series of longitudinal inlet grooves for air extending around it, of a plunger slidable in the grooved portion of the cylinder, a collar journaled on the said cylinder and provided with a means for oscillating it, an outer neck mold formed in halves and mounted on slides, and links pivotally connecting the said slides with the said collar.

957,350. TANNING APPARATUS. JOHN B. KOOGLER, Indiana, Pa., assignor of one-half to Charles H. Robinsteen, Indiana, Pa. Filed July 12, 1909. Serial No. 507,181.

1. Tanning apparatus comprising a vat or tank for the tanning liquor, a rotary drum mounted to dip deeply into the liquor in said tank or vat and being provided with a substantially smooth outer or peripheral surface, and means for rotating said drum, said drum being provided with openings in its periphery and its ends or heads so arranged as to induce circulation inwardly through the periphery and outwardly through both ends or heads.

2. Tanning apparatus comprising a tank or vat for the tanning liquor, a rotary drum mounted to dip into said

tank or vat, and means for rotating said drum, said drum being provided with inclined openings through its periphery and ends or heads, the said openings in the periphery being inclined from the outside to the inside rearwardly with reference to the direction of rotation of the drum and those through the heads being inclined in the direction of the back flow of liquor in the drum.



3. Tanning apparatus comprising a tank or vat for the tanning liquor, a rotary drum mounted to dip into said tank or vat, means for rotating said drum, said drum being provided in its periphery and its ends or heads with inclined openings arranged to induce circulation inwardly through the periphery of the drum and outwardly through both ends or heads, and inwardly projecting spikes or prongs arranged on the walls of said drum.

4. Tanning apparatus comprising a vat or tank for the tanning liquor, a rotary drum mounted to dip into the liquor in said tank or vat, and means for rotating said drum, said drum being provided in its periphery with openings for the in-flow of the liquor and in its heads with openings extending into proximity to the center of said heads for the out-flow of the liquor.

5. Tanning apparatus comprising a vat or tank for the tanning liquor, a rotary drum mounted to dip into the liquor in said vat or tank, and means for rotating said drum, said drum being provided in its periphery with openings for the in-flow of the liquor and in its heads with long slots for the out-flow of the liquor.

957,351. MANUFACTURE OF BUILDING-BLOCKS. CONRAD KÖRTLING and CARL JANITSCH, Cassel, Germany. Filed Apr. 1, 1909. Serial No. 487,295.

1. A process of manufacturing building blocks, which comprises the impregnation of unpressed blocks of peat with a solution of water-glass.

2. A process of manufacturing building blocks, which comprises coating unpressed blocks of peat with a layer of water-glass, the central portion of the peat block remaining unaltered.

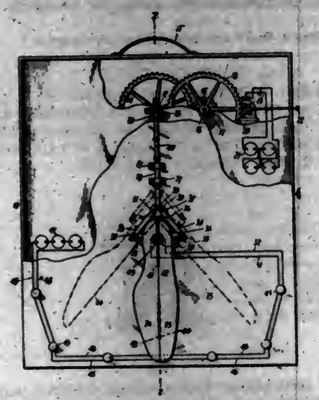
3. A building block consisting of an unpressed block of peat impregnated with water-glass.

4. A building block consisting of an unpressed block of peat provided with a coating of fire-proofing material, the central portion of the block remaining in its natural condition.

957,352. MOVING SIGN. WILLIAM W. LILES, St. Louis, Mo. Filed Oct. 12, 1908. Serial No. 457,408.

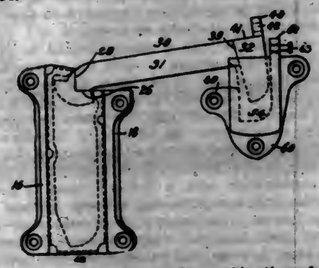
1. A device of the class described comprising a plurality of electric lamps connected in circuit, two objects movable toward and away from each other, contacts carried by said objects and engaged when said objects are in one position, said contacts being connected in circuit with said lamps, and means for actuating said objects.

2. In a device of the class described, a supporting structure, a plurality of electric lamps connected in circuit, two objects movable upon said structure, a bar arranged for movement upon said structure, a bracket connected to each of said objects, links connected respectively between said bar and objects, contacts carried by said objects and



connected in circuit with said lamps, a motor, and connecting means between said motor and bar.

957,353. HASP-LOCKING DEVICE. ERNEST A. LINDSTROM, Orange, N. J. Filed Apr. 7, 1909. Serial No. 488,384.



1. In a hasp locking device the combination of a casing, a chamber in the casing connecting with an opening formed in said casing, retaining edges in the chamber, a hasp with one end within said chamber and engaging faces on the hasp coacting with the said retaining edges of the chamber.

2. In a hasp locking device the combination of a casing, a chamber in the casing connecting with an opening formed in said casing, retaining edges in the chamber, a hasp with one end within said chamber, engaging faces on the hasp coacting with said retaining edges of the chamber, a head on the hasp and a pocket to lock with said head.

3. In a hasp locking device the combination of a casing, a chamber in the casing connecting with an opening formed in said casing, supporting seats formed with the casing, retaining edges in the chamber, a hasp with a hook portion thereof within said chamber, engaging faces on the hook portion formed to coact with said retaining edges when the major portion of the hasp is withdrawn from said chamber, supporting seats on the casing, a head formed with the hasp supported on the said supporting seats when the major portion of the hook is within the said chamber, and a pocket for the device in the path of the head of the hasp when the latter has its major portion withdrawn from said chamber.

4. In a hasp locking device the combination of a casing, a chamber in the casing connecting with an opening formed in said casing, retaining edges in the chamber, a hasp with a double hook at one end thereof within the chamber, engaging faces on the double hook coacting with

the said retaining edges, a head at the other end of the hasp, an ear on the said head having an opening, a pocket to lock with said head, a lug for said pocket having an opening coacting with the opening in the head when the latter is locked with the pocket.

5. In a hasp locking device the combination of a casing, a chamber in the casing connecting with an opening formed in said casing, a hasp having one end within said chamber, means to retain one end of said hasp in said chamber, a pocket having an opening for the other end of said hasp coacting with said openings to lock the hasp and pocket together.

[Claim 6 not printed in the Gazette.]

957,354. CLOSURE-LOCKING MEANS. CARL J. LJUNGGREN, Providence, R. I. Original application filed Sept. 2, 1908, Serial No. 451,444. Divided and this application filed Oct. 1, 1909. Serial No. 522,930.



1. In a device of the type set forth, the combination with a stationary member, of a closure body, and a segment upon the body comprising a plurality of radially graduated portions, each portion being provided with a series of transversely disposed steps provided with peripheral faces parallel with the axis of the closure body.

2. In a device of the type set forth, the combination with a stationary member, of a closure body, and a segment upon the body comprising a plurality of radially graduated portions, each portion being provided with a series of transverse steps of gradually lessening radii longitudinally of the body.

3. In a device of the type set forth, the combination with a stationary member, of a closure body, and a segment upon the body comprising a plurality of radially graduated portions, each portion being provided with a series of steps of gradually lessening radii longitudinally of body and having a pitched relation to the body.

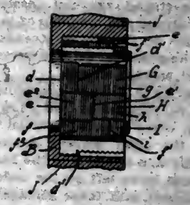
4. In a device of the type set forth, the combination with a stationary member, of a closure body, and a segment upon the body comprising a plurality of radially graduated portions, a series of graduated steps upon each portion provided with peripheral faces parallel with the body axis, and provided with rear pitched faces in alinement with each other.

5. In a device of the type set forth, the combination of a hollow stationary member provided with longitudinally disposed graduated channeled portions, each channeled portion being provided with transversely disposed graduated channels of diminishing radii longitudinally, and a closure member within the stationary member, and radially graduated portions upon the closure member provided with a series of steps adapted to register in the graduated channels.

957,355. CLOSURE-LOCKING MEANS. CARL J. LJUNGGREN, Providence, R. I. Original application filed Sept. 2, 1908, Serial No. 451,444. Divided and this application filed Oct. 16, 1909. Serial No. 522,931.

1. In a device of the type set forth, the combination with a stationary member, of a closure body, and a segment upon the body comprising steps, said steps being graduated both radially and longitudinally, and being provided with threads upon their outer faces.

2. In a device of the type set forth, the combination with a stationary member, of a closure body, a segment upon the body comprising steps graduated both radially and longitudinally, auxiliary steps in longitudinal alinement with the first mentioned steps, said auxiliary steps being longitudinally and radially graduated.



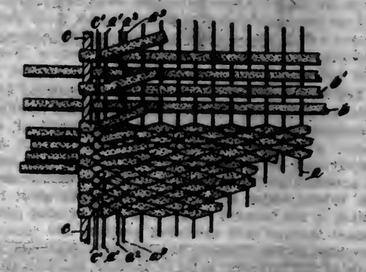
3. In a device of the type set forth, the combination with a stationary member, of a closure body, a segment upon the body comprising steps graduated both radially and longitudinally and provided with threads upon their outer faces, auxiliary steps in longitudinal alinement with the first mentioned steps, said auxiliary steps being longitudinally and radially graduated and being provided with threads upon their outer faces.

4. In a device of the type set forth, the combination with a stationary member, of a closure body, a segment upon the body comprising a plurality of radially graduated longitudinally disposed steps of graduated lengths provided with terminal shoulders diagonally disposed with relation to each other, and longitudinally disposed auxiliary steps extending from the first mentioned steps and in a lower plane than the latter, all the steps being provided with threads upon their outer faces.

5. In a device of the type set forth, the combination with a stationary member, of a closure body, a segment upon the body comprising steps graduated both radially and longitudinally and provided with threads upon their outer faces, said steps terminating in transversely inclined shoulders, and radially and longitudinally graduated auxiliary steps extending from said shoulders in a lower plane and provided with threads upon their outer faces.

[Claim 6 not printed in the Gazette.]

957,356. SHORT-WEFT FABRIC AND METHOD OF MAKING THE SAME. DAVID F. LUCIER, Worcester, Mass., assignor to Julius Garst, Worcester, Mass. Filed Jan. 25, 1908. Serial No. 412,567.



1. A fabric having a selvage comprising two longitudinal strands or threads, and filling, certain strands of which pass over the inner selvage strand and over and entirely around the outer selvage strand, the ends passing back over the inner selvage strand, and under the body of the same filling strand.

2. A fabric having a selvage comprising two longitudinal strands or threads at the extreme edge thereof, a certain strand of which passes over the inner selvage strand, over and entirely around the outer selvage strand, and back over the inner selvage strand, the free end being left on the under or wrong side of the fabric between said inner selvage strand and the first warp strand, said free end being cut off at this point.

3. A fabric having a selvage comprising two longitudinal strands or threads at the extreme edge thereof,

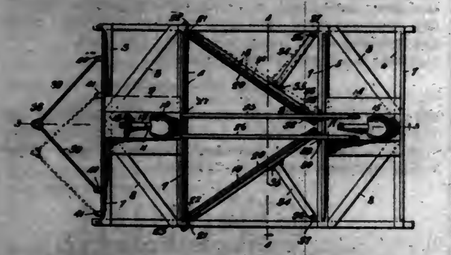
and filling, every alternate strand of which passes over the inner selvage strand and over and entirely around the outer selvage strand, the end passing back between the inner selvage strand and the body of said filling strand, and the remainder of the filling strands of which pass under the inner longitudinal selvage strand and over the outer longitudinal selvage strand.

4. A fabric having a selvage consisting of two longitudinal strands or threads at the edge beyond all the warp, and filling, every alternate strand of which passes entirely around the outer selvage strand, and back between the inner selvage strand and the body of said filling strand, the free end being left on the under or wrong side of the fabric between said inner selvage strand and the first warp strand, said free end being cut off at this point, and the remainder of the filling strands of which pass under the inner longitudinal selvage strand and over the outer longitudinal selvage strand, and are cut off between the two longitudinal selvage strands on the right side of the fabric.

5. A fabric having a selvage comprising two longitudinal strands or threads, and filling, every alternate strand of which passes around the outer selvage strand, and back over the inner selvage strand, and the remainder of the filling strands of which pass under the inner longitudinal selvage strand and over the outer longitudinal selvage strand, the first warp strand of the fabric being close to said inner longitudinal selvage strand, and the second and third warp strands being spaced therefrom but located close together, whereby the filling is firmly held by said warp and selvage strands.

[Claims 6 to 12 not printed in the Gazette.]

957,357. ROAD-GRADER. THOMAS E. LYON, Bucklin, Kans. Filed Apr. 7, 1909. Serial No. 488,332.



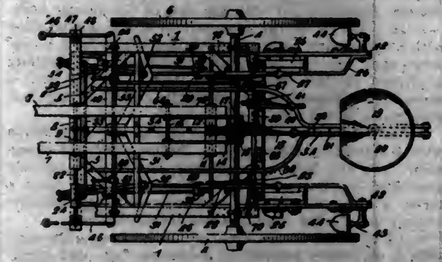
The herein described road grader comprising a rectangular frame having parallel side runners and front and rear connecting bars, said runners being formed at opposite points with upper and lower openings, a pair of rearwardly and inwardly converging scrapers each consisting of a vertically disposed bar and scraper blades secured to the bottom edges of said bars, apertured pivot brackets bolted to the forward ends of the scraper bars, pivot bolts passed through said apertured brackets and through said openings in the runners to adjustably pivot the forward ends of the scrapers, pairs of angular brackets secured to the intermediate portions of the outer rear faces of the scraper bars, diagonally arranged braces within the frame and having their inner ends pivoted between said pairs of angular brackets, loose pivotal connections between the outer ends of said braces and the runners, a pair of forwardly and rearwardly extending levers arranged above the frame adjacent its center, a pair of upright posts on the intermediate portion of the front connecting bar of the frame and carrying pivots for said levers, a pair of similarly arranged uprights on the rear connecting bar of the frame and having bifurcated upper ends formed with vertical series of transverse alining openings, said bifurcated upper ends of the uprights being adapted to receive the levers, pairs of pins arranged in the transverse alining openings in the last mentioned upright to retain the levers in adjusted position, and links having their upper ends pivotally connected to said levers and their lower ends pivotally connected to the scraper bars adjacent the rear ends of the latter.

957,358. GAS-BURNER. ERNST MEYER-ZIMMERLI, Zurich, Switzerland, assignor to Gustav Schmid, Kreuzlingen, Switzerland. Filed Jan. 8, 1910. Serial No. 537,070.



In a Bunsen burner the combination with a gas inlet tube and an air inlet hood about said tube the said hood having a restricted passageway above the air inlet holes thereof, of a sliding sleeve on said gas inlet tube, a perforated cap to said sleeve and collar thereon adapted to coact with the restricted passageway to form a variable air passage into the mixture chamber of the burner.

957,359. CULTIVATOR. JOHN P. MEYERS, Monroeville, Ohio. Filed June 15, 1909. Serial No. 502,314.



1. In a cultivator, the combination of a main frame having an arched axle, a tongue mounted on the frame for horisontal and vertical swinging movement, a member slidable on the axle and pivotally connected to the tongue, a link and lever connection between said member and said tongue, means for locking said connection in adjusted position, upright shafts upon the frame, foot pieces for rocking said shafts, and operative connections between said shafts and said member whereby the latter may be moved longitudinally of the axle.

2. In a cultivator, the combination of a main frame having an arched axle, a tongue mounted on the frame for horisontal and vertical swinging movement, a member slidable on the axle and pivotally connected to the tongue, a link and lever connection between said member and the tongue and means for locking said connection in adjusted position.

3. In a cultivator, the combination of a main frame, a tongue consisting of spaced members, a U-shaped strap uniting the intermediate portions of said tongue members, a horisontal pivot passed through said tongue members and said strap, a vertical pivot uniting said strap to the frame, and an adjustable connection between the rear portion of the tongue and the frame.

4. In a cultivator, the combination of a main frame having an arched axle, a tongue consisting of spaced members and mounted on the frame for horisontal and vertical swinging movement, a U-shaped member arranged between

the rear portions of the spaced members of the tongue and pivotally connected thereto, spaced anti-friction rollers journaled on said U-shaped member and arranged for sliding movement on the arched axle, a link and lever connection between said U-shaped member and the tongue and means for retaining said connection in adjusted position.

5. In a cultivator, the combination of a main frame having an arched axle, a tongue fulcrumed intermediate its ends for horisontal swinging movement, a guiding means for the rear end of the tongue slidably engaged with said axle, upright shafts upon the frame adjacent its sides, foot pieces for rocking said shafts, and operative connections between said shafts and the rear end of the tongue.

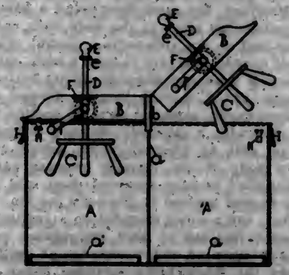
[Claims 6 to 17 not printed in the Gazette.]

957,360. UNDERGARMENT FOR WOMEN. MABEL MILLARD, Oak Park, Ill. Filed Apr. 7, 1909. Serial No. 488,440.



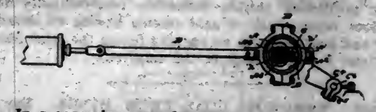
A garment of the class described comprising a waist-band, a saddle secured to the waist-band at its rear and having detachable connection with the band at the front, and side wings permanently secured to the saddle and band, each wing being divided in the direction of its length to provide permanently spaced opposing edges adapted to permit the wings to snugly fit the legs and hips of the wearer, and provide a permanent opening at the front and running lengthwise of the legs of the wearer, said opening extending from the waist-band to the lower end of the wings, the lines of connection of wings and saddle and of the wings and waist-band being of a form to cause the wings to assume a shape in cross-section incompletely surrounding the leg.

957,361. COMBINED WASHING-MACHINE AND BOILER. MARGARET MCKUEN, Guelph, Ontario, Canada. Filed Aug. 14, 1909. Serial No. 512,918.



In combination with a wash boiler divided into two compartments, a removable center bridge, hinged lids attached to and carried by said bridge; said lids carrying on their under side, means for operating a dolly, and slidable vertical dolly stems surmounted with non-conducting knobs for the purpose of raising the lids singly or together from the top of the wash boiler, substantially as described.

957,362. REVERSING-GEAR. DENNIS W. MCLAUGHLIN, Berkeley, Cal., assignor to McLaughlin Manufacturing Company, Berkeley, Cal. Filed Oct. 28, 1908. Serial No. 459,897.



1. In a reversing gear for steam engines, the combination with an engine shaft, of an eccentric encircling said shaft and adapted to be connected with a cut off valve, an oscillating block mounted in said eccentric, and an inclined plane slidably mounted on the engine shaft and extending through said block.

2. In a reversing gear for steam engines, the combination with an engine shaft, of an eccentric encircling said shaft and adapted to be connected with a cut off valve, an oscillating block mounted in said eccentric, a disk mounted on said shaft and provided with a laterally extended inclined plane engaging said block, and means for shifting said disk on said shaft.

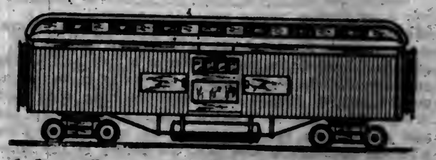
3. In a reversing gear for steam engines, the combination with an engine shaft, of an eccentric encircling said shaft and adapted to be connected with the cut-off valve, means for pivotally supporting said eccentric to one side of the axis of said shaft, a disk mounted on said shaft and provided with a laterally extended inclined plane engaging said eccentric, and means for shifting said disk on said shaft.

4. In a reversing gear for steam engines, the combination with an engine shaft, of an eccentric encircling said shaft and adapted to be connected with a cut-off valve, means for pivotally supporting said eccentric to one side of the axis of said shaft, an oscillating block mounted in said eccentric, and an inclined plane slidably mounted on the engine shaft and extending through said block.

5. In a reversing gear for steam engines, the combination with an engine shaft, of an eccentric encircling said shaft and adapted to be connected with a cut-off valve, an oscillating block mounted in said eccentric, means for pivotally supporting said eccentric to one side of the axis of said shaft, a disk mounted on said shaft and provided with a laterally extended inclined plane engaging said block, and means for shifting said disk on said shaft.

[Claim 6 not printed in the Gazette.]

957,363. RAILWAY-CAR. ROBERT M. NISBETT, San Francisco, Cal., assignor of one-half to William P. Crowley, San Francisco, Cal. Filed July 1, 1909. Serial No. 505,488.



1. In a railway car a shield having an enlarged curved front end inclining inwardly to the rear end thereof, said front end being provided with an opening.

2. In a railway car a shield having a curved front end inclining inwardly to the rear end thereof, said front end being provided with an opening, and a shutter for said opening.

3. In a railway car a shield having an enlarged curved front end inclining inwardly to the rear end thereof, said front end being provided with an opening, a shutter for

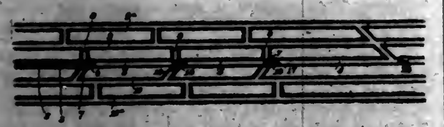
said opening, a rib in said shield branching outwardly from said front end, and guides curvingly inclosing the upper and lower end of said shutter.

4. In a railway car a shield having an enlarged curved front end inclining inwardly toward the rear end thereof, said front end being provided with an opening, a shutter for said opening, guides inclosing the upper and lower ends of said shutter, a rib in said shield branching inwardly from said front end, and a pair of ribs intermediately positioned therein.

5. In combination with a railway car a pair of oppositely positioned shields extending longitudinally from the door frame, each of said shields having an enlarged front end and provided with an opening facing the other shield.

[Claim 6 not printed in the Gazette.]

957,364. REMOVING COAL FROM MINES. EDWARD O'TOOLE and HOWARD N. EAVENSON, Gary, W. Va. Filed May 19, 1909. Serial No. 497,111.



1. As an improvement in the art of removing coal from mines a method which consists in subjecting the coal to a series of currents of air at atmospheric pressure acting in succession thereon.

2. An improvement in the art of removing coal from mines which consists in admitting air having a pressure not greater than atmospheric pressure to a passage extending along the mine at different points there along, withdrawing the air from the passage at a lower pressure and at points distant from the point of admission, thereby forming a series of streams or currents of air flowing outwardly along the passage, and feeding coal in a finely divided condition to such currents.

3. An improvement in the art of removing coal from mines which consists in establishing in the mine a series of outwardly-flowing currents of air at or approximately at atmospheric pressure and feeding the coal to such currents of air in succession.

4. An improvement in the art of removing coal from mines which consists in causing a current of air to move outwardly in the mine, feeding coal in a finely divided state to such stream, and automatically changing the dimensions of the passage traversed by the air in accordance with variations in the rate of flow of the air current.

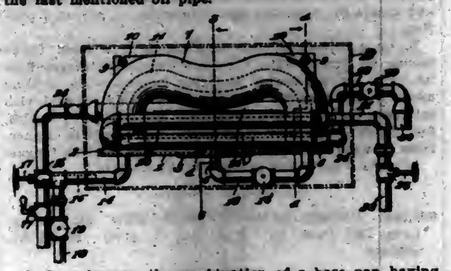
5. A mine consisting of a heading or entry for the reduction of air pressure, another heading or entry for the free inflow of air, a third entry divided into sections, and means for the admission of air from the intake entry to the forward end of each section, and means permitting it to escape into the out-take entry at the rear end of each section.

[Claim 6 not printed in the Gazette.]

957,365. STOVE-BURNER. JOSEPH L. PARK, Sacramento, Cal. Filed June 21, 1909. Serial No. 503,451.

1. In a burner, the combination of a base pan having openings adjacent to its ends, an oil cavity in its central portion, an oil supply pipe communicating with said cavity, an air tube of inverted U-form arranged over the pan and having its depending ends in communication with the openings in said pan, the bottom of the intermediate portion of said air tube being formed with a discharge opening and an oil pipe extending through said air tube and connected to the first mentioned oil pipe.

2. In a burner, the combination of a base pan having openings adjacent to its ends, an oil cavity in its central portion, an oil supply pipe communicating with said cavity, an air tube of inverted U-form arranged over the pan and having its depending ends in communication with the openings in said pan, the bottom of the intermediate portion of said air tube being formed with a discharge opening, an oil pipe extending through said air tube and having a valve controlled connection with the first mentioned oil pipe, and a steam injector connected to the last mentioned oil pipe.



3. In a burner, the combination of a base pan having openings adjacent to its ends, an oil cavity in its central portion, an oil supply pipe communicating with said cavity, an air tube of inverted U-form arranged over the pan and having its depending ends in communication with the openings in said pan, the bottom of the intermediate portion of said air tube being formed with a discharge opening, water and steam heating coils arranged above said pan, a valve controlled steam pipe leading from said coils and an injector connected to said steam pipe and arranged in the last mentioned oil pipe.

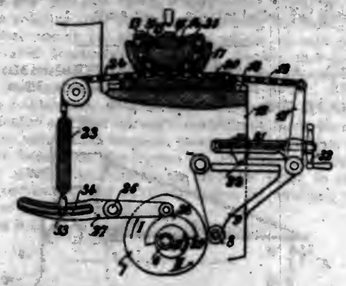
4. In a burner, the combination of a base pan having openings adjacent to its ends, an oil cavity in its central portion, an oil supply pipe communicating with said cavity, an air tube of inverted U-form arranged over the pan and having its depending ends in communication with the openings in said pan, the bottom of the intermediate portion of said air tube being formed with a discharge opening, a water coil arranged on one side of the air tube above said pan, a steam coil arranged on the other side of said tube above the pan, a connecting pipe between said coils, a valve controlled cold water pipe connected to said water coil, a valve controlled steam pipe leading from said steam coil, an oil pipe extending through said air tube, a valve connection between one end of the last mentioned pipe and the first mentioned oil pipe, and a steam injector in the last mentioned pipe and connected to said steam pipe.

957,366. BACK-BAND HOOK. THOMAS G. PHIPPS, Grenada, Miss. Filed Nov. 2, 1909. Serial No. 525,876.



As an improved article of manufacture, the back band hook herein described, the same comprising a base piece formed intermediate its sides at the ends with upturned perforated ears and at one side with a central extension bent upon itself toward said ears to form a hook, said base piece being formed upon opposite sides of its center with transverse loops, and a movable member formed at one edge with a downwardly extended serrated portion and at its opposite edge with a centrally disposed downwardly extended flange, with an integral central tongue portion connecting the body of the movable member and said flange, a rectangular member mounted upon said tongue with the ends thereof secured in the body portion of said movable member, and a roller mounted on a vertical shaft within the space inclosed by said rectangular member, the front vertical member of the rectangular portion extending beyond the downwardly extended flange to engage the free end of said hook.

957,367. MACHINE FOR PRODUCING FILES AND RASPS. GOTTLIEB PEISELER, Remscheid-Haddenbach, Germany. Filed Aug. 24, 1909. Serial No. 514,424.



1. In mechanism for reciprocating the work carrier of a file or rasp machine, a pawl and ratchet and means for operating the same, a cam moving with said ratchet and adjusting means for transmitting motion from said cam to the work carrier, the latter means comprising a part rocked by said cam, a nut movable along a surface of said part and actuated thereby, and an adjusting screw adapted to move said nut along said surface for varying the leverage exerted by said part and the movement correspondingly transmitted to said carrier.

2. The combination of a work carrier for rasp or file blanks, with a cam, means for rotating said cam, a lever rocked by said cam, an element adjustable in position and arranged for contact with said lever, a second lever moving in connection with said element, a flexible connection between said second lever and said work carrier and means for causing the return movement of said work carrier.

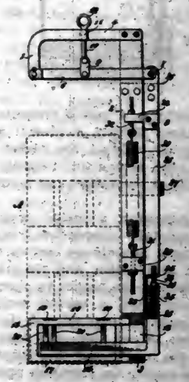
3. In a machine for producing files and raspe the combination of a work carrier and means for reciprocating the same, said means comprising a pawl, means for reciprocating the latter, a ratchet wheel engaged by said pawl, a uniformly ascending and descending symmetrically formed cam, connected with said ratchet wheel, means for transmitting motion from said cam to the work carrier, a spring for returning the work-carrier, means connecting one end of said spring with the work carrier, a counter-support connected with the other end of the spring and means for moving said counter-support substantially in unison with the first-mentioned end of the spring during the forward motion of the work-carrier for the purpose of maintaining the force exerted by the spring substantially constant.

4. In a machine for producing files and raspa the combination of a work-carrier and means for reciprocating the same said means comprising a pawl, means for reciprocating the latter, a ratchet wheel engaged by said pawl, a uniformly ascending and descending symmetrically formed cam connected with said ratchet wheel, and means for transmitting motion from said cam to the work carrier a spring for returning the work carrier, means connecting one end of said spring with the work carrier, a counter-support connected with the other end of the spring and means for moving said counter-support substantially in unison with the first-mentioned end of the spring during the forward motion of the work-carrier for the purpose of maintaining the force exerted by the spring substantially constant, said means for moving the counter-support comprising an eccentric connected with the cam.

5. In a machine for producing files and raspa the combination of a work carrier and means for reciprocating the same said means comprising a pawl, means for reciprocating the latter, a ratchet wheel engaged by said pawl, a uniformly ascending and descending symmetrically formed cam connected with said ratchet wheel, and means for transmitting motion from said cam to the work carrier, a spring for returning the work carrier, means connecting one end of said spring with the work carrier, a counter-support connected with the other end of the spring and means for moving said counter-support substantially in unison with the first-mentioned end of the spring during the forward motion of the work-carrier for the purpose of maintaining the force exerted by the spring substantially constant, said means for moving the counter-support comprising an eccentric connected with the cam said eccentric being in the form of a brake-disk.

[Claims 6 to 9 not printed in the Gazette.]

957,368. MACHINE FOR HANDLING BRICKS. RAYMOND C. PENFIELD, New York, N. Y. Filed Nov. 6, 1908. Serial No. 461,367.



1. A device for handling bricks, comprising a main frame, a series of lifting members on the lower end thereof adapted to be inserted between adjacent bricks of a layer, each member having a pair of clamping plates, a vertically movable frame, a series of wedges carried thereby and arranged to operate in connection with the clamping plates of the lifting members, and means for simultaneously lifting the movable frame and the main frame.

2. A machine for handling bricks, comprising a vertically disposed frame, laterally-extending lifting members each having a pair of clamping plates, a laterally-extending arm carried by the upper end of said frame, a movable frame alongside of the first-mentioned frame, a lever connecting the upper end of said movable frame with the outer end of the upper laterally-extending arm, and means on said arm for lifting the lever.

3. A machine for handling brick, comprising a vertically disposed frame, a laterally-extending arm at the upper end thereof, a lever pivoted to the outer end of said arm, a vertically movable frame alongside of the first-mentioned frame, to the upper end of which said lever is pivoted, a vertically movable rod working in a guide in said laterally-extending arm, means connecting the lower end of said rod with the said lever, supporting means engaging the upper end of said rod, and laterally-extending clamping devices at the lower end of the two frames.

4. A machine for handling bricks, comprising a vertically disposed frame, a second vertically movable frame alongside of the first, a series of lifting members carried by the lower end of the first frame and having expanding clamps, wedges carried by the vertically movable frame and operating to expand said clamps, and means for lifting the entire machine.

5. A machine for handling bricks, comprising a vertically disposed frame, a laterally-extending arm rigidly attached to the upper end thereof, a lever pivoted to the outer end of said arm, a vertically movable frame alongside of the first frame and pivotally connected to the end of said lever, means for lifting said lever, said means working through a guide on the upper arm, a spring connection between the vertically movable frame and the first-mentioned frame, a series of lifting members adapted to be inserted between adjacent bricks of a series, and

means consisting essentially of wedges carried by the vertical movable frame for operating clamps carried by the lifting members.

[Claims 6 to 12 not printed in the Gazette.]

957,369. ACETYLENE-GAS GENERATOR. OCTAVE W. PETERSON, Chicago, Ill. Original application filed Feb. 2, 1907, Serial No. 355,400. Divided and this application filed Jan. 19, 1909. Serial No. 473,162.



1. In a gas generator, a carbid receptacle, and a basket having a foraminous bottom, a pivotal support for said basket, and a spring between the basket and a substantially stationary part, at one side thereof, to substantially balance the weight of the basket and permit it to move in response to jars.

2. In a gas generator, a carbid receptacle, a carbid basket therein, pivotally suspended from one side only, said basket having a foraminous bottom and a spring interposed between said basket and the wall of the receptacle, acting to sustain the basket in operative position.

3. In a gas generator, a carbid receptacle, a carbid basket therein, hooks at one side of the receptacle suspending the basket at one side only, and a yielding connection between the basket and the receptacle positioning said basket in the casing for vibration upon its suspension hooks in response to jars.

4. In a gas generator, a carbid receptacle, having an internal suspension hook, a carbid basket supported at one side only on said hook, for pivotal movement thereon, and a spring yieldingly holding said basket in sustained position in the casing to vibrate in response to jars.

5. In a gas generator, a carbid receptacle, a carbid basket therein, fixed means pivotally supporting the carbid basket at one side only, a leaf spring interposed between the carbid basket and the receptacle tending to hold the carbid basket in raised position, and an expansion coiled spring interposed between the lower end of the basket and the receptacle.

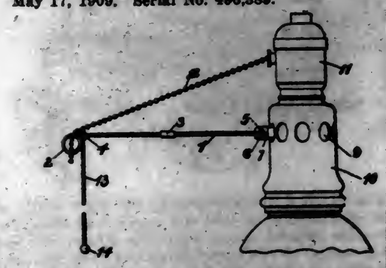
[Claims 6 to 8 not printed in the Gazette.]

957,370. SHEET-MUSIC TURNER. JOHN O. PHILLIPS, Canajoharie, N. Y. Filed Nov. 23, 1908. Serial No. 464,004.



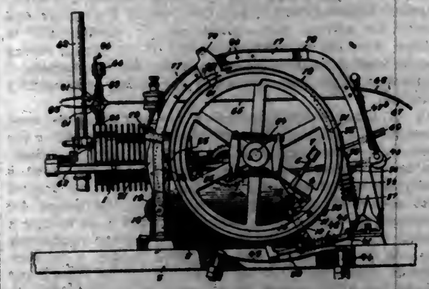
In a sheet music turner a case having a set of spring actuated arms hinged in the case and arranged in different contiguous planes, a sliding stop bar mounted in bearings in the case and adapted to have one end projected into set position across the path of the several swinging arms and having a set of ratchet teeth, a spring for actuating said stop bar in its retracting movement, a manually operated and pivotally mounted escapement operating on the teeth of the sliding stop bar and having two adjacent spring tensioned dogs, the first dog holding the sliding stop bar in set position and yielding to allow said stop bar to be forced to a lower set position without manipulating the escapement and tensioned to move upon disengagement from the stop bar to be in line at its operating end with the next lower notch in said stop bar and to be raised upon engagement therewith, the second dog tensioned to be normally on a line with the upward position of the first dog but to yield to downward pressure of the stop bar, and a spring swinging the escapement back after each operation into position where the first dog engages the stop bar, substantially as set forth.

957,371. ATTACHMENT FOR ELECTRIC-LAMP SOCKETS. HUGH E. PLUNKETT, Charlestown, Mass. Filed May 17, 1909. Serial No. 496,389.



In an attachment for electric lamp sockets having a switch operating chain, a globe holder attached to said socket, said holder having formed therein ventilating openings, a chain holding arm adapted to hold said switch operating chain away from said globe or shade holder, said arm comprising a wire rod bent midway between its ends to form a series of spring chain engaging coils, an eye formed in one member of said rod, an attaching clip adapted to be engaged with the ventilating openings in said holder, means to pivotally connect the inner end of said rod to said clip, a sleeve arranged on the end portions of said rod to secure the same together, and an operating cord secured at its upper end in said eye and extending downwardly from said arm.

957,372. STARTING AND STOPPING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. JOSEPH B. POLO, Clear Lake, S. D., assignor of one-half to Emil H. Paustian, Hardwick, Minn. Filed June 23, 1909. Serial No. 503,949.



1. The combination with an explosive engine, of means automatically operated through centrifugal force for arresting the same on its stopping movement, said means operable to impart to the engine its starting movement.

2. The combination with an explosive engine, of automatic means for arresting the same on its stopping movement, said means operable to impart to the engine its starting movement, and means for priming the cylinder, said starting means adapted to effect the ignition of the primary charge.

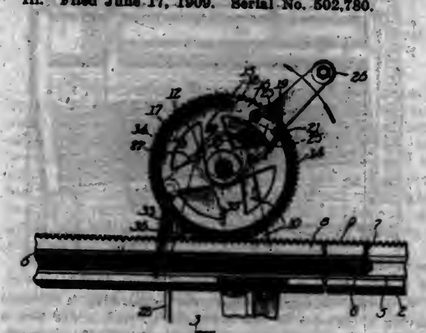
3. The combination with an explosive engine, of means automatically operated through centrifugal force for arresting the same on its stopping movement, said means operable to impart to the engine its starting movement, means for priming the cylinder, means for igniting said charge, and means whereby the compression of the primary charge and the firing point thereof may be regulated.

4. The combination with an explosive engine, of means automatically operated through centrifugal force for arresting a rotating part thereof and holding the same under tension, means for effecting the release of said part whereby said tensioning means may impart movement thereto, and means coöperating therewith for priming the cylinder and igniting the charge.

5. The combination with an explosive engine, of means automatically operated through centrifugal force for arresting the same on its stopping movement, said means operable to impart to the engine its starting movement, auxiliary means for priming the cylinder prior to said starting movement, and auxiliary means for effecting the ignition of the primary charge.

[Claims 6 to 16 not printed in the Gazette.]

957,373. PROOF-PRESS. WALTER G. POTTER, Chicago, Ill. Filed June 17, 1909. Serial No. 502,780.



1. In a proof press, in combination, a table; a form bed slidable on said table; a bracket secured to each side of said table; bearing blocks rotatably mounted in said brackets; an impression cylinder having its journals eccentrically mounted in said bearing blocks; a driving connection between said cylinder and said form bed; stop means on one of said brackets; means on said cylinder arranged to engage said stop means to limit the rotation of the cylinder and the movement of the form bed; an arm fixed on each of said bearing blocks, said arms being arranged to rotate said blocks to move said impression cylinder toward and away from the form bed; means tending to hold said arms in position to hold the impression cylinder on the form bed; and means for moving said arms in the opposite direction.

2. In a proof press, in combination, a table; a form bed slidable on said table and having a rack bar secured thereto; a bracket secured to each side of said form bed and having bearing openings therein; bearing blocks rotatably mounted in said openings; an impression cylinder having journals eccentrically mounted in said bearing blocks; a gear wheel on said cylinder arranged to mesh with the rack on said form bed; a projection on one of said brackets; means on said cylinder arranged to engage said projection to limit the rotation of said cylinder and the sliding movement of the form bed; an arm fixed to each of said bearing blocks, said arms being arranged to rotate said blocks to move said impression cylinder away from the form bed; a rock shaft mounted in said table; arms fixed on said rock shaft; links connecting the free ends of said arms with the first mentioned arms; a treadle fixed on said rock shaft for moving said arms in the direction to raise said impression cylinder off the form bed; and a spring engaging one of said arms and tending to hold it in position to keep said cylinder in contact with the form bed.

957,374. EYEGLASS-MOUNTING. THEODORE RAFF, Los Angeles, Cal., assignor to E. Kirstein Sons Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 15, 1907. Serial No. 402,232.



1. In eyeglass mountings, the combination with a support for the lenses, of a nose guard pivoted thereon to turn about an upright axis located in a plane to one side of the plane of the lenses and having a forwardly extending operating portion, the pivot pin being located in a horizontal plane with the support.

2. In eyeglass mountings, the combination with a support for the lenses, of a nose guard pivoted thereon to turn about an upright axis located in a plane in rear of the lenses and having a forwardly extending operating portion, the pivot pin being located behind the support in a horizontal plane therewith.

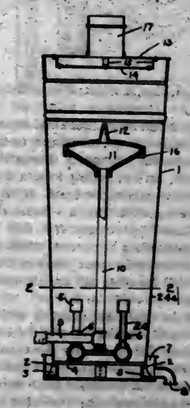
3. In eyeglass mountings, the combination with a support for the lenses, of a bracket extending horizontally from the support to one side of the plane of the lenses and a nose guard mounted to turn on the bracket about an upright axis in a plane to one side of the plane of the lenses.

4. In eyeglass mountings, the combination with a support for the lenses, of a bracket extending rearwardly from the support, and a nose guard mounted to turn on the bracket about an upright axis in rear of the plane of the lenses.

5. In an eyeglass mounting, the combination with a support for the lenses embodying a lens attaching device having a box and a bridging portion secured in the box, of a bracket secured in the box and extending horizontally to one side of the plane of the lenses, and a nose guard mounted to turn about an upright axis on the bracket to one side of the plane of the lenses.

[Claims 6 to 21 not printed in the Gazette.]

957,375. WATER-HEATER. HENRY T. RASER, Ashtabula, Ohio. Filed July 3, 1909. Serial No. 505,944.



1. In a water heater the combination of a burner; a drip case flaring toward the top, and arranged to carry the drip outside the burner; a gas deflector above the burner; and a spray delivering device above the deflector adapted to spray water in the path of the gases, the deflector case and burner being arranged relatively to each

other to direct the water and heated gases into contact, and the case to carry the water in contact with the heated gases, to the level of the burner.

2. In a water heater, the combination of a burner; a drip case flaring toward the top and arranged to carry the drip outside of the burner, said drip case forming the outer case of the heater; and a spray delivering device for delivering water to the walls of the case above the burner.

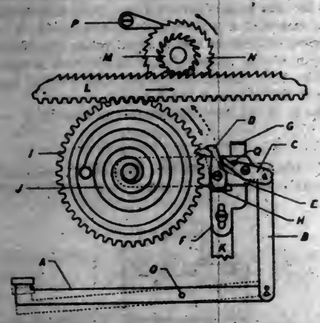
3. In a water heater, the combination of a burner; a drip case flaring toward the top and arranged to carry the drip outside of the burner; a spray delivering device for delivering water to the walls of the case; and a gas deflector above the burner and below the spray delivering device, said deflector being larger than the burner and having its edge arranged to carry the drip outside the burner.

4. In a water heater the combination of a drip case; a burner arranged within the case; a jet device for delivering water; a water supply pipe leading to the jet device and a deflector below the jet and above the burner, said deflector having a water space in connection with the delivery pipe for cooling the deflector, said water spaces being of greater diameter than the water supply pipe.

5. In a water heater, the combination of a pan; a drip case open at the bottom and mounted in the pan, the pan being of larger diameter than the case to catch the drip from both the outer and inner walls of the case; a burner in the case; and means for delivering spray to the inner walls of the case.

[Claims 6 to 9 not printed in the Gazette.]

957,376. BACK-SPACING MECHANISM FOR TYPEWRITERS. HARRY RAYMOND, Syracuse, N. Y., assignor to E. C. Stearns & Co., Syracuse, N. Y. Filed Dec. 18, 1909. Serial No. 533,958.

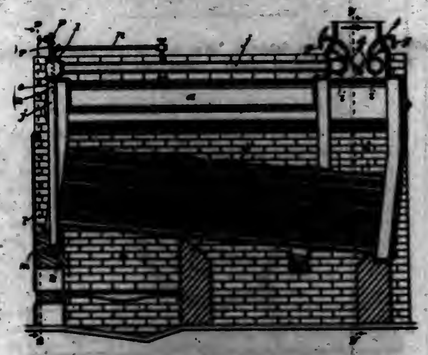


1. In a typewriter, a carriage, gearing connected to the carriage, means for causing the carriage to tend to move in one direction, means for normally preventing its movement in that direction, an actuating key, a dog D adapted to swing between two consecutive teeth of said gearing, a movable arm supporting said dog, a second dog C pivoted to said arm and adapted to cause the dog D to engage said gearing and positively prevent said dog D from slipping on the teeth of said gear, means for connecting the actuating key and the dog C, and stops for limiting the movement of said movable arm.

2. In a typewriter, a carriage, gearing connected to the carriage, means for causing the carriage to tend to move in one direction, means for normally preventing its movement in that direction but permitting its movement in the opposite direction, means for causing said carriage to move a definite distance in said opposite direction consisting of: a vibrating member; means for positively attaching said vibrating member to said gearing during the movement of said vibrating member in one direction consisting of a movable dog D adapted to enter between two consecutive teeth of said gearing, a dog C for pushing dog D into engagement with said teeth and positively holding it there; means for actuating said vibrating member; means for limiting the motion of said vibrating member.

3. In a device for back spacing a typewriter carriage, gear teeth for driving the carriage, a member having a limited oscillating movement past said gear teeth, a dog pivoted to said oscillating member and adapted to enter between said gear teeth, an actuating and locking dog also pivoted to said oscillating member and adapted to force said dog between said gear teeth and prevent its withdrawal until said dog is itself released, means for limiting the motion of said oscillating member, means for limiting the rotation of said locking dog, and means for actuating said locking dog and said oscillating member.

957,377. SMOKE-CONSUMER. THOMAS REES, Chicago, Ill. Filed June 5, 1909. Serial No. 500,436.



1. Smoke consuming apparatus comprising a furnace having a chamber in the draft-end thereof, a fire box, a perforated suction pipe upon each side of said chamber, dampers adapted to close said chamber, hinged above said suction pipes, lips on said dampers extending downwardly therefrom, said dampers and said lips acting as baffle plates, pipes extending from one end of each of said suction pipes and forming continuations thereof, and having extensions, other pipes extending inwardly from said extensions, and nozzles on said last mentioned pipes extending downwardly into the fire box of said furnace.

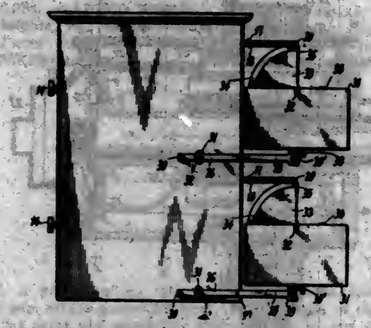
2. Smoke consuming apparatus comprising a furnace having a chamber in the draft end thereof, a fire box, a perforated pipe upon each side of said chamber, pipes extending laterally from one end of each of said perforated pipes, other pipes forming continuations of said lateral pipes, and extending at an angle thereto, steam and air inlet pipes entering the latter pipes at their junctions with said lateral pipes, the nozzles of one set of said inlet pipes being above the nozzles of the other set, pipes connected to the lower ends of said last mentioned pipes and extending inwardly therefrom, nozzles on said last mentioned pipes projecting into said fire box, and pipes extending through the wall of the furnace and terminating within said nozzles.

957,378. LABEL CABINET AND MOISTENER. CLAUDE K. RESH, Freeport, Ill. Filed May 1, 1909. Serial No. 493,319.

1. In a label holder and moistener, a cabinet, a plurality of label holding drawers provided with alined delivery tubes held in said cabinet, and a moistener supported from said cabinet and movable into position adjacent any one of the delivery tubes.

2. In a label holder and moistener, a cabinet, a plurality of label holding drawers provided with alined delivery tubes and held in said cabinet, a guide bar supported from said cabinet, and a moistener carried on said guide bar and movable into position adjacent any one of the delivery tubes.

3. In a label holder and moistener, a cabinet, a plurality of label holding drawers provided with alined delivery tubes, a support attached to said cabinet, a guide bar carried in front of said cabinet on said support, and a moistener held upon said guide bar to move longitudinally thereof into position adjacent any one of the delivery tubes.

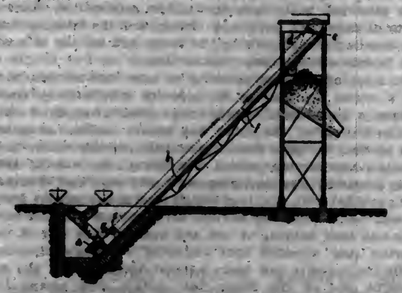


4. In a label holder and moistener, a cabinet, a plurality of label holding drawers held in said cabinet and each provided with a delivery tube, all of said delivery tubes being alined, supports pivoted at one end to the cabinet and provided each with an arcuate slot concentric with the pivot point, thumb nuts passing through said arcuate slot to hold the support in adjusted position, a guide bar carried by said support, and a moistener carried on said guide bar and movable into position adjacent any one of the delivery tubes.

5. In a label holder and moistener, a moistener comprising a tank, a shaft provided with a crank handle extending across the tank, a segmentocylindrical member mounted to rotate with the shaft, and a spring friction catch to releasably hold the said member in operative position.

[Claims 6 to 8 not printed in the Gazette.]

957,379. ELEVATOR. WILHELM REUBOLD, Karlshorst, near Berlin, Germany. Filed May 15, 1908. Serial No. 433,087.



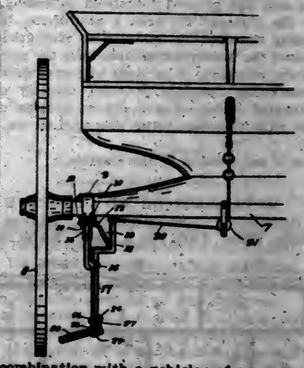
1. An elevator comprising a track, a delivery bucket adapted to move backward and forward successively upon the track, an endless moving member provided at the side of the track, and in connection with the bucket, one part of said member moving constantly in one direction and the other part constantly in the opposite direction substantially as described.

2. An elevator comprising a track, a delivery bucket adapted to move backward and forward successively upon the track, an endless moving member provided at the side of the track, and in connection with the bucket, one part of said member moving constantly in one direction and the other part constantly in the opposite direction, and means for connecting the bucket to the endless moving member in such a manner that when the bucket reaches the end of the track its direction of motion is reversed substantially as described.

3. An elevator comprising a track, a delivery bucket adapted to move backward and forward successively upon the track, an endless moving member provided at the side of the track, and in connection with the bucket, one part of said member moving constantly in one direction and the other part constantly in the opposite direction, and means for connecting the bucket to the endless moving member in such a manner that when the bucket reaches the end of the track its direction of motion is reversed, and means for giving the endless moving member a movement in a direction normal to the direction of movement of the bucket substantially as described.

4. An elevator comprising a track, a delivery bucket adapted to move backward and forward successively upon the track, an endless moving member provided at the side of the track, and in connection with the bucket, one part of said member moving constantly in one direction and the other part of said member moving constantly in the opposite direction, and means for connecting the bucket to the endless moving member in such a manner that when the bucket reaches the end of the track its direction of motion is reversed, and means for giving the endless moving member a movement in a direction normal to the direction of movement of the bucket and means for retarding the bucket when it has reached the end of the track substantially as described.

957,380. HORSE-HITCHING DEVICE. EBEN B. ROLFE, Spokane, Wash. Filed July 1, 1909. Serial No. 505,393.



1. The combination with a vehicle; of an arm mounted for vertical swinging movement on the vehicle, a lever pivoted intermediate its ends to the arm to swing transversely of the vehicle, a trip arm carried by one end of the lever, and adapted to enter between the spokes of one of the wheels of the vehicle, a line connected to the other end of the lever for swinging said lever in the direction of the wheel, and a line having a loose connection with that end of the lever carrying the trip arm.

2. The combination with a vehicle; of an arm mounted for vertical swinging movement on the vehicle, a lever pivoted intermediate its ends to the arm to swing transversely of the vehicle, a trip arm pivotally mounted on one end of the lever, and adapted to enter between the spokes of one of the wheels of the vehicle, said trip arm yielding in one direction, a line connected to the other end of the lever for swinging said lever in the direction of the wheel, and a line having a loose connection with that end of the lever carrying the trip arm.

957,381. CORN-CRIB. CHARLES M. ROWLAND, Mansfield, Ohio. Filed Mar. 17, 1910. Serial No. 550,050.

1. A corn crib made of sections of corrugated sheet iron with ventilating openings provided directly underneath

the horisontal center of each convex portion of the corrugation.



2. A corn crib made of sections of corrugated sheet iron with ventilating openings provided directly underneath the horisontal center of each convex portion of the corrugation and lips pressed therefrom.

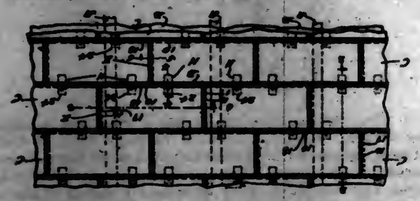
3. A corn crib made of sections of corrugated sheet iron with ventilating openings provided directly underneath the horisontal center of each convex portion of the corrugation and lips pressed therefrom extending at an incline to the plane of the crib.

4. A corn crib made of sections of corrugated sheet iron with ventilating openings provided directly underneath the horisontal center of each convex portion of the corrugation and lips pressed therefrom extending at an incline to the plane of the crib, a reinforcing bead or rib surrounding the openings adapted to strengthen the crib and conduct the foreign substances from the openings.

5. A corn crib made of sections of corrugated sheet iron with ventilating openings provided directly underneath the horisontal center of each convex portion of the corrugation, said openings being arranged at an incline to the body.

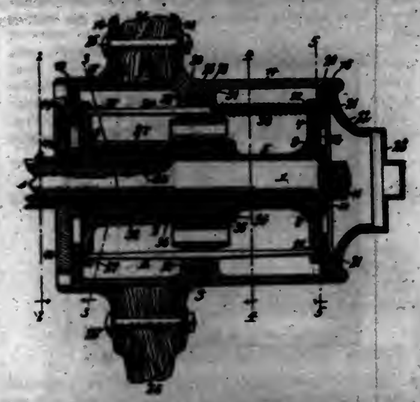
[Claim 6 not printed in the Gazette.]

957,382. METAL-REINFORCED CONCRETE VENEER FOR BUILDING CONSTRUCTION. ALFRED SCHNURR, Sandusky, Ohio. Filed Feb. 8, 1909. Serial No. 476,611.



A veneer for an upright wall of a building, said veneer comprising horizontal rows of independently supported metal-reinforced concrete slabs, which rows are arranged one above the other, adjacent edges of adjacent slabs of adjacent rows of slabs being provided between the forward and rear sides of the said slabs, the one with a groove and the other with a tongue engaging the said groove to form a tongue-and-groove joint between the said slabs, the forward portion of the top edge of the lower slab of the said adjacent slabs sloping downwardly and rearwardly from the forward side of the slab and arranged below the rear portion of the said edge the forward portion of the bottom edge of the upper slab of the said adjacent slabs sloping upwardly and rearwardly from the forward side of the slab, and the said forward sloping portions of the said edges of the said adjacent slabs being spaced vertically and forming rearwardly diverging top and bottom walls of a recess which extends above and below the rear portions of the said edges, and mortar occupying the said recess.

957,383. SPRING-WHEEL. EDWARD SCHUYLER, Syracuse, and WILLIAM A. HYLE, Buffalo, N. Y., assignors of one-third to Leslie R. Pratt, Buffalo, N. Y. Filed July 22, 1909. Serial No. 508,952.



1. A spring wheel comprising an inner hub section composed of a barrel, an integral flange arranged at one end of the barrel and a detachable flange at its opposite end, a plurality of spring bars seated at their ends on said flanges, and an outer hub section supported on the central parts of said spring bars.

2. A spring wheel comprising an inner hub section composed of a barrel having a fixed flange at one end and a plurality of recesses at its opposite end, a detachable flange having lugs engaging with said recesses, spring bars resting at opposite ends on said flanges, and an outer hub section supported on the central part of said spring bars.

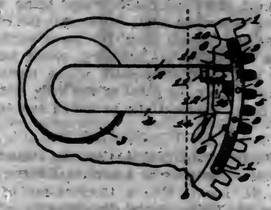
3. A spring wheel comprising an inner hub section having a barrel provided at its opposite ends with external flanges, a plurality of spring bars resting at opposite ends on the flanges of the inner hub barrel section, an outer hub section having a barrel provided centrally in its bore with an annular seat and a shoulder at one side of said seat, a bearing ring engaging with said seat and shoulder and provided with openings which receive the central parts of said bars, retaining devices for the bearing ring and means for maintaining the outer hub section in positive relation to the inner hub section.

4. A spring wheel comprising an inner hub section having a barrel provided at its opposite ends with external flanges, a plurality of spring bars resting at opposite ends on the flanges of the inner hub barrel section, an outer hub section having a barrel provided centrally in its bore with an annular seat and a shoulder at one side of said seat, a bearing ring engaging with said seat and shoulder and provided with openings which receive the central parts of said bars, retaining devices arranged on some of said bars and each bearing at one end against that side of the bearing ring opposite that engaging with said shoulder while its opposite end bears against the flange at the respective end of the inner hub section and means for maintaining the outer hub section in positive relation to the inner hub section.

5. A spring wheel comprising an inner hub section having a barrel provided at its opposite ends with external flanges, a plurality of spring bars resting at opposite ends on the flanges of the inner hub barrel section, an outer hub section having a barrel provided centrally in its bore with an annular seat and a shoulder at one side of said seat, a bearing ring engaging with said seat and shoulder and provided with openings which receive the central parts of said bars, retaining devices of coil spring form arranged on some of said bars and each bearing at one end against that side of the bearing ring opposite that engaging with said shoulder while its opposite end bears against the flange at the respective end of the inner hub section and means for maintaining the outer hub section in positive relation to the inner hub section.

[Claims 6 to 13 not printed in the Gazette.]

957,384. GAPPED WHEEL. WILLARD T. SEARS, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, Jersey City, N. J. Filed Jan. 19, 1910. Serial No. 538,800.



1. A gapped wheel comprising, a rim-patch spanning the gap, straps projecting from the side edges of one end of the patch and straddling the wheel-rim at one side of the gap, a hinge uniting the extremities of said straps to the rim, and a latch locking the opposite end of the patch to the rim at the opposite side of the gap, combined substantially as set forth.

2. A gapped wheel, comprising a rim patch spanning the gap and having projections from the side edges of one of its ends to straddle the wheel-rim at one side of the gap, a hinge uniting the opposite end of the patch to the rim at the opposite side of the gap, and a latch locking the free end of the patch to the rim at the side of the gap opposite the hinge, combined substantially as set forth.

3. A gapped wheel comprising, a rim-patch spanning the gap, a hinge uniting one end of the patch to the rim at one side of the gap, and a latch locking the opposite end of the patch to the rim at the opposite side of the gap, the opposite ends of the patch and the rim at the opposite sides of the gap being provided with coöperating projections and recesses, combined substantially as set forth.

4. A gapped wheel comprising, a rim-patch spanning the gap, a hinge uniting one end of the patch to the rim at one side of the gap, and a latch carried by the inner side of the patch and adapted to engage the wheel-rim at the side of the gap opposite the side at which the patch is hinged and serving in locking the opposite end of the patch to the rim at the opposite side of the gap, combined substantially as set forth.

5. A gapped wheel comprising, a rim-patch spanning the gap, a hinge uniting one end of the patch to the rim at one side of the gap, and a latch-lever pivoted to the inner face of the patch and having toes adapted to engage within the rim at the opposite sides of the gap, combined substantially as set forth.

[Claim 6 not printed in the Gazette.]

957,385. AIR-HOSE COUPLING. EUGENE W. SHAW, Weir, Kans. Filed July 1, 1909. Serial No. 505,444.



1. In an air hose coupling, a bracket having a clamp bar combined therewith, and a draw head yieldingly held for longitudinal movement within the bracket.

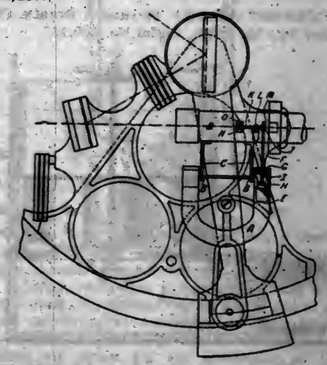
2. In an air hose coupling, a bracket, a clamping bar combined with the bracket, a draw head adapted for longitudinal movement within the bracket and relative to the clamping bar.

3. In an air hose coupling, a draw head having on one side a stepped surface, a guide disposed over and spaced from said stepped surface and a clamping bar having one end portion disposed in the space between said guide and draw head.

4. In an air hose coupling, a bracket, a longitudinally movable draw head yieldingly held supported within said bracket, a guide combined with the draw head and disposed over and spaced from one face of the latter, a clamping bar combined with the bracket and having one end disposed in the space between the guide and draw head.

5. In a car coupling, a vertically disposed support, a rearwardly extending bracket combined with said support, a longitudinally movable draw head combined with said bracket, a guide combined with said draw head and disposed over and spaced from one face of the latter, and a clamping bar having one end secured to the bracket and its opposite end disposed in the space between the guide and the draw head.

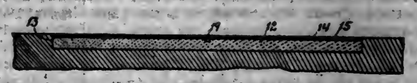
957,386. SEXTANT. MERVYN P. T. SMITH, Slaidburn, Clitheroe, England. Filed Dec. 4, 1909. Serial No. 531,469.



1. The combination of a sextant, a tube containing liquid, said tube pivotally mounted on the sextant, a body floating in the liquid, an operating rod connected to said body, a fixed indicating device, and a movable indicating device adapted to be operated by said rod.

2. The combination of a sextant, a U-tube containing liquid, said tube pivotally mounted on the sextant, a body floating in the liquid, an operating rod connected to said body, a fixed indicating device, a movable device adapted to be operated by said rod, and a telescope connected to the sextant.

957,387. ARTIFICIAL PLAYING-BED FOR OPEN-AIR GAMES. JAMES H. STEDMAN, Braintree, Mass. Filed Mar. 20, 1909. Serial No. 484,621.



1. An artificial playing bed comprising a relatively thick and rigid base layer having a cavity in its central portion, a compressible relatively inelastic intermediate layer supported by the bed, and a top layer of resilient wear-resisting material supported by the intermediate layer, the central portions of the intermediate and top layers having coinciding orifices, which coincide with the cavity in the base layer.

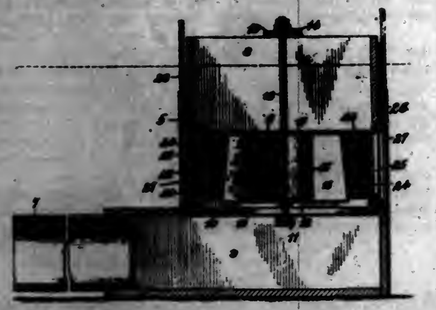
2. An artificial playing bed comprising a relatively thick and rigid base layer, a compressible relatively inelastic intermediate layer supported by the bed, and a top layer of resilient wear-resisting material supported by the intermediate layer.

3. An artificial playing bed comprising a relatively thick and rigid base layer, a compressible relatively inelastic intermediate layer supported by the bed, and a top layer of resilient wear-resisting material supported by the intermediate layer, and provided with a roughened upper surface.

4. An artificial playing bed comprising a relatively thick and rigid base layer, a compressible relatively inelastic intermediate layer supported by the bed, and a top layer of resilient wear-resisting material supported by the intermediate layer, the said intermediate and top layers being composed of sections, the sections of each sectional layer breaking joints with those of the other layer.

5. An artificial playing bed comprising a concrete base layer having a cup cavity in its central portion, an intermediate layer of compressible inelastic material supported by the base layer, and a top layer of relatively resilient wear-resisting material supported by the intermediate layer, and provided with a roughened upper surface, the intermediate and top layers being made in sections and the central sections being provided with coinciding orifices which coincide with the cavity in the base layer.

957,388. CURRENT-MOTOR. THOMAS J. STEELE, Citra, Fla. Filed July 23, 1909. Serial No. 509,157.



1. A current motor comprising, in combination, a housing provided with inlet and outlet openings, a water wheel rotatably mounted therein, and plates arranged within said housing above and below the wheel and provided with alining openings to permit the escape of water above said wheel through the housing outlet.

2. A current motor comprising, in combination, a housing with inlets on all sides thereof, and with an outlet below said inlets, a horizontally arranged water wheel rotatable within the housing, and plates arranged within said housing above and below the wheel and provided with openings to permit the escape of water above said wheel through said outlet.

957,389. PIPE-CLEANER. HORACE P. STEWART, Armstrong Creek, Wis. Filed Oct. 28, 1909. Serial No. 525,210.

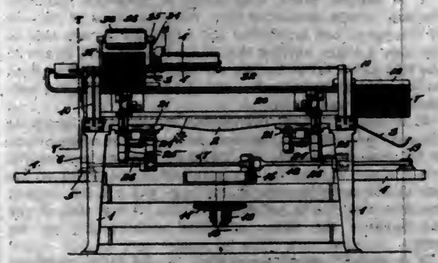


1. A pipe bowl cleaner constructed from a single piece of sheet metal cut and bent to form a tapering body having two wings set at right angles, a back bent up integral therewith, and a handle formed integral with, and projecting back from said back.

2. A pipe bowl cleaner made from a single piece of sheet metal cut and bent to form a body having a back and a handle integral therewith, said body tapering from the back to the point and having two wings standing at right angles with the edges formed thereby in such position as to form cutting edges for the surface of the pipe bowl.

3. A pipe bowl cleaner composed of a single piece of sheet metal cut, bent and formed to make a body having wings that stand at right angles, a back and a handle formed integral therewith, said wings being so formed that when the cleaner is made to revolve the edge of one wing will cut the deposit from the inner surface of the bowl and the deposit in the bowl will polish and sharpen the edge of the other wing, said wings made to taper from the back to near the point of the body and thence to curve to the point, substantially as shown and described.

957,390. DOUGH-MOLDING MACHINE. FRANK STERICH, St. Louis, Mo., assignor to American Bakers Machinery Company, St. Louis, Mo., a Corporation of Missouri. Filed June 21, 1909. Serial No. 503,409.



1. In a dough molding machine, the combination with a molding board adapted to reciprocate lengthwise, and a pair of laterally moving molding boards, of means whereby the lumps of dough delivered to the machine are alternately distributed onto opposite sides of the reciprocating molding board.

2. In a dough molding machine, a molding board adapted to reciprocate lengthwise, a pair of laterally moving molding boards, and a dough-lump distributer adapted to alternately feed the lumps of dough between the reciprocating molding board and the laterally moving molding boards.

3. In a dough molding machine, a molding board adapted to reciprocate lengthwise, a pair of laterally moving molding boards, means whereby all of said molding boards are operated, and a dough-lump distributer adapted to alternately feed the lumps of dough between the reciprocating molding board and the laterally moving molding boards.

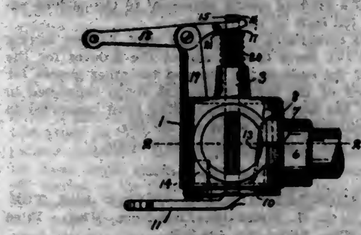
4. In a dough molding machine, a molding board adapted to reciprocate lengthwise, a pair of laterally moving molding boards, means for conveying lumps of dough to the machine, and a dough-lump distributer adapted to receive the lumps of dough from the conveying means and alternately deliver the same between the molding boards.

5. In a dough molding machine, a reciprocating molding board, a pair of laterally moving molding boards, means whereby lumps of dough are conveyed to the machine, and means adapted to receive the lumps of dough from the feeding means and alternately deliver said lumps of dough onto opposite sides of the reciprocating molding board.

[Claims 6 to 19 not printed in the Gazette.]

957,391. VALVE. ERNEST H. SWEET, Detroit, Mich., assignor to Cadillac Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 25, 1908. Serial No. 454,722.

1. A valve comprising a cylindrical body having a head, and a plurality of connections for pipes and having the end opposite the head open, an outwardly movable disk to close said open end, a stem connected to said disk and projecting through said head, and a spring to normally hold the disk in position.



2. A valve comprising a shell, connections projecting therefrom, a head for said shell, a disk seated in an opening in the shell opposite the head and having a stem passing through the head, and a lever to move the disk off its seat.

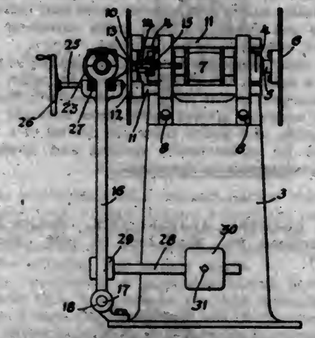
3. A valve comprising a body portion having a series of apertures in one plane, and an aperture opening at right angles to said plane, a closure for the last named aperture, a gate to close another of said apertures secured to said closure, and a spring to normally hold the closure in position.

4. A valve comprising a case having an inlet passage and outlet passages, an outwardly movable closure for one of the outlet passages, and a gate mounted on the closure to close one or another of the other outlet passages.

5. A valve comprising a cylindrical body having three apertures in the sides and a head at one end, a disk for closing the opposite end, a spring to hold the disk in position, and a gate adapted to close one or another of the apertures according to the position of the disk.

[Claim 6 not printed in the Gazette.]

957,392. MACHINE FOR GRINDING CAMS. MARTIN A. THIEL, Wilkinsburg, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Mar. 31, 1906. Serial No. 309,133.

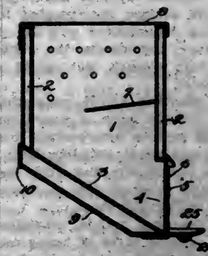


1. In combination in a grinding machine, a rotatable grinding wheel, an adjustable former plate, the operating face of which is parallel to the grinding face of said wheel, an oscillating carriage, a rotatable shaft mounted on said carriage, a former cam mounted upon said shaft and adapted to contact with said former plate to cause said carriage to move toward and away from said grinding wheel, and an adjustably weighted arm rigidly connected to said carriage to cause contact between said cam and said former plate.

2. In combination in a grinding machine, a rotatable grinding wheel, an adjustable former plate, the operating face of which is parallel to the grinding face of said wheel, an oscillating carriage, a rotatable shaft mounted on said carriage, a former cam mounted on said shaft and adapted to contact with said former plate and to cause said carriage to move toward and away from said grinding wheel, an adjustably weighted arm secured to said carriage to cause contact between said cam and said former plate, and means for moving said former plate backward and forward relative to the grinding face of said wheel.

3. In combination in a grinding machine, a rotatable grinding wheel, a former plate, an oscillating carriage, a rotatable shaft mounted on said carriage, a former cam mounted on said shaft and adapted to contact with said former plate to cause said carriage to move toward and away from said grinding wheel, and an adjustably weighted arm secured to said carriage to cause contact between said cam and said former plate during the revolution of said cam.

957,393. SHOE-FILLER APPARATUS. ANDREW THOMA, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y., a Corporation of Maine. Filed Mar. 5, 1906. Serial No. 304,225.



1. A shoe filler apparatus, comprising a heating chamber adapted to hold shoe filler material which is normally self-sustaining but requires to be melted for use, said chamber containing a support for said material inclined downwardly toward the discharge end of said chamber for delivering automatically the filler when melted, said chamber having double walls which provide a surrounding air jacket for the circulation of heated air around said chamber, the inner walls of said chamber being perforated to provide flues for the passage of said heated air from between said double walls into the interior of the chamber in direct contact with the filler material therein, means for maintaining a supply of said hot air between said double walls for delivery through into the chamber, and a discharge outlet at the lower end of said inclined support.

2. A shoe filler apparatus, comprising a heating chamber having a heated inclined bottom for melting the filler, a shelf above said bottom for partially softening a reserve supply of filler, means permitting free circulation of hot air throughout the chamber, means for supplying said heat, and a discharge outlet at the lower end of said bottom.

3. A shoe filler apparatus, comprising a chamber having a lower melting portion for melting the filler, a shelf extending partially across the chamber above said lower portion, for holding a reserve supply, means for maintaining extra heat at the bottom and moderate heat around the top of the chamber and a discharge outlet at the lower end of said chamber.

4. A shoe filler apparatus, comprising a heating chamber adapted to hold shoe filler material which requires melting for use, said chamber having double walls which provide a surrounding air jacket for the circulation of heated air around said chamber, said chamber also containing a double bottom normally open at one side, a self-contained electric heater fitting the cavity in said double bottom, removable therefrom without disturbing the apparatus, and means for closing said bottom when the heater is in place therein, said chamber having a discharge outlet adjacent the bottom, and means for regulating the discharge of the melted filler at said outlet.

5. A shoe filler apparatus, comprising a heating chamber having double walls, heating wires between said walls, a discharge opening at the bottom of said chamber, and an approximately horizontal shelf-like extension from said opening for automatically checking the flow of material and rendering it available to the operator.

[Claims 6 to 10 not printed in the Gazette.]

957,394. PLASTIC SHEET COMPOSITION. ANDREW THOMA, Cambridge, Mass., assignor to Thoma Corporation, Portland, Me. Filed Nov. 14, 1906. Serial No. 343,317.



1. The herein described article, consisting of a fabric sheet, having an outside layer of heavy canvas; a body-backing having its surface incorporated into said canvas and containing comminuted pulp-like filler material and penetrating tarry ingredients, the whole being fluxed together by heat into a tough, waterproof, strongly flexible, leather-like sheet.

2. The herein described article, consisting of a fabric sheet, having an outside layer of heavy canvas, a body-backing having its surface incorporated into said canvas and coatalning comminuted pulp-like filler material and penetrating tarry ingredients, the whole being fluxed together by heat and pressure into a tough, waterproof, strongly flexible, leather-like sheet.

3. The herein described article, consisting of a fabric sheet, having an outside layer of heavy canvas provided with an outstanding stitch-receiving rib formed integrally from said canvas, a body-backing having its surface incorporated into said canvas and containing comminuted pulp-like filler material and penetrating tarry ingredients the whole being fluxed together by heat and pressure into a tough, waterproof, strongly flexible, leather-like sheet.

4. The herein described article, consisting of a firm, strongly flexible, waterproof, pliable, leather-like sheet, composed of opposite layers of textile material, and an intervening body composed of pulp-like filler material permeated with low-melting, penetrating hydro-carbon, the whole being incorporated together by heat and pressure into mutually permeating interlocked relation.

5. The herein described article, consisting of a porous, firm, strongly flexible, waterproof, pliable, leather-like sheet, composed of opposite layers of textile material, and an intervening body composed of pulp-like filler material permeated with low-melting, penetrating hydro-carbon, the whole being incorporated together by heat and pressure into mutually permeating interlocked relation.

[Claims 6 to 40 not printed in the Gazette.]

957,395. BOX. HARRISON B. WALTER, Danville, Ill., assignor, by mesne assignments, to National Fibre Box Company, Danville, Ill., a Corporation of Illinois. Filed Mar. 8, 1909. Serial No. 481,993.



1. A box comprising a body and ends, and a binding strip connected to the box extensible at the edges of the box.

2. A box comprising a body and ends, battens for retaining the ends and body in position, and a binding means connected to the box extensible at the folding edges of the box.

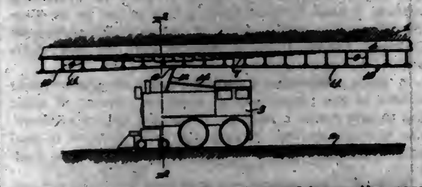
3. A box comprising a body and ends, battens for retaining the body and ends in position, and means extending across the body connecting the battens on each side of the box together.

4. A box comprising a body and ends, battens for retaining the body and ends in position, horizontal strips connecting the ends of the battens together at the edges of the box and a binding means connected to the battens extensible at the ends of the battens.

5. A box comprising a body and ends, battens having grooves on two faces thereof one of the grooves for the reception of the ends of the box and the other groove for the reception of the body, horizontal strips connected to the ends of the battens, and a binding band connected to the box yieldable at the edges of the box.

[Claims 6 and 7 not printed in the Gazette.]

957,396. SMOKE-EXHAUSTING DEVICE FOR TUNNELS. PAUL H. WEDMARK, Lindstrom, Minn. Filed May 7, 1909. Serial No. 494,709.

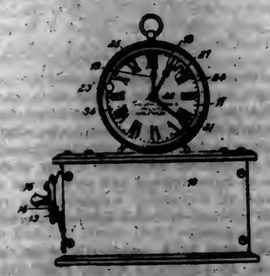


1. The combination with an inclosed locomotive passage way, of an exhaust flue extending along the upper portion thereof, and provided at its bottom with closely positioned air ports, pivoted valve plates normally closing said air ports, a flexible trolley bar extending below said exhaust flue in position to be engaged by a part carried by the locomotive, and connections between said flexible trolley bar and said valve plates, substantially as described.

2. The combination with an inclosed locomotive passage way, of an exhaust flue extending along the upper portion thereof, a fan connected to said exhaust flue for producing a forced circulation of air therethrough, said flue having two rows of air ports in its bottom, pivoted valve plates normally closing said air ports, a flexible trolley bar extending under said exhaust flue, links connecting said valve plates to said trolley bar in pairs, and a trolley pole carried by the locomotive and operative on said flexible trolley bar to progressively move said valve plates into open and closed positions under movement of the locomotive, substantially as described.

3. The combination with an inclosed locomotive passage way, of an exhaust flue extending along the upper portion thereof, and provided at its bottom with closely positioned air ports, centrally pivoted valve plates normally closing said air ports, and means under the control of a moving locomotive for automatically opening and closing said valves, substantially as described.

957,397. ELECTRIC ALARM-CLOCK. HORACE C. WILCOX, Hasleton, Pa. Filed June 17, 1900. Serial No. 502,708.

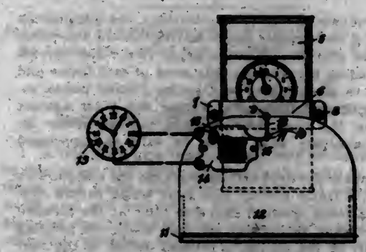


1. The combination with a clock including its minute hand, dial and glass, the latter being rotatably mounted; of an electric circuit connected at one end to the minute hand of the clock, a signal device in the circuit, a ring mounted on the dial, and insulated from the clock, said ring being connected to the other end of the circuit, and a contact carried by the glass in the path of the minute hand, and engageable thereby, said contact being electrically connected to the ring, and adjustable with respect to the graduations of the dial by rotation of the glass.

2. In a clock alarm, the combination of an hour hand having an arbor which is mounted for endwise movement, a disk on said arbor having a notched face, a pointer indicating on the clock dial, a tubular arbor for the pointer mounted for independent rotary movement on the hour hand arbor, a pinion on the pointer arbor, a pin carried by the pinion, and extending into contact with the notched face of the disk, a spring pressing on the hour hand arbor, and tending to move the same endwise when the pin enters the notch of the disk, said spring moving with the arbor, and having an aperture through which the minute hand arbor loosely passes, an electric circuit including a signal device, one end of the circuit being connected to the spring, a contact connected to the other end of the circuit, said contact being in the path of the spring and engageable thereby when the aforesaid movement of the spring takes place, and a setting device for the pointer geared to the aforesaid pinion.

3. The combination with a clock including its hands, dial and glass, the latter being rotatably mounted; of an electric circuit connected at one end to one of the hands of the clock, a device in the circuit actuated by the closing thereof, a ring mounted on the dial, and insulated from the clock, said ring being connected to the other end of the circuit, and a contact carried by the glass in the path of the aforesaid hand, and engageable thereby, said contact being electrically connected to the ring, and adjustable with respect to the graduations of the dial by rotation of the glass.

957,398. TIME-CONTROLLING MECHANISM. HORACE C. WILCOX, Hasleton, Pa. Filed Aug. 7, 1909. Serial No. 511,762.



1. The combination of a support having bearings, an unbalanced tank, a band clamped around the tank, trunnions carried by the band and journaled in the bearings, means for holding the tank stationary, and time-controlled means for releasing said holding means.

2. The combination of a support having bearings, an unbalanced tank, trunnions on the tank journaled in the bearings, a stem projecting from one of the trunnions, a holding device engageable with the stem to prevent tilting of the tank, and time-controlled means for withdrawing the holding device to release the tank.

3. The combination of a support having bearings, an unbalanced tank, trunnions on the tank journaled in the bearings, a stem projecting from one of the trunnions, an electric circuit including a time-controlled switch, a holding device engageable with the stem to prevent tilting of the tank, and an electromagnet in the circuit for withdrawing the holding device to release the tank.

4. The combination of a support having bearings, an unbalanced tank, trunnions on the tank journaled in the bearings, a stem projecting from one of the trunnions, an electric circuit including a time-controlled switch, and an electromagnet in the circuit having an armature engageable with the stem when said magnet is deenergized, to prevent tilting of the tank, said armature releasing the stem when the magnet is energized.

5. The combination of a support having bearings, an unbalanced tank, a band clamped around the tank, trunnions carried by the band and journaled in the bearings, means for holding the tank stationary, and time-controlled electromagnetic means for releasing said holding means.

[Claims 6 to 10 not printed in the Gazette.]

957,399. BRAKE-BEAM. CHARLES H. WILLIAMS, Jr., Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation. Filed June 3, 1909. Serial No. 499,911.



1. In a brake beam, the combination of a commercially rolled member, and a part having a socket to receive said commercially rolled member, said socket being of such size as to tightly fit the "smallest" commercially rolled member.

2. In a brake beam, the combination of a flanged, commercially rolled member, the part having a socket designed to receive said flanged, commercially rolled member, said socket having a dimension as small as the "smallest" dimension of said commercially rolled member.

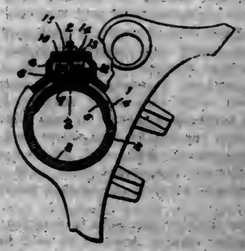
3. In a brake beam, the combination of a flanged commercially rolled member, of a part having a socket to receive said flanged commercially rolled member, said socket having a seat for the flanges of said commercially rolled member, which seat has an inclined portion.

4. In a brake beam, the combination of a commercially rolled member, of a part having a socket designed to receive said member, the inner face of said socket having inclined walls, whereby the commercially rolled member will cut or mash its way to its home position.

5. In a brake beam, the combination of a commercially rolled member, a part having a socket designed to receive the end of said commercially rolled member, and means in the socket for taking up lost motion between said parts.

[Claims 6 and 7 not printed in the Gazette.]

957,400. BRAKE-BEAM. CHARLES H. WILLIAMS, Jr., Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed July 17, 1909. Serial No. 508,121.



1. The combination with a brake beam, of brake heads loosely mounted on the ends thereof, locking blocks carried by the brake heads and engaging the beam, and flat springs carried by the heads and bearing against the locking blocks.

2. The combination with a brake beam, of brake heads loosely mounted on the ends thereof, locking blocks car-

ried by the brake heads and engaging the beam, and adjustable flat springs carried by the heads and bearing against the locking blocks.

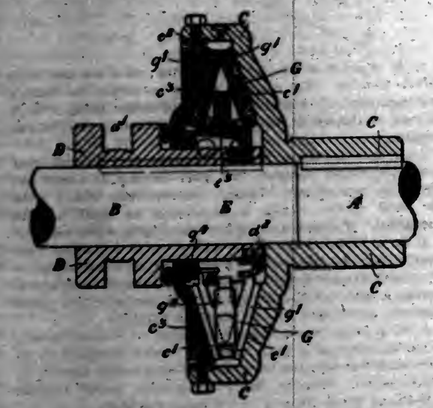
3. The combination with a brake beam, of brake heads loosely mounted on the ends thereof, locking blocks carried by the brake heads and engaging the beam, and flat springs removably arranged in the heads and bearing against the locking blocks.

4. The combination with a brake beam, of brake heads loosely mounted on the ends thereof, locking blocks carried by the brake heads and engaging the beam, and adjustable flat springs removably arranged in the heads and bearing against the locking blocks.

5. In a brake beam of the class described, a head provided with a housing, a locking block located therein, and a flat spring arranged therein and bearing against the locking block.

[Claims 6 to 19 not printed in the Gazette.]

957,401. CLUTCH. LUIS WIRTZ, Smethwick, England. Filed Oct. 26, 1908. Serial No. 459,645.



1. A friction clutch comprising in combination, a shaft, a friction member mounted on said shaft, a radially movable friction member adapted to coöperate with said other member, anti-friction elements engaging both of said friction members, and means for shifting said elements to effect frictional engagement of said members with each other and locking engagement with one of said members with said means.

2. A friction clutch comprising in combination, a shaft, a friction member mounted on said shaft, a coöperating friction member, anti-friction elements engaging both of said members, and means for shifting said elements to effect frictional engagement of said members and locking engagement of one of said members with said means.

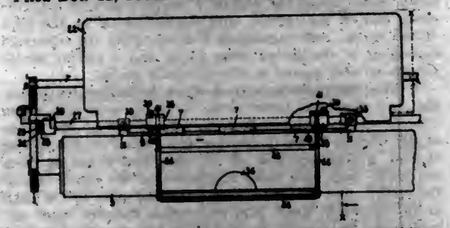
3. A friction clutch comprising in combination, a shaft, a friction member mounted on said shaft and provided with groove portions, a second friction member adapted for engagement with said shaft member and provided with grooved surfaces, a sleeve on said shaft, and anti-friction elements carried by said sleeve and adapted for successive engagement with said grooved portions for effecting frictional engagement with said member and locking engagement between one of said members and said sleeve.

4. A friction clutch comprising in combination, a shaft, a friction member rigidly mounted on said shaft and provided with grooved surfaces, a second friction member adapted for engagement with said first friction member and provided with grooved surfaces, a second shaft, a sleeve keyed on said second shaft and movable longitudinally thereof, and anti-friction members carried by said sleeve and adapted for successive engagement with said grooved surfaces to effect engagement of said friction members and positive locking engagement of one of said members with said sleeve.

5. A friction clutch comprising in combination, shafts arranged for operative connection with each other, rotative coacting friction members one of which is connected with one of said shafts and the other of which is free therefrom and radially movable, said free member having a plurality of axially arranged grooves inclined with respect to its axis, a sleeve non-rotatively and slidably mounted on the other of said shafts, a ring of anti-friction balls carried by said sleeve and engaging said inclined grooves to non-rotatively connect said free member and said sleeve and serving upon axial movement of said sleeve to radially move said free member into frictional engagement with said other member.

[Claims 6 to 8 not printed in the Gazette.]

957,402. TYPE-WRITING MACHINE. CLIO B. YAW, Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Dec. 11, 1909. Serial No. 532,601.



1. In a front-strike typewriting machine, the combination of a spring-pressed frame carrying a feed roller which extends longitudinally of the platen above the printing line, and throughout a substantial distance longitudinally of the platen, said frame comprising connected parallel side arms which extend over the platen, and means for readily affording a detachment of said frame when desired.

2. In a front-strike typewriting machine, the combination of a platen, a rectangular frame having curved side arms which extend over the platen, a paper feed roller carried by and extending between the side arms of said frame and situated above the printing line, spring-pressed means coöperative with said frame for forcing the roller against the platen or the work sheet thereon, and means for detachably connecting said frame to said spring-pressed means.

3. In a front-strike typewriting machine, the combination of a platen, a frame having side arms which extend over the platen, a roller between said side arms at the forward ends thereof, said roller being situated above the printing line centrally of the platen, a pivoted device in the rear of the platen, and means for detachably connecting said frame to said pivoted device.

4. In a front-strike typewriting machine, the combination of a platen, a frame having side arms which extend over the platen, a roller between said side arms at the forward ends thereof, said roller being situated above the printing line centrally of the platen, a rock shaft, and means for detachably connecting said frame to said rock shaft.

5. In a front-strike typewriting machine, the combination of a platen, a frame having side arms which extend over the platen, a roller between said side arms at the forward ends thereof, said roller being situated above the printing line centrally of the platen, a spring-pressed rock shaft in the rear of the platen, and means for detachably connecting said frame to said rock shaft.

[Claims 6 to 23 not printed in the Gazette.]

957,403. TELEPHONE-RECEIVER. NATHANIEL BALDWIN, Heber, Utah. Filed July 1, 1909. Serial No. 505,478.

1. A telephone receiver comprising a permanent magnet, an electromagnet, a centrally pivoted armature operated by the electromagnet, means connecting one end of the armature to the diaphragm of the receiver, and means to balance the armature against the tension of the diaphragm.



2. A telephone receiver comprising a permanent magnet, an electromagnet, a centrally pivoted armature adapted to be operated by said electromagnet, a connection between one end of the armature and the diaphragm, and a flexible device for maintaining the balance of the armature.

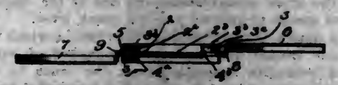
3. A telephone receiver comprising a permanent magnet, an electromagnet, a centrally pivoted armature operated by the electromagnet, a diaphragm for said receiver, an adjustable connection between the diaphragm and one end of the armature a spring for balancing the armature against the tension of the diaphragm, and means to adjust the spring.

4. A telephone receiver comprising a casing, a permanent magnet mounted therein, an apertured disk through which the legs of the magnet pass, said disk adapted to engage the casing, and a cap clamping the disk against the casing.

5. A telephone receiver comprising a casing, a cup threaded therein, an electromagnet carried by the cup, a balanced armature mounted within said magnet, a diaphragm carried by the casing, a connection between the armature and diaphragm, and adjustable means to flexibly maintain the armature in balanced position within the magnet.

[Claims 6 to 9 not printed in the Gazette.]

957,404. TELEPHONE-MOUTHPIECE. ANNA BEBOUT, St. Louis, Mo. Filed Mar. 29, 1909. Serial No. 486,621.



1. A telephone attachment comprising an annular frame having inner and outer annular walls with a space between said walls, the outer annular wall being adapted to fit over and embrace a telephone mouth piece of one diameter and the inner annular wall being adapted to fit over and embrace a telephone mouth piece of a lesser diameter.

2. An attachment for telephones comprising an annular frame having inner and outer annular walls, with a space between them, a flanged member secured within said space and dividing it into a plurality of transmitter receiving recesses adapted to receive an annular portion of different sized transmitters, said inner wall being constructed with a lip; a diaphragm supported on said lip; and a ring fitting said inner annular wall and also constructed with a lip overlapping said diaphragm and holding it to said wall.

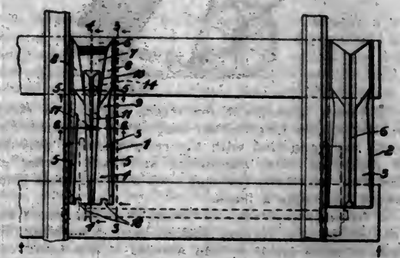
3. An attachment for telephones comprising an annular frame having inner and outer walls extending both on the same side of said frame and having a space between them to receive the mouth piece of an existing telephone; the inner wall being provided with a ring fitted thereto; a diaphragm secured between said inner wall and ring; and covers suitably fitted to the outer wall and closing the opposite sides of the frame.

4. An attachment for telephones comprising an annular frame constructed with inner and outer walls, and with a space between said walls adapted to receive the mouth piece of an existing telephone, a ring fitted to the inner wall, a barrier or diaphragm secured between said ring and inner wall, and covers hinged to the outer wall and swinging in closing relation to opposite sides of the frame.

5. An attachment for telephones comprising an annular frame constructed with inner and outer walls, and with a space between said walls adapted to receive the mouth piece of an existing telephone, a ring fitted to the inner wall, a barrier or diaphragm secured between said ring and inner wall, and covers hinged to the outer wall and swinging in closing relation to opposite sides of the frame, said outer wall being provided with a surrounding bead against which the covers seat.

[Claims 6 and 7 not printed in the Gazette.]

957,405. CAR-REPLACER. EDWARD BEST, London, Ontario, Canada, and DAVID A. SCOTT, Oshkosh, Wis. Filed July 8, 1909. Serial No. 506,560.



1. A car replacer of the class described, comprising a body having a tapering outer portion having a flat upwardly inclined top surface and an inner portion having outwardly and rearwardly inclined side faces, a longitudinal switch bar pivoted upon the inner portion of the replacer body with means formed upon the free end of the switch bar and in the outer end of the tapering portion of the replacer body for holding the switch bar at the desired angular adjustment.

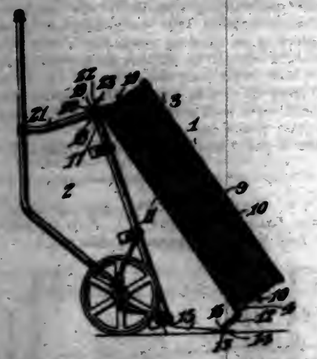
2. A car replacer of the class described, comprising a body having a tapering outer portion, provided with a flat upwardly inclined top surface, an inner portion having inclined side faces, the inner portion of the body having a socket, and a vertical recess in the bottom of the socket and the top surface of the tapering portion having a transverse recess near its inner end and a plurality of laterally spaced recesses in its outer end, and a switch bar having a semi-spherical portion to seat in said socket, a stem projecting from said semi-spherical portion adapted to seat in said vertical recess, a projection to fit in the guide recess, and a spur at its free end to fit in any one of the recesses of the outer end of the tapering portion.

957,406. BASKET ATTACHMENT FOR BARREL-TRUCKS. CHARLEY BJORKLUND, Bowesmont, N. D., assignor of one-third to H. M. Waldren and one-third to John V. Anderson, Drayton, N. D. Filed Mar. 9, 1909. Serial No. 482,370.

1. A basket attachment for hand trucks having a foot piece, said basket attachment including a receptacle provided at its front with arms detachably engaging the foot piece of the truck and supporting the front of the receptacle in an elevated position when the truck is in its normal position, said receptacle being also provided at its rear end with means for connecting it with the frame of the truck.

2. The combination of a truck including a foot piece and provided thereat and at the rear portion of its frame with openings, and a basket attachment provided at the front with arms arranged to engage the openings of the foot piece and supporting the front of the basket at an elevation, said basket being also provided at the back with means for engaging the rear openings of the frame.

3. The combination with a truck having a frame provided with front and rear openings, of a basket attachment including a receptacle, and longitudinal supporting rods secured to the bottom of the receptacle and having terminal portions detachably engaging the said openings.
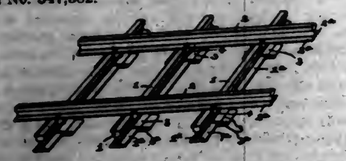


4. A basket attachment for trucks including a receptacle, and spaced longitudinal supporting rods extending beneath and connected with the receptacle and provided with depending front supporting arms and having extended rear terminals, the said arms and terminals being arranged to engage a truck.

5. A basket attachment for trucks including upper and lower rectangular frames, corner bars connecting the frames, a sheet metal bottom secured to the lower rectangular frame, side and end walls connected with the frames, and spaced longitudinal supporting bars connected with the lower frame and having extended terminals arranged to engage a truck.

[Claim 6 not printed in the Gazette.]

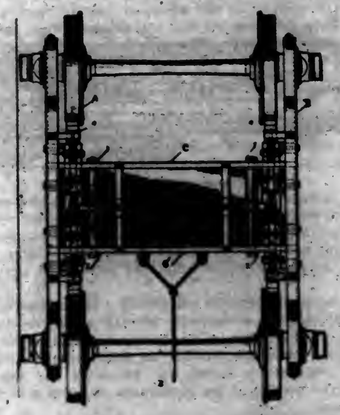
957,407. RAILWAY-TRACK CONSTRUCTION. JOSEPH W. BLOWER, Columbus, Ohio. Filed Mar. 4, 1910. Serial No. 547,382.



1. In a railway track construction, the combination with metal tie bars and track rails supported thereon, of connecting members each comprising an angular plate having a recess in the inner side of its base portion adapted to engage a base flange of the tie body, the upright portion of each of said connecting members being formed at one end with an upwardly extending and inwardly projecting tongue adapted to engage the adjacent base flange of a track rail, and means for securing said connecting members to opposite sides of a tie.

2. In a railway track construction, the combination with metal tie bars, each having the form of a railway track section and track rails mounted on said ties, of connecting members each consisting of an angular plate having its laterally extending horizontal base portion doubled and provided with an inner side recess adapted to receive the laterally projecting base flange of one of said tie bars, the upright portion of each of said connecting members comprising an inwardly projecting central portion adapted to engage the longitudinal side channel of the tie bar and an upper portion having an integrally formed upwardly and inwardly projecting tongue, each of said connecting members having a bolt hole formed therethrough, and a bolt by means of which two of said connecting plates may be secured to opposing sides of the tie bar.

957,408. CAR-BRAKE. GEORGE M. BRAHAM and JOHN LILL, Hammond, Ind. Filed Mar. 6, 1909. Serial No. 481,869.



1. In a device of the character described, a wheel truck, a plurality of brakeshoes on each side of the truck, an operating bar pivoted to each shoe, pivoted operating levers carried by the truck provided with wedge shaped ends adapted to contact with and actuate the operating bars, and an actuating member connected to the opposite ends of the operating levers and means to operate said actuating member.

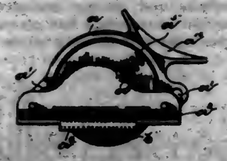
2. In a device of the character described, a wheel truck, brakeshoes suspended from each side of the truck, horizontal operating bars mounted to reciprocate in bearings carried by the truck pivotally secured at one end to a brakeshoe and having their opposite ends terminating in proximity to each other, a pivoted operating lever provided with a wedged shaped portion adapted to engage between each of the operating bars, a bell crank lever pivoted to the truck connected at one end of the operating lever, and means to operate the bell crank lever.

3. In a device of the character described, a wheel truck having side frames and a transom composed of parallel panels, a brakeshoe suspended from the truck in proximity to the inner side of each wheel, a horisontal bearing in each panel on each side, an operating bar adapted to reciprocate in each bearing pivoted at one end to a brakeshoe and having an antifriction roller at the opposite end, said operating bars on each side being in line and terminating with rollers in proximity to each other, an operating lever pivoted between the panels of the transom on each side of the center thereof, the free end of each lever having a wedged shaped member adapted to enter between the adjacent rollers on each side, a bell crank lever pivoted to the outer side of a panel on each side of the center having an arm extended inward secured to an operating lever and an arm extending upward on the outer side of the panel, means connecting the upper ends of said levers to each other and means to apply power to said connection.

4. A vehicle brake operating mechanism comprising brake shoes, supporting means for said shoes, plunger rods connecting at one end with said brake shoes and mounted to slide toward and from each other, wedge blocks normally out of engagement with and operable between the inner ends of said plunger rods to force them apart and operating means for said wedge blocks.

5. In a device of the character described, a wheel truck, brake shoes, operating bars connected at one end to a shoe and having their free ends adjacent to each other, an independent actuating means adapted to engage the adjacent free ends of the operating bars, and means to reciprocate said actuating means into and out of engagement with the operating bar.

957,409. PAPER-CUTTER. LOUIS F. BRENING, Springfield, Ohio, assignor, by mesne assignments, to The Ridgely Trimmer Company, Springfield, Ohio, a Corporation of Ohio. Filed Dec. 26, 1905. Serial No. 293,269.

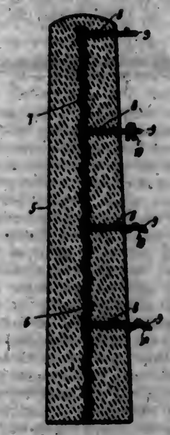


1. In a paper cutter as described, the combination of a disk and a casing therefor, a supporting frame with which said casing is movably connected, parallel inclined guides directing the movement of said casing forwardly and downwardly in relation to said supporting frame, substantially as specified.

2. In a paper cutter, a cutting disk, a casing therefor, a supporting frame for said casing, a straight edge having an over-hanging ledge for the engagement of said paper cutter, a central projecting flange on said supporting frame engaging one side of said over-hanging ledge, projecting flanges offset in relation to said central flange engaging the opposite side of said over-hanging ledge, substantially as specified.

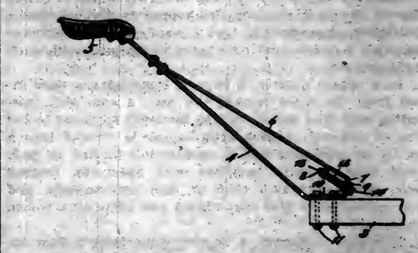
3. In a paper cutter, a cutting disk, a casing therefor, a supporting frame for said casing, a straight-edge having an over-hanging ledge for the engagement of said paper cutter, bearing surfaces at opposite ends of said supporting frame engaging one side of said over-hanging ledge, and a bearing surface intermediate said afore-mentioned surfaces engaging the opposite side of said over-hanging ledge, substantially as specified.

957,410. FENCE-POST. JOSEPH M. CAMPBELL, Memphis, Tenn. Filed June 29, 1908. Serial No. 440,940.



In a cementitious fence post, a reinforcing rod extending longitudinally of said post, and a length of wire twisted around said post in a series of spirals, the ends of each spiral overlapping the adjacent ends of the adjacent spirals to form a substantially continuous spiral extending the entire length of said rod, and a wire being twisted at the ends of each spiral to form fence wire attaching loops extending outward from said rod, the twisted portions of said loops lying wholly within the post and the ends of the loops lying exterior of said post.

957,411. SEAT FOR AGRICULTURAL IMPLEMENTS. CARL CHRISTENSEN, Bradley, Ill., assignor, by mesne assignments, to Sears, Roebuck & Company, Chicago, Ill., a Corporation of New York. Filed Oct. 7, 1907. Serial No. 396,249.



1. A seat-support for implements, comprising a strap secured at its lower end to a suitable support, said strap being adapted to be deflected from its normal position by the weight of the rider, a second strap connected with and extending longitudinally of said first-mentioned strap, and a spring connected with said second strap and yieldingly holding the same when the seat-support is deflected from its normal position.

2. A seat-support for implements, comprising a strap secured at its lower end to a suitable support, said strap being adapted to be deflected from its normal position by the weight of the rider, a second strap connected with and extending longitudinally of said first-mentioned strap, and a coiled spring arranged substantially parallel with said second strap and yieldingly holding the same.

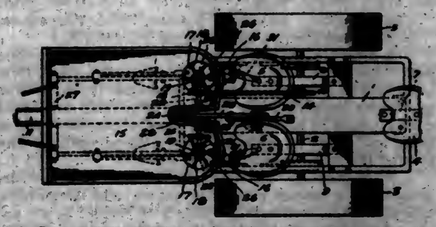
3. A seat-support for implements, comprising a flexible strap secured at its lower end to a suitable support, a second strap secured at its upper end to said first-mentioned strap and arranged at an angle thereto, a spring connected with the lower end portion of said second strap and adapted to be put under stress by longitudinal movement thereof, and means supporting said spring.

4. A seat-support for implements, comprising a strap secured at its lower end to a suitable support, a spring suitably supported at a distance from the lower portion of said strap, and a second strap secured to the upper portion of said first-mentioned strap and disposed at an angle thereto, said second strap operating under the weight of the rider to put said spring under stress.

5. A seat-support for implements, comprising a strap secured at its lower end upon a suitable support and extending upward in an inclined position from the point of its support, a second strap connected with the upper portion of said first-mentioned strap and disposed at an angle therewith, a bolt suitably supported at a distance from the lower portion of said first-mentioned strap, and a spring mounted on said bolt, said second strap acting under the weight of the rider to compress said spring.

[Claims 6 to 9 not printed in the Gazette.]

957,412. TWO-ROW POTATO-PLANTER. NICHOLAS COLGEN and OSCAR P. BOYSEN, St. Charles, Minn. Filed June 26, 1909. Serial No. 504,617.



1. In a potato planter, a hopper, comprising a floor inclined from the front toward the rear, a side wall, sur-

rounding said floor and extending inwardly adjacent to the center of one end, whereby the hopper is divided into a plurality of compartments.

2. In a potato planter, a hopper, comprising a floor inclined from the front toward the rear, a side wall, surrounding said floor and extending inwardly adjacent to the center of one end, whereby the hopper is divided into a plurality of compartments, each of said compartments provided with a recess, and feed tubes registering with each of said recesses.

3. In a potato planter, a hopper, comprising a floor inclined from the front toward the rear, a side wall, surrounding said floor and extending inwardly adjacent to the center of one end, whereby the hopper is divided into a plurality of compartments, a countersink formed in each of said compartments, provided with apertures, feeding wheels, mounted within each of said countersinks and means connected to said feed wheels and adapted to rotate them.

4. In a potato planter, a hopper, comprising a floor inclined from the front toward the rear, a side wall, surrounding said floor and extending inwardly adjacent to the center of one end, whereby the hopper is divided into a plurality of compartments, a countersink formed in each of said compartments, provided with apertures, feeding wheels, mounted within each of said countersinks, means connected to said feed wheels and adapted to rotate them, and feed tubes registering with the apertures in the countersinks constructed and arranged to convey the seeds from the countersinks to the furrows.

957,413. PROTECTING-COVER FOR PNEUMATIC TIRES. ANGELY CONSTANTIN, Hanover, Germany. Filed June 28, 1909. Serial No. 504,815.



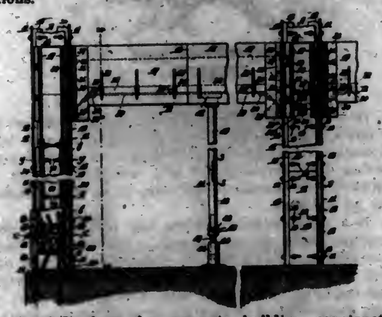
An improved protecting cover for pneumatic tires comprising two ring-shaped parts of india-rubber which together form the protecting cover and both of which have circular grooves in the inner surface, beveled outer edges, thickened inner edges and an insertion of wire gauze, one of the parts having a circular groove in the outer surface near the outer edge and a flap of circular cross section extending from the outer edge of one of said parts and destined to engage with the circular groove of the other part, in combination with a pneumatic tire having circular ribs upon its outer surface destined to engage with the circular grooves of the inner surface of the parts of the protecting cover and an auxiliary felly at the side of the ordinary felly which carries the pneumatic tire, said auxiliary felly being destined to carry the protecting cover, substantially as described.

957,414. FORM FOR CONCRETE BUILDING CONSTRUCTIONS. GEORGE F. FISHER, North Tonawanda, N. Y. Filed Dec. 10, 1906. Serial No. 347,177.

1. A form for concrete building constructions comprising adjustable column-forms and an adjustable girder-form supported at its ends by said column-forms, the interior of said forms communicating to permit of casting columns of different sizes in thickness and girders of different sizes in depth and width in connected form without removing any part of the form or adding parts thereto.

2. A girder-form for concrete building constructions comprising a bottom plate, side plates, and corner-bars, said bottom plate being adjustable with respect to the upper edge of the side plates to permit of increasing or diminishing the depth of the form, and said side plates being adjustable toward and from the bottom plate to permit of increasing or diminishing the width of the form, the whole permitting the casting of girders of different depths and widths without adding to or reducing the number of parts.

3. A girder-form supported at its ends and comprising a plurality of sections, each having side plates, a bottom plate, and corner-bars connecting said plates, and the intermediate section lying with its ends within the adjoining sections.



4. A girder-form for concrete building constructions comprising side plates having vertical slots, a bottom plate having transverse slots, and corner-bars having bolts passed therethrough and projecting through the slots in said bottom and side plates, and nuts applied to the projecting ends of said bolts.

5. A girder-form for concrete building constructions comprising side plates having vertical slots, a bottom plate having transverse slots and corner angle-bars forming the angles of said form and having bolts passed therethrough whose ends extend through the slots in said bottom and side plates, and nuts applied to the projecting ends of said bolts.

[Claims 6 to 14 not printed in the Gazette.]

957,415. TRACE-BUCKLE. WILLIAM M. GIFFEE, Green, Kans. Filed Nov. 25, 1908. Serial No. 464,361.



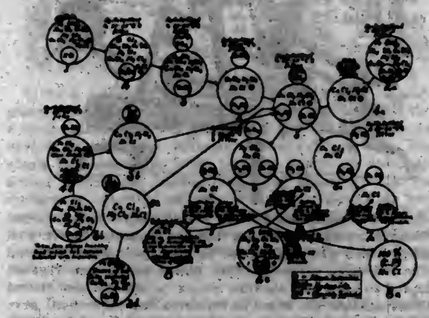
1. A trace buckle comprising a bottom plate having longitudinal side flanges, and having also a hook at its forward end, the hook being wholly out of the plane of the plate and having its under portion terminating short of the forward end of the plate so that a transverse slot is afforded, an upper plate pivoted between the side flanges adjacent the rear ends thereof and having strap engaging means, the upper plate in its operative position being in substantially the same plane as the under portion of the hook and having an extended jaw which is disposed adjacent to said under portion in combination with a strap which extends axially of the buckle between the side flanges and the upper and bottom plates and projects through the said transverse slot and a second strap having a loop provided at its end for engagement in the hook and over the extended jaw to thereby maintain the upper plate in its operative position.

2. A trace buckle comprising a bottom plate having strap securing means associated therewith, a hook shaped member having an opening through which the strap secured by the strap securing means is passed, and means for detachably connecting the member and the plate.

3. A trace buckle comprising a bottom plate having side flanges between which a strap may be passed, means associated with the bottom plate for removably securing the strap, a hook shaped member also having side flanges and having an opening through which the strap is also passed and a bolt passing through the side flanges of the plate and of the member and constituting a means for detachably connecting the plate and the member.

4. A trace buckle, comprising a bottom plate, a strap securing plate pivoted thereto and having an extended jaw at its free end and a hook shaped member detachably connected to the bottom plate adjacent the jaw, the member being constructed to provide a transverse slot between the member and the bottom plate and through which a strap may be passed in combination with a separable securing part which is engaged under the bill of the hook shaped member and over the jaw the latter being disposed at one side of the bill of the hook shaped member.

957,416. PROCESS OF REFINING SALT AND RECOVERING ITS IMPURITIES AS BY-PRODUCTS. CHARLES GLASER and GEORGE J. MULLER, Baltimore, Md. Filed May 17, 1909. Serial No. 496,525.



1. The process of purifying sodium chlorid which consists in adding to a solution of the impure sodium chlorid a quantity of hydrochloric acid sufficient to dissolve contained impurity not wholly soluble in water but insufficient to precipitate any of the sodium chlorid, then adding to the solution a reagent suitable in character and quantity to react upon and render the impurity separable from the sodium chlorid and at the same time add to the solution an element of sodium chlorid.

2. The process of purifying sodium chlorid which consists in adding to a solution of the impure sodium chlorid a quantity of hydrochloric acid sufficient to dissolve contained impurity not wholly soluble in water but insufficient to precipitate any of the sodium chlorid, then adding to the solution a reagent suitable in character and quantity to react upon and render the impurity separable from the sodium chlorid and at the same time increase the mass of salt.

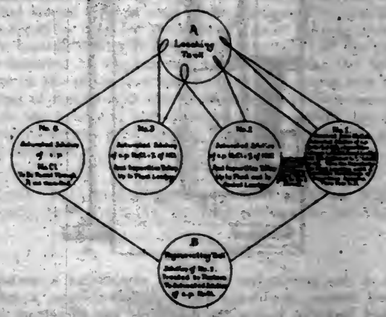
3. The process of removing from sodium chlorid an impurity not wholly soluble in water, which consists in dissolving the impurity by adding to the solution a quantity of hydrochloric acid sufficient therefor but insufficient to precipitate any of the sodium chlorid, then adding to the solution a reagent suitable in character and quantity to react upon and render the impurity separable from the sodium chlorid and which reagent is also capable of adding to the solution an element of said chlorid.

4. The process of removing from sodium chlorid, a plurality of impurities not wholly soluble in water, which consists in adding to the impure solution, a quantity of hydrochloric acid sufficient to dissolve the impurities but insufficient to precipitate any of the sodium chlorid, and then subjecting the impurities to a reagent which renders them separable from the sodium chlorid and furnishes an element of sodium chlorid to the solution.

5. The process of removing from sodium chlorid a plurality of impurities not wholly soluble in water, which consists in adding to an impure solution of the sodium chlorid, a quantity of hydrochloric acid, sufficient to dissolve the said impurities but insufficient to precipitate any of the sodium chlorid and then subjecting the impurities to a plurality of reagents respectively reactive upon the several impurities to render them separable from the sodium chlorid and adapted to add to the solution an element of sodium chlorid.

[Claims 6 to 27 not printed in the Gazette.]

957,417. PROCESS OF REFINING SALT. CHARLES GLASER and GEORGE J. MULLER, Baltimore, Md. Original application filed May 17, 1909, Serial No. 496,525. Divided and this application filed Nov. 17, 1909. Serial No. 528,566.



1. The process of purifying salt which consists in leaching salt with its impurity by an acidulated saturated solution of pure salt, thereby dissolving the impurity from the salt to be purified.

2. The process of purifying salt which consists in leaching salt with its impurity by an acidulated saturated solution of pure salt, thereby dissolving the impurity from the salt to be purified, and then washing clean with a saturated solution of pure salt.

3. The process of purifying salt containing a plurality of impurities which consists in leaching the impure salt by an acidulated saturated solution of pure salt thereby dissolving out the impurities from the salt to be purified and then washing clean with a saturated solution of pure salt.

4. The process of purifying salt containing a plurality of impurities which consists in leaching the impure salt by an acidulated saturated solution of pure salt thereby dissolving out the impurities from the salt to be purified and then washing clean with a saturated solution of pure salt, then adding barium chlorid to the acidulated leaching solution to precipitate the sulfuric radical.

5. The process of purifying salt which consists in leaching the impure salt by an acidulated saturated solution of pure salt to dissolve out the impurities to be removed, washing clean with a saturated solution of pure salt, then adding barium chlorid to the acidulated leaching solution to precipitate the sulfuric radical, and thereafter neutralizing the acidulated solution.

[Claims 6 to 10 not printed in the Gazette.]

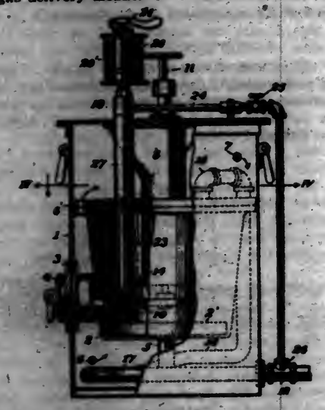
957,418. SULFUR-BURNER. PAUL H. GRIMM, Glen Cove, N. Y., assignor to The Sulphur Dioxide Co., Glen Cove, N. Y., a Corporation of New York. Filed Nov. 17, 1909. Serial No. 528,487.

1. A sulfur burner comprising a normally closed firebox, means for supplying combustible materials thereto, means for delivering gas therefrom and a steam generator heated by said combustible materials and constructed to supply a determinate quantity of steam to said gas.

2. A gas generating apparatus comprising a normally closed firebox, means for supplying combustibles thereto, a steam generating device extending within said firebox, and means for supplying determinate quantities of water to said device.

3. A gas generating apparatus comprising a normally closed firebox, means for supplying air thereto, a sulfur reservoir supply, means for delivering gas therefrom, and

a moisture supplying device the same extending adjacent the point of combustion and having a discharge into said gas delivery means.



4. A gas generating apparatus comprising a normally closed firebox, means for supplying air thereto, a sulfur supply therefor, means for delivering gas therefrom, and a moisture supplying device, the same consisting of a barrel extending adjacent to the point of combustion with means for forcing determinate quantities of water thereinto.

5. A gas generating apparatus comprising a normally closed combustion chamber, and a moisture supplying device disposed therein, said device consisting of a steam generator, and means for forcing determinate quantities of water thereinto.

[Claims 6 and 7 not printed in the Gazette.]

957,419. BABY-JUMPER. CHARLES K. GUBLEY, Salt Lake City, Utah. Filed July 14, 1909. Serial No. 507,555.

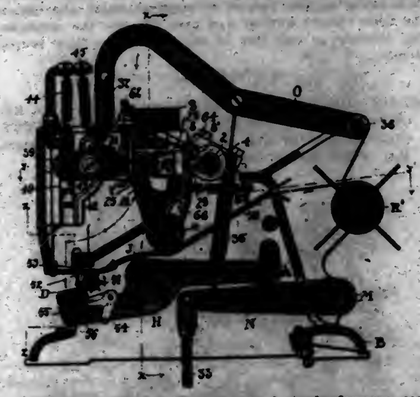


In a device of the kind described, a pipe cross having intersecting bores one of which is threaded at both ends, a sleeve held in the unthreaded bore and extending across the threaded bore, a tripod leg screwed into one end of the threaded bore and bearing against the sleeve, a bolt passing through said sleeve, and other tripod legs carried at the ends of said bolt.

957,420. TAGGING-MACHINE. FRANCIS W. HALL, Wickliffe, Ohio. Filed Aug. 15, 1907. Serial No. 388,653.

1. In a tagging machine, a set of staple formers comprising a plunger having a loosely connected outer portion provided with a shoulder on its edge, a shaft adapted to be reversely rotated within limits and a cam thereon adapted to pass said shoulder on its reverse movement and to bear against the same in its actuating movement.

2. In a tagging machine, a set of wire cutters and a set of formers to convert the wire into staples, said cutters and formers each mounted on rock arms and having a plunger member and each plunger member having a vertically spring pressed movable shouldered outer portion, and cams adapted to operatively engage said outer portions, and means to provide a limited rock movement to said cams.



3. In a tagging machine, a set of staple formers comprising a plunger having a loosely connected outer portion provided with a shoulder on its edge, a shaft adapted to be reversely rotated within limits and a cam thereon adapted to pass said shoulder on its reverse movement and to bear against the same in its actuating movement, gear and crank mechanism to actuate said shaft, and adjustable stops to fix the limit of rotation of said mechanism and shaft.

4. In a tagging machine, a pair of rolls arranged to feed dual strands of wire to the machine and guide channels for the wires, in combination with cutters mounted on rock arms to sever the wires into lengths, a pair of forming members mounted on rock arms at the side of said cutters to convert the wires into staples, separate cams to act successively upon said cutting and forming members, and an anvil, one of said forming members constructed to deliver said staples to the anvil and clench them thereon.

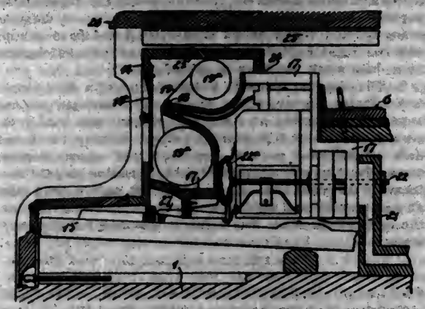
5. In a tagging machine, the combination of a pair of feed rolls for dual strands of wire, a shaft and gears connecting said shaft and rolls to actuate the rolls, a set of cams fixed on said shaft and a crank to rock the same, and a pair of wire cutters and a pair of staple formers pivotally mounted to rock side by side and having each a slidable member adapted to be successively engaged by said cams upon reverse movements thereof.

[Claims 6 to 17 not printed in the Gazette.]

957,421. HORIZONTAL-GRAND PLAYER-PIANO. NELSON D. HOSLEY, Meriden, Conn., assignor to The Wilcox & White Company, Meriden, Conn., a Corporation of Connecticut. Filed Apr. 28, 1909. Serial No. 492,644.

1. In a horizontal grand piano, a horizontal case, sounding devices therein, hammers therefor, pivoted keys and mechanical devices for operating said hammers, said mechanical devices including key strikers and pneumatic action mechanism arranged entirely within the front part of the case directly to the rear of the outer ends of the keys, and arranged to operate said hammers from a point forward of the pivots for said keys, and tracker mechanism above said strikers and in front of said action mechanism.

2. In a combined mechanically and manually operable grand piano, a frame having an elongated front portion, a horizontally disposed sounding board in said frame, and a tracker-board and pneumatic action mechanism mounted entirely within the elongated front portions of the case, said tracker mechanism being arranged forward of said action mechanism and in substantially the same horizontal plane.



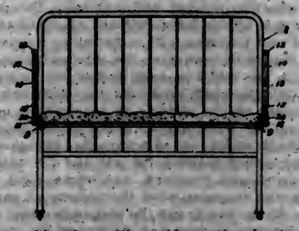
3. In a combined mechanically and manually operable grand piano, a frame having an elongated front portion, a horizontally disposed sounding board therein, sounding devices therein, keys therefor having exposed outer ends along the elongated front portion, combined pneumatic action mechanism, tracker board and music roll carrying mechanism mounted entirely within the elongated front portion of the frame, said parts being removable bodily through the said front portion, said tracker board and music roll carrying mechanism being arranged in substantially the same horizontal plane as, and in front of, said action mechanism.

4. In a combined mechanically and manually operable grand piano, a frame having an elongated front portion, a horizontally disposed sounding board therein, sounding devices therein, keys therefor having exposed outer ends along the elongated front portion, combined pneumatic action mechanism, tracker-board, music roll carrying mechanism and motor therefor mounted entirely within the elongated front portion of the frame, said parts being arranged in substantially the same horizontal plane, the tracker mechanism being in front of said action, and said motor being at one end of said tracker.

5. In a combined pneumatic and manually operable grand piano, a frame having an elongated front portion, a horizontally disposed sounding board in said frame, mechanical player mechanism in front of said sounding board including pneumatic action mechanism, a tracker, spool mechanism, and motor mechanism therefor, all of said parts being in substantially the same horizontal plane, and a frame dependently supporting and carrying all of said mechanical player parts all arranged entirely within the elongated front portion of the piano frame, with means at the ends of said frame for detachably holding said frame in place.

[Claims 6 and 7 not printed in the Gazette.]

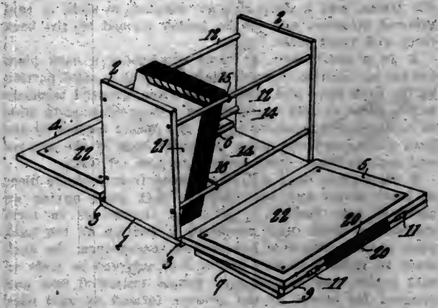
957,422. BEDSTEAD ATTACHMENT. FREDERICK W. KING, Jacksonville, Fla. Filed May 22, 1909. Serial No. 497,581.



1. The combination with a side section having vertical rods, of clamp members adjustably and detachably connecting the said section to a bed, each clamp comprising a plate having rigid outwardly and upwardly curled spaced ears at one end to receive the lower edge of the section, a right angular perforated guide ear at the opposite end of the plate receiving one vertical rod of the section, an extension on the plate, an adjustable screw supported by the extension and plate and a movable jaw acted upon by the screw and adapted to clamp between it and the plate a side rail of a bed.

2. An attachment of the class described comprising side guards, each formed of double hinged sections and having spaced vertical rods, plates having guide ears slidably receiving a pair of the vertical rods of the side guards, rigid bearing means located at the lower end of the plate and adapted to receive and form a rest for the lower edges of the guard, brackets fixed to said plates and projecting at right angles therefrom, adjusting screws mounted in the brackets, and movable jaws operated by said adjusting screws for clamping the plates to the side rails of a bedstead.

957,423. FILING-CABINET. SOLOMON KLEPFER, Indianapolis, Ind. Filed Dec. 31, 1909. Serial No. 535,773.



1. A filing cabinet for cards, provided with coöperating card-receiving keepers having individual sliding adjustment in spaced horizontal planes.

2. A filing cabinet for cards, comprising vertically spaced pairs of rods; and a card-receiving keeper slidably adjustable upon each pair.

3. A filing cabinet for cards, comprising vertically spaced card-receiving keepers having individual sliding adjustment, the upper of said keepers being arranged to support the cards at their edges, and the lower of said keepers being arranged to support the cards intermediate their edges.

4. A filing cabinet for cards, comprising vertically spaced pairs of rods; and a card receiving keeper slidably adjustable upon each pair, the upper of said keepers being arranged to support the cards at their edges, and the lower of said keepers being arranged to support the cards intermediate their edges.

5. A filing cabinet for cards, provided with coöperating card-receiving keepers having individual sliding adjustment in spaced horizontal planes, each keeper comprising co-axial end portions and an outstanding central portion; the central portions of the keepers being extended toward each other.

[Claims 6 to 8 not printed in the Gazette.]

957,424. GRAIN-DOOR. ANDREW A. KRAMER, Kansas City, Kans. Filed June 28, 1909. Serial No. 504,701.

1. A grain door comprising a solid back piece having an opening therein and a flange turned into said opening, grooved members at the side edges of said back piece and a door having edge flanges adapted for travel in said grooved members.

2. A grain door comprising a solid back piece having an opening, flanges turned outwardly at the side edges of said back piece and folded upon themselves to form grooves, a

front piece located above the back opening and spaced from the back piece to form a pocket, and a door member adapted for travel in said pocket and provided with flanges adapted for travel in said grooves.



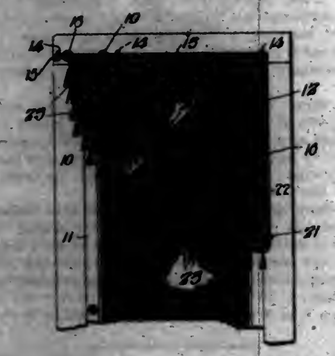
3. In a grain door, a frame comprising a back piece having an opening at one end and having a front plate folded over and spaced from the back piece, at the end opposite said opening, grooved members at the side edge of the frame, and a door member adapted to slide in said grooved members and in the pocket formed by the back piece and front plate.

4. In a grain door, a frame comprising a back piece having an opening, a front plate covering a solid portion of the back piece and spaced therefrom, grooved members at the sides of said opening, and a door adapted to slide in said grooved members and in the pocket formed by the back piece and front plate, the upper ends of the grooves and pockets being closed for the purpose set forth.

5. In a grain door, a frame formed from a single piece of sheet metal and comprising a back piece having an opening, side flanges folded upon themselves to form grooves, a front plate overlying a portion of the back piece between the side flanges and spaced from the back piece to form a pocket, and a door adapted to slide in said pocket and having edge flanges projected into and adapted for travel in the grooves formed by said edge flanges, substantially as set forth.

[Claim 6 not printed in the Gazette.]

957,425. FLY-GUARD. PETER KREUSCHER, Canova, S. D. Filed Nov. 12, 1908. Serial No. 462,251.



1. The combination with a door frame, a door hinged to the frame, a guard frame formed from a single piece of wire and comprising a base portion hingedly united to the door frame, a portion extending at right angles from one end of the base portion, a segmental portion extending between the free end of the right angled portion and the other end of the base portion, a diagonal brace portion coiled at its ends around the base portion and the right angled portion and depending into the path of the door, and a fabric covering for the guard frame.

2. A guard frame of the class described formed from a single piece of wire and comprising a base portion adapted to be attached to the door frame, a portion extending at right angles from one end of the base portion, a segmental portion extending between the free end of the right angled portion and the other end of the base portion, a diagonal brace portion coiled at its ends around the base portion and the right angled portion and adapted to be engaged by a door when the door is opened.

3. The combination with a door frame, of a door hinged to the frame, a guard frame comprising a base portion and a portion extending at right angles from one end of the base portion, and a segmental portion uniting the terminals of the base portion and the right angled portion, means for hingedly uniting said base portion to said door frame, a diagonal brace connected at its ends to said right angled portion and said base portion and depending into the path of the door, and a fabric covering for the guard frame.

957,426. COMBINED SCHOOL DESK AND SEAT. THEODOR KUNDTS, Lakewood, Ohio. Filed Feb. 18, 1909. Serial No. 478,679.



1. In combination, in a combined school-desk and seat, a pair of laterally spaced standards, each having on its inner side two inclined guideways which converge upwardly and are arranged the one forward of the other, each standard having an upwardly pointing wedge-shaped lug between the upper portions of the guideways; a seat and back-rest for the seat; brackets supporting the seat and its back-rest and arranged to be adjusted along the forward guideways of the standards; a desk; desk-supporting brackets arranged to be adjusted along the rear guideways of the standards, and means for clamping and adjusting the positions of the brackets.

2. The combination, in a combined school-desk and seat, with two laterally spaced standards, a pair of brackets which are arranged at the inner sides of the different standards respectively and adjustable up and down the standards; a solid shaft arranged horizontally and extending between the standards and through and supporting the brackets and through and a suitable distance beyond the outer sides of the standards, said shaft being provided at one end and a suitable distance from the outer side of one of the standards with a head and at its opposite end and at the outer side of the other standard being screw-threaded; a correspondingly threaded nut mounted on the threaded end of the shaft a suitable distance from the outer side of the adjacent standard; a pinion mounted on the shaft and arranged at the inner side of the standard which is adjacent the head, said pinion having a hub projecting outwardly through and a suitable distance beyond the outer side of the last-mentioned standard toward the said head and provided with a flat side; a washer intermediate the shaft-head and the adjacent standard and mounted on the said hub, said washer having such a connection with the shaft-head that the shaft can not turn independently of the pinion; another pinion operatively mounted on the shaft and arranged at the inner side of the standard which is adjacent the aforesaid nut; a washer interposed between the nut and the outer side of the last-mentioned standard, and racks rigid with the standards and engaging with the pinions at one and the same side of the shaft, and the standards being slotted to accommodate the location and shifting of the shaft during a readjustment of the brackets.

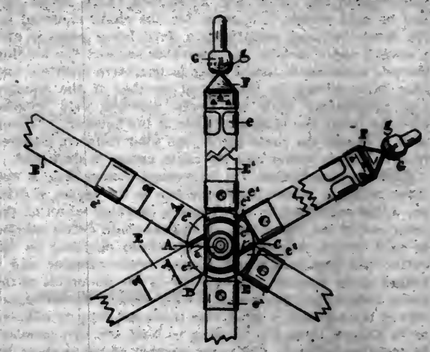
3. The combination, in a combined school-desk and seat, with two laterally spaced standards; a pair of brackets which are arranged at the inner sides of the different standards respectively and adjustable up and down the standards; a solid shaft arranged horizontally and extending between the standards and through and supporting the brackets and through and a suitable distance beyond the outer sides of the standards, said shaft being provided at one end and a suitable distance from the outer side of one of the standards with an integral polygonal head and at its opposite end and at the outer side of the other standard being screw-threaded; a correspondingly threaded nut mounted on the threaded end of the shaft a suitable distance from the outer side of the adjacent standard; a pinion mounted on the shaft and arranged adjacent the head of the shaft and at the inner side of the standard which is adjacent the head, said pinion having a hub projecting outwardly through and a suitable distance beyond the outer side of the last-mentioned standard toward the said head and provided with flat sides; a washer intermediate the shaft-head and the adjacent standard and mounted on the said hub, said washer having a member which embraces and internally conforms to the shaft-head; another pinion operatively mounted on the shaft and arranged at the inner side of the standard which is adjacent the aforesaid nut and having a hub which projects through and a suitable distance outwardly beyond the outer side of the said standard, said hub having flat sides; a washer mounted on the last-mentioned hub between the nut and the outer side of the last-mentioned standard and internally conforming to and engaging the flat sides of the hub, and racks rigid with the standards at one and the same side of the shaft, and the standards being slotted to accommodate the location and shifting of the shafts during a readjustment of the brackets.

4. The combination, in a combined school-desk and seat, with two laterally spaced standards; a pair of brackets which are arranged at the inner sides of the different standards respectively and adjustable up and down the standards; a solid shaft arranged horizontally and extending between the standards and through and supporting the brackets and through and a suitable distance beyond the outer sides of the standards, said shaft being provided at one end and a suitable distance from the outer side of one of the standards with a head and at its opposite end and at the outer side of the other standard being screw-threaded; a correspondingly threaded nut mounted on the threaded end of the shaft a suitable distance from the outer side of the adjacent standard; a pinion mounted on the shaft and arranged at the inner side of the standard adjacent the head, said pinion being operatively connected with the shaft; a washer intermediate the shaft-head and the adjacent standard; another pinion operatively mounted on the shaft and arranged at the inner side of the standard which is adjacent the aforesaid nut and having a hub which projects through and a suitable distance outwardly beyond the outer side of the said standard, said hub having a flat side; a washer mounted on the said hub between the nut and the outer side of the last-mentioned standard and internally conforming to and engaging the flat side of the hub, and racks rigid with the standards at one and the same side of the shaft, and the standards being slotted to accommodate the location and shifting of the shaft during a readjustment of the brackets.

5. The combination, in a combined school-desk and seat, with two laterally spaced standards; a pair of brackets which are arranged at the inner sides of the different standards respectively and adjustable up and down the standards; a shaft arranged horizontally and extending between the standards and through and supporting the brackets and through and a suitable distance beyond the outer sides of the standards, said shaft being provided at one end and a suitable distance from the outer side of one of the standards with a polygonal head and at its opposite end and at the outer side of the other standard being screw-threaded; a correspondingly threaded nut mounted on the threaded end of the shaft a suitable distance from the outer side of the adjacent standard; a pinion mounted on the shaft and arranged adjacent the head of the shaft and at the inner side of the standard adjacent the head, said pinion having a hub projecting outwardly through and a suitable distance beyond the outer side of the last-mentioned standard toward the said head and provided with flat sides; a washer intermediate the shaft-head and the adjacent standard and mounted on the said hub, said washer having a member which embraces and internally conforms to the shaft-head; another pinion operatively mounted on the shaft and arranged at the inner side of the standard which is adjacent the aforesaid nut and having a hub which projects through and a suitable distance outwardly beyond the outer side of the said standard, said hub having flat sides; a washer mounted on the last-mentioned hub between the nut and the outer side of the last-mentioned standard and internally conforming to and engaging the flat sides of the hub, and racks rigid with the standards at one and the same side of the shaft, and the standards being slotted to accommodate the location and shifting of the shafts during a readjustment of the brackets.

[Claims 6 to 10 not printed in the Gazette.]

957,427. SKEIN-WINDER. VALÉRY LAFONT, Lyon, France. Filed May 6, 1909. Serial No. 494,482.



1. A skein winder comprising a hub, a plurality of arms loosely mounted thereon, extensible members slidably mounted on said arms, resilient means for holding said extensible members relatively to said arms in various positions imparted to said members, plates mounted on the hub having stepped opposing surfaces and means for causing said plates to engage and hold the arms in positions radiating from said hub.

2. A skein winder comprising a hub, a plurality of arms mounted thereon, a reel at the end of each arm, flattened tubular members connecting the reels to the arms, plates having stepped opposing surfaces mounted on said hub and means for causing said plates to engage and hold the arms in positions radiating from said hub.

3. A skein winder comprising a screw threaded hub, a plurality of arms loosely mounted thereon, extensions slidably mounted on said arms, a reel carried by the outer end of each extension, flattened tubular members connecting the reels to said extensions, resilient means for holding the extensions relatively to the arms in various positions imparted to said extensions, disks mounted on the hub and having stepped opposing surfaces corresponding in number to that of the arms and screws on the hub adapted to lock the plates with the stepped surfaces thereof in engagement with the arms to hold the latter in positions radiating from said hub substantially as described.

957,428. CUTTER FOR HARVESTERS. NELSON P. LITHANDER, Hallock, Minn. Filed May 28, 1909. Serial No. 499,024.

1. Cutter mechanism for harvesters, comprising a machine frame, a bracket mounted adjustably on the frame, a shaft journaled in the bracket, a wheel carried by said shaft, a cutter bar connected with the machine frame, a carrying wheel mounted on the cutter bar, an endless chain cutter carried by said wheels, a housing for the cutter

mounted on the cutter bar, a driving wheel mounted on the machine frame, and chain gearing, independent of the endless chain cutter and including a chain tightener, for transmitting motion from said driving wheel to said shaft, whereby slack in the endless chain cutter is taken up by adjusting the bracket and the resulting slack in the chain gearing is taken up by the chain tightener.



2. Cutter mechanism for harvesters, comprising a machine frame, a cutter bar connected to the frame, a driving wheel supported by the frame, a carrying wheel at the outer end of the cutter bar, an endless chain cutter carried by said wheels, a housing for the chain mounted on the cutter bar and comprising a fixed lower member and a hinged upper member, a removable support for holding the two members of the housing in operative position, and idler rolls carried by the hinged member of the housing and coöperating with the chain between said wheels, whereby, when the hinged member of the housing is turned back to expose the chain cutter, the idler rolls are removed from the chain cutter and the chain cutter is slackened.

3. Cutter mechanism for harvesters, comprising a machine frame, a cutter bar connected to the frame, a driving wheel supported by the frame, a carrying wheel at the outer end of the cutter bar, an endless chain cutter carried by said wheels, a housing for the chain mounted on the cutter bar and comprising a fixed lower member and a hinged upper member, a projection on the underside of the lower member of the housing, a projection on the upper side of the housing, a removable U-shaped support adapted to be slipped upon the housing to hold the two members in operative position, the lower member of the support being slotted longitudinally to engage the projection on the under side of the housing and the upper member of the support being slotted longitudinally to engage the projection on the upper side of the housing, and a pin to engage the upper member of the support and the corresponding projection to hold the support in position.

4. Cutter mechanism for harvesters, comprising a machine frame, a cutter bar connected to the frame, a driving wheel supported by the frame, a carrying wheel at the outer end of the cutter bar, an endless chair cutter carried by said wheels, a housing for the chain mounted on the cutter bar and comprising a fixed lower member and a hinged upper member, a combined guard tooth and support straddling the two members of the housing to hold them in operative relation, and means to secure the combined guard tooth and support in position.

5. Cutter mechanism for harvesters, comprising a machine frame, a cutter bar connected to the frame, a driving wheel supported by the frame, a carrying wheel at the outer end of the cutter bar, an endless chain cutter carried by said wheels, a housing for the chain mounted on the cutter bar and comprising a fixed lower member and a hinged upper member, a U-shaped support straddling the two members of the housing to hold them in operative position, and means to secure the support in position.

[Claim 6 not printed in the Gazette.]

957,429. NUT-LOCK AND SCREW-SOCKET FOR WELL DRILLING MACHINES. ABRAHAM G. MARTIN, Bruceton, Pa., assignor of one-fourth to John F. Hickman, Bruceton, Pa. Filed Dec. 20, 1909. Serial No. 534,243.

1. The combination with a threaded bolt, of a nut engaging the threaded end of the bolt and having one face thereof provided with a seating recess surrounding the bolt receiving opening, a spring pressed pawl housed within the recess and having one end thereof provided with a spur for engagement with the threads on the bolt, there being an opening formed in the nut to permit the insertion of a key for forcing the spur into the threads to produce a seat, and transversely alined openings formed in the nut to permit the insertion of said key for holding the spur to its seat in the threads of the bolt.



2. The combination with a threaded bolt, of a nut engaging the threaded end of the bolt and provided with a seating recess, there being intersecting openings formed in the nut and communicating with the recess, a spring pressed pawl housed within the seating recess and provided with a spur, and a locking key adapted to be inserted in one of the openings for forcing the spur of the locking pawl into the threads of the bolt to produce a seat, said locking key being subsequently inserted in the other opening with a portion thereof bearing against the adjacent face of the pawl for retaining the spur of said pawl to its seat in the threads of the bolt.

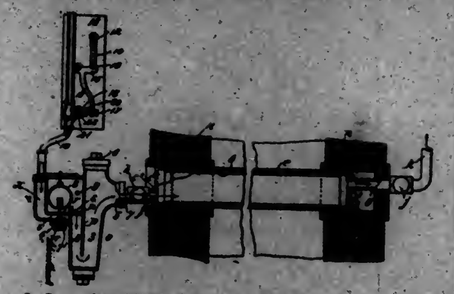
3. The combination with a threaded bolt, of a nut engaging the threaded end of the bolt and having one face thereof provided with a seating recess disposed concentric with the bolt receiving opening, there being a pocket formed in the nut and communicating with the seating recess, intersecting openings formed in the body of the nut, one of which communicates with the pocket, a spring pawl seated in the recess and having one end thereof rigidly secured to the nut and its other end normally disposed within the pocket and provided with a locking spur, and a locking key adapted to enter one of the openings in the nut for forcing the spur into engagement with the threads on the nut for producing a seat in said threads for the reception of the spur, said locking key being adapted to be subsequently inserted in the other opening in the nut for pressing the free end of the pawl laterally and retaining the spur thereof to its seat in the threads of the bolt.

4. The combination with a threaded bolt, of a nut engaging the threaded end of the bolt and having one face thereof provided with a seating recess and its side walls provided with intersecting openings, there being a pocket formed in the nut at one of said openings, a spring pawl entirely housed within the recess and embracing the major portion of the bolt, one end of the pawl being rigidly secured to the bolt and the other end thereof disposed at said pocket and provided with an inwardly extending spur, and a locking key adapted to be inserted in one of said openings for forcing the spur into engagement with the threads on the nut to produce a seat for said spur, said locking key being adapted to be subsequently inserted in the other opening for pressing the free end of the pawl laterally and retaining the spur to its seat in the threads on the bolt.

957,430. HUMIDIFIER. EDWARD MAXWELL, Montreal, Quebec, Canada, assignor of one-half to William J. Wall, Montreal, Canada. Filed Jan. 3, 1908. Serial No. 409,280.

1. In a humidifying system the combination with a retort, of a combined water supply regulator and steam trap consisting of a chamber presenting a pair of passages communicating at one end and having an overflow for establishing the level of water in the chamber; a humidistat; means controlled by such humidistat whereby water is supplied to one end of such chamber the other end whereof is connected to the retort, and means whereby steam is conducted from the retort.

2. In a humidifying system the combination with a retort, of a combined water supply regulator and steam trap consisting of a chamber presenting a pair of passages communicating at one end; a humidistat, means controlled by such humidistat whereby water is supplied to one end of such chamber the other end whereof is connected to the retort, and means whereby steam is conducted from the retort.



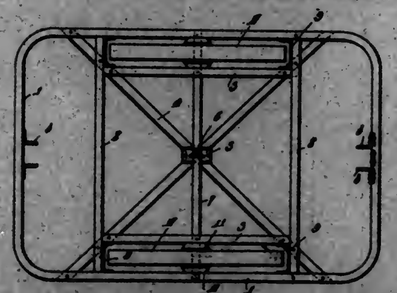
3. In a humidifying system the combination with a retort, of a water supply regulator consisting of a water conductor communicating with the retort; a reservoir communicating with the conductor; a valve chamber communicating with the reservoir and containing a valve controlling the communication between such reservoir and chamber; means controlled by the vaporization in the retort for operating the valve; means whereby water is supplied to the valve chamber; and means whereby steam is conducted away from the device.

4. In a humidifying system the combination with a retort, of a combined water supply regulator and steam trap consisting of a chamber presenting a pair of passages communicating at one end; a reservoir formed by an extension of one of such passages and containing a float; a valve chamber communicating with the reservoir and containing a valve coacting with the float and controlling the communication between such reservoir and conductor; means controlled by the vaporization in the retort for operating the valve; means whereby water is supplied to the valve chamber; and means whereby steam is conducted away from the device.

5. In a humidifying system the combination with a retort, of a water conductor communicating with the retort, a unitary member consisting of a chamber divided by a partition into two passages communicating at one end, automatic means controlling the supply of water to one of such passages the other passage being connected to the retort.

[Claims 6 to 9 not printed in the Gazette.]

957,431. LUMBER-TRUCK. ERNEST B. MERRY, Memphis, Tenn. Filed Apr. 6, 1909. Serial No. 488,261.



1. A lumber buggy comprising a wheel-supported frame, means thereon for attachment to a pulling-bar, and means for transmitting draft strains from said means and along diagonal lines to the frame.

2. A lumber buggy comprising a wheel-supported frame, means thereon for attachment to a pulling-bar, and diagonal bracing means for transmitting draft strains from said means to the frame.

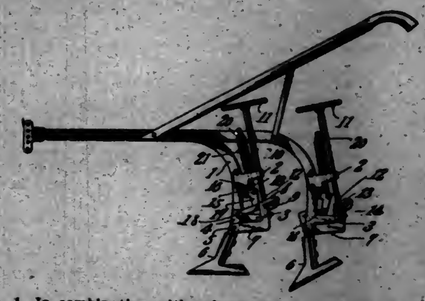
3. A lumber buggy comprising a wheel-supported frame, cross members thereon, longitudinal braces connecting the cross members, diagonal braces secured to the frame, cross members and longitudinal braces, said members intersecting at a central point, and means carried by the diagonal braces for attachment to a pulling-bar.

4. A lumber buggy comprising a frame, cross members connecting the sides thereof, longitudinal braces connecting the cross members, diagonal braces secured to the sides of the frame and to the cross members and longitudinal braces, said diagonal braces intersecting at a central point, means secured to the intersecting portions of the diagonal braces for attachment to a pulling-bar, an axle mounted in the sides and the longitudinal braces of the frame and connected to the intersecting portions of the diagonal braces, and supporting wheels upon the axle and between the sides and the adjoining longitudinal braces.

5. A lumber buggy comprising a frame, an axle extending transversely thereof, supporting wheels upon the axle, said axle having bearings at each side of and close to each of the wheels, means upon the frame for attachment to a pulling-bar, and means for distributing draft strains upon said first mentioned means and along diagonal lines to the frame.

[Claims 6 to 8 not printed in the Gazette]

957,432. SPRING TRIP MECHANISM. JEREMIAH C. MESSER, Austin, Tex., assignor of two-thirds to William G. Bell, Austin, Tex. Filed Jan. 11, 1910. Serial No. 537,551.



1. In combination with a beam and a standard pivoted thereto at a point intermediate its ends, a spring trip mechanism comprising a lug carried by the beam, a lever fulcrumed to the lug, a spring-actuated bolt passing through the lug and pivotally connected with the lever, a link pivotally connected with the lever at one end and pivotally connected at its other end with the standard at a point above its pivotal connection with the beam and a stop located in the path of movement of the said link.

2. In combination with a beam and a standard pivoted thereto at a point intermediate its ends, a spring trip mechanism comprising a lug carried by the beam, a lever fulcrumed to the lug, a bolt pivotally connected to the lever and passing through the lug and subjected to spring tension, a link pivotally connected at its rear end with the lever and pivotally connected at its forward end with the standard at a point above its pivotal connection with the beam, an arm forming a stop pivotally connected with the beam and having an edge portion lying in the path of movement of the link which edge portion is eccentric with relation to the pivotal support of the arm and means for adjusting the said arm upon its pivot.

3. In combination with a beam and a standard pivoted thereto at a point intermediate its ends, a spring trip mechanism comprising a lug carried by the beam, a lever fulcrumed to the lug, a spring-actuated bolt passing through the lug and pivoted to the lever, a link pivoted at its rear end to the lever and pivoted at its forward end to the standard at a point above its pivotal connection with the beam, an angle arm pivoted to the beam and having an edge portion lying in the path of movement of the

link, a shaft journaled in the lug, a nut threaded on the shaft, said nut having slot and pin connection with the arm, therefore the upper portions of the arms 7 serve as stops for the links 18.

957,433. LINE-CASTING MACHINE, &c. WINTON G. MIDDLETON, Oakland, Cal., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Apr. 15, 1909. Serial No. 490,052.



1. In a line casting machine, a rotary wheel provided with two alternately operative molds of equal length, one divided and the other undivided, in combination with a divided ejector adapted to enter both molds, a receiving galley in position to receive both long and short slugs, and means for directing one short slug of each pair away from the galley.

2. In a line casting machine, a mold wheel provided with two alternately usable molds, one having a continuous and the other a divided slot, in combination with a divided ejector adapted to enter both molds, and means for separating the two slugs delivered from the divided mold.

3. In a line casting machine the combination of two alternately usable molds, one continuous and the other divided in length, an ejector adapted to pass through both molds, a galley adapted to receive the long slugs, and also the lower short slugs, means for guiding said slugs from the mold to the galley, and an automatic device in the path of the outgoing slugs to change the path of the upper short slugs only.

4. In a line casting machine, the combination of molds for producing long and short slugs, means for delivering the slugs from the molds, and guiding mechanism adapted to direct all long slugs in a common path and direct short slugs in different paths.

5. In a line casting machine, the combination of a mold, means for delivering slugs, means for guiding the delivered slugs, and a spring deflector, g', arranged to divert the outgoing slugs laterally from the path in which they left the mold.

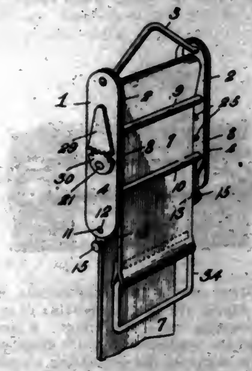
[Claim 6 not printed in the Gazette.]

957,434. RAZOR-STROPPER. DAVID MILLINGTON, Berlin, Germany, and HARRY YATES, Leicester, England. Filed Sept. 15, 1909. Serial No. 517,873.

1. A razor stropper comprising a frame having sections movable toward and from each other, co-acting blade holding members, one of the latter being carried by each of said frame sections, whereby said members will be separated when the frame is open, a strop and means for holding the blade in the holder against said strop.

2. A razor stropper comprising a frame having sections movable toward and from each other, co-acting blade holding members, one of the latter being carried by each of said frame sections, whereby said members will be separated when the frame is open, a catch device for fastening the frame in closed position, a strop and means for holding the blade in the holder against said strop.

3. A razor stropper comprising a frame having sections movable toward and from each other, co-acting blade holding members, one of the latter being carried by each of said frame sections, whereby said members will be separated when the frame is open, a catch device for holding the frame in closed position, means for maintaining the blade holder for oscillatory movement, a friction rocker, operative connections between said rocker and the blade holder, whereby they will rock in unison, a strop engaged with said rocker and means for guiding the strop.

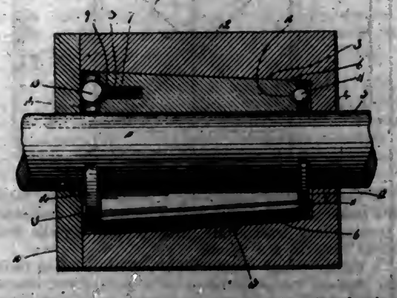


4. A razor stropper comprising a frame having back and front sections hingedly connected and each consisting of side plates, the side plates of the front member being adapted to enter between the side plates of the back member, said side plates of the back member being provided with keeper seats, spring catches upon the side plates of the front member to engage said keeper seats, said catches having oppositely projecting finger pieces, blade holding means, a strop and means for actuating said blade holding means to hold the blade therein against the strop.

5. A razor stropper comprising a frame having front and rear sections united for movement toward and from each other, each of said frame sections having side plates, the side plates of the front section being adapted to enter between the side plates of the rear section, a blade holding member journaled in the side plates of the back section, the side plates of the front section being formed with bearing notches adapted to receive said journals and with arcuate slots on opposite sides of and concentric with said bearing notches, a co-acting blade holding member having at its ends journal portions arranged in said bearing notches and stop pins to oscillate in said arcuate slots, whereby the last mentioned blade holding member is retained in the front frame section, a catch device for holding the frame sections in closed position, a strop, means for guiding the same and means for shifting the blade holding members to hold the edges of the blade between them against said strop.

[Claims 6 to 10 not printed in the Gazette.]

957,435. JOURNAL-BEARING. BYRON L. MORRISON, Colorado Springs, Colo., assignor of one-third to Joseph W. Ady, Colorado Springs, Colo. Filed Sept. 10, 1909. Serial No. 517,086.



1. A journal bearing comprising a housing having a tapered recess, a series of tapered rolls mounted in said recess, bearing balls at the inner ends of said rolls, the outer ends of said rolls chambered, springs mounted in said chambers, and bearing balls at the outer ends of said rolls against which said springs bear.

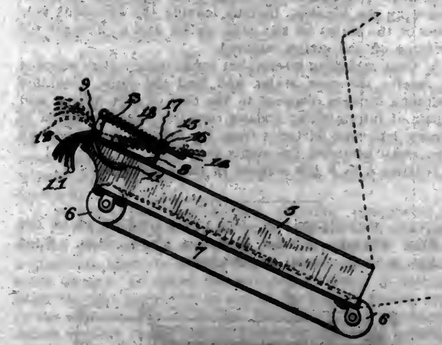
2. A journal bearing comprising a housing having a tapered recess, a series of tapered rolls mounted in said recess, bearing balls at the inner ends of said rolls, the outer ends of said rolls chambered, springs mounted in said chambers, said springs provided with metal blocks, and bearing balls at the outer ends of said rolls against which said blocks bear.

957,436. TUBE-MILL. BYRON L. MORRISON, Colorado Springs, Colo., assignor of one-third to Joseph W. Ady, Colorado Springs, Colo. Filed Dec. 13, 1909. Serial No. 532,900.



A tube mill comprising a barrel having a feed opening at one end and a driving head at the opposite end, the ends connected by a shell having a series of perforations, a lining comprising rectangular bars, notched strips between the bars and shell, said strips formed with flanges turned downward between the bars, and having the notches therein registering with the perforations in the shell.

957,437. ELEVATOR-HOOD FOR HARVESTERS. EMIL C. MOTTERT, Tenmile, La. Filed Nov. 6, 1909. Serial No. 526,596.

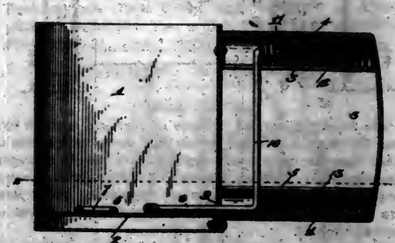


1. An elevator hood for harvesters comprising the spaced bearing members secured to the upper end of the elevator, a rock shaft mounted in the outer ends of said members, the ends of said shaft being laterally extended to form crank handles, a plurality of outwardly and downwardly curved tines integrally formed with said shaft, said tines being normally positioned over the end of the elevator, longitudinal rods movably supported in the rear of said bearing members, said rods being pivotally connected at their forward ends to said shaft, means carried by said rods normally adapted to retain the tines in operative position, and means for limiting the forward longitudinal movement of said rods.

2. An elevator hood for harvesters comprising spaced bearing members secured to the upper end of the elevator, a rock shaft mounted in the outer ends of said members, said shaft being rectangular in cross section, the ends of said shaft being laterally extended to provide crank handles, a plurality of tines integrally formed with said shaft and extending outwardly and forwardly therefrom, said tines extending entirely across the open end of the elevator, arms carried by said shaft, longitudinal rods mounted in the rear end of said bearings, the forward ends of said rods being pivotally connected to said arms, a spring disposed upon each of said rods between the bearing members and said arms, said springs normally acting to maintain the tines in operative position, said shaft being adapted to be rotated to dispose the rods and arms in longitudinal alinement and elevate the tines, such movement being adapted to place the springs under compression, and stops carried by the rods to limit their forward longitudinal movement.

3. An elevator hood for harvesters comprising bearing members secured to opposite sides of the upper end of the elevator, a rock shaft mounted in bearings in the outer ends of said members, tines integrally formed with said rock shaft and depending in front of the elevator, operating handles on the opposite ends of said shaft, an arm integrally formed with the shaft adjacent to each of the bearings, upwardly and inwardly extending bearing arms on the rear ends of said bearing members, a rod longitudinally movable through each of said arms and pivotally connected at one end to the shaft arms, a spiral spring disposed about each of said rods between said arms adapted to maintain the tines in operative position, a stop nut on each of said rods adapted to limit the forward movement of the rods, said rock shaft being adapted to be rotated to move the arms into longitudinal alinement with the rods and the tines to an operative position, said springs being placed under compression and adapted to return the tines to operative position when the arms and rods are moved out of longitudinal alinement.

957,438. AUTOMATIC FLOUR-SIFTER. GEORGE MCEACHRON, Oklahoma, Okla. Filed Feb. 23, 1910. Serial No. 545,343.

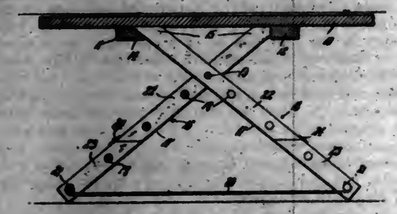


In a flour sifter, a receptacle having a screen bottom, a handle secured to one side of said receptacle, tubular spring casings secured in said handle, said casings having formed therein longitudinal slots, an agitator slidably mounted in said receptacle, said agitator comprising a wire rod bent to form a series of loops, a handle formed on said loops and projecting through one side of said receptacle, a gripping bar formed on the projecting end of the agitator and having a sliding engagement with the slots in said spring casings, and agitator projecting springs arranged in said casings to engage said gripping bar and automatically project the agitator in one direction after the same has been manually retracted in the opposite direction.

957,439. IRONING-TABLE. JOSEPH MCGUIGAN, Detroit, Mich., assignor of one-half to Eugine Stein, Detroit, Mich. Filed Dec. 10, 1908. Serial No. 466,872.

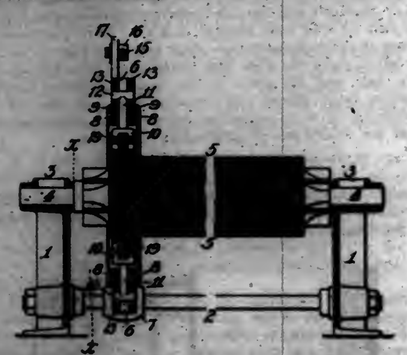
The combination with an ironing board, of legs pivotally connected together, each leg formed of two sections, the adjacent ends of the sections being beveled, hinges connecting the adjacent ends of the sections and being mounted on the outside edges thereof, socketed cross cleats on

the ironing board and adapted to receive therebetween and be engaged by the upper ends of the legs to prevent spreading of the latter, and rigid tie rods having upwardly and



inwardly curved hook terminals engaging with the lower ends of the legs to hold the adjacent hinged beveled ends of their sections abutting with each other.

957,440. PROCESS OF MAKING TOOTHED CYLINDERS. EDWARD J. O'BRIEN, St. Louis, Mo., assignor to The Proctor and Gamble Company, a Corporation of Ohio. Original application filed Nov. 18, 1905, Serial No. 287,950. Divided and this application filed May 10, 1907. Serial No. 372,874.



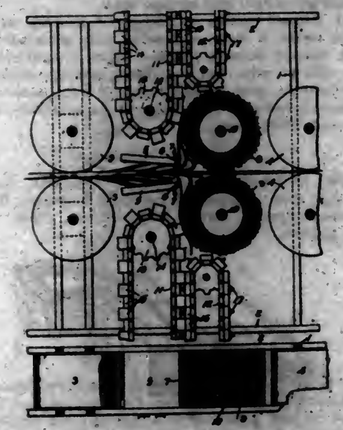
1. The herein described process of forming toothed cylinders, the same consisting in initially forming a series of circular threads upon the periphery of a metal cylinder, and subsequently forming a series of longitudinal grooves in said threads and simultaneously imparting added density to the teeth thus formed by a lateral displacement of the metal thereof.

2. The herein described process of forming toothed cylinders, the same consisting in initially forming a series of spiral threads upon the periphery of a metal cylinder, and subsequently forming a series of longitudinal grooves in said threads and simultaneously imparting added density to the teeth thus formed by a lateral displacement of the metal thereof.

957,441. CANE-STRIPPING MECHANISM. THOMAS J. PERRINE, Perrine, Fla. Filed Aug. 18, 1909. Serial No. 513,496.

1. Cane stripping mechanism comprising rollers adapted to receive the cane stalks and feed the same, brushes disposed to the rear of the rollers and adapted to rotate and engage the strip portions of the cane stalks, and means cooperating with said rotating brushes adapted to sever said strips whereby the succulent portions thereof are caused to remain integral with the cane stalks.

2. Cane stripping mechanism comprising rollers adapted to receive the cane stalks and feed the same, brushes disposed to the rear of the rollers and adapted to rotate and engage the strip portions of the cane stalks, and means cooperating with said brushes whereby the same are cleaned of particles adhering thereto, said means adapted to cut up into small particles the strips removed from the stalks and convey the same to a point removed from the stripping mechanism.



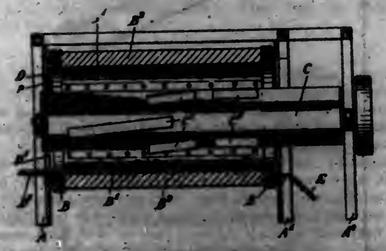
3. Cane stripping mechanism comprising rollers adapted to receive the cane stalks and feed the same, brushes disposed to the rear of the rollers and adapted to rotate and engage the strip portions of the cane stalks, means whereby succulent portions of the strips are caused to remain integral with the cane stalks, and means for cutting the removed strips into small particles, said means serving to convey the cut up strips to a point removed from the stripping mechanism.

4. Cane stripping mechanism comprising rollers adapted to receive the cane stalks and feed the same, rotatable stripping brushes disposed to the rear of said rollers, knives fixed adjacent said brushes and adapted to sever the thicker portions of the strips when said strips are tensioned by the brushes, thereby leaving the succulent portions of the strips on the cane stalks, and a conveyer for carrying off the strips removed.

5. Cane stripping mechanism comprising rollers adapted to receive the cane stalks and feed the same, rotatable stripping brushes disposed to the rear of said rollers, and a pair of intermeshing endless conveyer chains adapted to remove adhering particles from the brushes and to cut up into small particles the strips conveyed.

[Claims 6 to 8 not printed in the Gazette.]

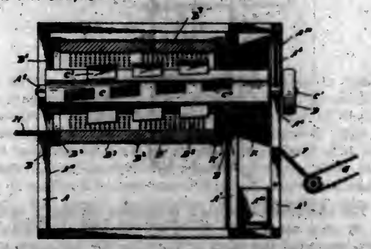
957,442. MACHINE FOR HULLING GREEN PEAS ON THE VINES. ROBERT P. SCOTT, Cadiz, Ohio. Filed Apr. 6, 1905. Serial No. 254,126.



1. A machine for hulling green peas from masses of vines comprising the combination of a revoluble outer drum having elevating ribs for raising the vines to the upper half of the drum and then dropping them, a cover with perforations for permitting the hulled peas to escape therethrough, and a revoluble inner drum provided with longitudinally disposed but axially slanted beaters for striking the falling bunches of vines, the beaters at the tail end of the machine being more nearly parallel to the machine axis than the rest, substantially as described.

2. A machine for hulling green peas from masses of vines comprising the combination of a revoluble outer drum having elevating ribs for raising the vines to the upper half of the drum and then dropping them, a cover with perforations for permitting the hulled peas to escape therethrough, and a revoluble inner drum provided with longitudinally disposed beaters for striking the falling bunches of vines, said beaters being slanted at the feed end and practically straight at the discharge end, substantially as described.

957,443. GREEN-PEA-VINE-HULLING MACHINE. ROBERT P. SCOTT, Cadiz, Ohio. Filed Feb. 1, 1910. Serial No. 541,361.



1. A green-pea vine-hulling machine comprising an outer cylinder having a perforated covering and elevating ribs, a beater-carrying drum having an extended end, and an annular extension-screen secured to the discharge end of the outer cylinder and surrounding the drum-end, substantially as described.

2. A green-pea vine-hulling machine comprising an outer cylinder having a perforated covering and elevating ribs, a beater-carrying drum having an extended end, and a conical, annular extension-screen secured to the discharge end of the outer cylinder and surrounding the drum-end, substantially as described.

3. A green-pea vine-hulling machine comprising a pair of frames supporting an outer cylinder having a perforated covering and elevating ribs, an end frame having a discharge aperture for the vines, an inner beater-carrying drum, a driving shaft therefor supported on one of the pair of frames and the end frame, and an annular extension-screen secured to the discharge end of the outer cylinder and extending to the end-frame, substantially as described.

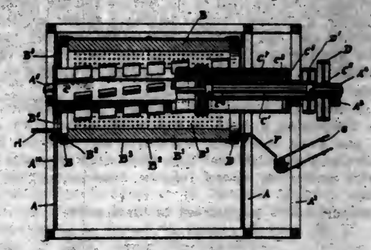
4. A green-pea vine-hulling machine, comprising a pair of frames supporting an outer cylinder having a perforated covering and elevating ribs, an end-frame having a discharge aperture for the hulled vines and a suspended shaft hanger, an inner beater-carrying drum, a driving shaft therefor supported on one of the pair of frames and in the suspended shaft hanger, and an annular extension-screen secured to the discharge-end of the outer cylinder and extending to the discharge aperture on the end-frame, substantially as described.

957,444. GREEN-PEA-VINE-HULLING MACHINE. THOMAS A. SCOTT, Cadiz, Ohio. Filed Jan. 10, 1910. Serial No. 537,377.

1. A green-pea vine-hulling machine comprising an outer cylinder having elevating ribs, a set of revolving beaters near the feed-end, an independently revolving set of beaters near the discharge-end, and power devices for rotating the latter beaters more rapidly than the former, substantially as described.

2. A green-pea vine-hulling machine comprising an outer cylinder having elevating ribs, and an inner beater-carrying drum having a feed-end section and an independently revolving discharge-end section driven at a higher speed, substantially as described.

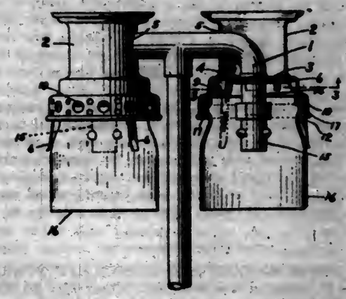
3. A green-pea vine-hulling machine comprising an outer cylinder having elevating ribs, an inner beater-carrying drum having a feed-end section and an independently revolving discharge-end section, and power devices for revolving the last named section more rapidly than the first, substantially as described.



4. A green-pea vine-hulling machine comprising an outer cylinder having elevating ribs, a central shaft, beaters supported on and driven thereby, a hollow shaft supported on the central shaft, beaters supported on and driven thereby, and devices for rotating the hollow shaft and central shaft at different speeds, substantially as described.

5. A green-pea vine-hulling machine comprising an outer cylinder having elevating ribs, an inner beater-carrying drum having a feed-end section and an independently revolving discharge-end section, said discharge-end section having a portion within the outer cylinder provided with beaters and a portion projecting beyond the outer cylinder to act as a guard, and devices for moving the discharge-end section at a higher speed than the feed-end section, substantially as described.

957,445. INVERTED INCANDESCENT GAS-LIGHT. ARTHUR E. SHAW, Philadelphia, Pa., assignor to The Pennsylvania Glass Globe Light Company of Philadelphia, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 31, 1909. Serial No. 486,903.



1. A chimney holder for inverted incandescent gas lights which comprises a spider having at its top a ring provided with arms having their shanks in the general plane of said ring and having their intermediate portions curved downwardly and outwardly, a band surrounding and connected to said intermediate portions and having their ends curved outwardly and provided with spring tongues which project inwardly and upwardly, substantially as described.

2. A chimney holder for inverted incandescent gas lights which comprises a spider having outwardly and downwardly extending arms provided near their ends with inwardly and upwardly extending spring tongues, and a band encircling and connected with said arms, substantially as described.

3. In combination a burner tube having a threaded depending end, a chimney holder having a spider fitted onto said end, means applied to the threaded end for retaining

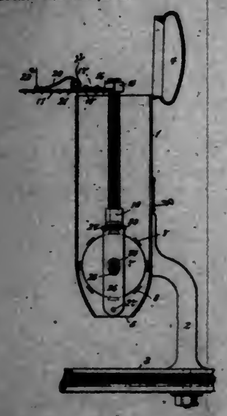
the chimney holder, and a mantle holder detachably applied to said means whereby the mantle holder can be removed without disturbing the other parts, substantially as described.

4. In combination a burner tube having a threaded depending end, a chimney top having a spider applied to the burner end, a nut applied to the burner end for clamping said spider, a chimney holder having a spider applied to the burner end and arranged within the chimney top, a thimble applied to the burner end for holding the chimney holder, and a mantle holder detachably applied to the thimble, substantially as described.

5. A chimney holder for inverted incandescent gas lights comprising a band, a spider connected with said band, and arms depending downward and outward from the band and provided near their ends with upwardly and inwardly projecting spring tongues, substantially as described.
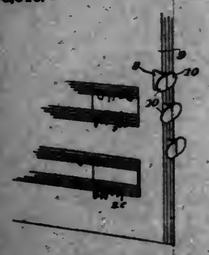
[Claims 6 and 7 not printed in the Gazette.]

957,446. SOAP-CUTTING MACHINE. ZALMON G. SHOLES, New York, N. Y., assignor to West Disinfecting Company, a Corporation of New York. Filed Dec. 10, 1906. Serial No. 347,212.



A device of the class described comprising a casing, a rotary cutter near one end thereof, a longitudinal threaded bar having a ratchet wheel on one end, a swinging slotted plate pivoted near said cutter, an eccentric carried by the cutter shaft and entering the slot in said plate, a ratchet on said plate engaging said ratchet wheel and a follower operated by said screw, substantially as described.

957,447. PAGE-MARKER AND MUSIC-LEAF TURNER. LOUISE F. SUDDICK, De Soto, Mo. Filed July 20, 1909. Serial No. 508,646.



A device of the class described including a body portion formed of matting strips having their opposite longitudinal edges cut away to produce a contracted neck, said strips being fastened together at said neck to form attaching lips on one side of the neck, the strips on the other side of the neck being bent laterally in opposite directions to form finger-pieces.

957,448. HEAD-GATE. JOHN A. TAYLOR, Greeley, Colo. Filed June 15, 1909. Serial No. 502,219.



1. The combination with a head-gate, having a toothed stem, of stop mechanism mounted thereon, and including a worm engaging the teeth of the stem for purposes of adjustment, and means for locking the worm against adjustment upon the stem of the gate, substantially as described.

2. The combination with a head-gate, having a toothed stem, of a worm mounted on the stem, and engaging the said teeth, a casing adapted to surround the worm and conceal the latter, means for locking the casing in its assembled relation with the worm, and means for preventing the rotary movement of the casing and the worm upon the stem, substantially as described.

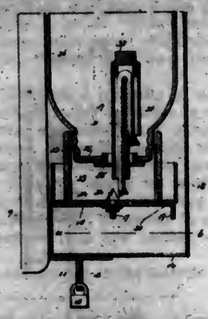
3. The combination with a head-gate, of stop mechanism mounted on the stem of the gate, the stem being toothed on one edge, a worm mounted on the stem, its interior being of sufficient diameter to permit its thread to be moved laterally out of engagement with the teeth of the stem, a casing adapted to surround the worm and having a key or spline adapted to pass between the plain edge of the stem and the thread of the worm, whereby the thread of the worm is thrown into engagement with the teeth of the stem, the casing being connected with the stem to prevent rotary movement, while the worm is allowed to rotate, substantially as described.

4. The combination with a head-gate, having a stem toothed on one edge and plain on its opposite edge, of a sleeve surrounding the stem, and having an interior spiral thread adapted to engage the teeth of the stem, the interior of the sleeve being of sufficient diameter to allow the sleeve to be moved laterally on the stem to disengage its thread from the teeth whereby the sleeve may slide vertically on the stem, and a casing mounted on the stem and adapted to surround the sleeve, the casing having a key or spline adapted to pass between the plain edge of the stem and the thread of the sleeve, whereby the said thread may be brought into operative engagement with the teeth of the stem, for the purpose set forth.

5. The combination of a head-gate, having a stem toothed on one edge and plain on its opposite edge, of a sleeve surrounding the stem and having an interior thread adapted to engage the teeth of the stem, a casing adapted to surround the sleeve and slidable thereon, the casing being locked against rotary movement on the stem, but slidable thereon and means for locking the sleeve and casing in assembled relation, the casing concealing the sleeve to prevent access thereto for rotary movement, substantially as described.

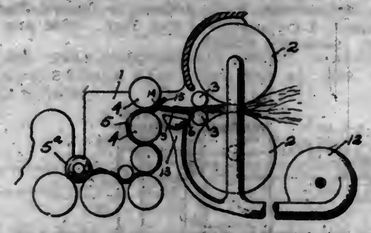
[Claims 6 to 9 not printed in the Gazette.]

957,449. DISINFECTANT-HOLDER. CHARLES J. WALS, New Haven, Conn., assignor to West Disinfecting Company, a Corporation of New York. Filed Sept. 30, 1908. Serial No. 455,529.



A device of the class described comprising in combination a bracket having a shelf and an outwardly projecting flange below it, said shelf having a plurality of discharge openings, a discharge cup revolubly secured upon said shelf and having a nipple adapted to register with either of said discharge openings at will by appropriate revolution of said cup, a container supported above said cup, and means for slowly discharging said container into said cup—substantially as described.

957,450. SPLIT-LAP PREVENTER FOR COTTON-PICKERS. HOWARD R. WHITEHEAD, Lonedale, R. I. Filed Apr. 6, 1908. Serial No. 425,424.



1. In a cotton picker, lap engaging means comprising a rod supported at its ends and provided with openings, and a plurality of fingers each having one end secured in one of said openings, said fingers being turned over said rod and having their free ends arranged to engage the under face of the lap, and a second rod provided with parallel fingers to engage the upper face of the lap.

2. In a cotton picker, lap engaging means comprising a rod provided with a plurality of parallel fingers projecting therefrom and constructed to engage the under face of the lap, bearings in which the ends of said rod are adjustably mounted to vary the angle of said fingers, set screws in said bearings arranged to engage said rod, and a second rod provided with parallel fingers to engage the upper face of the lap.

3. In a cotton picker, lap engaging means comprising a rod supported at its ends and provided with a plurality of parallel fingers projecting from said rod and constructed to engage the under face of the lap, and a second rod supported at its ends and provided with parallel fingers constructed to engage the upper face of the lap.

4. In a cotton picker, lap engaging means comprising a rod supported at its ends and provided with a plurality of parallel fingers projecting from said rod and constructed to engage the under face of the lap, a second rod supported at its ends and provided with parallel fingers constructed to engage the upper face of the lap, and means for permitting adjustment of said rods to vary the angles of inclination of the respective fingers.

5. In a machine of the character described, stripping rolls, calender rolls, a supporting rod adjacent said stripping rolls, a row of forwardly extending wire fingers or bars fixed in said rod and adapted to reach therefrom nearly to said calender rolls, forming a grating over which the lap may pass and through which the waste and dirt may fall out of reach of the following portions of the lap, means whereby said fingers may be raised and lowered to regulate their action upon the lap, and a second rod provided with parallel fingers to engage the upper face of the lap.

[Claims 6 to 10 not printed in the Gazette.]

957,451. PUMP. JOHN G. WILLET, Buffalo, N. Y., assignor of eighteen one-hundredths to Isidore Michael, eighteen one-hundredths to Edward Michael, eighteen one-hundredths to Clark L. Ingham, and eighteen one-hundredths to Elgood C. Lufkin, Buffalo, N. Y. Filed May 11, 1906. Serial No. 316,292.



1. A pump comprising a barrel having an inlet and an outlet, transferring and expelling plungers arranged in the barrel and adapted to receive a charge of liquid between their opposing ends, an adjusting loop connected with the rear end of the expelling plunger and having a stem, a clamping device for said stem, and means for actuating said plungers, substantially as set forth.

2. A pump comprising a barrel having an inlet and an outlet, transferring and expelling plungers arranged in the barrel and adapted to receive a charge of liquid between their opposing ends, a housing arranged at the end of the barrel, an adjusting loop arranged in said housing and having an eye in which the rear end of the expelling plunger slides and a stem passing through the outer end of said housing, means for retaining said eye upon the plunger, and a clamping device mounted on said housing and engaging said stem, substantially as set forth.

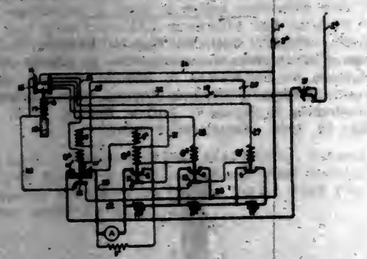
3. In a pump, a piston chamber provided with an inlet and an outlet port located apart from each other, an upper and a lower piston opposed to each other and operating in timed relation, means for moving one of said pistons from a position uncovering the inlet port to a position near the outlet port, and means for regulating the nearest approach of the other of said pistons to the inlet port.

4. In a pump, a piston chamber provided with an inlet and an outlet port located apart from each other, two opposing pistons, one a forcing piston and the other a yieldable piston, means for moving the forcing piston from a position uncovering the inlet port to a position near the outlet port, said yieldable piston tending to approach said inlet port, and adjusting means for regulating the nearest approach of the yieldable piston to said inlet port.

5. In a pump, a piston chamber provided with an inlet and an outlet port located apart from each other, two opposing pistons, one a forcing piston and the other a yieldable piston, means for moving the forcing piston from

a position uncovering the inlet port to a position near the outlet port, said yieldable piston tending to approach said inlet port, a stop for limiting the movement of said yieldable piston toward the inlet port, and means for adjusting the yieldable piston with reference to said stop.

957,452. AUTOMATIC CIRCUIT-CONTROLLING DEVICE. WILLIAM C. YATES and WALTER O. LUM, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed Sept. 22, 1906. Serial No. 335,693.



1. The combination with an electric motor circuit, of means for controlling the same comprising separately actuated electromagnetic switches in said circuit, a controlling element normally biased to running position, an electromagnetic device controlled by one of said switches for moving said element to starting position, and connections whereby said switches are successively operated by said element as it returns to running position.

2. The combination with an electric motor circuit, of means for controlling the same comprising separately actuated electromagnetic switches in said circuit, a controlling element normally biased to running position, an electromagnetic device controlled by one of said switches for moving said element to starting position, means whereby said element automatically moves to running position, and connections whereby said switches are successively operated by said element as it returns to said position.

3. The combination with an electric motor circuit, of means for controlling the same comprising separately actuated electromagnetic switches in said circuit, a controlling element biased to running position, an electrically controlled device for moving said element to starting position, and connections whereby said device is deënergised and one of said switches simultaneously operated to affect the circuit when said element reaches starting position.

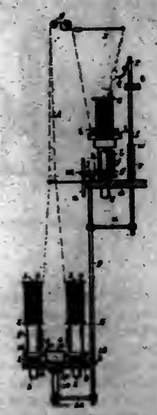
4. The combination with an electric motor circuit, of means for controlling the same comprising a plurality of electromagnetic switches in the motor circuit, an automatically operated electrically controlled device for successively energising said switches to affect the motor circuit, and connections whereby certain of said switches are each deënergised by the actuation of the next succeeding switch.

5. The combination with an electric motor circuit, of means for controlling the same comprising a plurality of electromagnetic switches in the motor circuit, an electrically controlled device for successively energising said switches to affect the motor circuit, and connections whereby certain of said switches are each deënergised by the actuation of the next succeeding switch.

[Claims 6 to 9 not printed in the Gazette.]

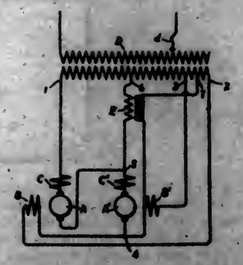
957,453. STOP-MOTION MECHANISM FOR SPINNING-MACHINES AND THE LIKE. OSCAR AGEL and CHARLES F. ISLEIB, Paterson, N. J. Filed Dec. 1, 1909. Serial No. 530,750.

The combination of a suitable support, rotary spindle members, a driving member for the spindle members disposed between the latter, each spindle member being movable toward and from the driving member, a mounting arranged in said support between the spindle members and having a guideway formed parallel with the axes of the spindle members and another guideway formed transversely of said axes of the spindle members, a wedge piece movable in the first guideway, movable parts arranged in



the second guideway, one between the wedge piece and one spindle and the other between the wedge piece and the other spindle, and mechanism, controlled from the thread, for actuating the wedge piece, substantially as described.

957,454. MOTOR CONTROL. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 10, 1907. Serial No. 388,001.



1. In combination with a plurality of alternating current motors each having its field and armature connected in series, connections for deriving from the motors a voltage displaced in phase nearly 90 degrees from the terminal voltage of the motors and increasing gradually and automatically as the motors speed up, and connections including means for impressing on the motor fields a shunt voltage corresponding in amount and phase to said derived voltage.

2. In combination with a plurality of alternating current series motors connected in series, connections for producing a phase-displacement between the voltages at the armature terminals of the motors, and connections including means for impressing on the motor fields a shunt voltage corresponding in amount to said phase-displacement.

3. In combination with a plurality of alternating-current series motors connected in series, connections for producing a phase-displacement between the voltages at the armature terminals of the motors gradually and automatically increasing with increase of speed, and connections including means for impressing on the motor fields a shunt voltage corresponding in amount to said phase-displacement.

4. In combination with a plurality of alternating-current series motors connected in series, a supply circuit therefor, connections for producing a phase-displacement between the voltages at the armature terminals of the motors, and connections including means for impressing on the motor fields a shunt voltage corresponding in amount to said phase-displacement and displaced in phase approximately ninety degrees from the voltage of the supply circuit.

5. In combination with a plurality of alternating-current series motors connected in series, a supply circuit therefor, connections for producing a phase-displacement between the voltages at their armature terminals gradually and automatically increasing with increase of speed, and connections including means for impressing on the motor fields a shunt voltage corresponding in amount to said phase-displacement and displaced in phase approximately ninety degrees from the voltage of the supply circuit.

[Claims 6 to 8 not printed in the Gazette.]

957,455. PILLOW-SHAM HOLDER. JOSEPHINE M. BABCOCK, Spokane, Wash. Filed June 29, 1909. Serial No. 505,065.



In a pillow-sham holder, a split ring, a barbed tongue on one end of the ring, spaced outstanding ears at the ends of the ring, one of said ears having an aperture through which the tongue is passed, and rod seats on the ring.

957,456. SELF-DUMPING HAY-SWEEP. ALEXANDER E. DAVIS, Belleville, Kans. Filed Sept. 11, 1909. Serial No. 517,193.



1. In a device of the character described, the combination with a wheel supported carrying frame, of a longitudinally positioned guide shaft carried by said frame, a detent carried by said frame, a push bar supported by said frame and guided by said shaft, a cam block secured to said push bar, a cross head carried at the forward end of said push bar, a grate carried by said head, a rake shaft, teeth projecting from said rake shaft, means to adjustably hold said rake shaft, said detent engaging said push bar, a rock shaft having shoe arms, and a cam arm secured to said rock shaft and engaged by said cam block.

2. In a device of the character described, the combination with a wheel supported carrying frame, of a guide shaft secured to said frame, a detent carried by said frame, means to operate said detent, a push bar supported by said frame and guided by said shaft, a cam block secured to said push bar, a cross head carried at the forward end of said push bar, a grate carried by said head, a rake shaft, teeth projecting from said rake shaft, means to adjustably hold said rake shaft, said detent engaging said push bar, a rock shaft having shoe arms, and a cam arm secured to said rock shaft and engaged by said cam block.

3. In combination a wheel supported frame, of a guide shaft carried by said frame, a detent secured to said frame, a push bar supported by said frame and guided by said shaft, a cam block secured to said push bar, a grate carried at the end of said push bar, a rake secured to said frame, means to adjustably hold said rake, a rock shaft having shoe arms, springs to normally force said arms in one direction, and a cam arm secured to said rock shaft and engaged by said cam block.

4. In combination, a wheel supported frame, a guide shaft carried by said frame, a detent carried by said frame, a push bar supported by said frame and guided by said shaft, a grate secured to the end of said push bar, a rake carried at the forward end of said frame, means to adjust said rake, said detent engaging said push bar, a rock shaft having shoe arms, a cam arm secured to said rock shaft and engaged by said cam block, and means to actuate said push bar.

5. In combination, a wheel supported frame, a guide shaft carried by said frame, a push bar guided by said shaft, a detent engaging said push bar, means to actuate said push bar, a cam block secured to said push bar, a grate carried by said push bar, a rake secured to the forward end of said frame, means to adjustably secure said rake, a rock shaft having shoe arms engaging the wheels of said frame, and a cam arm secured to said rock shaft and engaged by said cam block.

957,457. ART OF MAKING BILGED BARREL-BODIES. WILLIAM H. DUCKER, Syracuse, N. Y., assignor to The Solvay Process Company, Syracuse, N. Y., a Corporation of New York. Original application filed Feb. 5, 1907, Serial No. 355,844. Divided and this application filed Mar. 5, 1908. Serial No. 419,291.

1. The improvement in the art of forming bilged barrel bodies, which consists in lifting a bilge shaped web of paper pulp from a mass thereof, reversing the position of such web so that it shall present exteriorly a concave surface, moving the web forward in this position at uniform speed in each part thereof, the speed being greatest in the central parts, and decreasing therefrom to the edges of the web, and finally again reversing the position of the web and winding it in superposed layers until the desired thickness is attained.

2. The improvement in the art of forming bilged barrel bodies, which consists in lifting a bilge shaped web of paper pulp from a mass thereof, reversing the position of such web, so that it shall present exteriorly a concave surface, moving the web forward in this position, and finally again reversing the position of the web and winding it in superposed layers until the desired thickness is attained.

3. The hereinbefore described improvement in the art of forming bilged barrel bodies which consists in lifting from a mass of paper pulp a web of pulp having the same bilge which it is desired the completed barrel body shall have, moving such web forward in such manner that it shall retain at all points of its progress its original bilged shape and finally depositing it in successive superposed layers to form the barrel body.

4. The hereinbefore described improvement in the art of making bilged barrel bodies which consists in lifting from a mass of paper pulp a web of pulp having the same bilge which it is desired the completed barrel body shall have, partially extracting the water from such web, moving such web forward from the point of its formation in such manner that it shall retain at all points of its progress its original bilged shape and finally depositing it in successive superposed layers to form a barrel body.

5. The hereinbefore described improvement in the art of making bilged barrel bodies which consists in lifting from a mass of paper pulp a web of pulp having the same bilge which it is desired the completed barrel body shall have, moving said web forward under tension whereby its bilged shape is maintained, and at a uniform rate of speed in each part thereof, and finally depositing it in successive layers to form a barrel body.

[Claims 6 to 9 not printed in the Gazette.]

957,458. GOPHER-EXTERMINATOR. EDWARD C. DUCKETT and FRANK B. LLOYD, Spokane, Wash. Filed June 28, 1909. Serial No. 504,757.

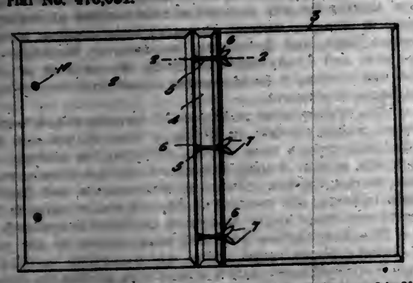
A gopher exterminator comprising a tube, a cap on one end thereof, a nipple on the cap projecting from both sides thereof, a pump connected to that portion of the nipple

which is on the outside of the cap, and a conical sleeve surrounding that portion of the nipple which is on the



inner side of the cap, said sleeve extending from the cap to the extremity of the nipple.

957,459. MUSIC BINDER AND CARRIER. FRANCIS H. DUMBLE, Schenectady, N. Y. Filed Feb. 4, 1909. Serial No. 476,051.



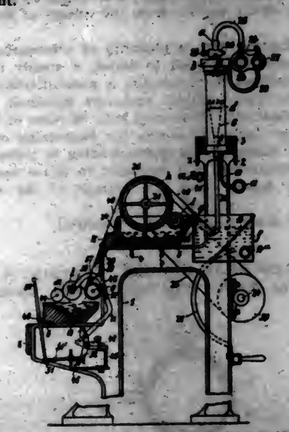
1. A music binder and carrier comprising a binding strip, hinge members on said strip, cover sections mounted to swing on said hinge members to either side of the binding strip, binding straps on one of said sections, and means on the strip coacting with the straps to secure the parts in rolled position.

2. A music binder and carrier comprising a binding strip, loops extending from one side to the other of said strip, cover sections hinged to said loops and adapted to lie, one on each side, in book form or both on one side, binding straps on one of said sections, and means on the strip co-acting with the straps to secure the parts in rolled position.

3. A music binder and carrier comprising a binding strip, binding loops connected to said strip and extending transversely thereacross, rollable cover sections hinged to said loops, means to secure sheets to said loops, said cover sections adapted to fold over on either side of said binding strip, binding straps on one of said sections, and means on the strip co-acting with the straps to secure the parts in rolled position.

957,460. MACHINE FOR SPINNING VISCOUS LIQUIDS. EMIL HEINZMANN, Barmen-Rittershausen, Germany. Filed May 7, 1908. Serial No. 431,433.

1. In a machine for spinning viscous liquids, the combination with a spinning vessel, of a spinning die for issuing the viscous liquid in threads, means for introducing fresh precipitation-liquid in a tranquil current into said spinning vessel near said spinning die, and means for introducing used precipitation-liquid in a quick current into said spinning vessel separated from said fresh precipitation-liquid and so that said used precipitation-liquid comes in contact with said threads only at a certain distance from said spinning-die and after the threads have sufficiently hardened to endure the action of the quick current.



2. In a machine for spinning viscous liquids, the combination with a spinning-vessel, of a spinning-die at the top of said spinning-vessel for issuing the viscous liquid in threads, a funnel within said spinning-vessel, a nozzle above said funnel, means for passing fresh precipitation-liquid in a tranquil current through said spinning-vessel from said spinning-die to said nozzle, and means for circulating spent precipitation-liquid so that it passes through said spinning-vessel upward to said nozzle and along same over the edge of said funnel and mixes with fresh precipitation-liquid, whereupon the mixture passes downward through the funnel carrying the threads off.

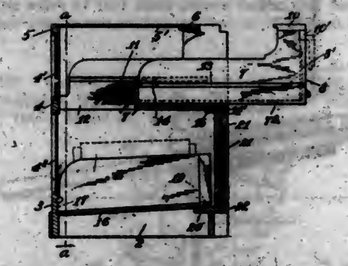
3. In a machine for spinning viscous liquids, the combination with a spinning-vessel, of a spinning-die at the top of said spinning-vessel for issuing the viscous liquid in threads, a funnel within said spinning-vessel, a nozzle above said funnel, a ring above said nozzle and tightened on the inside of said spinning-vessel for keeping off all air-bubbles from said spinning-die, leaving a small opening between said nozzle and said ring, means for passing fresh precipitation-liquid in a tranquil current through said spinning-vessel from said spinning-die to said nozzle, means for circulating spent precipitation liquid so that it passes through said spinning-vessel upward to said nozzle and along same over the edge of said funnel and mixes with fresh precipitation-liquid, whereupon the mixture passes downward through the funnel carrying the threads off.

4. In a machine for spinning viscous liquids, the combination with a spinning-vessel, of a spinning-die at the top of said spinning-vessel for issuing the viscous liquid in threads, means for passing fresh precipitation-liquid in a tranquil current through said spinning-vessel, means for circulating spent precipitation-liquid so that it passes downward through the lower part of the said spinning-vessel, and a carrying tooth wheel receiving the threads from said spinning-vessel and being so driven that the periphery runs at the same speed as the threads.

5. In a machine for spinning viscous liquids, the combination with a spinning-vessel for issuing the viscous liquids in threads, means for passing fresh precipitation-liquid in a tranquil current through said spinning-vessel and means for circulating spent precipitation-liquid so that it passes downward through the lower part of the said spinning-vessel, a carrying gear wheel for receiving the threads from said spinning-vessel and being so driven that its periphery runs at the same speed as the threads, and a second gear wheel meshing with said gear wheel and adapted to remove therefrom the liquid collecting in the tooth spaces and also any broken threads.

[Claim 6 not printed in the Gazette.]

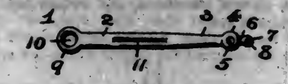
957,461. DISPLAY-CASE. DAVID S. FORCHHEIMER, White Plains, N. Y. Filed Jan. 11, 1910. Serial No. 537,450.



1. In a display case having a frame embodying a rear ledge, a drawer comprising in combination, partitions diagonally insertible in and removable from the drawer and a swinging leaf having a closed position in which it lies in substantially the same plane as said ledge and an open position to permit the passage of said partitions.

2. In a display case having a frame embodying a rear ledge, a drawer comprising in combination, slotted front and rear boards, partitions adapted to fit in the slots in said front and rear boards, a supplemental back strip hinged to said back board, and a swinging leaf hinged to said supplemental back strip and adapted to swing to a position in which it lies in substantially the same plane as said ledge.

957,462. HAIR CURLER AND WAVER. WALTER F. FREEMAN, Tooting, London, England, assignor to Merkham Trading Company, a Corporation of New York. Filed Feb. 8, 1910. Serial No. 542,698.



1. As a new article of manufacture, a hair-curler and waver comprising a flexible body-portion, a ring-shaped member at one end of said body-portion, a head or bulb at the other end of said body-portion, said head or bulb being provided with a transverse opening or hole, and a pull-piece or extension extending outwardly from said head or bulb.

2. As a new article of manufacture, a hair-curler and waver comprising a body-portion of soft rubber provided with a slot or opening adapted to receive a tress or lock of hair, a ring-shaped member integrally connected with one end of said body-portion, a head or bulb integrally connected with the other end of said body-portion, said head or bulb being provided with a transverse opening or hole adapted to render said head or bulb more easily compressible, and a pull-piece or extension integrally connected with said head or bulb, said pull-piece or extension being provided with a small head or bulb of smaller diameter than the opening of said ring-shaped member.

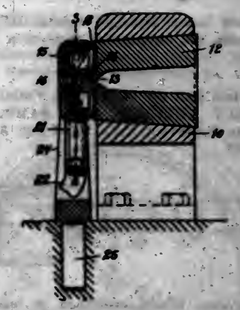
957,463. LIFTER. FRANK W. GLYMPS, Shinglehouse, Pa., assignor of nine-tenths to E. E. Peterson, Shinglehouse, Pa., and G. M. Corwin, Oswayo, Pa. Filed Aug. 24, 1909. Serial No. 514,345.

A device of the class described comprising two oblong open center frames each composed of wire, one frame being bent to form eyes and the other being bent to form pintles at one end which fit into said eyes and form a hinge joint between the two frames, one frame being provided at one end with a pair of notches and the other



frame being provided intermediate its ends with notches, substantially as described.

957,464. COOLING ATTACHMENT FOR WIRE-DRAWING DIES. JAMES A. HORTON, Providence, R. I., assignor to Iroquois Machine Company, New York, N. Y., a Corporation of New York. Filed June 14, 1906. Serial No. 321,609. Renewed Nov. 2, 1909. Serial No. 525,976.



1. A die-cooling attachment comprising a conduit member open at one side and adapted to coöperate with the delivering end of a drawing die in forming a conduit, said member having an inlet and an outlet for a cooling medium.

2. A die-cooling attachment comprising a conduit member having a recess, the side walls of which are adapted to form fluid tight joints with the delivering end of a drawing die, the latter completing the conduit, said member having also an inlet and an outlet for a cooling medium.

3. A die-cooling attachment comprising a conduit member open at one side, and having flexible side walls adapted to be seated on the delivering end of a drawing die, the latter forming a part of the conduit, said member having also an inlet and an outlet for a cooling medium.

4. A die-cooling attachment comprising a conduit member open at one side, and adapted to coöperate with the delivering end of a drawing die, in forming a conduit, and a support on which said member is movably mounted, said member having an inlet and an outlet for a cooling medium.

5. A die-cooling attachment comprising a conduit member open at one side, and adapted to coöperate with the delivering end of a drawing die, in forming a conduit, and a movable support on which said member is mounted, said member having an inlet and an outlet for a cooling medium.

[Claims 6 to 8 not printed in the Gazette.]

957,465. BOOK-MARKER. JOHN JACKSON, Chicago, Ill. Filed Jan. 7, 1910. Serial No. 536,883.

A book marker comprising a clip consisting of a sheet of comparatively stiff material having a tongue struck up therefrom, and three arms articulately joined together, one of them being articulately joined to said clip, the joints

affording sufficient friction to hold the parts in the position to which they are set, and the arm most remote



from the clip being attached substantially midway between its ends and having the form of a pointer.

957,466. PROCESS OF WASHING VEGETABLES AND PARTIALLY COOKING THE SAME. EDWARD J. JUDGE, San Francisco, Cal. Filed Oct. 5, 1908. Serial No. 456,148.



1. The process herein described of washing spinach, said process consisting in advancing the spinach through and along a revoluble foraminous container and subjecting the spinach while in motion to the action of fluid sprays operating from both inside and outside the container whereby the spinach is washed while under movement and is prevented from adhering to the inside of the container.

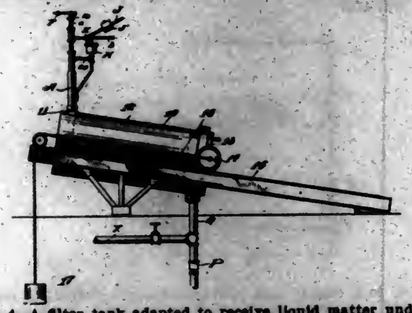
2. The process herein described of washing and cooking spinach, said process consisting in advancing the spinach through and along a revoluble foraminous container and subjecting the spinach while in motion to the action of fluid sprays operating from both inside and outside the container whereby the spinach is washed while under movement and is prevented from adhering to the inside of the container, and then delivering the spinach directly into a closed chamber and advancing it therethrough in the presence of steam whereby the washed spinach is partially cooked immediately following the washing action and as it passes through the chamber.

957,467. FILTERING APPARATUS. DAVID J. KELLY, Salt Lake City, Utah, assignor to Kelly Filter Press Company, Salt Lake City, Utah, a Corporation. Filed Mar. 3, 1910. Serial No. 547,028.

1. The combination with a hydraulic filtering apparatus, of a container connecting therewith and through which air displaced in filling the apparatus is normally permitted to escape and means controlled by the hydraulic pressure in the apparatus for admitting a pressure into the apparatus to supplement the hydraulic pressure.

2. The combination with a filter tank of means connecting therewith and automatically exhausting displaced air when the tank is filling, and means for automatically supplying air under pressure to the tank to maintain substantially a uniform pressure therein when the hydraulic pressure in the tank becomes reduced.

3. The combination with a filter tank, of means connecting therewith and normally automatically exhausting displaced air when the tank is filling, and means for maintaining substantially a uniform pressure in the tank after the latter is filled, said last-named means being controlled by the tank pressure, and adapted to admit an auxiliary pressure to the tank when the hydraulic pressure in the tank decreases.

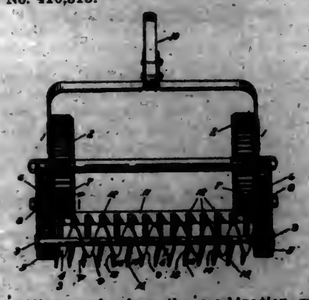


4. A filter tank adapted to receive liquid matter under pressure, said tank having means for automatically exhausting displaced air when the tank is filling and having also, a mechanism for automatically supplying compressed-air to the tank in response to a deficient hydraulic pressure.

5. A hydraulic filtering apparatus comprising a tank to receive liquid, said tank having means for exhausting displaced air when the tank is filling; an auxiliary fluid-pressure mechanism connecting with the tank and including a fluid-pressure conductor and a valve controlling the admission of the fluid-pressure to the tank; and means for automatically imparting an opening and closing movement to the valve in response to variations in the tank pressure.

[Claims 6 to 11 not printed in the Gazette.]

957,468. CUTTING MECHANISM FOR MOWERS. JAMES S. LYNCH, Citronelle, Ala. Filed Jan. 11, 1908. Serial No. 410,315.

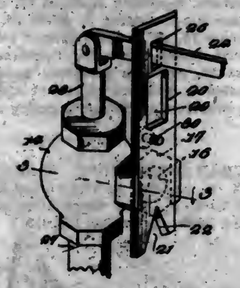


1. In cutting mechanism, the combination with a rotary knife having a spiral cutting edge, of a plurality of fixed knife guards extending forwardly on the underside of said knife and partially encircling the same obliquely in a direction substantially corresponding to that of the tangents to the spiral cutting edge at the points of co-action thereof with said knife guards.

2. In cutting mechanism, the combination with a rotary knife having a spiral cutting edge, of a plurality of fixed knife guards extending forwardly on the underside of said knife and partially encircling the same obliquely in a direction substantially corresponding to that of the tangents to the spiral cutting edge at the points of co-action thereof with said knife guards, one edge of each knife guard forming a cutting edge for said knife adapted to coöperate with a portion of its cutting edge.

3. In cutting mechanism, the combination with a rotary knife having a spiral cutting edge, of a plurality of fixed knife guards extending forwardly on the underside of said knife and partially encircling the same obliquely in a direction substantially corresponding to that of the tangents to the spiral cutting edge at the points of co-action with said knife guards, one edge of each knife guard forming a cutting edge with which a portion of the cutting edge of the knife is adapted to coöperate, the cutting edges of said knife guards collectively forming a cutting edge corresponding to that of the spiral cutting edge.

957,469. VALVE FOR STEAM-TRAPS AND THE LIKE. CHARLES J. MACKERSEY, Newport News, Va. Filed Aug. 13, 1909. Serial No. 512,722.

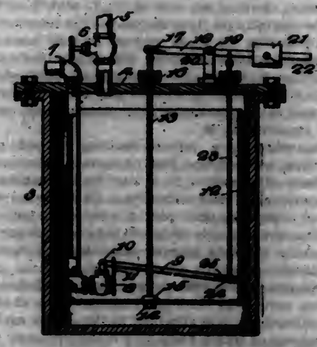


1. A valve having a sliding gate consisting of a plate provided with a V-shaped opening therein, and the sides of said opening being beveled to cutting edges to coöperate with the edge of the valve seat for the purpose set forth.

2. A valve for steam traps and the like, comprising a head, an opening formed through the head, a seat surrounding the opening, a plate adapted to slide on the seat, said plate provided with a V shaped notch having beveled edges whereby a slicing cut between the parts is obtained.

3. A valve for steam traps and the like, comprising a head, an opening formed through the head, a seat surrounding the opening, a plate adapted to slide on the seat, guides for the plate, said plate being provided with a V shaped notch having beveled edges formed in the end of the plate whereby a slicing cut between the parts is obtained.

957,470. VALVE FOR STEAM-TRAPS. CHARLES J. MACKERSEY, U. S. Navy. Filed Dec. 17, 1909. Serial No. 533,621.

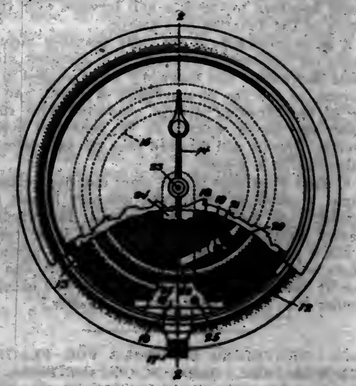


1. In a steam trap, the combination with a closed casing, of a receptacle within the casing and separated therefrom, a gated valve within the receptacle and out of contact therewith, a lever within the receptacle and connected to the gate of said valve for operating it, an overflow pipe leading from said valve, a lever exterior to the casing, a rod connecting the exterior lever with the receptacle, and a second rod connecting the exterior lever with the valve lever.

2. In a steam trap, the combination with a closed casing, of a receptacle within said casing and separated therefrom, a valve within said receptacle and out of contact therewith, an overflow pipe leading from said valve, a lever mounted on the outside of the casing, a rod extending from the receptacle and secured to the lever, a second lever connected to the valve and adapted to operate the same, and a second rod connecting said lever outside the casing with said valve operating lever, and a counterweight on said lever outside the casing.

3. In a steam trap, the combination with a closed casing, of a receptacle within the casing and separated therefrom, a valve within the receptacle and out of contact therewith, means for operating said valve, an overflow pipe leading from said valve, a lever, a rod connecting said lever with the receptacle and a second rod connecting said lever with said operating means, and a weight adjustably mounted on said lever.

957,471. PRESSURE-GAGE. COLEMAN J. MANNING, Medford, Mass., assignor to American Steam Gauge and Valve Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed Jan. 26, 1909. Serial No. 474,236.



In a pressure gage, the combination of a casing having a steam inlet, a Bourdon tube, the inner end of which is affixed to the casing and communicates with said inlet, the tube being of spiral form, whereby its free end is given a maximum amplitude of movement, a fixed support overhanging the central portion of the space surrounded by said tube, and provided with an enlargement forming a bearing, a pointer-carrying arbor journaled in said bearing and provided with a pinion, said bearing serving as the sole support for said arbor, a fulcrum screw also secured to said support at a point located perpendicularly below said bearing, a two-armed lever mounted on said fulcrum screw and having on one arm a segmental rack engaging said pinion, the other arm of said lever having a longitudinal slot, an arm pivotally connected to the free end of the spiral tube and having a stud projecting into the slot of said lever, and means for preventing pivotal movement of said arm.

957,472. GAME APPARATUS. DWIGHT C. MITCHELL, Gasport, N. Y. Filed Dec. 8, 1908. Serial No. 466,513.

1. A game apparatus of the class described including a plurality of upright movable ball actuated members arranged in a row transverse to the direction of the line of movement of the ball, which is propelled manually, a plurality of ball-throwing devices to throw a ball forward in the direction of a player, means for actuating the ball-

throwing devices, and means operated by the upright members for releasing the ball-throwing devices.



2. A game apparatus of the class described including a plurality of upright movable ball actuated members arranged in a row transverse to the direction of the line of movement of the ball, and a plurality of ball-throwing devices located in rear of the said members and connected with and set in motion by the same to throw a ball upward and forward over the said members in the direction of the player.

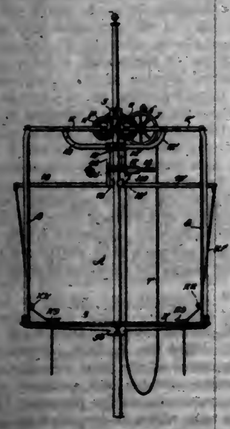
3. A game apparatus of the class described including a plurality of upright ball actuated members movable backwardly and forwardly and arranged in a row transverse to the direction of the line of movement of the ball, and a plurality of normally concealed ball-throwing devices located in rear of and connected with and set in motion by the said members to throw a ball forward over the said members in the direction of a player.

4. A game apparatus of the class described including a plurality of pendent oscillatory ball actuated members movable backwardly and forwardly and arranged in a row transverse to the line of movement of a ball, and a plurality of ball-throwing devices connected with the said members and set in motion by the rearward movement thereof to throw a ball forward over the said members in the direction of a player.

5. A game apparatus of the class described comprising a frame, a plurality of upright members hinged to and suspended from the frame and movable backwardly and forwardly, said members being arranged in a transverse row, and a plurality of ball-throwing devices arranged at the back of the frame and mounted thereon and set in motion by the rearward movement of the said members.

[Claims 6 to 14 not printed in the Gazette.]

957,473. TRAVELING SCAFFOLD FOR FLAGPOLES AND THE LIKE. JOHAN A. OLAFSON, Boston, Mass. Filed June 11, 1909. Serial No. 501,498.



1. In a device of the class described, a main frame composed of upper, lower and side members, said upper and lower members being frictionally arranged upon the pole, a drive wheel 7 with cog-wheel 8 arranged on one of said upper members, wheels 9 and 10 arranged on upper members on opposite sides of the pole and meshing with each other, friction wheels 11 and 11' carried axially by wheels 9 and 10 respectively and engaging the pole, depending members 12, 12' secured to the upper members and uniting in collar 13, collar 15 secured by members 14, 14' to the aforesaid collar and having a rack, with keeper 17, extending therefrom and transverse members 18, 18' with actuating means depending therefrom pivoted to members 14 and 17 respectively and provided with shoulders 19, 19' for engaging the pole.

2. In a device of the class described, a main frame composed of upper, lower and side members and frictionally arranged upon the pole, traveling mechanism arranged on the upper members, depending members 12, 12' secured to the upper members and uniting in collar 13, collar 15 secured by members 14, 14' to the aforesaid collar and having a rack, with keeper, extending therefrom and transverse members 18, 18' with actuating means depending therefrom pivoted to members 14 and 17 respectively and provided with shoulders 19, 19' for engaging the pole.

957,474. PITMAN CONNECTION. WILLIAM N. PARKER, Brooklyn, N. Y., assignor to The Parker Machine Company, New York, N. Y., a Corporation of New York. Filed Jan. 14, 1903. Serial No. 139,018.



1. In combination, a pitman connection and means for transmitting movement through it comprising an arm adapted to oscillate, a rod carried by said arm, a plurality of shoes carried by one end of said pitman, said rod located intermediate said shoes in such a manner that the shoes are retained on the rod and may reciprocate thereon, means whereby the shoes may be reciprocated on the rod, and means whereby the pitman may transmit movement transmitted to it.

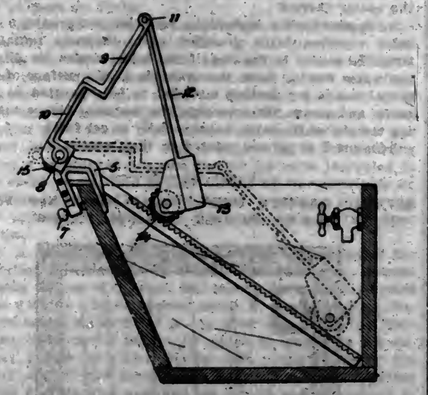
2. A pitman having an end through which a bore is formed substantially at right angles to the length of said pitman, a plurality of shoes located in said bore, a rod disposed intermediate said shoes, means whereby said rod may be oscillated, means for retaining the shoes in said bore, means whereby the said shoes may be reciprocated on said rod, and means whereby said pitman may transmit movement imparted to it.

3. In combination, a pitman having an end portion through which a transverse bore is formed, two segments of a disk located in said bore, a way formed intermediate the plane portions of said segments, a part located in said way, means adapting said part to be oscillated, means adapting the shoes to be reciprocated on said part, and means whereby the said pitman may transmit movement imparted to it.

4. In combination a pitman connection and means for transmitting movement through it comprising a shaft that may be oscillated, an arm attached to the end of said shaft in the lower end of which there is a transverse way or slot formed, a sleeve journaled on said shaft, a bearing or rod, one end of said rod located in the said sleeve and the other end of said rod adjustably secured in said slot, a pitman, one end of said pitman adapted to slide on said rod, means whereby said end of said pitman may be reciprocated on said rod, and means whereby said pitman may transmit longitudinal movement imparted to it.

5. In combination, a pitman connection and means for transmitting movement through it comprising a part that is adapted to be oscillated, one end of said pitman provided with two shoes that embrace said part, said end of said pitman adapted to turn on said shoes, means for adjusting said shoes to take up lost motion between the same and said part, means whereby said shoes may be reciprocated on said part, and means whereby said pitman connection may transmit motion imparted to it.

957,475. WASHING-MACHINE. WILLIAM H. PRESTON, New York, N. Y. Filed Aug. 12, 1907. Serial No. 388,118.



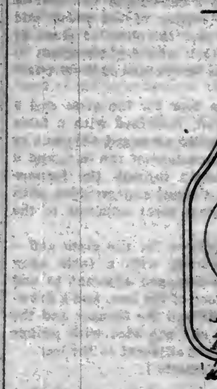
1. A washing attachment for wash tubs comprising inverted U shaped clamps adapted to be secured to the front of the tub, a cross bar rigidly connecting said clamps together, a cross shaft journaled in the top of said clamps, levers fixed to the opposite ends of said shaft having offset hand-holds adjacent thereto, arms freely suspended from the opposite ends of said levers having weighted extremities, a corrugated washing roller journaled in the weighted ends of said arms, and a spring connected to said cross bar and cross shaft operating to elevate the levers, arms and roller when depressed by said hand-holds.

2. A washing attachment for wash tubs comprising inverted U shaped clamps rigidly connected together and having angled corners, a cross shaft journaled in the upper portions of said clamps, levers fixed to the opposite ends of said cross shaft having heads, arms pivotally suspended from the opposite ends of said levers, a washing roller journaled between the free ends of said arms, said levers having hand-holds for depressing said roller until the heads thereof contact with the clamps, and means for automatically elevating the roller, arms and levers until the said heads contact with the angled corners of the clamps.

3. A washing attachment for wash tubs comprising clamping means, a cross shaft journaled in said clamping means, ribbed levers fixed to the outer ends of said shaft, ribbed arms pivotally suspended from the opposite ends of said levers, a washing roller journaled between the free ends of said arms, said levers having offset hand-holds for depressing the washing roller, and a spring connecting the clamping means and cross shaft for automatically returning the roller to an elevated position when depressed.

957,476. GAS-LAMP. ALCORN RECTOR, New York, N. Y., assignor to Rector Gas Lamp Company, New York, N. Y., a Corporation of New York. Filed July 6, 1909. Serial No. 506,216.

1. A gas lamp, having a globe, a pilot burner for the lamp, a gas supply pipe for the lamp, means for exhausting the globe, and a valve actuated by the change of pressure in the globe and controlling the gas supply.



2. The combination with a gas lamp having a globe and its gas supply pipe, of exhausting means connected with the lamp globe, and a valve operated by the starting and stopping of the exhaust and controlling the gas supply.

3. The combination with a gas lamp having a globe and its supply pipe, of exhausting means connected with the globe, a pilot tube leading from the gas supply pipe to the lamp, and a valve controlling the main gas supply to the lamp, said valve being operated by the stopping and starting of the exhausting means.

4. The combination with a globe gas lamp having exhausting means connected with the globe, and a main gas supply pipe, of a pilot tube connecting the main gas supply pipe with the lamp, a float supported above the gas supply pipe and between it and the lamp, and a valve carried by the float and seating in the gas inlet.

5. The combination with a globe gas lamp, its main gas supply pipe, and means for exhausting the globe, of a pilot tube connecting the main gas supply pipe with the lamp, a casing forming a part of the gas inlet to the lamp, a float movable in the casing, and a valve carried by the float and seating in the gas inlet.

[Claims 6 to 8 not printed in the Gazette.]

957,477. METHOD OF AND MEANS FOR ANNEALING GLASS. FRANK SHUMAN, Philadelphia, Pa., assignor to The Continuous Glass Press Company, a Corporation of New Jersey. Filed May 20, 1905. Serial No. 261,384.



1. The method of making and annealing flat sheets of glass which consists, in rolling molten glass into a sheet upon a horizontal flat surface, and while still hot and pliable transferring the sheet of glass into a leer for annealing it by applying power to the end of the sheet across its width next to the leer and thereby pulling it bodily over the flat surface into the leer as distinguished from pushing it and whereby the sheet is held in a flat condition by gravity and the flat surface during the operation.

2. The art of making sheets of rolled glass which consists of rolling a ball of glass into a sheet upon a flat surface and during the rolling operation while the glass is plastic applying a drawing-in tool to the end of the glass first rolled, and as soon as the roller has left the glass drawing or pulling the sheet of glass from the rolling table into the leer over the supporting surface as distinguished from pushing it.

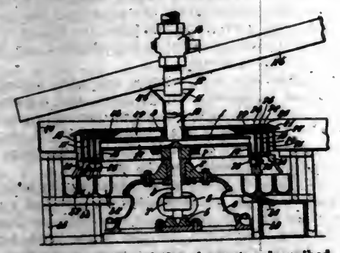
3. The art of making sheets of rolled glass which consists of rolling a ball of glass into a sheet, embedding in the end of the glass first rolled a drawing-in tool and at the same time completing the rolling of the sheet, and then at once drawing into the leer the sheet of glass by pulling upon the drawing-in tool whereby the glass is drawn or pulled into the leer as distinguished from pushing it.

4. A leer having an entrance door for the glass and a tool aperture in its opposite wall, combined with a table upon which the glass sheet is rolled arranged adjacent to and upon the level of the entrance door of the leer, and a drawing in tool extending entirely through the furnace and the tool aperture and door thereof and provided with means for attachment to the glass sheet adjacent to the leer.

5. A leer having an entrance door for the glass and a tool aperture in its wall, combined with a table upon which the glass sheet is rolled arranged adjacent to and upon the level of the entrance door of the leer, and a drawing in tool extending entirely through the furnace and the tool aperture and door thereof and provided with prongs for attachment into the glass sheet adjacent to the leer.

[Claim 6 not printed in the Gazette.]

957,478. APPARATUS FOR SEPARATING METALS AND THE LIKE FROM EXTRANEOUS MATTER. RICHARD M. SIMPSON, Wellington, New Zealand. Filed Aug. 5, 1908. Serial No. 447,177.



1. In an apparatus of the character described, the combination of a substantially horizontally arranged, circular, rotating table adapted to receive on its upper surface the material to be treated and having below said surface channels which radiate from its center to its periphery, means for supplying water to the inner ends of said channels, and a trough extending about the periphery of the table and having its interior divided into a plurality of concentric compartments, the walls of the inner compartment acting to cause the water issuing from said channels to pass upwardly onto the upper surface of the table and toward the center thereof.

2. In an apparatus of the character described, the combination of a substantially horizontally arranged, circular, rotating table adapted to receive on its upper surface the material to be treated and having below said surface channels which radiate from its center to its periphery, means for supplying water to the inner ends of said channels, and a trough surrounding the table and rotating therewith, said trough being divided into a plurality of concentric compartments the outer walls of which extend above the upper surface of the table, and separable covers supported by said outer walls of the compartments in the trough and projecting over the table.

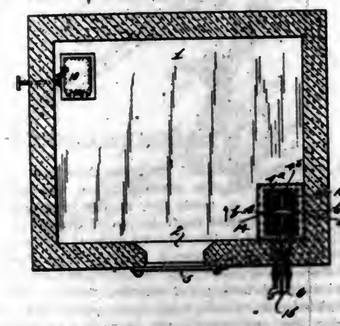
3. In an apparatus of the character described, the combination of a substantially horizontally arranged, circular, rotating table adapted to receive on its upper surface the material to be treated and having below said surface channels which radiate from its center to its periphery, means for supplying water to the inner ends of said channels, and a trough surrounding the table and rotating therewith, said trough being divided into a plurality of concentric compartments the outer walls of which extend above the upper surface of the table, and separable covers supported by said outer walls of the compartments in the trough and projecting over the table, the height of the several walls of the trough and the extent of projection of the covers over the table gradually increasing as the distance of said walls from the table increases.

4. In an apparatus of the character described, the combination of a circular table mounted to rotate about a vertical axis, and having formed therein, below its upper surface a series of channels that open through its periphery, a conduit communicating with the inner ends of said channels and extending above the table, means for supplying material to be treated to the upper surfaces of the table, and a trough surrounding the table and divided into a plurality of compartments, the walls of the inner compartment being adapted to direct the water issuing from said channels over the upper surface of the table toward the center thereof.

5. Apparatus for separating material, comprising a circular rotating table provided with channels radiating from the center to the rim of the table, means for directing water flowing from the channels to the surface of the table, means for feeding material to be separated to the table, and means for spreading the material before reaching the rim of the table, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

957,479. BAKER'S OVEN. ISAAC SLAPO, New York, N. Y. Filed Oct. 29, 1909. Serial No. 525,290.



A grate frame, cylindrical projections integral with said frame, a shelf beneath each of said projections, beveled stops integral with said shelf, one at each end thereof, a rotatable grate, and blocks carried by said grate provided with a recess adapted to partly surround the projections on said grate frame, the remote lower edges of said blocks being beveled to correspond with the stops on said shelf.

957,480. CASTER. NIKOLAI SVENVIG, St. Paul, Minn., assignor of one-fourth to William T. Kirke and one-fourth to Jarvis W. Mason, St. Paul, Minn. Filed July 19, 1909. Serial No. 508,514.



1. A caster comprising a cylindrical shell adapted for insertion upward into an article to be supported, a cover closing the top of the shell and having a central downward boss with an annular recess about it, two oppositely disposed cheek plates fitted in the shell and having at their upper ends curved flanges by which to engage in the annular groove and their lower ends projected below the lower end of the shell and a supporting roller rotating about a horizontal axis and having its ends journaled in the cheek plates.

2. A caster comprising a cylindrical shell adapted for insertion upward into an article to be supported, a cover closing the top of the shell and having a central downward boss with an annular recess about it, two oppositely disposed cheek plates fitted in the shell and having at their upper ends curved flanges by which to engage in the annular groove and their lower ends projected below the lower end of the shell and a supporting roller rotating about a horizontal axis and having its ends journaled in the cheek plates, said shell having about its lower end an annular flange provided with holes for nails or screws for the purpose set forth.

3. A caster comprising a cylindrical shell adapted for insertion upward into an article to be supported, a cover closing the top of the shell and having a central downward boss with an annular recess about it, two oppositely disposed cheek plates fitted in the shell and having at their upper ends curved flanges by which to engage in the annular groove, and their lower ends projected below the lower end of the shell and a supporting roller rotating about a horizontal axis and having its ends journaled in the cheek plates, said bottom having at its under side an annular recess, balls in said recess, a washer supporting the balls and resting upon the upper ends of the cheek plates.

4. A caster comprising a cylindrical shell adapted for insertion upward into an article to be supported, a cover closing the top of the shell and having a central downward boss with an annular recess about it, two oppositely disposed cheek plates fitted in the shell and having at their upper ends curved flanges by which to engage in the annular groove and their lower ends projected below the lower end of the shell and a supporting roller rotating about a horizontal axis and having its ends journaled in the cheek plates, said shell having its upper end slit so as to clasp the cover and the cover having a reduced portion adapted to be forced into the clasping portion of the shell.

957,481. KEY-LOCKING MECHANISM. PATRICK H. TURLEY, Harrisburg, Pa., assignor to Elliott-Fisher Company, New York, N. Y., a Corporation of Delaware. Filed July 24, 1907. Serial No. 385,326.



1. The combination with a row or bank of key-operated members, having enlarged upper ends or heads, of a series of locking devices loosely mounted in alternation with the key-operated members and having angular locking arms normally contacting with each other and disposed below and in the line of movement of the enlarged ends or heads of the key-operated members, said members serving to limit the lateral movement of the locking devices, and said heads serving to operate the locking devices and to hold the same in predetermined positions during continued movement of the member operated.

2. The combination with a row or bank of key operated members having enlargements, of a series of locking devices mounted in alternation with the key operated members and movable into and out of coacting relation with the enlargements thereof, said locking members being arranged to engage one another and the movement of each locking member being limited by the key operated members at opposite sides thereof.

3. The combination with a row or bank of key operated members having enlarged upper ends or heads, of a series of pendent oscillatory locking devices loosely mounted in alternation with the key operated members, each locking device having oppositely extending locking arms having annular extremities passed around the adjacent key operated members to contact with the adjacent locking devices, the movement of each locking device being limited by engagement with the two adjacent key operated members and each pair of locking devices being operated by the head of the intermediate key operated member.

957,482. TRACK-SANDER. CHARLES P. WHITE, Greensboro, N. C. Original application filed May 21, 1908, Serial No. 434,121. Divided and this application filed Jan. 15, 1910. Serial No. 538,303.



1. In a track-sander, a sand pipe casting provided with a sand outlet passage and an independent T-shaped fluid pressure passage, the stem of the tee opening inward and having a nozzle connection, and the branches of the tee opening outward, a closure for one of said branches, a fluid pressure pipe connected to the other branch, and a nozzle connected to the inner end of the stem and having its mouth disposed in the axial line of the mouth of the sand discharge passage.

2. In a track sander, a sand pipe casting provided with a sand discharge passage and an independent T-shaped fluid pressure passage, the stem of the tee opening inward and having a nozzle connection and the branches of the tee opening laterally on opposite sides of the casting, a closure for one of said branches and a fluid pressure supply pipe connected to the other branch, and a nozzle connected to the stem portion of the fluid pressure passage at the inner end thereof and having its mouth disposed in the axial line of the mouth or entrance end of the sand discharge passage.

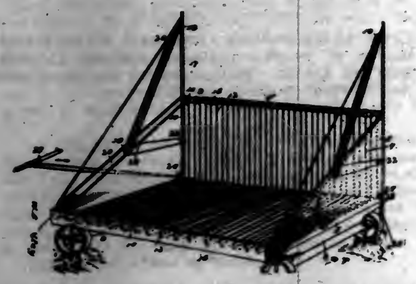
3. In combination with a sand dome, of a sander comprising a body portion secured to the dome and extending partially within and partially without the same, said body portion being formed with an upwardly and outwardly extending sand passage leading from the interior to the dome, the entrance end of said passage being defined by a wall which occupies an oblique position and an overhanging relation to the portion of the sand dome to which the body portion of the device is attached, and a nozzle for fluid pressure, said nozzle being connected to the inner end of said body portion with its discharge mouth pointing toward the receiving end of the sand passage, said nozzle having its mouth located underneath the overhanging inner portion of the body of the device and in spaced relation to the entrance end of the sand passage.

4. The combination with a sand dome, of a sand pipe casting secured to the dome and provided with a sand passage extending upwardly and outwardly from the sand dome with its inner end occupying an oblique or inclined overhanging position in the dome, and a fluid pressure nozzle secured to said casting within the dome and extending downwardly and inwardly from said casting and thence downwardly and upwardly underneath the first named portion of the nozzle, the mouth of said nozzle pointing toward and spaced from the entrance end of the sand passage.

5. The combination with a sand dome, of a sand pipe casting provided with a sand passage which extends upwardly and outwardly from the sand dome, the casting being provided with an independent fluid pressure passage which extends therethrough downwardly and inwardly into the dome and which includes a nozzle, the mouth of which points toward the entrance end of the sand passage, said fluid pressure passage at the inner end of its down-

wardly and inwardly extending portion, extending downwardly and thence returned upon itself and extending upwardly and outwardly toward the sand passage, for the purpose specified.

957,483. HEADER-BARGE. WILLIAM S. ALLEY, Ingalls, Kans. Filed May 4, 1909. Serial No. 493,875.



1. A barge for heading machines including a body portion, main and auxiliary frames pivotally mounted one within the other for tilting movement on said body portion and adapted to receive the grain from the heading machine, and a connection between said frames for simultaneously elevating both frames and subsequently tilting one of the frames to effect the dumping of the load.

2. A barge for heading machines including a body portion, main and auxiliary frames pivotally mounted one within the other on the body portion and movable simultaneously to operative position to effect the dumping of the load, and cables forming a connection between said frames and provided with means for attachment to a draft animal.

3. A barge for heading machines including a body portion, main and auxiliary frames pivotally mounted on the body portion, the main frame being provided with spaced teeth terminating in curved extensions and the auxiliary frame provided with spaced teeth normally interposed between the teeth of the main frame, and a flexible connection operatively connected with both frames and provided with means for attachment to a draft animal.

4. A barge for heading machines including a body portion having spaced standards secured thereto, main and auxiliary frames pivotally mounted for swinging movement on the body portion, pulleys secured to the opposite sides of the main frame, pulleys journaled on the auxiliary frame, pulleys journaled on the upper ends of the standards, and cables extended over the several pulleys and having their inner ends fastened to the main frame and their outer ends provided with means for attachment to a draft animal.

5. A barge for heading machines including a body portion having its rear wall higher than its front wall, main and auxiliary frames pivotally mounted on the rear wall of the body portion, and a connection between said frames for elevating the same to effect the dumping of the load, the auxiliary frame being provided with teeth adapted to pass through the main frame after the latter is in elevated position, thereby to forcibly eject the material from the main frame.

[Claim 6 not printed in the Gazette.]

957,484. BAGGAGE-CHECK. JOHN M. BAILHACHE, San Francisco, Cal. Filed July 14, 1909. Serial No. 507,627.

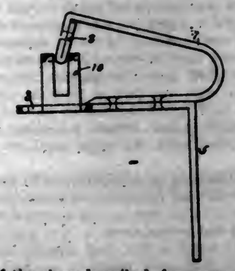
1. In a system for checking baggage original and duplicate indicia bearing checks having openings so arranged that when the original is placed upon the duplicate certain indicia on the covered face of the latter will be visible through the openings of the original which will coincide with the indicia visible through the opening of the duplicate when the latter is placed over the original.

2. In a system for checking baggage indicia bearing duplicate and original checks, each of which is provided with an opening in alinement with the indicia on the other check, whereby certain indicia will be visible through the



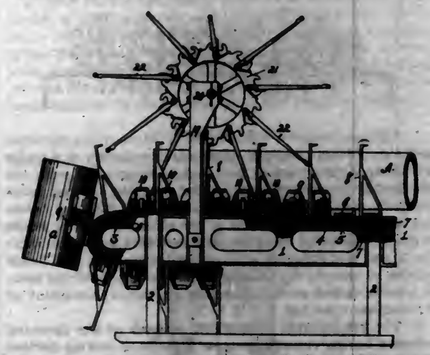
opening of the original when the latter is placed upon the duplicate which will coincide with the indicia visible through the opening of the duplicate when the latter is placed on the original.

957,485. WIRE-CLIP. OCTAVE A. BELIVEAU, St. Paul, Minn. Filed June 22, 1908. Serial No. 439,679.



A clip of the class described, for connecting the ends of conductor wires, comprising a base plate formed with a permanently connected bar 5 projecting at right angles from said plate, an outwardly and permanently connected holder 10 carried by said base and projecting therefrom oppositely to said arm, and a spring arm permanently carried by said base and having its free end extending downwardly alongside said holder, said arm and holder being formed with cooperating openings.

957,486. TILE-CUTTING MACHINE. JACOB BENSING, Malinta, Ohio. Filed Apr. 19, 1909, Serial No. 490,971. Renewed Mar. 28, 1910. Serial No. 552,053.



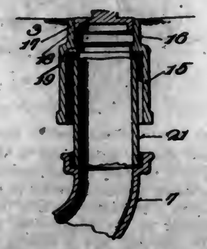
1. In a machine of the class described, an endless carrier comprising double and single trough sections, the single sections being arranged in pairs between each pair of double sections.

2. In a machine of the class described, the combination of an endless carrier comprising a plurality of pivotally connected carrier links, and double and single trough sections carried thereby, the single sections being arranged in pairs between each pair of double sections.

3. In a machine of the class described, the combination of an endless carrier comprising a plurality of pivotally connected links, a single trough carried by each link of alternating pairs of the carrier and a double trough carried by the links intermediate said pairs.

4. In a machine of the class described, the combination of an endless carrier comprising a plurality of pivotally connected links, a single trough carried by each link of alternating pairs of the carrier, and a double trough fixed to one and adapted to rest freely on the other of the links disposed between said pair, substantially as described.

957,487. DRAIN-PIPE FITTING. GEORGE W. BERRY, Bayonne, N. J. Filed Nov. 24, 1909. Serial No. 529,772.



1. The combination with a soil pipe, of an outlet pipe having its lower end communicating with the interior of the soil pipe and provided with an exterior collar, the upper end of said outlet pipe being provided with interior threads and having an inwardly extending shoulder formed thereon and spaced from said threads, a strainer resting on said shoulder, and a plug engaging the threads on the outlet pipe and forming a closure for the upper end of the latter, said plug being provided with a square head.

2. The combination with a soil pipe having an elbow, of a pipe section seated in said elbow, an outlet pipe resting on said pipe section and having its upper end interiorly threaded, and a plug engaging the threads on the outlet pipe and forming a closure for the upper end thereof.

3. The combination with a soil pipe having an elbow, of a pipe section seated in said elbow, an outlet pipe engaging the pipe section and having its upper end reduced and provided with interior threads, there being a shoulder extending inwardly from the outlet pipe and spaced from the threads, a strainer resting on the shoulder, and a plug engaging the threads and forming a closure for the upper end of said outlet pipe.

4. An outlet pipe comprising a cylindrical body portion having its interior walls threaded at the upper end thereof and provided with an inwardly extending shoulder spaced from said threads, a strainer resting on said shoulder, and a plug engaging the threads and forming a closure for the upper end of the outlet pipe.

5. An outlet pipe comprising a cylindrical body portion having its upper end reduced and provided with interior threads, there being a shoulder extending inwardly from the reduced portion of the outlet pipe and spaced from said threads, a perforated disk resting on said shoulder and constituting a strainer, and a plug engaging the threads and forming a closure for the upper end of said outlet pipe.

957,488. CLASP. WILLIAM T. BLASDELL, Chicago, Ill. Filed July 19, 1909. Serial No. 508,437.

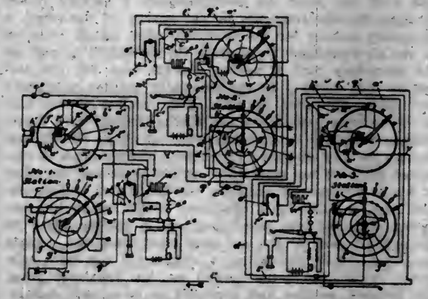
1. A clasp formed of spring metal, comprising longitudinally disposed, parallel, engaging members joined together at one end, and a combined guard, guide and locking member arranged transverse of said first named members and above the bodies thereof, said last named member being in the form of a loop extension of the other ends of said first named members.

2. A clasp made of spring metal, comprising longitudinally disposed, parallel engaging members joined together at one end, a handle formed at the joined ends of said parallel members, and a combined guard, lock and guide member arranged transverse of said first named members and above the same, said last named member being in the form of a loop extension of the other ends of said first named members.



3. A clasp made of spring metal, comprising longitudinally disposed, parallel engaging members joined together at one end, a handle formed at the joined ends of the engaging members, and a combined guide and lock member arranged transverse of said first named members and adapted to engage the body thereof, said last named member being in the form of a spring made integral with the other ends of said first named members.

957,489. TELEPHONE APPARATUS. CHARLES F. BRADBURN, Delmer, Ontario, Canada. Filed Aug. 10, 1907. Serial No. 387,949.



1. A telephone system comprising a number of telephone instruments, a selecting instrument for each telephone instrument, a normally open local telephone circuit connecting each telephone instrument with its respective selecting instrument, a selecting circuit connecting the selecting instruments in series, a main telephone circuit connected through all the selecting instruments, and arranged to be closed by the selecting circuit through the local telephone circuits of any selected, two, telephone instruments, and an emergency circuit forming part of the main telephone circuit arranged to be closed through the signal set of the local telephone circuit.

2. A telephone system comprising a number of telephone instruments, a selecting instrument for each telephone instrument, a normally open local telephone circuit connecting each telephone instrument with its respective selecting instrument, a selecting circuit connecting the selecting instruments in series, a main telephone circuit connected through all the selecting instruments and arranged to be closed by the selecting circuit through the local telephone circuits of any selected, two, telephone instruments, an emergency circuit forming part of the main telephone circuit arranged to be closed through the signal set of the local telephone circuit of any selected instrument, and to be permanently cut out of circuit with the receiver and transmitter of the local telephone circuit.

3. A telephone system comprising a number of selecting instruments, each consisting of a primary mechanism and

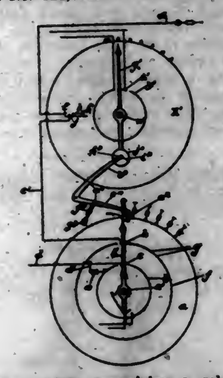
a secondary mechanism, a selecting circuit passing through the primary mechanisms to the secondary mechanisms, connecting them in series, and by which the secondary mechanisms of the selecting instruments can be operated without disturbing the primary mechanisms of such instruments, a selecting battery for each selecting instrument cut into a selecting circuit by the operation of its respective primary mechanism to actuate the secondary mechanism of its respective selecting instrument and the secondary mechanisms of all the other instruments in series, a telephone instrument, for each selecting instrument, and a local telephone circuit connected with the primary and secondary mechanisms of the selecting instrument, and a main telephone circuit closed through the local telephone circuit of any selected, two, telephone instruments.

4. In a telephone system, a selecting instrument comprising a primary dial, a primary pointer revolubly connected to the primary dial, a broken contact ring for the primary dial engaged by the primary pointer during its revolution, a contact plate interposed between the ends of the broken contact ring and electrically disconnected therefrom, engaged by the primary pointer when in its initial position, a selecting circuit conductor connected with the contact plate, a battery connected with the selecting circuit conductor and with the broken contact ring, a second contact ring concentric with the first mentioned one, a series of projecting contact plates for the second contact ring, successively engaged by the primary pointer during its revolution, a contact plate for the second contact ring, alined with the first mentioned contact plate, a secondary dial, a relay, a selecting circuit conductor connected with the last mentioned contact plate, and with the relay, an electromagnet, a battery closed through the electromagnet by the energy of the relay, a secondary pointer for the secondary dial, means actuated by the electromagnet to position the secondary pointer on the secondary dial, a broken contact ring for the secondary dial engaged by the secondary pointer, a contact plate located between the ends of the broken contact ring of the secondary dial and electrically disconnected therefrom, a telephone instrument, local telephone circuit conductors for the telephone instrument one of which is connected with the last mentioned contact plate and the other of which is connected with the last mentioned broken contact ring, a third local telephone circuit conductor connected with the first mentioned one, a contact plate on the primary dial for the last mentioned conductor, a main telephone circuit conductor, a switch for the main telephone circuit conductor opened by, but insulated from, the primary pointer and arranged to move into engagement with the last mentioned contact plate when the primary pointer has been moved from its initial position on the primary dial, a conductor leading from the main telephone circuit conductor to the primary pointer, an emergency switch for the telephone instrument, a contact plate on the primary dial engaged by the primary pointer when in its initial position, an emergency conductor leading from the last mentioned contact plate to the emergency switch, a second conductor leading from the emergency switch to the secondary pointer, a conductor leading from the signal set of the local telephone circuit to one of the emergency conductors when the switch is moved to open the circuit between the emergency conductors, and a main telephone circuit conductor connected with the broken contact ring of the secondary dial.

5. A telephone system comprising a main line, a number of telephone stations, each having a telephone instrument provided with a signal set, a normally open telephone station circuit for each telephone station connected with the main line, a selecting instrument for each telephone station, a selecting circuit normally without current connecting the selecting instruments in series whereby the telephone station circuits of any selected two telephone stations can be closed, and an emergency circuit forming part of each telephone station circuit to be closed through the signal set of its respective telephone instrument.

[Claims 6 and 7 not printed in the Gazette.]

957,490. TELEPHONE APPARATUS. CHARLES F. BRADBURN, Delmer, Ontario, Canada. Filed Jan. 20, 1908. Serial No. 411,781.



1. A telephone system comprising a selecting instrument consisting of a primary mechanism and a secondary mechanism, a primary pointer, a series of contacts for the primary mechanism, a secondary pointer for the secondary mechanism actuated by the engagement of the primary pointer with the contacts and a locking mechanism for the primary pointer positioned directly in the path of the latter by the movement of the secondary pointer as the primary pointer engages the first contact from sero and removed from the path of the primary pointer when the secondary pointer returns to sero.

2. A telephone system comprising a number of selecting instruments each consisting of a primary mechanism having a series of contacts and a primary pointer, a secondary mechanism having a secondary pointer and an actuating means for the secondary pointer, a selecting circuit through the primary pointer and contacts of the primary mechanism to the actuating means of the secondary pointer, and a locking means for the primary pointer normally held free from engagement with the latter by the secondary pointer and positioned directly in the path of the primary pointer by the movement of the secondary pointer from sero.

3. A telephone system comprising a selecting instrument consisting of a primary mechanism having a primary pointer, a secondary mechanism having a secondary pointer, a bell crank lever having two arms, a detent carried by one of the arms to engage with the primary pointer, a traveler carried by the other arm to be engaged by the secondary pointer and a spring connected to the bell crank lever to accelerate its movement.

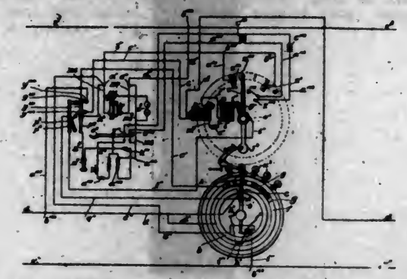
4. In a telephone apparatus a selecting instrument comprising a primary mechanism having a primary pointer and contacts engaged by the primary pointer, and a secondary mechanism controlled by the contacts having a secondary pointer, and means actuated by the secondary pointer controlling the movement of the primary pointer from its initial position.

5. In a telephone apparatus a selecting instrument comprising a primary mechanism having a primary pointer and contacts engaged by the primary pointer, and a secondary mechanism controlled by the contacts having a secondary pointer, a bell crank lever having a detent to engage with the primary pointer, and means engaged by the secondary pointer to position the bell crank lever during the movement of the secondary pointer to arrest the primary pointer at its initial position.

[Claims 6 to 9 not printed in the Gazette.]

957,491. TELEPHONE SYSTEM. CHARLES F. BRADBURN, Delmer, Ontario, Canada. Filed Nov. 25, 1908. Serial No. 464,366.

1. A telephone system comprising a selecting circuit, a selecting means consisting of a primary and secondary mechanism a relay for the secondary mechanism, an emergency switch, a relay circuit passing through the primary mechanism and the emergency switch, when in its normal position, to the relay, and a correction circuit from the selecting circuit through the emergency switch to the relay when the emergency switch has moved to its emergency position.



2. A telephone system comprising a telephone instrument having the usual local telephone circuits, a selecting means consisting of a primary mechanism, and a secondary mechanism actuated by the primary mechanism, the secondary mechanism having an individual calling contact connected with the local telephone circuits and a common calling contact connected with the local telephone circuits, and means forming part of the secondary mechanism by which the local telephone circuits may be selectively switched through the individual or common calling contacts, a signal supplemental to the telephone signal, contacts to be engaged by the switching means of the secondary mechanism, contacts to be engaged by the switch hook, and conductors connecting the supplemental signal with each of the last mentioned contacts.

3. A telephone system comprising a telephone instrument having the usual local telephone circuits, a selecting means consisting of a primary mechanism, and a secondary mechanism actuated by the primary mechanism, the secondary mechanism having an individual calling contact connected with the local telephone circuits, means forming part of the secondary mechanism by which the local telephone circuits may be switched through the individual calling contacts, a signal supplemental to the signal of the telephone instrument, contacts to be engaged by the switching means of the secondary mechanism, contacts to be engaged by the switch hook of the telephone instrument, and conductors connecting the supplemental signal with all of the last mentioned contacts.

4. In a telephone apparatus a selecting instrument comprising a primary mechanism having a primary pointer and contacts engaged thereby, and a secondary mechanism controlled by the contacts having a secondary pointer and individual and common calling contacts, engaged by the secondary pointer.

5. In a telephone apparatus a telephone instrument having a signal circuit and a receiver circuit, a condenser in the receiver circuit, and a conductor joining the signal and receiver circuits energizing the receiver for speaking purposes while hanging on the switch hook.

[Claims 6 to 8 not printed in the Gazette.]

957,492. HOSE. ROBERT H. BROWN, Los Angeles, Cal. Filed Oct. 27, 1909. Serial No. 526,635.

1. A hose comprising a tubular body, nipples in the ends of the body, a core extending through the body and spread apart and extending between the nipples and the body, and bands to compress the body onto the core and nipple.

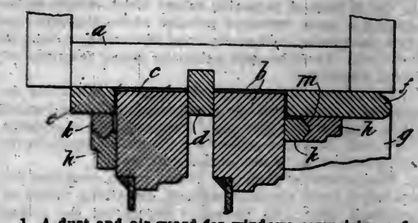
2. A hose comprising a tubular body, a core extending inside the body from end to end thereof and composed of strands, the ends of said strands being separated, nipples inserted between the separated strands inside the body, and bands compressing the body onto the strands and the nipple.

3. A hose comprising a tubular body, a rope composed of strands inside the body, the strands being separated at the ends of the body, nipples inserted into the body between



the separated strands, bands fastened around the body and provided with internal ribs to press the hose body between the strands, and means to tighten the band on the hose body.

957,493. DUST AND AIR GUARD FOR WINDOWS. OLIVER C. CALL, Springfield, Mass. Filed Nov. 18, 1908. Serial No. 463,243.



1. A dust and air-guard for windows comprising a fixed strip secured to a window-casing or the like, a strip secured to the sash, the contiguous sides of these strips being oppositely tapered and having a bearing one against the other when the sash is in a closed position, the tapered sides of said strips having a tongue and groove engagement one with the other, whereby the sash will be moved transversely in its own plane when the tapered strips are brought together into operative contact.

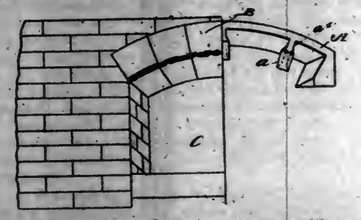
2. A dust and air-guard for windows comprising a fixed strip secured to a window-casing or the like, a strip secured to the sash, the contiguous sides of these strips being oppositely tapered and having a bearing one against the other when the sash is in a closed position, to move the sash in the direction of the plane thereof, the tapered sides of said strips having also a positive engagement one with the other to effect the transverse movement of the sash when the parts are brought into operative contact.

957,494. FURNACE-ARCH CONSTRUCTION. COLIN CAMPBELL, Rutherford, N. J. Filed Dec. 30, 1909. Serial No. 535,652.

1. In arch construction the combination with an arch plate, said arch plate being a segment of a cone, of holding means cast integral therewith and tapered fire-blocks removably held and secured by said holding means.

2. In arch construction the combination with an arch plate, said arch plate being a true segment of a cone, dovetailed tongues cast integral with said arch plate and correspondingly grooved fire-blocks removably held and secured by said dove-tailed tongues.

3. In arch construction, the combination with an arch plate, said arch plate being a true segment of a cone, dove-tailed tongues cast integral with said arch plate, tapering fire-blocks having correspondingly dove-tailed recesses adapted to be removably secured in said arch plate.



4. In arch construction, the combination with an arch plate having dove-tailed tongues cast integral therewith, a pair of fire-blocks held together by a binding agent and removably secured in said arch-plate between said tongues.

5. In arch construction, the combination with an arch plate having dove-tailed tongues cast integral therewith, a pair of fire-blocks held together by a binding agent, and having dove-tailed recesses, adapted to receive the aforementioned tongues and removably held and secured between said tongues.

[Claim 6 not printed in the Gazette.]

957,495. PROCESS OF PRODUCING RUBBER. HARRY O. CHUTE and FRANK L. RANDEL, New York, N. Y. Filed Mar. 10, 1909. Serial No. 482,477.

1. The process of preparing rubber which comprises deresinating a crude vegetable material of the character described containing rubber by treatment with a volatile solvent, and thereafter separating the rubber from the remaining impurities.

2. The process of preparing rubber which comprises deresinating a crude vegetable material of the character described containing rubber by treatment with a volatile solvent, and thereafter separating the rubber from the remaining impurities by maceration with water.

3. The process of preparing rubber which comprises deresinating a crude vegetable material containing rubber by a protected ester, and thereafter separating the rubber from the remaining impurities by maceration with water.

4. The process of preparing rubber which comprises deresinating a crude vegetable material containing rubber by a solvent comprising ethyl acetate, and thereafter separating the rubber from the remaining impurities by maceration with water.

5. The process of preparing rubber which comprises deresinating a crude vegetable material of the character described containing rubber by a volatile solvent adapted to extract resin but having substantially no solvent power for rubber, and thereafter separating the rubber from such material.

[Claims 6 to 12 not printed in the Gazette.]

957,496. POLISHING-WHEEL. STEPHEN A. COCHELL, Detroit, Mich. Filed June 29, 1908. Serial No. 440,814.

1. A polishing wheel having a body of disks formed of layers of pasted cloth sewed together, the stitches therein forming perforations through the disks, and said disks being bound together by glue applied to the sides thereof and forced through the perforations by pressure.

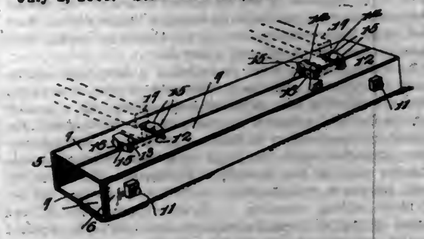
2. A polishing wheel having a body of disks formed of layers of pasted cloth sewed together by lines of stitches forming perforations through the disks, the disks being secured together by glue applied to their sized sides and forced through the perforations by pressure, the center portion of the body being compressed and apertured for engaging an arbor.

3. A polishing wheel comprising a plurality of disks formed of layers of pasted cloth sewed together by a spirally disposed line of stitching forming a series of perforations through the disks, the disks being sized and secured by glue forced through the perforations under pressure, outer disks of heavy cloth fabric glued to the sides of the wheel, and a layer of abrasive material secured by



the cloth paste and disk glue to the wheel periphery, the central portion of the wheel body being compressed more than the outer portion, and being provided with an axial arbor aperture whose margins are beveled.

957,497. METALLIC CROSS-TIE. WILLIAM E. COLE and WASHINGTON W. CANDLER, Candler, N. C. Filed July 2, 1909. Serial No. 505,680.



1. A cross tie including mating sections, a spacing member interposed between said tie sections, and rail engaging devices provided with lateral lips adapted to engage the base of the rail and said spacing member respectively, said engaging devices being actuated to clamp the rail into engagement with the tie when the sections are united.

2. A cross tie including mating sections having their inner longitudinal edges provided with inclined slots, rail engaging devices seated in said slots, and fastening devices connecting the tie sections.

3. A cross tie including mating sections having registering slots formed therein, one wall of each of which is inclined, rail engaging members seated in said slots and each provided with oppositely disposed inclined faces for engagement with the inclined faces of the slots, and fastening devices connecting the tie sections for drawing the latter together thereby to exert a wedging action on said rail engaging members.

4. A cross tie including mating sections having spaced inwardly extending flanges, the upper flange of each section being provided with a slot having an inclined wall, rail engaging members interposed between the tie sections and having inclined walls for engagement with the inclined walls of the slots, and means for connecting said tie sections.

5. A cross tie including mating sections, spacing members disposed between said sections, there being slots formed in the inner edges of the sections on each side of the spacing members, rail engaging devices seated in said slots, and a fastening device disposed on one side of each

spacing member for uniting the tie sections and simultaneously actuating the rail engaging members to clamp the rail in engagement with the tie.

[Claim 6 not printed in the Gazette.]

957,498. SECTIONAL SASH-WEIGHT. JOHN M. CORNELL, Phillipstown, N. Y. Filed June 19, 1909. Serial No. 503,143.



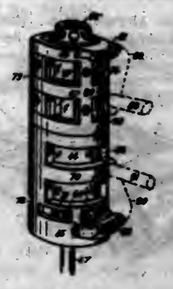
1. A sectional sash weight having, in combination, endwise adjoining members normally suspended in line with each other, one such member being constructed with an end hook having in one side a substantially horizontal notch, the inner end of which is rounded and in line with the entrance of the notch and a locking-in end surface formed by the extremity of the hook, and the adjoining member constructed with an end recess fitted to said hook, a cylindrical cross bar fitted to said notch, and a locking-in portion within the closed end of said recess constructed and arranged to interact with said locking-in end surface when the weight members are suspended.

2. A sectional sash weight having, in combination, endwise adjoining members normally suspended in line with each other, one such member being constructed with an end hook having in one side a substantially horizontal notch the inner end of which is rounded and in line with the entrance of the notch, and a locking-in end surface formed by the extremity of the hook, and the adjoining member constructed with an end recess fitted to said hook, a cylindrical cross bar within said recess fitted to said notch, and a locking-in portion within the closed end of said recess constructed and arranged to interact with said locking-in end surface; said locking-in end surface and the interacting surface of said locking-in portion being concentric with said inner end of the notch and with said cross bar.

3. A sectional-sash-weight unit having at one end a central end hook constructed with a notch in one side the inner end of which is rounded and in line with the entrance of the notch and a locking-in end surface concentric with said rounded end of the notch, and at its other end a central end recess and a cylindrical cross bar within said recess fitted respectively to the like hook and notch of an endwise adjoining unit, and a locking-in portion within said recess arranged to interact with a like locking-in end surface of such adjoining unit; the interacting surface of said locking-in portion being concentric with said cross bar.

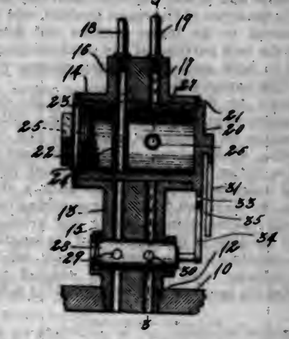
4. A sectional-sash-weight unit having at one end a pair of square shoulders and between them a central end hook, the latter constructed with a notch in one side parallel to the plane of said shoulders, the inner end of the notch being rounded and in line with the entrance of the notch, and a locking-in end surface, and at its other end with a pair of end surfaces matching said shoulders but forming rounded corners at one side of the weight, a central recess matching said hook, a cylindrical cross bar within said recess matching said notch, and a locking-in portion within said recess matching said locking-in surface; said locking-in end surface being concentric with said rounded end of the notch, and the interacting surface of said locking-in portion and said rounded corners concentric with said cross bar, substantially as hereinbefore specified.

957,499. DISTRIBUTING AND REVERSING EXPANSION-VALVE. WILLIAM M. COWARD, Sydney, New South Wales, Australia. Filed Aug. 6, 1908. Serial No. 447,292.



A distributing and reversing expansion valve comprising a valve chamber having a plurality of live steam ports and a plurality of exhaust ports, a tapered valve within the valve chamber, a slotted reversing sleeve surrounding the tapered valve, a cut off sleeve, a toothed sector for the cut off sleeve, a spindle provided with an operating handle, a toothed sector mounted upon the spindle meshing with the toothed sector of the cut off sleeve, a toothed sector for the reversing sleeve, a spindle, a pivoted sector within the valve chamber pinned to the spindle meshing with the toothed sector of the reversing sleeve.

957,500. GAS-ENGINE PRIMER. LAWRENCE R. DALRYMPLE, Abilene, Kans. Filed Aug. 23, 1909. Serial No. 514,164.



1. In a device of the kind described, a measuring valve including a hollow rotatable member provided with a port having a tubiform inward extension.

2. In a device of the kind described, a measuring valve including a hollow rotatable member provided with outlet and inlet ports, the inlet ports having tubiform inward extensions.

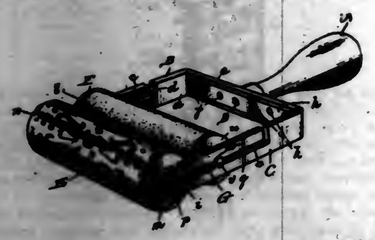
3. In a device of the kind described, a measuring valve including a hollow rotatable member provided with outlet and inlet ports, the outlet ports having their axes at right angles to each other in planes displaced longitudinally of said member and the inlet ports being similarly disposed with reference to the member, said inlet ports having tubiform inward extensions.

4. In a device of the kind described, a measuring valve including a body having inlet and outlet passages, a hol-

low rotatable valve held therein provided with an outlet port and an inlet port having a tubiform inward extension; in combination with a stop valve held in said body, and means to rotate said valves synchronously.

5. In a device of the kind described, a valve body, a measuring valve operable therein, a stop valve located between the outlet end of the valve body and the measuring valve, and means to synchronously operate said valves.

957,501. PAINTING APPARATUS. HERMAN DU BRAU, Baltimore, Md. Filed Dec. 16, 1909. Serial No. 533,458.



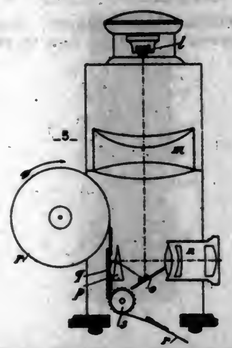
1. In a device for the purpose described, the combination of frame sections comprising side portions in which are slots that are open at their rear ends, and arms reaching inward and disposed at right angles to the side portions; one of the said arms being of dove-tail form in cross-section, and the other having a groove of dove-tail form in cross-section receiving the first-named arm, and one arm having an aperture, and the other having apertures at intervals of its length adapted to be registered with the first-named aperture, a handle extending rearward at a right-angle from the rear arm, a screw removably arranged in registered apertures of the arms and detachably connecting the handle thereto, a roller removably mounted between the arms of the frame sections and adapted to apply paint to a surface to be decorated, a roller adapted to carry paint and supply the same to the first-named roller and having portions removably arranged in the slots in the arms of the frame sections, and tractile springs connected to the frame sections and detachably connected to the said portions of the paint-carrying roller and adapted to hold said roller under yielding pressure against the first-named roller.

2. In a device for the purpose described, the combination with a paint-carrying roller comprising a cylinder of wire gauze, means for closing the ends of the said cylinder, and a covering of absorbent material surrounding the cylinder; of a device for separating bodies of paint, arranged in the cylinder and comprising a stem, a disk fixed on one end of the stem and frictionally engaging the inner side of the wire gauze cylinder, and a disk arranged and adjustable on the stem in the direction of the length thereof and also frictionally engaging the inner side of the wire gauze cylinder; the stem being adapted to serve as a handle for the insertion and withdrawal of both disks.

957,502. PROJECTION APPARATUS. CHARLES DUPUIS, Vincennes, France. Filed June 7, 1909. Serial No. 500,710.

1. In a device of the class described, the combination with an opaque reflecting surface having an image thereon to be reflected, of a source of light, a prism arranged with its bisecting plane parallel to the plane of the image and interposed between the source of light and the image, said prism being so positioned that the axis of the rays of light directed upon the prism will lie in a plane perpendicular to the edge thereof.

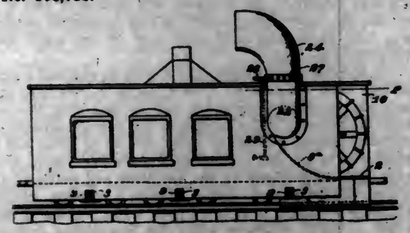
2. In a device of the class described, the combination with an opaque reflecting surface having an image thereon to be reflected, of a source of light, a prism arranged with its bisecting angle in a plane parallel to the plane of the image and interposed between said image and said source of light, and means interposed between said source of light and said prism to direct a pencil of light upon said prism, said parts being so positioned that the axis of the pencil of light will lie in a plane perpendicular to the edge of the prism.



3. In a device of the class described, the combination with an opaque reflecting surface having an image thereon to be reflected, of a source of light, a prism arranged with its bisecting angle in a plane parallel to the plane of the image and interposed between said image and said source of light, and means interposed between said source of light and said prism to direct a pencil of light upon said prism, said parts being so positioned and proportioned that the angle formed between the axis of the pencil of light and a line normal to the plane of the image will be substantially equal to the angle of the prism.

4. In a device of the class described, the combination with an opaque reflecting surface having an image thereon to be reflected, of a source of light, a prism arranged with its bisecting plane parallel to the plane of the image, a reflector adapted to direct the light from said source upon said prism, and means interposed between said source of light and said reflector for directing a pencil of light thereon, said reflector being so positioned relatively to said means and said prism that the axis of the pencil of light directed upon the said prism will lie in a plane perpendicular to the edge thereof.

957,503. ROTARY SNOW-PLOW. WILLIAM H. FERGUSON, La Grande, Oreg. Filed July 21, 1909. Serial No. 508,755.



1. A snow plow comprising a car body having a wedge-shaped vertical end, disintegrating wheels carried upon the faces of said wedge-shaped end, and chutes arranged adjacent to said wheel, through which the snow is forced by the rotation of the wheel.

2. A snow plow having wedge-shaped front ends, disintegrating wheels rotatably mounted on the sides of the wedge-shaped ends, and chutes arranged in alinement with the circumference of the wheels but rearward of the shafts of said wheels, said chutes extending out at a tangent to the wheels.

3. A snow plow comprising a car body having a wedge-shaped vertical end, rotatable disintegrating wheels carried on the opposed faces of the wedge-shaped end, each wheel having thereon a series of fan blades, and chutes mounted on the car body rearward of but adjacent to the disintegrating wheels, through which the snow is forced by the rotation of said wheels.

4. A snow plow having a wedge-shaped front end, disintegrating wheels rotatably mounted on the sides of the wedge-shaped end, and chutes arranged in alinement with the wheels but to the rear of the shafts thereof, said chutes extending upward at a tangent to the wheels, curved hoods mounted upon the chutes for rotation around the axes of the chutes, and mechanism for rotating said hoods.

5. A snow plow having a wedge-shaped front end, disintegrating wheels rotatably mounted on the sides of the wedge-shaped end, chutes arranged in alinement with the wheels but to the rear thereof, said chutes extending upward at a tangent to the wheels, outwardly curved hoods rotatably mounted upon the upper ends of the chutes, each provided with an annular gear wheel, a pinion engaging each of said gear wheels, and mechanism for operating said pinion to rotate the hoods.

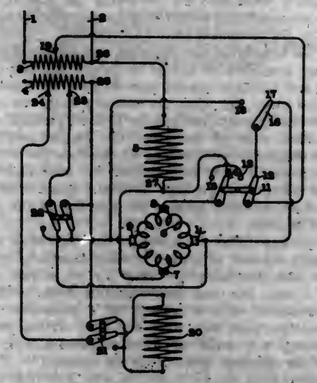
[Claims 6 to 12 not printed in the Gazette.]

957,504. NUT-LOCK. LOUIS D. FRENOT, Newark, N. J. Filed Jan. 28, 1909. Serial No. 474,692. Renewed Mar. 29, 1910. Serial No. 552,236.



In a nut-lock, the combination of a bolt, a washer having opposite projecting yielding tongues on one face thereof, provided with rounded enlargements on the ends thereof and an extended flat bottom face forming an extended bearing to prevent turning of the washer, and a cup-shaped nut receiving said tongues, said nut having corrugations to engage said enlargements, substantially as described.

957,505. ALTERNATING-CURRENT MOTOR. VALÈRE A. FYNN, London, England. Filed June 12, 1909. Serial No. 501,691.



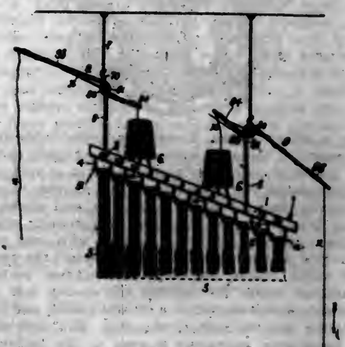
In an alternating current motor, the combination with a stationary member provided with a neutralising winding, of a rotor provided with a commuted winding connected in series relation to the neutralising winding by means of working brushes coaxially disposed with reference to said neutralising winding, means for short-circuiting the working brushes at starting, an exciting circuit for normal operation provided by closing the circuit of the commuted winding by means of exciting brushes, and means for connecting one of the exciting brushes to the source of supply at starting.

957,506. ELECTRIC CABLE. RODNEIC F. HALL, East Orange, N. J., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed July 24, 1905. Serial No. 271,064.



An article of manufacture comprising an electric cable made up of insulated continuous wires twisted in pairs, each pair being twisted with a variable lay, and the several pairs being transposed with reference to each other at intervals in their continuity.

957,507. BAG AND TWINE HOLDER. CHARLES E. HEDGE, Beaverton, Oreg. Filed Oct. 5, 1909. Serial No. 521,033.



1. An appliance of the character described, comprising a beam having means for supporting a series of differently weighted packages, a pair of twine holders mounted on the beam to counterbalance said packages, a pair of supports for the beam, a guide for each holder rockably mounted in each support, normally held swung up by the weight of the beam and adapted when swung down, to lift the beam.

2. A device of the character described, comprising a twine holder, pendent supports therefor, a guide shiftably connected to one of said supports, said guide having a thread opening in each end, the opening in the outer end being contracted to form a crotch, the guide connection being shiftable in one direction by pulling the outer end thereof down and in the other direction under the weight of the twine holder.

3. In an appliance of the character described, a twine holder having means for pendently supporting differently weighted articles, a flexible hanger for each end of the beam, a pair of twine spools mounted on the beam to balance it, a guide rockably mounted in each hanger, said guide having an eye at each end for the thread, the rockable connection for each guide being near one end thereof, whereby to provide an outer long arm and an inner short arm.

4. A device of the character described that comprises a goods holding beam, a flexible hanger for each end, each consisting of a pendent member having a loop at the lower end, a rod secured to and projected up from the beam and having a hook end, a twine spool mounted on the beam, one adjacent each hanger, a guide having a pair of adjacent and reversely bent loops, one of which hangs in the loop of the pendent hanger member, the other of which

receives the hook of the lower or rod member, said guide having an eye at the inner end to receive the twine from the spool and an eye in the other end formed with an elongated crotch like portion.

957,508. ROTARY COMPOUND STEAM-ENGINE. CHARLES R. HILTY, Chicago, Ill. Filed Dec. 13, 1909. Serial No. 532,958.



1. In a rotary engine, a casing provided with an annular expansion chamber, a power shaft rotatably mounted in said casing, a cylindrical piston mounted in said power shaft and forming the inner wall of said annular chamber, diametrically disposed piston blades on said piston and traveling in said annular chamber, diametrically opposed cylindrical members in rolling contact with said piston and provided with recesses adapted to permit the passage of said piston blades, admission and exhaust ports for said chamber, means for opening and closing said ports to effect the continuous rotation of said piston, and means for rotating said cylindrical members, said last named means comprising spur-gears secured to the journals of said members in mesh with a gear secured to said power shaft, and said first named means comprising rocker valves mounted in said casing and adapted to operate simultaneously, substantially as described.

2. In a rotary engine, a casing provided with an annular expansion chamber, a power shaft mounted in said casing, a cylindrical piston mounted on said power shaft and forming the inner wall of said annular chamber, diametrically disposed piston blades on said piston and traveling in said annular chamber, diametrically opposed cylindrical members in rolling contact with said piston and provided with recesses adapted to permit the passage of said piston blades, admission and exhaust ports for said chamber, means for opening and closing said ports comprising rocker valves mounted in said casing having arms at their outer ends, parallel rods connecting said arms, an oscillatory disk mounted on said casing connected with and adapted to actuate said valve arms, and means for oscillating said disk, substantially as described.

3. In a rotary engine, a casing provided with an annular expansion chamber, a power shaft rotatably mounted in said casing, a cylindrical piston mounted on said power shaft and forming the inner wall of said annular chamber, diametrically disposed piston blades on said piston and traveling in said annular chamber, diametrically opposed cylindrical members in rolling contact with said piston and provided with recesses adapted to permit the passage of said piston blades, admission and exhaust ports for said chamber, means for opening and closing said ports comprising rocker valves mounted in said casing having arms at their outer ends, parallel rods connecting said arms, an oscillatory disk mounted on said casing connected with and adapted to actuate said valve arms, a pin secured in the face of said disk, a link adapted to slide on said pin, eccentric rods pivoted to said link at each extremity thereof, and oppositely arranged eccentrics secured to a journal of one of said cylindrical rotatable members for actuating said eccentric rods, substantially as described.

4. In a compound rotary steam engine, a casing provided with adjacent high and low pressure annular expansion chambers; a power shaft rotatably mounted in said casings; cylindrical pistons mounted on said power shaft and forming the inner walls of said annular chambers; diametrically disposed piston blades on said pistons and traveling in said annular chambers; diametrically opposed cylindrical members in rolling contact with said pistons and provided with recesses adapted to permit the passage of said piston blades, admission and exhaust ports for said chambers; means for opening and closing said ports to effect the continuous rotation of said pistons; and a compound throttle valve having two cylindrical chambers in which oscillatory valves are mounted and adapted to control the flow of steam to and from the engine cylinders which are tied to said throttle valve, substantially as described.

957,509. SPEED RETARDING AND REVERSING DEVICE. KARL J. A. ISAKSON, Stockholm, Sweden. Filed Apr. 19, 1906. Serial No. 312,630.



1. In motor vessels, the combination with a motor running in one direction only for driving the vessel ahead by means of a propeller fitted on a shaft, driven by the motor in the usual manner, of a jet-apparatus or ejector in the form of a tube bent angularly and comprising a long and a short branch open at both ends for moderating the vessel's speed and for reversing the direction of the vessel's motion from ahead to astern, when required, substantially as described.

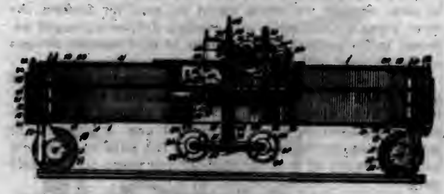
2. In motor vessels, the combination with a motor, actuating a propeller in the usual way, of a jet-apparatus in the form of a tube bent angularly and comprising a long and a short branch open at both ends, fed from an accumulator, in which compressed air or other gas or mixture of gases is stored or produced, for moderating the vessel's speed and for reversing the direction of the vessel's motion from ahead to astern, when required, substantially as described.

3. A jet-apparatus for stopping and reversing a vessel's headway, composed of a pipe or tube angularly bent into a short and a longer branch open at both ends and secured under the water line upon the hull of a ship, the open ends communicating with the sea, in line or parallel with the longitudinal axis of the ship, the longer branch ahead and the shorter branch astern in combination with a tube E for a pressure fluid surrounding the bent pipe near the apex of the bent angle and having a number of inclined perforations directed toward the opening of the longer or forward branch.

4. A jet-apparatus for stopping and reversing a vessel's headway composed of a pipe or tube, angularly bent, open at both ends and secured under the water line upon the hull of a ship, the open ends communicating with the sea in combination with a tube E for a pressure fluid, surrounding the bent pipe near the apex of the bent angle and having a number of inclined perforations, directed toward the opening of the forward branch.

957,510. COAL-MINING MACHINE. JACOB KURTZ, Darragh, and THEODORE HOCHREITER, Greensburg, Pa. Filed Oct. 9, 1908. Serial No. 456,899.

1. In a coal cutting machine, a horizontally movable carriage, a vertically adjustable forked sleeve traveling with said carriage, spirally flanged shafts carried by the fork of the sleeve and extending laterally from the carriage, means for rotating said shafts, cutting blades held upon the flanges of the shafts, and means for swinging said sleeve in a horizontal plane.



2. The combination with a wheeled frame, of a carriage movable thereon, means for moving said carriage upon the frame, a sleeve depending from the under side of said carriage, an angled sleeve having a vertical portion slidably mounted upon the first mentioned sleeve and having a horizontal portion forked, a gear wheel fixed upon the vertical portion of said second mentioned sleeve, vertically arranged toothed drums meshing with said gear wheel, rotatable shafts carried by the fork of the second mentioned sleeve, cutters carried by said shafts, means carried by said sleeve for rotating the said shafts, and means for sliding the second mentioned sleeve upon the first mentioned sleeve, the gear wheel being adapted to slide upon said toothed drums.

3. A device of the kind described comprising a sliding carriage, a motor mounted upon said carriage, a slidable vertically arranged shaft, a friction clutch adapted to lock said shaft to said motor, an angled vertically adjustable sleeve, the said sleeve having a forked horizontal portion, cutters carried by the sleeve fork, means for transmitting rotation of the slidable shaft to said cutters, said means being carried by the sleeves and fork, a gear wheel fixed to and adjustable with said sleeve, and rotatable toothed drums meshing with said gear wheel, the said gear wheel being adapted to slide vertically upon said drums during adjustment of the sleeve.

957,511. PRESSURE-CONTROLLING VALVE. FRANK A. LOCKWOOD, Denver, Colo., assignor to The Denver Engineering Works Co., a Corporation of Colorado. Filed May 28, 1909. Serial No. 499,020.



1. A valve mechanism comprising a casing having a closed end, and provided with admission and exhaust ports, and with a third port adapted to be connected to a controlled device; a valve member slidable within said casing, comprising two pistons with an intermediate portion adapted to communicate with each of the ports; a passage leading through one of said pistons and establishing communication between the closed end portion of said valve chamber and the intermediate portion of said valve member; and means for applying a variable opposition to the movement of said valve member.

2. A valve mechanism comprising a casing having a closed end, and provided with admission and exhaust ports, and with a third port adapted to be connected to a controlled device; a valve member slidable within said casing, comprising two pistons with an intermediate portion adapted to communicate with each of the ports; a passage leading through one of said pistons and establishing communication between the closed end portion of said valve chamber and the intermediate portion of said valve member; and a spring opposing the movement of said valve member.

3. A valve mechanism comprising a casing having a closed end, and provided with admission and exhaust ports, and with a third port adapted to be connected to a controlled device; a valve member slidable within said casing, comprising two pistons with an intermediate portion adapted to communicate with each of the ports; a passage leading through one of said pistons and establishing communication between the closed end portion of said valve chamber and the intermediate portion of said valve member; a spring opposing the movement of said valve member; and means for varying the stress on said spring.

4. A controlling valve mechanism for fluid pressure controlled devices comprising in combination a valve chamber, closed at one end, and provided with admission and exhaust ports, and with a third port adapted to be connected to the controlled device, and located intermediate said admission and exhaust ports; a close fitting valve member movable in said valve chamber and consisting of end portions, and a reduced middle portion adapted to connect the said third port successively with the admission port and the exhaust port, and one of said end portions having a passage connecting the space about said reduced middle portion of the valve member with the space at the closed end of said valve chamber; and means for applying an elastic pressure urging said valve member toward the closed end of said valve chamber.

5. A controlling valve mechanism for fluid pressure controlled devices comprising in combination a valve chamber, closed at one end, and provided with admission and exhaust ports, and with a third port adapted to be connected to the controlled device, and located intermediate said admission and exhaust ports; a close fitting valve member movable in said valve chamber and consisting of end portions and a reduced middle portion adapted to connect the said third port successively with the admission and the exhaust port, and one of said end portions having a passage connecting the space about said reduced middle portion of the valve member to the space at the closed end of said valve chamber; a spring urging said valve member toward the closed end of said valve chamber; and means for varying the stress on said spring.

[Claims 6 to 8 not printed in the Gazette.]

957,512. CHECK-HOOK. HENRY E. LUTZ, Helena, Mont. Filed Aug. 20, 1909. Serial No. 513,814.



1. A check hook comprising a keeper, a shank mounted in the keeper, a spring surrounding the shank, a check hook pivotally mounted in a recess in the front end of the shank, and a spring connected to the shank and extending over the rear end of the check hook.

2. A check hook comprising a keeper consisting of parallel members, a shank mounted to slide between said members and provided with a guide, a spring surrounding said shank, a check hook pivotally mounted upon said shank, a flat spring secured to said shank and extending over the rear end of said check hook, and a yoke surrounding the keeper and provided with a set screw adapted to serve as an abutment for said flat spring to regulate the action thereof.

3. A check hook comprising a keeper, a shank mounted to slide in said keeper, a spring surrounding the shank, a check hook pivoted to the shank, said check hook having an upwardly extending bill, and a spring for bearing upon the rear end of the check hook to hold it in operative position.

957,513. LIFE-PRESERVER AND SWIMMING-MACHINE. OSCAR B. LYON, Maricopa, and WILLIAM H. YOUNG, Modesto, Cal. Filed July 20, 1909. Serial No. 508,650.

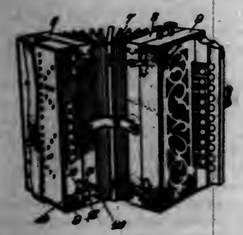
1. A swimming machine comprising an air tight compartment, a keel thereon, a driving means on said keel,

a shaft driven by said driving means, said shaft being adjustable horisontally and a propeller on said shaft, such propeller being adjustable vertically, as set forth.



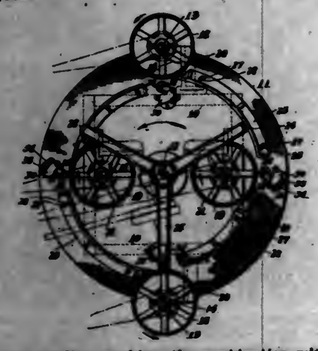
2. A swimming machine comprising an air tight compartment, means for propelling said compartment through water, a water intake pump on said compartment, a water outlet pump on said compartment and an air outlet valve on said compartment.

957,514. ACCORDION. JULIUS J. NEUMANN, Chicago, Ill., assignor to Lyon & Healy, Chicago, Ill., a Corporation of Illinois. Filed June 28, 1909. Serial No. 504,688.



In an accordion, the combination of a bellows frame, a casing, and adjustable means for holding said members tightly together, said means comprising a plate provided with a circular opening at one end and adapted to be secured to one of said members at its other end, a cam latch, a circular boss on the face of the end of said latch adapted to fit within the opening in said plate, said boss having an opening located therein, and fastening means passing through said opening and securing said plate and latch in operative position.

957,515. SANDING-MACHINE. THOMAS NICHOLS, Gardner, Mass., assignor of one-half to L. G. McKnight, Gardner, Mass. Filed June 22, 1908. Serial No. 439,681.



1. In a sanding machine, the combination with a sanding device and a table to support the work, of a rotary arm adapted to move the work along on the table in contact with said sanding device.

2. In a sanding machine, the combination with a plurality of sanding devices arranged with a surface of each located at substantially the same distance from a common center, of a table to support the work, and an arm adapted to rotate about said center to move the work along on the table in contact with the surfaces of said sanding devices.

3. In a sanding machine, the combination of a table and an arm adapted to rotate about an axis for feeding the work along on the table, and sanding devices arranged adjacent to the path of said arm, one of said sanding devices being inside of said path and one being outside of it.

4. In a sanding machine, the combination of a table and a depending arm adapted to rotate about an axis for feeding the work along on the table, and sanding devices arranged adjacent to the path of said arm, a plurality of said sanding devices being inside of the path of said arm and a plurality of said sanding devices being outside said path.

5. In a sanding machine, the combination of a work-supporting table, an arm movable over said table and adapted to feed work along the table, and sanding devices arranged on both sides of the path of travel of said arm.

[Claims 6 to 16 not printed in the Gazette.]

957,516. CURRENT-CONTROLLER. BURTON H. PARKER, Port Colburn, Ontario, Canada. Filed July 8, 1909. Serial No. 506,501.



1. In an electric current controller, the combination of a driven rotary device, a contact member carried by said device and movable outwardly relative thereto under the action of centrifugal force to different positions beyond the periphery thereof in accordance with the speed of rotation of said device, and a yieldable contact member which is arranged opposite to the periphery of said rotary device and is engaged by said movable contact member, substantially as set forth.

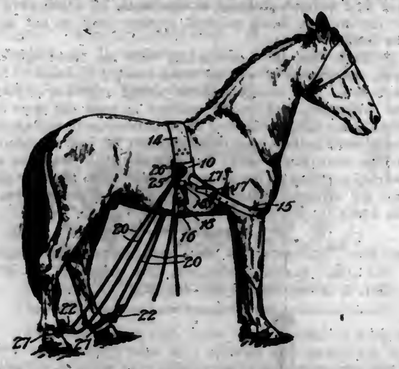
2. In an electric current controller, the combination of a driven rotary circular device having a periphery of insulating material, a contact member carried by said device and movable outwardly relative thereto under the action of centrifugal force to different positions beyond the periphery thereof in accordance with the speed of rotation of said device, and a contact member which bears yieldingly against the periphery of said rotary device and is engaged by said movable contact member, substantially as set forth.

3. In an electric current controller, the combination of a driven rotary circular device having a periphery of insulating material and an opening for a contact member, a contact member in said opening which is movable outwardly relative to said device under the action of centrifugal force, a spring which tends to hold said member inwardly in said opening, and a contact member which bears yieldingly against the periphery of said rotary device and is engaged by said movable contact member, substantially as set forth.

4. In an electric current controller, the combination of a driven rotary circular device having a periphery of insulating material and an opening for a contact member, a contact member in said opening which is movable outwardly relative to said device under the action of centrifugal force, a spring which tends to hold said member inwardly in said opening, means for adjusting the tension of said spring, and a contact member which bears yieldingly against the periphery of said rotary device and is engaged by said movable contact member, substantially as set forth.

957,517. CASTING-HARNESS. IRA PASLEY, Olds, Alberta, Canada. Filed Dec. 20, 1909. Serial No. 534,132.

1. In a casting-harness, the combination of a back-strap, shield-equipped side-plates on the ends of said strap provided with rope-guides, hopples, and ropes each having one end fastened to a side-plate, passing thence to and having a loop-connection with a hopple, with its free end passing through said guide between a side-plate and its shield.



2. In a casting-harness, the combination of a back-strap, shield-equipped side-plates on the ends of said strap provided with pulleys, hopples, and ropes each having one end fastened to a side-plate, passing thence to and having a loop-connection with a hopple, with its free end passing through a shield on one of said side-plates and thence about a pulley.

3. In a casting-harness, the combination of a back-strap, shield-equipped side-plates on the ends of said strap provided with pulleys, reinforced facing-pads on the inner surfaces of said plates about said shields, hopples, and ropes each having one end fastened to a side-plate, passing thence to and having a loop-connection with a hopple, with its free end passing through a shield on one of said side-plates and thence about a pulley.

4. In a casting-harness, the combination of a back-strap, side-plates on the ends of said strap provided with rope guides, hopples, the loop of one of which is relatively larger than that of the other, and ropes each having one end fastened to a side-plate, passing thence to and having a loop-connection with a hopple, with its free end passing through one of said rope-guides.

5. In a casting-harness, the combination of a back-strap, side-plates, on the ends of said strap provided with rope-guides, hopples provided with pulley-blocks, one end of each hopple-strap being fastened to its pulley-block and provided with ring-fastening means on its opposite end, ropes each having one end fastened to a side-plate, passing thence about a pulley in a pulley-block, with its free end passing through a rope-guide in one of said side-plates, and rings adapted to freely slide along said ropes and pulley-blocks, and to engage said fastening means.

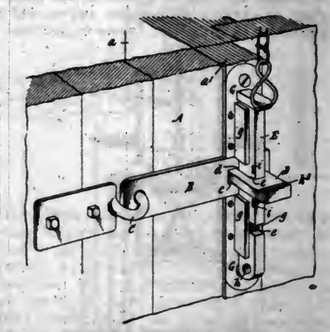
[Claims 6 and 7 not printed in the Gazette.]

957,518. CAR-DOOR LOCK. PATRICK J. QUINN and GEORGE P. CLIFFORD, Buffalo, N. Y., assignors of one-third to Daniel A. Driscoll, Buffalo, N. Y. Filed July 8, 1909. Serial No. 506,490.

1. The combination with a movable and a stationary part, of a hasp fastened to one of said parts, and a bolt movably mounted on said other part and adapted to extend through an opening in the hasp, a locking pin which interlocks with the bolt in front of the hasp, and a spring which holds the bolt interlocked with the locking pin to secure the latter in place, substantially as set forth.

2. The combination with a door and door post, of a hasp fastened to the door and provided at its free end with a bolt opening, a bolt movably mounted on the door post and adapted to extend through the opening in the hasp, a locking pin passing through a hole in the bolt in front of the hasp, and a spring which holds the bolt interlocked with the locking pin to secure the latter in place, substantially as set forth.

3. The combination with a door and door post, of a hasp fastened to the door and provided at its free end with a bolt opening, a bolt movably mounted on the door post and adapted to extend through the opening in the hasp, a locking pin passing through a hole in the bolt in front of the hasp and having a notch in its outer edge, and a spring which holds said bolt in said notch in the locking pin to secure the locking pin in place, substantially as set forth.



4. The combination with a door and door post, of a hasp fastened to the door and provided at its free end with a bolt opening, a bolt movable endwise in a hole in the door post and adapted to extend through the hasp opening, a locking pin passing through a hole in the bolt in front of the hasp, a face plate having a guide in which the locking pin is slidable endwise and confined laterally, and a spring acting on the inner end of the bolt which holds the bolt interlocked with the locking pin to hold the locking pin in place, substantially as set forth.

5. The combination with a door and door post, of a hasp fastened to the door and provided at its free end with a bolt opening, a bolt movable endwise in a hole in the door post and adapted to extend through the hasp opening, a locking pin passing through a hole in the bolt in front of the hasp, a face plate having a vertical guide in which the locking pin is slidable endwise and which has parts which engage said hasp and hold it from vertical play, and a spring acting on the inner end of the bolt which holds the bolt interlocked with the locking pin to hold the locking pin in place, substantially as set forth.

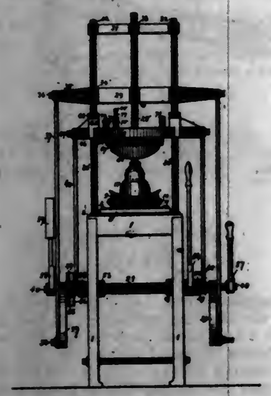
[Claims 6 to 8 not printed in the Gazette.]

957,519. HAT-BRIM EDGING, SETTING, AND ROUNDING MACHINE. CHARLES E. SACKETT, Danbury, Conn. Filed Apr. 7, 1909. Serial No. 488,375.

1. In a hat brim edging, setting, and rounding machine, the combination of a machine frame supporting a platform, a bed matrix supported by said platform adapted to shape the under side of a curved hat brim, a series of automatic conformate fingers elastically controlled adapted to reverse or curl a curved peripheral edge section of said hat brim inwardly upon itself, a heated upper matrix adapted to set said reversed or curled edge by heated contact with it, a ring frame to which said upper matrix is attached, a revolving rounding mechanism mounted on said ring frame, guided by said matrix, and adapted to trim the reversed curved edge of said hat brim, with means to bring said upper and lower matrices and rounding mechanism into operative conjunction.

2. In a machine of the character described, the combination of a frame supporting a platform, an adjustable bed-plate arranged centrally over said platform, a bed matrix having a concavity adapted to shape the curvatures of a finished hat brim removably and centrally secured to said bed-plate, a hat block centrally secured in said bed matrix adapted to position the crown of a hat upon it, and a series of adjusting screws adapted to level said bed plate and secure it to said platform.

3. In a machine of the character described, the combination of a frame supporting a platform, an adjustable bed-plate supported by said platform, a bed matrix centered upon said bed-plate adapted to shape the curvatures of a finished hat brim, means to raise or lower said bed matrix, an annular recess in said bed-plate surrounding said bed matrix, a series of upright formative fingers radially movable therein, said fingers being adapted to shape the curved peripheral edge of a finished hat brim, and a ring partially overhanging said recess, and secured to said bed-plate, adapted to retain said fingers in position.



4. In a machine of the character described, the combination of a frame supporting a platform, an adjustable bed-plate supported thereon, a bed matrix centrally and removably secured to said bed-plate, a series of upright formative fingers radially movable in an annular recess surrounding said bed matrix, said fingers being of different heights adapted to follow the peripheral curves of a matriced hat brim, and an elastic band surrounding said fingers automatically controlling their radial vibratory movement.

5. In a machine of the character described, the combination of a frame supporting a platform, an adjustable bed-plate supported thereon, a concave bed matrix removably and centrally secured to said bed-plate; said bed matrix being adapted to shape the under face of a finished hat brim, and a raised ledge surrounding the peripheral curves of said matrix, said ledge acting as a tongue to enter a groove in a corresponding upper matrix adapted to register with it.

[Claims 6 to 18 not printed in the Gazette.]

957,520. VISE. EDWARD C. STEARNS, Syracuse, N. Y. Filed Apr. 16, 1909. Serial No. 490,393.

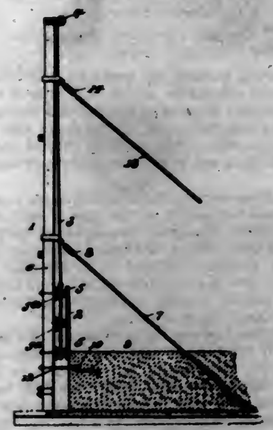


1. In a vise, means of guiding the jaws in their rectilinear movement to and from each other, consisting of a substantially rectangular opening in the rear jaw with its upper edges filled in to form oblique surfaces and a beam C attached to the front jaw or integral with it also substantially rectangular in cross section with its upper edges beveled off, the relative shapes and sizes of the beam and opening being so proportioned that only the aforementioned beveled portions and the bottom of the beam bear on the corresponding surfaces of the opening.

2. In a vise, means of guiding the jaws in rectilinear motion to and from each other consisting of a substantially rectangular beam having its upper edges beveled off and an opening in the rear jaw shaped to bear on the base and said beveled portions of the beam, all other portions of the opening being relieved so that they do not touch the beam.

3. In a vise, the combination with the front and rear jaws and means of moving them toward and away from each other and clamping them tightly together of means for restricting said relative motion between the jaws to a rectilinear path consisting of a substantially rectangular beam having its upper edges beveled off and an opening in the rear jaw shaped to coincide with the base and beveled portions of the beam, but relieved so that the sides and top of the opening do not touch the sides and top of the beam.

957,521. APPARATUS FOR BUILDING RETAINING-WALLS. FRANK M. TALBOT, Glen Ridge, N. J. Filed Oct. 7, 1908. Serial No. 456,582.



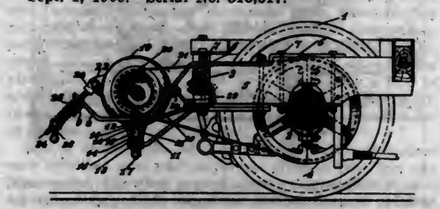
1. Means for building a retaining wall beside a way or track comprising a frame between the track and the line of the wall, and means for supporting and bracing said frame wholly on the side away from said track to leave the latter unobstructed, said means comprising a brace rod removably secured to said frame and anchored to the foundation of the portion of the wall to be constructed, and extending through the space to be filled.

2. Means for building a retaining wall beside a way or track, comprising a frame between the track and the line of the wall, a vertically movable form carried by said frame, means for supporting and bracing said frame wholly on the side away from said track to leave the latter unobstructed, said means comprising an inclined brace rod removably secured to said frame and anchored to the foundation of the portion of the wall about to be constructed and extending through the space to be filled, means for raising and lowering said form, and means for securing said frame to the composition filling.

3. In an apparatus for building a retaining wall, the combination with the vertical frame, the inclined brace rod secured to the ground over which the wall is to be constructed and extending up through the space to be filled, and the turnbuckle for removably securing said brace rod to said frame and adjusting the disposition of said frame, of a form carried by said frame, and means for raising and lowering said form.

4. In an apparatus for building a retaining wall, the combination with the vertical frame the inclined removable brace rods anchored to the foundation of the portion of the wall to be constructed, and extending up through the space to be filled, and means for removably securing said brace rods to said frame, of a vertically movable form carried by said frame, lugs between said frame and said form, and liners or wedges between said lugs and said frame.

957,522. DYNAMO-DRIVING. WILLIAM I. THOMSON, Newark, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Sept. 1, 1909. Serial No. 515,617.



1. The combination with a car truck having an axle, an end-sill and safety sills, of a dynamo and means for carrying the dynamo upon said truck in operative relation to said axle comprehending members attached to the upper side of the safety sills, members attached to the lower side of the said safety sills, a transverse member supported between the members carried by the safety sills on each side of the truck and means for mounting the dynamo upon said transverse member below the armature.

2. The combination with a car truck having an axle, an end-sill and longitudinal sills, of a pulley mounted to revolve with said axle, a dynamo, a transverse member placed below the center thereof and supporting said dynamo and members supported both by the end-sill and the longitudinal sills of said truck carrying said transverse member, a driving pulley for said dynamo, a belt engaging the said dynamo driving pulley and the pulley upon the axle and means tending to revolve said generator upon said transverse member to preserve substantially constant tension upon said belt.

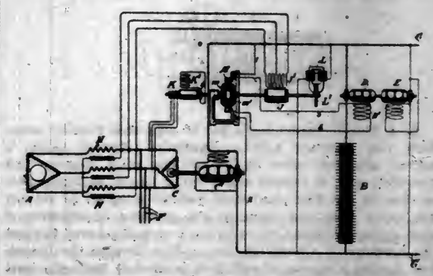
3. The combination with a car truck comprising longitudinal sills, a transverse sill and an axle, of a pulley mounted upon said axle, a dynamo support attached to a plurality of the longitudinal sills and to one of the end-sills and provided with a transverse member, a dynamo mounted upon said transverse member in a position above the same, a driving pulley carried by the said dynamo, a driving belt inclosing the pulley upon the axle, the end-sill and the dynamo pulley and means for preserving substantially uniform tension upon said belt.

4. The combination with a car truck having an axle, a pulley upon said axle, a transverse sill and longitudinal sills, of longitudinal supporting members carried by a plurality of the longitudinal sills and the end-sill, a transverse member carried thereby, a dynamo carried upon said member and resting thereon at a point below its center, a pulley upon said dynamo, a second transverse member carried by the said longitudinal members, a belt engaging the pulley upon the axle and the dynamo pulley and means carried by the said last named transverse member for causing substantially uniform tension upon said belt.

5. The combination with a car truck having an axle, a pulley upon said axle, a plurality of longitudinal sills and an end-sill, of members carried by a longitudinal sill on each side of the truck and an end-sill, a transverse member adjustably secured between said longitudinal members, a dynamo supported upon said transverse member at a point below its center and capable of rotary motion upon said member, a driving pulley carried by the said dynamo, a belt inclosing the end-sill and engaging the pulley upon the axle and the dynamo pulley in such manner that rocking the generator upon its transverse supporting member varies the tension upon said belt and yielding means tending to revolve the generator upon said transverse member in a direction away from the car axle.

[Claim 6 not printed in the Gazette.]

957,523. ELECTRICAL SYSTEM OF DISTRIBUTION. WILLIAM A. TURBAYNE, Lancaster, N. Y., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Sept. 14, 1906. Serial No. 334,582.



1. The combination of an alternating current generator, a storage battery and means for operatively connecting the same to the generator, an alternating current synchronous motor, an alternating current induction motor having less poles than the synchronous motor, means for varying the speed of the latter responsively to changes of electrical condition of the alternating current circuit, and regulating apparatus for the battery controlled responsively to relative speed variations of the two motors.

2. The combination of an alternating current generator, a storage battery and means for operatively connecting the same to the generator, an alternating current synchronous motor, an alternating current induction motor having less poles than the synchronous motor, means for varying the speed of the latter responsively to changes of current strength of the alternating current generator, and regulating apparatus for the battery controlled responsively to relative speed variations of the two motors.

3. The combination of an alternating current generator, a storage battery and means for operatively connecting the same to the generator, an alternating current synchronous motor, an alternating current induction motor having its field so connected as to be responsive to fluctuations in the alternating current circuit, a load connected to the induction motor, and regulating apparatus for the battery controlled responsively to relative speed variations of the two motors.

4. The combination of an alternating current generator, a storage battery and means for operatively connecting the same to the generator, an alternating current synchronous motor, an alternating current induction motor having its field so connected as to be responsive to fluctuations of current strength of the alternating current generator, a load connected to the induction motor, and regulating apparatus for the battery controlled responsively to relative speed variations of the two motors.

5. The combination of an alternating current generator, a storage battery and means for operatively connecting the same to the generator, an alternating current synchronous motor, an alternating current induction motor having a higher maximum speed than that of the synchronous motor and having its field so connected as to be responsive to fluctuations in the alternating current circuit, a load connected to the induction motor, and regulating apparatus for the battery controlled responsively to relative speed variations of the two motors.

[Claims 6 to 16 not printed in the Gazette.]

957,524. FAUCET FOR DRAWING LIQUIDS. GEORGE WEGMAN, Beaver Dam, Wis., assignor of one-third to Royal A. Smith, Beaver Dam, Wis., and one-third to Robert J. Sutton, Chicago, Ill. Filed Jan. 21, 1909. Serial No. 473,559.

1. A faucet consisting of the combination of two separable tubular members, one of said members being provided with a spring actuated valve seating against the pressure and the other of said members being arranged,

in one position of adjustment, to engage and actuate said valve to open position, said members, when so engaged, being adapted to afford a liquid tight passage from one member into the other.



2. A faucet comprising a set of separable tubular members, one provided with a manually actuated valve, a spring actuated valve located in the other member and provided with a flanged stem, and a flange engaging projection on the first mentioned member adapted to retract the valve stem and valve in one position of adjustment said spring actuated valve being arranged to seat against the pressure of a fluid tending to flow through the faucet, and having a spring of sufficient tension to normally hold the valve to its seat against such tension except when the other member is in position of use.

3. A faucet comprising a cylindrical casing having an interior spring actuated valve seating against the pressure and provided with a flanged stem, a spout member having an extremity adapted to enter the casing in coupling relation to said flange, said spout member having exterior projections and said casing having cam recesses, adapted to receive the projections and permit the spout member to assume a coupling relation with the valve stem, and said spout member being also rotatable in coupling position, whereby said projections, in passing out of the cam recesses, will retract the valve by drawing the same from its seat in the direction of the spout member.

4. A faucet comprising a cylindrical casing having a valve seat, a spring actuated valve in the casing, having a tubular stem and a terminal notched flange, said casing having its extremity provided with cam recesses and notches, a spout member adapted to enter the casing and to receive the valve stem flange, interior projections on said spout member adapted to pass through the flange notches into coupling engagement with the flange, and projections are in registry with the flange notches; and tubu- adapted to enter the cam recesses when the interior projections are in registry with the flange notches; said tubular valve stem having apertures therein at an intermediate point.

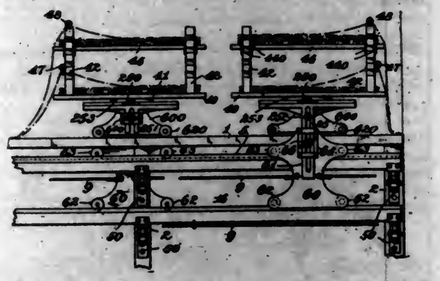
5. A faucet comprising a cylindrical casing having a valve seat, a spring actuated valve in the casing, having a tubular stem and a terminal notched flange, said casing having its extremity provided with cam recesses and notches, a spout member adapted to enter the casing and to receive the valve stem flange, interior projections on said spout member adapted to pass through the flange notches into coupling engagement with the flange, and projections on the exterior surface of the spout member adapted to enter the cam recesses when the interior projections are in registry with the flange notches, said tubular valve stem having apertures therein at an intermediate point, said spout member having an interior flange and a packing ring adapted to be interposed between such flange and the valve stem flange.

[Claim 6 not printed in the Gazette.]

957,525. CLOTH-PILING MACHINE. CORNELIUS WEISS, Brooklyn, N. Y. Filed Apr. 23, 1909. Serial No. 491,753.

1. In a machine of the character described, a table, a rail mounted on each side of and below the top thereof, a carrier movable on the rail on each side of the table, two carriers mounted on the top of the table, and two cloth supports adapted to be moved in parallel lines above the table and each mounted on two carriers, one moving upon the rail alongside of the table and another moving upon the table.

2. A cloth support comprising a revoluble lower shelf, uprights secured thereto, an upper shelf, and means for detachably and adjustably securing the upper shelf in position, consisting of detachable blocks supported from the uprights and upon which the upper shelf can rest.



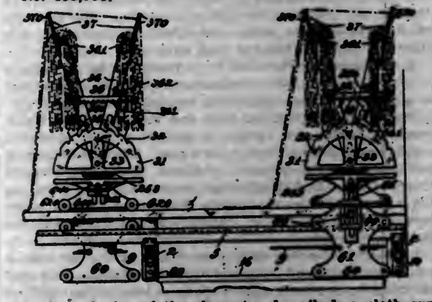
3. A cloth support comprising a revoluble lower shelf, uprights secured thereto, an upper shelf, and means for detachably and adjustably securing the upper shelf in position, consisting of external notches in the uprights arranged in series in substantially horizontal planes and detachable blocks internally supported therefrom and on which the upper shelf can rest.

4. A cloth support comprising a frame work including a series of uprights, notches cut in the outer side thereof and arranged in series in substantially horizontal planes, detachable blocks each having a horizontal face adapted to serve as a shelf support and a vertical face adapted to rest against the inner side of one of the supports and means engaging with the notches in the uprights to hold the blocks in position.

5. A cloth support comprising a frame work including a series of uprights, notches cut in the outer side thereof and arranged in series in substantially horizontal planes, detachable blocks each having a horizontal face adapted to serve as a shelf support and a vertical face adapted to rest against the inner side of one of the supports and means engaging with the notches in the uprights to hold the blocks in position, consisting of rods adapted to rest in the notches and links hinged thereto and to the blocks.

[Claims 6 to 10 not printed in the Gazette.]

957,526. CLOTH-PILING MACHINE. CORNELIUS WEISS, Brooklyn, N. Y. Filed June 3, 1909. Serial No. 499,955.



1. In a device of the character described, a cloth supporting device comprising a pair of arms adapted to swing in parallel vertical planes and a transverse cloth supportind rod held between them and means for holding them in position after such movement, comprising a vertical plate arranged near each arm, notches on the edge thereof and a pawl on the arm adapted to engage the notch.

2. In a device of the character described, a cloth supporting device comprising two pairs of arms adapted to swing in opposite directions in parallel vertical planes and provided with a transverse cloth supporting rod between each pair.

3. In a device of the character described, a cloth supporting device comprising two pairs of arms adapted to swing in opposite directions in parallel vertical planes and provided with a transverse cloth supporting rod between each pair and means for holding each arm at any desired position in its swinging movement, comprising a vertical plate arranged near each arm, notches on the edge thereof and a pawl on the arm adapted to engage the notches.

4. The combination of a table, a plurality of shelves, each arranged part way across the same so that they can pass each other when moved, carriers arranged in pairs whereby each shelf is supported in a horizontal position, one of said carriers being supported on a higher plane than the other, a cloth support including a pair of arms adapted to swing in parallel vertical planes arranged above each shelf and a revolving connection between the support and the shelf.

5. The combination of a table, a plurality of shelves each arranged part way across the same so that they can pass each other when moved, carriers arranged in pairs whereby each shelf is supported in a horizontal position, one of said carriers being supported on the table and the other alongside of the table and below its top, a cloth support consisting of a transverse plate arranged above each shelf, a revolving connection between each plate and shelf and vertical plates arranged at each end of the transverse plate.

[Claims 6 to 10 not printed in the Gazette.]

957,527. UMBRELLA PART. FRANK WETTEROTH, St. Louis, Mo., assignor to Zittlosen Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 26, 1909. Serial No. 514,716.



1. In combination with the cover and ribs of an umbrella, a shell member completely incasing an extremity of each of said ribs, and a cap member incasing an extremity of the first mentioned member, a portion of the cloth of said cover disposed between said members.

2. In combination with the cover and ribs of an umbrella, a shell member completely incasing an extremity of each of said ribs, and a cap member incasing an extremity of the first mentioned member, a portion of the cloth of said cover disposed between said members, and means whereby one of said members is locked upon the other.

3. In combination with the cover and ribs of an umbrella, a shell member completely incasing an extremity of each of said ribs, and a cap member incasing an extremity of the first mentioned member, a portion of the cloth of said cover disposed between said members, and means integral with one of said members for the retention of the other of said members.

4. In combination with the cover and ribs of an umbrella, a shell member completely incasing an extremity of each of said ribs, and a cap member incasing an extremity of the first mentioned member, a portion of the cloth of said cover disposed between said members, and an annular shoulder integral with said member incasing said rib extremities, said cap member locked against said shoulder.

5. In combination with the cover and ribs of an umbrella, a shell member completely incasing an extremity of each of said ribs, a semi-elliptical shoulder upon said member, and a cap member incasing an extremity of the first mentioned member, a portion of the cloth of said cover disposed between said members, the circumferential margin of said cap member being rebent, and said rebent portion of said cap member locked against said shoulder, whereby said portion of said cover is protected from abrasion.

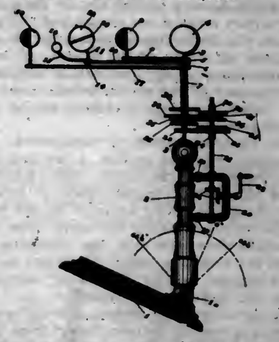
957,528. HINGE-JOINT. FRANK WETTEROTH, St. Louis, Mo., assignor to Zittlosen Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 1, 1909. Serial No. 515,616.



1. A device of the class described, comprising a member completely incasing an extremity of a brace, said incasing member gradually widening from its extremity L to its extremity M, the portion of said member adjacent its wider extremity and the underlying portion of said brace being compressed, and lugs integral with said member in pivotal engagement with a second member upon an adjacent rib.

2. A device of the class described, comprising a rib having an indentation, a member completely encircling said rib, a portion of said member depressed in register with said indentation, and a second member completely incasing an extremity of an adjacent brace, said second member gradually widening from its extremity L to its extremity M, the portion of said second member adjacent its wider extremity and the underlying portion of said brace being compressed, and lugs integral with said second member in pivotal engagement with lugs upon the first named member.

957,529. COSMOSCOPE. JOHN E. WILLIAMS, Ceres, Cal. Filed Apr. 3, 1909. Serial No. 487,799.



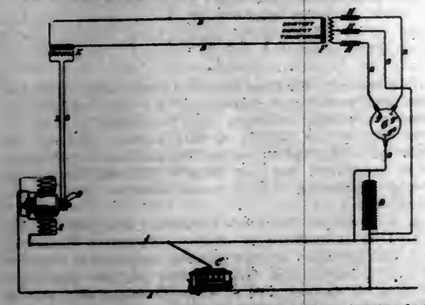
1. A cosmoscope comprising a pivoted standard carrying a plurality of revolving balls, projecting arms on said standard, a U-shaped frame, screw collars on said frame screw mounted on said arms, and a gear mechanism carried by said frame driving said balls.

2. A cosmoscope comprising a standard, a rod projecting upwardly therefrom, a fixed ball on said rod, three sleeves disposed one within the other on said rod, a projecting arm on each sleeve, such arms being of different lengths, a ball rigidly attached to each of the upper and lower arms, a curved bar on the middle arm, and a ball turnable on said curved bar.

3. A cosmoscope comprising a standard, a rod projecting upwardly therefrom, a fixed ball disposed on said rod, three sleeves disposed one within the other on said rod, a projecting arm on each sleeve, such arms being of different lengths, a ball rigidly attached to each of the upper and lower arms, a curved bar on the middle arm, a projecting arm having a spring clip member engaging said bar, a ball on said arm, and a ball turnable on said curved bar.

4. A cosmoscope comprising a standard, a rod projecting upwardly from said standard, a plurality of sleeves on said rod, each sleeve being provided with two gears one of greater dimensions than the other, a driving shaft, gears on said shaft adapted to be alternately engaged with one or the other of said gears on said sleeves, an arm on each sleeve and a ball on each arm.

957,530. ELECTRICAL SYSTEM OF DISTRIBUTION. WALTER E. WINSHIP, New York, N. Y., assignor to Gould Storage Battery Company, a Corporation of New York. Filed Sept. 19, 1906. Serial No. 335,179.



1. In an electrical system of distribution, a floating battery distant from the station, a working circuit between the station and the battery and connected to the station, an alternating current source of supply at the station, an independent circuit transmitting energy from said alternating current source to the part of the system to which the battery is connected, and a transformer therein having a constant current characteristic.

2. In an electric railway system, a direct current generating station, a floating battery distant from the station, a working circuit between the station and the battery and connected to the direct current generator, an alternating current source of supply at the station, an independent circuit transmitting energy from said alternating current source to the part of the system to which the battery is connected, and a transformer therein having a constant current characteristic.

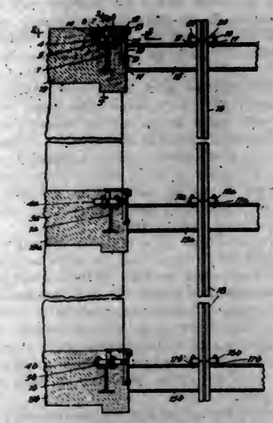
3. In an electrical system of distribution, a floating battery distant from the station, a working circuit between the station and the battery and connected to the station, an alternating current source of supply at the station, a rectifying device adjacent to the battery, an independent circuit transmitting energy from said alternating current source through the rectifying device to the part of the system to which the battery is connected, and a transformer having a constant current characteristic in said independent circuit.

4. In an electric railway system, a direct current generating station, a floating battery distant from the station, a working circuit between the station and the battery and connected to the direct current generator, an alternating current source of supply at the station, a rectifying device adjacent to the battery, an independent circuit transmitting energy from said alternating current source through the rectifying device to the part of the system to which the battery is connected, and a transformer having a constant current characteristic in said independent circuit.

5. In an electrical system of distribution, a direct current generating station, a floating battery distant from the station, a working circuit between the station and the battery and connected to the direct current generator and to the battery, an alternating current source of supply at the station, an independent circuit transmitting energy from said alternating current source to the part of the system to which the battery is connected, and a transformer having a constant current characteristic in said independent circuit.

[Claims 6 to 12 not printed in the Gazette.]

957,531. BRACKET FOR STRUCTURAL WORK. FRANCIS A. WINSLOW, Chicago, Ill., assignor to The Winslow Bros. Company, Chicago, Ill., a Corporation. Filed Apr. 24, 1908. Serial No. 428,969.



1. As a means for securing a bracket to a support, bolts extending from the bracket and having offset portions including longitudinal parts for engagement with the side of the support, the bracket being adjustable relatively to such bolts, and means independent of the bracket and the support for co-action with said longitudinal parts of said offset portions to retain said bolts in engagement with the support.

2. As a means for securing a bracket to a support, clamping members extending from the bracket and having offset portions including longitudinal parts for engagement with the side of the support, the bracket being adjustable relatively to such clamping members, and means independent of the bracket and the support for coaction with said longitudinal parts of said offset portions to retain said clamping members in engagement with the support.

3. As a means for securing a bracket to a flanged beam, clamping bolts extending from the bracket and having parts engaging the flanged portion of the beam, the bracket being adjustable relatively to the beam, and means independent of the bracket and the beam for coaction with the bracket proper to retain such clamping bolts against rotation and in engagement with the beam.

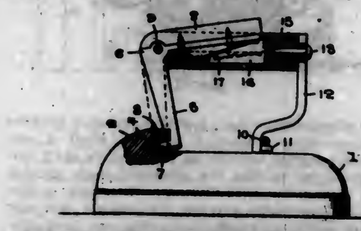
4. As a means for securing a bracket to a flanged beam, clamping bolts extending from the bracket and having parts engaging the flanged portion of the beam, the bracket being adjustable relatively to the beam, and means independent of the bracket and the beam for coaction with the bracket proper to retain said clamping bolts against rotation and in engagement with the beam, each of said clamps as a unit being insertible and removable through such bracket.

5. As a means for securing a bracket to a flanged beam, clamping bolts extending from the bracket and having parts engaging the flanged portion of the beam, the bracket being adjustable relatively to the beam, and a bar independent of the bracket and the beam for coaction with the bracket proper to retain such clamping bolts against rotation and in proper position relatively to the beam during the adjustment of the bracket, each of such clamps as a unit being insertible and removable through such bracket and such bar.

[Claims 6 to 9 not printed in the Gazette.]

957,532. SAD-IRON. CLIFF W. AMICK, New Franklin, Mo. Filed July 15, 1909. Serial No. 507,853.

1. A device of the character described, comprising a sad iron having near its forward end upon the upper surface a lug provided with a socket, a handle comprising two members, one of said members being right-angled in general outline and pivoted at its angle to the other handle member, the vertical arm of said right-angled handle member having means for engagement with said socket, the other handle member having a longitudinal socket therein receiving the horizontal arm of the right-angled handle member, a spring interposed between the bottom of said socket and the under side of the horizontal arm of said right-angled handle member, said spring exerting upward pressure upon the rear end of said right-angled handle member and an additional arm applied to one end of one of said handle members, and means for effecting connection between one end of said additional arm and the sad iron.



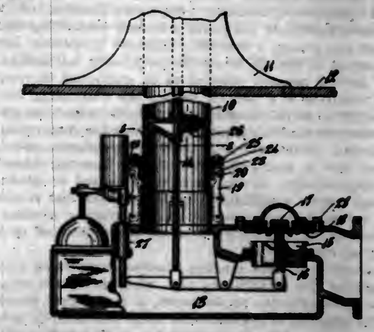
2. A device of the character described, comprising a sad iron having at its forward end upon the upper surface a lug provided with a socket and a recess communicating with said socket, said recess being arranged in the rear end of said lug, said sad iron also being provided upon its upper surface near the rear end with a keeper, and a handle comprising two members, one being of right-angled outline and pivoted at its angle to the forward end of the other handle member, the vertical arm of the right-angled handle member having a forwardly projecting toe engaging said socket, the other handle member having a longitudinal socket receiving the horizontal arm of the right-angled handle member, a spring secured at its forward end in the bottom of said longitudinal socket and having its free end engaging the under side of said horizontal arm, near its rear end, and an additional arm connected to the rear end of one of said handle members, said arm having a rearwardly projecting stud engaging said keeper.

3. A device of the character described, including a sad iron having at its forward end upon the upper surface a lug, said lug having a forwardly projecting socket and also having a vertical recess in its rear end communicating with said socket, a handle comprising two members, one being of right-angled outline and pivoted at its angle to the forward end of the other handle member, the vertical arm of said right-angled handle member having a forwardly projecting toe engaging said socket, the other handle member having a longitudinal socket receiving the horizontal arm of the right-angled handle member, a spring having its forward end secured to the bottom of said longitudinal socket and its opposite end delivering pressure upon the under side of said horizontal arm near its rear end, and an additional arm having upon its inner surface a vertical rib, one of said handle members having a corresponding recess receiving said rib, means effecting connection between said arm at its upper end and the rear end of the last referred to handle member and means effecting connection between the lower end of said additional arm and the sad iron.

957,533. VALVE-CHAMBER FOR WATER-COLUMNS. FRANK C. ANDERSON, Cincinnati, Ohio, assignor to American Valve & Meter Company, Cincinnati, Ohio, a Corporation of West Virginia. Filed Aug. 21, 1909. Serial No. 513,906.

1. A valve chamber for water columns having an extension mounted thereon, said extension being made in halves adapted to be bolted together, a packing ring mounted on the said extension and friction rollers mounted on said packing ring, substantially as and for the purposes set forth.

2. A device of the character described comprising a water column, a valve chamber formed of one casting, an extension placed between said valve chamber and said water column and mounted on said valve chamber, said extension being made in separable parts and bolted together and to be removed separately without moving or disturbing any part of the valve chamber or water column or the mechanism of either, substantially as and for the purposes set forth.

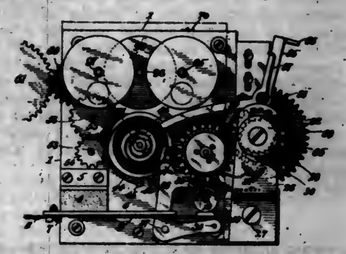


3. In a device of the character described, a water column, a valve chamber, a packing for said water column, a packing ring, and friction rollers mounted upon said ring and bearing against said water column, substantially as and for the purposes set forth.

4. A device of the character described comprising a water column, a valve chamber, an extension made in parts, said parts adapted to be bolted together mounted upon said valve chamber, packing placed between said water column and said parts, a packing ring fastened to said parts, and friction rollers mounted on said packing ring and bearing against the water column, substantially as and for the purposes set forth.

5. In a device of the character described, a water column, a valve chamber, and an extension made weaker than said water column and valve chamber, respectively, and interposed between said water column and valve chamber, substantially as and for the purposes set forth.

957,534. PREPAYMENT ELECTRICITY-METER. HERMANN ARON, Charlottenburg, Germany, assignor to The American Aron Electricity Meter Company, a Corporation of New Jersey. Filed Dec. 12, 1906. Serial No. 347,433.



1. A coin-controlled vending machine comprising a supply member for establishing and interrupting the supply of the commodity to be delivered, an oscillatory controlling member therefor and connections intermediate the same and the supply member whereby the latter may be thrown into and out of operative or commodity-supplying position, actuating means adapted to be rendered operative by the introduction of a coin in setting the controlling member out of initial position to cause the supply member to assume its supply position, and means acting

independently of the energising influence of said actuating means whereby said controlling member is returned to initial position to cause the cutting off of the supply of commodity.

2. A coin-controlled vending machine comprising a supply member for establishing and interrupting the supply of the commodity to be delivered, an oscillatory member therefor and connections intermediate the same and the supply member whereby the latter may be thrown into and out of operative or commodity-supplying position, actuating means positively connected with the controlling member and comprising a manually operated propelling member adapted to operate in one direction only, an independently moving member adapted to be connected therewith by introduction of a coin for setting the controlling mechanism out of initial position to cause the supply member to assume its supply position, an accelerator comprising a rotary cam connected with said independently moving member and a spring-pressed follower therefor whereby the independently moving member is caused to advance into and remain yieldingly in initial position, and mechanically actuated means whereby said controlling member is returned to initial position to cause the cutting off of the supply of commodity.

3. A coin-controlled vending machine, comprising a supply member for establishing and interrupting the supply of the commodity to be delivered, a controlling member therefor adapted to maintain the same normally in initial cut-off position, actuating means for moving said controlling member from its initial position and including a rotary coin-receiving member and an independently movable propelling member adapted to engage a coin carried by the coin-receiving member to effect the rotation of the same, and means mechanically driven for returning said controlling member to initial position.

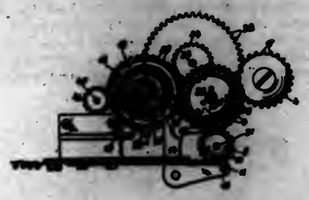
4. A coin-controlled vending machine, comprising a supply member for establishing and interrupting the supply of the commodity to be delivered and prepayment mechanism including a controlling member for said supply member adapted to maintain the same normally in initial cut-off position, actuating means for moving said controlling member from its initial position including a rotary coin-receiving member and an independently movable propelling member adapted to successively engage the individual coins of a series corresponding with the full capacity of the prepayment mechanism, means actuated by said controlling member for preventing the introduction of coins in excess of the capacity of the prepayment mechanism, and means mechanically driven whereby said controlling member may be returned to initial position.

5. A coin-controlled vending machine, comprising a supply member for establishing and interrupting the supply of the commodity to be delivered, a controlling member therefor adapted to maintain the same normally in initial cut-off position, actuating means for moving said controlling member from its initial position including a rotary coin-receiving member and an independently movable propelling member adapted to engage a coin carried by the coin-receiving member to effect the rotation of the same, means acting independently of said propelling member, for returning said coin-receiving member to initial position in advance of its propelling member, and means mechanically driven for returning said controlling member to its initial position.

[Claims 6 to 12 not printed in the Gazette.]

957,535. PREPAYMENT ELECTRICITY-METER. HERMANN ARON, Charlottenburg, Germany, assignor to The American Aron Electricity Meter Company, a Corporation of New Jersey. Filed Nov. 13, 1906. Serial No. 343,214. Renewed Oct. 14, 1909. Serial No. 522,614.

1. In a prepayment electricity meter, in combination, a shaft adapted to be turned in one direction proportionately to the number of coins introduced into the meter and to be returned to initial position by a counting mechanism for measuring the electric current, a cam member on said shaft, an electrical switch, mechanism intermediate said switch and cam member whereby the switch is adapted to be reciprocally actuated as the cam member moves respectively into and out of initial position, and a spring applied to said cam member and adapted to aid the counting mechanism in returning the cam member to initial position and also acting through said cam member to insure the opening of the switch.



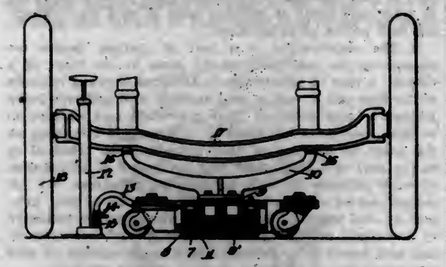
2. In a prepayment meter, a rotary actuator adapted to be freely rotated by hand, a controller shaft, a controller member carried thereby, an intermediate shaft carrying a spring for turning the controller shaft, gearing connecting said spring with the controller shaft, a frictional driving connection between the actuator and said intermediate shaft, a let-off mechanism for said controller, a cam member for governing the let-off mechanism, and connections, brought into operation by introduction of a coin, between the actuator and the cam member.

3. In a prepayment meter, a rotary actuator adapted to be freely rotated by hand, a controller shaft, a controller member mounted thereon, an intermediate shaft carrying a spring for turning the controller shaft, gearing connecting said spring with the controller shaft, a frictional driving connection between the actuator and said intermediate shaft, a let-off mechanism for said controller, a cam member for governing the let-off mechanism, and a spring applied to said cam member in a direction to return the same to initial position when turned therefrom to actuate the controller member.

4. In a prepayment meter, a rotary actuator adapted to be freely rotated by hand, a controller shaft, a controller member mounted thereon, an intermediate shaft, gearing for actuating the controller-shaft having a member loose upon the intermediate shaft, a spring connecting said intermediate shaft with the member of the gearing mounted thereon, a frictional driving connection between the actuator and said intermediate shaft, a let-off mechanism for said controller including a vibratory lever with means for alternately engaging the rotary member carried by the controller shaft, a cam member having two operative portions for alternately engaging said vibratory lever in governing the let-off mechanism, and means for actuating said cam member.

5. In a prepayment meter, a rotary actuator adapted to be freely rotated by hand, a controller shaft, a controller member mounted thereon, an intermediate shaft, gearing for connecting the controller-shaft and intermediate shaft and including a toothed wheel fixed upon one of said shafts and an intermeshing toothed wheel loosely mounted upon the other of said shafts and yieldingly connected therewith by means of a coiled spring, a frictional driving connection between the actuator and said intermediate shaft, a lateral pin or projection carried by the controller-shaft, a plural-armed lever mounted upon a fixed fulcrum and having two arms embracing the controller-shaft and adapted to alternately engage the pin or projection of the controller-shaft and provided with an arm carrying a lateral pin, a cam-member formed with an annular cam-shoulder provided with a notch for engagement of the lateral pin of the plural-armed lever and with an adjacent lateral pin adapted to engage said lever as its pin enters the notch in the annular cam-shoulder, whereby the cam serves as a stop for the plural-armed lever and said lever affords a stop for the cam in arresting their respective movements in initial position, and means for actuating said cam.

957,536. AUTOMOBILE TRANSFER TURN-TABLE. MILO A. BAKER, Los Angeles, Cal. Filed Mar. 16, 1910. Serial No. 549,758.

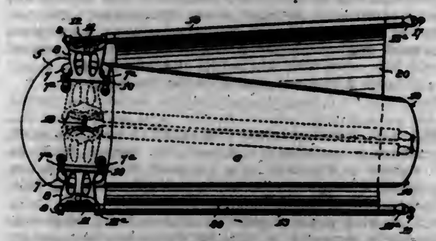


1. An automobile transfer turn-table comprising a truck provided with casters, elevator means on said truck provided with a carrier for engaging and supporting an automobile axle, and operating means for said elevator means.

2. An automobile transfer turn-table comprising a truck provided with casters, elevator means on said truck provided with a carrier for engaging and supporting an automobile axle, operating means for said elevator means comprising a cylinder, a plunger therein connected to said carrier, and means for applying fluid pressure in said cylinder.

3. An automobile transfer turn-table comprising a truck provided with casters, elevator means on said truck provided with a carrier for engaging and supporting an automobile axle, operating means for said elevator means, comprising a cylinder, a plunger therein supporting the said carrier, a jacket surrounding said cylinder and communicating therewith, said jacket and cylinder adapted to contain liquid for communicating pressure from the jacket to the cylinder, and means for applying air pressure to the interior of the jacket above the liquid therein.

957,537. IRONING-BOARD. JOSEPH A. BEAN, Mahwah, N. J., assignor of one-third to Lydia Durfee, Mahwah, N. J. Filed May 15, 1908. Serial No. 433,073.



1. In combination with an ironing-board, brackets secured to the surface thereof and adapted to project beyond opposite side edges thereof, roller supports pivoted to the end portions of the brackets rollers rotatably supported in the roller supports, and a sheet attached at its ends to the rollers and adapted to be wound thereon.

2. In combination with an ironing-board, brackets hinged thereto, rollers rotatably and pivotally maintained by the brackets, and a sheet or apron attached at its ends to the rollers and adapted to be wound thereon.

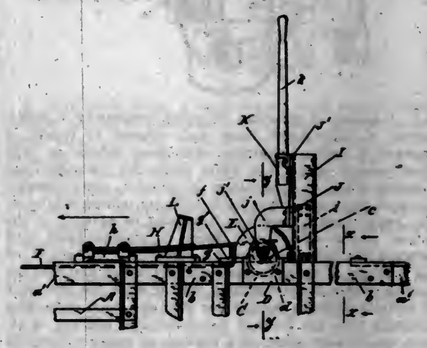
3. In combination with an ironing-board, a bracket hinged thereto so as to fold thereon, a member pivoted to the bracket, a rod supported by the pivoted member, and a sheet attached at one of its ends to the rod and adapted to hang down and form an open pocket below the ironing board.

4. In combination with an ironing-board, brackets hingedly connected to the upper side of the board and adapted to fold thereon, rods rotatably supported in the outer ends of the brackets, and a sheet or apron attached at its ends to the rotatable rods and adapted to be wound thereon.

5. In combination with an ironing-board, brackets hingedly connected to the board, yokes swiveled to the outer ends of the brackets, rods rotatably supported in the yokes, and a sheet or apron attached at its ends to the rods and adapted to be wound thereon.

[Claims 6 and 7 not printed in the Gazette.]

957,538. HAY-PRESS. DANIEL S. BEARD, Waynesboro, Pa., assignor to The Geiser Manufacturing Company, Waynesboro, Pa. Filed June 1, 1909. Serial No. 499,425.



1. The combination, with a press-chamber provided with a feed-opening, of brackets provided with guide-pockets and secured to the said chamber at the rear part of the feed-opening, a folder-roller provided with a shaft having its end portions free to move about in the said pockets, and springs which press the said roller downwardly in the said feed-opening.

2. The combination, with a press-chamber provided with a feed-opening, of brackets provided with guide-pockets and secured to the said chamber at the rear part of the feed-opening, said brackets being also provided with vertical guard-plates at their upper parts and having laterally projecting flanges at the front parts of the said guard-plates, a folder-roller provided with a shaft having its end portions free to move about in the said pockets, and springs which press the said roller downwardly in the said feed-opening.

3. The combination, with a press-chamber provided with a feed-opening and having bars at its sides, of brackets provided with guide-pockets and secured to the said chamber at the rear part of the feed-opening, the said pockets having openings at their bottoms which are closed by the said bars, a folder-roller provided with a shaft having its end portions free to move about in the said pockets, and springs which press the said roller downwardly in the said feed-opening.

4. The combination, with a press-chamber, of a block-dropper comprising two channel-shaped guides and two crossbars secured to the said guides, and two cranked and offset arms secured at one end to the end portions of the lower crossbar and having their other end portions pivoted to the press-chamber.

5. The combination, with a press-chamber, of a block-dropper comprising two channel-shaped guides and two crossbars secured to the said guides, two cranked and offset arms secured to the end portions of the lower crossbar and pivoted to the press-chamber, a socket secured to the middle portions of the said crossbars and bracing them together, and a handle projecting from the said socket.

957,539. ADVERTISEMENT-HOLDER. ROBERT F. BERKHEILE, Kantner, Pa., assignor of one-half to Thomas J. Adams, Kantner, Pa. Filed Feb. 15, 1909, Serial No. 477,939. Renewed Dec. 16, 1909. Serial No. 533,395.



1. A holder of the class described comprising a casing having a transparent front and adapted to receive a package of paper containing advertising matter on each sheet thereof, supporting ledges projecting inwardly from opposite sides of the casing, a follower plate slidably mounted upon said ledges, said casing containing a delivery slot below said transparent front and in advance of the ledges, means within the casing to automatically feed forward the follower plate for advancing the sheets of the package of paper in the path of the slot and also for making visible the advertising matter upon the discharge of individual sheets through the slot, and spurs projecting inwardly from the front of the casing and adapted to engage the forward sheet of a package of paper to suspend said sheet and to prevent its accidental discharge through the slot.

2. In a holder of the class described, the combination with a plurality of sheets of paper having printed matter on each of the same, a casing receiving said sheets of paper and having a delivery slot therein at its front, a transparent panel mounted at the front of the casing to make visible the advertising matter upon the forward sheet of paper within the casing, supporting ledges within said casing for the paper and terminating at their forward ends in rear of the slot, a follower plate slidable upon said ledges and arranged in rear of the sheets of paper, a spring yoke member acting upon the follower plate to advance the same, and pointed spurs projecting inwardly from the front of the casing and adapted to penetrate the forward sheets of paper when in the path of the delivery slot to prevent their accidental discharge through the latter.

957,540. CAR-FENDER. JEAN B. BERNIER, Lowell, Mass. Filed Jan. 20, 1910. Serial No. 539,160.



1. The combination of a pair of springs, means for supporting the rear ends of the same at the front of a vehicle, a pair of grippers each attached between its ends to the free end of one of said springs, said grippers being jointed to each other at their rear ends and adapted to be held open or to be closed by said springs, according as the point of junction of said grippers is in front of or in the rear of a line connecting the points of attachment of said grippers to said springs, and a transverse bar arranged across said grippers and connected to said grippers at said junction and adapted when pressed backward to move said point of junction back of said line connecting said points of attachment.

2. The combination of a pair of springs, means for supporting the rear ends of the same at the front of a vehicle, a pair of grippers each attached between its ends to the free end of one of said springs, said grippers being jointed to each other at their rear ends and adapted to be held open or to be closed by said springs according as the point of junction of said grippers is in front of or in the rear of a line connecting the points of attachment of said grippers to said springs, a transverse bar arranged across said grippers, and connected to said grippers at said junction, and adapted when pressed backward to move said point of junction back of said line connecting said points of attachment, and stops carried by said transverse-bar to limit the opening of said grippers.

3. The combination of a vertical post, means for securing the same to the front end of a vehicle, a horizontal plate, vertically movable on said post, a shank carried by said plate, springs, each attached at one end to said shank, a pair of grippers, each attached between its ends to one of said springs, said grippers having their outer ends curved and their inner ends jointed to each other, and a transverse bar pivoted to said grippers at their junction and arranged under said grippers.

4. The combination of a vertical post, means for securing the same to the front end of a vehicle, a horizontal plate vertically movable on said post, a shank carried by said plate, springs each attached at one end to said shank, a pair of grippers each attached between its ends to one of said springs, said grippers having their outer ends curved and their inner ends jointed to each other, a transverse bar pivoted to said grippers at their junction and arranged under said grippers and having stops to limit the opening of said grippers.

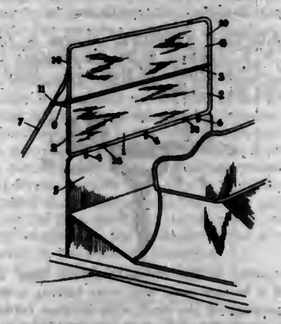
5. The combination in a fender, of a plate, a shank pivoted thereto and normally supported thereon in a horizontal position, but adapted to be raised therefrom, a pair of springs secured to said shank, a pair of grippers each attached between its ends to the free end of one of said springs, said grippers being jointed to each other at their rear ends and adapted to be held open or to be closed by said springs, according as the point of junction of said grippers is in front or in the rear of a line connecting the points of attachment of said grippers to said springs, and a transverse bar arranged across said grippers and connected to said grippers at said junction and adapted when pressed backward to move said point of junction back of said line connecting said points of attachment.

[Claims 6 to 8 not printed in the Gazette.]

957,541. WIND-SHIELD FOR VEHICLES. HENRY W. BERTRAM and FRANK L. LAMORREAUX, Detroit, Mich., assignors to Standard Auto Accessory Mfg. Co., Detroit, Mich., a Corporation of Michigan. Filed June 25, 1909. Serial No. 504,251.

1. A wind shield comprising a lower frame adapted to be rigidly secured in upright position on a vehicle, an upper frame corresponding to the lower frame, a pair of bracket arms extending forward from the upper corners of the lower frame, links pivoted each at one end to the outer end of an arm and at the other to the upper frame between the corners thereof, coupling bars each pivoted at its outer end to an arm between its lower corners and the link pivot, and a spring projected member on each coupling bar adapted to bear obliquely against the end of the upper frame when the latter is alined with and resting on the lower frame, said parts being disposed to lock the frames in vertical alinement one on the other and to move the upper frame into parallel relation with and against the lower frame when the upper frame is dropped.

2. A wind shield comprising a lower substantially rectangular frame adapted to be rigidly secured in upright position on a vehicle, an upper frame corresponding to the lower frame, a pair of arms rigidly extending from the upper corners of the lower frame, a pair of links articulating the ends of the arms and the end members of the upper frame between the ends of the latter, a pair of coupling bars pivoted at their upper ends to the end mem-



bers of the upper frames between the lower corners of the latter and the links and a spring plunger in each coupling bar adapted to bear against an outwardly oblique face on the adjacent end member of the upper frame when the frames are superposed.

957,542. WINDING APPARATUS FOR INKING-RIBBONS. GEORG BLUEN, Berlin, Germany. Filed Oct. 3, 1906. Serial No. 337,823.



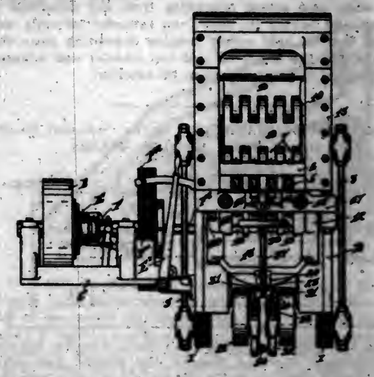
1. A winding apparatus for ribbons and the like, comprising two rotary shafts mounted parallel to each other, means for rotating the shafts, each shaft having a number of steps thereon forming spool bearing portions of different diameters, and means for expanding each shaft to increase the diameters.

2. A winding apparatus for ribbons and the like, comprising two slotted shafts arranged parallel to each other and each having steps thereon forming spool bearing portions different in diameters, means for expanding each shaft to increase the diameters and means for rotating the shafts.

3. A winding apparatus for ribbons and the like comprising two rotary shafts mounted parallel to each other, each shaft having a series of spool bearing portions, the portions on each shaft differing in diameter from each other, and means for adjusting one shaft longitudinally whereby a spool bearing portion of one shaft of a certain size may be brought into alinement with a spool bearing portion of the other shaft of the same or different size, substantially as described.

957,543. BRICK-MACHINE. GEORGE W. BOND, Elwood, Ind., assignor to The Elwood Iron Works, Elwood, Ind., a Corporation of Indiana. Filed Mar. 24, 1908. Serial No. 423,055.

1. In a brick press employing two opposed plungers, slide-bars, a bell crank lever fulcrumed on the cross-head of the upper plungers, a toggle link hinged to one of the arms of the bell crank lever and journaling on said slide-bars, the cross-head of the opposite plungers mounted on said slide-bars, and lever mechanism for operating the said slide-bars, substantially as described.



2. In a brick press, a main frame, slide bars, a lower plunger secured to said slide-bars, an upper plunger, a bell crank lever pivotally connected to said plunger, a link pivotally connected to said slide-bars and one arm of the bell crank lever, a drive shaft, connections between said bell crank lever and drive shaft flexing said bell crank arm and link outward in an upward movement of the upper plunger, and lever mechanism for operating said lower plunger and slide-bars.

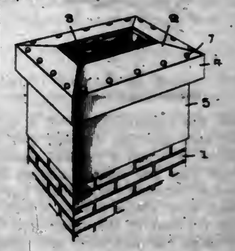
3. In a press employing a bell crank lever and toggle link, two opposed plungers upon one of which the bell crank lever is fulcrumed, slide-bars, the toggle link journaled on said slide-bars, the opposite plungers mounted upon said slide-bars, a lifting lever, a cylinder journaled in sliding boxes carried by said lifting lever, and a co-acting supporting arm journaled upon said lifting lever, substantially as described.

4. In a press employing two opposing plungers, slide-bars carrying one of said plungers, a lifting lever, guide-ways in said lever, sliding boxes in said guide-ways, a cylindrical roll journaled in said boxes, a segmental arm journaled in said lifting lever and contacting with companion rollers during the initial movement of the lifting lever, substantially as described.

5. In a press employing two opposing plungers, slide-bars carrying one of said plungers, a cross-head supporting said plungers and provided at its foot with an adjusting wedge, a lifting lever, a cylinder journaled thereon and contacting with said adjusting wedge, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

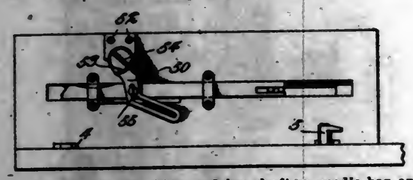
957,544. CHIMNEY PROTECTOR OR SHIELD. THOMAS J. CANIVAN, Honesdale, Pa. Filed June 24, 1909. Serial No. 504,092.



A device of the character described, comprising a cap member proper and an inner socket member, the former having a central opening therethrough and inclined downwardly and outwardly around said opening and extending

beyond the surface of the object to which it may be applied, said cap proper having a depending flange at its outer edge, said socket depending from the underside of said cap and having its upper end extended laterally and secured thereto, said socket member depending some distance beyond the flange of said cap member and adapted to encompass the chimney upon its exterior.

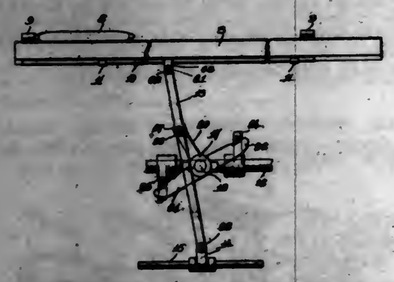
957,545. SEWING-MACHINE. JAMES COMBEST, Peoria, Ill. Filed Oct. 20, 1908. Serial No. 458,624.



1. In a sewing machine, a drive shaft, a needle bar and a shuttle arm operated thereby, the shuttle arm being provided with offset spaced members having their adjacent faces beveled in opposite directions, a finger pivotally connected with the shuttle arm between the offset members, said finger comprising a flattened member having one of its edges straightened and its opposite edge curved, a resilient strip carried by the machine frame and adapted to lie in the path of the finger so as to contact the same and to move it upon its pivot to force the said finger into engagement with and to raise the feed dog as the arm is reciprocated.

2. In a sewing machine, a driving shaft, a needle bar and a shuttle arm operated by said shaft, a pivoted finger upon the shuttle arm, a work holder plate, a feed dog normally retained below the plate, an offset member provided with arms connected with one end of the feed dog, a toothed rack adapted to be engaged by one of the arms of the offset member, an offset slotted bar connected with the rack, a projection upon the shuttle arm adapted to engage the slotted bar, and means for raising the pivoted finger of the shuttle arm to contact and raise the feed dog as the arm is reciprocated.

957,546. LOOM. HENRY COTE, West Warren, Mass., assignor, by direct and mesne assignments, to Ware Machine & Loom Company, Ware, Mass., a Corporation of Massachusetts. Filed Mar. 9, 1908. Serial No. 419,869.



1. In a loom, the combination with a lay, of a slide carried thereby and provided at each end with a head having an inclined face and a vertical shoulder, a picker sustained by each head and resting against said shoulder, a wedge interposed between each picker and the inclined face of the head, each wedge having a slot, a screw extending through the base of the picker and into the head and passing through the said slot, and means to adjust the wedge thereby to change the vertical position of the picker.

2. In a loom, the combination with a lay, of a slide situated beneath the lay, means to actuate the slide, said slide having at each end a head having an inclined face and a shoulder, a wedge resting on each inclined face, a picker resting on each wedge and in engagement with said shoulder, and means to adjust the wedges for varying the vertical position of the pickers.

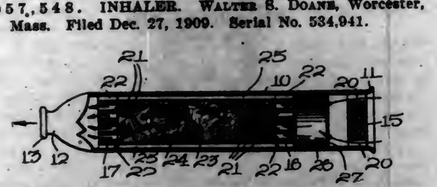
957,547. ELECTRIC ROSETTE. JAMES S. CROSSLEY, Syracuse, N. Y., assignor to Pass & Seymour, Inc., Solvay, N. Y., a Corporation of New York. Filed Oct. 20, 1906. Serial No. 339,796.



1. In a rosette, a one piece porcelain body having a flat base and a hollow boss, said boss having a side opening for the passage of the knot, side notches formed in its walls for the conductor ends, a recess centrally to seat the knot and a passage from said recess for the depending conductors.

2. In an electric rosette, a one piece body of porcelain having a flat base and a hollow cylindrical boss, said base and boss being formed to provide a central knot recess and with a side opening in the boss and a base groove for the passage of the knot to the recess and said boss having side notches formed in its walls for the conductor ends and a central lower passage from the recess for the depending conductors.

957,548. INHALER. WALTER S. DOANE, Worcester, Mass. Filed Dec. 27, 1909. Serial No. 534,941.



1. As an article of manufacture, an inhaler comprising a tubular container having a mouth piece, a chamber inside the container adapted to receive an absorbent medicated material spaced from the inner wall of the container, a partition fitting frictionally in the container against which the end of said chamber is held and having passages therethrough communicating with the interior of said chamber, and passages beyond the circumference of said chamber whereby a path for the air outside said chamber is provided.

2. As an article of manufacture, an inhaler comprising a tubular container having a mouth piece, a chamber inside the container spaced from the inner wall of the container, two partitions fitting the interior of the container, holding the ends of said chamber in position therein, and having passages therethrough communicating with the interior of said chamber and passages beyond the circumference of said chamber, whereby a path for the air outside said receptacle is provided, means whereby the air is forced to pass through the chamber during inhalation, and is permitted to pass outside during exhalation, and means for restricting the flow of air during exhalation.

3. As an article of manufacture, an inhaler comprising a tubular container having a mouth piece, a chamber inside the container spaced from the inner wall of the container, a pair of partitions located in the container at the ends of said chamber and having passages therethrough communicating with the interior of said chamber, and passages beyond the circumference of said chamber, whereby a path for the air outside said chamber is provided, and a valve at the outer end of said container adapted to close

the passages outside the chamber during inhalation so as to force all the air to pass through the chamber.

4. In a device of the character described, the combination of a container having a mouth piece, a receptacle therein for the medicament, means for causing the air to pass through said receptacle during inhalation and for permitting it to pass along the container inside the same but outside the receptacle during exhalation, and means for restricting the exit of the air during exhalation.

5. In a device of the character described, the combination of a cylindrical container, a partition therein having perforations, a receptacle on one side of the partition communicating with certain of said perforations, others of the perforations being outside the receptacle, a second partition nearer the end of the container having passages near its circumference, and a valve between said partitions and freely movable from one to the other, said valve having means for stopping said partitions outside the receptacle in the first named partition when moved against it, and for restricting the passages in the other partition when moved in the opposite direction.

[Claim 6 not printed in the Gazette.]

957,549. WEATHER-STRIP. CHARLES H. FAULKNER, Boston, Mass., assignor to Champion Metal Weather Strip and Parting Bead Company, Boston, Mass., a Corporation of Massachusetts. Filed July 19, 1909. Serial No. 508,302.

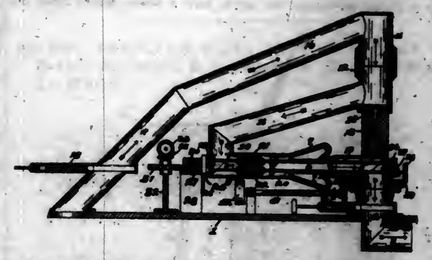


1. In combination, a casement sash, a recess in the outer side of its bottom rail, and an inner weather strip member formed as a lip attached to the bottom of the rail and projecting outwardly below said recess, and a sill having an outer weather strip member, including a pocket adapted to receive said lip and an upwardly projecting flange which is located in said recess, when the sash is closed, the upper side of the recess overhanging said flange, while its inner side and the weather strip members form a sinuous crevice.

2. In combination, a casement sash having an inner weather strip member projecting outwardly from its lower edge, and a sill having an outer weather strip member, including a pocket adapted to receive said lip, and an upwardly projecting flange constituting the outer edge of said member, the sash being provided on its outer side with a rain deflector which overhangs the weather strip when the sash is closed.

3. A two part weather strip composed of an inner member formed as a lip adapted to be attached to a casement sash, and to project outwardly therefrom, and an outer member adapted to be attached to a sill and including a pocket adapted to receive said lip, and an upwardly projecting flange constituting the outer edge of said member.

957,550. MEANS FOR PROPELLING BOATS. SEBASTIANO GIOVANNINI, Chicago, Ill. Filed June 12, 1909. Serial No. 501,782.



In means for propelling boats, the combination of a stationary tube communicating with the water on the exterior of the vessel and terminating in a vertically disposed head; a vertically disposed head communicating with and pivoted to said first mentioned head; a pipe leading outwardly from the axis of said pivoted head and communicating with an inwardly extending pipe, which latter communicates with a vertical pipe pivoted in the axis of the two first mentioned heads and having a substantially horizontal discharge beneath the bottom of the boat; means for forcing water through said pipes; and means for swinging the pivoted pipes to different positions, substantially as described.

957,551. WHIFFLETREE. WILLIAM V. GIST, Sparta, Tenn. Filed Dec. 15, 1909. Serial No. 533,213.



1. A whiffle tree including a bow spring, a pivot device extending in front of and connected to the middle portion of the spring, transversely corrugated brace strips engaged by the pivot device, the outer ends of said strips being extended below the adjoining ends of the spring, and means for securing the ends of said strip to the spring ends.

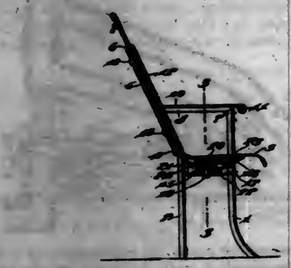
2. A whiffle tree including a laminated bow spring having terminal eyes, a clip embracing and secured to the middle portion of the spring, a pivot device extending through the clip and in front of the spring, transversely corrugated brace strips having lapping inner ends engaged by the pivot device, the outer ends of said strips being located beneath the eyes, connecting devices extending through and beyond the eyes and securing the strips to said eyes, and a swingle tree pivotally mounted upon each of said devices, each swingle tree consisting of a laminated bow spring, a clip embracing and secured to the middle portion thereof and engaging the connecting device, and trace engaging means at the ends of the spring.

957,552. CHAIR. WILLIAM R. GORDON, Philadelphia, Pa. Filed Jan. 27, 1910. Serial No. 540,316.

1. A chair of the character described, comprising front and rear legs composed of T-bars, the upper end of the front leg bent at right angles, forming arms secured to the rear legs, plates connecting the front and rear legs, said rear legs inclining rearward from a point adjacent the plates, and bent upon themselves, and extending downward to a point adjacent the bend, and a sheet metal back secured between the rearwardly inclining upper portion of the rear legs.

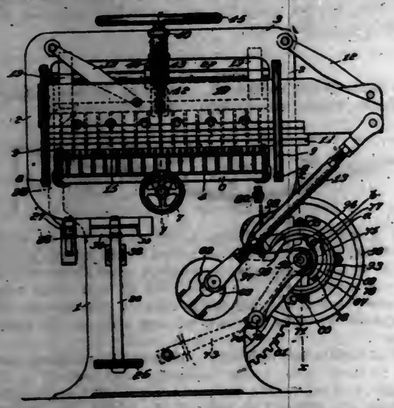
2. A chair of the character described, comprising front and rear legs composed of T-bars, the upper end of the front leg bent at right angles, forming arms secured to the

rear legs plates connecting the front and rear legs, said rear legs inclining rearward from a point adjacent the plates, and bent upon themselves, and extending downward to a point adjacent the bend, and a sheet metal back se-



cured between the rearwardly inclining upper portion of the rear legs, a seat hinged to said plates and bars or strips secured on said arms projecting forward beyond the arms, and bent into cylindrical form.

957,553. PAPER-CUTTING MACHINE. NIEL GRAY, JR., Oswego, N. Y. Filed July 20, 1906. Serial No. 327,063.



1. In a paper cutting machine, the combination with a suitable frame and paper supporting table, of the paper clamp fitted to slide between the upper extensions of the frame, racks on the rear face of the clamp, a horizontal clamp-shaft journaled on the frame, gears secured on said shaft and meshing with said racks, a bell-crank lever supported in a journal bearing on the frame and having a downwardly extending, front arm and a rearwardly extending, upper arm, a treadle on said lower arm, a segmental-rack on said upper arm, a vertically arranged rack-bar having an upper rack meshing with one of said gears and a lower rack meshing with said segmental-rack, a hub secured on the clamp-shaft, a worm-gear fitting around the hub and having cam slots formed between its inner periphery and the periphery of the hub, a worm-gear case secured on the frame and inclosing the worm-gear, rollers arranged in the cam slots to bind therein and lock the worm-gear to the hub when the worm is turned in the direction to rotate the clamp-shaft to depress the clamp, a vertical bearing on the front of the frame, a worm-shaft in said bearing, a hand-wheel in the upper end of said shaft, and a worm on the lower end of said shaft meshing with the worm-gear, substantially as described and shown.

2. In a paper cutting machine, the combination with a suitable frame and paper supporting table, of the paper clamp fitted to slide between the upper extensions of the frame, racks on the rear face of the clamp, a horizontal clamp-shaft journaled on the upper portion of the frame, gears secured on said shaft and meshing with said racks, a bell-crank lever having a treadle on its downwardly extending front arm and a segmental-rack on its rearwardly extending upper arm, a spring to return the bell-crank lever to initial position, a vertically arranged rack-bar having an upper rack meshing with one of said gears and a lower rack meshing with said segmental-rack, means to maintain said rack-bar in vertical or operative position, a hard steel hub secured on the clamp-shaft about at its center, a worm-gear having its inner periphery fitting the hub and cam slots formed in said inner periphery, a worm-gear case bolted on the rear of the frame and inclosing the worm-gear, rollers arranged in the cam slots to bind therein and lock the worm-gear to the hub when the worm-gear is turned in the direction to rotate the clamp-shaft to depress the clamp, a pin and spring fitted to a socket in one end of each roller, each pin and the opposite end of each roller being formed with rounded ends to form pivotal bearings, a worm-shaft supported on the frame, a hand-wheel on said worm-shaft, and a worm on said worm-shaft meshing with the worm-gear, substantially as described and shown.

3. In a paper cutting machine, the combination with a suitable frame and paper supporting table, of the paper clamp fitted to slide between the upper extensions of the frame, racks on the rear face of the clamp, a horizontal clamp-shaft journaled in rear bearings on the upper ends of said extensions, gears secured on said shaft and meshing with said racks; a bell-crank lever composed of a lever shaft journaled in a bearing on the front of the machine at one side, of a downwardly extending, front arm fixed on the inner end of the lever shaft and of a rearwardly extending, upper arm fixed on the outer end of the lever shaft, a treadle on said lower arm, a segmental-rack on said upper arm, a spring supported on the frame and engaging with said front arm to return the segmental-rack to initial or lower position, a vertically arranged rack-bar having an upper rack meshing with one of said gears and a lower rack meshing with said segmental-rack, upper and lower brackets on the rear of the frame, rollers in said brackets to engage with the rack-bar to maintain it in position, a hard steel hub secured on the clamp-shaft at its center, a worm-gear having its inner periphery fitting the hub and cam slots formed in said inner periphery, a worm-gear case bolted on the rear of the frame and inclosing the worm-gear, rollers arranged in the cam slots to bind therein and lock the worm-gear to the hub when the worm-gear is turned in the direction to rotate the clamp-shaft to depress the clamp, a pin and spring fitted to a socket in one end of each roller, frictionally to engage with the faces of the gear case, each pin and the opposite end of each roller being formed with rounded ends to form pivotal bearings, a vertical bearing on the front of the frame, a worm-shaft in said bearing, a hand-wheel in the upper end of said shaft, and a worm on the lower end of said shaft meshing with the worm-gear, substantially as described and shown.

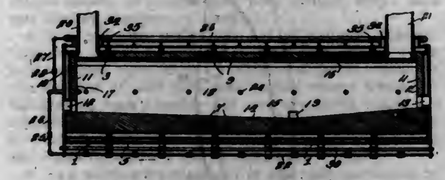
4. In a paper cutting machine, the main frame, the knife-stock and knife fitted to the frame, links supporting the knife, a counter-shaft, a crank on said counter-shaft, a pitman connecting the crank to the knife-stock, a driving-shaft, a pinion on the driving-shaft, a main gear on the counter-shaft meshing with said pinion, a fly-wheel and pulley fitted to turn on the driving-shaft, means to rotate the fly-wheel and pulley and in combination therewith an outer clutch member secured on the fly-wheel, an inner clutch member on the driving-shaft, a cone fitted to slide on and to turn with the driving-shaft, a shifter-rod supported in bearings on the frame, a shifter-yoke secured on said rod and engaging with said cone, a spring tending to move said rod and cone toward the clutch to force the inner clutch member into engagement with the outer member, a starting-lever pivotally supported on the frame, a stop-wedge having an incline hung on the rear of the lever, a stop-wedge collar fixed on the shifter-rod and having a corresponding incline and a rear projection on the stop-wedge adapted to enter a cam-notch on the front of the

main gear when the knife is nearly at the top of its return stroke.

5. In a paper cutting machine, the main frame, the knife-stock and knife fitted to the frame, links supporting the knife, a counter-shaft, a crank on said counter-shaft, a pitman connecting the crank to the knife-stock, a driving-shaft, a pinion on the driving-shaft, a main gear on the counter-shaft meshing with said pinion, a fly-wheel and pulley fitted to turn on the driving-shaft, means to rotate the fly-wheel and pulley and in combination therewith a clutch ring secured on the fly-wheel, a hub secured on the driving-shaft, an expansible band-spring arranged within the clutch ring and having one free end and one end secured on said hub, a curved lever hung on said hub and having a stud to engage with the free end of said band spring and its free end adapted to engage with a cone sliding on the driving-shaft, said cone fitted to turn with the driving-shaft, a shifter-rod supported in bearings on the frame parallel to the driving shaft, a shifter-yoke secured on said rod and engaging with the cone, a spring to force the yoke and cone toward the clutch ring to expand the band-spring, a starting handle pivotally supported on the frame, a stop-wedge having an incline hung on the rear end of the handle lever, a stop-wedge collar fixed on the shifter-rod and having a corresponding incline, and a projection on the stop-wedge adapted to enter a cam-notch on the front of the main gear when the knife is nearly at the top of its return stroke, substantially as described and shown.

[Claims 6 to 14 not printed in the Gazette.]

957,554. SMELTING-FURNACE. JAMES GROGAN, Prescott, Ariz. Filed Aug. 3, 1909. Serial No. 510,989.



1. An apparatus for recovering the waste products from blast furnaces comprising a smelting chamber, means for conducting the products thereto, means for smelting and separating the particles of metal from the products, and means for discharging the final products from said chamber.

2. An apparatus for recovering the waste products from blast furnaces comprising a smelting chamber having a refractory lining, means for cooling said lining, means for conducting the products to said chamber, means for heating the chamber to smelt and separate the fine particles of metal from the products, and means for discharging the final spent products from said chamber.

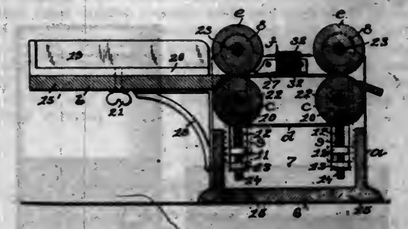
3. An apparatus for recovering the waste products from blast furnaces comprising a smelting chamber having a refractory lining, a water jacket inclosing said lining, means for circulating water therethrough, means for conducting the products to the smelting chamber, means for discharging the final spent products therefrom and means for heating said smelting chamber.

4. An apparatus for recovering the waste products from blast furnaces comprising a smelting chamber having a refractory lining, a water jacket composed of sectional walls inclosing the lining, means for circulating water therethrough, means for conducting the products to said chamber, means for discharging the final spent products therefrom, and means for heating the chamber.

5. An apparatus for recovering the waste products from blast furnaces comprising a smelting chamber having a refractory lining and provided with inlet and exhaust flues and an outlet for the discharge of the recovered metal, a water jacket composed of sections formed of walls inclosing said lining, injector burners extending through said walls and lining into said chamber, and means for supplying a fuel element to said burners.

[Claims 6 and 7 not printed in the Gazette.]

957,555. ENVELOP-SEALING MACHINE. HENRY K. HARRIS, Providence, R. I. Filed Feb. 15, 1909. Serial No. 478,022.



1. In an envelop sealing machine, the combined envelop flap elevator and moistener, consisting of a blade adapted to extend transversely across the path of movement of an envelop in a sealing machine, said blade having an upturned guide edge and a flap engaging knife-edge merging in said guide edge, parallel opposing overhanging flanges forming a channel longitudinally along said blade on its upper face, and a moistening wick clamped in said longitudinal channel formed on said blade.

2. An envelop sealing machine, comprising, in combination, a walled frame, rollers journaled across said frame, an endless apron inclosing said rollers and driven thereby, rollers superposed above said first mentioned rollers and bearing on said apron, each of said superposed rollers having an intermediate reduced portion, a blade mounted to extend between said superposed rollers and having an upturned guide-edge extending into the reduced portion of the first superposed roll, and a knife-edge underlying the full portion of said first roll to engage the envelop flaps, and moistening means extending longitudinally along the length of the blade.

3. An envelop sealing machine, comprising a frame, upper and lower feed rolls rotatably supported in the frame and adapted to feed the envelop with the flap closed, means for exerting a spring tension on the lower feed roll, a table secured to the frame and adapted to hold a stack of envelops, adjustable means on the table for gaging the feed position of the envelop, a moistening mechanism consisting of a flat arm secured at one end to the frame and having a curled-up lip merging into a thin curved edge, a water reservoir and a wick extending from the water reservoir out onto the arm, the whole adapted to raise the flap of the envelop and moisten the gummed portion of the flap, upper and lower pressure rolls rotatably supported in the frame and adapted to close the flap down onto the body of the envelop under pressure, means for exerting a spring tension on the lower pressure roll, an endless apron connecting the lower feed and pressure rolls, means for adjusting the tension on the lower feed and pressure rolls and means for revolving the rolls.

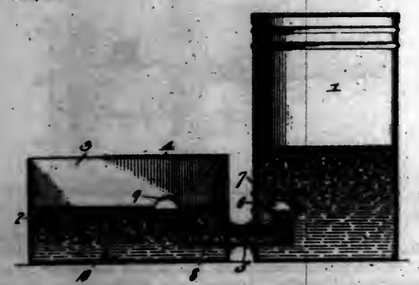
957,556. RUBBER HEEL. SEYD HAVENS, Oakland, Cal. Filed June 19, 1909. Serial No. 503,198.



1. As a new article of manufacture, a heel provided with alternating hard and soft layers inclined in a vertical plane longitudinally of the shoe, and each layer provided at its surface-engaging end with a beveled face.

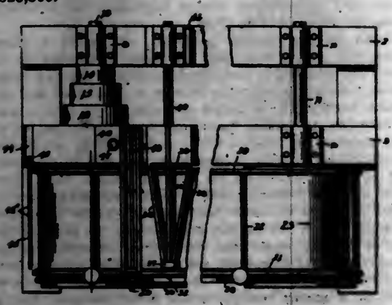
2. As a new article of manufacture, a heel composed of inclined layers of hard and soft rubber, said layers being inclined longitudinally of the shoe in a vertical plane and each layer having its lower or outer edge formed straight and at right angles to the longitudinal axis of the layer.

957,557. ANTIFREEZING-TANK. LEONARD HEISEL, Fremont, Iowa. Filed June 10, 1909. Serial No. 501,362.



The combination with a tank, of a trough, a cover extending over the greater portion of the trough, a pipe connecting said covered portion with the tank, a transverse partition arranged substantially in vertical alinement with the front end of the covered portion, said partition being of less height than the trough, the said pipe having its inner end portion upwardly angled, a rod pivotally mounted in said pipe having upturned end portions, a valve carried by the inner end of the rod, and a float carried by the outer end.

957,558. VACUUM-FILTER. MARTIN E. HILTNER, Deadwood, S. D. Filed Oct. 30, 1909. Serial No. 525,509.



1. In a filter of the character described, an endless belt, a filtering medium arranged upon said endless belt, a pressure conduit communicating with said filtering medium, a vacuum conduit communicating with said filtering medium, and a single device for controlling both of said conduits.

2. In a filter of the character described, an endless belt, a filtering medium arranged upon said endless belt, vacuum and pressure conduits communicating with said filter medium, a single device controlling both of said conduits, and stationary members for actuating said device.

3. A filter of the character described, comprising pulleys, an endless belt trained about said pulleys, a filtering medium arranged upon said endless belt, a vacuum hose, a pressure hose, a three-way valve associated with said filtering medium, vacuum, hose and pressure hose, and means for rotating said valve during the travel of said endless belt.

4. In a filter of the character described, a filter medium, a vacuum hose, a pressure hose, means for alternately establishing communication between said filter medium, said vacuum hose and pressure hose, and means for sprinkling said filter medium during its communication with said pressure hose.

5. In a filter of the character described, a filter medium, a vacuum hose, a pressure hose, a three-way valve for alternately establishing communication between said filter medium, vacuum hose and pressure hose, and means for rotating said valve.

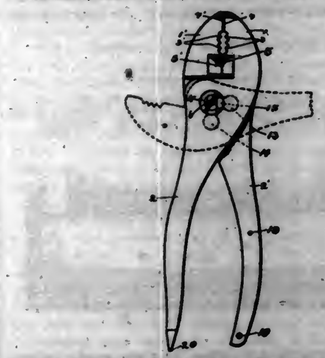
[Claims 6 to 8 not printed in the Gazette.]

957,559. LACING. ALBERT T. HOLT, Columbus, Ohio. Filed May 24, 1909. Serial No. 497,968.



A lacing tip formed by filling the end portions of the lace with a rubber composition, twisting said lace end into substantially rounded form and vulcanising together the rubber and lace end.

957,560. PLIERS OR PIPE-TONGS. GARDNER L. HOLT, Hartford, Conn. Filed Feb. 23, 1909. Serial No. 479,451.

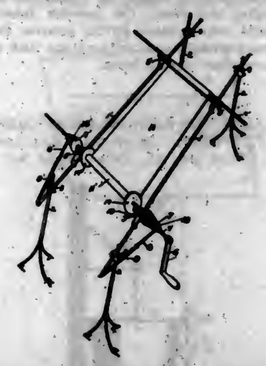


1. An article of the class described comprising a pair of pivoted lever handles, one of said handles provided with a longitudinal slot, said slotted handle having opposite cheeks and alining perforations formed therethrough, a flattened pivotal stud accurately fitting and positioned in said perforations, the other of said handles provided with a transverse slot of a width equal to the flattened portion of said stud and having opposite enlarged end openings, said latter handle arranged between the cheeks of said slotted handle and the pivotal stud journaled in said slot, flat terminal heads provided upon the opposite ends of said stud, the exterior faces of said cheeks having countersunk openings concentrically-arranged with respect to said perforations for receiving said heads, one of said heads being removable, screw-threaded means for retaining said removable head upon an end of the stud and the stud positioned within said perforations, and removable means secured to said transversely-slotted handle, said means being adapted to permit the movement of said handle through the longitudinal slot of the other handle upon the removal of said stud.

2. In combination with a lever handle adapted to be inserted through the slot of a coöperating handle, of a longitudinal tongue upon one side of said first-named handle, a reinforcing strip having a longitudinal groove the entire length thereof adapted to receive said tongue, said tongue and groove being of uniform cross-section, means provided through said handle and strip for securing the same together.

3. In combination with a wrench handle adapted to be inserted through the slot of a coöperating handle, of a longitudinal tongue upon one side of said first-named handle, a reinforcing strip fitted to said tongue and handle, said strip being removable and adapted to permit the passage of said tongue-carrying handle through the slot of the other handle.

957,561. QUILTING-FRAME. FRED JAKOB, Bartley, Nebr. Filed Dec. 8, 1909. Serial No. 532,005.



1. In a quilting frame, a pair of side rods, a pair of end rods, swivel-jointed connections between said pairs of rods, means for rotating one of said rods, conical spools, which are mounted on such rotating rod, and flexible members, which are adapted to be wound spirally upon said conical spools, in combination with springs, which hold said flexible members at tension.

2. Four straight rods, which are of uniform cross-section, four swivel-jointed and sliding connections, which hold said rods together as a quadrilateral frame, means for rotating one of said rods, two conical spools which are mounted on such rotating rod, and two cords, which are adapted to be wound spirally upon said spools respectively, in combination with two springs which are attached to said cords respectively and to said frame severally.

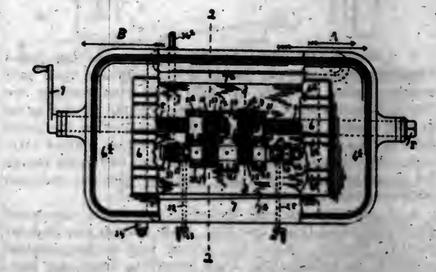
3. In a quilting frame, a pair of side rods, perforated by longitudinal lines of pin-holes, a pair of transverse end rods, one of which is similarly perforated, and adjustable connections between said pairs of rods, each of said connections comprising two clevis-slides, pivoted together, in combination with stop pins which are adapted to be inserted in said pin-holes selectively.

4. In a quilting frame, a pair of parallel side rods, a pair of parallel end rods, crossing said side rods, a sliding connection between said side rods and said end rods at each point of crossing, means for rotating one of said rods, conical spools, which are mounted on said rotating rod, and flexible members, which are adapted to be wound spirally upon said spools, in combination with springs, which hold said flexible members at tension.

957,562. FEEDING DEVICE FOR MILLING-MACHINES. HENRY F. KELLEMEN, Utica, N. Y., assignor to Utica Drop Forge & Tool Company, Utica, N. Y., a Corporation. Filed Dec. 30, 1907. Serial No. 408,681.

1. In a feeding mechanism of the character herein described, a base having slideways, a platen mounted on said ways, a rotatable screw connected to the platen for longitudinal movement therewith and arranged parallel with the ways, a pinion for rotating the screw slidably mounted on the screw and laterally confined on the base, a nut mounted on the screw and laterally confined on the base, actuating mechanism for said pinion and said nut, means for operatively connecting said pinion with said actuating mechanism or for holding it against rotation, and means for operatively connecting said nut with said actuating mechanism or for holding it against rotation.

2. In a variable and return feed device, the combination of a longitudinally movable feed screw longitudinally grooved in the threaded portion, a rotatable gear pinion nut mounted on the screw and held against lateral movement, a gear pinion slidably mounted on the threaded portion of the screw and having a bit engaging in the longitudinal groove thereof and held against lateral movement, a driven jack shaft parallel with the screw, independent unequal gear pinions loosely mounted on the jack shaft and meshing with said nut and screw pinion respectively, means fixed against rotation with said jack shaft gears, and independent clutch mechanisms for each of said jack shaft gears, each of said mechanisms adapted, when in one position, to connect its corresponding gear to said jack shaft for rotation therewith, and when in another position to connect said gear with said fixed means for holding it against rotation.



3. In a feeding mechanism of the character herein described, a base having slideways, a platen mounted on said ways, a rotatable screw connected to the platen for longitudinal movement therewith and arranged parallel with the ways and longitudinally grooved in the threaded portion thereof, a rotatable gear pinion nut mounted on the screw and held against lateral movement on the base, a gear pinion slidably mounted on the threaded portion of the screw and having a bit engaging in the longitudinal groove thereof and held against lateral movement on the base, a driven jack shaft mounted in bearings on the base parallel with the screw, independent unequal gear pinions loosely mounted on the jack shaft and meshing with said nut and screw pinions respectively, independent clutch mechanisms for each of said jack shaft gears operable to connect the gear to the jack shaft or to release it from the same, and a set of trips mounted on the platen and adapted to operate said clutch mechanisms, substantially as set forth.

957,563. IMPRESSION-TRAY FOR DENTISTRY. MATHEW M. KERR, Detroit, Mich., assignor to Detroit Dental Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 22, 1910. Serial No. 539,537.



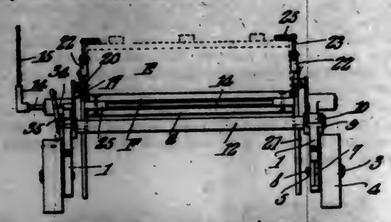
1. An impression tray for dentistry having a detachable handle, for the purpose described.

2. An impression tray for dentistry provided with a socket and a handle detachably engaging said socket.

957,564. MOLDING-MACHINE. EWALD KILLING, Davenport, Iowa. Filed July 22, 1909. Serial No. 508,982.

1. A molding machine including side frame members, supporting wheels adjustably connected to said members, adjustable connections between the members, and flask-supporting and inverting mechanism carried by said members.

2. A molding machine including wheel-supported frame members, adjustable connections between said members, pivotally and slidably supported clamping devices, pivotally mounted flask supporting devices movable independently of the clamping devices, and revoluble means for simultaneously shifting the clamping devices toward or away from the supporting devices.



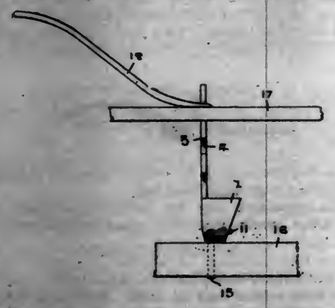
3. A molding machine including wheel-supported frame members, guide devices mounted for rotation upon said members, flask supports pivotally supported between the frame members and movable independently of the guide devices, means for locking said flask support to the guide devices, means for locking the guide devices against rotation, slides mounted in the guide devices, revoluble means for actuating said slides, and clamping members movable with said slides.

4. A molding machine including adjustably connected wheel-supported frame members, guide devices mounted for rotation thereon, means for locking said devices against rotation, flask-supporting arms extending from and movable with said devices, a frame slidably mounted within each guide device, a revoluble actuating element, flexible connections between said element and the opposed ends of the frame, said revoluble element operating to simultaneously wind and unwind the connections to shift the frames longitudinally, and clamping devices carried by the frames.

5. A molding machine including adjustably connected frame members, guide devices mounted for rotation thereon, means for locking said devices against rotation, an apertured drum within each guide device, a revoluble actuating element extending through the drums, frames slidably mounted within the guide devices, flexible connections between opposite ends of each frame and the actuating element, said element operating to simultaneously wrap and unwrap said connections to shift the frame longitudinally, flask-supporting members movable with the guide devices, and clamping members movable with the frames.

[Claims 6 and 7 not printed in the Gazette.]

957,565. DRIFT-BOLT PULLER. JOHN A. KING, St. Maries, Idaho. Filed Sept. 21, 1909. Serial No. 518,836.



1. A drift bolt puller comprising a hollow body, one wall of which is inclined, a shank extending upwardly from the wall opposed to said inclined wall, shoulders arranged in pairs on opposite edges of said shank, a wedge block having tongues thereon, the end walls of said body having grooves to receive said tongues, whereby the block will be caused to move in a path co-incident to the angle of the inclined wall and means to hold said block within the body and limit the movement thereof.

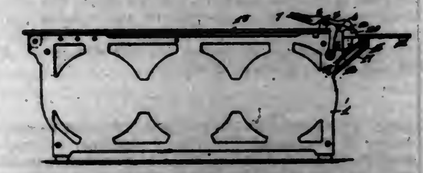
2. A device of the character described, comprising a hollow body member having one wall thereof inclined from its upper to its lower end with a slot therein, the opposite wall having teeth and a shank extending therefrom, said shank having shoulders thereon, a wedge block having tongues extending therefrom, the interior faces of the side walls of said body member having grooves therein to receive said tongues and means coöperating with said slot to limit the movement of said block.

957,566. SPRAYING-SIPHON ATTACHMENT FOR BATHING PURPOSES. BURTON D. KNICKERBOCKER, Chicago, Ill. Filed May 22, 1909. Serial No. 497,677.



A siphon attachment of the class described in which is combined a flexible conduit having a bend therein, a bent retaining element for maintaining the same in bent form, a coil for securing said retaining element in place, means in the main body of the conduit for producing a vacuum therein, and means at the end of the main body of the conduit for producing a spray.

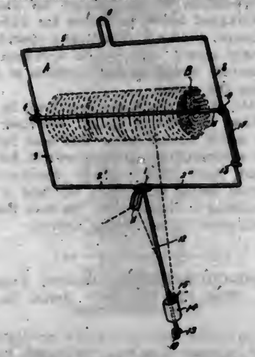
957,567. AUTOGRAPHIC REGISTER. HARRY KONERMAN, Newport, Ky., assignor to The Globe Register Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 4, 1909. Serial No. 520,849.



1. In an autographic register, a casing, a writing tablet, a spring actuated tearing blade, an aligning plate hinged to the front end of the casing, adapted to form an extension of the tablet when raised, and to occupy a vertical position in front of the casing when lowered, and means projected from the tearing blade adapted to engage said plate when raised and release the tearing blade.

2. In an autographic register, a casing, a writing tablet, a spring actuated tearing-blade, the front end of which is normally pressed against the papers on the tablet, an aligning plate hinged to the front of the casing under the tablet, engaging devices formed on the tearing-blade and hinged plate, adapted to coöperate to raise the tearing-blade when the aligning plate is raised to horizontal position, and connections between said casing and hinged plate, adapted to hold the plate in horizontal position when raised, and to be disengaged to permit the plate to be returned to a vertical position covering the front of the casing

957,568. TWINE-HOLDER. CLIFFORD E. LAYMAN, Keene, Ohio. Filed Dec. 30, 1909. Serial No. 535,664.

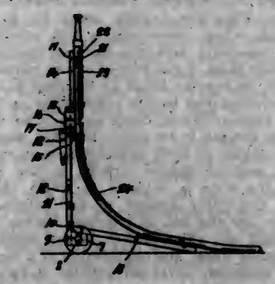


1. An article of manufacture comprising a wire frame having a pair of coinciding coils in the vertical sides thereof, a supporting loop formed in the upper horizontal side, a guide loop in the lower horizontal side, a downwardly extending rod adjacent said guide loop, and a supporting rod detachably carried in said coils.

2. An article of manufacture of the class described comprising a rectangular frame formed of one continuous section of wire, a pair of coinciding coils formed in the vertical sides thereof, and a twine supporting rod adapted to be inserted in said coils, having one extremity thereof bent at right angles to the main body portion, said bent portion provided with a hook at its outer terminal, said hook adapted to engage one of the vertical sides from the interior and retain said supporting rod detachably in said coil.

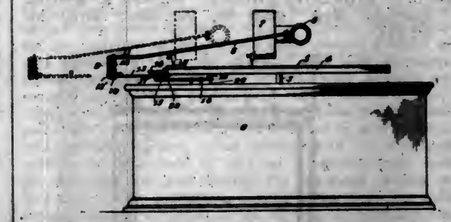
3. A device of the class described comprising a continuous section of spring wire having an elongated loop at one extremity thereof, a rectangular frame formed by the free end of said wire having a pair of coinciding loops in the vertical sides thereof, a supporting loop in the upper horizontal side thereof and the elongated eye located midway of the lower side, the free end of the frame being passed through said eye and bent upon itself through said eye and extending downwardly forming a rod, a take-up weight reciprocating on said rod, and means for rotatably supporting a roll of twine in said frame.

957,569. GARDEN-HOSE CARRIAGE. ANDREW LOW, Newark, N. J. Filed Aug. 13, 1909. Serial No. 512,656.



A hose carriage of the character described comprising an axle member, wheels thereon, an upright support fast on said axle member, a loop fast on the said support at its upper end, an extension member fitted to slide within the said loop, a second loop fast on the said extension member and fitted around the said upright support, the said second loop forming means for preventing the withdrawal of the said extension member from the said support, means for adjusting the extension member on the said support, a tail member fast on the said axle member at an angle to keep the said support vertical and hose fastening means, comprising chains and hooks at the top and the bottom of the said extension member and on the free end of the said tail member.

957,570. AUTOMATIC BRAKE FOR PHONOGRAPHS. WILBER C. MILLS, Denver, Colo. Filed May 28, 1909. Serial No. 498,831.



1. In a sound-reproducing machine, the combination with a rotatable record support, a reproducer and a reproducer-carrying arm, of a brake shoe mounted adjacent to the periphery of the support and movable into contact therewith, but resiliently held out therefrom, an arm engageable with the brake shoe and moving it into contact with the record support, but normally held out of engagement with the brake shoe and a member on the support, engageable with the arm to move it into contact with the brake shoe when the reproducer and reproducer-carrying arm have passed entirely across the record, to thereby force the brake shoe into contact with the record support.

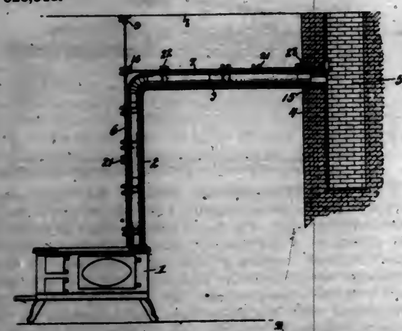
2. In a sound-reproducing machine, the combination with a rotatable record support having a stud projecting out therefrom, a reproducer, and a reproducer supporting arm, of a brake shoe, an arm carrying the brake shoe and pivoted beneath the record support to turn in the direction of movement thereof, but having a shorter radius than the support, a spring holding the arm in such position that the brake shoe is out of contact with the record support, and means carried by the reproducer supporting arm engageable by said stop on the record support, and when so engaged, movable into engagement with the brake shoe-carrying arm to bring it into contact with the record support.

3. In a sound reproducing machine, the combination with a rotatable record support, a reproducer, and a reproducer supporting arm, of a brake shoe, a carrying arm therefor pivoted to turn in the direction of movement of the record, but having a shorter radius than the record support, and means movable by the record support for forcing the brake shoe against the record support, when the reproducer arm has been moved to its innermost extreme position.

4. In a sound reproducer machine, the combination with a rotatable record support, a reproducer and a reproducer supporting arm, of a brake shoe, a carrying arm therefor pivoted to turn in the direction of movement of the record, but having a shorter radius than the same, a support projecting from the reproducer arm, a finger pivoted to said support and projecting toward the record support, said finger being arranged to contact with the brake shoe supporting arm when the reproducer arm has been moved to its extreme innermost position, and means carried by the record support adapted to contact with said finger and move the finger in the direction of movement of the record support to engage the finger with the brake shoe supporting arm and move the said shoe into contact with the record support.

5. In a sound reproducing machine, the combination with a rotatable record supporting table, a reproducer having a stylus engaging with the grooves of a record, and an arm carrying said reproducer, of an arm supported at right-angles from the reproducer arm, a pivoted finger on the extremity of said arm projecting inward toward the record table, a lug on the circumference of the record table adapted to contact with the pivoted finger when the finger carrying arm has been moved inward to its extreme point toward the table, and a brake shoe carrying arm pivoted beneath the table and adapted to be engaged by said finger and turned to bring the brake shoe into contact with the rotatable table when the finger is engaged by the lug thereon.

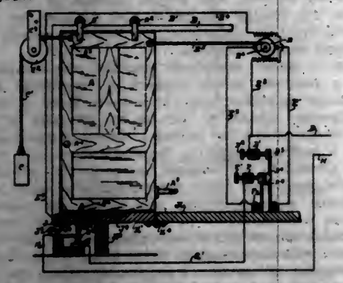
957,571. STOVEPIPE-HOLDER. WILLIAM E. MCCUNE, Kosciusko, Miss. Filed Oct. 22, 1909. Serial No. 523,943.



1. In a stove pipe holder a rod adapted to be arranged adjacent and parallel to the pipe and clamps adjustably mounted on said rod, each of said clamps comprising a pair of sleeves independently and slidably mounted on the rod, a curved finger extending from each sleeve adapted to partially surround the pipe and a set screw extending through said sleeve to impinge against said rod, substantially as described.

2. In a stove pipe holder a rod adapted to be arranged adjacent and parallel to the pipe, one end of said rod being adapted to enter the flue through the stove pipe hole, a pair of sleeves slidably mounted on said end and having upwardly extending arms adapted to engage the inner and outer faces of the chimney breast respectively, set screws threaded in said sleeves for securing the same to the rod and the screw on the inner slide projecting downwardly to limit the inward movement of the pipe, substantially as described.

957,572. ELECTRIC DOOR-OPERATOR. TOICH NAKAMARA, New York, N. Y. Filed Feb. 2, 1910. Serial No. 541,453.

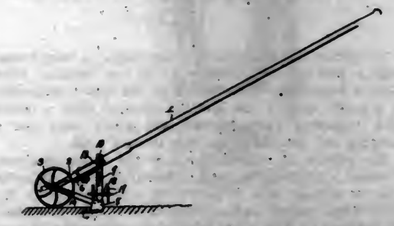


1. In a device of the character described, a door, a motor for operating said door, a flexible connection between said motor and said door, a weight arranged in opposition to said motor and flexibly connected to said door, a hinged platform beneath said door and a switch operated by said platform for starting said motor, means attached to said door for causing the motor to stop, and a double contact switch operated by said last named means for causing the motor to exert a holding motion upon said door.

2. In a device of the character described, in combination with a door, a motor for opening such door, a weight arranged in opposition to such motor for closing said door, means arranged below said door for automatically starting said motor, and an automatically operated switch for stopping said motor, said switch arranged to short circuit the armature circuit by continuation of the movement that stops the motor.

3. In a device of the character described, in combination with a door, a motor, a weight arranged in opposition to such motor, means below said door for starting said motor, an automatically operated switch for stopping said motor and short circuiting the armature thereof, and an additional switch for closing the field of said motor and maintaining it closed until the door has reached a predetermined point in its closing motion.

957,573. HAND-CULTIVATOR. EDMUND PIGGOTT, Detroit, Mich. Filed June 25, 1909. Serial No. 504,231.



1. In a hand cultivator, a handle, hangers depending therefrom, a cultivating blade supported by the lower ends of said hangers, and pointed earth-breaking arms journaled between said hangers directly over said blade to swing into close proximity thereto.

2. A hand cultivator, comprising a handle, curved hangers adjustably attached to said handle, a cultivating blade connected to the lower ends of said hangers, a shaft journaled between said hangers, and pointed arms on said shaft positioned to enter the earth directly over said blade.

3. In a hand cultivator, a handle, a transporting wheel mounted thereon, a cultivating blade, hangers depending from the handle and supporting said blade, braces adjustably connecting the blade with the axle of the wheel, a shaft journaled between said hangers, and radial arms on said shaft positioned to pierce the earth directly over said blade.

957,574. SPRING-WHEEL. MARTIN PRESSLER, Stamford, Conn. Filed Nov. 7, 1908. Serial No. 461,507.

1. A vehicle wheel, comprising a hub provided with spokes and oppositely arranged annular flanges having notches in their edges, a rim formed of two members, each provided with an angular flange at its outer end, and an inwardly projecting web having a projection on its inner face and an annular lateral flange on its outer face, said flange having notches in its edges, the said members being secured together by bolts arranged between the flanges thereof, the angular flanges forming a tire retaining groove and the webs, a chamber in which the spokes slide, studs detachably secured in the notches of the flanges of the hub and rim, and springs resting upon the said flanges and into which project the said studs.

2. In a vehicle wheel, the combination of a hub having spokes and oppositely arranged annular flanges, a rim formed of two members secured together and having their external peripheries shaped to form a tire-retaining groove, the members having inwardly extending webs spaced apart to form a chamber therebetween to receive the spokes and each provided with an annular laterally projecting flange, studs on the flanges of the hub and rim, and springs resting on the said flanges and into which project the studs.



3. In a vehicle wheel, the combination of a hub having spokes and oppositely arranged annular flanges, a rim formed of two members secured together and having their peripheries shaped to form a tire-retaining groove, the members being provided with inwardly extending and spaced webs and between which the spokes loosely extend, and with annular laterally projecting flanges between the tire-retaining groove and the ends of the webs, studs detachably secured to the flanges of the hub and rim, and springs resting on the said flanges and into which project the studs.

957,575. CIGAR-TIP CUTTER. THOMAS F. PRYOR, JR., Newark, N. J. Filed Jan. 17, 1910. Serial No. 538,387.



1. A cigar-tip cutter comprising a flat chambered body of rectangular configuration, said body having an open end-portion for the insertion of the end of a cigar therein, a cutter movably arranged in said chambered body, the said cutter having an open portion, the edges of said body providing guides between which said cutter is movably arranged, a fingerpiece upon one end of said cutter, said fingerpiece normally extending from the opening in said body, said cutter being provided at its opposite end with a knife-edge, a flattened coiled spring within the opening of said cutter, said spring having one end-portion in engagement with one of the edges bounding the said opening, and means connected with said body and in engagement with the other end-portion of said spring for producing the compression of said spring when pressure is applied upon said fingerpiece.

2. A cigar-tip cutter comprising a flat chambered body of rectangular configuration, said body having an open end-portion for the insertion of the end of a cigar therein, a cutter movably arranged in said chambered body, the said cutter having an open portion, the edges of said body providing guides between which said cutter is movably arranged, a fingerpiece upon one end of said cutter, said fingerpiece normally extending from the opening in said body, said cutter being provided at its opposite end with a knife-edge, a flattened coiled spring within the opening of said cutter, said spring having one end-portion in engagement with one of the edges bounding the said opening, said post-like member being formed with an elongated opening, a pin secured in said flat chambered body, said pin extending into and through the elongated opening in said cutter-body, a stud-like member connected with said cutter-body and arranged in the opening of said post-like member, a spring encircling said post-like member and said stud-like member, said spring being engaged by said pin, a finger-piece upon one end of said cutter-body, said finger-piece extending normally from the opening in said flat chambered body, said cutter-body being provided at its opposite end with a knife-edge, and side-elements connected with said body and projecting outwardly from the outer edges of said body.

3. A cigar-tip cutter comprising a flat chambered body of rectangular configuration, said body having an open end-portion, means connected with the opposite end-portion for the insertion of the end of a cigar therein, a cutter in said chambered body, the edges of said body providing guides, said cutter comprising a cutter-body movably arranged between said guides, said cutter-body being provided with an elongated opening, a post-like member connected with said cutter-body and arranged in said opening, said post-like member being formed with an elongated opening, a pin secured in said flat chambered body, said pin extending into and through the elongated opening in said cutter-body, a stud-like member connected with said cutter-body and arranged in the opening of said post-like member, a spring encircling said post-like member and said stud-like member, said spring being engaged by said pin, a finger-piece upon one end of said cutter-body, said finger-piece extending normally from the opening in said flat chambered body, and said cutter-body being provided at its opposite end with a knife-edge.

4. A cigar-tip cutter comprising a flat chambered body of rectangular configuration, said body having an open end-portion, means connected with the opposite end-portion for the insertion of the end of a cigar therein, a cutter in said chambered body, the edges of said body providing guides, said cutter comprising a cutter-body movably arranged between said guides, said cutter-body being provided with an elongated opening, a post-like member connected with said cutter-body and arranged in said opening, said post-like member being formed with an elongated opening, a pin secured in said flat chambered body, said pin extending into and through the elongated opening in said cutter-body, a stud-like member connected with said cutter-body and arranged in the opening of said post-like member, a flattened spring within the opening of said cutter-body, said spring encircling said post-like member and said stud-like member, said spring being engaged by said pin, a finger-piece upon one end of said cutter-body, said finger-piece extending normally from the opening in said flat chambered body, and said cutter-body being provided at its opposite end with a knife-edge.

5. A cigar-tip cutter comprising a flat chambered body of rectangular configuration, said body having an open end-portion, means connected with the opposite end-portion for the insertion of the end of a cigar therein, a cutter in said chambered body, the edges of said body providing guides, said cutter comprising a cutter-body movably arranged between said guides, said cutter-body being provided with an elongated opening, a post-like member connected with said cutter-body and arranged in said opening, said post-like member being formed with an elongated opening, a pin secured in said flat chambered body, said pin extending into and through the elongated opening in said cutter-body, a stud-like member connected with said cutter-body and arranged in the opening of said post-like member, a flattened spring within the opening of said cutter-body, said spring encircling said post-like member and said stud-like member, said spring being engaged by said pin, a finger-piece upon one end of said cutter-body, said finger-piece extending normally from the opening in said flat chambered body, and said cutter-body being provided at its opposite end with a knife-edge.

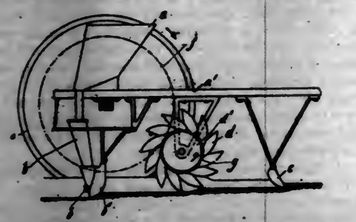
[Claims 6 to 8 not printed in the Gazette.]

957,576. NUT-LOCK. HARRY ROBINSON, Sheffield, Ala. Filed Sept. 8, 1909. Serial No. 516,007.



In combination, a threaded bolt having a longitudinal key-way cut in its threaded portion, a nut internally threaded and provided in its inner face with a chamber and in its outer face with a series of notches around its threaded opening, and a key slidably mounted in said key-way and provided with a spring at its inner end lying in said chamber and acting to normally pull the key inwardly and at its outer end with a head extending radially outward and adapted to be engaged in any one of said notches.

957,577. SEED-SOWER. RUDOLF SCHÖNNER, Berlin, Germany. Filed Sept. 30, 1909. Serial No. 520,355.



1. In a machine for sowing corn and like seeds, the combination, with a seed drill comprising a frame, drill tubes thereon, and a share or colter on said frame in front of each of said tubes, of a rotatable wheel or disk adapted to form a deep furrow having a ridge of soil on each side thereof arranged between each of said tubes and the share or colter in front of the same, and means for rotating said wheel in such a manner that the portion thereof which forms the furrow will move in the same direction as that in which the machine moves.

2. In a machine for sowing corn and like seeds, the combination, with a seed drill comprising a frame, drill tubes thereon, land wheels carrying said frame, and a share or colter on said frame in front of each of said tubes, of a wheel comprising a hub carrying share-like bodies adapted to form a deep furrow having a ridge of soil on each side thereof arranged between each of said tubes and the share or colter in front of the same and gearing connecting said land wheels with the furrow-forming wheels, the latter being rotated in a direction opposite to the direction of rotation of the land wheels.

957,578. CIRCUIT MAKE-AND-BREAK DEVICE. JAMES E. SCOVILL, Chicago, Ill. Original application filed Jan. 8, 1909, Serial No. 471,280. Divided and this application filed Apr. 26, 1909. Serial No. 492,278.

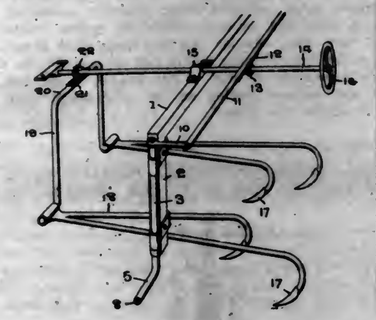


1. A current make-and-break device comprising a pivotally mounted wheel provided with radially projecting arms; circuit making and breaking means adapted to be operated by a passage of said arms; a rotatable shaft; an arm on said shaft adapted to impart a partial rotation to said wheel; a series of projections on said wheel, there being one of said projections for each arm on the wheel; and a spring adapted to engage said projections to continue the partial rotation of said wheel and hold said wheel in position, substantially as described.

2. A current make-and-break device comprising a pivotally mounted wheel provided with four radially projecting contact arms; two adjacent electrical contacts set to close an electrical circuit when one of said arms passes between them; a rotatable shaft; an arm on said shaft adapted to impart a partial rotation to said wheel; a series of pins on said wheel, there being a pin at the base of each of said arms; and a spring adapted to contact with two of said pins simultaneously, substantially as described.

3. A current make-and-break device comprising a pivotally mounted wheel provided with four radially projecting contact arms having wedge shaped ends; two adjacent electrical contacts set to close an electrical circuit when one of said arms passes between them; a rotatable shaft; an arm on said shaft adapted to impart a partial rotation to said wheel; a series of pins on said wheel, there being a pin at the base of each of said arms; and a spring adapted to contact with two of said pins simultaneously, substantially as described.

957,579. CULTIVATOR ATTACHMENT. CONRAD SELL, Arcadia, Nebr. Filed June 11, 1909. Serial No. 501,615.



1. A cultivator attachment comprising a frame, a movable yoke, said yoke having a rack upon its upper surface, about centrally thereof, standards of right angled outline having their vertical portions pivoted laterally to said frame and adapted to swing horizontally, said standards having their horizontal arms provided with spindles, a rotatable shaft arranged centrally of said frame and journaled thereon, levers connected to the upper end of said standards and a connecting bar having pivotal connection with said levers, said connecting bar being provided with an outwardly facing rack, said shaft having pinions, one of said pinions engaging the downwardly facing rack of said connecting bar and the other pinion engaging the upwardly facing rack of said yoke, and means for manually actuating said shaft.

2. In a cultivator attachment, the combination with a frame, an inverted U shaped yoke having a toothed rack on the upper face of the upper central portion thereof and shanks with cultivator shovels thereon mounted on the lower portion of said yoke; of standards pivotally mounted on the vertical portion of said frame and having their lower portions bent at right angles to form spindles, a bar having a rack on the under face of its central portion, levers pivotally connecting said bar and the upper portions of said standards, a shaft mounted centrally on said frame carrying a pair of pinions, one engaging the upwardly facing rack on said yoke, the other engaging the downwardly facing rack on said bar and means to rotate said shaft, whereby when the wheels of said cultivator are turned in one direction, the yoke will simultaneously move in the opposite direction, thereby maintaining the shovels in proper alinement with the rows.

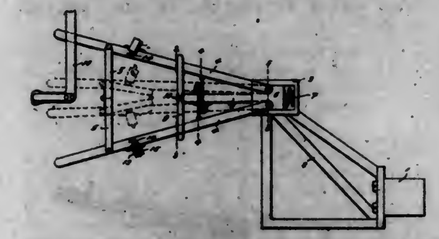
957,580. CHECKREIN-HOLDER. GAY A. STANTON, Union City, Mich. Filed Feb. 17, 1910. Serial No. 544,420.



1. In a check-rein holder, a locking member formed with a socket adapted to receive a key, a latch supported within said member and provided with a shoulder, said latch pivoted at one end to the walls of the locking member, its free end extending beyond the walls whereby it may be operated, a key having a loop at one end to receive a check-rein and provided with a notch to engage the shoulder of the latch, and a spring adapted to force the latch into locking relation with the key.

2. In a check-rein holder, a locking member formed with a socket adapted to receive a key, a latch supported within said member and provided with a shoulder, said latch pivoted at one end to the walls of the locking member, its free end extending beyond the walls whereby it may be operated, a key having a loop at one end to receive a check-rein and provided with a notch to engage the shoulder of the latch, and a coil spring adapted to force the latch into locking relation with the key.

957,581. MAIL-CATCHER. SAMUEL G. STAYMATES, Wall, Pa. Filed Oct. 2, 1909. Serial No. 520,691.

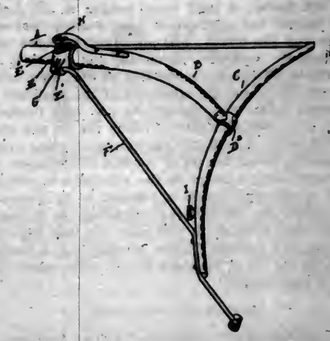


1. A mail catcher comprising a supporting bracket, spaced arms pivotally mounted on said bracket, a spreading toggle joint connecting adjacent end portions of said arms and normally holding them in spaced relation, and buffers carried by the arms and engageable with the members of the toggle joint when said joint is broken by impact of a sack of mail therewith.

2. In a mail catcher, the combination of a supporting bracket having a head thereon, a block yieldingly mounted to slide on said head, catcher arms pivoted at their rear ends to the head, a toggle joint connecting the front end portions of the arms to hold the same apart, buffers carried by the arms to engage the members of the toggle joint when said joint is broken, means normally tending to force the catcher arms together, and a guide in which the catcher arms slide intermediate of their ends.

957,582. VEHICLE-POLE. GEORGE J. TRUST, Detroit, Mich., assignor to Detroit Seamless Steel Tubes Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 11, 1908. Serial No. 452,607.

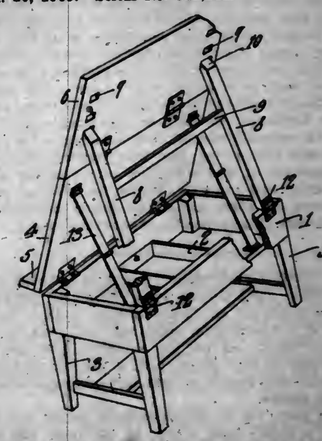
1. A vehicle pole, comprising a pole proper formed of a single-piece seamless-drawn tube having a tapering curved shank, a curved cross bar tapering toward its opposite ends, a fitting centrally positioned and shrunk upon said cross bar and engaging said curved shank, braces extending from the end of said cross bar to said pole member, and a fitting shrunk upon said pole member forming an anchor for the braces and a bearing for the whiffletree.



2. A vehicle pole, comprising a pole proper formed of a single-piece seamless-drawn tube tapering toward its opposite ends and having a portion thereof curved to form a shank, a curved cross bar tapering toward its opposite ends and having the latter sealed, a fitting shrunk upon said cross bar and engaging said curved shank, braces extending from the end of said cross bar to said pole member, and a fitting shrunk upon said pole member forming an anchor for the braces, and a bearing for the whiffletree, the walls of the pole and cross bar increasing in thickness toward the tapering ends of said members.

3. A vehicle pole, comprising a tubular member forming a pole proper and having a portion thereof curved to form a shank, a curved cross bar tapering toward its opposite ends, a fitting shrunk upon said cross bar provided with a laterally-projecting lug positioned within the end of the tube of the shank, the latter being secured to the lug by shrinking, braces extending from the end of said cross bar to said pole member, and a fitting shrunk upon said pole member forming a bearing for the whiffletree and having laterally-projecting lugs forming anchors for the braces, the walls of the pole and cross bar increasing in thickness toward the ends of said members.

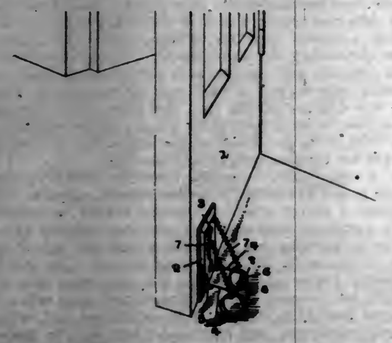
957,583. DESK. IDA M. TINDALL, Pontiac, Ill. Filed Aug. 10, 1909. Serial No. 512,241.



A device of the class described including a body consisting of an open frame and a bottom; a lid hinged at its

forward edge to the forward edge of the frame and arranged to extend beyond the rear edge of the frame to constitute a closure therefor; an extension hinged to the rear edge of the lid and arranged to hang pendent at the rear of the frame; a rigid brace hinged to the frame at the rear thereof and arranged to hang pendent between the extension and the frame; and an auxiliary brace consisting of hingedly connected parts, one end of which auxiliary brace is hinged to the bottom of the body adjacent the rear of the frame, the other end of the auxiliary brace being hinged to the lid adjacent the rear edge thereof, the auxiliary brace being foldable between the lid and the bottom of the body; the lid and the extension being arranged to be alined in a common plane inclined with respect to the frame, there being notches in the extension in which the free end of the rigid brace is adapted to be successively engaged when the lid and the extension are alined; the extension being foldable to rest upon the rear edge of the frame; and the auxiliary brace constituting a means for maintaining the lid at an angle to the frame when the extension is thus folded.

957,584. DOOR-STOP. EDWARD VANONI, Loyalton, Cal. Filed Oct. 29, 1909. Serial No. 525,276.



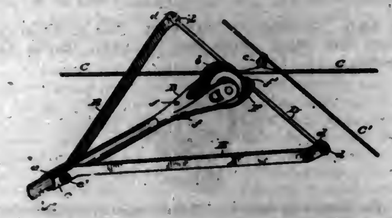
1. A door stop comprising wire sections, each wire section having a horizontal portion, an eye adapted to be applied to a door and having said horizontal portion attached thereto, said horizontal portion of said wire section being formed into a ring adapted to rest upon the floor, said wire section being extended from said ring upwardly and inwardly in the form of a spring, the upper end of said spring being adapted to be applied to the door, and means effecting connection between the rings.

2. A door stop comprising a plate adapted to be applied to a door, said plate being provided with eyes near its lower edge, and wire sections, each of said wire sections having a horizontal portion, one end being connected to an eye, the opposite end of said horizontal wire portion being formed into a ring, said wire section being formed in continuation of said wire ring into a spring extending upwardly and inwardly, means for effecting connection between the upper end of said spring and said plate, and means effecting connection between the rings.

957,585. TROLLEY-GUARD. FRANK B. WAGNER, Cleveland, Ohio. Filed Oct. 16, 1905. Serial No. 282,888.

1. In a guard for an electric-railway trolley, the combination of a trolley pole, cross rod, side arms to which the ends of said cross rod are connected, said side arms being secured to said trolley pole, a harp on said trolley pole, a brace arm secured to said harp and supporting said rod at its middle.

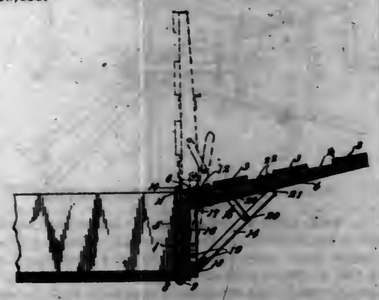
2. In a guard for an electric-railway trolley, the combination of a trolley pole, a harp at the upper end of the trolley pole, side arms secured to the trolley pole and diverging at their free ends and a brace arm extending from the harp, with a cross rod secured at its ends to the side arms and supported midway by the brace arm from the harp and sleeve rollers mounted on the cross rod at each side of the brace, substantially as set forth.



3. In a guard for an electric-railway trolley, the combination of a trolley pole, a harp at the upper end of the trolley pole, side arms secured to the trolley pole and a brace extending from the harp, with a cross rod supported by the side arms and by the brace from the harp, and sleeve rollers mounted on said cross rod at each side of the central supporting brace and provided with guard flanges at their outer ends, substantially as set forth.

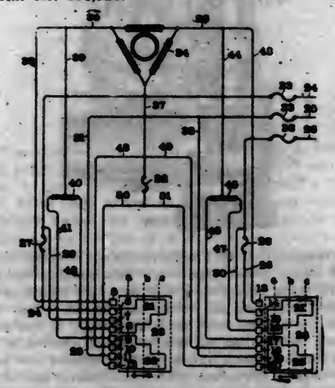
4. In an electric-railway trolley, the combination of a metallic trolley pole, a harp provided with the usual trolley wheel mounted on the end of the trolley pole, diverging side arms secured to the trolley pole and a brace extending from the harp, with a cross rod secured at its ends to the side arms and supported at mid length by the brace from the harp and sleeve rollers loosely mounted on the cross rod at each side of the central supporting brace and provided at their outer ends with guard flanges, substantially as set forth.

957,586. DETACHABLE RACK FOR WAGONS. JOHN WEBER, Elba, N. Y. Filed Nov. 19, 1908. Serial No. 463,433.



The combination with a side wall of a vehicle body, a strap bolt secured to the inner face of said wall and having at its upper end an integral eye disposed over the inner edge of the top of said side wall, of a rack bodily removable from the body and having a single point of connection therewith, said rack including an arm provided with a flat inner end to bear against the outer face of said side wall, a hinge plate secured to the upper face of said arm to reinforce the same and formed at its inner end with a laterally projecting integral pintle to enter said eye, said inner end of the hinge plate projecting beyond the flat inner end of the arm to rest upon the top of said side wall to assist in supporting the rack when the latter is lowered, means for retaining the pintle in said eye, an angle plate secured to the bottom face of the arm at a point intermediate its ends, a hanger formed from a metal strap bent into U-form and having the ends of its parallel arms pivoted to the opposite side faces of the inner end of the arm, said parallel arms of the U-shaped hanger being formed with vertical series of alining openings and being adapted to bear against the outer side face of said wall, to support the rack when lowered, a diagonal brace having an angular outer end to engage said angle plate, the lower or inner end of said brace being formed with a transverse opening to register with said alined openings in the hanger, a removable pivot bolt passed through said alining openings to adjustably pivot the brace in the lower portion of the hanger, and a pair of links pivoted to the opposite side faces of the intermediate portion of the brace and the inner portion of the arm, as shown and described.

957,587. STARTING DEVICE FOR ELECTRICAL MOTORS. HANS WEICHSEL, St. Louis, Mo., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed June 17, 1908. Serial No. 438,928.



1. In an electrical starting device, the combination with a rotary contact member, of a rotary handle for actuating said contact member, a stationary member cooperating with said handle and provided with notches for determining the controller positions of said rotary member, and a cam and yielding coöperating member for completing the movement of said contact member from each controller position to the one succeeding.

2. In an electrical starting device, the combination with a rotary contact member, of a rotary handle for actuating said contact member, a stationary member cooperating with said handle and provided with notches for determining the controller positions of said rotary member, a cam carried by said contact member, and a yielding member coöperating with said cam to complete the movement of said contact member from each controller position to the one succeeding.

3. In an electrical starting device, the combination with a rotary contact member, of a rotary handle, gearing connected to said handle and contact member, whereby the rotation of the former moves the latter into different controller positions, a fixed member coöperating with said handle and provided with notches for determining the controller positions, a cam carried by said contact member, and a spring actuated member coöperating with said cam to automatically complete the movement of said contact member from each controller position to the one succeeding.

957,588. CLOTH-PILING MACHINE. CORNELIUS WEISS, Brooklyn, N. Y. Original application filed Dec. 2, 1908, Serial No. 465,714. Divided and this application filed Apr. 26, 1909. Serial No. 492,321.

1. In a machine of the character described, a cloth supporting device, comprising two pairs of arms, a transverse spindle adapted to be carried between each pair, and means for adjusting the horizontal longitudinal position of each pair with respect to the other.

2. In a machine of the character described, a cloth supporting device, comprising two pairs of arms, a transverse spindle adapted to be carried between each pair, means for adjusting the horizontal longitudinal position of each pair with respect to the other and means for adjusting the vertical position of the entire device.



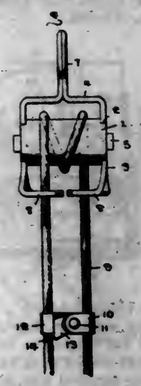
3. In a machine of the character described, a cloth supporting device, comprising two pairs of arms, a transverse spindle adapted to be carried between each pair, means for adjusting the horizontal longitudinal position of each pair with respect to the other, and means for adjusting the vertical position of the entire device, comprising a table, carriers arranged in pairs, one on each side thereof, an upright adjustably secured to each carrier and a connection between the upright and the pairs of arms.

4. In a machine of the character described, a table, a pair of cloth carriers adapted to be moved longitudinally thereof, a cloth support mounted on the carriers, non-revoluble open bearings for a cloth supporting spindle arranged transversely of the support and a holder carried by the support and adapted to revolve in a horizontal plane.

5. In a machine of the character described, a table, a pair of cloth carriers adapted to be moved longitudinally thereof, a cloth support mounted on the carriers, a pair of cloth supporting spindles arranged transversely of the support, and a horizontally revoluble holder placed between them.

[Claim 6 not printed in the Gazette.]

957,589. FIRE-ESCAPE. MARION F. WELCH, Hollis, Kans. Filed Apr. 27, 1909. Serial No. 492,467.

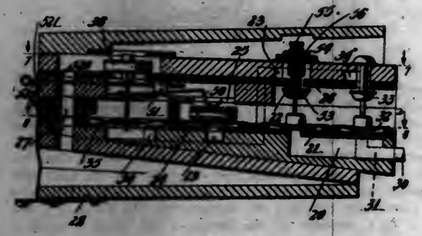


1. A device of the character described, comprising a non-rotatable drum, said drum having a notch in each end thereof, a hanger having downwardly projecting arms, said arms fitting in said notches, means to secure said drum to said hanger, a rope adapted to movably engage said drum and guides integral with the lower ends of said arms and bent inwardly, said guides extending to the opposite sides of the axial trend of said drum.

2. In a fire escape, the combination with a stationary drum having a notch in each end thereof, a hanger having downwardly projecting arms fitting in said notches, means for holding said drum to said hanger and guides integral with the lower ends of said arms, said guides being bent

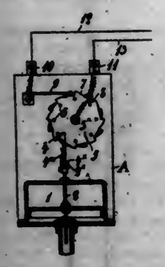
inwardly and extending to the opposite sides of the axial trend of said drum; of a rope movably engaging said drum and passing through said guides, whereby the wraps of said rope on said drum are held in a separated position.

957,590. AUTOMATIC PLAYER FOR MUSICAL INSTRUMENTS. PETER WELIN, Newcastle, Ind., assignor, by mesne assignments, to The Krell Auto-Grand Piano Co. of America, Connersville, Ind., a Corporation of Indiana. Filed Jan. 7, 1907. Serial No. 351,088.



In a piano player, the combination of a tracker-bar having modulating channels and note channels, a striking pneumatic, means controlled from one of the note channels for operating said pneumatic, a modulating valve, means controlled from one of the modulating perforations of the tracker for operating said valve, and a music sheet having lines of note perforations, the note perforations which are to be modified, and those which are not to be modified being in transverse alinement when the corresponding notes are to be sounded simultaneously, and lines of modulating perforations, adapted to travel over the tracker, the modulating perforations being slightly in advance of the note perforations.

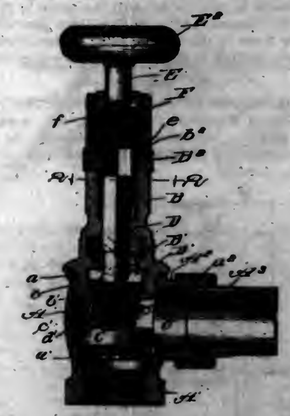
957,591. CONTROLLING DEVICE FOR GAS-BURNERS. JOHAN V. WENGELIN, Gottenborg, Sweden. Filed Sept. 22, 1908. Serial No. 454,232.



In a gas burner, the combination of a casing communicating with the gas pipe, a flexible diaphragm fixed in the said casing, a vertical rod projecting through the upper part of the casing, a fork-shaped pawl carried by the said rod, a circular rotatably mounted disk provided with conducting teeth alternating with non-conducting teeth, and with pins arranged to be engaged by the said pawl, a contact piece in position to bear successively against the teeth, and electric conductors connected with said contact piece and with the disk.

957,592. VALVE. EVERETT P. ALLEN, Chicago, Ill., assignor to Norwall Manufacturing Company, Chicago, Ill. Filed Apr. 15, 1905. Serial No. 255,761.

1. The combination with a valve casing, of a valve seat therein, a valve coöperating with said valve seat, a two-part rotary valve stem, means operatively connecting the lower part of said stem and valve, an annular flange having a flat under surface carried by the upper part of said stem and projecting around the same, a convex seat at the upper end of said casing over which said flange extends, and means for retaining said flange in close contact with said convex seat.



2. The combination with a valve casing, of a valve seat therein, a valve coöperating with said seat, a two-part rotary valve stem extending within the valve casing, means operatively connecting the lower part of said stem with said valve for moving said valve relatively to the lower part of said valve stem, an annular flange carried by the upper part of said stem and projecting around the same, a circular seat at the upper end of said casing over which said flange extends, a cap surrounding the valve stem and secured to the upper end of the valve casing below said seat, and means inclosed within and interposed between said cap and said flange for retaining the latter in close contact with said circular seat.

3. The combination with a valve casing, of a valve seat therein, a valve coöperating with said seat, a two-part rotary valve stem extending within the valve casing, means operatively connecting the lower part of said stem with said valve, removing said valve relatively to the lower part of said valve stem, an annular flange carried by the upper part of said stem and projecting around the same, a circular seat at the upper end of said casing over which said flange extends, a cap surrounding the valve stem and secured to the upper end of the valve casing below said seat, and a spring inclosed within said cap for retaining said cap in close contact with said circular seat.

4. The combination with a valve casing, of a valve seat therein, a valve coöperating with said valve seat, a rotary valve stem, means operatively connecting said stem and valve, an annular flange having a flat under surface carried by said stem and projecting around the same, a convex seat at the upper end of said casing over which said flange extends, a cap surrounding said valve stem and secured to the upper end of said valve casing below said seat, and a spring inclosed within and interposed between said cap and said flange for retaining the latter in close contact with said convex seat.

5. The combination with a valve casing, of a valve seat therein, a valve coöperating with said seat, a rotary valve stem, means operatively connecting said stem and valve, an annular flange having a flat under surface carried by said stem and projecting around the same, the upper end of said valve casing being reduced to form a convex circular seat over which said flange extends, a cap surrounding said valve stem and engaging screw threads on the exterior of the valve casing below said convex seat, and a spring inclosed within and interposed between said cap and flange for retaining the latter in close contact with said convex seat.

[Claims 6 and 7 not printed in the Gazette.]

957,593. RADIATOR-VALVE. EVERETT P. ALLEN, Chicago, Ill., assignor to Norwall Manufacturing Company, Chicago, Ill. Filed May 5, 1906. Serial No. 315,271.



1. The combination with a valve casing comprising a casing proper, a bonnet and a cap, of a valve seat in said casing, a valve coöperating with said seat, a two-part rotary valve stem extending within said cap and bonnet but axially immovable relatively thereto, means for connecting the two parts of said stem to prevent relative rotary movement, a flange formed around each part of said stem, seats in said casing coöperating with said flanges a spring surrounding said stem and interposed between said flanges for forcing the same toward the coöperating seats, and operative connections whereby a rotation of said stem will move said valve toward and away from its seat.

2. The combination with a valve casing having a bonnet, of a valve within said casing, a valve stem operatively associated with said valve and projecting through said bonnet, said bonnet having a seat on its onter edge, a cap surrounding said valve stem and screw-threaded upon said bonnet, a loose connection in the stem within the cap, a bearing seat within the outer end of the cap, flanges on said stem on opposite sides of the loose connection, and means for forcing said flanges toward the seats on the bonnet and on the cap, respectively.

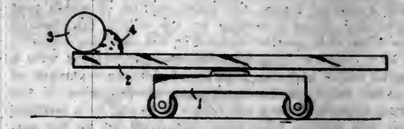
3. The combination with a valve casing having a bonnet, of a valve within said casing, a valve stem operatively associated with said valve and projecting through said bonnet, said bonnet having a seat on its outer edge, a cap surrounding said valve stem, and screw-threaded upon said bonnet, a loose connection in the stem within the cap, a bearing seat within the outer end of the cap, flanges on said stem on opposite sides of the loose connection, means for forcing said flanges toward the seats on the bonnet and on the cap, respectively, and a bearing ring arranged between each of said flanges and the seat coöperating therewith.

4. The combination with a valve casing having a bonnet of a valve within said casing, a valve stem operatively associated with said valve and projecting through said bonnet, said bonnet having a seat on its outer edge, a cap surrounding said valve stem and screw-threaded upon said bonnet, a loose connection in the stem within the cap, a bearing seat within the outer end of the cap, flanges on said stem on opposite sides of the loose connection, and a spring surrounding said stem between the flanges for forcing said flanges toward the coöperating bearing seats.

5. The combination with a valve casing having a bonnet, a valve within said casing, a valve stem projecting through said bonnet, a cap surrounding said valve stem and secured to the bonnet, a loose connection in said stem within the cap, a bearing between said stem and the cap arranged transversely to the stem at one side of the loose connection, and a similar bearing between the stem and the bonnet on the other side of said loose connection, and a second loose connection between the portion of the stem within the bonnet and the portion within the cap.

[Claims 6 to 9 not printed in the Gazette.]

957,594. MACHINE FOR MAKING WIRE-GLASS. ARTHUR J. BALDWIN, East Orange, N. J. Filed Nov. 2, 1908. Serial No. 460,678.



1. A machine for making wire glass comprising a roller, a truck, and a table pivotally mounted on said truck and capable of being turned end for end, in a horizontal plane, on said truck.

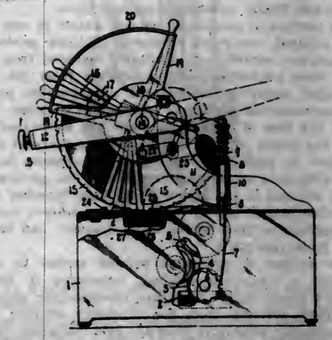
2. A machine for making wire glass comprising a table, a roller for spreading molten glass into sheet form on said table, means for reversing the table and presenting the first formed end of said sheet to said roller whereby a finishing layer of glass may be spread on said first formed sheet; substantially as described.

3. A machine for making wire glass comprising a table, a roller coöperating therewith for spreading molten glass into sheet form, and tangs of different thickness for adjusting said roller vertically with respect to said table whereby said roller may be caused to spread the final finishing layer of glass on the first formed sheet; substantially as described.

4. In a machine for making wire glass, the combination with a table, a roller for spreading a complete sheet of glass thereon, and means for reversing said table with respect to said roller, whereby the same roller spreads a second layer of glass over the first formed sheet, starting at the cooler end thereof.

5. In a machine for making wire glass, the combination with a truck, a table pivotally mounted thereon and reversible in a horizontal plane, and a roller arranged above the table at different distances so as to roll different thicknesses of glass at different passes of the table thereunder.

957,595. CHECK-WRITING MACHINE. GEORGE M. BARKER, St. Louis, Mo., assignor of one-eighth to Jacob Ranz, St. Louis, Mo. Filed Feb. 9, 1909. Serial No. 476,904.



1. In a check writing machine, the combination with a swinging frame carrying a series of printing segments, of an inking roller on which the faces of the printing segments are positioned when the frame is swung to a position of rest after the printing operation, rotary means for applying ink to the surface of the inking roller, and a yielding support forming a rest for the swinging frame, and which yielding support engages and imparts movement to the rotary ink-applying means when engaged by the swinging support.

2. In a check writing machine, a swinging frame, a series of independently adjustable printing segments carried by said frame, an inking roller which is engaged by the faces of the printing segments when the frame is

swung to a position of rest, rotary ink feeding rollers adapted to deliver ink to the surface of the inking roller, and a vertically disposed spring held post forming a rest for the swinging frame, the lower portion of which post engages and imparts motion to the rotary ink feeding means when said post is engaged by the swinging support.

3. In a check writing machine, the combination with a swinging frame carrying a series of printing segments, of an inking roller, which is engaged by the faces of the printing segments when the frame is swung to a position of rest, ink feeding rollers for delivering ink to the surface of the inking roller, a ratchet wheel on one of said ink feeding rollers, a yielding post forming a rest for the frame when the same is swung to a position of rest, and a flat spring pawl carried by said yielding post, the point of which pawl engages the teeth of the ratchet wheel on the ink feeding roller.

957,596. PROCESS FOR PRODUCING PRINTING-PLATES. ELLIS BASSIST, New York, N. Y., assignor to Edward G. Soltmann, New York, N. Y. Filed May 4, 1909. Serial No. 493,817.

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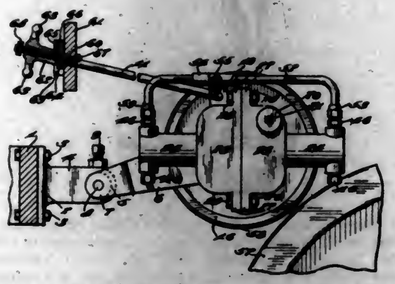
1. The method of producing printed matter in any size from an original, consisting in photographically producing a photographic negative on a suitable material from the original, then photographically producing from the said photographic negative an enlarged photographic print; then superimposing the said photographic print on the sensitized face of a printing plate and subjecting the same to the action of light, then completing the plate to form a printing surface of the subject matter of the reproduced original; and finally printing from this plate.

2. The method of producing printed matter in any size from an original, consisting in photographically producing a photographic negative on a suitable material from the original, then photographically producing from the said photographic negative an enlarged photographic print; then superimposing the said photographic print face down on the face of a printing plate and subjecting the same to the action of light; then washing the said plate with water to remove the portions not exposed to the light; inking said entire plate; removing the portions of the plate exposed to the action of the light together with the attached film of ink by rubbing under water; etching and preparing the plate in the usual manner; and finally printing from this plate.

3. The method of producing printed matter in large form from a miniature original, consisting in photographically producing a miniature photographic negative on a suitable material from the miniature original, then photographically producing from the said miniature photographic negative an enlarged photographic print, then superimposing the said enlarged photographic print on the sensitized face of a printing plate and subjecting the same to the action of light, then successively fixing and etching the printing plate to form a printing surface of the subject matter of the said enlarged photographic print, and finally printing from this printing plate.

4. The method of producing printed matter in large form from an original, consisting in photographically producing a photographic negative on a suitable material from the original, then photographically producing from the said photographic negative an enlarged photographic print, then superimposing the said enlarged photographic print on the sensitized face of a printing plate and subjecting the same to the action of light, then successively fixing and etching the printing plate to form a printing surface of the subject matter of the said enlarged photographic print, and finally printing from this plate.

957,597. TIRE-INFLATING PUMP. MARTIN L. BASTIAN, Philadelphia, Pa., assignor to Olney Automobile Company, Limited, Philadelphia, Pa. Filed Dec. 13, 1909. Serial No. 532,765.



1. In a tire inflating pump, the combination of a pivoted link, a bearing ring on the free end of the link, a shaft in said ring, a pump secured against one end of said bearing ring, and operated by said shaft, a drive wheel secured on said shaft at the opposite end of said bearing ring, and means for raising and lowering the free end of said link, substantially as described.

2. In a tire inflating pump, the combination of a pivoted link, a bearing ring on the free end of said link, a shaft mounted to turn in said bearing ring, a pump casing comprising two castings, each casting forming a cylinder and a half-housing, said half-housings secured together and having an opening to receive one end of said bearing ring, pistons in said cylinders, a cross head in the housing, fixed to said pistons, an eccentric pin on said shaft engaging the cross head, a drive wheel secured on said shaft at the opposite end of said bearing ring, and means for raising and lowering said link, substantially as described.

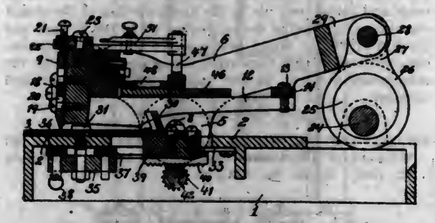
3. In a tire inflating pump, the combination of a pivoted link, a bearing ring on the free end of said link, a shaft mounted to turn in said bearing ring, a pump casing comprising two castings, each casting forming a cylinder and a half-housing, said half-housings secured together and having an opening to receive one end of said bearing ring, pistons in said cylinders, a cross head in the housing, fixed to said pistons, an eccentric pin on said shaft engaging the cross head, a drive wheel secured on said shaft at the opposite end of said bearing ring, a perforated ear on said link near its free end, a rod secured in said perforated ear, and means for moving said rod longitudinally, substantially as described.

4. In a tire inflating pump, the combination with a support, of a bracket secured to said support, an outwardly projecting arm on said bracket, a link pivotally secured to said arm, a bearing ring on the free end of said arm, a drive shaft supported in said bearing ring, a pump supported at one end of said bearing ring and driven by said shaft, a friction wheel secured on said shaft at the other end of said link, a rod connected to the free end of said bearing ring, and means for moving said rod to positively move the link on its pivot in both directions, so as to move the friction wheel toward and away from its driving element, substantially as described.

5. In a tire inflating pump, the combination with a support, of a bracket secured to said support, an outwardly projecting arm on said bracket, a link pivotally secured to said arm, a drive shaft supported in the free end of said link, a pump supported at one side of said link and driven by said shaft, a friction wheel secured on said shaft at the other side of said link, a rod connected to the free end of said link, said rod screw threaded throughout a portion of its length, an internally screw threaded sleeve engaging the threads of said rod, means preventing longitudinal movement of the sleeve, and handles on said sleeve to facilitate the turning thereof to adjust the rod and move the link.

[Claim 6 not printed in the Gazette.]

957,598. SOLE CUTTING AND MARKING MACHINE. MILLER COOK, Jr., Whitman, Mass., assignor, by direct and mesne assignments, to Boston Machine Works Company, Lynn, Mass., a Corporation of Massachusetts. Filed Mar. 8, 1906. Serial No. 304,866.



1. A sole-cutting machine comprising provisions for supporting and positioning the heel portion of a sole, and cutting means arranged for making separated incisions in the upper surface of the sole adjacent the edges thereof, leaving the surface between the incisions intact.

2. A sole-cutting and marking machine comprising provisions for supporting and positioning the heel portion of a sole, cutting means arranged for making incisions in the upper surface of the sole adjacent the edges thereof, and a marking device for indenting the sole between said incisions.

3. A sole-cutting machine comprising means for supporting and positioning a channeled sole, and cutting means arranged to cut the lips of the channels adjacent the heel portion of the sole.

4. A sole-cutting and marking machine comprising means for supporting and positioning a channeled sole, cutting means arranged to cut the lips of the channels adjacent the heel portion of the sole, and a non-penetrating indenting stop arranged between said cutting means to limit the penetration thereof and produce an indented mark between the incisions made thereby.

5. A sole-cutting machine comprising means for supporting and positioning a channeled sole, and cutting means arranged to cut the lips of the channels adjacent the heel portion of the sole, said cutting means being adjustable to vary the depth of cut.

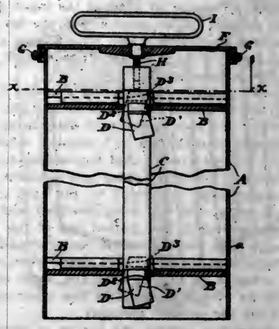
[Claims 6 to 25 not printed in the Gazette.]

957,599. COLLAPSIBLE CORE. CHARLES C. CROSSLEY, Port Chester, N. Y. Filed Nov. 12, 1907. Serial No. 401,808.

1. In a device of the character described, two sections adapted to fit together so as to form an oblong core, webs carried by said sections, flanges formed upon said webs, said flanges overlapping each other, a central rod, wedge-shaped lugs formed upon said rod, said lugs fitting within slots formed in the webs whereby the sections may be expanded or contracted, and an operating screw for bringing about the movements of the rod, as specified.

2. In a device of the character described, two sections adapted to fit together so as to form an oblong core, webs carried by said sections, flanges formed upon said webs, said flanges overlapping each other, a central rod, wedge-shaped lugs formed upon said rod, said lugs fitting within slots formed in the webs whereby the section may be expanded or contracted, an operating screw for bringing about the movements of the rod, and a cap in which said operating screw is fitted to turn, as specified.

3. In a device of the character described, two sections adapted to fit together so as to form an oblong core, webs carried by said sections, flanges formed on said webs, said flanges overlapping each other, a central rod, wedge-shaped lugs formed upon said rod, said lugs fitting within slots



formed in the webs whereby the sections may be expanded or contracted, an operating screw for bringing about the movements of the rod, a cap in which said operating screw is fitted to turn, and a handle secured to the operating screw for manipulating the same, as specified.

957,600. LOCK FOR WINDOWS AND ANALOGOUS DEVICES. WILLIAM L. DEMING, Salem, Ohio. Filed Sept. 18, 1909. Serial No. 518,426.



1. In a device for locking together two relatively movable members, the combination with a keeper secured to one of said members, said keeper being provided with an elongated slot, a locking bolt carried by the other member, an elongated head on said bolt, and a slotted cam lever connected with the bolt, said lever being adapted to turn the bolt so as to rotate the head at an angle to the said slot in the keeper, and means coöperating with the cam lever for forcing the bolt in a direction away from the keeper when the cam lever is moved relatively to the bolt, whereby the two members are drawn together.

2. In a device for locking together two relatively movable members, the combination with a keeper secured to one of the members, said keeper having an elongated slot therein, of a housing secured to the other member, a bolt longitudinally and rotatably mounted in the housing, an elongated head on said bolt, and a slotted cam lever connected with the bolt, as and for the purpose specified.

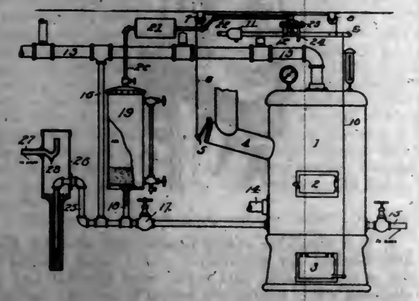
3. In a device for locking the sashes of windows, the combination with a keeper plate secured to a side rail of the upper sash, said plate being provided with an elongated slot, of a housing secured to the upper edge of the lower sash, a locking bolt longitudinally and rotatably mounted in the housing, an elongated head on the inner end of the bolt, a lever secured to the outer end of the bolt adjacent the outer edge of the housing, said lever having a cam slot therein, and a pin on the bolt extending through said slot, as and for the purpose specified.

4. In a locking device for securing together the sashes of windows, the combination with a keeper plate secured to a side rail of the upper sash, said plate being provided with an elongated slot therein, of a housing secured to the upper rail of the lower sash, said housing having a cylindrical portion, a cylindrical locking bolt mounted for longitudinal and rotatable movement in the said cylindrical part of the housing, said bolt being provided with a slot in its outer end, a lever in the slotted end of the bolt, said lever having a cam slot extending longitudinally therein and at an angle with the inner edge of the lever, said inner edge being adapted to engage with the outer end of the housing, and an elongated head on the inner end of the bolt, as and for the purpose specified.

5. In a device for locking the sashes of windows, the combination with a keeper plate secured to one of the side rails of the upper sash, said plate being provided with a series of elongated slots, of a housing secured to the upper edge of the lower sash opposite the keeper plate, said housing being provided with a notch in its upper and outer edge, a locking bolt rotatably and longitudinally mounted in said housing, said bolt having its outer end slotted, a lever mounted in the slotted end of the bolt adjacent the notch in the housing, said lever having a cam slot extending longitudinally therein and at a slight angle with respect to the inner edge of the lever, said inner edge being adapted to engage with the outer end of the housing in the notch thereof, a pin extending through the bolt and through the cam slot in the lever, and an elongated head on the inner end of the bolt, as and for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

957,601. REGULATING APPARATUS. JOHN M. DOUGHERTY and HARRY C. TABLER, St. Louis, Mo. Filed Mar. 17, 1909. Serial No. 483,946.

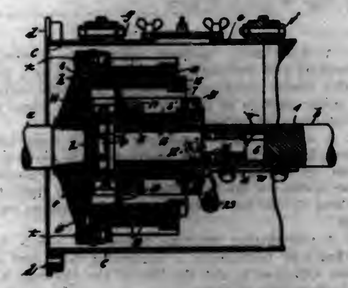


1. In a regulating apparatus, the combination with a boiler in a closed heating system, said boiler delivering hot water to an outgoing distributing pipe and receiving cold water from an incoming collecting pipe, a pipe short-circuiting said outgoing and incoming pipes, a chamber connected to said short-circuiting pipe for receiving water at varying degrees and pressures, said water exercising varying pressures upon gases trapped in the upper portion of said chamber, a heat-generating medium for the boiler, and means operated by the trapped gases in said tank for regulating said heat-generating medium.

2. In a regulating apparatus, the combination with a boiler in a closed heating system, said boiler delivering hot water to an outgoing distributing pipe and receiving cold water from an incoming collecting pipe, a pipe short-circuiting said outgoing and incoming pipes, a tank connected to said short-circuiting pipe for receiving water at varying degrees and pressures, said water exercising varying pressures upon gases trapped in the upper portion of said tank, a heat-generating medium for the boiler, means operated by the trapped gases in said tank for regulating said heat-generating medium, and a mercury trap connected to said short-circuiting pipe whereby excess pressures from the system may be relieved.

3. In a regulating apparatus for closed heating systems, the combination with a water heater of a pipe leading from the main distributing pipe of the system to the boiler, a closed chamber connected to said pipe and adapted to receive hot water from the heating system, which water traps and compresses air in the upper portion of the closed chamber, a regulating device connected to the intake, and check draft of the water heater and a translating apparatus connected to said regulating means and actuated by the compressed air trap in the upper portion of the closed chamber.

957,602. CLUTCH MECHANISM. JAMES F. DURYEA and WILLIAM M. REMINGTON, Springfield, Mass. Filed July 15, 1907. Serial No. 383,773.

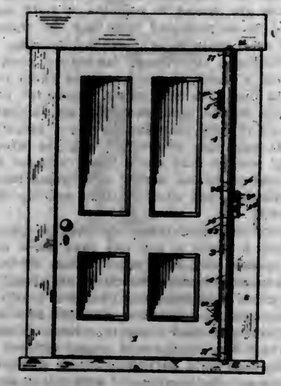


1. The combination with a clutch mechanism, of a driving and driven shaft between which said mechanism is located, means to pivotally support said mechanism on one of said shafts, and means including a coupling member for positively securing said mechanism to the other of said shafts in spaced relation to the end thereof, said mechanism comprising a spring, and means to secure the spring in a compressed position whereby room is provided to slide the clutch mechanism toward that shaft with which it is in said spaced relation, to disconnect the mechanism from that shaft on which it is pivotally supported.

2. A clutch mechanism having in combination, a driving and a driven-shaft in axial alinement and spaced from each other, a clutch construction located between said shafts and including concentric annular parts, a hub member, a coupling member for securing the hub member to the driven shaft, sleeve element, a disk member, an expansion spring located between said sleeve and disk, means to compress the spring, and means to retain the spring in a compressed condition, the length of the hub-member being less than the distance between the ends of said shafts, whereby when the coupling member is removed the clutch construction may be bodily removed, as described.

957,603. SPRING-HINGE. FRANK H. ELLIS, Chicago, Ill. Filed Jan. 30, 1909. Serial No. 475,213.

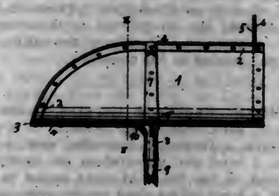
1. A door and door jamb in combination with a pair of cylindrical vertically disposed members of less length than the door respectively secured to the edge of the door at its upper and lower portions, said door and said jamb being concavely formed to receive the same and the outer ends of said members being provided with projections adapted to enter sockets in the lintel and sill of the door frame, a spring casing seated in the space between said members and rigidly connected to said jamb, a spindle extending axially through said casing and having its ends rigidly fixed in said members and a pair of springs oppositely coiled about said spindle and having their opposite ends connected reepectively to said spindle and said casing, substantially as described.



2. A door and door frame including the lintel, jamb and sill, in combination with a pair of cylindrical members of less length than the door, brackets secured to said door and said members, means connecting said brackets whereby said members are detachably secured to the edge of said door at its upper and lower portions, a spring casing seated in the space between said members and rigidly secured to said jamb, a member rotatably mounted in said casing and fixed to said members and a spring connecting said casing and said rotatably mounted member, substantially as described.

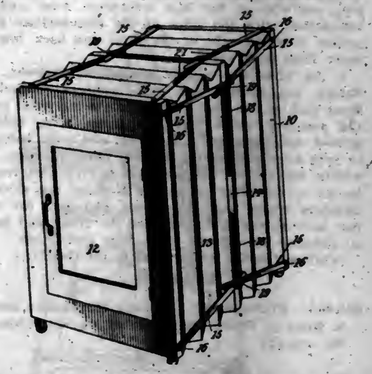
3. A door and door frame including the lintel, jamb and sill, in combination with a pair of cylindrical members secured to the edge of said door at its upper and lower portions and provided with reduced extensions on the outer ends thereof adapted to enter sockets in said lintel and said sill, a spring casing seated in the space between the adjacent ends of said members and rigidly secured to said jamb, a spindle extending axially through said casing and having its ends secured rigidly in the ends of said cylindrical members, said members being provided with radially disposed sockets to receive the same and a spring interposed between said spindle and said casing, substantially as described.

957,604. HOD. GEORGE W. FROST, Cleveland, Ohio. Filed Apr. 26, 1909. Serial No. 492,270.



A hod comprising body and back portions furnished with flat reinforcing elements secured to said body and overlapped by the upper edge of the body portions; a supporting fork and a reinforcing element underneath said body engaging the reinforcement aforesaid and extending underneath the hod body from the mouth to the fork in combination with said fork and a bracket 10, secured to the said fork for the supporting of the reinforcing element underneath the fore part of body of the hod.

957,605. EXTENSIBLE CABINET. JOSEPH GAYNOR, New York, N. Y. Filed Jan. 5, 1910. Serial No. 536,501.



1. An extensible cabinet comprising a front, a back, flexible top, bottom and side members connecting the front and back, a frame intermediate the front and back and having connection with said top, bottom and side members, upper and lower sets of side arms pivoted to the front and back, means pivotally connecting the inner ends of the arms of each set to the sides of said intermediate frame, sets of arms connecting the front and back at their upper edges, the inner ends of the arms of each set being slotted, and means operating through the slotted ends of said arms and having connection with the top of the intermediate frame whereby the front and back have adjustment toward and away from each other.

2. An extensible cabinet comprising a front, a back, flexible top, side and bottom members connecting the front and back, a frame intermediate the front and back and having connection with said flexible members, a pair of arms pivoted to the back at the upper edge thereof, a pair of arms pivoted to the front at its upper edge, each arm having a slot, and means operating through the slots of opposite arms of each pair and having connection with the top of said intermediate frame whereby the front and back may be adjusted toward and away from each other.

3. An extensible cabinet comprising a front, a back, flexible top, bottom and side members connecting the front and top, a frame intermediate the front and back and having connection with said flexible members, a pair of arms pivoted to the back at the upper edge thereof, a pair of arms pivoted to the front at its upper edge, each arm having a slot, opposite arms of each pair overlapping each other, means passed through the slots of the overlapping arms and having connection with the upper edge of said intermediate frame, a pair of arms pivotally connected to each side edge of the back, a pair of arms pivotally connected to each side edge of the front, the arms that are pivotally connected to the sides of the front and back having their inner ends overlapping, and means connected to the overlapping parts of said arms and having connection with the sides of said intermediate frame whereby the front and back may be adjusted toward and away from each other.

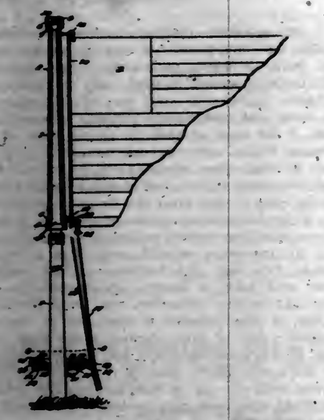
4. An extensible cabinet comprising a front, a back, flexible top, bottom and side members connecting the front and back, a frame intermediate the front and back and having connection with said flexible members, slotted arms pivotally secured to the upper edge of the back, slotted arms pivotally connected to the upper edge of the front and overlapping the first mentioned arms, means passed through the overlapping portions of said arms and having connection with the top of said intermediate frame whereby the front and back may be adjusted toward and away from each other, a pair of arms pivotally secured to each side edge of the back,

a pair of arms pivotally secured to each side edge of the front and overlapping the arms that are pivoted to the sides of the back, and means passed through the overlapping portions of the last mentioned arms and having connection with the sides of the intermediate frame to permit of adjustment of the front and back toward and away from each other.

5. An extensible cabinet comprising a front, a back, flexible top, bottom and side members connecting the front and back, a frame intermediate the front and back, the members which form the frame being hollow and slotted, arms pivoted to the front and back, bolts carried by said arms and having squared heads that are movable within the hollow members which form the frame, the bodies of the bolts projecting through the slots of the members which form the frame, and nuts for clamping the bolts to the arms whereby the front and back may be adjusted toward and away from each other.

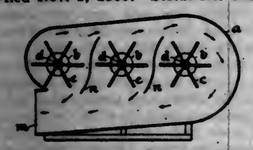
[Claims 6 and 7 not printed in the Gazette.]

957,606. FLAGSTAFF. MILTON HENDRICKS and JAMES S. BURNAP, Vanlue, Ohio. Filed May 21, 1908. Serial No. 434,123.



The combination with a stationary flag staff having a flag mounted for vertical movement thereon, of a carrier mounted for rotation on the flag staff and provided at its upper and lower ends with laterally extending eyes, a runner mounted for rotation on the flag staff beneath the carrier and provided with an eye, an angular member carrying an eye at each end and secured to the lower corner of the flag, one of the eyes of the angular member being adapted to bear against the lower eye on the carrier for limiting the upward movement of said flag, a hoisting halyard extending through the eye on the runner and through one of the eyes on the flag and through both eyes on the carrier for attachment to the upper corner of said flag, and a lowering halyard fastened to the other eye on the flag and extending through the eye on the runner.

957,607. FAN-BLOWER. SAMUEL HIGGINS, Milwaukee, Wis. Filed Nov. 1, 1909. Serial No. 525,612.



1. A compound centrifugal fan-blower comprising, in combination, a plurality of centrifugal fans, means for rotating said fans in the same direction, a casing inclosing all of said fans and having a plurality of intake-openings and a single exhaust-opening, and partitions between the fans which separate the currents of the several fans from each other, said partitions leaving continuous passage-ways at each end whereby the currents of the several fans are caused to combine on both sides of the casing and to be projected from one end thereof to the other and back again to said exhaust opening.

2. A compound centrifugal fan-blower comprising, in combination, a series of not less than three rotary fans mounted in line with each other, means for rotating all of said fans in the same direction, an elongated casing inclosing all of said fans and having a plurality of lateral intake openings concentric with the axes of rotation of the several fans and a single exhaust opening at one end, and partitions across said casing between each pair of adjacent fans, each partition leaving open spaces at both ends.

3. A compound centrifugal fan-blower comprising, in combination, a series of not less than three rotary fans mounted in line with each other, means for rotating all of said fans in the same direction, an elongated casing inclosing all of said fans and having a plurality of lateral intake-openings concentric with the axes of rotation of the several fans and a single exhaust-opening at one end, and partitions across said casing between each pair of adjacent fans, said partitions acting to prevent interference between the currents of adjacent fans and leaving openings between their ends and the walls of the casing whereby the currents of the several fans are caused to combine on both sides of the casing, the combined current increasing from the exhaust-end of the casing and passing to the opposite end on the opposite side of the casing from said exhaust-nozzle and thence around the end of the casing, still increasing as it passes back to the exhaust-nozzle on the same side of the casing as said exhaust-nozzle.

4. A compound centrifugal fan-blower comprising, in combination, a plurality of rotary centrifugal fans mounted on parallel shafts, a single casing inclosing all of said fans, a pulley mounted on one of the shafts, two pulleys mounted on each of the other shafts, a belt passing around the first pulley and one of the pulleys on the next adjacent shaft driving the former from the latter, a second belt passing around the second pulley on said last-named shaft and one of the pulleys on the next adjacent shaft and driving the former from the latter, and a third belt passing around the other pulley on said last-named shaft and driving it.

5. A compound centrifugal fan-blower comprising, in combination, a plurality of rotary fans mounted on parallel shafts, means for driving said shafts, an individual casing inclosing all of said fans and having a plurality of lateral intake-openings corresponding to the several fans and a single exhaust-nozzle at one end thereof, and partition-plates disposed across said casing between each pair of adjacent fans and leaving an open passage-way at each end of each partition-plate between it and the casing-wall whereby the air-currents of the several fans are caused to combine on both sides of the casing.

[Claim 6 not printed in the Gazette.]

957,608. CHURN. SAMUEL M. HOPKINS, Embouse, Tex. Filed Feb. 1, 1910. Serial No. 541,227.

1. In a churn, a frame, an operating shaft supported on the frame, a bevel gear mounted on the shaft, a drive shaft supported on the frame at right angles to the operating shaft, a bevel pinion fixed on the drive shaft and meshing with the gear, a balance wheel fixed on the drive shaft, a disk fixed on the drive shaft, a wrist pin mounted on the disk, a standard supporting one end of the drive shaft and provided with a vertical slide-way, a portion of the standard bent and secured to the frame, means associated with the bent portion of the standard for holding a churn receptacle in place, a platform carried by the frame for supporting the churn receptacle, means for retaining the churn receptacle on the platform, a slide block mounted on the slide-way of the standard, means for fastening a churn dasher to the block, and link connecting the block and the wrist pin.



2. In a churn, a frame comprising, a vertical post having an inclined portion and a vertical portion, a bearing arm extending from the inclined portion of the post, a bearing member extending from the opposite side of the inclined portion, an operating shaft supported by the arm and the member, a bevel gear fixed on the shaft between the arm and the member, a drive shaft extending through the vertical portion of the post, a bevel pinion fixed on the drive shaft on one side of the post and meshing with the gear, a balance wheel mounted on the drive shaft on the opposite side of the post, an offset standard engaging the drive shaft adjacent the balance wheel, a slide-way formed on the standard, a disk mounted on the drive shaft beyond the standard and over the slide-way, a slide block mounted on the slide-way, a link connection between the block and the disk, means for fastening the block to a reciprocating churn dasher, legs extending forward from the post of the frame, and a churn receptacle platform supported between the legs.

3. In a churn, a frame, a bevel gear operating mechanism supported on the frame, a balance wheel associated with the gear mechanism, means on the balance wheel for causing it to come to rest in a predetermined position, and a dasher reciprocating mechanism connected with the gear mechanism including, a disk, a slide block arranged to be fastened to a churn dasher, and a connection between the disk and the block.

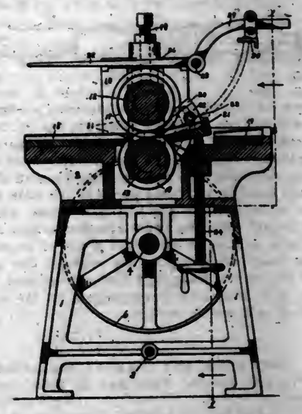
957,609. BENDING-MACHINE. THOMAS H. KANE, Youngstown, Ohio, assignor to Trussed Concrete Steel Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 16, 1909. Serial No. 512,959.

1. In a bending-machine for ribbed sheet-metal, the combination of a lower roll having grooves to receive the ribs on the sheet metal, an upper roll having rings to enter the grooves, a plate to support the sheets as they are fed between the rolls, and an adjustable grooved plate to engage the sheets as they emerge from the rolls, and means to adjustably support said plate.

2. In a bending-machine for sheet-metal, the combination of a table, rolls mounted on said table, brackets extending upward from the table, an apron mounted between said brackets adjacent said rolls to engage the sheet metal as it leaves the rolls, and an adjusting screw mounted in said table to engage the apron to control the inclination of the same.

3. In a bending-machine for ribbed sheet-metal, the combination of a lower roll having grooves to receive the ribs on the sheet metal, an upper roll having rings to enter the grooves, a grooved stationary plate to support the sheets as they are fed between the rolls, and an adjustable grooved plate to engage the sheets as they emerge from the rolls.

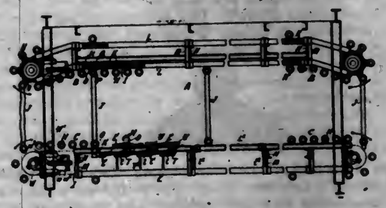
4. In a bending-machine for sheet-metal, the combination of a frame, bending rolls mounted thereon, a reversible driving mechanism for the rolls, a lever to control the driving mechanism, means to support the sheet metal as it comes from the rolls, and means in the path of the sheet-metal and adapted to be shifted by the same for actuating the controlling lever to reverse the rolls.



5. In a bending-machine for sheet-metal, the combination of a frame, rolls mounted thereon, a reversible driving mechanism for the rolls, means to support the sheet metal as it comes from the rolls, and means adapted to be shifted by the sheet-metal as it passes through the rolls for reversing the driving mechanism.

[Claims 6 and 7 not printed in the Gazette.]

957,610. APPARATUS FOR OPENING AND SEPARATING THREADS OF YARN AND THE LIKE. JAMES KEITH and WILLIAM W. WARDLE, London, England. Filed June 2, 1909. Serial No. 499,754.



1. Apparatus for treating hanks of yarn or the like comprising upper and lower bars on which the hanks are hung, means for supporting said bars, means for rotating the upper bars, a track formed with inclines, rollers movable with said bars and riding said track and serving to raise and lower the lower bars to impart a series of blows to the hanks, and means for moving said bars over the track.

2. Apparatus for opening and separating threads of yarn and the like comprising upper and lower bands each comprising an endless chain and means for supporting said chains, bars attached to said chains, races consisting of stationary sections coöperating with the chain of the upper band, races including hinged and vertically movable sections coöperating with the chains of the lower band and means for operating the chains.

957,611. EXTENSION-TABLE. KAROLY KEAL, New York, N. Y. Filed Sept. 20, 1909. Serial No. 518,673.

1. In an extension table, the combination with side rails, of end rails forming with said side rails the main frame of the table, supporting legs for said main frame, and a top of circular configuration comprising three middle sec-

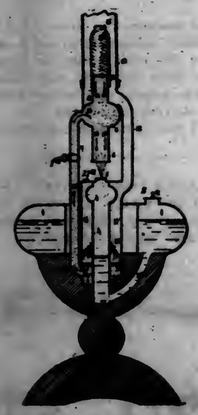
tions, one arranged upon the top of the other, and two end sections, each of which is of a thickness corresponding to the combined thickness of said middle sections.



2. A top for extension tables, comprising a plurality of middle sections, one arranged upon the top of the other, and two end sections, each of which is of a thickness corresponding to the combined thickness of said middle sections.

3. In an extension table, the combination with side rails, of end rails forming with said side rails the main frame of the table, supporting legs for said main frame, guide rails attached to said side rails, slides attached to said end rails and engaging said guide rails, and a top of circular configuration comprising three middle sections, one arranged upon the top of the other, and two end sections, each of which is of a thickness corresponding to the combined thickness of said middle sections.

957,612. INCANDESCENT LAMP. ALEXANDER KRZYWIEC, Warsaw, Russia. Filed Mar. 23, 1909. Serial No. 485,245.

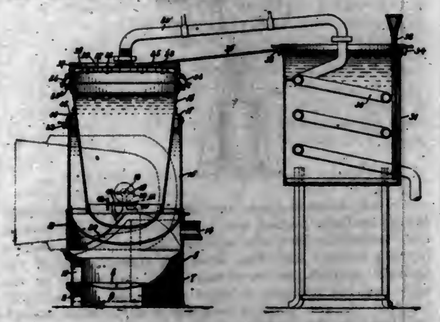


An incandescent lamp for burning combustible liquids comprising a container freely open to the air, a vaporizer communicating with said container and having one of its ends located below the container, and the other above, a nipple on the vaporizer, a heating chamber surrounding the vaporizer, a mixing chamber opening above the nipple and having at its top an incandescent mantle, a chimney forming a chamber about the mantle, a pipe branching from the mixing chamber to the base of the chamber surrounding the vaporizer, and a separate conduit leading from the heating chamber surrounding the vaporizer to the chamber within the chimney, substantially as described.

957,613. DISTILLING APPARATUS. GEORGE LÁCZAY, New York, N. Y. Filed Feb. 4, 1910. Serial No. 542,098.

1. In a distilling apparatus, the combination with a furnace and a condenser, of a water tank upon said furnace, a kettle supported by and arranged in said water-tank and being provided with a cover, a diaphragm supported by said cover, a spiral band arranged between said cover and diaphragm to form a passage leading from the peripheral portion of said kettle to the center thereof, a still pipe connecting the inner end of said passage with said condenser, and means for cooling said passage.

2. In a distilling apparatus, the combination with a furnace and a condenser, of a water tank upon said furnace, a kettle supported by and arranged in said water tank and being provided with a cover, a diaphragm supported by said cover, a spiral band arranged between said cover and diaphragm to form a passage leading from the peripheral portion of said kettle to the center thereof, a still pipe connecting the inner end of said passage with said condenser, and a connection leading from said condenser to said cover and being adapted to conduct water therefrom onto said cover, for the purpose specified.



3. In a distilling apparatus, the combination with a furnace and a condenser, of a water tank upon said furnace, a kettle supported by and arranged in said water tank and being provided with a cover, a diaphragm supported by said cover, a spiral band arranged between said cover and diaphragm to form a passage leading from the peripheral portion of said kettle to the center thereof, a still pipe connecting the inner end of said passage with said condenser, means for cooling said passage, and means for tilting over said water tank and kettle.

4. In a distilling apparatus, the combination with a furnace and a condenser, of a water tank upon said furnace, a kettle supported by and arranged in said water tank and being provided with a cover, a diaphragm supported by said cover, a spiral band arranged between said cover and diaphragm to form a passage leading from the peripheral portion of said kettle to the center thereof, a still pipe connecting the inner end of said passage with said condenser, means for cooling said passage, and a worm and worm-gear mechanism for tilting over said water tank and kettle.

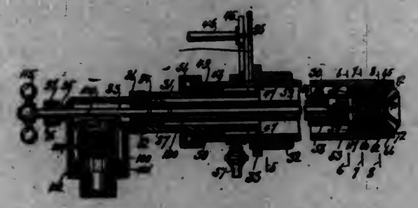
5. In a distilling apparatus, the combination with a furnace and a condenser, of a water tank upon said furnace, a kettle supported by and arranged in said water tank and being provided with a cover, a diaphragm supported by said cover, a spiral band arranged between said cover and diaphragm to form a passage leading from the peripheral portion of said kettle to the center thereof, a still pipe connecting the inner end of said passage with said condenser, a connection leading from said condenser to said cover and being adapted to conduct water therefrom onto said cover, and means for tilting over said water tank and kettle.

[Claims 6 to 10 not printed in the Gazette.]

957,614. OIL-BURNER. VALDEMAR F. LIGSON, Brooklyn, N. Y. Filed Dec. 16, 1908. Serial No. 467,741.

1. The combination in a burner of an outer tube, a spraying head connected with said tube, a valve seat formed in said head, an oil barrel located in the outer tube and in threaded engagement therewith, a threaded boss in the oil barrel, an oil nozzle extending from the oil barrel having a valve seat formed therein and its outer end face coacting with the valve seat in the spraying head, a valve in engagement with the threaded boss of the oil barrel and coacting with the valve seat in the nozzle, means to rotate the said tube and thereby axially move the spraying head having the valve seat, and means to turn and thereby axially move the second valve.

2. The combination in an oil burner of an outer tube for the body, an inner tube slidably connected with the outer tube, and having an inlet opening, a stuffing box connected up between the tubes, a spraying head connected with the outer tube, a valve seat formed in the head, a valve for a spraying medium in threaded engagement with the outer tube and coacting with the seat in the spraying head, means to turn the outer tube and thereby move the valve seat thereof, an oil barrel connected with said valve, a threaded boss in the oil barrel, a valve rod in threaded engagement with said boss, a valve seat and port in the oil barrel, a valve extending from the valve rod and coacting with the latter seat, an oil chamber connected with the said inner tube and a stuffing box extending from the oil chamber for said valve rod.



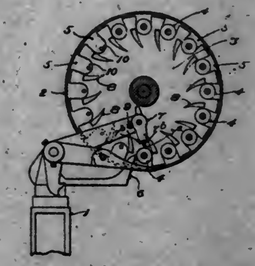
3. In an oil burner the combination of an outer tube, a spraying head connected thereto, a valve seat formed in the head, an inner tube slidably connected with the outer tube, an oil pipe in connection with the inner tube, an oil barrel extending from one end of said pipe and in threaded engagement with the outer tube, a threaded boss in the oil barrel, an oil nozzle extending from the oil barrel coacting with the valve seat formed in the spraying head, a port extending through the oil nozzle, a valve seat formed with said port, an oil chamber connected with the other end of said pipe, a stuffing box connected to said chamber, a valve rod passing through the stuffing box and also through the oil pipe and oil barrel, and in threaded engagement with the threaded boss in the oil barrel, and a valve extending from the rod coacting with the seat and port in the oil nozzle.

4. In an oil burner, the combination of an outer tube, a spraying head connected thereto, a valve seat formed in the head, an inner tube slidably connected with the outer tube, a stuffing box connected up between the two tubes, an oil pipe in the inner tube, an oil barrel connected to one end of said pipe in engagement with the outer tube, a threaded boss in the oil barrel, an oil nozzle extending from the oil barrel adapted to coact with the valve seat in the head, a port through the nozzle and a valve seat formed with the port, a fluted outer surface on the oil nozzle, an oil chamber in communication with the other end of the oil pipe and also connected to the corresponding end of the inner tube, a stuffing box connected to said chamber, a valve rod passing through the stuffing box and also through the oil pipe and oil barrel and in engagement with the threaded boss in the oil barrel, a valve extending from the valve rod coacting with the seat in the oil nozzle, and means to turn the outer tube and thereby axially move the valve seat in the spraying head relatively to the oil nozzle.

5. The combination in a burner of an outer tube, an inner collar extending from the tube and having openings, a support in which said tube is rotatably mounted, a dial plate connected to said support, a pointer extending from said tube, a spraying head connected with said tube, a valve seat formed in the head, a cavity in the head adjacent to said seat, outlets extending from said cavity through the head, threads formed in the collar of the outer tube, a barrel with threads on its outer surface within the tube and in engagement with the threads thereof, a nozzle extending from the barrel and its end face coacting with the valve seat in the head, a valve for fuel located in the nozzle, means to move the valve, a valve seat with a port in the nozzle for said valve, a fuel pipe connected to the barrel, a fuel strainer chamber connected with the fuel pipe, an inner tube with an inlet and slidably connected with the outer tube and a stuffing box connected up between the two tubes.

[Claim 6 not printed in the Gazette.]

957,615. LOOM. JOSEPH E. LEMYRE, Manchester, N. H., assignor to Patent Sales Company, Kittery, Me., a Corporation of Maine. Filed Aug. 5, 1908. Serial No. 447,026.



1. Bobbin-feeding devices for looms comprising, essentially, a rotary bobbin-feeder, a transferrer, a bobbin-stop, and means adapted to turn such bobbin-feeder at the time of the transferring movement, in case it occupies an improper position, to insure engagement of the leading bobbin with the said bobbin-stop during such movement.

2. Bobbin-feeding devices for looms comprising, essentially, a rotary bobbin-feeder, a transferrer, a bobbin-stop, and means actuated by the transferrer to turn the bobbin-feeder at the time of the transferring movement, in case of misplacement thereof, to insure engagement of the leading bobbin with the said bobbin-stop during such movement.

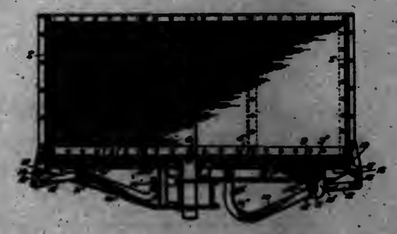
3. Bobbin-feeding devices for looms comprising, essentially, a movable bobbin-feeder, a transferrer, and means acting intermittingly and positively at the time of the transferring movement to insure correct positioning of the said bobbin-feeder during the transferring operation.

4. Bobbin-feeding devices for looms comprising essentially, a movable bobbin-feeder, a transferrer, and means actuated by the transferrer and operating positively at the time of the transferring movement to set the bobbin-feeder in correct position during the transferring operation.

5. Bobbin-feeding devices for looms comprising, essentially, a bobbin-feeder having in connection therewith a series of cam-surfaces, a transferrer, and means in connection with the said transferrer for engaging with the said cam-surfaces to set the bobbin-feeder in correct position for the transferring operation.

[Claims 6 to 8 not printed in the Gazette.]

957,616. DUMP-CAR. ARTHUR LIPSCHUTZ, St. Louis, Mo., assignor, by mesne assignments, to National Dump Car Company, a Corporation of Maine. Filed Apr. 1, 1904. Serial No. 201,047.



1. A car provided with a drop door, in combination with an inclined track or tracks beneath said door, a part or

parts movable upon said track or tracks, and a compound lever connected to said part and to said car, for actuating said movable part, substantially as described.

2. A car provided with a drop door, in combination with a wedge-like device beneath said door, a part for it to travel on and a plurality of levers extending beneath said door for operating said device to raise and lock said door or permit it to fall, substantially as described.

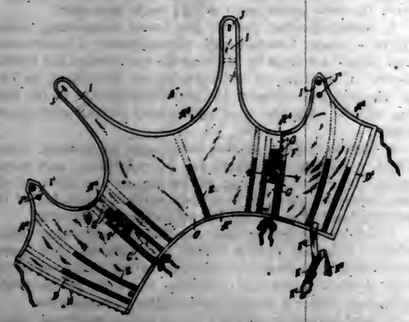
3. A car provided with a drop door, in combination with inclined hangers beneath said door, and a wedge part movable on said hangers to raise and lock said door or permit it to fall, a plurality of compound levers for actuating said wedge part substantially as described.

4. A car provided with a drop door, in combination with an inclined hanger beneath said door, and a wedge part movable on said hanger to raise and lock said door or permit it to fall, a compound lever for positively operating said part in both directions, and a rocking shaft for operating said lever, substantially as described.

5. A car provided with a drop door, in combination with an inclined track beneath said door and provided with a "flat" or level portion, a part movable on said track and whereon said door rests, means for moving said part, and said track having an upwardly curved lower end, substantially as described.

[Claims 6 to 89 not printed in the Gazette.]

957,617. COMBINED CORSET-COVER AND BUST-SUPPORTER. JENNIE MARX and EMMA MAIER, New York, N. Y. Filed Nov. 10, 1909. Serial No. 527,177.



A combined corset cover and bust supporter, comprising a back piece and two front pieces, fastening means for connecting the inner edges of the front pieces with each other, lacings connecting the outer edge of each front piece with the back, and a flap secured to the front and to the back adjacent to each lacing, said flaps overlapping on the lacings and concealing said lacings, whether the said lacings are loosely or tightly drawn.

957,618. NET. JOHN F. MASEK, New York, N. Y. Filed Apr. 8, 1909. Serial No. 488,643.



1. A device of the character described, comprising a plurality of rectangular members hinged together, a plurality of triangular members rigidly connected to one of said rectangular members, a rod having loops thereon connecting the free ends of said triangular members and flexible means adapted to pass through said loops for bringing the edge portions of the other two rectangular members in contact with the edge portion of the triangular members.

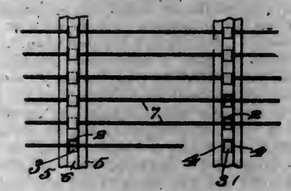
2. A device of the character described, comprising substantially rectangular bottom and side members each having a frame, and an open work covering the frame, hinges pivotally holding the side members to the bottom member at the side edges thereof, two substantially triangular end members hinged to the ends of the bottom member, a rod having loops thereon and provided with downwardly projecting portions, sleeves carried by the upper portion of the end members, and engaged by the downwardly projecting portions of the rods, a flexible connection held at its ends to the outer edge of the side members on opposite sides thereof and passing through the loops of the rod, and means connected to the flexible connection whereby the device may be raised or lowered in the water.

3. A device of the character described, comprising a bottom and side members each having a frame, and an open work covering the frame, two substantially triangular end members, a rod having loops thereon and provided with downwardly projecting portions, sleeves carried by the upper portion of the end members and engaged by the downwardly projecting portion of the rods, and a flexible connection held at its ends to the outer edge of its side members on opposite sides thereof and passing through the loops of the rod.

4. A device of the character described, comprising a plurality of side, bottom and end members, a rod having loops thereon and provided with projecting portions, sleeves carried by the upper portion of the end members and engaged by the projecting portion of the rod, and means for moving certain of the members.

5. A device of the character described, comprising end members, a bottom member, and two side members, means for raising and lowering the side members, a guide held to each of the side members, and springs held to the bottom member and having one end thereof engaging the guides to form a sliding connection therewith.

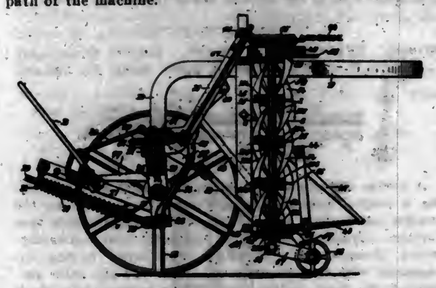
957,619. WIRE STRUCTURE. THOMAS G. MELISH, Cincinnati, and MILTON W. GATCH, Mansfield, Ohio, assignors to The Bromwell Brush & Wire Goods Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 29, 1907. Serial No. 404,336.



As a new article of manufacture, a device of the character described comprising a plane channeled-rib having a series of openings at suitable intervals apart therein, lateral flanges or foot-extensions along the open side edges of said channeled-rib, a series of clips or flaps respectively provided adjacent said openings in the channeled-rib, transversely-alined notches in said rib lateral to said openings and adapted to receive mesh-wires in a completed wire-structure with said clips or flaps closed over said mesh-wires at intersections to close the latter in place.

957,620. STALK-CUTTER. JOSEPH MICHALKA and FRANK A. MICHALKA, Cameron, Tex. Filed Aug. 8, 1908. Serial No. 447,611.

1. A machine of the character described, comprising a wheeled frame, cutting mechanism, means for driving the cutting mechanism, adjustable means for supporting said cutting mechanism, and means for adjusting the supporting means to move the cutting mechanism laterally of the path of the machine.



2. A machine of the character described, comprising a wheeled frame, cutting mechanism, means for driving the cutting mechanism, means for supporting said cutting mechanism and capable of adjustment to move the cutting mechanism laterally of the path of the machine, and lever mechanism capable of reverse actuation to vary the adjustment of said supporting means.

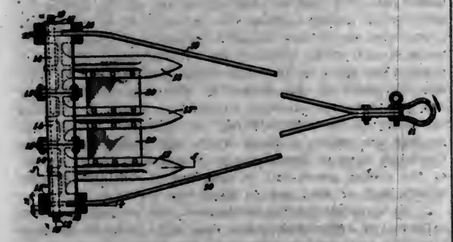
3. A machine of the character described, comprising a wheeled frame, cutting mechanism, means for driving the cutting mechanism, and means for adjusting the cutting mechanism to move the same vertically and laterally of the path of the machine.

4. A machine of the character described, comprising a wheeled frame, cutting mechanism having driving means, means for supporting the cutting mechanism and capable of adjustment to move the cutting mechanism vertically and laterally of the path of the machine, and lever mechanism capable of reverse actuation to vary the adjustment of said supporting means.

5. A machine of the character described, comprising a wheel-supported frame, a support having universal movement relative to the frame, and having its forward portion supported upon wheels, cutting mechanism mounted in the support at the front thereof, means for adjusting the support vertically, means for swinging the support laterally, and means for operating the cutting mechanism from the axle of the wheels of the frame.

[Claims 6 to 23 not printed in the Gazette.]

957,621. ANCHOR. JOHN W. NEAL, Kealia, Hawaii. Filed June 24, 1909. Serial No. 504,042.



1. In an anchor, the combination of a frame, a plurality of flukes carried by the frame and having a limited rotary movement relative thereto, the flukes having heads externally flanged at each end, and means detachably securing the adjacent flanges of the heads together.

2. In an anchor, the combination of a cross-shaft, a yoke frame connected to the opposite end portions of the cross-shaft, flukes arranged on the cross-shaft and having a limited rotary movement to each side of the frame, each fluke having a head detachably connected to the head of the next adjacent fluke.

3. In an anchor, the combination of a yoke frame, a cross-shaft passing through the outer end portions of the frame, and flukes arranged on the cross-shaft, each fluke detachably connected to the next adjacent fluke and having heads provided with flattened forwardly extending portions at opposite sides to cause the points of the flukes to engage when the frame is moved forward.

4. In an anchor, the combination of a yoke frame, flukes having heads provided with end flanges, with the adjacent flanges of the heads detachably secured together, the outer flanges of the end flukes having sector-shaped slots to receive the end portions of the frame, and a cross-shaft passing through the flukes and the frame.

5. In an anchor, the combination of a frame having spaced arms, a cross-shaft passing through said arms, flukes having heads arranged on the cross-shaft, each of said heads externally flanged at each end, the outer flanges of the outer flukes having slots radiating from the cross-shaft, through which the arms pass, with the end walls of the slots arranged to limit the rotation of the flukes to the opposite sides of the arm, and means detachably securing the flukes together, passing through the adjacent flanges of the heads.

[Claims 6 and 7 not printed in the Gazette.]

957,622. MEANS FOR THE PROPULSION OF VESSELS. RASMUS P. NIELSEN, Tranebjerg, near Samsö, Denmark. Filed Aug. 14, 1909. Serial No. 512,897.
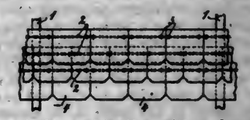


1. The combination with a vessel, of an endless carrier mounted thereon, a plurality of inclined blades on the carrier, and means for adjusting the inclination of said blades.

2. The combination with a vessel, of a pair of endless chains arranged on opposite sides of the hull, and blades secured to the chains, each blade consisting of an inclined plate pivoted to the chains and an adjustable member pivoted to the plate and to the chains.

3. The combination with a vessel having two hulls spaced apart and connected by a deck, of a pair of endless chains for each hull, the pairs of chains being adapted to be independently operated and each provided with a plurality of adjustable blades standing at an inclination to the chains.

4. The combination with a vessel having two hulls arranged side by side and connected together by a deck, of a pair of endless chains for each hull, the pairs of chains being adapted to be independently operated and each provided with a plurality of blades formed of two members, one of which stands at an inclination to the chains and the other is adjustable to vary the inclination of the first.

957,623. ROOF. ADOLF OESTERHELD, Seelze, near Hanover, Germany. Filed Apr. 14, 1908. Serial No. 426,937.



1. In a roof, the combination with a plurality of rafters, of a series of chains stretched transversely across the rafters, a series of tiles resting on each of the said chains and overlapping in successive series and clamps passing through the tiles and links of the chain, and removably securing the tiles to the links.

2. In a roof, the combination with a plurality of rafters, of a series of chains stretched transversely across the rafters, and a series of tiles supported on the said chains and removably secured thereto.

3. In a roof, the combination with a plurality of rafters, of a series of chains stretched transversely across the rafters, a series of tiles supported on the chains, and means for removably securing the tiles to the chains.

957,624. TYPE-WRITING MACHINE. WILLIAM C. PAUL, New York, N. Y. Filed Apr. 23, 1903, Serial No. 153,992. Renewed Oct. 11, 1909. Serial No. 522,126.



1. In a typewriting or similar machine, a cylindrical type wheel, a spindle therefor, a skeleton spiral cam connected with the spindle, and a key lever tangential in relation to the cam and having its inner end bent to engage and turn the cam, the said cam being provided with a recess at its upper end adapted to loosely receive the bent end of the key lever and thereby effect a locking engagement with the key lever, as specified.

2. In a typewriting or similar machine, a cylindrical type wheel, a spindle therefor, a skeleton spiral cam attached to the said spindle, the said spiral cam being circular in plan and elongated in face view, and a spring controlled key lever tangential in relation to the cam, the inner end of said lever being bent and adapted for engagement with an edge of said cam to turn the same, and through said cam to turn the spindle and the type wheel, the said cam being provided with a recess adapted to receive the end of the lever, as specified.

3. In a typewriting or similar machine, a type wheel, a spindle therefor, a skeleton spiral cam circular in plan and elongated in face view and having opposing points oppositely disposed, a recess at one side of the center of the upper point, and supporting arms connecting the inner face of the cam at its pointed ends with the said spindle, as set forth.

4. In a type writing machine, the combination with a type wheel, a spindle therefor, a sleeve having limited rotary movement on the said spindle, a spiral cam attached to the said sleeve, the said cam being circular in plan and elongated in face view and provided with a recess at its upper end extending from its under edge, and a spring attached to the upper end of the sleeve and to the said spindle, of standards at opposite sides of the spindle, a frame mounted to slide on the said standards, which frame includes an upper and a lower ring encircling the said spindle, the upper ring having teeth thereon, an extension arm for the spindle, projecting over the teeth of the said upper ring, and a series of key levers having their inner ends bent and arranged in a circular group under the cam, the inner end of each key lever being adapted to engage with an edge of the said spiral cam to rotate the said spindle, to enter the recess in the said cam and to engage with the frame at one point in its movement, carrying the toothed ring in engagement with the extension from the said spindle, whereby to effect an engagement between said extension and the teeth of the upper ring, for the purpose described.

5. In a typewriting machine, the combination with a type wheel, a spindle therefor, and a spiral cam connected with the spindle, the said cam being provided with a recess at its upper end extending from its under edge, of a frame mounted to slide vertically, and provided with a toothed ring, an arm on the spindle projecting over the teeth of said ring, and a series of key levers having their inner ends bent and arranged in a circular group under the cam, each key lever being adapted to engage the cam to rotate the spindle, the inner end of said lever being adapted to enter the recess in the cam and also to engage with the said frame to move the toothed ring in engagement with the arm on the spindle, as set forth.

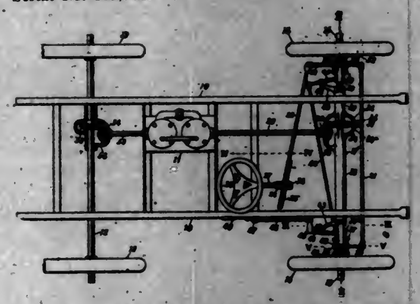
[Claims 6 to 10 not printed in the Gazette.]

957,625. PYROGRAPHIC POINT. LUDWIG QUOSBARTH, Newark, N. J. Filed June 16, 1909. Serial No. 502,403.



A device of the class described, having a body presenting a conical portion and a threaded extension at the smaller end thereof, a platinum point having a hollow base portion corrugated to present inwardly and outwardly-facing threads, the inwardly-facing thread having engagement with said threaded extension and the outer surface of the base portion terminating substantially flush with the smaller end of the conical portion, a collar having a conical bore receiving said conical portion and the base portion of said point, and means for detachably securing said collar to said body and moving the collar longitudinally to frictionally bind against the outwardly-facing threads of the point.

957,626. DRIVING-GEAR FOR AUTOMOBILES. PHILIP J. RIVERS, New Rochelle, N. Y. Filed July 29, 1908. Serial No. 445,961.



1. In a vehicle driving mechanism, the combination with a frame, of a forward and a rear axle mounted thereon, a sleeve forming a journal for the forward axle, a wheel pivotally held to each end of the sleeve, means for moving the wheels horizontally on their pivots in unison, a gear carried by each wheel, a second gear slidingly held on each end of the forward axle, intermediate gears connecting the gears on the ends of the forward axle to operate the gears of the wheels in whatever position they are placed by the steering mechanism, levers for moving the gears on the axle inwardly or outwardly, a rod connecting the levers, a hand lever, and means connecting the hand lever to one of the gear operating levers whereby the sliding gears may be operated so that the forward wheels may or may not be positively driven.

2. In a vehicle driving mechanism, the combination with a frame, of a forward and a rear axle mounted thereon, pivotally held vehicle wheels at the forward part of the vehicle, means for moving the wheels in unison, a bevel gear slidingly held on each end of the forward axle, gears meshing therewith for driving the wheels in whatever position they are placed, levers for moving the gears on the axle inwardly or ontwardly, a rod connecting the levers, a hand lever, and means connecting the hand lever to one of the gear operating levers whereby the sliding gears may be operated so that the forward wheels may be positively driven.

3. In a vehicle driving mechanism, the combination with a frame, of an axle mounted thereon, a vehicle wheel pivotally held at each end of the axle, a gear slidingly held on each end of the axle, gears connecting the gears on the ends of the axle to operate the wheels in whatever position they are placed, levers for moving the gears on the axle inwardly and outwardly, a rod connecting the levers, and means for operating one of the levers.

957,627. LAMP. WILLIAM S. RYAN, Viola, Ill. Filed Mar. 3, 1908. Serial No. 418,946.



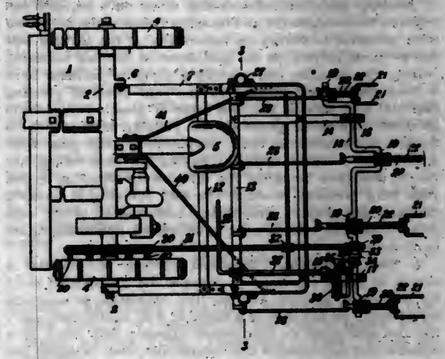
1. The combination of an upright casing, constituting a lamp post, a fuel supply reservoir in the lower portion of the casing, a lamp carried by the casing, a fuel feed tank located in the upper portion of the casing, having connections with the reservoir and lamp, a door forming a portion of the upper part of the casing, and a filling-tube extending into the top of the reservoir below the normal level of the fuel, accessible through said door.

2. The combination of an upright casing, constituting a lamp post, having spaced heads secured therein forming in connection with the casing a fuel reservoir, a fuel feed tank arranged within the casing above the reservoir, a lamp, a pipe leading from the top of the reservoir to the top of the feed tank, having controlling valves, an air compressor having a connection with said pipe between the controlling valves, a supply pipe leading from the lower portion of the reservoir to the upper portion of the feed tank, a lamp having a feed connection with the lower portion of the feed tank, adapted to be fed under the air pressure created by the compressor in the fuel tank, and a gage connected with the fuel feed tank for determining said pressure.

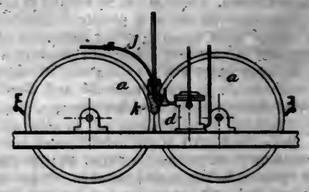
957,628. COMBINED HAY TEDDER AND MOWER. WILLIAM F. SCHANZLIN, Lima, Ohio. Filed Aug. 12, 1909. Serial No. 512,654.

1. In a device of the class described, the combination with a mower, of a hay tedder connected to said mower, means for driving said hay tedder from said mower, and means for adjustably supporting said hay tedder, comprising hollow casings, pins telescoping in said casings, wheels rotatably supported on said pins, and adjusting screws adjustably supported in said casings and resting on said pins.

2. In a device of the class described, the combination with a mower, of a hay tedder connected to said mower, said hay tedder comprising a frame, a crank shaft pivoted to said frame, forks pivoted to said crank shaft, links connecting said forks with said frame, a sprocket on said crank shaft, a clutch for connecting said sprocket to said crank shaft, driving connections between said sprocket and said mower, and means for adjustably supporting said hay tedder, comprising hollow casings, pins telescoping in said casings, wheels rotatably supported on said pins, and adjusting screws adjustably supported in said casings and resting on said pins.



957,629. COOLING APPARATUS FOR FLUID OR SEMI-FLUID SUBSTANCES. EJNAR SCHOU, London, England. Filed Feb. 25, 1909. Serial No. 479,922.

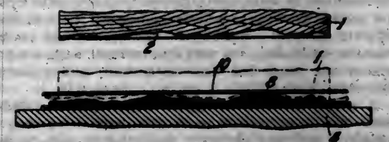


1. In a cooling apparatus of the class described, a pair of rolls separated by a minute definite gap, means for cooling said rolls, means for supplying liquid emulsion above said rolls, and means for conducting said emulsion into the bight of said rolls, said means acting to prevent cooling contact of the emulsion with the rolls prior to entering the bight thereof.

2. In a cooling apparatus of the class described, a pair of rolls separated by a minute definite gap, means for cooling said rolls, means for supplying liquid emulsion above said rolls, and two heated bodies acting to conduct said emulsion between them into the bight of said rolls, said bodies acting to prevent cooling contact of the emulsion with the rolls prior to entering the bight thereof.

3. In a cooling apparatus of the class described, a pair of rolls separated by a minute definite gap, means for cooling said rolls, means for supplying liquid emulsion above said rolls, and a heated body for conducting said emulsion into the bight of said rolls, said body acting to prevent cooling contact of the emulsion with the rolls prior to entering the bight thereof.

957,630. EMBOSSING PHOTOGRAPHS OR OTHER PICTURES. ALFRED G. SCOPES, Ipswich, England. Filed May 18, 1908. Serial No. 433,467.

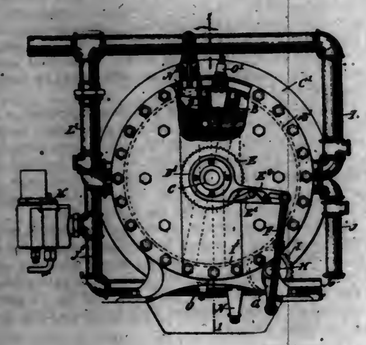


1. The hereinbefore described process of forming a cameo or relief die from an intaglio die or recessed mold

for embossing pictures, consisting in applying a coating of adhesive to a sheet of yielding material, placing the sheet of yielding material adhesive side down on a suitable bed beneath the intaglio die and bringing this intaglio die down with pressure to obtain an impression of the margin and flat portions thereof on the said sheet of yielding material, raising the intaglio die, placing a layer of suitable hard setting plastic composition on the said piece of yielding material and making the said layer of plastic composition thickest over those parts of the yielding material to be formed in the greatest relief, then covering the same with a sheet of yielding material having an intervening adhesive and then bringing the intaglio die down a second time with pressure to shape the said covering of yielding material and plastic composition conformably to the said intaglio die and allowing the thus formed cameo die to set hard for use.

2. The hereinbefore described process of forming a cameo or relief die from an intaglio die or recessed mold for embossing pictures and the like, consisting in applying an adhesive to one side of a sheet of soft paper, then placing the said sheet of soft paper adhesive side down in a suitable flat bed beneath the intaglio die, then bringing the intaglio die down with pressure upon the said sheet of soft paper to obtain therein an impression of the margin and flat parts of the said intaglio die, then raising the intaglio die, then placing a layer or layers of hard setting plastic composition on the said piece of soft paper and making the said layer or layers of plastic composition thickest over those parts of the piece of soft paper, as shown by the impression made therein, which are to be formed in the greatest relief, then covering the said plastic composition with a sheet of paper with an intervening adhesive and then bringing the said intaglio die down with pressure a second time upon the said paper and plastic composition to shape the same conformably to the intaglio die and allowing the cameo die thus formed to set hard for use.

957,631. ROTARY INTERNAL-COMBUSTION ENGINE. JAMES S. STEWART, Diamondville, Wyo. Filed Feb. 16, 1909. Serial No. 478,147.



1. A rotary internal combustion engine, comprising a cylinder having an inlet and an exhaust, a main shaft passing centrally through the cylinder, a revoluble piston in the said cylinder secured on the said shaft, an abutment mounted to rotate intermittently in the said cylinder, a countershaft, gear wheels connecting the said main shaft with the said countershaft, and a pawl and ratchet mechanism connecting the said countershaft with the said abutment for imparting an intermittent rotary motion to the said abutment.

2. A rotary combustion engine comprising a cylinder, a shaft journaled therein, a rotating piston secured to the shaft, a rotating abutment journaled thereon, a connection between the shaft and the abutment for imparting an intermittent motion thereto and at a greater speed than the speed of the piston, whereby to compress the charge, means for igniting the charge when so compressed, and spring latches against which the abutment rests during the ignition of the charge.

957,632. VEHICLE-BRAKE. VARDIMAN T. SWEENEY, Anchorage, Ky. Filed Oct. 27, 1909. Serial No. 524,832.



1. In a vehicle, the combination of a brake having a brake beam carrying shoes thereon, a casing mounted to swing on the running gear of the vehicle, a tongue pivoted on the said running gear, and a flexible connection between the said brake beam and the forward portion of the running gear and passing through the said casing, the said tongue being adapted to engage the said casing and impart a swinging motion thereto to tighten the said connection for moving the said brake shoes in active position.

2. In a vehicle, the combination of a brake having a brake beam, shoes on the said brake beam, a pivoted casing provided with pulleys mounted to swing on the running gear of the vehicle, a tongue pivoted on the said running gear, and a connection between the said brake beam and the forward portion of the running gear, having a flexible portion and adjustable portions, the said flexible portion being adapted to pass over and under the said pulleys, and the said tongue being adapted to engage the said casing and impart a swinging motion thereto to tighten the said connection for moving the said brake shoes in active position.

3. In a vehicle, the combination of a brake having a brake beam carrying shoes thereon, a casing mounted to swing on the running gear of the vehicle, a flexible connection between the said brake beam and the forward portion of the running gear and passing through the said casing, a manually controlled lever pivotally mounted on the tongue of the vehicle, and releasable locking means on the said tongue for holding the said lever in locked position thereon, the said lever being attached to the said connection to tighten the same for moving the said brake shoes in active position when the said lever is operated.

4. In a vehicle, the combination of a brake, having a brake beam, shoes on the said brake beam, a pivoted casing provided with pulleys mounted to swing on the running gear of the vehicle, a connection between the said brake beam and the forward portion of the running gear, having a flexible portion and adjustable portions, the said flexible portion being adapted to pass over and under the said pulleys, a manually controlled lever pivotally mounted on the tongue of the vehicle, and releasable locking means on the said tongue for holding the said lever in locked position thereon, the said lever being attached to the said connection to tighten the same for moving the said brake shoes in active position, when the said lever is operated.

5. In a vehicle, the combination of a brake having a brake beam, shoes on the said brake beam, a tiltable tongue mounted on the forward part of the running gear of the vehicle, a flexible connection between the said tongue and the said brake beam, a casing provided with pulleys mounted to swing on the said running gear and having the said connection passed therethrough, the said tongue being adapted to engage the said casing, when the said tongue is tilted, to tighten up the said connection for moving the said brake shoes into active position, and locking means on the said tongue and the said running gear for releasably locking the said tongue to the said running gear, to prevent the said tongue from tilting.

[Claim 6 not printed in the Gazette.]

957,633. ESTER FROM CHAULMOOGRA-OIL. LUDWIG TAUB, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Feb. 9, 1909. Serial No. 476,980. (Specimens.)

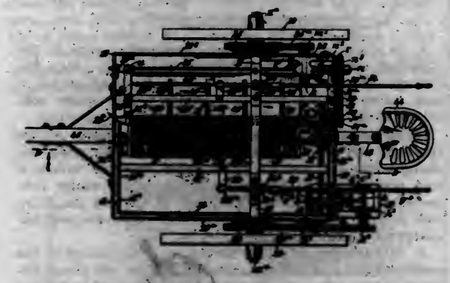
1. The herein-described process of producing esters from chaulmoogra-oil, which process consists in first saponifying chaulmoogra-oil, secondly acidulating and purifying the mixture of acids thus obtained, thirdly esterifying the mixture of acids thus purified and finally distilling the esters *in vacuo*.

2. The herein-described process of producing a preparation from chaulmoogra-oil, which process consists in first saponifying chaulmoogra-oil, secondly acidulating and purifying the mixture of acids thus obtained, thirdly esterifying the mixture of acids thus purified with ethyl alcohol to obtain the mixture of ethyl esters and finally distilling these ethyl esters *in vacuo*.

3. The herein-described mixture of almost odorless and tasteless esters from chaulmoogra-oil, which is a limpid neutral oil, soluble in ether and in alcohol, insoluble in water, yielding on saponification a mixture containing fatty acids from which chaulmoogric acid of the formula $C_{18}H_{32}O_2$ and the melting point of 68° C. may be isolated; and exhibiting valuable therapeutic properties.

4. The herein-described almost odorless and tasteless mixture of ethyl esters obtainable from chaulmoogra-oil, which is a limpid neutral colorless oil; boiling at 190 to 220° C. under a pressure of about 15 mm., soluble in alcohol and ether, and insoluble in water; and exhibiting valuable therapeutic properties.

957,634. BUG AND WORM KILLING MACHINE. LEVI THORTVEDT, Glyndon, Minn. Filed Mar. 9, 1909. Serial No. 482,328.



1. A machine of the character described, embodying a four-sided wheel-supported frame, a beater shaft rotatable on the end members of the frame, two radial beater blades oppositely secured on the shaft, gearing on the frame connecting the hub of one wheel with the beater shaft for its rotation, an insect crusher on the frame comprising a trough, an elongated screw rotatable in the trough, a crushing device at one end of the trough and screw, and gearing on the frame connecting the hub of the other wheel with the screw and crushing device.

2. A machine of the character described, embodying a main frame, a rockably adjustable frame supported in the main frame, a beater device rotatable on the said adjustable frame, and a crushing device adjustably supported on the main frame and adapted for crushing insects transferred thereinto from the beater device.

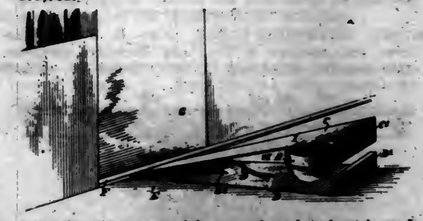
3. A machine of the character described, embodying a main frame, a rockably adjustable frame pivoted on the main frame, a beater device rotatable on the said adjustable frame, a crushing device, hanger bars adjustable for length and supporting the ends of the crushing device, and means for transferring insects from the beater device into the crushing device.

4. A machine of the character described, embodying a main frame, a rockably adjustable frame in the main frame, a rotatable beater device supported on the said adjustable frame, a pair of extensible hanger bars rockably adjusted on the main frame, an insect-crushing device connected at its ends to the lower ends of the hanger bars, and a chute plate carried by the crushing device and one hanger bar, said plate extending between the crushing device and the beater device.

5. A machine of the character described, embodying a main frame, a rockably adjustable frame in the main frame, a beater device rotatable on the said adjustable frame, an insect-crushing device, two hanger bars pivoted at one end of each on the main frame, means for adjusting the hanger bars an insect-crushing device hung at its ends on the hanger bars, a chute plate inclined between the beater device and the crushing device, and a guard plate supported from the main frame near the beater device.

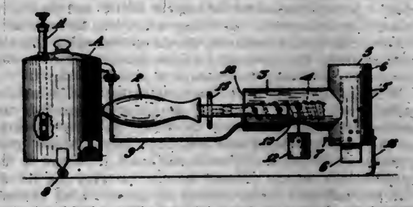
[Claims 6 to 11 not printed in the Gazette.]

957,635. BURGLAR-ALARM. WILLIAM G. TILLMAN, New York, N. Y., assignor of one-half to Henry Weinberger, Ansonia, Conn. Filed June 2, 1909. Serial No. 499,782.



A burglar alarm comprising a spring plate bent in wedge shape, the ends of the plate being at the short side of the wedge, and being spaced apart from each other, and each provided with an angular portion forming a stop for engagement by the opposite end, a spring between the plates, and a bell secured to one side of the plate and having an actuating push rod for engagement by the other side of the plate.

957,636. HAND SOLDERING-MACHINE. AGOSTINO TOSCO, San Francisco, Cal. Filed Aug. 24, 1909. Serial No. 514,386.



1. A soldering tool comprising a burner casing, a burner in said casing, a shell at one end of the casing and communicating therewith and into which shell the burner discharges its heat, a soldering iron fixed within said shell, and foldable means for supporting the soldering iron end of the tool independently of said iron when the latter is not in use.

2. A soldering tool having a fuel tank at one end, a soldering iron at the opposite end, an operating handle intermediate of the tank and soldering iron, and a foldable leg for supporting the soldering iron end of the tool independently of the iron when the latter is not in use, and a roller on the tank forming a freely movable support therefor.

3. In a soldering tool, the combination with a handle member, of a fuel tank on one end thereof, a freely movable support for the tank a burner supported at the other end of the handle member, connections between the fuel tank and burner, and an adjustably supported soldering-

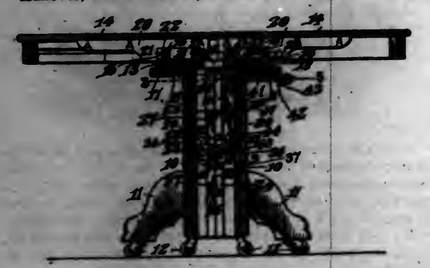
iron connected and movable with the handle and arranged in the path of discharge from the burner, said burner and soldering-iron having inclosing casings arranged one at right angles to the other and communicating with each other.

4. A soldering tool comprising the combination with a handle member, of a roller-bearing fuel tank carried thereby, a burner supported by the handle and communicating with the fuel tank, a soldering-iron supported in the path of the burner and movable with the handle, and means for supporting the soldering-iron end of the device independently of the soldering-iron when the device is not in use.

5. A soldering tool consisting in the combination with a suitable handle member, of a fuel tank carried by the handle, a substantially horizontal burner casing supported on the opposite end of the handle, said burner casing communicating at the front end with a vertical casing in which is adjustably supported a vertically arranged soldering-iron, a burner in the burner casing, and a fuel feed pipe connecting the tank and burner.

[Claims 6 to 8 not printed in the Gazette.]

957,637. EXTENSION-TABLE. JOHN B. WEEKS, Hanover, Pa., assignor to The Long Furniture Company, Hanover, Pa. Filed July 10, 1908. Serial No. 442,946.



1. In an extension table, the combination with a tubular pedestal comprising separable sections, of separable top sections mounted thereon, a tie device movably mounted on one pedestal section and detachably engaging the other pedestal section, a rotary actuating device for the tie device, a pitman connected to the tie device and having a crank connection with the rotary actuating device, and a stop carried by the actuating device and engaging the pitman to limit the movement of the actuating device and thereby maintain the tie device in a locked position.

2. In an extension table, the combination with a tubular pedestal comprising separable sections, of separable top sections mounted thereon, a tie device pivotally mounted on one pedestal section and detachably engaging the other pedestal section, a rotary actuating shaft journaled in the upper portion of the pedestal section carrying the tie device and having a crank disk at its inner end, an extensible and contractible pitman connected to the latch and having a crank connection with the disk, and a stop lug projecting from the disk into the path of movement of the pitman and arranged to engage the same after the crank has passed its upper dead center and thereby maintain the tie device in a locked position.

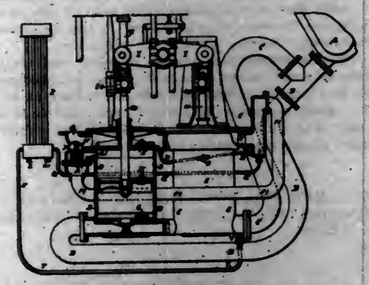
3. The combination of separable members, a hook-shaped latch having one end pivoted on one of the members and the other end extending over the second member, a device on the second member with which the hook engages by an upward movement, an actuating element pivoted on the first member at a point under the latch and extending beyond the pivoted end of the latter, connecting means between the element and latch whereby an upward or downward movement of the element produces a corresponding movement of the latch, and operating means connected with the element.

4. In an extension table, the combination with a tubular pedestal comprising separable sections, of a sectional top carried thereby, a plate secured longitudinally to the inner side of one pedestal section and having inwardly extending lips forming a socket between them, a plate secured longitudinally to the inner side of the other pedestal section and having a lug that engages between the lips, and means for detachably securing the sections together.

5. The combination of relatively-movable members, oppositely-disposed latches pivoted on one member, means on the other member with which the latches engage, a device pivoted on the first member at points below the latches, slot and pin connections between the device and latches whereby a downward movement of the device causes the latches to simultaneously drop out of engagement with the said means, and an actuating mechanism connected with the said device and including means for automatically locking the latter in raised position.

[Claims 6 to 16 not printed in the Gazette.]

957,638. STEAM-CONDENSING PLANT AND AIR-PUMP. WILLIAM WEIR, Cathcart, Scotland. Filed Feb. 7, 1910. Serial No. 542,499.



1. In steam condensing plant having air pumps of the combined wet and dry type wherein the dry air pump discharges into the wet air pump below its head valves, a cold water charged tubular injection water cooler connected to the suction and discharge of the dry air pump.

2. In steam condensing plant having air pumps of the combined wet and dry type wherein the dry air pump discharges into the wet air pump below its head valves, a cold water charged tubular injection water cooler connected to the suction and discharge of the dry air pump and a controllably-loaded non-return valve on the discharge of the dry air pump.

3. In a steam condensing plant having air pumps of the combined wet and dry type wherein the dry air pump discharges into the wet air pump below its head valves, a cold water charged tubular injection water cooler connected to the suction and discharge of the dry air pump, a controllably loaded non-return valve on the discharge of the dry air pump, and a valve controlled pipe connection between the hot well of the wet pump and the dry air pump discharge.

4. In steam condensing plant having air pumps of the combined wet and dry type wherein the dry air pump discharges into the wet air pump below its head valves, a cold water charged tubular injection water cooler connected to the suction and discharge of the dry air pump and a valve controlled pipe connection between the hot well of the wet pump and the dry air pump discharge.

5. Improved steam condensing plant comprising in combination a condenser, a combined wet and dry air pump of the type where the dry air pump discharges below the head valves of the wet air pump and a water-charged injection-water cooler connected with the suction and discharge of the dry air pump.

[Claims 6 to 13 not printed in the Gazette.]

957,639. PASSENGER-CAR. HARRY H. ADAMS, Baltimore, Md. Filed May 18, 1908. Serial No. 433,365.

1. The combination in a passenger car, of a vestibule open at both sides of the car, transverse partitions at each side of the vestibule, two doorways in each partition communicating with the interior of the car, and two railings having movable sections capable of shifting from one side of the car to the other so as to separate the ingress and egress sections of the vestibule.

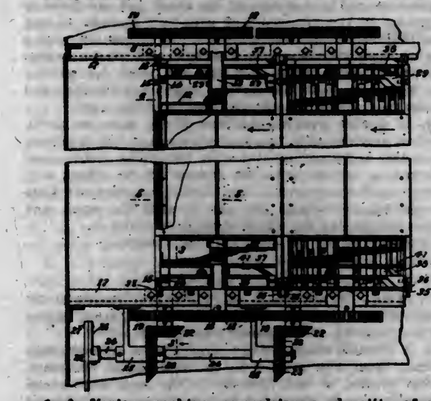


2. The combination in a passenger car, of a vestibule extending from one side of the car to the other and two transverse partitions, each having two doorways therein, two posts at each side of the vestibule, two rails projecting from the transverse partitions into the vestibule, and pivoted sections hinged to said rails so that they can be shifted to engage the posts on one side of the vestibule or the posts on the other side and separating the central ingress passage from the two egress passages.

3. The combination in a passenger car, of a vestibule, two transverse partitions separating the vestibule from the body of the car, each partition having two doorways therein, two posts at each side of the vestibule, rails projecting from the partitions between the doorways and into the vestibule, and a movable section pivoted to each rail so as to swing in a vertical plane and engage the posts on either side of the vestibule.

4. The combination in a passenger car having a central vestibule, of two transverse partitions separating the vestibule from the body of the car, each partition having two doorways therein, the spaces between the doors being equal to the width of the doorway, sliding doors mounted in the partition and arranged to close the doorways and when open to slide past each other, two railings projecting from the central portion of each partition into the vestibule, each rail having a transverse movable section capable of being shifted from one side of the vestibule to the other so as to divide the vestibule into ingress and egress passages on one side of the car, and means for closing the opposite side of the vestibule.

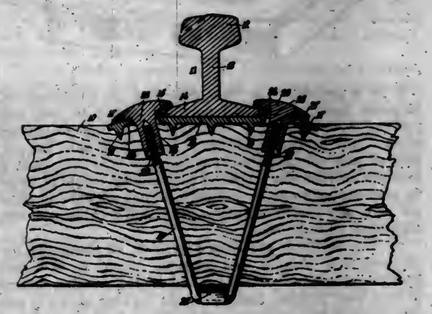
957,640. DISPLAY-MACHINE. JAMES S. ANDERSON, Newport, Ky. Filed May 24, 1909. Serial No. 497,876.



1. A display machine, comprising a plurality of vertically-mounted leaves radially disposed, an advancing mechanism for shifting the leaves from the one side of the radial center to the other, embodying a pawl and a stop member adapted to work conjointly to engage one, and one only, of the said leaves, and a holding device for maintaining the leaves in fixed position and adapted to be released by the said stop.

2. A display machine comprising a plurality of vertically disposed carrying bars arranged in circular disposition about a common center to form a half cylindrical drum; a plurality of supporting arms fixedly connected to said bars and pivotally mounted upon a common pivot shaft; a plurality of wedge shaped double faced leaves, one of which is fixedly mounted on each of said bars and disposed to extend a sharpened edge parallel with and near the rotary center of the said bars, the said leaves having rectilinear sides; a plurality of pins extended inwardly from the said bars; a circular plate rotatively mounted within the rotary path of said bars and concentrically therewith; a pawl pivotally mounted upon said plate and extended into the path of said pins and adapted to override said pins when moved in one direction and to engage the same when moved in the opposite direction; a stop pivotally connected to said plate and disposed in opposite relation to the said pawl, elongated to rest upon and bridge the distance between two adjacent of said pins on the one side of the assembled bars and to engage the first of the said pins on the opposite side of said assembled bars, said stop being separated from said pawl a distance less than the separation of adjacent pins; and a driving mechanism to continuously oscillate the said plate through a half revolution to transfer the said leaves successively from one radial to the opposite radial extension.

957,641. RAIL-FASTENER. DANIEL ASHWORTH, Wappingers Falls, N. Y. Filed Nov. 24, 1909. Serial No. 529,707.



1. A device of the class described, comprising a rail chair adapted to carry a rail and to rest upon a tie, U-shaped holding members, a keeper adapted to be positioned under the tie and engaging at the bends of said holding members, said keeper having bent extremities, and nuts having laterally extended heads and mounted upon said chair and extending to the under side thereof, said holding members being removably engaged by said nuts, said nuts engaging directly said chair and the base of the rail.

2. A device of the class described, comprising a chair adapted to carry a rail and to rest upon a tie, holding members extending to the under part of the tie, a keeper arranged under the tie and engaging said holding members, and nuts for securing said holding members on said tie, said chair having stops adapted to engage said nuts to hold the same against displacement, said nuts having recesses adapted to receive said stops.

3. A device of the class described, comprising a rail chair adapted to carry a rail and to rest upon a tie, said chair having openings therethrough, U-shaped holding members, a keeper adapted to be positioned under the tie and engaging at the bends of said holding members, said keeper having bent extremities, and nuts having laterally extended heads, engaging said chair and the base of the rail directly, said nuts being located in said openings of said chair, said holding members having threaded extremities adapted to be removably received by said nuts.

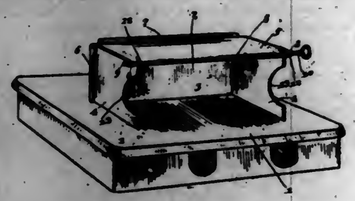
4. A device of the class described, comprising a rail chair adapted to carry a rail and to rest upon a tie, said chair having openings therethrough, U-shaped holding members, a keeper adapted to be positioned under the tie

and engaging at the bends of said holding members, said keeper having bent extremities, nuts having laterally extended heads, said nuts being located in said openings of said chair, said holding members having threaded extremities adapted to be removably received by said nuts, said heads of said nuts having edge recesses, and stops removably carried by said chair and adapted to be received by said recesses.

5. In a device of the class described, a chair of substantially uniform thickness adapted to carry a rail, and having offset side parts relatively inclined, whereby the surfaces of said parts are substantially flush with the respective upper surfaces of the base of a rail mounted upon said chair, a holding member, and a nut removably associated with said member and seating directly upon one of said side parts and the base of the rail.

[Claim 6 not printed in the Gazette.]

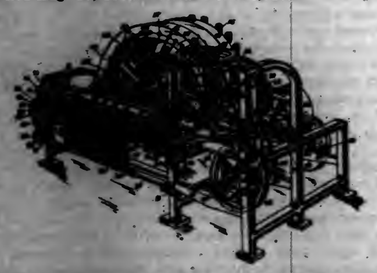
957,642. COOKING-STOVE. EDWARD BARKER, Chicago, Ill. Filed Jan. 15, 1910. Serial No. 538,269.



1. In a device of the class described, an elongated rectangular rear portion, end portions hinged to said rear portion, a substantially rectangular top portion hinged to said rear portion, and means for locking said top portion to said end portions comprising a bent-over edge in said top portion and a locking rod slidably mounted therein, said end portions having perforations adapted to register with and permit the passage of said locking rod, substantially as described.

2. In a device of the class described, an elongated rectangular rear portion, end portions hinged to said rear portion, a substantially rectangular top portion hinged to said rear portion, and means for locking said top portion to said end portions comprising a bent-over edge in said top portion having recesses adapted to receive the end portions and a locking rod slidably mounted therein adapted to span said recesses, said end portions having perforations adapted to register with and to permit the passage of said locking rod, substantially as described.

957,643. WIRE-NETTING-WEAVING MACHINE. COLIN E. BEGG, Mosman, Sydney, New South Wales, Australia. Filed Aug. 13, 1908. Serial No. 448,310.



1. In a wire weaving machine, a base, a shaft supported by the base, a plurality of connected pairs of wheels journaled on the shaft and spaced apart from each other, each of said pairs of wheels having on its peripheral surface alined transverse grooves, a fixed rim encircling each wheel and provided with transverse grooves normally registering with the grooves of the wheel, pinions each composed of half sections, each half section having a longitudinal passage therethrough, a circular rack on the shaft between each pair of wheels and engaging the pinions, a pair of plates on one side of the wheel and provided on their adjacent edges with registering grooves, pinions supported by the grooves, each of said pinions consisting of half sections having longitudinal openings, and means for reciprocating the plates longitudinally of each other.

2. In a wire weaving machine, a base, a shaft supported by the base, a plurality of connected pairs of wheels journaled on the shaft and spaced apart from each other, each of said pairs of wheels having on its peripheral surface alined transverse grooves, a fixed rim encircling each wheel and provided with transverse grooves normally registering with the grooves of the wheels, pinions each composed of half sections, one section of each pinion being arranged in a groove of the wheel and the other in a groove of the rim, each of said half sections having longitudinal passages therethrough, and means for moving the wheels with respect to the rims.

3. In a wire weaving machine, a base, a shaft supported by the base, a plurality of connected pairs of wheels journaled on the shaft and spaced apart from each other, each of said pairs of wheels having on its peripheral surface alined transverse grooves, a fixed rim encircling each wheel and provided with transverse grooves normally registering with the grooves of the wheels, pinions each composed of half sections, one section of each pinion being arranged in a groove of the wheel and the other in a groove of the rim, each of said half sections having longitudinal passages therethrough, and means for moving the wheels with respect to the rims, said wheels having segmental slots, for the purpose set forth, and means for varying the effective length of the slots.

4. In a wire weaving machine, a base, a shaft supported by the base, a plurality of connected pairs of wheels journaled on the shaft and spaced apart from each other, each of said pairs of wheels having on its peripheral surface alined transverse grooves, a fixed rim encircling each wheel and provided with transverse grooves normally registering with the grooves of the wheels, pinions each composed of half sections, one section of each pinion being arranged in a groove of the wheel and the other in a groove of the rim, each of said half sections having longitudinal passages therethrough, means engaging the slots for moving the wheels to shift the sections supported thereby, and means for varying the effective length of the slots.

5. In a wire weaving machine of the class set forth, a wheel provided with transverse grooves, a rim encircling the wheel and also provided with transverse grooves and adapted to register with the grooves of the wheel, said wheels having segmental slots, means engaging the slots for moving the wheels whereby to shift the same, and means for varying the effective length of the slots.

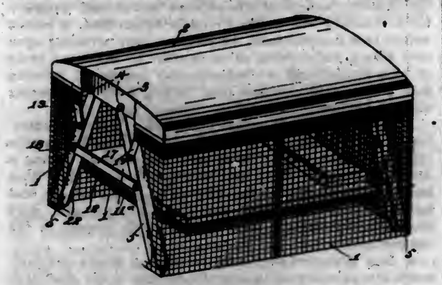
[Claims 6 to 13 not printed in the Gazette.]

957,644. FOLDABLE STAND FOR CANOPY-HAMMOCKS. CHARLES A. BERGER, Clay Center, Kans. Filed Dec. 18, 1909. Serial No. 533,908.

1. A foldable canopy stand comprising a central longitudinal beam, legs pivoted to and foldable on the beam, braces pivoted to and foldable on the legs, and canopy supporting heads removably held to the legs and engaged by certain of said braces.

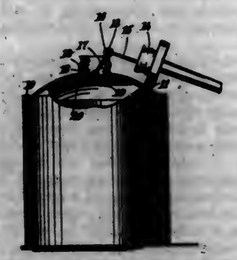
2. A foldable canopy stand comprising legs, a two part central beam pivoted to and foldable between the legs, beam braces pivoted to and foldable on the legs, canopy supporting heads having notches fitting projections on the legs for holding the heads, and head braces pivoted to and foldable on the legs.

3. The combination, with a central longitudinal beam, and legs pivoted at one end to the ends of the beam and adapted to be folded on the beam lengthwise, of a series of connections between the legs and between the



beam and the legs and foldable on the legs; and reversible pointed plates pivoted to the other end of the legs.

957,645. STOPPER-RETAINER. ALVIN C. BOGGS, Jr., Fort Dodge, Iowa. Filed Mar. 6, 1909. Serial No. 481,574.

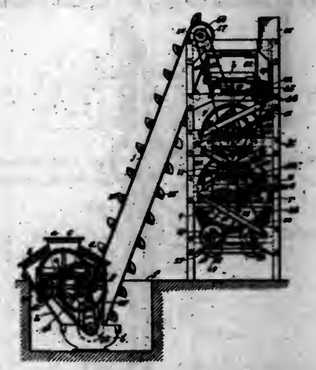


1. In a device of the class described, the combination with a vessel having a curved top and a neck projecting from the top, and a spout having a head fitting in the neck of the vessel, of a bar having one end secured in the lower end of the spout and projecting into the vessel, said bar being of a length less than one half of the diameter of the vessel and provided with an eye at its inner end, a keeper bar in the vessel and of a length greater than the internal diameter of the neck of the vessel, and adapted to engage with its ends the inner face of the top of the vessel, the said bar being bent to form an eye at its center of length, and a link having an eye at each end, one eye engaging the eye of the keeper bar and the other the eye of the bar secured to the spout, the link being of a length a little greater than that of the neck of the vessel, whereby when the head and spout are removed the head and spout will be supported upon the outer face of the top of said vessel, and the keeper bar held spaced from the inner end of the neck.

2. In a device of the class described, a spout having a head, a bar having one end secured in the lower end of the spout and provided with an eye at its inner end, a keeper bar of a length greater than diameter of the outlet of the vessel which the stopper closes, said bar being bent to form an eye at its center of length, and a link having an eye at each end, one eye engaging the eye of the keeper bar, and the other the eye of the bar secured to the stopper.

957,646. MIXING AND BLENDING MACHINE. HORACE G. HOUGHTON, Cleveland, Ohio. Filed Mar. 13, 1909. Serial No. 483,333.

1. In a mixing apparatus, the combination of a rotatable non-perforated cylindrical shell supported upon its rotating means having lifting buckets on its interior surface, a pair of rotatable blending rolls within said shell adapted to receive material to be blended from said buckets, means for rotating said rolls, and means for revolving said shell, substantially as set forth.



2. In a mixing apparatus, the combination of a rotatable non-perforated cylindrical shell supported upon its rotating means having lifting buckets on its interior surface, a plurality of pairs of rotatable blending rolls adapted to operate within said shell and to receive material to be blended from said buckets, means for rotating said rolls, and means for revolving said shell, substantially as set forth.

3. In a mixing apparatus, the combination of a rotatable cylindrical shell having lifting buckets on its interior surface and supported by its rotating means at an axial inclination from the horizontal, rotatable inclined blending rolls within said shell disposed parallel thereto and adapted to receive material to be blended by gravity from said buckets, and means for rotating said rolls and said shell, substantially as set forth.

4. In a mixing apparatus, the combination of a rotatable cylindrical shell having lifting plates on its interior surface and supported by its rotating means at an axial inclination from the horizontal, one or more pairs of rotatable inclined blending rolls disposed within and parallel to said shell and adapted to receive repeatedly the material to be blended by gravity from said lifting plates, and means for rotating said rolls and said shell, substantially as set forth.

5. The combination of a cylindrical shell supported by rotating means at an axial inclination from the horizontal, a plurality of lifting plates projecting from the interior surface of said shell, a pair of inclined blending rolls within and parallel to said shell disposed to receive material to be blended by gravity from said lifting plates, rotatable shafts for said rolls extending out of said shell, fixed bearings for one of said roll shafts, spring bearings for the other of said roll shafts adapted to press one roll against the other, and means for rotating said rolls, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

957,647. FAUCET. CHARLES T. BOWN and THOMAS E. SMITH, Pittsburg, Pa. Filed July 27, 1909. Serial No. 509,892.

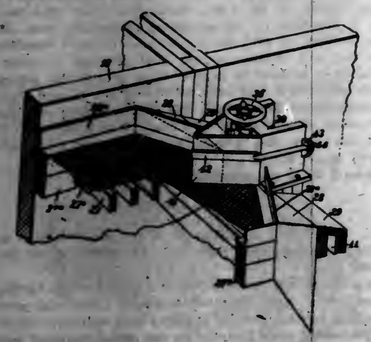
1. In a faucet, the combination of a body-portion having an upper and a lower interiorly-arranged valve seat, said body-portion having an inlet chamber and an outlet chamber, a removable plug mounted in the outlet chamber and adapted to engage said upper valve seat for shutting off communication between the two chambers, a rod fixed to said plug and extending in said inlet chamber, a valve arranged within said inlet chamber and adapted to engage said lower valve seat when said rod is elevated, said valve being convexo-concave in cross-section, and a buoyant body depending from said valve and of less diameter than said

inlet chamber and adapted to automatically move said valve to engagement with said lower seat when said rod is removed from the inlet chamber whereby communication will be cut off between the inlet and the outlet chamber.



2. In a faucet, the combination of a body-portion having an upper and a lower interiorly-arranged valve seat, said body-portion having an inlet chamber and an outlet chamber, a removable plug mounted in the outlet chamber and adapted to engage said upper valve seat for shutting off communication between the two chambers, a rod fixed to said plug and extending in said inlet chamber, a valve arranged within said inlet chamber and adapted to engage said lower valve seat when said rod is elevated, said valve being convexo-concave in cross-section, a buoyant body depending from said valve and of less diameter than said inlet chamber and adapted to automatically move said valve to engagement with said lower seat when said rod is removed from the inlet chamber whereby communication will be cut off between the inlet and the outlet chamber, an inlet communicating with the lower end of said inlet chamber, and an outlet communicating at its inner end with said outlet chamber, the inner end of said outlet being above the plane of the inner end of the inlet.

957,648. JIG. WILLIAM A. BRADLEY, Spokane, Wash. Filed Oct. 23, 1907. Serial No. 398,722.



1. In a device of the class described, a screen compartment having a diagonally constricted overflow end, a screen in said compartment, a discharge cup in said constricted end of said compartment and centrally disposed, and an overflow liner diagonally disposed at each side of said cup, said cup being adapted to receive material at a lower level than the overflow level of said liner.

2. In a device of the class described, a screen compartment having substantially triangular blocks arranged at the opposite corners of the overflow end of said compartment, whereby the overflow end is constricted, a screen within said compartment, an overflow liner arranged upon said screen and having parts parallel to the inner faces of said blocks, and a discharge cup positioned between said blocks, said overflow liner having ends terminating at said cup.

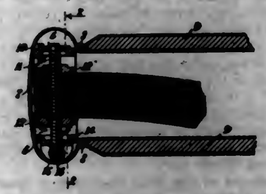
3. In a device of the class described, a screen compartment, substantially triangular blocks arranged in opposite corners of said compartment, said compartment having a discharge outlet between said blocks, and an overflow liner having parts parallel to the inner faces of said blocks, and having the overflow edge substantially horisontal, said blocks having the top faces inclined with respect to the horizontal.

4. In a device of the class described, a screen compartment, blocks arranged in opposite corners of the discharge end of said compartment and of substantially triangular cross section, said blocks having the lower ends tapered toward said corners wherein said blocks are located, said blocks further having the top faces inclined from the sides of said compartment toward the center thereof and toward the overflow end of said compartment, a screen within said compartment, a discharge cup between said blocks, and an overflow liner having parts adjacent to the inner faces of said blocks and terminating at said cup, said overflow liner having the overflow edge substantially horizontal.

5. A device of the class described, comprising a screen compartment having a screen, means for forcing water through said screen alternately in opposite directions, diagonal guides near one end of said screen and forming a tapered discharge, a discharge cup arranged at said discharge and having a part extending over said screen, said extending part of said cup being tapered oppositely to said tapered discharge, and being open at the bottom, means for regulating the passage of material through said cup, a discharge box below said screen, means for discharging values into said box, and a conduit from said cup to said box, said guides permitting the overflow of material above said screen at each side of said cup at a level substantially above the lower edge of said extending part of said cup.

[Claims 6 to 11 not printed in the Gazette.]

957,649. LOOSE-LEAF BINDER. THOMAS BRAZIL-DINEEN, North Sydney, New South Wales, Australia. Filed Dec. 15, 1909. Serial No. 533,315.



1. The combination in a loose leaf binder, of a box case, leaf binding plates arranged within the case, a screw journaled in the case and having right and left-hand threaded end portions in respective engagement with the plates, and an operating shaft extending to one end of the case at the outside thereof and operatively connected to the screw.

2. The combination in a loose leaf binder, of a box case, leaf-binding plates arranged within the case, a screw journaled in the case, having right and left hand threaded end portions in respective engagement with the plates, book covers having a back extending around the case, and an operating shaft extending to one end of the case at the outside thereof and operatively connected to the screw and inclosed by and between the book back and the box case.

957,650. POWER-TRANSMITTING APPARATUS. HENRY L. BROWN, Paterson, N. J., assignor to Brown Spin-Wright Company, New York, N. Y., a Corporation of New York. Filed Nov. 28, 1908. Serial No. 465,466.



1. Power transmitting apparatus; comprising a driving member and a driven member, one of said members being an endless metal band having apertures the walls of which constitute drive-surfaces and said other member being rotatable and having projections to enter said band apertures, with co-acting opposed drive surfaces inclined laterally fore-and-aft in transverse relation to the plane of actuative movement, said surfaces being constructed and arranged to cause progressive, positive, actuative contact of said driving member surfaces with said driven member surfaces respectively.

2. Power transmitting apparatus; comprising an apertured, endless, metal band, flat throughout its length, constituting a lengthwise-acting member; and a rotating member having a projecting part with operating surfaces inclined divergently in a lateral direction relatively to the path of rotation of said part and arranged to turn recurrently into the path of said lengthwise-acting band, the aperture-walls of said band presenting opposed co-acting inclined surfaces to be engaged with said inclined operating surfaces positively and progressively throughout each period of projection of said part into the path of movement of said lengthwise-acting band; substantially as described.

3. Power-transmitting mechanism; comprising an endless metallic band having at regular intervals V-shaped openings with their angles rounded and arranged with their apices in the same direction lengthwise of said band; a rotatable sprocket-wheel-member consisting of a hub provided with a peripheral tooth V-shaped in transverse-section and having its apex arranged in the mid plane of the rotative path of said tooth; and means to support said sprocket-wheel-member rotatably adjacent said band, in position to permit recurrent entry of said tooth into a plurality of said apertures successively; said tooth having its walls normal to the periphery of said hub near the base of said tooth, and tapered toward the crown, to permit ready entrance of said tooth into said opening, and exit therefrom, respectively, said tooth being somewhat shorter than said opening, and of suitable width to cause progressive engagement of its walls with the inclined walls of said openings respectively, for positive actuation of one of said members by the one selected to serve as the driving member; and means to actuate said driving member; substantially as described.

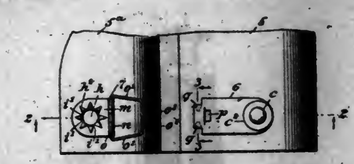
4. The combination with a rotating member having a driving surface wedge-shaped in plan when viewed radially; of a band having coöperating wedge driving surfaces respectively inclined laterally fore-and-aft relatively to the direction of coöperative movement; substantially as described.

5. A power-transmitting device; comprising an endwise movable member provided at intervals with V-shaped openings having their apices arranged lengthwise of said member; substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

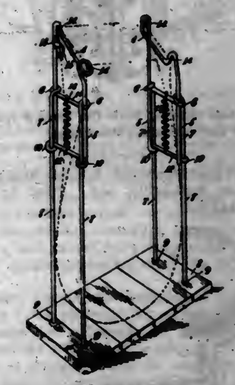
957,651. FASTENER FOR GLOVES AND OTHER ARTICLES. LEWIS W. BROWN, St. Louis, Mo. Filed Aug. 7, 1907, Serial No. 387,446. Renewed Oct. 21, 1909. Serial No. 523,914.

A fastening device for gloves and other articles, comprising a male bulb section, a link-plate having an opening near one end and securable near its opposite end on the male bulb section, a female bulb section, and a toggle lever, rockably connected at one transverse edge on said female



bulb section, said toggle lever having a toe that may enter the opening in the link-plate.

957,652. BAG-HOLDER. BURNETT BUSH, Kennedy, N. Y. Filed Aug. 31, 1909. Serial No. 515,392.



1. A bag holder comprising a plurality of holding arms set in an inclined position depressed toward the front of the said holder; guide members integrally formed with said arms and depended therefrom and provided at the lower end with loops; a plurality of supporting rods mounted vertically and extended through said loops and being provided at the upper ends of said rods with loops infolding said guide members, said rods being formed to normally spread to separate the said holding arms each from the other; a platform to hold said supporting rods; cross braces extended between said loops; and expansion springs connecting the said cross braces to normally maintain the said holding arms in a raised position.

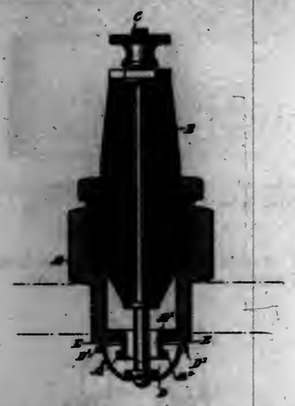
2. A bag holder comprising a plurality of holding arms set in an inclined position depressed toward the front of said holder; guide members integrally formed with said holding arms and depended therefrom; supporting rods for said arms slidably connected with said guide members; means for elevating the said arms upon the said supporting rods; and a latch mounted on the said arms to engage the said rods to hold the said arms in depressed position.

957,653. OIL-PROOF SPARK-PLUG. ELI J. BUSHEY, New York, N. Y. Filed Mar. 10, 1909. Serial No. 482,471.

1. A spark plug provided with a shell having an exterior retaining flange at its terminal, and a firing cap forming with the said shell a spark gap, the said cap having a deflecting flange at the said gap.

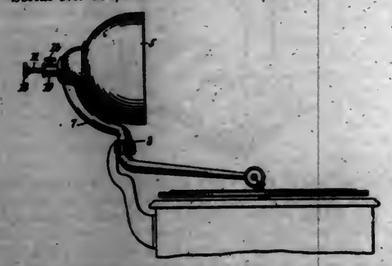
2. A spark plug provided with a shell having an exterior retaining flange at its terminal and a firing cap forming with the said shell a spark gap, the said cap having an exterior annular deflecting flange at its base adjacent to the said gap.

3. A spark plug provided with a shell having a neck at its terminal, said neck having a lateral marginal flange,



and a closed cap forming with the shell a spark gap, said cap having an external marginal flange.

957,654. REVERBERATORY SOUND-HORN. WILLIAM A. CHAPMAN, Smithville, Ark. Filed July 10, 1908. Serial No. 442,857.



1. The combination of a resonator having a sound-conveying tube leading thereto, and a hollow sound reflector supported within and spaced from the resonator, with the discharge ends of the tube and resonator facing in the same direction and the tube discharging into the space between the resonator and reflector.

2. The combination of a resonator having a sound-conveying tube leading thereto, and a sound reflector supported in the resonator and movable forwardly and rearwardly therein to and from the tube forward of the discharge end thereof.

3. The combination of an approximately hemispherical resonator having an opening in the bottom, and a sound tube intermediate its length, conforming to the curvature of the resonator and having a substantially hemispherical extremity attached to the resonator over said opening.

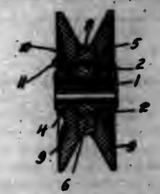
4. The combination of a horn for sound reproducing machines, of opalescent material, and a combined sound and light reflector of like material arranged within the horn.

5. The combination of a resonator, a sound tube leading to and attached to the resonator, and a reflector within the resonator, adjustably supported on the tube, with the tube discharging externally of the resonator.

[Claims 6 to 19 not printed in the Gazette.]

957,655. TROLLEY-WHEEL. OWEN S. CHEW, Brookfield township, Trumbull county, Ohio. Filed Sept. 18, 1909. Serial No. 518,344.

A trolley wheel embodying a hub section, a bearing section and flange sections, said hub section comprising a sleeve with a collar intermediate the ends of said sleeve, the ends being exteriorly screw threaded and the periphery of said collar provided with a transverse groove, said bearing section having a central opening adapted to receive the collar of said hub section, with the wall of said opening provided with a transverse groove adapted to aline with the groove of said collar, and provide an opening, said bearing section having the periphery thereof provided with a circumferentially arranged groove, said flange



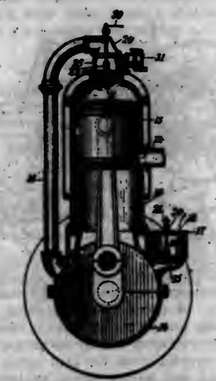
sections being provided with interiorly threaded openings adapted to receive the threaded ends of said sleeve, said flange sections having the inner sides thereof shaped to provide a continuation of the sides of the groove of said bearing section, said flange sections having openings formed therein adapted to aline with the opening of said hub and bearing section, and a pin mounted in the opening of said sections and adapted to lock said sections together.

957,656. MECHANISM FOR ELEVATING LIQUIDS. MARTIN J. CHRISTENSEN, Chicago, Ill. Filed Oct. 24, 1908. Serial No. 459,417.



In a device of the class described, the combination with a tubular casing of comparatively large diameter, of a compression chamber of less diameter than said tubular casing and centrally positioned within the upper end thereof, a bell shaped hood closing the upper end of said chamber, an annular reducing member secured to the lower end of said chamber, an air delivery pipe of less diameter than said chamber extending downwardly from said reducing member, a disk valve adapted to close the lower opening of said air delivery pipe, a stem on said valve extending upwardly through said air delivery pipe and said compression chamber and threaded through said hood, said hood being provided with a sleeve to receive said stem, an upwardly opening cylindrical nozzle encircling the lower end portion of said air delivery pipe, an annular perforated member interposed between the lower end of said pipe and the adjacent wall of said nozzle for holding the latter in position, and an air supply pipe leading into said compression chamber through said hood, substantially as described.

957,657. INTERNAL-COMBUSTION ENGINE. PAUL DANIEL, New York, N. Y., assignor to Benjamin G. Paskus, New York, N. Y. Filed Feb. 4, 1909. Serial No. 476,004.



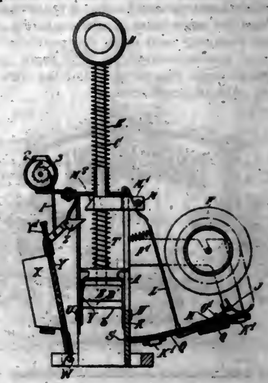
1. A two-cycle internal combustion engine having an explosion chamber, a compression chamber, a conduit for delivering compressed air from said compression chamber, to said explosion chamber, an automatic inlet valve for permitting the entrance of air to the compression chamber during the compression of the charge in the explosion chamber, means for varying the resistance to the opening of said valve, an inlet valve for controlling the admission of air from said conduit to said explosion chamber, means for inducting a liquid fuel into said conduit, and means for automatically preventing the return movement of said fuel, the quantity of fuel inducted being dependent upon the resistance to the opening of the first-mentioned valve.

2. A two-cycle internal combustion engine having a cylinder provided with an inlet port, a crank case serving as a compression chamber, a spring-pressed inlet valve for said crank case, a conduit leading from said crank case to said inlet port, the portion of the conduit adjacent said inlet port serving as a mixing chamber, a liquid fuel float chamber adjacent said mixing chamber, a passage leading from said float chamber to said mixing chamber and terminating in a spray nozzle, and a check valve within said passage, the suction of air into said crank case serving to induct fuel into said mixing chamber, and the quantity of the fuel inducted being dependent upon the tension of the spring of the first-mentioned valve.

3. An internal combustion engine having an explosion chamber, a compression chamber, a conduit delivering air to the former from the latter, an inlet valve within said conduit and closely adjacent said explosion chamber, for preventing the return of fluid from said explosion chamber to said conduit, a throttle valve within said conduit and adjacent said inner valve, for controlling the quantity of fluid admitted from said conduit to said explosion chamber, and means controllable by a vacuum pressure in the compression chamber and conduit for inducting a fuel into the latter during the admission of uncharged air to said compression chamber.

957,658. STAMP-AFFIXER. PERCY G. E. DANIEL, Clevedon, and CHARLES A. H. BULLOCK, London, England. Filed July 30, 1907. Serial No. 386,288.

1. In a stamp affixer, the combination with a case; of an operating handle and rod attached thereto, means for carrying a supply of water, means for automatically moistening the substance to which the stamp is to be affixed, means for carrying a supply of stamps, means for automatically feeding said stamps into the machine, means for automatically regulating the quantity of stamps so fed, means for automatically detaching a stamp from the supply, means for pressing the detached stamp on to the moistened surface, and means for automatically restoring the parts to their operative position after the delivery of each stamp.



2. In a stamp affixer, the combination with a case, of a movable air tight reservoir for water, means for automatically moistening the substance to which the stamp is to be affixed, means for carrying a supply of stamps, means for automatically feeding said stamps into the machine, means for automatically regulating the quantity of stamps so fed, means for automatically detaching a stamp from the supply, means for pressing the detached stamp on to the moistened surface, means for absorbing spare moisture, and means for automatically restoring the parts to their operative position after the delivery of each stamp.

3. In a stamp affixer, the combination with a case, of a movable air tight reservoir for water, guides for said reservoir, means for automatically moistening the substance to which the stamp is to be affixed, means for carrying a supply of stamps, means for automatically feeding said stamps into the machine, means for automatically regulating the quantity of stamps so fed, means for automatically detaching a stamp from the supply, means for pressing the detached stamp on to the moistened surface, and means for automatically restoring the parts to their operative position after the delivery of each stamp.

4. In a stamp affixer, the combination with a case, of a movable air tight reservoir for water, guides for said reservoir, delivery jets in said reservoir, means for automatically moistening the substance to which the stamp is to be affixed, means for carrying a supply of stamps, means for automatically feeding said stamps into the machine, means for automatically regulating the quantity of stamps so fed, means for automatically detaching a stamp from the supply, means for pressing the detached stamp on to the moistened surface, and means for automatically restoring the parts to their operative position after the delivery of each stamp.

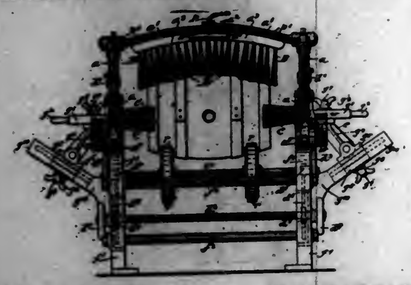
5. In a stamp affixer, the combination with a case, of a movable air tight reservoir for water, guides for said reservoir, delivery pipes in said reservoir, a lever carried by said case for lifting said reservoir in its guides and releasing the same, means for carrying a supply of stamps, means for automatically feeding said stamps into the machine, means for automatically regulating the quantity of stamps so fed, means for automatically detaching a stamp from the supply, means for pressing the detached stamp on to the moistened surface, and means for automatically restoring the parts to their operative position after the delivery of each stamp.

[Claims 6 to 38 not printed in the Gazette.]

957,659. BARREL-SCRUBBING MACHINE. ADAM DANNER, Yonkers, N. Y. Filed May 6, 1909. Serial No. 494,443.

1. In a barrel-scrubbing machine, the combination, with the supporting standards, of rotary barrel-supporting roll-

ers, a segmental brush above the barrel for scrubbing the outer surface of the same, freely movable inclined arms pivoted to the standards and having a transverse brace-rod for supporting the segmental scrubbing brush, counterbalanced means engaging said arms for partially supporting the arms, and means carried by said arms for engaging said counterbalanced means and limiting the downward movement of said inclined arms.



2. In a barrel-scrubbing machine, the combination, with the supporting standards, of rotary barrel-supporting rollers, a segmental brush for scrubbing the circumference of the barrel, inclined brush-supporting arms pivoted to said standards, stops on said arms, pivotally mounted upright pillars abutting against said stops, means for raising or lowering said pillars and inclined supporting arms, and counterbalancing weights connected with said pillars.

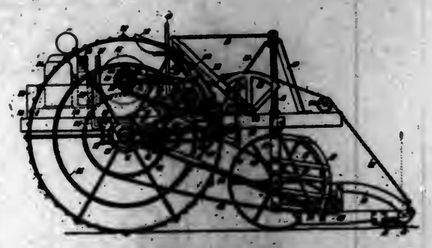
3. In a barrel-scrubbing machine, the combination of supporting side-standards having inclined bracket-arms, rotary barrel-supporting rollers turning in bearings of said standards, inclined arms pivoted to the outer ends of the bracket-arms, an arched brace connecting the upper ends of said inclined arms, a segmental scrubbing brush supported on said arched brace, adjustable stops on the inclined arms, pivotally mounted upright pillars abutting at their upper ends against said stops, means for adjusting the pillars into a higher or lower position, and weights connected with the upright pillars for counterbalancing the weight of the segmental brush and its supporting mechanism.

4. In a barrel-scrubbing machine, the combination, with the side-standards, of outwardly-inclined bracket-arms attached to said side-standards and provided with guide-ways, slide-blocks guided in said ways, means for clamping said slide-blocks to the inclined bracket-arms, inwardly-inclined arms pivoted to said slide-blocks, scrubbing brushes for the heads of the barrel, and means for adjusting said brushes forward and backward on the upper ends of the inwardly-inclined pivot-arms for adjusting the head-brushes higher or lower and inwardly and outwardly relatively to the heads of the barrels.

5. In a barrel-scrubbing machine, the combination of side-standards, outwardly-inclined bracket-arms attached to the side-standards and having inclined ways, adjustable slide-blocks guided in the ways of said bracket-arms, inwardly-inclined arms pivoted to said slide-blocks and provided with guide-blocks at their upper ends, brush-holders provided with slotted shanks guided on guide-blocks of the pivot-arms, means for clamping the slotted shanks to the guide-blocks, and means for clamping the heads of the brushes to the holders.

957,660. AUTOMOBILE MOWING-MACHINE. CHARLES G. DELANO, Berkley, Mass. Filed Oct. 27, 1909. Serial No. 524,823.

1. An automobile mowing machine comprising an elongated rectangular carrying body; an axle rotatably mounted in said body; carrying wheels mounted on said axle, one of said wheels being fixed thereon; a reciprocating cutter bar disposed in front of and in the path of said wheels; a plurality of carrying arms for said cutter bar embodying separable sections adjustable lengthwise; a motor carried on said body; a transmission mechanism operatively connecting said wheels and cutter bar and said motor; and a clutch mechanism for engaging and disengaging said motor.



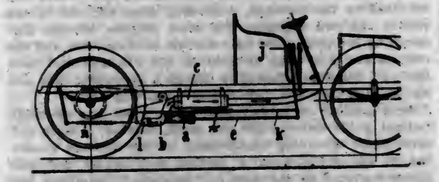
2. An automobile mowing machine comprising an elongated rectangular carrying body; an axle rotatably mounted in said body; carrying wheels mounted on said axle, one of said wheels being fixed thereon; a reciprocating cutter bar disposed in front of and in the path of said wheels; a plurality of carrying arms for said cutter bar pivotally attached thereto, and having screw threaded ends; pivotal mountings for said arms having collars to engage the said axle and screw threaded sockets to engage said threaded ends of said arms; a motor carried on said body; a transmission mechanism operatively connecting said wheels and cutter bar and said motor; and a clutch mechanism for engaging and disengaging said motor.

3. An automobile mowing machine comprising an elongated rectangular carrying body; an axle rotatably mounted in said body; carrying wheels mounted on said axle, one of said wheels being fixed thereon; a reciprocating cutter bar disposed in front of and in the path of said wheels; a carrier for said cutter bar extended to the rear thereof, and having supporting devices adapted to slide on the surface of the ground; a plurality of carrying arms for said cutter bar pivotally attached thereto and having screw threaded ends; pivotal mountings for said arms having collars to engage the said axle and screw threaded sockets to engage said threaded ends of said arms; a motor carried on said body; a transmission mechanism operatively connecting said wheels and cutter bar and said motor; and a clutch mechanism for engaging and disengaging said motor.

4. An automobile mowing machine comprising an elongated rectangular carrying body; an axle rotatably mounted in said body; carrying wheels mounted on said axle, one of said wheels being fixed thereon; a reciprocating cutter bar disposed in front of and in the path of said wheels; a carrier for said cutter bar extended to the rear thereof, and having supporting devices adapted to slide on the surface of the ground; guards mounted on said carrier at the rear of said cutter bar to deflect the straw from the path of said wheels; a plurality of carrying arms for said cutter bar pivotally attached thereto and having screw threaded ends; pivotal mountings for said arms having collars to engage the said axle and screw threaded sockets to engage said threaded ends of said arms; a motor carried on said body; a transmission mechanism operatively connecting said wheels and cutter bar and said motor; and a clutch mechanism for engaging and disengaging said motor.

5. An automobile mowing machine comprising an elongated rectangular carrying body; an axle rotatably mounted in said body; carrying wheels mounted on said axle, one of said wheels being fixed thereon; a reciprocating cutter bar disposed in front of and in the path of said wheels; a carrier for said cutter bar extended to the rear thereof and having supporting devices adapted to slide on the surface of the ground; inwardly inclined guards mounted on said carrier at the rear of said bar, to deflect the straw inwardly between the said wheels; a plurality of carrying arms for said cutter bar pivotally attached thereto and having screw threaded ends; pivotal mountings for said arms having collars to engage the said axle and screw threaded sockets to engage said threaded ends of said arms; a motor carried on said body; a transmission mechanism operatively connecting said wheels and cutter bar and said motor; and a clutch mechanism for engaging and disengaging said motor.

957,661. WHISTLE, SIREN, OR THE LIKE. LEON A. DELFEUCH, Neuilly-sur-Seine, France, assignor to Auguste Gildenmeister, Paris, France. Filed Sept. 19, 1907. Serial No. 393,632.

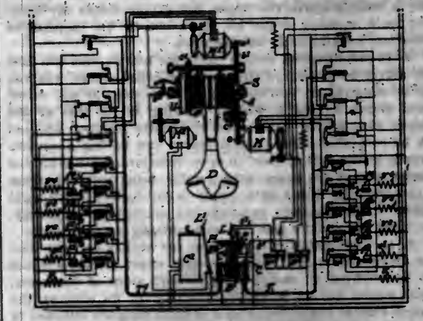


1. The combination with a whistle comprising a piston-tube closed at one end and provided with outlet-orifices, a fixed pyramid in said tube, said pyramid being cut away to provide passages between its edge and the wall of said tube adjacent to said outlet-orifices and a spring-actuated piston in said piston-tube adapted to normally close said openings and orifices, of means for operating said piston, an exhaust-pipe, a branch exhaust-pipe connected with the opposite end of the piston-tube, means for closing the exhaust-pipe, and a spring-actuated lever mechanism connecting said closing means with the operating means of the piston.

2. In a motor-vehicle, a whistle having a piston-tube having orifices and extending longitudinally of the frame of the vehicle, an exhaust-pipe extending downwardly into communication with the rear-end of the whistle and then extending rearwardly, a cap adapted to close the rear-end of the exhaust-pipe, a lever carrying said cap on its lower end, resilient means tending to move said cap from the rear-end of the exhaust-pipe, a fixed pyramid in the piston-tube, said pyramid being cut away at its edge to form passages between the pyramid and the wall of the tube adjacent to said outlet-orifices, a piston slidable in said piston-tube and adapted to close said orifices, resilient means tending to move said piston rearwardly, a hand-lever pivoted to said frame and extending below the same, a piston-rod connecting the lower end of said hand-lever to said piston, and resilient means connecting together intermediate points of both of said levers.

3. In a motor-vehicle, a piston-tube extending longitudinally of the frame of the vehicle, an exhaust-pipe extending downwardly in communication with the rear-end of the piston-tube and then extending rearwardly, a rearwardly-pointing pyramid fitting in said piston-tube and cut away at its edges to form orifices, said piston-tube being also provided with orifices, adjacent to said first-named orifices, a hand-lever pivoted to and extending above and below said frame, a piston slidable in said piston-tube and adapted when in its rearmost position to close and cover all of said orifices, a screw-cap closing the forward end of the piston-tube and having a central perforation, a piston-rod connected to the lower end of said hand-lever and passing through said central perforation and secured to said piston, a helical spring between said screw-cap and piston and surrounding said piston-rod, a cap-carrying lever pivoted to said frame, a cap carried on the lower end of said cap-carrying lever and adapted to close the rear-end of the exhaust-pipe, a cap-closing rod having an intermediate resilient portion and having its opposite ends attached to intermediate points of said levers, and a spring having its rear-end connected to said frame and its forward end to the lower end of the cap-carrying lever.

957,662. MEANS FOR OPERATING MASTER-CONTROLLERS. EUGENE G. DEUCHER, Cleveland, Ohio, assignor to The Brown Hoisting Machinery Company, Cleveland, Ohio. Filed July 28, 1909. Serial No. 509,973.



1. The combination with a hoisting and conveying machine provided with an electrically operated grab-bucket on the same, a plurality of systems of rheostat resistances therein, having switches in the path of the current therethrough, master controllers for actuating said switches, and suitable lever-mechanism for rotating the controllers, when moved in one direction and making and breaking contacts, with the controller circuits, when moved crosswise of said direction, substantially as shown and described.

2. Means for operating a plurality of master controllers comprising the combination of a suitable gearing for simultaneously rotating said controllers and a two-way or duplex hand-lever for actuating said gearing when moved, in one direction, and of making and breaking a contact with the circuits of said controllers when moved crosswise of said direction, substantially as shown and described.

3. A means for operating master controllers comprising the combination of a hinged frame-work or housing between the same provided with racks that mesh in with pinions on the cylinders of said controllers, a two-way, or duplex lever, within said housing for actuating the same about its hinges, said lever being in contact with and a part of the controller circuits when in the center path of said actuating movement one way, and, out of contact with one or the other of said circuits when and according as it is moved cross-wise of said path on its other way, substantially as shown and described.

957,663. ALARM DEVICE FOR CULINARY UTENSILS. PAULA C. EMSLIE, Boston, Mass. Filed Sept. 2, 1909. Serial No. 515,918.



1. An alarm device for kettles and the like, comprising a sleeve adapted to be rigidly secured to the kettle cover in open communication with the inner side thereof, said sleeve having a whistle-opening in its side, and a whistle member rotatably mounted in said sleeve and having a recess adapted, in certain positions thereof, to register with said opening and to provide a whistle passage from beneath the cover to said recess, substantially as described.

2. An alarm device for kettles and the like, comprising a sleeve adapted to be rigidly secured to the kettle cover in open communication with the inner side thereof, said sleeve having a whistle-opening in its side, and a whistle

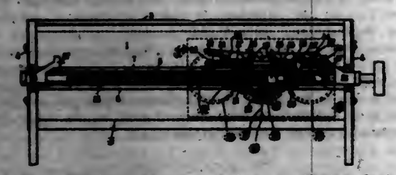
member rotatably mounted in said sleeve and having a recess adapted, in certain positions thereof, to register with said opening and to provide a whistle passage from beneath the cover to said recess, said whistle member having a handle above the upper end of the sleeve for turning said member from an operative to an inoperative position, substantially as described.

3. In combination with a cover for kettles and the like, an alarm device comprising an open ended sleeve, adapted to be mounted in, and opening at both sides of the cover, said sleeve having a whistle opening in its side at the upper side of the cover, and a whistle member adapted to be rotatably fitted in said sleeve and having a whistle recess in the side thereof in open communication with the under side of the cover, said member being rotatable from a position in which said recess is in register with said whistle opening to a position out of register therewith, to close the whistle passage, substantially as described.

4. In combination with a cover for kettles and the like, an alarm device comprising an open ended sleeve, adapted to be mounted in, and opening at both sides of the cover, said sleeve having a whistle opening in its side at the upper side of the cover, and a whistle member adapted to be rotatably fitted in said sleeve and having a whistle recess in the side thereof in open communication with the under side of the cover and adapted, when in position therein, to be held in register with said whistle opening, said member being adapted to be removably inserted in the upper end of said sleeve and having a handle at its upper end, and means for engaging the sleeve to prevent withdrawal therefrom, subtantially as described.

5. In combination with a cover, a whistle-member mounted therein and having a passage therethrough leading to the inner side of the cover and a removable whistle-member having a handle at one end and insertible at the other in said passage to connect it to the cover and to cooperate with said cover member to sound an alarm when steam is forced through said passage, substantially as described.

957,664. MALTING APPARATUS. CHARLES J. ERDMANN, St. Louis, Mo. Filed Dec. 8, 1909. Serial No. 531,939.



1. In a malting apparatus, a box, a stirring device rotatably mounted in said box and provided with a gear member, a drive shaft, a pair of pinions splined to said drive shaft and either of which is adapted to operate the gear member of said stirring device, spring controlled means for governing said pinions, and means for controlling said spring controlled means to maintain one of said pinions in engagement with the stirring device gear member and the other pinion out of engagement with said gear member.

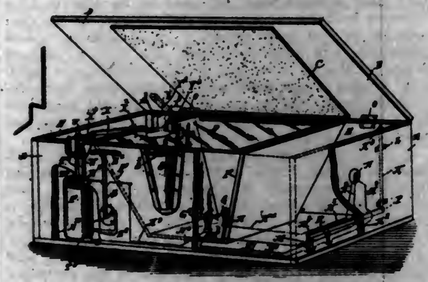
2. In a device for actuating the stirring device of a malting apparatus, a drive shaft, a pair of pinions splined to said shaft and either of which is operable upon said stirring device, a shifter for controlling said pinions, dogs for controlling said shifter, and means whereby said dogs are automatically thrown out of positions to control the shifter.

3. A mechanism for actuating the stirring device of a malting apparatus, comprising a drive shaft, a pair of pinions splined to said shaft, a carriage loosely fitted to said shaft, a shifter rod, members carried by said shifter rod whereby said pinions may be moved, a pair of dogs carried by said carriage and adapted to engage said shifter members to restrain the shifter rod from movement, springs associated with said shifter rod by which movement may be imparted thereto, and means whereby said dogs may be tripped to release said shifter after said springs have been compressed.

4. A malting apparatus comprising a box having longitudinal guide slots in the side walls thereof, an agitator shaft extending transversely of the box and operating in the guide slots, rack bars secured to the side walls over the guide slots, pinions fixed to the agitator shaft, and meshing with the rack bars, a bevel gear wheel fixed to the agitator shaft, a drive shaft, bracket bearing arms each having a trip arm provided with an opening, a carriage loosely fitted to the drive shaft, bevel pinions splined to the drive shaft and adapted to alternately mesh with the bevel gear wheel, a shifter rod having end collars and mounted on the carriage, depending arms slidable on the shifter rod and engaging the bevel pinions, springs surrounding the shifter rod between the slidable arms and the end collars, and dogs pivoted to the carriage and each having a shoulder adapted to engage a depending arm and an inclined face adapted to ride on a trip arm.

5. A malting apparatus comprising a box having longitudinal guide slots in the side walls thereof, a main agitator shaft extending transversely of the box and operating in the guide slots, a driving spur wheel and side plates mounted on the main agitator shaft, auxiliary agitator shafts journaled in the side plates spur wheels fixed to the auxiliary agitator shafts and meshed by the driving spur wheel, rack bars secured to the side walls over the guide slots, pinions fixed to the main agitator shaft, and meshing with the rack bars, a bevel gear wheel fixed to the main agitator shaft, a drive shaft, bracket bearing arms each having a trip arm provided with an opening, a carriage loosely fitted to the drive shaft, bevel pinions splined to the drive shaft and adapted to alternately mesh with the bevel gear wheel, a shifter rod having end collars and mounted on the carriage, depending arms slidable on the shifter rod, and engaging the bevel pinions, springs surrounding the shifter rod between the slidable arms and the end collars, and dogs pivoted to the carriage and each having a shoulder adapted to engage a depending arm and an inclined face adapted to ride on a trip arm.

957,665. AUTOMATIC PHOTOGRAPHIC-PRINTING MACHINE. GEORGE W. FERGUSON, Springfield, Mo. Filed July 19, 1907. Serial No. 384,627.



1. In a photographic printing device, a casing, sources of actinic and non-actinic light within said casing, a hinged cover for said casing, automatic means for energizing said actinic source for a definite period, arranged to be operated by said cover, and means for energizing the source of non-actinic light when the cover is raised.

2. In a photographic printing device, a casing, sources of actinic and non-actinic light within said casing, a hinged cover for said casing, a sliding contact for energizing said sources of actinic light for a definite period, means operated by said cover for actuating said sliding contact, and means operated by said cover for energizing the source of non-actinic light.

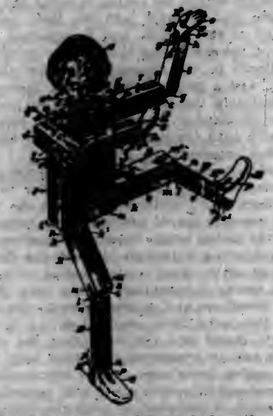
3. In a photographic printing device, a casing, sources of actinic and non-actinic light within said casing, a hinged cover for said casing, a stationary contact secured to said casing, a movable contact adapted for sliding engagement with said stationary contact, means for regulating the movement of said movable contact, the engagement of said movable contact with said stationary contact completing the circuit through the actinic light, and means for energizing the source of non-actinic light when the cover is raised.

4. In a photographic printing device, a slotted casing, incandescent lamps arranged within said casing, one of said lamps being actinic, and the other of said lamps being non-actinic, means for supporting the negative in proximity to said lamps, a hinged cover for said casing provided with resilient pads, a cylinder within said casing, a plunger within said cylinder, a stationary contact secured to said casing, a movable contact carried by said plunger arranged to engage said stationary contact for completing the circuit through the actinic lamp, a lever for operating said plunger pivotally connected to said cover, means for regulating the time of engagement of the contacts, and means for completing the circuit through the non-actinic lamp, when the cover is raised.

5. In a photographic printing device, a slotted casing, incandescent lamps arranged within said casing, one of said lamps being adapted to give out actinic rays and the other of said lamps being adapted to give out non-actinic rays, means for supporting the negative in proximity to said lamps, a hinged cover for said casing provided with resilient pads, a pivoted forked lever carried within said casing and adapted to project through said slot, pivotal connections between said cover and said lever, a cylinder provided with an opening, a plunger adapted to be engaged by said forked lever, a contact carried by said plunger, a stationary contact secured to said casing and arranged to be engaged by the first named contact for energizing said actinic lamp, and a gage for regulating the size of the opening in said cylinder.

[Claim 6 not printed in the Gazette.]

957,666. JOINTED FIGURE. GEORGE W. FERGUSON, Plymouth, Wis. Filed May 25, 1909. Serial No. 498,200.



1. A jointed figure, comprising a body, a head having a neck provided with flat beveled edges on its lower end, and an elastic cord connecting the head and body, whereby the head may be turned to either side and held in the position to which it is moved.

2. A jointed figure, having a body, flat beveled edges on each end of said body, limbs, bevel corners on the ends of said limbs, and elastic means for connecting the limbs and body.

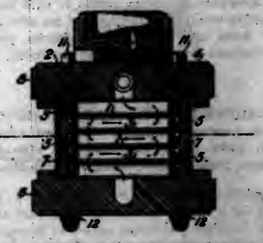
3. A figure, having a four sided body with flat ends and beveled corners between the sides and ends, a plurality of members, and elastic cords connecting the members with the body.

4. A figure, having a rigid four-sided body with flat ends and provided with slots in said ends extending through the front and rear walls thereof, a plurality of members, and elastic cords connecting the members with the body and working in said slots.

5. A figure, having a four-sided body with flat ends and provided with slots in its ends and at right angles to one another, a plurality of slotted members, and elastic cords connecting the members with the body and working in the slots of said body and members.

[Claims 6 to 16 not printed in the Gazette.]

957,667. APPARATUS FOR ELECTRICALLY HEATING RUNNING WATER. GEORGE FULLER and LEONARD FULLER, Bow, London, England. Filed June 3, 1909. Serial No. 500,009.



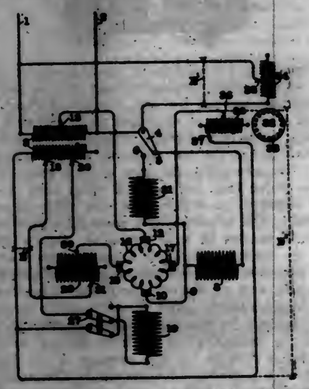
1. In apparatus for electrically heating water; the combination with a casing having an inlet and an outlet passage oppositely located for the passage of liquid to be heated; of a plurality of extremely thin platinum plates, edge clamps comprising frames, located in the said casing to grip the edges of the said plates between them and hold same at a distance apart the form of such plates and the manner in which they are mounted being such as to permit said liquid to pass from the said inlet passage between said plates to said outlet passage, means for supporting said frames in said casing, a negative electric terminal, an electric conductor extending from alternate platinum plates to said negative terminal, a positive electric terminal, and an electric conductor extending from the remaining platinum plates to said positive terminal.

2. In apparatus for electrically heating water, the combination with a casing having an inlet and an outlet passage oppositely located for the passage of the liquid to be heated, of a plurality of horizontally arranged superposed extremely thin platinum plates each having a through aperture to permit of the passage of the liquid between and through said plates from said inlet to said outlet, edge clamps comprising frames, located in the said casing to grip the edges of the said plates between them and hold same at a distance apart, a negative electric terminal, an electric conductor extending from alternate platinum plates to said negative terminal, a positive electric terminal, and an electric conductor extending from the remaining platinum plates to said positive terminal, substantially as set forth.

3. In apparatus for electrically heating water, the combination with a casing having an inlet and an outlet passage oppositely located for the passage of the liquid to be heated, of a plurality of horizontally arranged superposed extremely thin platinum plates each alternate plate having a through aperture adjacent to one side of the interior of the casing and the remaining plates having an aperture adjacent to the opposite side of the casing to permit of the circuitous passage of liquid through and between the said plates from said inlet to said outlet, edge clamps comprising frames horizontally arranged in said casing to clamp said platinum plates at their edges, a negative electric terminal, an electric conductor extending from alternate platinum plates to said negative terminal, a positive electric terminal, and an electric conductor extending from the remaining platinum plates to said positive terminal, substantially as set forth.

4. In apparatus for electrically heating water, the combination with a plurality of horizontally arranged superposed extremely thin platinum plates each having a through aperture for the passage of liquid, a series of superposed horizontally arranged edge clamps comprising frames between the adjacent surfaces of which the edges of said platinum plates are located and clamped, of an open-ended casing into which said frames and said plates are placed, a closure plate for one end of said casing having an inlet passage formed therein communicating with the interior of said casing for the inlet of liquid, an end closure plate for the opposite end of said casing having a passage for the outlet of the liquid from said casing, means for clamping the end closure plates to the ends of said casing to form a water-tight joint and to press said frames gripping said platinum plates together, a negative electric terminal, an electric conductor extending from alternate platinum plates to said negative terminal, a positive electric terminal, and an electric conductor extending from the remaining platinum plates to said positive terminal, substantially as set forth.

957,668. ALTERNATING-CURRENT MOTOR. VALBEN A. FYNN, London, England. Original application filed Dec. 19, 1906, Serial No. 348,669. Divided and this application filed Mar. 6, 1909. Serial No. 481,766.



1. In an alternating current motor, the combination with a stationary member provided with a neutralising winding, of a revolving member provided with a commuted winding connected in series relation with the neutralising winding along an axis coinciding with the axis of said neutralising winding, exciting brushes on the revolving member, and means for producing an alternating flux along an axis approximately coinciding with that of the neutralising winding.

2. In an alternating current motor, the combination with a stationary member provided with a neutralising winding, of a revolving member provided with a commuted winding connected in series relation with the neutralising winding, a teaser winding on the stationary member, and exciting brushes on the revolving member along an axis displaced from that of the neutralising winding.

3. In an alternating current motor, the combination with a stationary member provided with a neutralising winding and a teaser winding, of a revolving member carrying a conductively impressed working current along an axis coinciding with that of the neutralising winding, and an exciting current along an axis displaced from that of the neutralising winding.

4. In an alternating current motor, the combination with a stationary member provided with a neutralising winding and a teaser winding, of a revolving member provided with a commuted winding connected in series relation with the neutralising winding along an axis coinciding with the axis of said neutralising winding, and an exciting circuit on the revolving member.

5. In an alternating current motor, the combination with a stationary member provided with a neutralising winding and a teaser winding coaxially disposed therewith, of a rotor provided with a commuted winding, means connected in series relation with the neutralising winding for conductively impressing a working E. M. F. on said commuted winding along an axis coinciding with the axis of said neutralising winding, and means for providing an exciting circuit by closing the circuit of said commuted winding along an axis displaced from the axis of the neutralising winding.

[Claims 6 to 24 not printed in the Gazette.]

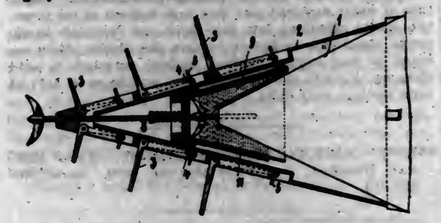
957,669. SOAP-DISPENSER. WILLIAM B. GARNETT, Tonkawa, Okla., assignor of one-half to Joseph E. Faulds, Tonkawa, Okla. Filed Mar. 29, 1909. Serial No. 486,436.



1. A liquid dispensing apparatus comprising an elongated valve casing formed at an intermediate point with an outlet port, the casing being closed at one end and being provided with a by-pass leading from said closed end and reentering the casing at a point in transverse alinement with the outlet port, the casing being pierced by an inlet port intermediate of its other end and the outlet port, a liquid reservoir in continuous communication with the inlet port, a reciprocatory piston valve formed intermediate of its ends with a transverse measuring chamber of less length than the distance between the inlet and outlet ports, the piston valve being movable into operative position within the casing to bring the measuring chamber into registry with both the inlet port and the adjacent end of the by-pass, and to compress air in the closed end of the casing and through the by-pass to forcibly eject liquid in the measuring chamber through the outlet port, and a spring acting on the piston valve to normally maintain the same in inoperative position with the measuring chamber in communication with the inlet port and with both the outlet port and the adjacent end of the by-pass uncovered.

2. A liquid dispensing apparatus comprising a vessel for containing a supply of liquid, a tubular valve casing disposed substantially horizontally within the lower portion of the vessel in spaced relation to the bottom thereof, one end of the casing being closed and the other end being open and projecting outwardly through the side wall of the vessel, an outlet spout communicating with the lower side of the casing intermediate of the ends thereof and depending therefrom and passing through the bottom of the vessel, the casing being provided with a by-pass leading from its closed end and reëntering the same at a point above and in transverse alinement with the outlet spout, the casing being also formed intermediate of its projecting end and the outlet spout with vertically alining inlet ports both communicating with the interior of the vessel, a reciprocatory piston valve mounted in the casing and formed intermediate of its ends with a transverse measuring chamber of less length than the longitudinal distance between the inlet ports and the outlet port, the piston valve being movable toward the closed end of the casing to bring the measuring chamber into registry with both the outlet spout and the adjacent end of the by-pass and to compress air through the by-pass to forcibly eject liquid in the measuring chamber through the discharge spout, a cap removably mounted on the projecting open end of the casing and limiting the movement of the piston valve in one direction, a stem secured to the piston valve and passing slidably through the cap and terminating at its outer end in a push button, and a spring acting on the piston valve to normally maintain the same in inoperative position against the cap with the measuring chamber in communication with both inlet ports and with both the outlet port and the adjacent end of the by-pass uncovered.

957,670. TORPEDO. MAX GLASS, Vienna, Austria-Hungary. Filed Nov. 22, 1909. Serial No. 529,411.



1. A device for the purpose specified comprising a detachable cap adapted to fit over a torpedo head, said cap being provided with a line adapted to connect the same with the torpedo head, together with means in connection with said cap for engaging a torpedo net, and means for displacing the center of gravity of said torpedo upon striking said net whereby the same is tilted, as and for the purpose described.

2. A device for the purpose specified comprising a detachable cap adapted to fit over a torpedo head, said cap being provided with a line adapted to connect the same with the torpedo head, together with means in connection with said cap for engaging a torpedo net, and means for displacing the center of gravity of said torpedo upon striking said net whereby the same is tilted, in combination with an igniting rod extending through said cap, substantially as described.

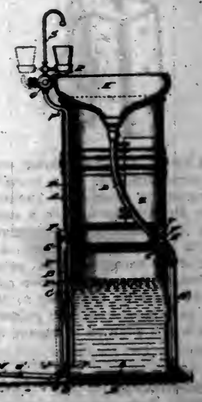
3. A device for the purpose specified comprising a detachable cap adapted to fit over a torpedo head, said cap being provided with a line adapted to connect the same with the torpedo head, together with means in connection with said cap for engaging a torpedo net, and means for displacing the center of gravity of said torpedo upon striking said net whereby the same is tilted, in combination with an igniting rod extending through said cap and resiliently connected to the igniting device so as to permit of the impact of the torpedo against a protection net without causing the explosion of the same, substantially as described.

957,671. DENTAL CUSPIDOR. ISAAC M. HAIR, Union, S. C. Filed June 17, 1909. Serial No. 502,715.

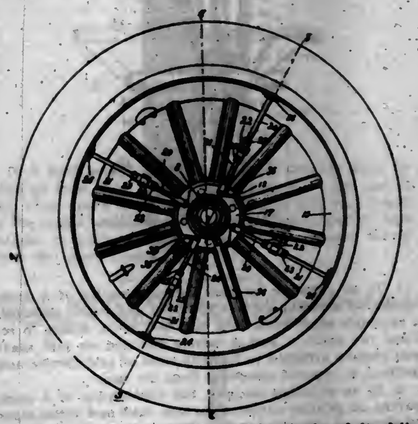
1. A dental cuspidor comprising a water tank, arranged to contain air under pressure, a bowl, a pipe leading from said tank to said bowl, a spring-actuated valve in said pipe and a foot lever for operating said valve.

2. A dental cuspidor comprising a tank having an upper and a lower compartment, means for admitting air and water into said lower compartment, a bowl arranged to project into said upper compartment, means adapted to receive the contents of said bowl, a pipe leading from said lower compartment through said upper compartment and arranged to deliver water into said bowl, a spring actuated valve for controlling said pipe, a foot lever pivoted to said tank, an upright arm pivoted to said tank, and arranged to be operated by said foot lever and connections between said arm and said spring-actuated valve for operating the latter.

3. A dental cuspidor comprising a tank having an upper and a lower compartment, and an annular recessed portion between the two, means for admitting air and water into said lower compartment, a bowl carried at the upper extremity of the upper compartment, a pipe disposed within said lower and upper compartments and having a portion extending through said annular recessed portion, a spring-actuated valve for controlling said pipe disposed in said annular recess, connections between said pipe and the bowl for flushing the latter, a foot lever and an arm pivoted to said tank, connections between said arm and said spring-actuated valve, a projection on said arm arranged to be engaged by said foot lever for actuating the arm, said foot lever being arranged to swing upwardly against said arm in an inoperative position.



957,672. AUTOMOBILE-RIM. JAMES HAMILTON, Weir, Kans. Filed Mar. 12, 1909. Serial No. 483,090.



1. The combination with a vehicle wheel and its felly, of an annular rim secured to said felly, a removable rim supported by said fixed rim and having recesses in its under face, a rotary disk carried by the wheel and locking pins pivoted to said disk and adapted to engage in said recesses to securely fasten the removable rim to said fixed rim.

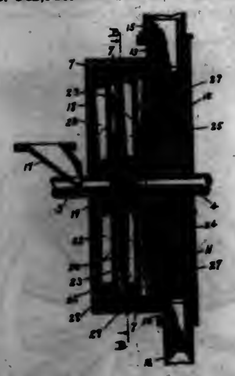
2. The combination with a vehicle wheel having a felly and hub, of a fixed rim secured to said felly and having a clencher flange at one edge thereof, a removable rim having recesses at intervals therein a rotary disk carried by the hub, extensible locking pins pivotally connected to said disk and having their opposite free ends working through said fixed rim and adapted to engage in the recesses of the removable rim to lock it on the fixed rim, means for locking the disk against rotation, and a handle fixed to said disk.

957,673. BROOM-HOLDING DEVICE. HENRY W. HARRISON, Clinton, Iowa. Filed Jan. 15, 1909. Serial No. 472,541.



In a broom holder, the combination with a holder made in a single piece composed of a trough shaped member opening outwardly to receive the handle of a broom and adapted to be directly fastened to a support, said trough having a slot in its side, and a flat extension extending outwardly from the side of the trough and disposed away from the base of the trough, of a flat gripping jaw pivoted to the inner face of the said extension and lying and operating in a plane parallel and close to the said extension with its free part playing in and guided by the slot and provided with a cam adapted to engage the broom.

957,674. ABRADING-MACHINE. JACOB HEINZ, Detroit, Mich., assignor to Thomas Neal, Detroit, Mich. Filed Aug. 5, 1907, Serial No. 387,030. Renewed Feb. 9, 1910. Serial No. 542,940.



1. In an abrading machine, the combination of a drum having an abrading surface and inlet and outlet passages, a revoluble shaft projecting into said drum, means to revolve the shaft, a bucket carrier mounted on said shaft and buckets attached to opposite sides of said carrier and inclined in opposite directions from the same.

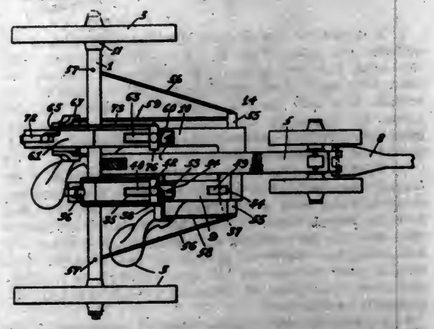
2. In an abrading machine, the combination of a drum having an interior abrading surface, inlet and outlet pipes or conveyers connected to said drum, a revoluble shaft projecting into said drum, means to revolve the shaft, a bucket carrier mounted on said shaft, and buckets attached to opposite sides of said carrier and inclined in opposite directions from each other, said buckets being inclined to radial lines with their outer ends in the direction of revolution of the shaft.

3. In an abrading machine, the combination of a drum having inlet and outlet passages, a revoluble shaft projecting into said drum, means to revolve the shaft, a disk mounted on said shaft and provided with a series of slots, buckets attached to one side of said disk adjacent to said slots and inclined from said disk in the direction of the movement of the same, and a second series of buckets secured to said disk on the opposite side thereof and adjacent to and at the same side of each slot, said buckets being inclined in opposite direction to the first.

4. In an abrading machine, the combination of a drum having inlet and outlet passages, the interior of the shell of the drum having an abrading surface, revoluble shafts projecting into said drum, means to revolve the shafts in opposite directions, a disk mounted on each shaft and provided with a series of slots, inclined buckets attached to each disk adjacent the slots in the same, and curved buckets secured to the opposite sides of the disks.

5. In a machine for reducing lead to a powder, the combination of a drum having openings through which a mixture of water and lead may flow into and out of the drum, two shafts extending into said drum and revoluble in opposite directions, means to revolve the shafts, disks secured to said shafts, inclined buckets attached to said disks on opposite sides thereof, and on the same side of slots through said disks.

957,675. AGRICULTURAL IMPLEMENT. JACOB HERMAN, Braddock, Pa. Filed May 20, 1909. Serial No. 497,312.



1. An agricultural implement comprising a portable supporting means, two sets of hangers pivoted to said means, a pair of plows, suspension arms for connecting one of the plows to one set of hangers, suspension arms for connecting the other of the plows to the other set of hangers, a pair of levers, means for connecting one of said levers to a hanger of one set, means for connecting the other of said levers to the hanger of another set, and operating levers pivoted upon said portable supporting means and operatively connected with said pairs of levers and adapted when operated to elevate and lower the plows.

2. An agricultural implement comprising a portable supporting means, a pair of plows, a shiftable suspension means connecting one of said plows with said supporting means, a shiftable suspension means connecting the other of said plows with said supporting means, a pair of levers pivoted upon said supporting means, means for connecting one of said levers to one of said suspension means, means for connecting the other of said levers to the other of said suspension means, a pair of operating levers, and means for connecting said operating levers to the first-mentioned levers.

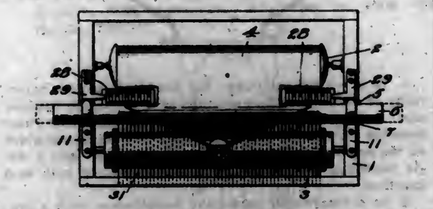
3. An agricultural implement comprising a portable supporting means, a pair of plow beams, a plow carried by each of said beams, a shiftable suspension means connecting one of said beams with said supporting means, a shiftable suspension means connecting the other of said beams with said supporting means, a lever and link mechanism carried by said supporting means and connected to the other of the suspension means, a lever pivoted upon said supporting means and connected to one of said lever and link mechanisms for operating it, and a lever pivoted upon said supporting means and connected to the other of said lever and link mechanisms for operating it.

4. An agricultural implement comprising a pair of supporting members, portable supporting means for said members, a forward and a rear plow, a beam projecting forwardly from each of said plows, a suspension means pivotally connecting one of said beams with one of said members, a suspension means pivotally-connecting the other of said beams with the other of said members, a lever and link mechanism carried by one of said members and connected to a suspension means, operating means for said lever and link mechanisms, a lever and link mechanism carried by the other of said members and connected to the other of said suspension means, and an operating means for said last-mentioned lever and link mechanism.

5. An agricultural implement comprising a pair of supporting members, a portable supporting means therefor, a lever supported by the rear of each of said members, a lever pivotally-connected to each of said members intermediate its ends thereof, connections between the levers of each of the members, a pivoted suspension means depending from each of said members, and connection between the lever at the rear of a member and its respective suspension means, and a plow connected to each suspension means.

[Claims 6 and 7 not printed in the Gazette.]

957,676. UNIVERSALLY-MOVABLE TRACKER-BOARD. MARION F. HOLDERMAN, Washington, D. C. Filed May 18, 1909. Serial No. 496,868.



1. In combination with the frame of a piano player, a trackerboard mounted for universal movement thereon relative to a perforated music sheet movable against the trackerboard.

2. In combination with the frame of a piano player, a trackerboard mounted for universal movement thereon relative to a perforated music sheet movable against the trackerboard, and yielding means for holding the trackerboard on an adjusted position in the frame.

3. In combination with the frame of a piano player having openings in the opposite sides thereof, a trackerboard mounted in said openings and adapted to have a universal movement relative to a perforated music sheet movable against the trackerboard, and springs fastened to the edges of the frame and adapted to hold the trackerboard in adjusted positions.

4. In combination with the frame of a piano player having open recesses in the opposite sides thereof, a trackerboard mounted in said recesses and adapted to have a universal movement relative to a perforated music sheet movable against the trackerboard.

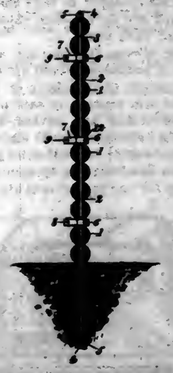
5. In combination with the frame of a piano player having open recesses in the opposite sides thereof, a trackerboard mounted in said recesses and adapted to have a universal movement relative to a perforated music sheet movable against the trackerboard, and means secured to the edges of the frame and designed to hold the trackerboard in said recesses.

[Claims 6 to 16 not printed in the Gazette.]

957,677. FENCE-POST. CHARLES T. HOWELL, Glen Flora, Wis. Filed June 26, 1908. Serial No. 440,485.

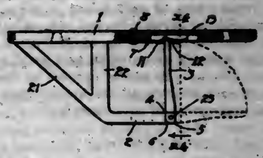
1. In a device of the class described, a series of spheres having openings therethrough, a rod traversing the openings, clamps arranged at spaced intervals on the rod, and between adjacent spheres, and nuts threaded on the ends of the rods for securing the parts together.

2. In a device of the class described, a series of spheres having openings therethrough, a rod traversing the openings, and means engaging the ends of the rods for retaining the spheres in place.



3. In a device of the class described, a series of spheres having diametrical openings, and arranged in superimposed relation with the openings in alinement, a rod passing through the alined openings, and extending beyond the spheres at each end, clamps arranged at spaced intervals on the rod between adjacent spheres, and nuts threaded onto the extended ends of the rod.

957,678. SAFETY-HOLDBACK SHAFT-HOOK. DAVID N. HYER and JOHN W. SHIREY, Los Angeles, Cal. Filed Jan. 11, 1910. Serial No. 537,553.



In a hold back, a base, a forwardly opening hook depending from said base, a keeper hinged to the end of said hook, and a leaf spring to yieldingly hold said keeper in the closed position, said spring having an abrupt bend therein to prevent backward movement of said keeper from the closed position.

957,679. POKER. WILLIAM L. JANWICH, Cliffwood, N. J. Filed Oct. 27, 1909. Serial No. 524,810.



1. A poker or slicing bar having an air chamber therein extending longitudinally thereof, and a partition extend-

ing transversely of the said air chamber and also longitudinally thereof and terminating at its ends short of the ends of the said air chamber so that those portions of the air chamber which are on opposite sides of said partition communicate with each other.

2. A poker or slicing bar having a longitudinal air chamber therein, a partition in said air chamber, strengthening the construction of the poker or bar, and a handle having a socketed arm screwed to said poker or bar.

3. A poker or slicing bar having a longitudinal air chamber therein, a partition in said air chamber, strengthening the construction of the poker or bar, and a handle having a socketed arm screwed to said poker or bar, and forming a closure for one end of said air chamber.

957,680. VENTILATOR. LEO JOHANNS, Pittsburg, Pa. Filed Jan. 3, 1910. Serial No. 535,994.



A ventilator, comprising a board or plate, said board or plate having an opening formed therein, a hinged screen adapted to partially close said opening, extensible members movable relative to the ends of said board or plate, metallic strips carried by the upper and lower edges of said members and adapted to be loosely connected to the upper and lower edges of said board or plate, a metallic semi-cylindrical hood carried by one side of said board or plate, said hood having an opening formed therein, a curved shutter slidably mounted in said hood and adapted to close said opening, and means carried by the outer and inner sides of said shutter at the lower edges thereof to facilitate an adjustment of said shutter.

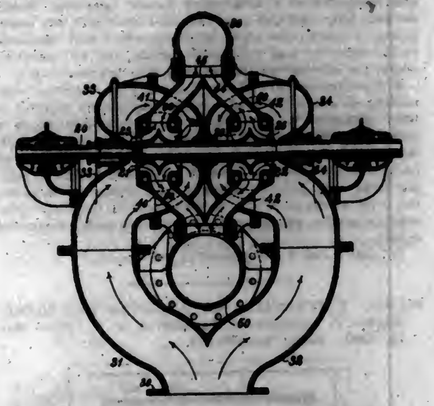
957,681. KEYED FINGER-BOARD FOR VIOLINS AND SIMILAR STRINGED MUSICAL INSTRUMENTS. ANDREW T. JOHN, New York, N. Y. Filed Oct. 11, 1909. Serial No. 522,072.



1. The combination, with a stringed musical instrument having a neck provided with a perforation and with a plurality of recesses intersecting the same; of a key-board provided with depending apertured projections received in said recesses; depressible keys carried by the key-board for stopping the strings of the instrument; and a removable bolt inserted through said perforation and through the apertures in said projections for connecting the key-board to the instrument.

2. The combination, with a stringed musical instrument having a neck provided with a transverse perforation and with a plurality of recesses intersecting the same; of a key-board provided upon its under face with depending flanges resting upon said neck to support the key-board above the springs of the instrument, each flange having an apertured extension received in the adjacent recess; depressible keys carried by the key-board for stopping said strings; and a removable bolt inserted through said perforation and through the apertures in said extensions for connecting the key-board to the instrument.

957,682. CENTRIFUGAL PUMP. RICHARD O. JONES, Dayton, Ohio, assignor, by mesne assignments, to The Computing Scale Company, Dayton, Ohio, a Corporation of Ohio. Filed Nov. 28, 1908. Serial No. 464,957.



1. In a centrifugal pump, the combination with a plurality of double impellers mounted upon a common impeller shaft and revoluble therewith, of suction pipes and water passages for conducting water to all the intake openings on the opposite sides of said double impellers; and a single discharge casing common to and connected with said impellers.

2. In a centrifugal pump, the combination with a plurality of double impellers mounted upon a common impeller shaft and revoluble therewith, of suction pipes and water passages for conducting water to all the intake openings on the opposite sides of said double impellers; a diffusion ring surrounding each of said double impellers and all converging to a common discharge periphery; and a single discharge casing common to and surrounding said diffusion rings at their common discharge periphery, and serving as a common discharge for all said impellers.

3. In a centrifugal pump, the combination with a cylinder casing inclosing two double impellers mounted side by side upon a common impeller shaft and revoluble therewith, of double suction pipes leading to suction heads on opposite sides of the cylinder casing, said pipes connecting with the outside intake openings of said impellers; water channels leading through said cylinder casing from the outside suction heads to the respective inside intake openings of said impellers; and a single discharge casing common to and connected with said impellers.

4. In a centrifugal pump, the combination with a cylinder casing inclosing two double impellers mounted side by side upon a common impeller shaft and revoluble therewith, of double suction pipes leading to suction heads on opposite sides of the cylinder casing, said pipes connecting with the outside intake openings of said impellers; a diffusion ring for each of said impellers both converging to a common discharge periphery; water channels leading from said outside suction heads through said diffusion rings to the respective inside intake openings of said impellers; and a single volute casing common to and surrounding said diffusion rings at their common discharge periphery, said volute serving as a common discharge for both said impellers.

5. In a centrifugal pump, the combination with a pair of double closed impellers mounted on a revoluble impeller shaft, and a suction pipe and head connected with the outside intake opening of each of said impellers; of a casing surrounding each of said impellers and having suction passages cored transversely therethrough to connect with the interior intakes on the opposite sides of the impellers; said impeller casings uniting between the two impellers in an intermediate common partition forming a separating wall between said transversely cored passages at their central approach to said interior intakes.

957,683. DICHLOR-DIBROM-INDIGO AND PROCESS OF MAKING SAME. PAUL JULIUS, VIKTOR VILLIGER, and PAUL NAWIASKY, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation of Germany. Filed Nov. 17, 1909. Serial No. 528,563.

1. The process of producing symmetrical dichlor-dibrom-indigo, in which the four halogen atoms are in the positions 4.4'.5.5', by saponifying and oxidizing an ester of the corresponding chlor-brom-indoxyl carboxylic acid substantially as described.

2. As a new article of manufacture, symmetrical dichlor-dibrom-indigo, in which the four halogen atoms are in the positions 4.4'.5.5', which consists when dry of a greenish blue powder, yields a blue solution in cold concentrated sulfuric acid, and a blue solution in hot dimethyl anilin, dyes cotton particularly greenish shades of blue and contains both chlorin and bromin.

957,684. PREPAYMENT MECHANISM. JAMES B. KAIGHN, Philadelphia, Pa. Filed Nov. 26, 1909. Serial No. 529,940.



1. A prepayment mechanism for a vending machine, including a rotary coin carrier; a casing inclosing said carrier, having a coin inlet; an imperforate plate adapted to close said inlet, having hinge trunnions at opposite ends thereof and a projection at one end thereof adjoining said coin carrier; and, means on said coin carrier arranged to operate said plate, including a projection adapted to cooperate with the projection on said plate.

2. In prepayment mechanism for a vending machine, the combination with a casing having a coin passageway; of a rotary coin carrier journaled in said casing and having a projection; a plate adapted to close said passageway, having alined hinge trunnions at its opposite ends journaled in said casing, means in said casing limiting the movement of said plate to less than a complete revolution and a projection adapted to coöperate with the projection on said coin carrier, to open and close said plate.

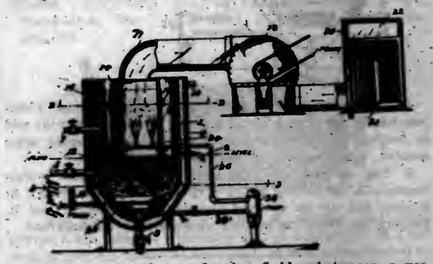
3. In prepayment mechanism for a vending machine having a coin passageway; a plate eccentrically hinged at one edge and arranged to close said passageway; and, a rotary member arranged to operate said plate to open said passageway.

4. In prepayment mechanism for a vending machine having a coin passageway; a plate eccentrically hinged at one edge and arranged to normally close said passageway.

5. In prepayment mechanism, a rotary coin carrier having an axial shaft, two diametrically opposite pins extending parallel with said shaft; a disk connecting said shaft and pins; and a semi-annular flange projecting parallel with said pins and arranged to support a coin between them.

[Claim 6 not printed in the Gazette.]

957,685. CONDENSING FLUID SUBSTANCES. ALBERT G. KALB, Chicago, Ill., assignor to Natural Dry Products Company, Augusta, Me., a Corporation of Maine. Filed July 30, 1908. Serial No. 446,169.



1. In apparatus for condensing fluid substances, a vessel for containing the material being treated, a spraying or atomizing chamber, means for forcing a current of air into said spraying or atomizing chamber and through the material in said vessel, and means for spraying or atomizing the material into the air current, substantially as described.

2. In apparatus for condensing fluid substances, a vessel for containing the material being treated, a spraying or atomizing chamber located in said vessel, a spraying or atomizing device located in said chamber, and means for introducing a current of air into said spraying chamber and through the material in said vessel, substantially as described.

3. In apparatus for condensing fluid substances, a vessel for containing the material being treated, a spraying or atomizing chamber located in said vessel, a spraying or atomizing device in said chamber, said chamber having a perforated bottom adapted to be immersed in the liquid in said vessel, and means for introducing to said chamber a current of air, whereby the air as it is forced through the openings in the bottom of the chamber is subjected to a spray, and is forced through the material being condensed, substantially as described.

4. In apparatus for condensing fluid substances, a vessel for containing the material being treated, a spraying or atomizing chamber, means for forcing a current of air into said spraying or atomizing chamber and through the material in said vessel, a spraying device for spraying the material into the air current before its passage through said material, and an agitator for creating a current in said material, substantially as described.

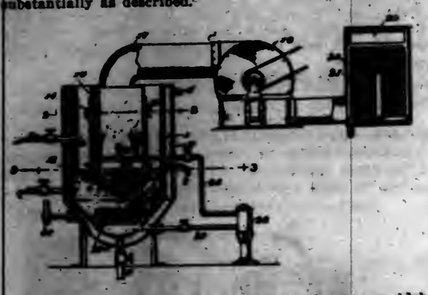
5. In apparatus for condensing fluid substances, a vessel for containing the material being treated, a spraying or atomizing chamber having a perforated bottom adapted to be immersed in the liquid in said vessel, said bottom being arranged to be raised or lowered, means for forcing a current of air into said chamber and through the material in said vessel or tank, and means for spraying the liquid into the air current before its passage through said material, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

957,686. CONDENSING FLUID SUBSTANCES. ALBERT G. KALB, Chicago, Ill., assignor to Natural Dry Products Company, Augusta, Me., a Corporation of Maine. Filed Feb. 4, 1909. Serial No. 476,049.

1. The method of condensing fluid substances which consists in introducing the material in atomized condition to a current of air, maintaining the air in motion, and

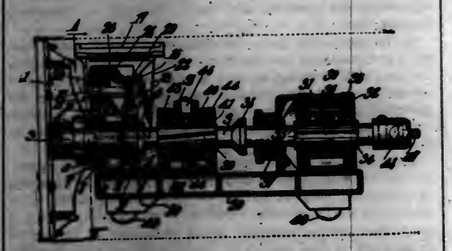
forcing the air through the body of material being treated, substantially as described.



2. The method of condensing fluid substances which consists in subjecting air to a spray of liquid material and in forcing the air so sprayed through the material being treated, substantially as described.

3. The method of condensing fluid substances which consists in subjecting air to a spray of liquid material, in forcing the air so sprayed through the material, and in keeping the liquid in motion, substantially as described.

957,687. TUNNELING-MACHINE STRUCTURE. JOHN P. KARNS, Boulder, Colo., assignor to J. P. Karns Tunneling Machine Co., Boulder, Colo. Filed May 25, 1909. Serial No. 498,245.



1. In a tunneling machine, a cutter head, a shaft carrying the same, and a journal bearing for the shaft having a member adjacent to the shaft and provided with circumferential series of balls, another member carrying the first named member, a support for the last named member in which it is movable in the direction of the longitudinal axis of the shaft, and balls between the second named member and the support therefor.

2. In a tunneling machine, a cutter head, a shaft carrying the same, a journal bearing therefor having a member movable with the shaft in the direction of the longitudinal axis of the latter and with reference to which the shaft is rotatable, a carrier for the said member movable therewith in the direction of the longitudinal axis of the shaft, and a support for the carrier along which the latter is also movable in the direction of the longitudinal axis of the shaft.

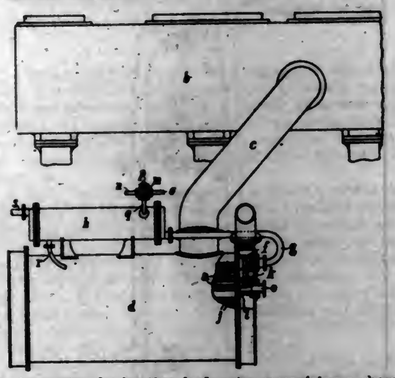
3. In a tunneling machine, a cutter head, a shaft carrying the same, and a journal bearing therefor having a member rotatable with the shaft and movable with the shaft in the direction of the longitudinal axis of the latter, another member surrounding the first member and movable therewith in the direction of the longitudinal axis of the shaft, annular series of balls between the members, a carrier for the last named member movable therewith in the direction of the longitudinal axis of the shaft, a support for the carrier along which the latter is also movable in the direction of the longitudinal axis of the shaft, and balls introduced between the carrier and the support therefor and extended in the direction of the movement of said support.

4. In a tunneling machine, a carriage, a cutter head, a shaft carrying the same, standards mounted on the truck and extending above the shaft on each side thereof, longitudinally disposed bearings formed on said standards at the upper end thereof, a support movable on said bearings on the standards in the direction of the longitudinal axis of the shaft, ring-shaped members carried by the longitudinally movable member and surrounding the shaft and bearings interposed between the shaft and the ring-shaped member and constrained to rotative movement only therein, said last named bearings, ring-shaped members, and longitudinally slidable member participating in the longitudinal movement of the shaft.

5. In a tunneling machine, a cutter head, a shaft for the same, said shaft being capable of rotative and reciprocatory motion, bearings sustaining the shaft and participating in the longitudinal movements of the shaft, said bearings permitting the rotative movement of the shaft, and a hanger for said bearings movable in the direction of the longitudinal axis of the shaft.

[Claims 6 and 7 not printed in the Gazette.]

957,688. APPARATUS FOR HEATING FEED-WATER BY EXHAUST-STEAM FROM STEAM-ENGINES. JAMES KERFOOT, Antwerp, Belgium. Filed Feb. 7, 1908. Serial No. 414,667.

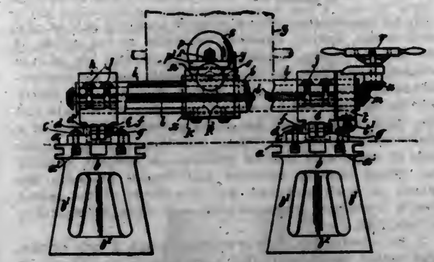


1. Apparatus for heating feed water comprising a chamber, means for leading steam into the upper part of said chamber, a tube plate extending completely across said chamber near each end thereof, two separate sets of tubes extending between said plates, one set being located in the upper part of said chamber and the other in the lower part, a cover box located on each tube plate and between it and the adjacent end of the chamber and extending over and inclosing the ends of the tubes of the upper set, division pieces in said boxes separating the tubes into rows, a steam jacket on each of said boxes, means for admitting feed water to the lowest division of one of said boxes, means for carrying off feed water from the top division of one of said boxes, and means for supplying condensing water to the spaces between the tube plates and the ends of the chamber outside the cover boxes so as to feed the lower set of tubes therewith.

2. Apparatus for heating feed water, comprising a chamber, means for leading steam into the upper part of said chamber, a tube plate extending completely across said chamber near each end thereof, a set of tubes extending between said tube plates in the upper part of the chamber, a cover box located on each tube plate and between it and the adjacent end of the chamber and extending over and inclosing the ends of said tubes, division pieces in said boxes separating the tubes into rows, a steam jacket on each of said boxes, means for admitting feed water to the lowest division of one of said boxes, means for carrying off water from the top division of one of said boxes, condensing means located in the lower part of the chamber, and means for supplying water to the spaces between the tube plates and the ends of the chamber outside the cover boxes so as to feed said condensing means therewith.

3. Apparatus for heating feed water, comprising a chamber, means for leading steam into the upper part of said chamber, a tube plate near each end of said chamber, tubes extending between said plates in the upper part of the chamber, means for conducting feed water into the lowest of said tubes, means for causing the feed water to pass in a zig-zag path through said set of tubes, means for carrying off feed water from the top tubes of said set, said three last mentioned means being located between the tube plates and the ends of the chamber, means located in the lower part of said chamber for condensing the steam, means for supplying water to the spaces between the tube plates and the ends of the chamber outside the feed water guiding means located in these spaces so as to feed said condensing means therewith, and a steam jacket separating the feed water guiding means from the cooling influence of the condensing water.

957,689. APPARATUS FOR DRESSING OR TRUING GRINDSTONES. SAMUEL KING, London, England. Filed June 25, 1909. Serial No. 504,345.



1. In apparatus for dressing and truing grindstones, the combination of a single horizontal slide, a single cutter longitudinally movable on said slide, brackets adapted to support the said horizontal slide in a position parallel with either side or across one end of the grindstone, a base plate carrying each of said brackets, means whereby such brackets can be readily and removably mounted on said base plates, and supports to each of which one of said base plates is fixed.

2. In apparatus for dressing and truing grindstones, the combination of a single horizontal slide, a single cutter longitudinally movable on said slide, brackets adapted to support the said horizontal slide in a position parallel with either side or across one end of the grindstones, means whereby said horizontal slide can be readily freed from either bracket when it is desired to change its position with relation to the stone, a base plate carrying each of said brackets, means whereby such brackets can be readily and removably mounted on said base plates, and supports to each of which one of said base plates is fixed.

3. In apparatus for dressing and truing grindstones, the combination of a horizontal cylindrical slide, a cutter mounted on said slide, carriers for each end of the slide, a base plate for each carrier, a vertical split socket carried by each base plate, a bracket having a cylindrical neck removably mounted in each of said split sockets, means for clamping said sockets around the necks of said brackets, a divided hinged bearing on each of said brackets to secure the horisontal cylindrical slide therein, and means for moving the cutter along the slide.

4. In apparatus for dressing and truing grindstones, the combination of a horizontal cylindrical slide, a cutter mounted on said slide, carriers for each end of the slide, a base plate for each carrier, a vertical split socket carried by each base plate, a bracket having a cylindrical neck movably mounted in each of said split sockets, means for clamping said sockets around the necks of said brackets, a divided hinged bearing on each of said brackets to secure the horizontal cylindrical slide therein, means for moving the cutter along the slide, a block removably fixed to either end of the horizontal cylindrical slide, a bevel wheel carried by said block a screw in the interior of the horizontal cylindrical slide, a bevel wheel at both ends of the screw, either of which can be arranged to gear with the first mentioned bevel wheel, and means carried by said block by which the bevel wheels and consequently the screw can be rotated to traverse the cutter.

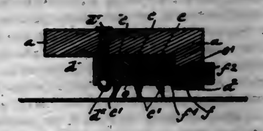
957,690. ROCKING GRATE-BAR. CHARLES R. KLINE, Beechwood, Pa. Filed May 17, 1909. Serial No. 496,485.



1. The combination of a series of rocking grate bars having a lug integral with each bar, of a plurality of arms each connected to one of said lugs, each arm connected to control but a single grate bar, a plurality of pivotally mounted levers each lever being connected to one of said arms, and an operating member having a slot therein, and means coöperating with said slot to connect said levers independently or all together to said operating member.

2. A furnace casing, a series of rocking grate bars mounted in said casing and forming therewith an ash pit, a lug on each grate bar, an arm secured to each lug and extending exterior of said casing, each arm connected to control but a single grate bar, a plurality of brackets secured to said casing in alinement with said arms, a lever pivotally mounted on each bracket, connections between the respective arms and levers, an operating member having depending sides each side having a slot therein, and detachable connections between said operating member and said pivoted lever coöperating with said slots, whereby all or any number of said grate bars may be rocked.

957,691. HORSESHOE. GEORGE LIMBACH, New York, N. Y. Filed Dec. 13, 1909. Serial No. 532,795.



1. The combination, with the rear-calks of a horse-shoe, of auxiliary calks suspended from the rear-portions of the shoe, and provided with vertical holes, headed and pointed anti-slipping pins inserted into said holes, and means attached to the rear-calks for securing the auxiliary calks in position on the rear-calks of the shoe.

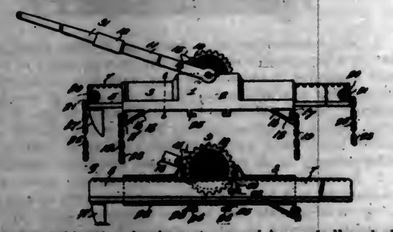
2. The combination, with the rear-calks of a horseshoe, of auxiliary calks having vertical holes suspended from the shoe, headed anti-slipping pins inserted into the holes of the auxiliary calks, and screw-bolts passing through the rear-calks and engaging threaded sockets of the auxiliary calks.

3. The combination, with the rear-calks of a horse-shoe, of auxiliary calks, headed pins for suspending the front-ends of the rear-calks from the shoe, headed and pointed anti-slipping pins inserted into vertical holes of the auxiliary calks and extending below the same and the rear-calks and heel-calks, and screw-bolts extending through the heel-calks and engaging threaded sockets of the auxiliary calks.

4. The combination, with the rear-calks of a horse-shoe of auxiliary calks provided with vertical holes, headed suspended pins passing through the rear-parts of the shoe and the front-ends of the auxiliary calks, headed anti-slipping pins inserted into the holes of the auxiliary calks and means for securing the auxiliary calks to the rear-calks, the adjacent faces of the auxiliary calks and rear-calks being concentric with the suspension pins for permitting the sidewise swinging of the auxiliary calks for inserting, removing or exchanging the anti-slipping pins.

5. An auxiliary calk formed of a rectangular block pivotally attached on the rear-part of an arm of the horse-shoe and provided with vertical holes, headed and pointed anti-slipping pins inserted into the holes of the auxiliary calk, and means attached to said block and said adjacent arm only for holding said block against said rear-part.

957,692. COMBINATION IMPLEMENT. CHARLES J. LIVERING, Louisville, Ky., assignor of three-fifths to Annie Livering, Louisville, Ky., and two-fifths to Willis E. Pemberton, Clark, Ky. Filed Dec. 18, 1908. Serial No. 468,180.



1. A combination implement comprising a hollow body member, a slide member mounted for longitudinal movement in the body member and flanges carried by and projecting from the lower side of the body member to slidably receive the slide member in a position at right angles to its position when in the body member.

2. A combination implement comprising a hollow body member, a slide member of T-form mounted for movement in the body member, and flanges projecting from the lower surface of the body member to slidably receive the ends of the cross portion of the slide member.

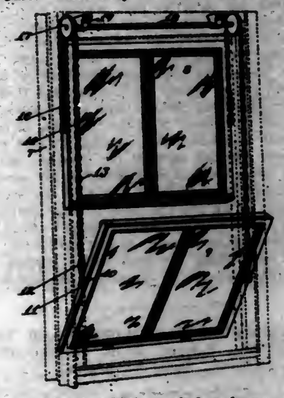
3. A combination implement comprising a hollow body member, a slide member mounted for movement in the body member, means including a shaft for fitting the slide member longitudinally of the body member, said shaft extending beyond the body member, boring-bit heads carried by the ends of the shaft, and means carried by the body member to slidably receive the slide member for movement in spaced parallel relation with the shaft.

4. A combination implement comprising a hollow body member, a slide member mounted for movement in the body member, means including a shaft for fitting the slide member longitudinally of the body member, said shaft extending beyond the body member, boring-bit heads carried by the ends of the shaft, means carried by the body member to slidably receive the slide member for movement in spaced parallel relation with the shaft, and a foot carried by the slide member to serve as a work support in the use of the shaft for boring.

5. A combination implement comprising a body member, a shaft mounted for rotation in the body member and arranged transversely thereof, the ends of the shaft projecting beyond the body member and formed for the connection of tools therewith, a slide mounted for movement longitudinally of the body member, a series of teeth formed on the slide, a gear secured on the shaft to co-operate with the teeth on the slide, ratchets mounted on the shaft at the respective ends of the gear, and a lever engaging the ratchets and operating the gear to move the slide member longitudinally of the body member, the movement of the lever serving to operate the shaft and thereby the tool connections.

[Claim 6 not printed in the Gazette.]

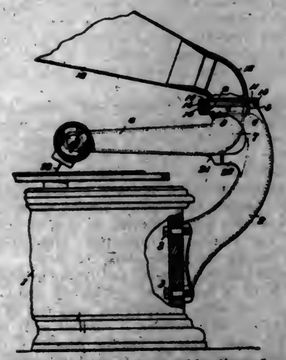
957,693. WINDOW CONSTRUCTION. EDMUND H. LUNKEN and CHARLES M. CONKLIN, Cincinnati, Ohio, assignors to The Lunken Steel Window Company, Hamilton, Ohio. Filed July 17, 1908. Serial No. 444,140.



1. In combination with a window frame, a pair of pivoted sashes, flexible elements connected to the pivots of the sashes, rotary bearing members at the top of the window over which the flexible elements pass for counterbalancing said sashes, said flexible elements and rotary bearing members being provided the one with indents and the other with detents for engaging said indents, and a shaft journaled at the top of the window frame to the ends of which said bearing members are secured, whereby the rotary bearing members and flexible elements are caused to move in unison and the pivots of the sashes kept in horizontal alinement with each other, substantially as described.

2. In combination with a window frame, a pair of pivoted sashes, sprocket chains connected to the pivots of the sashes, sprocket wheels at the top of the window over which the chains pass, for counter-balancing said sashes, and a shaft journaled at the top of the window frame to the ends of which the said sprocket wheels are secured whereby the sprocket wheels and chains are caused to move in unison, and the pivots of the sashes kept in horizontal alinement with each other, substantially as described.

957,694. DISK SOUND-REPRODUCING MACHINE. THOMAS H. MACDONALD, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed May 23, 1905. Serial No. 261,892.



1. In a talking machine, the combination of a stationary supporting arm having a horizontal annular ledge, a ring resting on said ledge and having its interior surface corresponding to a spherical zone whose center is the center of the ring, a hollow swinging arm carrying the reproducer at one end, the other end having its exterior surface in the form of a spherical zone fitting snugly within said ring, and diametrically opposite trunnions engaging said ring and hollow arm.

2. The combination of a swinging arm carrying the reproducer at one end, a ring within which the other end of the arm is joined on lines corresponding to a portion of the surface of a sphere, trunnions securing said ring and arm together, and a stationary arm supporting said ring.

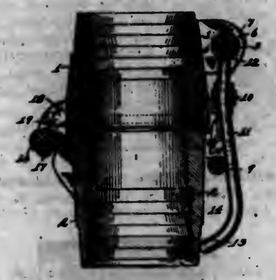
3. The combination of a swinging arm carrying the reproducer at one end, a stationary arm, a ring mounted on said stationary arm to turn in a horizontal plane and trunnions connecting the ring to the swinging arm to permit said arm to turn in a vertical plane.

4. The combination of a stationary arm, a substantially horizontal hollow swinging arm having a vertically extending elbow at one end and a reproducer at the other end, a horizontal ring jointed to said elbow on spherical lines, trunnions also connecting said ring and elbow, and a stationary arm supporting said ring.

5. The combination of a stationary arm, a horn mounted thereon so as to be free to turn in a circle, a hollow swinging arm having a reproducer at one end, a ring connected to the other end by a spherical joint and a pair of trunnions and a horizontal bearing for said ring on the stationary arm.

[Claims 6 to 12 not printed in the Gazette.]

957,695. COUPLING. ERNEST MAREK, Chicago, Ill. Filed Dec. 8, 1909. Serial No. 531,969.



1. In a coupling, the combination of two tubular members; a rotary member pivoted to one of said tubular members; a wrist pin carried eccentrically by said rotary member; a link pivotally mounted on said wrist pin, the said link being provided with a turn-buckle for adjusting its length; a clamping lever secured to said rotary member; means on the other tubular member adapted to detachably engage said link; and a detachable connection between said tubular members independent of said link, substantially as described.

2. In a coupling, the combination of two tubular members; adjacent lugs on one of said members, a rotary member pivoted in said lugs, a bolt passing through said rotary member eccentrically; a U-shaped link having the ends of its limbs pivotally secured to the ends of said bolt; and the said limbs being provided with turn-buckles for adjusting their lengths; a clamping lever secured to said rotary member between said lugs; hook projections on the other tubular member adapted to engage said link; and a hook and loop connection between said tubular members opposite said lugs and projections, substantially as described.

957,696. BIT-BRACE. EDWARD S. MARKS, Auburn, N. Y., assignor to Ohio Tool Company, a Corporation of New York. Filed Oct. 12, 1909. Serial No. 522,287.



1. In a bit brace, the combination with a bit holder having a shank provided with a ratchet device comprising two circular and oppositely facing sets of teeth spaced apart from each other longitudinally of said shank, of a stock encircling said shank and rotatable relative thereto, a sweep or crank with which said stock is connected, a spring-pressed pawl shank provided with oppositely facing teeth which are so disposed longitudinally of said pawl shank that one pawl tooth may occupy the space between the said sets of ratchet teeth, when another tooth is in engagement with one or the other set of ratchet teeth, and mechanical means, engaging said pawl shank, for shifting said pawl to different positions and for positively holding it in place so that the said pawl may be so adjusted that it will be in engagement with either or with both sets of ratchet teeth

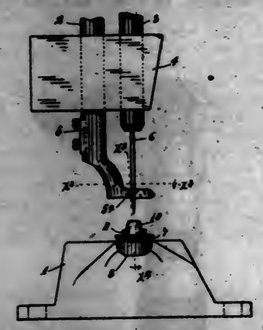
2. In a bit brace, the combination with a bit holder having a shank provided with a ratchet device comprising two circular and oppositely facing sets of teeth spaced apart from each other longitudinally of said shank, of a stock encircling said shank and rotatable relative thereto, a sweep or crank with which said stock is connected, a spring-pressed pawl provided with oppositely facing teeth which are nearer together longitudinally of said shank than the said sets of ratchet teeth, and means for moving the said pawl longitudinally of said shank so that the pawl teeth will be in engagement with either or with both sets of ratchet teeth, said means comprising a rotatable cam ring coaxial with an arm of said sweep and engaging the opposite ends of the body of said pawl, thus enabling said cam ring to move said pawl into any desired position.

3. The combination with a bit holder 13 having the shank 17 provided with a ratchet device comprising the circular, separated and oppositely facing sets of ratchet teeth 18 and 19, of the chambered stock 14 encircling said shank, the spring-pressed pawl 20 housed in an extension of said stock, and movable longitudinally of said shank, said pawl having a rigid shank and closely disposed and oppositely facing teeth for engagement with said ratchet teeth, and the rotatable cam ring 25 encircling said extension and engaging the opposite ends of said shank and serving to adjust said pawl to any desired position and to hold it positively in place when adjusted.

957,697. PRESSER-FOOT FOR SHOE-SOLE-STITCHING MECHANISMS. HANS MICHELSEN, Minneapolis, Minn. Filed Oct. 27, 1909. Serial No. 524,813.

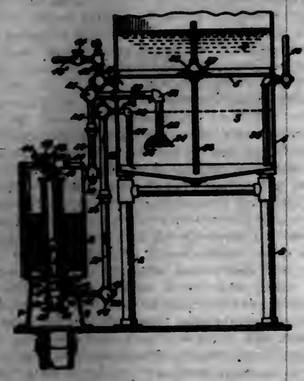
In a sewing machine, the combination with a needle, of a presser foot having relatively long and relatively short toes, the former projecting forward of the needle at one side thereof and the latter extending obliquely across the

stitching line at the rear of the needle and engageable with the upturned rib of a stitching crease formed in the



shoe sole and adapted to press the same back into the crease over the formed stitches.

957,698. ACETYLENE-GAS GENERATOR. SAMUEL A. MILLS, Philadelphia, Pa., assignor to Isaac Stead, Philadelphia, Pa. Filed June 7, 1909. Serial No. 500,647.



A gas producer of the class described comprising a water tank divided into upper and lower water compartments, a carbid receptacle arranged beneath and at one side of the water tank, a perforated water tube in the carbid receptacle, an annular series of vertical corrugated guard bars inclosing the water tube, a spacing ring on which screws the lower ends of said guard bars to hold them in proper spaced relation, a water conduit for passing the water in the lower compartment to the bottom of the water tube, a gas conduit for passing the gas from the upper end of the carbid receptacle into the lower compartment of the water tank, means for permitting the water in the upper compartment to flow into the lower compartment, whereby the water in said first mentioned compartment acts as a head of pressure to force the gas to the top of the lower compartment, and a gas outlet communicating with the top of said lower compartment.

957,699. AUTOMATIC RAILWAY-SWITCH. ALANSON A. MOORE, Detroit, Mich. Filed May 29, 1909. Serial No. 499,148.

1. In a device of the character described, mechanically operated means for throwing the switch point comprising a member adapted to be actuated by a car moving along the track, and electrically operated means for holding said member out of position to be operated by the car and adapted to release the same to permit its operation.



2. In a device of the character described, mechanically operating means adapted to be actuated by a car and to throw the switch point first in one direction and upon its next actuation by the car, to throw the switch point in the opposite direction, and electrically operated means for holding the switch point in the position to which it has last been thrown and for releasing the same to permit its operation.

3. In a device of the character described, mechanically operated means for controlling the switch point comprising a member adapted to be actuated by a car and means for transmitting motion from said member to alternately throw the switch point first in one direction and upon its next operation, to throw the switch point in the opposite direction, means for holding the switch point in the position to which it has last been thrown, and electrically operated means for actuating said holding means to release the switch point.

4. In a device of the character described, mechanically operating means for throwing the switch point comprising a member adapted to be engaged and depressed by a car passing along the track, means for transmitting motion from said member to throw the switch point, means for locking said member in its depressed position, and means for actuating the locking means to release said member.

5. In a device of the character described, mechanically operating means for throwing the switch point, comprising a member adapted to be engaged and depressed by a car passing along the track, means for transmitting motion from said member to throw the switch point, means for locking said member, and an electro-magnet for actuating the locking means to release said member.

[Claims 6 to 19 not printed in the Gazette.]

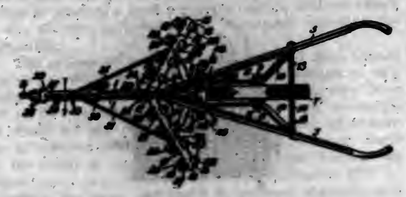
957,700. RIBBON-HOLDER. ARTHUR MORGAN, Wilkes-Barre, Pa. Filed Sept. 21, 1909. Serial No. 518,755.



A ribbon holder including a triangular engaging member, a section movably connected with said member, a hook member including a hook and a bearing portion, and an extensible connector joining the bearing portion of the hook member and the section movably connected to the engaging member.

957,701. ADJUSTABLE CULTIVATING-HARROW. WINDFREY S. MORGAN, Lewisville, Ark. Filed Aug. 12, 1908. Serial No. 448,226.

1. A harrow including a longitudinal beam composed of spaced members, a supporting wheel mounted between the rear portions of the said members, harrow sections extending laterally from the beam in advance of the wheel, handles connected with the beam in rear of the harrow sections, and rear braces connected with the harrow sections and with the beam at a point between the handles and the wheel.



2. A harrow including a longitudinal beam composed of side members having their rear portions bent laterally and spaced apart, an axle, a wheel mounted on the axle and arranged between the rear portions of the side members, inclined handle bars connected with the beam in advance of the wheel, braces secured to the beam by the said axle and adjustably supporting the handle, and a harrow section mounted on the beam in advance of the wheel.

3. A harrow including a longitudinal beam composed of spaced side members, a spacing block arranged between the side members of the beam and secured to the same, said spacing block being provided with an upwardly extending lug, inclined handle bars pivoted at their lower ends to the projecting lug of the spacing block, braces adjustably connecting the upper portions of the handle bars with the beam, and a harrow section connected with the beam.

4. A harrow including a longitudinal beam composed of spaced side members, a spacing lug mounted between the members, adjustable harrow sections having upper and lower members and extending from opposite sides of the beam, a vertical pivot piercing the spacing lug and the inner ends of the upper and lower members of the harrow sections and securing the same to the beam, and means for securing the harrow sections in their adjustment.

5. A harrow including a longitudinal beam composed of spaced side members, a spacing block mounted between the side members, adjustable harrow sections having their upper and lower members and extending from opposite sides of the beam, a vertical pivot piercing the spacing block and the upper and lower members of the harrow sections and securing the same to the beam, means for securing the harrow sections to their adjustment, and a central harrow tooth adjustably mounted between the side members.

[Claims 6 to 10 not printed in the Gazette.]

957,702. INTERLOCK MECHANISM FOR ELEVATORS. JOHN S. MUCKLE, Philadelphia, Pa., assignor to Standard Elevator Interlock Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 19, 1909. Serial No. 508,421.

1. The combination in interlocking mechanism for elevators, of a car, a landing, a door at said landing, a latch by which the door is locked in a closed position, means on the car for actuating the latch, a controlling cable, a cam cable extending throughout the well, said cam cable being connected to the controlling cable, a movable cam on said cam cable for operating the latch actuating means, and means for positively connecting the car with the cam cable when the car is at rest.

2. The combination in interlocking mechanism for elevators, of a landing, a car, a controlling cable for actuating the controlling mechanism of the car, a second cable, a cam connected to said second cable adapted to be thrown into and out of action when said cable is moved in either direction, a slide on the body of the car, a lever on the car engaging the slide and arranged to be actuated by said cam when in position, a latch on the elevator well actuated by the slide, a landing door locked by the latch, and means for positively coupling the cam cable to the car when the landing door is open.

3. The combination in interlocking mechanism for elevators, of a landing, a door closing the landing, a latch on the elevator well for locking the door in a closed position, a car means on the car for actuating the latch, a controlling cable extending throughout the well, a cam mounted in the well, a cable attached to said cam and also extending throughout the well, means connecting the cam cable with the controlling cable so that when the controlling cable is moved to stop the car the cam will be shifted into position to move the latch actuating mechanism of the car.



4. The combination in interlocking mechanism for elevators, of a landing, a landing door, a latch in the elevator well for locking the door in its closed position, a car means on the car for actuating the latch, a controller for stopping and starting the car, a cam pivoted to the side of the elevator well, a cable connected to the cam and to the controlling mechanism of the car, a toothed bracket on the car, a toothed plate on the wall of the elevator well, and means whereby the two elements can be thrown into and out of engagement on the opening or closing of the door, said toothed plate being connected to the cable to which the cam is attached.

5. In interlocking mechanism for elevators, the combination of a landing, a landing door, a latch for locking the door in its closed position, a car means on the car for actuating the latch, a controller for stopping and starting the car, a cam on the side of the elevator well, a cable connected to the cam so that on the movement of the cable the cam will be moved into and out of position to engage the actuating mechanism on the car, a slide on the elevator well to which the cable is also attached, a sliding toothed plate carried by the slide, a toothed bracket on the car arranged to be engaged by the sliding plate, and means on the door for moving the plate into and out of position, the said cable being connected to the controlling mechanism so that any movement of the car after it is brought to the landing will be imparted to the controlling mechanism so that the floor of the car will be in line with the landing.

[Claims 6 to 8 not printed in the Gazette.]

957,703. COMPOSITE REFLECTOR FOR LIGHT-RAYS. OTIS A. MYGATT, New York, N. Y. Filed Mar. 10, 1906, Serial No. 305,301. Renewed Sept. 24, 1908. Serial No. 454,541.

1. A reflector composed of a single piece of glass, having one portion of its body transparent and externally covered with light-reflecting prisms, and having another portion white in color and externally ribbed, the prismatic portion and the colored portion gradually blending.

2. A reflector composed of a single piece of "flash opal" glass, having a portion of its body transparent and provided with light directing prisms, and a portion "flashed" white and being light reflecting by reason of its color.

3. A glass body having on a part of its surface light-reflecting prisms, and having another part of its body reflective of light by reason of its color, these portions of the body blending gradually each into the other.

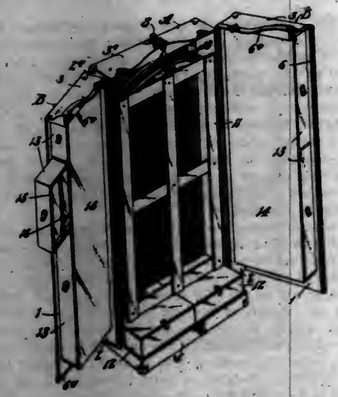
4. A glass body having a part of its surface provided with transparent crystal glass light-reflecting prisms, and having a part of its body developed in a color or tint through which the light rays pass to the prisms with obstruction, and are again reflected through the tinted body by the prisms.



5. An integral glass body having a transparent portion reflective of light, and a portion reflective by reason of its color merging or blending with the transparent portion.

[Claims 6 to 9 not printed in the Gazette.]

957,704. TRUNK. CLARENCE A. MCCARTHY, St. Louis, Mo., assignor to P. C. Murphy Trunk Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 13, 1909. Serial No. 517,377.



A wardrobe steamer trunk that is adapted to be arranged in an upright position on one of its ends when it is opened, said trunk comprising a shallow body portion that is provided at one end with a wall which extends the full depth and width of the trunk, a flange on said wall that forms part of the side and top walls of the trunk, two hollow hinged sections that form a top or cover for said body portion, said hinged sections terminating at said flange, sliding drawers or trays that are adapted to be slid edgewise into said hollow sections, and boxes arranged inside of the flange on the end wall of the body portion.

957,705. PADLOCK. ANTON NEBHAFT, Budapest, Austria-Hungary. Filed Feb. 8, 1908. Serial No. 414,953.

1. In a safety lock the combination with a casing of a shackle attached to said casing said shackle being formed with notches, fixed plates secured in the interior of said casing, movable plates interposed between said fixed plates, said fixed plates being formed with orifices and said movable plates having orifices out of line with each other and connected by slots, said orifices serving to receive said shackle, said movable plates adapted to be moved longitudinally in one direction through varying distances under the action of a key, and a spring tending to move the movable plates in the opposite direction.



2. In a safety lock the combination of a casing, of fixed plates mounted in said casing and formed with orifices, movable plates interposed between said fixed plates and formed with orifices out of line with each other and connected by slots, a tubular shackle one shank of which is shorter than the other, a helical spring mounted in the longer limb of the shackle and interposed between the same and the casing, and a blade spring fitted below the plates and provided with a lug adapted to be engaged by a lug on the key, as and for the purpose set forth.

957,706. PROCESS OF MAKING HARDENED STEEL. HECTOR DE NOLLY, St. Chamond, France, assignor to Compagnie des Forges & Acieries de la Marine et d'Honrecourt, St. Chamond, France. Filed Nov. 25, 1907. Serial No. 403,789.

1. Armor plates manufactured from chrome nickel steel containing at least 0.65% and at most 0.8% of carbon, at least 3% and at most 4% of chromium and about 2.5% of nickel, by annealing at a temperature above that at which the steel alloy changes its molecular condition, working it and then subjecting it to two heatings the first to a temperature above that at which the alloy changes its molecular condition and the second to a temperature below that point, said heating operations being each followed by quenching, heating the face thereof to a temperature above that at which the alloy changes its molecular condition while maintaining the body thereof at a temperature below this point of change and quenching with water.

2. Armor plates manufactured from chrome nickel steel containing at least 0.65% and at most 0.8% of carbon, at least 3% and at most 4% of chromium and about 2.5% of nickel, by treatment consisting of subjecting the plates to two annealing operations, the first at a temperature between 850° C. and 900° C. and the second at a temperature of about 775° C., heating uniformly to about 775° C., quenching in oil, annealing at a temperature of about 775° C., quenching with water after uniform reheating to between 650° C. and 675°., heating the face to be hardened to a temperature of between 800° C. and 850° C. while maintaining the body of the plate at a temperature below 675° C. and finally quenching by sprinkling with water.

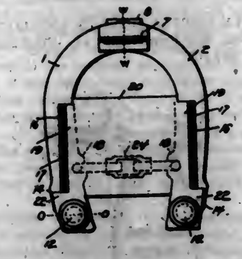
3. An armor plate manufactured from chrome nickel steel containing from 0.65% to 0.8% of carbon, 3% to 4% of chromium, and about 2.5% of nickel, said plates having a body portion of fibrous texture and an impact face of extra hard porcelain texture.

4. The process of manufacturing hardened steel objects such as for example, armor plates, which consists in subjecting a charge of chrome nickel steel containing from 0.65 to 0.8 per cent. carbon, 3 to 4 per cent. chromium and about 2.5 per cent. nickel to a plurality of annealings at temperatures above that at which the alloy changes its molecular state, working the metal so treated into desired shape, subjecting the shaped metal to two heatings, the first to a temperature above that at which the alloy changes its molecular state and the second at a temperature below that point said heatings being followed by quenchings adapted to produce a fibrous texture throughout and then heating a portion thereof to a temperature above that at which the alloy changes its molecular state while maintaining the remainder at a temperature below this point and quenching the highly heated surface to produce a hard porcelain texture without affecting the fibrous character of the remainder, substantially as described.

5. The process of manufacturing hardened steel objects such as for example, armor plates, which consist in subjecting a charge of chrome nickel steel containing from 0.65 to 0.8 per cent. carbon, 3 to 4 per cent. chromium and about 2.5 per cent. nickel to a plurality of annealings at temperatures between 775° C. and 900° C. working the metal so treated into desired shape, heating the shaped metal to a temperature of approximately 775° C., quenching the same, reheating to between approximately 650° C. and 675° C. and again quenching whereby a fibrous texture throughout is produced and then heating a portion thereof to a temperature between 800° C. and 850° C. while maintaining the remainder at a temperature below 675° C. and quenching the highly heated surface to produce a hard porcelain texture without affecting the fibrous character of the remainder, substantially as described.

[Claim 6 not printed in the Gazette.]

957,707. HORSESHOE. STEPHEN OROSZ, Montana Mines, W. Va. Filed Jan. 17, 1910. Serial No. 538,440.



1. A horseshoe comprising sections having the forward ends thereof pivotally connected together, said sections having the bottom surfaces thereof recessed, hoof engaging means carried by the sections a plate adapted to fit in the recessed portions of said shoe sections, heel calks carried by the heels of said sections and adapted to retain said plate in engagement with said sections, and a clamping device connecting said sections and adapted to clamp said means in engagement with a hoof.

2. A horseshoe comprising sections, a toe calk adapted to connect the forward ends of said sections, a toe piece carried by one of said sections, heel pieces carried by both of said sections, a clamping device connecting said sections and adapted to clamp said pieces in engagement with a hoof, a plate mounted in the bottom surfaces of said sections, and heel calks adapted to retain said plate in engagement with said sections.

957,708. IMPACT-TOOL. JOHN J. PADBURY, Philadelphia, Pa. Filed Aug. 16, 1909. Serial No. 513,034.

1. In a pneumatic impact tool, the combination of a cylinder, a piston therein having a reduced end forming a shoulder, said cylinder having an annular recess adjacent the striking end of the tool to receive said shoulder, and a live air passage communicating with said recess.

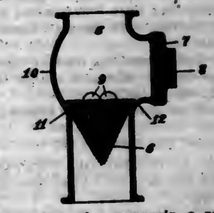
2. In a pneumatic impact tool, the combination of a cylinder having a series of ports and passages in the wall of the same and an annular recess of reduced area formed in one end thereof, a live air passage leading to said recess, and a piston or hammer mounted within said cylinder and having a shouldered portion to enter said annular recess whereby movement of the tool in one direction may be controlled by motive fluid entering the passage leading to said recessed portion.

3. In a pneumatic impact tool, the combination of a cylinder, a piston longitudinally movable in said cylinder, the wall of the latter being provided with ports and passages whereby movement of the piston can be controlled, means for supplying motive fluid to said cylinder, and a shoulder formed on the end of the piston or hammer adjacent to the striking portion of the same, the cylinder of said tool being recessed for the reception of the shouldered portion of the hammer and having a passage for motive fluid to act upon said shoulder of the hammer for the purpose of cushioning the blow and imparting to said hammer or piston the initial portion of the return stroke.



4. The combination in a pneumatic impact tool, of a cylinder, a cap-piece secured thereto and carrying inlet and exhaust ports for the motive fluid, means for securing said cap-piece in place comprising a toothed member carried by the cap-piece and arranged to fit a slot in the cylinder, and means for securing said toothed member in an adjusted position.

957,709. PLUMBING ATTACHMENT. HIRAM PHILLIPS, St. Louis, Mo. Filed Apr. 8, 1909. Serial No. 488,580.



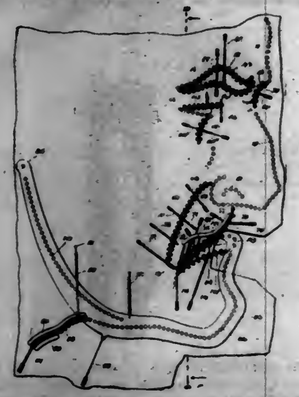
1. The combination of a reservoir, a receptacle spaced from the reservoir, a pair of pipes connected by a hollow removable member, one of said pipes being connected to said reservoir and the other being connected to said receptacle, said member having a bilge and an out-turned mouth, and a disinfectant receptacle having openings therein and supported conjointly by said bilge and said out-turned mouth.

2. In combination with a reservoir and a receptacle, a pipe connected to the reservoir and a second pipe connected to the receptacle, a hollow removable member having its ends connected to the inner ends of the pipes and having a central bilge and an outwardly extending mouth which is located at one side of the bilge, the lower end of said bilge and said mouth being in alinement to form supporting ledges, a disinfectant receptacle having a flared open upper end which seats on said supporting ledges, and a closure for the mouth.

3. The combination with a tank and a receptacle, of a pair of pipes one connected to the tank and the other to the receptacle, said pipes having their inner ends arranged in spaced relation, a removable member disposed in said space and having its ends secured to said inner ends of the pipe, an out-turned mouth formed on said

member, and a removable disinfectant receptacle arranged within said member, having means at its upper end to engage said member for supporting the disinfectant receptacle.

957,710. ELECTRIC SIGN. EDWIN J. PRINDLE, East Orange, N. J., assignor to Vita Electric Sign Company, New York, N. Y., a Corporation of New York. Filed Nov. 24, 1909. Serial 529,675.



1. An electric sign, having a line of lights, said lights being capable of movement independently of each other and means for moving said lights independently of each other.

2. An electric sign, a line of lights having an immediate support, and means for moving said line of lights independently of said support.

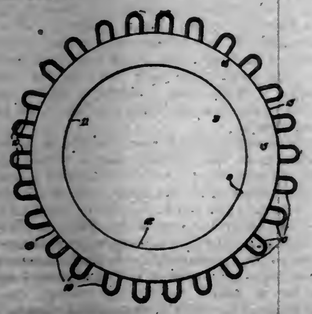
3. A sign comprising lines of electric lights representing the face of an animate being, and means for shifting said lines to cause a change of expression of said face.

4. A sign comprising lines representing a human face, and means for shifting said lines to cause a change of expression of said face.

5. An electric sign comprising lines of lights delineating a picture, and means for causing a change in said picture by shifting said lines of lights.

[Claims 6 to 28 not printed in the Gazette.]

957,711. HAND KNITTING OR WEAVING DEVICE. ALICE PUTMAN, Chicago, Ill. Filed Nov. 22, 1909. Serial No. 529,395.



1. In a knitting or weaving device, the combination of a frame-work having a hole therein, one side of the frame-work being of concave formation, and staples in the periphery of the frame-work for holding the fabric, substantially as described.

2. In a knitting or weaving device, the combination of a frame-work having a hole therein, one side of the frame-work being of concave formation, and staples placed in the periphery of the frame-work for holding the fabric, said staples being inclined away from the concave face of the frame-work, substantially as described.

3. In a knitting or weaving device, the combination of a circular frame-work having a circular hole in its central portion, one side of the frame-work being of concave formation, and staples placed in the periphery of the frame-work for holding the fabric, said staples being inclined away from the concave face of the frame-work, substantially as described.

4. In a knitting or weaving device, the combination of a circular frame-work having a circular hole in its central portion, one side of the frame-work being of concave formation, and groups of staples placed in the periphery of the frame-work in approximately parallel relation to each other, said staples being inclined away from the concave face of the frame-work, substantially as described.

5. In a knitting or weaving device, the combination of a frame-work, one side of the frame-work being of concave formation, and staples in the periphery of the frame-work for holding the fabric, the staples being set away from the concave side of the frame-work, substantially as described.

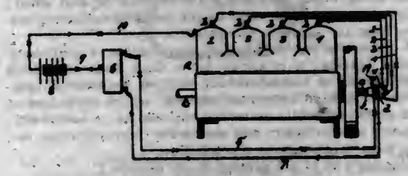
957,712. MILK-BOTTLE HOLDER AND LOCK. MARION C. RANDOLPH, San Francisco, Cal. Filed Apr. 15, 1909. Serial No. 490,107.



The combination with a bottle having a flanged neck portion, of a suitable support having a hole therethrough, a sleeve fitting in said hole, and a bottle lock comprising a piece of spring wire bent centrally to form a loop adapted to receive the neck of the bottle and grip the same when said loop is contracted, the ends of said loop extending in approximately parallel position and of a length sufficient to extend through said sleeve to a point a little beyond the same, said projecting portions having their extremities bent in reverse directions to form stops which engage the wall of the support surrounding the sleeve and prevent the withdrawal therefrom, said extending portions of the loop being compressible to allow the bent extremities to be passed through the sleeve.

957,713. CIRCUIT CLOSER OR TIMER. WILLIAM J. RAPP, Detroit, Mich., assignor to H. H. Creighton and Alexander Arnold, Toledo, Ohio. Filed Jan. 27, 1908. Serial No. 412,726.

1. An electrical instrument for the purpose described comprising a battery, an induction coil, a cylinder of insulating material, triple circular circumferentially arranged rows of insulated electrical contact devices carried within the cylinder and extending therethrough, a shaft rotatable within the cylinder provided with plural correspondingly arranged electrical contact devices to form electrical connection with the two outer rows of contact devices of the cylinder, and with an intermediate electrical contact device in electrical circuit with the shaft, and with the intermediate row of the contact devices of the cylinder, the contact device in circuit with the shaft arranged to be in electrical circuit with the battery through the shaft, and to be connected with leads to the coil, one of the outer rows of the contact devices of the cylinder arranged to be in electrical circuit with the coil, and the other outer row of contact devices of the cylinder arranged to be in electrical contact with independent spark plug leads, the contact device in circuit with the spark plug leads being insulated from said shaft.



2. An electrical instrument for the purpose described, comprising a cylinder of insulating material, triple circular circumferential rows of insulated electrical contact devices carried within the cylinder and extending therethrough, the contact devices of each row being separated and insulated one from the other by said cylinder, a shaft rotatable within the cylinder provided with corresponding triple electrical contact devices to contact with the adjacent contact devices of the cylinder, one row of the contact devices of the cylinder arranged to be in electrical circuit with a battery through the shaft and with leads to an induction coil, a second row of the contact devices of the cylinder arranged to be in electrical connection with leads to the coil, and the other row of the contact devices of the cylinder arranged to be placed in electrical connection with the second row of contact devices of the cylinder, and being connected with independent spark plug leads.

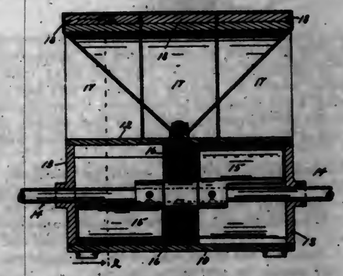
3. An electrical instrument for the purpose described, comprising a cylinder of insulating material, triple circular circumferential rows of insulated electrical contact devices carried within the cylinder and extending therethrough, the contact devices of each row being separated and insulated one from the other by said cylinder, a shaft rotatable within the cylinder provided with corresponding triple electrical contacts to contact with the adjacent contact devices of the cylinder, one row of the contact devices of the cylinder arranged to be in electrical circuit with a battery through the shaft and with leads to an induction coil, a second row of the contact devices of the cylinder arranged to be in electrical connection with leads to the coil, and the other row of the contact devices of the cylinder arranged to be placed in electrical connection with the second row of contact devices of the cylinder and being connected with independent spark plug leads, the second row of contact devices of the cylinder having electrical connections one with the other.

4. An electrical instrument for the purpose described, comprising a cylinder of insulating material, triple circular circumferential rows of insulated electrical contact devices carried within the cylinder and extending therethrough, the contact devices of each row being separated and insulated the one from the other by said cylinder, a shaft rotatable within the cylinder provided with corresponding triple electrical contacts to contact with the adjacent contact devices of the cylinder, one row of the contact devices of the cylinder arranged to be in electrical circuit with a battery through the shaft and with leads to an induction coil, the second row of the contact devices of the cylinder arranged to be in electrical connection with leads to the coil, and the other row of the contact devices of the cylinder arranged to be placed in electrical connection with the second row of contact devices of the cylinder, and being connected with independent spark plug leads, the first mentioned row of contact devices of the cylinder having electrical connections the one with the other.

5. An electrical instrument for the purpose described comprising a battery, an induction coil, a cylinder of insulating material triple circular circumferentially arranged rows of insulated electrical contact devices carried within the cylinder and extending therethrough, a shaft rotatable within the cylinder provided with plural correspondingly arranged electrical contact devices to form electrical connection with the two outer rows of contact devices of the cylinder, and with an intermediate electrical contact device in electrical circuit with the shaft, and arranged to connect with the intermediate row of the contact devices of the cylinder, the contact device in circuit with the shaft arranged to be in electrical circuit with the battery through the shaft, and to be connected with leads to the coil, one of the outer rows of the contact devices of the cylinder arranged to be in electrical circuit with the coil, and the other outer row of contact devices of the cylinder arranged to be in electrical contact with independent spark plug leads, the contact device in circuit with the spark plug leads being insulated from said shaft, and said cylinder being adjustable about said shaft.

[Claims 6 to 9 not printed in the Gazette.]

957,714. MAGNETO-ELECTRIC GENERATOR. FRANK I. REMY and BENJAMIN P. REMY, Anderson, Ind., assignors to Remy Electric Company, Anderson, Ind., a Corporation. Filed Mar. 25, 1909. Serial No. 485,580.



1. A magneto electric generator including a casing or frame, horseshoe shaped magnets mounted in connection with said casing or frame, a strap extending over the tops of said magnets with the ends thereof extending downwardly at an inclination under the magnets until said ends meet, and means mounted in connection with the top of the frame of the casing with which both ends of said strap are connected for drawing and holding said strap down tightly in place.

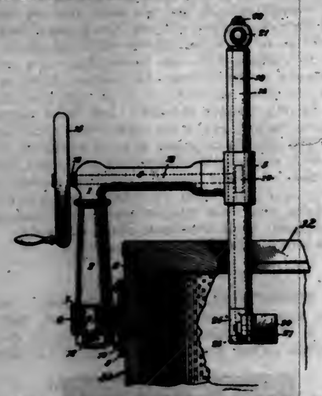
2. A magneto electric generator including a case or frame, horseshoe shaped magnets mounted in connection with said casing or frame, a strap extending over the tops of said magnets with the ends thereof extending downwardly, and means mounted in connection with the top of the frame of the casing with which the ends of said strap are connected for drawing and holding said strap down tightly in place.

957,715. CENTRIFUGAL MACHINE. EUGENE ROBERTS and ANGUS H. GIBSON, Lehi, Utah. Filed Jan. 31, 1908. Serial No. 413,500.

1. The combination with the casing of the centrifugal machine, of a bearing secured thereto, a bracket comprising a vertical portion journaled in the bearing, and a horizontal portion having a horizontal bearing therethrough, and a vertical sleeve at the end thereof, a shaft journaled in the bearing, a pinion on the shaft adjacent to the sleeve, a hand wheel on the other end of the shaft, a hollow shaft slidable in the sleeve and provided with rack teeth engaged by the pinion, a rod journaled in the hollow shaft, a lever on the upper end of the rod for manipulating the same, an arm on the lower end of the rod, and a paddle secured to the arm.

2. The combination with the casing of the centrifugal machine, of a bracket supported thereon, a hollow sleeve

slidable in the bracket, means for raising and lowering the sleeve, a rod journaled in the sleeve, a lever connected with the upper end of the rod for manipulating the same, an arm connected with the lower end of the sleeve, and a paddle secured to the arm.

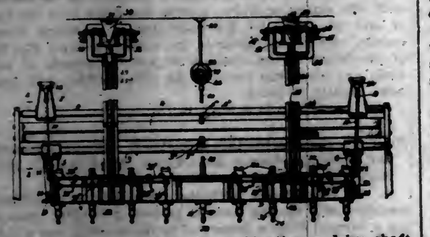


3. The combination with the casing of the centrifugal machine, of a hollow sleeve, means for supporting the sleeve for swinging movement over and away from over the casing, means for moving the sleeve into and out of the casing, a rod journaled in the sleeve, a lever secured to the rod for oscillating the same, an arm secured to the lower end of the rod, and a paddle in connection with the arm.

4. The combination with the centrifugal machine, of a rod mounted above the machine, means for swinging the rod over and away from over the machine, means for raising and lowering the rod, a paddle arranged transversely of the lower end of the rod, said paddle having one end beveled for engaging the inner wall of the casing of the machine, and means for oscillating the rod.

5. The combination with the centrifugal machine, of a rod mounted above the machine, means for moving the rod over and away from over the machine, means for raising and lowering the rod, a paddle arranged transversely of the lower end of the rod, and means for oscillating the rod.

957,716. CARVING-MACHINE. DAVID B. SALSTROM, Chicago, Ill., assignor of one-half to Emanuel Kopriwa, Chicago, Ill. Filed July 19, 1906. Serial No. 326,834.



1. In a carving machine, in combination, a drive shaft suspended by one end and arranged to swing; a head adapted to be moved bodily with relation to said shaft; spindles in said head; and a driving connection between the other end of said shaft and said spindles.

2. In a carving machine, in combination, a movable spindle-carrying head; spindles in said head; a drive shaft for the spindles, arranged to move forward and back and from side to side; independent supports for said head and said shaft; and a driving connection between said shaft and said spindles.

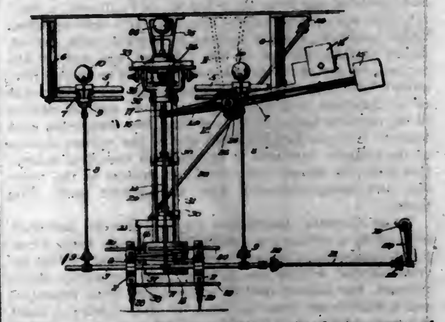
3. In a carving machine, in combination, a vertical drive shaft; a support for said shaft permitting the lower end of the shaft to swing forward and back and from side to side; a head arranged to have a vertical movement independently of said shaft; spindles in said head; and a driving connection between said shaft and said spindles.

4. In a carving machine, in combination, a spindle-carrying head arranged to have a vertical movement; a rotatable drive shaft; a gimbal bearing for said shaft, said head being bodily movable with relation to said shaft; spindles in said head; and means for communicating motion from the shaft to the spindles.

5. In a carving machine, in combination, a stationary gimbal bearing; a rotatable drive shaft suspended from said bearing in a substantially vertical position; a spindle-carrying head supported adjacent to the lower end of said shaft and bodily movable with relation to said shaft; spindles in said head; and means for communicating motion from said shaft to the spindles.

[Claims 6 to 17 not printed in the Gazette.]

957,717. CARVING-MACHINE. DAVID B. SALSTROM, Chicago, Ill., assignor of one-half to Emanuel Kopriwa, Chicago, Ill. Filed Aug. 19, 1908. Serial No. 449,225.



1. A carving machine comprising a head; two rows of spindles in said head; and two driving means located between said rows and each driving the adjacent one-half of the spindles.

2. A carving machine comprising a head; two rows of spindles in said head; a driving means near each end of said head; and a single belt connecting each driving means with a plurality of spindles in both rows.

3. A carving machine comprising sixteen spindles arranged in two groups of eight spindles each; and a single driving means for each group of spindles.

4. A carving machine comprising sixteen spindles and two drivers located relatively near said spindles, each of said drivers having a driving connection with one-half of said spindles.

5. A carving machine comprising sixteen spindles, rotatable driving elements located among said spindles and each driving a plurality of spindles, and means for rotating said elements.

[Claims 6 to 15 not printed in the Gazette.]

957,718. DEVICE FOR THE CORRECTION OF FLAT FOOT, WEAK FOOT, OR FALLEN ARCH OF THE FOOT. FREDERICK C. SCHUMACHER, New York, N. Y., assignor to Perfect Foot-Arch Supporter Co., New York, N. Y., a Corporation of New York. Filed Dec. 28, 1908. Serial No. 469,719.

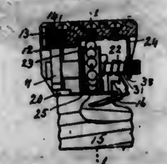
1. In an instep support, the combination with the concavo-convex foot supporting portion, of a reversely bent reduced portion forming a spring support therefor, and integral means on the free end of said reduced portion springingly supporting the same.

2. In an instep support, a base portion having one end bent thereunder to form a springing support for one side of the base, and the other end being bent upward at an angle from the base and its free end above the downward



bent portion of the base terminating in a curved portion adapted to fit the foot and support the same in proper position.

957,719. ELECTRIC-LAMP SOCKET. FRANK E. SEELEY, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Oct. 14, 1907. Serial No. 397,297.



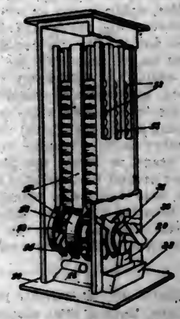
1. In a pull socket for an electric lamp, an insulating base recessed to form two chambers, a switch spindle extending through both of said chambers, standards in one of said chambers supporting said spindle and a ratchet mechanism for operating said spindle located between said standards, in combination with a circuit terminal located in the other chamber and a contact member on the switch spindle adapted to establish the circuit between said circuit terminal and a lamp terminal.

2. In a pull socket for an electric lamp, an insulating base recessed to form two chambers, a switch spindle extending through both of said chambers, standards in one of said chambers supporting said spindle and a ratchet mechanism for operating said spindle located between said standards, in combination with a circuit terminal located in the other chamber and a rotary switch member in said chamber having spring arms bearing against the sides of said chamber, the latter being offset to act as stops against which said arms impinge to prevent the rotation of the spindle in one direction.

3. In a pull socket for an electric lamp, an insulating base recessed to form two chambers, a switch spindle extending through both of said chambers, standards in one of said chambers supporting said spindle and a ratchet mechanism for operating said spindle located between said standards, in combination with a circuit terminal located in the other chamber, a screw shell above said terminal and a contact member on the switch spindle adapted to establish the circuit between said circuit terminal and shell, the latter being offset to insure a better contact with said switch member and to facilitate the assembly of the shell and base, as described.

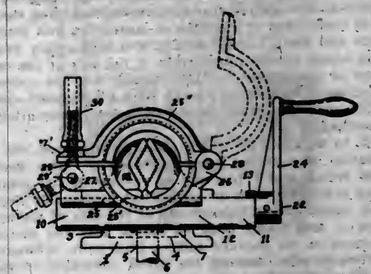
4. In a pull socket for an electric lamp, having lamp and circuit terminals, a circuit closer operating between a lamp and a circuit terminal, a spindle carrying the same, standards supporting said spindle, a spring actuated ratchet device to actuate said spindle and means for adjusting the tension of the spring of said ratchet device, said means comprising a sleeve to which one end of the spring is secured and forming a bearing for said spindle and comprising a hollow shank, a retaining flange thereon and an angled portion adjacent thereto, said retaining flange being adapted to be pressed against the side of one of said spindle standards by the spring and said irregular portion being adapted to enter a corresponding aperture in said standard, the shank affording means for disengaging said sleeve from the standard, and guiding the same in said aperture during its rotation for the purpose of adjusting the tension of the spring.

957,720. COIN-OPERATED VENDING-MACHINE. JOSEPH STARR, New London, Conn. Filed Mar. 24, 1909. Serial No. 485,382. Renewed Mar. 30, 1910. Serial No. 552,414.



In a vending machine, the combination with a multi-chambered vertically-disposed tube-supporting chute, of a notched delivery wheel disposed beneath said chute, said wheel having at one side of each of its notches a hook or beak having a wedge-shaped point forming a pocket to receive a tube and adapted to enter between the selected tube and the tubes above it in the chute and to act as a cut-off and a support for the superimposed rolls in the chute, whereby the selected tube is relieved from such load, and a guard plate following the contour of said wheel to prevent a tube from leaving its pocket and intermittently actuated locking mechanism.

957,721. SELF-CENTERING WORK AND DIE HOLDER FOR PIPE-THREADING DIES. EDWARD L. TROUP, Toledo, Ohio, assignor of one-half to David C. Walter, Toledo, Ohio. Filed June 21, 1909. Serial No. 503,375.



1. In a self-centering work and die lead holder for threading pipes and the like, a support, a base mounted on the support, a die lead holder fixed on the base and adapted to detachably receive and secure therein the internally threaded lead of an independently usable die head therein, with the head in threaded engagement therewith and revoluble and movable progressively in the lead in line with its axis, and a work holder on the base comprising means independent of the die holder for receiving and automatically securing in fixed relation to the die lead holder cylindrical bodies of different diameters, in axial alinement with the axis of a die secured in the die holder, substantially as set forth.

2. In a self-centering work and die lead holder for threading pipes and the like, a support, a base adjustably

mounted on the support, a die lead holder fixed on the base and adapted to detachably receive and secure therein the internally threaded lead of an independently usable die head therein, with the head in threaded engagement therewith and revoluble and movable progressively in the lead in line with its axis, and a work holder on the base comprising means independent of the die holder for receiving and automatically securing in fixed relation to the die lead holder, cylindrical bodies of different diameters, in axial alinement with the axis of the die secured in the die holder, substantially as set forth.

3. In a self-centering work and die lead holder for threading pipes and the like, the combination of a support, a base mounted on the support, a die lead holder fixed on the base and adapted to detachably receive and secure a die head therein, with the head revoluble and movable progressively in the lead in line with its axis, said die lead holder comprising a semi-cylindrical member integral with the base, a semi-cylindrical member hinged to the integral member and means to clamp the hinge member to the integral member around the lead of a die lead, and a work holder on the base comprising means for receiving and automatically securing pipes and the like of different diameters, in axial alinement with the axis of the die secured in the die lead holder, substantially as set forth.

957,722. HARROW ATTACHMENT FOR PLOWS. WARREN H. WALKER, Racine, Wis., assignor to Racine Economy Spring Company, Racine, Wis., a Corporation of Wisconsin. Filed Mar. 2, 1909. Serial No. 480,880.



1. In an appliance of the character described, the combination of a cutter frame, a revoluble cutter shaft in said frame, and a plurality of cutters on and rotatable with said shaft, each of said cutters having only five cutting blades curved transversely of the axis of the cutter, each of said blades being so shaped that the successive portions of its forward cutting edge are disposed substantially vertically when leaving the earth, substantially as described.

2. In an appliance of the character described, the combination of a cutter frame, a revoluble cutter shaft in said frame, and a plurality of cutters on and rotatable with said shaft, each of said cutters having only five cutting blades curved transversely of the axis of the cutter, each of said blades being so shaped that the successive portions of its forward cutting edge move substantially vertically when leaving the earth, substantially as described.

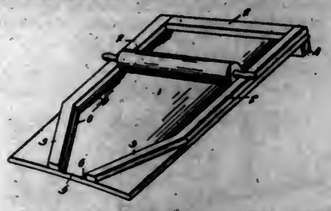
3. In an appliance of the character described, the combination of a cutter frame, a revoluble cutter shaft in said frame, and a plurality of cutters on and rotatable with said shaft, each of said cutters having only five cutting blades curved transversely of the axis of the cutter, each of said blades being so shaped that the successive portions of its forward cutting edge are disposed and move substantially vertically when leaving the earth, substantially as described.

4. In an appliance of the character described, the combination of a cutter frame, a revoluble cutter shaft in said frame, and a plurality of cutters on and rotatable with said shaft, each of said cutters having only five cutting blades curved transversely of the axis of the cutter, each of said blades being so shaped that the successive portions of its forward cutting edge are disposed and move substantially vertically when leaving the earth, said cutters being arranged on said shaft with the blades thereof disposed spirally, substantially as described.

5. In an appliance of the character described, the combination of a cutter frame, a revoluble cutter shaft in said frame, and a plurality of cutters on and rotatable with said shaft, each of said cutters having only five cutting blades curved transversely of the axis of the cutter, each of said blades being so shaped that the successive portions of its forward cutting edge are disposed and move substantially vertically when leaving the earth, said blades being bent laterally longitudinally of said axis, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

957,723. BUTTER-WORKER. ELLA WELLS, Shelbyville, Ky. Filed Mar. 23, 1909. Serial No. 485,273.

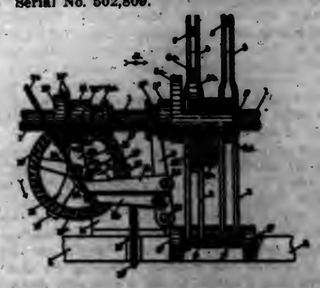


1. A device of the character described, comprising an inclined tray having rails at opposite sides and one end, said side rails converging inwardly toward the longitudinal center of the tray at the other end thereof, the upper surface of said tray being transversely convex.

2. A device of the character described, comprising an inclined tray having rails at opposite sides and one end, said side rails converging inwardly toward the longitudinal center of the tray to provide an escape opening at the other end thereof, said tray being transversely convex and having longitudinal grooves at opposite sides between the rails.

3. A device of the character described, comprising a tray, a supporting cleat arranged under one end of said tray, side rails disposed upon the tray on opposite sides and one end thereof, said side rails converging inwardly adjacent to the other end of the tray to form an escape opening, said tray being transversely convex and having grooves in its upper surface extending in parallel relation to the side rails and in close proximity thereto.

957,724. CAM MECHANISM. HORACE WYMAN, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed June 17, 1909. Serial No. 502,809.

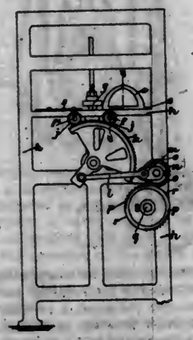


1. In a cam mechanism, a set of cams, as 8^a, 8^b, 8^c, and 8^d, movable on a shaft, a plurality of said cams having a concentric portion of their circumference removed, a corresponding concentric segmental surface, as 6^a, fast on said shaft, and means to move said set of cams, to cause said segmental surface to be interposed in place of the removed surface of one or the other of said plurality of cams.

2. In a cam mechanism, a set of cams on a hub movable on a shaft, comprising two pairs of cams, as 8^a, 8^b, and 8^c, 8^d, two harness levers, one actuated by one of one pair of cams, and the other by one of the other pair of cams, means to move the set of cams endwise on a shaft, and one pair of cams, as 8^a and 8^b, having the concentric portion removed, a hub fast on said shaft, having a concentric surface, as 6^a, similar to that removed from the cams, to sustain a lever, as the concentric portion passes over it.

3. In a cam mechanism, two pairs of cams movable longitudinally, to bring either pair into operative position for two levers, pattern indicators, and intermediate mechanism, comprising a lever adapted to be engaged by a pattern indicator, to ship the cams endwise, and an intermittently moving lever to return the first mentioned lever to its normal position.

957,725. PICKING-MOTION FOR VERTICAL LOOMS. ROBERT ABELL, Uttoxeter, borough of Derby, England. Filed Nov. 6, 1908. Serial No. 461,422.

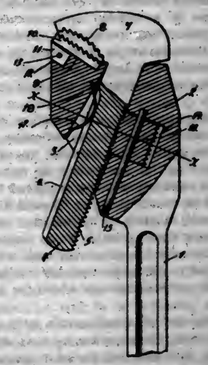


In a vertical loom, the combination of reciprocating upright shuttles, placed side by side, racks on the bottom of the shuttles, pinions engaging with said racks, horizontal shafts carrying said pinions, pinions on the ends of said shafts, a toothed quadrant engaging with the last named pinions, a pinion having dwells thereon, means for connecting said pinion with the quadrant, and a gear wheel having dwells thereon engaging with the last named pinion said gear wheel being connected with the driving means.

957,726. WRENCH. RICHARD W. ARMSTRONG, Parkers Landing, Pa. Filed May 7, 1909. Serial No. 494,614.

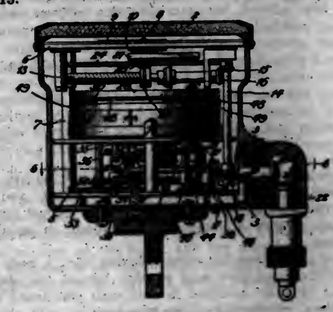
1. A wrench of the type described, comprising a handle, an enlarged head carried thereby, said head having a diagonally disposed tapering opening formed therein, a shank movably mounted in said opening and having one edge thereof provided with teeth while the opposite edge is provided with a longitudinally disposed groove, a jaw carried by said shank and having a concave serrated gripping surface, said head having an inclined surface provided with a seat, a serrated gripping block mounted in said seat and adapted to confront the gripping surface of said jaw, a pin for holding said gripping block in said seat, said head having a transverse opening formed therein, a threaded nut revolubly mounted in said opening and adapted to engage the teeth of said shank, and a spring located in the diagonally disposed tapering opening of said head and adapted to extend into the groove of said shank for holding said shank in engagement with said nut.

2. A wrench of the type described, comprising a handle, an enlarged head carried thereby, said head having a diagonally disposed tapering opening formed therein, a shank movably mounted in said opening and having one edge thereof provided with teeth, while the opposite edge is provided with a longitudinally disposed groove, a jaw carried by said shank and having a concave serrated gripping surface, said head having an inclined surface provided with a seat, a serrated gripping block mounted in said seat and adapted to confront the gripping surface



of said jaw, a pin for holding said gripping block in said seat, said head having a transverse opening formed therein, a threaded nut revolubly mounted in said opening and adapted to engage the teeth of said shank, and means carried by said head and extending into the groove of said shank for normally holding said shank in engagement with said nut.

957,727. SPEEDOMETER. DILLWYN M. BELL, Oak Park, Ill., assignor to William J. Anderson and George F. Lewis, Chicago, Ill. Filed Nov. 1, 1909. Serial No. 525,613.



1. In a device for indicating the speed of rotation of a wheel or other rotating object, the combination with a rotary magnet, of means whereby said magnet is driven from said rotating object, a magnet armature rotatably mounted in the field of said magnet and driven thereby, means whereby said armature is prevented from exceeding a predetermined speed, indicating means, variable speed mechanism driven at a speed proportionate to the speed of said rotating object, and means responsive to the resultant action of said armature and said variable speed mechanism for actuating said indicating means.

2. In a device for indicating the speed of rotation of a wheel or other rotating object, the combination with a rotary magnet, of means whereby said magnet is driven from said rotating object, a magnet armature rotatably mounted in the field of said magnet, means whereby said armature is regulated to rotate at a predetermined speed,

variable speed mechanism driven at a speed proportionate to the speed of said rotating object and speed-indicating mechanism differentially actuated by said armature and said variable speed mechanism.

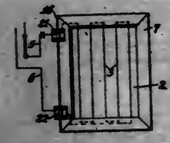
3. In a speedometer, the combination with gear mechanism adapted to be operatively connected to an object the speed of which is to be indicated, of a rotary magnet driven through said gear mechanism, a rotary armature of magnetic material driven by said magnet, means whereby said armature is prevented from exceeding a predetermined speed, indicating mechanism, and means whereby said indicating mechanism is subjected to a tendency of said armature to move it in one direction and to a tendency of said gear mechanism to move it in an opposite direction.

4. In a speedometer, the combination with a rotary magnet, of a rotary disk, means whereby said disk is rotated by the magnetic pull exerted by said magnet, a traveler-wheel having its periphery in engagement with said disk, said traveler-wheel being mounted to rotate upon its own axis and to travel radially of said disk, means cooperating with said magnet to maintain a constant maximum speed of rotation of said disk, means tending to impart to said traveler-wheel a speed of rotation proportional to the speed to be measured, indicating means, and means actuated from said traveler-wheel for actuating said indicating means.

5. In a speedometer, the combination with a rotary magnet, of a rotary disk, means whereby said disk is rotated by the magnetic pull exerted by said magnet, a rotary screw, a traveler-wheel mounted on said screw, said traveler wheel having its periphery in engagement with the surface of said disk, means for maintaining a constant maximum speed of rotation of said disk, means whereby a speed proportional to the speed to be measured is transmitted to said screw, indicating means, and means actuated from said traveler-wheel for actuating said indicating means.

[Claims 6 to 21 not printed in the Gazette.]

957,728. WINDOW. WILLIAM L. BLISS, Brooklyn, N. Y. Filed Sept. 14, 1905. Serial No. 278,358.



1. In a window for cabs, vestibules, and the like, a pane of glass, conducting wires embedded therein, and means for automatically throwing the wires in circuit upon closing the window and opening the circuit on opening the window.

2. In a window for cabs, vehicles, etc., a sash having supporting shoulders and grooves beyond the shoulders, a pane of glass mounted in said sash positioned by said shoulders, conducting wires embedded in said glass, and having their ends extending into said grooves, and means for energizing the circuit through said wires, for the purpose specified.

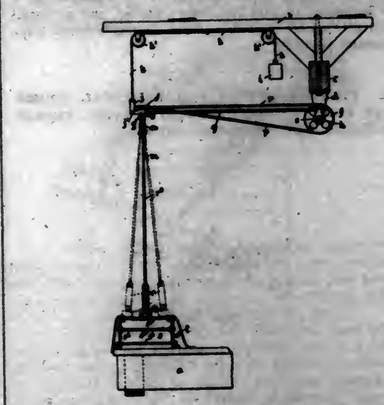
3. In a window construction, a stationary frame having contacts, a source of electrical energy connected to said contacts, a sash movable in said frame and having terminals adapted to electrically engage said frame contacts, a glass plate supported in said sash and a conductive wire embedded in said glass plate, the ends of the wire being housed and protected in said sash and connected to said sash terminals.

4. A window construction comprising, a frame, a sheet of transparent glass carried thereby, a plurality of conducting wires embedded therein and arranged so as to furnish a heating means throughout the glass but not to obstruct the vision through the window, means for supplying current sufficient to heat the wires so as to prevent the formation or collection of ice on the exterior of the glass and means for automatically throwing the wires into circuit upon closing the window.

5. A window construction comprising, a frame, a sheet of transparent glass carried thereby, a plurality of conducting wires embedded therein and arranged so as to furnish a heating means throughout the glass but not to obstruct the vision through the window, means for supplying current sufficient to heat the wires so as to prevent the formation or collection of ice on the exterior of the glass and means for automatically opening the circuit through the wires on opening the window.

[Claims 6 to 9 not printed in the Gazette.]

957,729. HAIR-GRINDING MACHINE. CHARLES P. BOSSERT, Milwaukee, Wis. Filed Apr. 23, 1908. Serial No. 428,810.



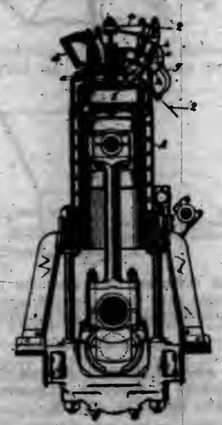
1. A hair-grinding machine comprising, in combination, a vertical shaft, means for rotating the same, means for raising and lowering the same, a vertical swinging spindle, a flexible connection between said shaft and spindle, an abrading tool mounted on the lower end of said spindle, a sleeve mounted to rotate freely on said spindle just above said tool, and a tube mounted on the upper end of said sleeve and inclosing it to a distance above the height of a worker thereon.

2. A hair-grinding machine comprising, in combination, a shaft, a sheave mounted thereon, a distance-arm mounted to turn about said shaft as an axis, a vertical shaft mounted to turn in the end of said arm, a sheave mounted on said vertical shaft, a vertical swinging spindle flexibly connected to said shaft, an abrading tool comprising a block of abrading material having a convexly rounded centrally recessed lower surface mounted on the lower end of said spindle, a manipulating sleeve mounted in bearings on said spindle just above said tool and having an extension tube connected therewith above the same, a flexible elastic work-rest under said tool, a counterweight for said arm and the apparatus carried thereby, and a belt connecting said sheaves.

957,730. VALVE FOR INTERNAL-COMBUSTION ENGINES. FRANCIS W. BRADY, New York, N. Y. Filed July 8, 1907. Serial No. 382,701.

1. In an internal combustion engine, a combustion chamber having a port through which the contents of the combustion chamber as a whole pass during the reciprocation of the piston, a valve opening in the direction of flow of the gases and actuated by the movement thereof and controlling said port, and cushioning mechanism for said valve comprising a surface operatively connected therewith and moving against the pressure of the gases; substantially as described.

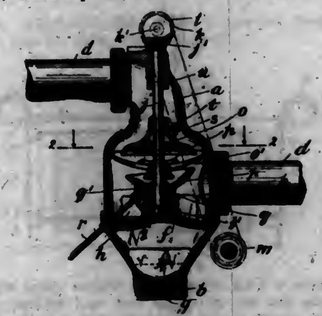
2. In an internal combustion engine, a combustion chamber having a port through which the contents of the combustion chamber as a whole pass during the reciprocation of the piston, a valve actuated by the movement of the gases and controlling said port, a second valve opening against the pressure of the gases, and connection mechanism between said valves for transmitting the movement of the first valve to the second, whereby the movement of the first valve is cushioned; substantially as described.



3. In an internal combustion engine, a combustion chamber having a port through which the contents of the combustion chamber as a whole pass during the reciprocation of the piston, a valve actuated by the movement of the gases and controlling said port, a surface arranged to move against the pressure of the gases, and connecting mechanism between the valve and said surface, said connecting mechanism including a lost motion device; substantially as described.

4. An engine having a valve opening outwardly from the combustion chamber and through which the contents of that chamber are exhausted, said valve being actuated by the pressure of the confined gases on the exhaust stroke of the piston, in combination with means for cushioning said valve comprising a plate mechanically connected thereto and moving against the pressure of the said gases; substantially as described.

957,731. CARBURETER. FRANCIS W. BRADY, New York, N. Y. Filed Sept. 19, 1907. Serial No. 393,714.



1. A carbureter comprising a carbureting chamber and a vaporizing member rotatably mounted therein, said chamber having an air inlet port above the vaporizing member and a vapor out-take port below the vaporizing member, in combination with means for feeding a stream of oil on the upper surface of the vaporizing member, and mechanism for rotating said member to spread the oil thereon in a thin film, whereby the air is caused to pass directly across the film of oil on the vaporizing surface; substantially as described.

2. A carbureter comprising a casing having a contracted end and an enlarged chamber, connected by a flaring portion, an air inlet in the contracted end and a vapor out-take from the enlarged chamber, a spindle extending through the casing axially of the flaring portion, a bell-shaped vaporizing surface mounted on the spindle in the flaring portion, means for feeding oil onto the vaporizing surface, and mechanism for rotating the spindle and with it the vaporizing surface; substantially as described.

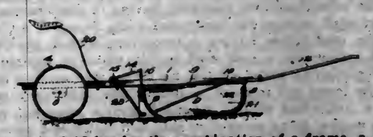
3. A carbureter comprising a carbureting chamber and a vaporizing member rotatably mounted therein, said chamber having an air inlet port above the vaporizing member and a vapor out-take port below the vaporizing member, and a baffle having a central passage and substantially dividing the chamber between the vaporizing member and the vapor out-take port, in combination with means for feeding a stream of oil on the upper surface of the vaporizing member and mechanism for rotating said member to spread the oil thereon in a thin film, whereby the air is caused to pass directly across the film of oil on the vaporizing surface and in a tortuous path through the central passage in the baffle; substantially as described.

4. A carbureter comprising a carbureting chamber and a vaporizing member rotatably mounted therein, said member having an air inlet port above the vaporizing member and a vapor out-take port below the vaporizing member, in combination with means for feeding a stream of oil onto the upper surface of the vaporizing member, mechanism for rotating said member to spread the oil thereon in a thin film, a drip cup below the vaporizing member to catch any oil that drips therefrom, and a drainage pipe leading from the drip cup to the exterior of the carbureting chamber, whereby the air is caused to pass directly across the film of oil on the vaporizing surface and the accumulation of oil in the chamber is prevented; substantially as described.

5. A carbureter comprising a carbureting chamber and a vaporizing member rotatably mounted therein, said chamber having an air inlet port above the vaporizing member, and a vapor out-take port below the vaporizing member, and a baffle having a concave upper surface with a central passage and substantially dividing the chamber between the vaporizing member and the vapor out-take port, in combination with means for feeding a stream of oil onto the upper surface of the vaporizing member, mechanism for rotating said member to spread the oil thereon in a thin film, a drip cup below the baffle to catch any oil that drips therefrom, and a drainage pipe leading from the drip cup to the exterior of the carbureting chamber, whereby the air is caused to pass directly across the film of oil on the vaporizing surface and by a tortuous path through the central passage of the baffle, and the accumulation of oil in the chamber is prevented; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

957,732. FIELD-LEVELER. GEORGE M. BRAND, Brighton, Colo., assignor of one-fourth to H. T. Bacon, Greeley, Colo. Filed Aug. 6, 1909. Serial No. 511,611.



1. In a field leveler the combination of a frame, a rearwardly curved shoe and a roller extending across said frame, said shoe and roller respectively supporting the forward and rear ends of said frame, and a leveler intermediate of said shoe and said roller, substantially as described.

2. In a field leveler the combination of a frame, a rearwardly curved shoe and a roller extending across said frame, said shoe and roller respectively supporting the forward and rear ends of said frame, and a vertically adjustable leveler intermediate of said shoe and roller, substantially as described.

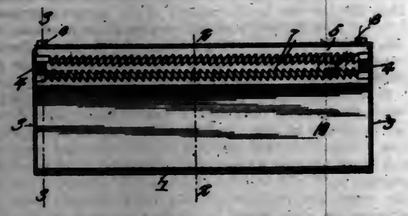
3. In a field leveler the combination of a frame, a rearwardly curved shoe and a roller extending across said frame, said shoe and roller respectively supporting the forward and rear ends of said frame, and a vertically adjustable forwardly curved leveler intermediate of said shoe and roller, substantially as described.

4. In a field leveler the combination of a frame, a rearwardly curved shoe and a roller extending across said frame, said shoe and roller respectively supporting the forward and rear ends of said frame, a leveler intermediate of said shoe and roller, said leveler being pivotally supported on said frame by means of the forwardly extending pivoted leveler rods, a crank shaft provided with an arm supporting said leveler, and an operating lever connected to said crank shaft and coöperating with a pawl rod and rack to adjustably support said leveler, substantially as described.

5. In a field leveler the combination of a frame, a rearwardly curved shoe and a roller extending across said frame, said shoe and roller respectively supporting the forward and rear ends of said frame, an adjustable leveler intermediate of said shoe and roller, and side fenders connected to said frame and extending from said shoe rearwardly beyond said leveler, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

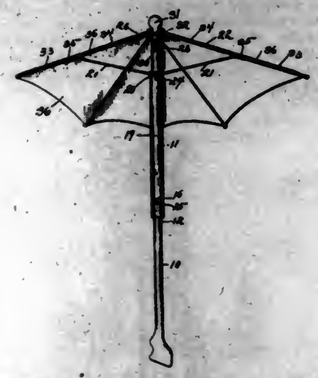
957,733. CHALK-SHARPENING DEVICE. AUGUST BRANTZ, Richmond, Va. Filed Aug. 4, 1908. Serial No. 446,946.



A chalk sharpening device comprising a casing, a pair of sharpening bars arranged therein and provided at their ends with depending lugs, means fixedly connecting one of the bars to the casing, adjusting screws working in threaded openings in the lugs of the fixed bar and passing through non-threaded openings in the lugs of the other bar with their heads arranged to be engaged with the latter-named lugs for adjusting said bar toward the fixed bar, and binding screws having a non-threaded engagement with the fixed bar and working in threaded openings in the adjustable bar, whereby the latter may be clamped between the fixed bar and the heads of the adjusting screws.

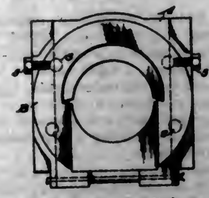
957,734. FOLDING UMBRELLA. GEORGE V. BRATZEL, Hebron, N. D. Filed June 2, 1908. Serial No. 436,238.

The hereindescribed umbrella, having in combination, a lower staff section the upper end being recessed, a plate within said recess having a projecting portion provided with a shoulder, a stub staff section pivotally secured to said projecting plate portion, an upper staff section having its lower end recessed, a plate within said recess having a projecting portion provided with a shoulder, said stub section being secured to said last mentioned plate, a spring carried by said stub member to engage at times said shoulder, a tubular sleeve sliding over said upper staff section, said stub section and the upper end of said lower staff section, said sleeve having a slot near its upper and lower ends, a spring stud secured near the upper end of said staff section for engagement with said upper sleeve section, a spring below said stub carried by said upper staff section, a spring near the lower end of said upper staff section for engagement with said lower slot, ribs extending from the upper end of said upper staff section,



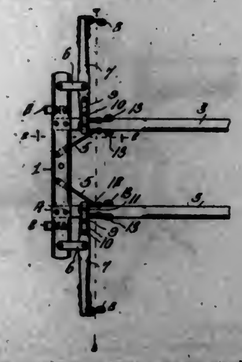
and brace rods extending from said ribs to said sleeve, said sleeve sliding upon the upper staff section to entirely uncover said stud section, as and for the purpose set forth.

957,735. ADJUSTER FOR LOCOMOTIVE DRIVE-BOXES. MARCUS F. BRENNAN, Carbondale, Pa. Filed Mar. 18, 1909. Serial No. 484,180.



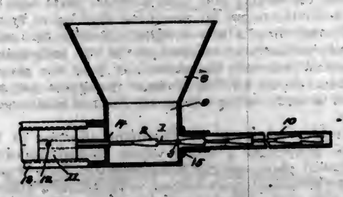
The combination with a box, of a liner or adjuster having lugs or studs in one side adapted to enter corresponding recesses in the side of the box, whereby the liner is removably secured thereto, and set screws engaging the lugs or studs for removably retaining the adjuster or liner in place.

957,736. DRAFT-EVENER. GAYLORD I. BRISTOL, Cross Fork, Pa. Filed July 21, 1908. Serial No. 444,584.



The herein described three-horse evener consisting of a draft bar, thills secured to the draft bar at suitable distances from the ends thereof, swingletrees connected to the outer ends of said draft bar by links pivoted to said swingletrees at points to one side of the centers thereof, draft hooks on the outer ends of the swingletrees, plates projecting from the inner ends of the swingletrees, rollers journaled between said plates and lying directly over the inner ends of the thills, straps passing around the rollers and extending in lines parallel with and on either side of the thills, and draft hooks on the opposite ends of the straps and disposed on opposite sides of the thills.

957,737. STUFFING-ROD. OSCAR BROCKMAN, Louisville, Ky. Filed May 5, 1909. Serial No. 494,052.

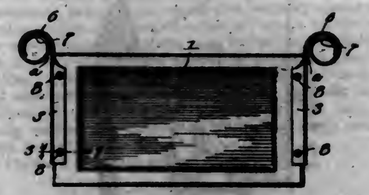


1. In a stuffing machine, the combination with a chute and a pipe, of a stuffing rod, a reciprocating member connected with the stuffing rod, guides connected with the chute and adapted to receive and guide the reciprocating member, the stuffing rod positioned within the pipe and having formed thereon a plurality of pairs of projections, each pair of projections being arranged to alternate upon the rod with its adjacent pair and each projection formed upon the rod at an acute angle thereto, substantially as shown and described.

2. In a stuffing machine, the combination with a chute and a tube, of a stuffing rod adapted to reciprocate within the tube and having formed thereon a series of teeth positioned in alternating pairs at substantially right angles to each other, the teeth of each pair being formed upon opposite sides of the rod and tapering lengthwise thereof, each tooth being set at an angle to the rod for engaging the material being packed.

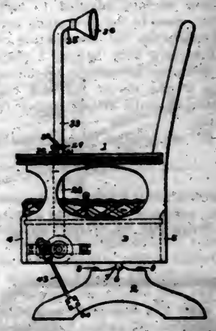
3. In a stuffing machine, the combination with a tube, and means for directing material thereto, of a stuffing rod adapted to reciprocate in said tube and comprising a plurality of teeth arranged in pairs and extending on each side of said rod, each pair being positioned at substantially a right angle to the adjacent pairs, and each tooth being formed with a concave end and beveled edges for permitting easy grasping of the material being packed and permitting easy rearward movement of the teeth.

957,738. REIN-HOLDER. JOHN S. BROUGH, Reeds, Mo. Filed May 21, 1909. Serial No. 497,474.



A rein holder formed from a single piece of sheet metal having parallel lugs bent to inclose the side edge of a dash board, means for securing said holder to the dash board, and an integral convolute coil formed upon the outer end of the holder for clamping a rein between the resilient convolutions.

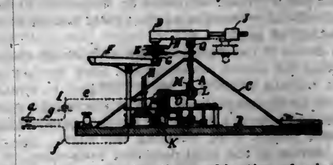
957,739. BLOWER FOR ROCKING-CHAIRS. EDWARD G. BULES, San Diego, Cal. Filed June 24, 1909. Serial No. 504,198.



1. In a rocking chair, a body portion provided with side and end frame pieces, a blow pipe arranged to pass through one of the side frame pieces and to project above the main body portion thereof and bent inward to form a discharge member, a combination fan and fly wheel positioned in the other end of the blow pipe, a pivotal base positioned under the chair body, a pivotal member carried by the body and engaging the pivotal base and means carried by the base and connected with the combination fan and fly wheel to operate the same for the purpose of forcing air through the blow pipe.

2. In a rocking chair, a blow pipe connected therewith, a combination fan and fly wheel mounted upon a shaft and positioned in one end of the blow pipe, a second shaft mounted adjacent the first mentioned shaft, means mounted upon the chair for revolving the last mentioned shaft and means connecting the two shafts, whereby when motion is imparted to the second mentioned shaft the first mentioned shaft will be made to revolve and to simultaneously rotate the combination fan and fly wheel for the purpose of forcing air through the blow pipe.

957,740. GAME APPARATUS. EDWARD J. BURKE, Brooklyn, N. Y. Filed Jan. 4, 1906. Serial No. 294,626.



1. In a game apparatus the combination of a body having a plane surface, a body having an inclined surface located above the said plane surface, a mechanical means located at the top of the inclined surface under the control of the operator for temporarily holding and delivering balls, and a means for changing the direction of delivery of the holding means so as to direct the balls down the inclined surface and onto the plane surface along any desired line of the said plane surface.

2. In a game apparatus the combination of a body having a plane surface, a mechanical means under the control of the operator for temporarily holding and delivering a ball, a means for changing the direction of delivery of the balls from the holding means and giving momentum to the said balls upon delivery thereof.

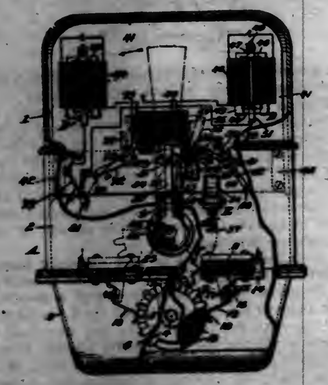
3. In a game apparatus the combination of a body having a plane surface, a body having an inclined surface located above the said plane surface, and a movable means under the control of the operator for directing the ball along any desired line of the said plane surface and means for releasing the said ball from the said movable means.

4. In a game apparatus the combination of a body having a plane surface, a rotating means for holding a ball, a means for releasing the said ball from the said rotating means, an inclined surface adapted to receive the said balls and to direct them to the said plane surface.

5. In a game apparatus the combination of a body having a conical surface, a body having a plane surface located below the said conical surface, mechanical means for moving the balls at the top of the said conical surface, means for releasing the balls at any desired time from said mechanical means.

[Claims 6 to 27 not printed in the Gazette.]

957,741. MOTOR-STARTER. ANTHONY J. BURNS, Hegewisch, Ill., assignor of one-half to Edward Shuler, Chicago, Ill. Filed Feb. 13, 1909. Serial No. 477,586.



1. A device of the class described comprising a controlling handle, means responsive to abnormal conditions for releasably holding the handle in running position, a lock-out means for holding the handle in off position, a switch held open by the handle when the latter is in off position, and a circuit controlled by the switch for releasing the lock-out means during the initial movement of the handle from off position.

2. A device of the class described comprising a lever for controlling the circuit connections, a latch for locking the same in running position, a weight adapted to release the latch, an electro-magnet for holding the weight in raised position, and a second weight arranged to restore the first-mentioned weight after releasing the latch.

3. A device of the class described comprising an operating lever, a locking device for holding the same in running position, a pivoted weight for releasing the latch, a second pivoted weight for restoring the first-mentioned weight, and an electro-magnet for holding the releasing weight in normal position.

4. A device of the class described comprising a controlling lever, a latch held by gravity in locking position, an armature constituting a weight arranged to release the latch by a hammer blow, electrical means for holding the armature in set position, and manually operable means on the lever for releasing the latch.

5. A device of the class described comprising a controlling lever, a gravity-set latch for holding the same in running position, an electro-magnet responsive to overload or no-voltage conditions and provided with an armature arranged to drop when the electro-magnet is deenergized for imparting a hammer blow to release the latch, means for automatically restoring the armature in coöperative relation with the electro-magnet, and manually operable means on the lever for releasing the latch.

[Claims 6 to 31 not printed in the Gazette.]

957,742. MOVING TARGET. PILADE CHIANTORE, Turin, Italy. Filed Oct. 10, 1908. Serial No. 457,071.



1. A moving target for practicing shooting at flying objects comprising two hemi-spherical parts of fragile material, an annular curved rim encircling said hemi-spherical parts and projecting therefrom, and means carried by said rim for locking said hemi-spherical parts together.

2. A moving target for practicing shooting at flying objects, comprising a hollow sphere divided through one diametrical plane, an annular curved rim encircling said sphere and projecting therefrom, and lying in a plane perpendicular to the dividing plane of the sphere, and means carried by said rim for locking the parts of said sphere together.

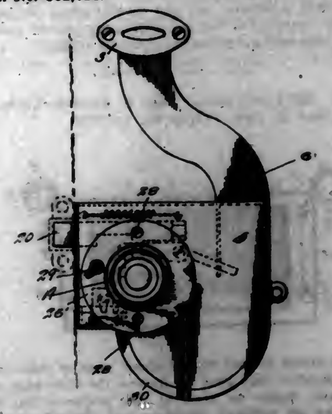
3. A moving target for practicing shooting at flying objects, comprising a hollow sphere divided through one diametrical plane, an annular curved rim encircling said sphere and projecting therefrom, and lying in a plane perpendicular to the dividing plane of the sphere, means carried by said rim for locking the parts of said sphere together, and a filling of light material for the interior of said sphere.

4. A moving target for practicing shooting at flying objects, comprising a hollow sphere divided through one diametrical plane, an annular curved rim encircling said sphere and projecting therefrom, and lying in a plane perpendicular to the dividing plane of the sphere, and means for locking the sphere and rim together upon the latter being rotated through part of a revolution.

5. A moving target for practicing shooting at flying objects, comprising a hollow sphere divided through one diametrical plane, an annular curved rim encircling said sphere and projecting therefrom, and lying in a plane perpendicular to the dividing plane of the sphere and means carried by said sphere and said rim for locking the parts of the target together upon the rim being rotated relatively to the sphere.

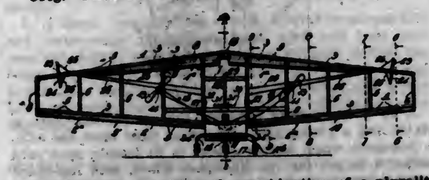
[Claims 6 to 8 not printed in the Gazette.]

957,743. COIN-OPERATED LOCK. HILLIARD F. CHRISTENSEN, Monroe, N. C. Filed June 17, 1909. Serial No. 502,714.



In combination with a door, a pair of sleeves mounted therein, shafts mounted in the sleeves, one of said shafts having a groove formed in its outer end and the outer end of the other shaft being of angular conformation to receive a knob, a bolt slidably secured to the inner side of the door above said shafts, an arm on one of the shafts for operating said bolt, a lever mounted on the other shaft and provided with a recess adapted to engage the arm and hold the same inoperative, a coin chute passing through the door and so disposed as to cause a coin deposited therein to contact with an extension of the lever to cause the latter to release the arm, means for securely retaining the coins thus deposited, and means on the door for concealing the end of the lever shaft and thus preventing it under ordinary conditions from being turned by the insertion of means in the groove thereof to release the arm and thus avoid the payment of a coin.

957,744. FLYING-MACHINE. WILLIAM W. CHRISTMAS, Washington, D. C., assignor of forty-nine one-hundredths to Creed M. Fulton and Thomas W. Buckey, Washington, D. C., and Lester C. McLeod, Astoria, Oreg. Filed Oct. 30, 1909. Serial No. 525,497.



1. In a flying machine, the combination of a plurality of separate, independent, suitably spaced supporting planes of concavo-convex form in the direction of their length transversely of the line of flight, and means uniting said supporting planes with their concave sides toward each other.

2. In a flying machine, the combination of a plurality of separate, independent, superposed, suitably spaced supporting planes, each having a concave and a convex side, the upper supporting plane having an intermediate air gap, and means uniting said supporting planes with their concave sides toward each other.

3. In a flying machine, the combination of a plurality of separate, independent, superposed, suitably spaced supporting planes, each having a concave and a convex side, the upper supporting plane having also an intermediate air gap and warped to present air guiding surfaces leading to said gap, and means uniting said supporting planes with their concave sides toward each other.
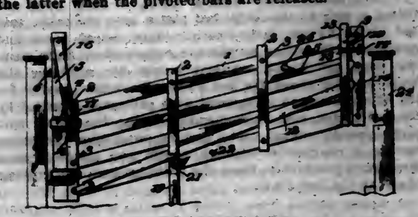
4. In a flying machine, the combination of a plurality of separate, independent, superposed, suitably spaced supporting planes, each having a concave and a convex side, the upper supporting plane also having an intermediate fore and aft air gap and warped to present inclined air guiding surfaces converging and increasing in area toward the gap, and means uniting said supporting planes with their concave sides toward each other.

5. In a flying machine, the combination of a plurality of separate, independent, superposed, suitably spaced supporting planes, each having a concave and a convex side, the upper supporting plane also having an intermediate fore and aft air gap and warped to present inclined air guiding surfaces arranged on opposite sides of said gap and converging and increasing in area from the lateral margins of said supporting plane toward the gap, and means uniting said supporting planes with their concave sides toward each other.

[Claims 6 to 36 not printed in the Gazette.]

957,745. GATE. CHARLES M. CLARK, FRED J. BULLOCK, and EDWIN D. WATKINS, Lima, N. Y. Filed May 24, 1909. Serial No. 498,022.

1. The combination with an upright, of a gate having rails and vertical bars, means slidably connecting the gate at one end to said upright so that the gate may be raised or lowered at its hinged end, pivoted bars adjustably connecting said gate to said upright, and a foot secured to the bottom of the gate and designed to support the latter when the pivoted bars are released.



2. The combination with an upright, of a gate having rails and vertical bars, means adjustably connecting the gate at one end to said upright, means adjustably connecting said upright and the hinged end of the gate, a leg pivoted to the gate near the hinged end thereof to act as a fulcrum for raising said hinged end when said connecting means is released, and means for holding such leg raised.

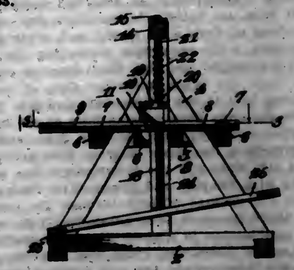
957,746. NUT-LOCK. CHARLES F. CLAWSON, Mount Pleasant, Iowa. Filed Nov. 22, 1909. Serial No. 529,280.



1. A nut lock of the character described comprising a rod or bar, a right angular loop formed on one end of said rod, a spring fastening arm formed on said loop, and means formed on the opposite ends of the rod to engage one of the nuts whereby the rod is held in position and against longitudinal movement in one direction on the fish plate.

2. A nut lock of the character described comprising a nut engaging rod, a right angular loop formed on one end of said rod, a spring arm formed on said loop and projecting parallel with said rod and adapted to be inserted between the fish plate and the adjacent side of a rail, and an angularly bent finger on the opposite end of said rod to engage one of the nuts to be locked.

957,747. CUTTING-MACHINE. JAMES H. F. CLIFTON, Pilotmountain, N. C. Filed Feb. 3, 1909. Serial No. 475,863.

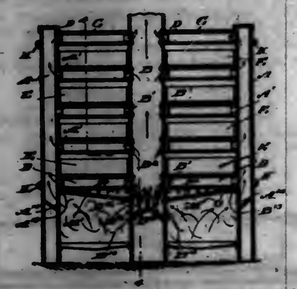


1. The combination with a frame, a skeleton table upon the frame, removable bed plates upon the table, said bed plates being arranged in pairs and having their meeting edges spaced from each other and provided with cutting plates, and a reciprocatory knife member of a contour

corresponding to the edges of the cutting plates adapted for movement within the space formed between the cutting edges of the bed plates.

2. The combination with a frame, a table upon the frame, a pair of removable bed plates upon the table, said bed plates having their meeting edges spaced apart and provided with cutting members, a reciprocatory knife member upon the frame, resilient means for retaining the knife member above the bed plates, the knife member being of a contour to correspond with the space provided by the bed plates, said knife member having its central portion upwardly curved, and a pivoted pedal upon the frame having a connection with the knife and adapted upon downward pressure to force the knife between the cutting edges of the bed plate.

957,748. BAKING-STOVE. JOEL A. COFFRIDGE, Browns Summit, N. C. Filed May 22, 1909. Serial No. 497,641.



1. The baking stove herein described comprising upright side flues, and an intermediate flue, said flues being provided on their inner adjacent faces with projecting nipples, cross flues extending between the side and intermediate flues and fitting the nipples thereof, a front plate detachably held to the said flues, a back plate detachably held to the said flues, tie rods extending between said plates and securing the same together, pans resting upon their respective cross flues and arranged in upright tiers, the cross flues being also arranged in upright tiers, fire boxes below their respective tiers of cross flues and pans, ventilating flues between the fire boxes and the lower cross flues, door plates fitted to the front plates of the stove and provided with openings and with doors controlling the same, said fire boxes communicating with the side flues and the intermediate flue, valves controlling the communication between the fire boxes and the intermediate flue, and dampers controlling the communication between the intermediate flue and the cross flues all substantially as and for the purposes set forth.

2. A stove substantially as described comprising upright side flues, an upright intermediate flue, said flues being provided on their sides facing each other with projecting nipples, with cross flues connecting the opposite nipples of the central and side flues, dampers controlling the cross flues, fire boxes below the tiers of cross flues for supplying heat to the intermediate and side flues, and pans above the cross flues, substantially as set forth.

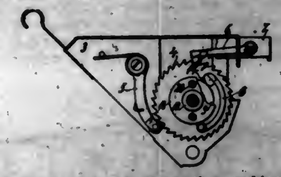
3. A stove comprising upright side flues, and an upright intermediate flue, tiers of cross flues extending between the side flues and the intermediate flue and communicating with the side and intermediate flues, dampers controlling the passage of heat through the cross flues, and pans above the cross flues, substantially as set forth.

4. The combination in a stove of an intermediate flue, side flues spaced therefrom, cross flues between the side flues and the intermediate flue and communicating with the side and intermediate flues, said intermediate flue and side flues having openings near their lower ends for the admission of heat, valves controlling the delivery of heat through said openings of the intermediate flue pans above the cross flues, and a source of heat for supplying heat to the intermediate and side flues, substantially as set forth.

5. A stove comprising upright side flues, an intermediate flue, cross flues between the side flues and intermediate flue and communicating with the side and intermediate flues, a back plate held detachably to the side flues, a detachable front plate provided with openings above the cross flues, pans fitting in said openings and extending above the cross flues and a source of heat, for supplying heat to the intermediate and side flues substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

957,749. TYPE-WRITING MACHINE. HARRY CRUTCHLEY, Bayonne, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed June 30, 1908. Serial No. 441,163.



1. In a typewriting machine, the combination with a platen and a platen axle, of a collar fixed upon the axle, a line-space wheel having a bore to fit loosely upon said collar, a detent for the line-space wheel, said line-space wheel having a smaller bore or seat opening into the main bore, a revoluble cam fitting in said main bore, and a handle for said cam to turn the latter in its seat to bind the line-space wheel to the collar.

2. In a typewriting machine, the combination with a platen and a platen axle, of a collar fixed upon the axle, a line-space wheel having a bore to fit loosely upon said collar, a detent for the line-space wheel, said line-space wheel having a smaller bore or seat opening into the main bore, a revoluble cam fitting in said main bore, and a handle for said cam to turn the latter in its seat to bind the line-space wheel to the collar; the line-space wheel being mounted outside of the platen frame, and said handle being mounted between the line-space wheel and a hand wheel secured upon the end of the platen axle.

3. In a typewriting machine, the combination with a platen and a platen axle, of a collar fixed upon the axle, a line-space wheel having a bore to fit loosely upon said collar, a detent for the line-space wheel, said line-space wheel having a smaller bore or seat opening into the main bore, a revoluble cam fitting in said main bore, and a handle for said cam to turn the latter in its seat to bind the line-space wheel to the collar; said cam cylindrical in form and having a flat or cut-away.

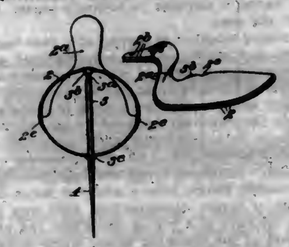
4. In a typewriting machine, the combination with a revoluble platen, an axle therefor, and a collar fixed upon the axle, of a line-space wheel mounted to turn loosely upon the collar, a detent for the line-space wheel, and a rotatable cam mounted upon the line-space wheel to bear against the collar to lock the wheel to the axle.

5. In a typewriting machine, the combination with a revoluble platen, of a collar element secured thereto, a line-space wheel element, a revoluble cam mounted in a bearing or recess in the periphery of one of said collar and wheel elements to bear against the other thereof, to lock them together, and a detent for the line-space wheel.

[Claims 6 to 23 not printed in the Gazette.]

957,750. DECOY. CHARLES A. CUNNINGHAM, Chico, Cal. Filed Sept. 21, 1909. Serial No. 518,855.

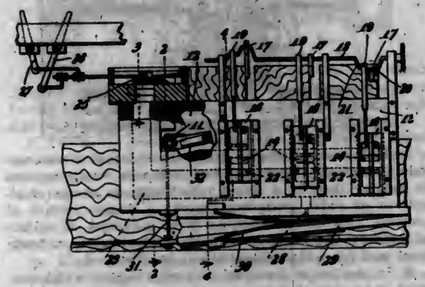
1. A decoy comprising a thin hollow body divided longitudinally and transversely on a substantially median line, extending from end to end of the decoy, into upper and lower separable halves, the lower half being adapted to float the decoy and the upper half adapted to fit over the lower half to impart a bird-like appearance to the decoy, each half being adapted when separated to be nested for transport with similar halves of like decoys.



2. A decoy, composed of a body divided longitudinally and transversely through its head, neck and body into separable halves, each half being adapted, when separated, to be nested for transport with similar halves of like decoys.

3. A decoy, composed of a body divided longitudinally and transversely through its head, neck and body into separable halves, the lower half being adapted to float the decoy and the upper half adapted to fit over the lower half to impart a bird-like appearance to the decoy, and means for detachably connecting the halves, substantially as described.

957,751. PNEUMATIC MOTOR. THOMAS DANQUARD, New York, N. Y., assignor, by mesne assignments, to Auto Pneumatic Action Co., New York, N. Y., a Corporation of New York. Filed July 14, 1906. Serial No. 326,163.



1. In a music playing device, the combination of a casing having a main wind passage, a series of passages for communication with motor pneumatics, and a passage connected with the atmospheric air, with a series of valves, each covering one of the passages for communication with a motor pneumatic and a passage connected with the atmospheric air, whereby said valves can connect either the main wind passage or the passage to the atmospheric air with the corresponding motor pneumatic.

2. In a music playing device, the combination of a motor having a main wind passage, a series of passages for communication with motor pneumatics, and a passage connected with the atmospheric air, with a series of valves, each located outside the motor and in the air, and each covering one of the passages for communication with a motor pneumatic and a passage connected with the atmospheric air, whereby said valves can connect either the main wind passage or the passage to the atmospheric air with the corresponding motor pneumatic.

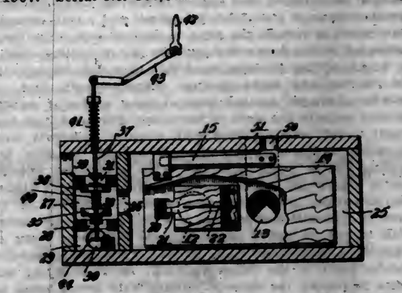
3. In a music playing device, the combination of a main casing having a main wind passage, a motor pneumatic arranged outside the casing, said casing having a passage communicating with the motor pneumatic, a passage communicating with the atmospheric air, and a passage communicating with the main wind passage, said three passages opening on the outside of the main motor casing, and a valve controlled by the motor pneumatic adapted to cover the ends of said three passages.

4. In a music playing device, the combination of a motor pneumatic, a casing having a main wind passage, a passage communicating with the motor pneumatic, a passage communicating with the atmospheric air, and a passage communicating with the main wind passage, and a valve controlled by the motor pneumatic adapted to cover the ends of said three passages.

5. In a music playing device, the combination of a casing having a main wind passage, a series of passages for communication with motor pneumatics, and a passage in the walls of the casing connected with the atmospheric air, said series of passages being located between the other passages, with a series of valves, each having means for connecting either the main wind passage or the passage to the atmospheric air with the corresponding motor pneumatic.

[Claims 6 to 9 not printed in the Gazette.]

957,752. REGULATOR FOR PNEUMATIC MOTORS. THOMAS DANQUARD, New York, N. Y., assignor, by mesne assignments, to Auto Pneumatic Action Co., New York, N. Y., a Corporation of New York. Filed Nov. 4, 1907. Serial No. 400,682.



1. In a regulator for pneumatic motors, the combination with a wind-way, of a valve for controlling the flow of air therethrough, a pneumatic regulator for controlling the valve, said valve being located in said regulator, and means entirely outside said regulator connected with said wind way for controlling the pressure on the outside of said regulator.

2. In a regulator for pneumatic motors, the combination with a wind-way, of a valve for controlling the flow of air therethrough, and a pneumatic regulator for exclusively controlling the entire operation of said valve, said valve being located in said regulator and being movable from its seat independently of the regulator.

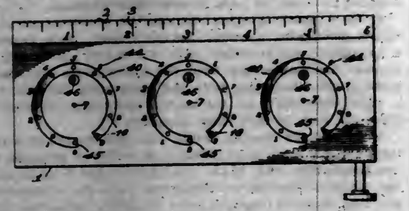
3. In a regulator for pneumatic motors, the combination with a wind-way, of a valve, a pneumatic regulator for controlling the valve having a movable leaf, and means whereby both sides of the movable leaf can be put into communication with the wind way to balance the tension or pressure on opposite sides thereof.

4. In a regulator for pneumatic motors, the combination with a wind-way, of a valve for controlling the flow of air therethrough, a pneumatic regulator for controlling the valve, said valve being located in said regulator, pneumatic means external to the regulator for controlling it, and valves for controlling the operation of said pneumatic means.

5. In a regulator for pneumatic motors, the combination with a wind-way, of a valve for controlling the flow therethrough, a pneumatic regulator for controlling the valve, means controlled independently of the flow of air through said wind-way for controlling the operation of said regulator, and pneumatic means for controlling the operation of said regulator by change of pressure or tension on the outside thereof.

[Claims 6 to 14 not printed in the Gazette.]

957,753. ADDING-MACHINE. CHARLES A. DARR, Leavenworth, Kans. Filed Nov. 5, 1909. Serial No. 526,412.



1. An adding machine consisting of a case having slots in its top and sight-openings adjacent said slots, numerals arranged around said slots, a series of adding-wheels beneath the slots of increasing denominations from right to left and provided with rows of numerals corresponding to the numerals arranged around the slots, said adding-wheels being provided with peripheral ratchet-teeth, lugs on all the adding-wheels but the one of highest denomination, propelling-arms slidingly-mounted in the case to transmit motion from a wheel of lower denomination to one of higher denomination, each arm being arranged in the path of a lug on one wheel and adjacent a ratchet-tooth of the following wheel, and levers engaging said arms to restore the same to normal, said levers being actuated by the lugs which actuate the propelling-arms.

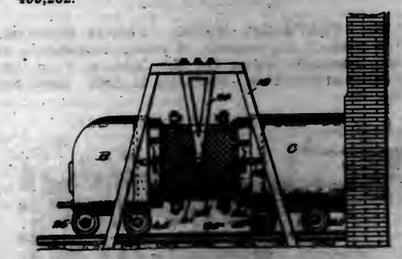
2. An adding machine consisting of a case having slots in its top and sight-openings adjacent said slots, numerals arranged around said slots, a series of adding-wheels beneath the slots of increasing denominations from right to left and provided with rows of numerals corresponding to the numerals arranged around the slots, said adding-wheels being provided with peripheral ratchet-teeth, lugs on all the adding-wheels but the one of highest denomination, propelling-arms slidingly-mounted in the case to transmit motion from a wheel of lower denomination to one of higher denomination, each arm being arranged in the path of a lug on one wheel and adjacent a ratchet-tooth of the following wheel, levers engaging said arms to restore the same to normal, said levers being actuated by the lugs which actuate the propelling-arms, and means engaging the ratchet-teeth to prevent backward rotation of the wheels.

3. An adding machine consisting of a case having slots in its top and sight-openings adjacent said slots, numerals arranged around said slots, a series of adding-wheels beneath the slots of increasing denominations from right to left and provided with rows of numerals corresponding to the numerals arranged around the slots, said adding-wheels being provided with peripheral ratchet-teeth, lugs on all the adding-wheels but the one of highest denomination, propelling-arms slidingly-mounted in the case to transmit motion from a wheel of lower denomination to one of higher denomination, each arm being arranged in the path of a lug on one wheel and adjacent a ratchet-tooth of the following wheel, levers engaging said arms to restore the same to normal, said levers being actuated by the lugs which actuate the propelling-arms, and resilient arms engaging the ratchet-teeth to prevent backward rotation of the wheels.

4. An adding machine consisting of a case having segmental slots in its top and sight-openings adjacent said slots, numerals arranged around said slots, a series of adding-wheels beneath the slots of increasing denominations from right to left and provided with rows of numerals corresponding to the numerals arranged around the slots, said adding-wheels being provided with ratchet-teeth and circular rows of openings, lugs on all the adding-wheels but the one of highest denomination, propelling-arms slidingly-mounted in the case to transmit motion from a wheel of lower denomination to one of higher denomination, each arm being arranged in the path of a lug on one wheel and adjacent a ratchet-tooth of the following wheel, and levers engaging said arms to restore the same to normal, said levers being actuated by the lugs which actuate the propelling-arms; in combination with a tool having a reduced end adapted to extend through any of the segmental slots and any of the openings in the adding-wheels, said tool having a shoulder to slidingly-engage the upper surface of the case.

5. An adding machine consisting of a case having slots in its top and sight-openings adjacent said slots, numerals arranged around said slots, a series of adding-wheels beneath the slots of increasing denominations from right to left and provided with rows of numerals corresponding to the numerals arranged around the slots, said adding-wheels being provided with peripheral ratchet-teeth, lugs on all the adding-wheels but the one of highest denomination, propelling-arms slidingly-mounted in the case to transmit motion from a wheel of lower denomination to one of higher denomination, each arm being arranged in the path of a lug on one wheel and adjacent a ratchet-tooth of the following wheel, levers engaging said arms to restore the same to normal, said levers being actuated by the lugs which actuate the propelling-arms, a push-bar slidingly-mounted in the case adjacent the adding-wheel of lowest denomination, and a pawl carried by said push-bar and adapted to engage the teeth of the last-mentioned adding-wheel.

957,754. PROCESS OF MAKING ALUMINUM FLUORID AND OTHER ALUMINUM COMPOUNDS. PHILIP A. EMANUEL, Aiken, S. C. Filed May 29, 1909. Serial No. 499,202.



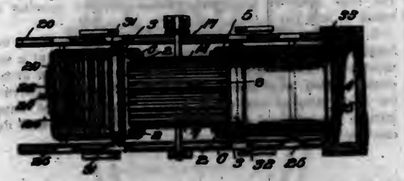
1. In the herein described process of treating ores containing alumina, silica and iron, the step which consists in heating them in a closed retort with an excess of bi-sulfate of soda, producing thereby a double sulfate of alumina and soda, containing three molecules of sulfate of soda to one molecule of sulfate of alumina, a ferric alum and free silica, substantially as described.

2. In the herein described process, the step which consists in heating clays in a closed retort with an excess of bi-sulfate of soda, producing a double sulfate of soda and alumina, having three molecules of sulfate of soda to one molecule of sulfate of alumina, and free silica, and separating said double sulfate from said silica, substantially as described.

3. The herein described process of making aluminum fluorid, which consists in heating clay in a closed retort with an excess of bi-sulfate of soda, forming a double sulfate of alumina and soda, having three molecules of sulfate of soda to one molecule of sulfate of alumina, separating out said double sulfate, heating it in a carbon-lined retort, heating the resulting product with lime, dissolving out aluminate of soda from the product and leading into the solution thus formed a stream of hydrofluoric acid gas, substantially as described.

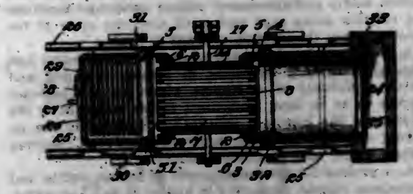
957,755. PROCESS OF TREATING ORES. PHILIP A. EMANUEL, Aiken, S. C. Filed Sept. 29, 1909. Serial No. 520,214.

1. The herein described process of making sodium from neutral sodium sulfate, which consists in heating said sodium sulfate in a carbon-lined retort in the presence of free coke to a red heat, the carboniferous material being in excess, then adding lime and more carbon and heating to about 800° C., and finally raising the heat to about 850° C., whereupon sodium distils over, substantially as described.



2. The herein described process of making sodium from sodium sulfate, which consists in heating the same with carbon in a closed retort until it is reduced to sodium sulfid; then adding calcium oxid to take up the sulfur and to form calcium sulfid, finally raising the temperature to substantially 850° C. and permitting the sodium to distil off, substantially as described.

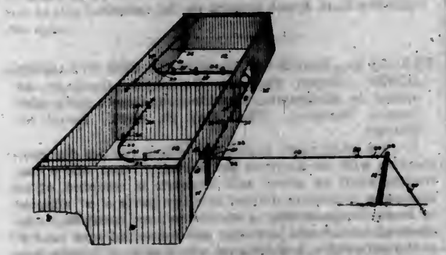
957,756. PROCESS OF TREATING ORES. PHILIP A. EMANUEL, Aiken, S. C. Original application filed May 29, 1909, Serial No. 499,202. Divided and this application filed Sept. 29, 1909. Serial No. 520,215.



1. The herein described process of making sodium, which consists in heating in a closed vessel sodium aluminate in the presence of a sodium compound and carbon, substantially as described.

2. The herein described process of making sodium, which consists in heating in a closed vessel sodium aluminate in the presence of sodium carbonate and gas carbon, substantially as described.

957,757. ELEVATED TRACK. JEREMIAH C. FITZGERALD, De Kalb, Ill., assignor to Smith Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 24, 1910. Serial No. 545,559.



1. In an elevated track for carriers, the combination with a suitably supported flexible track, of a suitable supported branch track, engaging means at one end of the branch track to connect it with the flexible track between its ends, and a hanger engaging the flexible track between one of its ends and its point of engagement with the branch track.
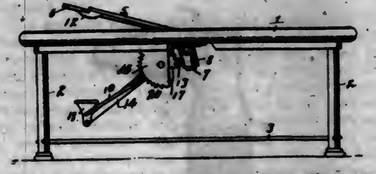
2. In an elevated track for carriers, the combination with a flexible track suitably supported at one of its ends, of an upright post at the other end of said track, a yoke embracing the upper portion of the post, a tension bolt engaging the end of the flexible track adjacent to the post and adjustably mounted on one end of the yoke, an anchor located near the post, and a connection uniting the anchor and the other end of the yoke.

3. In an elevated track for carriers, the combination with a flexible track suitably supported at one of its ends, of an upright post located near the other end of said track, a yoke embracing the upper portion of said post, means on the post to adjustably support the yoke, a tension bolt engaging that end of the flexible track adjacent to the post and adjustably mounted on one end of the yoke, an anchor located near the post, and a connection uniting the anchor and the other end of the yoke.

4. In an elevated track for carriers, the combination with a flexible track suitably supported at one of its ends, of an upright post located near its other end, lateral projections on said post, a yoke embracing the post and resting on said projections, a tension bolt engaging that end of the flexible track adjacent to the post and adjustably mounted on the yoke, an anchor located near the post, and an adjustable connection uniting the anchor to the other end of the yoke.

5. In an elevated track for carriers, the combination with a flexible track suitably supported at one of its ends, of an upright post near the other end of said track, a yoke embracing the upper portion of the post, a cross-bar mounted on one end of the yoke, a nut swiveled in said bar and having means to turn the same, a tension bolt engaging the end of the flexible track adjacent to the post and in engagement with said nut, an anchor located near the post, and a connection uniting the anchor and the other end of the yoke.

957,758. SWING FOR OSTEOPATHIC TABLES. WILLIAM E. FOGLE, Bath, N. Y. Filed Nov. 24, 1908. Serial No. 464,232.



1. An osteopathic table having a supporting member arranged wholly within the table top, said member including a supporting arm, a plate secured at one end to the arm, and a stud depending from the opposite end of the arm, and member elevating means rotatably receiving the stud.

2. An osteopathic table having a supporting member arranged wholly within the table top, said member including a supporting arm, a plate secured at one end to the arm, and a stud depending from the opposite end of the arm, a shaft mounted in the table, a socket piece carried by the shaft to receive the stud, and means for operating the shaft.

957,759. SPINNING-RING. CHARLES S. FORBES, Boston, Mass., assignor to High Speed Ring Company, Boston, Mass., a Corporation of Maine. Filed Feb. 29, 1908. Serial No. 418,465.



1. The combination with a rail plate adapted to be confined to the top of a ring rail and having near the outer edge thereof a positioning device and a locking device, of a spinning ring including in its construction a

member having a plate to overlie the rail plate and provided with a notch in its outer edge to coöperate with said positioning device and also having a lug to coöperate with said locking device.

2. The combination with a rail plate adapted to be confined to the top of a ring rail and having near its outer edge a positioning device and a locking device, of a spinning ring including an outer member, an inner member and an annular traveler confined between said members, one of said members having a plate to overlie the ring rail and provided at its outer edge with a positioning notch to receive said positioning device, and a locking lug to engage the above-mentioned locking device.

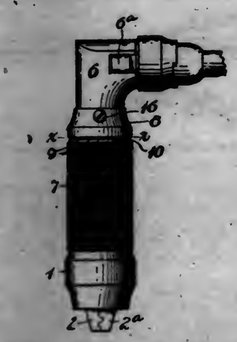
3. A sheet metal rail-plate having two lugs or uprights, combined with a spinning-ring comprising an inner and outer member and an annular traveler between said members, said inner member having a notch and an upright, the notch of the inner member embracing one of the uprights of the rail-plate, the other upright of the rail-plate and the upright of the said member being adapted to engage one the other frictionally to hold the spinning-ring seated operatively upon the rail-plate.

4. In a spinning ring, the combination with a rail-plate, of a two-part shell provided with a base, an anti-friction annulus and a traveler, and resilient means carried by said rail-plate between which said base may be snapped or held frictionally to confine the two-part shell to the rail-plate.

5. A ring holder comprising a two-part shell, one part having a resilient positioning member to engage the other part, an inclosed anti-friction annulus, and a traveler.

[Claims 6 and 7 not printed in the Gazette.]

957,760. TOOL-CHUCK. JOHN S. FRAY, Bridgeport, Conn., assignor to The John S. Fray Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Oct. 20, 1909. Serial No. 523,695.



1. In a chuck, two companion jaws, operating means for moving said jaws toward and from each other, each of said jaws having a main groove extending longitudinally thereof, said grooves being arranged to face each other, said grooves being deepest at a point nearer to the forward than to the rear ends of said jaws, supplemental longitudinal excavations in each of said jaws at each side of each main groove, said supplemental longitudinal excavations extending to the rear of the deepest part of the main grooves.

2. In a chuck, two companion jaws, operating means for moving said jaws toward and from each other, each of said jaws having a main groove extending longitudinally thereof, said grooves being arranged to face each other, said grooves being deepest at a point nearer to the forward than to the rear ends of said jaws, supplemental longitudinal excavations in each of said jaws at each side of each main groove, said supplemental longitudinal excavations extending to the rear of the deepest part of the main grooves, the operating means for said jaws comprising a jaw holder having a converging tapered outlet in which said jaws stand and may slide, a driver block at the rear of said jaws, the forward part of said driver block being notched to form forwardly flaring bearing walls for the rear ends of the jaws and means for moving said block to and fro.

3. A chuck jaw of elongated form having therein a main longitudinal groove, said groove being deepened at a point intermediate its length and said groove being of angular cross section, said jaw having a supplemental excavation on each side of the main groove, both of said supplemental excavations extending rearwardly from said deepened part of said main groove.

957,761. PROCESS OF MAKING SODIUM SULFITE AND AMMONIUM CHLORID. RICHARD FRIEDRICH, Glösa, near Chemnitz, Germany, and FRIEDRICH HIRSCH, Vienna, Austria-Hungary. Filed May 27, 1909. Serial No. 498,786.

1. A process for the manufacture of sodium sulfite and ammonium chlorid consisting in decomposing sodium chlorid by nascent ammonium sulfite in the presence of the heat generated by the reaction.

2. A process for the manufacture of sodium sulfite and ammonium chlorid consisting in adding to salt and water, substances which will act together to form ammonium sulfite within the salt and water and separating out the sodium sulfite and ammonium chlorid resulting therefrom, the solution being kept acid until near the close of the reaction when the solution is made neutral.

3. A process for the manufacture of sodium sulfite and ammonium chlorid, consisting in passing into salt and water, a plurality of substances which will act together therein so as to form ammonium sulfite maintaining the solution at the increased temperature incident to the resulting reaction, and then separating out the resulting sodium sulfite and ammonium chlorid.

4. A process for the manufacture of sodium sulfite and ammonium chlorid, consisting in adding to salt and water, substances which will act together therein so as to form ammonium sulfite, maintaining the solution at such a degree of heat incident to the reaction as to convert the readily soluble sodium sulfite resulting therefrom into less readily soluble sodium sulfite.

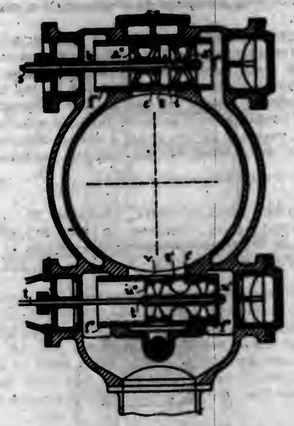
5. A process for the manufacture of sodium sulfite and ammonium chlorid, consisting in adding to salt and water, substances which act together to form ammonium sulfite which latter will decompose the salt so as to form the sodium sulfite and ammonium chlorid, sufficient heat being generated thereby to convert the readily soluble sodium sulfite into less soluble sodium sulfite, and then separating out said sodium sulfite and subsequently separating out the ammonium chlorid.

[Claims 6 to 8 not printed in the Gazette.]

957,762. SLIDE-VALVE MOTION FOR STEAM-ENGINES. EUGEN FAIKART, Mülhausen, Germany, assignor to Elsässische Maschinenbau-Gesellschaft, Mülhausen, Germany. Filed May 23, 1908. Serial No. 434,622.

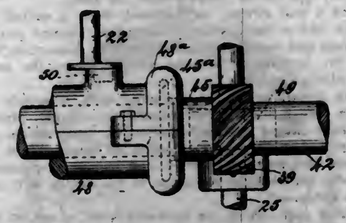
1. In a slide valve motion for steam engines the combination with an eccentric and eccentric strap, and a controlling shaft on which said eccentric is mounted, of an admission slide-valve divided into two parts a' a'' adapted to move independently of each other, an oscillating arm operated by the said eccentric and connected with part a' of the slide-valve, a shaft z on which said oscillating arm is loosely mounted, means for operating said latter shaft, a crank-lever pivoted to said oscillating arm, a double-armed lever secured on shaft z, a parallel link mechanism connecting one arm of said double-armed lever with the said crank-lever, and means connecting the other arm of the double-armed lever with the eccentric strap.

2. In a slide-valve motion for steam engines the combination with an eccentric, and a controlling shaft on which said eccentric is mounted, of a divided admission slide-valve the parts of which are adapted to move independently of each other, and means for operating said



parts of the slide-valve for the purpose of varying the degree of admission to the steam cylinder.

957,763. GEARING. PAUL GARTH, Cleveland, Ohio. Filed Sept. 27, 1907, Serial No. 394,925. Renewed Dec. 9, 1909. Serial No. 532,252.



An adjusting mechanism comprising in combination, driving and driven shafts, and spiral gears between the same, a sleeve fixed to the gear on one shaft and slidable lengthwise on the shaft and having a collar at its end, a split sleeve also slidable on said shaft and having an internal groove in which said collar fits, and a turning rod having a crank pin engaging the split sleeve, to shift the same.

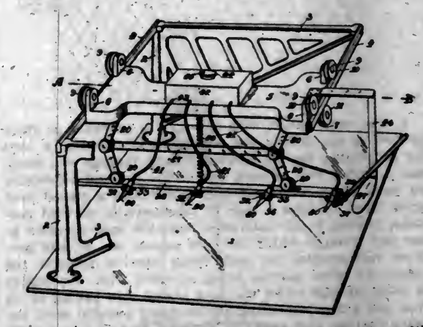
957,764. PAPER-CLIP. DAVID G. GALBRAITH, Mineral Wells, Tex., assignor to Nannie L. Galbraith, Mineral Wells, Tex. Filed Jan. 16, 1909. Serial No. 472,763.



1. A clip for loose sheets, etc., made in the form of a uniform spiral loop with its ends overlapped not to exceed approximately one-half the circumference of the loop, the overlapped portions contacting only at their ends and the intermediate parts of the overlapped portions being at all points correspondingly bent outwardly from the contacting points and spread apart between the contacting points parallel with the axis of the loop to form an entrance mouth for the edges of the sheets.

2. A clip for loose sheets, etc., made substantially in the form of a spiral loop with its ends overlapped not to exceed substantially one-half the circumference of the loop whereby by reversal of the relative positions of the overlapped portions they will contact only at the extremes and the intermediate portions of the overlapped ends will spread apart to form an entrance mouth for the edges of the papers.

957,765. MULTIPLE-SIGNING MACHINE. JAMES C. GARDINER, Montreal, Quebec, Canada. Filed Mar. 1, 1909. Serial No. 480,590.



1. In a multiple signing machine, the combination with a base having a surface finished upper side and a frame supported thereon having a suitable track-way, of a carriage traveling on said track-way, a plurality of parallel bars suspended from said carriage, a pen bar supported from said parallel bars having a longitudinal dove-tailed groove in the bottom side thereof, a plurality of pen sockets having lateral lugs and corresponding dove-tailed pieces fitting into said slot and slidably arranged therein, a plurality of pens in said sockets, and suitable means for feeding said pens.

2. In a multiple signing machine, the combination with the base and a frame supported thereby having upright end pieces and parallel rails joining said end pieces and forming a track-way, of a carriage having a running gear of rollers traveling on said track-way, a plurality of pens, a pen bar supporting said pens in a row, an ink well supported by said carriage and suitably connected with said pens, and a plurality of parallel bars supporting said pen bar from said carriage and insuring the coincident operation of the several pens on the manual operation of one of said pens.

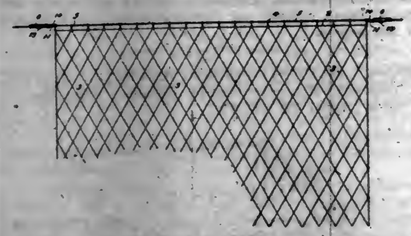
3. In a multiple signing machine, the combination with the base and a frame supported thereby having upright end pieces and parallel rails joining said end pieces and forming a track-way, of a carriage traveling on said rails, an ink well supported thereby, a plurality of pens having suitable ink receptacles, a plurality of flexible tubes joining said well to said pens, means for retaining said pens in a row, and suspension means supporting the retaining means and insuring the coincident operation of the several pens on the manual operation of one of said pens.

4. In a multiple signing machine, the combination with the base and a frame supported thereby having upright end pieces and parallel rails joining said end pieces and forming a track-way, of a carriage traveling on said rails, a suspension bar swinging under said carriage, a pen bar and links joining said pen bar to said suspension bar, a longitudinal bar joining said links, a plurality of pens supported by said pen bar, and means for feeding said pens.

5. In a multiple signing machine, the combination with the base and a frame supported thereby having upright end pieces and parallel arms joining said end pieces and forming a track-way, of a carriage traveling on said track-way, a plurality of parallel bars suspended under said carriage, marking devices secured to the lower of said bars, and a master holder for operating said devices simultaneously.

[Claims 6 to 12 not printed in the Gazette.]

957,766. FISH-NET. DAVID P. GILSTRAP, Brownwood, Tex. Filed Oct. 4, 1909. Serial No. 520,798.



1. The combination with a net, of a plurality of rings secured to one side of the net in spaced relation, a cord for supporting the net passing loosely through the rings, and a spring trip at each end of the net and adjustable on the cord, each of said trips comprising a strand bent upon itself to form a pair of substantially parallel portions, having a coil interposed between said portions at one end through which the cord passes, one of said portions intermediate its ends being bent to encircle the other, the other portion being provided with a plurality of coils through which the cord passes, and having at its free end a fork extending substantially parallel with the other portion and engaging the end thereof loosely, the said ends forming a catch for detachably holding a ring, for the purpose specified.

2. The combination with a net, of a plurality of rings secured to one side of the net in spaced relation, a cord for supporting the net passing loosely through the rings, and a spring trip at each end of the net, and adjustable on the cord, each of said trips comprising a strand bent upon itself to form substantially parallel portions connected at one end and intermediate their ends, and contacting at their free ends to engage and yieldingly hold a ring, one of said portions having means for frictionally engaging the cord, for the purpose specified.

3. The combination with a net, of a plurality of rings secured to one side of the net in spaced relation, a cord for supporting the net passing loosely through the rings, and a spring trip at each end of the net, and adjustable on the cord, each of said trips comprising a strand bent upon itself to form substantially parallel portions connected at one end and intermediate their ends and forming at their free ends a catch for the purpose specified, one of said portions having means for frictionally engaging the cord.

4. The combination with a net, of a plurality of rings secured to one side of the net in spaced relation, a cord for supporting the net passing loosely through the rings, and a spring trip at each end of the net, and adjustable on the cord, each of said trips comprising a portion for frictionally engaging the cord, and a resilient catch for releasably holding a ring.

5. The combination with a net, of a plurality of rings secured to one side of the net in spaced relation, a cord for supporting the net passing loosely through the rings, and a spring trip at each end of the net, and adjustable on the cord, each of said trips engaging the cord and adjustable thereon, and having a spring catch for engaging a ring.

[Claims 6 to 8 not printed in the Gazette.]

957,767. PACKAGE-HOLDER. FRANK GOBLE, Fairpoint, Ohio. Filed June 28, 1909. Serial No. 504,833.

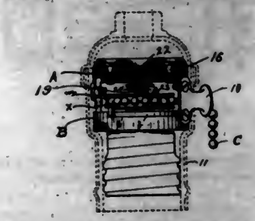


1. A package holder comprising a wire member having bent side bars, a V-shaped fastener connected to the ends of said bars, arms extending upward from said bars, and connected by a cross bar, a spring connected to the cross bar, and a hook connected to the spring for engaging the fastener.

2. A package holder comprising a resilient wire member provided with a cross bar, a wire eye connected to the cross bar, a spring connected to the eye, a hook connected to the spring, and a fastener engaged by the hook.

3. A package holder for mail matter comprising a wire member having spring arms, a fastener secured to said arms, a cross bar on the arms, a spring connected to the cross bar, and a hook for engaging the fastener.

957,768. PULL-SOCKET. GILBERT W. GOODRIDGE, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 15, 1908. Serial No. 467,619.



1. In a pull switch an inclosing shell, a switch body therein, and a chain guide independent of the shell, and readily accessible means for detachably securing said guide to the switch body within the shell.

2. In a pull switch, an inclosing shell, a switch body therein and a chain guide independent thereof provided with lugs and readily accessible means in connection therewith for detachably securing said guide to the switch body within the shell.

3. In a pull switch, an inclosing shell, a switch body therein, and a chain guide independent thereof, provided with lugs having openings therein, in combination with readily accessible screws adapted to engage said lugs through said openings therein and means in connection therewith for securing the guide to the switch body within the shell.

4. In a pull switch, an inclosing shell, a switch body therein, having insulating buttons between which the switch mechanism is located and a spacing bar between said buttons, in combination with a chain guide independent of said shell and provided with securing lugs and means in connection with the latter for engaging said guide with said spacing bar so that it may be readily detached therefrom, substantially as described.

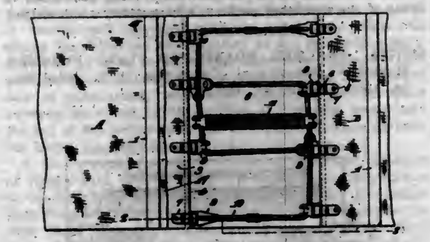
5. In an electric switch mechanism, a ratchet member, a spring tending to turn the same in one direction and a tensioning device for said spring comprising a rotary abutment member engaged by one end of the spring and a friction bearing for said abutment member adapted to hold the latter in any position to which it may be adjusted.

[Claims 6 to 16 not printed in the Gazette.]

957,769. CONVEYER-BELT. MICHAEL C. GRANEY, Hoosick Falls, N. Y. Filed Jan. 8, 1909. Serial No. 471,305.

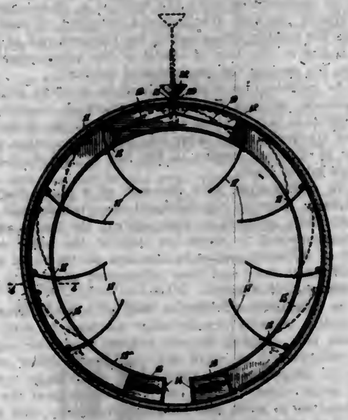
1. A conveyer belt having terminal portions bent backwardly, rods extending transversely to the belt at the point where the latter is doubled, clips spanning the doubled portions of the belt and shaped to grip the belt around the rods, and lacing means connected with the said clips for uniting the ends of the belt.

2. A conveyer belt, transversely-extending rods around which the terminal portions of the belt are doubled, clips straddling the doubled portions of the belt and having oppositely-curved shoulders for gripping the belt to the rods, fastenings extending through the clips for clamping the same in place on the belt, pivotally-connected brackets on the clips, lacings connected with the brackets, and a take-up device connected with the lacings.



3. A lacing belt having one end doubled back on itself, a rod extending under the doubled portion of the belt, clips engaging over the doubled portion and clamping the latter to the rod, said doubled portion being itself bent forwardly to form a covering flap, clips on the opposite end of the belt, and connecting means attached to the clips and arranged to be covered by the said flap.

957,770. HAT-HOLDER. EUGENE J. GUILLARD, New York, N. Y. Filed Oct. 12, 1909. Serial No. 522,310.

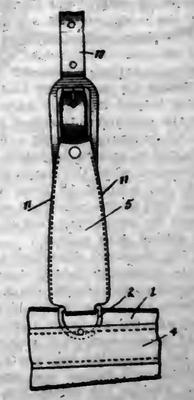


1. In a hat holder, a hollow ring-shaped casing adapted to be secured to a hat, segmental slides mounted to move in the said casing, springs secured to one end of each of the said slides with the other ends of the said springs secured to the said casing, pins pivotally staggered, connected to the said slides, and flexible means secured to the other ends of each of the said slides and extending to the outside of the hat, the said means being adapted to operate the said slides to move the said pins in and out of the casing.

2. In a hat holder, a hollow ring-shaped casing adapted to be secured to the inner peripheral surface of a hat, and the said casing having alternately-disposed apertures therein on the inner side of the casing, segmental slides mounted to move in the said casing, springs secured to the said slides and the said casing, pins pivotally staggered, connected to the said slides and adapted to project inwardly through the said apertures in the said casing, and externally controlled means, connected with the slides, for moving the said pins in and out of the said casing.

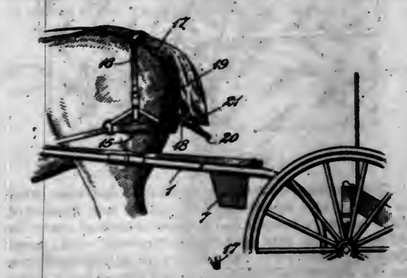
3. In a hat holder, a hollow ring-shaped casing capable of being spread, adapted to be fastened to a hat, spring-controlled segmental slides in the said casing, pins pivotally staggered connected to the said slide and projecting inwardly through apertures in the said casing, and manually operated external means connected with the said slides for operating the same.

957,771. SHIELD FOR HARNESS. ANDY B. HARRELL, Pilotmountain, N. C. Filed July 16, 1909. Serial No. 508,011.



A harness shield comprising a front and a back member connected together along their longitudinal edges and arranged with respect to each other to form open end portions, and a buckle secured to the upper end of the front member, the said rear member being curved approximately its entire length outwardly and away from the front member, the said rear member having its upper end extending beyond the upper end of the front member and having formed therein a slot which is disposed opposite the buckle of the said front member.

957,772. MANURE-RECEPTACLE. JOHN HARRIGAN, Brooklyn, N. Y. Filed Sept. 3, 1909. Serial No. 516,034.



1. A device of the character described having a receptacle, means for supporting said receptacle behind a draft animal capable of operation to compel movement of said receptacle with the animal during travel, and a chute member supported in inclined position behind such draft animal and adapted to receive droppings, and having its lower part unconnected with the receptacle and out of contact therewith, but adapted to direct such droppings into said receptacle.

2. A device of the character described having a receptacle, means for supporting said receptacle behind a draft animal capable of operation to compel movement of said receptacle with said animal during travel, a chute mem-

ber adapted to receive droppings and having its lower part unconnected with the receptacle and out of contact therewith but adapted to direct such droppings into the receptacle, and means adapted for connection with the animal for supporting said chute member in inclined position behind the draft animal.

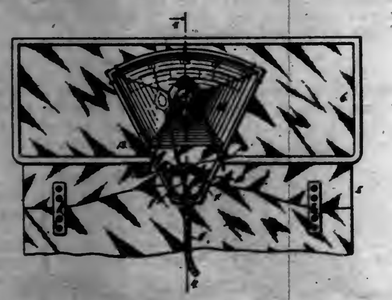
3. A device of the character described having a receptacle, means for supporting said receptacle behind a draft animal capable of operation to compel movement of said receptacle with said animal during travel, a chute member adapted to receive droppings and having its lower part unconnected with the receptacle and out of contact therewith but adapted to direct such droppings into the receptacle, and having its upper end provided with a projecting member adapted to be extended between the buttocks of the animal and means for supporting said chute member in inclined position behind the draft animal.

4. A device of the character described having a receptacle adapted to be supported behind a draft animal, a chute member adapted to receive droppings and having its lower part unconnected with the receptacle and out of contact therewith, but adapted to direct such droppings into the receptacle, and means connected with the harness of the draft animal for supporting said chute member in inclined position behind said animal.

5. A device of the character described having a receptacle adapted to be supported behind a draft animal, a chute member adapted to receive droppings and having its lower part unconnected with the receptacle and out of contact therewith but adapted to direct such droppings into the receptacle, and means connected with the harness of the draft animal for supporting said chute member in inclined position behind said animal and capable of adjustment to permit of varying the inclination of said chute member.

[Claims 6 to 19 not printed in the Gazette.]

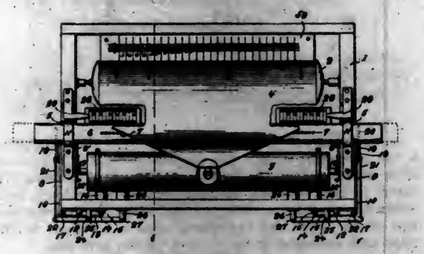
957,773. SPEEDOMETER. FRED B. HEALEY and CARL S. HOMSHER, Denver, Colo. Filed May 28, 1909. Serial No. 498,885.



1. The combination with the dashboard and wind shield of a vehicle, of a speedometer carried by said dashboard, a plate having a transparent portion extending above the speedometer, the said plate being provided with speed-indicating characters to harmonize with similar characters upon the dial of the speedometer but formed on a larger scale, a pointer mounted on the speedometer, an extension pointer carried by the pointer mounted on the speedometer, the said extension pointer reaching to the graduated part of the transparent plate and adapted to travel in the rear of the same, substantially as described.

2. The combination with a speedometer, of a plate extending above the speedometer and having formed thereon a duplicate on a larger scale of the speed-indicating characters formed on the dial of the speedometer, a pointer mounted on the speedometer for indicating the characters thereon, an extension pointer integral with said speedometer pointer and describing a circular arc around the pivoted extremity of the speedometer pointer, as a center, the said extension pointer reaching to the speed-indicating characters formed on the plate, the said plate having a transparent portion upon which the speed-indicating characters are formed, and the said plate being positioned in front of the extension pointer, substantially as described.

957,774. TRACKER-BOARD FOR PIANO-PLAYERS. MARION F. HOLDERMAN, Washington, D. C. Filed May 24, 1909. Serial No. 497,989.



1. In combination with the well of a piano player, a universally movable trackerboard mounted in said well, and means for raising either end of the trackerboard relative to the line of travel of a perforated music sheet.

2. In combination with the well of a piano player, a universally movable trackerboard mounted in said well, means for moving either end of the trackerboard at different angles to the line of travel of the music sheet, and means for moving the trackerboard forward.

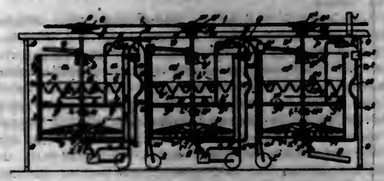
3. In combination with the well of a piano player, a universally movable trackerboard mounted in said well, and movable bars adapted to bear against the under edge of the trackerboard to move one end or the other of the latter at different angles to the line of travel of a perforated music sheet.

4. In combination with the well of a piano player, a universally movable trackerboard mounted in said well, movable bars adapted to bear against the under edge of the trackerboard to move one end or the other of the latter at different angles to the line of travel of a perforated music sheet and lever mechanism adapted to move said bars longitudinally.

5. In combination with the well of a piano player, a universally movable trackerboard mounted in said well, movable bars adapted to bear against the under edge of the trackerboard to move one end or the other of the latter at different angles to the line of travel of a perforated music sheet, pivotal levers mounted upon the well and adapted to move said bars longitudinally, and a key pivoted to each of said levers.

[Claims 6 to 12 not printed in the Gazette.]

957,775. MEANS FOR SEPARATING WATER OR SOLUTION FROM SOLIDS, SUCH AS SLIMY ORES, PULP, AND THE LIKE. WILLIAM L. HOLMS, Guadalajara, Mexico, LEONARD M. GREEN, London, England, and JOHN S. PATTINSON, Zacatecas, Mexico. Filed Mar. 5, 1909. Serial No. 481,521.



1. In an apparatus for continuously eliminating liquid from pulp, a series of vessels each provided with an upper pulp inlet and a barrier in each vessel having apertures through which solid particles descend, said barriers retarding the upward flow of extraneously introduced liquid and a pipe connection between an outlet in the bottom of the first vessel and the top of the next vessel.

2. In an apparatus of the character described, a series of vessels each provided with an upper pulp inlet, and means for deflecting the direction of the descending pulp, a barrier in each vessel having apertures through which solid particles descend, said barrier retarding the upward flow of extraneously introduced liquid, a pipe connection between an outlet in the bottom of the first vessel and the top of the next vessel, and a strainer for keeping back the larger agglomerations of pulp.

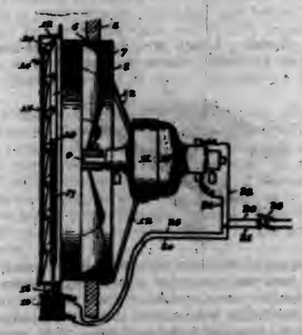
3. In an apparatus of the character described, a series of vessels each provided with an upper pulp inlet, means in the vessels for deflecting the direction of the descending pulp from a vertical to a horizontal direction, a barrier in each vessel having apertures through which solid particles descend, said barriers retarding the upward flow of extraneously introduced liquid, a pipe connection between an outlet in the bottom of the first vessel and the top of the next vessel, a strainer in the pipe for keeping back the larger agglomerations of pulp, and a regulating cock below the strainer.

4. In an apparatus of the character described, a series of vessels, each provided with an upper pulp inlet, a barrier in each vessel having apertures through which solid particles descend, said barrier retarding the upward flow of extraneously introduced liquid, a pipe connection between an outlet in the bottom of the first vessel and the top of the next vessel, means for leading the overflow from the top of one vessel to the top of the vessel preceding it in the series, and a system of perforated pipes for conveying such overflow or portion thereof to a place below the barrier.

5. In an apparatus of the character described, a series of vessels each provided with an upper pulp inlet, a barrier in each vessel having apertures through which solid particles descend, said barrier being capable of retarding the upward flow of extraneously introduced liquid, a pipe connection between an outlet in the bottom of the first vessel and the top of the next vessel, a strainer in the pipe for keeping back the larger agglomerations of pulp, and a regulating cock below the strainer device.

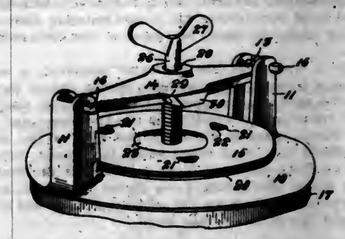
[Claims 6 to 14 not printed in the Gazette.]

957,776. VENTILATING-FAN. ROBERT A. ILG, Chicago, Ill. Filed Feb. 23, 1906. Serial No. 302,535.



The combination with a fan-casing and a fan mounted therein, of a motor for said fan, a shutter mounted across the discharge end of the fan-casing, the blades of said shutter being pivoted in a line substantially coincident with their upper edges whereby they normally tend to close by gravity or external wind pressure, a motor and connections therefrom to said shutter blades, and means for simultaneously energizing and deenergizing said motors, substantially as described.

957,777. IRRIGATING-VALVE. ELMER E. IZER, Pomona, Cal. Filed Aug. 23, 1909. Serial No. 514,208.



1. In an irrigating valve, a frame provided with opposite posts having seats upon the inner faces thereof, a cross-bar having its opposite ends disposed in said seats, a feed screw carried by said bar, and a valve swiveled upon said screw to engage a seat upon said frame.

2. In an irrigating valve, a frame provided with opposite posts having seats upon the inner faces thereof, a cross-bar having its opposite ends disposed in said seats for lateral oscillation therein, a feed screw carried by said bar, a valve swiveled upon said screw to engage a seat upon said frame, and removable pins disposed in said posts above said bar.

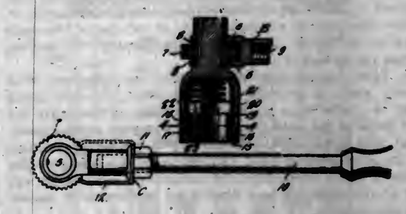
3. In an irrigating valve, a frame provided with opposite posts having seats upon the inner faces thereof, a cross-bar having its opposite ends disposed in said seats for lateral oscillation therein, a feed screw carried by said bar, a valve swiveled upon said screw, a gasket upon the under face of said valve, and removable pins extended through said valve and gasket.

4. In an irrigating valve, a frame provided with a valve seat, posts carried by said frame, a cross-bar mounted on said posts and having a dovetailed socket upon its under face at the lower end of an aperture therethrough, an interiorly threaded dovetailed nut disposed in said socket, a feed screw mounted in said nut and provided with a handle above said bar, and a valve carried by said screw.

5. In an irrigating valve, a frame provided with a valve seat, opposite posts thereon having U-shaped seats upon their inner face, a cross-bar having its opposite ends mounted for lateral oscillation in said seats, a feed screw carried by said bar, and a valve mounted upon said screw.

[Claims 6 and 7 not printed in the Gazette.]

957,778. WRENCH. LUTHER C. LAWRENCE, Newcastle, Ind. Filed Aug. 17, 1909. Serial No. 513,208.



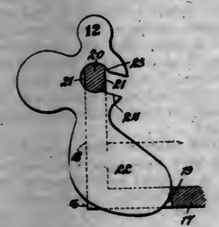
1. In a wrench of the character described, a socket having an axial extension, a spur wheel fixed upon said extension, a head pivoted upon the extension and having a threaded socket, a correspondingly threaded handle member engaging the socket and having a jam nut, and an L-shaped spring member mounted upon the handle between the head and the jam nut and having a lip engaging the spur wheel.

2. In a wrench of the character described, a socket member, a reducing sleeve slidable therein, means for lim-

lting the outward movement of the reducing sleeve, a second reducing sleeve slidable in the first sleeve and having a flange engaging the inner end of the latter, and a spring-pressed band surrounding the second reducing sleeve and abutting upon the inner end edge of the first reducing sleeve.

3. In a wrench of the character described, a socket member, a reducing sleeve slidable therein, means for limiting the outward movement of the reducing sleeve, a second reducing sleeve slidable in the first sleeve and having a flange engaging the inner end edge of the latter, a relatively thin band surrounding the second reducing sleeve abutting upon the inner end edge of the first reducing sleeve and having a contracted inner end, and a spring interposed between the contracted inner end of the band and the bottom of the socket.

957,779. GAGE. JAMES M. LEAVER, Jr., Sonora, Cal. Filed Jan. 15, 1908. Serial No. 410,980.



1. The combination with a support, of a plurality of gage stops pivotally mounted on the support and automatically presented in projecting relation to the work, means for holding the gage stops against movement along the support so as to hold them in spaced relation, the pivotal connection of the stops to the support being constructed to permit the removal of any one of the stops without disturbing the others or removing the support or dismembering the detached stop.

2. The combination of an angular support, a plurality of gage stops pivotally hung from the outer edge of one of the sides of the angular support and automatically presented in projecting relation to the work, the pivotal connection of the stops to the support being constructed to permit the removal of any one of the stops without disturbing the others or removing the support.

3. The combination with a support, of a plurality of gage stops, means for pivotally mounting the stops upon the support so as to cause them to be automatically presented in projecting relation to the work, the pivotal connection of the stops to the support being constructed to permit the removal or displacement of any one of the stops without disturbing the others or the support or dismembering the detached stop.

4. The combination of an angle bar provided with spaced slots, a plurality of gage stops pivotally hung from the outer edge of one of the sides of the angle bar and fitted in the said slots and held against lateral movement and automatically presented in projecting relation to the work, the pivotal connection of the stops to the support being constructed to permit the removal of any one of the stops without disturbing the others or removing the support.

5. The combination of a support provided with a pivot having its cross section presenting two unequal diameters, a plurality of gage stops having a bearing opening of a size to receive the greatest diameter of the pivot, and a mouth leading from the said opening to the outside, said mouth being of a width less than the greatest diameter of the pivot to permit the removal of a gage stop laterally of the pivot without dismembering such gage stop or disturbing the other stops or the support.

[Claims 6 to 23 not printed in the Gazette.]

957,780. GAGE. JAMES M. LEAVER, Jr., Sonora, Cal. Original application filed Jan. 15, 1908, Serial No. 410,980. Divided and this application filed Jan. 15, 1908. Serial No. 410,981.



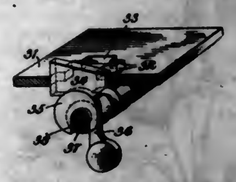
1. In a gage of the character described, the combination with a substantially horizontal fixed base plate having a longitudinal slot, and transverse slots communicating therewith and forming seats on opposite sides of the longitudinal slot, of a plurality of reciprocatory gage stops slidably mounted in the seats and having their upper ends normally projected above the base plate, and yieldable means located beneath the base plate and engaging the gage stops for normally holding them in an elevated position.

2. In a gage of the character described, the combination with a substantially horizontal fixed base plate having a longitudinal slot, and transverse slots that communicate therewith and form seats on opposite sides of the longitudinal slot, of a plurality of vertically movable gage stops mounted beneath the base plate and slidable through the seats, and means located beneath the base plate for yieldingly maintaining the stops with their upper ends in projecting relation with respect to the upper face of the base plate.

3. In a gage of the character described, the combination with a substantially horizontal fixed base plate having a longitudinal slot, and transverse slots communicating therewith and forming seats on opposite sides of the longitudinal slot, of a plurality of reciprocatory gage stops slidably mounted in the seats and having their upper ends normally projecting above the base plate, and springs located beneath the base plate and engaging the gage stops for normally holding them in elevated positions.

4. In a gage of the character described, the combination with a fixed base plate having slots, of leaf springs permanently located at one side of the base plate and having curved terminals, and gage stops detachably and slidably mounted in the slots and having seats that detachably receive the curved terminals of the springs and permit the removal of the stops individually through the slots without disturbing the others or their mountings.

957,781. GAGE. JAMES M. LEAVER, Jr., Sonora, Cal. Filed Jan. 15, 1908. Serial No. 410,982.



1. In a gage of the character described, the combination of a fixed base plate provided with slots, gage stops movable through the slots, weighted arms separate from the stops for yieldingly holding the stops in projecting relation above the base plate, the mountings of the arms being independent of each other and each weighted arm and each stop being removable to allow the placing of the stops in any one of the slots without disturbing the others.

2. In a gage of the character described, the combination with a fixed base plate provided with slots, a gage stop movable vertically through the slots, a pivot having its cross section presenting two unequal diameters, and a weighted arm having a bearing opening of a size to receive the greatest diameter of the pivot, and a mouth leading from the opening to the outside, said mouth being of a width less than the greatest diameter of the pivot to permit the removal of the weighted arm when the mouth is brought into register with the narrow portion of the pivot.

3. In a gage of the character described, the combination with a fixed base plate provided with slots, a gage stop movable vertically through the slots, a pivot located below the base plate adjacent to the said stop, and a weighted arm mounted on the pivot and acting against the stop to support the same yieldingly in projecting relation above the base plate, said weighted arm being removable from the pivot by a partial rotative movement about the same.

4. In a gage of the character described, the combination of a fixed base plate provided with slots, gage stops fitting in the slots of the base plate and movable vertically therein and held against lateral movement by the same, pivotally supported weighted means below the base plate for holding the gage stops in projecting relation above the base plate, said means allowing for the independent mounting of the stops and their separate removal without disturbing the other stops.

5. In a gage of the character described, the combination with a fixed support, of a pivot arranged below the same, a gage stop movably mounted on one portion of the support, and a swinging weighted arm mounted on the pivot and detachable therefrom transversely of the pivot to permit the removal of the gage stop without disturbing the mounting thereof.

[Claims 6 and 7 not printed in the Gazette.]

957,782. GAGE. JAMES M. LEAVER, Jr., Sonora, Cal. Filed Jan. 15, 1908. Serial No. 410,983.



1. In a gage of the character set forth, the combination with a fixed pivot support, of a gage stop having an open ended seat to receive the same and thereby supported for oscillatory movement and presented in projecting relation with the work, and means pivotally mounted on the gage stop for closing the seat to retain the stop on the pivot support.

2. In a gage of the character set forth, the combination with a fixed pivot support having its cross section presenting two unequal diameters, of a gage stop having a seat of a size to receive the greatest diameter of the pivot and provided with a contracted open mouth, a closure for the mouth mounted on the gage stop and having a weighted arm, said mouth permitting the removal of the stop from the pivot support transversely thereof by the removal of the closure.

3. In a gage of the character set forth, the combination with a pivot support, of a gage stop pivotally and detachably mounted thereon, and common means for preventing the detachment of the stop and for yieldingly maintaining it in a predetermined position.

4. In a gage of the character set forth, the combination with a pivot support, of a gage stop having an open ended seat that pivotally receives the support, and a weighted arm that closes the open end of the seat and yieldingly maintains the stop in a predetermined position.

5. In a gage of the character set forth, the combination with a base, of a pivot support associated therewith said base having a slot, of a gage stop pivotally mounted on the support and having an open ended seat that receives the pivot support, the free portion of said stop operating in the slot, and a weighted arm pivoted to the gage stop and closing the open side of the seat, said arm being offset from the gage stop.

[Claims 6 and 7 not printed in the Gazette.]

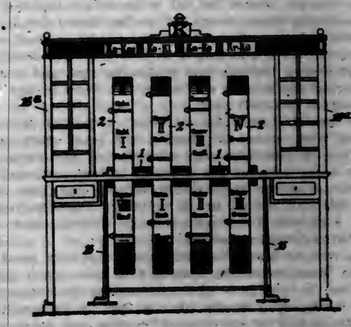
957,783. TOOL-SUPPORT FOR LATHES. CHARLES L. LIBBY, Indianapolis, Ind. Filed Feb. 6, 1908. Serial No. 414,500.



1. The combination of the bed of a lathe, a tool holder fulcrumed at one side of the bed of the lathe and consisting of a single arm with the upper and free end thereof formed to hold a tool and a shoulder on said tool holder near its fulcrum adapted to fit upon the upper surface of the same side of the lathe bed as the pivotal mounting of the tool holder and hold the tool holder in an inclined position with the free end over the lathe bed during work, and means for stopping the oscillatory movement of the tool holder for holding it out of the way when desired.

2. The combination of the bed of a lathe, a rod mounted at one side of the bed of the lathe, a tool holder mounted on said rod so as to be oscillatory thereon and slidable longitudinally thereof and consisting of a single arm with the upper and free end thereof formed to hold the tool and a shoulder on said tool holder near said rod adapted to fit and slide upon the side of the lathe bed with which said rod is connected and hold the tool holder in an inclined position with the free end over the lathe bed during work, and an extension of said tool holder below said rod adapted to engage the side of the lathe bed when the tool holder is turned back and limit such movement thereof.

957,784. ROTARY FILE-CABINET. CONSTANTIN LIEBERT, Warsaw, and WACLAW LIEBERT, Moscow, Russia. Filed Nov. 19, 1908. Serial No. 463,402.



1. A rotary file-cabinet comprising a stationary frame, a rotating frame mounted thereon having compartments, lids for said compartments, means in said compartments for holding certain of the papers spaced from the lids, and means for holding the papers spaced from one end of the compartments.

2. A rotary file-cabinet comprising a stationary frame, a rotating frame mounted thereon, compartments adapted to receive papers therein mounted on the stationary frame, lids for said compartments, and elongated projections partially covering the interior face of said lids and adapted to bear upon the edge of the papers to hold them in spaced relation with said lids.

3. A rotary file-cabinet comprising a stationary frame, a rotating frame mounted thereon, compartments adapted to receive papers therein mounted on the stationary frame, lids for said compartments, elongated projections partially covering the interior face of said lids and adapted to bear upon the edge of the papers to hold them in spaced relation with said lids and ridges forming radially projecting grooves on the inner face of the sides of the compartments and a movable partition engaging in certain of the grooves.

4. In a rotating file-cabinet, the combination of a rotating frame elongated compartments mounted on said frame and open at the tops and the upper part of one side, an angular lid hinged to said side and adapted to cover the opening of the compartment, an elongated projection extending longitudinally of the lid, ridges near one end of one side of the compartment and a movable partition engaging between certain of said ridges.

957,785. ELECTRIC HEATER FOR OIL-WELLS. OSCAR B. LINQUEST, Jamestown, N. Y., assignor of one-half to Archibald F. Russell, Lakewood, N. Y. Filed June 29, 1909. Serial No. 505,021.



1. An electric heater for oil wells comprising two or more insulating tubes, means for spacing these tubes apart from each other, a resistance wire wound around said tubes, means for conducting a current from any suitable source of energy through said resistance wire, and means for lowering and raising said tubes and wires in any desired position in an oil well.

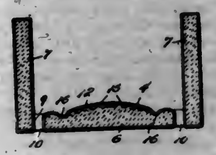
2. An electric heater for oil wells comprising grooved porcelain tubes, means for spacing said tubes apart from each other, a resistance wire surrounding said tubes, a tubular casing open at the top and bottom surrounding said tubes, a bail for raising and lowering said tubes and casing into and out of an oil well; and means for conducting a current from some suitable electric source of energy through said resistance wire.

3. An electric heater for oil wells comprising grooved porcelain tubes, means for spacing said tubes apart from each other, a resistance wire surrounding said tubes, a tubular casing open at the top and bottom surrounding said tubes, a bail for raising and lowering said tubes and casing into and out of an oil well, a terminal block secured to said bail, means for connecting wires from any suitable source of electric energy with said resistance wire.

4. An electric heater for oil wells comprising grooved porcelain tubes, a casing open at top and bottom, means for securing said tubes in place in said casing, a resistance wire surrounding said tubes, a bail secured to said casing, electric connectors secured in said bail, insulated wire leads leading from said connectors to the terminals of said resistance wire, means for securing the ends of said wire leads in said connectors and means for securing wires from any suitable source of energy in said connectors.

5. An electric heater for oil wells comprising grooved porcelain tubes, means for spacing said tubes apart from each other, a resistance wire surrounding said tubes, means for connecting said resistance wire with a suitable source of electric energy, and means for raising and lowering said elements into and out of an oil well whereby the said elements are brought into direct contact with the oil of the well and thus heat the same.

957,786. VAPORIZING DEVICE. ABBOT A. LOW, Horseshoe, and MAURICE J. WOHL and HARRY HERTZBERG, New York, N. Y.; said Wohl and said Hertzberg assignors to Abbot A. Low, Horseshoe, N. Y. Filed June 16, 1908. Serial No. 438,788.



1. A vaporizer for carburetion purposes, comprising a vaporizing chamber, and a vaporizing member therein consisting of a longitudinally inclined bottom wound transversely with resistance wire and upright side members similarly wound.

2. A vaporizing member for carburetion purposes, comprising a bottom section provided with lateral projections, and upright side members spaced from the lateral edges of said bottom member by said projections, said bottom section and side members being wound with electrical resistance wire.

3. A vaporizing member for carburetion purposes, comprising an insulating block traversed by electrical resistance wire, said block being provided in its upper surface with oil-distributing channels.

4. A vaporizing member for carburetion purposes, comprising an insulating block provided with electrical resistance wire, the oil receiving surface of said block being traversed with a network of intersecting oil-distributing channels.

5. A vaporizing member for carburetion purposes, comprising an insulating block traversed by electrical resistance wire, said block being provided in its upper surface with oil-distributing channels and an oil trap with which said channels communicate.

[Claims 6 to 8 not printed in the Gazette.]

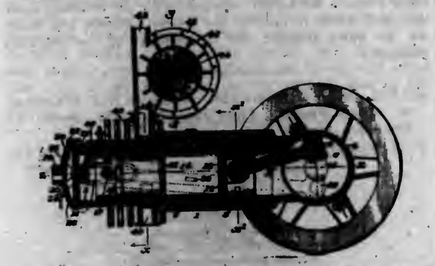
957,787. PENCIL-HOLDER. LOUIS MAY, San Francisco, Cal. Filed Jan. 3, 1908. Serial No. 409,228.

A pencil holder comprising a hollow tubular member, said member being split longitudinally to provide gripping jaws adapted for clamping engagement with the pencil, each jaw being formed intermediate of its length with a bulged portion which is formed at its inner end to provide a shoulder, a sleeve mounted to slide on the tubular member and provided with an enlarged portion whose walls are spaced from the walls of the said tubular member and provided with a contracted portion whose walls are engaged with the walls of the tubular member, said enlarged and reduced portions of the sleeve being connected together by a shoulder which is adapted to be engaged by the shoulders of the bulged portions of the jaws to limit the sliding movement of the sleeve in one direction, the said tubular member having a collar formed thereon at its opposite end to engage the sleeve to limit the sliding movement thereof in an opposite direction, the enlarged portion of the said sleeve being constructed whereby its inner walls may be engaged with the outer



surfaces of the bulged portions of the gripping jaws to move the jaws toward each other and into clamping engagement with the pencil.

957,788. INTERNAL-COMBUSTION ENGINE. NATHANIEL METZ, Lansdale, Pa., assignor of one-half to William D. Heebner, Lansdale, Pa. Filed Sept. 13, 1906. Serial No. 334,421.
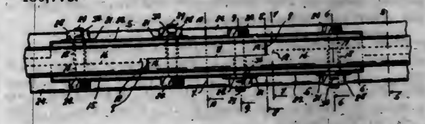


1. In an internal combustion engine, a cylinder, front and rear pistons therein, an intake valve at the rear of said cylinder, said rear piston being open at its rear end and adapted to receive and be cooled by the gas entering through said valve, ports at the rear end of said cylinder, a crank case, side passages communicating with said ports and said crank case, inlet and exhaust ports in the cylinder, said inlet ports communicating with said passages, a crank shaft in the crank case, side connecting rods in said passages and secured to said crank shaft and to the rear piston, and a central connecting rod secured to said crank shaft and said front piston.

2. In an internal combustion engine, a cylinder, an intake valve at the rear end thereof, front and rear pistons in said cylinder, said rear piston being open at its rear end and adapted to receive and be cooled by the gas entering through said valve, ports in said cylinder at its rear end, side passages communicating with said cylinder ports, a crank case communicating with said side passages, center cranks and end cranks in said crank case, side connecting rods secured to said rear piston and to said end cranks, a central connecting rod secured to said center cranks and said front piston, ports in said rear piston communicating with the ports at the rear of the cylinder on the rearward movement of the rear piston, means for admitting the charge from the side passages to the space between the pistons, and means for exhausting the burned gases.

3. In an internal combustion engine, a cylinder, an intake valve at the rear end thereof, front and rear pistons in said cylinder, said rear piston being open at the rear end and adapted to be cooled by the charge entering through the intake valve, ports at the rear end of the cylinder, a crank casing, center cranks and end cranks therein, side passages communicating with said ports and the casing, connecting rods located in said passages and secured to the end cranks, means passing through said ports for securing the connecting rods to the rear piston, a central connecting rod secured to the center cranks and to the front piston, inlet ports from said side passages to the cylinder and controlled by said front piston, exhaust ports controlled by said rear piston and ports in said rear piston intermediate the ends thereof and adapted to register with the ports at the rear end of the cylinder on the rearward movement of the rear piston.

4. In an internal combustion engine, a cylinder, front and rear pistons in said cylinder, an intake valve at the rear of said cylinder, said rear piston being open at its rear end and adapted to receive and be cooled by the gas entering said valve, ports in the side wall of the rear piston, a pin extending transversely of said rear piston, ports controlled by said rear piston located at the side of said cylinder and adapted to receive and guide the ends of said pin and coöperating with said piston ports to permit a charge to pass through the side passages on the rear stroke of the rear piston, there being side passages communicating with and leading from said cylinder ports, a crank case with which said side passages communicate, a crank shaft therein, side connecting rods leading from said crank shaft to said pin, a central connecting rod leading from said crank shaft to said front piston, means for admitting the charge from the side passages to the space between the pistons, and means for exhausting the burned gases.

957,789. RAILWAY-RAIL AND JOINT THEREFOR. JAMES MURPHY, Greeley, Colo., assignor to Elbert C. Smith, Greeley, Colo. Filed May 4, 1908. Serial No. 430,776.



1. A railway rail whose web is reinforced on one side, the said reinforced part extending both forwardly and rearwardly from the extremity of the base of the rail, the tread of the rail being vertically cut away, the cut away portion extending both forwardly and rearwardly from the extremity of the base of the rail, the forward portion of the reinforced extension of the web of the rail having its tread part removed, whereby when the rail joint is formed, the said forward portion is adapted to project underneath the tread of the other rail, the base of the rail being reinforced to form a supporting ledge or seat for the web-and-tread extension of the other rail, substantially as described.

2. A railway rail whose web portion is reinforced on one side at the extremity of the rail and partly cut away on the opposite side, the said reinforced and cut away portion of the web of the rail extending both forwardly and rearwardly from the extremity of the base of the rail, a portion of the tread of the rail being vertically cut away to coincide with the cut away portion of the rail web, the said cut away portion of the tread extending both forwardly and rearwardly from the extremity of the base of the rail, the forward extremity of the reinforced web extension of the rail having its tread portion cut away, the base of the rail being reinforced to form a supporting ledge or seat for the web-and-tread extension of the other rail, substantially as described.

3. A railway rail whose extremity has its web reinforced on one side, the reinforced web part extending both forwardly and rearwardly from the extremity of the base of the rail, the web of the rail being partially cut away on the side opposite the reinforced side, the tread of the rail projecting forward of the extremity of the base of the rail, but terminating in the rear of the forward extremity of the reinforced web extension, the base

of the rail being reinforced to form a supporting ledge or seat for the web-and-tread extension of the other rail, substantially as described.

4. A railway rail whose extremity has its web reinforced on one side, the said reinforced portion extending both forwardly and rearwardly from the extremity of the base of the rail, the web of the rail being cut away on the opposite side from the reinforcement, but for a distance less than the length of the reinforcement, forming a shoulder in the rear of the extremity of the base of the rail, the forward portion of the reinforced web extension having its tread portion entirely cut away, and its web portion further cut away on the side opposite the reinforcement, forming a second shoulder of the same, or approximately the same, width as the first named shoulder, the said shoulders being so arranged that when the rail joint is formed, the second shoulder of one rail abuts against the first shoulder of the other rail, the base of the rail being reinforced to form a supporting ledge or seat for the web-and-tread extension of the other rail, substantially as described.

5. A railway rail whose extremity has its web portion reinforced on one side, the said reinforced web portion extending both forwardly and rearwardly from the extremity of the base of the rail, the web of the rail on the opposite side from the reinforcement being cut away vertically, but for a distance less than the length of the reinforcement, forming a shoulder forward of the rear extremity of the reinforced web part, the tread of the rail being half cut away vertically from a point located forward of the said web shoulder and extending to a point forward of the extremity of the base of the rail, the forward part of the reinforced web extension having its tread part entirely cut away, and its web part cut away on the opposite side from the reinforcement, forming a second shoulder, the base of the rail being reinforced to form a supporting ledge or seat for the web-and-tread extension of the other rail, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

957,790. GLOBE FOR PROTECTING MANTLES. ARTHUR P. NELSON, Le Beau, S. D. Filed Jan. 7, 1910. Serial No. 536,862.



1. In combination with a globe having an opening in the lower portion thereof, exteriorly and interiorly disposed disks surrounding said opening and having corresponding apertures formed therein, means engaged in the apertures for securing said disks together and clamping them against the globe, and means pivotally secured to the exterior disk forming a closure for the opening in the globe.

2. The combination with a dome, of a globe secured thereto, said globe having an aperture formed in the bottom thereof, plates clamped to the globe and surrounding the opening for reinforcing the globe, and eccentrically pivoted means secured to the plates and forming a closure for the opening, said means having an integral lug forming a handle portion to swing the means over and away from the opening.

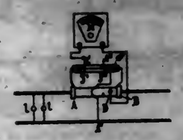
957,791. PUMP ATTACHMENT. OTTO NUERNBERGER, Comfort, Tex. Filed May 24, 1909. Serial No. 498,084.

1. In combination with a pump cylinder, of a plurality of supporting devices, hollow members mounted to slide in said supporting devices, a pump plunger rod, a connection between the pump plunger and the hollow members, a windmill plunger, means to resiliently connect the hollow members with the windmill plunger, and means to operate the hollow members and thereby the pump plunger rod independent of the windmill plunger.

2. In combination with a pump cylinder, of a plurality of supporting devices, hollow members mounted to slide in said supporting devices, a pump plunger rod, an adjustable connection between the pump plunger rod and the hollow members, a windmill plunger, means to resiliently connect the hollow members with the windmill plunger, and means to operate the hollow members and thereby the pump plunger rod independent of the windmill plunger.



957,792. ELECTRIC METER. CHARLES E. J. O'KEENAN, St. Cloud, France. Filed June 28, 1909. Serial No. 504,845.



1. In a device for obtaining a fall of potential proportional to the watts absorbed in a continuous current circuit, the combination of a shunt, a sub-shunt, and a winding for heating the sub-shunt, the ends of said winding being connected to the main conductors of the installation, substantially as described.

2. In a device for obtaining a fall of potential proportional to the watts absorbed in a continuous current circuit, the combination of a shunt, a sub-shunt, a winding for heating the sub-shunt, the ends of said winding being connected to the main conductors of the installation, and a motor meter connected between the sub-shunt and the shunt, substantially as described.

957,793. CLAMP-PRESS. WILLIAM D. OSBORN, South Bend, Ind. Filed June 16, 1909. Serial No. 502,556.



1. A clamping press comprising upper and lower solid plates, a rotatable clamping lever pivoted upon the upper face of the upper plate and having resilient laterally extending members, the said clamping lever being so formed that the said lateral extremities move away from the face of the plate when the lever is turned, and hooks on the lower plate adapted to detachably engage with the extremities of the clamping lever, said hooks being pivoted to the lower plate for movement against the edges of the plate.

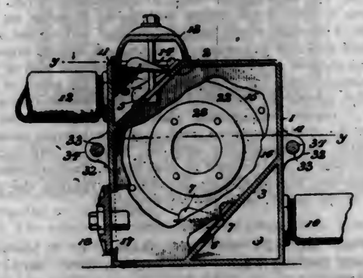
2. A clamping press comprising upper and lower plates, hooks on the lower plate, a handle pivoted to the upper plate, and resilient laterally extending members, the extremities of said laterally extending members being spaced from the axial center of the clamping handle and adapted to engage with said hooks.

3. A clamping press including upper and lower plates, hooks pivoted to the edges of the lower plate, and a clamping lever pivoted upon the upper plate, said lever consisting of a handle portion and resilient laterally projecting end portions, said end portions extending out at less than right angles to the handle portion and being inclined from the plane of the handle portion.

4. A clamping press comprising upper and lower plates, a bail pivoted to the bottom of the lower plate and having upwardly extending ends hooked at their extremities, and a clamp pivotally supported on the upper face of the upper plate, said clamp having a central handle member and laterally extended ends, said ends having an angle less than a right angle and extended both at an angle to the axial plane of the handle.

5. A clamping press of the character described comprising a base plate formed with a transverse groove in its bottom face, a bail pivotally supported in said groove and having its extremities upwardly turned and formed into hooks, an upper plate adapted to contact with the lower plate, eyes on the upper plate, and a clamping member composed of a handle, the lower ends of which are laterally extended and pass through said eyes for pivotal movement therein, the laterally extended ends of the clamping member after passing through said eyes being bent slightly toward the handle of the clamp and being also bent at an inclination to the pivotal axis of the clamp.

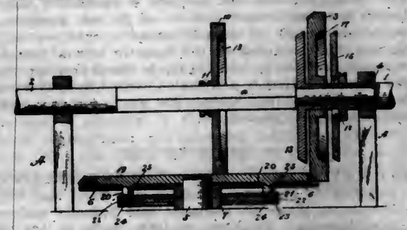
957,794. PUMP. ATWELL A. PARKER, Waterford, N. Y. Filed Oct. 14, 1909. Serial No. 522,656.



1. In a double acting pump, the combination of a casing having two inclined partitions extending entirely across and connecting with the side walls of the casing and a centrally vertically disposed partition within the casing and connecting with the interior walls thereof and also connected with the two inclined partitions to provide two opposite receiving chambers, there being openings formed in the two inclined partitions to afford communication between the receiving chambers and inlet and outlet chambers formed by said inclined partitions and the corners of the casing adjacent thereto, a valve over each of the openings in the inclined partition to control the inlet and outlet of the water, a supply pipe communicating with the inlet chamber in the lower corner of the casing an outlet pipe communicating with the outlet chamber in the upper corner of the casing there being alined diaphragm openings in the side walls of the casing opposite the vertical partition, a diaphragm in each said diaphragm opening, a cross head on each diaphragm and means for connecting the cross heads to cause them to be simultaneously operated.

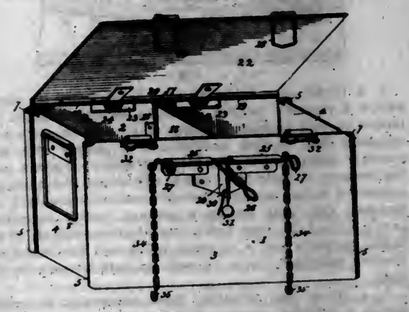
2. In a double acting pump, the combination with a casing formed with inlet and outlet openings, and alined diaphragm openings, the latter openings being in the side walls of the casing, two inclined partitions, one of said partitions extending across the casing below the upper corner thereof, the other said partition extending across the casing above the lower opposite corner thereof, forming with the walls of the casing, inlet and outlet chambers, a central vertical partition in the casing extending between and connected to the inclined partitions and forming with the latter receiving chambers, there being openings formed in the inclined partitions for affording communication between the receiving and inlet and outlet chambers, valves on the upper inclined surfaces of the partitions for controlling said openings, a diaphragm in each diaphragm opening, a cross head connected to each diaphragm and a pair of connecting rods connected at or near the ends of the cross heads at points beyond the ends of the casing to cause the diaphragms to operate simultaneously.

957,795. TRANSMISSION-GEARING. WALLACE M. PARKISON, Rensselaer, Ind. Filed Dec. 2, 1907. Serial No. 404,730.



In a transmission gearing, the combination with a drive and a driven shaft, a clutch mechanism whereby motion can be transmitted indirectly to the driven shaft, a bevel gear wheel having a recess formed therein and in engagement with one member of the clutch mechanism, a friction disk carried by the bevel gear, a thrust bearing in engagement with the friction disk, a friction wheel adapted to be moved over the driven shaft and in position to be engaged by the friction disk, and a member on the drive shaft to engage the friction wheel whereby the driven shaft is driven at a speed equal to the speed of the drive shaft.

957,796. FOLDING CRATE. ADDISON J. PARMETER, Milnor, N. D. Filed July 29, 1909. Serial No. 510,169.



1. In a device of the class described, the combination with hinged side and end members, of a top hinged to one of the side members, pivoted links on the opposite side member, and hooks carried upon the underside of the top adjacent its connection with the side and adapted to en-

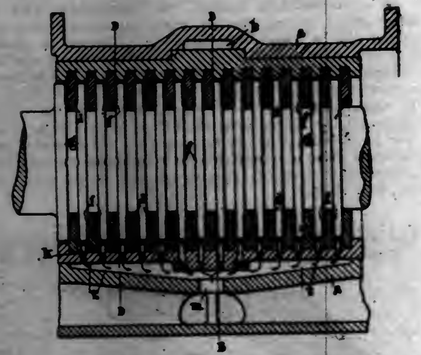
gage said links to hold the opposite side member collapsed with respect to the first side member on which the door is mounted.

2. In a device of the class described, the combination with hinged side and end members, of a top hinged to one of the side members, links carried by the opposite side member, hooks carried on the underside of the top adjacent the hinge connection and adapted to engage the links to hold the members collapsed, and means carried by the opposite side member for engaging the top to hold it in collapsed position.

3. In a device of the class described, the combination with side and end members, of a partition permanently hinged to the side members, separate bottom members hinged to one of the side members and adapted to fold up alongside of said side member, a door hinged to one side member, links carried by the opposite side member, hooks carried by the door adjacent the hinged connection thereof and adapted to engage the links, to hold the parts collapsed, links carried by the door, and flexible means carried by the opposite side member for engaging the links on the door to lock the lower side of the device in collapsed position.

4. In a device of the class described, the combination with hinged side and end members, independently hinged bottom members connected to one of the side members, a top hinged to one of the side members, links carried by the top, means carried by the opposite side member for engaging the links to hold the top in closed position when the crate is distended, and chains carried by said means for engaging the links to hold the top in locked position with the parts collapsed.

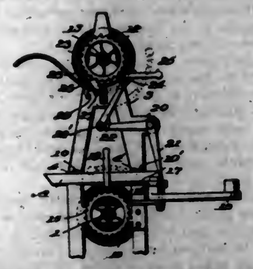
957,797. LUBRICATION OF THRUST-BEARINGS. CHARLES A. PARSONS, Newcastle-upon-Tyne, and JOHN TURNBULL, Wallsend, England; said Turnbull assignor to said Parsons. Filed Nov. 22, 1909. Serial No. 529,380.



1. A thrust and adjusting block comprising in combination a rotating member, pressure bearing elements attached to said member, annular stationary elements surrounding said rotating member and in contact with said pressure bearing elements, said stationary elements having recesses in their faces and each element also having a number of radial passages therein communicating with the recesses, said body having a passage therein extending partly around the same and communicating with all of the radial passages and a common outlet and means for delivering lubricant under pressure to said passage in the body.

2. A thrust and adjusting block comprising in combination a rotating member, pressure bearing elements attached to said member and having distributing recesses in their faces, a body encircling said member and formed in two parts, stationary elements attached to said body and being formed in two parts, one part of each element bearing on the ahead face of one adjacent pressure bearing element and the other part on the astern face of the other adjacent pressure bearing element, said stationary elements having recesses in their bearing faces and each element also having radial passages therein communicating with said recesses, said body having a passage therein extending partly around the same and communicating with all of said radial passages and said body also having an outlet port communicating with the spaces between the stationary elements.

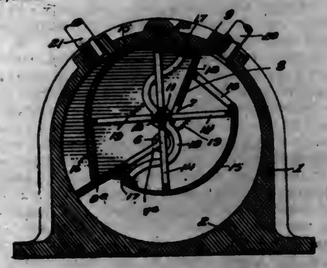
957,798. COPY-HOLDER. BENJAMIN F. PEETZ, Moro, Oreg. Filed Dec. 3, 1908. Serial No. 465,780.



1. In a copy holder attachment for typewriter machines, the combination with the line-spacing lever, of a frame, a roller journaled in said frame, a ratchet wheel attached to the shaft of said roller, a bell-crank lever pivoted on said frame, a spring-pressed pawl carried by said bell-crank lever and arranged to engage the teeth of said ratchet wheel, one end of said bell-crank lever being adapted to be engaged by said line-spacing lever, a friction member normally in engagement with the teeth of said ratchet wheel, and means for varying the pressure of said friction member.

2. In a copy holder, attachment for typewriter machines, the combination with a line-spacing lever, of a frame, a shaft journaled in said frame, a roller on said shaft, a ratchet wheel attached to one end of the shaft of said roller, a bell-crank lever pivoted on said frame, a spring-pressed pawl pivotally mounted on one end of said bell-crank lever, and arranged to engage the teeth of said ratchet wheel, the other end of said bell-crank lever being out of normal engagement with, but adapted to be engaged by the line-spacing lever, a spring friction member, normally in engagement with the teeth of said ratchet wheel, and a cam secured to said frame, and arranged to engage said spring friction member for varying the pressure of the latter, upon the ratchet wheel.

957,799. ROTARY ENGINE. ALBERT E. RASMUSSEN, North Yakima, Wash. Filed July 15, 1909. Serial No. 507,833.



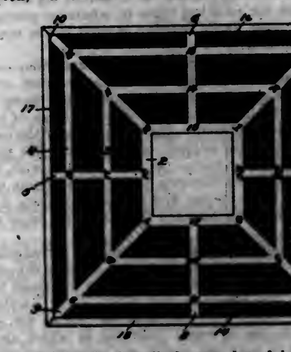
1. A rotary engine comprising a casing, independently mounted pistons in the casing, sectors mounted eccentrically to the pistons, links connecting the sectors and the pistons, and spring-actuated gates for closing the openings between the sectors and pistons.

2. A rotary engine comprising a cylinder, pistons independently mounted in the cylinder, a wheel mounted on a shaft disposed eccentrically to the center of rotation of said pistons, sectors carried by the wheels, links connecting said sectors and said pistons, said links being pivotally mounted at their ends, and gates connected by springs to said wheel for closing the space between the sectors and the pistons.

3. A rotary engine comprising a cylinder, pistons mounted concentrically in the cylinder, a wheel mounted eccentrically in the cylinder sectors carried by said wheel, said wheel and pistons being connected by pivoted links, inlet and exhaust ports in the casing, and gates actuated by springs for closing the openings between the sectors and the pistons.

4. A rotary engine comprising a casing, pistons mounted in the casing, one of said pistons being connected to a hollow shaft, the other piston being connected to a solid shaft mounted in the hollow shaft, a wheel journaled on a shaft mounted eccentrically in the casing, sectors carried by the wheel, links connecting the sectors with the piston, said links being pivoted, and gates carried by arms mounted on the wheel shaft and actuated by springs to close the openings between the pistons and the sectors.

957,800. GAME-BOARD. HAROLD A. RICHARDSON, Steelton, Pa. Filed Feb. 13, 1909. Serial No. 477,575.

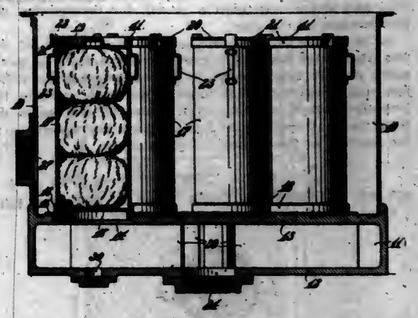


1. The herein described game board having a plurality of figures delineated on its upper surface, the figures being arranged one within the other and forming panels therebetween which are variously colored, and numbers appearing on the figures.

2. The herein described polygonal game board having a plurality of polygonal figures delineated on its upper surface and arranged one within the other, stripes extending from the corners of the inner figure to the corners of the board, said stripes intersecting the other figures at their corners, stripes extending from the sides of the inner figure to the sides of the board, said last-named stripes centrally intersecting the sides of the other figures, the figures and stripes providing panels which are variously colored, and numbers appearing on all of the figures where they are intersected by the stripes.

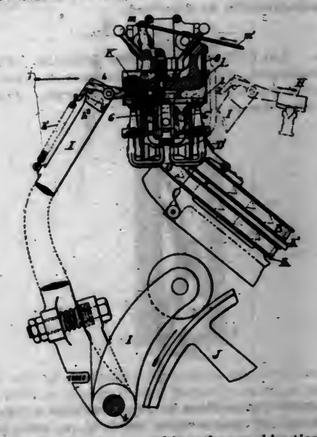
957,801. DYEING-MACHINE. JOSEPH RICHARDSON and JACOB F. NEFF, Philadelphia, Pa. Filed Dec. 7, 1909. Serial No. 531,794.

1. In a dyeing apparatus, a tank, a diaphragm arranged in said tank dividing the same into two compartments, a plurality of openings in said diaphragm, material-containing receptacles having their lower ends detachably mounted in the openings in the diaphragm and extending vertically upward therefrom, said material-containing receptacles having perforated bottoms and removable perforated top covers, a centrally disposed inlet communicating with the compartment below the diaphragm, and a plurality of vertical walls arranged in said lower compartment and extending radially outward from said inlet.



2. In a dyeing apparatus, a tank, a diaphragm arranged in said tank dividing the same into two compartments, a plurality of openings in said diaphragm, material-containing receptacles having their lower ends detachably mounted in the openings in the diaphragm and extending vertically upward therefrom, said material-containing receptacles having perforated bottoms and removable perforated top covers, a centrally disposed inlet communicating with the compartment below the diaphragm, a plurality of vertical walls arranged in said lower compartment and extending radially outward from said inlet, and means for causing the dye liquor to circulate from the upper to the lower compartment and thence through the material-containing receptacles.

957,802. LINE-CASTING MACHINE. JOHN R. ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Dec. 2, 1909. Serial No. 531,036.



1. In a line casting machine the combination of two fixed distributers and a carrier for composed lines of matrices, said carrier adjustable at will to present matrices to one distributer or the other as demanded.

2. In combination, two magazines, two corresponding distributers, a matrix line carrier having a variable extent of travel, and adjustable means to determine the extent of said travel.

3. In combination with the carrying lever and the line carrier yieldingly jointed thereto, a fixed stop engaging the carrier to arrest the same at one point, and a controllable device to arrest the carrier at another point.

4. In a line casting machine the combination of two distributer mechanisms, a line carrier adapted to present a composed line of matrices to either distributer mechanism, and means controllable at will for determining the presentation of the line.

5. In a line casting machine the combination of the two distributer boxes, the line carrier, variable in movement that it may present a line of matrices to either box, and a delivery slide having two arms opposite the respective boxes, whereby said carrier is adapted to deliver the matrices to one box or the other according to the position of the carrier.

957,803. SHOW-CASE LOCK. LEO H. SCHMIDT, Vale, Oreg. Filed July 23, 1909. Serial No. 509,161.



1. In a device of the class described in combination, a locking bolt, a lock casing integral with said bolt, a latch carried by said casing, and a catch with which said latch is adapted to coöperate, substantially as described.

2. In a device of the class described in combination, a locking bolt, a latch casing, a back plate carried by said casing, a latch on said back plate, a spring on said latch, and a catch adapted to coöperate with said latch, substantially as described.

3. In a device of the class described in combination, a locking bolt, a casing, a latch carried by said casing, a spring coöperating with said latch, and a catch adapted to be engaged by said latch, substantially as described.

4. In combination with sliding doors, a bolt passing through said doors, a lock casing integral with said bolt, latch mechanism carried in said casing, a catch carried by one of said doors, said latch mechanism being adapted to engage said catch when the bolt is in position in said doors, substantially as described.

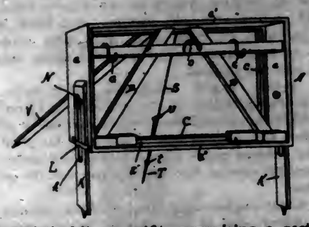
957,804. VACUUM-SUPPORTING DEVICE. FLORENCE P. SCHROEDER, Berkeley, Cal., assignor to Vaco Manufacturing Co., a Corporation of California. Filed July 15, 1909. Serial No. 507,845.



1. A vacuum supporting device comprising a cup-shaped body formed of compressible material, a head integral therewith, and a thin flat resilient strip of metal having a central toothed portion molded within said head, the ends of said strip projecting beyond the edge of said body and adapted to contact with a supporting surface to increase the vacuum space of said body and also form supports for articles.

2. A supporting device comprising a vacuum cup, and a flat strip of resilient metal having a transversely toothed portion adapted to be embedded within said cup the ends of said strip projecting beyond said cup and adapted to contact with the surface to which the cup is attached to increase the vacuum space of said cup.

957,805. ARTIST'S SKETCHING OUTFIT. WILLIAM P. SILVA, Chattanooga, Tenn. Filed July 28, 1909. Serial No. 509,987.



1. An artist's kit or outfit, comprising a rectangular case adapted to inclose and protect the articles carried, in combination with front legs secured against the faces of the two lateral side pieces of the case, and a separable rear leg, hinged to the upper side piece of the case, whereby the case is adapted to serve as the frame of an easel upon which the canvas may be supported.

2. An artist's kit or outfit and easel, comprising a rectangular case adapted to inclose and protect the articles carried, adjustable legs, means for holding the legs against the sides of the case, so they may be adjusted on lines substantially parallel therewith so as to extend beyond the ends thereof, and for securing them in whatever position they may be adjusted, and a rear leg secured to the upper side piece of the case.

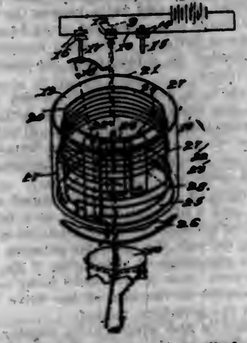
3. An artist's kit or outfit comprising a rectangular case adapted to inclose and protect the articles carried, legs for supporting the case so that it constitutes the frame of an easel, two of the legs being secured to the sides of the case and a third being hinged to the upper piece of the case and constituting the rear support of the easel, a bar supported by and extending across the case parallel with its upper side piece, but at a distance below it, and hooks adjustably mounted upon the bar and supported thereby and arranged to sustain a canvas when the case is set up as an easel.

4. An artist's outfit and easel, comprising a rectangular case adapted to inclose and protect the articles carried, legs at the ends of the case adjustable so as to extend beyond the case in one direction, and substantially parallel with the ends to which they are attached, means for securing the legs in the different positions to which they may be adjusted, a rear leg, and a bar extending across the case parallel with and adjacent to the top side of the case.

957,806. REGULATING INCANDESCENT-LAMP SOCKET FOR REDUCING THE LIGHT. EDWARD H. SMITH, Aberdeen, Wash., assignor of one-half to Thomas Evenson, Seattle, Wash. Filed Dec. 7, 1909. Serial No. 532,864.

1. In a device of the character described, an incandescent lamp socket, a rotary rheostat ring mounted within the casing of said socket and having a flange at its lower end in electrical connection with the lamp, a number of contact plates mounted in said ring, one of said contact plates extending to the lower end of said ring and in electrical connection with the flange at the bottom of the ring, a number of independent coils of variable resistance, each connected with one of the remaining contact plates and with the flange at the bottom of the ring, and a spring contact arm with which said contact plates are adapted to be severally brought in contact therewith whereby an uninterrupted electric current may be sent directly through the lamp or a series of variable resistances may be interposed in circuit with the lamp.

2. In a device of the character described, an incandescent lamp socket, a plug mounted within the casing of said socket, a rotary rheostat ring located about said plug and having an inner and outer metallic wall, the inner wall having a flange at its lower end, a filling of insulating material located between said walls, a number of contact plates insulated from each other and mounted in said filling, one of said contact plates extending from top to bottom of the ring and in electrical contact with the flange of the inner wall of the ring, a number of independent helical coils of different thickness insulated from each other and mounted in said filling, one end of each of said coils being connected with one of said plates and the other end being connected with the flange of the inner wall of the ring, a metallic ring located beneath the flange of the rotary ring and in electrical contact therewith and with the threaded tubular socket, and a spring contact arm with which the several contact plates are adapted to be successively brought in contact, for the purpose specified.



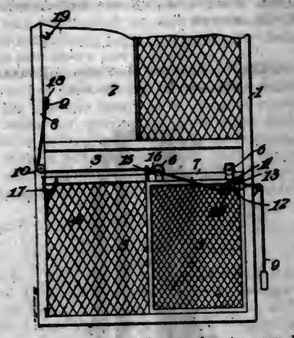
3. In a device of the character described, an incandescent lamp socket, a plug of insulating material with an annular flange at its top mounted in the casing of the lamp socket, a rotary rheostat ring encircling said plug and formed with an outer metallic wall and an inner metallic wall having a flange at its lower end, a filling of insulating material within said walls, a number of contact plates insulated from each other and mounted in said filling, one of said contact plates extending to the bottom of said ring and in electrical contact with said inner flange of the ring, a number of helical coils of different resistances embedded in said filling and insulated from each other, one end of each of said coils being connected with one end of each of the remaining contact plates and the other end of each of said coils being electrically connected with the bottom flange of the ring, a contact plate located beneath and in electrical contact with the bottom flange of the rotary ring, said contact plate being located in electrical connection with the tubular threaded lamp socket connection, and a spring contact arm located above said rotary ring and connected with one of the leading in circuit wires, said contact arm being adapted to contact successively with the contacts on the rotary ring as the latter is rotated to directly turn on the full current in the lamp or to reduce the light to different degrees of dimness.

957,807. DOOR ATTACHMENT FOR ELEVATOR FREIGHT-COMPARTMENTS. BRADLEY A. SNYDER, Hyattsville, Md., and MARVIN A. CUSTIS, Washington, D. C., assignors to said Marvin A. Custis. Filed July 30, 1909. Serial No. 510,474.

1. In combination with an elevator car having a freight compartment, of a movable closure for said compartment, and operating mechanism exposed for manipulation to the operator in the passenger compartment and comprising means for opening and closing said closure.

2. In an elevator, the car having passenger and freight compartments, a closure door for the freight compartment, and door operating mechanism having an operator's element exposed to the operator in the passenger compartment.

3. The combination with an elevator car having passenger and freight compartments, of a closure door for the freight compartment, and door operating mechanism having opening and closing means for the door, said mechanism being exposed for manipulation by the operator within the passenger compartment.



4. The combination with an elevator car having passenger and freight compartments, of a closure door for the freight compartment, a latch device for the door, and a releasing connection with the latch device, said connection having an operator's element exposed to the operator in the passenger compartment.

5. The combination with an elevator car having passenger and freight compartments, of a closure door for the freight compartment, and door operating mechanism including an operator's draw element exposed to the operator in the passenger compartment, and holding means for securing said element when the door is in either an open or closed position.

[Claims 6 to 18 not printed in the Gazette.]

957,808. HEAT-INSULATED RECEPTACLE. LEONARD R. STEEL, Milwaukee, Wis. Filed Nov. 4, 1908. Serial No. 461,071.



1. A tube or receptacle comprising an outer casing provided with an upwardly and inwardly inclined flange, an inner casing provided with a downwardly flaring flange engaging the flange of the outer casing, and a closure removably secured to the inner casing.

2. A tube or receptacle comprising an outer casing with an upwardly and inwardly inclined flange, an inner casing provided with a downwardly flaring flange engaging the flange of the outer casing, and a closure removably secured to the inner casing, said closure having an inclined portion engaging the flange of the inner casing.

3. A tube or receptacle comprising inner and outer casings, a lining between the casings, the inner casing and its lower portion offset inwardly, the vertical wall of the said offset portion being spaced from the lining, and a closure.

4. A tube or receptacle comprising inner and outer casings, a closure, and a lining located between the bottom and side walls of the casings, said lining consisting of outer layers of paper and an intermediate layer of tin foil coated with mercury.

957,809. BOTTLE. LEONARD R. STEEL, Milwaukee, Wis. Filed Nov. 4, 1908. Serial No. 461,073.



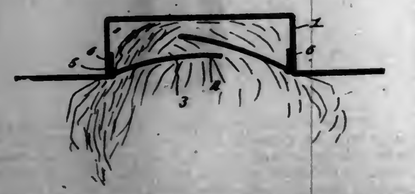
1. A bottle comprising a sectional casing, each section being provided with a threaded bead, each bead being provided with a groove, a coupling sleeve mounted on the bead, portions of the coupling sleeve being bent into grooves, a receptacle arranged within and spaced from the casing, and a closure for the bottle.

2. A bottle comprising a casing, a mirrored lining arranged within the casing, a receptacle arranged within and spaced from the casing, a mirrored lining secured to the outside of the receptacle, and a closure for the bottle.

3. A bottle comprising a casing having an inwardly disposed flange, a receptacle arranged within the casing, said flange spacing the receptacle from the casing, and a closure for the bottle.

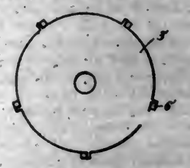
4. A bottle comprising a sectional casing, means securing the sections of the casing together, a lining on the inside of the casing, a receptacle arranged within and spaced from the casing, a lining on the outside of the receptacle, and a cap threadedly mounted on the casing, said cap being provided with a hollow portion forming a dead air space above the contents of the bottle.

957,810. HAT-FASTENER. ANNIE STRAUS, Danville, Ill. Filed Nov. 28, 1908. Serial No. 464,880.



The combination of a hat including a crown, with a hat fastener normally disposed in the crown, and a flexible attaching device consisting of a doubled elastic tape having its upper end fastened to the crown and its lower looped end free from the crown and terminating adjacent the bottom edge thereof, said pin consisting of a continuous piece in the form of a looped shank and an eye-shaped head which has its opening communicating with the opening of the shank to permit the pin to move longitudinally into and out of the crown by freely sliding through the attaching loop.

957,811. VALVE. CHARLES E. STRONG, Amityville, N. Y. Filed June 5, 1909. Serial No. 500,318.



1. In a valve, a reciprocating valve member, peripheral arms projecting from said valve member formed substantially in the shape of a compound curve having a part of the sides thereof flattened at diagonal corners for causing the valve member to rotate upon the passage of fluid through the valve.

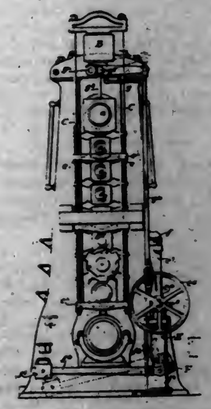
2. In a valve, a valve member formed substantially disk-shaped, and arms arranged on the periphery thereof extending substantially in a general direction parallel with the axis of the valve member and formed with walls having diagonal rounded corners and merging into diagonal flattened corners.

3. In a valve, a valve member formed substantially disk-shaped, and a plurality of arms each formed with a plurality of curved surfaces arranged to be acted upon by fluid passing through the valve for rotating the same in one direction regardless of which side of the valve member is uppermost, each of said arms being arranged substantially parallel to the axis of the valve member and located upon the periphery thereof.

4. In a valve, a disk shaped valve member, a plurality of arms arranged on the periphery thereof formed with beveled surfaces upon opposite sides and arranged in opposition to each other, whereby the arms may engage the fluid passing through the valve, regardless of which side of the valve member is uppermost.

5. In a valve, a reciprocating disk-shaped valve member formed with spaced peripheral arms, each of said arms extending in a general direction parallel with the axis of the valve member and formed with diagonal corners rounded in order to cause the valve member to partially rotate upon each unseating thereof regardless of which side is uppermost.

957,812. ATTACHMENT FOR CALENDER-MACHINES. JOSEPH STUART, Wilmington, Del., assignor to Lobdell Car Wheel Company, Wilmington, Del., a Corporation of Delaware. Filed May 5, 1909. Serial No. 494,102.



1. The combination with a calender machine of a device for applying pressure to the rolls thereof; fluid operated means for raising the roll or rolls; and a pump capable of supplying fluid under pressure to the roll raising means; said pump including a member capable of actuating the pressure applying device.

2. The combination with a calender machine of fluid actuated apparatus for raising a roll or rolls, a cylinder and piston for forcing fluid to said roll raising apparatus, means for applying pressure to the rolls, and means actuated by said piston for relieving said pressure before the raising of a roll or rolls.

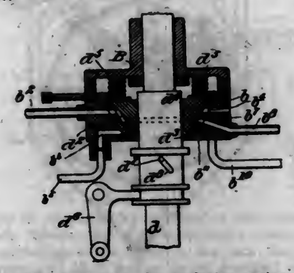
3. The combination with a calender machine of a cylinder having a piston and a piston rod, means for raising the rolls of the machine including other cylinders also having pistons, conduits connecting said latter cylinders with the first cylinder, and means operatively connected to the piston rod of said first cylinder for controlling the pressure on the rolls of the machine.

4. The combination with a calender machine of a cylinder, a piston and a piston rod, means for applying pressure to the rolls of the machine consisting of a weighted lever, means for connecting the piston rod with said weighted lever; fluid operated means for raising the rolls of the machine, and conduits connecting said latter means with the cylinder.

5. The combination with a calender machine of means for raising the rolls thereof including a cylinder and a plunger provided with packing, means including a conduit for forcing fluid to said cylinder, said conduit entering the cylinder above the level of the packing so as to trap a body of fluid in the cylinder in contact with said packing.

[Claims 6 and 7 not printed in the Gazette.]

957,813. STARTING MECHANISM. WILLIAM L. TERRY, Jr., Little Rock, Ark. Filed July 13, 1909. Serial No. 507,430.



1. A starting mechanism for explosive engines, comprising a pressure tank, means for charging said tank with fluid under pressure from one or more of the engine cylinders, means for distributing fluid under pressure from said tank to the engine cylinders, a valve casing, a sleeve located therein and having ports controlling the storage and distribution of said fluid under pressure, and a valve provided with channels coöperating with said ports.

2. A starting mechanism for explosive engines, comprising a pressure tank, means for charging said tank with fluid under pressure from one or more of the engine cylinders, means for distributing fluid under pressure from said tank to the engine cylinders, a valve casing, a sleeve located therein and having ports controlling the storage and distribution of said fluid under pressure and a valve controlling said ports and located within said sleeve.

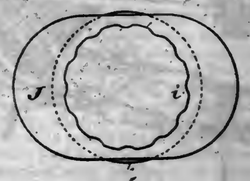
3. A starting mechanism for explosive engines, comprising a pressure tank, means for charging said tank with fluid under pressure from one or more of the engine cylinders, means for distributing fluid under pressure from said tank to the engine cylinders, a valve casing, a sleeve located therein and provided with ports controlling the storage and distribution of said fluid under pressure a valve located within said sleeve and controlling said ports, and means for independently operating said sleeve and said valve.

4. A starting mechanism for explosive engines, comprising a pressure tank, means for charging said tank with fluid under pressure from one or more of the engine cylinders, means for distributing fluid under pressure from said tank to the engine cylinders, a valve casing, a sleeve located therein and provided with ports controlling the storage and distribution of said fluid under pressure, a valve controlling said ports, and means for independently operating said sleeve and said valve.

5. A starting mechanism for explosive engines, comprising a pressure tank, means for charging said tank with fluid under pressure from one or more of the engine cylinders, means for distributing fluid under pressure from said tank to the engine cylinders, a valve casing, a sleeve located therein and provided with ports controlling the storage and distribution of said fluid under pressure, an operating arm for said sleeve, and a valve controlling said ports.

[Claim 6 not printed in the Gazette.]

957,814. FILLER FOR AUTOMOBILE-RADIATORS. EDWIN L. THOMAS, Buffalo, N. Y., assignor to E. R. Thomas Motor Company, Buffalo, N. Y., a Corporation of New York. Filed May 29, 1909. Serial No. 499,221.



1. A filler for automobile radiators comprising a funnel having a small lower end provided with a seat and a large upper end provided with a seat, a stopper engaging the lower seat, an oblong cover engaging the upper seat, and a spring connection between said stopper and cover.

2. A filler for automobile radiators comprising a funnel having a small lower end provided with a seat and a large upper end provided with a seat, a stopper engaging the lower seat, a cover engaging the upper seat, and a spring connection between said stopper and cover comprising an upright stem secured at its lower end to said stopper and passing with its central part through an opening in the cover and a spring operating to press said cover downwardly.

3. A filler for automobile radiators comprising a funnel having a small lower end provided with a seat and a large upper end provided with a seat, a stopper engaging the lower seat, a cover engaging the upper seat, and a spring connection between said stopper and cover, comprising an upright stem secured at its lower end to said stopper and passing with its central part through an opening in the cover and provided above the cover with a handle and a spring operating to press said cover downwardly.

4. A filler for automobile radiators comprising a funnel having a small lower end provided with a seat and a large upper end provided with a seat, a stopper engaging the lower seat, a cover engaging with the upper seat and a yielding connection between said stopper and cover.

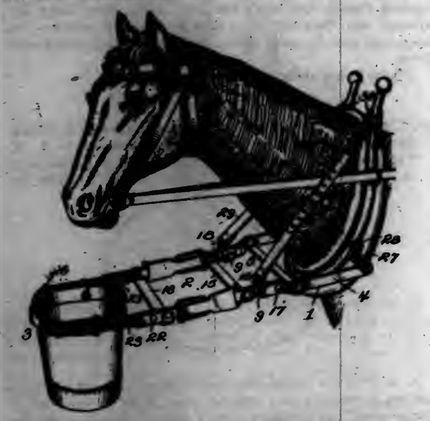
5. A filler for automobile radiators comprising a funnel having a small lower end provided with a seat and a large upper end provided with a seat, a stopper engaging the lower seat, a cover engaging with the upper seat and a yielding connection between said stopper and cover, comprising a stem secured to the stopper, a casing secured to the cover, and a spring interposed between a shoulder on said casing and a shoulder on said stem.

[Claim 6 not printed in the Gazette.]

957,815. NOSE-BAG HOLDER. CALVIN H. THOMPSON, Mounds, Okla. Filed May 14, 1909. Serial No. 495,891.

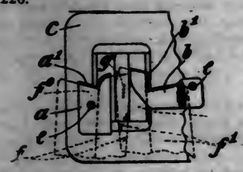
The herein described nose bag holder comprising an inner section composed of a pair of side bars, and a cross bar connecting them together, said side bars having stops

on their inner sides at their outer ends, an intermediate section composed of longitudinally adjustable side bars each consisting of inner and outer members disposed in overlapping relation and respectively provided with an angular portion having openings through which said members extend, cross bars respectively connecting said inner and outer members together, the inner ends of said inner members being disposed on the inner sides of the side bars of the inner section and pivotally connected thereto so that said intermediate section is foldable in said inner section and when extended bears on the said stops thereof, the said outer members of the side bars of the intermediate



section having stops on their inner sides at their outer ends; an outer section having side arms pivotally connected to the inner sides of the outer members of the side bars of the intermediate section, foldable in said intermediate section and when extended adapted to bear on the said stops thereof, means to connect the inner ends of the said bars of said inner sections to the lower portions of harness hames, and means to connect the inner portions of the side bars of said intermediate section to the upper portions of harness hames.

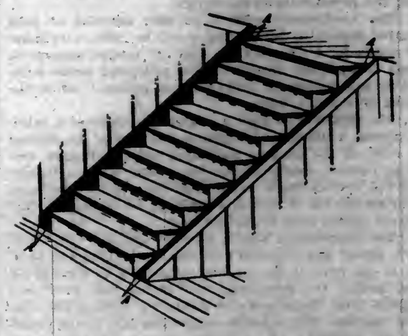
957,816. GUIDE FOR COLLARS. MARSHALL TILLIE, Londonderry, Ireland. Filed Sept. 22, 1908. Serial No. 454,226.



In a device of the character described, a plurality of plates adapted to be secured above the feed plate of a buttonhole sewing machine, a transverse flange on one of said plates, a curved flange forming a continuation of said flange, said flanges together conforming to one end of a turn-down collar, and means on another of said plates conforming to the other end of said collar, whereby said plates are adapted to guide a turn-down collar.

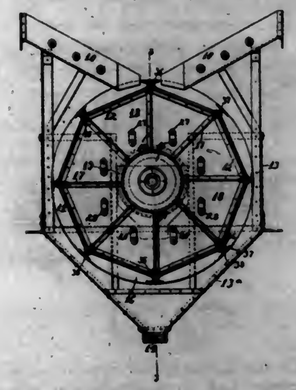
957,817. STAIR. JAMES C. TOLIVER, Ainsworth, Nebr. Filed Sept. 9, 1909. Serial No. 516,988.

A stair having a chute located on the side parallel thereto and having the same inclination, the chute being formed of an outer or side portion which is spaced from the ends of the steps, and a bottom which is located behind the inner angles of the treads and risers, whereby dust or other material accumulating on the steps may be swept



off the ends of the treads into the chute without obstruction, substantially as described.

957,818. ROTARY SCREEN. SAMUEL W. TRAYLOR, Allentown, Pa. Filed Dec. 22, 1908. Serial No. 468,790.



1. A rotary screen comprising a conical center in the shape of a truncated cone, side plates constituting heads, radial partitions joining said cone and side plates and providing compartments, screen frames covering said compartments, a supporting shaft projecting from the larger end of the conical center, the side plate at the opposite end having a delivery opening for each compartment, a spray pipe within each compartment for directing a spray of water toward the screen surface, and means for successively admitting water to said pipes, and cutting it off therefrom as the screen rotates, substantially as described.

2. A rotary screen drum having a plurality of compartments with inclined bottoms having delivery openings at one side, a supporting shaft suitably journaled and projecting from the opposite side, and hollow throughout part of its length, a spray pipe within each compartment for directing a spray against the surface of the screen, said pipes being in communication with said hollow shaft, means for automatically controlling said communication as the drum rotates, and a water supply pipe connected with said hollow shaft, substantially as described.

3. In combination a suitable casing, a screen drum rotatably mounted therein, means for feeding ore onto the exterior of said drum at the upper side, means for effecting the delivery of the under size material from the interior

of the drum, a plurality of water spray pipes within said drum and carried thereby, and means for successively admitting water to said pipes and cutting it off therefrom as the drum rotates, substantially as described.

4. In combination, a suitable casing, a screen drum rotatably mounted therein, means for feeding the material to be separated onto the upper side of said drum, means for effecting the delivery of the under-sized material from the interior of the drum, a plurality of spray pipes within the drum and carried thereby having spray openings facing the inside of the screen surface, means for automatically controlling the flow of water to the pipes as the drum rotates, and means for protecting the pipes from under sized material when water is not flowing therethrough, substantially as described.

5. In combination, a suitable casing, a screen drum, rotatably mounted therein, means for feeding the material to be separated onto the upper side of said drum, means for effecting the delivery of the undersized material from the interior of the drum, a plurality of spray pipes within the drum and carried thereby having spray openings facing the inside of the screen surface, means for automatically controlling the flow of water to the pipes as the drum rotates, a protecting shield located in proximity to each pipe, and a counterweight for holding said shield at all times vertically over said pipe, substantially as described.

[Claim 6 not printed in the Gazette.]

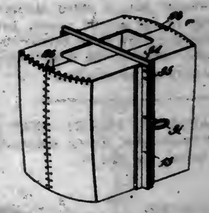
957,819. TOY. GUSTAV H. ULBRICH, Enid, Okla., assignor of one-half to John S. Balden, Enid, Okla. Filed Nov. 3, 1909. Serial No. 526,100.



In a toy of the character described, a body member having a neck member extending at an angle thereto, a head portion extending at an angle to the neck member, said body portion and head portion being provided with apertures and said neck portion being provided with a longitudinal groove in the upper side thereof; in combination with a jaw member hingedly connected with the underside of the head portion adjacent to the neck member, a bellows secured upon the underside of the body portion and including a hingedly supported spring-actuated wall member, and a flexible member connecting said wall member with the jaw member, said flexible member being guided through the apertures and grooves of the body, neck and head members and mainly accommodated in said grooves and apertures.

957,820. BOAT. HARVEY W. VANIMAN, Cincinnati, Ohio. Filed July 13, 1909. Serial No. 507,292.

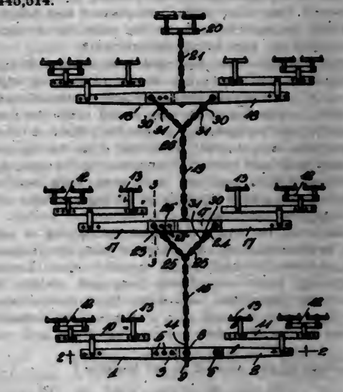
1. A boat comprising a plurality of sections, each section being formed of sheet material bent to form a bottom and sides, and ends secured to the ends of the sides and bottom, angle plates connecting the ends to the sides and bottom, a reinforcing bar on the free edge of each side, a pair of angle plates on the under face of the bottom of each section and longitudinally of the boat, a bar arranged between the angle plates and connecting the sections, bolts traversing the bar and the angle plates, bolts connecting the ends of the adjacent sections, sundry of said sections having false bottoms, air chambers arranged between the said false bottom and the true bottom, said sections decreasing in size from the central to the end sections whereby to permit them to be arranged in nested relation, means for securing the sections together when so nested, and detachable handles connected with sundry of the sections.



2. In a boat of the class described, a stern section composed of sheet material and having its bottom inclined upwardly toward the stern end thereof, a substantially horizontal false bottom above the true bottom, angle plates secured to the true bottom in spaced and parallel relation, and longitudinally of the boat, and a rudder secured between the angle plates.

3. In a boat of the class described, a plurality of sections composed of sheet material, each having on its bottom angle plates in spaced and parallel relation and longitudinally of the boat, and a stern section composed of sheet material having its bottom inclined upwardly toward the stern end thereof, a substantially horizontal false bottom above the true bottom, angle plates secured to the true bottom in spaced and parallel relation and longitudinally of the boat, a rudder secured between the angle plates, said sections being adapted to be arranged end to end, and plates extending between the angle plates of adjacent sections for securing them together.

957,821. DRAFT-EQUALIZER. JENNINGS VAN MATRE, Paso Robles, Cal. Filed July 27, 1908. Serial No. 445,514.



A draft equalizer comprising a primary sectional evener bar with a plurality of apertures in the inner end of one section and a single aperture in the inner end of the other section, plates mounted on the upper and lower surfaces of said first named section of the bar and having the same number of apertures as the bar and registering therewith, a plurality of bolts inserted in the plurality of apertures of the plates and section of bar, a bolt inserted through the plate and single aperture of the other section, a similar secondary sectional evener bar having a clevis adapted to be interchangeable from one of the plurality of bolts to the other, a clevis carried by the pivot of the sections, links having circular and straight portions, the straight portions having slots which communicate with the circular portions, the circular portions being secured

to the clevises, and chains having their inner ends secured to the slotted portions, the outer ends of the chains having a ring secured thereto, and an intermediate chain secured to said ring and extending rearwardly and connected to the primary evener bar, a third similar evener bar similarly connected to the second evener bar, a forward double tree connected to the third evener bar, and draft devices on the outer ends of the first, second and third evener bars, substantially as specified.

957,822. COLLAPSIBLE TOILET-SEAT. HARRY B. VANOSDALL and CHARLES E. ENCK, Ashland, Ohio. Filed Oct. 4, 1909. Serial No. 520,767.



1. A device of the class described comprising a flexible seat having front and rear arms secured to opposite edges thereof, and side arms separate from the seat for detachably connecting the first-mentioned arms for supporting the said seat.

2. A device of the class described comprising a flexible seat having front and rear arms secured to opposite edges thereof, side arms separate from the seat for detachably connecting the first-mentioned arms for supporting the said seat, and means carried by the seat and engaging the second-mentioned arms for holding the same in operative engagement with the first-mentioned arms.

3. A device of the class described comprising a flexible seat having front and rear arms secured to opposite edges thereof, and side arms respectively pivoted to one of the first-mentioned arms near either end thereof and adapted to detachably engage the ends of the other of the first-mentioned arms for supporting the said seat.

4. A device of the class described comprising a flexible seat having front and rear arms secured to opposite edges thereof, one of the arms consisting of a flat strip of metal and the other consisting of an open-ended tube, the first-mentioned arm having openings respectively formed therein and near the ends thereof, and side arms having one of their ends bent and pivotally mounted in the openings of the first-mentioned arm and their other ends bent to detachably engage within the ends of the said tubular arm for supporting the said seat.

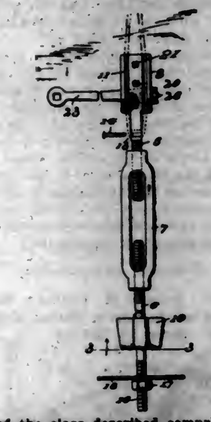
5. A device of the class described comprising a seat formed of flexible material and provided with longitudinal hems respectively arranged along opposite edges thereof, front and rear arms respectively arranged within the hems, side arms detachably connecting the first-mentioned arms for supporting the said seat, and means for connecting the seat to the side arms between the front and rear arms.

[Claims 6 to 10 not printed in the Gazette.]

957,823. GUY-WIRE CONNECTION FOR LAND-ANCHORS. FRANK M. VILES, Fitchburg, Mass. Filed Apr. 26, 1909. Serial No. 492,199.

1. A device of the class described including spaced rod sections having their inner ends provided with right and left hand threads respectively, a clamp carried by one of the rod sections for engagement with a guy wire, means carried by the other rod section for engagement with one side of an anchor, a turn buckle engaging the threaded ends of the rod sections, and a wedge shaped member rigidly secured to the lower rod section and adapted to be embedded in another side of said anchor for preventing rotary movement of the lower rod section when the turn buckle is adjusted.

2. A device of the class described including rod sections having their inner ends threaded, a clamp carried by one of the rod sections for engagement with a guy wire, means carried by the other rod section for engagement with one side of an anchor, a turn buckle engaging the inner ends of the rod sections for regulating the tension of the guy wire, and lateral projections rigidly secured to the lower rod section in spaced relation to the anchor engaging means and adapted to be embedded in another side of said anchor for preventing rotary movement of said lower rod section when the turn buckle is adjusted.



3. A device of the class described comprising rod sections having their inner ends threaded, one of said rod sections being provided with means for engagement with a guy wire, means carried by the lower rod section for engagement with one side of an anchor, a turn buckle engaging the threads on the rod sections, and wedge-shaped lugs rigidly secured to the lower rod section in spaced relation to the anchor engaging means and adapted to be embedded in another side of the anchor for preventing turning movement of said lower rod section when the turn buckle is rotated.

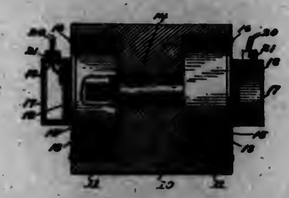
4. A device of the class described including rod sections having their inner ends threaded, one of said rod sections being provided with a clamp for engagement with a guy wire and the other section provided with means for engagement with an anchor, a turn buckle forming a connection between the rod sections and engaging the threaded ends thereof, and a pin extending laterally from the clamp and adapted to engage a wrench for preventing rotation of the clamp when the turn buckle is adjusted.

5. A device of the class described including upper and lower rod sections having their inner ends provided with right and left hand threads respectively, one of said rod sections being provided with a clamp for engagement with a guy wire, the lower end of the lower rod section being provided with threads, the pitch of which is different from the pitch of the threads at the upper end of the lower rod section, a turn buckle engaging the right and left hand threads of said rod sections, laterally extending wedge shaped lugs rigidly secured to the lower rod section for engagement with one side of an anchor, a nut engaging the lower threads on the lug carrying section for engagement with another side of said anchor, and a pin extending laterally from the clamp for engagement with a wrench, thereby to prevent turning movement of said clamp when the turn buckle is rotated.

957,824. ELECTRICALLY-HEATED ROLLER. GEORGE H. WADE, Atlanta, Ga. Filed Aug. 11, 1909. Serial No. 512,481.

1. A roller provided with recesses formed in opposite ends, and heating elements inserted within such recesses.

2. A roller provided with recesses formed in its opposite ends connected by an axial bore, and heating elements inserted within the recesses and rigidly connected by a journal extending through the axial bore.



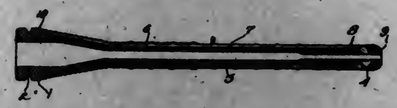
3. A roller provided with recesses formed in its opposite ends, heating elements disposed within the recesses, and means for conducting energy to the heating elements.

4. A roller provided with recesses in its opposite ends, and electrical heating elements disposed within the recesses, and alined axially with the roller.

5. A roller provided with recesses formed in its opposite ends, electrical heating elements disposed within the recesses, and means connecting the heating elements forming a journal for the roller.

[Claims 6 to 8 not printed in the Gazette.]

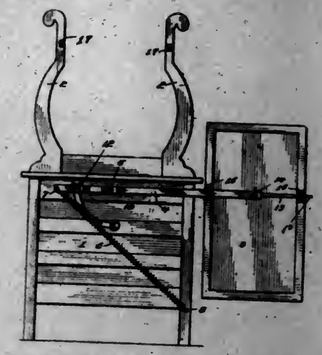
957,825. BOBBIN. THOMAS P. WALSH, Boston, Mass., assignor to Walsh-Baker Corporation, Portland, Me. Filed Nov. 20, 1909. Serial No. 529,055.



1. A loom bobbin, provided at its butt end with holding means and thence extending in a long slender yarn-supporting body terminating in a similarly slender smooth delivery-end whose peripheral yarn-engaging surface is uncut and unindented, said slender body having a substantially uniform diameter from said butt end throughout its yarn-receiving extent to said smooth delivery-end, and provided with a longitudinal groove beginning in said uniform-diameter portion of the bobbin adjacent, but not entering, said smooth delivery-end and continuing lengthwise of the slender portion and also lengthwise of at least a part of the butt end of the bobbin, whereby the yarn has free unimpeded axial delivery lengthwise over said smooth delivery-end in continuous whirling contact with its smooth surface, peripherally thereof, and, when all delivered except the usual yarn remnant adjacent the butt end, a long extent of said groove is exposed between said remnant and the said smooth delivery-end, for giving directed momentum to a stripping knife run quickly along said groove for cutting through said remnant.

2. A loom bobbin, provided at its butt end with holding means and thence extending in a long slender yarn-supporting body terminating in a similarly slender smooth delivery-end whose peripheral yarn-engaging surface is uncut and unindented, said slender body having a substantially uniform diameter from said butt end throughout its yarn-receiving extent to said smooth delivery-end, and provided with a longitudinal groove beginning in said uniform-diameter portion of the bobbin adjacent, but not entering, said smooth delivery-end and continuing lengthwise of the slender portion and also lengthwise of at least a part of the butt end of the bobbin, and a metal track permanently lining said groove for the point of a knife to travel on, whereby the yarn has free unimpeded axial delivery lengthwise over said smooth delivery-end in continuous whirling contact with its smooth surface, peripherally thereof, and, when all delivered except the usual yarn remnant adjacent the butt end, a long extent of said groove is exposed between said remnant and the said smooth delivery-end, for giving directed momentum to a stripping knife run quickly along said groove for cutting through said remnant.

957,826. ARTICLE OF FURNITURE. JAMES A. WARD, Jr., Fort Smith, Ark. Filed July 16, 1909. Serial No. 507,968.



1. In combination with an article of furniture, a supporting element pivotally connected thereto for movement in a vertical plane so that said supporting element may be raised or lowered, a spring exerting tension to raise said supporting element and a mirror carried by and pivotally connected to said supporting element.

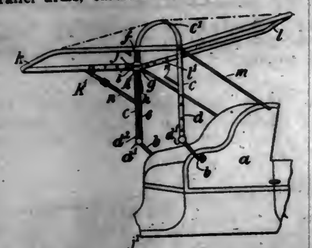
2. An article of furniture having mirror supporting standards rising therefrom and further provided with a pivotally mounted supporting arm, an axle member pivotally connected to said supporting arm for angular movement in a plane parallel to the plane of movement of said arm, a mirror pivotally connected to said axle member for angular movement in a plane at right angles to the plane of the movement of said axle member and means to mount said axle member on the standards of said article of furniture and permit the detachment of said axle member from said standards.

3. An article of furniture having mirror supporting standards rising therefrom and further provided with a pivotally mounted supporting arm, an axle member pivotally connected to said supporting arm for angular movement in a plane parallel to the plane of movement of said arm, a mirror pivotally connected to said axle member for angular movement in a plane at right angles to the plane of the movement of said axle member and means to mount said axle member on the standards of said article of furniture and permit the detachment of said axle member from said standards, and a spring tending to raise said supporting arm and said mirror to an elevated position.

957,827. FOLDING HOOD-FRAMING FOR ROAD-VEHICLES. PARIS W. WATSON, Jr., Lowestoft, England. Filed Oct. 16, 1908. Serial No. 458,139.

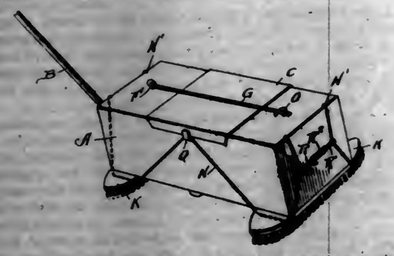
1. In a folding hood frame-work for road vehicles, the combination with a supporting frame or bow having parallel arms pivoted to the vehicle, carriers mounted on rods and capable of being moved up and down with relation to said parallel arms, folding stays pivoted at one end to the body of the vehicle and at the other end to the supporting bow or frame, forwardly and rearwardly extending bows or hood-carrying frames pivoted to the carriers spring stops for supporting the carriers in their upper position and releasing them therefrom adjustable straps connected to the supporting bow or frame and to the forwardly extending bow or frame to securely hold the latter when in position for use, substantially as herein shown and described.

2. In a folding hood framework for road vehicles, the combination with a supporting frame or bow having parallel arms, metal fittings pivoted to the vehicle and to which said parallel arms are fixed, guide rods parallel to the parallel arms, carriers mounted on said guide rods,



and forwardly and rearwardly extending bows or frames pin-jointed to said carriers, of rotatable forked perforated lugs loosely screwed into opposite sides of the body of each carrier to which the forwardly and backwardly extending bows or frames are pin-jointed, substantially as herein shown and described.

957,828. SCRUBBING-MACHINE. JOHN G. WEBB, Vigo, Ohio. Filed Feb. 26, 1910. Serial No. 546,124.



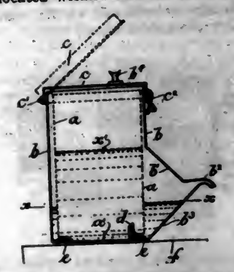
1. In combination with a receptacle adapted to contain liquid and having exit apertures in the bottom thereof, a slide to regulate the flow of liquid through said apertures, scrub brushes upon the bottom of the receptacle, wires having hooked ends engaging apertures in the receptacle and holding said brushes in place, and means for holding said wires taut.

2. In combination with a receptacle adapted to contain liquid and having exit apertures in the bottom thereof, a slide to regulate the flow of liquid through said apertures, scrub brushes upon the bottom of the receptacle, wires having hooked ends engaging apertures in the receptacle and passing underneath said brushes, hooks on the receptacle and engaged by said wires, and means for holding the latter taut.

3. In combination with a receptacle adapted to contain liquid and having exit apertures in the bottom thereof, a slide to regulate the flow of liquid through said apertures, scrub brushes upon the bottom of the receptacle, wires having hooked ends engaging apertures in the receptacle and passing underneath said brushes, hooks on the receptacle and engaged by said wires, a sectional rod having eyes in its ends engaging said wires, and a turn buckle connecting the sections of said rod.

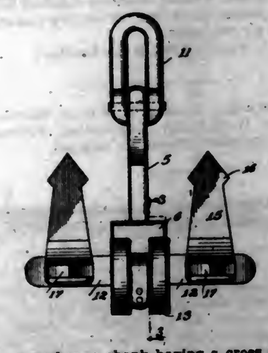
957,829. TILTING APPLIANCE FOR DECANTING OILS AND LIQUIDS. PERCIVAL T. WHITE and GEORGE ROBERTSON, Perth, Western Australia, Australia. Filed Sept. 8, 1909. Serial No. 516,703.

An appliance for decanting liquids comprising a hollow stand having a forwardly-projecting chamber opening into the interior thereof, said chamber being provided with a pouring spout and having a flat inclined side constituting a support for the stand during the decanting operation, and means located within said stand for puncturing the



can when the latter is inserted therewithin, to permit the liquid to flow into said chamber.

957,830. ANCHOR. JAMES E. WILDE, Chester, Pa. Filed Nov. 6, 1909. Serial No. 526,601.



1. In an anchor, a shank having a cross head and provided with a recess at its lower end, a fluke carrying shaft engaging said recess, a bearing block seated in the recess, and disks upon the fluke carrying shaft having notches engaging the cross head of the shank.

2. In an anchor, a shank having a cross head, a fluke carrying shaft supported for rotation adjacent to the cross head, and notched cross head engaging disks upon the shaft.

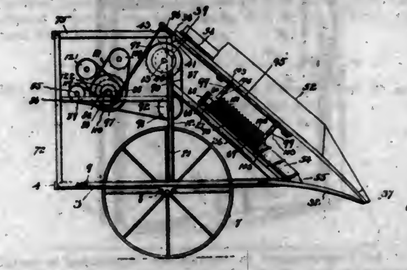
3. In an anchor, a shank having a cross head, a shaft supported for rotation by the shank adjacent to the cross head, flukes extending upwardly from the shaft, barbs extending in opposite directions from the shaft adjacent to the bases of the flukes, and notched cross head engaging disks upon the fluke carrying shaft.

957,831. CORN-HARVESTER. FREDERIC D. WILSON and ALBERT D. WILSON, Ottumwa, Iowa. Filed Mar. 4, 1908. Serial No. 419,238.

1. In a corn-harvester, the snapping-rolls inclined downwardly in the direction of the draft, a rock-shaft parallel with said snapping-rolls, a knocker-arm secured to said rock-shaft and arranged to reciprocate over said snapping-rolls to snap the ears of corn from the stalks passing through the machine, means for operating said rock shaft, husking-rolls, and a conveyer to carry the snapped ears to the husking-rolls, substantially as shown and described.

2. In a corn-harvester, snapping-rolls, a rock-shaft parallel with said snapping-rolls, a knocker-arm secured to said rock-shaft and having laterally-extending teeth, substantially as shown and described.

3. In a corn-harvester, snapping-rolls inclined downwardly in the direction of the draft, a rock-shaft journaled adjacent to said snapping-rolls and parallel thereto, arms secured to said shaft, a bar connecting the free ends of said arms, teeth projecting laterally from said bar, husking-rolls, and a conveyer located adjacent to said snapping-rolls to carry the snapped ears to the husking-rolls, substantially as shown and described.

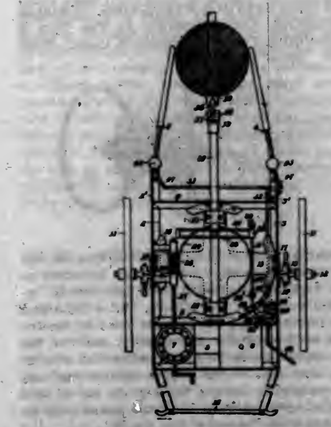


4. In a corn-harvester, the snapping-rolls inclined downwardly in the direction of the draft, each of said snapping-rolls having spiral projections thereon and longitudinal corrugations, a rock-shaft journaled adjacent to said snapping-rolls, arms rigidly secured to said shaft, a bar connecting the free ends of said arms, teeth projecting laterally from said bar, husking-rolls, and a conveyer located adjacent to said snapping-rolls to carry the snapped ears to the husking-rolls, substantially as shown and described.

5. In a corn-harvester, a frame, a platform secured to said frame having an opening therein for the standing corn, conveyer-chains at each side of said opening, the snapping-rolls located beneath the said opening and parallel therewith, and inclined downwardly in the direction of the draft, a knocker-arm mounted on the said platform and arranged to reciprocate over said snapping-rolls, husking-rollers, a conveyer located adjacent to said snapping-rolls and knocker-arm, wheels journaled on said frame, and gearing connected with one of said wheels to actuate the conveyer-chains, snapping-rolls, conveyer, husking-rolls, and knocker-arm, substantially as shown and described.

[Claims 6 to 9 not printed in the Gazette.]

957,832. MACHINE FOR FELLING TREES. JAMES E. WISE, Butler, Pa. Filed June 3, 1909. Serial No. 499,807.



1. In a portable tree sawing machine, the combination of a frame, ground wheels at opposite sides of the frame, tree engaging dogs projecting forwardly from the front end of the frame, a motor mounted on the rear end of the frame, a table movable horizontally on the frame between the ground wheels, guides on the table, a ram mounted to reciprocate on the table, means connecting the motor and ram, and table moving means.

2. In a tree sawing machine, the combination of a frame, ground wheels at opposite sides of the frame, a table on the frame between the ground wheels and mounted to turn on a vertical axis, a power transmitting wheel journaled on the table, a ram mounted to reciprocate on the table, a saw secured to the ram, an operative connection between the power transmiting wheel and the ram, power means for driving said wheel, and table moving means.

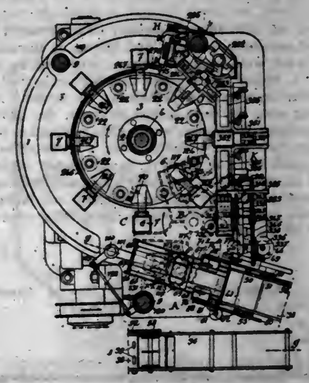
3. In a tree sawing machine, the combination of a frame, a table mounted in the frame on a vertical axis, a power transmitting wheel mounted on the table on a vertical axis coincident with the table axis, a ram mounted to reciprocate on the table, a cross-head and wrist-pin connection between the ram and said wheel, a saw secured to the ram, means for driving said wheel, and table turning means.

4. In a portable tree sawing machine, the combination of a horizontal frame, ground wheels at opposite sides of the frame, a horizontal table rotatably mounted on the frame between the ground wheels, a horizontal gear wheel having its axis coincident with the table axis, a motor mounted on the frame, a power shaft extending from the motor and geared to said gear wheel, a ram mounted to reciprocate on the table, a cross-head and wrist-pin connection between the ram and said gear wheel, a saw secured to the ram, and table turning means.

5. A sawing machine comprising a frame, a table rotatable therein, mechanism for imparting a step by step rotary movement to the table, a saw, a saw actuating member mounted to reciprocate on the table, and means for reciprocating said member.

[Claims 6 to 23 not printed in the Gazette.]

957,833. PARCELING-MACHINE. JEAN BARDET, Paris, France. Filed Jan. 29, 1906. Serial No. 298,480.



1. A parceling machine comprising a main frame, a rotary plate turning step by step, boxes on the said plate to receive bags, a device on the main frame adapted to introduce into each bag a portion of a weighed quantity of material a device on the main frame to ram the said portion down means for introducing the remainder of the charge into the bag, means for ramming the material in the bag after each partial filling, and means for closing the bag.

2. In a parceling machine, the combination of the feed roller for feeding step by step a continuous web, a swinging bracket, paste-cups on the said bracket, mollets in the said cups to paste the edges of the web, means for causing

the mollets to turn at the same time as the rollers, and means for causing the said bracket to swing during a part of the rotation of the rollers.

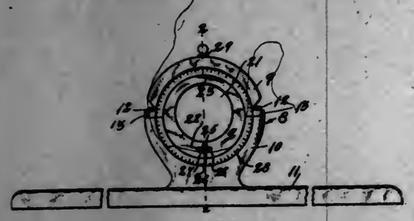
3. In a parceling machine, the combination of a star shaped bracket, bag mold on the said bracket, means for causing the said bracket to turn step by step, clips on each mold having flat springs to hold the bag tight on the opposite faces of the mold, means for opening and for closing the clips, and means for holding the clips in their opened and closed positions.

4. In a parceling machine, the combination of a main frame, a rotary plate, a bracket on the said plate having a slide-way, a box in the said slide-way, a beveled extension on the said box, inclined or skew teeth on the main frame, and a spring pressing the said extension onto the teeth.

5. In a parceling machine, the combination of a main frame, a bracket on the main frame, a paste-cup on the bracket, a mollet rotating on the cup, an arm pivoted to the bracket, a finger pivoted to the arm, a lever pivoted to the arm, a rotary plate, a box on the said plate to receive a bag, a projection on the box adapted to engage the said lever, means for causing the said arm to swing, and means for transmitting and amplifying the rotation of the said lever to the said finger.

[Claims 6 to 10 not printed in the Gazette.]

957,834. PLUMB-LEVEL. ALBERT A. BAUMANN, Wauwatosa, Wis. Filed Feb. 11, 1909. Serial No. 477,361.



A level of the class described comprising a casing formed of separable sections and having a circular opening the inner wall of the opening containing an annular raceway, a rotary gravitating member supported within the circular opening and containing an annular raceway registering with the first named raceway, the said gravitating member containing an eccentric opening to effect gravitating movement of the member, a series of ball bearings disposed in said raceway, a graduated scale being provided on the casing circumscribing said circular opening, a pointer carried by the member and adapted to travel over the scale, and means permitting arcuate adjustment of the pointer.

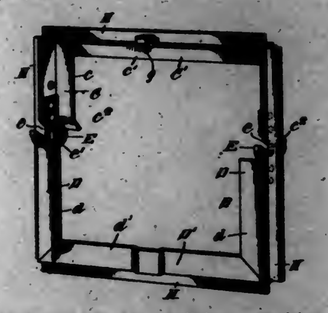
957,835. PENHOLDER. ARTHUR BEATY, Azusa, Cal. Filed June 4, 1909. Serial No. 500,067.



1. A pen holder comprising a tubular staff, a wire gripping coil inclosing the staff, a retaining spring bearing against said coil, and an adjustable nut on the staff engaging said spring.

2. A pen holder embodying a staff having a flange at its forward end and a threaded rear end, a coiled gripping wire surrounding the staff, and bearing at one end against said flange, a retaining spring upon the other end of the staff bearing against the opposite end of the wire, and a cap nut adjustably engaging the threaded rear end of the staff and inclosing the holding spring.

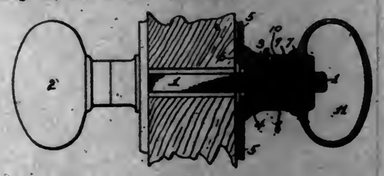
957,836. VENTILATING-SASH. JOHN BENZ and PAUL ROSSBACH, Chicago, Ill. Filed Nov. 10, 1909. Serial No. 527,298.



1. An improvement in ventilators comprising a metal frame made in sections, united by metal couplings, secured to the sides of the frame, a part of said couplings intervening between the sides of the frame sections and having their outer surfaces flush with the outer surfaces of the sides of the frame sections, said couplings being provided with slots forming pivot bearings, the inner surfaces of the central portions of the said couplings which intervene between the said sections being thickened and projecting slightly beyond the inner surfaces of the sides of the frame whereby frictional contact between the sides of the frame and sash is limited to the inwardly projecting portions of said couplings.

2. An improvement in ventilators comprising a metal frame made in sections, united by metal couplings, secured to the sides of the frame, a part of said couplings intervening between the sides of the frame sections and having their outer surfaces flush with the outer surfaces of the sides of the frame sections, said couplings being provided with slots forming pivot bearings, the inner surfaces of the central portions of the said couplings which intervene between the said sections being thickened and projecting slightly beyond the inner surfaces of the sides of the frame, the said frame being provided with angle irons secured to the outer faces of the sides thereof having one flange extending outwardly from the frame, whereby the sides of the frame are additionally strengthened and braced in the window frame.

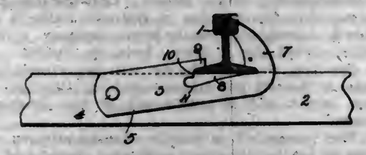
957,837. KNOB AND SPINDLE FASTENING. CHARLES A. BRADY, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Aug. 14, 1909. Serial No. 512,835.



1. The combination with a knob spindle having an angular end and threaded section, of a sleeve mounted to rotate with the knob and having a threaded bore to engage the threaded section of the spindle, and a knob and knob shank the latter having an angular bore to receive the angular end of the spindle, the adjacent ends of the sleeve and knob shank having interlocking lugs for detachably connecting the knob to the sleeve against endwise separation, the contacting faces of the lugs on one of said parts being cam shaped whereby the knob shank will be drawn into contact with the end of the sleeve.

2. The combination with a plate and a thimble secured thereto, of a knob spindle having a threaded angular end, a sleeve mounted to rotate in the thimble and having a threaded bore to engage the threaded spindle and a knob the shank of which has an angular bore to receive the angular spindle, the adjacent ends of the sleeve and knob shank having interlocking lugs for detachably connecting the knob to the sleeve against endwise separation, the contacting faces of the lugs on one of said parts being cam-shaped whereby the knob shank will be drawn into contact with the end of the sleeve.

957,838. RAIL-CLAMP. WILLIAM BERRY, Fond du Lac, Wis. Filed Nov. 6, 1909. Serial No. 526,608.



1. An integral rigid rail clamp of the character described, having a hooked portion adapted to engage the outer edge of the foot of a rail, an oppositely extending nose adapted to engage the inner edge of the rail-foot, an opening inclined downwardly and inwardly from below said hooked portion to below said nose, the outer end of the base of said opening engaging the bottom of the rail foot, and an extension projecting laterally of the rail and means to fasten said extension to the side of a tie in position where the outer edge of the rail-foot is supported and the inner edge thereof held down upon the tie by a lever action.

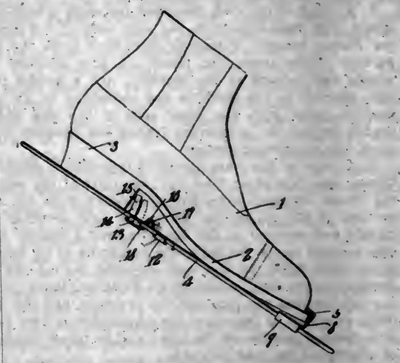
2. An integral rigid rail clamp of the character described, having a hooked portion adapted to engage the outer edge of the foot of a rail, an oppositely extending nose adapted to engage the inner edge of the rail-foot, an opening inclined downwardly and inwardly from below said hooked portion to below said nose, the outer end of the base of said opening engaging the bottom of the rail-foot, an upward extension on said hooked portion adapted to engage the outer edge of the tread of the rail, and an extension projecting laterally of the rail and means to fasten said extension to the side of a tie in position where the outer edge of the rail-foot is supported and the inner edge thereof held down upon the tie by a lever action.

3. An integral rigid rail clamp of the character described, having a hooked portion adapted to engage the outer edge of a foot of a rail, an oppositely extending nose adapted to engage the inner edge of the rail-foot, an opening inclined downward and inward from below said hooked portion to below said nose, the outer end of the base of said opening engaging the bottom of the rail-foot, a stepped portion at the inner lower extremity of said opening leaving a cut-out portion constituting an extension of said opening whereby sufficient clearance to admit the rail-foot is provided, and an extension projecting laterally of the rail and means to fasten said extension to the side of a tie in position where the outer edge of the rail-foot is supported and the inner edge thereof held down upon the tie by a lever action.

957,839. SHOE-RACK. BENJAMIN H. BIRCHALL, Baltimore, Md., assignor of one-half to Harry L. Troxell, Philadelphia, Pa. Filed May 8, 1909. Serial No. 494,739.

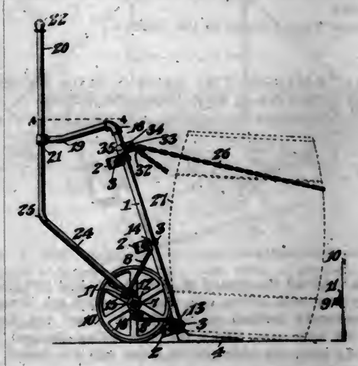
1. A shoe tree comprising a support having spaced bearing portions, a toe clamp adapted to secure the toe of a shoe to said support, a heel clamp having terminal spaced bearing portions adapted to slidingly fit the spaced bearing portions of the support, said heel plate having terminal means for securing the heel of a shoe, and an operating lever mounted on said support between the ends of the heel clamp and bearing against said heel clamp whereby to hold the same in engagement with a heel of a shoe.

2. A shoe tree comprising a support having yielding sides in spaced relation, a toe clamp having spaced bearing portions adapted to engage the sides of the support and terminating in a bent portion adapted to engage the toe end of a shoe sole, a heel clamp having terminal bearing portions adapted to engage the sides of the support and having a portion intermediate the ends bent upward, an operating lever bearing against said bent-up portion and causing the bearing ends of the heel clamp to bind upon the support whereby to hold the securing end of the heel clamp in engagement with the heel of a shoe.



3. A shoe tree comprising a resilient support, a heel clamp slidingly mounted thereon and having an up-turned portion between its ends, and a latch slidingly mounted on the support and having a locking head disposed transversely between the support and the said up-turned portion of the clamp and bearing against the same.

957,840. BARREL-TRUCK. CHARLEY BJORKLUND, Bowesmont, N. D., assignor of one-third to H. M. Waldren and one-third to John V. Anderson, Drayton, N. D. Filed Mar. 9, 1909. Serial No. 482,371.



1. A truck of the class described including side bars, transverse supporting bars connecting the side bars, wheels located at the front portions of the side bars, legs extending downwardly from the rear portion of the side bars, and a handle frame adapted to rest upon the floor and extending in rear of the side bars and connected at an intermediate point with the lower ends of the legs and at the front with the truck in advance of the said legs, said handle frame having angularly related front and rear portions.

2. A truck of the class described including side bars, transverse supporting bars connecting the side bars,

wheels located at the front portions of the side bars, legs extending downward from the rear portions of the side bars, and a handle frame extending in rear of the side bars and connected at an intermediate point with the legs and at the front with the truck in advance of the said legs and adapted to rest upon the floor or supporting surface, said handle frame being angularly bent in advance of the legs, the angles formed by the bends being arranged to rest upon the floor or supporting surface, whereby the center of gravity of a load is thrown forward and the rear portion of the handle frame elevated.

3. A truck of the class described including a supporting frame, legs depending from the rear ends of the supporting frame, brackets extending downward from the front portion of the supporting frame, an axle provided with wheels and secured to the brackets, and a handle frame also secured to the brackets and connected at an intermediate point with the lower ends of the legs and extended beyond the supporting frame, and adapted to rest upon the supporting surface.

4. A truck of the class described including a supporting frame, legs depending from the rear ends of the supporting frame, brackets extending downward from the front portion of the supporting frame, an axle provided with wheels and secured to the brackets, and a handle frame also secured to the brackets and connected at an intermediate point with the legs and extended beyond the supporting frame, said handle frame being angularly bent at a point between the legs and the brackets, and the bends being arranged to rest upon the supporting surface to elevate the rear portion of the truck and to throw the center of gravity of the load forward.

5. A truck of the class described including side bars, transverse connecting bars, brackets secured to the side bars at the front portions thereof and composed of inclined sides and a bottom connecting portion, the latter being bent at an intermediate point, lower bearing members secured to the brackets and correspondingly bent, an axle secured to the brackets by the lower bearing members and arranged between the said bends, legs extending downward from the rear ends of the side bars, a foot connecting the front ends of the side bars, and a handle frame having opposite longitudinal handle bars secured at their front ends to the brackets and connected at an intermediate point to the legs and extended in rear of the side bars.

[Claim 6 not printed in the Gazette.]

957,841. RAILROAD-TIE. FRANK O. BLAIR, Fort Scott, Kans. Filed Jan. 7, 1910. Serial No. 536,809.



1. A railroad tie formed of sheet metal and comprising a body arch with rebent side portions which are inwardly and upwardly inclined in converging planes and spaced from the body arch, and a concrete filling disposed over the body arch and between the latter and the rebent side portions.

2. A railroad tie formed of sheet metal and comprising a body arch with rebent side portions which are upwardly and inwardly inclined in converging planes and also bent to form gutters along the lower side edges, and a concrete filling disposed over the body arch and between the latter and the rebent side portions.

3. A railroad tie having a filling with drain ducts extending from the opposite ends of the tie inwardly a distance within the latter, and fastening means held by the tie to receive the rails, the drain ducts extending to the inner extremity of the fastening means to relieve the latter of water.

4. A railroad tie formed of sheet metal doubled in close relation at the side edges and the doubled portions bent upwardly to provide drain troughs at said edges.

5. A railroad tie formed of sheet metal doubled in close relation at the side edges and bent upwardly to provide drain troughs at said edges, the upwardly bent doubled edges being further bent downwardly in reverse directions from intermediate portions of the tie toward opposite ends of the latter.

[Claims 6 to 10 not printed in the Gazette.]

957,842. PRODUCTION OF TITANIUM-NITROGEN COMPOUNDS. CARL BOSCH, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Mar. 2, 1908. Serial No. 418,847.

1. The process of producing titanium-nitrogen compounds by heating an oxygen-containing titanium compound, carbon and an alkali salt in the presence of nitrogen.

2. The process of producing titanium-nitrogen compounds by heating a mixture containing titanic acid, carbon and an alkali salt in the presence of nitrogen gas at a temperature above 1,100° C.

3. The process of producing titanium-nitrogen compounds by heating a mixture containing titanic acid, carbon and sodium sulfate in the presence of nitrogen gas at a temperature above 1,100° C.

957,843. PROCESS OF MAKING AMMONIA. CARL BOSCH, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Mar. 26, 1908. Serial No. 423,451.

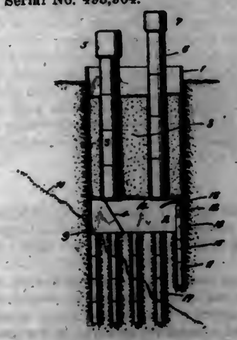
1. The process of producing ammonia by heating titanium nitrid with an oxidising agent in the presence of water while maintaining the temperature so low that the production of free nitrogen is practically avoided.

2. The process of producing ammonia by heating titanium nitrid with an oxidising agent in the presence of water and an oxygen carrier.

3. The process of producing ammonia by heating titanium nitrid with air and steam in the presence of an oxygen carrier.

4. The process of producing ammonia by heating titanium nitrid with air in the presence of ferric sulfate and water.

957,844. CONSTRUCTING FOUNDATIONS OF BUILDINGS. JULES BREUCHAUD, Yonkers, N. Y. Filed May 4, 1909. Serial No. 493,904.



1. The herein-described method of constructing foundations, which consists in sinking a caisson into the soil and arranging a jack in engagement with the base portion thereof, in then locating a supporting element vertically beneath said caisson and jack and forcing the same into the earth until a firm foundation is reached, permitting the soil supporting the caisson to be otherwise undisturbed and subsequently removing the jack and connecting said supporting element and the supporting soil to the caisson.

2. The herein-described method of constructing foundations, which consists in sinking a caisson into the soil, in then arranging a hydraulic jack in engagement with the base portion of the caisson and successively driving column sections perpendicularly into the earth until a column is formed which reaches bed-rock or other firm strata, permitting the soil supporting the caisson to be otherwise undisturbed then removing the jack, and subsequently forming a pressure-resisting connection between the supporting soil, the upper end of the column and the base portion of the caisson, substantially as described.

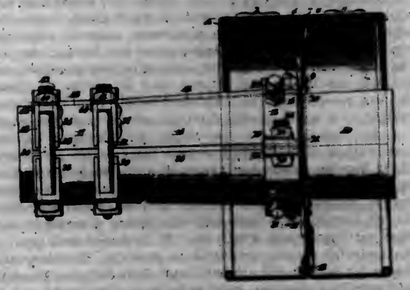
3. The herein-described method of constructing foundations, which consists in sinking a caisson into the soil, in then arranging a hydraulic jack in engagement with the base portion of the caisson and successively driving column sections perpendicularly into the earth until a column is formed which reaches bed-rock or other firm strata, then removing the jack, and repeating this operation until a plurality of sectional columns is formed, each resting on a firm substrata, permitting the soil supporting the caisson to be otherwise undisturbed and subsequently forming an integral pressure-resisting connection between the supporting soil, the columns thus formed and the base of the caisson, substantially as described.

4. The herein-described method of constructing foundations, which consists in sinking a caisson into the soil, in then arranging a hydraulic jack in engagement with the base portion of the caisson and successively driving column sections perpendicularly into the earth until a column is formed which reaches bed-rock or other firm strata, permitting the soil supporting the caisson to be otherwise undisturbed then removing the jack, uniting the footing of the column thus formed to firm substrata by grout and subsequently filling the column and forming a pressure-resisting connection between the supporting soil, the column and the base portion of the caisson.

5. A foundation for a building or other structure, comprising a caisson sunk vertically into the soil, and foundation elements individually of less diameter than the caisson and collectively supporting such caisson extending vertically below such caisson through the surrounding soil to bed-rock or other firm supporting strata, and a pressure-resisting connection between such caisson and the foundation elements.

[Claims 6 to 12 not printed in the Gazette.]

957,845. PULLEY AND ATTACHMENT THEREFOR. CHARLES A. BRINLEY, Philadelphia, Pa., and RUSSELL H. BOWEN, Palmyra, N. J., assignors to The American Pulley Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 25, 1910. Serial No. 545,805.



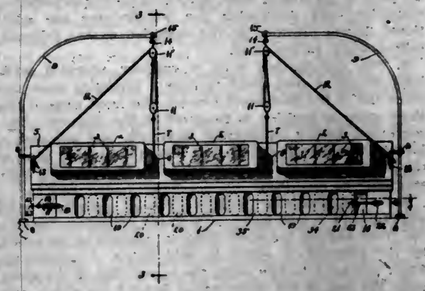
1. In a divided pulley, the combination, with the rim and spoke elements; of an extended barrel, having a bearing surface at its outer end of substantially cylindrical contour, and having its remaining portion adapted to embrace a shaft of different diameter from that of said cylindrical portion; clamping means arranged in proximity to said cylindrical portion; and centering devices arranged adjacent to the pulley, whereby the outer end of the barrel may be clamped to bear upon a substantially cylindrical surface and the pulley may be centered upon a surface of different diameter from the first mentioned one.

2. In a divided pulley, the combination with the rim, and spoke elements; of a laterally projecting hub element; a tapering barrel element, one extremity of which fits within said hub element; clamping bands embracing the exterior of said hub element; means for securing said clamping bands, barrel and hub element together; and clamping devices arranged in proximity to the outer extremity of said barrel, substantially as set forth.

3. In a divided pulley, the combination with the rim and spoke elements; of a laterally projecting hub element; a tapering barrel element, one extremity of which fits within said hub element; clamping bands embracing the exterior of said hub element; means for securing said clamping bands, barrel and hub element together; clamping devices arranged in proximity to the outer extremity of said barrel; and centering devices extending through the barrel at the region of said hub element.

4. In a divided pulley, the combination of a rim element comprising flat bands having inwardly extending flanges at their proximate edges; a spoke element provided with portions adapted to embrace said flanges and arranged alternately on opposite sides of the median line of said spoke element; a hub element integral with said spoke element and extending laterally therefrom; an extending tapering barrel element attached to said hub element; clamping bands adapted to embrace the hub element at the region of attachment of the barrel thereto; clamping devices arranged at the outer extremity of the barrel; and centering devices arranged at the region of the hub, substantially as set forth.

957,846. SKYLIGHT AND VENTILATING CONSTRUCTION FOR SHIPS. JAMES CRATES, Lorain, Ohio. Filed Nov. 8, 1909. Serial No. 526,782.



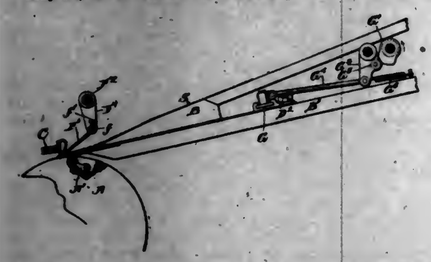
1. A roof structure for vessels, comprising coamings around a hatchway in the roof deck, a skylight frame resting on said coamings and provided with openable windows, means to open said windows from below the deck, and means above the deck to remove the whole frame to open the hatchway.

2. A ventilating skylight comprising a cover, a hinged window therein, a lever fulcrumed at one end, a thrust bar connecting the other end of the lever and the window, and a rope connected to the lever, for swinging the same to open the window.

3. A ventilating skylight comprising a cover, a window hinged to the upper side thereof, to open and close an opening in the cover, a lever fulcrumed at one end to the under side of the cover, a bar connecting the free end of the lever and the under side of the window and arranged to work through said opening when the window is raised, and means to swing the lever upwardly, to open the window.

4. A ventilating skylight structure for vessels comprising coamings around an opening in the roof deck, the coamings having openings therein, slides mounted in guides on the coamings, springs connected to said slides and tending to close the same, and ropes connected to said slides and depending through said opening in the deck, to operate said slides from below the deck.

957,847. SHEET-FEEDING MACHINE. FRANK L. CROSS, Mystic, Conn., assignor to Cross Paper Feeder Company, Boston, Mass., a Corporation of Maine. Filed May 22, 1905. Serial No. 261,545.



1. The combination of a cylinder provided with grippers, a feed board, a transverse bar arranged below the path of the sheets, fingers adjustably secured upon the bar and extending forward beneath the front edge of the sheet when in position to be seized by the grippers, and mechanism for operating the bar to withdraw the fingers from beneath the front edge of the sheet before the sheet is seized by the grippers.

2. The combination of a cylinder provided with grippers, a feed board, sheet supporting fingers projecting from the front edge of the feed board over the cylinder, front gages coöperating with said fingers, additional fingers arranged at the front of the feed board and below the path of the sheets, sheet controlled devices coöperating therewith, and mechanism for withdrawing the additional fingers previous to the operation of the grippers, substantially as described.

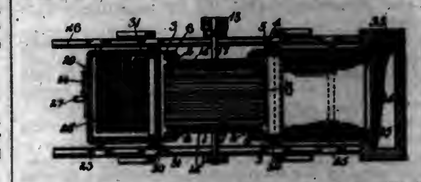
3. The combination with a cylinder provided with grippers and a feed board of fingers extending from the front end of the feed board beneath the front edge of the sheet when in position to be seized by the grippers, sheet controlled devices coöperating therewith, and mechanism for withdrawing the fingers from beneath the front edge of the sheet before the sheet is seized by the grippers, substantially as described.

4. The combination with a cylinder provided with grippers and a feed board of a finger extending beneath the front edge of the sheet when in position to be seized by the grippers, a notch in said finger, a controlling finger arranged to ride along the upper edge of the sheet until the end of the finger passes beyond the notch, and mechanism for withdrawing said notched finger before the sheet is seized by the grippers, substantially as described.

5. The combination with a cylinder provided with grippers, of fingers having their front ends extending in the direction of feed beneath the front edge of the sheet when in position to be seized by the grippers, and mechanism acting to withdraw the fingers from beneath the sheet previous to the operation of the grippers, substantially as described.

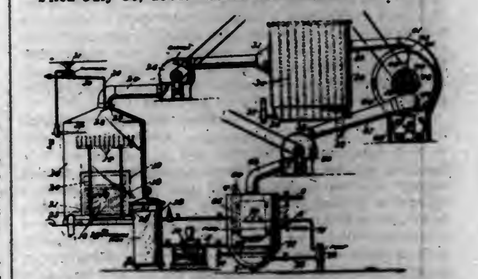
957,848. PROCESS OF MAKING SODIUM ALUMINATE. PHILIP A. EMANUEL, Aiken, S. S. Original application filed May 29, 1909, Serial No. 499,202. Divided and this application filed Sept. 29, 1909. Serial No. 520,216.

The herein described process of making sodium aluminate, which consists in heating clay in a closed retort with an excess of bisulfate of soda, making a double sulfate of soda and alumina, having three molecules of sulfate of soda to one of sulfate of alumina, heating said double sulfate in a retort lined with gas carbon, thereby



driving off sulfur dioxid, heating the product with lime, and treating the fused mass with water, dissolving out aluminate of soda, substantially as described.

957,849. DESICCATING FLUID SUBSTANCES. ALBERT G. KALB, Chicago, Ill., assignor to Natural Dry Products Company, Augusta, Me., a Corporation of Maine. Filed July 30, 1908. Serial No. 446,170.



1. In apparatus for desiccating fluid substances, means for forming a current of air and maintaining said air in motion by constantly renewing the same, means for spraying the air with the fluid being treated, means for collecting part of the desiccated material, means for spraying the air and the residue of the particles carried by it, and means for forcing said sprayed air through the fluid being treated substantially as described.

2. In apparatus for desiccating fluid substances, means for forming a current of air, means for introducing the material being treated into the air in atomised condition, means for separating the bulk of the desiccated material from the air, and means for subsequently introducing a liquid spray to collect the residue of the desiccated material from the air, and means for forcing the air after being sprayed through the fluid being treated, substantially as described.

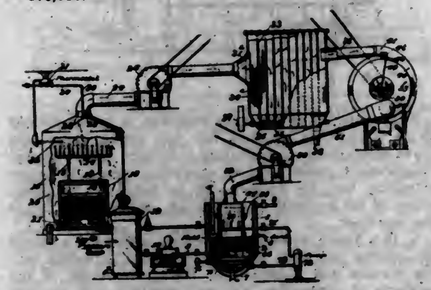
3. In apparatus for desiccating fluid substances, means for forming a current of air, means for atomising and spraying said air with the fluid being treated, means for separating the bulk of the desiccated material from the air, a spraying chamber and means for forcing the air and contained material into said spraying chamber and through the fluid being treated, and means for spraying the air previous to its passage through the fluid being treated by a spray of said fluid substantially as described.

4. In apparatus for desiccating fluid substances, the combination of a chamber, means for creating a current of air therein, means for introducing the fluid in atomized condition to said air current and for constantly renewing the air, means for separating the desiccated material from the air comprising a dust collector having a series of vertical partitions past which the air is forced and part of the material thereby collected, a spraying chamber, and means for forcing the air from said dust collector through said spraying chamber, substantially as described.

5. In apparatus for desiccating fluid substances, the combination of a chamber, means for creating a current of air therein, a heating or drying device for said air, means for introducing the fluid in atomized condition to said air current, means for separating the desiccated material from the air comprising a dust collector having a series of vertical partitions past which the air is forced and part of the material thereby collected, a chamber having means for spraying material therein, and means for forcing the air from said dust collector through said spraying chamber, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

957,850. METHOD OF DESICCATING FLUID SUBSTANCES. ALBERT G. KALB, Chicago, Ill., assignor to Natural Dry Products Company, Augusta, Me., a Corporation of Maine. Filed Feb. 4, 1909. Serial No. 476,050.



1. The method of desiccating fluid substances which consists in spraying the fluid to a current of air and maintaining the air in motion by constantly renewing the same, separating part of the desiccated material from the air, introducing a liquid spray to the air to collect the remaining material from the air and forcing the air through the fluid being treated, substantially as described.

2. The method of desiccating fluid substances which consists in forming and maintaining an air current by constantly renewing the air, introducing fluid material in atomised condition to said current of air, separating the bulk of the desiccated material from the air by a method of dry collection, and collecting the residue by introducing a liquid spray to the air and forcing the air through the fluid being treated, substantially as described.

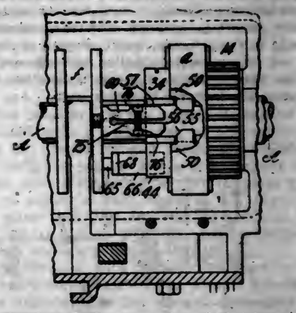
3. The method of desiccating fluid substances which consists in introducing fluid material in atomised condition to a current of air, maintaining said air current by constantly renewing the same, and separating the bulk of the desiccated material from the air by a method of dry collection, collecting the residue of the desiccated material by introducing a liquid spray to the air, and forcing the air through the liquid being treated, substantially as described.

4. The method of desiccating fluid substances which consists in forcing fluid material from a vessel or tank in atomised condition to a current of air, maintaining the air in motion by constantly renewing the same, separating part of the desiccated material from the air, forcing said current of air with remaining material, in suspension through the bulk of the fluid in said vessel or tank, and spraying the air by the fluid being treated in its passage from the atomising chamber to the vessel or tank containing the bulk of the fluid, substantially as described.

5. The method of desiccating fluid substances which consists in forcing fluid material from a vessel or tank in atomised condition to a current of air, maintaining the air in motion by constantly renewing the same, separating part of the desiccated material from the air, forcing said current of air with its remaining material in suspension through the bulk of the fluid in said vessel or tank, and forcing the fluid from said vessel or tank and introducing it in atomised or sprayed form to the current of air previous to forcing the air through the vessel or tank, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

957,851. COMBINED FRICTIONAL AND POSITIVELY LOCKING CLUTCH. ALBERT LATHAM, Beverly, Mass., assignor of one-half to James W. Nourbourne, Somerville, Mass. Filed Sept. 2, 1908. Serial No. 451,356.



1. In a clutch a shaft, a cup shaped clutch member on, and normally rotatively free relatively to the shaft and having a socket in its back, a support affixed on the shaft carrying one or more friction shoes which have their locations within the rim flange of said clutch member, said support having a socket parallel with the shaft and a slidable locking bolt in said socket for coaction with the socket portion of the cup-shaped clutch member, a collar slidable along the shaft having a longitudinally extending member for setting the friction shoes into, and for releasing them from, bind with the rim of the cup shaped member and a stud carried by and longitudinally projecting from said collar and coacting with the slidable bolt.

2. In a clutch, a shaft, a cup-shaped member normally rotatively free thereon and having a socket in its back, a support affixed on the shaft provided with one or more friction shoes within and coacting with the rim of said cup-shaped member, said support having a socket parallel with the shaft, a slidable locking bolt in said socket for coaction with the socket portion of the cup-shaped clutch, member, a collar slidable along the shaft, having longitudinally extending bars for respectively setting and withdrawing the friction shoes into and out of bind with the clutch member rim, a stud carried by and longitudinally extended from said collar, alined and telescopically engaged with said bolt, and a spring for reaction endwise between the stud and bolt.

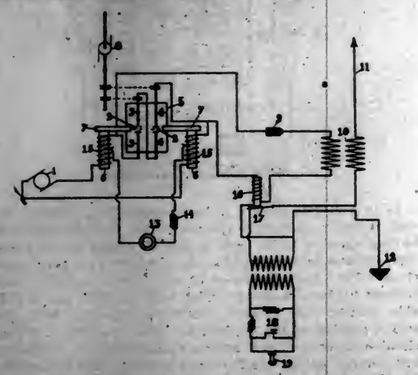
3. In a clutch a shaft, a cup-shaped clutch member normally rotatively free thereon, a support affixed on the shaft adjacent said clutch member, comprising a part radially extended having a transverse recess in its outer end and an intersecting recess at such end parallel with the shaft, one or more friction shoes movably carried by said support, the approached ends of which are located within said transverse recess, and a collar slidable along the shaft having a longitudinally extending shoe expanding bar, the extremity of which plays in said intersecting recess of the support and coacts with the approached extremities of the shoes.

957,852. TRANSMITTING SYSTEM FOR SPACE TELEPHONY. VICTOR H. LAUGHTER, Detroit, Mich. Filed July 10, 1909. Serial No. 506,954.

1. Space telephony apparatus comprising a transmitting set including in the circuit oscillation-inducing means adapted to be adjusted to a state of inactivity close to the critical point, and means adapted when influenced by sound waves to bring the oscillation-inducing means to the critical operative point, a receiving set, and means in circuit with the transmitting set adapted to throw the receiving set into operative relation with the aerial limb of the transmitting set when the oscillation-inducing means is inactive and to cut out said receiving set when the inductor is rendered active.

2. Space telephony apparatus comprising a transmitting set including in the primary circuit an oscillation-inducing

means adapted to be adjusted to a state of inactivity close to the critical point, and means adapted when impressed by sound waves to bring the oscillation-inductor to the critical point, and a secondary circuit including antenna and ground connections, a receiving set using the said secondary circuit in common with the transmitting set, and means in the primary circuit adapted to throw the receiving set into operative relation with the secondary circuit when the oscillation inductor is inactive, and to cut it out when the inductor is active.



3. Space telephony apparatus comprising a transmitting set including in the primary circuit oscillation-inducing means adapted to be adjusted to a state of inactivity close to the critical point, an electro-magnet, and the primary coil of a transformer, a transmitter in shunt to the primary circuit and in the secondary circuit an antenna, a ground connection and the secondary coil of the transformer, a receiving set including in its primary circuit a receiver, the secondary coil of a transformer whose primary coil is in series with said antenna and ground, and a switch operated by the electro-magnet and adapted to open the receiving primary circuit when the oscillation-inducing means is active and to close it when the latter is inactive.

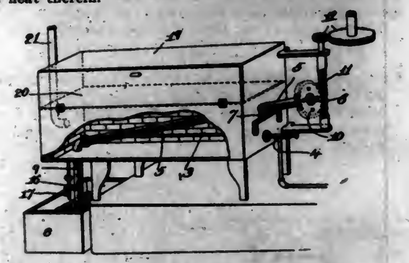
4. Space telephony apparatus comprising a transmitting set including in series in the primary circuit a generator, oscillation-inducing means adapted to be adjusted to a state of inactivity close to the critical point, an electro-magnet, and the primary coil of a transformer, a transmitter in shunt to the primary circuit adapted to be actuated by sound waves to influence the oscillation inducing means, and in the secondary circuit an antenna and ground connections in series with the secondary coil of the transformer, a receiving set including a transformer whose primary coil is in series with the antenna and ground and whose secondary coil is in series with a receiver, and a switch operated by said electro-magnet and adapted to open the circuit of the receiving set when the oscillation-inducing means is active.

5. Space telephony apparatus comprising a transmitting set including in the circuit a singing arc adapted to be adjusted to a state of inactivity close to the critical point, an electromagnet in series with the arc and having conventional antenna and ground connections, and a receiving set operatively connected to the said antenna and ground connections, and provided with a cut out switch adapted to be opened by the electro-magnet when the singing arc becomes active.

[Claims 6 to 9 not printed in the Gazette.]

957,853. OVEN FOR TEMPERING SHOE-SHANKS AND OTHER SMALL ARTICLES. ALFRED M. MOORE, Malden, Mass., assignor to Alfred M. Moore and Chester M. Moore, Copartners. Filed Oct. 28, 1905. Serial No. 284,839.

1. In a device of the class described, a furnace, a rotary inclined container extending thereinto, means to rotate said container, a non-rotary discharge conduit leading to a cooling bath and swiveled to the lower end of the container, means co-acting with the discharge conduit for raising and lowering the latter vertically, and an annealing chamber above the furnace arranged to be heated by the heat therein.



2. In a device of the class described, a casing divided by an imperforate partition into two compartments, the lower compartment constituting a furnace and the upper compartment constituting an annealing oven, a container extending into the furnace and subjected to the direct action of the products of combustion, and means to rotate the container.

3. In a device of the class described, a furnace, a burner for heating the same, a rotary container extending into the furnace and subjected to the direct action of the products of combustion, and an annealing oven situated above the furnace and having its top and sides exposed to the air, the bottom of said annealing oven constituting the top of the furnace.

4. In a device of the class described, a furnace, a rotary inclined container extending thereinto and terminating at its lower end within the furnace, means to rotate said container, a non-rotary discharge conduit extending through the bottom of the furnace and leading to a cooling bath, the lower end of said container being swiveled to the discharge conduit, and means co-acting with the discharge conduit for raising and lowering the latter vertically, and an annealing chamber above the furnace arranged to be heated by the heat therein.

957,854. KNITTED SWEATER. MAX A. MUELLER, Brooklyn, N. Y. Filed Mar. 6, 1909. Serial No. 481,719.



1. A knitted sweater, having on its inner face one set of loops forming rib wales and on its outer face another set of loops, with tying courses at the waist line knitted into the inner rib wales only, as and for the purpose described.

2. A knitted sweater having on its inner face rib wales and on its outer face other and different ornamental but elastic knitting loops with tying courses at the waist line knitted into the inner rib wales only, as and for the purpose described.

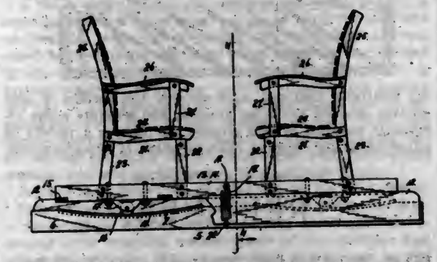
3. A knitted sweater, having on its inner face one set of loops forming rib wales and on its outer face another set of loops, with tying courses at the waist line knitted into the inner rib wales only, the different parts of the sweater, breast, waist and hips, being knitted of varying weights of yarns and of varying degrees of tightness or looseness, substantially as described.

4. A knitted sweater having on its inner face rib wales and on its outer face elastic rack stitch loops with tying courses at the waist line knitted into the inner rib wales only, as and for the purpose described.

5. A knitted sweater, having on its inner face rib wales and on its outer face elastic stitch loops with tying courses at the waist line, said tying courses consisting of plain knitting courses knitted into the inner rib wales.

[Claims 6 and 7 not printed in the Gazette.]

957,855. GLIDING SWING. FREDERICK S. SPAULDING, Denver, Colo., assignor, by direct and mesne assignments, to The Spaulding Manufacturing Company, Boston, Mass., a Corporation of Maine. Filed Jan. 2, 1909. Serial No. 470,515.

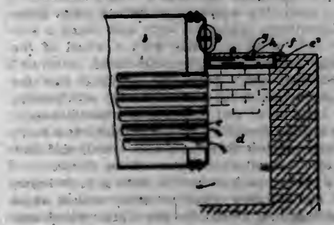


1. The combination with a horizontal frame carrying one or more seats and supporting wheels rotatably secured beneath the same, of tracks for said wheels having certain parts thereof elevated above the remainder, and guard boards secured exterior to said tracks and rising a substantial distance above the same, whereby the feet of persons upon said seats or otherwise nearby can not be caught between the track and frame when the latter is elevated, and be crushed when said frame approaches its lowermost position in rolling back and forth on said uneven track.

2. The combination with a horizontal frame carrying one or more seats, and a vertically uneven pair of track-members, of brackets fixed to the under face of said frame and track-engaging wheels rotatably mounted in said brackets, the distance between the under face of said frame and the lowermost peripheral point of said wheels being in excess of the difference in level between the highest and lowest points of said tracks, and guard boards secured exterior to said tracks for the purpose set forth.

3. The combination with a horizontal frame carrying one or more seats and embracing longitudinal side-bars, of two brackets fixed to the under surface of each said side-bars, wheels rotatably mounted in said brackets, beams located beneath and parallel with said side-bars and having vertically uneven tracks in their upper faces engaging and supporting said wheels, and guard-boards secured to the outer surfaces of said beams and rising to a height substantially equal to that of the under surface of the side-bars when their supporting wheels are located on the highest parts of said tracks.

957,856. REMOVABLE WATER-HOLDING ARCH-PLATE. CHARLES H. FELDMANN, Portland, Oreg. Filed Dec. 14, 1908. Serial No. 467,560.



1. The combination with the rear flue-sheet, of a tubular boiler and a three-sided closure therefor constituting a return flue chamber, of an arch-plate constituting a top closure for such return flue chamber, said arch-plate being of pan-like shape and open at the top, a water inlet pipe arranged to discharge into the pan, and said arch-plate being adapted to discharge the water therein above a predetermined level.

2. The combination with a rear flue-sheet, of a tubular boiler and a three-sided closure therefor constituting a return flue chamber, of an arch-plate constituting a top closure for such return flue chamber, said arch-plate being of pan-like shape and open at the top, a water inlet pipe arranged to discharge into the pan, one wall of the arch-plate being provided with an orifice near the top, and a discharge pipe inserted in said orifice.

3. The combination with the rear flue-sheet, of a tubular boiler and a three-sided closure therefor constituting a return flue chamber, the top of said three-sided closure being provided with a seat recess, of an arch-plate constituting a top closure for such return flue chamber, said arch-plate being of pan-like shape and open at the top, a flange rim formed exteriorly on the arch-plate by which the latter is seated in said recess of the three-sided inclosure, a water inlet pipe arranged to discharge into the pan, and said arch-plate being adapted to discharge the water therein above a predetermined level.

4. The combination with the rear flue-sheet, of a tubular boiler and a three-sided closure therefor constituting a return flue chamber, the top of said three-sided closure being provided with a seat recess, of an arch-plate constituting a top closure for such return flue chamber, said arch-plate being of pan-like shape and open at the top, a flange rim formed exteriorly on the arch-plate by which the latter is seated in said recess of the three-sided inclosure, a valve-controlled water inlet pipe arranged to discharge into the pan, one wall of the arch-plate being provided with an orifice near the top, and a discharge pipe inserted in said orifice.

957,857. BURNER. ORIEL M. GRAVES, Spokane, Wash. Filed Mar. 5, 1909. Serial No. 481,264.



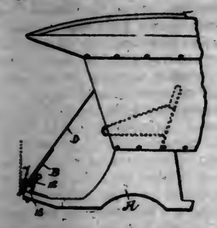
1. In combination, a vaporizer having a partition extending longitudinally thereof and spaced from one end, an inlet and an outlet for said vaporizer at the opposite end and upon opposite sides of said partition, a burner adjacent said vaporizer and having a mixing chamber provided with an air inlet, said burner having a plurality of outlet openings extending along the length thereof and adjacent said vaporizer, a second row of openings opposite to said vaporizer, and a damper plate for controlling said last-mentioned openings.

2. In combination, a vaporizer, a burner disposed adjacent thereto and having a series of outlet openings adjacent said vaporizer, and a second set of outlet openings opposite to said vaporizer, and a needle valve delivering to the interior of said burner adjacent one end thereof, said burner having a series of air inlet passages through the lower wall thereof and each inclined at an angle and delivering the air toward the end of the burner opposite to said needle valve.

957,858. VEHICLE-DASHBOARD. JULES F. JAQUET, Hyattsville, Md. Filed Apr. 24, 1909. Serial No. 491,924.

1. The combination with a vehicle and its dash-board, of means for supporting said dash-board, comprising a member connected to said dash-board and provided with a portion forming a handle, a member vertically movable mounted upon said vehicle, said first named member being pivotally mounted upon said vertically movable member, means for normally holding said members in a locked relation with each other, said means being releasable upon

the movement of said vertically movable member, and means for securing said members to said vehicle.



2. The combination with a vehicle and its dash-board, of means for supporting said dash-board, comprising a socket, a member mounted to reciprocate therein, a member secured to said dash-board and pivotally connected to said reciprocating member, means for normally retaining said members in a rigid relation to each other, said means being releasable upon the movement of said reciprocating member, means for reciprocating said reciprocating member, to permit said second named member to be swung upon its pivot, and means for securing said socket upon said vehicle, substantially as described.

3. The combination with a vehicle and its dash-board, of means for supporting said dash-board, comprising a socket, a member mounted to reciprocate therein, a member secured to said dash-board and pivotally connected to said reciprocating member, means for normally retaining said members in a rigid relation to each other, said means being releasable upon the movement of said reciprocating member, a lever pivotally connected to said member secured to said dash-board and arranged to engage said socket and adapted to operate said reciprocating member to permit said second named member to be swung upon its pivot point, and means for securing said socket upon said vehicle, substantially as described.

4. The combination with a vehicle and its dash-board, of means for supporting said dash-board comprising a socket, a member mounted to reciprocate therein, a member secured to said dash-board and pivotally connected to said reciprocating member, means for normally retaining said members in a rigid relation to each other, said means being releasable upon the movement of said reciprocating member, means for moving said reciprocating member and adapted after said movement to swing said member secured to said dash-board upon its pivot, means for limiting the movement of said reciprocating member, and means for securing said socket upon said vehicle, substantially as described.

5. The combination with a vehicle and its dash-board, of means for supporting said dash-board, comprising a socket, a member mounted to reciprocate therein, a member secured to said dash-board and pivotally connected to said reciprocating member, said second named member being provided with a depending portion adapted to fit within said socket for preventing said second named member from normally swinging upon its pivot, means for moving said reciprocating member whereby said depending portion of said second named member may be moved from within said socket and said second named member be swung upon its pivot point, and means for securing said socket upon said vehicle, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

957,859. CABINET FOR STATIONERY. FREDERICK W. BLISS, East Orange, N. J. Filed May 5, 1909. Serial No. 494,035.

1. A cabinet for sheet material, comprising a box-like receptacle having opposite sides provided with slide-receiving grooves, the alternate grooves being relatively short and slightly oblique and the other grooves being relatively long and more oblique, and separate slides removably mounted in said grooves for forming a variety of adjustments for forming different sizes of compartments.

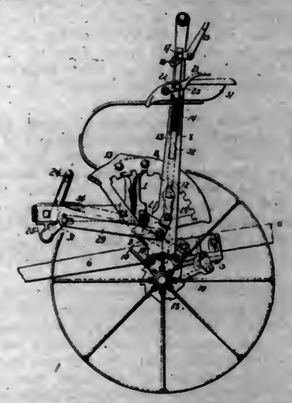
2. A cabinet for sheet material, comprising a box-like receptacle having opposite sides provided with slide-receiving grooves, certain of said grooves being relatively short and slightly oblique and others of said grooves be-



ing relatively long and more oblique, and certain of said grooves crossing the other grooves, and separate slides removably mounted in said grooves for forming a variety of adjustments for forming different sizes of compartments.

REISSUES.

13,112. SULKY-PLOW. WILLIAM L. PAUL, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Nov. 2, 1909. Serial No. 525,969. Original No. 925,593, dated June 22, 1909, Serial No. 458,231.



1. In a sulky plow, the combination with a plow beam, a hand lever, a clutch wheel and a segment, of a single mechanism mounted on the hand lever and adapted to be simultaneously engaged with and disengaged from the clutch wheel and segment respectively, a foot lever independently and fixedly mounted with respect to the hand lever, and means connecting said foot lever with said single mechanism on the hand lever for actuating said mechanism.

2. In a sulky plow, the combination with a plow beam, a hand lever operatively connected with said beam, a segment, and a clutch wheel rotatable with a wheel of the plow, of locking means carried by said hand lever and adapted to coöperate with both the segment and the clutch wheel, and a foot lever connected with said locking means on the hand lever and operable to simultaneously disengage said locking means from the segment and move the same into engagement with the clutch wheel, said foot lever mounted on a non-adjustable part of the frame.

3. In a sulky plow, the combination with a plow beam, a raising lever, and a clutch wheel connected with a wheel of the plow, of engaging means for the clutch wheel carried by the raising lever, a toothed segment with which the engaging means coöperates, a foot lever mounted on a non-adjustable part of the structure, and connections between the foot lever and engaging means for unlocking the latter from the segment and moving it into engagement with the clutch.

4. In a sulky plow, the combination with a ball, a plow beam and an operating lever connected with the ball for raising the plow, of a locking-bar, a segment to coöperate with said locking bar, a clutch wheel to be engaged by the locking bar, a foot lever and devices intermediate the foot lever and the locking bar for moving the same into engagement with the clutch wheel.

5. In a sulky plow, the combination with a ball, a carrying wheel, a plow beam connected with the ball, and an operating lever also connected with the ball, of a clutch wheel carried by the carrying wheel, a locking-bar carried by the operating lever to engage said clutch wheel, a toothed segment, means for normally holding the locking bar out of engagement with the clutch wheel and in engagement with the toothed segment, a foot lever and devices intermediate of the foot lever and the locking bar for moving the latter out of engagement with the toothed segment and into engagement with the clutch wheel.

6. In a sulky-plow, the combination with a fixed frame, a ball, a carrying wheel, a plow-beam attached to the ball, a clutch wheel secured to the carrying wheel and an operating lever mounted on the frame of the machine and connected with the ball, of a locking bar carried by the operating lever, a toothed segment to be engaged by said locking-bar, hand operated devices mounted on the lever and connected with the locking bar and a foot operated device mounted on the fixed frame, and connections between the foot operating device and the locking-bar for moving the same out of engagement with the toothed segment and into engagement with the clutch wheel.

7. In a sulky plow, the combination with a frame, a ball, a plow beam, and an operating lever, of a locking bar, a segment to operate with said locking bar, a clutch wheel to be engaged by the locking bar, a foot lever mounted on the frame, a slotted bar connected with foot lever, and connections between said slotted bar and locking bar.

8. In a sulky plow, the combination with a frame, a ball, a plow beam and an operating lever, of a locking device, a segment to coöperate with said locking device, a clutch wheel to be engaged by the locking device, a foot lever mounted on the frame, a bar connected with the foot lever, and connections between said bar and locking device.

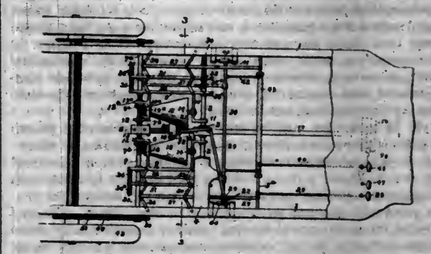
9. In a sulky plow, the combination with a frame, a ball, a plow beam, and an operating lever, of a locking bar carried by the operating lever, a segment to coöperate with said locking bar, a clutch wheel to be engaged by the locking bar, a foot lever mounted on the frame, a bell-crank mounted on the operating lever, means connecting one arm of said bell-crank with the foot lever, and a link connecting the other arm of said bell-crank with the locking bar.

10. In a sulky plow, the combination with a fixed frame, a ball, a plow beam and an operating lever, of a locking device carried by the operating lever, a segment to coöperate with said locking device, a clutch wheel to be engaged by the locking device, a foot lever mounted on the fixed frame, a bell-crank mounted on the operating lever, means connecting one arm of the bell crank with the foot lever, and means connecting the other arm of the bell-crank with the locking device.

18,113. DRIVING MECHANISM FOR VEHICLES. JAMES F. WAITE, Cleveland, Ohio. Filed Feb. 16, 1910. Serial No. 544,324. Original No. 948,749, dated Feb. 8, 1910, Serial No. 512,966.

1. In driving mechanism, the combination of a pair of shaft sections, tapered members operatively connected therewith, a member common to both of the former members and interposed therebetween, means for moving the latter member longitudinally with respect to the former members, means for automatically maintaining a fixed distance between the latter member and the former members during such movement, and means for thereafter bringing said members into and out of engagement.

2. In driving mechanism, the combination of a pair of shaft sections, tapered driven members operatively connected therewith, a driving member common to both of said driven members and interposed therebetween, means for moving the driving member longitudinally with respect to the driven members, means for automatically maintaining a fixed distance between the driving and driven members during such movement, and means for thereafter bringing said members into and out of engagement.



3. In a driving mechanism, the combination of a pair of shaft sections, a conical driven member operatively connected with each section, a reversely tapered driving member interposed between said driven members, means for moving the latter member longitudinally of the former members, connections whereby such movement of the latter member will operate the former members to preserve a fixed distance between the driving and driven members, and means whereby the driven members may be brought into and out of driving engagement with the driving member.

4. In driving mechanism, the combination of a pair of shaft sections, a conical member operatively connected with each section, a reversely tapered member interposed between the former members, means for obtaining movement between the former members and the latter member in a direction which is longitudinal with respect to the former members, connections whereby such movement will preserve a fixed distance between the former and latter members, and means whereby said members may be brought into and out of driving engagement.

5. In a driving mechanism, the combination of a pair of shaft sections, a pinion connected to each of said sections and slidable thereon, a pair of tapered driven members each having a driving connection with a pinion on one of the shaft sections, a frame for each of said driven members and a pinion, a driving member interposed between the driven members and tapered reversely with respect thereto, means for moving the latter member longitudinally with respect to the former members, connections whereby the movement of the driving member will operate the frames to preserve a substantially fixed distance between the driving and driven members, and means whereby said frames may be operated independently of the former means to bring the driving and driven members into and out of engagement.

6. In a driving mechanism, the combination of a pair of shaft sections, a pinion connected to each of said sections and slidable thereon, a pair of tapered driven members each having a pinion meshing with a pinion on one of the shaft sections, a frame for each driven member and for the pinion driven thereby and a coöperating shaft pinion, a driving member interposed between the driven members and tapered reversely with respect thereto, means for moving the latter member longitudinally with respect to the former members, connections whereby the operation of said means will operate the frames to preserve a substantially fixed distance between the driving and driven members, and means whereby said frames may be operated independently of the former means, to bring the driving and driven members into engagement.

7. In a driving mechanism, the combination of a shaft, a tapered member operatively connected with said shaft, a driving member tapered reversely with respect to the former member, means for moving the latter member longitudinally with respect to the former member, connections whereby such movement will move the former member toward and away from the latter member to preserve a substantially fixed distance therebetween while preserv-

ing a driving engagement between the former member and the shaft and means for bringing said members into and out of driving engagement.

8. In a driving mechanism, the combination of a shaft, a tapered member operatively connected to said shaft, a member tapered reversely with respect to the former member, means for obtaining a movement between said members in a direction which is longitudinal with respect to the former member, connections whereby such movement will preserve a substantially fixed distance between said members and means for bringing said members into and out of driving engagement.

9. In a driving mechanism, the combination of a shaft, a pinion thereon adapted to be moved longitudinally thereof, a tapered driven member, a driving pinion operated by said member, a frame holding said pinions in mesh and supporting the driven member, a driving member which is reversely tapered with respect to the driven member, means for moving said driving member longitudinally with respect to the former member, connections whereby such movement of the driving member will move said frame to maintain a substantially fixed distance between the driving and driven members, and means for thereafter moving said frame to bring said members into and out of driving engagement.

10. In a driving mechanism for vehicles, the combination of a shaft, a rod extending substantially parallel with said shaft, an arm slidably mounted on said rod and shaft, a pinion carried by said arm and slidably mounted on the shaft, a driving pinion for the latter pinion, a shaft for the driving pinion carried by said frame, a tapered driven member mounted on said shaft, a driving member, means for moving the same substantially parallel with the axis of the former member, connections whereby such movement will operate the frame to preserve a substantially fixed distance between said members, and means whereby said frame may be moved toward and from the driving member.

11. In a driving mechanism for vehicles, the combination of a pair of shaft sections, a frame for each section, a pinion carried by each frame and having a sliding driving engagement with a shaft section, a tapered driven member carried by each frame and each operatively connected with a pinion, a reversely tapered driving member interposed between the former members, means for moving the same in the plane of the axes of the former members, connections whereby such movement will operate the frames to preserve a substantially fixed distance between the driving and driven members, and means for moving said frames to bring the driving and driven members into and out of engagement.

12. In a driving mechanism, the combination of a shaft, a tapered driven member arranged to rotate said shaft, a driving member for the former member, means for producing relative movement between said members in the direction of the axis of the driven member, connections whereby a substantially fixed distance will be preserved between the driving portions of said members during such movement, and means whereby said members may be brought into and out of engagement.

13. In a driving mechanism for vehicles, the combination of a pair of shaft sections, a pair of tapered driven members having their axes extending at substantially right angles with respect to the shaft sections, a drive shaft extending between the driven members in substantially the same plane as the axes thereof, a driving member slidably mounted on said drive shaft, means for moving the driving member along said drive shaft, connections whereby such movement will move the driven members toward and away from the driving member to preserve a substantially fixed distance therebetween, and means for bringing the driven members into and out of engagement with the driving member.

14. In a driving mechanism for vehicles, the combination of a pair of shaft sections, a pair of tapered driven members having their axes extending at substantially right angles with respect to the shaft sections, a drive shaft extending between the driven members in substantially the same plane as the axes thereof, a driving member slidably mounted on said drive shaft, the latter member being tapered reversely with respect to the former members, means for moving the driving member along said drive shaft, connections whereby such movement will move the driven members toward and away from the driving member to preserve a substantially fixed distance therebetween, and means for bringing the driven members into and out of engagement with the driving member.

15. In a driving mechanism for vehicles, the combination, with a pair of shaft sections, of a pinion in driving engagement with each section and slidably mounted thereon, a pair of frames, a driven member carried by each frame and adapted to drive a pinion on one of the shaft sections, a driving member interposed between the driven members, means connected with the driving member and adapted to move the same longitudinally with respect to and between the driven members, toggle levers operatively connected to said frames, and means for operating said levers.

16. In a driving mechanism for vehicles, the combination, with a pair of shaft sections, of a pinion in driving engagement with each section and slidably mounted thereon, a pair of frames, a tapered driven member carried by each frame and adapted to drive a pinion on one of the shaft sections, a reversely tapered driving member interposed between the driven members, a lever connected with the driving member and adapted to move the same longitudinally with respect to and between the driven members, toggle levers operatively connected to said frames, and means for operating said toggle levers.

17. In a driving mechanism for vehicles, the combination of a pair of shaft sections, a driven member for each section having a driving connection therewith, a frame supporting each of said driven members, said frames being movable toward and from each other, a driving member interposed between the driven members and movable in the plane of the axis thereof and longitudinally with respect to the former members, means for so moving the driving member, toggles connected with said frames, and rods, operatively connected with said toggles and with the aforesaid means, for moving the frames toward and from each other, and additional means for moving said frames toward and from each other, the latter means being operative independently of the former.

18. In a driving mechanism for vehicles, the combination of a pair of shaft sections, a tapered driven member for each section having a driving connection therewith, a frame supporting each of said driven members, said frames being movable toward and from each other, a reversely tapered driving member interposed between the driven members and movable in the plane of the axis thereof and longitudinally with respect to the former members, means for so moving the driving member, toggles connected with said frames, means operatively connected with said toggles and with the aforesaid means for moving the frames toward and from each other, and additional means for moving said frames toward and from each other, the latter means being operative independently of the former.

19. In a driving mechanism, the combination of a shaft, a tapered driven member arranged to rotate said shaft, a driving member for the driven member and tapered reversely with respect to said driven member, means for producing relative movement between said members in the direction of the axis of the driven member, connections whereby a substantially fixed distance will be preserved between the driving portions of said members during such movement, and means whereby said members may be brought into and out of engagement.

20. In a driving mechanism, the combination of a pair of shaft sections, a tapered driven member arranged to rotate each shaft section, a driving member for the former members, means for producing relative movement between the driving and driven members in the direction of the axes of the driven members, connections whereby a substantially fixed distance will be preserved between the driving portions of the driving and driven members during such movement, and means whereby the driving and driven members may be brought into and out of engagement.

21. In a driving mechanism, the combination of a pair of shaft sections, a tapered member operatively connected with each section, a member interposed between the former members, means for producing relative movement between the former members and the latter member in the direction of the axes of the former members, connections whereby a substantially fixed distance will be preserved between the tapered members and the interposed member during such movement, and means whereby the tapered members and the interposed member may be brought into and out of engagement.

13,114. ELECTRIC SWITCH. EVERETT M. COFFIN, Oakland, Cal. Filed Jan. 17, 1910. Serial No. 538,562. Original No. 881,300, dated Mar. 10, 1908. Reissue No. 12,841, dated Aug. 11, 1908, Serial No. 440,118.



1. In a device of the character described, the combination of a contact, a shaft upon which said contact rocks, a shifter also rocking on said shaft and operatively connected with said contact, a coiled spring around the shaft for energizing said shifter, and a controller having side members and a bridge connecting them, said opposite side members being pivoted on said shaft on opposite sides of the coiled spring, substantially as described.

2. In a device of the character described, the combination of a shaft, a contact rocking thereon, a shifter operatively connected with said contact to impart motion thereto, a coiled spring around the shaft, and a controller for energizing said coiled spring, the shifter having side members and a bridge connecting them formed in a single piece and having its opposite members pivoted upon the shaft on opposite sides of the coiled spring to provide a long bearing for said shifter, substantially as described.

3. In a device of the character described, the combination of a contact, a shaft upon which said contact rocks, a shifter also rocking on said shaft and operatively connected with said contact, a coiled spring around the shaft for energizing said shifter, and a controller also rocking on said shaft for energizing said coiled spring, said shifter and controller each having side members and a bridge connecting them, the coiled spring lying within the side members of the shifter, and the latter lying within the side members of the controller, substantially as described.

4. In a device of the character described, the combination of a contact, a shaft upon which said contact rocks, a shifter also rocking on said shaft and operatively connected with said contact, a coiled spring around the shaft for energizing said shifter, a pair of hooks alternately engaging the shifter to prevent movement of the same, and a controller energizing said spring and in its continued movement disengaging the engaging hook from the shifter, substantially as described.

5. In a device of the character described, the combination of a contact, a shaft upon which said contact is supported, a shifter rocking on said shaft and operatively connected with said contact, a coiled spring around the shaft for energizing said shifter, a controller also rocking on said shaft for energizing said spring, said shifter and controller each having side members and a bridge connecting them and the said shifter and controller each having its side members pivoted upon the shaft on the opposite sides of the coiled spring, substantially as described.

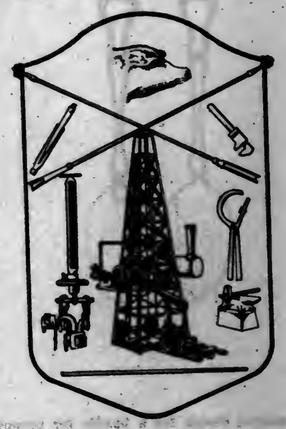
6. In a device of the character described, the combination of a shaft, means for supporting the said shaft, a bridge-containing device having its legs journaled upon the said shaft, a spring coiled around the said shaft and having its opposite ends crossed and located upon the opposite sides of the bridge portion of the said bridge-containing device, a second bridge-containing device, the legs of which are also journaled upon the said shaft, and the bridge portion of which is located between the opposite ends of the said spring, means for occasioning oscillation of the first-named device to place the spring under tension, a stop for preventing movement of the second device, and means for occasioning movement of the said stop to disengage the same from the said device and permit movement of the latter under the influence of the said spring, substantially as described.

7. In a device of the character described, the combination of a shaft, means for supporting the same, a bridge-containing device pivotally connected to the said shaft, means for occasioning movement of the said bridge-containing device, a spring coiled around the said shaft, the opposite ends of which are crossed and are located upon opposite sides of the bridge-containing device, a second bridge-containing device, pivotally connected to the said shaft, and one portion of which is also located between the opposite ends of the said spring, one part of the said device being arranged to form a trigger catch, a stop lever adapted to be engaged by the latter part of said second device, and a part upon the first named device which is adapted to occasion movement of the said stop lever into and out of alinement with the said part of the second device, whereby movement of the said second device may be occasioned by the said spring, substantially as described.

8. In a device of the character described, the combination of a contact member, a support for the said contact member, a shifter operatively connected to the said contact member, means associated with the said shifter for energizing it, a controller for energizing the said means, the said shifter and its said controller each having side members by which they are supported, and the side members of each being connected by a bridge, substantially as described.

DESIGNS.

40,683. BADGE. JOHN DE FREEZE, Newark, Ohio, assignor of one-half to Charles B. Luton, Lowell, Ohio. Filed Mar. 29, 1910. Serial No. 552,273. Term of patent 7 years.



The ornamental design for a badge, as shown.

40,684. SPOON. GUSTAV STROHHAKER, Wallingford, Conn., assignor to International Silver Co., Meriden, Conn., a Corporation of New Jersey. Filed Mar. 10, 1910. Serial No. 548,507. Term of patent 7 years.



The ornamental design for a spoon, as shown.

40,685. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. WILLIAM C. CODMAN, Providence, R. I., assignor to Gorham Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 14, 1910. Serial No. 549,373. Term of patent 14 years.



The ornamental design for a handle for spoons, forks or similar articles, as shown.

40,686. GLASS VESSEL. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Inc., Newark, Ohio, a Corporation of West Virginia. Filed Mar. 4, 1910. Serial No. 547,372. Term of patent 7 years.



The ornamental design for a glass-vessel, as shown.

40,687. TOILET-RACK. CHARLES D. GOLDEN, Chicago, Ill. Filed Feb. 5, 1910. Serial No. 542,333. Term of patent 3½ years.



The ornamental design for a toilet rack, as shown.

40,688. CLOTHES-RACK. CHARLES D. GOLDEN, Chicago, Ill. Filed Feb. 5, 1910. Serial No. 542,332. Term of patent 3½ years.



The ornamental design for a clothes rack, as shown.

40,689. CLOTHES-RACK. CHARLES D. GOLDEN, Chicago, Ill. Filed Feb. 5, 1910. Serial No. 542,334. Term of patent 3½ years.



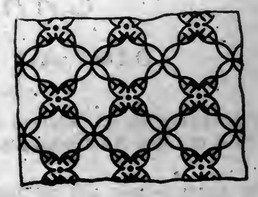
The ornamental design for a clothes rack, as shown.

40,690. TOP-PLATE AND OVEN FOR GAS-STOVES. JOHN G. HARVEY, Chicago, Ill., assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed July 21, 1909. Serial No. 508,846. Term of patent 14 years.



The ornamental design for a top plate and oven for gas stoves, as shown.

40,691. TEXTILE FABRIC. DOUGLAS E. BONNER, New York, N. Y., assignor to The Pantasote Leather Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 15, 1910. Serial No. 549,563. Term of patent 14 years.



The ornamental design for a textile fabric as shown.

40,692. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Feb. 28, 1910. Serial No. 546,567. Term of patent 3½ years.



The ornamental design for a rug, as shown.

TRADE-MARKS

PUBLISHED MAY 10, 1910.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 10,284. (CLASS 39. CLOTHING.) NEUSTADTER BROTHERS, San Francisco, Cal. Filed July 13, 1905.



Particular description of goods.—Hosiery.

Ser. No. 28,284. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) GEORGE J. THOMAS, Boston, Mass. Filed June 21, 1907.

O. K.

Particular description of goods.—Valves and Cocks.

Ser. No. 36,129. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) JOHN HOOD CO., Boston, Mass. Filed July 15, 1908.



Particular description of goods.—Amalgam Tooth-Fillings and Dental Gold.

Ser. No. 40,017. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) HENRY W. SCHENCK, Albany, N. Y. Filed Jan. 19, 1909.



Particular description of goods.—An Oleaginous and Waxy Compound for Use as a Dressing for Floors, Walls, and Ceilings.

Ser. No. 41,834. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THOMAS F. HOARE, Brooklyn, N. Y. Filed Apr. 17, 1909.



Particular description of goods.—Natural Spring-Water.

Ser. No. 43,771. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE JAMES W. FOSTER COMPANY, Bath, N. H. Filed July 24, 1909. Used ten years.

George Morrison

Which consists of the facsimile-signature of Geo. Morrison, deceased.

Particular description of goods.—Liniment.

Ser. No. 44,922. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HARGREAVES BROS & Co. LIMITED, Kingston-upon-Hull, England. Filed Sept. 23, 1909.

GIPSY

Particular description of goods.—Black-Lead for Polishing.

Ser. No. 45,132. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSHUA GEORGE SMITH, St. Paul, Minn. Filed Oct. 4, 1909.

Dromo

Particular description of goods.—Candies.

Ser. No. 45,255. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TACOMA GRAIN COMPANY, Tacoma, Wash. Filed Oct. 11, 1909.

PILOT

Particular description of goods.—Wheat-Flour.

Ser. No. 45,674. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOREN-STEWART COMPANY, Dallas, Tex. Filed Nov. 2, 1909.

REINZI

Particular description of goods.—Canned Fruits, Canned Vegetables, Canned Fish, Jellies, Jams, Preserves, Pickles, Spices, Coffee, Tomato Catsup, Cream-Cheese, Dried Fruits, Mince-Meat, Prepared Mustard, Olives, Maraschino-Flavored Cherries, Tea, Sago, Tapioca, Wheat-Flour, Pepper Sauce, Peanut-Butter, Apple-Butter, Pepper, Salad-Dressing, Honey, Cocoanut, Cotton-Seed Oil, Canned Pork and Beans, and Stuffed Olives.

Ser. No. 45,706. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ED T. RICHARDS, Chicago, Ill. Filed Nov. 4, 1909.



Particular description of goods.—Remedies for Diseases of the Skin.

Ser. No. 45,774. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) FRANK D. HEALY, Buffalo, N. Y. Filed Nov. 9, 1909.

Particular description of goods.—Rings and Cuff-Buttons.

Ser. No. 46,044. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE CHERRY-CHEER CO., Sidney, Ohio. Filed Nov. 20, 1909.



Particular description of goods.—A Non-Alcoholic Tonic Beverage and Syrup for Making the Same.

Ser. No. 46,051. (CLASS 39. CLOTHING.) HARRIS-LIPSITZ COMPANY, Dallas, Tex. Filed Nov. 22, 1909.

ALAMO
TRADE MARK

Particular description of goods.—Ladies', Misses', Men's, and Children's Hosiery.

Ser. No. 46,162. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) LAUTZ BROS. & Co., Buffalo, N. Y. Filed Nov. 29, 1909.



Which is a fanciful picture of a man holding a cake of soap.

Particular description of goods.—Soap.

Ser. No. 46,447. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LORD AND RUSSELL CHEM CO., Richmond, Va. Filed Dec. 11, 1909.

BLUE CROSS

Particular description of goods.—Talcum Powder.

Ser. No. 46,556. (CLASS 17. TOBACCO PRODUCTS.) PENN CIGAR CO., Pittsburg, Pa. Filed Dec. 16, 1909.

RED HEADS

Particular description of goods.—Stogies and Cigars.

Ser. No. 46,697. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) JOHN Q. SLOAN, Hasbrock Heights, N. J., and New York, N. Y. Filed Dec. 23, 1909.



Particular description of goods.—Artificial Flowers.

Ser. No. 46,943. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) TINGUE BROWN & COMPANY, New York, N. Y. Filed Jan. 6, 1910.

TINDECK

Particular description of goods.—Printing-Press Blanket.

Ser. No. 46,963. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE H. D. LEE MERCANTILE COMPANY, Salina, Kans. Filed Jan. 7, 1910.

SUMMER GIRL BRAND

Particular description of goods.—Coffee, Flavoring Extracts, Canned Vegetables, Canned Sauer-Kraut, Canned Fruits, Canned Fish; Tomato Catsup; Blended Cane and Corn Table-Syrup; Seeded Raisins, and Mince-Meat.

Ser. No. 47,053. (CLASS 2. RECEPTACLES.) EAGLE GLASS & MFG. CO., Wellsburg, W. Va. Filed Jan. 11, 1910.



Particular description of goods.—Oil-Cans.

Ser. No. 47,197. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HUSTON BISCUIT CO., Birmingham, Ala. Filed Jan. 17, 1910.

MERITINA

Particular description of goods.—Crackers, Cakes, Candied Popcorn, and Peanuts.

Ser. No. 47,312. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WELLINGTON WHOLESALE GROCERY COMPANY, Wellington, Kans. Filed Jan. 22, 1910.

WELCO BRAND

Particular description of goods.—Tea, Sorghum, Blended Corn and Cane Table-Syrup, Spices, Dried Fruits, Flavoring Extracts, and Canned Fruits and Vegetables.

Ser. No. 47,431. (CLASS 17. TOBACCO PRODUCTS.) A. CUSIMANO & Co., New Orleans, La. Filed Jan. 28, 1910.

SANT' ANTONINO

Particular description of goods.—Snuff.

Ser. No. 47,460. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FIGARO CHEMICAL CO., Dallas, Tex. Filed Jan. 29, 1910.



Particular description of goods.—A Meat-Preservative.

Ser. No. 47,520. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GRAF BROS., New York, N. Y. Filed Feb. 2, 1910.



The picture shown being fanciful.
Particular description of goods.—A Rouge-Cloth for Tinting the Face.

Ser. No. 47,529. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL CANDY COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed Feb. 2, 1910.

Olde Folke

Particular description of goods.—Licorice Gum-Drops.

Ser. No. 47,641. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE DR MERIDOR CO., Scranton, Pa. Filed Feb. 8, 1910.



The same being the portrait of Miss Bernice Norcross.
Particular description of goods.—Toilet Cream.

Ser. No. 47,654. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) CHIESA HERMANOS, Rosario, Santa Fe, Argentina, and New York, N. Y. Filed Feb. 8, 1910. Used ten years.



The space immediately around the cross being printed in red.
Particular description of goods.—Lumber of White Pine, Spruce, Oak, Ash, Walnut, Poplar, Birch, and Maple.

Ser. No. 47,682. (CLASS 10. FERTILIZERS.) STANDARD NITROGEN COMPANY, New York, N. Y. Filed Feb. 9, 1910.



No claim being made to the words "From the air into the soil."
Particular description of goods.—Nitrogen-Gathering Bacteria for Use as a Fertilizer.

Ser. No. 47,684. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARSHALL L. HAVEY, Montclair, N. J., assignor, by mesne assignments, to The Laxamint Company, Lima, Ohio. Filed Feb. 9, 1910.

LAXAMINTS

Particular description of goods.—Laxative Tablets.

Ser. No. 47,748. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) VEIT SON & CO., New York, N. Y. Filed Feb. 11, 1910.

Vesco

Particular description of goods.—Millinery-Trimmings—Namely, Aigrettes, Pompons, Wings, Cabuchons, Hat-Pins, Braids, Plumes, Quills, Rosettes, Millinery-Buckles, Barrettes, Spangled Bands, and Bow-Knots; and Dress-Trimmings—Namely, Dress-Buckles, Beaded Bands, Braids, and Spangled Bands.

Ser. No. 47,784. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) HOFFMAN BROTHERS COMPANY, Fort Wayne, Ind. Filed Feb. 12, 1910.

HB

Particular description of goods.—Lumber, Logs, Veneer, Shingles, and Laths.

Ser. No. 47,816. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE THERMAL SYNDICATE LIMITED, Wallsend-on-Tyne, England. Filed Feb. 14, 1910.

VITRECOHL

Particular description of goods.—Articles of Fused Silica, in the Form of Tubes, Plates, Basins, Crucibles, Rings, Cylinders, Muffles, Trays, Gutters, Retorts, and in other Shapes for Chemical, Measuring, and Scientific Purposes.

Ser. No. 47,896. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARMSTRONG REFINING COMPANY, Dallas, Tex. Filed Feb. 18, 1910.

DEWDROP

Particular description of goods.—Cotton-Seed Cooking-Oil.

Ser. No. 47,926. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN FRUIT PRODUCT COMPANY, Rochester, N. Y. Filed Feb. 19, 1910.



The mark being shown in red.
Particular description of goods.—Vinegar.

Ser. No. 47,957. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FORT WAYNE ENGINEERING & MANUFACTURING COMPANY, Fort Wayne, Ind. Filed Feb. 23, 1910.

Henry C. Paul

Which consists of the facsimile-signature of Henry C. Paul.
Particular description of goods.—Pumps, Air-Compressors, Pump-Jacks, and Vacuum-Pumps.

Ser. No. 48,055. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) H. W. FLEDDERMANN CO., Louisville, Ky. Filed Feb. 28, 1910.

PRISTINE

Particular description of goods.—Waterproof Cloth.

Ser. No. 48,077. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE AEOLIAN COMPANY, Meriden, Conn., and New York, N. Y. Filed Feb. 28, 1910.

TEMPOLA

Particular description of goods.—Player-Pianos, Piano-Players, and Perforated Music-Sheets for Said Instruments.

Ser. No. 48,196. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GORDON & DILWORTH, Roselle and New York, N. Y. Filed Mar. 4, 1910.

PUNCHEEZY

Particular description of goods.—Brandy Fruits, Fruits with Sugar and Maraschino, Fruits with Sugar and Rum, Fruits with Sugar and Brandy, and Fruits with Sugar and Spirituous Liquors.

Ser. No. 48,279. (CLASS 12. CONSTRUCTION MATERIALS.) B. F. NELSON MANUFACTURING COMPANY, Minneapolis, Minn. Filed Mar. 8, 1910.

N

Particular description of goods.—Composition Roofing.

Ser. No. 48,297. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) URY DANENBERG, Washington, D. C. Filed Mar. 9, 1910.



Particular description of goods.—Roasted Coffee and Tea.

Ser. No. 48,301. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PATRICK LYONS, San Francisco, Cal. Filed Mar. 9, 1910.

IOLENE

Particular description of goods.—Eye-Wash.

Ser. No. 48,312. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) BISON MANUFACTURING CO., Little Valley, N. Y. Filed Mar. 9, 1910.



Particular description of goods.—Razor Hones and Strops.

Ser. No. 48,366. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) F. T. PEARCE COMPANY, Providence, R. I. Filed Mar. 12, 1910.

FTP

Particular description of goods.—Jewelry and Tableware, Flat Ware, Hollow Ware, Toilet Articles, Desk Goods, Ornaments, and Novelties, and Mountings and Trimmings Made of Precious Metal, Solid or Plated.

Ser. No. 48,372. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS J. NEWBERRY, Jackson, Ala. Filed Mar. 12, 1910.

T.J.N.

Particular description of goods.—A Remedy for Cutaneous Eruptions.

Ser. No. 48,381. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ROGERS & THOMPSON, West New York, N. J., and New York, N. Y. Filed Mar. 14, 1910.



The portrait being a fanciful one.

Particular description of goods.—Silk Piece Goods, Cotton Piece Goods, and Silk and Cotton Mixed Piece Goods.

Ser. No. 48,388. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) WHEELOCK, LOVEJOY & COMPANY, Boston, Mass., and New York, N. Y. Filed Mar. 14, 1910.

W. L. & Co.'s HY-TEN

Particular description of goods.—Steel.

Ser. No. 48,394. (CLASS 38. PRINTS AND PUBLICATIONS.) WILL C. BISHOP, Denver, Colo. Filed Mar. 14, 1910.

THE TRAIL

Particular description of goods.—A Monthly Periodical.

Ser. No. 48,442. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ORME RICE PACKING COMPANY, New Orleans, La. Filed Mar. 16, 1910.

MOTHERS



The picture is fanciful.

Particular description of goods.—Rice.

Ser. No. 48,449. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BITTMAN-TODD GROCER COMPANY, Leavenworth, Kans. Filed Mar. 16, 1910.



Particular description of goods.—Canned Fruits, Vegetables, and Oysters; Dried Fruits, Rice, Honey, Chocolate, Coffee, Tomato Catsup, Tea, Pickles, Olives, Flavoring Extracts, Prepared Mustard, Spices, Raisins, Chow-Chow, Macaroni, and Spaghetti.

Ser. No. 48,491. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAS. H. FORBES TEA & COFFEE COMPANY, St. Louis, Mo. Filed Mar. 16, 1910. Used ten years.

FORBES'

Particular description of goods.—All Kinds of Coffee.

Ser. No. 48,515. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE MEDICINAL PRODUCTS COMPANY, Denver, Colo. Filed Mar. 17, 1910.

DE-O-INE

Particular description of goods.—An Antiseptic Liquid Preparation for Treatment of Parasitic Skin Diseases, Suppurative Inflammation, Pustular Diseases, and Diseases of the Mucous Membranes.

Ser. No. 48,518. (CLASS 37. PAPER AND STATIONERY.) UNION CARD & PAPER CO., New York, N. Y. Filed Mar. 18, 1910.

PILOT

Particular description of goods.—Writing and Printing Paper.

Ser. No. 48,533. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CHARLES F. BUTCHER, Sheffield, England. Filed Mar. 19, 1910.

XCD

Particular description of goods.—Pocket-Knives, Table-Knives, Penknives, Farriers' Knives; Scissors, Razors, Files, Saws, Chisels, Gouges, Adzes, and Plane-Bits.

Ser. No. 48,544. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) M. C. PETERS MILL CO., Omaha, Nebr. Filed Mar. 19, 1910.

RE-PETER

Particular description of goods.—A Stock and Poultry Food Composed of Corn, Oats, Alfalfa-Meal, and Molasses.

Ser. No. 48,560. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) GEO. BORGFELDT & CO., New York, N. Y. Filed Mar. 21, 1910.

RHENANIA

Particular description of goods.—Enameled Metal Ware.

Ser. No. 48,566. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HARRIS GRAPE JUICE CO., Harrisburg, Pa. Filed Mar. 21, 1910.



Particular description of goods.—Sweetened Unfermented Grape-Juice.

Ser. No. 48,567. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HARRIS GRAPE JUICE CO., Harrisburg, Pa. Filed Mar. 21, 1910.



Particular description of goods.—Sweetened Unfermented Grape-Juice.

Ser. No. 48,575. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) D. & A. LUCKENBACH, Bethlehem, Pa. Filed Mar. 21, 1910.

ANCHOR

Particular description of goods.—Wheat-Flour.

Ser. No. 48,578. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BOZEMAN MILLING COMPANY, Bozeman, Mont. Filed Mar. 21, 1910.

CERETANA

Particular description of goods.—Wheat-Flakes and Rolled Oats.

Ser. No. 48,579. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES H. ADAMS COMPANY, LTD., New Orleans, La. Filed Mar. 21, 1910.

Particular description of goods.—Spices and Flavoring Extracts.

Ser. No. 48,589. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE S. C. RANDALS COMPANY, Houston, Tex. Filed Mar. 21, 1910.

Particular description of goods.—A Dry Shampoo.

Ser. No. 48,643. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WINONA MILL COMPANY, Milwaukee, Wis. Filed Mar. 25, 1910.

LAUREL

Particular description of goods.—Wheat-Flour.

Ser. No. 48,645. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ANGEL BAKING COMPANY, New York, N. Y. Filed Mar. 25, 1910.

OCTA

Particular description of goods.—Ice-Cream Cones.

Ser. No. 48,670. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOHN H. MEYER CO., New York, N. Y. Filed Mar. 26, 1910.

Particular description of goods.—Cotton Piece Goods.

Ser. No. 48,674. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) HOTT METAL COMPANY, St. Louis, Mo. Filed Mar. 26, 1910.

TROJAN

Particular description of goods.—Antifriction-Bearing Metal.

Ser. No. 48,678. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PLATT & Co., Baltimore, Md. Filed Mar. 26, 1910. Used ten years.

"A. FIELD" BRAND

Particular description of goods.—Canned Oysters.

Ser. No. 48,686. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AMERICAN LUMBER PRESERVING CO., Atlanta, Ga. Filed Mar. 26, 1910.

A A A

Particular description of goods.—A Chemical Solution for Preserving Lumber.

Ser. No. 48,711. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. MIFFLIN FROTHINGHAM, Boston, Mass. Filed Mar. 29, 1910.

Particular description of goods.—Crackers.

Ser. No. 48,729. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE CAPITAL CITY BOTTLING WORKS, Atlanta, Ga. Filed Mar. 29, 1910.

Eylona

Particular description of goods.—A Non-Intoxicating Tonic Beverage and Syrup for Making the Same.

Ser. No. 48,756. (CLASS 32. FURNITURE AND UPHOLSTERY.) M. A. HUNT AND CO., Cincinnati, Ohio. Filed Mar. 30, 1910.

ELYSIAN

Consisting of the arbitrary word symbol "Elysian."
Particular description of goods.—Mattresses and Bed-Springs.

Ser. No. 48,757. (CLASS 32. FURNITURE AND UPHOLSTERY.) M. A. HUNT AND CO., Cincinnati, Ohio. Filed Mar. 30, 1910.

LUXURIA

Consisting of the arbitrary word symbol "Luxuria."
Particular description of goods.—Mattresses and Bed-Springs.

Ser. No. 48,769. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ELDER-HARRISON COMPANY, Baltimore, Md. Filed Mar. 31, 1910.

GELICA

Particular description of goods.—French Olive-oil.

Ser. No. 48,775. (CLASS 10. FERTILIZERS.) PIEDMONT FERTILIZER CO., Montgomery, Ala. Filed Mar. 31, 1910.

Particular description of goods.—Fertilizers.

Ser. No. 48,780. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES T. PADGETT, New Bloomfield, Mo. Filed Apr. 1, 1910.

FROTHAL

Particular description of goods.—A Preparation to Deodorize and Lessen Excessive Perspiration.

Ser. No. 48,792. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) UNITED HANDLE MILLS, New York, N. Y. Filed Apr. 1, 1910.

MONARCH

Particular description of goods.—Wooden Handles for Tools and Implements.

Ser. No. 48,834. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) CAROLINA BUGGY M'F'G CO., Henderson, N. C. Filed Apr. 4, 1910.

Particular description of goods.—Buggies, Carriages, and Wagons.

Ser. No. 48,872. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JUNE VIOLA SIEGEL, New York, N. Y. Filed Apr. 6, 1910.

Autaro

Particular description of goods.—Veils.

Ser. No. 48,915. (CLASS 17. TOBACCO PRODUCTS.) JOSEPH O. THERIEN, Minneapolis, Minn. Filed Apr. 8, 1910.

Particular description of goods.—Cigars.

Ser. No. 48,967. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PEOPLE'S OUTFITTING COMPANY, Detroit, Mich. Filed Apr. 9, 1910.

Turkoro

Particular description of goods.—Rugs.

Ser. No. 48,968. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PEOPLE'S OUTFITTING COMPANY, Detroit, Mich. Filed Apr. 9, 1910.

Siltex

Particular description of goods.—Rugs.

Ser. No. 48,995. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GROSSFELD AND ROM COMPANY, Chicago, Ill. Filed Apr. 9, 1910.

JUMBO

Particular description of goods.—Soap and Washing-Powder.

Ser. No. 49,010. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE AKRON BELTING COMPANY, Akron, Ohio. Filed Apr. 11, 1910.

ARROW

Particular description of goods.—Leather Belting.

Ser. No. 49,022. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed Apr. 11, 1910.



Particular description of goods.—Toilet-Paper.

Ser. No. 49,075. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE WEST HAVEN MFG. CO., West Haven, Conn. Filed Apr. 13, 1910.

NUVERSAL

Particular description of goods.—Hacksaws.

Ser. No. 49,100. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BRISTOL DRUG MFG. CO., Bristol, Va. Filed Apr. 14, 1910.



Particular description of goods.—Flavoring Extracts.

Ser. No. 49,113. (CLASS 39. CLOTHING.) WEINGARTEN BROS. INC., New York, N. Y. Filed Apr. 15, 1910.

Chanticler.

Particular description of goods.—Corsets.

Ser. No. 49,140. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE GIBSON CANNING COMPANY, Gibson, Ill. Filed Apr. 16, 1910.

YOURS TRULY

Particular description of goods.—Matches.

Ser. No. 49,256. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PHILIP IANNACE, Philadelphia, Pa. Filed Apr. 22, 1910. Which is a picture of myself.



Particular description of goods.—A Remedy for Rheumatism, Coughs, and Stomach Troubles.

TRADE-MARKS

REGISTERED MAY 10, 1910.

77,783. ELECTRIC CLOCKS. AKTIEBOLAGET L. M. ERICSSON & Co., Stockholm, Sweden.
Filed January 11, 1909. Serial No. 39,828. PUBLISHED MARCH 8, 1910.

77,784. LACTIC-ACID-BACILLI TABLETS. ALLEN & HANBURYS, LIMITED, London, England.
Filed March 20, 1909. Serial No. 41,297. PUBLISHED MARCH 8, 1910.

77,785. WHEAT-FLOUR. AMERICAN HOMINY COMPANY, Indianapolis, Ind.
Filed October 3, 1908. Serial No. 37,765. PUBLISHED MARCH 8, 1910.

77,786. PIECE FABRICS OF SILK. ATUYER, BIANCHINI, FERIER & CIE., Lyon, France, and New York, N. Y.
Filed November 4, 1909. Serial No. 45,703. PUBLISHED MARCH 8, 1910.

77,787. CORSETS. BAY STATE CORSET CO., Springfield, Mass., and New York, N. Y.
Filed January 26, 1910. Serial No. 47,405. PUBLISHED MARCH 8, 1910.

77,788. ARTIFICIAL FLOWERS AND FEATHER TRIMMINGS USED IN MILLINERY. BEN STRAUSS COMPANY, New York, N. Y.
Filed November 10, 1909. Serial No. 45,806. PUBLISHED MARCH 8, 1910.

77,789. SPIRAL RUBBER PISTON-PACKING. BOWERS RUBBER WORKS, San Francisco, Cal.
Filed March 15, 1909. Serial No. 41,191. PUBLISHED MARCH 8, 1910.

77,790. LINOLEUM. BREMER LINOLEUMWERKE DELMENHORST, Delmenhorst, Germany.
Filed October 26, 1909. Serial No. 45,563. PUBLISHED MARCH 8, 1910.

77,791. CIGARS, CHEROOTS, AND CIGARETTES. CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y.
Filed December 20, 1909. Serial No. 46,623. PUBLISHED MARCH 8, 1910.

77,792. LADIES' CLOAKS AND OUTER SUITS. LAZARUS COHEN & Co., New York, N. Y.
Filed December 22, 1909. Serial No. 46,672. PUBLISHED MARCH 8, 1910.

77,793. CERTAIN CLOTHING. THE COHN GOODMAN COMPANY, Cleveland, Ohio.
Filed January 9, 1909. Serial No. 39,801. PUBLISHED MARCH 8, 1910.

77,794. INCUBATORS AND BROODERS. THOMAS J. COLLIER, Racine, Wis.
Filed December 30, 1909. Serial No. 46,804. PUBLISHED MARCH 8, 1910.

77,795. SUGAR-CURED MEATS AND LARD. COLUMBIA COTTON OIL AND PROVISION CORPORATION, Relee, Va.
Filed November 27, 1909. Serial No. 46,149. PUBLISHED MARCH 8, 1910.

77,796. CANNED FRUITS AND VEGETABLES. E. W. GATES & SON COMPANY, Richmond, Va.
Filed January 7, 1910. Serial No. 46,984. PUBLISHED MARCH 8, 1910.

77,797. LEAD-PENCILS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed January 10, 1910. Serial No. 47,026. PUBLISHED MARCH 8, 1910.

77,798. LEAD-PENCILS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed January 10, 1910. Serial No. 47,027. PUBLISHED MARCH 8, 1910.

77,799. LEAD-PENCILS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed January 10, 1910. Serial No. 47,028. PUBLISHED MARCH 8, 1910.

77,800. RICE. GEO. P. EASTMAN, New Orleans, La.
Filed August 23, 1909. Serial No. 44,294. PUBLISHED MARCH 8, 1910.

77,801. STEEL SHELVING AND FILING-CASES. ELECTRIC PROTECTION COMPANY, Minneapolis, Minn.
Filed November 22, 1909. Serial No. 46,061. PUBLISHED MARCH 8, 1910.

77,802. [WITHDRAWN.]

77,803. PERFUMES. FREDERICK STEARNS & Co., Detroit, Mich.
Filed January 3, 1910. Serial No. 46,887. PUBLISHED MARCH 8, 1910.

77,804. COATS AND OVERCOATS. HAYMAN FREEDMAN, New York, N. Y.
Filed January 20, 1910. Serial No. 47,267. PUBLISHED MARCH 8, 1910.

77,805. STEAM CONDENSERS, EVAPORATORS, AND PREHEATERS FOR BOILERS. G. & J. WEIR LD., Cathcart, Scotland.
Filed August 31, 1908. Serial No. 37,072. PUBLISHED MARCH 8, 1910.

77,806. SOAP. GRANULATOR SOAP COMPANY, New York, N. Y.
Filed October 21, 1909. Serial No. 45,450. PUBLISHED MARCH 8, 1910.

77,807. WASHING AND CLEANING POWDER. HALSEY J. TIBBALS CHEMICAL MANUFACTURING COMPANY, Philadelphia, Pa.
Filed April 12, 1909. Serial No. 41,741. PUBLISHED MARCH 8, 1910.

77,808. TEA. J. A. HENDERSON, Colombo, Ceylon.
Filed February 17, 1909. Serial No. 40,610. PUBLISHED MARCH 8, 1910.

77,809. CURTAIN-STRETCHERS. HOLMQUIST & Co., Chicago, Ill.
Filed November 20, 1909. Serial No. 46,028. PUBLISHED MARCH 8, 1910.

77,810. SILVER-PLATED FLAT WARE AND HOLLOW WARE. INTERNATIONAL SILVER COMPANY, Meriden, Conn.
Filed December 6, 1905. Serial No. 15,286. PUBLISHED MARCH 20, 1906.

77,811. BOND-PAPER. THE J. C. HALL COMPANY, Providence, R. I.
Filed December 29, 1909. Serial No. 46,771. PUBLISHED MARCH 8, 1910.

77,812. CANNED SALMON. JOHN F. LALLA COMPANY, Chicago, Ill.
Filed January 7, 1910. Serial No. 46,970. PUBLISHED MARCH 8, 1910.

77,813. CANNED SALMON. JOHN F. LALLA COMPANY, Chicago, Ill.
Filed January 7, 1910. Serial No. 46,972. PUBLISHED MARCH 8, 1910.

77,814. INSECTICIDES. EDGERTON R. JENNINGS, Chicago, Ill.
Filed January 19, 1910. Serial No. 47,243. PUBLISHED MARCH 8, 1910.

77,815. HOSIERY. KAHN & FRANK, New York, N. Y.
Filed January 5, 1910. Serial No. 46,914. PUBLISHED MARCH 8, 1910.

77,816. RUBBER PACKINGS. LA FAVORITE RUBBER MANUFACTURING CO., Hawthorne, N. J.
Filed August 19, 1909. Serial No. 44,240. PUBLISHED JANUARY 11, 1910.

77,817. LINIMENTS. LANMAN & KEMP, New York, N. Y.
Filed February 17, 1909. Serial No. 40,613. PUBLISHED MARCH 8, 1910.

77,818. MALT EXTRACTS. MALT-DIASTASE CO., New York, N. Y.
Filed January 5, 1910. Serial No. 46,922. PUBLISHED MARCH 8, 1910.

77,819. MANGE REMEDY. THE MANGE REMEDY CO., Little Rock, Ark.
Filed October 29, 1909. Serial No. 45,608. PUBLISHED MARCH 8, 1910.

77,820. BOTTLED BEER. MILLSTADT BREWERY COMPANY, Millstadt, Ill.
Filed January 7, 1910. Serial No. 46,956. PUBLISHED MARCH 8, 1910.

77,821. HAM, BACON, DRIED BEEF, AND LARD. WILLIAM MOLAND'S SONS, Philadelphia, Pa.
Filed January 8, 1910. Serial No. 47,012. PUBLISHED MARCH 8, 1910.

77,822. CATHARTIC AND LAXATIVE TABLET OR PILL. THE MORRIS PHARMACAL COMPANY OF NEW YORK, New York, N. Y.
Filed January 15, 1910. Serial No. 47,139. PUBLISHED MARCH 8, 1910.

77,823. RIBBONS. MURPHY GRANT & Co., San Francisco, Cal., and New York, N. Y.
Filed January 7, 1910. Serial No. 46,974. PUBLISHED MARCH 8, 1910.

77,824. SLICED BEEF AND SLICED BACON. C. E. NESSLE PACKING COMPANY, New York, N. Y.
Filed October 2, 1909. Serial No. 45,091. PUBLISHED MARCH 8, 1910.

77,825. CERTAIN TEXTILES. THE NEW YORK MILLS, New York Mills, N. Y.
Filed August 26, 1909. Serial No. 44,366. PUBLISHED MARCH 8, 1910.

77,826. CHEMICAL POWDER FOR STOPPING LEAKS IN COOLING SYSTEMS. THE NORTHWESTERN CHEMICAL CO., Marietta, Ohio.
Filed November 24, 1909. Serial No. 46,093. PUBLISHED MARCH 8, 1910.

77,827. CERTAIN CLOTHING. HENRY NEWELL PALMER, New York, N. Y.
Filed January 4, 1910. Serial No. 46,904. PUBLISHED MARCH 8, 1910.

77,828. SUSPENDERS AND MEN'S GARTERS AND BELTS. M. & S. PELLER, New York, N. Y.
Filed December 16, 1909. Serial No. 46,559. PUBLISHED MARCH 8, 1910.

77,829. LEATHER BOOTS AND SHOES. THE PLANT-BUTLER CO., Cincinnati, Ohio.
Filed January 20, 1910. Serial No. 47,260. PUBLISHED MARCH 8, 1910.

77,830. CANNED FOODS. JOHN W. RIDER, Scottsburg, Ind.
Filed December 15, 1909. Serial No. 46,527. PUBLISHED MARCH 8, 1910.

77,831. CANNED LYE-HOMINY. JOHN W. RIDER, Scottsburg, Ind.
Filed December 15, 1909. Serial No. 46,529. PUBLISHED MARCH 8, 1910.

77,832. CANNED OYSTERS. RUGE BROS. CANNING COMPANY, Englewood, N. J.; Apalachicola and Cedar Keys, Fla., and Baltimore, Md.
Filed December 15, 1909. Serial No. 46,517. PUBLISHED MARCH 8, 1910.

77,833. RICE. SEABOARD RICE MILLING CO., Galveston, Tex.
Filed January 6, 1910. Serial No. 46,932. PUBLISHED MARCH 8, 1910.

77,834. RICE. SEABOARD RICE MILLING CO., Galveston, Tex.
Filed January 6, 1910. Serial No. 46,933. PUBLISHED MARCH 8, 1910.

77,835. RICE. SEABOARD RICE MILLING CO., Galveston, Tex.
Filed January 6, 1910. Serial No. 46,934. PUBLISHED MARCH 8, 1910.

77,836. HOSIERY. BARRINGTON S. SHARP, Atlanta, Ga.
Filed February 1, 1909. Serial No. 40,286. PUBLISHED MAY 25, 1909.

77,837. GRANULAR EFFERVESCENT SALT. SHARP & DOHME, Baltimore, Md.
Filed December 29, 1909. Serial No. 46,772. PUBLISHED MARCH 8, 1910.

77,838. LONG-CLOTH. SHERMAN & SONS CO., New York, N. Y.
Filed October 23, 1909. Serial No. 45,486. PUBLISHED MARCH 8, 1910.

77,839. REMEDIES FOR HOG-CHOLERA. G. M. SLIGAR & SONS, Columbus, Ohio.
Filed December 13, 1909. Serial No. 46,471. PUBLISHED MARCH 8, 1910.

77,840. LADIES' OUTER WAISTS AND LADIES' SHIRT-WAISTS. ABRAHAM SOLOMON, New York, N. Y.
Filed November 2, 1909. Serial No. 45,680. PUBLISHED MARCH 8, 1910.

77,841. WRITING-PAPER. SOUTHWESTERN PAPER CO., Dallas, Tex.
Filed April 1, 1909. Serial No. 41,548. PUBLISHED MARCH 8, 1910.

77,842. EXTRACT OF MEATS AND VEGETABLES FOR SOUPS. STANDARD CUBE BOUILLON CO., New York, N. Y.
Filed December 24, 1909. Serial No. 46,717. PUBLISHED MARCH 8, 1910.

77,843. CANNED MUSHROOMS. STEINHARDTER & NORDLINGER, New York, N. Y.
Filed August 19, 1909. Serial No. 44,228. PUBLISHED MARCH 8, 1910.

77,844. VEILINGS, NETTINGS, MALINE, TULLE, AND CHIFFONS. DANIEL STRAUSS, New York, N. Y.
Filed January 24, 1910. Serial No. 47,326. PUBLISHED MARCH 8, 1910.

77,845. DRESSED POULTRY. STUBBS BROS. & NOACK, New Ulm, Minn.
Filed October 28, 1909. Serial No. 45,583. PUBLISHED MARCH 8, 1910.

77,846. ALE, BEER, PORTER, AND STOUT. T. B. HALL & COMPANY LIMITED, Liverpool, England.
Filed May 31, 1905. Serial No. 7,091. PUBLISHED OCTOBER 19, 1909.

77,847. SHOES MADE WHOLLY OR IN PART OF LEATHER. THE TAPPAN SHOE MANUFACTURING COMPANY, Coldwater, Mich.
Filed January 7, 1910. Serial No. 46,990. PUBLISHED MARCH 8, 1910.

77,848. KNIT SHIRTS AND DRAWERS. TIFFANY BROTHERS, Bennington, Vt.
Filed January 7, 1910. Serial No. 46,991. PUBLISHED MARCH 8, 1910.

77,849. HOSIERY. E. M. TOWNSEND & Co., New York, N. Y.
Filed January 28, 1910. Serial No. 47,432. PUBLISHED MARCH 8, 1910.

77,850. HOSIERY. E. M. TOWNSEND & Co., New York, N. Y.
Filed January 28, 1910. Serial No. 47,433. PUBLISHED MARCH 8, 1910.

77,851. ALE. TRUE W. JONES BREWING COMPANY, Manchester, N. H.
Filed January 6, 1910. Serial No. 46,940. PUBLISHED MARCH 8, 1910.

77,852. SHAMPOO PREPARATIONS AND HAIR-TONICS. UNITED DRUG COMPANY, Boston, Mass.
Filed December 23, 1909. Serial No. 46,694. PUBLISHED MARCH 8, 1910.

77,853. CERTAIN FURNITURE. W. LUDWIG SCHULTZE COMPANY, New York, N. Y.
Filed December 17, 1909. Serial No. 46,580. PUBLISHED MARCH 8, 1910.

77,854. STEAM-HEATING APPARATUS. WARREN WEBSTER & Co., Camden, N. J.
Filed December 4, 1909. Serial No. 46,277. PUBLISHED MARCH 8, 1910.

77,855. CLOCKS AND WATCHES. THE WESTERN CLOCK MFG. CO., Peru, Ill.
Filed November 29, 1909. Serial No. 46,158. PUBLISHED MARCH 8, 1910.

77,856. CLOCKS AND WATCHES. THE WESTERN CLOCK MFG. CO., Peru, Ill.
Filed December 16, 1909. Serial No. 46,555. PUBLISHED MARCH 8, 1910.

77,857. CERTAIN STOVES AND HEATING APPARATUS. WOLTERSTORFF-HASKELL RANGE & FURNACE COMPANY, St. Paul, Minn.
Filed December 15, 1909. Serial No. 46,508. PUBLISHED MARCH 8, 1910.

77,858. REMEDIES FOR DISEASES OF THE EYE. THE ZYMOLE COMPANY, New York, N. Y.
Filed January 13, 1910. Serial No. 47,100. PUBLISHED MARCH 8, 1910.

77,859. COFFEE. LOUIS N. WARD, Mobile, Ala.
Filed January 29, 1909. Serial No. 40,500. PUBLISHED MARCH 8, 1910.

77,860. REMEDY FOR GRIPPE, COLDS, FEVERS, AND CHILLS. THE BARTOW CHEMICAL CO., Bartow, Fla.
Filed November 22, 1909. Serial No. 46,059. PUBLISHED FEBRUARY 1, 1910.

77,861. CERTAIN FOODS. THE CAUTHERS-TERRY PRESERVING COMPANY, Akron, Ohio.
Filed September 23, 1909. Serial No. 44,898. PUBLISHED MARCH 8, 1910.

77,862. PLUMBERS' FITTINGS. CENTRAL FOUNDRY CO., New York, N. Y.
Filed April 12, 1907. Serial No. 26,656. PUBLISHED MARCH 8, 1910.

77,863. COMBINED LETTER-HEAD AND CONTAINER FOR ADVERTISING-CUTS. THE DANDO PRINTING & PUBLISHING COMPANY, Philadelphia, Pa.
Filed December 15, 1909. Serial No. 46,542. PUBLISHED MARCH 8, 1910.

77,864. WHISKY. E. EISING & Co., New York, N. Y.
Filed March 20, 1909. Serial No. 41,303. PUBLISHED MARCH 8, 1910.

77,865. POCKET-KNIVES, SCISSORS AND SHEARS, TABLE AND KITCHEN KNIVES. THE EMPIRE KNIFE COMPANY, Winsted, Conn.
Filed March 25, 1909. Serial No. 41,398. PUBLISHED JULY 20, 1909.

77,866. POCKET-KNIVES, SCISSORS AND SHEARS, TABLE AND KITCHEN KNIVES. THE EMPIRE KNIFE COMPANY, Winsted, Conn.
Filed March 25, 1909. Serial No. 41,399. PUBLISHED JULY 20, 1909.

77,867. STEAM AND GASOLENE MOTORS AND ENGINES AND PARTS THEREOF. FABBRICA ITALIANA AUTOMOBILI-TORINO SOCIETA ANONIMA, Turin, Italy.
Filed February 5, 1907. Serial No. 25,149. PUBLISHED MARCH 8, 1910.

77,868. FARM-WAGONS. FLORENCE WAGON WORKS, Florence, Ala.
Filed August 16, 1909. Serial No. 44,178. PUBLISHED OCTOBER 12, 1909.

77,869. PINOCHLE SCORE-CARDS. HERMAN FULD, New York, N. Y.
Filed December 29, 1909. Serial No. 46,788. PUBLISHED MARCH 8, 1910.

77,870. CULTIVATORS. HARTMAN MFG. CO., Vincennes, Ind.
Filed December 22, 1909. Serial No. 46,679. PUBLISHED MARCH 8, 1910.

77,871. ELECTRIC APPARATUS AND SUPPLIES. JOHNSTON ELECTRIC COMPANY, Omaha, Nebr.
Filed December 13, 1909. Serial No. 46,480. PUBLISHED MARCH 8, 1910.

77,872. BLENDED WHISKY. THE KELLY-STEINMETZ LIQUOR CO., Minneapolis, Minn.
Filed January 26, 1910. Serial No. 47,407. PUBLISHED MARCH 8, 1910.

77,873. PAINTERS' MATERIALS. LA SALLE VARNISH CO., Chicago, Ill.
Filed January 10, 1910. Serial No. 47,041. PUBLISHED MARCH 8, 1910.

77,874. AUTOMOBILES. GENEVRA R. LODGE, Detroit, Mich.
Filed December 22, 1909. Serial No. 46,673. PUBLISHED MARCH 8, 1910.

77,875. CHAMPAGNE WINE. ALFRED DE MONTEBELLO & Co., Mareuil-sur-Ay, Marne, France.
Filed December 28, 1909. Serial No. 46,758. PUBLISHED MARCH 8, 1910.

77,876. CHAMPAGNE WINE. ALFRED DE MONTEBELLO & Co., Mareuil-sur-Ay, Marne, France.
Filed December 28, 1909. Serial No. 46,760. PUBLISHED MARCH 8, 1910.

77,877. FERTILIZERS. NITRATE AGENCIES CO., New York, N. Y.
Filed January 5, 1910. Serial No. 46,921. PUBLISHED MARCH 8, 1910.

77,878. HARNESS HARDWARE. NORTH & JUDD MANUFACTURING COMPANY, New Britain, Conn.
Filed January 20, 1910. Serial No. 47,262. PUBLISHED MARCH 8, 1910.

77,879. TROLLEY-CLAMPS AND SUSPENSION DEVICES. THE OHIO BRASS COMPANY, Mansfield, Ohio.
Filed December 7, 1909. Serial No. 46,327. PUBLISHED MARCH 8, 1910.

77,880. SAUSAGE-CASINGS. S. OPPENHEIMER & Co., New York, N. Y., and Chicago, Ill.
Filed October 16, 1909. Serial No. 45,366. PUBLISHED MARCH 8, 1910.

77,881. CARTONS. THE PELTASON COMPANY, St. Louis, Mo.
Filed March 30, 1909. Serial No. 41,475. PUBLISHED MARCH 8, 1910.

77,882. PRINTING-PRESSES AND PARTS THEREOF. MATTHIAS PLUM, Newark, N. J.
Filed January 18, 1910. Serial No. 47,224. PUBLISHED MARCH 8, 1910.

77,883. GLUE. HERMAN F. ROBINSON, Gloucester, Mass.
Filed June 21, 1909. Serial No. 43,153. PUBLISHED MARCH 8, 1910.

77,884. APPARATUS FOR ANALYZING GASES AND REPAIR PARTS THEREFOR. OLOF RODHE, Stockholm, Sweden.
Filed August 4, 1909. Serial No. 43,962. PUBLISHED MARCH 8, 1910.

77,885. STEEL. J. J. SAVILLE & COMPANY, LIMITED, Sheffield, England.
Filed December 10, 1909. Serial No. 46,410. PUBLISHED MARCH 8, 1910.

77,886. AUTOMOBILES, CYCLES, AND CERTAIN NAMED PARTS. SCHWEINFURTER PRÄCISIONS-KUGEL-LAGER-WERKE, FICHTEL & SACHS, Schweinfurt, Germany.
Filed September 12, 1908. Serial No. 37,883. PUBLISHED JULY 6, 1909.

77,887. ELECTRIC OUTLET-BOXES. SPRAGUE ELECTRIC COMPANY, New York, N. Y.
Filed December 6, 1909. Serial No. 46,296. PUBLISHED MARCH 8, 1910.

77,888. CAKES AND BISCUITS. WED. B. VAN DOMBURG, Mijdrecht and Amsterdam, Netherlands.
Filed December 9, 1908. Serial No. 39,197. PUBLISHED JUNE 22, 1909.

77,889. TONICS AND DYSPEPSIA-TABLETS. W. L. WHITE, Grand Rapids, Mich.
Filed March 10, 1909. Serial No. 41,079. PUBLISHED MARCH 8, 1910.

DECISIONS
OF THE
COMMISSIONER OF PATENTS
AND
UNITED STATES COURTS IN PATENT CASES

LABELS

REGISTERED MAY 10, 1910.

15,171.—*Title:* "FRENCH MARKET." (For Roasted Coffee and Chicory.) NEW ORLEANS COFFEE CO. LIMITED, New Orleans, La. Filed April 23, 1910.

15,172.—*Title:* "BUTTER-KRUST." (For Bread.) HALLER BREAD CO., Pittsburg, Pa. Filed March 17, 1910.

15,173.—*Title:* "RHEUMOLA." (For Medicines for Rheumatic Diseases.) WILLIAM CHARLES SCHULER, Jr., Cincinnati, Ohio. Filed March 16, 1910.

15,174.—*Title:* "GOSSAU MADEIRA FINISH EMBROIDERY." (For Embroidery.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed April 14, 1910.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

HAUDENSCHILD *v.* HUYCK.

Decided January 5, 1910.

INTERFERENCE—MOTION TO AMEND—TRANSMISSION.

A motion to amend the issue under Rule 109 brought long after the time set for bringing such motions and after the case is ready for final hearing *Held* properly refused transmission where the only excuse for the delay in bringing such motion was that the moving party did not order a complete copy of his opponent's application until shortly prior to the bringing of the motion and it appeared that the delay in obtaining such copy was inspired by a policy of economy rather than impelled by poverty.

APPEAL on motion.

CONTROL MECHANISM.

Messrs. Whittemore, Hulbert & Whittemore and *Messrs. Bacons & Milans* for Haudenschild.

Mr. Almon Hall and *Messrs. Church & Church* for Huyck.

BILLINGS, *First Assistant Commissioner:*

Huyck has appealed from decisions of the Examiner of Interferences refusing transmission of his motion to amend under Rule 109 and denying his motion for an order to permit him to recall for cross-examination Haudenschild's witnesses in rebuttal.

On November 15, 1909, nine months after the expiration of the time provided by the rule, Huyck filed a motion to add twelve counts to the issue under Rule 109.

The record of the interference proceeding shows that printed records of both parties have been filed and the case is ready for final hearing. It also shows that the printed record of Haudenschild had been filed prior to November 5, 1909, on which date prior motions to the same effect were filed by Huyck.

To permit additional counts to be added to the issue would result in reopening the case for the filing of preliminary statements and the taking of additional testimony relating to the new counts. Appellant's opponent should be forced to assume such an additional burden only on a most satisfactory showing by the moving party.

Huyck contends that error was committed by the Patent Office in not suggesting the claims of the motion under Rule 96. It appears that Huyck did not order a complete copy of his opponent's application until shortly prior to the filing of his motion. As pointed out by the Examiner of Interferences in his decision at the time claims were suggested by the Primary Examiner for interference purposes every claim in Huyck's application involved a motor in combination with a rheostat, a brake, and coöperating means between these various members. Claims of this character constitute the counts of the issue. The claims of the motion are for different subject-matter and all except the last two are for a rheostat, *per se*. Rule 96 provides for the suggestion of claims where—

> the claims of two or more applications differ in phraseology but cover substantially the same patentable subject-matter.

It does not appear, therefore, that the Examiner was in error in not suggesting to appellant the claims of the motion.

Appellant also pleads poverty as an excuse for failure to order sooner a copy of his opponent's application. It appears from the showing made, however, that appellant's manner of prosecuting the interference was inspired by a policy of economy rather than compelled by poverty.

In support of the motion for an order permitting him to recall for cross-examination the witnesses examined in rebuttal on behalf of Haudenschild appellant makes the same plea of poverty. This excuse, for the reasons stated above, is deemed insufficient, as is also the allegation of threats made by Haudenschild's assignee.

No error is found in the decisions of the Examiner of Interferences, and they are accordingly affirmed.

LOTTERHAND *v.* CORNWALL.

Decided April 19, 1910.

INTERFERENCE—MOTION TO AMEND—PRACTICE.

Where a motion to amend the issue of an interference is transmitted to the Primary Examiner, he should consider all the grounds raised in opposition to the motion.

APPEAL on motion.

ADDING-MACHINE.

Mr. William R. Baird and *Mr. Shipley Brashears* for Lotterhand. (*Mr. Stephen J. Cox* of counsel.)

Mr. F. R. Cornwall for Cornwall.

TENNANT, *Assistant Commissioner:*

This is an appeal by Lotterhand from the decision of the Examiner of Interferences denying his

motion to transmit a motion to dissolve the interference as to counts 5, 6, 7, and 8, based upon all the grounds provided for by Rule 122.

The record shows that the interference as originally declared contained four counts. Lotterhand presented a motion to dissolve the interference as to these counts, accompanied by a motion to transmit the same to the Primary Examiner. The Examiner of Interferences, however, refused to transmit Lotterhand's original motion to dissolve upon the ground that the motion for dissolution was informal and no appeal was taken from his decision.

Cornwall presented under the provisions of Rule 109 claims which correspond to present counts 5, 6, 7, and 8 of the interference. Consideration was had before the Primary Examiner upon the admissibility of these claims, the Examiner holding that Cornwall had a right to make the claims.

It was urged by Lotterhand before the Primary Examiner not only that Cornwall had no right to make the claims for the reason that the claims were not readable on Cornwall's structure, but also as to count 8 that unless this claim is limited and read in connection with Lotterhand's construction it is not patentable over the state of the art as shown by certain cited patents, and, further, upon the ground that Cornwall's structure discloses "a crude, impractical, inoperative machine."

It appears from the decision of the Examiner that the only question he considered before him for determination under Rule 109 was the right of Cornwall to make the claims, since he states in his decision in respect to one of the counts that—

the 4th proposed count is Lotterhand's claim 84. Lotterhand does not seriously contend that Cornwall has no right to make this count, but states that the count is met in certain patents if construed sufficiently broad to cover the Cornwall device. But whether or not these patents meet this count is not now before me for determination. The claim as it stands can clearly be made by Cornwall and that is the only point now decided.

The Primary Examiner was clearly in error in not passing upon the other grounds urged in opposition to Cornwall's motion to amend. Rule 109, which provides for amendment to applications in interference for the purpose of instituting additional counts, states in part that—

new preliminary statements will be received as to the added claims, but motions for dissolution will not be transmitted in regard thereto where the questions raised could have been disposed of in connection with the admission of the claims.

The clear intent of this rule was to avoid repetition of motions for dissolution.

As stated in *Wheeler* v. *Palmros*, (133 O. G., 230:)

The motion to amend under Rule 109 contains a proviso that such claims shall be added "without prejudice to Wheeler's right to contest such claims under the provisions of Rule 123 (122)." This condition, as stated by the Examiner of Interferences, is in contravention of Rule 109, which provides that motions for dissolution will not be transmitted in regard to claims presented under this rule where the questions could have been disposed of in connection with the admission of the claims. Under the provisions of this rule it is contemplated that the question of each party's right to make the claims should be determined in connection with the motion to add such claims.

Prior to July 17, 1907, the date when Rule 109 was amended to its present form, motions to dissolve as to counts added under that rule were transmitted and considered. It is the intent of the amended rule to obviate such multiplicity of motions for dissolution by compelling all of the grounds of objection to the proposed new counts which might be presented by a motion for dissolution to be urged at the hearing of the motion to amend after proper notice by the opposing party upon the moving party.

Motions for dissolution as to counts added under Rule 109 are clearly prohibited by the rule itself, and the decision of the Examiner of Interferences refusing to transmit Lotterhand's motion to dissolve was clearly right and his decision is affirmed.

In view, however, of the failure of the Examiner to consider objections raised against the admission of the claims corresponding to counts 5, 6, 7, and 8 the case is remanded to him for the purpose of further consideration and for a supplemental decision upon the remaining grounds of opposition to these proposed claims.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

ARBETTER *v.* LEWIS.

Decided March 1, 1910.

1. INTERFERENCE—CLAIMS—CONSTRUCTION OF.

"A limitation in a claim that is merely arbitrary and without function ought not to be permitted to deprive the first inventor of reward simply because the one first to file an application has inserted it."

2. SAME—SAME—SAME.

Where in an interference involving a sewed seam the sole reason assigned for the limitation in the claim "under the edge" is concealment of one of the threads and neither seam accomplishes that result, *Held* that "the one in which such result is more nearly accomplished ought not to be put aside for the other."

Mr. Nathan Heard and *Mr. Frederick P. Fish* for the appellant.

Mr. A. C. Fowler and *Mr. E. E. Huffman* for the appellee.

ROBB, *J.*:

This is an interference proceeding in which the three tribunals of the Patent Office have concurred in awarding priority of invention to Lewis, the senior party.

The case is peculiar in that it involves merely a seam or article of manufacture without reference to the method or process of such manufacture or the machine by the operation of which the article is produced. This fact should be kept in mind, for it has a material bearing, in our opinion, in the consideration of the issue which is expressed in the following counts:

1. A hem or seam for sewed articles, consisting of a main layer of textile or similar material and a superimposed layer of material having a turned-under edge and secured to said main layer by two connected rows of locked or enchained stitches entering and emerging at different points on the same side of the work, one of said rows entering under said edge, and said edge lying between the extremities of said stitches.

2. A hem or seam for sewed articles, consisting of a main layer of textile or similar material and a superimposed layer of material having a turned-under edge and secured to said main layer by two connected rows of locked or enchained stitches entering and emerging at different points on the same side of the goods, one of said rows entering under said edge, said edge lying between the extremities of said stitches, and one of said rows of stitches being inclined to the edge of said superimposed layers.

3. A hem or seam for sewed articles, consisting of a main layer of textile or similar material, and one or more superimposed layers of material secured to said main layer by two connected rows of locked or enchained stitches entering and emerging from different points on the same side of the work, one of said rows entering the main layer only and the other row entering under the edge of the superimposed layer or layers.

4. A hem or seam for sewed articles consisting of a main layer of textile or similar material, and a superimposed layer or layers secured to said main layer by two connected rows of locked or enchained stitches entering and emerging from different points on the same side of the work, one of said rows entering the main layer only, and the other of said rows entering under the edge of the superimposed layer or layers and piercing said layer or layers only.

The question of the patentability of these claims is not before us, the sole issue, as has been many times held, being priority of invention.

Neither party has taken testimony on the question of priority, each relying upon patents on machines for the manufacture of their respective stitches. Arbetter's Patent No. 690,385 was granted January 7th, 1902, upon an application filed August 13th, 1901. Lewis's Patent No. 862,830 was granted August 6th, 1907, upon an application filed August 2, 1902, which, it will be observed, was almost one year after Arbetter's filing date. It is apparent, therefore, that if each of these patents constitutes a disclosure of the issue, priority of invention should be awarded Arbetter. We here reproduce Figure 8 from Arbetter's patent, upon which he bases his contention that said patent constitutes a disclosure of the issue herein:

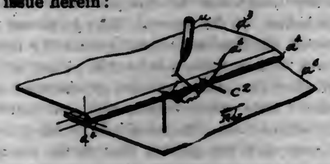


Fig. 8.

We also reproduce Fig. 3 from Lewis's application herein, as an embodiment of his seam:

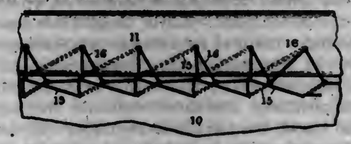


Fig. 3.

While the tribunals of the Patent Office, as above stated, were unanimously of the opinion that priority should be awarded Lewis, their views as to the proper interpretation of the issue and the patents upon which each party bases his claim to priority, were quite divergent. Ordinarily in a technical case like this, we accept the views of the expert tribunals of the Patent Office. Where, however, it is apparent that those tribunals are not in harmony upon controlling questions involved or where we are satisfied that an incorrect conclusion has been reached, we deem it our duty to consider the case afresh. We shall, therefore, in our effort to determine the exact nature of the invention in controversy, turn to Lewis's application herein, he being the senior party and the originator of these claims.

Upon the filing of his application, Lewis was notified by the Patent Office that his claims—

fail to define anything patentable over the patent to Arbetter, 690,385, Jan. 7, 1902, Buttonhole (6), and are rejected thereon.

There was no claim in the original specification that this stitch resulted in the concealment of either the needle or the bobbin thread. Upon the rejection of his claims because they contained nothing patentable over Arbetter's patent, Lewis made no mention of the contention he now makes, but filed an affidavit under Rule 75 carrying his date of invention back of the date of the filing of the application upon which Arbetter's patent was granted. While this affidavit was found to be satisfactory, the claims were again rejected upon Lewis's British method patent, the Office holding that—

it is immaterial so far as the seam is concerned whether the needle-puncture is parallel with the hem or inclined relative thereto.

To meet this condition, Lewis filed a statement in which appeared the following:

By making the stitches inclined to the edge two very important advantages are gained. First, by so inclining the stitches, a very much greater width of overseaming is secured with the same lateral vibration of the needle. * * * In making this form of hem with the straight stitch there is great liability of pulling the woof from the warp or the warp from the woof, as the case may be, while with the inclined stitch the woof and warp are bound together, thus making a much more durable hem or seam.

Again his claims were rejected and again he filed amendments, which were in turn rejected. Thereupon, he sought to have his application amended so that it would contain a reference to the advantages of making the stitch inclined to the edge of the superimposed layer. This advantage consisted, it was contended, in a wider and stronger seam. Under the head of remarks, Lewis said:

The interlocking of the needle-thread of each of the stitches in one of the rows or series with the part of the bobbin-thread which lies in the preceding stitch, *masses both the bobbin and needle thread upon the edge of the superimposed layer of material* and thus makes a hem or seam, which both in appearance and in binding effect upon the edge is entirely different from anything shown in any of the references.

The amendment was incorporated by the Patent Office, but the claims were again rejected, the Office holding—

that the mere statement that the needle-thread engages a portion of the bobbin-thread does not lend patentability to an otherwise old seam.

Thereupon, on July 5th, 1906, Lewis filed another amendment, and in the course of the accompanying remarks, said:

In connection with present claims 6, 7, and 8, it is to be noted that all of these claims contain a limitation which is absolutely novel, namely, that the needle-thread of each stitch is interlocked with the portion of the bobbin-thread lying in the preceding stitch. This construction enables the threads to be drawn into the fold between the main and superimposed layers, so as to make a much neater hem or seam than could be otherwise obtained, and by sufficient tension on the threads they may be drawn into the fold to such an extent that the stitches are substantially concealed on the wrong side of the hem or seam, as well as on the right side.

It is to be noted that Lewis in this statement does not contend that either thread would be entirely concealed. His contention is that by drawing the *threads* into the fold the *stitches* would be substantially concealed. After several other rejections the

claims were finally held to be in form for allowance and this interference was thereupon declared.

The Examiner of Interferences ruled that the object of the limitation in the counts that one of the rows of stitches should enter *under* the edge of the superimposed layer of material "is the partial concealment of the stitch." He decided against Arbetter because—

the point at which the needle emerges determines the point at which the thread carried by it will be locked by the bobbin-thread,

and for the further reason that in Arbetter's construction—

one of the stitches emerges just *over* the turned-under edge—

instead of *entering* just *under* said edge.

The Examiners-in-Chief in their opinion said that—

the machines of the applicants are essentially different and the *seams are themselves specifically different*, yet possessing certain features in common.

They further said:

It appears that the applicants approached the invention from somewhat different points. Arbetter apparently had in view only a loose imitation of hand-felling. In forming his seam the object is to keep it narrow and show substantially nothing but the bobbin-thread appearing only at the points of enchainment with the other thread and the stitches in the main layer of fabric lying close to the edge of the overlapping layer. In forming this seam the needle takes alternately a short stitch parallel to the fell close to the edge thereof in the main body of the fabric, and a diagonal stitch in which the needle enters under the turned-over edge of the fabric between the layers and emerges through the superposed layer a short distance back from the edge, the bobbin-thread caught in the successive stitches passing back and forth over the edge in a zigzag line.

The Examiners-in-Chief then direct attention to the fact heretofore pointed out that Lewis's application as originally filed contained no reference to his present contention. They then said:

It appears that in Lewis's machine the needle is shifted laterally of the fold between seams and the inventor found that by inclining the needle a greater width of seam is possible with the same amount of bodily lateral motion thereof.

The Examiners stated the reasons for their conclusion in favor of Lewis as follows:

In the seam of the patent (Arbetter's Fig. 8) the needle forms alternate stitches in the main layer and the superposed layer. The latter has its edge turned in and the needle enters it at a point remote from the edge and emerges at a point above or on the folded edge. The stitch in the under layer of fabric is parallel to the edge of the fell. It is clear that the seam of this patent is different materially from that of either of these applications. Neither of the threads is hidden and the needle-thread appears more prominently than the bobbin-thread, the reverse being true in the case of the seam of each of the applications in this interference. The difference appears in each of the issues which state that one of the rows of stitches enters under the edge of the superposed fabric. It is argued on behalf of Arbetter that it is immaterial whether it be said that the row enters or emerges under the edge, since the invention here in controversy is a seam independent of the process by which it is formed. To our way of thinking, however, while the language referred to describes the seam with reference to the process of manufacture, it imports a real difference in the seam; that is to say, it fixes the fact that the needle engages the bobbin-thread at a point remote from the edge of the superposed fabric, since the point of engagement of the threads is always at the point of emergence. Further than this Arbetter does not show the stitches either entering or emerging from under the edge.

The Commissioner ruled that—

the real question at issue is whether this patent (Arbetter's) shows one of the rows of stitches "entering under the edge" of the superposed layer of fabric as called for by the issue.

He further said:

In view of the fact that the invention in issue is a seam, in my opinion the words of the counts "one of such rows (of stitches) entering under" the edge of the folded layer of material does not import into the claim any limitation resulting from the method of manufacture but that such words must be construed as referring alone to the position which the threads occupy in the finished article. In the seam shown in both the applications involved in interference the thread lies wholly *under the folded edge*. In the seam shown in Arbetter's patent the thread lies for the most part somewhere below the upper fold, but it emerges either at the folded edge or above the folded edge and hence does not lie under the folded edge. By reason of the fact that the thread emerges either at or above the edge of the fold, the thread of the preceding stitch must lie in an exposed position, whereas in the seam involved in the interference it is concealed beneath the fold. For these reasons it is held that appellant's Patent No. 690,335 does not disclose the invention of the issue, and that appellant is not entitled to the benefit of the date thereof.

It is clear that the Commissioner was correct in concluding that the words "one of such rows entering under the folded edge of material" import no limitation resulting from the method of manufacture, since the patent is upon the article itself and has no reference to the method by which the finished product is produced. In other words, if the same result is brought about by reversing the position of the needle, it becomes immaterial whether the needle enters or emerges at a given point. It is equally clear, we think, that the Examiner of Interferences and the Examiners-in-Chief were in error in stating that it makes the slightest difference in the finished product whether the needle enters or emerges at a given point, since it is a matter of common knowledge to those familiar with the operation of a sewing-machine that by regulating the tension device of the machine the position of the locking-point of the thread may be varied without altering the construction of the seam. That is to say, by manipulating the tension device, it would be impossible to tell from a subsequent examination of the stitch whether the needle entered or emerged at a given point. This was evidently the conclusion of the Commissioner, since he based his decision in favor of Lewis upon the ground that in the seam of Arbetter's patent one thread does not lie wholly under the folded edge.

Let us first see whether it is physically possible for one thread in the Lewis seam to lie wholly under the folded edge. Lewis himself has never so contended. His first reference to this feature of his seam was contained in the communication he filed July 5th, 1906, nearly three years after the filing of his application. He there contended that tension would enable the *threads* to be drawn into the fold so as substantially to conceal the stitches. An examination of his seam, we think, clearly indicates that what he meant was that by tension the threads at the interlocking point would be substantially drawn into the fold, but this would leave the threads of the lower part of the seam as fully exposed as the thread on the superposed layer. This must be so, because the point at which the needle enters the base layer is a length of the stitch away from the edge of the superposed layer in order to allow the needle to emerge below and without puncturing said edge. No amount of tension could conceal either thread because of the physical characteristics of the seam.

In Arbetter's patent, as pointed out by the Examiners-in-Chief, it is apparent he was endeavoring to

construct a narrow seam, which would in a measure take the place of hand-felling. In hand-felling the object is to secure the edge of the upper layer of fabric to the lower edge by stitches which show as little as possible on the main layer. He formed his seam by taking a short stitch close to and parallel with the edge of the overlapping layer. This stitch he alternated with the diagonal stitch.

In Arbetter's Fig. 8 it will be observed that the needle-thread at the left apparently passes *under* instead of *over* the bobbin-thread. Counsel for Arbetter during the argument at bar stated this to be an error due to the failure of the draftsman to understand the stitch. While we are inclined to sympathize with the draftsman, we are convinced from an examination of Figs. 6 and 7 of the patent that counsel's contention is correct. We will employ Fig. 8 to demonstrate this. The first thrust of the needle in a complete stitch according to the specification is in the folded layer at its edge, the needle is retracted, the bobbin-thread having been engaged, and a second thrust is then made in the fabric close to and parallel with the folded layer. The needle is again retracted, again having engaged the bobbin-thread, and moved or swung into position for the next thrust into the upper or folded layer. Necessarily, when the needle is moved from the lower body of the fabric to the upper or folded layer it must pass its thread *over* and not *under* the bobbin-thread.

But, it is said, Arbetter's stitches neither enter nor emerge *under* the edge of the folded layer and hence it is impossible for him entirely to conceal the one thread. We have endeavored to demonstrate the impossibility of concealing either thread in the Lewis seam; that originally he made no such claim but on the contrary talked about a *wide overseam* and the massing of the two threads *upon the edge* of the folded layer as the features of his seam; and that the most he ever claimed in his amended specification was a partial concealment of *threads*. Surely, if Lewis's seam responds to the issue, so also does Arbetter's. A limitation in a claim that is merely arbitrary and without function ought not to be permitted to deprive the first inventor of reward simply because the one first to file an application has inserted it. The sole reason assigned for the limitation "under the edge" is concealment of one of the threads; but if neither seam fully accomplishes that result, manifestly the one in which such result is more nearly accomplished ought not to be put aside for the other. As we view these claims and the seams to which they apply, it is at least open to doubt whether this limitation really amounts to anything. If it does we are satisfied that Arbetter's seam responds to it. In his specification he states, and his drawings show that the upper stitch emerges *at* the edge of the folded layer of material. When we consider that this material is thin, flexible cloth and when we also consider the effect of tension upon the stitch, it becomes apparent that it can make little if any difference whether the stitch enters just *under* or *at* the turned-under edge. In either case one thread will be substantially concealed. Moreover, in the Lewis patent upon which he relies for priority he describes the thrust of the needle as "entering the *edge or under side* of the superimposed material." Manifestly he did not then think a variation of the needle so slight as not to be perceptible to be at all material.

An examination of the Lewis application through its vicissitudes in the Patent Office convinces us that his present contention was born of a desire to overcome the adverse view of the Primary Examiner to the allowance of any of these claims, and that concealment of either thread was as foreign to his original design as it is impossible of accomplishment in his seam. Moreover, as above suggested, we are convinced that it would make no practical difference in the finished article whether the needle entered or emerged at a point just below or at the edge of the underturned layer of material. If we were dealing with a less flexible or a more dense material, the case might be different. There can be no doubt that if the only difference between two seams lay in the fact that the needle in one entered or emerged just below, and the needle in the other at the folded edge of the underturned material, one would be held to constitute an infringement of the other. (*Westinghouse* v. *Boyden Power Brake Company*, 170 U. S., 537.)

For the foregoing reasons the decision of the Commissioner of Patents must be reversed and priority awarded Arbetter. The clerk will certify this opinion to the Commissioner of Patents as by law required.

Reversed.

ADJUDICATED PATENTS.

The Lamme patent, No. 606,015, for a system of electrical distribution and regulation, *Held* valid and infringed. *Westinghouse Electric & Mfg. Co.* v. *Allis-Chalmers Co.*, (C. C. A.,) 176 Fed. Rep., 362.

The Herzog patent, No. 628,464, for an electric signaling apparatus, construed and *Held* not infringed. *Herzog* v. *New York Telephone Co.*, (C. C. A.,) 176 Fed. Rep., 349.

The Rand patent, No. 746,157, for a bank-account book, *Held* void in view of the prior art. *Time Saver Co.* v. *Stamford Trust Co.*, (C. C. A.,) 176 Fed. Rep., 358.

RECIPROCAL AGREEMENT WITH FOREIGN COUNTRIES RESPECTING COPYRIGHT.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA.
A PROCLAMATION.

Whereas it is provided by the act of Congress of March 4, 1909, entitled "An act to amend and consolidate the acts respecting copyright," that the benefits of said act, excepting the benefits under section 1 (e) thereof, as to which special conditions are imposed, shall extend to the work of an author or proprietor who is a citizen or subject of a foreign state or nation, only upon certain conditions set forth in section 8 of said act, to wit:

(a) When an alien author or proprietor shall be domiciled within the United States at the time of the first publication of his work; or

(b) When the foreign state or nation of which such author or proprietor is a citizen or subject grants, either by treaty, convention, agreement, or law, to citizens of the United States the benefit of copyright on substantially the same basis as to its own citizens, or copyright protection substantially equal to the protection secured to such foreign author under this act or by treaty; or when such foreign state or nation is a party to an international agreement which provides for reciprocity in the granting of copyright, by the terms of which agreement the United States may, at its pleasure, become a party thereto:

And, whereas, it is also provided by said section that "the existence of the reciprocal conditions aforesaid shall be determined by the President of the United States, by proclamation made from time to time as the purposes of this act may require:"

And, whereas satisfactory evidence has been received that in Austria, Belgium, Chile, Costa Rica, Cuba, Denmark, France, Germany, Great Britain and her possessions, Italy, Mexico, the Netherlands and possessions, Norway, Portugal, Spain, and Switzerland the law permits and since July 1, 1909, has permitted to citizens of the United States the benefit of copyright on substantially the same basis as to citizens of those countries:

Now, therefore, I, WILLIAM HOWARD TAFT, President of the United States of America, do declare and proclaim that one of the alternative conditions specified in section 8 of the act of March 4, 1909, is now fulfilled, and since July 1, 1909, has continuously been fulfilled, in respect to the citizens or subjects of Austria, Belgium, Chile, Costa Rica, Cuba, Denmark, France, Germany, Great Britain and her possessions, Italy, Mexico, the Netherlands and possessions, Norway, Portugal, Spain, and Switzerland, and that the citizens or subjects of the aforementioned countries are and since July 1, 1909, have been entitled to all of the benefits of the said act other than the benefits under section 1 (e) thereof, as to which the inquiry is still pending.

In testimony whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this ninth day of April, in the year of our Lord one thousand nine hundred and ten, and of the Independence of the United States of America the one hundred and thirty-fourth.

[SEAL.] WM. H. TAFT.

By the President:
P. C. KNOX,
Secretary of State.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 22, 1910.

Joseph Parker & Son, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Keith Paper Company, of Turners Falls, Mass., for registration of a trade-mark and a trade-mark registered to Joseph Parker & Son, of 27 Elm street, New Haven, Conn., and the receipt for the registered letter in which notice of this interference was mailed to Parker & Son being signed Joseph Parker & Son Co. instead of Joseph Parker & Son, notice is hereby given to the said Joseph Parker & Son, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 22, 1910.

Julian Alvares, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Moore & Calvi, of 39 Water street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Julian Alvares, of 919 Broadway, New York, N. Y., and the notice of said declaration sent by registered mail to the said Julian Alvares having been returned undelivered, notice is hereby given to the said Julian Alvares, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 21, 1910.

Strassheim & Jaeger, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Frederick W. Gardner, of 316 East Thirty-fourth street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Strassheim & Jaeger, of 173 and 175 South Water street, Chicago, Ill., and the notice of said declaration sent by registered mail to the said Strassheim & Jaeger having been returned undelivered, notice is hereby given to the said Strassheim & Jaeger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 21, 1910.

Hugo Pfabe, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Sugar Products Company, of Caro, Mich., for registration of a trade-mark and a trade-mark registered to Hugo Pfabe, of Chicago, Ill., and the notice of said declaration sent by registered mail to the said Hugo Pfabe having been returned undelivered, notice is hereby given to the said Hugo Pfabe, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 8, 1910.

Day, Rollins & Company, their assigns or legal representatives, take notice:

An interference exists in this Office between an application of Sparks Milling Company, of Alton, Ill., for registration of a trade-mark and a trade-mark registration to Day, Rollins & Company, of Minneapolis, Minn., and a notice of redeclaration of said interference which was sent by registered mail on January 26, 1910, to the said Day, Rollins & Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Day, Rollins & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 5, 1910.

Augustus W. Kriete, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of C. E. Sears & Company, of Circleville, Ohio, for registration of a trade-mark and trade-marks registered to Jane M. McMurray, of Frederick city, Md., and Augustus W. Kriete, Center Cross, Essex county, Va., and it appearing from the registry return receipt that the registered letter in which notice of this interference was mailed to the party Kriete was not delivered to him, but to Mrs. A. W. Kriete, notice is hereby given to the said Augustus W. Kriete, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
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Reissues	2	No. 13,115 to No. 13,116, inclusive.
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TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	1	Ohio	57	8
Arkansas	2	....	Oklahoma	4	....
California	31	4	Oregon	2	1
Colorado	7	....	Pennsylvania	70	5
Connecticut	25	1	Rhode Island	6	2
Delaware	....	....	South Carolina	3	2
Florida	....	....	South Dakota	3	....
Georgia	3	....	Tennessee	4	1
Idaho	4	....	Texas	13	2
Illinois	78	5	Utah	3	....
Indiana	18	4	Vermont	3	....
Iowa	20	2	Virginia	4	1
Kansas	8	1	Washington	9	1
Kentucky	10	....	West Virginia	5	....
Louisiana	4	2	Wisconsin	23	2
Maine	2	....	Wyoming	1	....
Maryland	5	....			
Massachusetts	127	11	Alaska, District of	....	....
Michigan	16	4	Arizona Territory	1	....
Minnesota	12	1	District of Columbia	5	1
Mississippi	....	....	Hawaii Territory	....	....
Missouri	31	2	New Mexico Ter'y	1	....
Montana	2	....	Panama	....	....
Nebraska	4	....	Philippine Islands	....	....
Nevada	1	....	U. S. Army	....	....
New Hampshire	3	....	U. S. Navy	....	....
New Jersey	21	....	U. S. Marine Corps	1	....
New York	86	22			
North Carolina	4	....	Total to citizens of the United States	764	87
North Dakota	2	....			

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Belgium	1	....	New South Wales	....	....
Brazil	....	....	New Zealand	3	....
British West Indies	....	....	Norway	1	....
Canada	12	....	Persia	....	....
Ceylon	....	....	Queensland	....	....
Chile	....	....	Russia	....	....
China	....	....	Scotland	4	....
Costa Rica	....	....	South Australia	....	....
Cuba	1	....	Spain	....	....
Denmark	....	....	Sweden	2	....
Ecuador	....	....	Switzerland	3	1
England	22	3	Tasmania	....	....
France	4	2	Transvaal, South Africa	2	....
Germany	37	2	Victoria	....	....
Haiti	....	....	Western Australia	....	....
Ireland	....	....			
Italy	....	....	Total to citizens of foreign countries	98	8
Japan	....	....			
Mexico	1	....			

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Application as originally filed, (petition, specification, oath, and drawings.)

Application as amended, (petition, specification, oath, and drawings.)

Application as allowed, (petition, specification, oath, and drawings.)

Specification as originally filed.

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Original specification, (facsimile.)

Assignment. Give the liber and page of the record, as well as the name of the inventor.

Printed publications in possession of the Office. Give title and date of publication, also page and exact portion to be copied.

Publishers' Catalogues.

This Office would be pleased to receive from manufacturers and publishers such catalogues, circulars, price-lists, or other advertisements relating to the sciences and mechanical arts as are published by them for gratuitous distribution. It is requested that at least three copies of such publications be forwarded in order that the subjects may be properly indexed, classified, and subclassified in the Scientific Library for convenient and ready reference.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business May 10, 1910.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Apr. 11	Apr. 11	339
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Feb. 24	Mar. 14	296
173	3. Annealing and Tempering; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Apr. 11	Apr. 28	130
238	4. Bridges; Conveyors; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Mar. 26	Apr. 4	441
167	5. Bookbinding; Harvesters; Jewelry; Music.	Mar. 8	Mar. 8	478
315	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Apr. 1	Apr. 6	338
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Mar. 28	Mar. 24	364
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Apr. 14	Apr. 14	199
142	9. Air and Gas Pumps; Fire-Extinguishers; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Sewerage; Wind-Wheels.	Jan. 26	Dec. 31	464
265	10. Carriages and Wagons.....	Mar. 3	Mar. 17	659
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Apr. 11	Mar. 31	259
234	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Apr. 7	Apr. 6	560
139	13. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, Etc.	Feb. 21	Apr. 11	531
318	14. Compound Tools; Cutting and Punching Sheets and Bars; Forgery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Mar. 15	Mar. 23	380
226	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Sheets and Fabrics; Liquid Coating Compositions; Paper-Making; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Mar. 11	Apr. 26	492
169	16. Telegraphy; Telephony.....	Mar. 9	Mar. 1	206
268	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Apr. 11	Mar. 31	160
237	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Feb. 12	Feb. 7	257
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Apr. 9	Apr. 6	338
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Sales; Undertaking.	Apr. 12	Apr. 11	241
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Mar. 15	Apr. 11	400
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Dec. 16	Feb. 24	719
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 9	Apr. 11	365

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
144	24. Apparel; Apparel Apparatus; Electricity, Medical and Surgical; Sewing-Machines; Surgery.	Apr. 4	Apr. 5	527
316	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Apr. 19	Apr. 25	150
106	26. Electric Heating and Rheostats; Electricity, Generation; Motive Power.	Jan. 8	Feb. 15	423
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Mar. 25	Apr. 1	396
65	28. Electric Railways; Internal-Combustion Engines.	Mar. 7	Apr. 1	508
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	Feb. 11	Mar. 25	455
132	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Apr. 6	Apr. 12	387
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Feb. 18	Mar. 29	300
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Fine Arts; Packaging Liquids; Refrigeration.	Apr. 12	Apr. 13	320
164	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 9	Mar. 3	512
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Apr. 1	Apr. 11	350
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Mar. 31	Apr. 22	662
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Feb. 11	Mar. 7	680
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Jan. 26	Feb. 14	759
378	38. Artesian and Oil Wells; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working.	Mar. 1	Mar. 10	558
321	39. Baths and Closets; Water Distribution.	Feb. 3	Mar. 18	598
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 7	Mar. 21	518
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Feb. 7	Feb. 19	632
279	42. Electric Signaling; Railway Signaling; Signals.	Dec. 18	Mar. 9	470

Oldest new case, Dec. 16; oldest amended, Dec. 31.

Total number of applications awaiting action..... 18,177

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	Apr. 9	Apr. 27	775
	Designs.....	Apr. 11	Apr. 27	164
	Labels and Prints	Apr. 28	Apr. 30	40

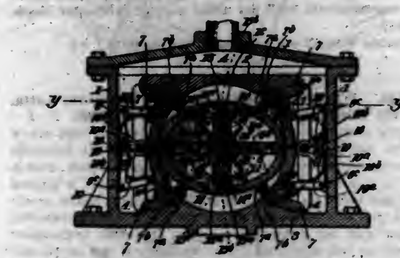
Trade-Marks.

Extra copies of the trade-mark portion of the GAZETTE, which will be sold separately, may be obtained single or in quantities for five cents each. Coupons will be taken in payment thereof.

PATENTS

GRANTED MAY 17, 1910.

957,860. ROTARY ENGINE. GEORGE W. BARTLETT, Tacoma, Wash., assignor to George W. Bartlett Rotary Engine Company, Tacoma, Wash., a Corporation of Washington. Filed Dec. 19, 1908. Serial No. 468,383.



1. A rotary engine comprising an elliptically shaped piston, oscillating wings disposed at opposite ends of the piston and bearing against the periphery thereof, a cylinder inclosing said piston, and formed with valve-controlled ports for the admission of steam into the cylinder between the piston and wings on opposite sides of the piston at diagonally opposite points, substantially as described.

2. A rotary engine comprising an elliptically shaped piston, oscillating wings at opposite ends of the piston and bearing against the periphery thereof, a cylinder inclosing said piston and formed with steam inlet ports opening into spaces between the piston, cylinder and oscillating wings at opposite ends of the piston, valves arranged to control said ports, and means for actuating said valves to close the several ports, or open one set of diagonally disposed ports, substantially as described.

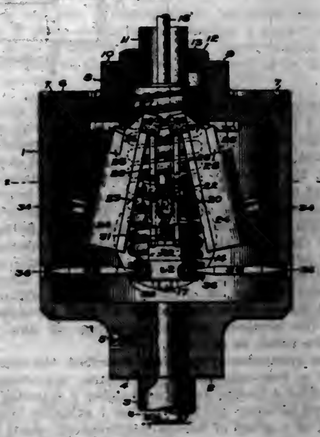
3. A rotary engine comprising an elliptically shaped piston formed with a plurality of internal chambers each having a steam inlet and steam exhaust port, and a cylinder inclosing said piston and formed with steam inlet ports, the inlet ports of the piston and of the cylinder being so disposed in relation to each other that when the ports of the piston are brought in communication with the steam spaces in the cylinder steam will pass into the chambers of the piston communicating therewith, substantially as described.

4. A rotary engine comprising an elliptically shaped piston formed with a plurality of internal chambers each having a steam inlet and a steam exhaust port, oscillating wings at opposite ends of the piston and bearing against the periphery thereof, a cylinder inclosing said piston and formed with steam inlet ports opening into spaces between the piston, cylinder and oscillating wings at opposite ends of the piston, valves controlling said ports, and means for actuating said valves to close one set of diagonally disposed ports, the inlet ports to the piston chambers being so disposed in relation to the inlet ports of the cylinder that when the piston ports are between the oscillating wings steam admitted through the ports of the cylinder will pass into chambers of the piston and exert an impelling force therein and exhaust from said chambers, substantially as described.

5. A rotary engine comprising an elliptically shaped piston formed with a plurality of internal chambers each having an inlet and an exhaust port, a cylinder inclosing said piston and having inlet ports, valves controlling the inlet ports to the chambers of the piston, and means for actuating said valves to direct steam into one or another of said chambers in the movement of said valves, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

957,861. CENTRIFUGAL GOVERNOR. FRED W. BENTLEY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 20, 1907. Serial No. 384,759.



1. A centrifugal governor which rotates about a given axis, comprising a frame, an axially arranged spring member that is attached at one end to the frame, means extending between the frame and the unattached end of said member for preventing its lateral displacement, weights pivotally mounted on the frame and located in the same zone of revolution as said spring member, and means connecting the weights and said member.

2. A centrifugal governor which rotates about a given axis, comprising a rotatable shaft, a cylindrical casing fixed to the shaft, a tension spring located along said axis that is attached at one end to said casing, means for preventing the lateral displacement of the unattached end of the spring, weights arranged within the casing and pivotally mounted thereon at each side of the spring in the same zone of revolution as said spring, and means connecting the weights and the spring.

3. A centrifugal governor comprising a rotatable shaft, a casing fixed to the shaft, a tension spring having its upper end secured to the casing, a spring-plug to which the lower end of the spring is attached, weights pivotally mounted on the casing and located in the zone of revolution of said spring, and connections between the weight and the plug.

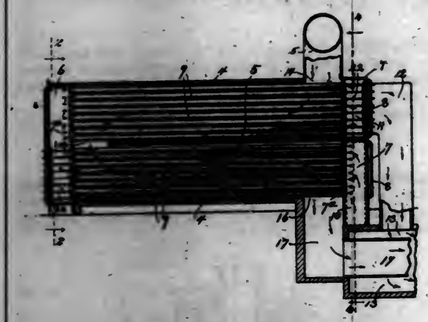
4. A centrifugal governor, comprising a tension spring, a spring-plug to which its lower end is attached, pivoted weights located in the zone of revolution of said spring, and struts between said weights and plug.

5. A centrifugal governor, comprising a tension spring, a spring-plug attached to its lower end and having lateral

lugs, pivoted weights located in the zone of revolution of said spring and having hooks, and struts between said hooks and lugs.

[Claims 6 to 16 not printed in the Gazette.]

957,862. AIR-HEATER. CARL G. BOSCH, Cedar Rapids, Iowa. Filed Jan. 20, 1908. Serial No. 411,561.



1. In an apparatus of the class described, the combination with a four-compartment structure comprising an inner chamber and having an outer chamber 6 extended over one end and a divided outer chamber 7 extended over the other end, the structure being provided with inlets at 10 and 14 and outlets at 11 and 16, of a group of narrowly-interspaced small tubes comprising a large number of such tubes within said inner chamber substantially filling the same and communicating with said outer chambers, two groups of jets located respectively at opposite ends of the tubes, one in the upper part of chamber 6 and the other in the lower division of chamber 7, scrapers within the tubes and means other than steam or fluid arranged for working the scrapers without shutting off the draft through the tubes, as specified.

2. In an apparatus of the class described, the combination with a four-compartment structure, comprising an inner chamber 4 having an outer chamber 6 extended over one end and an outer divided chamber 7 extended over the other end, of a group of narrowly-interspaced, small tubes comprising a large number of such tubes substantially filling said inner chamber and all communicating at one end with outer chamber 6 and an equal portion communicating at the other end with each division of outer chamber 7, said inner chamber being provided with an inlet opening 14 and an outlet opening 16 and said divided outer chamber 7 being provided with an inlet opening 10 in close proximity to outlet 16 and with an outlet opening 11 in close proximity to inlet opening 14, and a partway partition in said inner chamber connected to the end wall midway between said inlet 14 and outlet 16, as specified.

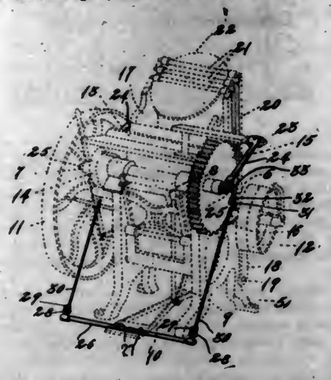
3. An apparatus of the class mentioned, comprising an inner chamber provided with an inlet and an outlet opening and with outer chamber 6 and an outer divided chamber 7, the latter having an inlet opening 10 and an outlet opening 11, a group of small tubes closely filling said inner chamber and communicating with said outer chambers, a system of jets and supply piping therefor connected with the tubes in the lower division of outer chamber 7 and with the tubes in the upper part of outer chamber 6, scrapers within said group of tubes, and means connected with the lower part of outer chamber 6 and with the upper division of outer chamber 7 for operating said scrapers.

4. An apparatus of the class mentioned, comprising an inner chamber provided with an inlet opening and an outlet opening and with outer compartments, said outer compartments being also provided with inlet openings and outlet openings, a group of small tubes closely filling said inner chamber and communicating with said outer compartments, a system of jets and supply piping in connection at one end of said inner chamber with the lower portion of said tubes and at the other end of said chamber with the upper portion of said tubes, a system of scrapers within the tubes and means for operating the same.

5. An apparatus of the class mentioned, comprising a large inner chamber provided with inlet opening and an outlet opening, an outer divided chamber 7 covering one end of said inner chamber and having an inlet and an outlet opening and an outer chamber 6 covering the other end of said inner chamber, a group of small tubes closely filling said inner chamber and communicating with said outer chambers at both ends of said inner chamber, a system of jets and supply piping in connection with the tubes where they communicate with the lower division of said outer chamber 7 and with the opposite end of the tubes, where they communicate with the upper part of said outer chamber 6.

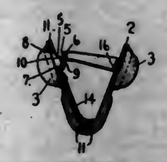
[Claims 6 to 10 not printed in the Gazette.]

957,863. FOOT-TREADLE. ELLIOTT BOURQUIN, Latta, S. C. Filed Aug. 9, 1909. Serial No. 511,963.



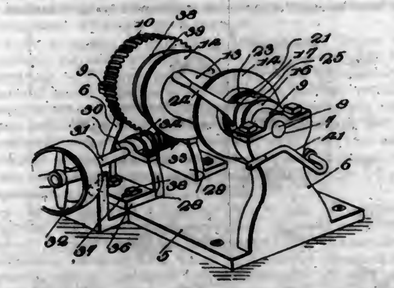
The combination with a printing press having side arms, of a foot treadle for operating the latter, a bar having lugs rising centrally from the bar to engage the foot treadle, rings loosely connected to the ends of the bar, and connections between the rings and said side arms.

957,864. CUFF-BUTTON. RALPH N. BROTHERS, Oklahoma, Okla. Filed June 13, 1908. Serial No. 438,282.



In a device of the class described, two button members pivotally secured to each other, a leaf spring secured to one of said members, the free end of said spring being curved, an arm for connecting said button members, one end of said arm being provided with a pair of resilient offset members which are secured to one of the button members, the other end of said arm terminating in an enlargement adapted to engage a portion of the other button member, a portion of said other button member being raised to receive said enlargement, said raised portion being provided with a slot in which rests the portion of the connecting member adjacent the said enlargement.

957,865. HOISTING DEVICE. EDWARD O. CARVIN, Manhattan, Nev., assignor of one-fourth to James Mcosh Smith, Manhattan, Nev. Filed Oct. 26, 1909. Serial No. 524,599.



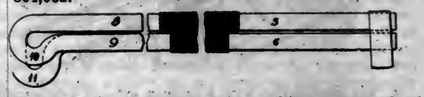
1. A hoisting apparatus including a driven shaft, a worm gear secured to the shaft, a winding drum slidably mounted on the driven shaft, a sleeve carried by the driven shaft and provided with a depending extension having a segmental slot formed thereon, one side of said sleeve being provided with a cam face, an operating lever interposed between the sleeve and drum and having a corresponding cam face adapted to engage the cam face of the sleeve for moving the drum into and out of engagement with the gear, spaced brackets disposed beneath the driven shaft, a driving shaft journaled in said brackets and having a worm meshing with said worm gear, collars secured to the driving shaft on opposite sides of the worm and bearing against the brackets and a fastening device extended through the segmental slot of the sleeve extension for clamping the latter in adjusted position.

2. A hoisting apparatus including a base having spaced standards, and provided with spaced brackets arranged at right angles to the standards, a driven shaft journaled in said standards, a worm gear secured to one end of the driven shaft, a winding drum loosely mounted on the driven shaft and movable into and out of engagement with the worm gear, a collar secured to one end of the drum and provided with a series of anti-friction balls, a sleeve surrounding the driven shaft and provided with a depending extension having a segmental slot formed therein, one side of the sleeve being formed with a cam face, an operating lever encircling the driven shaft and having a cam face adapted to engage the cam face of the sleeve for moving the drum into and out of engagement with the worm gear, a wear-plate secured to the opposite side of the lever and having a race-way formed therein for the reception of the anti-friction balls, a fastening device extending through the segmental slot and engaging the adjacent standard, and a driving shaft journaled in the brackets and having a worm secured thereto and meshing with the teeth of the worm gear, and collars disposed on opposite sides of the worm and bearing against said brackets.

3. A hoisting apparatus including a base having spaced standards secured thereto, a driven shaft journaled in said standards, a worm gear keyed to one end of the driven shaft and provided with a conical extension, a drum loosely mounted on the driven shaft and having a conical socket formed in one end thereof and adapted to receive the conical extension of the worm gear, spaced brackets secured to and adjustable transversely of the supporting base, a driving shaft journaled in said brackets, a worm carried by the driving shaft and meshing with the worm gear, collars interposed between the worm and the adjacent brackets for receiving the longitudinal thrust of the driving shaft, and means mounted on the driven shaft and interposed between one end of the drum and the adjacent upright for moving the drum into and out of engagement with the worm gear.

4. A hoisting apparatus including a base having spaced standards secured thereto, slotted brackets secured to the base and adjustable laterally in a plane at right angles to the standards, a driven shaft journaled in said standards, a worm gear secured to said driven shaft, a drum slidably mounted on the driven shaft and movable into and out of engagement with the worm gear, a driving shaft journaled in the brackets and having a worm secured thereto and meshing with the worm gear, collars disposed on opposite sides of the worm and bearing against the adjacent brackets, and a fastening device extending through the slots in the brackets and engaging the base for clamping said brackets in adjusted position.

957,866. COIL FOR DYNAMO-ELECTRIC MACHINES. GUSTAVE CHOVAN, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1906. Serial No. 304,062.



1. A coil for dynamo-electric machines composed of turns of strap conductor and having a projection in the form of an elongated and twisted looped portion which is located between the portions of the coil to be included in the core slots.

2. A coil for dynamo-electric machines composed of turns of strap conductor and having a projection for attachment to cross-connectors which is in the form of an elongated and twisted looped portion and is located between the portions of the coil to be included in the core slots.

3. In a dynamo-electric machine, a coil comprising a plurality of turns of strap conductor one of which projects beyond the others at one end to form a loop the sides of which are twisted and riveted together.

4. In a dynamo-electric machine, a coil comprising a plurality of turns of strap conductor one of which projects beyond the others at one end to form a loop the sides of which are twisted together to a plane substantially parallel to the end of the machine.

957,867. BRAIDED HOSE. HENRY Z. COBB, Malden, Mass., assignor to Revere Rubber Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 12, 1909. Serial No. 489,305.



1. A vulcanized hose of braided tapes of textile fabric associated with rubber.

2. A vulcanized hose of braided tapes of textile fabric treated with rubber.

3. A vulcanized hose of braided tapes of frictional textile fabric.

4. A vulcanized hose of a plurality of layers of braided tapes of textile fabric treated with rubber.

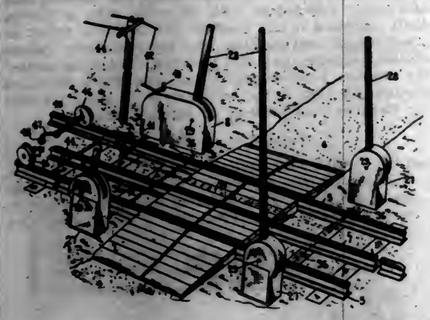
5. A vulcanized hose of a plurality of layers of braided tapes of rubber-treated textile fabric with intervening rubber.

[Claims 6 to 15 not printed in the Gazette.]

957,868. RAILROAD-GATE. JOHN T. CORRIGAN, Rockford, Ill. Filed Oct. 4, 1909. Serial No. 520,890.

1. The combination with railway gates of fluid supply means closing said gates, an electric motor controlling the fluid supply means, a governor controlled means operative upon the stopping of the motor to permit the ex-

haust of the fluid from the fluid supply means for the opening of the gates, and a train controlled electric circuit for actuating said motor.



2. The combination with a railway gate, of fluid supply means closing said gate, an electric motor controlling the fluid supply means and a governor controlled means operative upon the stopping of the motor to permit the exhaust of the fluid from the fluid supply means for the opening of the gates.

3. The combination with a plurality of railway gates, fluid operating pumps for moving said gates, pipes establishing communication between all of the said pumps, and fluid supply means communicating with said pipes, a motor controlling the fluid supply means, a train controlled electric circuit actuating said motor and governor controlled means operative upon the stopping of the motor to permit the exhaust of the fluid from the fluid supply means for the opening of the gates.

4. The combination with opposed railway gates, fluid controlled pumps operating said gates, pipe connections between the pumps, motor controlled fluid supply means having communication with said pumps through said pipes, atmospheric exhaust means communicating with the fluid supply means, and a governor controlled valve operative upon the stopping of the motor controlling the fluid supply means for regulating the atmospheric exhaust means.

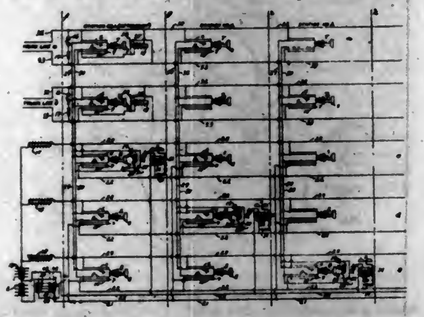
5. The combination with a gate, of a pump having connection with the gate for raising and lowering the same, means for supplying fluid to the pumps for closing the gate, a motor operating said means, train controlled means actuating the motor, a fluid exhaust means leading from said first named means, a valve controlling the said fluid exhaust means, and a governor closing the valve when the motor is actuated and also opening it when the motor has been stopped.

[Claim 6 not printed in the Gazette.]

957,869. INTERCOMMUNICATING TELEPHONE SYSTEM. ELMER R. COAWIN, Chicago, Ill., assignor, by mesne assignments, to Corwin Telephone Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 23, 1907. Serial No. 394,129.

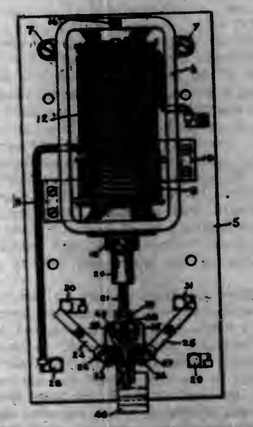
1. The combination with an intercommunicating telephone system having a plurality of stations and a trunk line common thereto, of a relay, a key adapted in itself to bridge the relay across the trunk line, independently of the condition of the other apparatus of the system, and a switch controlled by the relay whereby the latter when bridged across the trunk line by the said key maintains its own bridge after the key has been released, until properly demergised, for purposes substantially as described.

2. The combination with an intercommunicating telephone system having a plurality of stations and a trunk line common thereto, of a relay, means for bridging the relay across the trunk line to hold the latter while calling the called station, the said relay being adapted to control its own bridge, and means whereby the telephone set of the said called station, when connected with the trunk line for use, forms a direct shunt around the said relay to demergise the latter sufficiently to cause it to break its own bridge, for purposes substantially as described.



3. The combination with an intercommunicating telephone system having a plurality of stations and a trunk line common thereto, of a relay, a key adapted in itself to bridge the relay across the trunk line, independently of the condition of the other apparatus of the system, to hold the trunk line while calling the called station, a switch controlled by the relay whereby the latter when bridged across the trunk line by the said key maintains its own bridge after the key has been released, and means whereby the telephone set of the said called station, when connected with the trunk line for use, forms a direct shunt around the said relay to demergise the latter sufficiently to cause it to break its own bridge, for purposes substantially as described.

957,870. RELAY. ARCHIBALD S. CUBITT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 24, 1908. Serial No. 440,061.



1. In a relay, an actuating coil, a core of magnetic material movable in the field thereof, pivotally supported movable contact members, stationary contacts coöperating therewith, and a U-shaped spring connection between said movable contact members and said movable core whereby the core in its movement moves said movable contact members into and out of engagement with the stationary contacts.

2. In a relay, an actuating coil, a core of magnetic material movable in the field thereof, pivotally supported contact members arranged on opposite sides of said core, stationary contacts with which said contact members cooperate, and a U-shaped spring connection between said core and said contact members whereby said core in its movement rotates said contact members into and out of engagement with said fixed contacts.

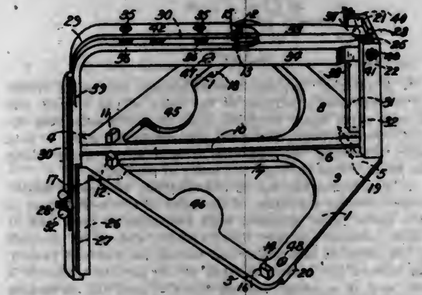
3. In a relay, a supporting back, a field frame of magnetic material secured thereto, an actuating coil cooperating with said field frame, a core of magnetic material movable in the field of said coil, movable contact members pivotally supported on said base, stationary contacts with which said contact members coöperate, and a U-shaped spring connection between said core and said movable contact members whereby said core in its movement rotates said contact members into and out of engagement with said fixed contacts.

4. In a relay, an actuating coil, a core of magnetic material movable in the field thereof, pivotally supported contact members arranged on opposite sides of said core, stationary contacts with which said contact members cooperate, and a U-shaped spring connected at each end to one of said movable contact members and at its middle to said core whereby said core in its movement rotates said contact members into and out of engagement with said fixed contacts.

5. In a relay, an actuating coil, a core of magnetic material movable in the field thereof, pivotally supported contact members arranged on opposite sides of said core, stationary contacts with which said contact members cooperate, and a U-shaped spring connection between said contact members and said movable core whereby said core in its movement rotates said contact members into and out of engagement with said stationary contacts and holds said contact members in yielding engagement with said stationary contacts.

[Claims 6 and 7 not printed in the Gazette.]

957,871. MITER-BOX. RALPH DUNNE, Dunedin, New Zealand. Filed Dec. 2, 1907. Serial No. 404,762.



1. A miter box comprising a flat portion, vertical guides on said portion, a pair of horizontally parallel strips connected together and having their ends adapted to slide up and down said vertical guides and pins located on said flat portions, the pins on one side being so placed that a line touching the inner surfaces thereof is at right angles to a line touching the inner surfaces of the pins on the other side of said flat portion, substantially as described.

2. A miter box comprising a substantially diamond shaped body portion, vertical guides thereon arranged at opposite corners, a pair of parallel strips connected together and having their ends adapted to slide up and down said vertical guides, and pins located on said diamond shaped body portion, adjacent two meeting edges thereof, the pins on one edge being so arranged that a line touching the inner surfaces of said pins is at right angles to a line touching the inner surfaces of the pins on the other edge, substantially as described.

3. A miter box comprising a body portion, an upright vertical guide thereon, a downwardly extending vertical guide thereon opposite the other, a pair of parallel strips having one end adapted to slide up and down said upright vertical guide and connecting means for the other end of said strips slidable up and down on said downwardly extending guide substantially as and for the purposes set forth.

4. A miter box comprising a substantially diamond shaped body portion, an upright vertical guide at one corner thereof, a downwardly extending vertical guide at an opposite corner thereof, a pair of parallel strips having one end adapted to slide up and down said upright vertical guide and connecting means for the other having one end adapted to slide up and down said upextending guide substantially as and for the purposes set forth.

5. A miter box comprising a body portion, an upright vertical guide thereon, a downwardly extending vertical guide thereon opposite the other a pair of parallel strips having one end adapted to slide up and down said upright vertical guide, connecting means for the other end of said strips slidable up and down on said downwardly extending guide, and pins disposed at the ends of adjacent arms of said body so that the line touching the inner surfaces of the pins on one of said arms is at right angles to the line touching the inner surfaces of the pins on the other of said arms, substantially as and for the purposes set forth.

[Claims 6 to 18 not printed in the Gazette.]

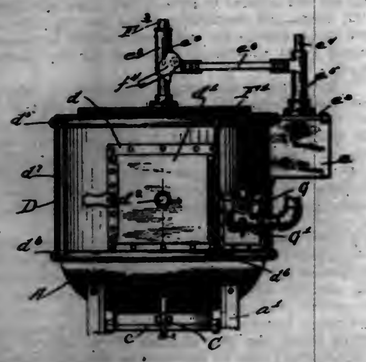
957,872. CARD-GAME APPARATUS. LEWELLEN A. ELY, Dayton, Ohio, assignor of one-fourth to William H. Ennis and Lillie G. Ennis, Saginaw, Mich. Filed Dec. 5, 1908. Serial No. 466,139.

A playing card pack comprising a series of cards divided into suits, the respective suits bearing representations respectively of a catcher's mitt, a base ball diamond, a bat, and a ball respectively, as suit designations, each suit consisting of cards bearing designations indicating a one base hit, a two base hit, a three base hit, four, seven, eight and nine, respectively, and cards bearing designations indicating a fly ball, a catcher, an umpire, a "fan" and a pitcher, respectively.

957,873. FURNACE. ALFRED FISHER, Chicago, Ill. Filed Oct. 26, 1908. Serial No. 459,501.

1. The combination with a furnace of a metal pot supported therein, a flue leading from the top of the furnace, a blast burner below said flue positioned to direct its blast tangentially into the furnace, and a bottom door

positioned to close an aperture in the bottom of the furnace through which may be removed any material in the fire pot.



2. The combination with a furnace of a metal pot supported therein, a flue leading from the top of the furnace, a blast burner below said flue positioned to direct its blast tangentially into the furnace, a bottom door positioned to close an aperture in the bottom of the furnace through which may be removed any material in the fire pot, a cover for the pot, snd mechanism for lifting the same.

3. The combination with a furnace of a metal pot supported therein, a flue leading from the top of the furnace, a hydro-carbon blast burner below and at one side of said flue positioned to direct its heat tangentially and downwardly into the furnace, a bottom door positioned to close an sperture in the bottom of the furnace through which may be removed any material in the fire pot, and a side door opening into the furnace.

4. The combination with a pot shaped furnace, of a metal pot having a rim suspended from the top of the furnace by the rim, a cover for the pot, a flue leading from the top of the furnace, a blast burner positioned to direct its blast tangentially and downwardly into the furnace below the pot, and a bottom door positioned to close an aperture in the bottom of the furnace through which may be removed any material in the fire pot.

5. The combination with a pot shaped furnace opentopped, of a metal pot having a rim supported therein by its rim and closing the top, a flue leading from the top of the furnace, a hydro-carbon blast burner positioned at one side of and below said flue to direct its blast tangentially and downwardly into the furnace, a bottom door positioned to close an aperture in the bottom of the furnace through which may be removed any material in the fire pot, an insulating cover for the pot and mechanism for actuating the same.

[Claims 6 to 18 not printed in the Gazette.]

957,874. CONVERTIBLE PERAMBULATOR. JOSEPH FORD, Dunedin, New Zealand. Filed May 13, 1908. Serial No. 432,754.



1. In a convertible perambulator, the combination with a body, of slotted and notched metal angles secured to the said body, and hand shafts having a crossbar and rod adapted to fit the slots and notches of the angles, substantially as set forth.

2. In a perambulator, the combination with a body of metal angles, secured to said body, a baby-chair adapted to be carried upon the angles, and hooks upon the bottom of the chair fitting into holes in the angles, substantially as set forth.

3. In a perambulator, the combination with a body and baby-chair, of metal angles supporting the said body and chair, a foldable boot hinged to the body, and battens upon the chair supporting the boot when folded, substantially as set forth.

4. The combination, with a perambulator body, of metal angles secured to the said body, a baby-chair secured to the said angles, standards to which the body and chair are suspended, a spreader keeping the standards at proper distances apart, and tie-rods uniting the standards together, substantially as set forth.

5. The combination with a baby-chair of a perambulator, of standards having pins at their upper ends adapted to pass into holes in the bottom of the said baby-chair, a frame like spreader having recessed corners to fit against the standards, tie-rods attached at one end to the standards, a plate to which the other ends of the tie-rods are attached, a hook bolt passing through the plate and attached to the baby-chair, and a thumb nut on the hook bolt and below the plate, substantially as set forth.

[Claim 6 not printed in the Gazette.]

957,875. GARMENT. JOSEPH H. C. DE FORGE, Lynn, Mass. Filed Mar. 10, 1909. Serial No. 482,522.



1. A garment having, in combination, two parts adapted to surround a portion of the body of the wearer, one of said parts being provided with two slits extending entirely therethrough, and a tab secured to the other of said parts extending through one of said slits, thence along the surface and through the other of said slits.

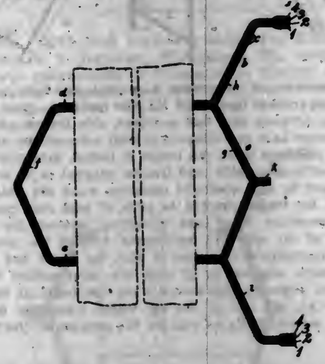
2. A garment having, in combination, two parts adapted to surround a portion of the body of the wearer, one of said parts being provided with two slits at least one of which extends entirely therethrough, and a tab secured to the other of said parts and having its free end extending toward the central portion of the part to which it is fast and in a plane outside thereof, said tab extending through one of said slits, thence along the surface and through the other of said slits.

3. A garment having, in combination, two parts adapted to surround a portion of the body of the wearer, one of said parts being provided with two slits at least one of which extends entirely therethrough, and a tab secured to the other of said parts and having its free end extending toward the central portion of the part to which it is fast and in a plane outside thereof, said tab extending through one of said slits, thence along the surface and through the other of said slits, said tab being provided with a shoulder to engage one end of the second slit to lock said parts against disconnection.

4. In combination, a shirt having a sleeve provided with a wrist band having two slits extending therethrough, a cuff surrounding said wrist band, a tab fast to said cuff adjacent to one edge thereof and extending toward the opposite edge thereof in a plane outside of said cuff, said tab extending inwardly through one of said slits, thence along the inner surface of said wrist band and thence outwardly through the other of said slits, said tab being provided with a shoulder to engage one end of the second slit, and means to detachably attach said cuff to said wrist band at another point.

5. A garment having, in combination, two parts adapted to surround a portion of the body of the wearer, one of said parts being provided with two slits, and a tab secured to one of said parts adjacent to one edge thereof and having its free end extending toward the opposite edge thereof and in a plane outside of said part to which said tab is fast, said tab being located in said slits and being provided with shoulders adapted to engage opposite ends, respectively, of said slits, said tab being greater in width at said shoulders than said slits, the ends of which said shoulders engage.

957,876. COIL FOR DYNAMO-ELECTRIC MACHINES. JOSEPH D. FORBES, Pittsburg, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa., a Corporation of Pennsylvania. Filed July 24, 1908. Serial No. 445,280.



1. A coil for dynamo-electric machines comprising a plurality of multi-strand turns located one above another, the strands of said turns being located side by side and reversed in position once in each closed turn of the coil.

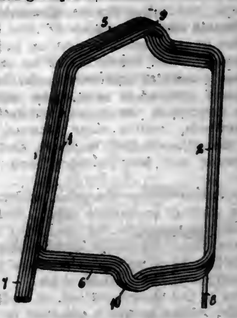
2. A wave winding coil for dynamo-electric machines comprising one complete and one open multi-strand turn, the closed turn of which has an off-set bend and the strands being reversed in position at the off-set bend.

3. A coil for dynamo-electric machines comprising a plurality of multi-strand turns having substantially parallel straight portions, V-shaped end connecting portions and an off-set bend in one of the said end connecting portions, the position of the strands being reversed on opposite sides of said off-set bend.

4. A coil comprising a plurality of multi-strand turns having substantially parallel straight portions adapted to be included in the core slots of a dynamo-electric machine, V-shaped end connecting portions and an off-set bend in one of the said end connecting portions, the relative positions of the strands being the same throughout the coil except that they are disposed in reverse order at opposite sides of the off-set bend.

957,877. ARMATURE-WINDING COIL FOR DYNAMO-ELECTRIC MACHINES. JOSEPH D. FORBES, Pittsburg, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa., a Corporation of Pennsylvania. Filed Sept. 8, 1908. Serial No. 452,088.

1. A coil for dynamo-electric machines comprising a plurality of multi-strand turns having two substantially parallel straight portions, the strands of said turns being located in one plane in one of the said portions and in another plane substantially perpendicular to the first in the other straight portion.



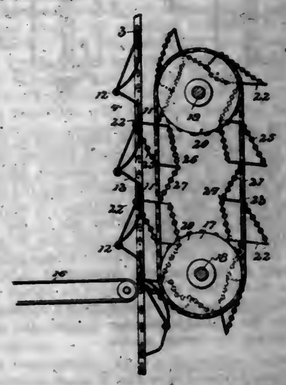
2. A coil for dynamo-electric machines comprising a plurality of multi-strand turns having substantially parallel straight portions and V-shaped end connecting portions, the conductors being disposed in x layers of y strands each in one straight portion and in y layers of x conductors each in the other straight portion.

3. A coil for dynamo-electric machines comprising a plurality of multi-strand turns having substantially parallel straight portions, V-shaped end connecting portions and off-set bends in said end connecting portions, the strands being twisted through an angle of approximately 90° at the off-set bends.

4. A coil for dynamo-electric machines comprising a plurality of multi-strand turns having two substantially parallel straight portions adapted to be included in the core slots of a dynamo-electric machine, the strands of said turns being disposed in radial layers in one straight portion and in tangential layers in the other straight portion.

5. In a dynamo-electric machine, the combination with a substantially cylindrical core member having a plurality of longitudinal slots in radial planes, of a coil comprising multi-strand turns, having two parallel straight portions disposed within predetermined core slots, the strands of said turns being disposed in radial planes in one slot and in tangential planes in the other slot.

957,878. MEANS FOR UNLOADING SHIPS. MARTIN J. FURLONG, New Orleans, La. Filed Jan. 30, 1909. Serial No. 475,194.



1. In a device of the class described, an endless carrier, an actuator therefor comprising an endless member, lifting bars pivoted at intervals in the length of the endless member and adapted to engage in successive rotation

with the endless carrier, stays spaced from the lifting bars, flexible elements connecting the stays and adjacent lifting members, and other flexible elements connecting the stays with said endless member.

2. In a device of the class described, an endless carrier, actuating means therefor consisting of an endless chain, lifting members located at intervals in the length of the endless chain and adapted to engage the endless carrier, stay members secured to the endless chain intermediate the lifting members, flexible stays between the lifting members and the adjacent stay members, and other flexible stays between said stay members and the endless chain.

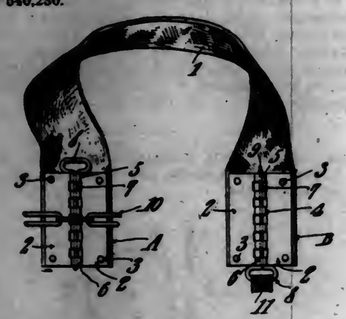
3. In an appliance of the character specified comprising an endless carrier, an endless chain, lifting bars located at regular intervals in the length of the endless chain, stay bars connected to the endless chain intermediate of the lifting bars, and flexible stays between the lifting bars, stay bars and endless chain.

4. In a device of the class described, an endless carrier, an endless chain, lifting members attached to the endless chain at intervals and inclined upwardly and forwardly at their outer ends upon the ascending side of the endless chain, stay members secured to the endless chain intermediate the lifting members, flexible elements connecting the stay members with the adjacent lifting members, and other flexible elements forming a connection between said lifting members and the endless chain.

5. In an appliance of the nature described comprising an endless carrier, a pair of spaced endless chains, supports therefor, cross bars connecting the endless chains, lifting members mounted upon every other cross bar, stay bars mounted upon the intermediate cross bars, and flexible stays connecting the several lifting and stay bars with one another and with the endless chains.

[Claims 6 to 9 not printed in the Gazette.]

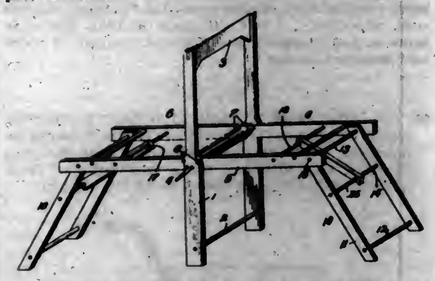
957,879. BACK-BAND ATTACHMENT. ELVIN H. GRIFFIN, South Boston, Va. Filed Jan. 26, 1910. Serial No. 540,230.



A device of the class described comprising a yieldable member; a pair of flat plates secured adjacent their remote edges directly to the yieldable member, there being a plurality of arched bridge pieces connecting the adjacent edges of the plates; and a pin arranged to be inserted within the bridge pieces from either end of the device, the pin having a transversely disposed loop at one end arranged to engage one of the terminal bridge pieces, and having a finger at the other end disposed at right angles to the plane of the loop and arranged to engage the periphery of the other terminal bridge piece; the loop being engageable by the yieldable member to limit the rotation of the pin within the bridge pieces.

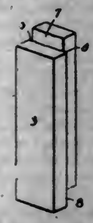
957,880. WASHBENCH. JAMES I. HARRINGTON, Sheffield, Mo. Filed Mar. 6, 1908. Serial No. 419,488.

1. A washbench comprising a central standard having transverse grooves in each of its side members, cross bars extending between said side members, side frames pivoted on said cross bars and adapted to nest between the standard side members when the bench is folded, laterally projecting portions on said side frames adapted to fit within the grooves in said standard members when the bench is in set-up condition, a leg frame pivoted to each of said side frames, cross braces on said side and leg frames, and a latch bar pivoted on one of said brace bars and adapted for engagement with a brace bar on the adjacent frame member, substantially as and for the purpose set forth.



2. A washbench comprising a central standard having transverse grooves in each of its side members, cross bars extending between said side members, side frames pivoted on said cross bars and adapted to nest between the standard side members when the bench is folded, laterally projecting portions on said side frames adapted to fit within the grooves in said standard members when the bench is set-up, a leg frame pivoted to each of said side frames, and intermediate cross bars extending between the side members of the side and leg frames, a latch bar pivoted on the intermediate cross bar of each leg frame and having a groove adapted to fit over the intermediate cross bar of the adjacent side frame when the bench is set-up and over an end bar of the leg frame when the bench is folded, substantially as and for the purpose set forth.

957,881. WINDOW-FRAME. WARREN B. HARRIS, Millbury, Mass. Filed Aug. 9, 1909. Serial No. 512,014.



1. A window frame having an opening for the admission of sash weights, a removable closing strip, longitudinal shoulders on the sides of said closing strip, corresponding opposing shoulders on said window frame lengthwise said sash weight opening, a transverse shoulder on one end of said closing strip facing toward the inside of the window frame, a transverse shoulder on the opposite end of said closing strip facing away from the inside of the window frame and corresponding opposing shoulders on the window frame at the ends of the sash weight opening.

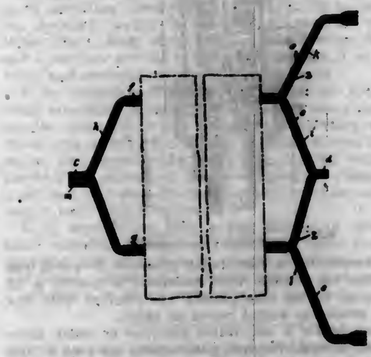
2. A window frame having a sash weight opening, a cover for said opening having shoulders at its sides and one end facing away from the inside of the window frame, a shoulder at the opposite end of said cover facing toward the inside of the window frame, said shoulders lying in substantially the same plane, and corresponding opposing shoulders on the window frame.

3. A window frame having a sash weight opening, a cover for said opening formed from the side of the window frame by longitudinal saw kerfs, in different planes, by which longitudinal shoulders are formed at the sides of the cover and by transverse saw kerfs at the ends of the cover in different planes, whereby transverse shoulders are formed at the ends of the cover, one of said end shoulders facing in the same direction as the longitudinal shoulders and the other end shoulder facing in the opposite direction.

4. A window frame having a sash weight opening and a cover therefor provided at its sides with shoulders 5 and 6 and at its ends with shoulders 7 and 8, said end shoulders facing in opposite directions, and corresponding opposing shoulders at the ends and sides of the sash weight opening.

5. In a window frame having a sash weight opening, a cover for said opening provided at its sides with longitudinal shoulders engaging corresponding longitudinal shoulders at the sides of the sash weight opening and forming seats for said cover, a shoulder at one end of said cover transversely thereto engaging a corresponding shoulder at one end of the sash weight opening and holding said longitudinal shoulders in contact.

957,882. COIL FOR DYNAMO-ELECTRIC MACHINES. WILLIAM T. HENSLEY, Wilkinsburg, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa., a Corporation of Pennsylvania. Filed Jan. 10, 1908. Serial No. 410,147.



1. A coil for dynamo-electric machines, comprising a plurality of multi-strand turns each having an offset bend at one end, the strands being side-by-side, and the turns being one above another, except at said offset bends, where they are side-by-side.

2. A coil for dynamo-electric machines, comprising two multi-strand turns each having an offset bend at one end and located one above another, except at said offset bends, where they are side-by-side.

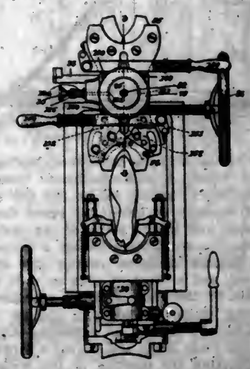
3. A coil for dynamo-electric machines, having a plurality of turns each of which comprises a plurality of side-by-side strap conductors and has an offset bend, the turns being disposed one above another, except at the offset bends, where they are disposed side-by-side.

4. A substantially hexagonal coil for dynamo-electric machines, having two relatively long, substantially parallel and equal sides, a plurality of turns of wire or strap conductor which have corresponding offset bends, the turns being disposed one above another, except at said offset bends, where they are disposed side-by-side, and terminal portions that extend outwardly from laterally opposite corners of the coil.

5. A coil for dynamo-electric machines having terminal portions and comprising a plurality of multi-strand turns, each turn having a corresponding offset bend at one end, the turns being disposed one above another except at the offset bends where they are side-by-side and the terminal portions being connected respectively to the uppermost and the undermost turn of the coil.

[Claims 6 and 7 not printed in the Gazette.]

957,883. BED-LASTING MACHINE. FRANK HOLBROOK, Lynn, Mass., assignor to Maurice V. Bresnahan, Lynn, Mass. Filed May 11, 1909. Serial No. 495,332.



1. In a bed-lasting machine, means for lasting the heel part of a boot or shoe, a revoluble ring, a pivoted lever supporting said ring, a spider comprising a cylindrical hub formed with two or more toe-plate wiper beds, said hub being arranged in a complemental recess or bearing in said ring, a cap arranged over the top of said hub and secured to said ring, said hub being formed with a vertical aperture and registering with a like aperture in the cap, a rod arranged in said aperture, the lower end of which is rotatably connected with said lever, a worm segment connected with said hub, said cap being formed with upwardly projecting walls forming gear cases, a hand wheel mounted on top of said cap, worm and gear connections between said worm segment and said hand wheel housed in said chambers, whereby the operation of said hand wheel oscillates said hub and its bed plates.

2. In a bed-lasting machine, means for lasting the heel part of a boot or shoe, a revoluble ring, a pivoted lever supporting said ring, a spider comprising a cylindrical hub formed with two or more toe-plate wiper beds, said hub being arranged in a complemental recess or bearing in said ring, a cap arranged over the top of said hub and secured to said ring, said hub being formed with a vertical aperture and registering with a like aperture in the cap, a rod arranged in said aperture, the lower end of which is rotatably connected with said lever, a work segment connected with said hub, said cap being formed with upwardly projecting walls forming gear cases, a hand wheel mounted on top of said cap, worm and gear connections between said worm segment and said hand wheel housed in said chambers, whereby the operation of said hand wheel oscillates said hub and its bed plates, a swiveled nut carried in the chamber of said cap, engaging screw-threads on said rod, means for turning said rod for tilting the toe plate beds and the parts carried thereby.

957,884. HORSESHOE ATTACHMENT. HERMANN HUTH, St. Louis, Mo. Filed Nov. 8, 1909. Serial No. 526,861.

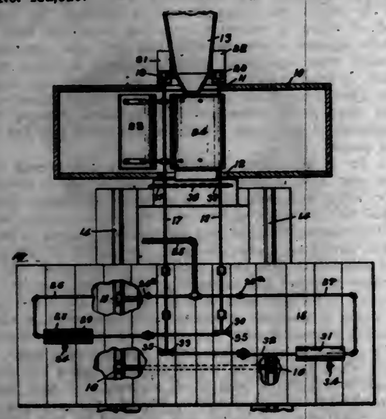
1. In combination with a horse-shoe having opposite plane parallel faces, a calk-attachment comprising a front and rear block having ledges for the support of the shoe, and recessed to bring the upper surfaces of the blocks flush with and in the plane of the corresponding surface of the shoe, the front block having a curved vertical

wall abutting against the inner curved edge of the shoe opposite the toe, and the rear block having tapering sides adapted to wedge against the inner edges of the sides of the shoe, a screw-stem connecting the blocks, and adapted to advance the wedge or rear block to proper position to effect the necessary engagement with the sides of the shoe, substantially as set forth.



2. In combination with a horse-shoe having opposite plane parallel faces, a calk-attachment comprising a front and rear block having ledges for the support of the shoe, and recessed to bring the upper faces of the blocks flush with and in the plane of the corresponding face of the shoe, the front block having a curved vertical wall abutting against the inner curved edge of the shoe opposite the toe, and a straight edge or wall for engaging the toe-calk of the shoe, and the rear-block having vertical tapering walls for wedging against the inner edges of the sides of the shoe, an adjusting screw operating loosely in the front block, and having a screw-threaded portion for adjusting the position of the wedge or rear block, the rear terminal of the stem having means for the application of a wrench or equivalent tool, substantially as set forth.

957,885. RAILROAD-BOX-CAR LOADER. HIRAM L. JACKSON, Colfax, Iowa. Filed Sept. 14, 1908. Serial No. 452,819.



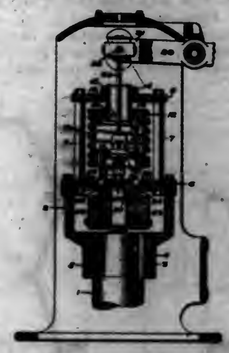
1. In a box car loader comprising shafts mounted for partial rotary movement, a shovel secured to each of said shafts, said shovel having a concaved upper surface, and a concaved base; all arranged and combined substantially as shown and described.

2. A loader for cars embodying a pair of vertical standards, a bearing carried by each standard, a platform movable toward and away from said standards, a pair of horizontal shafts arranged in spaced relation on said platform, the outer ends of said shafts being adapted to be removably engaged in said bearings, shovels on the shafts, a lug carried by each shaft, a chain connecting said lugs and extending transversely across the space between said shafts, a concentric connected to each shaft, a coil spring for each eccentric which underlies the same and acts as a cushion therefor, and means for actuating each of said concentrics.

3. A loader for cars embodying a pair of standards, a bearing carried by each, a platform movable toward and away from said standards, a pair of spaced shafts carried by said platform adapted to have their outer ends removably engaged in said bearings, shovels on the shafts, means to operate the inner ends of the shafts, a lug on each shaft, and a flexible connection between said lugs.

4. A loader for cars embodying a pair of standards, a chute mounted above said standards a bearing carried by each, a platform movable toward and away from said standards and facing said standards, a pair of spaced shafts carried by said platform, adapted to have their outer ends removably engaged in said bearings, shovels on the shafts, means to operate the inner ends of the shafts, and means connecting said shafts whereby oscillatory movement imparted to one will be imparted to the other.

957,886. CENTRIFUGAL GOVERNOR. OSCAR JUNGGREN and FRED W. BENTLEY, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed July 29, 1907. Serial No. 385,961.



1. A weight for a centrifugal governor in which the line joining the fulcrum with the center of gravity is at right angles to the line joining the fulcrum with the point at which the weight exerts its effort.

2. A weight for a centrifugal governor in which there is a constant ratio between the vertical distance of the center of gravity from the fulcrum and the horizontal distance from said fulcrum of the point at which the weight exerts its effort.

3. A centrifugal governor comprising a spring and weights and means whereby said weights exert a constant leverage on said spring at all points in their movement so that the effective movement of the governor is exactly proportional to changes in centrifugal force due to changes in speed.

4. A centrifugal governor which rotates about a given axis, comprising a frame, an axially arranged spring, pivoted weights located on opposite sides of the axis, knife-edge pivots between the weights and the frame, and means connecting the weights with the spring, there being knife-edge pivots between the weights and said means, and said pivots and weights being so constructed and arranged that the line joining a frame pivot with the center of gravity of the adjacent weight is at right angles to the line joining said frame pivot and the pivot between the weight and said means.

5. A centrifugal governor comprising a rotatable shaft, a frame fixed on said shaft, a spring, an annular plug screwed into the end of the spring, a supporting member projecting from the frame into the opening in the plug, and a spherical joint between the plug and the supporting member.

[Claims 6 to 13 not printed in the Gazette.]

957,887. PACKING FOR ELASTIC-FLUID-TURBINE SHAFTS. OSCAR JUNGGREN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 28, 1908. Serial No. 455,171.



1. In combination with a wall having an opening, a shaft extending therethrough, a loose sleeve surrounding the shaft in said opening and free to expand and contract transversely and longitudinally with respect to the shaft axis, and a retainer for the sleeve which permits said expansion and contraction and also serves to recenter it each time it contracts.

2. In combination with a wall having an opening, a shaft extending therethrough, a loose packing sleeve surrounding the shaft in said opening and free to expand and contract axially and circumferentially, a retainer which holds the sleeve within said opening without restraining its movements under increases in temperature, and a means which recenters the packing sleeve each time it cools.

3. In combination with a wall having an opening, a shaft extending therethrough, a packing sleeve surrounding the shaft within the opening and provided with internal ribs to baffle the passage of fluid between its ends, and a retainer for the sleeve which permits it to expand freely and recenters it each time it contracts.

4. In combination with a wall having an opening, a shaft extending therethrough, a packing sleeve surrounding the shaft within the opening and provided with internal ribs to baffle the passage of fluid between its ends, means that prevents the sleeve from turning without restricting its movements due to temperature changes, and a retainer that supports the sleeve by its ends and recenters it each time it contracts.

5. In combination with a wall having an opening, a shaft extending through said opening, a loose sleeve surrounding said shaft in said opening and free to expand, and means for centering said sleeve when it contracts.

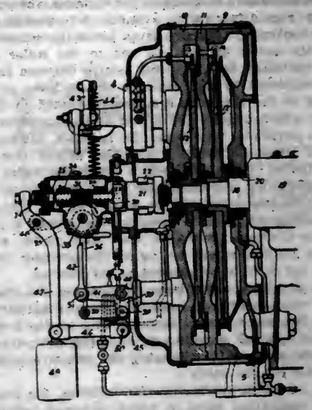
[Claims 6 to 10 not printed in the Gazette.]

957,888. GOVERNING MECHANISM FOR ELASTIC-FLUID TURBINES. WALTER KIESSE, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Apr. 3, 1906. Serial No. 309,688.

1. In a governing mechanism, the combination of the valve chest having a ported wall, a valve which opens and closes the ports one after another as the demand for motive fluid changes, means for vibrating a portion of the valve over certain of said ports, and a device responsive to load variations for changing the portion of said valve which is vibrated.

2. In a governing mechanism, the combination of a valve-chest having a ported wall, a valve which opens and closes the ports one after another as the demand for motive fluid changes, means for constantly vibrating the valve over a portion of said ported wall in a manner to throttle the passage of motive fluid, a speed responsive device, and means acted upon by the speed responsive device for changing the region of vibration of the valve from one portion of the wall to another so as to cooperate with different ports.

3. In a governing mechanism, the combination of a valve chest having a ported wall, an elastic band valve for controlling the passage of motive fluid through said ports, means for winding and unwinding the valve to open and close the ports including a spindle for the valve which is rotatably mounted, a device connected to the spindle for vibrating said means to move the valve over a portion of the ports, and a speed responsive device for changing the region of vibration of said valve with respect to the ports as the load changes.

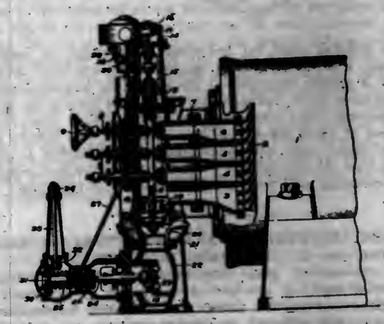


4. In a governing mechanism, the combination of a valve chest having a wall that is provided with a plurality of ports of similar function, a valve which is common to and opens and closes the ports one after another as the demand for motive fluid changes, a power-driven means for constantly vibrating a portion of the valve over some of said ports and a device responsive to load conditions for varying the portion of the valve which is vibrated and thereby varying the throttling effect through different ports for different load conditions.

5. In a governing mechanism, the combination of a ported wall, a valve, a spindle for the valve which is rotatably mounted, means for oscillating the spindle about its axis to vibrate the valve with respect to the ports, a driving device for said means, and a speed responsive device for modifying the action of the valve vibrating means.

[Claims 6 to 19 not printed in the Gazette.]

957,889. GOVERNING MECHANISM FOR ELASTIC-FLUID TURBINES. WALTER KIESSE, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Oct. 29, 1906. Serial No. 340,995.



1. In a governing mechanism for turbines, the combination of a regulating valve, a motor for operating it, a governor controlled collar, a lever pivotally secured to a part of the motor and to the collar and supported thereby, a controller directly connected to and moved by the lever so that movements of the collar move the controller from its normal position and the motor restores it, and a

spring means also connected to the lever and controller and subjected to changes in stress each time the controller is moved from its normal position.

2. In a governing mechanism for turbines, the combination of a regulating valve, a motor for operating it, a governor-controlled collar, a lever pivotally secured to a part of the motor at one end and to the collar at the other, a controller for the motor located between the ends of and connected to said lever, a second lever pivotally connected to the first, and a spring connected to the second lever which opposes the action of the governor.

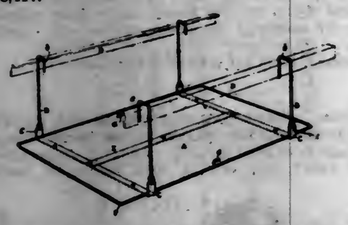
3. In a governing mechanism for turbines, the combination of a low-speed shaft, a governor driven thereby, a collar actuated by the governor, a regulating valve, a hydraulic motor for actuating the valve, a lever pivotally connected to the collar and to a part of the motor and supported thereby, a pilot valve for the motor, a pivotal connection between the motor and pilot valve, and an adjustable yielding means acting on the governor through the lever for changing the speed of the turbine.

4. In a governing mechanism for turbines, the combination of a regulating valve, a speed governor controlling the action of the valve, and a device acting on the governor comprising opposed springs and an adjustable abutment between the springs for changing the effective action of the governor on the valve.

5. In a governing mechanism for turbines, the combination of a regulating valve, a speed governor controlling the action of the valve, a low-speed shaft for driving the governor, a casing for the shaft, a bracket mounted on the casing, springs for adjusting the effective action of the governor on the valve, an abutment mounted in the bracket and guided thereby which is situated between the springs, and a screw-threaded means also carried by the bracket for changing the position of the abutment.

[Claims 6 to 13 not printed in the Gazette.]

957,890. SHELF FOR BEDSTEADS. ANTON KRBJCI, Leavenworth, Kans. Filed Jan. 17, 1910. Serial No. 538,417.

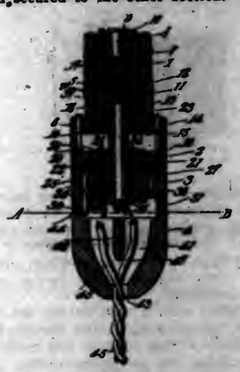


A hanging shelf for bed-steads, comprising, in combination, a sheet metal body, spaced transverse brace members, a middle longitudinal brace member adjoining said transverse brace members, upturned ends formed on said transverse brace members, and provided with eyes, rods looped at their lower ends into said eyes, and formed at their upper ends with overturned hooks adapted to engage over the side rails of a bed stead, and resilient means for clamping said rods against the body of the shelf.

957,891. ELECTRIC PLUG. REUBEN R. LANG, Iola, Kans. Filed Jan. 25, 1909. Serial No. 474,133.

1. An electric plug comprising two sections axially swiveled together, one section having an axially located terminal counter-sunk therein and the other section having an axial stem of insulating material, a conductor extending axially through the said stem and having its free end provided with a circuit terminal adapted to contact with the counter-sunk terminal of the first named section when the stem is inserted in said countersink.

2. An electric plug comprising two members swiveled together, one member having an axial countersink therein and the other member having a neck and an axial stem of insulating material formed thereon the said stem entering the countersink in the other member, and a ring or collar of insulating material surrounding the neck on one section and secured to the other section.



3. An electric plug comprising a member of insulating material provided with an axial countersink, another member of insulating material having an axial neck and a stem projecting from said neck and adapted to enter the countersink of the first member, a third member of insulating material secured to the first member and inclosing the neck on the second member, and a fourth member of insulating material secured to the second member at the end remote from the neck and stem thereon.

4. An electric plug comprising a member of insulating material provided with an axial countersink having an electric terminal housed therein, another member of insulating material having an axial neck and a stem projecting from said neck and provided with a circuit terminal, said stem being adapted to enter the countersink in the first named member, a third member of insulating material secured to the first member and inclosing the neck on the second member, and a fourth member of insulating material secured to the second member at the end remote from the neck and stem thereon.

5. An electric plug comprising a member of insulating material provided with an axial countersink housing an electric terminal, and also provided with a head carrying an annular conducting plate, and another member of insulating material having a neck formed on it at one end and a stem projecting in axial relation to the neck and adapted to enter the countersink of the first named member, said second named member having two conducting plates on the neck one over-riding the annular conducting plate carried by the first named member, and a circuit terminal on the stem adapted to engage the circuit terminal in the countersink in the first named member.

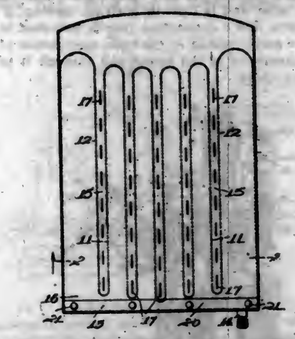
[Claim 6 not printed in the Gazette.]

957,892. MATTRESS. HJALMAR LAURILA, Worcester, Mass. Filed Oct. 12, 1909. Serial No. 522,256.

1. As an article of manufacture, a mattress comprising a plurality of inflated tubes communicating with each other at one end of the mattress, and a flat cover therefor secured to the bottoms of the tubes and movable from them on their upper sides and engaging the tubes only on the tops and bottoms thereof.

2. As an article of manufacture, a mattress comprising a plurality of parallel inflated tubes spaced from each other, and a cover therefor secured to the bottoms of said tubes and resting upon the tops thereof, the top and bottom of said cover being unconnected throughout and the top having openings located between each two adjacent tubes, the bottom of the cover being imperforate.

3. As an article of manufacture, a mattress comprising a plurality of parallel inflated tubes separated from each other by an unobstructed air space extending from one to the next, and having a passage at one end of substantially the same height as the tubes with which the tubes freely communicate, and cover therefor secured to



the bottoms of said tubes, but removable from the tops thereof, the top of the cover being provided with a series of openings located between each two adjacent tubes.

957,893. UNDERGARMENT. GEORGE S. MARVILLE, Riegelsville, Pa., assignor to Augusta Knitting Company, Utica, N. Y. Filed June 29, 1908. Serial No. 440,782.

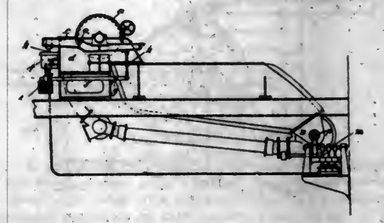


A bifurcated undergarment composed of knit fabric having integral reinforced sections and a portion of which fabric has been divided diagonally, the edges of said diagonally divided portion of the fabric being secured together to form the tubular leg portions of the garment, the waist and hip, or non-bifurcated portion of the garment, comprising tapering gores secured in place in the crotch part of the garment, and the reinforced sections of knitted fabric being disposed to form a reinforced zone which is mainly at the hip portion of the garment.

957,894. BEATING-ENGINE USED IN THE MANUFACTURE OF PAPER. ANDREW MASSON, Putney, England, and WILLIAM M. WALLACE, Denny, Scotland. Filed Sept. 10, 1909. Serial No. 517,126.

1. Improvements in beating engines used in the manufacture of paper, comprising in combination, a frame carrying the roll and being entered on the casing sides, levers linked to one end of said casing, counter-balance weights carried by said levers, a ram acting on the other end of said frame, a hydraulic cylinder containing said ram and a pump, said pump being coupled to the pump circulator and furnishing the pressure for operating the ram, substantially as described and shown, and for the purpose set forth.

2. Improvements in beating engines used in the manufacture of paper, comprising in combination, levers c^2, said levers carrying the roll, a second pair of levers f, counter-balance weights carried by the latter, said levers f being linked to said levers c^2, a third pair of levers s, the latter being linked to the levers c^2, a ram acting on



the former, a cylinder carrying said ram and a cross bar supported by the casing sides, the pressure of the ram causing the levers s to operate in counteraction to the levers f, on the roll carrying levers c^2, substantially as described and shown, and for the purpose set forth.

957,895. POST-BINDER. ROY E. MURPHY, Colorado Springs, Colo., assignor of one-half to Mabel Oliver Crose, Montrose, Colo. Filed Jan. 10, 1908. Serial No. 410,085.



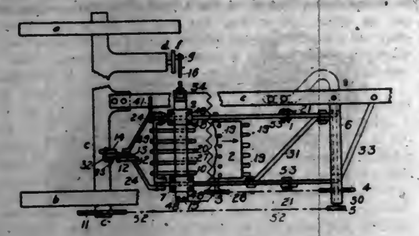
In a temporary binder of the class described, the combination of two sections connected by two binding posts which are rigidly attached to the lower section and adjustably clamped to the upper section, a plate 2, having in one edge near its ends recesses 7, provided to receive the said posts and having on its upper side the two studs 12, each located about ⅓ the distance from one end of said plate to the opposite end thereof, a toggle joint comprising the two arms 3 and 4, each having near its center the slotted holes 11, through which pass the aforesaid studs 12, sliding loosely longitudinally in the said arms 3 and 4, the outer end of the arm 3, being provided with recess 9, encompassed at its front in part by the short lug 19, and at its rear by the long lug 18, which extends beyond the end of the short lug 19, the arm 4, having recess 8 encompassed in front by the short lug 19, and at its rear by the long lug 18, which extends beyond the end of short lug 19, said recesses 8 and 9, being provided to receive posts 5 and 6, when the plate 2 is forced toward said posts, the lugs 19 at the front extremities of the arms 3 and 4 provided to engage posts 5 and 6, when the upper section and plate 2 are being withdrawn from the posts 5 and 6, substantially as set forth and for the purposes specified.

957,896. BEET-TOPPING ATTACHMENT FOR MOWING-MACHINES. ROY E. MURPHY, Colorado Springs, Colo., assignor, by direct and mesne assignments, to The Murphy Beet Topper Company, a Corporation of Colorado. Filed Mar. 22, 1909. Serial No. 484,868.

1. In a beet topping attachment, the race bar 27, having angle arms 18, 18, provided with slotted holes 45, and 46, having rigidly and adjustably attached thereto the upright angle bars 15, and 17, carrying at their lower extremity the sickle blade 10, substantially as set forth and for the purposes specified.

2. In a beet topping attachment of the class described, a serrated sickle blade rigidly attached at each end to

upright angle bars 15, and 17, near the tops of which are bolts attaching them adjustably to down extending angle arms 18, 18, of a race bar 27, all substantially as set forth and for the purposes specified.



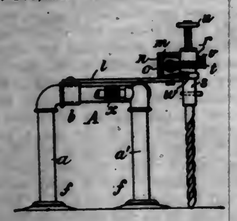
3. In a beet topping machine of the class described, the race bar 27, having down projecting angle arms upon which is suspended the sickle blade 10, means for operating same from the driving gear of a mowing machine, boxings carrying the said race bar 27, and supported on the adjustable frame 1, 1, substantially as set forth and for the purposes specified.

4. In a beet topping attachment for mowing machines, the race bar 27, having the angle arms 18, 18, provided with the slotted holes 45, and 46, for the adjustable and rigid attachment of the angle bars 15, and 17, the angle bars 15 and 17 and having suitable means for vibrating same from the gear mechanism of the mowing machine, in combination with the sickle blade 10, substantially as set forth and as specified.

5. In a vegetable topping attachment for mowing machines, the race bar 27, having the angle arms 18, 18, the angle arms 15, and 17, rigidly attached thereon, the serrated sickle blade 10, with means for operating same, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

957,897. TOOL-FRAME. ALOIS NEUBERT, Astoria, N. Y., assignor to A. Schrader's Son, Incorporated, New York, N. Y., a Corporation of New York. Filed May 15, 1907. Serial No. 373,788.

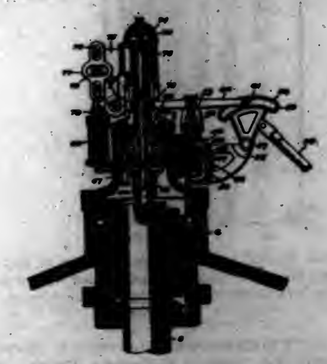


1. A frame for tools having a pair of legs a' and a^2 provided with suction feet, means for carrying a tool on said frame out of line with said legs, and a third leg a out of line with the legs a' and a^2.

2. A frame for tools comprising three lengths of pipe b, b' and b^2, a coupling c uniting them, legs a, a' and a^2 at the ends of said lengths, suction feet on said legs, and means for carrying a tool alongside of said lengths b' and b^2.

957,898. GOVERNING MECHANISM FOR ELASTIC-FLUID TURBINES. PAUL OLIVIER, Paris, France, assignor to General Electric Company, a Corporation of New York. Filed June 27, 1907. Serial No. 381,111.

1. In a governing mechanism for turbines, the combination of a ported valve chest, a controlling valve therein which moves over the ports, a motor for actuating the valve, a speed governor driven by the turbine shaft, a pivoted sector having an eccentric cam slot therein, a lever which is supported by the governor at one end and by the cam slot at the other, a pilot valve that is attached to the lever and is held in position thereby, a casing for the valve, and a connection that is attached to the sector and the motor piston so that the movements of the piston are transmitted to the sector and through it to the lever and pilot valve.



2. In a governing mechanism for turbines, the combination of a valve chest, a controlling valve therein, a fluid actuated motor for moving the valve, a speed governor driven by the turbine shaft, a pivoted sector having an eccentric cam slot therein and forming a part of a follow-up device, a lever supported by the governor at one end and by the cam slot in the sector at the other, a pilot valve for controlling the motor which is attached to the lever intermediate its ends and is held in position thereby, a lever moved by the motor piston, and a connection between the last mentioned lever and the sector for moving the latter to change the effective action of the cam slot on the governor supported lever.

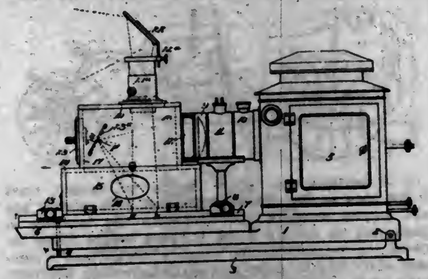
3. In a governing mechanism for turbines, the combination of a valve chest, a controlling valve therein, a fluid actuated motor for moving the valve, a speed governor driven by the turbine shaft, a support adjacent the governor, a pilot valve and its casing mounted on the support, a pivoted sector having an eccentric cam slot therein and forming a part of a follow-up device, a bracket for supporting it, a lever supported by the governor at one end and by the cam slot in the sector at the other and both the governor and the cam slot acting to move the lever, the said lever being pivotally connected to the pilot valve for supporting and moving it, and a connection between the motor and controlling valve and the sector for moving the latter to change the position of the cam slot.

4. In a governing mechanism for turbines, the combination of a valve chest, a controlling valve therein, a fluid actuated motor for moving the valve, a speed governor driven by the turbine shaft, a pivoted sector forming a part of a follow-up device, a lever supported by the governor at one end and the sector at the other, a pilot valve for controlling the motor which is attached to the lever intermediate its ends, an auxiliary spring which acts on the governor end of the lever, and a means uniting the controlling valve and the sector for moving the latter.

5. In a governing mechanism for turbines, the combination of a valve chest, a controlling valve therein, a fluid actuated motor for moving the valve, a speed governor driven by the turbine shaft, a pivoted sector forming a part of a follow-up device, a lever supported by the governor at one end and the sector at the other, a pilot valve for controlling the motor which is attached to the lever, an auxiliary spring, a means for transmitting its effect to the governor actuated lever, a lever moved by the controlling valve, and a connection between the lever and the sector for moving the latter.

[Claims 6 to 8 not printed in the Gazette.]

957,899. PROJECTION APPARATUS. WILLIAM L. PATTERSON, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 5, 1905. Serial No. 272,886.



1. In a projection apparatus, the combination with a condensing system embodying a plurality of lens elements for projecting converging rays, of a reflector arranged to receive the converging rays and to deflect them as diverging rays to one side of the optical axis of the condensing system, and a projecting device arranged on the opposite side of the axis of the condensing system and receiving rays from an object on that side to which the rays are deflected by the reflector.

2. In a projection apparatus, the combination with a condensing system embodying a plurality of lens elements projecting converging rays, of a chamber receiving converging rays from said system, a reflector arranged in the chamber receiving the converging rays and directing them as diverging rays to one side of the chamber, said chamber being provided with an opening in the side opposite to that on which the rays are thrown by the reflector, and a deflector arranged without the chamber in proximity to said opening to receive the rays passed therethrough and deflect them.

3. In a projection apparatus, the combination with a chamber, of a condensing system arranged exteriorly of the chamber and projecting converging rays therein, a deflector arranged within the chamber, receiving the converging rays from the condensing system and deflecting them as diverging rays to one side of the chamber, a projecting device arranged at the opposite side of the chamber to receive the rays from an object at the side to which the rays are deflected by the reflector, and a deflector receiving rays from the projecting device and deflecting them in a direction at an angle to the optical axis of the device.

4. In projecting apparatus, the combination with an illuminating device, and a condenser therefor of a chamber arranged to receive the convergent rays from the illuminating device and having a horizontal support and adapted to receive the object to be illuminated, a deflector located at the focal point of the rays for deflecting the rays from the illuminating device and directing divergent rays upon the object, and a second deflector for directing the rays from the object upon a screen.

5. In projecting apparatus, the combination with a condensing system, of a chamber arranged to receive the rays from the condensing system, an adjustable reflector located at the focus of the said condensing system and reflecting convergent rays received by it from the condensing system, as divergent rays to an object to be illuminated and a projecting lens for projecting an image of the illuminated object.

[Claim 6 not printed in the Gazette.]

957,900. LAWN-RAKE. ADDISON J. PLATT, Sterling, Ill. Filed Nov. 11, 1909. Serial No. 527,537.

1. A lawn rake, comprising a handle; a pair of diverging arms attached thereto, and provided at their outer ends with transverse sleeves; a rake-head, rockingly supported in said sleeves, and having a plurality of teeth; a slot in one of said sleeves, extending transversely of the rake-head; a lug, fixed in said rake-head, and engaged by said slot; and means for slidably supporting said rake-head, so as to prevent contact of the rake-teeth with the earth.

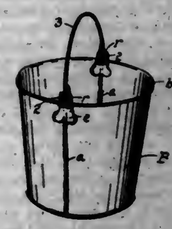


2. A device of the class named, comprising a handle; a pair of diverging arms attached thereto, and provided at their outer ends with transverse sleeves; a rake-head, rockingly supported in said sleeves, a slot in one of said sleeves, transversely of the rake-head; a lug, fixed in said rake-head, and engaged by said slot; means for adjustably increasing or decreasing the length of said slot, to vary the amount of the rocking movement of said rake-head; and means for slidably supporting said rake-head, so as to prevent contact of the rake-teeth with the earth.

3. In a device of the class named, a rake-head, having a plurality of teeth, and provided with supports at its ends; carrying wheels, secured to said supports, so as to permit a rocking movement of the rake-head; adjustable means for raising or lowering said head; a handle; a pair of arms, attached to said handle, and provided with sleeves loosely encircling said rake-head; a slot in one of said sleeves; a pin in said rake-head, engaged by said slot, whereby the rocking movement of said rake-head is limited; and a plate, supported conveniently to said sleeve, provided with a tongue adapted to enter said slot, said plate being adjustable with reference to said slot, so as to increase or diminish the length thereof.

4. In a device of the class named, a handle; a sleeve supported thereby, and provided with a longitudinal slot; a rake-head, having a plurality of teeth, loosely held in said sleeve, and provided with a lug, engaged by said slot, limiting the rocking movement of said rake-head; and a plate, supported conveniently to said sleeve; having a tongue adapted to enter said slot, and adjustable with reference thereto.

957,901. SHEET-METAL VESSEL. WILLIAM J. REUTER, St. Louis, Mo. Filed Dec. 17, 1909. Serial No. 533,588.



1. A vessel provided with diametrically disposed openings contiguous and parallel to the upper edge of the vessel, clips inserted through said openings and folded about and projecting above the edge of the vessel, and a bail having its ends passed through the clips and secured thereto.

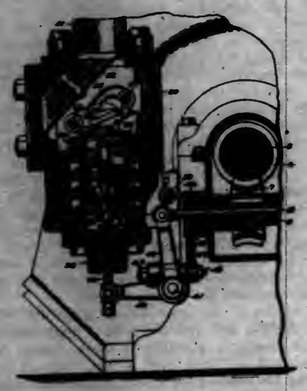
2. A sheet metal vessel provided with an upper stiffening bead, and having diametrically opposite slots cut in the sides immediately under and parallel to the bead, clips passed through the slots and folded about and projecting above the head, and a bail having its ends coupled to the clips.

3. A sheet metal vessel provided with an upper stiffening bead, and having diametrically opposite slots cut in

the sides immediately under and parallel to the bead, clips passed through the slots and folded about and projecting above the bead and doubled, the doubled ends being provided with registering openings for the passage of the ends of a bail, and having a stiffening rib formed about said registering openings.

4. A sheet metal vessel having sides formed of two sections seamed at points diametrically opposite one another and having embossed lobes at the upper ends of the seams, a stiffening bead at the upper edge of the vessel, a pair of clips inserted through openings cut lengthwise of the bead between the lobes and bead and folded about the bead, and a bail having its ends hinged to the clips above the bead.

957,902. GOVERNING MECHANISM FOR TURBINES. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Dec. 14, 1906. Serial No. 347,761.



1. In a governing mechanism, the combination of a valve, a governor for controlling the valve, a lever, means connecting the lever to the governor and to the valve for transmitting motion from said governor to said valve, a pivot for the lever, and a device for oscillating the pivot about an axis at an angle to the axis of said pivot to thereby vibrate the valve and overcome its static friction.

2. In a governing mechanism, the combination of a valve, a governor, a mechanical connection between the governor and the valve for transmitting movements of the former to the latter, said connection including a pivoted member, and a means acting to constantly vibrate the pivot of said member about an axis at an angle to the axis of said pivot independently of the positions assumed by the governor for moving the valve.

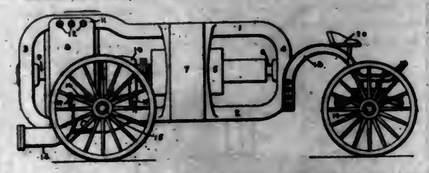
3. In a governing mechanism, the combination of a valve, a speed governor for actuating the valve, a connection between the governor and the valve including a lever, a fulcrum for the lever, and means for constantly vibrating the fulcrum about an axis at right angles to the axis of said fulcrum.

4. In a governing mechanism, the combination of a valve, a speed governor for actuating the valve, a connection between the governor and valve including a shaft having levers mounted thereon and connected to the valve and governor, and a means for vibrating the shaft about an axis at an angle to the axis of said shaft.

5. In a governing mechanism, the combination of a valve, a governor, a connection between the governor and valve for moving the latter, including a rock-shaft, a movable support for the shaft having its axis at an angle to that of the shaft, and a means for moving the support about its axis.

[Claims 6 to 12 not printed in the Gazette.]

957,903. PORTABLE FIRE-ENGINE. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 4, 1908. Serial No. 451,710.



1. A portable fire engine having an upright truss frame open at its sides and provided with parallel top and bottom members and connecting end members, a pump and its driving motor arranged on the frame between the top and bottom members thereof, and a common shaft for the pump and motor extending longitudinally of the frame and journaled in the end members of said frame.

2. A portable fire engine having a vertically arranged frame provided with upper and lower longitudinal members and connecting end members, a rotary pump mounted within the frame adjacent one end thereof, a motor mounted within the frame adjacent the other end of said frame, a common shaft for the pump and motor extending longitudinally of the frame, and bearings for the shaft arranged in the end members of the frame.

3. A portable fire engine having a vertically arranged frame provided with upper and lower longitudinal members and connecting end members, the depth of the frame being greater than its width, a motor mounted within the frame adjacent one end thereof, a rotary pump mounted within the frame adjacent the other end of said frame, a bearing supported on the frame between the pump and the motor, a shaft for the motor having one end mounted in the adjacent end member of the frame, a shaft for the pump that is arranged in alinement with the motor shaft and mounted in said bearing and the other end of the member of the frame, and a coupling between the motor and pump shafts.

4. A portable fire engine having an open-sided, vertically arranged rectangular frame provided with integral longitudinal members and connecting end members, the depth of the frame being greater than its width, a shaft centrally arranged within the frame and mounted in bearings carried by the end members thereof, a motor for driving the shaft which is mounted within the front portion of the frame, a rotary pump mounted within the rear portion of the frame and driven by the shaft, and running gear on which the frame is mounted.

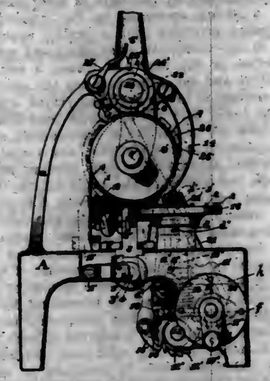
5. A portable fire engine having an open-sided, upright, rectangular frame provided with a circular ring transverse thereto at a point intermediate its end members, an electric motor having its rotor concentric with and arranged within said ring and its shaft running lengthwise of the frame, the field poles of the motor being carried by the ring, and a rotary pump arranged on the frame in alinement with the motor to be actuated thereby.

957,904. MACHINE FOR MAKING TYPES AND TYPE-BARS. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of Arizona. Filed Aug. 7, 1902. Serial No. 118,760.

1. The combination of a series of molds; a series of rammers severally correlating the respective molds; mechanism for imparting to a member of one series a plurality of movements at various angles to a correlate member of the other series; and means for imparting to a member of one series a movement advancing toward a correlate member of the other series.

2. The combination of a series of molds; a series of rammers severally correlating the respective molds; mechanism for imparting to a member of one series a

working movement; and means for imparting to a member of one series a plurality of movements advancing toward a correlate member of the other series.



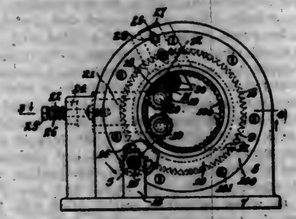
3. The combination of a series of molds; a series of rammers severally correlating the respective molds; mechanism for imparting to a member of one series a plurality of movements at various angles to a correlate member of the other series; and means for imparting to a member of one series a plurality of movements advancing toward a correlate member of the other series.

4. The combination of a plurality of molds; a mold-carrier; a plurality of rammers; a rammer carrier; means for imparting to one of said carriers a plurality of movements at various angles to the other carrier; and means for causing a rammer and a mold to co-act impressively.

5. The combination of a mold; a rammer; mechanism for imparting to one of said members a working movement; and means operatable by said mechanism for imparting to one of said members an advancing movement.

[Claims 6 to 114 not printed in the Gazette.]

957,905. COILING AND FEED MECHANISM. FRANCIS H. RICHARDS, Hartford, Conn. Filed June 15, 1909. Serial No. 502,205.



1. In a coiling machine the combination with coiling means, of a feed roll having an inner circumferential stock engaging face and a feed roll having an outer circumferential stock engaging face, said rolls being located for feeding the stock directly to the coiling means.

2. In a coiling machine the combination with coiling means, of two rotating members located one within the other and whose axes of rotation are eccentric one to the other, each of said members being provided with a continuous circumferential working face, said faces forming a working pass at their arc of nearest approach one to the other, and located for feeding the stock directly to the coiling means.

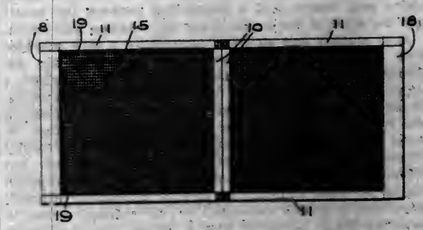
3. A coiling mechanism, comprising a feed embodying two rotating members located one within the other and whose axes of rotation are eccentric one to the other, each of said members being provided with a continuous circumferential working face, said faces forming a working pass at their arc of nearest approach one to the other, and a coiling die located adjacent said working pass in the line of stock feed movement.

4. The combination with an internal-faced roll, of a roll mounted within and coöperative with the internal-faced roll and forming a working pass for gripping the stock and forcing the same forward, means for rotating said rolls at the same surface speed, a circumferentially closed coiling die having an open sided portion located adjacent to the working pass of said rolls and in the line of stock feed movement therefrom.

5. The combination with a coiling die, of a feed therefor comprising two members located one within the other and whose axes are eccentric one to the other, a working face upon the inner portion of the outer member and a working face upon the outer portion of the inner member, the two faces coöperating together to form a pass adjacent said die at a point which is in line with the axes of the two members and on the sides of the axes where the working surfaces of the two members are in the closest relation, the working portions of the faces which form the pass having the same relative movement with respect to the axis of one of the members, and means for guiding a stock rod into the said die.

[Claims 6 to 16 not printed in the Gazette.]

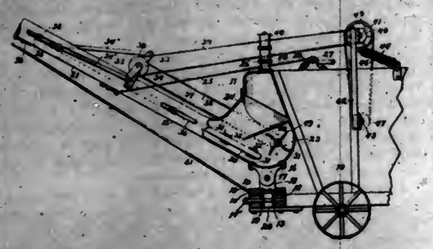
957,906. WINDOW-SCREEN. PHILIP RIED, Lumberton, N. J. Filed Aug. 25, 1909. Serial No. 514,614.



1. A screen of the class described including opposite hinged sections, each of said sections including spaced horizontal members having notches formed on their inner edges, said members having their outer ends bifurcated to present registering guideways, an adjustable end piece disposed in the guideways and extending between the parallel members, a connecting strip attached to the parallel members, and a spring member carried by the adjustable member and adapted to engage the notches to hold the adjustable member at various points in its movement, said spring being adapted to engage the connecting strip to check movement of the adjustable piece at the outer limit of its movement.

2. A device of the class described including hinged sections, each of said sections including inner vertical members and spaced horizontal members carried thereby, a connecting strip carried between the horizontal members at their outer extremities, screen material secured to the connecting strip and adjacent horizontal members and respective vertical members, said horizontal members each being provided with a longitudinally extending guideway, an adjustable piece disposed in said guideways for movement longitudinally outward of the frame, said connecting piece extending flush with the outer edges of the horizontal members, and having a portion lying in close juxtaposition with the body portion of the connecting strip, said horizontal members having a plurality of longitudinally spaced notches formed on their inner edges, and an L-shaped spring secured to the inner edge of the adjustable member and adapted to detachably engage in any one of the notches to hold the adjusting member at various points in its movement.

957,907. STRAW STACKER AND ELEVATOR. AUGUST ROSENTHAL, West Allis, Wis. Filed May 29, 1908. Serial No. 435,610.



1. A stacker and elevator, comprising a tube, a supporting frame, a sliding block mounted on said frame, a block revolubly mounted in said sliding block and to which the tube is pivoted, reciprocating bars positioned within said tube, material engaging fingers pivotally connected to said bars, pins connected to said bars and extending through slots provided in the tube, connecting bars connected to said pins, cranked means for reciprocating the bars in alternately opposite directions, a pulley connected to the cranked means, a swinging frame provided with a pulley, spools mounted above and in approximately axial alinement with the pivot of the revoluble block, a belt connected to both pulleys and extending between the spools, a yielding means connected to the swinging frame, a beater positioned in the lower part of the tube, an apron above said beater, and a connection between the beater and the shaft of the double crank for rotating said beater.

2. A stacker and elevator, comprising a tube provided with a circular opening constructed to overlap the discharge spout of the machine to which it is connected, a supporting frame for said tube, a pivotal connection between the tube and the frame positioned medially beneath the circular opening of the tube, reciprocating bars located within said tube, material engaging fingers pivotally connected to said bars, pins connected to said bars and extending through slots provided in the tube, cranked means for reciprocating the bars in alternately opposite directions, a pulley connected to the cranked means, a swinging frame provided with a pulley, spools mounted above and in approximately axial alinement with the pivotal connection of the tube and frame, a belt connected to both pulleys and extending between the spools, a yielding means connected to the swinging frame, a beater positioned in the lower part of the tube, a connection between the beater and the double crank for rotating said beater.

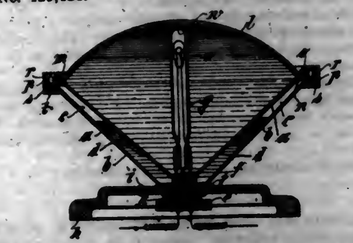
3. A stacker and elevator, comprising a tube provided with a circular opening constructed to overlap the discharge spout of the machine to which it is connected, a supporting frame for said tube, a pivotal connection between the tube and the frame positioned medially beneath the circular opening of the tube, reciprocating bars located within said tube, material engaging fingers pivotally connected to said bars, pins connected to said bars and extending through slots provided in the tube, cranked means for reciprocating the bars in alternately opposite directions, a pulley connected to the cranked means, a swinging frame provided with a pulley, spools mounted above and in approximately axial alinement with the pivotal connection of the tube and frame, a belt connected to both pulleys and extending between the spools, a yielding means connected to the swinging frame, a beater positioned in the lower part of the tube, a pulley fixed on the shaft of the beater, a pulley connected to the cranked means, and a belt connecting both pulleys.

4. A stacker and elevator, comprising a tube provided with a circular opening constructed to overlap the discharge spout of the machine to which it is connected, a supporting frame for said tube, a pivotal connection between the tube and the frame positioned medially beneath the circular opening of the tube, reciprocating bars located within said tube, material engaging fingers pivotally connected to said bars, pins connected to said bars and extending through slots provided in the tube, cranked means for reciprocating the bars in alternately opposite directions, a pulley connected to the cranked means, a swinging frame provided with a pulley, spools mounted above and in approximately axial alinement with the pivotal connection of the tube and frame, a belt connected to both pulleys and extending between the spools, a yielding means connected to the swinging frame, a beater positioned in the lower part of the tube, a connection between the beater and the double crank for rotating said beater, a windlass mounted on the machine, and a rope connected to the tube and the windlass and passing between two of the spools for adjusting the angle of the tube.

5. A stacker and elevator, comprising a tube, a reciprocating bar associated with said tube and provided with means for engaging and moving material within said tube, means for reciprocating the bar, means for positively moving material into the path of movement of the reciprocating bar, a flexible extensible tube formed of short tube sections pivoted together and of increasing diameters toward the discharge end thereof connected to said first mentioned tube, flexible bars connected to each short tube section, and means coacting with said flexible bars for holding the extensible tube in positions of adjustment.

[Claims 6 to 11 not printed in the Gazette.]

957,908. APPARATUS FOR MEASURING AND REGISTERING THE OSCILLATIONS OF VIBRATING BODIES, SUCH AS MARINE VESSELS, AIRSHIPS, RAILWAY-VEHICLES, AND THE LIKE. PAUL ROSS, Halberstadt, Germany. Filed Apr. 27, 1908. Serial No. 429,423.

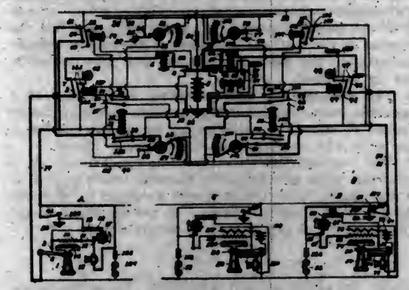


1. In an apparatus for measuring and registering the oscillations of vibrating bodies, in combination, an inner receptacle wholly filled with liquid and provided with openings, an outer receptacle partly filled with liquid so as to leave an empty space between both receptacles, a closing stopper for said inner receptacle, a buoyancy pendulum arranged in said inner receptacle, a joint to movably attach said pendulum at one end to said stopper, and a glass bonnet arranged on said inner receptacle and provided with a graduation, all for the purpose set forth.

2. In an apparatus for measuring and registering the oscillations of vibrating bodies, in combination, an inner receptacle wholly filled with liquid and provided with openings, an outer receptacle partly filled with liquid so as to leave an empty space between both receptacles, a closing stopper for said inner receptacle, a buoyancy pendulum arranged in said inner receptacle and consisting of blind glass having a glaring pole, a joint to movably attach said pendulum at one end to said stopper, an illuminating source in said pendulum, and a glass bonnet arranged on said inner receptacle and provided with a graduation, all for the purpose set forth.

957,909. AUTOPHONE SYSTEM. ALTON E. STEVENS, Fall River, Mass., assignor of three-fifths to Samuel H. Couch, Wollaston, Mass. Filed Nov. 6, 1908. Serial No. 461,304.

1. In an automatic telephone system, telephone lines; automatic means whereby a calling line may become electrically associated with a called line for the purpose of communication; means whereby the said calling line and called line may become electrically associated with a called third line for the purpose of inter-communication; and means whereby electrical current from a central source may be supplied to the transmitters in multiple, at the connected stations.



2. In an automatic telephone system, telephone lines; automatic means whereby a calling line may become electrically associated with a called line for the purpose of communication; means whereby the said calling and called lines may become electrically associated with a third line for the purpose of inter-communication, and means whereby electrical current from a central source may be supplied to the transmitters at the connected stations; and automatic means for each line to restore its operated apparatus to normal position.

3. In an automatic telephone system, telephone lines; automatic means whereby a calling line may become electrically associated with a called line for the purpose of communication; means whereby the said calling and called lines may become electrically associated with a third line for the purpose of inter-communication, and means whereby electrical current from a central source may be supplied to the transmitters at the connected stations; and means whereby said lines may be made inaccessible to other lines.

4. In an automatic telephone system, telephone lines; automatic means whereby a calling line may become electrically associated with a called line for the purpose of communication; means whereby the said calling and called lines may become electrically associated with a third line for the purpose of inter-communication, and means whereby electrical current from a central source may be supplied to the transmitters at the connected stations; automatic means for restoring the system to normal position; and means whereby said lines are inaccessible to other lines.

5. In an automatic telephone system, telephone lines; automatic means whereby a calling line may become electrically associated with a called line for the purpose of communication; means whereby the said calling and called lines may become electrically associated with a third line for the purpose of inter-communication; means whereby electrical current may be supplied to the transmitters at the connected stations; and automatic means for restoring the system to normal position.

[Claims 6 to 38 not printed in the Gazette.]

957,910. HEAD-REST FOR BURIAL-CASKETS. BERNER STEVENS, New Hartford, N. Y. Filed Mar. 19, 1909. Serial No. 484,350.

1. In a head rest for burial caskets the combination with a head board of means for hinging one edge of the board to the casket bottom, a prop hinged to the underside of the head board, a spring for throwing the prop into folded position, and a cord for operating the prop against the tension of the spring, substantially as set forth.

2. In a head rest for burial caskets the combination with a head board of means including a rod for hinging one edge of the board to the casket bottom said rod having spurs for driving into the bottom of the casket, a prop



hinged to the underside of the head board, a spring for throwing the prop into folding position and a cord for operating the prop against the tension of the spring, substantially as set forth.

957,911. RAIL-BOND. CHARLES R. STURDEVANT, Worcester, Mass., assignor to The American Steel and Wire Company of New Jersey, Worcester, Mass., a Corporation of New Jersey. Filed Aug. 23, 1906. Serial No. 331,711.



1. A rail having a bottomed hole therein with an annular groove or recess in its wall for receiving a terminal stud, the bottom wall of the hole forming a backing, or anvil surface for the end of the stud, and also excluding moisture therefrom, substantially as described.

2. A rail having a bottomed hole therein with an annular groove or recess in the wall of the hole, and a terminal stud expanded within the groove of the hole, the bottom wall of the hole protecting the stud and also forming an anvil or backing therefor, substantially as described.

3. A rail having a bottomed hole with an annular groove in its wall near the outer end of the hole, in combination with a terminal stud expanded in the hole and within the annular recess, the wall of the hole being in contact with the surface of the stud at its inner end, substantially as described.

4. In a rail bond, the combination with a rail having a bottomed hole therein, formed with an annular groove in its wall near its outer end, of a terminal stud seated in the said hole and having a portion thereof expanded into the annular groove and forming combined sealing and anchoring means for the stud; substantially as described.

5. In a device of the class described, the combination of a rail provided with a cavity having an end wall, the diameter of the cavity being larger intermediate its ends, a bond, and a projection carried thereby, said projection entering into the cavity and upset therein to substantially conform to the contour of said cavity.

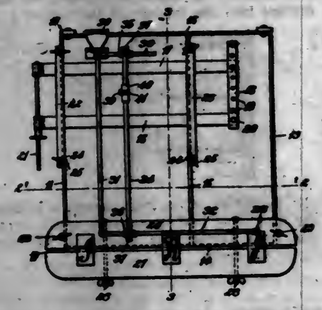
[Claims 6 to 10 not printed in the Gazette.]

957,912. ENGRAVING-MACHINE. GEORGE T. SUMMERS, Russellville, Ky. Filed Aug. 19, 1909. Serial No. 513,659.

1. In a device of the character described, a supporting frame, a work support comprising parallel clamping bars, an adjustable pivotal connection at one end of said bars, an adjustable screw connection at their opposite ends, and means detachably engaging portions of said frame to removably clamp said work support thereon in selected position.

2. In a device of the character described, a supporting

frame, a clamp thereon comprising parallel clamping bars and means connecting the same for relative movement,



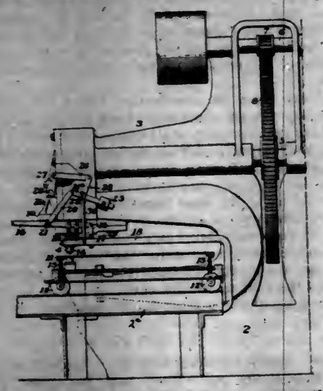
and means detachably engaging portions of said frame to removably hold said clamp in selected position.

957,913. DENTURE. SAMUEL G. SUPPLEE, New York, N. Y. Filed Dec. 12, 1907. Serial No. 406,156.



In a denture, two saddles bearing artificial teeth and arranged to be removably anchored to two abutments on opposite sides of the lower jaw, a round bar shaped to the contour of the inner side of the arch of the lower jaw and arranged when in place slightly away from the gum tissues and below the margin of the gum, and including metallic abutment engaging clips, said metallic bar being directly connected to said metallic clips.

957,914. PUNCHING-MACHINE. JOHN H. THOMPSON, Cheswick, Pa., assignor to American Bridge Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Jan. 21, 1908. Serial No. 411,892.



1. In a machine of the character described, the combination of a movable templet and work support, an index pin arranged to coöperate with the templet, a tool acting on the work, a device for throwing the tool into and out of operation, and a system of link and lever connections between the index pin and the said device; substantially as described.

2. In a machine of the character described, the combination of a movable templet and work support, a lever, an index pin carried by said lever and arranged to cooperate with the templet, a tool for acting on the work, a device arranged to effect the starting and stopping of the tool, a counterweighted lever connected to said device, and a connection between said lever and the lever which carries the index pin; substantially as described.

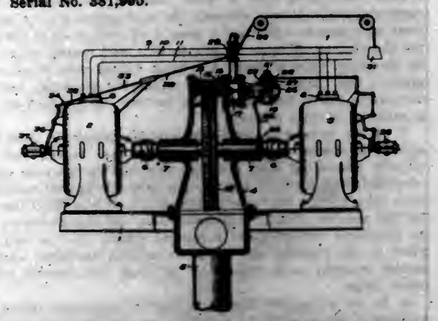
3. In a machine of the character described, the combination of a movable templet and work support, an index pin arranged to coöperate with the templet, a tool for acting on the work, a movable gag plate for controlling the operation of the tool, and a system of mechanical connections between the index pin and the gag plate; substantially as described.

4. The combination with punching mechanism, of a supporting frame and manually operable centering means arranged to effect the operation of the punch simultaneously with the operation of the centering means.

5. The combination with punching mechanism, of a supporting frame and manually operable centering means, and mechanism connected therewith arranged to effect the operation of the punch dependent on the centering means.

[Claims 6 to 12 not printed in the Gazette.]

957,915. ELASTIC-FLUID TURBINE. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 3, 1907. Serial No. 381,995.



1. In an elastic fluid turbine, the combination of bucket-wheels mounted to revolve in opposite directions and receive motive fluid one from the other, nozzles arranged on opposite sides of the wheels to discharge fluid through the wheels in opposite directions to equalize the torque thereof, electrical gearing for causing the proper speed relation of the wheels to be maintained, and a governing mechanism that is common to both wheels.

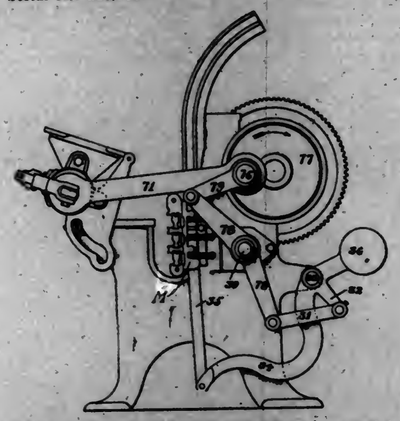
2. In an elastic fluid turbine, the combination of bucket-wheels mounted to revolve in opposite directions and receive motive fluid one from the other, nozzles disposed on opposite sides of the wheels and arranged in sets, a valve-chest, passages extending from the valve-chest to the sets of nozzles, valves for varying the passage of fluid therethrough, and an actuating mechanism common to the valves.

3. In an elastic fluid turbine, the combination of bucket-wheels mounted to revolve in opposite directions and receive motive fluid one from the other, nozzles disposed on opposite sides of the wheel and arranged in sets, a valve-chest, passages extending from the valve-chest to the sets of nozzles, valves for varying the passage of fluid therethrough, an actuating mechanism common to the valves, and electrical gearing for causing the proper speed-relation of the wheels to be maintained.

4. In an elastic fluid turbine, the combination of bucket-wheels mounted to revolve in opposite directions and receive motive fluid one from the other, nozzles disposed on opposite sides of the wheel and arranged in sets, a valve-chest located on one side of the wheels, passages extending from the valve-chest to the sets of nozzles, valves for varying the passage of fluid therethrough, an actuating

mechanism common to the valves, electrical gearing for causing the proper speed-relation of the wheels to be maintained, and a governor responsive to the speed of the electrically-geared wheels for shutting off the supply of motive fluid when the speed becomes abnormal.

957,916. PRESS. JOHN THOMSON, New York, N. Y., assignor to John Thomson Press Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 1, 1908. Serial No. 446,866.



1. In a press, the combination with the platen and form-inking carriage, of a crank, a connecting rod connecting the platen and the crank, a lever one arm of which is on the same side of the crank as the platen, a link connecting the crank and said lever, and connections between the other arm of said lever and the carriage.

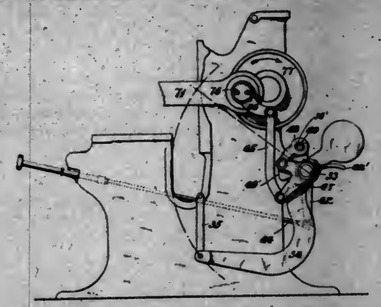
2. In a press, the combination with the platen and form-inking carriage, of a crank, a connecting rod connected thereto through which the impression is effected, a lever through which the movements of the carriage are produced, said lever being upon the same side of the crank as the platen, a second lever underneath the first lever and operatively connected with the carriage, a link connecting one end of the first named lever with the crank, and another link connecting the other end of the first named lever with the second named lever.

3. In a press, the combination with the platen and form-inking carriage, of a crank, a connecting rod connecting the platen and the crank, a substantially vertical lever through which the movements of the carriage are effected, the upper end of said lever being upon the same side of the crank as the platen, a link connecting the crank and said upper end of the lever, and connections between the lower end of the lever and the carriage.

957,917. PRINTING-PRESS. JOHN THOMSON, New York, N. Y., assignor to John Thomson Press Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 17, 1908. Serial No. 448,765.

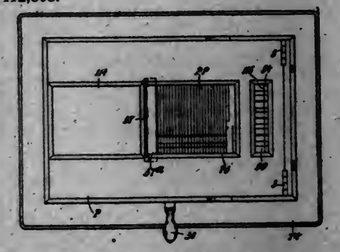
1. In a printing press, the combination with the form-inking carriage, of means to operate the same including a crank, a link operatively connected thereto, a weighted lever, and a connecting piece consisting of a bell-crank lever one arm of which is pivoted to the link and the other arm of which has a free link through which it is adapted to be connected to the weighted lever.

2. In a printing press, the combination with the form-inking carriage, of a weighted lever included in its actuating mechanism, a connecting piece consisting of a bell-crank lever pivoted along the same center line as the weighted lever and having on one arm a free link provided with a pin, the said weighted lever having a curved surface and a recess at the end of the surface for the pin to ride upon and engage in respectively, means to actuate the carriage through the bell-crank lever, and means to check the normal movement of the pin at a certain point.



3. In a printing press, the combination of actuating mechanism for the form-inking carriage including a weighted lever, a pivot therefor, a bell-crank lever mounted upon said pivot and having a weighted link pivoted to one arm, a curved surface and a recess at the end thereof formed upon said weighted lever, a pin upon the link adapted to travel upon said surface and engage in said recess respectively, means to reciprocate said bell-crank lever in order to actuate the carriage, and a third lever mounted upon said pivot and having a shoe adapted to check the normal movement of the pin at a certain point to disengage it from the recess in the weighted lever and cause it to ride upon the curved surface.

957,918. CASH-REGISTER. FREDERICK H. TREVELLIAN, Wellington, New Zealand. Filed Jan. 27, 1908. Serial No. 412,808.



1. In a cash register provided with a drawer and with three traveling bands of registering paper, two of which are adapted to receive duplicate copies of invoices, the third being adapted to receive the total thereof, rollers for supporting the said bands and permitting their endwise travel, in combination with mechanism for causing such motion of the two bands first mentioned, mechanism distinct from said drawer for shifting one of said belts, a pawl and ratchet for operating one of the rollers to feed the third band and means operated by said band moving mechanism for automatically actuating said pawl and ratchet substantially as set forth.

2. A pair of rollers having bands 21 and 22 of paper wound thereon, in combination with a receiving roller for band 21, means for guiding band 22 out of the machine, a tension roller arranged to grip said bands against said receiving roller, a roller 38 in contact with the latter two rollers, a spring forcing said receiving roller against roller 38 and means for preventing roller 38 from turning backward substantially as described.

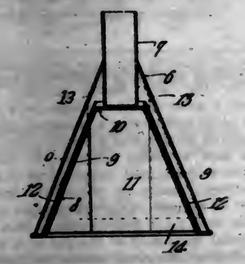
3. In a cash register, the combination of pivoted brackets, a roller mounted in said brackets, pivoted plates, and screws carried by said brackets in engagement with said pivoted plates, substantially as described.

4. In a cash register, the combination of a feed roller, a roller in engagement therewith for receiving bands of paper, pivoted arms carrying said receiving roller, plates provided with slots for guiding said receiving roller, and resilient means for maintaining a uniform pressure between said two rollers irrespective of the thickness of the paper coil wound on said receiving roller, substantially as described.

5. In a cash register, the combination of a bolt, a spring for maintaining it in normal position, a wheel, and a cam and a stop extending from the face of said wheel for successively engaging said bolt, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

957,919. CLOTHES-POUNDER. JAMES S. TURNER, Caddo Mills, Tex., and JOHN L. CAMPBELL, Caddo, Okla. Filed June 1, 1909. Serial No. 499,831.

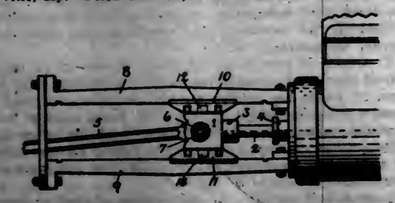


1. A clothes pounder comprising a hollow body having a handle socket projecting thereinto through the upper end thereof, a hollow plunger mounted to reciprocate in said body, a strip secured at its end to opposite sides of the wall of the hollow body and at the lower edges thereof and secured at its intermediate portion to the lower end of the handle socket, the lower edge of the body of the plunger resting normally upon the said strip.

2. A clothes pounder comprising a hollow body, a plunger mounted to reciprocate in said body and provided with air pockets, and a strip secured at its end to the lower edge of the body and having its intermediate portion projecting up into the body, the said strip extending between the pockets of the plunger the latter resting at its lower edge normally upon the strip.

3. A clothes pounder comprising a hollow body, a plunger mounted to reciprocate in said body and provided with air pockets the said body having a handle socket projecting downwardly thereinto through its upper end, a strip secured at its lower end to the lower edge of the wall of the body at opposite points and having its intermediate portion projecting up into the body and secured to the lower end of the handle socket, the said strip projecting between the pockets of the plunger and the said plunger resting at its lower edge normally upon the strip.

957,920. CROSS-HEAD. WILLIAM J. WASSMANN, Louisville, Ky. Filed Jan. 19, 1910. Serial No. 538,836.

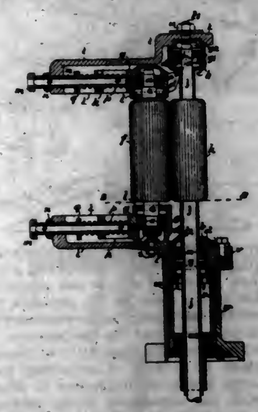


1. In a cross-head, the combination of a main cross-head member, a gib, a guide, a trunnion on said cross-head member, said gib being formed with a corresponding receptacle for said trunnion, and a guiding-stud on said cross-head member, and said gib being formed with a receptacle for said guiding-stud.

2. In a cross-head, the combination of a main cross-head member, a gib, a slide, a trunnion mounted on said cross-head member, said gib being formed with a bearing-receptacle for said trunnion, a stud mounted on said cross-head member, said gib being formed with a receptacle for said stud, and a spring mounted over said stud.

3. In a cross-head, the combination of a main cross-head member, a gib, a slide, a trunnion mounted on said cross-head member, said gib being formed with a bearing-receptacle for said trunnion, a stud mounted on said cross-head member, said gib being formed with a laterally elongated receptacle for said stud, and a spring mounted over said stud.

957,921. SPINDLE-SUPPORT FOR ROLLERS FOR COMBING-MACHINES. ALFRED R. WHITEHEAD, Headingley, Leeds, England. Filed June 24, 1909. Serial No. 504,179.



1. In combination with the pressing roller and the drawing off roller of a combing machine and their spindles, a pair of bearings for the ends of the pressing roller spindle, housings inclosing said bearings and adapted to exclude dust therefrom and means for pressing said housings and the parts moving therewith and inclosed thereby toward the drawing off roller.

2. In combination with the pressing roller and the drawing off roller of a combing machine and their spindles, bearings for the ends of the pressing roller spindle, housings inclosing said bearings, springs for pressing said housings toward the drawing off roller and means for adjusting the pressure of said springs.

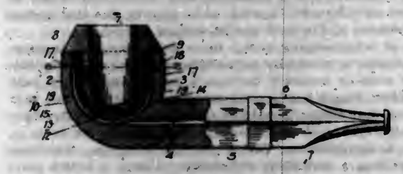
3. In combination with the pressing roller and the drawing off roller of a combing machine and their spindles, bearings for the ends of the pressing roller spindles, housings containing said bearings, slides carrying said housings, springs acting on said slides, brackets guiding said slides and screws for adjusting the pressure of said springs.

4. In combination with a pair of drawing rollers of a combing machine a ball bearing for the spindle of one of them, a sliding housing containing said ball bearing, means for supporting and guiding said housing and a spring, adjustable in tension, acting on said housing substantially as set forth.

5. In combination with the spindle of the pressing roller of a combing machine, a ball bearing, a sliding piece, a housing carried by said piece and inclosing said bearing recess or housing formed at its inner end a dust excluding cap a pressing spring and a guide bracket, having a boss portion hinged on or about the drawing-off roller spindle, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

957,922. TOBACCO-PIPE. HARRY WILLIS, Denver, Colo. Filed Oct. 27, 1909. Serial No. 524,909.



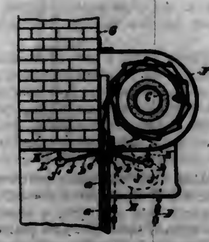
1. In a tobacco pipe, a body portion having a chamber and a therewith communicating duct, a fire-bowl spaced from the wall of said chamber and having a head engaging the upper edge thereof, a packing ring fitted between the inner surface of said chamber and the said bowl, and an absorbent cup conforming with the interior surface of the said chamber and spaced from the exterior surface of the bowl, with its edge engaging the ring, the said cup having in its interior, an exteriorly grooved stud occupying a corresponding opening in the bottom of the bowl, an exterior chamfer and therewith connecting indents in its upper edge, and exterior grooves extending from said chamfer to a common point at the bottom of said cup.

2. In a tobacco pipe, a body portion having a chamber and a therewith communicating duct, a fire-bowl having an air tight connection within said chamber in spaced relation to its wall, and an absorbent cup conforming with the interior surface of the said chamber within the said space, the said cup having in its interior a stud occupying a corresponding opening in the said bowl and provided with exterior grooves, and in its exterior, grooves communicating with the grooves in said stud and with a common point at the bottom of the said cup.

3. In a tobacco pipe, a body portion having a chamber and a therewith communicating duct, a fire-bowl having an air tight connection within said chamber in spaced relation to its wall, and an absorbent cup within the said space and having in its interior, a stud occupying a corresponding opening in the bottom of the bowl and provided with exterior grooves communicating with the said duct.

4. In a tobacco pipe, a body portion having a chamber and a therewith communicating duct, a fire-bowl having an air tight connection within said chamber in spaced relation to its wall, an absorbent cup conforming with the interior surface of the said chamber within said space in spaced relation to the exterior surface of the bowl, the said cup having in its interior, an exteriorly grooved stud, occupying a corresponding opening in the fire-bowl, an exterior chamfer and therewith connected indents in its upper edge, and exterior grooves extending from said chamfer to a common point at the bottom of said cup.

957,923. BAFFLE FOR FIREPROOF SHUTTERS. JAMES G. WILSON, Larchmont, N. Y. Filed Jan. 9, 1909. Serial No. 471,391.



1. In a fire resistant shutter adapted to move into a casing on opening, a fire resistant slat movably attached to supporting means independent of said casing and immediately adjacent to the entrance of said casing, said slat being adapted to substantially close the juncture of said shutter with said casing when said shutter is closed, substantially as and for the purpose described.

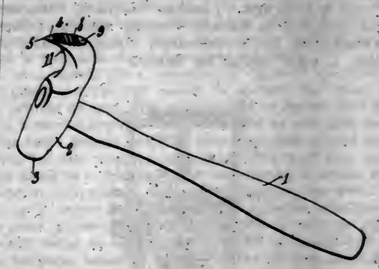
2. In a rolling metallic shutter adapted to move into a casing on opening, a fire resistant slat hingeably attached to supporting means independent of both shutter and casing and immediately adjacent to the entrance of said casing said slat being adapted to substantially close the juncture of said shutter with said casing when said shutter is closed, substantially as and for the purpose described.

3. In combination in a rolling metallic shutter, the shutter coil, a fire resistant casing inclosing said shutter coil and provided with an entrance through which the shutter is adapted to pass, supporting means to which said casing is fixed, and a fire resistant slat hingeably attached to said supporting means immediately adjacent to the entrance of said casing and adapted to substantially close the juncture of said shutter with said casing when said shutter is closed, substantially as and for the purpose described.

4. In combination in a rolling metallic shutter, the shutter coil, a fire resistant casing inclosing said shutter coil and provided with an entrance slot through which the shutter is adapted to pass when operated, supporting means to which the said casing is fixed, a fire resistant slat hingeably attached to said supporting means immediately adjacent to the entrance of said casing, a weight coöperating with said slat and adapted to hold said slat in closed relation to the shutter, and means fusible at a predetermined temperature adapted to retain said slat in normally open position, substantially as and for the purpose described.

5. In combination in a rolling metallic shutter, the shutter coil, a fire resistant casing inclosing said shutter coil and provided with an entrance slot through which the shutter is adapted to pass when operated, supporting means to which said casing is fixed, and a fire resistant slat on each side of the shutter hingedly attached to said supporting means immediately adjacent to the entrance of said casing, said slats being adapted to substantially close the juncture of said shutter with said casing on each of said shutter sides when said shutter is closed, substantially as and for the purpose described.

957,924. TACK HAMMER AND PULLER. SAMUEL L. YOUNG, New Castle, Pa. Filed June 15, 1909. Serial No. 502,300.



A hammer comprising a handle and a transverse head thereon, the head terminating in a pointed prong extended in a direction opposite to the handle and having a rounded outer face, the said outer face being provided with transverse serrations determined by meeting walls, those walls which are disposed toward the extremity of the prong, being located in parallel planes normal to the axis of the handle.

957,925. EYEGLASS-MOUNTING. GUSTAV A. BADER, Rochester, N. Y. Filed June 28, 1909. Serial No. 504,981.



1. In eye-glass mountings, the combination with a frame comprising a bow, lens-clips and nose guard brackets, of nose-guards pivoted to their brackets; means for yieldingly tilting the upper ends of said noseguards toward each other; and stops for limiting the movement of said nose-guards; substantially as shown and described.

2. In eye-glass mountings, the combination with a frame comprising a bow, lens-clips and nose-guard brackets, of nose-guards pivoted to their brackets; springs carried by the frame and adapted, respectively, to engage said nose-guards to tilt them toward each other; and stops for limiting the movement of said nose-guards under the action of said springs; substantially as shown and described.

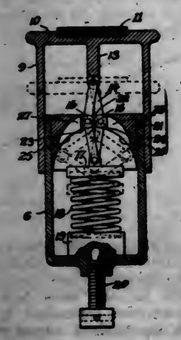
3. In eye-glass mountings, the combination with a frame comprising a bow, lens-clips and nose-guard brackets, of nose-guards pivoted to their frames; springs each attached under tension at one end to the frame and at its other end to one of the nose-guards above its pivotal connection with its bracket; and stops for limiting the movement of said nose-guards under the action of said springs; substantially as shown and described.

4. In eye-glass mountings, the combination with a frame comprising a bow, lens-clips and nose-guard brackets, of nose-guards, having axillary connections with their brackets; and means whereby said nose-guards also rotate at right angles to such connections; substantially as shown and described.

5. In eye-glass mountings, the combination with a frame comprising a bow, lens-clips and nose-guard brackets, of nose-guards, having axillary connections with their brackets; means whereby said nose-guards also rotate at right angles to such connections; means for yieldingly rocking said nose-guards upon one set of said axes; and stops adapted to limit such movement; substantially as shown and described.

[Claims 6 to 14 not printed in the Gazette.]

957,926. COMPENSATING DEVICE FOR BOTTLE-CAPPING MACHINES. LEONARD BARTLETT, Philadelphia, Pa., assignor to Bartlett Capping Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 1, 1909. Serial No. 480,625.



1. A compensating device for a bottle capping machine comprising a bottle platform vertically movable, a spring, toggle levers connecting said platform and spring, means to limit the spread of said levers until said spring has been compressed to a predetermined degree, and means to permit said levers to spread while holding the said spring compressed at the said predetermined degree.

2. A compensating device for a bottle capping machine comprising a vertically adjustable cylinder, a bottle platform slidably mounted thereon, a spring mounted in said cylinder, toggle levers connecting said platform and said spring, and means in said cylinder to automatically regulate the spread of said levers, for the purpose set forth.

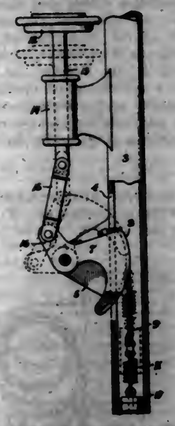
3. A compensating device for bottle capping machines comprising a vertically adjustable cylinder, a bottle platform slidably mounted thereon, a spring mounted within said cylinder, toggle levers connecting said platform with said spring, and a fixed head in said cylinder having vertical walls adapted to prevent the spread of said levers, and having inclined walls adapted to permit said levers to spread while holding the spring at a fixed degree of compression.

4. A compensating device for a bottle capping machine comprising a vertically adjustable cylinder, a bottle platform slidably mounted thereon, a spring in said cylinder, and means to adjust the tension of the same, toggle levers connecting said platform and said spring, a head fixed in said cylinder and having a slot therein with vertical walls of fixed height and outwardly curved walls adjacent thereto, and wheels on said levers adapted to engage said walls, as and for the purpose set forth.

5. A compensating device for a bottle capping machine comprising a cylinder, having a head fixed therein, a bottle platform slidably mounted on said cylinder, a spring mounted in said cylinder, and means to adjust the tension of the same, a pair of toggle levers connecting said platform and said spring, said head having a slotted center with substantially vertical side walls of a predetermined length, and outwardly and downwardly curved walls adjacent thereto, and wheels on said levers adapted to engage said walls, as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

957,927. COMPENSATING DEVICE FOR BOTTLE-CAPPING MACHINES. LEONARD BARTLETT, Philadelphia, Pa., assignor to Bartlett Capping Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 1, 1909. Serial No. 480,626.

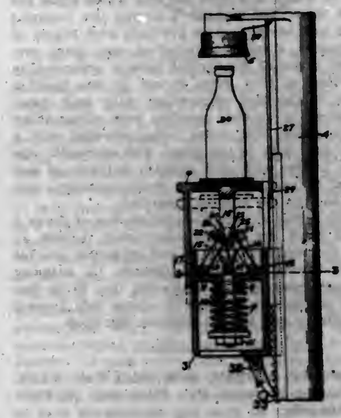


1. In combination with the bottle platform of a bottle capping machine, a bell crank lever pivotally mounted on the standard beneath said platform, a pivotal connection between one arm of said lever and said platform, a weight mounted on the other arm of said lever, and a coil spring mounted between said lever and said weight, for the purpose set forth.

2. In combination with the bottle platform of a bottle capping machine, a bell crank lever pivotally mounted on the standard beneath said platform, a link pivotally connecting one arm of said lever and said platform, the other arm of said lever having a segmental portion, a cable secured to said segmental arm and resting on the curved surface thereof, and a weight mounted on said cable, for the purpose set forth.

3. In combination with a bottle capping machine having a slotted standard, and a movable bottle platform, a bell crank lever pivotally mounted on said standard beneath said bottle platform, a link pivotally connecting said platform and one arm of said lever, the other arm of said lever being segmental in form, a cable mounted on the curved surface thereof which extends within said standard, a weight within said standard secured to said cable, and a coil spring between said cable and weight, as and for the purpose set forth.

957,928. COMPENSATING DEVICE FOR BOTTLE-CAPPING MACHINES. LEONARD BARTLETT, Philadelphia, Pa., assignor to Bartlett Capping Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 1, 1909. Serial No. 487,344.

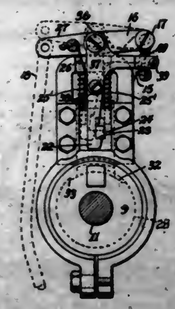


1. The combination with a bottle capping machine of a compensating device comprising a movable bottle platform, an adjustable support for same, two levers pivoted on said support and normally held at an angle thereto whereby the upper ends of said levers are adjacent to each other, a compression spring mounted beneath said support, a shaft mounted therein and carrying a nut adapted to adjust the tension thereof, a connection between each of said levers and said shaft, said bottle platform being supported on the upper ends of said levers and having means to separate said levers during the descent thereof to a predetermined distance, and having means to descend a further distance without further separating said levers.

2. The combination with a bottle capping machine of a compensating device comprising an adjustable support, a movable bottle platform mounted thereon, levers mounted on said support and having their upper ends adjacent, a spring normally holding the ends of said levers against separation, said bottle platform being supported by said levers and having means to separate the ends thereof to a fixed point, and also having means to descend after the levers have been separated a fixed distance without further separating the same.

3. The combination with a bottle capping machine of a compensating device comprising an adjustable support cylindrical in shape, a bottle platform mounted thereon, said support having a fixed partition or head with an opening in the center thereof, a shaft passing through said opening, a compression spring mounted on the lower end of said shaft, two levers hinged to said head and carrying friction wheels on the upper ends thereof which are held adjacent to each other whereby the levers are held inclined to said head, or partition, levers, or links connecting the free ends of said levers with said shaft, and a shaft mounted on the bottle platform and resting on said wheels, said shaft having outwardly and upwardly curved surfaces on the lower end which engage said wheels whereby in the descent of the bottle platform said wheels are forced apart equal in distance to the width of said shaft, and said wheels being adapted to travel on the sides of said shaft.

957,929. CLUTCH FOR CAPPING-MACHINES. LEONARD BARTLETT, Philadelphia, Pa., assignor to Bartlett Capping Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 15, 1909. Serial No. 496,148.



1. A clutch for a periodically operated machine comprising a cam wheel having a groove with a recess therein ending in an abrupt wall forming a stop, a trip plate mounted in said groove and adapted to engage said stop, a sliding block passing through said recess, a fly wheel carrying a stud adapted to engage said sliding block when projected by suitable means when released from said plate, means to raise said plate from said recess, and means to automatically return said plate to said recess.

2. In a clutch for a periodically operated machine, a trip plate, a pivotally mounted lever, an arm pivotally mounted thereon and adapted to engage said plate, and a second lever pivotally mounted on said first lever, and adapted to contact with another point thereon during the operation of said first lever, said second lever being secured to said arm, for the purpose set forth.

3. In a clutch for a periodically operated machine, a trip plate, a lever and means to operate the same, an arm pivoted on said lever and adapted to engage said trip plate, a second lever pivotally mounted on said first lever at the same pivotal point as said arm, said second lever having an arm adapted to contact with said first lever when lifted to a certain height, and having a second arm secured to said pivoted arm, for the purpose set forth.

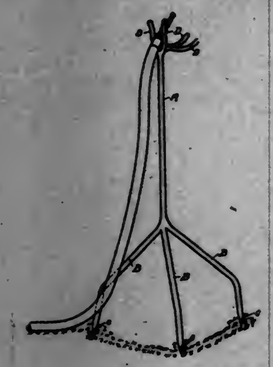
4. In a clutch for a periodically operated machine, a trip plate, a lever pivotally mounted at one end the opposite end being in engagement with an operating rod, an arm pivotally mounted on the center of said lever and having a notch adapted to engage said trip plate, a second lever pivotally mounted on the center of said first lever and having an arm extending away from said operating rod, an adjusting screw mounted in the end of said lever arm adapted to contact with said first named lever when raised to a predetermined height and said second lever having an arm secured to said pivoted arm by a screw, as and for the purpose set forth.

5. In a clutch for a periodically operated machine, a cam wheel having a groove formed therein with a recess formed in the bottom thereof having diagonally-extending

walls, a trip plate having a chamfered edge adapted to move in said groove and engage the wall of said recess, a sliding contact block entering said recess and adapted to engage said plate, a lifting mechanism adapted to lift said trip plate from engagement with the wall of said recess, and an automatic tripping device adapted to release said trip plate, for the purpose set forth.

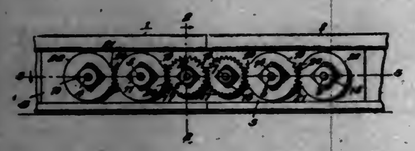
[Claims 6 and 7 not printed in the Gazette.]

957,930. HOSE-HOLDER. TORKILD BORSON, Grayling, Mich. Filed Sept. 17, 1909. Serial No. 518,264.



A hose holder comprising a standard, the standard provided with three legs, each leg being provided with a prong, two pairs of forked arms integral with the standard, one of said pairs being vertical and the other being arranged substantially horizontal, each pair of arms being narrower in the center than at its inner and outer extremities.

957,931. NUT-LOCK. HENRY J. BOND, Pittsburg, Pa. Filed Feb. 14, 1910. Serial No. 543,666.



1. The combination of a pair of oppositely screw threaded bolts, a pair of nuts arranged on said bolts and provided with series of meshing gear teeth, a third bolt, and a nut arranged upon the latter and having teeth to mesh with the teeth of one of the first mentioned nuts.

2. The combination of a pair of oppositely screw threaded bolts, a pair of nuts arranged on said bolts and provided with series of meshing gear teeth, a second pair of bolts, nuts arranged on the last mentioned bolts and provided with teeth to mesh with the teeth on the first mentioned nuts, and means for holding the first mentioned bolts against rotation.

3. The combination with the meeting ends of two rails and fish plates arranged on opposite sides of said rails, said rails and fish plates having registering openings, of bolts passed through said registering openings, and nuts arranged on the threaded ends of said bolts and formed with radially projecting flanges notched to provide gear teeth, the teeth on the flanges of adjacent nuts meshing with each other, for the purpose specified.

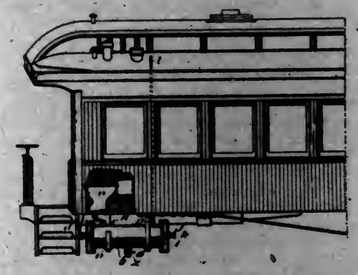
957,932. QUICK-ACTING WRENCH. WILLIAM E. BARNES, Bellevue borough, Pa. Filed Feb. 20, 1909. Serial No. 479,078.



1. In a quick acting wrench, the combination of a shank upon the end of which is a fixed jaw and whose edges are provided with interruped threads, a sliding jaw mounted on said shank and having a neck provided with a pair of arc shaped grooves, a collar mounted on said shank provided with two series of interrupted threads separated by cutaway portions so that when turned in one position said collar is in threaded engagement with said shank and when turned in another position said collar slides freely on said shank, said collar being provided with a seat in which said neck is contained, and segmental lips on said collar in line with said cutaway portions of said collar adapted to engage said arc shaped grooves, substantially as and for the purpose described.

2. In a quick acting wrench, the combination of shank 1 provided with fixed jaw 2, and interrupted threads 4; sliding jaw 6 provided with neck 10 and segmental grooves 11; collar 12 having interrupted threads 13, cutaway portions 14, neck seat 15 and segmental lips 16 in line with cutaway portions 14 adapted to engage said grooves 11, substantially as and for the purpose described.

957,933. SEWAGE SYSTEM FOR RAILWAY-CARS. ANNA C. CLARKE, Scranton, Pa. Filed Aug. 15, 1907. Serial No. 388,680.

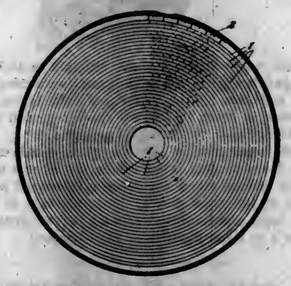


1. A sewage system for cars and the like comprising, the bowl of a closet, urinal, lavatory or the like, a removable closed tank having means for discharging its contents and provided with an inlet, a flexible conduit leading from the bowl and separably connected with the tank inlet, and means for separably supporting the tank from the car.

2. A sewage system for cars and the like comprising the bowl of a closet, urinal, lavatory or the like, a removable tank having an inlet separably connected with the outlet of the bowl, or the like, and provided with guide lugs, and straps suspending the tank from the car with their lower members extending through said guide lugs, said straps having hinged sections to permit of the ready removal of the tank.

3. A tank for car sewage systems, provided with a removable head, an inlet, a vent, and guide lugs on its lower side.

957,934. COMPUTING-SCALE DIAL. JOSEPH E. COCHRAN, Elkhart, Ind. Filed June 17, 1907. Serial No. 379,302.



1. As a new and useful article of manufacture a computing scale dial having a plurality of concentric lines, concentric rows of graduations indicated between said lines, every tenth one of said graduations bearing a number constituting a multiple of ten, and each of the nine graduations following each tenth graduation being numbered from 1 to 9 consecutively throughout the concentric row, the said numbers constituting multiples of ten and being arranged in a concentric row contiguous to one of said lines and the other said numerals being arranged in a concentric row contiguous to the opposite one of said lines, both rows of numerals being between the same two lines and extending on opposite sides of the graduations to offset one row from the other.

2. As a new and useful article of manufacture a computing scale dial having a plurality of concentric rows of graduations, every tenth graduation being offset from the nine succeeding graduations so as to be in a different concentric row and every tenth graduation being numbered by a number constituting a multiple of ten and said number being arranged in a concentric row with the first nine of said graduations and each of the first nine of said graduations being consecutively numbered from 1 to 9, and said numbers of from 1 to 9 being arranged in a concentric row in line with each tenth graduation so that the two sets of numbers and the two sets of graduations will be in concentric rows offset from each other with the numbers on opposite sides of the respective series of graduations.

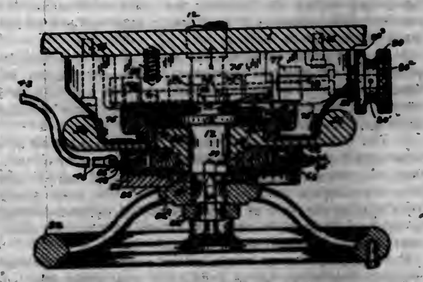
3. As a new and useful article of manufacture a computing scale dial having a plurality of concentric lines and each space between said lines bearing numerals arranged in arithmetical progression from 1 to 9 in a row concentric with said lines and adjacent one of the lines, the point between each numeral 9 and each numeral 1 throughout said concentric row being numbered by a number constituting a multiple of ten and the latter said number being offset in said space between the lines to a position outside of the concentric row of the first said numerals and adjacent the other concentric line, the first said numerals being indicated in a color distinguishable from the color of the said numbers constituting multiples of ten.

4. As a new and useful article of manufacture, a computing scale dial having a plurality of concentric lines, a row of graduations between each two lines, every tenth one of said graduations extending to one side of the intermediate nine graduations, all of the graduations excepting every tenth graduation being numbered in consecutive series from 1 to 9, the numbers being arranged on one side of the respective graduations and concentric with the row of graduations, the tenth graduations extending to the same side of the rows of graduations on which the said series of numbers are located and being arranged in the line of said numbers, each of said tenth graduations having an indicating character or number arranged in row with the intermediate nine graduations and extending on the side of the first said row of graduations opposite to the side on which said series of numbers from 1 to 9 are located.

5. As a new and useful article of manufacture, a computing scale dial having a plurality of concentric lines and each space between said lines bearing numerals arranged in arithmetical progression from 1 to 9 in a row concentric with the said lines and adjacent one of said lines, graduations extending between each numeral 9 and each numeral 1 throughout said concentric row, said graduations being numbered by a number constituting a multiple of 10 and the latter said numbers being offset in said space to a position to one side of the concentric row of the first said numerals and adjacent the other of said concentric lines, the first said numerals having a distinguishing characteristic from the numbers constituting the multiples of 10.

[Claim 6 not printed in the Gazette.]

957,935. GRINDING-MACHINE FEEDING MECHANISM. CONRAD M. CONRADSON, Madison, Wis., assignor to Vernette E. Prentice, New York, N. Y. Filed Nov. 18, 1907. Serial No. 402,770.



1. In a grinding machine feeding mechanism, a wheel head adapted to be actuated in one direction by a cam and in the opposite direction by a counterweight pivotally suspended from a bell crank and the latter connected by a belt to the said wheel head, substantially as described and for the purposes set forth.

2. In a grinding machine feeding mechanism, a rotatable cam having ratchet teeth, an oscillating member with a pawl adapted to rotate the said cam, the said oscillating member actuated by a connecting means and the reciprocating table motion, in combination with a table and a means for reciprocating it.

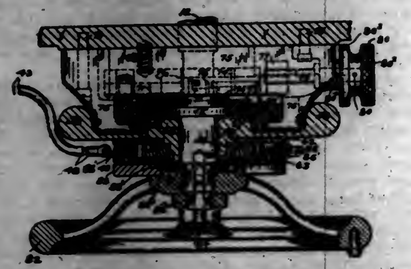
3. In a grinding machine feeding mechanism, a rotatable cam having ratchet teeth, a member with a pawl adapted to rotate the said cam and actuated by an oscillating rocker, the said rocker being actuated by dogs on the reciprocating table, in combination with a table and means for reciprocating it.

4. In a grinding machine feeding mechanism, a rotatable cam, an oscillating rocker, a feed-plate, means whereby the said feed-plate intermittently actuates the said cam, in combination with a table and means for reciprocating it.

5. In a grinding machine feeding mechanism, a rotatable cam, an oscillating rocker with a feed-plate, and two arms, the latter respectively adapted to be actuated by two dogs fastened to a reciprocating table, one dog initiating the action when the table moves in one direction and the other dog initiating the action when the table moves in the other direction, and a spring completing both of the said actions, in combination with a table and means for reciprocating it.

[Claims 6 to 8 not printed in the Gazette.]

957,936. GRINDING-MACHINE FEEDING MECHANISM. CONRAD M. CONRADSON, Madison, Wis., assignor to Vernette E. Prentice, New York, N. Y. Filed Nov. 18, 1907. Serial No. 402,771.



1. The combination of a stroke-regulating means for finishing the work; a cam for regulating amount of stock to be removed; means for gradually reducing the amount of feed; means for stopping the feed at a predetermined point and making a number of traverses of the work past the wheel without feeding; means for compensating for wear of the wheel; means for grinding different diameters of work with the same initial adjustment; and means for measuring differences in the diameter of the work.

2. In a grinding machine, the combination of stroke-regulating means for finishing the work with means for regulating the amount of stock to be removed and including a movable cam.

3. In a grinding machine, the combination of a cam for gradually reducing the amount of feed with means for stopping the feed at a predetermined point and making a number of traverses of the work past the wheel without feeding.

4. The combination of means for stopping the feed at a predetermined point; means for making a number of traverses of work past the wheel without feeding; and means for compensating for the wear of the wheel, said means for stopping the feed at a predetermined point including a cam feed mechanism and also a cam limiting the movement of the grinding mechanism.

5. In a grinding machine feeding mechanism, the combination of a lever with a fixed knife edge adapted to engage a wheel support; a wheel support; a roller adapted to be actuated by a cam; a cam; a fulcrum plate adapted to co-act with the knife edge to form the fulcrum for said lever, the said fulcrum knife edge being adjustable relatively to said fixed knife edge.

[Claim 6 not printed in the Gazette.]

957,937. ROOFING. FREDERICK D. COOK, Blairsville, Pa. Filed June 21, 1909. Serial No. 503,529.



A roofing consisting of sheet metal having both sides covered with a vitreous layer of enamel or glass, a layer of cement applied to one layer of the vitreous material and a layer of flexible material applied to the layer of cement.

957,938. LOCK. WILLIAM COX, Toronto, Ontario, Canada. Filed Feb. 17, 1908, Serial No. 416,307. Renewed Apr. 11, 1910. Serial No. 554,793.

1. A lock comprising a slidable cylinder, a slidable latch bolt movable parallel with the cylinder and a lever actuated by the cylinder to move the latch bolt.

2. A lock comprising a slidable cylinder, a slidable latch movable parallel with the cylinder, an actuating lever for the latch operated by the cylinder as the latter moves in one direction, and means for moving the lever and cylinder in the other direction.

3. A lock comprising a slidable cylinder, a slidable latch movable parallel with the cylinder, an actuating lever for the latch operated by the cylinder as the latter moves in one direction and a latch spring for the latch.

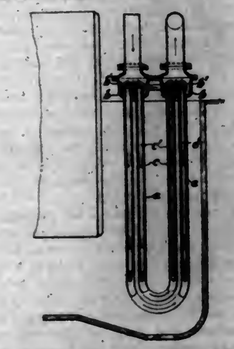


4. A lock comprising a slidable cylinder, a slidable latch movable parallel with the cylinder, an actuating lever for the latch operable by the cylinder as the latter moves in one direction, a latch spring for the latch, and springs to restore the cylinder to its initial position.

5. A lock comprising a slidable cylinder, a latch, and an actuating lever for the latch consisting of two lever arms movable in unison when the lever is actuated by the cylinder, one of the arms moving independently of the other when the latch moves independently of the cylinder.

[Claims 6 to 8 not printed in the Gazette.]

957,939. APPARATUS FOR SUPERHEATING STEAM. HENRY CRUSE, Salford, Lancaster, England. Filed Sept. 20, 1909. Serial No. 518,652.

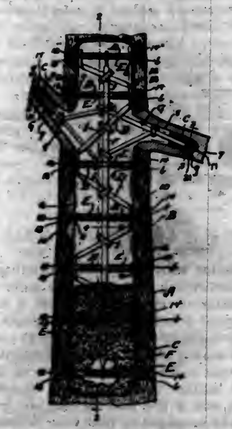


A steam superheater comprising a single set of steam and water boxes, external steam tubes of looped shape having their ends connected with the steam boxes, and internal Field tubes for the water located in some of the legs of the steam tubes and connected with the water boxes.

957,940. PROCESS OF REINFORCING TREES. WELLINGTON E. DAVEY, Kent, Ohio. Filed Sept. 30, 1908. Serial No. 455,477.

1. An improvement in reinforcing a tree having a cavity which is formed in the trunk of the tree and extends to the exterior and longitudinally of the trunk, said improvement comprising a reinforcing of the trunk by mechanically tying together and mechanically bracing opposite side walls of the cavity at points spaced longitudinally of the trunk preparatory to filling any portions of the cavity, which remain unoccupied upon thus mechanically reinforcing the trunk, with cementitious material, and then filling the said portions of the cavity with cementitious material.

2. An improvement in reinforcing a tree having a cavity which is formed in the trunk of the tree and extends to the exterior and longitudinally of the trunk, said improvement comprising a reinforcing of the trunk by mechanically tying opposite side walls of the cavity together at points spaced longitudinally of the trunk, and mechanically tying the portion of the trunk at one end of the cavity to the portion of the trunk at the other end of the cavity, all preparatory to filling any portions of the cavity, which remain unoccupied upon thus mechanically reinforcing the trunk, with cementitious material, and then filling the said portions of the cavity with cementitious material.



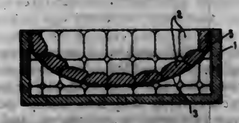
3. An improvement in reinforcing a tree having a cavity in its trunk adjacent the inner end of a limb of the trunk, said improvement consisting in mechanically reinforcing the trunk at the said cavity and supporting the limb from the mechanical reinforcement of the trunk.

4. An improvement in reinforcing a tree having a cavity in its trunk adjacent the inner end of a limb of the trunk and also having a cavity which is formed in the inner end of the limb and connects with the cavity in the trunk, said improvement consisting in mechanically reinforcing the trunk at the cavity in the trunk, mechanically reinforcing the limb, and mechanically tying the mechanical reinforcement of the limb to the mechanical reinforcement of the trunk.

5. An improvement in reinforcing a tree having a cavity in its trunk adjacent the inner end of a limb of the trunk and also having a cavity which is formed in the inner end of the limb and connects with the cavity in the trunk, said improvement consisting in mechanically reinforcing the trunk interiorly and mechanically supporting the limb from the mechanical reinforcement of the trunk, and suitably filling with cementitious material any portions of the cavity in the trunk and the connected cavity in the limb which remain unoccupied upon mechanically reinforcing the trunk and connected limb as aforesaid.

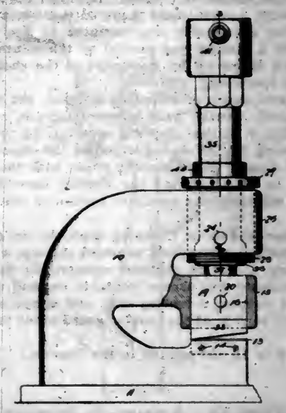
[Claims 6 to 8 not printed in the Gazette.]

957,941. ATTACHMENT FOR COFFINS. URIAH H. DEERING, Cleburne, Tex. Filed Jan. 17, 1910. Serial No. 538,349.



An attachment for a coffin, consisting of a flexible band, having one end permanently secured to one side of the head portion of the coffin, and a toothed fastening attached to the other side thereof, and having an offset portion providing a space between the wall of the coffin and the holding device, through which said band is adapted to be passed, the extremity of the band being adjustably secured by the teeth of the fastening.

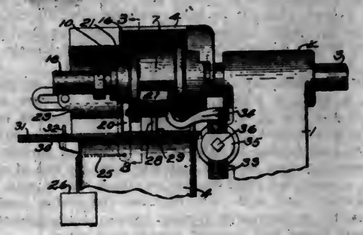
957,942. CUTTING OR TRIMMING MACHINE FOR SHEET METAL. FRANCIS R. EDDY, Montclair, N. J. Filed May 12, 1908. Serial No. 432,483.



1. A metal cutting machine comprising a frame provided with a stationary cutter blade seat, a cutting blade connected with said seat, a stationary guide carried by said frame, a movable blade carrying member slidable vertically in said guide, an arm carried by said frame and projecting over said guide and being provided with a vertical opening, a spring connection between said movable blade carrying member and said arm whereby the former is automatically raised, and a motor-controlled hammer detachably connected with said arm and coöperating with said movable blade carrying holder.

2. A metal cutting machine comprising a frame provided with a fixed cutter blade, a vertically movable member carrying the movable cutter blade, a guide for said movable member, an arm carried by said frame and provided with a vertically arranged threaded opening, a threaded and longitudinally split coupling sleeve in engagement with said threaded opening and provided with an outer adjusting nut, and a motor-controlled hammer held in operative engagement with the said frame by said coupling sleeve.

957,943. COUNTER-GUARD FOR HEEL-SHAVING MACHINES. FRANK F. ENO, Forest Hills, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed May 13, 1909. Serial No. 495,711.



1. In a heel shaver or trimming machine, the combination of a shaft, a cutter head mounted thereon, a counter guard having a portion disposed eccentric to said cutter head, and a yielding bearing portion freely movable on said eccentric portion by movement of the shoe during the cutting operation.

2. In a heel shaver or trimming machine, the combination of a shaft, a cutter head mounted thereon, a counter guard having a portion disposed eccentric to said cutter

head, and a bearing portion freely movable on said eccentric portion by movement of the shoe during the cutting operation.

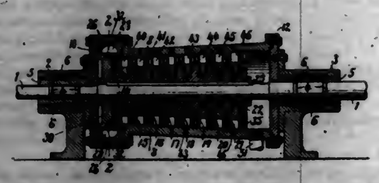
3. In a heel shaver or trimming machine, the combination of a shaft, a cutter head mounted thereon, a counter guard having a rotatable ring mounted to freely rotate thereon, and a bearing ring carried by the rotatable ring and rotating therewith by movement of the shoe during the cutting operation.

4. In a heel shaver or trimming machine, the combination of a shaft, a cutter head mounted thereon, a counter guard having a portion disposed eccentric to the cutter head, a bearing for the shoe mounted on the eccentric portion of the counter guard to move freely with the shoe as the latter is moved during the cutting operation, and means for adjusting the eccentric portion of the counter guard.

5. In a heel shaver or trimming machine, the combination of a shaft, a cutter head mounted thereon, a counter guard having a portion disposed eccentric to the cutter head, a rotatable ring freely rotatable on said eccentric portion and carrying a bearing ring, and means to adjust the eccentric portion of the counter guard about the cutter head.

[Claims 6 to 12 not printed in the Gazette.]

957,944. TURBINE. RICHARD C. FROHLICH, Philadelphia, Pa. Filed Aug. 2, 1909. Serial No. 510,837.



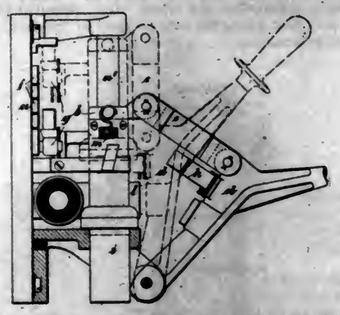
1. In a turbine, the combination of a cylinder, a shaft, a wheel secured on said shaft, a receiving-chest formed in said cylinder with an annular groove formed upon the inner surface of the same and having a portion thereof forming a stop to close the end of said recess, a receiving-chest-distributer fitted within said receiving-chest and having a plurality of apertures formed therein communicating with said recess formed in said receiving-chest and directed toward said wheel.

2. In a turbine, the combination of a cylinder, a shaft, a wheel secured on said shaft, a receiving-chest formed at one end of said cylinder with a groove formed upon the inner surface thereof, said receiving-chest having a portion thereof closing said recess formed therein, a receiving-chest-distributer secured within said receiving-chest, said wheel located adjacent to said receiving-chest-distributer and having blades thereon, and said receiving-chest-distributer having a plurality of apertures formed therein directed toward the said blades upon said wheel.

3. In a turbine, the combination of a cylinder, cylinder heads, a shaft, a wheel, a receiving-chest between said cylinder and one of said heads, said receiving-chest having a groove formed around the inner surface of the same, an inlet port formed in said receiving-chest, a portion of said receiving-chest forming a stop to close the end of said recess, a receiving chest-distributer fitted within said receiving-chest and said receiving-chest-distributer having a plurality of apertures formed therein communicating with said recess and directed toward said wheel.

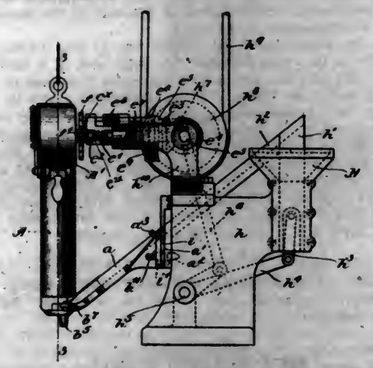
4. In a turbine having a cylinder, a shaft, a plurality of wheels upon said shaft, blades upon the periphery of said wheels, the combination of distributers secured in said cylinder and placed between said wheels, said distributers having grooves formed in the periphery of the same to direct the fluid from one of said wheels to the next adjoining wheel and the said grooves formed in said distributers being wider at the inlet side and tapering toward the outlet side of said distributers.

957,945. STARTING-SWITCH FOR ELECTRIC MOTORS. EDMUND GARSIDE, Darlington, England, assignor to Engineering Instruments Limited, Darlington, England. Filed Oct. 2, 1909. Serial No. 520,688.



An electric motor starting switch consisting in combination a pivoted switch arm carrying a main circuit closing device, a series of resistance contacts, a movable contact device adapted to slide over said contacts, a dash-pot adapted to control the movement of the said contact device in cutting out resistance, a crosshead adapted to slide parallel with said contact device, a spring disposed between the said contact device and said crosshead, toggle levers of which one is the said switch arm connected to the crosshead and arranged so that their leverage over the spring reaction is least at the open position of the main switch and gradually increases to maximum at the closed position and a "no volt" release device to hold the main switch closed when current is on, substantially as described.

957,946. AUTOMATIC HAND-TACKER. JOHN GELZENLICHTER, Lynn, Mass., assignor, by mesne assignments, to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed June 12, 1905. Serial No. 264,795.



1. A fastener driving apparatus comprising a portable fastener driving device provided with stored power means for operating the same, self contained stored power means for successively rendering said first named power means operable to drive fasteners in succession, and a fastener supply to supply fasteners.

2. A fastener driving apparatus comprising a portable fastener driving device provided with self-contained stored power means for operating the same, self contained stored power means for successively rendering said first named stored power means operable to drive fasteners in succession, and a fastener supply operated by said operating means to supply fasteners.

3. A fastener driving apparatus comprising in combination a portable fastener driving device provided with a source of fastener supply and a source of stored operating power, stationary fastener supplying means and power storing means.

4. A fastener driving apparatus comprising a portable fastener driving device having a source of stored operating power comprising a spring, stationary power storing means and means for coupling said device to said storing means for the storing of operating power.

5. A fastener driving apparatus comprising a portable fastener driving device having a source of stored operating power comprising a spring normally held under tension, stationary fastener supplying means and means to connect said driving device to said fastener supplying means for the supply of fasteners to be driven by said stored power.

[Claims 6 to 19 not printed in the Gazette.]

957,947. RAKE. PETER GLADBACK, Mendon, Mo. Filed Feb. 26, 1909. Serial No. 480,230.



1. In a rake of the character described, the combination of a wheeled frame, an oscillatory shaft journaled therein, wheels carried by said shaft, a rake frame, carrying rake teeth, suspended from, and rotatably connected to, said shaft, means to oscillate said shaft and raise and lower said shaft and rake frame, and means for simultaneously swinging said rake frame upon the said shaft to cause the same to assume inclined positions toward and away from the ground in the lower and upper positions thereof, respectively, substantially as described.

2. In a rake of the character described, the combination of a frame, provided at its rear end with a guiding wheel, an oscillatory shaft journaled transversely of, and at the forward end, of said frame, wheels loosely rotatively carried by said shaft, a rake frame carrying forwardly projecting rake teeth, suspended from, and rotatably connected to, said shaft, means to oscillate said shaft and raise and lower said shaft and rake frame, and means for simultaneously swinging said rake frame upon said shaft to cause the same to assume inclined positions toward and away from the ground in the lower and upper positions thereof, respectively, substantially as described.

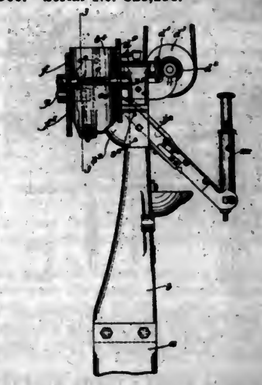
3. A rake of the character described, comprising a body frame, a shaft pivotally connected to said body frame and provided with angular ends, wheels rotatably mounted upon said angular ends, means for locking said wheels and said angular ends together, a rake-teeth-carrying member pivotally connected to said body frame, and means for moving said rake-teeth-carrying member.

4. A rake of the character described, comprising a body frame, members swingingly mounted upon said body frame, wheels rotatably mounted upon said members, manually operative means for swinging said members, and a rake-teeth-carrying member connected to said body frame.

5. A rake of the character described, comprising a supporting frame, a shaft rotatably mounted upon said supporting frame and provided with angular ends, wheels rotatably mounted upon said angular ends, means for locking said wheels and said angular ends together, a rake-teeth-carrying member swingingly mounted upon said frame, and common means for simultaneously moving said angular ends and said rake-teeth-carrying member.

[Claims 6 to 9 not printed in the Gazette.]

957,948. LOADING MECHANISM FOR HAND-TACKERS. PERLEY R. GLASS, Quincy, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Apr. 26, 1906, Serial No. 313,727. Renewed Nov. 22, 1909. Serial No. 529,293.



1. In a tack loading machine for a hand tacker, a two part race-way comprising an upper, stationary and downwardly projecting part and a lower movable part, and locking and unlocking means acting automatically to lock said parts upon bringing said movable part into endwise contact with the stationary part by an upward and forward movement and releasable by a direct downward and outward pull on said movable part, said locking means comprising a locking depression in one part and a co-operating locking member upon the other part.

2. In a tack loading machine for a hand tacker, a two part race-way, one of said parts having a depression and the other of said parts having an automatic locking member to coöperate with said depression to secure the two parts together, and means coöperating with the locking member for guiding said member into locking position.

3. In a machine of the class described, a two-part race-way provided with longitudinally extended locking members provided at their ends with lugs adapted to embrace and secure the other part of the raceway, and one part of the raceway being provided with lugs to coöperate with the locking members on the other part of the raceway and hold them in proper locking position.

4. In a machine of the class described, a two-part race-way provided with longitudinally extended locking members provided at their ends with laterally projecting lugs adapted to embrace and secure the other part of the raceway, one part of the raceway being provided with lugs to coöperate with the locking member on the other part of the raceway, said lugs and locking members being provided respectively with inclined coöperating edges, and a locking member secured to the bottom of one part of the raceway adapted to enter a coöperating depression in the other part of the raceway.

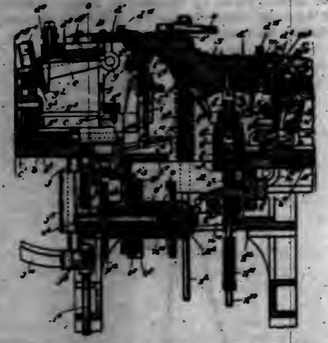
5. In a tack loading machine for a hand tacker, a raceway having upper, stationary and lower movable parts, a lug on the bottom of said stationary part to sustain said movable part when the meeting faces are in contact, and locking means for said parts operating automatically upon bringing the movable part into endwise contact with the stationary part.

[Claims 6 to 11 not printed in the Gazette.]

957,949. LASTING-MACHINE. PERLEY R. GLASS, Quincy, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Dec. 30, 1905, Serial No. 293,947. Renewed Feb. 24, 1910. Serial No. 545,713.

1. A lasting machine having a wiper-carrying support, means for adjustably tipping said support about a longi-

tudinal axis, and retarding means to maintain the support in its adjusted tipped position.



2. A lasting machine having a wiper support, a lever mechanism for tipping said support, and a frictional device to maintain said lever mechanism in its adjusted position.

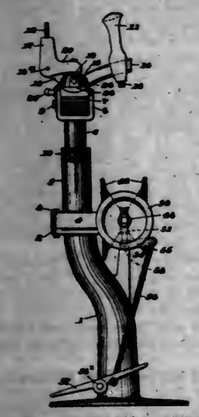
3. A lasting machine having a tipping wiper carrier, a relatively stationary support, a segmental gear upon said carrier, means meshing with said gear for moving the same, and a linked connection between said gear and said stationary support.

4. A lasting machine having a vertically movable toe head, and separate rack and pinion devices for raising and for lowering said toe head.

5. A lasting machine having a vertically movable toe head, a foot treadle for lowering said toe head, and yieldable means tending to raise the same.

[Claims 6 to 26 not printed in the Gazette.]

957,950. AUTOMATIC ROTARY SHOE-JACK. PERLEY R. GLASS, Quincy, Mass., assignor, by mesne assignments, to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Feb. 9, 1906, Serial No. 300,259. Renewed Feb. 24, 1910. Serial No. 545,714.



1. A work support comprising a drive shaft, a shaft having a slidable wheel thereon provided with means to engage said drive shaft for rotating said slidable wheel and its shaft in either direction, a jack, a jack carrier, provisions for raising and lowering the jack carrier and means intermediate said jack and wheel shaft to rotate said jack therewith and with relation to the jack carrier.

2. A work support comprising a jack, a jack carrier, a drive shaft rotatable independent of the carrier, an operating shaft having means adapted to be connected therewith to cause rotation thereof in either direction, adjusting means for holding said jack in a predetermined position during rotation thereof, and means intermediate the jack and operating shaft for rotating said jack therewith, about an axis determined by the said adjusting means.

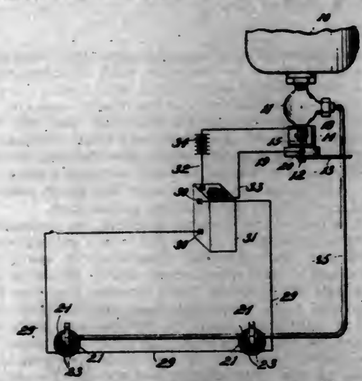
3. In an apparatus of the character described, the combination of a jack carrier, a drive shaft, an operating shaft having means for rotating it therewith in either direction independent of the jack carrier, and a vertically adjustable and swiveled jack provided with means for connecting it to said operating shaft to rotate it therewith about variably inclined axes determined by the swiveled adjustment of the jack.

4. In an apparatus of the character described, the combination of an operating shaft, a jack having an adjustable heel post and toe rest provided with means for vertical adjustment, a jack carrier and a slidable shaft intermediate said jack and operating shaft having operative connections therewith to produce rotation of said jack with respect to the jack carrier.

5. A work support comprising an operating shaft, a jack having an adjustable heel post and toe rest, a jack carrier with relation to which the jack is rotatable and a movable shaft connected therewith and to said operating shaft adapted to rotate said jack and enable it to be adjusted toward and from said operating shaft.

[Claims 6 to 12 not printed in the Gazette.]

957,951. GAS-IGNITER. CHARLES L. HAASE, Jr., Milwaukee, Wis. Filed May 29, 1909. Serial No. 499,001.



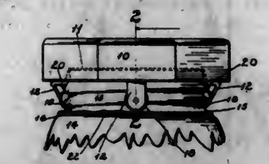
1. A gas igniter, comprising a valve controlling a gas supply, a burner connected to said valve, an induction coil, an open primary circuit connection between the coil and the valve and provided with an electric current supply, jump spark terminals connected to the burner by an insulating block, a secondary circuit connection between the spark terminals and the induction coil, and a wrench for operating the valve to control the flow of gas from the supply and to simultaneously close in the primary circuit to produce a spark between the spark terminals for igniting the gas.

2. A gas igniter, comprising a valve controlling a gas supply, a collar connected to said valve and provided with a contact collar insulated therefrom, a burner connected to said valve, an induction coil, a primary circuit connection between the coil and the valve and the contact collar and including an electric current supply, jump spark terminals connected to the burner by an insulating block, a secondary circuit connection between the spark terminals and the induction coil, and a means for operating the valve to control the flow of gas from the supply and to simultaneously engage the contact collar to complete the primary circuit and produce a spark between the spark terminals for igniting the gas.

3. A gas igniter, comprising a valve controlling a gas supply, a clamping collar provided with a split clamping portion and a clamping means connected to said valve, a contact collar mounted on the clamping collar and insulated therefrom, a burner connected to said valve, an induction coil, a primary circuit connection between the coil and the valve and the contact collar and including an electric current supply, jump spark terminals connected to the burner and insulated therefrom, a secondary circuit connection between the spark terminals and the induction coil, and a wrench for operating the valve to control the flow of gas from the supply and to simultaneously engage the contact collar to complete the primary circuit and produce a spark between the spark terminals for igniting the gas.

4. A gas igniter, comprising a valve controlling a gas supply, a removable collar connected to said valve and provided with a contact collar insulated therefrom, a burner connected to said valve, an induction coil, a primary circuit connection between the coil and the valve and the contact collar and including an electric current supply, jump spark terminals removably connected to the burner by an insulating block, a secondary circuit connection between the spark terminals and the induction coil, and removable means for operating the valve to control the flow of gas from the supply and to simultaneously engage the contact collar to complete the primary circuit and produce a spark between the spark terminals for igniting the gas.

957,952. FRUIT-JAR SEALER. WILLIAM G. HALL, Irvington, N. J. Filed May 12, 1909. Serial No. 495,395.



The hereindescribed fruit jar sealer comprising a rotatable body portion adapted to fit over the top of a fruit jar and having a uniform peripheral hand-hold at its upper part, and a plurality of sealing members projecting below said body portion and spaced from one another in an annular series, substantially as set forth.

957,953. ELECTRICAL SWITCH. JOHN O. HEINZE, Jr., Lowell, Mass. Filed Mar. 3, 1909. Serial No. 481,139.



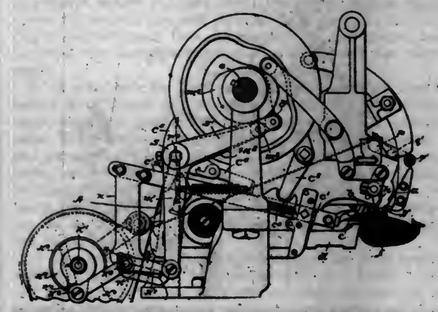
1. In an electrical switch having a pivoted switch arm, and a cover over the same; a pivoted operating lever, partially contained within said cover; a key hole in said cover, in said lever, and in said switch arm; a key to fit said key holes, whereby, when said key engages said switch arm and operating lever, and a force is applied to the exposed end of the operating lever, said force may be transmitted by said key to said switch arm, and cause the lever and arm to move simultaneously.

2. In an electrical switch having a pivoted switch arm, and a cover over the same; a pivoted operating lever partially concealed by said cover; said switch arm and said operating lever having a common pivotal center; a key hole in said cover, in said lever, and in said arm; a key to fit said key hole whereby when said key engages said arm and lever, and a force is applied to the exposed end of the lever, said force may be transmitted by said key to said lever and cause the lever and arm to move simultaneously.

3. In an electrical switch having a pivoted switch arm, and a cover of insulating material over the same; a pivoted operating lever being partially concealed by said cover; a key hole in said cover, in said lever, and in said switch arm; a key having a fin, to fit into said key holes, whereby when said key engages said switch arm and operating lever, a force if applied to the exposed end of the lever, is transmitted by said key and fin to said switch arm, and causes the lever and arm to move simultaneously; it being impossible to mechanically separate the switch arm from the operating lever except when the key holes in the switch arm, operating lever, and cover are in alinement.

4. In an electrical switch having a pivoted switch arm, and a cover over the same; a pivoted operating lever being partially concealed by said cover; a key hole in said lever, in said switch arm, and in said cover; a key to fit said key holes and engage said switch arm and operating lever, when they are in alinement, all designed so that if the operating lever is moved, the key is moved out of alinement with its hole in the cover and cannot be withdrawn; and the switch arm and operating lever remain locked until the key is withdrawn.

957,954. SHOE-SEWING MACHINE. JOHN J. HEYS, Lynn, Mass., assignor, by mesne assignments, to Bresnahan Shoe Machinery Company, Lynn, Mass., a Corporation of Maine. Filed Sept. 8, 1903. Serial No. 172,352.



1. In a shoe sewing machine, the combination of stitch forming mechanism, a movable thread delivering device, an actuating lever, means for imparting to said lever uniform movements, operating means for the thread delivering device, jointed connections pivoted to said means and to the actuating lever, and guiding means for changing the direction of travel of the joint in said jointed connection for the purpose of delivering variable lengths or quantities of thread to the needle.

2. In a shoe sewing machine, the combination of stitch forming mechanism, a movable thread delivering device, an actuating lever, means for imparting to said lever uniform movements, operating means for the thread delivering device, jointed connections pivoted to said means and to the actuating lever, a sliding bar carrying the welt guide, and an arm connected thereto provided with a deflecting guide for changing the direction of travel of the joint in said jointed connection for the purpose of delivering variable lengths or quantities of thread to the needle.

3. In a shoe sewing machine, the combination of stitch forming mechanism, a movable thread delivering device, an actuating lever, means for imparting to said lever uniform movements, operating means for the thread delivering device, permanent and flexible jointed connections

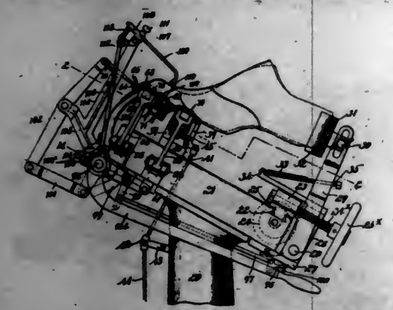
pivoted to said means and to the actuating lever, a sliding bar carrying the welt guide, and an arm having an angular slot connected to said sliding bar, said slot being engaged by the joint of said jointed connection for changing the direction of travel of the joint of said connection for the purpose of actuating the thread delivering device variable distances.

4. In a shoe sewing machine, the combination of stitch forming mechanism, a movable thread delivering device, an actuating lever, means for imparting to said lever uniform movements, operating means for the thread delivering device, permanent and flexible jointed connections pivoted to said means and to the actuating lever, and means including a guide having a cam slot for changing the path of travel of the joint in said jointed connection for the purpose of delivering variable lengths or quantities of threads to the needle.

5. In a shoe sewing machine, the combination of stitch forming mechanism, a rotative thread delivering truck, an actuating lever, means for imparting to said lever uniform movements, a welt guide, a welt guide carrier, jointed connections pivoted to the actuating lever and to the thread delivering truck for operating the latter from the former, and means including a cam slot engaged by the joint in said connection controlled by the welt guide carrier for rendering more or less of the uniform movement of the actuating lever effective in causing rotative movement of the truck.

[Claims 6 to 11 not printed in the Gazette.]

957,955. PULLING-OVER MACHINE FOR BOOTS AND SHOES. JOHN J. HEYS, Lynn, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Apr. 19, 1906. Serial No. 312,559.



1. A pulling over machine comprising means arranged for supporting a shoe with its forepart and tip line in full view of the operative and with the toe of the last pointing in a direction of non-intersection with the plane of the machine front, and oblique thereto, to present the shoe to visual inspection of the operative as it appears on the foot, tip line gaging means to define the position the tip line should occupy, and pulling over means constructed and arranged to pull the upper over the last and position the upper upon the last.

2. A pulling over machine comprising means for pulling over and positioning the upper on the last, in combination with means to support the last with its bottom directed downward and resting in a plane at an angle to the horisontal and with its toe pointing upward and away from the workman, the parts being so constructed and arranged that the view of the forepart and tip line of the upper on the last is unobstructed and the shoe is made observable to the workman similarly to viewing it on the foot, and a tip line gage also in view of the workman to determine the position the tip line should occupy with respect to the last.

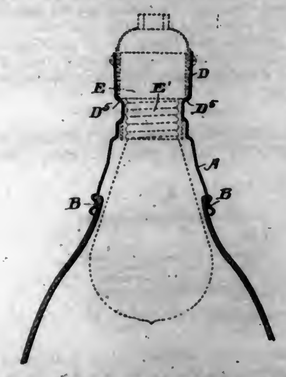
3. A pulling over machine comprising shoe supporting means for supporting a shoe sole downward, pulling over means to operate upon a shoe so positioned, tip gaging means relative to which the tip on a shoe may be positioned, and means for causing said gage to move to and from operative position.

4. A pulling over machine comprising a shoe support, pulling over means and tip positioning means to determine the positioning of the upper in and relative to said pulling over means, and means for moving the tip positioning means into and out of operative position.

5. A pulling over machine comprising shoe supporting means, pulling over means and tip measuring means relative to which the shoe tip may be adjusted in the operation of pulling over to obtain proper tip measurement, and means acting automatically as the pulling over means is manipulated to move the tip measuring means into operative position.

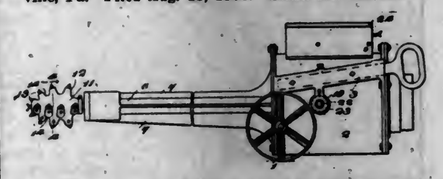
[Claims 6 to 60 not printed in the Gazette.]

957,956. SHADE AND REFLECTOR SUPPORT FOR LIGHTING-FIXTURES. WILLIAM C. HINE, Cleveland, Ohio, assignor to The Conneaut Company, a Corporation of Ohio. Filed June 3, 1909. Serial No. 499,972.



A reflector support comprising a skirt having holding means for a reflector at the outer edge thereof, means at the inner end of the skirt for attaching the same directly to the cap of a lamp socket, said attaching means having a shoulder adapted to take against a shoulder of an ordinary porcelain base plate of a lamp socket.

957,957. MINING-MACHINE. JOHN C. HIRST, Reynoldsville, Pa. Filed Aug. 13, 1908. Serial No. 448,367.



1. A mining machine including a wheeled truck, an operating shaft mounted for rotation on the truck and a bulbous cutter head secured to the operating shaft and provided with a circumferential series of tangentially disposed cutters adapted to successively engage the work as the shaft is swung laterally in the arc of a circle with the truck wheels as a pivot.

2. A mining machine including a wheeled truck, an operating shaft mounted for rotation on the truck and a bulbous cutter head secured to the operating shaft and provided with a series of peripheral tangentially disposed cutters arranged in staggered relation, the active ends of the cutters being adapted to successively engage the work as the shaft is swung laterally in the arc of a circle with the truck wheels as a pivot.

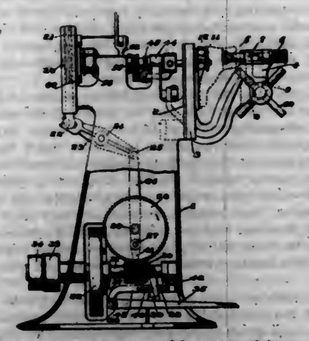
3. A mining machine including a wheeled truck, an operating shaft mounted for rotation on the truck and a cutter head mounted for rotation with the shaft and provided with a circumferential series of tangentially disposed cutters arranged on straight lines and adapted to successively engage the work as the shaft is swung laterally in the arc of a circle with the truck wheels as a pivot.

4. A mining machine including a wheeled truck, an operating shaft mounted for rotation on the truck and a cutter head of substantially ovate spheroidal shape mounted for rotation with the operating shaft and provided with a peripheral series of tangentially disposed cutters arranged in staggered relation, the active ends of the cutters being adapted to successively engage the work as the shaft is swung laterally in the arc of a circle with the truck wheels as a pivot.

5. A mining machine including a wheeled truck, an operating shaft mounted for rotation on the truck and a bulbous cutter head mounted for rotation with the shaft and provided with a series of peripheral tangentially disposed pick points arranged on straight lines and adapted to successively engage the work as the shaft is swung laterally in the arc of a circle with the truck wheels as a pivot, the active ends of the pick points being disposed on lines conforming to the shape of the head.

[Claims 6 and 7 not printed in the Gazette.]

957,958. HEEL-BURNISHING MACHINE. CHARLES E. HOOD, Lynn, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed May 2, 1906, Serial No. 314,807. Renewed Mar. 2, 1910. Serial No. 546,763.



1. A heel burnishing machine comprising a heel support and a tool, the latter presenting in different positions differently shaped burnishing surfaces with means for changing the relative positions of said support and tool to enable said different burnishing surfaces to be presented to and for action upon the heel.

2. A heel burnishing machine comprising a heel support, a tool predeterminately shaped throughout its length to produce different predetermined shapes about the heel and means for changing the relative positions of said support and tool to enable the latter to produce a predetermined variable surface upon the heel.

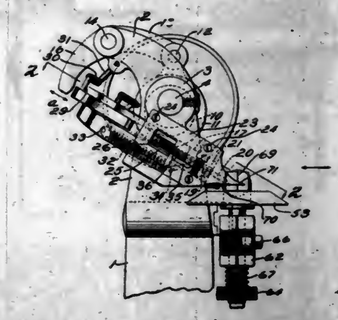
3. A heel burnishing machine comprising a heel support, a variably patterned tool and means to change the relative positions of said support and tool to cause different portions of the pattern of the tool to be presented to the heel and means for relatively oscillating the heel and tool while in such position.

4. A heel burnishing machine comprising a heel support, a burnishing tool having varying shaped surfaces at different portions of the tool with means for producing a back and forth relative movement between the heel and the tool, and means for imparting a relative progressing movement between the heel and tool.

5. A heel burnishing machine comprising a heel support, a patterned tool, means to produce relative traverse of the tool and heel without substantially changing the shape of tool surface presented to the heel, and also a relative traverse coupled with a substantial change of shape of tool surface presented to the heel.

[Claims 6 to 21 not printed in the Gazette.]

957,959. MACHINE FOR TREATING INSOLES OF BOOTS AND SHOES. WILLIAM H. HOOPER, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Mar. 31, 1909. Serial No. 487,069.



1. In a machine for incising the channel lip of a shoe sole before it is turned up, the combination of means for supporting and positioning the toe of a channeled sole, cutting means having a substantially horizontal cutting edge, means for moving the said cutting means to make its cutting stroke obliquely into the channel lip, and means for stopping the cutting means after a single cut has been made.

2. In a machine for incising the channel lip of an insole before it is turned up, the combination of a supporting table, means for positioning the toe of a shoe sole on said table, a knife having a cutting edge disposed in substantial parallelism to the plane of the sole surface on said table, and means to impart to said knife a single cutting movement in a direction oblique to the sole surface to cause the cutting edge to cut a diagonal slot in the channel lip as it rests in the channel of the insole to enable the lip to be upturned.

3. In a machine for incising the channel lip of an insole before it is turned up, the combination of a support for the insole, a knife having a cutting edge disposed in a plane substantially parallel to the sole surface, a guide for directing the knife in an oblique direction toward the channel lip of a shoe sole on said support, a gage for positioning the toe of an insole on said support that the channel lip may be in the cutting path of the knife, and means for giving the knife a single cutting operation to cut diagonally into the channel lip before it is upturned.

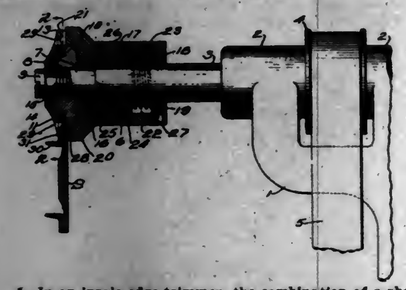
4. In a machine for incising the channel lip of an insole before it is turned up, the combination of a support for the insole, a knife having a cutting edge disposed in a plane substantially parallel to the sole surface, a guide for directing the knife in an oblique direction toward the channel lip of a shoe sole on said support, a gage for positioning the toe of an insole on said support that the channel lip may be in the cutting path of the knife, and means for giving the knife a single cutting operation to cut diagonally into the channel lip before it is upturned, said knife guide having a foot portion to engage the shoe sole as the knife is withdrawn.

5. In a machine for incising a shoe sole, the combination of means for supporting and positioning the toe of an insole, cutting means having a cutting edge substantially parallel to and movable in a plane oblique to the insole surface for cutting the channel lip transversely at the toe and in a direction oblique to the sole surface to permit the

channel lip to be upturned, actuating devices therefor, and gaging means to enable the channel lip to be positioned on the supporting means in the path of the said cutting edge and operative on placing the insole in position to bring the said devices and cutting means into operative relation.

[Claims 6 to 13 not printed in the Gazette.]

957,960. INSOLE-EDGE TRIMMER. WILLIAM H. HOOPER, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed May 5, 1909. Serial No. 494,117.



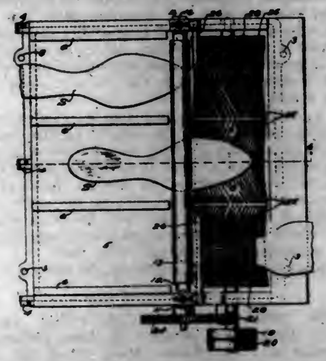
1. In an insole edge trimmer, the combination of a shaft and its operating means, a bearing collar on said shaft having a seat for a knife carrier and a bearing shoulder to limit the inward movement of the sole edge, a knife carrier comprising a ring portion to engage the seat in the bearing collar and carrying knives, a clamping guard covering the face of said knife carrier and knives, means for clamping the knife carrier and knives between said bearing collar and clamping guard to force and hold the ring portion of the knife carrier in its seat and cause it to rotate with the bearing collar, a work holder surrounding said shaft, and means for yieldingly forcing said work holder longitudinally of said shaft and toward the said knives.

2. In an insole edge trimmer, the combination of a shaft and its operating means, said shaft having a reduced end bearing portion 7, a bearing collar on said reduced portion of said shaft, and having a seat for a knife carrier, a knife carrier carrying knives and seated on said collar, a clamping guard covering the face of said knife carrier and knives, means for forcing the clamping guard longitudinally of the shaft to clamp the bearing collar on the reduced portion of the shaft and the knife carrier in the seat of the clamping collar and cause said parts to rotate with said shaft, a work holder surrounding said shaft, means for yieldingly forcing said work holder longitudinally of said shaft and toward the said knives, said bearing collar having a stop shoulder becoming exposed for contact with the edge of the sole as the work holder is moved back by the work, and means for limiting the movement of the work holder in response to said yielding means.

3. In an insole edge trimmer, the combination of a shaft having a reduced end bearing portion 7 and shoulder 6, a bearing collar 10 loosely mounted on said reduced portion 7 and having a reduced portion 16 the end of which bears against said shoulder 6 and an enlarged portion provided with a seat for a knife carrier, a knife carrier 11 having a circular portion to engage said seat and provided with knives, a clamping guard 14, and means for forcing the clamping guard longitudinally relative to the shaft for clamping the knife carrier to its seat and the bearing collar 10 against the said shoulder 6 of the shaft.

4. In an insole edge trimmer, the combination of a shaft having a reduced end bearing portion 7 and shoulder 6, a bearing collar 10 loosely mounted on said reduced portion 7 and having a reduced portion 16 the end of which bears against said shoulder 6 and an enlarged circular bearing portion 23 to contact with the sole edge, said circular bearing portion having a face seat, a knife carrier 11 having a circular portion to engage said seat and provided with knives, a clamping guard, means to force the clamping guard longitudinally of the shaft to clamp the knife carrier to the bearing collar and the bearing collar to the shaft, and a work holder movable longitudinally of the shaft.

957,961. INSOLE-TEMPERING MACHINE. WILLIAM H. HOOPER, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Apr. 15, 1909, Serial No. 490,172. Renewed Nov. 27, 1909. Serial No. 530,241.



1. In a machine for tempering the edge portions of an insole that the channel lip may be upturned, the combination of a tempering roll having a concaved liquid carrying surface, said surface being provided with liquid carrying grooves disposed diagonally thereof, feeding means for directing an insole over said tempering roll, and liquid supplying means for said tempering roll.

2. In a machine for tempering the edge portions of an insole that the channel lip may be upturned, the combination of a tempering roll the diameter of which varies in different portions of the roll, a series of liquid carrying grooves disposed in the surface of said roll and extending diagonally thereof from a portion of less to a portion of greater diameter, means for feeding an insole that the toe portion thereof may receive treatment by the part of the roll of less diameter and the following edge portions of the sole by parts of the roll of progressively varying diameters, and operative means for the feeding means and tempering roll.

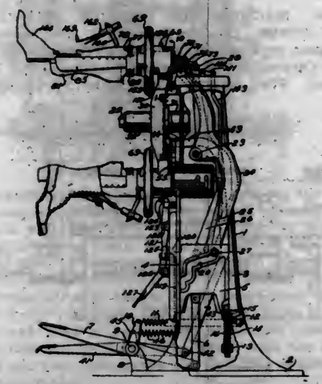
3. In a machine for tempering the edge portions of an insole that the channel lip may be upturned, the combination of a tank or receptacle for the tempering liquid, a tempering roll having a concaved liquid carrying surface which receives liquid from said tank or receptacle, feeding means for delivering an insole to said tempering roll, and means for operating the tempering roll at greater speed than the feeding means to cause the tempering liquid to be applied at the toe and along the edge portions of the insole.

4. In a machine for tempering the edge portions of an insole that the channel lip may be upturned, the combination of a tank or receptacle for the tempering liquid, a tempering roll having a concaved liquid carrying surface which receives liquid from said tank or receptacle, feeding means for delivering an insole to said tempering roll, means for operating the tempering roll at greater speed than the feeding means to cause the tempering liquid to be applied at the toe and along the edge portions of the insole, and guide fingers extending transversely of said tempering roll to cause the insole to have an extended bearing on the tempering roll as it passes thereover.

5. In an insole tempering machine, the combination of a tank or receptacle for the tempering liquid, a tempering roll having a concaved liquid carrying surface which receives liquid from said tank or receptacle, said concaved surface having a series of liquid carrying grooves diverging in the direction of rotation of said roll, insole feeding means, and means for operating said feeding means and tempering roll.

[Claims 6 to 12 not printed in the Gazette.]

957,962. TREEING-MACHINE. WILLIAM H. HOOPER, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Nov. 7, 1908, Serial No. 461,450. Renewed Feb. 19, 1910. Serial No. 544,896.



1. In a boot and shoe treeing machine, the combination of a supporting frame, a tree leg sustained thereby, an independent expansible foot-piece forepart having a forepart enlarging member movable with relation to the forepart to enlarge said forepart, a heel member, and means for moving the forepart and enlarging member toward the leg, for causing relative separation of the forepart and heel members, and for moving the forepart enlarging member with relation to the forepart to enlarge the same.

2. In a boot and shoe treeing machine, the combination of a supporting frame, a tree leg sustained thereby, an expansible foot-piece forepart formed independent of the leg, a forepart enlarging member movable with relation to the forepart to enlarge said forepart, a heel member, and slides for moving the forepart toward the leg, for causing relative separation of the forepart and heel members, and for moving the forepart enlarging member with relation to the forepart to enlarge the same.

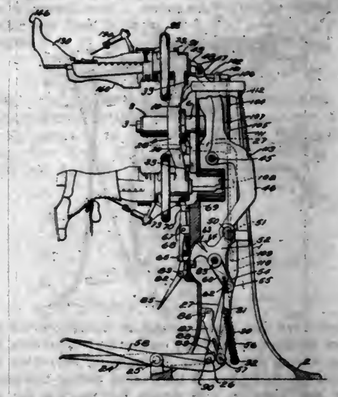
3. In a boot and shoe treeing machine, the combination of a supporting frame, a tree leg sustained thereby, an independent expansible foot-piece forepart, a slide for moving said expansible forepart toward and from the leg, a forepart enlarging member movable with relation to the forepart to enlarge the same, a second slide for operating said enlarging member, and means for operating said slides.

4. In a boot and shoe treeing machine, the combination of a supporting frame, a tree leg sustained thereby, an expansible foot-piece forepart formed independent of the leg, a slide for moving said forepart toward and from the leg, a forepart enlarging member movable with relation to the forepart to enlarge the same, a second slide for operating said enlarging member, a treadle, and detachable connections between said treadle and slides for operating the latter.

5. In a boot and shoe treeing machine, the combination of a supporting frame, a tree leg sustained thereby, an expansible foot-piece forepart formed independent of the leg, a slide for moving the forepart toward and from the leg, a forepart enlarging member movable with relation to the forepart to enlarge the same, a slide for moving the forepart enlarging member, a heel member, a slide for moving the heel member, and means for moving said slides.

[Claims 6 to 42 not printed in the Gazette.]

957,963. TREEING-MACHINE. WILLIAM H. HOOPER, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Feb. 6, 1909, Serial No. 476,442. Renewed Feb. 19, 1910. Serial No. 544,897.



1. In a boot and shoe treeing machine, the combination of a supporting frame, a tree-leg sustained thereby, an expansible foot-piece formed independent of the tree-leg, a foot-piece enlarging member movable with and relative to said foot-piece, a heel member, a slide for moving the foot-piece and enlarging member toward the leg, then to move the foot-piece and enlarging member relatively and separate the foot-piece and heel member, and a jacking and unjacking lever for moving said slide.

2. In a boot and shoe treeing machine, the combination of a supporting frame, a tree-leg sustained thereby, a foot-piece and foot-piece enlarging member, a heel member, means for moving the foot-piece and foot-piece enlarging member together toward the leg and to then relatively move the foot-piece and foot-piece enlarging member and the heel member, and a single jacking and unjacking lever for operating said means.

3. In a boot and shoe treeing machine, the combination of a supporting frame, a tree-leg sustained thereby, a foot-piece and foot-piece enlarging member, a heel member, and means for moving the foot-piece and foot-piece enlarging member together toward the leg and to then arrest the movement of the enlarging member while the foot-piece continues its movement.

4. In a boot and shoe treeing machine, the combination of a supporting frame, a tree-leg sustained thereby, a foot-piece, a foot-piece enlarging member, slides carrying said foot-piece and foot-piece enlarging member, a heel member, means for moving said slides together to carry the foot-piece and enlarging member toward the leg, and to then yieldingly arrest the movement of the foot-piece enlarging member while the foot-piece continues its movement toward the leg.

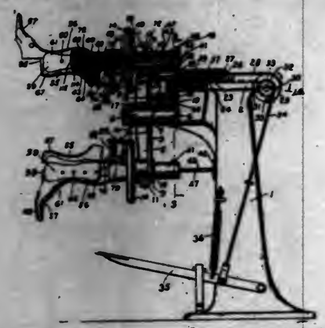
5. In a boot and shoe treeing machine, the combination of a supporting frame, a tree-leg sustained thereby, a relatively movable foot-piece and sole expanding member, slides for moving said foot-piece and sole expanding member toward the tree-leg and then relatively moving them to expand the foot-piece, and a single jacking and unjacking lever for moving said slides.

[Claims 6 to 38 not printed in the Gazette.]

957,964. BOOT-TREEING MACHINE. WILLIAM H. HOOPER, Swampscott, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed July 2, 1906, Serial No. 324,314. Renewed Feb. 19, 1910. Serial No. 544,898.

1. A boot tree foot piece, means for supporting said foot piece during the finishing operation and from which the foot piece is removable, a foot thickening sole member, and means for giving said sole member a bodily move-

ment with respect to the supported foot piece to cause the upper to conform to the shape of the foot piece and prepare it for the finishing operation.



2. A boot tree foot piece having an uninterrupted fore part upper supporting surface, means for supporting said foot piece during the treeing or finishing operation and from which the foot piece is removable, a foot thickening fore part sole member, and means for moving the sole member bodily from the supported foot piece to cause the upper to conform to the shape of the uninterrupted supporting surface of the foot piece.

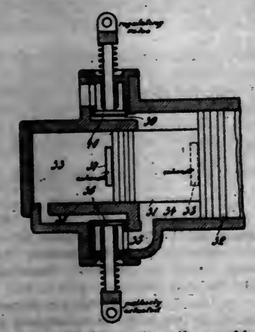
3. A boot tree foot-piece having a foot thickening sole member constructed and arranged with reference to the foot-piece to present its bottom surface within the plane of the sole line, a support connected to said foot-piece to sustain the same, and yieldingly acting means for moving said sole member bodily relative to the said foot-piece to draw the fore part of the upper into shaping contact with the fore part of the tree.

4. A boot tree foot piece having a foot thickening sole member, and yielding means for giving said sole member bodily movement of separation from the foot piece and against the sole of a shoe mounted thereon to draw the fore part of the upper with a yielding action into uniform shaping contact with the tree fore part.

5. A boot tree foot-piece having a foot thickening sole member, yielding means for giving said sole member bodily movement of separation from the tree foot-piece and against the sole of a shoe mounted thereon to draw the fore part of the upper into uniform shaping contact with the tree fore part, and provisions for adjusting the yielding character of said means.

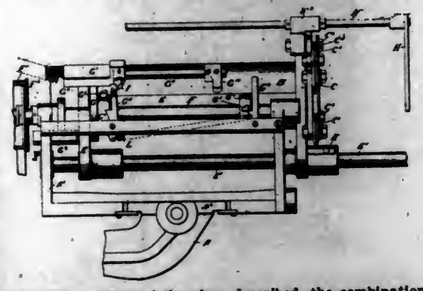
[Claims 6 to 47 not printed in the Gazette.]

957,965. INTERNAL-COMBUSTION MOTOR. CARL A. HULT and OSCAR W. HULT, Stockholm, Sweden. Filed Feb. 26, 1906. Serial No. 303,090.



In internal combustion motors the combination of two cylinders having a passage connecting them together, said cylinders being positioned co-axially with respect to one another, one of said cylinders being of greater diameter than the other of said cylinders, one of said cylinders having a motive fluid inlet port, and the other cylinder having an air inlet port and an exhaust port, and a passage leading to the atmosphere, a double piston fitting within said cylinders, a positively actuated valve controlling the passage between the two cylinders, and a governing valve controlling the passage leading to the atmosphere.

957,966. MACHINE FOR FORMING AND CUTTING OFF TUBES. CHARLES F. JENKINS, Washington, D. C., assignor, by mesne assignments, to Single Service Package Corporation of America, a Corporation of New Jersey. Filed July 10, 1908. Serial No. 442,846.



1. In apparatus of the class described, the combination with means for rotating a tube, of a series of cutters spaced about the tube in the same plane, and automatic means for at intervals forcing all the cutters inward through the walls of the rotating tube and again outward before the latter has completed a single revolution; whereby each cutter cuts through a part of the tube proportional to the number of cutters and the tube is divided while making a portion of one turn.

2. In tube severing devices, the combination with a centrally pivoted arm, and forwardly projecting cutters mounted in the same plane at the ends of said arm, respectively, automatic means for forcibly moving said arm and cutters at intervals toward a tube to be cut, and a third freely rotatable cutter in the same plane in position to support the tube, while cutting it, against the thrust of the cutters first mentioned.

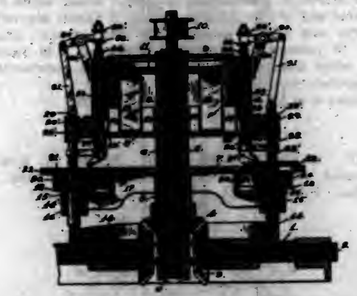
3. In tube severing devices, the combination with means for rotating a tube and advancing it longitudinally, of a frame mounted to swing toward and from the tube and to travel parallel to the same, a series of cutters in the same plane spaced around the tube, means for forcing the frame to swing alternately toward and from the tube while permitting it to slide longitudinally, and a longitudinally movable disk adapted to lie within the tube to co-act with the cutters while advancing longitudinally therewith.

4. The combination with a hollow mandrel, of means for rotating and longitudinally advancing a paper tube thereon, a rotary extensible shaft mounted within the mandrel and projecting from the free end thereof, a disk of approximately the size of the mandrel secured to the projecting end of the extensible shaft, cutters arranged to travel with the tube and co-act with said disk to sever the same, and a spring for returning the disk to initial position when the severing is completed.

5. The combination with means for winding and rotating a tube, of a centrally pivoted bar at one side of the tube's path, carrying at each end a freely rotatable cutter, a third freely rotatable cutter in the same plane upon the opposite side of said path, means for adjusting the distance of the third cutter from the bar's pivot, and automatic means for causing the three cutters to grip the tube at intervals.

[Claims 6 to 10 not printed in the Gazette.]

957,967. PASTE-APPLYING APPARATUS FOR CAN ENDS. AXEL JOHNSON, Oakland, Cal. Filed Sept. 23, 1908. Serial No. 454,302.



1. In an apparatus for the described purpose, the combination with a rotatable can head holder, of means for forcing the same upwardly, a ported reservoir for the holding of a sealing paste, a valved receiving tube into which the paste is delivered from the said reservoir, a distributing nozzle connected with the said tube, of associated devices actuated by the upward movement of the can head holder for closing the port of the paste holding reservoir and ejecting paste from within the receiving tube and through the distributing nozzle onto the flange of a held can head, and means for imparting rotation to the can head holder.

2. In an apparatus for the described purpose, the combination with a ported paste holding reservoir, of a vertically movable rotatable can head holder, devices for imparting vertical movement to said holder and rotation thereto, a distributing nozzle and connecting means for conveying paste from the ported reservoir onto the flange of a can head contained on the can head holder, a device for spreading the paste so applied, and means for controlling the flow of paste from within the reservoir onto the flange of a held can head.

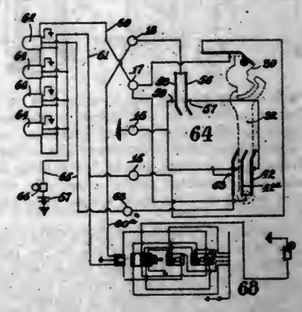
3. In an apparatus for the described purpose, the combination with a rotatable paste holding reservoir provided with a series of outlet ports, a carrier table supporting the said reservoir, of mechanism for imparting rotation to the said carrier table and the reservoir supported thereby, agitating devices within the reservoir, a series of vertically movable and rotatable can head holders working within the carrier table, devices for imparting rotation to the said can head holders during the rotary movement of the carrier table, a series of valved receiving tubes into which paste is delivered from the ported reservoir, a distributing nozzle connected with each of the receiving tubes, and associated devices actuated by the upward movement of the can head holders for closing the ports of the reservoir and ejecting paste from within the receiving tubes and through the distributing nozzles onto the flange of a held can head.

4. In an apparatus for the described purpose, the combination with a rotatable paste holding reservoir provided with outlet ports, a rotary carrier upon which said reservoir is mounted, of mechanism for imparting rotation thereto, devices within the reservoir for agitating the liquid material therein, a series of vertically movable and rotatable can head holders mounted on said carrier, means for imparting rotation to the can head holders, devices for receiving paste from the reservoir and delivering the same to the flange of a can head on the holders, and means for regulating the flow of material from within the reservoir and through the distributing devices.

5. In an apparatus for the described purpose, the combination with a rotatable paste holding reservoir provided with a series of outlet ports, a series of controlled distributing nozzles receiving paste from the reservoir, devices for maintaining the paste within the reservoir in an agitated condition during the working of the apparatus, mechanism for imparting rotation to the said reservoir, a series of piston plungers for controlling the outlet of the paste from the reservoir and forcing the same through the distributing nozzles, means for actuating said piston plungers, and a series of vertically movable and rotatable can head holders.

[Claims 6 to 17 not printed in the Gazette.]

957,968. CALL-BOX SIGNALING SYSTEM AND APPARATUS THEREFOR. CLARENCE C. JOHNSON, Yonkers, N. Y., assignor to American District Telegraph Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 5, 1907. Serial No. 396,049.



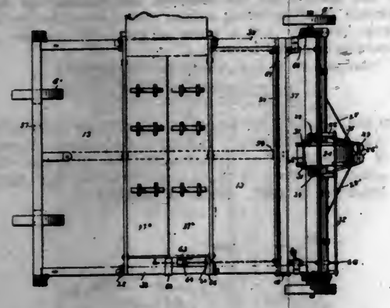
1. A signaling system comprising in combination a line circuit, signal receiving means therefor, and signal transmitting means therefor comprising means for transmitting at will either of two different signals through said circuit, and another signal circuit and signal receiving means therefor to which said signal circuit leads from said signal transmitting means, independent of said line circuit; said signal transmitting means comprising means, additional to the means for transmitting either of the signals through the line circuit, for transmitting a signal through such other circuit concurrently with the transmission through such first circuit of one of said two classes of signals to be transmitted therethrough.

2. Signal transmitting apparatus comprising in combination main signal transmitting means including means for transmitting through one circuit either of two different classes of signals at will, and comprising also other transmitting means for transmitting a signal through another circuit concurrently with the transmission of one of the two classes of signals transmitted by said first mentioned transmitting means.

3. Signal transmitting apparatus comprising in combination main signal transmitting means including means for transmitting through one circuit either of two different classes of signals at will, and other transmitting means for transmitting a signal through another circuit concurrently with the transmission of one of the two classes of signals transmitted by said first mentioned transmitting means, comprising a break wheel and contact means operated thereby, said brake wheel driven by the mechanism of said main transmitting means.

4. Signal transmitting apparatus comprising in combination main signal transmitting means adapted to transmit successively and alternately a characteristic signal and a distinctive signal, said mechanism arranged to transmit said signals in alternation a greater or less number of times at will, and further comprising means for preventing the transmission of the distinctive signal when said mechanism is operated to transmit the characteristic signal the less number of times, said transmitting apparatus further comprising transmitting means arranged to transmit a signal through another circuit when said main signal transmitting means is operated to transmit its signal the greater number of times.

957,969. HOISTING DEVICE. GEORGE F. KOENIG, Le Sueur, Minn. Filed Nov. 2, 1908. Serial No. 460,642.



1. In a hoisting-machine the combination of a truck, a main frame mounted on said truck, a platform, trap-doors hinged in the center of said platform, means for opening and closing said trap-doors, means for raising and lowering said platform, means for guiding said platform comprising platform guides adjustably secured to the vertical beams of said main frame, substantially as described.

2. In a hoisting-machine comprising a main frame, platform guides adjustably secured to one of the inner faces of the vertical beams of said main frame, said platform guides adapted to fit over stakes driven in the ground to hold said main frame substantially in position.

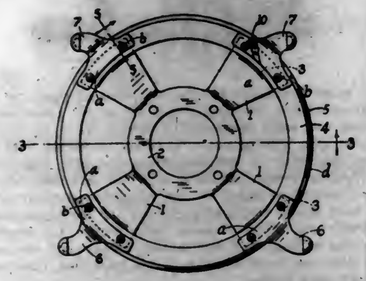
3. In a hoisting-machine comprising a main frame, a platform guide adjustably secured to one of the inner faces of each vertical beam of said main frame, each of said platform guides having vertically disposed slots cut therein near its upper and lower ends, bolts passing through said vertical beams of said main frame and through the slots in said platform guides, said platform guides having a plurality of perforations passing therethrough adjacent to the upper of said vertical slots, pins passing through one or more of these perforations holding said platform guides at whatever position is desired in the scope of their adjustability.

4. In a hoisting-machine a main frame comprising vertical beams, a platform adapted to be elevated and lowered, means for elevating and lowering said platform consisting of the following elements, to wit: a main shaft journaled near the rear end of said machine, chains, two secured at their front ends to the vertical beams of said platform, passing over pulleys journaled over the top and near the front end of said frame, thence rearward over pulleys journaled over the top and near the rear end of said frame and thence downward, winding around said main shaft, and two secured to the side beams of said platform near their rear ends, passing up over pulleys journaled over the top and near the rear end of said frame, and thence downward winding around said main shaft, means, consisting of a drum, for effecting the rotation of said main shaft, means comprising a dog and ratchet for holding said main shaft against reverse rotation when said platform is being hoisted, said ratchet being formed to one of the edges of the drum and its dog pivotally held to the adjacent vertical beam of the frame.

5. In a hoisting machine comprising a main frame, a crank shaft mounted between the rear vertical beams of said main frame, a platform, trap-doors hinged at the center thereof, means for opening and closing said trap-doors, said trap-doors comprising cleats, said means consisting of chains secured on the outer surface of the outermost cleats of the forward of said trap-doors, said chains passing over pulleys journaled in pulley boxes secured to longitudinal beams of the platform, thence under pulleys journaled in suitable boxes secured to the outer surface of the outermost cleats of the rearward trap-door, thence passing over pulleys working in pulley boxes secured to said longitudinal beams, thence said chains pass through brake mechanisms, thence over pulleys working in pulley boxes secured near the outer ends of said longitudinal beams, terminating in collars formed to the aforesaid crank-shaft, a ratchet wheel keyed near the outer end of the crank-shaft, and a handle secured to its outer end, a pawl engaging the teeth of said ratchet wheel to prevent a retrograde motion of said ratchet wheel while the trap-doors are being closed, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

957,970. BARBER-CHAIR SEAT. ERNEST E. KOKEN, deceased, late of St. Louis, Mo.; Walter F. Koken, executor. Filed Dec. 17, 1909. Serial No. 533,631.



1. A chair-seat comprising a central member, a depending apron provided with an inner flange resting on the outer edges of said member, bracket arms secured to said flange and disposed at a suitable distance from the inner bounding edge thereof, and a cushion supported on the apron flange at points between the bases of the bracket arms and the inner edge of the flange.

2. A chair-seat comprising a central dished spider having a series of radiating arms, terminal ledges at the outer ends of said arms, a depending apron provided with an inner flange resting on the ledges of the spider arms, bracket-arms having basal flanges resting on the apron flange and mounted over the ledges of the spider-arms, and securing screws passed through the flanges of the bracket-arms, flange of the apron, and ledges of the spider-arms for securing the parts together.

3. A chair-seat comprising a central dished spider having a series of outwardly flaring arms terminating in horizontal supporting ledges or flanges, a circular apron having an upper inwardly projecting flange resting on the spider ledges, bracket arms having basal flanges resting on the apron flange and over the ledges of the spider arms, the bracket-arm flanges being narrower than the flange of the apron and having their inner edges disposed in arcs of a common circle, and a cushion resting on the apron flange within said circle.

4. A chair-seat comprising a central dished spider having a series of radiating outwardly flaring arms terminating in horizontal ledges or flanges, a circular apron having an upper inwardly projecting flange resting on the ledges aforesaid, bracket arms having basal flanges resting on the apron flange and over the ledges of the spider arms, a soft filler interposed between the apron flange and the flanges of the bracket-arms, fastening means passed through the bracket-arm flanges, filler, apron flange and ledges of the spider arms, and a cushion resting on the apron flange within the flanges of the bracket-arms.

5. A chair-seat comprising a central spider provided with outer marginal ledges, a depending apron provided with an inner flange resting on the ledges aforesaid, bracket arms resting on the apron flange and disposed at a suitable distance from the inner bounding edge of said flange, and a cushion supported on the apron flange at points between the bases of the bracket arms and the inner edge of the flange.

957,971. VENDING-MACHINE. JOHN F. KACMA, Chicago, Ill. Filed Jan. 27, 1909. Serial No. 474,377.



1. In a machine of the class described a casing, compartments therein for receiving boxes, means for supporting the boxes and ejecting the same singly from the machine, mechanism adapted to retract said means and then release the same and a lever adapted on one stroke to actuate the mechanism to retract said means and on the return stroke to actuate the mechanism to release said means to eject the box.

2. In a machine of the class described a casing, compartments therein for receiving boxes, means for supporting the boxes and ejecting the same singly from the machine, actuating mechanism for adjusting said means, a lever for actuating said mechanism, a locking bar pivoted to the casing and a reciprocating bar having a slot through which the lever extends normally held from movement by the locking bar.

3. In a vending machine a casing, a plurality of troughs or compartments therein, independent ejecting mechanisms, one for each compartment acting successively to eject the articles therefrom, and a guard connected to simultaneously operate with the actuation of the ejecting mechanisms to hold all articles in place except the one to be ejected.

4. In a vending machine a casing, a plurality of troughs or compartments therein, independent ejecting mechanism one for each compartment acting successively to eject the articles therefrom, a guard for preventing accidental displacement of the articles from all of the compartments and means for simultaneously operating the appropriate ejecting mechanism and the guard.

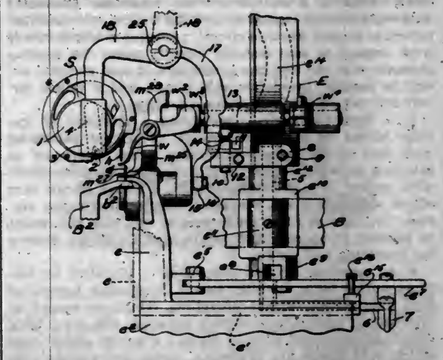
5. In a vending machine a casing, a plurality of troughs or compartments therein, oscillating ejecting members, one for each compartment adapted to support the articles in the respective compartment, and to successively oscillate to eject the articles singly from the machine, means for successively oscillating the ejecting members, and a support upon which the articles rest when the ejecting member for any compartment is actuated.

[Claims 6 to 22 not printed in the Gazette.]

957,972. SEWING-MACHINE. FRED LA CHAPELLE, Lynn, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Aug. 8, 1907. Serial No. 387,623.

1. In a machine of the class described, the combination of a shuttle having an eccentrically mounted bobbin case provided with a thread delivery portion, a guide to restrain oscillatory movement of the bobbin case in response to shuttle movement, a needle, work feeding means, means to vary the movement of the feeding means to vary the length of stitch, and connections between said last named means and said guide to change the path of movement of the thread delivery portion of the bobbin case in accordance with the variation of stitch length.

2. In a lock stitch sewing machine, the combination of a shuttle having an eccentrically mounted bobbin case, a door having a guide to determine the movement of the bobbin case, awl feeding means, and means to simultaneously vary the feeding movement of the awl and the position of said door and its guide.



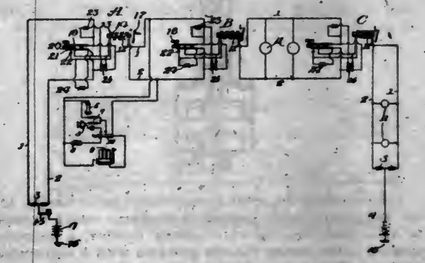
3. In a machine of the character described, the combination of a shuttle having an eccentrically mounted bobbin case provided with a thread delivery portion, a guide for determining the path of movement of the bobbin case as the shuttle is oscillated, work feeding means, a lever e^7 for varying the movement of the work feeding means, and a lever 6 movable with the lever e^7 and connected to said guide to vary the path of movement of the thread delivery portion of the bobbin case as the feed movement of the feeding means is varied.

4. In a sewing machine of the class described, the combination of a shuttle and needle for forming a stitch, a bobbin case having a thread delivery portion and mounted eccentrically in the shuttle, means for holding the bobbin case from oscillatory movement with the shuttle, means for varying the stitch length, and devices connected to said last named means for adjusting the bobbin case holding devices to change the path of movement of the thread delivery portion of the bobbin due to oscillation of the shuttle as the length of the stitch is changed.

5. In a machine of the class described, the combination of a shuttle having an eccentrically mounted bobbin case and a needle for forming a stitch, means for varying the length of stitch, and means connected to the bobbin case for controlling the slack in the shuttle thread due to the eccentricity of the bobbin case and shuttle and in conformity with the variation in length of stitch.

[Claims 6 to 11 not printed in the Gazette.]

957,973. SIGNALING SYSTEM. OTTO T. LADEMAN, Milwaukee, Wis. Filed Mar. 27, 1909. Serial No. 486,189.



1. A signaling system comprising a plurality of stations united by a metallic circuit, telephones metallically connected to said circuit, signal-controlling relays inter-

posed at intervals in said metallic circuit, arranged non-inductively with respect to said metallic circuit, means for sending currents over the two line conductors of said metallic circuit in parallel to operate said relays, and a return circuit over which said relays are operative.

2. A signaling system comprising a plurality of stations united by a metallic circuit, telephones associated with said circuit, signal-controlling relays interposed at intervals in said metallic circuit, arranged non-inductively with respect to said metallic circuit, means for sending currents over the two line conductors of said metallic circuit in parallel to operate said relays, and a return circuit over which said relays are operative.

3. A signaling system comprising a plurality of stations united by a metallic circuit, telephones associated with said circuit, signal-controlling relays interposed at intervals in said metallic circuit, arranged non-inductively with respect to said metallic circuit, a return circuit over which said relays are operative, means for sending currents over the two line conductors of said metallic circuit in parallel to operate said relays, and switching devices for operating said relays.

4. A signaling system comprising a plurality of stations united by a metallic circuit, telephones associated with said circuit, signal-controlling relays interposed at intervals in said metallic circuit, arranged non-inductively with respect to said metallic circuit, a return circuit over which said relays are operative, means for sending currents over the two line conductors of said metallic circuit in parallel to operate said relays, and switching devices at each of a plurality of stations for operating said relays.

5. A signaling system comprising a plurality of stations united by a metallic circuit, telephones associated with said circuit, signal-controlling relays interposed at intervals in said metallic circuit, each having two windings differentially arranged with respect to said metallic circuit, means for sending currents over the two line conductors of said metallic circuit in parallel to operate said relays, and a return circuit over which said relays are operative.

[Claims 6 to 10 not printed in the Gazette.]

957,974. WELL MECHANISM. MAHLON E. LAYNE, Houston, Tex. Filed June 11, 1907. Serial No. 378,342.



1. In combination with a centrifugal pump having inner and outer casing members, a discharge casing secured to and supporting the outer casing member, a laterally opening outlet casing thereon provided with a supporting socket, a shaft casing coupled to the socket portion and to the inner casing member, a drive shaft having a thrust bearing in the socket and extending through the shaft casing to the pump, and means for supporting the outlet casing.

2. In combination with a centrifugal pump having inner and outer casing members, a discharge casing secured to and supporting the outer casing member, a laterally opening outlet casing thereon provided with a supporting socket, a shaft casing coupled to the inner casing member and having an adjustable connection with the socket, a drive shaft having a thrust bearing in the socket and extending through the shaft casing to the pump, and means for supporting the outlet casing.

3. In combination with a centrifugal pump having inner and outer casing members, a laterally opening outlet casing provided with a supporting socket, a discharge casing secured to the outlet casing and to the outer casing member, a shaft casing coupled to the supporting socket and to the inner casing member, a drive shaft having a thrust bearing in the socket and extending through the shaft casing to the pump, and means for supporting the outlet casing.

4. In combination, a discharge casing, a laterally opening outlet casing thereon provided with a downwardly extending socket portion provided with an inwardly extending flange at its lower end, a shaft casing extending through the flange and threaded at its upper end, a nut engaging the thread end, packing between the flange and nut, a bearing block mounted in the socket portion, and means for supporting the outlet casing.

5. The combination with a discharge tee having a downwardly extending socket portion, of a drive shaft extending through the socket portion and having a thrust bearing member, a bearing block mounted in the socket portion and constituting a journal for the shaft and a thrust bearing for opposing the thrust bearing member and having an oil passage extending from its upper surface to a point adjacent the journal surface, and an admission tube mounted in the upper end of the oil passage whereby the oil in the socket is maintained at a level above the thrust bearing.

[Claims 6 to 9 not printed in the Gazette.]

957,975. EXPANSIBLE FOOT-LAST. JOHN E. LEAVITT, Boston, Mass., assignor, by mesne assignments, to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Mar. 9, 1906. Serial No. 305,066.



1. An expansible foot last comprising an instep portion, laterally separable side pieces extending to the tip of the toe, pin and transverse slot connections between the side pieces and instep portion permitting lateral and restraining longitudinal movement of said side pieces, a longitudinally movable wedge actuator therefor independent of and having a longitudinal slot and pin connection with the body portion of the last for moving said side pieces laterally relative to the instep portion, and means acting normally to move the wedge in one direction.

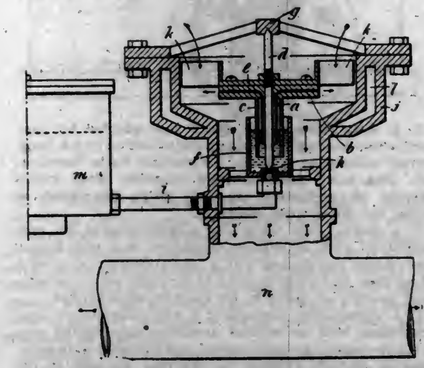
2. An expansible foot last comprising an instep portion, side pieces extending to the tip of the toe and having the transverse slot and pin connection 3, 4 with said instep portion to permit lateral separation and prevent longitudinal movement of said side pieces with relation to the instep portion, a wedge 2 having a longitudinal slot at its upper portion, guide pins secured to the instep portion and engaging said slot, and means acting normally to retract the wedge and cause lateral contraction of the side pieces.

3. An expansible foot last comprising an instep portion bodily movable side pieces, an intermediate wedge piece and slot and pin connections 16 and 10 between said side pieces and intermediate wedge piece to permit said intermediate wedge piece to be moved back and forth longitudinally relatively to the body portion of the foot last to cause a lateral separation and approach of said sides to expand or contract the last, said wedge piece having pin and slot connections 5, 6 with the instep portion, and a spring acting normally to retract the wedge piece.

4. An expansible foot last comprising bodily movable side pieces longitudinally immovable relatively to the body portion of the foot last, and an operating sliding wedge connected therewith provided with means tending to restore said operating wedge into normal and thereby move said side pieces into unexpanded position.

5. A foot last having an instep portion, side pieces extending to the tip of the toe and longitudinally immovable relative to the instep portion, a wedge independent of the instep portion and connected to the instep portion, and side pieces to move relative thereto in expanding and contracting the side pieces.

957,976. ATOMIZER AND THE LIKE. OWEN D. LUCAS, Bayswater, London, England. Filed June 29, 1908. Serial No. 440,947.



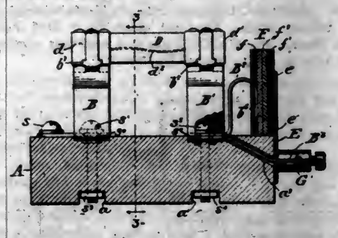
1. An atomising apparatus comprising a vertically arranged liquid-containing vessel, a series of independent tubes extending into the liquid-containing vessel, and having their ends disposed below the liquid level therein and whose lengths are so proportioned in relation to their diameters that the liquid will not normally flow out from them when the apparatus is at rest, a support on which the tubes are mounted, means for rotating the support, and means for supplying liquid in proper quantities to the tubes.

2. An atomising apparatus comprising a vertically arranged liquid-containing vessel, a series of independent capillary tubes extending into said vessel having their ends arranged below the liquid level therein and whose lengths are so proportioned in relation to their diameters that the liquid will not normally flow out of them when the apparatus is at rest, a support on which the tubes are mounted, means for rotating the support and means for supplying liquid in proper quantities to the tubes.

3. An atomising apparatus comprising a rotatable support, a series of independent bent tubes carried thereby and having vertical portions connected with horizontal radial portions, a supply tube into which the vertical portions extend, means for supplying liquid in proper quantities, and means for rotating the tube support.

957,977. PROTECTIVE DEVICE. RAY H. MANSON, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed Sept. 9, 1905. Serial No. 277,732.

1. A contact device for electrical apparatus formed from a strip of metal into two side springs having flat smooth ends normally retained in crossed position against the tension of each of said springs tending to separate them, the ends adapted to be brought into crossed position by simple bending motion, retaining means holding said springs in crossed relation, an electric conductor, the ends of said springs receiving between them in contacting engagement said electric conductor and gripping the same between flat smooth surfaces, the insertion of such conductor serving to separate such ends, increase the tension of such springs and transfer such tension from the retaining means to such conductor, and an electric terminal attached to said springs.



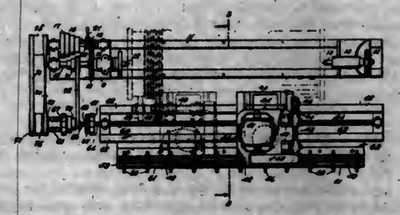
2. A contact device for electrical apparatus comprising a pair of side springs having crossed and intermeshing ends, a projection formed upon the end of one side spring, and a notch in the end of the other, the arrangement being such that the parts are normally maintained in crossed relation, with outward tension on each of the side springs.

3. A clip for fuse holders comprising a pair of side springs having terminal fingers crossed and intermeshed, a pair of ears on one finger normally caught and resting upon the surface of the other or others, whereby the fingers are maintained crossed against the outward tension of both the side springs, and a notch or notches normally displaced with regard to said ears, but adapted to be brought into registry therewith, so as to permit the separation of the fingers and the side springs.

4. In protective apparatus for telephone lines, the combination of a pair of spring clips for holding the fuse, a line terminal for one clip, and a pair of terminals for the other clip, one of said terminals being carried up from the base and supporting a carbon lightning arrester, while the second terminal is carried down through the base for the continuation of the operating circuit.

5. A protective apparatus for telephone lines comprising a grooved insulating panel, spring fuse clips arranged in pairs in the grooves of said panel, securing devices for said clips, a line terminal attached to one clip of each pair brought out from the groove to the edge of the panel, a pair of terminals for the other clip, one bent up to form a spring support for lightning arrester blocks, and the other bent down and carried through the insulating base to form the instrument or switch board terminal, together with a ground plate secured along the edge of the panel, and common to a plurality of the pairs, said ground plate formed with integral fingers opposite the respective spring terminals for the reception and maintenance of carbon blocks.

957,978. STONEWORKING-LATHE. WILLARD F. MEYERS, New York, N. Y. Filed Jan. 22, 1909. Serial No. 473,699.

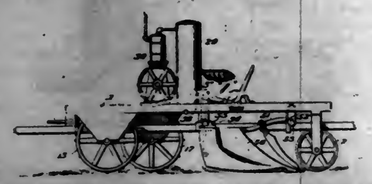


1. A stone-working lathe comprising a removable tilting work-supporting table detachably secured to the bed of

the lathe, a tool-supporting carriage, means for feeding the carriage relatively to the table, and means for adjusting the carriage relatively to the table.

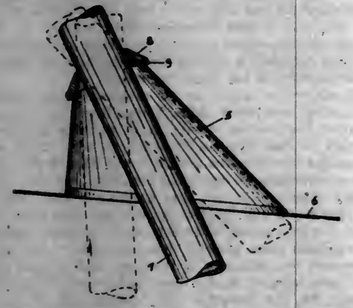
2. A stone-working lathe comprising a removable tilting work-supporting table detachably secured to the bed of the lathe, a tool-supporting carriage, and means for feeding the carriage relatively to the table.

957,979. MOTOR-PLOW. JAMES J. MIDDLEBROOK, Sault Ste. Marie, Mich. Original application filed Feb. 23, 1909, Serial No. 479,216. Divided and this application filed July 2, 1909. Serial No. 505,720.



In a plow, the combination with a wheeled frame having vertically disposed guideways, of a transversely disposed arc-shaped guide disposed below the frame aforesaid, vertically disposed guides secured to said transversely disposed guide and slidable in the guideways, a plow having a beam pivoted to the frame, a slide to which the plow is secured which is slidable on said transversely disposed guide so that it can swing sidewise of the frame, and raising and lowering mechanism directly coöperating with the vertically disposed guides for raising and lowering them.

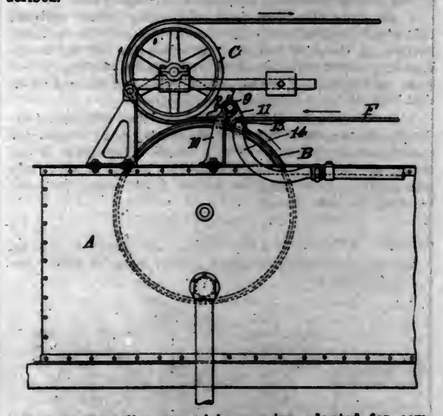
957,980. ROOF-JOINT. HARRY B. MIKESELL, Spokane, Wash. Filed June 10, 1909. Serial No. 501,320.



A roof joint comprising a collar having means for attachment to the roof, and adapted to inclose a pipe, a frusto-conical calking sleeve of malleable material exteriorly surrounding and supported on the upper end of the collar, said sleeve being conical on its interior, and tapered in thickness in the direction of its upper end, to fit the pipe and to be forced down thereon, said pipe being spaced from the collar and from the major portion of the sleeve sufficiently to permit the collar to be set at different angles to the pipe, and the sleeve being adapted to have its upper end forced into still closer contact with the pipe.

957,981. SUCTION-SLICE. WILLIAM H. MILLSPAUGH, Sandusky, Ohio. Filed June 10, 1909. Serial No. 501,326.

1. A suction-slice consisting of a tube adapted for communication with an exhaust apparatus, said tube having an enlarged body portion and a contracted lateral portion the top and bottom sides of which come together in a narrow edge, the latter being provided with a longitudinal opening or openings of narrow width, whereby exhaustion of air from said tube will create strong air currents through said opening or openings, for the purpose described.



2. A suction-slice comprising a pipe adapted for communication with an exhaust apparatus and having a longitudinal opening or openings for sucking water thereinto, said pipe being provided with eccentric pivot means whereby its perforated side will swing downward on pivots, for the purpose described.

3. A suction-slice comprising a pipe adapted for communication with an exhaust apparatus, said pipe having pivot means and formed with a lateral contracted portion off-set from said pivot means and provided with a longitudinal opening or openings, for the purpose described.

4. A suction-slice comprising a pipe adapted for communication with an exhaust apparatus and having caps or heads closing the ends thereof and provided with trunnions or journals eccentric to the pipe, the side of the pipe opposite said trunnions or journals being provided with a longitudinal opening or openings for sucking the water into the pipe, for the purpose described.

5. A suction-slice comprising a pipe having a longitudinal inlet opening or openings and having caps or heads closing the ends thereof and provided with trunnions or journals, one of said caps or heads having a hollow arm in communication with the pipe and adapted for connection with a pipe leading to an exhaust apparatus, for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

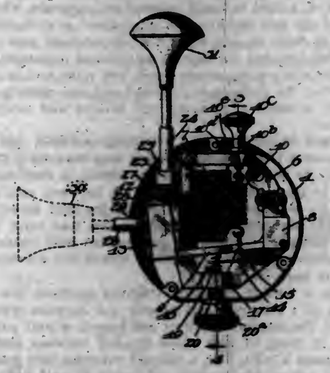
957,982. ELECTRIC VIBRATOR. SAMPSON W. MOON, Chicago, Ill. Filed Dec. 24, 1906. Serial No. 349,313.

1. An electric vibrator comprising an electro-magnet, an armature and applicator, a vibrator post adapted to receive the strokes of said armature, and means for transmitting the same to said applicator, said receiving and transmitting means being structurally distinct from said armature and electromagnet.

2. An electric vibrator comprising an electro-magnet, an armature and applicator, a vibrator post adapted to receive the strokes of said armature and to transmit the same directly to the applicator in the form of percussion strokes, and means on said vibrator post for imparting a lateral stroke to the applicator.

3. An electric vibrator comprising an electro-magnet, an armature, an applicator, a vibrator post adapted to receive the strokes of the armature and transmit the same to the applicator in the form of percussion strokes, a socket on said post by which said applicator is connected directly thereto, and a vibrating arm on said post adapted to receive the applicator and impart thereto a lateral stroke.

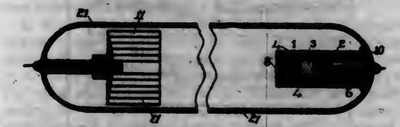
4. An electric vibrator comprising a casing, an electro-magnet in said casing, a pivoted armature acted on by said magnet, a vibration post to receive the strokes or vibrations of said armature, a socket formed on said post to directly connect the applicator therewith, whereby they receive a percussion stroke from the armature through said post, a vibrator arm on said post and projecting rearwardly therefrom, and a socket on said arm to receive the applicator whereby a lateral stroke is imparted thereto through said post, substantially as described.



5. An electric vibrator comprising a casing, a handle thereon, an electro-magnet in said casing, a pivoted armature vibrated by said magnet, a weight to form a hammer on said armature, a resilient bumper on said post to receive the strokes or vibrations of the hammer, means to attach the applicator directly to said post to impart a percussion stroke thereto, and means to connect the applicator to the post to impart a lateral motion thereto, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

957,983. ELECTRIC TUBE-LAMP AND SIMILAR DEVICE. DANIEL M. MOORE, Newark, N. J., assignor to Moore Electrical Co., New York, N. Y., a Corporation of New York. Filed May 6, 1902. Serial No. 106,134.



1. The combination with a closed receptacle containing a rarefied gas or vapor, of a cathode composed of lime and having surfaces which receive the electric discharge and are highly heated thereby.

2. The combination with a closed receptacle containing a rarefied gas or vapor, of a cathode composed of a refractory oxid such as described and provided with one or more discharge-receiving cavities whose walls receive and become highly heated by the electric discharge.

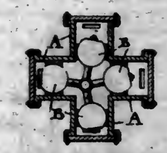
3. The combination with a closed receptacle containing rarefied gas or vapor, of a negative electrode having one or more discharge-receiving cavities of contracted dimensions and whose surfaces receive and become highly heated by the electric discharge.

4. In an electric gas lamp, a negative electrode mounted upon a supporting stem or column combined with a jacket or covering of a semi-elastic non-conductive material surrounding said stem.

5. In an electric gas lamp, a negative electrode having a discharge receiving body or block composed of a highly refractory material provided with a metal jacket.

[Claims 6 to 20 not printed in the Gazette.]

957,984. PISTON. ALBERT L. MOWAT, St. John, New Brunswick, Canada, assignor to Harry Richards McLellan, St. John, Canada. Filed Sept. 22, 1909. Serial No. 519,055.



1. A piston having a head with a spherically formed side surface and segmental shoes fitting between the head and the walls of the cylinder and being formed with interlocking parts adapted to prevent the passage of steam in a longitudinal direction.

2. A piston having a head with a spherically formed side surface and segmental shoes fitting between the head and the walls of the cylinder, one of each pair of abutting parts of said shoes being formed with a circumferentially extending projection fitting into a corresponding recess formed in the other part.

3. A piston having a head formed with an outer spherical surface and longitudinally divided removable shoes extending between the head and the walls of the cylinder, and diametrically opposed pins in the head fitting into recesses in the shoes.

4. A piston having a head with a spherically formed side surface and segmental shoes fitting between the head and the walls of the cylinder, one of each pair of abutting parts of said shoes being formed with a circumferentially extending projection, fitting into a corresponding recess formed in the other part and packing rings extending between said shoes and the head.

957,985. PROCESS OF MAKING PAVEMENTS. J Y MCCLINTOCK, Rochester, N. Y. Filed Nov. 3, 1908. Serial No. 460,900.



1. The process of making pavements, which consists of preparing a suitable foundation, spreading small cubical blocks of vitrified brick or other suitable material on said foundation, raking said blocks together into a compact layer and filling up the space between them, substantially as described.

2. A pavement having a suitable foundation and a wearing surface of small cubical blocks of suitable paving material, substantially two inches each way, raked together on the foundation and grouted, substantially as described.

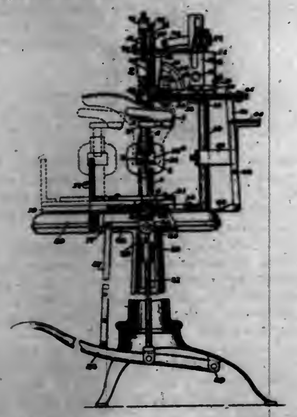
957,986. HEEL-BREASTING MACHINE. GEORGE T. MCLEOD, Boston, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Mar. 2, 1904. Serial No. 196,164.

1. In a machine for operating on boots and shoes, the combination of a movable work support; alternatively operative work gages movable toward and from operative position, said work gages being constructed and arranged to determine respectively the desired swing for a right or left shoe; and means to provide for movement of said gages into and out of operative position.

2. In a heel breasting machine the combination of a work support; a movable work gage; a cutter; means controlled by movement of the cutter to move the gage positively to inoperative position; and means independent of the cutter for retaining the gage in said position.

3. In a machine for operating on boots and shoes, the combination, with a work support, and a gage with reference to and against which the boot or shoe is turned about a center adjacent the heel for determining the right

or left swing of a boot or shoe sustained by said support, said gage being normally held in inoperative position, of means operable to bring said gage to operative position with respect to the boot or shoe.

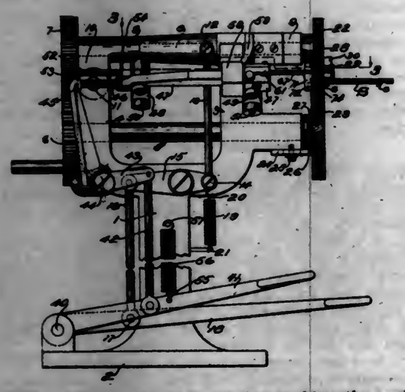


4. In a heel breasting machine the combination with a presser plate and a work support, of a gage to determine the relative position of said plate and support and means interposed between said gage and support whereby said gage may be moved to operative position by movement of said support.

5. In a heel treating machine a tool and normally inoperative positioning gages constructed and arranged to determine the right and left angular adjustment of a heel operated upon, relative to said tool, and means permitting the shoe to be swung laterally into contact with one of said gages when it is in operative position, determining the right or left swing to be given the shoe.

[Claims 6 to 45 not printed in the Gazette.]

957,987. WELT LAYING AND ATTACHING MACHINE. GEORGE T. MCLEOD, Dedham, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed June 17, 1909. Serial No. 502,813.



1. In a welt laying and attaching machine, the combination of a feed roll and presser roll between which the edge of the sole and the welt are passed, a welt guide disposed in front of and above the nip between and in a plane passing vertically through said rolls, and means directed diagonally toward the nip between the rolls for severing the welt oblique to the surface of the sole.

2. In a welt laying and attaching machine, the combination of a feed roll and presser roll between which the edge of the sole and the welt are passed, said feed roll supporting the sole between the edge and channel lip, a welt guide disposed in front of and above the nip between said rolls, and means for relatively adjusting the feed and presser rolls substantially parallel to the acting surfaces of said rolls to cause the feed roll to sustain for the action of the presser roll varying widths of soles between the edge and channel lip.

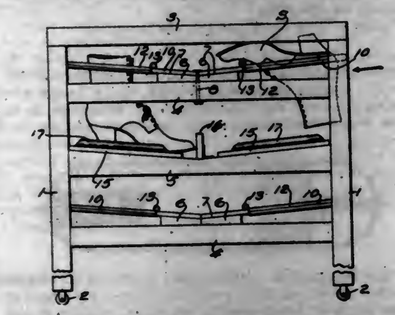
3. In a welt laying and attaching machine, the combination of a feed roll and presser roll between which the edge of the sole and the welt are passed, a welt guide disposed in front of and above the nip between said rolls, a knife for severing the welt in an inclined direction toward the nip between the presser and feed rolls, and means for actuating the knife in a combined end and sidewise direction to produce a shearing cut oblique and toward the shoe sole.

4. In a welt laying and attaching machine, the combination of a feed roll and presser roll between which the edge of the sole and the welt are passed, a welt guide disposed in front of and above the nip between said rolls, a knife for severing the welt in an inclined direction toward the nip between the presser and feed rolls, a knife guide having a portion for guiding the welt opposite the nip between the said rolls, and means for actuating the knife to sever the welt.

5. In a welt laying and attaching machine, the combination of a feed roll and presser roll between which the edge of the sole and the welt are passed, a welt guide disposed in front of and above the nip between said rolls, comprising a guide roll, a bracket carrying said guide roll, and an adjustable member connected to said bracket for varying the extent of the guiding surface of said roll.

[Claims 6 to 13 not printed in the Gazette.]

957,988. SHOE-SUPPORTING RACK. GEORGE T. MCLEOD, Dedham, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Sept. 15, 1909. Serial No. 517,768.

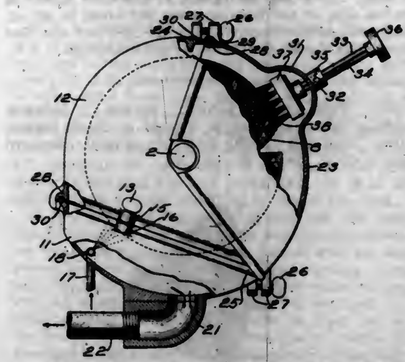


1. In a shoe supporting rack, the combination of a supporting frame, a series of sustaining separators spaced apart and inclined upwardly toward the sides of said frame, the sustaining edges of said sustaining separators being concaved to afford a seat for the wide portion of the shoe uppers, and converging toward their outer ends to prevent outward sliding movement of the shoes sustained thereby.

2. In a shoe supporting rack, the combination of a supporting frame having longitudinal center supports, a series of spaced sustaining separators secured to and extending from said longitudinal center supports and having concaved edges forming seats for the wide part of a shoe, the greatest separation of the supporting edges being between the base and free ends of the separators to prevent outward sliding movement of shoes sustained thereby, a toe rest extending transversely of the separators near their base portions, said sustaining separators being inclined upwardly toward their free ends, and a sole support disposed below the series of separators to position the shoe upper between the separators when the shoe is supported sole downward.

3. In a shoe supporting rack, the combination of a supporting frame, a series of spaced sustaining separators having concaved edges forming seats for the wide part of a shoe, and a sole support disposed below each series of said concaved edge separators to support a shoe sole downward, the said series of sustaining separators and its adjacent sole support being disposed with relation to each other that when a shoe is supported by the separators with its sole uppermost, the upper of the shoe does not contact with the sole support, and when the shoe is supported sole downward on a sole support, its upper will extend between the concaved edges of the sustaining separators and prevent the upper from falling over on or contacting with the upper of the adjacent shoe.

957,989. BRUSH-CLEANER. GEORGE T. MCLEOD, Dedham, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Sept. 15, 1909. Serial No. 517,801.



1. In a brush cleaner, the combination of a supporting frame, a casing supported on said frame and having an open portion for the presentation of a shoe to be treated by a brush in said casing, a cleaner casing section to close the open portion of the casing supported on the frame, and a cleaner brush carried by said cleaner casing section and adjustable with respect thereto.

2. In a brush cleaner, the combination of a supporting frame, a casing supported by said frame and having an open portion for the presentation of a shoe to be treated by a brush in said casing, a cleaner casing section to close the open portion of the casing, means for detachably securing the cleaner casing section in place to close said opening, and a cleaner brush carried by the cleaner casing section to contact with and clean the brush in said casing.

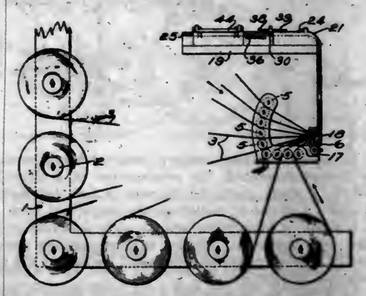
3. In a brush cleaner, a supporting frame, a casing supported on said frame and having an open portion for the presentation of a shoe to be treated by a brush in said casing, a cleaner casing section for closing the said open portion, a stem extending through the cleaner casing section and carrying a cleaner brush, and means permitting the cleaner brush to be adjusted toward and away from the brush within the casing on the supporting frame.

4. In a brush cleaner, the combination of a supporting frame, a casing supported on said frame and having an open portion for the presentation of a shoe to be treated by a brush in said casing, a cleaner casing section adapted to close the open portion of the casing and having a cleaner brush chamber, means for detachably securing the cleaner casing section in place to close said opening, and a cleaner brush carried by the cleaner casing section to contact with and clean the brush in the casing supported by the frame.

5. In a brush cleaner, the combination of a supporting frame, a casing supported on said frame and having an open portion for the presentation of a shoe to be treated by a brush in said casing, a fluid supply pipe leading into said casing, a drain leading from the casing, a cleaner casing section adapted to close the open portion of said casing, a cleaner brush, a cleaner brush carrier extending through the wall of the cleaner casing section and adjustable to present the cleaner brush against the brush in the casing, and means for securing the cleaner brush in adjusted position.

[Claim 6 not printed in the Gazette.]

957,990. MACHINE FOR CUTTING AND SLITTING INSOLE-REINFORCING STRIPS. GEORGE T. MCLEOD, Dedham, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Sept. 29, 1909. Serial No. 520,114.



1. In a machine for severing and slitting insole reinforcing strips, the combination of a table having a guideway, gaging means for locating the fabric or canvas in said guideway, and a cover or clamping plate adapted to rest upon and hold the fabric or canvas in place while being cut and slit, said cover or clamping plate having transverse slots for determining the length of the strip to be cut and a longitudinal slot for a knife to make a longitudinal slit in the strip.

2. In a machine for severing and slitting insole reinforcing strips, the combination of a table, a gage thereon for positioning the ends of the strips, and a clamping plate having transverse openings for the passage of a knife in cutting the required length of reinforce for a shoe sole and a longitudinal opening for the passage of a knife in cutting a slit longitudinally of the severed reinforce.

3. In a machine for severing and slitting insole reinforcing strips, the combination of a table, a gage thereon for positioning the ends of the strips, a clamping plate having transverse openings for the passage of a knife in cutting the required length of reinforce for a shoe sole and a longitudinal opening for the passage of a knife in cutting a slit longitudinally of the severed reinforce, and gaging means to determine the position of the transverse and longitudinal cuts.

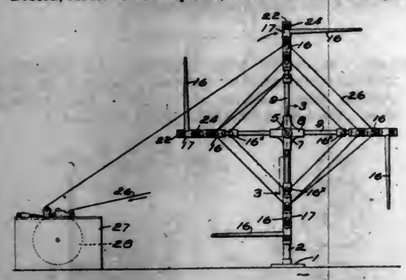
4. In a machine for severing and slitting insole reinforcing strips, the combination of a table or support, means for positioning fabric or canvas thereon, a cover or clamp plate adapted to rest upon the fabric or canvas and having a series of transverse openings for the passage of a knife, a gage movable to said openings in determining the length of reinforce to be cut, said cover or clamp plate having also a longitudinal slit or opening between its ends for the passage of a knife, and a gage for determining the length of the longitudinal slit.

5. In a machine for severing and slitting insole reinforcing strips, the combination of a table or support, means for positioning fabric or canvas thereon, a cover or clamp plate adapted to rest upon the fabric or canvas and having a series of transverse openings for the passage of a knife, a gage movable to said openings in determining the length of reinforce to be cut, said cover or clamp plate having also a longitudinal slit or opening

between its ends for the passage of a knife, a gage for determining the length of the longitudinal slit, and a presser for engaging the cover or clamp plate and holding it on the fabric or canvas.

[Claims 6 to 18 not printed in the Gazette.]

957,991. FABRIC-SUPPORTING REEL. GEORGE T. McLEOD, Dedham, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Sept. 29, 1909. Serial No. 520,168.



1. In a reel for supporting a strip of fabric with the plies thereof separated, the combination of a supporting standard, a shaft sustained thereby, a hub rotatable on said shaft, a series of radial spokes projecting from said hub, a series of supporting arms loosely mounted on said spokes, and means for locking said supporting arms in operative or inoperative position with respect to the plane of rotation of said reel.

2. In a reel for supporting a strip of fabric with the plies thereof separated, the combination of a supporting standard, a shaft sustained thereby, a hub rotatable on said shaft, retarding means acting to prevent free rotation of the reel, a series of radial spokes projecting from said hub, a series of supporting arms loosely mounted on said spokes, and means for locking said supporting arms in operative or inoperative position with respect to the plane of rotation of said reel.

3. In a reel for supporting a strip of fabric with successive plies thereof in separated relation, the combination of a support, a hub having a series of radial spokes, a series of supporting arms loosely mounted on said spokes in separated relation, and locking means acting separately on each supporting arm to hold it in either operative or inoperative position.

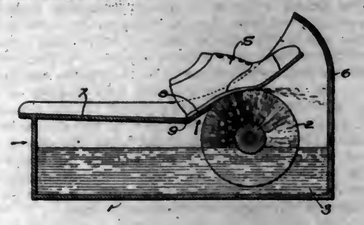
4. In a reel for supporting a strip of fabric with successive plies thereof in separated relation, the combination of a support, a hub having a series of radial spokes, a series of supporting arms loosely mounted on said spokes in separated relation, a series of collars having locking tongues fixed to said radial spokes, and springs for normally forcing the locking tongues into locking engagement with the supporting arms to hold the latter in position to wind the cloth thereon or in a position to permit the reel to rotate while the cloth is being wound on other supporting arms.

5. In a reel for supporting a strip of fabric with the successive plies thereof in separated relation, the combination of a support, a shaft non-rotatably and endwise movably sustained thereby, a reel having a hub on said shaft, a collar secured to the shaft and bearing on the hub, means for yieldingly moving the shaft endwise to regulate the frictional retarding effect of said collar, and supporting arms movable into and out of operative position carried by said hub.

[Claim 6 not printed in the Gazette.]

957,992. MACHINE FOR TEMPERING OUTSOLES OF BOOTS AND SHOES. GEORGE T. McLEOD, Dedham, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed June 4, 1909. Serial No. 500,173. Renewed Feb. 19, 1910. Serial No. 544,901.

1. In an outsole tempering machine, the combination of a brush, means to supply tempering liquid thereto, a table disposed in front of the brush, and a heel seat guard extending in an inclined direction upward from the table and adjacent the brush to protect the heel seat of a shoe from the tempering liquid.



2. In an outsole tempering machine, the combination of a tank, a rotary brush, means for revolving it in the tank, a table in front of the brush inclining downward toward the brush, and a heel seat guard or protector extending from the edge of the table adjacent the brush in an upwardly inclined direction to protect the heel seat of a shoe from the liquid while the outsole is being tempered.

957,993. HEEL-EDGE LINER. GEORGE T. McLEOD, Dedham, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed May 7, 1909. Serial No. 494,535. Renewed Apr. 4, 1910. Serial No. 553,293.



1. In a heel edge liner, a shaft, means for rotating the shaft, a disk of abrading material secured to said shaft to act along the edge or corner of a heel presented thereto, and a cutting ring closely surrounding said disk of abrading material and forming a peripheral edge thereto to remove any bur or bunch of material at the connection of the heel with the sole.

2. In a heel edge liner, a shaft, means for rotating the shaft, a disk of abrading material secured to said shaft to act along the edge or corner of a heel presented thereto, and a cutting ring forming a peripheral edge to said abrading material and having cutting edge portions surrounding said disk of abrading material to remove any bur or bunch of material at the connection of the heel with the sole.

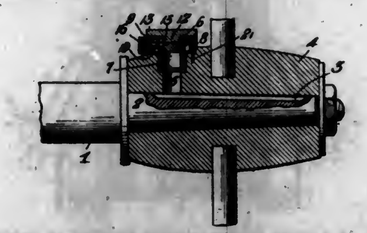
3. In a heel edge liner, a shaft, means for rotating the shaft, a disk of abrading material secured to said shaft to act along the edge or corner of a heel presented thereto, and an independent cutting ring having cutting edge portions alternating with smooth portions and surrounding said disk of abrading material to remove any bur or bunch of material at the connection of the heel with the sole.

4. In a heel edge liner, a shaft, means for rotating said shaft, a liner support having a face extending in a plane transversely of said shaft, a disk of abrading material rotating with said shaft and bearing on the said face of the liner support, and a cutting ring on the liner support surrounding the disk of abrading material to act upon the heel at the connection with the shoe sole.

5. In a heel edge liner, a shaft, means for rotating said shaft, a liner support having a face extending in a plane transversely of said shaft, a clamping collar on said shaft, a disk of abrading material disposed between the clamping collar and face of the liner support to act along the edge or corner of a heel presented thereto, and a cutting ring surrounding said disk of abrading material to act upon the edge or corner of the heel at the connection with the sole.

[Claims 6 and 7 not printed in the Gazette.]

957,994. OIL-CUP CLOSURE. EDWARD J. NAHM and WARREN L. NAHM, St. Louis, Mo. Filed May 11, 1909. Serial No. 495,336.



1. In a device of the character described, the combination of a tubular body, a removable plug inserted in said body and having a pin-receiving seat or groove, a radially slidable locking pin arranged in said body and having at its outer end a finger piece, the inner end of said pin being adapted to enter the seat or groove in the plug, and a substantially circular spring arranged in the body and having one of its ends connected to said pin, whereby said spring will maintain the inner end of the pin in the seat or groove in the plug and will permit said pin to be moved outwardly in a radial direction to release the plug.

2. In a device of the character described, the combination of a tubular body having an annular enlargement at one end, said enlargement being formed with an annular groove and with an intersecting radial opening, a removable plug inserted in the body to close the same and formed with an annular groove, a locking pin arranged in said radial opening and adapted to have its inner end engage the groove in the plug and a substantially circular spring arranged in the groove in the enlargement of the body and having one end connected to said pin, whereby the latter will be actuated inwardly.

3. In a device of the character described, the combination of a tubular body having an externally threaded inner end and an enlargement at its outer end, said enlargement being formed in its bottom with an annular groove and also with a radial opening intersecting said groove, a removable plug inserted in the body to close the same and formed with an annular groove, a slidable locking pin arranged in said radial opening in the enlargement of the body and adapted to enter said groove in the plug, a spring in the groove of the enlargement of the body and engaged with the pin for actuating the same, and a cover ring arranged upon the bottom of the enlargement of the body to close said groove.

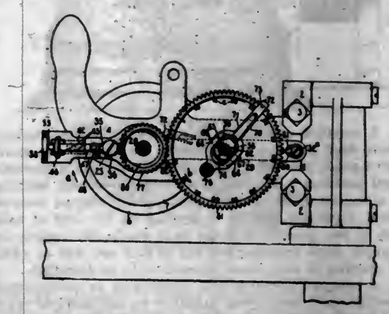
957,995. TYPE-WRITING MACHINE. STEFANUS NIELSEN, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 6, 1909. Serial No. 481,638.

1. In a typewriting machine, the combination of a platen, a spur wheel fixed to rotate therewith, a companion spur wheel mounted to rotate in the same vertical plane as the first mentioned spur wheel, means for engaging and disengaging said spur wheels by a bodily movement of one of said wheels relatively to the other, and means for stopping their rotation and thereby stopping the rotation of the platen.

2. In a typewriting machine, the combination of a platen, a spur wheel fixed to rotate therewith, a companion spur wheel, both wheels being arranged in the same vertical plane, a slide on which said companion spur wheel is mounted, and means for stopping the rotation of said wheels and thereby arresting the rotation of the platen.

3. In a typewriting machine, the combination of a platen, a spur wheel fixed to rotate therewith, a companion spur wheel arranged in the same vertical plane as the first mentioned spur wheel, means for bodily moving said wheels into and out of mesh, and stops carried by said companion spur wheel, one of said stops being adjustable.

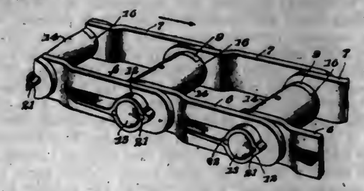
4. In a typewriting machine, the combination of a platen, a spur wheel fixed to rotate therewith, a companion spur wheel, a slide carrying said companion spur wheel and movable fore and aft of the machine, and stopping means mounted directly on said companion spur wheel for arresting the rotation of the platen.



5. In a typewriting machine, the combination of a platen, a spur wheel mounted to rotate therewith, a horizontal slide adapted for a fore and aft movement, a companion spur wheel mounted on said slide, and stopping means carried directly by said companion wheel for arresting the rotation of the platen.

[Claims 6 to 25 not printed in the Gazette.]

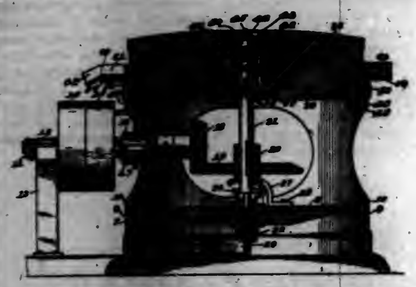
957,996. SPROCKET-CHAIN LINK. SAMUEL NYE, Corbin, Idaho, assignor of one-half to Austin Corbin, 2d, Spokane, Wash. Filed Sept. 1, 1909. Serial No. 515,649.



1. A drive or sprocket chain comprising, in combination, overlapping side bars, said side bars being provided with registering openings through their overlapping portions, the inner face of the inner bars being provided with bosses which partly surround the openings in said inner bars, connecting bars extending between the overlapped portions of the side bars, each of said connecting bars being bored, and provided with bosses extending from the ends of the connecting bars adapted to coöperate with the bosses on the side bars to hold the connecting bars against rotation, and pins passing through the openings in the side bars and connecting bars as set forth.

2. A drive or sprocket chain comprising, in combination, overlapping side bars, connecting bars extending between the overlapped portions of the side bars, said side bars and connecting bars being provided with projecting interlocking means to hold the connecting bars from rotation, pins passing through the overlapped portions of the side bars and connecting bars, said pins being provided with oppositely extending wings, and said side bars being provided with slots adapted to receive said wings, whereby the pins are held from rotation in the side bars.

957,997. MUSTARD-GRINDING MILL. PAUL OEHMIG, Chicago, Ill. Filed Nov. 26, 1909. Serial No. 529,873.



1. A mustard grinding mill comprising in combination a lower fixed grinding stone, means for leveling the same, a drive shaft passing axially therethrough, an adjustable fibrous bushing a tightening wedge between said bushing and stone, an upper grinding stone, a cap bearing secured to said stone and having a bearing on the end of said shaft, a bar passing through said shaft and sockets in the upper stone receiving the end of said bar, and an axial feed opening in said stone, substantially as described.

2. A mustard grinding mill comprising in combination opposing upper and lower grinding stones provided with axial openings therethrough, a hub in the lower stone, a drive shaft passing therethrough, an adjustable cone shield surrounding said shaft seated water tight upon said hub and projecting in a plane substantially above the lower surface of the upper stone, substantially as described.

3. A mustard grinding mill comprising in combination opposing upper and lower grinding stones provided with axial openings therethrough, a hub in the lower stone, a drive shaft passing therethrough, a cone shield surrounding said shaft seated water tight upon said hub and projecting in a plane substantially above the lower surface of the upper stone, and rotatable means for adjusting the height of said shield above said surface, substantially as described.

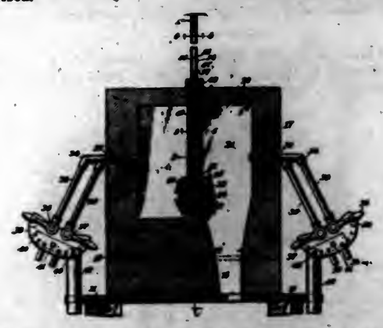
4. A mustard grinding mill comprising in combination opposing upper and lower grinding stones provided with axial openings therethrough, a hub in the lower stone, a drive shaft passing therethrough, a cone shield surrounding said shaft seated water tight upon said hub and projecting in a plane substantially above the lower surface of the upper stone, and a screw threaded collar for adjusting the height of said shield, substantially as described.

5. A mustard grinding mill comprising in combination upper and lower stones, an axial feed opening through the upper stone, a hub in the lower stone, a drive shaft passing through said hub, a cone bearing cap secured to the upper stone and supported at the upper end of said shaft, a shield surrounding said shaft and seated water tight upon said hub projecting in a plane substantially above the lower stone, and means for adjusting the height of said shield, substantially as described.

957,998. ANNEALING AND TEMPERING APPARATUS. WINSLOW R. PARSONS, Chicago, Ill. Filed June 14, 1907. Serial No. 378,968.

1. In a device for the purposes described an annealing chamber so arranged that articles to be annealed are conducted therethrough by gravity alone, means for automatically discharging said articles from said chamber, and means maintaining the walls of said chamber uniformly heated, substantially as described.

2. In a device for the purposes described an annealing chamber provided with a free and substantially close passage through which the articles to be annealed are conducted by gravity alone, means for uniformly heating the walls of said chamber to any desired degree of heat, and mechanical means closing the discharge end of said chamber and adapted to automatically discharge the annealed articles intermittently therefrom, substantially as described.



3. In a device for the purposes described an annealing chamber provided with a passage closed toward one extremity by the articles to be annealed and adapted to conduct the articles therethrough by gravity alone, and a rotary discharger adapted to close its lower extremity, substantially as described.

4. In a device for the purposes described an annealing chamber conforming in cross area to that of the articles to be annealed, means for conducting said articles therethrough by gravity alone, a surrounding combustion chamber, means for supplying a regulated degree of heat thereto and to the walls of the annealing chamber, and a rotary discharger operating intermittently to discharge the articles from the annealing chamber, substantially as described.

5. In a device for the purposes described an annealing chamber provided with a passage therethrough conforming to the cross area of the articles to be annealed and stacked therein, a surrounding heating chamber therefor, means for supplying heat thereto, means for supporting a column of stacked articles in the annealing chamber and mechanical means for intermittently discharging said articles one at a time therefrom, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

957,999. COMPOUND FOR SMOOTHING AND POLISHING ARTICLES AND PARTS. WINSLOW R. PARSONS, Chicago, Ill. Filed Mar. 29, 1909. Serial No. 486,454.

1. A compound for smoothing and polishing metal articles and parts, the base of which consists of pieces of brass and oil.

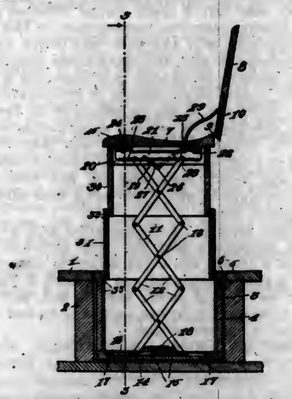
2. A compound for smoothing and polishing metal articles and parts consisting of pieces of brass and a neutral oil.

3. A compound for smoothing and polishing metal articles and parts consisting of pieces of brass, oil and an abrasive material, substantially as described.

958,000. CHAIR. JAMES PETERSON and JAMES G. CALLAWAY, Price, Utah. Filed June 15, 1909. Serial No. 502,316.

1. A chair comprising a base, a seat, a lazy tong structure between the seat and base and having pairs of crossed pivotally connected levers, the uppermost pair of levers being connected by rods, guides for said rods and arranged upon the seat, spring ratchet members upon the seat to engage and lock said rods, a rock shaft, arms upon the latter to engage and retract said members, and means for actuating said shaft.

2. A chair comprising a base, a seat, a lazy tong structure between the seat and base and having pairs of crossed pivotally connected levers, the uppermost pair of levers being connected by rods, guides for said rods and arranged upon the seat, spring ratchet members upon the seat and adapted to engage and lock said rods, a folding back, and means actuated by said back for retracting said members.



3. A chair comprising a base, a seat, a lazy tong structure between the base and seat and having pairs of crossed pivotally connected levers, the uppermost pairs of levers being connected by rods, guides for said rods and arranged upon the seat, an inverted U-shaped spring plate secured to the seat and having depending flanges formed with ratchet teeth to engage said rod and lock the lazy tong structure against movement, and means for retracting said ratchet teeth from engagement with said rods.

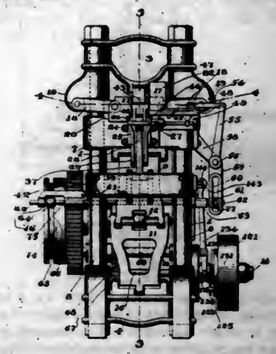
4. A chair comprising a base, a seat, a lazy tong structure between the seat and base and having pairs of crossed pivotally connected levers, the uppermost pair of levers being connected by rods, guides for said rods and arranged upon the seat, spring ratchet members upon the seat to engage and lock said rods, a rock shaft, arms upon the latter to engage and retract said members, a downwardly folding chair back, arms upon the ends of said rock shaft, and links connecting the last mentioned arms to said folding back.

5. A chair comprising a base formed with undercut guide grooves, a pair of slidable blocks having grooved edges to slide in said guide grooves, said blocks being movable toward and from each other, a seat, a lazy tong structure between said slide blocks and said seat and having pairs of crossed pivotally connected levers, the uppermost pairs of levers being connected by rods, guides for said rods and arranged upon the seat, spring ratchet members upon the seat to engage and lock said rods, a rock shaft, arms upon the latter to engage and retract said members, means for actuating said shaft, and cushioning members arranged in the ends of the grooves in said base and adapted to be engaged by said slide blocks when the latter are moved from each other in the folding movement of the lazy tong structure.

[Claim 6 not printed in the Gazette.]

958,001. HEEL-COMPRESSOR. MERTON D. PHELAN, Boston, Mass., assignor, by mesne assignments, to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed June 2, 1906. Serial No. 319,898.

1. An organized machine of the class described comprising in combination a movable cross head provided with means for supporting a reciprocatory carrier, dies or compressing members for shaping heel blanks, a heel blank carrier slidably mounted on said supporting means having a flange constituting a breast plate, a concaver plate secured to said carrier to lie in a plane at an angle to said plate, a fixed cross head for a tread plate having a lug or finger disposed to be engaged by the breast plate as the heel is being compressed, means for feeding blanks upon the concaver plate of said carrier, means connected with said carrier for holding the blank in compressing position against said breast plate, and means governed by said feeding mechanism for operating said holding means to facilitate insertion or removal of blanks between it and said breast plate.



2. An organized machine of the type described comprising in combination a series of dies or compressing members, a carrier provided with means for holding heel blanks in compressing position thereon, and means for feeding blanks thereto, clamping means constructed and arranged for holding a blank to place it in compressing position upon said carrier and to yield and finally release the heel blank as the carrier is moved to heel compressing position.

3. In a machine of the type described, a blank feeding device comprising a pair of members, one mounted upon the other and arranged to permit of relative motion therebetween, and a blank clamping device upon one of said relatively movable members and connected with the other movable member to cause said device to automatically clamp a blank when one of said members is moved in one direction and to release it when moved in the opposite direction.

4. In a machine of the type described a blank carrier having a removable blank holder, a blank feeding device provided with one or more rollers and a slide member provided with cam portions constructed and arranged to be engaged by said rollers to actuate said blank holder to permit insertion or removal of a blank upon or from said carrier by the respective infeeding motion of said feeding device in one direction and its retraction by a movement of the latter in the opposite direction.

5. In a machine of the type described a blank carrier having a movable yieldingly mounted holder, a blank feeding device provided with one or more rollers, and means operated by said rollers to actuate said holder to facilitate insertion or removal of a blank on said carrier substantially as shown and described.

[Claims 6 to 9 not printed in the Gazette.]

958,002. PORTABLE POWER-TACKER. MERTON D. PHELAN, Boston, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Jan. 2, 1907. Serial No. 350,492.

1. A tack driving device comprising in combination tack driving mechanism, feeding means for moving said device in substantially the plane of the work, and an extensible throat, both operated by said tack driving mechanism.

2. A tack driving device provided with a slidably mounted extensible throat, means frictionally to move it toward and from the work, and pneumatically operated automatic step-by-step feed for moving the device over the work.

3. A portable tack driving device provided with an extensible throat normally in retracted position, and means yieldingly to move it in the direction of the work.

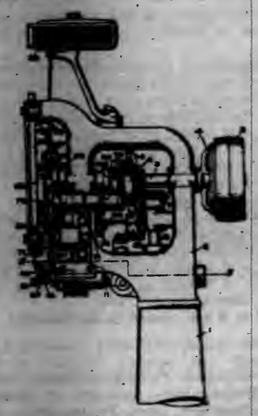


4. A tack driving device provided with an extensible throat normally in retracted position, a guide for said throat, a stop to limit the outward movement of said throat relatively to its guide, and pneumatically operated automatic step-by-step feed for moving the device over the work.

5. A portable tack driving device having a pneumatically operated step-by-step feed for automatically moving the device over the work, a spring to impel it toward the work, and means positively to lift it therefrom.

[Claims 6 to 16 not printed in the Gazette.]

958,003. METALLIC-FASTENING MACHINE. MERTON D. PHELAN, Boston, Mass., assignor, by mesne assignments, to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Jan. 11, 1907, Serial No. 351,785. Renewed Nov. 22, 1909. Serial No. 529,314.



1. A nailing machine comprising in combination nail driving means, a reciprocable awl bar, an awl transversely movable on said bar, means to positively move said awl transversely in both directions, including adjusting devices to vary the extent of the transverse movement, and means to reciprocate said bar.

2. A nailing machine comprising in combination nail driving means, an awl bar and its awl, a shaft and means to move the awl transversely from said shaft, and additional transverse awl moving means operated by the nail driving means.

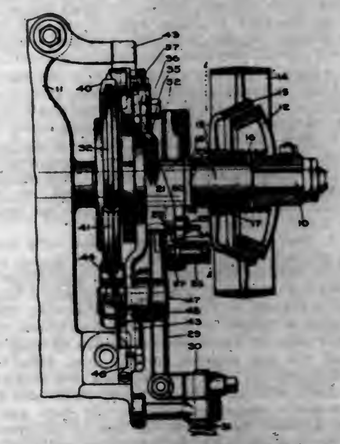
3. A nailing machine comprising in combination nail driving means including a reciprocable driver bar, an awl bar, means to reciprocate it endwise, an awl transversely reciprocable on said bar, a shaft, means operated from said shaft to impart transverse reciprocation to said awl and means connecting said awl with said driver bar to additionally reciprocate said awl transversely therefrom.

4. A nailing machine comprising in combination a nail carrier, a shaft, a cam geared thereto to reciprocate said nail carrier, a driver bar, a cam on said shaft to reciprocate it in both directions, an awl bar, an awl transversely movable thereon, means operated from said shaft to reciprocate said awl bar and also the awl thereon, relative to said bar, and means connecting the awl with said driver bar for moving the awl transversely from said bar during its approach stroke.

5. In a nailing machine, the combination with an awl and means to reciprocate said awl both vertically and transversely, of a slotted driver bar, means to reciprocate said bar, and a slide constructed and arranged to engage the transverse awl moving means and the slot, said slot being formed to impart transverse movement to said slide on reciprocation of the driver bar.

[Claims 6 and 7 not printed in the Gazette.]

958,004. STARTING AND STOPPING MECHANISM. MERTON D. PHELAN, Boston, Mass., assignor, by mesne assignments, to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Jan. 11, 1907, Serial No. 351,844. Renewed Nov. 22, 1909. Serial No. 529,315.



1. A starting and stopping mechanism having, in combination, a driving member; a driven member; a plurality of brake shoes disposed diametrically of and to act on the driven member; a brake arm extending diametrically of the driven member and carrying said brake shoes; actuating means for the brake shoes including said brake arm; and clutch operating mechanism controlling said actuating means.

2. A starting and stopping mechanism having, in combination, a driving member; a driven member; a plurality of brake shoes to act on the driven member; a diametrically disposed arm carrying said brake shoes; actuating means for the brake shoes including said arm; clutch mechanism; and stop motion controlling means controlling both the brake shoes and the clutch mechanism.

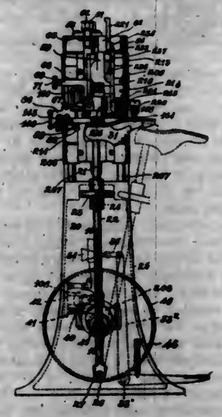
3. A starting and stopping mechanism having, in combination, a driving member; a driven member; clutch mechanism; a brake drum; an arm diametrically disposed with relation to the drum; self-adjusting brake shoes connected to the arm; means including said arm to set and disengage one shoe, and by moving the arm to set the other shoe; and additional means acting when the first shoe is disengaged to move the arm and disengage the other shoe.

4. A starting and stopping mechanism having, in combination, a driving member; a driven member; clutch mechanism; a brake drum; brake shoes; an arm extending diametrically of the driven member for supporting the shoes at opposite sides of the driven member; a lever pivoted to the arm; a pivotal connection between the lever and one brake shoe; and means for adjusting said pivotal connection with relation to the lever.

5. A starting and stopping mechanism having, in combination, a driving member; a driven member; a clutch; coöperating wedges to operate the clutch; means to move one wedge for controlling the clutch; means to adjust another wedge to interrupt said control; and brake mechanism operable concurrently with movement of the first mentioned wedge.

[Claims 6 to 10 not printed in the Gazette.]

958,005. MACHINE FOR BREASTING THE HEELS OF BOOTS AND SHOES. MERTON D. PHELAN, Boston, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Sept. 4, 1906, Serial No. 333,170. Renewed Apr. 12, 1910. Serial No. 554,961.



1. In a breasting machine, the combination of a movable shoe rest; a knife; a tripper adapted to engage the heel of a shoe supported on said shoe rest and movable therewith; and instrumentalities actuated by said tripper to operate said knife.

2. In a breasting machine, the combination of a movable shoe rest; a knife; a presser-foot adapted to rest against the heel of a shoe supported on said shoe rest; a tripper supported on said presser-foot and movable relatively thereto, said tripper being arranged to engage the heel of said shoe and movable therewith; and instrumentalities actuated by said tripper to operate said knife.

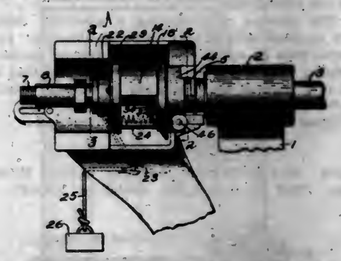
3. In a breasting machine, the combination of a shoe rest; a knife; a tripper; and mechanism to move said tripper into engagement with the heel of a shoe supported on said rest prior to every alternate cutting movement of said knife.

4. In a breasting machine, the combination of a shoe rest; a knife; a pair of trippers; and mechanism to move each of said trippers alternately into engagement with the heel of a shoe supported on said rest prior to every alternate cutting movement, respectively, of said knife.

5. In a breasting machine, the combination of a shoe rest; a knife; a tripper; an edge gage; and mechanism to move said tripper into engagement with the heel and said edge gage into engagement with the edge of the sole of a shoe supported on said rest prior to every alternate cutting movement of said knife.

[Claims 6 to 55 not printed in the Gazette.]

958,006. HEEL-SHAVER. MERTON D. PHELAN, Dorchester, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed June 12, 1909, Serial No. 501,738. Renewed Apr. 12, 1910. Serial No. 554,962.



1. In a heel trimmer, the combination of a shaft, a knife supporting collar mounted on said shaft and provided with eccentric knife sustaining grooves, knives having ribs engaging said eccentric grooves, a separate backer bar for each knife, and means for simultaneously adjusting the backer bars to bring the cutting edges of the knives into proper cutting position.

2. In a heel trimmer, the combination of a shaft, a knife supporting collar mounted on said shaft and provided with eccentric knife sustaining grooves, knives having ribs engaging said eccentric grooves, a separate backer bar for each knife, a segment connected to each backer bar, and means for adjusting the segments to bring the cutting edges of the knives into proper cutting position.

3. In a heel trimmer, the combination of a shaft, a knife supporting collar rotatable with said shaft and having eccentrically disposed knife sustaining grooves and concentric guiding slots, knives having ribs engaging said grooves, a separate backer bar for each knife, each backer bar engaging and being guided by one of said concentric guiding grooves in the knife supporting collar, and means for adjusting each backer bar to bring the cutting edge of the knives into proper cutting position.

4. In a heel trimmer, the combination of a shaft, a knife supporting collar rotatable with said shaft and having eccentrically disposed knife sustaining grooves and concentric guiding slots, knives having ribs engaging said grooves, a separate backer bar for each knife, each backer bar engaging and being guided by one of said concentric guiding grooves in the knife supporting collar, a separate rack connected to each backer bar, and means for adjusting the racks.

5. In a heel trimmer, the combination of a shaft, a knife supporting collar mounted on said shaft and provided with eccentric knife sustaining grooves, knives having ribs engaging said eccentric grooves, a separate backer bar for each knife, a segment rack for each backer bar, a worm engaging each segment rack, and means for operating the worms to move the backer bars.

[Claims 6 to 8 not printed in the Gazette.]

958,007. SWEEPING COMPOUND AND PROCESS OF MAKING SAME. JAMES P. PORTEUS, Kirkwood, Mo. Filed June 1, 1908. Serial No. 435,853.

1. The process of producing a sweeping compound, which consists in mixing sawdust with an aqueous solution of ferrous sulfate, and thereafter mixing therewith a viscid or sticky non-oily substance, to render the sawdust sticky; substantially as described.

2. The process of producing a sweeping compound, which consists in mixing an absorbing substance with an

aqueous solution of ferrous sulfate, and thereafter mixing with said mass glucose and an aqueous solution of chlorid of aluminum; substantially as described.

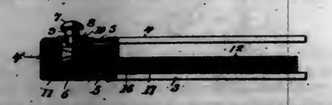
3. A sweeping compound comprising a mass of absorbent granular material mixed with an aqueous solution of ferrous sulfate and the particles of which mass are coated with glucose.

4. A sweeping compound comprising a mass of absorbent granular material mixed with an aqueous solution of ferrous sulfate, a disinfectant and the particles of which mass are coated with glucose.

5. The process of producing a sweeping compound, which consists in mixing a mass of absorbent granular material with an aqueous solution of ferrous sulfate, then combining with said mass a disinfectant, and then mixing with said mass a viscid non-oily substance in sufficient quantity to coat the particles of the entire mass.

[Claims 6 to 8 not printed in the Gazette.]

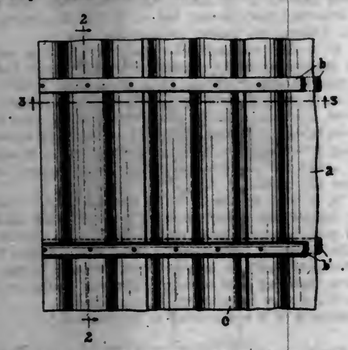
958,008. BLANK BOOK. HENRY G. RAZALL, Milwaukee, Wis. Filed June 14, 1909. Serial No. 501,940.



1. A blank-book leaf having a line of perforations therein interrupted by slots, whereby it is divided into a stub and a detachable sheet, said stud being fashioned for engagement with posts of a temporary binder, and said sheet provided with binder-post apertures and slits intersecting said slots and apertures.

2. A blank book leaf comprising a stud provided with binding-post apertures and transverse slits extending from said apertures to the adjacent longitudinal edge of the leaf, the remainder of said leaf being a detachable sheet separated from the stub by a line of perforations interrupted by slots and provided with binder-post apertures in communication with transverse slits that of themselves communicate with said slots.

958,009. GLIDING SURFACE FOR OPERATING IN AIR OR WATER. HANS REISSNER, Aix-la-Chapelle, Germany. Filed Oct. 26, 1909. Serial No. 524,600.



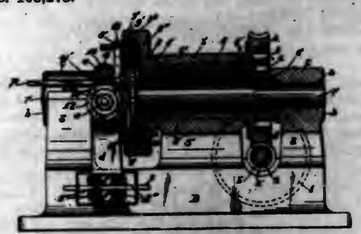
1. A gliding surface for operating in air or water consisting of a corrugated thin plate with its corrugations running in the direction of motion, and stiffening bands arranged transversely upon both sides of said plate in a manner to offer the least resistance to motion.

2. A gliding surface for operating in air or water consisting of a comparatively thin corrugated metal plate with its corrugations running in the direction of motion, and flat stiffening bands arranged upon both sides of said plate transversely to said corrugations in a manner to offer the least resistance to motion.

3. A gliding surface for operating in air or water consisting of a very thin corrugated plate with its corrugations running in the direction of motion and stiffening bands composed of flat tubes and arranged upon both sides of said plate transversely to said corrugations in a manner to offer the least resistance to motion.

4. A gliding surface for operating in air or water consisting of a very thin corrugated plate with its corrugations running in the direction of motion, a reinforcing strip, and stiffening bands arranged upon both sides of said plate opposite each other and transversely to said corrugations in a manner to offer the least resistance to motion.

958,010. ROLLING MECHANISM. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, of one-half to American Typographic Corporation, a Corporation of Arizona. Filed Apr. 30, 1902. Serial No. 105,273.



1. A rolling mechanism, comprising two rotating members located one within the other and whose axes of rotation are eccentric one to the other, each of said members being provided with a continuous circumferential working face, said faces forming a working pass at their arc of nearest approach one to the other, and means at the respective sides of said working pass for guiding strip material longitudinally through said pass in the direction of rotation of the rolls.

2. A rolling mechanism, comprising two rotary members located one within the other and whose axes of rotation are eccentric one to the other, a circumferential die upon the interior of the outer member and upon the exterior of the inner member, and feed mechanism transversely disposed with relation to said members, and located for delivering material to a point between said dies where these are separated adjacent to the working pass thereof.

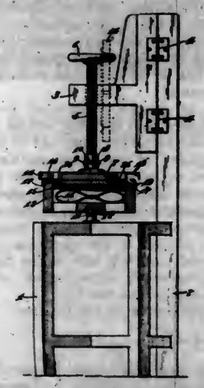
3. The combination with a rotary member having an internal circularly formed die face, of a rotary member having an external circularly formed die face mounted within and eccentric to said internal die face, said die faces being in rolling working relation one to the other throughout a considerable arc of each and effective to pass work between them and in the direction of their rotation, means for rotating said members in the same direction, and means for delivering strip material to the said rotary members at the out-of-working-relation-position.

4. The combination of a hollow rotatable member having an interior forming face and an internal gear, a rotatable shaft passing therethrough and eccentric to the axis thereof, a member carried by said shaft and rotating therewith and also having a forming face concentric with said shaft and eccentric with the first mentioned member, a pinion carried by said shaft and meshing with the internal gear, and means for driving one of said members.

5. The combination of a rotatable member having a compressive inner face, a rotatable member arranged eccentrically of the first-mentioned rotatable member and having a compressive peripheral surface located within said inner face and coöperative therewith in forming a working pass, driving mechanism engaging the eccentrically arranged compressive members, and rotatable members arranged angularly of the eccentrically arranged compressive members and located for delivering material to the said working pass.

[Claims 6 to 12 not printed in the Gazette.]

958,011. APPARATUS FOR MAKING LEATHER-COVERED CUSHIONED SEATS FOR CHAIRS. AIME ROTHBERG, Philadelphia, Pa. Filed June 25, 1909. Serial No. 504,219.



1. In an apparatus of the character described, the combination with a base, an upwardly projecting journal on said base, a clamping frame pivotally supported on said journal, said clamping frame comprising two members clamping a sheet of flexible material between them, a chair bottom over said flexible material, and a plunger adapted to press said chair bottom and flexible material downwardly in the clamping frame.

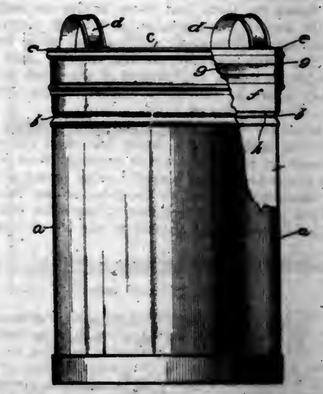
2. In an apparatus of the character described, the combination with a supporting base, an upright secured to the base, a bracket hinged to the upright, a screw threaded plunger in said bracket, a hand wheel at the upper end of said plunger, a block at the lower end of said plunger, and a removable clamping frame on said base.

3. In an apparatus of the character described, the combination with a supporting base, an upright secured to the base, a bracket hinged to the upright, a screw threaded plunger in said bracket, a hand wheel at the upper end of said plunger, a block at the lower end of said plunger, a removable clamping frame on said base, said clamping frame comprising two members adapted to clamp a sheet of flexible material between them, a movable frame in the lower member of said clamping frame, and springs exerting upward pressure on said frame.

4. In an apparatus of the character described, the combination with a supporting base, an upright on the base, a bracket on the upright, and a vertically movable plunger in said bracket, of a clamping frame having rotary mounting on said base, and comprising two members, one member having grooves, and the other a tongue adapted to clamp a leather sheet between them, pins on the lower member adapted to puncture said leather sheet, a vertically movable beveled frame in the lower member below the leather sheet, springs in the lower member exerting upward pressure on said frame, cushioning material on said leather sheet, a chair bottom on said cushioning material, and a block on the lower end of said plunger exerting downward pressure on said chair bottom.

958,012. MILK-CAN CLOSURE. AUGUST R. RUPPENTHAL, Brillion, Wis. Filed Feb. 15, 1910. Serial No. 544,068.

A milk-can closure consisting of the combination of a milk-can formed near its mouth with an inwardly-projecting annular bead; and a loose-fitting stopper having a ring-shaped neck-portion which is formed with an outwardly-projecting annular bead and the edge of the inner end of which is pressed into engagement with the bead formed near the mouth of the milk-can, when the stopper is forced home, whereby a liquid-tight joint is formed to prevent leakage of the milk from the can; the bead upon the neck-portion of the stopper preventing frictional contact between the rest of the neck-portion of the stopper



and the inner opposing wall of the mouth portion of the can, whereby a loose fit and a minimum of frictional resistance are insured.

958,013. INSOLE FOR BOOTS AND SHOES. THOMAS J. RYAN, Roxbury, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Apr. 15, 1909. Serial No. 490,160.



1. An article of manufacture comprising an insole having a channel and channel lip, and a strip of reinforcing material corresponding substantially in width to the shank width of the insole and applied to the shank and ball portions thereof, said strip of reinforcing material having a slit between the shank and toe portions and spread apart and tucked into the channel of the insole.

2. An insole for boots and shoes having an upwardly extending lip or projecting portion, and a reinforcing fabric corresponding substantially in width to the shank width of the insole and applied to the shank and ball portions thereof, said reinforcing fabric having a slit extending longitudinally at the forepart of the sole and spread or separated at the slit and secured to the sole in such separated or spread condition to reinforce the sole for the reception of fasteners.

3. An insole for boots and shoes having a channel lip slit at the toe portion and turned upward, and a strip of reinforcing material corresponding substantially in width to the shank width of the insole, applied to the shank and ball portions and having a slit, said strip of reinforcing material being spread apart at the slit and the portions

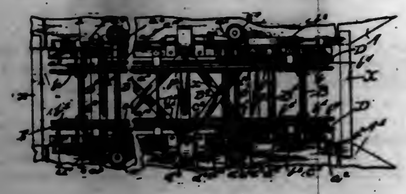
at each side of the slit being tucked into and secured to the channel formed by the upturned lip to reinforce the insole for the reception of fasteners.

4. An insole for boots and shoes having an upturned channel lip, and reinforcing fabric of a width corresponding substantially to the shank width of the insole and applied to the shank and ball portions thereof, said reinforcing fabric having a slit forward of the shank portion and spread apart at the slit to extend to the sides of the insole into the channel.

5. An insole for boots and shoes having a lip, and a strip of reinforcing material of a width less than the width of the insole at the forepart and provided with a slit, the parts of the reinforcing material being spread or separated at the slit to extend to the sides of the insole to reinforce the sole for the reception of fasteners, and said reinforcing material being applied to the shank and ball portions.

[Claims 6 and 7 not printed in the Gazette.]

958,014. CURRENT-MOTOR. RUDOLPH C. SCHREIBER, Harvey, Ill. Filed Oct. 10, 1908. Serial No. 457,058.



1. The combination with supporting means affording therebetween a sluiceway or flume of a current motor adjustably supported thereon, embracing parallel, transverse shafts, sprocket wheels thereon, sprocket chains trained about the same, extensible, flat buckets adapted to be extended by the action of the current, means pivotally connecting the buckets to the chains and lugs integral with said means on each side of the pivot point adapted to engage the under side of the chains for holding the buckets to receive the full force of the current.

2. The combination with supporting means affording therebetween a sluiceway or flume of a current motor adjustably supported thereon, embracing parallel transverse shafts, sprocket wheels thereon, sprocket chains trained about the same, extensible flat buckets, adapted to be extended by the action of the current and to fall inwardly by gravity at the end of the power impulse, a member pivotally connecting the end of each bucket to the chain, means secured to said member for engaging the under side of the chain and preventing the buckets swinging out of the water by the force of the current, rollers journaled to said member and guides for receiving said rollers and holding the buckets a uniform height in the water.

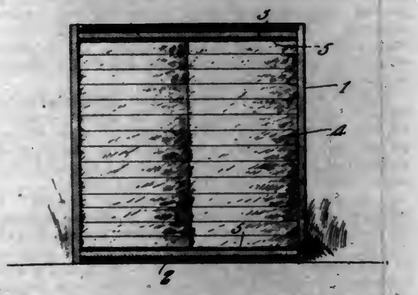
3. In a machine of the class described the combination of the supporting elements, of a current motor adjustably secured thereon as to height with reference to the current, and embracing in part extensible paddles or buckets adapted to be opened by the current to increase the area subjected to the pressure, bars secured to the supporting elements, channel ways secured to said bars in vertical alinement and rollers connected with each bucket adapted to engage in each channel way to support the buckets in a horizontal plane.

4. In a water motor of the class described the combination with pontoons, parallel shafts journaled thereto, sprocket wheels secured on the shafts, chains trained around the sprocket wheels, buckets secured to the chains having foldable ends, a transmission shaft journaled to the pontoon between the aforesaid shafts, means driving said transmission shaft from one of the first named shafts, means on said transmission shaft for transmitting power longitudinally of the motor, a transmission shaft operated from one of the first named shafts, a shaft extending transversely thereof and operated thereby, means on said shaft for transmitting power transversely of the motor, a screw jack secured to the pontoon at each corner of the motor, parallel shafts, each shaft adapted to operate the screw jacks at the corresponding end of the motor, means connecting the shafts to rotate together and mechanisms operated from one of the first named parallel shafts for rotating one of the shafts to actuate the screw jacks in either direction.

5. In a machine of the class described the combination with parallel shafts, and sprocket wheels thereon, of sprocket chains trained about the same, one on each side of the machine, a plurality of transverse paddles attached to each chain, guides supporting said paddles perpendicularly with the flow of the current, mechanism operated by the current adapted for adjustment to elevate the machine from the current and by reversal to lower the machine into operative position in the current, a plurality of adjustable chute boards on each side of the machine and mechanism for simultaneously adjusting all of the chute boards on the same side of the machine.

[Claims 6 and 7 not printed in the Gazette.]

958,015. TOBACCO-SHIELD. JOHN H. SCOTT, Winston Salem, N. C., assignor of one-half to James B. Dyer, Winston Salem, N. C. Filed Oct. 23, 1909. Serial No. 524,251.



1. A non-absorbent tobacco shield arranged to be inserted in a packing case between the case and the tobacco therein, the tobacco-contacting face of the shield being roughened.

2. A non-absorbent tobacco shield arranged to be inserted in a packing case between the case and the tobacco therein, the tobacco-contacting face of the shield being coated with a substance containing nicotin.

3. A non-absorbent tobacco shield arranged to be inserted in a packing case between the case and the tobacco therein, the tobacco-contacting face of the shield being coated with a substance simulating the taste of tobacco.

4. A non-absorbent tobacco shield arranged to be inserted in a packing case between the case and the tobacco therein, the tobacco-contacting face of the shield being coated with tobacco juice.

5. A tobacco shield arranged to be inserted in a packing case between the case and the tobacco therein, the tobacco-contacting face of the shield being roughened and coated with a substance containing nicotin.

[Claims 6 and 7 not printed in the Gazette.]

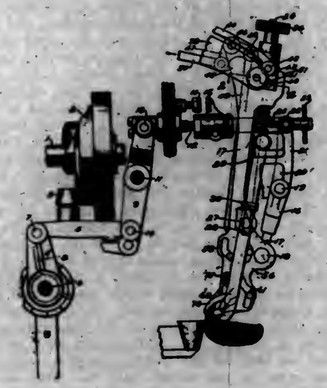
958,016. RODENT-TRAP. JOHN R. SCOTT, Daleville, Ind. Filed Sept. 22, 1909. Serial No. 519,051.

In a trap of the character described, the combination of a swinging door, a pivoted swinging platform, a depending swinging rod adjacent said platform, having an intermediate eye and a lower hook end, and a wire spring pivotally connected at one end to said swinging door and having an intermediate eye with which said lower hook end of said rod engages, said wire being bent adjacent the



platform to form an S-shaped trigger having its free end extending through the intermediate eye of said rod.

958,017. PINCER MECHANISM FOR LASTING-MACHINES. THOMAS H. SEELY, Boston, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Jan. 20, 1909. Serial No. 473,314.



1. In a pincer mechanism for lasting machines, the combination of two jaws movable relative to each other to grip and release the work, means for yieldingly lifting said jaws while they grip the work, a lifting lever for transmitting extra movement to said means, and an extra lift lever for giving an additional updraw lifting action to the lifting lever and said jaws.

2. In a pincer mechanism for lasting machines, the combination of two jaws movable relative to each other to grip and release the work, means for yieldingly lifting said jaws while they grip the work, and auxiliary means operating at the conclusion of the updraw movement to increase the lifting tension of the said yielding means, said auxiliary means including a lifting lever.

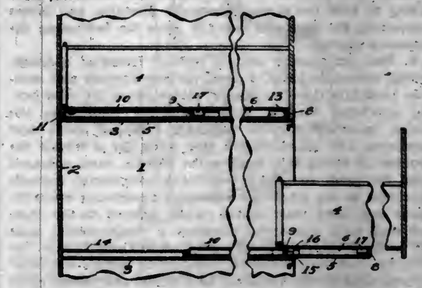
3. In a pincer mechanism for lasting machines, the combination of two jaws movable relatively to grip and release the work, an updraw lever, yielding connections between the updraw lever and said jaws, and an extra lift lever and connected block for giving an additional updraw lifting action to the said yielding connections.

4. In a pincer mechanism for lasting machines, the combination of two jaws movable relative to each other to grip and release the work, a jaw carrier, means for raising the jaw carrier to give an updraw movement to the jaws, means for closing and opening the jaws, and means to take up thrust of the jaw carrier due to jaw closing movement to prevent the jaw carrier binding upon adjacent parts under the action of the jaw closing movement.

5. In a pincer mechanism for lasting machines, the combination of two jaws, a jaw carrier, an updraw lever connected to said jaw carrier, means connected to the jaw carrier for closing said jaws, and rolling surfaces interposed between the jaw carrier and updraw lever connection therewith to prevent binding of the jaw carrier under the action of the jaw closing movement.

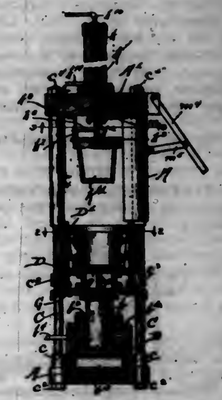
[Claims 6 to 17 not printed in the Gazette.]

958,018. FILING-CABINET. LIBORIUS SENGE, Crescent Springs, Ky., assignor to The Globe-Wernicke Company, Cincinnati, Ohio. Filed Feb. 4, 1910. Serial No. 542,084.



In a drawer support for filing cabinets and the like the combination of a main supporting shelf, front stops to limit the outward movement of the drawer, rear stops to limit the inward movement of the drawer with relation to the drawer support, stops to limit the outward movement of the drawer support with relation to the cabinet, supporting guides to maintain the horizontal position of the drawer support, and supporting guides to maintain the horizontal position of the drawer, substantially as described.

958,019. MACHINE FOR FORMING ARTICLES FROM PULP AND ANALOGOUS MATERIALS. ALFRED SHACKLETON, Chicago, Ill., assignor to Louis T. Roenitz, Chicago, Ill. Filed Jan. 20, 1909. Serial No. 473,282.



1. The combination with a vertical frame of a lower hydraulic press, a head secured thereon and movable vertically thereby, parallel plates apertured centrally, inwardly movable segments arranged between said plates about said apertures and affording the side walls for a female die member, cam bars rigidly secured to the head and vertically slidable through the plates, cam members removably secured to the cam bars for actuating the segments, said cam members non-connected with the segments, a male die member adjustable into position in said female die member, a brace bar adapted to hold the same against the pressure, means also actuated by the press for retracting the segments, and a stripper carried on the male die member to discharge the formed article therefrom.

2. The combination with a frame of a hydraulic press affording a part thereof, a head secured thereon and movable thereby, inwardly movable segments arranged about

said head and affording the side walls of a female die member, means operated from the press for moving the segments inwardly about said head, a male die member adjustable into position in said female die member, means acting to hold the same against the pressure, and cables connecting the segments and the press for retracting the segments thereby.

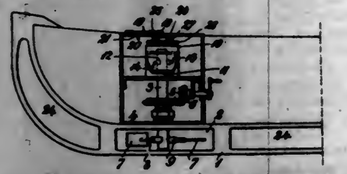
3. The combination with a vertical frame of a double acting hydraulic press, a head secured thereon and movable vertically thereby, parallel plates above the head having apertures therein, members rigidly connecting the plates, inwardly movable segments arranged about said apertures, and affording the side walls for a female die member of which said head is the bottom, cams operated from the press adapted to vertically reciprocate through apertures in the plates for moving the segments inwardly about said head, wear plates rigidly secured to the cams and said rigid connecting members, a complemental male die member adjustable into position in said female die member, a slidable brace bar adapted to engage the same to hold against the action of said press, and means operatively connecting the press and segments for retracting the segments thereby.

4. The combination with a vertical frame of a double acting hydraulic press, a vertically movable head secured thereon, inwardly movable segments arranged about said head and affording the side walls for a female die member of which said head affords the bottom, cams operated from the press and non-connected with the segments and acting to move the segments inwardly about said head, a male die member complemental with and adjustable into position in said female die member, rigid manually actuated means adapted to engage the male die member to hold the same against the pressure, and cables connected with the segments and the press for retracting the segments.

5. In a machine of the class described the combination with the movable bottom member of peripherally arranged radially movable segments, alternate segments of which are provided with feather edges overlapping inclined faces on the adjacent segments, means rigidly secured to the movable member for positively actuating all of said segments inwardly by engagement with said overlapped segments and non-connected with the segments, and power operated means for retracting some of said segments.

[Claims 6 to 10 not printed in the Gazette.]

958,020. PROPELLING MEANS FOR VESSELS. JOSEF SINČIC, Bakar, Austria-Hungary. Filed Dec. 15, 1908. Serial No. 467,601.

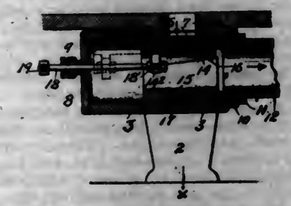


1. The combination with a vessel having a keel, the keel provided with window-like openings, of vertical shafts the lower ends of which project into the keel, a horizontal tubular guide carried by each of the vertical shafts, a spindle rotatably arranged within each of said guides, feathering paddles mounted on each of said spindles, and adapted to rotate in a horizontal plane within said openings, and controlling devices for varying the feathering movement of said paddles comprising a cylinder arranged over the upper end of each of the said vertical shafts and concentric therewith and having a slot in its wall, a horizontally-arranged tubular guide carried by each of the vertical shafts within the cylinder, a horizontally-arranged rotatable crank mounted within each of said horizontal tubular guides, the outer ends of said cranks lying within the slot of the respective cylinder, an arm on each of the cranks within each vertical shaft, arms on each of the paddle spindles, and rods connecting the arms on the cranks with the arms on the paddle spindles, and means for rotating the vertical shafts.

2. The combination with a vessel having a keel, the keel provided with window-like openings, of vertical shafts the lower ends of which project into the keel, a horizontal tubular guide carried by each of the vertical shafts, a spindle rotatably arranged within each of said guides, feathering paddles mounted on each of said spindles, and adapted to rotate in a horizontal plane, said paddles fitted in certain of such openings, and controlling devices for varying the feathering movement of said paddles comprising a cylinder arranged over the upper end of each of the said vertical shafts and concentric therewith and having a slot in its wall, a horizontally-arranged tubular guide carried by each of the vertical shafts within the cylinder, a horizontally-arranged rotatable crank mounted within each of said horizontal tubular guides, the outer ends of said cranks lying within the slot of the respective cylinder, an arm on each of the cranks within each vertical shaft, arms on each of the paddle spindles, and rods connecting the arms on the cranks with the arms on the paddle spindles, and means for rotating the vertical shafts.

3. The combination with a vessel having a keel, said keel being provided with window-like openings, of vertical shafts the lower ends of which project into the keel, a horizontal tubular guide carried by each vertical shaft, a spindle rotatably arranged within each of said guides, feathering paddles mounted on each of said spindles and adapted to rotate in a horizontal plane within said openings, and controlling devices for varying the feathering movement of said paddles comprising a cylinder arranged over the upper end of each of the said vertical shafts and concentric therewith and having a slot in its wall, a horizontally-arranged tubular guide carried by each of the vertical shafts within the cylinder, a horizontally-arranged rotatable crank mounted within each of said last-mentioned horizontal tubular guides, the outer ends of said cranks lying within the slot of the respective cylinders, an arm on each of the cranks within each vertical shaft, arms on each of the paddle spindles, rods connecting the arms on the cranks with the arms on the paddle spindles, means for rotating the vertical shafts, and means for shifting said cylinders in an angular direction.

958,021. VALVE. FREDERICK SNOW, Chicago, Ill., assignor, by mesne assignments, to Conkling Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 26, 1905. Serial No. 293,287.



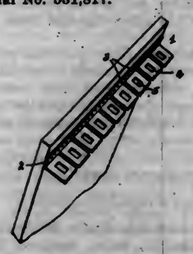
1. A cylindrical washer shell in combination with the cradle supporting one end of said shell, a valve casing formed integral with said cradle and having in its top an opening communicating with said shell, a waste pipe attached to the side of said cradle and leading from said valve casing, a one piece sliding valve in said valve casing and adapted to close the opening in the top of said casing and cradle, the valve stem extending through that end of said casing which is opposite said waste pipe and an operating lever mounted on said cradle and occupying a horizontal position beneath the washer shell, substantially as described.

2. A cradle or support for a washer shell, said cradle containing in its upper portion a cylindrical, horizontal valve casing integral therewith and having an inlet opening in its top, and an outlet opening in its end, said valve casing also containing inclined ways below the opening in its top, in combination with a wedge shaped slide valve segmental in cross section, fitted to the top of said casing and slidable on said inclined ways, to open and close said inlet opening in the top of the casing, a valve stem extending from said slide valve and a lever pivoted upon the side of the cradle for operating said stem and valve, substantially as described.

3. A cradle having a curved top to receive a washer shell, in combination with a valve casing integral with said cradle and containing a horizontal cylindrical bore, said cradle having an opening in its top, communicating with said bore, means closing one end of said casing, a waste pipe connected with the other end of the casing, a cylindrical lining shorter than said casing and arranged therein beneath the opening in the top thereof, said lining being divided into a larger lower part and a smaller upper part, engaged upon inclined surfaces, the smaller part being adapted to close the opening in the cradle, means securing the lower part of the lining in the casing, a valve stem arranged in the closed head or end of the casing and loosely connected with the upper part of said lining and means upon the cradle for operating said stem and the upper part of the lining to open and close the opening in the cradle, substantially as described.

4. A cradle or support for a washer shell containing a valve casing integral therewith and having a cylindrical bore, open at one end and closed at the other, said integral casing being provided with an inlet opening in its top, in combination with a pipe fitting at the open end of the casing, a sleeve like lining for said casing fitting the same and divided into two parts by severance on a plane lying between the axis of the casing and the inlet opening thereof and forming an acute angle with said axis, the lower part of said lining being fixed in the lower part of said casing, the upper part of said lining constituting a one piece slide valve which is slidable on the lower part to open and close said inlet opening and a valve stem extending through the closed end of the casing and loosely attached to said upper, valve-forming, part of the lining, substantially as described.

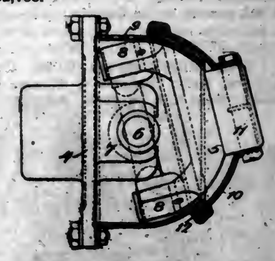
958,022. BOX-COVER FASTENER. JAMES H. SOWER and JOHN T. RICHARDS, Louisville, Ky. Filed Dec. 7, 1909. Serial No. 531,817.



1. The combination with the lid and end of a box, of a plate suitably secured to said lid and provided with a plurality of apertured ears, a plate suitably secured to said end and provided with a plurality of tongues for interlocking with said apertured ears, and a plurality of teeth connected to said first named plate for engagement with said end.

2. The combination with the lid and end of a box, of a plate suitably secured to the end of said lid and provided upon one of its longitudinal edges with a plurality of apertured ears, said plate being provided upon the other longitudinal edge with a plurality of teeth, a second plate suitably secured to said end and provided with a plurality of substantially triangular tongues adapted to interlock with said ears, and said teeth being arranged to engage approximately the central longitudinal axis of the upper edge of said end.

958,023. INCASED UNIVERSAL JOINT. CLARENCE W. SPICER, Plainfield, N. J. Filed Jan. 17, 1907. Serial No. 352,785.



1. The combination with an incased universal joint structure, comprising driving and driven members, means connecting said members for the transmission of the motion from one to another, and a casing inclosing said driving and driven members, having an opening through which one of said members projects, such opening substantially closed by the member so projecting therethrough, of a cover for said opening outside of said casing but coacting therewith, and mounted upon the member so projecting through said opening.

2. A power transmitting device comprising two universal joints and a shaft connecting said joints, each such joint comprising driving and driven members and means connecting said members for the transmission of motion from one to another, that one of said members, of one such joint, which is not connected to the shaft, having a casing provided with an opening through which the other said member of that joint projects, such opening substantially closed by said member so projecting therethrough, said casing thereby substantially inclosing the joint, in combination with a protecting cap for said incased joint, mounted on that member of said joint which is connected to said shaft and fitting over, coacting with, and partly inclosing the casing of that joint.

3. A power transmitting device comprising two universal joints and a shaft connecting said joints, each such joint comprising driving and driven members and means connecting said members for the transmission of motion from one to another, that one of said members, of one such joint, which is not connected to the shaft, having a casing provided with an opening through which the other said member of that joint projects, such opening substantially closed by said member so projecting therethrough, the said casing having a curved surface substantially concentric with its respective joint, in combination with a protecting cap for such incased joint mounted on that member of said joint which is connected to said shaft and fitting over and coacting with the curved surface of said casing.

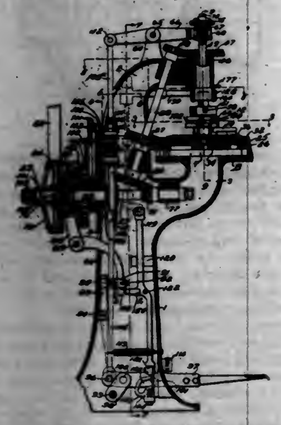
4. The combination with an incased universal joint structure, comprising driving and driven members, means connecting said members for the transmission of motion from one to another, one of said members being provided with a curved surface substantially concentric with the axis of oscillation of that member, and a correspondingly-curved casing member inclosing said curved surface and having an orifice substantially closed thereby, said casing member mounted upon another member of the joint, of a cover for said orifice outside of said orificed member but coacting therewith, and mounted upon the member provided with such curved surface.

5. The combination with an incased universal joint structure, comprising driving and driven members, means connecting said members for the transmission of motion from one to another, one of said members being provided with a curved surface substantially concentric with the axis of oscillation of that member, and a correspondingly-curved casing member inclosing said curved surface and having an orifice substantially closed thereby, said casing member mounted upon another member of the joint, of a cover for said orifice outside of said orificed member but

coacting therewith, and mounted upon the member provided with such curved surface, and packing rings between said cover and the casing.

[Claim 6 not printed in the Gazette.]

958,024. SOLE-ROUNDING MACHINE. CHARLES P. STANDON, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Nov. 28, 1908. Serial No. 464,816.



1. In a sole rounding machine, the combination of upper and lower work clamping members, a knife carrier and knife, power means connected to the upper and the lower clamping members to positively rotate each of them in unison and impart cutting movement to said knife, and means operative after the said power means is disengaged from its driving connection with the upper and lower clamping members and knife to reverse the movement of the said upper and lower clamping members and knife and return them to initial or starting position.

2. In a sole rounding machine, the combination of upper and lower work clamping members, a knife carrier and knife, power means connected to the upper and lower clamping members to rotate them in unison and impart cutting movement to said knife, a spring, and means connected to the spring and operative after the said power means is disengaged from its driving connection with the upper and lower clamping members and knife to reverse the movement of the said upper and lower clamping members and knife and return them to initial or starting position.

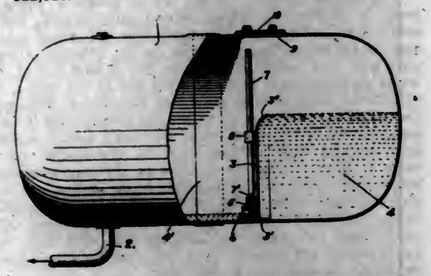
3. In a sole rounding machine, the combination of a work support to sustain a sole to be rounded, a knife to act on the sole, means to move the work to present it to the knife, means to also impart cutting movement to the knife in a direction opposite that in which the sole is moved, and means for automatically reversing the movement of both the work support and the knife and return each to initial position after the actuating means for the work support has been disengaged from driving connection with said work support.

4. In a sole rounding machine, the combination of work clamping means to clamp and hold the work, cutting means, mechanism to rotate the work clamping means and to move the cutting means bodily for cutting the work, and unitary controlling devices to disengage the said mechanism from operative connection with the work clamping and cutting means, for reversing the direction of movement of the work clamping and cutting means, and unclamping the work.

5. A sole rounding machine comprising, in combination, clamping means arranged to clamp a sole blank, means to rotate the clamping means and sole blank, a cutter, means to move the cutter along the clamping means to contribute to the cutting action, and means to move the cutter and the work clamping means in the opposite direction as the machine is brought to rest.

[Claims 6 to 49 not printed in the Gazette.]

958,025. LIQUID-FUEL TANK. JOSEPH A. STEINMETZ, Philadelphia, Pa. Filed Oct. 16, 1909. Serial No. 522,928.



1. A tank containing a partition forming two compartments, valve mechanism disposed near the bottom of said partition for controlling communication therethrough between said compartments, an outlet for discharging from the bottom of one of said compartments and an inlet through the top of said tank over said partition for charging both of said compartments simultaneously.

2. A tank having an inlet, a partition rising from the bottom to a termination below said inlet, said partition forming compartments, a discharge passage leading from the bottom of one of said compartments, and valve mechanism controlling a passage through the bottom of said partition whereby said compartments communicate, said valve mechanism comprising a casing containing a port and a revoluble rod having a threaded engagement with said casing for controlling said port.

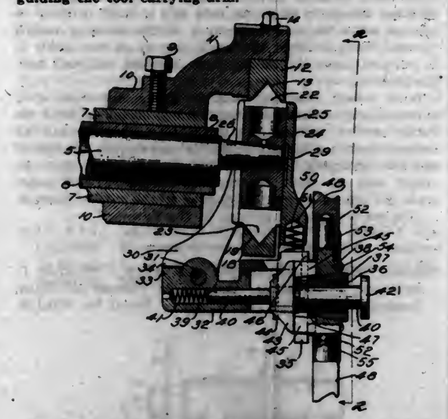
3. A tank containing a partition which rises from its bottom to a level below the top thereof, said partition having its upper portion bent transversely to the plane thereof, a charging aperture directly above said partition, means providing a passage through the bottom of said partition, and a revoluble rod having means for controlling said passage, said rod being disposed beneath said aperture.

4. A tank having an inlet, a partition rising from the bottom of the tank to a terminus below said inlet, said partition forming compartments, and valve mechanism controlling a passage through the bottom of said partition whereby said compartments communicate, said valve mechanism being wholly within said tank and comprising a casing containing a port and a longitudinally movable rod accessible through said inlet.

958,026. SHOE-SOLE-EDGE SETTER. GEORGE F. STEWART, Swampscott, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed June 28, 1909. Serial No. 504,678.

1. In a shoe sole edge setter, the combination of a driving shaft, a reciprocating tool carrying head actuated thereby and having a downwardly projecting bracket arm, a tool carrying arm pivotally connected to the rear portion of said bracket arm, coacting stops 33 and 34 on said arms, a tool carrier mounted on said tool carrying arm and carrying a plurality of tools, a locking member for holding any one of the tools in operative position, and a spring seated in the outer part of the head and bearing on the supporting arm and acting to hold the stop members 33 and 34 in contact.

2. In a shoe sole edge setter, the combination of a driving shaft, a tool carrying head reciprocated thereby having pivotally connected thereto a tool carrying arm, a tool carrier mounted on said arm and carrying a plurality of tools, a locking member for locking any one of the tools in operative position, means including the stop members 33 and 34 for yieldingly maintaining the tool carrying arm in operative position, and guide arms 49, 49 for guiding the tool carrying arm.



3. In a shoe sole edge setter, the combination of a reciprocating tool carrying head having a bracket arm, a tool carrying arm pivotally connected to said bracket arm, a spring seated in the head and disposed between the head and tool carrying arm to normally depress the tool end of said arm, stops 33 and 34 between the bracket arm and tool carrying arm, guide arms 49, 49 projecting downward from the head, and a bearing 36 on the tool carrying arm embraced by said guide arms.

4. In a shoe sole edge setter, the combination of a reciprocating tool carrying head, a bracket arm 30 disposed at the rear and guide arms 49, 49 disposed at the front of said head, a tool carrying arm pivotally connected to said bracket arm, and a face plate on said tool carrying arm having a bearing 36 embraced by the said guides 49, 49.

5. In a shoe sole edge setter, the combination of a tool carrying head having a pivoted tool carrying arm provided with a face plate, a bearing 36 projecting from said face plate, a conical tool support secured to said bearing, a tool carrier mounted on said conical support, and yielding means normally acting to lock the tool carrier from rotative movement and force the same toward the larger part of the conical support.

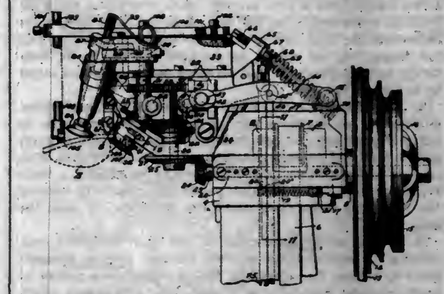
[Claims 6 to 10 not printed in the Gazette.]

958,027. BOOT AND SHOE CHANNELING MACHINE. GEORGE F. STEWART, Swampscott, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Aug. 7, 1908. Serial No. 447,376. Renewed Nov. 22, 1909. Serial No. 529,311.

1. In a channeling machine, the combination of a supporting head, work feeding means carried thereby, a movable head mounted on the supporting head and carrying a channeling tool, means for moving the movable head to carry the tool into and out of operative position with respect to the work engaged by the feeding means, and means to render the work feeding means inoperative while the tool is out of operative position.

2. In a channeling machine, the combination of a supporting head, work feeding means carried thereby and rendered operative by pressure of the work against said work feeding means, a channeling tool movable into and out of coöperating relation with the feeding means, and means to render said feeding means ineffectual while the channeling tool is out of coöperating relation therewith.

3. In a channeling machine, the combination of a supporting head, working devices carried thereby, driving means for said working devices, means for relatively moving the working devices to permit the work to be placed in the machine and to then relatively move them to work engaging position, and means for locking one of the working devices in inoperative condition while the said devices are in position to permit the work to be placed in the machine.

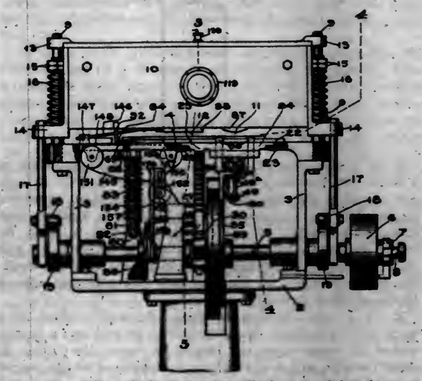


4. In a channeling machine, the combination of a supporting head, feeding and working devices carried thereby, operating means for said devices when in relative position for acting on the work, means for relatively moving said devices to permit the work to be placed in the machine and for relatively moving them to work engaging position, and means for rendering one of said operative means ineffectual when said devices are in position to permit the work to be placed in the machine.

5. In a channeling machine, the combination of a movable head, feeding means for the work and a channeling tool, one of which parts is movable with said head, means for moving the head to separate the feeding means and channeling tool and permit the work to be placed in position and for then moving them into coöperative relation with the work, and means to render one of said parts inoperative until they are brought into such coöperative relation.

[Claims 6 to 35 not printed in the Gazette.]

958,028. SOLE-MARKING MACHINE. WILLIAM C. STEWART, Lynn, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed July 27, 1906. Serial No. 328,044.



1. A machine of the type described comprising in combination a plurality of markers adjustable to predetermined positions for making marks upon different sizes of shoe parts at invariable positions for a given size of part and means for varying the position of said marks to correspondingly invariable positions in marking parts of different styles.

2. A sole marking machine of the type described comprising means for producing a plurality of marks in predetermined positions upon a shoe sole invariable for a given size of sole and means for adjusting said means to place said marks in corresponding positions upon different styles of soles.

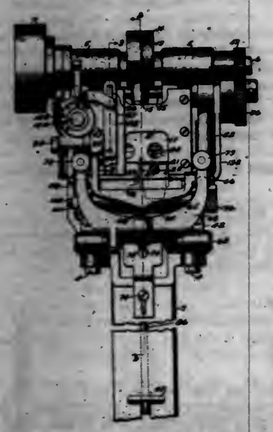
3. In a shoe marking machine, the combination of a front marker and a rear marker, each to make a mark extending transversely of the sole to be marked, means for adjusting the angular relation of said markers, a table for supporting the sole to be marked, and means for relatively moving the table and markers for causing the latter to act upon the sole.

4. A sole marking machine, comprising, in combination, a plurality of markers for placing marks on a sole to indicate positions thereon, means for changing the angular position of one of said markers on its support and with respect to the median line of the sole to be marked, a table for supporting the sole, and means for relatively moving the table and markers to cause the latter to act upon the sole.

5. A sole marking machine of the type described comprising in combination a heel marker and a forepart marker, means for operating the same to place marks at predetermined positions on a shoe sole, and means effecting sizing adjustment of said markers.

[Claims 6 to 57 not printed in the Gazette.]

958,029. MACHINE FOR SLASHING SOLES OF BOOTS AND SHOES. WILLIAM C. STEWART, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Nov. 16, 1908. Serial No. 462,786.



1. In a shoe sole slashing machine, the combination of a work rest having a curved or rounded surface to support the shoe sole, reciprocating slashing means, actuating means therefor to produce progressively a slashed area comprising slashes of varying lengths, and a slash director movable with the slashing means to bend the sole about the rounded surface of the work rest that the slashing means may act on the shoe sole in a direction oblique to the surface thereof.

2. In a sole slashing machine, the combination of a work rest to support the shoe sole to be slashed, a cutter, means to reciprocate the cutter to cause the cutter to slash the sole, and a slash director movable with the cutter to bend the sole about the work rest that the cutter may act on the shoe sole in a direction oblique to the surface thereof.

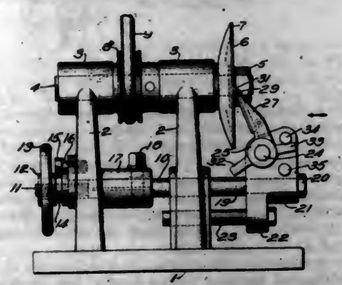
3. In a sole slashing machine, the combination of a work rest, a cutter carrier, a cutter carried thereby, means to move the cutter carrier to cause the cutter to slash the sole, and a slash director coöperating with the cutter and moving in advance thereof to bend the shoe sole over the work rest that the slash made by the cutter may be oblique to the surface of the shoe sole.

4. In a sole slashing machine, the combination of a work rest, slashing means, means for reciprocating the slashing means to slash the sole, and a slash director to contact with the sole in advance of the slashing means to bend the sole about the work rest where the cutter is to act and cause the slashes to be directed obliquely into the shoe sole.

5. In a sole slashing machine, the combination of a cutter carrier, a cutter carried thereby, means to move the cutter carrier to cause the cutter to slash the sole, and means movable with the cutter to present the surface of the sole obliquely to the action of the cutter that the cutter may act upon the inclined surface of and penetrate the sole in a direction oblique to the surface thereof.

[Claims 6 to 40 not printed in the Gazette.]

958,030. KNIFE-GRINDING MACHINE. WILLIAM C. STEWART, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed June 4, 1909. Serial No. 500,159.



1. In a knife grinding and sharpening machine, the combination of a grinding wheel, a work carrying head movable in a direction parallel to the axis of the grinding wheel, a rod projecting from the head, a work holder freely movable about and longitudinally of said rod, stop rods projecting from the head parallel to the first mentioned rod, and a tail piece projecting from the holder and extending between the rods to limit the swinging movement of the holder as it is moved along its supporting rod.

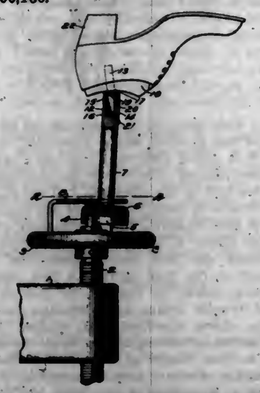
2. In a machine for grinding and sharpening leather cutting knives having beveled edges of different angles, the combination of a single grinding wheel, a head provided with a work holder supporting rod and two parallel stop rods, a reversible work holder slidable along said supporting rod and free to turn thereon, and tail pieces projecting in opposite directions from the said holder, either one of which may be extended between the stop rods to determine the bevel to be given the knife edges by the grinding wheel when the holder is slid in initial or reversed position on said supporting rod.

3. In a machine for grinding and sharpening leather cutting knives having beveled edges of different angles, the combination of a single grinding wheel, a head provided with a work holder supporting rod and two parallel stop rods, a reversible work holder slidable along said supporting rod and free to turn thereon, tail pieces projecting in opposite directions from the said holder, either one of which may be extended between the stop rods to determine the bevel to be given the knife edges by the grinding wheel when the holder is slid in initial or reversed position on said supporting rod, a shaft on which the head is mounted, and means for adjusting the shaft.

4. In a knife grinding and sharpening machine, the combination of a driving shaft, a grinding wheel carried thereby, a work carrier movable in a direction toward and from the plane of the grinding face of the said wheel, a rod projecting from said carrier, a reversible work holder mounted to slide and turn on said rod, to present the opposite edges of the knife to the same grinding wheel and means including oppositely disposed stop wings to determine the grinding angle in either position of the reversible work holder and limit the turning movement of the work holder on said rod.

5. In a grinding and sharpening machine, the combination of a driving shaft, a grinding wheel mounted thereon, a work carrier, means to adjust the work carrier toward and from the plane of the grinding face of said wheel, a supporting rod projecting from said carrier substantially parallel to the said grinding face, a work holder mounted to slide and swing on said supporting rod and provided with a stop wing, and stop rods on the carrier between which the stop wing extends to limit its swinging movement on said carrier as the holder is moved longitudinally on said supporting rod.

958,031. JACK FOR SLUGGING AND OTHER MACHINES. WILLIAM C. STEWART, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed June 4, 1909. Serial No. 500,160.



1. In a jack for slugging and other machines, the combination of a supporting post and spindle, a loose socket and pin connection between the post and spindle, said spindle at its upper end being provided with a socket extending longitudinally thereinto, and a last supporting pin freely tiltable at all times in said spindle socket and having its end within the spindle socket resting on the bottom thereof.

2. In a jack for slugging and other machines, the combination of a supporting pin, a spindle having an enlarged socketed base portion free to slide and tilt on said pin, and a cage for retaining the spindle base portion on said pin, said cage extending over the base portion and having an enlarged opening through which the spindle extends.

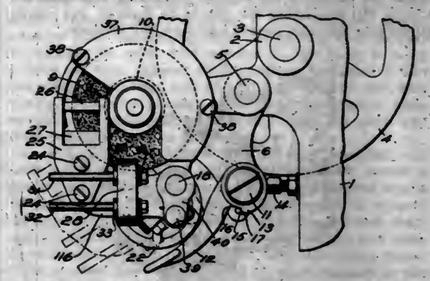
3. In a jack for slugging and other machines, the combination of an adjustable post having a supporting pin, a spindle having an enlarged socketed base portion free to slide and tilt on said pin, and a cage for retaining the spindle base portion on said pin, said cage extending over the base portion and having an enlarged opening through which the spindle extends.

4. In a jack for slugging and other machines, the combination of a post and spindle, a loose socket and pin supporting connection between the post and spindle permitting the spindle to freely slide and tilt with respect to the post, said spindle having a socketed upper portion extending longitudinally into the body of the spindle, and a last supporting pin having an enlarged bearing portion adjacent the upper end of the socket and a smaller end portion bearing upon the lower end of the socket.

5. In a jack for slugging and other machines, the combination of a post and spindle, a loose socket and pin supporting connection between the post and spindle permitting the spindle to freely slide and tilt with respect to the post, said spindle having a socketed upper portion, a last supporting pin loosely sustained in said socketed portion and free to tilt therein, and means to detachably retain the last supporting pin in said socketed portion.

[Claims 6 to 15 not printed in the Gazette.]

958,032. KNIFE GRINDING AND SHARPENING MACHINE. WILLIAM C. STEWART, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed June 5, 1909. Serial No. 500,383.



1. In a knife grinding and sharpening machine, the combination of a pivotally mounted frame, a shaft carrying a driving pulley and grinding disk, said shaft, pulley, and grinding disk being mounted on the pivoted frame, a driving wheel, means for supporting said driving wheel, means carried by said pivoted frame for supporting the knife to be ground, and a hand piece 12 for moving the said pivotally mounted frame about its pivot to carry the driving pulley into and out of engagement with the driving wheel.

2. In a knife grinding and sharpening machine, the combination of a driving shaft carrying a grinding disk, a knife gage having a plurality of knife rests, a plurality of knife carriers corresponding to said knife rests, and means for moving the knife gage and knife carriers toward and from the plane of the grinding disk.

3. In a knife grinding and sharpening machine, the combination of a driving shaft carrying a grinding disk, a knife gage having a plurality of knife rests, a bracket, a plurality of knife carrying spindles extending from said bracket transversely of said knife gage, means for adjusting the knife carrying spindles with relation to the knife rests, and means for moving the knife gage and knife carrying spindles toward and from the plane of the grinding disk.

4. In a knife grinding and sharpening machine, the combination of a driving shaft carrying a grinding disk, a movable knife gage extending in front of the grinding disk and having a plurality of knife rests, a knife carrier coöperating with each of said knife rests to determine the bevel to be given opposite edges of the knife, and means for moving the knife gage, its knife rests and coöperating knife carriers toward and from the plane of the grinding disk.

5. In a knife grinding and sharpening machine, the combination of a driving shaft carrying a grinding disk, a movable knife gage extending in front of the grinding disk and having a plurality of knife rests, a bracket movable with said knife gage and having a plurality of slots, knife carriers or spindles adjustable in said slots and coöperating one with each of said knife rests to grind different bevels on the opposite edges of the knife, and means to move the knife gage, knife rests, and knife carriers toward and from the plane of the grinding disk.

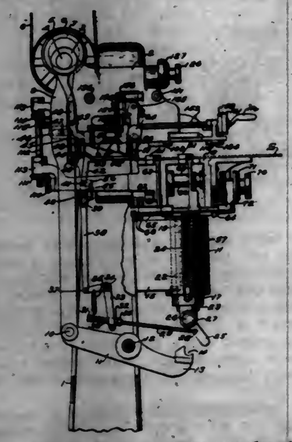
[Claims 6 to 8 not printed in the Gazette.]

958,033. OUTSOLE-MARKER. WILLIAM C. STEWART, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed July 12, 1909. Serial No. 507,068.

1. A sole marking machine of the type described, comprising in combination a front marker and a rear marker,

the one to place a mark transversely of the sole at the ball line and the other to place a mark transversely of the sole substantially at the heel breast line to indicate points for commencing or ending work on the sole, means for adjusting said markers toward and from each other in accordance with the size of the sole to be marked, a table having a flat surface for supporting the sole to be marked, and means for moving the table toward and from the markers.

2. A sole marking machine of the type described, comprising in combination a front marker and a rear marker, means for adjusting the angular relation of said markers, a table for supporting the sole to be marked, and means for moving the table toward and from the markers.



3. A sole marking machine of the type described, comprising in combination a front marker and a rear marker, means for changing the angular position of the front marker with respect to the median line of the sole to be marked, a table for supporting the sole, and means for moving the table toward and from the markers.

4. A sole marking machine of the type described, comprising in combination a front marker and a rear marker, means for changing the angular relation of one of said markers with respect to the median line of the shoe sole to be marked, a table, and means for moving the table toward and from the markers to cause the latter to act upon the shoe sole.

5. A sole marking machine of the type described, comprising in combination a front marker and a rear marker, a support for sustaining a shoe sole to be marked, means for sustaining type characters in position to be impressed upon the shoe sole, means for moving the type characters to bring a type character into operative position, means operative by movement of the type character moving means for relatively adjusting the markers in accordance with the size of the sole to be marked, and means for relatively moving the shoe sole and markers to cause the markers to act upon the sole.

[Claims 6 to 27 not printed in the Gazette.]

958,034. ROTARY JACK. WILLIAM C. STEWART, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Sept. 10, 1909. Serial No. 517,114.

1. In a shoe support, the combination of a rotary jack, a jack carrier adapted for adjustment to varying angles of inclination, jack operating means for turning the jack to present one or the other side of the shoe to the operator, and treadle operated devices for turning the jack in either direction and holding it in either position.

2. In a shoe support, the combination of a rotary jack, a jack carrier adapted for adjustment to varying angles of inclination, a jack operating shaft for turning the jack to present one or the other side of the shoe to the operator, treadle operated means for turning the jack in either direction, and means for limiting the rotative movements of the jack.



3. In a shoe support, the combination of a rotary jack for supporting a shoe, means connected to the jack for turning it in either direction, and two treadles connected to the jack turning means, one for operating said means to turn the jack in one direction and the other for operating said means to turn the jack in the opposite direction.

4. In a shoe support, the combination of a sustaining member or sleeve, a jack carrier, connections between the said member and jack carrier permitting lateral tilting adjustment of the jack carrier, a jack sustained by the jack carrier, means for turning the jack on the jack carrier, and treadle means for actuating the jack turning means in either direction and holding the jack from further movement during action upon the shoe.

5. In a work support, the combination of jack sustaining means, a rotary jack supported by said means, and two treadles connected to the jack, one for turning the jack in one direction and the other for turning the jack in the opposite direction.

[Claims 6 to 38 not printed in the Gazette.]

958,035. TACK-POUNDER. WILLIAM C. STEWART, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Sept. 17, 1909. Serial No. 518,184.



1. In a tack pounder, the combination of a shaft, a series of pounder arms driven by said shaft, a series of plungers, a bearing for said plungers in which they are held normally out of the path of movement of the pounder arms, and means for operating the shaft to cause the plungers when raisrd by the work to pound and depress any projection thereon and to act upon the work about said projection.

2. In a tack pounder, the combination of a shaft, a series of pounder arms arranged thereon in different transverse planes, a plurality of plungers arranged in planes corresponding to the planes of the pounder arms, a bearing for said plungers in which they are held normally out of the path of the pounder arms, and means for operating the shaft to cause the pounder arms to act each separately on its corresponding plunger to depress or pound any projection on the work and pound the work about said projection when the plungers are raised by the work.

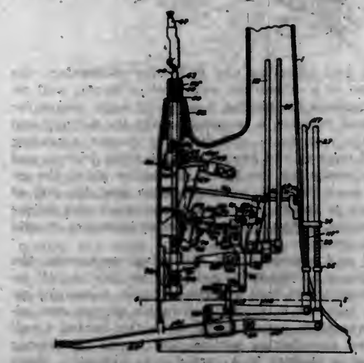
3. In a tack pounder, the combination of a shaft, a series of pounder arms arranged thereon in different transverse planes, a plurality of groups of plungers, one group disposed for coöperation with each of said pounder arms, a bearing for said plungers in which they are normally held out of the path of the pounder arms, and means for operating the shaft for causing each of the plungers of a group to be operated by a pounder arm when the plungers are raised by the work to pound any projection and to act upon the work about the projection.

4. In a tack pounder, the combination of a shaft, a series of pounder arms driven by said shaft, a series of plungers, a bearing for said plungers in which they are held normally out of the path of movement of the pounder arms, retarding means acting on the series of plungers, and means for operating the shaft to cause the plungers when raised by the work to pound and depress any projection thereon and to act upon the work about said projection.

5. In a tack pounder, the combination of a shaft, a series of pounder arms driven by said shaft, a series of plungers, a bearing for said plungers in which they are held normally out of the path of movement of the pounder arms, means for operating the shaft to cause the plungers when raised by the work to pound and depress any projection thereon and to act upon the work about said projection, and stops projecting at each side of the series of plungers.

[Claims 6 to 8 not printed in the Gazette.]

958,036. HORN-CONTROLLING MECHANISM FOR FASTENER-INSERTING MACHINES. WILLIAM C. STEWART, Lynn, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Nov. 22, 1907, Serial No. 403,306. Renewed Nov. 22, 1909. Serial No. 529,308.



1. A machine for inserting fasteners, comprising in combination, a driving shaft, fastener inserting means in operating relation thereto, a work support, means operable from the driving shaft for raising the work support to position the work, starting and stopping mechanism for said driving shaft, mechanism operable from the driving shaft for periodically depressing the work support for feeding, and means independent of the driving shaft and stopping mechanism for effecting the final depression of the work support.

2. A machine for inserting fasteners, comprising in combination, fastener inserting mechanism, a work support, power operated means for raising the work support to position the work with relation to the fastener inserting mechanism, starting and stopping mechanism, power operated means for periodically depressing the work support to permit feeding of the work, and treadle operated means independent of the driving shaft and stopping mechanism to secure the final depression of the work support.

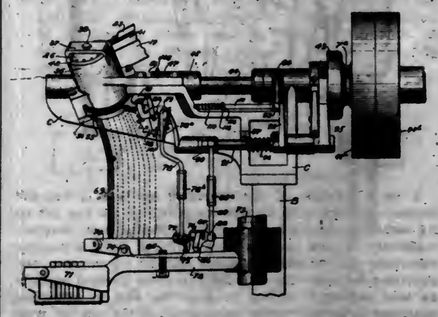
3. In a nailing machine, the combination of a nailing head, a driving shaft thereon, a work support, means actuated from the driving shaft for raising said support to position the work with relation to the head, a catch to hold the work support in the position to which it has been raised, starting and stopping mechanism for said driving shaft, and treadle operated means operable independent of the stopping mechanism to trip the catch and effect depression of the work support.

4. In a nailing machine of the character described, the combination of a nailing head, a driving shaft mounted thereon, a work support, power operated positioning means actuated by the driving shaft to raise the work support and position the work, stopping mechanism for said shaft operable independent of said positioning means, and treadle controlled devices independent of the stopping mechanism to effect final depression of the work support at the will of the operator.

5. In a nailing machine, the combination of a nailing head, fastener inserting means mounted thereon, a work support, positioning means to produce relative approach of said fastener inserting means and work support to position the work with reference to the head, treadle operated starting and stopping means for said fastener inserting means, series means for rendering the starting and stopping means ineffective for stopping the inserting means for variable predetermined nail driving periods, and a series treadle independent of the first named treadle for causing the series means to become effective for the purposes stated, and means for separating the work support and fastener inserting means at the will of the operator.

[Claims 6 to 30 not printed in the Gazette.]

958,037. NAIL ASSORTING AND DELIVERING MECHANISM. WILLIAM C. STEWART, Lynn, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Jan. 3, 1908, Serial No. 409,141. Renewed Nov. 22, 1909. Serial No. 529,309.



1. In a mechanism of the character described, the combination, with a raceway and means for supplying loose nails to said raceway, of a rotatable cylinder at the delivery end of said raceway having nail receiving recesses in its periphery and arranged to pick off nails singly on its movement past said raceway end, means for rotating said cylinder, means for predetermining the number of nails to be picked off from the raceway, means for holding all of said nails in said cylinder until the last has been picked off, and means for thereafter delivering said nails from said cylinder as a gang.

2. In a mechanism of the character described, the combination, with a nail receiver, means for supplying it with loose nails singly and in numbers that may be predeterminately varied and means for retaining said nails in the receiver, of means for discontinuing the supply of nails after the receiver has received the predetermined number, and means mounted on the machine independent of said nail supply discontinuing means for automatically delivering said nails from said receiver at a predetermined time as a gang.

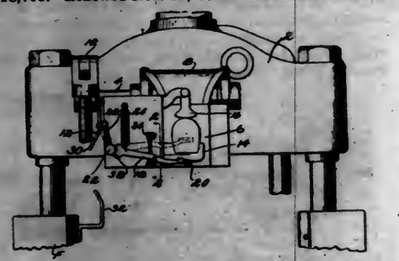
3. In a mechanism of the character described, a nail receiver and a nail carrier movable by the machine from nail receiving to nail delivering position, means for supplying the receiver with a varying predetermined number of nails, and provision for starting the operation of said nail supplying means by the movement of said carrier to nail delivering position.

4. In a mechanism of the character described, the combination, with a nail receiver and means for supplying it with nails, of provision for predetermining the number of nails to be supplied thereto in accordance with the varying requirements of the work including a start and stop mechanism, a nail carrier movable by the machine toward and from the nail receiver, means controlled by the carrier movement from the receiver to start the nail supplying means in operation, and means controlled by the carrier movement toward the receiver to deliver the predetermined supply of nails in the receiver to the carrier as a gang.

5. In a mechanism of the character described, a raceway, means to deliver loose nails thereto, means to assort said nails and arrange them point down in the raceway, a nail receiver at the delivery end of the raceway having peripheral nail receiving recesses, means to supply said receiver with varying predetermined numbers of nails while maintaining their points down, and provision thereafter to deliver said nails from the receiver, point down, as a gang.

[Claims 6 to 32 not printed in the Gazette.]

958,038. WORK-HOLDER FOR HEELING-MACHINES. WILLIAM C. STEWART, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Mar. 2, 1908, Serial No. 418,705. Renewed Nov. 22, 1909. Serial No. 529,310.



1. In a machine of the character specified, a top lift carrier provided with devices for positioning a top lift on its carrier, a detainer, means for extending said detainer relatively to said positioning devices to form a box-like structure for retaining the top lift on its carrier, and provision for removing said detainer from its said position as said carrier is moved to receiving and to attaching positions to permit ready engagement of the top lift with its positioning devices and its removal therefrom in the securing operation.

2. In a machine of the character specified, a top lift carrier having top lift holding devices, means to move said carrier into and out of operating position, a top lift detainer extending over the carrier for retaining the top lift on its carrier and with relation to its holding devices, and means for moving said detainer out of top lift retaining position at each end of the carrier movement, to permit the top lift to be freely placed upon its carrier and freely removed therefrom when secured to a heel.

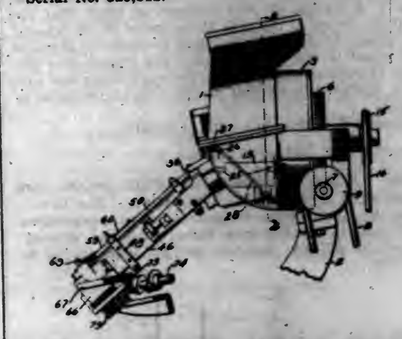
3. In a machine of the character specified, a top lift carrier, actuating means for moving the carrier from top lift receiving to attaching positions, a device extending over the surface of the top lift to retain it on its carrier, and means for moving said device into top lift retaining position as the carrier moves from receiving position, and means to remove it from over the top lift as the carrier reaches top lift attaching position.

4. In a machine of the character specified, a spanker plate provided with a top lift holder, a device extending over the holder for retaining a top lift within said holder, and automatically operating means to withdraw said device from its position over the holder prior to placing a top lift therein.

5. In a machine of the character specified, a top lift carrier, means for moving it from top lift receiving to attaching position, a detainer for extending over the exposed face of the top lift to retain it on its carrier as it moves from receiving to attaching position, and means for causing withdrawal of said detainer from its top lift retaining position by an upward and outward movement relatively to the top lift as said carrier moves to attaching position.

[Claims 6 to 9 not printed in the Gazette.]

958,039. NAIL ASSORTING AND DELIVERING MECHANISM. WILLIAM C. STEWART, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Dec. 12, 1908, Serial No. 467,180. Renewed Nov. 22, 1909. Serial No. 529,312.



1. In a nail assorting and delivering mechanism, the combination of a cylindrical nail receiver having nail receiving chambers for holding a series of nails, means for rotating said receiver, a raceway having its delivery end adjacent the receiver, a nail feeder or shutter extending about said receiver and having a nail holding portion and means for oscillating the feeder or shutter about the receiver to move the nail holding portion past the end of the raceway to detach nails from the raceway and deliver them from the raceway to the series of chambers in said cylindrical receiver.

2. In a nail assorting and delivering mechanism, the combination of a cylindrical nail receiver having nail receiving chambers to hold a series of nails, means for rotating the receiver, a raceway having its delivery end adjacent the receiver, a nail feeder or shutter having a nail holding and transferring portion, and means for moving said feeder or shutter in a curved path extending about the receiver to detach a nail from the raceway and carry it to one side thereof and there deliver it to a chamber in the rotatable nail receiver.

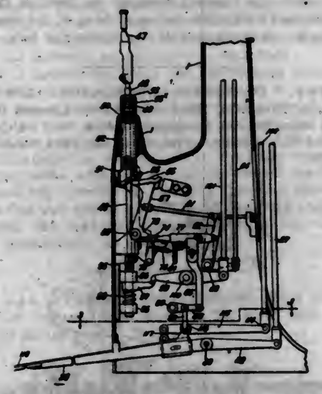
3. In a nail assorting and delivering mechanism, the combination of a cylindrical nail receiver having nail receiving chambers to hold a series of nails, means to rotate the receiver to present its chambers for the delivery of nails thereto, a raceway having its delivery end adjacent the receiver, a cylindrical nail feeder for taking nails from the raceway to one side thereof and delivering them singly to the said nail receiving chambers as they are presented by the rotating receiver at a point to one side of the raceway, and means for moving the cylindrical nail feeder in a curved path extending about the nail receiver.

4. In a nail assorting and delivering mechanism, the combination of a cylindrical nail receiver having a series of nail receiving chambers, a raceway having its delivery end adjacent the nail receiver, a nail feeder extending about a portion of said receiver and having a nail holding portion, and means for moving the nail feeder in a path extending about the receiver to take nails from the raceway and deliver them to the receiver.

5. In a nail assorting and delivering mechanism, the combination of a nail receiver having a series of nail receiving chambers, a raceway, means for moving the nail receiver to carry the nail receiving chambers past the end of said raceway, a nail feeder having a nail holding portion adapted to receive a nail from the raceway, and means for moving the nail feeder in a path extending about the receiver to carry a nail from the raceway to a chamber in the receiver when said chamber has been moved to a point beyond the end of the raceway.

[Claims 6 to 37 not printed in the Gazette.]

958,040. FASTENER-INSERTING MACHINE. WILLIAM C. STEWART, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Dec. 22, 1909. Serial No. 534,409.



1. In a machine of the character described, the combination of a work supporting horn, power operated means for raising the horn, machine starting and stopping mechanism, a treadle for actuating said mechanism to cause the machine to start and then to be disconnected from said mechanism, a series lever having an arm for maintaining the said mechanism in machine operating position for any desired number of machine cycles after said treadle has been disconnected from said mechanism, a second treadle for moving the series lever into and out of operative position, and means under control of the first named treadle and independent of the stopping mechanism for effecting the final depression of the work supporting horn at the will of the operator independent of the operative or inoperative condition of the machine.

2. In a machine for inserting fasteners singly and in series, the combination of a driving shaft, a work supporting horn, means actuated from the driving shaft to raise the horn to position the work for the insertion of fasteners, starting and stopping mechanism for said shaft, a treadle for actuating said mechanism to start the machine, means for then disengaging said treadle from said mechanism, a series lever having an arm 103 for continuing the machine in operation, a second treadle connected to said series lever for operating the same, and means independent of the stopping mechanism and under control of the first named treadle when disconnected from the starting mechanism to effect the final depression of the horn at the will of the operator.

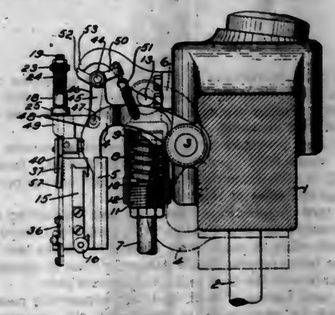
3. In a machine for inserting fasteners singly and in series, the combination of a driving shaft, a work supporting horn, means including a clutch for actuating said shaft, means actuated from the driving shaft for raising the horn to position the work, a lift pawl for operatively connecting the clutch and shaft, a treadle for operating said lift pawl, means for tripping the lift pawl when the machine operates, a series lever pivoted at a fixed point on the machine frame for maintaining the clutch and shaft in operative relation after the lift pawl has been tripped, a second treadle, a connection between the second treadle and series lever including a spring, and means controlled by the first named treadle and operable independent of the operative or inoperative condition of the machine to lower the horn.

4. In a machine for inserting fasteners singly and in series, the combination of a driving shaft, a work supporting horn, means including a clutch for actuating said shaft, means actuated from the driving shaft for raising the horn to position the work, a lift pawl for operatively connecting the clutch and shaft, a treadle for operating said lift pawl, means for tripping the lift pawl when the machine operates, a series lever for continuing the machine in operation after the lift pawl has been tripped, a second treadle, a collar yieldingly connected thereto for operating the series lever, and means controlled by the first named lever to lower the horn independent of operative or inoperative condition of the machine.

5. In a machine for inserting fasteners singly and in series, the combination of a driving shaft, a work supporting horn, means including a clutch for actuating said shaft, means actuated from the driving shaft for raising the horn to position the work, a lift pawl for operatively connecting the clutch and shaft, a treadle for operating said lift pawl, means for tripping the lift pawl when the machine operates, a series lever having an arm 103 for holding the clutch in operative relation with the shaft after the lift pawl has been tripped and a second arm 105, a second treadle, a treadle rod connected thereto, and a yielding collar on said treadle rod and connected with the arm 105 of the series lever for yieldingly actuating said lever.

[Claims 6 to 10 not printed in the Gazette.]

958,041. TOP-LIFT HOLDER FOR HEELING-MACHINES. WILLIAM C. STEWART, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Mar. 15, 1909, Serial No. 483,346. Renewed Feb. 21, 1910. Serial No. 545,237.



1. In a machine of the character described, the combination of a carrier, means for moving the carrier, a plurality of gages mounted for movement therewith to hold the work as it is transferred to operative position, a lock for preventing the separation of said gages during movement of the work to operative position, and means

actuated upon movement of the carrier for operating said lock.

2. In a machine of the character described the combination of a carrier, means for moving the carrier to transfer the work to operative position, means for engaging and holding the work on the carrier, a lock to prevent release of the work as the carrier is moved, and means operated upon actuation of the carrier to operate said lock.

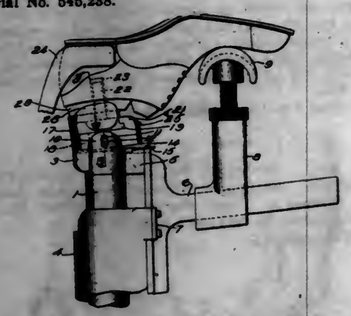
3. In a machine of the character described, the combination of a carrier movable to and from work receiving and operating positions, a plurality of gages mounted for movement with the carrier, means acting automatically to lock the gages from relative movement as the carrier moves from receiving to operating position, and means acting automatically to free the gages from such lock when the carrier is moved to receiving position.

4. In a machine of the character described, the combination of a carrier, a plurality of gages mounted for movement therewith, yielding means normally acting to cause said gages to clamp the work placed between them, means to prevent relative movement of the gages to release the work as it is moved to operative position, and means to free the gages to the control of the said yielding means when the carrier is moved to receiving position.

5. In a top-lift carrier or holder, the combination of a top-lift plate, breast and back gages, means for moving one of said gages relatively toward the other to hold a top lift between them, and means to prevent separation of said gages as the carrier or holder moves to operative position and to free said gages for separation when the carrier is moved to inoperative position.

[Claims 6 to 15 not printed in the Gazette.]

958,042. WORK-SUPPORT FOR BOOT AND SHOE MACHINES. WILLIAM C. STEWART, Lynn, Mass., assignor to Thomas G. Plant, Boston, Mass. Filed Mar. 31, 1909, Serial No. 487,007. Renewed Feb. 21, 1910. Serial No. 545,238.



1. A jack comprising a head, last supporting members mounted to slide transversely and tilt upon said head, and yielding means for restraining the sliding separation of said members.

2. A jack provided with last supporting means, said means comprising automatically adjusting members mounted to slide transversely and tilt and having portions to engage the sides of the last.

3. A jack comprising a head, and last supporting members mounted on said head to slide and tilt toward and from each other in conforming themselves to the last, said members being provided with flange portions to engage the outer surface of the last supported on said jack.

4. A jack having a head, and last supporting members supported by said head to slide and tilt transversely thereof.

5. A jack having a head, last supporting members supported by said head to slide and tilt transversely thereof, and means acting normally to prevent sliding separation of said members.

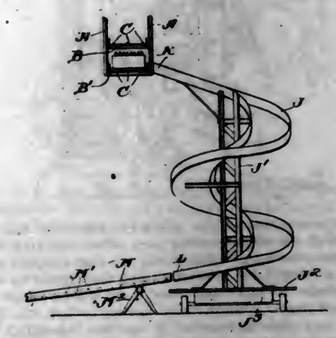
[Claims 6 to 21 not printed in the Gazette.]

958,043. CONCRETE PIPE. FREDERICK A. STOCKLEY, Montour Falls, N. Y. Filed Apr. 21, 1909. Serial No. 491,404.



A concrete pipe including spaced heads having their inner peripheral edges provided with spaced perforated ears radiating toward the center of the pipe and having their outer faces spaced from the outer faces of the heads, threaded reinforcing rods connecting said ears, a strip of foraminous material embedded in the concrete and bearing against the rods, clamping nuts engaging the threaded portions of the rods and bearing against the inner and outer faces of the ears, and attaching lugs secured to each head for engagement with the head of an adjacent pipe when several of said pipes are assembled, the attaching lugs on the head at one end of each pipe being disposed diametrically opposite to the lugs on the head at the opposite end of said pipe, the concrete forming the body of the pipe being disposed flush with the outer faces of the heads and covering the clamping nuts of the reinforcing rods.

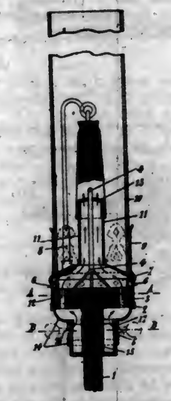
958,044. CONVEYING APPARATUS. EDWARD G. THOMAS, Brookline, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed Dec. 20, 1906. Serial No. 348,757.



1. In a conveying apparatus, a plurality of elevated or despatching stations, a plurality of corresponding receiving stations located below said despatching stations, movable conveying means adapted to connect any one of said despatching stations independently with a corresponding receiving station for conveying articles from said despatching to said receiving stations, and a conveyer between the despatching stations.

2. In a conveying apparatus, a plurality of elevated or despatching stations, a plurality of corresponding receiving stations located below said despatching stations, movable conveying means adapted to connect any one of said despatching stations independently with a corresponding receiving station for conveying articles from said despatching to said receiving stations, switches located at said despatching stations and adapted to be moved into position to divert articles into said movable conveying means, and a conveyer between the despatching stations.

958,045. CARBURETING-LAMP. CHARLES TORCHEBEUF and EDGARD DE LANNEAU, Paris, France. Filed June 7, 1909. Serial No. 500,589.



1. In a carbureting lamp, the combination with a mass of absorbent material, adapted for the carburization of air, of means for heating said mass, said means comprising a rod having one end arranged in proximity to the flame and its opposite end branched and extending into the mass of absorbent material, substantially as described.

2. In a carbureting lamp, the combination with a base provided with air admission openings, of a case carried by said base, a mass of pierced absorbent material inclosed within the case and designed to carburet air entering through the openings in the base, said case being provided with air admission openings above the mass of absorbent material, baffles adjacent the last mentioned openings for deflecting the entering air from the absorbent mass, and a rod having one end in proximity to the flame and having its other end branched and embedded in the absorbent mass, substantially as described.

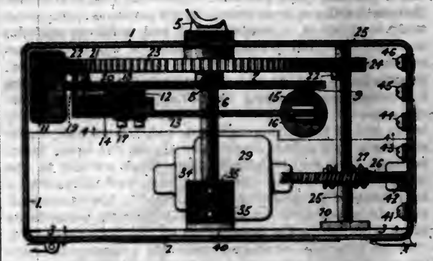
958,046. INSULATING-COVERING FOR CABLES. PHILIP TORCHIO, New York, N. Y. Filed May 4, 1909. Serial No. 493,880.



1. The process of making an insulating covering for electric conductors which consists in first, winding a strip of fabric in close spiral around the conductor: second, saturating said applied strip with a rubber solution: third, winding another strip of fabric in like manner upon the first strip: fourth, saturating said second applied strip with a rubber solution and so on continuously for any desired number of layers: fifth, vulcanising said covered conductor to convert the several layers of rubber engaging with said several strips into a homogeneous mass.

2. The process of making an insulating covering for electric conductors which consists in first, winding a strip of fabric in close spiral around the conductor: second drawing said covered conductor through a bath of rubber solution: third, winding a second strip of fabric in like manner upon the first strip: fourth, drawing said conductor, thus twice covered, through a bath of rubber solution and so on continuously for any desired number of layers: fifth, vulcanising said covered conductor to convert the several layers of rubber engaging with said several strips into a homogeneous mass.

958,047. TRAIN-STOPPING MECHANISM. JEAN F. WEBB, Jr., New York, N. Y., assignor to The Electric Signagraph and Semaphore Co., Incorporated, New York, N. Y. Filed Dec. 12, 1908. Serial No. 467,206.



1. A valve having a rotary stem combined with means for effecting a quick opening of the valve and another electrically operated means for restoring the valve and the opening means to their original position.

2. A valve and a gravity actuated means for opening the valve together with electric motor driven means for closing the valve and restoring the gravity actuated means to its initial position.

3. A valve and means for effecting a quick opening of the valve, together with another means operating a definite interval after the valve has been opened to restore the valve to its closed position and restore the opening means to its original position.

4. A valve and means for effecting a quick opening of the valve, electro-magnetic means for locking the opening means from operation at times, and another means for restoring the opening means to its initial position and closing the valve, and means for automatically setting said restoring means into operation substantially immediately after the valve is open.

5. A valve, a normally locked gravity actuated means for opening the valve combined with an electric motor driven means for restoring the valve to its closed position and the opening means to its original position at times.

[Claims 6 to 20 not printed in the Gazette.]

958,048. DENTAL CHAIR. HENRY E. WEBER, Canton, Ohio, assignor to The Weber Dental Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Nov. 26, 1906. Serial No. 345,006.



1. In a chair-base having two members with adjacent walls and one arranged to rotate within the other, a locking device comprising a plate between the walls and at-

tached at one end to one member, a rotatable cam mounted on the same member and arranged to abut the plate and to wedge it against the wall of the other member.

2. An extensible chair-base including a base-proper having a bottom plate therein, a rotatable base-standard thereon having a cross frame in its lower end, an intermediate-standard, a seat-standard and a lifting-standard each concentrically arranged to telescope within the base-standard, with slide guides respectively between the base-, intermediate- and seat-standards, axially applied means for raising and lowering the lifting-standard, diametrically-opposite radial arms extending outward from the lower end of the lifting-standard, and diametrically-opposite chain and pulley connections among the base-, intermediate-, and seat-standards, there being notches in the lower ends of the intermediate-, seat-, and lifting-standards, adapted to receive the cross frame in the base-standard, and notches in the seat- and intermediate-standards adapted to receive the radial arms on the lifting-standard.

3. An extensible chair-base including a base-proper having a bottom plate therein, a rotatable base-standard thereon having a cross frame in its lower end, an intermediate-standard, a seat-standard and a lifting-standard each concentrically arranged to telescope within the base-standard, with slide guides respectively between the base-, intermediate- and seat-standards, axially applied means for raising and lowering the lifting-standard, radial arms extending outward from the lower end of the lifting-standard, and chain and pulley connections among the base-, intermediate-, and seat-standards, there being notches in the lower ends of the intermediate-, seat-, and lifting-standards, adapted to receive the cross frame in the base-standard, and notches in the seat- and intermediate-standards adapted to receive the radial arms on the lifting-standard.

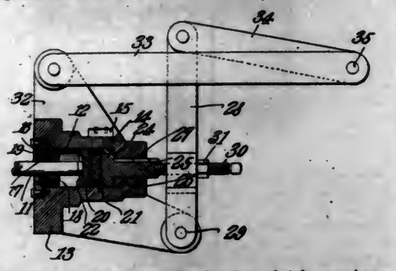
4. An extensible chair-base including a base-proper having a bottom plate therein, a rotatable base-standard thereon having a cross frame in its lower end, an intermediate-standard, a seat-standard and a lifting-standard each concentrically arranged to telescope within the base-standard, axially applied means for raising and lowering the lifting-standard, radial arms extending outward from the lower end of the lifting-standard, and chain and pulley connections among the base-, intermediate-, and seat-standards, there being notches in the lower ends of the intermediate-, seat-, and lifting-standards, adapted to receive the cross frame in the base-standard, and notches in the seat- and intermediate-standards adapted to receive the radial arms on the lifting-standard.

5. An extensible chair-base including a base-proper having a bottom plate therein, a rotatable base-standard thereon having a cross frame in its lower end, an intermediate-standard, a seat-standard and a lifting-standard each concentrically arranged to telescope within the base-standard, axially applied means for raising and lowering the lifting-standard, radial arms extending outward from the lower end of the lifting-standard, and operative connections among the base-, intermediate-, and seat-standards, there being notches in the lower ends of the intermediate-, seat-, and lifting-standards, adapted to receive the cross frame in the base-standard, and notches in the seat- and intermediate-standards adapted to receive the radial arms on the lifting-standard.

958,049. HOISTING APPARATUS. THOMAS O. WERNER, Bangor, Pa. Filed May 3, 1909. Serial No. 493,637.

1. The combination with friction clutch members, of means for setting said members in driving contact comprising a bearing, a pin rotatably and slidably mounted therein, and engageable at one end with one of the clutch members, a pair of disks mounted in the bearing, one of said disks being connected to the pin to rotate therewith, an operating device engageable with the other disk, and a disk interposed between said disks.

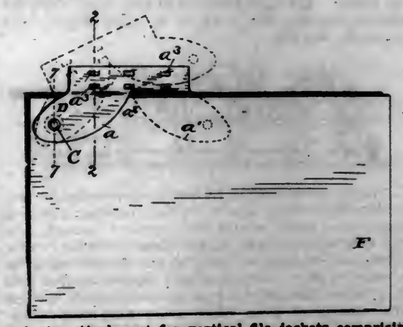
2. The combination with friction clutch members, of means for setting said members in driving contact comprising a bearing, a pin rotatably and slidably mounted therein, and engageable at one end with one of the clutch members, a pair of disks mounted in the bearing, one of said disks being connected to the pin to rotate therewith, and the other disk being slidably mounted in the bearing, and held against rotary movement, an operating device engageable with the last mentioned disk, and a disk interposed between said disks.



3. The combination with friction clutch members, of means for setting said members in driving contact comprising a bearing, a pin rotatably and slidably mounted therein, and engageable at one end with one of the clutch members, a pair of disks mounted in the bearing, one of said disks being connected to the pin and rotatable therewith, a stem projecting from the other disk, an operating device engageable with the stem, and a disk interposed between the aforesaid disks.

4. The combination with friction clutch members, of means for setting said members in driving contact comprising a bearing, a pin rotatably and slidably mounted in the bearing, and engageable at one end with one of the clutch members, a lever fulcrumed on the bearing, and carrying a pin, a pair of disks mounted in the bearing, one of said disks being grooved to receive the end of the pin, a stem projecting from the other disk and engageable by the pin carried by the lever, means for holding the stem against rotation, and an intermediate disk having its opposite faces grooved.

958,050. VERTICAL FILE-INDEX CLASP. CLAYTON J. WHIPPLE, Euclid, Ohio. Filed Nov. 18, 1908. Serial No. 463,151.



1. An attachment for vertical file jackets comprising a plate having on its lower edge a pivoting wing and a clasp wing which are separated from each other by a deep notch.

2. An attachment for vertical file jackets having on its lower edge a pivoting wing and a clasp wing which are separated from each other by a deep notch, and having above said notch means for holding an index card.

3. An attachment for vertical file jackets, comprising a plate having on its lower edge a pivoting wing and a clasp wing which are separated from each other by a deep notch, and having above said notch a plurality of punched out tongues.

958,051. SLIDE-TROMBONE. HENDERSON N. WHITE, Cleveland, Ohio. Filed Sept. 22, 1908. Serial No. 454,188.



In trombones, an inner slide member having opposite parallel tubes and a compound hand grip uniting said members consisting of a straight cross piece A and a tubular cross bow B rigidly secured to said tubes at their respective ends, the ends of said bow spanning the angles between said part A and said side tubes in bracing relation and the body of said bow depressed lengthwise and partially overlapping the sides of the said cross piece and united therewith by soldering or otherwise.

958,052. PIPE SUPPORT AND CLAMP. DAVID WILLIAMS, Greensboro, N. C. Filed July 28, 1909. Serial No. 509,986.

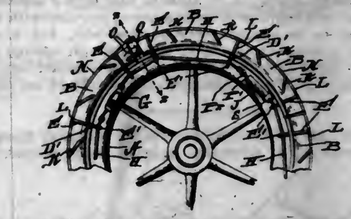


1. A pipe support and clamp comprising a supporting member having a flat shank formed at its end with a solid hemispherical socket, an independent plate formed with a complementary solid hemispherical socket and adapted to be adjustably clamped against said shank, a member having at one end a ball fitting in said sockets, a contracted neck, a flat-faced enlarged shank, clamping members, each formed with a curved jaw and a flat plate-like portion engaging on opposite sides of the shank of the ball-carrying member, and a bolt passing through the clamping members and said shank.

2. A pipe support and clamp comprising a supporting member having a flat shank formed at its end with a solid hemispherical socket, a detachable plate formed with a complementary solid hemispherical socket and adapted to be clamped against said flat shank, both of said sockets being cut away on their side edges, a member having at one end a ball fitting between said socket members, said ball member having a neck projecting out through the cut-away portions of the socket, the other end of the member being formed with a widened shank having opposed flat faces, opposed clamping members, each formed with a curved jaw and a flat plate-like portion engaging on opposite sides of the shank of the ball member, and a bolt passing through the clamping members and said shank.

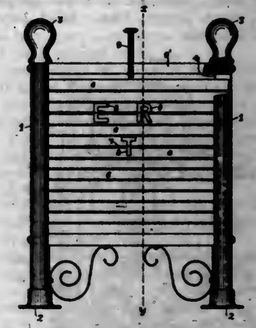
3. A pipe support and clamp including a supporting member having a flat shank formed at its end with a solid hemispherical socket, said shank being formed above the socket with a many-sided opening extending through it, a detachable plate adapted to be engaged against the flat shank and having formed therewith a complementary solid hemispherical socket, said plate having an opening therethrough for the passage of a bolt, a bolt passing through the plate and said shank, said bolt being provided with a many-sided shoulder adapted to engage the many-sided opening in the shank, a member having at one end a ball fitting in said socket, a contracted neck extending over the ball, a flattened laterally widened shank, opposed clamping members located one on each side of said shank, and a bolt passing through the clamping members and the shank, said bolt pivotally connecting the clamping members to the shank and also acting to close the clamping members upon the part to be clamped.

958,053. TIRE-PROTECTOR. JOHN WILMES, Maquoketa, Iowa. Filed Sept. 20, 1909. Serial No. 518,588.



A protecting device for tires comprising a series of concaved segmental plates having longitudinal flanges at the edges thereof which are apertured, the outer surface of each of said plates having a centrally disposed rib with recesses therein, sockets formed upon the outer surface of each plate adjacent to its end, lugs upon the adjacent end of the plate and projecting beyond its end, said sockets of one plate adapted to receive the lug upon an adjacent plate, bail-shaped wires engaging the recesses in said rib and passing through the apertures in said flanges and having eyes at their ends, a cable passing through said eyes and adapted to hold the plate together and over a tire, as shown and described.

958,054. CHANGEABLE SIGNBOARD. HENRY WILLSON, Chicago, Ill. Filed Mar. 13, 1909. Serial No. 483,198.



1. In an advertising sign, the combination of a supporting frame, a series of parallel bars movable in said frame, a series of characters provided with extending lugs adapted to be clamped between two parallel bars, a bar fixedly attached to the frame and provided with a cam adapted to tightly clamp and hold the parallel bars in close contact with themselves and against the character-supporting lugs, substantially as set forth.

2. In an advertising sign, the combination of a frame, parallel bars movable lengthwise of said frame, a series of characters provided with lugs adapted to be clamped between said bars, means provided in said bars for insertion of a cam-key, and a cam-key adapted to separate the adjacent bars for the insertion of the characters, substantially as set forth.

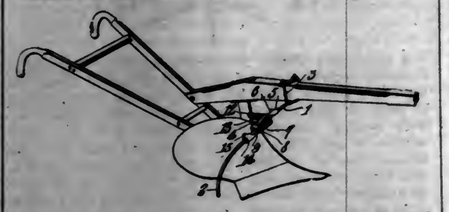
3. In a sign-board, a supporting frame, parallel bars vertically movable in said frame, said bars being provided

with grooves upon their abutting edges, in combination with a legible character provided with a spring corrugated lug adapted to fit into said groove, and means for adjusting the bars upon the lug, substantially as set forth.

4. In a sign-board, a legible character a pair of parallel bars, one of said bars being flat on the abutting side, the other having a longitudinal groove along the abutting edge, in combination with a spring corrugated lug, adapted to be received and held in said groove, and means for regulating the pressure between the bars.

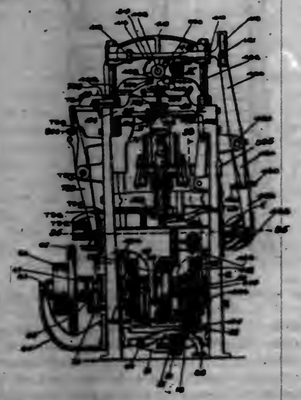
5. In a sign-board, a pair of parallel bars, one of said bars being provided on its abutting edge with a segmental circular opening, a series of characters provided with lugs adapted to be clamped between said bars, and a segmental cam-key adapted to fit said segmental opening and upon turning either way to separate the adjacent bars for the insertion of the characters, substantially as set forth.

958,055. SECTIONAL WEED-HOOK. HARRY E. WOODIN, Laurens, Iowa. Filed June 10, 1909. Serial No. 503,204.



A weed hook comprising members hinged together and provided at their outer ends with sockets, a spring engaging both members and resiliently holding them in normal relation and a hook section held in the socket of each member and extending in opposite directions.

958,056. HEELING-MACHINE. ERASTUS WOODWARD, Somerville, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed July 23, 1906. Serial No. 327,389.



1. A heeling machine comprising, in combination, a nail block; its supporting head; nailing means, said means and block being movable relatively toward and from each other; and a plurality of ribs at the front and rear of the head between which the relative movement between the nailing means and block occurs, said ribs acting as a guard to protect an attendant from the action of the nailing means.

2. A heeling machine comprising, in combination, a nail block; nailing means, said means being movable toward and from said block; and a trough-shaped supporting head for the nail block within the walls of which said nailing means moves and is thereby shielded.

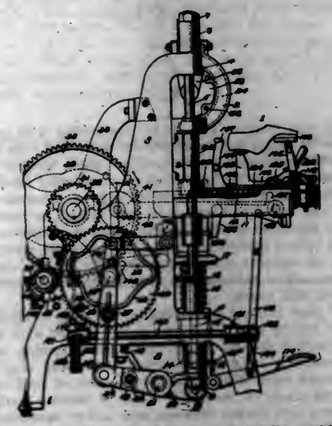
3. A heeling machine comprising, in combination, nailing devices; a head; a nail block carried by the head; nail conveying means; and a guard rib on the head disposed between the nailing device and nail conveying means, said rib having an opening to permit the nail conveying means to convey nails to the nail block.

4. A heeling machine comprising, in combination, a head, nailing means at one side of the head; nail conveying means on another side of the head; a plurality of ribs forming a protective recess on one side of the head, said ribs being constructed and arranged to permit access to the recess by both the nailing means and nail conveying means; and appropriate actuating mechanism for said means.

5. A heeling machine comprising, in combination, nailing devices, a stationary head having a longitudinally arranged upright rib, a nail block supported by said head below the plane of the upper edge of said upright rib, a swinging nail carrier arm and its nail carrier for supplying the nail block with nails, said arm being pivotally supported to swing at one side of the machine to position the carrier above the nail block within the vertical limits of the upright rib, power operated means for swinging the said arm and carrier, and means for presenting a shoe to the nailing devices.

[Claims 6 to 52 not printed in the Gazette.]

958,057. SOLE LAYING AND LEVELING MACHINE. ERASTUS WOODWARD, Somerville, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Apr. 13, 1907. Serial No. 367,912.



1. A sole pressing machine, comprising in combination, a shoe support, sole pressing means, and means to operate the same to produce direct pressure upon one part of the shoe sole and progressive pressure upon another part thereof.

2. A sole pressing machine, comprising in combination, a shoe support, sole pressing means, and means to operate the same to produce direct pressure upon one part and a pressure progressing alternately in opposite direction upon another part thereof.

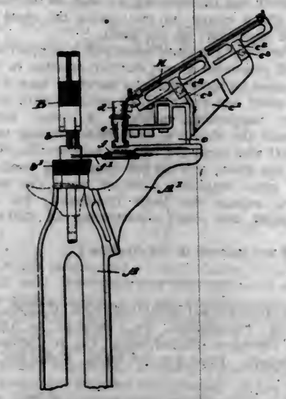
3. A sole pressing machine comprising a form, a shoe support, and means to produce between said form and support direct and rolling contact pressure for and upon separate portions of the shoe sole.

4. A sole pressing machine, comprising a form, a shoe support, and means to produce between said form and support, first a direct pressure and then a rolling contact pressure, upon and over separate portions of the shoe sole.

5. A sole pressing machine, comprising a form having shank and fore part molding faces, a support for a shoe, and means for operating said form and support to bring the shank of a shoe into direct pressure contact with the complemental shank molding face of the form for laying the shank of the shoe sole and to effect relative rolling contact between said form and support to bring the fore part of said sole into pressure contact with the fore part molding face of said form.

[Claims 6 to 22 not printed in the Gazette.]

958,058. HEEL-NAILING MACHINE. ERASTUS WOODWARD, Somerville, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Apr. 5, 1906. Serial No. 310,007. Renewed Nov. 22, 1909. Serial No. 529,296.



1. The combination with a heel nailing machine of a detachable loading and nail supplying raceway therefor, carrying loose nails in a single uninterrupted series and means abutting against the delivery end of said raceway to receive the nails singly and to deliver the same in groups to said nailing machine.

2. The combination with a heel nailing machine and nail transferring means of a detachable raceway and a gravity support therefor down which said raceway may gravitate into nail delivering position.

3. The combination with a heel nailing machine and nail transferring means of a detachable raceway and a gravity support therefor provided with raceway supporting rollers.

4. The combination with a heeling machine of a detachable nail supplying raceway therefor, and means carried on the delivery end of said raceway to engage the nail heads and control the delivery of nails therefrom.

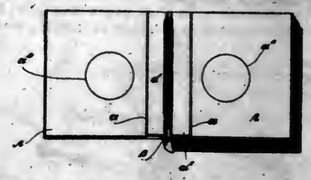
5. The combination with a heeling machine of a detachable nail supplying raceway therefor and means at both ends of said raceway to prevent normal escape of nails therefrom when the raceway is detached, said means at the delivery end being constructed and arranged to facilitate separation of the nails singly from the raceway when attached to the heeling machine.

[Claims 6 and 7 not printed in the Gazette.]

958,059. ALBUM FOR HOLDING DISK RECORDS. THOMAS W. WRIGHT, Leith, Scotland. Filed June 12, 1908. Serial No. 438,158.

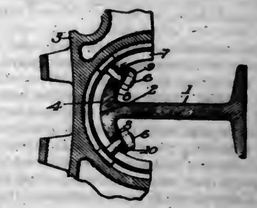
1. In an album, a plurality of leaves, each leaf comprising two envelops fastened back to back, the faces of said envelops having apertures therein, and slits near the bound edges of said leaves, and flaps on said envelops adapted to lie flush with the outer surface of said leaves and ending in proximity to said slits.

2. In an album, a plurality of leaves, each leaf comprising two envelops fastened back to back, said envelops adapted to contain disk records and having slits near the



bound edges thereof, the slits in the two envelops comprising one leaf being approximately opposite one another.

958,060. BRAKE-BEAM. HENRY ZIEMSS, Jr., Chicago, Ill. Filed Sept. 14, 1909. Serial No. 517,719.



1. The combination of a brake beam consisting of an I-beam having one head thereof bent to provide a curved seat; a brake head having a curved surface in direct contact with said seat; and means for securing said brake head to said seat.

2. The combination of a brake beam consisting of a commercial rolled beam having one head thereof bent to provide a convex seat, said seat being curved upon the arc of a circle; a brake head having a concave surface conforming to said seat; and means for adjustably securing said brake head to said seat.

3. The combination of a brake beam consisting of a commercial rolled beam having one head thereof bent to provide a curved seat; a brake head having a curved surface in direct contact with said seat, said brake head having a T-slot therein; and means extending through said slot and through said bent head adapted to clamp said brake head to said seat in adjusted position with reference to the beam.

4. A brake head having a curved rear side, a T-slot being formed in said rear side, said slot opening upon the rear side of the head.

5. A brake head having a recess in its rear side, which recess is curved upon the arc of a circle, a T-slot being formed in said brake head, which slot is curved upon the arc of a circle concentric with said recess.

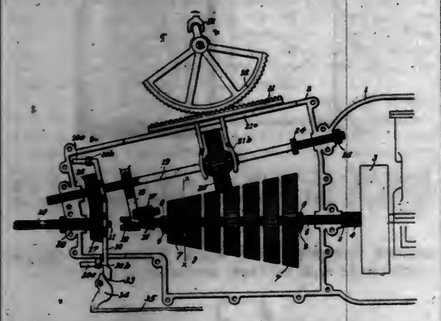
[Claim 6 not printed in the Gazette.]

958,061. GEARING. ALFRED N. ADAMS, Stockton, Cal. Filed Nov. 10, 1909. Serial No. 527,167.

1. A gearing comprising a driving shaft, a cone on said shaft comprising a plurality of independent gears, a shift gear moving over said cone gears, means for isolating said shift gear from said cone gears, a driven shaft and means for engaging said driven shaft with said driving shaft when said gears are isolated.

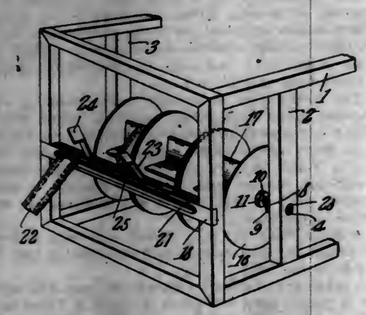
2. The combination of a driving shaft and a driven shaft, a plurality of beveled gears on said driving shaft arranged end to end and having a direct connection with said driving shaft, a driven gear, means within said beveled gears to enable one of lesser diameter to rotate faster than said driving shaft and adjacent beveled gear of greater diameter, while said lesser and greater beveled

gears are simultaneously in engagement with the said driven gear, a third shaft, gears on said driven and third shaft normally engaging each other and means for disengaging said last two gears.



3. A gearing comprising a driving shaft and a driven shaft, a plurality of independent beveled gears on said driving shaft, a shifting gear on said driven shaft moving over said beveled gears, means within said beveled gears to allow them to compensate with each other when two of them are in mesh with the driven gear at one time, a third shaft, a driving means from said driven shaft to said third shaft, means for isolating said driven gear from said beveled gears, and means for connecting said third shaft with said driving shaft when said gears are isolated.

958,062. LACE-CABINET. JOSEPH H. ADKINS, Chatham, Va., assignor of one-half to Tupper G. Walker, Chatham, Va. Filed Sept. 21, 1909. Serial No. 518,745.



1. A device of the class described comprising a rotatably mounted spool; a bar supported adjacent the spool and having longitudinally extended, intersecting slots, through one of which the contents of the spool is adapted to pass; and a lever pivoted in the other of said slots and arranged to extend across the first named slot.

2. A device of the class described comprising a rotatably mounted spool; a bar supported adjacent the spool and having longitudinally extended, intersecting slots, through one of which the contents of the spool is adapted to pass; and a lever pivoted in the other of said slots and arranged to extend across the first named slot, the lever having a lateral extension to engage an outer face of the bar.

3. In a device of the class described, a supporting member; a shaft journaled at one end for rotation in the supporting member; a sleeve slidably mounted upon the other end of the shaft and arranged to rotate with the shaft, within the supporting member, the sleeve being provided with a laterally extending flange; a yieldable washer interposed between the flange and the supporting member; resilient means for holding the flange in contact with the washer; and a resilient spool rotatably mounted upon the shaft and arranged to engage the shaft frictionally for rotation with the shaft.

4. In a device of the class described, a supporting member; a shaft journaled for rotation at one end in the supporting member; a sleeve slidably mounted upon the other end of the shaft and arranged to rotate with the shaft, within the supporting member, the sleeve being provided with a laterally extending flange; a yieldable washer interposed between the flange and the supporting member; a compression spring inclosing the shaft and arranged to bear against the flange; and a spool rotatably mounted on the shaft and arranged to engage the same frictionally for rotation with the shaft; a collar adjustably mounted upon the shaft and constituting at once an abutment for the spring and a means for restraining the spool against longitudinal movement on the shaft.

5. In a device of the class described, a supporting member; a shaft journaled at one end for rotation in the supporting member; a sleeve slidably mounted upon the other end of the shaft and arranged for rotation with the shaft, within the supporting member; a collar adjustably mounted upon the shaft; a compression spring surrounding the shaft and arranged to abut against the collar and to actuate the sleeve toward the supporting member; and a resilient spool rotatably mounted upon the shaft and arranged to engage the shaft frictionally for rotation with the shaft, the collar constituting an abutment for the spool.

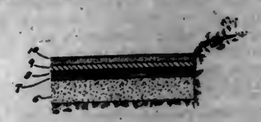
[Claim 6 not printed in the Gazette.]

958,063. STREET AND ROAD CONSTRUCTION. JOSEPH H. AMIES, Philadelphia, Pa., assignor to The Amies Asphalt Company, Philadelphia, Pa., a Corporation of South Dakota. Filed Feb. 20, 1909. Serial No. 479,252.



The herein described method of constructing roads, streets and the like which consists in mixing duly graded and proportioned crushed stone and the like with water and Portland cement to form a base, then placing thereon and thereover a due amount of crushed stone and the like the same having previously been coated with asphaltic cement and the like and then pressing the asphaltic coated stone down into the soft cement base before the initial set of the Portland cement concrete takes place, substantially as described.

958,064. ROAD CONSTRUCTION. JOSEPH H. AMIES, Philadelphia, Pa., assignor to The Amies Asphalt Company, Philadelphia, Pa., a Corporation of South Dakota. Filed Mar. 3, 1909. Serial No. 481,174.



1. The herein described method of road construction which consists in forming a suitable foundation, placing thereon a due amount of soil, moistening the same with water, then placing thereover a due amount of calcium oxid, then covering the above elements with liquid asphalt, and then over all placing a body of crushed stone and the like substantially as and for the purposes set forth.

2. The herein described method of road construction which consists in forming a foundation composed of soil, calcium oxid, Portland cement and water, treated *in situ*, placing thereon a due amount of soil, moistening the same with water, then placing thereover a due amount of calcium oxid, then covering the above elements with liquid asphalt and then over all throwing dry soil and rolling the same down to a compact body, substantially as and for the purposes set forth.

3. The herein described method of building streets, roads and the like which consists in placing a due amount of soil over a suitable base and when the soil is sufficiently wet with water covering the same with a due amount of crushed calcium oxid, then placing thereon a due amount of liquid asphalt and the like, then before the calcium oxid begins to slake, placing thereover a desired amount of mineral materials and during the slaking of the calcium oxid compressing this mass to a compact body, substantially as described.

958,065. BUCKLE. ELIAS B. ANDERSON, Rock Falls, Ill. Filed Apr. 23, 1909. Serial No. 491,676.



1. A buckle comprising a buckle frame, a bail pivotally connected with the frame and provided with a cross bar having a buckle tongue, a guard slidably connected to the buckle frame and movable longitudinally thereof into operative relation to the buckle tongue to hold the same against turning movement.

2. A buckle comprising a buckle frame embodying side bars, a cross bar disposed transversely of the frame and provided with an outstanding buckle tongue, a bail connected with the cross bar for tilting the buckle tongue and a guard interposed between the side bars and doubled upon itself to constitute spaced members facing the cross bar, one of the members being slidably connected to the side bars to admit of the guard being moved longitudinally of the frame to embrace the buckle tongue.

3. A buckle comprising a buckle frame, a cross bar carried by the frame and provided with an outstanding buckle tongue, a guard slidably connected to the buckle frame and movable longitudinally thereof to embrace the buckle tongue, and means carried by the guard for engaging the cross bar to hold the guard against sliding movement.

4. A buckle comprising a buckle frame, a cross bar carried by the frame and provided with an outstanding buckle tongue, and a guard slidably connected to the buckle frame and movable longitudinally thereof to embrace the buckle tongue, the guard being formed with a hump adapted to engage the cross bar to hold the guard against sliding into an inoperative position.

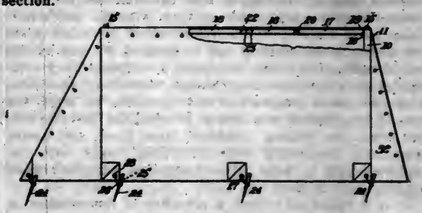
5. A buckle comprising a frame, a bail pivotally connected with the frame and provided with a tongue, and a guard slidably mounted on the frame and movable to operative position over the tongue.

[Claims 6 to 8 not printed in the Gazette.]

958,066. SHELTER-TENT. NELS D. ANDERSON, Parkersburg, Iowa, assignor of one-half to J. A. Bokel, Baltimore, Md. Filed Feb. 27, 1909. Serial No. 480,415.

1. As an improvement in shelter tents, a pole formed of tubular sections arranged to be separated, the end of one section being tapered to fit within the open end of the other section, one of said sections being provided with a lug, a flexible connection for said sections having each end secured to the respective sections within the interior thereof, and a ridge pole section pivoted to said lug.

2. As an improvement in shelter tents, a pole formed in sections, a plurality of pivotally connected arms adapted to be placed in alinement and arranged to form a portion of a ridge pole, one of said arms being pivotally connected to said pole, and means carried by the free end of said ridge pole portion for engaging a corresponding ridge pole section.



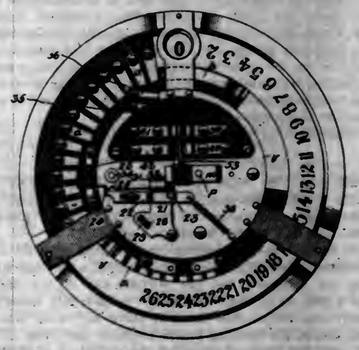
3. As an improvement in shelter tents, a pole formed in sections, and a ridge pole portion formed of pivoted sections adapted to be placed in alinement, one of said sections being pivotally connected to said pole, the free end of said ridge pole portion being provided with an overhanging locking member constructed to engage a similar locking member carried by a corresponding ridge pole section.

4. As an improvement in shelter tents, a pole formed in sections, and a ridge pole portion formed of pivoted sections adapted to be placed in alinement, one of said sections being pivotally connected to said pole, the free end of said ridge pole portion being provided with an overhanging member provided with a locking lug constructed to engage the free end of a corresponding ridge pole section.

5. As an improvement in shelter tents, a pole formed of separable sections, flexible connections for said sections, and a ridge pole portion formed of a plurality of pivotally connected arms adapted to be placed in alinement, one of said arms being pivotally connected to said pole, the free end of said ridge pole portion being provided with means for engaging the free end of a corresponding ridge pole section.

[Claim 6 not printed in the Gazette.]

958,067. TELEPHONE SYSTEM AND APPARATUS. ALBERT K. ANDRIANO, San Francisco, Cal., assignor to Direct-Line General Telephone Company, San Francisco, Cal., a Corporation of California. Filed July 3, 1909. Serial No. 505,877.



1. In a telephone switch a plurality of line-contacts, a movable-contact, locking devices therefor, a movable support for the telephone instrument when not in use, means operatively connecting the locking devices with the telephone-support to lock the movable-contact when the telephone is hung on the support and to unlock the said contact when it is returned to place, a ringing-key, a sup-

plementary locking-device, means operatively connecting it with the ringing-key to bring the same into action when the ringing-key is pressed, and means to throw off the supplementary locking-device by the act of returning the telephone instrument to place after use.

2. In a telephone switch, a plurality of line-contacts, a movable contact, locking-devices therefor, means operatively connecting said locking-devices with the user's telephone hook whereby the movable-contact is locked when the telephone is hung up and is released for use by the act of taking down the telephone, a supplementary locking-device and controlling means connecting the same with the user's ringing-key and operating to bring the said locking-device into action to lock the movable-contact when the ringing operation takes place, and means operatively connecting said controlling means with the telephone-hook to throw off said supplementary lock when the telephone is hung up.

3. In a telephone switch, a plurality of line-contacts, a movable-contact, means for setting and holding the movable contact to any selected one of the line-contacts, a spring to return the movable-contact, a ringing-key, a locking device actuated by the movement of the ringing-key to lock the movable-contact, whereby the switch cannot be moved after the ringing-key has been pressed, and means operatively connecting the locking-device with the user's telephone-hook to throw off the lock by the act of hanging up the telephone.

4. In a telephone switch having a plurality of line-contacts, a movable-contact, means for setting and holding the movable-contact to make a switch, and spring-actuated means for returning the movable-contact to its normal position when released; the combination of a locking-device for the movable-contact, means operated by the user's ringing-key to throw on the locking-device when the ringing-key is operated, and means operatively connecting the switch-locking device with the user's telephone-hook whereby the movable-contact is released and returned to position by the return of the telephone to the hook.

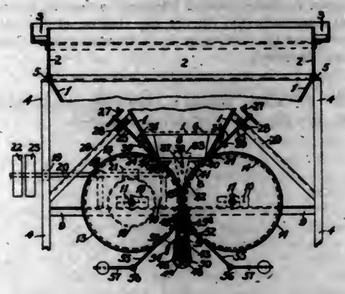
5. In a telephone switching-mechanism, a plurality of line-contacts, a movable-contact adjustable to any selected one of the line-contacts, a setting spindle to which the movable contact is connected by gears, a spring to return the movable-contact to normal position, a detent engaging the setting gears to hold the movable-contact against the reactive force of the spring, a locking-device holding the movable-contact normally locked, controlling means connecting said locking device with the user's telephone-hook, whereby the said lock is set off and the movable-contact is released for operation by removing the telephone from the hook, a ringing-key, a second locking-device normally held out of action by the ringing-key, a spring-actuated means for throwing the last-named locking device on the movable-contact by the act of pressing the ringing-key, and means operated by the movement of the telephone-hook on hanging up the telephone to reset the second locking-device for action.

[Claims 6 to 14 not printed in the Gazette.]

958,068. MEANS FOR SEPARATING COMMINUTED ORES OR OTHER SOLID MATTER FROM LIQUIDS. ALEXANDER J. ARBUCKLE, Johannesburg, Transvaal. Filed Oct. 19, 1908. Serial No. 458,540.

1. In means for separating comminuted ores or other solid matter from liquids, in combination, a settling vessel having an aperture for the withdrawal of the settled solids, a pair of cylinders arranged to partially close said aperture and to provide between them an outlet for the solids, means for making joints between the sides of the vessel and the circumference of the cylinders comprising wedge shaped members plane on those sides next the vessel and curved on those sides next the cylinders, coverings of resilient material upon said members guiding means for said members and means for raising and lowering said members in their guiding means as set forth.

2. In means for separating comminuted ores or other solid matter from liquids, in combination, a settling vessel having an aperture for the withdrawal of the settled solids, a pair of cylinders arranged to partially close said aperture and to provide between them an outlet for the solids, means for making joints between the sides of the vessel and the circumference of the cylinders comprising wedge shaped members guiding means for said members comprising pins fixed to the wedge and brackets fixed to the vessel and means for raising and lowering said members comprising a screw threaded spindle revolubly attached to each member and a stationary internally threaded piece through which the screw may work and means for rotating the screw as set forth.



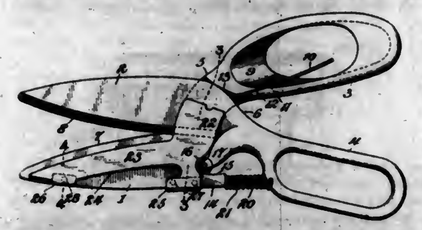
3. In means for separating comminuted ores or other solid matter from liquids, in combination, a settling vessel having an aperture for the withdrawal of the settled solids, a pair of cylinders arranged to partially close said aperture and to provide between them an outlet for the solids, means for making joints between the sides of the vessel and the ends of the cylinders comprising movable side plates curved and flanged along the outer edges to fit the peripheries of the cylinders and inclined along their inner edges, guiding means for said side plates and a wedge shaped member positioned between the inner inclined edges of the side plates, guiding means for said wedge member and means for raising and lowering said member as set forth.

4. In means for separating comminuted ores or other solid matter from liquids, in combination, a settling vessel having an aperture for the withdrawal of the settled solids, a pair of cylinders arranged to partially close said aperture and to provide between them an outlet for the solids, means for making joints between the sides of the vessel and the ends of the cylinders comprising movable side plates curved and flanged along the outer edges to fit the peripheries of the cylinders and inclined along their inner edges, guiding means for said side plates, said means comprising studs fixed to the vessel engaging slots in the side plates and a wedge shaped member positioned between the inner inclined edges of the side plates, guiding means for said wedge member and means for raising and lowering said member as set forth.

5. In means for separating comminuted ores or other solid matter from liquids, in combination, a settling vessel having an aperture for the withdrawal of the settled solids, a pair of cylinders arranged to partially close said aperture and to provide between them an outlet for the solids, means for making joints between the sides of the vessel and the ends of the cylinders comprising movable side plates curved and flanged along the outer edges to fit the peripheries of the cylinders and inclined along their inner edges, guiding means for said side plates and a wedge shaped member positioned between the inner inclined edges of the side plates, guiding means for said wedge member comprising a stud screwed to the vessel engaging a slot in said member and means for raising and lowering said wedge member comprising a screw revolubly attached to the member and a stationary nut fixed to the vessel through which the screw can work as set forth.

[Claims 6 to 10 not printed in the Gazette.]

958,069. SHEEP-SHEARS. ELBERT ASCUE, Blum, Tex., assignor of one-third to Richard H. Crank, Cleburne, Tex. Filed June 11, 1908. Serial No. 437,899.



1. Shears including a handle having an opening and provided with a spring mounted on the handle and having a movable cushioning portion extending from the handle at the opening and located at an intermediate point between the opposite walls thereof so as to spring in either direction to cushion the hand of the operator.

2. Shears including a handle having a substantially oblong opening and provided with a spring mounted on the handle and extending longitudinally of the opening in spaced relation with the walls thereof and arranged to receive and cushion the hand of the operator.

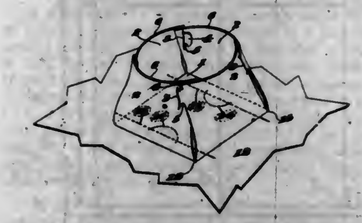
3. Shears including a handle having an opening, and a spring secured at one end to such handle and having a free portion arranged within the said opening and extending longitudinally of the handle and forming a cushion for the operator.

4. Shears including a handle provided with an opening and having a groove, and a spring secured at one end in the groove and having a free portion extending into the opening and forming a cushion for the operator.

5. Shears including a thumb receiving handle having an opening and provided at the inner end with a recess and having a groove formed in the inner end of the handle at the inner side thereof, and a spring secured at one end in the groove and having a free portion arranged in the opening of the handle to receive the thumb of the operator.

[Claims 6 to 15 not printed in the Gazette.]

958,070. HAT-HOLDER. GERTRUDE AUBUCHON, Jefferson, Mo., assignor of one-half to John C. Stephens, St. Louis, Mo. Filed Feb. 4, 1909. Serial No. 476,175.



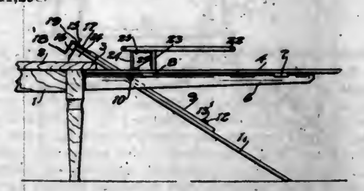
1. A hat holder, comprising in combination, a blank consisting of a squared base, and quadrilateral arms formed on each side of said base, said quadrilateral arms being adapted to be overlapped and joined to form an upwardly tapering structure whose square base merges into a round top.

2. A hat holder, comprising, in combination, a blank consisting of a square base, an arm formed on each side of said base having tapering sides, and an inwardly curved top, whereby, when said arms are bent upwardly, they will form a structure whose square base merges into a round top, and means for horizontally adjusting the position of said holder on a support.

3. A hat holder, comprising, in combination, with a support, a blank consisting of a square base, quadrilateral arms formed on each side of said base, said quadrilateral arms being adapted to be overlapped and joined to form an upwardly tapering structure whose square base merges into a round top, said securing means comprising flaps formed on said base, and elongated slots formed in said support and engaging said flaps.

4. A hat holder, comprising in combination with a support, a blank comprising a square base and radiating arms, said arms being inwardly inclined and overlapping one another to form a circular top, means for securing said arms in overlapped position, and means for adjustably securing said holder to said support, said securing means comprising flaps formed on said base, and elongated slots formed in said support and engaging said flaps.

958,071. IRONING-BOARD. BENJAMIN M. BAIN, Winnipeg, Manitoba, Canada. Filed Aug. 5, 1909. Serial No. 511,298.



1. An ironing board comprising a board having an outwardly opening slot located at one end and suitable longitudinally extending braces secured to its under side, a plate pivotally secured to the braces by pins the plate being adapted to enter the slot, a leg slidably secured to the plate by means of a bolt which enters a slot formed in the plate and at its lower end, said leg having a lug secured to its upper end, a plate secured to the upper end of the leg, and an adjusting rod carried by the latter plate and entering the former plate, as and for the purpose specified.

2. An ironing board comprising a table having an outwardly opening slot located at one end and provided with longitudinally extending braces secured to its under face, a plate pivotally secured to the braces and adapted to enter the slot, said plate having its lower end slotted and its upper end bored thereby forming longitudinally extending openings, a nut within the upper end, a leg slidably secured to the plate by a bolt entering the slot formed therein, a lug secured to the upper end of the leg, a plate secured to the lug, a threaded rod having a crank end rotatably mounted in the latter plate and prevented from longitudinal displacement, said rod being adapted to thread into the nut carried by the plate, as and for the purpose specified.

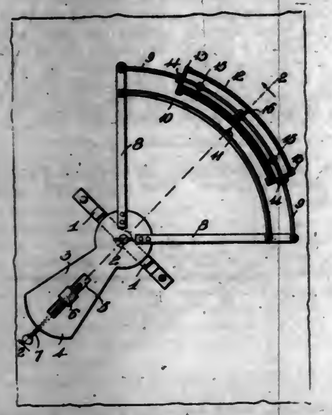
958,072. WATER-GAGE. FRANK BAKER, Dalton, N. Y. Filed June 11, 1909. Serial No. 501,530.

1. In a water gage, a pivotally mounted supporting plate, a rod, means connecting said rod to said plate in fixed relation thereto, a float fixed on said rod, a metal gage tube surrounding said float and through which said rod is adapted to slide, means for connecting said tube with a boiler and means connected with said first mentioned means for indicating the position of the float within the tube.

2. In a water gage, a supporting frame, a supporting plate pivotally mounted on said frame, a counter balancing arm arranged on said plate, right angular supporting arms secured to the plate, a segmental float carrying rod secured to the outer ends of said arms, a float secured to said rod, a segmental gage tube to receive said float supporting rod and float, means to connect said tube with a boiler on opposite sides of the float, and means whereby the position of the float in the tube is indicated.

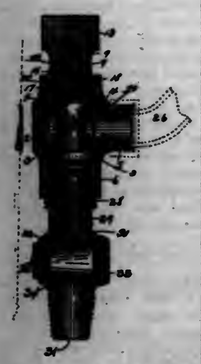
3. In a water gage, a pivotally mounted supporting plate, a counter balancing arm on said plate, an adjust-

able weight arranged on said arm, a segmental float carrying arm, means connecting said arm to said plate, a float fixed on said arm, a segmental metal gage tube adapted to receive said float carrying arm and float, stuffing boxes arranged on the opposite ends of said tube to provide a fluid tight engagement with said float carrying



rod, means to connect the tube with a boiler, a segmental pointer carrying rod, mounted on the connecting means of said float carrying arm, and an indicating pointer carried by said rod to indicate the position of the float in the tube.

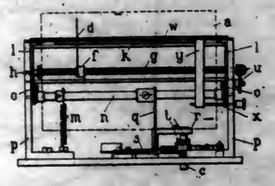
958,073. CORPORATION-COCK. WILLIAM J. BARNSTEAD, Galesburg, Ill. Filed June 8, 1908. Serial No. 437,397.



1. The combination with a corporation cock, of a casing connected thereto, and having a longitudinal bore in communication with the bore of the cock, said casing also having a lateral opening communicating with the longitudinal bore, and a turning plug mounted in the longitudinal bore, said plug having waterways adapted to connect the longitudinal bore with the lateral opening.

2. The combination with a corporation cock, of a tubular connection secured thereto, a casing mounted on said connection, and having a longitudinal bore in axial alinement, with the bore of the connection, said casing also having a lateral opening communicating with the longitudinal bore, and a turning plug mounted in the last mentioned bore, said plug having waterways adapted to connect the longitudinal bore with the lateral opening.

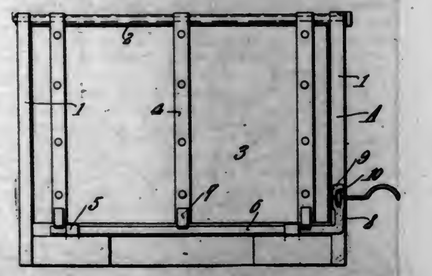
958,074. COMBINED SPEED AND TIME INDICATOR. TOBIAS BÄUMLE, St. Georgen, Germany, assignor to The Velochrone Company, New York, N. Y. Filed Sept. 2, 1908. Serial No. 451,453.



1. A speed and time indicator, comprising a framing, a rotating record-sheet carrying drum mounted thereon, a rotating traversing-screw mounted on the framing parallel with the drum, a nut traversed by said screw, a swing-arm carried by the nut and presenting a perforating and minute indicating head and an hour pointer, a stationary scale over which the hour pointer moves, a shaft driven by the body whose speed is to be indicated, and spring-controlled means, actuated by said shaft, intermittently depressing the perforator-head upon the record-sheet carrying drum and then retracting it therefrom, substantially as described.

2. A speed and time indicator, comprising a framing, a rotating record-sheet carrying drum mounted thereon, a rotating traversing-screw mounted on the framing parallel with the drum, a nut traversed by said screw, a swing-arm carried by the nut and presenting a perforating and minute indicating head and an hour pointer, a stationary adjustable scale over which the hour pointer moves, a shaft driven by the body whose speed is to be indicated, a rocking spring-actuated frame mounted on the framing and engaging said swing-arm, spring-actuated lever-mechanism rocking forward said frame and thus depressing the perforator-head upon the record-sheet carrying drum, and means actuated by said shaft for intermittently operating said lever-mechanism, substantially as described.

958,075. LATCH FOR END-GATES OF MINING-CARS. ISAAC K. BEAVER, Wilburton, Pa., assignor of one-half to Elmer E. Straub, Wilburton, Pa. Filed May 17, 1909. Serial No. 496,356.



The combination with posts and a cross bar connecting the same, of a gate pivotally suspended from the bar, reinforcing straps extending longitudinally of the gate and constituting hinge members engaging the cross bar, a tumbler rod mounted for partial rotation below the gate, fingers extending from the rod, a slotted arm upon one end of the rod, a locking bolt mounted for rotation on one of the posts, an arrow head thereon, the slotted arm being movable onto the head, and a bowed arm extending from the bolt for rotating the bolt and head to lock the arm and rod against movement and the fingers in the path of and in contact with the reinforcing straps, the bowed portion of said arm being extended at all times beyond the post.

958,076. MATRIX FOR LINE-CASTING MACHINES. RICHARD M. BEDELL, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Dec. 12, 1908. Serial No. 467,318.



1. A matrix of the class described, having a body portion and an upwardly extending shank, the latter having its upper end provided with a suspending eye and with an adjacent lateral projection, the projections adapted to hold the shanks of the matrices apart when assembled in line.

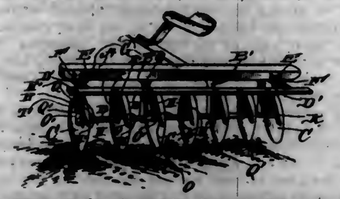
2. A matrix of the class described, having a body portion and a shank with a suspending eye at its upper end, said shank indented in one side to form a protrusion on the opposite side.

3. A matrix of the class described, having a shank provided with a suspending eye, and with lateral projections on opposite sides, out of line with each other.

4. A matrix of the class described, having a body portion, a shank of a thickness less than that of the body portion, a suspending eye at the upper end, and a side projection at the upper end below the eye.

5. A matrix of the class described, having a thick body portion, a shank thinner than the body throughout its length with a suspending eye at the upper end, and lateral projections on the shank below the eye.

958,077. DISK-HARROW-SHARPENING APPARATUS. PETER BENDER, Slater, Mo. Filed Nov. 17, 1909. Serial No. 528,519.



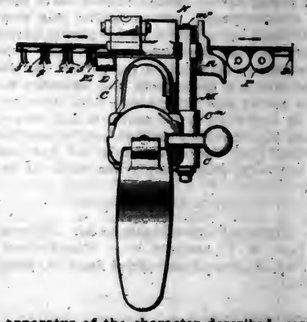
An apparatus for sharpening harrow disks comprising, in combination with the cross beam of a harrow frame, slotted bracket arms fastened to the edge of said beam, a rack having laterally projecting arms, bolts passing through apertures in said arms and slots of said bracket members, flanged bars fastened to the under face of said rack, a pivotal socket member mounted upon each of said bars, an integral lug projecting from each bar and socket member, a bolt passing through registering apertures in said lugs, a coiled spring mounted upon each bolt and interposed between said lugs.

958,078. FEED APPARATUS FOR AUTOMATIC GUNS. LAURENCE V. BENÉT, Paris, France. Filed Mar. 20, 1909. Serial No. 484,604.

1. In an apparatus of the character described, the combination with the motor piston, a feed strip, means operated by said motor piston for moving said feed strip forward, means for detaching the cartridges from the feed strip and for feeding the cartridges *seriatim*, and a spring plunger engaging each cartridge as it is detached from the feed strip near the loading position, substantially as described.

2. An apparatus of the character described, comprising a motor piston, a feed strip, means operated by said motor piston for imparting a step by step motion to said feed strip, clips carried by said feed strip, cartridges held between said clips, means for detaching the cartridges from the feed strip, and a spring plunger engaging each cartridge as it is detached from the feed strip near the loading position, substantially as described.

3. An apparatus of the character described, comprising a motor piston, a feed strip, means operated by said motor piston for imparting a step by step motion to said feed strip, resilient clips carried by said feed strip for engaging one side of the cartridge, and a reinforced clip carried by said feed strip engaging the opposite side of the cartridge, cartridges held between said clips, means for detaching the cartridges *seriatim* from the feed strip, and a spring plunger engaging each cartridge as it is detached from the feed strip near the loading position, substantially as described.



4. A feed strip for use in a gun of the character described, comprising a metal sheet, resilient clips stamped out of said sheet for engaging one side of the cartridge, and other clips also stamped out of said sheet and provided with a hollow reinforced portion in the back thereof to stiffen same, the said strips engaging the opposite side of said cartridge, substantially as described.

5. A feed strip for use in a gun of the character described, comprising a metal sheet corrugated longitudinally, resilient clips stamped out of the sides of said sheet exterior to said corrugations and adapted to engage one side of the cartridge, other clips also stamped out of said sheet between said corrugations and adapted to engage the other side of the cartridge, said latter clips being provided with a hollow reinforced portion to stiffen same, and lugs stamped out of said sheet and adapted to engage the rims of the cartridges, substantially as described.

[Claim 6 not printed in the Gazette.]

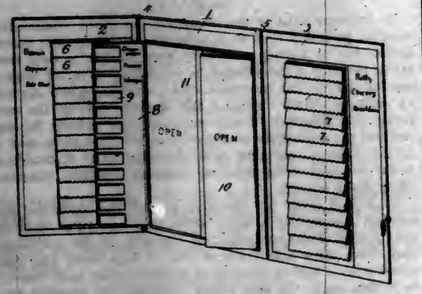
958,079. HYDRANT. ALBERT A. BENNETT, Essex, Ontario, Canada. Filed Aug. 12, 1909. Serial No. 512,554.



In a hydrant of the character described, a box, a service connection arranged in the lower end of said box, a

valve casing having a screw threaded engagement with said connection, a tapered valve seat in said casing, said seat and casing having formed therein drain ports and a by-pass, a substantially conical hollow plug arranged in said seat, said plug having a discharge port adapted to be turned into and out of engagement with said by-pass, and a drain passage adapted to be turned into and out of engagement with said drain ports, stop shoulders formed on the upper end of said valve seat, a stop collar on the upper end of said valve plug, means on said stop collar to engage the stop shoulders on said seat, to limit the movement of said plug, and an operating rod and handle connected with said plug whereby the latter is turned on or off.

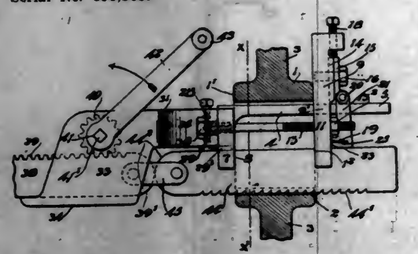
958,080. DISPLAY OR COLOR CARD. GEORGE BENZE, New York, N. Y., assignor to A. Wimpfheimer & Bro., New York, N. Y., a Firm. Filed June 19, 1909. Serial No. 503,172.



1. In an article of the class described, a suitable backing, a flap secured thereto, a series of samples of fabric disposed on the face of said flap, and an additional flap movably secured to the backing and carrying a series of samples of fabric to be matched with the first named series, the second flap being adapted to be moved into close juxtaposition to the first named flap to aline the fabric samples carried by each.

2. In an article of the class described, two flaps and an intermediate section connecting them, a series of samples of fabric arranged upon the inner faces of said flaps, and an additional backing as 11, secured to the face of the first named intermediate section having two end flaps adapted to be moved over and into juxtaposition with the first named flaps.

958,081. KEY-SEATING MACHINE. WILLIAM BILLING, St. Boniface, Manitoba, Canada. Filed Apr. 16, 1909. Serial No. 490,365.



1. In a key seating machine, in combination, a main frame consisting in a shank provided with laterally extending wings, said frame having a slot formed therein with the walls thereof passing at right angles to the plane of the shank; a head slidable on the shank and provided with laterally extending wings, there being a slot in the head opposing the slot aforesaid, and with its walls passing at right angles to the plane of the shank; means securing the head adjustably to the frame; a cutting bar longitudinally slidable within the slots; means carried by the head and by the frame whereby the position of the cutting bar in the slots can be adjusted; a tail piece secured to the wings of the frame; and means carried by the tail piece and secured to the shank whereby the shank can be reciprocated longitudinally, as and for the purpose specified.

2. In a key seating machine, in combination, a main frame consisting in a shank provided with laterally extending wings, said frame having a slot formed therein with the walls thereof passing at right angles to the plane of the shank; a head slidable on the shank and provided with laterally extending wings, there being a slot in the head opposing the slot aforesaid, and with its walls passing at right angles to the plane of the shank; means securing the head adjustably to the frame; a cutting bar longitudinally slidable within the slots; means carried by the head and by the frame whereby the position of the cutting bar in the slots can be adjusted; a tail piece secured to the wings of the frame, said tail piece being provided with a slideway alined with the slots aforesaid; a rack received within the slideway and linked to the cutting bar; a pinion in mesh with the rack; and a crank for rotating the pinion, as and for the purpose specified.

3. In a key seating machine, in combination, a main frame consisting in an extending shank of rectangular cross section having laterally extending wings located at one of its ends, there being a slot formed at the junction of the wings, said slot having the walls thereof passing at right angles to the plane of the shank; a head slidable on the shank having laterally extending wings opposing those aforesaid and provided at the junction of the wings with a slot directly opposing the former slot, and with its walls passing at right angles to the plane of the shank; adjusting bolts connecting the wings carried by the head and the frame; a cutting bar longitudinally slidable within the slots; adjustable means carried by the head and bearing on the upper edge of the cutting bar; adjusting means carried by the frame and bearing on the cutting bar; and means for reciprocating the cutting bar longitudinally, as and for the purpose specified.

4. In a key seating machine adapted for forming a key seat in the hub of a wheel, in combination, a main frame having an extending shank adapted to pass through the opening in the hub and provided with laterally extending wings designed to bear against one face of the hub; a head slidable on the shank and provided with laterally extending wings adapted to bear against the other face of the hub, and opposing the former wings; means passing longitudinally through the hub and secured to the frame and the head whereby the frame and head can be securely fastened to the hub; a cutting bar adapted to pass within the hub and be received within slots formed in the head and the frame, said slots being in a plane passing through the center of the hub and at right angles to the shank; means for reciprocating the cutting bar; adjustable means carried by the frame and bearing on the cutting bar; and adjustable means carried by the head and bearing on the upper edge of the cutting bar, the former and the latter adjusting means being located at the outer faces of the wings, as and for the purpose specified.

5. A key seating machine comprising a frame adapted to pass through the opening in the hub, said frame having wings thereon, an adjustable head having wings thereon, means engaging with said wings for clamping the hub between said parts, a reciprocating cutting bar carried by the frame, and independent means engaging with each end of the cutting bar for applying pressure thereto, whereby one end of the key way may be cut deeper than the other.

958,082. ADJUSTABLE DISPLAY-CARD HOLDER. LOUIS BLAND, Chicago, Ill. Filed July 14, 1909. Serial No. 507,658.

1. A holder including a frame, composed of a plurality of split tubes disposed in telescopic relation, the split portions of said tubes being turned inwardly for the reception of the edges of a placard, bands carried on the outer faces of said tubes and secured to the opposite inner ends of the same, a standard engaged with said tubes to support said frame and a base located on the lower end of said standard.

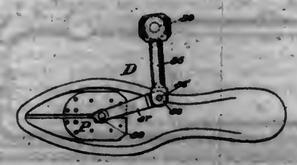


2. A holder including a frame, composed of side bars, each of said side bars formed of a pair of split tubes disposed in telescopic relation, the outer of said tubes carrying a band rigidly secured to the inner end thereof, inturned portions formed on said band for engagement through the split portions of the tubes, a second band carried by said outer tube and secured to the inner tube at the split portion thereof, and inturned portions formed upon said second band for engagement against the inner face of the inner of said tubes.

3. A holder including a support, fork arms carried by said support, a frame formed of cylindrical side bars adjustably engaged between said fork arms and means carried by said fork arms for securing said frame in adjusted position.

4. In a holder the combination with a support, of fork arms carried by said support, a frame formed of cylindrical side bars adjustably mounted between said fork arms and means for securing said frame in position.

958,083. HOLDDOWN FOR LASTING-MACHINES. NICHOLAS C. BOHR, Boston, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Filed Apr. 26, 1907. Serial No. 370,360. Renewed Nov. 22, 1909. Serial No. 529,292.



1. In a lasting machine a hold-down support, a hold-down arm swiveled thereon to swing horizontally, a second arm jointed to the first arm, a bearing foot carried by the second arm, and means for moving said parts vertically in unison.

2. In a lasting machine, a hold-down device, and a self expanding bearing foot sustained thereby.

3. In a lasting machine, the combination of a hold-down supporting rod, a hold-down arm connected thereto to swing in a horizontal plane, a bearing foot adapted to contact with the sole of a shoe supported by the machine and mounted for universal movement on said hold-down arm to enable the bearing foot to conform to the surface of the shoe sole, and treadle operated means for moving the bearing foot toward and from the sole of the shoe.

4. In a lasting machine, the combination of a hold-down supporting member, a hold-down arm jointed thereto to swing in a horizontal plane, a second arm mounted to swing on the hold-down arm, a bearing foot, yielding connections between the second arm and bearing foot to permit the latter to adapt itself to the sole of a shoe supported by said machine, yielding means acting normally to raise the bearing foot, and treadle operated means for moving said bearing foot toward the shoe sole.

5. In a lasting machine, the combination of a hold-down supporting rod, an arm mounted to swing horizontally thereon, a second arm mounted on the first named arm to swing horizontally with respect thereto, a bearing foot to bear upon the sole of a shoe supported by said machine, connections between the second arm and bearing foot permitting the latter to adjust itself to the shoe sole, and means for raising and lowering said parts in unison.

[Claims 6 to 12 not printed in the Gazette.]

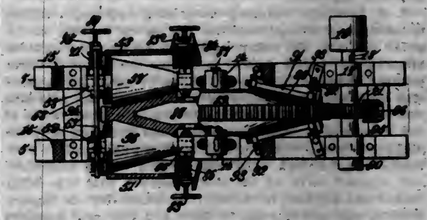
958,084. MANUFACTURE OF SILICA BRICKS, GANISTER, AND OTHER REFRACTORY MATERIALS. HARRY BREARLEY and FRANCIS C. MOORWOOD, Sheffield, England. Filed Mar. 22, 1909. Serial No. 485,091.

1. The process of manufacturing acid refractory material possessing throughout uniformly refractory properties, which consists in burning a mixture made by adding to silica, water and a calcium-containing substance soluble in water and capable of depositing lime when heated in sufficient quantity to produce the requisite silicatization.

2. The process of manufacturing acid refractory material composed only of silica and lime and possessing throughout uniformly refractory properties, which consists in burning a mixture composed of silica, water and a substantially soluble compound of calcium capable of depositing lime when heated in sufficient quantity to produce the requisite silicatization.

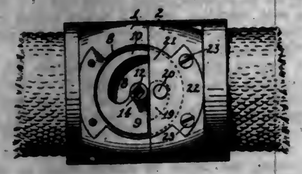
3. The process of manufacturing acid refractory material composed only of silica and lime, which consists in burning a mixture composed of silica, water and calcium chlorid.

958,085. GRINDING AND CRUSHING MILL. FRANK H. BROWN and FRED H. BROWN, Portland, Oreg. Filed Aug. 19, 1908. Serial No. 449,282.



A mill of the class described embodying a grinding wheel of large diameter having reversely inclined sides equally sloping from the center convergingly to the periphery of the wheel, the said grinding wheel having teeth disposed in the center between the inclined sides and extending fully around the periphery of the same, a shaft fixed to the grinding wheel to rotate therewith and having suitable bearings, gear means coöperating with the peripheral teeth to rotate the said wheel and shaft, conical grinding or crushing rolls arranged in operative relation with respect to the two inclined faces of the grinding wheel, means for unitedly adjusting the rolls relatively to the grinding wheel, means for independently adjusting the rolls relatively to the grinding wheel, and means for feeding material to be ground to the points of contact of the grinding or crushing rolls and the grinding wheel, the grinding or crushing rolls being rotated inwardly toward the grinding wheel by frictional contact with the latter.

958,086. LOCK-JOINT COUPLING. JOHN K. BULGER, San Francisco, Cal., assignor to The Bulger Lock-Coupling Company, San Francisco, Cal., a Corporation of California. Filed Nov. 16, 1909. Serial No. 528,425.



1. A lock-joint coupling comprising complemental coupling members between the meeting faces of which a joint is effected; a rotatable cam-tongue housed within the wall of one member and operatable from the exterior to be projected from the face of said member; and a fixed lug housed within the wall of the other member, said lug being shaped and disposed to receive the engagement of the cam-tongue, to draw and lock said members together.

2. A lock-joint coupling comprising opposing coupling members, one of said members having on its face an annular rib and the other having in its face an annular groove with seated gasket, to receive the rib of the first member, whereby a joint is formed between the faces of said members; a rotatable cam-tongue housed within the wall of one member and operatable from the exterior to be projected from the face of said member; and a fixed lug housed within the wall of the other member, said lug being shaped and disposed to receive the engagement of the cam-tongue, to draw and lock said members together.

3. A lock-joint coupling comprising complemental coupling members between the meeting faces of which a joint is effected; relatively reversed, symmetrical, rotatable cam-tongues housed within diametrically opposed walls of one member and each operatable from the exterior to be projected from the face of said member; and relatively reversed, symmetrical, fixed lugs housed within diametrically opposed walls of the other member, said lugs being shaped and disposed to receive interchangeably the engagement of the cam-tongues, to draw and lock said members together.

4. A lock-joint coupling comprising opposing coupling members, one of said members having on its face an annular rib, and the other having in its face an annular groove with seated gasket, to receive the rib of the first member, whereby a joint is formed between the faces of said members; relatively reversed, symmetrical, rotatable cam-tongues housed within diametrically opposed walls of one member and each operatable from the exterior to be projected from the face of said member; and relatively reversed, symmetrical, fixed lugs housed within diametrically opposed walls of the other member, said lugs being shaped and disposed to receive interchangeably the engagement of the cam-tongues, to draw and lock said members together.

5. A lock-joint coupling comprising complemental coupling members between the faces of which a joint is effected, one of said members having formed in its outer wall a recess intersecting the face of said member, and a removable cover for said recess, and the other member having formed in its outer wall a recess intersecting the face of said member, and a removable cover for said recess; a cam-tongue mounted in the recess of the first member and pivoted between the floor of said recess and the cover thereof, its pivot being exposed to the exterior of the cover and fashioned to receive a key whereby the cam-tongue may be turned to be projected from the face of said member; and a fixed lug in the recess of the second member between the floor of said recess and its cover, said lug being shaped and disposed to receive behind it the engagement of the cam-tongue, to draw and lock said members together.

[Claim 6 not printed in the Gazette.]

958,087. EGG-CARRIER. ELVAH O. BULMAN, Grand Rapids, Mich. Filed June 28, 1909. Serial No. 504,746.



1. An egg carrier, comprising vertical walls having inwardly turned bottom flanges, bars supported by the flanges, springs supported by the bars, a bottom supported by the springs, an inverted tray above the bottom, and a yieldable and removable clamp above the tray.

2. An egg carrier, comprising vertical walls having inwardly turned bottom flanges, bars secured to the flanges and supported thereby, springs secured to the bars and supported thereby, a bottom secured to the springs and supported thereby, a detached inverted tray above the bottom and having downwardly extended margins, and a yieldable and removable clamp above the tray.

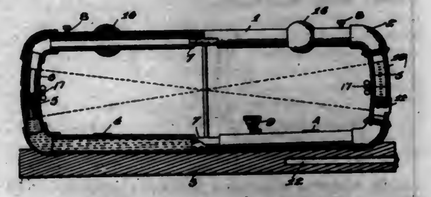
3. An egg carrier, comprising four vertical walls forming a parallelogram and joined at the angles, inturned flanges at the bottom of said walls, bars secured to the flanges and spaced apart, coiled springs supported by the bars and connected by diagonal and crossed wires, a bottom supported by the springs and wires, an inverted tray above the bottom and having downwardly and outwardly extended margins to engage the outer eggs, and a yieldable and removable clamp engaging the tray.

4. An egg carrier, comprising a case having an opening in one end, a tray to engage and hold eggs in the case, and a clamp to hold the tray formed of a resilient wire folded near the middle and having its folded end detachably inserted in the opening in the case by spreading apart of its side portions and also having its ends pivoted to the opposite end of the case.

5. An egg carrier, comprising a case having openings in its respective ends, a tray to engage and hold eggs in the case, and a resilient wire bent at the middle and inserted in an opening in one end of the case, and having its parts oppositely curved outward and downward to engage the tray and having its ends each turned in circular form and inserted in openings in the other end of the case.

[Claim 6 not printed in the Gazette.]

958,088. COMBINED LEVEL AND GRADIENT INSTRUMENT. JOHN J. BUNTING, Grandview, Wash. Filed Jan. 17, 1910. Serial No. 538,559.



1. A clinometer comprising a substantially rectangular metallic frame having a cut-away portion, a sight glass arranged at the cut-away portion, said clinometer being provided at the sight glass with graduations, spaced fenders arranged at the sight glass and mounted on the metal frame at the ends of the cut-away portion, and a reflector mounted on the fenders.

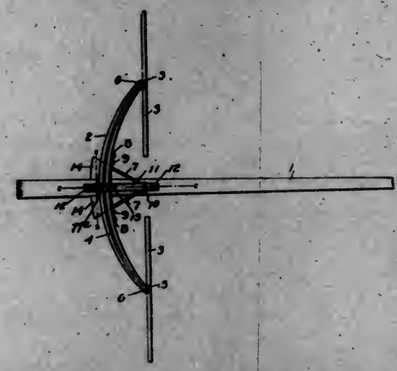
2. A clinometer comprising a substantially rectangular metallic frame having a cut-away portion, a sight glass arranged at the cut-away portion, said clinometer being provided at the sight glass with graduations, spaced fenders arranged at the sight glass and mounted on the metal frame at the ends of the cut-away portion, a reflector detachably mounted on the fenders, and a base supporting the frame and having a cavity of a size to receive the reflector when the same is detached from the fender.

3. A clinometer comprising a substantially rectangular frame including opposite sight glass tubes curved about a common center and having graduations, and reflectors each arranged at an angle to one of the curved sight glass tubes and curved to conform to the curvature of the axis of the same.

4. A clinometer comprising a substantially rectangular tubular frame including sight glasses curved about a common center and having graduations and located at the ends of the frame, curved fenders spaced apart at the sight glasses and secured to the said frame, and curved reflectors mounted on the fenders and conforming to the curvature of the sight glasses.

5. A clinometer comprising a continuous tube in the shape of a rectangle, sight glasses located at various points on said rectangular tube and curved about a common center, buffers located upon the upper portion of said tube, a liquid column partially filling said tube, means for adjusting the height of the liquid in said tube, curved members connecting the upper and lower portions of said tube, said curved members being provided with reflectors, disposed at an angle thereto.

958,089. WHIFFLETREE. JOHN J. BUNTING, Grandview, Wash. Filed Jan. 18, 1910. Serial No. 538,752.

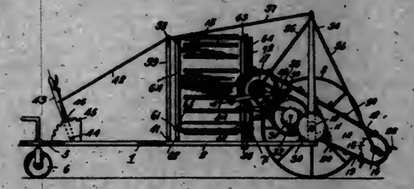


1. The combination with a tongue, of an arcuate doubletree, means connected with the center of the doubletree for pivotally connecting the same with the tongue, swingletrees pivotally connected with the eyes of the doubletree, and a base or supporting bracket composed of a central loop or yoke portion embracing and secured to the tongue, and laterally extending supporting portions projecting from opposite sides of the tongue and receiving and supporting the doubletree.

2. The combination with a tongue, of an arcuate doubletree, means centrally connected with the doubletree for pivoting the same to the tongue, a retaining strap or bracket secured to the tongue and extending over the doubletree and provided with an off-set portion, and a longitudinally disposed combined anti-friction and sound deadening roller mounted in the off-set portion of the retaining strap or bracket and bearing against the upper face of the doubletree, and swingletrees connected with the terminals of the doubletree.

3. The combination with a tongue, of an arcuate doubletree, means centrally connected with the doubletree for pivoting the same to the tongue, a base or supporting bracket having a central loop or yoke to embrace the tongue and provided with supporting portions extending laterally from opposite sides of the tongue and receiving the doubletree, a retaining strap or bracket extending over the doubletree and secured to the tongue, a combined sound deadening and anti-friction roller mounted in the retaining strap or bracket and bearing against the upper face of the doubletree, and swingletrees connected with the terminals of the doubletree.

958,090. SHOCK-LOADER. FRANK BURK, McHenry, N. D. Filed May 4, 1909. Serial No. 493,895.



1. In a machine of the character described, the combination of a wheel supported main frame, an upwardly and rearwardly inclined elevator frame, the latter including connected side plates pivoted intermediate their ends, an endless elevator upon the last mentioned frame, means for vertically adjusting the lower front end of the elevator frame, a transverse conveyer arranged upon the main frame beneath the discharge end of the elevator, an upright guard frame hung from and movable with the rear portions of the side plates of the elevator frame, rearwardly projecting brackets upon the side plates of the elevator frame, a horizontally disposed rectangular beater bar journaled in said brackets and arranged in rear of the elevator and said guard frame, means for actuating the conveyer, elevator and beater bar.

2. In a machine of the character described, a main frame having spaced forwardly projecting side beams united by a rear connecting beam, and a rearwardly extending central beam projecting from the center of said connecting beam, a caster wheel carried by said rearwardly projecting central beam, a transverse shaft journaled upon the forward ends of the spaced side beams, supporting and driving wheels upon said shaft, a transverse conveyer arranged upon the main frame, a downwardly and forwardly inclined elevator frame having side plates pivoted intermediate their ends upon said shaft, an endless elevator upon the last mentioned frame, an inverted U-shaped member having depending arms pivoted to said shaft, braces between said U-shaped member and the side plates of the elevator frame, an upright pivoted at its lower end upon the main frame, a link connecting the upper end of the upright to the U-shaped member, a hand lever pivoted upon the rearwardly projecting central beam of the main frame, a link connecting said hand lever to the top of said upright, and means for driving the conveyer and elevator from said supporting and driving wheels, and a pawl and rack locking means for said hand lever.

3. In a machine of the character described, the combination of a wheel supported main frame, an upwardly and rearwardly inclined elevator, means for vertically adjusting the lower front end of the same, a transverse conveyer arranged beneath the discharge end of the elevator, a vertically adjustable guard hung from the elevated rear portion of the elevator, means for guiding said guard and means for driving said elevator and conveyer.

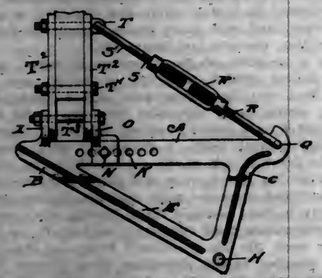
4. In a machine of the character described, the combination of a wheel supported main frame, a vertically swinging elevator frame, an endless elevator on the last mentioned frame, means for driving said elevator, a discharge conveyer arranged beneath the discharge end of the elevator, means for driving said conveyer, slotted supporting arms upon the elevator frame, a vertically disposed guard member having at its upper end pivots to rotate and slide in said slotted arms, upright guides to receive the lower end of said guard, and means for adjusting said elevator frame.

5. In a machine of the character described, a main frame having spaced forwardly projecting side beams

united by a rear connecting beam, and a rearwardly extending central beam projecting from the center of said connecting beam, a caster wheel carried by said rearwardly extending central beam, a transverse shaft journaled upon the forward ends of the spaced side beams, supporting and driving wheels upon said shaft, a transverse conveyer arranged upon the main frame, a downwardly and forwardly inclined elevator frame having side plates pivoted intermediate their ends upon said shaft, and an endless elevator upon the last mentioned frame, an inverted U-shaped member having depending arms pivoted to said shaft, braces between said U-shaped member and the side plates of the elevator frame, a vertically adjustable guard board hung from the rear portions of the side plates of the elevator frame, means upon the main frame for guiding said guard board, a rotary beater bar hung from the side plates of the elevator frame and disposed in rear of the elevator, means for driving the beater bar from the elevator, means for driving said elevator and conveyer from the supporting drive wheels, an upright pivoted at its lower end to the main frame, a link connecting the top of said elevator to said U-shaped member, a hand lever pivoted upon the rearwardly projecting beam of the main frame, a link connecting said hand lever to the top of said upright, and a locking means for said hand lever.

[Claims 6 to 8 not printed in the Gazette.]

958,091. ADJUSTABLE BEAM AND FRAME FOR SULKY AND GANG-PLOWS. HARLEY S. BUSBY, Girard, Kans. Filed Dec. 15, 1909. Serial No. 533,255.



1. An adjustable frame hitch for sulky and gang plows, comprising a triangular shaped frame, two of the sides of which are divided, a lag bolt adapted to be held in registering apertures in the angled portions of the divided sides and to which a double tree is adapted to be connected, adjustable means for fastening the frame to a plow, and an adjustable side draft rod adapted to connect said frame with a plow frame, as set forth.

2. An adjustable frame hitch for sulky and gang plows, comprising a triangular shaped frame, two of the sides of which are divided, a lag bolt adapted to be held in registering apertures in the angled portions of the divided sides and to which a double tree is adapted to be connected, and means for attachment to a plow, an adjustable side draft rod having a hooked end for attachment to one end of said frame and a second hook for attachment to the frame of a plow, as set forth.

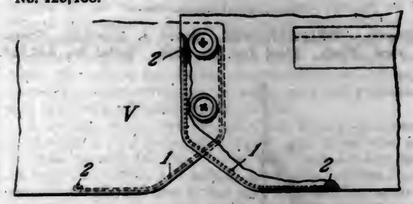
3. An adjustable frame hitch for sulky and gang plows, comprising a triangular shaped frame, two of the sides of which are divided, a lag bolt adapted to be held in registering apertures in the angled portions of the divided sides and to which a double tree is adapted to be connected, a fixed jaw upon one side of the frame, a movable jaw having a slot for the reception of the side from which said fixed jaw projects, said movable jaw and the side of the frame upon which it is mounted, having apertures, a lag bolt adapted to pass through registering apertures in said movable jaw and the side, double side draft mechanism, consisting of two hooks having threaded shank portions with a turnbuckle engaging the threaded portions thereof, one of said hooks adapted for attachment to said frame, and the other to a plow frame, as shown and described.

958,092. CIGAR-CUTTER FORMING PART OF A COMBINATION-TOOL. HARRY A. CHIPPENDALE, New London, Conn., assignor to James Sweeney, New London, Conn. Filed Oct. 5, 1909. Serial No. 521,065.



An implement of the class described comprising a plurality of spaced arms, heads connecting the end portions of the arms, a plate secured to the said arms and provided with a centrally located perforation, a pivoted knife adapted for movement across the perforation formed in the plate, a finger engaging lip carried by the knife and disposed in overlapping engagement with one of the arms, and means carried by the lip for locking engagement with one of the arms so that the knife will be held normally against pivotal movement.

958,093. VEST-CORNER STIFFENER. CHESTER D. CLEMENTS, Wymore, Nebr. Filed Apr. 27, 1908. Serial No. 429,438.



The combination with a vest having hem portions at the lower corners formed with openings, of a stiffener for the said corners consisting of a strand of wire bent to conform to the outline of the corner, the bent portions being inserted at their extremities through the openings in the hem and being stitched between their ends to the inner surface of the vest.

958,094. INCANDESCENT LIGHT. ROBERT D. CODY, Chicago, Ill. Filed Dec. 4, 1908. Serial No. 465,953.



1. In a Bunsen apparatus; a feed pipe, a mixing tube, a link to connect the feed pipe and the mixing tube and comprising two spaced arms connected at the ends by hollow heads, one of said arms provided with a hollow portion in communication at its upper end through the upper hollow head with the feed pipe, and a valve off-set from said hollow portion adjacent its lower end to direct gas into the mixing tube.

2. In a Bunsen apparatus; a feed pipe, a mixing tube, a link to connect the feed pipe and the mixing tube and comprising two spaced arms connected at the ends by hollow heads, one of said arms provided with a hollow portion and adapted to hold them in adjustable relation, and a valve off-set from said hollow portion adjacent its lower end to direct gas into the mixing tube.

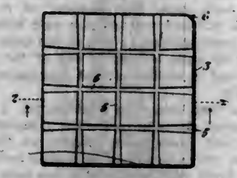
3. In a Bunsen apparatus; a feed pipe, a mixing tube provided with a slotted upper end, and a cap member provided in its top with a multiplicity of outlet openings to conduct gas from the feed pipe and direct it into the mixing tube and having a sleeve fitting on the slotted upper end of the mixing tube and provided with openings.

4. In a Bunsen apparatus; a feed pipe, a mixing tube provided with a slotted upper end, a cap member provided in its top with a central outlet aperture, and a multiplicity of apertures spaced therearound, a sleeve fitted on the slotted upper end of the mixing tube and provided with openings, and means for controlling the flow of gas through the central aperture.

5. In a Bunsen apparatus; a feed pipe, a mixing tube, a branched link to connect the feed pipe and the mixing tube, one of the branches of said link having a hollow portion, a member between the branches of the link communicating with the hollow portion and provided with an outlet opening to direct gas into the mixing tube, and a valve stem alined with the mixing tube to control the said gas outlet opening.

[Claims 6 and 7 not printed in the Gazette.]

958,095. HEAT-INSULATING WALL. CLYDE J. COLEMAN, New York, N. Y. Filed July 9, 1908. Serial No. 442,752.



1. A unit for heat insulating construction comprising a vacuum inclosing shell having flat side walls provided at intervals with internal longitudinally arched strengthening ribs.

2. A unit for heat insulating construction comprising a vacuum inclosing shell having flat side walls provided at intervals with internal longitudinally arched strengthening ribs running in two directions and crossing one another.

3. A unit for heat insulating construction comprising a vacuum inclosing shell having flat side walls provided at intervals with indented grooves forming internal strengthening ribs, such grooves becoming gradually deeper toward their ends and the internal ribs being correspondingly arched to increase their strength.

4. A unit for heat insulating construction comprising a vacuum inclosing shell having flat side walls provided at intervals with indented grooves running in two directions and forming internal strengthening ribs crossing one another, such grooves becoming gradually deeper toward their ends and the internal ribs being correspondingly arched to increase their strength.

5. A unit for heat insulating construction comprising a thin and flat vacuum inclosing shell having plane opposite side walls provided at intervals with indented grooves forming internal strengthening ribs, such grooves becoming gradually deeper toward their ends and the internal ribs being correspondingly arched, the ribs of the opposite sides coalescing one with another near their ends and adjacent to the edges of the unit.

[Claims 6 to 14 not printed in the Gazette.]

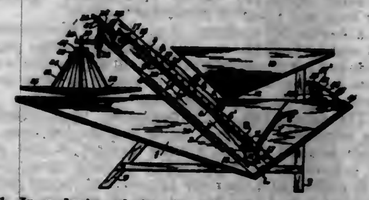
958,096. UMBRELLA-RECEPTACLE FOR CARS. MILDRED COLONNA, St. Louis, Mo. Filed July 27, 1909. Serial No. 509,789.



1. In combination with the outer wall of a car, an inner facing spaced therefrom, and a sill formed with an opening extending over the space between the wall and facing, an umbrella receptacle consisting of a member of a size to be received in said space and having an open upper end which alines with said sill opening, the latter being of a size to receive the umbrella.

2. In combination with the outer wall of a car, an inner facing arranged in spaced relation to said wall, and an umbrella receptacle disposed in said space, said receptacle having a mouth which is disposed adjacent the upper end of said facing and a drain pipe which communicates with the lower end of the receptacle and extends through the floor of the car.

958,097. GRAIN PICKLING AND CLEANING MACHINE. JOHN A. COWAN, Winnipeg, Manitoba, Canada. Filed Oct. 1, 1907. Serial No. 395,387.



1. In a device of the class described, the combination comprising a tank; an inclined endless slotted conveyer having its upper portion moving upwardly and its lower portion moving downwardly, a feed hopper adapted to deposit grain in the path of the upwardly movable portion of the conveyer; a cross partition located directly beneath the upwardly movable portion of the conveyer and upon which the grain deposited from the hopper is received, the said partition having its upper portion smooth with a series of screened openings therein, and its lower portion formed with a continuous series of transversely extending channels, as and for the purpose specified.

2. In a device of the class described, the combination comprising a tank, an endless conveyer adapted to have the upper portion carry the grain upwardly, a cross partition in proximity to and beneath the upper portion, the said cross partition having a portion of its upper face ratchet shaped in cross section, as and for the purpose specified.

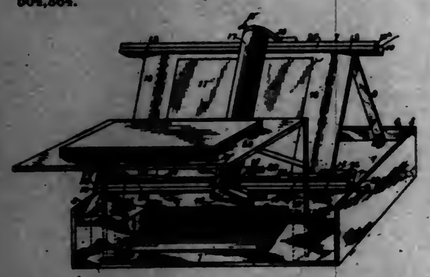
3. In a device of the class described the combination with the elongated sides and the endless chain conveyer of a cross partition in proximity to and beneath the ascending side of the conveyer, the said cross partition having a series of screened openings therein and having a portion of its upper face ratchet shaped in cross section, as and for the purpose specified.

4. In a device of the class described the combination with the elongated sides, and the carriers formed from cross blades and a continuous chain riveted within an incision in the ends of the cross blades, of a cross partition extending between the sides, said cross partition having screened openings therein, and a portion of its upper face ratchet shaped in cross section and longitudinal channels cut in the upper toothed face to receive the extending ends of the rivets, as and for the purpose specified.

5. In a device of the class described the combination with the tank and the endless carriers, of a combined draining and drying board consisting of a lower revoluble tray carrying a conical shaped upwardly extending center piece, and means for allowing for drainage from the tray, as and for the purpose specified.

[Claims 6 to 10 not printed in the Gazette.]

958,096. DUPLICATING-MACHINE. JAMES G. DAILEY, Philadelphia, Pa. Filed June 25, 1909. Serial No. 504,364.



1. A duplicator consisting of a cabinet, a printing frame angularly disposed on said cabinet, an impression roller operating on said printing frame, paper rests for holding paper on said angular printing frame, means for rotating said paper rests, and thereby automatically releasing paper from said frame as shown and specified.

2. A duplicator consisting of a printing frame placed in an angular position, rotating means for holding paper thereon and for releasing said paper, in combination with a chute for directing the course of said paper after leaving said frame for the purpose shown and described.

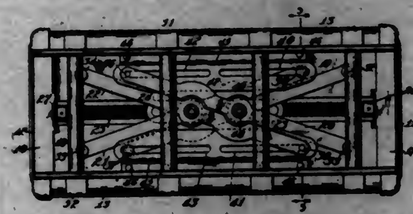
3. The combination in a duplicator, of a printing frame comprising the track beams and the bed plate, a carriage mounted thereon, a roller mounted on said carriage, grooves in said track beams containing contact bars held in contact with the roller by means of springs under the contact bars, a tumbling rod parallel with one of said track beams, spools journaled in the track beams and carrying an inked ribbon, said spools having a geared connection with said tumbling rod, means for automatically rotating the tumbling rod by engagement with said carriage which is fitted with guide rollers engaging flanges on the track beams, paper rests movably seated upon the tumbling rod, means for engaging and disengaging the gears on the spools and tumbling rod, all substantially as shown and described.

4. The combination in a duplicator, of a printing frame pivotally mounted upon a cabinet, track beams having grooves therein mounted on either side of said printing frame, contact members adapted to fit said grooves, a traveling roller carried by a carriage and adapted to contact with said contact members, ribbon spools positioned at the ends of the printing frame, gears on said spools, a tumbling rod positioned longitudinally with respect to one of said track beams, said tumbling rod geared to said spools, and means carried by said carriage for automatically operating said tumbling rod.

5. The combination in a duplicating machine having a printing frame mounted upon a cabinet, of track beams with grooves therein on said frame, contact bars mounted in the grooves in said track beams, springs positioned under said contact bars, a carriage mounted on said frame, a traveling roller carried by said carriage and adapted to contact said contact bars, spools positioned at the ends of said printing frame, journals for said spools in the ends of said track beams, a tumbling rod having gears for engagement with said spools mounted on said printing frame and means carried by said carriage for automatically rotating said rod.

[Claims 6 to 8 not printed in the Gazette.]

958,099. LOOSE-LEAF BINDER. JAMES C. DAWSON, Webster Groves, Mo., assignor to Sieber & Trussell Manufacturing Company, a Corporation of Missouri. Filed Jan. 14, 1910. Serial No. 538,105.



1. In a loose leaf binder, in combination, a back plate, a pair of opposed clamping plates, a threaded rod journaled on the back plate, a nut running on the rod, a pair of levers pivoted upon the nut, each of the levers having one of its ends united to one of the side plates by a fixed pivot and its other end in sliding pivotal engagement with the other side plate.

2. In a loose leaf binder, in combination, a back plate, a pair of opposed clamping plates, a threaded rod journaled on the back plate, nuts running on the rod, two pairs of levers, the members of each pair being mounted on a common pivot carried by one of the nuts, each lever having one of its ends secured to one of the side plates and its other end in sliding pivotal engagement with the other side plate.

3. In a loose leaf binder, in combination, a back plate, a pair of opposed clamping plates, a threaded rod journaled on the back plate, nuts running on the rod, two pairs of levers, the members of each pair being mounted on a common pivot carried by one of the nuts, each lever having one of its ends secured to one of the side plates and its other end in sliding pivotal engagement with the other side plate, the ends of the levers of each pair overlapping the levers of the other pair.

958,100. STRAINER FOR OIL AND WATER WELLS. HARRY R. DECKER, Houston, Tex. Filed Sept. 25, 1906, Serial No. 336,109. Renewed Sept. 24, 1909. Serial No. 519,409.



1. In combination with a strainer comprising a perforated tube, frangible plugs secured in the holes in the tube, substantially as shown and described.

2. In combination with a strainer comprising a perforated tube, imperforate thimble plugs secured in the holes in the tube, substantially as shown and described.

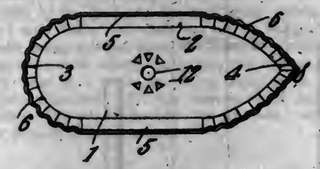
3. In combination with a strainer comprising a perforated tube, thimble plugs of frangible material secured in the holes in the tube, substantially as shown and described.

4. In combination with a strainer comprising a perforated tube, frangible plugs secured in the holes in the tube and extending inside of the inner surface of the tube, substantially as shown and described.

5. In combination with a strainer comprising a perforated tube, imperforate thimble plugs secured in the holes in the tube and extending inside of the inner surface of the tube, substantially as shown and described.

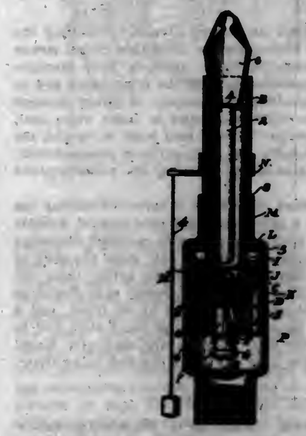
[Claims 6 to 10 not printed in the Gazette.]

958,101. HOG-SCRAPER. MCCLELLEN DRIEL, Washingtonville, Pa. Filed Mar. 3, 1910. Serial No. 547,095.



A device of the class described comprising a dished blade peripherally provided with a circumscribing flange disposed at an obtuse angle to the blade proper, the end edges of the flange being curvilinear, and the side edges thereof being straight and parallel to each other, the curvilinear portions of the flange being fluted transversely.

958,102. GAS-BURNER. LAWRENCE DE PASQUALE, San Francisco, Cal. Filed Feb. 20, 1909. Serial No. 479,170.



1. In a gas-burner, the combination of a burner shell provided with a gas-tip, a channeled cylindrical case having a flexible diaphragm at its lower end, a valve positioned below said diaphragm and in alinement therewith so as to be operatively engageable by said diaphragm, cylindrical casings forming a chamber inclosing the lower portion of said burner shell and cylindrical case and said valve, and means attached to said burner shell for depressing the same.

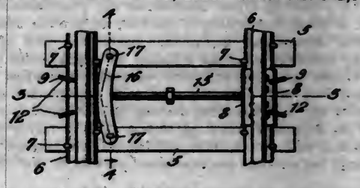
2. In a gas-burner, the combination of a burner shell provided with a gas-tip, a cylindrical case having a plurality of longitudinal channels in its wall and said case being open at its lower end, a resilient diaphragm covering the opening in said end, a valve positioned below said diaphragm and in alinement therewith so as to be operatively engageable by said diaphragm, connected bottle-neck cylindrical casings forming a chamber inclosing the lower portion of said burner shell and cylindrical case and said valve, a spring bearing upwardly against said cylindrical case, and means attached to said burner shell for depressing the same.

3. In a gas-burner, the combination of a burner shell, a cylindrical case having a plurality of longitudinal channels in its wall and said case being open at its lower end and inclosed in said shell, a resilient diaphragm covering the opening in said case, an exteriorly threaded valve shell having a central valve seat, a longitudinally acting valve in said seat, a casing secured to said burner shell and a casing positioned below said casing and securable to the gas-fixture, said casings being secured by said valve shell, and means encircling said burner shell and contained in said first named casing for preventing the escape of gas.

4. In a gas-burner, the combination of a burner shell, a cylindrical case having a plurality of longitudinal channels in its wall, and said case being open at its lower end and having a ring secured at said end and said case being within said shell, a resilient diaphragm secured with said ring, an exteriorly threaded valve shell having a central seat, a casing secured to said burner shell and a casing positioned below said casing and securable to the gas fixture, said casings being connected by said valve shell, means on said burner shell and contained in said first-named casing for preventing the escape of gas, and a valve in said valve shell.

5. In a gas burner the combination of a cylindrical case having a plurality of longitudinal channels in its wall, and said case being open at its lower end and having a ring secured at said end, a burner shell upon said case, a resilient diaphragm secured within said ring, an exteriorly threaded valve shell having a central seat, a longitudinally acting valve movably supported in said seat, a casing secured to said burner shell and a casing positioned below the last mentioned casing and securable to the gas fixture, said casings being connected by said valve shell, a spring contained in said valve seat and bearing against said cylindrical case, a resilient washer on said burner shell, and means for depressing said cylindrical case and burner shell.

958,103. RAIL-RETAINER. TIMOTHY J. DONOVAN, Syracuse, N. Y. Filed Jan. 31, 1910. Serial No. 541,076.



1. In a rail clamp, the combination with ties and rails secured thereon, of clamping members engaged upon the rail flanges, an adjusting rod provided with screw threads on its ends connecting said clamping members to secure the same in clamping engagement with the rails, and a locking plate arranged upon the ties having a central depending stud engaging with the threads on one end of said rod to lock the same against rotation.

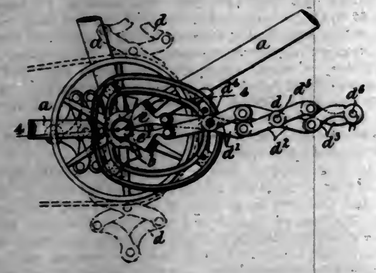
2. In a rail clamp, the combination with ties and rails supported thereby, of clamping members each comprising outwardly diverging arms integrally connected at their inner ends, the extremities of said arms engaging over the outer base flanges of the rails, an adjusting rod movably engaged with the inner ends of said arms and adapted to secure said clamping members upon the rail flanges, and means secured to the ties engaging with said adjusting rod to lock the same against rotation.

3. In a rail clamp, the combination with ties and rails supported thereby, of clamping members each comprising outwardly diverging arms integrally connected at their inner ends, the extremities of said arms being hooked for engagement over the outer base flanges of the rails, an adjusting rod oppositely threaded on its ends for engagement with the inner ends of said clamping members, and a locking plate secured to the rail ties carrying means engaging with the adjusting rod to lock the same against rotation.

4. In a rail clamp, the combination with ties and rails supported thereby, of clamping members each comprising two arms connected at their inner ends, the outer ends of said arms being engaged upon the outer base flanges of the rails, an adjusting rod connecting the inner ends of

said clamping members, a locking bar having its ends secured to the rail ties, and a stud depending from said bar between the arms of one of the clamping members for engagement with said adjusting rod to lock the same against rotation.

958,104. CRANK. JOHN DRURY, London, England. Filed Dec. 10, 1909. Serial No. 532,483.



1. The combination of a shaft, a crank thereon comprising a plurality of driving members or links, means for causing one of said driving members or links to engage with the shaft during a portion of the revolution of the crank and to be free from driving engagement with the shaft during another portion of said revolution, and independent means for causing another of said driving members or links likewise to be engaged with the shaft during one portion, and disengaged therefrom during another portion of said revolution.

2. In a driving crank mechanism the combination of a shaft, a crank comprising a plurality of driving members or links thereon, an engagement device for each of said driving members or links adapted to engage said shaft, and means for actuating said engagement devices independently of each other so that each engagement device will lock the corresponding driving link or member on the shaft for a predetermined portion of the revolution of the crank and will release said driving link or member from the shaft for another predetermined portion of said revolution.

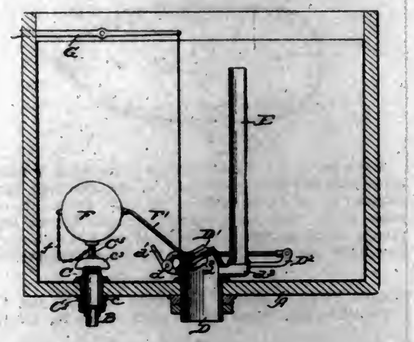
3. The combination of a shaft, a crank thereon comprising two members, a separate engagement device for each member for locking said member with the shaft, and means for actuating or controlling said engagement devices as to cause each one to lock the corresponding crank member on the shaft during a portion of its revolution and to unlock said member during another portion of said revolution, said actuating or controlling means being so timed that one of the engagement devices controlled thereby will be in, while the other is out of engagement.

4. The combination of a shaft, an extensible and contractible crank thereon comprising a plurality of members adjacent said shaft and a plurality of links or members jointed to said first named links or members remote from the shaft, cam means engaging said crank for causing same to extend and contract during revolution, and means for locking each of said first named members with the shaft at different times from each other but at predetermined periods of said revolution, and likewise unlocking each of said members at different times from each other, but at predetermined times in said revolution.

5. The combination of a shaft, an extensible and contractible crank thereon comprising a plurality of links or members adjacent said shaft and a plurality of links or members jointed to said first named links or members, cam means engaging said crank for causing same to extend and contract during revolution, means independent of each other for locking and unlocking each of said first named links or members relatively to the shaft, and means for actuating or controlling said locking and unlocking means so as to cause each to be locked during a predetermined part of the revolution and unlocked during another part thereof, said controlling means being adapted to cause one of the locking devices to be out of engagement while another locking device is in engagement.

[Claims 6 and 7 not printed in the Gazette.]

958,105. FLUSHING-TANK. EMIL EICHMAN, Detroit, Mich. Filed Apr. 21, 1909. Serial No. 491,250.



1. In a flushing tank for closets, a valve controlling the water inlet, a valve controlling the discharge outlet, means for manually opening the latter valve, a float mechanism adapted to automatically open the inlet valve and to close the valve controlling the passage of water through the discharge outlet while said outlet is under water seal, and a flexible connection between said inlet valve and the float mechanism whereby the inlet valve is automatically closed upon the water again reaching its predetermined level.

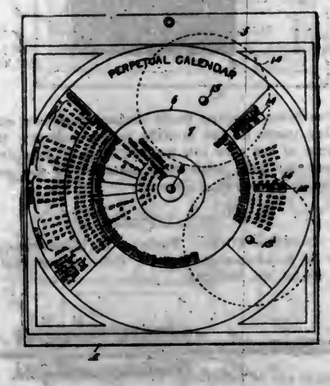
2. In a flushing tank for closets, a valve controlling the water inlet, having a bell-shaped deflector located directly above its discharge opening, a manually operated discharge valve, a float mechanism adapted to rest upon the stem of the inlet valve to open said valve while acting upon the discharge valve to close the latter whereby said discharge opening may be kept under water seal at all times, and a connecting member secured to the inlet valve stem and to the float whereby the inlet valve is automatically closed when the water in the tank has again reached its predetermined level.

958,106. CALENDAR. WILLIAM G. FAIRCHILD, Savannah, Ga. Filed Nov. 11, 1909. Serial No. 527,470.

1. The herein described calendar comprising a base member, a disk rotatably mounted centrally upon said base member, said disk having a plurality of key days designated thereon adjacent to its periphery, means for finding the key day of any year of any century, a second peripheral table of days opposite said key days, a rotatable disk mounted on said base having the months of the year designated thereon, the number of days in the month and one of the calendar days being indicated on either side of each month, the day in said second table of days on the central disk corresponding with the key day being adapted to be moved into radial alinement with a particular one of the months carried by the month disk, and calendar month numerals printed upon said base, the week day in the last named table of days being adapted to be moved opposite the numeral in said calendar corresponding to the calendar number appearing opposite to the month on said month disk whereby the calendar day of the key day will be indicated, substantially as and for the purpose set forth.

2. The herein described calendar comprising a base member, a rotatable disk centrally arranged therein flush with the surfaces of the base member, key days designated on said disk adjacent to its periphery, means for finding

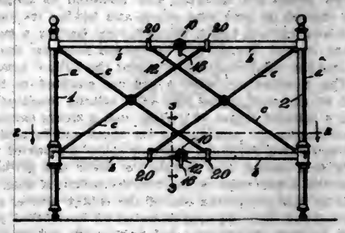
the key day of any year of any century, a table of week days arranged in consecutive order contiguous to the periphery of the disk opposite the key days, two disks rotatably mounted on said base each having the months of the year printed thereon and the number of days in the months and one of said days indicated opposite each month, said disks being printed in distinctive colors to indicate ordinary and leap years, the day in the last named table of days corresponding with the key day being adapted to be moved to the particular month desired on one of said disks, the numerals of the complete calendar month being printed upon the base, the calendar numeral opposite said month indicating the calendar day of the week day, said week day being adapted to be then moved into alinement with the corresponding numeral in the monthly calendar whereby the calendar month for the year desired is ascertained.



3. The herein described calendar comprising a base member, a disk rotatably mounted on said base member flush with the surface thereof, a table of key days indicated on said disk, means for finding the key day of any year, a second table of days arranged in consecutive order contiguous to the periphery of the disk opposite the key days, said base having openings therein extending radially beyond the periphery of the disk, disks arranged upon said base beneath said openings, said disks each having designated thereon the months of an entire year, the number of days and the numeral indicating one of the days appearing upon each side of each month, said disks being printed in distinctive colors, each of the months thereon being successively movable beneath the openings in the base, the day in said last named table of days on the first named disk corresponding with the key day being adapted to be moved into radial alinement with a particular one of the months on said disks, the numerals of two calendar months being printed upon said base in colors corresponding to the disks, the key day in the last named table of days being adapted to be then moved opposite to the numeral in one of said calendar months on the base corresponding to the calendar numeral opposite the month appearing in the opening in the base, whereby the entire calendar month for the year may be obtained, and means for rotating said disks.

958,107. BEDSTEAD. DAVID N. GARDNER, Grand Marais, Mich., assignor of one-half to Andrew V. Nyberg, Grand Marais, Mich. Filed Apr. 19, 1909. Serial No. 490,781.

In a bedstead, the combination with a pair of uprights, of parallel tubes connected to each of said uprights, and extending horizontally therefrom, of diagonal braces connecting the parallel tubes, the tubes of one upright adapted to lie in parallel relation with the tubes of the other upright, clips on the ends of said tubes adapted to surround the co-acting tubes to hold them in proper relation, a band clamp surrounding the tubes intermediate the clips



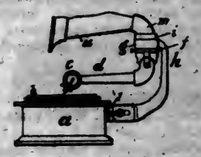
to hold them in adjusted position, and a friction washer carried by the clamp and arranged between the tubes.

958,108. PROPELLER. GIUSEPPE GAYS, Los Angeles, Cal. Filed June 16, 1908. Serial No. 438,818.



An improved propeller having a plurality of spiral members or blades, the inner portion of each of which overlaps the inner portion of each of the others; said spiral members or blades having varying thrust areas or operative superficial dimensions and being of the same pitch; each of said members extending approximately through 180 degrees of a circle; the outer edge portions of said spiral members or blades projecting radially and obliquely from the axis of the propeller; and said outer edge portions overlapping respectively the thrust areas of the adjacent members or blades.

958,109. SUPPORTING DEVICE FOR SOUND-BOX ARMS AND HORNS OF TALKING-MACHINES. ROBERT L. GIBSON, Philadelphia, Pa., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Dec. 11, 1905. Serial No. 291,197.



1. The combination with a bracket adapted to be attached at one end to the case of a talking machine, and having a tubular socket at its free end, a sleeve carried by said bracket-socket, and having its upper end formed as a socket to receive the horn, a rotary sleeve supported within said first sleeve and having its lower end projecting beyond the lower edge of the bracket-socket, a ring piece carried by said projecting end of the rotary sleeve, and a hollow sound box carrying arm mounted on horizontal pivots carried by said ring piece.

2. The combination with a bracket adapted to be attached at one end to the case of a talking machine, and having a tubular socket at its free end, a sleeve carried by said bracket-socket, and having its upper end formed as a socket to receive the horn, a rotary sleeve supported within said first sleeve and having its lower end project-

ing beyond the lower edge of the bracket-socket, a ring piece carried by said projecting end of the rotary sleeve, a hollow sound box carrying arm mounted on horizontal pivots carried by said ring piece, and having its end upturned and curved, and a tubular piece having a complementary curved lower edge interposed between the ring piece and the upturned curved end of the hollow arm.

3. The combination with a bracket adapted to be attached at one end to the case of a talking machine, and having a tubular socket at its free end, a sleeve carried by said bracket-socket, and having its upper end formed as a socket to receive the horn, a rotary sleeve supported within said first sleeve, and having its lower end projecting beyond the lower edge of the bracket-socket, a ring piece carried by said projecting end of the rotary sleeve, a hollow sound-box carrying arm mounted on horizontal pivots carried by said ring piece, and having its end upturned and curved, a tubular piece having a complementary curved lower edge interposed between the ring piece and the upturned curved end of the hollow arm, and a yielding cushion interposed between said tubular piece and ring piece.

4. The combination with a bracket adapted to be attached at one end to the case of a talking machine, and having a tubular socket at its free end, a sleeve carried by said bracket-socket, and having its upper end formed as a socket to receive the horn a rotary sleeve supported within said first sleeve on ball bearings and having its lower end projecting beyond the lower edge of the bracket-socket, a ring piece carried by said projecting end of the rotary sleeve, and a hollow sound-box carrying arm mounted on horizontal pivots carried by said ring piece.

5. The combination with a bracket adapted to be attached at one end to the case of a talking machine, and having a tubular socket at its free end, a sleeve carried by said tubular socket and formed with an internal annular shoulder, a series of balls supported by said shoulder, a rotary sleeve within the first sleeve having its upper end provided with a flange engaging said balls, a ring piece carried by the lower end of said rotary sleeve, and a hollow sound-box carrying arm mounted on a horizontal axis carried by said ring piece.

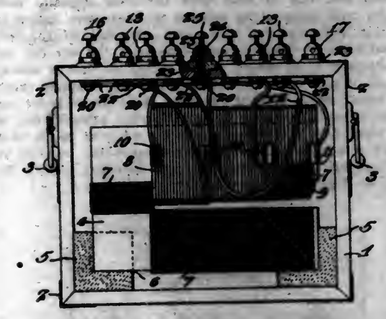
[Claims 6 to 22 not printed in the Gazette.]

958,110. ISOBUTYL ESTER OF PARA-AMINO-BENZOIC ACID. WILHELM GRÜTTEFIEN, Vohwinkel, near Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Aug. 17, 1909. Serial No. 513,335.

The herein described isobutyl ester of para-aminobenzoic acid, obtainable from this acid and isobutyl alcohol, which ester crystallizes from ligroin in the shape of white needles melting at 65° C., soluble in alcohol, benzene and ether and scarcely soluble in water, forming salts with acids which retain the valuable therapeutic properties exhibited by the ester, substantially as described.

958,111. CURRENT-REDUCER. BURTON L. HADFIELD and HARRY A. HALL, Wausau, Wis. Filed May 25, 1909. Serial No. 498,309.

The herein described current reducer comprising a rectangular casing of non-conducting material, rectangular corner blocks arranged in the two lower corners of the casing and formed in their upper and inner faces with recesses, a U-shaped core composed of a plurality of U-shaped metal plates united by a binding of non-conducting cord wound around them, said core being disposed horizontally in the casing and having its lower arm seated in the recesses in said corner blocks, a wire coil permanently secured upon the upper arm of the core and having a plurality of layers separated by non-conducting material, sheet metal connectors projecting from different portions of said wire coil, said connectors having their inner ends bent to form eyes for the reception of the wire of the coil, and their outer ends formed with similar eyes, an arcuate series of binding posts in the top of the casing, conducting wires between the lower ends of said binding posts and the eyes at the outer extremities of said sheet metal connectors, other binding posts in the top of the casing, a conducting wire covered with insulating material and having one end connected to one of said last mentioned binding posts, the other end of the last men-



tioned wire being adapted to be connected to any one of the binding posts in the arcuate series, whereby different portions of the wire coil may be brought into circuit, and a granular non conducting material in the casing around the parts therein.

958,112. BORING-TOOL. THOMAS S. HALLIWELL and HENRY B. MASCHMEIER, Denver, Colo. Filed Dec. 14, 1909. Serial No. 533,064.



1. A tool of the character described comprising a tubular boring member, a shank longitudinally movable in said member, a starting bit carried by said shank, a guide carried by the bit engaged with the inner wall of said boring member, said bit being adapted to be positioned beyond the end of the main boring member to start the boring operation, and means engaged with the shank to lock the bit in its extended position.

2. A tool of the character described comprising a cylindrical tubular boring member having cutting teeth formed on its outer end, a head arranged in the inner end of said member, a cylindrical shank movable through said head having a flattened face, a starting bit carried by said shank having a collar integrally formed therewith engaged with the inner periphery of the boring member, said starting bit being adapted for longitudinal movement in said member to move the same to its operative and inoperative positions, and a locking bar positioned between the flattened face of said shank and said head to lock the starting bit in either of such positions.

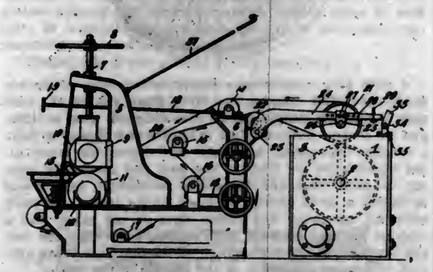
3. A tool of the character described comprising a cylindrical tubular boring member, a head rigidly secured in one end of said member, a cylindrical shank movable through said head, a starting bit carried by said shank and adapted to be positioned beyond the cutting end of said boring member to start the boring operation and means extending into said tubular boring member adapted to lock said shank in the head.

4. A tool of the character described comprising a cylindrical tubular boring member having a head rigidly secured in one end thereof, said head being formed with a central opening therein, a cylindrical shank movable through said opening, a starting bit carried on said shank and movable within said boring member, said shank having spaced recesses therein adapted to engage over the edge of the opening in said head, and a locking bar positioned through the opening in said head and engaged with said shank adapted to lock said starting bit within the head in its operative or inoperative positions.

5. A tool of the character described comprising a cylindrical boring member, a head rigidly secured in one end of said member provided with a central rectangular opening, a cylindrical shank longitudinally movable through the opening in said head, a starting bit secured on the inner end of said shank and movable within said boring member, said bit having a collar formed integral therewith engaging with the inner periphery of said member, said shank having spaced recesses adapted to engage over the edge of the opening in said head, and a locking bar disposed between the opposite side of said shank and the edge of said opening to secure the starting bit in either its operative or inoperative position.

[Claims 6 and 7 not printed in the Gazette.]

958,113. PAPER-MAKING MACHINE. FREDERICK N. HAMLIN, Austin, Pa. Filed May 8, 1909. Serial No. 494,736.



1. The combination with a machine of the character described comprising press rolls, a couch roll, a felt band passing around a press roll and the couch roll, a cylindrical mold contacting with the felt band, of a second couch roll, a felt covering on said second couch roll and means whereby one couch roll may be substituted for the other.

2. In a machine of the character described comprising driven press rolls, a couch roll, a felt band passing around a press roll and the couch roll and driving the latter, and a mold contacting with the felt band and driven thereby, of a second couch roll provided with a felt-covering, means whereby it may be substituted for the driven couch roll, and driving mechanism for the shaft of the cylindrical mold.

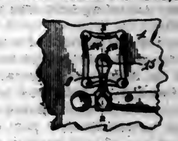
3. In a machine of the character described comprising press rolls, a felt band, a pair of levers pivoted to the frame of the machine, a couch roll supported by said levers and engaged by the felt band, a cylindrical mold, a second pair of pivoted levers mounted on the machine, and a second couch roll mounted in bearings in the last named pivoted levers, the location of the pivoted levers on the machine being such that either of the couch rolls may be brought into proper relationship with the cylindrical mold as may be desired.

4. In a machine of the character described comprising a vat, a cylindrical screen or mold therein, means for applying power to drive said screen direct, a swinging shaft, a driven couch roll carried thereby, a second swinging shaft, a second couch roll carried thereby, and means for bringing either of the couch rolls into contact with the cylindrical mold, as may be desired.

5. In a machine of the character described, the combination with a vat, of a cylindrical mold mounted therein, a trough on the side of the vat, arms pivoted on the top of the vat, a couch roll journaled in bearings on said arms, and a pivoted scraper for the couch roll adapted to serve as a cover for the trough when not in use.

[Claims 6 to 8 not printed in the Gazette.]

958,114. HANDLE. JAMES T. HAMMOND, Winsted, Conn. Filed Sept. 22, 1909. Serial No. 518,893.



1. In a device of the character described, the combination with a receptacle, of a pivot plate for the side thereof, said plate being provided with oppositely disposed pivot ears, a cap plate fitted over said pivot plate and provided with a front opening, a handle arm having one end provided with a pivot ear, and a pivot pin passing through the said cap plate, pivot ears of the pivot plate and the pivot ear of the handle arm.

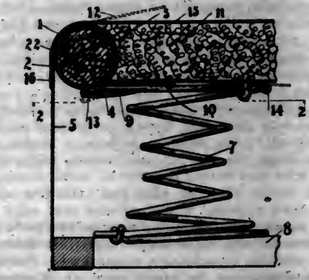
2. In a device of the character described, the combination with a receptacle, of a plate carried thereby, a cap plate adapted to be fitted over said plate to conceal the same, a handle arm, a pin for holding the cap plate in rigid engagement with said plate and the handle arm in pivotal engagement therewith, and means carried by the said plate for limiting the pivotal movement of said handle arm in one direction.

3. In a device of the character described, the combination with a receptacle, of a pivot plate having a channeled body, fastening bolts passing through said receptacle and said pivot plate, nuts for said bolts adapted to be seated in the channeled body of said plate, a cap plate for said pivot plate, and a handle also connected to said pivot plate.

4. In a device of the character described, the combination with a receptacle, of a pivot plate provided with side flanges, means for fastening said plate to said receptacle, a cap plate fitted over said pivot plate, a handle arm projecting through said cap plate, a pivot pin for connecting said cap plate and handle arm to said pivot plate, and means carried by said flanges for limiting the movement of said arm in one direction.

5. In a device of the character described, the combination with a receptacle, of a plate fastened thereto, a cap plate surrounding said plate, a handle arm projecting through said cap plate, means for connecting said handle arm and cap plate to said first-mentioned plate, and means carried by said first-mentioned plate for limiting the movement of said handle arm in one direction.

958,115. CUSHION EDGE. FRANK H. HAMPTON, Pullman, Ill., assignor to Jackson Cushion Edge Company, Jackson, Mich. Filed Aug. 24, 1908. Serial No. 449,996.



1. In a cushion, the combination of a spring frame, an edge pad extending along the upper edge thereof and comprising a casing formed of flexible material and stuffed with padding material, and a fastening clip secured to said frame and having a part encircling said edge pad.

2. In a cushion, the combination of a spring frame, an edge pad extending along the upper edge thereof and comprising a casing formed of flexible material and stuffed

with padding material, and a series of fastening clips disposed along the edge of said frame, being spaced apart and each having a part encircling said edge pad for retaining the same in position.

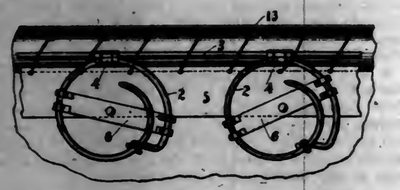
3. In a cushion, the combination of a spring frame comprising a plurality of coiled springs arranged in a row along the edge of the frame; an edge pad extending along the edge of the frame above said row of springs; and a plurality of fastening clips, each having a part encircling said edge pad and having another part spanning the upper convolutions of one of said springs and engaging opposite sides thereof for securing said clip against shifting with respect to such spring.

4. In a cushion, the combination of a plurality of coiled springs arranged in a row along the edge of the cushion; an edge pad extending along the edge of the cushion above said row of springs; and a fastening clip spanning the upper convolution of one of said springs and comprising a part adapted to engage the edge pad for securing the same in position, a hook-shaped part adapted to engage one side of said upper convolution, and means for securing said clip to the opposite side of said upper convolution.

5. In a cushion, the combination of a wire spring structure; an edge pad extending along the edge of said structure; and a plurality of fastening clips, each comprising a piece of metal bent upon itself at one end to encircle said edge pad, being also bent to form a hook for engaging a part of the frame adjacent to the pad, and being bent upon itself at its other end to engage a part of the frame distant from said pad.

[Claims 6 to 13 not printed in the Gazette.]

958,116. CUSHION EDGE. FRANK H. HAMPTON, Pullman, Ill., assignor to Jackson Cushion Edge Company, Jackson, Mich. Filed Aug. 24, 1908. Serial No. 449,997.



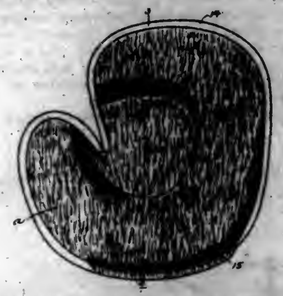
1. A cushion, comprising a spring frame, a border member extending along the edge thereof, an edge pad extending along said border member, and a flexible metallic lacing wound around said edge pad and engaging said border member for securing said pad in position thereon.

2. A cushion, comprising a spring frame, a border plate extending along the edge of said frame and having a series of perforations adjacent to its outer edge, and a lacing wound around said edge pad and passing through the perforations in said border plate for securing said edge pad in position.

3. A cushion, comprising a plurality of coiled springs, a border wire extending around the edge of said cushion and secured to the adjacent springs, a border plate extending along the edge of said cushion adjacent to said border wire and having a series of perforations adjacent to said border wire, an edge pad extending along said border, and a lacing wound around said edge pad and border member and extending through the perforations in said plate for securing said pad in position thereon.

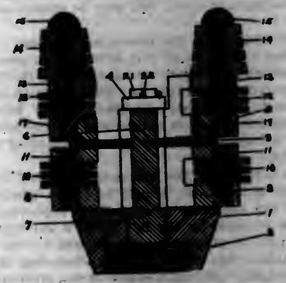
4. A cushion, comprising a spring frame, a border member extending along the edge thereof, an edge pad extending along said border member, and a lacing of flexible material wound around said edge pad and engaging said border member for securing said pad in position thereon, said edge pad comprising a sheet of flexible material folded upon itself and having the parts at each side of the fold sewed together to form a tubular casing with a pair of flaps extending along the seam thereof, a filling of yielding material in said casing, said lacing being applied so as to extend through said flaps adjacent to the seam and being adapted to prevent the twisting of said pad when one of said flaps is pulled around the pad in a circumferential direction.

958,117. BASE-BALL MITT. JOSEPH HARTMAN, Chicago, Ill., assignor to Walter T. Stall, Brockton, Mass., and Charles H. Dean, Chicago, Ill. Filed Aug. 13, 1908. Serial No. 448,312.



A mitt pad comprising a single facing piece of fibrous flexible material forming the entire front side of the pad, and having its margin offset outwardly to form a ridge, and its central portion offset inwardly and dished to form a concave depression, said ridge and depression constituting a pocket on the front of the pad, and means for making the said ridge and depression permanent, said means including a cloth backing stitched at its inner and outer edges to the inner and outer edges of the ridge, and a cushion confined between said backing and ridge, the tensile strength of the material of the facing piece being utilized to prevent distortion of the margin of the pocket.

958,118. TUBE-CLEANER. ELMER E. HAUER, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Aug. 5, 1909. Serial No. 511,436.



1. The combination of a support having forwardly projecting bolts with heads on their front ends and screw-threaded at their rear ends into perforations in said support, arms adapted to swing on said bolts, cutters on said arms and a locking device separate from said support to rigidly hold said bolts from turning, substantially as described.

2. The combination of a support having bolts removably secured thereto projecting from the front face thereof, arms adapted to swing on said bolts, cutters on said arms, a forwardly extending central projection secured to said support, which said arms are adapted to engage to limit their swinging movement, and a locking device common to said bolts and separate from said support to keep the bolts from turning, substantially as described.

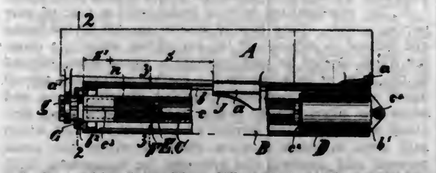
3. The combination of a support having forwardly projecting bolts with heads on their front ends and screw-threaded at their rear ends into perforations in said support, arms arranged in sets, one set in front of the other and adapted to swing on said bolts, cutters on said arms, a removable wearing plate between each set of arms, said plate having perforations through which said bolts extend unattached to stay said bolts and a locking device independent of the threaded attachment to the support to keep said bolts from turning, substantially as described.

4. The combination of a support having forwardly projecting bolts with heads on their front ends and screw-threaded at their rear ends into perforations in said support, arms arranged in sets, one set in front of the other and adapted to swing on said bolts, cutters on said arms, said support having a forwardly extending central projection which said arms are adapted to engage to limit their swinging movement, a removable wearing plate between each set of arms, said plate having perforations through which said central projection and bolts extend unattached to stay said bolts and a locking device separate from said support to keep said bolts from turning, substantially as described.

5. The combination of a support with bolts and arms adapted to swing on said bolts, spindles in said arms with cutters thereon and means removably held in place by said bolts to removably secure said spindles to the arms, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

958,119. DIFFERENTIAL-RECOIL GUN. KONRAD HAUSSNER, Eisenach, Germany. Filed July 28, 1909. Serial No. 510,098.



1. In combination with a differential recoil gun, means automatically called into action by the running-out movement of the gun barrel beyond a predetermined firing point, and imposing resistance to recoil.

2. In combination with a differential recoil gun, having means absorbing the work of recoil in the normal operation of the gun; means automatically called into action by the running-out movement beyond a predetermined point, adapted to absorb additional work of recoil.

3. In combination with a differential recoil gun having automatic firing means and a recuperator absorbing work of recoil; a recoil brake and means actuated by the movement of the gun barrel beyond a predetermined firing point, causing the recoil brake to add to the normal resistance to recoil and absorb additional work of recoil.

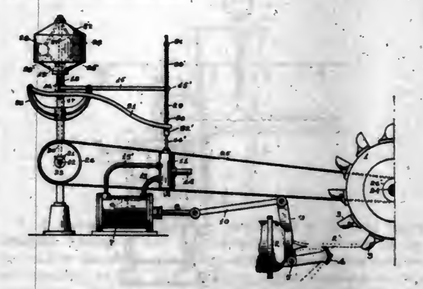
4. A safety attachment for differential recoil guns, comprising a recoil brake having its parts connected to parts of the gun which have relative movement during recoil and means whereby the gun controls the braking action of said brake by a running-out-movement exceeding a predetermined limit.

5. In combination with a differential recoil gun, a safety attachment to relieve shock incident to abnormal length of running-out movement, comprising a recoil brake and means whereby one of the relatively moving members of said recoil brake is connected with a recoiling member of the gun, when the barrel exceeds a predetermined limit in its running-out movement.

[Claims 6 to 9 not printed in the Gazette.]

958,120. SAFETY ATTACHMENT FOR HYDRAULIC MOTORS. GEORGE J. HENRY, Jr., San Francisco, Cal., assignor of one-half to The Pelton Water Wheel Company, a Corporation of California. Filed Mar. 22, 1909. Serial No. 484,992.

1. In a controlled hydraulic nozzle for regulating an impact stream relative to a water wheel, the combination with the fluid actuated means for varying the impact stream, of governing mechanism for controlling the fluid actuated means, drive connection for operating the governing mechanism from the drive shaft of the water wheel, and means interposed between the governing mechanism and the fluid actuated means for automatically operating the same to place the impact stream off of the buckets of the water wheel on a breakage in the drive connection for the governing mechanism.



2. In a controlled hydraulic nozzle for regulating an impact stream relative to a water wheel, the combination with regulating devices for varying the impact stream, governing mechanism, connection between said mechanism and the regulating means, drive connection for imparting rotation of the water wheel to the governing mechanism, and means interposed between the said governing mechanism and the regulating devices for automatically operating the same on a breakage of the drive connection for the governing mechanism.

3. In combination with a water wheel, of a nozzle for directing an impact stream onto the buckets of the water wheel, governing mechanism, drive connection for imparting rotation of the water wheel to the governing mechanism, regulating devices operated from said mechanism for controlling the impact stream in accordance with load changes, and means interposed between the governing mechanisms and the regulating devices for automatically operating the same to place the impact stream off of the water wheel on a breakage in the drive-connection.

4. In a water wheel, the combination with the regulating mechanism for controlling an impact stream relatively to the water wheel, of governing mechanism driven from the water wheel, and safety means interposed between the governing mechanism and the regulating mechanism, said means automatically placing into operation the regulating mechanism to place the impact stream off the water wheel on a breakage in the drive connection for the governing mechanism.

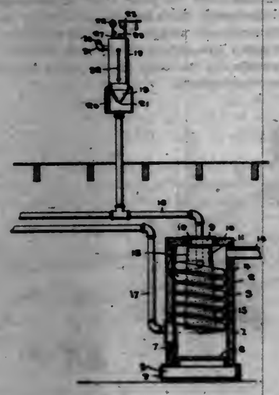
5. In an apparatus of the described class, the combination with the governing mechanism, drive connection for actuating the same, a valve stem, a fulcrumed lever connection between said stem and the governing mechanism for operating the same under normal working conditions, and a pivoted lever engaging the valve stem and operated by the governing mechanism to depress the said stem on a breakage in the drive connection for the said governing mechanism.

958,121. WATER-HEATING SYSTEM. JACOB F. HICKMSON, McComb, Ohio. Filed Apr. 27, 1909. Serial No. 492,543.

1. A device of the class described, comprising a tank having a closed top and a depending lower portion, conical in shape, having a reduced opening therein, a member carried by and surrounding the lower portion of said tank and forming with said cone-shaped end, a chamber adapted to communicate with a water circulating system, and means to regulate the pressure in said tank.

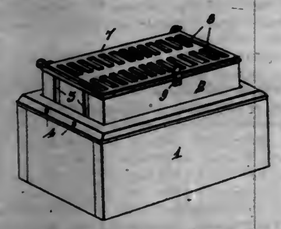
2. A device of the class described, comprising a tank having a closed top and a reduced lower portion with an

aperture therein, a member carried by and having said reduced lower portion extending therein to form a top for said member, said reduced lower portion with said member



composing a chamber adapted to communicate with a water circulating system, and means to regulate the pressure in said tank.

958,122. MATCH-SAFE. LAWRENCE HILDRETH, Pine Grove, Ky. Filed Feb. 15, 1910. Serial No. 543,917.

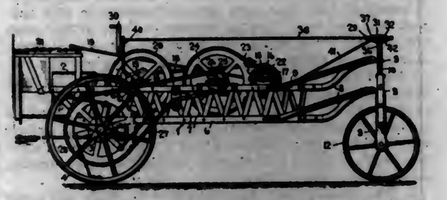


1. In a match safe of the class described, an outer box or casing, a stationary bottom in said box, an inner box having an open end mounted to slide in said outer box over said stationary bottom and thereby forming an automatically adjustable match compartment whereby the matches are held at the proper level in said inner box.

2. In a match safe of the character described, an outer box or casing having arranged therein adjacent to its upper side a stationary bottom, an inner box or casing arranged in said outer box and having a vertical sliding engagement therewith and with said bottom, means to guide and limit the outward movement of said inner box or casing, a cover arranged on said inner box, said cover comprising an open frame having a series of fingers projecting inwardly from the opposite sides of the frame toward the center thereof and forming a space through said center, said fingers being spaced apart a sufficient distance to permit one match at a time to be removed between the same from said inner box.

3. In a match safe of the character described, an outer box or casing, combined guiding and bottom supporting rods arranged through said outer box, a stationary bottom secured to said rods, an inner box or casing arranged in said outer box, said inner box having in its opposite ends vertically disposed guide slots engaged with said guiding and bottom supporting rods, said inner box thus having a sliding engagement with the outer box and with said stationary bottom, a cover hingedly connected to the upper side of said inner box, said cover comprising an open frame having on its side bars a series of inwardly projecting fingers terminating at their inner ends to form a longitudinal space through the cover, said fingers being spaced apart a sufficient distance to permit the removal of one match at a time between the same, and means to fasten said cover in closed position.

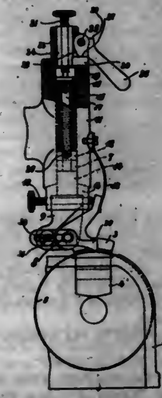
958,123. TRACTION-ENGINE. GEORGE L. HINSHAW and HEZEKIAH A. WADE, Parsons, Kans. Filed Oct. 6, 1908. Serial No. 456,405.



1. The combination, with a frame, and a pair of supporting wheels, of a rotatable bracket carried by the frame and located in advance of the supporting wheels; a steering wheel carried by said bracket; a worm wheel secured to the stem of said bracket; a casing comprising spaced upper and lower members, one of said members being provided with a bearing having an opening through which said stem extends; a worm disposed within the space between said members and arranged for engagement with said worm wheel; and means for rotating said worm.

2. The combination, with a frame, and a pair of supporting wheels, of a rotatable bracket carried by the frame and located in advance of the supporting wheels; a steering wheel carried by said bracket; a worm wheel secured to the stem of said bracket; a casing comprising spaced upper and lower members extending directly above and below the worm wheel, one of said members being provided with a bearing having an opening through which said stem extends; a worm disposed within the space between said members and arranged for engagement with said worm wheel; a rod connected at one end to said worm; and means secured to the other end of said rod, for rotating the same.

958,124. LEATHER-SKIVING MACHINE. CARL A. HIRTH, Cannstatt, Germany. Filed May 22, 1909. Serial No. 497,687.



1. In a leather-skiving machine the combination of a cutter, means for feeding the work to the cutter, means for pressing the work against the feeding-means, means for adjusting the pressing-means in relation to the feeding-means, resilient means tending to move the pressing-means away from the work, and positive means for moving the pressing-means exactly to its working position the said position being independent of the thickness of the work.

2. In a leather-skiving machine the combination of a cutter, means for feeding the work to the cutter, means for pressing the work against the feeding means, means for guiding the work, and means whereby the pressing- and guiding-means can be simultaneously moved away from the work and subsequently simultaneously returned each to its former position.

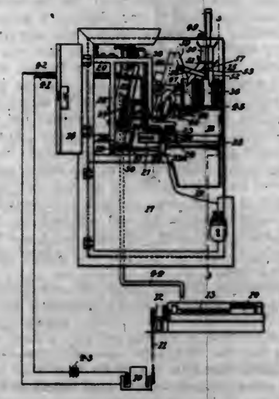
3. In a leather-skiving machine the combination of a cutter, means for feeding the work to the cutter, means for pressing the work against the feeding-means, means whereby the pressing-means can be moved away from the work and subsequently returned to its former position exactly, means for guiding the work, and means whereby the guiding-means can be moved away from the work and subsequently returned to its former position exactly.

4. In a leather-skiving machine the combination of a cutter, means for feeding the work to the cutter, a member that presses the work against the feeding-means, means for adjusting the pressing-member in relation to the feeding-means, a slide carrying the pressing-member, resilient means tending to move the slide away from the work, and positive means for moving the slide to the position in which the pressing-member is ready for working the said position being independent of the thickness of the work.

5. In a leather-skiving machine the combination of a cutter, means for feeding the work to the cutter, a slide adapted to move toward and away from the cutter, a pressing-member adjustably mounted upon the slide, resilient means tending to move the slide away from the work, and positive means for moving the slide to the position in which the pressing-member mounted thereon is in its working position the said position being independent of the thickness of the work.

[Claims 6 to 11 not printed in the Gazette.]

958,125. COIN-CONTROLLED ACTUATING MECHANISM FOR AUTOPNEUMATIC PIANOS. ADAM J. HOBART, St. Johnsville, N. Y., assignor to F. Engelhardt & Sons, St. Johnsville, N. Y., a Firm. Filed Mar. 29, 1909. Serial No. 486,479.



1. A device of the character described, comprising a coin chute, a coin tube, a coin magazine, a pair of diverging coin ducts communicating with the tube and magazine, respectively and a coin switch for connecting the chute with either one of said ducts.

2. A device of the character described, comprising a coin chute, a coin tube, a coin magazine, a pair of diverging coin ducts communicating with the tube and magazine, respectively, a coin switch adapted to connect the chute with either one of said ducts, a coin ejector at the bottom of the magazine, and spring-influenced bellows operatively connected to the switch and ejector.

958,126. EMERGENCY CUT-OFF FOR GAS-PIPES. MICHAEL A. HORAN, Trenton, N. J. Filed Feb. 8, 1909. Serial No. 476,719.



1. A cut-off for gas pipes, including a vertical valve chamber having a bore continuously tapered from its upper end to its lower extremity, said chamber having an inlet opening at one side and an outlet opening at the lower and smaller end of the chamber, a downwardly tapering plug valve having an extended upper surface supported within the upper end of said chamber normally above the inlet opening in the said chamber, the plug valve being of such size that when the upper end of the plug valve is below the inlet opening, said valve shall fill the bore of the chamber, closing off the outlet therefrom but permitting the entrance of gas from the inlet opening into the upper portion of the chamber above the plug valve, and a fusible connection between said extended surface and the upper end of the valve chamber, whereby the valve may be released at a predetermined temperature and allowed to drop downwardly into the lower end of the chamber, filling the bore of the same below the inlet opening.

2. A vertical valve chamber having a continuously downwardly and inwardly tapered bore, and an inlet opening at one side of the valve chamber, mid-way between the upper end of the chamber and its lower open end, a covering plate for closing the upper end of the chamber having a marginal screw threaded flange engaging in said chamber, a continuously tapered plug valve supported by a fusible connection on the bottom of the covering plate and normally above the inlet opening in the side of the casing, said plug valve being of such size relative to the casing that when it is supported it is spaced on all sides from the walls of the chamber but when it closes the outlet opening of the chamber the upper face shall be below the inlet opening.

958,127. POLE-ANCHOR. KNUT T. HOVRUD, Butler, S. D. Filed Nov. 4, 1909. Serial No. 526,268.

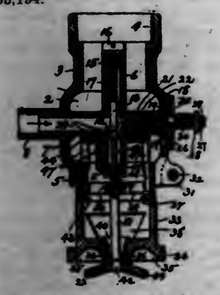


1. In an anchoring device a driving point having therein a series of openings provided with downwardly and outwardly inclined lower walls, a tubular extension on the

upper end of said point communicating with the openings formed therein, means to prevent the marring or bending of the upper end of the driving tube when the latter is being driven, a fastening member adapted to be inserted through said tube or sleeve and comprising a solid body having a series of expansible integral prongs formed on the lower end thereof and adapted to enter the openings in said point and to be spread from or expanded by the inclined lower walls of said openings.

2. In an anchoring device of the character described, a driving point having formed therein a series of openings having V-shaped downwardly and outwardly inclined lower walls, an exteriorly threaded tubular extension on the upper end of said point and communicating with the upper ends of the openings therein, a driving tube or sleeve adapted to be screwed into engagement with the threaded extension of the point, a fastening rod adapted to be inserted in said driving sleeve, said rod having formed in its lower end rectangularly disposed notches, a series of expansible prongs formed by the lower end of the rod, said prongs having the lower walls of their outer ends inclined downwardly and outwardly to facilitate the engagement thereof with the V-shaped inclined lower walls of the openings in said driving point whereby when said rod is driven downwardly, said prongs will enter and pass out through the openings in the point and will be spread or expanded laterally in opposite directions from the point, means whereby a guy rod or wire is secured to the upper end of said fastening rod.

958,128. CARBURETER. ALBERT HOWARTH, Providence, R. I., assignor, by mesne assignments, to Star Carburetor and Supply Company, Providence, R. I., a Corporation of Rhode Island. Filed Sept. 28, 1908. Serial No. 455,194.



1. In a carbureter for an engine, the combination of a carbureter case; a shaft mounted transversely in the case and capable of oscillatory movement; means for oscillating said shaft at will to limited extents; a fixed air inlet tube opening into the carbureter case and extending from said case in an axial direction, which air inlet tube has ports through the sides thereof, located and arranged to deliver atmospheric air into the carbureter case; an outlet pipe communicating with the interior of the carbureter case and extending therefrom to the engine; a gasolene-supply pipe extending in the axial line of the carbureter case and of the air inlet tube and discharging into the air inlet tube; a tubular valve fitting slidably in the air inlet tube and adapted alternately to cover or uncover the ports of said tube and having at its top a disk provided with a central aperture for the passage therethrough of said gasolene-supply tube, which disk has the same diameter as the tubular body of the valve and is adapted to be moved with said valve by the suction of the engine, said tubular body being provided with side openings adjacent to but beneath the disk, which openings are covered by the air inlet tube when the tubular body of said valve is wholly contained in the air inlet tube in contact therewith, but are open to the interior of the carbureter case when the valve has been moved up beyond the top of the air inlet tube by the suction of the engine; and a curved arm mounted fast at its inner end on the shaft and in contact at its outer end with the disk and adapted to move the tubular body of the valve into the air inlet tube and also to limit the extent of the upward movement of the tubular body of the valve when said valve is subjected to the suction of the engine.

2. In a carbureter for an engine, the combination of a carbureter case; a shaft mounted transversely in the case and capable of oscillatory movement; means for oscillating said shaft at will to limited extents; a fixed air inlet tube opening into the carbureter case and extending from said case in an axial direction, which air inlet tube has ports through the sides thereof located and arranged to deliver atmospheric air into the carbureter case; an outlet pipe communicating with the interior of the carbureter case and extending therefrom to the engine; a gasolene-supply pipe extending in the axial line of the carbureter case and of the air inlet tube and discharging into the air inlet tube; a tubular valve fitting slidably in the air inlet tube and adapted alternately to cover or uncover the ports of said tube; a throttling disk having a central aperture for the passage therethrough of said gasolene-supply pipe, which disk is concentric with the tubular body of the valve and having the same diameter as it and supported parallel to the upper edge of the tubular body by posts extending longitudinally therefrom and so arranged as to provide side apertures beneath said disk and between said posts for the discharge of carbureted air from the tubular body of said valve into the carbureter case at will, when the valve is extended up beyond the inner end of the air inlet tube, but said side apertures being covered by the air inlet tube when the valve and disk are seated therein; and a cam mounted fast on the shaft with its working surface adapted to contact at will with the throttling disk to force the valve into the air inlet tube and also adapted to limit the movement of the valve along the air inlet tube when said valve is partially withdrawn therefrom by the suction of the engine.

3. In a carbureter for an engine, the combination of a carbureter case; a shaft mounted transversely in the case and capable of oscillatory movement; means for oscillating said shaft at will to limited extents; a fixed air inlet tube opening into the carbureter case and extending therefrom in an axial direction, which air inlet tube has ports through the sides thereof, located and arranged to deliver atmospheric air to the carbureter case; an outlet pipe communicating with the interior of the carbureter case and extending therefrom to the engine; a gasolene-supply pipe extending in the axial line of the carbureter case and of the air inlet tube and discharging into the air inlet tube; a tubular valve fitting slidably in the air inlet tube and adapted alternately to cover and uncover the ports of the air inlet tube, and provided with side apertures; a throttling disk having a central opening for the passage therethrough of said gasolene-supply pipe, which disk is fastened upon the top of the tubular valve and concentric with the tubular body of the valve, having the same diameter and adapted to be moved with the valve by the suction of the engine; and a cam mounted on said shaft and movable therewith and adapted to close the valve by pressure upon said disk, said valve apertures being arranged so as to be covered by the air inlet tube when the valve is closed.

4. In a carbureter for an engine, the combination of a carbureter case; a shaft mounted transversely in the case and capable of an oscillatory movement; means for oscillating said shaft at will to limited extents; a fixed air inlet tube opening into the carbureter case and extending therefrom in an axial direction, which air inlet tube has ports through the sides thereof, located and arranged to deliver atmospheric air to the carbureter case; an outlet pipe communicating with the interior of the carbureter case and extending therefrom to the engine; a gasolene-supply pipe extending in the axial line of the carbureter case and of the air inlet tube and discharging into the air inlet tube; a tubular valve fitting slidably in the air inlet tube and adapted alternately to cover and uncover the ports of the air inlet tube and provided with side apertures; a throttling disk having a central opening for the passage therethrough of said gasolene supply pipe, which disk is mounted upon the top of the tubular valve; and a cam mounted on and movable with the shaft and in operative contact with the upper surface of the throttling disk.

5. In a carbureter, the combination of a carbureter case; an air inlet tube extending into said case; a gasolene-supply tube supported in the case and extending into the air inlet tube; a discharging nozzle at the end of the gasolene-supply tube, provided with a valve seat; a ball valve normally supported by the valve seat; a slidably mounted valve within the air inlet tube, having lateral apertures, which, when the slidable valve is wholly contained in the air inlet tube, are covered thereby, but which open into the carbureter case, when the slidable valve projects beyond the upper end of the air inlet tube; a valve rod mounted in and movable with said slidable valve, and whose upper end is in constant contact with the ball valve and is adapted to unseat the ball valve in the nozzle, whenever the slidable valve moves up along the air inlet tube; an outlet tube from the carbureter case adapted to discharge into an engine; and a cover fastened on the slidable valve adapted to be lifted in the air inlet tube by the suction of the engine.

[Claims 6 to 22 not printed in the Gazette.]

958,129. CONSTRUCTION OF ROTATING WHEELS FOR ROTARY FLUID-COMPRESSORS. ALBERT HUGUENIN, Zurich, Switzerland. Filed Nov. 5, 1907. Serial No. 400,808.



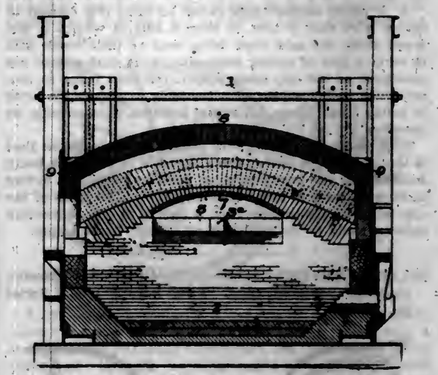
1. In a rotating compressor, the combination with blades gradually decreasing in section outward and lengthwise, of lateral triangular projections attached to a hub, to which said blades are secured, of spacers located between the blades and of a case adapted to receive the wheel composed by the hub, the projections and the blades, substantially as set forth.

2. In rotating compressors the combination with blades gradually decreasing in section outward and lengthwise, of lateral triangular projections attached to the hub, to which said blades are secured, of sector-shaped spacers separated from one another by radial slots which receive the blades, and of a case adapted to receive the wheel composed by the hub the projections and the blades, substantially as set forth.

958,130. FURNACE-ARCH CONSTRUCTION. PETER ISLES, Swissvale, Pa. Filed Jan. 25, 1910. Serial No. 540,062.

1. In a regenerative furnace, a furnace end wall having inlet and outlet ports therein connecting the furnace and the regenerators, and an arched roof over said ports, the radial joints in said arch radiating from the center of the arch and extending to the side walls of the furnace; substantially as described.

2. In a regenerative furnace, a furnace end wall having inlet and outlet ports therein connecting the furnace and the furnace flues, and an arched wall over said ports, the radial joints in said arch radiating and extending beyond and below the curved roof surface defining the top of the inlet port opening; substantially as described.

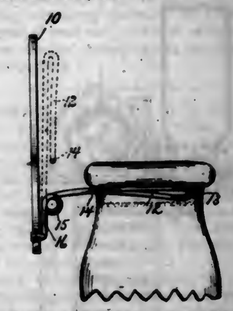


3. In a regenerative furnace, a furnace end wall having inlet ports thereto, an arched roof over said inlet ports, the radial joints in said arch radiating from the center of the arch and extending beyond the inner surface of the side walls of said furnace and extending below the spring of the arch, a downwardly and inwardly inclined arched roof over the furnace flues engaging with said port roof and a downwardly and outwardly inclined furnace roof engaging with the opposite side of said port roof; substantially as described.

4. In a regenerative furnace, a furnace end wall having inlet ports thereto, an arched roof over said inlet ports, the radial joints in said arch extending at least to the inner surface of the side walls of said furnace and extending below the spring of the arch and radiating from the center of the spring of the arch, a downwardly and inwardly inclined arched roof over the furnace flues engaging with said port roof and a downwardly and outwardly inclined furnace roof engaging with the opposite side of said port roof; substantially as described.

5. In a regenerative furnace, a furnace end wall having inlet ports thereto, an arched roof over said inlet ports, said arch extending beyond the inner surface of the side walls of said furnace, the joints in said end wall extending radially from the center of the spring of said arch; substantially as described.

958,131. DEVICE FOR SUPPORTING MILK-BOTTLES. WILLIAM L. JACKSON, Brookland, D. C. Filed Aug. 14, 1909. Serial No. 512,885.



1. A bottle holder comprising a supporting member having curved spring jaws arranged for engaging and supporting the neck of a bottle, yielding means for normally holding said supporting member in a vertical position, said yielding means being so proportioned to the weight of a bottle as to permit said supporting member to move down

into a horizontal position against the action thereof when a bottle is engaged with said jaws, substantially as described.

2. A bottle support comprising an open clip formed of spring wire that is bent to form a pair of vertically disposed arms, the said arms being bent at their inner ends to form a pair of spring supporting coils that add to the resiliency of the clip arms proper, the coils being so proportioned to the weight of a bottle as to permit the arms to swing down into a horizontal position, substantially as described.

3. A bottle supporting clip formed of spring wire that is bent to form a pair of arms the wire of the arms being doubled and one of the doubled portions extending across to form a rear stop for the bottle, the terminal arms of the clip being thence bent to form a pair of spring-supporting coils that add to the resiliency of the clip arms proper.

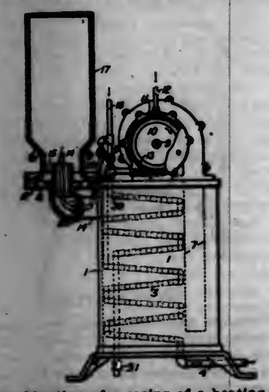
958,132. FENDER FOR AUTOMOBILES. ROBERT JARDINE, Cleveland, Ohio. Filed Nov. 7, 1906. Serial No. 342,315.



1. A fender for a vehicle-wheel comprising a cylindrical section disposed to conform with the periphery of such wheel and disposed to cover the upper portion of the same, a section continuous with the inner edge of said first-named section and disposed to inclose the inner side of such wheel-portion, and a flange or rib along the forward and outer edge on the underside of said first-named section, said section being so disposed and the width of said rib being so gaged as to place the latter without the periphery of the wheel altogether.

2. A fender for the front wheel of an automobile or the like, such fender comprising a substantially cylindrical section disposed to aline with the periphery of said wheel when in its normal position, a section of substantially spherical conformation disposed to inclose the inner side of said wheel while permitting movement of said wheel from its normal position, and an angle bar secured along the edge on the under side of said cylindrical portion, the downturned tongue of such bar forming a rib and said cylindrical portion being disposed to support such rib wholly without the periphery of such wheel.

958,133. STERILIZER AND DRIER. AAGE JENSEN, Eureka, Cal. Filed May 8, 1909. Serial No. 494,896.

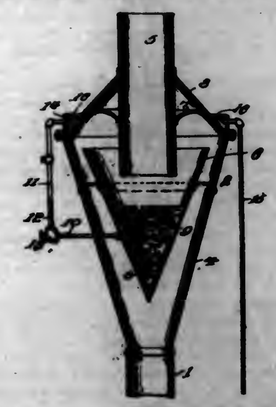


1. The combination of a casing of a heating chamber, a blower supported thereon, arranged to impel air into said chamber, a perforated supporting plate secured to, and supported by, said casing, an air conduit leading from said casing through said perforated plate, and a steam coil within the casing, substantially as described.

2. The combination of a casing of a heating chamber, a blower supported thereon, an air pipe leading therefrom to the lower portion of said chamber for conducting air thereto, a perforated supporting plate secured to, and supported by, said casing, an air conduit leading from the top of said casing through said perforated plate, a steam turbine supported on said casing co-axially with said blower, a pipe for supplying live steam thereto, a steam coil in the upper part of said chamber connected with said pipe, and a steam coil in the lower part of the chamber connected with the exhaust from the turbine, substantially as described.

3. The combination of a casing of a heating chamber, a blower supported thereon, an air pipe leading therefrom to the lower portion of said chamber for conducting air thereto, a perforated supporting plate secured to, and supported by, said casing, an air conduit leading from the top of said casing through said perforated plate, a steam turbine supported on said casing co-axially with said blower, a pipe for supplying live steam thereto, a steam coil in the upper part of said chamber connected with said pipe, a steam coil in the lower part of the chamber connected with the exhaust from the turbine, and a steam pipe leading from the live steam supply pipe through said air conduit, substantially as described.

958,134. SPARK-ARRESTER. FREDERICK A. JUST, Judson, N. D. Filed July 14, 1909. Serial No. 507,634.



1. In a spark arrester, the combination with a stack, of a drum secured to the upper end of the stack and consisting of upper and lower sections, the sections being of truncated conical form and having their larger ends secured together, an obconic water receptacle supported within the lower drum section in spaced relation to the inner surface thereof, an outlet pipe passing vertically through the upper drum section and projecting at its lower end into the upper portion of the water receptacle above the water level therein, an annular deflector mounted within the upper drum section below the upper end thereof and curving inwardly and downwardly therefrom with its inner edge fitting the periphery of the outlet pipe, the deflector being positioned above and in close proximity to the upper edge of the water receptacle to deflect the products of combustion downwardly therein and between the same and the lower end of the pipe, and an open annular water trough mounted on the periphery of the upper drum section, the upper drum section being of truncated conical form throughout its length and fitting the periphery of the outlet pipe above the deflector and the trough, as and for the purpose specified.

2. In a spark arrester, the combination with a stack, of a drum secured to the upper end of the stack and consisting of upper and lower sections, the sections being of truncated conical form and having their larger ends secured together, an obconic water receptacle supported within the lower drum section in spaced relation to the inner surface thereof, an outlet pipe passing vertically through the upper drum section and projecting at its lower end into the upper portion of the water receptacle above the water level therein, an annular deflector mounted within the upper drum section below the upper end thereof and curving inwardly and downwardly therefrom with its inner edge fitting the periphery of the outlet pipe, the deflector being positioned above and in close proximity to the upper edge of the water receptacle to deflect the products of combustion downwardly therein and between the same and the lower end of the pipe, the upper end of the upper drum section fitting the periphery of the outlet pipe above the deflector, an open annular water trough mounted on the periphery of the upper drum section below the upper end thereof, a pipe for supplying water to the trough, and a feed pipe establishing communication between the trough and the water receptacle for conducting water from the former to the latter.

3. In a spark arrester, the combination with a stack, of a drum secured to the upper end of the stack, a stationary downwardly tapering water receptacle supported within the drum and spaced apart from the inner surface thereof, an outlet pipe passing through the upper end of the drum with its lower end of less diameter than the upper portion of the receptacle and projecting into said upper portion of the receptacle and terminating above the water level therein, and an inner vessel removably fitted within the tapered lower portion of the water receptacle for collecting sediment accumulating therein, the inner receptacle being of less diameter than the outlet pipe, whereby to be adapted to be inserted and withdrawn therethrough into and from the drum without disturbing the other parts of the device.

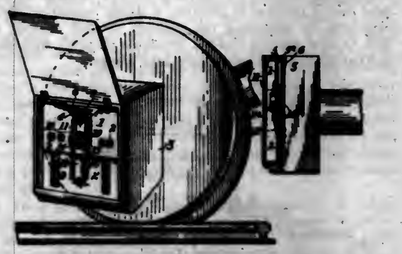
4. In a spark arrester, the combination with a stack, of a drum secured to the upper end of the stack, an outlet pipe passing through the upper end of the stack, a stationary water receptacle supported within the drum below the lower end of the outlet pipe, means provided above the water receptacle for deflecting the smoke downwardly therein to extinguish the sparks, a removable inner vessel fitting within and conforming to the contour of the lower portion of the receptacle to collect sediment accumulating therein, and a pipe supplying the receptacle with water and communicating therewith at a point above the inner vessel, the inner vessel being of less diameter than the outlet pipe and being adapted to be inserted and withdrawn therethrough into and from the drum without disturbing the other parts of the device.

5. In a spark arrester, the combination with a stack, of a drum secured to the upper end of the stack, an outlet pipe passing substantially vertically through the upper end of the drum, a water receptacle supported within the drum and below the outlet pipe, means for deflecting the products of combustion into the water receptacle, and an open annular trough mounted on the periphery of the drum, the drum fitting snugly to the periphery of the outlet pipe and being of truncated conical form between the same and the trough, as and for the purpose specified.

958,135. CAR-JOURNAL, SPONGING-SHIELD, AND OIL-SAVER. LOUIS E. KELLER, Oil City, Pa. Filed Aug. 25, 1908. Serial No. 450,251.

1. The combination with a car journal box, of a shield located in said box, and consisting of an upper and a lower plate overlapping each other, the upper plate being slidable on the lower plate, a bolt connecting said plates and having a nut on its outer end, and a guard shield surrounding the outer end of the bolt and the nut thereon, and guarding against operating the nut.

2. The combination with a car journal box, of a shield located in said box, and consisting of an upper and a lower plate overlapping each other, the upper plate being slidable on the lower plate, and means for detachably fastening said plates in adjusted position, the upper plate having on its upper edge pairs of prongs bent in opposite directions and engaging the top of the box and serving as a lock for the shield.



3. The combination with a car journal box, of a shield located in said box, and consisting of an upper and a lower plate overlapping each other, the upper plate being slidable on the lower plate, the upper plate being provided at its top with a sight opening, and the lower plate with a plurality of elongated vertical sight openings, the upper plate having guide projections extending through said elongated sight openings, and means for detachably fastening said plates in adjusted position.

4. The combination with a car journal box, of a shield located in said box, and consisting of an upper and a lower plate overlapping each other, the upper plate being slidable upon the lower plate, and having on its upper edge pairs of prongs bent in opposite directions, the inner prongs being longer than the outer prongs, said pairs of prongs serving to lock the shield in place, said upper plate having a sight opening in its upper portion, and the lower plate having elongated vertical sight openings, means for detachably locking said plates in adjusted position, and means for guiding the upper plate upon the lower plate.

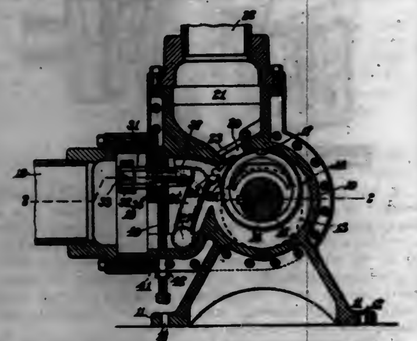
5. A device of the character described, comprising a primary and an auxiliary section, said primary section provided with a sight-opening at one edge and with pairs of bracing and locking prongs upon one edge at opposite sides of the sight-opening, one of the prongs in each pair being bent upwardly for forming a lock, said auxiliary section provided with elongated slots or apertures, said primary section provided with a pair of horizontal guiding prongs extending through the elongated slots of the auxiliary section, said primary section provided with an outwardly-bulged or square portion, said auxiliary section provided with a projecting or bulging portion positioned in the squared portion of said primary section, a bolt extending through the socketed bulged portions of said sections, a nut threaded upon the outer end of said bolt, and a spring-cotter extending through the projecting end of the bolt outside of said nut, and said primary section provided with an integral guard casing surrounding the nut and the spring-cotter.

958,136. ROTARY PUMP. JUSTUS R. KINNEY, Dorchester, Mass. Filed May 11, 1909. Serial No. 495,551.

1. In a device of the class described, the combination of two oppositely-disposed rotary eccentric pistons; a pivoted blade for each piston; a rocker member; struts the ends of which are rounded and rest in sockets in said blades and member; a movable slotted member to which said rocker member is pivoted; and means extending through said slot for adjusting the position of said member relative to said pistons.

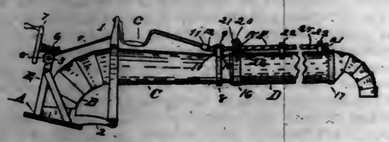
2. In a device of the class described, the combination of two oppositely-disposed rotary eccentric pistons; a pivoted blade for each piston; a rocker member; struts the ends of which are rounded and rest in sockets in said blades and member; a movable slotted member to which said rocker member is pivoted; and a wedge extending through said slot for adjusting the position of said member relative to said pistons.

3. In a device of the class described, the combination of two oppositely-disposed rotary eccentric pistons; a pivoted blade for each piston; a rocker member; struts the ends of which are rounded and rest in sockets in said blades and member; a movable slotted member to which said rocker member is pivoted; a wedge extending through said slot for adjusting the position of said member relative to said pistons; and a revoluble member threaded to a fixed element for adjusting said wedge.



4. In a device of the class described, the combination of two oppositely-disposed rotary eccentric pistons; a pivoted blade for each piston; a rocker member; struts the ends of which are rounded and rest in sockets in said blades and member; a movable slotted member to which said rocker member is pivoted; a wedge extending through said slot for adjusting the position of said member relative to said pistons; a revoluble member threaded to a fixed element for adjusting said wedge; and means for locking said threaded member in adjusted position.

958,137. PNEUMATIC STRAW-STACKER. PETER T. KIRKPATRICK, Battle Creek, Mich., assignor of one-half to Joseph F. Russell, Battle Creek, Mich. Filed Apr. 19, 1909. Serial No. 490,886.



1. In a device of the class described, the combination with the telescoping straw-conducting tubes and means to prevent the outer tube from rolling on the inner tube, of a spirally-threaded adjusting shaft rotatably secured at one end near the lower end of said inner tube, a nut secured at the lower end of said outer tube and threaded on said spirally-threaded adjusting shaft by which means said outer tube may be longitudinally adjusted on said inner tube by the rotation of said shaft, and means carried by said outer tube to prevent the free end of said adjusting shaft from lateral displacement, substantially as set forth and described.

2. In a device of the class described, the combination with the telescoping straw-conducting tubes and means to prevent the outer tube from rolling on the inner tube, of a spirally-threaded adjusting shaft rotatably secured at one end near the lower end of said inner tube, a nut secured at the lower end of said outer tube and threaded on said spirally-threaded adjusting shaft, by which means said outer tube may be longitudinally adjusted on said inner tube by the rotation of said shaft, and eyelets forming guards fixed to said outer tube to prevent said adjusting shaft from lateral displacement, for the purpose set forth.

3. In a device of the class described, the combination with the telescoping straw-conducting tubes and means to prevent the outer tube from rolling on the inner tube, of a bracket near the lower end of the inner tube, a crank shaft journaled in said bracket, a secondary bracket spaced therefrom and rigidly secured to said tube, a spirally-threaded adjusting shaft journaled at one end in said secondary bracket and means to prevent said shaft from longitudinal displacement therewith, a flexible union connecting said crank shaft to said spirally-threaded adjusting shaft, a nut rigidly secured to the lower end of said outer tube and threaded on said spirally-threaded adjusting shaft and means to keep said adjusting shaft from lateral displacement, all arranged to coact, for the purpose set forth and described.

4. In a device of the class described, the combination with the straw-conducting tubes and means to prevent the outer tube from rotary displacement with the inner tube, of the crank shaft, G, journaled in the yoke, 1, the bracket, 8, secured intermediary of the tube, C, the bracket 16 secured at the lower end of the outer tube D, the nut, 18, carried by said bracket, the spirally-threaded adjusting shaft, F, fitted to actuate said nut and journaled within the bracket, 8, the collars, 10—10, to prevent said shaft from longitudinal displacement, the tumbling rod connecting said crank shaft and said adjusting shaft, and the eyelets, 22—22, to prevent said adjusting shaft from lateral displacement, all arranged to coact, substantially as set forth and described.

958,138. STAIR-CARPET FASTENER. CHARLES W. KIRSCH, Sturgis, Mich., assignor to Kirsch Manufacturing Company, Sturgis, Mich., a Corporation of Michigan. Filed May 10, 1909. Serial No. 495,148.

1. A stair carpet fastener comprising a laterally corrugated normally bowed strip of spring metal capable of being bent straight and adapted to bear on its normally convex face upon the carpet to be secured, the end portions of said strip being adapted to be depressed into engagement with said carpet, and fastening means disposed on the stairway beyond the side edges of the carpet engaging the end portions of said strip to maintain the same in their depressed positions.

2. A stair carpet fastener comprising in combination a normally bowed strip of spring metal bearing on its normally convex side upon the stair carpet, the end portions thereof being adapted to be depressed to straighten said rod and force the same into engagement with said carpet, fastening devices mounted on the stairway on either side of the carpet, the fasteners on one side being movable toward and away from the adjacent side edge of the carpet, and projections at the ends of said member adapted to be engaged by said fastening devices to secure said member.

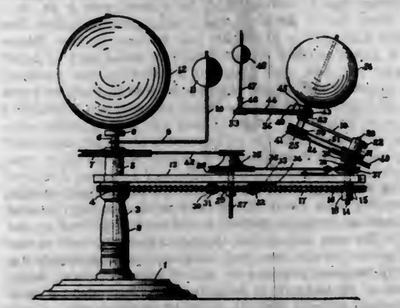
3. A stair carpet fastener comprising a strip of spring metal provided on its side edges with flanges diverging at an angle greater than ninety degrees to each other, and at substantially equal angles to the middle portion of the strip, and fastening means engaging said strip, the convex side of the latter opposing the carpet and the free edges of the said flanges engaging the latter, the middle portion of said strip being forced downwardly by engagement with said fastening means with a force sufficient to decrease the divergence of said flanges.

4. A stair carpet fastener comprising a normally bowed strip of spring metal provided on its side edges with diverging flanges, the edge portions of said flanges engaging the tread and riser portions respectively of a stair carpet, the normally convex side of said strip opposing the carpet, said strip being straightened by depressing the end portions thereof into engagement with the carpet, and fastening means engaging said end portions of said strip and holding same in their depressed positions, the depression of said end portions of said strip decreasing the divergence of said flanges.

5. A stair carpet fastener comprising a normally bowed strip of spring metal provided on its side edges with diverging flanges, the edge portions of said flanges engaging the tread and riser portions respectively of a stair carpet, the normally convex side of said strip opposing the carpet, said strip being straightened by depressing the end portions thereof into engagement with the carpet, and fastening devices mounted on the stairway beyond the side edges of the carpet and engaging the ends of said strips to hold same in their depressed positions, the depression of said end portions of said strip decreasing the divergence of said flanges.

[Claim 6 not printed in the Gazette.]

958,139. PLANETARIUM. ALEXANDER LAING, Detroit, Mich. Filed July 15, 1908. Serial No. 443,600.

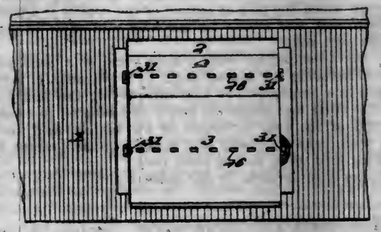


1. A planetarium comprising a central base and standard, a non-rotatable upright spindle extending from the upper end of the standard, a sphere on the upper end of the spindle, a horizontal arm rotatably secured at one end on the spindle, a shaft having its lower portion journaled in the outer end of the arm parallel to the spindle having an upper portion bent at an angle to the spindle, a radial arm extending from the upper oblique end of said shaft, a bushing at the outer end of the radial arm parallel to the oblique shaft end, a tubular shaft journaled in the said bushing, an inner shaft journaled in the tube carrying a globe on its upper end, a disk obliquely secured on the tubular shaft, a radius arm whose inner end is rotatably secured on the disk periphery, a fork secured to the tubular shaft engaging the radius arm, a bushing on the outer end of the radius arm oblique to the spindle, a shaft rotatable therein, a ball secured on the rod, a pulley journaled on the spindle, having a radial bracket with upturned end parallel to the spindle, a ball on the upturned end, and mechanism coupling the rotatable and revoluble members adapted to operate them in proper timed relation when the horizontal arm is swung on the spindle.

2. A planetarium comprising a central base and standard, a non-rotatable upright spindle extending from the upper end of the standard, a sphere on the upper end of the spindle, a horizontal arm rotatably secured at one end on the spindle, a shaft having its lower portion journaled in the outer ends of the arm parallel to the spindle having an upper portion bent at an angle to the spindle, a radial arm extending from the upper oblique end of said shaft, a bushing at the outer end of the radial arm parallel to the oblique shaft end, a tubular shaft journaled in the said bushing, an inner shaft journaled in the tube carrying a globe on its upper end, a disk obliquely secured on the tubular shaft, a radius arm whose inner end is rotatably secured in the disk periphery, a fork secured to the tubular shaft engaging the radius arm, a bushing on the outer end of the radius arm oblique to the spindle, a shaft rotatable therein, a ball adjustably secured on the rod, a pulley journaled on the spindle having a radial bracket with upturned end parallel to the spindle, a ball on the upturned end, a countershaft journaled on the horizontal arm parallel to the spindle, a sprocket wheel non-rotatably secured on the spindle, an alined sprocket secured on the countershaft, an alined sprocket secured on the outer arm shaft, a sprocket chain operatively connecting said sprockets, a two-step driving pulley fast on the countershaft, a belt connecting one step and the spindle pulley, a bevel gear journaled on the upright portion of the outer arm shaft, a pulley on the gear belted to the other step of the driving pulley, a bevel pinion on the oblique portion of the outer arm shaft meshing with the said gear, a two-step pulley on the gear, a pulley secured on the tubular shaft belted to one step of the pinion pulley, a pulley secured on the inner shaft belted to the other step of the pinion pulley, and a pulley on the radius arm shaft belted to the tubular shaft disk.

3. In a planetarium, a fixed, upright spindle, a sphere representing the sun secured thereon, an arm journaled at its inner end on the spindle to rotate parallel to the plane of the ecliptic, a one piece shaft bent between its ends at the angle of inclination of the earth's axis to the plane of the ecliptic one of whose arms is journaled in the outer end of the arm, a radius arm secured to the upper oblique portion of the shaft perpendicularly thereto, a tubular shaft journaled in the outer end of the radius arm parallel to the bent portion of the arm shaft, an inner shaft rotatable in the tube, a disk secured obliquely on the tubular sleeve in a plane parallel to the plane of the moon's orbit in relation to the plane of the ecliptic, a radius rod whose inner end rotatably engages the disk adapted to revolve parallel to the plane of the moon's orbit, a shaft journaled in the outer end of the rod perpendicular to the plane of revolution, a fork on the tubular shaft engaging the radius rod adapted to interlock them to rotate together in their divergent planes, a globe on the inner shaft representing the earth, a ball on the radius shaft representing the moon, and means for moving said parts in proper relation.

958,140. SLIDING GRAIN-DOOR FOR CARS. FRANK C. LAKIN, Manchester, Ill. Filed May 17, 1909. Serial No. 496,365.



1. A car door formed of a plurality of slidable sections arranged one above the other, guide tracks to slidably support said door sections, longitudinally extending housings on said doors, having transverse indentations adjacent their ends, fastening bars mounted in suitable bearings, door engaging off-sets formed in said fastening bars, and adapted to be turned into engagement with the indentations of the housings on said sections of the door to hold the same in closed position, detents formed on the upper ends of said bars, and catches adapted to be engaged with said detents to hold the bars in operative position.

2. A grain door for cars formed of a plurality of slidably mounted apertured sections, guiding and supporting tracks adapted to receive said sections of the door, longitudinally extending housings over the apertures, having transverse indentations adjacent their ends, independent fastening bars mounted to turn in suitable bearings on said guide tracks, offset portions formed in said bars and adapted to be turned into operative engagement with the indentations in the housings on the door sections to clamp the sections in closed position, right angularly bent handles

formed on the upper ends of said bars, pivotally mounted catches adapted to be engaged with said handle ends to hold the bars in operative engagement with the door sections, keepers to receive said catches when in operative engagement with the fastening bars, and means to engage the apertures, whereby the sections of the door may be opened.

958,141. NECK-YOKE CENTER. GEORGE A. LAMBERT, Anderson, Ind. Filed Apr. 29, 1909. Serial No. 492,852.



1. The combination with a neck yoke, of a neck yoke center formed of a wire cable connected with the neck yoke and provided with a downwardly extending wire cable loop, and a protective covering for said wire cable loop and through which covering the pole or tongue of the vehicle is adapted to be inserted.

2. The combination with a neck yoke, of a neck yoke center formed of a wire cable connected with the neck yoke and provided with a downwardly extending wire cable loop, and a metal protective bearing ring secured to and within said wire cable loop and through which the pole or tongue of the vehicle is adapted to be inserted.

3. The combination with a neck yoke, of a neck yoke center formed of a wire cable connected with the neck yoke and provided with a downwardly extending wire cable loop, and a bearing ring U-shaped in cross-section and which the wire cable loop surrounds and in which it is embedded with the lateral flanges of the ring bent about the wire cable, substantially as set forth.

4. The combination with a neck yoke, of a neck yoke center consisting of a wire cable formed into a double loop, one loop surrounding the neck yoke and the other loop extending below, a metal protective bearing ring secured to and within said downwardly extending loop and through which the pole or tongue of the vehicle is adapted to be passed, and means for securing said cable in place on the neck yoke.

5. The combination with a neck yoke, of a neck yoke center including an endless skein of a plurality of wires formed into two loops, one loop surrounding the neck yoke and the other loop extending below and adapted to receive the end of the pole or tongue of the vehicle, said lower loop being drawn through said upper loop, and means for securing said loops on the neck yoke.

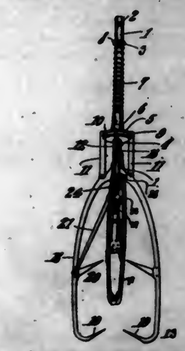
[Claim 6 not printed in the Gazette.]

958,142. FISH AND GAME HOOK. STEPHEN B. LEE, Danbury, Iowa. Filed June 21, 1909. Serial No. 503,512.

1. A device of the class described including a casing; a trapping arm pivotally secured to the casing; a stud outstanding from the casing; a trigger bar pivoted at one end to the arm and at the other end provided with a slot adapted to receive the stud slidably, and comprising angularly disposed portions, in one of which the stud is arranged to be engaged to hold the arm distended.

2. A device of the class described comprising a casing; a trapping arm pivotally secured to the casing; a stud outstanding from the casing; a trigger bar pivoted at one end to the arm and at the other end provided with a slot adapted to receive the stud slidably, and comprising angularly disposed portions in one of which the stud is arranged to be engaged to hold the arm distended; a bait-supporting element slidably mounted in the casing; and a trip bar pivotally connected with the trigger bar and the bait-supporting element, and operative to break the engagement between the stud and the trigger bar.

3. A device of the class described comprising a casing; a trapping arm pivotally secured to the casing; a stud outstanding from the casing; a trigger bar pivoted at one end to the arm and at the other end provided with a slot adapted to receive the stud slidably, and comprising angularly disposed portions in one of which the stud is arranged to be engaged to hold the arm distended; a bait-supporting element slidably mounted in the casing; a trip bar pivotally connected with the bait-supporting element; and a sleeve slidably mounted upon the trigger bar in the slot thereof, and pivotally connected with the trip bar.



4. A device of the class described comprising a casing; a trapping arm pivotally secured to the casing; a stud outstanding from the casing; a trigger bar pivoted at one end to the arm and at the other end provided with a slot adapted to receive the stud slidably, and comprising angularly disposed portions in one of which the stud is arranged to be engaged to hold the arm distended; a bait-supporting element slidably mounted in the casing; a trip bar pivotally connected with the bait-supporting element; and a sleeve slidably mounted upon the trigger bar in the slot thereof, and pivotally connected with the trip bar.

5. A device of the class described comprising a casing; a trapping arm pivotally secured at one end to the casing; a trigger bar pivotally secured at one end to the intermediate portion of the arm and at the other end slidably secured to the casing, the last named end of the bar being movable upon the casing in a common direction with the free end of the arm when the arm is swung into distended position, to lock the arm in distended position.

[Claims 6 to 8 not printed in the Gazette.]

958,143. SELF-ADJUSTING CASING FOR ROLLER-BEARINGS. CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed Mar. 26, 1909. Serial No. 485,971.



1. As a new article of manufacture, a self-contained and self-adjusting roller-bearing having a hub with the double conical seats *h* and two sets of tapering rolls *i* fitted to such seats with their larger ends adjacent, a casing having a spherical bore, and two rings *n* fitted to the said bore at opposite sides of its diameter and provided with tapering seats *o* embracing the outer sides of the two sets of rolls.

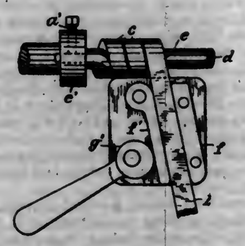
2. As a new article of manufacture, a self-contained and self-adjusting roller-bearing having a hub with the double conical seats *h* and two sets of tapering rolls *i* fitted to such seats, a cage fitted to revolve about the hub with the rolls to guide the same, a casing having a spherical bore, and two rings *n* fitted to the said bore at opposite sides of its transverse diameter with interspace *n'* between the rings for the periphery of the cage, the casing being divided and provided with means for adjusting toward one another the spherical surfaces which bear upon the rings *n*.

3. As a new article of manufacture, a roller-bearing having a hub with double conical seats *h* and two sets of tapering rolls fitted to such seats, a casing provided with a spherical bore and two rings *n* fitted to the said bore at opposite sides of its diameter and provided with tapering seats *o* embracing the outer sides of the two sets of rolls, the casing being divided and the parts connected by screw-threads, the outer part having the notch *v* therein and the inner part having a series of tap-holes to coincide separately with such notch, and a screw adapted to engage the notch and any one of the said holes and wholly inclosed by such notch, whereby the parts of the casing may be adjusted and its cylindrical exterior fitted directly to a cylindrical socket.

4. As a new article of manufacture, a self-contained and self-adjusting roller-bearing having a hub with the double conical seats *h* and two sets of tapering rolls *i* fitted to such seats with their larger ends adjacent, a cylindrical casing having a spherical bore, and two rings *n* fitted to the said bore at opposite sides of its diameter and provided with tapering seats *o* fitted respectively to the outer sides of the two sets of rolls, the casing being divided and the parts connected by screw-threads, the outer part *r* having the notch *v* therein and the inner part having a series of tap-holes, and a screw adapted to engage the notch and any one of the said holes and wholly inclosed by such notch.

5. A self-contained and self-adjusting roller-bearing having a cylindrical periphery adapted to removably fit a cylindrical socket, the bearing having a hub with the double conical seats *h* and two sets of tapering rolls fitted to such seats, two rings *n* with tapering bore embracing the outsides of the rolls and having their exteriors curved concentrically and spherically, and the cylindrical casing of the bearing having a spherical bore arranged and operated to hold the tapering rings in their working position, and divided transversely in two parts for application to the rings, and the casing having at both ends of the rolls integral dust-guards extended toward the hub, the two parts of the casing being connected adjustably together.

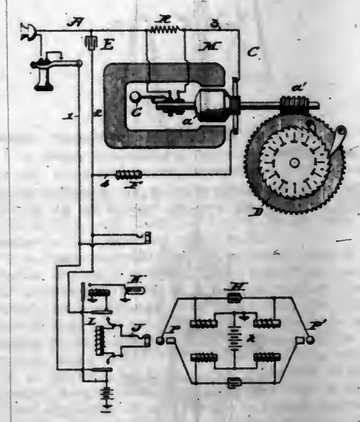
958,144. PROCESS OF MAKING HELICAL ROLLS. CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed Aug. 21, 1909. Serial No. 513,073.



1. The process of forming helical rolls with closely adjacent coils, which consists in progressively bending into coils a strip of metal and simultaneously compressing the successive coils while positively extending the length of the metal, whereby the tendency to form trough-shaped coils is obviated, as set forth.

2. The process of forming helical rolls, which consists in winding a strip of greater length than thickness, with such width applied to a mandrel, and compressing the successive coils below the normal thickness of the strip while positively extending the length of the strip where wrapped upon the mandrel.

958,145. TELEPHONE-METER SYSTEM AND APPARATUS. RAY H. MANSON, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed Apr. 18, 1907. Serial No. 369,015.



1. In a telephone system, a time registering device, an electric motor for driving the same, speech transmitting and receiving instruments, and circuit connections completed by initiating the use of said instruments to operate said motor.

2. In a telephone system, a line circuit, a time registering device, an electric motor connected to said line circuit for driving said registering device, speech transmitting and receiving instruments, and a condenser in the line circuit bridged across the motor terminals.

3. In a telephone system, a line circuit, a time registering device, an electric motor connected to said line circuit and having a rotatable armature geared to said registering device, speech transmitting and receiving instruments and means to complete the motor circuit to line when said instruments are in use, and an inductive resistance included in the armature circuit of said motor.

4. In a telephone system, a line circuit, a time registering device, an electric motor connected to said line circuit and having a rotatable armature geared to said registering device, speech transmitting and receiving instruments and means to complete the motor circuit to line when said instruments are in use, a condenser in the line circuit bridged across the motor terminals, and an inductive resistance included in the armature circuit of the motor.

5. In a telephone system, a line circuit, a time registering device, an electric motor connected to said line circuit and having a rotatable armature geared to said registering device, and automatic means for governing the speed of said motor.

[Claims 6 to 16 not printed in the Gazette.]

958,146. VIOLIN. JOHN A. MARTIN, Centerville, Iowa. Filed Nov. 4, 1908. Serial No. 461,021.

A violin of the character described comprising a sounding board having a longitudinal bass bar integral with its underside, said bar being thickest at a point intermediate

its ends, said thickness decreasing gradually to a point or edge at each end, said thickest portion being located



below one end of the bridge of the instrument, substantially as specified.

958,147. FRICTION-CLUTCH. KARL MATTHIAS, Dessau, Germany. Filed Oct. 6, 1909. Serial No. 521,410.



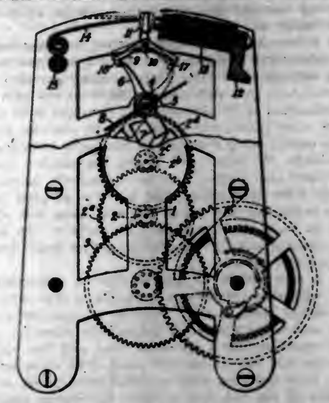
1. A friction clutch, comprising two clutch halves, a pair of closed rings between the same, elastic means between said rings and one of said clutch halves, said ring and elastic means rendering the clutch halves capable of yielding tangentially, axially and perpendicularly relative to one another, and mechanism for bringing the said rings into and out of frictional engagement with the other clutch half.

2. A friction clutch, comprising two clutch-halves one of which is received by the other and presents peripheral claws, a pair of closed rings encompassing the said clawed clutch-half and having claws intermeshing with those of the latter, elastic members filling the spaces between the claws, and means for bringing the said rings into and out of frictional engagement with the outer clutch-half, substantially as described.

3. A friction clutch, comprising two clutch-halves, an outer one presenting a conical friction-surface and an inner one presenting peripheral claws; a pair of closed rings which encompass the inner clutch-half, and which present claws intermeshing with those of the latter, and whose peripheries together constitute a double conical friction-surface; elastic members filling the spaces between the claws; and means for bringing the said rings into and out of frictional engagement with the outer clutch-half; substantially as described.

958,148. SYNCHRONIZING ATTACHMENT FOR CLOCKS. BENJAMIN F. MERRITT, Canton, Mass., assignor to Dey Time Register Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 9, 1908. Serial No. 419,885.

The combination of an escapement arbor having a scape-arm, an anchor arranged to oscillate in the path of the scape-arm, an armature connected with the anchor, an electromagnet arranged to attract the armature and thereby swing the anchor in one direction, a weight-arm associated with the armature to retract the same when the magnet is deënergised, and a stop in the path of the weight-arm to limit the retraction of the armature, said



weight-arm comprising a strip of pliable material having the portion engaging the said stop arranged in expansible and contractible convolutions whereby the extent of retraction of the armature may be varied without substantial variation in the retracting force of said arm, as set forth.

958,149. MOISTENER. MAXWELL A. METZNER, Perth Amboy, N. J. Filed Oct. 2, 1907, Serial No. 395,493. Renewed Oct. 18, 1909. Serial No. 523,197.



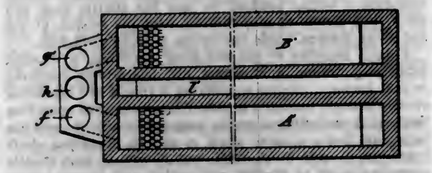
1. In a moistening device, a liquid container having a flexible diaphragm forming an air-tight joint therewith, a sheet of foraminous material having its peripheral portions in engagement with peripheral portions of said diaphragm, means for securing said diaphragm and foraminous sheet to said container, a tube extending from adjacent the bottom of said container through said diaphragm, and an absorbent pad intermediate said sheet and said container at their central portions.

2. A moistening device, comprising a container having an opening, a flexible diaphragm closing said opening and forming an air-tight joint therewith, a capillary tube carried by said diaphragm and extending to adjacent the bottom of the container, a pad of fibrous material in engagement with the outer surface of said diaphragm at the central portion thereof, a wire gauze sheet in engagement with the outer surface of the pad and with the outer surface of the diaphragm at the peripheral portion thereof, and an annular collar having threaded engagement with said container and adapted to secure said diaphragm and wire gauze in position.

3. In a moistening device, a liquid container having a flexible diaphragm forming an air-tight joint therewith, a sheet of woven wire gauze having its peripheral portions in engagement with the peripheral portions of said diaphragm, means for securing said diaphragm and wire gauze to said container, and a tube extending from adjacent the bottom of said container through said diaphragm.

4. In a moistening device, a liquid container having a flexible diaphragm forming an air-tight joint therewith, a sheet of foraminous material having its peripheral portions in engagement with the peripheral portions of said diaphragm, means for securing said diaphragm and foraminous sheet to said container, an absorbent pad intermediate said sheet and said container at their central portions, and means for delivering liquid through said diaphragm to said pad.

958,150. REGENERATIVE FURNACE. FRANZ MEYER, Englewood, N. J., assignor to Metallurgical Company of America, New York, N. Y., a Corporation of New Jersey. Filed Oct. 24, 1905. Serial No. 284,204.



1. A regenerative furnace for heating retorts, muffles, crucibles and other vessels, consisting of a combustion chamber divided into two compartments having fuel-gas inlets, said compartments being arranged side by side and communicating with each other at one end, and each communicating at the other end with a corresponding regenerator, and means for alternating the direction of flow of air and products of combustion with respect to the regenerators and consequently with respect to the compartments of the combustion chamber; substantially as described.

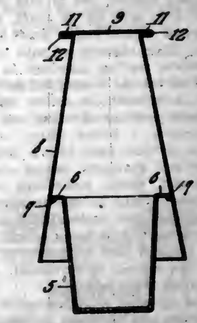
2. A regenerative furnace for heating retorts, muffles, crucibles, and other vessels, consisting of a combustion chamber divided into two compartments by a partition wall and having a series of gas inlets on each side of said wall, said compartments communicating with each other at one end, and each communicating at the other end with a corresponding regenerator, and means for alternating the direction of flow of air and products of combustion with respect to the regenerators and consequently with respect to the compartments of the combustion chamber; substantially as described.

3. A regenerative furnace for heating retorts, muffles, crucibles, and other vessels, consisting of a combustion chamber divided into two compartments by a partition wall and having fuel gas inlets, said compartments communicating with each other at one end by means of a series of vaulted apertures which serve to support some of the vessels, and each compartment communicating at the other end with a corresponding regenerator, and means for alternating the direction of flow of air and products of combustion with respect to the regenerators and consequently with respect to the compartments of the combustion chamber; substantially as described.

4. A regenerative furnace for heating retorts, muffles, crucibles, and other vessels, consisting of a combustion chamber divided into two compartments by a partition wall, and having fuel gas inlets, said compartments being arranged side by side and communicating with each other at one end, and each communicating at the other end with a corresponding regenerator through down-takes which serve alternately as up-takes for the admission of air to said compartments respectively, and a reversing valve by means of which each of said regenerators can be connected either with the chimney flue or with the atmosphere; substantially as described.

5. A regenerative furnace for heating retorts, muffles, crucibles and other vessels consisting of a combustion chamber divided longitudinally into two compartments communicating with each other at one end, a corresponding regenerator connected to each compartment at the opposite end, means for admitting fuel gas to said combustion chamber and means for alternating the direction of flow of the products of combustion with respect to the regenerators and consequently with respect to the compartments of the combustion chamber.

958,151. ORCHARD-HEATER. RALPH J. MEYER, Grand Junction, Colo. Filed Aug. 9, 1909. Serial No. 511,951.

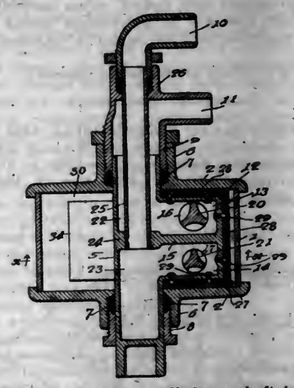


1. A heater comprising a fuel receptacle open at its upper end, a hood supported on said end of the receptacle, and surrounding the same in spaced relation therewith, whereby an air passage between the hood and the receptacle is had, said hood being open at its ends, and a damper on the upper end of the hood.

2. A heater comprising a fuel receptacle open at its upper end, a hood supported on said end of the receptacle, and surrounding the same in spaced relation therewith, whereby an air passage between the hood and the receptacle is had, said hood being open at its ends, and extending at its lower end below the upper end of the receptacle, and a damper on the upper end of the hood.

3. A heater comprising a fuel receptacle having outstanding flanges at its upper end, and open at said end, a hood supported on said flanges in spaced relation with the receptacle, whereby an air passage between the hood and the receptacle is had, the hood being open at both ends, and a damper on the upper end of the hood.

958,152. WATER-MOTOR. HARRY W. MEZGER, Springfield, Ohio. Filed May 3, 1909. Serial No. 493,447.



1. A motor comprising a cylinder, a shaft journaled in said cylinder, a piston carried by said shaft and having two chambers, each of said chambers having openings in the opposite sides thereof, and valves to control said openings, said shaft having two passages, one of said passages being connected at its inner end with one of the chambers in said piston and the other of said passages being connected at its inner end to the other chamber in said piston and comprising a pipe extending through the first-mentioned passage, said passages being connected at their outer ends to the inlet and outlet pipes, respectively.

2. A motor comprising a cylinder, a hollow shaft journaled in said cylinder, a piston carried by said shaft and having two chambers therein, one of said chambers being in communication with said hollow shaft, a pipe extending through a portion of said hollow shaft and in communication with the other chamber of said piston, each of said hollow chambers having openings in the opposite sides thereof, and valves for controlling said openings.

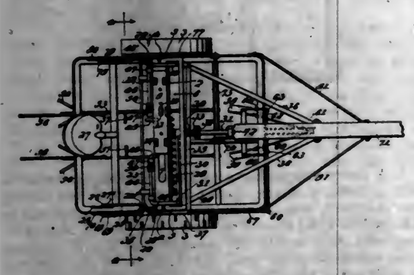
3. In a motor, a cylinder, a hollow shaft journaled therein, a transverse partition dividing said hollow shaft into two compartments, a hollow piston carried by said shaft, a partition dividing said hollow piston into two chambers, each of said chambers having openings in the opposite sides thereof, valves controlling said openings, each of said chambers being in communication with one of the compartments of said hollow shaft, an outlet pipe communicating with one compartment of said hollow shaft, a pipe extending through said compartment and in communication with the second compartment, and an inlet pipe in communication with said pipe.

4. In a motor, a cylinder, a hollow shaft journaled in said cylinder, a transverse partition dividing said hollow shaft into two compartments, a housing secured to one end of said cylinder and surrounding the end of said hollow shaft, said housing having an inlet opening and an outlet opening, one of said openings being in direct communication with the interior of said housing, a pipe connected with the other of said openings, extending through said housing and having its opposite end extending through the partition in said hollow shaft, a piston carried by said shaft and having two chambers therein, each of said chambers being in communication with one of the compartments of said hollow shaft and each of said chambers having openings in the opposite sides thereof, and valves for controlling said openings.

5. In a motor, a cylinder comprising a body portion and cylinder heads at the opposite ends thereof, a hollow shaft journaled in said cylinder heads, bosses extending outwardly from each of said cylinder heads, said bosses being of a uniform diameter and adapted to receive a packing, a gland adapted to encircle said shaft and enter one of said bosses, a housing adapted to receive one end of said hollow shaft and enter the other of said bosses, said housing having an outlet, a piston secured to said shaft and having two chambers, each of said chambers having openings in the opposite sides thereof, valves controlling said openings, and inlet and outlet passages formed in said shaft and connected with the respective chambers in said piston.

[Claims 6 to 12 not printed in the Gazette.]

958,153. COTTON AND BEET CHOPPER AND CULTIVATOR. ROBERT B. MORRIS and WILLIAM KENNEDY, Harrisonville, Mo., assignors of one-third to Frank H. Howard, Harrisonville, Mo. Filed Mar. 18, 1909. Serial No. 484,209.



1. In a machine of the character described, a wheeled supporting frame, a chopping hoe yieldingly and adjustably supported in said frame, and a spring actuated shuttle adapted to operate said hoe.

2. In a machine of the character described, a wheeled supporting frame, a chopping hoe operatively mounted in said frame, a hoe operating shuttle, a spring to actuate said shuttle, means to stretch said shuttle actuating spring, holding devices to momentarily hold the shuttle against the pull of the spring while the latter is being stretched, and means to automatically release said holding devices.

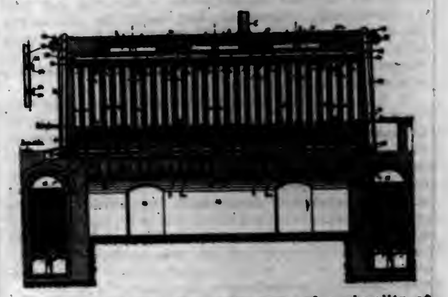
3. In a machine of the character described, a wheeled supporting frame, a chopping hoe, means whereby said hoe is pivotally and adjustably supported in said frame, a shuttle supporting frame, a hoe operating shuttle slidably mounted in said frame, a shuttle operating mechanism including a spring adapted to jerk the shuttle back and forth, and means to momentarily hold the shuttle at the end of its strokes, while the spring is being stretched.

4. In a machine of the character described, a wheeled supporting frame, a chopping hoe operatively mounted in said frame, a shuttle supporting frame, a hoe operating shuttle slidably mounted in said frame, a shuttle operating mechanism including a spring adapted to jerk the shuttle back and forth, a drive shaft, a shuttle operating shaft connected to said drive shaft, and means on said shuttle operating shaft to stretch said spring and thereby cause the latter to operate said shuttle.

5. In a machine of the character described, a wheeled supporting frame, a shuttle supporting frame, hoe supporting bars adjustably connected to said shuttle supporting frame, means to yieldingly hold said hoe supporting frame in its adjusted positions, a chopping hoe pivotally and adjustably mounted in said hoe supporting bars, a shuttle slidably mounted in said shuttle frame and adapted to engage said hoe, and a shuttle operating mechanism including a spring whereby said shuttle is jerked back and forth to operate the hoe.

[Claims 6 and 7 not printed in the Gazette.]

958,154. COKE-OVEN. WILHELM MUELLER, Dusseldorf, Germany. Filed Apr. 6, 1909. Serial No. 488,248.



1. The combination in a coke oven, of a plurality of vertical heating flues forming the sides of coking chambers, means to supply gas and air to the lower and upper part of each of said heating flues, passages connecting gas supply channels connected with the upper ends of said heating flues, a plurality of superposed supply channels connected with the lower part of said heating flues, passages for cleaning and inspecting leading from the foundation vaults into the heating flues, subdivided hot-air or waste-heat sole channels, each said sole channel having four subdivisions and passages connecting said sole channels with the lower ends of the heating flues, air-passages connecting the lower sole channels to the air-ports and the supply channels of the upper air flues to the heating flues, means for closing and regulating said gas supply channels and said sole channels, and means for reversing the gas and air supply.

2. The combination in a coke oven, of a plurality of vertical heating flues forming the sides of coking chambers, each of said heating flues having a twyer at the top and bottom of the same, gas-supply channels opening into the top and bottom of said heating flues, a plurality of small cooling channels around the top or gas-collecting space of each coking chamber arranged, substantially as shown, extending down the sides of the coking chambers, and air-supply channels connected with said cooling channels and said twyers, as set forth and for the purpose specified.

3. The combination, in a coke oven, of a plurality of vertical heating flues forming the sides of coking chambers, each of said heating flues having a twyer at the top and bottom of the same, gas-supply channels opening into the top and bottom of said heating flues, a plurality of small cooling channels around the top or gas-collecting space of each coking chamber arranged, substantially as shown, extending down the sides of the coking chambers, and air-supply channels connected with said cooling channels and said twyers, the top or gas-collecting space of each coking chamber being smaller than the coking chamber proper below it, substantially as set forth and shown in the accompanying drawings.

958,155. SHAFT FOR LEATHER-SKIVING MACHINES. LORENZ MUTHER, Denver, Colo., and GEORGE A. HENDERSON, Marblehead, Mass., assignors to The Peerless Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 24, 1906. Serial No. 349,310.



1. The combination with a shaft, of a rotatable device operatively connected to the shaft for rotating the latter, and means operative upon adjustment either to exert a pressure on said shaft or to counterbalance to a required extent the weight of said shaft and any load carried thereby.

2. The combination with a shaft, of a rotatable device operatively connected to the shaft for rotating the same, and means to exert with respect to said rotatable device either a pushing or a pulling action on said shaft in the direction of its length.

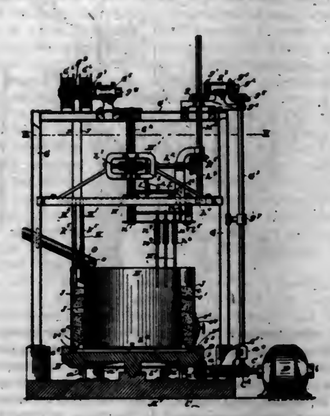
3. The combination with a shaft, of a rotatable device therefor, connections between said rotatable device and shaft to secure the rotation of the latter from the former, and allow of the longitudinal movement of the latter with respect to the former, a spring operatively connected to both said rotatable device and said shaft, and means to adjust said spring to cause it to tend to force the shaft in either direction as required.

4. The combination with a shaft, of a rotatable device therefor presenting a sleeve in which said shaft is longitudinally movable, an inclined slot in said sleeve, a pin on said shaft projecting into said slot, a spring connected at one end to said shaft and at the other end to said rotatable device, and means for adjusting said spring to cause it to exert either tension or compression upon the shaft and to the extent required.

5. A shaft, a device for rotating the same, means for connecting said shaft with the means for rotating the same, a sleeve nut, and a spring interposed between said nut and shaft, the spring being sustained at its upper end by the nut so that the spring may be stretched to overcome more or less of the weight of the shaft.

[Claim 6 not printed in the Gazette.]

958,156. MACHINE FOR MAKING REINFORCED-CONCRETE PIPE. HARRY R. MCMAHON, Cleveland, Ohio. Filed Dec. 28, 1907. Serial No. 408,341.



1. In a machine for manufacturing reinforced concrete pipe, the combination of a horizontal shaft, a rotatable table for receiving a mold, a mold mounted upon the latter, a carrier mounted so as to be capable of vertical movement toward and from said table, means comprising said shaft for effecting both the rotatable and vertical movement, reinforcement guiding-means mounted upon said carrier; and means for automatically feeding concrete to said mold.

2. In a machine for manufacturing reinforced concrete pipe, the combination of a horizontal shaft, a rotatable table for receiving a mold and a mold mounted upon the latter, a carrier mounted so as to be capable of vertical movement toward and from said table, means comprising said shaft for effecting both the rotatable and vertical movement, reinforcement guiding-means mounted upon said carrier, tamping mechanism mounted upon the latter, and means for automatically feeding concrete to said mold.

3. In a machine for manufacturing reinforced concrete pipe, the combination of a horizontal shaft, a rotatable table for receiving a mold, a stationary frame, a carrier vertically movable toward and from said table and means comprising said shaft for effecting both the rotatable and vertical movement, reinforcement guiding-means and tamping means mounted upon said carrier, a reinforcement supply, mounted upon said frame, and means for automatically feeding concrete to said mold.

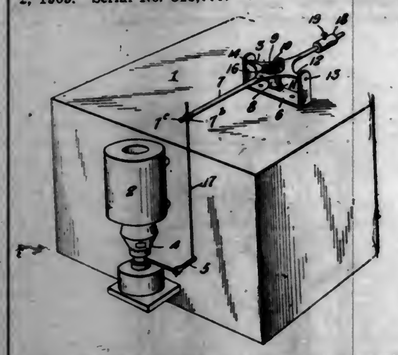
4. In a machine for manufacturing reinforced concrete pipe, the combination of a horizontal shaft, a rotatable table for receiving a mold, a stationary frame, a carrier vertically movable toward and from said table and means comprising said shaft for effecting both the rotatable and vertical movement, reinforcement guiding-means and tamping means mounted upon said carrier, a reinforcement supply mounted upon said frame, and means for automatically feeding concrete to said mold.

5. In a machine for manufacturing reinforced concrete pipe, the combination of a horizontal shaft, a rotatable table for receiving a mold, a stationary frame, a carrier vertically movable toward and from said table and means comprising said shaft for effecting both the rotatable and vertical movement; adjustable reinforcement guiding-

means, tamping means, said guiding and tamping means being mounted upon said carrier; a reinforcement supply, and means for automatically feeding concrete to said mold.

[Claims 6 to 11 not printed in the Gazette.]

958,157. THERMOSTATIC TEMPERATURE-REGULATOR. DON O. NATION, Oklahoma, Okla. Filed Sept. 2, 1909. Serial No. 515,770.



1. A thermostatic temperature regulator comprising controlling means, a lever, means actuated by the lever for controlling a heater, a thermostat, and an adjustable connection between the thermostat and lever, said connection being shiftable longitudinally of the lever whereby the thermostat may be connected to the lever at points closer to or farther from the axis of its pivot.

2. A thermostatic temperature regulator comprising controlling means, a lever, means actuated by the latter for controlling a heater, a member carried by the lever and disposed in parallel relation thereto, said member being also disposed in a plane at right angles to the axis of the pivot of the lever, and a thermostat carrying a part shiftable longitudinally of said member.

3. A thermostatic temperature regulator comprising controlling means, a lever, means actuated by the same for controlling a heater, a screw carried by the lever and extending longitudinally thereof and in a plane at right angles to the axis of the pivot of said lever, a thermostat, a nut engaged with said screw and connected to said thermostat.

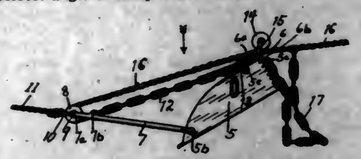
4. A thermostatic temperature regulator comprising a lever, means actuated by the latter for controlling a heater, a screw swiveled on said lever and extending longitudinally thereof and in a plane at right angles to the axis of the pivot of said lever, a pivotally mounted thermostat and a nut pivotally connected to said thermostat and arranged on said screw.

5. A thermostatic temperature regulator comprising a lever having an enlarged portion provided with oppositely projecting pivots, said enlarged portion of the lever being formed with an opening and having bearing ears struck up from it at said opening, bearings for the pivots of said lever, a screw having its ends rotatable in said bearing ears whereby said screw is swiveled and disposed in parallel relation to said lever, and in a plane at right angles to the axis of its pivots, a pivotally mounted thermostat, a nut upon said screw and pivotally connected to said thermostat, and means actuated by said lever for controlling a heater.

[Claim 6 not printed in the Gazette.]

958,158. EXCAVATOR. CLAUDE E. NEGLEY, Indianapolis, Ind. Filed Feb. 25, 1910. Serial No. 545,976.

1. In a device of the kind described, the combination with an excavator having a bail pivotally secured to its forward portion, a cable attached to said bail and a cable secured to the rear portion of said excavator, of a means connecting the central portion of said bail and the rear portion of said excavator to maintain said excavator in the correct angle to scoop a load of earth.



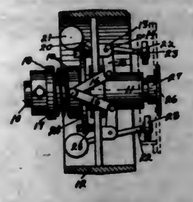
2. In a device of the kind described, the combination with an excavator having a bail pivotally connected to its forward portion, and a loading cable attached to said bail, of a cross bar rigidly secured across the upper rear portion of said excavator, a guide secured to the central portion of said bail, a second guide secured to said cross bar, and a dumping cable fastened to said cross bar and operatively secured in said first guide and said second guide substantially as described.

3. In a device of the kind described, the combination with an excavator having a bail pivotally connected to the forward portion of said excavator and a loading cable secured to said bail, of a grooved pulley journaled in the central portion of said bail, a cross bar rigidly secured across the upper rear portion of said excavator, a bearing secured to said cross bar, a second grooved pulley journaled in said bearing, and a dumping cable secured to said cross bar and passing around said first grooved pulley and under said second grooved pulley and to the source of power.

4. In a device of the kind described, the combination with an excavator having a bail pivotally attached to its forward portion, of two chains having their forward ends secured near the central portion of said bail and their rearward ends removably secured to the rear portion of said excavator to maintain said excavator at the correct angle to scoop a load of earth.

5. In a device of the kind described the combination with an excavator and a loading cable operatively connected to its forward portion, of a means for maintaining said excavator in the correct position to scoop a load of earth, a cross bar secured across the rear upper portion of said excavator, a dumping cable operatively secured to said cross bar, and a means for preventing said excavator from turning upside down while being dumped or unloaded.

958,159. GOVERNOR. GEORGE B. NELSON, Redfield, Iowa. Filed June 20, 1908. Serial No. 439,570.



1. In a governor, the combination of a rotatable member, weighted levers connected therewith, said weights being arranged to move outwardly by centrifugal force, arms connected with said weighted levers, and arranged to move inwardly as the weights move outwardly, a series of levers arranged in a circle around the ends of said arms, said levers being fulcrumed to a support, and each having a substantially radial arm, and each also having an arm arranged substantially concentric to the said rotatable member, and in position to be engaged by the arms on the weighted levers, a ring pivotally connected with all of the said radially extended arms.

2. In a governor, the combination of a rotatable member, weighted levers fulcrumed thereto, arms on said levers arranged to move inwardly as the weights move outwardly, rollers on said arms, a support, a series of levers fulcrumed to the support and each having a substantially radially extended arm, and an arm extended substantially concentric relative to the rotatable member, said concentric arms being in position to be engaged by said rollers, a ring pivotally connected to all the radial arms, and an arm pivoted to said ring and extended in a direction substantially at right-angles to the axis of the rotatable member.

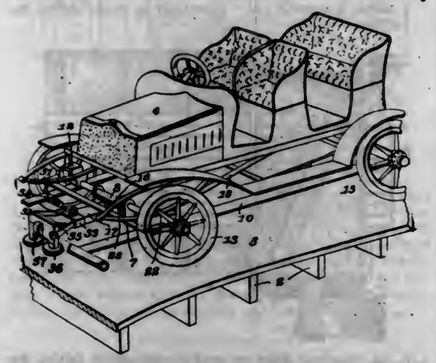
3. In a governor, the combination of a support, a series of levers fulcrumed to the support and arranged in a circle, said levers each having a radial arm, and an arm substantially concentric relative to the circle in which the said levers are fulcrumed, a ring connected to the radially extended arms of said levers, and rollers operated by centrifugal action for engaging the concentrically arranged portions of said levers.

4. A governor, comprising a series of levers arranged in a circle, each lever having a substantially radially extended arm and an arm extended substantially concentric relative to the circle in which the levers are fulcrumed, a segmental plate on each lever, said plates being arranged substantially in a circle, a ring connected to all of the levers, and rollers operated by centrifugal power for engaging said plates.

5. A governor, comprising a series of levers arranged in a circle, each lever having a substantially radially extended arm and an arm extended substantially concentric relative to the circle in which the levers are fulcrumed, a segmental plate on each lever, said plates being arranged substantially in a circle, a ring connected to all of the levers, and rollers operated by centrifugal power for engaging said plates, and a spring connected with said ring for normally holding the levers at one limit of their movement.

[Claims 6 to 9 not printed in the Gazette.]

958,160. GRAVITY-AUTOMOBILE. ASA G. NEVILLE, Wellsburg, W. Va. Filed July 31, 1909. Serial No. 510,551.



1. A car of the kind described having a guiding trolley supported thereon and adapted to engage with a guiding track, knuckle-supported front and rear traction wheels on the car, connections between the front wheels whereby they shall have parallel movement, connections between the rear wheels whereby they shall have parallel movement, means connecting the front and rear wheels so that they shall move in opposite directions to each other, and a connection between the said trolley and the wheels for moving the latter from the former.

2. A car of the kind described having a guiding trolley pivotally mounted on the car and projecting in front of the same, said trolley adapted to engage with a guiding track, knuckle-supported front and rear traction wheels on the car, connections between the front wheels whereby they shall have parallel movement, connections between the rear wheels whereby they shall have parallel movement, means connecting the front and rear wheels so they shall simultaneously move in opposite directions, and a connection between the trolley and said front wheels for moving the front wheels upon a movement of the trolley and in the same direction.

3. A car of the kind described having a forwardly projecting guiding trolley supported thereon, adjustable knuckle-supported pairs of front and rear wheels, connections between the front wheels whereby they shall have parallel steering movement, connections between the rear wheels so that they shall have parallel steering movement, means connecting the front and rear wheels so that they shall have simultaneous steering movement in opposite directions to each other, and an adjustable connection between the trolley and the front wheels, said connection being adapted to be lengthened or shortened.

4. A car of the kind described having a guiding trolley supported beneath the car and projecting forwardly therefrom and adapted to engage with a guiding track, opposed front steering wheels, each pivotally supported on the car for a lateral steering movement, connections between the front wheels whereby they shall move together, and an adjustable connection between said trolley and the front wheels, said connection being adapted to be lengthened or shortened.

5. A car of the kind described having a guiding trolley pivotally supported upon its forward end and projecting forwardly from the car, the forward end of the trolley being adapted to engage with a guiding track, an opposed pair of forward wheels, an opposed pair of rear wheels, each of said wheels being so mounted as to turn laterally and being formed with bell crank arms, connecting rods between the arms of the bell cranks of each pair of wheels, whereby the wheels of each pair will move together in one direction, a connection between the said trolley and the forward pair of wheels, whereby said wheels shall move with the trolley, and a connecting rod from the front wheels to the rear wheels so arranged that the rear wheels shall turn simultaneously in an opposite direction to the front wheels, said connecting rod being formed in two sections, the sections being connected to each other by a turn buckle, whereby the rod as a whole may be lengthened or shortened.

[Claims 6 to 16 not printed in the Gazette.]

958,161. AUTOMOBILE TURN-TABLE CONSTRUCTION. WILLIAM A. E. NOBLE, Hollywood, and SAMUEL JAY, Los Angeles, Cal., assignors to United Casting Company, Los Angeles, Cal., a Corporation of California. Filed Jan. 25, 1910. Serial No. 540,070.



1. A turn-table construction comprising a standard provided with bearings, a pivot mounted to turn in said bearings, a head on said pivot provided with a depending annular flange surrounding the standard and forming a protecting apron for the bearings, a frame carried by said head and a table mounted on said frame.

2. A turn-table construction comprising a standard provided with bearings, a pivot mounted to turn in said bearings, a head on said pivot provided with a depending annular flange surrounding the standard and forming a protecting apron for the bearings, a frame carried by said head and a table mounted on said frame, said frame comprising trusses formed with horizontal upper

bars attached to the upper part of said head, lower bars attached to the lower part of said apron and extending outwardly and upwardly therefrom, and connected at the outer end to the horizontal bars, and bars connecting said trusses and extending around the frame.

958,162. AUTOMOBILE TURN-TABLE BEARING AND METHOD OF MAKING THE SAME. WILLIAM A. E. NOBLE, Hollywood, Cal., assignor to United Casting Company, Los Angeles, Cal., a Corporation of California. Filed Jan. 25, 1910. Serial No. 540,071.



1. In an automobile turn-table, the combination with the pivot post of the turn-table, of a bearing comprising a standard having a vertical recess, a babbitt bearing at the lower end of said recess formed with a cylindrical recess to receive the lower end of the pivot post and form a step bearing therefor, and an annular babbitt bearing at the upper end of said recess surrounding the pivot post.

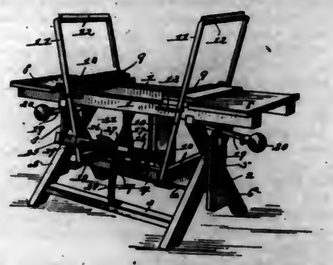
2. In an automobile turn-table, the combination with a vertical standard having a vertical recess, a pivot post extending within said recess and separated therefrom at the bottom and all sides, babbitt at the lower end of the pivot post occupying the space between the lower end of the pivot post and the bottom and sides of the recess, and babbitt at the upper end of the recess occupying the space between the pivot post and the walls of the recess.

3. In an automobile turn-table, the combination with a vertical standard having a vertical recess, a pivot post extending within said recess and separated therefrom at the bottom and all sides, babbitt at the lower end of the pivot post occupying the space between the lower end of the pivot post and the bottom and sides of the recess, and babbitt at the upper end of the recess occupying the space between the pivot post and the walls of the recess, said post having an oil duct extending from its upper end to the side of the post, and means for closing said oil duct at the top.

4. In an automobile turn-table, the combination with the pivot post of the turn table, of a bearing comprising a standard having a vertical recess, a bearing at the lower end of said recess formed with a cylindrical recess to receive the lower end of the pivot post and form a step bearing therefor, and an annular bearing at the upper end of said recess surrounding the pivot post.

5. The method of making a pivot bearing for automobile turn-tables which consists in supporting in a vertical recess a mandrel corresponding in dimensions to the pivot post, said mandrel being supported in such manner as to leave a space between the bottom of the mandrel and the recess and between the walls of the mandrel and the walls of the recess at all sides thereof, pouring melted babbitt into the lower portion of such space to form a babbitt bearing below and around the lower end of the mandrel, then forming an annular stopper of plastic material in the space between the mandrel and the standard at a distance below the top of the standard, pouring melted babbitt into the space above said stopper and below the top of the standard to form a babbitt bearing surrounding the upper portion of the mandrel, and then withdrawing the mandrel.

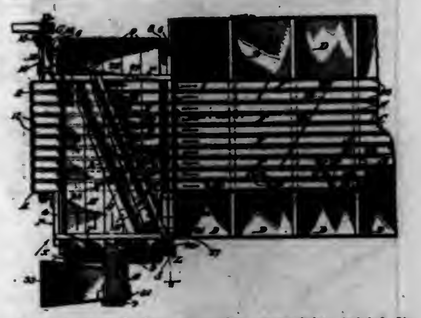
958,163. FRUIT-BOX PRESS. JOSIAH OSBORN, Los Angeles, Cal. Filed June 25, 1909. Serial No. 504,370.



1. A device of the kind described comprising a frame, adjustable tracks to receive boxes upon said frame, a vertical movable bar arranged below the frame, the pivoted foot lever bearing upon the bar, cross pieces carried by the bar, bails pivoted at their ends to the ends of the cross pieces and having their bow portions flanged, means for lifting the bar after it has been lowered by the depression of the foot lever, means for locking the foot lever in a lowered position, means carried by the bar for swinging the bails inwardly independent of their pivotal connection to the bar, and gripping means carried by the foot lever to engage the ends of the tape.

2. In a device of the kind described, pivoted bails, a depressible foot lever operating said bails, a block carried by the foot lever, a supplemental lever pivoted to the foot lever, the block and supplemental lever coacting to form a gripping device, a rack bar, a dog pivoted to the lever and engaging said rack bar, and a spring carried by the lever and bearing upon the supplemental lever as and for the purpose set forth.

958,164. FRUIT SIZER AND GRADER. GEORGE D. PARKER, Riverside, Cal. Filed July 8, 1908. Serial No. 442,580.



1. An improved sizer or grader, comprising initial distributing means and final distributing means; said initial distributing means including a plurality of spaced rotary elements each having a plurality of operative portions respectively related to the various sizes of the fruit to be sorted; the numbers of operative portions of the rotary elements being unequal.

2. An improved sizer or grader, comprising initial distributing means, and final distributing means; said initial distributing means including a conveyer, a roller extending above the carrying surface of the conveyer and provided with a plurality of operative portions respectively related to the various sizes of the fruit to be sorted; and said final distributing means comprising a plurality of conveyers arranged adjacent to said conveyer of said initial distributing means in positions to receive fruit from the latter, and a plurality of chutes respectively embracing said conveyers of said final distributing means, and extending into juxtaposition respectively with relation to said operative portions of said roller.

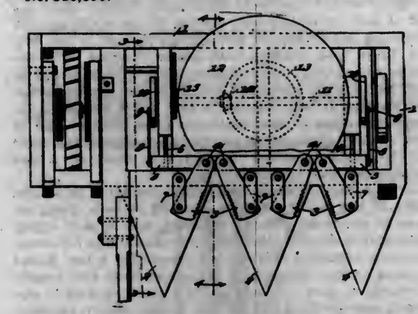
3. In an improved sizer or grader, a conveyer, and a plurality of spaced rotary elements extending above the carrying surface of said conveyer and each having a plurality of operative portions of different diameters respectively related to the various sizes of the fruit to be sorted; the numbers of operative portions of the rotary elements being unequal.

4. In an improved sizer or grader, a conveyer, and two spaced rollers extending above the carrying surfaces of the conveyer and each at an angle with the path of movement of said conveyer; each of said rollers comprising a plurality of operative portions of different diameters respectively related to the sizes of the fruit to be sorted.

5. In an improved sizer or grader, a conveyer, a roller extending above the carrying surface of the conveyer and provided with a plurality of operative portions of varying diameters, means for rotating the roller, a plurality of conveyers arranged adjacent to said first-named conveyer in positions to receive fruit from the latter, and chutes embracing the last named conveyers and extending respectively into juxtaposition with relation to said operative portions of said roller.

[Claims 6 to 8 not printed in the Gazette.]

958,165. CUTTING MECHANISM FOR CORN-HARVESTERS. LEWIS E. PARSONS, Lewistown, Ill. Original application filed Sept. 22, 1908, Serial No. 454,183. Divided and this application filed Aug. 2, 1909. Serial No. 510,890.

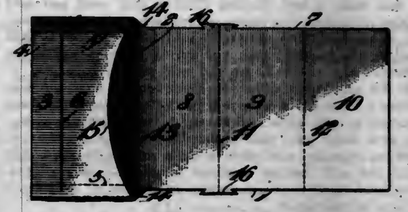


A cutting mechanism of the class described, comprising a supporting frame provided with a plurality of triangular-shaped guards, a drive bar reciprocatorily mounted in the frame, pairs of toothed cutting knives pivoted on said bar in position for the knives of each pair to swing toward and from each other, pivoted links for connecting the free ends of the knives with the frame, and means for reciprocating the drive bar to actuate the cutting knives.

958,166. ENVELOP AND ADVERTISING DEVICE. JOHN G. PATTON, Philadelphia, Pa. Filed Mar. 14, 1910. Serial No. 549,129.

1. As a new article of manufacture, a combined envelop and advertising device, consisting of a blank of material separated into a plurality of envelop and tab sections, one of the end sections being secured to the adjoining section along its marginal edges, whereby an envelop is formed, the inner side of said envelop having one or more apertures therein, and one of the tab sections being provided with lateral extensions adapted to interlock with such aperture or apertures when the tab sections are folded in the direction of the longitudinal axis of the blank.

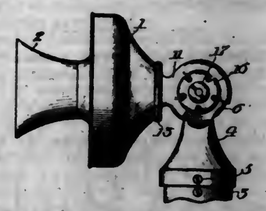
2. As a new article of manufacture, a combined envelop and advertising device, consisting of a blank of material separated into a plurality of sections by weakening the paper to form a plurality of envelop sections, and a plurality of tab sections of less width than the envelop sections, one of the envelop sections being of less length than the adjoining section and secured to such adjoining section along its marginal edges, whereby an envelop is formed having one side of less width than the other, the side of less width having one or more apertures therein, and all of said tab sections being folded in the direction of the longitudinal axis of the blank and interlocking with said apertures to prevent the accidental unfolding of such tab sections.



3. As a new article of manufacture, a combined envelop and advertising device, consisting of a blank of material separated into a plurality of envelop and tab sections by weakening the paper, one of the end sections being of less length than the adjoining section and secured to such adjoining section along its marginal edges whereby an envelop is formed having one side of less width than the other, and such side being provided with an aperture therein with which the tab sections interlock when folded in the direction of the longitudinal axis of the blank.

4. As a new article of manufacture, a combined envelop and advertising device, consisting of a blank of material separated into a plurality of envelop and tab sections, one of the envelop sections being of less length than the adjoining section, the latter being provided with side flaps secured to such adjoining section along its marginal edges, whereby an envelop is formed, the inner section of such envelop having one or more slots therein and the tab sections having an extension thereon on opposite sides thereof adapted to interlock with such apertures when the tab sections are folded in the direction of the longitudinal axis of the blank.

958,167. TRANSMITTER-MOUNTING. NIELS PEDERSEN, Genoa, Ill., assignor to Cracraft-Leich Electric Company, Genoa, Ill., a Corporation of Illinois. Filed June 4, 1909. Serial No. 500,047.



1. An adjustable mounting comprising a fixed support having a head and a mounting plate, two mating members fastened to said plate and inclosing the major portion of said head, and a shaft passing through said head and said mating members to slidably secure them together to permit of an oscillatory motion of said plate relative to said head.

2. An adjustable mounting comprising a fixed support having a head and a mounting plate, two mating members fastened to said plate and inclosing the major portion of said head, a bolt passing through said head and said mating members to slidably secure them together to permit of an oscillatory motion of said plate relative to said head, and a nut for said bolt.

3. An adjustable mounting comprising a fixed support having a head and a mounting plate, two mating members fastened to said plate and inclosing the major portion of the head, a bolt passing through said head and said mating members to slidably secure them together to permit of an oscillatory motion of said plate relative to said head, a nut for said bolt, and resilient means interposed between said bolt and nut and said mating members.

4. An adjustable mounting comprising a fixed support having a head and a mounting plate, two mating members fastened to said plate and inclosing the major portion of said head, a bolt passing through said head and said mating members to slidably secure them together to permit of an oscillatory motion of said plate relative to said head, a nut for said bolt, and spring washers interposed between said bolt and nut and said mating members.

5. An adjustable mounting comprising a fixed support having a head and a mounting plate, two mating members fastened to said plate and having bearing surfaces engaging said head, said mating members having angular extensions engaging said plate, a shaft passing through said head and said mating members to slidably secure them together to permit of an oscillatory motion of said plate relative to said head.

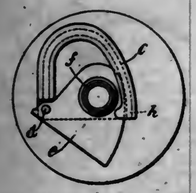
[Claims 6 to 10 not printed in the Gazette.]

958,168. LINE-HOLDER. THOMAS PETERSEN, Hartford, Conn. Filed Mar. 6, 1908. Serial No. 419,463.



A line fastener comprising a member formed at each end with a plurality of longitudinally extending jam notches, each of a width greater than the diameter of the line, said member further provided with a plurality of apertures arranged in longitudinal alinement and each of a diameter greater than the diameter of the line, and said member furthermore provided with a longitudinally extending passage connecting said apertures, said passage less in width throughout than the diameter of said apertures and said passage of greater width throughout than the diameter of the line.

958,169. BOTTLE AND STOPPER. MORIS PILZ, Brooklyn, N. Y. Filed Feb. 9, 1909. Serial No. 476,928.



The combination, with a bottle neck formed at its top with a lateral extension having an upstanding U-shaped rim provided at its upper edge with an in-turned flange; of a packing strip interposed between said extension and flange and fitted against the inner wall of said rim; a plate pivoted to said extension adjacent the free end of one leg of the rim; and a tubular outlet formed upon the plate, said plate being arranged for bodily swinging movement outwardly between the legs of the rim into binding engagement with that portion of the strip adjacent the other leg, to bring said outlet into registration with the bore of the bottle neck and to effect its retention in such position.

958,170. BOOKBINDING. WILLIAM S. PROUDFIT, Jr., Chicago, Ill. Filed Mar. 13, 1905. Serial No. 249,936.



1. In a book binding, stiff plates integral with the covers and forming their binding edge, a spring back hinged to said plates some distance from their free binding edges, and leaf holding springs secured to said plates extending between the edges of said plates.

2. In a book binding, stiff plates integral with the covers and forming their binding edge, a removable back hinged to said plates some distance from their free binding edges, leaf holding springs secured to said plates extending between the edges of said plates and bearing strips loosely mounted on said springs interposed between the edges of said plates and the leaves of the book.

3. In a book binding, two covers connected by leaf holding springs, a bar adjustably secured to one cover, a guide secured to said cover whereby said bar is retained parallel to the binding edge of said cover and is permitted to move toward and away from said binding edge, one end of each of said springs secured to one cover and the remaining end of each of said springs secured to said bar.

4. In a book binding, stiff plates integral with the covers and forming their binding edge, a back hinged to said plates some distance from their free binding edge, leaf holding springs secured to said plates extending between the edges of said plates, and the binding edge of each of said plates being so bent that the binding force will be exerted against the leaves in front of a line through said leaf holding springs.

5. In a book binding, two covers connected by a plurality of leaf holding springs, one end of each spring secured to one cover and the remaining end of each spring adjustably secured to the other cover, and means for simultaneously adjusting said springs comprising a bar guided to move in one direction, a bell-crank lever arm loosely connected to said bar, and a worm meshing with a segmental gear provided on one arm of said bell crank lever.

[Claims 6 to 37 not printed in the Gazette.]

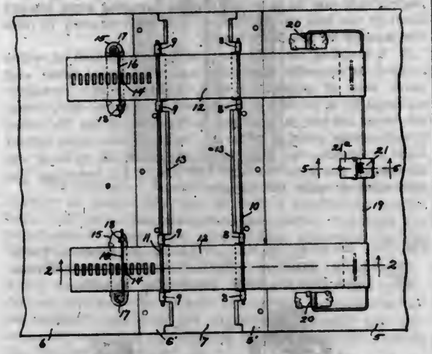
958,171. LOOSE-LEAF BINDER. WILLIAM S. PROUDFIT, Jr., Chicago, Ill. Filed July 29, 1907. Serial No. 386,134.

1. In a loose leaf binder, covers, leaf holding strips and means whereby the leaves in the binder are pressed more tightly together when the covers are open than when the covers are closed.

2. In a loose leaf binder, the combination of the covers, leaf holding members having their ends attached to swing with said covers and flex the intermediate portion of said members lying between the covers, and the rigid binding edges of the covers extended to press against the leaves at a point back of the leaf holding members when the covers are opened and be disengaged from said leaves when the covers are closed.

3. In a loose leaf binder, a cover, a resilient leaf holding band secured to said cover, eyes formed on said cover some distance from the binding edge thereof, a rod inserted in said eyes and said band extending under said rod whereby said band is held close to the surface of said cover.

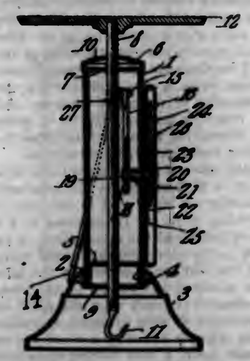
4. In a loose leaf binder, a cover, a plurality of leaf holding members extending from the binding edge of said cover, means on the cover for holding said members close to the surface of said cover near its binding edge, a U shaped bail having its ends pivotally secured to said cover to swing its middle portion toward and away from the binding edge, one end of each of said bands attached to the middle portion of said bail and means for holding the middle portion of said bail close to said cover.



5. In a loose leaf binder, a pair of covers, leaf holding members bridging the space between the covers having their ends adjustably secured to the covers, means on one of the covers comprising a pivoted member arranged to swing toward and away from the binding edge of the cover, for releasing the tension on said leaf holding members.

[Claims 6 to 28 not printed in the Gazette.]

958,172. SPRING-SCALE WEIGHING DEVICE. HENRY B. PUFFENBERGER, Tiffin, Ohio. Filed Sept. 20, 1909. Serial No. 518,537.

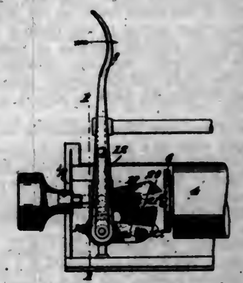


1. In a device of the class described, a case; a flat plate secured transversely in the case and having a slot terminating within the contour of the plate and determining a spiral tongue within the plate; and weighing mechanism connected with the end of the tongue.

2. In a device of the class described, a case; springs connected with the interior of the case adjacent the ends thereof; a scale bar extended axially through the casing and secured to the springs; a base arranged to receive removably, one end of the case; a suspension member secured to one end of the scale bar and arranged to be housed within the base; a platform removably mounted on the other end of the scale beam, and weight indicating mechanism operatively connected with the scale bar.

3. In a device of the class described, a case; a shaft rotatably mounted within the case, a pinion attached to the shaft within the case; an arm having a rack to engage the pinion; a scale bar mounted for reciprocation in the case, a pivot element connecting the arm with the bar; a resilient member having its intermediate portion wrapped about the pivot element between the arm and the bar, one end of the resilient member being engaged by the bar, and the other end thereof being engaged by the arm to hold the rack in mesh with the pinion; weight receiving means carried by the scale bar; and weight indicating means connected with the shaft.

958,173. LINE-SPACING MECHANISM. JOSEPH RABER, Poplar Bluff, Mo., assignor to Adding Typewriter Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 1, 1909. Serial No. 475,406.



1. The combination with a platen, and a ratchet wheel, of a shaft, means for oscillating said shaft, an arm connected to said shaft, a pawl support, a pawl mounted to slide in said support, a lever connecting said arm and said pawl whereby said pawl will be moved relative to said support and engaged with the ratchet wheel when said oscillating means is operated, and an adjustable stop in position to be engaged by said pawl support whereby the movement of the pawl may be regulated as desired, substantially as specified.

2. The combination of a platen, and a ratchet wheel, of a shaft, operating means connected to said shaft, an arm attached to said shaft, a pawl support separate from said shaft, a pawl slidably carried by said support, a lever pivotally connecting said pawl and said arm whereby said pawl will be moved into engagement with said ratchet wheel when said arm is operated, a stop device to limit movement of said pawl support, and means for adjusting said stop device to change the scope of movement of said pawl, substantially as specified.

3. Line spacing mechanism comprising, in combination with a platen, and a ratchet wheel attached thereto, a pawl support, a pawl mounted to slide in said support and held out of engagement with the ratchet wheel, an arm, a lever pivoted to said pawl support and to said arm and connected with said pawl, and means for operating said arm and lever effectively to move said pawl into engagement with the ratchet wheel and then moving the pawl and support together effectively to rotate said platen for line spacing, substantially as specified.

4. Line spacing mechanism comprising, in combination with a platen, and a ratchet wheel attached thereto, a pawl support, a pawl carried by said support and held in idle position out of engagement with the ratchet wheel, an arm separate from said support, a lever pivoted to said arm and said support and connected with said pawl, means for moving said arm and lever effectively to move said pawl into engagement with said ratchet wheel and then moving the pawl support and pawl together effectively to rotate the platen, and an adjustable stop for limiting movement of said parts, substantially as specified.

5. Line spacing mechanism comprising, in combination with a platen, and a ratchet wheel attached thereto, a pivoted support, a pawl mounted to slide in said support, an operating lever, lever connections between said operat-

ing lever and said pawl whereby said pawl will be caused to slide into engagement with the ratchet wheel effectively to rotate the platen when said operating lever is operated, and means for first disengaging the pawl from the ratchet wheel and then moving said pawl to its idle position.

[Claims 6 to 10 not printed in the Gazette.]

958,174. PAPER AND PROCESS OF GROOVING SAME. WILLIAM E. RAMAGE and HENRY D. SHAW, Adams, Mass., assignors to Berkshire Hills Paper Co., Adams, Mass. Filed Dec. 6, 1906. Serial No. 346,562.



1. The process of grooving paper consisting in cutting grooves in the web of the paper while on the driers of a Fourdrinier machine and before it has reached the last drier roll, cleaning the grooved portions of loose fibers, passing the then practically dry web through animal sizing, removing the paper and air drying, then passing the paper through calendering rolls to give it a smooth surface.

2. The process of treating paper consisting in cutting grooves in the paper while in a dry condition, cleaning the grooved portions of all fibrous material, passing the paper through animal sizing thereby filling the grooves with sizing and impregnating the paper, removing the paper and thoroughly air drying, then calendering the entire surface of the paper.

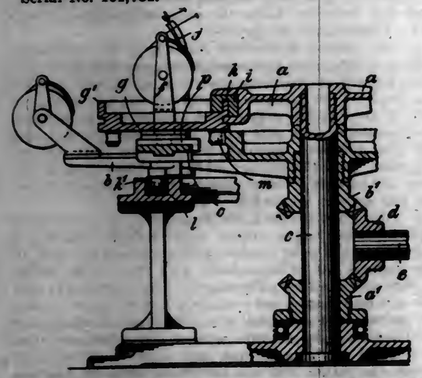
3. As a new article of manufacture, paper having grooves first ground or cut in the pulp while in a hardened state, to form a thinned portion, the sides of said grooves being inclined; the paper being then sized to produce a uniform surface and afterward calendered.

4. The method of making hinged ledger leaves, consisting in grinding or cutting a paper sheet to form a relatively thin hinge section, and in then sizing and calendering the sheet.

5. The herein-described method of making hinged ledger leaves, which consists in forming a paper sheet from pulp, in producing a relatively thin section therein to form the hinge, then sizing the thinned sheet, and finally calendering.

[Claims 6 to 11 not printed in the Gazette.]

958,175. BRAIDING-MACHINE. EUGENE RANKIN, London, England, assignor of one-half to George Spicer, Kingston-on-Thames, England. Filed Nov. 11, 1907. Serial No. 401,731.

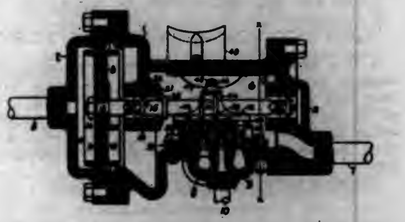


1. A braiding machine comprising inner and outer sets of bobbins rotatable in opposite directions, disks having the inner bobbins mounted thereon, and supporting means engaging a portion of the peripheries of said disks, whereby said disks are adapted to be rotated.

2. A braiding machine comprising inner and outer sets of bobbins rotated in opposite directions, means for passing the thread comprising rotatable inner bobbin disks provided with slots, a supporting plate having curved grooves engaging a portion of the periphery of each disk, a two part cam on the bed of the machine, and thread carrying arms or levers acting on the outer threads and engaging said cam to move the thread carrying arms inward through the slot in the carrier disk and outward to pass the threads as the disks rotate.

3. A braiding machine comprising two spiders or tables rotated in opposite directions and supporting inner and outer sets of bobbin carriers, toothed disks rotatably mounted by a portion of their peripheries and supporting the inner bobbin carriers and a toothed rim on the outer bobbin spider gearing with the teeth on the inner bobbin disks to rotate the said disks, thread arms guiding the threads of the outer bobbins and means for operating the said arms to pass the threads.

958,176. BRAKE-VALVE. WILLIAM K. RANKIN, Philadelphia, Pa., assignor to John E. Reyburn, Philadelphia, Pa. Filed May 11, 1909. Serial No. 495,274.



1. In a brake valve, a case, a diaphragm secured therein which divides the case and forms a train pipe chamber at one side, and an auxiliary reservoir chamber at the opposite side, a removable valve seat, a slide valve thereon, a second slide valve with a connection to the diaphragm, and with means to operate the valve located on the removable seat, and ball bearings for the diaphragm connection.

2. In a brake valve, a case, a diaphragm therein operative in one direction by train pipe pressure, and oppositely by auxiliary reservoir pressure, valves to control a brake, an operative connection from the diaphragm to the valves, and antifriction bearings for the connection.

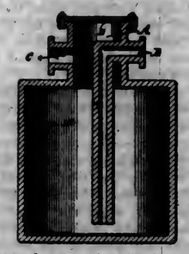
3. In a brake valve, a case, connections therefrom to a main reservoir, a brake cylinder, the atmosphere and an auxiliary reservoir; a valve seat in the case, ports therethrough coinciding with the connections to a main reservoir, a brake cylinder and the atmosphere; a valve mounted and guided on the valve seat, and ports therethrough to connect with the valve seat ports and the interior of the case; a valve mounted and guided on the aforesaid valve with ports adapted to coact with the ports aforesaid; a diaphragm operative by fluid pressure, and means whereby the diaphragm controls the movement of the valves.

4. In a brake valve, a case having chambers with connections to different sources of pneumatic pressure; a diaphragm subject to opposite movements by the pressure in the chambers; a valve operative by a stem from the diaphragm antifriction supports for the stem; a valve operative by the aforesaid valve; connections from the case to pressure means for operating a brake; and ports in the valves for controlling the flow of the pressure.

5. In a brake valve, a case, a fluid pressure controlled diaphragm therein; a valve operative by the diaphragm; frictionless bearings for the operative means from the diaphragm to the valve; a second valve controlled by attachments on the diaphragm controlled valve and having a guiding seat; connections to the case for fluid pressure passage to brake operative devices, and ports in the valves aforesaid controlling the passing of the fluid pressure.

[Claim 6 not printed in the Gazette.]

958,177. PROCESS OF DETINNING. CHARLES J. REED, Philadelphia, Pa. Filed July 20, 1909. Serial No. 508,587.



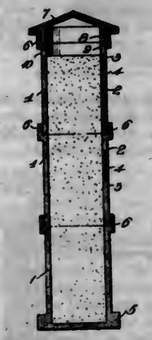
1. The process of separating tin from other metal which consists in pulverizing the tin with a subdivided foreign body, without pulverizing the other metal, removing the unpulverized metals and subsequently removing the tin from the added foreign body as a chlorid.

2. The process of separating tin from other metal, which consists in pulverizing the tin by heat and a subdivided foreign body, without pulverizing the other metal, mechanically removing the unpulverized metals and subsequently removing the tin from the added foreign body in the form of a chlorid.

3. The process of separating tin from other metal which consists in heating and agitating the mixture with a foreign body, to pulverize the tin only, mechanically separating the finely divided constituents of the product from the larger scrap and subsequently removing the tin as a gaseous compound.

4. The process of detinning tinned iron scrap which consists in mixing it with a subdivided foreign body, heating and agitating the mass, mechanically separating the finely divided products from the scrap and subsequently removing the tin as a gaseous compound.

958,178. SILO. JOHN T. RIDGWAY, Hillsboro, Ohio. Filed June 28, 1909. Serial No. 504,788.



A silo of the class described comprising a plurality of hollow upright sections, each provided at its upper end with an annular flange adapted to be arranged in position with the lower end of each section fitting upon the upper end of the next lower section within the flange of the latter, and a removable cover for the upper section, said cover having an annular depending rim to seat upon the top of the top section within the flange of the latter, the rim of the cover forming a continuation of the silo.

958,179. SURGICAL INSTRUMENT. JOHN S. RYDELL, Minneapolis, Minn. Filed Oct. 5, 1908. Serial No. 456,119.

1. An instrument of the class described, having a part adapted to force the peritoneum in front of it, and a speculum shaped lever in the rear of said part and between which lever and said part the cervix uteri is grasped and held the forward portion of peritoneum forcing part being bent transversely toward the plane of said lever.



2. An instrument of the class described, comprising a fixed part having a forward portion provided with a recessed end and bent out of the plane of its rear portion, and a speculum shaped lever arranged to oscillate toward and from said part.

3. An instrument of the class described, comprising a lever having a curved forward portion and a depressed plate in the rear of said curved portion, a second lever having a speculum shaped part between which and said plate the cervix uteri is grasped and held in the rear of said curved portion and means for operating said second lever.

4. An instrument of the class described, comprising a lever having a curved forward portion and a second lever having a gripping surface in the rear of said curved portion and between which levers, the cervix uteri is grasped and held.

5. An instrument of the class described comprising a lever having a forward end adapted to force the peritoneum inward, a plate on said lever in the rear of said forward end, and a second lever having a speculum shaped part, between which and said plate the cervix uteri is grasped and held.

958,180. METHOD OF PRODUCING TANTALUM. JOHANNES SCHILLING, Halensee, near Berlin, Germany, assignor to Siemens & Halske, Aktiengesellschaft, Berlin, Germany, a Corporation of Germany. Filed Oct. 15, 1906. Serial No. 339,016.

1. The herein described method of producing metallic tantalum, which comprises converting an oxygen compound of tantalum into a hydrogenous tantalum and subsequently rendering and keeping the hydrogenous tantalum molten and drawing off the hydrogen which is evolved.

2. The herein described method of producing metallic tantalum, which comprises replacing by hydrogen the oxygen of an oxygen compound of tantalum, and subsequently fusing the hydrogenous tantalum and drawing off the hydrogen thereby evolved.

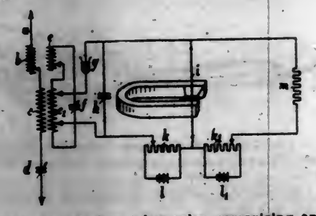
3. The herein described method of producing metallic tantalum from oxygen compounds of tantalum, which comprises enveloping an oxygen compound of tantalum in an atmosphere of hydrogen, heating said compound to a high temperature in said atmosphere and thereby reducing said compound and melting the reduced product and exhausting the space around said product while in its molten condition and thereby freeing said product from gas.

4. The herein described method of producing metallic tantalum from oxygen compounds of tantalum, which comprises enveloping tantalic acid in an atmosphere of hydrogen, heating said acid to a high temperature in said atmosphere and thereby reducing said compound and melting the reduced product and exhausting the space around said product while in its molten condition and thereby freeing said product from gas.

5. The herein described method of producing metallic tantalum from oxygen compounds of tantalum, which comprises enveloping tantalic acid in an atmosphere of hydrogen, heating said acid to a high temperature in an electric furnace and thereby reducing said acid and melting the reduced product and exhausting the space around said product while in its molten condition and thereby freeing said product from gas.

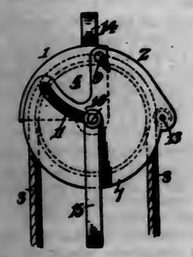
[Claims 6 and 7 not printed in the Gazette.]

958,181. RECEIVER FOR WIRELESS TELEGRAPHY. WILHELM SCHLOMILCH, Berlin, Germany, assignor to Gesellschaft für Drahtlose Telegraphie M. B. H., Berlin, Germany. Filed Aug. 31, 1906. Serial No. 332,839.



A receiver for wireless telegraphy, comprising an oscillating circuit containing a self induction coil, a detector circuit branched off from the self-induction coil, a detector responding to current intensities and a condenser included in said detector circuit, a thread galvanometer parallel to the said condenser and means for rendering the movement of the thread perceptible, substantially as described.

958,182. SAFETY-PULLEY. PETER J. A. SCHNOOR, Holstein, Iowa. Filed June 4, 1909. Serial No. 500,152.



1. A pulley of the class described including a safety casing composed of overlapped automatically closable sections connected at the top of the casing and arranged to be automatically opened by a hoisting rope, and a sheave or wheel provided with an axle carried by one of the sections of the casing, said axle being guided on the other section of the casing.

2. A pulley of the class described including a safety casing comprising inner and outer sections provided with side or cheek plates pivotally connected together at the top, one of the sections or members being provided in its side plates with arcuate slots extending from the center of the casing and arranged concentric with the pivot of the sections or members, and a sheave or wheel having a shaft mounted on the side plates of the other section or member of the casing and operable in the arcuate slots.

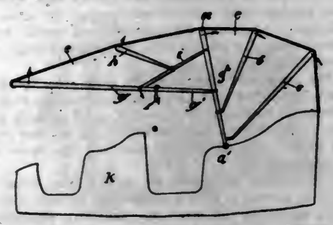
3. A pulley of the class described including a safety casing comprising two sections or members pivoted at the top and composed of spaced side plates and connecting peripheral portions, one of the sections being extended at its peripheral portion to form a housing and provided in its side plates with arcuate slots extending from the center of the casing and arranged concentric with the pivot of the sections or members, a sheave or wheel having a shaft or axle carried by the side plates of the other section or member and operable in the arcuate slots to permit the sections or members of the casing to open and close, and an anti-friction wheel or idler mounted in the said housing.

4. A pulley of the class described including a casing comprising an inner approximately quadrant-shaped section having spaced side plates and a connecting peripheral portion, and an outer substantially circular section or member pivoted at the top to the inner section or member and composed of side plates and a connecting peripheral portion, the side plates being provided with arcuate slots extending outward from the center of the pulley and arranged concentric with the pivot of the sections or members, and a sheave or wheel having an axle carried by the inner section or member of the pulley and operable in the said slots.

5. A pulley of the class described including a safety casing composed of a substantially circular section having opposite cut-away portions, and an approximately quadrant-shaped section pivotally connected at the top of the casing to the circular section and arranged within the same at the cut-away portions thereof, said sections being automatically closable and adapted to be opened by a hoisting rope, and a sheave or wheel carried by one of the sections of the casing and having its shaft or axle located below the pivot of the sections.

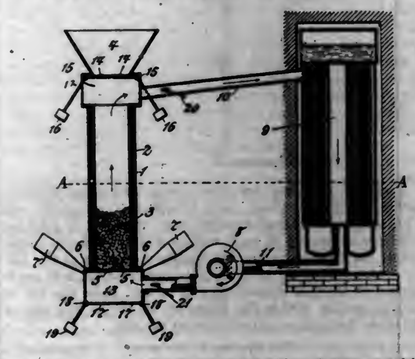
[Claims 6 and 7 not printed in the Gazette.]

958,183. AUTOMOBILE-COVERING. ALBIN SCHREIBER and OTTO MEISTER, Untermhaus, near Gera, Germany. Filed May 5, 1909. Serial No. 494,051.



An automobile hood, comprising a main hoop, an articulated outrigger hoop pivoted thereto and having stop-hinges intermediate its inner and outer members, a covering secured at its front end to the top of the outer member, braces connecting said outer member with the main hoop, and an auxiliary hoop pivoted to said braces intermediate the outrigger hoop and main hoop and supporting the covering back of the outrigger hoop.

958,184. PROCESS FOR QUENCHING COKE. EDUARD SCHULTE, New York, N. Y., assignor to The United Coke and Gas Company, a Corporation of West Virginia. Filed Feb. 7, 1906. Serial No. 299,855.



1. The process of cooling combustible substances, which consists in inclosing them within an air-tight casing containing a cooling medium and inert gases, and circulating said gases in a continuous circuit in contact with the combustible substances and the cooling medium.

2. The process of cooling and quenching combustible substances which consists in inclosing said substances within an air-tight casing containing a cooling medium, excluding the air from said casing, and circulating the gases within said casing in a continuous circuit in contact with the combustible substances and the cooling medium.

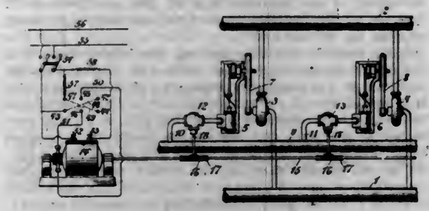
3. The process of cooling and quenching coke, which consists in inserting said coke while in an incandescent state in a casing, excluding the air from said casing, cooling an inert gas, and circulating said gas in contact with the coke.

4. The process of cooling coke, which consists in inserting said coke while in an incandescent state in an air-tight casing containing a cooling medium, and circulating the inert gases resulting from the slight combustion of the coke, in intimate contact with the cooling medium and the coke.

5. The process of cooling coke, which consists in inserting said coke while in an incandescent state in an air-tight chamber containing a cooling medium, forcing the inert gases which are within said casing and resulting from the slight burning of the coke, into contact with the cooling medium, and blowing said gases through the coke, whereby further burning of the coke is prevented and the temperature thereof reduced below the point of ignition.

[Claims 6 and 7 not printed in the Gazette.]

958,185. REGULATOR FOR GAS-PUMPING SYSTEMS. EDUARD SCHULTE, New York, N. Y., assignor to The United Coke and Gas Company, a Corporation of West Virginia. Filed Apr. 3, 1907. Serial No. 366,168.

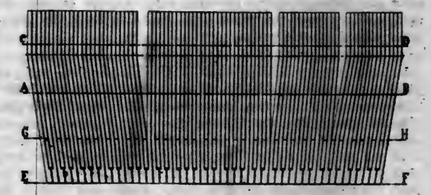


1. In a gas distributing system, and in combination with branch distributing pipes and a common main connected thereto, a blower for each of said branch pipes, a prime mover for each blower, a controlling device for regulating the speed of each prime mover, an electric motor, a shaft driven thereby, separate means connected operatively to said shaft for individually operating each of said controlling devices, and an automatic governing switch operated by pressure from said main for stopping said electric motor and starting the same in one direction or the other, substantially as described.

2. In a gas distributing system, and in combination with branch distributing pipes and a common main connected thereto, a blower for each of said branch pipes, a prime mover for each blower, an independent automatic speed governor for each prime mover adapted to be adjusted for maintaining various speeds, an electric motor, mechanical connections between said motor and the adjusting mechanisms of all of said governors, and an automatic governing switch operated by pressure from said main for stopping said electric motor and starting the same in one direction or the other, substantially as described.

3. In a gas distributing system, and in combination with branch distributing pipes and a common main connected thereto, a blower for each of said branch pipes, a prime mover for each blower, a speed controller for each prime mover, manual operating means for each speed controller, an operating wheel connected to each controller, an electric motor, a driving shaft for all the controllers driven by said motor, a pivoted frame centered on said shaft at each controller, and means on each frame for transmitting motion from said shaft to said operating wheel, all arranged so that by tilting any one of said frames the corresponding controller may be freed to permit manual control thereof, substantially as described.

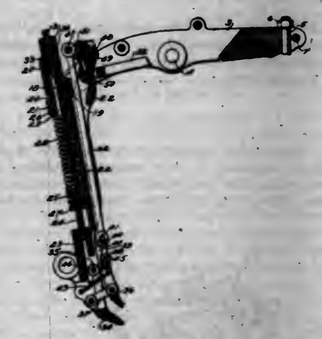
958,186. KEYBOARD FOR KEYED MUSICAL INSTRUMENTS. ALBERT SCHULZ, Barmen, Germany. Filed Apr. 1, 1909. Serial No. 487,171.



1. A piano keyboard comprising a plurality of keys the front edges of which are in a straight line, the visible front portions of said keys diverging from each other backward from the key-fronts in a symmetrical way from the middle of the key-board, for the purpose set forth.

2. A piano keyboard comprising a plurality of keys the front edges of which are in a straight line, the visible front portions of said keys diverging from each other backward from the key-fronts in a symmetrical way from the middle of the keyboard and free from large bends near the junction of the visible and interior parts of the keys, for the purpose set forth.

958,187. PINCER OR GRIPPER MECHANISM FOR LASTING-MACHINES. THOMAS H. SEELY, Boston, Mass., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Original application filed Mar. 12, 1907, Serial No. 362,016. Divided and this application filed Aug. 31, 1908, Serial No. 450,941. Renewed Apr. 4, 1910. Serial No. 553,294.



1. A lasting machine comprising pincer jaws one of which is movable and hung by a link to the other, and a wedging pusher for the movable jaw to move the latter first without and then with and by wedging action.

2. A lasting machine comprising pincers, including fixed and movable jaws, a roller on each, a jaw closing rod having a wedge adapted for entrance between said rollers and connection between said rod and said movable jaw, and independent of said wedge, for imparting closing movement thereto.

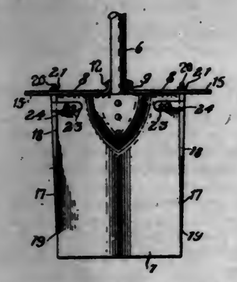
3. In a lasting machine, the combination of two pincer jaws, connections between said jaws whereby they are

relatively movable, a wedge for closing said jaws, and a rod connected to said jaws independent of the wedge to move them simultaneously when they are closed.

4. In a lasting machine, the combination of two pincer jaws, connections between said jaws whereby they are relatively movable, a wedge movable with respect to each of said jaws for closing said jaws, and a rod connected to said jaws independent of the wedge to move them simultaneously when they are closed.

5. In a lasting machine, the combination of two pincer jaws, connections between said jaws to permit them to open and close, a wedge movable with relation to both of said jaws to close the same, and means to move the jaws when closed by the wedge.

958,188. SOD-CUTTING ATTACHMENT FOR SPADES. ANDREW N. SEVERSON, Maple Park, Ill. Filed Sept. 19, 1908. Serial No. 453,785.



1. An attachment for spades comprising a foot rest, and a sod cutter connected therewith.

2. An attachment for spades comprising a foot rest, and a sod cutter connected for longitudinal adjustment therewith.

3. An attachment for spades comprising a channeled foot rest, and a sod cutter connected therewith.

4. An attachment for spades comprising a foot rest provided at one end with means for connecting it with a spade handle, and a sod cutter connected with the foot rest.

5. An attachment for spades comprising a longitudinally channeled foot rest provided at one end with means for attachment with a spade handle, and a sod cutter connected with the foot rest.

[Claims 6 to 10 not printed in the Gazette.]

958,189. WASHING-MACHINE GEARING. HARRISON L. STALEY, Martinsville, Ind., assignor to Staley Manufacturing Company, Martinsville, Ind., a Corporation of Indiana. Filed Dec. 27, 1909. Serial No. 534,943.



1. Gearing including a fixed support, a movable support, a balance-wheel mounted on the fixed support, a rotative gear-wheel on the movable support, a driving gear-wheel mounted on the fixed support and connected operatively with the balance-wheel and removably connected with the rotative gear-wheel, and means for connecting the movable support removably to the fixed support to remove the rotative gear-wheel from connection with the driving gear-wheel.

2. Machine gearing including a fixed support, a movable support hinged to the fixed support, a driving gear-wheel and a lever mounted on the fixed support, a pitman connecting the driving gear-wheel with the lever, a balance-wheel mounted on the fixed support and having a pinion thereon in contact with the driving gear-wheel, a driving shaft rotatable on the movable support, and a gear-wheel on the driving shaft removably connected with the driving gear-wheel.

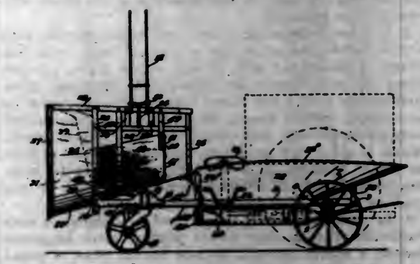
3. Machine gearing including an oscillatory prime mover, a driven shaft mounted rotatively, a balance-wheel mounted rotatively, and relatively dissimilar operating means including a vibratory device operatively connected with the prime mover and the driven shaft and also with the balance-wheel, for converting the oscillatory motion of the prime mover into continuous rotary motion and the continuous rotary motion into oscillatory-rotary motion, to move the driven shaft rotatively forward and backward alternately and farther in one direction than in the reverse direction, and to rotate the balance wheel continuously for steadying the movements of the dissimilar operating means.

4. Machine gearing including a stationary support, a movable support hinged to the stationary support, a lever mounted on the stationary support, a toothed driving gear-wheel mounted rotatably on the stationary support and connected operatively with the lever, a balance-wheel mounted rotatably on the stationary support and operatively connected with the driving gear-wheel, a driving shaft rotative on the movable support and having a toothed gear-wheel secured thereto in contact with the driving gear-wheel and movable from said contact on movement of the movable support, and a driven shaft mounted on the movable support and operatively connected with the driving shaft.

5. In washing machine gearing, the combination of a stationary support, two stud axles and also a fulcrum mounted on the stationary support, a driving gear-wheel mounted on one of the stud-axles and having a crank-pin thereon, a lever mounted on the fulcrum, a pitman connected to the lever and also to the crank-pin, a balance wheel mounted on the other one of the stud axles, a pinion on the balance-wheel and in contact with the driving gear-wheel, a movable support hinged to the stationary support, a driven shaft mounted rotatively on the movable support and connected with the driven shaft, and a gear-wheel secured to the driving shaft in contact with the driving gear-wheel and removable therefrom by the movable support moving on its hinges.

[Claim 6 not printed in the Gazette.]

958,190. GRAIN-SHOCKER. JOHN G. STEWART, Monmouth, Ill. Filed June 7, 1909. Serial No. 500,745.



1. In a grain shocker, the combination with the shocker frame having two longitudinal members and a transverse member, the basket and the supporting caster wheels having vertically directed shanks, of bearings secured to the extending ends of the longitudinal members and adapted to receive the shanks of the caster wheels, said bearings being provided each with three extending arms, one of which in each instance is supplied with a vertically directed set of openings, a set of bolts passing through the openings and secured to the basket and a cross bar passing between the longitudinal members and united with a pair of the arms which extend transversely of the frame, as and for the purpose specified.

2. In a grain shocker, the combination with the shocker frame having longitudinal members, the basket pivotally secured to the frame, and a cross bar located beneath the basket and secured to the longitudinal members of the frame, of lugs carried by the basket, and springs secured to the lugs and adjustably fastened to the cross bar, as and for the purpose specified.

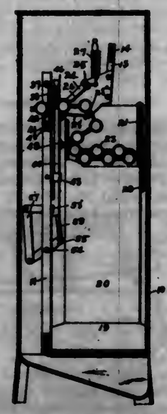
3. In a grain shocker, the combination with the shocker frame having longitudinal members, the basket pivotally secured to the frame, and a cross bar located beneath the basket and secured to the longitudinal members of the frame, said cross bar having a series of openings therein, of lugs secured to the basket and at opposite sides thereof, coiled springs secured permanently to the lugs and having their free ends hooked and adapted to pass within the openings formed in the bar, as and for the purpose specified.

4. In a grain shocker, the combination with the shocker frame having a box secured centrally thereto, of a deck secured to the shocker frame and surrounding two sides of the box, said deck having its outer edge in a higher horizontal plane than the inner edge, adjoining the box, as and for the purpose specified.

5. In a grain shocker, adapted to be used in conjunction with a binding machine, the combination with the binder frame and shocker frame adapted to be secured to the binder frame adjoining the binder delivery tray and the box secured centrally to the frame, of a deck carried by the shocker frame and extending over two sides of the box, said deck being constructed so as to receive at one end the sheaves delivered from the binder tray and direct them to the opposite end, as and for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

958,191. CIGAR-VENDING MACHINE. HERMAN R. STOUDER, Newton, Iowa. Filed Feb. 8, 1909. Serial No. 476,686.



1. In a device of the class described, the combination of two sets of fingers mounted in a stationary support, one of them being yieldingly held toward the other, and two sets of fingers mounted in a manually movable support, one of them being yieldingly held toward the other and being designed to grasp a cigar between them, and a latch device for preventing movement of the yielding fingers on the stationary support, said fingers on the movable support being arranged to carry a cigar through and beyond the fingers on the stationary support and then to withdraw from between the fingers on the stationary support and carry the cigar with them except when the latch device is in position for preventing movement of the fingers on the stationary support.

2. In a device of the class described, the combination of a tilting frame, a stationary frame, cigar gripping fingers carried by the tilting frame, cigar gripping fingers carried by the stationary frame, the fingers on the tilting frame being capable of movement through and beyond the fingers on the stationary frame and of returning to position away from the fingers on the stationary frame, and means for causing the fingers on the stationary frame to grasp and retain a cigar, said means comprising an arm capable of being moved by the coin actuated mechanism, a rod pivoted thereto, a block carried by the rod, a lever pivotally supported and having said rod extended through it and designed to be engaged by said block, a bell-crank lever pivoted to the stationary frame and having a limited sliding connection with said lever, one of the sets of gripping fingers on the stationary frame being capable of tilting movements, and an arm connected with said tilting fingers so arranged that when the bell-crank lever is moved to one position it will be engaged by said arm on the tilting fingers of the stationary frame to thereby hold said fingers in position for gripping a cigar.

3. In a device of the class described, the combination of a tilting frame, a stationary frame, cigar gripping fingers carried by the tilting frame, cigar gripping fingers carried by the stationary frame, the fingers on the tilting frame being capable of movement through and beyond the fingers on the stationary frame and of returning to position away from the fingers on the stationary frame, and means for causing the fingers on the stationary frame to grasp and retain a cigar, said means comprising an arm capable of being moved by the coin actuated mechanism, a rod pivoted thereto, a block carried by the rod, a lever pivotally supported and having said rod extended through it and designed to be engaged by said block, a bell-crank lever pivoted to the stationary frame and having a limited sliding connection with said lever, one of the sets of gripping fingers on the stationary frame being capable of tilting movements, and an arm connected with said tilting fingers so arranged that when the bell-crank lever is moved to one position it will be engaged by said arm on the tilting fingers of the stationary frame to thereby hold said fingers in position for gripping a cigar, said block on the rod being adjustably supported, and said arm connected with the tilting fingers on the stationary frame being adjustable relative to said tilting fingers.

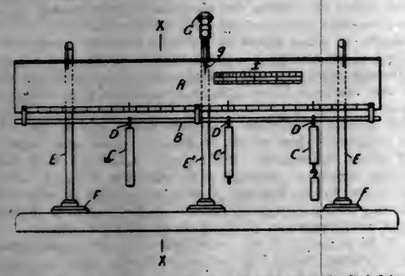
4. In a device of the class described, the combination of a stationary frame, a tilting frame, a shaft capable of manual rotation gripping fingers carried by the tilting frame, a slidingly supported knife blade above the gripping fingers, a slidingly supported knife blade below the gripping fingers, means actuated by the said shaft for moving the knife blades away from each other, spring actuated means for moving them toward each other, a pivoted trip lever arranged to prevent downward movement of the upper knife blade, and a rod connecting said pivoted trip lever with the tilting frame to remove the trip lever from the path of the upper knife blade when the tilting frame has reached a certain point in its movement.

5. In a device of the class described, the combination of a stationary frame, a tilting frame, a shaft capable of manual rotation, gripping fingers carried by the tilting frame, a slidingly supported knife blade above the gripping fingers, a slidingly supported knife blade below the gripping fingers, means for operating said knife blades comprising an arm fixed to the said shaft, a bell-crank lever pivoted to a stationary support, a roller carried by the bell-crank lever to be engaged by said arm, a link pivoted to the other end of the bell-crank lever, a shaft mounted in the stationary frame, a lever fixed to each end of the shaft, an arm fixed to one end of the shaft and connected to said link, means for connecting one end of both levers with the upper knife blade, means for con-

necting the other end of both levers with the lower knife blade, a spring for normally holding the said levers in position with the knife blades adjacent to each other, and a trip device for holding the knife blades at their limit of movement away from each other, and means for releasing said trip device actuated by the tilting frame.

[Claim 6 not printed in the Gazette.]

958,192. DEVICE FOR DETERMINING THE METACENTRIC HEIGHT OF VESSELS. EDWIN TATE and JEREMIAH M. GOODALL, London, England. Filed July 9, 1909. Serial No. 506,787.



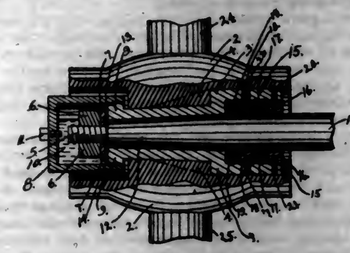
1. A device for determining the metacentric height of a vessel in any condition of loading, comprising a laterally movable beam, the length of which corresponds to the depth of the vessel and the weight of which represents the weight of the vessel in light condition, said beam being marked to scale with the positions of the centers of the cubic capacities of the holds for stowage of cargo etc., and the positions of the transverse metacenter with the deadweights corresponding thereto, detachable weights movably suspended from said beam, said weights representing the deadweight carried by the vessel, side davits serving normally to support the beam, an intermediate davit and a lever carried by said intermediate davit on which said beam is adapted to be balanced, substantially as described.

2. A device for determining the metacentric height of a vessel in any condition of loading, comprising a laterally movable beam, the length of which corresponds to the depth of the vessel and the weight of which represents the weight of the vessel in light condition, said beam being marked to scale with the positions of the centers of the cubic capacities of the holds for stowage of cargo etc., and the positions of the transverse metacenter with the deadweights corresponding thereto, detachable weights movably suspended from said beam, said weights representing the deadweight carried by the vessel, a davit, and a lever carried by said davit on which said beam is adapted to be balanced.

3. A device for determining the metacentric height of a vessel in any condition of loading, comprising a laterally movable beam, the length of which corresponds to the depth of the vessel and the weight of which represents the weight of the vessel in light condition, said beam being marked to scale with the positions of the centers of the cubic capacities of the holds for stowage of cargo etc., and the positions of the transverse metacenter with the deadweights corresponding thereto, detachable weights movably suspended from said beam, said weights representing the deadweight carried by the vessel, a davit, a lever carried by said davit on which said beam is adapted to be balanced, and an indicator on said lever.

958,193. LUBRICANT-RETAINER. JOHN E. THEBAUD, Buffalo, N. Y., assignor of one-half to Harry C. Nash, Buffalo, N. Y. Filed Mar. 15, 1909. Serial No. 483,605.

In a lubricant retainer, rotating and non-rotating members, one surrounding the other and inclosing one end of the inner member, there being one or more annular recesses within and near one end of the outer member, one or more rings adjustably positioned upon the inner member and located in said recesses, the walls of said recesses being lubricant tight and closely enveloping said rings, whereby a lubricant extends from between the bearing surfaces of said members to envelop and contact said ring or rings as a lubricant film, while contacting the inner walls of said recesses, means for supplying the lubricant to



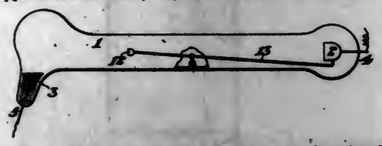
the device, one of said members and said ring or rings cooperating with the other of said members to neutralize by centrifugal action the outward movement of the lubricant from between the members, by maintaining the said lubricant film at the ring or rings, substantially as set forth.

958,194. PROCESS OF MOLDING ARTIFICIAL-STONE BUILDING-BLOCKS. AUGUSTUS O. THOMAS, Kearney, Nebr. Filed Oct. 12, 1907. Serial No. 397,221.



An improvement in making building blocks, which consists in forming the body portion thereof, of a mixture of coarse aggregates made in low plasticity, in forming a facing for the outer side of said body portion of a mixture of finely divided aggregates in high plasticity for furnishing sufficient moisture for the crystallization of said body portion, and in forming on the surface of said facing a thin layer in low plasticity by sifting on such surface powdered stone and cement to stiffen the surface of the facing and prevent the escape of moisture therefrom, substantially as described.

958,195. CONTROLLING DEVICE FOR VAPOR APPARATUS. PERCY H. THOMAS, Montclair, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y., a Corporation of New York. Original application filed Apr. 14, 1904, Serial No. 203,077. Divided and this application filed July 16, 1907. Serial No. 384,106.

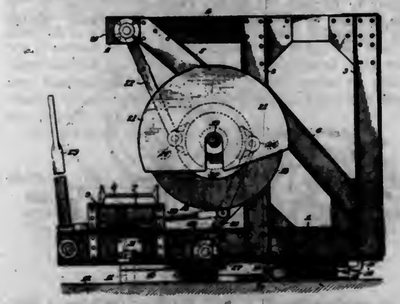


1. In a vapor apparatus having a pair of main electrodes, a supplemental positive electrode located in the light-giving path nearer to the main negative electrode than the positive electrode and a resistance between the said supplemental electrode and the main positive electrode, such resistance being located within the vapor apparatus and consisting of a high resistance filament extending between said supplemental and said main positive electrodes.

2. In a vapor apparatus having a pair of main electrodes, a supplemental positive electrode located in the light-giving path nearer to the negative electrode than the main positive electrode, and a resistance between the said supplemental electrode and the main positive electrode, such resistance being located within the vapor apparatus.

3. In a vapor electric device, the combination with a hermetically sealed completely exhausted container, a vaporizable reconstructing cathode and an anode also therein separated from the cathode by a tubular portion of the container, of a high resistance filament extending partially through said tubular portion and attached to a point of the anode remote from the cathode whereby the resistance of the filament near the point of attachment forces normal current to run upon the anode instead of upon the filament.

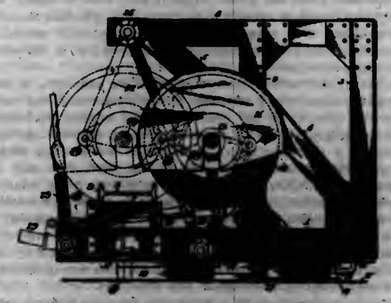
958,196. METAL-CUTTING MACHINE. EDWARD G. TODT, Manitowoc, Wis. Filed Feb. 8, 1909. Serial No. 476,830.



1. In combination in a machine for cutting beams and structural steel work, a base, a framework, a work support and cutting means carried by the framework, a vertical pivot support for the frame adjacent one side thereof, and means for rigidly securing the opposite side of the framework to the base.

2. In combination in a machine for cutting beams and structural steel work, a framework provided with a work support and cutting means, a curved track adjacent one side of the machine, a pivotal support for the framework at the side opposite the track, whereby the frame may be shifted bodily on the track about the pivotal support, and means whereby the framework may be rigidly clamped upon the track.

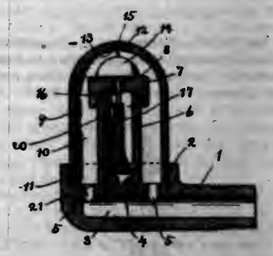
958,197. METAL-CUTTING MACHINE. EDWARD G. TODT, Manitowoc, Wis. Original application filed Feb. 8, 1909, Serial No. 476,830. Divided and this application filed July 26, 1909. Serial No. 509,500.



1. In combination in a metal cutting machine, a supporting frame, a drive shaft, a saw carried thereby, a bearing for the shaft, a supporting link pivoted to the bearing on one side thereof and to the frame above the drive shaft, and a supporting link of substantially the same length as the first link pivoted to the opposite side of the bearing and the frame below the drive shaft, the links being so arranged as to carry the weight of the bearing, drive shaft, and saw and to maintain the movement of the drive shaft upon substantially a horizontal line as it moves back and forth to bring the saw into engagement with the work.

2. In combination in a metal cutting machine, a supporting frame, a drive shaft, a saw carried thereby, a motor carrying the drive shaft, a supporting link pivoted to the motor on one side thereof and to the frame above the drive shaft, and a supporting link pivoted to the opposite side of the motor and to the frame below the drive shaft, the links being arranged so as to carry the weight of the saw, motor and drive shaft and to maintain the movement of the drive shaft upon substantially a horizontal line as it moves back and forth to bring the saw into engagement with the work.

958,198. VENT ATTACHMENT FOR RADIATORS. WILLIAM L. WALTER, Pontiac, Mich., assignor of one-eighth to Isadore Small, Washington, D. C. Filed Jan. 24, 1907, Serial No. 353,829. Renewed Sept. 16, 1909. Serial No. 518,076.



1. A vent attachment for the purpose set forth comprising a tubular neck provided with a plurality of openings, a shell detachably connected to the neck and having a vent opening in the top thereof, and further provided with a convex valve seat, said valve seat arranged at the base of the opening, a receptacle arranged within the shell and supported by the neck, said receptacle, in connection with the shell, forming a chamber communicating with the interior of the neck through the openings formed in the neck, said receptacle having a substantially conical bottom, a cap mounted upon said receptacle and provided with a centrally-disposed opening, a hemispherical valve interposed between the cap and the shell and adapted to have its valved portion to seat on the cap, an upwardly projecting stem carried by the valve and extending through the vent opening, a depending stem carried by the valve and extending through the opening in the cap, and a float connected to the depending stem, arranged within said receptacle, and having the convex lower face, said receptacle adapted to contain an expansible liquid.

2. A vent attachment for the purpose set forth comprising a tubular neck provided with a plurality of openings, a shell detachably connected to the neck and having a vent opening in the top thereof and a valve seat at the base of said opening, a receptacle arranged within the shell and connected with the neck, said receptacle, in connection with the shell, forming a chamber communicating with the interior of the neck through the openings formed in the neck, a cap mounted upon the receptacle and provided with a centrally-disposed opening, a valve interposed between the cap and shell and adapted to engage said seat, an upwardly-projecting stem carried by the valve and extending in the vent opening, a depending stem carried by the valve and extending through the opening in the cap, and a float arranged within said receptacle and connected to the depending stem, said receptacle adapted to contain an expansible liquid.

958,199. CORN AND BUNION PLASTER. EUGENE J. WARD, New York, N. Y. Filed Mar. 1, 1910. Serial No. 546,644.



1. A substantially U-shaped corn plaster having incisions upon the inner edge thereof at points adjacent to the junction of the arms.

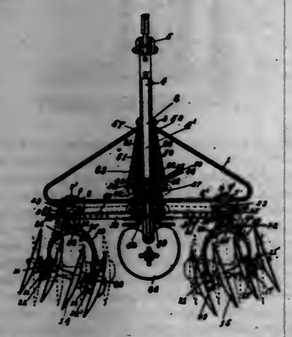
2. A U-shaped corn plaster having exterior V-shaped incisions at the outer edges of the yoke portion.

3. A U-shaped corn plaster having incisions upon the inner edge of the yoke portion and V-shaped cuts upon the outer edge thereof.

4. A U-shaped corn plaster having incisions upon the inner edge of the yoke portion and V-shaped cuts upon the outer edge thereof, the said plaster being of reduced thickness from the yoke portion toward the extremity of the arms.

5. A substantially U-shaped corn plaster having incisions at its inner and outer edges for facilitating and permitting lateral adjustment of the arms toward and away from each other.

958,200. HARROW. FREDERICK C. WARNE and ANDRUS B. MCLEAN, Mansfield, Ohio, assignors to Roderick Lean Manufacturing Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Oct. 22, 1908. Serial No. 458,959.



1. In a harrow, a frame, disk gangs, a pole connected to the frame, notched segments secured to said pole, operating levers pivotally connected to the pole, link levers secured to said pole, link bars to connect said link levers and operating levers, and means to pivotally connect said disk gangs to the link levers, as described and set forth.

2. In a harrow, the combination of a main frame and disk gangs; of yokes attached to said disk gangs, laterally adjustable and tilting frame blocks secured to the main frame, coupling blocks secured to the yokes, links pivotally connected to the frame blocks and coupling blocks and means to impart movement to the disk gangs at the will of the operator, as described and set forth.

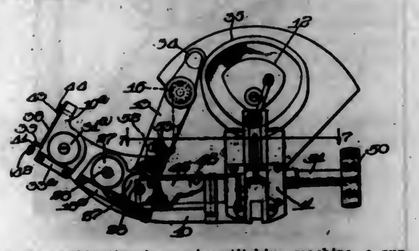
3. In a harrow, a frame substantially triangular in shape, frame blocks secured to said frame and adapted to be laterally adjusted thereon, disk gangs, yokes secured to said disk gangs, coupling blocks secured to said yoke, links pivotally secured to said coupling blocks and frame blocks, substantially as and for the purpose described.

4. In a low frame harrow, a main frame substantially triangular in shape, frame blocks secured thereto, disk gangs, yokes secured to said gangs, coupling blocks secured to said yokes, links pivotally connected to said frame blocks and the coupling blocks whereby the disks can be made to travel at an inclination to the line of draft or parallel therewith, means secured to the main frame and connected to the yokes whereby movement can be imparted to the yokes and disks, substantially as and for the purpose set forth.

5. In a harrow, the combination of a main frame and disk gangs pivotally connected thereto, operating levers connected to said frame, link levers mounted on the lower part of the frame, link bars connecting said link levers and operating levers, yokes attached to the disk gangs, plates secured to the yokes, adjustable shifting bars pivotally connected to said plates and link levers whereby the disks are made to travel in line or at a predetermined inclination to the travel of the main frame at the will of the operator.

[Claims 6 and 7 not printed in the Gazette.]

958,201. WIRE-FEEDING MECHANISM FOR STAPLING-MACHINES. HENRY WEBER, Chicago, Ill., assignor to Latham Machinery Company, Chicago, Ill., a Corporation of Illinois. Filed July 7, 1908. Serial No. 442,268.



1. In combination in a wire stitching machine, a support over which the wire is adapted to be drawn, a gripper member coöperating with the support for holding the wire against retrograde movement and to permit the wire to freely pass in one direction, means for drawing the wire over the support, said means including an extended support for the wire, and spaced gripper members arranged in tandem and coöperating with the support for holding the wire, said gripper members being adapted to simultaneously grip the wire when the said drawing means is moved in one direction, and to simultaneously release the wire when moved in the opposite direction, means for imparting motion to the last said means, and adjustable means for limiting the movement of the said drawing means in one direction.

2. In combination in a wire stitching machine, a wire gripper comprising a member, a wire support on the member and over which the wire is adapted to pass, a support eccentrically mounted on the member, a gripping member mounted upon the said eccentric support and adapted to coöperate with the wire support, and elastic means for shifting the said eccentric to cause the gripping member to grip the wire when the first said member is moved in one direction, and to yield when the member is moved in the opposite direction.

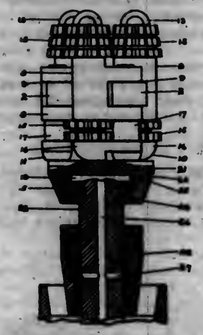
3. In combination in a wire stitching machine, a wire gripper comprising a member, a wire support on the member and over which the wire is adapted to pass, said member being provided with a recess opening through the face thereof, a disk eccentrically mounted within the recess, a gripping member supported by the said disk and coöperating with the said support, said disk being adapted to be shifted by the gripping member to cause the member to grip the wire when the first said member is moved in one direction and to yield when the member is moved in the opposite direction, and elastic means supported by and projecting beyond the periphery of the disk for controlling the movement of the disk in one direction.

4. In combination in a wire stitching machine, a wire gripper comprising a member, a wire support on the member and over which the wire is adapted to pass, said member being provided with a recess opening through the face thereof, a disk eccentrically mounted within the recess, a gripping member supported by the said disk and coöperating with the said support, said disk being adapted to be shifted by the gripping member to cause the member to grip the wire when the first said member is moved in one direction and to yield when the member is moved in the opposite direction, and elastic means supported by and projecting beyond the periphery of the disk for controlling the movement of the disk in one direction, said gripping member being of a diameter greater than the diameter of the said recess to form a closure therefor for inclosing the said disk.

5. In a wire stitching machine, a wire gripper comprising a main supporting member, a wire support on the member and over which the wire is adapted to pass, said member being provided with an open recess, a disk eccentrically mounted within the recess and being of a smaller diameter than the diameter of the recess, a gripping member supported by the disk and coöperating with the wire support, and yielding means supported by the disk and projecting beyond the periphery thereof, said gripping member being adapted to grip the wire when the main supporting member is moved in one direction and to release the wire and shift the disk to cause the said yielding means to be forced into engagement with the wall of the recess to create a tension upon the said yielding means to move the disk in the opposite direction.

[Claims 6 to 10 not printed in the Gazette.]

958,202. BOILER-TUBE CLEANER. HENRY F. WEINLAND, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Aug. 11, 1909. Serial No. 512,442.

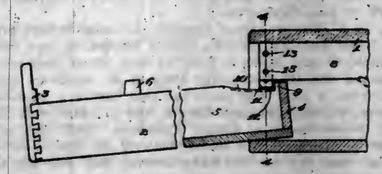


1. The combination with a body having spindles with arms pivoted thereon to swing in planes transverse to the axis of the body, bolts with cutters thereon mounted in said arms and means adapted to swing on said spindles to secure said bolts in place, substantially as described.

2. The combination of a body having transverse projections and a rearwardly extending central portion with a removable support secured thereto, arms, spindles extending forwardly through perforations in said projections and arms on which said arms are adapted to swing, said spindles having heads against which said support abuts, bolts with cutters thereon mounted in said arms, and plates adapted to swing on said spindles and to which said bolts are secured, substantially as described.

[Claim 6 not printed in the Gazette.]

958,203. CABINET-DRAWER. ALBERT T. WEISS, Rochester, N. Y., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed July 8, 1907. Serial No. 382,579.

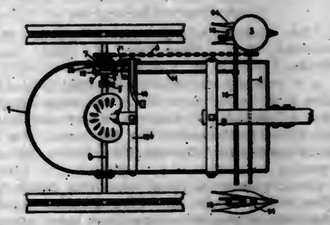


1. The combination with a casing having a drawer chamber therein provided with a guiding strip on its side wall and a sliding drawer operating in the chamber beneath the guiding strip and provided with an abutment on the upper edge of a side wall thereof, of a vertically movable sliding latch arranged beneath the guide strip and between it and the wall of the chamber to normally rest on the upper edge of the side wall of the drawer and to engage the abutment thereon when the drawer is extended, said latch having a vertical slot therein, and a pin extending through the guide strip and casing and through the slot in the latch.

2. The combination with a casing having a drawer chamber and provided with a guiding strip on a lateral wall thereof and a sliding drawer operating in the chamber with the upper edge of one of its side walls adjacent to and in the plane of the guiding strip, of an abutment arranged near the rear end of said side wall of the drawer and a vertically movable latch arranged between the forward end of the guide strip and the casing and adapted to engage the abutment when the drawer is withdrawn.

3. The combination with a casing having a drawer chamber and a sliding drawer operating therein and provided with an abutment near its rear end, of a vertically movable sliding latch arranged on the casing near the forward end of the chamber and coöperating laterally with the abutment on the drawer when the latter is extended, said latch being raised to an inoperative position with respect to the abutment by an endwise engagement with the edge of the drawer through an upward tilting of the forward end of the latter when extended.

958,204. CORN OR COTTON PLANTER. CHANCE WILKS, Little Elm, Tex. Filed July 6, 1909. Serial No. 506,240.

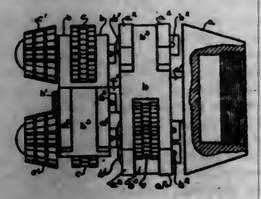


1. In a corn or cotton planter, the combination with the frame and wheels thereof, of seed cans mounted on the frame in front of the wheels, seed boots beneath said

seed cans, a disk loose upon the axle having a plurality of teeth equi-distant upon its rim, and provided with lateral clutch teeth, a clutch stationary upon the axle adapted to engage said clutch teeth upon the disk, a coiled spring upon the axle normally holding said disk against the clutch, a segmental dial, upon which the teeth on the rim of the disk are adapted to serve as pointers, a bell crank with one of whose arms the teeth of said disk are adapted to engage, a swinging link, one of whose extremities is pivotally connected to the other arm of said bell-crank, a transverse rod rotatably mounted on said frame, a rigid arm upon said rod, to which the other extremity of said swinging link is pivotally attached, rigid arms upon said rod at the extremities thereof, hinged doors upon the lower extremities of said boots, and links connecting said doors to said rigid arms.

2. In a corn or cotton planter, the combination with the frame and transporting wheels thereof, of seed cans mounted in said frame in front of each wheel, seed boots arranged beneath each can, adapted to discharge seed therefrom, a disk loose upon the axle having a plurality of teeth equi-distant upon its rim, and provided with lateral clutch teeth, a clutch stationary upon the axle adapted to engage said clutch teeth of the disk, a coiled spring upon the axle normally holding said disk against said clutch, a segmental dial arranged above said disk, upon which the teeth of the disk are adapted to indicate, a lever adapted to be operated periodically by the teeth of the disk in its rotation, and mechanism communicating the motion of said lever to doors upon the lower extremities of said boots to open the same.

958,205. BOILER-TUBE CLEANER. GEORGE H. AINGE, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Feb. 1, 1908. Serial No. 413,801.



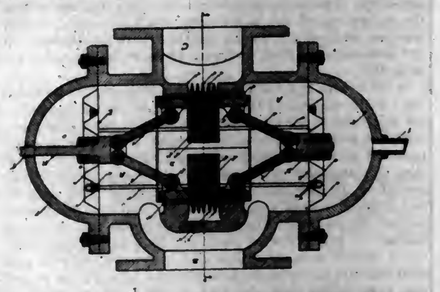
A cleaner head comprising a series of freely swinging pairs of arms, a support having a central post with oppositely extending ears formed integrally therewith for each pair of arms, the respective members of each pair of arms being pivoted at one end to the outer ends of the ears, each arm and the ear to which it is pivoted being arranged to operate one within a bifurcation of the other for a portion of their length the arms being adapted to swing transversely to the axis of the head in the same plane with and on opposite sides of the ears, the free ends of the arms being bifurcated and provided with cutters pivoted therein and cutters on the front side of the forward pair of arms substantially as described.

958,206. REGULATING-VALVE. ALBERT M. ALLEN, Cleveland, Ohio. Filed Jan. 11, 1906. Serial No. 295,594.

1. In a pressure controlled regulating device, the combination with the valve, of actuating means therefor comprising two flexible diaphragms, one of said diaphragms being exposed to the controlling pressure, and a plurality of stays connecting corresponding points on said diaphragms.

2. In a pressure controlled regulating device, the combination with the valve, of actuating means therefor comprising two corrugated diaphragms, one of said diaphragms being exposed to the controlling pressure, and a plurality of stays connecting corresponding corrugations of said diaphragms.

3. In a pressure controlled regulating device, the combination with the valve, of actuating means therefor comprising two diaphragms having concentric corrugations, one of said diaphragms being exposed to the controlling pressure, annular members located in corresponding corrugations of said diaphragms, and stays connecting said annular members.

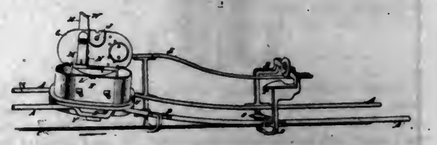


4. In a pressure controlled regulating device, the combination with the valve, of actuating means therefor comprising two corrugated diaphragms, one of said diaphragms being exposed to the controlling pressure, the corrugations of said diaphragms being substantially catenary in their transverse cross section, and a plurality of stays connecting corresponding corrugations of said diaphragms.

5. In a pressure controlled regulating device, the combination with the valve, of actuating means therefor comprising two diaphragms having concentric corrugations, one of said diaphragms being exposed to the controlling pressure, and such corrugations being substantially catenary in their transverse cross section, annular members located in corresponding inturned corrugations of said diaphragms, and stays connecting said annular members.

[Claims 6 to 14 not printed in the Gazette.]

958,207. CABLE-CARRIER APPARATUS. GEORGE A. AMSDEN, Littleton, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed May 8, 1908. Serial No. 431,684.

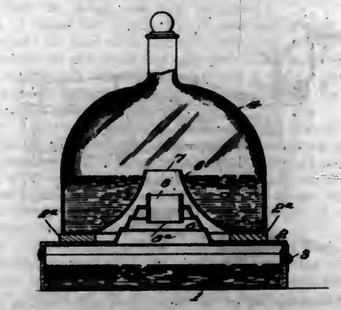


1. In a cable carrier apparatus, a track, carriers having normally open covers adapted to travel on said track, a cable for driving the carriers along said track, despatching means for placing carriers into coöperation with said track and said cable, means adapted to engage and close into locking position the cover of said carriers when placed into coöperation with said track and said cable, and means for automatically locking said covers closed.

2. In a cable carrier apparatus, a track or way, carriers adapted to travel on said track or way, a traveling cable for driving said carriers, means for placing said carriers into coöperation with said track or way and said cable a guide rail adapted to engage and close into locking position the cover of said carriers when placed into coöperation with said track and said cable, and means for automatically locking said covers closed.

3. In a cable carrier apparatus, a track or way, carriers having normally open covers adapted to travel on said track or way, a cable for driving said carriers along said track or way, a despatching station for placing carriers into coöperation with said track and said cable, a guide rail located at said despatching station and adapted to engage and close the covers of carriers despatched, locking means located on said carriers adapted to be operated to lock the covers closed, and means adapted to engage said locking means when said covers are closed to lock the same in closed position.

958,208. FLY-TRAP. ELIAS B. ANDERSON, Rock Falls, Ill. Filed Oct. 13, 1909. Serial No. 522,485.



1. An insect trap comprising a covered receptacle designed to contain water or the like, blocks secured to the cover of said receptacle, shelves also secured to the cover, a bottle adapted to rest on said blocks and formed with a hollow bottom, having an opening therein and surrounding said shelves, the shelves being provided at their top with an opening leading down into the covered receptacle.

2. An insect trap comprising a covered receptacle designed to contain water or the like, a series of pyramidal shelves secured to and rising from the cover of said receptacle, a cylinder supported in the top of said shelves and providing an opening leading down into the receptacle, the cylinder being provided with a depending flange extending into the shelves, and a bottle supported on the cover in a slightly elevated position and formed with a hollow open bottom surrounding the shelves and spaced from and above the opening at the hollow bottom.

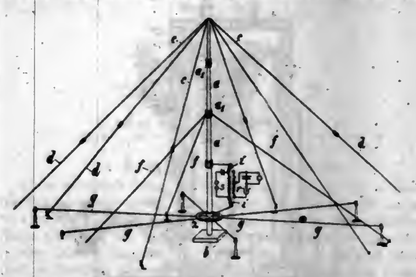
3. An insect trap comprising a covered receptacle designed to contain water or the like, shelves supported on the cover and provided with an opening leading down into the receptacle, and a bottle supported in a slightly elevated position on the cover and formed with a hollow bottom having an opening above and in line with the opening which leads downwardly into the covered receptacle.

4. An insect trap comprising a receptacle provided with a cover adapted to be opened, the cover being formed with an opening extending therethrough, blocks secured to said cover, and a bottle adapted to rest on said blocks and formed with a hollow open bottom, the bottom having an opening therein above the opening in the cover.

958,209. PORTABLE STATION FOR WIRELESS TELEGRAPHY. GEORG VON ARCO, Berlin, Germany. Filed Oct. 31, 1907. Serial No. 400,095.

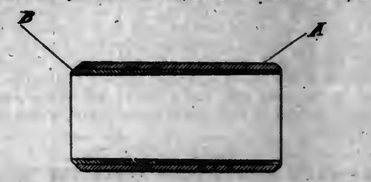
1. A portable station for wireless telegraphy consisting of a metal mast composed of several easily dismountable sections and insulated from the ground, an umbrella-shaped aerial stretched between said mast and several distant points on the ground but insulated from the latter, a counter capacity formed of wires disposed radially around the mast and insulated therefrom and from the ground, and the apparatus for wireless telegraphy interposed between the aerial and the counter capacity.

2. A portable station for wireless telegraphy consisting of a metal mast composed of several easily dismountable sections, and insulated from the ground, an umbrella-shaped aerial stretched between said mast and several distant points on the ground but insulated from the latter, a counter capacity comprising a conductivity ring surrounding said mast, insulators fastened to said ring and to said mast holding said ring concentrically with the



mast and wires attached to said ring and radiating therefrom and fastened at their free ends to the ground but insulated therefrom, the apparatus for wireless telegraphy interposed between the aerial and said counter capacity.

958,210. DUPLICATE SOUND-RECORD. JONAS W. AYLSWORTH, East Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Nov. 7, 1906. Serial No. 342,818.



1. A composite record, comprising an outer layer of a hard, tough, but plastic material when hot, and an interior layer of a composition reamable when hot, substantially as and for the purposes set forth.

2. A composite record, comprising an outer layer of a hard, tough, but plastic material when hot, and an interior layer of a composition reamable when hot, the two layers being intimately welded together, substantially as and for the purposes set forth.

3. A composite record, comprising an outer layer formed of an asphalt composition, and an inner layer formed of a composition reamable when hot, substantially as and for the purposes set forth.

4. A composite record, comprising an outer layer formed of an asphalt composition, and an inner layer formed of a composition reamable when hot, the two layers being intimately welded together, substantially as and for the purposes set forth.

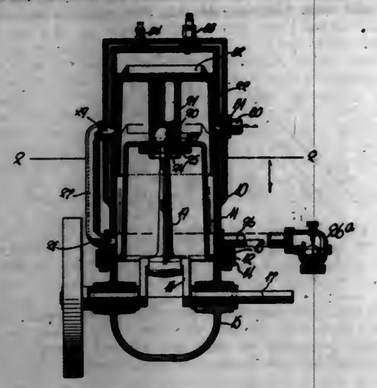
5. A composite record, comprising an outer layer of an asphalt composition, and an inner layer employing stearate of soda, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

958,211. GAS-ENGINE. JACOB A. BAAB, New York, N. Y. Filed May 21, 1908. Serial No. 434,011.

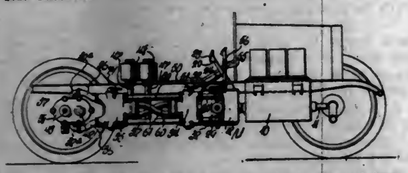
1. In a gas engine, the combination with a crank case, a shaft and piston operative therein, an outwardly turned flange on said crank case, an upwardly extending shell-member having an outwardly turned flange mounted upon the outwardly turned flange of said crank case, said shell-member having a flattened top, of a cylinder having an outwardly turned flange mounted upon the outwardly turned flange of said shell member, a contracted chamber between said shell-member and said cylinder, a piston operative within said cylinder and adapted to compress gas in said contracted chamber, and a downwardly projecting

stem formed within said cylinder and adapted to slide through an aperture in the flattened top of said shell-member, said stem rotatably secured to said piston rod.



2. In a gas engine, the combination with a cylinder, outwardly turned flanges on the edge of said cylinder, a crank case, outwardly turned flanges on the edge of said crank case, and a shell member having outwardly turned flanges interposed between said crank case and said cylinder, said shell member having a flat top with an aperture therein, of a piston operative between said shell member and said cylinder, an integral, cylindrical extension depending from said piston, said extension adapted to slide through the aperture in the top of said shell member and having a recess in its lower end, and a piston rod having one end loosely secured in said recess whereby said piston is free to rotate.

958,212. TRANSMISSION APPARATUS. JACOB A. BAAB, New York, N. Y., assignor of one-half to Daniel Rohrer, New York, N. Y. Filed Aug. 28, 1908. Serial No. 450,706.



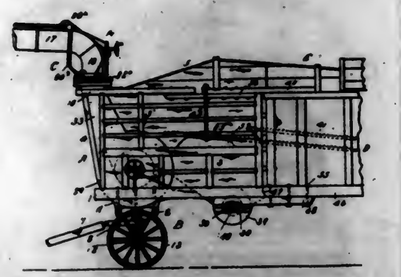
1. An apparatus of the kind described, comprising a pump, a primary motor operating the pump, a secondary motor detachably coupled on its driving shaft or axle, and a system of circulation pipes connecting the secondary motor and the pump.

2. An apparatus of the kind described, comprising a pump, a motor for driving the pump, a shaft or axle having a yoke connecting its adjacent parts, a secondary motor detachably coupled to the ends of the shaft or axle, and circulation pipes connecting the secondary motor and the pump.

3. In apparatus of the character described, an engine, a pump driven by said engine, an axle, a motor mounted upon the axle, and pipes connecting said pump to said motor, said pump having opposed cylinders, pistons therein, a block on the shaft of said engine, an eccentric slidable on said block, two straps on said eccentric and arms connecting one strap with each piston.

4. In an apparatus of the character described, the combination with an engine, a pump driven by said engine, an axle, a motor pump mounted upon the axle, pipes connecting said pump to said motor, said pump having opposed cylinders, pistons therein, a block on the shaft of said engine, an eccentric slidable on said block, and means connecting said eccentric and said pistons, of means for sliding said block within said eccentric, a foot lever for controlling said means, valves in the pipe for controlling the flow of liquid therethrough, and a foot lever controlling said valves.

958,213. THRESHING-MACHINE FRAME. JOHN B. BARTHOLOMEW, Peoria, Ill., assignor, by mesne assignments, to Avery Company, a Corporation of Illinois. Filed July 24, 1907. Serial No. 385,369.



1. The combination of the frame-work and housing, the pneumatic elevator and stacker carried thereby, the laterally oscillating fore-carriage under the front end of said elevator and stacker frame, the draft devices connected to said fore-carriage and extending forward from the elevator and stacker, the frame and housing for the thresher and separator having an adjustable housing section, the carriage or truck for the rear end thereof, the front end of the thresher and separator frame being adapted to be detachably connected to the elevator and stacker frame and also adapted to be detachably connected to a fore-carriage at the front end thereof, the stacker frame and housing and the thresher and separator frame and housing having over-lapping parts adapted to be rigidly secured together, substantially as set forth.

2. The combination of the frame and housing for the thresher and separator, adapted to support the supplemental casing or housing, the reciprocating grain table projecting forward from said thresher frame and housing, the frame or housing for the pneumatic elevator and stacker adapted to overlap and to be rigidly secured to the thresher frame and housing and to inclose the forward end of the reciprocating table, the shaker links supported from the thresher frame and adapted to be supported outside of the frame and housing for the pneumatic elevator and stacker, while engaging with and supporting the said reciprocating table, substantially as set forth.

3. The combination of the frame and housing for the thresher and separator having the forward extending bars, the forward end of said frame and housing being adapted to support a supplemental housing section, the frame and housing for the pneumatic elevator and stacker having bars or beams and adapted to be joined to the forward end of the thresher frame and housing, and having rearward extending beams or bars overlapping the same, the aforesaid beams being adapted to overlap and to be bolted to the beams or bars and the beams or bars being adapted to be rigidly secured to the thresher frame, and the vibrating hanger links mounted on the overlapping bars lying outside of the stacker frame and housing.

958,214. SPOOL FOR MUSIC-SHEETS. WILLIAM F. BAYER, Buffalo, N. Y., assignor to Chase & Baker Company, Buffalo, N. Y., a Corporation of New York. Filed Aug. 21, 1908. Serial No. 449,656.

1. A music roll provided at its end with a stud, a cap mounted on said stud and held against outward displacement thereon, a roll-flange mounted on said stud on the inner side of said cap and provided in its outer side with a recess which receives the cap, and a spring arranged in said recess and said cap and bearing at its ends against the cap and the bottom of the recess.



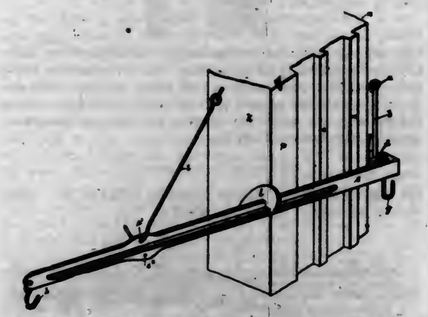
2. A music roll provided at its end with a stud, a sleeve mounted on said stud and having an abutment, a flange slidably mounted on the sleeve, and a spring interposed between the flange and said abutment.

3. A music roll provided at its end with a stud, a sleeve mounted on said stud and provided with a cap, a flange mounted on said stud and provided in its outer side with a recess which receives said cap, and a spring arranged in said recess and bearing at its ends against the cap and the bottom of the recess.

4. A music roll provided at its end with a stud, a sleeve mounted on said stud and having a projecting abutment at its outer end, a flange mounted on said stud and having the outer portion of its bore enlarged, forming a shoulder therein, and a spring surrounding said sleeve within the enlargement of the flange-bore and bearing at its ends against said shoulder and said abutment.

5. A music roll provided at its end with a stud, a sleeve mounted on said stud and having a projecting abutment-flange, a roll-flange mounted on said stud and having the outer portion of its bore enlarged, forming a shoulder, a collar surrounding said sleeve and bearing against said abutment-flange, said collar having a rim which extends into the enlargement of said flange-bore, and a spring applied to said sleeve between said collar and said shoulder.

958,215. CRANE FOR CLOTHES-LINE PULLEYS. LUDWIG F. BECKER, Brooklyn, N. Y. Filed Dec. 17, 1908. Serial No. 468,082.



1. In a window crane, the combination of a vertical guide, a block pivotally and slidably mounted on said guide, a line supporting arm pivotally attached to said block and means to hold said arm in a horizontal position.

2. In a window crane, the combination of a vertical guide, a block pivotally and slidably mounted on said guide, a line supporting arm pivotally attached to said block, a hanger to hold said arm in a horizontal position and means at the base of said vertical guide to prevent rotation of the block when in its lowest position, said block being freely rotatable when raised above said means.

958,216. ELECTRIC-LAMP SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 11, 1907. Serial No. 367,656.

1. In a lamp-holding device, the combination of a base having upon one of its sides a rib in the form of a ring having an opening, a lamp-receiving socket upon said rib, a contact plate upon the same side of the base, said contact plate projecting through the opening in said rib and arranged to be engaged by the center terminal of a lamp, and a binding screw on said plate, said binding screw being accessible through the opening in said rib.



2. In a lamp-holding device, the combination of a base having upon one of its sides means for securing the same to a suitable support, a rib having the form of an incomplete circle on the opposite side of said base, a lamp-receiving socket on said rib, a plate arranged on said base and projecting through the opening in the rib and forming the center contact for the socket, and means for electrically connecting a conductor to said socket, a binding screw carried by said plate and accessible from the front of the device, and a finishing cap normally concealing said screw.

3. In a lamp-holding device, the combination of a base having upon one of its sides means for securing the same to a suitable support, a rib in the form of an incomplete circle on the opposite side of said base, a plate secured to said rib, a lamp-receiving socket secured to said plate, means for making electrical connection between a supply wire and said plate, a second plate secured to the lower side of said base and extending through the opening in the rib and forming a contact for said socket, and suitable means for making electrical connection between another supply wire and said last-named plate.

4. In a lamp socket, the combination of a base having upon one of its sides a center contact member, a projection on the same side of the base having an opening through which said member extends, a lamp-receiving socket supported on said projection beyond the plane of said center contact-member, a binding screw carried by said center contact member and accessible from the front of the device through said opening.

5. In a lamp socket, the combination of a base having upon one of its sides an annular rib, said rib having a portion thereof cut away, a lamp-receiving socket having an outturned flange, a curved plate clamping said flange between itself and said rib, a binding terminal on said plate, a center contact plate extending through said cut-away portion of said rib, a binding screw on said center contact plate, and a finishing cap made removable to expose said binding screw.

[Claim 6 not printed in the Gazette.]

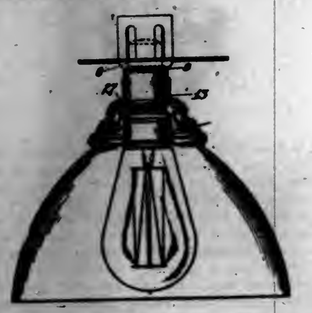
958,217. EXTENSION-SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed July 23, 1909. Serial No. 509,185.

1. The combination of a base having a passage extending longitudinally therethrough, a strip extending through said passage and having its ends bent over at a right angle with its body, a threaded contact extending around said base, and a threaded receptacle shell supported upon the lower end of said base and electrically connected with said threaded contact.

2. The combination of an insulating base having a longitudinally extending aperture, a threaded contact surrounding said base, a threaded receptacle shell supported at the lower end of said base and in electrical connection with said threaded contact, and a conducting strip extending through the longitudinally extending aperture of the base, the upper end of said strip serving as a center contact, the lower end of said strip being bent over upon the lower end of the base and serving as a center lamp terminal engaging contact.

3. The combination of a base, a threaded contact shell extending around said base, a threaded receptacle shell

at the lower end of said base, said first-named shell being extended into said second-named shell and expanded therein to secure said shells together, and a conducting strip extending through said base for conducting current to the center terminal of a lamp.

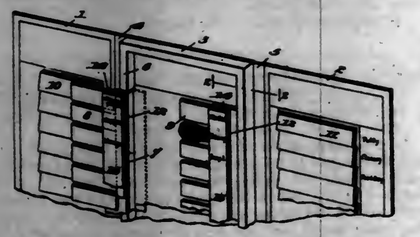


4. The combination of a base having a shoulder near its lower end, a threaded contact shell extending around said base, a threaded receptacle shell below said base, said first-named shell having a portion of its body drawn in under said shoulder and thereafter expanded within said second-named shell, and means extending through said base for conducting current to the center terminal of a lamp.

5. The combination of a base having a shoulder near its lower end, a contact shell surrounding said base, a receptacle shell below said base and having an inturned flange at its upper end, an insulating shell surrounding said receptacle shell, a casing shell surrounding said insulating shell, said insulating shell and casing shell having each an inturned flange extending under the shoulder of the base, said contact shell being drawn in under said shoulder and thereafter expanded within said receptacle shell and thereby securing all of said shells together and electrically connecting said contact and receptacle shells.

[Claims 6 to 12 not printed in the Gazette.]

958,218. DISPLAY OR COLOR CARD. GEORGE BENZE, New York, N. Y., assignor to A. Wimpfheimer & Bro., New York, N. Y., a Firm. Original application filed June 19, 1909, Serial No. 503,172. Divided and this application filed Jan. 13, 1910. Serial No. 537,942.



1. In an article of the class described, a backing having a tray formed therein, and flaps movably secured thereto, strips secured within the tray, a series of fabric samples disposed on the inner faces of the first mentioned flaps and a series of fabric samples secured to said strips.

2. An article of the class described comprising a section having a tray, end flaps movably secured to opposite edges thereof, strips movably secured within the tray, a series of fabric samples disposed on the inner faces of the first mentioned flaps and a series of fabric samples secured to said strips.

3. In an article of the class described, a central section having a tray, end flaps movably secured thereto, strips hinged within the tray, strips secured to said strips upon opposite sides thereof and overlapping the edge of the same and fabric samples secured between the overlapped edges of said strips.

958,219. ROD-SUPPORTING DEVICE. CHARLES C. BLAKE, Brookline, Mass. Filed Dec. 14, 1908. Serial No. 467,380.



1. A rod-supporting device made from narrow resilient metal bent into two substantially parallel portions having a midway flexible spring-like portion, one of the parallel portions being perforated to receive the end of a rod and adapted to be moved toward the opposite parallel portion, with a foot portion whereby the device may be secured to a support.

2. A rod-supporting device made from narrow resilient metal bent into two substantially parallel portions having a midway spring-like portion, one of the parallel portions being perforated to receive the end of a rod, and adapted to be moved toward the opposite parallel portion, with a foot portion perforated to receive a screw and provided with one or more tangs, as and for the purpose set forth.

3. A rod-supporting device made from thin resilient ribbon metal bent into two substantially parallel portions, having a midway circular spring portion, one of the parallel portions being perforated to receive the end of a rod, and adapted to be sprung toward the opposite parallel portion, the other parallel portion having abutting means for the end of the rod, with a foot portion whereby the device may be secured to a support.

4. A rod-supporting device made from a strip of resilient metal bent upon itself so that its ends approach each other, a circular spring portion midway of the ends, adjacent to which is a foot portion, the latter portion being perforated to receive a screw and being provided with one or more tangs, one of said ends being perforated to receive the end of a rod, while the opposite end has a protuberance opposite the said perforation.

958,220. CANNON. EDWIN J. BLOOD, Chicago, Ill. Filed July 26, 1909. Serial No. 509,515.



1. A cannon consisting of a barrel, a series of spools mounted thereon, each spool consisting of two tubular body members fitted one within the other and having at opposite ends an outwardly extended flange, reinforcing material surrounding the outer body member, and means to secure said spools together and on the barrel.

2. A cannon consisting of a barrel, a series of spools mounted thereon, each spool consisting of two tubular body members fitted one within the other and having at opposite ends an outwardly extended flange, reinforcing material surrounding the outer body member, longitudinally extended strengthening members located on the outer surface of the reinforcing material and in engagement with the flanges of the spools, and means at the ends of the strengthening members to secure them, the spools and barrels together.

3. A cannon consisting of a barrel, a series of spools mounted thereon, each spool consisting of two tubular body members fitted one within the other and having at opposite ends an outwardly extended flange, a series of disks located on the outer body member of each spool and presenting their edges to its outer surface, and means to secure said spools together and on the barrel.

4. A cannon consisting of an inner barrel, an outer barrel surrounding the same and externally tapered, a series of spools mounted on the outer barrel, each spool consisting of two tubular body members fitted one within the other and having at opposite ends an outwardly extended flange, reinforcing material surrounding the outer body member, and means to secure said spools together on the outer barrel.

5. A cannon consisting of an inner barrel having its front portion externally screw-threaded, an outer barrel surrounding the same and externally tapered, a series of spools mounted on the outer barrel, each spool consisting of two tubular body members fitted one within the other and having at opposite ends an outwardly extended flange, reinforcing means surrounding the outer body member, a nut engaging the front portion of the inner barrel, a flanged collar on said nut, longitudinally extended strengthening members located on the outer surface of the reinforcing material and in engagement with the flanges of the spools and the flange of said collar, means at the rear end of the strengthening members and barrels to secure said members, spools, and barrels together.

[Claim 6 not printed in the Gazette.]

958,221. BOTTLE-STOPPER. GEORGE E. BOLTON, Chicago, Ill. Filed June 1, 1909. Serial No. 499,387.

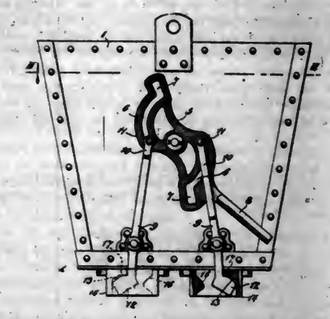


In combination, an open-ended glass receptacle, a plurality of narrow integral lugs projecting laterally from the receptacle in the plane of the open end, said end being countersunk about the opening, a compressible filler lying within the countersunk portion, a cover overlying the filler and lying wholly above the open end of the receptacle, said cover having a narrow depending flange, said flange being cut away throughout its entire width so as to form openings to receive said lugs, and each of the openings in the flange having a lateral branch into which one of the lugs may pass when the cover is turned so as to lock the cover in place, the parts being so proportioned that the filler must be compressed until the cover engages with the surrounding portion of the receptacle before the cover can be turned sufficiently to bring the lugs into the aforesaid branch openings.

958,222. DUMP-BUCKET. GEORGE H. BUDKE, Nanuet, N. Y. Filed June 10, 1909. Serial No. 501,232.

1. A dump bucket comprising the body of the bucket, a bottom hinged thereto, a locking lever pivoted on the bucket and provided with a locking dog at its lower end, a latch socket connected to the bottom and arranged to receive the locking dog, an operating cam mounted on the bucket and formed with an eccentric cam slot with a radial slot extension at one end of the cam slot, a pin carried by the operating lever and engaging said slot, and means whereby when the locking dog is released from the latch socket the upper end of the locking lever will be thrown into the radial slot extension of the cam slot to retain the locking dog in its released position.

2. A dump bucket comprising the bucket proper, a swinging bottom therefor, a locking lever provided with a locking dog at its lower end, a latch socket connected to the bottom, means whereby when the bottom is brought to its closed position the locking dog will be thrown into its latched position, means whereby when the bottom is released the locking dog will be thrown into its released position and latched in such position until the bottom is again brought to its closed position, and means on the bottom to engage the locking dog to throw it to its locked position when the bottom is closed.



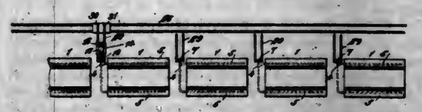
3. A dump bucket comprising a bucket proper, a bottom therefor, a pivoted operating cam mounted on the front of the bucket, said cam being formed with diametrically arranged curved eccentric slots, each slot having a radial outwardly extending extension at the outer end of the curved part, a pair of locking levers pivoted near the lower edge of the front of the bucket, the upper ends of said levers engaging the cam slots, a locking dog formed on the lower end of each lever below its pivot, and a latch socket for each dog connected to the bottom of the bucket at the front edge thereof.

4. A dump bucket comprising a bucket proper, a bottom therefor, a pivoted operating cam mounted on the front of the bucket, said cam being formed with diametrically arranged curved eccentric slots, each slot having a radial outwardly extending extension at the outer end of the curved part, a pair of locking levers pivoted near the lower edge of the front of the bucket, the upper ends of said levers engaging the cam slots, a locking dog formed on the lower end of each lever below its pivot, a latch socket for each dog connected to the bottom of the bucket at the front edge thereof, each of said sockets being formed with a cam surface to engage the locking dog and throw it to its locked position and its locking dog being formed with a cam surface to throw the locking dog to its full release position.

5. A dump bucket comprising the bucket proper, a bottom therefor, a locking lever pivoted on the bucket, an operating cam mounted on the bucket and adapted to engage the upper end of the locking lever to throw it to its released position, a locking dog formed on the lower end of the locking lever, a latch socket secured to the bottom of the bucket and adapted to receive the locking dog, means within the latch socket to direct the locking dog to its latched position, means carried by the locking dog to throw said dog to its extreme released position, and means to hold said dog in said released position and in position to be engaged by the latch socket.

[Claim 6 not printed in the Gazette.]

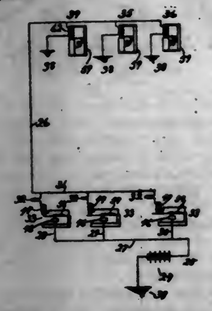
958,223. PORTABLE BLOWER FOR BRICK-KILNS. EDWARD H. CALLAWAY, Westfield, N. J., assignor to The American Clay Machinery Company, Bucyrus, Ohio, and New York, N. Y., a Corporation of Ohio. Filed June 24, 1908. Serial No. 440,115.



The hereindescribed system of providing a forced draft for brick-kilns, which system consists of the combination

with a series of brick-kilns provided with air-receiving ducts, a main railroad track extending alongside of said series, a series of lateral spur-tracks connecting the main track with the receiving end of each duct, a railroad flat-car or flat-topped truck provided with car wheels adapted to travel on said main-track, a pair of transverse tracks on top of said track and adapted to register with each of said spur tracks, a portable blower device carrying its own power plant mounted on wheels and adapted to roll on and off said spur-tracks and truck-tracks, and a detachable pipe adapted to form a connection between the blower and the receiving or inlet end of said air duct.

958,224. ELECTRIC SIGNALING APPARATUS. LOUIS W. CARROLL, Anamosa, Iowa. Filed July 16, 1906. Serial No. 326,430.



1. In combination with an electric circuit having a generator, a variable resistance device, and a transmitting and a receiving electro-magnet, a tuned vibratile armature for the transmitting electro-magnet operatively connected to the variable resistance device, and a vibratile armature for the receiving electro-magnet tuned in harmony with the first-named armature.

2. In combination with an electric circuit having a generator, a variable resistance device, and a transmitting and a receiving electro-magnet, a tuned vibratile armature for the transmitting electro-magnet operatively connected to the variable resistance device, a vibratile armature for the receiving electro-magnet tuned in harmony with the first-named armature, and a resonator for the second-named armature.

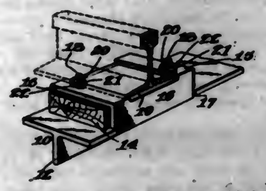
3. In combination, a generator, a transmitting and a receiving electro-magnet served by the generator, a variable resistance device in circuit with the coils of the transmitting electro-magnet, a tuned vibratile armature for the transmitting electro-magnet operatively connected to the variable resistance device, and a vibratile armature for the receiving electro-magnet tuned in harmony with the first-named armature.

4. In combination, a generator, a plurality of transmitting and receiving electro-magnets served by the generator, a variable resistance device in circuit with the coils of each of the transmitting electro-magnets, a tuned vibratile armature for each of the transmitting electro-magnets operatively connected to the variable resistance device in circuit with the coils of such magnet, the armatures being of differing pitch, and a vibratile armature for each of the receiving electro-magnets, each one of such armatures being tuned in harmony with a separate one of the armatures of the transmitting electro-magnets.

5. In combination, a primary electric circuit having a generator, a variable resistance device, and an electro-magnet, a tuned vibratile armature for the electro-magnet operatively connected with the variable resistance device, a secondary circuit having an electro-magnet, and a vibratile armature for the last-named electro-magnet tuned in harmony with the first-named armature.

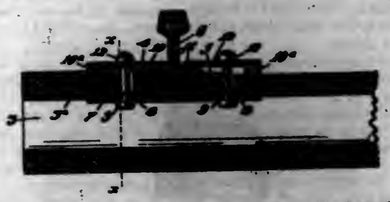
[Claims 6 to 21 not printed in the Gazette.]

958,225. RAILWAY-TIE AND FASTENING. WILLIAM E. CLARK, Charlestown, N. H. Filed Sept. 22, 1909. Serial No. 518,939.



A tie-body having a top flange, provided in opposite edges with angular notches, a wooden rail-bearing cushion arranged flatly on top of said body, an inverted U-shaped chair-plate placed astride said cushion and having its side legs registering within said notches, the said chair plate being formed in its top side with a depression constituting a metallic rail seat with shoulders at the sides, and rail-fastenings having members extending through the chair plate, the cushion, and the flange of the tie-body.

958,226. RAILWAY-TIE. JOSEPH M. CLEARY, San Francisco, Cal. Filed July 26, 1909. Serial No. 509,485.



1. The combination of a tubular railway tie formed of plastic material and splintered overlapped wood fiber, said tie having the interior top of the tubular surface flattened, an offset or shoulder upon the exterior and a metal angle plate fitting said shoulder to receive a rail, bolts passing through the tie having heads abutting against the inner flattened portion of the tube, and locking plates resting upon the rail flanges, and through which the bolts pass.

2. The combination of a tubular concrete and wood fiber tie having a shoulder on the upper surface, and an angle plate fitting thereon, an interior flattened slotted surface to the tube, slots passing through the tie, plates having lugs or extensions at the outer ends, having the inner ends beveled and adapted to press upon the rail flanges, and having openings intermediate of the ends through which the bolts pass to secure the plates by elastic pressure.

958,227. HEATING UTENSIL. KEROS L. COMES, Danbury, Conn. Filed Jan. 14, 1910. Serial No. 538,053.



1. A heating utensil comprising a hollow body having perforations extending through the side walls thereof, and a plurality of pins extending freely through said perforations and declined toward the axial center of said body and capable of adjustment inside and outside of the latter.

2. A heating utensil comprising a hollow body having perforations extending through the side walls thereof, and a plurality of pins which are radially disposed and extend freely through said perforations in planes that are declined toward the axial center of said body, said pins capable of adjustment inside and outside said body.

3. A heating utensil comprising an annular body having perforations extending through the side walls thereof, and a plurality of inclined radially disposed pins which extend freely through said perforations, the inclination of said pins being such that when they are forced inwardly their inner ends will converge in planes that gradually approach the bottom plane of said body.

958,228. STORE-FRONT AND SHOW-CASE CONSTRUCTION. HENRY S. CONROW, Wichita, Kans. Filed Aug. 16, 1909. Serial No. 513,012.



1. A device for store front and show case constructions, comprising an outer metal plate having its side edges bent inwardly at a sharp angle to its body portion to form lips and having rounded contact edges at the crotch of the angle, an inner metal plate having its side edges bent to form rounded contact edges, the last named edges being diametrically opposed to the first named edges, a clip for engaging the lips on the outer plate, and means for connecting said clip and the inner plate for adjusting the same toward each other, whereby the abutting edges of glass plates may be clamped between the rounded edges of said inner and outer plates and said plates disposed in the same vertical plane or at an angle to each other.

2. A device for store front and show case constructions, comprising an outer metal plate having its side edges bent inwardly to form lips, a clip for engaging said lips, an inner metal plate bent upon itself and having its edges turned inwardly, means engaging said clip and said inner plate for clamping said plates on interposed glass plates, and a post adapted to enter the ends of said inner plate and to be secured to the construction to hold the device firmly in position.

958,229. SPRINKLER. CHARLES C. CORLEW, Fresno, Cal., assignor to Gladys Corlew, Fresno, Cal. Filed June 28, 1909. Serial No. 504,660.

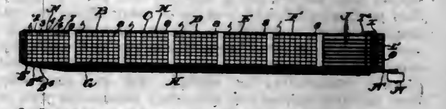


1. A sprinkler comprising a nozzle, an adjustable spray lip on said nozzle, a side flange on said lip, the side opposite the flange being upturned forming a channel between said flange and said upturned portion.

2. A sprinkler comprising a nozzle having flanges spaced apart a turnable spring clamp turnably disposed between said flanges, projecting lips on said clamp, a bolt projecting through said lips and having an elongated head, one of said lips turning back over said head, a spray lip on said bolt, and a wing nut on said bolt adapted to clamp all of said lips together.

958,230. SORTING-TABLE. JAMES T. COWLEY and EDWARD G. THOMAS, Boston, Mass., assignors to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed Aug. 9, 1906. Serial No. 329,825.

1. In an apparatus of the character described, a substation or hopper adapted to receive articles, a central station adapted to receive articles deposited in said sub station, means under the control of said central station for releasing or discharging articles from said sub station or hopper, and conveying means adapted to receive and convey said articles to said central station.



2. In an apparatus of the character described, a series of compartments or hoppers adapted to receive articles, a central station or receptacle adapted to receive articles from said compartments, means located at and under the control of said central station for releasing the articles from said compartments or hoppers, and means for receiving and conveying said articles from said compartments to said central station.

3. In an apparatus of the character described, a despatching station adapted to receive articles, a receiving station, means under the control of said receiving station for releasing the articles from said despatching station, and conveying means adapted to receive and convey articles from said despatching station to said receiving station.

4. In an apparatus of the character described, a central or receiving station, a series of groups of sub stations, corresponding hoppers or compartments located at each of said sub stations and adapted to receive articles, means located at and under the control of said central or receiving station and adapted to simultaneously discharge or release the contents of the corresponding hoppers or compartments at the several sub stations, and conveying means adapted to receive and convey said discharged articles to said receiving station.

5. In an apparatus of the character described, a central or receiving station divided into compartments, a series of sub-stations each consisting of transverse and longitudinally corresponding hoppers or compartments adapted to receive articles, manually operated means at said central or receiving station for discharging or releasing said articles from corresponding hoppers or compartments at all of said sub-stations, and conveying means adapted to receive, convey and discharge said articles into a corresponding compartment at said central or receiving station.

[Claims 6 to 8 not printed in the Gazette.]

958,231. MANUFACTURE OF WALL-TANKS. RAYMOND E. CRANE, Cameron, W. Va. Filed May 1, 1909. Serial No. 493,269.



1. The method of making wall tanks comprising a cup-shaped body portion and a slab-like rear wall, which consists in constructing the unit made up of said parts, from the soft clay, with a reinforcing flange extending from the rear portion of the tank, said reinforcing flange being sufficiently heavy to strengthen the tank and reduce the warpage thereof during firing, and then firing the structure at a heat which will cause a substantial contraction and density in the unit thus formed, substantially as described.

2. The method of making wall tanks comprising a cup-shaped body portion and a slab-like wall, of highly fired earthenware, which consists in constructing the cup-shaped body portion from the clay and providing it with a heavy permanently formed outwardly extending reinforcing flange or extension, constructing the slab-like wall separately, uniting the separately constructed wall to the main body portion at the open end of the latter, adjacent the permanently formed reinforcing flange or extension,

preliminarily drying the assembled parts, and finally firing the structure, substantially as described.

3. The method of making wall tanks comprising a cup-shaped body portion and a slab-like rear wall, of highly fired earthenware, which consists in constructing the cup-shaped body portion from the clay and providing it at its open end with a heavy integral laterally and outwardly extending reinforcing flange that is permanently formed thereon, constructing the slab-like rear wall separately from the clay, uniting said separately constructed wall to the main body portion at the open end of the latter by a homogeneous joint formed between the adjacent clay surfaces of the wall and the body portion, preliminarily drying the assembled parts and then firing the structure, substantially as described.

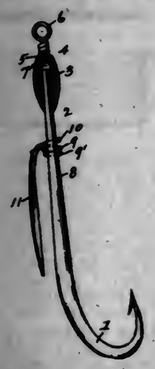
4. The method of making wall tanks comprising a cup-shaped body portion and a slab-like rear wall, of highly fired earthenware, which consists in constructing the cup-shaped body portion from the clay with a heavy laterally extending marginal flange at its open end, constructing the slab-like wall separately from the clay, uniting the separately constructed wall to the main body portion by a joint between the adjacent clay surfaces formed by the edge of the wall and the inner surface of the body portion, at a point offset from the plane of the marginal flange, bracing the joint thus formed by an angular clay filling laid in between the flange and the slab-like wall, drying the structure thus formed, and then firing it, substantially as described.

958,232. TYPE-WRITER-RIBBON BOX. GEORGE M. CRIDER, Marion, Ky. Filed May 6, 1909. Serial No. 494,224.



The combination with an inclosing container of impervious material and a typewriter ribbon inclosed therein, of a layer of fibrous material inclosed within the container and contiguous to said ribbon, said material being saturated with like ink to that with which the typewriter ribbon is filled.

958,233. FISHING-TACKLE. JAMES M. CURTISS, Cleveland, Ohio. Filed Nov. 2, 1906. Serial No. 341,701.



1. In a fishing tackle, in combination, a hook having a long rigid shank, a sinker member on the end of the shank, a fastening loop swiveled in said sinker member, and a second sinker member on said shank a short distance below the sinker member at the end of the shank, a spinner adapted to rotate about the shank between said sinker members and said second sinker member having a stop against which the spinner may operate.

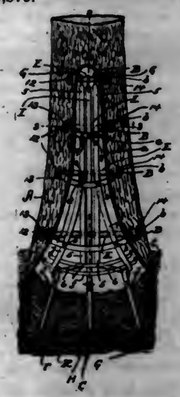
2. In a fishing tackle, in combination, a hook having a long rigid shank provided with a sinker member secured to the end of said shank, a fastening loop swiveled in said sinker member, a second sinker member secured to the shank below the first sinker members, and a spinner mounted on said shank between said sinker members and adapted to rotate above the curve and point of the hook.

3. In fishing tackle, in combination, a hook having a long rigid shank, a stop ring upon said shank, a sinker below said stop ring, a spinner mounted upon said shank above said stop ring, a member secured to the end of said shank, and a fastening loop swiveled in said member.

4. In fishing tackle, in combination, a hook having a long rigid shank, a sinker secured to said shank, a stop ring engaging said shank, a spinner upon said shank, above said stop ring, a sinker at the end of said shank, and a loop swiveled in said sinker at the end of said shank.

5. In a fishing tackle, in combination, a hook having a long shank, a sinker member secured to the end of the shank, a loop swiveled in said sinker member, a stop ring upon said shank below said sinker member, said shank having means for limiting the movement of said stop ring in the direction of the curve of the hook, and a spinner mounted on said shank between said sinker member and said stop ring and adapted to rotate about said shank above the point and curve of the hook.

958,234. PROCESS OF REINFORCING TREES. WELLINGTON E. DAVEY, Kent, Ohio. Filed Apr. 17, 1909. Serial No. 490,579.



1. An improved process of reinforcing a tree having a cavity in its trunk, said process consisting in placing a reinforcement in the said cavity, and anchoring the said reinforcement to the earth independently of the trunk.

2. An improved process of reinforcing a tree having a cavity in its trunk, said process consisting in placing a reinforcement in the said cavity and attaching the said reinforcement to the trunk, and anchoring the said reinforcement to the earth independently of the trunk.

3. An improved process of reinforcing a tree having a cavity in its trunk, said process consisting in filling the said cavity with a reinforcement and anchoring the said reinforcement to the earth independently of the trunk.

4. An improved process of reinforcing a tree having a cavity in its trunk, said process consisting in filling the said cavity with a reinforcement of metal-reinforced concrete and anchoring the metal reinforcement of the said filling to the earth independently of the trunk.

5. An improved process of reinforcing a tree having a cavity in its trunk, said process consisting in placing a reinforcement in the said cavity and attaching the said reinforcement to opposite side walls of the cavity and anchoring the said reinforcement to the earth independently of the trunk.

[Claims 6 to 10 not printed in the Gazette.]

958,235. ILLUMINATING DEVICE FOR BURNING WAX. PAUL DESTEFANI, Johannesburg, Transvaal, assignor of one-half to The New Transvaal Chemical Company, Limited, Johannesburg, Transvaal. Filed Jan. 27, 1908. Serial No. 412,873.



1. A device of the kind described comprising a casing for inflammable material, a wick holder connected to the casing, a wick in said holder, said holder having a passage leading from the casing to the wick, a valve for regulating the supply of the inflammable material through said passage and means for forcing the inflammable material from the casing to the wick.

2. A device of the kind described comprising a casing for inflammable material, a cover for said casing, a wick holder connected to said cover, a wick in said holder, said holder having a wick space and a passage leading from the casing to said wick space, and serving to conduct heat from the flame to the inflammable material, and means for maintaining the inflammable material in contact with the cover and for forcing the inflammable material when liquefied through the said passage to the wick.

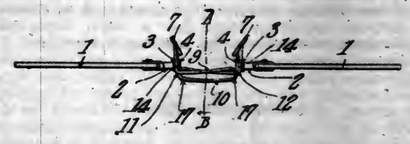
3. A device of the kind described comprising a casing for inflammable material, a cover for said casing, a wick holder connected to said cover, a wick in said holder, said holder having a passage leading from the casing to said wick and constituting means for conducting heat from the flame to the inflammable material, means for maintaining the inflammable material in contact with the cover and for forcing it when liquefied through the passage to the wick, and a valve for regulating the supply of combustible liquid through said passage.

4. A device of the kind described comprising a casing for inflammable material, a cover for said casing, a wick, and a wick holder rotatably connected to said cover, said holder having a passage leading from the casing to the wick, and in which passage the whole of the wick is arranged, the holder also constituting means for conducting heat from the flame to the inflammable material, and means for forcing the liquefied inflammable material from the casing to the wick.

5. A device of the kind described comprising a casing for inflammable material, a wick, and a wick holder connected to said casing, said holder having a passage leading from the casing to the wick, and in which passage the whole of the wick is arranged, a reservoir in said passage from which the inflammable material passes directly to the wick, a valve in the passage for controlling the supply of inflammable material to the wick, and means for forcing the inflammable material from the casing to the wick.

[Claims 6 to 13 not printed in the Gazette.]

958,236. EYEGLASS-SPRING. ALBERT E. DOBLE, Scranton, Pa. Filed Jan. 18, 1910. Serial No. 538,738.



1. An eye glass spring fashioned from a single piece of material having its ends crossed to form a loop and extended in opposite directions toward opposite ends of the loop.

2. An eye glass spring fashioned from a single piece of material having its ends crossed to form a loop and extended in opposite directions to cross opposite ends of the loop within the contour of the loop.

3. In an eye glass frame consisting of separate lens-holding members, a spring connecting the members and fashioned from a single piece of material having its ends crossed to form a loop disposed in a plane substantially at right angles to the lens plane of the frame and extended in opposite directions toward opposite ends of the loop.

4. In an eye glass frame consisting of separate lens-holding members, a spring connecting the members and fashioned from a single piece of material having its ends crossed to form a loop disposed in a plane substantially at right angles to the lens plane of the frame and extended in opposite directions to cross opposite ends of the loop within the contour of the loop.

958,237. VENDING-MACHINE. RICHARD F. DOWNEY, Milwaukee, Wis., assignor to Downey Machine Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed May 20, 1909. Serial No. 497,292.



1. In a vending machine, a nested tape-section having series of transversely disposed cells throughout its length for the reception of vendable articles, the tape-section being perforated between cells, a feed-spool, a driving gear carried by the feed-spool, a spring-controlled hand-lever, a pawl carried by the hand-lever for engagement with the driving gear, a cam-wheel rotative with said driving gear, a spring-controlled shiftable arm engageable with the cam-wheel, and a stop pin carried by the hand lever for engagement with the shiftable arm whereby movement of said hand-lever is controlled.

2. In a vending machine, a nested tape-section having series of transversely disposed cells throughout its length for the reception of vendable articles, the tape-section being perforated between cells, a feed-spool, a driving gear carried by the feed-spool, a spring-controlled hand-lever, a pawl carried by the hand-lever for engagement with the driving gear, and a cam-controlled arm for engagement with the hand-lever whereby the stroke of the same is controlled.

3. In a vending machine, a nested tape-section having series of transversely disposed cells throughout its length for the reception of vendable articles, the tape-section being perforated between cells, a feed-spool, a driving gear carried by the feed-spool, a spring-controlled hand-lever, a pawl carried by the hand-lever for engagement with the driving gear, a cam-wheel rotative with the driving gear and a spring-controlled arm for engagement with the cam-wheel, the arm being adapted to control movement of the feed-spool relative to movement of said hand-lever.

958,238. WIRE FENCE. BRADEN L. ELWELL and WILLIAM GRIMM, Morton, Ill., assignors to Interlocking Fence Company, Morton, Ill., a Corporation of Illinois. Original application filed Apr. 4, 1904, Serial No. 201,398. Divided and this application filed July 15, 1904. Serial No. 216,638.



A fence comprising line wires, stays formed of short lengths of wire having their ends bent at an angle, the angular ends of adjacent lengths extending parallel to the line wires, and connected therewith by a right and left intertwist.

958,239. MEANS FOR SECURING TURBINE-BLADES. PAUL EMDEN and WALTER FRITZ, Berlin, Germany. Filed Sept. 7, 1909. Serial No. 516,538.



1. In a turbine, the combination of a carrier having a groove, and a blade having a foot which fits said groove, a secondary groove being provided between the transverse face of the carrier and the adjacent face of said foot.

2. In a turbine, the combination of a carrier having a groove provided with a depression in its transverse wall, and a blade provided with a foot which fits said groove while leaving the depression free.

3. In a turbine, a carrier provided with a circumferential groove, blades provided with feet which fit said grooves, and a secondary circumferential groove between the transverse face of the carrier and the adjacent faces of said feet.

958,240. CARRIER FOR PNEUMATIC-DESPATCH-TUBE APPARATUS. MERTON L. EMERSON, Braintree, Mass. Filed Sept. 24, 1908. Serial No. 454,624.



A packing ring for pneumatic despatch tube apparatus constructed of varying thicknesses and with its thickest and thinnest portions diametrically opposite.

958,241. RAIL CHAIR AND COUPLING. JESSE C. EVANS and PALMER G. HILL, Lumberton, N. C. Filed July 9, 1909. Serial No. 506,725.



1. A rail chair comprising a base, spikes driven through the base in transversely spaced relation, transversely spaced opposed side members upstanding from the base beyond the spikes and extending over and bearing against the heads thereof, the side members conforming to the contour of a rail, one of the side members being integral with the base and the other side member being separable therefrom, and fastening devices connecting the side members.

2. A rail chair comprising a base formed with longitudinally spaced transversely disposed slots, spikes driven through the base and positioned at the opposite ends of the slots and adapted to engage the base flanges of the rail, transversely spaced opposed side members upstanding from the base beyond the terminals of the slots and conforming to the contour of a rail, the side members extending over and bearing against the heads of the spikes, one of the side members being integral with the base and the other side member being separable therefrom, and means for connecting the side members.

3. A rail chair comprising a base formed with longitudinally spaced transversely disposed slots extending therethrough, transversely spaced opposed side members upstanding from the base beyond the terminals of the slots and conforming with the contour of a rail, and fastening means connecting the side members, the side members being formed in their under surfaces with transverse grooves arranged in alinement with the slots.

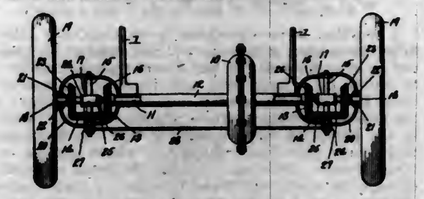
4. A rail chair comprising a base formed with longitudinally spaced transversely disposed slots extending therethrough, spikes driven through the base and positioned at the opposite ends of the slots, transversely spaced opposed side members upstanding from the base beyond the terminals of the slots and conforming with the contour of a rail, one of the side members being formed integral with the base and the other side member being separable therefrom, and fastening means connecting the side members, the side members being formed in their under surfaces with transverse grooves arranged in alinement with the respective slots and adapted for the reception of the heads of the spikes.

5. A rail chair comprising a base formed with longitudinally spaced transversely disposed slots extending therethrough, transversely spaced opposed side members upstanding from the base beyond the terminals of the slots and conforming with the contour of a rail, one of the side members being rigid with the base and the other side member being separable therefrom, fastening devices connecting the side members, the side members being formed in their under faces with transverse grooves arranged in alinement with the respective slots, and ribs outstanding from the outer surfaces of the side members and extending in alinement with the respective grooves.

[Claims 6 to 21 not printed in the Gazette.]

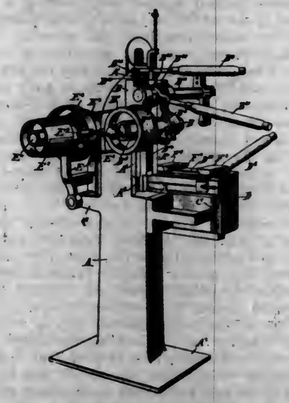
958,242. AUTOMOBILE TRANSMISSION-GEARING. WALTER C. FALK, Bluffton, Ind. Filed Feb. 3, 1910. Serial No. 541,741.

1. In a motor vehicle, the combination of a main frame, an engine mounted upon the main frame, an axle journaled upon the main frame, means for transmitting power from the engine to the axle, a casing carried by the main frame adjacent each end of the axle, a vertical shaft loosely mounted upon each of the said casings, the said vertical shafts being provided with horizontally disposed bearings, a yoke fitted to each of the vertical shafts so as to rotate therewith and formed with a bearing arranged in alinement with the bearing of the said vertical shaft, stub axles journaled within the bearings of the yokes and vertical shafts, wheels rigid with the stub axles, means for transmitting motion from the before mentioned axle to the stub axles, and means for turning the vertical shafts to swing the wheels about a vertical axis.



2. In a motor vehicle, the combination of a main frame, an engine mounted upon the main frame, an axle journaled upon the main frame and provided at each end with a gear wheel, means for transmitting motion from the engine to the axle, a casing carried by the main frame adjacent each end of the axle, a vertical shaft rotatably mounted upon each of the casings and formed at a point between its end with a horizontally disposed bearing, a yoke applied to each of the vertical shafts so as to rotate therewith, the ends of the yoke being secured to the ends of the vertical shaft while the middle portion of the yoke is formed with a bearing which is arranged in alinement with the bearing of the vertical shaft, stub axles journaled within the bearings of the yokes and the said vertical shafts, wheels rigidly applied to the stub axles, gear wheels loose upon the vertical shafts and meshing with the before mentioned gear wheels of the axle, gear wheels keyed upon the stub axles and meshing with the said gear wheels loose upon the vertical shafts, and means for turning the vertical shafts to swing the wheels about a vertical axis.

958,243. MILLING-MACHINE. FAY O. FARWELL, Dubuque, Iowa, assignor of one-half to The Adams Company, Dubuque, Iowa, a Corporation of Iowa. Filed Dec. 9, 1908. Serial No. 466,716.



1. In a milling machine, the combination of a fixed member, a slidable member, rack mechanism for adjusting said members with respect to each other, mechanism to lock the movable member in adjusted position, and a lever having different movements to effect the operation of the rack mechanism and the locking member respectively.

2. In a milling machine, the combination with relatively fixed and slidable parts, of means for adjusting the sliding part and locking it in position, said means comprising a rack and pinion, a lock, and means which when moved in one direction engages the pinion and when moved in the other direction disengages the pinion and operates the lock.

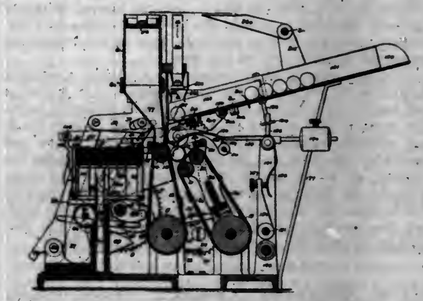
3. In a milling machine, the combination with relatively fixed and slidable parts, of means for adjusting the sliding part and locking it in position, said means comprising gearing for moving the parts, a lock, and means movable in one direction to engage one member of the gearing, in another direction to operate the gearing, and in third direction to disengage the gearing and operate the lock.

4. In a milling machine, the combination of a spindle head, a spindle journaled therein, rack mechanism for adjusting the spindle longitudinally, locking mechanism for the spindle, and a single means to operate the rack and locking mechanisms.

5. In a milling machine, the combination of a spindle head, a spindle journaled therein, rack mechanism for adjusting the spindle longitudinally, means to lock the spindle in its adjusted position, and a single lever to operate both the rack mechanism and said locking mechanism.

[Claims 6 to 8 not printed in the Gazette.]

958,244. CIGAR-BANDING MACHINE. JAMES J. FEARON and THOMAS E. FEARON, Philadelphia, Pa., assignors, by mesne assignments, to The Banding Machine Company, Wilmington, Del., a Corporation of Delaware. Filed Jan. 6, 1909. Serial No. 471,016.



1. In a cigar banding machine, the combination of a band supporting device, a pasting device, and an intermittently operating carrier whereby said pasting device is caused to first contact with the rear portion of a band and then to feed it forwardly, said pasting device including a paste reservoir, and means whereby limited quantities of paste are ejected therefrom between successive pasting operations.

2. In a cigar banding machine, the combination of a receptacle for a stack of bands, a pasting device, and an intermittently operating carrier, whereby said pasting device is caused to first contact with the rear portion of a band and then to remove the same from the pile and feed it forwardly, said pasting device including a paste reservoir, and means whereby limited quantities of paste are ejected therefrom between successive pasting operations.

3. In a cigar banding machine, the combination of a receptacle for a stack of bands, a pasting device, an intermittently operating carrier, whereby said pasting device is caused to first contact with the rear portion of a band and then to remove the same from the pile and feed it forwardly and means for progressively raising the stack of bands, said pasting device including a paste reservoir, and means whereby limited quantities of paste are ejected therefrom between successive pasting operations.

4. The combination, in a cigar banding machine, of devices for wrapping a band around the cigar, with means for feeding the band to said wrapping devices, said means including a pasting device, means for causing the same to contact with a band, and means for feeding the pasting device and its adhering band forwardly, said pasting de-

vice including a paste reservoir, and means whereby limited quantities of paste are ejected therefrom between successive pasting operations.

5. The combination, in a cigar banding machine, of a receptacle for a stack of bands, a pasting device, means for causing the same to travel longitudinally over the top of the stack of bands, and means for causing contact of the paste carrying member of the device with the uppermost band of the stack, said pasting device including a paste reservoir, and means whereby limited quantities of paste are ejected therefrom between successive pasting operations.

[Claims 6 to 62 not printed in the Gazette.]

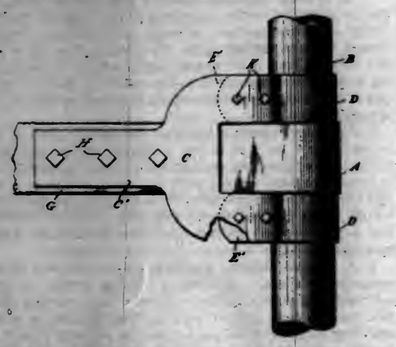
958,245. GAS APPARATUS. JAKOB FISCHER, Zurich, Switzerland. Filed Aug. 26, 1909. Serial No. 514,825.



1. A gas cooking stove comprising a support for the receptacle to be heated, a gas supply pipe, a burner to which the gas supply pipe leads, a diaphragm for closing the gas supply pipe, a lever having one end pivoted to the stove and its other end projecting up above the support for the receptacle, said lever having a portion thereof engaging with the diaphragm to close the gas supply pipe, said diaphragm opening the pipe when the lever is lowered by the receptacle being placed on the stove.

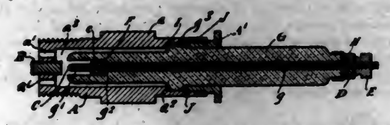
2. A gas cooking stove comprising a burner, a support located above the burner for the receptacle to be heated, a gas supply pipe leading to the burner and having a chamber forming part of said pipe, a diaphragm in said chamber adapted to close said pipe, a lever having one end pivoted to the stove and the other end projecting above the support so as to engage the bottom of the receptacle whereby the lever is lowered to permit the diaphragm to fall to open the supply pipe, and means for normally holding the lever raised and in engagement with the diaphragm to close the pipe, and a pipe for a pilot flame.

958,246. BED-CLAMP. CHARLES F. GOODING Oronogo, Mo. Filed Mar. 15, 1910. Serial No. 549,381.



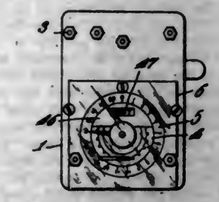
The combination with a bed leg having a lug thereon and a rail adapted to be connected to said lug, of a clamp comprising a substantially flat shank, a pair of spaced parallel straps embracing said lug and extending around the leg above and below said lug, auxiliary strap members hinged to the aforesaid straps and adapted to snugly embrace the bed leg, and means to secure the straps and auxiliary strap members together, and means to secure said shank to the rail.

958,247. SPARK-PLUG. FREDERICK J. HRABEL, Cincinnati, Ohio. Filed Feb. 18, 1909. Serial No. 478,706.



A sparking device embodying in combination a cylindrical casing open at the outer end and closed at the inner end by a perforated wall and exteriorly screw-threaded to seat in the cylinder shell with its inner end substantially flush with the interior surface of the cylinder; a low tension sparking electrode adjustably seated axially in and projecting through said end wall; an insulating plug axially perforated, countersunk and of reduced external diameter at its inner end, and projecting outwardly through the casing and secured thereto; a high tension electrode carried axially through said insulating plug, said electrode being closed at its inner end but otherwise hollow throughout and open to the external atmosphere.

958,248. TELEPHONE SYSTEM. LEONIDAS E. HICKS, Stinson, W. Va. Filed July 30, 1908. Serial No. 446,139.



1. In a telephone system, a subscriber's instrument comprising a mechanically rotatable toothed member, an electric contact fast thereto, and a hand or pointer also fast to said member, another toothed member, an electric contact fast thereto and adapted to engage the first named contact, an electrically operated means for actuating the second named toothed member step by step, a hand or pointer fast to the said second named toothed member, and electric circuit connections from each contact.

2. In a telephone system, a subscriber's instrument comprising a manually operable rotatable toothed member, an electric contact movable therewith, a hand or pointer movable with said member, another toothed member, an electric contact actuated thereby and adapted to engage the first named contact, an electrically operated means for actuating the second named toothed member, a hand or pointer actuated by the said second named toothed member, electric circuit connections from each contact, and an index common to both pointers.

3. In a telephone system, a subscriber's instrument comprising a manually operable rotatable member, an electric contact movable therewith, a hand or pointer also movable with said member, another rotatable member, an electric contact actuated thereby and adapted to engage the first named contact, an electrically actuated means for actuating the second named member step by step, a hand or pointer actuated by the said second named member, electric circuit connections from each contact, and another contact adapted to maintain the circuit intact after being broken at the first and second named contacts.

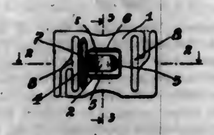
4. In a telephone system, a mechanically rotatable contact, an electrically rotatable contact, adapted to engage the first named contact at a predetermined point in its rotation, and means under the control of the electrically actuated contact for locking the mechanically actuated contact except at a predetermined zero position.

5. In a telephone system, local stations each provided with electrically operable selecting mechanism and with a source of current incapable of actuating the selecting

mechanisms at the other local stations, and a central station relay comprising an electro-magnetic circuit controlling means responsive to the current furnished by the current sources at the local stations, electro-magnetic circuit controlling means responsive only to comparatively strong current, and a current source of requisite strength for the said last named electro-magnetic means and coupled to the line by the latter.

[Claims 6 and 7 not printed in the Gazette.]

958,249. FASTENER. FRED HIRSH, New York, N. Y. Filed Dec. 26, 1908. Serial No. 469,411.

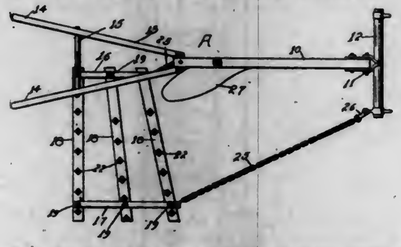


1. A fastener which comprises a body and a tongue cut therefrom and forming an integral part thereof and having the body portion set back to form narrow open spaces along each side of the tongue.

2. A fastener which comprises a body and a tongue cut therefrom and forming an integral part thereof and having the body portion set back to form a narrow open space along each side of the tongue, the said tongue being raised above the plane of the body but less than the width of the open spaces at its sides.

3. A fastener which comprises a body and a tongue cut therefrom and forming an integral part thereof, the said body portion being upset to form raised edges and leave a narrow open space along each side of the tongue and the said tongue being at and near its base substantially in the plane of the body while for the rest of its length it is gradually raised therefrom.

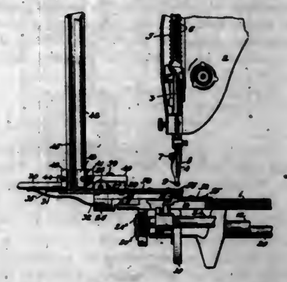
958,250. POTATO-DIGGER. JASON S. HOGELAND, Holland, Pa. Filed July 21, 1909. Serial No. 508,793.



The combination with a plow, of a potato digger attachment comprising a harrow frame provided with an inner end member of relatively short length, an outer end member of relatively great length, transverse members having their inner ends attached to said inner member at evenly spaced distances and their outer ends attached to the outer member at evenly spaced distances, said distances at each end being substantially proportional to the lengths of the respective end members, a flexible element connecting the inner member to the plow beam, and a second flexible element connecting the outer member to an end of the swingle tree, said elements being of such respective length as to hold the rear transverse member perpendicular to the beam and in advance of the handles of the plow.

958,251. TABI-FASTENER ATTACHMENT FOR SEWING-MACHINES. CHARLES M. HORTON, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Jan. 24, 1910. Serial No. 539,688.

1. The combination with a straight-away stitching machine comprising stitch-forming mechanism including a reciprocating needle, feeding mechanism for imparting an advance movement to the work after each stitch-forming operation, and a throat-plate through which the needle reciprocates, of a fastener chute, a rotary carrier formed with peripheral radially disposed fastener-recesses adapted to register successively with the mouth of said chute and the stitch-forming mechanism, and means for pressing said carrier upon the throat-plate adjacent the stitch-forming mechanism, said feeding mechanism by its engagement with an interposed ply of fabric serving to propel the carrier to feed the fasteners to the stitch-forming mechanism for attachment to said fabric.



2. In a sewing machine, the combination with stitch-forming and work-feeding mechanisms, and a throat-plate, of a fastener chute, a rotary carrier formed with peripheral radially disposed fastener recesses adapted to register successively with the mouth of said chute and the stitch-forming mechanism, a rocking supporting frame for said chute and carrier, fixed fulcra for said frame parallel with the throat-plate and upon which said frame is adapted to tilt, a spring for pressing said carrier upon the throat-plate adjacent the stitch-forming mechanism, a presser-foot disposed above the throat-plate and adjacent the periphery of said carrier, and a spring independent of that of said carrier for pressing said presser-foot upon the throat-plate.

3. In a sewing machine, the combination with stitch-forming mechanism, a throat-plate and feeding-mechanism including a feed-dog having rising and falling movements through said throat-plate, of a fastener chute, a rotary carrier with its periphery partially overlying the feed-dog upon the side thereof nearest its axis of rotation and formed with radially arranged fastener recesses extending inwardly from the periphery and adapted to register successively with the mouth of said chute and the stitch-forming mechanism, means for pressing said carrier upon the throat-plate adjacent the stitch-forming mechanism, and a spring-actuated presser-foot disposed above the throat-plate and overlying a portion of the feed-dog adjacent that covered by said carrier.

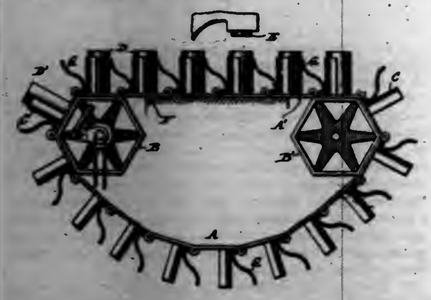
4. In a sewing machine, the combination with stitch-forming mechanism, a throat-plate and feeding-mechanism including a feed-dog having rising and falling movements through said throat-plate and adapted to impart to the work an advance movement after each stitch-forming operation, of a fastener chute, a rotary carrier with its periphery partially overlying the feed-dog upon the side thereof nearest its axis of rotation and formed with radially-arranged fastener recesses extending inwardly from the periphery and adapted to register successively with the mouth of said chute and the stitch-forming mechanism, said peripheral recesses being arranged in groups or clusters of which the component recesses are equi-distantly spaced and the nearer recesses of adjacent groups or clusters are spaced apart a greater distance, and means for pressing said carrier upon the throat-plate and feed-dog whereby the feed-dog by its engagement with an interposed ply of fabric serves to propel the carrier to feed the fasteners to the stitch-forming mechanism for attachment to said fabric.

5. In a sewing machine, the combination with stitch-forming mechanism, a throat-plate and feeding mechanism including a feed-dog having rising and falling move-

ments through said throat-plate, of a fastener chute, a rotary carrier with its periphery partially overlying the feed-dog upon the side thereof nearest its axis of rotation and formed with radially-arranged fastener recesses extending inwardly from the periphery and adapted to register successively with the mouth of said chute and the stitch-forming mechanism, said rotary carrier having its peripheral recesses arranged in groups or clusters spaced apart in multiples of stitch-lengths and being provided with indicator marks corresponding with such spacing, a non-rotary supporting frame for said rotary carrier having an indicator mark adapted to register with those of the rotary carrier in determining its initial position relative to the stitch-forming mechanism, and a spring-actuated presser-foot disposed above the throat-plate and overlying a portion of the feed-dog adjacent that covered by said carrier.

[Claim 6 not printed in the Gazette.]

958,252. DEVICE FOR HOLDING BOTTLE-BODIES FOR THE INSERTION OF CLOSURES. CHARLES F. JENKINS, Washington, D. C., assignor to Single Service Package Corporation of America, New York, N. Y., a Corporation of New Jersey. Filed Feb. 23, 1909. Serial No. 479,374.



1. The combination with a belt provided with bottle supporting wings at intervals, of springs secured to the belt in front of said wings, respectively, in position to swing toward the same as the belt passes from flexed position to a rectilineal path and yieldingly press each bottle into exact position against a wing.

2. In a machine of the class described, the combination of a chain of flat plates provided with bottle supporting wings, with springs secured to the plates, each in position to swing over the adjacent plate toward the wing thereon, as the chain passes from a flexed to a rectilineal form; whereby a bottle body inserted between the wing and spring when the chain is flexed is pressed firmly into position against the wing when the chain is straightened.

3. In apparatus of the class described, the combination with a bottle conveying belt provided at intervals with forwardly open wings to support bottles laterally, of springs carried by the belt in position to press bottles against said wings, respectively, and a series of bottle supporting blocks detachably secured alongside said wings, respectively, for supporting bottles of smaller dimension.

4. The combination with a belt provided with wings for laterally supporting in vertical position the rear side of bottles conveyed by the belt, of a series of blocks detachably secured to the wings, respectively, and adapted to support smaller bottles with their axes in the position of the axes of larger bottles supported directly by the wings.

5. The combination with the conveyer belt provided with bottle supporting wings having open slots, of blocks adapted to support bottles above the belt and provided with screws adapted to enter said slots, respectively, for detachably securing the blocks in position.

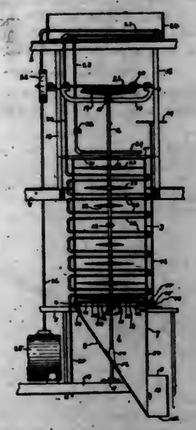
[Claim 6 not printed in the Gazette.]

958,253. HAME-FASTENER. ERNEST J. JONES, Baltimore, Md. Filed June 5, 1909. Serial No. 500,289.



A hame-fastener comprising a pair of members and a lever, the upper extremities of said members constituting snap hooks, the lower terminal of one member having a rack, said lever being provided with trunnions for engagement with said rack and pivotally connected to the lower terminal of the other member at a point below said trunnions, whereby the upper terminals of the last mentioned member and the lever are normally held in engagement with each other, but adapted to become disengaged when the pull on said members is released, said lever having a hook-like recess at its upper end, and the end of the hooked portion of the last mentioned member having a pivoted link which surrounds the upper end of said lever and is adapted to enter said recess when said member and lever become disengaged.

958,254. ALFALFA-MEAL MIXER. WILLIAM H. KISSEL, Council Bluffs, Iowa. Filed Nov. 6, 1909. Serial No. 526,546.



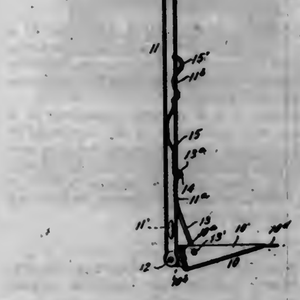
1. In an alfalfa meal mixer, the combination with a support, a cylindrical, upright tank upon said support, said tank having terminal passage ways and provided with a lower terminal chute communicating with its lower passage way; a plurality of connected pipe-sections transversely traversing the tank; means for heating said pipe-sections; a vertical, rotatable shaft disposed centrally of said tank and traversing the wall of the chute to a mounting of its lower end upon said support, said shaft being provided with transverse arms disposed between said pipe-sections; and means to make a closure of the lower passage way of said tank.

2. A mixing apparatus comprising an upright receiving tank having an intake and provided with a first apertured bottom, a feeding tank in communication with said intake; means for heating said feeding tank and said cylindrical tank; a vertical, rotatable shaft having horizontal arms disposed within said receiving tank and traversing said first apertured bottom; a secondary apertured bottom circumscribing and supported by said shaft disposed adjacent to said first apertured bottom; means to cause a rotatable movement of said secondary bottom to dispose its apertures in the plane of the apertures of said first bottom.

3. A mixing apparatus for the purposes described, comprising an upright receiving tank having an intake and provided with a first apertured bottom, a feeding tank in communication with said intake, a plurality of connected pipe-sections traversing said receiving tank; an upright, rotatable shaft disposed within said receiving tank and traversing said first apertured bottom, said shaft being provided with transverse arms disposed intermediate the pipe-sections; a secondary apertured bottom circumscribing and supported by said shaft and disposed adjacent to said first bottom; means for heating said connected pipe-sections; means for heating said feeding tank; and means to cause a rotatable movement of said secondary bottom, its apertures being disposed in alinement with the apertures of the first bottom.

4. A mixing apparatus as described, comprising a vertically disposed cylindrical casing having an intake and provided with a bottom having radially formed apertures, a feeding tank in communication with said intake, a plurality of horizontal pipe-sections having their terminals mounted at spaced intervals in the wall of and at opposite sides of the casing, the terminals of the pipes of said sections being in communication; a pivotally mounted closure plate having radially formed apertures and disposed adjacent to and parallel with the bottom of said casing; a vertical, rotatable shaft disposed in said casing and provided with transverse, outwardly-tapered arms disposed intermediate said pipe-sections; means to cause a rotation of said closure plate, its apertures moving into alinement with the apertures of said bottom; means for heating said feeding tank, and means for heating said connected pipe-sections.

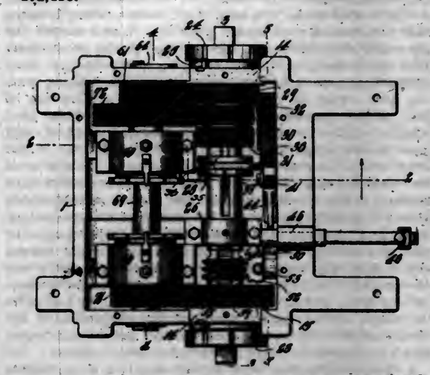
958,255. DUST-PAN. CONRAD W. KOERTNER, Pearl City, Ill. Filed Mar. 3, 1910. Serial No. 547,041.



1. In a dust-pan, the combination of a pan proper including side members and a rear wall, a hollow handle pivoted adjacent said rear wall and having depressions in its sides, a bail pivoted to the side members and adapted to grip the handle in said depressions in a certain position, and a catch connected to the bail and slidable along the interior of the handle to hold the bail and pan proper in another position with respect to the handle.

2. In a dust pan, the combination of a pan proper, said pan comprising a bottom, sides and a rear wall embraced by the extensions of the sides, a handle pivoted to said extensions of the sides in the rear of the rear wall, a bail pivoted to the side members of the pan proper and adapted to grip the sides of the handle in a certain position, and a catch connected to the bail and slidable along the handle to hold the bail and pan proper in another position with respect to the handle.

958,256. TRANSMISSION-GEARING. JOSEPH K. KOONS, Montgomery, Pa. Filed Jan. 9, 1909. Serial No. 471,488.



1. In a device of the class described, a transmission member consisting of alined shafts, one of which is provided with a keyway and with a series of clutch teeth, a gear wheel loosely mounted on the other shaft and provided with clutch teeth, a plurality of gear wheels journaled loosely on the shaft provided with a keyway, a key movable in the keyway for connecting either of said gears to the shaft, a sleeve slidable on the other shaft, and provided with a series of clutch teeth at each end, one of the series coöperating with the teeth of the gear wheel and the other with the teeth on the first shaft whereby to couple said shafts together, a counter-shaft, a disk secured thereto provided with a flange having an external series of teeth meshing with one of the gear wheels on the first named shaft, and an internal series, a second gear wheel secured thereto and meshing with the gear wheel on the other shaft, a stub shaft, a pinion on the stub shaft meshing with another of the gear wheels on the first named shaft and with the internal series of gear teeth, means for moving the key whereby to connect either of the gear wheels on the first named shaft therewith, and means which upon the completion of the movement of the key in one direction will move the clutch to directly connect the shafts, and at the beginning of movement of the key in the other direction will disconnect said shafts and connect the gear wheel on the second shaft therewith, and means for positively disconnecting the key from one gear wheel before connecting with another.

2. In a device of the class described, a transmission member consisting of alined shafts, one of which is provided with a keyway and a series of clutch teeth, a gear wheel loosely mounted on the other shaft and provided with clutch teeth, a plurality of gear wheels journaled loosely on the shaft provided with a keyway, a key movable in the keyway for connecting either of said gears to the shaft, a sleeve slidable on the other shaft, and provided with a series of clutch teeth at each end, one of the series coöperating with the teeth of the gear wheel, and the other with the teeth on the first shaft whereby to couple said shafts together, a countershaft, a disk secured thereto provided with a flange having an external series of teeth meshing with one of the gear wheels on the first named shaft and an internal series of teeth, a second gear wheel secured thereto and meshing with the gear wheel on the other shaft, a stub shaft, a pinion on the stub shaft meshing with another of the gear wheels on the first named shaft and with the internal series of teeth, means for moving the key whereby to connect either of the gear wheels on the first named shaft therewith, and means which upon the completion of the movement of the key in one direction will move the clutch to directly connect the shafts, and at the beginning of movement of the key in the other direction will disconnect the shafts and connect the gear wheel on the second shaft therewith.

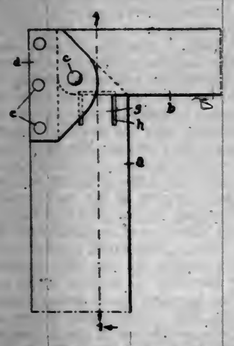
3. In a device of the class described, a transmission member consisting of alined shafts, a gear wheel loosely journaled on one of the shafts of the transmission shaft, a sleeve slidable on the said shaft, means whereby when said sleeve is moved in one direction it will couple the gear with the shaft, and when moved in the other direction will connect said shaft with the other shaft, a countershaft, a gear wheel on the counter-shaft meshing with the gear wheel on the first named shaft, a plurality of gear wheels loosely journaled on the other shaft, gear wheels on the counter-shaft with which sundry of said gear wheels mesh, an idler arranged between one of the gears on the transmission shaft and one of the gears on the counter-shaft, said other shaft being provided with a keyway, a key movable through the keyway and provided at one end with a projection for engaging the gear wheel whereby to connect said wheels with the shaft, means for moving said key, rings arranged between the gear wheels and closely encircling the said shaft whereby to positively disengage the key from one gear before it engages the succeeding gear, and means in connection with the key moving means for moving the sleeve, at the completion of the movement of said key in one direction and at the beginning of movement of said key in the other direction.

4. The combination of a driving shaft, a driven shaft capable of being operated independently of the drive shaft, a gear on the driven shaft, a series of gears loose on the driving shaft, gearing between the said loose gears and the gear on the driven shaft, a key in the driving shaft and having an outwardly projecting portion to engage with any selected loose gear, said key being movable longitudinally of said shaft into position to engage with a selected loose gear and the key being movable radially for the adjustment of its projection into and out of connection with said selected gear, a clutch sleeve keyed on the driven shaft and movable into and out of engagement with the gear on said shaft, and means for simultaneously shifting said key in the driving shaft and the clutch sleeve on the driven shaft substantially as set forth.

5. The combination of a driving shaft, a driven shaft, a series of loose gears on the driving shaft, intermediate gearing between said loose gears and the driven shaft, a clutch for coupling the driving shaft and the driven shaft directly together, means for keying any selected one of the loose gears to the driving shaft, a rack bar for shifting said key into position to engage with any selected loose gear, and gearing between said rack bar and the means for coupling the drive shaft and driven shaft for operating said means, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

958,257. TRY-SQUARE. CHARLES G. LARSON, Burlington, Iowa. Filed Nov. 10, 1909. Serial No. 527,234.



1. A try square having a main arm and a pivoted arm, said main arm having an abutment for the inner transverse edge of the pivoted arm when in squared position, and a spring tongue forming an integral part of the main arm, located wholly within and spaced from both longitudinal bounding edges of said main arm and capable of springing past the lower longitudinal edge of the unfolded pivoted arm.

2. A try square having a main arm and a pivoted arm, said main arm having an abutment for the inner transverse edge of the pivoted arm, and a spring tongue forming an integral part of the main arm, located wholly within and spaced apart from both longitudinal bounding edges of the main arm, and capable of springing past the lower longitudinal edge of the unfolded pivoted arm, said tongue having a slot surrounding the same on three sides and bounded on the outside by the body of the main arm.

3. A try square having a main arm and a pivoted arm, said main arm having an integral spring tongue capable of springing past the lower longitudinal edge of the unfolded pivoted arm, and spring means for pressing said pivoted arm down against the spring tongue to hold it in squared relation.

4. A try square having a main arm and a pivoted arm, said main arm having a clamp plate overlapping and separated by an interval from the inner end portion of the pivoted arm, and an intermediate spring abutment bridge-piece having a fast rivet connecton at one end portion thereof and a loose rivet connection at the other end portion thereof with said main arm, and an integral spring tongue capable of springing past the lower longitudinal edge of the unfolded pivoted arm.

958,258. GAME. ALICE F. LEACH, Andover, Mass. Filed Dec. 31, 1908. Serial No. 470,174.



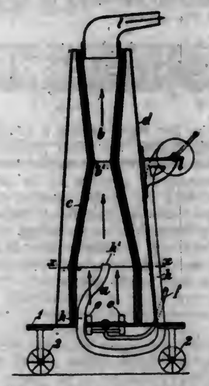
1. A game comprising a deck of cards consisting of a plurality of groups or sets, each group or set consisting of a primary or dominant card having thereon the first portion of a quotation and a secondary card having thereon the remainder of said quotation.

2. A game comprising a deck of cards consisting of a plurality of groups or sets each group or set consisting of a primary or dominant card having thereon the first portion of a quotation and a secondary card having thereon the remainder of said quotation, and each said card of each group having thereon a pictorial display identifying the quotation with the author thereof.

958,259. DISINFECTING DEVICE. FERNAND LE FAGUAYS, Nantes, France. Filed July 10, 1909. Serial No. 506,953.

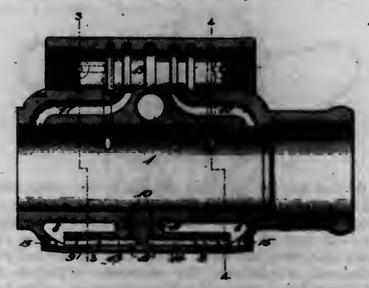
1. In an apparatus for disinfecting, a heating chamber having perforated bottom and a continuous uninterrupted flue with restricted passage intermediate its ends, means for causing air to pass upward through said chamber from the bottom thereof and through said restricted passage to create a vigorous inflow of external air and to be mixed with the products of combustion beyond said restricted passage and forked means for regulating the distance relative to the articles at which the device can be situated.

2. In an apparatus for disinfecting, a heating chamber having perforated bottom and a continuous uninterrupted flue with restricted passage intermediate its ends, means for causing air to pass upward through said chamber from the bottom thereof and through said restricted passage to create a vigorous inflow of external air and to be mixed with the products of combustion beyond said restricted passage, a nozzle, means for directing the air upon the articles to be disinfected, and adjustable forked means connected therewith for regulating the distance relative to the articles at which said nozzle can be situated.



3. Disinfecting apparatus comprising a heating chamber, means for causing air to pass into said chamber, means for conducting the heated air from said chamber, a nozzle connected with the last mentioned means, for directing the air upon the articles to be disinfected, and adjustable forked means connected with said nozzle for regulating the distance relative to the articles at which the nozzle can be situated.

958,260. CYLINDER LUBRICATION. JOHN G. LEYNER, Denver, Colo., assignor to The J. Geo. Leyner Engineering Works Company, Littleton, Colo., a Corporation of Colorado. Filed June 14, 1909. Serial No. 502,152.



1. A pneumatically operating oiling mechanism for the cylinders and pistons of air operating engines, which consists of providing the cylinders of such air operated engines with an oil holding chamber, provided with a closable oil filling aperture, means including an air entering port extending from the inner peripheral wall of said cylinder to one end portion of said oil chamber, and means including an oil outlet aperture extending from the opposite end portion of said oil chamber from said other aperture to and through the shell of said cylinder to its piston bore, said air inlet aperture being adapted to admit the air pressure of said cylinder to said oil chamber, and said oil outlet and air inlet apertures being positioned in the interior wall of said cylinder to register at all times with the peripheral surface of said piston in its operative reciprocal strokes in said cylinder.

2. A pneumatically operating oiling mechanism for the cylinders and pistons of compressed air operated machinery, which consists of providing the cylinders of such machinery with an oil holding chamber provided with a closable oil filling entrance, and with a pair of ports positioned in said cylinder at the central portion of the reciprocal portion of said piston, and within the limits of its movement, whereby said ports are covered by the peripheral surface of said piston, said ports extending to said oil chamber and being adapted to permit the air pressure of said cylinder to flow into said oil chamber to force said oil out of said oil chamber and said ports into said cylinder and in contact with the peripheral surface of said piston.

3. In a pneumatically operating oiling mechanism for the cylinders and pistons and drill-bit rotating mechanism of air operating rock drilling engines, the combination of an oil chamber formed in the shell portions of rock drilling cylinders, and arranged along the lower or piston bearing side of the central piston operating portion of said drilling engine, said oil chamber being provided with a closable oil filling aperture, and with two ports formed in the shell portion of said cylinder and chamber and arranged at a distance apart within the limit of the operative movement of the piston, and positioned in said cylinder where the piston will reciprocate in contact with the interior surface of the bore of said cylinder surrounding said apertures, one of said apertures extending to one end portion of said oil chamber, and the other aperture extending to the opposite end portion of said chamber.

958,261. MANTLE-SUPPORTING TRANSPORTATION DEVICE. THOMAS J. LITLE, Jr., Philadelphia, Pa. Filed Mar. 26, 1904. Serial No. 200,118.



1. The combination of a carton having a lid, and a support provided with a bight engaged by the rim of the lid and constituting a pair of leg portions which stride the carton wall and with a hook portion which holds a mantle loop or bail between its sides and the lid, substantially as described.

2. The combination of a carton, a rigid support having a hook portion for engaging a mantle-bail or loop and having a pair of leg portions whereof one is disposed internally and the other externally of the carton for engaging the wall thereof, substantially as specified.

3. The combination of a cylindrical carton, a rigid support having a hook portion for engaging a mantle bail or loop and having a pair of leg portions whereof one is disposed internally and the other externally of the carton for engaging the cylindrical wall thereof, and a lid of which the rim engages a leg portion of said support, substantially as specified.

4. The combination of a carton, a rigid support having a hook portion for engaging a mantle bail and having a loop which straddles the rim of the carton and whereof one part engages the inner wall of the carton and prevents undue lateral motion of the hook, substantially as specified.

5. The combination of a cylindrical carton, and a wire with a loop at one end thereof for clenching the cylindrical wall of the carton and with a hook near the other end to accommodate a mantle bail or loop, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

958,262. WAGON-NUT. GEORGE LOCHHEAD, Los Angeles, Cal. Filed Nov. 15, 1909. Serial No. 528,207.



1. A device of the class described comprising a hub member having a longitudinal slot therein provided with a lateral extension at its inner end, a spindle member engaged revolubly in the hub member and having a peripheral annular groove in registry with the lateral extension, and a cap member slidable upon the hub and carrying a spring pressed pawl member tending to engage snugly in the groove and adapted to be lifted from engagement therewith under rotation of the cap upon the hub.

2. An article of the class described comprising a spindle member having a peripheral groove spaced from its outer end, a hub member revolubly engaged thereon and having an extension provided with a longitudinal slot having a lateral extension at its inner end in registry with the groove, and a cap member slidably engaged upon the hub and carrying a spring pressed pawl member resiliently engaged in the groove, and having an extension projecting through the slot, and adapted for engagement with the sides of the slot to lift the pawl out of the groove upon rotation of the cap upon the hub.

3. A device of the class described comprising a hub member having a longitudinal slot therein provided with a lateral extension, a spindle member engaged revolubly in the hub member and having a peripheral annual groove in registry with the lateral extension, and a cap member slidable upon the hub and carrying a spring pressed pawl member tending to engage snugly in the groove, and adapted to engage the side of the slot and be lifted from engagement therewith under rotation of the cap upon the hub.

958,263. EAR-MUFF. PHILIP LOEWE, Chippewa Falls, Wis. Filed Apr. 24, 1909. Serial No. 491,899.

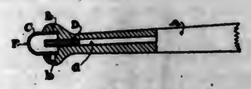


1. In a device of the class described the combination of a stationary member adapted to be inserted inside the hat band, arms pivoted to said stationary member and projecting into the hat, and adapted to swing forwardly or rearwardly, other arms pivoted to the first mentioned arms and adapted to swing forwardly or rearwardly, and ear pads carried by the last mentioned arms.

2. In combination, ear pads, resilient arms whereto said pads are secured, a substantially flat member *f* adapted to lie between the hat and hat band, and substantially flat arms pivoted at one end to the member *f* and at the other end to said arms whereby the pads are adjustable forward or backward.

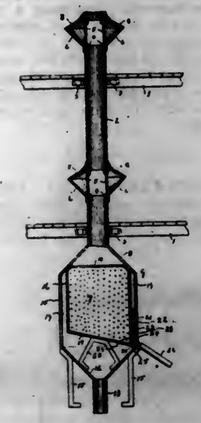
958,264. PIPE. CHARLES A. LORD, Seattle, Wash. Filed June 14, 1909. Serial No. 502,164.

1. A mouth-piece for pipes having a cup-like recess in its outer end surrounding the draft channel, a tube in and projecting from said draft channel within said recess, a cup-like member fitting said recess with its hollow inward and provided with a smoke-draft opening in its outer end and having also a moisture-drainage opening in its lower side, the mouth-piece also having a drainage opening registering with that in the said cup and opening through its terminal nub and within the teeth as the pipe would be held in the mouth.



2. A mouth-piece for pipes having a cup-like recess in its outer end surrounding the draft channel, a cup-like member fitting said recess with its hollow inward and provided with a smoke-draft opening in its outer end substantially in line with the smoke channel, and also having a moisture-drainage opening in its inner and lower part, the mouth piece having a registering drainage opening discharging through the lower part of the enlarged terminal nub of the mouth-piece and within the teeth as the pipe would be held in the mouth.

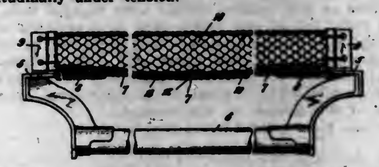
958,265. GARBAGE CHUTE AND RECEPTACLE. NELLIE W. LOWE, Omaha, Nebr. Filed Aug. 7, 1909. Serial No. 511,805.



In devices for the purposes described, the combination with a cylindrical container having an intake at its upper end and provided with a funnel shaped lower terminal with an exit way therein, and having a side aperture, of a draining receptacle having a cylindrical, perforated wall and disposed interiorly of the container to provide between its wall and the wall of the container an annular chamber, said draining receptacle being provided with an inclined bottom and with a side aperture opening upon the side aperture of the wall of said container; a horizontal platform vertically perforated and disposed between the cylindrical walls of the container and drainage receptacle at a lower altitude than the side apertures of said walls, and a horizontally curved, vertically disposed closure-plate in said annular chamber and having rollers seated upon said perforated platform.

958,266. BED-BOTTOM. WILFRID A. MANCHEE, Newark, N. J., assignor to Newark Spring Mattress Company, Newark, N. J., a Corporation of New Jersey. Filed Nov. 10, 1909. Serial No. 527,827.

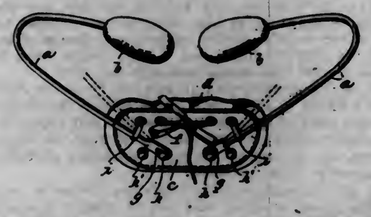
1. The combination with a bed bottom frame and a horizontal metallic fabric suspended between the end members of the said frame, of independent vertical metallic fabric members located in proximity to the lateral edges of the said horizontal member, means located beneath the said horizontal member for connecting the lower edges of the said vertical members together, and means carried by the end members of the said frame for supporting the said vertical members and holding them longitudinally under tension.



2. The combination with a bed bottom frame and a horizontal metallic fabric suspended between the end members of the said frame, of independent metallic fabric members located in proximity to the lateral edges of the said horizontal member, a wire rod secured at its opposite ends to the lower ends of the said vertical members and disposed intermediate its ends immediately beneath the said horizontal member, and means carried by the end members of the said frame for supporting the said vertical members and holding them longitudinally under tension.

3. In a bed bottom construction, the combination with a supporting frame, of a horizontally disposed metallic fabric suspensively supported under tension by the said frame, and two independent vertical metallic fabric members located in proximity to the lateral edges of the said horizontal member, but generally unconnected therewith, the said vertical members being also supported under tension by the said frame, and means connecting the lower edge of the said vertical members to the lateral edges of the said horizontal member, at a single point substantially midway of the ends thereof, to cause the former to move downward with the latter.

958,267. TRUSS. THOMAS E. MARTIN, Buffalo, N. Y., assignor to Flora A. M. Martin, Buffalo, N. Y. Filed May 12, 1909. Serial No. 495,465.



1. In a truss, a body-arm carrying a pad-appliance at each end, the connection with one of the pads being a loose universal one permitting the arm to tilt freely backwardly and upwardly and downwardly while on the body, and a keeper on the pad above the pivotal point to limit the extent of free movement of the arm.

2. In a truss, a body-arm carrying a pad-appliance at each end, the connection with one of the pads being a loose universal one permitting the arm to tilt freely backwardly and upwardly and downwardly while being worn, and a keeper on the pad above the pivotal point to limit the extent of free movement of the arm, said pivotal point of connection being below the middle of the pad-appliance.

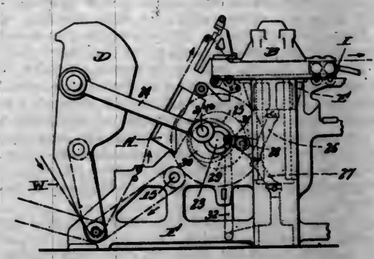
3. In a truss, a pair of curved body-arms each carrying a pad at one end, a connecting pad-appliance at the other end, the connection between the arms and this pad-appliance being a free universal one to permit the arms to have free backward up and down tilting action while in use, and means for limiting the outward play of the arms with respect to each other.

4. In a truss, a pair of curved body-arms each carrying a pad at one end, a connecting pad-appliance at the other end, the connection between the arms and this pad-appliance being a free pivotal one to permit the arms to have free up and down tilting action, and means on the pad-appliance for restricting the play of the arms with respect to the pad-appliance, said means being adjustable and flexible.

5. In a truss, a pair of body-arms, a pad-appliance connecting their ends, the connection between the appliance and each arm being substantially a free or loose universal joint and being on the outer face of the appliance, and a keeper for each arm on the pad-appliance above said joint, whereby while in use on the body each arm has a free independent universal movement with respect to the pad-appliance within a predetermined radius.

[Claims 6 to 9 not printed in the Gazette.]

958,268. PRINTING-PRESS. FRANCIS MEISEL, Boston, Mass., assignor to Meisel Press and Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 7, 1906. Serial No. 333,598.



1. In a printing press, the combination of two platens, a movable bed coöperating with each of said platens, an impression shaft, means for operating one of the beds from the impression shaft, and toggle levers operated by the impression shaft for operating the second bed, said toggle levers and said means for operating the first named bed being on opposite sides of the impression shaft.

2. In a perfecting printing press, the combination of two stationary platens, a movable bed coöperating with each of said platens, an impression shaft, a crank pin and link connection for operating one of the beds from the impression shaft, and toggle levers having direct operative connection with a cam on the impression shaft for operating the second bed, said link connection and toggle levers being on opposite sides of the impression shaft.

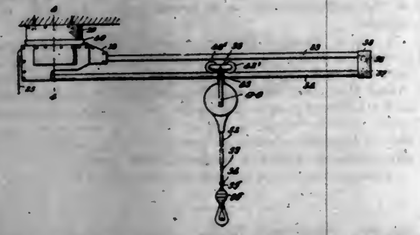
3. In a perfecting printing press, the combination of two stationary platens, a movable bed coöperating with each of said platens, an impression shaft, a crank pin and link connection for operating one of the beds from the impression shaft, and toggle levers having direct operative connection with a cam on the impression shaft for operating the second bed.

4. In a perfecting printing press, the combination of two stationary platens, a movable bed coöperating with each of said platens, an impression shaft, a link connection for operating one of the beds from the impression shaft, toggle levers having direct connection with the impression shaft for operating the second bed, the weight of said beds being so positioned as to act on the impression shaft in opposite directions when they are approaching their respective platens.

5. In a bed and platen printing press, the combination of two stationary platens, two movable beds coöperating therewith, toggle levers for operating one of the movable beds, an impression shaft, means connected with the impression shaft for operating the other of said beds, and a cam upon the impression shaft having direct engagement with the toggle levers, whereby the weight of said beds will act toward the impression shaft from opposite sides thereof when they are approaching their respective platens.

[Claim 6 not printed in the Gazette.]

958,269. ELECTRIC-LIGHT HANGER. WILLIAM McCANSE, Hobart, Okla. Filed Feb. 23, 1909. Serial No. 479,356.



1. A device as specified including a block secured to a ceiling, a flange formed on said block, a casing carried by said flange, a drum rotatably mounted within said block, an electric wire extended through said block and wound about the lower end of said drum, a tube forwardly extended from said casing, said wire being extended from said drum into said tube, a second electric wire extended through said block and engaged about the central part of said drum, a channel member forwardly extended from said casing beneath said tube, said second wire being extended from said drum into said channel member, a head engaged across the outer extremities of said tube and said channel member, idlers disposed in said head for the reception of said first wire from said tube and means adjustably disposed on said channel member for supporting an electric lamp and connecting the ends of said wires to the same.

2. In a device as specified the combination of a block, a casing rotatably disposed and depended from said block, a tube forwardly extended from said casing, a channel member forwardly extended from said casing in parallel relation with said tube, said tube and said channel member adapted to convey electric wires from said block and said casing and means adjustably positioned on said channel member for supporting an electric lamp.

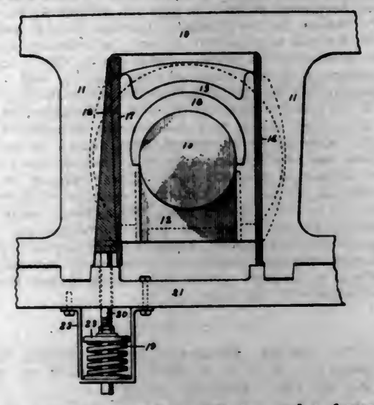
3. A device as specified comprising a block, a casing rotatably disposed on said block, a tube forwardly extended from said casing, a channel member forwardly extended from said casing beneath said tube, a bracket adjustably mounted on said channel member, an electric wire disposed in said tube and said channel member and engaged with said adjustable bracket, a drum mounted in said casing adapted for rotation to reciprocate said bracket, a tube depended from said bracket, a second tube telescopically disposed within said first tube, a drum mounted on said bracket, a wire positioned over said drum through said tubes, said wire being connected with said wire in said channel member and a lamp socket adjustably disposed upon the lower extremity of said second tube.

4. A device as specified comprising a ceiling block, a casing rotatably depended from said block, a drum mounted in said casing, electric wires extended through said block into said casing about said drum, a tube outwardly extending from said casing, a channel member carried by said casing in parallel relation with said tube and conveying one of said electric wires, a head positioned across the outer ends of said tube and said channel member, idlers disposed in said head for the reception of said electric wire in said tube, a bracket reciprocally disposed on said channel member and connected to said wires, arms depended from said bracket, a drum mounted in the lower end of said arms adapted to receive said wires, a spring disposed between said arms for engagement with said drum to tensionally hold the wire thereon in a wound position, a tube carried upon the lower extremities of said arms, a second tube telescopically mounted on said first tube, a semi-spherical socket disposed on the lower extremity of said second tube, a lamp socket carried by said tube and a ball disposed on said lamp socket for engagement in said semi-spherical bearing, said lamp socket being connected to the lower extremities of said wires.

5. A hanger as described comprising a block, a casing pivotally depended from said block, a drum horizontally and rotatably disposed in said casing, outwardly extended members carried by said casing, a bracket reciprocally disposed on said members, a lamp socket adjustably mounted on said bracket, electric wires engaged through said block, and on said casing, said wires extended outwardly through said members and connected to said bracket and to said lamp socket, and a chain disposed about said drum for rotating the same, said drum adapted to move said wires to admit of the longitudinal adjustment of said bracket on said members.

[Claim 6 not printed in the Gazette.]

958,270. AXLE-BOX FOR VEHICLES. JAMES E. McDANIEL, Columbia, S. C., assignor of two-fifths to Theodotus C. Hamby and Arthur W. Hamby, Columbia, S. C. Filed Sept. 10, 1909. Serial No. 517,168.



1. In combination with an axle box and a frame in which said box is slidably mounted, two wedges acting upon one another located between one side of said box and the adjacent frame, one of said wedges being yieldingly pressed into engagement with the other.

2. In combination with an axle box for power vehicles, and a frame in which said box is slidably mounted, two wedges tapering in opposite directions and engaging one another, located between one side of said box and said frame, one of said wedges being yieldingly pressed into engagement with the other.

3. In combination with an axle box for power vehicles and a frame in which said box is slidably mounted, a wedge shaped plate between one side of said box and the adjacent face of said frame, and a yielding wedge located between the said plate and said frame.

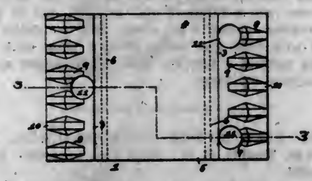
4. In combination with an axle box for power vehicles and a frame in which said box is slidably mounted, a wedge shaped plate between one side of said box and the adjacent face of said frame, and a spring pressed wedge located between the said plate and said frame.

5. In combination with an axle box for power vehicles and a pair of jaws between which said box is slidably mounted, a wedge shaped plate between one side of said box and the adjacent face of one of said jaws, and a wedge located between said plate and said frame, said wedge being yieldingly pressed into position at all times.

[Claims 6 to 9 not printed in the Gazette.]

958,271. TIE-PLATE. WILLIS MCKEE, Elyria, Ohio, assignor to Elyria Iron and Steel Company, Elyria, Ohio, a Corporation of Ohio. Filed Nov. 22, 1909. Serial No. 529,397.

1. A rolled tie-plate for rails having a rail-abutting shoulder on the upper surface of the plate, and a series of rolled bosses along said surface and beyond said shoulder for bearing against the back of the spike-heads which bosses being so arranged as to form a line contact with the back of the spike-heads to reinforce the same in whatever position the spike-hole may be located.

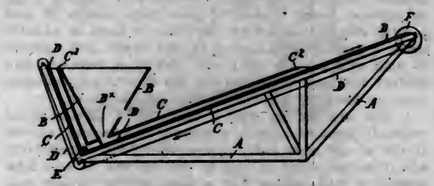


2. A rolled tie-plate for rails having a rail-abutting shoulder on the upper surface of the plate, and a series of rolled bosses along said surface and beyond said shoulder for bearing against the back of the spike-heads, said bosses being provided with upwardly and outwardly inclined bearing surfaces for said heads, and such bosses so arranged as to form a line contact with the back of the spike-heads to reinforce the same in whatever position the spike-hole may be located.

3. A tie-plate for rails having holes within the same for the reception of screw-spikes, a rail-abutting shoulder on each side of the upper surface of the plate, and a series of bosses along each side of said surface and beyond said shoulders for bearing against the back of the spike-heads, and the bosses on one side being staggered with those on the other side and so arranged as to form a line contact with the back of the spike-heads in any position of said holes to reinforce the same.

4. A tie-plate for rails having holes within the same for the reception of screw-spikes, a rail-abutting shoulder on each side of the upper surface of the plate, and a series of bosses along each side of said surface and beyond said shoulders for bearing against the back of the spike-heads, said bosses being provided with the upwardly and outwardly inclined bearing surfaces for said head, and the bosses on one side being staggered with those on the opposite side and so arranged as to form a line contact with the back of the spike-heads in any position of said holes to reinforce the same.

958,272. PROCESS OF SEPARATING LIQUIDS FROM SOLIDS. HORACE G. NICHOLS, near Ymir, British Columbia, Canada. Filed Apr. 3, 1908. Serial No. 425,068.



1. The herein described continuous process for separating liquid from solid matter in suspension in wet slimes or ore pulp; which consists in facilitating and assisting the said solid matter, suspended in such fluid mass, to settle in a settling vessel or compartment therein by constantly and steadily withdrawing such solid matter, as it settles, from the lower part of said vessel in close proximity below the point of discharge from the bottom of said settling vessel and delivering the said solid matter above the level of the fluid mass in said vessel and introducing the wet slimes or ore pulp into said vessel and withdrawing the clear liquid from said vessel in such a manner as to cause as little disturbance as possible to the whole fluid mass in said vessel and withdrawing the clear solution from the settling chamber at a point or points as nearly as possible directly over the deepest available part of said settling chamber substantially as and for the purposes hereinbefore described.

2. The herein described continuous process for separating liquid from solid matter in suspension in wet slimes or ore pulp; which consists in facilitating and assisting the said solid matter, suspended in such fluid mass, to settle in a settling vessel or compartment therein by constantly and steadily withdrawing such solid matter, as it settles, from the lower part of said vessel in close proximity below the point of discharge from the bottom of said settling vessel and delivering the said solid matter above the level of the fluid mass in said vessel and introducing the wet slimes or ore pulp into said vessel and withdrawing the clear liquid from said vessel in such a manner as to cause as little disturbance as possible to the whole fluid mass in said vessel and agglomerating the solid matter on the filtering surface of a suction filtering device or devices by applying suction to the latter, and alternately—and at rapid intervals—applying pressure through said filtering surface to thereby intermittently force the agglomerated or partly agglomerated solids off the surface of the filter and thereby cause or assist said solids to settle rapidly, substantially in the manner and for the purpose herein described.

3. The herein described continuous process for separating liquid from solid matter in suspension in wet slimes or ore pulp, which consists in facilitating and assisting the said solid matter, suspended in such fluid mass, to settle in a settling vessel or compartment therein by constantly and steadily withdrawing such solid matter, as it settles, from the lower part of said vessel in close proximity below the point of discharge from the bottom of said settling vessel and delivering the said solid matter above the level of the fluid mass in said vessel and introducing the wet slimes or ore pulp into said vessel and withdrawing the clear liquid from said vessel in such a manner as to cause as little disturbance as possible to the whole fluid mass in said vessel and introducing the wet slime or ore pulp into, and withdrawing the clear solution from, the settling chamber at a point or points as nearly as possible directly over the deepest available part of said settling chamber substantially as and for the purposes hereinbefore described.

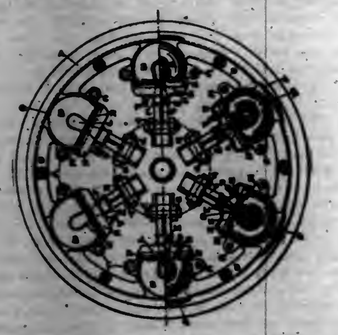
4. The herein described continuous process for separating liquid from solid matter in suspension in wet slimes or ore pulp; which consists in facilitating and assisting the said solid matter, suspended in such fluid mass, to settle in a settling vessel or compartment therein by constantly and steadily withdrawing such solid matter, as it settles, from the lower part of said vessel in close proximity below the point of discharge from the bottom of said settling vessel and delivering the said solid matter above the level of the fluid mass in said vessel and introducing the wet slimes or ore pulp into said vessel and withdrawing the clear liquid from said vessel in such a manner as to cause as little disturbance as possible to the whole fluid mass in said vessel and introducing the wet slime or ore pulp into, and withdrawing the clear solution from, the settling chamber at a point or points as close as possible to the point or points at which the wet slime or ore pulp supply enters said settling chamber substantially as and for the purposes herein described.

5. The herein described continuous process for separating liquid from solid matter in suspension in wet slimes or ore pulp; which consists in facilitating and assisting the said solid matter, suspended in such fluid mass, to settle in a settling vessel or compartment therein by constantly and steadily withdrawing such solid matter, as it settles, from the lower part of said vessel in close proximity below the point of discharge from the bottom of said settling vessel and delivering the said solid matter above the level of the fluid mass in said vessel and introducing the wet slimes or ore pulp into said vessel and withdrawing the clear liquid from said vessel in such a manner as to cause as little disturbance as possible to the whole fluid mass in said vessel and introducing the wet slime or ore pulp into, and withdrawing the clear solution from, the settling chamber at a point or points as nearly as possible directly over the deepest available part of said settling chamber; and agglomerating the solid matter on the filtering surface of a suction filtering device or devices by applying suction to the latter, and alter-

nately — and at rapid intervals — applying pressure through said filtering surface to thereby intermittently force the agglomerated or partly agglomerated solids off the surface of the filter and thereby cause or assist said solids to settle rapidly substantially as and for the purposes herein described.

[Claim 6 not printed in the Gazette.]

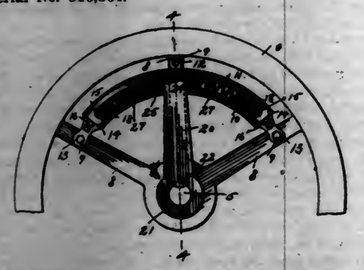
958,273. RESILIENT WHEEL FOR ROAD-VEHICLES. TOM OLDFIELD and JOSEPH A. SCHOFIELD, Halifax, England. Filed Apr. 10, 1909. Serial No. 489,133.



1. In a wheel, the combination, with a rim provided with chambers for cushions, of arch-shaped cushions arranged in the said chambers, a hub, arms connected with the hub and provided with bulbs on their outer ends which are inserted in the spaces at the middle parts of the cushions, and caps of elastic material secured over the open end portions of the said chambers and around the middle portions of the said arms as set forth.

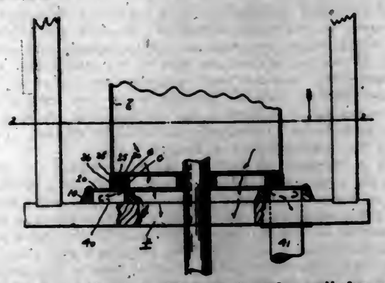
2. In a wheel, the combination, with a rim provided with chambers for cushions, of arch-shaped cushions arranged in the said chambers, a hub, arms connected with the hub and provided at their outer ends with hollow bulbs for holding lubricating material, said bulbs having perforations at their inner ends for the gradual delivery of the lubricating material to the chambers, and the outer end and middle portions of the said bulbs being inserted in the spaces at the middle parts of the cushions, and caps of elastic material secured over the open end portions of the said chambers and around the middle portions of the said arms as set forth.

958,274. POWER-TRANSMITTING PULLEY. WILLIAM A. OWEN, Johnson City, Tenn. Filed Sept. 7, 1909. Serial No. 516,364.



The combination with a driving shaft, of a sprocket wheel loosely mounted thereon, a collar secured to said shaft, a hub secured to said shaft and against said wheel opposite said collar having an arm extending from near the outer edge of said hub, ending in a laterally off-set head provided with lugs extending in opposite directions, an arcuate spring case secured to said wheel having its ends closed and provided with terminal securing ears with a middle lengthwise positioned laterally entering slot ending proximal to said case ends, each case end having a threaded opening, said head being arranged to enter said slot and centrally held in said case, a set screw within each case end, a follower disk at each end of said case and working against a set screw, and two helical springs within said case, one being carried upon each lug and working against a follower disk, all arranged as and for the purpose set forth.

958,275. PACKING FOR CYLINDER-MOLDS. HOWARD PARKER, Nashua, N. H. Filed Jan. 14, 1909. Serial No. 472,252.



1. The combination with a tank and a cylinder mold rotatably mounted in said tank, of a pair of packings located between an end wall of the tank and an end of said cylinder mold, said packings being separated to form an annular space between them.

2. The combination with a tank and a cylinder mold rotatably mounted therein, an annular flange on an end of said mold near its periphery, an annular ring on an end of said tank opposite said flange, a packing ring overlying said flanges, a second annular packing ring located outside of and spaced from said first mentioned packing ring, substantially as described.

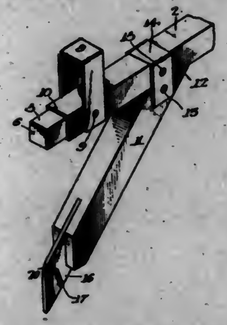
3. The combination with a tank and a cylinder mold mounted therein, of an annular flange on an end of said cylinder mold, an annular ring on an end wall of said tank opposite said flange, a packing ring laid on said flange and ring and covering the joint between them, a parti-annular ring secured to the end wall of said tank outside of said first mentioned ring, a plate secured to said parti-annular ring and extending toward said packing ring, an annular flange secured to said plate outside of said packing ring and separated therefrom to form an annular space, a packing strip located on said flange, and a binder to hold said packing strip and expand it laterally into contact with said plate and the end of said roll, substantially as described and for the purposes set forth.

4. The combination with a tank and a cylinder mold rotatably mounted therein, a packing ring located between an end of said mold and a corresponding end of said tank, a parti-annular ring secured to the end wall of said tank outside of said packing ring, a plate secured to said ring and forming a pocket and having an annular flange projecting toward the end of said mold, said flange being separated from said packing ring to form an annular space in communication with said pocket, and a packing strip located on said annular flange between the end of said mold and said plate.

958,276. JOINT. WARREN PENCE, CHARLES B. WOLF, and VIRGIL O. JARVIS, Los Angeles, Cal. Filed Dec. 6, 1909. Serial No. 531,704.

1. A joint comprising two bars, a loop on the end of each bar adapted to receive the end of the other bar.

2. A joint comprising two bars, a loop on the end of each bar adapted to receive the end of the other bar, one of said loops being pivoted on its bar to swing over the end of the other loop.



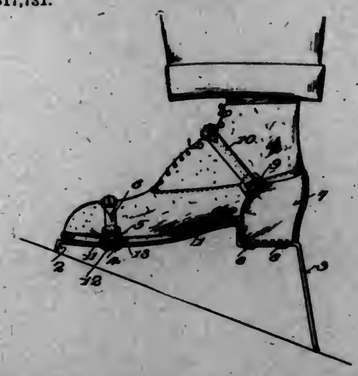
3. A joint comprising two bars, a loop on the end of each bar adapted to receive the end of the other bar, the end of one of said bars having a tenon to fit within the loop of the other bar, and the loop on the said bar having a tenon being pivoted and adapted to swing over the loop of the other bar.

4. A joint comprising two bars, a loop on the end of each bar adapted to receive the end of the other bar, one of said loops being movable to permit its bar to be first inserted in the other loop, after which the movable loop is adapted to be engaged over the outer loop.

5. A joint comprising two bars, a rigid loop on one bar, a loop pivoted to the other bar, the rigid loop having curved edges over which the pivoted loop is adapted to be swung, the end of the bar having the pivoted loop being curved to permit the swinging movement of the pivoted loop.

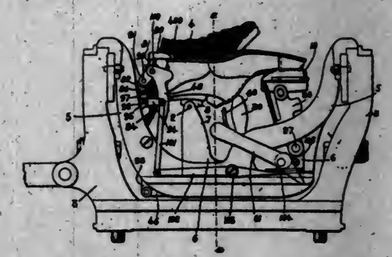
[Claims 6 and 7 not printed in the Gazette.]

958,277. ROOF-SHOE. CHRISTOPHER W. PHINNY, Brownwood, Tex. Filed Sept. 14, 1909. Serial No. 517,731.



A roof shoe, comprising a base plate formed with a relatively long downwardly projecting rear extension and a relatively short downwardly extending front extension, a cross bar secured to the base plate between the front ends thereof, and having upwardly extending ends, straps secured to said ends and adapted to pass over the foot, a clamp screw working through one of the upwardly projecting ends of the cross bar, a clamping plate secured to the inner end of said screw and having outwardly turned ends embracing the side edges of the cross bar, a counterplate secured to the base plate, and instep straps connected to said counterplate.

958,278. SHOE-JACK. THOMAS G. PLANT, Boston, Mass. Filed Apr. 25, 1908. Serial No. 429,202.



1. In a jack, the combination with last-supporting means including a toe-rest, of a normally elevated heel hold-down mounted on and movable with said jack, said parts being manually movable relatively to each other to bring the heel end of the shoe into position under the heel hold-down.

2. In a jack, the combination with last-supporting means, of a normally elevated heel hold-down mounted on said jack, said last-supporting means being movable manually toward the heel hold-down to bring the heel end of the shoe beneath said heel hold-down, means for jacking the last, and means operated by the jacking means for locking the hold-down.

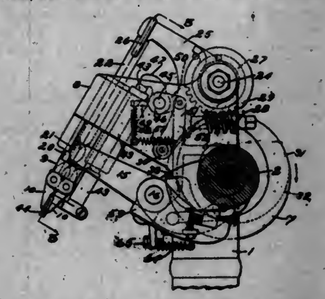
3. In a jack, the combination with last-supporting means, of a vertically movable heel hold-down mounted on and movable with said jack and normally sustained in position above the level of the sole of the lasted shoe sustained by said means, said parts being movable manually relative to each other to bring the heel portion of the shoe into position beneath the heel hold-down, and locking means for said hold-down when in lowered position.

4. In a jack, the combination with a heel gage, of last-supporting means including a toe-rest movable toward and from the heel gage thereby to position the last, and a heel hold-down to engage the heel end of the last and locking means to hold the latter to the last-supporting means.

5. In a jack, the combination with a heel gage, of last-supporting means including a last pin and toe-rest movable toward and from the heel gage thereby to position the last, a heel hold-down associated with the heel gage, and means for tilting the last pin to jack the last.

[Claims 6 to 34 not printed in the Gazette.]

958,279. FASTENER-PULLER. THOMAS G. PLANT, Boston, Mass. Filed July 23, 1908. Serial No. 444,915.



1. In a machine of the character described, the combination, with fastener pulling jaws normally positioned to contact directly with the surface into which fasteners are driven, of automatic actuating mechanism therefor including a driving shaft and operating connections adapted to actuate said jaws to engage, close upon, and pull a fas-

tener and thereafter to return said pulling jaws to rest in normal fastener receiving and open position.

2. In a machine of the character described, the combination, with fastener pulling jaws normally positioned to contact directly with the surface into which fasteners are driven, of a movable member adjacent said jaws and extending beyond the ends thereof, and mechanism, controlled by said movable member, adapted to actuate said jaws to engage and pull a fastener and thereafter to return said jaws to rest in normal fastener receiving position.

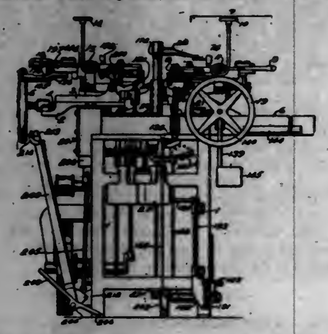
3. In a machine of the character described, the combination, with a pair of fastener pulling jaws, of automatic means to drive said jaws into the work and cause said jaws to close upon a fastener, and a shaft and operating connections for giving to the jaws a fastener pulling movement and then return them to fastener receiving position.

4. In a machine of the character described, the combination, with a fastener pulling device, of means to reciprocate said device toward and from the work, and means, independent of said reciprocating means, to impart to said device an additional movement toward the work.

5. In a machine of the character described, the combination with a slide, means to reciprocate said slide, and fastener pulling jaws carried by said slide, of a spring actuated plunger constructed and arranged to drive said jaws into the work and cause said jaws to close upon a fastener, and means for controlling said plunger.

[Claims 6 to 15 not printed in the Gazette.]

958,280. LASTING-MACHINE. THOMAS G. PLANT, Boston, Mass. Filed Sept. 28, 1908. Serial No. 455,159.



1. In a lasting machine, the combination of a last support, end wipers, auxiliary lasting devices movable into operative position for engaging the work in front of the wipers, and means for guiding the auxiliary lasting devices into engagement with the work as they are moved into operative position.

2. In a lasting machine, the combination of a last support, end wipers, side auxiliary lasting devices for engaging the work in front of the wipers, means for adjusting a wiper toward and from the center of the last and for correspondingly adjusting the associated auxiliary lasting device.

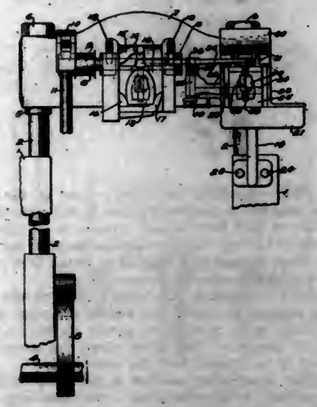
3. In a lasting machine, the combination of a last support, wiper carriers, end wipers associated therewith, side grippers for positively engaging the work in front of the wipers, means for adjusting a wiper with relation to its carrier and for correspondingly adjusting the associated gripper.

4. In a lasting machine, the combination of a last support, end wipers, side grippers and end grippers to positively engage the work in advance of the wiper edges, and means for causing closing and opening movements of the wipers and side and end grippers over the shoe sole.

5. In a bed lasting machine, the combination of a last support, end wipers, side grippers and end grippers to engage the work in advance of the wiper edges, and means to move said grippers inwardly over a shoe sole simultaneously with and immediately in advance of the acting edges of said wipers.

[Claims 6 to 74 not printed in the Gazette.]

958,281. HEELING-MACHINE ATTACHMENT. THOMAS G. PLANT, Boston, Mass. Filed Feb. 13, 1909. Serial No. 477,774.



1. In a boot and shoe heeling machine, the combination of a frame, a movable cross head, means for raising and lowering said cross head, a top lift holder for sustaining a top lift with a surface exposed and mounted on said movable cross head, an adhesive applying member, an arm carrying said member and sustained by the frame, and an adhesive supplying means secured to the frame at the upper limit of cross-head movement, said arm being mounted to permit the adhesive applying member to be moved from the adhesive supplying means to the top lift when the cross head is in a raised position and the top lift is sustained by the top lift holder.

2. In a boot and shoe heeling machine, the combination of a frame, a movable cross head, means for raising and lowering said cross head, a top lift holder for sustaining a top lift with a surface exposed and mounted on said movable cross head, an arm pivotally supported by the frame, an adhesive applying means loosely carried by said arm to turn with respect thereto as the arm is swung, and means to supply an adhesive for said applying means, pivotal movement of the said arm upon its support carrying the adhesive applying means from the supplying means to the top lift when the cross head is in a raised position and the top lift is in position on the holder.

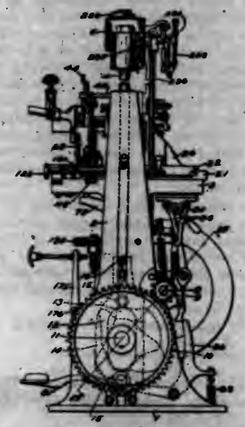
3. In a boot and shoe heeling machine, the combination of a supporting frame, a cross head, means for raising and lowering the cross head, a top lift holder movable with the cross head and adapted to swing from operative position beneath the cross-head to inoperative position at one face thereof and sustain a top lift with a surface exposed, an adhesive supplying means, an adhesive transferrer, an arm carrying said transferrer and mounted to move said transferrer from the adhesive supplying means to the surface of a top lift when the cross head is in raised position and the top lift is held by its holder in inoperative position, and means to normally maintain the arm and transferrer out of the path of movement of the top lift holder as it is swung from inoperative to operative position.

4. In a boot and shoe heeling machine, the combination of a supporting frame, a cross head, means for raising and lowering the cross head, a top lift holder movable with the cross head, means for swinging the top-lift holder under the cross-head to operative position in applying a top-lift to the heel and to inoperative position to the rear of the cross-head to sustain a top lift with a surface exposed, an adhesive supplying means, an adhesive transferrer, an arm carrying said transferrer and mounted to move said transferrer from the adhesive supplying means to the surface of a top lift when the cross head is in raised position and the top lift is held by the holder in inoperative position and the underface of the toplift exposed, and means to adjust the transferrer with relation to said arm to cause the transferrer to properly apply the adhesive to the top lift.

5. In a boot and shoe machine, the combination of a toplift holder, a cross-head on which it is mounted, means for moving the toplift holder to operative position beneath the cross-head and to inoperative position at one face thereof, means for holding a top-lift on said holder with its under surface presented in an upward direction in view of the operator, a pivotally mounted arm carrying a transferrer for adhesive material having an adhesive carrying face extending in a plane parallel to the exposed surface of the toplift when the holder sustains the toplift in inoperative position, an adhesive supplying means, and means for normally maintaining the transferrer in connection with the adhesive supplying means.

[Claims 6 to 9 not printed in the Gazette.]

958,282. HEELING-MACHINE. THOMAS G. PLANT, Boston, Mass. Filed Feb. 19, 1909. Serial No. 478,954.



1. In a heeling machine, the combination, with a driving shaft a shoe support and heel nailing means, of means acting on and for swinging the shoe support laterally to change its angular position with relation to the nailing means, means for engaging the shoe as it is swung to limit the lateral movement thereof, and means actuated from the said driving shaft to operate the nailing devices and return the shoe support to central position after the nailing operation.

2. In a heel nailing machine, the combination, with a support for the heel seat of a shoe and means for attaching a heel to said seat, of a top-lift carrier, means for placing said carrier into alinement with the heel, and an adjustable wedge on the carrier for moving the top-lift in its carrier toward and from the tread face of the heel to determine the degree of penetration of the heel nails into the substance of the top-lift.

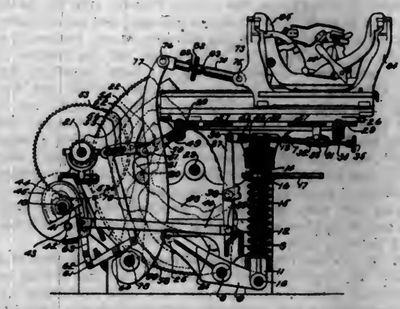
3. In a heel nailing machine, the combination of heel measuring mechanism under control of the operator for measuring the heel, automatically operating heel attaching mechanism, means for setting said mechanisms in operation, and connecting devices between said means constructed and arranged to prevent operation of the heel attaching mechanism actuating means until after the heel has been measured.

4. In a heel nailing machine, heel attaching mechanism, means for operating the same, devices for starting said means into operation, said devices being normally locked against movement in a direction to operate said mechanism, heel measuring mechanism, and means controlled by the heel measuring mechanism to unlock the said devices and permit operation of the heel attaching operating means.

5. In a heeling machine, heel and top lift attaching mechanism including a reciprocatory cross-head and a work support coöperating therewith, means for imparting to said cross-head a series of reciprocations relative to the work support to attach a heel and top lift, means for controlling said series of reciprocations constructed and arranged to stop movement of the cross-head at the ends of regular periods during its series of reciprocations, and means to prevent such stoppage of cross-head movement at the end of a selected period.

[Claims 6 to 43 not printed in the Gazette.]

958,283. LAYING AND LEVELING MACHINE. THOMAS G. PLANT, Boston, Mass. Filed May 24, 1909. Serial No. 497,959.



1. In a machine for treating boots and shoes, the combination of last supporting means, means to sustain the last supporting means along a line of support, means for automatically moving the last supporting means in a direction longitudinally of the shoe, and means for relatively shifting the line of support and the last supporting means transversely during such longitudinal movement.

2. In a machine for treating boots and shoes, the combination of last supporting means, means to sustain the last supporting means along a line of support, means for automatically moving the last supporting means in a direction longitudinally of the shoe, means for relatively shifting the line of support and the last supporting means transversely during such longitudinal movement, and means for relatively vibrating said line of support and last supporting means as they are relatively shifted transversely.

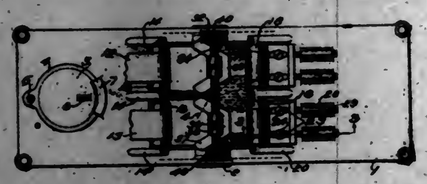
3. In a boot and shoe treating machine, the combination of last supporting means, means to sustain the last supporting means along a line of support, means for relatively vibrating the line of support and last supporting means transversely, and means for varying the path of transverse vibration.

4. In a boot and shoe machine, the combination of a jack, means for sustaining the jack along a line of support, means to shift the line of support laterally of said jack, and means to additionally move the line of support laterally.

5. In a boot and shoe machine, the combination of a table, a jack, means for moving the jack longitudinally of the table, means for sustaining the jack along a line of support, and a cam plate connected to said table for moving the line of support laterally of the jack as it is moved on said table.

[Claims 6 to 40 not printed in the Gazette.]

958,284. CANVAS-CEMENTER. THOMAS G. PLANT, Boston, Mass. Filed June 11, 1909. Serial No. 501,450.



1. In a device for applying an adhesive to one surface of a strip of canvas for application as a reinforce for insoles of boots and shoes, the combination of a tank for containing a liquid adhesive, a supporting element for the fabric extending into the liquid in the tank and about which the canvas passes in close contact, a guide for directing the canvas into the tank and about said element, a guide for directing the canvas strip from the tank, said guides being disposed with reference to said supporting element to cause the fabric to cling or press closely against the entire submerged surface of said element, and a scraper 21 bearing on the canvas directly after it leaves the said element and between it and said last named guide.

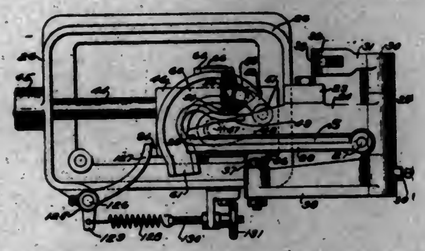
2. In a device for applying adhesive to one surface of a fabric for application as a reinforce for the insoles of boots and shoes, the combination of a tank containing liquid adhesive, a roll rotatably sustained therein and dipping into said adhesive, guiding means disposed close to and above the said roll and separated a distance apart less than the diameter of said roll so that the fabric passing about said guiding means and the roll in the tank may cling close to the surface of the latter roll and have cement or adhesive applied to only one surface thereof, and a plow having side wing portions and disposed between the guiding means and bearing upon the upper part of the roll dipping into the tank.

3. In a device for applying adhesive to one surface of a fabric for application as a reinforce for the insoles of boots and shoes, the combination of a tank containing liquid adhesive, a roll rotatably sustained therein and dipping into said adhesive, guiding means disposed close to and above the said roll and separated a distance apart less than the diameter of said roll so that the fabric passing about said guiding means and the roll in the tank may cling close to the surface of the latter roll and have cement or adhesive applied to only one surface thereof, a plow having side wing portions and disposed between the guiding means and bearing upon the upper part of the roll dipping into the tank, and means for forcing the plow onto the surface of said roll.

4. In a device for applying adhesive to one surface of a fabric for application as a reinforce for the insoles of boots and shoes, the combination of a tank containing liquid adhesive, a roll rotatably sustained therein and dipping into said adhesive, guiding means disposed close to and above the said roll and separated a distance apart less than the diameter of said roll so that the fabric passing about said guiding means and the roll in the tank may cling close to the surface of the latter roll and have cement or adhesive applied to only one surface thereof, a plow having diverging side wing portions provided with upwardly curved plowing surfaces, and means for forcing the plow onto the exposed surface of the roll in the tank.

5. In a device for applying adhesive to one surface of a fabric for application as a reinforce for the insoles of boots and shoes, the combination of a tank containing liquid adhesive, a roll rotatably sustained therein and dipping into said adhesive, two guide elements disposed close to and above the said roll and separated a distance apart less than the diameter of said roll so that the fabric passing about said guide elements and the roll in the tank may cling close to the surface of the latter roll and have cement or adhesive applied to only one surface thereof, and means acting upon the exposed portion of the roll which dips into the tank to keep it clean and free from adhesive.

958,285. SHOE-SOLE FLEXER. THOMAS G. PLANT, Boston, Mass. Filed June 23, 1909. Serial No. 503,793.



1. A shoe sole flexing machine, comprising, in combination, means for holding the sole while being treated, and means for rolling or bending an end portion of the sole back and forth toward and away from the plane of the sole body to impart flexibility thereto while so held.

2. A shoe sole flexing machine, comprising, in combination, means for holding the sole while being treated, means for grasping an end portion of the sole, and devices for causing said grasping means to turn or bend the sole end toward and away from the plane of the sole body while held by said means.

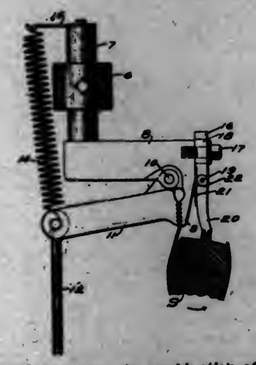
3. A shoe sole flexing machine, comprising, in combination, sole clamping means for holding the sole while being treated, and sole flexing means for rolling or bending the sole end toward and from the plane of the sole body while held by the clamping means to impart flexibility thereto.

4. A shoe sole flexing machine, comprising, in combination, sole holding jaws for holding a shoe sole while being treated, sole flexing jaws for engaging an end portion of the sole, and means for giving a relative bending movement to the holding and flexing jaws to cause the end of the sole to be bent toward and from the plane of the sole body to impart flexibility to the sole.

5. A shoe sole flexing machine, comprising, in combination, sole holding jaws for holding a shoe sole while being treated, sole flexing jaws for engaging a portion of the sole, and means for causing said flexing jaws to roll or bend the portion of the sole extending between the holding and flexing jaws toward and from the sole body to impart flexibility to the sole.

[Claims 6 to 27 not printed in the Gazette.]

958,286. AUXILIARY LASTING DEVICE. THOMAS G. PLANT, Boston, Mass. Filed Sept. 20, 1909. Serial No. 518,689.



1. In a lasting machine, the combination of a support, relatively fixed and movable pincer jaws mounted on said support for vertical adjustment, means for operating the jaws, a pivotally mounted finger adjustably connected to the fixed jaw, and a spring for maintaining the finger in position with respect to pivotal movement that its lower end may act as a fulcrum for the shoe and permitting the finger to swing toward the jaws as the shoe is turned.

2. In a lasting machine, the combination of a supporting frame, a pair of pincer jaws carried by said frame to engage the upper while the shoe is held in the hands of the operator, treadle means for closing the pincers on the upper, a pivotally mounted finger to engage the shoe sole and about which the shoe may be turned with respect to the frame supported pincers to draw the upper into position, and means permitting said finger to turn on its pivot toward the pincers.

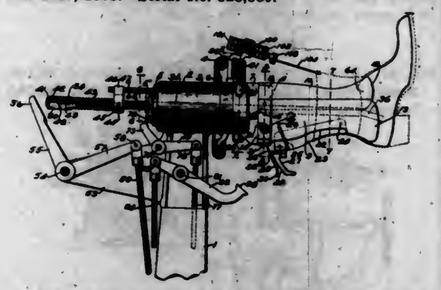
3. In a lasting machine, the combination of a supporting frame, a fixed and a pivotally mounted pincer jaw supported by said frame, a treadle for turning the pivotally mounted jaw, and a pivotally mounted fulcrum point about which the shoe is movable with respect to the frame supported pincer jaws to draw the upper about the last.

4. In a lasting machine, the combination of a supporting frame, a fixed jaw, a jaw pivoted to the fixed jaw, a fixed bracket supporting said jaws, means under control of the operator for actuating said jaws to grasp the upper of the shoe, a pivotally mounted fulcrum pin disposed adjacent said jaws to bear upon the shoe and about which the shoe may be turned with respect to the frame supported pincer jaws to draw the upper about the last, and a spring permitting the fulcrum pin to yield toward the jaws.

5. In a lasting machine, the combination of a supporting frame, a pair of pincer jaws, a fixed bracket supporting said jaws, means under control of the operator for actuating said jaws to grasp the upper of a shoe, a fulcrum pin disposed adjacent said jaws to bear upon the shoe and about which the shoe may be turned with respect to the frame supported pincer jaws to draw the upper about the last, said fulcrum pin being pivotally mounted, and a spring normally acting to hold the fulcrum pin in operative position and allowing it to yield to permit the pin to swing toward the pincer jaws as the shoe is turned.

[Claim 6 not printed in the Gazette.]

958,287. IRONING AND DRESSING JACK FOR BOOTS AND SHOES. THOMAS G. PLANT, Boston, Mass. Filed Oct. 19, 1909. Serial No. 523,380.



1. An ironing and dressing jack having a leg portion, a last supporting spindle having an end portion to engage and interlock with the last pin socket of a last, means permitting movement of the last supporting spindle longitudinally to move a last carried by said spindle into position with respect to the leg portion, and means to move the last supporting spindle laterally with respect to the leg portion.

2. An ironing and dressing jack having a leg portion, a last supporting spindle having an end portion to engage the pin socket of a last, means permitting movement of the spindle longitudinally of the leg portion by pressure upon the shoe carried thereby, and means to move the last supporting spindle laterally of the leg portion.

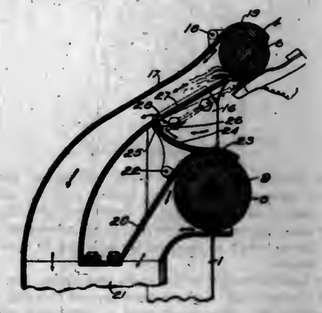
3. An ironing and dressing jack having a leg portion, a last supporting spindle having an end portion to engage the pin socket of a last, means permitting movement of the spindle longitudinally of the leg portion by pressure upon the shoe carried thereby, and means acting yieldingly to move the last supporting spindle in a direction toward the front of the leg portion.

4. In a dressing or finishing jack, the combination of a leg portion, a last supporting spindle movable longitudinally of said leg portion and having an end to engage the pin socket of a last, and means to move the last supporting spindle in a direction toward and from the front of the leg portion.

5. In a dressing and finishing jack, the combination of a leg portion comprising a front leg member and a rear leg member, a last supporting spindle having an end portion to engage the pin socket of a last, and means for moving the last supporting spindle in a direction toward the front leg member.

[Claims 6 to 34 not printed in the Gazette.]

958,288. BOOT AND SHOE BUFFING MACHINE. THOMAS G. PLANT, Boston, Mass. Filed Oct. 19, 1909. Serial No. 523,381.



1. In a buffing machine for treating boots and shoes, the combination of a buffing roll, a dust trunk having a mouth disposed adjacent said roll to receive particles detached from the shoe by said roll, said dust trunk having an opening through its wall remote from said roll, and a deflector to intercept particles failing to enter the mouth of the dust trunk and direct them through said opening into the dust trunk.

2. In a buffing machine for treating boots and shoes, the combination of a buffing roll, a dust trunk having a mouth disposed adjacent said roll to receive particles detached from the shoe by said roll, said dust trunk having an opening through its wall remote from said roll, and a movable deflector to intercept particles failing to enter the mouth of the dust trunk and direct them through said opening into the dust trunk.

3. In a buffing machine for treating boots and shoes, the combination of upper and lower buffing rolls, a dust trunk to receive and carry away particles detached from the shoe by said rolls, said dust trunk having an opening in one of its walls, and a deflector extending over the lower roll to intercept particles thrown from the shoe by the upper roll and direct them into the dust trunk.

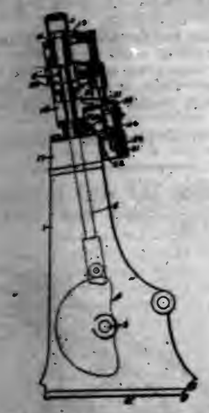
4. In a buffing machine for treating boots and shoes, the combination of upper and lower buffing rolls, a dust trunk to receive and carry away particles detached from the shoe by said rolls, said dust trunk having an opening in one of its walls, and a hinged deflector extending over the lower roll to intercept particles thrown from the shoe by the upper roll and direct them into the dust trunk.

5. In a buffing machine for treating boots and shoes, the combination of a buffing roll, and a dust trunk having a mouth disposed adjacent said buffing roll to receive particles detached from the shoe by said roll, said dust trunk having another opening in the side wall of the trunk at a point remote from the buffing roll, said opening being

disposed with reference to the roll that particles detached from the shoe and falling to enter the mouth of the dust trunk may pass through said opening into the dust trunk.

[Claims 6 and 7 not printed in the Gazette.]

958,289. BOOT AND SHOE MACHINE. THOMAS G. PLANT, Boston, Mass. Filed Oct. 29, 1909. Serial No. 525,251.



1. In a heeling machine for boots and shoes, the combination of heel pricking means, means to move the heel pricking means into and out of operative position, and lubricant spraying means operative upon movement of the pricking means when in inoperative position to spray said pricking means.

2. In a heeling machine for boots and shoes, the combination of a cross-head, heel prickers carried thereby, means for operating the cross-head, and a lubricant spraying device operative upon movement of the prickers to throw lubricant thereon.

3. In a heeling machine for boots and shoes, the combination of heel pricking means, a lubricant spraying device for throwing a lubricant upon the pricking means, and means to move the pricking means and operate the spraying device.

4. In a heeling machine, the combination of a cross-head, heel prickers carried thereby, a lubricant spraying device, a casing into which the spraying device delivers the lubricant spray, and means for operating the spraying device to deliver lubricant to the prickers.

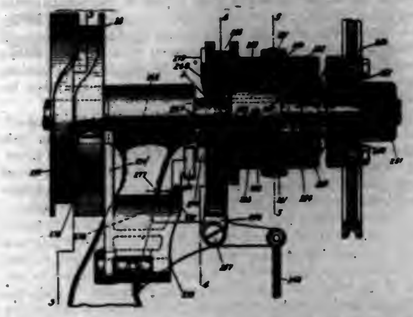
5. In a heeling machine, the combination of a cross-head, heel prickers carried thereby, a casing into which the prickers project, a lubricant spraying device connected with said casing, and means for operating the spraying device to deliver lubricant spray upon the prickers when in said casing.

[Claims 6 to 27 not printed in the Gazette.]

958,290. STARTING AND STOPPING MECHANISM. THOMAS G. PLANT, Boston, Mass. Filed Oct. 4, 1906, Serial No. 337,339. Renewed Nov. 22, 1909. Serial No. 529,298.

1. In a sewing machine, the combination with a driving shaft, of a driving pulley loosely mounted thereon, a collar secured against rotation on said shaft, a pair of cup-shaped telescoping sleeves loose on said shaft and surrounding said collar, a yielding connection between said sleeves, means for connecting one of said sleeves with the driving pulley, and means for connecting said sleeves alternately with said collar.

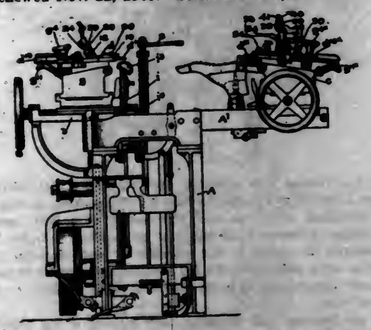
2. In a sewing machine, the combination with a driving shaft, of means for driving the shaft including a yielding member, brake means for the shaft including a stop arm, a pair of stops carried by the driving means, and provision for moving the driving means into position for one of its stops to engage the brake stop arm to stop rotation of the shaft and tension said yielding member, and for its other stop to engage said brake stop arm on relaxation of said yielding member after being tensioned.



3. In a sewing machine, the combination with a driving shaft, of a pair of sleeves loose on said shaft, a yielding connection between said sleeves, brake means including a brake stop arm, an oppositely facing lug on each sleeve constructed and arranged to coöperate with the opposite faces of said stop arm, means to connect said sleeves and shaft, means to rotate the sleeves, and provision for moving said sleeves to bring their lugs into operative relation with said brake stop arm.

4. In a sewing machine, the combination with a driving shaft and a driving pulley loose thereon, of a collar secured to said shaft, a rotary member loose on said shaft adjacent each end of said collar, a lug on each end of said collar, said lugs facing in opposite directions, a lug on each rotary member for engaging said collar lugs, means to connect one of said rotary members and said driving pulley and simultaneously engage the other rotary member and collar, a yielding connection between said rotary members wherethrough the shaft is driven, and means to stop rotation of the shaft, including provision for disengaging the pulley and its rotary member and engaging said rotary member with the collar.

958,291. BED-LASTING MACHINE. THOMAS G. PLANT, Boston, Mass. Filed Dec. 28, 1906, Serial No. 349,782. Renewed Nov. 22, 1909. Serial No. 529,299.



1. A lasting machine comprising, in combination, a last support, end wipers for laying the margin of the material to be lasted over the insole, a device positively to engage the material in front of the wipers, and means to move said wipers and device after such engagement in a single plane substantially parallel with the bottom of the last to stretch and conform the materials to the last.

2. A lasting machine comprising, in combination, a last support, end wipers, positive work engaging lasting devices constructed and arranged to operate in front of the wipers on one side only of the materials to be lasted and within the area bounded by the edge of the last, and means to close and open said wipers and devices relatively to the last by movement in a plane substantially parallel with the bottom thereof.

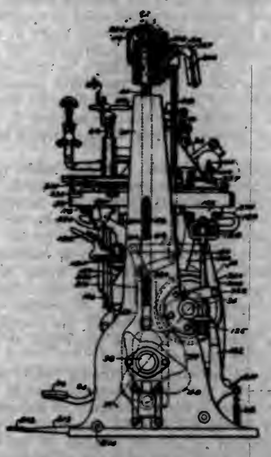
3. A lasting machine comprising, in combination, a last support, a wiper for engaging the material at the end of the last and means to operate it, and a device acting in front of the wiper positively to engage the outer surface only of the material engaged by the wipers, and means to move the wiper and said device relatively to the last and in a plane substantially parallel with the bottom thereof.

4. A lasting machine comprising, in combination, a last support, wiping means, devices to engage the outer surface only of the material in front of the wiping means, and means for moving said devices in a plane substantially parallel with the bottom of the last, said devices being constructed and arranged to hold said material during retraction of the wiping means.

5. A lasting machine comprising in combination a last support, wiping means, and positive work engaging devices and means to operate the same simultaneously with and immediately in advance of the acting faces of said wiping means.

[Claims 6 to 56 not printed in the Gazette.]

958,292. HEELING-MACHINE. THOMAS G. PLANT, Boston, Mass. Filed Feb. 7, 1908, Serial No. 414,707. Renewed Nov. 22, 1909. Serial No. 529,300.



1. In a machine of the class described, the combination with a shoe support to swing the shoe laterally into a fixed position for treatment and means for oscillating said support, of a stop against which the forepart of the shoe contacts to define its lateral position as the shoe support is swung laterally.

2. In a machine of the class described, the combination with a shoe support, of means to adjust the shoe for a selected pointing of the heel including a side gage disposed on each side of said support normally in inoperative position, and mechanical means for selectively moving said gages into operative position.

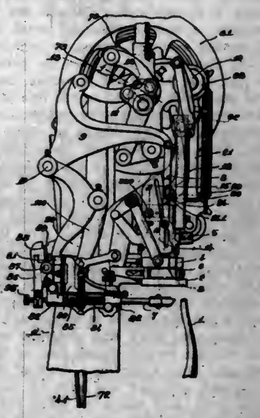
3. In a machine of the class described, the combination with a shoe support, of means for angularly positioning both right and left shoes including forepart gages on opposite sides of said shoe support, and provision for alternatively operating said gages to determine the swing for rights and lefts.

4. In a machine of the class described, the combination with a shoe support, of counter clamps, two forepart gages normally in inoperative position, and means for moving said gages into operative position singly.

5. In a machine of the class described, the combination with an angularly movable shoe support and a forepart gage for contacting with the shoe, of means for angularly moving said shoe support and for placing said gage in a predetermined relation to said support to be met by the shoe when the latter is swung into the desired position.

[Claims 6 to 63 not printed in the Gazette.]

958,293. MACHINE FOR INSERTING METALLIC FASTENINGS. THOMAS G. PLANT, Boston, Mass. Filed Jan. 31, 1908, Serial No. 413,540. Renewed Nov. 22, 1909. Serial No. 529,301.



1. In a machine for inserting fastenings, the combination with fastening-driving mechanism, of a clutch to operate said mechanism, a work support movable into and out of operative position, and means controlled by the clutch to prevent the work support from movement while the clutch is in engagement.

2. In a machine for inserting fastenings, the combination with fastening-inserting mechanism, of a clutch to operate said mechanism, a tipping horn or work support, and means controlled by the clutch to lock said horn in operative position while the machine is in operation.

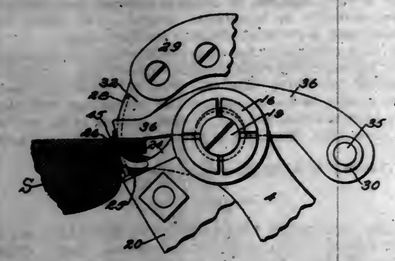
3. In a machine for inserting fastenings, the combination, with fastening driving mechanism, of a clutch to operate said mechanism, mechanism for actuating the clutch, a work support movable into and out of operative position, and means controlled by said clutch independently of its actuating mechanism to prevent the work support from movement while the clutch is in engagement.

4. In a machine for inserting fastenings, the combination, with fastening driving mechanism, of a clutch including a member movable to engage and disengage the same, a work support movable into and out of operative position, and means actuated by said movable member to permit the work support to be held from movement while the clutch is in engagement.

5. In a machine for inserting fastenings, the combination with fastening-inserting mechanism and a clutch to operate said mechanism, of a tipping work support having a recess, a locking pin to enter said recess and maintain the work support in operative position, and means associated with said clutch to control the operation of the locking pin.

[Claims 6 to 19 not printed in the Gazette.]

958,294. SHOE-SEWING MACHINE. THOMAS G. PLANT, Boston, Mass. Filed June 3, 1908, Serial No. 436,329. Renewed Nov. 22, 1909. Serial No. 529,302.



1. In a shoe sewing machine, the combination of a work support or table, stitch forming mechanism, awl feeding means, a presser-foot to clamp the work upon the work support or table during the stitch forming operation, and having a movable nose to engage the work, said nose being disposed adjacent to the plane of movement of the awl as it penetrates the work, and means to move the said nose with the awl in the line of feed.

2. In a shoe sewing machine, the combination of stitch forming mechanism, an awl, means to cause the awl to penetrate the work and withdraw therefrom, means to move the awl to feed the work, a work support or table, a presser-foot, a nose movable relative to said presser-foot in the direction of work feed, and means to move the nose with the awl in the work feeding and return movements while the nose is in contact with the work.

3. In a shoe sewing machine, the combination of stitch forming mechanism including a needle and its actuating means, an awl, means to cause the awl to penetrate the work and withdraw therefrom, means to move the awl to feed the work while the needle is withdrawn, a presser-foot to bear upon the work and provided with a nose movable with relation to the presser-foot in the direction of work feed, said nose engaging a channel in the work and being disposed adjacent the path of the awl as it penetrates the work, and means to move the nose with the awl during work feeding movement and return it to initial position while the work is clamped by the presser foot.

4. In a shoe sewing machine, the combination of stitch forming mechanism, awl feeding means, a presser-foot to bear upon the work, a nose movable in relation to the presser-foot in the direction of feed, said nose being forced upon the work by the presser-foot, and means for moving the nose with the awl during work feed.

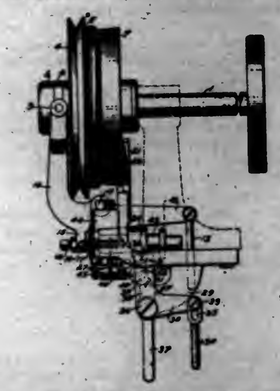
5. In a shoe sewing machine, the combination of stitch forming and awl feeding means, a presser-foot to bear upon the work, a nose carrying arm, a nose connected therewith to engage the work, said arm being movable with the presser-foot to place the nose in engagement with the work, and connections between the awl feeding means and said arm to impart movement to the nose in the direction of feed.

[Claims 6 to 19 not printed in the Gazette.]

958,295. STOPPING MECHANISM. THOMAS G. PLANT, Boston, Mass. Filed June 11, 1908, Serial No. 437,817. Renewed Nov. 22, 1909. Serial No. 529,303.

1. In a stopping mechanism, a driving shaft, fast and loose clutch members mounted thereon, clutch operating means, a stop-finger or member, means acting normally to maintain said stop-finger or member in engagement with the fast clutch member to prevent movement of the driving shaft, means controlled by the operator and movable independent of the clutch operating means to disengage the stop-finger or member from its holding relation with the fast clutch member while the clutch members remain disengaged, and a lock for holding the finger or member in such disengaged position to permit the driving shaft to be turned.

2. In a stopping mechanism, a driving shaft, fast and loose clutch members mounted in operative relation thereto, treadle actuating means for moving said clutch members into driving engagement, a stop-finger or member, means acting to maintain the clutch members disengaged and the said finger or member in position to prevent rotation of the driving shaft, means under the control of the operator and movable independent of the clutch actuating means to move said finger or member from said position to an inoperative position, and a lock for holding the said stop-finger or member in inoperative position.



3. In a stopping mechanism, a driving shaft, fast and loose clutch members in operative relation thereto, a stop-finger or member, means acting normally to maintain said clutch members disengaged and the stop-finger or member in operative position to prevent rotation of the driving shaft, a treadle to move the stop-finger or member to inoperative position and to engage the clutch members, and means independent of said treadle and under control of the operator to move the stop-finger or member to inoperative position to permit rotation of the driving shaft by hand.

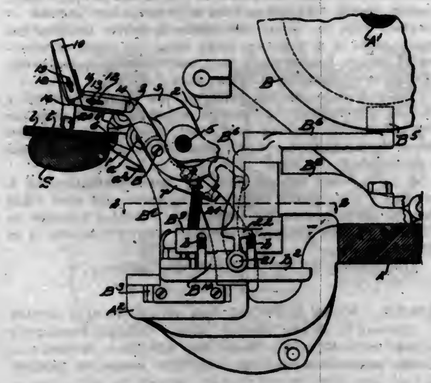
4. In a stopping mechanism, a driving shaft, fast and loose clutch members in operative relation thereto, a stop-finger or member, means acting normally to maintain said clutch members disengaged and the stop-finger or member in operative position to prevent rotation of the driving shaft, a treadle to move the stop-finger or member to inoperative position and to engage the clutch members, means independent of said treadle and under control of the operator to move the stop-finger or member to inoperative position to permit rotation of the driving shaft by hand, and a lock for holding the stop-finger or member in such inoperative position.

5. In a stopping mechanism, a driving shaft, fast and loose clutch members in operative relation thereto, a stop-finger or member, means acting normally to maintain said clutch members disengaged and the stop-finger or member in operative position to prevent rotation of the driving shaft, a treadle to move the stop-finger or member to inoperative position and to engage the clutch members, means under control of the operative to move the stop-finger or member to inoperative position independently of movement of the clutch members to permit rotation of the driving shaft by hand, a lock for holding the stop-finger or member in such inoperative position, and means operated by the starting treadle to trip the lock.

[Claims 6 to 15 not printed in the Gazette.]

958,296. SEWING-MACHINE. THOMAS G. PLANT, Boston, Mass. Filed Sept. 1, 1908, Serial No. 451,145. Renewed Nov. 22, 1909. Serial No. 529,304.

1. In a shoe sewing machine, the combination of a table or work support to engage and sustain the work, stitch forming mechanism, a presser-foot, a guide to engage the work to determine the distance of the line of stitches from the sole edge on one surface of the work, a tilt preventer independent of the presser foot to engage the surface of a shoe sole to determine the inclination of the work with respect to the table and cause the line of stitches to appear in a desired position on the opposite surface of the work, and means for causing the tilt preventer to be operative while sewing on one part and inoperative while sewing on another part of the shoe sole.



2. In a shoe sewing machine, the combination of a table or work support to sustain the work, stitch forming mechanism, a presser foot for holding the work on the table, a guide to determine the distance of the line of stitches from the edge of the work on one surface thereof, a tilt preventer to engage the surface of a shoe sole and determine the vertical tilt of the shoe, and means for moving the tilt preventer during the operation of the machine to vary the position of the line of stitches on the opposite surface of the work with respect to the sole edge.

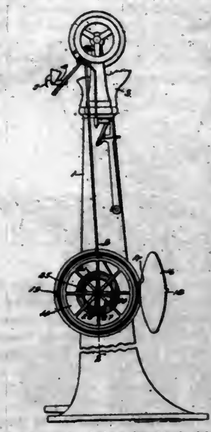
3. In a shoe sewing machine, the combination of a table or work support to engage and sustain the work, stitch forming mechanism, a presser foot for holding the work upon the table or work support, a guide to determine the position of the line of stitches from the edge of the sole on one surface thereof, and means inoperative while sewing around the shank to permit the work to be tilted and contacting with the sole surface while sewing around the forepart to determine the direction of the line of stitches through the work and maintain the desired position of the line of stitches on the opposite surface of the work with respect to the edge thereof about the forepart.

4. In a shoe sewing machine, the combination of stitch forming mechanism, means to determine the position of the line of stitches on one surface of the work, a presser-foot, and means to limit the vertical inclination of the shoe with respect to the direction of the stitches where they pass from one surface of the work to the other as said shoe is being stitched about the forepart to determine the position of the line of stitches with respect to the sole edge on the opposite surface of the work, said means permitting increased inclination of the shoe in sewing around the shank.

5. In a shoe sewing machine, the combination of a table or work support, stitch forming mechanism, a presser-foot a guide in coöperative relation with the presser foot to engage a groove in the surface of the work and determine the transverse adjustment of the shoe with respect to the stitch forming mechanism, a tilt preventer movable during the sewing operation into position to engage the shoe and determine the inclination or tilt of the work with respect to the direction of the stitches where they pass through the work that the line of stitches may be properly positioned on both surfaces of the work, and a lock for holding the tilt preventer in position.

[Claims 6 to 26 not printed in the Gazette.]

958,297. WELT-HOLDER FOR SEWING-MACHINES. THOMAS G. PLANT, Boston, Mass. Filed Oct. 17, 1908, Serial No. 458,158. Renewed Nov. 22, 1909. Serial No. 529,305.



1. A moisture retaining welt holder for sewing machines for maintaining the welt in moist or tempered condition for presentation to the sewing instrumentalities, comprising a supporting standard, a reel having a welt supporting portion on which the welt is wound, said welt supporting portion having a slot through which the end of the welt is passed and by which said end is held, a moisture retaining casing surrounding said reel and provided with a passageway for the delivery of the moist welt as it is presented to the sewing instrumentalities and having an opening for the introduction of the reel and moist welt, and a door for closing said opening to maintain the welt in moist and pliable condition, the said reel and casing being sustained by said standard.

2. A welt holder for sewing machines comprising a reel on which the tempered welt is wound, a shaft for supporting said reel, said shaft having a reel retaining catch, a casing section having a passageway for the passage of the welt to the sewing machine and an opening for the introduction and removal of the reel, and a cover for said opening, said reel and supporting shaft being contained within the space defined by the casing section and cover to maintain the welt in moist and pliable condition.

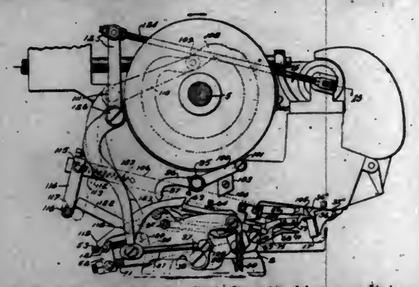
3. A moisture retaining welt holder for sewing machines, comprising a supporting frame, a shaft sustained thereby, a casing section supported by said frame and having a door for closing the entrance to said casing section and a passageway for the withdrawal of the welt, a reel adapted to be supported by said shaft within the casing section, and a catch for holding the reel on said shaft, said reel being contained within the space defined by the casing section and door to maintain the supported welt in moist and pliable condition.

4. A moisture retaining welt holder for sewing machines comprising a supporting frame, a shaft sustained thereby, a casing section removably supported by said shaft and having a door for closing the entrance to said casing section and a passageway for the passage of the welt to the sewing machine, a welt supporting reel having a hollow barrel on which the welt is wound, and a hollow hub to engage the said shaft, said casing and door forming a moisture retaining envelop for the reel to maintain the welt in moist and pliable condition.

5. A moisture retaining welt holder for sewing machines comprising a supporting frame, a casing section supported thereby, a shaft projecting into said casing, a door for closing one portion of the casing, said casing affording a moisture retaining envelop for a mass of welt, a reel having a welt supporting barrel, and a reel supporting hub adapted to be sustained by said shaft.

[Claim 6 not printed in the Gazette.]

958,298. SEWING-MACHINE. THOMAS G. PLANT, Boston, Mass. Filed Oct. 19, 1908, Serial No. 458,356. Renewed Nov. 22, 1909. Serial No. 529,306.



1. In a shoe sewing machine for attaching a welt to a shoe, the combination of stopping and starting mechanism for said machine, and welt controlling means actuated upon stopping the machine for preventing the withdrawal of welt upon withdrawal of the work from the machine.

2. In a shoe sewing machine for attaching a welt to a shoe, the combination of starting and stopping means for said machine, and a welt measuring device comprising means acting upon stopping the machine to limit the withdrawal of welt upon withdrawal of the work from the machine.

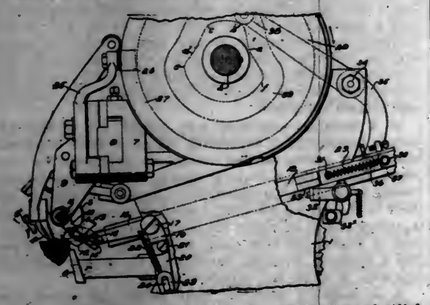
3. In a shoe sewing machine for attaching a welt to a shoe, the combination of stitch forming mechanism, starting and stopping means therefor, and means acting upon stopping the machine to prevent the welt being drawn from its source of supply.

4. In a shoe sewing machine for attaching a welt to a shoe, the combination of starting and stopping means for said machine, welt controlling means, and connections between said starting and stopping means and welt controlling means to cause the latter to free the welt upon starting the machine and to limit the withdrawal of the welt from its source of supply upon stopping the machine.

5. In a shoe sewing machine for attaching a welt to a shoe, the combination of stopping and starting mechanism for said machine, welt controlling means actuated upon stopping the machine for preventing the withdrawal of welt upon withdrawal of the work from the machine, and means for severing the welt.

[Claims 6 to 33 not printed in the Gazette.]

958,299. SHOE-SEWING MACHINE. THOMAS G. PLANT, Boston, Mass. Filed Nov. 4, 1908, Serial No. 460,995. Renewed Nov. 22, 1909. Serial No. 529,307.



1. In a shoe sewing machine, the combination of stitch forming mechanism, a welt guide to direct the welt for the action of the stitch forming mechanism, and means to move the welt guide in a direction diagonal to the line of feed and out of contact with the work to draw it along the welt.

2. In a shoe sewing machine, the combination of stitch forming mechanism including a needle, a welt guide to direct the welt for the action of the stitch forming mechanism, and means acting to move the welt guide along the welt in a direction substantially diagonally to the plane of movement of the needle and from contact with the work.

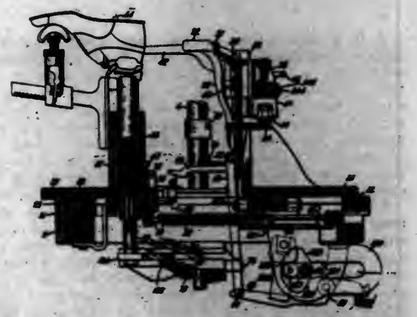
3. In a shoe sewing machine, the combination of stitch forming mechanism, including a needle, a welt guide to direct the welt for the action of the stitch forming mechanism, means for moving said welt guide into and out of contact with the work, and means operative to move the welt guide in a direction away from the plane of movement of the needle while said welt guide is being withdrawn from contact with the work.

4. In a shoe sewing machine, the combination of a needle, a welt guide, and means including a back gage for simultaneously moving said welt guide in a direction away from the plane of movement of the needle and from contact with the work.

5. In a shoe sewing machine, the combination of a needle, a welt guide, and means to move said welt guide out of contact with the work in a direction inclined to the line of feed and along the welt while the needle is in the work.

[Claims 6 to 11 not printed in the Gazette.]

958,300. WORK-SUPPORT FOR HEELING-MACHINES. THOMAS G. PLANT, Boston, Mass. Original application filed Feb. 19, 1909, Serial No. 478,954. Divided and this application filed Nov. 24, 1909. Serial No. 529,703.



1. In a machine of the class described, the combination with a shoe support to swing the shoe laterally into a fixed position for treatment, and means including a rock shaft and eccentric pin and slot connection between the rock shaft and shoe support for oscillating said support, of a stop against which the forepart of the shoe contacts to define its lateral position as the shoe support is swung laterally.

2. In a machine of the class described, the combination with a shoe support to swing the shoe laterally into a fixed position for treatment, and means including a spring actuated rock shaft and eccentric pin and slot connection between the rock shaft and shoe support for oscillating said support, of a stop against which the forepart of the shoe contacts to define its lateral position as the shoe support is swung laterally.

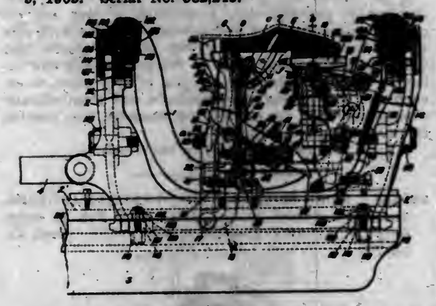
3. In a machine of the character described, the combination with a shoe support to swing the shoe laterally into a fixed position for treatment, and spring actuated means for oscillating said support, of a stop against which the forepart of the shoe contacts to define its lateral position as the shoe support is swung laterally.

4. In a machine of the character described, the combination with a shoe support to swing the shoe laterally into a fixed position for treatment, and spring actuated means for oscillating said support, of devices for freeing said means to the action of the spring to cause lateral movement of the support.

5. In a machine of the character described, the combination, with a shoe support, of means for angularly positioning both right and left shoes including forepart gages on opposite sides of said shoe support, and spring actuated means for alternatively operating said gages to determine the swing for rights and lefts.

[Claims 6 to 46 not printed in the Gazette.]

958,301. SHOE-JACK. THOMAS G. PLANT, Boston, Mass. Filed Feb. 14, 1908, Serial No. 415,835. Renewed Dec. 9, 1909. Serial No. 532,249.



1. In a jack, the combination with last-sustaining means, of means to support said last-sustaining means along a line of support, and means to shift said line of support and last-sustaining means relative to each other.

2. In a jack, the combination with a frame, of last-sustaining means supported by said frame along a line of support, and means to shift said line of support laterally relatively to the last-sustaining means.

3. In a jack, the combination with a frame, of last-sustaining means supported thereby along a line of support, means to prevent lateral movement of the last-sustaining means relative to said frame, and means to shift the line of support laterally relatively to said last-sustaining means.

4. In a jack, the combination with a frame, of last-sustaining means supported by said frame along a line of support substantially in the horizontal plane of the last supported by said means, and means to shift said line of support and said last-sustaining means laterally relative to each other.

5. In a jack, the combination with a frame, of last-sustaining means pivotally supported by the frame, and means to shift the position laterally of the pivotal axis of said last-sustaining means.

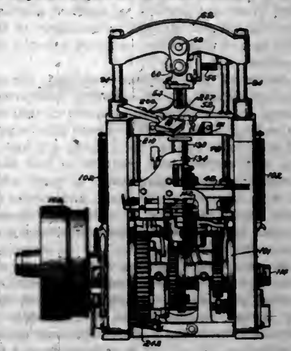
[Claims 6 to 49 not printed in the Gazette.]

958,302. HEELING-MACHINE. THOMAS G. PLANT, Boston, Mass. Filed Jan. 27, 1908, Serial No. 412,727. Renewed Dec. 9, 1909. Serial No. 532,250.

1. In a heeling machine the combination with a nail block, of a heel carriage at one side of said block, means to move said carriage in a horizontal plane to present heels horizontally to said block, nail driving devices on the other side of said block, means to supply nails to said nail block, and means to move said nail driving devices in an oblique path relatively to the path of movement of said heel carriage to drive said nails obliquely into the heel.

2. In a heeling machine the combination with a rotatably mounted heel carriage constructed to support a plurality of heels in a horizontal plane, nailing devices including drivers, means to rotate said carriage to present heels horizontally in succession to said nailing devices, and means to move said drivers in an oblique path toward and from the plane of the tread faces of the heels so presented.

3. In a heeling machine, the combination of a nail block and a rotatable heel carriage provided with a plurality of heel holders movable successively from loading position to a position adjacent the nail block, power means for rotating the heel carriage, and a stationary plate supported independent of the nail block and disposed above the path of movement of the heels and having a surface with which the face of a heel lift contacts as the heel is positioned in a holder at the loading position, said plate extending from a point above the loading position of the heels to a point adjacent the nail block.

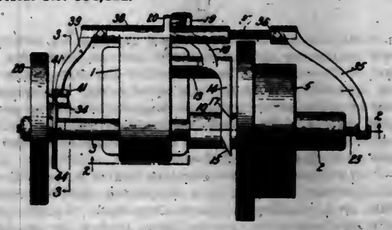


4. In a heeling machine, the combination of a nail block, a stationary beam on which said block is mounted, a rotatable heel carriage provided with a plurality of heel holders, means to actuate said carriage to move heels successively from loading position to a position beneath the said nail block, and a guide plate supported independent of the nail block and disposed above the path of movement of the heels and having a surface with which a heel lift contacts as it is placed in a holder at the loading position, said plate extending from a point above the loading position of the heels to a point adjacent the nail block.

5. In a heeling machine, the combination of a nail block having a horizontal face and nail driving devices, means for moving the nailing devices in an oblique direction toward and from the nail block, a heel support, an actuator for moving said heel support obliquely toward the nail block, and means for adjusting the length of the heel support in a direction oblique to the face of the nail block while maintaining undisturbed relation between said support and actuator, said heel support including an anvil and a coiled spring sustaining said anvil.

[Claims 6 to 34 not printed in the Gazette.]

958,303. DRIVING-SHAFT CONTROLLING MEANS. THOMAS G. PLANT, Boston, Mass. Filed Dec. 22, 1909. Serial No. 534,421.



1. In a device of the character described, the combination of a driving shaft, driving means therefor, clutch members for operatively connecting and disconnecting said shaft and driving means, a locking pin extending transversely of said shaft to lock the clutch members from operative engagement, an actuator extending longitudinally of said shaft, a hand wheel normally loose with respect to

said driving shaft, and means connected to the actuator for locking the hand wheel to the shaft and moving the locking pin transversely of the shaft into locking engagement with a clutch member and to free the hand wheel when the locking pin is withdrawn.

2. In a device of the character described, the combination of a driving shaft, clutch members associated therewith, a clutch coupling pin, a locking pin extending transversely of said shaft, and an actuator extending longitudinally of said shaft and having an inclined portion to engage the locking pin and move it transversely of the shaft into position to lock the clutch coupling pin out of clutch coupling position.

3. In a device of the character described, the combination of a driving shaft, clutch members associated therewith, a locking pin extending transversely of said shaft, an actuator extending longitudinally of said shaft and having an inclined portion to engage the locking pin and move it transversely of the shaft into position to lock the clutch members from operative engagement, a hand wheel normally loose with relation to the shaft, and means operated by movement of the actuator to operatively connect the hand wheel and shaft when the clutch members are locked from engagement.

4. In a device of the character described, the combination of a driving shaft, clutch members associated therewith, a locking pin carried by said shaft and extending transversely thereof to engage one of the clutch members and prevent their operative engagement, and an actuator extending longitudinally of the driving shaft and having a portion to engage said locking pin to move it transversely of the shaft into and out of locking engagement with respect to one of the clutch members.

5. In a device of the character described, the combination of a driving shaft, clutch members associated therewith, a locking pin carried by said shaft and extending transversely thereof to engage one of the clutch members and prevent their operative engagement, and an actuator extending longitudinally of the driving shaft, said locking pin and actuator having an inclined surface engagement for causing the pin to be moved transversely into and out of locking relation with one of the clutch members as the actuator is moved longitudinally of the driving shaft.

[Claims 6 to 17 not printed in the Gazette.]

958,304. IRONING AND DRESSING MACHINE. THOMAS G. PLANT, Boston, Mass. Filed June 3, 1909, Serial No. 499,890. Renewed Feb. 15, 1910. Serial No. 544,079.



1. An ironing and dressing jack having a leg portion, a last supporting spindle provided with an expansible end portion to engage the last pin socket of a last, means acting normally to hold the said spindle with its expansible end in projected or last receiving position and to permit said spindle to be moved longitudinally of the leg into retracted position, and means to automatically expand the end of the last supporting spindle.

2. An ironing and dressing jack having a leg portion, a longitudinally movable last supporting spindle provided with an expansible end portion to engage the pin socket of a last, means acting normally to project the expansible end portion of the spindle for engaging with the pin socket of a last, and means for contracting and expanding the end portion of the spindle while in projected position.

3. An ironing and dressing jack having a leg portion, a last supporting spindle having an expansible end portion to engage the pin socket of a last, means for expanding and contracting the expansible end portion, and means for permitting movement of the spindle and its expansible end longitudinally of the leg portion by pressure upon the lasted shoe.

4. An ironing and dressing jack having a last supporting spindle, an end expander movable with said spindle to expand the end portion of said spindle, and means permitting movement of the spindle and end expander longitudinally with relation to each other to expand the end portion of the spindle and longitudinally together to move the spindle and expander into position for the ironing operation.

5. An ironing and dressing jack having a last supporting spindle provided with a deflected or bent and expansible end portion, an end expander movable with said spindle to expand the end portion of said spindle, and means permitting movement of the spindle and end expander longitudinally with relation to each other to expand the end portion of the spindle and longitudinally together to move the spindle and expander into position for the ironing operation.

[Claims 6 to 39 not printed in the Gazette.]

958,305. WORK-HOLDER FOR HEELING-MACHINES. THOMAS G. PLANT, Boston, Mass. Filed Feb. 27, 1908, Serial No. 418,023. Renewed Mar. 11, 1910. Serial No. 548,720.



1. In a machine of the character described, the combination of heel treating tools, a support upon which the heel rests during the action of the tools, a heel carrier for transferring a heel from receiving position to the said support, a heel detainer, and means to move the detainer into contact with the heel face as the carrier transfers the heel to said support and maintains it in said position during the action of said tools.

2. In a machine of the character described, a heel support, tools for acting on the heel sustained by said support, heel holding and transferring devices for engaging the lateral surface of the heel and transferring the heel to the action of said tools, a heel detainer for engaging a face of the heel, means to move said detainer into engagement with the heel face and maintain such relation of the detainer and heel during the action of the tools, and devices for varying the path of movement of said detainer to accommodate heels of different heights.

3. In a machine of the character described, the combination of heel nailing devices, a heel support on which the heel is placed and by which it is sustained during the action of said devices, a carrier for transferring a heel to said support, a heel detainer to engage the under face of the heel, and means operative as the carrier transfers the heel to said support to operate the detainer and maintain it in contact with the heel when the latter rests upon said support.

4. In a machine of the character described, the combination of heel nailing devices, a heel support on which the heel is placed and by which it is sustained during the action of said devices, a carrier for transferring a heel to said support, a heel detainer to engage the under face of the heel, means operative as the carrier transfers the heel to said support to operate the detainer and maintain it in contact with the heel when the latter rests upon said support, and means to subsequently separate the detainer from contact with the heel.

5. In a heel loading machine, devices for positioning a heel relative to the loading mechanism, means for detaining the heel in engagement with its positioning devices, means for clamping the heel in operating position, and provision for causing said detaining means to engage a face of the heel before it is clamped and to maintain such engagement during the loading operation.

[Claims 6 to 18 not printed in the Gazette.]

958,306. MACHINE FOR OPERATING ON THE BOTTOMS OF BOOTS AND SHOES. THOMAS G. PLANT, Boston, Mass. Filed May 13, 1907, Serial No. 373,276. Renewed Apr. 12, 1910. Serial No. 554,963.



1. In a heel breasting machine, the combination of breasting means; a breasting stop; means relatively to move the stop and work into contact; and means to support the stop independently of the work, while the stop arrests the operation of the breasting means.

2. In a heel breasting machine, the combination of breasting means; a pivotally mounted breasting stop to contact with the work; and means to support the stop independently of the work while the stop arrests the operation of the breasting means.

3. In a heel breasting machine, the combination of breasting means; and means to arrest the operation thereof, including an automatically-adjustable power-operated stop, and means to support the stop independently of the shoe while performing its arresting office.

4. In a heel breasting machine, the combination of breasting means; and means to arrest the operation thereof, including a stop automatically relatively adjustable to contact with the work and to conform to varying inclinations of the work, and means to support the stop independently of the shoe while performing its arresting office.

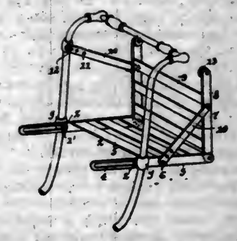
5. In a heel breasting machine, the combination of breasting means; a breasting stop; means other than said breasting means to move the stop to and from operative position; and means to support the stop independently of the shoe, to arrest the operation of the breasting means.

[Claims 6 to 44 not printed in the Gazette.]

958,307. BABY-CARRIAGE. EUGENE PLOURDE, Paterson, N. J. Filed June 29, 1909. Serial No. 504,960.

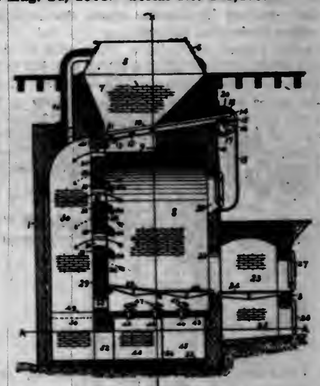
1. The combination, with a baby carriage, of a back member and a seat member pivotally connected together, one of them being pivotally attached to the carriage, means for securing said members in their open relation, and means for limiting the downward movement of said members relatively to the carriage, substantially as described.

2. The combination, with a baby carriage, of a back member and a seat member pivotally connected together, the seat member being pivotally attached to the carriage, means for securing said members in their open relation, and a brace connecting the back member with the carriage, substantially as described.



3. The combination, with a baby carriage, of a member pivotally connected therewith and forming a seat, another member pivoted to the outer or free portion of the first member and movable into angular relation to the first member either one side or the other of the first member, a link adapted to secure said member in either relation to the first member, and another link adapted to be connected with the carriage to support said members, substantially as described.

958,308. INCINERATING PLANT. EDWARD F. PRICE, Lancaster, and THOMAS F. BENNETT, Philadelphia, Pa., assignors of one-third to John F. Keller, Lancaster, Pa. Filed Aug. 14, 1908. Serial No. 448,473.



1. In an incinerating plant, walls forming in combination, a main furnace, an initial furnace in communication therewith, and a drying chamber as a receptacle for the material to be consumed, said chamber being adapted to dry the material previous to its incineration; a removable separator between the drying chamber and the main furnace, provided with gutters for liquid flowing and inclined to facilitate the flow, and provided with an open space at its lower end, to permit the flow to the main furnace; projecting bricks from the main furnace's back wall adapted to catch and evaporate the liquid flow, and means for moving the separator to discharge the material into the main furnace.

2. In an incinerating plant, walls forming in combination, and in communication an initial furnace, and a main furnace, a drying chamber above the main furnace, and an inclined removable separator to segregate the main furnace and the drying chamber, the separator being formed in corrugated gutters to permit the release and flow of the

liquids from the solids deposited thereon, and provided with an open space at its lower end, and projecting heated bricks forming part of the main furnace back wall adapted to intercept and evaporate the released liquid.

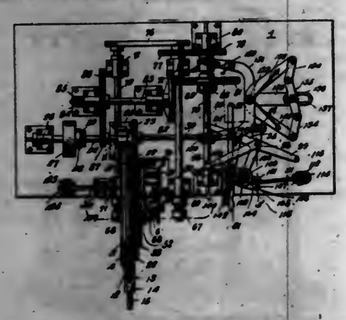
3. In an incinerating plant, walls forming in combination, an initial furnace, a drying chamber, and a main furnace located between the initial furnace and the drying chamber the initial and main furnaces being in communication; an inclined and guttered separator between the main furnace and the drying chamber, with an open space for liquid flowing at its inner end, through which the liberated liquid is precipitated; the back wall for the main furnace comprising in part inwardly projecting bricks located directly under the space for liquid flowing, and means for the removal of the separator to permit the discharge of the solids into the main furnace.

4. An incinerating plant comprising walls forming a main furnace, an initial furnace in communication therewith, a drying chamber and a downtake flue having an outlet to a stack; removable means to separate the main furnace and the drying chamber; multiple means to connect the main furnace and the downtake flue, with projections over said means and extending into the main furnace.

5. An incinerating plant having walls forming a main furnace and an initial furnace in communication, a drying chamber and a downtake flue and connections therefrom to a stack; the main furnace and downtake flue separated by an apertured bridge wall; deflectors over the apertures, which extend into the main furnace; and means to separate the main furnace and the drying chamber, and to connect them.

[Claims 6 to 13 not printed in the Gazette.]

958,309. TIRE WRAPPING AND UNWRAPPING MACHINE. NELSON E. RABER, Akron, Ohio. Filed July 19, 1909. Serial No. 508,462.



1. In a machine of the character described, the combination of means for supporting and rotating a tire alternately in opposite directions and means for winding tape about the tire while the latter is being rotated, whereby the tire will be cross wrapped.

2. In a machine of the character described, the combination of means for supporting and rotating a tire alternately in opposite directions, means for winding tape about the tire while the latter is being rotated, whereby the tire will be cross wrapped, and means for varying the speed of the tire rotating means.

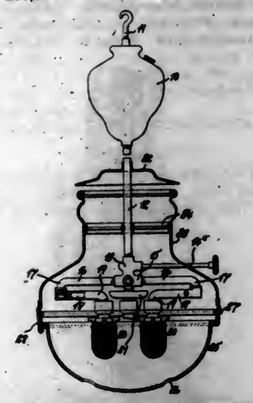
3. In a machine of the character described, the combination of means for supporting and rotating a tire alternately in opposite directions, means for winding tape about the tire while the latter is being rotated, whereby the tire will be cross wrapped, a single driving means from which both the wrapping means and the tire rotating means are driven and means for stopping the tire rotating means without interfering with the wrapping means.

4. In a machine of the character described, the combination of means for supporting a tire wrapped with tape and means for unwinding the tape from said tire.

5. In a machine of the character described, the combination of means for supporting a tire wrapped with tape, a tape spool, means for moving the same around the tire and means for rotating said spool when being thus moved around the tire to cause the tape to be wound thereon as it is unwrapped from the tire.

[Claims 6 to 22 not printed in the Gazette.]

958,310. ALCOHOL-VAPOR LAMP. ALCORN RECTOR, New York, N. Y., assignor to Warren B. Hutchinson, trustee, New York, N. Y. Filed Mar. 26, 1907. Serial No. 364,615.



1. A lamp of the kind described, comprising a vertical fuel supply pipe connecting at its lower end with a series of horizontally radiating pipes having downward bends at their outer ends, a bunsen connected with each radiating pipe and extending inward directly beneath and parallel with the same, said bunsens terminating at their inward ends in downward bends, and mantle supports secured to the downward bends of the bunsens in such manner that each mantle support is directly beneath both the downward bend of the bunsen and the horizontal fuel pipe above it.

2. A lamp of the kind described, comprising a vertical drop pipe having a valve therein, and merging at its lower end into horizontally radiating branch pipes having downward bends, bunsens secured to the said branch pipes and extending inward directly beneath and parallel with the same, said bunsens terminating in downward bends, mantle supports secured to the downward bends of the bunsens, a single housing inclosing the aforesaid structure, and a valve stem operating the valve and extending out through the housing.

3. A lamp of the kind described, comprising a vertical fuel supply pipe connecting with a source of fuel supply and terminating at its lower end in a head, said head being connected with a fuel pan suspended directly beneath the head, a series of horizontally radiating pipes having downward bends at their outer ends, a bunsen connected with each radiating pipe and extending inward directly beneath and parallel with the same, said bunsens terminating at their inward ends in downward bends, and mantle supports secured to the downward bends of the bunsens.

958,311. PIN. JOHN H. REED, Lancaster, Wis. Filed July 7, 1909. Serial No. 506,355.

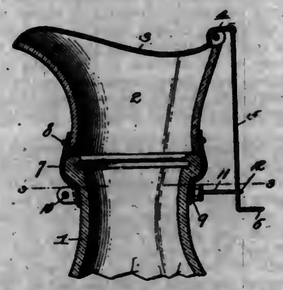
1. A safety pin having a shank provided with a crimp adjacent each end, a catch for the point of said pin extending from said shank adjacent one of said crimps, and a guard for the point of the pin having a shank portion extending longitudinally of said pin shank and provided with a pair of spaced eyes to spring over said crimps and yieldingly hold the guard in open or closed position.

2. A safety pin provided on its shank with a pair of spaced crimps, a catch adjacent one of said crimps, and a guard for the point of the pin having a shank provided with a pair of spaced eyes to spring over said crimps and lock the guard in open or closed position, and having a cap arranged at one end of the said guard shank and held in alinement with said catch to engage the point of said pin.



3. In a safety pin having a shank and a catch, a guard for the point of said pin embodying a shank portion slidingly fitting the shank of said safety pin and a cap normally held in alinement with said catch, and a stop disposed on the shank of said safety pin engageable with the shank portion of said guard whereby to yieldingly hold said cap in engagement with the point of said pin.

958,312. ATTACHMENT FOR MILK-BOTTLES. THOMAS J. REYNOLDS, Bessemer, Ala. Filed Sept. 14, 1909. Serial No. 517,694.



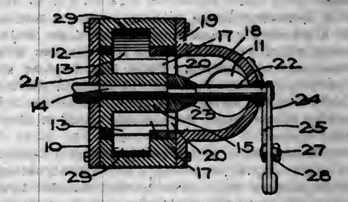
1. A device of the kind described comprising a pitcher shaped mouth-piece, opening downwardly, and adapted to rest upon the top of a jar or bottle, a flexible sleeve carried by said mouth-piece adapted to fit over the upper portion of the bottle or jar, means for temporarily locking said sleeve in position, a hinged lid carried by the mouth-piece, and an operating rod depending from said cover to a point below said mouth-piece, as and for the purpose set forth.

2. The combination with a bottle or jar, of a mouth-piece adapted to rest thereon, a hinged cover for said mouth-piece, a sleeve connected to the mouth-piece and adapted to inclose the upper portion of a bottle or jar, a clamping ring for clamping said sleeve to the bottle or jar, and a depending rod operatively connected to the hinged cover and angled at its lower end to form a finger piece.

3. The combination with a bottle, of a pitcher shaped mouth-piece, a hinged lid mounted on said mouth-piece, a flexible sleeve, a ring holding said sleeve upon said mouth-piece, a split clamping ring for locking said sleeve to the bottle, and a depending cover operating rod.

4. The combination with a bottle, a pitcher shaped mouth-piece, a hinged cover for said mouth-piece, a flexible sleeve carried by the mouth-piece, a split clamping ring for locking said sleeve over the upper portion of the bottle, an arm carried by said clamping ring, a guide eye formed at the outer end of the arm, and a depending rod pivotally connected to the hinged cover at its upper end and working through said guide eye, as and for the purpose set forth.

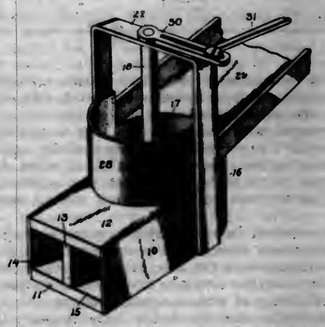
958,313. ROTARY VALVE. ROBERT W. RIORDAN, Brooklyn, N. Y. Filed Aug. 21, 1909. Serial No. 514,002.



1. A valve of the character described comprising a valve casing and an entrance pipe communicating therewith, a sleeve mounted in said casing having exhaust ports formed therein, a rotary valve mounted in said sleeve, said valve having transversely extending steam chambers formed therein, the walls of said steam chambers being radially positioned, a cut-off valve plate mounted upon the inner ends of a transversely positioned shaft and adapted to be rotated thereby, said valve plate being located at one end of the rotary valve and having arcuate openings formed therein of greater area than the transverse area of said steam chambers, and means secured to the outer ends of said shaft to adjust the openings of said valve plate with relation to the exhaust port.

2. A valve of the character described comprising a valve casing, a sleeve mounted in said casing having exhaust ports formed therein at diametrically opposite points, a rotary valve mounted in said sleeve and provided with steam chambers adapted to register with said exhaust ports, a supply pipe secured to one side of the valve casing, a valve plate mounted upon the inner end of a transversely positioned shaft and located between the end of said valve and the supply pipe, a lever secured to the outer end of said shaft, a quadrant shaped guide member secured at one end to the supply pipe and depending therefrom, said guide member having a slot formed therein adapted to receive a pin secured in said lever, said lever being adapted to rotate said shaft and guide plate to adjust the openings in said plate with relation to the exhaust ports, and a thumb screw threaded upon the outer end of said pin adapted to retain the lever in its adjusted position.

958,314. FEED-REGULATOR. LEONARD C. ROBERTS, Nunda, N. Y. Filed Sept. 3, 1909. Serial No. 516,048.



1. In a measuring device, a casing having a feed chamber and a plurality of measuring chambers separated by a partition, and an oscillating feed device having oppositely disposed members adapted to traverse the feed chamber in opposite directions and to enter each measuring chamber to discharge material therefrom.

2. In a measuring device, a casing having a feed chamber and a plurality of measuring chambers, an oscillating feed device disposed to traverse the feed chamber in opposite directions and extend into each measuring cham-

ber to discharge material therefrom, and an oscillating strike arm disposed at the upper portion of said measuring chambers.

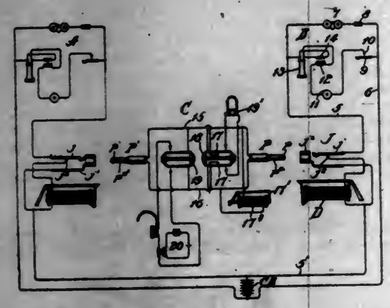
3. In a measuring device, a casing having a feed chamber and a plurality of measuring chambers, an oscillating feed device adapted to traverse the feed chamber in opposite directions, an oscillating strike arm disposed at the upper portion of said measuring chambers, a shaft upon which said feed and strike arms are mounted, and a lever arm carried by the upper end of said shaft to effect an oscillation thereof.

4. In a measuring device, a casing having a feed chamber and a plurality of measuring chambers, an oscillating feed device adapted to traverse the feed chamber in opposite directions, an oscillating strike arm disposed at the upper portion of said measuring chambers, a shaft upon which said feed and strike arms are mounted, a slotted lever arm carried by said shaft and a driving connection adjustably secured to said arm to control the extent of movement thereof.

5. The combination with a casing open at one end and provided with a partition to form opposite parallel measuring chambers therein, segmental feed arms disposed at opposite sides of a shaft mounted in said casing and adapted to alternately traverse a portion of each of said measuring chambers and means for oscillating said shaft and arms.

[Claims 6 to 10 not printed in the Gazette.]

958,315. TELEPHONE SYSTEM. EARL C. RODMAN, West Point, Iowa. Filed Dec. 28, 1908. Serial No. 469,667.

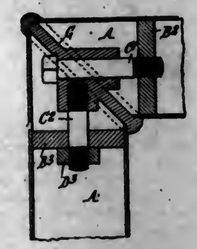


1. In a central energy telephone system, a central battery, subscribers' lines normally connected with said battery at the central station, an impedance device, and a cord arranged when connecting two lines to establish two loops metallicly complete, and substantially unimpeded one connecting the subscribers' stations in series, and the other local to the exchange, bridged at one point by the central battery and at another point by the impedance device.

2. In a central energy telephone system, a central battery, subscribers' lines normally connected with said battery each comprising two legs, bridged by the instrument set at the subscriber's station, and a central station equipment including cord strands arranged to respectively close two metallicly complete circuit loops respectively connected with opposite terminals of the battery, and one constituting a talking loop including both subscribers' stations in series, and an impedance device bridged across said cord strands at the side of the talking loop opposite the battery.

3. In a telephone system, a central battery, metallicly complete subscribers' lines between which said battery is directly bridged, a line signal normally in said circuit, a jack for opening one leg only of the line and cutting out the line signal, a cord circuit, comprising plugs and cord strands for connecting the tip contacts and sleeve contacts respectively, of the jacks, and an impedance device directly bridging said cord strands and normally disconnected from said battery.

958,316. MITER-JOINT FOR TUBES. FRANK R. ROGERS and CHARLES VALLONE, Buffalo, N. Y., assignors to Barcalo Manufacturing Company, Buffalo, N. Y. Filed Mar. 29, 1909. Serial No. 486,522.



1. The combination of two tubes arranged at an angle to each other and having abutting mitered ends, an anchor piece secured in the end portion of one of said tubes, an anchor piece secured to the end portion of said other tube, and a screw connection between said anchor pieces which extends within one of said tubes in the direction of the length of said tube through the anchor piece therein, and at an angle to the direction of the length of said other tube, whereby said screw connection may be tightened by a tool inserted into the former tube, said screw connection being completely concealed from view, substantially as set forth.

2. The combination of two tubes arranged at an angle to each other and having abutting mitered ends, an anchor piece secured in the end portion of one of said tubes, an anchor piece secured in the end portion of said other tube, a screw connection between said anchor pieces which extends within one of said tubes in the direction of the length of said tube through the anchor piece therein and at an angle to the direction of the length of said other tube, whereby said screw connection may be tightened by a tool inserted into the former tube, said screw connection being completely concealed from view, and a band which surrounds and conceals the joint between the mitered ends of said tubes, substantially as set forth.

3. The combination of two tubes arranged at an angle to each other and having abutting mitered ends, an anchor piece secured in the end portion of one of said tubes, an anchor piece secured in the end portion of said other tube, and a screw secured to said first anchor piece and extending therefrom through said other anchor piece in the direction of the length of said other tube and at an angle to the length of said first mentioned tube, said screw connection and said anchor pieces being completely concealed from view in said tubes, whereby said screw connection may be tightened by a tool inserted into said latter tube, substantially as set forth.

4. The combination of two tubes arranged at an angle to each other and having abutting mitered ends, an anchor piece secured in the end portion of one of said tubes, an anchor piece secured in the end portion of said other tube, and a screw secured to said first anchor piece and extending therefrom through said other anchor piece in the direction of the length of said other tube and at an angle to the length of the said first-mentioned tube, a nut on said screw, whereby said nut may be tightened by a tool inserted into said other tube, substantially as set forth.

5. The combination of two tubes arranged at an angle to each other and having abutting mitered ends, anchor pieces secured in the ends of said tubes substantially parallel with said mitered ends, a screw stud projecting from one of said anchor pieces through a hole in the other anchor piece, and a nut screwed on said stud, said stud and nut being inside of the tube and completely concealed from view, substantially as set forth.

[Claim 6 not printed in the Gazette.]

958,317. LINE-CASTING MACHINE. JOHN R. ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Feb. 5, 1910. Serial No. 542,200.



1. In a line casting machine matrices of one font having projections, and matrices of another font having projections in a different position, in combination with divergent guides to engage said projections and push the matrices in the composed line apart edgewise and means for moving the composed lines endwise along said guides.

2. The combination with matrices provided respectively with projections f and f^1, a guide G having divergent grooves g and g^1 to engage the projections on the matrices, and means adapted to move a composed line of matrices along said guides, whereby separation of the matrices edgewise may be effected.

3. In combination, the two distributers, the distributer boxes for delivering individual matrices thereto, a matrix line elevator D, a carrier H to deliver the composed matrix lines therefrom, a matrix support G provided with divergent guides to engage the projections on the lower ends of the matrices, matrices having bottom projections to engage the respective guides.

4. In combination with matrices differing in form, means for advancing a composed line of said matrices, and stationary divergent guides, adapted to push the matrices of different forms in the composed line edgewise in opposite directions as the line advances.

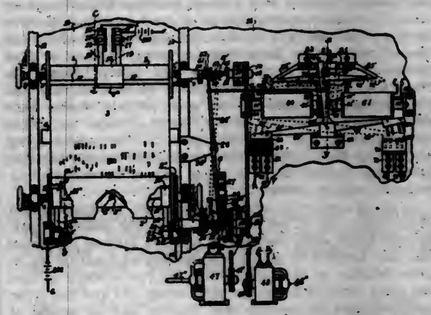
5. Matrices of different fonts, differing in form at their lower ends, in combination with a support to underlie the composed line, said support provided with divergent guides, adapted to separate the matrices edgewise, and stationary guides in position to engage the upper ends of the separated matrices.

[Claim 6 not printed in the Gazette.]

958,318. AUTOMATIC MUSICAL INSTRUMENT. CHARLES A. ROHRBACHER, Bellingham, Wash., assignor of one-half to Albert F. Scherfenberg, Bellingham, Wash. Filed Jan. 14, 1909. Serial No. 472,364.

1. In an automatic musical instrument, the combination of a roll adapted to hold a perforated music strip; a metallic surface covering a portion of said roll; a perforated music strip attached to said roll, said strip being cut away in places adapting it to uncover portions of said metallic surface before said strip is entirely unrolled; metallic pieces adapted to make a running electric contact with said metallic surface when the same is uncovered by said strip and mounted to permit the several turns of said strip when on said roll to lie between said metallic surface and said pieces; an electric motor; an electro-magnetic circuit breaker electric connections between said metallic pieces and the coils of the controlling electromagnet of said circuit-breaker said connections including a source of electricity; electrical connections between the armature terminals of said motor and said circuit-breaker; and mechanical connections between the shaft of said motor and said roll.

2. In an automatic musical instrument, the combination of a music roll; a take-up roll, a metallic surface on each of said rolls; a perforated music strip having one end attached to each of said rolls, portions of said ends being cut away adapting them to expose parts of said metallic surfaces before said strip is entirely unrolled; a pair of insulated metallic pieces supported near each of said rolls and being adapted to make a running electric contact with the metal surface on each of said rolls when the same are exposed by the cut-away ends of said music strip, and mounted to permit the several turns of said strip when on said rolls to lie between said surfaces and said pieces; two electric motors; a double circuit breaker comprising two electro-magnets for operating it; electrical connections between the metallic pieces supported near said music roll and the coils of one of the electro-magnets, said connections including a source of electricity; electrical connections between the armature of one of said electric motors and the circuit-breaker closed by the said electro-magnet; mechanical connections between said motor shaft and said music roll; electrical connections between the metallic pieces supported near said take-up roll and the coils of the other electro-magnet of said double circuit-breaker, said connections including a source of electricity; electrical connections between the armature of the other electric motor and the circuit-breaker closed by said other electro-magnet; and mechanical connections between the shaft of said other motor and the take-up roll.



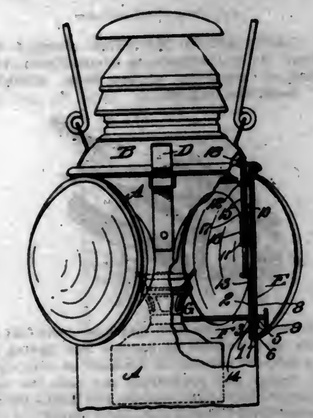
3. In an automatic musical instrument, the combination of a music roll; a take-up roll, bearings for said rolls being adapted for the easy removal of the same; a perforated music strip having an opening at one end, said end being permanently attached to said music roll, also having openings at its other end, said end being removably attached to said take-up roll; a metallic surface on said music roll; metallic surfaces on said take-up roll being electrically connected together and being adapted to lie in the openings caused by the cut-off or turned-over corners of the detachable end of said music strip; two insulated metallic brushes adapted to make a running electric connection with the metallic surface on said music roll and being mounted to permit the turns of said music strip to lie between said metallic surface and said brushes; two insulated metallic brushes adapted to make a running electric contact with the metallic surfaces on said take-up roll and being mounted to permit the turns of said music strip to lie between said metallic surfaces and said brushes; a double, circuit-breaker having two electro-magnets, each being connected to close one and open the other of said circuit-breakers; means operative to latch each of said circuit-breakers in closed position; electrical connections between each pair of said brushes and one of said electro-magnets; a source of electricity in each of said connections; two electric motors; electrical connections between the armature of one of said motors and the circuit-breaker controlled by the brushes mounted near said music roll; electrical connections be-

tween the armature of the other of said motors and the circuit-breaker controlled by the brushes mounted near said take-up roll; power connections between the shaft of the one of said motors and said music roll; power connections between the shaft of the other of said motors and said take-up roll; and mechanical connections between said rolls and said circuit-breakers whereby only one of said power connections is operative on said rolls at a time

4. In an automatic musical instrument, the combination of a music roll, a take-up roll; a tracker board; a perforated music strip, said music roll and take-up roll being together adapted to retain said perforated music strip in close relation to said tracker board; two electric motors one being adapted to revolve said music roll and the other being adapted to revolve said take-up roll; a source of electricity adapted to cause the revolution of said electric motors; an electro-magnetic circuit-breaker, having two electro-magnets, adapted to establish connection between said source of electricity and one of said motors and simultaneously break electrical connection between said source of electricity and the other of said motors; an electric battery; a circuit breaker being electrically connected through said battery to one of the electromagnets of said electro-magnetic circuit breaker and being adapted to close the circuit through said battery when said music strip is nearly unwound from said music roll whereby said electro-magnetic circuit breaker closes the circuit through the motor adapted to revolve said music roll; means being adapted to electrically connect said circuit breaker, said battery and one of the magnets of said electro-magnetic circuit breaker; another electric battery; another circuit breaker electrically connected through said other battery to the other magnet of said electro-magnetic circuit breaker and being adapted to close the circuit when said music strip is nearly unwound from said take-up roll whereby said electro-magnetic circuit breaker closes the circuit through the motor adapted to revolve said take-up roll; and means being adapted to electrically connect said other circuit breaker, said other battery and the other magnet of said electro-magnetic circuit breaker.

5. In an automatic musical instrument, the combination of a music roll, a take-up roll; a tracker board; a perforated music strip, said music roll and take-up roll being together adapted to retain said perforated music strip in close relation to said tracker board; two electric motors one being adapted to revolve said music roll and the other being adapted to revolve said take-up roll; a source of electricity adapted to cause the revolution of said electric motors; an electro-magnetic circuit breaker, having two electro-magnets, adapted to establish connection between said source of electricity and one of said motors and simultaneously break electrical connection between said source of electricity and the other of said motors; an electric battery; a circuit breaker being electrically connected through said battery to one of the electromagnets of said electro-magnetic circuit breaker and being adapted to close the circuit through said battery when said music strip is nearly unwound from said music roll whereby said electro-magnetic circuit breaker closes the circuit through the motor adapted to revolve said music roll; means being adapted to electrically connect said circuit breaker, said battery and one of the magnets of said electro-magnetic circuit breaker; another electric battery; another circuit breaker electrically connected through said other battery to the other magnet of said electro-magnetic circuit breaker and being adapted to close the circuit when said music strip is nearly unwound from said take-up roll whereby said electro-magnetic circuit breaker closes the circuit through the motor adapted to revolve said take-up roll; means being adapted to electrically connect said other circuit breaker, said other battery and the other magnet of said electro-magnetic circuit breaker, and mechanical connections between said electro-magnetic circuit breaker and said rolls being adapted to cause said rolls to coöperate in passing said music strip back and forth over said tracker board.

958,319. RAILROAD-LANTERN. GEORGE H. ROLFES, St. Louis, Mo., assignor to Handlan-Buck Manufacturing Company, St. Louis, Mo., a Corporation. Filed July 6, 1909. Serial No. 506,254.



1. The combination in a lantern, comprising a shell having an aperture therein for a wick raising rod and a hood hinged to said shell, of an apertured housing secured to said shell at the location of said aperture, the aperture in said housing registering with the aperture in said shell, a slide operable in said housing to close its aperture, and means for automatically elevating said slide when said hood is elevated.

2. The combination in a lantern, comprising a shell having an aperture therein for a wick raising rod and a hood hinged to said shell, of an apertured housing secured to said shell at the location of the aperture therein, the aperture in said housing registering with the aperture in said shell, and a spring controlled slide operable in said housing to close the aperture therein, adapted to be depressed by said hood when it is moved to a closed position.

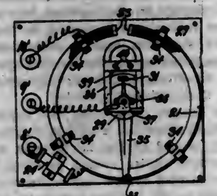
3. The combination in a lantern, comprising a shell having an aperture therein for a wick raising rod and a hood hinged to said shell, of an apertured housing secured to said shell at the location of the aperture therein, the aperture in the housing registering with the aperture in said shell, a slide movable vertically in said housing and adapted to close the aperture therein when in a lowered position, an operating rod extending upwardly from said slide, and a spring associated with said operating rod for imparting upward movement to said slide when the lantern hood is elevated.

4. The combination in a lantern, comprising a shell having an aperture therein for a wick raising rod, and a hood hinged to said shell, of an apertured housing plate secured to said shell, a second apertured housing plate interposed between said first named housing plate and said shell and spaced apart from the first named plate, the second housing plate having a vertical bracket extension, a slide operable between said housing plates and adapted to close the apertures therein, and an operating rod connected to said slide and operable in said bracket extension, the said rod being arranged to be depressed by said hood when the hood is moved to a closed position.

5. The combination in a lantern, comprising a shell having an aperture therein for a wick raising rod, and a hood hinged to said shell, of an apertured housing plate secured to said shell, a second apertured housing plate interposed between said first named housing plate and said shell and spaced apart from the first named plate, the second housing plate having a vertical bracket extension, a slide operable between said housing plates and adapted to close the apertures therein, an operating rod connected to said slide and operable in said bracket extension, and a lift spring associated with said operating rod for elevating said operating rod and slide, the said rod being arranged to be depressed by said hood when the hood is moved to a closed position.

[Claims 6 and 7 not printed in the Gazette.]

958,320. ELECTRICAL MEASURING INSTRUMENT. FRANK W. ROLLER, East Orange, N. J., assignor to Roller-Smith Company, a Corporation of New York. Filed Sept. 13, 1906. Serial No. 334,402.



1. In a bond testing device, the combination of a contact bar, means whereby said bar may be moved by the operator, a plurality of saw-blade contacts, and a plurality of clamping jaws on the opposite side of the bar from said means for removably holding said saw-blade contacts in position respectively.

2. A resistance measuring instrument comprising in combination, a box, a removable plate, said plate having secured on one side an adjustable resistance in circular form, means mounted in said plate for adjusting said resistance and extending through to the opposite side of said plate, a galvanometer mounted within said circular resistance, and means for indicating the resistance and for indicating the movement of the galvanometer on the said opposite side of said plate.

3. A measuring instrument comprising in combination a plate, an adjustable resistance in circular form secured to the lower side of said plate, a centrally mounted means for adjusting the resistance extending through to the upper side of said plate, a galvanometer mounted within said circular resistance, and means for indicating the resistance and for indicating the movement of the galvanometer on the upper side of said plate.

4. A resistance measuring instrument for bond testing comprising in combination a plate, an adjustable resistance in circular form secured to one side of said plate, a centrally mounted means for adjusting the resistance extending through to the opposite side of said plate, a galvanometer mounted within said circular resistance, and means for indicating the resistance and for indicating the movement of the galvanometer on the said opposite side of said plate.

5. A bond testing instrument comprising a box inclosing the instrument, a cover for the box, a hinge for said cover, said hinge having an intermediate length equal to approximately one-half the depth of said box, and a strap for supporting the box.

[Claims 6 to 9 not printed in the Gazette.]

958,321. BALING-PRESS. FRANK A. RYTHER, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Jan. 21, 1910. Serial No. 539,261.



1. A baling press including, in combination, a rack, rotatable pinions adapted to reciprocate said rack in an orbital path relative thereto, fixed tracks adapted to guide said rack through a part of its movement, and movable tracks coöperating with said fixed tracks.

2. A baling press including, in combination, a rack, guide rollers at opposite ends of said rack, rotatable pinions adapted to reciprocate said rack in an orbital path relative thereto, fixed tracks adapted to engage with said guide rollers during a part of the movement of said rack, and movable tracks coöperating with said fixed tracks.

3. A baling press including, in combination, a power jack including vertically arranged side members, independent axially alined shafts journaled in said side members, pinions secured to the inner ends of said shafts and having an intervening space between them, a rack bar having pins projecting laterally upon opposite sides thereof, said pinions engaging with said pins in a manner to cause said rack to move in an orbital path relative thereto, guide rollers upon opposite sides and at opposite ends of said rack, fixed tracks integral with said side members and concentric with the axial line of said shafts, said tracks adapted to engage with said rollers during a part of the movement of said rack, and pivotal tracks coöperating with said fixed tracks.

4. A baling press including, in combination, a power jack including vertically arranged side members, independent axially alined shafts journaled in said side members, pinions secured to the inner ends of said shafts and having an intervening space between them, a rack including a bar having pins projecting laterally upon opposite sides thereof, a pull bar connected with one end of said rack, said pinions engaging with said pins in a manner to cause said rack to move in an orbital path relative thereto, guide rollers upon opposite sides and at opposite ends of said rack, fixed tracks integral with said side members upon opposite sides of the axial line of said shafts in the direction of movement of said pull bar and concentric with said axial line, said tracks adapted to engage with said rollers during a part of the movement of said rack, and tracks pivotally connected with said side members and coöperating with said fixed tracks.

958,322. METAL BEDSTEAD. RICHARD F. SAWITZKE, EDWIN J. YATES, and JOHN M. ADAMS, Chicago, Ill., assignors to Francis W. Adams, Chicago, Ill. Filed Aug. 17, 1909. Serial No. 513,323.



1. A metal bedstead comprising a hollow member and members connected to said hollow member, the means for connecting said members comprising keys on said members other than said hollow member and a key plate adapted to be inserted inside of said hollow member, said hollow member being provided with holes adapted to receive said keys, and said key plate being provided with openings adapted to interlock with said keys, substantially as described.

2. A metal bedstead comprising a hollow member and members connected to said hollow member, the means for connecting said members comprising keys on said members other than said hollow member and a hollow key plate fitted to and adapted to be inserted inside of said hollow member, said hollow member being provided with holes adapted to receive said keys, and said key plate be-

ing provided with key openings adapted to interlock with said keys, substantially as described.

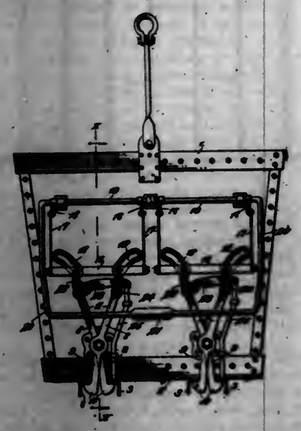
3. A metal bedstead comprising a hollow member and members connected to said hollow member, the means for connecting said members comprising keys on said members other than said hollow member and a key plate adapted to be inserted inside of said hollow member, said hollow member being provided with holes adapted to receive said keys, and said key plate being provided with key openings each comprising a relatively large section adapted to permit the passage therethrough of a key and a relatively narrow section or sections engagement of the sides of which with said keys is adapted to be effected by movement of said key plate relatively to said hollow member, substantially as described.

4. A metal bedstead comprising a hollow member and members connected to said hollow member, the means for connecting said members comprising keys on said members other than said hollow member and a key plate adapted to be inserted inside of said hollow member, said hollow member being provided with holes adapted to receive said keys, and said key plate being provided with key openings each comprising a relatively large section adapted to permit the passage therethrough of a key and a relatively narrow section or sections engagement of the sides of which with said keys is adapted to be effected by movement of said plate relatively to said hollow member or members, the relation being such that movement of said key plate to effect interlocking of said key opening or openings therein with said keys will produce a wedging action on said keys, substantially as described.

5. A metal bedstead comprising a hollow member and members connected to said hollow member, the means for connecting said members comprising keys formed by headed studs, the under sides of the heads of which are inclined or beveled, and a key plate adapted to be inserted inside of said hollow member, said hollow member being provided with holes adapted to receive the heads of said keys and said key plate being provided with key openings each comprising a relatively large section adapted to permit the passage therethrough of the head of a key and a relatively narrow section or sections adapted to receive the shank thereof, the width of said relatively narrow section or sections decreasing toward the outer end or ends thereof, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

958,323. SELF-CLOSING BOTTOM-DUMPING BUCKET. ROBERT N. SCHALKENBACH, Jersey City, N. J. Filed Feb. 26, 1909. Serial No. 480,155.



1. A dump bucket comprising a movable bottom, a locking lever pivoted on the bucket, means at the lower end of said lever to retain the bottom in its closed position, a movable operating device carried by the bucket and connected to the locking lever to swing said lever to its release position upon moving the operating device in one direction, and to swing said lever into its locking position upon moving the operating device in the opposite direction, means for retaining the lever in its released position.

2. A dump bucket comprising the sides of the bucket, a movable bottom therefor, a pair of locking levers pivoted to the bucket, means at the lower ends of said levers to retain the bottom in its closed position, a movable operating device carried by the bucket, means connecting said movable device to the locking levers to swing said levers to their release position upon moving the operating device in one direction and to swing said levers into their locked position upon moving the operating device in the opposite direction, and means for retaining the locking levers in their released position.

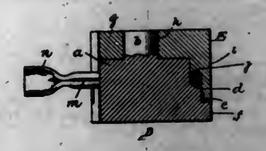
3. A dump bucket comprising the sides of the bucket, a movable bottom therefor, a pair of locking levers pivoted to the bucket, means at the lower ends of said levers to retain the bottom in its closed position, a movable operating device carried by the bucket, means connecting said movable device to the locking levers to swing said levers to their release position upon moving the operating device in one direction and to swing said levers into their locked position upon moving the operating device in the opposite direction, means for retaining the locking levers in their released position, and an automatic lever-releasing device adapted to be operated by the bottom when said bottom is swung to its closed position.

4. A dump bucket formed of sides, a bottom hinged thereto, a pair of locking levers pivoted thereon, a pair of stops carried by the bottom and adapted to be engaged by the lower ends of the locking levers, the upper ends of the locking levers being formed with outwardly and upwardly curved slots, a rigid device carrying rollers operating in said slots, a rotatable shaft above the locking levers, and depending links connected to said shaft and to the rigid device.

5. A dump bucket formed of sides, a bottom hinged thereto, a pair of downwardly extending crossed locking levers formed with locking dogs at their lower ends, stops carried by the bottom of its front edge and adapted to be engaged by the locking dogs on the levers, the upper ends of said levers being formed with upwardly diverging slots, a pair of rollers in said slots, a rigid device near the upper ends of the levers and carrying said rollers, a rock shaft secured to the bucket above the locking levers, crank-arms connected to said shaft and depending links connecting said crank arms with the ends of the rigid device carrying the rollers.

[Claims 6 to 12 not printed in the Gazette.]

958,324. LEATHER-WORKING DIE. ROBERT C. SCHEMMEL, Union City, Ind., assignor to Backstay Machine and Leather Company, Union City, Ind. Filed Feb. 21, 1910. Serial No. 545,135.

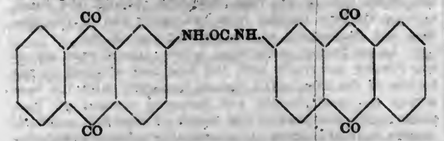


A die for the purpose described, comprising a male member having a mandrel portion, and a seat at the side of the lower part of said mandrel portion, which seat is open at its outer side, and a female member having a skirt flange disposed to receive the mandrel portion and seat of the male member and form the outer wall of the seat and extend below said seat, and also having a seat at the inner side of the said skirt flange and arranged to be opposed to the seat of the male member when the die is closed.

958,325. UREA OF THE ANTHRAQUINONE SERIES AND PROCESS OF MAKING SAME. ALBRECHT SCHMIDT and GEORG KRANZLEIN, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Oct. 27, 1909. Serial No. 524,953.

1. As new products, the herein-described anthraquinone-ureas, obtainable by heating beta-anthraquinonyl urethanes or beta-anthraquinonyl urea chlorids with such amins as amidoanthraquinones, di-amidoanthraquinones, said products being yellow to reddish-brown substances, soluble in concentrated sulfuric acid with an orange-red to brown color, soluble in alkaline hydrosulfite solution with a reddish-brown color, and dyeing cotton and wool yellow to brown and reddish-brown tints.

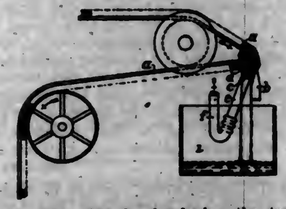
2. As a new product, the herein described beta-beta-di-anthraquinonyl urea of the formula:



obtainable by the reaction of beta-anthraquinonyl urethane or beta-anthraquinonyl urea chlorid on beta-amidoanthraquinone, being a yellow substance, soluble in concentrated sulfuric acid with an orange-red color, soluble in alkaline hydrosulfite solution with a reddish-brown color, and dyeing cotton and wool yellow tints.

3. The herein described process of manufacturing ureas of the anthraquinone series, which consists in heating beta-anthraquinonyl urethanes or beta-anthraquinonyl urea chlorids with such amins as amidoanthraquinones and di-amidoanthraquinones.

958,326. APPARATUS FOR HARDENING THE TEETH OF CARD-CLOTHING, &c. LOUIS C. SCHNEIDER, Mittweida, Germany. Filed Jan. 12, 1909. Serial No. 471,930.



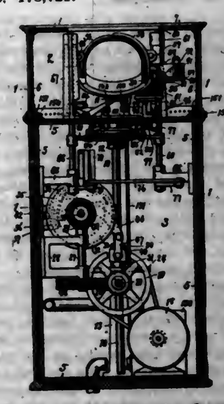
1. In an apparatus for hardening the teeth of card clothing or the points of toothed wire for carding machines, the combination with a burner for heating the teeth until red hot, and being arranged as near as possible to the heating point, of a longitudinal slit tube-like pipe adjacent to the point where the teeth are heated, a water conduit supplying cooling water in the said tube-like pipe, and means for continuously passing the teeth or points through the cooling water, substantially as and for the purpose specified.

2. In an apparatus for hardening the teeth of card clothing or the points of toothed wire for carding machines, the combination with a burner for heating the teeth until red hot and being arranged as near as possible to the heating point, of a longitudinal slit tube-like pipe adjacent to the point where the teeth are heated, a water conduit supplying cooling water in the said tube-like pipe, means for regulating the pressure of the water supplied through such conduit and the rising height of the jet issuing from the tube-like pipe and means for continuously passing the teeth or points through said jet, substantially as and for the purpose specified.

3. In an apparatus for hardening the teeth of card clothing or the points of toothed wire for carding machines, the combination with a burner for heating the teeth until red hot and being arranged as near as possible to the heating point, of a longitudinal slit tube-like pipe adjacent to the point where the teeth are heated, a water conduit supplying cooling water to the said tube-like pipe, means for regulating the pressure of the water supplied through such conduit and the rising height of the jet issuing from the tube-like pipe, means for regulating the position of the jet relative to the heating means and means for continuously passing the teeth or points through said jet, substantially as and for the purpose specified.

4. In an apparatus for hardening the teeth of card clothing or the points of toothed wire for carding machines, the combination with a burner for heating the teeth until red hot and being as near as possible to the heating point, of a chamber formed of two sections provided with a slot at their meeting edges on one side thereof, a pressure water supply, means for regulating the pressure of said water supply, means for connecting the chamber with the pressure water supply, means for adjusting the width of the slot for the cooling water jet to issue, and means for continuously passing the teeth or points through said jet, substantially as and for the purpose specified.

958,327. MACHINE FOR CLEANING HATS. CONRAD S. SCHWARZ, Philadelphia, Pa. Filed Jan. 22, 1909. Serial No. 473,721.



1. In a machine of the character described, the combination of a hat holder, means for rotating said hat holder, a brush, an arm carrying said brush, a cam for automatically moving said arm toward said hat holder and for withdrawing said arm away from said hat holder at the commencement and at the end of the rotating operation of said hat holder.

2. In a machine of the character described, the combination of a hat holder, means for raising and lowering said hat holder, means for rotating said hat holder when in the lower position, an arm, a cleaning member carried by said arm, a cam to move said arm toward said hat holder before the latter begins to rotate and for withdrawing said arm when said hat holder stops rotating.

3. In a machine of the character described, the combination of a hat holder, a shaft on which said hat holder is mounted, means for rotating said shaft, an elliptical cam secured on said shaft, arms controlled by said elliptical cam, cleaning means secured upon said arms and a cam adapted to act upon said arms and automatically move said arms toward said hat holder and for withdrawing said arms away from said hat holder at the commencement and at the end of the rotating operation of said hat holder.

4. In a machine of the character described, the combination of a hat holder, a shaft on which said hat holder

to mounted, means for rotating said shaft, a brush located below said hat holder, an arm carrying said brush, a bearing in which said arm is pivoted, a rock-shaft pivoted in a bearing, an arm on said rock-shaft, said arm connected with said arm carrying said brush, a second arm on said rock-shaft, a cam on said first mentioned shaft to move said brush and a spring to move said brush against the action of said cam.

5. In a machine of the character described, the combination of a hat holder adapted to receive a hat, a shaft to rotate said hat holder, a brush adapted to clean the upper side of the hat brim, an arm carrying said brush, a shaft to move said brush arm horizontally, a joint formed in said arm to permit said brush to move vertically, a cam secured to a bearing, said cam adapted to bear against said movable part of said brush arm and move said brush vertically and a spring to move said brush against the action of said cam.

[Claims 6 to 20 not printed in the Gazette.]

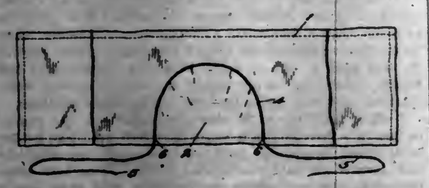
958,328. BUTTON. SAMUEL J. SERWER, New York, N. Y. Filed Apr. 3, 1909. Serial No. 487,655.



1. A button comprising an outer section having a head and a hollow shank, said head having the central portion thereof depressed and extending into the shank and said head forming in connection with one terminus of the shank a recess, an inner section provided with a head and a shank adapted to extend in the shank of the outer section, said shank of the inner section having the inner terminus thereof enlarged and projecting into said recess whereby said sections are coupled together, a covering inclosing each of said heads, a flexible washer mounted upon each of the shanks and provided with an adhesive material engaging with a covering whereby the covering and washer are secured together, and a washer formed of rigid material and mounted upon each of the shanks and abutting against said flexible washer.

2. A button comprising an outer and an inner section each provided with a shank, the shank of one section coupled to the shank of the other section, each of said sections provided with a head, a covering for each of said heads, each of said coverings having an inturned portion, and a pair of washers mounted upon each of said shanks, one of said washers of each pair of washers provided with an adhesive substance for securing the inturned portion of a covering to said washer to maintain the covering in position upon the head.

958,329. AUTOMOBILE-VEIL. JUNE V. SIEGEL, New York, N. Y. Filed Oct. 21, 1909. Serial No. 523,789.



A head covering composed of an elongated fabric provided with means for retaining a draw string disposed in substantially a semi-circle, the ends of which terminate at points adjacent the same edge of said head covering and inclosing a portion thereof adapted to fit over the head and comprising a relatively small part of said fabric, and a draw string located therein.

958,330. OIL-BURNER. CHARLES W. SIEVERT, Los Angeles, Cal., assignor of one-half to Albert Henry Sievert, Los Angeles, Cal. Filed Sept. 27, 1909. Serial No. 519,838.



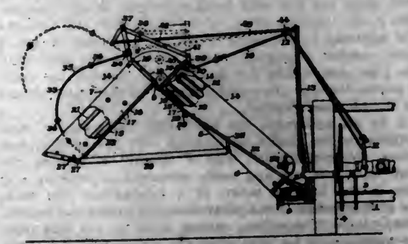
1. An oil burner, comprising a bowl shaped base, an oil cup in the center of the base, walls formed within the bowl of the base and inclosing an air passage leading from the under side of the base upwardly through the same, and an air pipe leading from the upper end of the passage and discharging at a point over the oil cup.

2. An oil burner, comprising a bowl shaped base, an oil cup formed integrally with the base and situated in the bottom of the base, walls formed integrally with the base within the bowl thereof and inclosing vertical air passages inside the bowl of the base and near the outer periphery thereof, and an air pipe having induction branches connecting with the vertical passages and having an outlet discharging air directly over the oil cup and into the base.

3. An oil burner, comprising a bowl shaped base, an oil cup formed integrally with the base and situated in the central lower portion of the base at a small distance above the bottom, walls formed integrally with the base within the bowl thereof and inclosing vertical air passages within the bowl of the base and near the periphery thereof, and an air pipe having induction branches connecting with the air passages and having a central downwardly projecting outlet opening adapted to discharge air downwardly over the oil cup and into the base.

4. An oil burner, comprising a bowl shaped base, a frusto-conical member raised in the central lower portion of the base, the conical member having an annular trough in its lateral face and having an oil cup formed in its top, oil supply means leading to the oil cup, walls formed integrally with the base within the bowl thereof and inclosing a pair of vertical air passages situated inside the bowl of the base and near the periphery thereof and passing upwardly therethrough, and an air pipe having induction branches resting upon the walls and communicating with the air passages and having an outlet opening discharging air downwardly over the oil cup and into the base.

958,331. GRAIN-HARVESTER. DANIEL W. SMITH, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Sept. 10, 1909. Serial No. 516,098.



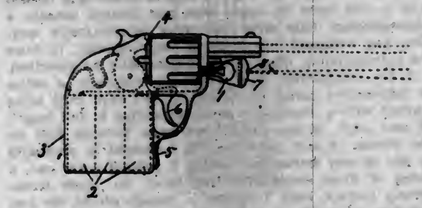
1. A harvester elevator including, in combination, two sections hinged together at their adjacent ends, carrier guides secured to each section, carrier rollers, bearing boxes for said carrier rollers, said boxes having socket members adapted to loosely receive the ends of said guides at the delivery end of either section.

2. A harvester elevator including, in combination, two sections hinged together at their adjacent ends, carrier guides secured to each section, carrier rollers, bearing boxes for said carrier rollers, said boxes having socket members, said guides having a cutaway portion at the delivery end of each section adapted to loosely receive said socket members.

3. A harvester elevator including, in combination, two sections hinged together at their adjacent ends whereby they may be arranged in the same plane or at an angle to each other, chafing members, means for mounting said chafing members longitudinally along the bottom of said sections when they are arranged in the same planes, and means whereby said chafing members may be operative as brace members between said sections when they are arranged at an angle to each other.

4. A harvester elevator including, in combination, two sections hinged together at their adjacent ends, carrier guides secured to each section, carrier rollers, bearing boxes for said carrier rollers, the outer ends of said carrier guides being adapted to loosely receive said bearing boxes.

958,332. FIREARM. WARD H. SNYDER, Cincinnati, Ohio, assignor to Edwin L. Robinson, North Attleboro, Mass. Filed Aug. 23, 1905. Serial No. 275,401.



1. A search light for firearms having a lens provided with an opaque spot at its vertex, said lens being transparent continuously about said spot, whereby a shadow will be cast at the center of the circle of the light rays passing through the transparent part of the lens.

2. In combination with means for directing a projectile, a source of light, a lens associated with said light, an opaque spot on said lens in the line of its principal axis, said lens being transparent continuously about said spot, whereby a shadow will be cast at the center of the circle of the light rays passing through the transparent part of said lens.

3. In a device of the class described, means for directing a projectile, a source of light, means associated with said source for concentrating light rays emanating therefrom, means for projecting a shadow within said concentrated light rays and surrounded thereby, the trajectory of said projectile and said shadow coinciding at one or more points.

4. In a device of the class described, means for directing a projectile, a source of light, means associated with said source for concentrating light rays emanating therefrom, means for projecting a shadow within said concentrated light rays and surrounded thereby, said means being relatively adjustable whereby said shadow and the trajectory of said projectile may be made to coincide at any desired point.

5. In combination with means for directing a projectile, a source of light operatively associated with said directing means, means associated with said source of light for concentrating said light rays emanating therefrom into a light pencil, means for projecting a shadow centrally of said pencil of rays and surrounded entirely by said pencil of rays and means for adjusting said light directing and concentrating means relative to said projectile directing means to secure coincidence of trajectory at a predetermined point.

[Claim 6 not printed in the Gazette.]

958,333. MACHINE FOR APPLYING CAPS TO BOTTLES. JOHN M. STARK and THOMAS L. TURNER, New York, N. Y., assignors to Bottlers' Seal Company, New York, N. Y., a Corporation of New York. Filed Nov. 13, 1908. Serial No. 462,445.



1. The combination of a bottle support, a shaft having operative connections to move said support, means, controlled by the placing of a bottle on said support, for starting the rotation of the shaft, and cap-applying mechanism controlled by said shaft.

2. The combination of a bottle support, means for moving it, mechanism for applying a cap to the bottle, and means, controlled by the placing of a bottle on said support, for starting the operation of the machine.

3. The combination of a bottle support having a movable member arranged to be shifted by the placing of a bottle on the support, starting mechanism arranged to be thrown into action by the movement of said member, and mechanism, controlled by said starting mechanism, for applying a cap to the bottle.

4. The combination of a bottle support, a slide adapted to be moved thereon transversely by engagement with a bottle, a second slide engaged by the first slide in the initial position thereof, a starting mechanism normally held inactively by the second slide but adapted for release by the movement of said slide, and cap-applying mechanism controlled by said starting mechanism.

5. The combination of a vertically movable bottle support, a slide adapted to be moved thereon transversely by engagement with a bottle, a second slide engaged by the first slide in the initial position thereof, a starting mechanism normally held inactive by the second slide, a shaft the rotation of which is controlled by said starting mechanism cap applying mechanism operated by said shaft, and means, actuated by the shaft, for bringing the starting mechanism back to its original position in which it causes the shaft to remain stationary.

[Claims 6 to 24 not printed in the Gazette.]

958,334. CONSTRUCTION OF POSTS. RICHARD C. STEWART, Covington, Ky. Filed July 15, 1909. Serial No. 507,686.

1. A hollow polygonal post, consisting of two complementary, cast-metal sections, each of which contains a number of straight post-sides angularly arranged and ornamented on their outside, the sections being fitted to each other at their free longitudinal edges, one of which, at each joint to be formed, constitutes also one of the corners of the post, the other edge being spaced from this corner-forming edge equal to the thickness of the metal and located within and flush with the plane of the particular side of the post and means to hold the two post-sections to each other.

2. In post construction, two cast-metal sections, each containing a number of angularly arranged post-sides which are of limited thickness and ornamented on their outside, the sections being side-wise fitted to each other so as to meet at diagonally opposite post-corners, tie-bolts to hold these sections to each other to form a hollow post open at its upper end, a top fitted to this upper end so as to close it and a tie-rod which holds this top in place by connecting it to the upper one of the tie-bolts.



3. A hollow, polygonal post made up of two cast-metal sections each containing a number of angularly disposed sides of limited thickness and ornamented on their outside, the sections being fitted to each other at their free edges, one of which, at each joint, forms also one of the corners of the post, there being stops spaced inwardly from each of these particular edges, equal to the thickness of the metal, which form shoulders against which the other edge is fitted so as to meet the corner-forming edge properly and means to hold the two sections to each other.

958,335. TOOTHPICK. JOSEPH G. STROCK, Trindle Spring, Pa. Filed May 14, 1909. Serial No. 495,916.



A tooth pick comprising a thin flexible blade having a semi-circular end provided in both sides and in its end with a plurality of semi-circular notches, the outer end of each wall of each notch forming an engaging shoulder, both shoulders of each notch being equidistant from a radial line bisecting said notch.

958,336. CEMENT AND CONCRETE WORK. EDWARD THOMAS, Worcester, Mass. Filed Nov. 29, 1909. Serial No. 530,387.

1. A composition comprising colloidal cement and untreated cement.

2. A composition comprising colloidal cement, untreated cement and a filler.

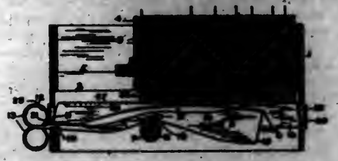
3. The process of making mortar which consists in adding cement to water, rendering the cement colloidal and adding the mixture to untreated cement.

4. The process of making concrete which consists in adding cement to water, rendering the cement colloidal and adding this cement to untreated cement and a filler.

5. The process of rendering cement colloidal which consists in agitating it in a dilute aqueous solution containing more than one fifth of one per cent. of matter adapted to modify the action of water on the cement.

[Claim 6 not printed in the Gazette.]

958,337. CARD SYSTEM. JOHN J. VOGELI, San Francisco, Cal. Filed Nov. 2, 1909. Serial No. 525,956.



1. In combination with a suitable receptacle, a series of information cards, the lower edge of each card being marked with a continuous series, extending in full length of said edge, of equi-distant marks, a movable foot on the bottom of each card variably arranged in proximity to one of said marks, a series of lifter strips extending below the cards transversely thereof, each arranged to engage all of the feet attached to cards in proximity to one of said marks, and a series of cam strips each formed with a cam upon its upper edge and located beneath a corresponding lifter strip and being longitudinally movable, and arranged, when moved longitudinally, to raise the corresponding lifter strip, substantially as described.

2. In combination with a suitable receptacle, a series of information cards, the lower edge of each card being marked with a continuous series, extending in full length of said edge, of equi-distant marks, a movable foot on the bottom of each card variably arranged in proximity to one of said marks and having a pointed lower end, a series of lifter strips extending below the cards transversely thereof, each arranged to engage all of the feet attached to cards in proximity to one of said marks, the upper edge of said lifter strip being grooved longitudinally to receive the pointed lower ends of the corresponding feet, and a series of cam strips corresponding to the series of lifter strips, each cam strip being longitudinally movable, and arranged, when moved longitudinally, to raise the corresponding lifter strip, substantially as described.

3. In combination with a suitable receptacle, a series of information cards, a movable foot on the bottom of each card variably arranged in proximity to one of said marks, a series of lifter strips extending below the cards transversely thereof, each arranged to engage all of the feet attached to cards in proximity to one of said marks, and a series of cam strips corresponding to the series of lifter strips, each cam strip being longitudinally movable, and arranged, when moved longitudinally, to raise the corresponding lifter strip, each cam strip being formed with a shoulder, and the front wall of the receptacle being formed with a transverse opening, the lower edge of which is adapted to engage said shoulder to prevent the cam strip being drawn forward until raised to permit said shoulder to pass over said edge, substantially as described.

4. In combination with a suitable receptacle, a series of information cards, the lower edge of each card being marked with a continuous series, extending in full length of said edge, of equi-distant marks, a movable foot on the bottom of each card variably arranged in proximity to one of said marks, a series of lifter strips extending below the cards transversely thereof, each arranged to engage all of the feet attached to cards in proximity to one of said marks, a series of cam strips corresponding to the series of lifter strips, each cam strip being longitudinally movable, and arranged, when moved longitudinally, to raise the corresponding lifter strip, revoluble supporting means extending transversely beneath all of said cam strips and means for supporting said revoluble means, substantially as described.

5. In combination with a suitable receptacle, a series of information cards, each having a straight lower edge, and marked adjacent to said lower edge with a series of uniformly spaced indicating marks, a foot for each card formed with a transverse straight edge adapted to engage the straight edge of the card, and two members extending upward above said straight edge adapted to engage opposite sides of the card, and to grasp the same by spring pressure, the lower end of said foot being pointed, a series of lifter strips each extending longitudinally within said receptacle and transversely to said cards, each lifter strip having in its upper edge a groove adapted to engage a foot on a card, and means for selectively raising any one of said lifter strips, substantially as described.

958,338. MACHINE FOR SCOURING AND CLEANING CANDIES. WALTER F. WALKER, Springfield, Mass., assignor to The Confectioners' Machinery & Manufacturing Company, Springfield, Mass., a Corporation. Filed Jan. 18, 1909. Serial No. 472,819.



In a machine for cleaning confections which are substantially flat and thin, the combination of a brush-frame, a receiving platform *c*, and a delivery shelf *d*, the brush-frame being concavo-convex in cross section and provided with tufts of bristles of different lengths, a sieve or reticulated member through which the tufts of bristles project, the major portion of the tufts being shorter than the minor portion of the tufts, a vibratory brush arranged to be moved transversely over the brush-frame, and in engagement with the tufts of bristles thereof, whereby the confections will be tipped and operated upon by the vibratory motions of the brush and cleaned on all of their surfaces, as described.

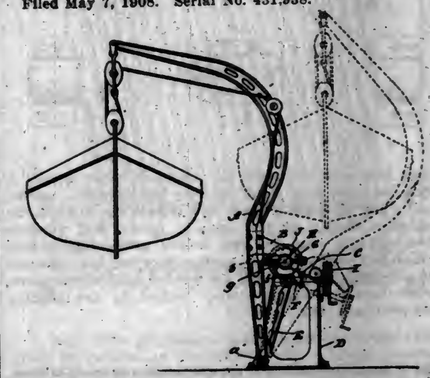
958,339. TOILET ARTICLE. PHILIP H. WATSON, Leominster, Mass. Filed Sept. 29, 1908. Serial No. 455,247.



1. An article of the class described, having a plurality of hair engaging projections, one of them being provided along the inner side thereof with a bow-shaped member having a convex side extending substantially into contact with an adjacent projection, said bow-shaped member being secured at one end to the first named projection at a certain point and being connected therewith at its other end at a point remote from the first named point.

2. As an article of manufacture, a toilet article having a plurality of hair engaging projections, one of them being provided on the inner side thereof with two oppositely slanting holes, at different distances from the end thereof and a bow-shaped piece of wire having its ends set into the same.

958,340. DAVIT FOR HOISTING AND LOWERING BOATS. AXEL WELIN, London, England, assignor to Welin Davit and Lane & De Groot Co., Consolidated. Filed May 7, 1908. Serial No. 431,938.



1. The combination of a davit pivoted to swing, an arm carried by said davit, a support fixed to the vessel, and an intermediate member engaging both said support and arm and adapted to travel transversely between the same and relatively to each thereof.

2. The combination of a davit pivoted at its lower end to swing, a rack secured to the davit, another rack suitably supported on the vessel, a pinion interposed between and engaging with said two racks, and means for actuating said interposed pinion to swing the davit.

3. The combination of a davit pivoted at its lower end to swing, an arm secured to said davit and having a rack, another rack having its teeth opposing the teeth of said first rack and prevented from moving with the davit, a pinion interposed between said two racks and geared to a worm, movable supporting means for said gear and worm, and means for rotating the worm to swing the davit on its pivot.

4. The combination of a davit pivoted at its lower end, a rearwardly extending arm rigidly secured to said davit, a rack at the lower edge of said arm, a frame fixed to the vessel, a rack supported by said frame and having its teeth opposing the teeth of the first rack, a pinion interposed between said two racks, a gear wheel secured to rotate with said interposed pinion, a worm meshing with said gear wheel, movable supporting means for said gear wheel and worm, and means for rotating said worm.

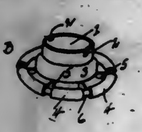
5. The combination of a davit pivoted at its lower end, a rearwardly extending arm rigidly secured to said davit, a rack at the lower edge of said arm, a frame fixed to the vessel, another rack supported by said frame and having its teeth opposing the teeth of the first rack, a pinion interposed between said two racks, a gear wheel fixed to the same shaft and rotating with said interposed pinion, a worm meshing with said gear wheel, a supporting bar pivoted to the vessel for supporting said gear and worm, and means for rotating said worm.

[Claims 6 to 8 not printed in the Gazette.]

958,341. UMBRELLA TOP-NOTCHER. FRANK WETTEROTH, St. Louis, Mo., assignor to Zittlosen Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 23, 1909. Serial No. 534,732.

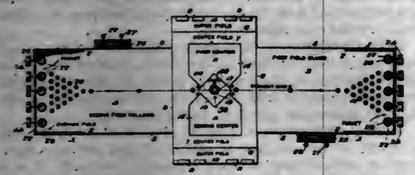
An umbrella top-notcher comprising a hub or rib-retaining member having a tubular collar; notches in the pe-

riphery thereof; an outstanding annular flange depending from said collar; a shoulder at the point of union of said flange with said collar; a plurality of gripping tongues prolonged from and at a right angle to said flange; said tongues gradually widening from the base of said flange to their periphery; a plurality of apertures alternate with said tongues; an annular ring disposed midway the longitudinal extent of said apertures; the circumferential margin of said tongues rebent over said ring; open hooks upon an extremity of the umbrella ribs engaging said



ring over said apertures; an individual cover member A disposed over said collar of said hub member, bearing upon said shoulder thereof, and completely incasing the external surface of said annular flange, said gripping tongues, said ring, and said hooked extremities of said ribs; said cover member having slots for the insertion therethrough of said ribs, the upward and lateral movement thereof being positively limited by the defining walls of said slots.

958,342. GAME APPARATUS. WILLIAM A. WHITE, Seattle, Wash. Filed May 22, 1908. Serial No. 434,389.

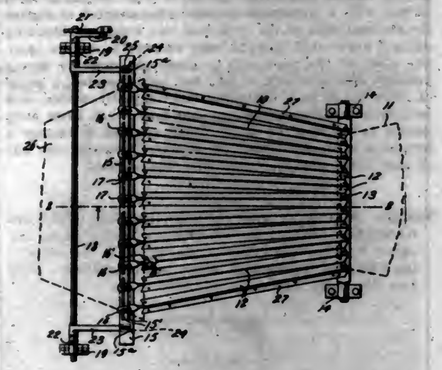


1. An indicating apparatus for games employing movable projectiles, consisting of pockets adapted to receive the projectiles, mechanically operated visual indicators having means engaged and operated by the projectiles when in the pockets, and an electrically operated indicator having circuit connections to and contacts for the respective pockets which is operated by the projectile at the same time that it mechanically operates the visual indicator.

2. An indicating apparatus for games employing rolling projectiles consisting of bottomed concavities or pockets into which the projectiles can be rolled, push pins projecting into the pockets and adapted to be operated by the contact of the projectile therewith when received in the pocket, independent visual indicators mechanically operated and maintained in displayed position by the push pins when the projectile is received in the pocket, and an electrically operated indicator adapted for operation on the engagement of any push pin by a projectile.

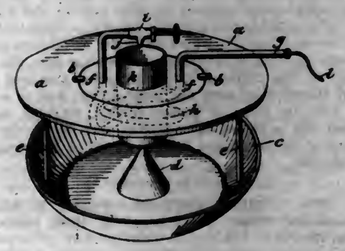
958,343. SLATE-PICKER. HARRY A. WHITMAN, Jermyn, Pa. Filed Feb. 8, 1910. Serial No. 542,695.

1. In a device of the character set forth, the combination of a plurality of angle bar slats, a rotary supporting bar for the upper ends of said slats, a plate having a series of longitudinal slots in pairs, a plurality of supporting feet adjustably connected to said plate through the slots, each of said feet having its upper end provided with a pair of lugs connected to the opposite flanges of the corresponding angle bar slat, and manual control means for varying the elevation of the plate and lower ends of said slats.



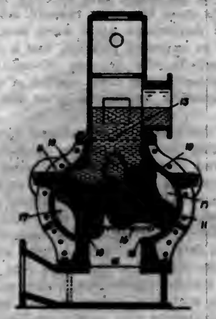
2. In a device of the character set forth, the combination of a plurality of slats, a bar to which the upper ends of the slats are connected close together, a plate, means connecting the lower ends of the several slats to said plate and in spaced relation each to each, and means to vary the elevation of said plate, said means including a rock shaft, a pair of arms rigidly connected to the rock shaft, the upper end of each arm passing loosely through an end of the plate, and means to maintain a proper operative relation between the plate and said arms, substantially as set forth.

958,344. HYDROCARBON-BURNER. ENOCH G. WICKERSHAM, Portland, Ind., assignor of one-half to Francis M. McLaughlin, Portland, Ind. Filed Aug. 23, 1909. Serial No. 514,318.



The herein-described hydro-carbon burner comprising, in combination, a stove lid rim having a central opening, a burner detachably mounted in said opening, said burner comprising an open ended vertical chamber extending above and below the plane of the rim, said chamber structure having a flange intermediate of its ends for coöperation with said rim, a generator tube passing vertically through said flange on opposite sides of said chamber, the intermediate portion of said generator tube being coiled around the lower end of the chamber, means connected to one end of the tube to feed fuel thereto, and a needle valve connected to the other end of said tube and located centrally above said chamber, and a spreader pan connected to said rim, said pan having a central cone projecting upwardly toward said chamber and needle valve and adapted to direct the flame and products of combustion outwardly and upwardly by virtue of the upturned edge of the pan, substantially as set forth.

958,345. VACUUM-PUMP. JOHN T. WILKIN, Connersville, Ind., assignor to The Connersville Blower Co., Connersville, Ind., a Corporation of Indiana. Filed Jan. 22, 1910. Serial No. 539,592.



1. In a vacuum pump of the lobed-impeller type, a water inlet, an air port leading into the pump chamber between the impellers thereof and extending transversely into those portions of the pump chamber with which the lobes of the impellers contact whereby the said air port will be cut off by the lobes of the impellers at about the time said lobes cut off communication with the water inlet.

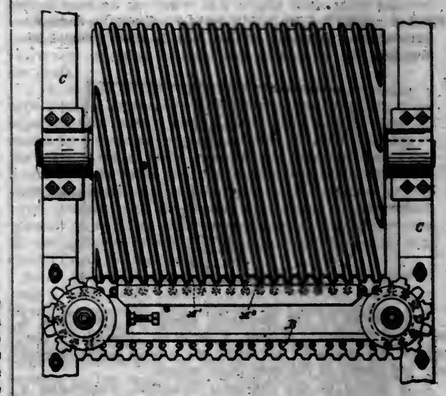
2. In a vacuum pump of the lobed-impeller type, a water inlet, an air port leading into the pump chamber between the impellers thereof and extending transversely into those portions of the pump chamber with which the lobes of the impellers contact whereby the said air port will be cut off by the lobes of the impellers at about the time said lobes cut off communication with the water inlet, said air port having its upper edge slightly below the lowest line of contact between the two impellers and its lower edge above the lowest points of the pump chamber which co-act with the impellers.

3. In a vacuum pump, a pump chamber comprising a pair of mating portions and connecting end walls, a pair of co-acting lobed impellers mounted in said pump chamber and co-acting with the mating portions and end walls thereof, said pump chamber having a water inlet leading into the lower part thereof between the mating portions, and an end wall having a transversely extended recess formed therein and extending into the mating portions of the chamber so as to be cut off from said chamber by the lobes of the impellers at about the time when said lobes cut off said mating portions from the water inlet, said recess having an air feed passage leading thereto.

4. In a vacuum pump, a pump chamber comprising a pair of mating portions and connecting end walls, a pair of co-acting lobed impellers mounted in said pump chamber and co-acting with the mating portions and end walls thereof, said pump chamber having a water inlet leading into the lower part thereof between the mating portions, and an end wall having a transversely extended recess formed therein, said recess having its upper edge slightly below the lowest line of contact between the impellers and its ends transversely extending into the mating portions of the chamber so as to be cut off from said chamber by the lobes of the impellers at about the time when said lobes cut off said mating portions from the water inlet, said recess having an air feed passage leading thereto.

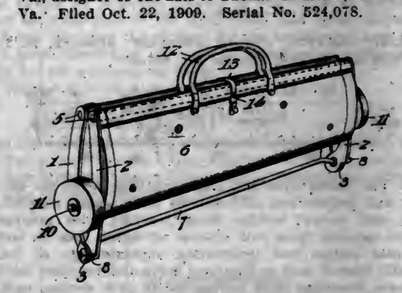
5. In a vacuum pump of the lobed-impeller type, an air port leading into the pump chamber between the impellers thereof and extending transversely into those portions of the pump chamber with which the lobes of the impellers contact whereby the said air port will be cut off by the lobes of the impellers at about the time said lobes cut off communication with the water port, and a vertical air passage formed in the end casing and communicating with the air inlet, and having its inlet above the air port.

958,346. ROAD-ROLLER. FREDERICK F. WILLIAMSON and DANIEL BRENNAN, Jr., New York, N. Y., assignors to The Sicilian Asphalt Paving Company, New York, N. Y., a Corporation of New York. Original application filed May 2, 1908, Serial No. 430,463. Divided and this application filed Dec. 24, 1908. Serial No. 469,069.



A road roller provided with spiral working ridges separated by grooves, in combination with a chain mounted to travel substantially parallel with the roller's axis and provided with teeth fitted into the roller's grooves.

958,347. TOOL-BAG. THOMAS J. YOUNGLOVE, Richmond, Va., assignor of one-half to Thomas B. Hicks, Richmond, Va. Filed Oct. 22, 1909. Serial No. 524,078.



1. A body-supporting wheeled stretcher comprising a jointed and folding frame, hand grips arranged at opposite ends of the stretcher, a flexible apron connected to the frame, and a tool bag attached to and supported by said apron.

2. A body-supporting stretcher comprising jointed and folding side bars, supporting wheels for the stretcher mounted on the side bars at one side of the joints thereof, hand grips at opposite ends of the stretcher, a flexible apron connected to the frame, and a tool bag attached to and supported by said apron.

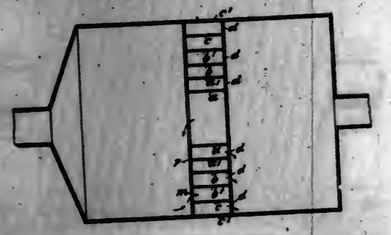
3. A device of the class described comprising a frame embodying jointed and folding side bars, end bars connecting the side bars, a rod extending across the frame and forming the pivot of the joints in the side bars, a flexible apron connecting the end bars, hand grips connected with the end bars, and a tool bag attached to and supported by the apron.

4. A flexible tool bag adapted to be rolled up and spread out, in combination with a combined carriage and stretcher to which the bag is attached, said combined carriage and stretcher being adapted to fold around the tool bag in the form of a satchel.

5. A flexible tool bag adapted to be rolled up and spread out, in combination with a combined carriage and stretcher to which said tool bag is attached, and oppositely arranged hand gripe attached to said carriage.

[Claims 6 and 7 not printed in the Gazette.]

958,348. SIEVE FOR DRUM-MILLS. GERHARD ZARNIKO, Hildesheim, Germany. Filed July 7, 1909. Serial No. 506,288.



1. A device of the character described, comprising a series of concentric screens, a series of intervening conveyers, and means for conveying the coarser particles from any one screen to the next inner screen.

2. A device of the character described, comprising a series of concentric screens, a series of intervening concentric conveyers, and a series of shovels adapted to convey the coarser particles successively from the outer screens to the inner screens.

3. A device of the character described, comprising a series of concentric screens, a series of intervening conveyers having a lateral dip, and means for successively conveying the coarser particles from the outer screens to the inner screens.

958,349. LEVEL. CARL J. ANDERSEN, Brooklyn, N. Y. Filed Apr. 3, 1909. Serial No. 487,800.



1. The herein described tool comprising a central section and end-sections, said sections being hinged together, and said central section being provided with grooves in its opposite faces, said grooves extending from an end of said section and terminating approximately at the middle thereof, said end-sections being also provided with grooves extending from end to end in each section, each groove in an end-section being adapted to be brought in alinement with one of the grooves in said central section, a spirit-level secured upon an edge of one of said sections, a spirit-level secured upon an edge of the free end of one of said end-sections, and a locking means slidably arranged in the grooves of said sections for maintaining the sections in their opened or extended relation one with another.

2. The herein described tool comprising a central section and end-sections, said sections being hinged together, and said central section being provided with grooves in its opposite faces, each groove extending from an end of said section and terminating approximately at the middle thereof, said end-sections being also provided with grooves extending from end to end in each section, each groove in an end-section being adapted to be brought in alinement with one of the grooves in said central section, a spirit-level secured upon an edge of said central section, a spirit-level secured upon the free end of one of said end-sections, and a locking means slidably arranged in the grooves of said sections for maintaining the sections in their opened or extended relation one with another, and each section being provided with a scale.

3. The herein described tool comprising a central-section, end-sections pivotally connected with the ends of said central section, all of said sections being provided with grooves, said central section being provided with a spirit-level upon one of its edges, said sections being provided with graduations upon the faces thereof, adapted to form a complete and continuous scale when said sections are in their opened or extended relation, and a locking means slidably arranged in the grooves of said sections for maintaining the sections in their opened or extended relation one with another, substantially as and for the purposes set forth.

4. The herein described tool comprising a central section, said section being provided in its opposite faces with centrally disposed and longitudinally extending grooves, each groove extending from an end of said section and terminating approximately in the middle of the section, a spirit-level connected with one of the edges of said central section, a left end-section, hinges connecting said left end-section with said central section, said left end-section being adapted to fold back upon the rear face of said central section, a right end-section, hinges connecting said right end-section with said central section, said right end-section being adapted to fold back upon the front face of said central-section, said two end-sections being provided with grooves extending from end to end of each section and adapted to be brought in alinement with said grooves in said central section, and slide-bars slidably arranged in the grooves of said central section and said end-sections for maintaining said sections in their fixed opened or extended relations with each other, substantially as and for the purposes set forth.

5. The herein described tool comprising a central section, said section being provided in its opposite faces with centrally disposed and longitudinally extending grooves, each groove extending from an end of said section and terminating approximately in the middle of the section, a spirit-level connected with one of the edges of said central-section, a left end-section, hinges connecting said left end-section with said central section, said left end-section being adapted to fold back upon the rear face of said central section, a right-end section, hinges connecting said right end-section with said central section, said right-end section being adapted to fold back upon the front face of said central-section, said two end-sections being provided with grooves extending from end to end of each section and adapted to be brought in alinement with said grooves in said central section, and said central section and said end-sections being provided with graduations upon their respective faces adapted to form a complete and continuous scale when said sections are in their opened or extended relation, and slide-bars slidably arranged in the grooves of said central section and said end-sections for maintaining said sections in their fixed opened or extended relations with each other, substantially as and for the purposes set forth.

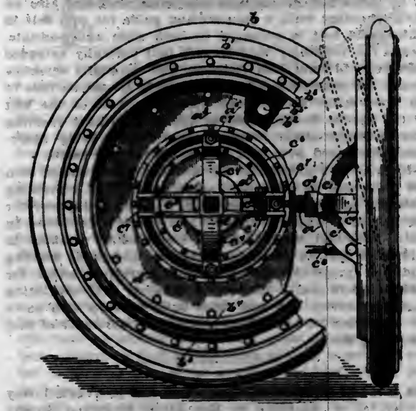
[Claims 6 to 9 not printed in the Gazette.]

958,350. VEHICLE-WHEEL. CON D. ANDERSON, Lima, Ohio. Filed Mar. 30, 1906. Serial No. 308,859.

1. In a device as described, an axle, a wheel having a ball-and-socket connection therewith, and a member consisting of four arms integrally formed thereon supported on said axle and engaging said wheel at diametrically opposite points, two of said arms being slotted to permit it to be moved with respect to said axle in a horizontal plane, substantially as specified.

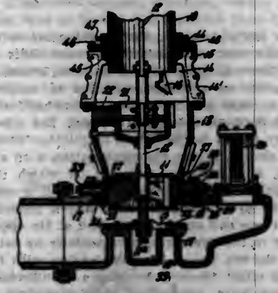
2. In a structure as described, an axle, a wheel having a universal connection therewith, a device on said axle consisting of four projecting arms integrally formed therewith, the ends of two of which lie against said wheel to maintain the same in a vertical position, the other two of said arms being adapted to bear against said wheel on a horizontal line, said last-mentioned arms being slotted to permit the device and arms to swing in a horizontal plane, substantially as specified.

3. In a device as described, an axle, a wheel having a universal connection therewith, a slotted track about said wheel between the hub and periphery thereof, and a member supported on said axle consisting of four arms integrally formed therewith, two of said arms being vertically arranged and extending into said track at points diametrically opposite each other to maintain said wheel in a



vertical direction, the other two of said arms being horizontally arranged and extending into said track at points diametrically opposite each other, said horizontally-arranged arms being slotted, substantially as and for the purpose specified.

958,351. VALVE MECHANISM FOR WATER-COLUMNS. FRANK C. ANDERSON, Cincinnati, Ohio, assignor to American Valve & Meter Company, Cincinnati, Ohio, a Corporation of West Virginia. Filed Aug. 21, 1909. Serial No. 513,905.



1. A device of the character described comprising a valve chamber, a valve seat placed therein, a main valve, a main valve stem adapted to operate the main valve, recesses in the upper edge of said main valve, an annular ring fastened between the lowermost frame work of the valve chamber and an annular member of the valve chamber, plates adapted to be fastened on the outer edge of said annular ring, said plates being reversible and having recesses on one side, port holes in said annular ring, and a split casing fastened upon the annular member of the valve chamber, substantially as set forth.

2. A device of the character described comprising a split casing, a waste ring, port holes in said waste ring, recesses in the upper surface of said ring, a ring adapted to fit inside of said ring, lugs on said inner ring adapted to engage said recesses, port holes in said ring and in said inner ring adapted to coincide with each other, a plate adapted to be fastened directly in front of port holes in said ring and on the outer surface thereof, a main valve, recesses on one side of said plate to allow a free opening in valve chamber through said port holes in ring when said plate is fastened to said ring, and the main valve is closed, recesses in the upper edge of the main valve adapted to engage port holes in said ring when the main valve is in its closed position, an elliptical shaped stem on the lower end of said main valve adapted to engage an elliptical opening in a flanged spider bolted to the valve chamber and forming a clamp for the main valve seat packing, substantially as and for the purposes set forth.

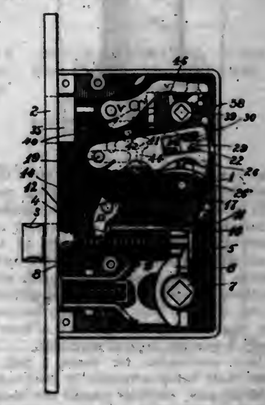
3. A device of the character described comprising a split member of the valve chamber casing fastened at its upper part to engage water column pipe, a main valve operated by a main valve stem, recesses in the upper edge of the main valve, a waste ring clamped between the middle member of the valve chamber casing and the lower valve chamber casing, and a reversible plate fastened at the outer periphery of the flange, port holes in said flange adapted to coincide with the recesses in the upper edge of the main valve when said main valve is closed, substantially as set forth.

4. In a device of the character described, an annular ring, a main valve chamber made in sections adapted to clamp said annular ring between its lowermost and middle sections, said annular ring having port holes, reversible plates fastened on the outside of said ring, means for clamping the packing for the main valve to the ring, and recesses in the upper edge of the main valve adapted to coincide with the port holes in said ring when the main valve is in its lowermost position, substantially as set forth.

5. A device of the character described comprising a main valve chamber made in sections, the upper section being made in halves, said halves being adapted to be bolted together, a main valve, an elliptical main valve stem extending below the main valve, a spider fastened to the frame work of the lower member of the valve chamber having an elliptical opening in the center to receive said elliptical stem of the main valve, said spider having a flange clamping the packing for the main valve seat to the lower member of the valve chamber, substantially as and for the purposes set forth.

[Claims 6 to 10 not printed in the Gazette.]

958,352. HOTEL-LOCK. AUGUST ARENS and ERNEST L. TRICH, New Britain, Conn., assignors to P. & F. Corbin, New Britain, Conn., a Corporation of Connecticut. Filed Aug. 5, 1909. Serial No. 511,353.



1. In a lock, the combination of a latch bolt and a knob spindle for operating said latch bolt from one side of the door only, a plurality of keys, key operated lock mechanism operable by all of said keys for operating said latch bolt, including a member for preventing the opera-

tion of said latch bolt by certain of said keys when operated by certain other of said keys.

2. In a lock, a latch bolt normally spring projected, a knob spindle arranged to operate said latch bolt from the inside of the door only, a plurality of keys and a locking mechanism operable by all of said keys arranged to actuate said latch bolt including a member constructed to prevent operation of said latch bolt by certain of said keys when locked by the operation of certain other of said keys.

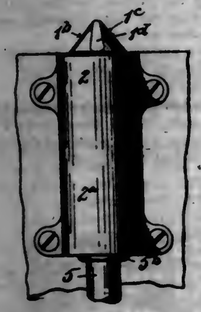
3. In a lock, a latch bolt normally spring projected, a knob spindle arranged to actuate said latch bolt from one side of the door only, a plurality of keys and tumbler mechanism operable by all of said keys, including a tumbler constructed and arranged to prevent the actuation of said latch bolt by certain of said keys when locked by the operation of certain other of said keys.

4. In a lock, a latch bolt normally spring projected, a knob spindle arranged to actuate said latch bolt from but one side of the door, a plurality of keys, a locking mechanism for said latch bolt operable by all of said keys including a tumbler so constructed and arranged as to prevent operation of certain of said keys when operated by certain other of said keys.

5. In a lock, a latch bolt normally spring projected, a blind bolt operatively connected with said latch bolt, a plurality of keys and mechanism connected with said blind bolt and operable by all of said keys so constructed and arranged as to prevent operation of said blind bolt by certain of said keys when operated by certain other of said keys.

[Claims 6 to 40 not printed in the Gazette.]

958,353. LATCH MECHANISM FOR EMERGENCY-DOORS. AUGUST ARENS and ERNEST L. TRICH, New Britain, Conn., assignors to P. & F. Corbin, New Britain, Conn., a Corporation of Connecticut. Filed Dec. 16, 1909. Serial No. 533,342.



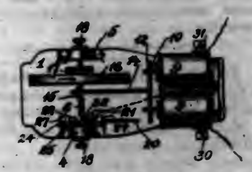
1. In a latch mechanism for doors, a latch bolt, a guide therefor, said bolt being arranged to both oscillate and slide in said guide, a yielding projecting means for said bolt, said bolt having its outer end formed on its side, and at substantially right angles, with an inclined repressing wall and a straight holding wall, and manually operable means for imparting an oscillating movement to said bolt without shifting the same longitudinally, whereby one or the other of said walls may be brought into position for engagement with part of a door casing by approximately a quarter turn of said bolt.

2. In a latch mechanism for doors, a bolt, a support therefor, said bolt being arranged to both oscillate and slide in said support, yielding means for normally holding said bolt projected, the outer end of said bolt having two oppositely arranged side inclines, a semi-conical surface connecting both inclines at one side of the bolt and a straight holding wall opposite said semi-conical incline, said bolt being free to be pushed in at all times, and manually operable means for oscillating said bolt whereby one of the inclined walls may be brought into position for engagement with part of a door casing by approximately a quarter of a turn of said bolt.

3. In a latch mechanism for doors, a latch bolt having at its outer end an inclined repressing wall and also an abrupt holding wall, a support and guide for said bolt in which said bolt is arranged to both slide and oscillate, means for yieldingly holding said bolt normally extended relatively to said bolt support, and manually operable means for presenting at will relatively to one surface of the door either the inclined repressing wall of the bolt or the abrupt holding wall of the bolt without exerting thereon longitudinal pressure, said means being operatively connected with said bolt by a rotatable sleeve.

4. In a latch mechanism for doors, a round bodied bolt, the outer end of said bolt having an inclined repressing wall and an abrupt holding wall, a guide or support for the bolt including a fixed part and a rotatable sleeve, in which said bolt may slide said sleeve being mounted in said fixed part to oscillate, means for yieldingly holding said bolt projected, an oscillating operating device for manual operation, a connection between said oscillating operating device and said latch bolt, whereby said parts are connected for oscillation only by the movement of said operating device.

958,354. ELECTRIC MOTOR. CHARLES E. AVERY, Jersey City, N. J., assignor to Manhattan Electrical Supply Company, a Corporation of New Jersey. Filed Apr. 8, 1909. Serial No. 488,683.



1. In an electric motor, the combination with a bed plate provided with standards for a crank shaft and magnet, of an electro-magnet supported by its standard, studs on the magnet, an armature mounted to reciprocate on said studs, a crank shaft carrying a fly-wheel, and a connecting rod between the armature and the crank shaft, substantially as set forth.

2. In an electric motor, the combination with an operating magnet, an armature, supports on which the armature is mounted to reciprocate, a fly-wheel, a crank-shaft on which the fly-wheel is mounted and a connecting rod journaled at one end on the crank and at its opposite end fixed rigidly to the armature, substantially as set forth.

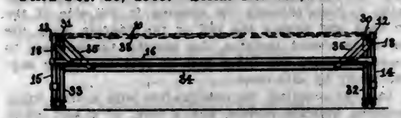
3. In an electric motor, the combination with the crank shaft, of an offset thereon forming a circuit-closing contact, a switch lever, conducting arms extending on opposite sides of the crank shaft and means engaging said arms for removably holding them in place on the switch lever.

4. In an electric motor, the combination with the crank shaft, of an offset thereon forming a circuit-closing contact, a switch lever, resilient conducting arms extending on opposite sides of the crank shaft and means engaging said arms, whereby the same are removably held in place on the switch lever by their own resiliency.

5. In an electric motor, the combination with a bed plate provided with standards for the crank shaft and magnet, of an electro-magnet supported by its standard, studs projecting from the magnet cores, an armature mounted to reciprocate on said studs, a crank shaft carrying a fly-wheel, and a connecting rod, one end of which is rigidly fixed to the armature, and the opposite end of which is journaled on the crank shaft, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

958,355. BED. GEORGE W. BENT, Cambridge, Mass. Filed Feb. 10, 1909. Serial No. 477,063.



1. In a bed of the character described, in combination, a stationary member comprising a mattress support, end bars to which said support is secured, corner posts or legs, side bars connecting said corner posts or legs, and cross bars connecting said corner posts or legs, a movable member comprising a mattress support, end bars, corner posts or legs, side bars and cross bars connecting said posts or legs, and auxiliary legs or posts for said stationary member normally inactive but capable of being rendered active to elevate the mattress support of said stationary member to permit the movable member to be moved into and withdrawn from a nested position with relation to said stationary member, substantially as described.

2. In a bed of the character described, in combination, a stationary member comprising a mattress support, end bars to which said support is secured, corner posts or legs, side bars connecting said corner posts or legs, and cross bars connecting said corner posts or legs, a movable member comprising a mattress support, end bars, corner posts or legs, side bars and cross bars connecting said posts or legs, and auxiliary legs or posts for said stationary member normally inactive but capable of being rendered active to elevate the mattress support of said stationary member to permit the movable member to be moved into and withdrawn from a nested position with relation to said stationary member, and springs to move said auxiliary legs into their active position, substantially as described.

3. In a bed of the character described, in combination, a stationary member comprising a mattress support, end bars to which said support is secured, corner posts or legs to support said mattress support, cross bars connecting said corner posts or legs, a movable member comprising a mattress support, end bars, corner posts or legs and cross bars to form a bed separate from the stationary member and capable of being used as a bed independently of said stationary member, and means coöperating with the stationary member for elevating the mattress supporting surface thereof to permit the movable bed member to be bodily moved under the mattress support of the stationary bed member and withdrawn from under the same, substantially as described.

958,356. UPHOLSTERED CHAIR. PHILIPP G. A. BODE, Hamburg, Germany. Filed Nov. 1, 1909. Serial No. 525,722.



1. An upholstered chair comprising a plurality of yielding independently movable pads, means to lock the pads and means to simultaneously operate the locking means.

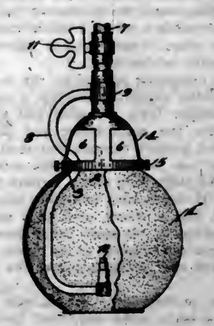
2. An upholstered chair comprising a covering, a plurality of independently adjustable members adapted to automatically cause the covering to conform to the contour of a body laid thereon, means to lock the supports in their adjusted position, and means to simultaneously operate the locking means.

3. An upholstered chair comprising a number of pads, shanks on the pads adapted to move in guides, teeth on the shanks and a number of slotted movable rods adapted to catch between the teeth of the shanks to lock the pads in position.

4. An upholstered chair comprising a number of movable pads, a corresponding number of springs to elastically hold the pads in position, serrated shanks on the pads and a number of movable rods adapted to catch between the teeth of the serrated shanks to lock the pads in position.

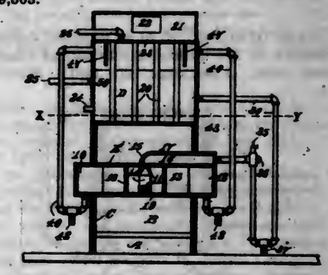
5. An upholstered chair comprising a frame, a number of sockets on the frame, a number of pads and shanks on the pads guided by the sockets, helical springs surrounding the shanks, between the sockets and the pads, teeth on the shanks, and a number of slotted movable rods adapted to catch between the teeth of the rods to lock the pads in position.

958,357. INVERTED GAS-FIXTURE. GEORGE BRECK, San Francisco, Cal. Filed Sept. 22, 1909. Serial No. 519,084.



An improved gas fixture consisting of a pendent gas pipe, a globe holder carried thereby having suitable ventilating openings, a narrow topped globe carried by the globe holder, said globe open at both ends, and a pipe connecting with the said gas pipe at a point above the globe holder and extending down toward the same and through one of its draft openings and terminating at a point inside the globe adjacent to but above the bottom thereof, and having an upwardly turned top within said globe.

958,358. STEAM-GENERATOR. JOSEPH BUCKLEY, Methuen, Mass. Filed Apr. 12, 1909. Serial No. 489,503.



1. In a steam producing apparatus, a main boiler, a generator below the main boiler and closer to the fire, combined with a generator inlet water pipe which leaves the main boiler and extends downward and upward in U shape and enters the generator at the top, and steam outlet pipes from the bottom of the generator which enter the main boiler at the top.

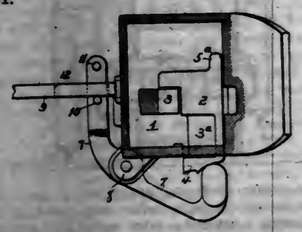
2. In a steam producing apparatus, a main boiler, a water inlet and a steam outlet therefor, and a cylindrical shell by which the main boiler is supported, combined with an auxiliary generator which comprises a central drum of a size smaller than the shell and is formed with hollow supporting ears extended through said shell, a generator feed water pipe which leaves the main boiler near the bottom and extends below the generator in U shape and enters the top of the generator through a relatively small opening, a sprayer inside the generator, and generator steam outlet pipes which leave the ears at the bottom form U shaped bends and enter the main boiler at the top as shown.

3. In a steam producing apparatus, the combination of a shell, a main boiler supported thereby, a generator with a flat bottom smaller than the shell and located inside thereof and below the main boiler and provided with hollow ears which project through the shell, steam outlets from the bottom of the ears of the generator which extend out through the shell, said steam outlets being formed with dependent U bends and extended into the top of the main boiler, together with a water inlet pipe which extends from near the bottom of the main boiler and downward forming a U bend below the U bends of the steam outlet pipes, thence upward and over into the top of the generator as described.

4. In a steam producing apparatus, the combination of a shell, a main boiler supported thereby, a generator with a flat bottom smaller than the shell and located inside thereof and below the main boiler and provided with hollow ears which project through the shell, a plurality of steam outlets from the bottom of the ears of the generator outside the shell, said steam outlets being formed with dependent U bends and extended into the top of the main boiler, and a water inlet pipe which extends from near the bottom of the main boiler downward forming a U bend below the U bends of the steam outlet pipes, thence upward and over into the top of the generator as described.

5. In a steam producing apparatus, the combination of a shell, and a main boiler supported thereby, with a plurality of generators each of which has a flat bottom, is smaller than the shell and is located inside the shell below the main boiler and is provided with hollow ears which project through the shell, a plurality of steam outlets from the bottom of the ears of each generator outside the shell, the adjoining steam outlets from each generator being joined and formed with a dependent U bend below the bottom of the lowest generator and extended into the top of the main boiler, a main steam outlet at the top of the main boiler, and a water inlet pipe which extends from near the bottom of the main boiler forming a U bend below the U bends of the generator steam outlet pipes, thence upward and over in a plurality of branches one branch into the top of each generator as described.

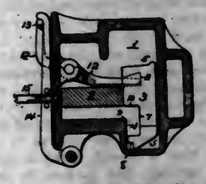
958,359. CAR-COUPLING. SAMUEL P. BUSH, Columbus, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Filed Sept. 27, 1907. Serial No. 394,911.



1. In a car coupling, the combination with a draw head having an opening through the side thereof, a swinging knuckle and a lock, of a bell crank lever one end of which is adapted to engage the lock and move same to lock set position, and a bar engaging the upper end of said bell crank lever, the inner end of said bar adapted to pass through the opening in the side of the draw head and engage the tail of the knuckle when the latter is in closed position, for moving the knuckle to its open position, the inner end of said bar being supported solely by said lever.

2. In a car coupling, the combination with a draw head, a swinging knuckle therein and a lock, of a bell crank lever, one end of which is adapted to engage the lock and move same to lock set position, a bar having a slot through which the other end of said lever passes, the said bar adapted to be moved through an opening in the wall of the draw head and engage the tail of the knuckle, and a device on said lever for supporting the inner end of the bar, the inner end of the bar being solely supported by the lever in a position to enter the draw head when the locking block is in lock set position.

958,360. CAR-COUPLING. SAMUEL P. BUSH, Columbus, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Filed Apr. 11, 1908. Serial No. 426,586.



1. In a car coupling, the combination with a coupling head having a seat, a locking block having a recess and also having a shoulder to engage the seat in the coupling head, and a knuckle, of a lever pivoted to the coupling head and having an approximately horisontal member within the coupling head projecting into the recess in the locking block and also having an arm outside the coupling head, and a member located outside the coupling head and coöperating with the outside arm of said lever to tilt the latter.

2. In a car coupling, the combination with a coupling head having a seat, a locking block having a shoulder near its lower end to engage said seat, said locking block also having a recess near its upper end, and a knuckle, of a pivoted lever, one member of which is within the coupling head with its free end permanently within the recess near the upper end of the locking block and its other member located adjacent to one side of the coupling head, and means on the coupling head and coöperating with said lever to tilt the same.

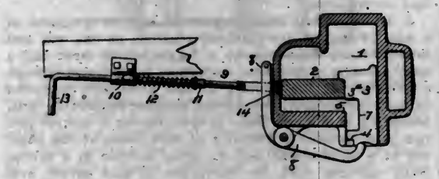
3. In a car coupling, the combination with a coupling head having a seat, a locking block having a shoulder to engage said seat and a knuckle, of a pivoted bell crank lever partly within and partly outside the coupling head, the said lever engaging the locking block for lifting same, a lever pivoted at one end to the coupling head and engaging the outer member of the bell crank and means for actuating said pivoted lever.

4. In a car coupling, the combination with a coupling head having a seat, a locking block having a shoulder to engage said seat, and also provided with a recess, and a knuckle carried by the coupling head, of a pivoted bell crank lever, one member of which is within the coupling head with its free end resting in the recess in the block, a lever pivoted to the coupling and engaging the outer member of the bell crank and means for actuating said pivoted lever and for throwing the knuckle to its open position.

5. In a car coupling, the combination with a coupling head having a seat, a locking block having a shoulder to engage said seat, and also provided with a recess, and a knuckle, of a bell crank lever one member of which is within the coupling head with its free end resting in the recess in the locking block, a pivoted lever engaging the outer end of the bell crank lever and a rod for actuating the pivoted lever when moved in one direction, and for throwing the knuckle to open position when moved in the opposite direction.

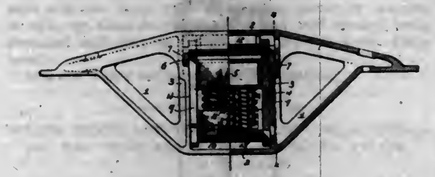
[Claim 6 not printed in the Gazette.]

958,361. CAR-COUPLING-OPERATING DEVICE. SAMUEL P. BUSH, Columbus, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Filed Apr. 13, 1908. Serial No. 426,833.



In a car coupling, the combination with a coupling head, a knuckle, and a device for locking the knuckle in its closed position, of a bell crank lever for moving the locking device to unlocking position, a rod, and a spring on the rod tending to force the latter inwardly toward the tail of the knuckle, the said rod having a loose connection with the lever, whereby when it is drawn outwardly the lever will be rocked in a direction to move the locking block to unlocking position, and when released will be forced by the spring against the tail of the knuckle and throw the latter to open position.

958,362. TRUCK CONSTRUCTION FOR CARS. SAMUEL P. BUSH, Columbus, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Filed Apr. 24, 1909. Serial No. 492,031.



1. In a car truck, the combination of truck sides and transoms connecting them near their upper portion and carrying a portion of the weight of the car body transmitted through the hangers, from a point within the structure of the truck sides.

2. The combination with side frames, each having an opening wider at the top than at its lower or intermediate portion, of two transoms the ends of which rest in the enlarged portion of said openings, hangers located intermediate the two transoms and a bolster carried by said hangers.

3. In a swing motion car truck the combination of truck sides and transoms connecting and interlocking with them, and carrying that portion of the weight of the car body transmitted through the hangers, at a point within the structure of the truck sides.

4. In a car truck the combination of truck sides, cross transoms connecting therewith and hangers suspended partly from the side frames and partly from the transoms.

5. In a car truck the combination of truck sides and transoms connected therewith, having bifurcated ends and supporting the hangers.

[Claim 6 not printed in the Gazette.]

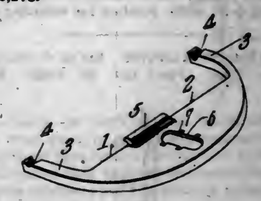
958,363. NON-SLIPPING TREAD-PLUG. JAMES L. CAMPBELL, Lowell, Mass., assignor to American Mason Safety Tread Company, Saco, Me., a Corporation of Maine. Filed July 18, 1906. Serial No. 326,664.



1. A non-slipping tread-plug comprising a suitable body of cement containing gritty material adapted to be let into a tread flush with the tread surface thereof, and an attaching shank rigidly secured to said body and adapted to extend through said tread, and means to engage said shank below said tread and to retain the same in said tread.

2. A non-slipping tread-plug consisting of a suitable case filled with non-slipping material, said case being adapted to be let into a tread and having a screw-threaded shank rigidly connected to said case and adapted to extend through said tread and a nut to engage said shank below said tread.

958,364. CAR-WHEEL JACK-STAND. DE FOREST CHAMPEON, Houlton, Me. Filed July 6, 1909. Serial No. 506,175.



1. A jack stand including a jack supporting platform, intermediate means extending from one side of the platform for engaging the outer portion of the wheel rim and bearing downwardly upon said rim, and means extending from said side of the platform at the ends thereof for projecting under and engaging the flange of the wheel, said intermediate and end means coöperating to engage the wheel when the platform is subjected to downward pressure so as to hold the platform extended laterally beyond one face of the wheel.

2. A jack stand including a jack supporting platform, spaced means extending from one side of said platform for engaging and bearing upwardly upon the flange of a wheel, and intermediate means upon said side of the platform for bearing downwardly upon the rim of the wheel to hold said platform extended beyond one face of the wheel when subjected to pressure in one direction.

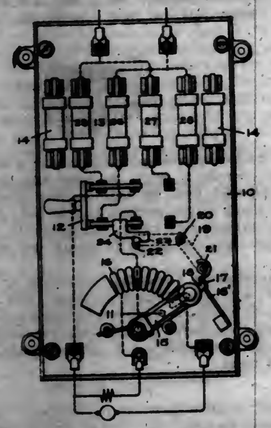
958,365. MOTOR-CONTROLLING DEVICE. LEWIS S. CHAPMAN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 22, 1908. Serial No. 434,309.

1. In combination with a starting rheostat having a controlling arm biased to starting position, a latching device for holding said arm in running position, a double throw switch, and mechanism for mechanically moving the latch to release the arm upon the opening of said switch from either position.

2. The combination with a starting rheostat having a controlling arm biased to starting position, of a spring detent for automatically latching said arm in running position, a double-throw switch, and a cam operated by the switch to actuate the detent and release the arm when the switch is moved from either position.

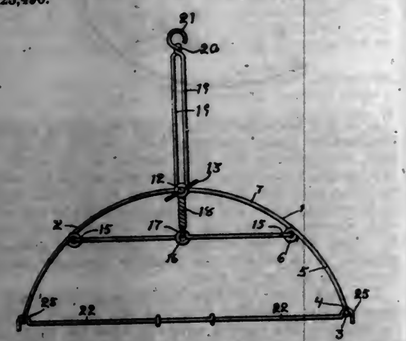
3. The combination with a starting rheostat having a controlling arm biased to starting position, of a latching

device for holding said arm in running position, a double-throw switch, a plurality of protective fuses one for each



position of said switch, and means operated by the opening of said switch from either position for releasing said arm.

958,366. GARMENT-HANGER. EDGAR C. CLAUSEN, Salt Lake City, Utah. Filed Oct. 30, 1909. Serial No. 525,490.



1. A foldable adjustable garment-hanger, comprising an arched garment support composed of two oppositely disposed curved arms each made of a single piece of wire bent centrally to form a laterally disposed closed end loop of the arm, adjacent portions toward both ends bent to form axially alined eyes disposed inwardly and centrally of the arm, and the ends of the wire bent to form a pair of hinging eyes spaced apart in axial alinement; a toggle-jointed strut composed of two connecting-rods each made of a single piece of wire having their outer ends bent to form eyes closed through said centrally and inwardly disposed eyes on said arms and their inner ends bent to form eyes in axial alinement; a longitudinally-reciprocable suspension-bar made of a single piece of wire bent centrally to form a base eye disposed through the alined eyes at the inner ends of said connecting-rods, opposite portions adjacent to said base eye twisted together to close said eye and form a closed rigid base portion to limit the movement of said toggle-joint toward the hinge-joint of said arms, further adjacent portions disposed parallelly and spaced apart to form an elongated guide-loop at the end of which the opposite branches of the wire are again twisted together to close the end of said loop and one of said branches continued beyond and bent to form a suspension hook; and a screw-bolt disposed through said guide-loop disposed through the space between said hinging eyes.

2. A foldable adjustable garment-hanger, comprising a pair of curved arms hinged together at one end and their opposite free ends having laterally disposed loops, a toggle-jointed strut disposed between and connected centrally to each arm, a longitudinally-reciprocal bar having one end hinged to said toggle-jointed strut, a guide and lock on said arms to carry and fasten said reciprocal bar, and a bar adjustable in length and having at its ends terminal hooks adapted to engage the lateral loops at the ends of said curved arms.

3. In an arched foldable garment-support composed of a pair of curved arms jointed together at one end and intermediately connected by a toggle-jointed strut and a longitudinally-reciprocable suspension-bar disposed through a guideway at the jointing of said arms and connected to said toggle-joint, the curved garment-supporting arm, consisting of a single piece of wire having a central portion bent to form a plurality of open loops at the outer end of a large closed loop all lying flatwise in a curved plane agreeing with the curvature of said curved arm and at its outer end, opposite portions of the wire adjacent to said large loop bent to form centrally of said arm a pair of inwardly-disposed axially-alined eyes to connect said toggle-jointed strut thereto, and the ends of said wire bent to form terminal hinging eyes spaced apart and in axial alinement.

958,367. MOTION-PICTURE FILM. ABRAM L. CLAWSON, Pleasant Hill, Mo. Filed Apr. 8, 1909. Serial No. 488,596.

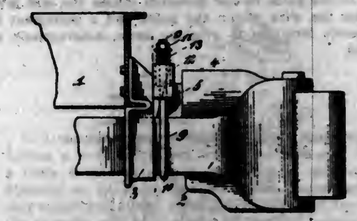


1. A motion picture film having a central longitudinal series of perforations, motion pictures disposed in two longitudinal series on opposite sides of the central line of perforations, with the pictures of the two series alternating, said film having projecting edge portions beyond the pictures, each of less lateral extent than the width of the intermediate space containing the said perforations.

2. A motion picture film having a central longitudinal series of closely related perforations, longitudinal picture receiving portions on each side of the perforations, and plain edge portions projecting beyond the longitudinal zones for receiving the pictures, said edge portions being each of less lateral extent than the width of the intermediate space containing said perforations.

958,368. DISTANCE-SPACING DEVICE FOR FREIGHT-CARS. THOMAS CONLEY, Pittsburg, Pa. Filed May 4, 1909. Serial No. 493,948.

1. A distance spacer for draw bars of freight cars, comprising a plurality of wedge shaped blocks, adapted to be supported by a coupling member and constituting an automatically expanding key between a projection on the coupling member and the end of a car.



2. The combination with a car and a normally yielding coupling member, of an automatically expanding key adapted to rest on the coupling member, and to block the latter against longitudinal movement toward the car.

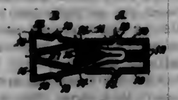
3. The combination with a car and a coupling head, of a blocking device consisting of two opposed wedge shaped bodies, one of which is stationary and the other vertically movable, the movable member being attached to the coupling head.

4. The combination with a car and its coupling member the latter being formed with a lug or shoulder at the rear of its coupling head, of a pair of wedge shaped blocks, one of which rests loosely on the coupling member and against said lug or shoulder as an inverted wedge, while the other block is movably arranged between the said inverted wedge and the end of the car, and is positively connected to the coupling member.

5. The combination with a car and with a coupling member having a lug or shoulder at the rear of its head, of an inverted wedge shaped block resting on said member and against said lug, a correspondingly wedge shaped reversely tapered or beveled block located between the first named block and the end of the car, and formed with vertical openings, a stirrup embracing the shank of the coupling member, and having its limbs screw threaded and passed through said vertical openings, nut on the ends of said stirrup and springs arranged between said nuts and the block, said block being vertically movable to take up slack in the coupling and said springs being arranged and adapted to force the movable block downward.

[Claims 6 to 9 not printed in the Gazette.]

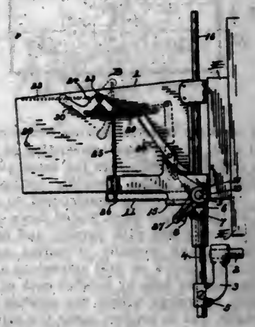
958,369. HOOK AND EYE. EMMA M. COWLES, Milwaukee, Wis. Filed Apr. 15, 1908. Serial No. 427,108.



1. A hook and eye construction, comprising a hook member having a bill with an intermediate greatest width and eye engaging parts spaced apart, and a wire eye member having an engaging bar to be engaged by the bill, the wire forming the engaging bar of the eye member being bent to form stops at a distance apart less than the greatest width of the bill to compel said bill to be compressed when it is engaged with or disengaged from the bar of the eye member, said ends of the wire then being bent to form loops with divergent ends terminating close to the bar to confine the engagement of the bill to the bar and to prevent lateral swinging of the members with relation to each other.

2. A hook and eye construction, comprising a hook member having a heart shaped bill with eye engaging parts spaced apart and declining spiral bends forming the neck of the bill, and a wire eye member having an engaging bar to be engaged by the bill, the wire forming the engaging bar of the eye member being bent to form sides of the eye member at a distance apart less than the greatest width of the bill to compel said bill to be compressed when it is engaged with or disengaged from the bar of the eye member, said ends of the wire being bent to form loops with divergent ends terminating close to the bar to confine the engagement of the hook member to the bar and to prevent lateral swinging of the members with relation to each other.

958,370. VIEW-DISSOLVER FOR MAGIC LANTERNS. OTIS C. CURRIE, Detroit, Mich., assignor to The Campbell-Kingsley Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 29, 1909, Serial No. 475,002. Renewed Mar. 31, 1910. Serial No. 552,633.



1. In a device of the character described, means for turning a view plate in a direction longitudinally of the path of the light rays from a lantern, out of focal position before the lens of said lantern, and means for simultaneously moving another plate transversely across the path of the light rays into focal position.

2. In a device of the character described, a holder for view plates adapted to be turned pivotally upon its pivot in a direction longitudinally of the path of the light rays into focal position transversely of said path, a second holder, and means for moving said second holder in timed relation to the turning of the first holder.

3. In a device of the character described, a pivoted view holder, a sliding view holder, and means for moving one holder by the movement of the other.

4. In a device of the character described, a pivoted view holder, a vertically movable view holder, and means for lifting the vertically movable holder adapted to be engaged and operated by the turning of the pivoted holder.

5. In a device of the character described, a pivoted view holder, a sliding view holder, means for turning the pivoted holder, and means actuated by the pivoted holder to move the sliding holder.

[Claims 6 to 14 not printed in the Gazette.]

958,371. TOOTH-BRUSH. DAVID H. DANEK, Chicago, Ill. Filed June 12, 1909. Serial No. 501,771.

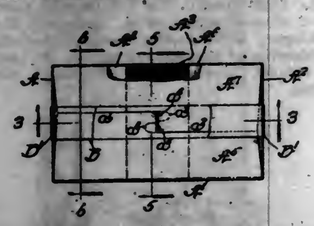


1. In a tooth brush, a handle and laterally extending bristles arranged adjacent one end thereof, said bristles being arranged in tufts and the center of each tuft being formed of relatively stiff and coarse bristles, said centers of the tufts being spaced regular distances apart to readily fit between the teeth, substantially as described.

2. In a tooth brush, a handle and laterally extending bristles arranged adjacent one end thereof, said bristles being arranged in tufts and each tuft being formed with

relatively coarse and stiff bristles extending from side to side thereof forming transverse parallel rows of stiff bristles spaced at regular intervals apart and adapted to enter between the teeth, substantially as described.

958,372. CONTAINER. FRANK B. DAVIDSON, Marseilles, Ill, assignor to Howe and Davidson Company, East Orange, N. J., a Corporation of New Jersey. Filed Aug. 14, 1909. Serial No. 512,824.



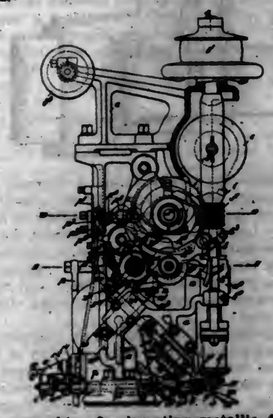
1. A box of sheet material having connected side walls and an end wall, said end wall consisting of two opposite inner flaps folded inwardly into the same plane, and two opposite outer flaps folded inwardly against said inner flaps, said outer flaps being constructed to abut against each other at their edges when folded down on said inner flaps and being provided with parallel and oppositely disposed extensions, and laterally extending and oppositely disposed tongues formed on said extensions and separated from the edges of the flaps by notches each of said tongues being adapted to engage within the notches adjacent the opposite tongue, and to project under the extension of the opposite flap, whereby said flaps are locked in closed position.

2. A box of sheet material having connected side walls and an end wall, said end wall consisting of two opposite inner flaps folded inwardly into the same plane, and two opposite outer flaps provided with parallel and oppositely disposed extensions, and with laterally extending and oppositely disposed tongues formed on said extensions and separated from the edges of the flaps by notches, said outer flaps being adapted to be folded inwardly against the inner flaps without overlapping each other and with their end margins in the same plane with each other, the tongues on each of said extensions being adapted to engage within the notch adjacent to the opposite tongue, and to lock under the extension of the opposite flap.

3. A box of sheet material having connected side walls and an end wall, said end wall consisting of two opposite inner walls folded inwardly into the same plane, and two opposite outer flaps folded inwardly against said inner flaps, said outer flaps being constructed to abut against each other at their edges when folded down on said inner flaps and being provided with parallel and oppositely disposed extensions, laterally extending and oppositely disposed tongues formed on said extensions and separated from the edges of their flaps by notches, each of said tongues being adapted to engage within the notch adjacent the opposite tongue and to lie under and against the opposite outer flap extension, and a strip of flexible, adhesive material overlying and being secured to said outer flaps, and to the adjacent ends of the sides of the box.

958,373. MACHINE FOR ATTACHING SOLES TO BOOTS AND SHOES BY SCREWS. MARK T. DENNE, Rushden, Northampton, England. Filed Aug. 28, 1905. Serial No. 276,154.

1. In a machine for inserting screw fastenings for the soles of boots and shoes, the combination with the continuously rotating hollow spindle, of a tubular wire guide within said spindle having its lower end slotted to form movable jaws or grippers, said jaws or grippers having inclined outer faces, a sleeve surrounding said jaws coned internally to fit the outer faces of said jaws or grippers and provisions whereby said sleeve is given a slight movement longitudinally of the said guide and said rotating hollow spindle, whereby a movement of the sleeve longitudinally of the guide in one direction causes the said jaws to release the wire within the guide and a movement in the opposite direction to grip the same, substantially as described.



2. In a machine for inserting metallic fastenings for the soles of boots and shoes, the combination with a continuously rotating hollow spindle, of a tubular guide within said spindle and movable longitudinally thereof, said guide having its lower end slotted to form spring jaws or grippers, said jaws or grippers having inclined outer faces, a sleeve surrounding said jaws coned internally to fit the outer faces of said jaws or grippers, said sleeve having a slight movement longitudinally of said spindle in respect to said guide, friction means for retarding the movement of said guide longitudinally of said spindle and provision for moving the sleeve and guide longitudinally of the spindle, substantially as described.

3. In a machine for inserting metallic fastenings for the soles of boots and shoes, the combination with the continuously hollow revolving spindle, of a tubular guide within said spindle and movable longitudinally thereof, said guide having its lower end slotted to form spring jaws or grippers, said jaws or grippers having inclined outer faces, a sleeve surrounding said jaws or grippers coned internally to fit the outer faces of said jaws or grippers, means connected with said sleeve for raising and lowering the said sleeve and guide, said means including provision for a little lost motion between the sleeve and guide on starting, and means for retarding the longitudinal movement of the guide within the said spindle, substantially as described.

4. In a machine for inserting metallic fastenings for the soles of boots and shoes, the combination with the screw inserting mechanism including a wire feed and an actuating lever therefor, said lever having an arm extending on the opposite side of its pivot from that of its actuating arm, a stop directly connected with the horn of the machine and engaging the opposed arm of the actuating lever and an auxiliary stop located adjacent to said first stop also normally engaging such arm, a treadle and a direct connection between said treadle and auxiliary stop, substantially as described.

5. In a machine for inserting metallic fastenings for the soles of boots and shoes, the combination with the screw inserting mechanism including a wire feed and an actuating lever therefor, of a stop engaging said lever and connections directly connecting it with the horn of the machine, whereby a movement of the horn imparts a like movement to the stop, an auxiliary stop located adjacent to said first stop normally in engagement with said lever, a treadle and a rod connecting said treadle directly with said auxiliary stop, substantially as described.

958,374. MACHINE FOR BEVELING SHOE-SOLES. WILLIAM DENNISON, New Orleans, La. Filed Oct. 6, 1909. Serial No. 521,349.



1. A machine for beveling shoe-soles, comprising means having a surface against which the sole may be placed, a knife extending at opposite sides of said means and disposed at an angle to the surface thereof, and a suitably-supported guard arranged in front of the knife, at the opposite side of the said means with reference to the said surface thereof.

2. A machine for beveling shoe-soles, comprising a frame having a work-support in which is a slot, means for securing a shoe-sole against the surface of the support, a reciprocatory carrier movable in the frame and parallel to said slot and having a lateral arm disposed below the work-support, and a knife carried by said arm and extending upwardly through the slot and disposed at an angle of inclination to the upper surface of the work-support.

3. A machine for beveling shoe-soles comprising a main frame having a lateral work-support in which is a slot, a reciprocatory carrier movable in the frame and parallel to said slot and having a lateral arm disposed below the work-support, a knife carried by said arm and extending upwardly through the slot and disposed at an angle of inclination to the upper surface of the work-support, a vertically-movable frame guided by the work-support, clamping members carried by the frame and disposed above the work-support and at opposite sides of the slot therein, a spring for yieldingly maintaining said vertically-movable frame in a raised position, means for lowering said frame against the action of the spring, and means for reciprocating the knife-carrier.

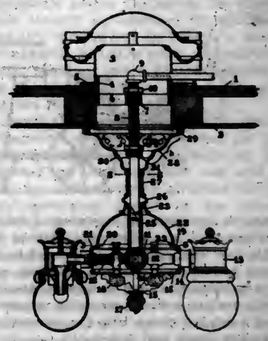
4. A machine for beveling shoe-soles, comprising a main frame on which is a work-support having a slotted throat-plate beveled on its under side at the inner side of the slot, a knife-carrier movable in the frame and having an arm movable below the work-support and in which is a socket inclined correspondingly to the bevel of the throat-plate, and a knife secured in said socket and extending upwardly through the slot and disposed at an angle of inclination to the upper surface of the throat-plate.

5. A machine for beveling shoe-soles, comprising a main frame on which is a work-support having a slotted throat-plate beveled on its under side at the inner side of the slot, and roughened at its upper side, a knife-carrier movable in the frame and having an arm movable below the work-support and in which is a socket inclined correspondingly to the bevel of the throat-plate, a knife secured in said socket and extending upwardly through the slot and disposed at an angle of inclination to the upper surface of the throat-plate, means for reciprocating said carrier, a vertically-movable frame guided in the work-support, clamp members pivoted to said frame and disposed at opposite sides of the slot, springs interposed between the end portions of the clamps and said frame, a spring for yieldingly maintaining the frame in a raised position, means for lowering said frame, and an inclined guard disposed in front of the said slot.

[Claims 6 and 7 not printed in the Gazette.]

958,375. GAS-LIGHTING APPARATUS. ROBERT M. DIXON, East Orange, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Feb. 16, 1906. Serial No. 301,350.

1. In apparatus of the class described, in combination, an upright supply pipe, a plurality of diversely disposed lamp supporting conduits directly leading from said pipe to receive gas therefrom, a casing mounted on said pipe and supporting said conduits at a distance from said pipe and adapted for longitudinal adjustment along said pipe whereby it may be translated to restrict relative movement between said pipe and conduits, and adjusting means for limiting the upward translation of said casing.



2. In apparatus of the class described, in combination, an upright supply pipe, a plurality of diversely disposed connected lamp supporting conduits directly communicating with the lower end of said supply pipe, a ring in engagement with a series of said conduits and adapted to restrict relative movement therebetween, a casing longitudinally adjustable on said pipe and adapted to be brought into end abutment with said ring to restrict upward movement thereof, and a locking means for restraining said casing against relative rotary motion with respect to its supporting pipe and said ring.

3. In apparatus of the class described, in combination, an upright supply pipe, a plurality of diversely disposed connected conduits directly communicating with the lower end of said supply pipe, a casing interfitting with two or more of said conduits whereby they are restrained against relative movement, a second casing mounted on said pipe and adjustable therealong and abutting the first mentioned casing, and a third casing adapted to oppositively abut said first casing whereby relative movement thereof and the conduits interfitting therewith will be restrained, two or more of said casings being interlocked together against rotary movement.

4. In apparatus of the class described, in combination, an upright supply pipe, a plurality of diversely disposed connected lamp supporting conduits, a casing in engagement with a series of said conduits and adapted to restrict relative movement therebetween, a casing longitudinally adjustable upon said pipe and adapted to be brought into abutment with said first mentioned casing to restrict the movement thereof, means for restraining said latter casing against relative rotary motion with respect to its supporting pipe, and a casing adapted to be moved in opposition to said latter casing and adapted to abut the opposite side of said first mentioned casing to restrict the movement thereof.

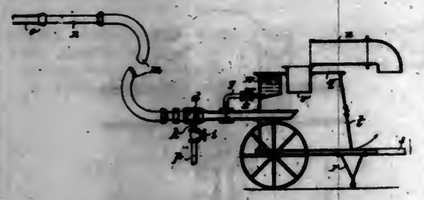
5. In apparatus of the class described, in combination a downwardly extending gas pipe, a plurality of diversely disposed connected lamp supporting conduits adapted to receive gas from said pipe, a casing interfitting with said conduits, said casing comprising a plurality of abutting and interlocking sections, one of said sections being relatively resilient, and a means adjustably arranged for forcing said sections together, whereby said conduits will be restricted against relative movement.

[Claims 6 to 8 not printed in the Gazette.]

958,376. APPARATUS FOR CLEANING FIRE-TUBES OF BOILERS. MARTIN DOMISZEWSKI, Kolomea, Austria-Hungary. Filed Oct. 25, 1909. Serial No. 524,487.

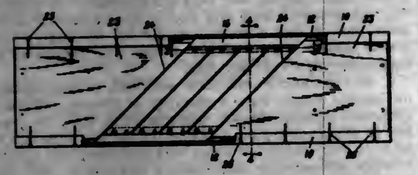
1. An apparatus for cleaning fire-tubes of boilers, comprising a suction nozzle adapted to be connected with a fire tube, a casing surrounding the nozzle, means to intro-

duce a current of steam into the casing, a receptacle communicating with the latter provided with a steam exhaust, and a water supply communicating with the casing between the nozzle and receptacle.



2. An apparatus for cleaning fire-tubes of boilers, comprising a suction-nozzle, a tubular plug adapted to fit said tubes, a flexible hose connecting the plug and nozzle, a receptacle having an exhaust conduit, a casing connecting the nozzle and receptacle, means to regulate the admission of steam to the casing, a water reservoir mounted on the receptacle, and a conduit connecting the reservoir with the casing between the nozzle and receptacle.

958,377. CUTTER. ROBERT L. DORSEY, Indianapolis, Ind., assignor to Tucker & Dorsey Manufacturing Company, Indianapolis, Ind., a Corporation of Indiana. Filed Feb. 25, 1910. Serial No. 545,983.



1. A vegetable slicer comprising a pair of side bars each having a pocket formed in its inner surface, a cutter element comprising a pair of bars adapted to seat each in a pocket of a side bar, one or more knives, connections between said knives and the cutter bars, and bottom boards arranged between the side bars and the ends of the cutter bars and abutting against the ends of said cutter bars.

2. A vegetable slicer comprising a pair of side bars each having a pocket formed in its inner surface, a cutter element comprising a pair of bars adapted to seat each in a pocket of a side bar, one or more knives, adjusting connections between said knives and the cutter bars, and bottom boards arranged between the side bars and the ends of the cutter bars and abutting against the ends of said cutter bars.

3. A cutter element for slicers comprising a pair of bars, a plurality of knives, clamping screws connecting the rear corners of each knife with the two bars, temper screws threaded upwardly through the bars and engaging the knives in front of their clamping screws, a pair of side bars 10 each having a pocket 12 formed in its inner face to receive a cutter bar, and each of said side bars 10 also having a runway 11 formed in its inner face, and bottom boards 23 secured in said runways.

4. A cutter element for slicers comprising a pair of bars, a plurality of knives having a combined width, when arranged on the side bars, slightly less than the length of the bars so that the bars will project beyond the knives, clamping screws connecting the rear corners of each knife with the two bars, temper screws threaded upwardly through the bars and engaging the knives in front of their clamping screws, a pair of side bars 10 each having a pocket 12 formed in its inner face to receive a cutter bar, each of said bars 10 also having a runway 11 formed in its inner face, and bottom boards 23 secured in said runways and abutting at their inner ends against ends of the cutter bars.

5. A cutter element for slicers comprising a pair of bars, a plurality of knives having a combined width, when arranged on the side bars, slightly less than the length of the bars so that the bars will project beyond the knives, clamping screws connecting the rear corners of each knife with the two bars, temper screws threaded upwardly through the bars and engaging the knives in front of their clamping screws, a pair of side bars 10 each having a pocket 12 formed in its inner face to receive a cutter bar, each of said side bars 10 also having a runway 11 formed in its inner face, and bottom boards 23 secured in said runways and abutting at their inner ends against ends of the cutter bars.

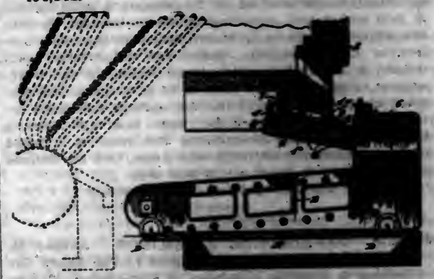
958,378. LAMP-BURNER. FLOYD DOW, Princeton, Ill., assignor of one-half to Noah Delay, Princeton, Ill. Filed July 28, 1909. Serial No. 510,026.



1. In a flat-wick burner for lamps, the combination with the wick-tube, of a vent-tube located at one side of the wick-tube, and a filling tube located at the opposite side of the wick-tube and provided with a perforated cover, the interior cross-sectional area of the vent-tube approximating the combined area of the perforations in the filling tube cover, whereby a substantially equal feed of the gases from the bowl of the lamp is carried to each side of the burner, for the purpose set forth.

2. In a flat-wick burner for lamps, the combination with the hollow base forming a housing for the wick-lift, a wick-tube extending through said base, perforate diaphragm surrounding the wick-tube above the base, of a filling-tube extending through said diaphragm and base at one side of the wick-tube, an opening-and-closing cover for said filling-tube provided with perforations, and a vent-tube extending through said base at the opposite side of the wick-tube, the interior cross-sectional area of the vent-tube approximating the combined area of the perforations in the filling-tube cover.

958,379. IGNITION-ARCH FOR FURNACES. WILLIAM M. DUNCAN, Alton, Ill. Filed May 6, 1909. Serial No. 494,842.



1. In an ignition arch for furnaces, a support having seats projecting from opposite sides thereof, said seats being spaced apart, a hanger susceptible of being passed upwardly through the space between said seats and then moved laterally to a position of rest upon said seats, and heat radiating sections suspended from said hanger.

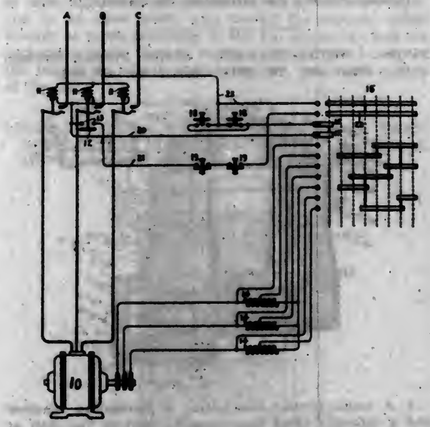
2. In an ignition arch for furnaces, a support having integral therewith and projecting horizontally therefrom at opposite sides, rigid seats spaced apart from each other to provide gaps between them, a hanger susceptible of being passed upwardly through said gaps and then moved laterally to a position of rest upon said seats, and a plurality of heat radiating sections suspended from said hanger.

3. In an ignition arch for furnaces, a support having integral therewith and projecting horizontally therefrom pairs of oppositely disposed seat lugs spaced apart from each other to provide gaps between them, a hanger susceptible of being passed upwardly between said gaps and then moved laterally to rest upon a pair of said seat lugs, the hanger being provided at its sides with flanges, and rows of heat radiating sections having grooves in which the flanges of said hanger are seated.

4. In an ignition arch for furnaces, a support having rigid seat lugs extending horizontally from each of its sides, said lugs being spaced apart to provide gaps between them, a hanger provided with arms each forming a pocket in the upper portion of said hanger, the arms being adapted to be moved upwardly through the gaps between said lugs and to be positioned on the lugs, and heat radiating sections suspended from said hanger.

5. In an ignition arch for furnaces, a pair of supporting beams each having at its side farthest removed from the other beam a plurality of rigid seats extending horizontally from the beam and spaced apart to provide gaps between them, hangers susceptible of being moved upwardly beneath said beams and having portions adapted to rest upon said seats for the suspension of the hangers, and heat radiating sections suspended from said hangers.

958,380. MOTOR-CONTROLLING DEVICE. GEORGE T. EAGAR, Ballston Spa, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 3, 1910. Serial No. 541,790.



1. The combination with an alternating current motor, of electromagnetic switch mechanism for closing the primary circuit thereof, a resistance for the secondary circuit, a controlling device for varying said resistance and controlling said electromagnetic switch mechanism, and a plurality of manually operated switches for closing a circuit to energize the electromagnetic switch mechanism when the controlling device is in the initial position.

2. The combination with an alternating current motor, of electromagnetic switches for closing the primary circuit thereof, a resistance for the secondary circuit, a plurality of manually operated switches for closing a circuit through the electromagnetic switches with the controlling device in the initial position, and a second set of switches for controlling said electromagnetic switches in a succeeding position of the controlling device.

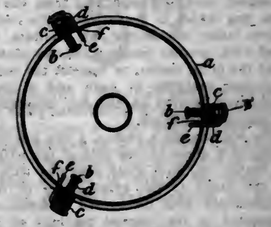
3. The combination with an alternating current motor, of electromagnetic switch mechanism for closing the primary circuit thereof, a resistance for the secondary circuit, a normally open switch for closing a circuit through the electromagnetic switches with the controlling device in the initial position, and a normally closed switch for controlling the electromagnetic switches in a succeeding position of the controlling device.

4. The combination with an alternating current motor, of electromagnetic switches for closing the primary circuit thereof, a resistance for the secondary circuit, a device for controlling said resistance and said switches, a plurality of manually operated switches for opening and closing an energizing circuit of the electromagnetic switches with the controlling device in initial position, and a set of normally closed switches for completing a circuit through the electromagnetic switches with the controlling device in one of its succeeding positions.

5. The combination with an electric motor, of electromagnetic switch mechanism for closing the circuit thereof, a speed controlling device for the motor, a plurality of manually operated switches for controlling said electromagnetic switch mechanism, and connections whereby certain of said switches are operative only in the initial position of the controlling device to open and close the motor circuit while others are operative only in successive positions of the controlling device to open and not close the motor circuit.

[Claims 6 to 10 not printed in the Gazette.]

958,381. MEANS FOR HOLDING GLOBES OR SHADES IN THE GALLERIES OF ELECTRIC-LIGHT, GAS, AND OTHER FITTINGS. SALOMON FALK, London, England. Filed May 22, 1909. Serial No. 497,771.



1. A support for a globe or shade comprising a gallery and a series of spring actuated plungers mounted thereon, said plungers being provided with auxiliary tongues adjacent thereto operating normally through openings in the gallery and adapted to be turned out of alinement with said openings when the plungers are retracted, and to hold said plungers in a retracted position.

2. A support for a globe or shade comprising a gallery and a series of spring actuated plungers mounted thereon, each of said plungers being provided with a head which may be easily grasped by the hand and a tongue extending toward the inner end of said plunger and normally engaging openings in the said gallery whereby the head of the plunger can be grasped to draw the tongue outward through the openings in the gallery and turned to cause the tongues to hold the plunger in a retracted position.

3. A support for a globe or shade comprising a gallery provided with a series of hollow cylindrical projections, a series of plungers mounted in said cylindrical projections, springs for forcing said plungers inwardly, located within said projections, each of said plungers being provided with a head, which can be readily grasped and a tongue extending inwardly and lying normally in openings in said gallery, whereby the plungers can be drawn outwardly and the tongues turned to retain the plungers in an outward position.

958,382. LATHE-DOG. JOHN W. FAWCETT, Lawrenceburg, Ind., assignor of one-half to William B. J. Johnson, Lawrenceburg, Ind. Filed Sept. 22, 1906. Serial No. 335,685.



1. A dog, in combination with a rocker, the dog having journal or pivot bearings, the rocker consisting of the bowed body piece oscillating independently of the dog, and extended partly around the body of the lathe dog, to give clearance to the right and left of the dog and also to permit as large a dog as is necessary to carry the work, and provided with the two driving pins for revolving the work, the ends of the rocker being respectively pivotally connected to the dog at the respective journal or pivot bearings of the latter, substantially as and for the purposes specified.

2. The combination of a rocker, a double dog or driving piece, having terminal journal bearings engaging with the journal pivots of the rocker, the said journal bearings being located outside of the rocker, the rocker having a bowed body to give it clearance for oscillation, the rocker having driving pins, and a face plate adapted to receive said pins, said pivotal connection being located on the dog and outside of the same, substantially as and for the purposes specified.

3. In lathe mechanism, a rocker, a dog provided with arms extending in a plane to one side of the axial center of the lathe center, each arm separated from the adjacent portion of the dog which is nearer the lathe center by a space in which latter the rocker can oscillate, the said arms provided with journal bearings, in the plane of the axial center of the lathe center, to support the rocker, and the curved rocker carrying at each end a journal to engage the adjacent bearing on the dog, substantially as and for the purposes specified.

4. In a lathe mechanism, a rocker, a dog provided with arms extending in a plane to one side of the axial center of the lathe center, the said arms provided with journal bearings, in the plane of the axial center of the lathe center, in combination with the curved detachable rocker, pivotally connected to the journal bearings of the dog, substantially as and for the purposes specified.

5. In a lathe mechanism, a rocker, a dog provided with arms extending in a plane to one side of the vertical plane of the axial center of the lathe center, each arm separated from the adjacent portion of the dog which is nearer the lathe center by a space in which latter the rocker can oscillate, and the curved rocker pivotally connected at its respective ends to the respective arms of the dog, said pivotal connection being located on the dog and outside of the same, substantially as and for the purposes specified.

[Claims 6 to 9 not printed in the Gazette.]

958,383. FIRE-ESCAPE APPARATUS. MORIS FISCHER, New York, N. Y. Filed May 4, 1909. Serial No. 493,838.

1. A fire escape-apparatus comprising a truck-frame, laterally-movable extensions at both sides of the truck-frame formed of bracket-bars, and a spring-cushioned and upholstered main mattress-sections, and extensible mattress sections hinged to the main-section.

2. A fire-escape apparatus comprising a wheeled truck-frame, an extensible platform supported on said truck-frame, extensible, spring-cushioned and upholstered mattress-sections supported on said platform.

3. A fire-escape apparatus comprising a wheeled truck-frame, an extensible platform supported on said truck-frame, means for raising or lowering said platform, and extensible spring-cushioned and upholstered mattress-sections supported on the extensible platform.

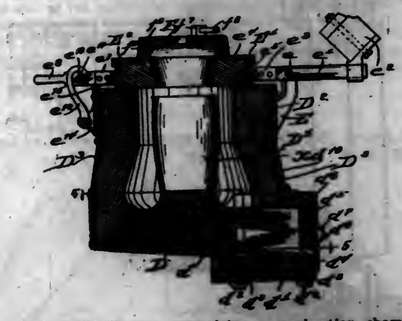


4. A fire-escape apparatus comprising a wheeled truck-frame, a center-platform, means for vertically adjusting the platform, laterally-extensible side-platforms, and an extensible spring-cushioned and upholstered mattress-sections supported on said center and side-platforms.

5. A fire-escape apparatus comprising a wheeled truck-frame, vertical guide-posts supported on the truck-frame, rack-bars guided on said posts, means for raising or lowering said rack-bars, an extensible platform supported on said truck, and an extensible spring-cushioned and upholstered mattress supported on said platform.

[Claims 6 and 7 not printed in the Gazette.]

958,384. METAL-FURNACE. ALFRED FISHER, Chicago, Ill. Filed July 20, 1908. Serial No. 444,566.



1. A metal furnace comprising a combustion chamber and a laterally offset slag chamber built in the wall of the furnace and partly overlapping the combustion chamber and opening from the bottom thereof.

2. A metal furnace comprising a combustion chamber, a laterally offset slag chamber partly overlapping the combustion chamber and opening from the bottom thereof, a removable bottom door for the slag chamber and a removable side door for said slag chamber.

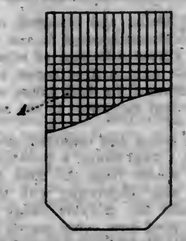
3. A metal furnace embracing a combustion chamber, a lower chamber communicating therewith adapted to receive therein the metal from a broken crucible, a bottom discharge door for said lower chamber, and a side discharging door for the lower chamber having an aperture therethrough.

4. A metal furnace provided with a combustion chamber, a crucible support projecting above the bottom of the chamber, burners opening into the chamber, means for directing a blast into the burner or for cutting off the blast from the burner and a slag chamber built in the wall of the furnace below and overlapping the combustion chamber providing a large opening and direct communication between the chambers.

5. In a device of the class described a battery of melting furnaces, each provided with a combustion chamber, a crucible support in each, a burner opening approximately tangentially into each combustion chamber, means supplying fuel from a single source to all of the burners, means supplying a blast to all of the burners from a single source and a valve opening into the burner for simultaneously cutting off the blast from the burner and delivering the blast outside of the burner thereby maintaining uniform pressure in the other burners.

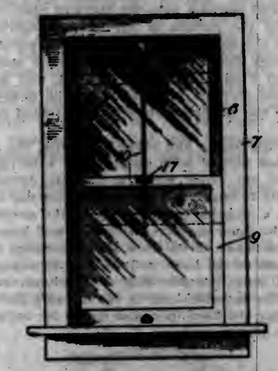
[Claims 6 to 16 not printed in the Gazette.]

958,385. BAG. WILLIAM P. FITZGERALD, Easton, Pa. Filed Aug. 25, 1908. Serial No. 450,237.



A bag composed of an inner material of paper or cloth strengthened by vertical and horizontal cords, threads or tapes applied to the outside surface of the inner material in an open mesh, and having the vertical cords, threads or tapes extending to the top of the bag and the horizontal cords, threads or tapes omitted at the top of the bag so as not to extend through the tying portion of the bag.

958,386. LOCKING DEVICE FOR WINDOWS, TRANSOMS, OR THE LIKE. ELLSWORTH E. FLORA, Chicago, Ill. Filed Oct. 1, 1909. Serial No. 520,478.



1. A clamping device comprising a recessed head containing an opening for a rod, and a rotatable member journaled in the recess in said head and containing an eccentric rod-receiving opening, for the purpose set forth.

2. A clamping device comprising a recessed head containing a laterally opening vertical rod-receiving slot in its wall, and a rotatable member journaled in the recess in said head and containing a laterally opening eccentric rod-receiving slot, for the purpose set forth.

3. A clamping device comprising a recessed head containing an opening for a rod, and a horizontally-disposed slot in its wall, a rotatable member journaled in the recess in said head and containing an eccentric rod-receiving opening, and a finger-grip secured to said member and extending through said slot, for the purpose set forth.

4. A clamping device comprising a recessed head containing in its wall a vertical and a horizontal slot, a rotatable member journaled in the recess in said head and containing a radial eccentrically disposed slot adapted, when said member is in one position, to register with the vertical slot in said head, and a finger-grip connected with said member and extending through said horizontal slot, for the purpose set forth.

958,387. CLOWN-DOLL. OLICE A. FLYNN, Tacoma, Wash. Filed Jan. 25, 1910. Serial No. 540,012.



1. A doll having a body and arm and leg members, said members being constructed to engage and interlock.

2. A doll having a body, arms flexibly united thereto and having enlarged hand members, legs flexibly attached to said body and having feet formed with upturned, hook-shaped toes adapted to receive the arms whereby the body of the doll may be supported in upright sitting posture.

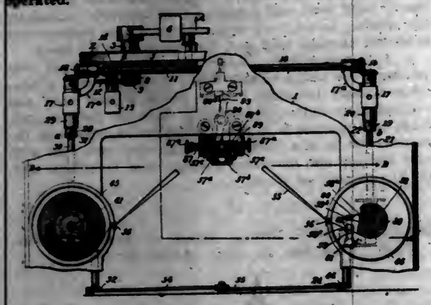
3. A doll comprising a flexible body, a flexible head attached to the top of the body, flexible arms loosely connected to the upper side portions of the body and having their extremities formed with enlarged hand members, flexible legs attached to the lower side portions of the body and formed with large feet members having upwardly and inwardly turned toe portions, the latter being adapted to receive the arms for the purpose specified.

4. A doll having a body composed of a substantially rectangular casing having its lower corners folded transversely to provide tabs and the portions at the opposite sides of the open top of the bag folded inwardly, flexible leg members secured to the tabs at the bottom of the body casing, flexible arm members having their upper ends secured to the opposite sides of the body casing beneath said end folds, and a head secured over the open top of the body casing.

958,388. RIBBON MECHANISM FOR TYPE-WRITING MACHINES. CARL GABRIELSON, Syracuse, N. Y., assignor to L. C. Smith & Bros. Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Aug. 20, 1904. Serial No. 221,522.

1. In a typewriting machine, the combination of a ribbon carrier arranged to normally hold the ribbon away from the printing line, mechanism operatively related to

the key levers for vibrating the carrier to move the ribbon over the printing line each time a key is depressed, means for adjusting said mechanism to vary the extent of movement of the carrier, and means for rendering said mechanism inoperative to move the carrier when the keys are operated.



2. In a typewriting machine, the combination of a ribbon carrier arranged to normally hold the ribbon away from the printing line, and means for vibrating the carrier to move the ribbon to the printing line, comprising a lever having one end connected to the carrier, means operatively related to the key-levers for vibrating said lever, means for adjusting the fulcrum point of said lever to vary the movement of the carrier, and means for rendering said lever inoperative to move the carrier when the key levers are operated.

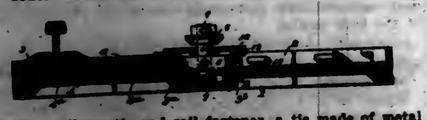
3. In a typewriting machine, the combination of a ribbon carrier arranged to normally hold the ribbon away from the printing line, and means for vibrating the carrier to move the ribbon to the printing line, comprising a lever having one end pivotally connected to the carrier, means operatively related to the key levers for vibrating said lever, and a fulcrum movable into and out of engagement with said lever.

4. In a typewriting machine, the combination of a ribbon carrier arranged to normally hold the ribbon away from the printing line, and means for vibrating the carrier to move the ribbon to and from the printing line, comprising a lever having one end pivotally connected to the carrier, means operatively related to the key levers for vibrating said lever, and two fulcrums adapted to engage the lever at different points in its length, alternately.

5. In a typewriting machine, the combination of a ribbon carrier arranged to normally hold the ribbon away from the printing line, and means for vibrating the carrier to move the ribbon to and from the printing line, comprising a lever having one end pivotally connected to the key levers for vibrating said lever, means operatively related to the key levers for vibrating said lever, and a slide adjacent to said lever and having fulcrum pins secured thereto at opposite sides of the lever, said pins being adapted to alternately engage different points of the lever.

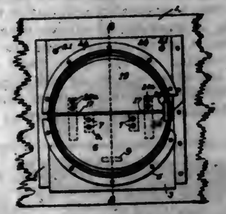
[Claims 6 to 32 not printed in the Gazette.]

958,389. RAILWAY-TIE AND RAIL-FASTENER. HENRY M. GAUL, Jr., Sinking Spring, Pa. Filed Feb. 24, 1910. Serial No. 545,600.



In a railway tie and rail fastener, a tie made of metal and formed with a central longitudinal opening of irregular width in its top; removable outside rail clamps; slidable inside rail clamps adapted to move in said opening; operating means for moving said sliding clamps consisting of a double cam adapted to contact with the inner ends of the clamps, said cam being secured to a shaft and said shaft having means for raising and lowering the cam, and means for locking said cam when the sliding clamps are in engagement with the rails.

958,390. HOOP SIZING AND CLAMPING DEVICE. LEWIS GIBBS, Canton, Ohio, assignor to The Gibbs Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Jan. 2, 1907. Serial No. 350,427.



1. In a hoop sizing and clamping device, a movable plate, a movable flange secured to and movable with the movable plate, a fixed form located adjacent the movable flange, a movable form, a fixed flange, said movable form being located adjacent the fixed flange, and means for imparting longitudinal movement to the movable flange and the movable form.

2. In a hoop sizing and clamping device, the combination with a bed, a fixed flange, a movable flange having its ends normally spaced from the fixed flange, a movable form inside of and coöperating with the fixed flange, a fixed form inside the movable flange and coöperating therewith, said fixed form being spaced from the movable form, each of said forms being recessed at one end.

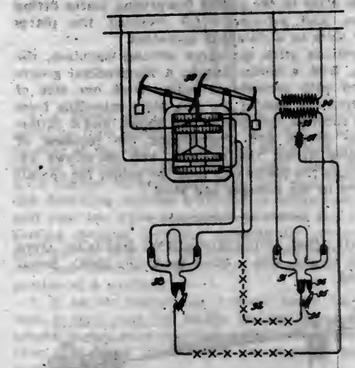
3. In a hoop sizing and clamping device, the combination of a movable and a fixed form, a movable flange, adjacent to and coöperating with the fixed form, a fixed flange adjacent to and coöperating with the movable form, means for connecting the movable form and the movable flange, and means for simultaneously reciprocating the movable form and the flange.

4. In a hoop sizing and clamping device, the combination of a bed plate, a fixed plate, a fixed flange on the fixed plate to engage the outside of a portion of a hoop being sized, a fixed form to engage a portion of the opposite inner side of said hoop, a movable plate, a flange carried by and movable with the movable plate to engage a portion of the outside of the hoop, a movable form mounted on the movable plate to engage a portion of the opposite inner side of the hoop, the inner ends of the movable and fixed forms being recessed, and means for operating the movable plate to move the flange carried thereby and the movable form toward the fixed flange and fixed form.

5. In a hoop sizing and clamping device, the combination of a bed formed with guide ways, a movable plate operating in the guide ways, a movable flange on the movable plate to engage a portion of the outside of a hoop being sized, a movable form carried by the movable plate to engage the inner opposite portion of said hoop, a fixed plate, a fixed flange on the fixed plate to engage a portion of the outside of the hoop, a fixed form to engage a portion of the inner opposite side of the hoop, means for connecting the movable form to the movable plate, means for supporting the fixed form and means for reciprocating the movable plate.

958,391. VAPOR-RECTIFIER SYSTEM. CHARLES M. GREEN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 11, 1905. Serial No. 273,806.

1. The combination of a transformer having a plurality of separate secondary coils and primaries coöperating therewith, and having a rectifier connected to one terminal of each of said secondary coils, a consumption circuit supplied with current from said rectifier, means for connecting said consumption circuit to one terminal of each of said coils, said means including a second rectifier, and means for maintaining a substantially constant current in said consumption circuit, said maintaining means including said primaries.



2. The combination of an alternating current source, a mercury rectifier receiving current waves of both polarities from said source, a consumption circuit connected to said rectifier, and separate means for independently regulating the current waves of the two polarities from said source to maintain substantially constant current in said consumption circuit.

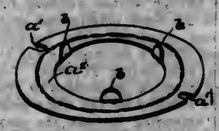
3. The combination of a mercury rectifier, a series consumption circuit connected to said rectifier and a transformer for supplying energy to said consumption circuit, said transformer having windings of relatively high reactance which carry uni-directional current, and a plurality of movable coils for automatically maintaining rality of movable coils for automatically maintaining substantially constant current in said consumption circuit.

4. The combination of a mercury rectifier, a series consumption circuit connected to said rectifier, a source of current for said rectifier and a transformer operatively connected to said consumption circuit and having windings traversed by uni-directional current, said windings being separated sufficiently to offer material reactance to said uni-directional current, said transformer having a plurality of coils automatically movable to maintain substantially constant current in said consumption circuit.

5. A constant current transformer having a plurality of secondary coils separated by an air gap, means for automatically varying the voltage of each of said coils, an asymmetric vapor path for current from each of said coils, a consumption circuit, and means for connecting said consumption circuit to one terminal of each of said coils.

[Claims 6 to 10 not printed in the Gazette.]

958,392. HOLDER FOR ROTARY RINGS. BICKNELL HALL, Taunton, Mass., assignor to Rotary Ring Spinning Company, Boston, Mass., a Corporation of Delaware. Filed July 22, 1909. Serial No. 508,919.

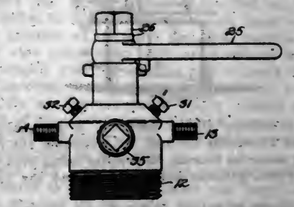


1. A holder for a rotary spinning ring, consisting of a stationary base having a flat ring-supporting annulus, and a plurality of tongues projecting upwardly and outwardly from the inner edge of said annulus.

2. A holder for a rotary ring, the same being made of sheet metal having a base with an inner flat continuous ring-supporting annulus, and a plurality of lips or tongues bent upwardly and outwardly from the inner edge of said annulus so as to extend into the interior of the ring.

3. A holder for a rotary spinning ring, comprising a flat circular base, having an inner continuous ring-supporting annulus raised above the plane of the outer portion of the base, and lips or tongues formed on said annulus and projecting upwardly and outwardly so as to extend into the interior of a rotary ring.

958,393. ENGINEER'S VALVE FOR PNEUMATIC SANDERS. JOHN H. HANLON, Somerville, Mass. Filed Feb. 25, 1910. Serial No. 545,912.



1. In a valve of the character described, the combination with an outlet pipe of a valve body having a cleanout port therethrough and a valve member having a port therethrough supplying air to the outlet pipe, said port being in line with the cleanout port when the two are in registration.

2. In a valve of the character described, the combination with a valve body having a port therethrough communicating with the air outlet pipe and a cleanout port intercepting said first mentioned port, of a valve member having a port therethrough in line with said cleanout port when the two are in registration.

3. In a valve of the character described, the combination with a valve body having a port therethrough communicating with an air outlet pipe and a cleanout port intercepting said first mentioned port of a valve member having a port therethrough in line with said cleanout port when the two ports are in registration with each other and a screw plug closing the said cleanout port.

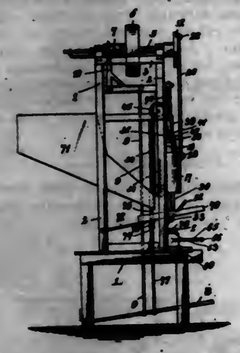
4. In a valve of the character described, the combination with a valve body having a port therethrough communicating with the air outlet pipe and a cleanout port intercepting said first mentioned port, of a valve member having a port therethrough in line with said cleanout port when the two are in registration and a handle located on the said movable valve member in such position that when the said ports are in registration the air escaping from the cleanout port will be directed against the handle.

958,394. APPARATUS FOR FILLING DRY BATTERIES. JOHN L. HELLER, Ravenna, Ohio, assignor to Manhattan Electrical Supply Company, a Corporation of New Jersey. Filed Aug. 5, 1908. Serial No. 447,058.

1. In a battery filling machine, the combination with a fixed battery support, vertically reciprocating tamping bars, rotating operating means therefor, and a connection between the latter and the tamping bars which permits the downward movement of the tamping bars to be arrested at intermediate points while the rotating movement of the operating means is continued, and mechanism for imparting an intermittent rotary movement to the tamping bars.

2. In a battery filling machine, the combination of a fixed battery support, reciprocating tamping bars, operating means therefor comprising a rotating member and a connecting bar, and a slotted connection between the rotating member and the connecting bar.

3. In a battery filling machine, a removable collar adapted to fit within the battery cup to determine the height of the filling material therein and means carried by the collar for supporting said collar in position.

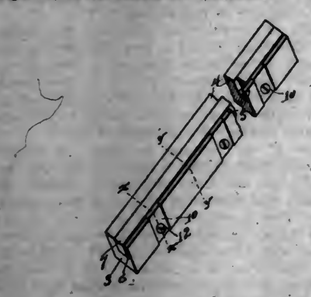


4. In a battery filling machine, a removable collar adapted to fit within the cup, to determine the height of the filling material therein, said collar being provided with a flange which projects outwardly beyond the top of the cup.

5. In a battery filling machine, the combination of a reciprocating plunger carrying tamping fingers, a shaft extending through the plunger and provided with carbon engaging devices at its lower end and means for raising and lowering said shaft independently of the plunger.

[Claim 6 not printed in the Gazette.]

958,395. CUTTING-STICK FOR PAPER-CUTTING MACHINES. BRUCE M. HELM, Hagerstown, Md. Filed Sept. 25, 1909. Serial No. 519,584.



1. A cutting stick for paper cutting machines, comprising a holder having side flanges forming a groove, a strip or bar fitting the groove, one of such flanges having slots, clamping plates fitting the slots, and means for operating the plates for clamping the strip against the other flange.

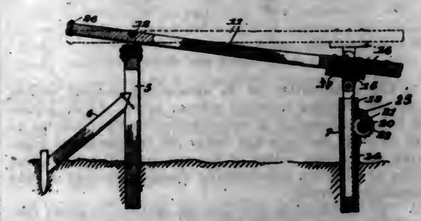
2. In a cutting stick for paper cutting machines, the combination, with a grooved holder having side slots and recesses, and a cutter-strip loosely fitting the slot, of clamping plates operated in the recesses and through the slots to clamp the strip, and suitable set-screws for operating the plates against the strip in advance of their being secured in the recesses.

3. In a cutting stick for paper cutting machines, the combination, with a holder having flanges forming a groove, one of said flanges having slots extending from recesses in the side of the holder, and a cutter strip fitting the groove with a clearance between it and the flanges, of clamping plates operated in the recesses and through the slots for clamping the strip against the other of said flanges, and means for holding the plates in position.

4. In a cutting stick for paper cutting machines, the combination, with a holder having a longitudinal groove and recesses in one side thereof below the groove, and slots extending from the recesses through one side of the groove, and a cutter-strip for the groove, of means for clamping the strip in the groove comprising plates fitting the recesses, and set-screws for working the plates through the slots in a clamping operation.

5. In a cutting stick for paper cutting machines, the combination, with a holder having a longitudinal groove and provided with recesses extending from one side of the holder into the base of the slot, slots extending from the recesses through this side of the holder, and a cutter-strip in the groove and overhanging the recesses, of clamping-plates fitting the recesses, and set-screws extending through the plates and into the holder for operating the plates in the recesses and slots.

958,396. LOADING AND UNLOADING DEVICE. OTTO R. HENKE, Grant, Wyo. Filed Sept. 28, 1909. Serial No. 519,939.



1. A loading and unloading device including front and rear sets of standards, longitudinally disposed supporting bars pivotally connected with the rear set of standards, guides secured to the forward portions of the supporting bars and provided with inwardly extending flanges, rack bars mounted for vertical movement on the front standards and provided with heads slidably mounted between the flanges of the adjacent guides, and pinions mounted for rotation on said front standards and adapted to engage the rack bars for raising and lowering the adjacent ends of the supporting bars.

2. A loading and unloading device including front and rear sets of standards, the front set of standards being provided with vertical recesses opening through the adjacent faces of said standards, longitudinally disposed supporting bars pivotally connected with the rear set of standards, rack bars slidably mounted in the recesses of the front standards and having a slidable connection with the adjacent ends of the supporting bars, strap irons secured to the front standards on opposite side of the recesses therein and provided with bearings, pinions provided with sleeves engaging said bearings, and a shaft extending through the sleeves and provided with an operating handle for rotating the pinions to effect the raising and lowering of the supporting bars.

3. A loading and unloading device including spaced rear standards, clips secured to the upper ends of the rear standards and provided with upstanding ears, longitudinally disposed supporting bars pivotally mounted between the ears and provided with terminal stops, spaced front standards having vertical recesses formed therein, guides secured to the lower longitudinal edges of the supporting bars and provided with inwardly extending flanges, rack bars slidably mounted in the recesses of the front standards and having terminal T-shaped heads slidably mounted between the flanges of the guides, pinions mounted for rotation on the front standards, and a removable shaft extending through the pinions and provided with a crank for rotating the pinions to raise and lower the rack bars.

958,397. BUCKLE. WALTER A. HOLDEN, Ansonia, Conn., assignor to The Robert N. Bassett Company, Shelton, Conn., a Corporation of Connecticut. Filed Sept. 18, 1909. Serial No. 518,317.



1. A buckle comprising a back bent up out of sheet metal to form front and rear bars spaced apart for the passage of the end of a webbing and embraced between a pair of upwardly projecting side ears, and a web holding lever carried between said ears, the said lever having a web deflecting member arranged to swing over the top of said rear bar when the buckle is closed and the said deflecting member carrying downwardly projecting spurs arranged to come to rest between said bars and to snap over and coact with said front bar to hold the running portion of a webbing.

2. A buckle comprising a sheet metal back provided with a rigid rear bar and a yielding front bar, a lever hinged to said back provided with teeth arranged to snap over said front bar to hold the running portion of a webbing.

3. A buckle comprising a back bent up out of a single piece of sheet metal to form a continuous rear bar and a divided front bar connected by a pair of upward projecting side ears, and a lever having a web deflecting roll arranged to swing over the top of said bars, the said roll being of a length substantially equal to that of said bars and being provided with spaced web holding points on its underside arranged to snap over the front bar to hold the running portion of a webbing.

958,398. TOBACCO-SMOKING PIPE. WILLIAM E. HOOKER, Buffalo, N. Y. Filed Oct. 18, 1909. Serial No. 522,496.

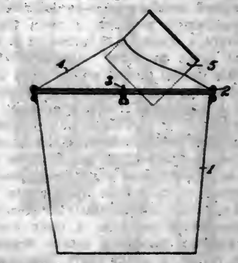


In a tobacco smoking pipe, a moisture or nicotin receptacle, situated or located between the pipe bowl and pipe stem or mouth piece, in a vertical position and parallel with the pipe bowl, having an opening at the top of said moisture or nicotin receptacle or chamber, with two smoke channels entering said receptacle or chamber at the top and a drainage channel entering said receptacle or chamber at the bottom, as substantially set forth herein and for the purposes specified.

958,399. MILKING-RECEPTACLE. IRVING N. HORNE, Portland, Me., assignor, by mesne assignments, to Sterilac Company, Boston, Mass., a Corporation. Filed Oct. 16, 1909. Serial No. 522,925.

1. In a device of the class described, an open milk receiver having one side disposed to partly vertically overhang the opening and an imperforate shelf across the receiver and blocking the vertically exposed portion of said opening.

2. A cover for a milk retainer having an inclined milk receiving opening and having its upper side vertically overhanging its mouth and an imperforate shelf across said opening covering that portion of the mouth vertically uncovered by said overhang.



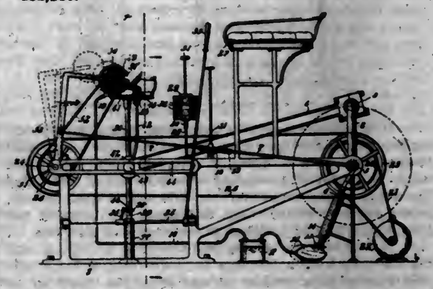
3. A milk pail having its cover provided with a milk receiver which is open at its upper and lower ends and carries a strainer at its lower end, said receiver having its upper side constructed with an overhang which extends outwardly over the strainer and protects the same, and said receiver having below said overhang and above said strainer an internal guard which extends from the lower side of the receiver inwardly and is separated from the upper side of the receiver by a passageway for the milk, substantially as set forth.

4. A milk pail having its cover provided with a milk receiver which is open at its upper and lower ends and carries a strainer at its lower end, said receiver being arranged obliquely in said cover and overhanging outwardly, and being provided with an internal guard which extends from the lower side of the receiver inwardly and is separated from the overhanging upper side of the receiver by a passageway for the milk, substantially as set forth.

5. A device of the class described comprising a closed receptacle, a tubular milk receiver angularly disposed therein and adapted to support a filter on its inner end, said filter end being substantially within the overhanging side of the outer end and a segmental dirt guard across the receiver and substantially blocking the exposed portion of said opening.

[Claims 6 to 9 not printed in the Gazette.]

958,400. SHOE-POLISHING MACHINE. DANIEL L. HUDSON, Chicago, Ill. Filed Mar. 8, 1909. Serial No. 482,140.



1. In a shoe-polishing machine, a main frame, a crank-shaft journaled therein, a frame being provided with guide-ways, a cross-head adapted to travel in said guide-ways, a connecting rod connecting said crank-shaft and said cross-head, an upwardly extending arm integral with said cross-head, a brush fixedly attached to said arm, and a brush pivotally attached to said arm, substantially as described.

2. In a shoe-polishing machine, in combination with a main frame and a rocking frame pivoted thereto, a rotary brush mounted on said rocking frame, means for rocking

said frame, a crank-shaft journaled in said main frame, a cross-head, a connecting rod between said crank-shaft and said cross-head, and a brush-carrying arm integral with said cross-head, substantially as described.

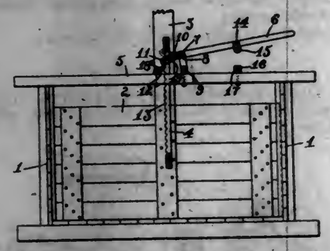
3. In a shoe-polishing machine, a main frame and a seat secured thereto, a crank-shaft journaled in said frame, said crank-shaft being provided with a driving and a driven pulley, said driven pulley being belted to a motor, said driving pulley being belted to a pulley secured to a shaft journaled in said main frame, a sprocket secured to said last-named shaft, a rocking frame pivoted on said last-named shaft and connected with the crank of said crank-shaft, a rotary brush-shaft journaled in said rocking frame, and said last-named shaft being provided with a sprocket adapted to be driven by a chain driven by said first-named sprocket, substantially as described.

4. In a shoe-polishing machine, a main frame and a rocking frame pivoted thereto, a rotary brush mounted in said rocking frame, a crank-shaft journaled in said main frame, a crank at one extremity of said crank-shaft, connecting means between said crank and said rocking frame, a second crank in said crank-shaft, a cross-head provided with a brush-carrying arm, and connecting means between said cross-head and said second crank, substantially as described.

5. In a shoe-polishing machine, in combination with a main frame, a horizontally disposed shaft journaled in said frame, an upwardly extending operating arm secured to said shaft, an inwardly extending arm also secured to said shaft, a lateral extension on said last-named arm, a tubular standard integral with said main frame, a vertically disposed foot-rest carrying rod slidably mounted in said standard, a lateral projection on said last-named rod, and said projection adapted to engage and be supported by said extension, substantially as described.

[Claim 6 not printed in the Gazette.]

958,401. DEVICE FOR LOWERING AND HOISTING HEAD-GATES FOR DAMS. NORMAN ISACHSON, Mountain Home, Idaho. Filed June 22, 1909. Serial No. 503,745.



1. In combination with a head-gate, means for operating the gate vertically with a step by step movement, said means comprising a comb, a lever movably fulcrumed, toggle links pivoted to one end of said lever and embracing the comb, means carried by the said toggle links for engaging recesses in the comb, and means for securing the gate in any desired position, substantially as described.

2. In a device for raising and lowering head-gates and the like requiring a leverage to move them, a comb carried by the gate, means for operating the comb up or down, positioned parallel thereto, comprising a lever, movably fulcrumed near one end by toggle links, said links being pivoted at one end to the lever and at the other end pivotally secured to a stationary member, the short end of the lever carrying a second pair of toggle links, said links embracing the comb, and being pivoted at their one end to the lever and having riveted through their other end a pin, said pin engaging recesses on the opposite edge of the comb from the lever, and means for locking the whole against movement, substantially as described.

3. In a device of the class described, a lever movably fulcrumed, toggle links pivotally secured to one end thereof, said links embracing a comb carried by a head-gate or other object, and designed to drop by gravity to secure a fresh engagement with the comb in a hoisting action, and lifted by hand to secure this effect in a lowering action, and means for securing the parts in any desired position, comprising a plate fastened to the other end of the lever and having a hole therein designed to come in alinement with a similar hole provided in an angle plate secured to a stationary member when the lever is brought to its lowermost position, and a padlock to secure these parts when desired.

4. In combination with a head-gate, means for operating the gate vertically with a step by step movement, said means comprising a comb, a pawl for engaging the comb, a lever movably fulcrumed, toggle links pivoted to one end of said lever and embracing the comb, means carried by the said toggle links for engaging recesses in the comb, and means for securing the gate in any desired position, substantially as described.

5. In combination with a head-gate, means for operating the gate vertically with a step by step movement, said means comprising a comb, a lever movably fulcrumed, toggle links pivoted to one end of said lever and embracing the comb, means carried by the said toggle links for engaging recesses in the comb, a spring tending to incline said links with relation to the handle, and means for securing the gate in any desired position, substantially as described.

958,402. CONCRETE-MOLD. CHARLES R. JACKMAN, New London, Iowa. Filed Jan. 15, 1909. Serial No. 472,470.

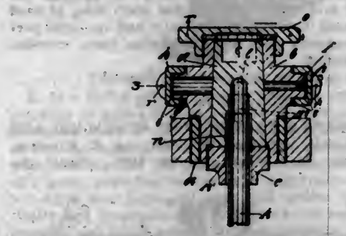


1. A mold including a supporting member comprising a stationary section having movable sections pivotally connected therewith, a covering resting on the supporting member, toggle levers connecting the movable sections of the supporting member, a locking link pivotally connected with one of the movable sections and having a slot formed therein and adapted to receive the pivot pin of the toggle levers, a releasing device pivotally mounted on said pivot pin and arranged when tilted to release the locking link and permit inward movement of the movable sections.

2. A mold including a supporting member comprising a stationary section having movable sections pivotally connected therewith, one of said movable sections being provided with a pin arranged to enter a segmental slot formed in the other movable section, toggle levers pivotally connected with said movable sections and pivotally connected with each other, a locking link mounted on the pivot pin of one of the movable sections and having its opposite end provided with a transverse slot arranged to engage the pivot pin of the toggle levers at the overlapped ends thereof, and a releasing member pivotally mounted on the toggle levers and provided with a laterally extending lip adapted to engage the locking link and disengage the latter from the pivot pin of said toggle levers, thereby to permit the movable sections to be swung inwardly.

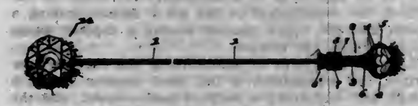
3. A mold including a supporting member comprising a stationary section having movable sections pivotally connected therewith, one of said movable sections being provided with a pin arranged to enter a segmental slot formed in the mating movable section, a covering surrounding the supporting member, a clamping device engaging the covering, toggle levers pivotally connected with the movable sections and pivotally connected with each other, a locking member pivotally mounted on the pin of one of the movable sections and having a transverse slot formed in the opposite end thereof and arranged to receive the pivot pin of the toggle levers at the overlapped ends thereof, a releasing member pivotally mounted on the central pin of the toggle levers and having a laterally extending lip arranged to bear against and disengage the locking link, a pulley secured to the stationary section of the supporting member, and a flexible operating element having one end thereof secured to the releasing member and its opposite end extended over said pulley.

958,403. BARREL FILLING OR TAPPING DEVICE. OTTO JAHN, Untermhaus, near Gera-Reuss, Germany. Filed Aug. 7, 1909. Serial No. 511,832.



A device of the character described, comprising a valve casing having a liquid duct and a compressed air duct, an inclosed plug, a ring engaging the plug and extending downward beyond the casing, a pipe centered within the plug and adapted to communicate with the liquid duct, and an annular passage formed between said plug and pipe which is adapted to communicate with the air duct.

958,404. HAT-PIN ATTACHMENT. JOHN R. JAMESON, Oak Park, Ill. Filed Feb. 13, 1909. Serial No. 477,564.

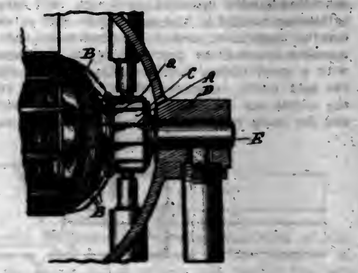


In a device of the class described, the combination with a hat pin, of a tubular sleeve portion expanded and formed into claws at one end, a jewel secured in said claws behind said tubular sleeve and adapted to serve as a stop for a pin therein, an enlarged tubular portion on the sleeve portion, a rubber bushing having a central tapering bore and secured in said enlarged tubular portion, and a flaring end portion adjacent the said enlarged tubular portion, substantially as described.

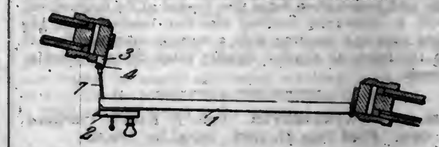
958,405. COMMUTATOR. HARRY T. JOHNSON, New York, N. Y. Filed May 13, 1909. Serial No. 495,658.

1. In a commutator, the combination with the commutator strips, of connectors consisting of conducting metal sheets arranged between adjacent commutator strips and formed with lugs for the attachment of the armature coils, one of said connectors being held in contact with a commutator strip, and an insulating separator between such connector and the adjacent strip.

2. In a commutator, the combination with the commutator strips, of connectors consisting of thin conducting sheets, substantially coincident in outline with the commutator strips, arranged between adjacent strips, lugs carried by the connectors for the attachment of the armature coils, and clamping devices common to all the connectors and commutator strips for holding them in position on the armature shaft with each connector in contact with a commutator strip.



958,406. DOOR-LOCK. JOHN JOHNSON, Crookston, Scotland. Filed July 23, 1909. Serial No. 509,172.



1. The combination with a door and a keeper, of a stem pivotally connected to the keeper and normally held by gravity in a downwardly extended position, a casing upon the door, a keeper engaging bolt slidably mounted within the casing, said casing having an aperture for the reception of the stem when elevated, and coöperating means upon the stem and bolt for holding the casing and stem against relative movement.

2. The combination with a door and a keeper, of a casing upon the door, a bolt within the casing for engaging the keeper to hold the door in closed position, and means movable into the side of the casing and transversely of the bolt for engaging said bolt to lock the door in partly closed position.

3. The combination with a keeper and a door mounted for movement relative to the keeper, of a casing upon the door and a bolt within the casing and movable into engagement with the keeper to hold the door in closed position, a stem movable into the side of the casing and transversely of the bolt, and coöperating means upon the bolt and stem for locking the door in a partly closed position.

4. The combination with a keeper, of a door, a casing upon the door, a bolt slidably mounted upon the casing and movable into engagement with the keeper to hold the door in closed position, a projection carried by the bolt and within the casing, and a stem insertible into the casing and having a notch for the reception of the projection on the bolt to lock the stem and bolt together.

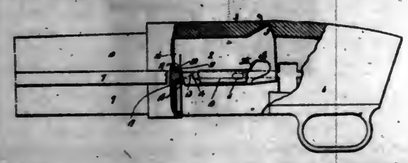
5. The combination with a keeper, of a door, a casing upon the door, a bolt slidably mounted therein, and movable into engagement with the keeper to hold the door in closed position, a projection upon the bolt and within the casing, a stem pivotally connected to and normally hanging downward from the keeper, said stem being movable upwardly into the path of the lock casing and having a notched end insertible into said casing for engagement with the projection on the bolt.

[Claim 6 not printed in the Gazette.]

958,407. REPEATING FIREARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Jan. 15, 1910. Serial No. 538,241.

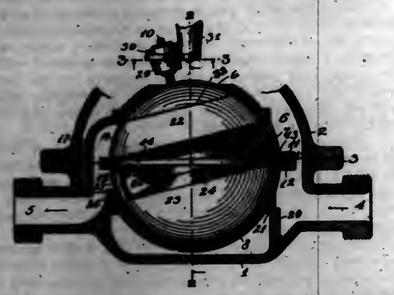
In a repeating firearm, the combination with a gun-frame or receiver having a solid top the under face of

which is formed with a locking-notch, of a gun-barrel, a tubular magazine located below the gun-barrel, a sliding operating-handle mounted upon the said magazine, an action-bar carried by the said handle and extending rearwardly therefrom, and a longitudinally and vertically movable breech-block provided at its rear upper corner with a recoil-taking shoulder adapted to be entered into the said notch, connected directly with the rear end of the action-bar for being moved back and forth thereby and for being raised and lowered at its rear end thereby,



formed at its forward end with a solid, circular tenon-like supporting-nose entering a corresponding circular recess in the said frame and acting as a fulcrum on which the block is swung into its locked and unlocked positions, and the said breech-block being also formed at its forward end with a rearwardly inclined stop-face located below the said nose and coacting with a vertical stop-face formed in the frame at a point directly below the said circular recess.

958,408. WATER-METER. OTTO F. KADOW, Cleveland, Ohio. Filed June 17, 1907. Serial No. 379,329.



1. A meter comprising a spherical piston having at the central portion thereof a recess, a disk in said recess, means for wabbling said piston, and a division plate spanning said recess and extending through said disk, the piston having at the central portion of said recess a spherical bearing fitting in an aperture in said disk, substantially as specified.

2. A meter comprising in combination, a cylinder casing, a spherical piston mounted therein and having a central recess, a central spherical connection in said recess, a diaphragm supported by said casing and located within said recess, and a division plate spanning said recess and extending from said spherical connection to the outer periphery of said recess and extending through a slot in said diaphragm, the edges of said slot being rounded, said casing being provided with an inlet and an outlet port located on opposite sides of said division plate, substantially as specified.

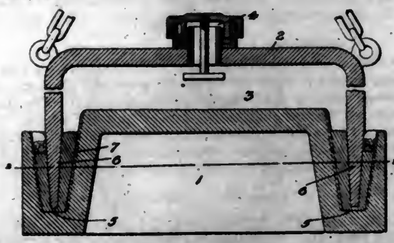
3. A meter comprising in combination, a cylinder casing, a piston mounted therein and having a central recess, a central connecting member in said recess, a diaphragm located within said recess, and a division plate spanning said recess and extending from said member to the outer periphery of said recess and extending through a slot in said diaphragm, the edges of said slot being rounded, said casing being provided with an inlet and an outlet port located on opposite sides of said division plate, substantially as specified.

4. In a meter, the combination of a cylinder casing, a spherical piston therein having a central recess, a fixed diaphragm in said recess and having a central aperture, said piston being provided with a central spherical section fitting the said aperture, the axis of said piston being at an angle with respect to the axis of said casing, the upper and lower walls of said recess being inclined from the outer portion thereof toward the center of the recess, the inclination of said walls providing a rolling contact between the same and the disk, a division plate spanning the recess and extending through a slot in said diaphragm, and said casing having inlet and outlet ports located on opposite sides of said division plate, substantially as specified.

5. In a meter, the combination of a metallic cylinder casing, a spherical piston therein of hard rubber, said piston having a central recess and a spherical bearing at the central portion of said recess, a metallic diaphragm mounted in said recess and having an aperture fitting said spherical bearing, and a division plate spanning said space and extending from said bearing outwardly to the periphery of said recess, said division plate being of hard rubber and said casing having an inlet and an outlet port located on opposite sides of said division plate, substantially as specified.

[Claims 6 to 20 not printed in the Gazette.]

958,409. FUSIBLE PACKING FOR ANNEALING AND OTHER LIKE APPARATUS. WILLIAM R. KINNEAR, New Castle, Pa. Filed Aug. 18, 1909. Serial No. 513,443.



1. In an apparatus of substantially the character described, the combination of the lower member having a trough and the upper member having a tapered flange dipping within the trough.

2. In an apparatus of substantially the character described, the combination of the lower member having a trough and containing a body of fusible metal, and the upper member having a tapered flange within the metal in the trough.

3. In an apparatus of substantially the character described, a base having a surrounding trough adapted to contain fusible metal and having a flange or rib extending into the trough from a wall thereof for the purpose of indenting a body of metal fused in the trough.

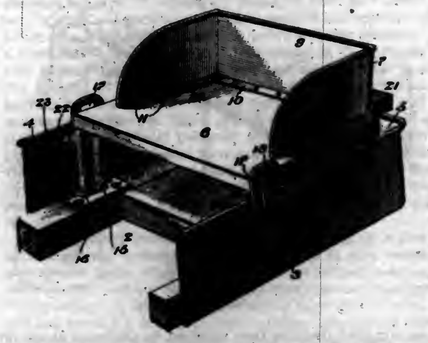
4. In an apparatus of the character described a base having a surrounding trough adapted to contain fusible metal and flanges or projections extending into the trough from a wall thereof at points where the trough changes its direction.

5. In an apparatus of substantially the character described a base constructed with a trough and with dividing ribs or flanges extending into the trough from both walls thereof.

[Claims 6 to 11 not printed in the Gazette.]

958,410. ADJUSTABLE VEHICLE-SEAT. RICHARD G. LEDIG, Philadelphia, Pa., assignor to A. Mecky Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 4, 1909. Serial No. 511,102.

1. In a vehicle, guides on the body thereof, a seat means on said seat engaging said guides, the latter comprising standards having therein slots composed of two vertically-extending parts of differential lengths joining each other at top, the upper part being continued downwardly partly from said top forming a rest for the front of the seat below said top, the rear of said seat being adapted to rest freely on the back of the vehicle body.

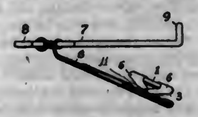


2. In a device of the character stated, a vehicle body, a plurality of guides therein, each having therein vertically-extending slots of differential lengths in communication at top, the upper slot being continued downwardly partly from said top and the other slot extending to the bottom of a guide, providing vertical and longitudinal movement, a vehicle seat connected with said guides to move vertically and longitudinally, and means for supporting the opposite end of the seat in the longitudinally moved position of said seat on the floor or back of the vehicle body.

3. In a device of the character stated, a vehicle body, a seat, standards on said body each having therein a plurality of vertically extending slots of differential lengths joining each other at top, the upper slot being continued downwardly partially from said top, and means on the seat slidably fitted in said slots, standards to direct the seat vertically and longitudinally therein and permit the seat to be elevated and moved rearwardly and sustained on the upper portion of the body of the vehicle, or lowered and moved forwardly and sustained on or approximately on the floor thereof.

4. In a device of the character stated, a vehicle body, a plurality of guides therein, a vehicle seat, and means upon said seat engaging with said guides to direct the seat vertically and longitudinally, said guides having each therein, a plurality of vertically-extending slots of differential lengths, in communication at top, the upper slot extending partially downward from said top.

958,411. GARMENT-CLASP. JOSEPH LEMAY, New York, N. Y. Filed Apr. 26, 1909. Serial No. 492,102.

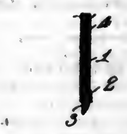


In a garment clasp of the button and loop type, the combination with the loop of a button element comprising a separate rigid perforated head and a separate rigid perforated base, and webbing threaded through said head and passed over the outer edges thereof and then threaded through the perforations in the base and suitably connected to the loop.

958,412. STYLUS FOR SOUND-REPRODUCING MACHINES. SAMUEL LEVIN, Highland Park, Ill. Filed June 15, 1909. Serial No. 502,297.

1. A reproducing stylus for sound reproducing machines of the gramophone or disk type, having its active end formed of a plano-convex jewel with the plane and convex surfaces joined by a rounded edge.

2. A stylus for sound reproducing machines of the gramophone or disk type elongated in the direction of travel of the sound record groove and having the face against which the propelling wall of the sound record groove acts convex.



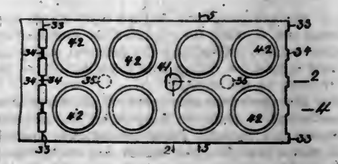
3. A stylus for sound reproducing machines of the gramophone or disk type elongated in the direction of travel of the sound record groove and having the face against which the propelling wall of the sound record groove acts convex and the opposite face plane.

4. A stylus for sound reproducing machines, comprising a metallic stem terminating in a head, and a plano-convex jewel mounted in said head and constituting the active end of the stylus, the convex side of the jewel being adapted to receive the feeding thrust of the sound record groove.

5. A stylus for sound reproducing machines comprising an active end formed of a jewel, a tubular stem having one end formed to receive and retain the jewel point, and a core within the tubular stem for stiffening the same.

[Claim 6 not printed in the Gazette.]

958,413. INTERLOCKING CELLULAR BUILDING-BLOCK. LUIS RIBERBAU Y MARTEAUX, Habana, Cuba. Filed Apr. 29, 1908. Serial No. 429,962.



1. An interlocking cellular block comprising a body portion having cells formed therein from one face thereof, a channel in said face connecting the cells, a conduit leading from the said channel to the opposite face of the block, and bosses extending up from the latter face axially in line with the said cells.

2. An interlocking cellular block comprising a body portion having cells formed therein from one face thereof, a channel in said face connecting the cells, the said block having also a conduit leading from the said channel to the opposite face of the block, bosses extending up from the latter face of the block, axially in line with the said cells, abutting lugs and intermediate lugs extending from the ends of the blocks.

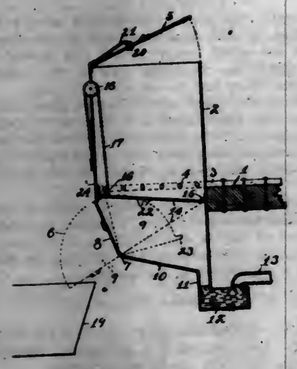
3. An interlocking cellular building block comprising a body portion having cylindrical cells with spherical roofs formed thereon, the said cells being connected at their open ends by a longitudinal channel, the said block having secondary cells formed therein, conical truncated interlocking bosses extending from the face of the block opposite to said cells and axially in line therewith.

4. The combination of cellular blocks, abutting lugs extending from the ends of the blocks, and a binding material in the space between the said lugs, interlocking bosses extending from the upper faces of the blocks and engaging the lower portions of cells in the blocks next above them, a channel in one of the faces of each block connecting the lower ends of the cells, a conduit extending through each block connecting with said channel.

5. The combination of cellular blocks placed in tiers one over the other and breaking joints with each other,

abutting and intermediate lugs at the end faces of the blocks forming a space for a binding agent between the said end faces, a plurality of cells extending up from the lower face of each block, a channel in said lower face connecting the cells, a conduit in each block leading from the channel in said lower face to the channel in the block next above, and locking bosses extending from one of the faces of each block engaging with the cells of the block next thereto.

958,414. SANITARY GARBAGE-TANK. JOSEPH MAST, Fort Riley, Kans. Filed Jan. 6, 1910. Serial No. 536,733.



1. A garbage receptacle having a discharge opening in its lower end, a chute for receiving the material from said opening, a plate for holding the material above said opening, and means for tilting said plate to deliver the material thereon to the chute.

2. A garbage receptacle having a discharge opening in its lower end, a plate for supporting the material above the opening, a movable chute closing said opening when in its raised position, and means for tilting the plate to discharge the material thereon through the opening onto the chute.

3. A garbage receptacle having a discharge opening in its lower end and a liquid discharge below said opening, a perforated plate located above the opening for supporting the solid material, a movable chute closing the opening when in its raised position, and means for tilting the plate to discharge the solid material through the opening onto the chute.

4. In combination with a garbage receptacle having a discharge opening, a movable chute located adjacent the bottom of the receptacle and having a wall to close the discharge opening in the said receptacle, a perforated hinged bottom located above the plane of the chute adapted to be lowered to inclined position to deliver the contents to the chute, and a trapped liquid discharge for the receptacle below the hinged perforated bottom, substantially as described.

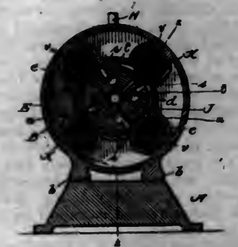
958,415. SIPHON. CARL F. MEADE, Cleveland, Ohio. Filed Mar. 16, 1908. Serial No. 421,325.

As a new article of manufacture, a siphon for decanting cream and the like comprising a body portion and piston, the body portion being made of continuous glass tubing and having when in operative position an upwardly extending leg, a downwardly inclined leg, and a discharge leg communicating with the downwardly inclined leg adjacent to its free end, the piston being adapted to occupy the downwardly inclined leg and having a rod extending out from the end of that leg, said leg continuing beyond the discharge leg to allow the piston to be moved beyond the discharge leg and remain within the inclined leg, and



an air vent into the tube adjacent to the junction of the upward leg and downwardly inclined leg.

958,416. ROTARY STEAM-ENGINE. GEORGE A. METCALF, WALTER C. ROCHELEAU, and LOUIS T. ROCHELEAU, Woonsocket, R. I. Filed Dec. 27, 1909. Serial No. 535,118.



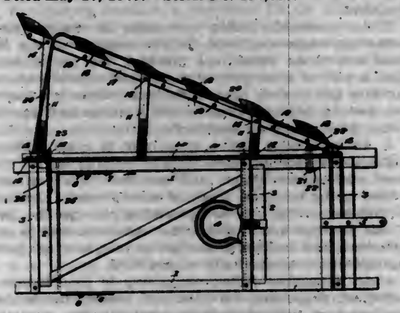
1. The combination in a rotary steam engine, of a cylinder having at one side a lateral central projection in which are formed an annular chamber that communicates with the interior of the cylinder, and a second annular chamber arranged at the opposite side of the first-named chamber, with reference to the cylinder, and in which is also formed a bore; a bushing arranged in the bore of the cylinder projection and having opposite ports in communication with the second-named chamber in said projection; means for leading steam from the first-named chamber; means for supplying live steam through the second-named chamber; rotary abutments mounted in the cylinder and grouped about the center thereof and having opposite recesses and also having stems which extend without the cylinder; spur gears mounted on said stems; a main shaft extending through the cylinder and the lateral projection thereof and having a hollow portion and ports for connecting the interior of said portion with the ports in the bushing, a piston fixed with respect to the said main shaft and arranged in the cylinder and having peripheral blades and passages leading from the hollow portion of the shaft to points behind said blades and also having longitudinal passages which communicate with the first-named chamber, and ports leading from said longitudinal passages to points in front of the blades; and a spur gear fixed on the main shaft and intermeshed with the spur gears on the stems of the rotary abutments.

2. In a rotary steam engine, the combination of a cylinder having at one side a lateral projection containing an inner annular chamber in communication with the interior

of the cylinder and also containing an outer annular chamber and a bore that is open at its outer end; a bushing arranged in the said bore and extending through the said chambers and having its interior connected with the outer chamber; means for exhausting steam from the inner chamber; means for supplying steam to the outer chamber; a main shaft having a hollow portion the interior of which communicates at intervals with the outer chamber; a piston fixed on said shaft and arranged in the cylinder and having peripheral blades and passages leading from the interior of the hollow shaft portion to points behind said blades, and also having longitudinal passages in communication with the inner chamber, and ports leading from said longitudinal passages to points in front of the blades, rotary abutments mounted in the cylinder about the piston and having recesses to receive and permit the passage of the piston blades; and means intermediate the main shaft and the abutments for rotating the latter by the former.

3. In a rotary steam engine, the combination of a suitably supported casing, cylinders arranged in said casing and spaced apart whereby a chamber is formed between them in the casing; said cylinders being placed together "quartering", a main shaft extending through the cylinder and having a hollow portion, pistons arranged in the cylinders and having peripheral blades and passages leading from the interior of the hollow portion of the shaft to points behind the blades and also having longitudinal passages connected by ports with points in front of the blades, chambers communicating with the outer ends of the said longitudinal passages of the pistons and having exhaust ports, chambers surrounding the hollow portion of the shaft, means for supplying steam to the latter chambers, means for effecting connection between the latter chambers and the interior of the hollow shaft during the rotation of the latter, rotary abutments grouped about the pistons in the cylinders, and means intermediate the main shaft and the said abutments for rotating the latter by the former; said means being located in the chamber between the cylinders.

958,417. BRUSH-CUTTING MACHINE. BENJAMIN MILLER and JOHN CLEGG, Wetaskiwin, Alberta, Canada. Filed May 17, 1909. Serial No. 496,663.



1. In a brush cutting machine, the combination with a main frame having a side piece extending longitudinally thereof, a movable cutter frame having a bar hinged to the bar of the main frame aforesaid and adapted to lie flat thereagainst in lengthwise disposition thereof, knives carried by the hinged cutter frame and movable therewith, and means for clamping the bars of the main and cutter frames together.

2. In a brush cutting machine, the combination with a sled frame having a runner extending longitudinally thereof, of a cutter frame having a side runner hinged to one of the runners of the sled frame and adapted to lie flat thereagainst throughout its length, knives carried by the cutter frame, and means for securing the side and sled frame runners together, side by side.

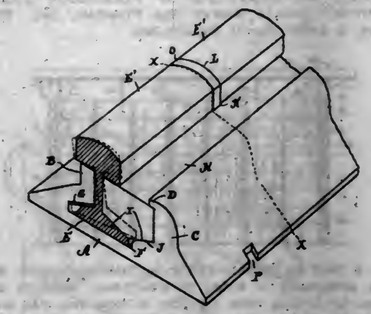
3. In a brush cutting machine, the combination with a main frame, and a cutter carried thereby, of a knife pivoted to the main frame and adapted to take into the ground, and means for securing said knife so that it may be engaged with the ground or held out of contact therewith, as when the machine is taken from one place to another.

4. In a brush cutting machine, the combination with a main frame, of a cutting frame, a cutter carried by the cutting frame, and a guard extending from a point near the ground at its forward end, rearwardly and upwardly for directing the brush to the cutter and for preventing the brush from falling on the main frame.

5. In a brush cutting machine, the combination with a frame, of a swinging cutter frame connected thereto, a cutter carried by the cutter frame, and a guard carried by the cutter frame which is adapted to direct the brush to the cutter and to prevent the brush from falling on the main frame.

[Claims 6 and 7 not printed in the Gazette.]

958,418. RAIL-JOINT. CLYDE J. MILLS, Camden, N. J. Filed Feb. 4, 1910. Serial No. 542,052.



1. In a device of the character described, the combination with the meeting ends of two rails, of a chair, a fish plate formed integral therewith adjacent to one edge, a brace provided with a flange along its upper edge formed integral and adjacent to the opposite edge of the chair, said chair having a seat formed between said brace and fish plate, a stop formed integral with the chair within the seat, a sliding strip provided with a slot, and a key adapted to register with said slot and rest between the meeting ends of the rails, as specified.

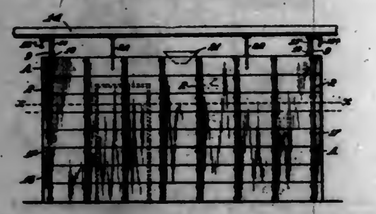
2. In a device of the character described, the combination with the meeting ends of two rails, of a chair, a fish plate formed integral therewith adjacent to one edge, a brace provided with a flange along its upper edge formed integral and adjacent to the opposite edge of the chair, said chair having a seat formed between said brace and fish plate, a stop formed integral with the chair within the seat, a sliding strip provided with a beveled lower face and having a slot central of its length, said strip resting between the web of the rail and the brace, its beveled face resting upon the upper face of the rail base, a portion of the upper face of said strip resting beneath the flange, and a key adapted to register with the slot in the strip, when placed between the meeting ends of the rails.

3. In a device of the character described, the combination with the meeting ends of two rails, of a chair, a fish plate formed integral therewith adjacent to one edge, a brace provided with a flange along its upper edge formed integral and adjacent to the opposite edge of the chair, said chair having a seat formed between said brace and fish plate, a stop formed integral with the chair within the seat, a sliding strip provided with a beveled lower face and having a slot central of its length, said strip resting between the web of the rail and the brace, its beveled face resting upon the upper face of the rail base, a portion of the upper face of said strip resting beneath the flange, and

a key provided with a shank and a bead coinciding with the contour of the rail heads, said key registering with the slot in the strip when placed between the meeting ends of the two rails.

4. In a rail joint, the combination with the meeting ends of two rails, of a chair, a fish plate formed integral with said chair, adjacent to one edge thereof, a brace formed integral with and adjacent to the opposite edge of said chair, said brace having a beveled inner face provided with a flange along its upper edge, the chair having a seat formed between the brace and fish plate of greater width than the bases of the rails and the space between the seat and the fish plate being of greater depth than the thickness of the rail base, a sliding strip having lower beveled faces tipped to rest upon the beveled face of the brace and the upper face of the rail bases, said strip having a slot formed in one side thereof approximately midway of its length, a stop formed integral with the chair within the seat, and a key having a shank and head tipped to register with the slot in the strip when placed between the meeting ends of two rails, the head of said key having the same contour as the heads of the rails.

958,419. MANUFACTURE OF FIREPROOF PARTITIONS. DONALD MOWAT, San Francisco, Cal. Filed Oct. 6, 1909. Serial No. 521,395.



1. A mold for manufacturing partition structures, said mold comprising a series of side panel members and means for locking them together to form two side walls of a mold, said locking means including crosswise extending slats, each formed with a tongue at one end and a slot at the other, the said slot being formed between two spaced members, the inner one of which is off-set beyond the inner side of the slat and is adapted to fit a slot formed in the edge of the panel, bonding wires passed through the opposed panels, and spacing members supported by said bonding wires and having end portions parallel with and bearing against the inner sides of the panels.

2. A mold for manufacturing partition structures, said mold comprising a series of side panel members and means for locking them together to form two side walls of a mold, said locking means including crosswise extending slats each formed with a tongue, the said slot being formed between two spaced members, the inner one of which is of dove-tail form in cross section and is off-set from the inner side of the slat and is adapted to fit a corresponding slot in the edge of the panel, bonding wires passed through the opposed panels, and spacing members supported by the bonding wires.

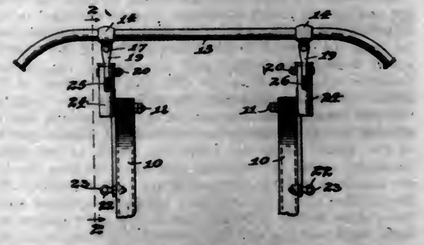
3. A mold for manufacturing partition structure, said mold comprising a series of side panel members and means for locking them together to form two side walls of a mold, said locking means including crosswise extending slats each formed with a tongue at one end and a slot at the other, the said slot being formed between two spaced members, the inner one of which is of dove-tail form in cross-section and is off-set from the inner side of the slat and is adapted to fit a corresponding slot in the edge of the panel, bonding wires passed through the opposed panels, and spacing members supported by the bonding wires, said spacing members having hook-shaped flanges along one edge adapted to hook over the bonding wires, and said slats having off-set cleats on their outer sides to which the wires are secured.

4. A mold for partition structures consisting of a series of panel members adapted to be assembled together to inclose a mold space, each of said panel members having crosswise extending slats, each slat formed with a tongue at one end and a slot at the other, the slotted portion of the slat being formed by a pair of flanges, with one of the flanges bent inwardly and having a vertical portion with dovetailed edges to fit a corresponding dovetailed slot in the edge of the panel, and said slot lying approximately in the plane of said slat.

5. A mold for partition structures comprising side panels and end panels, means for locking the parts together, and clamping means on the end panels adapted to engage the ceiling, said clamping means including horizontally extending arms and adjusting screws passing through said arms and engaging the ceiling at a plurality of points.

[Claim 6 not printed in the Gazette.]

958,420. AUTOMOBILE-BUFFER. ALLAN L. MCGREGOR, Duluth, Minn. Filed Sept. 29, 1909. Serial No. 520,115.



1. An automobile buffer, comprising in combination a buffer-bar, supporting bars therefor secured to the forward end of the vehicle, a pair of arms pivoted at one end to said supporting bars and at their other ends connected to said buffer-bar, slotted guides rigid with said supporting bars laterally engaging and supporting said arms, and cushioning springs backing said arms, substantially as described.

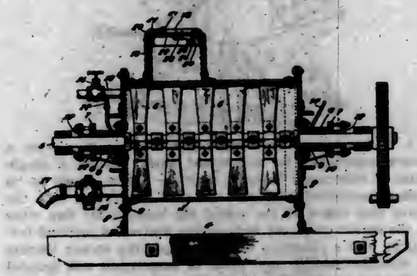
2. An automobile buffer, comprising in combination a buffer-bar, supporting bars therefor secured to the forward end of the vehicle and provided with spring housings, a pair of arms pivoted at one end to said supporting bars and at their other ends connected to said buffer-bar, and cushioning springs in said housings backing said arms, substantially as described.

3. An automobile buffer, comprising in combination a buffer-bar, supporting bars therefor secured to the forward end of the vehicle and provided with vertically slotted spring housings, a pair of arms pivoted at one end to said supporting bars and extending through the slots of said housings and at their other ends connected to said buffer-bar, and cushioning springs in said housings backing said arms, substantially as described.

4. An automobile buffer, comprising in combination a buffer-bar, supporting bars therefor secured to the forward end of the vehicle and provided with vertically slotted spring housings, a pair of vertical arms pivoted at their lower ends to the forward ends of said supporting bars and extending through the slots of said housings and at their other ends connected to said buffer-bar, and cushioning springs in said housings backing said arms, substantially as described.

5. The combination with the side bar and semi-elliptic spring of an automobile pivotally joined at their forward ends, of a buffer mechanism comprising a pair of supporting bars mounted on the pivot-bolts of said side bars and springs and extending both forwardly and rearwardly thereof, each of said supporting bars being formed with a slotted spring housing above the forwardly projecting portion of said bar, links connecting the rearwardly projecting portions of said supporting bars to the side frames, a pair of upright arms pivoted at their lower ends to the forward ends of said supporting bars and extending through the slots of said housings and at their upper ends connected to said buffer-bar, and compression springs in said housings backing said arms, substantially as described.

958,421. GROUT-MIXER. WILLIAM MCILVRID, Jersey City, N. J., assignor to Cockburn Barrow & Machine Company, Jersey City, N. J., a Corporation of New Jersey. Filed Nov. 2, 1905. Serial No. 285,657.



1. In a mixing machine, a receptacle for the materials, a rotary shaft extending therethrough, blades on said shaft, a pipe conducting motive fluid under pressure to said receptacle, a packing box having a chamber surrounding said shaft without said receptacle, and a passage establishing communication between said pipe and said chamber.

2. In a mixing machine, a receptacle for the materials, a rotary shaft extending therethrough, blades on said shaft, a pipe conducting motive fluid under pressure to said receptacle, a sleeve surrounding said shaft without said receptacle, an internal annular recess being formed in said sleeve, and means for establishing communication between said pipe and said recess.

3. In a mixing machine, a receptacle for the materials, a rotary shaft extending therethrough, blades on said shaft, a stuffing box on said shaft without said receptacle and containing soft packing, an internal annular recess being formed in said box intermediate said soft packing and said receptacle, a pipe designed to conduct motive fluid under pressure to said receptacle, and a passage establishing communication between said pipe and said recess.

4. In a grout mixer, the combination with the casing having a rotary shaft extending therethrough, blades on said shaft, means for rotating said shaft, a dome on said casing having a charging opening, and an inwardly swinging door mounted in said dome and controlling said opening, of a pipe entering said casing and adapted to convey a charge of compressed air into said casing to co-act with said blades in effecting the mixing of materials and to hold said door to its seat, and an outlet pipe adapted to convey the mixed material from said casing under the pressure of the air blast.

5. In a grout mixer, the combination with the casing having a rotary shaft extending therethrough, blades on said shaft, means for rotating said shaft, a dome on said casing having a charging opening, an inwardly swinging door mounted in said dome for controlling said opening, and means permitting said door to move tangentially to the curve described in its swinging movement, of a pipe entering said casing and adapted to convey a charge of compressed air into said casing to co-act with said blades in effecting the mixing of materials and to lift said door and hold it elevated against its seat, and an outlet pipe adapted to convey the mixed materials from said casing under the pressure of the air blast.

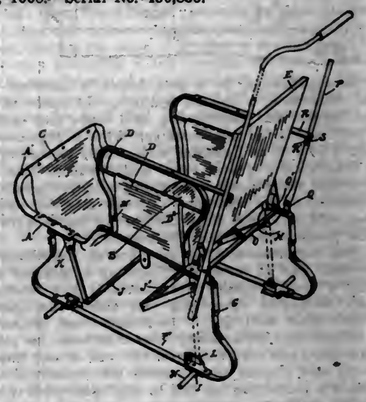
[Claims 6 to 11 not printed in the Gazette.]

958,422. SAFETY-CATCH FOR PINS. SAMUEL J. MCMILLEN, Providence, R. I. Filed Dec. 27, 1909. Serial No. 535,163.



A safety catch, composed of a base and a substantially circular head, the free end of said head extending in a straight plane for a short distance and forming a pin-holding space in conjunction with the head, the extremity of said free end extending in proximity to the head to an extent to preclude the pin tongue passing between said free extremity and the adjacent portion of the head, said free end and the adjacent portion of the head forming a wedge-shaped space whereby the pin tongue is held wedged therein.

958,423. FOLDING PERAMBULATOR. FRANK A. NAUTS, Toledo, Ohio, assignor to Gendron Wheel Company, Toledo, Ohio, a Corporation of Ohio. Filed May 4, 1908. Serial No. 430,856.



1. A foldable perambulator comprising a body frame, a handle pivotally attached thereto and foldable into parallelism therewith, arm rest frames pivoted to said body frame to fold transversely into parallelism therewith, and arms formed of spring metal secured to the top of said arm rest frames and projecting rearwardly therefrom, and means carried by the outer end of said spring metal arms detachably engaging the handle frame.

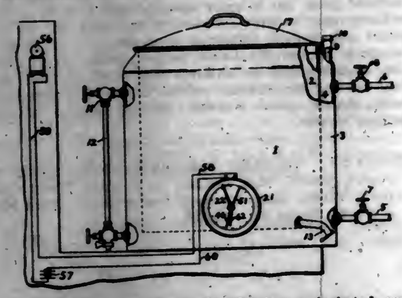
2. A foldable perambulator comprising a body frame, a handle frame pivotally attached thereto and foldable into parallelism therewith, arm rest frames pivotally connected with said body frame and foldable transversely into parallelism therewith, arms formed of spring metal projecting rearwardly from said arm rest frames and having an interlocking engagement with said handle frame.

3. A foldable perambulator comprising a body frame, a handle pivotally attached thereto and foldable into parallelism therewith, arm rest frames pivoted to said body frame to fold transversely into parallelism therewith, a socket carried by said handle, and arms formed of spring metal secured to said arm rest frames, and projecting rearwardly therefrom, and pins carried by the outer end of said spring metal arms detachably engaging said sockets.

4. A foldable perambulator comprising a body frame, wheel supporting frames pivotally connected to said body frame to fold into substantial parallelism therewith, a bail pivotally connected to said body frame and extending transversely thereof, spring keepers on said wheel supporting frame for engaging said transversely extending bail, a handle frame pivotally attached to said body

frame and foldable into parallelism therewith, arm rest frames pivotally connected with said body frame and foldable transversely into parallelism therewith, and resilient arms projecting rearwardly from said arm rest frames and having an interlocking engagement with said handle frame.

958,424. ALARM FOR GLUE-HEATERS. CLEMENS H. NIEMANN, Cincinnati, Ohio. Filed Oct. 1, 1906. Serial No. 336,984.



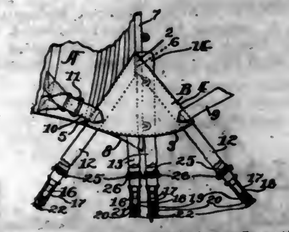
1. In combination, in a glue heater, a jacketed container comprising a thimble spanning the space of the jacket thereof and interrupting said space and opening into the interior of the container, with a thermometer having a bulb in said thimble permanently located in the said interruption of said space and distanced from the wall of said thimble adjacent said opening for permitting the contents of the container to contact said bulb and removing said bulb from direct influence of the temperature in said jacket, substantially as described.

2. The combination of a glue heater comprising an inner shell and an outer shell forming a jacketed tank having a heating-compartment between said shells, a thimble releasably connecting said shells and opening into said inner shell, and a thermometer-bulb secured in said thimble and permanently located between the planes of said shells and distanced from the wall of said thimble adjacent said heating compartment but exposed at said opening for permitting the glue in said inner shell to contact with said bulb.

3. In a glue heater, the combination of an outer shell, an inner shell releasably received thereby and spaced from said outer shell for forming a heating-compartment between said shells, pipes for conveying a heating agency secured to said outer shell, a thimble releasably connecting said shells and provided with a lateral wall having an opening at the inner end thereof opening into said inner shell and having a closing wall at its outer end, the said thimble forming an interruption in said heating-compartment, a thermometer having a bulb located within said thimble and secured in said outer end but distanced from said lateral wall for removing said bulb from direct influence of the heating agency in said heating compartment and permitting contact of the glue in said inner shell with said bulb, but removing said bulb from contact of a stirrer in said inner shell, said bulb being permanently located in the said interruption of said heating-compartment and outside the vertical plane of the interior of said inner shell, substantially as described.

4. In a glue heater, the combination of an outer shell 3, a removable inner glue-container shell 2, said shells having a heating-compartment 4 therebetween, a hollow cap 29 releasably secured to both of said shells and having a lateral wall spanning said heating-compartment and opening into said inner shell, said hollow cap forming an interruption in said heating-compartment, a bulb secured in said hollow cap from its outer end and distanced from said lateral wall for removing it from direct influence of the heating-agency in said heating-compartment and permitting the glue in said inner shell to be received about said bulb, said bulb being within said hollow cap for removing it from danger of contact by a glue stirrer in said inner shell, and permanently located in the said interruption of said heating-compartment, substantially as described.

958,425. HOSE-SUPPORTER. BERTHA ORTELL, St. Paul, Minn. Filed Apr. 26, 1909. Serial No. 492,179.



1. A hose supporter adapted for coöperation with a corset comprising an abdominal shield having a single point of suspension integral with the corset, a pair of tie straps connected with the sides of the corset and the lower side edges of the shield for holding the flap close to the corset when the body of the wearer is inclined forwardly and a plurality of hose supporting straps leading in straight lines to said point of suspension and secured to the lower edge of said shield, said straps having clips upon their lower ends, for the purposes specified.

2. A hose supporter adapted for coöperation with a corset, comprising, an angular abdominal shield having an apex secured to and integral with the corset and by which the shield is suspended, a pair of straps secured to the lower side portions of said shield at downwardly inclined angles from the sides of the corset to hold the lower end of the shield close to the front of the corset when the body of the wearer is inclined forwardly, and a plurality of hose supporting straps secured to the lower edge of said shield and leading in single straight lines to its apex, for the purposes specified.

958,426. SPLICED-SIDE GONDOLA CAR. SPENCER OTIS, Chicago, Ill., assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed Mar. 11, 1907. Serial No. 361,702.



1. A trussed side frame for a railway car comprising planks of a length less than the length of the car, some of said planks extending from a point on one side of the center to a point on the opposite side thereof.

2. A trussed side frame for a railway car comprising planks of a length less than the length of the car, said planks being arranged in sections, each section consisting of planks of substantially equal length and the central section extending from a point on one side of the center to a point on the opposite side thereof.

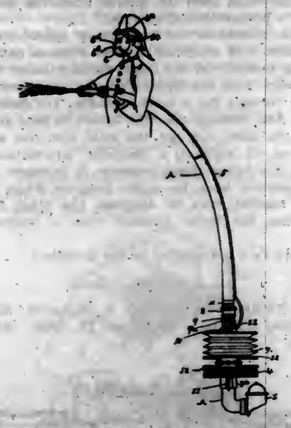
3. A trussed side frame for a railway car comprising planks of a length less than the length of the car, the joints between said planks being located at each side of the center of the car.

4. A car side comprising planks of a length substantially equal to one-third the length of the car, the joints between said planks being located at substantially one-third of the distance from each end of the car to the opposite end.

5. A trussed car side comprising compression and tension members, diagonal members between said compression and tension members, planks between said compression and tension members, said planks being of less length than the car side, said planks extending continuously through the transverse center of the car side and being jointed at points comparatively remote from said center.

[Claim 6 not printed in the Gazette.]

958,427. RESPIRATOR, (SMOKE-PROTECTOR). MARTIN PANIAN, Eveleth, Minn. Filed June 29, 1909, Serial No. 505,108. Renewed Mar. 18, 1910. Serial No. 550,308.

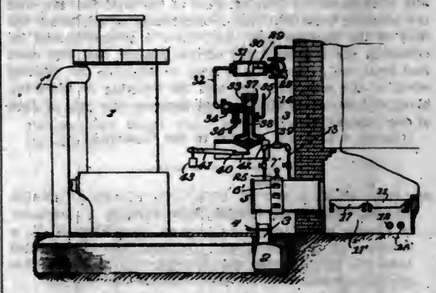


1. The combination with a hose, of a bellows mounted thereon and provided with an inlet port to the free atmosphere, said port being governed by a check valve, a face mask provided with an exhaust port to the free atmosphere, an exhaust conduit extending from said bellows to said mask and adapted to exhaust into said mask, said conduit being governed by a check valve, a water wheel inserted in said hose and adapted to be operated by the stream of water passing through said hose, means connected to said bellows for expanding and collapsing the same, said means being engaged by said water wheel and being adapted to be actuated by the same.

2. The combination with a hose, of two chambers mounted thereon one of said chambers being provided with a port communicating with the free atmosphere, a face mask communicating with the other of said chambers; a bellows mounted on said chambers above the same and adapted to receive air from the first said chamber and to exhaust such air into the second said chamber; a bellows secured to said chambers below the same and adapted to receive air from the first said chamber and to exhaust said air into the second said chamber; and means, including a water wheel inserted in said hose, for collapsing and expanding said bellows alternately with respect to each other.

958,428. METHOD FOR BURNING GASES. HENRY E. PARSON, New York, N. Y., assignor to Parson Manufacturing Company, New York, N. Y., a Corporation of New York. Filed June 30, 1905. Serial No. 267,823.

1. In a method of burning solid fuel in conjunction with gases from a blast furnace, or other source; first, maintaining a solid fuel fire by means of a varying or intermittent blast therethrough; secondly, feeding the gaseous fuel into the furnace and there igniting the same to produce a heating effect which will vary according to the varying character and volume of the constituents of said gases; and thirdly, utilizing the variations in the heating effect of the gaseous fuel to regulate the solid fuel fire blast in such manner that, upon a predetermined drop in the heating value of the gaseous fuel, the solid fuel blast will rise automatically to increase the heating effect of the solid fuel fire; and, upon a predetermined increase in heating value of the gaseous fuel, the solid fuel blast will drop automatically to lower the heating effect of the solid fuel fire.



2. In a method of burning solid fuel in conjunction with gases from a blast furnace, or other source; first, maintaining a solid fuel fire by means of a varying or intermittent blast therethrough; secondly, feeding the gaseous fuel into the furnace together with air and steam and there igniting the same to produce a heating effect which will vary according to the varying character and volume of the constituents of said gases; and thirdly, utilizing the variations in the heating effect of the gaseous fuel to regulate the solid fuel fire blast in such manner that, upon a predetermined drop in the heating value of the gaseous fuel, the solid fuel blast will rise automatically to increase the heating effect of the solid fuel fire; and, upon a predetermined increase in heating value of the gaseous fuel, the solid fuel blast will drop automatically to lower the heating effect of the solid fuel fire.

3. In a method of burning solid fuel in conjunction with gases from a blast furnace, or other source; first, maintaining a fire of solid fuel low in volatile constituents, by means of a varying or intermittent blast therethrough; secondly, feeding the gaseous fuel into the furnace to cause the same to be ignited in the presence of the solid fuel fire, and to produce a heating effect which will vary according to the varying character and volume of the constituents of said gases; and thirdly, utilizing the variations in heating effect of the gaseous fuel to regulate the solid fuel fire blast in such manner that, upon a predetermined drop in the heating value of the gaseous fuel, the solid fuel blast will rise automatically to increase the heating effect of the solid fuel fire; and, upon a predetermined increase in heating value of the gaseous fuel, the solid fuel blast will drop automatically to lower the heating effect of the solid fuel fire.

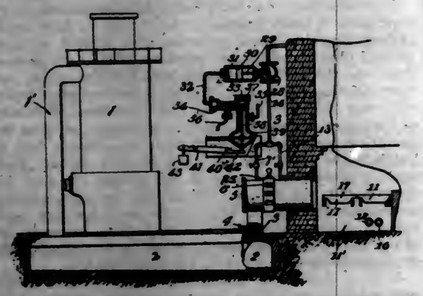
4. In a method of operating a boiler furnace to burn solid fuel in conjunction with gases from a blast furnace, or other source; first, maintaining in the boiler furnace a solid fuel fire by means of a varying or intermittent blast therethrough; secondly, feeding the gaseous fuel into the boiler furnace and there igniting the same; thirdly, utilizing the variations in boiler steam pressure at the boiler furnace to regulate the solid fuel fire blast in such manner that, upon a predetermined drop in the steam pressure, the solid fuel blast will rise automatically to increase the heating effect of the solid fuel fire; and upon a predetermined increase in the steam pressure, the solid fuel blast will drop automatically to lower the heating effect of the solid fuel fire.

5. In a method of burning solid fuel in conjunction with gases from a blast furnace or other source; first, maintaining a solid fuel fire by means of a varying or intermittent blast therethrough; secondly, feeding the gaseous fuel into the furnace by means of a boosting or impelling blast of varying or intermittent force; thirdly, igniting the gaseous fuel in the furnace to produce therein a heating effect which will vary according to the varying character and volume of the constituents of said gases; and fourthly, utilizing the variations in heating effect of the gaseous fuel to regulate the solid fuel fire blast, and

to regulate the boosting or impelling blast, in such manner that, upon a predetermined drop in the heating value of the gaseous fuel, the solid fuel blast will rise automatically to increase the heating effect of the solid fuel fire, and the boosting blast will rise automatically to accelerate the feed of the gaseous fuel; and, upon a predetermined increase in the heating value of the gaseous fuel, the solid fuel blast will automatically drop to diminish the heating effect of the solid fuel fire, and the boosting or impelling blast will automatically drop to decrease the rate of feed of the gaseous fuel.

[Claims 6 to 8 not printed in the Gazette.]

958,429. FURNACE FOR BURNING BLAST-FURNACE GASES. HENRY E. PARSON, New York, N. Y., assignor to Parson Manufacturing Company, New York, N. Y., a Corporation of New York. Original application filed June 30, 1905, Serial No. 267,823. Divided and this application filed Feb. 24, 1906. Serial No. 302,766.



1. In an apparatus for burning gaseous fuel in combination with solid fuel, a fluid heating furnace, a conduit for the gaseous fuel having an inlet into the fluid heating furnace; a support within the furnace for a solid fuel fire, a blower for the solid fuel fire opening into the furnace at a point to direct its blast through the solid fuel fire when the latter is on its support, and means controlled automatically by the fluctuations of pressure of the fluid heated by the furnace to increase the blast through the blower when the pressure falls below a predetermined amount, and to decrease the blast through the blower when the pressure rises above a predetermined amount.

2. In an apparatus for burning gaseous fuel in combination with solid fuel, a fluid heating furnace, a conduit for the gaseous fuel having an outlet into the fluid heating furnace; a blower for forcing the gaseous fuel into the furnace, and means automatically controlled by the fluctuations of pressure of the fluid heated by the furnace to increase the blast through the blower when the pressure falls below a predetermined amount and to decrease the blast when the pressure rises above a predetermined amount.

3. In an apparatus for burning gaseous fuel in combination with solid fuel, a fluid heating furnace, a conduit for the gaseous fuel having an inlet into the furnace, a blower for forcing the gaseous fuel into the furnace, a support within the furnace for a solid fuel fire, a blower for the solid fuel fire opening into the furnace at a point to direct its blast through the solid fuel fire when the latter is on its support, and means automatically controlled by the fluctuations in pressure of the fluid heated by the furnace to increase the blast through the blowers so as to raise the temperature of the solid fuel fire and to accelerate the feed of the gaseous fuel when the pressure of the heated fluid falls below a predetermined amount, and to decrease the blast through the blowers to lower the temperature of the solid fuel fire and decrease the rate of feed of the gaseous fuel when the pressure of the heated fluid rises above a predetermined amount.

4. In an apparatus for burning in combination blast furnace gases and solid fuel, a blast furnace and a boiler furnace, a conduit for the blast furnace gases from the blast furnace into the boiler furnace, a support within the boiler furnace for a solid fuel fire, a blower for the solid fuel fire, opening into the boiler furnace at a point to direct its blast through the solid fuel fire when the latter is on its support, and means controlled automatically by the boiler pressure to increase the blast from the blower when the boiler pressure drops a predetermined amount, and to decrease the blast from the blower when the boiler pressure rises a predetermined amount.

5. In an apparatus for burning in combination blast furnace gases and solid fuel, a blast furnace and a boiler furnace, a conduit for the blast furnace gases from the blast furnace into the boiler furnace, a support within the boiler furnace for a solid fuel fire, a blower for the solid fuel fire, opening into the boiler furnace at a point to direct its blast through the solid fuel fire when the latter is on its support, a regulator automatically controlled by the boiler steam pressure to increase the blast from the blower when the boiler pressure drops a predetermined amount, and to decrease the blast from the blower when the boiler pressure rises a predetermined amount.

[Claims 6 to 8 not printed in the Gazette.]

958,430. TURBINE. CHARLES A. PARSONS, Newcastle-upon-Tyne, England. Filed Dec. 12, 1908. Serial No. 467,266.



1. A turbine having a number of successive stages, each of which comprises a plurality of means for fractionally converting the pressure energy of the working fluid into kinetic energy, reaction means interposed between said converting means for transforming said kinetic energy into mechanical energy while simultaneously further converting said pressure energy into kinetic energy, said converting means only partly extending over said reaction means and terminating in short end blockings to form impingement zone or zones.

2. A turbine having in combination within a casing a number of successive stages each of which comprises a plurality of means for fractionally converting the pressure energy of the working fluid into kinetic energy, said converting means being carried by the turbine casing, reaction means interposed between said converting means for transforming said kinetic energy into mechanical energy while simultaneously further converting said pressure energy into kinetic energy, said converting means only partly extending over said reaction means and terminating in short end blockings to form impingement zone or zones.

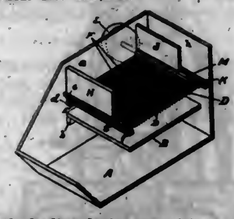
3. A turbine having a number of successive stages, each of which comprises a plurality of means for frictionally converting the pressure energy of the working fluid into kinetic energy, a rotor element, reaction means on said rotor element interposed between said converting means for transforming said kinetic energy into mechanical energy while simultaneously further converting said pressure energy into kinetic energy, said converting means only partly extending over said reaction means and terminating in short end blockings to form impingement zone or zones.

4. A turbine having in combination within a casing a number of successive stages each of which comprises a plurality of means for fractionally converting the pressure energy of the working fluid into kinetic energy, a rotor element, reaction means on said rotor element interposed between said converting means for transforming said kinetic energy into mechanical energy while simultaneously further converting said pressure energy into kinetic energy, said converting means only partly extending over said reaction means and terminating in short end blockings to form impingement zone or zones.

5. A turbine having a number of successive stages, each of which comprises a plurality of means for fractionally converting the pressure energy of the working fluid into kinetic energy, reaction means interposed between said converting means for transforming said kinetic energy into mechanical energy while simultaneously further converting said pressure energy into kinetic energy, said converting means only partly extending over said reaction means and terminating in short end blockings to form impingement zone or zones, the area of said impingement zone or zones increasing gradually in the direction of flow of the working fluid through each stage.

[Claims 6 to 42 not printed in the Gazette.]

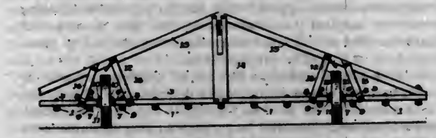
958,431. BRUSH-MAKING MACHINERY. ARTHUR S. PAYNE and BERNARD J. WADE, Troy, N. Y. Filed Apr. 1, 1909. Serial No. 487,160.



1. A bristle feeding device comprising a screen; a series of rods extending above the screen with which the bristles are in contact; a means for imparting to the said rods a sharp violent intermittent motion.

2. In a means for feeding bristles; a screen; a series of rods placed above the screen; an eccentric arranged to intermittently spring said rods, substantially as described.

958,432. SWEEP-RAKE. CHARLES PEARSON, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed May 27, 1909. Serial No. 498,714.

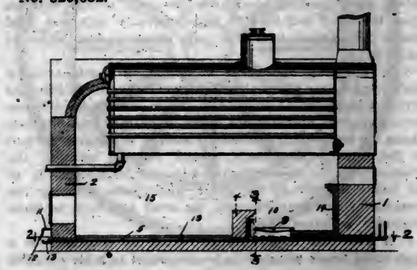


1. A sweep rake including, in combination, rake teeth, a rake supporting frame having said teeth secured thereto, said frame including a transverse sectional bar comprising separable members having the adjacent ends of its sections connected by means of axle members, and carrying wheels journaled upon said axles.

2. A sweep rake including, in combination, rake teeth, a rake supporting frame having said teeth secured thereto, said frame including a transverse sectional bar having the adjacent ends of its sections connected by means of axle members, said axle members having the opposite ends thereof supported by members having socket portions adapted to receive the ends of the sectional bar, and longitudinally arranged wing portions adapted to receive bolts passing through said axles and bar, and carrying wheels journaled upon said axles.

3. A sweep rake including, in combination, rake teeth, a rake supporting frame having said teeth secured thereto, said frame including a transverse sectional bar having the adjacent ends of its sections connected by means of axle members, carrying wheels journaled upon said axles, a strut having its lower end secured to the middle portion of said sectional bar, truss frame members having their upper converging ends secured to the upper end of said strut and their lower ends to the outer ends of said sectional bar, and supplemental truss frame members connecting said first mentioned truss frame members with said sectional bar upon opposite sides of said carrying wheels.

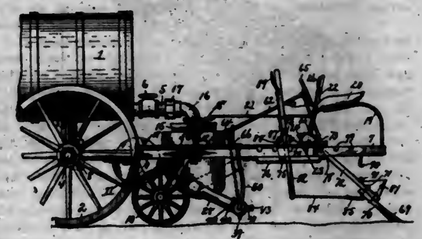
958,433. OIL-BURNING FURNACE. CLAYTON C. PHIPPS, San Diego, Cal. Filed Nov. 23, 1909. Serial No. 529,652.



1. In an oil burning furnace, in combination with the front, rear, and bottom walls thereof, a bridge wall located to the rear of the front wall, an oil burner disposed adjacent to the front face of the bridge wall and supported at a point above the furnace bottom, and a series of pipes arranged in a horizontal layer and disposed along the bottom of the furnace, said pipes having their rear ends projecting beyond the rear wall of the furnace and having their front ends disposed at the base of the bridge wall, so as to discharge the air below the burner.

2. In an oil burning furnace, in combination with the front, rear and bottom walls thereof, a bridge wall located to the rear of the front wall, a series of air pipes on the bottom wall which air pipes extend through the rear wall and through the bridge wall, a hood on the rear wall overlying the rear ends of the pipes, a damper connected to the hood to regulate the ingress of air into the pipes, a shelf-like member carried by the rear wall to cooperate with said damper, the front ends of the air pipes extending through the bridge wall at the base thereof, and a burner located in front of the bridge wall adjacent the top thereof.

958,434. OIL-DISTRIBUTING APPARATUS. CHARLES P. PRICE, Malden, Mass., assignor to American Tar Company, Boston, Mass., a Corporation of Massachusetts. Original application filed June 6, 1908, Serial No. 437,089. Divided and this application filed Aug. 8, 1908. Serial No. 447,554.



1. A brushing apparatus including in combination a supporting frame, adapted to be attached to a distributing device, wheels on which said frame is carried, a seat on said frame, a plurality of brushes, means for independently supporting said brushes on said supporting frame,

and means adjacent said seat whereby the position of said brushes relative to each other may be independently adjusted longitudinally of the frame and the angle of the brushes relative to the supporting frame varied.

2. A brushing apparatus including in combination, a supporting frame, adapted to be attached to a distributing device, wheels on which said frame is carried, a plurality of brushes, means for independently supporting said brushes on said supporting frame, means whereby the position of said brushes relative to each other may be independently adjusted and the angle of the brushes relative to the supporting frame varied, a seat carried by said frame, and means whereby the pressure of the brushes upon the road bed may be independently adjusted, said means including a lever for each brush located adjacent said seat.

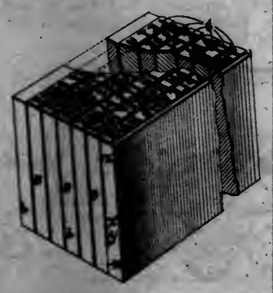
3. A brushing apparatus including in combination a supporting frame adapted to be connected to a distributing device, wheels on which said frame is carried, said frame having spaced intermediate parts, a plurality of brushes, means for supporting a brush in each of the spaces formed by the intermediate parts, means whereby each of the brushes may be independently adjusted longitudinally of the frame relative to the other, and means whereby the pressure of the brushes upon the road bed may be independently adjusted.

4. A brushing apparatus including in combination a supporting frame adapted to be connected to a distributing device, wheels on which said frame is carried, said frame having spaced intermediate parts, a plurality of brushes, means for supporting a brush in each of the spaces formed by the intermediate parts, means whereby each of the brushes may be independently adjusted relative to the other, said means including a bar slidingly connected at one end to said frame and near its other end having means for holding the bar in adjusted positions.

5. A brushing apparatus including in combination a supporting frame adapted to be connected to a distributing device, wheels on which said frame is carried, said frame having spaced intermediate parts, a plurality of brushes, means for supporting a brush in each of the spaces formed by the intermediate parts, means whereby each of the brushes may be independently adjusted relative to the other, said means including a bar slidingly connected at one end to said frame and near its other end having means for holding the bar in adjusted positions, a seat carried by said frame, and levers pivoted to said bar and located adjacent said frame for varying the pressure of the brushes upon the road bed.

[Claims 6 to 12 not printed in the Gazette.]

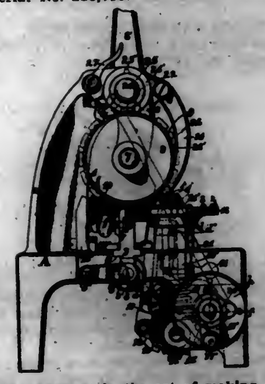
958,435. TYPE-BAR. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of Arizona. Filed Aug. 7, 1902. Serial No. 118,758.



1. A type bar embodying a support, a type face of sheet metal having upon it a line of spaced apart and properly related typographic composition, said type face being adapted to rest upon the top of said support and having dependent from its longitudinal edge a flange extending down the side of the support nearly to the bottom thereof.

2. A typographic form embodying a plurality of supports approximating in width the height of a line of composition, of a series of sheet metal members each approximating in length a line of composition and having upon it a line of spaced apart and properly related typographic composition and each resting upon the top of a support, each of said members carrying at one edge a longitudinally disposed flange extending over the side of the support upon which its type face carrying member rests, said flanges being of slightly less height than the height of the supports and being located in position between the side faces of the supports substantially as and for the purposes specified.

958,436. METHOD OF MAKING TYPE AND TYPE-BARS. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of Arizona. Filed Aug. 7, 1902. Serial No. 118,759.



1. That improvement in the art of making a character which consists in simultaneously subjecting the blank upon which the character is to be formed to ramming treatment between opposed dies and to a repeated forging movement.

2. That improvement in the art of making a character which consists in simultaneously subjecting the blank upon which the character is to be formed to ramming treatment between opposed dies and to a repeated forging movement applied transversely of the line joining the character-field of the forming character with the character-field of the adjacent character.

3. That improvement in the art of making a character which consists in simultaneously subjecting the blank upon which the character is to be formed to ramming treatment between opposed dies and to a repeated forging movement applied at various angles to the blank.

4. That improvement in the art of making a type which consists in simultaneously subjecting the blank upon which the type is to be made to ramming treatment between opposed dies and to a repeated forging movement.

5. That improvement in the art of making a type which consists in simultaneously subjecting the blank upon which the type is to be made to ramming treatment between opposed dies and to a repeated working movement applied transversely of the line joining the character-field of the forming type with the character-field of an adjacent type.

[Claims 6 to 23 not printed in the Gazette.]

958,437. HOSE-COUPLING LOCK. HENRY M. ROBERTSON, St. Paul, Minn., assignor to Gold Car Heating & Lighting Company, New York, N. Y., a Corporation of New York. Filed Aug. 9, 1909. Serial No. 511,905.

1. The combination with hose-coupling heads provided with interlocking means whereby the heads are held together normally, of a toggle connected to the heads and means to buckle the toggle away from the heads to prevent the accidental separation thereof.



2. The combination with hose-coupling heads provided with interlocking means whereby the heads are held together normally, of a toggle comprising members pivotally connected to the heads and a screw carried by one of the members and arranged to bear against one of the heads to prevent the accidental separation of the heads.

3. The combination with hose-coupling heads provided with interlocking means whereby the heads are held together normally, said heads having eyes near their remote ends, of a toggle having hooked ends to engage said eyes and means to buckle the toggle away from the heads.

958,438. HOSE-COUPLING LOCK. HENRY M. ROBERTSON, St. Paul, Minn., assignor to Gold Car Heating & Lighting Company, New York, N. Y., a Corporation of New York. Filed Feb. 3, 1910. Serial No. 541,946.



1. The combination with hose-coupling heads provided with interlocking means whereby the heads are held together normally, of a toggle comprising members pivotally connected with the heads near their remote ends and adapted to be separably connected together, and means to buckle the toggle.

2. The combination with hose-coupling heads provided with interlocking means whereby the heads are held together normally, of a toggle comprising members pivotally connected with the heads near their remote ends and adapted to be separably connected together, and a screw carried by one of said members and adapted to bear against one of the heads to buckle the toggle.

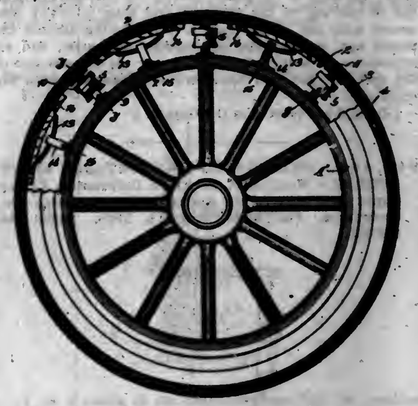
3. The combination with hose-coupling heads provided with interlocking means whereby the heads are held together normally, of a toggle comprising members pivotally connected with the heads near their remote ends and adapted to be separably connected together, and a screw carried by one of said members and adapted to bear against one of the heads to buckle the toggle, said head having a lateral stop for the end of the screw.

4. The combination with hose-coupling heads provided with interlocking means whereby the heads are held together normally, of a toggle comprising members pivotally connected with the heads near their remote ends and adapted to be separably connected together, and a screw carried by one of said members and adapted to bear against one of the heads to buckle the toggle, said head having a lateral stop with an inclined or cam surface to cooperate with the end of the screw.

5. The combination with hose-coupling heads provided with interlocking means whereby the heads are held together normally, of a toggle comprising members pivotally and loosely connected with the heads near their remote ends and having a stud on one adapted to enter an eye in the other whereby the members may be separably connected, and means to buckle the toggle.

[Claim 6 not printed in the Gazette.]

958,439. VEHICLE-WHEEL. MORRIS W. ROSENGHEIM, San Francisco, Cal. Filed Nov. 7, 1908. Serial No. 461,458.



1. In a vehicle wheel, the combination with outer and inner rims, of cylinder members pivoted to one rim, pistons in said cylinders and the stems of said pistons pivoted to the other rim, said cylinder members being closed at one end and centrally pierced at the opposite end to admit the stems of the pistons, helical springs within the cylinders and acting as a cushion to the respective pistons, and other spring members alternating with the spring-carrying cylinders and pivoted to one of said rims and having a sliding bearing on the other rim and acting in opposition to the springs in said cylinders.

2. A vehicle wheel having outer and inner rims, cylinders pivoted to one rim having closed outer ends and having inner ends closed except for a central opening, pistons in the cylinders having stems pivotally connected to the other rim, springs interposed between the undersides of the pistons and the inner wall of the adjacent end of the cylinder, rocking supports alternating with the cylinders and pistons and carried by one rim, and spring supporting members engaged at their central portions by said rocking supports and having their ends bearing against the outer rim.

3. The combination with a vehicle wheel having outer and inner rims, of semi-elliptical springs, lugs projecting from the inner rim, blocks embracing said lugs and pivot pins passing through the blocks and lugs, the outer ends of the blocks engaging the central portion of said springs, said lugs adapted to receive the thrust due to the compression of the springs whereby the strain is removed directly from the pivots about which the blocks are turnable, the ends of the springs bearing against the outer rim on each side of the blocks, and articulated connections alternating with the springs and having a yieldable, telescopic movement between the rims.

4. The combination in a vehicle wheel having outer and inner rims, of semi-elliptical springs each secured centrally to a block, said blocks pivotally connected with one of the rims, with the end of each spring bearing against the other rim on each side of its supporting block, lugs on the inner rim to which the blocks are pivotally connected, said lugs serving to resist the thrust due to the compression of the springs and thereby relieving the pivots of the blocks of strain, and articulated connections between the rims, said articulated connections between the two rims and alternating with the springs, and including spring members acting in opposition to said semi-elliptical springs.

5. The combination in a vehicle wheel having outer and inner rims, of semi-elliptical springs each secured centrally to a block, said blocks pivotally connected with one of the rims, with the end of each spring bearing against the other rim on each side of its supporting block, and

articulated connections between the rims, said articulated connections comprising each a cylinder, a piston in the cylinder, the stem of the piston passing out through an opening in one end of the cylinder, said stem pivotally connected with one of the rims, a spring acting against the piston and cylinder and surrounding said stem, and an adjustable screw-threaded head closing the opposite end of the cylinder, and said head pivotally connected with the other rim.

[Claim 6 not printed in the Gazette.]

958,440. DETACHABLE AND PORTABLE LIGHT-HOLDER. WILLIAM H. SACKMAN, Cochranton, Pa., assignor to Pennsylvania Specialty Manufacturing Co., Cochranton, Pa. Filed June 11, 1908. Serial No. 438,003.



1. In a lamp supporting device, the combination with a base or support, of a notched and apertured body, said notch having an inclined wall, a wedge plug seated in said notch, means to operate said plug to clamp the body on the support, a standard seated in said aperture, and means to hold the standard in adjusted position on the body.

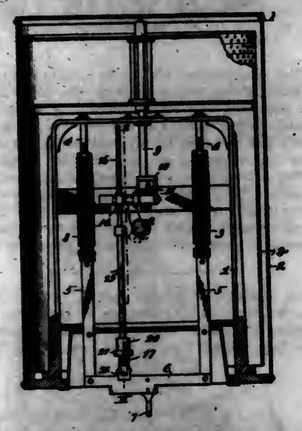
2. In a lamp supporting device, the combination with a base or support, of a notched and apertured body, said notch having an inclined wall, a wedge plug seated in said notch, means to operate said plug to clamp the body on the support, a standard seated in said aperture and comprising a plurality of pivoted arms, and a cam bolt carried by the standard for holding the same in adjusted position in the aperture of the body.

958,441. SCALE. HARRY B. SHERWOOD, Kansas City, Mo., assignor to Kansas City Scale & Supply Company, a Corporation of Missouri. Filed Dec. 21, 1909. Serial No. 534,270.

1. The combination with the weighing mechanism of a scale, of a compensating device consisting of an externally-threaded tubular member adjustably-engaging two parts of said weighing mechanism, means interposed between one of said parts and said member tending to force them in opposite directions, a second member internally-threaded to adjustably-engage the first member, and means connecting said second member to one of the parts of the weighing mechanism.

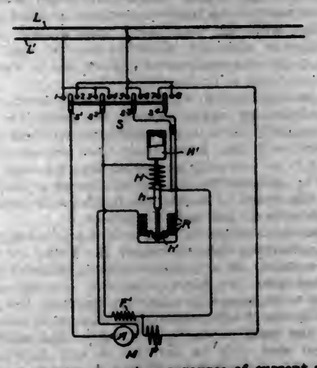
2. The combination with the weighing mechanism of a scale, of a compensating device consisting of a member adjustably-connecting two parts of said weighing mechanism, expansive means interposed between one of said parts and said member tending to force them in opposite directions, a second member adjustably-engaging the first-member and having an annular groove, and a pin extending through one of the parts of the weighing mechanism and projecting into said annular groove, said pin extending loosely through the first member.

3. The combination with the weighing mechanism of a scale, of a compensating device consisting of an externally-threaded tubular member adjustably-connecting two parts of said weighing mechanism and provided with oppositely-disposed slots, a spring interposed between one of said parts and said member tending to force them in opposite direction, a second member internally-threaded to engage the threads of the first member and provided with an annular groove, and a pin extending through one of the weighing mechanism parts and the slots in the first member and projecting into the annular groove of the second member.



4. The combination with the weighing mechanism of a scale including a pinion, a rack-bar having teeth intermeshing with said pinion, and an equalising-bar; of a compensating device adjustably-connecting the equalising-bar and the rack-bar, said compensating device having a rearwardly-extending arm pivotally-connected to the equalising bar at a point in the rear of the rack-bar.

958,442. MOTOR-CONTROL APPARATUS. ANDREW E. STEVENS, Madison, Wis., assignor to Northern Electrical Manufacturing Company, a Corporation of Wisconsin. Filed May 19, 1905. Serial No. 261,145.



1. In combination, a motor, a source of current supply, a resistance, a controlling member for said resistance, a switch, and connections whereby said controlling member is automatically operated in one direction to cut the resistance out of the motor circuit when the switch is in one position and when the switch is in another position to short circuit the motor armature through said resistance and automatically cut the resistance out of circuit by a movement in the same direction.

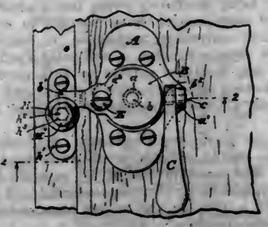
2. In combination, a motor, a source of current supply, a resistance, a controlling member for said resistance, a switch having a starting and a stopping position, means whereby said controlling member is automatically operated to cut the resistance out of the motor circuit when the switch is in the starting position and short circuit the motor armature through said resistance and automatically cut the resistance out of circuit when the switch is moved to stopping position, and connections whereby the controlling member returns to the full resistance position as the switch is moved from the starting to the stopping position.

3. In combination, a motor, a source of current supply, a resistance, a controlling member for said resistance biased to starting position, an electromagnetic device for moving said member to running position, a switch having a starting and a stopping position, connections whereby said electromagnetic device is energized to cut the resistance out of the motor circuit when the switch is moved to starting position and to short circuit the motor armature through said resistance and again energize the electromagnetic device to cut the resistance out of circuit when the switch is moved to stopping position, said electromagnetic device being deënergized to permit the controlling member to return to starting position as the switch is moved from starting to stopping position.

4. In combination, a motor, a source of current supply, a resistance, a double-pole switch arranged to connect the motor to said source of supply with said resistance in circuit in one position and to short-circuit the armature through said resistance in the other position, a controlling member for the resistance having a bias to full resistance position, and an electromagnetic device controlled by said switch and energized in both positions thereof for cutting out said resistance.

5. In combination, a shunt motor, a source of current supply, a resistance, a switch for alternately connecting said motor to said source of supply for operation as a motor with said resistance in circuit and as a generator with the armature short-circuited through said resistance, and an electromagnetic device connected in parallel with the shunt field and controlled by said switch for gradually and automatically cutting out said resistance by a movement in one direction when the motor is operating as a motor and by a movement in the same direction when operating as a generator.

958,443. LOCK-STRIKE. THEODORE B. STEVENS, Cleveland, Ohio. Filed Nov. 20, 1909. Serial No. 529,027.

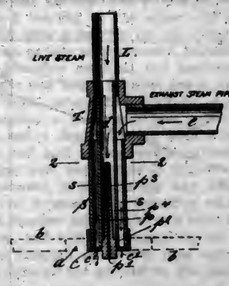


1. As part of a latch mechanism adapted to be secured to a door and to coöperate therewith, a strike comprising one member adapted to be secured to the door frame, and another member which is provided with a frusto-conical head, the rear face of which has an integral shank adapted to be screwed into the first mentioned part of said strike member.

2. As a part of latch mechanism, an adjustable strike comprising a plate adapted to be secured to the door frame and a member having a frusto-conical head having an integral rearwardly projecting screw shank adapted to screw into the member first mentioned.

3. As a part of latch mechanism, an adjustable strike comprising a plate adapted to be secured to the door frame and a member having a frusto-conical head and a rearwardly projecting screw shank adapted to screw into the member first mentioned, said shank having a flat sided portion adapted to be engaged by a wrench.

958,444. STEAM-NOZZLE. JOSEPH W. STILLWELL, New York, N. Y. Filed Oct. 5, 1908. Serial No. 456,129.



1. In a nozzle of the character described, the combination of a central live steam pipe, a conical discharge plug in the end thereof, a sleeve surrounding the outer end of said central live steam pipe, a cap on the outer end of said sleeve formed with a central aperture through which the central steam pipe extends and with a plurality of discharge openings, and an auxiliary pipe communicating with the interior of said sleeve through the medium of a suitable tee coupling, together with said tee coupling, for the purpose described.

2. In a nozzle of the character described, the combination of a central live steam pipe, a conical discharge plug in the end thereof formed with an inwardly projecting portion in the apex of which is the entrance to the steam discharge conduit, said inward projection being of greater length than the diameter of the steam pipe so as to form a relatively deep annular pocket around the discharge passage, a sleeve surrounding the outer end of said central live steam pipe, a cap on the outer end of said sleeve formed with a central aperture through which the central steam pipe extends and with a plurality of discharge openings, and an auxiliary pipe communicating with the interior of said sleeve through the medium of a suitable tee coupling, together with said tee coupling, for the purpose described.

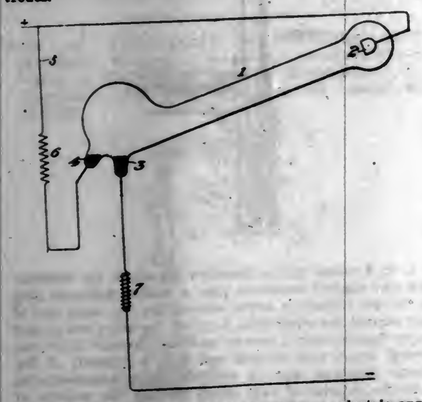
958,445. STARTING DEVICE FOR VAPOR APPARATUS. PERCY H. THOMAS, East Orange, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y., a Corporation of New York. Filed May 9, 1904. Serial No. 207,014.

1. The method of starting a vapor electric apparatus comprising a hermetically sealed and completely exhausted container, an anode and a vaporizable reconstructing cathode therein, which consists in overcoming the negative electrode starting reluctance separately from the vapor path starting resistance, storing energy externally and utilizing a portion of this stored energy to overcome the vapor starting resistance through the partial interposition of negative electrode starting reluctance within the apparatus.

2. The combination with a supply circuit and a vacuum vapor electric apparatus including a hermetically sealed and completely exhausted container, a main anode and a vaporizable reconstructing cathode therein, of a supplemental anode also therein, connections between the two anodes and one main of the source and between the cathode and another main of the source and an inductance traversed by the current in both anodes together with means for controlling and rendering unstable the current flowing through the supplemental electrode.

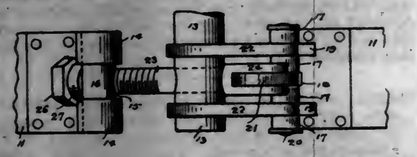
3. In a vapor electric apparatus, a main positive electrode, a main negative electrode, an inductance device in

series therewith, adapted to supply high potential impulses on unstable current, a supplemental positive electrode, in shunt to the main positive electrode, and means for establishing an initial flow of current between the supplemental positive electrode and the main negative electrode, the shunt circuit being such that the conditions of flow of current established therein are unstable, whereby on the sudden diminution of current in the said shunt, a flow will be established between the main electrodes.



4. The method of starting a gas or vapor electric apparatus requiring more than the normal voltage to establish current flow through the normal path, which consists in utilizing the rise of potential resulting from the tendency of an unstable current within the chamber to drop out for overcoming the resistance of the vapor columns in the normal path.

958,446. BRAKE. HERBERT VANDERBEEK, Bridgeport, Conn., assignor, by mesne assignments, to The Royal Equipment Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Oct. 14, 1909. Serial No. 522,630.



1. An improved brake comprising a support, a brake band adapted to engage a rotary drum, longitudinally movable link plates pivotally connected with one end of said brake band and connecting the latter with said support, an operating lever pivotally connected with said band at the point of pivotal connection of said link plates, and an adjusting bolt having its ends directly connected with the other end of said brake band and with said lever, respectively, the shank of said bolt being provided with means for engaging said support to limit its movement.

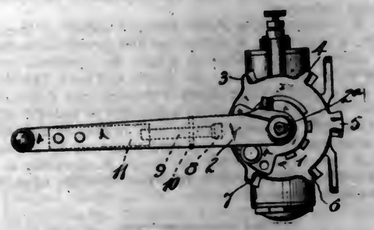
2. As an improvement in brakes, a support, a brake band adapted to engage a rotary drum, a stud carried by one end of said band, an operating lever pivotally mounted on said stud, longitudinally movable link plates connecting said stud and said support, and an adjusting bolt directly connecting the other end of said band with said lever and movable with relation to said support, the shank of said bolt provided with means for engaging said support to limit the movement of the bolt.

3. A brake comprising a rotary drum, a brake band inclosing the drum, an operating lever connected to one end of the band, a support having a transverse hole, a longitudinally movable adjusting bolt which passes through the hole, is connected to the other end of the band and to the lever and is provided with a shoulder adapted to engage the support to limit the movement of the band when the drum is turned backward and longitudinally movable link plates between the support and the end of the band that is connected to the lever.

4. A brake comprising a band having eyes at one end with an opening between them, a stud in said eyes having a transverse hole, a support also having a transverse hole, an operating lever connected to one end of the band, an adjusting bolt connected to the lever, passing through the support and the stud and having a shoulder adapted to engage the support, a nut on said bolt having a collar lying in the opening between said eyes and engaging the stud, and slotted link plates between the support and the end of the band to which the lever is pivoted.

5. As an improvement in brakes, a support, a brake band adapted to engage a rotary drum, a stud carried by one end of said band, an operating lever pivotally mounted on said stud, longitudinally movable link plates connecting said stud and said support, and a longitudinally movable adjusting bolt connecting the other end of said band with said lever, the shank of said bolt being provided with a shoulder adapted to engage said support to limit said longitudinal movement.

958,447. DOOR-CONTROLLING MECHANISM. HENRY G. VOIGHT and NORMAN B. HURD, New Britain, Conn., assignors to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 22, 1910. Serial No. 539,576.



1. In a door stop mechanism, a stationary part, a movable part, a stop abutment carried by one of said parts, a coöperating stop engager carried by the other part, said stop engager being pivoted to swing like a pendulum, the pivot of said stop engager being adapted to yield.

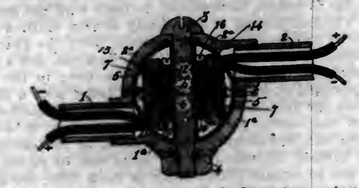
2. In a door controlling mechanism, in combination a movable door closing member, a relatively fixed member, coöperating stop members carried by said parts, one of said stop members being pivotally mounted and arranged to swing, and a yielding support for one of said stop members.

3. In a door controlling mechanism, in combination a movable door closing member, a relatively fixed member, coöperating stop members carried by said parts, one of said stop members being pivotally mounted and arranged to swing, and a yielding and spring pressed support for one of said stop members.

4. In a door controlling mechanism, in combination a movable door closing member, a relatively fixed member, coöperating stop members carried by said parts, one of said stop members being pivotally mounted and arranged to swing, and a spring pressed tilting lever supporting said last mentioned member.

958,448. SWIVEL-JOINT FOR ELECTRIC-LIGHT FIXTURES. GUSTAV VOSSBERG, Toledo, Ohio. Filed Sept. 28, 1908. Serial No. 454,982.

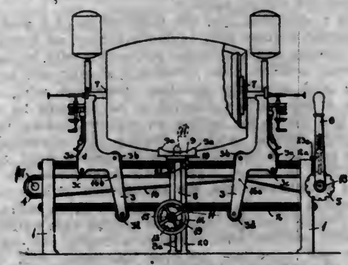
1. A swivel-joint for electric light fixtures, comprising an internally insulated two-part shell, connections which permit one shell-part to rotate upon the other, tubes connected with said shell-parts, inleading wires in one of said tubes, outleading wires in the other of said tubes, a pair of contact-rings capable of rotation upon each other with the rotation of the shell-parts, a pair of telescoped tubes disposed axially of said shell-parts and said rings, connections for one of said inleading wires and one of said outleading wires with said rings, and connections for the other of said inleading wires and the other of said outleading wires with said telescoped tubes.



2. In a device of the described character, a two-part shell, an axially disposed bolt which connects said shell-parts and permits their rotation, one part upon the other, tubes connected with said shell-parts, inleading wires in one of said tubes, outleading wires in the other of said tubes, a pair of insulating-blocks within the shell and axially revoluble about said bolt, a pair of contact-rings upon the adjacent faces of said blocks, a pair of telescoped tubes surrounding the bolt and insulated therefrom, connections between one of said inleading wires and one of said outleading wires and said rings, and connections between the other of said inleading wires and the other of said outleading wires and said telescoped tubes.

3. In a device of the described character, a pair of shell-sections, an axially disposed bolt which revolubly connects said two parts as a shell, a pair of insulating blocks within the shell and revoluble with the shell-parts, a pair of contact-rings upon the adjacent faces of the blocks, a tube surrounding the bolt and insulated therefrom and rigid with one of the blocks, a pair of wires leading into one of the shell-parts, a pair of wires leading from the other shell-part, connections for one of the inleading and one of the outleading wires with the rings and connections for the other of the inleading and the other of the outleading wires with said tube.

958,449. BRANDING-MACHINE. HENRY WAIBEL, Cleveland, Ohio. Filed Aug. 16, 1909. Serial No. 513,033.



1. In a branding machine, the combination of a frame having upper and lower horizontal longitudinal guide rods extending across the same, carriages for branding irons, mounted to travel on said rods and having bearings on the upper side of one rod and the lower side of the other and also having upwardly extending arms for supporting the branding irons, flexible means connected to the carriages for moving the same toward and from each other, and means to support the article to be branded above the rods and between said carriages.

2. In a branding machine, the combination of a frame having upper and lower parallel guides, carriages for branding irons mounted opposite to each other on said guides and each having a two point bearing on one side of one guide and a bearing on the opposite side of the other guide, and means to support the article to be branded, between said carriages.

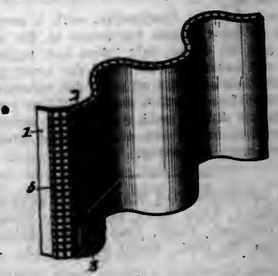
3. In a branding machine, the combination of a frame having upper and lower parallel guides, carriages for branding irons, mounted oppositely on said guides, each carriage having an inwardly projecting knee or part provided with a bearing on the upper rod and a depending leg provided with a bearing on the lower rod, and means to support an article to be branded, between said carriages.

4. In a branding machine, the combination of a frame having upper and lower parallel guide rods, carriages for branding irons, mounted oppositely on said rods, each carriage having a front and rear roller bearing on the upper rod and a depending leg with a roller bearing on the lower rod and an upwardly extending support for the branding iron, and means to support the article to be branded between said carriages and above the rods.

5. A barrel support for a branding machine, comprising an upright member provided with a head at the top having a bung plug, and a table mounted on the head and having an opening through which the plug extends.

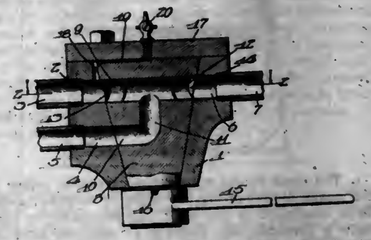
[Claims 6 to 10 not printed in the Gazette.]

958,450. BITUMINOUS STRUCTURAL MATERIAL. HENRY R. WARDELL, Philadelphia, Pa. Filed July 24, 1908. Serial No. 445,083.



A composite corrugated structural sheet comprising a strong rigid layer of hard bituminous material reinforced by a vegetable or metal textile embedded therein, and having sufficient consistency to retain its corrugations under sun temperatures, in combination with one or more external protective bituminous sheets of a softer character.

958,451. VALVE. DIXON E. WASHINGTON, Chicago, Ill., assignor of one-half to Charles W. Patton, Chicago, Ill. Filed Mar. 27, 1907. Serial No. 364,941.



1. In a valve, the combination of a housing having spaced inlets and outlet, a plug in said housing having one port communicating with one of said inlets and the outlet in the housing and a second port having communication with the first said port and the other inlet of the housing, both ends of the first said port in the plug being

enlarged in both directions of the rotation of the plug, whereby the inlet and the housing corresponding to that port in the plug will be placed in communication with the outlet of the housing in advance of the opening of the other said port in either direction of rotation of the plug.

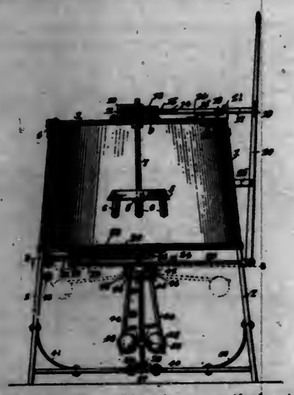
2. In a valve, the combination with a housing having inlets in different planes transverse to the axis of said housing and an outlet, of a plug provided with a plurality of ports for connecting each of said inlets with said outlet and adapted to mix the fluids from the different inlets, said ports being suitably shaped and disposed to insure one and the same inlet being connected first with the outlet.

3. In a valve, the combination with a housing having an inlet and an outlet oppositely disposed and a second inlet spaced from the first inlet, of a plug provided with a port adapted to connect the first inlet and said outlet and with a second port adapted to connect the second inlet with the first port, the first said port being provided with ends enlarged in the plane of its movement in such manner as to cause the first inlet to be connected with the outlet first and to be cut off therefrom last.

4. In a valve, the combination of a valve housing having two supply inlets and an outlet, a plug within the housing, said plug having three ports connected together and corresponding respectively with said inlets and outlet, said ports in the plug being so proportioned and arranged that one and the same inlet will be placed in communication with the outlet in advance of the opening of the other inlet and will be cut off after the other inlet is cut off.

5. In a valve, the combination with a housing having inlets in different planes transverse to the axis of said housing, and an outlet, said inlets and outlet being disposed in the same axial plane of the housing, of a plug provided with a plurality of ports for connecting each of said inlets with said outlet, and adapted to mix the fluids from different inlets, said ports being suitably shaped and disposed to insure one and the same inlet being connected first with the outlet.

958,452. GEARING FOR WASHING-MACHINES. ORLA H. WATKINS, Ames, Iowa, assignor to Globe Manufacturing Company, Perry, Iowa, a Corporation of Iowa. Filed Nov. 30, 1906. Serial No. 345,713.

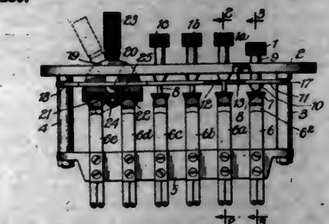


1. The combination with a lower vertical rotary shaft, and means for mounting the same, of weighted arms pivotally connected to the shaft and depending in substantially a perpendicular position at opposite sides of the shaft, an operating lever, an upper reversely rotated shaft, means for communicating motion from the lever to the upper shaft, and means for communicating motion from the lever to the lower rotary shaft, the weighted arms on the said lower shaft moving upward as the speed of the shaft increases.

2. The combination of a reversely rotated shaft, a gear mounted thereon, a rack bar meshing with the gear, an operating lever, a link pivoted to the rack bar, and a connecting bar extending from the lever to the link and provided at the outer end of the latter with a pintle piercing the said link and forming a hinge connection, to enable the shaft, the gearing and the link to swing upward and downward in any position of the operating lever without disconnecting the parts, and to permit the rack bar to remain permanently in mesh with the gear.

3. The combination of a reversely rotated shaft, a gear mounted thereon, a rack bar meshing with the gear, an operating lever, a link pivoted to the rack bar, and a pair of connecting bars extending from the lever to the link and provided at the outer end of the latter with a pintle piercing the said link and forming a hinge connection, to enable the shaft, the gearing and the link to swing upward and downward in any position of the operating lever without disconnecting the parts and to permit the rack bar to remain permanently in mesh with the gear, and means for holding the connecting bars against upward movement when the machine is in operation.

958,453. SWITCHING-KEY. LYNN A. WILLIAMS, Evanston, Ill., assignor to The Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed July 23, 1909. Serial No. 509,239.



1. In a switching key, the combination of a plurality of actuating buttons each having a normal, an indicating and a ringing position, means for moving each button to its normal position when released, a ringing cam having normal and operating positions associated with each button, switch springs adapted to be operated by such cams, and means for locking an actuated button in its indicating position without moving the corresponding ringing cam from its normal position.

2. In a switching key, the combination of a plurality of actuating buttons each having a normal, an indicating and a ringing position, means for moving each button to its normal position when released, a ringing cam having normal and operating positions associated with each button, switch springs adapted to be operated by such cams, and means for locking an actuated button in its indicating position without moving the corresponding ringing cam from its normal position, such locking operation serving to release a previously actuated button.

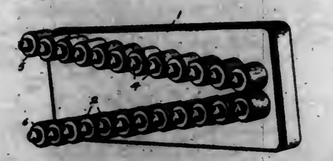
3. In a switching key, the combination of a plurality of actuating buttons each having a normal, an indicating and a ringing position, means for moving each button to its normal position when released, a ringing cam having normal and operating positions associated with each button, switch springs adapted to be operated by such cams, and means for locking an actuated button in its indicating position, motion of one of such buttons from its indicating to its ringing position serving to move the associated ringing cam from its normal to its operating position.

4. In a switching key, the combination of a frame, a plurality of actuating buttons each adapted to assume a normal, an indicating or a ringing position, and a locking plate adapted to retain a button when moved to its indicating position, each button having associated with it the following instrumentalities,—a locking cam connected with such button, a first spring tending to maintain the button in its normal position, a plunger having normal and ringing positions, an operating cam carried by the plunger, switch springs adapted to be actuated by the operating cam, and a second spring tending to maintain the plunger in its normal position.

5. In a switching key, the combination of a frame, a plurality of actuating buttons each adapted to assume a normal, an indicating or a ringing position, and a locking plate adapted to retain a button when moved to its indicating position, each button having associated with it the following instrumentalities,—a locking cam connected with such button, a plunger having normal and ringing positions, a first spring between the button and the plunger tending to maintain the button in its normal position, an operating cam carried by the plunger, switch springs adapted to be actuated by the operating cam, and a second spring of greater stiffness than the first spring tending to maintain the plunger in its normal position.

[Claim 6 not printed in the Gazette.]

958,454. LIGHTNING-ARRESTER. HERBERT C. WIRT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 22, 1905. Serial No. 292,927.



1. In a lightning arrester, the combination of an insulating base, and a plurality of conducting cylinders supported on said base and grouped in two converging rows.

2. In a lightning arrester, the combination of a plurality of units each comprising an insulating base and a plurality of conducting members mounted thereon, said units being disposed in proximity to each other to form a discharge path for high potential charges, and the end members of adjacent units being separated by air gaps.

3. The combination with the conductors of an electrical distribution circuit, of a plurality of conducting members spaced apart to form air gaps and grouped to form a sig-sag path for high potential discharges from one of said conductors.

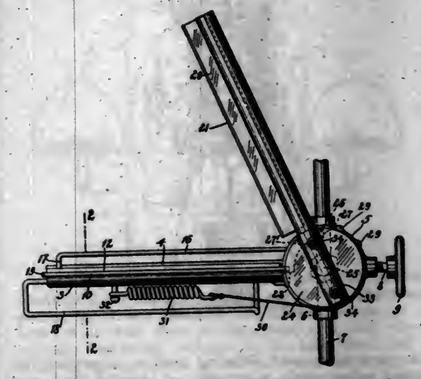
4. In a lightning arrester, the combination of an insulating base and a plurality of conducting cylinders supported thereon, said cylinders being arranged in two approximately horizontal converging lines to permit a rapid circulation of air between said cylinders when an arc forms therebetween.

5. In a lightning arrester, the combination of an insulating base, and a plurality of conducting cylinders supported thereon, said cylinders being arranged in a plurality of converging but approximately horizontal lines and with their axes substantially horizontal.

958,455. PAPER-CUTTING SHEARS. ALBERT WORCESTER, New York, N. Y. Filed Oct. 23, 1909. Serial No. 524,185.

1. In a machine of the character described, the combination with a supporting block, of a base plate secured thereto, a cutting blade tapering toward its cutting edge, a clamping plate engaging said cutting blade and holding the same by pressure upon said base plate and preventing its forward movement, means engaging said base plate and cutting blade for preventing the movement of the latter in the other direction, a cutting blade oscillatably mounted upon said supporting block, and means for bringing said oscillatable blade back from its cutting position to its operative position.

2. In a machine of the character described, the combination with a supporting block, of a base plate secured thereto, a cutting blade tapering toward its cutting edge, a clamping plate engaging said cutting blade and holding the same by pressure upon said base plate and preventing its forward movement, a plurality of set screws engaging said base plate and cutting blade for preventing the movement of the latter in the other direction, a cutting blade oscillatably mounted upon said supporting block, and means for bringing said oscillatable blade back from its cutting position to its operative position.



3. In a machine of the character described, the combination with a supporting block, of a base plate secured thereto, a cutting blade, a clamping plate engaging said cutting blade and holding the same by pressure upon said base plate, means for predetermining the position of said cutting blade upon said base plate, a cutting blade oscillatably and adjustably mounted upon said supporting block, and means for bringing said oscillatable blade back from its cutting position to its operative position.

4. In a machine of the character described, the combination with a supporting block, of a base plate secured thereto, a cutting blade tapering toward its cutting edge, a clamping plate engaging said cutting blade and holding the same by pressure upon said base plate and preventing its forward movement, means engaging said base plate and cutting blade for preventing the movement of the latter in the other direction, a cutting blade oscillatably and adjustably mounted upon said supporting block, and means for bringing said oscillatable blade back from its cutting position to its operative position.

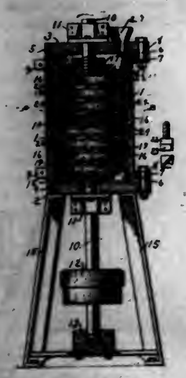
5. In a machine of the character described, the combination with a supporting block, of a base plate secured thereto, a cutting blade tapering toward its cutting edge, a clamping plate engaging said cutting blade and holding the same by pressure upon said base plate and preventing its forward movement, a plurality of set screws engaging said base plate and cutting blade for preventing the movement of the latter in the other direction, a cutting blade oscillatably and adjustably mounted upon said supporting block, and means for bringing said oscillatable blade back from its cutting position to its operative position.

[Claim 6 not printed in the Gazette.]

958,456. COTTON-SEED-DELINTING MACHINE. WILLIAM E. WORTH, Wilmington, N. C., assignor to United States Cotton Seed Oil Company, Portland, Me., a Corporation of Maine. Filed May 6, 1909. Serial No. 494,501.

1. In a cotton seed delinting machine, a vertically arranged rotary shaft; a plurality of abrasive disks upon said shaft; a plurality of separating disks upon said shaft

and arranged in alternation with said abrasive disks; a vertically arranged imperforate casing surrounding said disks and located adjacent thereto; a plurality of deflecting elements within said casing and disposed between adjacent abrasive disks; and means for supplying seed to be operated upon to the upper portion of said casing, said casing being provided with an opening at its lower end through which the seed and lint are discharged.



2. In a cotton seed delinting machine, a vertically arranged rotary shaft, a plurality of abrasive disks upon said shaft; a plurality of separating disks upon said shaft and arranged in alternation with said abrasive disks; a vertically arranged imperforate casing surrounding said disks and located adjacent thereto; a plurality of deflecting elements within said casing; and means for supplying seed to be operated upon to the upper portion of said casing, said casing being provided with an opening at its lower end through which the seed and lint are discharged.

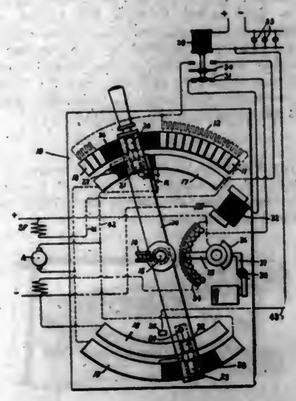
3. In a cotton seed delinting machine, a vertically arranged rotary shaft; a plurality of abrasive disks upon said shaft; a plurality of separating disks upon said shaft and arranged in alternation with said abrasive disks; a vertically arranged imperforate casing surrounding said disks and located adjacent thereto; a plurality of deflecting elements within said casing and disposed between adjacent abrasive disks; means for supplying seed to be operated upon to the upper portion of said casing; and means whereby the seed and lint are discharged from the lower portion of said casing.

4. In a cotton seed delinting machine, a vertically arranged rotary shaft, a plurality of abrasive disks upon said shaft; a plurality of separating disks upon said shaft and arranged in alternation with said abrasive disks; a vertically arranged imperforate casing surrounding said disks and located adjacent thereto; a plurality of deflecting elements within said casing; means for supplying seed to be operated upon to the upper portion of said casing, said casing being provided with an opening at its lower end through which the seed and lint are discharged; and a rotary element carried by said shaft and disposed adjacent said opening and provided with a series of projections whereby the seed and lint are pushed outwardly from said shaft.

5. In a cotton seed delinting machine, a vertically arranged rotary shaft; a plurality of abrasive disks upon said shaft; a plurality of separating disks upon said shaft and arranged in alternation with said abrasive disks and each of said separating disks having a plurality of projections upon its periphery; a vertically arranged imperforate casing surrounding said disks and located adjacent thereto; a plurality of deflecting elements within said casing and disposed between adjacent abrasive disks; and means for supplying seed to be operated upon to the upper portion of said casing, said casing being provided with an opening at its lower end through which the seed and lint are discharged.

[Claims 6 to 17 not printed in the Gazette.]

958,457. RHEOSTAT. WILLIAM C. YATES, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 18, 1907. Serial No. 384,422.



1. A starting rheostat comprising a resistance varying switch, an electromagnetic switch in parallel therewith, and means whereby said latter switch is closed when the resistance switch is moved toward running position.

2. A starting rheostat comprising an electromagnetic circuit closing switch, a resistance varying switch arranged to vary the resistance independently of the electromagnetic switch, and means whereby the electromagnetic switch may be closed and opened by a continuous movement of the resistance varying switch without substantially varying the resistance.

3. A starting rheostat comprising a resistance varying switch, an electromagnetic switch in parallel circuit therewith, and means whereby said latter switch may be opened and closed by the movement of the resistance switch without substantially varying the resistance.

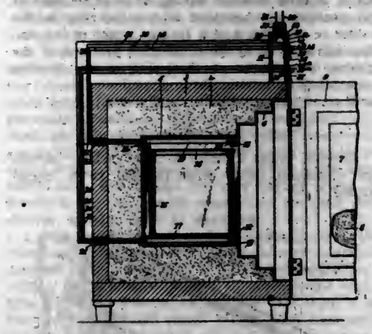
4. A starting rheostat comprising a resistance varying switch, an electromagnetic switch in parallel therewith, and means whereby said latter switch is closed by the initial movement of the resistance switch without substantially varying the resistance and opened by the further movement of said switch.

5. A starting rheostat comprising a resistance varying switch biased to the starting position, a no-voltage magnet for retaining the same in running position, an electromagnetic switch in parallel circuit with said resistance switch and controlling the circuit of the no-voltage magnet, and connections whereby the movement of the resistance switch controls the electromagnetic switch.

[Claims 6 to 14 not printed in the Gazette.]

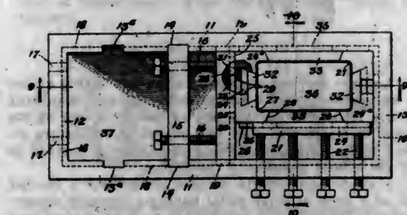
958,458. ELECTRIC COOK-STOVE. FREDERIC H. ZURGEN, Detroit, Mich. Filed Mar. 18, 1909. Serial No. 484,188.

In an electric stove, the combination of a receptacle provided with a lining, said lining having a portion extending outwardly from said receptacle, a wall disposed adjacent to said portion of said lining, switch mechanism mounted upon said portion of said lining and upon said wall, heating units disposed within said receptacle, and connections from said switch mechanism to said heating



units, for the purpose of varying the currents flowing through said heating units.

958,459. BUILT-UP DIE. JOSEPH H. AMES, Oak Park, Ill., assignor to American Car & Foundry Company, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 30, 1909. Serial No. 493,180.



1. In built-up dies, the combination of a main frame, a clamping end bar, a clamping side bar, means for exerting pressure on the bars, and corner blocks, side blocks, and end blocks, fitted together and adapted to be held in clamped condition by the clamping side and end bars.

2. In built-up dies, the combination of a main frame, a clamping end bar, a clamping side bar, means for exerting pressure on the bars, corner blocks having beveled cuts at their ends, and side and end blocks of wedge-formation adapted to register with the cuts of the corner blocks, the parts being arranged to be clamped and held by the side and end clamping bars.

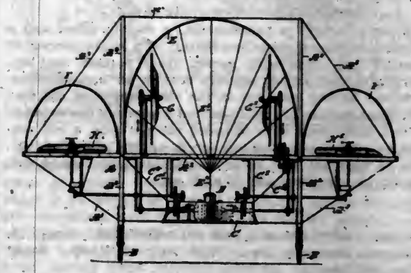
3. In built-up dies, the combination of a main frame having side and end rails, affording a grooved corner, an end clamping bar provided with a groove, a side clamping bar provided with a groove, means for exerting pressure on the bars, and corner, side and end blocks provided with tongues adapted to register with the grooves and fitted together and adapted to be clamped in place by the end and side clamping bars.

4. In built-up dies, the combination of a main frame having side and end rails, affording a grooved corner, an end clamping bar provided with a groove, a side clamping bar provided with a groove, means for exerting pressure on the bars, and corner, side and end blocks provided with tongues adapted to register with the grooves and having beveled, abutting ends, adapted to interlock the parts together, the blocks being adapted to be clamped in place by the clamping bars.

5. In built-up dies, the combination of a main frame provided with side and end rails having grooves or channels on their inner faces, a clamping end bar provided with a groove, a clamping side bar provided with a groove, corner blocks provided with tongues adapted to register with the grooves, said corner blocks being beveled at one of their outer ends and notched at the other outer end, wedge-shaped side blocks provided with tongues and fitted between the beveled ends of the corner blocks, wedge-shaped end blocks provided with tongues and having their ends fitted into the notches in adjacent corner blocks, and clamping screws bearing against the clamping bars.

[Claims 6 and 7 not printed in the Gazette.]

958,460. AIRSHIP. LOUIS ARNHEITER, Jersey City, N. J. Filed Oct. 6, 1908. Serial No. 456,499.



1. An air ship, comprising a skeleton frame having a platform, a car supported on the said frame, and a main sustaining surface mounted on the said frame in the form of an arch open at the front, rear and bottom, auxiliary sustaining surfaces on the said frame and located on opposite sides of the said main sustaining surface and parallel thereto, the auxiliary sustaining surfaces being each in the form of an arch, and raising and lowering propellers mounted on the said frame under the said auxiliary sustaining surfaces.

2. An air ship, comprising a skeleton frame having a platform, a car supported on the said frame and a main sustaining surface mounted on the said frame in the form of an arch open at the front, rear and bottom, auxiliary sustaining surfaces on the said frame and located on opposite sides of the said main sustaining surface and parallel thereto, the auxiliary sustaining surfaces being each in the form of an arch, a car supported on the said frame below the said main stationary surface, a motor on the said car, propellers under the said main sustaining surface and driven from the said motor for propelling the air ship forward or backward, and raising and lowering propellers mounted under the said auxiliary sustaining surfaces and driven from the said motor.

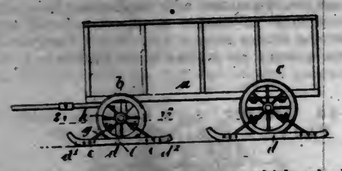
3. An air-ship comprising an open-work platform, standards connected with the platform intermediate its ends, and extending above and below the platform, wheels on the lower ends of the standards, a car suspended from the platform inside of the standards, an arched aeroplane on top of the platform, and inside of the standards, side planes on each side of the standards, lifting propellers below the latter planes, and guiding propellers inside of the former plane.

958,461. DETACHABLE WAGON-SKATE. MAX AUBERTEL, Cornwall on the Hudson, N. Y. Filed Jan. 13, 1910. Serial No. 537,799.

1. Detachable wagon skates for vehicle wheels comprising each a skate proper of channel iron form having a curved front portion bent upwardly and openings in its side flanges in the front and rear portions of the skate, and two securing devices consisting each of two metal rods forming acute angular hooks at one end and threaded at the other, a rod connecting metal plate, and a tightening screw on each threaded rod portion.

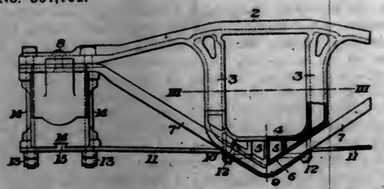
2. In a detachable wagon skate of the type described a securing device consisting of two metal rods with threaded end portions, a rod connecting metal plate with two openings adapted to be slipped on the threaded portions of the rods, a tightening screw on each threaded portion, and

two outwardly bent acute angular hooks formed one on the second end of each rod, said hook containing rod portion being slightly bent inwardly for the purpose specified.



3. In a vehicle in combination, a vehicle wheel and a detachable wagon skate consisting of a skate proper of channel iron form with curved front portion bent upwardly, a rear portion slightly bent in an upward direction and having openings in the side flanges of the rear and front portion of the skate, and a securing device made of two metal rods with threaded end portions, a rod connecting plate, a tightening screw on the threaded portion of each rod, and an acute angular hook formed outwardly at the other end of each rod.

958,462. SIDE FRAME FOR CAR-TRUCKS. JAMES H. BAKER, Pittsburg, Pa. Filed July 15, 1909. Serial No. 507,701.



1. In a side frame for car trucks, a compression member, and a tension member secured to the compression member at its end portions above the journal boxes and having a short angular bend at its central portion, together with bolster guides or columns acting as a strut and provided with a bearing for the central bent portion of the tension member, said tension member extending obliquely downward in a substantially straight line from the tops of the journal boxes to the angular bend, substantially as described.

2. A side frame for car trucks, comprising a tension member having integral bolster guides or columns, connected at the bottom, and a spring-seating portion, said spring-seating portion having a groove or recess on its under side, and a tension member secured to the compression member at its ends above the journal boxes and having an angular bend at its central portion fitting the said groove or recess, said tension member extending obliquely downward in a substantially straight line from the tops of the journal boxes to the angular bend, substantially as described.

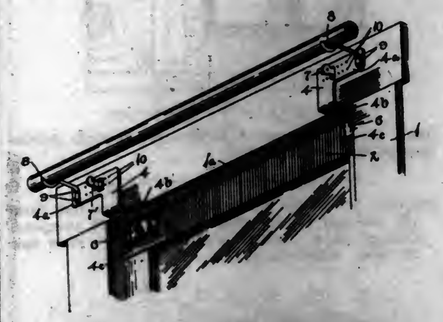
3. A side frame for car trucks having a compression member formed with integral bolster columns or guides, connected at their lower ends by a spring-seating portion, said spring-seating portion having a groove or recess on its under side which extends in an upward direction from each side of the center, and a tension member having an angular bend at its central portion and seating in said groove or recess, the end portions of the tension member being secured to the compression member above the journal boxes, substantially as described.

4. In a side frame for car trucks, a cast compression member having integral bolster guides or columns integrally connected at their lower ends by a spring-seating portion, said spring-seating portion having its greatest depth at the center, and a tension member secured to the compression member above the journal boxes and having a central angular bend in which the spring-seating portion bears, substantially as described.

5. In a side frame for car trucks, a compression member having bolster guides or columns connected at their lower ends, a tension member having an angular bend at its central portion and provided with a bearing in the bolster guides or columns, and a tie bar forked at its central portion and secured to the connecting portions of the bolster guides or columns at each side of the tension member, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

958,463. SHADE AND CURTAIN BRACKET. MOSES BASSETT, Cleveland, Ohio. Filed Dec. 10, 1909. Serial No. 532,322.



1. A shade support comprising a bracket having at one end an upstanding part and a horizontal arm projecting laterally from said part, means at the other end of the bracket to attach the same to a frame, and a fixture attached to said horizontal arm and adjustable thereon to vary the lateral position of the fixture.

2. A shade and curtain support comprising a bracket made of a strip of sheet metal having a laterally extending arm at its outer end, and bent to form an upright part from which said arm projects, a horizontal rearwardly extending part at the lower end of said upright part, and a depending shank at the rear end of said rearwardly extending part, a shade fixture attached to said arm, a curtain pole holder attached to the outer end of said arm, and means engaging the shank to attach the bracket to a frame.

958,464. BLUE VAT DYE. WILHELM BAUER, Vohwinkel, near Elberfeld, and ALFRED HERER, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Jan. 12, 1910. Serial No. 537,724.

1. The herein described new dyestuffs obtainable from a substituted isatin derivative containing a substituent in the benzene nucleus in which compound the oxygen of the alpha-keto group is replaced by an easily movable or replaceable substituent and 4-bromo-1-naphthol, which dyestuffs are in a dry state dark blue crystalline powders with a metallic luster which are soluble in hot nitrobensene generally with a blue coloration, and which yield with hydrosulfite and caustic soda lye vats dyeing cotton after exposure to air blue shades remarkable for their fastness to chlorin, substantially as described.

2. The herein described new dyestuff obtainable from dibromoisatin-alpha-chlorid and 4-bromo-1-naphthol, which dyestuff is in a dry state a dark blue crystalline powder with a copper luster, soluble in hot bensene with a pure blue and in concentrated sulfuric acid with a greenish blue coloration, and which yields with hydrosulfite and caustic soda lye a yellow vat from which cotton is dyed yellow changing on exposure to air into a clear blue remarkable for its fastness to chlorin, substantially as described.

958,465. BLUE VAT DYE. WILHELM BAUER, Vohwinkel, near Elberfeld, and ALFRED HERER, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Jan. 12, 1910. Serial No. 537,725.

1. The herein described new dyestuffs obtainable from a substituted isatin derivative containing a substituent in the benzene nucleus in which compound the oxygen of the alpha-keto group is replaced by an easily movable or replaceable substituent and 4-chloro-1-naphthol, which dyestuffs are in a dry state dark blue crystalline powders with a metallic luster which are soluble in hot nitrobensene generally with a blue coloration, and which yield with hydrosulfite and caustic soda lye vats dyeing cotton after exposure to air blue shades remarkable for their fastness to chlorin, substantially as described.

2. The herein described new dyestuff obtainable from dibromoisatin-alpha-chlorid and 4-chloro-1-naphthol, which dyestuff is in a dry state a dark blue crystalline powder with a copper luster, soluble in hot bensene with a pure blue and in concentrated sulfuric acid with a greenish-blue coloration, and which yields with hydrosulfite and caustic soda lye a yellow vat from which cotton is dyed yellow, changing on exposure to air into a clear blue remarkable for its fastness to chlorin, substantially as described.

958,466. DRIVE-CHAIN CONSTRUCTION. WARREN J. BELCHER, Hartford, Conn., assignor to The Whitney Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Dec. 16, 1909. Serial No. 533,422.

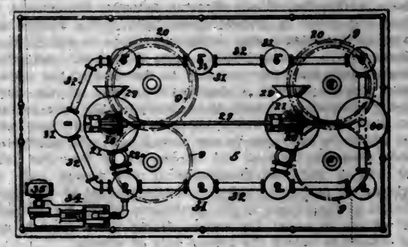


1. A drive-chain consisting of links comprising oppositely disposed side-plates and non-rotatable pins extending through said plates near the ends thereof, and other links comprising oppositely disposed side-plates and non-rotatable bushings extending through the plates near the ends thereof, a pin of one of said links extending through a bushing of the other link to constitute a chain; together with link members movably fitted over the bushings, certain of said members extending from one bushing to another in the same link, and certain other link members extending to a bushing of another link.

2. A drive-chain consisting of links comprising oppositely disposed side-plates and non-rotatable pins extending through the side-plates near the ends thereof, and other links comprising oppositely disposed side-plates and non-rotatable bushings extending through the plates near the ends thereof, a pin of one of said links extending through a bushing of the other link to constitute a chain; together with link members fitted over said bushings, certain of said link members being rotatable on the bushings, and certain other members being non-rotatable on the bushings.

958,467. WAVE OR CURRENT MOTOR. JAMES E. BENNETT, Atlantic City, N. J. Filed July 6, 1909. Serial No. 506,017.

1. In a wave or current motor, the combination of two vertical wheels having their peripheries provided with a series of upright buckets and between which wheels the water is permitted to flow to rotate the wheels in opposite directions, with vertical shafts for the wheels, connecting gearing between the shafts to cause the wheels to rotate with proper relative speeds, and vertical abutment walls having their forward portions curved to closely surround the forward and outer parts of the wheels and form a tapering throat directed between the wheels so that the water is guided intermediate of the wheels and also having rearwardly extending parts arranged at a gradually increasing distance from the wheels and forming a large discharge aperture to the rear of the wheels and throat portion.



2. In a wave or current motor, the combination of two vertical wheels having their peripheries provided with a series of upright buckets and between which wheels the water is permitted to flow to rotate the wheels in opposite directions, with vertical shafts for the wheels, connecting gearing between the shafts to cause the wheels to rotate with proper relative speeds, vertical abutment walls having their forward portions curved to closely surround the forward and outer parts of the wheels and form a tapering throat directed between the wheels so that the water is guided intermediate of the wheels and also having rearwardly extending parts arranged at a gradually increasing distance from the wheels and forming a large discharge aperture to the rear of the wheels and throat portion, an air compressing device having a separate shaft, and speed multiplying gearing between the air compressing shaft and one of the water wheels.

3. In a wave or current motor, the combination of two vertical wheels having their peripheries provided with a series of upright buckets and between which wheels the water is permitted to flow to rotate the wheels in opposite directions, with vertical shafts for the wheels, connecting gearing between the shafts to cause the wheels to rotate with proper relative speeds, vertical abutment walls having their forward portions curved to closely surround the forward and outer parts of the wheels and form a tapering throat directed between the wheels so that the water is guided intermediate of the wheels and also having rearwardly extending parts arranged at a gradually increasing distance from the wheels and forming a large discharge aperture to the rear of the wheels and throat portion, an air compressing device having a separate shaft, speed multiplying gearing between the air compressing shaft and one of the water wheels, storage reservoirs in communication with the compressors and power devices driven by the compressed air from the storage reservoirs.

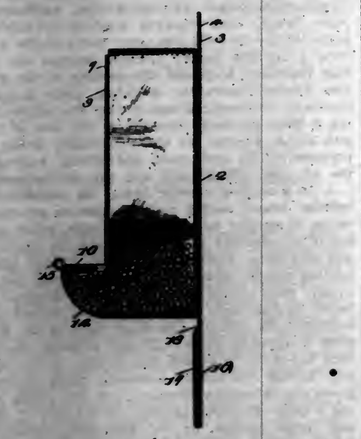
4. In a wave or current motor, the combination of two vertical wheels having their peripheries provided with a series of upright buckets and between which wheels the water is permitted to flow to rotate the wheels in opposite directions, with vertical shafts for the wheels, connecting gearing between the shafts to cause the wheels to rotate with proper relative speeds, vertical abutment walls having their forward portions curved to closely surround the forward and outer parts of the wheels and form a tapering throat directed between the wheels so that the water is guided intermediate of the wheels and also having rearwardly extending parts arranged at a gradually increasing distance from the wheels and forming a large discharge aperture to the rear of the wheels and throat portion, and a duplication of all of the foregoing elements arranged immediately to the rear thereof so that the water which passes through the first pair of wheels is delivered to the second pair.

5. In a wave or current motor, the combination of two vertical wheels having their peripheries provided with a series of upright buckets and between which wheels the water is permitted to flow to rotate the wheels in oppo-

site directions, with vertical shafts for the wheels, connecting gearing between the shafts to cause the wheels to rotate with proper relative speeds, vertical abutment walls having their forward portions curved to closely surround the forward and outer parts of the wheels and form a tapering throat directed between the wheels so that the water is guided intermediate of the wheels and also having rearwardly extending parts arranged at a gradually increasing distance from the wheels and forming a large discharge aperture to the rear of the wheels and throat portion, a duplication of all of the foregoing elements arranged immediately to the rear thereof so that the water which passes through the first pair of wheels is delivered to the second pair, and additional side passages between the abutments of the first pair of wheels and the abutments of the second pair of wheels for delivering water from the outside of the abutments to the throat of the abutments of the second pair of wheels to assist the water passing from the first set of wheels to rotate the second pair of wheels.

[Claims 6 to 8 not printed in the Gazette.]

958,468. MATCH-BOX. SAMUEL W. BOCK, Milwaukee, Wis. Filed Sept. 14, 1909. Serial No. 517,600.

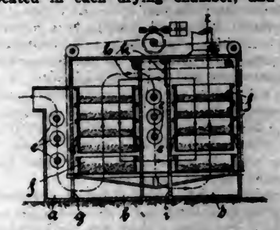


The match box substantially as described composed of a vertical back wall having a tongue cut from the lower portion thereof and bent downwardly to depend from the box and provided with an exposed match scratching surface, the vertical side walls having inturned vertical front match-retaining flanges spaced apart, and the forwardly and upwardly projecting bottom to which the side walls are secured, said side walls at their lower ends having forward extensions to cooperate with said bottom in forming the bottom open-top match-receiving and holding-receptacle.

958,469. APPARATUS FOR DRYING TEXTILE AND OTHER MATERIALS. ADOLF BOLEG, Rorschach, Switzerland. Filed June 4, 1909. Serial No. 500,089.

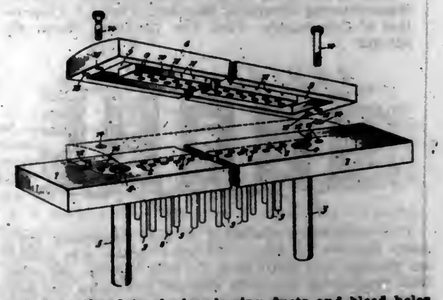
1. Apparatus for drying textile and other materials, comprising two heating and two drying chambers arranged in alternation with each other and all in communication, and means for feeding the material in succession through said drying chambers in reverse directions, the passages between said four chambers being so located that the air-inlets from the heating chambers to the drying chambers are situated at the opposite end of the latter to the passages through which the material is passed by said feeding means, substantially as described.

2. Apparatus for drying textile and other materials, comprising two heating and two drying chambers arranged in alternation with each other and all in communication, a plurality of superposed perforated receptacles located in each drying chamber, and means for



feeding the receptacles upwardly through the second drying chamber and downwardly through the first drying chamber, the air-inlets from the heating chambers to the drying chambers being located at the bottom of said latter chambers, substantially as described.

958,470. TRACKER-BAR. GEORGE P. BRAND, New York, N. Y. Filed Apr. 7, 1909. Serial No. 488,341.



1. A sectional trackerbar having ducts and bleed holes opening into the same inaccessible when the tracker sections are assembled and readily accessible for cleaning upon removal of one of the sections of the trackerbar.

2. A tracker-bar comprising a bed and a removable cap, said tracker bar being provided with note-holes and bleed holes inaccessible when the cap is in place and accessible upon removal of the cap.

3. A tracker-bar comprising a bed and a removable cap, the same being provided with note-holes and with bleed holes inaccessible when the cap is in place and accessible upon removal of the cap and a chamber with which said bleed holes communicate.

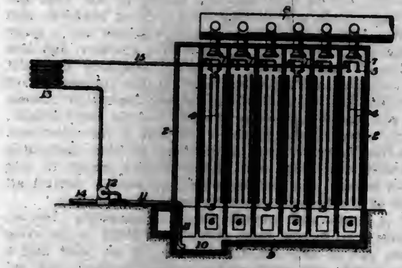
4. A tracker-bar comprising a bed and a removable cap, said tracker bar being provided with note-holes and bleed holes inaccessible when the cap is in place and accessible upon removal of the cap and a chamber with which said bleed holes communicate, and exhaust conduits leading through the bed and communicating with said chamber.

5. A tracker-bar comprising a bed and a removable cap, said bed and cap having note-holes and bleed holes there being a chamber with which said bleed holes communicate said bleed holes being inaccessible when the cap is in place and accessible by removal of the cap.

[Claims 6 and 7 not printed in the Gazette.]

958,471. PROCESS OF DRYING AIR. HERMANN A. BRASSERT, Chicago, Ill., assignor to James Gayley, New York, N. Y. Filed Dec. 9, 1908. Serial No. 466,701.

1. In the drying of air by refrigeration, the steps consisting of supplying cooling fluid to the cooling pipes of the refrigerating apparatus from a separate ammonia condenser, thawing congealed moisture from the refrigerating pipes by supplying liquid thereto, and then feeding at least a portion of this thawing liquid to the ammonia condenser; substantially as described.



2. In the drying of air by refrigeration, the steps consisting of passing the air over refrigerating pipes, supplying cooling fluid to the pipes from a separate ammonia condenser, intermittently thawing the congealed moisture from the refrigerating pipes by flowing liquid over them, and feeding at least a portion of this thawing liquid to the ammonia condenser; substantially as described.

3. In the drying of air by refrigeration, the steps consisting of passing the air over refrigerating coils, supplying a cooling fluid to the coils from an ammonia condenser, thawing the congealed moisture from the coils by liquid, feeding at least a portion of the thawing liquid to the ammonia condenser, and then withdrawing this water from the condenser and spraying the cooling pipes; substantially as described.

4. In the drying of air by refrigeration, the steps consisting of passing the air over refrigerating pipes in a series of chambers, supplying cooling fluid to the pipes from an ammonia condenser, shutting off the chambers successively, and thawing the congealed moisture from the coils by liquid, and returning at least a portion of the liquid to the ammonia condenser; substantially as described.

5. In the process of drying air by refrigeration, the steps consisting of passing the air over refrigerating coils, thawing the congealed moisture from the coils by the liquid, feeding at least a portion of the liquid to an ammonia condenser forming a part of the refrigerating system, and then withdrawing this water from the condenser and spraying the cooling pipes; substantially as described.

958,472. FOUNTAIN-PENHOLDER. HENRY S. BARWINGTON, Baltimore, Md. Filed July 21, 1909. Serial No. 508,801.



1. A fountain pen holder having a cylindrical body part to engage a pen stock, wings formed integral therewith beyond the said cylinder, which wings are formed into a plurality of ink reservoirs beneath the concaved extended end portion of said body part.

2. A fountain pen holder having a cylindrical body part to engage a pen stock, wings formed integral therewith beyond the said cylinder, which wings are formed into a plurality of open ended ink reservoirs beneath the concaved extended end portion of said body part.

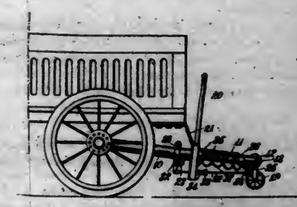
3. A fountain pen holder having a cylindrical body part to engage a pen stock, wings formed integral therewith beyond the said cylinder, which wings are formed into a plurality of ink reservoirs, which lie side by side longitudinally of and beneath the concaved extended end of the said body part.

4. A fountain pen holder having a cylindrical body part to engage a pen stock, wings formed on one end thereof, and integral therewith beyond the said cylinder, which wings are rolled into ink reservoirs beneath the concaved extended end portion of said body part.

5. A fountain pen holder having a cylindrical body part to engage a pen stock, wings formed on one end thereof, beyond the said cylinder and integral therewith, pointed extensions formed integral with the said wings, which wings are formed into a plurality of ink reservoirs beneath the concaved extended end portion of said body part, with the said pointed extensions extended beyond the said concaved end portion to form feeders.

[Claim 6 not printed in the Gazette.]

958,473. CAR-FENDER. CLARENCE P. BRONSON, Corning, N. Y. Filed Sept. 30, 1909. Serial No. 520,312.



1. The combination of a fender frame of telescoping sections, means tending to force the sections apart, an extensible and contractible bed carried by the outer section of the frame presenting a flat upper face in both the extended and contracted positions, means to lock the sections of the frame together when the fender is contracted, and means to automatically disengage the last mentioned means when the fender strikes an object.

2. The combination with a car, a fender comprising inner and outer telescoping frame sections, and cross slats slidable on the outer section of the frame, providing an extensible and contractible bed, said bed being disposed beyond the forward end of the car body in both its extended and contracted positions.

3. The combination of an extensible and contractible fender frame, means tending to force the frame to an extended position, cross-slats slidable on the forward portion of the frame, means to lock the frame in contracted position, and means to draw the slats apart on the forward portion of the frame when the fender is extended upon the release of the locking means.

4. The combination of a fender frame having telescoping side bar sections, springs interposed between the said sections tending to force them apart, a contractible and extensible bed carried on the outer section of the side bars, triggers arranged to lock the sections of the side bars together against the tension of the springs, and forwardly-extending push-bars operatively connected to the triggers and operatively arranged with respect to the forward portion of the frame.

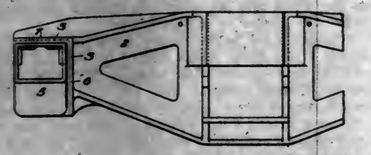
5. The combination of an extensible and contractible fender frame having a spring-pressed front portion, triggers arranged to lock the frame in contracted position, and forwardly-extending push-bars operatively connected to the triggers and arranged to be actuated by the spring-pressed front portion of the frame.

[Claims 6 to 11 not printed in the Gazette.]

958,474. TRUCK SIDE FRAME. ALBERT O. BUCKIUS, Jr., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 28, 1909. Serial No. 515,028.

1. A truck side frame having separately formed journal boxes, recessed ribs in the boxes, the side frame and the journal boxes being secured to each other by cast metal; substantially as described.

2. A truck side frame having a separately formed journal box, one of said members being secured to the other in casting; substantially as described.



3. A truck side frame having separately formed journal boxes, the side frame being secured to the boxes in casting; substantially as described.

4. A truck side frame having separately formed journal boxes, recesses in said boxes, and ribs formed integrally with the frame cast in the recesses to form a cast joint; substantially as described.

5. A truck side frame having separately formed journal boxes, converging recesses in said boxes, and ribs formed integrally with the frame cast in the recesses to form a cast joint; substantially as described.

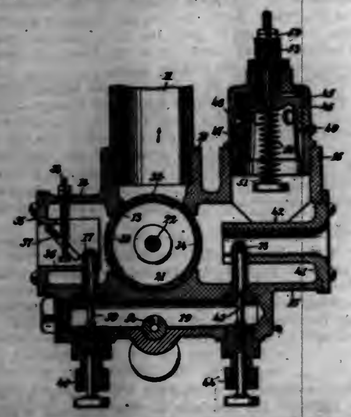
[Claims 6 to 9 not printed in the Gazette.]

958,475. DISPLAY APPARATUS. EDWARD F. CANNON, Portland, Oreg. Filed May 18, 1908. Serial No. 433,358.



A display apparatus, comprising a slotted support, a chain traveling below the slots of the support, alternate links of the chain being provided with pivot sleeves to receive the pivot pins connecting the links, and a carriage provided with a step projecting through the said slot and carrying a plate to which a pair of the pivot pins of the chain are secured.

958,476. CARBURETER. GEORGE E. COOK, New York, N. Y., assignor of one-half to Philip Schlosser, New York, N. Y. Filed June 18, 1908. Serial No. 439,107.

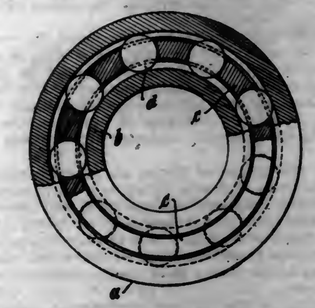


1. A carbureter having a plurality of mixing chambers, each having an air inlet and a spray nozzle, an auxiliary air inlet for one only of said mixing chambers, means for automatically controlling said auxiliary air inlet, and a throttle valve for controlling said mixing chambers, said throttle valve when in its closed position, permitting a limited flow through one of said chambers and serving to bring all of said chambers into operation and simultaneously varying the flow through all of them upon an opening movement.

2. A carbureter having three substantially tubular branches, one of said branches having an air inlet and a spray nozzle and serving as a mixing chamber, and another of said branches having an air inlet and a spray nozzle and serving as a second mixing chamber, and also having an automatically controlled auxiliary air inlet port, and a throttle valve adjacent the intersection of said branches and controlling the communication between the two branches above referred to and the third branch, which latter constitutes the outlet port of the carbureter, said throttle valve, when in its closed position, permitting a limited flow from said first-mentioned branch to said outlet branch, and serving to simultaneously control all three of the branches upon an opening movement.

3. A carbureter having three substantially tubular branches, all having their axes substantially in the same plane, one of said branches having an air inlet and a spray nozzle and serving as a mixing chamber, and another of said branches having an air inlet and a spray nozzle and serving as a second mixing chamber and also having an automatically controlled auxiliary air inlet port, and a tubular throttle valve adjacent the intersection of said branches and movable longitudinally in a direction at right angles to the plane of the branches and serving to simultaneously control all three of said branches.

958,477. METHOD OF MANUFACTURING BALL-BEARINGS AND THE LIKE. WILHELM DAHLMANN, Berlin, Germany. Filed Dec. 6, 1906. Serial No. 346,671.



1. The method of manufacturing ball bearings which consists in constructing a substantially solid cage about the balls while the latter are mounted in position between the inner and outer elements of the bearing.

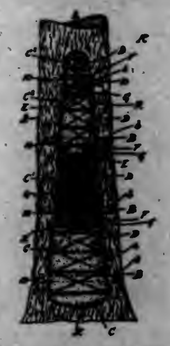
2. The method of manufacturing ball bearings which consists in forming inner and outer channeled rings, mounting the balls between such rings, spacing the balls apart, and constructing a substantially solid cage around the balls while in such positions.

3. The method of manufacturing ball bearings which consists in forming inner and outer channeled rings, mounting the balls between such rings, spacing the balls apart, and casting a cage around the balls while in such positions.

4. The method of manufacturing ball bearings which consists in forming inner and outer channeled rings, mounting the balls between such rings, spacing the balls apart by a mold and casting a cage in said mold.

958,478. PROCESS OF REINFORCING TREES. WELLINGTON E. DAVEY, Kent, Ohio. Filed Apr. 23, 1909. Serial No. 491,836.

1. An improved process of reinforcing a tree having a cavity which is formed in the trunk of the tree and extends to the exterior and longitudinally of the trunk, said process comprising a building up within the cavity of a filling in sections one above another.



2. An improved process of reinforcing a tree having a cavity which is formed in the trunk of the tree and extends to the exterior and longitudinally of the trunk, said process comprising a building up within the cavity of a filling in sections one above another, and contouring the upper end surface of the lower of adjacent filling-sections to permit a slight lateral swaying of the upper of the said adjacent filling-sections with the trunk independent of the lower of the said adjacent filling-sections.

3. An improved process of reinforcing a tree having a cavity which is formed in the trunk of the tree and extends to the exterior and longitudinally of the trunk, said process comprising a building up within the cavity of a filling in sections one above another and supporting the upper of adjacent filling-sections independent of the lower of the said adjacent filling-sections.

4. An improved process of reinforcing a tree having a cavity which is formed in the trunk of the tree and extends to the exterior and longitudinally of the trunk, said process comprising a building up within the cavity of a filling in sections one above another, and supporting adjacent filling-sections from the trunk independent of each other.

5. An improved process of reinforcing a tree having a cavity which is formed in the trunk of the tree and extends to the exterior and longitudinally of the trunk, said process comprising a building up within the cavity of a filling in sections one above another, contouring the upper end surface of the lower of adjacent filling-sections to permit a slight lateral swaying of the upper of said adjacent filling-sections with the trunk independent of the lower of the said adjacent filling-sections and supporting said upper filling-section from the trunk independent of said lower filling-section.

[Claims 6 to 17 not printed in the Gazette.]

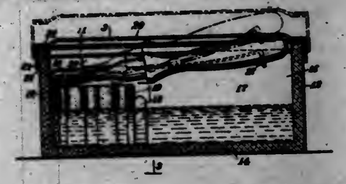
958,479. IRRIGATING-GUTTER. CHARLES DIEHL, Cleveland, Ohio. Filed June 19, 1909. Serial No. 503,087.



1. A gutter block provided with openings extending downwardly through the same with a lateral outlet on one side, and a base flange projecting outwardly under said outlet.

2. A gutter block having a trough at the top and openings extending downwardly through the block from said trough, and an outlet channel extending along the side of the block and intersecting said openings.

958,480. PASTE-BOX. OSCAR DREHER, Stroudsburg, Pa. Filed Apr. 30, 1909. Serial No. 493,111.



1. A container having a brush compartment, a bibulous material for supporting the bristles end of the brush, and a resilient holder for supporting the handle end of the brush and operating to automatically raise the handle of the brush upon the opening of the container.

2. A container having a brush compartment, a cover for said container, means for supporting and moistening the bristles end of a brush, and means operating to lift the handle of the brush and open the cover of the container upon the release of said cover.

3. A container having a compartment for paste or the like, and a brush compartment, a partition subdividing the brush compartment into two sections, a bibulous material within one of said sections and serving to support the bristles of a brush, and means within the other section for supporting the handle of the brush, said means operating to automatically raise said handle upon the opening of the container.

4. A container having a compartment for paste or the like, and a brush compartment, a partition subdividing the brush compartment into two sections, a bibulous material within one of said sections and serving to support the bristles of a brush, and means within the other section for supporting the handle of the brush, said last-mentioned section serving to receive water for moistening the bibulous material and said partition having an aperture therethrough for said water.

5. A holder for paste or the like, comprising a container having a substantially vertical partition subdividing the container into two open-top compartments, a cover for said container, and means disposed within one of said compartments for supporting a brush in a substantially horizontal position and operating to tilt the brush and elevate the handle thereof upon the opening of the cover.

[Claims 6 to 8 not printed in the Gazette.]

958,481. DOOR OR WINDOW GUARD. EDGAR L. DRINKWATER, Chicago, Ill. Filed Dec. 2, 1908. Serial No. 465,719.



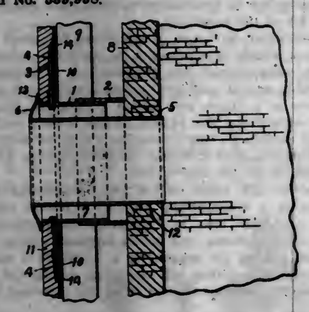
1. The combination with a window frame provided with window-ways of a barrier consisting of perforated upper and lower cross-bars and vertical bars fitting in and extending through the perforations in said cross-bars, sheet metal plates fitting on top of the ends of said upper and lower bars, respectively, and forming adjustable extensions thereof, said plates having depending flanges

fitting over the sides of said cross-bars, the outer ends of said plates constituting tongues which fit in said window-ways and means carried by said cross-bars and extending through said plates for maintaining the latter in their adjusted positions.

2. The combination with a window frame provided with window-ways of a barrier consisting of perforated upper and lower cross-bars, and vertical bars fitting in and extending through the perforations in said cross-bars, inverted channel plates fitting over the ends of said upper and lower bars respectively, and forming adjustable extensions thereof, the outer ends of said extensions fitting in said window-ways said channel plates being slotted to receive therethrough the vertical bars which extend through the portions of the cross-bars underlying said channel plates, bolts extending from said upper and lower bars respectively through the corresponding slots in said channel bars, and clamping nuts upon the ends of said bolts for adjustably clamping said channel bars to said horizontal bars.

3. In a door or window guard, the combination with a frame provided with guide-ways of upper and lower cross-bars and vertical bars rigidly secured thereto, channel plates slidably mounted upon the ends of said upper and lower bars, respectively, and forming adjustable extensions thereof, the outer ends of said plates fitting in said guide-ways said channel plates each being of sufficient length to overlap one or more of said vertical bars and being slotted to receive the same, and means carried by said cross-bars and extending through said channel plates for maintaining the latter in their adjusted positions.

958,482. GUARD FOR CHIMNEY-THIMBLES. JOHN B. P. DUPONT, Springfield, Mass. Filed Jan. 25, 1910. Serial No. 539,998.

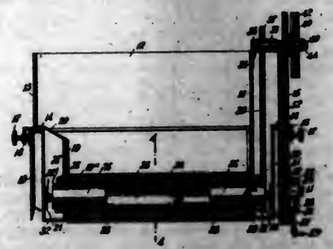


1. As an improved article of manufacture, a thimble guard comprising a cylinder, substantially radial stiffeners fastened at their inner ends to said cylinder, and a foraminous collar mounted on said cylinder and attached to said stiffeners, such collar and stiffeners being adapted to be received between the lathing and plastering around the flue to support the guard.

2. As an improved article of manufacture, a thimble guard comprising a cylinder, an extension fitted to one terminal of such cylinder, substantially radial stiffeners fastened at their inner ends to said cylinder adjacent to the end thereof opposite the terminal where said extension is located, and a foraminous collar mounted on said cylinder and attached to said stiffeners, such collar and stiffeners being adapted to be received between the lathing and plastering around the flue to support the guard.

3. The combination, with a chimney and its thimble, and the studding, lathing and plastering adjacent to such chimney around said thimble, of a thimble guard comprising a cylinder larger in diameter than said thimble and surrounding the same with an air-space between, an extension fitted to the inner terminal of such cylinder, such extension being adjustable to adapt the cylinder with extension to the distance between the outside faces of said chimney and plastering, substantially radial stiffeners fastened at their inner ends to the cylinder, and a foraminous collar mounted on the cylinder and attached to such stiffeners, said stiffeners and said collar being received between said lathing and plastering around the opening therein for the cylinder.

958,483. FEEDING ATTACHMENT FOR FANNING-MILLS. HENRY DYKSTRA, Spring Valley township, McCook county, S. D. Filed Sept. 11, 1909. Serial No. 517,199.



1. A casing mounted upon a fanning mill, and having walls inwardly offset, whereby it can extend partly into the mill, said casing having an inclined bottom provided with an opening, a drum journaled adjacent to said opening, a feed slide in said casing and extending partly over said drum, and means for actuating said drum.

2. A casing mounted upon a fanning mill and to extend partly into the mill, said casing having the bottom inclined from the ends toward the center, and being provided at the center with a transverse depression, said depression having an opening extending longitudinally thereof, a feeding drum journaled within said casing and extending into said depression, and a feed slide extending downward into said casing and having the end projecting over said drum to the side thereof opposite said opening in said depression.

3. In a device of the class described, a feeding drum comprising a hollow cylinder, heads adjustable within said cylinder and projecting from the ends thereof, said cylinder having vanes, and retaining collars upon said heads in combination with means for rotatably mounting said drum, and means for driving the same.

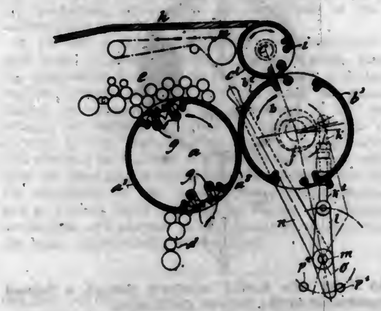
4. A device of the class described, comprising a casing, a feeding drum journaled within said casing, said casing having an outlet opening adjacent to said drum, said drum comprising a hollow cylinder having longitudinal vanes, heads within said cylinder and projecting from the ends thereof, and retaining collars mounted upon said heads, said casing having bearings, said heads having gudgeons journaled in said bearings, and means for driving said drum.

5. A device of the class described, comprising a casing having double side walls, bearings mounted within said walls, a feeding drum positioned between said walls and comprising a hollow cylinder having vanes, heads adjustably mounted within said cylinder and projecting from the ends thereof through said inner walls, said inner walls having openings to receive said heads, said heads having pivots journaled in said bearings and being provided with retaining collars within said double walls, and means for driving said drum.

[Claim 6 not printed in the Gazette.]

958,484. ROTARY PRINTING-MACHINE. ARTHUR B. EVANS and GEORG C. H. WICHMANN, Leeds, England. Filed Jan. 29, 1909. Serial No. 474,961.

1. A rotary printing machine comprising a continuously rotating first cylinder adapted to hold a printing surface, a continuously rotating second cylinder in printing contact with the first cylinder and adapted to hold a plurality of printing surfaces on its periphery, a continuously rotating third cylinder in printing contact with the second cylinder and adapted to hold a single printing surface on its periphery, the diameter of the said third cylinder being a submultiple of that of the said second cylinder, and grippers carried by said third cylinder adapted to retain a sheet to be printed when fed thereto during the rotation of the cylinder.



2. A rotary printing machine comprising a continuously rotating first cylinder adapted to hold a printing surface, a continuously rotating second cylinder in printing contact with the first cylinder and adapted to hold a plurality of printing surfaces on its periphery, and a continuously rotating third cylinder in printing contact with the second cylinder and adapted to hold a single printing surface on its periphery, the diameter of the said third cylinder being a submultiple of that of the said second cylinder, the said three cylinders being adapted to be brought out of printing contact with each other when required, and grippers carried by said third cylinder adapted to retain a sheet to be printed when fed thereto during the rotation of the cylinder.

3. A rotary printing machine comprising a continuously rotating first cylinder, a plurality of printing surfaces on its periphery, a continuously rotating second cylinder of the same diameter as the first cylinder, printing surfaces on the second cylinder equal in number to those on the first cylinder, a continuously rotating third cylinder of a diameter which is a submultiple of that of the second cylinder, a single printing surface on the said third cylinder, the three cylinders being adapted to be moved into and out of printing contact with each other and means carried by the third cylinder for retaining a sheet to be printed when fed thereto.

4. A rotary printing machine comprising a continuously rotating first cylinder, a plurality of printing surfaces on its periphery each adapted to carry a different design, a continuously rotating second cylinder of the same diameter as and in direct printing contact with the first cylinder, printing surfaces on the second cylinder equal in number to those on the first cylinder, a continuously rotating third cylinder having a single printing surface, and means for imparting simultaneously to a sheet to be printed impressions of said designs, one of said impressions being on one face of the sheet and another of said impressions being on the other face.

5. A rotary printing machine comprising a continuously rotating first cylinder, a plurality of printing surfaces on its periphery each adapted to carry a different design, a continuously rotating second cylinder of the same diameter as the first cylinder, printing surfaces on the second cylinder equal in number to those on the first cylinder, a continuously rotating third cylinder having a single printing surface, the three cylinders being adapted to be moved into and out of printing contact with each other, and means for imparting simultaneously to a sheet to be printed impressions of said designs, one of said impressions being on one face of the sheet and another of said impressions being on the other face.

[Claim 6 not printed in the Gazette.]

958,485. EYEGLASS-MOUNT. WALDO G. FAY, Pelham, N. Y. Filed July 20, 1909. Serial No. 508,635.



1. In a lens mount of the character set forth, the combination of the perforated lens, a lens post formed with perforated side bearings, one of which is formed with a female screw thread, a screw bolt passing through one side bearing and through the perforation in the lens and engaging with the female screw thread in the other side bearing, a wedge sleeve on said bolt projecting into the perforation in the lens, and a spring interposed between said wedge and the head of the screw bolt.

2. In a lens mount of the character set forth, the combination of the perforated lens, a lens post formed with perforated side bearings, one of which is formed with a female screw thread, a screw bolt passing through one side bearing and through the perforation in the lens and engaging with the female screw thread in the other side bearing, a wedge sleeve on said bolt projecting into the perforation in the lens, and a spring interposed between said wedge sleeve and the head of the screw bolt, said wedge sleeve and said spring being formed integral.

3. In a lens mount of the character set forth, the combination of the perforated lens, a lens post formed with perforated side bearings, one of which is formed with a female screw thread, a screw bolt passing through one side bearing and through the perforation in the lens and engaging with the female screw thread in the other side bearing, a wedge sleeve on said bolt projecting into the perforation in the lens, and a spring interposed between said wedge sleeve and the head of the screw bolt, said wedge sleeve and said spring being formed integral of a single piece of metallic wire.

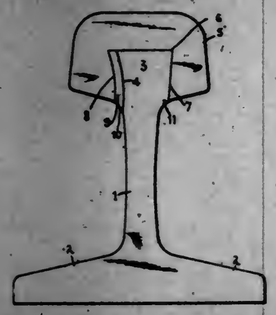
4. In a lens mount of the character set forth, the combination of the perforated lens, a lens post formed with perforated side bearings, one of which is formed with a female screw thread, a screw bolt passing through one side bearing and through the perforation in the lens and engaging with the female screw thread in the other side bearing, a wedge sleeve on said bolt projecting into the perforation in the lens, and a spring interposed between said wedge sleeve and the head of the screw bolt, said screw bolt being formed with a countersink on the under side of its head, for the purpose described.

958,486. RAIL. JOHN C. GETTY, Pittsburg, Pa., assignor of one-half to Joseph H. Dittman, Pittsburg, Pa. Filed Feb. 12, 1910. Serial No. 543,473.

1. The combination of a rail web having the upper edge thereof provided with a longitudinal dovetail tongue, one side of the said tongue being concave and the other side inclined, a head having the lower face thereof provided with a dovetail groove receiving the tongue of said web and having one wall inclined and engaging the inclined side of the tongue throughout, the other wall of said groove confronting the concave side of said tongue being convex and spaced therefrom, and a key fitting between the concave and convex walls of said tongue and said head and snugly engaging throughout said wall.

2. The combination of a rail web having the upper edge thereof provided with a dovetail enlargement constituting

a tongue and extending from one end of the web to the opposite end, one side of the said tongue inclined and the other side having a concavity formed therein extending from one end of said tongue to the opposite end thereof, a head having the under face thereof provided with a dovetail groove extending from one end of said head to the opposite end thereof and having one wall inclined and engaging the inclined side of the tongue and its other wall convex and confronting and spaced from the concave side of said tongue, and a curved key between and engaging throughout the concave side of said tongue and the convex wall of said head.



3. The combination of a rail web having the upper edge thereof provided with a dovetail enlargement constituting a tongue extending from one end of the web to the opposite end, one side of the said tongue being inclined and its other side having a concavity formed therein extending from one end of said tongue to the opposite end thereof, a head having the lower face thereof provided with a dovetail groove extending from one end of said head to the opposite end thereof, and having one wall inclined and engaging throughout the inclined side of the tongue and its other wall convex and confronting and spaced from the concave side of said tongue, a curved key fitting between and engaging throughout the concave side of said enlargement and the convex wall of said head, and a flange carried by the lower edge of said key and extending from one end of said key to the opposite end thereof.

958,487. SHUTTLE-BINDER FOR LOOMS. ALBERT A. GORDON, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Feb. 13, 1908. Serial No. 415,653.



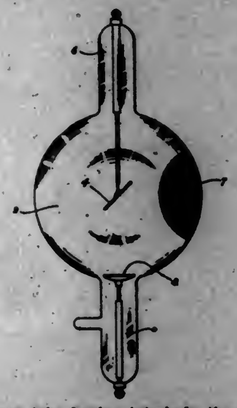
A shuttle binder for a loom, comprising a non-metallic bar pivotally supported near one end and having a recess upon its inner side, and reinforcing stripe on its upper and lower edge overlapping said recess, a convexed or outwardly curved flat spring in said recess with its ends abutting against the ends of said recess, and a strip of flexible material extending over said spring, and secured at each end to the binder.

958,488. X-RAY TUBE. HENRY GEHRE, Hartford, Conn. Filed Nov. 23, 1909. Serial No. 529,567.

1. An X-ray tube having an artificially-formed cellular portion disposed in the path of the X-rays.

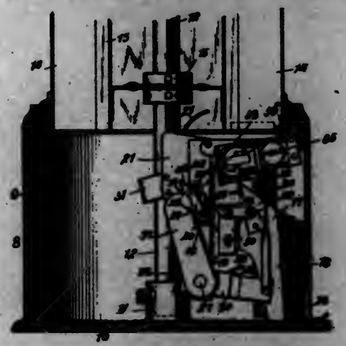
2. An X-ray tube having an interior artificially-formed cellular portion disposed in the path of the X-rays.

3. An X-ray tube having a frosted surface disposed in the path of the X-rays.



4. An X-ray tube having interiorly thereof, a frosted surface disposed in the path of the X-rays.

958,489. COIN-ACTUATED MECHANISM. ERIK S. HAGEN, Chicago, Ill., assignor, by mesne assignments, to Globe Vending Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 29, 1907. Serial No. 399,704.



1. In coin actuated mechanism, the combination of an actuating arm provided with a pocket adapted to receive and hold a coin, an abutment, and a spring adapted to throw the actuating arm into violent contact with the abutment to dislodge the coin, substantially as described.

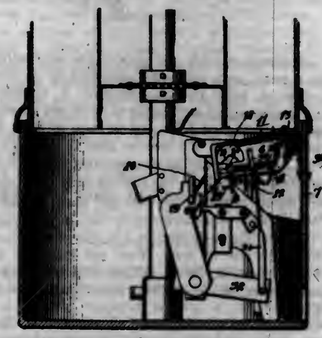
2. In coin actuated mechanism, the combination of an actuating arm provided with a pocket adapted to receive and hold a coin, discharging mechanism adjacent to the actuating arm and adapted to be locked thereto by the insertion of a coin, a spring adapted to create a tension on the actuating arms, releasing mechanism adapted to be actuated at a predetermined time, and a stop or abutment for abruptly limiting the movement of the actuating arm, and thereby dislodging the coin, substantially as described.

3. In coin actuated mechanism, the combination of a rock shaft, an actuating arm rigidly secured to the shaft, discharging mechanism pivoted to the shaft, a spring adapted to exert a tension on the shaft, means for actuating the spring, a coin pocket on the actuating arm adapted to enable the coin to lock the actuating arm with the discharging mechanism, an abutment for limiting the movement of the parts, and releasing mechanism for releasing the parts from spring tension, substantially as described.

4. In coin actuated mechanism, the combination of a rock shaft, a yoke journaled to the rock shaft, discharging mechanism journaled to the rock shaft, a spring connection between the yoke and the shaft for creating a tension on the shaft by the movement of the yoke, a plunger for moving the yoke, an actuating arm rigidly secured to the shaft, a coin pocket on the actuating arm adapted to return a coin in position to lock said arm with the discharging mechanism, an abutment for limiting the movement of the arm and discharging mechanism, and releasing mechanism actuated by the movement of the yoke, substantially as described.

5. In coin actuated mechanism, the combination of a rock shaft, a yoke journaled to the rock shaft, discharging mechanism journaled to the rock shaft, a spring connection between the yoke and the shaft for creating a tension on the shaft by the movement of the yoke, a plunger for moving the yoke, an actuating arm rigidly secured to the shaft, a coin pocket on the actuating arm adapted to return a coin in position to lock said arm with the discharging mechanism, an abutment for limiting the movement of the arm and discharging mechanism, and a locking latch adapted to engage the discharging mechanism and adapted to be released by the movement of the yoke, substantially as described.

958,490. COIN-CHUTE. ERIK S. HAGEN, Chicago, Ill., assignor, by mesne assignments, to Globe Vending Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 29, 1907. Serial No. 399,705.



1. A coin chute in the form of a runway downwardly sloping and inclined sidewise to enable the coins to roll down the chute and rest against the wall of the same without falling outwardly therefrom, and, having in its wall an opening adapted to permit a coin to topple therethrough, a platform, behind the runway and adjacent to the opening, adapted to receive the coin, and a finger, on the edge of the platform, adapted to divert a washer or perforated slug, substantially as described.

2. A coin chute in the form of a runway downwardly sloping and inclined sidewise to enable the coins to roll down the chute and rest against the wall of the same without falling outwardly therefrom, and, having in its wall an opening adapted to permit a coin to topple therethrough, a platform, behind the runway and adjacent to the opening, adapted to receive the coin, and a kicker, adapted to operate through the platform, for dislodging slugs or tokens therefrom, substantially as described.

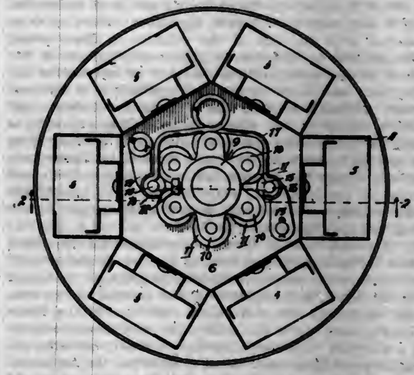
3. A coin chute in the form of a runway downwardly sloping and inclined sidewise to enable the coins to roll down the chute and rest against the wall of the same without falling outwardly therefrom, and, having in its wall an opening adapted to permit a coin to topple therethrough, a platform, behind the runway and adjacent to the opening, adapted to receive the coin, a finger, on the edge of the platform, adapted to divert a washer or perforated slug, and a kicker, adapted to operate through the platform, for dislodging slugs or tokens therefrom, substantially as described.

4. A coin chute in the form of a runway downwardly sloping and inclined sidewise to enable the coins to roll down the chute and rest against the wall of the same without falling outwardly therefrom, and, provided with an opening adapted to allow a coin to topple sidewise therethrough, a platform, behind the chute and adjacent to the opening, the runway and platform being provided with slots, and kickers operating through the slots, substantially as described.

5. A coin chute in the form of a runway downwardly sloping and inclined sidewise to enable the coins to roll down the chute and rest against the wall of the same without falling outwardly therefrom, and, provided with an opening adapted to allow a coin to topple sidewise therethrough, a platform, behind the chute and adjacent to the opening, the runway and platform being provided with slots, kickers operating through the slots, and a rock shaft to which the kickers are secured, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

958,491. CENTERING MECHANISM FOR ROTARY VENDING-MACHINES. ERIK S. HAGEN, Chicago, Ill., assignor, by mesne assignments, to Globe Vending Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 29, 1907. Serial No. 399,706.



1. In combination with a rotary package carrier having a plurality of chutes, a fixedly positioned member, a plurality of rollers pivoted to said member and forming, in effect, a corrugated trackway, and a spring actuated member on the package carrier adapted to be held in contact with said rollers, substantially as described.

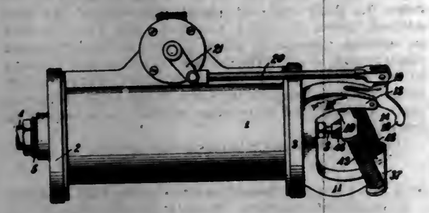
2. In combination with a rotary package carrier having a plurality of chutes, a fixedly positioned member, a plurality of rollers pivoted to said member and forming, in effect, a corrugated trackway, an arm pivoted to the package carrier, and a spring for holding the arm in coöperative relation with the track rollers, substantially as described.

3. In combination with a rotary package carrier having a plurality of chutes, a fixedly positioned member, a plurality of rollers pivoted to said member and forming, in effect, a corrugated trackway, an arm pivoted to the package carrier, a roller on said arm, and a spring for holding said roller in contact with the track rollers, substantially as described.

4. In combination with a rotary package carrier having a plurality of chutes, a fixedly positioned member, a plurality of rollers pivoted to said member and forming, in effect, a corrugated trackway, a plurality of arms pivoted to the package carrier, a roller for each arm, and a spring connecting the free ends of the arms for holding the rollers on the arms in yieldable contact with the track rollers, substantially as described.

5. In combination with a rotary package carrier, a fixedly mounted center post, a collar rigidly secured to the center post and having pivoted thereto a roller for each compartment of the package carrier, a pair of oppositely disposed arms pivoted to the carrier, a roller on the free end of each arm, and a spring connecting the free ends of the arms and holding the rollers thereon in engagement with the track rollers, substantially as described.

958,492. WATER-MOTOR. JOHN N. HARDY, Columbus, Ohio. Filed July 27, 1909. Serial No. 509,773.



1. A device of the character specified, comprising a cylinder, a piston movable therein, a piston rod connected with the piston and having a recess in the end adjacent the piston, a valve controlling the admission of the motive fluid to and from the cylinder, oppositely extending arms connected with the end of the cylinder, a three armed rocker pivoted on one arm, a link connecting one of the arms with the valve, a frame pivoted by one end to the other arm, said frame comprising a plurality of sections, springs normally pressing the sections away from each other, a roller on the section remote from the arm to which the frame is pivoted, said roller engaging the rocker, and moving between the free arms thereof, said arms having each a stop for engagement by the roller, and a rod pivoted to the frame and extending into the bore of the piston rod, and provided with stops for engagement by the piston rod for the purpose specified.

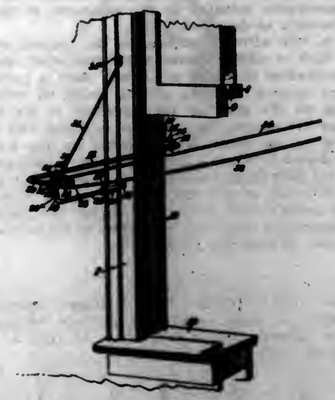
2. In a water motor, a valve for controlling the admission of the motive fluid, and means for operating the valve, said means comprising oppositely arranged arms extending from the motor, a three armed rocker pivoted on one arm, a link connecting one of the arms with the valve, a frame pivoted by one end to the other arm, said frame comprising a plurality of sections, springs normally pressing the sections away from each other, a roller on the outer section of the frame, said roller engaging the rocker and moving between the free arms thereof, each of said arms having a stop for engagement by the roller a rod pivoted to the frame, and having a lost motion connection with a reciprocating part of the motor for the purpose specified.

958,493. CLOTHES-LINE HOLDER. ANTON HEINZINGER, New York, N. Y. Filed May 18, 1909. Serial No. 496,711.

1. The combination of a rod, means for journaling the same upon a window jamb, means for supporting a line from said rod, a second rod loosely mounted upon said window jamb and provided with a portion for engaging said first-mentioned rod in order that said second-mentioned rod may serve as a brace for said second-mentioned rod, an additional rod for bracing said second rod and means controllable at will for adjusting the length of said second-mentioned rod.

2. The combination of a rod, means for journaling the same upon a jamb, said rod being provided at its outer or free end with a bent portion for supporting a line, a second rod for bracing said bent portion, and an additional rod connected with said second-mentioned rod for bracing the latter.

3. A device of the character described, comprising a knob, a rod journaled relatively to said knob and movable relatively to said knob as a center, said rod being provided at its outer or free end with a projecting portion containing a plurality of notches, means for supporting a line from either of said notches as desired, said line thereby occupying either of two different planes, one of said planes intersecting said knob so that said line may be partially wound thereupon when said rod is turned, the other of said planes being spaced a little distance from said knob, so that when the line occupies the plane last mentioned it is unable to engage said knob.



4. The combination of a rod, means for journaling the same upon a jamb, said rod being provided at its outer or free end with a bent portion carrying a plurality of notches, an eye engaging said outer or free end of said rod and adapted to be moved from one of said notches to another in order that said eye may be placed near the main body portion of said rod or spaced a little distance therefrom as desired, brace rods for holding said outer or free end of said first-mentioned rod, and means for mounting a line upon said eye.

958,494. PROCESS OF MAKING FLOUR. CHARLES HERENDEEN, Chicago, Ill. Filed July 24, 1909. Serial No. 509,438.

1. The process of making flour which consists in subjecting grits or meal to the action of steam for a sufficient period to disrupt the starch cells therein, passing the resulting product in a thin film through rolls to flake the same, grinding the resulting flakes into flour and mixing therewith a larger quantity of ordinary flour, in which the starch cells are not ruptured.

2. The process of making flour which consists in subjecting grits or meal to the action of steam for a sufficient period to disrupt the starch cells therein, passing the resulting product in a thin film through cold rolls to flake the same, drying said flakes, grinding the same into flour, and mixing therewith a larger quantity of ordinary flour in which the starch cells are not ruptured.

958,495. ART OF MAKING FLOUR. CHARLES HERENDEEN, Chicago, Ill. Filed Aug. 6, 1909. Serial No. 511,563.

The process of making baker's flour having an unusual capacity for absorbing moisture, which consists in moistening flour having a high starch content to form a paste, spreading this paste into a thin film and disrupting the starch cells therein and drying such paste by passing it through rollers heated to the required temperature, grinding the product, and mixing therewith a larger quantity of ordinary baker's flour in which the starch cells are not ruptured.

958,496. FLOUR. CHARLES HERENDEEN, Chicago, Ill. Filed Feb. 14, 1910. Serial No. 543,652.

1. As a new article of manufacture, a flour, comprising a mixture of a quantity of flour in which the starch cells have been ruptured, with a larger quantity of flour in which the starch cells have not been ruptured.

2. As a new article of manufacture, a flour, comprising a mixture of a quantity of flour in which the starch cells have been ruptured, with a quantity of flour in which the starch cells have not been ruptured, in substantially the proportions set forth.

958,497. WRITING-MACHINE. EDWARD B. HESS, New York, N. Y., assignor to Royal Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 23, 1908. Serial No. 454,420.



1. A writing machine having a transversely movable carriage, a revoluble platen carried thereby, an adjustable carriage stop located in rear of the platen, a paper table normally interposed between the platen and stop and means whereby the table may be moved upwardly and rearwardly away from the platen to uncover the stop to the view and convenient access of the operator.

2. A writing machine having a transversely movable carriage, a revoluble platen carried thereby, a series of adjustable tabulator stops located in rear of the platen, a paper table normally interposed between the platen and the tabular stops and means whereby the table may be moved upwardly and rearwardly away from the platen to uncover said stops to the view and convenient access of the operator.

3. A writing machine having a transversely movable carriage, a revoluble platen carried thereby, an adjustable margin stop located at the right hand side of the carriage and in rear of the platen, a paper table normally interposed between the platen and said margin stop and means whereby the table may be moved upwardly and rearwardly away from the platen to uncover said stop to the view and convenient access of the operator.

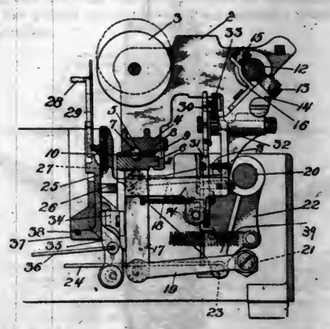
4. A writing machine having a transversely movable carriage, revoluble platen carried thereby, an adjustable carriage stop located in rear of the platen, a swinging frame pivoted in rear of the transverse line in which the stop is located and adapted to be swung upwardly and rearwardly and a paper table carried by said frame and normally located between the platen and stop but moving with the frame upwardly and rearwardly to uncover the stop to the view and convenient access of the operator.

5. A writing machine having a transversely movable carriage, a revoluble platen carried thereby, a support pivoted at its rear end in the carriage and extending forward toward the platen and a paper table carried in the front end of said support, whereby the support may be swung upwardly and rearwardly to carry the table rearwardly bodily away from the platen.

[Claim 6 not printed in the Gazette.]

958,498. BALL-BEARING FOR TYPE-WRITING-MACHINE CARRIAGES. EDWARD B. HESS, New York, N. Y., assignor to Royal Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 10, 1910. Serial No. 537,235.

1. A typewriting machine comprising a carriage shift rail with a portion of a ball race in its upper face, the bottom rail of a shifting carriage having on its under face the companion portion of said ball race, bearing balls in said race, annular gears loosely encircling the balls, a rack carried by the shift rail and with which said gears mesh on one side and a rack carried by the carriage bottom rail with which the gears mesh on the opposite side.



2. A typewriting machine comprising a carriage shift rail with a portion of a ball race in its upper face, the bottom rail of a shifting carriage having on its under face the companion portion of said ball race, bearing balls in said race, horizontally disposed annular gears loosely encircling the balls, a rack carried by the shift rail and with which said gears mesh on one side and a rack carried by the carriage bottom rail with which the gears mesh on the opposite side.

3. A typewriting machine comprising a carriage shift rail with a portion of a ball race in its upper face, the bottom rail of a shifting carriage having on its under face the companion portion of said ball race, bearing balls in said race, annular gears loosely encircling the balls, a rack integral with the shift rail and with which said gears mesh on one side and a rack integral with the carriage bottom rail with which the gears mesh on the opposite side.

4. A typewriting machine comprising a carriage shift rail with a portion of a ball race in its upper face, the bottom rail of a shifting carriage having on its under face the companion portion of said ball race, bearing balls in said race, horizontally disposed annular gears loosely encircling the balls, a rack carried by the shift rail and with which said gears mesh on one side and a rack carried by the carriage bottom rail with which the gears mesh on the opposite side, said race being vertically below the axis of the platen, and a guide in rear of the platen and in the horizontal plane of its axis upon which the carriage is guided.

5. A typewriting machine comprising a carriage supporting rail with a portion of a ball race in its upper face, the bottom rail of a carriage having on its under face the companion portion of said ball race, bearing balls in said race, horizontally disposed annular gears loosely encircling the balls, a rack carried by the carriage supporting rail and with which said gears mesh on one side and a rack carried by the carriage bottom rail with which the gears mesh on the opposite side.

[Claims 6 and 7 not printed in the Gazette.]

958,499. WATER-HEATER. WILLIAM T. HICKS, Bloomington, Ind. Filed Sept. 2, 1909. Serial No. 515,883.

1. In a water heating apparatus, the combination with a reservoir having water inlet and outlet pipes connected therewith, of a shell constituting a combustion chamber located entirely within the reservoir and separated therefrom, said shell being located at a point intermediate the ends of said reservoir, said shell and said reservoir being each provided with openings in line with each other, flanged collars inserted in the openings in the reservoir with the flanges surrounding the openings in the shell and extending between the shell and the wall of the reservoir, rivets passing through the shell, the collar and the wall of the reservoir to secure the parts together, said

openings being so arranged whereby combustion may be maintained within the shell.



2. In a water heating apparatus, the combination with a reservoir having water inlet and outlet pipes connected therewith, of a shell constituting a combustion chamber located entirely within the reservoir and separated therefrom, said shell being located at a point intermediate the ends of said reservoir, said shell and said reservoir being each provided with openings in line with each other, flanged collars inserted in the openings in the reservoir with the flanges surrounding the openings in the shell and extending between the shell and the wall of the reservoir, rivets passing through the shell, the collar and the wall of the reservoir to secure the parts together, a fuel supporting element located within the shell, said openings being so located as to furnish a draft inlet below said fuel supporting element, a fuel inlet opening above said fuel supporting element, and a draft outlet above the same.

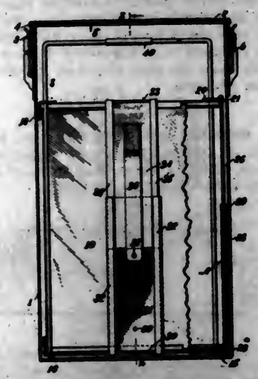
3. In a water heating apparatus, the combination with an upright reservoir having water inlet and outlet pipes connected thereto, said reservoir having a convex bottom, of a shell constituting a combustion chamber located entirely within the reservoir and separated therefrom, said shell being located intermediate the top and bottom of said reservoir, said shell being provided with openings communicating through the side of the reservoir whereby combustion can be maintained within the shell, said convex bottom being provided with a central opening, and a sediment collecting drum connected to said central opening.

958,500. ADJUSTABLE-RACK REVERSIBLE DEVELOPING-TANK. PERCY Y. HOWE, Yonkers, N. Y. Filed June 9, 1909. Serial No. 501,015.

1. A rack adapted to be used for holding photographic plates, comprising a frame, a pair of cross heads mounted on said frame and adapted to approach or recede from each other, said cross heads having means for retaining the edges of the photographic plates, and an extensible cover forming a retaining wall for the plates and adapted to connect said cross heads.

2. A rack adapted to be used in reversible developing tanks, comprising a frame, a sliding frame mounted on said first frame having a pair of oppositely disposed cross heads to engage the edges of the photographic plates, means for rigidly securing said cross heads to each other in different positions, and an extensible door connecting said cross heads and adapted to be opened to permit the insertion of the photographic plates.

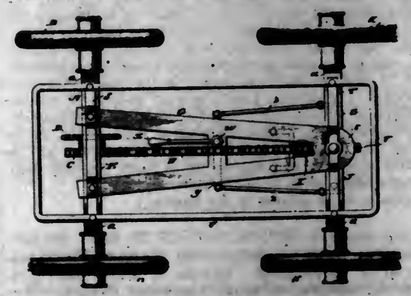
3. A photographic developing rack adapted to be used in reversible developing tanks, comprising a frame, cross heads mounted to slide on said frame and having arms projecting toward each other and sliding one upon the other, means for fixing said arms against sliding, and an extensible door connecting said cross heads and adapted to be opened to permit the photographic plates to be placed between said cross heads.



4. A photographic developing rack adapted to be used in a reversible developing tank, comprising a pair of substantially rectangular frames, cross heads sliding on said frames and having means for engaging the edges of the photographic plates, said cross heads having arms projecting toward each other and sliding one upon the other, means for locking said arms together to maintain said cross heads at a fixed distance from each other, and a door hinged to one of said cross heads and having a sliding gate adapted to be extended toward the opposite cross head, said opposite cross head having a keeper for engaging the end of said gate.

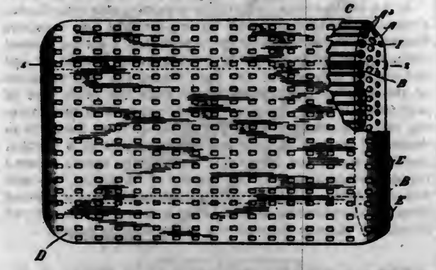
5. A developing rack adapted to be used with a reversible developing tank, comprising a frame, cross heads adapted to engage the edges of the photographic plates and having shoes sliding on said frame, an extensible door mounted between said cross heads and adapted to retain the photographic plates on one side, said shoes being adapted to engage the edges of the plates opposite said door, and means for fixing said cross heads with respect to each other in any one of a plurality of different positions.

958,501. MOTOR-VEHICLE. FRANK H. JOHNSON, Faribault, Minn. Filed Mar. 11, 1909. Serial No. 482,753.



A motor vehicle comprising upper and lower main-frame members, a front transverse frame, of open form, interposed between and pivoted to said frame members, a shaft journaled in the end portions of said transverse frame, ground wheels on said shaft, a sprocket gear surrounding the shaft, a universal joint interposed between the shaft and said gear, a sprocket belt extending around said gear and rearwardly from the same, a vertically-disposed holder and guide located intermediate the lower and upper stretches of said belt and having sides in which are openings and also having the forward walls of said openings integral at both ends with the sides and curved in conformity to and arranged adjacent the sides of the peripheral toothed portion of the sprocket gear, and upper and lower arms integral with and divergent from the rear portion of said holder and guide and fixedly connected to the upper and lower main-frame members.

958,502. PILLOW. JOHN L. KENNEDY, Washington, D. C. Filed Apr. 8, 1910. Serial No. 554,092.



1. In a pillow or the like, the combination with two cap end pieces of spring metal, of a flexible pillow body member secured at short corresponding intervals to the entire marginal portion of each end piece, to connect the two peripherally, and rigid bars of adjustable length connecting said cap end pieces.

2. A pillow or the like consisting of similar oblong end pieces peripherally connected on all sides by numerous cords and held at the desired distance apart by a plurality of rods of adjustable length lying within the space inclosed by the cords.

3. In a pillow or the like, the combination with two oppositely turned, outwardly convex end pieces of spring metal each provided on all sides with marginal perforations, of central rods of adjustable length holding said end pieces parallel and at the desired distance from each other.

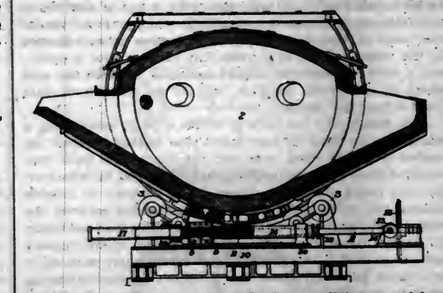
4. The combination with two oppositely turned cup-like end pieces of spring metal, of a flexible open-work pillow body member connecting on all sides corresponding marginal points of said end pieces, and means for forcibly increasing the separation of the end pieces by the action of screws projecting through one end piece.

5. The combination with two similar oblong, cup-like end pieces of spring metal one provided with inwardly projecting, rigid studs in a plane midway between the planes of its longer margins and the other with correspondingly located inwardly projecting screws revolubly but not longitudinally movable in the bottom wall of the cup, strut-like rods each having one end adapted to slip over one of said studs and the opposite end adapted to receive the corresponding screw, and a flexible pillow body member connecting the marginal portions of the cups at numerous points on all sides of the latter.

958,503. TIPPING FURNACE, MIXER, &c. JOHN L. KLINDWORTH, Bellevue, Pa., assignor to Mesta Machine Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed July 29, 1909. Serial No. 510,160.

1. The combination with a tilting or tipping vessel, having a bracket member secured to its lower portion, of a cross-head trunnioned in bearings carried by said bracket, a nut carried by the cross-head, a slideway in which said nut is mounted to travel, an actuating screw engaging the nut, and casings or cylinders surrounding the screw; substantially as described.

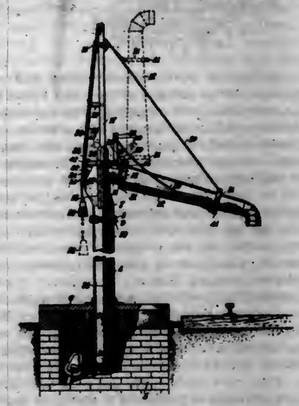
2. The combination with a tilting or tipping vessel having an actuating nut, of a screw shaft engaging said nut, means for rotating said shaft, cylinders or casings connected to said nut and inclosing the screw portion of said shaft, and bearings for the cylinders or casings in which they are guided and have a sliding bearing; substantially as described.



3. The combination with a tipping or tilting vessel having an actuating nut, of a screw shaft engaging said nut, means for rotating said shaft, cylinders or casings connected to the nut and surrounding the shaft and forming lubricant reservoirs, and bearings for the cylinders or casings in which they are guided and have a sliding bearing; substantially as described.

4. The combination with a tipping or tilting vessel having an actuating nut, of a screw shaft engaging said nut, means for rotating said shaft, cylinders or casings connected to the nut and surrounding the shaft and forming lubricant reservoirs, and bearings for the cylinders or casings in which they are guided and have a sliding bearing; the nut also having a guide bearing; substantially as described.

958,504. STAND-PIPE FOR RAILWAY WATER-SUPPLY. PATRICK H. KNIGHT, St. Joseph, Mo. Filed Sept. 13, 1909. Serial No. 517,437.



1. A stand pipe for railway water supply, comprising a stand pipe; a head for said stand pipe having brackets extended from the top and rear thereof; a bell crank lever pivotally mounted on the top bracket and provided with a counter-balancing weight disposed to normally rest upon the rear bracket; a valve controlling the flow of water through the said stand pipe; and operating means for said valve connected with the said bell crank by means of pull rods.

2. A stand pipe for railway water supply, comprising a stand pipe; a head for said stand pipe having brackets extended from the sides thereof and from the top and rear thereof; a yoke-shaped mast secured to said side and rear

brackets and extended above the said stand pipe to support the running rigging for the delivery spout; a shaft extended between the sides of said yoke near the upper end thereof; anti-friction devices mounted on said shaft and on the said rear bracket; a delivery spout hingedly secured to said head to envelop the delivery end of said head; a flexible hoisting member secured to said spout and reeved over said pulley, said anti-friction devices being mounted in the upper end of said yoke and on said rear bracket; and a counter-balancing weight sufficient to raise the said spout to a vertical position, secured to the end of said flexible hoisting member.

3. A stand pipe for railway water supply, comprising a stand pipe; a head for said stand pipe having brackets extended from the sides, rear and top thereof; a mast constructed from strap-shaped members arranged in tripod order, the lower extensions whereof are grooved to provide housing for valve pull rods; a shaft extended between the sides of said members of said mast near the upper end thereof; pulleys mounted on said shaft; a delivery spout hingedly secured to said head; flexible hoisting members secured to said spout and reeved over said pulleys; counter-balancing weights mounted on said hoisting members and adapted to raise the said spout; a bell crank lever mounted on the top bracket on said head; a counter-balancing weight secured to the said lever and adapted to rest upon the rear bracket on said head; a valve to control the flow of water from said stand pipe; means for operating the said valve; pull rods connecting said means with said bell crank, said rods extending through said housing in said mast; and means for operating the said lever to raise the said pull rods and counter-balancing weight connected therewith.

958,505. ANIMAL-TRAP. PETER J. KOTTUM, Sacred Heart, Minn. Filed Mar. 23, 1909. Serial No. 485,154.



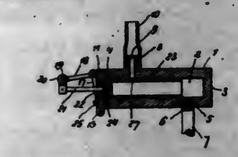
1. The combination with a base frame, and a spring pressed rockable frame hinged at one end upon the base frame, of a clamping bail hinged at the opposite end of said base frame and having straight side members, the said rockable frame slidably engaging the said side members of the clamping bail and adapted when in depressed position to hold the said clamping bail in a vertical position and at right angles to the base frame, and means for releasably holding the rockable frame depressed against the tensional force of the spring, the said means including a pivoted trigger arm carried by the rockable frame near one side thereof and extending across the space between the side members of the clamping bail.

2. The combination with a rectangular base frame, a rectangular rockable clamping frame formed of flat bars, and having its side members perforated, the rockable frame being hinged at one end on a corresponding end of the base frame, and two springs having arms respectively engaged at their free ends with the rockable frame and side members of the base frame, of a clamping bail hinged at its ends upon the opposite end of the base frame, said clamping bail having its side members passed through the perforations in the side members of the rockable frame and being disposed in a vertical position, when the rockable frame is in depressed position, and means for detachably holding the rockable frame depressed against the tensional force of the springs.

3. The combination with a rectangular base frame formed of wire, a rockable clamping frame formed of flat metal bars and having rectangular form, said frame being hinged at its rear end on a corresponding end of the base frame, and two springs formed of coiled resilient wire, having arms that have hooked engagement at their ends on the base frame and the clamping frame, of a clamping bail formed of wire rod in rectangular shape, the lower ends of the side members of said clamping bail having hinged engagement with the front transverse member of the base frame, and a device for holding the clamping frame depressed against tension of the springs, comprising a supplementary cross bar on the rockable frame provided near one end with spaced parallel flanges, a trigger arm having a heel block that is pivoted between the said flanges, a rockable latch dog, having a finger that engages at its end in a notch in the heel block, and a rock arm hinged at its lower end on a side member of the base frame, said rock arm having a perforation in its upper end portion wherein a toe on the other end of the latch dog is inserted.

4. An animal trap, comprising a rectangular base frame, a rectangular clamping bail having straight side members hinged to the front end of the base frame, a spring pressed clamping frame rectangular in shape and hinged at one end on the rear end of the base frame, the side members of the said spring pressed frame near the other end of said frame loosely engaging the side members of the clamping bail and adapted when the spring pressed frame is in depressed position to hold the clamping bail in a vertical position, means for detachably holding the spring pressed frame depressed against the tension of its spring, the said means including a trigger arm carried by the spring pressed frame, and extending when the trap is set in the path of an animal passing through the said clamping bail.

958,506. AUTOMATIC GAS-VALVE. JOHN HRIVNÁK and JOHN BATOS, Blair Station, Pa. Filed Nov. 26, 1909. Serial No. 529,944.

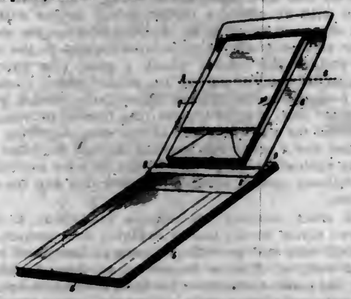


1. In an automatic gas valve, a valve body adapted to be supported by a gas supply pipe, said body having a bore formed therein communicating with the gas supply pipe, a nipple carried by said body and adapted to communicate with said bore, a tubular piston slidably mounted in the bore of said body and provided with a port adapted to register with said nipple and establish communication between said nipple and said gas supply pipe, means located exteriorly of said valve body and adapted to move said piston upon a reduction in the pressure of gas admitted to said valve body, said means including a piston rod connecting with said piston, a rock shaft indirectly connected to said piston rod, and a weighted lever for rocking said shaft.

2. In a gas valve, the combination with a gas supply pipe, of a valve body adapted to be carried thereby, said body having a bore formed therein and adapted to communicate with said gas supply pipe, a nipple carried by said valve body, a tubular piston slidably mounted in the bore of said valve body and provided with a port adapted to register with said nipple and establish communication between said nipple and said gas supply pipe, a detachable plate carried by one end of said body, a piston rod extending through said plate and connecting with said tubular piston, and means carried by said plate and adapted to move said piston rod upon a reduction in the pressure of gas entering said body.

3. In a gas valve, the combination with a gas supply pipe, of a valve body adapted to be carried thereby, said body having a bore formed therein and adapted to communicate with said gas supply pipe, a nipple carried by said valve body, a tubular piston slidably mounted in the bore of said valve body and provided with a port adapted to register with said nipple and establish communication between said nipple and said gas supply pipe, a detachable plate carried by one end of said body, a piston rod extending through said plate and connecting with said tubular piston, means carried by said plate and adapted to move said piston rod upon a reduction in the pressure of the gas entering said body, said means including a rock shaft carried by one edge of said plate, a crank mounted upon one end of said rock shaft and adapted to connect with said piston, and a weighted lever mounted upon the opposite end of said rock shaft.

958,507. WRITING-TABLET. RUDOLPH C. KUHN, Minneapolis, Minn. Filed Oct. 2, 1909. Serial No. 520,615.



1. A writing tablet comprising a writing pad formed from paper leaves and provided with a stiff back-piece; a cover for said pad suitably attached to the said back-piece; and a pocket attached to the said cover and opening toward the hinge thereof, said pocket having three equally extensible accordion-folded side-sections.

2. A writing tablet comprising a writing pad; a cover formed from paper leaves adapted to infold said pad; and a pocket attached to the said cover and opening toward the hinge thereof, said pocket having three equally extensible accordion-folded side-sections, said sections being disconnected at the corners of said pocket.

3. A writing tablet comprising a writing pad; a cover infolding said pad and suitably connected thereto, said cover having a front piece molded to form an outwardly extended portion adjacent to the hinge thereof; and a pocket attached to said cover and opening toward the hinge thereof, and toward the said outwardly extended portion, and so arranged that the said outwardly extended portion closes said pocket when the cover is folded in closed position.

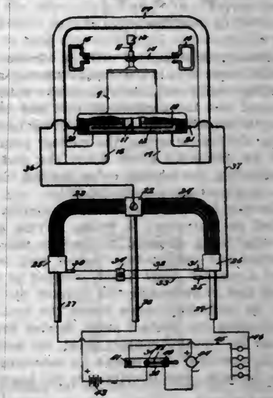
4. A writing tablet comprising a writing pad composed of leaves of paper; a cover infolding said pad and suitably attached thereto, said cover being molded to form an outwardly extended portion adjacent to the hinge thereof; and a pocket attached to said cover, and opening toward and adjacent to said outwardly extended portion, said pocket embodying three equally extensible accordion folded side sections, said sections being disconnected at the corners of said pocket.

5. A writing tablet comprising a writing pad formed of leaves of paper; a double cover for said pad infolding the same and suitably attached thereto, one of said covers being molded to form two vertically extended portions, one of said portions being adjacent to the hinge of said cover and one adjacent to the opposite end thereof; and a pocket attached to said cover between said vertically-extended portions, said pocket embodying three equally extensible accordion-folded side-sections.

958,508. SHUNT FOR ELECTRIC METERS. ROBERT C. LANPHIER, Springfield, Ill., assignor to Sangamo Electric Company, Springfield, Ill., a Corporation of Illinois. Filed Sept. 4, 1909. Serial No. 516,178.

1. A current shunt, having end and intermediate terminals, a bridging connection between said end terminals, a variable resistance member adapted for connection to an instrument, and means adjustably connecting said variable resistance member to said bridging connection.

2. A current shunt, composed of two main members of predetermined resistance not adapted to be varied, connected at their inner ends to a common terminal, a third member of higher resistance connecting the outer ends of said main members, and means adjustably connected with said third member, and operating to vary the potential between said common terminal and said third member for a given flow of current through the shunt.



3. The combination of a current shunt having two main resistance members connected at their inner ends to a common terminal, and a bridging connection between the outer ends of said members, with a derived circuit connected at one end with said common terminal, and means adjustably connected with said derived circuit and said bridging connection, whereby the proportion of current flowing through said derived circuit may be varied when the main current flows through one of said main resistance members, but will remain constant when the main current flows through the other main resistance member.

4. The combination of a differential electric current shunt having two main current paths through one of which the current flows in one direction and through the other in an opposite direction, and a common connection connecting said main current paths at one end, with a derived circuit connected with said common connection, and means for causing the proportion of the current passing through said derived circuit to be less when the main current passes through one of said main current paths than when the main current passes through the other main current path.

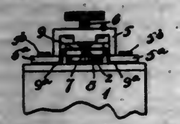
5. The combination of an electric current shunt, having two main current paths, one adapted for use with a current passing in one direction and the other adapted for use with the current passing in an opposite direction, and a resistance connection between the outer ends of said main current paths, with a derived circuit, and means for varying the ratio of the derived current to the total current when said current is passing in one of said directions and for preserving a constant ratio of said derived current to said total current when said current is passing in the other direction.

[Claims 6 to 8 not printed in the Gazette.]

958,509. VIBRATOR FOR INDUCTION-COILS. BURTON L. LAWTON, Meriden, Conn., assignor to The Connecticut Telephone & Electric Company, Incorporated, Meriden, Conn., a Corporation of Connecticut. Filed Nov. 25, 1908. Serial No. 464,872.

1. In a vibrator for induction coils, a vibrator element having a fixed contact point, a bridge having a flexible arch, said bridge being mounted at opposite sides of said vibrator element but independent thereof and overstanding the same, a contact point fixedly carried by the arch of said bridge and overstanding the contact point on the

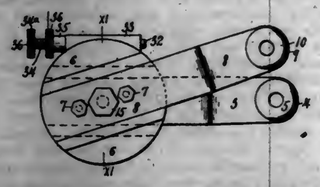
vibrator and an adjusting mechanism above the arch of said bridge for adjusting the contact point carried thereby toward and from the vibrator contact point.



2. In a vibrator for induction coils, a vibrator element having a fixed contact point, a bridge having a flexible arch, said bridge being mounted at opposite sides of said vibrator element but independent thereof and overstanding the same, a contact point fixedly carried by the arch of said bridge and overstanding the contact point on the vibrator and an adjusting screw above the arch of said bridge for adjusting the contact point carried thereby toward and from the vibrator contact point.

3. In a vibrator for induction coils, a vibrator element having a fixed contact point, a bridge having a flexible arch, said bridge being mounted at opposite sides of said vibrator element but independent thereof and overstanding the same, a contact point fixedly carried by the arch of said bridge and overstanding the contact point on the vibrator and an adjusting screw above the arch of said bridge for adjusting the contact point carried thereby toward and from the vibrator contact point, the said adjusting screw being provided with means for centering or alining the upper contact point relatively to the lower contact point.

958,510. SHOCK-ABSORBER FOR VEHICLES. THOMAS LEA, New Brunswick, N. J. Filed Dec. 8, 1909. Serial No. 531,966.



1. A shock absorber for vehicles comprising a pivot bolt, two plates having loosely engaging hubs mounted on the pivot bolt and providing a casing; one plate being formed with an offset, a ratchet wheel mounted on the hubs between the plates, a lever secured to one plate, a lever secured to the other plate and the ratchet wheel, a pawl ring carrying spring pawls and surrounding the ratchet wheel, a friction ring located between the casing and the pawl ring and having ears projecting into the offset, and a screw bolt working through the offset and bearing against an ear of the friction ring for controlling the frictional contact between the pawl ring and the friction ring.

2. A shock absorber for vehicles comprising a pivot bolt, two plates having loosely engaging hubs mounted on the pivot bolt and providing a casing; one plate being formed with an offset, a ratchet wheel mounted on the hubs between the plates, a lever secured to one plate, a lever secured to the other plate and to the ratchet wheel, a pawl ring carrying spring pawls and surrounding the ratchet wheel, a friction ring located between the casing and the pawl ring and having ears projecting into the offset, a screw bolt working through the offset and bearing against an ear of the friction ring for controlling the frictional contact between the pawl ring and the friction ring, and a jam nut mounted on the screw bolt and bearing against the offset.

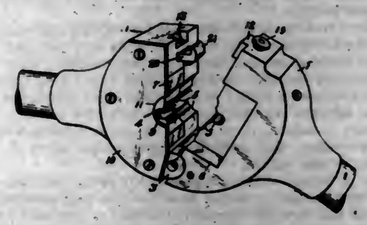
3. A shock absorber for vehicles comprising a pivot bolt, two plates having loosely engaging hubs mounted on the pivot bolt and providing a casing; one plate being formed with an offset, a ratchet wheel mounted on the hubs between the plates, a lever secured to one plate, a lever secured to the other plate and to the ratchet wheel, a pawl ring carrying spring pawls and surrounding the ratchet wheel, a friction ring located between the casing and the pawl ring and having ears projecting into the offset and primary and secondary screw bolts working through the offset and bearing against the ears of the friction ring for controlling the frictional contact between the pawl ring and the friction ring.

4. A shock absorber for vehicles comprising a pivot bolt, two plates having loosely engaging hubs mounted on the pivot bolt and providing a casing; one plate being formed with an offset, a ratchet wheel formed with reduced edges and mounted on the hubs between the plates, a lever secured to one plate, a lever secured to the other plate and to the ratchet wheel, a pawl ring carrying spring pawls and surrounding the ratchet wheel, retaining rings mounted in the reduced edges of the ratchet wheel and in the pawl ring, a friction ring located between the casing and the pawl ring and having ears projecting into the offset and a screw bolt working through the offset and bearing against an ear of the friction ring for controlling the frictional contact between the pawl ring and the friction ring.

5. A shock absorber for vehicles comprising a pivot bolt, two plates having loosely engaging hubs mounted on the pivot bolt and providing a casing; one plate being formed with an offset, a ratchet wheel formed with reduced edges and mounted on the hubs between the plates, a lever secured to one plate, a lever secured to the other plate and to the ratchet wheel, a pawl ring having cavities, pawls and springs bearing against the ends of their respective cavities, retaining rings mounted in the reduced edges of the ratchet wheel and in the pawl ring, pivot pins extending across the pawl ring through their respective pawls and springs and into the retaining rings for holding the pawls and springs in place in their end bearings, a friction ring located between the casing and the pawl ring and having ears projecting into the offset and a screw bolt working through the offset and bearing against an ear of the friction ring for controlling the frictional contact between the pawl ring and the friction ring.

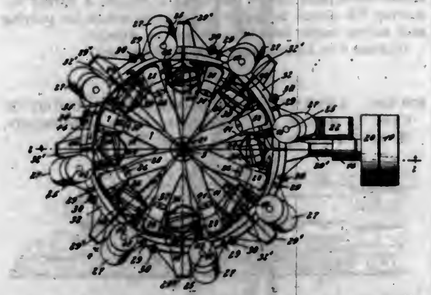
[Claims 6 and 7 not printed in the Gazette.]

958,511. LATCH MECHANISM FOR SPLIT STOCKS AND DIES. RICHARD E. LEACH, Cobalt, Ontario, Canada. Filed Oct. 11, 1909. Serial No. 522,054.



In a device of the class described, a split die stock having in one section thereof an alining slot out of the top and meeting edge faces and a lug projecting outwardly from the meeting face immediately below said slot, said lug having an upwardly turned outer end, the other section of said stock having an alining lug projecting from its meeting face adapted to fit into said alining slot, and a recess into said meeting face below said alining lug and extending upwardly in said section to the rear of said alining lug, said lug with the upwardly turned end extending into said slot in the closed position of the stock, a pin extending through a corresponding hole in the top wall of a stock section and leading into said recess to the rear of said alining lug and having at the lower end thereof an enlarged portion with a beveled outer face forming a latch member and adapted to coact with the aforesaid lug having the upwardly turned outer end, said pin having an adjustable head arranged thereon, and a spring encircling said pin between the enlarged lower end thereof and the upper wall of the recess.

958,512. BRAIDING-MACHINE. WILLIAM T. LE BLANC, New York, N. Y. Filed Apr. 5, 1909. Serial No. 487,917.



1. In a braiding machine, the combination with a pair of thread-supplying devices, of means for supporting said devices and moving them in opposite orbits, and means embodying two coöperative thread-guiding devices associated and movable orbitally with one of said thread-supplying devices and controlling the interlacing of the threads, one of said thread-guiding devices being operative to direct the passage of one thread to either one side or the other of the other thread and the other of said thread-guiding devices being movable to different positions relative to said first-mentioned thread-guiding device and thereby controlling the thread guiding operation of the latter.

2. In a braiding machine, the combination with a pair of thread-supplying devices, of means for supporting said devices and moving them in opposite orbits, and means embodying two coöperative thread-guiding devices associated and movable orbitally with one of said thread-supplying devices and controlling the interlacing of the threads, one of said thread-guiding devices being operative to direct the passage of one thread to either one side or the other of the other thread and the other of said thread-guiding devices being rotatively movable to different positions relative to said first-mentioned thread-guiding device and thereby controlling the thread guiding operation of the latter.

3. In a braiding machine, the combination with a pair of thread-supplying devices, of a pair of rotary carriers supporting said thread-supplying devices respectively, means for rotating said carriers in opposite directions, and means embodying two coöperative thread-guiding devices associated and movable orbitally with one of said thread-supplying devices and controlling the interlacing of the threads, one of said thread-guiding devices being operative to direct the passage of one thread to either one side or the other of the other thread and the other of said thread-guiding devices being movable to different positions relative to said first-mentioned thread-guiding device and thereby controlling the thread guiding operation of the latter.

4. In a braiding machine, the combination with two sets of thread-supplying devices, of means for supporting said sets of devices and moving them in opposite orbits, and a set of pairs of coöperative thread-guiding devices associated and movable orbitally with one of said sets of thread-supplying devices and controlling the interlacing of the two sets of threads, one of said thread-guiding devices of each pair being operative to direct the passage of threads of one set to either one side or the other of threads of the other set and the other thread-guiding device of each pair being movable to different positions relative to said first-mentioned device of each pair and thereby controlling the thread-guiding operation of the latter device.

5. In a braiding machine, the combination with a pair of thread-supplying devices, of means for supporting said devices and moving them in opposite orbits, means embodying two coöperative thread-guiding devices associated and movable orbitally with one of said thread-supplying devices and controlling the interlacing of the threads, one of said thread-guiding devices being operative to direct the passage of one thread to either one side or the other of the other thread and the other or second of said thread-guiding devices being movable to different positions relative to said first-mentioned thread-guiding device and thereby controlling the thread guiding operation of the latter, and means for moving said second thread-guiding device to its said different thread-controlling positions during its orbital movement.

[Claims 6 to 28 not printed in the Gazette.]

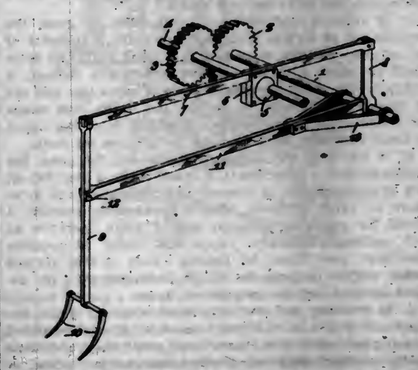
958,513. CLOSURE. CLYDE D. LOVE, Newark, N. J. Filed Apr. 29, 1909. Serial No. 492,828.



1. A closure for bottles and the like, comprising a cap, a closing disk of thin pliable material adapted to rest upon the bottle neck, and a spring in the form of a disk interposed between the cap and closing disk, said spring disk having a central raised portion engaging the cap and a concavo-convex rim resting upon the closing disk, the concavity of the rim being on the underside and the raised portion of the said spring disk being provided with slots arranged at angles to one another and intersecting at the center of the disk.

2. The combination with a bottle having the end of its neck rounded, of a thin flat closing disk of pliable material resting upon the bottle neck, a spring disk having a central raised portion and a concavo-convex rim resting upon the closing disk, the concavity of the rim being on the under side and the raised portion being slotted, and a cap secured upon the bottle neck and engaging the raised portion of the spring disk, whereby the outer edge of the closing disk will be curved to correspond with the curvature of the end of the bottle neck and the rim of the spring disk.

958,514. HAY-TEDDER. BENJAMIN F. LUTZ, Celina, Ohio, assignor of one-half to James M. Howick, Celina, Ohio. Filed Sept. 22, 1909. Serial No. 518,937.

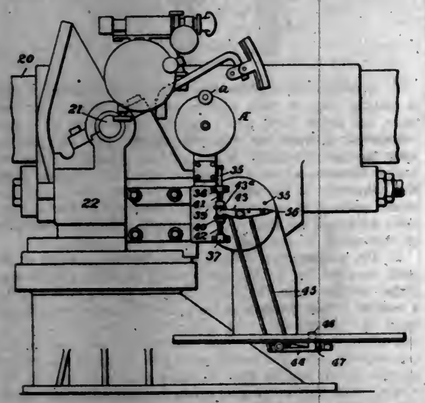


1. An operating shaft, a longitudinally extending arm loosely mounted upon the shaft, a link loosely connected

with the shaft, a second longitudinally extending arm pivotally connected with the link, a rod pivotally connecting the free ends of both of the arms, a fork upon the lower extremity of the rod, a second shaft, means for imparting motion to this second shaft when the operating shaft is rotated, and means provided upon the second shaft for imparting a reciprocatory motion in an undulatory path to the fork when the shaft is rotated.

2. An operating shaft, a toothed wheel connected with the shaft, a second shaft, a toothed wheel upon this shaft meshing with the wheel upon the first shaft, an eccentric upon the second shaft, a longitudinally extending rod, a housing upon the rod for the eccentric, a link connection between the first shaft and the longitudinally extending rod, a depending member pivotally connected with the rear end of the rod, a fork upon this member, a second longitudinally extending rod loosely connected with the first shaft and with the member provided with the fork.

958,515. TRAINING AND ELEVATING MECHANISM FOR GUNS. JOHN F. MEIGS and HERMAN G. JAKOBSSON, South Bethlehem, Pa., assignors to Bethlehem Steel Company, South Bethlehem, Pa., a Corporation of Pennsylvania. Filed Jan. 6, 1909. Serial No. 471,009.



1. In training and elevating mechanism for guns, the combination of a drive shaft, a crank shaft, a plurality of sets of gears adapted to connect said crank shaft and drive shaft to effect different relative movements thereof, a clutch for rendering any one of said sets of gears operative at will, and manually operated means, including a spring connection for throwing said clutch.

2. In training and elevating mechanism for guns, the combination of a drive shaft, a crank shaft, a plurality of sets of gears adapted to connect said crank shaft and drive shaft to effect different relative movements thereof, a clutch for throwing the different sets of gears into and out of operation, a treadle for moving the clutch, and means for placing said treadle under pressure to move the clutch in either direction, as desired, for the purpose set forth.

3. In training and elevating mechanism for guns, the combination of a drive shaft, a crank shaft, a plurality of sets of gears adapted to connect said crank shaft and drive shaft to effect different relative movements thereof, a clutch for rendering different sets of gears operative at will, springs adapted to throw said clutch in opposite directions, and means for placing either of said springs under tension to move the clutch yieldingly into the desired position, for the purpose set forth.

4. In training and elevating mechanism for guns, the combination of a drive shaft, a crank shaft, a plurality of sets of gears adapted to connect said crank shaft and drive shaft to effect different relative movements thereof, a clutch for rendering either of said sets of gears operative, springs adapted to throw the clutch in either direction desired, a manually operated lever adapted to place either of said springs under tension to shift the clutch, and means for holding said lever in its operative positions.

5. In training and elevating mechanism for guns, the combination with a drive shaft and a crank shaft, of means for communicating to the drive shaft from the crank shaft different speeds relative to the speed of the crank shaft, said means including a clutch, a spring for moving the clutch in one direction, and means for putting said spring under tension to move the clutch.

[Claims 6 to 10 not printed in the Gazette.]

958,516. ARTICULATED COMPOUND LOCOMOTIVE. CARL J. MELLIN and JOSHUA J. JONES, Schenectady, N. Y. Filed Feb. 14, 1910. Serial No. 543,658.



1. An articulated compound locomotive having the driving wheels of its high pressure cylinder frame of smaller diameter than those of its low pressure cylinder frame.

2. An articulated compound locomotive having driving wheels in its low pressure cylinder frame which are rotated under lower piston speed than the driving wheels of its high pressure cylinder frame.

3. An articulated compound locomotive having a front low pressure cylinder frame, low pressure cylinders fixed thereto, a rear high pressure cylinder frame pivoted thereto, high pressure cylinders fixed to said last recited frame, driving wheels supporting the front low pressure cylinder frame, and driving wheels, of smaller diameter, supporting the rear high pressure cylinder frame.

4. In an articulated locomotive, the combination of a rear frame, a front frame pivoted thereto, driving wheels supporting the front frame, driving wheels, of smaller diameter supporting the rear frame, and a boiler, carried on the rear and front frames and having a firebox extending over a pair of driving wheels of the rear frame.

5. In an articulated compound locomotive, the combination of a rear frame, high pressure cylinders fixed thereon, a front frame pivoted to the rear frame, low pressure cylinders fixed on the front frame, driving wheels supporting the front frame and rotated by pressure in the low pressure cylinders, driving wheels, of smaller diameter, supporting the rear frame and rotated by pressure in the high pressure cylinders, and a boiler carried on the front and rear frames.

958,517. WELL-CASING-REPAIRING TOOL. JOHN C. METTLER, Evans City, Pa. Filed Sept. 1, 1909. Serial No. 515,707.

1. In a tubular well repairing device, the combination of a patch holder having radially movable slides adapted to support a patch while being lowered into the well, and means for expanding the slides when lowered into the well so as to hold the patch while it is being applied.

2. In a tubular well repairing device, the combination of a patch holder having radially movable slides adapted to support a patch while being lowered into the well; with a patch expander rotatably connected to the patch holder whereby the patch may be expanded and locked in position while supported by the holder.

3. In a tubular well repairing device, the combination of a patch holder having radially movable slides adapted to support a patch while being lowered into the well, and means for expanding the slides when lowered into the well so as to hold the patch while it is being applied; with a patch expander rotatably connected to the patch holder whereby the patch may be expanded and locked in position while supported by the holder.

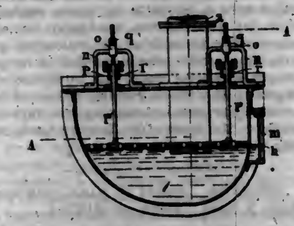
4. In a device of the character described, the combination of a patch holder having radially movable slides adapted to support a patch, a rotatable patch expander, and a revoluble connection between the patch holder and patch expander.



5. In a device of the character described, the comination of a patch holder having radially movable slides adapted to support a patch while being applied, and a rotatable patch expander having radially movable slides provided with rollers, and wedges for moving the slides radially outward in the patch holder and in the expander, and a revoluble connection between the patch holder and the patch expander.

[Claims 6 to 8 not printed in the Gazette.]

958,518. HYDRAULIC GAS-MAIN. STANISLAUS MEUNIER, Heaton-Chapel, England. Filed Aug. 9, 1909. Serial No. 511,072.



1. In the manufacture of gas, in combination, a hydraulic main, a dip pipe projecting into said main, and a perforate baffle disposed in contact with and covering the liquid surface in said main, as set forth.

2. In the manufacture of gas, in combination, a hydraulic main, a dip pipe projecting into said main, and a perforate floating baffle disposed in contact with and covering the liquid surface in said main, as set forth.

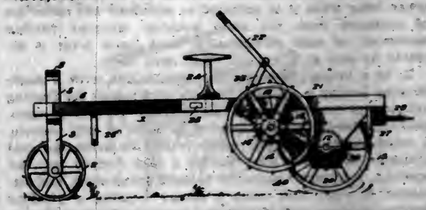
3. In the manufacture of gas, in combination, a hydraulic main, a dip pipe projecting into said main, and a perforate adjustable baffle disposed in contact with and covering the liquid surface in said main, as set forth.

4. In the manufacture of gas, in combination, a hydraulic main, a dip pipe projecting into said main, and a perforate adjustable floating baffle disposed in contact with and covering the liquid surface in said main, as set forth.

5. In the manufacture of gas, in combination, a hydraulic main, a dip pipe, an adjustable sleeve on said dip pipe, and a perforate baffle disposed in contact with and covering the liquid surface in said main, as set forth.

[Claims 6 to 11 not printed in the Gazette.]

958,519. MOTOR-VEHICLE. JAMES J. MIDDLEBROOK, Sault Ste. Marie, Mich. Filed Feb. 23, 1909. Serial No. 479,316.

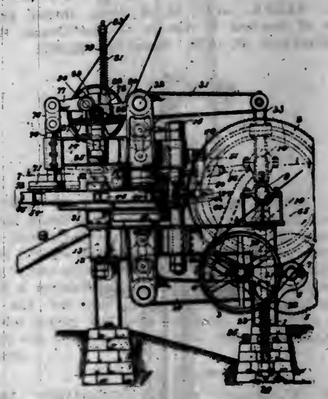


1. In a motor vehicle, the combination with a frame, and a motor, of a traction wheel supporting said frame, a carrier pivoted to the frame at a point off-set from the center of said traction wheel, a traction wheel carried by the said carrier, means for positioning the said carrier at different heights, a gear connected to the first-named traction wheel, and a gear carried by the said carrier for driving the last-named traction wheel and which is driven from the gear first-named.

2. In a motor vehicle, the combination with a frame, and a motor, of a traction wheel supporting said frame, a gear connected to said traction wheel, a carrier pivoted at a point off-set from the center of the traction wheel and adapted for upward swinging, a shaft carried by said carrier which is adapted to abut a part of the said frame to limit the upward swing of the carrier, means for raising or lowering the carrier and for holding it in different positions, a traction wheel carried by the shaft aforesaid and driven by a gear carried by the carrier and driven by the gear first-named.

3. In a motor vehicle, the combination with a frame and a motor, of a traction wheel supporting said frame, a carrier pivoted to the frame, a traction wheel carried by the carrier, means controlling the position of the carrier, and intermeshing gears one of which is carried by said carrier and operatively connecting the two traction wheels.

958,520. MOLDING-MACHINE. EDGAR D. MISNER, St. Louis, Mo., assignor of one-third to James E. Rutledge and one-third to John Scullen, St. Louis, Mo. Filed Apr. 18, 1908. Serial No. 427,837.



1. In a briquet machine, the combination with a mold-housing having a series of pockets, and means for feeding pulverulent material to the pockets, of two sets of oppositely-disposed plungers designed to work in said pockets, a crank-shaft, upper and lower levers for actuating said plungers, means positively connecting the upper lever to said crank-shaft, a pitman connected to said

crank-shaft and in engagement with the lower lever, a spring interposed between the last mentioned lever and said pitman, and a stop for limiting the movement of the lower lever when it is actuated to withdraw the lower set of plungers from the mold housing, whereby further movement of said pitman after said lower lever is arrested by said stop will not affect such lever.

2. In a briquet machine, the combination with a mold-housing having a series of pockets, and means for feeding pulverulent material to the pockets, of two sets of oppositely-disposed plungers designed to work in said pockets, a crank-shaft, upper and lower levers for actuating said plungers, the lower lever having a boss formed with an opening, a pitman connected to said crank-shaft and extended through said boss, a spring forming a yielding bearing between said pitman and said boss, a stop for limiting the movement of said lever when it is actuated by said pitman to withdraw the lower set of plungers from the mold housing, and means positively connecting the upper lever to said crank-shaft.

3. In a briquet machine, the combination with a platform, and a series of mold-housings carried thereby formed with pockets, of a hopper located above the platform for successively supplying pulverulent material to each mold-housing, a false-bottom above which the charge-receiving mold-housing is designed to be located, said false-bottom having at one end openings corresponding to the pockets in the mold-housings, upper compressing plungers, lower compressing plungers fitted in said openings of the false-bottom and designed to support the material in a previously-charged mold-housing when brought into line therewith, upper and lower levers for operating the upper and lower sets of plungers, a crank shaft, a yielding connection between said lower lever and said crank shaft, and a stop for limiting the downward movement of said lower lever so as to prevent said lower set of plungers from being withdrawn through the openings in said false bottom by the action of said crank shaft.

4. In combination with a molding machine, a heating tank for the pulverulent material, a vertically-disposed shaft located centrally within said tank, a series of radially-arranged scraper arms carried by said shaft, each scraper arm having a shank fitted in an opening in said shaft, means for adjustably holding the shank of each arm to said shaft to permit the arms to be adjusted lengthwise of their shafts, and means for actuating the shaft.

958,521. VALVE. JOHN W. MCCOWN, Butler, Pa., assignor of one-half to Newton C. McCollough, Butler, Pa. Filed Oct. 15, 1909. Serial No. 522,818.



1. A four-way valve casing having intersecting channels extending through oppositely disposed pairs of arms, a bushing connected terminally with one of the arms and having a packing gland, the opposite arm being terminally ground to form a seat, a valve stem extending through the casing and through the bushing and gland in threaded connection with the bushing, a valve disk engaging the stem and having guide arms extending into the casing, and an internally threaded annular flange, a pin extending transversely through the valve stem to retain the valve upon the latter, and a cap member having threaded connection with the flange of the valve and equipped with a recess to accommodate the transverse pin.

2. A four-way valve casing having intersecting channels extending through oppositely disposed pairs of arms, a bushing connected terminally with one of the arms and having a packing gland, the opposite arm being terminally ground to form a seat, a valve stem extending through the casing and through the bushing and gland in threaded connection with the bushing, a valve disk engaging the stem and having guide arms extending into the casing, and an internally threaded annular flange, a pin extending transversely through the valve stem to retain the valve upon the stem, and a cap member having threaded connection with the flange of the valve and equipped with recesses to accommodate the transverse pin and the terminal end of the valve stem and to admit of longitudinal movement of the valve upon the stem.

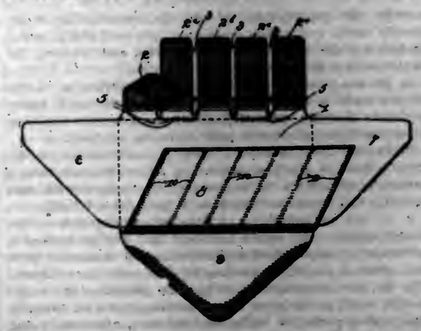
3. In a device of the character described, a valve stem, a valve disk engaging the stem and having an annular internally threaded flange, a pin extending transversely through the stem to retain the valve disk, and a cap member threaded into the flange of the valve disk and having recesses to accommodate the transverse pin and the terminal end of the valve stem to permit longitudinal movement of the valve upon the stem.

958,522. ADJUSTER FOR LOCOMOTIVE-HEAD-LIGHTS. OLAN B. MCCOY, Fort Worth, Tex. Filed Jan. 27, 1909. Serial No. 474,572.



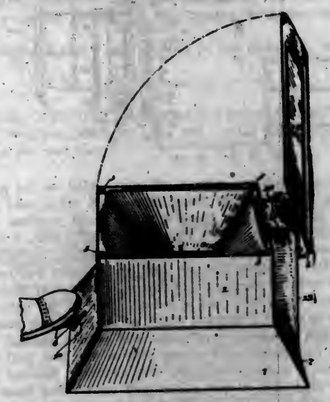
A head-light adjuster for locomotives comprising a bearing block rigidly attached to the locomotive boiler and provided with a groove in the upper surface thereof, a turn-table for carrying the head-light connected with said flange moving in said groove, balancing guards on said bearing block and having a depending flange moving in said groove, balancing guards on said block concentric with said groove to prevent rocking motion of said turn-table on said block and maintaining the turn-table in a plane parallel to the plane of the bearing block, and means for turning said turn-table.

958,523. ENVELOP. HARRY D. NAUM, Newburgh, N. Y. Filed Sept. 2, 1909. Serial No. 515,744.



An envelop formed with a front side having a series of oblong, narrow tongues projecting from the upper edge of said front side and provided with adhesive material, a back side corresponding to the front side and projecting from the lower edge thereof and folded against the front side, said back side portion having a series of vertical, spaced lines of adhesive material, side flaps folded against said back side and secured to said lines of adhesive material, and a back flap projecting from the lower edge of said front and back side portion and having a border of adhesive material and folded against the side flaps and folded backward on the back side portion, forming a series of vertical pockets adapted to receive said tongues.

958,524. CUSPIDOR. HARRY L. NIER, Chicago, Ill. Filed Sept. 30, 1909. Serial No. 520,390.



1. In a cuspidor, an expectoration receptacle or compartment, a housing connected to said compartment, a flaring base connected to said compartment inclosing a space beneath the latter, a hanger depending from and connected to the bottom of said receptacle, a pedal projecting through a slot provided in said base pivoted to said hanger, a spring connected to said base adapted to maintain said pedal in its raised or normal position, said lever being Y-shaped, connecting-rods pivoted to two adjacent extremities of said pedal and extending upwardly therefrom into said housing through slots provided in said base, a cover for said compartment having ears hinged to said housing, and means connecting said connecting-rods and said cover whereby the latter is raised when said pedal is depressed, substantially as described.

2. In a cuspidor, a rectangular receptacle having a flaring base, a frusto-pyramidal removable member adapted to seat in said receptacle, rubber bumpers positioned at the corners of said member, a hinge cover adapted to seat on said bumpers, a pedal operating mechanism for raising said cover, and a housing at one side of said receptacle inclosing the operating mechanism directly connected to said cover, substantially as described.

3. In a cuspidor, an expectoration receptacle or compartment, a housing connected to said compartment, a flaring base connected to said compartment inclosing a space beneath the latter, a hanger depending from and connected to the bottom of said receptacle, a pedal projecting through a slot provided in said base pivoted to said hanger, a spring connected to said base adapted to maintain said pedal in its raised or normal position, said lever being Y-shaped, connecting-rods pivoted to two adjacent extremities of said pedal and extending upwardly therefrom into said housing through slots provided in said base, a cover for said compartment having ears hinged in said housing, and means connecting said connecting-rods and said cover whereby the latter is raised when said pedal is depressed, said connecting means consisting of cranks soldered to said ears, substantially as described.

958,525. GAS-RANGE ATTACHMENT. MAURICE P. O'DONOHOE, Nashville, Tenn., assignor of one-half to Charles P. Ellis, Nashville, Tenn. Filed June 19, 1909. Serial No. 503,105.



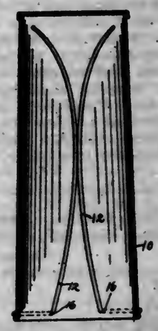
1. The combination of a supply pipe, a cock connecting with the pipe, having a handle, and a stop device mounted to turn on the pipe and having a portion movable against the handle of the cock.

2. The combination of a gas stove having a supply pipe provided with connecting cocks, each cock having a controlling handle, and a stop device mounted to turn on the pipe and having a portion movable against the handles of the cocks.

3. The combination of a supply pipe, a cock connecting with the pipe and having a handle, a stop device mounted to turn on the pipe and having a portion movable against the handle of the cock, and means for securing the device in operative and inoperative position.

4. The combination of a gas stove having a supply pipe and provided with cocks to control the flow of gas from the supply pipe to the several burners, each cock having a handle, and a stop device mounted to turn on the supply pipe and having an outwardly-projecting portion adapted to pass into and out of the path of the cock handles.

958,526. ARTICLE-HOLDER. ROBERT L. PATE, Springfield, Mo. Filed Feb. 4, 1909. Serial No. 476,060.



A holder for newspapers and other articles including a casing closed at its upper end and open at its lower end, and a plurality of spring holders within said casing, each of said holders consisting of a wire inserted through the casing at two points near the lower end thereof and looped around a segment of the casing at the outside with the inner and free ends of the springs extending upwardly into the casing and bent inwardly in position to bear against any other spring in said casing, substantially as set forth.

958,527. SWIMMING-GLOVE. CHARLES P. PEARSON, Providence, R. I. Filed Jan. 26, 1910. Serial No. 540,110.

1. A swimming glove comprising a flexible sheet of water-proof material, a stall or cot for each finger fastened to the back of said sheet, the outer edge of said sheet extending beyond the ends of said stalls, curved stiffening strips for supporting said extending portion and causing

the same to curve inwardly toward the palm giving the glove a concave or scooping effect.

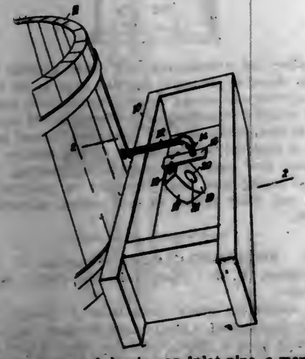


2. A swimming glove comprising a flexible sheet of water-proof material, a stall or cot for each finger made of open-work or netting fastened to the back of said sheet, the outer edge of said sheet extending beyond the ends of said stalls, curved stiffening strips for supporting said extending portion and causing the same to curve inwardly toward the palm giving the glove a concave or scooping effect.

3. A swimming glove comprising a flexible sheet of water-proof material, a stall or cot for each finger fastened to the back of said sheet, the outer edge of said sheet extending beyond the ends of said stalls, curved stiffening strips for supporting said extending portion and causing the same to curve inwardly toward the palm giving the glove a concave or scooping effect, and a flexible tension cord around the outer edge of said web.

4. A swimming glove comprising a flexible sheet of water-proof material, a stall or cot for each finger made of open-work or netting fastened to the back of said sheet, the outer edge of said sheet extending beyond the ends of said stalls, curved stiffening strips extending outward from beneath each stall for supporting said extending portion and causing the same to curve inwardly toward the palm of the glove giving said glove a concave or scooping effect and an elastic tension cord around the outer edge of said web.

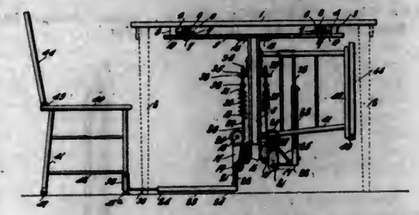
958,528. WATERING-TROUGH. THEODORE C. PREBBOOM, Ireton, Iowa. Filed Sept. 4, 1909. Serial No. 516,186.



1. A watering trough having an inlet pipe, a member secured to said pipe, and a float hinged to said member and adapted to seal the end of said pipe, said float having under the top thereof a pad adapted to be engaged by said pipe.

2. A watering trough having an inlet pipe, and a float for controlling the flow of water into the trough and having a hinged connection with said pipe, said float having a double top, the upper wall whereof has an opening therethrough, said float having a pad between the walls of said double top at said opening.

958,529. CHAIR. WILLIAM S. PHILLIPS, Cameron, W. Va. Filed May 14, 1909. Serial No. 495,960.



1. The combination with a table provided on its under face with blocks spaced apart from each other, and provided on their adjacent faces with undercut grooves, of a bar provided at its center with a depending arm, a plate at each end of the bar and having an angular portion at one end for engaging the bar and an angular portion at the other end for engaging the slot, a bolt passing through the bar and the plate, and a nut on the bolt for securing the plate thereto, a bracket plate secured to each side of the arm and provided at its lower end with a journal pin, a pair of spaced plates on each side of the arm and provided with a bearing engaging the adjacent journal pin, a bolt at each end of the plates and connecting them together, a pulley on the upper bolt, a hanger journaled on the lower bolt, a telescoping arm whose one section is connected with the hanger, a cross bar secured by its center to the free end of the other section, and provided at each end with a vertical lug, having a bayonet slot, a chair comprising a bottom and legs, a folding back hinged to the bottom, a plate secured to the inner face of each front leg, an angular hook on the plate with which the bayonet slot of the adjacent lug engages, a link pivoted by one end to the section of the telescoping arm adjacent to the hanger, a chain connected with the other end, a bracket on the bracket plate, and a spring connected by one end to the bracket, and by the other to the chain, said chain passing over the pulley.

2. The combination with a table provided on its under face with blocks spaced apart from each other, each having on its inner face an undercut slot, of a bar provided with a central depending arm, a plate detachably connected with each end of the support and engaging the slot of the adjacent block, a pair of spaced plates journaled on a vertical axis, on the lower end of the arm and at each side thereof, a pulley journaled between the plates at their upper end, a hanger journaled between the plates at their lower end, a telescoping arm whose one section is connected with the hanger, a link pivoted to the hanger, a chain connected with the free end of the link, a spring connected with the adjacent bracket plate and with the chain, and passing over the pulley, and a chair provided with a folding back pivoted to the outer end of the other section.

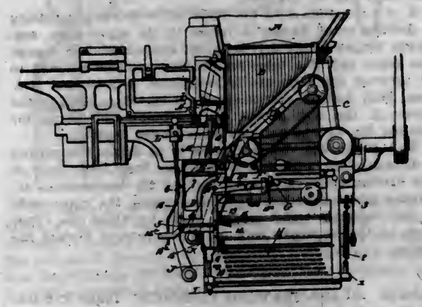
3. The combination with a table provided on its under face with blocks spaced apart from each other, each having on its inner face an undercut slot, of a bar provided with a central depending arm, a plate detachably connected with each end of the support and engaging the slot of the adjacent block, a pair of spaced plates journaled on a vertical axis, on the lower end of the arm and at each side thereof, a pulley journaled between the plates at their upper end, a hanger journaled between the plates at their lower end, a telescoping arm whose one section is connected with the hanger, a chain connecting the hanger with the bracket plate and passing over the pulley, a spring interposed in the chain, and a chair provided with a folding back hinged to the other section of the arm.

4. The combination with a table, of a bar provided with a central depending arm, means for detachably connecting the ends of the bar with the table, a hanger journaled on a transverse axis on the lower end of the arm, a telescoping arm whose one section is rigid with the hanger, a chair provided with a folding back pivoted to the other section, and a spring connecting the hanger with the depending arm.

5. The combination with a table, of a depending arm detachably connected therewith, a hanger journaled in a transverse axis on the lower end of the arm, a telescoping arm whose one section is rigid with the hanger, a chair provided with a folding back pivoted to the other section, and a spring connecting the hanger with the depending arm.

[Claims 6 and 7 not printed in the Gazette.]

958,530. LINOTYPE-MACHINE ATTACHMENT. OCREN G. PICKETT, Jefferson City, Mo. Filed July 3, 1908. Serial No. 441,806.



1. An attachment of the kind described comprising an assembler block, said block moving vertically, a pivoted lever, a left hand finger, a right hand finger, means connecting said fingers to said lever, and a key controlling action of said lever.

2. An attachment of the kind described comprising a right hand finger, a spring for holding said finger in normal position, a bell crank carrying said spring, the bell crank being adapted to engage the finger, a key-operated lever, a rod connecting said lever and bell crank, and means for holding the lever in normal position.

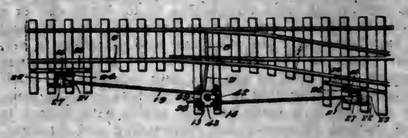
3. An attachment of the kind described comprising a pivoted key notched in its rear portion, a line straightening device resting loosely in one of said notches, a trigger engaging one of said notches, said trigger being secured to the assembling elevator lock, and a left hand finger attachment resting loosely in the remaining notch, as and for the purpose set forth.

4. In a linotype machine having an assembling elevator provided with a lock and a left hand finger, a pivoted key notched in its rear portion, a line straightening device resting loosely in one of said notches, a trigger engaging one of said notches, said trigger being secured to the assembling elevator lock, and an attachment connected to the left hand finger and resting loosely in the other notch, as and for the purpose set forth.

5. The combination with a linotype keyboard and slide brake, of a line straightener resting loosely upon the inner end of a key having a pivoted angled portion, and a pin flattened upon its under face, said pin being carried by said line straightener and engaging the slide brake when in normal position.

[Claims 6 to 10 not printed in the Gazette.]

958,531. AUTOMATIC SWITCH FOR RAILWAYS. ALBERT L. PIPES, Clarence, Mo. Filed Aug. 11, 1909. Serial No. 512,317.



1. In a railway switch, the combination with a switch point, of a vertical shaft operatively connected thereto, separate automatic and manual operating devices, and connections between said devices and the shaft including a clutch member located on the shaft between said devices and shiftable up and down on the shaft from the automatic to the manual devices or vice versa, to operate the switch by either.

2. In a railway switch, the combination of a shaft operatively connected to the switch point, upper and lower clutch members loose on said shaft, an intermediate clutch member non-rotatable on said shaft and slidable lengthwise thereon from one of said clutch members to the other, means to shift said intermediate member, a manual operating device connected to the upper clutch member, and automatic devices operatively connected to the lower clutch member.

3. In a railway switch, the combination of a shaft operatively connected to the switch point, upper and lower clutch members loose on said shaft, an intermediate clutch member non-rotatable on said shaft and slidable lengthwise thereon from one of said clutch members to the other, means to shift said intermediate member, a manual operating device connected to the upper clutch member, and automatic devices operatively connected to the lower clutch member, including a yielding latch constructed to prevent operation of the lower clutch member except by special effort.

4. In a railway switch, the combination of a shaft operatively connected to the switch point, a lower clutch member loose thereon, trip-operated devices operatively connected to said lower clutch member, an upper clutch member non-rotatable on the shaft and coöperating with the lower clutch member to turn the shaft when the clutch is engaged, a latch engaging said lower clutch member, and means actuated by said trip-operated devices to release the latch before the clutch members are actuated.

5. In a railway switch, the combination of a shaft operatively connected to the switch point, trip-operated devices and connections between said devices and the shaft including a clutch on the shaft and a latch normally engaging the clutch and preventing operation of the shaft and means actuated by initial movement of the said devices to release the latch.

[Claims 6 to 8 not printed in the Gazette.]

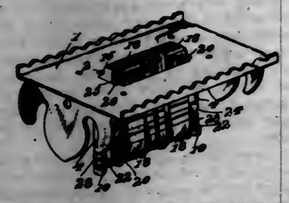
958,582. CLOTHES-PIN. GRANT S. POLLOCK, Pittsburg, Pa. Filed July 23, 1909. Serial No. 509,122.



A clothes pin comprising a single length of wire bent upon itself to provide a spring loop terminating in a pair of clamping members of ogee curvature oppositely disposed with respect to each other, each of said members consisting of a pair of arms, the arms of one of said members crossing at three points and depending below the

arms of the other of said members, and said arms and said members providing a passage for the line between the two upper crossing points, said shorter member having each of its arms terminating at its lower end in a vertically-disposed semi-circular extension, one arranged in parallelism with the other and both extending in vertical planes to one side of a vertical plane extending through the center of the pin, said extensions at their lower ends terminating in a semi-circular coupling member disposed in a plane at right angles with respect to said vertical extensions and surrounding and constituting a stop for the lower ends of the arms of the elongated member, said members adapted to clamp a line in said passage.

958,533. HAND-STAMP. MAX C. PRICE, Muskegon, Mich., assignor to Independent Manufacturing Company, Muskegon, Mich., a Corporation of Michigan. Filed Mar. 16, 1909. Serial No. 483,774.



1. In a hand stamp, a die plate having posts or standards secured thereto and projecting therefrom, said posts having tubular portions, a type base or bridge having arms coacting with said tubular portions, screws adjustably securing said arms to said tubular portions, and lugs projecting from said arms and forming guides coacting with said tubular portions, substantially as described.

2. In a hand stamp, a die plate having posts or standards secured thereto and projecting therefrom, said posts having tubular portions, a type base or bridge having arms with lugs projecting therefrom, screws adjustably securing said lugs to said tubular portions, springs located between said tubular portions and said lugs, and the arms of said type base or bridge also having lugs coacting with said tubular portions, substantially as described.

3. In a hand stamp, a die plate having posts or standards secured thereto, each of said posts or standards comprising a single piece of metal bent to form a screw threaded tubular portion and having two lugs or feet integral with said screw threaded tubular portion by which it is secured to said die plate, a type base or bridge, and screws entering said tubular portions and securing said type base or bridge to said posts, substantially as described.

4. In a hand stamp, a die plate having posts or standards secured thereto, each of said posts or standards comprising a single piece of metal bent to form a screw threaded tubular portion and having two lugs or feet integral with said screw threaded tubular portion by which it is secured to said die plate, a type base or bridge, screws entering said tubular portions and securing said type base or bridge to said posts, and springs located around said screws and coacting with said tubular portions and said type base to hold the latter in position, substantially as described.

958,534. COLLAPSIBLE SHOE. EMIL PROBST, Berlin, Germany. Filed July 3, 1909. Serial No. 505,881.

1. A collapsible shoe for tubes to be driven comprising a plurality of segments capable of being collapsed so as to pass through the tube, and of being expanded beneath the tube so as to engage the lower end thereof; and means for holding said segments in expanded position, said means being adapted to fit between adjacent edges of said segments to thereby hold them in their expanded position.

2. A collapsible shoe for tubes to be driven comprising a plurality of segments capable of being collapsed so as to pass through the tube, and of being expanded beneath the tube so as to engage the lower end thereof; and means for holding said segments in expanded position, said means comprising blocks located between adjacent edges of and filling the entire space between adjacent segments to thereby hold them in their expanded position and provide a shoe having a peripheral surface without openings leading to the interior of the tube.

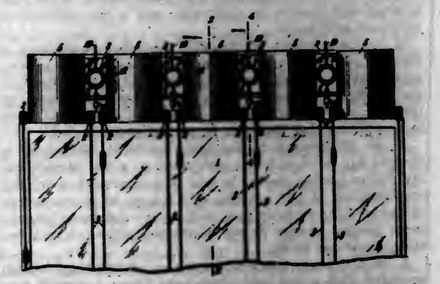


3. A collapsible shoe for tubes to be driven comprising a driving point, segments hinged to the driving point and adapted to engage the lower end of a tube, and locking sections between the segments to hold them in expanded position, said locking sections being adapted to engage the lower end of the tube.

4. A collapsible shoe for tubes to be driven comprising a driving point having a recess in its upper edge, segments hinged to the driving point and adapted to engage the lower end of a tube, and locking sections adapted to fit between the segments to hold them in expanded position, said locking sections being adapted to engage the recess in the edge of the driving point and means for holding the locking sections in expanded position.

5. A collapsible shoe for tubes to be driven comprising a driving point, segments hinged near their lower ends to the driving point, means for locking the segments in expanded position and connections between the upper ends of the segments and a central chain by which the upper ends of the segments may be drawn inward toward the center.

958,535. GLASS-DRAWING FURNACE. ISAAC J. RALSTON and JESSE BRIGGS, Kane, Pa., assignors of one-third to Hugo J. Walter, Kane, Pa. Original application filed June 5, 1909, Serial No. 500,804. Divided and this application filed Oct. 28, 1909. Serial No. 525,004.



1. In a device of the class described, the combination with a furnace, of an extension on said furnace having a plurality of drawing baths, and a plurality of dog-houses juxtaposed to said baths.

2. In a device of the class described, the combination with a furnace, of an extension on said furnace, a plurality of dog-houses on said extension, and a plurality of drawing baths interposed between said dog-houses.

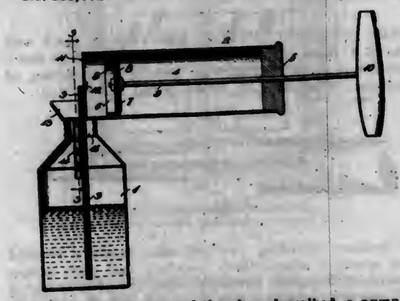
3. The combination with a furnace, of an extension on said furnace, a plurality of dog-houses on said extension having a plurality of drawing baths interposed between them, and a cover-plate for each of said baths having an opening therein.

4. In a device of the class described, the combination with a furnace, of an extension on said furnace having a plurality of drawing baths, and a plurality of dog-houses juxtaposed to said baths, said dog-houses being in communication with said baths and said furnaces, whereby a plurality of interchangeable rings may be manipulated successively between said baths and said furnace.

5. In a device of the class described, the combination with a furnace, of an extension on said furnace, having a drawing bath, and a dog-house arranged alongside of said bath, said dog-house being in communication with said bath and said furnace, whereby a plurality of interchangeable rings may be successively manipulated between said bath and said furnace.

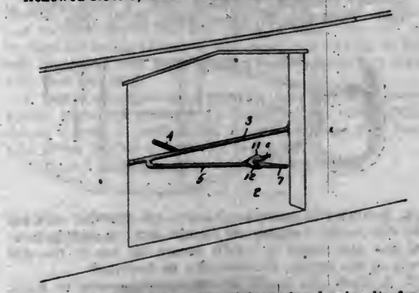
[Claims 6 to 8 not printed in the Gazette.]

958,536. SPRAYING ATTACHMENT. CHARLES H. RATH, Philadelphia, Pa. Filed Mar. 25, 1909. Serial No. 485,772.



In a spraying device of the class described, a pump cylinder, a cup-like member extending from one end of the cylinder, a supply tube and a return tube passing through the bottom of the cup-like member, and a threaded extension surrounding the tubes and adapted for attachment to a liquid containing receptacle.

958,537. MAIL-BAG CATCHER. JOHN RAUGSTAD, Grassrange, Mont. Filed Sept. 19, 1908, Serial No. 453,787. Renewed Nov. 4, 1909. Serial No. 526,296.

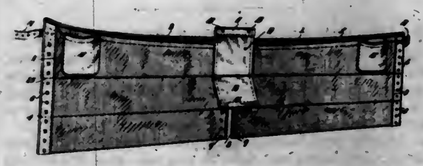


1. A mail-bag catcher, comprising a bar having its front end flattened and formed with a pair of forwardly-extending diverging arms, the upper faces of said arms and of the adjacent portion of the bar having a seat formed therein; a pivoted locking lever working in said seat and arranged to be operated by the impact of a mail-bag thereagainst; means for normally holding the lever in operative position; and a plate secured to said bar and arranged to cover said seat.

2. A mail-bag catcher comprising a bar having the forward end thereof flattened and formed with a pair of diverging arms, the upper faces of said arms and of the adjacent portion of said bar having a seat formed therein; the pivoted lever working in said seat and consisting of an impact arm and a locking arm, the first-mentioned arm extending in its operative position across the space between the catcher arms, in position to be struck by a mail-bag delivered to the catcher; means for normally holding the lever in operative position; and a plate arranged to cover said seat.

3. A mail-bag catcher comprising a bar having its front end flattened and formed with a pair of forwardly-extending diverging arms, the upper faces of said arms and of the adjacent portion of said bar being formed with a seat; a pivoted lever working in said seat and consisting of a straight impact arm and an arcuate locking arm, the first mentioned arm extending in its operative position across the space between the catcher arms in position to be struck by a mail-bag delivered to the catcher; means for holding the lever normally in operative position; a spring catch located adjacent the impact arm, for holding the lever against return movement after its operation; and a plate arranged to cover said seat.

958,538. BELT. GEORGE W. REAM and PAUL E. GREEN, Butte, Mont. Filed June 17, 1909. Serial No. 502,700.



1. A belt composed of a sheet of flexible material doubled longitudinally to form a front and a back, a double row of stitching connecting the ends of the front with the corresponding ends of the back, said front and back, being divided transversely at their center for the lower two-thirds of their width, and connected on each side of the line of division and above the same, a transverse series of eyelets between the rows of stitching at each end and a series on each side of the division, said front and back each being provided with a plurality of rows of longitudinal stitching dividing the said front and back into three sections and indicating the lines of fold, a lace in each of the series of eyelets for the purpose set forth, and a transverse strip secured at the center of the belt and provided at one end with studs and at the other with sockets, and of a length to encircle the belt when folded into its narrowest dimension, and a pocket in the outer face of the front at each end.

2. A belt composed of a sheet of flexible material doubled longitudinally to form a front and a back, a double row of stitching connecting the ends of the front and the back, said front and back, being divided transversely at their center for the lower two-thirds of their width, and connected on each side of the line of division and above the same, a transverse series of eyelets between the rows of stitching at each end and a series on each side of the division, said front and back each being provided with a plurality of rows of longitudinal stitching dividing the said front and back into three sections and indicating the lines of fold, a lace in each of the series of eyelets for the purpose set forth, and a transverse strip secured to the center of the belt and of a length to encircle the same when folded into its narrowest dimension, said strip being provided with means for securing the ends together.

3. A folding belt comprising a front and a back connected at their ends and provided with a transverse row of eyelets adjacent to each end, said front and back being divided transversely at their center from below upward for approximately two-thirds of their width, and provided with a row of eyelets on each side of the division, a lace in each row of eyelets, a strip secured transversely to the belt at its center and provided with means for securing its ends together, and of a length to encircle the belt when it is folded to its narrowest dimension, said belt being

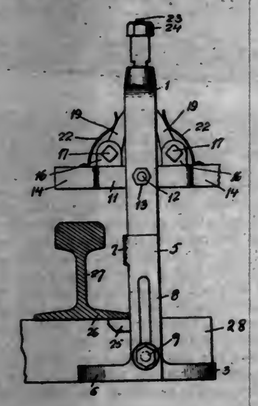
adapted to fold twice longitudinally, and means for indicating the line of the folds.

4. A folding belt comprising a front and a back connected at their ends and provided with a transverse row of eyelets adjacent to each end, said front and back being divided transversely at their center from below upward for approximately two-thirds of their width, and provided with a row of eyelets on each side of the division, a lace in each row of eyelets, a strip secured transversely to the belt at its center and provided with means for securing its ends together, and of a length to encircle the belt when it is folded to its narrowest dimension, said belt being adapted to fold twice longitudinally.

5. A folding belt comprising a front and a back connected at their ends and provided with a transverse row of eyelets adjacent to each end, said front and back being divided transversely at their center from below upward for approximately two-thirds of their width, and provided with a row of eyelets on each side of the division, a lace in each row of eyelets, said belt being adapted to fold twice longitudinally, means for indicating the line of the folds, and means at the center of the belt for retaining it in folded condition.

[Claims 6 and 7 not printed in the Gazette.]

958,539. RAIL-JACK. GEORGE K. REILEY, Scottdale, Pa. Filed Oct. 20, 1909. Serial No. 523,715.

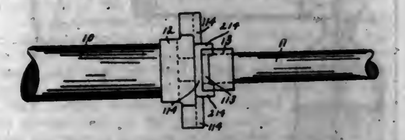


1. A jack for the purpose set forth comprising a housing, a foundation plate connected to the lower end of and disposed at right angles with respect to said housing, an adjustable foundation plate connected to said housing and disposed at right angles with respect thereto and extending in an opposite direction with respect to the direction in which the first-mentioned foundation plate extends, a vertically movable ratchet bar arranged in said housing and having a right angularly disposed lower end extending over the adjustable foundation plate, and means for vertically moving said ratchet bar and for maintaining it in its adjusted position.

2. A jack for the purpose set forth comprising a housing, a foundation plate connected to and disposed at right angles with respect to the lower end of the housing, an adjustable foundation plate disposed at right angles with respect to the lower end of the housing and extending in an opposite direction with respect to the direction in which the first-mentioned foundation plate extends, a pair of vertically-disposed arms projecting from the adjustable foundation plate and overlapping the sides of the housing, means for adjustably connecting said arms to the housing, a vertically movable ratchet bar mounted in the housing and having a right angularly disposed lower end, and means for vertically moving the bar and for maintaining it in its adjusted position.

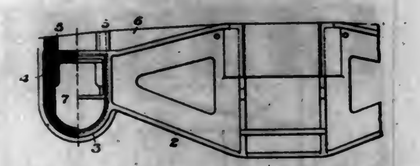
3. A jack for the purpose set forth comprising a housing, a foundation plate connected to and disposed at right angles with respect to the lower end of the housing, an adjustable foundation plate disposed at right angles with respect to the lower end of the housing and extending in an opposite direction with respect to the direction in which the first-mentioned foundation plate extends, a pair of vertically-disposed arms projecting from the adjustable foundation plate and overlapping the sides of the housing, means for adjustably connecting said arms to the housing, a vertically movable ratchet bar mounted in the housing and having a right angularly disposed lower end, a yoke extending through the housing, means projecting through the sides of the yoke and engaging with the sides of the housing for pivotally connecting the yoke to the housing, extensions projecting from the yoke, and duplex means carried by the yoke and engaging with said bar for vertically adjusting it when the yoke is oscillated and for maintaining the bar in its adjusted position when the yoke is stationary.

958,540. SHAFT-COUPLING. BENJAMIN P. REMY and FRANK I. REMY, Anderson, Ind., assignors to The Remy Electric Company, Anderson, Ind., a Corporation of Indiana. Filed June 24, 1909. Serial No. 504,010.



A coupling including two rotatable members adapted to be arranged substantially coaxially and each having oppositely and radially extending arms, the arms of one of said members being narrower than the central portion of said member and the arms of the other of said members being of the same width as the central portion thereof, and a coupling plate between said members with oppositely extending arms having flanges turned at a right angle to the body of the coupling plate and engaging the edges of the arms of said coupling members.

958,541. TRUCK SIDE FRAME. EDWARD M. RICHARDSON, Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 28, 1909. Serial No. 515,029.



1. A truck side frame having a recess provided with top and side walls, a separately formed axle supporting journal box, and means to rigidly secure the box to the side walls of the recess; substantially as described.

2. A truck side frame provided with recesses or seats, each of said recesses having top and side walls, and a separately formed axle supporting journal box rigidly secured to the walls of each recess; substantially as described.

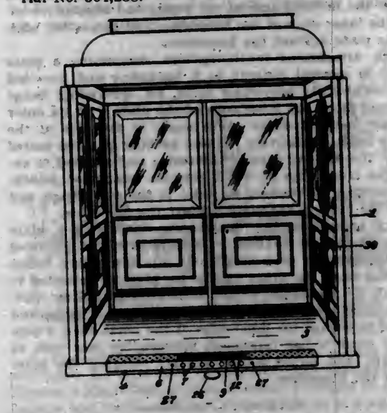
3. A truck side frame having end recesses provided with top and side walls, a separately formed axle supporting journal box in each of said recesses, grooves in said journal boxes, and means coacting with said grooves for securing the boxes to the recesses in the frame; substantially as described.

4. A truck side frame having an end recess and a separately formed journal box secured therein by metal cast between the box and the walls of said recess; substantially as described.

5. A truck side frame having an end recess with inner grooves, and a separately formed journal box having a groove, said box being secured in the recess by metal cast between the same and entering said grooves, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

958,542. ILLUMINATED THRESHOLD. CLAUDE B. RICKETTS, St. Louis, Mo. Filed June 25, 1909. Serial No. 504,238.



1. A movable passenger-carrying body having a recess formed in its floor at the threshold thereof, and an illuminated casing seated in said recess for lighting up said threshold.

2. A movable passenger-carrying body having a recess formed in its floor at the threshold thereof, and an internally illuminated casing seated in said recess for lighting up said threshold.

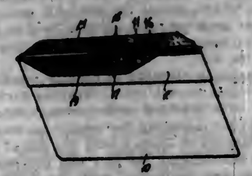
3. The combination of a floor having a recess formed therein, said recess opening through the upper surface and through one of the side faces of said floor, and an illuminated casing seated in said recess.

4. The combination of a floor having a recess formed therein, said recess opening through the upper surface and through one of the side faces of said floor, and an illuminated casing seated in said recess and having its top face flush with said upper surface and its front face flush with said side face.

5. The combination of a movable floor having a recess formed therein, a casing fitted in said recess, and lighting means located in said casing for illuminating said floor, said casing having a light exit in its top.

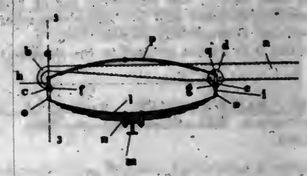
[Claims 6 to 19 not printed in the Gazette.]

958,543. ENVELOP. ADA B. RIPPETOE, Yellville, Ark. Filed July 8, 1909. Serial No. 506,538.



An envelop comprising a body, end flaps extending from the body, a back flap extending from the body at one side and provided with a slit near one end and a strap extending from the other end, said body having a folding flap extending from its outer side and said back flap having a closure flap extending from its outer side, said end flaps being foldable over the body and sealed at their overlapping ends, said back flap being foldable over the folded end flaps, said strap being foldable over the body with its outer portion inserted through the cleft of the back flap and the inserted portion sealed upon the folded end flaps, said folding flap inserted into the envelop and sealed upon the inserted portion of the strap, and said closure flap foldable over the body and sealed between the body and the outer portion of the strap.

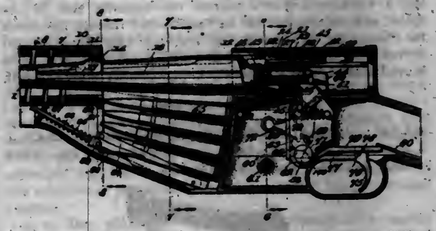
958,544. SPRING ARRANGEMENT FOR VEHICLES. JULIUS ROSENMEYER, Berlin, Germany. Filed Oct. 23, 1908. Serial No. 459,196.



1. A spring for vehicles comprising an upper and a lower leaf spring said springs being independent of each other, a vertical two armed lever pivoted to the vehicle body, and means for securing one of the ends of each spring to said two-armed lever, substantially as described.

2. A spring for vehicles comprising a lower leaf spring resting on the axle, a vertical two-armed lever pivoted to the vehicle body, one end of said two-armed lever being connected to one end of the said spring, a second leaf spring independent of the first spring and having one end secured to the other end of the two-armed lever, and means for securing the other ends of the springs to the vehicle, substantially as described.

958,545. AUTOMATIC FIREARM. CHARLES H. A. F. L. ROSS, Ross-Shire, Scotland. Filed June 4, 1909. Serial No. 500,226.



1. In an automatic gun, the combination of a sliding barrel, main and loading springs surrounding the same; a magazine; a breech mechanism; and means comprising a reciprocating and rotating sleeve provided with an interrupted connection with said barrel, and cams, lugs and a cam latch for automatically causing said barrel and sleeve to unlock and to interlock; substantially as described.

2. In an automatic gun, the combination of a sliding barrel; main and loading springs surrounding the same; a magazine; an automatic cocking mechanism; an automatic ejecting mechanism; a rotating sleeve; interrupted connections between said barrel and sleeve; and means comprising cams, lugs and a cam latch for automatically causing said barrel and sleeve to unlock and to interlock; substantially as described.

3. In an automatic gun, the combination of a reciprocating barrel; main and loading springs surrounding said barrel; a sleeve provided with an interrupted connection with said barrel; and means comprising cams, lugs, and a cam latch for automatically causing said barrel and sleeve

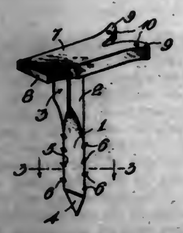
to unlock and to interlock upon firing the piece; substantially as described.

4. In an automatic gun, the combination of a reciprocating barrel; a main spring; a loading spring adapted to be compressed by said main spring; a reciprocating and rotating sleeve provided with an interrupted connection with said barrel; a breech bolt secured in said sleeve; and means for causing said sleeve as it reciprocates to engage and disengage said barrel, substantially as described.

5. In an automatic gun, the combination of a reciprocating barrel; a main spring; a loading spring adapted to be compressed by said main spring; a reciprocating and rotating sleeve provided with an interrupted connection with said barrel; a breech bolt secured in said sleeve; means for causing said sleeve as it reciprocates to engage and disengage said barrel; and additional spring pressed means for impelling forward said bolt and sleeve after the barrel has recoiled, substantially as described.

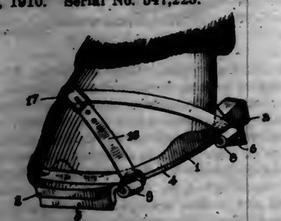
[Claims 6 to 26 not printed in the Gazette.]

958,546. RAILWAY-SPIKE. RICHARD A. ROSSMEISL, Whitingham, Vt. Filed July 19, 1909. Serial No. 508,301.



A railway spike comprising a body portion having a rectangular offset upper end, and a triangular-shaped lower portion, a series of barbs or spurs formed on the corners of said triangular portion, a plate like head on the upper end of the spike, said head having one end beveled on its under side and adapted to be engaged with the flange of the rail and having its opposite end bifurcated and projecting a suitable distance beyond the opposite side of the spike, said bifurcated end having formed therein apertures for fastening devices to be inserted therethrough and driven into the tie whereby the upper end of the spike is braced and secured in operative engagement with the rail.

958,547. ATTACHMENT FOR HORSESHOES. EMIL J. RUBRECHT and PATRICK C. DEAN, Pittsburg, Pa. Filed Mar. 4, 1910. Serial No. 547,223.



1. An attachment for horseshoes, comprising a plate adapted to fit the lower face of a horseshoe and provided with downwardly projecting calks, an upstanding flange at the inner edge of the plate adapted to fit inside the horseshoe, relatively yielding packing means interposed between the flange and the inner edge of the horseshoe, and means for holding the plate against the horseshoe.

2. An attachment for horseshoes, comprising a plate similar in general contour to a horseshoe and provided with downwardly projecting calks, an upstanding flange extending along the inner edge of the plate and adapted to fit inside the horseshoe, a band of relatively yielding packing material secured to the outer face of the flange and adapted to engage the inner edge of the horseshoe, and means for holding the plate against the horseshoe.

3. An attachment for horseshoes, comprising a plate similar in general contour to a horseshoe and provided with downwardly projecting calks, an upstanding flange extending along the inner edge of the plate with its outer side face inclined at an acute angle to the face of the plate, a band of relatively yielding packing material secured against the inclined face of the flange and adapted to engage the inner edge of the horseshoe, and means for holding the plate against the horseshoe.

4. An attachment for horseshoes, comprising a plate similar in general contour to a horseshoe and provided with downwardly projecting calks, an upstanding flange extending along the inner edge of the plate with its outer side face inclined at an acute angle to the face of the plate, a band of relatively yielding packing material seated against the inclined face of the flange and adapted to engage the inner edge of the horseshoe, means for detachably securing the packing material to the said flange, and means for holding the plate against the horseshoe.

5. An attachment for horseshoes, comprising a plate similar in general contour to a horseshoe and provided with downwardly projecting calks, an upstanding flange extending along the inner edge of the plate and adapted to fit inside the horseshoe, a band of relatively yielding packing material secured to the outer face of the flange and adapted to engage the inner edge of the horse shoe, a supporting strut or bar interposed between the rear ends of the plate, and means for detachably securing the plate against the horseshoe.

958,548. BEARING. JAMES E. SAPP, Bainbridge, Ga. Filed Feb. 2, 1909. Serial No. 475,658.



1. In a bearing, a plurality of tubular members adjustable with reference to each other, engaging devices thereon, an axle provided with corresponding engaging devices, bearings for the tubular members, and resilient devices for flexibly supporting the tubular members against movement longitudinally of the axle.

2. In a bearing, a plurality of tubular members having screw-threaded connection, engaging devices therein, an axle provided with corresponding engaging devices, means for mounting the tubular members, and resilient devices for flexibly supporting the tubular members against movement longitudinally of the axle.

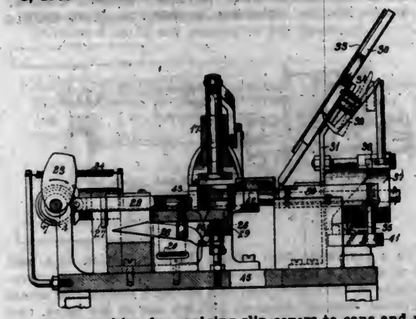
3. In a bearing, a plurality of tubular members adjustable with reference to each other, engaging devices thereon, an axle, longitudinal ribs thereon for contacting with the engaging devices, means for rotatably mounting a hub on the tubular members, and resilient devices for flexibly supporting the tubular members against movement longitudinally of the axle.

4. In a bearing, a plurality of tubular members adjustable with reference to each other, engaging devices on said members, an axle provided with corresponding engaging devices, means for mounting the tubular members, a resilient device arranged to contact with one end of such members, a collar surrounding the axle and provided with engaging devices and contacting with the resilient device, and a nut also provided with engaging devices and contacting with said collar.

5. In a bearing, a plurality of tubular members adjustable with reference to each other, an axle provided with means for engaging such tubular members and preventing the rotation thereof with reference to the axle, a collar surrounding the axle and having threaded connection with the outer end of each of the tubular members, means for rotatably mounting a hub on said collar and on said tubular members, and means bearing against the collar for cushioning the latter with reference to the axle.

[Claim 6 not printed in the Gazette.]

958,549. CAN-CAPPING MACHINE. FREDERICK SEITZ, Rensselaer, N. Y., assignor of one-third to Valentine Dickhaut and one-third to Henry Dickhaut. Filed Feb. 5, 1909. Serial No. 476,309.



1. In a machine for applying slip covers to cans and receptacles, a single pair of gripping dies, mechanism for feeding a single line of cans, a feeder arranged to directly engage and move each can successively to a position between the jaws, mechanism for actuating the jaws and means for forcing the cap downwardly upon the can while the latter is relatively stationary, substantially as described.

2. In a machine for applying slip covers to cans, a pair of gripping jaws, arranged to engage the can and the cap, means for feeding a single line of cans, a reciprocating feeder arranged to directly engage each can of the line successively and push it to a place between the jaws, means for feeding a succession of caps to a position over the can, mechanism for actuating the jaws and a pusher device arranged to force the cap down upon the can while the latter is relatively stationary, substantially as described.

3. In a machine for applying slip covers to cans, a single pair of gripping jaws, mechanism for reciprocating the same toward and from each other, means for feeding a single line of cans past one side of the jaws, a feeder arranged directly to engage each can successively and push it to a point between the jaws, mechanism for feeding the caps and forcing them downwardly upon the cans, and an ejector mechanism, substantially as described.

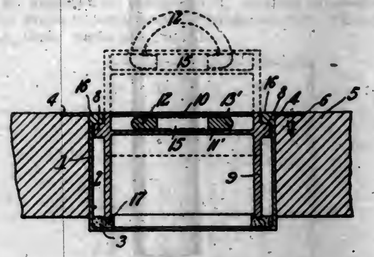
4. In an apparatus for applying slip covers to cans, a pair of reciprocating jaws raised to engage the body and a cap feeder entering recesses in said jaws, substantially as described.

5. In a mechanism for applying slip covers to cans, a pair of reciprocating jaws arranged to engage both the can and the cap, a cap feeder movable through recesses in the jaws and a pusher arranged to force the cap downwardly on the can while the latter is relatively stationary, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

958,550. CLOSING DEVICE FOR CELLAR FIRE-HOLES. WILLIAM C. SHEPARD, Pittsfield, Mass. Filed Jan. 29, 1908. Serial No. 413,260.

1. A floor plate for fire holes, and the like, consisting of a casing embodying a cylindrical body arranged in said hole and formed with an inwardly extending base flange and a top flange which extends on opposite sides of said body, a compressible gasket seating on the base flange, the inner portion of the top flange being formed with a pair of diametrically opposed openings, a cam faced lug on the under face of the inner portion of said top flange on one side of each of said openings, a stop on said flange on the opposite side of each opening, a closure consisting of a body having its lower edge engaging said gasket, a pair of opposite studs on said body designed to engage said lugs and to have their rotative movement restricted by said stops, and means to enable the rotation of said closure.



2. A floor-plate for a fire-hole comprising a cylindrical tubular shell having at its top an outwardly extending attachment flange and an inwardly extending annular flange provided on its under side with cam surfaces and having oppositely located recesses, and said shell having at its lower end an inwardly extending annular flange; and a cylindrical cup-shaped closure provided with outwardly extending studs at its upper portion adapted to be passed through said recesses to occupy a position below the upper flange of said cylindrical shell and by rotative movement to have engagements with the aforesaid cam surfaces and adapted by its lower circular edge to acquire a seating on the lower flange of said shell, and a compressible packing material between the upper surface of the said lower flange and the lower edge of the cup-shaped closure.

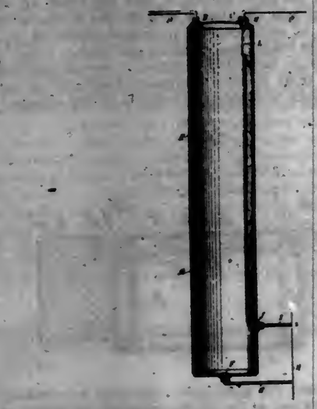
3. A floor-plate for a fire-hole comprising a cylindrical tubular shell having at its top an outwardly extending attachment flange and an inwardly extending annular flange provided on its under side with cam surfaces, having oppositely located recesses, and provided at the sides of said recesses opposite the locations of the cam surfaces with depending stop lugs, and said shell having at its lower end an inwardly extending annular flange; and a cylindrical inverted cup-shaped closure provided with outwardly extending studs at its upper portion adapted to be passed through said recesses to occupy a position below the upper flange of said cylindrical shell and by rotative movement to have engagements with the aforesaid cam surfaces and adapted by its lower circular edge to acquire a seating on the lower flange of said shell, and a compressible packing material between the upper surface of the said lower flange and the lower edge of the cup-shaped closure.

4. A floor plate for fire holes, consisting of a casing disposed in the hole, a closure in said casing, said casing having a top plate, a horizontal web therebelow and spaced therefrom, a vertical connecting web between the horizontal web and the top plate, a handle having inturned ends engaging a part of the connecting web and designed to have its major portion seat on said horizontal web, said top plate having an opening cut therethrough so as to enable access to said handle to permit the latter to be raised and lowered therethrough up from and down to its seat.

958,551. STAND-BOILER. WILLIAM SHERWOOD, New York, N. Y. Filed Jan. 14, 1910. Serial No. 538,134.

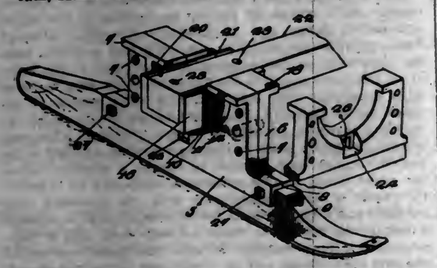
1. A stand boiler having a hot water inlet and a hot water outlet and provided with a flexible pipe arranged within the boiler shell and having its lower end connected with the hot water inlet, the upper end of the said flexible pipe reaching to within a short distance of the top of the boiler shell, a coupling for the hot water outlet, a washer

on the coupling and a connection between the said washer and the upper end of the said flexible pipe.



2. A stand boiler having a hot water inlet and a hot water outlet and provided with a flexible pipe arranged within the boiler shell and having its lower end connected with the hot water inlet, the upper end of the said flexible pipe reaching to within a short distance of the top of the boiler shell, a coupling for the hot water outlet, a washer held in the coupling and provided with an apertured lug, and a flexible connection between the upper end of the said flexible pipe and the said lug.

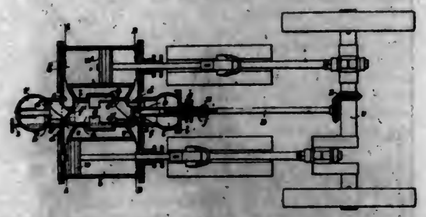
958,552. SLEIGH-KNEE. FRANK SHILLIN, Sundby, Minn., assignor of one-half to Edward G. Hilliard, Duluth, Minn. Filed June 3, 1909. Serial No. 499,989.



1. The combination with a sleigh, of a bracket secured to the runner thereof and provided with a bearing opening through the top of the bracket and having a segmental groove, there being an opening formed in the bracket and intersecting the groove at said bearing, a saddle piece having a rib engaging the walls of said groove, and a stop lug depending from the rib and adapted to engage the walls of the opening in the bracket for limiting the oscillation of the saddle piece, there being apertures formed in the bracket and communicating with the opening.

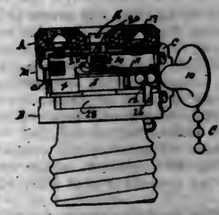
2. The combination with a sleigh, of a bracket mounted thereon and including detachably connected sections having their lower ends cut-away to form a seat for the reception of the runner and their upper portions provided with segmental recesses opening through the top of the bracket and constituting a bearing, the inner face of each bracket section being beveled and provided with an opening communicating with said beveled portion, a saddle piece having a segmental rib adapted to bear against the beveled portions of the bracket sections and provided with a seat adapted to receive a bolster, and a lug depending from the rib at the bottom of the saddle piece for engagement with the adjacent walls of the openings for limiting the oscillation of the saddle piece, the opposite ends of the rib terminating short of the top of the saddle piece to form shoulders adapted to bear against the adjacent bracket sections at the beveled portions thereof to assist in limiting the oscillation of the saddle piece, there being apertures formed in the bracket sections and communicating with the openings in said bracket sections, and a seating recess formed in the top of the saddle piece for the reception of a bolster.

958,553. ELASTIC-FLUID MOTOR. JOHN I. SHIRLEY, Mexico, Mexico. Filed Sept. 1, 1906. Serial No. 332,914.



In a reversible fluid motor, the combination of a pair of cylinders, a valve chest between the cylinders, a rotary-tubular valve in said chest and having a central live steam chamber, exhaust chambers at each end of the valve, two sets of inlet and outlet ports at each end of the tubular valve, one set at each end being inoperative while the other is operating, ports in the cylinders adapted to intermittently coincide with the ports in the rotary valve, sloping partitions extending across the interior space of the valve and separating the inlet from the outlet of one set of ports, an exhaust pipe at each end of the valve extending through the partition at one end and the side wall of the valve at the other end, and means for longitudinally moving the valve to bring one or the other set of ports into operation.

958,554. PULL-SOCKET. FRANK W. SLADY, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Apr. 24, 1909. Serial No. 492,016.



1. In an electric switch mechanism, a ratchet member, a spring tending to turn the same in one direction, and a tensioning device for said spring, comprising an abutment member engaged by one end of said spring and a frictional collar forming a bearing for said abutment piece and holding the latter in any position to which it may be adjusted by merely rotating the same.

2. In an electric switch mechanism, a ratchet member, a spring tending to turn the same in one direction, and a tensioning device for said spring, comprising an abutment member engaged by one end of said spring and a split frictional collar forming a bearing for said abutment piece and holding the latter in any position to which it may be adjusted by merely rotating the same.

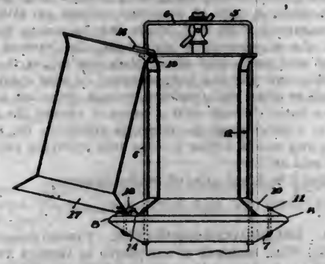
3. In an electric switch mechanism, a ratchet member, a spring tending to turn the same in one direction, and a tensioning device for said spring, comprising an abutment member engaged by one end of said spring and a frictional collar forming a bearing for said abutment piece, said abutment being offset above and below said collar to prevent axial displacement.

4. In a pull socket a stationary spring terminal and a coöperating rotary switch member comprising a non-conducting body and conducting spring contact wings rotating therewith.

5. In a pull socket a stationary spring terminal and a rotary switch member coöperating therewith, said switch member comprising a non-conducting body with circumferential teeth formed therein and conducting spring wings lying circumferentially above certain of said teeth and substantially co-terminous therewith.

[Claims 6 to 13 not printed in the Gazette.]

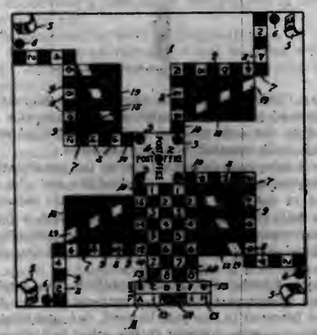
958,555. HUMIDIFIER. ROBERT P. SMITH, Winchester, Mass., assignor to American Moistening Company, Boston, Mass., a Corporation of Maine. Filed Apr. 22, 1909. Serial No. 491,432.



1. A humidifier comprising a casing formed of segmental sections of which one has a flaring rim, a ball and socket joint connecting the upper part of said section and an adjacent fixed part of the machine, and a ball and socket joint connecting the lower end portion of said flaring rim with a corresponding fixed part of the machine.

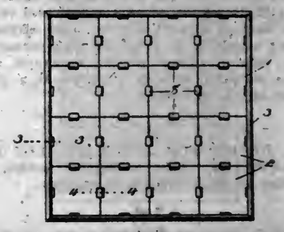
2. In a humidifier the combination with a segmental casing section having a flaring rim at its lower end, and sockets mounted respectively at the upper part of said section and at the outer edge of said rim, of a second segmental casing member having a flaring rim and having bearings journaled in said respective sockets, one of said bearings being mounted on the flaring rim of said movable section.

958,556. GAME-BOARD. THOMAS W. SPAULDING, San Francisco, Cal. Filed July 6, 1908. Serial No. 442,081.



A rectangular board having delineated thereon, at each of the four corners, a device indicating a mail box, at the center a device indicating a post office, tracks leading from the mail box to the post office in the form of squares, and second tracks, one for each of the first tracks, and forming short cuts, a part marked to indicate a hotel, four paths leading from the post office to the hotel, each path being formed of numbered squares, said hotel being suitably indicated to designate rooms therein, and also a chamber for containing valuables, substantially as described.

958,557. SECTIONAL METALLIC FLOORING. JAMES H. STIGGLEMAN, Wabash, Ind., assignor of one-fourth to Frank T. Edenharter, Indianapolis, Ind. Filed June 4, 1909. Serial No. 500,201.



1. A metallic flooring comprising a series of sections, each of said sections being provided with flanges and a series of openings, said openings being disposed near the edge of each section and adjacent the said flanges, a clip arranged to enter an opening in two adjacent sections, means on said clip for engaging two adjacent flanges on two of said sections to draw the same together, and means on said clip for retaining itself in position in said slots.

2. A metallic flooring comprising a series of sections, each of which is provided with a plurality of flanges, a series of clips arranged to enter said sections, means on said clips for engaging said flanges to draw the sections together, and means on said clips for retaining themselves in proper position in said sections.

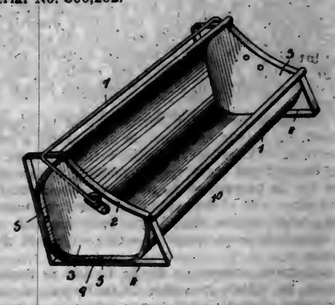
3. A metallic flooring comprising a series of sections, each of which is provided with a plurality of flanges, a series of clips arranged to enter said sections, means on said clips for engaging said flanges to draw the sections together.

4. A metallic flooring comprising a series of sections, said sections being provided with flanges and a series of openings, a clip constructed to enter said openings and to engage the flanges on the sections.

5. A section for a metallic flooring comprising a plurality of flanges and a series of openings in said section adjacent the said flanges, and a clip arranged to enter an opening in said section and to engage a flange thereon.

[Claims 6 and 7 not printed in the Gazette.]

958,558. METALLIC RECEPTACLE. JAMES H. STIGGLEMAN, Wabash, Ind., assignor of one-fourth to Frank T. Edenharter, Indianapolis, Ind. Filed June 4, 1909. Serial No. 500,202.



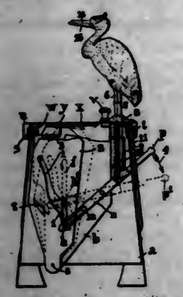
1. A receptacle comprising a body and ends, said body being bent at substantially right angles and having its

two edges bent inwardly, a stiffening and supporting strap at each end of the receptacle to form a base of support for the same, and a bail or handle on said receptacle, said bail or handle being connected thereto at a point above the center of gravity thereof.

2. A receptacle comprising a body and ends, said body being bent, one side of said body being at substantially right angles to the other, the edges of said body approaching each other, and a bail or handle for said body, said bail or handle being connected thereto at a point above the center of gravity thereof.

3. A receptacle comprising a body and ends, a supporting and stiffening strap at each end of said receptacle to form the base of support therefor, each stiffening strap being bent angularly to form two sides either of which acts as a base of support for the receptacle, and a bail or handle connected to said receptacle at a point above the center of gravity thereof.

958,559. DEVICE FOR AUTOMATICALLY DELIVERING ARTICLES. NOEL R. STILES, London, England. Filed May 29, 1909. Serial No. 499,162.



1. An automatic presenting device having in combination an article container, a cradle and a receiving body, lever means, operable from the exterior of said device, acting to move the cradle vertically through said container and simultaneously therewith allowing the receiving body to move under gravity till it meets the cradle and receives the article directly therefrom, said lever means on its return raising the receiving body into a position suitable for presenting the article, and lowering the cradle within the container into a position in which it becomes loaded with another article.

2. An automatic presenting device having in combination a chest, an article container, a slot in the bottom of said container, said bottom sloping toward the slot, a cradle in said slot, means to guide said cradle vertically within said container, a body mounted on said presenting device, a pair of receiving prongs attached to body, lever means operable from without said chest, acting to move the cradle within said vertical guides and simultaneously allowing the receiving body to move under gravity until it moves the cradle and receives the article directly into the prongs of the body, said lever means on its return raising the receiving body into a position suitable for presenting the article, and lowering the cradle within the container into a position in which it becomes loaded with another article.

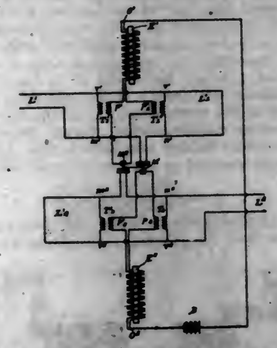
3. An automatic presenting device having in combination a chest, an article container in said chest, a cradle and a receiving element, lever means acting to raise said cradle up through the container, an opening in the top of said chest for the passage of the receiving element into the article container and of the article out therefrom, cammed segmental lever means controlling said opening, said cammed segmental lever means co-acting with said cradle lever means.

4. An automatic presenting device having in combination a chest, an article container in said chest, a cradle and a receiving element, lever means acting to raise said cradle up through the container, an opening in the top of said chest for the passage of the receiving element into the article container and of the article out therefrom, cammed segmental lever means controlling said opening, said cammed segmental lever means co-acting with said cradle lever means, means attached to said cammed segmental lever means acting to open a part of said receiving element to receive the article from said cradle.

5. An automatic presenting device having in combination a chest, an article container in said chest, a slot in the bottom of said container, said bottom sloping toward said slot, a cradle in said slot, pins projecting from said cradle and extending through slots in the opposite side walls of the container, levers pivoted to said container, long slots in one end of said levers engaging with the pins projecting from said cradle, a cross piece connecting said levers, a handle attached to said cross piece whereby said levers can be operated, segmental levers pivoted at one end to said container, a cam slot in said levers engaging with said pins extending from said cradle, a plate connecting the other ends of said segmental levers, an opening in the top of said chest controlled by said plate, a body mounted on said chest, a pair of receiving prongs on said body, means operated from said cradle raising means for controlling the movements of said body, the various movements of said cradle and of the plate controlling the opening in the chest and the body mounted on said chest being arranged so that the receiving prongs attached to said body can enter through said opening to receive the article from the cradle when the latter is raised to its highest position and means acting to open said receiving prongs to receive said article.

[Claims 6 to 8 not printed in the Gazette.]

958,560. TELEPHONE-REPEATER. PIETRO STRAGIOTTI, Hurley, Wis., assignor of one-fourth to Griffith Thomas, one-fourth to Joseph Vercellini, and one-fourth to Frank Marta, Hurley, Wis. Filed Aug. 11, 1908. Serial No. 448,022.



1. In a telephone repeating station the combination with the electrical triangle connections, of the coil of a repeater inserted in one side thereof, and two identical secondary induction coils inserted in the other sides.

2. In a telephone repeating device the combination with the electrical triangle connections, of the coil of a repeater inserted in one side thereof, two identical secondary induction coils inserted in the other two sides, a telephonic line connected to the ends of one of the secondary coils, and a local circuit connected to the ends of the other secondary coil.

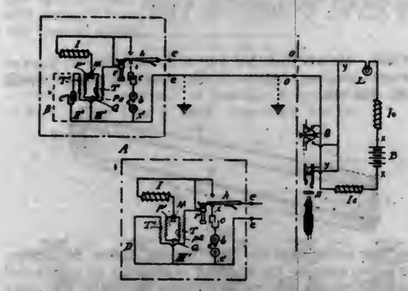
3. In a telephone repeating station the combination with the electrical triangle connections, of the coil of a repeater inserted in one side thereof, two identical secondary induction coils inserted in the other two sides, a telephonic line connected to the ends of one of the secondary coils, a local circuit connected to the ends of the other secondary coil, a similar electrical triangle, a second telephonic line and the coil of a second repeater connected to said similar electrical triangle, and a local circuit, a source of current therefor, said local circuit forking at the microphone of the first mentioned repeater to flow through two derived circuits, primary induction coils establishing said circuits, said primary induction coils acting on the secondary induction coils of the second mentioned electrical triangle.

4. The combination of two repeaters, a coil for each, each coil being inserted in the side of an electrical triangle connection, two identical secondary induction coils inserted in the other two sides of the electrical triangle connection, a circuit of a telephonic line connected to the ends of one of said secondary coils, a local circuit connected to the ends of the other, a local circuit, a source of current therefor, by means of which one repeater can act upon the circuit of the telephonic line connected with the other repeater in such manner as not to interfere with the last mentioned repeater.

5. In a telephonic system, the combination of a circuit of a telephonic line with another circuit by means of two repeaters, an electrical triangle connection in the side of which is inserted the coil of a repeater, two identical secondary induction coils inserted in the other two sides, one circuit of the telephonic line being connected to the ends of one of said secondary coils, and means by which one telephone circuit can act through one of the repeaters on the other telephone circuit without interference on the other repeater.

[Claim 6 not printed in the Gazette.]

958,561. TELEPHONIC TRANSMITTER. PIETRO STRAGIOTTI, Hurley, Wis. Filed Aug. 11, 1908. Serial No. 448,025.



1. The combination with a telephonic line, of a bridge-circuit comprising a differential micro-phone in series with an impedance coil.

2. The combination with a telephonic line, of a bridge-circuit comprising an impedance coil in series with a differential micro-phone where said bridge-circuit forks in two derived circuits.

3. The combination with a telephonic line, of a bridge circuit comprising a differential micro-phone where said bridge-circuit forks in two derived circuits, each passing through one of two identical coils wound on the same core and acting together as to produce an impedance on the total current that flows through said differential micro-phone.

4. The combination with a telephonic line, of two local parallel circuits, the first passing through a receiver, the secondaries of transformers and a condenser; and the second through an impedance coil and a differential micro-phone where said second parallel circuit forks in two derived circuits passing through the primaries of said transformers.

5. The combination with a telephonic line, of two local parallel circuits of relatively high ohmic resistance passing through a receiver and the secondaries of transformers, and the second through an impedance coil and a differential microphone where said second parallel circuit forks in two derived circuits passing through the primaries of said transformers.

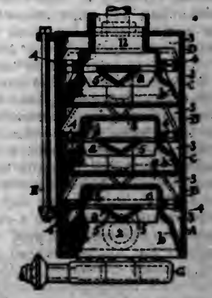
[Claims 6 and 7 not printed in the Gazette.]

958,562. FLY-SCREEN. VERNON J. STRATTON, Cloverdale, Cal. Filed Aug. 3, 1909. Serial No. 511,021.



A fly screen, comprising a frame having alined recesses in its sides, a pair of brace rods having their opposite ends slidingly fitted in said recesses, screen members secured to the ends of the frame and having their free ends bent to loosely embrace said rods and extend outwardly therebeyond in parallel planes, and adjusting elements connecting said rods and operating to vary the space between said outwardly extending screen portions.

958,563. INSTANTANEOUS WATER-HEATER. SIMON TACHE, Cleveland, Ohio. Filed Oct. 4, 1909. Serial No. 520,981.

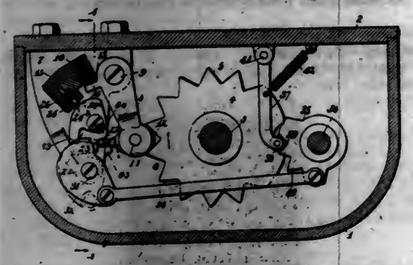


A water heater, embodying a series of circular sections having peripheral water chambers triangular in cross area and forming a closed exterior wall, said sections also having intersecting triangular cross passages, said passages in one section being staggered relatively to the passages of its adjacent sections, and oppositely disposed ports communicating between said sections and out of alinement with respect to the ports of the adjacent sections, whereby tortuous passages within the confines of the said peripheral water chambers for both the water and the products of combustion are afforded through the heater.

958,564. LEVER-CHECK FOR ELECTRIC CONTROLLERS. JOHN THOMAS, New York, N. Y. Filed Aug. 14, 1909. Serial No. 512,886.

1. In combination, a controller spindle, a segment carried thereby, a movable member coöperating with said segment, a pawl pivotally mounted on said movable member and having a rounded rigid butt end adapted to engage the notches of said segment, the body of said pawl projecting away from said segment, and means coöperating

with said pawl to check the continued advancing movement of said segment and adapted to be released by a periodical reversing movement of said segment.



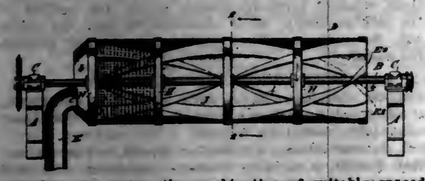
2. In combination, a controller spindle, a segment carried thereby, an arm coöperating with said segment, a pawl carried by said arm, projecting away from said segment and having a rigid butt end engaging the edge of said segment, and a member normally adapted to obstruct said pawl when said arm is moved outwardly by said segment and having a slot which may receive said pawl.

3. In combination, a controlled spindle, a segment carried thereby having teeth, an arm pressed toward said segment, a pawl mounted on said arm and having a butt rigid therewith for engaging said segment, said pawl projecting away from said segment and being adapted to be swung by the teeth of said segment when said segment is rotated, and a movable member controlled by said pawl, adapted to check the forward rotation of said segment and adapted to permit a backward rotation of said segment.

4. In combination, a controller spindle, a toothed segment carried thereby, an arm pressed toward said segment, a pawl carried pivotally by said arm and having an enlarged rounded butt end rigid therewith and normally received in a notch of said segment between the teeth thereof, said pawl projecting away from said segment, and a movable block controlled by said pawl and having a throat adapted to receive said pawl when permitting the rotation of said segment, said block having a jaw adapted to engage said pawl to arrest the movement thereof and check the rotation of said segment.

5. In combination, a controller spindle, a segment carried by said spindle, a pawl arm pivotally mounted near said segment and having a projecting wing, a spring thrusting against said projecting wing and adapted to press said pawl arm toward said segment, a pawl pivotally carried by said pawl arm and having a rigid rounded butt end adapted to engage the notches between the teeth of said segment, and a block coöperating with said pawl, normally tending to check the continued forward rotation of said segment and adapted to be released by a periodic backward rotation of said segment.

958,565. APPARATUS FOR SEPARATING GRAVEL FROM SAND, &c. CARSTEN E. TORJUSEN and WILLIAM IDSTROM, New Orleans, La. Filed Feb. 28, 1910. Serial No. 546,378.
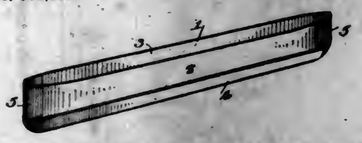


1. In a separator, the combination of suitably spaced supports, a shaft journaled in suitable bearings on said supports, spiders fixed on said shaft at intervals in the length thereof, a cylindrical shell fixed to said spiders and perforated and having one of its ends open throughout its diameter and also having a truncated cone at its opposite end, a pipe extending through the latter end and into the shell and adapted to deliver material to be separated thereto, and equidistant blades arranged spirally in the shell and extending throughout the length thereof and connected to both spiders and shell and having their portions adjacent the discharge end of the shell of increased pitch and also having right-angle flanges which extend forward from their inner edges; the said blades being provided with perforations, for the purpose set forth.

2. In a separator, the combination of a suitably supported foraminous shell open at one end throughout its diameter and having a truncated cone at its opposite end, a pipe extending through the latter end and into the shell for delivering material to be separated thereto, and equidistant, perforated blades carried by and movable with the shell and arranged spirally in and extending throughout the length thereof and having their portions adjacent the discharge end of the shell of increased pitch and also having right-angle flanges which extend forward from their inner edges.

3. In a separator, the combination of a suitably supported foraminous shell open at one end throughout its diameter and having a truncated cone at its opposite end, a pipe extending through the latter end and into the shell, and equidistant perforated blades carried by and movable with the shell and arranged spirally in and extending throughout the length thereof and having right-angle flanges on their inner edges.

4. In a separator, the combination of a suitably supported foraminous shell open at one end, and equidistant perforated blades carried by and movable with the shell and arranged spirally in and extending lengthwise thereof and having flanges on their inner edges, and means for delivering material to be separated to the interior of the shell through the opposite end thereof.

958,566. MANIFOLDING DEVICE. EDMUND J. TOUSIGNANT, Wallace, Idaho. Filed June 18, 1909. Serial No. 502,995.



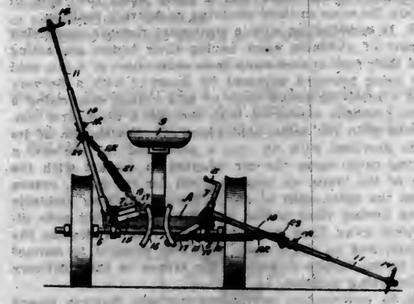
1. The hereindescribed manifolding device for temporary application to the edges of a plurality of superposed sheets of paper and carbon sheets to guide the same around the platen of a typewriting machine, consisting of front and rear members united at the ends of the device and along one of their longitudinal edges to form a pocket for the reception of such superposed sheets, and a straight, flat, longitudinally-extending, stiff flange formed by gluing together the longitudinal edges of the front and rear members along their longitudinal edges which are united, as and for the purpose specified.

2. A device of the character described consisting of separable sections, each having opposing strips forming a half-pocket to receive the edges of a plurality of sheets, and means whereby said sections may be united.

3. A device of the character described comprising two detachable sections, each having opposing strips, united along one longitudinal edge and stiffened at such edge, said sections being detachably connected by an interlocking tongue and slit connection.

958,567. LAND-MARKER. PETER A. ULRICH, Deer Creek, Ill. Filed Dec. 28, 1909. Serial No. 535,282.

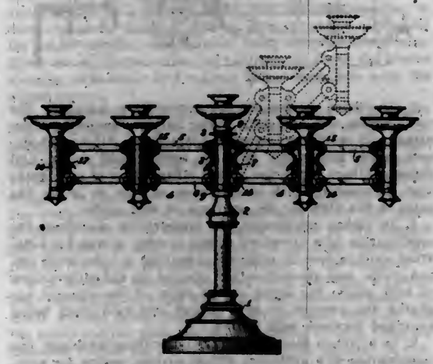
1. In a device of the character described, a rock shaft having a radially extending marker-carrying arm, a lever fulcrumed adjacent to said rock shaft, an arcuate keeper constituting a guide for said lever, and connecting means between said lever and the marker-carrying arm, said connecting means including a tension spring.



2. In a device of the character described, a rock shaft having a radially extending marker-carrying arm, a lever fulcrumed adjacent to the rock shaft, a keeper constituting a guide for said lever, an L-shaped bracket pivoted upon the lever, and connecting means including a tension spring between said L-shaped bracket and the marker-carrying arm.

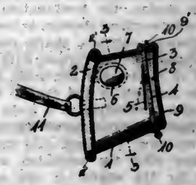
3. In a device of the character described, a rock shaft having a radially extending marker-carrying arm, a lever fulcrumed adjacent to one end of the rock shaft, a keeper constituting a guide for said lever, an L-shaped bracket pivoted upon the lever, an eye bolt connected adjustably with said bracket, a tension spring connected with the eye bolt, a clamp secured upon the marker-carrying arm and having a hook, and a chain connecting said hook with the tension spring.

958,568. CANDELABRUM. OTTO H. VAN GUELPEN, New York, N. Y., assignor to Benziger Brothers, New York, N. Y. Filed June 8, 1909. Serial No. 500,951.



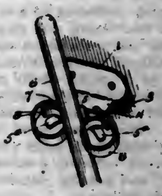
A candelabrum having an adjustable arm including a plurality of candle holders, each having a spindle, three cylindrical or sleeve sections arranged end to end and surrounding each spindle, the center one of said sections presenting substantially parallel flanges, the ends of which extend lengthwise adjacent the two terminal sleeve sections, parallel links pivotally secured between said flanges adjacent opposite ends thereof, two parallel flanges carried by said terminal sleeve sections and extending from one to the other past said central sleeve section, and links pivotally connected between said last-mentioned flanges adjacent opposite ends thereof.

958,569. RESPIRATOR AND INHALER. RICHARD VENNER, Barre, Vt. Filed Oct. 17, 1907. Serial No. 397,805.



A respirator comprising a substantially cylindrical member, a filtering fabric secured over one end thereof, an outwardly curved bead formed on the other end of said member, a cushioning fabric having one edge clamped between the member and the edge of said bead, the other edge of said fabric lying over the bead within the member, and means to secure the device to the person.

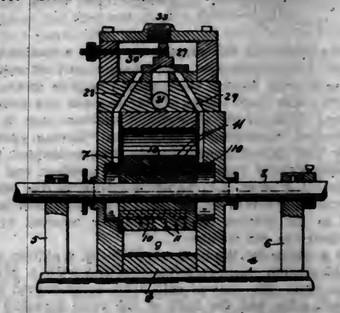
958,570. BROOM-HOLDER. SAMUEL A. WATSON, Chester, Vt. Filed Nov. 27, 1909. Serial No. 530,172.



1. A broom holder bracket comprising an attaching back, an arm projecting forwardly from the back and terminating in lateral wings, ears projecting upwardly from the arm, and a tongue projecting upwardly from the arm between the ears.

2. In a broom holder, the combination, with a plate spring having coiled free ends and a central offset, of a bracket having an attaching back, an arm projecting forwardly from the back and terminating in lateral wings which form bearings for the spring-ends, ears perpendicular to the arm, and a tongue projecting upwardly from the arm between the ears and fitting the off-set of the spring.

958,571. ROTARY ENGINE. BENJAMIN F. WICKERSHAM, Patoka, Ill., assignor of one-third to Thomas B. Walker and one-third to John Pugh. Filed May 18, 1909. Serial No. 496,834.



1. In a rotary engine, a propeller formed with a longitudinal rib or wing and having a steam inlet in both its faces or ends, said inlets being on opposite sides of the rib or wing and extending to the circumference of the

propeller but not to its opposite faces, and cylindrical abutments adapted to work in conjunction with the propeller.

2. In a rotary engine, the combination with a main casing, of a propeller working therein, hollow rotary abutments having cut-away portions, shafts connected to the abutments, and annular guides formed with bearings, said bearings adapted to receive the abutment shafts, so that the guides may be received in and control the abutments.

3. A rotary engine, consisting of a main casing, a propeller journaled therein, hollow cylindrical abutments having a shaft and cut-away portions, said abutments working in conjunction with the propeller, annular guides having bearings for the shafts of the abutments and adapted to be received in and direct the abutments, inlets for the steam, and an exhaust.

4. A rotary engine, consisting of a main casing, a propeller therein, said propeller having steam inlets and outlets in its ends and circumference but not extending to its opposite faces, a shaft supporting the propeller, hollow cylindrical cut-offs having shafts journaled in the casing, gearing connecting the shafts of the propeller and cut-offs, a steam chest, inlet ports for the steam leading from the steam chest to the ends of the propeller, an exhaust, a slide valve for controlling the inlets, and a lever for operating the slide valve.

5. A rotary engine, consisting of a main casing, a propeller journaled in said casing, said propeller formed with a longitudinal wing and ports at its ends and circumference, hollow cylindrical abutments adapted to work in conjunction with the propeller, shafts carrying said abutments, annular guides for the abutments, said guides having bearings formed in the same to receive the shafts of the abutments, a steam chest, ports leading from the steam chest to the ends of the main propeller, a valve to control said ports, an exhaust, a drive-wheel connected to the main shaft, and gearing connecting the shafts of the propeller and abutments.

958,572. MAIL-BAG CATCHER AND DELIVERER. JOSEPH YATES, Lake Point, Utah. Filed Jan. 18, 1910. Serial No. 538,617.



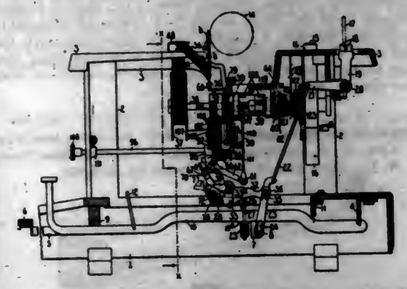
1. In a device for the purpose set forth, a station member, said station member comprising a pair of resilient arms, said arms having their ends diverging away from each other and their bodies contacting and car members positioned adjacent the doorway of the car, each of said car members comprising a hinged shelf having yieldable delivery and receiving cranes, said cranes adapted to be positioned directly beneath the station member, and mail bags provided with detachable members having spaced enlargements whereby one of said mail bags may be delivered to the station member and one received by the crane upon the car member.

2. In a device for the purpose set forth, a station member, said station member being provided with a pair of resilient arms, the ends of said arms being curved away from each other and the body of the arms normally contacting each other, a car, a mail pouch receiving and a mail pouch delivering member upon the car, each of said members comprising a pivoted table, a brace member connected with the table, a guide rod for the brace member, a spring catch for the brace member, yieldable delivery and receiving cranes upon the table, each of said cranes comprising a pivoted member provided with outwardly extending forked arms and a catch upon the table to retain the arms in their receiving or delivery position.

3. In combination with a stationary member comprising a pair of yieldable arms having their bodies contacting and their ends spaced away from each other, of a car, said car being provided adjacent its doorway with a delivery and a receiving crane, each of said cranes comprising a table pivotally connected with the car, a brace arm connected with the table, said brace arm having one of its ends provided with an eye, a guide rod for the eye, a spring catch upon the car adapted to contact with the eye of the brace, an operating rod for the catch, cranes upon the table, each of said cranes comprising yieldable arms having their bodies contacting and their ends diverging away from each other, a spring handle for the cranes, and an offset upon the table adapted to contact the spring handle to sustain the cranes in their delivery or receiving position.

4. In combination with receiving and delivery means of the class set forth, of a mail bag support, said support comprising a catch adapted to engage the mail pouch, and said support further comprising a rod member provided with spaced offset portions, substantially as and for the purpose set forth.

958,573. TYPE-WRITING MACHINE. CLIO B. YAW, Arlington, N. J., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed Dec. 27, 1907. Serial No. 408,238.



1. In ribbon mechanism for typewriting machines, the combination of a vibratory ribbon carrier, means for actuating said carrier at printing operation, a bifurcated ribbon guide, means for variably setting said guide, and roller gearings supported on the bifurcations of said guide and coöperating with said ribbon carrier to guide the same in the different set positions of said guide.

2. In ribbon mechanism for typewriting machines, the combination of a vibratory ribbon carrier, means for actuating said carrier at printing operation, a bifurcated ribbon guide, and grooved rollers pivoted on the bifurcations of said guide, the edges of the stem of the vibrator engaging the grooves in said rollers and said stem being arranged between said rollers.

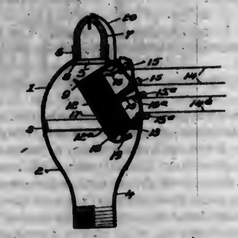
3. In a ribbon mechanism for typewriting machines, the combination of a vibratory ribbon carrier, means for actuating the same at printing operation, a lever acting to guide said carrier, a member pivotally connected with an arm of said lever, and means for moving said member to vary the normal position of said lever and said vibrator.

4. In a ribbon mechanism for typewriting machines, the combination of a vibratory ribbon carrier, means for actuating the same at printing operation, a lever acting to guide said carrier, a member pivotally connected with an arm of said lever, a shaft on which said member is fixed, said shaft being movable either automatically or by hand to vary the normal position of said lever and said carrier.

5. In a ribbon mechanism for typewriting machines, the combination of a vibratory ribbon carrier, means for actuating the same at printing operation, a lever acting to guide said carrier, a member pivotally connected with an arm of said lever, and a detent coöperative with said member to maintain it set in one or another of a plurality of predetermined positions.

[Claims 6 to 26 not printed in the Gazette.]

958,574. ELECTRICALLY-CONTROLLED GAS IGNITING AND EXTINGUISHING DEVICE. EBBEN S. ALLEN, New Haven, Conn. Filed Oct. 28, 1907. Serial No. 398,835.



1. A device of the character set forth including a burner body consisting of upper and lower separable sections, the lower section being provided with an inlet opening and the upper section with an outlet opening, a valve hingedly secured to the upper section, a spring secured to the upper section and adapted to normally retain the valve in position to close the outlet opening, a bracket arm secured to the upper section, and an electro-magnet carried by the bracket arm, said magnet being adapted when energized to move the valve in position to clear the outlet opening.

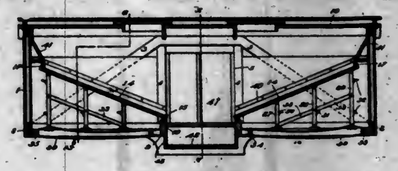
2. A device of the character set forth including a burner body consisting of upper and lower sections, the upper section being detachably secured to the lower section and provided with an outlet opening, a valve hingedly secured to the upper section, a spring secured to the upper section and adapted to normally retain the valve in position to close the outlet opening, and an electro-magnet carried by the upper section, said magnet being adapted when energized to move the valve in position to clear the outlet opening, said valve and magnet being removable with the upper section.

3. A device of the character set forth including a burner body consisting of upper and lower separable sections, the lower section being provided with an inlet opening and the upper section with an outlet opening, a support, a valve hingedly secured to the upper section, a spring adapted to normally retain the valve in position to close the outlet opening, a bracket arm secured to the upper section, a circuit, an electro-magnet carried by the bracket and included in said circuit, and an igniting means carried by the upper section and included in the circuit.

4. A device of the character set forth including a burner body consisting of upper and lower separable sections, the lower section being provided with an inlet opening and the upper section with an outlet opening, a valve hingedly mounted within the burner body, a spring adapted to normally retain the valve in position to close the outlet opening, and an electro-magnet mounted within the burner body, said magnet being adapted when energized to move the valve in position to clear the outlet opening.

5. A device of the character set forth including a burner body consisting of upper and lower separable sections, the lower section being provided with an inlet opening and the upper section with an outlet opening, a valve mounted within the burner body, a spring adapted to normally retain the valve in position to close the outlet opening, an electro-magnet mounted within the burner body, said magnet being adapted when energized to move the valve in position to clear the outlet opening, a latch mounted within the burner body and adapted to engage and hold the valve in a position to clear the outlet opening, and means by which the latch may be withdrawn to release the valve.

958,575. CONVERTIBLE BOX-CAR. JOHN A. ANSLEY, Thessalon, Ontario, Canada. Filed July 22, 1909. Serial No. 508,963.



1. In a convertible box car, the combination with the car body, of a movable floor pivotally supported at one end and adapted to be raised at the free end to form a hopper shaped interior to the car, a plurality of strut members pivotally secured at one end to said movable floor and slidably supported at the other end, and means for operating said strut members to raise said pivotal floor.

2. In a convertible box car, the combination with the car body, of a movable floor pivotally supported at one end and adapted to be raised at the free end to form a hopper shaped interior to the car, a plurality of bars pivotally connected at one end to said floor and forming struts for supporting said floor in its raised position, means for slidably supporting the free ends of said struts, and means for sliding the free ends of said struts on their supports and raising and lowering the free end of said floor.

3. In a convertible box car, a car body having longitudinal slide-ways formed in the bottom thereof, a movable floor pivotally supported at one end above said slide-ways and adapted to be swung on its pivot to form a hopper shaped interior to the car, a plurality of bars forming struts pivotally connected to the under side of said floor and rigidly connected together, shoes pivotally connected to the free ends of said struts and sliding in said slide-ways, and means for sliding said shoes on said slide-ways to raise and lower the free end of said floor.

4. In a convertible box car, a car body having longitudinal slide-ways formed in the bottom thereof, a movable floor pivotally supported at one end above said slide-ways, a plurality of bars forming struts pivotally connected to the underside of said floor and rigidly connected together, shoes pivotally connected to the free ends of said struts and sliding on said slide-ways, a winding drum suitably journaled in the car frame, a pulley suitably journaled from the car frame, and an endless belt secured to said shoes and extending around said pulley and drum for sliding said shoes longitudinally on said slide-ways to raise and lower the free end of said floor.

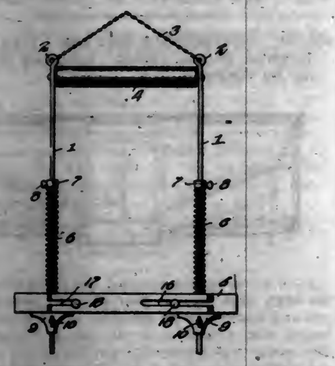
5. In a convertible box car, a car body having longitudinal slide-ways formed in the bottom thereof, a movable floor pivotally supported at one end above said slide-ways, a plurality of bars arranged in sets of different lengths and pivotally secured to the underside of said floor, the bars of each set being rigidly connected together, connecting rods pivotally connecting the several sets of bars together, shoes pivotally secured to the free ends of said bars, and means for sliding said shoes on said slide-ways to raise and lower the free ends of said floor.

[Claims 6 to 9 not printed in the Gazette.]

958,576. TROUSERS-STRETCHER. ROBERT P. BAIRD, Berry, Ky. Filed Feb. 25, 1909. Serial No. 479,970.

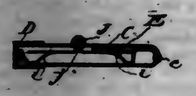
The herein described trousers stretcher comprising a bar, rods extending through said bar near the opposite ends thereof, a roller journaled near the outer ends of said rods, a suspending chain connected to the ends of said rods, springs encircling said rods and bearing at one end

against said bar and at their opposite ends against adjustable stops, adjustable stop collars mounted on said rods and provided with means for holding them rigidly to



said rods, slotted clamps upon opposite sides of said bar, and pins passing through said slots and connected to said bar.

958,577. CAR-TICKET HOLDER. JOHN H. BAKER and JOHN A. FRENCH, Toronto, Ontario, Canada. Filed Mar. 24, 1909. Serial No. 485,387.



1. A ticket holder comprising a one-piece tray; a central partition dividing the tray into two compartments side by side; a single movable cover for both compartments; a spring in each compartment; an ejecting roller for each compartment carried by the cover; and a slidable lock cap adapted to embrace the front of the tray and movable cover and slotted for the passage of tickets.

2. A ticket holder comprising a tray; a hinged cover therefor; a sliding lock cap adapted to embrace the front of the tray and cover and slotted for the passage of tickets; and a spring in the tray adapted to press tickets toward a position in alinement with the slot.

3. A ticket holder comprising a tray; a hinged cover therefor; a sliding lock cap adapted to embrace the front of the tray and cover and slotted for the passage of tickets; a spring in the tray adapted to press tickets toward a position in alinement with the slot, and an ejecting roller journaled in the cover.

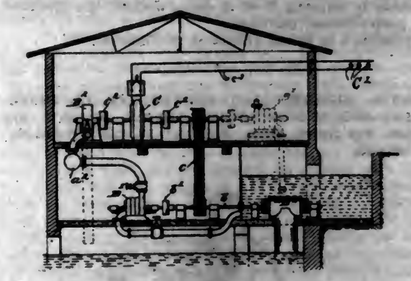
4. A ticket holder comprising a tray; a partial cover therefor; a hinged cover therefor; a sliding lock cap adapted to embrace the front of the tray and cover and slotted for the passage of tickets; and a spring in the tray adapted to press tickets toward a position in alinement with the slot.

5. A ticket holder comprising a tray; a partial cover therefor; a hinged cover therefor; a sliding lock cap adapted to embrace the front of the tray and cover and slotted for the passage of tickets; a spring in the tray adapted to press tickets toward a position in alinement with the slot; and an ejecting roller journaled in the cover.

[Claims 6 to 12 not printed in the Gazette.]

958,578. HYDRO-ELECTRIC POWER PLANT. FREDERICK W. BALLARD, Cleveland Heights, Ohio. Filed June 16, 1909. Serial No. 502,416.

1. A power plant comprising a hydraulic installation operable at a relatively low head, a second hydraulic installation operable at a relatively high head, and means for utilizing excess power developed at the first installation to raise water to such relatively high head for use in said second installation.



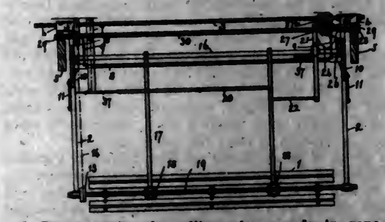
2. A power plant comprising an electric generator, a hydraulic installation operable at a relatively low head and adapted to drive said generator, a second hydraulic installation operable at a relatively high head and likewise adapted to drive said generator, and means adapted to be operated by said first installation to raise water to such relatively high head for use in said second installation.

3. The combination with power absorbing means, of a plant for supplying power thereto, comprising a hydraulic installation operable at a relatively low head, a second hydraulic installation operable at a relatively high head, each of said installations being adapted to actuate said power absorbing means, and means adapted to be operated by said first installation to raise water to such relatively high head for use in said second installation.

4. The combination with an electric-supply system, of a power plant for supplying current thereto, comprising current-generating means, a hydraulic installation operable at a relatively low head, a second hydraulic installation operable at a relatively high head, each of said installations being adapted to actuate said current-generating means, and means adapted to be operated by said first installation to raise water to such relatively high head for use in said second installation.

5. The combination with an electric-supply system, of a power plant for supplying current thereto, comprising an electric generator, a hydraulic installation operable at a relatively low head and adapted to be coupled to said generator, a second hydraulic installation operable at a relatively high head and likewise adapted to be coupled to the same generator, and means adapted to be operated by said first installation to raise water to such relatively high head for use in said second installation.

958,579. APPARATUS FOR PILING PIECE GOODS. JAMES W. BANKS, Bradford, England, assignor of two-thirds to The Firm of Denison, Preussner and Company, Bradford, England. Filed Aug. 29, 1908. Serial No. 450,908.



1. In apparatus for piling piece goods in rope form, warps, yarns and the like, a rotating winch having an oscillating motion at right angles to its axis, and pot eyes connected for oscillatory movement in unison with said winch and capable of movement parallel with the axis of said winch.

2. In apparatus for piling piece goods in rope form, warps, yarns and the like, a rotating winch, depending swinging supporting means for said winch, means for oscillating said winch supporting means at right angles to the axis of said winch, pot eyes, swinging depending brackets carrying said pot eyes and mounted on said winch supporting means, and means for oscillating said pot-eye carrying brackets parallel with the axis of the said winch.

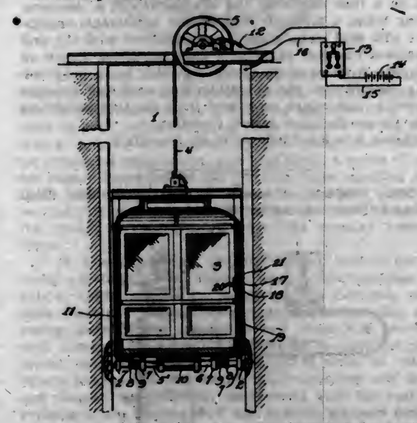
3. In apparatus for piling piece goods in rope form, warps, yarns and the like, a main shaft, means for rotating said main shaft, depending brackets capable of oscillating on said main shaft, a winch carried by said brackets, driving means between said main shaft and said winch, further depending brackets mounted on said first-named brackets and capable of oscillating parallel to said main shaft in combination with connections to said main shaft for oscillating said further brackets.

4. In apparatus for piling piece goods in rope form, warps, yarns and the like, a winch, depending brackets carrying said winch, a main shaft supporting said brackets, a second shaft, means for rotating said second shaft from said main shaft, a crank device on said second shaft, a link between said crank device and said depending brackets, pot eyes, depending brackets carrying said pot eyes and mounted on said winch carrying brackets and means for oscillating said pot eyes parallel with the axis of the said winch.

5. In apparatus for piling piece goods in rope form warps, yarns and the like, a winch, depending brackets carrying said winch, a main shaft carrying said brackets, a second shaft, means for rotating said second shaft from said main shaft, a crank device on said second shaft, a link between said crank device and said depending brackets, pot eyes, brackets carrying said pot eyes and mounted on said winch carrying brackets, a link between the pot eye brackets, a further link connected to one of the said pot eye brackets, a lever connected to said further link and mounted on the winch depending brackets, a rotating cam acting on said lever and means on the main shaft for rotating said cam.

[Claims 6 to 11 not printed in the Gazette.]

958,580. SAFETY ATTACHMENT FOR ELEVATORS. CLARENCE E. BAUMER and BERTHA BAUMER, Troy, Ohio. Filed Sept. 22, 1909. Serial No. 518,895.



In an apparatus of the character described the combination with the well racks, the elevator car, and its hoisting cable, a magnet carried by the elevator car, locking bars adapted for engagement with said racks, a circuit including said magnet, cable, and one of the racks, a circuit closing pull rod slidable through said elevator car, a roller carried by one end of said pull rod, a spring for normally holding said pull rod with its roller in contact with one of said racks to energize said magnet and thereby hold the locking bars from engagement with said racks, and a handle carried by said pull rod whereby the same may be withdrawn from engagement with its rack to break said circuit and thereby permit the magnet to release the locking bars.

958,581. FLOAT. GEORGE BLANK, Burlington, Iowa. Filed Apr. 21, 1909. Serial No. 491,291.



A fishing bob embodying a buoyant body provided with a longitudinal aperture, a tube rotatably mounted in the aperture and formed with a plurality of spaced apertures connected by a channel, a line passing through the tube and being threaded through the apertures and engaging the channel, the tube being adapted to be rotated to clamp the line against the wall of the aperture.

958,582. COMBINATION FASHION AND SAMPLE BOOK. HARRY E. BODINE, Merchantville, N. J. Filed Feb. 26, 1910. Serial No. 546,225.



1. A signature for combination fashion and sample books, comprising two or more pairs of stiff sheets jointed together by binding tape to provide stitching and binding means, one or more flexible fashion sheet interleaves interposed between each two pairs of thick sheets, and stitching threads extending through the stitching and binding tapes of the thick sheets and interposed flexible sheets.

2. A signature for combination fashion and sample books, comprising two or more pairs of stiff sheets jointed together by binding tape to provide stitching and binding means, continuous flexible double sheet interleaves interposed between each two pairs of thick sheets, a sewing back, and stitching threads extending through the stitching and binding tapes of the stiff sheets and the interposed flexible sheets and securing the signature to the sewing back.

3. A signature for combination fashion and sample books, comprising two or more pairs of stiff sheets jointed together by binding tape to provide stitching and binding means, one or more flexible fashion sheet interleaves interposed between each two pairs of thick sheets, and

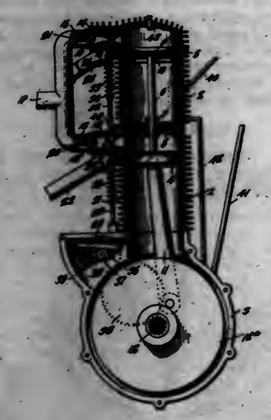
stitching threads extending through the stitching and binding tapes of the thick sheets and interposed flexible sheets; said flexible sheets being reinforced by binding tape, at the stitching line.

4. A signature for combination fashion and sample books, comprising two or more pairs of stiff sheets jointed together by binding tape to provide stitching and binding means, one or more flexible fashion sheet interleaves interposed between each two pairs of thick sheets, and stitching threads extending through the stitching and binding tapes of the thick sheets and interposed flexible sheets; said flexible sheets being reinforced by binding tape, at the top and bottom of the stitching line.

5. A combination fashion and sample book made up of signatures, each of which comprises two or more pairs of stiff sheets carrying samples of textile fabrics and jointed together by binding tape to provide stitching and binding means, one or more flexible sheets containing fashion illustrations interposed between the pairs of thick sheets, a sewing back, and threads passing through the thick sheet binding tapes and the interposed flexible sheet or sheets and securing the whole to the sewing back.

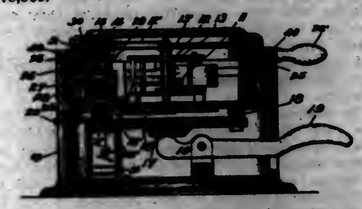
[Claims 6 and 7 not printed in the Gazette.]

958,583. ENGINE. GEORGE L. BORDEN, Campbell, N. Y. Filed Apr. 24, 1909. Serial No. 491,978.



An engine having two cylinders separated by a head, a crank casing in communication with the lower cylinder, a fly wheel mounted in said casing, pistons located in said cylinders, a connecting rod pivotally secured to the lower piston and eccentrically connected to the fly wheel, a piston rod passing through the head separating the cylinders, the lower end of which rod is fixed to the lower piston, a head forming the upper end of the latter and adapted to be freely received by a recess formed in the upper piston whereby the latter is free to move independently of said piston rod, in a downward direction, a fuel supply pipe, valve chambers in communication with said pipe and cylinders, valves located in said chambers, suitable exhaust pipes, spring-actuated rods, valves carried by the upper ends of the latter for controlling the exhaust from the cylinders, a shaft mounted in the lower portion of the casing of the engine, cams fixed upon the shaft, pivoted levers one end of which are movably secured within the casing the free ends of which are adapted to be forced into contact with the lower ends of the rods for actuating the latter in one direction and unseating the valves carried by the upper ends of said rods, and suitable gearing for connecting the crank shaft to the cam shaft, as and for the purpose described.

958,584. AUTOMATIC TIME-COMPUTER. RAWLEY H. BOUSLOG, Peru, Ind. Filed June 12, 1907. Serial No. 378,569.



1. In a time recorder, the combination, with a time train, recording mechanism carried thereby, and a time indicator coöperating with the time train, of a working-time integrating recorder associated with said time indicator, means for manipulating said integrating recorder independent of the time train, and means for associating a record sheet with the two recorders to receive records therefrom.

2. In a time computer, the combination of a time train and time indicator associated therewith, a movable member associated with said indicator and movable relative thereto to indicate successive units of working-time, means for gaging the movement of said member, and a time integrating indicator associated with said movable member for reducing the movement of the movable member into terms of working-time.

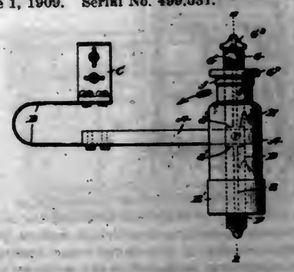
3. In a time computer, the combination of a time train, a time train indicator associated with said train, a working-time integrating train, an operating member therefor independent of the time train, a gage associated with said operating member and time indicator and divided into spaces indicating successive units of working-time, and means for co-relating said operating member and gage to indicate the starting point at any position in the gage and an ending point at another position of the gage.

4. In a time computer, the combination of a time-computing train, a rotatable ring having a rotatable engagement with said train, a gage ring associated with the first mentioned ring and carrying a gage indicating angles on said ring in terms of time, said gage ring being independently movable on the operating ring and also movable therewith.

5. In a time computer, the combination of a time-computing train, a rotatable ring having a rotatable engagement with said train, a gage ring associated with the first mentioned ring and carrying a gage indicating angles on said ring in terms of time, said gage ring being independently movable on the operating ring and also movable therewith, and means associated with the time-computing train for producing a record therefrom.

[Claims 6 to 9 not printed in the Gazette.]

958,585. CHURN. JAMES R. BRADY, Parole, Md. Filed June 1, 1909. Serial No. 499,531.



1. In a churn, a movable arm, a cross bar carried by the outer end of said arm, a cup-shaped member pivoted to said cross bar, and a clamping screw carried by the cross bar and arranged opposite the cup-shaped member pivoted thereto.

2. In a churn, a movable arm, a cross bar carried by the outer end of said arm, a cup-shaped member pivotally supported upon said cross bar adjacent one end thereof, a clamping screw carried by the other end of the cross bar and in axial alinement with the pivoted cup-shaped member, and a cup-shaped member secured to the inner end of said clamping screw.

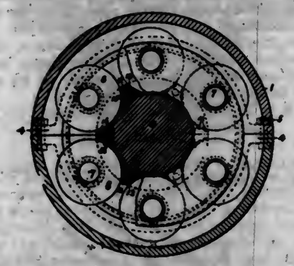
3. In a churn, a yieldably supported arm, a cross bar carried by the outer end of said arm, a post rotatably supported in one end of said cross bar, a cup-shaped member carried by said post and rotatable therewith, a fixed post carried by the other end of the cross bar a clamping screw mounted in said fixed post, and a cup-shaped member pivotally connected with the inner end of said clamping screw.

4. In a churn, a movably supported arm, a cross bar carried by the outer end of said arm, a bottle support pivoted to said cross bar at one end thereof and a clamping member at the other end of the cross bar.

5. In a churn, a cross bar provided on the underside thereof with integral ribs extending inwardly from the ends thereof and terminating short of the center thereof to form a pocket therebetween, means for supporting a container upon said cross bar, an actuating arm having its outer end secured to the cross bar between the ribs on the underside thereof, a fixed support and a spring connecting the inner end of the arm and fixed support.

[Claims 6 and 7 not printed in the Gazette.]

958,586. ROLLER-BEARING. WILLIAM J. BREWER, Brooklyn, N. Y. Filed July 2, 1909, Serial No. 505,539. Renewed Apr. 7, 1910. Serial No. 554,045.



1. In a roller-bearing, the combination with a box or casing provided with an interior annular bearing-ledge, an axle or shaft mounted in the casing and relatively rotatable thereto, roller-retaining rings disposed within said casing, bearing-bars connecting said rings and adapted for incidental engagement with said shaft, a series of rollers loosely journaled in the retainer-rings engaging said shaft and adapted for incidental engagement with the bearing-bars of said rings, and reduced journals formed on the rollers for engagement with said annular bearing-ledge.

2. In a roller-bearing, the combination with a box or casing provided with an interior annular bearing-ledge, an axle or shaft mounted in the casing and relatively rotatable thereto, roller-retaining rings disposed within said casing, bearing-bars connecting said rings and provided with recessed bearing-surfaces adapted in part for incidental engagement with said shaft, a series of rollers loosely journaled in the retainer-rings engaging said shaft and adapted for incidental engagement with the bearing-surfaces of the bearing-bars, and reduced journals formed on the rollers for engagement with said annular bearing-ledge.

3. In a roller-bearing, the combination with a box or casing provided with an interior annular bearing-ledge, of an axle or shaft mounted in the casing and relatively rotatable thereto, roller-retaining rings disposed within said casing, bearing-bars connecting said rings and adapted for incidental engagement with said shaft, a series of spindles journaled in the retainer-rings and engaging the annular bearing-ledge, and rollers secured to the spindles on opposite sides of the bearing-ledge engaging said shaft and adapted for incidental engagement with the bearing-bars of said rings.

4. In a roller-bearing, the combination with an axle, a two-part box or casing therefor, an annular bearing-ledge formed within said casing and having exteriorly recessed walls and flange-connection members, roller-retaining rings disposed within said casing, bearing-bars connecting said rings and adapted for incidental engagement with said axle, a series of rollers journaled in the retainer-rings engaging said axle and adapted for incidental engagement with the bearing-bars of said rings, and reduced journals in connection with the rollers for engagement with said annular bearing-ledge.

5. In an axle-roller-bearing, a roller-retaining ring comprising two side members and transversely connected bearing-bars, the latter adapted to engage the faces of the rollers and axle under excessive loads.

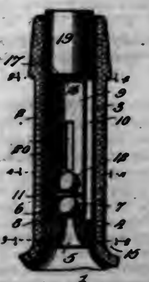
[Claim 6 not printed in the Gazette.]

958,587. CUTTING AND PRUNING TOOL. PAUL P. B. BROOKS, Kent township, Warren county, Ind. Filed Jan. 22, 1909. Serial No. 473,737.



The combination with an operating handle having its extremity provided with a slotted extension, of a hook member provided with spaced collars engaging the operating handle, of a knife member having an extending portion, said knife member being pivotally connected with the hook member and having its extending portion projecting through the slotted extension of the operating handle.

958,588. NON-REFILLABLE BOTTLE. WILLIAM J. BURLEIGH, Rome, N. Y. Filed Sept. 8, 1909. Serial No. 516,672.

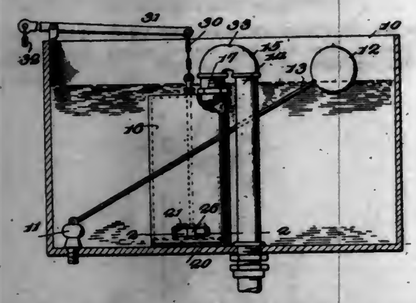


1. A bottle having a neck, a valve-carrying member located in the neck and adapted to be secured thereto, said valve carrying member comprising inner and outer spaced tubes, the inner tube having a closed outer end, a spider engaged with the said closed outer end and provided with a series of radially spaced fingers, said inner tube having a plurality of feed passages formed therein, a valve seat at the lower end of the said valve-carrying member, said

valve-carrying member having a passage which opens at one end into the inner tube and at the other end into the neck of the bottle, the outer end of the said passage being formed into the valve seat, a valve engaged with the seat, a weight above the said valve, and a disk conforming in contour to the transverse area of the inner tube and interposed between the valve and weight respectively.

2. A bottle having a neck, a valve-carrying member located in the neck and adapted to be permanently engaged therewith, an apertured plug carried by the said member and provided at one end of its aperture with a valve seat, a valve normally engaged with the seat, a weight above the valve, and a disk interposed between the said weight and valve respectively and adapted to normally close the transverse area of the valve-carrying member at a point immediately above the said valve, said valve-carrying member having a series of feed passages formed therein.

958,589. SIPHON-VALVE. LUKE T. BURNS, Waterbury, Conn. Filed Apr. 5, 1909. Serial No. 487,907.



In a siphon valve, the combination with a tank having a siphon pipe disposed therein, of a cylinder located upon the short arm of said pipe and having an opening formed in the side thereof and spaced upwardly from the bottom of the cylinder, a detachable bottom formed on said cylinder, a piston located in said cylinder, balls carried by said piston and crossed at their central portions, said piston having an opening centrally formed therethrough, a disk loosely mounted upon the upper face of said piston between said balls, and a piston rod upwardly extended through said cylinder and connected to the intersecting portions of said balls.

958,590. CURRENT-MOTOR. OTTIE M. BUTCHER, Coeur d'Alene, Idaho. Filed May 15, 1909. Serial No. 496,153.

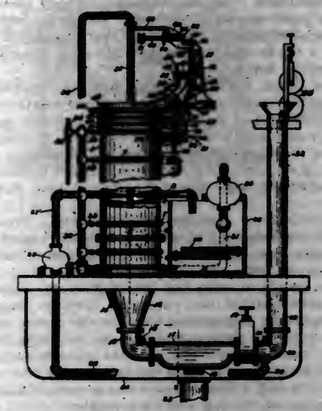


In a current motor, an endless traveling belt comprising drive chains, plates secured to opposite links on said drive chains, and hollow buckets connected to said plates by rods extending from one plate to the other through lugs on the buckets.

958,591. KEIR. JAMES A. BUTLER, Winthrop, Mass., and LORENS FLICK, Saylesville, R. I. Filed Apr. 17, 1908. Serial No. 427,729.

1. A vertical keir furnished with fluid supply means, in combination with a bodily floatable fabric receiver.

2. A keir furnished with fluid supply means, in combination with a float bodily movable within said keir and having an opening through which fabric may be drawn from said float.



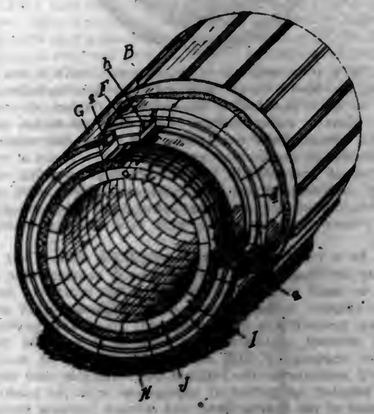
3. A keir furnished with fluid supply means, in combination with a fabric sustaining float bodily movable within said keir and having a guide opening through which fabric may be drawn.

4. A keir furnished with fluid supply means, in combination with a fabric sustaining float bodily movable within said keir and having an opening in its bottom through which fabric may be drawn.

5. A keir furnished with fluid supply means, in combination with a fabric sustaining float bodily movable within said keir and having an opening in its bottom and a wall inclined toward said opening.

[Claims 6 to 12 not printed in the Gazette.]

958,592. TUNNEL. WALTER BUTLER, St. Paul, Minn. Filed May 7, 1909. Serial No. 494,667.



1. The method of lining a tunnel in which the bore is made by driving forward a shield, consisting in laying a ring of cement blocks conforming to the shape of the tunnel and forming the permanent lining of the tunnel, holding the upper blocks of the ring by clamping them between the shield and the end of the tunnel lining until the key-block is placed.

2. The method of lining a tunnel in which the bore is made by driving forward a shield, consisting in laying a ring of blocks conforming to the shape of the tunnel and forming the permanent lining of the tunnel, holding the upper blocks of the ring by jacks pressing against the shield and forcing the blocks against the already-laid lining until the key-block is placed, and then in applying cement in the joints of the blocks from inside the tunnel.

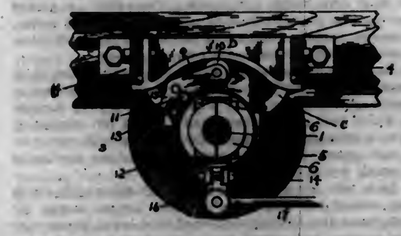
3. The process of lining a tunnel in which the bore is made by driving forward a shield, consisting in forming a lining of blocks within the tail of the shield, spaced therefrom, and filling said space with plastic cement from within the shield.

4. The process of lining a tunnel in which the bore is made by driving forward a shield, consisting in forming a layer of blocks within the tail of the shield, spaced therefrom and with passages between the blocks leading into the outside space, and filling said space and passages with plastic cement from within the shield.

5. The process of lining a tunnel, consisting in laying rings of blocks within the tunnel bore, provided with passages for liquid cement, and then forcing liquid cement into the passages to solidify the ring.

[Claims 6 to 24 not printed in the Gazette.]

958,593. SAWMILL-CARRIAGE. GEORGE E. CAMPBELL, Chattanooga, Tenn. Filed July 30, 1909. Serial No. 510,379.



1. In a saw mill carriage, the combination with axles, of a carriage frame capable of lateral movement on the axles, a sleeve mounted on the axle, means on the frame in engagement with the sleeve for causing lateral movement of the frame, a clutch connected to the sleeve, the arrangement being such as to cause the clutch to be moved upon the operation of the carriage, and means for causing the clutch to tighten during its movement whereby the sleeve is moved for shifting the carriage.

2. In a saw mill carriage, the combination with axles, of a carriage frame capable of lateral movement on the axles, a sleeve mounted on the axle, means on the frame in engagement with the sleeve for causing lateral movement of the frame, a clutch connected to the sleeve, the arrangement being such as to cause the clutch to be moved upon the operation of the carriage, and an eccentric for causing the clutch to tighten as the clutch moves whereby the sleeve is moved for shifting the carriage.

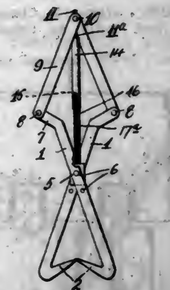
3. In a saw mill carriage, the combination with axles, of a carriage frame capable of lateral movement on the axles, a sleeve mounted on the axle, means on the frame in engagement with the sleeve, a lever connected to the sleeve, a band connected to the lever and sleeve, means for rotating the band for causing the lever to be moved and means engaging the lever for moving the lever whereby the band is tightened causing the sleeve to be moved for shifting the carriage.

4. In a saw mill carriage the combination with axles, of a carriage frame mounted thereon capable of lateral movement, a cam on the frame, a sleeve mounted on the axle adapted to engage the cam, a lever connected to the sleeve, a friction block mounted upon the axle, a band connected to the sleeve and lever and engaging the block, and an eccentric on the frame adapted to be engaged by the lever for tightening the band whereby the sleeve is moved and the carriage shifted.

5. In a saw mill carriage the combination with axles, of a carriage frame mounted thereon capable of lateral movement, a sleeve mounted on an axle, means on the frame in engagement with the sleeve, a lever connected to the sleeve, a band connected to the sleeve and lever, and an eccentric adapted to be engaged by the lever whereby the band is tightened with the movement of the lever, causing the sleeve to be moved, thereby shifting the carriage.

[Claim 6 not printed in the Gazette.]

958,594. TONGS. VINCENT D. CARROLL, Johnstown, Pa. Filed Feb. 3, 1910. Serial No. 541,844.



1. A grapple comprising levers, gripping prongs carried by the lower ends of said levers, a pin pivotally connecting said levers, arms pivotally connected to the upper ends of said levers, a pin connecting the upper ends of said arms, and a wedge shaped member arranged between said levers, said member having an opening formed therein adapted to provide clearance for the pivot pin of said levers, substantially as, and for the purpose herein described.

2. A grapple comprising levers, gripping prongs carried by the lower ends of said levers, pivoted arms connected to the upper ends of said levers, a pin pivotally connecting said levers, a wedge shaped member suspended from the upper ends of said arms between said levers and adapted to normally retain said gripping prongs oppositely disposed.

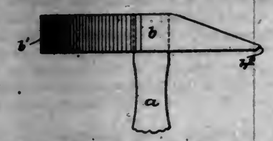
3. A grapple comprising pivoted levers, gripping prongs carried by the lower ends of said levers, arms pivotally connected to the upper ends of said levers, a pin pivotally connecting the upper ends of said arms together, a sleeve suspended from the upper ends of said levers, a pin pivotally connecting said levers, and a wedge shaped member mounted upon said pin between said levers and adapted to be suspended from said sleeve, substantially as described.

4. A grapple comprising pivoted levers, gripping prongs carried by the lower ends of said levers, arms pivotally connected to the upper ends of said levers, a stirrup connecting the upper ends of said arms, a vertical sleeve carried by said stirrup, a wedge shaped member arranged between said levers at the pivot point thereof, and a rod connecting with said member and extending upwardly into said sleeve, said rod having a hook-shaped end adapted to engage the upper edge of said sleeve.

958,595. HAMMER FOR TINSMITHS, &c. JOSEPH O. CHARPENTIER, Concord, N. H. Filed Dec. 2, 1909. Serial No. 531,008.

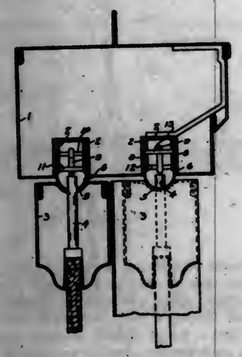
A tinsmith's hammer comprising a handle and a head secured thereto and having a straight rear face, the front face being beveled from the handle to one edge to form an elongated peen extended transversely of the handle, the side faces of said head being both beveled from the handle to the other edge to form an elongated peen extending

lengthwise of the handle, whereby the application of the hammer to the different parts of a circular flange or body is facilitated, the edge of the transverse peen being bev-



eled from the front to the rear, the edge of the other peen being also beveled away from the face intended to be adjacent the work.

958,596. WINDOW. ALBERT F. CIZEK, Tacoma, Wash. Filed Oct. 30, 1909. Serial No. 525,452.

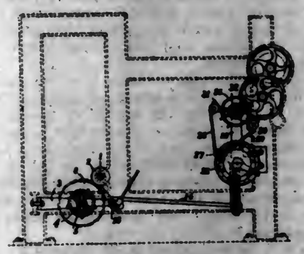


1. In a window, the combination with a frame having a vertical guide groove therein; an inner side-bar engaging said groove and vertically movable therein; an outer side-bar moving vertically with said inner side-bar and extending outward from said groove; a sash having a central pivot extending from its side and passing through said side-bar and supported thereby; and a flexible sash cord for supporting the side-bars and the sash, and secured to the outer side-bar, and engaging the ends of the outer- and inner-side-bars by offset engagement, whereby the weight of the sash will press the inner bar inward against the frame and the outer bar outward against the sash.

2. In a window, the combination with a frame having vertical guide grooves therein; a sash narrower than the space between the side faces of said frame and having pivots extending from the centers of its sides; side-bars engaging the sides of the sash and engaging the guide grooves in the frame and supporting the sash by the pivots; flexible sash cords adapted to support the sash and the side-bars and each secured to the lower ends of the side-bars and engaging the upper ends thereof; and means carried by the side-bars but transversely movable relatively thereto and engaging the inner faces of the grooves and reacting therefrom to force the sash cords out of alinement outward between the top and bottom of said side-bars, whereby said side-bars are yieldingly pressed against the sides of said sash.

3. In a window, the combination with a frame having vertical guide grooves therein; a sash narrower than the space between the side faces of said frame and having pivots extending from the centers of its sides; outer side-bars engaging the sides of the sash and engaging the guide grooves in the frame and supporting the sash by the pivots; flexible sash cords adapted to support the sash and the side-bars and each secured to the lower ends of the side-bars and engaging the upper ends thereof; and inner side-bars moving vertically with said outer side-bars, but transversely movable relatively thereto, and engaging the sash cords between the top and bottom of said outer side-bars and reacting from the inner faces of said grooves to force the sash cords out of alinement outward, whereby said outer side-bars are yieldingly pressed against the sides of said sash.

958,597. TAKE-UP MOTION FOR LOOMS. WILLIAM H. CLEGG, Burnley, England. Filed May 22, 1908. Serial No. 434,380.



1. In combination with a loom, a take up motion comprising a rotary member; means for driving said member from the loom crank shaft at a reduced speed; a rocking crank adjustable in length operatively connected with said rotary member; a second crank of fixed length connected with said first crank and rocking therewith; a second rotary member operatively connected to the take up roller; and means connected with said second crank for frictionally engaging and driving said rotary member.

2. In a take up motion for looms, the combination of an adjustable crank device comprising a pinion arranged on the axis on which the crank device rocks, a rack member with which said pinion gears, and a crank pin carried by said rack member, with means for rocking said crank device and means for transforming the rocking motion of said crank device into rotary motion.

3. In a take up motion for looms, an adjustable crank device, means for rocking said crank device, means for transforming the rocking motion of said crank device into rotary motion, said crank device comprising a pinion arranged on the axis about which the crank device rocks, a rack member with which said pinion gears, a crank pin carried by said rack member, and means for locking said crank pin in position.

4. A take up motion for looms, comprising in combination an adjustable rocking crank device; means for rocking said crank device; and means for transforming rocking motion of said crank device into rotary motion, said crank device comprising an arm; a pinion rotatably mounted co-axial with said arm; a rack meshing with said pinion and guided by said arm; a crank pin carried by said rack; and indicating means operatively connected with said pinion.

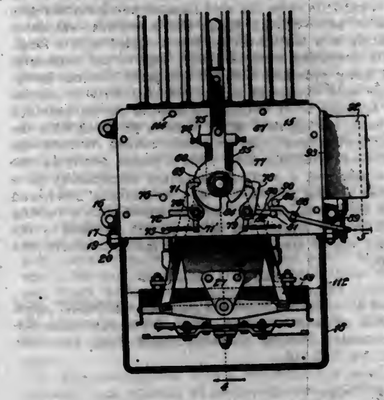
5. In a take up motion for looms, an adjustable crank device, means for rocking said crank device, means for transforming the rocking motion of said crank device into rotary motion, said crank device comprising a pinion arranged on the axis about which the crank device rocks, a rack member with which said pinion gears, a crank pin carried by said rack member, an indicating disk connected to said pinion, and a pointer working in conjunction with said disk.

[Claims 6 to 12 not printed in the Gazette.]

958,598. ELECTRIC SWITCH. FRED L. COLLINS and EUGENE A. HULTS, Chicago, Ill. Filed June 3, 1909. Serial No. 500,008.

1. An electric switch comprising an upper shell adapted to be supported in a suitable manner, the front wall of said shell being removable, a lower shell adapted to be secured to the upper shell, contact terminals within the lower shell supported by inside hangers depending from the upper shell, and mechanism secured to the front wall

of the upper shell for operating and controlling said contact terminals, said mechanism remaining mounted on said front wall when the latter is removed from the rest of the shell.



2. An electric switch comprising a casing adapted to be supported in a suitable manner, contact terminals within the casing, mechanism secured to one outside face of the casing for operating and controlling said contact terminals, a handle for actuating said mechanism, an overload circuit breaker mounted on another outside face of the casing and having connections around the corner of the casing to also actuate said mechanism, and a hood attached to the casing to protect said overload circuit breaker.

3. An electric switch comprising an upper shell, a lower shell adapted to be secured thereto, extension brackets hanging down from the upper shell within the lower shell, a horizontal slab of insulation attached to the lower ends of said brackets, stationary contact terminals mounted on the under face of said slab, trunnions also attached to said brackets, and a member carrying movable contacts mounted on said trunnions.

4. An electric switch comprising an upper shell, a lower shell secured thereto, brackets hanging down from the upper shell within the lower shell, fixed contact terminals supported by said brackets, trunnions also supported by said brackets, and a movable member mounted on said trunnions carrying contacts adapted to engage the fixed contacts, said member being adjustably supported on the lower ends of said brackets.

5. An electric switch comprising an upper shell, a lower shell secured thereto, brackets depending from the upper shell within the lower shell, fixed contact terminals supported by said brackets, trunnions carried by the lower ends of said brackets, a bar pivotally mounted on said trunnions, flexible contact strips fixed on said bar and adapted to engage the said fixed contact terminals, and mechanism to operate said bar.

[Claims 6 to 33 not printed in the Gazette.]

958,599. PROPELLER. MANSFIELD COOKSEY, Baltimore, Md. Filed Sept. 1, 1909. Serial No. 515,600.

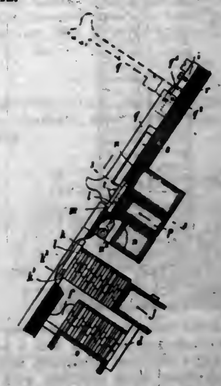
1. A propeller formed from a single blank of springy sheet metal whose transverse area is the same throughout its entire length, said blank being curved throughout its longitudinal area and bent at its ends to form oppositely extending flukes which extend approximately at an angle of 45° to the axis of the said propeller.

2. A propeller comprising a blade formed from a single blank of material whose transverse area is the same throughout its entire length, and spiral flukes at the ends of the said blade.

3. A propeller formed from a single blank of springy sheet metal whose thickness is the same throughout, the width of the said blank being the same throughout the entire transverse area and spiral flukes at the ends of said blank.



958,600. TYPE-DISTRIBUTING APPARATUS. RENÉ DACHEUX, Liege, Belgium. Filed July 7, 1909. Serial No. 506,342.



1. In a type distributing apparatus, the combination with a feeding mechanism for the types to be distributed, of a distributing slide having recesses adapted to receive the types from the feeding mechanism, controllers provided with a "signature" corresponding to that of the corresponding types, a piston for raising the types from the slide and presenting the same to the controllers, distributing conduits adapted to receive the types recognised by the controllers and means for imparting to the distributing slide and the piston a reciprocating motion.

2. In a type distributing apparatus, the combination with a feeding mechanism for the types to be distributed, of a distributing slide having recesses adapted to receive the types from the feeding mechanism, controllers provided with teeth spaced apart at a distance corresponding to the distance between notches provided in the corresponding types, a piston for raising the types from the slide and presenting them to the controllers, distributing conduits adapted to receive the types recognised by the controllers and means for imparting to the distributing slide and the piston a reciprocating motion.

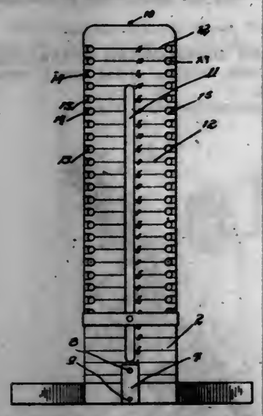
3. In a type distributing apparatus the combination with a feeding mechanism, of a distributing slide, controlling fingers pivotally mounted at one end, springs for maintaining said controlling fingers in a downward position, a piston for presenting the types to the controllers, distributing conduits, and means for imparting to the distributing slide and the piston a reciprocating motion.

4. In a type distributing apparatus, the combination with a feeding mechanism, of a distributing slide, controlling fingers disposed end to end and pivotally mounted at their opposite ends, a piston for presenting the types to the controllers, distributing conduits, and means for imparting to the distributing slide and the piston a reciprocating motion.

5. In a type distributing apparatus, the combination with a feeding mechanism, of a distributing slide, controlling fingers pivotally mounted intermediate their ends, springs for maintaining the operating ends of the controllers in a downward position, a stop coacting with the shanks of the controllers for limiting the downward movement thereof, a piston for presenting the types to the controllers, distributing conduits, and means for imparting to the distributing slide and the piston a reciprocating motion.

[Claim 6 not printed in the Gazette.]

958,601. SKIRT-MARKER. EMMA DAVID, Chico, Cal. Filed Sept. 22, 1909. Serial No. 519,067.



1. A skirt marker comprising a platform, a standard hinged to the platform and provided with a series of scale marks thereon, and a hem rest adjustably mounted on the standard, the standard being provided with a series of perforations in opposite edges thereof to accommodate a pencil for marking the hem.

2. A skirt and hem marker comprising a platform, a standard hinged to the platform, means for holding the standard upright on the platform, means for locking the standard parallel with the platform, a hem rest mounted adjustably upon the standard, and means for marking the hem.

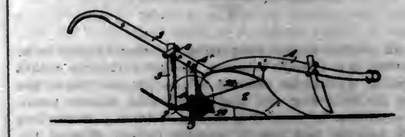
3. A skirt marker, the combination of a platform, a standard hinged thereto, said standard having an indicating scale thereon, a longitudinal slot therethrough and a series of perforations, a hem rest adjustably mounted on the standard, a binding strip secured to said hem rest and provided with end guides, a binding screw extending into said hem rest through the slot in the standard, a washer on said screw, and means for holding said standard in elevated position and for locking the same parallel with the platform.

958,602. RAIL-JOINT. WILLIAM P. DAVIS, Memphis, Tenn. Filed Aug. 4, 1908. Serial No. 446,885.



The combination with the meeting ends of a pair of rails, said rails having one side of their heads cut away to provide a comparatively small pocket, the inner wall of the pocket terminating a distance from the web of the rail, the opposite heads of the rail being also cut away to provide a comparatively large pocket, the inner walls of the said pocket also terminating a distance away from the webs of the rails, splice bars for the rails, the splice bar upon one face of the rail being provided with a flange engaging portion having its bottom face inclined from its center toward its ends, the said member being further provided with an overlying flange and a vertical extension terminating in a horizontal portion provided with a longitudinally extending bead, the outer edge of the horizontal portion being provided with an elongated vertical extension, the said extension being provided with a central tongue adapted to fit within the smaller pocket provided by the rails, the opposite splice member provided with the base portion inclined from its center toward its ends, the said member being provided with a flange overlying the base portion and a vertical extension terminating in a horizontal portion provided with a longitudinal bead, and the said horizontal portion being provided with a locking offset adapted to engage the larger pocket provided by the rails, and means for connecting the splice members and the rails.

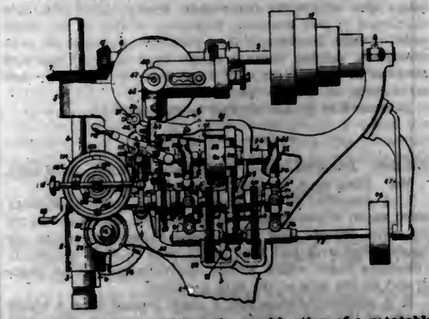
958,603. POTATO-DIGGING ATTACHMENT FOR PLOWS. FREDERICK DAY, West Zorra township, Oxford county, Ontario, Canada. Filed June 14, 1909. Serial No. 502,118.



1. In a potato digging attachment, the combination with a plow having a mold-board, of an angular bar connected to the plow, a plate connected to the bar and extending inwardly therefrom, and rods connecting the plate and bar together, upon which the earth and potatoes are received from the mold-board, said rods projecting upwardly for separating the earth and potatoes.

2. In a potato digging attachment, the combination with a plow having a mold-board, of an angular bar adjustably connected to the plow, a plate connected to the bar and extending at an angle therefrom, rods connecting the plate and bar together forming the bottom on which the earth and potatoes are received, said rods projecting upwardly from the bar for separating the earth and potatoes, and a wheel connected to the plow adapted to enter the earth to prevent lateral movement of the plow and attachment.

958,604. DRILLING-MACHINE. JOHN S. BARNES and JOHN R. VINCEN, Rockford, Ill., assignors to W. F. & John Barnes Company, Rockford, Ill. Filed Apr. 27, 1909. Serial No. 492,592.



1. In a drilling machine, the combination of a rotatably and longitudinally movable drill spindle, a cross shaft for the spindle, a second shaft, gear connection between the second shaft and cross shaft, a driving shaft, a cam shaft,

gear connection between the second shaft and driving shaft, friction connection between the driving shaft and cam shaft, clutches mounted on the second shaft, cams mounted on the cam shaft, and connections between the clutches and cams.

2. In a drilling machine, the combination of a rotatably and longitudinally movable drill spindle, a cross shaft for the spindle, a second shaft, gear connection between this second shaft and cross shaft, a driving shaft, a cam shaft, gear connection between the second shaft and driving shaft, friction connection between the driving shaft and cam shaft, means for releasing the cam shaft to permit its movement, clutches mounted on the second shaft, cams mounted on the cam shaft and connections between the clutches and cams.

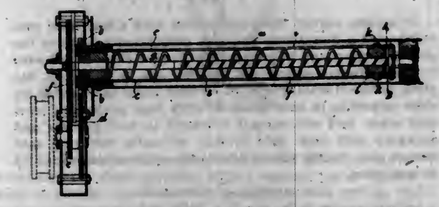
3. In a drilling machine, the combination of a rotatably and longitudinally movable drill spindle, a cross shaft for the spindle, a second shaft, gear connection between the second shaft and cross shaft, a driving shaft, a cam shaft, gear connection between the second shaft and driving shaft, friction connection between the driving shaft and cam shaft, means for holding the cam shaft against rotation, means for releasing the shaft to permit its movement, clutches mounted on the second shaft, cams mounted on the cam shaft, and connections between the clutches and cams.

4. The combination with a rotatable and longitudinally movable tool spindle, of means for effecting its longitudinal movement, including a driven member, a driving member, means for connecting the driving member to and disconnecting it from the driven member, a rotary element for governing the position of said connecting means, and mechanism for automatically effecting an intermittent rotation of the rotary element.

5. The combination with a rotatable and longitudinally movable tool spindle, of means for effecting its longitudinal movement, including a driven member, a driving member, means for connecting the driving member to and disconnecting it from the driven member, and automatic mechanism controlled by the longitudinal movement of said spindle for positively operating said means to connect and disconnect the driving and driven members.

[Claims 6 to 35 not printed in the Gazette.]

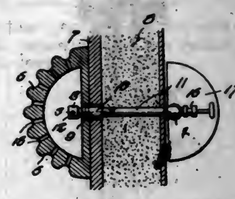
958,605. AUTOMATIC CURTAIN-ROLLER. ERNST DÖRING, Zossen, Germany. Filed Sept. 27, 1909. Serial No. 519,775.



In a device of the character described, the combination with a fixed sleeve provided with oppositely disposed longitudinally extending slots and a roller exterior thereto, of a threaded spindle revolubly mounted in said sleeve, a helical spring arranged about the spindle, gearing by means of which said spindle may be rotated through rotation of said roller, and a nut having lugs entering the slots in said sleeve, said nut being adapted for longitudinal but not rotary movement on said spindle, whereby when the roller is rotated to unwind the shade carried thereby said nut tensions said helical spring and when the shade is released said nut permits the spring to unflex and automatically rewind the shade on the roller.

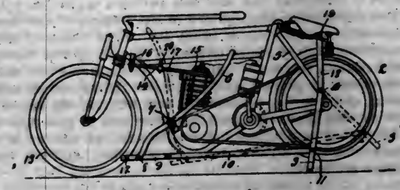
958,606. STEAM-GENERATOR. RUDOLPH DUNKEL, Boston, Mass. Filed Dec. 7, 1909. Serial No. 531,772.

1. In a device of the character described, an exteriorly corrugated casing, having discharge apertures, a feed pipe connected therewith and provided within the casing with a perforated cap, a supply tank, and a valved feed pipe leading from the supply tank to the pipe connected with the casing.



2. In a device of the character described, a casing having a corrugated surface, and provided with discharge apertures, a flat back wall provided with a threaded aperture, a pipe having a threaded collar engaging said aperture and provided with an apertured cap of smaller diameter than the collar upon the end which extends within the casing, an elbow threaded upon the outer end of the pipe, a tank or reservoir, and a valved feed pipe connecting said tank with the elbow.

958,607. MOTOR-CYCLE ATTACHMENT. ARTHUR W. EDWARDS, Chatham, Mass. Filed Aug. 3, 1909. Serial No. 510,982.



1. The combination with a motor-cycle, of a supporting stand pivotally connected to the machine frame, an operating hand lever fulcrumed on the machine frame and arranged within reach of the driver while in the saddle, and a connecting rod pivotally connected to said lever and to the stand, said rod being provided at its forward end with a brake shoe adapted to rest in contact with the steering wheel of the machine.

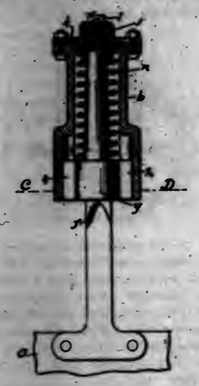
2. The combination with a motor-cycle, of a supporting stand pivotally connected to the machine frame, an operating hand lever fulcrumed on the machine frame and arranged within reach of the driver while in the saddle, a connecting rod interposed between said lever and stand, a keeper bar connected with the machine frame and provided with a forwardly projecting lip, a slide movable on said bar toward and away from said lip, and means for fastening said slide, substantially as described.

958,608. MIXING-MACHINE. GUSTAV EIRICH, Hardheim, Germany. Filed Jan. 14, 1910. Serial No. 538,008.

1. In a mixing machine having a driving shaft, in combination a bracket secured to the driving shaft of the machine, a casing connected to said bracket, a shovel, a movable bolt secured within said casing, adapted to carry the shovel at its lower projecting end, and means for permitting a yielding of such bolt and shovel in axial as well as in a rotary direction, substantially as described, and for the purpose set forth.

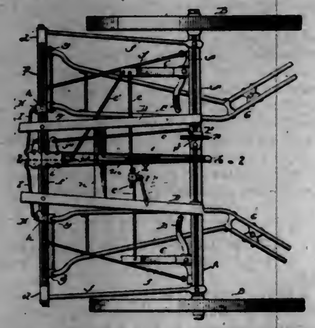
2. In a mixing machine having a driving shaft, in combination a bracket secured to the driving shaft of the machine, a casing connected to said bracket, means to adjust said casing on the bracket, a shovel, a movable bolt secured within said casing, adapted to carry the shovel at its lower projecting end, and means for permitting a yielding of such bolt and shovel in axial as well as in a rotary direc-

tion, substantially as described, and for the purpose set forth.



3. In a mixing machine having a driving shaft, a bracket secured to the driving shaft of the machine, a casing adjustably connected with said bracket and provided at its lower end with two opposite recesses, a movable bolt secured within said casing, designed to carry the shovel at its lower projecting end, said bolt having a projection with two opposite projections guided in the recesses of said casing, said recesses being of about the double width of said projections, a fixed sleeve located at the top of said casing and designed to receive and guide the upper end of said bolt, means to prevent said bolt from falling out of said casing, and a spring surrounding said bolt, having one end fixed to said projection, and the other end to said sleeve, and designed to actuate said bolt in axial as well as in a rotary direction, substantially as described, and for the purpose set forth.

958,609. PIVOT-AXLE CULTIVATOR. HENRY W. EISENHART, York, Pa., assignor to A. B. Farquhar Company, Limited, York, Pa. Filed Feb. 19, 1910. Serial No. 544,773.



1. The drag bars and their supporting frames on which the drag bars are slidably mounted so as to be movable bodily thereon from side to side of the machine, in combination with pivoted vertical hangers connected to the drag bars, an operating latch lever L and toothed segment therefor, a head piece connected to said lever by a ball and socket joint, so that while moving up and down with said lever, it can have a swiveling movement on a vertical axis independently thereof, a guide on the machine frame through which the stem of the head piece loosely passes, a crank projection on said head piece, and links I jointed at one end to said projection and at the other end to the said hangers, substantially as and for the purposes hereinbefore set forth.

2. The drag bars and their supporting frames on which the drag bars are slidably mounted so as to be movable from side to side of the machine, the hangers H, and links I in combination with the head piece, the operating lever connected to said head piece by a ball and socket joint, a guide on the machine frame through which the stem of the head piece loosely passes, a crank projection f^3 on the head piece to which the links I are jointed, the pivot axles and their bracketed steering stirrups connected to swing in unison, a crank arm on the head piece, and a connecting rod jointed at one end to the said crank arm and at the other end, to a member of the wheel swinging or steering system, substantially as and for the purposes hereinbefore set forth.

3. The combination substantially as hereinbefore described of the following elements: the drag bars and their supporting frames in which said drag bars are slidably mounted so as to be movable bodily from side to side of the machine; the hangers H, links I and head piece provided with a crank projection f^3 to which said links are jointed; a guide on the machine through which the stem of the head piece loosely passes; an operating lever having a ball and socket connection with the head piece, and designed to vary the distance between the drag bars; a crank arm f^4 on the head piece; a shifting latch lever and toothed segment therefor mounted on the frame of the machine, and a connecting rod jointed at one end to said shifting lever, and at the other end to said crank arm f^4, for the purposes set forth.

958,610. CIGAR-CUTTER. ALFRED EMRICH, Pforzheim, Germany, assignor to The Firm of I. Emrich, Pforzheim, Germany. Filed Aug. 25, 1909. Serial No. 514,587.

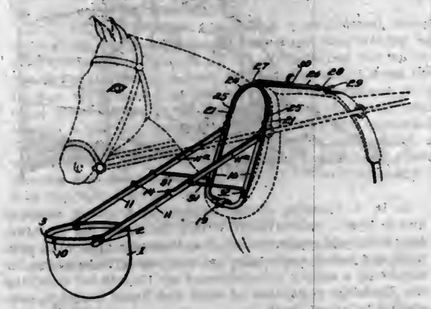


In a cigar cutter, the combination with a flat plate provided with a finger hole and also perforated to receive the end of a cigar, and provided with flanged sides folded over to form grooves contracted at each end, of a second flat plate provided with V shaped cutting edges and having its sides engaging in said grooves, with lugs projecting from said sides, and coil springs mounted in said grooves and engaging said lugs, said springs normally restoring said second plate to the initial operative position, substantially as described.

958,611. FEED-BAG. JOHN H. ESDERS, St. Joseph, Mo. Filed June 4, 1909. Serial No. 500,064.

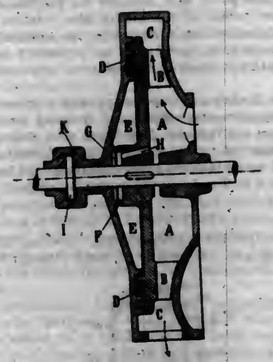
1. A feeding device comprising a supporting ring consisting of two sections pivotally connected together at their inner ends, a feed bag connected to said ring, supporting arms provided with keyhole slots at their outer ends, pintles upon which the ring sections are pivoted provided with T heads to engage said keyhole slots to permit the bag to be removed from the supporting arms, said supporting arms being formed in sections pivotally connected together by rule joints, a supporting collar adapted to be connected to the horse collar, said supporting arms being pivotally connected to said supporting collar, and pivoted latches for supporting said arms upon the supporting collar.

2. A feeding device comprising a collar, said collar being formed of a plurality of sections, one of said sections having a yoke connected to the check hook of the harness and provided with eyes at its extremities, the other of said sections being provided with hooks adjustably secured thereon and adapted to engage the said eyes of the yoke, sectional and hinged arms pivoted to second named



section of the collar, hooks on the arms engaging eyes on the second named section of the collar and a feed bag comprising a sectional ring detachably and pivotally connected to the supporting arms.

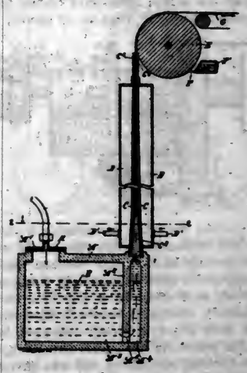
958,612. MEANS FOR BALANCING TURBINES AND PUMPS. WILHELM H. EYERMANN, Deutsch-Wilmersdorf, near Berlin, Germany. Filed Aug. 12, 1907. Serial No. 388,223.



1. In means for balancing turbines and pumps, the combination of a shell provided with a central cut away portion, a runner provided with a spindle, said casing and runner being provided with a series of interpenetrating rings which coact together, forming a passage of variable area between the shell and the runner, said runner being provided with a passage leading therethrough and with a cut away portion surrounding the spindle on one side of said runner and communicating with said passage, the raised portion of the runner surrounding said cut away portion coacting with the raised portion on the shell to form a passage of variable area, substantially as described.

2. In means for balancing turbines and pumps, the combination of a shell provided with a central cut away portion, a runner provided with a spindle, said casing and runner being provided with a series of interpenetrating rings which coact together, forming a passage of variable area between the shell and the runner, said runner being provided with a passage leading therethrough and with a cut away portion surrounding the spindle on one side of said runner and communicating with said passage, the raised portion of the runner surrounding said cut away portion coacting with the raised portion on the shell to form a passage of variable area, and a dash-pot for preventing too rapid movement of the spindle lengthwise, substantially as described.

958,613. PROCESS AND APPARATUS FOR MAKING GLASSWARE. STEPHAN FORGÓ, New York, N. Y. Filed Nov. 25, 1908. Serial No. 464,398.



1. The herein described process of forming glass, which consists in forcing molten glass by pressure to flow between directing or molding surfaces, while interposing a film of gaseous material between said surfaces and the glass and gradually reducing the thickness of the glass as it proceeds between said surfaces.

2. The herein described process of forming glass, which consists in forcing molten glass by pressure to flow between directing or molding surfaces while interposing a film of cool gaseous material between said surfaces and the glass and gradually reducing the thickness of the glass as it proceeds between said surfaces and is cooled by the film.

3. The combination of the receptacle divided into an inlet compartment and an outlet compartment, means for exerting pressure in the inlet compartment, two spaced directing members extending from the outlet compartment and forming a gradually contracting chamber, and means for producing gaseous films on the inner surfaces of said members.

4. The combination of the receptacle divided into an inlet compartment and an outlet compartment, means for exerting pressure in the inlet compartment, two spaced directing members extending from the outlet compartment and forming a gradually contracting chamber, and means for applying a vaporizable liquid to the inner surfaces of said members.

5. The combination of the receptacle divided into an inlet compartment and an outlet compartment, means for exerting pressure in the inlet compartment, two spaced directing members extending from the outlet compartment and forming a gradually contracting chamber, said members being made of porous material, and liquid supply chambers, the inner walls of which are formed by said members.

[Claims 6 and 7 not printed in the Gazette.]

958,614. METAL-SAWING MACHINE. WALLACE L. FIELD, West De Pere, Wis. Filed Sept. 2, 1909. Serial No. 515,949.

1. A metal sawing machine, comprising a suitable base, or support for the mechanism, two jaw stems, one of them being tubular, having each a jaw secured upon one end thereof and adapted to receive and hold between them the piece to be sawed, each stem being arranged to be reciprocated longitudinally thereof, relative to said base and independently of each other, a spring arranged between the two stems which normally separates the jaws

means for preventing the two jaw stems from turning around relative to the base piece, the stem of the inner jaw having secured to its opposite end from the jaw a compressed air cylinder, the stem of the outer jaw passing through the tubular jaw stem and into said cylinder, a piston secured to the latter stem inside of said cylinder, a connection from said cylinder through a three way valve with a compressed air supply source, whereby air can be admitted for action upon said piston for clamping the jaws aforesaid upon the piece to be sawed.

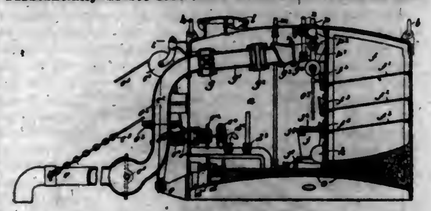


2. A metal sawing machine, comprising a suitable base, or support for the mechanism, two jaw stems, one of them being tubular, having each a jaw secured upon one end thereof and adapted to receive and hold between them the piece to be sawed, each stem being arranged to be reciprocated longitudinally thereof relative to said base, and independently of each other, a spring arranged between the two stems which normally separates the jaws, means for preventing the turning around of the two jaw stems relative to the base piece, the stem of the inner jaw having secured to its opposite end from the jaw a compressed air cylinder, the stem of the outer jaw passing through the tubular outer jaw stem and into said cylinder, a piston secured to the latter stem inside of said cylinder, a connection from said cylinder through a three way valve with a compressed air source of supply, a saw arbor arranged on said base at right angles with and above said jaw stems, a saw secured upon one end of said arbor, a motor for revolving the saw connected with said base, suitable gearing connecting the motor and saw arbor, a connection from the motor with a source of power supply, and a hand operated lever and connections therefor arranged for moving the jaws and saw toward and from each other.

3. A metal sawing machine, consisting of a suitable base, or support for the mechanism, the jaws 6 and 8 having stems 5 and 9, respectively, to one end of each of which stems a jaw is secured, the spring 11, arranged between the stems for spreading the jaws apart, a compressed air cylinder secured to the opposite end of the stem 9, a piston secured to the opposite end of the stem 5, and reciprocable within said cylinder, a three way valve attached to said cylinder, a connection from said cylinder with a compressed air source of supply through said three way valve, the saw arbor 34, the saw 36, secured thereto, means for holding the jaws in parallel relation relative to the saw, a motor for revolving the saw, a shaft for transmitting power from the motor to the saw suitable connections from the motor to a source of power supply, a worm wheel secured upon one end of the saw arbor, a worm shaft engaging said worm wheel, suitable gearing connecting the worm shaft and motor shaft, the lever 21, fulcrumed upon the stem 9, and the link 22, connecting the lever and base piece, for feeding the saw and piece to be sawed toward and from each other, said parts being arranged and operating substantially as shown, the piston and cylinder for clamping the jaws to the piece to be sawed, and the motor for revolving the saw.

958,615. SUBMARINE DEVICE FOR DREDGING AND OTHER SIMILAR PURPOSES. WILLIAM G. FITZGERALD, West Ealing, and JOHN G. FLOOD, Westcliffe-on-Sea, England. Filed Dec. 14, 1909. Serial No. 533,011.

1. A submarine device for dredging and similar purposes comprising a closed chamber, closed compartment in said chamber, a movable dredge pipe mounted outside said chamber, internal means for operating said pipe, controllable means for connecting said compartment with said dredge pipe, controllable means for discharging liquid contents from said compartment, controllable means for supplying compressed air to said compartment and means for maintaining a life sustaining atmosphere in said chamber, substantially as set forth.



2. In a dredging device comprising a closed chamber and a closed compartment within the same the combination with said compartment of a discharge apparatus with inlet and outlet control devices and controllable means for admitting a supply of compressed air thereto for emptying the discharge apparatus of solid and liquid contents, substantially as set forth.

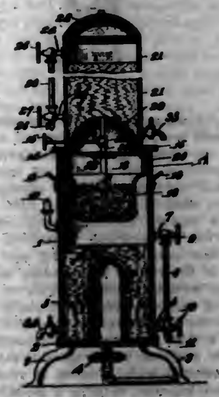
3. In a dredging device comprising a closed chamber and a closed compartment within the same, the arrangement of a series of perforated partitions dividing the compartment, each division provided with a water-tight access door, and co-acting controlling means for alternately charging and discharging the compartments by the operation of said controlling means, substantially as set forth.

4. In a dredging device comprising a closed chamber, a closed compartment within said chamber and a dredge pipe discharging into said compartment, mechanism operated from the interior of said chamber for varying the position of the inlet orifice of the dredge pipe relative to the sea bottom in combination with means also operated internally for giving the said dredge pipe an oscillatory motion so as to systematically treat any given area, substantially as set forth.

5. In a dredging device comprising a closed chamber, closed compartments within said chamber and a movable dredge pipe, a bifurcated pipe fitted with sluice and check valves connected to the dredge pipe and discharging into the closed compartments substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

958,616. COFFEE-CONDENSER. DANIEL B. FLEMING, Hartford, Ark. Filed May 21, 1909. Serial No. 497,513.



1. A coffee condenser comprising a lower boiler section open at its top, a basket set into the upper end of the boiler section, a water container section set into the basket and having its bottom formed into a condensing dome, and means inclosed within the dome and controlled from the outside of the container for supplying water to the basket, said basket consisting of a perforated coffee grounds containing cup of less diameter than the boiler to provide an annular space around the same, and members extending upwardly from the cup to support the same below the bottom of the water container to permit steam to pass over the cup to the condensing dome.

2. A coffee condenser comprising a cylindrical boiler open at its top, a basket including a top ring having an external flange resting on the top of the boiler and an internal flange forming a seat, members depending from the ring, a reticulated cup supported by the members at a point below the top of the boiler and above the water level therein, a water container set into the ring and supported on said seat and having its bottom formed into a dome, a supply pipe supported by the dome and terminating above the cup and independent thereof, and a valve for controlling the flow through the pipe.

958,617. LAP-ROBE. ANTHONY G. FRANKENHOFF, Atchison, Kans. Filed Dec. 30, 1909. Serial No. 535,619.



1. The combination of a lap-robe, a foot-receiver that is movable as a whole to a limited extent independently of the lap robe, and a connection intermediate the lap robe and the foot-receiver.

2. The combination of a lap robe, foot-receivers that are movable as a whole to a limited extent independently of the lap robe, flexible connections on the foot-receivers, and means on the lap-robe at intervals in the width thereof, whereby said connections may be attached to the robe at different distances apart.

3. The combination of a lap robe, foot-receivers that are movable as a whole to a limited extent independently of the lap robe, flexible connections on the foot-receivers, provided with snap-hooks, and rings on the lap-robe at intervals in the width thereof for the engagement of the said snap-hooks.

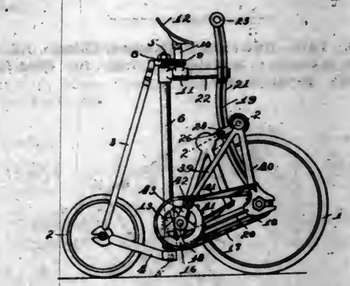
4. An attachment for lap robes, comprising a strap adapted to be fastened to a lap robe, a foot-receiver movable as a whole to a limited extent with respect to the strap, and a flexible connection intermediate the strap and the foot-receiver.

5. An attachment for lap robes, comprising a strap adapted to be fastened to a lap robe, and bearing spaced rings, foot-receivers movable as a whole to a limited extent with respect to the strap, and flexible connections on the foot-receivers having snap-hooks detachably connected to certain of the rings.

958,618. BICYCLE. ROBERT M. FRANKLIN, Galveston, Tex. Filed Apr. 6, 1907. Serial No. 366,814.

1. A device of the character described, comprising a frame, wheels mounted in said frame, a steering apparatus on said frame, a sprocket secured to the front wheel, pedals for moving said sprocket, means for conveying power to said pedals, and a plurality of means for operating said power conveying means for determining the angle at which said pedals operate.

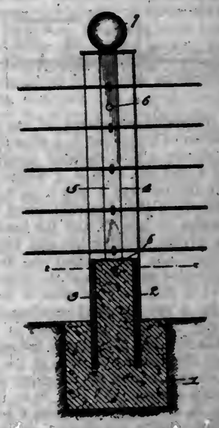
2. A device of the character described, comprising a frame, wheels mounted therein, a sprocket secured to the front wheel, a sprocket secured centrally of said frame, means for communicating power from said centrally positioned sprocket to said sprocket on the front wheel, pedals for revolving said centrally positioned sprocket, a crank hanger mounted on said frame above the front wheel, an axle and cranks journaled in said crank hanger, and means connecting said pedals, regulating the angle, and transmitting power from one to the other of said pedals.



3. A device of the character described, comprising a frame, wheels mounted in said frame, means for guiding the device, and means for propelling the device by the front wheel, said means comprising a centrally positioned sprocket on said frame, a sprocket on said front wheel, means for transmitting power between said sprockets, cranks for rotating said sprocket mounted in said frame, pedals secured to the outer extremities of said cranks, auxiliary cranks mounted on the front of said frame and connecting rods between said pedals and said auxiliary cranks.

4. In a device of the character described, a frame, wheels in said frame, securing means, and propelling means, said propelling means comprising a sprocket carried by the front wheel, a crank shaft mounted centrally of the frame, cranks secured to said crank shaft, a sprocket secured to said crank shaft, means connecting said sprockets for communicating power from one sprocket to the other, a crank shaft carried by the front forks of said frame, cranks secured to said last mentioned crank shafts, depending arms rotatably mounted on the extremities of said last mentioned cranks, and pedals supported at one end by said arms and at the other pivotally connected to the extremities of the cranks carried by the centrally mounted crank shaft.

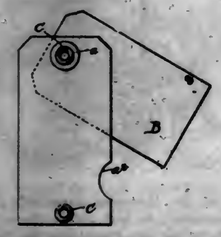
958,619. FENCE-POST. ISAIAH F. FRAZIER, New Castle, Pa. Filed Aug. 30, 1909. Serial No. 515,303.



A fence post consisting of a concrete base having a surface area greater than the post, a core rising centrally

from and integral with said base, an exterior tile inclosing said core and extending from the top of the post downwardly to and into the concrete base, the said tile having one face recessed and a wooden strip secured in said recess.

958,620. TAG. BENJAMIN F. GARDNER, Chicago, Ill., assignor to George C. Richardson, Chicago, Ill. Filed June 1, 1909. Serial No. 499,616.



1. In an improved tag, a movable tag, pivotally mounted within a case, said case made up of cover tags, means to hold the cover tags closely together at one end of said case, an eyelet uniting the cover tags at the opposite end of said case, said movable tag mounted upon said eyelet, means to spread the cover tags at the pivoted end to form a wedge-shaped recess within said case for the purpose specified and substantially as described.

2. In a device of the character described, the combination of two outer tags, perforated near one end, perforated spacing disks on each side of each tag, an eyelet passed through the perforation of each tag and joining the adjacent spacing disks thereto, a shorter tag placed between the outer tags and perforated near one end, a longer eyelet passing through the before-mentioned eyelets and perforation of the shorter tag to unite the tags, and means for uniting the opposite ends of the outer tags beyond the end of the shorter tag.

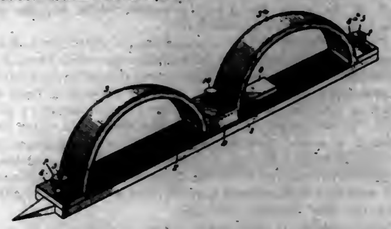
958,621. COIN-CONTROLLED APPARATUS. ADOLPH GERSTENKORN, Moorfleth, near Hamburg, Germany. Original application filed Dec. 11, 1908, Serial No. 467,011. Divided and this application filed Aug. 4, 1909. Serial No. 511,214.



1. In a coin controlled apparatus of the nature set forth the combination of a pull rod 5, a slide 6 for actuating the stamping device, a coin operated coupling between the said pull rod 5 and the slide 6, a wedge or cam 24 in connection with the pull rod 5, and a spring influenced knocking roller 14 above the opening leading to the coin receptacle, said wedge or cam 24 and the knocking roller 14 coöperating in forcibly ejecting the coin from its coupling position, substantially as described and shown.

2. In a coin controlled apparatus of the nature set forth the combination of a pull rod 5, a slide 6 for actuating the stamping device, a coin-operated coupling between the said pull rod 5 and the slide 6, a wedge or cam 24 in connection with the pull rod 5, a spring influenced knocking roller 14 above the opening leading to the coin receptacle, said wedge or cam 24 and the knocking roller 14 cooperating in forcibly ejecting the coin from its coupling position and a tail 25 attached to the slide 6 to retain the prematurely inserted coins in the chute 1, so as to prevent them from interfering with the proper action of the preceding coin, substantially as described and shown.

958,622. FILE-HANDLE. THOMAS E. GILL, Canton, Ohio. Original application filed Feb. 11, 1909, Serial No. 477,371. Divided and this application filed Feb. 5, 1910. Serial No. 542,312.



1. A handle for a file or the like composed of two handle sections having the outer ends thereof secured to the end portions of the file and their inner ends connected together by an endwise extensible joint.

2. A handle for a file or the like composed of two handle sections having the outer ends thereof secured to the end portions of the file and their inner ends connected together by an endwise extensible inflexible joint.

3. A handle for a file or the like composed of two handle sections on one side of the file, bolts adapted to connect the outer ends of the handle sections to the end portions of the file, and having their heads arranged to be countersunk in the exposed side of the file, the inner ends of the handle sections being connected together by an endwise extensible joint.

958,623. PROCESS OF BRIQUETING FINES OF ORE, FURNACE-DUST, WASTE METAL, WASTE IRON, &c. MAX GLASS, Vienna, Austria-Hungary. Filed Dec. 11, 1909. Serial No. 532,603.

1. In the process of briqueting ores, the cementing together of the ore particles by a cementitious compound insoluble in water formed of a basic salt, substantially as described.

2. In the process of briqueting ores, the cementing together of the ore particles by a cementitious compound formed of a basic metallic salt, substantially as described.

3. In the process of briqueting ores, the cementing together of the ore particles by a cementitious compound insoluble in water, formed of a basic acetate, substantially as described.

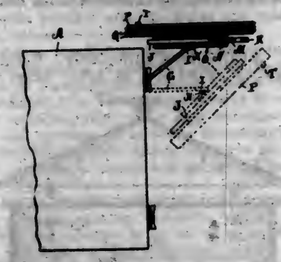
4. The herein described process of briqueting ores which consists in mixing a solution of acetate of aluminum with the material to be briqueted, pressing the mass thus obtained and heating to a temperature of approximately 100° C., whereby basic aluminum acetate is formed and acts as a cement, substantially as described.

5. The herein described process of briqueting ores which consists in mixing a solution of acetate of aluminum with the material to be briqueted, pressing the mass thus obtained and heating to a temperature of approximately 100° C. by quicklime added to the mass before pressing, whereby basic aluminum acetate is formed and acts as a cement, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

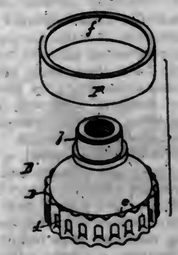
958,624. BURGLAR-PROOF-SAFE DOOR. LYMAN G. GLAZIER, Pomfret Center, Conn. Filed Dec. 9, 1909. Serial No. 532,229.

In combination, a safe having a circular threaded door opening and another opening of smaller size, thereby forming ribs, a number of which are provided with apertures, a carriage hinged to one of said ribs and resting in the aperture formed therein, said carriage having a semicircular opening formed in its free end, thus producing arms, a door carrying member provided with a threaded circular opening and having a lip which engages the aperture in one of the other ribs, said door carrying member being hinged to the arms of the carriage, a circular door having threads formed upon its periphery, a threaded projection formed on the inner surface of said door, engaging the circular opening in the door carrying member, and a



wrench hold mounted on the outer surface of said door, for the purpose set forth.

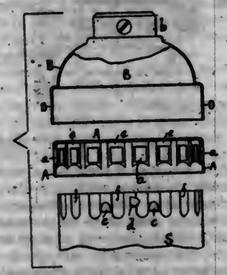
958,625. ELECTRIC-LAMP-SOCKET CAP. GILBERT W. GOODRIDGE, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Oct. 20, 1908. Serial No. 458,653.



1. An electric lamp socket cap, having a flange with numerous perforations and corrugations and a smooth inclosing ring secured over the said perforations and corrugations and bearing against and supporting the latter.

2. An electric lamp socket cap, having a flange with numerous corrugations and perforations and a smooth inclosing ring with a rim at one edge fitting over the shoulder above the corrugations and its other edge turned under the rim of the cap flange.

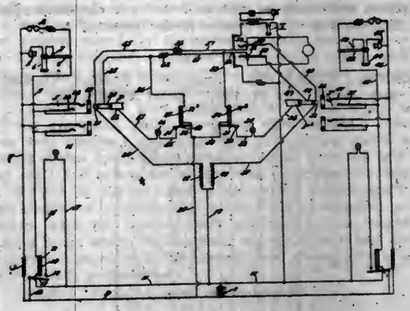
958,626. ELECTRIC-LAMP-SOCKET CAP. GILBERT W. GOODRIDGE, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Oct. 22, 1909. Serial No. 523,980



1. An electric lamp socket having a plain flange with a ring to aid in securing the shell to the cap in any one of the many different positions, said ring being permanently secured within the flange of the cap.

2. A socket having a shell with outwardly projecting tongues, a cap fitting said shell, and a perforated ring located in the cap, said tongues being adapted to enter openings in said ring when the shell and cap are put together.

958,627. TELEPHONE SYSTEM. CHARLES L. GOODRUM, Atlantic City, N. J., assignor, by mesne assignments, to C. P. Burns, Chicago, Ill. Filed Mar. 15, 1902. Serial No. 98,303.



1. A telephone system comprising substations and a central station and line connection between the same, circuit-changing devices at the substations for closing and opening the line circuits, a source of current at the central station connected with the lines and adapted to furnish current thereto for both talking and signaling purposes, line lamp signals having local circuits including said source of current, line relays for controlling said local circuits, jacks connected with the lines, a cord-circuit having plugs adapted for insertion in said jacks, a condenser in each talking strand of the cord-circuit, an impedance coil connected in parallel with one of said condensers, supervisory lamps associated with said cord-circuit, supervisory relays for controlling the circuits of said supervisory lamps, the impedance or retardation in the cord-circuit being in parallel with the line relays when the plugs are inserted, so as to shunt out the line relays and extinguish the line lamp signals, and the said supervisory relays being in series with the impedance or retardation when the plugs are inserted in the jacks.

2. A telephone system comprising substations and a central station and complete metallic line connection between the same, a plurality of jacks connected with each line, a line signal for each line, each jack having a pair of spring contacts and also a testing ring, said testing ring being connected with the line, a central source of current supply adapted to furnish current for both talking and signaling purposes, and a cord-circuit provided with plugs adapted for insertion in said jacks, both the tip and sleeve contacts of each jack being connected to the line-signal side of its allotted line.

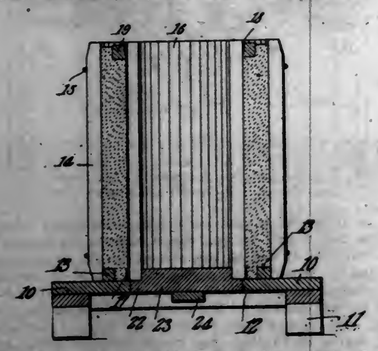
3. A telephone system comprising subscribers' lines, a plurality of jacks connected with each line, a line signal for each line, each jack having a test ring normally connected solely with the line, and a cord-circuit having three-way plugs provided with sleeve contacts adapted to register with and thereby close suitable circuits through the said testing rings, both the tip and sleeve contacts of each jack being connected to the line-signal side of its allotted line.

4. A telephone system comprising substations and a central station, complete metallic line connection between the same, a plurality of jacks connected with each line, each jack having a testing ring normally connected with the line only, a central source of current supply connected with the lines, a cord-circuit having three-way plugs provided with sleeve contacts adapted to register with said testing rings, and supervisory lamps located in the sleeve strand of the cord circuit.

5. A telephone system comprising substations and a central station, complete metallic line connection between the same, a plurality of jacks connected with the line, each jack having tip and ring contact springs and also a test ring connected with the tip spring, a central source of current supply connected with the lines, a cord circuit having three-way plugs provided with sleeve contacts adapted to register with said test rings, a condenser in each talking strand of the cord circuit, supervisory lamps located in the sleeve strand of the cord-circuit, and suitable impedance means arranged in parallel with one of said condensers and connected with said source of current supply.

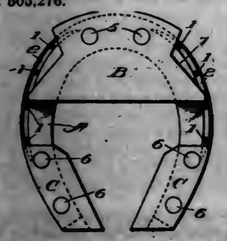
[Claims 6 to 51 not printed in the Gazette.]

958,628. TILE-MOLD. FREDERICK GORMAN, Okemah, Okla. Filed July 27, 1909. Serial No. 509,831.



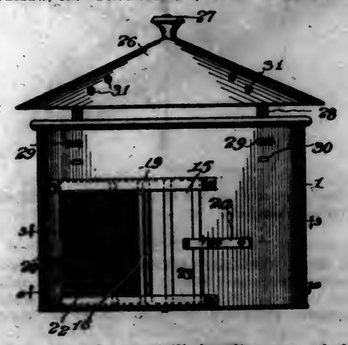
In a mold, a base having an upstanding annular flange, a plurality of mold sections assembled about said flange, said base being formed also with an opening concentric with respect to the flange, a head fitted in said opening and having a circular upstanding enlargement, a plurality of mold core sections assembled upon said head about the enlargement thereon, wedge blocks inserted between certain of said sections whereby to expand the same in assembled relation, means fitting about the sections for holding the same in such relation, said sections, at their upper ends, being provided with an outstanding annular flange, a strip fitted against the sections and closing the space between those sections between which the wedge blocks are inserted, and means removably supported beneath the base for supporting the head within the opening.

958,629. CUSHION-PADDED HORSESHOE. WILLIAM N. GOWING, San Augustine, Tex. Filed June 30, 1909. Serial No. 505,276.



The combination of a horseshoe having nail-receiving openings disposed along the outer edges, a toe cushion extending across the bottom of the horseshoe at the toe thereof with its marginal portion projecting forwardly of the toe and its ends recessed to expose the nail openings, means for securing the block to the shoe, said block having a segment shaped raised portion of substantially the same thickness as the shoe to bear against the under side of the hoof and to engage the concave inner face of the shoe, and cushioning blocks secured to the heel portions of the shoe.

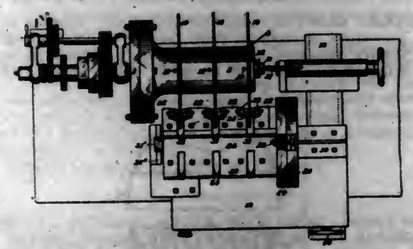
958,630. METAL BROODING-COOP. HARRY H. GRANT, Warsaw, Ill. Filed Mar. 16, 1909. Serial No. 483,703.



1. In a knock-down metallic brooding coop, a body member consisting of a single sheet of metal having outwardly and inwardly extending reinforcing beads at its upper and lower edges, respectively, said sheet being bent into circular shape and provided adjacent to its meeting edges with interlocking hook members and with overlapping portions and with fastening members extending therethrough in detachable engagement therewith.

2. In a device of the character described, a body member formed of a single sheet bent into circular shape and having its meeting ends detachably connected together, said body member being provided with a door opening, a flanged supporting member adjacent to the lower edge of the door opening having mutilated ends forming openings for the escape of obstructions, a keeper adjacent to the upper edge of the door opening, a plurality of doors supported at their lower ends upon the supporting member and having their upper ends confined within the keeper, and a spring latch secured upon the body member and having a door-engaging finger whereby one door may be secured without interfering with the movement of the remaining doors.

958,631. LATHE. HARRY B. GREIG, Cleveland, Ohio. Filed July 23, 1906. Serial No. 327,283.



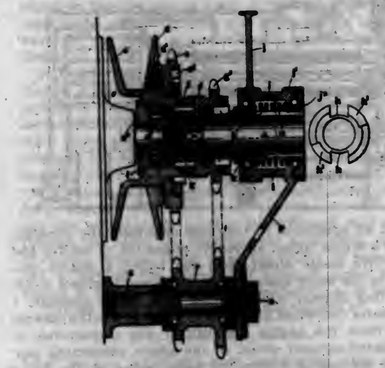
1. In a lathe, a mandrel shaped so as to have sleeved thereon a plurality of plates with a central opening, a series of sets of expansive devices carried by the mandrel, there being one set for each plate on the mandrel, means for simultaneously causing one set of said devices to engage the walls of the opening in each plate, and a lathe tool arranged to move parallel with each plate and plane one or both faces thereof.

2. In a lathe, a mandrel shaped so as to have sleeved thereon a plurality of plates with central openings, a series of expansive devices carried by the mandrel, there being one series for each plate on the mandrel, a single means for simultaneously causing said devices to engage the walls of the openings in said plates, and lathe tools arranged to move parallel with the plates and plane one or both faces thereof.

3. In a lathe, a mandrel having an axial opening, a plunger therein having a plurality of inclines thereon, a circular series of mandrel-pins arranged around each incline and extending from said central opening to the exterior of the mandrel, their inner ends arranged to be engaged by said inclines so as to be forced outwardly thereby, in combination with cutters arranged to cut simultaneously the sides of blanks held by several series of mandrel-pins.

4. In a lathe, a mandrel shaped to receive thereon a plate having a central opening, expansive devices carried by the mandrel and adapted to be forced to engage the edge of the said opening, and removable gaging means with which one face of the plate is engageable in the path of the cutters to adjust the plate accurately around the said expansive devices, in combination with cutters arranged to cut simultaneously the sides of the said plate.

958,632. CHANGE-SPEED GEAR. HUBERT C. GRIFFIN, Bristol, England, assignor of one-third to Charles Stancomb Ware, Bristol, England. Filed Nov. 26, 1909. Serial No. 530,068.



1. Change speed gear comprising a driving shaft, an expanding belt pulley upon said driving shaft, means for adjusting the effective diameter of the pulley, a change speed wheel upon the boss of the expanding pulley and connected to said pulley, a change speed wheel upon the driving shaft and means for alternately coupling the pulley boss or the second change speed wheel to the driving shaft, a countershaft, and a double change speed wheel on the countershaft said double change speed wheel being adapted to be driven by the change speed wheels aforesaid, substantially as described.

2. Variable speed gear comprising a driving shaft, an expanding pulley upon said driving shaft, means for adjusting the expanding pulley, a free change speed wheel upon the boss of said pulley, a change speed wheel upon the driving shaft and means for alternately coupling the expanding pulley and the second change speed wheel to the driving shaft, a double change speed wheel, and means for connecting the double change speed wheel to the change speed wheel aforesaid substantially as described.

3. Change speed gear comprising a driving shaft, having a conical extension, a hollow shaft having lateral and longitudinal recesses, an expanding belt pulley upon said hollow shaft, means for adjusting the effective diameter of said pulley, a change speed wheel upon the boss of the pulley and connected to said pulley, a change speed wheel upon the hollow shaft, wedges in the lateral recesses of the hollow shaft, a sliding wedge shaped member alternately engaging with the wedges, means for imparting a sliding movement to the sliding member, a double change speed wheel, said double wheel being adapted to be driven by the change speed wheels aforesaid substantially as described.

4. Change speed gear comprising a driving shaft having a conical extension, a hollow shaft having lateral and longitudinal recesses, an expanding pulley upon said hollow shaft, means for adjusting the effective diameter of the expanding pulley, a change speed free wheel upon the boss of said pulley, a change speed wheel upon the hollow shaft, wedges in the lateral recesses of the hollow shaft, a sliding wedge shaped member alternately engaging with the wedges, means for imparting a sliding movement to the sliding member, a double change speed wheel said double wheel being adapted to be driven by the change speed wheels aforesaid substantially as described.

5. Change speed gear comprising a driving shaft, a driving wheel and change speed free wheel having a common boss disposed co-axially with the driving shaft, a second change speed wheel mounted loosely upon the driving shaft and means for alternatively clutching the boss or the second change speed wheel to the driving shaft, and means for operating the clutch members disposed co-axially with the driving shaft adjacent to the second change speed wheel, and a double change speed wheel operatively engaged with the change speed wheels aforesaid substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

958,633. LOOSE-LEAF BINDER. MICHAEL G. GRIFFIN, Cincinnati, Ohio. Filed Apr. 24, 1909. Serial No. 491,920.



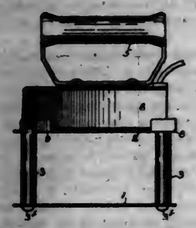
1. A loose leaf binder comprising oppositely arranged bars, one of which is provided with filing pins and the other with holes to receive said pins, a fixed abutment strip of concave-convex shape in cross section carried by one bar and having its opposite ends concaved to partially embrace and bear against the filing pins, a bail-shaped sliding clamp embracing both pins and adapted to bear against one of them, a combined yoke and nut fast upon one end of said sliding clamp, a second clamp having a sliding engagement with said yoke and adapted to bear against the other filing pin, and a clamp screw having a threaded engagement with the yoke and bearing at its extremity against the second sliding clamp for simultaneously moving both clamps in opposite directions.

2. A loose leaf binder comprising oppositely disposed bars, one of which is provided with filing pins and the other with openings for receiving the pins, an abutment strip on one of the bars arranged to engage the pins, a bail-shaped clamp consisting of a double bar embracing both pins and surrounding the abutment strip, a fixed lip arranged to engage the double end of the clamp and under which the latter has a limited sliding movement, a yoke on the opposite end of the clamp, a screw threaded in the yoke, and a slidable clamp disposed between the yoke and adjacent the filing pin and movable independently of the yoke and separate from the screw.

958,634. SAD-IRON HOLDER. FRANCIS E. GRIFFETH, Athens, Ga. Filed May 14, 1909. Serial No. 495,956.

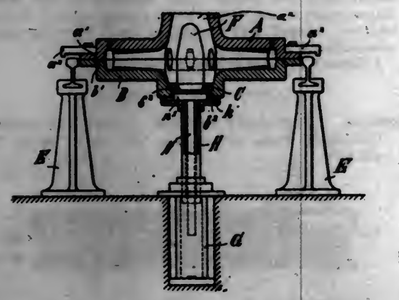
A sad iron holder comprising a base plate, a U-shaped plate adapted to support said iron in either an upright or inverted position, lugs at both sides and both ends of said U-shaped plate for the purposes specified, the lugs at the open end of said plate serving to prevent the horizontal displacement of the iron in that direction when in either

an upright or inverted position, and upright posts connecting said plates and extending through said base plate



and forming feet which support said plate above the surface on which the holder is placed.

958,635. APPARATUS FOR PRODUCING WHEELS IN DIVIDED METALLIC MOLDS. CARL GRUNWALD, Bredeney, Germany. Filed Aug. 24, 1908. Serial No. 450,124.



1. An apparatus for casting wheels comprising two mold-halves having a plane of separation coinciding with the transverse plane of the rim of the wheel and separable a distance equal at least to the axial dimension of the wheel, one of said mold-halves being provided with a central opening which permits introduction of the molten metal into the mold when closed, a hub support having a surface which serves as a rest for the under face of the wheel hub, a core detachably mounted on said hub support, and means for supporting the wheel through the medium of the hub support, in a position axially removable from each half of the mold when in separated position.

2. An apparatus for casting wheels comprising two mold-halves having a plane of separation coinciding with the transverse plane of the wheel rim, one of said mold-halves being provided with a central opening which permits introduction of the molten metal, a hub support, having a surface which serves as a rest for the under face of the wheel hub, a core detachably mounted on said hub support, and projecting upwardly therefrom without closing the said pouring opening, and means for separating the mold-halves in the direction of the axis of the wheel, a distance sufficient to permit removal of the wheel in a direction transverse to its axis.

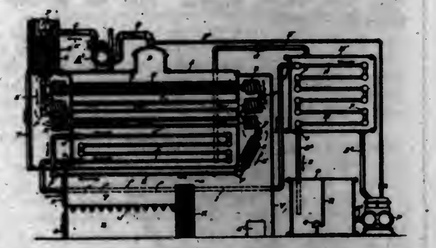
3. An apparatus for casting metal wheels comprising two horizontal mold-halves, separable in a transverse plane of the rim of the wheel, a hub support, fitted to the under half of the mold, means supporting the mold at a height sufficient to permit separation of its members to release the casting, and means arresting the casting through the medium of the hub support, at a height intermediate of the mold-halves when the latter are separated.

4. An apparatus for casting wheels comprising two mold-halves having a plane of separation coinciding with the transverse plane of the wheel rim, a hub support, and means for separating the mold-halves in the direction of the axis of the wheel, a distance sufficient to permit removal of the wheel in a direction transverse to its axis; said separating means comprising independent supports for the hub support and the mold half adjacent thereto, movable simultaneously to remove the casting from the opposite half of the mold, and then independently for the purpose of arresting the casting while releasing it from the moving half of the mold.

5. An apparatus for casting wheels comprising two mold-halves having a plane of separation coinciding with the transverse plane of the wheel rim, a hub support, and means for separating the mold-halves in the direction of the axis of the wheel, a distance sufficient to permit removal of the wheel in a direction transverse to its axis; said separating means comprising pistons for the hub support and the mold-half adjacent thereto, movable simultaneously to remove the casting from the opposite half of the mold, and then independently for the purpose of arresting the casting while releasing it from the moving half of the mold.

[Claims 6 and 7 not printed in the Gazette.]

958,636. EXHAUST-REGENERATING STEAM AND WATER HEATER COMBINED. STEPHEN H. HALE, St. Joseph, Mo. Filed Mar. 3, 1908. Serial No. 419,017.



1. In an apparatus of the class described, the combination of a steam boiler, an engine connected to receive and utilize live steam direct from the boiler, a heater contained in the water space of said boiler and having a steam conducting passage which is free from boiler pressure, a superheater connected to receive and regenerate the exhaust steam from the engine and deliver the regenerated or superheated exhaust steam to the steam conducting passage of the heater within the water space of the boiler whereby the regenerated exhaust steam will transmit its heat to the water in the boiler to assist in the generation of steam therein, a feed water heating tank connected to receive exhaust steam from said heater within the boiler and having a feed water outlet communicating with the boiler, and a pump for forcing feed water through the feed water tank and into the boiler.

2. In an apparatus of the class described, the combination of a steam boiler, a furnace therefor having a stack, an engine connected to receive and utilize steam from said boiler, a heater contained in the water space of said boiler and having a steam conducting passage which is free from the boiler pressure, and a superheater mounted in the stack and composed of a plurality of helical coils of different diameters contained one within the other, the inlet ends of said coils being connected in common to receive the exhaust steam from the engine and the opposite or outlet ends of said coils being connected in common to the said heater within the water space of the boiler whereby exhaust steam from the engine will be regenerated in the superheater and such regenerated or superheated exhaust steam will be delivered to the water heater contained within the water space of the boiler.

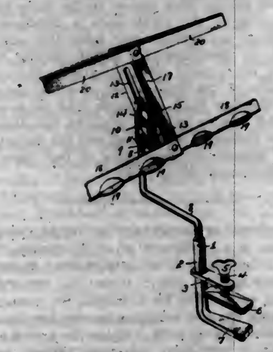
3. In an apparatus of the class described, the combination of a steam boiler, a furnace therefor having a combustion chamber and discharge flue, an engine connected to receive steam from the boiler, a plurality of superheaters arranged in the combustion chamber and the gas discharge flue of the boiler, the superheater in the discharge flue being connected to first receive exhaust steam from the engine, and the superheater in the combustion chamber being connected to receive such exhaust steam after traversing the superheater in the discharge flue of the furnace, and a heater arranged in the water space of the boiler and connected to receive the exhaust steam from said superheaters and serving to transmit the heat from the superheated exhaust steam to the water in the boiler, the exhaust steam in said heater being free from the boiler pressure.

4. In an apparatus of the class described, the combination of a steam boiler, a furnace therefor having a stack, an engine connected to receive steam from the boiler, a series of superheaters one arranged in the stack and connected to initially receive exhaust steam from the engine to regenerate such exhaust steam, other superheaters being arranged in alinement with the boiler flues and connected to receive the partially regenerated exhaust steam from the superheater in the stack to increase the superheat of such exhaust steam, and superheaters arranged in the combustion space of the boiler and connected to receive and further superheat the exhaust steam from the superheaters first mentioned whereby the exhaust steam from the engine is progressively regenerated as it approaches the hottest portion of the furnace, and a water heater contained in the water space of the boiler and having a passage which is free from boiler pressure and is connected to receive regenerated exhaust steam from the superheater in the combustion space of the furnace whereby the regenerated exhaust steam will transmit its heat to the water in the boiler to assist in the generation of steam therein.

5. In an apparatus of the class described, the combination of a steam boiler, a furnace therefor, an engine connected to receive and utilize steam from the boiler, a heater contained in the water space of the boiler and having a steam conducting passage which is free from boiler pressure, the boiler having flues for conducting the heated gases of the furnace therethrough, and superheating coils having their axes arranged in alinement with the boiler flues whereby the latter may be cleaned with facility and the heated gases passing therethrough may continue through the coils, the superheating coils being connected to receive exhaust steam from the engine to regenerate it and to deliver the regenerated exhaust steam from the engine to the heater within the water space of the boiler.

[Claims 6 and 7 not printed in the Gazette.]

958,637. ADJUSTABLE SUPPORT FOR BOOKS, PAPERS, &c. CHARLES T. HARD, East Liverpool, Ohio. Filed May 27, 1909. Serial No. 498,663.



1. In a device of the character described, the combination with a clamp and a standard revolubly supported thereby, of a bracket revolubly supported by the standard, a bar adjustably supported by the bracket, and foldable supporting arms pivotally connected with the respective ends of said bar.

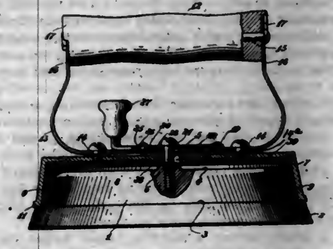
2. In a device of the character described, the combination with a standard and means for revolubly supporting the same, of a bracket revolubly mounted on said standard, a bar having an elongated slot, a clamping screw passing through bracket and the elongated slot in the bar, arms pivotally attached to the lower portion of said bar and provided with supporting means for a book or other article, and arms pivotally attached to the upper portion of said bar.

3. In a device of the character described, the combination with a standard and means for adjustably supporting the same, of a bracket revoluble on the standard, a bar adjustably attached to said bracket, arms attached to the lower portion of said bar and foldable on the latter, said arms having supporting means for a book or other article, and foldable arms attached to the upper portion of said bar.

4. In a device of the character described, the combination with a standard and means for supporting the same, of a bracket revolubly mounted on said standard, a bar adjustably attached to said bracket and provided on its upper edge with a laterally projecting flange, and arms made angular in cross-section and hinged to said flange, one member of each arm adapted to engage the bar to limit the downward movement of said arms and each of said arms provided with supporting means for a book or other article.

5. In a device of the character described, the combination with a standard and a bracket thereon, of a bar adjustably attached to said bracket and provided at one edge with a laterally projecting flange, foldable arms pivotally attached to said flange near the respective ends thereof and adapted to engage said bar and supporting means for a book or other article projecting from the lower foldable arms.

958,638. SAD-IRON. JAMES M. HARPER, Chicago, Ill., assignor to Harper Supply Company, a Corporation of Illinois. Filed Dec. 21, 1908. Serial No. 468,503.

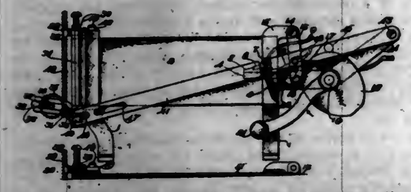


1. In a sad iron, the combination of a body portion provided with a peripheral shoulder, a handled cap piece adapted to rest upon said shoulder and to envelop the portion of said body above said shoulder, projections provided at the extremities of the upper body portion adapted to engage the inner surfaces of the end portions of said cap piece, a screw threaded in and upwardly extending from said body midway the extremities thereof, and a horizontally disposed slotted plate in pivotal connection with said cap piece, the slots in said plate being adapted to engage said screw, substantially as described.

2. In a sad iron, the combination of a body portion provided with a peripheral shoulder, a cap-piece adapted to rest upon said shoulder and to envelop the portion of said body above said shoulder, a tapering projection provided at the extremities of said upper body portion against which the inner surface of the end portions of said cap-piece are adapted to rest, a handle upon said cap-piece, a headed member extending upwardly from said body and

adapted to extend through said cap-piece, and a horizontally disposed lock plate pivotally mounted upon said cap piece and adapted to engage said headed member, substantially as described.

958,639. BUTTER-CUTTER. WILLIAM P. HART, Boston, Mass., assignor to Automatic Individual Butter Cutter Company, a Corporation of Maine. Filed Jan. 27, 1909. Serial No. 474,400. Renewed Jan. 12, 1910. Serial No. 537,755.



1. A butter cutter, comprising means for compacting a mass of butter into a solid block to be cut, cutting means for cutting a plurality of individual pieces from one end of said block, a single actuating mechanism common to both of said means, actuating connections from said mechanism to said compacting means and to said cutting means said cutting means being movable into inoperative position out of actuated relation to said actuating mechanism when it is desired to actuate the compacting means said movement of the cutting means disconnecting its said actuating connection from operative relation with said common actuating mechanism.

2. In a butter cutter, means for sub-dividing a block of butter into a series of columns at one end, means for transversely severing the ends of said columns to form a plurality of individual butter pieces, and positively-acting printing means operating just ahead of said transverse severing action, for positively impressing the end of each column separately with an individual print.

3. In a butter cutter, means for sub-dividing a block of butter into a series of columns at one end, a transversely moving member at said end, a cutter carried by said member in position to sever individual butter pieces from the ends of said columns, and a print roll carried by said member just ahead of said cutter for impressing prints on the ends of the columns successively just before said severing thereof.

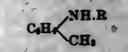
4. In a butter cutter, means for sub-dividing a block of butter into a series of columns at one end, a transversely moving member at said end, a cutter carried by said member in position to sever individual butter pieces from the ends of said columns, and a positively driven print roll carried by said member just ahead of said cutter for progressively impressing prints on the ends of the columns just before the progressive severing thereof.

5. In a butter cutter, a box-like butter holder for retaining a mass of butter to be compacted into a solid block and cut into individual pieces, compacting means, means for sub-dividing said block of butter into a series of parallel longitudinal columns projecting beyond said box-like holder, means for positively impressing the end of each of said parallel columns beyond said holder with a separate individual print, and cutting means for transversely severing the ends of said columns as they are impressed, thereby forming the desired plurality of individual butter pieces.

[Claims 6 to 11 not printed in the Gazette.]

958,640. SULFUR DYE AND PROCESS OF MAKING SAME. RUDOLF HAUGWITZ, Friedrichshagen, near Berlin, Germany, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed Mar. 23, 1909. Serial No. 485,237.

1. As new articles of manufacture the dyes which may be obtained by heating para-phenylenediamin with sulfur in the presence of a toluene derivative of the general formula:



in which formula R means a hydrogen atom or the radical of an organic acid, these products producing on cotton without a mordant from a dye-bath containing an alkali sulfid and preferably a suitable salt, generally speaking, olive tints, which are very fast to washing and fast to light, which products form when pulverised dark green to blackish powders which are insoluble in water and alcohol and which are partially soluble in diluted soda-lye on heating, these dyes being totally soluble in a sodium sulfid solution to an olive colored solution and which products are insoluble in concentrated sulfuric acid in the cold, the tints obtained on cotton becoming more dull by an after-treatment with potassium bichromate or with potassium bichromate and copper sulfate.

2. As a new article of manufacture the new sulfur dye which may be obtained by heating para-phenylenediamin with ortho-toluidin and sulfur to 220–240° C., this new dye being when pulverised a dark green to blackish colored powder which is insoluble in water and in alcohol, partially soluble in diluted soda-lye on heating to an olive colored solution and very sparingly soluble in a hot solution of sodium carbonate, and which new dye is insoluble in concentrated sulfuric acid at ordinary temperature, but is totally soluble in sodium sulfid to an olive colored solution, from which solution, more especially on the addition of Glaubers salt or common salt, unmordanted cotton is dyed olive tints which are very fast to washing and fast to light, and which tints by an after-treatment with potassium bichromate or with potassium bichromate and copper sulfate become more dull.

958,641. METHOD OF PRODUCING ORNAMENTAL ARTICLES. WILLIAM E. HEBBEN, Pittsburg, Pa. Filed Feb. 1, 1909. Serial No. 475,479.

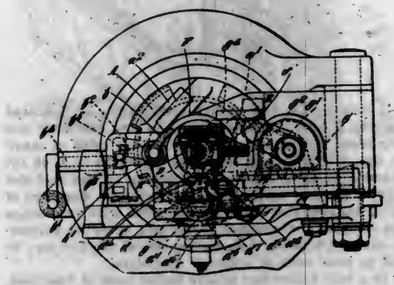


A method of manufacturing ornamental articles consisting in forming a mezzo-rilievo blank having the marginal portion thereof provided with a continuous flange extending rearwardly with respect to the outer face of the blank, then placing the blank upon a fashioned surface with the flange projecting away from the said surface, surrounding the fashioned face of the die and the flange of the blank by a collar, then placing in the collar and upon the flange of the blank a disk of softer material and of greater diameter than the blank, and then subjecting the blank and disk to pressure whereby the flange of the blank will be embedded in the disk and the material of the disk snugly engage the inner face of the blank without distorting the contour of the disk.

958,642. FIRING MECHANISM OF ORDNANCE. CARL HOLMSTROM and ARTHUR E. MASCALL, London, England, assignors of one-third to Elias Middleton, Sheffield, England. Filed Apr. 22, 1907. Serial No. 369,675.

1. In firing mechanism for ordnance, the combination of a rotary breech block, a swinging carrier for same, a sliding bar adapted to angularly displace the breech-block and also to impart a rectilinear movement thereto, means for actuating said sliding bar, a firing lock, an arm carrying the firing lock and adapted to rock upon said carrier, and means carried by said arm and operable through the medium of the sliding bar actuating means for withholding the firing pin until the breech block is in effectively closed position.

2. In firing mechanism for ordnance, the combination of a rotary breech block, a swinging carrier for same, a sliding bar adapted to angularly displace the breech block and also to impart a rectilinear movement thereto, means for actuating said sliding bar, a firing lock, a pivoted arm carrying the firing lock and adapted to rock upon said carrier, and means carried by the rocking arm and automatically operable through the medium of the sliding bar actuating means for withholding the firing pin until the breech block is in effectively closed position.



3. In firing mechanism for ordnance, the combination of a rotary breech block, a swinging carrier for same, a sliding bar adapted to angularly displace the breech block and also to impart a rectilinear movement thereto, means for actuating said sliding bar, a firing lock, an arm pivotally mounted on said carrier and adapted to carry the firing lock, means on said arm engaging the firing pin, and means mounted on and concentric with said arm and adapted to engage the firing pin holding means whereby to withhold said firing pin until the breech block is in effectively closed position.

4. In firing mechanism for ordnance, the combination of a rotary breech block, a swinging carrier for same, a sliding bar adapted to angularly displace the breech block and also to impart a rectilinear movement thereto, means for actuating said sliding bar, a firing lock, an arm pivotally mounted on said carrier and adapted to carry the firing lock, said arm comprising a reciprocating member, firing pin engaging means carried by said member, and means carried by the arm adapted to engage said pin engaging means, whereby to withhold the firing pin until the breech block is in effectively closed position, said pin holding means being operable through the bar actuating means.

5. In firing mechanism for ordnance, the combination of a rotary breech block, a swinging carrier for same, a sliding bar adapted to angularly displace the breech block said bar being provided with a groove having a deep oblique portion that terminates in an incline provided with a curved shoulder and leading to a shallow horizontal portion, means for actuating said sliding bar during the opening and closing of the breech, a spring-controlled arm carrying the firing lock and adapted to rock upon the carrier, and a spring guide-bolt mounted upon the rocking arm and adapted to engage with and slide in the groove in the sliding bar, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

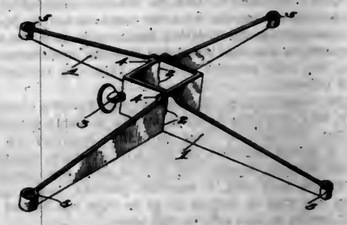
958,643. HARNESS-SADDLE. ALFRED HOMANN, New Braunfels, Tex. Filed Feb. 15, 1910. Serial No. 543,933.

In a harness saddle, a pad for each side formed of hollow sheet metal and each having on its upper side a longitudinal slot communicating at one end with an enlarged opening, grooved fastening nuts arranged on the under side of the saddle and adapted to be engaged by the openings and edges of the slots formed in the upper sides of



the pads whereby said pads are adjustably secured to the saddle.

958,644. CHRISTMAS-TREE HOLDER. JOHN S. HUFF, New Brighton, Pa. Filed Nov. 24, 1909. Serial No. 529,809.



1. A holder for Christmas trees, comprising supporting members having a slitted interlocking connection with each other to form a tree receiving socket, stops formed on said members adjacent to the slitted engaging portions of the opposing members, whereby the material adjacent to the slits is prevented from springing outwardly, and means for securing trees of different sizes in said socket.

2. A Christmas tree holder comprising V-shaped supporting members having formed therein slits whereby said members are adapted to have an interlocking connection to form a tree receiving socket, stops formed on said members adjacent to the slitted engaging portions of the opposing members, whereby the material adjacent to the slits is prevented from springing outwardly, and means to secure a tree in said holder.

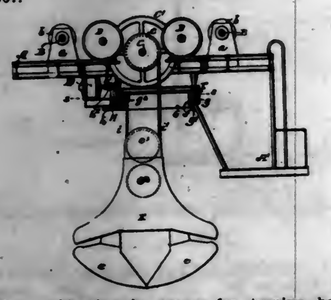
958,645. CLEVIS. GUSTAF H. JOHNSON, Cimarron, N. Mex. Filed Jan. 26, 1910. Serial No. 540,125.



1. The improved U-shaped clevis having one of its legs provided with a shoulder and the other with a transverse slot, a bolt having a head adapted to engage said shoulder and its other end provided with a groove, and a fastening device mounted in said slot and adapted to engage the groove for holding the bolt detachably, substantially as described.

2. A clevis comprising a U-shaped body having one of its apertured ends provided with a transverse slot, a bolt having a transverse groove adapted, when the bolt is in place, to register with the said slot in the body, and a fastening device consisting of a slidable cam-shaped bar arranged in said slot and a spring encircling the shank of the device, whereby the latter is held normally locked with the bolt, but may be released therefrom by pressure applied to its head, substantially as described.

958,646. MEANS FOR TURNING HOISTING-BUCKETS. ARTHUR C. JOHNSTON, Philadelphia, Pa., assignor to The J. M. Dodge Company, Naugatuck, Conn., a Corporation of Connecticut. Filed Nov. 6, 1909. Serial No. 526,567.

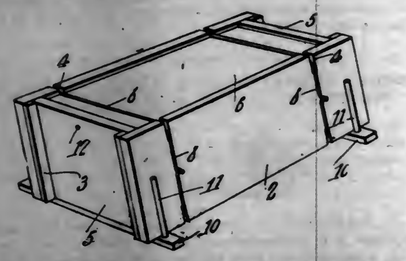


1. The combination in means for turning hoisting buckets, of a carriage, a rotatable member mounted on the carriage, hoisting means, a bucket, sheaves on the bucket, ropes passing from the hoisting means around the sheaves and secured to the said rotatable member, and means for turning the said member so as to turn the bucket and move it laterally.

2. The combination in means for turning hoisting buckets, of a carriage, hoisting means, a frame depending from the carriage, a ring pivotally mounted on the frame, a bucket, sheaves on the bucket, ropes extending from the hoisting means, the end of each rope being secured to the said ring, a segment, gearing, and a motor whereby the ring is shifted so as to turn the bucket and move it bodily to one side or the other.

3. The combination in means for turning hoisting buckets, of a carriage, hoisting drums mounted thereon, an open ring mounted on the carriage, means for turning said ring, a bucket, ropes extending from the hoisting drums through the ring to the bucket and attached to the ring so that the bucket will be suspended on a line at one side of the center of the ring.

958,647. COLLAPSIBLE BOX. JACOB M. JONES and DUDLEY C. JONES, St. John, Ky. Filed July 29, 1909. Serial No. 510,174.



A knock-down receptacle including side walls having alining slots extending thereinto from the longitudinal edges thereof and adjacent to the ends of said walls, retaining cleats above the inner faces of said walls at the ends thereof, a top and a bottom interposed between the side walls and spaced at their ends from the adjoining cleats on the side walls, the slots in said walls extending across the side edges of the top and the bottom, tie devices within the slots and extending around the receptacle, said devices bearing upon the outer faces of the top and bottom and being secured together at their ends to hold the top and bottom between the side walls, end walls removably mounted between the side walls and between the cleats and the adjoining ends of the top and bottom, and means within the end walls and detachably engaging the top or bottom for holding said walls against displacement relative thereto.

958,648. COIN-HOLDER OR CHANGE-MAKER. JOSHUA W. JONES, Harrisburg, Pa. Filed May 24, 1909. Serial No. 497,894.



1. A coin holder and change maker such as described embodying a coin receptacle having a coin discharge slot on the front side of sufficient size to pass coins of maximum size, a coin supporting flange below the level of the slot, and a spring pressed gate extending around said slot to a point where it will prevent the accidental discharge of coins of smallest size, pivotally connected with the bottom of the receptacle at one side of the slot to swing horizontally outward whereby the effective size of the slot may be varied to pass coins of different diameters.

2. In a coin holder and change maker such as described, the combination with a coin receptacle having a coin discharge opening in the front wall at the bottom and a coin supporting flange forming a finger opening, of a coin lock carried by the holder in position to be moved in above the level of the bottom coin by the finger in discharging said coin whereby "cocking" of the coin is prevented.

3. In a coin holder and change maker such as described, the combination with a coin receptacle having a coin discharge opening in the front wall at the bottom and a coin supporting flange forming a finger opening, of a finger operated coin lock mounted in position to engage a coin above the bottom coin to prevent the latter from "cocking" as it is discharged.

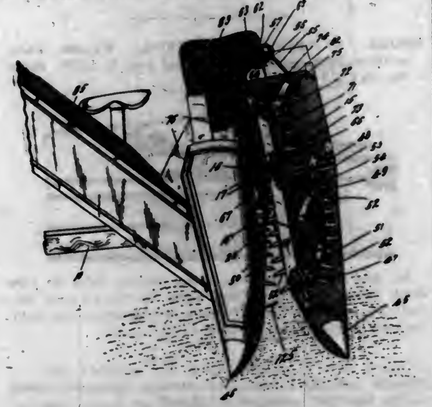
4. In a coin holder and change maker such as described, the combination with a coin receptacle having a coin discharge opening in the front wall at the bottom and a coin supporting flange forming a finger opening, of a yielding lock secured to the rear of the holder and having its lower end in position for contact with the finger engaging a coin to discharge the latter and adapted to hold the coin against being cocked when subjected to upward pressure.

5. In a coin holder and change maker embodying a coin receptacle having a discharge slot at the bottom, and a belt clip formed of sheet metal having hook shaped arms at top and bottom, respectively, with their ends spaced apart for the insertion of the belt and a spring tongue formed by an intermediate part of the clip.

958,649. CORN-PICKER. BURT J. KAULL, La Fayette, Ind., assignor to Indiana Picker & Husker Company, La Fayette, Ind., a Corporation of Indiana. Filed June 1, 1909. Serial No. 499,436.

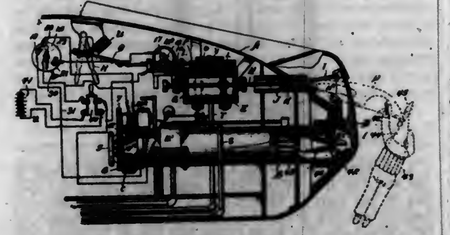
1. In a corn picker, a pair of rearwardly and upwardly inclined snapping rolls having tapered lower ends and a feeding wing carried by one of said ends and bridging the throat between said end and the companion end and having an axial inclination sufficient to draw a corn stalk rearwardly at a speed greater than the forward speed of the machine, whereby a standing stalk is inclined rearwardly at the time of engagement between the stripping rolls.

2. In a corn picker, the combination, of a pair of upwardly and rearwardly inclined snapping rolls, of feeding means arranged in advance of the receiving throat of said snapping rolls and extending rearwardly to but not beyond said receiving throat, means for driving said feeding means rearwardly during advancement of the machine, a second feeding means arranged above the feeding rolls and beginning at a point adjacent the receiving throat of the snapping rolls but beyond the end of the first feeding means and extending rearwardly therefrom, and means for driving said second feeding means.



3. In a corn picker, the combination with upwardly and rearwardly inclined snapping rolls, of a pair of laterally separated guides extending downwardly and forwardly in front of and over said snapping rolls, and a pair of ear-floating yielding members carried by said guides near their forward ends and projecting toward each other, for the purpose set forth.

958,650. ATTACHMENT FOR TORPEDO-TUBES. JULIUS KIMBRELL, Needles, Cal. Filed Dec. 1, 1909. Serial No. 530,752.



1. A torpedo tube, a rear door for the same having a locking dial provided with a rack segment, motor driven means for closing the door, motor driven means for locking the door including a pinion engaging the rack segment and a driven shaft with which said pinion is detachably connected, and means for timing the starting of the motors whereby the closing and the locking are effected.

2. A torpedo tube, a hingedly supported outer door for the same, a handle connected with said door, motor driven means for opening and closing the door, means for starting the door actuating motor including an auxiliary motor, and means for timing the starting of the auxiliary motor.

3. A torpedo tube, inner and outer doors for the same, motor driven means for closing the inner door, motor driven means for locking the inner door, a motor controlling the opening and closing of the outer door, means including an auxiliary motor for starting the door operating motor, and means for timing the starting of the motors, whereby the closing and locking of the inner door are effected and of the auxiliary motor controlling the starting of the motor governing the opening and closing of the outer door.

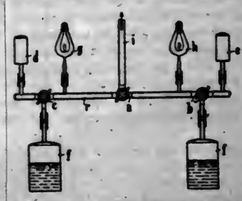
4. The combination with a torpedo tube, of means forming doors or closures at the inner and outer ends of said tube, mechanical means for successively closing and locking the inner door and for opening the outer door, and means for timing said operations.

5. A torpedo tube, doors or closures for the inner and outer ends of said tube, means including independent motors for closing and locking the inner door, means including a motor and an auxiliary starting motor for opening the outer door, and means including an electrical circuit, a dial having contacts, and a spring-actuated hand movable over the dial for successively starting the motor governing the closing of the inner door, the motor governing the locking of the inner door and the motor governing the starting of the motor for opening the outer door, the starting of said motors being timed at predetermined intervals.

958,651. PROCESS OF QUENCHING COKE. HEINRICH KOPPERS, Essen-on-the-Ruhr, Germany. Filed June 5, 1909. Serial No. 500,302.

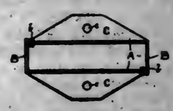
Process of quenching coke, which consists in immersing the output of each coking chamber of a coke oven in hot water for a length of time sufficient to envelop the core of each coke lump by a cooled protecting crust, and then exposing the coke to the atmosphere, whereby a uniform quality of non-brittle coke of the entire output is produced.

958,652. METHOD OF REGENERATING CARBON-FILAMENT ELECTRIC INCANDESCENT LAMPS. ERNST A. KRÜGER, Seehausen, Altmark, Germany, assignor, by mesne assignments, to Alfred Bloch, Paris, France. Filed Apr. 1, 1909. Serial No. 487,162.



The herein-described method of regenerating used carbon filament electric incandescent lamps, consisting in opening the lamp, in burning off the carbon deposited on the interior surface of the same, in evacuating the lamp, in connecting the evacuated lamp with a vessel containing a measured quantity of a pure hydrocarbon, in flashing the filament in the lamp, in evacuating the lamp and in sealing up the lamp.

958,653. SASH-CORD GUIDE. FRANK C. W. KUEHN, Huron, S. D. Filed Sept. 22, 1909. Serial No. 519,049.

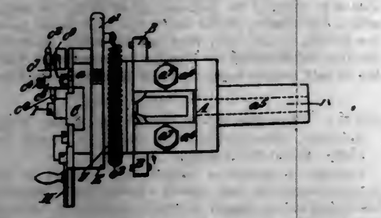


1. A pulley casing of the character described made of two similarly shaped pieces of sheet metal, each bent to form one side and one end of the casing and having a lateral projection at the base for securing said casing to the window frame, each piece being provided with lips at one edge and slots at the opposite edge interlocking respectively with the slots and lips on the other piece.

2. A pulley casing of the character described made of two similarly shaped pieces of sheet metal, each bent to form one side and one end of the casing and having means for securing said casing to a window frame, each piece being provided with lips at one edge and slots at the opposite edge interlocking respectively with the slots and lips on the other piece.

3. The combination, with a pulley casing, of a pulley mounted therein, a cover for said casing, and a bowed spring fastened near its middle to said cover and having its ends extending into the casing for the purpose specified.

958,654. LATHE AND OTHER TOOL HOLDER FOR CUTTING, SHAPING, AND SCREWING PURPOSES. HENRY S. LAND, Brockley, England. Filed Aug. 24, 1905. Serial No. 275,675.



1. Means for screwing the reduced portion of a piece of shouldered work comprising a die head having self-opening screwing dies, a feeler arranged to extend in front of the screwing dies, in the path of the work shoulder, a hinged member mounted on the die face for carrying such feeler, and a spring controlled catch arranged to engage with a catch appertaining to the die opening mechanism and actuated in opposition to its spring by the said hinged member for the purpose set forth.

2. Means for screwing the reduced portion of a piece of shouldered work, comprising a die head having self-opening screwing dies, an adjustable feeler arranged to extend in front of the screw-cutting dies in the path of the work shoulder, a hinged member mounted on the die face for carrying such feeler and a spring controlled catch arranged to engage with a catch appertaining to the die opening mechanism and provided with an adjustable member engaging with the aforesaid hinged member for the purpose set forth.

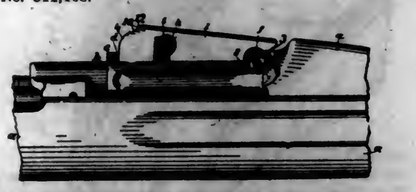
3. Means for screwing the reduced portion of a piece of shouldered work, comprising a die head having self-opening screwing dies, an adjustable feeler arranged to extend in front of the screw cutting dies in the path of the work shoulder, a hinged member mounted on the die face for carrying such feeler, a spring controlled catch arranged to engage with a catch appertaining to the die opening mechanism, a member adjustably carried by the spring controlled catch, and a sleeve for carrying such catch, said sleeve being slidably mounted in a slot formed in the face of the die head and provided with means for securing it in said slot for the purpose specified.

4. In a combined turning and screw cutting device for lathes, the combination with radially sliding screw cutting dies thereon, of an angularly displaceable disk having cam slots therein, pins on the dies engaging with the cam slots, a catch piece on said disk, a movable spring controlled catch piece with which said disk-catch-piece engages when the disk is moved in a direction to close the dies, a spring tending to move the disk in a direction to disengage the catch pieces, a hinged finger engaging said movable catch piece, a longitudinally adjustable lever carried by said hinged finger, a slotted arm rigidly secured to one of the dies, and a projection on the said adjustable lever engaging with said slotted arm substantially as and for the purpose specified.

5. In a combined turning and screw cutting device for lathes, the combination with the sliding screw cutting dies, the angularly displaceable cam disk for actuating them, the catch piece on the cam disk, and the movable catch piece for engaging the catch piece on the cam disk, of an adjustable head on the movable catch piece, a spring, tending to press the movable catch piece through a segmental slot toward the cam disk, a casing for carrying the movable catch piece, means for locking said casing in said slot, a pivoted carrier, a finger thereon engaging with the head of the movable catch piece, a socket on said finger, a lever mounted in said socket, a pin at the outer end of said lever, and an arm rigidly connected to one of the dies and slotted to receive the said pin substantially as and for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

958,655. GUN-SIGHT PROTECTOR. WALTER LANGSTROTH, Washington, D. C. Filed Aug. 5, 1909. Serial No. 511,468.



In gun sight protectors, a cap having sides to pass down beside the sight, these sides having forward projecting prongs to hook under side projections of the sight, the said prongs flaring outward to fit the gun.

958,656. CHURN. JOHN L. LAUGHLIN, Irwin, Pa. Filed Oct. 19, 1909. Serial No. 523,437.

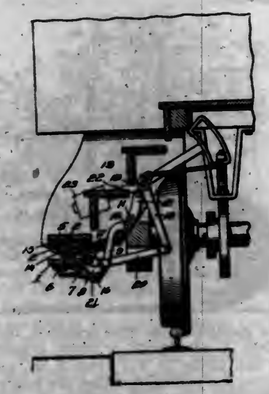


1. A churn comprising a body or receptacle closed at one end and open at the other, means for closing the open end of the body, a longitudinally expansible standard, a head at one end of said standard, a base at the other end of said standard, a dasher mounted on the standard and intermediate the ends thereof, and annular cushions arranged at the outer side of the head and base, substantially as specified.

2. A churn comprising a liquid receptacle closed at one end and open at the other, a closure for the open end of the body, a standard comprising telescopic sections, means for fixing the adjustment of said sections, one or more dashers mounted on said standard, a circular head at one end of the standard, a circular base at the other end of the standard, and annular cushions secured to the opposite outer sides of the head and base and adapted to rest in contact with the closed end of the body and the inner face of the closure for the body.

958,657. CAR-STEP. JOHN LAVERTY and HAL S. WILLIAMS, Columbia, S. C. Filed Nov. 3, 1909. Serial No. 526,116.

1. An auxiliary car step including a step proper, a weight operative to normally maintain the step in folded position, means for manually operating the step against the influence of the weight and means operative under predetermined conditions to release the step to the influence of the weight.



2. An auxiliary car step including a step proper, a weight normally operative to maintain the step in folded relation, means for manually operating the step against the influence of the weight, means for locking the step in the position assumed as a result of the manual operation, and means for automatically releasing the lock in the initial movement of the car.

3. An auxiliary car step including a step proper, manually operable means to move the step to operative position, a weight tending to move the step to inoperative position, a lock for holding the step in either position, and a trip lever automatically actuated in the initial movement of the car to release the lock and free the step to the influence of the weight.

4. An auxiliary car step including a step proper, a weight for normally holding the step in inoperative position, means for manually moving the step to operative position against the influence of the weight, means for locking the step in the position assumed as a result of the manual operation, a trip lever connected with the lock, and a cam actuated in the movement of the car to engage and operate the trip lever to release the lock.

5. An auxiliary car step including a step proper, a weight for normally holding the step in inoperative position, means for manually moving the step to operative position against the influence of the weight, means for locking the step in the position assumed as a result of the manual operation, a trip lever connected with the lock, a cam actuated in the movement of the car to engage and operate the trip lever to release the lock, and means operated by the step to engage and move the trip lever beyond the influence of the cam when the step is in folded relation.

[Claims 6 to 9 not printed in the Gazette.]

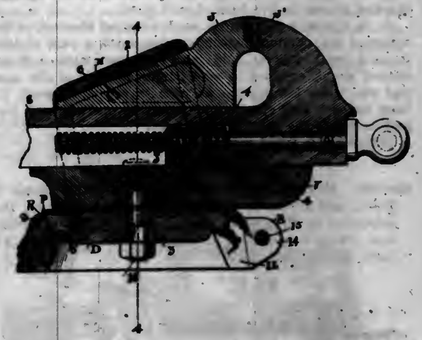
958,658. BENCH-VISE. JOHN R. LONG, Warren, Pa. Filed Aug. 30, 1909. Serial No. 515,351.

1. A bench vise having a base and a collar rotatably mounted therein, a set of jaws and supports therefor frictionally engaging said collar and adapted to be clamped against rotation upon said base.

2. A bench vise having a set of jaws and a hood carrying the same, a split base and a collar adapted to be clamped and rotated therein and mechanism frictionally clamping the hood on said collar.

3. A bench vise having a split base and a friction collar rotatably mounted therein and adapted to be locked therewith, a set of gripping jaws and a hood in which said jaws are engaged, and means adapted to clamp the hood upon said ring.

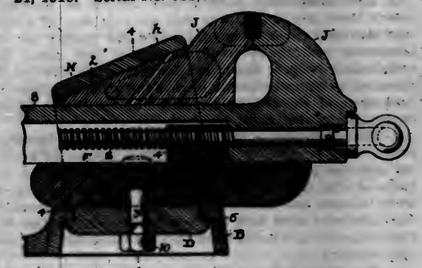
4. A bench vise having a split base, a friction collar and means on the base to frictionally engage the collar thereon, in combination with a hood and jaws and means operatively supporting the jaws in said hood and a disk engaging beneath said friction collar and clamped to the bottom of said base and to said hood.



5. A split base and a collar rotatably clamped therein, a hood and jaws therein, a part engaging the bottom of said collar and screws connecting the same with said hood, said hood and one of said jaws constructed to produce a clamping effect and tighten the parts against rotation when an object is gripped in said jaws.

[Claim 6 not printed in the Gazette.]

958,659. BENCH-VISE. JOHN R. LONG, Akron, Ohio. Filed July 6, 1909, Serial No. 505,954. Renewed Mar. 24, 1910. Serial No. 551,313.



1. A vise having a stationary jaw provided with a tapering shank and a hood deepest at its front and tapering toward its rear in which said shank is engaged, in combination with a base, a frictionally engaged part adapted to lock said hood against rotation on said base and a movable jaw having an extension projecting beneath said stationary jaw.

2. A vise with a jaw having a tapered shank and a tapered hood in which said shank is engaged, a base and a member therein frictionally connecting said base and hood and a movable jaw having a portion extending beneath said tapered shank and a support for said movable jaw on said base.

3. A bench vise having a stationary jaw provided with a rearwardly tapering shank, a hood having an inclined top extending forward and engaged over the said tapering shank, in combination with a base and a friction plate in engagement therewith about its edge and adapted to be frictionally engaged with said hood, a friction bar having shoulders at its rear end engaged against the hood and swiveled upon the base and an outer jaw having an arm extending between said friction bar and said stationary jaw, and a screw engaged with said friction bar and adapted to clamp said jaws.

4. In a vise the combination of a fixed base and a hood having a flaring top portion and horizontally rotatable on said base, a friction bar confined within the sides of said hood and having an integral screw support on its top, a screw through said support and a pair of jaws confined within said hood, the inner of said jaws having a shank tapered on top to the flare of said hood.

5. In a vise, a base and a hood mounted thereon having a flaring top portion, in combination with a pair of jaws in said hood, one of said jaws provided with a wedge shaped shank engaged in said flaring portion of the hood and the other jaw having an arm extending through the hood beneath said shank, and means to operate said jaws and to rotate the parts on said base.

[Claims 6 to 8 not printed in the Gazette.]

958,660. FIRING MECHANISM FOR GUNS. JOHN F. MEIGS and SIGARD A. S. HAMMAR, South Bethlehem, Pa., assignors to Bethlehem Steel Company, South Bethlehem, Pa., a Corporation of Pennsylvania. Filed Jan. 11, 1906. Serial No. 295,598.



1. The combination with a gun having an openable breech block provided with a seat for a primer, of a carrier for the primer adapted to hold the primer out of alinement with the axis of the primer seat when the breech block is open, and means for moving the carrier to seat the primer by the closing movement of the breech block, for the purpose set forth.

2. The combination with a gun having an openable breech block provided with a seat for a primer, of a carrier for the primer adapted to hold the primer out of alinement with the axis of the primer seat when the breech block is open, and means connected with the breech block for moving the carrier to seat the primer during the final stage of the closing movement of the breech block, for the purpose set forth.

3. The combination with a gun having an openable breech block provided with a seat for a primer, of a carrier for the primer adapted to hold the primer at an angle to the axis of the primer seat when the breech block is open, and means whereby the primer is brought into alinement with and inserted in the seat during the final stage of the closing of the breech block, for the purpose set forth.

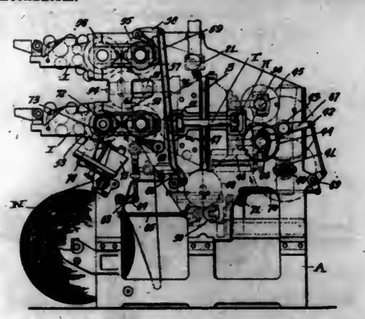
4. The combination with a gun having an openable breech block provided with a seat for a primer, of a primer carrier adapted to support a primer in position to be seated in said breech block, and means for deflecting the discharge from the primer from said primer seat should said primer be accidentally discharged prior to the closing of the breech block, whereby accidental discharge of the gun prior to the closing of the breech block is prevented.

5. In a gun, the combination with the breech block having a seat for the primer, of a carrier movable in a plane which is radial to the primer seat and adapted to hold the primer out of alinement with its seat, whereby accidental discharge of the primer will not ignite the charge in the gun, and means operated by the closing movement of the breech block for moving the carrier to bring the primer into alinement with its seat.

[Claims 6 to 17 not printed in the Gazette.]

958,661. MACHINE FOR MAKING BOX-BLANKS. FRANCIS MEISEL, Dorchester, Mass. Filed Mar. 14, 1904. Serial No. 198,032.

1. In a machine of the class described, the combination of a source of web supply, a rotary printing couple for printing box blanks in web form, a bed and platen for creasing the box blanks after they are printed, and a registering mechanism between the printing couple and creasing mechanism.



2. In a machine of the class described, the combination of a source of web supply, a rotary printing couple for printing box blanks in web form, a bed and platen for creasing the box-blanks after they are printed, a registering mechanism interposed between the rotary printing couple and creasing mechanism, and an intermittently acting web-feeding mechanism.

3. In a machine of the class described, the combination of a printing couple, a creasing device, a shaft, means controlled by said shaft for drawing the web from the creasing device and for feeding the web to the printing couple, a second shaft, and means controlled by the second shaft for clamping the web on the delivery side of the creasing device and for simultaneously clamping the web on the receiving side of the printing couple.

4. In a machine of the class described, the combination of a printing couple, a creasing device, means for guiding a web first through the printing couple and then through the creasing device, a shaft, means controlled by said shaft for drawing the web from the creasing device and for feeding the web to the printing couple, a second shaft, and means controlled by the second shaft for clamping the web between the creasing device and the first mentioned feeding device, and for simultaneously clamping the web before it enters the printing couple.

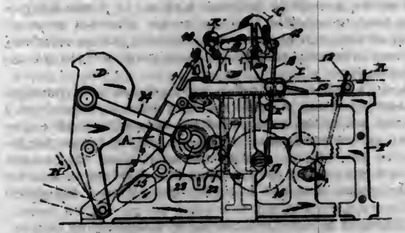
5. In a machine of the class described, the combination of a printing device, a creasing device, means for leading a web through the printing device and then through the creasing device, a feeding device arranged adjacent to the discharge end of the creasing device, a feeding device arranged adjacent to the receiving side of the printing device, means for simultaneously and intermittently operating said feeding devices, a pair of stationary jaws, one arranged between the creasing device and the first named feeding device, and the other arranged on the discharge side of the printing device, a pair of movable jaws cooperating with the stationary jaws to clamp the web in both places, and means for simultaneously operating both of said movable jaws.

[Claims 6 to 14 not printed in the Gazette.]

958,662. PRINTING-PRESS. FRANCIS MEISEL, Dorchester, Mass. Filed July 13, 1904. Serial No. 216,343.

1. In a perfecting printing press having impression making means, the combination of an offset web, and means for shifting the web after a predetermined number of impressions are made to bring a new section of the off-set web into position, with a movable link and means movably connected therewith for adjusting the length of throw thereof to change the period of operation of the shifting means.

2. In a perfecting printing press, the combination of an off-set web winding roll, and means for operating the roll after a predetermined number of impressions have been made, with a link having its end adjustable for changing the period of operation, said operating means being inoperative until said predetermined number of impressions have been made.



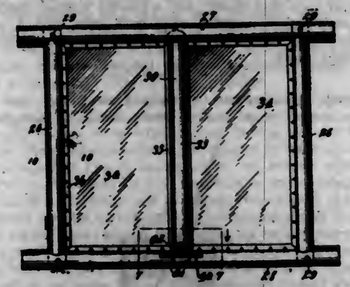
3. In a perfecting printing press, the combination of an off-set web winding roll having a shaft, a ratchet wheel fixed on the shaft, a pawl for turning the ratchet wheel oscillatable about the shaft, means on the shaft for normally holding the pawl out of engagement with the ratchet wheel and for permitting the pawl to engage the ratchet wheel and turn the winding roll after a desired number of impressions have been printed, and adjustable means for operating said holding means periodically.

4. In a perfecting printing press, the combination of an offset web, and winding mechanism therefor, comprising a winding roll, a ratchet-wheel and operating pawl, a laterally movable releasing plate normally holding the pawl out of engagement with the ratchet-wheel, a lever for shifting the releasing-plate, and a second ratchet wheel for operating the lever to release the pawl when a desired number of impressions have been printed.

5. In a perfecting printing press, the combination of an offset web, and winding devices therefor, comprising a winding roll, a ratchet wheel, a pawl, a laterally movable releasing plate normally holding the pawl out of engagement with the ratchet wheel, a horizontally swinging lever for shifting the releasing plate, and a second ratchet wheel having a cam or tooth for shifting the lever to permit the winding devices to operate when a desired number of impressions have been printed.

[Claims 6 to 9 not printed in the Gazette.]

958,663. METAL DOOR AND WINDOW FRAME. SOREN C. MONBERG, Leadville, Colo. Filed June 28, 1909. Serial No. 504,800.

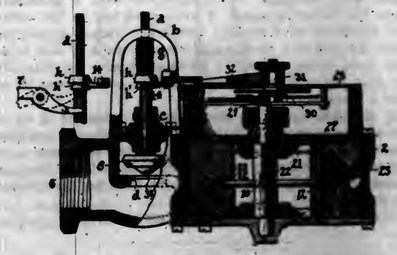


1. A window frame having tubular side and end members, a rotatable muntin journaled in the side members, panes mounted on the muntin, the end members being provided with concaved recesses on their inner faces, the side members being provided with flat faces, and weather strips mounted on the free edges of the panes and adapted to engage the concaved and flat faces of the side and end member.

2. A window frame having tubular side and end members, a rotatable muntin journaled in the side members and carrying panes, clamping strips disposed on opposite sides and near the free edges of the panes, and weather strips secured between said clamping strips, the side members having concaved recesses and the end members having flat faces on their inner sides adapted to be engaged by said weather strips.

3. A window frame comprising tubular side and end members, the end members having reduced ends, the side members having openings near their ends, and adapted to receive the said reduced ends, fastening elements passing through the side members and reduced portions, and a rotatable muntin journaled in the frame and carrying windows.

958,664. COMBINATION VALVE AND METER. EDWARD J. MOORE, Cleveland, Ohio. Filed Aug. 5, 1907. Serial No. 387,035.



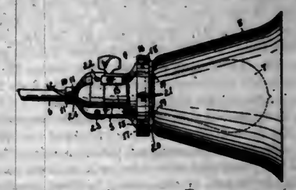
1. A meter provided with a measuring space provided with a discharge and a self seating valve in said discharge and a rotary measuring device within said space having oppositely connected spring pressed blades, in combination with air inlet and outlet openings for said measuring space and separate valves for said openings adapted to automatically open and close according as pressure or suction is on the meter, and a main valve to control the flow of air.

2. A meter and a spring pressed puppet valve therefor and an air valve arranged between said meter and valve and constructed to automatically open and close upon the operation of the meter, in combination with mechanism adapted to set said meter for the withdrawal of predetermined amounts of liquid, and trip means operated thereby to release said valve when the predetermined amount is withdrawn.

3. The combination of the casing and the main valve in the outlet therefrom, a stem on said valve having a beveled collar, a drum and slidable blades therein engaged with said casing and a shaft carrying said drum, in combination with means to stop the rotation of the drum at predetermined times comprising an arm to engage said collar and to hold said valve open, and a dial hand operated from one end of said shaft adapted to release said arm.

4. In a liquid measuring meter, a measuring mechanism and a self closing puppet valve in the discharge therefrom and a trip member to hold said valve open, in combination with a float case and a float and a main air valve therein adapted to control the flow of air in both directions for the purposes set forth.

958,665. LAMP-SHADE HOLDER. ARTHUR J. MORGAN, Chicago, Ill. Filed Feb. 3, 1908. Serial No. 413,028.



1. A shade-holder for lamps, comprising an inner and an outer collar, resilient arms connecting said collars,

said arms adapted to frictionally embrace a lamp socket, and also adapted to engage a lamp shade.

2. A lamp socket and shade holder comprising two collars formed in sections and apart, means for connecting the members of each collar, resilient arms connecting said collars, said arms having their free ends bent to embrace the lamp shade.

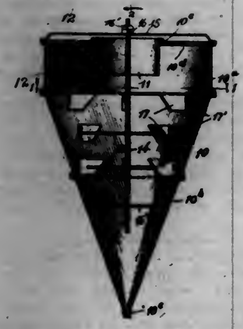
3. A shade holder adapted to be applied to a lamp socket, said holder comprising a frame made in separable sections, the members of the frame provided with apertures and recesses adapted to engage projections upon the socket, means for clamping said sections together, and means for engaging a lamp shade.

4. A shade holder adapted to be applied to a lamp socket, said holder consisting of a separable collar provided with openings for engagement with a projection upon the socket, a series of arms attached to the collar, and furnished with recesses adapted to engage projections upon the socket, a band connecting the ends of said arms, said band being formed in sections, means for clamping the said holder upon a socket, and fingers adapted to engage a shade.

5. A shade holder for electric-lamps composed of an inner and outer collar, each formed of semi-circular members separably connected, arms connecting the said collars together, said arms adapted to frictionally embrace the lamp socket substantially in the manner and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

958,666. APPARATUS FOR DUST COLLECTION. ORVILLE M. MORSE, Jackson, Mich. Filed Apr. 20, 1904. Serial No. 204,078.



1. In a centrifugal dust collector, the combination with a tapering casing having a tangential inlet at its larger end, a dust outlet at its smaller end, and an air outlet in its top, of a unitary structure in the casing constituting a single deflector, arranged wholly below the level of the inlet, and extending from a point separated from the casing toward the axis of the casing, said deflector being shaped to deflect air from within an uninterrupted peripheral belt toward the casing axis and having its edge free and unconfined.

2. In a centrifugal dust collector, a casing wherein dust laden air whirls to centrifugally mass the dust in a peripheral belt of the whirl, said casing being provided with an air inlet and an air outlet both at its top, and independent deflectors at different elevations within and separated from the casing each for deflecting bodies of air within the dust-laden peripheral belt toward the axis and each having all of its edges free and unconfined.

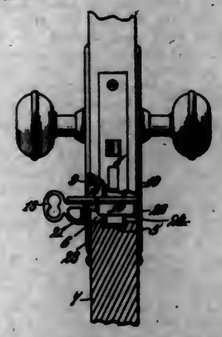
3. In a dust collector a casing having a tangential inlet and an axial outlet, of a deflector arranged out of contact with the casing in the path of rotation of air within a peripheral belt, said deflector having a portion between its outer end and the axis of the casing inclined relative to the axis and arranged to deflect material moving radially inward along the deflector toward the axial outlet.

4. In a dust collector a casing wherein the air whirls, said casing having a tangential inlet and an axial air outlet, of a deflector arranged in the path of rotation of the air having a radially disposed portion, an outer end portion bent in opposite direction to the direction of movement of the whirl of air, and an inclined portion relatively adjacent the axis arranged to deflect the air toward the axial outlet.

5. In a centrifugal dust collector, the combination with a tapering casing wherein the dust laden air may form a vortical whirl, having a peripheral, tangential inlet and an axial air outlet, both at the larger end, of means for deflecting the whirling air in the radial plane of the inlet toward the axis of the casing, and a deflector in another radial plane arranged to deflect air within a peripheral belt toward the outlet.

[Claims 6 to 8 not printed in the Gazette.]

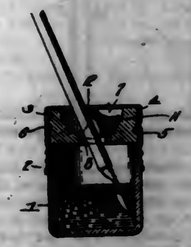
958,667. GUARD DOOR-KEY. WILLIAM S. MYERS and TRUMAN ALEXANDER, Ashland, Ky. Filed June 5, 1909. Serial No. 500,366.



1. In a key of the type specified, the combination of a guard member; and a locking member rotatably connected thereto and comprising a sleeve, a pair of spaced feet formed integral with the sleeve and occupying a common plane, and a finger piece formed integral with one foot.

2. In a key of the type specified, the combination of a guard member including a shank, a stem, and a foot formed upon said shank; and a locking member comprising a sleeve rotatably fitted upon said stem, and a pair of spaced feet connected to said sleeve and occupying a common plane.

958,668. INK-WELL. THOMAS E. MCNULTY, San Francisco, Cal. Filed June 9, 1909. Serial No. 501,090.

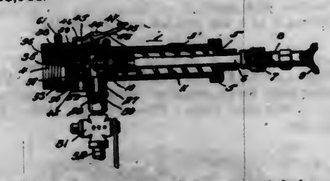


1. A device of the kind described comprising a reservoir a cover centrally cut out, said cover resting upon the reservoir, a top inclosing said cover and securing the same to the reservoir, the top being radially slotted, the cover having a cut out portion with opposite vertical and opposite curved walls, the vertical walls being recessed, a sector-shaped closing device, and lugs carried by said closing device, said lugs being journaled in the recesses of the vertical walls, the said cover having a central opening normally closed by said closing device.

2. A device of the kind described comprising a reservoir, a cover having a central cut out portion communicating with the opening in the cover, said opening affording communication with the reservoir, a closing device mounted to swing in said cut out portion and normally closing the said opening, and a flanged top radially slotted, said top fitting over the cover and the flange of the top threading upon the reservoir, the radial opening in the top being at right angles to the longitudinal axis of the closing device, as and for the purpose set forth.

3. An ink stand, a radially slotted top, a centrally slotted cover held in position by said top, said cover having a recess with a curved bottom in its upper surface, and a closing device pivotally connected to the top and having a curved face sliding upon the curved bottom of said recess.

958,669. PNEUMATIC HAMMER-SUPPORT. HARRY NEVILLE, Los Angeles, Cal. Filed Apr. 29, 1909. Serial No. 492,944.



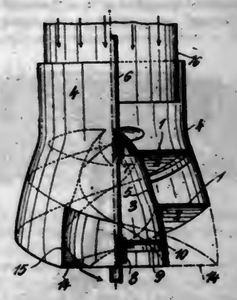
1. In a pneumatic support for hammers, a tubular cylinder a piston arranged in said cylinder, a piston rod connected to said piston, a holding extension, connected with the outer end of said piston rod, means whereby compressed air is admitted to said cylinder to operate said piston and holding extension, a hammer comprising a tubular sleeve secured to the opposite end of said cylinder, a valve to control the passage of the compressed air from the cylinder to the hammer sleeve and manually-operated means to move said valve into open position.

2. In a pneumatic support of the character described, a tubular cylinder, a piston and piston rod operatively mounted in said cylinder, a holding extension secured to the outer end of said piston rod, a compressed air valve connected to said cylinder, whereby compressed air is admitted thereto to operate said piston, a pneumatic hammer connected to one end of said cylinder, a spring retracted valve arranged in said cylinder to admit air therefrom to said hammer, a valve operating lever, and spring actuated detents adapted to automatically engage said lever to hold the valve in open position.

3. In a pneumatic support for hammers, a cylinder, a piston and piston rod operatively mounted in said cylinder, said piston comprising a head having on one end a tubular threaded extension, a cup shaped packing arranged on the opposite end of said head, a cup shaped retaining member to hold said packing in place, a nut arranged on the end of said piston rod to engage the tubular threaded extension on said piston head, an attaching sleeve to revolubly connect said piston head with the end of the piston rod, a collar on said end of the rod, anti-frictional engagement between said sleeve and collar, a holding extension secured to the outer end of said piston rod, means whereby compressed air is admitted to the cylinder to retract said piston and piston rod against the pressure of said spring.

958,670. WATER-TURBINE. ERNST A. NILSEN, Christiania, Norway. Filed Sept. 2, 1909. Serial No. 515,918.

1. A water turbine, the helically and spirally formed blades of which are attached to a central core, characterized by the fact, that the core has nearly paraboloidic shape and is connected with the blades along their inner edge throughout, said blades having essentially constant pitch and having their outer edge free for about one fourth of an encircling but at the rest thereof connected with a surrounding casing, in the upper extension of which the water supply tube projects down.



2. A water turbine comprising a core of nearly paraboloidic shape, blades connected to said core, an outer casing, said casing being of a shape corresponding to the shape of the core, and having a portion at the slipping edge of each blade cut away up to the overlying blade, the cut then following the underside of the blade down to the slipping edge of the said overlying blade.

958,671. APPARATUS FOR LAYING DROP-SIDING AND MATCHED MATERIAL. JOHN E. NORBY, Scandinavia, Wis. Filed Dec. 31, 1908. Serial No. 470,221.



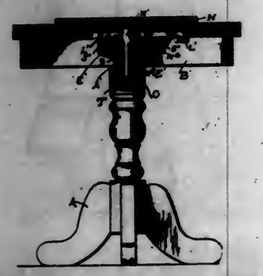
1. In a device of the character described, a lever handle, a pair of spaced bars offset at one end to engage the handle, the bottom of the bars being formed with recesses in the edges thereof and adapted to receive the tongue of a floor member, a pivotal bolt positioned above the recesses and passing through the spaced bars, and a spike hook pivotally mounted on the bolt between the bars and adapted to engage a joist to act as a fulcrum for the bars, to permit the same to be forced against the floor member.

2. In a device of the character described, a lever handle, a pair of spaced bars rigidly connected to the handle, recesses formed in the bottom of the spaced bars and adapted to engage the tongue of a floor member, a single pointed spike hook pivotally mounted between the bars above the recesses and adapted to engage a stationary member to act as a fulcrum for the bars in exerting pressure upon the floor member through the medium of the handle, and a doubled pointed spike hook pivoted above the first hook.

958,672. SELF-WAITING TABLE. KARL J. OLSON, Gladstone, Mich. Filed Feb. 19, 1910. Serial No. 544,893.

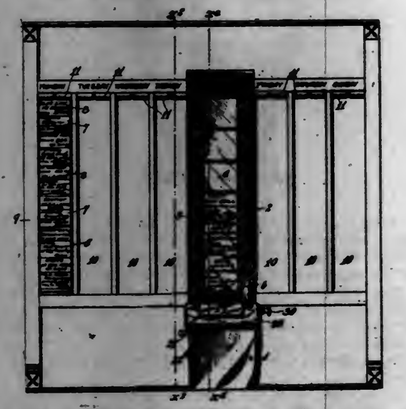
A self-waiting table comprising a standard having a square-outlined portion about its upper end with an opening in its upper end, the wall of which is oppositely recessed, a socket member having laterally projecting arms seated in said recesses, an annular shoulder at the lower

end of said square outlined portion, a stationary table top having a square-outlined opening to receive the top of the standard, said stationary table resting upon said annular shoulder, a revolving table having a spindle fastened to its under surface and provided with a threaded end adapted to be passed through an opening in the inner end of said socket member, a nut mounted upon the threaded end of



the spindle, said spindle provided with an inclined shouldered portion and the inner surface of the socket member having an inwardly extending rib, anti-friction balls interposed between said rib and the inclined portion of the spindle, said revolving table movable within an opening in the stationary table top and provided with a circumferential flange, as set forth.

958,673. INFORMATION AND DIRECTORY CABINET. ELIJAH A. OVENSHIRE, Los Angeles, Cal. Filed Mar. 31, 1908. Serial No. 424,461.



1. In an information and directory cabinet, a box having an opening, a slide normally covering the opening, a directory strip, an endless carrier to which the directory strip is connected, mechanism for opening the slide, and crank means for operating the carrier and closing the slide.

2. In an information and directory cabinet, a box having an opening, a directory strip movable past the opening, a slide normally covering the opening, mechanism for operating the slide, and means operating automatically when the slide is open to grip the strip and prevent slipping thereof and to free the strip when the slide is moved from open position.

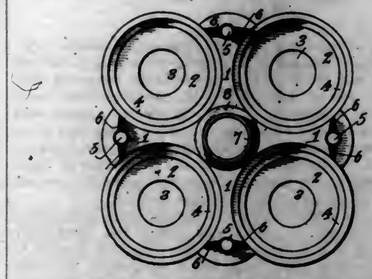
3. In an information and directory cabinet, a box having an opening, a directory strip movable past the opening, a slide normally closing the opening, a display box, an endless carrier in the display box to which the strip is connected, a lever, a dog operated by the lever to engage and actuate the carrier, spring means for moving the lever in one direction, a dash pot for cushioning that movement of the lever, and mechanism for operating the slide and controlling said lever.

4. In an information and directory cabinet, a box having an opening, a directory strip movable past the opening, a slide normally closing the opening, a display box, an endless carrier in the display box to which the strip is connected, a lever, a dog operated by the lever to engage and actuate the carrier, spring means for moving the lever in one direction, a dash pot for cushioning that movement of the lever, and mechanism for operating the slide and controlling said lever, spring means for opening the slide when released by the controlling mechanism, a crank for moving said lever into operative connection with the slide after the slide is open, the first mentioned spring means acting to then reverse the lever and thereby close the slide.

5. In an information and directory cabinet, a box having an opening, a directory strip movable past the opening, a slide normally closing the opening, a display box, an endless carrier in the display box to which the strip is connected, a lever, a dog operated by the lever to engage and actuate the carrier, spring means for moving the lever in one direction, and mechanism for operating the slide and controlling said lever.

[Claims 6 to 9 not printed in the Gazette.]

958,674. ANNEALING-RING. CHARLES G. OVERMYER, Coffeyville, Kans., assignor of one-half to George F. Collins, Coffeyville, Kans. Filed Feb. 20, 1909. Serial No. 479,158.



1. A device of the class described for carrying molten glass articles during treatment comprising a body provided with a plurality of sockets, each socket having an apertured center, said body provided with a central opening, an upwardly-projecting flange formed upon said body and adapted to reinforce the same, upwardly-projecting lugs formed upon said body intermediate said sockets, said body provided with grooves formed upon the bottom thereof terminating in lug-receiving sockets at their outer ends, and the central opening of said device adapted to receive a carrying rod for facilitating the handling thereof.

2. A device of the class described comprising a plurality of plates provided with registering apertures at the centers thereof, each plate provided with an upwardly-extending guiding flange surrounding the central aperture, guiding means formed upon said plates and adapted to hold the same in a spaced-apart relation, and said central apertures adapted to receive carrying means for facilitating the carrying of said plates from place to place and preventing the lateral displacement of the same.

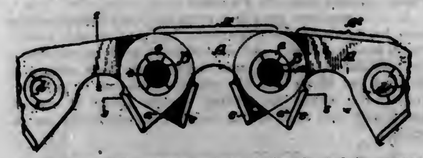
3. A device of the class described comprising a body provided with a plurality of sockets adapted to carry partly molten or plastic glass articles during treatment, said body provided with a central aperture, formed between said sockets, upwardly-projecting lugs formed upon said body intermediate said sockets, laterally-extending flanges formed upon said lugs and body and extending to said sockets and adapted to reinforce said lugs and body, and said central aperture adapted to receive a carrying member for facilitating the carrying of said body from place to place.

4. A device of the class described comprising a body provided with a plurality of sockets, each of said sockets being provided with an aperture, a ledge formed around the inner edge of each of said sockets and adapted to support a glass article from the bottom of said socket for allowing the free circulation of air around the same, spacing means formed upon said body and adapted to support a duplicate device just above said body, said body provided with a central aperture adapted to receive a carrying member for facilitating the conveyance of said bodies from place to place and preventing the lateral displacement of the same.

5. In a device of the class described the combination with a plurality of plates, said plates provided with central apertures and with article receiving sockets, guiding and spacing means formed upon said plates and adapted to direct articles into the sockets, said plates adapted to be placed in a stacked relation upon each other and be held in a spaced-apart relation by means of said spacing means, and said central apertures adapted to receive a carrying member for facilitating the conveyance of said device from place to place and preventing the lateral displacement of said device from each other while being carried.

[Claims 6 to 13 not printed in the Gazette.]

958,675. DRIVE-CHAIN. HAROLD S. PIRACH, Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed June 9, 1909. Serial No. 501,054.



1. A chain link plate having teeth adapted to engage the teeth of a sprocket wheel, said teeth having laterally extended bearings.

2. A drive chain made up of a series of links each consisting of a series of plates, the plates of the links having laterally extended bearings for contact with the teeth of sprocket wheels.

3. A chain link plate having teeth adapted to bear against the teeth of a sprocket wheel, each tooth having an extended bearing surface projecting beyond both of its sides.

4. The combination in a drive chain, of a series of links, each link composed of a series of plates having teeth formed to engage the teeth of a sprocket wheel, the plates of one series alternating with those of another series, thus spacing the plates of one series apart, with lateral projections on each tooth, said projections at either end of each link being in line one with another and forming an extended bearing surface.

5. The combination in a chain, of a series of links, each consisting of a plurality of plates having teeth and laterally extended bearings on each tooth, the bearings of the teeth at either end of each link lying in substantially the same plane.

[Claims 6 to 12 not printed in the Gazette.]

958,676. CHAIN. JAMES M. DODGE, Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 6, 1909. Serial No. 526,536.

1. A chain made up of a series of link elements, each link element having lateral projections extending through others of said links and of a length greater than the width of the element through which it extends, so that when the link elements are assembled the said lateral projections will space the said elements apart so as to avoid side friction and wear.

2. A chain made up of a series of link elements having openings and lateral extensions at the said openings, pivot pins, said extensions forming extended bearings for the pivot pins and projecting through openings in adjoining elements, the said extensions being greater in length than the width of the element through which they extend, so as to space the elements apart to prevent side friction and wear.



3. A chain link element having pivot pin openings, laterally extended bearings, and an intermediate projection of the same length as said bearings.

4. The combination in a chain of a series of link elements; and means for connecting said elements; each link element having openings adjacent its ends and being provided with lateral projections adjacent said openings; there being a lateral projection at the middle of each link element placed to co-act with a similar projection of an adjacent element.

5. A link element having openings for pivot pins and lateral extensions projecting at right angles to the plane of the link element, with an integral projection intermediate said bearings.

[Claims 6 to 13 not printed in the Gazette.]

958,677. DRIVE-CHAIN. JAMES M. DODGE, Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 9, 1910. Serial No. 548,179.



1. A chain link plate having perforations, teeth projecting at one edge of said plate and having laterally extended bearings, and a lateral projection at the other edge of said plate.

2. As a new article of manufacture, a chain link element consisting of a plate having a portion forming a sprocket-engaging tooth; said plate presenting a plane surface on one face and having on its other face a laterally extended bearing at the tooth.

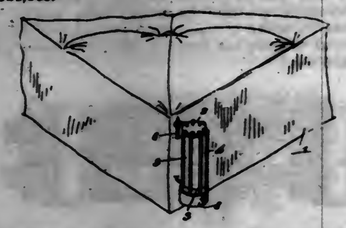
3. As a new article of manufacture, a chain link element consisting of a plate having portions forming sprocket-engaging teeth; said plate presenting a plane surface on one face and having on its other face laterally extended bearings at the teeth.

4. As a new article of manufacture, a chain link element consisting of a plate having a portion forming a sprocket-engaging tooth; said tooth presenting a flat surface on one side and having on its other side a lateral projection forming an extended bearing adjacent to and in continuation of its working face.

5. As a new article of manufacture, a chain link element consisting of a plate having two angular projecting teeth extending from the same side thereof, one side of each of said teeth having a flat surface and the other side of each tooth having a lateral projection forming an extended bearing adjacent to and in continuation of its working face.

[Claims 6 to 13 not printed in the Gazette.]

958,678. HOLDER FOR INSECTIFUGE. PAXTON POLLARD, Norfolk, Va., assignor of one-half to John E. Ledbetter, Norfolk, Va. Filed Oct. 9, 1909. Serial No. 521,865.



A holder for insectifuge comprising a cage including a disk and a ring, a plurality of wire strands having their opposite ends connected to said disk and ring, one of said strands being extended to form a safety pin for connecting the holder to a mattress, and a cap frictionally secured to the ring and serving to seal one end of the holder.

958,679. ELEVATOR SAFETY DEVICE. CHARLES R. PRATT, Montclair, N. J. Filed June 15, 1907. Serial No. 379,118.



1. In an elevator safety device, the combination with gripping means, of two pairs of members each having male and female screw threads of opposite kind or direction from the other adapted to coact in moving the gripping means into contact with the hoistway rails, one member of each pair of said members forming together a third pair having male and female screw threads of the same kind or direction as one of said first-mentioned pairs but of different pitch and adapted to constitute therewith a differential screw for forcing the gripping means into engagement with the rails, and means for connecting the other members of said first-mentioned pairs with the gripping means.

2. In an elevator safety device, the combination of opposite sets of gripping jaws adapted to engage hoistway rails, a shaft having upon different longitudinal portions of itself threads of the same kind or direction but of different pitch, means engaging one of said threaded portions and being non-rotatably connected to the adjacent set of gripping jaws, a member having one set of threads engaging the other threaded portion of the shaft and a second set of threads of the opposite kind or direction, and means engaging said second set of threads of said member and adapted to transmit motion to the adjacent set of gripping jaws.

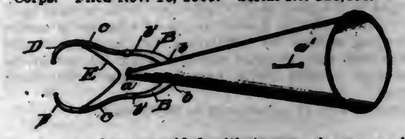
3. In an elevator safety device, the combination of gripping jaws, a shaft having upon different longitudinal portions of itself threads of the same kind or direction but of different pitch, a member threaded to engage one of said threaded shaft portions and having other threads of the opposite kind or direction, means for turning said shaft, and means for transmitting motion from said last mentioned threads of said member and from the other threaded portion of the shaft to the gripping jaws.

4. In an elevator safety device, the combination of supporting means, sets of gripping jaws fulcrumed on said supporting means, end-pieces slidably arranged on said supporting means and connected to said gripping jaws to operate the same and having at their inner ends interior screw threads of opposite kind or direction, a shaft having its ends lying in said inner ends of the end-pieces and provided with threads of the same kind or direction, one end of said shaft engaging the end-piece which has threads of the same kind as itself, and a sleeve between the other shaft end and end-piece having interior and exterior threads engaging the said parts respectively.

5. In an elevator safety device, the combination of gripping jaws adapted to engage a hoistway rail, a shaft having upon different longitudinal portions of itself threads of the same kind or direction but of different pitch, a non-rotary nut engaging one of said threaded portions, a member having one set of threads engaging the other threaded portion of the shaft and a second set of threads of the opposite kind or direction, and means adapted to transmit motion from the said second set of threads of said member to the gripping jaws.

[Claims 6 to 21 not printed in the Gazette.]

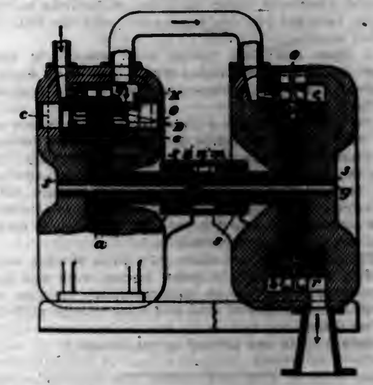
958,680. MEGAPHONE. LEE B. PURCELL, U. S. Marine Corps. Filed Nov. 16, 1909. Serial No. 528,406.



1. A megaphone provided with two ear horns opening into the body of the megaphone in front of the mouthpiece, said ear horns and mouth piece being permanently open to the megaphone with flexible ear tubes connected to said ear horns and ear pieces connected to said ear tubes, substantially as described.

2. A megaphone provided with two ear horns opening into the body of the megaphone in front of the mouthpiece, said ear horns and mouth piece being permanently open to the megaphone with flexible ear tubes connected to said ear horns and ear pieces connected to said ear tubes, with means for holding the ear pieces in engagement with the ears of the wearer, substantially as described.

958,681. TURBO-UNIPOLAR GENERATOR. OTTO SCHULZ, Schlachtensee, near Berlin, Germany. Filed Feb. 4, 1909. Serial No. 476,027.



1. In a turbo-generator, the combination with incasing means forming a plurality of communicating pressure stages, and means for magnetising said incasing means, of a plurality of rotors revoluble in opposite directions in each pressure stage, each rotor comprising one or more armatures having blades at the periphery of the same, the blades of alternate rotors in each stage being oppositely directed, the inner rotors having central attachments rigidly connecting the same together, and the outer rotors being rigidly connected together by central attachments located within said former attachments.

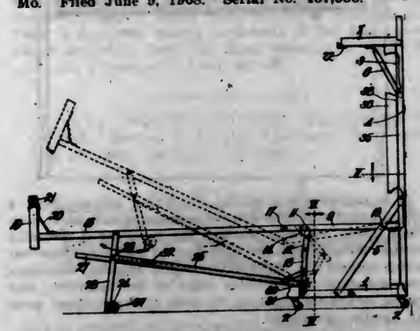
2. In a dynamo electric machine, the combination with means for setting up a magnetic field, of a plurality of armatures revoluble in opposite directions, and conducting rollers between the armatures for electrically connecting them each roller having rolling contact with two armatures, said rollers comprising elastic cylinders.

3. In a turbo-generator, the combination of a casing having a chamber provided with an inlet and an outlet, a plurality of rotors revoluble in said casing and extending into said chamber, said rotors each comprising one or more armatures having oppositely directed blades at the periphery of the same, a field winding in said chamber for energizing the casing, brushes in said chamber contacting with said rotors, and a bridge in said chamber separating the part thereof containing said brushes and field winding from the part thereof containing said blades.

4. In a turbo-generator, the combination with a casing and means for magnetizing the casing, of an armature revoluble in said casing and provided with turbine vanes, means for supplying motive fluid to said vanes, collecting brushes bearing on said armature, and a bridge in said casing separating said brushes and said vanes.

5. In a turbo-generator, the combination with a casing, of a winding in said casing for magnetising the same, an armature revoluble in said casing and provided with turbine vanes, means for supplying motive fluid to said vanes, collecting brushes bearing on said armature, and a bridge in said casing separating said winding and brushes from said vanes.

958,682. FOLDING BED. JOHN L. TANDY, Kansas City, Mo. Filed June 9, 1908. Serial No. 437,555.



1. A folding bed, comprising a rigid head-frame having a forwardly projecting mantel-section, a head-rail section pivoted to the head-frame, a foot-rail section pivoted to the foot-end of the head-rail section, folding legs for the foot-rail section, a foot-board secured to the foot-rail section and adapted when the bed is folded to form a continuation of the head-frame mantel-section, doors secured to the head-frame and adapted to lock the bed in its folded position, and means actuated by the doors in their closing or opening movements to lock the mantel sections together or to unlock them.

2. A folding bed, comprising a rigid head-frame having a forwardly projecting mantel-section, a head-rail section pivoted to the head-frame, a foot-rail section pivoted to the foot-end of the head-rail section, folding legs for the foot-rail section, a foot-board secured to the foot-rail section and adapted when the bed is folded to form a continuation of the head-frame mantel-section, and means for centering the foot-board mantel-section with respect to the head-frame mantel-section.

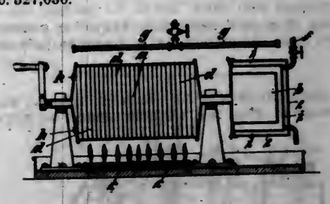
3. A folding bed, comprising a rigid head-frame having a forwardly projecting mantel-section, a head-rail section pivoted to the head-frame, a foot-rail section pivoted to the foot-end of the head-rail section, folding legs for the foot-rail section, a foot-board secured to the foot-rail section and adapted when the bed is folded to form a continuation of said head-frame mantel-section, doors hinged to the head-frame, keepers secured to the foot-board mantel-section, and means actuated by the doors as they are closed, to engage said keepers and lock the mantel-sections together.

4. A folding bed, comprising a rigid head-frame having a forwardly projecting mantel-section, a head-rail section pivoted to the head-frame, a foot-rail section pivoted to the foot-end of the head-rail section, folding legs for the foot-rail section, a foot-board secured to the foot-rail section and adapted when the bed is folded to form a continuation of the head-frame mantel-section and provided with keepers, doors hinged to the head-frame, bars adapted to be advanced toward the keepers by the closing of the doors, and guides for said bars, carried by the head-frame mantel-section to compel said bars if the foot-rail mantel-section is not properly centered with respect to the other mantel-section, to engage said keepers and push them, and the foot-rail mantel-section endwise or laterally of the bed and center it with respect to the companion mantel-section.

5. In a folding bed, a rigid head-frame having a forwardly projecting mantel-section, a head-rail section pivoted to the head-frame, a break-joint brace connecting said head-rail section with the head frame and normally supporting the former in a substantially horizontal position, a foot-rail section pivoted at its head-end to the head-rail section rearward of said break-joint brace, a foot-board mantel-section secured to the foot-end of the foot-rail section, levers pivoted to the foot-rail section, and fulcrum arms rigid with the member of the break-joint brace connected to the head-frame and pivotally connected to said levers.

[Claims 6 to 17 not printed in the Gazette.]

958,683. ICE-MAKING MACHINE. CLEMENS WAGENER, Berlin, Germany, assignor to Leopold Bichler, Innsbruck, Austria-Hungary. Filed Nov. 9, 1909. Serial No. 527,050.



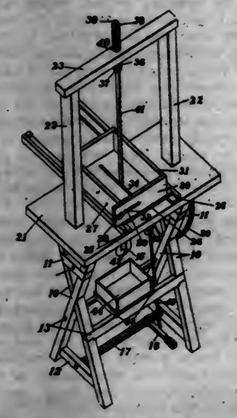
1. In an ice making machine, the combination of a rotatably mounted boiler, an evaporator rotatably mounted on the same axis and communicating with the boiler, and a number of disks having a plurality of perforations and one large aperture in the center and arranged in the interior of the machine in communication with its walls and rotating with them, for the purpose specified.

2. In an ice making machine, the combination of a rotatably mounted boiler, an evaporator rotatably mounted on the same axis and communicating with said boiler, a number of disks having a plurality of perforations and one large aperture in the center and arranged in the interior of the machine in communication with its walls and rotating with them, and a loose material, such as metal shavings, provided in the interior of the machine, substantially as described.

958,684. ICE-SAW. KARL K. WITT, Hazelhurst, Wis. Filed Apr. 8, 1909. Serial No. 488,760.

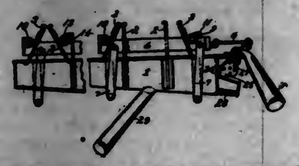
1. In a device of the kind described, an ice-holder comprising a bottom provided with a slot extending longitudinally thereof, a fixed side, a laterally movable side, ends fixed on said movable side, means on the fixed side and ends to hold the ends and movable side in adjusted position, an oscillating saw extending through said slot, and means to oscillate said saw.

2. In a device of the kind described, a frame, a table supported thereon provided with a slot therethrough, an ice-holder comprising a bottom provided with a slot extending longitudinally thereof, a fixed side, a laterally movable side, ends fixed on said movable side, means on the fixed side and ends to hold the ends and movable side in adjusted position, a saw mounted for oscillation through said slots, and means to oscillate said saw.



3. In a device of the kind described, a frame, a table supported thereon provided with a slot therethrough, guides on said table, an ice-holder comprising a bottom provided with a slot extending longitudinally thereof, a fixed side, a laterally movable side, ends fixed on said movable side, and means on the fixed side and ends to hold the ends and movable side in adjusted position, a saw passing through said slots, means for guiding one end of said saw in a rectilinear path, and other means for moving the other end of said saw in a substantially circular path.

958,685. MILKING-MACHINE. KARL A. AHLBOM, Stockholm, Sweden. Filed Dec. 16, 1909. Serial No. 533,439.



1. A milking machine comprising in combination, a receptacle provided with an outlet, a plurality of pairs of coacting lip members arranged to embrace the dugs of the animal, one member of each pair being rigidly and adjustably mounted on the receptacle and the other coacting member of each pair being normally and yieldingly supported with its upper edge in closer relation to its coacting members than its lower edge, and actuating mechanism for effecting initial pressure of the upper edges of the pairs of lip members alternately near the base of the dug and gradually and successively extending the pressure on the dugs throughout the length thereof.

2. In a milking machine, a receptacle, a reciprocatory frame mounted above and pivotally connected to said receptacle, a stationary lip adjustably mounted upon said receptacle, and a movable lip pivotally connected to said frame by means of a spring, to coöperate with said stationary lip.

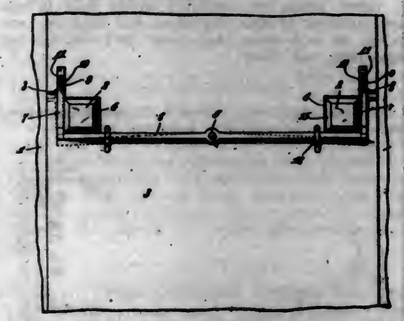
3. In a milking machine, a receptacle, a movable frame, links pivotally connected to said frame and receptacle, a stationary lip adjustably mounted within said receptacle, a movable lip pivotally connected to said frame, a spring for normally holding said movable lip in an inclined position, and means to reciprocate said frame.

4. In a milking machine, a receptacle, a movable frame mounted above said receptacle, a movable lip mounted upon said frame, means for yieldingly holding said movable lip in a normal inclined position, said receptacle being provided with grooves, and a stationary lip removably mounted within said grooves to coöperate with said movable lip.

5. In a milking machine, a receptacle, a movable frame mounted above said receptacle, a movable lip, a spring for pivotally connecting said movable lip to said frame and for yieldingly holding the same in a normal inclined position, said receptacle being provided with series of spaced grooves upon opposite sides thereof, and a stationary lip adapted to be inserted within a selected pair of said grooves by a substantially vertical movement of the same, to coöperate with said movable lip.

[Claims 6 and 7 not printed in the Gazette.]

958,686. SEALING DEVICE FOR ELECTRIC METERS. WALTER N. ALEXANDER, Sidney, Nebr., assignor of one-half to Karl T. Miller, Sidney, Nebr. Filed Jan. 25, 1910. Serial No. 540,056.



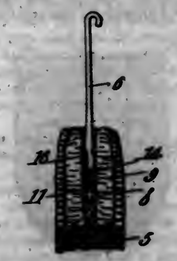
1. A meter casing having projecting ratchet bars, a cover having apertures for the passage of said bars, a resilient cross bar secured upon the cover by a fastening member intermediate the ends thereof and said cross bar having ratchet bar engaging teeth and upturned terminals lying adjacent to the outer edges of the apertures, and sealing means for securing the ends of the resilient cross bar against movement.

2. A casing having forwardly extending toothed locking bars, a cover having apertures for said locking bars, a resilient cross bar secured upon the cover engaging said locking bars, and sealing means to secure the resilient cross bar against movement when in locking-bar engaging position.

3. In a device of the character described, a cover member, a resilient cross bar secured upon the same by fastening means intermediate the ends thereof, keepers to limit the movement of the ends of the resilient cross bar, finger pieces upon the latter, brackets upon the cover member adjacent to and lying in the path of the ends of the resilient cross bar, and sealing means to secure the ends of the resilient cross bar against movement; in combination with a casing having locking means to be engaged by the resilient cross bar.

4. A meter casing having forwardly extending lock bars, a cover having apertures for the passage of said lock bars, a resilient cross bar secured upon the cover by fastening means intermediate the ends thereof and having lock-bar engaging portions and upturned terminals lying adjacent to the outer sides of the apertures in the cover, said upturned terminals being provided with laterally extending finger pieces and with forwardly extending apertured lugs, and apertured bracket members secured upon the cover adjacent to the apertured lugs for the passage of the sealing members.

958,687. CORN-HANGER. HENRY ANDERSON, Calamus, Iowa. Filed Dec. 18, 1909. Serial No. 533,922.

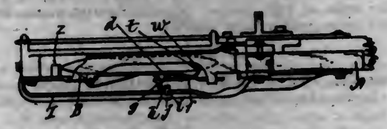


1. A corn hanger consisting of a shank adapted to penetrate the ear, an ear engaging spur mounted for longitudinal movement upon said shank, means for limiting the sliding movement of the spur, and means carried by the shank for grasping the spur and disengaging it from the ear.

2. A corn hanger consisting of a shank terminating in an ear penetrating barb, an ear engaging spur slidingly mounted on said shank and having its penetrating end disposed remote from said barb, stops upon the shank to limit the sliding movement of said spur, and means upon the shank for grasping the spur and disengaging it from the ear.

3. A corn hanger consisting of a shank having an ear penetrating barb, a resilient ear engaging spur slidingly mounted on said shank, stop shoulders adjacent said barb to limit the sliding movement of the spur, and a finger projecting from the shank adapted to grasp the spur and disengage it from the ear.

958,688. DROP-SHUTTLE-BOX MECHANISM OF LOOMS. EUGENE H. BALLOU, Pawtucket, R. I. Filed Oct. 14, 1908. Serial No. 457,728.



1. The combination of a drop shuttle-box mechanism, with a distinct shuttle-engaging means carried thereby, for preventing the forward movement of the shuttle in its box whenever the shuttle, in the operation of the loom, is removed out of line with the shuttle race, and at the same time applying friction to the withdrawn thread at the side of the shuttle.

2. The combination of a drop shuttle-box mechanism, with a distinct shuttle-engaging means carried thereby, for preventing the forward movement of each of the several shuttles in its own box independently of the others, whenever in the operation of the loom the shuttle is removed out of line with the shuttle race, and at the same time applying friction to the threads of the said shuttle independently of the others to prevent imperfection in the woven web.

3. The combination of a shuttle-box mechanism, with a distinct spring-actuated shuttle engaging means carried thereby, for applying friction to the thread at the side of the shuttle upon the removal of the shuttle from the line of the shuttle race.

958,689. WHEEL-GUARD AND TRACK-CLEANER FOR SAWMILL-CARRIAGES. GREEN O. BEASLEY, Winona, La. Filed July 7, 1909. Serial No. 506,866.

1. The combination with a wheel guard and track cleaner designed to be moved along the track in the travel of the wheel, of a removable wear face to receive the wheel contact on its sides adjacent the peripheral edge of the wheel.



2. The combination with a wheel guard and track cleaner designed to be moved along the track in the travel of the wheel, of a removable wear face to receive the wheel contact, and lips carried by said face to project beyond the peripheral edge of the wheel.

3. The combination with a wheel guard and track cleaner designed to be moved along the track in the travel of the wheel, of a removable wear face secured in the guard and cleaner at each end beyond the wheel, and wear lips carried by each wear face and projecting toward the axis of the wheel.

4. The combination with a sectional wheel guard and track cleaner, and means for securing the sections together, of a wear section secured in place by the section securing means, said section serving to receive the contact of the wheel sides adjacent the peripheral edge.

5. The combination with a sectional wheel guard and track cleaner made in two parts and comprising end sections and side plates, of a wear section formed with a dovetailed rib, the end section of the guard and cleaner being formed with a dovetailed recess to receive the rib.

[Claim 6 not printed in the Gazette.]

958,690. MATCH-HOLDER. HERMAN G. BLANKENHAGEN, Chicago, Ill. Filed Aug. 7, 1907. Serial No. 387,396.



1. As a new article of manufacture, a match holder formed from a single sheet or blank, having a supply receptacle with a lateral discharge opening at the bottom; and a chamber from which the matches may be removed, communicating with said opening, the bottom, front and sides of said chamber being formed from a projection extending from the back of said receptacle, said bottom being also reinforced with connecting strips extending from the sides of said receptacle.

2. A blank for a match holder, comprising a back portion, an extension on one side of said back portion for partially forming one of the sides of the holder, an extension on the other side of said back portion for forming the other side of the holder, the front thereof, and for completing the first-named side of the holder, the side-forming portions of said last-named extension having projections adapted to form a reinforcement for the bottom of the holder, said back portion also being provided at one end with another extension for forming the bottom, front and sides of a bottom chamber from which the matches may be removed, said bottom to be reinforced by the reinforcing strips above mentioned.

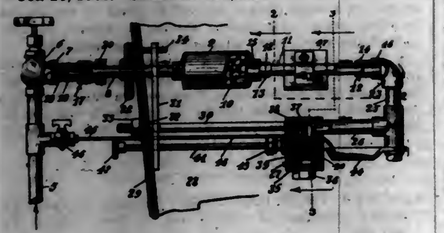
958,691. RAILROAD-TIE. JAMES A. BYERS, Centerville, Tenn. Filed Nov. 30, 1909. Serial No. 530,676.



1. In a metallic railway-tie, a pair of boxes each having an inwardly extending base portion and each being provided with means for clamping the rail thereto, a pair of bars connecting the boxes and rigidly attached thereto, supporting and bracing blocks between the bars at the inner ends of the extended base plates, and means for clamping said blocks to the bars and to the base plates.

2. In a metallic railway-tie, the combination of a pair of boxes each having a base plate extended inwardly, and each base plate being braced to the boxes by inwardly extending corner braces, rigid connecting bars lying between said corner braces, spacing and supporting blocks between said braces and said bars and supported by the extended base plates, said blocks lying between said connecting bars, bolts extending through the base plates, supporting blocks and the bars, for the purpose set forth.

958,692. HYDROCARBON-BURNER. THOMAS H. CLARK and JOSEPH H. NEQUETTE, Los Angeles, Cal. Filed Oct. 20, 1908. Serial No. 458,588.



1. In a hydrocarbon burner, an oil supply pipe, an oil warming reservoir mounted on said oil supply pipe, a generating chamber detachably connected to said oil warming reservoir, and means secured to said oil supply pipe for maintaining the generating chamber in detachable relation to the warming reservoir.

2. A hydrocarbon burner, comprising an oil supply pipe, a gas retort detachably secured in frictional engagement with said supply pipe, a mechanism mounted on said supply pipe for maintaining the said retort in frictional gas tight relation to said supply pipe, said mechanism also providing means whereby said retort may be disconnected from said supply pipe, and a burner leading from said retort.

3. A hydrocarbon burner, comprising an oil supply pipe, a gas retort detachably secured in frictional engagement with said supply pipe, a mechanism mounted on said oil supply pipe for maintaining the said retort in gas tight relation to said supply pipe, said mechanism also providing a means whereby said retort may be disconnected from said supply pipe, a burner leading from said retort, and means to control the volume of gas issuing from said burner.

4. A hydrocarbon burner, comprising a gas retort, an oil supply pipe leading to said retort and being held in detachable and frictional engagement therewith, a mechanism mounted on said supply pipe for maintaining the supply pipe in frictional gas tight relation to said retort, and a burner tip connected to said retort.

958,693. TIRE. WILLIAM B. CONNELL, Chicago, Ill. Filed Mar. 29, 1909. Serial No. 486,336.

1. An automobile tire comprising an integral compression member provided with oppositely disposed vertical arches having substantially curved inner faces, and a tension member positioned between said arches thus providing channels on either side of said tension member having substantially triangular cross-sections.



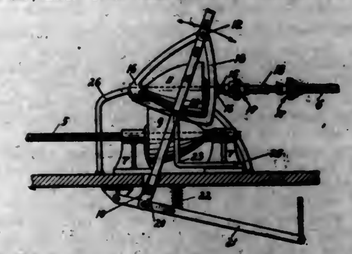
2. An automobile tire comprising an integral compression member provided with oppositely disposed vertical arches having substantially curved inner faces, and a tension member having enlarged ends positioned between said arches thus providing channels on either side of said tension member having substantially triangular cross-sections.

3. An automobile tire comprising an integral compression member having an interior channel, said channel having enlarged portions extending longitudinally on either side thereof, a tension member extending horizontally across said channel and fitting within said enlarged portions, the walls of said channel forming vertical arches above and below said tension member.

4. An automobile tire formed from an integral compression member slit longitudinally, said slit communicating with an interior channel, a tension member fitting within said channel, and means for locking said tension member in place, the walls of said channel forming vertical arches above and below said tension member.

5. An automobile tire formed from an integral compression member slit longitudinally, said slit communicating with an interior channel, a tension member fitting within said channel, and means integral with said compression member for locking said tension member in place, the walls of said channel forming vertical arches above and below said tension member.

958,694. VARIABLE-SPEED GEARING. JOHN S. COX, Yuma, Ariz. Filed June 2, 1908. Serial No. 436,278.



1. A speed changing device comprising, a driving member rotating in fixed bearings, a driven member in frictional engagement with said driving member, a pivoted frame, swinging arms to which said pivoted frame is attached, a driven shaft and flexible connecting means between said driven member and the driven shaft.

2. A variable speed gearing, comprising two frictional engaged members, each of said members having an engaging surface whose generating line is an arc of a circle which is revolved about an axis in such relation thereto that the chord subtending said arc forms an acute angle with the axis of revolution, a pivoted frame carrying one of said members and swinging means on which said frame is mounted.

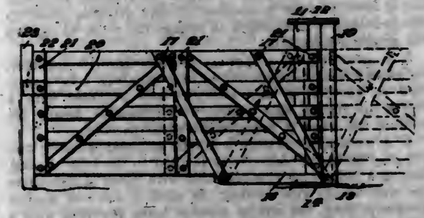
3. A variable speed gearing, comprising two frictionally engaging members each having an engaging surface which is formed by rotating an arc about an axis in such relation thereto that the chord subtending said arc forms an acute angle with said axis of rotation, frames in which said members are rotatably mounted, and a member pivotally connecting said frames in such manner that said engaging surfaces of said frictional members are always in contact when said pivoted member is rocked upon its pivot.

4. A variable speed gearing, comprising a pair of frictionally engaging members having their surfaces curved longitudinally, each of said members being substantially cone shaped and having the apexes of the cones oppositely disposed and means for rotating one of said members about the other in such manner as to change the angular relationship between their respective axes, said means comprising a pivoted frame and a swinging arm for said pivoted frame.

5. A variable speed gearing, comprising two frictionally engaging members, the members having conical engaging surfaces whose generating lines are curved, and means for changing the angle between the rotative axis of said members, said means comprising a pivoted frame carrying one of said frictional engaging members, and a swinging arm for controlling the position of said pivoted frame.

[Claims 6 to 10 not printed in the Gazette.]

958,695. GATE. JOHN W. CRATES, Marion, Ind., and FRANK LONGBRAKE, Arlington, Ohio. Filed July 29, 1909. Serial No. 510,175.



1. A device as specified, including a pair of guide posts disposed in spaced and off-set relation, a base mounted between said guide posts, a pivot pin upwardly extended from said base intermediately of said guide posts, a head mounted upon said pivot pin, pairs of arms upwardly extended from said head and pivotally mounted thereon, a gate pivotally mounted in the upper ends of said pairs of arms, a recessed post disposed in spaced relation from said guide posts, and an extension formed upon said gate for engagement with said recessed post upon the closing of the same.

2. A device as specified, including a pair of spaced posts, a base disposed between said posts, a pivot pin mounted on said base, a head disposed on said pivot pin, arms pivotally mounted on said head and upwardly extended from the same in pairs, a gate pivotally mounted between said arms, a retaining post spaced from said guide posts and means disposed between said gate and said retaining post to lock said gate in a closed position.

3. A device as specified including a pair of spaced posts, a head pivotally located between said posts, a gate mounted on said head, arms disposed between said head and said gate for supporting said gate, an extension formed on said gate, and a recessed post disposed in spaced relation to said first-named posts for coöperation with said extensions to lock said gate.

4. A device as specified, including a pair of spaced posts, a head pivotally mounted between said posts, bushings located in the opposite ends of said head, arms mounted against the opposite sides of said head, bolts engaged through said arms and said bushings to support said arms, and a gate pivotally mounted in the upper ends of said arms.

5. A gate mechanism including a pair of guide posts, a base disposed between said guide posts and at the lower end thereof, a pivot pin upwardly projected from said base, a head detachably mounted upon said pin, bushings located at the opposite ends of said head, arms engaged against the opposite edge of said head in registration with the bushings and upwardly extended therefrom, bolts engaged through said arms and said bushings, a gate hingedly supported between the upper ends of said arms, an extension formed on said gate and a recessed post located at the outer end of said gate for holding the same in a closed position.

[Claim 6 not printed in the Gazette.]

958,696. SULKY-PLOW. HARRY P. CURTRIGHT, Holliday, Mo.; Mary B. Curtright administratrix of said Harry P. Curtright, deceased. Filed May 3, 1909. Serial No. 493,659.



1. An agricultural implement comprising a frame to carry the ground engaging tools, front and rear furrow wheels and a land wheel, means for guiding the frame for rectilinear vertical movement with respect to said front and rear furrow wheels, and a common operating part carried by the frame and operatively connected to the front and rear furrow wheels and operative to elevate or lower the front and rear of the frame with respect to said furrow wheels.

2. An agricultural implement comprising a frame to carry the ground engaging tools, forward and rear furrow wheels and a land wheel, guides for insuring rectilinear vertical movement of the frame with respect to the forward and rear furrow wheels, operating devices connecting the said furrow wheels with their respective guides, and a common operating part connected to said operating devices for the forward and rear furrow wheels and operative to simultaneously elevate or depress the frame with respect to said forward and rear furrow wheels.

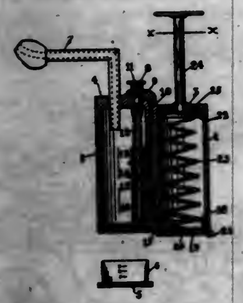
3. An agricultural implement comprising a frame to carry the ground engaging tools, front and rear furrow wheels and a land wheel, the frame being capable of vertical movement with respect to said wheels, a shaft connected to the land wheel, lifting devices for the front and rear furrow wheels, a common operating part having means for connecting and disconnecting it with respect to said shaft and to the lifting devices for the furrow wheels, means for locking the said part while the land wheel is disconnected therefrom, and means carried by said shaft for elevating or depressing the land side of the frame while said common operating part is locked.

4. An agricultural implement comprising a frame to carry the ground engaging tools, a land wheel, front and rear furrow wheels, said frame being capable of vertical movement with respect to all of said wheels, a shaft connected to the land wheel, a common operating lever connected to the two furrow wheels and having means for connecting and disconnecting it with respect to the said shaft for the land wheel, means for locking the common operating lever for movement while disconnected from said shaft, and means for turning said shaft to adjust the land side of the frame while said common operating lever is in locked condition.

5. An agricultural implement comprising a frame to carry the ground engaging tools, front and rear furrow wheels and a land wheel, said frame being capable of vertical movement with respect to all of said wheels, a common operating lever operatively connected to all of said wheels and capable of simultaneously elevating or lowering the frame bodily with respect thereto, and means for independently elevating or lowering a portion of the frame with respect to one of said furrow wheels.

[Claims 6 to 11 not printed in the Gazette.]

958,697. ATOMIZER. FRANK C. DORMENT, Detroit, Mich. Filed July 30, 1909. Serial No. 510,351.

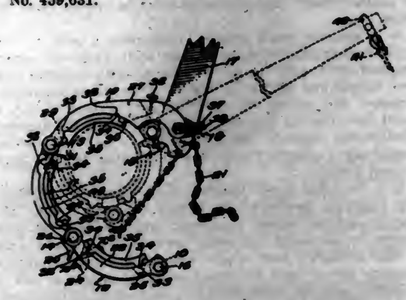


1. An atomizer comprising a compression cylinder, an atomizing cylinder secured in parallel relation thereto, both permanently closed at the upper end, a graduated cup detachably engaging and closely fitting the lower end of the atomizing cylinder, a hollow plug inserted through an aperture in the upper end of the atomizing cylinder whose bore is in communication with the upper end of a passage whose lower end opens into the lower end of the compression cylinder, a spray pipe whose upper end is detachably secured in the plug bore, and whose lower portion extends well into the inserted cup, a removable spray nozzle in the upper end of the atomizing cylinder, a cap closing the lower end of the compression cylinder, an inlet air valve in the cap, and a spring returned piston in the compression cylinder.

2. An atomizer comprising a compression cylinder, an atomizing cylinder secured in parallel relation thereto, both permanently closed at the upper end, a graduated cup detachably engaging and closely fitting the lower end of the atomizing cylinder, a hollow plug inserted through an aperture in the upper end of the atomizing cylinder, whose bore is in communication with openings into an annular groove that registers with the upper end of a passage whose lower end opens into the lower end of the compression cylinder, a spray pipe whose upper end is detachably secured in the ping bore, and whose lower portion extends well into the inserted cap, a removable spray nozzle in the upper end of the atomizing cylinder, a cap closing the lower end of the compression cylinder, an inlet air-valve in the cap, and a spring returned piston in the compression cylinder.

3. An atomizer comprising a compression cylinder, an atomizing cylinder secured in parallel relation thereto, both permanently closed at the upper end, a graduated cup detachably engaging and closely fitting the lower end of the atomizing cylinder, a hollow plug inserted through an aperture in the upper end of the atomizing cylinder whose bore is in communication with the upper end of a passage whose lower end opens into the lower end of the compression cylinder, a spray pipe consisting of an inner tube whose upper tapered end is screw-threaded into the lower open end of the plug and whose lower closed end is within the graduated cup, and an outer tube on the inner tube, a passage being formed between the tubes from the lower ends thereof to registering jet apertures through the walls of the tubes, a removable spray nozzle in the upper end of the atomizing cylinder, a cap closing the lower end of the compression cylinder, an inlet air-valve in the cap, and a spring returned piston in a compression cylinder.

958,698. COMBINATION CASING-WRENCH. WILLIAM L. DUNN, Gaviota, Cal. Filed Oct. 26, 1908. Serial No. 459,631.



1. A wrench comprising a plurality of gripping members pivoted together, a roller pivoted at its axis to one of said gripping members, and a lever pivoted to another of said gripping members and provided with a purchase to engage the roller.

2. A wrench comprising a plurality of gripping members, a roller pivoted at its axis to one of the gripping members, and a lever pivoted to another of said gripping members and provided with a crotch to engage the roller to tighten the gripping members.

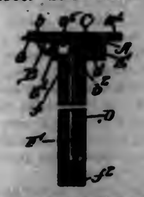
3. A plurality of gripping members pivoted together, an antifriction roller on one of said members, a lever pivoted to another of said members and provided with a crotch to engage said roller, and releasable means for holding the lever in engagement with the roller.

4. A wrench comprising a middle gripping member, two gripping members respectively pivoted to the ends thereof, and each formed of ribs provided with posts intermediate the ends of the ribs so that the ends of the ribs project to receive pins, the middle member being provided with a retainer, a roller pivoted to projecting ribs at one end of one of the end members, a lever pivoted between the projecting ribs of the other end member and arranged to engage said roller, and a chain connected with the lever and adapted to engage the retainer.

5. A wrench comprising pivoted gripping members provided with seats that extend only part way across the gripping faces of said members, and bushings provided with feathers to fit said seats and with latches to engage the gripping members to hold the bushings in place.

[Claims 6 to 12 not printed in the Gazette.]

958,699. SAFETY-RAZOR. ARTHUR F. DURAND, Chicago, Ill. Filed May 23, 1906. Serial No. 318,812.



1. In a safety razor, the combination of a blade, a plate provided with a guard, a clamping jaw movable in the plane of said blade, means for supporting said jaw for movement in the plane of the blade, and a handle, a screw operable at the lower end of said handle, and means engaged by said screw for locking said jaw.

2. In a safety razor, the combination of a double edged blade, a guard, a movable jaw provided with a pair of lugs engaging and overhanging the two forward corners of said blade, a plate provided with two lugs engaging and overhanging the two rear corners of said blade, a stem on said jaw extending toward the rear of said plate, a spring holding the jaw in one direction, and a screw extending upwardly and engaging said stem, said plate provided with a handle at the lower end of which said screw is operable.

3. In a safety razor, the combination of a double edged blade, a holder provided with a seat for the blade and holding lugs for the corner portions thereof, each lug recessed to receive and overhang a corner portion of the blade, the two front lugs being connected to form a pair, the two rear lugs being connected to form another pair, means for supporting one pair of lugs for movement toward and away from the other pair, means including a screw extending lengthwise of the handle for locking the lugs against relative movement when the blade is in place, a guard for the blade, a handle rigid with one pair of lugs, and a sliding connection between the handle and movable pair of lugs, engaged by said screw, said lugs preventing edgewise displacement of the blade in all directions.

4. In a safety razor, the combination of a reversible double edged blade, a holder provided with front and rear holding lugs, each lug holding the blade against endwise and sidewise displacement, means integral with the said lugs for engaging the top of the blade to hold the same flatwise in place on said holder, a guard for the cutting edge of the blade, a handle for the holder, and means including a sliding connection in the holder engaged by the upper end of a rotary screw extending lengthwise of the handle for locking some of said lugs relatively to the others to grip the blade.

5. In a safety razor, the combination of a flat rectangular blade having one or more cutting edges, a blade holding device therefor comprising a pair of relatively movable clamping jaws, a spring normally actuating one of them in the plane of the blade, a blade seat on one clamping jaw, a guard for the cutting edge or edges, means on said jaws receiving and overhanging opposite edges of the blade and holding it flatwise on the blade seat and fixed from displacement in any direction, a centrally disposed handle rigid with one of said jaws on the under side of the blade seat, and means on said blade holding device arranged lengthwise of the handle, and means coöperating therewith whereby the normal action of the spring is opposed and overcome to effect the insertion and removal of the blade.

[Claims 6 and 7 not printed in the Gazette.]

958,700. PROCESS OF BRIQUETING FINES OF ORE, FURNACE-DUST, WASTE METAL, WASTE IRON, &c. MAX GLASS, Vienna, Austria-Hungary. Original application filed Dec. 11, 1909, Serial No. 532,603. Divided and this application filed Mar. 31, 1910. Serial No. 552,723.

1. In the process of briqueting ores the cementing together of the ore particles by a cementitious compound insoluble in water formed of a basic silicate.

2. The process of briqueting ores which comprises mixing the material with a solution of water-glass, a calcium compound and quicklime and pressing the same whereby a silicate is formed and acts as a binder, substantially as described.

3. The hereindescribed process of briqueting ore, which consists in uniformly moistening the material to be briqueted with a solution of calcium chlorid, adding quicklime thereto, uniformly moistening the mass thus obtained with water-glass solution, and in pressing the mass thus obtained, the quantity of calcium chlorid solution and water-glass solution used being only just sufficient to damp the surface of the masses treated thereby.

4. The hereindescribed process of briqueting ore, which consists in uniformly moistening the material to be briqueted with a solution of calcium chlorid, adding quicklime thereto, uniformly moistening the mass thus obtained with water-glass solution, adding borax thereto, and in molding and pressing the mass thus obtained, the quantity of calcium chlorid solution and water-glass solution used being only just sufficient to damp the surfaces of the masses treated thereby.

5. A briquet having its particles held together by cementitious compound insoluble in water formed of a basic silicate.

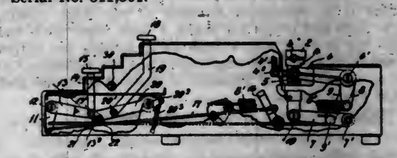
958,701. PROCESS FOR BRIQUETING FINES OF ORE, FURNACE-DUST, WASTE METAL, WASTE IRON, &c. MAX GLASS, Vienna, Austria-Hungary. Original application filed Dec. 14, 1909, Serial No. 532,603. Divided and this application filed Apr. 1, 1910. Serial No. 552,930.

1. The hereindescribed process of briqueting ore, which consists in uniformly moistening the material to be briqueted with an aqueous solution of calcium acetate and aluminium sulfate, adding quicklime thereto, and heating the mass thus obtained to a temperature of approximately one hundred degrees centigrade, whereby the calcium acetate is converted into basic aluminium acetate which serves as a binder, substantially as described.

2. The hereindescribed process of briqueting ore, which consists in uniformly moistening the material to be briqueted with an aqueous solution of calcium acetate and aluminium sulfate, adding quicklime and borax thereto, pressing the mass thus obtained, and heating the mass to a temperature of approximately 100° C.

3. A briquet having its particles held together by a cementitious compound insoluble in water comprising basic salt of aluminium together with borax to prevent oxidation, substantially as described.

958,702. TYPE-WRITING MACHINE. EDWARD B. HESS, New York, N. Y., assignor to Royal Typewriter Company, New York, N. Y., a Corporation of New Jersey. Original application filed Dec. 28, 1907, Serial No. 408,354. Divided and this application filed Aug. 6, 1909. Serial No. 511,501.



1. The combination of a vertically shiftable platen, a horizontally disposed shift link extending forward to the front of the machine, a transverse rock shaft at the front of the machine, an arm extending downwardly from the rock shaft and to which said shift link is connected, arms extending rearwardly from the rock shaft adjacent each end thereof, a vertically movable shift finger piece located in the key board at each side thereof and operatively respectively connected with such rearwardly extending arms whereby on depression of either such finger piece the platen is shifted, a vertically movable shift-lock finger piece located in the key board at a side thereof, a shift lock lever to which the latter finger piece is attached, and means whereby when said lever is depressed by the shift-lock finger piece the rearwardly projecting arm to which said shift finger piece is connected is depressed, the platen shifted and automatically locked in elevated position and whereby the platen may be released from such automatic lock by pressure applied to either of the shift finger pieces located respectively at opposite sides of the key board.

2. A vertically shiftable platen combined with a shifting link extending forwardly in a horizontal direction to the front of the machine, a transverse rock shaft turning in bearings at the front of the machine, two arms extending rearwardly from the rock shaft respectively adjacent its ends; shift finger piece stems pivoted respectively to said arms, an extension from one of said rock shaft arms extending rearwardly beyond the pivotal connection

of said finger piece stem thereto and having a lateral projection, a lever pivoted on the frame and having its free end overlying said lateral projection and having a notch in its end adjacent said projection and a shift-lock finger piece stem pivoted to said lever whereby on depression of the last named finger piece stem said lateral projection is carried downwardly to effect a shifting of the platen after which the said projection is engaged by the notch in the lever thereby automatically creating a toggle lock that holds the platen in shifted position, the organization being such that pressure applied to either of the said shift finger piece stems located respectively at opposite sides of the machine will release said toggle lock and permit the platen to return to normal or lower case position.

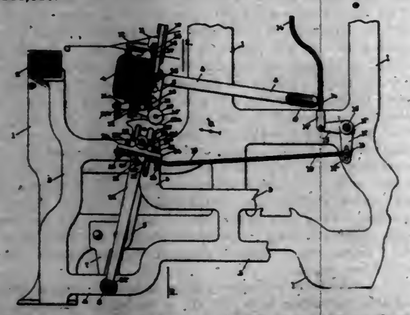
3. The combination with a vertical shiftable platen, of a shift link extending forward to the front of the machine, a transverse shaft turning in bearings at the front of the machine, an arm extending downwardly from the rock shaft at one side of the machine to which the shift link is connected, arms extending rearwardly from said rock shaft respectively adjacent its ends, shift finger piece stems respectively pivoted to said rearwardly extending arms whereby the platen may be shifted by depressing either of said stems, a third shift finger piece stem located at a side of the key board and means whereby on the depression of the last named stem, the platen is shifted and automatically locked in shifted position but may be released to return to normal position by pressure applied to either of the first named shift finger piece stems.

4. The combination of a shifting platen, two platen shifting finger piece stems located respectively at opposite sides of the key board and operatively connected with the platen to shift it when either stem is depressed, a third shift lock finger piece stem and means whereby on depression of the latter stem the platen is shifted and automatically locked in shifted position and may automatically be released to return to normal position by downward pressure applied to either of the first named finger piece stems.

5. The combination with a shifting platen, of means for shifting it by depression of either of two finger pieces, one at each side of the key board, a third finger piece and means for shifting and automatically locking the platen by means of said third finger piece and for releasing the lock by application of pressure to either one of the first named finger pieces.

[Claims 6 to 9 not printed in the Gazette.]

958,703. NARROW-WARE OR RIBBON LOOM. ELBRIDGE R. HOLMES, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Mar. 20, 1909. Serial No. 484,810.

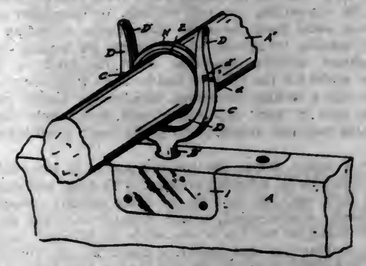


1. In a narrow-ware loom, a shuttle, a tension mechanism on the shuttle for the quill or bobbin, and means to automatically vary the tension of said mechanism during the operation of the loom, said means under the control of an indicating or pattern mechanism.

2. In a narrow-ware loom, a series of shuttles having tension mechanism for the quills or bobbins, and automatic means for simultaneously varying the tension of said tension mechanism during the operation of the loom.

3. In a narrow-ware loom, a shuttle, a tension mechanism on the shuttle for the quill or bobbin, a movable cam on the stationary part of the loom, connections intermediate said tension mechanism and said cam, and automatic means for moving said cam to vary the tension of said mechanism during the operation of the loom.

958,704. ADJUSTABLE OAR-LOCK. EMANUEL E. MATSON, Bigelow, Mo., assignor of one-half to Coke Jackson, Bigelow, Mo. Filed Sept. 7, 1909. Serial No. 516,362.



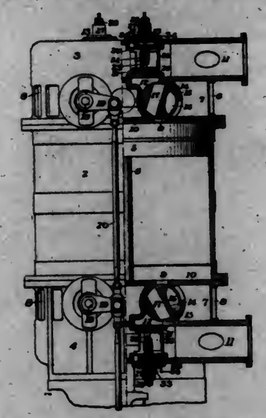
1. The combination with a boat provided with a socket enlarged at the top, of a pivot having a bearing at the top seated and revoluble in said enlarged portion of the socket, duplicate arms seated on said bearing and having central perforations at the top, an oscillatory member its arms provided with a continuous groove and projecting vertically above the other members and having perforations midway therein, pins projecting through the perforations in said duplicate arms and vertical arms carrying said oscillatory member pivotally, bearings on said oscillatory member arms engaging with the tops of said duplicate arms, an oar band provided with a flange around its entire circumference engaging with the groove in said oscillatory member, said band being adapted to fit rigidly on an oar and being unobstructedly revoluble within said oscillatory member, substantially as described and shown.

2. The combination with a boat having an enlarged socket, of an adjustable oar lock having an enlarged member engaging with said socket, an oscillatory member carried pivotally in said oar lock its upwardly projecting arms deflected slightly inward at their points of pivotal connection with said oar lock and provided with a continuous groove, bearings on said oscillatory member arms engaging with the top of said oar lock, a circular band and the flange thereon unobstructedly revoluble within said oscillatory member and retained within the lower part thereof by the pressure of the deflected portions of the arms of said oscillatory member, substantially as set forth and shown.

958,705. BLOWING-ENGINE OR COMPRESSOR. GEORGE MESTA, Pittsburg, Pa., assignor to Mesta Machine Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Aug. 4, 1909. Serial No. 511,191.

1. A blowing engine or compressor, having two rotary valves in each of its heads, one at each side of the piston rod, said valves being used for both inlet and discharge, actuating connections arranged to positively operate the two valves in each head simultaneously and the valves in the two heads oppositely, and automatic discharge valves located in the discharge ports or passages of the compressor beyond the rotary valves; substantially as described.

2. A blowing engine or compressor, having chambered heads, provided with transverse partitions forming separate inlet chambers, a port leading from each of said chambers to the cylinder, a rotary valve having a seat in each of said ports, there being a discharge port leading from each seat, and the rotary valves having both inlet and outlet ports, automatic valves controlling the discharge ports, and connections for positively actuating the two rotary valves in each head similarly and substantially simultaneously and the two sets of valves oppositely; substantially as described.



958,706. LOCK. JAMES A. CHAMBLESS, Acme, Tex. Filed Sept. 21, 1909. Serial No. 518,773.

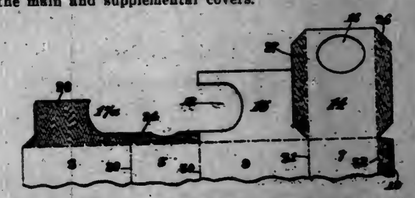


1. As an article of manufacture a lock comprising a pair of semi-circular jaws pivotally united at one end, an elongated head provided with a threaded bore arranged at the free end of one of said jaws, a sleeve on the free end of the opposite jaw to receive said head and a locking member insertible through said sleeve and into the threaded bore of said head.

2. A lock consisting of a pair of semi-circular jaw members hingedly united at one end, one of said jaw members terminating in an enlarged elongated head having an axial threaded bore, the other of said jaw members being provided at its free end with a sleeve to receive the said elongated head and a locking member insertible through said sleeve and having a threaded end portion to engage with the threaded bore of the said head and said member provided adjacent its opposite end with a stop to bear on one end of said sleeve.

958,707. BOX. CHARLES S. STAFFORD, Philadelphia, Pa., assignor to Moses R. Isaacs, Philadelphia, Pa. Filed June 3, 1909. Serial No. 499,929.

1. In a box, front and back vertical walls, side vertical walls, a bottom, a flap formed integral with one of said vertical walls and extending to the opposite vertical wall, said flap having an aperture cut in the body thereof and forming the main cover for the box, means for securing said flap to said opposite vertical wall, a supplemental cover arranged above the main cover and formed integral with one of the two remaining vertical walls of the box and connected to the opposite remaining vertical wall of the box, and a closure for said aperture inserted between the main and supplemental covers.

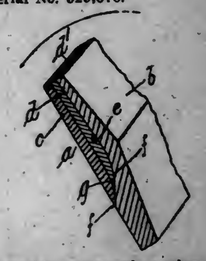


2. In a box, front and back vertical walls, side vertical walls, a bottom, a flap formed integral with one of said vertical walls and extending to the opposite vertical wall, said flap having an aperture cut in the body thereof and forming the main cover for the box, a flap formed integral with the first named flap and extending at right angles thereto and engaging a vertical wall of the box, a supplemental cover arranged above the main cover and formed integral with one of the two remaining vertical walls of the box and connected to the opposite remaining vertical wall of the box, and a closure for said aperture inserted between the main and supplemental covers.

3. In a box, front and back vertical walls, side vertical walls, a bottom, a flap formed integral with one of said vertical walls and extending to the opposite vertical wall, said flap having an aperture cut in the body thereof and forming the main cover for the box, means for securing said flap to said opposite vertical wall, flaps formed integral with the two remaining vertical walls of the box and secured together forming a supplemental cover arranged above the main cover, and a closure for said aperture inserted between the main and supplemental covers.

4. In a box, front and back walls, side walls, a bottom, a main cover having an aperture, a supplemental cover arranged above the main cover and having its lateral portions connected to the box, and having an opening therein above the aperture, said opening extending to one edge of the supplemental cover, and a closure for said aperture between the main and supplemental covers.

958,708. ROLL-BAR FOR PAPER-PULP ENGINES. CHARLES I. WARE, Holyoke, Mass., assignor of one-half to Fred E. Maxfield, Holyoke, Mass. Filed Nov. 24, 1909. Serial No. 529,676.



1. A roll bar for paper-pulp engines comprising a steel member inlaid between wrought iron members, substantially as described.

2. In a roll bar, substantially as described, a steel member secured to a wrought iron member, and a second wrought iron member secured to the steel member and having an end overlapping an end of the steel member.

3. A built-up roll bar for paper-pulp engines composed of a steel member overlaid with wrought iron members, one edge of the iron members and the steel member lying in the same plane on the cutting edge of the bar, substantially as described.

958,709. VACUUM-FAUCET. WILLIAM WHELAN, St. Joseph, Mo. Filed Aug. 27, 1909. Serial No. 514,921.



1. In a combination valve faucet a wall around an outer valve chamber, a nozzle and the threaded flange thereon engaging with said wall and forming the front thereof, a removable screen seated therein, a valve handle and a hollow rod, an inner wall forming a pressure chamber provided with a water outlet at the top, an opening at the rear to receive water from a supply pipe and a vent at the front, a segmental valve seated on said top water outlet, a stem on said valve projecting into but unattached to the lower end of said rod, a valve and pin seated in said vent and a retaining pin to prevent the displacement of said valve by the pressure of air when the opposite pressure of water is reduced, substantially as described and shown.

2. The combination with a supply pipe, of a T end constituting an outer valve chamber, a valve handle and threaded rod hollow at the bottom, an adjustable nozzle and a flange thereon forming the front of said wall, a removable screen seated in said flanged wall, an inner wall forming a pressure chamber provided with an outlet at the top, an inlet for the supply of water and an opposite vent, a segmental valve seated over said outlet, a valve stem engaging movably with the hollow end of said rod, a valve in said pressure chamber and the pin thereon to engage with said vent, and a pin spaced from said valve to prevent the displacement of said valve when pressed inward by the air when the opposite pressure of water is reduced, substantially as described and shown.

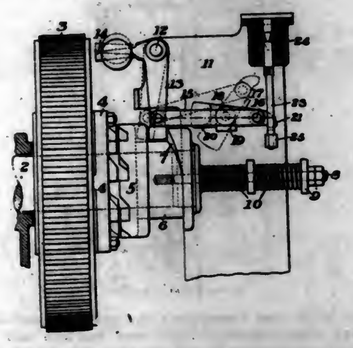
3. The combination in a faucet of outer walls forming an outer chamber and inner walls rigidly attached thereto forming a pressure chamber said chambers having the necessary inlets, outlets and a vent, a segmental valve seated on the outlet for water from the pressure chamber to the outer chamber, a valve vertical within said pressure chamber and a pin thereon engaging with said vent to allow air to enter said pressure chamber when the water pressure on said valve has ceased or been reduced, substantially as described and shown.

4. In a faucet the combination of a T end supply pipe, a flanged nozzle adjustable on the outer T end thereof said T end and flange forming an outer chamber, walls attached on the bottom of said T end said walls provided with a rear inlet and top vent and constituting a pressure chamber, a valve in the front wall of said pressure chamber and means to retain it in position, a segmental valve on said vent, a stem thereon and a threaded handle rod with which said stem engages, substantially as set forth and shown.

5. In a faucet a segment of pipe having a threaded shoulder at the rear end to engage with a supply pipe, a nozzle having a threaded flange to engage with the front end of said pipe said pipe and flange forming a wall for an outer chamber and a removable sieve seated in an inner shoulder of said nozzle, substantially as described and shown.

958,710. CLUTCH MECHANISM. FLORENCE C. BIGELOW, Jr., Pittsburg, Pa., assignor to United Engineering & Foundry Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed May 12, 1908. Serial No. 432,873.

1. In clutch mechanism, the combination of two coöperating clutch members, one of which is movable into and out of clutching engagement with the other member, a spring for normally forcing said member into clutching engagement, said movable member having a cam, a lever having a member arranged to be engaged by said cam, a second lever, a link connecting the levers and arranged to lock the cam-engaging member in rigid relation to the cam, and means for releasing the locking levers to permit the movable clutch member to be moved into clutching engagement; substantially as described.



2. In clutch mechanism, the combination of two coöperating clutch members, one of which is movable into and out of clutching engagement with the other, means for forcing said member into clutching engagement, said movable member having a cam, a member arranged to be engaged by said cam, means to shift the cam engaging member in line of movement of the movable clutch member to shift the movable clutch member out of engagement with the other clutch member, and means for locking the cam engaging member in its shifted position; substantially as described.

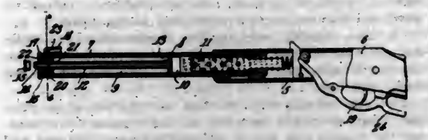
3. In clutch mechanism, the combination of two coöperating clutch members, one of which is movable into and out of clutching engagement with the other member, means for forcing said member into clutching engagement, said movable member having a cam, a lever pivoted so as to swing in line with the axis of the clutch members and arranged to be engaged by said cam, a pair of toggle levers pivoted to each other, one of the toggle levers being pivoted to a stationary member, the other toggle lever being connected to the cam engaging lever and arranged to move said lever, and means to move the toggle levers into and out of locking relation to each other; substantially as described.

4. In clutch mechanism, the combination of two coöperating clutch members, one of which is movable into and out of clutch engagement with the other member, means for forcing said member into clutching engagement, a lever arranged to swing in line with the axis of the clutch members, cam means on the movable clutch member arranged to engage said lever to retract said member, locking means for holding the lever in position to effect such retraction, and electro-magnetic means for releasing the locking device; substantially as described.

5. In clutch mechanism, the combination of two coöperating clutch members, one of which is movable into and out of clutching engagement with the other member, the movable member having a hub portion provided with a cam surface, a lever movable along the axis of the clutch members and arranged to be engaged by said cam surface to effect the retraction of said member, a latch device connected to said lever and arranged to normally hold the same in position to retract and hold the movable clutch member in retracted position, an electro-magnet, and means operated thereby for releasing the latch member; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

958,711. TRICK WATER-GUN. ERASTUS DE MOULIN, Greenville, Ill. Filed Apr. 17, 1909. Serial No. 490,505.



1. A trick gun having a sight and provided with a front and a rear discharge, one of which is located in the gun sight.

2. A trick gun having a sight and provided with a forward and a rearward discharge passage, one of which is through the gun sight, and means for rendering either passage inoperative.

3. A trick gun having a sight and provided with a front and rear discharge passage, one of which is located in said sight, a closure, and a valve coöperating with the closure for controlling the discharge of a projectable substance through either passage.

4. A trick gun having a forward and a rearward discharge passage, both of which are located at the forward end of the gun, and means for controlling the discharge of a projectable substance through either passage.

5. A trick gun including a false barrel provided with a chamber adapted to receive a projectable substance, a true barrel disposed within the false barrel and communicating with said chamber, a rearward discharge tube communicating with the interior of the true barrel, and a valve disposed within the false barrel for controlling the passage of the projectable substance to the said tube.

[Claims 6 to 15 not printed in the Gazette.]

958,712. TRICK-GUN. GEORGE P. RIGGS, St. Marys, W. Va., assignor to Erastus De Moulin, Greenville, Ill. Filed Dec. 16, 1908. Serial No. 467,823.



1. In a trick gun, the combination, with a main barrel and means therein for discharging water, of an auxiliary barrel and means therein for exploding an explosive.

2. In a trick gun, the combination, with a main barrel and water discharging mechanism in said barrel, of an auxiliary barrel, mechanism for exploding an explosive therein, and a trigger adapted to simultaneously operate said water-discharging mechanism and said exploding mechanism.

3. In a trick gun, the combination, with a barrel having a common water inlet and discharge opening in its muzzle end, of a spring pressed suction plunger in said barrel adapted to draw water into the same when the muzzle end of the barrel is submerged and said plunger is drawn rearward, and means for retaining said plunger in its rear position and for releasing the same to discharge the water.

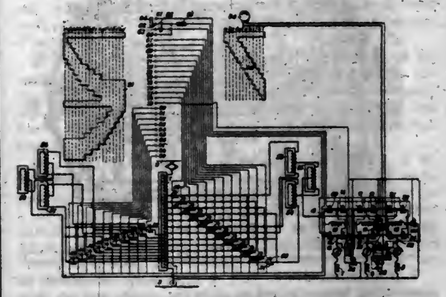
4. In a trick gun, the combination, with a barrel, of a nozzle fitted therein and adapted to be turned so as to discharge in either a forward or rearward direction, a spring-pressed plunger adapted to force water through said nozzle, and means for controlling said plunger.

5. In a trick gun, the combination, with a barrel, of a nozzle fitted therein and adapted to be turned so as to discharge in either a forward or rearward direction, an imitation sight carried by said nozzle and having a discharge passage therein, a spring-pressed plunger adapted to force water through said nozzle, and means for controlling said plunger.

[Claims 9 to 15 not printed in the Gazette.]

REISSUES.

13,115. REGENERATIVE SYSTEM OF CONTROL. WILLIAM COOPER, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 2, 1910. Serial No. 546,971. Original No. 889,908, dated June 9, 1908, Serial No. 891,226.



1. In a system of control, the combination with a subdivided transformer winding, and a plurality of dynamo-electric machines having field magnets and armature windings, one machine serving as an exciter and having its armature connected to the field magnet winding of the remaining machines, of means for connecting the field magnet winding of the exciting machine and the armatures of the remaining machine to the transformer winding, and means for automatically so adjusting the points of connection of the said parts with the transformer winding that the current supplied to the transformer winding will remain substantially constant.

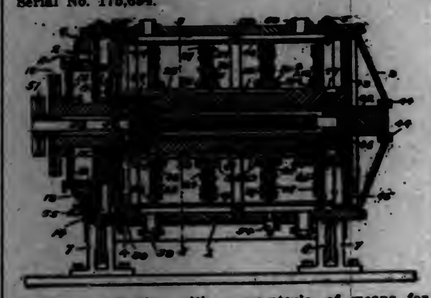
2. In a system of control, the combination with a subdivided transformer winding, and a plurality of dynamo-electric machines having field magnets and armature windings, one machine serving as an exciter and having its armature connected to the field magnet winding of the remaining machines, of means for connecting the field magnet winding of the exciting machine and the armatures of the remaining machines to such points of the transformer winding that the current supplied to the transformer winding will remain substantially constant.

3. In a system of control, the combination with a subdivided transformer winding, and a plurality of dynamo-electric machines having field magnet and armature windings, one machine serving as an exciter and having its armature connected to the field magnet winding of the remaining machines, of means for connecting the field magnet winding of the exciting machine and the armatures of the remaining machines to such points of the transformer winding that the current supplied to the transformer winding will remain substantially constant, and means for preventing the said armatures from becoming connected to the transformer winding except when the voltage generated thereby is approximately the same as that of the point in the transformer winding to which it is to be connected.

4. In a system of control, the combination with a subdivided transformer winding, and a plurality of dynamo-electric machines having field magnet and armature windings, one machine serving as an exciter and having its armature connected to the field magnet winding of the remaining machines, of means for connecting the field magnet winding of the exciting machines and the armature of the remaining machine to the transformer winding, means for automatically so adjusting the points of connection of said parts with the transformer winding that the current supplied to the transformer winding will remain substantially constant, and means for preventing

the said armatures from becoming connected to the transformer winding except when the voltage generated thereby is approximately the same as that of the point in the transformer winding to which it is to be connected.

943,116. AUTOMATIC TANNING-MACHINE. CHARLES J. GLAESEL, Boston, Mass. Filed Mar. 6, 1905. Serial No. 248,777. Original No. 782,198, dated Feb. 7, 1905, Serial No. 175,694.



1. The combination with a receptacle, of means for suspending hides therein at different points and on opposite sides of the hide, and mechanism for alternately straining and relaxing the texture of the hides on lines between said points.

2. In a machine of the character referred to, devices to which separate portions of each of the hides may be attached, means for actuating said devices to intermittently move said separate portions of each of the hides relatively to each other, and means whereby said hides are supplied with hide-treating material.

3. In a machine of the character referred to, means for suspending hides at different points on opposite sides, positive mechanism for alternately and intermittently straining the texture of the hides and permitting them to contract, and means in consequence of which said hides are supplied with proper treating material during the stretching and contracting operations.

4. In a machine as described, the combination with mechanism for alternately stretching the hides under tension and permitting them to relax, of means for supplying hide treating material to the hides.

5. In a machine of the character referred to, means for attaching hides at different points and on opposite sides, mechanism for alternately and intermittently stretching the hides and permitting them to contract, means whereby said hides are rotated about a common center, and means by which hide-treating material is supplied to said hides.

6. In a machine of the character referred to, a rotary receptacle for tanning material, means in said receptacle for arranging and holding a plurality of hides at different points on opposite sides and in a substantially flat condition with spaces between them for the passage of tanning material, and means for causing said hides to be moved relatively to said receptacle while held as described.

7. In a machine of the character referred to, a receptacle, means in said receptacle, for attaching a plurality of hides on opposite sides thereof with spaces between them for the passage of tanning material, and means for causing said hides to be intermittently and positively stretched and contracted while held as described.

8. In a hide-treating machine, the combination with a receptacle; means therein for attaching hides at a point or points on opposite sides thereof, means for alternately stretching the hides beyond the normal and permitting them to contract, and said hides being separated for the passage of a hide-treating material, and means for supplying said material to the hides.

9. In a machine of the character referred to, a receptacle, means in said receptacle for holding a plurality of hides with spaces between them for the passage of hide or leather treating material, and means whereby different portions of each hide are positively moved toward and from each other while held as described.

10. In a tanning machine, the combination of a cylinder, rotating frames carrying the hides, means for rotating the frames, and means for reciprocating the frames while rotating.

11. In a tanning-machine, the combination of a cylinder, rotating frames carrying the hides, means for rotating the frames and means afforded whereby adjacent and coöperating frames reciprocate independently.

12. In a tanning-machine, the combination of a cylinder, rotating frames carrying the hides, means for rotating the frames, and means for reciprocating the adjacent and coöperating frames in different directions.

13. In an automatic device for treating hides and skins, the combination of a rotating cylinder, means for rotating same, a shaft carried within the cylinder and adapted to rotate independently thereof, means for rotating the shaft independently of and in a direction reverse to the direction of the rotation of the cylinder, frames carried by the shaft and adapted to support the hides or skins and means for removing the shaft and frames from and to the cylinder.

14. In a tanning-machine, the combination of a cylinder, a rotating shaft, frames adapted to be adjusted on the shaft, coöperating frames adapted to slide on the shaft, means for rotating the shaft and means for reciprocating the movable frames.

15. In a tanning-machine, the combination of a rotating cylinder, means for rotating same, a shaft in the cylinder rotating independently of the cylinder, frames arranged in pairs on the shaft and adapted to carry the hides and vary their relations with each other, and means for varying the relations of each pair of frames.

16. In a tanning-machine, the combination of a cylinder, a shaft rotating in the same, means for rotating the shaft, frames carrying the hides, arranged in coöperating pairs on the rotating shaft and as such adapted to decrease or increase their distance apart on said shaft and means for varying the distance of separation.

17. In a tanning-machine, the combination of a rotating cylinder, a shaft rotating in the cylinder, means for rotating the cylinder, means for rotating the shaft independently of the cylinder, supporting-frames for the hides arranged in pairs on the shaft and adapted to vary their relation while rotating with the shaft and means for varying the relative distances of each pair of frames to enable hides and skins all possible movements.

18. In a tanning-machine, the combination of a rotating cylinder, means for rotating same, a shaft within the cylinder adapted to rotate in an opposite direction to the rotation of the cylinder, means for rotating the shaft, reciprocating frames carried by the shaft, means for reciprocating the frames, and means for expelling the shaft and its frames from the cylinder.

19. In a tanning-machine, the combination of a cylinder with annular rails, rollers carrying and rotating the cylinder, means for actuating the rollers, a shaft within the cylinder and adapted to rotate independently of the same, and in a contrary direction thereto, means for rotating the shaft, frames and hooks carried by the shaft and adapted to shift lengthwise of the shaft, means for shifting the frame while the shaft rotates, traction-rollers carried by one or more of the frames for supporting the frames and shaft when expelled from the cylinder and means for expelling the frames and shaft from the cylinder.

20. In a tanning-machine, the combination of a rotating cylinder, means for rotating same, a hollow shaft rotating independently of and within the cylinder, means for rotating the shaft, frames carried by the shaft and arranged in coöperating pairs, means for causing the frames of each pair to advance toward and recede from each other, a screw within the hollow shaft and means interposed between the screw and the shaft adapted to cause the rotation of the screw to expel the shaft from the cylinder but to permit of the independent rotation of the shaft.

21. In a tanning-machine, the combination of a rotating cylinder, means for rotating same, an independently-rotating hollow shaft within the cylinder, means for rotating the shaft, a second hollow shaft within the first and having one of its ends supported by the cylinder, a nut secured within the second shaft, a screw having one end supported by the cylinder and playing in the nut within the second shaft, a pulley on the screw and means for actuating the pulley.

22. In a tanning-machine, the combination of a rotating cylinder with heads, means for rotating the cylinder partitions within the cylinder, a sleeve carried by and adapted to rotate in one of the heads, means for rotating the sleeve, a hollow shaft carrying reciprocating frames, a sleeve with a cam-groove around its exterior, longitudinal rods carried by the shaft and having studs at each end to play in the groove and connect them with the frames respectively, and means connecting the sleeve with the cylinder to cause it to move therewith.

23. In a tanning-machine, the combination of a rotating cylinder, means for rotating same, a sleeve supported at one end of the cylinder, a hollow shaft within the cylinder and secured to the inner end of the sleeve, rotating means at the outer end of the sleeve, a sleeve loosely mounted on the hollow shaft and having a cam-face on its exterior, adjustable means securing said sleeve to the rotating cylinder, frames arranged in coöperating pairs on the shaft and adapted to reciprocate to and from each other, means actuated by the cam-face of the sleeve for producing this to-and-fro motion, and means for moving the frames independently of the shaft.

24. In a tanning-machine, the combination of a rotating cylinder, means for rotating same, hollow heads secured to the cylinder, a hollow shaft carrying reciprocating frames with hooks, means for reciprocating the frames, a sleeve rotating in one of the heads of the cylinder and carrying one end of the shaft, means for rotating the sleeve, a second hollow shaft within the first and having one of its ends journaled in the other head of the cylinder, a nut within the second shaft and secured thereto, an annular groove in the said shaft, adjustable pins carried by the first shaft and playing in the annular groove, a screw with its free end journaled in the sleeve and playing in the nut of the second shaft, and means for rotating the screw.

25. In a tanning-machine, the combination of a rotating cylinder, means for rotating same, hollow heads for the cylinder, a sleeve rotating independently in one of the heads, tanks in said head, valves or cocks controlling the inlet and outlet of the tank, an inlet in the head, an outlet in the head, a force-pump communicating with the interior of the hollow head, perforated pipes running through the cylinder and connected with the discharge of the pump and a cam carried by the rotating sleeve and actuating the suction-rod of the pump.

26. In a tanning-machine, the combination of a rotating cylinder, means for rotating same, an independently-rotating shaft with frames for the hides carried within the cylinder, means for rotating the shaft, a removable head on the cylinder and means carried by the cylinder for expelling the shaft and frames when the operation is completed and introducing the same with a new supply of skins or hides.

27. In a tanning-machine, the combination of a rotating cylinder, means for rotating same, an independently-rotating shaft operating within the cylinder and carrying frames to support the skins, means on the exterior of the cylinder for rotating the shaft, and means operated from the exterior for expelling the shaft with its frames and treated hides and re-introducing the shaft and frames with a supply to be treated.

28. The combination with a receptacle of holding means to which the hides are attached, means for actuating said holding means to move portions of the hide relatively to each other, and power mechanism for expelling said holding means from the receptacle.

29. In a machine of the character referred to, a receptacle, means to which separated portions of each of the hides may be attached, devices whereby said hides may be intermittently stretched while located in said receptacle, and mechanism for moving said means out of said receptacle.

30. In a machine of the character referred to, a receptacle, automatic mechanism in said receptacle for positively straining the texture of the hides arbitrarily and mechanically and permitting them to contract, and means for moving said automatic mechanism out from said receptacle.

31. In a machine of the character referred to, a receptacle, means in said receptacle for securing and maintaining a plurality of hides substantially radially about a common center, means by which said hides are alternately, intermittently and positively stretched, means by which said hides are rotated about said center, and power-mechanism for moving said securing means out of said receptacle.

32. In a machine of the character referred to, a closed receptacle having a removable part, means located within said receptacle for holding each hide at separated portions thereof with said hides substantially separated from each other, means by which said hides are intermittently and positively stretched, and means for expelling said holding means and said hides through the opening made by removing said part of the receptacle.

33. In a machine of the character referred to, a cylinder, rotatable shaft, means for rotating the shaft, means supported by said shaft for holding the hides, a removable head on the cylinder, and means for expelling said shaft and said holding means from said cylinder.

34. In a machine of the character referred to, a closed receptacle, a hide-carrying and moving means in said receptacle, and a screw and nut located within said receptacle and operatively connected to said hide-carrying means to expel it from said receptacle.

35. In a machine of the character referred to, a closed receptacle having a removable portion, a hide-carrying and moving means in said receptacle, and a screw and nut located within said receptacle and operatively connected to said hide-carrying means to expel it from said receptacle, and means exterior to said receptacle for actuating said screw.

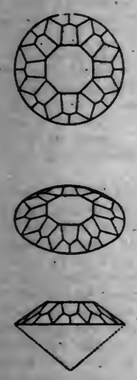
36. In a machine of the character referred to, a receptacle, rotatable hide carriers, means for suspending the hides at opposite sides thereof, devices for spraying hides, and a pump in said receptacle for supplying hide-treating material, to said spraying devices.

37. In a machine of the character referred to, a receptacle, rotatable hide carriers in said receptacle, means for suspending the hides at opposite sides thereof, a pump or other device in said receptacle, spraying devices in said receptacle to which hide-treating material is delivered by said pump or device, and means for actuating said pump or device.

38. The combination with a receptacle, of holding devices to which hides are attached, means for actuating said devices to move portions of the hide relatively to other portions thereof, and power mechanism for introducing said devices into said receptacle and for expelling the same therefrom.

DESIGNS.

40,693. CUT STONE. ERNEST G. H. SCHENCK, New York, N. Y. Filed Feb. 12, 1910. Serial No. 543,642. Term of patent 14 years.



The ornamental design for a cut stone, substantially as shown and described.

40,694. WATCH-CHARM. RICHARD A. POHLMANN, Jefferson City, Mo. Filed Mar. 10, 1909. Serial No. 482,623. Term of patent 7 years.



The ornamental design for a watch charm, substantially as shown and described.

40,695. WATCHCASE. ANNA M. BISSIG, City Point, Wis. Filed Mar. 12, 1910. Serial No. 549,065. Term of patent 7 years.



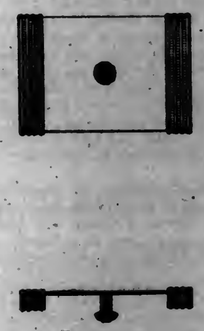
The ornamental design for a watch case, as shown.

40,696. OLIVE-SPOON. MARIE BURGUNDER, McKees Rocks, Pa. Filed Mar. 8, 1910. Serial No. 548,107. Term of patent 7 years.



The ornamental design for an olive spoon, as shown and described.

40,697. BUCKLE. JOSEPH R. SMITH, Waterbury, Conn., assignor to Waterbury Button Company, Waterbury, Conn., a Corporation of Connecticut. Filed Mar. 3, 1910. Serial No. 547,166. Term of patent 14 years.



The ornamental design for a buckle, as shown.

40,698. HORN. VINCENT PASCUCCI, Corona, N. Y. Filed Mar. 16, 1910. Serial No. 549,805. Term of patent 7 years.



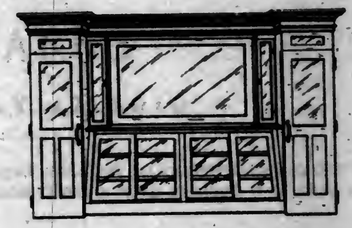
The ornamental design for a horn, as shown.

40,699. CABINET FOR TALKING-MACHINES. MORRIS KEHN, Philadelphia, Pa. Filed Mar. 17, 1910. Serial No. 550,084. Term of patent 14 years.



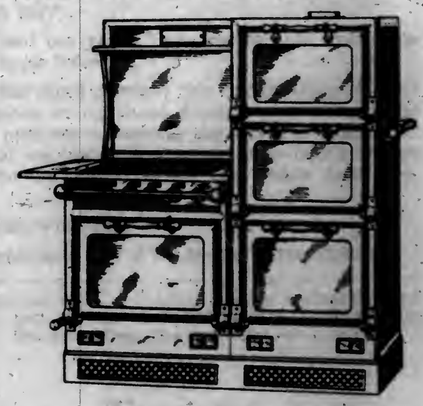
The ornamental design for a talking machine cabinet, as shown.

40,700. PRESCRIPTION-CASE. CHARLES F. KURZ, Cleveland, Ohio. Filed Jan. 12, 1910. Serial No. 537,794. Term of patent 7 years.



The ornamental design for a prescription-case as shown.

40,701. GAS-RANGE. GEORGE M. COKE, Milwaukee, Wis., assignor to The Fuller-Warren Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 23, 1910. Serial No. 551,218. Term of patent 7 years.



The ornamental design for a gas range, as shown.

TRADE-MARKS

PUBLISHED MAY 17, 1910.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 15,713. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) F. W. GESSWEIN COMPANY, New York, N. Y. Filed Dec. 28, 1905. Used ten years.



Particular description of goods.—Pliers Without a Cutting Edge.

Ser. No. 37,353. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EASTMAN KODAK CO., Rochester, N. Y. Filed Sept. 14, 1908. Used ten years.

NEPERA

Particular description of goods.—Chemicals Used in Treating Photographic Prints and Negatives.

Ser. No. 37,768. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN HOMINY COMPANY, Indianapolis, Ind. Filed Oct. 3, 1908.

PRIDE OF DECATUR

Particular description of goods.—Wheat-Flour.

Ser. No. 38,497. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) G. R. SPAINGER, Kansas City, Mo. Filed Nov. 5, 1908.

Excelsior

Particular description of goods.—Hair-Tonic and Dandruff-Remover.

Ser. No. 40,088. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DILLIARD REMEDY CO., East Bangor, Pa. Filed Jan. 22, 1909.



In which appears a fanciful picture of a girl.

Particular description of goods.—A Remedy for Headache, Liver Troubles, Skin Affections, Gout, Rheumatism, Derangements of the Stomach, Constipation, Indigestion, Depressions Following Alcoholic and other Excesses, Dizziness, and Heartburn.

Ser. No. 41,294. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WOHLTAT G. M. B. H. CHEM. FABRIK, Schöneberg, Germany. Filed Mar. 19, 1909.



Particular description of goods.—A Detergent Composition for Washing the Feet.

Ser. No. 42,523. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN CONCRETE-STEEL CO., Newark, N. J. Filed May 19, 1909.



Particular description of goods.—Metal Bars or Rods of Various Designs and Configurations for Reinforcing Concrete.

Ser. No. 42,725. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BADGER BUTTER COMPANY, East Troy, Wis. Filed May 28, 1909.



Particular description of goods.—Butter.

Ser. No. 44,033. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TERRE HAUTE PURE MILK AND ICE CREAM COMPANY, Terre Haute, Ind. Filed Aug. 9, 1909.

THE PEARL

Particular description of goods.—Ice-Cream and Ices.

Ser. No. 44,432. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) SMITH KLINE & FRENCH COMPANY, Philadelphia, Pa. Filed Aug. 30, 1909.



Particular description of goods.—Tooth-Brushes.

Ser. No. 44,815. (CLASS 11. INKS AND INKING MATERIALS.) PEERLESS CARBON & RIBBON MANUFACTURING COMPANY LTD., Toronto, Canada, and Buffalo, N. Y. Filed Sept. 20, 1909.

Sunbeam BRAND

Particular description of goods.—Carbon-Paper and Type-Writer Ribbons.

Ser. No. 45,192. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) JOHN E. DAVIS, St. Louis, Mo. Filed Oct. 8, 1909.



SHIELD-A-LENE

Particular description of goods.—Waterproof Paint for Coating Brick, Stone, and Cement Structures.

Ser. No. 45,518. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARTHUR VINTON BOGGS, Buffalo, N. Y. Filed Oct. 25, 1909.



Particular description of goods.—Horse, Cattle, and Swine Food.

Ser. No. 45,722. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) VACUUM SPECIALTY MANUFACTURING COMPANY, Phoenix, Aris., and San Francisco, Cal. Filed Nov. 5, 1909.



Particular description of goods.—A Vacuum Cleaning Apparatus.

Ser. No. 45,831. (CLASS 2. RECEPTACLES.) CROWN-COLUMBIA PULP AND PAPER CO., San Francisco, Cal. Filed Nov. 11, 1909.

SNOWFLAKE

Particular description of goods.—Paper Bags.

Ser. No. 45,832. (CLASS 2. RECEPTACLES.) CROWN-COLUMBIA PULP AND PAPER CO., San Francisco, Cal. Filed Nov. 11, 1909.

HORNET

Particular description of goods.—Paper Bags.

Ser. No. 45,836. (CLASS 37. PAPER AND STATIONERY.) CROWN-COLUMBIA PULP AND PAPER CO., San Francisco, Cal. Filed Nov. 11, 1909.

CROWN

Particular description of goods.—Wrapping-Paper.

Ser. No. 45,903. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES F. KASTEN, Baltimore, Md. Filed Nov. 15, 1909.



Particular description of goods.—A Remedy for Diseases of the Blood, Liver, Stomach, Kidneys, and Bladder.

Ser. No. 45,953. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KOSABURO NAKAYAMA, Osaka, Japan. Filed Nov. 17, 1909.



Particular description of goods.—Toilet Bath-Powder, Tooth-Powder.

Ser. No. 46,005. (CLASS 37. PAPER AND STATIONERY.) POWERS PAPER COMPANY, ASSOCIATES, Holyoke, Mass., and New York, N. Y. Filed Nov. 19, 1909.

Voile

Particular description of goods.—Writing-Paper in Boxes, Papeteries, Envelops, Writing-Paper in Tablet Form.

Ser. No. 46,301. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EDIBLE PRODUCTS COMPANY, Jersey City, N. J. Filed Dec. 6, 1909.

SALETA

Particular description of goods.—Refined Bean-Oil Used as a Food.

Ser. No. 46,405. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARVEY & MOORE, New York, N. Y. Filed Dec. 10, 1909.

MAGIC H&M BRAND INTENSIFO

Particular description of goods.—An Intensifying Solution for Photographic Glass and Film Negatives.

Ser. No. 46,436. (CLASS 47. WINES.) ALBERT CHARLES FREDK. MORGAN, London, England. Filed Dec. 10, 1909.

DIXO

Particular description of goods.—A Compound of Port Wine and Extract of Meat.

Ser. No. 46,500. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE DAVIS MILLING COMPANY, St. Joseph, Mo. Filed Dec. 15, 1909.

No 10

Particular description of goods.—Wheat-Flour.

Ser. No. 46,537. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) REYNOLDS, DAVIS & COMPANY, Fort Smith, Ark. Filed Dec. 15, 1909.

NOMAD BRAND

Particular description of goods.—Coffee.

Ser. No. 46,637. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) BEVIN BROTHERS MANUFACTURING COMPANY, East Hampton, Conn. Filed Dec. 20, 1909.

MERRY WIDOW

Particular description of goods.—Manually and Mechanically Operated Bells.

Ser. No. 46,985. (CLASS 33. GLASSWARE.) THE DAUDT GLASS & CROCKERY COMPANY, Toledo, Ohio. Filed Jan. 7, 1910.



Particular description of goods.—Fancy Glassware, Vases; Glass-Baskets, and Similar Ornamental Pieces, and Glassware Used for Table-Service.

Ser. No. 47,083. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WESTMORELAND GROCERY COMPANY, Greensburg, Pa. Filed Jan. 10, 1910.

Prestige

Particular description of goods.—Rice, Powdered Sugar, Corn-Starch, Rolled Oats, Macaroni, Currants, Tapioca, Noodles, Barley, Canned Vegetables, Canned Fruits, Dried Fruits, Canned Berries, Canned Baked Beans, Coffee, Tea, Pickles, Olives, Tomato Catsup, Molasses, a Compound of Corn and Cane Syrup, Olive-Oil, Salad-Oil Composed of Pure Cotton-Seed Oil, Oatmeal, Canned Salmon, Bird-Seed, and Honey.

Ser. No. 47,282. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) EDGAR T. HORSEY, Cleveland, Ohio. Filed Jan. 21, 1910.



Particular description of goods.—Patches for Pneumatic Tires.

Ser. No. 47,359. (CLASS 5. ADHESIVES.) NIAMLOOZE VENNOOTSCHAP LIJM-EN GELATINEFABRIEK "DELFT," Delft, Holland. Filed Jan. 25, 1910.



Particular description of goods.—Glue and Gelatin.

Ser. No. 47,413. (CLASS 12. CONSTRUCTION MATERIALS.) JOHN CASMENTO, New York, N. Y. Filed Jan. 27, 1910.

C—C

Particular description of goods.—Composite Roofing.

Ser. No. 47,546. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THOMAS G. PLANT Co., Boston, Mass. Filed Feb. 2, 1910.



No claim being made to the representation of the wreath.
Particular description of goods.—Polishes and Dressings for Leather Boots, Shoes, Slippers, Bags, Belts, Harnesses, and Cases.

Ser. No. 47,556. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) DOROTHY DODD SHOE Co., Boston, Mass. Filed Feb. 3, 1910.

Dorothy Dodd

Consists of the fanciful name "Dorothy Dodd."
Particular description of goods.—Polishes and Dressings for Leather Boots, Shoes, Slippers, Bags, Belts, Harnesses, and Cases.

Ser. No. 47,600. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE LA JARA MILLING & ELEVATOR COMPANY, La Jara, Colo. Filed Feb. 5, 1910.



ROSITA

The picture being fanciful.
Particular description of goods.—Wheat-Flour.

Ser. No. 47,646. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ABRAHAM BOSHES, New York, N. Y. Filed Feb. 8, 1910.



Simplex

Which includes a picture of the applicant.
Particular description of goods.—Exercising Apparatus and Parts Thereof.

Ser. No. 47,770. (CLASS 39. CLOTHING.) THE QUAKER CITY SHIRT MFG. CO., Norristown, Pa. Filed Feb. 12, 1910.



No claim being made to the word "Guyot."
Particular description of goods.—Dress, Negligée, Work, and Under Shirts.

Ser. No. 47,881. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) RUSSELL & ERWIN MANUFACTURING COMPANY, New Britain, Conn. Filed Feb. 2, 1910.



Consists of a rectangular figure having two heavy bars or panels extending across the same.
Particular description of goods.—Casement-Adjusters, Butts and Hinges, Espagnolette-Bars, Store-Door Handles, Shelf-Brackets, Clothes-Line Hooks, Drop-Handles, Door-Checks, Door-Closers, Screws, Spring-Hinges, Escutcheon-Plates, Coat and Hat Hooks, Door-Knockers, Letter-Box Plates, Nails, Door-Stops, Door-Holders, Sash-Lifts, Door-Knobs, Flower-Pot Brackets, Ceiling-Hooks, Drawer-Pulls, Studs, Partition-Supports, and Paper-Holders.

Ser. No. 47,918. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN W. PUTNAM, Charleston, Mo. Filed Feb. 19, 1910.



The picture shown being a portrait of Gen. Israel Putnam, deceased.
Particular description of goods.—Sweeping Compound.

Ser. No. 47,923. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE RANDLE MACHINERY CO., Cincinnati, Ohio. Filed Feb. 19, 1910. Used ten years.

LEADER

Particular description of goods.—Injectors, Boiler-Feeders, and Jet-Pumps.

Ser. No. 47,951. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FREDERICK CITY PACKING COMPANY, Frederick, Md. Filed Feb. 23, 1910.

PRIDE OF THE VALLEY BRAND

Particular description of goods.—Canned Fruits and Canned Vegetables.

Ser. No. 47,968. (CLASS 12. CONSTRUCTION MATERIALS.) JOHN HENRY MILLER, Locust Point, Md. Filed Feb. 23, 1910.

Sagax

Particular description of goods.—A Fireproof Weatherproof Wood Substitute.

Ser. No. 48,020. (CLASS 32. FURNITURE AND UPHOLSTERY.) RICHARD M. ADDISON, Montgomery, Ala. Filed Feb. 25, 1910.

Regal

Particular description of goods.—Mattresses.

Ser. No. 48,127. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) NELSON M. GORMAN, Boston, Mass. Filed Mar. 2, 1910.

SIMPLEX

Particular description of goods.—Fruit-Jar Lifters.

Ser. No. 48,199. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) RATHBONE, SARD & CO., Albany, N. Y.; Detroit, Mich., and Chicago and Aurora, Ill. Filed Mar. 4, 1910.



Particular description of goods.—Heating and Cooking Stoves, Ranges, and Furnaces.

Ser. No. 48,200. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) RATHBONE, SARD & CO., Albany, N. Y.; Detroit, Mich., and Chicago and Aurora, Ill. Filed Mar. 4, 1910.

ACORN

Particular description of goods.—Heating and Cooking Stoves, Ranges, and Furnaces.

Ser. No. 48,203. (CLASS 12. CONSTRUCTION MATERIALS.) UNION FIBRE COMPANY, Winona, Minn. Filed Mar. 4, 1910.

Linocel

Particular description of goods.—Waterproof Paper.

Ser. No. 48,210. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE PFAFFMAN EGG NOODLE CO., Cleveland, Ohio. Filed Mar. 5, 1910.

CLIMAX

Particular description of goods.—Egg-Noodles, Macaroni, Vermicelli, and Spaghetti.

Ser. No. 48,284. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) HENRY MILWARD & SONS LIMITED, Redditch, England. Filed Mar. 19, 1910. Used ten years.



Particular description of goods.—Needles.

Ser. No. 48,296. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SCUDDERS-GALE GROCER CO., St. Louis, Mo. Filed Mar. 9, 1910.



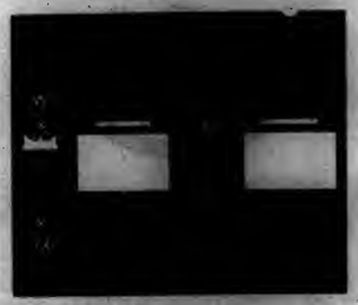
The individual shown being purely fanciful.
Particular description of goods.—Baking-Powder.

Ser. No. 48,423. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ARMIGER CHEMICAL CO., Chicago, Ill. Filed Mar. 15, 1910.

DUX

Particular description of goods.—Metal-Polishes.

Ser. No. 48,424. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WOOLSON SPICE COMPANY, Toledo, Ohio. Filed Mar. 16, 1910.



Particular description of goods.—Coffee.

Ser. No. 48,428. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WOOLSON SPICE COMPANY, Toledo, Ohio. Filed Mar. 16, 1910.

BRIARDALE

Particular description of goods.—Coffee.

Ser. No. 48,439. (CLASS 31. FILTERS AND REFRIGERATORS.) GURNEY REFRIGERATOR COMPANY, LIMITED, Fond du Lac, Wis. Filed Mar. 16, 1910.

La Belle.

Particular description of goods.—Refrigerators.

Ser. No. 48,486. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HORNOR-GAYLORD COMPANY, Clarksburg, W. Va. Filed Mar. 16, 1910.

SWEET MELODY

Particular description of goods.—Wheat-Flour.

Ser. No. 48,602. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NASH-SMITH TEA & COFFEE CO., Denver, Colo. Filed Mar. 22, 1910.



Particular description of goods.—Baking-Powder.

Ser. No. 48,609. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE HOUSE OF JOHNSON, INC., Baltimore, Md. Filed Mar. 22, 1910.

Melta Pels

Particular description of goods.—A Remedy for Catarrh, Hay-Fever, Asthma, and Colds.

Ser. No. 48,620. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VEGETABLE BUTTER COMPANY, New York, N. Y. Filed Mar. 23, 1910.

VEGETINE

Particular description of goods.—A Preparation of Eatable Fats from the Meat of Nuts and Vegetables.

Ser. No. 48,647. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CLIFFORD BROTHERS, Baltimore, Md. Filed Mar. 25, 1910.

Virginia Dare

Particular description of goods.—All Kinds of Candies.

Ser. No. 48,673. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) LEWIS OPPENHEIMER'S SONS, Philadelphia, Pa. Filed Mar. 26, 1910.

ST. REGIS

Particular description of goods.—Suspenders.

Ser. No. 48,692. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE OSKAMP NOLTING COMPANY, Cincinnati, Ohio. Filed Mar. 28, 1910.

Benjamin Franklin

Particular description of goods.—Watch-Movements.

Ser. No. 48,693. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE OSKAMP NOLTING COMPANY, Cincinnati, Ohio. Filed Mar. 28, 1910.

Lady Franklin

Particular description of goods.—Watch-Movements.

Ser. No. 48,721. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRED FEAR & COMPANY, New York, N. Y. Filed Mar. 29, 1910.



Particular description of goods.—Easter-Egg Dyes.

Ser. No. 48,742. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) FREDRIK EMIL KREUGER, London, England. Filed Mar. 30, 1910.



Particular description of goods.—Matches.

Ser. No. 48,743. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) FREDRIK EMIL KREUGER, London, England. Filed Mar. 30, 1910.



Particular description of goods.—Matches.

Ser. No. 48,747. (CLASS 17. TOBACCO PRODUCTS.) SCHUBERT CIGAR COMPANY, Boston, Mass. Filed Mar. 30, 1910.

General Schubert



The name and portrait of General Schubert, deceased.
Particular description of goods.—Cigars.

Ser. No. 48,755. (CLASS 32. FURNITURE AND UPHOLSTERY.) M. A. HUNT AND CO., Cincinnati, Ohio. Filed Mar. 30, 1910.

AERO

Consisting of the arbitrary word-symbol "Aero."
Particular description of goods.—Mattresses and Bed-Springs.

Ser. No. 48,788. (CLASS 2. RECEPTACLES.) THE UNION BAG AND PAPER COMPANY, Jersey City, N. J., and New York, N. Y. Filed Apr. 1, 1910.

WALRUS

Particular description of goods.—Paper Bags.

Ser. No. 48,846. (CLASS 39. CLOTHING.) THE A. H. AND C. B. ALLING CO., Derby, Conn. Filed Apr. 4, 1910.

£

Particular description of goods.—Hosiery.

Ser. No. 48,918. (CLASS 39. CLOTHING.) REGAL SHOE COMPANY, Boston, Mass. Filed Apr. 8, 1910.

Daurhoff

Particular description of goods.—Hosiery.

Ser. No. 48,988. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) G. CRAMER DRY PLATE CO., St. Louis, Mo. Filed Apr. 9, 1910.

Isos

Particular description of goods.—Photographic-Ray Filters.

Ser. No. 49,027. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAMUEL C. SHERMAN, Portland, Oreg. Filed Apr. 12, 1910.



Consisting of a portrait of myself.

Particular description of goods.—A Remedy for Inebriacy.

Ser. No. 49,036. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ALLEN W. HOUGHTON, Hatfield, Mass. Filed Apr. 12, 1910.

WIZARD

Particular description of goods.—Spark-Plugs and Spark-Plug Protectors.

Ser. No. 49,112. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) H. ROSENTHAL & CO. INC., New York, N. Y. Filed Apr. 15, 1910.

ARROW BRAND

Particular description of goods.—Handkerchiefs.

Ser. No. 49,114. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) RALPH MARTINDALE & CO., LIMITED, Birmingham, England. Filed Apr. 15, 1910.



Particular description of goods.—Hoes, Picks, Mattocks, Spades, Shovels, Agricultural and Horticultural Forks.

Ser. No. 49,116. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) M. C. MIGEL & COMPANY, New York, N. Y. Filed Apr. 15, 1910.

Madame Butterfly

Particular description of goods.—Woven and Printed Silks in Piece Goods.

Ser. No. 49,171. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PURITAN SOAP COMPANY, Rochester, N. Y. Filed Apr. 18, 1910.

BURNHAM

Particular description of goods.—Soap.

Ser. No. 49,201. (CLASS 39. CLOTHING.) HARRIS-LIPSITZ COMPANY, Dallas, Tex., and New York, N. Y. Filed Apr. 20, 1910.

Diplomat

Particular description of goods.—All Kinds of Shirts.

Ser. No. 49,240. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE GRAFF COMPANY, Pittsburg, Pa. Filed Apr. 21, 1910.

The Man

Particular description of goods.—Heating and Cooking Stoves, Ranges, Heating-Furnaces and Parts Thereof, and Hot-Air Pipes and Flues.

Ser. No. 49,261. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) UNION NOVELTY CO., New York, N. Y. Filed Apr. 23, 1910.



Particular description of goods.—Braids and Soutaches.

Ser. No. 49,293. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE CHARLES B. SMITH COMPANY, Cincinnati, Ohio. Filed Apr. 25, 1910.

MAZ-O-WEET

Particular description of goods.—Laundry Starch.

TRADE-MARKS

REGISTERED MAY 17, 1910.

77,890. CANDIES KNOWN AS "WILD-CHERRY DROPS." ADVANCE NOVELTY CANDY MANUFACTURING COMPANY, New York, N. Y.
Filed March 13, 1909. Serial No. 41,161. PUBLISHED MARCH 15, 1910.

77,891. METAL CASTERS FOR FURNITURE. HENRY MATHEW ALLEYN, London, England.
Filed June 30, 1909. Serial No. 43,345. PUBLISHED MARCH 15, 1910.

77,892. WHEAT-FLOUR. AMERICAN HOMINY COMPANY, Indianapolis, Ind.
Filed October 8, 1908. Serial No. 37,766. PUBLISHED MARCH 15, 1910.

77,893. SPARK-PLUGS. AUTO SPECIALTIES MFG. CO., Milwaukee, Wis.
Filed January 17, 1910. Serial No. 47,201. PUBLISHED MARCH 15, 1910.

77,894. STEAM-HOSE. THE B. F. GOODRICH COMPANY, Akron, Ohio.
Filed October 9, 1909. Serial No. 45,206. PUBLISHED MARCH 15, 1910.

77,895. DOLLS. BAWO & DOTTER, East Orange, N. J., and New York, N. Y.
Filed October 15, 1906. Serial No. 22,702. PUBLISHED JANUARY 12, 1909.

77,896. PIANOS. BELLEVUE PIANO CO., Bellevue, Iowa.
Filed December 27, 1909. Serial No. 46,744. PUBLISHED MARCH 15, 1910.

77,897. PREPARED ROOFING. J. A. & W. BIRD & CO., Boston, Mass.
Filed October 29, 1909. Serial No. 45,610. PUBLISHED MARCH 15, 1910.

77,898. REMEDY FOR CORNS AND CALLI. FRANK K. BOWERS, Baltimore, Md., and Washington, D. C.
Filed January 4, 1910. Serial No. 46,901. PUBLISHED MARCH 15, 1910.

77,899. COTTON PIECE GOODS. BRANDON MILLS, Greenville, S. C.
Filed July 17, 1909. Serial No. 43,620. PUBLISHED MARCH 15, 1910.

77,900. CIGARETTE-PAPER. BRAUNSTEIN & CIE., Paris, France.
Filed October 7, 1909. Serial No. 45,172. PUBLISHED MARCH 15, 1910.

77,901. CARBON-PAPER AND TYPE-WRITER RIBBONS. O. B. BROWN COMPANY, Indianapolis, Ind.
Filed February 5, 1910. Serial No. 47,618. PUBLISHED MARCH 15, 1910.

77,902. CANNED FRUITS AND VEGETABLES. THE BURT OLNEY CANNING COMPANY, Oneida, N. Y.
Filed March 24, 1909. Serial No. 41,875. PUBLISHED FEBRUARY 1, 1910.

77,903. CERTAIN PRECIOUS-METAL AND PLATED WARE. CHARLES A. BENNETT COMPANY, Taunton, Mass.
Filed October 11, 1909. Serial No. 45,253. PUBLISHED MARCH 8, 1910.

77,904. PURIFYING MATERIAL FOR GAS. CONNELLY IRON SPONGE & GOVERNOR COMPANY, New York, N. Y.
Filed January 7, 1910. Serial No. 46,986. PUBLISHED MARCH 15, 1910.

77,905. WRITING-PAPER. CROCKER-MCELWAIN COMPANY, Holyoke, Mass.
Filed January 22, 1910. Serial No. 47,301. PUBLISHED MARCH 15, 1910.

77,906. WRITING-PAPER. CROCKER-MCELWAIN COMPANY, Holyoke, Mass.
Filed January 22, 1910. Serial No. 47,303. PUBLISHED MARCH 15, 1910.

77,907. WRITING-PAPER. CROCKER-MCELWAIN COMPANY, Holyoke, Mass.
Filed January 22, 1910. Serial No. 47,304. PUBLISHED MARCH 15, 1910.

77,908. WRITING-PAPER. CROCKER-MCELWAIN COMPANY, Holyoke, Mass.
Filed January 22, 1910. Serial No. 47,305. PUBLISHED MARCH 15, 1910.

77,909. CERTAIN TOOLS. EBSTEIN BROS., New York, N. Y.
Filed December 30, 1909. Serial No. 46,803. PUBLISHED MARCH 15, 1910.

77,910. CLEANING SUBSTANCES AND COMPOUNDS FOR LAUNDRY PURPOSES. ELECTRIC COMPOUND CO., Los Angeles, Cal.
Filed September 18, 1909. Serial No. 44,755. PUBLISHED MARCH 15, 1910.

77,911. COMBINATION OF REMEDIAL AGENTS. F. H. STRONG COMPANY, New York, N. Y.
Filed January 27, 1910. Serial No. 47,425. PUBLISHED MARCH 15, 1910.

77,912. FARM-WAGONS. FLORENCE WAGON WORKS, Florence, Ala.
Filed August 16, 1909. Serial No. 44,176. PUBLISHED MARCH 15, 1910.

77,913. CERTAIN RECEPTACLES. FORSYTH MANUFACTURING COMPANY, Buffalo, N. Y.
Filed October 5, 1907. Serial No. 30,437. PUBLISHED MARCH 15, 1910.

77,914. SHEETINGS AND TICKINGS. G. A. STAFFORD & CO., Greenwich, Conn., and New York, N. Y.
Filed October 28, 1909. Serial No. 45,582. PUBLISHED MARCH 15, 1910.

77,915. PERFUMERY. GEO. BORGFELDT & CO., New York, N. Y.
Filed February 9, 1910. Serial No. 47,681. PUBLISHED MARCH 15, 1910.

77,916. MONTHLY MAGAZINES. GOOD HEALTH PUBLISHING CO., Battle Creek, Mich.
Filed December 18, 1909. Serial No. 46,589. PUBLISHED MARCH 15, 1910.

77,917. SELF-PROPELLED VEHICLES. THE GRAMM-LOGAN MOTOR CAR COMPANY, Bowling Green, Ohio.
Filed December 13, 1909. Serial No. 46,476. PUBLISHED FEBRUARY 15, 1910.

77,918. LEATHER FOR BOOTS AND SHOES. GRATON & KNIGHT MFG. CO., Worcester, Mass.
Filed September 21, 1909. Serial No. 44,840. PUBLISHED MARCH 15, 1910.

77,919. BRASS BINDING FOR OILED CLOTH AND LINOLEUM. RAY HUBBELL, Northville, N. Y.
Filed January 14, 1910. Serial No. 47,124. PUBLISHED MARCH 15, 1910.

77,920. OLIVE-OIL. WILBER S. HOPKINS, Chicago, Ill.
Filed December 8, 1909. Serial No. 46,343. PUBLISHED MARCH 15, 1910.

77,921. BOND-PAPER. THE J. C. HALL COMPANY, Providence, R. I.
Filed December 29, 1909. Serial No. 46,770. PUBLISHED MARCH 15, 1910.

77,922. LADIES' COMBS, HAIR-PINS, BARRETTES, AND BANDEAUX. J. L. GLAUBERG CO., New York, N. Y.
Filed January 5, 1910. Serial No. 46,911. PUBLISHED MARCH 15, 1910.

77,923. HOSIERY. JONESVILLE MANUFACTURING COMPANY, Jonesville, S. C.
Filed February 5, 1910. Serial No. 47,598. PUBLISHED MARCH 15, 1910.

77,924. MEDICINAL PREPARATION. OTTO KALMUS, Cincinnati, Ohio.
Filed June 11, 1909. Serial No. 42,965. PUBLISHED MARCH 15, 1910.

77,925. STRAIGHT RYE WHISKY. KLEWE BROS., Sheboygan, Wis.
Filed November 8, 1909. Serial No. 45,753. PUBLISHED MARCH 15, 1910.

77,926. MATCHES. FREDRIK EMIL KREUGER, London, England.
Filed January 6, 1910. Serial No. 46,935. PUBLISHED MARCH 15, 1910.

77,927. MATCHES. FREDRIK EMIL KREUGER, London, England.
Filed January 6, 1910. Serial No. 46,936. PUBLISHED MARCH 15, 1910.

77,928. MEDICINES AND SALVES. JAKE W. LESTER, Indianapolis, Ind.
Filed October 25, 1909. Serial No. 45,520. PUBLISHED MARCH 15, 1910.

77,929. CERTAIN CLOTHING. EDOUARD LEURENT, Tourcoing, France.
Filed June 22, 1909. Serial No. 43,180. PUBLISHED MARCH 15, 1910.

77,930. TOOTH-POWDER AND ANTISEPTIC MOUTH-WASH. KARL AUGUST LINGNER, Dresden, Germany.
Filed January 21, 1909. Serial No. 40,059. PUBLISHED AUGUST 24, 1909.

77,931. CANDY. THE LIPPS-MURBACH COMPANY OF BALTIMORE CITY (by change of name now The Frederick W. Lipps Company of Baltimore City,) Baltimore, Md.
Filed January 25, 1909. Serial No. 40,130. PUBLISHED MARCH 15, 1910.

77,932. BEER. LOS ANGELES BREWING CO., Los Angeles, Cal.
Filed January 21, 1910. Serial No. 47,286. PUBLISHED MARCH 15, 1910.

77,933. CREAM-CHEESES. FRANK B. LYON, Cuba, N. Y.
Filed February 10, 1909. Serial No. 40,459. PUBLISHED NOVEMBER 16, 1909.

77,934. CANNED SARDINES IN OLIVE-OIL. MACMONNIES & VON ELM, New York, N. Y.
Filed March 25, 1909. Serial No. 41,407. PUBLISHED MARCH 15, 1910.

77,935. OLIVE-OIL. MACMONNIES & VON ELM, New York, N. Y.
Filed May 20, 1909. Serial No. 42,544. PUBLISHED MARCH 15, 1910.

77,936. HAM, OLIVES, SAUSAGE, TEA, AND CREAM-CHEESE. EDWARD C. MATHEWSON, New York, N. Y.
Filed December 1, 1908. Serial No. 39,023. PUBLISHED MARCH 15, 1910.

77,937. CERAMIC GOLD PAINT. WILLIAM A. MAURER, Council Bluffs, Iowa.
Filed October 9, 1909. Serial No. 45,223. PUBLISHED MARCH 15, 1910.

77,938. PAINTS, PUTTY, AND DRY COLORS. MEANS & THACHER, Boston, Mass.
Filed January 12, 1910. Serial No. 47,076. PUBLISHED MARCH 15, 1910.

77,939. HOOF-PADS. MORGAN & WRIGHT, Detroit, Mich.
Filed February 20, 1909. Serial No. 40,699. PUBLISHED MARCH 15, 1910.

77,940. HOOF-PADS. MORGAN & WRIGHT, Detroit, Mich.
Filed February 20, 1909. Serial No. 40,701. PUBLISHED MARCH 15, 1910.

77,941. HOOF-PADS. MORGAN & WRIGHT, Detroit, Mich.
Filed February 20, 1909. Serial No. 40,702. PUBLISHED MARCH 15, 1910.

77,942. CIGARETTES. WILLIAM P. MULLER, New York, N. Y.
Filed December 27, 1909. Serial No. 46,741. PUBLISHED MARCH 15, 1910.

77,943. SHOE-LACES. THE NARROW FABRIC CO., Wyomissing, near Reading, Pa.
Filed January 12, 1910. Serial No. 47,094. PUBLISHED MARCH 15, 1910.

77,944. ELECTRICAL BRUSHES AND CONTACTS. NATIONAL CARBON COMPANY, Cleveland, Ohio.
Filed January 20, 1910. Serial No. 47,264. PUBLISHED MARCH 15, 1910.

77,945. TOOLS FOR USE IN CLEANING PIPES AND CYLINDERS. NATIONAL WATER MAIN CLEANING CO., Augusta, Me., and New York, N. Y.
Filed September 29, 1909. Serial No. 45,010. PUBLISHED MARCH 15, 1910.

77,946. WOVEN COTTON PLAIDS. NEUSS, HESSLEIN & Co., New York, N. Y.
Filed January 18, 1910. Serial No. 47,233. PUBLISHED MARCH 15, 1910.

77,947. SYRUPS, COFFEE, AND A COMPOUND OF COFFEE AND CHICORY. NEW ORLEANS COFFEE COMPANY, LIMITED, New Orleans, La.
Filed July 14, 1908. Serial No. 36,102. PUBLISHED JUNE 15, 1909.

77,948. CANNED SALMON. NORTH PACIFIC TRADING & PACKING CO., San Francisco, Cal.
Filed March 25, 1908. Serial No. 33,630. PUBLISHED MAY 5, 1908.

77,949. CERTAIN SPORTING GOODS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,174. PUBLISHED MARCH 15, 1910.

77,950. CLOTHES-PINS. THE OVAL WOOD DISH CO., Delta, Ohio.
Filed January 24, 1910. Serial No. 47,330. PUBLISHED MARCH 15, 1910.

77,951. FRESH OYSTERS AND CANNED OYSTERS. THE OYSTER PLANTERS AND GROWERS ASSOCIATION OF COTUIT, MASS., Barnstable, Mass.
Filed December 12, 1908. Serial No. 39,262. PUBLISHED MARCH 15, 1910.

77,952. BROOMS, DUST-BRUSHES, AND DUSTERS. MORRIS OZLEK, Philadelphia, Pa.
Filed January 10, 1910. Serial No. 47,016. PUBLISHED MARCH 15, 1910.

77,953. GINGER-ALE AND SYRUP THEREFOR. PARKER-BROWNE COMPANY, Fort Worth, Tex.
Filed January 10, 1910. Serial No. 47,037. PUBLISHED MARCH 15, 1910.

77,954. COMFORTS. THE PITTSBURGH DRY GOODS COMPANY, Pittsburg, Pa.
Filed October 25, 1909. Serial No. 45,511. PUBLISHED MARCH 15, 1910.

77,955. CANNED FRUITS AND VEGETABLES. PRATT-LOW PRESERVING COMPANY, Santa Clara, Cal.
Filed January 12, 1910. Serial No. 47,078. PUBLISHED MARCH 15, 1910.

77,956. COTTON SHEETINGS. QUINN-MARSHALL CO., Lynchburg, Va.
Filed March 24, 1909. Serial No. 41,380. PUBLISHED MARCH 15, 1910.

77,957. COMPOUND OF COFFEE AND CHICORY. THE REILY-TAYLOR COMPANY, New Orleans, La.
Filed November 20, 1908. Serial No. 38,788. PUBLISHED MARCH 15, 1910.

77,958. CANNED SAUER-KRAUT. JOHN W. RIDER, Scottsburg, Ind.
Filed December 15, 1909. Serial No. 46,528. PUBLISHED MARCH 15, 1910.

77,959. WOODWORKING MACHINERY. S. A. WOODS MACHINE CO., Boston and South Boston, Mass.
Filed December 18, 1909. Serial No. 46,597. PUBLISHED MARCH 15, 1910.

77,960. WORSTED PIECE GOODS AND COTTON PIECE GOODS. A. H. & F. L. SAYLES, Pascoag, R. I.
Filed August 11, 1909. Serial No. 44,079. PUBLISHED MARCH 15, 1910.

77,961. PIANOS. SCHILLER PIANO COMPANY, Oregon, Ill.
Filed January 31, 1910. Serial No. 47,483. PUBLISHED MARCH 15, 1910.

77,962. TELEPHONE APPARATUS. SELIG POLYSCOPE CO., Chicago, Ill.
Filed October 16, 1909. Serial No. 45,364. PUBLISHED MARCH 15, 1910.

77,963. CERTAIN FOODS. SPOKANE EXTRACT & SPICE COMPANY, Spokane, Wash.
Filed September 23, 1909. Serial No. 44,874. PUBLISHED JANUARY 25, 1910.

77,964. TOILET PINS. THE STAR PIN COMPANY, Shelton, Conn.
Filed December 27, 1909. Serial No. 46,735. PUBLISHED MARCH 15, 1910.

77,965. ROASTED COFFEE. STEINWENDER-STOFFREGEN COFFEE CO., St. Louis, Mo.
Filed December 6, 1909. Serial No. 46,294. PUBLISHED MARCH 15, 1910.

77,966. COCOA. SUCHARD, S. A., Serrieres, Switzerland.
Filed December 31, 1909. Serial No. 46,821. PUBLISHED MARCH 15, 1910.

77,967. CANNED SALMON. UNION FISHERMEN'S CO-OP. PACK'G CO., Astoria, Oreg.
Filed June 3, 1909. Serial No. 42,811. PUBLISHED MARCH 15, 1910.

77,968. OVERALLS. THE UNION SPECIAL OVERALL COMPANY, Cincinnati, Ohio.
Filed January 3, 1910. Serial No. 46,857. PUBLISHED MARCH 15, 1910.

77,969. ADHESIVE CEMENT. UNITED SHOE MACHINERY COMPANY, Paterson, N. J., and Boston, Mass.
Filed January 28, 1909. Serial No. 40,193. PUBLISHED MARCH 15, 1910.

77,970. MAGNETOS. UNTERBERG & HELMLE, Durlach, Germany.
Filed December 16, 1909. Serial No. 46,568. PUBLISHED MARCH 15, 1910.

77,971. REMEDIES FOR CERTAIN DISEASES. FRANK WAGNER, Chicago, Ill.
Filed December 24, 1909. Serial No. 46,705. PUBLISHED MARCH 15, 1910.

77,972. MATCHES. WHITE, WILSON, DREW COMPANY, Memphis, Tenn.
Filed January 13, 1910. Serial No. 47,104. PUBLISHED MARCH 15, 1910.

77,973. WRENCHES. THE WHITMAN & BARNES MANUFACTURING COMPANY, Akron, Ohio, and Chicago, Ill.
Filed February 16, 1909. Serial No. 40,584. PUBLISHED JULY 13, 1909.

77,974. LOTION FOR THE HEAD AND FACE. THE BONHEUR COMPANY, Marcellus, N. Y.
Filed March 8, 1907. Serial No. 25,866. PUBLISHED MARCH 15, 1910.

TRADE-MARKS CANCELED.

44,417. LAXATIVES. FREDERICK AUGUST LUYTIES, St. Louis, Mo.
Registered July 4, 1905. Canceled April 28, 1910.

60,487. RUBBER HOSE, BELTING, PACKING, AND PRINTING-BLANKETS. MINERALIZED RUBBER CO., New York, N. Y.
Registered February 12, 1907. Canceled April 26, 1910.

71,929. AROMATIC DISINFECTANTS AND DUST-ALLAYERS. MORRIS H. SIEGEL, New York, N. Y.
Registered December 22, 1908. Canceled April 14, 1910.

LABELS

REGISTERED MAY 17, 1910.

15,175.—*Title:* "LA VISTA DEL VUELTA." (For Cigars.) THE MOEHLE LITHOGRAPHIC CO., New York, N. Y. Filed May 6, 1910.

15,176.—*Title:* "BANNER OAK." (For Cigars.) THE MOEHLE LITHOGRAPHIC CO., New York, N. Y. Filed May 6, 1910.

15,177.—*Title:* "JOHN TRUMBULL." (For Cigars.) THE MOEHLE LITHOGRAPHIC CO., New York, N. Y. Filed May 6, 1910.

15,178.—*Title:* "DOVE BRAND." (For Sliced Ham.) THE AUTOMATIC SLICED HAM CO., Cincinnati, Ohio. Filed May 4, 1910.

15,179.—*Title:* "CHOCOLATE NUTS." (For Prepared Food.) KARL H. ROMMEL, Rochester, Minn. Filed April 30, 1910.

15,180.—*Title:* "VELVETONE HAIR TONIC." (For Hair-Tonic.) GEO. PABST, San Antonio, Tex. Filed April 18, 1910.

15,181.—*Title:* "DO UWANTA E Z WASH?" (For Washing Compound.) WILLIAM V. R. HECKMAN, Independence, Kans. Filed May 9, 1910.

15,182.—*Title:* "HELENE VARRE." (For Toilet Talcum Powder.) CLARA TETLOW, Philadelphia, Pa. Filed April 20, 1910.

PRINTS

REGISTERED MAY 17, 1910.

2,591.—*Title:* "'ELITE' CLOTH CLEANING PAD." (For Cleaning-Pads.) BRADFORD L. WILLIAMS, Camden, N. J., and Philadelphia, Pa. Filed February 5, 1910.

2,592.—*Title:* "THE MODERN METHOD OF HEATING AND VENTILATING A SCHOOL ROOM." (For Heating Apparatus.) CHARLES SMITH COMPANY, Chicago, Ill. Filed April 21, 1910.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE THE COMMERCIAL VEHICLE.

Decided April 30, 1910.

1. TRADE-MARKS—ACTION OF EXAMINER REFUSING TO REGISTER A MARK NOT REVIEWABLE ON PETITION.

The action of the Examiner of Trade-Marks refusing registration on the ground that the mark had not been used in commerce at the time the application for registration was filed is reviewable on appeal and not on petition.

2. SAME—APPLICATION—CHANGING DATE OF FILING.

Where an application for registration of a trade-mark was filed alleging that the mark had been in use since a certain date and it appeared from specimens subsequently filed that the mark had not been used at that time, *Held* that the date of filing cannot be changed to the date on which the specimens were filed.

ON PETITION.

TRADE-MARK FOR PERIODICALS.

Messrs. Knight Bros. for the applicant.

MOORE, *Commissioner:*

This is a petition from the refusal of the Examiner of Trade-Marks to register the mark claimed as a trade-mark for a monthly magazine.

This application was filed November 15, 1909, and in the statement it is said that—

> the trade-mark has been continuously used in the business of said corporation since about the first day of October, 1909.

The Examiner required specimens to be filed, and from these specimens and the statement in the letter of the applicant of March 12, 1910, it appears that the mark was not actually used until the 1st of January, 1910. The Examiner thereupon refused registration on the ground that—

> as the mark was not used prior to the filing of the application it is not registrable upon this application.

So far as the petition requests a review of this action of the Examiner the same must be dismissed, because the proper action to be taken from an adverse decision of the Examiner upon applicant's right to register is an appeal under section 8 of the act of February 20, 1905.

In his petition applicant requests that the case be considered as filed on January 10, 1910, the date on which the facsimiles as actually used in commerce were filed.

No sufficient reason is given for granting such request. It is well settled that no trade-mark right is acquired by the mere adoption of a trade-mark without use thereof in commerce, and the applicant and his attorneys are chargeable with knowledge of this rule of law. If the application was filed under a misapprehension as to the law, it was not such a mistake as would warrant changing the filing date, even should a new statement and declaration be filed. As the application now stands it relies for its validity upon the original verified papers, which contain the erroneous statement, under oath, that the mark has been in use since about the first day of October, 1909.

The petition is dismissed in so far as it seeks a review of the Examiner's action and denied in so far as it asks that the date of filing of the application be changed.

GILKESON *v.* VALENTINE.

Decided April 12, 1910.

1. INTERFERENCE — MOTION TO DISSOLVE — TRANSMISSION—APPEAL—SPECIFICATION OF ERROR.

An appeal from a decision of the Examiner of Interferences refusing to transmit a motion to dissolve will not be dismissed for failure to include a specific assignment of error where the question it is desired to have reviewed is clear.

2. SAME—SAME—SAME—SAME.

Where the Examiner of Interferences refuses to transmit a motion to dissolve and a renewed motion is filed, it was proper for the Examiner of Interferences to set a limit of appeal from his decision refusing to transmit the second motion.

3. SAME—SAME—SAME—SAME.

The fact that an appeal from a decision of the Examiner of Interferences refusing to transmit a motion to dissolve contains a reference to a patent alleged to anticipate the issue constitutes no ground for expunging the appeal from the record.

APPEAL on motion.

PROCESS OF PREPARING CEREAL FOOD PRODUCTS.

Mr. Edward Willoughby Anderson for Gilkeson.

Mr. W. N. Cromwell for Valentine.

BILLINGS, *First Assistant Commissioner:*

This case comes before me on an appeal by Gilkeson from a refusal of the Examiner of Interferences to transmit a motion to dissolve and upon a motion by Valentine to dismiss and expunge from the record said appeal of Gilkeson.

The motion to dissolve was refused transmission because it was brought late and was not accompanied by a sufficient showing of reasons for the delay.

Three grounds are urged by Valentine why the appeal should be dismissed and expunged. First, he contends that the appeal is irregular and informal due to the fact that it contains no assignment of errors in the decision appealed from.

The single point desired to have reviewed is clear from a reference to the decision of the Examiner of Interferences and the appeal as filed. The appeal therefore meets the requirements of the case under the principle announced by the court of appeals in *Carroll* v. *Hallwood*, (135 O. G., 896; 31 App. D. C., 165,) and it will not now be dismissed because of failure to particularly specify the single error alleged in the decision below.

The second reason urged by Valentine for the dismissal is that the motion upon which the decision below was rendered was in effect a motion for rehearing of a previous motion and that there is no appeal from a motion for a rehearing. This contention is based upon the ruling in the case of *Goodfellow* v. *Jolly*, (110 O. G., 602.) In that case, however, it was a third motion to transmit a motion to dissolve which was construed by the Office to be in effect a motion for rehearing. That decision is not authority for holding all renewal motions of this kind as equivalent to motions for rehearing. In fact renewal motions are often filed and considered and the motion now appealed from was construed by the Examiner of Interferences to be such a motion and not a motion for rehearing and a limit of appeal was accordingly set by him. His action in this respect is believed to have been correct.

As a third reason for dismissing and expunging the appeal Valentine points out that it contains reference to the non-patentability of the issue in view of a certain patent, as more fully set forth in the motion to dissolve for which transmission is asked, and that such reference is calculated to cast a cloud upon the patentability of the claim in issue. This, however, does not appear to be sufficient reason for expunging the appeal from the record. It may be said equally that any motion to dissolve on account of non-patentability or any appeal on such motion is calculated to cast a cloud upon the patentability of the issue. It is not seen that the appeal complained of has any more serious effect than the original motion, which necessarily contains a reference to the patent alleged to be an anticipation of the issue.

Valentine's motion to dismiss and expunge the appeal must therefore be denied and the appeal will be considered on its merits.

Gilkeson has not pointed out, either in his appeal or in his brief, any reasons why the holding of the Examiner of Interferences was incorrect. Reference to the decision itself shows that it was rendered in conformity with the general practice of the Office in connection with such motions, the reasons for the long delay being clearly insufficient to justify transmission of the motion.

It must be held therefore that the decision of the Examiner of Interferences is right and it is accordingly affirmed.

COLUMBIA DRUG CO. *v.* THE LESTER H. GREENE CO. *v.* JEHU R. SMITH *v.* SCOTT AND BOWNE.

Decided April 22, 1910.

1. INTERFERENCE—MOTION TO DISSOLVE—NO INTERFERENCE IN FACT—APPEAL.

Appeal lies to the Commissioner from the decision of the Examiner of Trade-Marks on a motion to dissolve alleging no interference in fact.

2. SAME—SAME—SEGREGATION OF MARKS.

Where on a motion to dissolve it is urged that the mark sought to be registered by one of the parties is not in fact the mark actually used, but only a part thereof, *Held* that this question cannot be decided on a motion to dissolve, but must be deferred until final hearing.

ON APPEAL.

TRADE-MARK FOR MEDICAL COMPOUNDS, ETC.

Messrs. Wilkinson & Fisher for Columbia Drug Co.

Messrs. C. A. Snow & Co. for The Lester H. Greene Co.

Mr. Jehu R. Smith, pro se.

Messrs. Kenyon & Kenyon for Scott and Bowne.

BILLINGS, *First Assistant Commissioner:*

This is an appeal by The Lester H. Greene Co. from the decision of the Examiner of Trade-Marks refusing to dissolve the above-entitled interference.

A motion is also made by Scott and Bowne to dismiss the appeal on the ground that the rules do not provide for an appeal on the questions raised therein.

It is true that no appeal lies from a decision of the Examiner of Trade-Marks in interlocutory motions affirming the right of registration; but it is to be noted that the tenth ground for dissolution set up by The Lester H. Greene Co. is—

that there is no interference in fact between the Scott & Bowne mark as they heretofore claimed it, namely, a mark consisting essentially of the words "Scott's Emulsion" and a triangle above the same, and the mark of The Lester H. Greene Co., consisting essentially of the letter "G" in a triangle.

Where a motion is made to dissolve an interference involving applications for the registration of trade-marks on the ground that there is no interference in fact between the respective trade-marks claimed therein, appeal lies to the Commissioner from the decision of the Examiner of Trade-Marks and will be entertained. (*Planten* v. *Canton Pharmacy Co.*, 130 O. G., 1484.)

It appears from the records that Scott and Bowne obtained a registration on March 24, 1891, which was described as follows:

Our trade-mark consists of the words "Scott's Emulsion" in connection with a triangle arranged above these words, inclosing suitable letters, as "P. P. P."

The trade-mark now sought to be registered by Scott and Bowne consists of the representation of a triangle inclosing the letters "P. P. P." It is contended by the appellants that the representation of the trade-mark now sought to be registered by the appellee is but part of the trade-mark which is actually used, and in support of this contention they refer to the specimens filed with this application showing the mark as actually used and which they contend are in all respects similar to the mark which had been previously registered by Scott and Bowne.

The difference between the previously-registered

mark and the one now sought to be registered is that the words "Scott's Emulsion" are now omitted. The words "Scott's Emulsion" are clearly descriptive, and if they had been presented in connection with the triangle surrounding the letters "P. P. P." it would have been necessary to require elimination of these words before registration could be effected under the doctrine announced by the Court of Appeals of the District of Columbia in the case of *Johnson* v. *Brandau*, (139 O. G., 732; 32 App. D. C., 348,) which prohibits the inclusion of descriptive words, such as "Scott's Emulsion," as a part of a technical trade-mark.

Counsel for The Lester H. Greene Co. also refer to the previous registration by Scott and Bowne of a trade-mark consisting of the representation of a fisherman carrying upon his back a large fish surrounded by a framework of arbitrary design on the top of which appear the words "Scott's Emulsion." This registration was effected May 27, 1890, and attention is called to the fact that the packages of the goods of Scott and Bowne now placed upon the market bear both of the registered trade-marks. It is contended, therefore, that the trade-mark now sought to be registered is merely a segregation, and its use cannot be predicated upon the adoption and use of the registered trade-marks under the doctrine the Court of Appeals of the District of Columbia announced in *Planten* v. *Canton Pharmacy Company*, (143 O. G., 1113; 33 App. D. C., 268.) This latter question is one which must be deferred until final hearing.

The registration now sought by Scott and Bowne, which consists of a triangle inclosing the letters "P. P. P.," is justified under the doctrine of *Johnson* v. *Brandau*, *supra*, and as presented it interferes with the trade-mark sought to be registered by The Lester H. Greene Co., which consists of a triangle inclosing the letter "G."

The motion by Scott and Bowne to dismiss the appeal is denied.

The decision of the Examiner of Trade-Marks refusing to dissolve the interference is affirmed.

WOOD *v.* PFISTER.

Decided May 6, 1910.

INTERFERENCE—PATENTABILITY OF THE ISSUE—JURISDICTION OF THE EXAMINER OF INTERFERENCES.

Where in response to an order to show cause a party filed a motion for dissolution on all the grounds provided by the rules and the motion was denied by the Primary Examiner, *Held* that a motion to direct the Examiner of Interferences to consider the question of the patentability of the issue is without standing.

ON PETITION.

CHANGE-WEB ROLL MECHANISM.

Messrs. Southgate & Southgate for Wood.

Mr. A. L. Squires and *Messrs. Kenyon & Kenyon* for Pfister.

TENNANT, *Assistant Commissioner:*

This is a petition by Wood that the supervisory authority of the Commissioner be exercised to direct the Examiner of Interferences to reconsider his decision upon the question of priority and render a decision as to whether certain alleged disclaimers or admissions in Pfister's specification have a bearing upon the question of patentability of the issues and, further, that he be instructed to decide whether counts 3, 4, 5, 6, 7, and 8 of the issue as construed by him are anticipated by certain cited patents.

The record shows that on August 27, 1909, an order was issued against Wood to show cause why judgment of priority should not be rendered against him for failure to show conception of the invention prior to the date of the applications of Pfister involved in the interference. In response to this order Wood presented a motion for dissolution, alleging all the grounds set forth in Rule 122. The Primary Examiner, after hearing duly had upon said motion, denied it as to all the grounds. The case having been returned to the Examiner of Interferences, judgment of priority was rendered against Wood.

It is obvious that this petition is without standing, first, for the reason that the Examiner of Interferences has no jurisdiction to pass upon the questions which it is sought to place before him; second, because the questions raised are not material to the question of priority of invention, and, finally, the petitioner having exhausted the remedies accorded to him by the Rules of Practice is not entitled to obtain indirectly a review of questions which are not appealable.

The petition is denied.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

WM. A. ROGERS, LIMITED, *v.* INTERNATIONAL SILVER CO.

No. 587 Patent Appeals.

Decided February 1, 1910.

TRADE-MARKS—SIMILARITY.

A mark consisting of the words and symbols "Wm. A. Rogers A. 1.," followed by a horseshoe inclosing the letter "R," *Held* not deceptively similar to the marks "Wm. Rogers, Mfg. Co." and "Wm. Rogers & Son."

Mr. C. H. Duell, Mr. F. P. Warfield, and *Mr. H. S. Duell* for the appellant.

Mr. George H. Mitchell for the appellee.

ROBB, *J.:*

This case involves the same parties as the two preceding cases. Appellant's mark herein, however, is "Wm. A. Rogers A. 1.," followed by a horseshoe inclosing the letter "R." Appellee contends that this mark is deceptively similar to its marks "Wm. Rogers, Mfg. Co.," and "Wm. Rogers & Son." We think the accessories employed by appellant in its use of the word "Rogers" reasonably differentiates its mark from appellee's. William A. Rogers, as appears in case No. 585, (153 O. G., 1085,) was the predecessor of appellant and is now its manager. The use, therefore, of the mark herein involved is not without reason. The goods sold under such a mark would probably be known as the "Horseshoe Brand." At all events, the mark in its entirety is

not readily to be confused with the marks of appellee.

The decision is reversed and the clerk will certify this opinion as by law required.

Court of Appeals of the District of Columbia.

IN RE NOYES.

Decided April 5, 1910.

PATENTABILITY—VACUUM CLEANING APPARATUS.

Applicant connected an internal-combustion engine with a vacuum cleaning machine in such a manner that the air supplied to the air-and-fuel-mixing means of the engine is drawn through the cleaning device. *Held* that this substitution of the pump of the engine for the separate air-pump of the cleaning device is ingenious, but is not invention.

Mr. Robert M. Pierson for the appellant.

Mr. R. F. Whitehead for the Commissioner of Patents.

SHEPARD, *C. J.*:

Edward P. Noyes appeals from the decision of the Commissioner of Patents rejecting ten of the twelve claims of an application for patent for an improvement in a vacuum apparatus.

As stated by the Commissioner, claims 1, 4, and 12 represent the invention sufficiently. They read as follows:

1. Vacuum apparatus comprising an automatic internal-combustion motor having means for mechanically pumping elastic fluid for its combustible charge, an anteriorly-extended induction-conduit for said fluid, and means associated with said conduit for employing the pumping-suction of the motor in the performance of useful work other than combustible-charge formation.

4. Vacuum apparatus consisting of a vapor-fuel automatic explosion-motor having means to mechanically pump its air charge, an air-supply pipe for said motor having means to perform extraneous mechanical work by the pumping-suction of the motor, a liquid-fuel mixer associated with said pipe, and means for causing the fuel-feeding pressure to automatically vary with the suction imparted to said extraneous-work-performing means.

12. Vacuum apparatus comprising an automatic internal-combustion motor having means for mechanically pumping its combustion-air charge, and an extended combustion-air suction-pipe for said motor having two inlets, one of which is equipped with extraneous-work-performing means operated by atmospheric pressure, and the other equipped with an automatic inlet-valve adapted to open upon the attainment of a predetermined degree of suction.

As stated in the appellant's brief the application is for an invention,

the central idea of which consists in so combining an internal-combustion motor with vacuum-using devices so that the motor may be directly employed as a suction-pump in doing work outside of its ordinary motor functions.

As described in the specifications, in connection with such a motor suitable means are provided whereby the difference in fluid-pressure created by the suction of the piston or equivalent element in supplying the motor with its own combustion fluid is applied to the performance of mechanical work. By this means the motor is applied directly to the production of vacuums for industrial purposes without the intervention of a separate vacuum-pump driven by the motor. The suction conduit or pipe is extended to the desired point and equipped with the necessary devices for mechanically applying the vacuum.

The ordinary vacuum-cleaner wagons drawn by horses carry a gasolene-engine which drives an air-pump and operates the devices in cleaning carpets, hangings, etc. Applicant can take an ordinary gas-engine of an automobile and without adding the air-pump cause the engine which propels the machine to perform services as a vacuum-producer.

The general view of the Office tribunals is thus expressed in the Commissioner's decision. He says:

The Examiner rejected these claims on the ground that the applicant, without exercising invention, has substituted the pump of an internal-combustion engine for the pump used in the well-known vacuum cleaning apparatus, and this view of the case was taken by the Examiners-in-Chief. I am of the opinion that to merely attach a pipe leading from a vacuum-cleaner to the conduit supplying air to the air-and-fuel-mixing means of an engine did not constitute invention.

A number of references were cited in the Office decisions, and may be summed up most favorably to the applicant in the language of his brief as follows:

The ordinary vacuum-cleaner consisting of dust-gathering nozzle, hose, strainer, vacuum-pump, and functionally separate motor (Young, Rec. p. 44; Kenny, p. 66; Leaycraft, p. 40), (b) carbureters, with or without a partial vacuum in the fuel-reservoir (Grouvelle, p. 50; Stute, p. 54; Haddan, Supplemental Record), (c) explosion-motors which draw either the air or the gas through a strainer to purify it before reaching the motor-cylinder (Brown, Westinghouse and Praetorius, all in the Supplemental Record).

The foundation of his contention is then stated:

It is apparent from the briefest perusal of these references that they show merely that individual elements of the applicant's new combination were old. They utterly fail to suggest the application of a gas-engine to the uses of an ordinary vacuum-pump, but the Patent Office takes the position that it involved no invention to conceive of this new application, or to make the necessary combination of elements for carrying the conception into effect.

It may be added that the Brown patent, mentioned above as having an air-strainer, shows a dust-collector interposed between the explosive-engine and the end of the air-pipe. While the object of the device is the purification of the air drawn into the engine, it is within the broad language used in claim 1:

Means associated with said conduit for employing the suction of the motor in the performance of useful work other than combustible-charge formation.

The applicant admits, of course, that extracting dust from objects, or performing other work by means of a vacuum is not new; and that the explosive-motor, as used by the appellant, acts very much as would an air-pump, which is nothing but an air-pump. But he contends that it is—

not the same agent as before, which is now acting. The old agent was a pump and nothing more. It had to be driven by a separate motor. The new agent is both pump and motor.

And he says:

Granting that it is an old result or ultimate effect which appellant has produced, he yet produces that effect in a more facile, economical and efficient way, by doing away with all the cost, weight, friction, and driving connections of the separate pump heretofore employed.

What the applicant has done is to connect an internal-combustion engine with a vacuum cleaning-machine in such manner that the air supplied to the air-and-fuel-mixing means of the engine is drawn through the cleaning device. An air-pump is necessary to the vacuum cleaning device; and the engine acts as a pump in drawing the air in, to form the necessary explosive mixture. The pump of the engine is substituted for the separate air-pump of the cleaning device, but it performs no different function. The same old thing is done by the same means—a vacuum-pump operated by a motor. The substitution is ingenious, but it is not invention.

It is well settled that the application of an old device or process to a similar or analogous subject, with no change in the manner of applying it, and no result substantially distinct in its nature, is not patentable, even if the new form of result has not before been contemplated. (*Pa. R. R. Co.* v. *Locomotive Truck Co.*, 110 U. S., 490–494; *Howe Machine Co.* v. *Nat. Needle Co.*, 134 U. S., 388–397; *Durham* v. *Seymour Co.*, 6 App. D. C., 78; *Millett* v. *Allen*, 27 App. D. C., 70, 76.)

We find no error in the rejection of the application, and the decision will be affirmed. The clerk will certify this decision to the Commissioner of Patents.

Affirmed.

Court of Appeals of the District of Columbia.

IN RE SHERMAN.

Decided April 5, 1910.

DESIGN—PATENTABILITY.

In considering the question of the patentability of a design, utility may, in a close case, be given some consideration; but the real question is whether there is such originality shown as to call for the exercise of the inventive faculty.

Mr. A. E. Dowell for the appellant.

Mr. R. F. Whitehead for the Commissioner of Patents.

ROBB, *J.*:

Appeal from the decision of the Commissioner of Patents denying appellant a design patent on a nail, the ground of the decision being lack of patentable novelty.

The design which appellant seeks to patent consists of an ordinary nail having a mushroom-shaped head and a circular protuberance on the convex side of the head. In other words, appellant's nail materially differs from the prior art solely by reason of said protuberance which, he contends, "imparts an ornamental finish to the nail." In his brief he states:

The "circular knobbed head" is the novel characteristic and distinctive feature of appellant's design.

The right to a design patent under section 4929, Revised Statutes, depends upon whether the person applying—

has invented any new, original, and ornamental design for an article of manufacture not known or used by others in this country before his invention thereof, etc.

Prior to May 9th, 1902, when said section was amended, the invention must have comprised—

a new, useful and original shape or configuration of any article of manufacture.

It will be observed that in the statute as amended the word "useful" is omitted and the word "ornamental" is inserted. It would seem that the purpose of this change was to more carefully differentiate design patents from mechanical patents. While in a close case utility may be given some consideration, the real question is whether there is such originality shown as to call for the exercise of the inventive faculty. (*Smith* v. *Whitman Saddle Company*, 148 U. S., 674; *in re Tournier*, 17 App. D. C., 481.)

While it is quite possible that appellant has produced a better and perhaps a more attractive nail than the nail of the prior art, we quite agree with the tribunals of the Patent Office that the distinctive features of his design do not involve invention. Had appellant inscribed a circle upon the convex side of the identical nail and in identically the same place where his "circular knobbed head" appears in the design of his application, it is clear that he would not have been entitled to a design patent. In our view, the projection of the shank of the nail beyond the top of its mushroom-shaped head, as appellant in effect has done, does not constitute an invention of a "new, original, and ornamental design."

The decision of the Commissioner is right and is affirmed. The clerk will certify this opinion as by law required.

Affirmed.

ADJUDICATED PATENTS.

The Palmer patent, No. 574,073, for a hammock attachment, *Held* valid and infringed. *I. E. Palmer Co.* v. *Patterson*, (C. C.,) 176 Fed. Rep., 578.

The Bates patent, No. 577,639, for a machine for making wire fence, construed and *Held* not infringed. *American Steel & Wire Co. of New Jersey* v. *Denning Wire & Fence Co.*, (C. C.,) 176 Fed. Rep., 584.

The Barnard patent, No. 580,151, for a fluid-distributer, *Held* valid and infringed. *Forest City Foundry & Mfg. Co.* v. *Barnard*, (C. C. A.,) 176 Fed. Rep., 561.

The Williams patent, No. 843,729, for a dumping-cage for crushers and pulverizers, claims 1 and 2 *Held* not infringed. *Williams Patent Crusher & Pulverizer Co.* v. *Pennsylvania Crusher Co.*, (C. C.,) 176 Fed. Rep., 576.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 11, 1910.

Radical Remedy Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Barclay & Barclay, of New York, N. Y., for registration of a trade-mark and trade-mark registrations to the following-named parties: (1) Radical Remedy Company, of Hickory, N. C., and (2) Walter M. Carr, of Stoughton, Wis., and the notice of such declaration sent by registered mail to the Radical Remedy Company at the address given above has been returned with the statement that this corporation has been dissolved.

Notice is therefore hereby given to the said Radical Remedy Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

F. A. TENNANT, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 10, 1910.

The St. Paul Roller Mill Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the C. A. Gambrill Mfg. Company, of 100 Commerce street, Baltimore, Md., for registration of a trade-mark and trade-marks registered to the Barber Milling Company, of Minneapolis, Minn., The St. Paul Roller Mill Co., of St. Paul, Minn., and H. Becker & Co., of New York, N. Y., and the notice of said declaration sent by registered mail to The St. Paul Roller Mill Co. having been returned undelivered, notice is hereby given to the said The St. Paul Roller Mill Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 10, 1910.

William Brokhahne, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the Norvell-Shapleigh Hardware Company, of Fourth and Washington avenues, St. Louis, Mo., for registration of a trade-mark and trade-marks registered to Krusius Brothers, 296 Broadway, New York, N. Y., the Challenge Cutlery Corp., of Seymour and Kossuth streets, Bridgeport, Conn., the A. F. Shapleigh Hardware Company, of St. Louis, Mo., and William Brokhahne, of New York, N. Y., and the notice of said declaration sent by registered mail to the said William Brokhahne having been returned undelivered, notice is hereby given to the said William Brokhahne, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 9, 1910.

William Brokhahne, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Norvell-Shapleigh Hardware Company, of Fourth street and Washington avenue, St. Louis, Mo., for registration of a trade-mark and trade-marks registered to Hibbard, Spencer, Bartlett & Company, northeast corner of State and South Water streets, Chicago, Ill., the A. F. Shapleigh Hardware Company, of St. Louis, Mo., and William Brokhahne, New York, N. Y., and the notice of said declaration sent by registered mail to the said William Brokhahne having been returned undelivered, notice is hereby given to the said William Brokhahne, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 23, 1910.

Joseph Parker & Son, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Keith Paper Company, of Turners Falls, Mass., for registration of a trade-mark and a trade-mark registered to Joseph Parker & Son, of 27 Elm street, New Haven, Conn., and the receipt for the registered letter in which notice of this interference was mailed to Parker & Son being signed Joseph Parker & Son Co. instead of Joseph Parker & Son, notice is hereby given to the said Joseph Parker & Son, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 22, 1910.

Julian Alvarez, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Moore & Calvi, of 89 Water street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Julian Alvarez, of 919 Broadway, New York, N. Y., and the notice of said declaration sent by registered mail to the said Julian Alvarez having been returned undelivered, notice is hereby given to the said Julian Alvarez, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 21, 1910.

Strassheim & Jaeger, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Frederick W. Gardner, of 316 East Thirty-fourth street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Strassheim & Jaeger, of 173 and 175 South Water street, Chicago, Ill., and the notice of said declaration sent by registered mail to the said Strassheim & Jaeger having been returned undelivered, notice is hereby given to the said Strassheim & Jaeger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 21, 1910.

Hugo Pfabe, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Sugar Products Company, of Caro, Mich., for registration of a trade-mark and a trade-mark registered to Hugo Pfabe, of Chicago, Ill., and the notice of said declaration sent by registered mail to the said Hugo Pfabe having been returned undelivered, notice is hereby given to the said Hugo Pfabe, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 8, 1910.

Day, Rollins & Company, their assigns or legal representatives, take notice:

An interference exists in this Office between an application of Sparks Milling Company, of Alton, Ill., for registration of a trade-mark and a trade-mark registration to Day, Rollins & Company, of Minneapolis, Minn., and a notice of redeclaration of said interference which was sent by registered mail on January 26, 1910, to the said Day, Rollins & Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Day, Rollins & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 5, 1910.

Augustus W. Kriete, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of C. H. Sears & Company, of Circleville, Ohio, for registration of a trade-mark and trade-marks registered to Jane M. McMurray, of Frederick city, Md., and Augustus W. Kriete, Center Cross, Essex county, Va., and it appearing from the registry return receipt that the registered letter in which notice of this interference was mailed to the party Kriete was not delivered to him, but to Mrs. A. W. Kriete, notice is hereby given to the said Augustus W. Kriete, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
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Patents	728	No. 958,713 to No. 959,440, inclusive.
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Trade-Marks	76	No. 77,975 to No. 78,050, inclusive.
Labels	8	No. 15,183 to No. 15,190, inclusive.
Prints	1	No. 2,593.
Reissues	1	No. 13,117.
Total	821	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	....	Ohio	56	1
Arkansas	1	....	Oklahoma	4	....
California	35	1	Oregon	7	....
Colorado	8	....	Pennsylvania	85	3
Connecticut	26	4	Rhode Island	7	....
Delaware	....	....	South Carolina	4	1
Florida	2	....	South Dakota	3	1
Georgia	5	1	Tennessee	9	....
Idaho	1	....	Texas	6	....
Illinois	66	3	Utah	2	....
Indiana	16	....	Vermont	1	....
Iowa	11	....	Virginia	3	....
Kansas	9	1	Washington	13	....
Kentucky	6	1	West Virginia	7	....
Louisiana	3	3	Wisconsin	13	1
Maine	2	1	Wyoming	....	....
Maryland	8	7			
Massachusetts	34	4	Alaska, District of	1	....
Michigan	19	4	Arizona Territory	2	....
Minnesota	13	....	District of Columbia	4	3
Mississippi	3	....	Hawaii Territory	....	....
Missouri	20	3	New Mexico Ter't'y	2	....
Montana	1	....	Panama	....	....
Nebraska	10	....	Philippine Islands	....	....
Nevada	....	....	U. S. Army	....	....
New Hampshire	2	....	U. S. Navy	....	....
New Jersey	20	5			
New York	94	25	Total to citizens of the United States	662	73
North Carolina	3	....			
North Dakota	5	....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	1	....	Netherlands	1	1
Austria-Hungary	2	1	Newfoundland	....	....
Belgium	....	....	New South Wales	....	....
Brazil	....	....	New Zealand	1	....
British West Indies	....	....	Norway	1	....
Canada	15	1	Persia	....	....
Cape Colony	....	....	Queensland	....	....
Chile	....	....	Russia	1	....
China	....	....	Scotland	1	....
Costa Rica	....	....	South Australia	....	....
Cuba	....	....	Spain	....	....
Denmark	....	....	Sweden	1	....
Ecuador	....	....	Switzerland	2	....
England	13	4	Tasmania	....	....
France	9	....	Transvaal, South Africa	....	....
Germany	22	3	Victoria	1	....
Haiti	....	....	Western Australia	....	....
Ireland	....	2			
Italy	1	....	Total to citizens of foreign countries	73	12
Japan	....	....			
Mexico	1	....			

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Application as originally filed, (petition, specification, oath, and drawings.)

Application as amended, (petition, specification, oath, and drawings.)

Application as allowed, (petition, specification, oath, and drawings.)

Specification as originally filed.

Specification as amended.

Specification as allowed.

Original application, (facsimile petition, specification, oath, and drawings.)

Original specification, (facsimile.)

Assignment. Give the liber and page of the record, as well as the name of the inventor.

Printed publications in possession of the Office. Give title and date of publication, also page and exact portion to be copied.

Publishers' Catalogues.

This Office would be pleased to receive from manufacturers and publishers such catalogues, circulars, price-lists, or other advertisements relating to the sciences and mechanical arts as are published by them for gratuitous distribution. It is requested that at least three copies of such publications be forwarded in order that the subjects may be properly indexed, classified, and subclassified in the Scientific Library for convenient and ready reference.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business May 17, 1910.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Apr. 19	Apr. 19	371
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Mar. 2	Mar. 14	284
173	3. Annealing and Tempering; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Apr. 18	May 4	127
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Apr. 4	Apr. 9	414
167	5. Bookbinding; Harvesters; Jewelery; Music.	Mar. 17	Mar. 17	494
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Apr. 4	Apr. 8	311
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Mar. 25	Mar. 30	586
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Apr. 25	Apr. 20	226
142	9. Air and Gas Pumps; Fire-Extinguishers; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Sewerage; Wind-Wheels.	Feb. 1	Jan. 25	473
235	10. Carriages and Wagons.....	Mar. 11	Mar. 21	634
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Apr. 13	Apr. 9	254
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Apr. 15	Apr. 11	557
329	13. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, Etc.	Mar. 18	Apr. 15	541
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Mar. 16	Apr. 4	356
308	15. Bread, Pastry, and Confection Making; Cooling; Fuel; Glass; Laminated Sheets and Fabrics; Liquid Coating Compositions; Paper-Making; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Mar. 11	Apr. 26	479
109	16. Telegraphy; Telephony.....	Mar. 17	Mar. 9	270
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Apr. 18	Apr. 18	187
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Feb. 12	Feb. 14	237
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Apr. 14	Apr. 18	297
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Apr. 18	Apr. 18	224
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Mar. 28	Apr. 18	378
240	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Dec. 30	Mar. 1	704
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 13	Apr. 15	357

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
144	24. Apparel; Apparel Apparatus; Electricity, Medical and Surgical; Sewing-Machines; Surgery.	Apr. 7	Apr. 13	500
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Apr. 27	May 4	125
106	26. Electric Heating and Rheostats; Electricity, Generation; Motive Power.	Jan. 26	Mar. 2	376
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Apr. 7	Apr. 5	384
65	28. Electric Railways; Internal-Combustion Engines.	Mar. 11	Apr. 12	486
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	Mar. 3	Apr. 1	439
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Apr. 11	Apr. 18	366
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Feb. 25	Mar. 31	369
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Fine Arts; Packaging Liquids; Refrigeration.	Apr. 20	Apr. 20	345
164	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 19	Mar. 14	476
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Apr. 11	Apr. 21	353
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Apr. 10	Apr. 29	638
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Feb. 21	Mar. 11	653
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 2	Feb. 21	712
378	38. Artesian and Oil Wells; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working.	Mar. 9	Mar. 18	519
321	39. Baths and Closets; Water Distribution.	Feb. 7	Apr. 7	586
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 23	Apr. 6	490
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Feb. 12	Feb. 21	623
279	42. Electric Signaling; Railway Signaling; Signals.	Dec. 20	Mar. 9	471

Oldest new case, Dec. 20; oldest amended, Jan. 25.

Total number of applications awaiting action..... 17,682

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	Apr. 14	May 4	727
	Designs.....	Apr. 19	May 7	141
	Labels and Prints.....	May 7	May 9	36

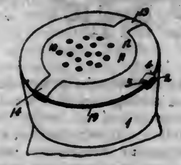
Trade-Marks.

Extra copies of the trade-mark portion of the GAZETTE, which will be sold separately, may be obtained single or in quantities for five cents each. Coupons will be taken in payment thereof.

PATENTS

GRANTED MAY 24, 1910.

958,713. RECEPTACLE OR CONTAINER. CHARLES S. BARON and JAMES F. HAFFEY, Tiffin, Ohio. Filed Oct. 29, 1909. Serial No. 525,342.



1. A receptacle provided with a seat on the inside, a recess on its top, and a groove on the outside, in combination with a lid having a central portion adapted to the seat and an arm adapted to the recess and an elastic ring adapted to the groove on the outside of the receptacle and the ends of the arms of the lid.

2. A receptacle provided at its top with a seat on the inside, two recesses at opposite ends of a diameter, and a groove on the outside, in combination with a cover consisting of a lid having a central portion provided with arms and adapted to the seat and recesses, and an elastic ring adapted to the groove on the outside of the receptacle and the ends of the arms of the lid.

3. A receptacle provided at its top with a seat on the inside, two recesses at opposite ends of a diameter, and a groove on the outside, in combination with a cover consisting of a lid having a central portion, and arms provided with grooves, such central portion and arms being adapted to the seat and recesses, and an elastic ring held in the grooves of the arms and adapted to the groove on the outside of the receptacle.

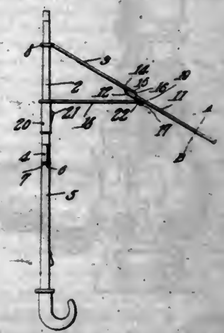
4. A receptacle provided at its top with a seat on the inside, a recess in the top, and a groove on the outside, in combination with a cover consisting of a lid having a central portion adapted to the seat, and an arm adapted to the recess, and an elastic ring adapted to the groove on the outside of the receptacle and the ends of the arms of the lid, the cover being hinged to the top of the receptacle.

958,714. FOLDING UMBRELLA. ORWEN K. ANDREWS, Clarksburg, W. Va., assignor of one-third to Cummins E. White and one-third to William S. O'Brien, Buckhannon, W. Va. Filed Oct. 15, 1909. Serial No. 522,821.

1. In an umbrella frame, a foldable rib comprising pivotally connected inner and outer sections; a link having at one end, a common pivotal connection with the sections; and a spreader pivoted adjacent one end to the other end of the link, the link being tiltable to bring said end of the spreader into contact with the intermediate portion of the outer section.

2. In an umbrella frame, a foldable rib comprising pivotally connected inner and outer sections; the outer section being inwardly prolonged beyond the pivotal connection, to engage the inner section; a link having at one end, a common pivotal connection with the sections; and a spreader pivoted adjacent one end to the other end of the link, the link being tiltable to bring said end of the spreader into contact with the intermediate portion of the outer section.

3. In an umbrella frame, a foldable rib comprising pivotally connected inner and outer sections; spaced plates having at one end, a common pivotal connection with the sections; and a spreader pivoted adjacent one end, between the other ends of the plates, the plates being tiltable to bring said end of the spreader into contact with the intermediate portion of the outer section.



4. In an umbrella frame, a foldable rib comprising inner and outer sections; a band pivotally connected with the outer end of the inner section and arranged to inclose the outer section, the outer section being inwardly prolonged beyond the band to engage the inner section; spaced plates having a common pivoted connection with the band and with the inner section; and a spreader pivoted adjacent one end between the plates, the plates being tiltable to bring said end of the spreader into contact with the intermediate portion of the outer section.

958,715. SUNBONNET. MARY E. BALDWIN, Chicago, Ill. Filed Nov. 30, 1906. Serial No. 345,703.



A sun bonnet comprising a crescent shaped head piece of flexible washable material, a fabric lining corresponding in shape to the head piece and secured thereto, eyelets permanently affixed through said head piece and lin-

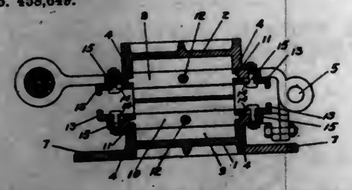
ing to afford ventilating means therein, a fabric crown secured between the ends of said crescent, a skirt portion secured to said crown and meeting the ends of the crescent, and fastening strings, substantially as described.

958,716. VALVE. GEORGE M. BARD, Chicago, Ill., assignor to Norwall Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 1, 1907. Serial No. 386,559.



In combination, a valve having a recessed upper surface, a valve stem having a perforated wall arranged above said valve, a headed stud carried by said valve and extending through the perforation in said wall, the distance between the head of the stud and the bottom of the recess in the valve being greater than the thickness of said wall, and a resilient plate arranged between said wall and said valve and spanning said recess.

958,717. CANDY-CUTTING MACHINE. JOSEPH H. BENNETT, New York, N. Y. Filed Oct. 20, 1908. Serial No. 458,649.



1. In a device of the character described, the combination of a frame member provided with a longitudinal cut out section, having cut out seats along its upper longitudinal sides and a plurality of cutting members having lugs at each end to rest in the seats in the frame members, and comprising a blade section and a base section, whereby the blade section or base section of said cutting members may be interchangeably presented to the material to be cut, and retaining plates resting upon the lugs of the cutting members, substantially as shown and described.

2. In a device of the character described, the combination of two frame members each provided with a longitudinal cut out section each of which cut out sections having cut out seats along its longitudinal sides, the seat on the upper frame member being on the lower side and the seat on the lower frame member being on the upper side, a plurality of cutting members upon each of said frame members having lugs on each end to rest in the seats in the respective frame members and comprising a blade section and a base section, whereby the blade section or base section of said cutting members may be interchangeably presented to the material to be cut, and retaining plates resting upon the lugs of the cutting members, substantially as shown and described.

958,718. BEDCLOTHING-REST. MARY E. L. BERGEN, Brooklyn, N. Y. Filed Feb. 3, 1909. Serial No. 475,732.



1. A collapsible attachment for bedsteads, couches and similar furniture for holding bed clothing and other articles, comprising a receptacle or holder composed of a series of rods adjustably coupled together and adapted to be uncoupled in collapsing the holder, and a series of hangers hung from such furniture and connected by the rods and adapted to be folded in collapsing the holder.

2. A collapsible supporting frame for bed clothing formed of intersecting rods, interlocking means for the rods, and foldable means for connecting the frame to a bedstead or the like.

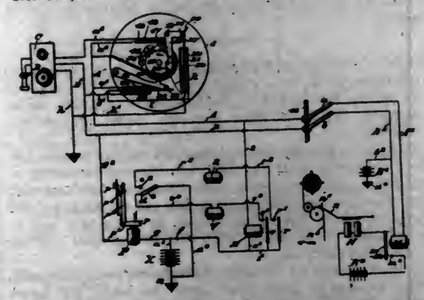
3. An attachment of the character described comprising a plurality of rods, and pendent hangers having one of their ends secured for suspending the rods and the other end thereof connected by said rods.

4. An attachment of the character described, comprising hangers having one of their ends fixed for suspending them, cross rods connecting the other ends, and brace rods connected to the cross rods.

5. An attachment of the character described, comprising hangers having one of their ends fixed for suspending them, rod-sections connecting the other end of the hangers in pairs, and means for joining said rod-sections together.

[Claims 6 to 8 not printed in the Gazette.]

958,719. SIGNAL-BOX FOR FIRE-ALARM SYSTEMS. FREDERICK S. BRONSON, Rochester, N. Y., assignor to Denio General Electric Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 13, 1909. Serial No. 532,807.



1. In a signal mechanism for use on subscribers' circuits of automatic telephone exchange systems which comprise electromagnetically operated central office switches, the combination with two movable members and a set of contacts arranged in a subscriber's circuit and operated by one of the members to transmit current impulses for actuating the central office switches, to select a predetermined circuit, of other contacts coöperating with the other member for transmitting alarm impulses over said circuit after the connection has been established through said switches and means for driving the members.

2. In a signal mechanism for use on subscribers' circuits of automatic telephone exchange systems which comprise electromagnetically operated central office switches, the combination with two revoluble members provided with notches, of contacts arranged in a subscriber's circuit for transmitting impulses of current for actuating said switches and giving an alarm signal, said contacts being actuated by said members and certain ones of them being operated to prevent the transmission of the alarm signal impulses during the transmission of the switch actuating impulses.

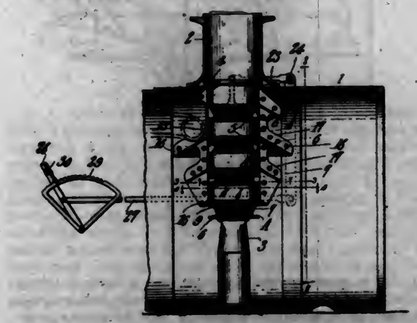
3. In a signal mechanism for use on subscribers' circuits of automatic telephone exchange systems which comprise electromagnetically operated central office switches, the combination with two simultaneously revoluble members, of contacts actuated by said members for transmitting groups of current impulses for actuating said switches and giving an alarm signal, certain of said contacts being operated by one of the members to open the circuit over which alarm impulses are transmitted during the despatching of the switch actuating impulses and thereafter to close said circuit.

4. In a signal mechanism for use on subscribers' circuits of automatic telephone exchange systems which comprise electromagnetically operated central office switches, the combination of two operating members, a switch operating branch circuit and an alarm despatching branch circuit both leading from the subscribers' circuit and each provided with contacts, of devices actuated by the members and coöperating with the contacts to transmit at different times current impulses for operating the switches and current impulses for giving a signal.

5. In a signal mechanism for use on subscribers' circuits of automatic telephone exchange systems which comprise electromagnetically operated central office switches, the combination of two operating members, a switch operating branch circuit and an alarm despatching branch circuit both leading from the subscribers' circuit and each provided with contacts, of devices actuated by the members and conjointly controlling said contacts to successively transmit impulses for operating the switches and impulses for giving a signal.

[Claims 6 and 7 not printed in the Gazette.]

958,720. FRONT-END ARRANGEMENT. JOSEPH F. BROWN and HERMAN M. BROWN, Bristol, Tenn. Filed Feb. 14, 1910. Serial No. 543,706.



1. In a front end arrangement, the combination with a nozzle and stack, of a stationary structure located between the nozzle and stack and having an imperforate annular portion and a flaring slotted portion, and a slidable structure surrounding said stationary structure and having annular openings therein.

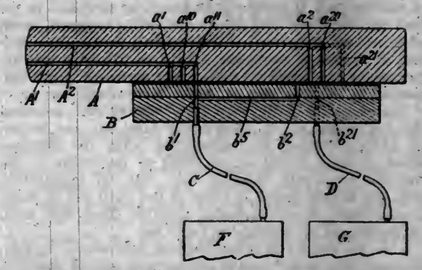
2. In a front end arrangement, the combination with a nozzle and stack, of a stationary structure located between the nozzle and stack and having an annular imperforate portion and a flared portion formed with slots which are approximately V-shaped in cross section, and a slide member surrounding said stationary structure and having an annular opening therein and a skirt connected therewith.

3. In a front end arrangement, the combination with an exhaust nozzle and stack, of a stationary structure located between the nozzle and stack and comprising a plurality of imperforate annular portions, and a plurality of conical portions formed with outwardly flaring walls, and a slide member surrounding said stationary structure and having a plurality of imperforate portions and a plurality of skirt members of different diameters.

4. In a front end arrangement, the combination with a nozzle and stack, of a plurality of structures movable relatively to each other, one of said structures having a plurality of imperforate annular portions separated from each other by flaring slotted portions, and the other structure having a plurality of annular imperforate portions and intermediate annular openings.

5. In a front end arrangement, the combination with a nozzle and a stack, of a stationary structure surrounding said nozzle at its lower end and fitted into said stack at its upper end, said stationary structure comprising one or more annular imperforate portions and one or more slotted annular portions, and a movable structure surrounding said stationary structure and having an annular opening adapted to register with the annular slotted portion of the stationary structure, and an annular imperforate portion adapted to register with the annular imperforate portion of the stationary structure, said movable structure being adapted to be moved so as to cause the imperforate portion of the movable structure to register with the slotted portion of the stationary structure.

958,721. DUPLEX DUCT-TRACKER FOR AUTOMATIC MUSIC-PLAYING INSTRUMENTS. CHARLES S. BURTON, Oak Park, Ill., assignor to Melville Clark, Chicago, Ill. Filed July 5, 1907. Serial No. 382,136.



1. In an automatic music-playing instrument, a duct board having a set of ducts all leading to ports at the same surface of the board, all of said ducts having one port at said surface, a portion of them having only one such port, all the remainder having two such ports, and a portion of said remainder having three such ports whereby there are formed three series of ports, the first comprising ports of all the ducts, the second comprising ports of a portion of the ducts and the third comprising ports of a lesser portion, each of said series occupying a distinct portion of the area of the board's surface, all said series having their ports spaced on the same scale; a valve bar having a series of ports spaced on the scale of the ports of the duct board and equal in number and pertaining to the full number of such ports, and means for adjusting said valve bar to register its ports with those of either one of the three series of ports of the duct board at will.

2. In an automatic music-playing instrument, in combination with a duct board having two sets of ducts, and ports from both said sets in the same surface of the board, said two sets comprising respectively different numbers of ducts, the greater set having a portion of its ducts provided with two ports each, forming two series

of ports in the same surface of the board; a valve bar having two series of flexible tubes connected with it; ports from one of said series adapted at one position of the valve bar to connect said tubes with the ports of the ducts of the lesser set, and at another position to connect them with one of the two series of ports of the greater set, the ports from the other series of tubes being adapted at said last mentioned position to register with ports from all the remaining ducts of the first set.

3. In an automatic music-playing instrument, in combination with a duct board having two sets of ducts of different number leading to ports all in the same surface of the board, the set which has the greater number having a portion of its ducts provided with two ports each in a first and second series, and having another portion provided with two ports each, one in said first series and constituting a continuation of said series, and the other in a third series, the remainder of the ducts of said larger set having their ports all in said third series; a valve bar having two sets of flexible tubes connected with it leading from two series of ports in the face of said valve bar, one of said sets being in number equal to, and the ports to which they lead being adapted to register with, said first series of ports of the duct board, the other set being equal in number to and connected with ports adapted to register with the ports of the third series of the duct board, the two series of ports of the valve bar to which said two sets of ducts are connected respectively being spaced from each other a distance equal to the spacing of the second and third series of ports of the board for registering simultaneously with said second and third series.

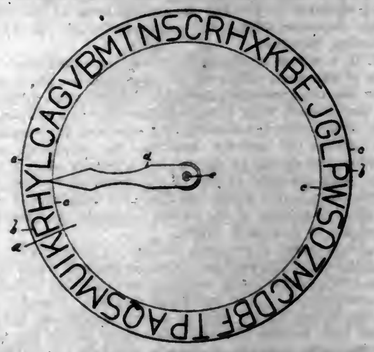
4. In an automatic music-playing instrument, in combination, a duct board having two sets of ducts of different number and differently spaced, each occupying approximately the same extent lengthwise of the board, the ducts of both sets having ports leading to the same surface of the board; a valve bar having flexible tubes connected with it at one face and communicating with ports in another face, a portion of the ducts of both sets in the duct board having two ports constituting separate series of ports occupying each a distinct area in the same surface of the board, the board having an unported area intermediate the areas of the several series of ports pertaining to the two sets of ducts respectively, the ports of the valve bar being adapted to seat at such unported area for closing all the ports of the valve bar, and having its ports arranged for registration with the different series of ports of one set of ducts by movement in one direction from said unported area, and for registration with the several series of ports of the other set of ducts by movement in the opposite direction from said area, and means for so moving the valve bar.

5. In an automatic music-playing instrument, in combination with a duct board having two sets of ducts of different number and differently spaced, leading to ports all upon the same surface of the board, the series of ports pertaining to said sets of ducts respectively being differently spaced on said surface of the board, each series occupying a distinct area of said surface; a valve bar mounted for movement on the duct board having flexible ducts communicating with it at one face and through it to two sets of ports in another face, the spacing of the series of ports of one of said sets of the valve bar agreeing with that of the series of ports of one of the two sets of ducts of the duct board, and the spacing of the series of ports of the other set in the valve bar agreeing with that of the series of ports or the other set of ducts of the duct board, the distance between said two series of ports of the valve bar being different from the distance between said corresponding series of duct board ports.

[Claims 6 to 13 not printed in the Gazette.]

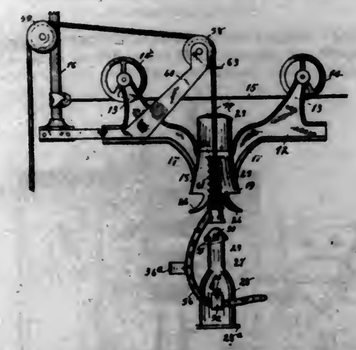
958,722. GAME APPARATUS. EDWARD P. CHALMERS, Norwood, Mass. Filed Sept. 17, 1909. Serial No. 518,248.

1. In a game-apparatus of the general character described, a card or surface having printed or inscribed on it a circle or ring of letters of the alphabet arranged in nonalphabetical order and each letter of the alphabet being used one or more times, the relative frequency of the appearance of different letters corresponding substantially with the relative numbers of names in a suitable dictionary or standard reference book of names having corresponding initial letters, and a pointer connected with the card or surface and adapted to be moved over it and point to the different letters inscribed thereon.



2. In a game-apparatus of the general character described, a card or surface having printed or inscribed on it a circle or ring of letters of the alphabet some of which occur with greater relative frequency than others, such frequency corresponding substantially with the relative numbers of names having corresponding initial letters in a suitable dictionary or standard reference book of names, and a pointer adapted to be moved over said surface and point to the different letters inscribed thereon.

958,723. PARCEL-CARRIER. JAMES W. CLARK, Janesville, Wis. Filed May 6, 1909. Serial No. 494,400.



1. In a parcel-carrier, a carriage, a hollow tubular member supported by said carriage, slidable and rotatable interlocking members arranged in said tubular member, a basket supporting member adapted to operate said slidable and rotatable members and to interlock thereon, and means for operating said basket supporting member.

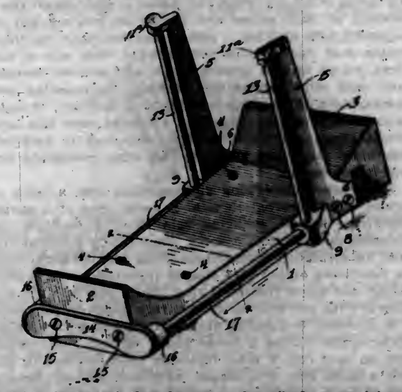
2. In a parcel carrier, a carriage, a hollow tubular member fixed on said carriage, slidable and rotatable interlocking means arranged in said tubular member, a basket supporting member adapted to operate said slidable and rotatable means and to interlock therewith, arms pivoted on said member, and manually operative means engaging said arms.

3. In a parcel carrier, including a trolley and a carriage adapted to travel thereon, the combination of a hollow body attached to the carriage, an annular member arranged to rotate and slide in said body, means for rotating said member when slid, a coöperating member adapted to slide said annular member, and means for interlocking said members when the annular member is rotated.

4. In a parcel carrier including a trolley, and a carriage adapted to travel thereon, the combination of a hollow body on the carriage, an annular serrated member arranged to rotate and slide in said body, serrations fixed on said body and adapted to rotate said annular member when the latter is slid, a coöperating member adapted to engage and slide said annular member, and means carried by the rotatable member for interlocking said members.

5. In a parcel carrier, including a trolley-wire and a carriage adapted to travel thereon, the combination of a hollow member attached to said carriage, annular series of serrations arranged in staggered relation in said hollow member, a movable serrated ring arranged between said series of serrations, an apertured diaphragm carried by said ring, a fixed diaphragm arranged below said apertured diaphragm and having openings corresponding with the apertures in the first mentioned diaphragm, a coöperating member adapted to engage said ring, and means on said coöperating member adapted to interlock with the diaphragm carried by the ring.

958,724. SHOE-POLISHING DEVICE. IRVIN H. COOPER, South Bend, Ind. Filed Aug. 16, 1909. Serial No. 513,142.



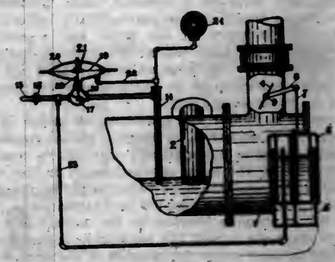
1. A device of the character described, comprising a base, a standard carried by each side thereof adjacent the rear end, a lug carried by each standard and provided with a vertical and a horizontal bearing opening, a plate carried by each standard and provided with a bearing opening in alinement with said vertical opening, a roller having its ends journaled in said alined openings, a plate extending across the front end of said base and projecting beyond each side thereof, bearings carried by the projecting portions of said plate, and rollers having their ends journaled in said bearings and the horizontal openings of said lugs.

2. A device of the character described, comprising a base, oppositely disposed standards adjacent the rear end thereof, a lug at the base of each standard and provided with intersecting vertical and horisontal openings, a cap plate at the top of each standard provided with a bearing in alinement with said vertical opening, a roller journaled in said bearing and vertical opening, bearings projecting from the side of the front portion of said base and alining with the horisontal openings of said lugs, and rollers journaled in said alined horisontal openings and bearings.

3. A device of the character described, comprising a base, oppositely disposed vertically-arranged standards carried by the longitudinal sides of said base adjacent the rear end, an overhanging bearing plate carried by the upper end of each standard, a lug carried by the lower portion of each standard and provided with a bearing opening in alinement with said bearing plate and with a horizontal bearing opening, bearings projecting laterally from the front end of said base and alining with said horizontal bearing openings, vertical rollers journaled in the alined bearing plates, and vertical openings, and horizontal rollers journaled in the alined projecting bearings and horizontal openings.

4. A device of the character described, comprising a base, a vertically-arranged standard carried by each side of said base, said standards being oppositely disposed, a bearing plate carried by the upper end of each standard, a lug carried by the lower end thereof, said lugs each having a vertical opening which alines with said bearing plate and an intersecting horizontal opening, a roller having one end mounted in said bearing plate and its other end in said vertical opening, a horizontal roller having one end in said horizontal opening and supporting said first-mentioned roller, and a bearing plate projecting from said base for the other end of said horizontal roller.

958,725. PRESSURE-REGULATOR FOR GAS PLANTS. FRANK L. CROSS, Detroit, Mich. Filed July 6, 1908. Serial No. 441,966.



1. The combination with the main of a gas generating system, of a valve adapted to control the flow of gas through the main, means for working the valve adapted to be operated by gas under pressure, means for admitting gas under pressure from a source outside the system to the valve working means, and means adapted to automatically control the flow of gas through the gas admitting means.

2. The combination with the main of a gas generating system of a valve controlling the main, means for working the valve adapted to be operated by gas under pressure, a pressure pipe leading from an independent source of supply of gas under pressure into the main, a by-pass leading from the pipe to the valve-working means, and an automatic regulating valve in the pipe between the gas main and the by-pass.

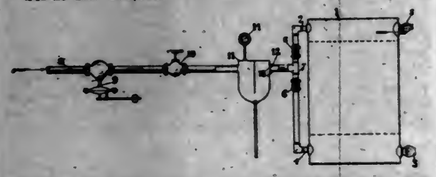
3. The combination with the main of a gas generating system of a valve controlling the main, means for working the valve adapted to be operated by gas under pressure, a pressure pipe from an independent source of supply of gas under pressure discharging into the main, a by-pass leading from the pipe to the valve working means, and an automatic regulating valve in the pipe between the by-pass and the main adapted to close when the pressure rises and open when the pressure falls.

4. The combination with the main of a gas generating system, of a valve controlling the main, a gasometer whose float tank is adapted to operate the valve, a pressure pipe from an independent source of supply discharging into the main, a by-pass from the pipe discharging into the float tank, and an automatic regulating valve in the pipe between the by-pass and the main adapted to close when the pressure rises and open when the pressure falls.

5. The combination with the main of a gas generating system of a valve controlling the main, means for working the valve adapted to be operated by gas under pressure, a pressure pipe from an independent source of supply of gas under pressure discharging into the main, a by-pass leading from the pipe to the valve working means, a regulating valve in the pipe between the by-pass and the main, a closure therein and an expansible chamber in communication with the pipe having a movable diaphragm connected to the closure adapted to seat the closure when the chamber is expanded.

[Claim 6 not printed in the Gazette.]

958,726. VOLUME REGULATOR AND INDICATOR. FRANK L. CROSS, Detroit, Mich. Filed Dec. 30, 1908. Serial No. 470,095.



1. A volume regulator for steam or gas comprising in combination a supply main, regulating means constructed to automatically maintain a constant initial pressure in the main, means constructed to automatically indicate the initial absolute pressure in the main, and a reducing means located in the main beyond the pressure indicator means constructed to discharge units in weight, per unit of time, equal in number to the units of absolute pressure indicated by the pressure gage.

2. A volume regulator and indicator for steam or gas comprising in combination a supply main, regulating means constructed to automatically maintain a constant initial pressure in the main, means located in the main for changing the pressure beyond the regulating means to any desired point, means adapted to automatically indicate the initial absolute pressure in the main, and a diaphragm in the main beyond the registering means having an aperture through which the contents of the main is discharged, adapted to discharge units of weight per unit of time equal in number to the units of absolute pressure shown by the indicating means.

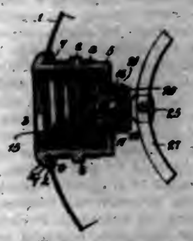
3. A volume regulator and indicator for steam or gas comprising in combination a supply main, regulating means constructed to automatically maintain a constant initial pressure in the main, means located in the main for changing the pressure beyond the regulating means to any desired point, means adapted to automatically indicate the initial absolute pressure in the main, and reducing means through which the contents of the main is discharged, adapted to discharge units in weight per unit of time equal in number to the units of absolute pressure shown by the indicating means.

4. A volume regulator and indicator for steam or gas comprising in combination a supply main, a regulating valve in the main adapted to automatically maintain a constant initial pressure in the main, means adapted to change the pressure beyond the regulating valve in the main to any desired point, means beyond the reducing means adapted to automatically indicate the pressure in the main, and a diaphragm in the main beyond the registering means having an aperture through which the contents of the main is discharged adapted to deliver units of weight per unit of time equal in number to the units of absolute pressure shown by the indicating means.

5. A volume regulator and indicator for steam or gas comprising in combination a supply main, an automatic pressure regulating valve in the main, a throttle valve in the main, beyond the regulating valve, an automatic pressure indicating gage connected to the main beyond the throttle valve, and a diaphragm in the main beyond the gage having a restricted aperture through which the contents of the main is discharged, adapted to deliver units of weight per unit of time equal in number to the units of absolute pressure indicated by the gage.

[Claims 6 to 8 not printed in the Gazette.]

958,727. CLUSTER LAMP-SOCKET. JOHN H. DALE, New York, N. Y. Filed May 6, 1908. Serial No. 431,144.



1. A socket comprising an insulating cup, a lamp receiving shell received therein, a metal ring of L-shaped transverse section engaging said shell, a terminal clip threaded on said ring, a screw constituting a center contact, a terminal clip threaded on said screw, an insulating washer separating said terminal clips, and an insulating button of T-shaped transverse section separating said screw from said ring.

2. In a cluster socket, a casing having holes, individual sockets received therein each formed with a flange outside the casing and a lug inside the casing, a sheet metal sleeve received on each socket and having an inclined slot engagement with said lug, a pair of metallic rings concentric within said casing, clips bent upward from one of said rings, center contact screws within said sockets threaded into said clips, insulating bushings surrounding said screws, metallic rings surrounding said bushings, threaded shells within said sockets and engaging said last mentioned rings, and metallic clips connected to said last mentioned rings and joined to the other concentric ring within the casing.

3. A socket comprising an insulating cup, a lamp receiving shell received therein, a metal ring of L-shaped transverse section engaging said shell, a terminal clip threaded on said ring, a screw constituting a center contact, an insulating washer separating said terminal clips, an insulating button of T-shaped transverse section separating said screw from said ring, and a pair of rings concentric with one another respectively joined to said clips.

4. A socket comprising an insulating cup with a flange, a sleeve also having a flange and a bayonet joint connection on said cup, a lamp receiving shell received in said cup, a metal ring of L-shaped transverse section engaging said shell, a terminal clip threaded on said ring, a screw constituting a center contact, a terminal clip threaded on said screw, an insulating washer separating said terminal clips, and an insulating button of T-shaped transverse section separating said screw from said ring.

958,728. CLUSTER LAMP-SOCKET. JOHN H. DALE, New York, N. Y. Filed May 6, 1908. Serial No. 431,145.

1. In a cluster socket, a casing having peripheral holes, bushings in said holes, lamp receiving shells in said bushings said shells having rearward extensions, a two part insulating ring engaging and operatively connecting said extensions together, and means affording center contacts.

2. In a cluster socket, a casing having holes, bushings in said holes, lamp receiving shells engaged in said bushings, and a transversely divided insulating ring operatively connecting said shells together around the outside periphery of said ring.

3. In a cluster socket, a casing having holes, bushings in said holes, lamp receiving shells engaged in said bushings, said shells having rearward extensions, a transversely divided insulating ring operatively connecting said extensions together around the outside periphery of said ring, said extensions being included between the sections of said ring for establishing a circuit connection.

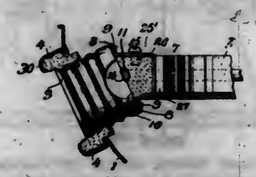


4. In a cluster socket, a casing having holes, bushings in said holes, lamp receiving shells engaged in said bushings, said shells having rearward extensions, a transversely divided insulating body operatively connecting said extensions together around the outside periphery of said body, said extensions being included between the sections of said body for establishing circuit connections with said shells.

5. In a cluster socket, a two part insulating ring, lamp receiving shells, means included between the parts of said ring for supporting said shells and establishing circuit connections therewith, and means affording center contacts.

[Claims 6 to 16 not printed in the Gazette.]

958,729. CLUSTER LAMP-SOCKET. JOHN H. DALE, New York, N. Y. Filed May 6, 1908. Serial No. 431,146.



1. In a cluster socket, an insulating ring, threaded shells having loops or straps surrounding said ring and securing said shells thereto, and means affording center contacts.

2. In a cluster socket, an insulating ring, threaded shells having loops or straps surrounding the same and securing said shells thereto, means for positioning said shells, on said ring in predetermined spaced-apart relation, and means affording center contacts.

3. In a cluster socket, a notched insulating ring, threaded shells having loops or straps surrounding said ring and securing said shells thereto, said loops or straps having portions entering the notches of said ring whereby they are maintained in properly spaced-apart relation, and means affording center contacts.

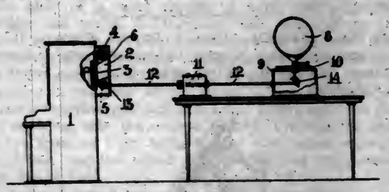
4. In a cluster socket, an insulating ring having a peripheral groove, a metallic ring or band received in said groove and affording center contacts, threaded shells, and loops or straps riveted to said shells and surrounding said insulating ring whereby the shells are tightly held thereto.

5. In a cluster socket, a casing having holes, porcelain bodies received in said holes and having headed or beaded portions lying outside the casing, and sheet metal coatings covering said headed or beaded portions to protect and strengthen the same.

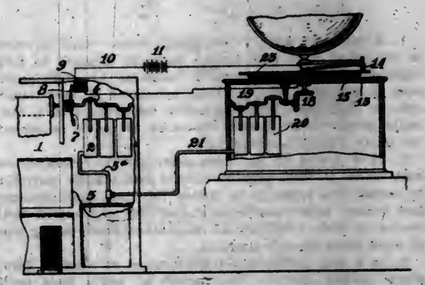
[Claims 6 to 9 not printed in the Gazette.]

958,730. TALKING-MACHINE AND PIANO RECORDING DEVICE. WALTER M. DAVIS, New York, N. Y. Filed Apr. 17, 1909. Serial No. 490,597.

The combination with a piano, of mechanism for moving a sheet of paper and mechanism for making upon this moving paper a record of the notes produced in playing the piano, and means for making a talking machine record of another musical performance produced at the same time and place with the piano performance, of which the record is being produced on the sheet of paper in playing the piano, and motor means for operating the talking machine record, and the above-mentioned paper-sheet-moving mechanism at the same time and at the same relative speeds, whereby the records, made at the same time, of notes produced on the piano and the sounds received by the talking machine, at the same time are recorded in both recording means at the same relative speeds at which they are produced.



958,731. COMBINED PIANO-PLAYER AND TALKING-MACHINE. WALTER M. DAVIS, New York, N. Y. Filed Sept. 10, 1909. Serial No. 517,000.



1. The combination with a piano playing mechanism, making use of a perforated note sheet, and a motor means, in said mechanism, for moving the note sheet controlling the playing mechanism of said piano player, and a talking machine, of means for automatically throwing the paper moving mechanism of the piano player into gear with the motor for operating it and means on the talking machine for inaugurating the actuation of the means for throwing the paper moving mechanism of the piano player into gear with the said motor, substantially as set forth.

2. The combination with a piano playing mechanism, of a music roll, a motor, a clutch for throwing the motor into gear with the music roll, means for operating the clutch, a talking machine and means for controlling the clutch operating means by the talking machine, substantially as set forth.

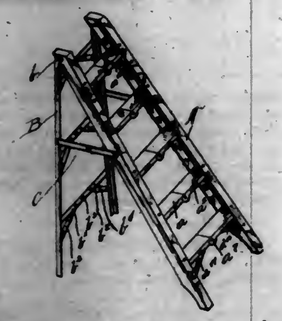
3. The combination with a piano playing mechanism, of a music roll, a motor and means for operatively connecting the roll with the motor, an electric device for adjusting said means, a talking machine and means on the talking machine for closing the circuit of the electric device, substantially as set forth.

4. The combination with a piano playing mechanism, of a music roll, a motor, a clutch, an electromagnet for operating the clutch, an electric circuit, a talking machine, and means for closing the electric circuit by means of the talking machine disk and stylus, substantially as set forth.

5. The combination with a piano playing mechanism, of a music roll, a motor, means for connecting the music roll with the motor, an electromagnet for operating such means, an electric circuit, a talking machine, a record

disk having an electrical contact in its record surface and connections for conducting electricity from the contact piece in the record to the electromagnet aforesaid and connections for transmitting the electro-current through the needle or stylus of the talking machine, substantially as set forth.

958,732. LADDER. JOHN J. DENNIS, Chicago, Ill., assignor to Dennis Novelty Ladder Company, a Corporation of Illinois. Filed Mar. 6, 1908. Serial No. 419,470.



1. A foldable ladder comprising stiles, steps pivoted to the stiles, each step hinged centrally adapted to fold together, brace bars pivotally connected at their outer ends to the stiles and pivotally connected at their inner ends to the steps, each brace bar constructed of a plurality of parts and means connecting the parts to permit the parts sliding longitudinally.

2. In a device of the class described the combination with stiles of steps pivoted thereto and hinged centrally to permit the stiles to be folded together longitudinally and braces, each comprising a plurality of sections connected to slide relatively of each other and bracing one or more steps in open position.

3. In a step ladder stiles constructed of channel bars, props hinged thereto constructed of angle bars each adapted to fold against the stiles at one of the angles, horizontal bars connecting the props, each hinged centrally to permit the props folding toward each other, foldable steps pivoted at their ends to the stiles adapted to fold in the channel bars, brace bars connecting the stiles and the steps centrally, brace bars connecting the props and the horizontal bars, each brace bar constructed of a plurality of bars and means connecting the bars forming each brace bar adapting each brace bar to extend longitudinally.

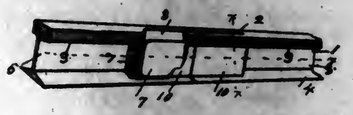
4. In a foldable ladder the combination with stiles, of steps hinged thereto and each step hinged centrally, adapting said stiles to move toward and from each other and to fold and extend the steps correspondingly, brace bars comprising a plurality of parts pivoted to the stiles and to the steps, and means for slidably connecting the parts of each brace bar.

5. In a device of the class described the combination with pressed metal stiles of channel form, of steps foldable thereagainst and adapted to be concealed in the channel bars when folded, brace bars for said steps, each brace bar extensible longitudinally and adapted to fold in said channel bars and to be concealed therein, props hinged to said stiles and steps and capable of being folded upon the stiles and laterally upon each other.

[Claims 6 and 7 not printed in the Gazette.]

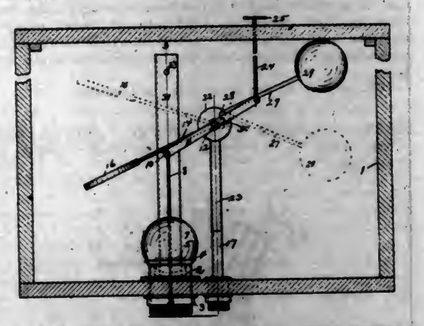
958,733. RAIL-JOINT FOR RAILWAY-RAILS. RAYMOND C. DOLE and ED ELLIS, Guthrie, Okla. Filed Sept. 10, 1909. Serial No. 517,132.

1. A rail joint for railway rails consisting of two abutting rail ends having a thickened web, and provided with coincident vertical slots having longitudinal recesses upon opposite sides thereof; a key or plate loosely mounted in the said vertical slots with its upper edge flush with the tread of the rails; and plates removably mounted in the said recesses respectively.



2. In a rail joint the combination of two railway rails having their abutting ends provided with coincident vertical slots having upon both sides and near the bottom thereof longitudinal lateral recesses; a key-plate loosely mounted in the said slot with its upper edge forming a continuous tread; and plates loosely mounted in the said recesses respectively.

958,734. CLOSET-FLUSHING DEVICE. CHARLES H. DUNCAN, Erie, Pa. Filed May 23, 1908. Serial No. 434,479.



1. In a closet flushing device, the combination of a tank; a water inlet; a valve controlling the inlet; a weight for closing the valve; a closet trip for opening said valve and setting said weight; a float; and float actuated tripping mechanism for locking said weight against closing the valve, said mechanism being actuated by the float to release said weight as the float reaches a predetermined level.

2. In a closet flushing device, the combination of a tank having a discharge opening therein; a discharge valve controlling said opening; a water inlet; an inlet valve controlling said inlet; an actuating means for closing the inlet valve; a closet trip for setting said means and opening the discharge valve; a float; and float actuated tripping mechanism for locking said means against closing the water inlet valve, said mechanism being actuated by the float to release said means as the float reaches a predetermined level.

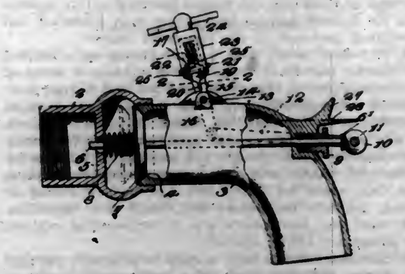
3. In a closet flushing device, the combination of a tank having a discharge opening; a discharge valve controlling said discharge opening; a float carrying said valve; a water inlet; an inlet valve controlling the inlet; an actuating means for closing the inlet valve; a closet trip for opening said inlet valve, setting said means and opening the discharge valve; a float; and float actuated tripping mechanism for locking said means against closing the valve, said mechanism being actuated by the float to release said means as the float reaches a predetermined level.

4. In a closet flushing device, the combination of a tank having a discharge opening; a valve controlling said opening; a water inlet; an inlet valve controlling said water inlet; a lever; a connection between the lever and discharge valve; a connection between the lever and the closet trip; means for closing the inlet valve, said means being in the path of the lever, and arranged to be set by the movement of said lever; a float; float mechanism for locking said means against closing the inlet valve, said mechanism being actuated by the float to release said means, and said lever being free to move independently of said means to permit the closing of the discharge valve; and said closet trip.

5. In a closet flushing device, the combination of a tank having a discharge opening; a float valve controlling the discharge opening; an inlet valve; a swinging lever 11; a rod connecting the float valve with the lever; a connection between the lever and the closet trip; a rotative inlet valve; a rod 14 secured to said inlet valve and arranged in the path of the lever 11; means for exerting closing pressure on the rod 14; a float rod 27 having a trigger 30 for engaging the rod 14 and locking it in its upper position; a float on the rod 27 adapted to move the rod 27 and trigger on said rod to release the rod 14 and permit the closing of the inlet valve; and said closet trip.

[Claims 6 to 13 not printed in the Gazette.]

958,735. LOCKING-FAUCET. JOSEPH S. ERICSON, Burbank, Cal. Filed July 13, 1909. Serial No. 507,386.



1. A faucet body, a valve within the faucet body adapted to close the passage therethrough, an operating lever connected with said valve and mounted exteriorly to the faucet body, a detent mounted on the lever, a lug on the faucet body with which said detent engages to hold the valve in its open or closed position, and a key engageable with the lever and adapted to lift the detent out of engagement with the lug.

2. The combination with a faucet body, of an interior valve controlling the passage way through the faucet body, a valve rod extending through the faucet body, a lever connected with the valve rod, a locking lug on the valve body, a movable detent on the lever engaging the said lug, and a locking key engageable with said detent, said key being formed with inclined cam faces engaging with the detent and adapted upon a rotation of the key to raise the detent from its engagement with the lug.

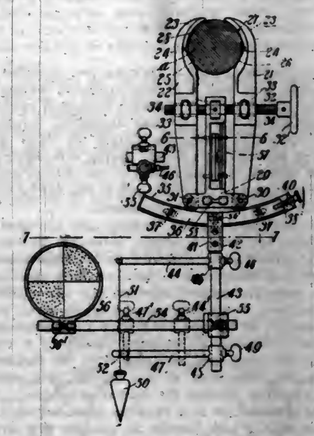
3. The combination with a faucet body, of an interior valve closing the passage therethrough, a valve rod, a lever pivoted to the outside of the faucet body and connected to the valve rod, a movable detent carried by the lever and engaging with the valve body to hold the lever in one position or another, pins projecting from the detent, and a rotatable key detachable from the lever, but engageable therewith, said key having cam faces formed thereon adapted to engage with the said pins to raise said pins and detent when the key is turned in one direction.

4. The combination with a faucet body having an interior valve seat, of a valve movable against said seat, a rod upon which said valve is mounted extending through the faucet body, a bifurcated lever pivoted upon the faucet body and having its legs connected to the end of said valve rod, said bifurcated lever at its upper end being formed with a cylindrical upwardly extending hub formed with a socket, a detent carried in said socket and engaging with the valve body to hold the lever in one or another position, and a rotatable key formed with a cylindrical socket engageable over said hub, the lower end of said key formed with cam faces adapted to engage with the detent and lift the same upon a rotation of the key.

5. The combination with a faucet having an interior valve seat, of a valve therein, a valve rod projecting through the faucet, a bifurcated lever mounted on the faucet body, links connecting the ends of the lever with the valve rod, an upwardly projecting hub formed on said lever, a locking device mounted within the hub and engaging with the body of the faucet to lock the lever set in one or another position, and a key fitting over the hub and engaging with the same to provide a means for moving the lever, said key being formed with means whereby the detent may be raised from its locking engagement with the faucet.

[Claims 6 and 7 not printed in the Gazette.]

958,736. SHAFT-ALINING DEVICE. EDGAR S. FERRIS, Holyoke, Mass. Filed Aug. 26, 1908. Serial No. 450,371.



1. A shaft alining device having in combination, a fixed target, a transit, a movable target, means for temporarily attaching the same to the shaft, said means including a pair of jaws having bearing points to engage the shaft, means for moving the jaws toward and away from the shaft, means carried by the jaws for determining the parallel relation between a vertical plane passing through the axis of the shaft and a vertical plane passing through the line extending from the center of the target and the transit, said means including a plumb-line, a horizontal arm for supporting the line, a second arm having a notch therein, an arc-shaped member secured to the jaws, connecting means between the arm and arc-shaped member and a thumb-screw for operating the arc-shaped member, whereby when the thumb-screw is operated the outer end of the arm which supports the line will be raised and lowered and the line brought into registration with the notch in the second arm substantially as described.

2. A shaft-alining device having in combination, a target fixed to a suitable support at one end of the shaft, a transit fixed to a suitable support at the other end of the shaft, a target-supporting device, means for temporarily securing the device to the shaft at various points along its length, said device including two arc-shaped members, and means for moving one in relation to the other for effecting a constant relation between the center of the shaft and the center of the target, an arm, a plumb-line supported thereby, and a second arm for determining the vertical position of the device, as described.

958,737. STEAM THAWING-TOOL. GEORGE H. FINNEGAN, Fairbanks, Alaska. Filed Feb. 27, 1905. Serial No. 301,973.



1. The combination of a thawing tool provided with a longitudinal bore, and a lateral extension having a pair of axially alined bores of different diameters connected to the longitudinal bore; a hose extending through both bores of the lateral extension, fitting the walls of one of said bores, and having a helical spring surrounding it and arranged within the other bore of the lateral extension; and means engaging the outer end of the spring to hold it and the hose to the lateral extension.

2. The combination of a thawing tool provided with a longitudinal bore and a lateral extension having a pair of axially alined bores connected to the longitudinal bore, the inner bore being of less diameter than the outer one, and the shoulder formed between the two alined bores being inclined; a hose fitting the inner bore; a helical spring located within the outer bore and surrounding the hose, and abutting the inclined shoulder; a ring surrounding the hose and provided with an inclined bore abutting the other end of the spring; and means for holding the ring against the lateral extension.

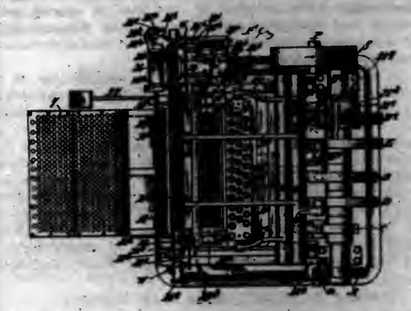
3. The combination of a thawing point having a lateral extension with a bore leading in through said extension, a hose the end of which is fitted into said bore, and an externally operated clamp having contractible means to clamp and hold the end of the hose within said bore.

4. The combination of a hose, a tapered chamber in which the end of the hose is positioned, a gland surrounding the hose and having a tapered opening registering with said chamber and opposing the taper thereof, and a helical spring compressed in said chamber, with its ends coöperating with said tapered portions.

958,738. MACHINE FOR CASTING AND SETTING INDIVIDUAL TYPE. JOSEPH C. FOWLER, Chicago, Ill., assignor, by mesne assignments, to J. Renwick Preston, Chicago, Ill. Filed Dec. 30, 1904. Serial No. 239,000.

1. The combination with a mold having cells adapted for casting individual type, of a metal pot, a series of pumps arranged for operation in the pot, a series of matrix bars having character matrices, means for releasing the matrices, and locking means for the pumps governed by the matrices and released instantly upon the release of the matrices.

2. The combination with a mold having cells adapted for casting individual type, of a series of matrix bars, means for selectively presenting individual matrix characters in front of the mold cells, a metal-pot, a series of pumps corresponding in number with said cells and operating in said pot and having independent communication with the mold cells, and locking means for the pumps governed by the matrices and released instantly upon the presentation of a matrix character to a mold cell.



3. The combination with a mold having cells adapted for casting individual type, of a metal-pot, a series of pumps operating in said pot and having independent communication with the mold-cells, a series of matrix-bars having matrices, means for selectively presenting the matrices to the mold, and means governed by the matrix-bars for locking part of said pumps from operation and permitting operation of the remainder thereof.

4. The combination with a mold having cells adapted for casting individual type, of a metal-pot, a series of pumps arranged to operate in said pot and having independent communication with the mold-cells, a series of matrix-bars having matrices, means for selectively presenting said matrices to said mold, and bolts for engaging elements of the pumps, the coöperative relation between said matrix bars, pump elements and bolts being such that when the matrix-bars are in their initial, or stored, position, the pumps are locked from operation, and when the matrix-bars are in type-casting position the pumps are free to operate.

5. The combination with a mold having cells adapted for casting individual type, of a metal pot, a series of pumps in the same arranged to operate in said pot and having independent communication with the mold-cells, a series of matrix bars having character matrices, a key mechanism and intermediate mechanism actuated by the key mechanism for selectively presenting a matrix to a mold cell, and means for locking the pumps against operation released immediately by the matrices when presented to the mold cells.

[Claims 6 to 65 not printed in the Gazette.]

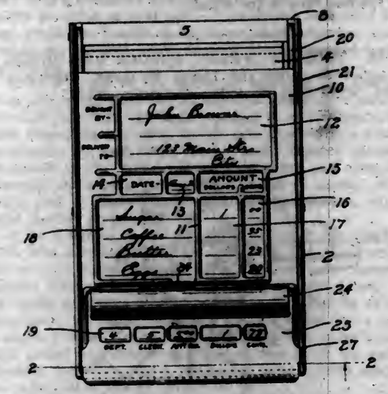
958,739. SALES-BOOK HOLDER. NILS F. GARBO, Minneapolis, Minn. Filed Aug. 20, 1906, Serial No. 331,291. Renewed Sept. 8, 1908. Serial No. 452,059.

1. The combination, in a sales book holder, with a suitable base, of a cover having openings through which entries may be made upon the exposed sheet of a book in said holder, and a parallel motion connection between said cover and said base.

2. The combination, in a sales book holder, with a suitable base, and means for securing a sales book thereon, of a cover having openings through which entries may be made upon the exposed sheet of said book, and a connecting mechanism between said cover and said base which permits said cover to rest upon the top of said book, parallel with the base, regardless of the thickness of the book.

3. The combination, in a sales book holder, with a suitable base, and means for securing a sales book thereon, of a cover having openings through which entries may be made upon the exposed sheet of said book, a connecting mechanism between said cover and said base, and means on said cover for supporting a record sheet.

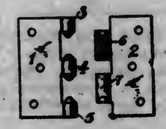
4. The combination, in a sales book holder, with a suitable base, and means for securing a sales book thereon, of a cover having openings through which entries may be made upon the exposed sheet of said book, a connecting mechanism between said cover and said base, and an auxiliary plate pivotally supported on said cover, a record sheet, and means on said auxiliary plate for supporting said record sheet.



5. The combination, in a sales book holder, with a suitable base, of a cover supported thereon and having openings through which entries may be made upon the exposed sheet of said book, an auxiliary plate pivotally supported upon said cover, and provided with a series of openings, a record sheet, and means on said auxiliary plate for supporting said record sheet beneath said openings, whereby entries may be made on said record sheet through the openings in the auxiliary plate.

[Claims 6 to 12 not printed in the Gazette.]

958,740. HINGE. CHARLES GLOVER, New Britain, Conn. Filed July 22, 1909. Serial No. 508,917.

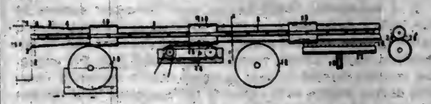


1. In a hinge composed of two parts or leaves of sheet metal, knuckles at the edge of one leaf, each knuckle having an integral end projection forming a pintle, and knuckles on the companion leaf having end recesses arranged to receive and surround the pintle projections upon the adjacent companion knuckles, all of said knuckles being formed from rolled up sheet metal.

2. In a hinge composed of two parts of sheet metal, forming leaves, integral interlocking knuckles arranged at the adjacent edges of said leaves having cone-like extensions and depressions arranged to couple said leaves and to permit said leaves to turn relatively to each other, one of the knuckles on one leaf being arranged between two knuckles on the adjacent leaf to prevent independent end play of said leaves, all of said knuckles being formed of rolled up sheet metal.

958,741. CAN-FORMING APPARATUS. CHARLES W. GRAHAM, Rome, N. Y., assignor, by mesne assignments, to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 25, 1908. Serial No. 412,566.

1. In apparatus of the class described, in combination, means adapted to force the portion of a can body in which the seam is positioned into temporarily flattened condition, solder applying means, and means adapted to bring the said solder applying means and said can seam into operative relation one to another with said can in said condition.



2. In apparatus of the class described, in combination, means adapted to apply solder to a can seam, means adapted to hold the can with the portion thereof in which the seam is positioned in temporarily flattened condition, and means adapted to wipe said seam while held in said condition.

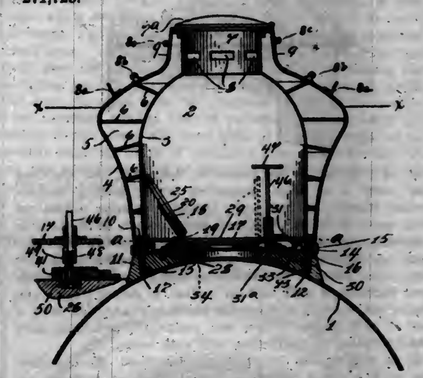
3. In apparatus of the class described, in combination, means adapted to apply solder to a can seam, and means adapted to hold the can with the portion in which the seam is positioned in temporarily flattened condition during the cooling thereof.

4. In apparatus of the class described, in combination, means adapted to force the portion of a can body in which the seam is positioned into temporarily flattened condition, solder applying means, wiping means, and means adapted to bring said can body while in said condition into successive relation to said solder applying means and said wiping means.

5. In apparatus of the class described, in combination, means adapted to force the portion of a can body in which the seam is positioned into temporarily flattened condition, solder applying means, and means adapted to bring said can body and said solder applying means into operative relation one to another and to permit the cooling of said seam with said can in said condition.

[Claims 6 to 20 not printed in the Gazette.]

958,742. SUBMARINE VESSEL. ANTHONY J. GRIFFIN, New York, N. Y. Filed July 29, 1905. Serial No. 271,725.



1. A submarine vessel having upon the outer surface of the hull a detachable buoyant safety-chamber, said chamber comprising an inner and outer shell, the space between said shells being divided into watertight compartments, a hatch through which said chamber can be entered from the interior of the hull, means for closing said hatch at will, and means, operable from within said chamber, for releasing said chamber from said hull.

2. A submarine vessel having upon the outer surface of the hull a detachable buoyant safety-chamber, said chamber comprising an inner and outer shell, the space between said shells being divided into watertight compartments, a floor within said safety-chamber, a closable hatch in said floor, a closable hatch in said hull in alinement with the hatch in said floor, a releasable locking device carried by

said hull for holding said safety-chamber and said hull firmly together, and means within said chamber for operating said releasable locking device to release said chamber from said hull.

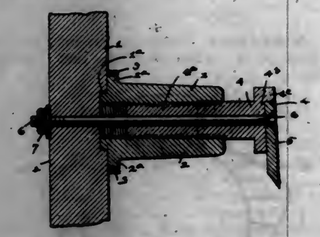
3. A submarine vessel having upon the outer surface of the hull a detachably secured buoyant safety-chamber, a hatch in said hull through which said chamber can be entered, movable latches mounted upon said hull for engaging catches carried by said chamber, and a manually operable device within said chamber for operating said latches to release said chamber from said hull.

4. A submarine vessel having upon the outer surface of the hull a detachable buoyant safety-chamber, said chamber comprising an inner and outer shell, the space between said shells being divided into watertight compartments, catches carried by said chamber, latches movably mounted upon said hull for engaging said catches, and a manually operable means within said chamber for operating said latches to release said chamber from the hull.

5. A submarine vessel having upon the outer surface of the hull a detachably secured buoyant safety-chamber, means interposed between said hull and said chamber for making the connection watertight, catches carried by said chamber, movable latches mounted upon said hull for engaging said catches, a gear rotatably mounted upon said hull for operating said latches, a pinion carried by said chamber for operating said gear, and means for operating said pinion.

[Claims 6 to 8 not printed in the Gazette.]

958,743. KNIFE-ADJUSTING MEANS FOR FEED-CUTTERS. JOHN J. GROMME, Lancaster, Ohio, assignor to The Hocking Valley Manufacturing Company, Lancaster, Ohio, a Corporation of Ohio. Filed Oct. 9, 1909. Serial No. 521,930.

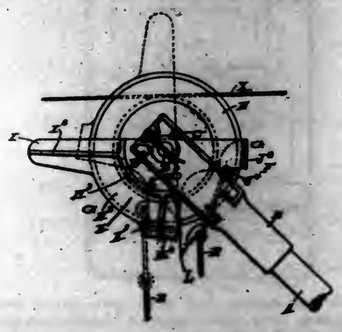


1. In a device of the character described, the combination with a suitably supported wheel having sockets formed therein, of internally threaded tubular bodies the inner ends of which engage in said sockets, knife holding members comprising threaded stem portions and head portions having shoulders thereon, said threaded stem portions being adapted to screw into engagement with the interal threads of said tubular bodies, a cutter blade, and means for securing said cutter blade in connection with a pair of said holder heads, and means for retaining said tubular bodies in connection with said wheel.

2. In a device of the character described, the combination with a wheel having sockets formed at desirable intervals in one face thereof, of tubular internally threaded bodies having their inner end portions engaging said sockets, knife holding members comprising threaded stems which engage the internal threads of said tubular bodies and head portions having shoulders thereon, a cutter blade, and a bolt detachably uniting said cutter blade, holder member and wheel.

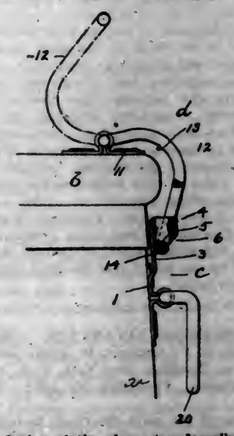
3. In a device of the character described, the combination with a suitably supported wheel having sockets formed therein, of internally threaded tubular bodies, the inner ends of which engage in said sockets, a toothed flange carried by each of said tubular bodies, knife holding members comprising threaded stem portions and head portions, each of said head portions having a shoulder formed thereon, a knife extending between two of said heads and having its rear edge resting against said shoulders, the threaded stem portions of the knife holding members being adapted to screw into engagement with the internal threads of said tubular bodies, bolts passing through said knives and through the threaded stem portions and through the wheel, and members threaded upon said bolts upon the rear face of the wheel.

958,744. TROLLEY-WHEEL HOLDER AND GUIDE. WILLIAM A. GUNN and LEWIS W. LINK, Cincinnati, Ohio. Filed Sept. 10, 1908. Serial No. 452,411.



In combination, a trolley wheel holder, a trolley rope, a trolley wheel, and a frame rotatable relatively to the said holder and consisting of two side rotatable pieces, and provided with outwardly inclined arms for guiding the said wheel to the trolley wire, said frame having an opposite connection uniting the said two side pieces, and provided with an eye for connection with the rope, and said frame having a curved strengthening rib H^3 which also constitutes a stop for the said frame, said stop adapted to impinge against the trolley holder as the supplemental abutment or stop and prevent further rotation of the said frame, substantially as and for the purposes specified.

958,745. HASP-HANDLE FOR WASHING-MACHINES AND OTHER CONTAINERS. JACOB P. HOLTZHOUSER, New Britain, Conn., assignor to The Stanley Works, New Britain, Conn., a Corporation of Connecticut. Filed Feb. 18, 1909. Serial No. 478,555.



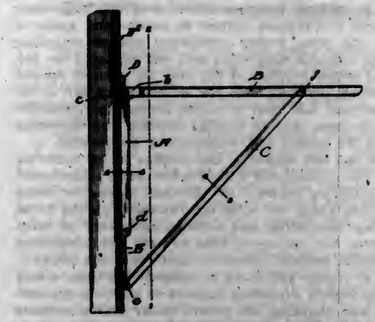
1. In a device of the character described the combination with the container and its cover, of a base-plate mounted on said container, an offset lip on said base-plate, a locking projection on said offset lip, a latch member pivotally mounted on the upper side of said cover and arched to embrace the edge of said cover, a handle-bar on said latch adapted to engage said locking projection.

2. In a device of the character described the combination with a container and its cover, of a latch member pivotally mounted on said cover, a yieldingly supported locking projection fixedly mounted on said container, and a handle-bar on said latch adapted to engage said locking projection.

3. In a device of the character described the combination with a container and its cover, of a base-plate mounted on said container, a handle secured to and supported by said base-plate, an offset lip on said base-plate, a locking projection on said offset lip, a latch member pivotally mounted on the upper side of said cover and arched to embrace the edge of said cover but out of contact therewith, and a handle-bar on said latch adapted to engage said locking projection.

4. In a device of the character described the combination with a container and its cover, of a base-plate mounted on said container and having a transverse recess, a handle having inturned ends fitting in said recess and pivotally supported by said base-plate, an offset lip on said base-plate, a locking projection on said offset lip, a latch member pivotally mounted on the upper side of said cover and arched to embrace the edge of said cover but out of contact therewith, and a handle-bar on said latch adapted to engage said locking projection.

958,746. STAGING-BRACKET. OSCAR L. JOHNSON, Streator, Ill. Filed Jan. 29, 1910. Serial No. 540,887.

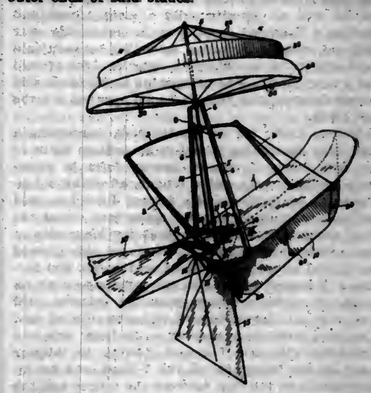


1. A staging bracket comprising a channel bar member having an inner bifurcated portion of increased width, a channel bar member pivoted in said bifurcated portion of the first-named member and having at its inner end an angular rod, a link pivoted in the outer end portion of the second-named member, and a brace pivoted at one end to the outer end of the link and pivoted at its opposite end in the first named channel bar.

2. A staging bracket comprising channel bar members pivotally connected together at their inner ends, an angular rod extending from the inner end of one member and in alinement with said member and then at a right angle to the member and then in a plane parallel to that of the member and in a direction away from the same, and bracing means pivotally connected with the members.

958,747. FLYING-MACHINE. JOHN KOSKINE, Detroit, Mich. Filed June 14, 1909. Serial No. 501,901.

1. A machine of the character described comprising a plane, a propeller shaft carried by said plane and extending upward therefrom, and a propeller wheel upon the upper end of said shaft comprising blades, means for automatically closing the spaces between the blades upon rapid downward movement of the machine, and an outwardly and downwardly extending flange attached to the outer ends of said blades.



2. A machine of the character described comprising a plane, a propeller shaft extending upward from said plane, a propeller wheel having a hub portion secured to said shaft, an outer rim portion, blades connecting the rim portion and the hub portion, an outwardly and downwardly extending flange on the lower edge of the rim, a series of gravity flaps attached to the lower edge of the blades, and means for actuating the wheel.

3. In a machine of the character described a plane, a propeller shaft and a propeller wheel upon said shaft comprising a hub portion secured to the shaft, a rim, blades extending between the rim and hub portion, an outwardly and downwardly curved flange on the lower edge of the rim, a series of gravity flaps upon the lower edge of each blade, and stops to limit the movement of the flaps.

4. A machine of the character described comprising a plane, a motor pivotally mounted upon the plane, a propeller shaft mounted in bearings on the motor to turn therewith and extending upward therefrom, a propeller wheel upon the upper end of the shaft, a bearing for the shaft near the wheel, a support for the bearing, means for adjusting the bearing upon its support to move the shaft and turn the same upon the pivotal support of the motor, wing members having narrow forward ends pivotally attached to the plane and rear ends of a width equal to or greater than the width of the plane, and means for adjusting the wide rear ends of the planes above or below the surface of the plane.

958,748. EXTERNAL ARMOR FOR PNEUMATIC TIRES. JOSEPH L. LA DRIERE, Albuquerque, N. Mex. Filed Jan. 21, 1910. Serial No. 539,359.



1. An external armor for pneumatic tires, comprising a plurality of links detachably joined in an endless chain or ring; each link being of concavo-convex form in cross-section, and having at one end a tongue, affording a longitudinal exterior projection, and a flanged T-head on said tongue, and also having an exterior transverse rib at the

inner end of the tongue, and a recess at the inner side of the tongue, and interior rabbets at the inner side of said transverse rib and at opposite sides of said recess, and further having a T-shaped opening in its outer side near its opposite end, an exterior recess extending between said opening and end, exterior rabbets at opposite sides of said recess, and a comparatively large opening in its inner side and in communication with said T-shaped opening, for the purpose set forth.

2. An external armor for pneumatic tires, comprising a plurality of links detachably joined in an endless chain or ring; each link being of concavo-convex form in cross-section, and having at one end a tongue, affording a longitudinal exterior projection, and a flanged T-head on said tongue, and also having an exterior transverse rib at the inner end of the tongue, and a recess at the inner side of the tongue, and interior rabbets at the inner side of said transverse rib and at opposite sides of said recess, and further having a T-shaped opening in its outer side near its opposite end, an exterior recess extending between said opening and end, exterior rabbets at opposite sides of said recess, a comparatively large opening in its inner side and in communication with said T-shaped opening, an interior protuberance on the inner side of the T-head, and an interior protuberance on the link, between the tongue and the inner opening thereof.

3. An external armor for pneumatic tires, comprising a plurality of links detachably joined in an endless chain or ring and each having a tongue at one end forming a longitudinal projection, and a flanged T-head on said tongue, and a transverse rib at the inner end of the tongue, and also having a T-shaped opening in its outer side near its opposite end, a comparatively large opening in its inner side and in communication with said T-shaped opening, and the said end exteriorly rabbeted.

4. An external armor for pneumatic tires, comprising a plurality of links detachably joined in an endless chain or ring and each having a tongue at one end and a flanged T-head on said tongue and also having a T-shaped opening in its outer side, near its opposite end, and a comparatively large opening in its inner side and in communication with said T-shaped opening.

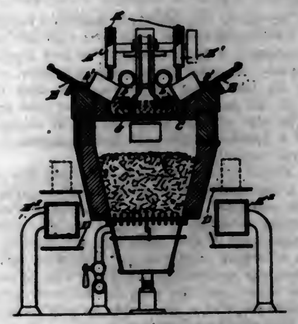
958,749. COLLAPSIBLE CRATE. LEON M. LEIBOWITZ, New York, N. Y. Filed July 12, 1909, Serial No. 507,272. Renewed Apr. 15, 1910. Serial No. 555,715.



The hereindescribed collapsible crate comprising a pair of end members having sockets in their upper and lower edges, a pair of side members hinged to the end members and foldable against the inner faces thereof, respectively, top and bottom members hinged to the side members and foldable thereagainst, said top and bottom members having holes in alinement with said sockets when the crate is in normal position, and sets of detachable locking bolts adapted to pass through said holes into said sockets to lock the crate in open position, said bolts being adapted to be seated in the same said sockets when the crate is folded and having hooked outer ends spanning the outer edges of the top, bottom, and side members, as specified.

958,750. CAN-SOLDERING AND SURPLUS-SOLDER-REMOVING MACHINE. MEREDITH LEITCH, New York, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 12, 1904. Serial No. 224,056.

1. In a can end soldering and surplus solder removing machine, the combination with a solder bath, transversely inclined soldering runways for the cans, means for rotating the cans along the soldering runways, cooling belts, endless can supporting and rotating conveyers or belts, guide plates for the upper runs of said can supporting belts, parallel endless conveyers above said can supporting belts having anti-friction rollers to engage and space or separate the cans, rotary cylindrical buffers extending parallel to said can supporting belts and engaging the corner solder-coated surfaces of the cans, inclined runways for delivering the cans to the can supporting belts and conveyers, and curved or twisted guides for turning the cans into an upright position and delivering them onto the cooling belts, substantially as specified.



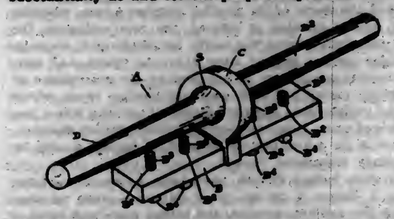
2. In a can end soldering and surplus solder removing machine, the combination with a solder bath, of a soldering runway for the cans, means for rolling the cans along the soldering runway, a cooling belt, an endless can supporting conveyer or belt, a guide plate for the upper run thereof, an endless conveyer above said can supporting belt having anti-friction rollers to engage and space or separate the cans, rotary cylindrical buffers extending parallel to said can supporting belt and engaging the solder-coated corner surfaces of the cans, an inclined runway for delivering the cans from the soldering runway to the can supporting belt, and a curved or twisted guide for turning the cans into an upright position and delivering them onto the cooling belt, substantially as specified.

3. In a can end soldering and surplus solder removing machine, the combination with a solder bath, transversely inclined soldering runways for the cans, means for rotating the cans along the soldering runways, cooling belts, endless can supporting and rotating conveyers or belts, guide plates for the upper runs of said can supporting belts, parallel endless conveyers above said can supporting belts to engage and space or separate the cans, rotary cylindrical buffers extending parallel to said can supporting belts and engaging the corner solder coated surfaces of the cans, inclined runways for delivering the cans to the can supporting belts and conveyers, and curved or twisted guides for turning the cans into an upright position and delivering them onto the cooling belts, substantially as specified.

4. In a can end soldering and surplus solder removing machine, the combination with a solder bath, of a soldering runway for the cans, means for rolling the cans along the soldering runway, a cooling belt, an endless can supporting conveyer or belt, a guide plate for the upper run thereof, an endless conveyer above said can supporting belt to engage and space or separate the cans, rotary cylindrical buffers extending parallel to said can supporting belt and engaging the solder coated corner surfaces of the cans, an inclined runway for delivering the cans from the soldering runway to the can supporting belt, and a curved or twisted guide for turning the cans in an upright position and delivering them onto the cooling belt, substantially as specified.

958,751. CLAMP FOR MENDING BROKEN TROLLEY-POLES AND OTHER ARTICLES. RENIX W. LOVETT, Cincinnati, Ohio. Filed Dec. 4, 1908. Serial No. 465,961.

1. A clamp, consisting of a body piece, an extension projecting from the body piece and provided with oppositely extending rods respectively located at a distance from the body piece, said body piece provided with screws adapted to be advanced against the sides of the said rods, substantially as and for the purposes specified.



2. A clamp, consisting of a body piece, an extension therefrom, cylindrical rods which taper and are connected at their larger ends to the extension, each rod provided next to the extension with an increased taper, the body piece being located at a distance from the said rods and screws extending through the said body piece and adapted to bear against the said rods substantially as and for the purposes specified.

958,752. TELESCOPIC TUBE. OTTO MACKENSEN, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed Dec. 15, 1909. Serial No. 533,164.



1. The combination of two cylindrical telescopic tubes and an eccentric annular body located tightly around the inner tube and adapted to be rotated concentrically to the outer tube, the latter tube being fitted with an eccentric surface for guiding the inner tube.

2. The combination of two cylindrical telescopic tubes and an eccentric annular body presenting a guiding surface to the inner tube and adapted to be rotated concentrically to the outer tube, the latter tube being fitted with an eccentric surface for guiding the inner tube and means being provided for preventing the annular body from being displaced along the outer tube.

3. The combination of two cylindrical telescopic tubes and an eccentric annular body presenting a guiding surface to the inner tube and adapted to be rotated concentrically to the outer tube, the latter tube being fitted with an eccentric surface for guiding the inner tube and means being provided for preventing the annular body from being displaced along the outer tube and from being rotated beyond the position, where its guiding surface is in line with that of the outer tube.

4. The combination of two cylindrical telescopic tubes and an eccentric annular body located around the inner and within the outer tube so as to present a guiding surface to the inner tube and be rotatable concentrically to the outer tube, the latter tube being fitted at its end with an eccentric surface for guiding the inner tube, a transverse slot being provided in the outer tube and a peg projecting through the slot being fastened in the annular body.

958,753. ELECTRIC CAUTERY. WILLIAM MEYER, Chicago, Ill. Filed Sept. 13, 1909. Serial No. 517,360.



1. An electric cautery comprising two leads insulated from each other but rigidly united together, a conductor of suitable metal and of incandescing diameter connecting the terminals of these leads, and a coating of hard, non-absorbent and readily sterilizable heat-resistant material applied to the ends of said leads immediately adjacent to said conductor.

2. An electric cautery comprising two leads of unequal length separated by an insulating layer but rigidly united together, a cauterizing conductor of suitable metal connecting the unequal ends of these leads, and a coating of hard, non-absorbent and readily sterilizable heat-resistant material applied to the reach of the longer lead extending opposite said conductor.

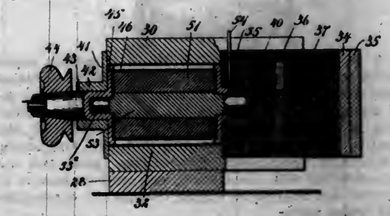
3. An electric cautery comprising two leads of unequal length separated by an insulating strip and twisted down on said strip into a rigid shank, a cauterizing conductor connecting the unequal ends of these leads, and a coating of hard, non-absorbent and readily sterilizable material, a heat resistant, applied to the reach of the longer lead extending opposite said conductor, beyond the twisted shank.

4. An electric cautery comprising two leads of unequal length separated by an insulating strip and twisted down on said strip into a rigid shank, a cauterizing conductor connecting the unequal ends of these leads, and a coating of hard, non-absorbent and readily sterilizable heat-resistant material applied to the reaches of both leads immediately adjacent to said conductor, beyond the twisted shank.

5. An electric cautery comprising two leads of unequal length, insulated from each other but rigidly united together, a cauterizing conductor connecting the unequal ends of these leads, and a hard coating of japan, of suitable thickness applied to the reach of the longer lead opposite said conductor.

[Claims 6 to 8 not printed in the Gazette.]

958,754. HIGH-FREQUENCY MAGNETO. THEODOR M. MUELLER, New York, N. Y. Filed Aug. 4, 1908. Serial No. 446,923.



1. The combination of a permanent magnet provided with poles, a magnetic member provided with poles and spaced apart from said permanent magnet, an inductor having a portion adapted to pass successively all of said poles, and a core disposed intermediate said magnet poles and also intermediate said poles of magnetic material.

2. The combination of a permanent magnet provided with poles, a sector-shaped pole piece normally stationary in relation to said magnet, means for angularly adjusting said pole piece relatively to said magnet, a magnetizable circuit provided with a winding, and an inductor element movable relatively to said magnet and to said pole piece for the purpose of affecting lines of force extending from said magnet to said pole piece and said circuit, whereby a current will be induced in said winding, substantially as described.

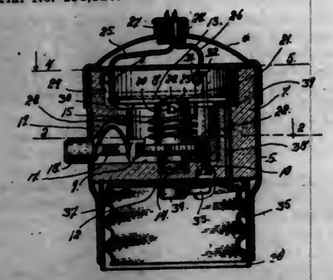
3. The combination of a permanent magnet provided with poles of opposite polarity, members of magnetic material adapted to be energized in opposite sense by induction from said magnet poles, a revoluble inductor provided with members of magnetic material movable relatively to said magnet poles and also to said members of magnetic material, a member having portions of soft iron mounted within said revoluble inductor, and means controllable at will for partially turning said member having portions of soft iron within said inductor for the purpose of effecting the distribution of the magnetic field from said magnet through said inductor.

4. The combination of a magnet, a revoluble inductor of substantially cylindrical form provided with members of magnetic material to be acted upon by said magnet, and a stationary member mounted within said revoluble inductor, said stationary member comprising a plurality of members of magnetic material separated from each other by a non-magnetic substance, and means including a magnetisable circuit, operatively located with relation to the stationary member, a coil thereon, whereby a current may be induced in said coil, substantially as described.

5. The combination of a magnet provided with poles, a revoluble member affected by the magnetic lines of force from said poles for the purpose of generating electric currents, and a member concentric to said revoluble member and adjustable in relation to said permanent magnet, a magnetic circuit having its poles spaced from the poles of said magnet, a coil thereon, whereby alternating currents may be generated, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

958,755. PUSH-BUTTON SWITCH. ADOLPH S. MÜLLER and LEO E. CARRICO, Denver, Colo. Filed May 17, 1909. Serial No. 496,510.



1. A push button switch comprising a ratchet sleeve mounted to rotate, a bridge piece having a stem journaled in said sleeve, the said stem having a pin adapted to engage inclined cams formed on the sleeve, a push button having a pawl adapted to engage the teeth of the ratchet, a spiral spring surrounding the sleeve and having one extremity connected with the bridge piece and the other extremity with the ratchet, and contacts located in the circuit and adapted to engage the opposite extremities of the bridge piece.

2. In a push button switch the combination of a ratchet having a sleeve, a bridge piece located above the sleeve, and having a stem passing therethrough, the sleeve adjacent the bridge piece having inclined cams and offsets at the lower extremities of the cams, the stem having a pin normally engaging one of the said offsets, a spring surrounding the sleeve and having one extremity connected with the ratchet and the other extremity with the bridge piece, and a spring-returned push button having a pawl adapted to engage the ratchet and impart a partial rotary movement thereto for the purpose set forth.

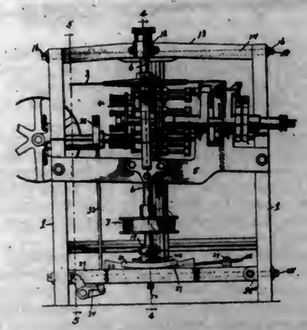
3. A push button switch comprising a ratchet mounted to rotate and having a sleeve terminating at its extremity remote from the ratchet in inclined cams, having shoulders or offsets at the lower extremities of the cams, a bridge piece having a stem passing through the sleeve, a support in which the stem is journaled, a spiral spring connecting the bridge piece with the ratchet and surrounding the sleeve, contacts arranged to engage the opposite extremities of the bridge piece and having upwardly projecting stops, seats also arranged to engage the opposite extremities of the bridge piece after the latter has made a partial turn from the circuit-closing position, and a push button having a member adapted to engage the ratchet for imparting a rotary movement thereto, substantially as described.

4. In a push button switch, the combination of a ratchet member mounted to rotate, a bridge piece having a stem also mounted to rotate, the ratchet member having a sleeve through which the stem of the bridge piece passes, a spiral spring surrounding the said sleeve and connecting the ratchet member and the bridge piece, the stem having a pin and the sleeve of the ratchet member a cam, whereby as the ratchet member is rotated, the cam acting on the pin of the stem, moves the latter longitudinally, whereby the bridge piece is pushed away from the sleeve, and suitable contacts adapted to be engaged by the extremities of the bridge piece, the said contacts having stops which lock the bridge piece against rotation until the latter has been moved away from the sleeve a predetermined distance, and means for actuating the ratchet to impart a step by step rotary movement thereto.

5. A push button switch comprising a ratchet member having a sleeve, a bridge piece having a stem passing through the ratchet member, the bridge piece and ratchet member being coaxially journaled, a coil spring surrounding the sleeve and connecting the bridge piece and ratchet member, a connection between the stem of the bridge piece and the sleeve of the ratchet member, whereby as the latter is given a partial rotation, the stem of the bridge piece is moved longitudinally, and contacts adapted to be engaged by the extremities of the bridge piece, and provided with stops arranged to lock the bridge piece against rotation, until the movement of the bridge piece stem as aforesaid, has been sufficient to disengage the bridge piece from the stops, substantially as described.

[Claim 6 not printed in the Gazette.]

958,756. CORK-TAPERING MACHINE. IRA T. McCREADY, Oak Park, Ill. Filed Apr. 13, 1905. Serial No. 255,414.



1. In a cork tapering machine, the combination, with the frame of the machine and a fixed cork-holding mechanism arranged to rotate the corks, of a circular knife mounted upon a shaft or spindle which is approximately vertical in its various positions and which is adjustable with respect to the perpendicular throughout a limited range of movement in a vertical plane parallel to a vertical axial plane of the cork passing through intermediate points in the cutting arc of the knife in order to incline the knife as desired and thereby vary the taper of the cork, the plane of the knife and said vertical axial plane of the cork being at right angles to each other, and means for automatically lowering and raising said shaft to shift the knife vertically to and from its work at each tapering operation of the machine.

2. In a cork tapering machine, the combination, with the frame of the machine and a fixed cork-holding mechanism arranged to rotate the corks, of a circular knife mounted upon a shaft or spindle having an upper collar bearing which has a swivel connection with the frame of the machine and a lower thrust bearing adjustable through a limited range of movement in the arc of a circle having said swivel as a center, said shaft being approximately vertical in its various positions and adjustable in said arc in a vertical plane parallel to a vertical axial plane of the cork passing through intermediate points in the cutting arc of the knife in order to incline the knife as desired and thereby vary the taper of the cork, the plane of the knife and said vertical axial plane of the cork being at right angles to each other, and means for automatically vibrating said beam to shift the knife to and from its work at each tapering operation of the machine.

3. In a cork tapering machine, the combination, with the frame of the machine and a fixed cork-holding mechanism arranged to rotate the corks, of a beam arranged to vibrate vertically; a supporting member carried thereby and adjustable thereon in the arc of a circle; a circular knife mounted upon a shaft or spindle having an upper collar bearing which has swivel connection with the frame of the machine and a lower thrust bearing carried by said supporting member, said shaft being approximately vertical in its various positions and adjustable in said arc with said swivel connection as a center in a vertical plane parallel to a vertical axial plane of the cork passing through intermediate points in the cutting arc of the knife in order to incline the knife as desired and thereby vary the taper of the cork, the plane of the knife and said vertical axial plane of the knife being arranged at right angles to each other; and means for automatically vibrating said beam to shift the knife to and from its work at each tapering operation of the machine.

4. In a cork tapering machine, the combination, with the frame of the machine and a fixed cork-holding mechanism secured thereon and arranged to rotate the corks, of a beam arranged to vibrate vertically and provided with a way formed in the arc of a circle; a shoe adjustable on said way; a circular knife mounted on a shaft or spindle having an upper collar bearing which has swivel connection with the frame of the machine and a lower thrust bearing carried by said shoe, said shaft being approximately vertical in its various positions and adjustable in said arc of a circle with said swivel connection as a center in a vertical plane parallel to a vertical axial plane of the cork passing through intermediate points in the cutting arc of the knife in order to incline the knife as desired and thereby vary the taper of the cork, the plane of the knife and said vertical plane being arranged at right angles to each other; and means for automatically vibrating said beam to shift the knife to and from its work at each tapering operation of the machine.

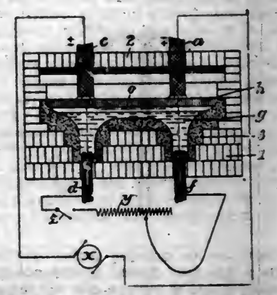
5. In a cork tapering machine, the combination, with the frame of the machine and a cork-holding mechanism arranged to hold and rotate the corks at a fixed inclination to the horizontal, of a circular knife mounted upon a shaft or spindle which is approximately vertical in its various positions and which is adjustable with respect to the perpendicular throughout a limited range of movement in a vertical plane parallel to a vertical axial plane of the cork passing through intermediate points in the cutting arc of the knife in order to incline the knife as desired and thereby vary the taper of the cork, the plane of the knife and said vertical axial plane of the cork being at right angles to each other, and means for automatically lowering and raising said shaft to shift the knife vertically to and from its work at each tapering operation of the machine.

[Claims 6 to 18 not printed in the Gazette.]

958,757. ELECTRIC MELTING AND REFINING FURNACE. HANS NATHUSIUS, Friedenshütte, near Morgenroth, Germany. Filed May 7, 1908. Serial No. 431,300.

1. In an electric furnace, a hearth, electrodes arranged above the hearth and adapted to form a voltaic arc in conjunction with the surface of the material contained therein, additional electrodes in the hearth below the level of the first named electrodes, and means for simultaneously effecting a varying distribution of the electric current flow between different of said electrodes, whereby the heat at the surface and in the body of the molten material is controlled.

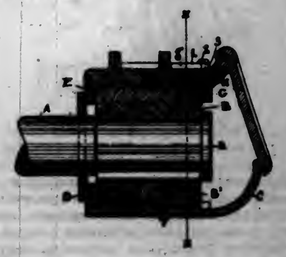
2. In an electric furnace, a hearth, electrodes arranged to cause a current flow through the bulk of the material contained in said hearth, and means for varying the connections of the electrodes with one another, whereby the density of current flow between different electrodes is varied.



3. In an electric furnace, a hearth, electrodes arranged to cause a current flow simultaneously in differing paths through material contained in said hearth, and means for varying the relative density of current along the respective paths.

4. In an electric furnace, a hearth, electrodes arranged to cause a current flow through material contained in said hearth, and means for varying the direction and density of current flow through the body of said material.

958,758. JOURNAL-BOX. WERNER NEUHS, Cleveland, Ohio. Filed Aug. 9, 1909. Serial No. 511,899.



1. In journal boxes, a box and a bearing block therein and a key plate between said box and bearing block, and a plug inserted through the top of said box into said key plate and having its upper end dropped beneath the surface of said block, and an insulating bushing in the block about the top of said plug.

2. A journal box and a bearing therein and a key plate next over said bearing and said box and plate provided with a bore from the top, in combination with a plug having a conducting core inserted in said bore from above and having its top dropped beneath the top of said bore, thereby preventing exposure of the plug for removal.

3. In journal boxes for cars, a box and a bearing therein and a key plate between said parts, in combination with a car axle having an enlargement about its end confining said bearing, said box and plate provided with a bore from the top, a plug inserted in said bore and adapted to lock said parts together, said plug having a non-conducting body and a conducting core and shorter than the bore in which it is placed, thus preventing easy removal.

958,759. PUPPET-VALVE FOR HEAT-ENGINES. LARS G. NILSON, Hoboken, N. J., assignor of one-half to William B. Strang, New York, N. Y. Filed Mar. 16, 1907. Serial No. 362,658.

1. A valve for an explosion engine comprising a stem, a relatively thin curved head having a thickened outside

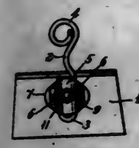
edge forming a seating surface, and elongated resilient ribs integral with said thin curved head and thickened flange extending between the flange and the stem.



2. A valve for an explosion engine comprising a stem, a relatively thin head having a thickened flange on one side forming a seating surface, and ribs integral with the head and flange on the same side as the flange, said ribs extending in other than a radial direction between the flange and the stem.

3. A valve for an explosion engine having a relatively thin head, a thickened peripheral flange on one side of said head, and heat radiating resilient ribs integral with said flange and head, said ribs being elongated and extending between the stem and flange in other than a radial direction.

958,760. THREAD-GUIDE. ISAAC E. PALMER, Middletown, Conn. Filed June 23, 1909. Serial No. 503,875.



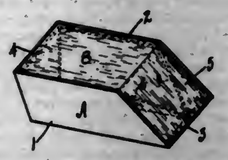
1. The combination with a finger board of a yarn or thread spinning or twisting machine of a yarn or thread guide having an eye at one end and an opposite, elongated, slotted shank, a bearing plate or washer adapted to rest on and having bent lateral edge portions to embrace the said slotted shank, thereby permitting longitudinal adjustment in either direction of the guide relative to said plate or washer, the finger board contacting parts of the said lateral edge portions being outwardly bent or deflected to provide lateral faces to contact flatwise with the surface of the finger board, said faces being provided with interlocking formations to penetrate the surface of the finger board, and securing means between said lateral faces of the bearing plate or washer for forcing the latter toward the finger board, thereby interlocking it therewith but permitting the lateral swinging adjustment of the guide upon loosening said securing means.

2. The combination with a finger board of a yarn or thread spinning or twisting machine of a yarn or thread guide formed of wire having its shank turned back along itself to form an elongated loop and having its opposite end bent to form an eye, a bearing plate or washer adapted to rest on and having bent lateral edge portions to embrace the said elongated looped portion, the finger board contacting parts of the said lateral edge portions of the plate or washer being outwardly bent or deflected to provide lateral faces to contact flatwise with the surface of the finger board, said faces being provided with interlocking formations to penetrate the surface of the finger board, and securing means passing through the said bearing plate or washer between the lateral faces thereof and engaging the finger board, thereby interlocking it therewith but permitting the lateral swinging adjustment of the guide upon loosening said securing means.

958,761. PRODUCTION OF FUEL. THOMAS PARKER, London, England. Filed July 29, 1907. Serial No. 386,088.

In a process for the destructive distillation of coal the application of heat to the retort charged with the coal to be treated, gradually and slowly, up to a maximum ultimate temperature of 800° F. and the arrestment of the process at the stage when illuminating gases have ceased to be evolved, for the purpose and substantially as described.

958,762. DEVICE FOR REFLECTING THE CONCEALED SIDES OF CARDS. WILLIAM T. PECKHAM, Providence, R. I. Filed July 15, 1907. Serial No. 383,867.

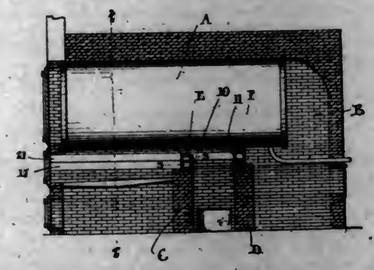


1. An article of the class described, comprising a box-like structure provided with a transparent end and cover, and two mirrors within said box-like structure, the lower edges of said mirrors being beveled and abutting against each other, the upper edge of one of said mirrors being beveled and resting against the inner upper edge of one side of said box, and the upper edge of the other of said mirrors being beveled and resting against the inner upper edge of the opposite side of said box.

2. An article of the class described, comprising a box-like structure having both ends transparent and one of said ends beveled, a transparent cover set in recesses formed in the inner upper edges of the sides of said box-like structure, and two mirrors within said box-like structure, the lower edges of said mirrors being beveled and abutting against each other and upon the bottom of the box, the upper edge of one of said mirrors resting against the inner upper edge of one side of said box, and the upper edge of the other of said mirrors resting against the inner upper edge of the opposite side of said box.

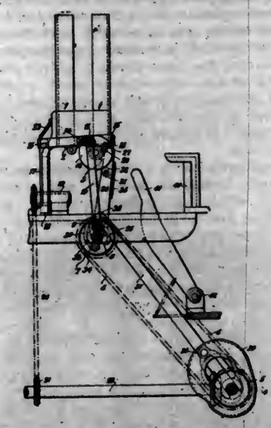
3. An article of the class described, comprising a box-like structure provided with a transparent beveled end and a transparent cover and two mirrors arranged within said box-like structure, the lower edges of said mirrors converging toward each other and the upper edges thereof diverging from each other.

958,763. FURNACE. WILLIAM H. PERKINS, Ottawa, Ontario, Canada. Filed May 8, 1909. Serial No. 494,929.



A furnace provided with side walls, a bridge wall and a baffle wall, air chambers on the bridge wall and baffle wall, conduits in the side wall communicating with the air chambers and opening at the front of the furnace, the air chamber on the bridge wall being provided with rabbets 23 and 24 into which the conduit over the air chamber on the baffle wall will extend.

958,764. APPARATUS FOR DELIVERING SHEETS OF PAPER ONE BY ONE FROM A PILE. EDWARD T. POLLARD, London, England, assignor to International Engineering Company, Limited, Edinburgh, Scotland. Filed Dec. 14, 1909. Serial No. 533,040.



1. In apparatus for delivering sheets of paper, the combination of a hopper for containing a pile of sheets, a segment beneath the pile and on which the paper at times rests, means for oscillating the segment back and forth to cause the segment to first move the front edge of the lowermost sheet in the pile rearward and to then while still engaging the under side of said sheet move it forward, lifting fingers held out of engagement with the pile during the rearward movement of the lowermost sheet thereof and which are formed with inclined surfaces for guiding the front edge of the sheet during its forward movement, means for operating the lifting fingers to raise the front portion of the pile after the lowermost sheet has been separated therefrom by the segment, and grippers which receive said lowermost sheet during the forward movement of the segment.

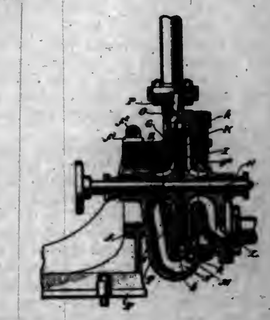
2. In apparatus for delivering sheets of paper, the combination of a hopper for containing a pile of sheets, a roughened segment beneath the pile on which the paper at times rests, means for oscillating the segment back and forth to cause it to first move the front edge of the lowermost sheet in the pile rearward and to then while still engaging the under side of the sheet move it forward, lifting fingers having inclined surfaces and extending beneath the pile of sheets, grippers for withdrawing the separated sheets, means for moving the grippers into position to receive a separated sheet during the forward movement thereof, and means for raising the lifting fingers into the path of the separated sheet as it moves forward and for simultaneously raising the front portion of the pile of sheets.

3. In apparatus for delivering sheets of paper, the combination of a hopper containing a pile of sheets of paper, a strap pivoted to the sides of the hopper and surrounding the front thereof, fingers carried by the strap and adapted to support the front of the pile, a roughened segment beneath the pile adapted to engage the front edge of the lowest sheet of the pile and move it rearward clear of the fingers and then to move such edge forward again, means for rocking the strap on its pivot during the forward movement of the front of such sheet, and means for rocking the segment to and fro.

4. In apparatus for delivering sheets of paper, the combination of a hopper containing a pile of sheets of paper, a strap pivoted to the sides of the hopper and surrounding the front thereof, fingers carried by the strap and adapted to support the front of the pile, a roughened segment beneath the pile adapted to engage the front edge of the lowest sheet of the pile and move it rearward clear of the fingers and then to move such edge forward again, means for rocking the strap on its pivot during the forward movement of the front of such sheet, means for rocking the segment to and fro, a pair of pivoted arms, grippers on the arms adapted to receive the front edge of the sheet so brought forward, and means for rocking the arms.

5. In apparatus for delivering sheets of paper, the combination of a hopper a roughened segment beneath the hopper, means for rocking the segment backward and forward, means for lifting the front of the pile as the segment rocks forward, a sleeve beneath the hopper, a pair of arms fast with it, jaws on the arms, a second sleeve, a pair of arms fast with it, jaws thereon adapted to coöperate with the first mentioned jaws, means for moving one pair of arms longitudinally with reference to the other pair, and means for rocking both sleeves together.

958,765. CENTRIFUGAL PUMP. HARRY A. PRINDLE, Philadelphia, Pa. Filed Aug. 6, 1907. Serial No. 387,331.



1. A pump having a casing provided with an inlet, a runner in said casing, an outlet substantially in the plane of the runner and at one side of the runner, and a discharge chamber for conveying water from said runner to said outlet, said discharge chamber having two separated branches extending from a point substantially on the opposite side of the periphery of said runner from said outlet, around said runner to said outlet.

2. A pump having a casing provided with an inlet, a runner in said casing, an outlet substantially in the plane of the runner, and a discharge chamber for conveying water from said runner to said outlet, said discharge chamber having two separated branches extending from a point removed from said outlet to said outlet.

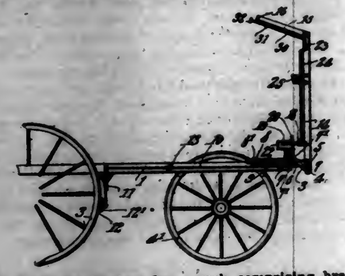
3. A pump having a casing provided with an inlet, a runner in said casing, an outlet substantially in the plane of the runner, a discharge chamber for conveying water from said runner to said outlet, said discharge chamber having two separated branches extending from a point removed from said outlet to said outlet, and said branches gradually increasing in cross-section in a direction toward said outlet.

4. A pump having a casing provided with an inlet, a runner in said casing, an outlet substantially in the plane of said runner, and a discharge passage for conveying water from the runner to the outlet, said discharge passage having two separated branches, beginning at a point on the opposite side of the runner from the outlet and extending to the outlet, and gradually increasing in cross-section.

5. A pump having a casing provided with an inlet, a runner in the casing, diffusion vanes around the runner, and a discharge chamber for receiving the water from said vanes and conveying it to an outlet, said discharge chamber being formed in two separated branches of increasing area of cross-section as they approach the outlet.

[Claims 6 to 18 not printed in the Gazette.]

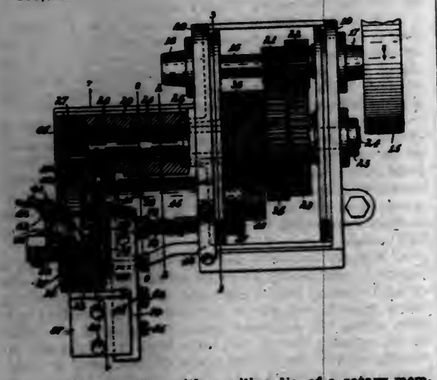
958,766. HAY-RACK BRAKE. ILA R. REEVES, Adelphi, Iowa. Filed Aug. 24, 1909. Serial No. 514,442.



1. A brake mechanism for a rack comprising brackets attached to the rack, a shaft journaled in the brackets and having an arm for connection with the brake-rod, a spring tension means attached to said arm and adapted to hold the free end thereof in a rear position, a bar fixed to the shaft, a bracket attached to the bar, a lever fulcrumed therein, a rack-bar pivotally connected with the first said bar, a loop plate mounted upon the rack and receiving the rack-bar, a bell crank lever fulcrumed to the first said bar, means operatively connecting the bell-crank lever with the rack-bar, and the lever in the bracket, and means for swinging the said bell-crank lever.

2. A brake mechanism for wagon-racks comprising brackets, a shaft journaled in the brackets, and having a vertically disposed arm, spring tension means for holding the said arm in a rear position, said arm adapted to be connected with the brake-rod, a bar fixed to the shaft, an upwardly and rearwardly disposed arm fixed to the bar, a foot-rest fixed to said arm, a rack-bar pivoted to the first said bar, a bracket attached to said bar, a lever fulcrumed to the bracket, a bell-crank lever fulcrumed to the bar, a rod operatively connecting the bell crank lever with the first said lever and the rack-bar, a rod connected with the bell-crank lever and having a seat located beyond said foot-rest.

958,767. COILING MECHANISM. FRANCIS H. RICHARDS, Hartford, Conn., assignor to Edward D. Speer, New York, N. Y. Filed July 6, 1909. Serial No. 505,952.



1. The combination with a coiling die, of a rotary member having an internal circumferentially formed die face, a rotary member having an external circularly formed die face mounted within and eccentric to said internal die face, said die faces being in rolling working engagement one with the other throughout a considerable arc of each and effective to pass work between them and in the direction of their rotation and into the said coiling die.

2. The combination with a coiling die, of a rotatable member having a compressive inner face, a rotatable member arranged eccentrically of the first mentioned rotatable member and having a compressive peripheral surface located within said inner face and coöperative therewith in forming a working pass adjacent to said coiling die.

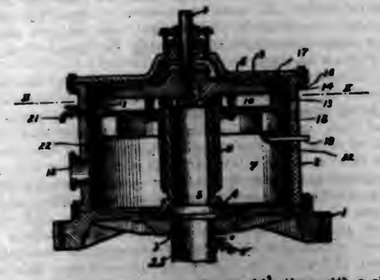
3. The combination with an internally faced roll, of a roll mounted within and coöperative with the internally faced roll for forming a working pass for forming the stock and forcing the same forward, means for rotating the said rolls at the same surface speed, a circumferentially closed coiling die having an open sided portion located adjacent to the working pass of said rolls and in position to receive the stock as this is formed and fed forward by the rolls.

4. The combination with a rotary member having an internal circularly formed die face, of a pair of rotary members mounted within and each eccentric to the said internal die face and each having an external circularly formed die face upon it, a carriage supporting said pair of rotary members, means for adjusting the die faces thereof toward the said internal die face, and a pair of antifriction rollers engaging the outer circumference of said first mentioned rotary member for receiving the thrust of each of said pair of members.

5. The combination with a ring provided on its inner periphery with a circumferential die face and on its outer periphery with a plain bearing face, a carriage, a pair of rolls carried by said carriage and each provided upon its outer periphery with a circumferential die face, said die faces being adapted to coöperate with the die face upon the inner circumference of said ring, and a pair of rolls for engaging the bearing face of said ring at each side of a radial line drawn from the center of said ring through the center of the arc of contact between the die faces of the ring and the inner roll.

[Claims 6 to 12 not printed in the Gazette.]

958,768. CENTRIFUGAL PUMP. WILLIAM K. RICHARDSON, Leavenworth, Kans. Filed Sept. 30, 1908. Serial No. 455,555.

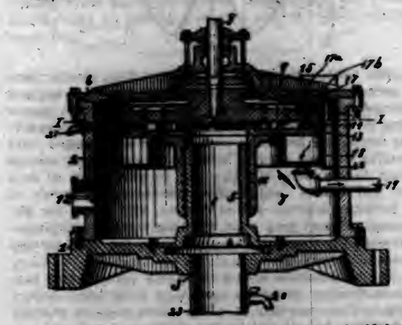


1. In a centrifugal pump, the combination with a closed casing having an outlet passage, of an impeller within said casing and provided with a chamber, an inlet, an outlet passage communicating with said chamber, said outlet passage provided with a valve, of a reservoir contained within said casing for the purpose specified.

2. A rotary impeller having a chamber, blades in said chamber, an inlet for said chamber, an annular outlet chamber for and concentric with the center of said first named chamber, a valve carried by the impeller, and consisting of a vertically movable band bridging the outlet chamber, and adapted to be raised by the water discharge from said outlet chamber, to provide passages for the escape of water from said outlet chamber between its inner edge and the impeller, and its outer edge and the impeller, the area of the inner passage materially exceeding that of the outer passage.

3. In a pump the combination with a rotary impeller having an outlet chamber, and an outlet passage leading therefrom, one side of which is nearer the center of the impeller than the opposite side, of a valve controlling said pump, and opening from the chamber under the pressure of water discharged, taking when open such a position that one way is opened toward the center of the impeller, and another way toward the periphery of the impeller, the latter being more restricted, whereby the larger portion of the water may be discharged through the inner way against centrifugal force, forming a water seal, and sedimentary deposits and water may pass through the outer way.

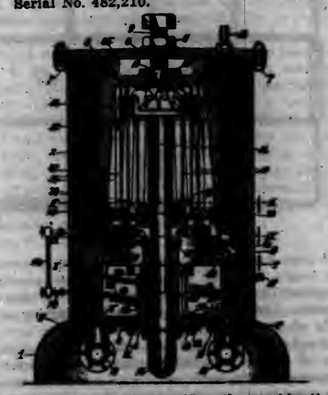
958,769. PROCESS OR METHOD OF PURIFYING OR CLARIFYING WATER. WILLIAM K. RICHARDSON, Leavenworth, Kans. Filed Oct. 1, 1908. Serial No. 455,590.



1. The process or method of purifying or clarifying water, which consists in subjecting water in the presence of air under pressure, to rotary velocity sufficient to separate the solid matter contained in, and held in suspension in the water, and discharging by pneumatic pressure the solid matter with a portion of the water, and discharging the pure water separately, both being delivered from said apparatus substantially as described.

2. The process or method of purifying and clarifying water, which consists in subjecting water to the action of centrifugal force in the presence of air under pressure, aerating and discharging the pure water by pneumatic pressure, and separately discharging the precipitate by pneumatic pressure, substantially as described.

958,770. CENTRIFUGAL WATER-PURIFIER. WILLIAM K. RICHARDSON, Leavenworth, Kans. Filed Mar. 9, 1909. Serial No. 482,210.



1. In a centrifugal water purifier, the combination of a shell containing air under pressure and provided with an intake and an outlet for unpurified water and an outlet for purified water, a receptacle within the said shell with which the outlet for unpurified water communicates, a suitably journaled bowl within the shell adapted to deliver purified water into the shell and provided with orifices to deliver unpurified water into the said receptacle within the shell, means whereby the water supplied to the intake shall revolve said bowl to effect such discharge therefrom of purified and unpurified water, and means within the shell to prevent swirling of the purified water delivered by the bowl.

3. In a centrifugal water purifier, the combination of a shell containing air under pressure and provided with an intake and an outlet for unpurified water and an outlet for purified water, a receptacle within the said shell with which the outlet for unpurified water communicates, a suitably journaled bowl within the shell adapted to deliver purified water into the shell and provided with orifices to deliver unpurified water into the said receptacle within the shell, and means whereby the water supplied to the intake shall revolve said bowl to effect such discharge therefrom of purified and unpurified water; said bowl being provided internally with ribs substantially parallel with the axis of rotation of the shell.

4. In a centrifugal water purifier, the combination of a shell containing air under pressure and provided with an intake and an outlet for unpurified water and an outlet for purified water, a receptacle within the said shell with which the outlet for unpurified water communicates, a suitably journaled bowl within the shell adapted to deliver purified water into the shell and provided with orifices to deliver unpurified water into the said receptacle within the shell, and means whereby the water supplied to the intake shall revolve said bowl to effect such discharge therefrom of purified or unpurified water; the inner surface of the shell sloping upward and inward and downward and inward from said orifices.

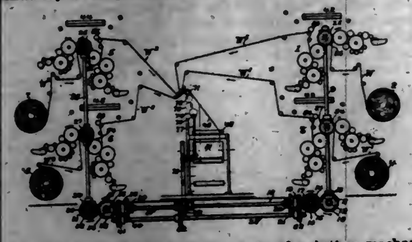
5. In a centrifugal water purifier, the combination of a shell containing air under pressure and provided with an intake and an outlet for unpurified water and an outlet for purified water, a receptacle within the said shell with which the outlet for unpurified water communicates, a suitably journaled bowl within the shell adapted to deliver purified water into the shell and provided with orifices to deliver unpurified water into the said receptacle within the shell, and means whereby the water supplied to the intake shall revolve said bowl to effect such discharge therefrom of purified or unpurified water, the inner surface of the shell sloping upward and inward and downward and inward from said orifices, and ribs projecting inwardly from said sloping surfaces at opposite sides of the said orifices.

[Claims 6 to 12 not printed in the Gazette.]

958,771. PRINTING-MACHINE. OSCAR ROSEN, New York, N. Y., assignor, by mesne assignments, to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed July 6, 1906. Serial No. 324,987.

1. The combination with a printing mechanism comprising a set of rotary double wide printing and perfecting couples, the cylinders of which are parallel, of a single wide longitudinal folder co-acting therewith, a web transferring mechanism coöperating with this set of couples, a second set of couples, the cylinders of which are parallel with the cylinders of the first set, a web transferring mechanism, a single wide longitudinal folder co-acting with the second set, said longitudinal folders being arranged side by side, and means for driving either set and its folder either independently of or simultaneously with the other set and its folder.

2. The combination with a printing mechanism comprising a set of rotary double wide printing and perfecting couples, the cylinders of which are parallel, of a single wide longitudinal folder co-acting therewith, a web transferring mechanism coöperating with this set of couples, a second set of couples, the cylinders of which are parallel with the cylinders of the first set, a web transferring mechanism, a single wide longitudinal folder co-acting with the second set, said longitudinal folders being arranged side by side, means for driving either set and its folder either independently of or simultaneously with the other set and its folder, and means for driving either folder independently of its printing mechanism.



3. The combination with two sets of printing mechanisms, said sets facing each other and each set comprising a plurality of superposed rotary double wide perfecting couples, all the cylinders of the couples being parallel, of a longitudinal folding mechanism located between the sets, said mechanism including two independently operated folders arranged side by side, means for leading all the webs printed on the couples in a straight line to the folding mechanism, and means for transferring laterally the single wide web perfected on either end of any couple and associating it with the single wide web perfected on the other end of the same couple, so that after association these webs may be led in a straight line to one of the side by side folders, the other side by side folder being inoperative if desired.

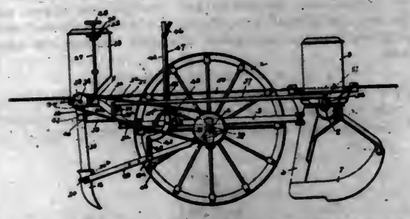
4. The combination with two sets of printing mechanisms, said sets facing each other and each set comprising a plurality of rotary double wide perfecting couples, all the cylinders of the couples being parallel, of two independently driven folders arranged side by side, means for leading all the webs printed on one end of all the couples in a straight line to one folder, and means for leading all the webs printed on the other end of the couples in a straight line to the other folder, means for transferring laterally the single wide web printed on either end of any couple and associating it with the single wide web printed on the other end of the same couple, so that these webs may be led in a straight line to one of the side by side folders.

5. The combination with two sets of printing mechanisms said sets facing each other and each set comprising a plurality of superposed decks of rotary double wide printing couples, all the cylinders of the couples being parallel, of a web transferrer for each deck so arranged that the webs printed on opposite ends of any couple may be associated, two independently operating folding mechanisms arranged side by side, guides whereby the webs printed on one end of the double wide couples may be led to one folder and the webs printed on the other end of the double wide couples to the other folder, and guides whereby the webs either associated or unassociated may be led to a folder.

[Claim 6 not printed in the Gazette.]

958,772. FERTILIZER-DISCHARGING ATTACHMENT FOR CORN-PLANTERS. CHARLES T. ROGERS and FRANK E. LEE, Cardington, Ohio. Filed July 19, 1909. Serial No. 508,384.

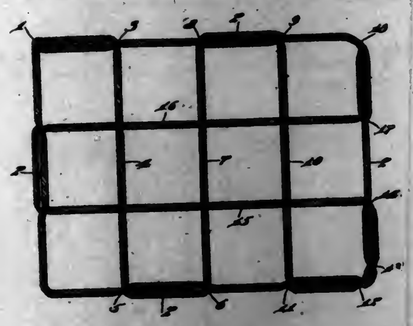
1. The combination with a check-row corn planter having corn dropper operating means, of fertiliser hoppers, and valve controlled discharging conduits adapted to discharge material from said hoppers on opposite sides of a previously planted and covered hill of corn, and connections between said dropper operating means and fertiliser conduit valves whereby the operation of the dropper opens said conduit valves.



2. The combination with a check-row corn planter having corn dropper operating means, of fertiliser hoppers supported by the frame of said corn planter, outlet spouts leading from said fertiliser hoppers, discharging shoes pivotally supported from the corn planter axle, keeper bars embracing the rear sides of said discharging shoes, springs on said keeper bars engaging the forward sides of said shoes, and flexible conduits between the outlet spouts of said fertiliser hoppers and said shoes, and means for discharging material from said fertiliser hoppers simultaneously with the discharge of grain from the corn planter hoppers.

3. The combination with a check-row corn planter having corn dropper operating means, of a fertiliser hopper having bottom openings, a valve plate slidable beneath said fertiliser hopper and having openings, a rack bar connected with said valve plate, a journaled operating shaft having means for moving said rack bar longitudinally, means carried by said shaft for indicating the amount of fertilising material being discharged, valve controlled discharge conduits leading from said fertiliser hopper, and connections between said conduit valves and the corn dropper operating mechanism whereby said valves are opened at each operation of said dropper mechanism.

958,773. ROPE NET. SOLOMON SADO, Philadelphia, Pa. Filed Sept. 8, 1909. Serial No. 516,704.



1. A rope net of the character described, composed of a single length of rope, of twisted strands forming both longitudinal and transverse runs, the strands of the longitudinal runs interlaced and interlocking with the strands of the transverse run.

2. A rope net composed of a single length of rope, consisting of twisted strands forming a rectangular outline and crossed longitudinal and transverse runs, the strands of the rope interlocking and interlacing at the points of crossing, and interlocked and interlacing with the outline, substantially as set forth.

958,774. BLACK MONO-AZO DYE AND PROCESS OF MAKING. FRANZ SCHOLL, Höchst-on-the-Main, Germany, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Aug. 5, 1909. Serial No. 511,267.

1. The process of manufacturing a black mono-azo-dyestuff dyeing on mordants, which consists in combining the diazo-compound of the 4-chloro-2-aminophenol with 1.8.5-aminonaphtholsulfonic acid, substantially as described.

2. As a new article of manufacture, a black mono-azo-dyestuff, dyeing on mordants, of the constitution: 4-chloro-2-diazo-phenol—1.8.5-aminonaphtholsulfonic acid, being a dark powder of a metallic luster, readily soluble in water, pretty readily soluble in alcohol, insoluble in benzene and ligroin, dyeing perfectly evenly a beautiful bloomy violet-bluish-black tint, fast to light, hot-pressing, milling and to potting and acid boiling, substantially as described.

958,775. LINE-GUIDE FOR FISHING-RODS. WILLIAM SHAKESPEARE, Jr., Kalamazoo, Mich., assignor to William Shakespeare, Jr., Company, Kalamazoo, Mich. Filed June 22, 1908. Serial No. 439,793.



1. A line guide for fishing reels comprising a line guide eye having a peripheral groove therein; a support provided with a pair of upwardly-projecting arms; and a securing ring for said eye arranged between and secured to said arms, said ring being contracted by a fold in the under side thereof into the groove of the eye whereby the eye is secured and supported.

2. A line guide for fishing reels comprising a line guide eye; a support provided with a pair of upwardly-projecting arms; and a securing ring for said eye arranged between and secured to said arms, said ring being contracted by a fold in the under side thereof upon said eye whereby the eye is secured and supported.

3. In a line guide for fishing reels, the combination with a line guide eye having a peripheral groove therein, of a support therefor comprising a base portion and a ring or band for said eye mounted thereon, said ring being continuous and contracted by a fold therein into the groove of the eye whereby the eye is secured to said support and supported thereby, said base being connected to said ring at each side of the said loop thereof.

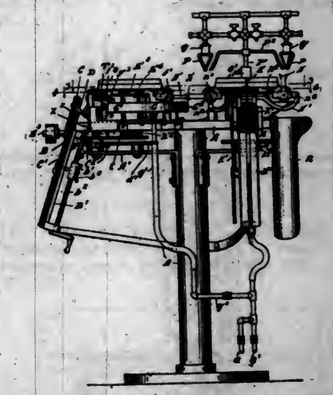
4. In a line guide for fishing reels, the combination with a line guide eye, of a support therefor comprising a base portion and a ring or band for said eye mounted thereon, said ring being continuous and contracted by a fold therein upon said eye whereby the eye is secured to said support and supported thereby, said base being connected to said ring at each side of the said loop thereof.

5. In a line guide for fishing reels, the combination with a line guide eye having a peripheral groove therein, of a support therefor comprising a ferrule; a pair of upwardly-projecting arms secured to said ferrule; and a securing ring for said eye arranged between and secured to said arms, said ring having a loop or fold in the under side thereof, the end of said loop or fold being secured to the end of said ferrule, said ring being contracted by compressing said fold into the groove of the eye whereby the eye is secured and supported.

[Claims 6 to 8 not printed in the Gazette.]

958,776. MACHINE FOR SOLDERING VENT-CLEATS TO CAN-CAPS. LEE C. SHARP, Omaha, Nebr., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed July 18, 1906. Serial No. 326,678.

1. In a machine for automatically soldering vent clips to can caps, the combination with a clip feeder, of a delivery device for the clips, a clip carrier furnished with a plurality of rocking clip holders, a flux bath, a molten solder bath into which one edge of the clip is dipped as it is carried around by the carrier and holder, a clip shaping device, a can cap feeder, a delivery device for the can caps, a cap carrier furnished with a plurality of rocking can cap holders and a plurality of soldering irons for fusing the solder applied to the clips and soldering the same to the can caps, substantially as specified.



2. In a machine for automatically soldering vent clips to can caps, the combination with a solder bath, of a clip carrier furnished with a plurality of clip holders, a can cap carrier furnished with a plurality of cap holders adapted to receive the clips from the holders of the clip carrier and a plurality of soldering irons, substantially as specified.

3. The combination with a clip carrier having clip holders, of a magnetic cap carrier having cap holders, means for transferring the clips from the clip carrier to the cap carrier and assembling the same on the caps, and soldering irons for soldering the clips on the caps while the clip and cap are clamped together by the magnetic cap holder, substantially as specified.

4. The combination with a clip supporting rack, of a clip feeder and a clip delivery device through which the clip feeder passes, said delivery device having separable members which open to permit the clip to pass between them to receive the clip when released by the feeder, substantially as specified.

5. The combination with a rack for supporting a pile of sheet metal pieces, of a reciprocating feeder and a two part chute comprising laterally opening and closing members between which the feeder reciprocates, said members opening to permit the metal pieces to pass between said members, and closing to receive the metal pieces when released by the feeder, substantially as specified.

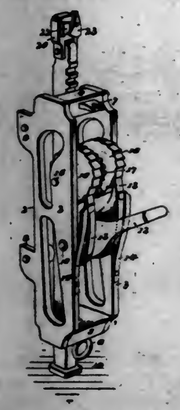
[Claims 6 to 40 not printed in the Gazette.]

958,777. LOAD-BINDER, WIRE-TIGHTENER, AND LIFTING-JACK. JAMES L. SHIPMAN, Mounds, Okla. Filed Apr. 22, 1909. Serial No. 491,520.

1. A device of the character described having two members, one shiftable longitudinally relatively to the other, mechanism mounted on one of the members engaging with the other and adapted to move one member relative to the other, an actuating handle mounted on said member for operating said mechanism, means located at opposite ends of one of the members for engaging with a flexible connection, and a clamp on the other member for engaging with said flexible connection.

2. In a device of the character described, a frame having means thereon for the attachment of a chain or other connection, a rack bar movable in the frame and having means whereby it may be attached to a chain or other connection, a gear wheel engaging with the rack bar, opposed ratchet wheels rigid with the gear wheel, the teeth

of which have a staggered relation to each other, a shaft mounted in the frame, eccentrics attached to the shaft angularly set with relation to each other, a handle attached to the shaft for operating the shaft, opposed pawls engaging with the ratchet wheels, said pawls having enlarged eyes each surrounding an eccentric, and springs mounted on the frame and forcing said pawls inward for engagement with the eccentrics.



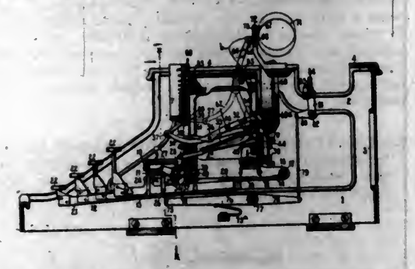
3. In a device of the character described, a frame having opposed side pieces, grooved rollers mounted between these side pieces at one edge thereof, a rack bar moving between the side pieces and engaging in the grooved rollers, one end of said rack bar being provided with a head and the other with means for engaging with the flexible connection, a bifurcated lug projecting from the frame and adapted to engage the flexible connection, a shaft mounted in the frame and having thereon opposed ratchet wheels engaging on each side of the rack bar, a gear wheel mounted between the ratchet wheels and engaging the teeth of the rack bar, a shaft mounted in the side pieces and having opposed eccentrics formed thereon, said eccentrics being angularly seated with relation to each other, opposed pawls having enlarged eyes surrounding the eccentrics, said pawls engaging the ratchet wheels, and pivoted springs mounted on the frame and adapted to force the pawls into engagement with the ratchet wheels.

4. In a device of the character described, opposed side pieces each having upper and lower ears projecting therefrom, grooved rollers mounted between said ears, an eye formed at one end of the frame, a bifurcated stud at the other end of the frame, a shaft passing through the side pieces, a gear wheel mounted on the shaft, ratchet wheels mounted on the shaft on each side of the gear wheel, and rigid therewith, opposed pawls engaging with the ratchet wheels, an eccentric shaft having angularly set eccentrics engaging with the pawls to move them in reverse directions, as the shaft is reciprocated, a lever projecting from the shaft and rigid therewith, pivoted springs for forcing the pawls into engagement with the ratchet, a rack bar movable between the side pieces of the frame, the teeth of which engage the teeth of the gear wheel, said rack bar being held in position by the grooved rollers on the frame, an enlarged head formed at one end of the rack bar and a shackle pivoted at the other end, a pair of hooked studs projecting from one face of the shackle, and means for attachment of a chain and wire gripping jaws formed upon the other face of said shackle.

5. A device of the character described having two members, one shiftable longitudinally with relation to the other, mechanism mounted on one of the members and engaging with the other and adapted to move one member relative to the other, an actuating handle adapted to operate the moving mechanism, an eye at one end of one of the members for attachment to a flexible connection, a bifurcated lug at the other end of said member, a clamp at that end of the other of said members opposed to the eye of the first named member and a hook upon said end of the last named member.

[Claim 6 not printed in the Gazette.]

958,778. TYPE-WRITING MACHINE. ARTHUR W. SMITH, New York, N. Y., assignor to Yost Writing Machine Company, Ilion, N. Y., a Corporation of New York. Filed May 15, 1905. Serial No. 260,441.



1. In a typewriting machine, the combination of a type carrier, a finger key, and an intermediate sub-lever that turns on a plurality of pivotal centers at each printing operation to afford a change in the leverage during the operation of said sub-lever.

2. In a typewriting machine, the combination of a type carrier, a finger key, and an intermediate bell crank that turns on a plurality of pivotal centers to afford a change in the leverage during the movement of said bell crank.

3. In a typewriting machine, the combination of a key lever, a type carrier, and an intermediate bell crank operatively connected to said key lever and type carrier and turning on a plurality of fixed pivotal centers during the movement of said bell crank to afford a change of leverage during the depression of the key lever.

4. In a typewriting machine, the combination of a key lever, a type carrier, a sub-lever that turns on a plurality of fixed pivots at each printing operation, and links that connect the sub-lever to the type carrier and key lever.

5. In a typewriting machine, the combination of a key lever, a type carrier, a bell crank that turns on a plurality of fixed pivots and affords an automatic change of leverage during the operation thereof, and links that connect the bell crank to the type carrier and key lever.

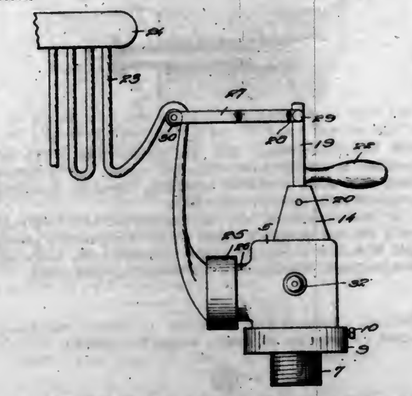
[Claims 6 to 70 not printed in the Gazette.]

958,779. AUTOMATIC HOSE-VALVE. LESLIE E. SMITH and WILLIAM SMITH, Tupelo, Miss. Filed Nov. 15, 1909. Serial No. 528,209.

1. The combination with a valve casing, of a support for said casing, a valve seat formed therein, a valve and stem in alinement with said seat, the upper end of the valve stem extending exteriorly of the valve casing, a cam lever pivotally mounted above said casing normally adapted to close said valve, and a hose supported by the cam lever adapted to operate the same to open said valve.

2. The combination with a valve casing, of a support for said casing, a valve seat formed therein, a valve and stem in alinement with said seat, the upper end of said stem extending exteriorly of the valve casing, a supplemental valve carried by said stem, a valve seat formed in the top of the valve casing adapted to receive said supplemental valve, a cam lever pivotally mounted above said casing, the pivotal point of said lever being out of alinement with the longitudinal center of the valve stem, and a counter weight integrally formed with said lever, and adapted to normally retain the same in engagement with the valve stem.

3. The combination with a valve casing rotatably mounted upon the flanged end of a connecting pipe, a coupling ring threaded upon the end of said casing, and adapted to retain the same in position upon the connecting pipe, a valve seat formed in the connecting pipe, a valve and stem vertically movable in said casing, said valve being normally engaged in the valve seat, ears formed upon the top of said casing, said valve stem extending exteriorly of the casing between said ears, a supplemental valve upon said stem, a valve seat formed in the top of said casing adapted to receive said supplemental valve, a cam lever pivoted between said ears, the cam portion of said lever being normally engaged with the end of the valve stem to retain the valve in closed position, and a counter weight integrally formed with said lever to retain the same in engagement with the valve stem.



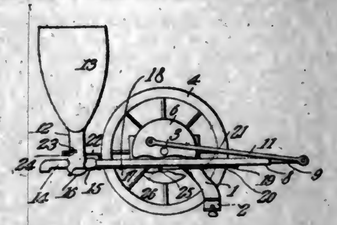
4. The combination with a valve casing rotatably mounted upon the flanged end of a connecting pipe, a coupling ring threaded upon said casing and movable therewith, a valve seated in said connecting pipe, a spider formed in said pipe below the valve, a guide rod extending through a central aperture formed in said spider, ears formed upon the top of said valve casing, said valve stem extending through the casing between said ears, a lever pivoted between said ears out of vertical alinement with said valve stem, a cam formed upon the lower end of said lever adapted to maintain said valve in its seat, a counter weight integrally formed with said lever normally acting to retain said cam in engagement with the valve stem, and a hose supporting member secured to the upper end of said lever.

5. The combination with a valve casing having an inlet and outlet opening, a valve seated in said inlet opening, a valve stem vertically extending therefrom, said stem being positioned through an opening formed in the top of the valve casing, a cam lever pivoted above the valve casing and normally engaging with said valve stem to retain the valve in its closed position, a hose, a hose supporting member removably secured to the upper end of said cam lever, the outer end of said member having a roller positioned therein, over which the hose is adapted to pass, the end of said hose being provided with a suitable coupling member for connection to the outlet opening of the valve, and a counter weight integrally formed with said lever adapted to retain the same in its normal position against the weight of the hose.

[Claim 6 not printed in the Gazette.]

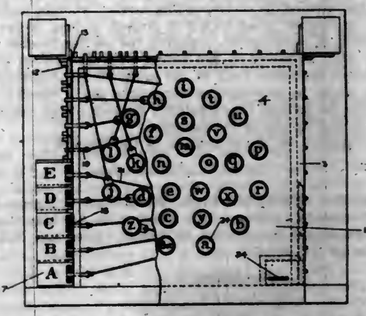
958,780. CHERRY-SEEDER. SIDNEY R. SMITH, Littleton, Colo. Filed July 8, 1909. Serial No. 506,576.

A cherry-seeder comprising a hopper, a barrel for receiving cherries from the hopper, a seed-delivery spout communicating with the barrel, a reciprocatory member mounted for movement in alinement with the said seed-delivery spout, a reciprocatory bottom member mounted for movement under the barrel, a valve carried by the bottom member and adapted to interrupt the movement of the



cherries through the barrel, and a crank mechanism operatively connecting the reciprocatory parts together.

958,781. EDUCATIONAL APPLIANCE. JERVIS SPENCER, Garrison, Md., assignor to Stuart S. Janney, Baltimore county, Md. Filed Jan. 9, 1909. Serial No. 471,419.



1. In a machine for use in learning the order of characters in a series, a set of carriers, each bearing one of the characters thereon occur in the series, actuating means for moving each carrier into a position in which the character thereon is displayed, a series of keys, each of which corresponds to one of the carriers and each of which bears the same character as the corresponding carrier, the keys so arranged as not to indicate the order of the characters in the series, controlling means for each carrier connected to the corresponding key, and locking means for each carrier controlling the carrier next following, whereby the travel of the carrier bearing each character to display position is restrained until the carriers bearing all the preceding characters in the series have been moved to display position.

2. In a machine for use in studying the order of characters in a series, a set of carriers, each bearing a character of the series, actuating means for moving each carrier into position in which the character thereon is displayed, a series of keys, one corresponding to each carrier, each key bearing the same character as that borne by the corresponding carrier, controlling means for each carrier connected to the corresponding key, a receptacle for a reward, means for locking the receptacle, and means controlled by the carriers for releasing the receptacle.

3. In a machine for studying the order of characters in a series, a set of carriers, each bearing a character of the series, actuating means for moving each carrier into position in which the character thereon is displayed, a series of keys, one corresponding to each carrier, each key bearing the same character as that borne by the corresponding carrier, controlling means for each carrier connected to the corresponding key, locking means for each carrier, locking the carrier bearing the next character in the series,

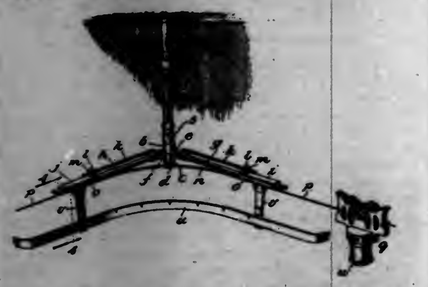
a receptacle for a reward, means for locking the receptacle, and means controlled by the movement of the carriers for releasing the receptacle.

4. In an educational appliance for use in studying the order of characters in a series, a set of carriers each marked with a character of the series, means for supporting the carriers in position with the characters thereon displayed, means for supporting them in position with the characters concealed, a key corresponding to each carrier and marked with the same character, a latch to hold each carrier in concealed position, means connecting each key to the latch of the corresponding carrier, whereby each carrier is released when its key is pressed, and locking means, controlled by each carrier, engaging the carrier marked with the next character in the series, whereby release of the carriers otherwise than in the order of the characters in the series is prevented.

5. In an educational appliance for use in studying the order of characters in a series, a set of carriers each marked with a character of the series, means for supporting the carriers in position with the characters thereon displayed, means for supporting them in position with the characters concealed, a key corresponding to each carrier and marked with the same character, a latch to hold each carrier in concealed position, means connecting each key to the latch of the corresponding carrier, whereby each carrier is released when its key is pressed, locking means controlled by each carrier, engaging the carrier marked with the next character in the series, whereby release of the carriers otherwise than in the order of the characters in the series is prevented, a receptacle for a reward, and means for locking the receptacle, the lock of the receptacle controlled by one of the carriers.

[Claims 6 to 12 not printed in the Gazette.]

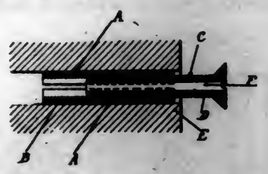
958,782. STORE-SERVICE WIREWAY. CLEMENT E. THOMPSON, Chicago, Ill., assignor to Air-Line Carrier Company, a Corporation of Illinois. Filed Nov. 2, 1908. Serial No. 460,719.



1. In a store-service apparatus, the combination with a diverging wire-way, of a hanger, arms jointedly mounted thereon to permit them to swing laterally, said arms having joints therein near to said hanger to permit a vertical movement of their free ends, slides loosely mounted upon said arms, screw-threaded rods attached to each of said arms near said hanger and connected with said slides by means of nuts, and a metallic tube connected near its ends with said slides by means of lateral extensions to hold the same away from said slides, said tube being bent to form a reëntrant curve between said jointed arms and serving as a support for said wire-way, which latter is projected through the passage therein.

2. In a store-service apparatus the combination with a diverging wire-way of a hanger, arms jointedly mounted thereon to permit them to swing laterally, said arms having joints therein near to said hanger to permit a vertical movement of their free ends, slides loosely mounted upon said arms, screw-threaded rods attached to each of said arms near said hanger and connected with said slides by means of nuts, a metallic tube to receive said wire-way and support the same, said tube being connected near its ends with said slides by means of lateral extensions to hold the same away from said slides, said tube forming a reëntrant curve between said jointed arms, arms extending downwardly from said slides and a curved guard supported upon said arms beneath the level of said wire-way whereby an adjustment of the slides to vary the curve of the tube may produce a corresponding variation in said guard.

958,783. EXPANSION-BOLT. CHARLES C. TOMKINSON, Plainfield, N. J. Filed June 22, 1909. Serial No. 503,651.



1. In an expansion bolt, the combination of an expansible interiorly screw threaded shield, and a hollow exteriorly screw threaded expanding member, extending longitudinally through said shield.

2. In an expansion bolt, the combination of a longitudinally divided interiorly screw threaded expansible shield, and a hollow exteriorly screw threaded stem extending longitudinally therethrough for expanding said shield.

958,784. VIOLIN-BOW. FRANK D. TORRE, Baltimore, Md. Filed Aug. 20, 1902. Serial No. 120,355.



1. A violin bow consisting of, a stick, hair, means for securing said hair to said stick, and a relatively moving weight attached to said bow.

2. A violin bow consisting of, a stick, hair, means for attaching said hair to said stick, an aperture in said stick, and a movable weight in said aperture.

3. A violin bow stick consisting of separate longitudinal parts secured together along a plurality of planes which intersect within said stick, a head secured to said stick, a nut secured to said stick, and hair between and secured to said head and said nut.

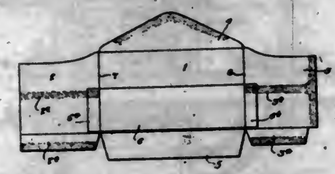
4. A violin stick curved and tapered consisting of, a plurality of separate longitudinal parts secured together along a plurality of planes which intersect within said stick, a head secured to said stick, a nut secured to said stick, and hair between and secured to said head and said nut.

5. A violin stick consisting of separate longitudinal parts secured together along a plurality of planes radiating from the center of said stick, a head secured to said stick, a nut secured to said stick, and hair between and secured to said head and said nut.

958,785. ENVELOP. LEWIS C. VAN RIPER, Chicago, Ill., assignor to Bright Manufacturing Company, Chicago, Ill., a Corporation of South Dakota. Filed Mar. 14, 1910. Serial No. 549,142.

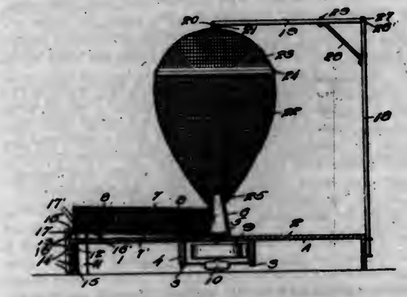
1. An envelop comprising a front portion, a back portion, flaps, and an interior supplemental strip for forming with the back portion a pocket to receive one of the flaps, said supplemental strip being gummed to the back portion and having both of its ends extending over and gummed to the flaps adjacent thereto.

2. An envelop comprising a front portion, a back portion formed of side flaps, a sealing flap, an inspection flap and an interior supplemental strip for forming with the back portion a pocket to receive said inspection flap, said supplemental strip being longer than the interior dimension of the envelop and overlapping each of said side flaps, each of said side flaps being provided with a gummed surface extending from side to side thereof in line with the upper portion of said supplemental strip, said gummed surface serving to unite the upper corners of said strip to the side flaps while said flaps are in unfolded position and serving, when the side flaps are folded, to unite them to the supplemental strip adjacent its upper edge.



3. An envelop comprising a front portion, a back portion formed of flaps carried by the front portion and a separate supplemental strip, two of said flaps and said supplemental strip being secured together to form a pocket in said back portion between said flaps and said supplemental strip and open along one edge of the envelop to removably receive an inspection flap, said supplemental strip having extended end portions overlapping the flaps that form the back portion and secured thereto, and said two flaps having supplemental flaps folded over the end portions of said supplemental strip.

958,786. INSECT-TRAP. JAMES F. WATTS, Spokane, Wash. Filed May 17, 1909. Serial No. 496,423.



1. A trap comprising a base, a frame rotatably mounted upon said base and comprising two hinged sections forming a passage, a central cage, said passage communicating with the interior of the cage, means for rotating the frame, means for stopping the rotation of said frame at times, bars supported above said base, a lug on one of said bars, said bars being inclined upwardly toward each other, and a lug formed upon the end of one of the sections of said frame adapted to engage with said bars.

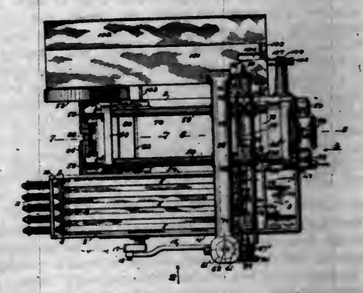
2. A trap comprising a base, a frame rotatably mounted upon said base and comprising two hinged sections, a hollow cone-shaped member, the inner end of said sections being disposed upon the periphery thereof, means for rotating the frame, means for stopping the rotation of said frame at intervals, bars supported above said base, a lug on one of said bars, said bars being inclined upwardly toward each other, a lug formed upon the end of one of the sections of said frame adapted to engage with said bars, and a wire retaining cage suspended above the base, the upper end of the cone-shaped member extending into the bottom thereof.

3. In a trap of the character described, the combination with a casing, a circular platform secured to said casing, a wire frame rotatably mounted upon said platform, a hollow cone-shaped member concentrically disposed upon said platform, a shaft secured to said member and extending into a second casing, said second casing secured to the under side of said platform, a spring located therein and engaged with the shaft for rotation thereof, a standard secured to the periphery of said first mentioned casing, a horizontal arm having one end removably secured to said standard, a brace bar secured to the standard and having one end disposed in parallel relation with said arm, a pin formed on the end of said bar and extending through said arm, a wire retaining cage removably held upon the outer end of said horizontal arm, said cage being substantially oval in outline and provided in its lower end with a sheet metal inwardly extending conical tube adapted to be inserted over the upper open end of the centrally disposed hollow cone, and means for checking rotation of the frame at times.

4. In a trap of the character described, the combination with a platform, of a frame rotatably mounted thereon, means for rotating the frame, said frame being formed of two hinged sections, means secured upon said platform for opening and closing said sections, the end of one of said sections being provided with an outwardly extending lug, a revoluble member disposed adjacent the platform, means for rotating the member, a plurality of arms carried by said member, said arms being adapted to engage with the lug upon said frame to hold the same against rotation, and means supported upon said platform and suspended over the inner end of said frame to receive the contents thereof.

5. In a trap of the character described, the combination with a cylindrical base, of a frame rotatably mounted upon said base and comprising two hinged sections; a hollow cone-shaped member, the inner end of said sections being disposed upon the periphery thereof; means for rotating the frame, means for stopping the rotation of said frame at times, inclined bars arranged on said base, braces secured to said base to support one of said bars out of contact therewith, the other of said bars having one of its ends secured to said base, a depending lug upon the lower end of said first mentioned bar, a lug formed upon the end of one of the sections of said frame adapted to engage with the lug carried by said bar, and means suspended above the frame for removing the insects therefrom.

958,787. BOOK-SMASHING MACHINE. SAMUEL K. WHITE, Hartford, Conn., assignor to The Smyth Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Mar. 27, 1905. Serial No. 252,134.



1. In a book smashing machine, the combination with smashing devices, of automatic means for feeding books thereto.

2. In a book smashing machine, the combination with smashing devices, of automatic means for feeding the books away from said devices after they have acted.

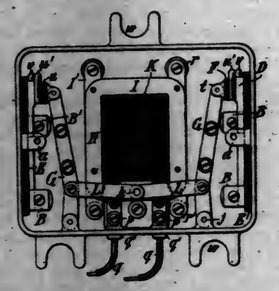
3. In a book smashing machine, the combination with smashing devices, of automatic means for feeding the books to and away from said devices.

4. In a book smashing machine, the combination with smashing devices, of automatic means for feeding the books singly thereto.

5. In a book smashing machine, the combination with smashing devices, of automatic means for feeding the books singly to the smashing devices and away from them after said devices have acted.

[Claims 6 to 30 not printed in the Gazette.]

958,788. MAGNETIC SWITCH. JAMES J. WOOD, Fort Wayne, Ind. Filed Sept. 29, 1905. Serial No. 280,591.



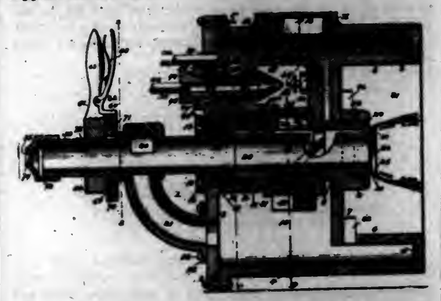
1. An electric switch comprising opposite fixed contacts, oppositely movable contacts, levers pivoted at their lower ends and carrying at their upper ends the respective movable contacts, an electromagnet between said levers comprising a coil, a fixed core exterior thereto serving as a stop to limit the movement of the levers, and a movable member, and toggle links connecting at their outer ends to said levers and at their intermediate joint to said movable member, and adapted upon the excitation of the magnet to approach alinement, and by forcing said levers apart to force the movable contacts against the respective fixed contacts, and on the demagnetization of the magnet and the retraction of said movable member to draw said levers together against the intervening magnet.

2. An electric switch comprising opposite fixed contacts, movable contacts mating therewith, one of each pair of contacts being laminated, an electro-magnet comprising a coil, a fixed core exterior thereto and a movable member entering partly within said coil and extended partly exterior thereto as an armature, and subject to a constant retracting force, and toggle links connecting at their outer ends to said movable contacts and at their middle joint to said movable member, and arranged with said middle joint below the ends in the retracted position of said movable member and in the open position of the switch, and adapted as the movable member is attracted to approach alinement, whereby during the free closing movement of the switch the magnet acts through the toggle with increasing mechanical advantage and during the final portion of the movement when the resistance is increased by the flexure of the laminae, both the mechanical advantage of the toggle and the magnetic attraction of the armature are at their maximum.

958,789. HYDROCARBON-BURNER. BURT L. WORTHEN, Tucson, Ariz., assignor, by direct and mesne assignments, to The Kemp Hydro-Carbon Furnace Company, a Corporation of New York. Filed Nov. 12, 1904. Serial No. 232,486.

1. A hydrocarbon burner, comprising a mixing-chamber for oil and air, means for atomizing the oil within said chamber, a burner proper constructed of an outer tube and an inner tube, with a space between the two, and a support for a portion of the inner tube, having means for receiving the combustible admixture from the mixing-chamber, and provided with forwardly and upwardly extending grooves on opposite sides of said inner tube, for delivering the combustible admixture to said space.

2. A hydrocarbon burner, comprising a mixing chamber, an air-chamber external thereto, a burner proper having an air tube forming part thereof, and means for delivering air to said tube from said air-chamber, the same also constituting an external support for the tube, the walls of the mixing-chamber having an extension forming an inner support for the tube.



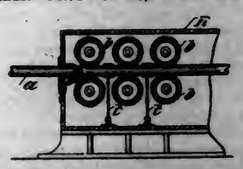
3. A hydrocarbon burner, comprising a mixing-chamber, an air-chamber inclosing the same and having communication with the atmosphere, a burner proper having an air tube forming part thereof, and means of communication between the air-chamber and the air-tube, the same also constituting an outer support for the tube, the walls of the mixing-chamber having an extension forming an inner support for the tube.

4. A hydrocarbon burner, comprising a mixing-chamber, an air-chamber inclosing the same and having communication with the atmosphere, a burner proper having an air tube forming part thereof, and means of communication between the air-chamber and the air-tube, the same also constituting an outer support for the tube, the walls of the mixing-chamber having an extension forming an inner support for the tube, and the air-tube being provided with adjusting devices.

5. A hydrocarbon burner, comprising a mixing chamber having the walls thereof extended to form a branch of said chamber, means for supplying oil and a gaseous fluid under pressure to said mixing chamber to form a combustible mixture, an atomizing device for the combustible mixture located within said branch, a burner proper constructed of outer and inner tubes, with a space between the two, and means for delivering the combustible mixture from said device to said space.

[Claims 6 to 14 not printed in the Gazette.]

958,790. APPARATUS FOR TREATING SUGAR-CANE. ABRAHAM WYNBERG and SIMON WYNBERG, Amsterdam, Netherlands. Filed Feb. 16, 1909. Serial No. 478,260.



1. A machine for removing wax from sugar cane stalks comprising a brush, means coöperating therewith for supporting the cane stalk so that its exterior surface is engaged by the brush, means for imparting movements relative to each other to the brush and the stalk and means for collecting the wax.

2. A machine for removing wax from sugar cane stalks comprising a rotary brush, means coöperating therewith for supporting the cane stalk so that its exterior surface is engaged by the brush, means for rotating the brush and means for collecting the wax.

3. A machine for removing wax from sugar-cane stalks, comprising a casing, rotary brushes therein, means for rotating the brushes, and means for supporting the cane so that the exterior surfaces are engaged by the brushes, said means comprising guides formed in the wall of the casing.

4. A machine for removing wax from sugar-cane stalks, comprising a casing, rotary brushes therein, means for rotating the brushes, and means for supporting the cane so that the exterior surfaces are engaged by the brushes, said means comprising guides formed in the wall of the casing and supplemental guides within the casing.

958,791. WHEEL-GUARD. JESSE M. YOUNT, New York, N. Y. Filed July 26, 1909. Serial No. 509,584.



1. The combination of a curved plate mounted on the wheel truck and movable therewith, said plate being adapted to have independent movement, a member adapted to be pressed against the said plate mounted on the car body and a guard connected with the said curved plate adapted to be moved in one direction through the said curved plate.

2. The combination of a curved plate mounted on the wheel truck and movable therewith, said plate being adapted to have independent movement, a member adapted to be pressed against the said plate mounted on the car body and a guard connected with the said curved plate adapted to be moved in one direction through the said curved plate, and a spring secured to the said guard for moving it in another direction.

3. The combination of a curved plate mounted on the wheel truck and movable therewith, said plate being adapted to have independent movement, a member adapted to be pressed against the said plate mounted on the car body and a guard connected with the said curved plate adapted to be moved in one direction through the said curved plate, and a spring secured to the said guard for moving it in another direction and means secured to the body of the car forward of the said guard for operating the member and adapted to press against the plate.

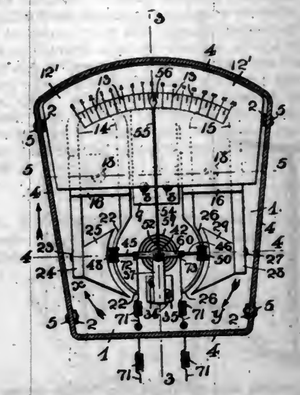
4. The combination of wheels mounted in a truck adapted to have rotary movement, a plate mounted on the said wheel truck curved on an arc struck from the truck pivot, a wheel guard mounted on the truck and connected with said plate, a member movably mounted on the car and means at the end of the car and outside of the wheel guard for moving the said member toward and from said plate and a spring connected with the truck and with the wheel guard for drawing the said guard downward.

5. The combination with a car and a suitable truck, of a curved plate mounted horizontally on a wheel truck and movable therewith, the convex side of said plate facing the nearest end of the car, a member disconnected from said plate and adapted to be pressed against the same mounted on the car body, and a guard connected with the said plate adapted to be moved in one direction through the said plate, and a spring secured to the said guard for moving it in another direction, and means secured to the body of the car forward of the said guard for operating the member adapted to press against the plate.

[Claims 6 to 10 not printed in the Gazette.]

958,792. ELECTRICAL MEASURING INSTRUMENT. JOHN L. ZANDER, Newark, N. J. Filed May 21, 1909. Serial No. 497,419.

1. In an electrical measuring instrument, a pair of magnets, each magnet being formed with a straight pole-member and an arc-shaped pole-member, a block upon each straight pole-member, said block extending toward the arc-shaped pole-member and having a concave surface in close proximity to the convex surface of the arc-shaped pole-member, and a wire-wound coil encircling an arc-shaped pole-member of each magnet and moving upon said pole-members.



2. In an electrical measuring instrument, a pair of horse-shoe magnets, each magnet being formed with a straight pole-member and an arc-shaped pole-member, said arc-shaped pole-members being of like polarity, a block upon each straight pole-member, said block extending toward the arc-shaped pole-member and having a concave surface in close proximity to the convex surface of the arc-shaped pole-member, a spindle placed between said arc-shaped pole-members, a support connected with and extending from said spindle, and wire-wound coils carried by said support, each coil encircling an arc-shaped pole-member and moving thereon.

3. In an electrical measuring instrument, a pair of horse-shoe magnets, each magnet being formed with an arc-shaped pole-member, a spindle placed between said arc-shaped pole-members, a supporting rod mounted upon said spindle, a wire-wound coil suspended from each end of said rod, each coil encircling an arc-shaped pole-member and being movably arranged thereon, a sleeve of non-conducting material mounted upon said spindle, a pair of spiral springs upon said sleeve, an electric circuit-wire connecting each spring with a coil, and a connecting circuit-wire between said coils.

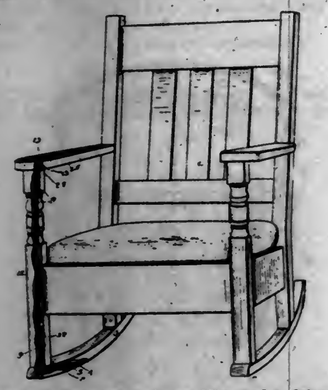
958,793. ADVERTISING-CHAIR. ANTONIO BIEHL, El Paso, Tex. Filed Nov. 15, 1909. Serial No. 528,157.

1. The combination with a chair having posts, arms and rockers, of a movable advertising device mounted in one of the arms of the chair, a post of the chair being provided with a longitudinal passage, a member protruding from the rocker for contact with the chair supporting surface when the chair is rocked and connected through said passage with said advertising device for operating the same.

2. In a rocking arm-chair, a movable advertising device mounted in one of the arms of the chair, an operative mechanism therefor mounted in the rocker of the chair adapted to contact with the floor and to move relative to said rocker whenever the chair is rocked, a post of the chair provided with a longitudinal bore, and an operative connection between said device and said mechanism concealed in said bore, substantially as described.

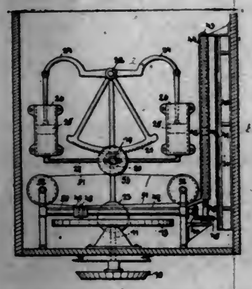
3. In a rocking arm-chair, a pair of rollers mounted in one of the arms of the chair, an advertising belt adapted to travel on said rollers, a lever fulcrumed in a rocker of the chair having one end in contact with the floor and adapted to oscillate whenever the chair is rocked, an operative connection between one of said rollers and said lever, a spring secured in said rocker and adapted to maintain said

lever in constant contact with the floor, and a post of the chair provided with a longitudinal bore, said operative connection comprising a rod pivoted to said lever and adapted to reciprocate in said bore, substantially as described.



4. In a rocking arm-chair, an idler and a driven roller mounted in an arm of the chair, an advertising belt mounted to travel on said rollers, a lever fulcrumed in a rocker of the chair having one end in continual contact with the floor and adapted to oscillate whenever the chair is rocked, a vertically movable rod pivoted to the other end of said lever and provided with a hook at its upper extremity, a disk secured to one end of said driven roller, a circular groove and recesses formed in the face of said disk, means for holding said hook in engagement with said groove during the upward movement of said rod and with said recesses during the downward movement thereof, and a ratchet-wheel and stop-pawl arranged at the other end of said driven roller, substantially as described.

958,794. SURVEYING INSTRUMENT. MYRON J. DIKEMAN, Joliet, Ill. Filed Nov. 15, 1909. Serial No. 528,189.



1. In a surveying instrument, the combination with a suitable vehicle, of a record sheet mounted to travel longitudinally; a wheel on said vehicle traveling on the ground; a primary friction disk; a driving connection between said disk and wheel; a shaft arranged radially of said disk; a secondary friction disk splined to said radial shaft; an operative connection between said radial shaft and said record sheet; a shaft arranged diametrically of said primary disk; a secondary friction disk splined to said diametric shaft; a marker adapted to trace a line on said record sheet; means for causing travel of said marker transversely of said record sheet; an operative connection between said diametric shaft and said marker travel causing means; a pendulum; and connections between said pendulum and said secondary disk, whereby when the vehicle travels over level ground the marker controlling disk is held at the center of said primary disk and departure from level travel causes movement of said marker disk outwardly and said record sheet disk inwardly, relatively to said primary disk, substantially as described.

2. In a surveying instrument, the combination with a suitable vehicle, of a pair of vertically disposed rollers; a record sheet adapted to travel from one of said rollers to the other; a wheel on said vehicle traveling on the ground; a horizontal primary friction disk; a driving connection between said disk and wheel; a shaft arranged radially of said disk; a secondary friction disk splined to said radial shaft; a cam wheel carried by said friction disk; an operative connection between said radial shaft and said record sheet rollers; a shaft arranged diametrically of said primary friction disk; a marker adapted to trace a line on said record sheet; means for causing travel of said marker transversely of said record sheet; an operative connection between said diametric shaft and said marker travel causing means; a secondary friction disk splined to said diametric shaft; a pendulum; a shaft operated by said pendulum; a cam disk carried by said pendulum shaft and provided with a cam path engaging said cam wheel, the said cam path being so shaped as to cause inward feed of the corresponding friction disk upon movement of said cam disk relatively to said cam wheel in either direction; a drum carried by said pendulum shaft; pulleys arranged near the ends of said diametric shaft, and a cable wrapped upon said drum, passing over said pulleys and connected at either side of the secondary disk on said diametric shaft, substantially as described.

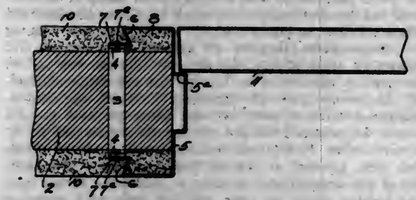
3. In a surveying instrument, the combination with a suitable vehicle, of a pair of vertically disposed rollers, a record sheet adapted to travel from one of said rollers to the other; a wheel on said vehicle traveling on the ground; a horizontal primary friction disk; a driving connection between said disk and wheel; a shaft arranged radially of said disk; a secondary friction disk splined to said radial shaft; a cam wheel carried by said friction disk; an operative connection between said radial shaft and said record sheet rollers; a shaft arranged diametrically of said primary friction disk; a marker adapted to trace a line on said record sheet; means for causing travel of said marker transversely of said record sheet; an operative connection between said diametric shaft and said marker travel causing means; a secondary friction disk splined to said diametric shaft; a pendulum; a segmental gear carried by said pendulum; a pendulum shaft; a gear on said pendulum shaft meshing with said segmental gear; rocker arms carried by said pendulum, pistons connected with the ends of said rocker arms; connected cylinders containing said pistons; a cam disk carried by said pendulum shaft and provided with a cam path engaging said cam wheel, the said cam path being so shaped as to cause inward feed of the corresponding friction disk upon movement of said cam disk relatively to said cam wheel in either direction; a drum carried by said pendulum shaft; pulleys arranged near the ends of said diametric shaft; and a cable wrapped upon said drum, passing over said pulleys and connected at either side of the secondary disk on said diametric shaft, substantially as described.

958,795. DOOR-FRAME. ERIK A. EKENDAHL, Jamestown, N. Y., assignor to Art Metal Construction Company, Jamestown, N. Y., a Corporation of New York. Filed Dec. 2, 1909. Serial No. 531,054.

1. In door and like frames, the combination with a wall frame, of metal bands extending therethrough having lugs bent at an angle to said bands, and a metal frame secured to said lugs.

2. In door and like frames, in combination with a wall-frame, of metal supports therein extending beyond said wall-frame, a metal frame secured to said supports, said frame having dove-tailed portions to receive the plaster.

3. In door and like frames, the combination with a wall-frame, of metal strips therein extending beyond said wall frame, a metal frame secured to said strips, spaces being left between the inner and outer faces of said wall-frame and the inner faces of said metal frame, and a filling of plastic material in said spaces.



4. In door and like frames, the combination with a wall-frame, of a metal frame inclosing a portion of said wall-frame, means for securing said frame to said wall-frame, and said frame having dove-tailed portions to receive the plaster.

958,796. COASTER-BRAKE. THEODORE FALKOS, Aurora, Ill. Filed Nov. 15, 1909. Serial No. 528,180.



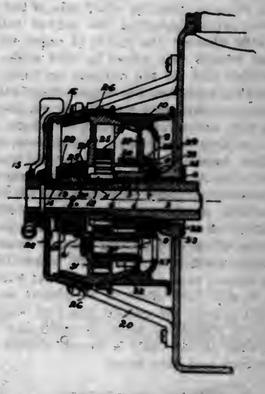
1. In a device of the class described, the combination with the frame and hub of a wheel of a bicycle, of a rotatable sleeve in said hub; a sprocket wheel rigidly connected with said sleeve; opposite screw threads on said sleeve; oppositely disposed friction members threaded on said sleeve and connected to rotate together; friction surfaces in said hub adapted to contact with said friction members when they approach each other; a friction surface on said hub adapted to contact with one of said members when they recede from each other; a stationary clutch member carried by said frame; and a clutch member on one of said friction members adapted to engage said stationary clutch member when said friction members are forced together, substantially as described.

2. In a device of the class described, the combination with the frame and hub of a wheel of a bicycle; of a rotatable sleeve in said hub; a sprocket wheel rigidly connected with said sleeve; opposite screw threads on said sleeve; oppositely disposed friction members threaded on said sleeve and connected to rotate together; friction surfaces in said hub adapted to contact with said friction members when they approach each other; a friction surface on said hub adapted to contact with one of said members when they recede from each other; yielding means for forcing said friction members apart; a stationary clutch member carried by said frame; and a clutch member on one of said friction members adapted to engage said stationary clutch member when said friction members are forced together, substantially as described.

3. In a device of the class described, the combination with the frame and hub of a wheel of a bicycle; of a rotatable sleeve in said hub; a sprocket wheel rigidly connected with said sleeve; opposite screw threads on said sleeve; oppositely disposed friction members threaded on said sleeve and splined together; friction surfaces in said hub adapted to contact with said friction members when they approach each other; a friction surface on said hub adapted to contact with one of said members when they recede from each other; a stationary clutch member carried by said frame; and a clutch member on one of said friction members adapted to engage said stationary clutch member when said friction members are forced together, substantially as described.

4. In a device of the class described, the combination with the frame and hub of a wheel of a bicycle; of a rotatable sleeve in said hub; a sprocket wheel rigidly connected with said sleeve; opposite screw threads on said sleeve; oppositely disposed friction members threaded on said sleeve and splined together; friction surfaces in said hub adapted to contact with said friction members when they approach each other; a friction surface on said hub adapted to contact with one of said members when they recede from each other; yielding means for forcing said friction members apart; a stationary clutch member carried by said frame; and a clutch member on one of said friction members adapted to engage said stationary clutch member when said friction members are forced together, substantially as described.

958,797. TWO-SPEED GEARING. FRANK P. FENTRESS, Tacoma, Wash. Filed Feb. 20, 1909. Serial No. 479,206.



1. A device of the character described comprising a crank shaft, a fast and a loose gear thereon, a drive gear having a threaded engagement with the loose gear, a clutch member slidably mounted on said shaft, and gear wheels carried by said clutch member and engaged with said fast and loose gears carried by the crank shaft.

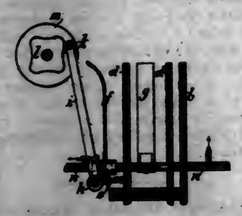
2. A device of the character described comprising a crank shaft, a fast and a loose gear thereon, a drive gear carried by the loose gear, a clutch member slidably mounted on the shaft, gear wheels mounted in said clutch member and engaging with the fast and loose gears of the shaft, and a manually operable lever for imparting a sliding movement to said clutch member.

3. A device of the character described comprising a crank shaft, a fast and a loose gear thereon, said gears being of different size, a drive gear carried by the loose gear, a clutch member slidably mounted on said shaft, gears mounted in said clutch member, said gears being of different size, and a manually operable lever for imparting a sliding movement to said clutch member to cause it to engage with the said drive gear.

4. A device of the character described comprising a crank shaft, a fast and a loose gear thereon which are of different size, a pulley carried by the loose gear, a sleeve slidably mounted on said shaft, a clutch member carried by said sleeve, gear wheels mounted in said clutch member, said gears being of different size, and a manually operable lever carried by said sleeve and adapted to move the same to cause the clutch member to engage with the pulley.

5. In a device of the character described, the combination with a support of a shaft carried thereby, speed mechanism on said shaft, hanger arms projecting from said support, each arm having an attaching ear at its outer end, a brake ring, and a detachable connection between said ring and said ears.

958,798. STACKING MECHANISM FOR PRINTING, FOLDING, OR SIMILAR PAPER-TREATING MACHINES. ROBERT E. FISCHER and MAX WESCHER, Elberfeld, Germany. Filed Apr. 2, 1909. Serial No. 487,421.

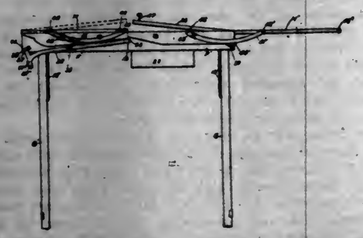


1. In a stacking device the combination of stationary members forming two sides of the receiver, curved rails provided with steps forming the other side of the same and means for alternately operating the curved rails of one or the other side whereby the sheets of paper will be supported by and pushed into place by said steps, substantially as described and for the purpose set forth.

2. In a stacking machine, the combination with the receiver consisting of stationary and rocking members, a rock shaft upon which one of said rocking members is mounted, means for rocking said shaft, a second rock shaft upon which the other rocking member is mounted and connections between said shafts whereby said members will be advanced alternately in planes at an angle to each other.

3. In a stacking machine, the combination with the receiver consisting of stationary and rocking members, a rock shaft upon which said rocking member is mounted, a pin or projection carried by said shaft, means for rocking said shaft, a second rock shaft arranged at substantially right angles to said first shaft, a projection on said second shaft, with which the pin on the first shaft coöperates, the pin and projection being so positioned relatively to each other that as one shaft is rocked inward the other is rocked outward and vice versa.

958,799. MILITARY FIELD-TABLE. ADRIAN S. FLEMING and JOHN CURRY, Vancouver, Wash.; said Fleming assignor to Mabel G. Fleming, Fort D. A. Russell, Wyo. Filed Dec. 16, 1909. Serial No. 533,444.



1. In a portable military field table, supporting means, comprising tubular legs each hinged to the lower surface of the table and having a longitudinal slot, an opposite transverse opening 16 at the upper end of the slot and opposite the lower end of the slot a recess 17, leg braces having ends formed at right angles thereto, and a collar near the extremity thereof one end of the braces being pivoted on the lower surface of the table, the right angled end extending into the slot of the leg and through the opening 16 when the legs are in erected position and into the recess 17 when the legs are in folded position, substantially as described.

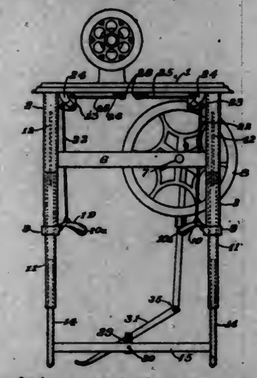
2. A portable folding military field table comprising two members F—F' hinged together at their joining edges, one member F having a recess 24 opening downward, the other member F' having compartments 22 opening upward, vertical grooves 31 and inclined slots 30 in its ends, the lower portions of said compartments being of form to enter the recessed member F when said two members are folded together, a lid 25 hinged to the outer side edge of the compartment member F' and closing over it, lid supporting arms 27—27' on each of its ends, one end of the arms being pivoted on the lid, the opposite ends having transverse pins 29 extending through the beforementioned inclined slots 30, and being movable in said grooves 31, means to secure the described members F—F' in erected or folded position, comprising arms 32 on each side, pivoted at one of their ends near the inner side of the compartment member F', said arms having integral locking heads on their opposite ends with openings 37—37'—37'' therein, locking pins 38 on the ends of the recess member F near its outer side, locking pins 39 in similar location on the compartment member F' said pins being each so disposed that they will enter oppositely placed openings of the said locking heads when the table is erected or folded, fulcrum holding plates pivoted on the recessed member F arranged and formed to receive the arm 32 in sliding engagement therewith, tubular legs hinged to the lower surface of the table members F—F' and having longitudinal slots therein, transverse openings opposite the upper ends of the slots and recesses opposite the lower ends thereof and leg braces having ends formed at right angles thereto and collars near the extremity thereof, one end of said braces being pivoted on the lower surface of the table member the right angled end thereof extending into the leg slot and through the upper openings in the leg when it is erected or into the lower recess of the leg when it is folded, substantially as described.

3. In a portable folding military field table having two hinged members, one member F being recessed and one member F' being provided with upwardly opening compartments, a compartment lid hinged to its outside edge and means to support said table members in erected position, the combination with a table of said description, of mechanism for securing its members F—F' in erected or folded position, consisting of arms 32 on each side pivoted at one of their ends near the inner side of the compartment member F', said arms having integral locking heads on their opposite ends with openings 37—37'—37'' therein, locking pins 38 on the ends of the recessed member F near its outer side, locking pins 39 in similar location on the compartment member F' said pins being each so disposed that it will enter oppositely placed openings of the said locking heads when the table is erected or folded, fulcrum holding plates pivoted on the recessed member F arranged and formed to receive the arm 32 in sliding engagement therewith, substantially as described.

4. In a portable folding military field table having two hinged members F—F', one of which has compartments, a lid hinged on its outside edge and means to support each of said members in erected position, the combination with said table, of extension leaves H—H' hinged to the outer sides of said members, and means to secure the same in erected or folded position consisting of a suitably formed arm pivoted on the end of the leaf, its opposite free end having a transverse opening a pivotal holding plate on the table member through which the arm passes in sliding engagement, also a fulcrum stop, on the member and a pin in the outer side of the end of the extension leaf positioned to enter said transverse opening, substantially as described.

958,800. ADJUSTABLE SEWING-MACHINE TABLE. VIRGINIA GIBBINS, Fruitvale, Cal. Filed Apr. 16, 1909. Serial No. 490,897.

1. In a device as set forth, a table top, a plurality of hollow leg sections secured to the under side thereof, friction clutches pivotally secured to the lower ends of said leg sections, intermediate leg sections slidable within the first leg sections adapted to be engaged by the friction clutches, means having connections with said clutches for operating the same, lower leg sections slidable within the intermediate leg sections and provided with slots, said lower leg sections being hollow and having spring members secured therein having inclined stop-arms designed to project through said slots, said inclined stop arms being adapted to be coöperated with by the lower ends of the intermediate leg sections so as to hold the lower leg sections extended, said lower leg sections and said intermediate leg sections having registering apertures or openings, said spring members having pins to extend through said apertures, in order to hold said lower and intermediate leg sections extended, said first named leg sections and the intermediate leg sections having slot and pin connections in order to guide the sections when being extended.



2. In a device as set forth, a table top, a plurality of hollow leg sections secured to the under side thereof, friction clutches pivotally secured to the lower ends of said leg sections, intermediate leg sections slidable within the first leg sections adapted to be engaged by the friction clutches, means for operating said clutches, lower leg sections slidable within the intermediate leg sections and provided with slots, said lower leg sections being hollow and having spring members secured therein having inclined stop-arms designed to project through said slots, said inclined stop arms being adapted to be coöperated with by the lower ends of the intermediate leg sections so as to hold the lower leg section extended, said lower leg sections and said intermediate leg sections having registering apertures or openings, said spring members having pins to extend through said apertures, in order to hold said lower and intermediate leg sections extended, said first named leg sections and the intermediate leg sections having means in order to guide the sections when being extended.

3. In a device as set forth, a table top, a plurality of hollow leg sections, intermediate leg sections, friction members for holding the intermediate and the first named leg sections in adjusted positions, means for operating the friction members, means for guiding the first named and intermediate leg sections when being adjusted, lower leg sections slidable within the intermediate leg sections and provided with slots, said lower leg sections being hollow and having spring members secured therein having inclined stop-arms designed to project through said slots, said inclined stop arms being adapted to be coöperated with by the lower ends of the intermediate leg sections so as to hold the lower leg section extended, said lower leg sections and said intermediate leg sections having registering apertures or openings, said spring members having pins to extend through said apertures, in order to hold said lower and intermediate leg sections extended.

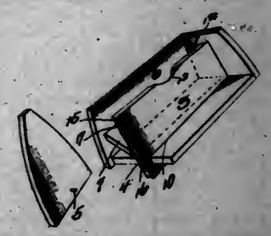
958,801. PAPER-FILE. CHARLES E. GIBBS, Malden, Mass. Filed Sept. 22, 1909. Serial No. 518,938.

1. A device of the character stated comprising a support of compressible material, such as wood, a stud having a rivet-shaped inner portion extending through the support, and a peripheral ridge near the outer end of the rivet portion, washers pressed into the opposite sides of the support with their outer faces flush with the corresponding faces of said support, one of said washers having a socket forming a seat for said ridge, whereby the outer side of the latter is flush with the face of said support, the other washer being engaged with the upset end of the rivet portion.



2. A device of the character stated comprising a support having a pointed impaling stud and a spring pressed clamping plate, hinged to said support and provided with an orifice arranged to receive said stud, said orifice being screw threaded and obliquely arranged relatively to the sides of the plate, and a tubular guard having a closed outer end formed to cover the pointed end of the stud, said guard being formed independently of the plate and exteriorly threaded to engage the threads in said orifice whereby said guards are supported in an inclined position relatively to the sides of the plate.

958,802. MATCH-SAFE. VICTOR E. GOLDEN, Byron, Nebr. Filed May 26, 1909. Serial No. 498,560.

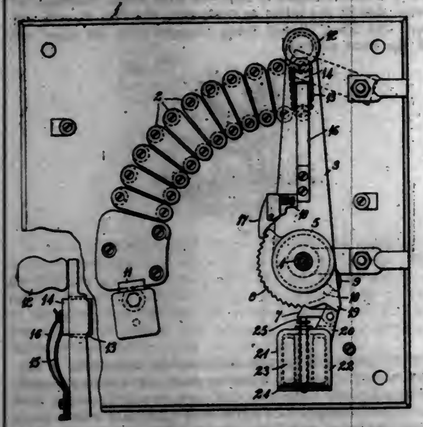


In a match safe, a base, a standard projecting therefrom having guideways or grooves, a receptacle movable upon the standard and provided with projections to enter the guideways, one of said guideways at its upper portion having a recess 17, said receptacle having a slot wider at one end than the other to receive said standard to allow the receptacle a slight lateral movement so as to move one of the projections of the receptacle through the recess 17 in order to free the projection from its guideway, thereby allowing the receptacle to be removed from the standard.

958,803. CONTROLLER. FLETCHER D. HALLOCK, Pittsburg, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa., a Corporation of Pennsylvania. Filed Sept. 8, 1908. Serial No. 452,087.

1. In a controller, the combination with a plurality of stationary contact terminals, a movable arm having a contact terminal which is adapted to successively engage the stationary terminals and a notched member operatively connected to said arm, of a retracting spring for said member, means for locking said member to permit

movement of the arm independently thereof in one direction and means adapted to engage the notches of said member for accentuating positions in the independent adjustment of the arm.



2. In a controller, the combination with a plurality of stationary contact terminals arranged substantially in the arc of a circle, a movable arm having a contact terminal to successively engage the stationary terminals and a notched member operatively connected to said movable arm, of a retracting spring for said member electro-responsive means for locking said member to permit independent movement of said arm in one direction and means carried by the arm for accentuating positions in the independent adjustment of the arm.

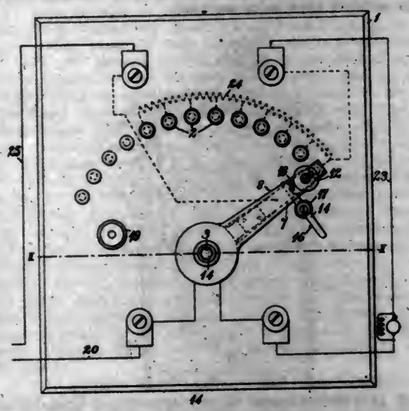
3. In a controller, the combination with a plurality of stationary contact terminals disposed substantially in the arc of a circle, of a movable arm having a contact terminal to successively engage the stationary terminals and a notched member rotatably mounted on the same axis and operatively connected to the arm, of a spiral spring for retracting the member and the arm, electro-responsive means for locking the member in predetermined positions to permit independenet movement of the arm in one direction, and means carried by the arm and engaging the notches of said member for accentuating a plurality of positions in the independent movement of the arm.

4. In a controller, the combination with a slab or plate, a plurality of contact terminals secured thereto, a movable contact-bearing arm adapted to sweep over said contact terminals, a notched member rotatably mounted upon the axis of the arm and operatively connected thereto when moved in one direction, of a spiral spring coiled about the axis of the member for retracting it to a predetermined position, a pawl adapted to engage any one of the notches in said member, an electro-magnet for holding said pawl in operative position in order to permit independent movement of said arm in one direction and a pawl for accentuating the positions of engagement between the movable and stationary contact terminals when the arm is moved independently of the member.

5. In a controller, the combination with an insulating plate or slab, a plurality of stationary contact terminals secured thereto and arranged substantially in the arc of a circle, a stationary shaft perpendicular to the face of the plate, a movable contact-bearing arm mounted on said shaft and adapted to sweep over the stationary contact members, and a notched member rotatably mounted on the stationary shaft and connected thereto by a spiral retracting spring, said arm being operatively connected to said member, of a pawl adapted to engage the notches in said member and electro-responsive means for forcing the pawl into engagement with one of the notches to permit independent movement of the arm in one direction, and a second pawl secured to the arm and adapted to engage the notches to accentuate the positions of the arm when it is moved independently of the member.

[Claims 6 and 7 not printed in the Gazette.]

958,804. MOTOR-STARTER. FLETCHER D. HALLOCK, Pittsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 3, 1910. Serial No. 536,062.



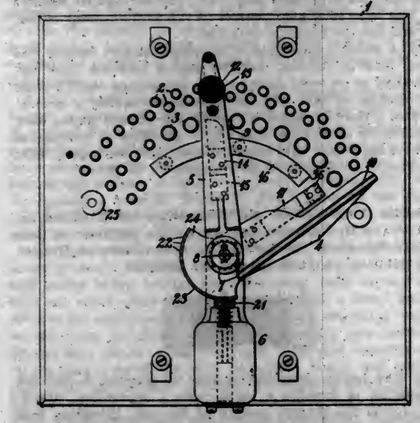
1. A controller comprising a plurality of stationary contact members insulated from each other and arranged substantially in an arc of a circle, a movable contact arm adapted to sweep over the stationary members, an operating handle lever independently pivoted upon the same axis as the contact arm, a spring tending to cause the arms to operate together and means, dependent upon predetermined conditions in the circuit governed by the controller, for locking the two arms together.

2. In a controller for electric motors, the combination with a slab or face plate, a plurality of contact members secured thereto substantially in an arc of a circle, a movable contact arm pivotally mounted upon the face plate and adapted to sweep over the stationary contact members, a spring for retracting the arm to its "off" position, an operating handle lever independently pivoted upon the same axis as the contact arm, yielding means for resisting the separation of the two arms, and electro-responsive means for locking the arms together.

3. In a controller for electric motors, the combination with a slab or face plate, a plurality of contact members secured thereto substantially in an arc of a circle, a movable contact arm pivotally mounted upon the face plate and adapted to sweep over the stationary contact members, a spring for retracting the arm to its "off" position, an operating handle lever independently pivoted upon the same axis as the contact arm, means for accentuating the position of either arm which corresponds to the position of the other, and electro-responsive means for predominating over the retracting spring to cause the arms to operate together.

958,805. RHEOSTATIC CONTROLLER FOR ELECTRIC MOTORS. FLETCHER D. HALLOCK, Pittsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 3, 1910. Serial No. 536,063.

1. A controller for electric motors comprising a pair of resistance-regulating arms adapted to operate together in one direction, means for retracting one of the arms to its off position, electro-responsive means for holding said arm in opposition to said retracting means, and means carried by the other arm for rendering the holding means inoperative.



2. A controller for electric motors comprising a pair of resistance-regulating arms adapted to operate together in one direction, a retracting spring tending to throw one of the arms to its off position, an electro-magnet acting in opposition to the retracting spring for holding the arm in the operating positions of the controller and a switch carried by the other arm for controlling the circuit of the magnet.

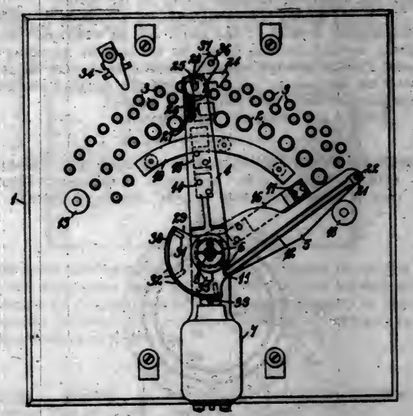
3. In a controller for electric motors, the combination with a pair of contact-bearing arms, which are adapted to be manually operated together in one direction and one of which may be manually operated independently in the other direction, of a retracting spring acting upon one of said arms for returning both of them to their off position, electro-magnetic means for opposing the action of the spring, and an electric switch carried by the second arm for governing the electro-magnetic means.

4. A controller for electric motors comprising a pair of contact-bearing arms, one of which is adapted to successively short circuit the motor field and the motor armature resistances as it progresses in one direction, and the other of which is adapted to gradually exclude the armature resistance as it progresses in one direction and to gradually increase the field resistance as it progresses in the opposite direction, an electro-magnet for opposing the movement of the first named arm and a switch carried by the other arm for governing the energization of the electro-magnet.

5. In a controller for electric motors, the combination with field resistance and armature resistance contact members, and a movable contact-bearing arm adapted to successively short-circuit the motor field and the motor armature resistances, of a second arm adapted to gradually reduce the resistance in the armature circuit as both arms progress in one direction and to increase the field resistance as it is independently adjusted in the opposite direction, a retracting spring for said first named arm, an electro-magnet for opposing the action of the retracting spring and a switch carried by the said second named arm for controlling the energization of the electro-magnet.

958,806. REGULATING-RHEOSTAT. FLETCHER D. HALLOCK, Pittsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 3, 1910. Serial No. 536,065.

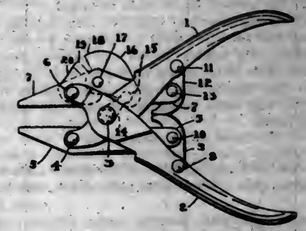
1. A controller for electric motors comprising a pair of contact-bearing arms, means for retracting one of the arms to its off position, means for latching the two arms together and a handle for operating both arms together and for releasing one of the arms and operating it separately.



2. In a controller for electric motors, the combination with a pair of contact-bearing arms, means for latching the two arms together, a retracting spring acting upon one of said arms for returning both of them to their off position, electro-magnetic means for opposing the action of the spring and manually operated means for releasing the second arm, whereby it is permitted to operate independently of the first.

3. A controller for electric motors comprising a pair of contact-bearing arms one of which is adapted to successively short circuit the motor field and the motor armature resistances as it progresses in one direction and the other of which is adapted to gradually exclude the armature resistance as it progresses in one direction and to gradually interpose the field resistance as it progresses in the opposite direction.

958,807. TOOL. NIELS M. HANSEN, Dundee, Mich., assignor to De Vilbiss Plier Company, Dundee, Mich., a Corporation of Michigan. Filed June 1, 1908. Serial No. 435,884.



1. A tool comprising a pair of hand actuable levers having a common pivot, a pair of cutting members, and a link connecting the lever pivot and one of the cutting members to permit actuation of the cutter from the levers.

2. A pair of hand actuable levers having a common pivot, a pair of parallel moving elements, a cutter having a member carried by an element, and a link connecting the lever pivot and the cutter member to permit actuation of the cutter from the levers.

3. A cutting tool embodying a pair of primary levers having a common pivot, a secondary lever, and an intermediate link connection between the primary lever pivot and secondary lever.

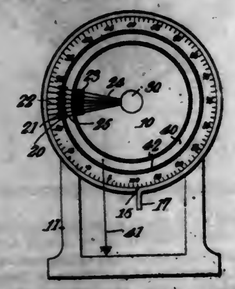
4. A cutter embodying a pivoted member, a second member, a support for the members in which the second mem-

ber is relatively fixed, said second member having a seat in which the pivoted member coacts to hold the second member, and a pair of operating levers for the cutter.

5. A tool having a working member, a support to which the member is fixed at one point, and an additional relatively rockable holding device for the member including a semi-circular pivoted member nesting in a seat in the working member to positively hold the working member against movement relatively to its support.

[Claim 6 not printed in the Gazette.]

958,808. FUSED DISTRIBUTING-BOARD AND CROSS-CONNECTING RACK. ROBERT G. HARDGRAVE, Tucumcari, N. Mex. Filed May 3, 1909. Serial No. 493,612.



1. A distributing board having street cable connections on one side and switch board cable connections on the opposite side, the said sides being the front and rear of the board, and interchangeable jumper wires extending between said connections.

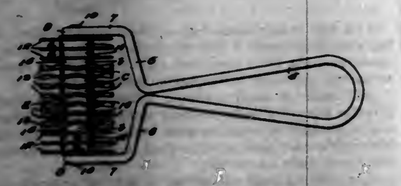
2. A distributing board having street cable connections on one side and switch-board cable connections on the opposite side said board having an approximately central opening for the passage of the jumper wires.

3. A distributing board of disk-like form having street cable connections on one side, and switch board cable connections on the other side, the board being provided with a central opening for the passage of the jumper wires.

4. A distributing board of disk-like form having marginal supports at each side, one for the street cable and the other for the switch board cable, said board having an approximately central opening, and jumper wires extending through the opening to connect the street cable terminals with the switch board cable terminal.

5. A distributing board of disk-like form having a central opening and provided with an annular groove in one face, a carbon ring seated within the groove, insulating strips, street cable connections in the form of blocks resting against the insulating strips, binding posts for the jumper wires, and fuses arranged between the blocks and the binding posts.

958,809. NOODLE-CUTTER. FREDRICK L. HAWKINS, Mishawaka, Ind. Filed June 26, 1909. Serial No. 504,537.



1. A cutter of the class described, comprising a carrier made of wire having two arms held in resilient parallel spaced relation each terminating in an open spring ear, a supporting shaft having a trunnion at each end, each trunnion having a circumscribing groove arranged to contain one of said spring ears, a plurality of loosely held disk cutters upon said shaft, washers between said disk cutters, a plurality of circular cutters having radially projecting corrugations held upon said shaft, and corrugated washers to lock each corrugated cutter to the next adjacent cutter, as and for the purpose set forth.

2. A cutter comprising a carrying member, having two arms held in resilient parallel spaced relation, each terminating in an open spring ear, a supporting shaft having a trunnion at each end, each trunnion having a circumscribed groove arranged to contain one of said spring ears, a plurality of disk cutters, and a plurality of corrugated cutters held upon said shaft, and suitable washers to hold said cutters, and as and for the purpose set forth.

958,810. PROCESS OF MAKING SELF-LOCKING NUTS. EDWARD R. HIBBARD, Oak Park, Ill., assignor to Grip Nut Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 21, 1905. Serial No. 292,750.

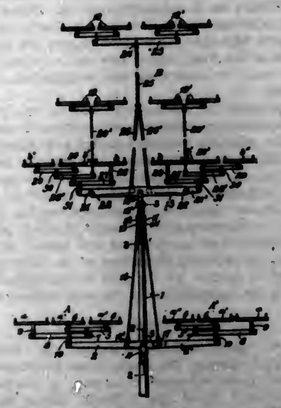


1. The herein described process of forming a lock-nut consisting in forming a blank with a depression extending across the central portion of the nut, threading said blank in the usual manner and then straightening said blank by compression, whereby all of the threads in said nut are permanently distorted from a true helix.

2. The herein described process of forming a lock-nut consisting in forming a blank with a depression extending across the central portion of the nut less than one-half the depth of the intended pitch of its threads, cutting threads in said blank in the usual manner and then straightening said blank by the compression, whereby all of the threads in said nut are permanently distorted from a true helix along a plurality of lines extending through said nut.

3. The herein described process of forming a lock nut consisting of forming a blank and cutting the thread therein, and thereafter compressing a portion of the walls of said blank longitudinally of the threaded opening to permanently reduce the pitch of all the threads at said compressed portion whereby the threads in said nut are permanently distorted from a true helix.

958,811. DRAFT-EQUALIZING DEVICE. ALFRED HINES, Wasco, Oreg. Filed Mar. 2, 1909. Serial No. 480,907.



1. An attachment for draft devices comprising a support adapted to be slidably mounted on the front end of a tongue, a pulley mounted on the support, a flexible element passing around the pulley and extending rearwardly along opposite sides of and free from the tongue to be attached at its extremities to rear draft devices, the length of the element between either end and point of engagement with the pulley being such that the element prevents the support from passing off the end of the tongue, and a device on the support for connecting the same with a front draft device, said support forming the sole means of connecting the pulley and device with and supporting them on the tongue.

2. In a draft equalizing device, the combination of a tongue, a sleeve slidably mounted on the front end thereof, a front draft rigging flexibly connected with the sleeve, a rear draft rigging composed of pivotally connected equalizing levers, means for supporting the levers in fixed relation to the tongue, a flexible element connected with the corresponding arms of the levers, and a guide on and carried wholly by the sleeve across the front of which the element moves for equalizing the draft on the levers.

3. In combination with the draft beam, main equalizing levers pivotally mounted at the ends thereof, the pivots of said levers being located near the outer ends thereof so that the short arms extend from the beam, a front beam with draft appliances, a flexible element extending rearwardly from the front beam and having its rear portion divided into two branches which are connected respectively to the long arms of the main equalising levers, and duplicate draft mechanisms arranged on opposite sides of the flexible element in rear of the front beam, said duplicate draft mechanisms each comprising a secondary equalizer having its long arm on the inside adjacent the flexible element and provided with a swingletree, and pivotally connected near its outer end to the short arm of the main equalising lever, a tertiary lever pivotally connected to the short arm of the secondary equalizer, a quaternary lever pivoted to the outer end of the tertiary lever and carrying two swingletrees which are arranged in line with the swingletree on the long arm of the secondary equalizer, a flexible element connected to the inner end of the tertiary lever and extending forwardly beyond the said swingletrees, and whiffletrees connected to the front end of the last-mentioned flexible element.

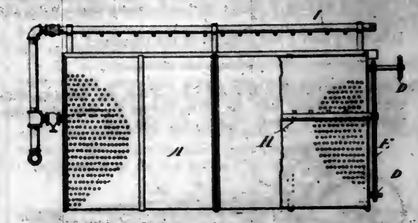
4. In a draft equalizer, the combination of a tongue, a sleeve slidably mounted on the front extremity thereof, a clevis, a fastener for securing the clevis to the sleeve and forming an axle, a pulley mounted on the said axle, a pair of equalising levers arranged at the rear end of the tongue, a flexible element connected with the corresponding arms of the levers and extending forwardly therefrom and guided by the pulley, draft means connected with the levers, and additional draft means connected with the clevis and attached thereby with the tongue for guiding the latter to steer the vehicle to which the tongue is attached.

5. In a draft device, the combination of a tongue, a rear draft rigging comprising equalising levers arranged with their inner ends overlapping and extending across the tongue, a pivot mounted on the tongue and connecting the overlapping ends of the levers together, the pivot being located nearer the inner ends of the levers than the outer ends thereof, draft means located at opposite sides of the tongue and connected with the outer extremities of the levers, a pulley removably mounted on the front end of the tongue and movable back and forth thereon, a flexible element having its middle portion passing over the front of the pulley and its extremities disposed at opposite sides of the tongue and between the latter and said draft means, said element forming an equalising connection between the levers, and means for connecting the extremities of the said element with the inner arms of the levers respectively, with a front draft rigging operatively connected with the rear draft rigging whereby the one equalises the other.

[Claims 6 to 10 not printed in the Gazette.]

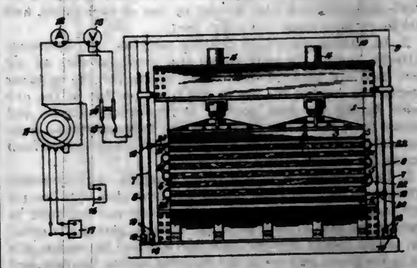
958,812. VEGETABLE-WASHER. EDWARD J. JUDGE, San Francisco, Cal. Filed Oct. 5, 1908. Serial No. 456,149.

An improved vegetable washer having in combination a revoluble, perforated drum having means for advancing the vegetable therethrough, a spray pipe within the drum adapted to deliver fluid jets outwardly against the vegetable and toward the opposed inner wall or surface of the drum, and a second spray pipe outside the drum adapted to deliver fluid jets against the outer wall or surface of



said drum substantially in a direction opposite to the jets of the first-named spray pipe, said second jets serving as cleaners of the perforations of the drum and also to prevent the leaves of the vegetable clinging to the opposite or inner surface of said drum.

958,813. PRESS. GEORGE KELLY, Mineral Point, Wis. Filed July 25, 1907. Serial No. 385,576.



1. In a press of the class described, the combination of upper and lower relatively-movable platens, a plurality of combined heating and division plates disposed between the platens each consisting of a solid sheet having smooth upper and lower faces and constructed of material which rises in temperature on the passage of an electric current therethrough, said sheets being arranged alternately with the material to be compressed and dried, and means for connecting the sheets in circuit with a source of electromotive force whereby opposite sides of the plates in contact with the material are substantially uniformly heated.

2. The combination with a drying press having upper and lower platens, of a plurality of movable division plates adapted to be located between and in the midst of the material being pressed, said plates being flat and smooth on opposite sides and composed of thin imperforate solid homogeneous sheets of electrically-resisting material with means whereby a current of electricity may be passed into each of them.

3. In a drying press, opposed platens, a series of thin solid homogeneous metal plates of electrically-resisting material adapted to be interposed alternately between the sheets of material to be dried, and means for separately and uniformly heating said plates by connecting them to a source of electrical energy.

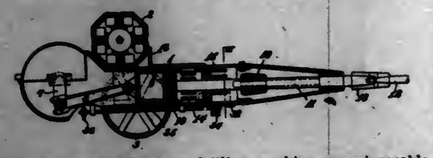
4. In a press for drying and pressing sheets of material, the combination with pressing platens, of a plurality of thin flat solid imperforate drying plates of material having electrical resistance, adapted to be interposed between layers composed of material being dried and in contact therewith, and movable conducting means connected to the several plates for heating the same.

5. In a press for drying and pressing sheets of material, the combination with pressing platens, of a plurality of flat solid imperforate drying and pressing plates of mate-

rial having electrical resistance adapted to be interposed between layers of said material and in contact therewith, an electrical conductor located longitudinally of the path of movement of the plates, and a conducting device connected to each plate and freely movable with the same, said device having a freely movable engagement with the conductor.

[Claims 6 and 7 not printed in the Gazette.]

958,814. DRILLING-MACHINE. NILS D. LEVIN, Chicago, Ill. Filed Nov. 19, 1906, Serial No. 343,964. Renewed July 28, 1909. Serial No. 509,979.



1. In combination in a drilling machine, a reciprocable cylinder having its ends closed and provided with an air port intermediate its ends, guide means for the cylinder adapted to confine the air in the front portion of the cylinder during the first portion of its forward stroke and release it at the latter portion of the forward stroke, a reciprocable piston, a tool carried by one of such parts, and means reciprocating the other part.

2. In combination in a drilling machine, a reciprocable cylinder having its ends closed and provided with an air port near its forward end, guide means for the cylinder adapted to confine the air in the front portion of the cylinder during the first portion of its forward stroke and release it at the latter portion of the forward stroke, a reciprocable piston therefor, a tool carried on the piston, and means for reciprocating the cylinder.

3. In combination in a drilling machine, a reciprocable cylinder having its ends closed and provided with an air port located at a distance from the front end sufficient to prevent the piston from striking the front end of the cylinder, guide means for the cylinder adapted to confine the air in the front portion of the cylinder during the first portion of its forward stroke and release it at the latter portion of the forward stroke, a reciprocable piston, a tool carried by one of such parts, and means for reciprocating the other part.

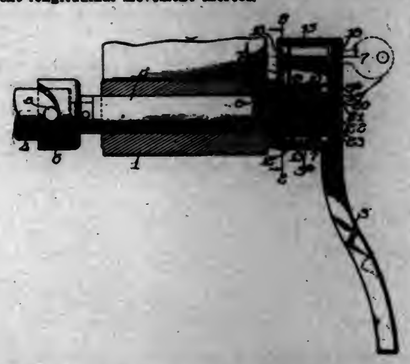
4. In combination in a drilling machine, a reciprocable cylinder having its ends closed and provided with an air port located at a distance from the front and sufficient to provide an air cushion to prevent the piston from striking the front end of the cylinder, a reciprocable piston therefor, guide means for the cylinder adapted to confine the air in the front portion of the cylinder during the first portion of its forward stroke and release it at the latter portion of the forward stroke, a tool carried by the piston, and means for reciprocating the cylinder.

5. In combination in a drilling machine, a reciprocable cylinder having its end closed and provided with an air port adapted to maintain atmospheric pressure in the front part of the cylinder on the forward stroke thereof and secure an air cushion between the front end of the cylinder and the piston, guide means for the cylinder adapted to confine the air in the front portion of the cylinder during the first portion of its forward stroke and release it at the latter portion of the forward stroke, a reciprocable piston, a tool carried by one of such parts, and means for reciprocating the other part.

[Claims 6 to 12 not printed in the Gazette.]

958,815. LOCK FOR MOTOR-STARTING CRANKS. ROMONDO D. MARKHAM, Chicago, Ill., assignor to Auto Lock Co., Chicago, Ill., a Corporation of Illinois. Filed Mar. 13, 1909. Serial No. 483,120.

1. In a device for the purpose described, a lock comprising a sleeve mounted upon a crank shaft between the crank and the frame of the machine and suitable means for positively locking the said sleeve on said shaft to prevent longitudinal movement thereof.



2. In a device for the purpose described, the combination of a motor shaft, a starting element having means for rotative engagement with said shaft, movable longitudinally thereof into and out of its engaging position, a guide for directing the starting element into and out of engaging position, and means for locking the starting element against longitudinal movement toward the motor shaft while permitting its rotary movement.

3. In a device for the purpose described, the combination of a motor shaft, a starting element having means for rotative engagement with said shaft, movable longitudinally thereof into and out of its engaging position, a guide for directing the starting element into and out of engaging position, a member on the starting element incapable of passing said guide and with reference to which member the starting element is movable toward and from said shaft, and means for locking the said member and element together.

4. In a device for the purpose described, the combination of a motor shaft, a starting element having means for rotative engagement with said shaft, movable longitudinally thereof into and out of its engaging position, a movable sleeve through which the starting element is longitudinally movable, an abutment or stop for said sleeve, and means for locking the sleeve and starting element against relative longitudinal movement.

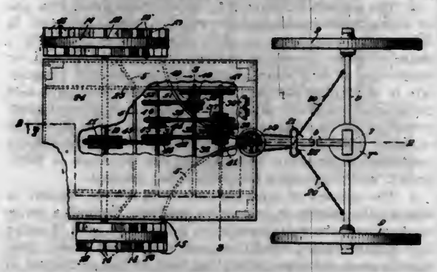
5. In a device for the purpose described, the combination of a motor shaft, a starting element having means for rotative engagement with said shaft, movable longitudinally thereof into and out of its engaging position, said starting element embodying a stem, a shouldered sleeve surrounding said stem and spaced therefrom, a spring surrounding said stem within said sleeve and bearing between the shoulder thereof and the starting element for tending to force the sleeve and starting element apart, an abutment for said sleeve for limiting its movement toward said shaft, and means for locking the starting element and sleeve against relative longitudinal movement.

[Claims 6 to 11 not printed in the Gazette.]

958,816. TRACTION-ENGINE. LAVERN M. MERKLEY, Blackfoot, Idaho. Filed Nov. 18, 1908. Serial No. 463,330.

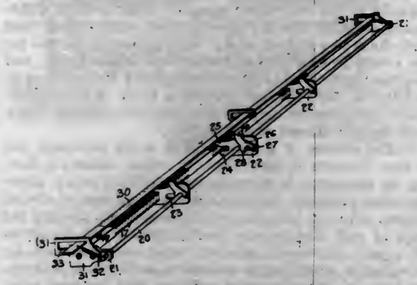
In a machine of the character described, the combination of upper and lower frames, spring devices for supporting the upper frame above the lower one, steering and driving wheels carried by the lower frame, a differential gear on the axle of the driving wheels, said upper frame consisting of front and rear end bars uniting longitudinal side bars and longitudinal intermediate bars, angular bearing brackets depending from the intermediate longitudinal bars, a main drive shaft journaled in said brackets, a reverse drive counter shaft journaled in said brackets, a direct drive counter shaft journaled in said brackets, meshing gears on the main

drive shaft and the reverse drive counter shaft, sprocket chain gearing between the direct and reverse drive counter shafts, and including the shiftable sprocket wheel, sprocket chain gearing between the direct drive counter shaft and said differential gearing, the sprocket wheel 34 fixed to the main drive shaft, two sets of sprocket chain gearing between the main drive shaft and the direct drive counter shaft, and including shiftable sprocket wheels arranged on opposite sides of the sprocket wheel fixed to said main



drive shaft, the last mentioned shiftable sprocket wheels being adapted to be locked to said intermediate one for rotation therewith, a top plate arranged on the upper frame and formed adjacent its front edge with transverse slots, longitudinal rock shafts journaled in bearings on the bottom of said plate, hand levers fixed to the forward ends of said rock shafts and working in the slots of said plate, locking devices for said hand levers, and arms depending from the rear portions of said rock shafts for actuating the said shiftable sprocket wheels.

958,817. TYPE-WRITING MACHINE. JOHN C. MCLAUGHLIN, Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed May 22, 1909. Serial No. 497,608.



1. In a typewriting and tabulating mechanism, the combination of a rack, a rod extending along the rack, a column stop mounted on the rod and shaped to engage the rack, said stop slidable transversely of the rod to withdraw it from the rack, and also adjustable along the rod, and means for holding said column stop either in or out of working position while held by said rack.

2. In a typewriting and tabulating mechanism, the combination of a rack, a rod extending along the rack, a column stop mounted on the rod to engage the rack, said stop slidable edgewise transversely of the rod to withdraw it from the rack, and also adjustable along the rod, and means to latch said stop in engagement with the rack.

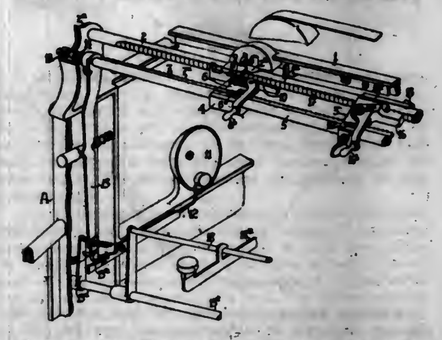
3. In a typewriting and tabulating mechanism, the combination of a rack, a rod extending along the rack, a column stop mounted on the rod to engage the rack, said stop slidable edgewise transversely of the rod to withdraw it from the rack, and also adjustable along the rod, and means to latch said stop both in and out of working position while held by the rack.

4. In a typewriting and tabulating mechanism, the combination with a rack and a rod extending along the rack, of a column stop shaped to engage the rack and slotted to engage the rod, said stop movable transversely on the rod to disengage itself from the rack, and also slidable along the rod, and a latch pivoted to the stop and provided with a hook portion to engage the rod to lock the stop into and out of engagement with the rack.

5. In a tabulating mechanism, the combination of a rack, a rod extending along the rack, and a column stop formed to engage said rod for transverse and lengthwise movement thereon, and having a portion to engage the rack, and means for detaining said stop in either effective or ineffective position while held by said rack.

[Claims 6 to 15 not printed in the Gazette.]

958,818. TYPE-WRITING MACHINE. JOHN C. MCLAUGHLIN, Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 21, 1909. Serial No. 534,269.



1. In a typewriting machine, the combination with a carriage and a signal and key locking mechanisms, of a rock-shaft journaled in the opposite sides of the frame of the machine and connected with the signal and key locking mechanisms, a slide splined on and adjustable throughout substantially the entire length of the rock shaft, and engaged by the carriage to rock the slide and rock-shaft to operate the signal and key-locking mechanisms.

2. In a typewriting machine, the combination with a carriage, and signal and key locking mechanisms, of a gage-supporting rock shaft, a gage splined thereon, and projecting beyond the rock shaft to form a crank to be engaged by the carriage to rock the shaft, and a direct connection between the rock shaft and the signal and key locking mechanisms for operating the latter when the carriage contacts with the gage to rock the shaft.

3. In a typewriting machine, the combination with a carriage, a signal device, and a key locking mechanism, of a combined gage support and signal-operating mechanism, comprising a rock-shaft journaled in the sides of the machine, a gage splined on the rock shaft and adjustable from side to side of the machine to effect the arrest of the carriage at different points in its range of movement, the gage lying in the path of the carriage and engaged thereby to rock the shaft, and an arm depending from the rock-shaft to operate the signal device and key locking mechanism, when the shaft is turned.

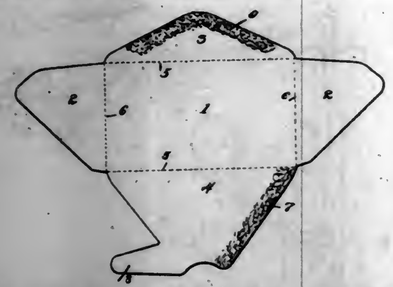
4. In a typewriting machine, the combination with a carriage, and signal and key locking mechanisms, of a rock-shaft extending across and journaled at its ends in the frame of the machine, an arm directly connecting the rock-shaft and the signal and key locking mechanisms, a rack forming part of the rock-shaft and extending substantially across the machine, a slide turning with the rock-shaft and adjustable thereon, a dog on the slide cooperating with the rack to lock the slide in adjusted position, a cam carried by the slide and engaged by the carriage to rock the shaft and actuate the signal and key locking mechanisms

against the tension of a returning spring for yieldingly maintaining the cam in the path of movement of the carriage.

5. In a typewriting machine, the combination with a carriage, key locking and signal mechanisms, of a rock-shaft journaled at its ends in the sides of the frame of the machine and having a rack forming a part of, and projecting therefrom in the form of a feather, the rack extending substantially across the machine, a slide adjustable on the rock shaft and rack across the frame of the machine and having a dog intermeshing with the rack, the rack splining the slide on the rock shaft, and a direct connection between the rock-shaft and signal and key locking mechanisms, the slide being engaged by the carriage at the end of a line for operating the slide to rock the shaft and actuate the signal and key locking mechanisms.

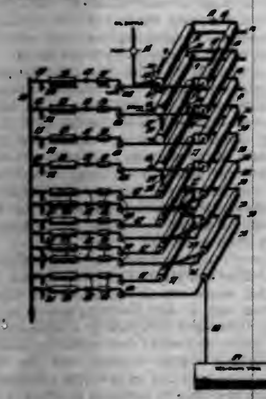
[Claims 6 to 10 not printed in the Gazette.]

958,819. ENVELOP. OSCAR J. OLM, Minneapolis, Minn. Filed July 31, 1909. Serial No. 510,542.



An envelop having a front wall, end flaps, a bottom flap disposed outwardly of the end flaps and provided with a gummed surface adapted to be secured to one of the said flaps, a laterally extending tongue extending from the bottom flap and overlying a portion of the end flap and spaced from the adjacent edge of the bottom flap to form a finger receiving space, and a sealing flap having a gummed surface adapted to be secured to one of the end walls and to the said laterally extending tongue.

958,820. PROCESS FOR THE TREATMENT OF OILS. JOSEPH H. PARKER, Los Angeles, Cal. Filed June 1, 1909. Serial No. 499,586.



1. The process of producing from crude petroleum one or more products of lighter gravity, which consists in forcing the petroleum in finely divided condition into a chamber under pressure, continuously supplying heat by conduction to said chamber to cause the heat to accumulate in the oil and thereby causing the petroleum oil in said chamber to generate vapor under pressure, intermittently withdrawing successive portions of such vapor from the chamber, when the vapor in the chamber attains a definite condition of pressure and condensing the portions of vapor so produced.

2. The process of producing from crude petroleum one or more products of lighter gravity, which consists in forcing the petroleum in finely divided condition into a chamber under pressure, continuously supplying heat by conduction to said chamber to cause the heat to accumulate in the oil and thereby causing the petroleum oil in said chamber to generate vapor under pressure, intermittently withdrawing successive portions of such vapor from the chamber when the vapor in the chamber attains a definite condition of pressure, compressing the portions so withdrawn, and condensing the compressed product.

3. The process of treating petroleum which consists in causing the petroleum to pass successively through a series of chambers, the petroleum being forced into each chamber in a finely divided condition and maintained under pressure in each chamber, imparting heat to the petroleum in each chamber to generate vapor under pressure therein, allowing the petroleum to escape from each chamber to the succeeding chamber under definite difference of pressure between said chambers, intermittently withdrawing from each chamber a portion of the vapor generated therein under a definite condition of pressure in said chamber, and condensing the portions so withdrawn, the successive chambers being of successively higher temperature so that the products obtained therefrom are of different boiling point.

4. The process of treating petroleum which consists in causing the petroleum to pass successively through a series of chambers, the petroleum being forced into each chamber in a finely divided condition and maintained under pressure in each chamber, imparting heat to the petroleum in each chamber to generate vapor under pressure therein, allowing the petroleum to escape from each chamber to the succeeding chamber under definite difference of pressure between said chambers, withdrawing from each chamber a portion of the vapor generated therein under a definite condition of pressure in said chamber, and compressing and subsequently condensing the portions so withdrawn, the successive chambers being of successively higher temperature so that the products obtained therefrom are of different boiling point.

5. The process of producing from crude petroleum one or more products of lighter gravity, which consists in forcing the petroleum in finely divided condition into a chamber under pressure, continuously imparting heat to the petroleum while in said chamber by conduction through the walls of said chamber and thereby causing the petroleum oil in said chamber to generate vapor under pressure, intermittently withdrawing successive portions of such vapor from the chamber when sufficient heat has been accumulated in the oil to produce a definite pressure, subjecting the vapor in its withdrawal to mechanical mixing action, and condensing the portions of vapor so produced.

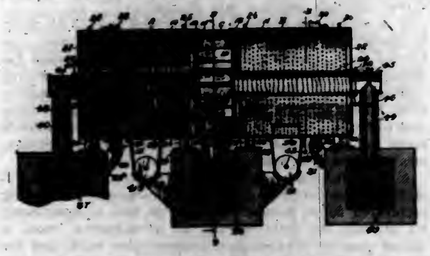
[Claims 6 to 13 not printed in the Gazette.]

958,821. MALTING APPARATUS. WILLIAM H. PRINZ, Chicago, Ill. Filed Aug. 22, 1903. Serial No. 170,414.

1. A malting apparatus, comprising a plurality of rotating malting-compartments, a stationary intermediate compartment in communication with said malting-compartments, means connecting said malting-compartments so that they rotate in unison, and air conduits communicating with said malting and intermediate compartments.

2. A malting apparatus, comprising a plurality of malting compartments adapted to be rotated about a common axis, a stationary intermediate compartment, an air conduit communicating with said intermediate compartment, and other means for supplying air to said malting compartments.

3. A malting apparatus, comprising a plurality of malting-compartments adapted to rotate about a common axis, means connecting said malting-compartments so that they rotate in unison, a stationary intermediate compartment, and air conduits communicating with said malting and intermediate compartments.

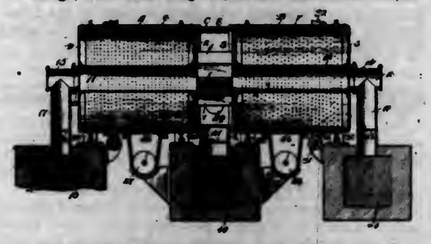


4. A malting apparatus, comprising a plurality of malting-compartments, means connecting said malting-compartments so that they rotate in unison, a stationary intermediate compartment, and air conduits communicating with each of said malting and intermediate compartments.

5. A malting apparatus, comprising a plurality of malting-compartments coaxially arranged, means connecting said malting-compartments so that they rotate in unison, a stationary intermediate compartment in communication with the adjacent malting-compartments, and air conduits communicating with said malting and intermediate compartments.

[Claims 6 to 23 not printed in the Gazette.]

958,822. MALTING APPARATUS. WILLIAM H. PRINZ, Chicago, Ill. Filed Aug. 22, 1903. Serial No. 170,415.



1. A malting apparatus, comprising a plurality of coaxial rotating malting compartments, means connecting said compartments so that they rotate in unison, and suction mechanism connected with both ends of each of said compartments for causing fresh air to flow in the same direction through the malt in each of said compartments.

2. A malting apparatus having a plurality of coaxial malting compartments, an intermediate compartment between adjacent malting compartments and communicating therewith, and means for simultaneously exhausting air from said compartments.

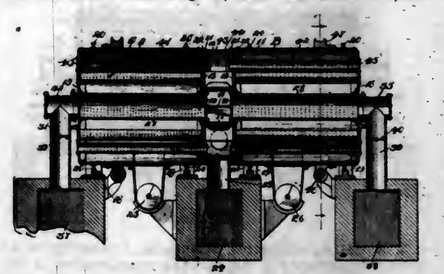
3. A malting apparatus, comprising a plurality of rotary coaxial malting compartments, a stationary intermediate compartment between adjacent malting compartments and communicating therewith, means connecting said malting compartments so that they rotate in unison, and means for exhausting air from said compartments.

4. A malting apparatus, comprising an externally-imperforate intermediate compartment, rotating malting compartments at opposite sides of said intermediate compartment and communicating therewith, said malting compartments being externally perforated, and means for exhausting air from said compartments.

5. A malting apparatus, comprising an imperforate intermediate compartment, rotating malting compartments at opposite sides of said intermediate compartment and communicating therewith, said malting compartments being perforated, and means connected with both ends of each of said malting compartments for exhausting air therefrom.

[Claims 6 to 17 not printed in the Gazette.]

958,823. MALTING APPARATUS. WILLIAM H. PRINZ, Chicago, Ill. Filed Aug. 22, 1903. Serial No. 170,417.



1. A malting apparatus, comprising a plurality of rotary imperforate malting compartments arranged coaxially, means connecting said compartments so that they rotate in unison, and means communicating with both ends of each of said compartments for directing fresh air through said compartments from the outer portions toward the axes thereof and toward opposite end portions of said compartments.

2. A malting apparatus, comprising a plurality of rotary imperforate malting compartments arranged coaxially, means connecting said compartments so that they rotate in unison, and means communicating with both ends of each of said compartments for establishing a circulation of air through said compartments from the outer portions toward the axes thereof and from their inner end portions toward their outer end portions.

3. A malting apparatus, comprising a plurality of rotary imperforate malting compartments arranged coaxially, means connecting said compartments together so that they rotate in unison, and means communicating with both ends of each of said compartments for directing fresh air through said compartments in opposite directions.

4. A malting apparatus, comprising a plurality of rotary imperforate malting compartments, means connecting said compartments together so that they rotate in unison, means communicating with the inner end portion of each of said compartments for supplying fresh air thereto, means communicating with said compartments near the axes thereof for removing foul air therefrom, and means for preventing air from entering said compartments above the surface of the grain therein.

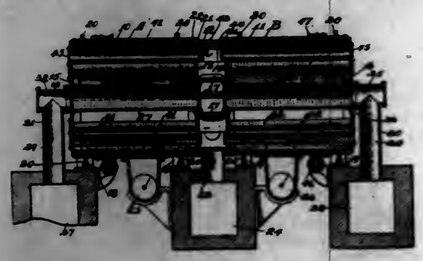
5. A malting apparatus, comprising a plurality of rotary imperforate malting compartments arranged coaxially, means connecting said compartments together so that they rotate in unison, means communicating with the inner end portions of each of said malting compartments near the peripheries thereof for supplying attemperated air thereto, and means communicating axially with the outer end portions of said compartments for conducting foul air therefrom.

[Claims 6 to 12 not printed in the Gazette.]

958,824. MALTING APPARATUS. WILLIAM H. PRINZ, Oak Park, Ill., assignor of two-thirds to Charles A. Plamondon and George Plamondon, Chicago, Ill. Filed July 5, 1904. Serial No. 215,348.

1. A malting apparatus having a plurality of externally-imperforate rotating malting-compartments coaxially disposed, means connecting said compartments so that they rotate in unison, and means communicating with both ends of each of said compartments and arranged to cause fresh air to flow radially through said compartments simultaneously.

2. A malting apparatus, comprising a plurality of externally-imperforate rotating malting-compartments coaxially disposed, means connecting said compartments so that they rotate in unison, and mechanism for supplying fresh air axially to said compartments simultaneously and causing it to flow radially therethrough.



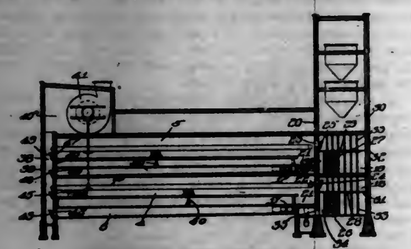
3. A malting apparatus, comprising a plurality of externally-imperforate rotary malting-compartments, a stationary intermediate compartment between successive malting-compartments, means connecting said rotary compartments together so that they rotate in unison, and means for causing air to flow radially through said malting-compartments.

4. A malting apparatus, comprising a plurality of externally imperforate malting compartments, means connecting said malting compartments so that they rotate in unison, means for rotating said malting compartments, a stationary intermediate compartment between said malting compartments, and means for supplying air to said malting compartments, substantially as described.

5. A malting apparatus, comprising a plurality of externally imperforate malting compartments, means connecting said malting compartments so that they rotate in unison, means for rotating said malting compartments, a stationary intermediate compartment between said malting compartments, and suction mechanism for supplying air to said compartments, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

958,825. MALTING APPARATUS. WILLIAM H. PRINZ, Oak Park, Ill., assignor of one-third to Charles A. Plamondon and one-third to George Plamondon, Chicago, Ill. Filed Oct. 6, 1906. Serial No. 337,784.



1. A malt-house having a malting compartment room, a plurality of compartments in said compartment room, said compartments having perforated floors, means operating in said compartments for stirring the malt therein, gangways between adjacent compartments, air channels under said compartment floors, air channels under said gangways, an attemperator room, and means for delivering air from said attemperator room either to the channels under the compartment floors or to the channels under the gangways.

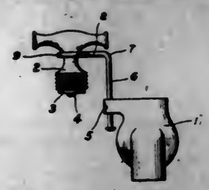
2. A malt-house having a malting compartment room, a plurality of compartments in said compartment room, said compartments having perforated floors, means operating in said compartments for stirring the malt therein, gangways between adjacent compartments, air channels under said compartment floors, air channels under said gangways, an attemperator room, means for delivering air from said attemperator room either to the channels under the compartment floors or to the channels under the gangways, and valved openings between said channels.

3. A malt-house having a compartment room, a plurality of compartments therein, said compartments having perforated floors, means operating in said compartments for stirring the malt therein, an attemperator room, a valved opening between said attemperator room and the compartment room above the compartments, a valved outlet from said compartment room above the compartments, channels under the compartment floors, and valved outlets communicating with said channels.

4. A malt-house having a compartment room, a plurality of compartments therein, said compartments having perforated floors, means operating in said compartments for stirring the malt therein, an attemperator room, a valved opening between said attemperator room and the compartment room above the compartments, a valved outlet from said compartment room above the compartments, channels under the compartment floors, valved outlets communicating with said channels, gangways between said compartments, channels under said gangways, and means for admitting air from said attemperator room to the latter channels.

5. A malt-house, having a compartment room, a plurality of compartments therein, said compartments having perforated floors, means operating in said compartments for stirring the malt therein, an attemperator room, a valved opening between said attemperator room and the compartment room above the compartments, a valved outlet from said compartment room above the compartments, channels under the compartment floors, valved outlets communicating with said channels, gangways between said compartments, channels under said gangways, means for admitting air from said attemperator room to the latter channels, and valved openings between the channels under the compartments and those under the gangways.

958,826. FAUCET. ALBERT R. PRITCHARD, Rochester, N. Y. Filed Apr. 30, 1908. Serial No. 430,246.



In a screw plug faucet, a faucet body with an extension cast on one side thereof, the latter having a perforation through it in line with the bore of said faucet body; a screw plug; and an angular connecting bar attached revolubly at one end to the screw plug, and movable at its other end within the perforation in said extension on the faucet body; substantially as shown and described.

958,827. ELECTRIC-ARC LAMP. LEON W. PULLEN, Camden, N. J., assignor, by mesne assignments, to Waldron Clark Manufacturing Company, a Corporation of New York. Filed Dec. 12, 1905. Serial No. 291,390.

1. In an arc lamp, the combination of a tubular reservoir and containing mercury, a solenoid surrounding the reservoir, a hollow tubular plunger of magnetic material floating in said mercury and having a straight central contracted vertical opening in its bottom to cause the mercury to pass into and out of the interior and maintaining the central position of the plunger in the reservoir, an electrode holder carried by the plunger, and an electrode holder to or from which the plunger moves.

2. In an arc lamp, the combination of a tubular reservoir containing mercury and surrounded by a magnetizing solenoid, a hollow plunger of iron having a buoyant body secured to its lower part and floating in said mercury and having at its top means for moving an electrode and an annular bushing surrounding the lower portion of the plunger and having a sliding connection therewith for permitting a small but quick movement to the plunger while the bushing acts as a guide and loose piston to retard the free movement of the plunger over great distance, an electrode holder to or from which the plunger moves, and electric conductors including the solenoid plunger and electrode in series.



3. In an arc lamp, a head for the globes consisting of a series of circular plates having flanges, the said plates being clamped together to bring the flanges concentric so as to form narrow concentric grooves adjacent to the perimeter and a shouldered portion at the center, combined with two globes one inclosing the other and having their rims respectively snugly fitting into said grooves, and a central insulating guide for the movable carbon holder supported by the central shouldered portion of the circular plates.

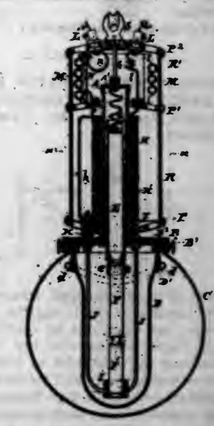
4. In an arc lamp a head consisting of a series of superimposed flanged plates of different diameters in which the flanges form two annular deep concentric grooves each containing a sealing body of mercury, a tubular central part for uniting the several flanged plates, a central closed globe having its lower rim fitted into the inner of said grooves, an outer inclosing globe surrounding the inner globe and having its lower rim fitted into the outer of said grooves, clamps for electrodes within the inner globe, and electro-magnetic means for adjusting the electrodes to maintain an arc.

5. In an arc lamp, a head for supporting the globes consisting of a series of circular plates fitted concentrically together and each having an annular flange the several flanges having slightly different diameters to form concentric narrow annular grooves, in combination with globes one inclosing the other and respectively fitting and filling said grooves, and electrodes for maintaining an arc within the inner globe.

[Claims 6 to 9 not printed in the Gazette.]

958,828. ARC-LAMP. LEON W. PULLEN, Camden, N. J., assignor, by mesne assignments, to Waldron Clark Manufacturing Company, a Corporation of New York. Filed May 24, 1906. Serial No. 318,445.

1. In an arc lamp, the combination of a central tube of non magnetic material, a solenoid surrounding the tube, a lower head P of magnetic material fitted upon the tube below the solenoid, an upper head P' also of magnetic material arranged above the solenoid and having a central opening through which the non magnetic tube extends, an outer case R of magnetic material connecting with and arranged between the heads P and P' which with the said heads form a magnetic yoke around the solenoid, means for securing the heads P and P' upon the case R, and a magnetic plunger within the tube for operating the movable carbon and completing with the said heads and case a magnetic circuit around the solenoid.



2. In an arc lamp, a frame structure consisting of the combination of a central tubular part open at the bottom, a lower head surrounding the lower end of the tube and supported thereby, a cylindrical case of larger diameter than the tube and resting upon the lower head, an upper head resting upon the top of the cylindrical case, a second cylindrical case resting upon the upper head, a cap resting upon the top of the second cylindrical case, and a bolt for drawing the cap and central tubular part toward each other for clamping the several parts together.

3. In an arc lamp, the combination of a central tube of non magnetic material, a solenoid surrounding the tube, a lower head P of magnetic material fitted upon the tube below the solenoid and having ventilating apertures, an upper head P' also of magnetic material arranged above the solenoid having ventilating apertures and arranged substantially concentric with the axis of the tube and lower head, an outer case R of magnetic material connecting with and arranged between the heads P and P' which with the said heads form a magnetic yoke around the solenoid, means for securing the heads P and P' upon the case R and to the tube, and a magnetic plunger within the tube for operating the movable carbon and completing with the said heads and case a magnetic circuit around the solenoid.

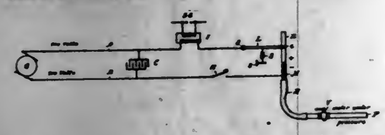
4. In an arc lamp, the combination of a central tube of non magnetic material closed at the top, a solenoid surrounding the tube, a lower head P of magnetic material fitted upon the tube below the solenoid, an upper head P' also of magnetic material arranged above the solenoid, an outer case R of magnetic material connecting with and arranged between the heads P and P' which with the said heads form a magnetic yoke around the solenoid, means for securing the heads P and P' upon the case R and to the tube, a tubular magnetic plunger closed at the top and arranged to make a snug sliding fit within the non magnetic tube for operating the movable carbon and completing with the said heads and case a magnetic circuit around the solenoid, and a flexible electric conductor between the non magnetic tube and the tubular magnetic plunger for supplying electricity to the carbon carried by the plunger.

5. In an arc lamp, the combination of a tube of non-magnetic material open at the bottom, a solenoid surrounding the tube at a distance above its lower end, a case, made with top and bottom heads and formed of magnetic mate-

rial secured to the non magnetic tube and surrounding the solenoid and also provided with ventilating apertures through its bottom and top heads, a globe holder receiving the lower open end of the non magnetic tube at a distance below the lower head of the magnetic case to form an annular air space between them leading to the ventilating apertures in the said lower head of the case, and a magnetic plunger within the non magnetic tube for operating the movable carbon.

[Claim 6 not printed in the Gazette.]

958,829. METHOD AND APPARATUS FOR PRODUCING HIGH-FREQUENCY OSCILLATING CURRENTS. JAMES H. ROGERS, Hyattsville, Md. Filed Jan. 20, 1910. Serial No. 538,962.



1. The method of producing high frequency oscillating currents, which consists in regulating the discharges of a condenser between two electrodes by continuously feeding a small body of liquid of relatively low conductivity, in liquid form, between the electrodes to produce an unbalanced condition of conductivity and resistance.

2. The method of producing high frequency oscillating currents, which consists in regulating the discharges of a condenser between two electrodes by continuously feeding a small body of water in liquid form between the two to produce an unbalanced condition of conductivity and resistance.

3. The method of producing high frequency oscillating currents, which consists in regulating the discharges of a condenser between two electrodes by continuously passing a jet of water from one electrode to the other.

4. The method of producing high frequency oscillating currents, which consists in regulating the discharges of a condenser between two electrodes by a constantly moving jet of water extending from one electrode to the other, and varying the frequency by varying the hydrostatic pressure of the jet.

5. The method of producing high frequency oscillating currents, which consists in regulating the discharges of a condenser between two electrodes by a constantly moving jet of water extending from one electrode to the other, said jet being of a fineness adapted to establish an unbalanced condition of conductivity and resistance for the condenser.

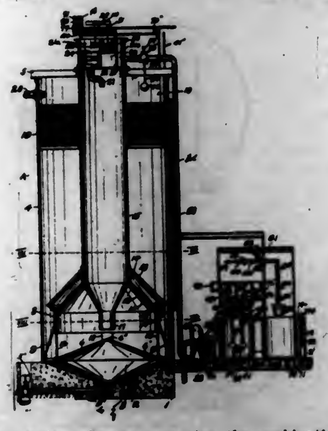
[Claims 6 to 10 not printed in the Gazette.]

958,830. DYE. FRIEDRICH RUNKEL and MARTIN HERZBERG, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Jan. 29, 1910. Serial No. 540,882.

1. The herein described new disazo dyestuffs obtainable from 1 molecule of a diazotised sulfonic acid of an aminodiarylether, 1 molecule of another diazo compound and 1 molecule of an 1.8-aminonaphthol sulfonic acid, which are after being dried and pulverised in the shape of their sodium salts dark powders soluble in water; yielding upon reduction with stannous chlorid and hydrochloric acid a sulfonic acid of an aminodiarylether, another amino compound and a diamino-1.8-aminonaphthol sulfonic acid; dyeing wool from acid baths from blue to green to black shades remarkable for their fastness to washing and to milling, substantially as described.

2. The herein described new disazo dyestuff obtainable from diazotised ortho-aminophenylether sulfonic acid, diazotised para-chloro-ortho-aminophenylether and 1.8-aminonaphthol-4-sulfonic acid, which dye is after being dried and pulverized in the shape of its sodium salt a dark powder soluble in water with a dark blue and soluble in concentrated sulfuric acid with a dark-green color; yielding upon reduction with stannous chlorid and hydrochloric acid ortho-aminophenylether sulfonic acid, para-chloro-ortho-aminophenylether and 1.2.7-triamino-8-naphthol-4-sulfonic acid; and dyeing wool blue-black shades remarkable for their fastness to washing and to milling, substantially as described.

958,831. WATER-SOFTENING APPARATUS. HEZEKIAH RUSSELL, Marion, Ohio. Filed Mar. 20, 1908. Serial No. 422,195.



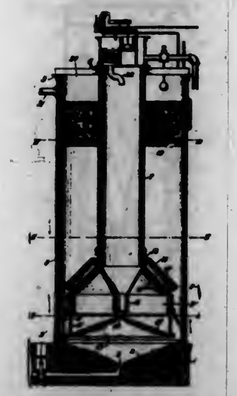
1. In a water softening apparatus, the combination of a precipitation tank, a mixing tank having a discharge conduit leading to said precipitation tank, a solution proportioning tank provided with a feed port adapted for discharge into said mixing tank, and with an overflow port, means for closing said overflow port to induce a flow through said feed port, means for delivering liquid to said mixing tank, and means for automatically controlling the overflow port closure to induce a flow through the feed port proportionate to the delivery of liquid to said mixing tank.

2. In a water softening apparatus, the combination of a precipitation tank, a solution tank having a partition dividing same to form a storage chamber and an overflow chamber, said partition being provided with an overflow weir and the tank body with a feed weir opening from said storage chamber, a gate adapted for movement over said overflow weir, a mixing tank having a raw water intake and adapted for receiving solution from the solution tank and for delivering liquid to said precipitation tank, a balance arm, a float located in said mixing tank and connected with one end of said balance arm, and means connecting the opposite end of said arm with said weir gate, for the purpose set forth.

3. In a water softening apparatus, the combination with a precipitation tank, of a mixing tank, a solution proportioning tank having a partition dividing same to form a storage chamber and an overflow chamber, said partition being provided with an overflow weir and the tank side with a vertical weir slot, the latter adapted for discharge into said mixing chamber and having its bottom located at a higher level than the bottom of said overflow weir, a gate adapted to slide over said overflow weir, a cleaning rod carried by said gate and projecting into said weir slot, a conduit for conducting solution from said feed weir to said mixing tank, a balance arm, a float in said mixing chamber and connected with one end of said balance arm, means for connecting the opposite end of said arm with said weir gate, and a conduit for delivering liquid from said mixing chamber to said precipitation tank.

4. In a water softening apparatus, a precipitation tank, a mixing tank, means for delivering liquid to said mixing tank, a solution proportioning tank having an overflow port and provided with a discharge port opening to said mixing tank, means for delivering solution to said proportioning tank, means for varying the level of said overflow port to produce a flow through said discharge port proportionate to the delivery of liquid to said mixing chamber, and means for delivering liquid from said mixing tank to said precipitation tank.

958,832. WATER-SOFTENING APPARATUS. HEZEKIAH RUSSELL, Dayton, Ohio. Filed Apr. 7, 1909. Serial No. 488,441.



1. In a water softening apparatus, a tank; a perforated, cone shaped baffle plate located in the bottom of said tank with its lower edge set in from the tank sides; a downtake pipe in said tank, having a discharge port located over the apex of said baffle plate, and means for delivering liquid to said pipe.

2. In a water softening apparatus, a tank having a cone bottom, an open bottom downtake pipe supported in said tank with its lower end terminating above the tank bottom, a cone shaped baffle plate, having a perforation in its apex, supported in said tank with its apex directed toward the bottom of said pipe, and means for delivering liquid to said pipe.

3. In a water softening apparatus, a tank having a cone bottom, a downtake pipe located in said tank and provided with a contracted lower end, a cylinder on the lower end of said pipe, a perforated, cone shaped baffle plate in the bottom of said tank with its apex directed toward the pipe cylinder and its edges set in from the tank sides, and means for delivering liquid to the upper portion of said pipe.

4. In a water softening apparatus, a tank, a downtake pipe located in and adapted to deliver liquid to the bottom of said tank, a hood located in said tank above the lower end of said pipe, a baffle supported over said hood, and means for delivering liquid to said pipe.

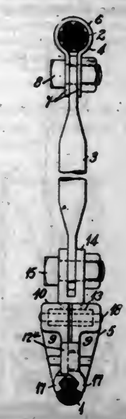
5. In a water softening apparatus, a tank; a downtake pipe located in said tank; a perforated hood supported in said tank above the bottom of said pipe; a slotted baffle supported over said hood, and means for delivering liquid to said pipe.

[Claims 6 to 11 not printed in the Gazette.]

958,833. TROLLEY-CONDUCTOR CLAMP. WILLIAM SCHAAKE, Pittsburg, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa., a Corporation of Pennsylvania. Filed Nov. 19, 1908. Serial No. 463,485.

1. A clamp comprising a pair of duplicate members having oppositely projecting shanks and jaws and intermediate interlocking fulcrum parts, in combination with means located between said shanks to exert a separating force whereby the jaws are moved toward each other.

2. A clamp comprising a pair of duplicate members having oppositely projecting shanks and jaws and intermediate interlocking fulcrum projections, in combination with a rotatably adjustable cam located between the shanks for forcing them away from each other and the jaws toward each other.



3. A clamp comprising a pair of interchangeable duplicate members having jaws and internally recessed shanks and intermediate interlocking hook lugs and flanges, in combination with a cam member located in the shank recesses and rotatably adjustable to force the shanks apart and the jaws together.

4. A clamp comprising a pair of interchangeable members having shank projections and jaws at their opposite edges and interlocking hook lugs and flanges intermediate their edges, said shank projections being provided with internal complementary recesses, in combination with an elliptical cam located in said complementary recesses and adapted to force the shank projections apart and the jaws together, when turned through an angle of substantially 90 degrees.

5. A trolley-conductor clamp comprising two duplicate members having jaws at one edge, internally recessed shanks at the opposite edge and intermediate hinge connections, in combination with a cam located between said shanks and rotatably adjustable to force the jaws into engagement with a trolley conductor, and means for locking the cam in its adjusted position.

958,834. HANGER FOR ELECTRICAL CONDUCTORS. WILLIAM SCHAAKE, Pittsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 28, 1909. Serial No. 510,001.

1. A clamp comprising two complementary gripping members having outwardly projecting complementary bosses provided with inclined surfaces, caps for said bosses and a bolt for drawing said caps toward each other.

2. A clamp comprising two complementary gripping members having oppositely projecting bosses of frusto-conical shape, caps having frusto-conical interior surfaces, and a bolt for drawing said caps toward each other upon said bosses.

3. A trolley wire hanger comprising a hanger rod or bar having a hole in its lower end, a pair of complementary gripping members forming a chamber into which the said end of the hanger rod or bar projects and provided with laterally projecting frusto-conical bosses, caps fitting over said bosses and a bolt projecting through said caps and bosses and the hole in said hanger rod or bar.

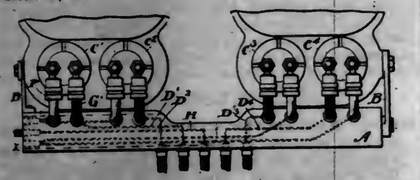
4. In a trolley conductor hanger, the combination with a hanger bar or rod provided with an aperture in its lower end, of a pair of complementary gripping members having

engaging upper ends and forming a chamber into which the apertured end of said rod or bar projects and provided with laterally projecting frusto-conical bosses, caps having frusto-conical interior surfaces to engage said bosses, and a bolt projecting through the caps and bosses and the aperture in said hanger bar or rod for drawing the caps toward each other and clamping the gripping members against the trolley conductor.



5. The combination with a hanger rod or bar provided with an aperture in its lower end, of a pair of complementary gripping members spaced apart except at their upper ends and provided with laterally projecting bosses having inclined surfaces, a pair of caps having inclined inner surfaces to fit the surfaces of said bosses, and a bolt projecting through the caps, the bosses and the aperture in the lower end of the hanger rod or bar for drawing said members into gripping engagement with the trolley conductor.

958,835. WIRE BAR FOR IGNITION SYSTEMS. CHARLES SCHMIDT, Cleveland, Ohio, assignor to The Peerless Motor Car Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Nov. 18, 1907. Serial No. 402,636.



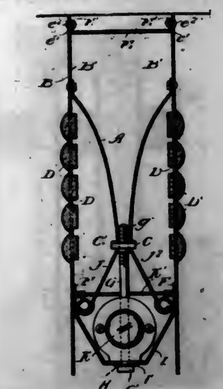
1. In an ignition system for explosive engines, having a plurality of cylinders, a wire bar of insulating material located adjacent to the cylinders of the engine having several high tension wires for the cylinders and connecting terminals therefor embedded therein, each high tension wire leading from a connecting terminal for the current source at its one end to a connecting terminal for a cylinder at its other end.

2. In an ignition system for explosive engines having a plurality of cylinders, a wire bar mounted on the engine frame and held in fixed relation to the cylinders, conducting wires embedded and insulated in the wire bar, and connecting terminals in the wire bar in proximity to the cylinders to which terminals the said conducting wires lead.

3. In an ignition system for explosive engines having a plurality of cylinders, a wire bar having insulated therein the high tension wires for the cylinders, a connecting terminal adjacent to each cylinder, each wire leading to one of said connecting terminals, and an exterior connection between said terminals and the cylinders.

4. In an ignition system for explosive engines, having a plurality of cylinders, a wire bar of insulating material having embedded therein the several wires for the high tension current, terminals adjacent to the cylinders, to which terminals said wires lead, and removable connections between the terminals and the cylinders.

958,836. ILLUMINATED SIGN. WARREN A. SHERWOOD and EDWIN L. GARDNER, Lancaster, Pa. Filed May 4, 1909. Serial No. 493,943.



1. In combination with a sign having an oppositely arranged pair of show faces and a pair of intermediately arranged, inwardly converging reflectors, a trough shaped reflector arranged to act simultaneously on both the reflectors before mentioned, means for permitting said trough shaped reflector to be removed from operative position and returned into the same and a source of illumination adapted to be moved into and out of such position with said trough-shaped reflector.

2. The combination of a semi-hexagonal shaped trough reflector provided with a hole through its bottom with two curved reflectors, and a screw tapped plate, a supporting rod provided with an externally threaded part, engaging said plate, and a head of less diameter than said hole, a catch adapted to engage said head in proximity to said hole, means for preventing the said trough reflector from being inserted too far into the sign casing and a pair of show faces adapted to exhibit the light from said reflectors.

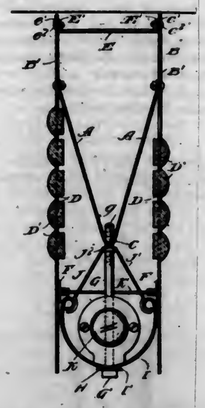
3. A sign casing adapted to permit the transmission of light through the same, in combination with a pair of curved reflectors which transmit the light through said casing, a source of illumination, a trough-shaped reflector receiving light therefrom and supplying it to said curved reflectors, a supporting rod for said trough shaped reflector, means for fastening the said rod in the sign, means for permitting the removal of the trough-shaped reflector from its normal position, means for checking such movement at a given point and means for locking said reflector in such normal position.

4. In combination with a casing adapted to permit the transmission of light through its opposite sides, a pair of curved reflectors adapted to concentrate the light which they thus transmit, a source of light, a trough-shaped reflector adapted to receive light from said source and reflect it on said curved reflectors and means permitting the movement of said trough shaped reflector into and out of its normal position for the purposes set forth.

5. A sign casing adapted to permit the transmission of light through its side, in combination with a curved reflector adapted to concentrate the light which it transmits through the same, means of illumination, a trough-shaped reflector adapted to receive light from said means and reflect the same on said curved reflector and means permitting the said trough-shaped reflector to be lowered from its normal position for convenience of access and restored to such position substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

958,837. ILLUMINATED SIGN. WARREN A. SHERWOOD and EDWIN L. GARDNER, Lancaster, Pa. Filed May 4, 1909. Serial No. 493,944.



1. The combination of a sign case a trough reflector having a series of holes arranged along its middle longitudinal line, two inwardly converging reflectors connected at their apex and there provided with a series of internally threaded holes, corresponding to the said holes in the trough reflector, screw threaded supporting rods engaging the threads of said holes, in the apex of the reflectors, the heads being adapted to pass through said holes in the said trough reflector, catches adapted to be used in conjunction with these latter holes to lock said trough reflector in normal position and means for preventing the said trough reflector from being inserted too far into said sign casing.

2. A sign casing adapted to allow the transmission of light through its face, in combination with an inclined reflector arranged within said casing to direct light on said face, a curved perforated trough reflector arranged to reflect light on said inclined reflector, sources of light for said trough reflector, brace bars and supporting rods for the trough reflector, said rods being provided with enlarged parts, said enlarged parts being adapted to pass through the perforations in the trough reflector, means for engaging said rods and fastening said trough reflector in normal position, means for checking the outward movement of the trough reflector and means for checking the inward movement thereof.

3. In combination with a pair of inclined converging reflectors and a sign having opposite faces through which the light is thrown by said reflectors, a trough-shaped reflector arranged to throw light on both of said converging reflectors and inwardly and outwardly movable, means of illumination for said trough reflector movable therewith, a series of rods connected to said converging reflectors and extending through said trough reflector and a corresponding series of checking devices sliding on said rods with said trough and adapted to engage said rods at a certain point substantially as set forth.

4. In combination with a sign casing, a reflector within the same arranged to reflect light through the face thereof, a movable reflector also normally within said casing and arranged to reflect light on the reflector first mentioned, a source of light for throwing light on the movable reflector and supporting rods for the latter, said rods being adapted to allow the said movable reflector to be lowered out of the casing without separating from said rods.

5. In combination with a sign casing, a reflector within the same arranged to reflect light through the face thereof, a curved trough shaped movable reflector also normally within said casing and arranged to reflect light on the reflector first mentioned, a source of light for throwing light on the movable reflector, supporting rods for the latter, said rods being adapted to allow the said movable reflector to be lowered out of the casing and means for checking the movement of said movable reflector both in rising and descending substantially as set forth.

958,838. ILLUMINATED SIGN. WARREN A. SHERWOOD and EDWIN L. GARDNER, Lancaster, Pa. Filed May 10, 1909. Serial No. 495,199.



A sign-casing adapted to permit the transmission of light through two opposite faces, two series of lamps within said casing, two trough-shaped base reflectors each receiving and supporting one series of said lamps and illuminated thereby, two pairs of downwardly converging reflectors, each pair being above and illuminated by one of said base reflectors and transmitting light through said sides and means of support arranged and adapted to permit the ascent and descent of said base reflectors and of one of said pairs of reflectors substantially as set forth.

958,839. EYEGLASSES. ROYAL H. SIMONDS, Southbridge, Mass. Filed Mar. 10, 1909. Serial No. 482,514.



1. A mount for an eyeglass for attaching a box stud thereto, comprising a pair of arms formed from elastic material, means for holding said arms in contact with the opposite faces of the lens and preventing their movement toward the edge of the lens, a pair of braces integral with said arms in contact with the edge of the lens, and means for varying the pressure of said elastic braces upon the edge of the lens.

2. A mount for an eyeglass, comprising a pair of arms formed from elastic material, means for holding said arms in contact with the opposite faces of the lens and preventing their movement toward the edge of the lens, a pair of braces integral with said arms, each brace bent at right angles thereto and with a second bend parallel and in contact with the edge of the lens, a screw connecting said

braces between said bends, whereby the distance between said braces may be varied, and a box stud attached to said arms between said braces.

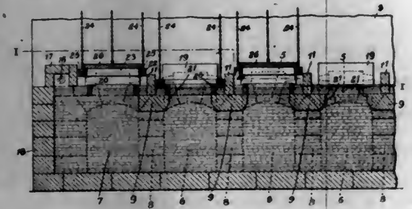
3. A mount for an eyeglass for attaching a box stud thereto, comprising a pair of arms formed of elastic material arranged to contact with the opposite faces of the lens, means transverse to said lens connecting said arms, a pair of braces integral with said arms, bent to contact with the edge of said lens upon either side of said arms, and means for varying the distance between said contacting braces in order to vary the pressure exerted by said braces upon said arms.

4. An eyeglass, means for attaching a box stud thereto, comprising a member having arms attached to the faces of the lens, said arms extending beyond the edge of the lens, elastic braces on each side of said arms bent at right angles to the outer end of said arms and thereby parallel, then bent outwardly to contact with the edge of the lens, and a screw connecting the parallel portions of said braces.

5. An eyeglass, a box stud having a transverse opening and a longitudinal hole intersecting said opening, and means for attaching said box stud to the lens of said eyeglass, comprising a member attached to said lens having a plane surface to receive said box stud, said plane surface having an opening concentric with said longitudinal hole, a pin inserted through the opening in said surface and said longitudinal hole, with the outer end of said pin provided with an eye, and a screw in said member in engagement with said eye.

[Claim 6 not printed in the Gazette.]

958,840. MANUFACTURE OF GLASS ARTICLES. HARRY G. SLINGLUFF, Allegheny, Pa., assignor to Pittsburgh Plate Glass Company, a Corporation of Pennsylvania. Filed Dec. 3, 1907. Serial No. 404,931.



1. The method of manufacture of glass articles by drawing from a deep body of molten glass, which consists in segregating a portion of the surface of the glass without detaching it from the body beneath, heating said segregated portion to a temperature above that required for drawing, cooling said segregated portion by exposure to the atmosphere to a proper temperature for drawing, and then drawing the article upwardly therefrom.

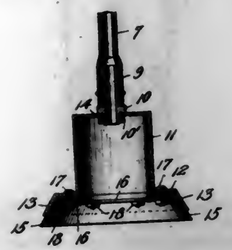
2. The method of manufacture of glass articles by drawing from a deep body of molten glass, which consists in segregating a portion of the surface of the glass without detaching it from the body beneath, heating said segregated portion to a temperature above that required for drawing, then cooling it to the desired consistency for drawing, and then drawing the article upwardly therefrom.

3. The method of manufacture of glass articles by drawing from a deep body of molten glass, which consists in segregating a portion of the surface of the glass without detaching it from the body beneath, drawing a succession of articles from said segregated portion, first reheating to a temperature above that required for drawing and then cooling said segregated portion to a proper temperature for drawing by exposure to the atmosphere after the drawing of each article, and maintaining the body of molten glass at a substantially constant depth throughout the operation.

4. The method of manufacture of glass articles by drawing from a deep body of molten glass, which consists in segregating a portion of the surface of the glass without detaching it from the body beneath, drawing a glass article upwardly from said segregated portion, and directing the heat of the glass outside of said segregated portion upwardly into contact with the article during the drawing operation.

5. The method of manufacture of glass articles by drawing from a deep body of molten glass, which consists in segregating a portion of the surface of the glass without detaching it from the body beneath, applying heat to the surface of the body of glass, cooling said segregated portion of the surface while still maintaining the glass outside of said segregated portion in highly heated condition, drawing a glass article upwardly from said segregated portion, and directing the heat applied to the glass outside of said segregated portion upwardly into contact with the article during the drawing operation.

958,841. FLUSHING DEVICE. HARRY M. SMITH and DANIEL KENEVEN, Denver, Colo. Filed Jan. 4, 1910. Serial No. 536,415.

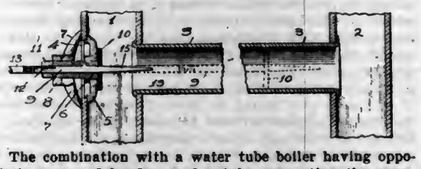


1. A device of the class described comprising a flexible hose adapted for attachment to a spigot or faucet, a suction head removably secured to the free end of said hose, said head consisting of a tubular body portion, the end of said body portion being transversely and laterally flanged, a flexible suction member seated on said flanges and extending beyond the circumscribing edge thereof, a securing plate disposed upon said member, and a plurality of bolts extending through the transverse flange of said head and through said plate having nuts threaded on their outer ends to secure the suction member in position.

2. A device of the character described comprising a flexible tube having removable connection to a spigot or faucet, a suction head removably secured on the free end of said tube, the outer end of said head being formed with a transverse circumscribing flange, an outwardly inclined flange extending laterally from the transverse flange, a flexible suction member seated on said flanges, an annular plate disposed upon said member, and a plurality of bolts extending through said transverse flange and plate having nuts threaded on their outer ends to secure the suction member in position.

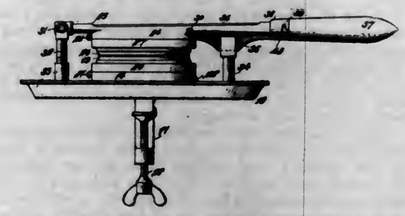
3. A device of the character described comprising a flexible tube adapted for detachable connection to a water spigot or faucet, a tubular shank disposed in the outer end of said tube having a peripheral flange adjacent to its outer end, the extremity of said shank being exteriorly threaded, a suction head having a cylindrical tubular body portion, one end thereof being closed and provided with a central opening to receive the end of said shank, a nut threaded upon said shank, the body portion of said head having a transversely extending circumscribing flange on its outer end, an outwardly inclined annular flange formed on the edge of said transverse flange, a flexible suction member disposed upon the inner faces of said flanges, an annular plate disposed upon said member, and a plurality of bolts disposed through the transverse flange, the suction member and said plate, said bolts having nuts threaded on their outer ends to secure the suction member in position.

958,842. CLEANING ATTACHMENT FOR WATER-TUBE BOILERS. EDWARD STEPHENSON, San Francisco, Cal. Filed Feb. 4, 1909. Serial No. 476,033.



The combination with a water tube boiler having oppositely arranged headers and a tube connecting the same, one of the headers being provided with a manhole alined with the tube, and a manhole closure engaging said header comprising a plate and a stud having a separable engagement therewith, the stud having a passage for the stem of a cleaning implement, of said cleaning implement comprising a scraper adapted to be reciprocated to engage the inner wall of the tube, and a stem for the scraper adapted to pass through the passage in the stud of the manhole closure, said stem projecting beyond said scraper sufficient to prevent the latter from moving beyond the tube, a part of the reciprocating scraper being formed to overlie adjoining portions of the manhole closure plate and stud to seal the space therebetween when the scraper is in inactive position.

958,843. MACHINE FOR USE IN CLEANING TABLE-CUTLERY. ANTHONY UHLYARIK, Ossining, N. Y. Filed Aug. 25, 1909. Serial No. 514,503.



1. A machine for use in cleaning table cutlery comprising an elongated base-tray having a raised table 14, a pad 15 having embedded in it a metal plate 16 formed with countersunk recesses containing nuts 17, screws 18 extending through said table and engaging said nuts for securing said pad on said table, a removable covering on said pad, a handle-frame having a bed carrying a depending pad above said pad 15, and a removable covering on said depending pad; substantially as set forth.

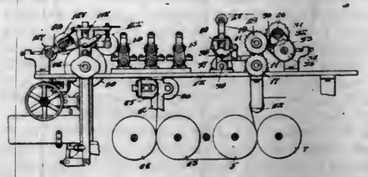
2. A machine for use in cleaning table cutlery comprising an elongated base-tray having a raised table 14, a pad 15 mounted on said table, an encompassing frame 20 hinged to the table 14 and extending upwardly therefrom along the edges of said pad, a latch for securing said frame in its operative position, a handle-frame having a depending bed 24 above said table and provided with a pad 25 corresponding with said pad 15, an encompassing frame 27 hinged to said bed 24 and extending downwardly therefrom along the edges of said pad 25, and a latch for securing said frame 27 around said pad 25; substantially as set forth.

3. A machine for use in cleaning table cutlery comprising a base-tray having a raised table 14, a pad 15 secured on said table, and a handle-frame having a depending bed 24 above said table and provided with a pad 25, said pads being of elongated form and wider at one end than at the other and at the narrower end being transversely grooved with the grooves on the lower pad arranged to receive the ridges on the upper pad; substantially as set forth.

4. A machine for use in cleaning table cutlery comprising a base-tray having a raised table 14, a pad 15 secured on said table, a handle-frame having a bed 24 above said table and provided with a depending pad 25 corresponding with said pad 15, means connected with said tray for staying said handle-frame against lateral movement during the use of said machine, and means transversely hinging and vertically swiveling the shank-end of said frame to said tray, whereby said handle-frame may have a hinged movement and may also without detachment be swiveled or turned angularly and folded downwardly over the pad 15 with the pad 25 facing upwardly; substantially as set forth.

5. A machine for use in cleaning table cutlery comprising a base, an elevated pad thereon, a covering fabric over said pad to receive abrasive material, a hinged encompassing frame to detachably secure said covering on said pad, a spring-latch for securing said frame in its operative position, a handle-frame having a bed carrying a depending pad above said elevated pad, a covering fabric on said depending pad to receive abrasive material, a hinged encompassing frame to detachably secure said covering on said depending pad, and a spring-latch for securing said frame around said depending pad; substantially as set forth.

958,844. PAPER-BAG MACHINE. MATTHEW VIEBENGEL, Brooklyn, N. Y., and JOHN SORGE, Cincinnati, Ohio, assignors, by mesne assignments, to Charles E. Roth, trustee, Cincinnati, Ohio. Filed Sept. 11, 1909. Serial No. 517,257.



1. In a paper bag machine for operating upon individual blanks, a first blank folder and a first blank feeder operating simultaneously on the blank, a second blank folder and a second blank feeder placed in rear of the first members and operating simultaneously on the blank, the feeders being disposed on opposite sides relative to the blank, and the folders being disposed on opposite sides relative to the blank, whereby the blank is folded on one side and then on the other.

2. In a paper bag machine of the class described, staggeredly disposed stationary folding means, staggeredly disposed sets of feed rollers positively rotated and each set yieldingly maintained in contact with each other between which is fed a strip of paper, whereby both sides of a strip of paper are in constant feeding engagement with the feeding means during the alternate side folding.

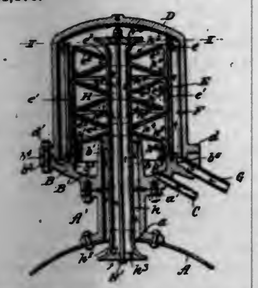
3. In a paper bag machine of the class described, staggeredly disposed paper folding means, comprising spiral ways supported in the path of paper travel, pairs of coacting feed rolls disposed oppositely to said folding means in positive rotation for feeding the paper forward during the folding action along one end thereof, and guiding means, for guiding the paper to said folding and feeding means.

4. In a bag machine for making a duplex bag, of means for feeding, printing, and cutting the outside marginal edges of one strip of paper, and means for feeding and cutting a blank from a second strip of paper, in combination with means for simultaneously feeding the cut strip and blank together, one above the other, and simultaneously folding the same one within the other, and cutting the outer bag from the continuous strip prior to the final folding thereof.

5. In a bag machine for making a duplex bag, of means for feeding, printing and cutting the outside marginal edges of one strip of paper, and feeding and cutting a blank from a second strip of paper, in combination with means for simultaneously feeding the same to a meeting point one above the other, means for simultaneously folding the edges of both bags, one over the other.

[Claims 6 to 11 not printed in the Gazette.]

958,845. WATER HEATER AND PURIFIER. HENRY WHITE, Cleveland, Ohio, assignor of one-third to Winfield S. Parr, Lakewood, Ohio. Filed Aug. 4, 1909. Serial No. 511,170.



1. The combination with a steam generator; of a combined water heater and purifier comprising the following elements; an outer shell formed with an opening for a feed water connection; an inner shell forming in conjunction with said outer shell and within same, a water space closed at the bottom and open at the top, said inner shell being furthermore provided with a bottom opening affording communication between its interior and said generator; a duct passing through the latter leading upwardly through, and discharging near the closed top of, the heater; and a second duct of tortuous form surrounding said first named duct and leading from the upper portion of the heater downwardly, the lower end of said tortuous duct communicating with said bottom opening.

2. The combination with a steam generator; of a combined water heater and purifier comprising the following elements; an outer shell formed with an opening for a feed water connection; an inner shell forming in conjunction with said outer shell and within same a water space closed at the bottom and open at the top, said inner shell formed with a bottom opening affording communication between its interior and said generator; a duct passing upwardly from the said generator directly through said bottom opening and discharging near the top of said heater; and a second duct of tortuous form surrounding said first named duct and leading from the upper portion of the heater downwardly; the bottom of said tortuous duct communicating with said bottom opening; said first named duct having lateral communication with said tortuous duct.

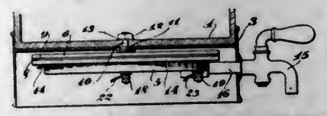
3. The combination with a steam generator; of a combined water heater and purifier comprising the following elements; an outer shell formed with an opening for a feed water connection; an inner shell forming in conjunction with said outer shell and within same a water space closed at the bottom and open at the top, said inner shell provided with a bottom opening affording communication between its interior and said generator; a duct leading from said generator upwardly through, and discharging at the top of, said water space; a second duct of tortuous form surrounding said first named duct and leading downwardly from the upper portion of the heater from a plane below the point of upper discharge of said first named duct, the bottom of said tortuous duct communicating with said bottom opening; the first named duct being provided with lateral openings communicating with said tortuous duct.

4. In a combined feed water heater and purifier, means for bringing feed water and steam into intimate contact, comprising the combination of a shell having a central bottom opening having its point of discharge in a plane above the bottom of the interior of said shell; a duct passing through said opening and discharging near the upper part of said shell; outwardly projecting flanges on said duct and of an outer diameter less than the interior diameter of said shell; and inwardly projecting annular webs on said shell having an interior diameter greater than the exterior diameter of said duct.

5. In a combined feed water heater and purifier, means for bringing the feed water and steam into intimate contact, comprising a shell provided with a central bottom opening having its point of discharge in a plane above the bottom of the interior thereof; a duct passing through said opening and discharging near the top of the shell; flanges projecting outwardly from said duct and having an outer diameter less than the interior diameter of said shell; annular webs projecting inwardly from the interior of said shell and having an inner diameter greater than the exterior diameter of said duct; said webs and flanges alternating with each other in position in the direction of the axis of said duct.

[Claims 6 to 9 not printed in the Gazette.]

958,846. ELECTRICAL WATER-HEATER. HIRAM D. WOOD, Jr., Minneapolis, Minn. Filed Apr. 8, 1909. Serial No. 488,664.

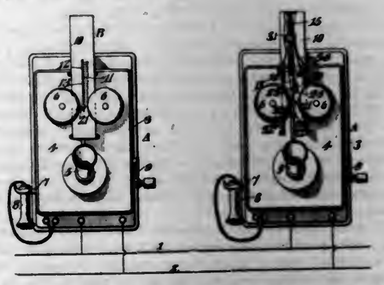


1. In an electrical water heater, the combination with a two-part member having a water delivery conduit with imperforated walls and open ends adapted to be opened from end to end by separation of the sections of said member, of an electrical conductor placed within and extending longitudinally of said conduit, substantially as described.

2. In an electrical water heater, the combination with a two-part member having a long tortuous water delivery conduit with imperforated walls and open ends adapted to be opened up from end to end by separation of the sections of said member, of a coiled electrical conductor placed within said conduit and extended longitudinally thereof, substantially as described.

3. In an electrical water heater, the combination with a water tank, of a member located at the bottom of said tank and having a long tortuous water delivery conduit with imperforated walls and open ends connected to the bottom of said tank at its inner end portion, a faucet connected to the outer end portion of said conduit, and a coiled electrical conductor located within and longitudinally of said conduit, substantially as described.

958,847. PARTY-LINE-TELEPHONE CALL MECHANISM. WILLIAM E. ZABST, Portage, Wis. Filed Apr. 21, 1909. Serial No. 491,227.



1. In an apparatus of the class described, the combination of a motor, a movable member normally engaged with and normally subjected to a pull by the motor, and a bell mechanism including a hammer normally engaged with the member to oppose the pull of the motor and having its movement restricted by the member when the latter is in normal position and unrestricted when the member is in a predetermined position.

2. In an apparatus of the class described, the combination of a motor including an element subjected to an impelling force, a member normally engaged with the element to move therewith to a predetermined position, means for automatically releasing the member from the element, and a bell hammer normally engaged with the member to act through the same to prevent movement of the element and adapted to be released from the member to permit the same to move to a position where the hammer can be operated.

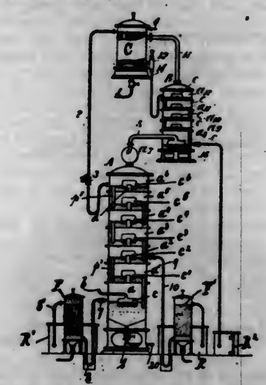
3. In an apparatus of the class described, the combination of a motor, a member moved by the motor, a bell hammer normally engaged with the member and free therefrom during operation of the motor for moving the member to a predetermined position to permit the hammer to operate, and an electro-magnet arranged to operate only on the hammer to initially disengage the same from the member and operate the hammer when the member is in said predetermined position.

4. In a system of the class described, the combination of a signal device having a movable member, a motor, and a single element initially engaged with the member to prevent movement of the element for holding the motor idle and adapted when released to permit the motor to operate, said element permitting the member to operate when the element is moved to a predetermined position by the motor.

5. In a system of the class described, the combination of a signal device including a movable element, a motor, and a single element operatively connected with the motor for constituting a brake therefor and having means forming a controller for the movable member, said element having an indicator for showing when the member is in position to permit the signal device to fully operate.

[Claims 6 to 27 not printed in the Gazette.]

958,848. PROCESS OF PURIFYING AND STERILIZING WATER. ALBERT BAUDAY, Kief, Russia. Filed Oct. 3, 1904. Serial No. 226,930.



1. The hereinbefore described process of purifying water which consists in heating the water, passing the vapors of the same through a cooler body of water so as to condense a portion of the vapor, causing the products of condensation to flow by gravity through a plurality of condensing chambers each containing a body of the condensed liquid, bringing each of the bodies of products of condensation into ebullition by causing vapor from the lower chambers to pass through the water and drawing off the principal purified water from an intermediate chamber.

2. The hereinbefore described process of purifying water which consists in heating the water, passing the vapors of the same through a cooler body of the same liquid so as to condense a portion of the vapor, causing the products of condensation to flow by gravity through a plurality of condensing chambers each containing a body of the condensed water, bringing each of the bodies of products of condensation into ebullition by causing vapor from the lower chambers to pass through the water, passing the same into a reservoir by way of a filter, and drawing off the principal water from an intermediate chamber.

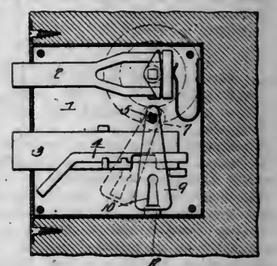
3. The hereinbefore described process of purifying water which consists in causing the heated liquid to vaporize, and the products of condensation to flow by gravity through a plurality of chambers in each of which the products of condensation are kept in ebullition by the passage through the same of vapors from the heated water.

4. The hereinbefore described process of purifying water which consists in causing the heated liquid to vaporize, and the products of condensation to flow by gravity through a plurality of chambers in each of which the products of condensation are kept in ebullition by the passage through the same of vapors from the heated water, the vapors last to pass through the water being only those from water which has itself been condensed within the apparatus.

5. The hereinbefore described process of purifying water which consists in vaporizing and condensing and revaporizing, and re-condensing the water in a plurality of chambers, the vaporizing in the last condensing chambers being brought about by bringing the vapor from the condensed water in one chamber into direct contact with the water in the next preceding chamber for the purpose of vaporizing the same.

[Claims 6 to 8 not printed in the Gazette.]

958,849. KEYHOLE-GUARD. JOHN W. BENEDICT, Hastings, Mich. Filed Feb. 23, 1909. Serial No. 479,377.



1. The combination with a lock casing, of a squared shaft means for rotating said shaft, and guard plates fixed upon said shaft and covering the keyhole when in normal position, one of said plates having a keyhole slot formed therein.

2. The combination with a lock casing, a squared shaft transversely arranged in said casing, pins threaded into the ends of said shaft, milled heads on said pins, the heads being respectively upon the outer and inner faces of a door a non-perforated guard plate fixed upon the outer end of the squared shaft and normally covering the keyhole, and a slotted plate fixed upon the inner end of the squared shaft, the slot of said plate alining with the keyhole and admitting a key from the inner side of the door, as and for the purpose set forth.

3. In a lock having a spring catch and a key operated bolt, a squared shaft arranged transversely between the spring catch and bolt operating mechanism, means operable from either side of the door for rotating said shaft, and guard plates fixed upon opposite ends of the squared shaft, and simultaneously covering the keyhole, the plate adjacent the inner side of the door having a keyhole slot therein adapted to register when the plate is in normal position with the keyhole of the door.

4. In a lock a squared shaft, pins passing transversely through the door and lock casing and entering the ends of said shaft, turning means carried by said pins, a solid guard plate fixed upon the squared end of the shaft adjacent the outer side of the lock casing, a plate having a keyhole slot therein fixed upon the inner end of the

squared shaft and working adjacent the inner side of the lock casing, and lugs formed upon the bottom of the lock casing and bearing respectively upon the inner faces of said plates.

5. A device of the character described comprising a rectangular bar having cylindrical bearing portions adjacent to each end, and a plate rigidly secured on each end of said bar, the plate on the outer end of said bar entirely covering the keyhole in the door, the plate on the inner end of the bar having an opening therein registering with the keyhole adapted to receive a key, the positioning of the key in the lock preventing the rotation of said bar and plates.

958,850. WOOL DYE. WILHELM BERCHELMANN, Vohwinkel, near Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Jan. 18, 1910. Serial No. 538,773.

1. The herein-described new dyestuffs obtainable from 1-aminoanthraquinones and epichlorhydrin which are after being dried and pulverized in the shape of their alkaline salts dark powders soluble in water generally with from a red to blue color, soluble in concentrated sulfuric acid generally with from a red to violet-red color; and dyeing wool generally from red to blue to violet shades, substantially as described.

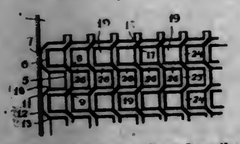
2. The herein-described new dyestuff obtainable from 1.4-diaminoanthraquinone and epichlorhydrin, which dye is after being dried and pulverized in the shape of its sodium salt a dark powder soluble in water with a pure blue color and soluble in concentrated sulfuric acid with a violet-red color; dyeing wool pure blue shades fast to light, substantially as described.

958,851. PROCESS OF REDUCING REFRACTORY ORES, PARTICULARLY OXIDS AND SULFIDS. GIDEON BORRICKE, Philadelphia, Pa. Filed Jan. 4, 1909. Serial No. 470,565.

1. The herein described process of reducing refractory ores which consists in subjecting the said ores to heat in the presence of manganese and another metallic reducing agent of such character that the two agents will in their oxidized form flux the mass, substantially as described.

2. The herein described process of reducing refractory ores which consists in subjecting the said ores to heat in the presence of some reducing compound containing manganese, and another reducing agent of such character that the two agents will in their oxidized form flux the mass, substantially as described.

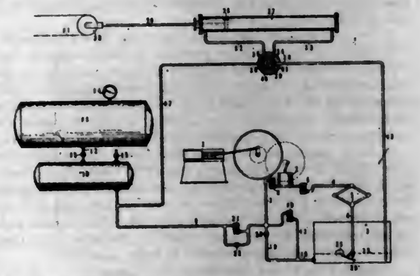
958,852. REFRIGERATING APPARATUS. LOUIS H. BRINKMAN, Hartford, Conn., assignor to Whitlock Coil Pipe Company, West Hartford, Conn., a Corporation of Connecticut. Filed Nov. 13, 1906. Serial No. 343,274.



1. In an apparatus of the class described, a refrigerating section, comprising sheet metal plates arranged in pairs and inclosing between them a serpentine passage communicating at each end with a water chamber, said sheets bent alternately in right angled and obtuse angled corrugations in opposite directions, with the right angled corrugations of one strip inclosed by the obtuse angled corrugations of the other strip to form said passage, and a flange at the edge of each plate and at right angles thereto, said flange continuous around each obtuse angled corrugation and with the corner pieces removed around each right angled corrugation, with said flanges upon the edges of each pair of plates fastened together.

2. In an apparatus of the class described, a refrigerating section, comprising upper and lower chambers, sheet metal plates arranged in pairs and connecting said chambers bent alternately in right angled and obtuse angled corrugations, with the obtuse angled corrugations of one plate extending in the same direction as the right angled corrugations of the other plate, a continuous strip at the edge of each plate integral therewith and at right angles thereto, but with the corner pieces removed around said right angled corrugations and with the strips upon the edges of each pair of plates fastened together.

958,853. ENERGY STORING AND USING SYSTEM. GEORGE W. BULLEY, New York, N. Y. Filed Jan. 8, 1907. Serial No. 351,315. Renewed Apr. 12, 1910. Serial No. 555,105.



1. An apparatus of the nature disclosed comprising in combination, a pressure tank adapted to contain operating fluid under pressure, a reservoir, a conduit leading from said reservoir to said pressure tank, a continuously operating pump for forcing operating fluid from said reservoir through said conduit into said pressure tank, an air tank adapted to contain air under pressure, a normally opened conduit leading from said air tank to said pressure tank whereby the air may be used expansively to maintain a pressure upon the operating fluid in said pressure tank, means for manually closing said normally opened conduit at the end of the operation of filling said air tank with air by forcing fluid into said pressure tank, and a valve adapted to be opened when said conduit is closed to enable a fresh supply of air to enter said pressure tank when the fluid is being drawn therefrom, whereby said air tank may be filled with air at any desired pressure by repeating said operations.

2. In apparatus of the class described, in combination, a reservoir, a pressure tank, means for effecting a transference of fluid from the former to the latter, means controlled from the reservoir for automatically preventing such transference prior to a complete depletion of the fluid in said reservoir, means for returning fluid from said pressure tank to said reservoir for the purpose of utilizing the returning fluid thereof and means adapted to accumulate air compressed within said pressure tank.

3. In apparatus of the class described, in combination, a reservoir adapted to contain fluid, a pressure tank in communication therewith, a plunger operated from said pressure tank and arranged to exhaust into said reservoir, a pump interposed between and connected to said pressure tank and reservoir, and a cut off valve on the suction side of said pump automatically controlled by the fluid in said reservoir for maintaining predetermined amounts of fluid in said reservoir and tank respectively.

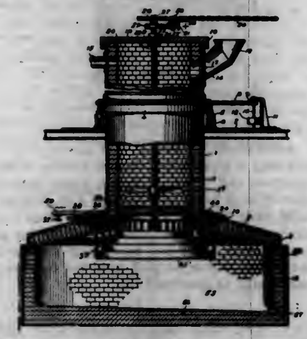
4. In apparatus of the class described, in combination, a reservoir, a pressure tank, a low-power pumping means adapted to continuously operate to maintain predetermined amounts of oil in said reservoir and pressure tank respectively, a cut off valve on the suction side of said pump controlled from said reservoir, means connected with said pressure tank adapted to periodically operate to utilize relatively large amounts of energy, and a return from said latter means to said reservoir.

958,854. SELF-CLEANING TROCAR. ORON L. BUNN, Peoria, Ill. Filed Oct. 25, 1900. Serial No. 524,443.



A trocar comprising a straight rigid tube having a bore of the same diameter throughout its length, and provided with a terminally unobstructed long beveled entering point, the tube being provided with a lateral branch to be engaged by an off-take tube, and at the end opposite the entering point with a stuffing box, and a plunger provided with a cage formed of resilient members to engage the bore of the tube to clean the same, the shank of the plunger being disposed within the stuffing box to prevent escape of any septic matter in the use of the device.

958,855. ELECTRIC FURNACE. HAROLD A. DANNE, Clarkesburg, W. Va. Filed Jan. 15, 1910. Serial No. 538,234.



1. An electric furnace comprising a circular electrode increasing in diameter downwardly, and a plurality of annularly disposed groups of electrodes surrounding said first named electrode, each group being disposed in a different horizontal plane.

2. An electric furnace comprising an electrode formed of a plurality of vertically disposed cylindrical sections increasing in diameter downwardly, and a plurality of electrodes disposed adjacent the outer upper edge of each section, substantially as described.

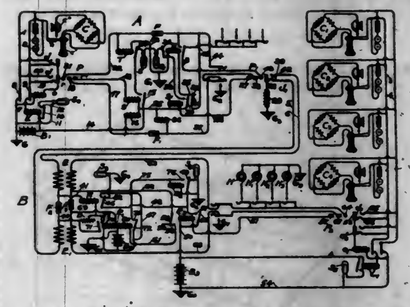
3. An electric furnace comprising an electrode circular in cross-section, the outer wall thereof having the form of a plurality of annular steps, and a series of groups of annularly disposed electrodes arranged in different horizontal planes in proximity to said first named electrode.

4. An electric furnace comprising a stack, a crucible in communication therewith, a central electrode supported from the upper portion of said stack and a plurality of electrodes of opposite polarity supported from the upper portion of said crucible in proximity to said first named electrode.

5. An electric furnace comprising a stack, a crucible in communication therewith, a shaft extending from the upper portion of the stack into said crucible, an electrode carried by said shaft and a plurality of electrodes of opposite polarity disposed in proximity to said first named electrode.

[Claims 6 to 19 not printed in the Gazette.]

958,856. TELEPHONE SYSTEM. WILLIAM W. DEAN, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed Oct. 14, 1909. Serial No. 522,637.



1. In a telephone system, a plurality of subscribers' lines, a central station circuit, a trunk circuit adapted to be connected at one end to said central station circuit and at the other end to a subscriber's circuit, a supervisory relay in said central station circuit, a low resistance relay and a high resistance in said trunk circuit adapted to be connected in circuit with said supervisory relay when said central circuit is connected with the trunk circuit, said high resistance preventing the operation of said supervisory relay, and means for eliminating said high resistance when the called subscriber responds, permitting the operation of said supervisory relay.

2. In a telephone system, a plurality of subscribers' lines, a central station circuit, a trunk circuit adapted to be connected at one end to said central station circuit and at the other end to a subscriber's circuit, a supervisory relay in said central station circuit, a low resistance relay and a high non-inductive resistance in said trunk circuit adapted to be connected in circuit with said supervisory relay when said central circuit is connected with the trunk circuit, said high resistance preventing the operation of said supervisory relay, and means for eliminating said high resistance when the called subscriber responds, permitting the operation of said supervisory relay.

3. In a telephone system, a plurality of subscribers' lines, a central station circuit, a trunk circuit adapted to be connected at one end to said central station circuit and at the other end to a subscriber's circuit, a supervisory relay in said central station circuit, a low resistance relay and a high non-inductive resistance in series in said trunk circuit adapted to be connected in circuit with said supervisory relay when said central circuit is connected with the trunk circuit, said high resistance preventing the operation of said supervisory relay, and means for eliminating said high resistance when the called subscriber responds, permitting the operation of said supervisory relay.

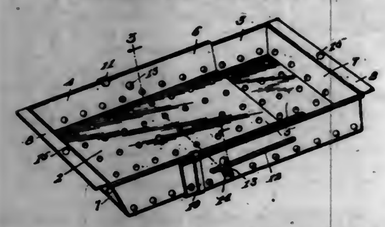
4. In a telephone system, a plurality of subscribers' lines, a central station circuit, a trunk circuit adapted to be connected at one end to said central station circuit and at the other end to a subscriber's circuit, a supervisory relay in said central station circuit, a low resistance relay and a high non-inductive resistance in said trunk circuit adapted to be connected in circuit with said super-

visory relay when said central circuit is connected with the trunk circuit, said high resistance preventing the operation of said supervisory relay, and means for shunting said high resistance when the called subscriber responds, permitting the operation of said supervisory relay.

5. In a telephone system, a plurality of subscribers' lines, a central station circuit, a trunk circuit adapted to be connected at one end to said central station circuit and at the other end to a subscriber's circuit, a supervisory relay in said central station circuit, a low resistance relay and a high non-inductive resistance in said trunk circuit adapted to be connected in circuit with said supervisory relay when said central circuit is connected with the trunk circuit, said high resistance preventing the operation of said supervisory relay, and a relay for shunting said high resistance when the called subscriber responds, permitting the operation of said supervisory relay.

[Claims 6 to 26 not printed in the Gazette.]

958,857. DISH-DRAINER. MOLLIE A. DENNIS, Deposit, N. Y. Filed July 14, 1909. Serial No. 507,613.



An adjustable dish drainer comprising two sections having foraminous portions and each consisting of a bottom, side walls and an end wall, the open end of one section being adapted to receive the other, means for guiding said sections in their sliding movement upon each other and retaining them in adjusted position, support engaging means upon the two sections, and a reinforcing strap extending around the open end of the outermost section and having its extremities bent inwardly and downwardly to provide guiding and supporting lips to receive the other section.

958,858. DEVICE FOR CONTROLLING CYLINDER-COCKS OF LOCOMOTIVES. JOSEPH H. DE SALIS, East Syracuse, N. Y. Filed Dec. 27, 1909. Serial No. 535,017.



1. The combination with a steam-cylinder and the cylinder-cocks comprising valves closed by pressure, of a bar engaging said valves and adapted to be shifted longitudinally to a position for retaining both valves open, said bar being also adapted to be adjusted to a rocking position whereby movement of the valve at the steam end of the cylinder to its closed position causes the bar to open the other valve for the purpose described.

2. The combination with a steam cylinder, and a pair of cylinder-cocks each comprising a vertically slotted casing and a vertically movable valve disposed therein and provided with a downwardly extending stem having a slot coinciding with the slots in the casing, of a longitudinally shiftable stepped-bar extending through the slots of the casings and valves and disposed normally in position to allow the valves to be seated, said bar being adapted to lift the valve-stems when shifted to extreme position to retain both valves open, and adapted to be moved to a predetermined position for rocking, and a fulcrum-member on the cylinder and disposed intermediate the valves to permit rocking of the bar, whereby the movement of the valve at the steam end of the cylinder to its closed position will force the corresponding end of the bar down and thereby causes the opposite end of the bar to open the other valve as and for the purpose set forth.

958,859. SCREEN. GEORGE DINGMAN, Penn, N. D. Filed Sept. 30, 1908. Serial No. 455,440.



In a device as set forth, a door or window screen frame having angularly disposed strips adjacent to its upper portion to form an apex, a screening secured to the frame having an opening therein adjacent to said apex, a conical shaped thimble disposed in said opening and provided with a semi-annular flange positioned between the screening and the upper portion of the said strips and the window frame, screws penetrating the screening, the flange and the frame and strips, said angularly disposed strips having angular metallic strips provided with oppositely disposed downward extensions and flanges, as and for the purpose specified.

958,860. SUIT-CASE. SAMUEL DRESNER, Chicago, Ill. Filed Dec. 29, 1909. Serial No. 535,460.



A suit case formed of two hinged parts, each of said parts comprising a single side member having integral top and end portions and a bottom flap, a single bottom member for both of said parts overlapping and secured to the bottom flaps, each of said side members being cut away and rounded at its corners and the ends of the top and side portions and bottom flap being overlapped and secured together, and corner pieces secured over the corners of said case, substantially as described.

958,861. OIL-GAS GENERATOR AND BURNER. GEORGE DRUMMOND, Los Angeles, Cal. Filed June 1, 1909. Serial No. 499,587.



1. An oil-gas generator and burner comprising a retort formed with two horizontal tubular members, a cross tube connecting said members at one end, an oil inlet connection to the other end of one of said members, an outlet connection to the corresponding end of the other of said members, and a mixing chamber connected to said outlet connection and extending longitudinally between said members and having outlet slots at each side thereof beneath the retort members, said mixing chamber being formed as a tubular member having a downward enlargement at one end, and having an air inlet opening in said enlargement, the outlet connection from the retort opening into said inlet.

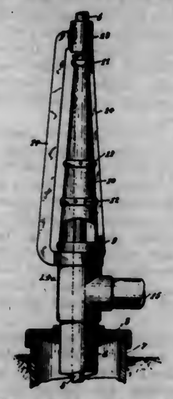
2. An oil-gas generator and burner comprising a tubular mixing chamber formed with a projecting portion along each side and a retort formed of two longitudinal members extending alongside the mixing chamber and resting on said projecting portion at each side, and a cross tube connecting said members.

3. An oil-gas generator and burner comprising a retort formed with two longitudinal tubular members, a cross tube connecting said members at one end, an oil inlet connection to the other end of one of said members, an outlet connection to the corresponding end of the other of said members, a mixing chamber connected to said outlet connection and extending longitudinally between said members and having outlet slots at each side thereof beneath the retort members, said mixing chamber being grooved at each side, and the longitudinal tubular members of the retort resting in said grooves of the mixing chamber.

4. An oil-gas generator and burner comprising a retort, an oil supply connection to said retort, an outlet connection from the retort provided with a manually operated valve, a mixing chamber communicating with the outlet connection to the retort and having an air inlet and provided with outlet means, and a connection extending from the retort to the mixing chamber and provided with a relief valve opening under definite pressure.

5. In an oil-gas generator and burner, a retort comprising two longitudinal members, a cross tube connecting said members at one end, four-way fittings at the junction of the cross tube with each longitudinal member, removable plugs in said four-way fittings in line with the cross tube and with the longitudinal members, a tee-fitting at the other end of one of said tubular members, a removable plug in said tee-fitting in line with said longitudinal member, a valved inlet connection communicating with the other arm of the tee-fitting, a four-way fitting at the corresponding end of the other tubular member, a removable plug therein in line with the said other tubular member, a relief valve communicating with another arm of the last named four-way fitting, an outlet pipe from said relief valve, a mixing chamber communicating with said outlet pipe and having outlet means, and air inlet means, a valved outlet connected with the other opening of the four-way fitting, and a nozzle connected with said outlet means and extending in position to direct the gas therefrom into the air inlet of the mixing chamber.

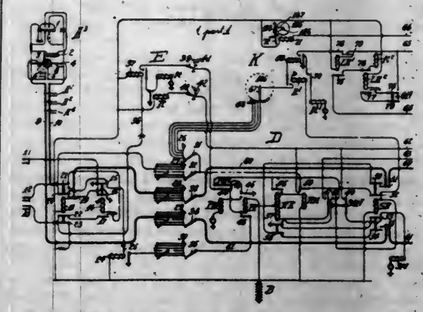
958,862. PUMP FOR WELLS. JOHN F. DURHAM, McKittrick, Cal. Filed Apr. 17, 1909. Serial No. 490,541.



1. In combination a pump casing, a plunger rod mounted therein, a cone shaped member formed of fabric secured to said rod and casing, reinforcing means secured to said cone shaped member, means to secure the cone shaped member to the pump casing and rod, and a bearing for said rod secured to said casing.

2. In combination a pump casing, a plunger rod mounted therein, a flexible liquid tight cone shaped member secured to the upper portion of said casing and to said plunger rod, a plurality of metal rings secured to said cone shaped member at intervals between its top and bottom, means to secure said cone shaped member to the pump casing and plunger rod, and a bearing for said rod secured to said casing.

958,863. PARTY-LINE CALL-REGISTER FOR AUTOMATIC TELEPHONE SYSTEMS. ALFRED H. DYSON, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed June 20, 1908. Serial No. 439,573.



1. A register for party lines including a device connected with a line adapted for adjustment to indicate that one of a plurality of stations on the line initiating a call, and means subsequently beyond the control of the calling party for recording the indications of said device.

2. A register for party lines including a device individual to and connected with a line adapted for adjustment to indicate that one of a plurality of stations on the line initiating a call, a called line adapted to be connected with said first-mentioned line, and means responsive to current over said called line to record the indication of said device.

3. A telephone system including a register device, a party line connected therewith, impulse transmitting means at each station adapted, on initiation of calls, to adjust said device to indicate the particular station calling, and means subsequently beyond the control of the calling party for recording the indications of said device.

4. A telephone system including a register device, a party line connected therewith, impulse transmitting means at each station adapted, on initiation of calls, to adjust said device to indicate the particular station calling, a called line adapted to be connected with said party line, and means responsive to current over said called line to record the indication of said device.

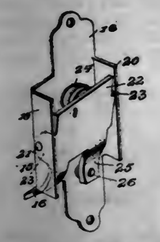
5. A telephone system including a party line, a register device comprising a movable type frame, means operating to adjust said frame to correspond with the particular station initiating a call, and means for printing the type of said station to record the call.

[Claims 6 to 24 not printed in the Gazette.]

958,864. SASH-LOCK. GEORGE J. ENGERT and ROL D. BURNHAM, Spokane, Wash. Filed Mar. 17, 1909. Serial No. 483,881.

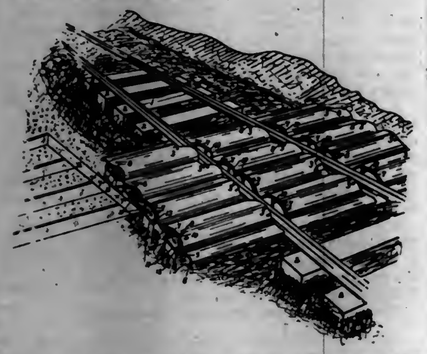
1. The combination with a window frame, including a guide strip, of a sash slidably mounted in the frame, a rack secured to one side of the guide strip and facing the sliding sash, a casing secured to the inner face of the sash and comprising a body portion having oppositely disposed

attaching ears and provided with a lateral extension arranged at the rear of the rack, said casing being provided with flanges, one of which is disposed at one side of the casing, and the other at said extension, a pawl pivotally mounted between the flanges and having one end thereof bifurcated to produce spaced fingers, one of which is bent laterally beyond the adjacent end of the extension and constitutes a terminal lip for engagement with the teeth on the rack, a knob secured to the other finger and projecting through an opening in the casing, and a spring interposed between the upper end of the pawl and the adjacent face of the casing for normally and yieldably supporting the free end of the lip in engagement with the teeth on the rack, said rack and lip being housed by the guide strip.



2. As a new article of manufacture, a sash lock comprising a casing stamped from a single piece of metal and provided with oppositely disposed perforated attaching ears, the metal on one side of the plate and between said attaching ears being projected laterally to form an extension, one end of which is bent inwardly to produce a flange, the metal at the opposite side of the plate being bent inwardly to produce a similar flange, there being an opening formed in the body of the plate near one of the attaching ears, a spring pressed pawl pivotally mounted between the flanges and having one end thereof bifurcated to form spaced fingers, one of which is curved laterally beyond the adjacent end of the extension to form a terminal lip, and a knob secured to the other finger and projecting through the opening in the casing.

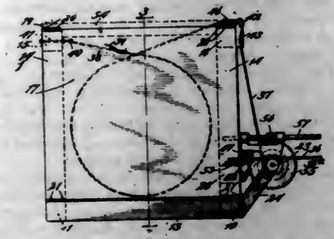
958,865. CATTLE-GUARD FOR RAILWAYS. ALBERT FISHER, Holmfield, Manitoba, Canada. Filed Dec. 10, 1909. Serial No. 532,432.



1. In a cattle guard for railways, the combination with a tie extending across said railway, of a plate having an arched forward section and a rearwardly-extending tail section, a hinge securing said plate at the juncture of the arch and tail sections thereof to the rear side of said tie and a supporting plate secured to said plate on the under side of the arched section and extending downwardly to said tie.

2. In a cattle guard for railways, the combination with a tie extending across said railway, of a plate having an arched forward section and a rearwardly-extending tail section having a downwardly-turned flange at the extremity thereof, a reinforcing plate secured to the aforesaid plate and having a flange at one side thereof extending downwardly from the center of said arched section and a hinge knuckle formed at the other side thereof at the juncture of said arch and tail sections, a hinge knuckle secured to said tie at the rearward corner thereof and a hinge pin extending through said hinge knuckles and tiltably securing said plate to said tie.

958,866. MACHINE FOR BUNDLING OR COMPRESSING BROOM-CORN AND THE LIKE. JAMES F. FOLEY, Chicago, Ill. Filed May 22, 1908. Serial No. 434,216.



1. In a device of the character described in combination, a compression chamber provided with an open top and having a bottom support and spaced upright side members within which the bundle or gavel is adapted to be placed for compressing and binding, a drum, a flexible compressing and binding member, and means for deflecting the compressing and binding member between the drum and bundle or gavel whereby the strands of the said member encircling the bundle or gavel are brought together for tying on the surface of the bundle or gavel remote from the spaced upright side members and accessible through the open top of the chamber.

2. In a device of the character described in combination, a compression chamber comprising a supporting bottom, spaced upright side members, and an open top, a flexible member for compressing and binding a bundle or gavel within the chamber, a winding drum for controlling and compressing the binding member, means secured to one of the spaced upright side members near the top thereof through which the compressing and binding member is threaded into the chamber adjacent the upright or open top thereof, and means secured to the other of said spaced upright side members adjacent the top of the chamber for temporarily holding the free end of the compressing and binding member in a position for tying over the compression chamber and remote from the spaced upright side members.

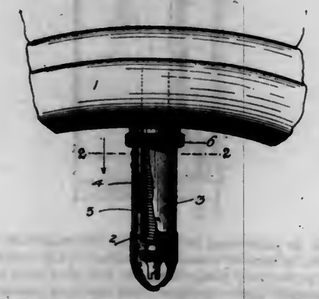
3. In a device of the character described in combination, a compression chamber comprising a supporting bottom and side walls and being provided with an open top, a winding drum, a flexible compression and binding member adapted to be wound on said drum, means through which the flexible member is threaded into the compression chamber adjacent the open top thereof, and means secured to the side walls of the compression chamber adapted to temporarily hold the free end of the compression member at a point for tying adjacent the open top of the compression chamber and remote from the walls thereof.

4. In a device of the character described in combination, a support for the bundle or gavel, a compression member, means for putting a tension upon the compression member, means for deflecting the compression member whereby it is caused to become tangent to the exterior of the bundle or gavel at a point remote from the bottom thereof, and means secured to the support to which the free end of the compression member is adapted to be secured, said means comprising a member to which the free end of the compression member may be secured adjacent the point where the strands encircling the gavel or bundle are adapted to approach and cross each other, said member being adapted to be folded out of the way of the support during the placing of the material in the support in forming the bundle or gavel.

5. In a device of the character described in combination, a compression chamber, a flexible compression member, a drum on which said flexible member is adapted to be wound, means for rotating said drum and means for securing the free end of the flexible member, said means comprising a hooked link pivotally secured to a wall of the compression chamber whereby the hooked end of the link is adapted to hold the free end of the flexible member adjacent the top of the compression chamber and remote from the walls thereof and adjacent the point where the strands of the compression member are adapted to approach each other in encircling the gavel or bundle.

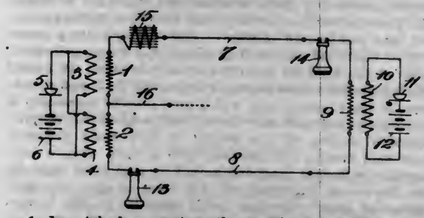
[Claims 6 to 11 not printed in the Gazette.]

958,867. CAP FOR VALVE-STEMS FOR PNEUMATIC TIRES. GEORGE F. FOSS, Los Angeles, Cal. Filed Dec. 5, 1908. Serial No. 466,090.



In a valve stem for pneumatic tires, the combination of a valve stem provided with a flat bearing face, of a cover therefor, a spring mounted on the inner face of the cover and projecting therefrom, said spring adapted to contact with the bearing face formed on the stem to maintain the cover in spring tight frictional engagement with the valve stem.

958,868. TELEPHONE SYSTEM. WILLIAM F. GRADOLPH, St. Louis, Mo., and WILLIAM C. HAHNE, Chicago, Ill., assignors to Gradolph Electric Company, St. Louis, Mo., a Corporation of Missouri. Original application filed Dec. 20, 1905, Serial No. 292,529. Divided and this application filed Feb. 1, 1908. Serial No. 413,854.



1. In a telephone system, the combination with a metallic circuit, and a plurality of stations thereon each provided with transmitting and receiving apparatus, of means at each station for impeding the current in one side of the circuit, and means at each station for cutting the impeding means in or out of the circuit at will.

2. In a telephone system, the combination with a metallic circuit, and a plurality of stations thereon each provided with transmitting and receiving apparatus, of means at each station for altering the phase relation of the currents, and means at each station for cutting said phase-altering means in or out of the circuit at will.

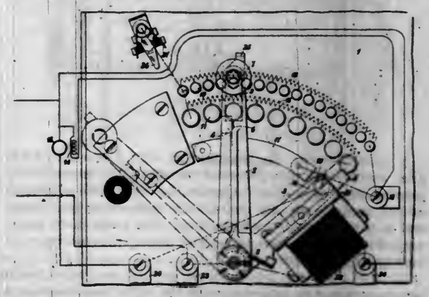
3. In a telephone system, the combination with a circuit and a plurality of stations thereon, each provided with transmitting and receiving apparatus, a differential relay at each station, dependent for operation upon actuation of the transmitting apparatus by sound waves entering the same, for changing the station from receiving to transmitting condition.

4. In a telephone system, the combination with a metallic circuit, and a plurality of stations thereon, each provided with transmitting and receiving apparatus, of means at each station for altering the phase relation of the currents in the two sides of the circuit, said phase-altering means being normally out of circuit, and means at each station, dependent for actuation upon operation of the transmitting apparatus, for putting said phase-altering means in circuit.

5. In a telephone system, the combination of a metallic circuit the sides of which are in inductive relation to each other, a plurality of stations thereon, transmitting and receiving apparatus at each station, and means in series with the circuit coöperating with means in inductive relation with both sides of the circuit for producing in both sides of the circuit at the same time currents of like polarity, and for restoring said currents to their original polarity.

[Claims 6 to 17 not printed in the Gazette.]

958,869. RHEOSTAT. FLETCHER D. HALLOCK, Pittsburg, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa., a Corporation of Pennsylvania. Filed July 6, 1908. Serial No. 442,225.



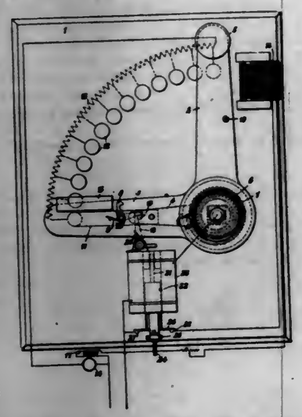
1. The combination with a movable member and two resistances adapted to be controlled thereby, of a second movable member, means operatively connecting the said members to cause the same to move together in one direction and permitting independent movement of the resistance governing member in the opposite direction, a stationary conducting segment, a contact device carried by the second movable member and engaging the stationary segment for a greater portion of the travel of the said member to short circuit one of the resistances, and means carried by the said second movable member for short-circuiting the other resistance at one of the limits of the travel of the said member.

2. The combination with a dynamo-electric machine having field and armature circuits and a resistance for each of said circuits, of a movable member controlling both of said resistances, a second movable member, a conducting segment, a contact device carried by the second movable member and engaging the stationary segment during the greater portion of the travel of the second movable member to short circuit the field resistance, and means carried by the second movable member for short-circuiting the

armature resistance when the said member occupies one of its extreme positions.

3. The combination with a dynamo-electric machine having field and armature circuits and a resistance for each of said circuits, of a movable member controlling both of said resistances, a second movable member, means for retaining the second member in its extreme position during the continuance of normal circuit conditions, a stationary conducting segment, a contact device carried by the second movable member and engaging the stationary segment during movement of the said second member after it is in its extreme position to short circuit the field resistance, and means carried by the second movable member for short-circuiting the armature resistance when the said member occupies its extreme position.

958,870. STARTING-RHEOSTAT. FLETCHER D. HALLOCK, Pittsburg, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa., a Corporation of Pennsylvania. Filed July 6, 1908. Serial No. 442,226.



1. In a rheostat, the combination with a pivoted switch arm, and a resistance governed thereby, of a concentrically pivoted arm adapted to operate the resistance-governing switch arm, means for operatively connecting said arms, and a third concentrically pivoted arm adapted to interrupt the said operative connection upon the occurrence of abnormal circuit conditions.

2. In a rheostat, the combination with a pivoted member constrained or biased toward its initial position and a resistance governed thereby, of a concentrically pivoted member adapted to operate the resistance-governing member, means for operatively connecting the said members, and a third concentrically pivoted member adapted to interrupt the said operative connection to permit the resistance-governing member to return to its initial position upon the occurrence of abnormal circuit conditions.

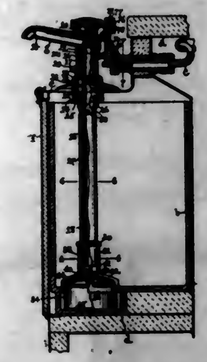
3. In a rheostat, the combination with a movable member, and a resistance governed thereby, of a second movable member adapted to operate the resistance-governing member, means for operatively connecting said members, a third movable member adapted to interrupt said operative connection upon the occurrence of abnormal circuit conditions, and means for retaining the said member in its initial position during the continuance of normal circuit conditions.

4. In a rheostat, the combination with three concentrically pivoted movable members, and a resistance governed by one of said movable members, of an operative connection between the resistance-governing member and one of the other members, means for retaining the third movable member in its initial position except upon the occurrence of abnormal circuit conditions, the said member, upon its release, effecting interruption of the said operative connection.

5. In a rheostat, the combination with a movable member, and a resistance governed thereby, of a second movable member for operating the resistance-governing member, means for operatively connecting said members, a third movable member biased or constrained toward the position of the resistance-governing members, and means for retaining the said third member in its initial position except upon the occurrence of abnormal circuit conditions, the said member, upon its release, effecting interruption of the said operative connection.

[Claims 6 to 10 not printed in the Gazette.]

958,871. LIQUID-DISPENSING APPARATUS. WILLIAM HELMER, Boston, Mass. Filed May 14, 1909. Serial No. 496,019.



1. In an apparatus of the character described, in combination, a tank or vessel containing liquid under atmospheric pressure, a pump extended into said tank or vessel and provided with a movable head having a discharge nozzle, said pump being capable of discharging a given quantity of liquid through said nozzle on the downward movement of the head for a portion of its movement, an outlet pipe connected with a source of supply for fluid under pressure, a valve casing with which said pipe is connected, a pipe connecting said valve casing with said nozzle, a valve normally cutting off the supply of fluid under pressure from said nozzle, and provided with a valve stem, and a cam movable with said head and acting on said valve stem on the downward movement of said head to open the said valve and permit the fluid under pressure to flow to the said nozzle and be discharged therefrom, substantially as described.

2. In an apparatus of the character described, in combination, a tank or vessel containing liquid under atmospheric pressure, a pump extended into said tank or vessel and provided with a movable head having a discharge nozzle, said pump being capable of discharging a given quantity of liquid through said nozzle on the downward movement of the head for a portion of its movement, an outlet pipe connected with a source of supply for fluid under pressure, a valve casing with which said pipe is connected, a pipe connecting said valve casing with said nozzle, a valve normally cutting off the supply of fluid under pressure from said nozzle, and provided with a valve stem, a cam movable with said head and acting on said valve stem on the downward movement of said head to open the said valve and permit the fluid under pressure to flow to the said nozzle and be discharged therefrom, and means to adjust said cam to engage said valve stem at different portions of the downward movement of the said head, substantially as described.

3. In an apparatus of the character described, in combination, a tank or vessel containing a liquid under one pressure, a pump having a movable head provided with a nozzle, said pump being capable of discharging a predetermined quantity of liquid from said tank on each movement of the said head in one direction, an outlet pipe from a source of supply of fluid under a greater pressure, a valve casing with which said outlet pipe is connected, means for connecting said valve casing with said nozzle, a valve in said casing controlling the passage of the fluid of greater pressure to said nozzle, and a cam movable with said head and coöperating with said valve to open the same after the said head has been moved a given distance in one direction, substantially as described.

958,872. BRAIDED NECKTIE. OTTO HOLZHEY and OTTO DICKHAUS, New York, N. Y. Filed May 22, 1909. Serial No. 497,664.



1. A braided article of manufacture having a tubular braided neck-band and flat braided ends integral therewith, said neck band having two cords braided therein along diametrically opposite sides to insure the folding of the braided tube along predetermined lines.

2. A braided article of manufacture having a flat braided end and a terminal tubular portion integral with the end and means for preventing the end of the tubular portion from raveling.

3. A braided article of manufacture having a flat braided end and a terminal tubular portion integral with the end, the free edge of said tubular portion being turned back into the tubular portion and secured therein.

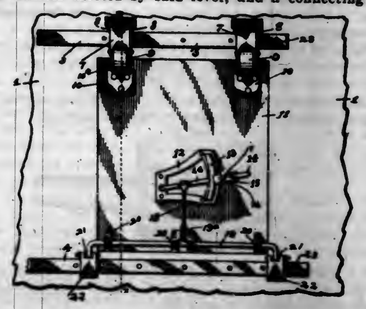
4. A braided article of manufacture having a flat braided end and a terminal tubular portion integral with the end, the free edge of said tubular portion being turned back into the tubular portion, and a line of stitching across said tubular portion for retaining the free end therein.

5. A braided necktie having a uniform number of strands extending the entire length thereof, the neck-band portion of the necktie being braided in tubular form and the tying ends of said necktie being braided flat and of a single thickness, and the terminal portions of said tying ends being also braided of tubular form with the free ends turned back into the tubular portion and secured therein to prevent raveling.

[Claims 6 and 7 not printed in the Gazette.]

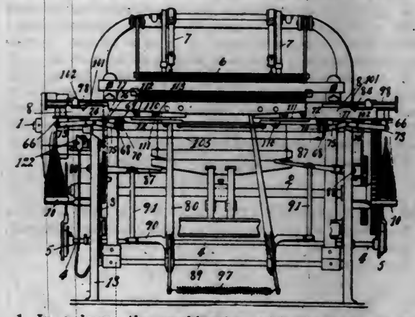
958,873. CAR-DOOR. FRANK HORN, Columbus, Ohio. Filed July 19, 1909. Serial No. 508,400.

The combination with a car having a doorway, track bars above and below said doorway, hangers depending from said upper track bar, and sliding guide members on said lower track bar, of a door, inclined link connections between said depending hangers and the upper portion of the door, a yoke rod having its horizontal portion journaled in connection with the lower portion of the door and its outturned end members pivoted in connection with said sliding guide members, a curved rack bar projecting from the door, a pivoted lever, a rack engaging lock member carried by said lever, and a connecting rod



between said lever and an arm of said yoke rod the throw of the pivoted lever being such that the link connections are maintained in an inclined position when the door is in its lowest position.

958,874. LOOM. ROBERT H. H. HUNT, San Francisco, Cal., assignor to Economic Loom Company, San Francisco, Cal. Filed Sept. 8, 1903. Serial No. 172,204.



1. In a loom, the combination with the lay and the thread carrier having devices for seizing a thread, of a feeder for successively presenting the thread to said devices at different points in the length thereof, and means supported independently of the lay for measuring the distance between said points, substantially as described.

2. In a loom, the combination, with the lay and the thread carrier, of means supported independently of the lay for cutting the thread into lengths, means for measuring the amount of thread to be so cut, and means for presenting the ends of the cut thread to the thread carrier, substantially as described.

3. In a loom, the combination, with the lay and the thread carrier, of means for measuring off a length of thread, means for cutting off the length so measured and means supported independently of the lay for presenting to the thread carrier in succession the cut ends of the thread, substantially as described.

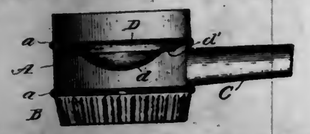
4. The feeding and severing device for feeding the thread to the loom comprising feed and tension plates secured together between which the thread is held, a pair of shears comprising a fixed blade and a movable blade, means for automatically moving said blade outward to open the shears to permit the thread to pass freely therebetween, and a connection between said movable blade and one of said plates to open said plates to permit the thread to pass also freely therebetween, substantially as described.

5. The feeding and severing device for a loom comprising a bifurcated feed plate, a spring tension plate se-

cured thereon and also bifurcated, shears in the space between the forks of the plates, a wire union between the two members of the spring plate, and means for moving a shear blade outward, said blade then engaging said wire union to press said plate outward when the shears open, substantially as described.

[Claims 6 to 23 not printed in the Gazette.]

958,875. KITCHEN UTENSIL. JOHN P. IBSON, Denver, Colo. Filed Feb. 5, 1910. Serial No. 542,296.



1. A utensil comprising a shell open at opposite ends and provided with a rib and a removable perforate plate seated with relation to said rib.

2. A utensil comprising a cylindrical shell having open ends, a rib extending around the same, a perforate plate seated with relation to said rib, and a tubular member projecting laterally from said shell.

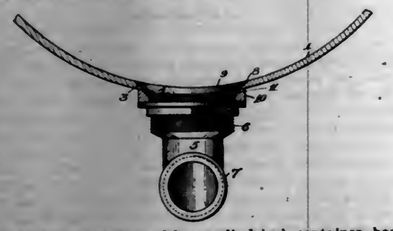
3. A utensil comprising a cylindrical shell having open ends, a rib extending around said shell and forming a recess on the inner surface thereof, a removable perforate plate seated in said recess, and a tubular member projecting laterally from said shell.

4. A utensil comprising a cylindrical shell having open ends, a rib extending around the same, a perforate plate seated with relation to said rib, and a tubular member projecting laterally from said shell, and open at its ends.

5. A utensil comprising a cylindrical shell having open ends, a rib extending around said shell and forming a recess on the inner surface thereof, a removable perforate plate seated in said recess, and a tubular member projecting laterally from said shell, and open at its ends.

[Claims 6 to 15 not printed in the Gazette.]

958,876. DRAINAGE CONNECTION. ALBERT I. JONES, Rochester, N. Y., assignor to The Pfaudler Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 2, 1907. Serial No. 404,711.



1. The combination with a cylindrical container having a curved wall provided with a discharge opening, the edges of which are countersunk to form an inclined seat extending continuously from the inner to the outer surface of the container, of a pipe elbow having an expanded, conical head arranged in the seat, the end portion of said pipe exposed within the container being concave and forming a substantial continuation of the inner surface of the latter, a washer encircling the pipe and conforming to the cylindrical curvature of the outer surface of the receptacle and having a countersunk portion surrounding the pipe head, a nut threaded on the pipe and engaging the washer and a gasket surrounding the conical pipe head and adapted to be pressed against the latter both by the inclined seat and by the countersunk portion of the washer when the nut is tightened.

2. The combination with a container provided with a discharge opening, the edges of which are counter-sunk to form an inclined seat extending continuously from the inner to the outer surface of the container, of a pipe elbow having its ends threaded, the intermediate portion being of reduced diameter to permit the elbow to be inserted through an aperture of minimum diameter with a rolling motion while the crook of the elbow is held against the edge of the inclined seat, an expanded conical head at one extremity of the elbow arranged in the seat, a washer encircling the pipe and having a counter-sunk portion surrounding the pipe head, a nut threaded on the pipe and engaging the washer and a gasket surrounding the conical pipe head and adapted to be pressed against the latter both by the inclined seat and by the counter-sunk portion of the washer when the nut is tightened.

958,877. RIBBON-CLIP. ALEXANDER L. KAHN, New York, N. Y. Filed Mar. 12, 1909. Serial No. 482,909.



1. A device of the class described comprising a single piece of wire bent intermediate its ends to form a central duplicate bar having an eye at one end, said wire being then bent to form two outer bars spaced apart and each having one end releasably engaging said eye.

2. A device of the class described comprising an intermediate or central bar having an eye formed at one end thereof, and two side bars formed integral with and spaced apart from the central bar, said side bars having free end portions releasably connected to the eye portion of the central bar.

3. A device of the class described comprising a single wire bent intermediate its ends to form a central bar having an end eye portion, the strands of the wire being twisted into engagement opposite the eye portion and then bent back and spaced apart to form side bars, said side bars having free ends releasably engaging with the eye portion of the central bar.

4. A device of the class described comprising a central bar portion, two side bars spaced apart from and integral with the central bar portion and releasably engaging at one end with the said central bar and holding means on one of said bars.

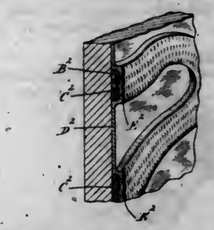
5. A device of the class described comprising a central bar, and two side bars each having an end portion releasably connected to one end of the central bar, said side bars spaced apart from and lying in approximately the same horizontal plane with the central bar whereby one or more layers of material may be clamped between the side bars and the central bar.

958,878. RECEPTACLE FOR CARRYING AND DISPLAYING CIGARS. ALPHONSE G. KAUFMANN, New York, N. Y. Filed Dec. 20, 1909. Serial No. 534,225.



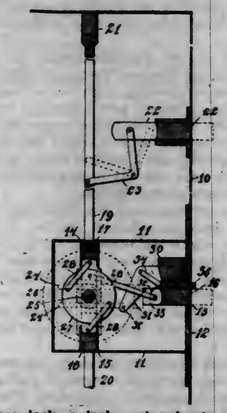
A cigar tube of the character described, having a closed end and of a length to fit over and cover a portion of a cigar at the head end thereof, and a cigar band on the open end of said tube.

958,879. PRINTING PROCESS. FELIX KROKERT, Halle-on-the-Saale, Germany. Filed Dec. 14, 1908. Serial No. 467,355.



A printing process for producing raised granulated color prints, consisting in applying to a surface an adhesive substance, dusting the same with a pulverulent, granular material, applying additional layers of adhesive to certain parts to produce an uneven design, dusting said additional layers with the pulverulent, granular material, varnishing the whole, and separately color printing the relief portions of different heights, of the uneven design.

958,880. LOCK. AUGUST LAWSON, Jamestown, N. Y., assignor to Martin L. Oberg and Ernest A. Lawson, Jamestown, N. Y. Filed June 21, 1909. Serial No. 503,433.



1. In a door lock, a lock casing having suitable openings therein, a bolt slidably mounted in said opening and means for actuating said bolt, a weighted catch pivotally attached to the inner side of said casing, said catch having a pin on its under side to engage a notch in said bolt, a tripping bolt slidably mounted on said bolt and having link connection in said weighted catch, said tripping bolt extending through the front of said casing to raise said catch by striking a door plate.

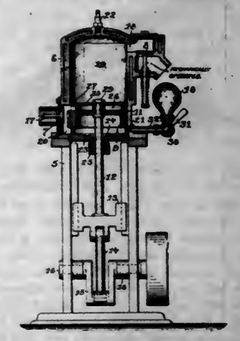
2. In a door lock, a lock casing having suitable openings therein for the bolt, a bolt slidably mounted through one of said openings in the front plate of said casing, said bolt having a notch in its upper side, a tripping bolt slidably mounted on said bolt, a weight pivotally mounted on the inner side of said casing, a projection on the under side of said weight to engage said notch in said bolt, said weight having link connection with said tripping bolt and extending over said bolts to hold the same.

3. In a door lock, a casing having a suitable front plate with an opening therein, a bolt slidably mounted in said opening, a cross shaft through said casing, knobs on said shaft, a crank wheel attached to said shaft within said casing, link connection between said bolt and shaft to slidably actuate said bolt by the turning of said shaft, guide arms on the inner end of said bolt passing each side of said shaft to keep said bolt in line, a weight to turn said shaft and actuate said bolt, a gravity catch to hold said bolt, and means for raising said catch actuated by closing the door.

4. In lock, a casing for said lock having openings in the edges thereof, a cross shaft revolubly mounted in said casing, knobs on said cross shaft, a crank wheel on said shaft, bolts slidably mounted in said openings in said casing, guide arms on the inner ends of said bolt intersecting one another on opposite sides of said shaft to hold said bolts in line, links pivotally attached to said bolts and said crank wheel so as to be in line with said bolts when in the extended position, a gravity catch for one of said bolts, and means for operating said catch.

5. In a door lock, a lock casing having suitable openings therein, bolts slidably mounted in said openings, a cross shaft revolubly mounted in said lock casing, knobs on said cross shaft, weights in one side of said knobs to turn said shaft, a crank wheel on said shaft within said casing, link connection between said bolts and said crank wheel, guide arms on the inner ends of said bolts extending on opposite sides of said shafts to keep said bolts in line, a gravity catch pivotally attached within said casing, said catch having a tooth and notch engagement with one of said bolts to hold all of said bolts, and a tripping bolt for said gravity catch having connection therewith to automatically release said bolts when the door is closed, substantially as and for the purpose specified.

958,881. GAS-ENGINE. RAYMOND J. LEACH, Seekonk, Mass. Filed Aug. 2, 1909. Serial No. 510,888.

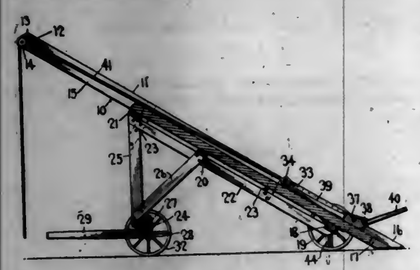


1. In a two-cycle gas engine, in combination, a cylinder having an exhaust port at the upper end on the side and a head secured to the lower end, a piston in the cylinder dividing the same into a compression chamber and an explosion chamber, a by-pass in the side of the cylinder at the lower end, extending from the compression chamber upward and inward, in a position to coincide with a port in the piston when the piston is at the downward limit of its stroke, an intake port at the lower end of the cylinder extending into the by-pass, an automatic valve controlling the intake port, a mechanically operated valve controlling the exhaust port, a piston having a concentric circular chamber in its upper end, a port extending from the circular chamber through the side of the piston in a position to coincide with the upper end of the by-pass when the piston is at the downward limit of its stroke, a circular perforated plate recessed into the piston and forming the top of the circular chamber, a shouldered piston rod having a reduced portion screw-threaded on the end and extending through a central hole in the piston and a central hole in the perforated plate and a nut on the screw-threaded end of the piston rod engaging with the perforated plate.

2. In a two-cycle gas engine, in combination, a cylinder having a closed upper end, an internally screw-threaded

lower end, walls forming an exhaust port at the upper end on the side, a by-pass in the side extending from the lower end upward and inward and an intake port on the side extending into the by-pass, all formed integral, an automatic valve controlling the intake port, a mechanically operated valve controlling the exhaust port, an externally screw-threaded head closing the lower end of the cylinder, the upper end of the cylinder constituting an explosion chamber and the lower end a compression chamber connected with the by-pass, a piston having a concentric circular chamber in its upper end, a port extending from the circular chamber through the side of the piston and adapted to coincide with the upper end of the by-pass in the cylinder when the piston is at the downward limit of its stroke, a circular perforated plate recessed into the piston and forming the top of the circular chamber, a shouldered piston rod extending through a stuffing box on the head closing the lower end of the cylinder and having a reduced portion screw-threaded on the end and extending through a central hole in the piston and a central hole in the perforated plate and a nut on the screw-threaded end of the piston rod engaging with the perforated plate.

958,882. HORSE-POWER LOADER. JOHN P. LUCAS and JOSEPH A. LUCAS, Browerville, Minn. Filed Feb. 16, 1909. Serial No. 478,337.

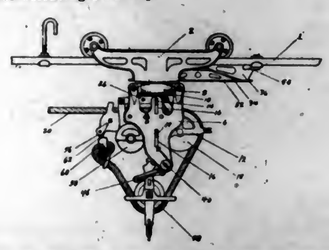


1. In a loader, an elevator incline, side rails projecting above the face of the incline and extending above the upper end of said incline, ledges on the inner sides of the upper ends of the side rails having their upper faces in the plane of the upper face of the incline, a cross rail extending across the upper end of the side rails, a pulley rotatably mounted on said cross rail, in combination with a loading fork, a bail pivoted thereto and adapted to fit between said side rails and rest on the ledges when elevated, said fork being adapted to drop between the ledges when elevated, and a cable attached to said bail and passing over said pulley.

2. In a loader, an elevator incline, side rails projecting above the face of the incline and extending above the upper end of said incline, ledges on the inner sides of the upper ends of the side rails and having their upper faces in the plane of the upper face of the incline, a cross rail extending across the upper ends of the side rails, a pulley rotatably mounted on said cross rail; in combination with a loading fork, a bail pivoted thereto comprising a pair of parallel side bars and a cross bar, said bail being of such dimensions that the side bars will fit between the side rails of the incline to guide the fork and will rest on the ledges when elevated to permit the fork dropping between the ledges, and a cable attached to said bail and passing over said pulley.

958,883. HOIST. RICHARD MILLER, Appleton, Wis. Filed Sept. 18, 1908. Serial No. 453,684.

1. In a hoist of the described class, the combination with a supporting track, of a carriage having a depending swivel hub, a set of supporting plates having swivel connection with the hub, a pulley frame movably mounted upon said plates, a yoke having swivel connection with the pulley frame, and provided with upwardly projecting arms, a stationary member adapted to engage and lift said arms and pulley frame, a trip arranged to engage and support said pulley frame in raised position, and rope actuated means for releasing said trip.



2. In a hoist of the described class, the combination with a pulley supporting member, a pulley frame movably mounted in said member, a pulley journaled in said pulley frame near one side thereof, a hoisting rope extending about said pulley and in a substantially horizontal position across the central upper portion of said pulley frame, rope clamping devices connected with said supporting member and pulley frame respectively, and means for adjusting said clamping devices into and out of operative position by lowering and raising said pulley frame, one of said clamping devices being pivotally connected with its support, and said clamping devices being located near the central upper portion of the pulley frame in clamping relation to the horizontally extending portion of the hoisting rope.

3. In a hoist of the described class, the combination of a track, a carriage mounted thereon, a supporting member having swivel connection with the carriage, a pulley frame movably supported by said member, a trip, arranged when set, to hold the pulley frame in one position of adjustment, a trip setting device having swivel connection with the pulley frame, and a bracket on the track arranged to engage and actuate the trip setting device to move the pulley frame to trip setting position.

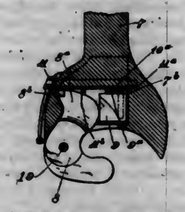
4. In a hoist of the described class, the combination of a track, a carriage mounted thereon, a pulley supporting member connected therewith, a locking, trip setting device supported from said member, and a bracket on the track provided with inclined portions adapted to actuate the trip setting device, and having a base arranged to prevent the pulley supporting member and carriage from lifting during the load lifting and trip releasing operation.

5. In a hoist of the described class, the combination of a track, a carriage mounted thereon, a pulley supporting member connected therewith, a pulley frame movably mounted in said member, an elbow crank trip lever, adapted, in one position of adjustment, to hold the pulley frame in a raised position in the supporting member, a hoisting rope and pulley supported by the pulley frame, means for actuating the trip lever from said rope, a trip setting device carried by the pulley frame, a track bracket adapted to engage the trip setting device and lift the pulley frame to trip setting position, and rope clamping members, connected with the supporting member and pulley frame respectively, and adapted to engage the rope between them.

[Claims 6 to 10 not printed in the Gazette.]

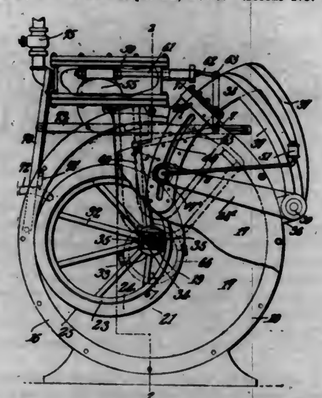
958,884. CAR-COUPLING. DANIEL S. MONTGOMERY, Columbus, Ohio. Filed Oct. 4, 1909. Serial No. 520,869.

1. In a car coupling the combination with the draw head having a support for a knuckle-locking block when the latter is in elevated position, of a knuckle pivoted in said draw head, said knuckle having a tail piece provided at its upper side with a lug and its under side provided with a cam, a knuckle locking block vertically sliding in the draw head, a shaft journaled in the draw head having a finger to move the knuckle to open position and a finger to elevate the locking block to engage the said support, said last named finger having a limited movement upward with reference to said shaft and a spring to hold the same at the limit of its movement, said draw head having a stop to limit the upward movement of said last named finger by the operation of the said shaft.



2. In a car coupling the combination with a draw head, and a knuckle, of a locking block for the knuckle, a shaft having fingers for operating the knuckle and locking block, the finger for operating the locking block having means for yieldingly holding it while the finger for operating the knuckle moves the knuckle.

958,885. ROTARY ENGINE. GEORGE F. MOORE, Mount Vernon, Ill. Filed Sept. 11, 1908. Serial No. 452,647.



1. In a rotary engine, a cylinder, a shaft extending therethrough, the opposite heads of the cylinder being provided with arcuate slots, a cylindrical piston mounted eccentrically on the shaft, a ring encircling said piston, a pivotally mounted abutment extending through an opening in the curved wall of the cylinder and having its inner end connected to the piston ring, arms extending from the inner end of the abutment through said arcuate slots, packing strips arranged in the inner walls of the heads on opposite sides of said arcuate slots and bearing against the sides of the abutment, and bracing arms connected to the extended arms of said abutment.

2. In a rotary engine, a cylinder, a shaft extending therethrough, the opposite heads of the cylinder being provided with arcuate slots, a cylindrical piston mounted eccentrically upon the shaft, a ring encircling the piston, an abutment, a stuffing box arranged in the curved wall of the cylinder for the passage of the abutment, a pivotally mounted arm connected to the outer end of the abutment, a pair of arms extending from the inner end of the abutment through said arcuate slots, pivoted bracing arms connected to the extended arms of the abutment, and packing strips arranged on opposite sides of the slots and bearing against the opposite ends of the abutment.

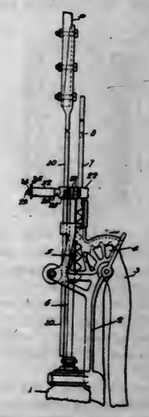
3. In a rotary engine, a cylinder, a shaft extending therethrough, the opposite heads of the cylinder being provided with arcuate slots, a cylindrical piston mounted eccentrically on the shaft, a ring encircling said piston, an arcuate abutment pivotally connected to the ring, bracing arms connected to the inner end of the abutment, a lubricant containing cup, and a feed pipe running from the cup to the pivotal connection between the bracing arms, the abutment and the ring, said pipe being arranged to move to varying angular positions from the horizontal to permit gravity feed of lubricant during the operation of the engine.

4. In a rotary engine, a cylinder, a shaft extending therethrough, a cylindrical piston mounted eccentrically on said shaft, a ring encircling the piston and provided with a substantially cylindrical recessed boss, a pivotally mounted arcuate abutment extending through an opening in the wall of the cylinder and having a curved recess to receive the boss, and a cylindrical block extending from the abutment and fitting within the recess of the boss.

5. In a rotary engine, a cylinder, a shaft extending therethrough, an eccentrically mounted cylindrical piston carried by the shaft, a ring encircling the piston and in which said piston is free to rotate, an arm pivotally connected to the cylinder, an abutment extending from one end of the arm and into the cylinder, said abutment being curved in an arc concentric with the pivot of the arm, cooperating means upon the ring and abutment for connecting the said ring and abutment, and braces connected to said coöperating means and extending to the pivot of the arm.

[Claims 6 to 10 not printed in the Gazette.]

958,886. WINDMILL CONNECTOR FOR PUMPS. PHILIP A. MYERS, Ashland, Ohio, assignor to F. E. Myers and Brother, Ashland, Ohio, a Copartnership. Filed Oct. 25, 1909. Serial No. 524,288.



1. The combination, with a pump having a handle, an actuating member operatively connected to said handle, a pump rod, and a windmill rod, of a connector comprising a body portion secured to said pump rod and having guideways adapted to receive said actuating member and said windmill rod, respectively, and a locking member mounted on said body portion, movable toward and away from said body portion and arranged to be moved about the same to enable said locking member to engage either said actuating member or said windmill rod and connect the part so engaged to said body portion.

2. The combination, with a pump having a handle, an actuating member operatively connected to said handle, a pump rod, and a windmill rod, of a connector comprising a body portion secured to said pump rod and having guideways adapted to receive said actuating member and said windmill rod, respectively, and having recesses inter-

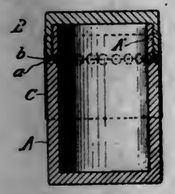
necting said guideways, and a locking pin mounted on said body portion, arranged to be moved into and out of said recesses and also arranged to be moved about said body portion to enable said pin to enter either one of said recesses and engage the member extending through the same and secure said member to said body portion.

3. The combination, with a pump having a handle, an actuating member operatively connected to said handle, a pump-rod, and a windmill-rod, of a connector comprising a circular body portion adapted to be connected to the pump-rod and having vertically arranged guideways therein adapted to receive said actuating member and said windmill-rod, respectively, horizontal recesses intersecting said vertical guideways, a collar rotatably mounted on said circular body portion, a locking pin carried by said collar and adapted to extend through said recesses and through said guideways.

4. A windmill connector for pumps comprising a circular body portion having vertically arranged guideways and horizontal recesses intersecting said guideways, a collar rotatably mounted on said body portion, a hollow handle for said collar, a locking pin slidably mounted in said hollow handle, a spring arranged in the rear of said locking pin, and a sleeve mounted on said handle and connected to said locking pin to enable the same to be withdrawn against the tension of said spring.

5. A windmill connector comprising a body portion adapted to be secured to a pump rod and having vertically arranged guideways, a member rotatably mounted on said body portion, and a locking pin movably mounted on said rotatable member and arranged to be moved toward and away from said body portion to cause said pin to intersect one or the other of said guideways according to the position of said rotatable member.

958,887. SEALED RECEPTACLE. CHARLES R. PARMELE, New Brighton, N. Y. Filed June 21, 1907. Serial No. 380,012.



1. The combination of a box body having an upward projection, a cover fitting over said projection and thus forming a closed box, a label secured by adhesive material to both said body and said cover and having a series of bonds at an angle to the lower edge of said cover and coinciding approximately with said lower edge, said closed box having an indentation beneath said bonds and coinciding with the line of junction of said cover and body.

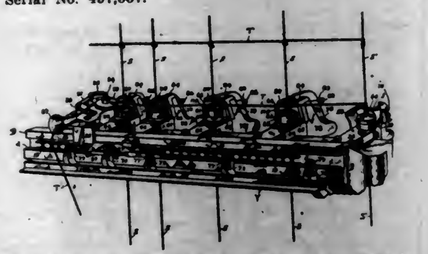
2. The combination of a box body having an upward projection, a cover fitting over said projection and thus forming a closed box, a label secured by adhesive material to both said body and said cover and having a series of bonds at an angle to the lower edge of said cover and coinciding approximately with said lower edge, said label having a non-adhering zone corresponding to said bonds and coinciding with the line of junction of said cover and body.

3. The combination of a box body having an upward projection, a cover fitting over said projection and thus forming a closed box, a label secured by adhesive material to both said body and said cover and having a line of perforations coinciding approximately to the lower edge of said cover, said closed box having an indentation coinciding with said line of perforations and the line of junction of said cover and body.

4. The combination of a box body having an upward projection provided with external screw-threads, a cover provided with internal screw-threads fitting over said projection and thus forming a closed box, a label secured by adhesive material to both said body and said cover and having a line of perforations coinciding approximately with the lower edge of said cover, said closed box having an indentation coinciding with said line of perforations and the line of junction of said cover and body.

5. In a box, the combination of a box body having a base portion and an upward projection therefrom of smaller external dimensions than said base portion, so as to form a shoulder at the lower end of said projection, a cover fitting over said upward projection and engaging said shoulder on said base portion at the lower end of said upward projection, the upper outer edge of the base portion and the lower outer edge of the cover being cut away so as to form a recess at the line of junction of cover and base portion, and a label secured by adhesive material to said base portion and cover.

958,888. MACHINE FOR MAKING WIRE FABRIC. WILLIAM N. PARRISH, Richmond, Ind., assignor to Parrish-Alford Fence and Machine Company, Knightstown, Ind., a Corporation of Indiana. Filed May 21, 1909. Serial No. 497,557.



1. In a machine for making wire fabric, comprising in combination, a frame, an angularly disposed bed-plate carried by the frame, a plurality of twister-blocks mounted on the bed-plate, a twister mechanism carried by each of said blocks, means whereby said twisters may be revolved horizontally, means for moving said twisters vertically during the time they are being revolved, and means whereby one of said twisters will be rotated oppositely to that of the other twisters, all substantially as set forth.

2. In a machine for making wire fabric, a plurality of intermediate twisters each comprising in combination, a head, a stem extending down from the head, a spiral-gear carried by the lower end of the stem, a stationary block in which said stem may operate both revolubly and endwise, a disk revolubly mounted on the surface of said block concentric with said stem, a twister-pin secured in said disk and projecting upward through an aperture therefor in said head, a collar secured around said head and projecting thereabove, a plate mounted on the face of said head with an aperture therethrough for said twister-pin, a roller carried by said plate, the same being pivoted to said head, and means for raising and lowering said head independent of the rotation thereof, all substantially as set forth.

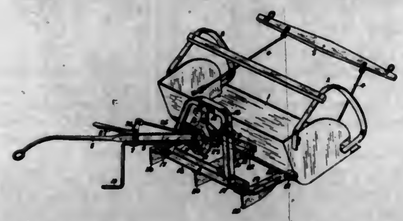
3. In a machine for making wire fabric, a frame having two end members spaced apart, a bed-plate extending across the frame at an angle horizontally, a bulldozer mounted between the upper portions of the end members, a reel revolubly mounted between the rear portions of the end members, a shaft mounted in the bed-plate and extending longitudinally thereof, and means for operating the bulldozer, the reel, and said shaft continuously by power, all substantially as set forth.

4. A machine for making wire fabric, comprising a frame, an angularly disposed bed-plate carried between the end members of the frame, a shaft revolubly mounted parallel with the bed-plate, a plurality of spiral gears carried by said shaft, one of said gears being provided with a left-hand thread while the others are provided with right-hand threads, twister-blocks mounted on the bed-plate and corresponding in number to the number of said spiral-gears, a twister carried by each of said twister-blocks, a spiral-gear connected to each of said twisters and meshing with and at right-angles to the corresponding first-named spiral gears, and means for rotating said shaft continuously to operate said twisters by power, all substantially as shown and described.

5. In a machine for making wire fabric, the combination with a suitable frame, of a bed-plate connecting the end members of the frame, said bed-plate being disposed at an angle sloping downward from one end of the machine to the other, and a shaft rotatably mounted in the bed-plate and extending longitudinally thereof.

[Claims 6 to 21 not printed in the Gazette.]

958,889. SCRAPER. OLOF PETERSON and GUSTAF PETERSON, Alameda, Cal. Filed Aug. 4, 1909. Serial No. 511,179.



1. A scraper comprising a bucket and a plurality of rearwardly extending rudder blades, connections between said blades and buckets permitting said blades to swing laterally, and means for so swinging said blades in unison, substantially as described.

2. A scraper comprising a bucket, a rearwardly extending rudder blade, a connection between said rudder blade and bucket, by which said blade can swing both vertically and horizontally, and means for moving said rudder blade horizontally, substantially as described.

3. A scraper comprising a bucket, a handle extending rearwardly therefrom, a rudder-blade pivotally connected with said bucket, extending rearwardly therefrom, and adapted to turn to either side from its pivot, a shaft rotatably supported upon said handle and having a crank handle, and an operative connection between said shaft and said rudder blade, whereby the latter can be moved laterally, substantially as described.

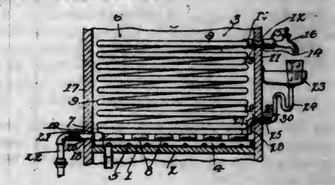
4. A scraper comprising a bucket, a handle extending rearwardly therefrom, a shaft having bearings mounted on said handle and having a crank handle, a rudder frame, connections between said frame and bucket permitting the frame to move horizontally, and means for supporting said rudder frame on said shaft while permitting it to move with the rocking of said shaft, substantially as described.

5. A scraper comprising a bucket, a handle extending rearwardly therefrom, a shaft having bearings mounted on said handle and having a crank handle, a rudder frame, connections between said frame and bucket permitting the frame to swing horizontally, a steering wheel encircling the handle attached to said frame, said shaft having a crank attached to said steering wheel, substantially as described.

[Claim 6 not printed in the Gazette.]

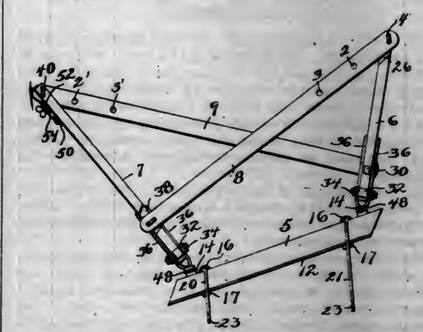
958,890. WATER-COOLER FOR REFRIGERATORS. JAMES S. PRATT, Los Angeles, Cal. Filed Aug. 23, 1909. Serial No. 514,166.

1. In a water cooler, walls forming an ice chamber, a coil in the ice chamber; there being openings through the walls at the ends of the coil; a fitting upon the lower end of the coil, a nipple extending from the fitting through one of said openings, a washer upon the nipple between the fitting and the inner face of the wall, a second washer upon the nipple against the outer face of the wall, and a sleeve upon the outer end of the nipple against the second washer, so that by tightening the sleeve the washers are tightened against the wall.



2. In a water cooler, an ice box, a drip pan secured to the outer face of the ice box, a trap drain secured to the drip pan, a sleeve upon the lower end of the trap drain, a nipple extending from the sleeve through the wall of the ice box, a washer upon the nipple between the sleeve and the outer face of the wall, a second washer upon the nipple against the inner face of the wall, and a fitting upon the inner end of the nipple against the second washer, so that by tightening the sleeve a tight joint is made to prevent the ice box from leaking.

958,891. ROAD GRADER AND SCRAPER. FRANK L. REISING, Piper City, Ill. Filed Nov. 5, 1909. Serial No. 526,376.

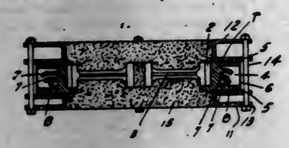


1. In combination, a knife bar, an upper and lower ear secured to each end of said bar, a long and a short arcuate drag arm extending from said knife bar, a long and a short runner, an eye secured to the lower forward corner of each runner, a pinch yoke secured to the upper forward corner of each runner, a clamping bolt passing through each runner and connected yoke, a forked securing member having a terminal bolt eye, the tines of said member being adjustably held below said yoke, two bars adjustably secured crosswise to said runners, and bolts passing through said ears and eyes.

2. In combination, a knife bar having a lower beveled edge, an upper and lower ear secured to each end of said bar, a long and a short arcuate drag arm extending from said knife bar, a knife secured to the lower edge of said bar, a long and a short runner, an eye secured to the lower forward corner of each runner, a pinch yoke secured to the upper forward corner of each runner, a clamping bolt passing through each runner and connected yoke, a forked securing member having a terminal bolt eye and curved tines held below said yoke, two bars adjustably secured crosswise to said runners, and means to connect said ears to said eye.

3. The combination with a runner, of an adjusting mechanism including a pinch yoke, a bolt to engage said pinch yoke, and a fork having a terminal eye and two curved tines, held below said pinch yoke.

958,892. MOLD. WILLIAM A. RIDDELL, Erie, Pa. Filed Mar. 9, 1909. Serial No. 482,208.



1. A mold for casting forms with protuberances comprising a metal mold section having indentures in which the protuberances of the castings run; and means for heating the metal mold section.

2. A mold for casting gears, comprising a metal ring having indentures therein to form the gear teeth; and means for heating said ring.

3. A mold for casting forms with protuberances comprising a metal mold section having indentures in which the protuberances of the castings run; an annular chamber on the periphery of said section; flanges extending into the chamber; and means acting on the flanges for heating the section.

4. A mold for casting forms with protuberances comprising a metal mold section of the annular form having indentures in which the protuberances of the castings run; an annular chamber on the mold section; annular flanges extending from the section into the chamber; and means acting on the flanges for heating the chamber.

958,893. COMPOSITION OF HYDRATED SODIUM CARBONATE AND SODIUM TANNATE. WILLIAM E. RIDENOUR, Philadelphia, Pa., assignor to Franklin Chemical Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 29, 1908. Serial No. 445,898.

1. A composition of matter produced by the combination of sodium carbonate, water and tannin extract in proportion producing an amorphous product, substantially as specified.

2. A composition of matter produced by the combination of sodium carbonate, a tannin extract, and sufficient water to hydrate the sodium carbonate without dissolving it, substantially as specified.

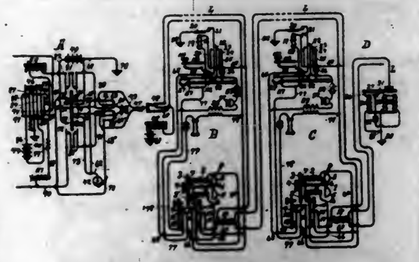
3. A composition of matter produced by the combination of sodium carbonate in the form of soda ash, water and tannin extract, in the proportion of about five hundred pounds of soda ash to approximately one hundred and twenty to two hundred pounds of water, and from ten to fifty pounds of tannin extract in solution, substantially as specified.

4. A composition of matter produced by the combination of sodium carbonate, a small amount of tannin extract and water in insufficient quantity to form crystalline hydrated sodium carbonate, the combination of the water with the sodium carbonate being effected gradually and accompanied by stirring, substantially as specified.

958,894. PARTY-LINE TELEPHONE SYSTEM. HOMER J. ROBERTS, Evanston, Ill., assignor, by mesne assignments, to Homer Roberts Telephone Co., a Corporation of West Virginia. Filed May 1, 1905. Serial No. 258,192.

1. In a party line telephone system, a main line extending uninterruptedly through a series of sub-stations, a sectional main line comprising a series of normally disconnected sections, each section of which extends from the station of its origination to a succeeding station and is there normally connected to the intact main line, means operable from the central station for progressively disconnecting each section from the intact main line and connecting it to a succeeding section, electrically-actuated means at each sub-station for establishing a circuit through the talking coil and between the two main lines and means for restoring the line connections to normal.

2. In a party line telephone system, a main line extending uninterruptedly through a series of sub-stations, a sectional main line comprising a series of normally disconnected sections, each section of which extends from the station of its origination to a succeeding station and is there normally connected to the intact main line, means operable from the central station for progressively disconnecting each section from the intact main line and switching it into connection with the succeeding section, a relatively low wound magnet included in circuit with said intact main line at each sub-station and means actuated by the armatures of said low wound magnets for restoring the line connections to normal when said magnets are energized.



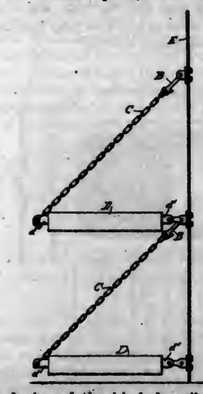
3. In a party line telephone system, a main line extending uninterruptedly through a series of sub-stations, a sectional main line comprising a series of normally disconnected sections, each section of which extends from the station of its origination to a succeeding station and is there normally connected to the intact main line, a polarized magnet at each sub-station, connected in circuit normally with the terminal portion of the sectional line section, a switch controlled by said polarized magnet and operable to disconnect said section from the intact main line and connect it to the succeeding section and an annunciator, operable by said polarized magnet when current of the polarity opposite that required for operating said switch mechanism, is sent therethrough.

4. In a party line telephone system, a main line extending uninterruptedly through a series of sub-stations, a sectional main line comprising a series of normally disconnected sections, each section of which extends from the station of its origination to a succeeding station and is there normally connected to the intact main line, magnet mechanism at each sub-station, responsive discriminatingly to two differentiated currents and normally connected in circuit with the terminal portion of the sectional line section, a switch controlled by said magnet mechanism and operable to disconnect said section from the intact main line and to connect it to the succeeding section, and an annunciator also controlled by said magnet mechanism, said switch being operated when current of one character is sent over the line and the annunciator being brought into action when current of different character is sent over the line.

5. In a party line telephone system, a continuous main line extending through a series of sub-stations, a sectional main line comprising a series of normally disconnected sections each of which extends from the station of its origination to a succeeding station and is there normally connected to the continuous line, a polarized bell magnet at each sub-station, included in that part of the circuit which is normally closed through the sub-station, a switch operable by the armature of each bell magnet for disconnecting the sectional line from the continuous line and connecting it to a succeeding station, a striker operable by the armature of each bell magnet when current of that polarity opposite that required to operate the switch mechanism is sent through the magnet and means for restoring the line connections to normal.

[Claims 6 to 39 not printed in the Gazette.]

958,895. COT-HOLDER. MANUEL R. RODRIGUES, New York, N. Y. Filed Sept. 9, 1908. Serial No. 452,328.



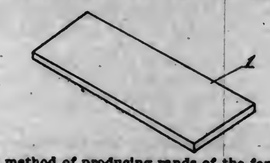
1. In a device of the kind described, a cot, means attached to a support to hold one end of the same in a movable relation, means also attached, in a movable relation, to the support to engage the other end of the cot, and connecting means located intermediate, and attached to both, the cot and the last named holding means.

2. In a device of the class described, a cot, means attached to a support to hold one end of the same in a movable relation, means also attached to the support having a movable member to hold up the other end of the cot, said movable member having a projection near one end to form a stop to limit the inward movement thereof, and a projection at the other end to serve as a hook, and connecting means located intermediate the movable member and the cot.

3. In a device of the class described, two cots, means attached to a support to hold the inner end of one of the cots in a movable relation, means also attached to the support to hold the inner end of the other cot in a movable relation, a movable member pivoted to the last named cot holding means, another movable member attached to the support, and connecting means located respectively between the two movable members and the outer ends of the two cots.

4. In a device of the class described, a cot having an extension at each end in alinement with the side thereof, means attached to a support to engage an extension at the lower end of the cot to hold the same in a movable relation, means also attached to the support having a movable member to support the upper end of the cot, and means intermediate the movable member and the extension at the upper end of the cot, located out of alinement with the plane of the extensions, the said movable member having a lateral projection to engage the upper extension and located in alinement with the same.

958,896. METHOD OF MAKING RANDS. LINUS H. SHAW, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 2, 1908. Serial No. 436,235.

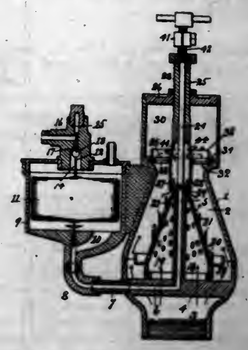


1. The method of producing rands of the form described, which consists in first reducing in thickness a piece of stock from its middle portion toward each end, and thereafter splitting said stock longitudinally into two strips tapering transversely to a thin edge.

2. The method of producing rands of the form described, which consists in first reducing in thickness a piece of stock from its middle portion toward each end by skiving said stock transversely, and thereafter splitting said stock longitudinally into two strips tapering transversely to a thin edge.

3. A method of producing rands of the form described, which consists in first reducing stock in thickness from its middle portion toward each end, thereafter dividing said stock longitudinally into a plurality of sections of predetermined width and splitting each section longitudinally into two strips tapering transversely to a thin edge.

958,897. CARBURETER. JAMES W. SNEDEKER, Adrian, Mich. Filed June 6, 1907. Serial No. 377,532.



1. In a carbureter for explosive engines, the combination of a carbureting chamber, a gasolene feed nozzle extending vertically into said chamber, means for maintaining the gasolene in said nozzle at a uniform level, a hollow, perforated cone through which air may pass, said cone extending into the carbureting chamber free from the wall thereof and around which the air is adapted to pass, said cone surrounding said feed nozzle from the apex of which said nozzle projects and onto which gasolene from the nozzle is adapted to flow, a receptacle at the base of the cone for the surplus gasolene and means for regulating the flow of gasolene through the nozzle.

2. In a carbureter, the combination of the carbureting chamber, a feed nozzle standing therein, means for maintaining the gasolene at a uniform level in said nozzle, a truncated cone surrounding the nozzle through the apex of which the nozzle projects, means for regulating the flow of gasolene through the nozzle, and means for directing gasolene in a spiral path around said cone.

3. In a carbureter, the combination of a carbureting chamber, an air intake passage below said chamber, a gasolene nozzle standing in the carbureting chamber and connected with a source of gasolene supply, a hollow cone within the carbureting chamber surrounding said nozzle and from the apex of which the nozzle projects, said cone having apertures therethrough which communicate with the air passage and with the carbureting chamber, an adjustable tube embracing the upper end of the gasolene nozzle, and means for directing the air passing through the carbureting chamber wholly through said tube.

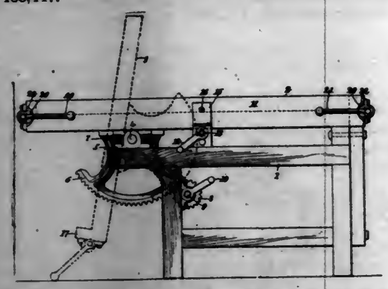
4. In a carbureter, the combination of the carbureting chamber, a gasolene nozzle standing therein, a cone within said chamber embracing the nozzle and onto which the gasolene is adapted to flow, means for regulating the flow of gasolene through the nozzle, a tube embracing the upper end only of said nozzle and standing adjacent to the wall of the cone at the upper end thereof, and means for directing the air current passing through the carbureter exterior to the cone upwardly along the surface of said cone and wholly through said tube.

5. In a carbureter, the combination of the carbureting chamber, a gasolene feed nozzle standing therein, a cone

embracing said nozzle onto which the gasolene is adapted to flow, an educt pipe communicating with the carbureter through which the explosive mixture is adapted to pass, means for regulating the passage of air from the carbureting chamber to said pipe, a tube above said cone freely embracing the gasolene nozzle at its lower end and communicating at all times at its upper end with said educt pipe.

[Claims 6 and 7 not printed in the Gazette.]

958,898. BRICK-MOLDING MACHINE. TIMOTHY YOUNG, Lakeland, Fla. Filed Mar. 24, 1909. Serial No. 485,447.



1. In a device of the class described, a frame, a mold supported by said frame, a bottom for said mold, sides for said mold, movable relatively to each other, clamps on said sides, a right and left screw carrying said clamps, means for operating said clamps, eccentric locks for holding said sides in position, and means for operating said locks.

2. In a device of the class described, the combination with a frame, of a mold comprising side members and a bottom rotatably supported independent of said side members on said frame, a gear sector secured to the under side of said bottom and away from the sides thereof, and a pinion on said frame adapted to turn said gear sector.

3. In a device of the class described, the combination with a frame, of a mold supported by said frame, a bottom rotatably supported by said frame, grooved sides movably supported on said frame, spacing pieces seated in the grooves in said sides, rotatable shafts moving in bearings on the ends of said bottom, eccentric locks on said shafts, adapted to lock said sides to hold them to the bottom, clamping members on said sides, and a double threaded shaft adapted to draw said clamping members together.

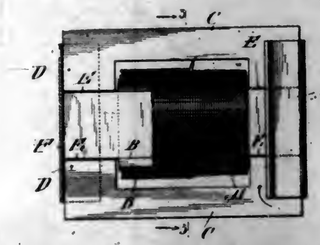
4. In a device of the class described, the combination with a frame, of a mold supported by said frame, a bottom for said mold rotatably supported on said frame, a gear sector secured on said bottom, a pinion on said frame meshing with said gear sector, means for rotating said pinion, sides on said mold movable relatively to the base, clamps secured to the sides, right and left hand screws working in said clamps adapted to draw the sides together, a handle adapted to rotate said screws, eccentric locks at each end of the mold adapted to lock the sides in position, and means for operating said locks.

958,899. SPARK-COIL. CHESTER H. THORDARSON, Chicago, Ill. Filed Sept. 3, 1907. Serial No. 391,023.

1. A spark coil having a laminated core, in combination with independent side pieces arranged to bear against the core at the ends thereof, and channel clips engaging the ends of the core and side pieces to retain the same in assembled relation.

2. A spark coil having a core and a subdivided side part formed with pole faces presented toward but separated from the ends of the said core and channel plates engaging the ends of said core and side part to hold the same in assembled relation.

3. A spark coil having a core, in combination with independent side pieces having pole faces arranged to bear against the sides of the core at the ends thereof, and means engaging the ends of the core and side pieces to retain the same in assembled relation.

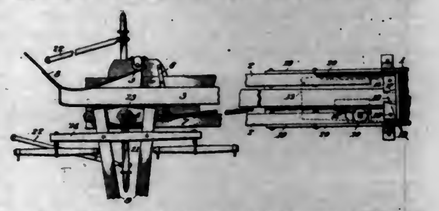


4. A spark coil having a laminated core, in combination with independent side pieces having pole faces arranged to bear against the sides of the core at the ends thereof, and means for engaging the ends of the core and side pieces to retain the same in assembled relation.

5. A spark coil having a core, in combination with independent laminated side pieces having pole faces arranged to bear against the sides of the core at the ends thereof, and means engaging the ends of the core and side pieces to retain the same in assembled relation.

[Claims 6 to 14 not printed in the Gazette.]

958,900. BALING-PRESS. FREDERICK W. WILLIAMS, Macon, Ga. Filed Dec. 12, 1907. Serial No. 406,215.



1. In a baling press having a bale chamber a plunger, a pitman, a power mechanism for actuating said pitman with its plunger, the combination of a base connecting the bale chamber with the power mechanism, a rotatable crosshead having rollers in its ends mounted on said base; a stationary roller attached to said base opposite said crosshead and a pitman having an inclined surface adapted to work between said crosshead and said stationary roller substantially as set forth.

2. In a baling press having a bale chamber, a plunger, a pitman, a power mechanism for operating said pitman with its plunger, the combination of a base connecting the bale chamber with the power mechanism, a rotatable crosshead having rollers in the ends mounted on said base, a stationary roller attached to said base opposite said crosshead and a pitman having an inclined surface adapted to work between said crosshead and said stationary roller; an extension on end of pitman adapted to work against said stationary roller and act as a guide after the pitman end has passed beyond the roller.

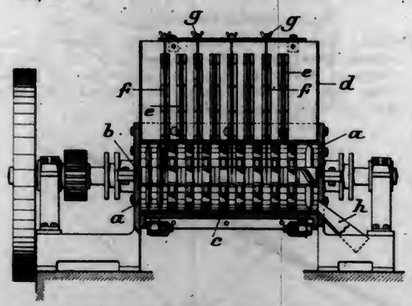
3. In a baling press having a bale chamber, a base connecting said bale chamber and power mechanism, a rotatable crosshead mounted on said base—a sweep for operating said crosshead, all mounted on suitable wheels and axles for moving from place to place, the combination of the rotatable crosshead having a suitable sweep fastened to it and an axle having detachable braces arranged to attach to said sweep so it can be used as a tongue.

4. In a baling press having a bale chamber, a pitman with plunger attached thereto and a base connected to said chamber, the combination of a plate secured to pitman and a spring actuated convex disk attached to base substantially as set forth and for the purpose mentioned.

5. In a baling press having a bale chamber, a pitman with plunger attached thereto and a base connected to said chamber, the combination of a plate secured to pitman and a spring actuated convex disk attached to base, a coil spring above said disk and a bolt passing through said disk and said spring and a regulating nut on said bolt substantially as set forth and for the purpose mentioned.

[Claim 6 not printed in the Gazette.]

958,901. MACHINE FOR KNEADING AND GRINDING PAPER-MAKING MATERIALS. CASIMIR WURSTER, Berlin, Germany. Filed Oct. 4, 1909. Serial No. 520,892.



1. A kneading or grinding machine comprising an open trough, one or two shafts adapted to rotate in said trough and provided with kneading or grinding elements, an upward extension on said trough and partition gates or sluices in said extension reaching downward between said kneading or grinding elements and means for rotating said shafts.

2. A kneading or grinding machine comprising an open kneading trough, an outlet at one end of said trough, one or two shafts adapted to rotate in the trough and provided with kneading or grinding elements, an upward extension on said trough and partition gates adjustable in vertical guiding slots in said extension, said gates reaching downward between said kneading or grinding elements and means for rotating said shafts.

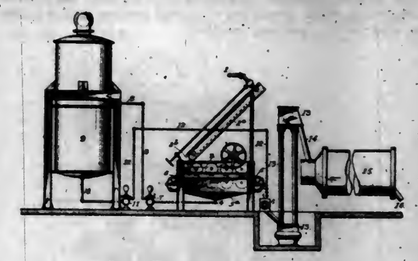
3. A kneading or grinding machine comprising an open kneading trough, an outlet at one end of said trough, one or two shafts adapted to rotate in the trough and provided with kneading or grinding elements, an upward extension on said trough, partition gates vertically adjustable in two or more adjacent vertical slots in said extension and reaching downward between said kneading or grinding elements and means for rotating said shafts.

4. A kneading or grinding machine comprising a trough, one or more shafts adapted to rotate in said trough and provided with kneading or grinding elements, an upward extension on said trough, a vertically adjustable partition gate in said extension reaching downwardly between the kneading or grinding elements, means for adjusting said gate laterally, and means for driving said shafts.

5. A kneading or grinding machine comprising a trough, a pair of shafts adapted to rotate in said trough and provided with overlapping kneading or grinding elements, an upward extension on said trough, a partition in said trough partially surrounding one of said shafts adjacent to the kneading or grinding element on the other shaft, an adjustable gate in said extension coöperating with said partition, and means for driving said shafts.

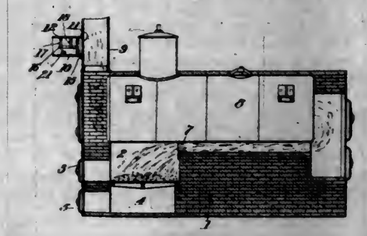
958,902. PROCESS OF DESICCATING DISTILLERY-SLOP. EDWARD H. BRINKMANN and HUGO O. WENTE, Cincinnati, Ohio. Filed May 10, 1909. Serial No. 495,163.

The process of manufacturing dry feed from distillery slop, consisting in separating the thin from the thick portions by continuous filtering; concentrating the stream of the thin portion into a syrup by continuous evaporation; mixing the continuous stream of syrup with the



thick portions of solid material continuously emerging from the filter press; and drying the mixture.

958,903. FURNACE. JOHN M. BROOKS, Baltimore, Md., assignor of one-half to Edwin W. Adams, Baltimore, Md. Filed Jan. 17, 1910. Serial No. 538,485.



1. The combination of a fuel chamber, a stack connected therewith, a door for closing said chamber, a damper connected with said stack, said damper including means operable directly by suction due to the vacuum in the stack, whereby the same is open when the door is opened and whereby said damper is closed when the door is closed.

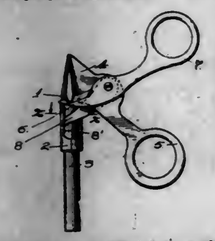
2. The combination with a fuel chamber, a stack connected therewith, a door for closing said chamber, a damper connected with said stack, said damper including a disk, a diaphragm having an opening against which the disk seats, means for supporting said disk, whereby said disk is normally held closed by suction due to the vacuum in the stack, when said door is closed, and means for overcoming the suction, and opening the damper when the vacuum in the stack is decreased by the opening of the door.

3. The combination of a fuel chamber, a stack connected therewith, a door for closing said fuel chamber, a damper connected to said stack, said damper including a disk, a diaphragm having an opening against which said disk seats, a bar connected to said disk, parallel links for supporting said bar, whereby said disk may be moved toward and from said diaphragm, one of said links having a deflected extended portion and a weight adjustably connected to said extended portion.

958,904. PENCIL-SHARPENER. FREDERICK BROSTROM, Chico, Cal. Filed Jan. 12, 1909. Serial No. 471,876.

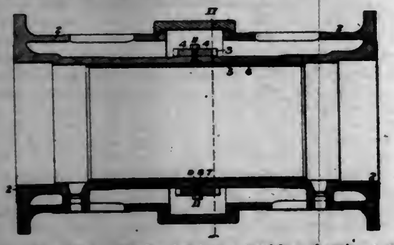
1. A pencil sharpener comprising an elongated substantially straight tubular member split longitudinally to constitute an adjustable guide for a pencil to be sharpened, said tubular member terminating in a tapered end, the parts including the tubular member and tapered terminal constituting a holder for the pencil, and said holder having a side cut away for the exposure of the pencil end, a sta-

tionary finger piece integral with an extension of said holder, a movable finger piece pivoted to said extension, and a cutter member carried by the movable finger piece adapted to work across the cut away portion of the holder as and for the purpose specified.



2. A pencil sharpener comprising an elongated substantially straight tubular member split longitudinally to constitute an adjustable guide for a pencil to be sharpened, said tubular member terminating in a tapered end, the parts including the tubular member and tapered terminal constituting a holder for the pencil, and said holder having a side cut away for the exposure of the pencil end, a stationary finger piece integral with an extension of said holder, a movable finger piece pivoted to said extension, a cutter member carried by the movable finger piece adapted to work across the cut away portion of the holder, and a keeper finger comprising a substantially flat spring member secured to said extension and projecting transversely across the cut away portion of the holder to hold the pencil in contact with the opposite solid wall of the holder as and for the purpose specified.

958,905. ENGINE-CYLINDER. GEORGE J. BRYEN, Duquesne, Pa. Filed Dec. 31, 1908. Serial No. 470,244.



1. An engine cylinder having a bushing therein, a peripheral groove in the outer surface of the bushing, a groove in the inner surface of the cylinder wall registering with the peripheral groove in the bushing, and an annular ring in said grooves for holding the bushing in place in the cylinder; substantially as described.

2. An engine cylinder having a bushing removably mounted therein, a peripheral groove in the outer surface of the bushing, a groove in the inner surface of the cylinder wall registering with the peripheral groove in the bushing, an annular ring in said grooves for holding the bushing in place in the cylinder, means for holding the ring in the groove in said bushing and means for withdrawing the ring from the groove in said bushing; substantially as described.

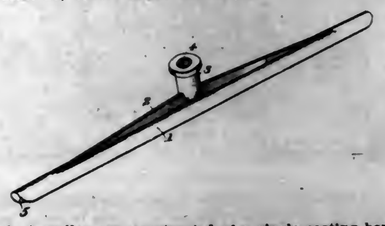
3. An engine cylinder having a removable bushing therein, a peripheral groove in the outer surface of the bushing, a groove in the inner surface of the cylinder wall registering with the peripheral groove in the bushing, means for forcing the ring into engagement with the walls of the groove in said bushing, and means for withdrawing and holding the ring out of engagement with the walls of the groove in said bushing; substantially as described.

4. An engine cylinder having a bushing therein, a peripheral groove in the outer surface of the bushing, a groove in the inner surface of the cylinder wall registering with the peripheral groove in the bushing, an annular ring in said grooves for holding the bushing in place in the cylinder, and means for withdrawing the ring from the groove in said bushing; substantially as described.

5. An engine cylinder having a bushing removably mounted therein, a peripheral groove in the outer surface of the bushing, a groove in the inner surface of the cylinder wall registering with the peripheral groove in the bushing, an annular ring in said groove for holding the bushing in place in the cylinder, means for holding the ring in the grooves in the bushing and cylinder, and means for withdrawing the ring from one of said grooves into the other of said grooves; substantially as described.

[Claim 6 not printed in the Gazette.]

958,906. EAR FOR TROLLEY-WIRES. JAMES H. CALLENDER, Brooklyn, N. Y., assignor to F. H. Lovell & Company, Arlington, N. J., a Corporation of Maine. Filed June 14, 1907, Serial No. 378,949. Renewed Mar. 25, 1910. Serial No. 551,585.



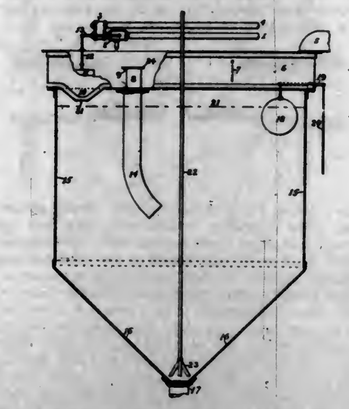
1. A trolley ear, constructed of a single casting having a spine, a flange projecting substantially equi-distant throughout its length upon opposite sides of said spine, and a boss projecting from said flange and spine, the said flange bent downwardly upon opposite sides of said spine to form a groove of a depth greater than the diameter of the wire to be held therein, whereby the said flange may be bent about the wire to completely envelop the same throughout the length of the ear.

2. A trolley ear, constructed of a cast blank having a central spine, a flange projecting substantially equi-distant throughout its length upon opposite sides of said spine and having rounded ends, and a boss projecting from said flange and spine, the said flange bent downwardly upon opposite sides of the spine to form a groove of a depth of greater diameter than the diameter of the wire to be applied thereto, the edges of said flange adapted to be bent about the wire to completely envelop the same throughout the length of the ear, and the rounded ends of said flange constituting beveled portions extending toward the contact surface, and the said boss screwthreaded to receive a support.

958,907. DEFECATION OF SACCHARINE LIQUIDS. FRANK E. COOMBS, Natick, Mass. Filed Jan. 2, 1909. Serial No. 470,405.

1. A defecating apparatus for sugar juices comprising a conduit, means for delivering a current of sugar juices to one end of said conduit, a flow equalizing device in the conduit, a discharge member therebeyond provided with a vertically slotted exit orifice, and a similarly slotted sleeve or collar movable with regard to said discharge member, means for delivering milk of lime into said sugar juice, controlled by the depth of liquid in said conduit between said equalizing device and said discharge member, and a receptacle arranged to maintain in active agitation and admixture a considerable and homogeneous body of said sugar juice and lime, into which said receptacle the said conduit continuously delivers the said sugar juice and lime, substantially as hereinbefore described.

2. A defecating apparatus comprising a conduit, means of delivering sugar juice into said conduit, a flow-equalizing device in said conduit, a discharge member for the said conduit provided with a vertically slotted orifice in said member and a slotted sleeve or collar movable with regard to said member, means for supplying milk of lime to liquid passing into said conduit in proportion to the quantity of juice passing into and from said conduit, a well, or float receptacle in connection with the bottom of said conduit, and a drainage aperture in the bottom of said well, covered by a valve actuated by the motion of the float and serving to drain the said well at times when said liquid ceases to flow into the said conduit.



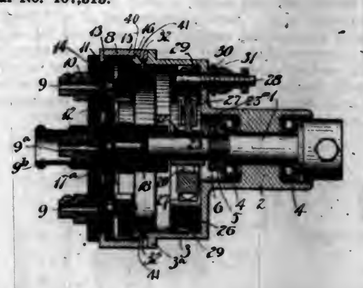
3. In a defecating apparatus as described, means for a continuous and float-controlled supply of milk of lime to a body of sugar liquor, said means comprising a valve body through which a current of said milk of lime may be made to circulate, a removable cover plate closing a port giving access to the interior of said body, a removable valve tube fastened to the lower part of said body, projecting upwardly into said body and continued downwardly and externally of the body, said tube having a chamber formed by widening the upper part of its bore, and said chamber opening at its upper part by a horizontal, rectangular slot in which moves vertically a triangularly notched guide attached to a pivoted cover member, said cover member firmly fixed to a spindle to which rotary motion is imparted by lever and rod members connected with a float rising and falling with the level of the sugar liquor contained in a conduit hereinbefore described, and by the position of the notch relatively to the slot in the valve tube forming a variable, rectangular aperture for the outflow of the milk of lime, the area of said aperture varying in direct ratio to the motion of the said float member and thus also to the quantity of sugar liquor contained at any time between the members of the said juice conduit.

4. In a defecating apparatus for sugar juices as described, the combination of a receptacle to contain a considerable body of mingled sugar juices and milk of lime, means for continuously adding said commingled juice and lime thereto, with means for continuous agitation and thorough mixing of said body with the further portions of the same materials added continuously thereto, means for continuously withdrawing treated liquid from the receptacle, and means for maintaining a thoroughly mingled and uniform volume of said body in said receptacle during the continued simultaneous addition and withdrawal of the said materials.

5. A defecating apparatus comprising a source of sugar juices, means for converting such juices into a flowing current of averaged depth, means for maintaining milk of lime of constant composition and means for adding such milk of lime directly to said current in amounts proportional to the temporary depth of liquid therein.

[Claims 6 to 14 not printed in the Gazette.]

958,908. TIMER AND DISTRIBUTER. CHARLES CUNO, Meriden, Conn., assignor to The Connecticut Telephone & Electric Company, Incorporated, Meriden, Conn., a Corporation of Connecticut. Filed Dec. 21, 1907. Serial No. 407,515.



1. In a timer and distributer, a shaft, a case having a bearing thereon, timer segments and distributer segments carried by said case, a timer contact and distributer arm carried by said shaft, means for insulating said sets of segments from each other, a cover for said case, secondary terminals carried by but insulated from said cover, said terminals making operative connection with said distributer segments.

2. In a timer and distributer, a shaft, a case having a bearing thereon, a timer contact carried by said shaft, and timer segments carried by said case, a distributer arm carried by said shaft, and distributer segments carried by said case, a cover for said case detachably connected thereto, the latter having relative rotary movement independent of the cover, secondary contacts carried by said cover and making a sliding connection with said distributer segments to permit the case to be partially rotated relatively to said cover or vice versa, without interrupting the electrical connection of the secondary terminal with said segments.

3. In a timer and distributer, a case, a cover, timer mechanism, distributer mechanism, the timer mechanism being carried by the case, the distributer mechanism by the cover, a shaft entering said case, bearings between said shaft and case, and means to permit a rotary movement of the case relatively to the cover and to said shaft.

4. In a device of the character described, a shaft, a contact device carried thereby, including a hub fitted to said shaft, a spline for preventing the independent rotation of said hub on said shaft, and a flat contact spring within the hub carried thereby and bearing against said spline to hold it against said shaft.

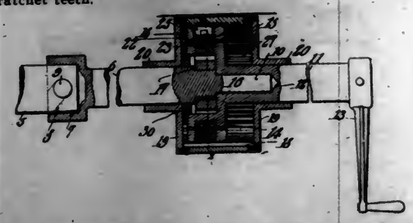
5. In a timer and distributer, a case, a carrier, timer mechanism, distributer mechanism, the timer mechanism being carried by the case, the distributer mechanism by the carrier, a shaft entering said case, bearings between said shaft and case, and means to permit a rotary movement of the case relatively to the carrier and to said shaft.

958,909. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. JOHN B. DICKEY, Columbus, Ind., assignor of one-eighth to William W. Denison and one-eighth to Wallace B. Denison, Columbus, Ind. Filed Dec. 9, 1909. Serial No. 532,218.

1. In a starting device for internal combustion engines, a starting shaft, means for coupling the same to the engine crank shaft, a ratchet disk carried by the starting shaft, a hand crank carrying a head having a recess to receive the ratchet disk, a lever carried by the head, a stationary cylindrical member encircling the head and having its inner surface formed with ratchet teeth, and dogs carried by the aforesaid lever, one of said dogs engaging the teeth of the ratchet disk, and the other dog the teeth of the stationary member.

2. In a starting device for internal combustion engines,

the combination with a starting shaft, means for coupling the same to the engine crank shaft, a ratchet disk carried by the starting shaft, a hand crank carrying a head having a recess and a peripheral groove, and an opening from the groove into the recess, a lever pivotally mounted in the groove, a dog carried at one end of said lever and passing through the opening into the recess into engagement with the teeth of the ratchet disk, a stationary cylindrical member encircling the head and having its interior surface formed with ratchet teeth, and a dog carried by the other end of the lever, and engaging the last-mentioned ratchet teeth.



3. In a starting device for internal combustion engines, a starting shaft, means for coupling the same to the engine crank shaft, a ratchet disk carried by the starting shaft, a hand crank, a shaft to which said hand crank is connected, the last-mentioned shaft having an axial opening in which one end of the starting shaft is mounted, a head on the shaft of the hand crank, said head having a recess to receive the ratchet disk, means for coupling the head to the ratchet disk, and means for automatically releasing said parts when the motion of the starting shaft is reversed.

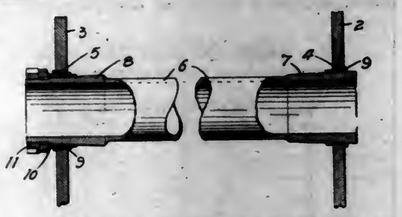
4. In a starting device for internal combustion engines, a starting shaft, means for coupling the same to the engine crank shaft, a ratchet disk carried by the starting shaft, a shaft having an axial opening in which one end of the starting shaft is supported, and carrying a hand crank, and provided with a head having a recess to receive the aforesaid ratchet disk, a stationary cylindrical member having internal ratchet teeth, heads secured to the ends of said member, said heads having hub extensions supporting the starting shaft and the shaft of the hand crank, means for coupling the aforesaid head to the ratchet disk, and means engageable with the aforesaid internal ratchet teeth for releasing the head from the ratchet disk when the motion of the starting shaft is reversed.

5. In a starting device for internal combustion engines, a starting shaft, means for coupling the shaft to the engine crank shaft, a ratchet disk carried by the starting shaft, a hand crank, a shaft to which the hand crank is connected, the last-mentioned shaft having an axial opening in which one end of the starting shaft is mounted, a head on the shaft of the hand crank, and having a recess to receive the ratchet disk, said head having a peripheral groove, and an opening extending from said groove into the recess, a stationary cylindrical member encircling the head, and having internal ratchet teeth, a lever pivotally mounted intermediate its ends in the aforesaid groove, a dog carried by one end of said lever, and extending through the opening into engagement with the ratchet disk, and a dog carried by the other end of the lever, and engaging the aforesaid internal ratchet teeth.

[Claim 6 not printed in the Gazette.]

958,910. DETACHABLE BOILER-FLUE. JULIAN F. DRAKE, Tracy, Minn., assignor of one-half to Joseph Kemna, Minneapolis, Minn. Filed Jan. 24, 1908. Serial No. 412,366.

1. In a boiler, the combination, with the flue sheets having flue seats extending therethrough from one side to the other, said seats being tapered from the outer toward the inner surfaces of said sheets, of a flue having tapered ends, the taper at the fire box end of said flue being toward the middle of the flue and the taper of the opposite end of the flue being toward its outer end, whereby a tool may be applied to drive the flue through the flue sheets into the fire box, packing rings interposed between the ends of the flue and the seats thereof, a tapered sleeve fitting between the flue and its packing ring at the end thereof opposite from the fire box, and means for locking said sleeve against premature outward movement, said means including a groove having a diagonally arranged cam edge and a pin coöperating with said groove, substantially as described.



2. In a boiler, the combination, with the flue sheets having flue seats extending therethrough from one side to the other, said seats being tapered from the outer toward the inner surfaces of said sheets, a flue provided between said sheets, tapered sections mounted on the ends of said flue, said sections being tapered in the same direction and fitting within the openings in said sheets, a sleeve tapered from its outer toward its inner end fitting between one of said sections and its flue seat and adapted when tightened to form a tight joint between the flue and seat, said section having a groove in its outer surface the inner portion of said groove having a diagonally arranged cam edge and said sleeve having an inwardly projecting pin adapted to enter said groove and engage said edge and draw said sleeve snugly to its seat and prevent accidental dislodgment of the same.

3. In a boiler, the combination, with the flue sheets having flue seats extending therethrough from one side to the other, said seats being tapered from the outer toward the inner surfaces of said sheets, of a flue having tapered ends, the taper at the fire box end of said flue being toward the middle of the flue and the taper of the opposite end of said flue being toward its outer end, whereby a tool may be applied to drive the flue through the flue sheets into the fire box, packing rings interposed between the ends of said flue and the tapered seats thereof, a tapered sleeve fitting between said flue and its packing ring at the end thereof opposite from the fire box and said end being threaded, and a lock nut fitting thereon and contacting with the outer end of said tapered sleeve, whereby said sleeve will be securely locked against premature endwise movement.

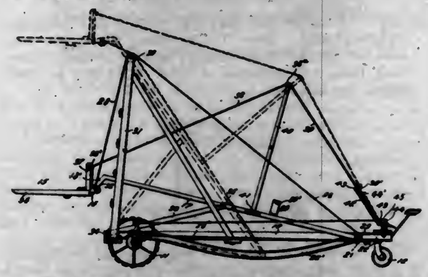
958,911. HAY-STACKER. JOHN DURKEE, Clay Center, Nebr. Filed Aug. 5, 1909. Serial No. 511,835.

1. The hereindescribed hay stacker comprising, in combination, a frame including a pair of parallel channel beams, a lifting frame, a fork connected to one end of the lifting frame, the other end of the lifting frame being guided for sliding movement along and within the channels of said channel beams, and hoisting devices associated with said lifting frame.

2. The hereindescribed hay stacker comprising, in combination, a frame including a pair of parallel channel beams, a lifting frame guided at one end for sliding movement along and within the channels of said channel beams, a fork connected to the other end of said lifting frame, a hoisting drum, a gib extending upwardly rigidly from the first mentioned frame, a hoisting rope connected to the fork end of the lifting frame and extending thence over the upper end of said gib, thence around the guided end of the lifting frame, and thence to said hoisting drum, and means to control the operation of the drum, substantially as set forth.

3. The hereindescribed hay stacker comparing, in combination, a main frame, a power shaft journaled across

one end of said frame, supporting wheels secured to said shaft, a hoisting drum loosely mounted on said shaft, means connected and rotatable with the shaft to cause rotation of the drum in one direction, brake means to control the rotation of the drum in the opposite direction, a lifting frame slidably connected to the main frame at one end, a fork pivotally connected to the other end of the lifting frame, a hoisting rope connected at one end to the lifting frame near the fork and at its other end to said drum, a standard pivoted to the lifting frame, guy members connected to the standard and respectively to the fork and the opposite end of the main frame, and means operable from one end of the frame to control the hoisting and tripping of said fork.



4. The hereindescribed hay stacker comprising, in combination, a main frame, a lifting frame movably connected to the main frame, a fork pivoted to said lifting frame, means to lift said lifting frame, and means to maintain the fork in a substantially horizontal position throughout its lifting movement, said means comprising a standard pivoted to the lifting frame, and guy means connected between the fork and the upper end of the standard and other guy means connected between the upper end of the standard and the rear end of the main frame, substantially as set forth.

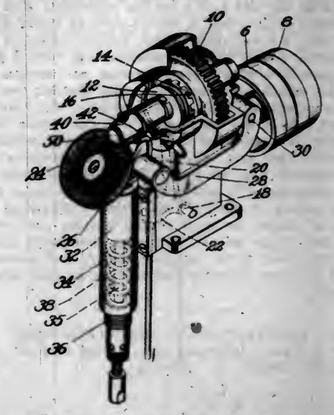
958,912. NITRO-ORTHO-OXY-AZO COLORS AND PROCESS OF MAKING SAME. KARL ELBEL, Biebrich, Germany, assignor to The Firm of Kalle & Company, Aktiengesellschaft, Biebrich, Germany. Filed Jan. 4, 1910. Serial No. 536,429.

1. As a new process the manufacture of pure nitro-ortho-oxy-azo coloring matters by precipitating from the reaction mass obtained by the nitration of 1-diazo-2-oxy-naphthalene-sulfonic acids, by means of soluble zinc salts, pure nitro-1-diazo-2-oxy-naphthalene-sulfonic acid in the form of a zinc salt, and combining such salt with a chromogen to form a soluble zinc salt, of the corresponding coloring matters.

2. As a new product the coloring matter obtained by dissolving the crude nitro-1-diazo-2-oxy-naphthalene-sulfonic acid in water and alkali, precipitating a zinc compound by means of zinc-sulfate and common salt, combining this zinc compound with alpha-naphthol and precipitating the dyestuff as zinc-alkali compound by means of an acid being a black powder soluble in water with violet-red color, changing on addition of alkali into a more bluish-violet, on addition of hydrochloric acid into brown-red, soluble in sulfuric acid with bright greenish-blue color, yielding when dyed on wool in an acid bath and subsequently treated with a bichromate, bluish grey to black shades fast to potting, and which does not stain white cotton in an acid dye bath.

958,913. IMITATION-STITCH MACHINE. LOUIS W. G. FLYNT, Rochester, N. Y., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 28, 1908. Serial No. 450,699.

1. A machine of the class described, having in combination, a tool formed to operate upon the upper surface of the projecting edge of the sole of a shoe, a stationary casing about the tool, and an inner shell removably fitted in said casing and having a thin wall arranged between the upper of the shoe and said tool.

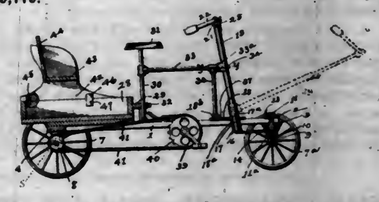


2. A machine of the class described, having in combination, a tool formed to operate upon the upper surface of the projecting edge of the sole of the shoe, a casing over said tool with its outer end back of the front face of the tool and a member of thin material arranged between the upper of the shoe and said tool and removably secured in said casing.

3. A machine of the class described, having in combination, a tool formed to operate upon the upper surface of the projecting edge of the sole of a shoe, a stationary casing removably sustained about the tool and an inner shell removably fitted in said casing and having a thin wall arranged between the upper of the shoe and said impression tool.

4. A machine of the class described, having in combination, a tubular member, a shaft arranged to rotate therein and provided at its end with a rotary tool formed to operate upon the upper surface of the projecting edge of the sole of a shoe, a tubular casing arranged on said member with its outer end back of the front face of the tool, and a member of thin material arranged between the upper of the shoe and said tool and removably sustained by said casing.

958,914. CHILD'S VEHICLE. COLONEL E. FOURMAN, Columbus, Ohio. Filed Sept. 27, 1909. Serial No. 519,779.



1. In a vehicle, the combination with the framework, axles and ground wheels, of a jointedly connected steering frame connected with the front axle, a steering post connected with said steering frame, said steering post comprising upper and lower sections pivotally connected one with the other, and means for detachably locking the upper steering post section in connection with the vehicle framework.

2. In a vehicle, the combination with a horisontal reach frame, rear and front axles, ground wheels carried by said axle, a sprocket wheel on the rear axle, a sprocket wheel journaled from the reach frame, a crank shaft carried by

said sprocket wheel, and a chain connecting said sprocket wheels, of a yoke bar in the ends of which the front axle is journaled, a bolt having a pivotal connection with said yoke bar at one end and a pivotal connection with said reach frame at the other, a jointed steering frame carried by said bolt, a lower steering post section connected with said steering frame, an upper steering post section pivotally connected with said lower steering post section, and means for detachably locking the upper steering post section into engagement with the framework of the vehicle.

3. In a vehicle, the combination with the vehicle frame, front and rear axles and ground wheels, and means for rotating the rear axle, of a steering frame having a movable connection with the front axle, a lower steering post section connected with said steering frame, an upper steering post section of tubular form pivotally connected with said lower section, an inner sliding steering post section within said upper section, means for detachably locking the steering post in an upright position, and means for latching the inner steering post member against outward movement.

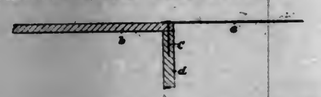
958,915. HOPPER-CLOSET GRAPPLING-HOOK. EDWARD C. FRAW, Jefferson, Ohio. Filed May 29, 1909. Serial No. 499,127.



1. A device of the kind described comprising a handle, a coupling member rigidly secured to the handle, a plurality of wires bent upon themselves and having their bow portions secured in said coupling member and their free ends bent inwardly to form hooks, a ring sliding on said wires, an operating handle for moving said ring, and a guide plate carried by the first mentioned handle and through which the operating handle passes.

2. In a grappling hook, a holding handle formed of two sections adapted to fold upon each other, spring wires carried by said holding handle, the free ends of said wires normally diverging, a ring slidable on said wires, an operating handle, formed of two sections foldable upon themselves, said handle being connected to the ring, and means carried by the holding handle for guiding one section of the operating handle, as and for the purpose set forth.

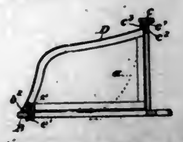
958,916. BOX-FASTENER. JOHN P. FRITZ, Paterson, N. J. Filed Dec. 15, 1909. Serial No. 533,282.



1. The combination, with the body of the box, its cover, and a withdrawable cover securing device penetrating the cover and extending into the body of the box, of a flexible tab formed of sheet material having one end penetrated by the securing device and being bent sharply in proximity to the securing device, said tab affording means for withdrawing the securing device from the body of the box, substantially as described.

2. The combination, with the body of the box, its cover, and a withdrawable headed cover-securing device penetrating the cover and extending into the body of the box, of a flexible tab formed of stiff sheet material having one end penetrated by the securing device between the head of the latter and the cover of the box and being bent sharply in proximity to the securing device, said tab affording means for withdrawing the securing device from the body of the box, substantially as described.

958,917. FASTENING DEVICE FOR VEHICLE-BODY STRUCTURES. EMIL GRUENFELDT, Cleveland, Ohio, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 12, 1909. Serial No. 495,541.



1. In a device of the class described, the combination of a main body member provided with abutment means, a battery cover pivotally mounted midway of its ends upon said member, and arranged to engage said abutment member, and means at one end for effecting such engagement.

2. In a device of the class described, the combination of a main body member, a battery cover pivotally mounted midway of its ends upon said member, having its pivotal axis transverse with respect thereto, and means for fixedly holding both ends of the cover to said member.

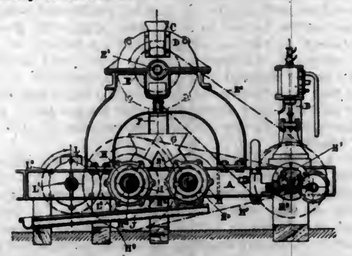
3. In a device of the class described, the combination of a main body-member provided with transverse abutment means; a battery-cover pivotally mounted intermediately of its ends upon said member and having its pivotal axis transverse with relation thereto, the inner end of said cover being located beneath said abutment means; and means for securing the outer end of said cover to said frame.

4. In a device of the class described, the combination of a main body-member; provided with abutment means; a battery-cover pivotally mounted intermediately of its ends upon said member, and having one end adjacent to such abutment means; means for drawing the other end of said cover and said frame toward and fixing them to each other whereby the engagement of the cover with said abutment means is effected.

5. In a device of the class described, the combination of a main body-member provided with transverse abutment means; a battery-cover pivotally and removably mounted upon said member and having its pivotal axis transverse with respect to the latter; the one end of said cover being located beneath said abutment means; and means for drawing the outer end of said cover and said frame toward and fixing same to each other, whereby said one end of the cover may be caused to engage the said abutment means.

958,918. APPARATUS FOR EXTRACTING RUBBER. LÉON GUIGUET, Lyon-Villeurbanne, France, assignor to La Société pour l'Exploitation du Caoutchouc au Congo, Lyon-Villeurbanne, France. Filed May 1, 1909. Serial No. 493,336.

1. In apparatus for the purpose specified the combination of a crushing device in which the raw material is reduced to a paste, an agglomerator in communication with said crusher in which the gum is separated from the inclosing material, means for supply of a current of liquid to said agglomerator for washing away foreign matter, means for supply of heat thereto for agglomerating the gum, an extracting and washing drum in communication with the gum discharge of the agglomerator and a further agglomerator in communication with said drum substantially as described.



2. In apparatus for the purpose specified the combination of a crushing device in which the raw material is reduced to a paste, an agglomerator in communication with said crusher and comprising relatively rotatable conical members and co-acting interior and exterior peripheral teeth on said members means for supply of a current of liquid to said agglomerator, means for supply of heat thereto, an extracting and washing drum in communication with the gum discharge of the agglomerator and a further agglomerator in communication with said drum substantially as described.

3. In apparatus for the purpose specified the combination of a crushing device in which the raw material is reduced to a paste, a plurality of agglomerators in communication with said crusher and each comprising relatively rotatable conical members and helicoidal interior and exterior peripheral teeth thereon between which the material is passed, means for supply of a current of liquid to said agglomerators means for supply of heat thereto, an extracting and washing drum, a trough communicating with the discharge of the agglomerators and said drum, a final agglomerator in communication with said drum and means for rotating the rotatable members of the agglomerators and the drum aforesaid, substantially as described.

4. In apparatus for the purpose specified, an agglomerator comprising a rotatable truncated conical core, having on its exterior periphery helicoidal teeth; a fixed sleeve surrounding said core having on its interior surface helicoidal teeth, the helices of which are of opposite direction to those of the core, the core and the sleeve being so arranged that an annular space remains between the teeth for the passage of the matter to be treated; means for introducing this said matter into the annular space at its greatest diameter and means for collecting said matter issuing through the smallest diameter of the annular space; means for passing a stream of water through said space and means for applying heat exteriorly to the sleeve.

958,919. MEASURING-PUMP. WILLIAM B. HAINES, Sunbury, Pa., assignor to Haines Oil Measuring Pump Company, Harrisburg, Pa. Filed June 9, 1908. Serial No. 437,568.

1. In a liquid measuring device, the combination with the cylinder, the piston, a rack bar connected therewith, said cylinder having an extension closed at its upper end and inclosing said rack bar, a pinion for operating the rack bar, and a shaft for said pinion extending to the exterior of the apparatus, said shaft having a threaded portion thereon outside of the apparatus, a traveling nut on said shaft, a pointer carried thereby, and a stationary part adjacent to the said pointer provided with indications, substantially as described.

2. In a liquid measuring device, the combination with the cylinder, the piston, a rack bar connected therewith, said cylinder having an extension closed at its upper end and inclosing said rack bar, a pinion for operating the rack bar, and a shaft for said pinion extending to the exterior of the apparatus, said shaft having a threaded portion thereon outside of the apparatus, a traveling nut on said threaded portion, a stationary bracket provided with a slot parallel to said shaft, a stud on said nut engaging said slot, said bracket and nut being provided the one with indications and the other with a pointer adapted to coöperate therewith, substantially as described.



3. In a liquid measuring device, the combination with the measuring cylinder provided at its upper end with a discharge spout, means for hermetically sealing said cylinder and said spout, a piston in said cylinder provided with a liquid passage therethrough, a check valve controlling said passage, means for reciprocating the piston and having an operating part extending to the outside of the cylinder, an indicating device for showing the position of the piston vertically in the cylinder, and a sight gage located in horizontal alinement with the communication between the spout and said cylinder.

4. In a measuring device, the combination with the cylinder and piston, a rack bar connected with the piston, a pinion for operating said rack bar, a shaft for said pinion extending outside of the apparatus, and provided with operating means, a closed extension above the cylinder for accommodating the upward movement of the rack bar, a device for indicating the position of the piston in the cylinder, operatively connected with the said shaft, a registering device operatively connected with said shaft, a delivery spout communicating with the cylinder, and a valve for closing said spout, substantially as described.

958,920. FUEL. ARNOLD B. HILL, Chicago, Ill. Filed Oct. 12, 1909. Serial No. 522,252.

1. The herein described fuel consisting of finely divided coal, 1 ton; maix oil obtained from crude petroleum by distilling off the light ends, 2½ gallons; black rosin, 12 pounds, and lime, substantially as and for the purposes set forth.

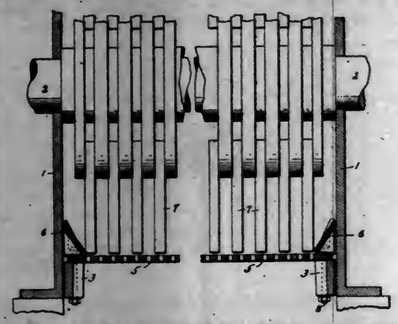
2. The herein described binder for coal dust consisting of maix oil obtained from crude petroleum by distilling off the light ends 2½ gallons, black rosin 12 pounds, and lime water, 2 pounds, substantially as described.

958,921. CRUSHING OR PULVERIZING MACHINE. JOSEPH L. HILLER, Mattapoisett, Mass. Filed Aug. 28, 1909. Serial No. 515,109.

1. In a grinding or pulverizing machine, the combination with grinders and an adjustable cage or grinding surface coöperating therewith, of means secured to, movable with, and arranged at the longitudinal edges of said grinding surface or cage to direct material into the field of coöperation of the grinding elements.

2. In a grinding or pulverizing machine, the combination with grinders and an adjustable cage or grinding sur-

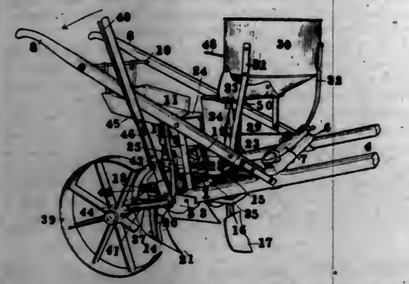
face coöperating therewith, of sheds secured to, movable with, and arranged at the longitudinal edges of said grinding surface or cage to direct material into the field of coöperation of the grinding elements.



3. In a grinding or pulverizing machine, the combination with grinders, and an adjustable cage or grinding surface coöperating therewith, of sheds secured to, movable with, and arranged at the longitudinal edges of the grinding surface or cage and having a slope greater than the angle of repose of the material introduced into the machine for directing material into the field of coöperation of the grinding elements.

4. In a grinding or pulverizing machine the combination with rotary grinders, of an adjustable cage provided with raised longitudinal sides having sloping surfaces.

958,922. POTATO-PLANTER. CURTIS HINMAN, Akron, Ohio. Filed July 26, 1909. Serial No. 509,608.



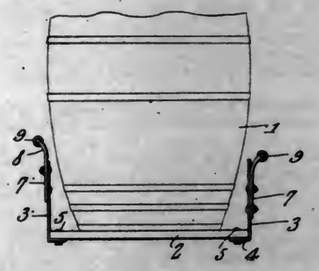
1. In a combined potato-planter and fertilizer distributer, the combination of a frame provided with means to permit the device to be drawn by an animal, a pair of rearwardly-extending operating handles suitably-supported by said frame and constituting means for directing the course of said device when in use, a seat for an operator carried by said operating handles, a hopper for seed potatoes arranged in advance of said seat and supported by said frame, a chute adapted to conduct potatoes from said hopper, a plow for producing a furrow in advance of said chute, a hopper for fertilizer arranged rearwardly of said chute and adapted to deliver fertilizer to said furrow, a plow for closing said furrow, a non-rotating crank-shaped axle carried by said frame, ground wheels mounted on the outer ends thereof, a lever secured to the offset portion of said axle for shifting the position of the same and thereby raising and lowering said frame and means for locking said axle in a selected position.

2. In a combined potato-planter and fertilizer distributer, the combination of a frame, a non-rotating crank-shaped axle carried by said frame, ground wheels mounted on the outer end of the latter, a lever for shifting the position of said axle for raising and lowering said frame, a hopper for seed potatoes mounted on said frame, an apron sustained by said hopper below the outlet thereof and inclined slightly rearwardly to receive the flow of said potatoes from said hopper, a chute to receive said potatoes from said apron carried by said frame, a plow for producing a furrow in advance of said chute, a hopper for fertilizer arranged rearwardly of said chute and provided with an outlet directed to discharge the contents of said hopper into said furrow, an intermittingly-operated agitator for said fertilizer arranged in said hopper and a plow for closing said furrow disposed rearwardly of said fertilizer hopper.

3. In a combined potato-planter and fertilizer distributer, the combination of a frame provided with draft mechanism, an axle carried by said frame, ground wheels mounted on said axle, a plow for producing a furrow mounted on said frame, mechanism for feeding potatoes to said furrow, a hopper arranged to deposit fertilizer in said furrow, an intermittingly-operated agitator in said fertilizer hopper for insuring the feed of said fertilizer to said furrow and a shovel to close said furrow.

4. A combined potato planter and fertilizer distributer comprising a frame embodying a whiffletree oscillated by the movement of an animal in drawing the device, an axle carried by said frame, wheels mounted on said axle, a plow for producing a furrow mounted on said frame, mechanism for feeding potatoes to said furrow, a hopper for fertilizer mounted on said frame arranged to deposit fertilizer in said furrow, an agitator in said hopper connected with said whiffletree whereby the movement thereof produces intermittent agitation of the fertilizer in said hopper, and shovels for closing said furrow.

958,923. DEVICE FOR CARRYING BARRELS. SOREN C. JENSEN, Kingman, Me. Filed Nov. 13, 1909. Serial No. 527,948.



1. A tool of the class described consisting of a bar, and an adjustable handle at each end of the bar, each handle comprising an arm rigidly secured to the bar, and a shank adjustably mounted on said arm having a curved extremity terminating in a gripping portion.

2. A tool of the class described consisting of a bar, and a pair of adjustable handles extending laterally from the bar; each handle consisting of an arm, and a shank adjustably mounted on said arm, said shank having an outwardly curved extremity terminating in a transversely disposed grip portion.

3. A tool of the class described consisting of a bar, and a pair of adjustable handles upstanding from opposite ends of the bar; each handle comprising an arm, a shank adjustably secured to the arm having outwardly curved prongs at one end, and a grip disposed between the extremities of said prongs and held thereby beyond the plane of said shank.

958,924. CAR-WHEEL. EMIL A. JOHNSON, Olivia, Minn. Filed Sept. 20, 1909. Serial No. 518,571.

1. A car wheel having a flange at one side and with an annular channel spaced from said flange, and a bearing ball located within said channel and adapted to project beneath the head portion of the rail at the side opposite to the flange.



2. A car wheel having a flange at one side and with an annular projection at the side opposite to said flange, said projection having an inwardly opening annular channel, and a bearing ball within said channel and adapted to project beneath the head portion of a rail at the side opposite the flange of the wheel.

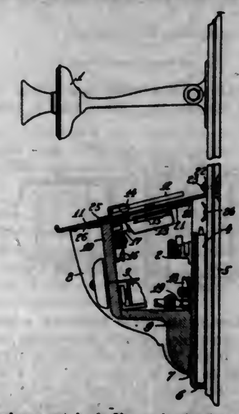
3. An attachment for car wheels comprising an annular member having an annular channel in one face, means for attaching said annular member to a car wheel with the channel located beyond the rim of the wheel, and a bearing ball located within said channel and adapted to project beneath the head portion of a rail at the side opposite the flange of the wheel.

4. A wheel having an annular channel spaced from its tread, and a bearing ball located within said channel and adapted to project beneath the head portion of a railway rail.

5. A wheel having an annular projection at one side extending beyond the tread thereof, said projection having an inwardly opening annular channel, and a bearing ball within said channel and adapted to project beneath the head portion of a railway rail.

[Claim 6 not printed in the Gazette.]

958,925. TELEPHONE SET. WILLIAM KAISLING, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Aug. 1, 1908. Serial No. 446,452.



1. A telephone set including a back plate, a hinged containing box supported thereby, an impulse controlling device, a slidably removable cover for said box supporting said device and a catch for locking said cover in adjusted position.

2. A telephone set including a containing box, jack members mounted within said box, a slidably adjustable cover for said box, impulse controlling mechanism fastened to said cover and coöperating jack members connected with said mechanism adapted to register with said first mentioned members when the cover is placed in adjusted position.

3. A telephone set including a containing box having integrally formed guides, a calling device, a cover for said box having flange members to slide within said guides, said cover supporting said device, a catch member supported by said cover, a wall for said box affording passage way for said member, whereby said member passes through said way as the cover reaches adjusted position to assume its holding relation.

4. A telephone set including a containing box having separable walls, an impulse controlling device, a slidable removable cover for said box supporting said device, and spring jacks on one of said walls and on said cover registering when said box is closed.

5. A telephone set including a relatively stationary back plate, stationary jack member supported by said plate, a relatively movable containing box hinged and supported by said back plate, jack members fastened to said box to register with said first mentioned jack members when said box is in adjusted position, an impulse controlling device, a slidable removable cover for said box supporting said device, and jack members on one of said walls and on said cover registering when said box is closed.

[Claim 6 not printed in the Gazette.]

958,926. DEVICE FOR FEEDING BALLONNETS ON AIRSHIPS. MARCEL KAPFERER, Billancourt, France, assignor to Société Anonyme "Astra," Billancourt, France. Filed Sept. 11, 1909. Serial No. 517,259.

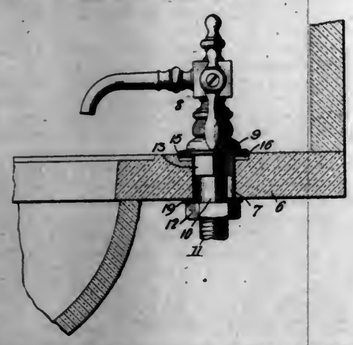


1. A device for feeding ballonnets on airships, comprising gas conducting means, a pipe discharging therefrom, a longitudinal flexible partition within said pipe, said partition being of a width equal to half the circumferential development of said pipe and being attached to the latter along opposite generatrices, a flexible spherical cap attached to one end of said partition and adapted to direct the gas into one or other of the compartments to be supplied, and means operable from the outside and attached to the other end of said partition, for applying the same against one or other of the half walls of the pipe so that the whole cross section of the latter is available for the passage of gas.

2. A device for feeding ballonnets on airships, comprising gas conducting means, a pipe discharging therefrom, a longitudinal flexible partition within said pipe, said partition being of a width equal to half the circumferential development of said pipe and being attached to the latter along opposite generatrices, a flexible spherical cap attached to one end of said partition and adapted to direct

the gas into one or other of the compartments to be supplied, and a sliding jaw operable from the outside and attached to the other end of said partition, for applying the same against one or other of the half walls of the pipe so that the whole cross section of the latter is available for the passage of gas.

958,927. BASIN-COCK. JOHN F. KELLY, Trenton, N. J. Filed Nov. 23, 1909. Serial No. 529,515.



1. The combination with a slab having an opening, of a cock or faucet provided with an extension passing through said opening, and a locking member interposed between the upper surface of the slab and the base of the cock and positively locked against angular movement with respect to the cock and slab.

2. The combination with a slab having a round opening, of a cock having an extension located in said opening, and a locking member having non-rotative engagement with said extension and positively locked to the upper surface of the slab.

3. The combination with a slab, of a cock or faucet having an extension passing through the slab, a locking member having non-rotative engagement with the extension and interposed between the base of the cock and the upper surface of the slab, and means for locking said member positively in a number of positions in the same horizontal plane.

4. The combination with a slab, of a cock having an extension passing therethrough, a washer having non-rotative engagement with the extension and movable angularly into a number of positions on the upper surface of the slab, and means for positively locking said washer in any of such positions.

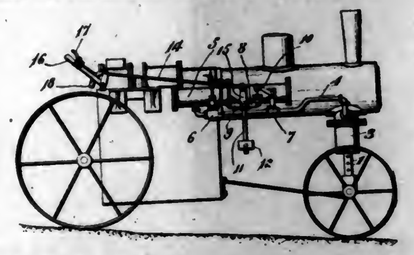
5. The combination with a slab having a round opening, of a cock provided with an extension passing through the opening and furnished at a point therein with a polygonal portion, a washer having a polygonal opening whereby it embraces said polygonal portion, said washer being interposed between the base of the cock and the upper surface of the slab, and angularly movable with respect to the latter, and means to lock said washer positively in any of its angularly adjusted positions.

[Claims 6 to 11 not printed in the Gazette.]

958,928. AUTOMATIC JACK FOR ENGINE-BOILERS. CHARLES KENT, Pevensey, Ontario, Canada. Filed July 30, 1909. Serial No. 510,481.

1. An automatic jack of the character described, comprising a cylinder, a piston mounted therein, a compressed air tank, a pipe connecting said tank and cylinder, and automatic means operated by variations in the position of an engine boiler and adapted to control the flow of air through said pipe.

2. An automatic jack of the character described, comprising a cylinder adapted to be secured to the forward end of an engine boiler, a piston adapted to be secured to the running gear of the engine, a compressed air tank, a pipe connecting said cylinder and tank, valves mounted in said pipe and adapted to control the flow of air from the tank to the cylinder and from the cylinder to the atmosphere, and pendulum operated means for automatically actuating said valves to control the flow of air through said pipe and maintain the level of the engine boiler.



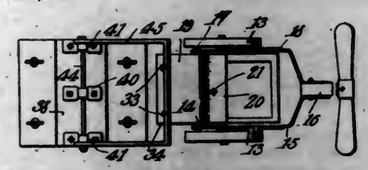
3. An automatic jack of the character described, comprising a cylinder adapted to be secured to an engine boiler, a piston adapted to be secured to the running gear of the engine, a compressed air tank, a pipe connecting said tank and said cylinder, valves adapted to control the flow of air through said pipe to said cylinder and through said pipe from said cylinder to the atmosphere, a lever for actuating said valves, and pendulum mechanism for operating said lever.

4. An automatic jack comprising a cylinder adapted to be secured to an engine boiler, a piston mounted therein and adapted to be secured to the running gear of the engine, a compressed air tank, a pipe connecting said compressed air tank and said cylinder, valves for controlling the flow of compressed air through said pipe, means for automatically operating said valves as the level of the boiler changes, and means for locking said cylinder in its various positions.

5. An automatic jack of the character described, comprising a cylinder adapted to be secured to an engine boiler, a piston mounted in said cylinder and adapted to be secured to the running gear of said engine, a compressed air tank, a pipe connecting said compressed air tank and said cylinder, valves for controlling the flow of air through said pipe, pendulum mechanism for automatically operating said valves as the level of the boiler changes, and means for locking said pendulum mechanism in inoperative position.

[Claim 6 not printed in the Gazette.]

958,929. FLOOR-DRESSING MACHINE. GEORGE J. KEPPLINGER, Dwight, Ill. Filed July 7, 1909. Serial No. 506,358.

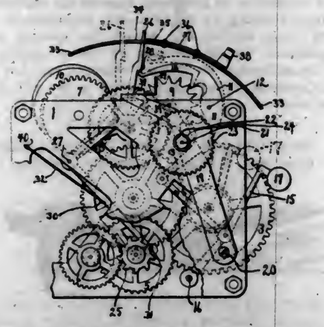


1. In a machine of the class described, a body, a handle projecting therefrom, wheels supporting the body, a head supported at the front of the body, a frame carried by the head and having a transverse rod, a sand paper block having intermediate and end bearings thereon for the said rod, the said end bearings loosely receiving the rod whereby the head may have transverse rocking movement upon the intermediate bearing.

2. In a machine of the class described, a body, handles projecting rearwardly from the body, wheels supporting the body, the body at its front being formed with a recess,

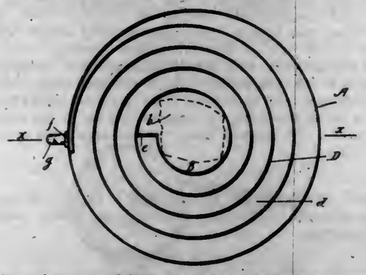
a head section fitted in the recess, means holding the said head section at angular adjustment in the recess, a second head section disposed against the first mentioned section and held thereon for angular adjustment, and a floor treating device carried by the last mentioned head section.

958,930. ALARM-CLOCK. GEORGE KERN, Peru, Ill., assignor to The Western Clock Manufacturing Company, La Salle, Ill., a Corporation of Illinois. Filed Sept. 27, 1909. Serial No. 519,808.



In an alarm clock, the combination of a time movement and an alarm mechanism, an alarm escape wheel journaled in said alarm mechanism, means actuated by said time movement for locking said alarm escape wheel, said means comprising a spring, and projection on said spring which enters the path of the teeth of said alarm escape wheel.

958,931. COOLER. OTIS A. KERSEY, Pulaski, Tenn. Filed May 15, 1909. Serial No. 496,208.

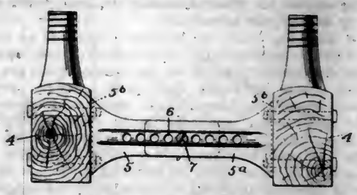


A cooler comprising an open-topped vessel provided with a single spiral partition which forms a central chamber for holding water and the lower part of a block of ice and which also forms a single spiral cooling chamber for water and the objects to be cooled, the inner end portion of the said partition having at its upper part a series of small perforations for the passage of ice-cold water from the central chamber to the cooling chamber, and the said cooling chamber having an outlet for comparatively warm water formed in the upper part of the periphery of the said vessel.

958,932. METHOD OF TREATING ASPARAGUS AND KINDRED PLANTS. EDWARD C. KLINE, Streator, Ill. Filed June 21, 1909. Serial No. 503,487.

The method of treating asparagus and kindred annual plants in the bed, consisting in cultivating the same in the usual manner until the plants begin to sprout, flooding the bed with water to a substantial depth, maintaining the water on the bed for a limited period, and finally drawing off the water from the bed.

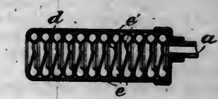
958,933. BRACE FOR CROSS-ARMS. JOHN D. LOVE, Athens, Ohio. Filed June 11, 1909. Serial No. 501,547.



1. A bracing device for cross arms and the like, comprising two overlapping grooved members provided with a plurality of openings, one or more bolts passing through the openings for locking the parts together and having angularly turned ends, and means for securing the ends of said members to the cross arms, substantially as described.

2. A bracing device for cross arms and the like, comprising two overlapping sheet metal members having alining depressed, central portions, and plain side bearing portions, said central portions having a plurality of openings, a bolt passing through alining openings, said members having widened and angularly turned ends with means for attaching them to the cross arms, substantially as described.

958,934. SILENT FIREARM. HIRAM P. MAXIM, Hartford, Conn., assignor to Maxim Silent Firearms Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 28, 1908. Serial No. 459,909.



1. A silencing device for firearms comprising a chamber adapted to communicate with the bore of the firearm and having an opening for the passage of the projectile, means whereby the gases are made to acquire a continuous rotary or whirling movement about a stationary axis in said chamber and to dissipate their energy thereby, and means whereby the core or pencil of gases following the projectile through such opening is deflected from movement in a longitudinal direction.

2. A silencing device for firearms comprising a chamber adapted to communicate with the bore of the firearm and having an opening for the passage of the projectile, means whereby the gases are made to acquire a continuous rotary or whirling movement about a stationary axis in said chamber and to dissipate their energy therein, and a deflecting surface adjacent to said opening by which the gases which impinge on said deflecting surface are made to collide with the gases which pass directly through said opening and thereby deflect and break up the core or pencil of gases tending to follow the projectile through the opening.

3. A silencing device for firearms comprising a chamber adapted to communicate with the bore of the firearm, said chamber having an opening for the passage of the projectile which is eccentrically disposed and a deflecting surface adjacent to said opening to cause the gases which impinge upon the same to collide with the gases which pass directly through the opening.

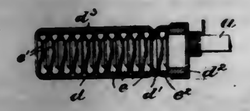
4. A silencing device for firearms comprising an annular chamber substantially conchoidal in cross section and having an opening for the passage of the projectile and having its mouth about said opening directed toward the breech of the firearm in opposition to the direction of movement of the projectile but with a portion thereof deformed to constitute a deflecting surface directed inwardly and forwardly, whereby some of the gases following the projectile are caused to acquire a rotary or whirling movement in the chamber about a substantially circu-

lar or annular axis and to dissipate their energy therein and other portions of such gases impinging upon said deflecting surface are directed against the gases which pass directly through the opening.

5. A silencing device for firearms comprising an annular chamber, substantially concholdal in cross section, having an eccentric opening for the passage of the projectile and having its mouth about said eccentric opening directed toward the breech of the firearm in opposition to the direction of movement of the projectile and deformed to constitute a deflecting surface directed forwardly and inwardly, whereby some of the gases are caused to acquire a rotary or whirling movement in the chamber about a substantially circular or annular axis and other portions of the gases are directed by said deflecting surface against the gases which pass directly through the eccentric opening.

[Claims 6 to 9 not printed in the Gazette.]

958,935. SILENT FIREARM. HIRAM P. MAXIM, Hartford, Conn., assignor to Maxim Silent Firearms Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 30, 1908. Serial No. 465,051.



1. A silencing device for firearms, comprising a shell or casing, a series of diaphragms or spreaders disposed in the shell or casing remote from the muzzle and forming a succession of chambers, each of the diaphragms or spreaders having an opening for the passage of the projectile, and a relatively heavy or strong diaphragm or spreader disposed in the shell or casing adjacent to the muzzle of the firearm and also having an opening for the passage of the projectile, the shell or casing having an abutment to resist the forward pressure of such heavier diaphragm or spreader, whereby the lighter diaphragms or spreaders remote from the muzzle of the firearm are relieved of the pressure of the heavier diaphragm or spreader.

2. A silencing device for firearms, comprising a supporting shell or casing, a series of diaphragms or spreaders disposed in the shell or casing remote from the muzzle and forming a succession of chambers, each of the diaphragms or spreaders having an opening for the passage of the projectile and forming an annular cell substantially concholdal in cross section, and a heavier diaphragm or spreader disposed in the shell or casing adjacent to the muzzle of the firearm and also having an opening for the passage of the projectile and also forming an annular cell substantially concholdal in cross section, the supporting shell or casing having an abutment to receive the pressure of such heavier diaphragm or spreader, whereby the lighter diaphragms or spreaders remote from the muzzle of the firearm are relieved of the pressure of the heavier diaphragm or spreader.

3. A silencing device for firearms, comprising a supporting shell or casing, a series of diaphragms or spreaders disposed in the shell or casing remote from the muzzle of the firearm, each of the diaphragms or spreaders forming an annular cell substantially concholdal in cross section and having an opening for the passage of the projectile, and a heavier or stronger diaphragm or spreader disposed in the shell or casing adjacent to the muzzle of the firearm and also forming an annular cell substantially concholdal in cross section and having an opening for the passage of the projectile, the supporting shell or casing having an interior circumferential ridge forming an abutment to receive the pressure of such heavier diaphragm or spreader, whereby the lighter diaphragms or spreaders remote from the muzzle of the firearm are relieved of the pressure of the heavier diaphragm or spreader.

4. A silencing device for firearms, comprising a supporting shell or casing and a series of diaphragms or spreaders disposed in the shell or casing and forming a succession of chambers, each of the diaphragms or spreaders having an opening eccentrically disposed for the passage of the projectile, the shell or casing having an interior ridge or key and each of the diaphragms or spreaders having a key-way to coöperate therewith.

5. A silencing device for firearms, comprising a supporting shell or casing and a series of diaphragms or spreaders disposed in the supporting shell or casing and forming a succession of chambers, each of the diaphragms or spreaders forming an annular cell substantially concholdal in cross section and having an opening eccentrically disposed for the passage of the projectile, the shell or casing having an interior ridge or key and each of the diaphragms or spreaders having a key-way to cooperate therewith.

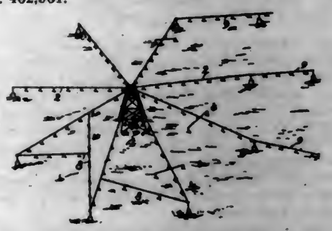
958,936. TOOL-HOLDER. JOHN J. MCINTYRE, Hartford, Conn. Filed Mar. 31, 1909. Serial No. 486,885.



1. A tool holder having a body with an opening for a cutter and a cylindrical opening for a clamp block, the longitudinal axis of said cutter opening being oblique with respect to the axis of the clamp block opening, a cylindrical clamp block with an opening for the cutter inserted in the cylindrical opening in the body, a cutter extending through the opening in the clamp block, and means for causing the clamp block to clamp the parts and bind the cutter in position.

2. A tool holder having a body with an opening for a cutter and a cylindrical opening for a clamp block, the longitudinal axis of said cutter opening being oblique with respect to the axis of the clamp block opening, a cylindrical clamp block with an opening for the cutter inserted in the cylindrical opening in the body, said clamp block having a head at one end and a threaded stud at the other, a cutter extending through the opening in the clamp block, and a nut screwed upon the threaded stud of the clamp block.

958,937. IRRIGATION APPARATUS. EMILIO OLSSON, Buenos Ayres, Argentina. Filed Nov. 16, 1908. Serial No. 462,961.



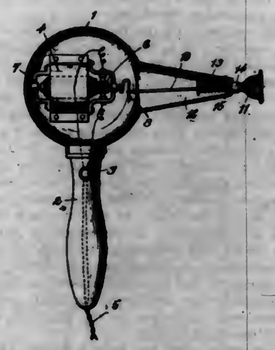
An irrigation apparatus comprising a tower, a container at the top of said tower, a plurality of cables extending radially from said tower, a plurality of pipes extending from said container and being suspended from said cables, a plurality of branch pipes interconnecting said first mentioned pipes, means for elevating water to the top of said tower and a plurality of spraying devices connected to each of said pipes and branch pipes, said spraying devices being adapted to be rotated by the re-active force of the discharged water.

958,938. CLOTHES-TONGS. WILLIAM J. OTT and ADA OTT, Hugo, Oreg. Filed Oct. 28, 1909. Serial No. 525,155.



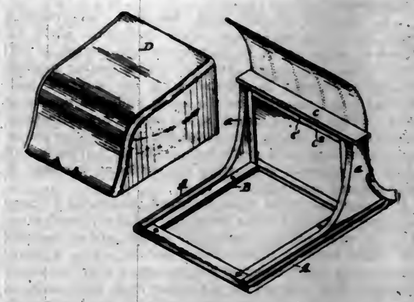
The hereindescribed clothes tongs comprising a stick having a rounded terminal, a gripping jaw of substantially semi-circular shape in cross section having inwardly curved ears at one end thereof embracing the stick, a pivot passed through the ears and the stick for pivotally connecting the jaw to the said stick, a curved lip projecting outwardly from the opposite end of the jaw and adapted to partially embrace the rounded end of the stick, a lever pivoted to said jaw, a rod connected to the lever and to one of the ears of the jaw, and a retractile spring surrounding the rod and having one end fixed to the lever and its opposite end fixed to the stick, whereby the jaw will be normally maintained in open position with respect to the stick.

958,939. MASSAGE APPARATUS. GEORGE R. PYPER, Salt Lake City, Utah. Filed July 15, 1909. Serial No. 507,782.



A massage device comprising a casing, a motor supported in the casing, an arm connected to the motor and having apertures eccentric to the shaft of the motor, a vibrating shaft, a massage device connected to the vibrating shaft, and a spiral spring surrounding the vibrating shaft and connected at one end thereto and at the opposite end to the casing, said spring being normally under tension and adapted to prevent the disengagement of the shaft from the apertures in the arm and to prevent the rotation of the shaft.

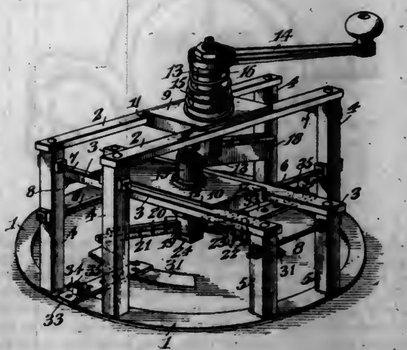
958,940. VEHICLE-BODY STRUCTURE. EDWARD H. REMDE, Cleveland, Ohio, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 12, 1909. Serial No. 495,500.



1. In a vehicle, the combination of a main body portion having an extension for supporting the battery, upright members contiguous to said extension and a transverse member; a battery cover having permanently secured sides, top and outer end; and suitable means for securing said cover to the main body portion; the inner end of the cover being placed between said upright members and beneath said transverse member.

2. In a vehicle, the combination of a main body portion having its sills extended to support the batteries; a transverse member; and upright members extending from the sills upwardly to said transverse member; a battery cover having permanently secured sides, top and outer end; and suitable means for securing the cover to said main body member; the inner end and bottom of the cover being open and said inner end being placed between said upright members and beneath said transverse member.

958,941. WASHER AND GASKET CUTTER. JAMES A. ROSE, Hastings, Nebr. Filed Dec. 4, 1908. Serial No. 466,009.



1. A machine of the class described comprising a frame including upper and lower horizontal ways arranged at different elevations, upper and lower shafts, means for slidably mounting the upper and lower shafts in the ways, means for connecting the shafts for arranging the same either in or out of alinement, operating means connected with the upper one of the shafts, and means for securing a tool to the lower shaft.

2. A machine of the class described comprising a frame including upper and lower horizontal ways arranged at right angles to each other and located at different elevations, upper and lower slides mounted in the ways and

having parallel side edges to fit the same, a tool-carrying shaft mounted on the lower slide, an operating shaft carried by the upper slide, and means for adjustably connecting the shafts for arranging them either in or out of alinement.

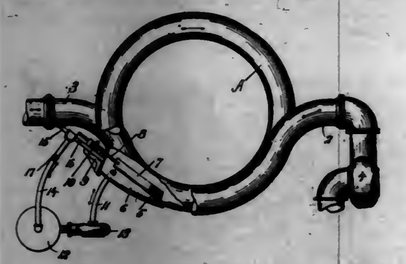
3. A machine of the class described comprising a frame including upper and lower horizontal ways arranged at right angles to each other and located at different elevations, upper and lower slides having parallel side edges slidably interlocked with the ways, a tool-carrying shaft mounted on the lower slide, an operating shaft carried by the upper slide, means for adjustably connecting the shafts for arranging them either in or out of alinement, said shafts being movable vertically, and means for yieldably supporting the shafts at the limit of their upward movement.

4. A machine of the class described comprising a frame including upper and lower horizontal ways arranged at an angle to each other, rectangular slides having parallel side edges slidably interlocked with the ways, a lower tool-carrying shaft mounted on the lower slide, an upper operating shaft carried by the upper slide and having a slot, and a horizontal arm connected with the lower shaft and slidably arranged in the slot of the upper shaft, whereby the upper and lower shafts are adjustably connected to enable them to be arranged either in or out of alinement.

5. A machine of the class described comprising a frame including upper and lower horizontal ways, upper and lower slides having parallel side edges slidably interlocked with the ways, said slides being provided with tubular bearings, upper and lower shafts journaled in the bearings and movable vertically, one of the shafts being provided with a horizontal arm slidably connected with the other shaft, and operating means connected with the upper shaft.

[Claims 6 and 7 not printed in the Gazette.]

958,942. APPARATUS FOR SEGREGATING SOLIDS FROM LIQUIDS. CHARLES E. SEYMOUR, Placerville, Cal. Filed May 26, 1908. Serial No. 435,033.

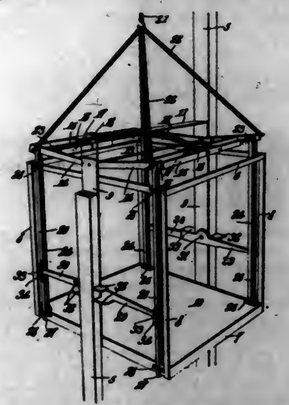


1. A segregating apparatus consisting of a looped conduit having its axis arranged vertical, said conduit having a lateral screen-covered discharge opening in its side, said discharge opening communicating with a supplemental collection chamber, hydraulic means for forcing the material under pressure through the loop, means for withdrawing the material from said collection chamber, means for varying the size of said discharge opening into the collection chamber, said last-named means including a slide-valve, and means for creating a pulsating action in said supplemental chamber, through the medium of the material and water withdrawn from the collection chamber.

2. A segregating apparatus consisting of a looped conduit with its axis arranged vertical, said conduit having a screened lateral discharge opening in its side, said discharge opening communicating with a supplemental collection chamber, hydraulic means for forcing the material under pressure through the loop, means for withdrawing the material from said collection chamber, and means connected with said last-mentioned withdrawing means for creating a counter current in the collection chamber.

3. A segregating apparatus consisting of a looped conduit, said conduit having a lateral discharge opening in its side, said discharge opening communicating with a supplemental collection chamber, means for forcing the material under pressure through the loop, and a pump and suitable connections for withdrawing the material from said collection chamber and for returning a portion thereto.

958,943. ELEVATOR SAFETY DEVICE. JASPER A. SISSOM, Joplin, Mo., assignor of two-thirds to John W. Barker, Joplin, Mo. Filed Mar. 3, 1909. Serial No. 481,213.



1. The combination with the hoisting cable and guide strips of an elevator; of a frame, spring-supported suspension members hinged to the frame, to which members the hoisting cable is connected, hangers carried by the free ends of said suspension members, and loosely connected to the frame, clutch members operatively connected to the hangers and engageable with the guide strips, a platform loose in the frame, and a connection between said platform and the suspension members.

2. The combination with the hoisting cable and guide strips of an elevator; of a frame, spring-supported suspension members hinged to the frame, to which members the hoisting cable is connected, hangers carried by the free ends of said suspension members, and loosely connected to the frame, clutch members operatively connected to the hangers, and engageable with the guide strips, a platform loose in the frame, and hangers carried by the free ends of the suspension members, and supporting the platform.

3. The combination with the hoisting cable and guide strips of an elevator; of a frame, suspension members hinged to the top of the frame, to the free ends of which members the hoisting cable is connected, a spring secured to the frame and bearing at its ends on the free ends of the suspension members, hangers carried by said ends of said members, and loosely connected to the frame, a platform carried by the suspension members, and clutch members operatively connected to the hangers, and engageable with the guide strips.

4. The combination with the hoisting cable and guide strips of an elevator; of a frame, suspension members hinged to the top of the frame, to the free ends of which members the hoisting cable is connected, a spring secured to the frame and bearing at its ends on the free ends of the suspension members, hangers carried by said ends of said members, and loosely connected to the frame, a platform carried by the suspension members, clutch members operatively connected to the hangers, and engageable with the guide strips, and means for adjusting the tension of the aforesaid spring.

5. The combination with the hoisting cable and guide strips of an elevator; of a frame, spring-supported suspension members hinged to the frame, to which members the hoisting cable is connected, hangers carried by the free ends of said suspension members and having inturned ends loosely engageable with the bottom of the frame, a platform carried by the suspension members, and clutch members operatively connected to the hangers, and engageable with the guide strips.

[Claim 6 not printed in the Gazette.]

958,944. FIRE-CHECK. ALDEN A. STEWARD, Rutland, Vt. Filed Sept. 13, 1909. Serial No. 517,545.



1. A fire check comprising laminated alternate plates and reticulated strips disposed with the edges thereof parallel with the flow of fluid therethrough.

2. A fire check comprising alternate layers of metallic plates and gauze disposed with the edges thereof parallel with the flow of material therethrough.

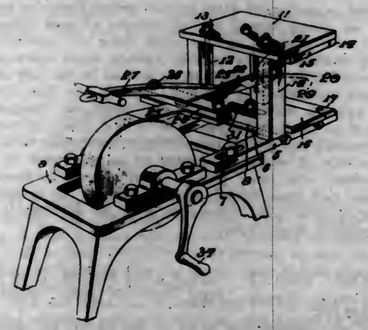
3. A fire check comprising alternate layers of metallic plates and gauze disposed with the edges thereof parallel with the flow of material therethrough, and means for binding said plates and gauze into contact with each other.

4. A fire check comprising alternate layers of metallic plates and gauze disposed with the edges thereof parallel with the flow of material therethrough, and a binding wire surrounding said plates and gauze for holding them in contact with each other.

5. A fire check comprising alternate layers of apertured metallic plates and gauze disposed with the edges thereof parallel with the flow of the fluid therethrough.

[Claim 6 not printed in the Gazette.]

958,945. TOOL-HOLDER. JACOB L. STOFFER, Homeworth, Ohio, assignor of one-half to R. R. Greeneisen, Columbiana county, Ohio. Filed Sept. 28, 1909. Serial No. 519,928.



1. A device of the class described including a frame, a standard pivotally mounted on the frame and adjustable laterally with respect thereto, an operating handle pivotally mounted on the standard, and means carried by the operating handle for clamping a tool.

2. A device of the class described including a frame, sliding plates mounted on the frame, a standard pivotally mounted on said plates, an operating lever pivotally mounted on the standard, means carried by the lever for clamping a tool, and means for securing the plates in adjusted position.

3. A device of the class described including a frame, a slotted standard pivotally mounted on the frame and provided with a vertical row of perforations, an operating lever having a shank extending through the slot in the standard and provided with a series of transverse perforations, a pivot pin extending through one of the perforations in the shank and adjacent perforations in the standard, and means carried by the lever for clamping a tool.

4. A device of the class described including a frame, slotted plates slidably mounted on the frame, a standard pivotally mounted between said plates, an operating lever pivotally mounted for tilting movement on the standard, means carried by the operating lever for clamping a tool, and fastening devices secured to the frame and extending through the slots in the plates for securing said plates in adjusted position.

5. A device of the class described including a frame, slotted plates slidably mounted on the frame, a slotted standard pivotally mounted between the sliding plates, a lever having its rear end reduced to form a shank extending through a slot in the standard and pivotally connected therewith, transverse clamping bars carried by the forward end of the lever for engagement with a tool, and means for clamping the sliding plates in adjusted position.

[Claims 6 to 8 not printed in the Gazette.]

958,946. POST. HEMAN J. STRATTON, Kalamazoo, Mich. Filed Apr. 29, 1909. Serial No. 493,026.



1. A post comprising an angle iron body portion; a point member arranged in an outwardly-inclined position between the arms of said body at its lower end, the upper end of said point member being turned inwardly; and an anchor member arranged between the arms of said body, the rear end of said anchor member being turned downwardly to engage the inturned upper edge of said point member, whereby said anchor member is pivotally supported to rest upon said point member when it is in its extended position.

2. A post comprising a right angle iron body portion of L-shaped cross section; a point member arranged in an outwardly-inclined position between the arms of said body at its lower end, and an anchor member pivotally supported between the arms of said body above said point member, said point member being adapted to serve as a rest for said anchor member when it is in its extended position.

3. A post comprising a right angle iron body portion of L-shaped cross section; and a point member arranged in an outwardly-inclined position between the arms of said

body at its lower end, said body being unobstructed above said point member whereby the earth may be packed thereon between the arms of the body after the body had been driven into the ground.

958,947. HYDROCARBON-BURNER. JOHN E. WALLING and ANDY OLSON, Portland, Oreg. Filed Apr. 27, 1909. Serial No. 492,487.



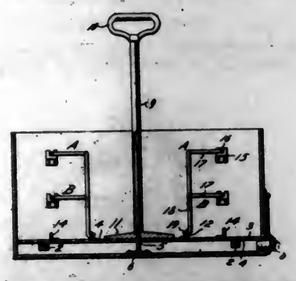
1. In a hydro-carbon burner, a steam supply pipe having its opposite ends exteriorly screw threaded, an oil supply pipe located within and spaced from said steam supply pipe, said oil supply pipe being of greater length than the steam pipe and having one end in a plane with one end of the latter and interiorly screw threaded and its opposite or extending end exteriorly screw threaded, a casing having one end interiorly screw threaded to receive one of the threaded ends of the steam supply pipes, said casing being contracted at its intermediate portion and interiorly screw threaded to receive the extending end of the oil supply pipe, a burner head having a portion threadable onto that end of the steam pipe remote from the casing and another portion threadable into the corresponding end of the oil supply pipe, said head being centrally provided with a valve seat and oil outlet openings extending obliquely to the long axis of the head and communicating with the valve seat, said burner head being further provided with a steam outlet opening spaced from and located below the oil outlet opening, and a needle valve having one end bearing in the free end of the casing and its opposite end in the valve seat.

2. In a hydro-carbon burner, a steam supply pipe exteriorly screw threaded at one end, an oil supply pipe located within and spaced from said steam supply pipe and having one end in a plane with the threaded end of the steam supply pipe and interiorly screw threaded, a burner head having a cylindrical inner end portion exteriorly screw threaded and threadable into an oil supply pipe, and an outer rectangular shaped end portion extending considerably in advance of the adjacent end of the oil supply pipe, said burner head having a medially disposed annular flange terminating in an interiorly threaded lip to engage the threaded end of the steam supply pipe, said burner head being provided on its inner end with a centrally disposed valve seat and a steam outlet extending through the flange and further provided with a plurality of diverging oil passages spaced from the steam outlet and extending oblique to the long axis of the burner head and having their inner ends communicating with the valve seat and their outer ends extending through the inner ends of one face of the rectangular shaped portion of the head and at a point adjacent the flange, a casing secured to the ends of the steam and oil supply pipe remote from the burner, a needle valve having one end bearing in the casing and its opposite end in the valve seat.

958,948. DISH-WASHER. ANNA WALTHER, Port Townsend, Wash. Filed Jan. 11, 1910. Serial No. 537,438.

1. A dish washing apparatus comprising a vessel having an outlet port adjacent the bottom of one extremity thereof and a closure for said outlet port, a perforated false bottom spaced from the bottom of the receptacle above said outlet port, a guide rod centrally disposed in the base of said receptacle and extending outwardly through the false bottom, an agitator reciprocating above said false bottom and about said guide rod, and means for retaining the dishes from contact with said agitator and also means for supporting the same on edge.

2. A dish washing apparatus comprising a vessel having an outlet port adjacent the bottom of one extremity thereof and a closure for said outlet port, a perforated false bottom spaced from the bottom of the receptacle above said outlet port, a guide rod centrally disposed in the base of said receptacle and extending outwardly through the false bottom, an agitator reciprocating upon said guide rod consisting of a tubular member adapted to incase said guide rod having a handle at one extremity and a transverse plate at the other, and means for retaining the dishes from contact with said agitator and also means for supporting the same on edge.



3. A dish washing apparatus comprising a vessel having an outlet port adjacent the bottom of one extremity thereof and a closure for said outlet port, a perforated false bottom spaced from the bottom of the receptacle above said outlet port, a guide rod centrally disposed in the base of said receptacle and extending outwardly through the false bottom, an agitator reciprocating upon said guide rod consisting of a tubular member adapted to incase said guide rod having a handle at one extremity and a transverse plate at the other, and independently removable guards disposed in vertical alinement on each side of said agitator.

4. A dish washing apparatus comprising a rectangular vessel, a perforated false bottom spaced from the bottom of the vessel having secured thereto at each extremity thereof a series of parallel angle irons, the innermost of said angle irons having their vertical arms apertured, a vertical guide rod permanently secured to the base of the vessel and extending upwardly through the false bottom, an agitator reciprocating on said guide rod, brackets secured to the longitudinal sides of said vessel in vertical alinement, and guards carried at one side thereof by said brackets and the other by the innermost of said angle irons, as and for the purpose set forth.

5. A dish washing apparatus comprising a rectangular vessel, a perforated false bottom spaced from the bottom of the vessel having secured thereto at each extremity thereof a series of parallel angle irons, the innermost of said angle irons having their vertical arms apertured, a vertical guide rod permanently secured to the base of the vessel and extending upwardly through the false bottom, an agitator reciprocating on said guide rod, brackets secured to the longitudinal sides of said vessel in vertical alinement, and guards comprising a rectangular wire arm, one side of which is adapted to be supported by said brackets, the other side carrying outwardly extending arms, said arms having hooks formed at the extremities thereof, said hooks coöperating with the openings in said innermost angle irons.

958,949. OIL-CAN. VERNON AMOS WEAVER, Three Hills, Alberta, Canada. Filed Sept. 27, 1909. Serial No. 519,795.

1. The combination of an oil can having an apertured bottom, a longitudinally curved leaf spring having a central opening, and ends to bear against the outer face of the bottom of the can adjacent to the edge of said bottom, a screw extending through the apertures of the spring and bottom and having a head at its lower end to bear against the spring, upper and lower nuts arranged upon the threaded portion of the screw on opposite sides of the bottom of the can, the upper nut within the can being adapted to be engaged by a socket wrench, and the packing washer arranged beneath one of said nuts.

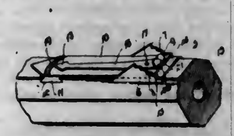


2. The combination of a can having at its bottom a surrounding rib, a spring device for said bottom of the can, and a protecting and supporting rim consisting of a band bent into circular form and having an offset portion to engage the rib upon the bottom of the can, one end of said band being formed with longitudinal series of openings, flexible tongues projecting from the other end of said band and adapted to be passed through said openings and bent to adjustably secure the rim or band upon the can, and supporting lugs projecting upwardly from the inner portion of the rim or band and engaged with the bottom of the can.

958,950. PROCESS OF MANUFACTURING BRIQUETS. THOMAS GODFREY AKINS WILSON, Vancouver, British Columbia, Canada. Filed July 26, 1909. Serial No. 509,618.

The herein described method of manufacturing briquets consisting in heating a mass of finely divided coal in a closed mixer to a temperature of from 130 degrees F. to 180 degrees F., heating a mass of asphaltum to the boiling point and until all oils are driven off, and finally spraying the molten asphaltum into the mass of coal while under agitation in the mixer.

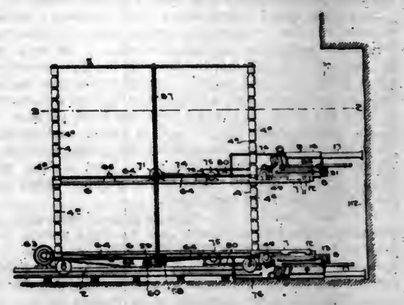
958,951. GUN-SIGHT. CHARLES F. WOLLENBERG, Irby, Wash. Filed Jan. 18, 1910. Serial No. 538,648.



1. In a gun-sight a stepped elevator, a spring shank having at one end oppositely extending lugs to engage the steps of said elevator and provided adjacent its opposite end with a degree scale, a finger pivoted to said shank having one end over-lying the degree scale and its opposite end provided with a sight body.

2. In a gun-sight, the combination with a barrel; of a stepped elevator slidingly fitted on said barrel, a spring shank secured at one end to the barrel and provided at its opposite end with a pair of lateral lugs to engage with the steps of said elevator and further provided on its upper face and at its secured end with a degree scale, a hand pivoted to the shank having one end extending to a point adjacent the degree scale and its opposite end provided with a sight body.

958,952. TUNNELING-MACHINE. GEORGE R. BENNETT, Denver, Colo. Filed Nov. 6, 1907. Serial No. 400,985.



1. A tunneling machine comprising, in combination with a suitable support, a battery of rock drills, means for presenting said battery to a working face, means for projecting said drills of said battery in said face and means for automatically moving said battery laterally after each projection of said drills.

2. A tunneling machine comprising in combination with a suitable support, a battery of rock drills, means for imparting a series of rectilinear movements to said battery, and means for automatically performing said movements, in progressive cycles, each cycle comprising a longitudinal, lateral and vertical movement.

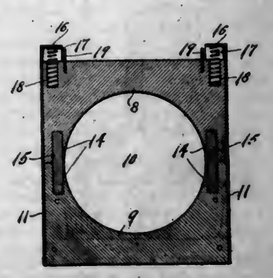
3. A tunneling machine comprising in combination, a suitable support, a battery of rock drills, and means for automatically causing said battery to move laterally and vertically in predetermined steps equal to an aliquot part of the distance between two successive drills.

4. A tunneling machine comprising in combination with a suitable support, a battery of rock drills and means to impart a predetermined intermittent, vertical movement to said battery.

5. A tunneling machine comprising in combination with a suitable support a battery of rock drills, means for presenting the drills of said battery for independent operation in said working face and means for imparting a successively repeated series of rectilinear operative movements to said battery.

[Claims 6 to 20 not printed in the Gazette.]

958,953. DUST-GUARD FOR CAR-AXLE BOXES. WILLIAM A. BRIGGS and ISRAEL MILLETT, Chicago, Ill. Filed Nov. 27, 1908. Serial No. 464,608.



1. A dust guard of the class described comprising normally contacting members, one slidable to and from the other, guide pieces fixed to one member and slidably supporting the other member, spring means acting upon the slidable member to normally hold the same in contact with the other member, and blocks extending across the meeting edges of the members contiguous to their inner edges

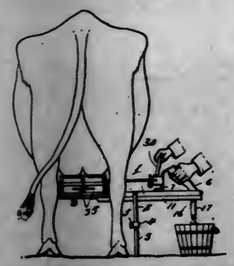
and working within the respective members and adapted to close entirely the gaps between the said members when the same are separated with respect to each other.

2. A dust guard comprising a fixed member, a movable member adapted to normally contact with the fixed member, means secured to opposite side edges of the fixed member and adapted to guide the movable member toward and away from said fixed member, spring means held by said first named means and acting upon the movable member to hold the latter in contact with the fixed member, and means independent of the said members contiguous to their inner edges and intersecting the joint between the mutually adjacent edges thereof to form a dust proof closure at the adjacent edges of the members when separated with respect to each other.

3. A dust guard of the class described comprising two normally contacting members, each having a curved inner edge to form a complete circular opening when the members are in normal assembled position, U-shaped guide strips fixed to opposite edges of one member and slidably supporting the other member, stops formed on the said strips for limiting the movement of the sliding member, springs interposed between the stops and slidable member to normally hold the latter in contact with the other, said members containing registering recesses formed in their abutting edges contiguous to the walls of the circular opening formed by the members, and blocks slidably fitted in said recesses to form sealing closures at the point of separation of the abutting edges of the members.

4. A dust guard of the class described comprising two members, each having a curved inner edge to form a complete circular opening when the members are in normal assembled and contacting position with each other, U-shaped guide strips fixed to opposite edges of one member and slidably supporting the other member, stops formed on the said strips for limiting the movement of the sliding member, springs interposed between the stops and slidable member to normally hold the latter in contact with the other, said members containing registering recesses formed in their abutting edges in close proximity to the circular opening formed by the members, blocks slidably fitted in said recesses to form sealing closures at the point of separation of the abutting edges of the members, the said blocks being disposed contiguous to the walls of said circular opening formed by the members, and eye members mounted in the outer edge of the movable member adjacent the stops to engage the same upon the turning of the eye members to hold the said movable member separated with respect to the other member.

958,954. MILKING-MACHINE. JOHN JOSEPH BUKOLT, Stevens Point, Wis. Filed Aug. 30, 1909. Serial No. 515,209.



1. In a milking machine, a supporting bar, a milk receiving tray secured to said bar, a supporting frame adjustably mounted in said tray, operating shafts mounted in said tray and frame, milking rollers arranged on said shafts, and teat cups adapted to coöperate with said rollers in the milking operation.

2. In a milking machine, a supporting bar, a milk receiving tray arranged on said bar, a bearing frame adjustably mounted in said tray, roller operating shafts mounted in said tray and frame, an operating mechanism connected to said shafts, pairs of milking rollers arranged at right angles on said shafts, teat cups pivotally and detachably mounted in said trays, and adapted to coöperate with said milking rollers during the milking operation, and an adjustable pressure mechanism adapted to yieldingly hold said cups against the pressure of said milking rollers and to draw the cups inwardly when disengaged by the rollers to manipulate the udder.

3. In a milking machine, a supporting bar, a milk receiving tray arranged on said bar, a bearing frame adjustably mounted in said tray, roller operating shafts mounted in said tray and frame, an operating mechanism connected to said shafts, pairs of milking rollers arranged at right angles on said shafts, teat cups pivotally and detachably mounted in said trays and adapted to coöperate with said milking rollers during the milking operation, an adjustable pressure mechanism adapted to yieldingly hold said cups against the pressure of said milking rollers and to draw the cups inwardly when disengaged by the rollers, to manipulate the udder, and means to adjust said cups whereby the machine may be used in connection with long or short teats.

4. In a milking machine, a supporting bar, a tray secured to said bar, said tray having formed thereon upwardly projecting end plates, supporting rods arranged in said tray and secured to said end plates, an adjusting frame pivotally and detachably engaged with one of said rods, pawls arranged on said frames to hold the same in adjusted position, operating shafts revoluably mounted in said end plates and frame, pairs of milking rollers arranged on each of said shafts, said pairs of rollers being disposed at right angles to each other, teat cups pivotally and detachably secured to said rods and adapted to coöperate with said milking rollers, a soft resilient lining arranged in said cups, a guard rod arranged across the upper ends of the cups, a yielding pressure applying mechanism engaged with said cups, said mechanism comprising pairs of cup engaging plates, a spring connection to secure said plates into yielding engagement with the cups, means to regulate the tension of said spring connection whereby a greater or less amount of resistance is provided for the cups with respect to the milking rollers, whereby the machine may be adapted for hard or easy milking cows, and means to facilitate the use of the machine in connection with long or short teats.

5. In a milking machine, a supporting mechanism, a milk receiving tray arranged thereon, a pair of suitably mounted operating shafts, means whereby one of said shafts is adjusted toward or from the other shaft, milking rollers arranged on said shafts, teat cups removably secured in said tray, milk deflecting plates arranged on said cups, means to yieldingly hold said cups in position to cooperate with said rollers, for milking purposes, an adjusting frame pivotally mounted on each of said cups and adapted to be swung into engagement with said shafts, whereby the cups are held at a greater distance from said rollers, thereby causing the latter to operatively engage the teats lower down than when the cups are closer to the rollers thus facilitating the machine for operation with long or short teats, and means whereby said rollers are operated.

[Claims 6 to 8 not printed in the Gazette.]

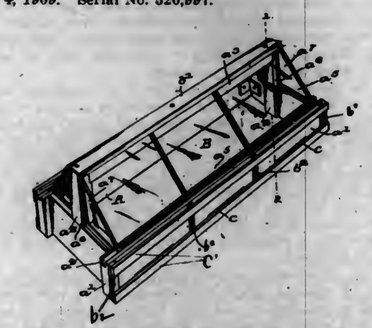
958,955. DETACHABLE SPROCKET-WHEEL. OTTO CULLMAN, Chicago, Ill. Filed June 8, 1908. Serial No. 437,378.

The combination of a split sleeve, a shaft, a key interposed between the sleeve and the shaft, said sleeve provided with a conical periphery at one end thereof, and with external screw threads at the other end thereof, a sprocket wheel provided with a central hole arranged to fit the conical periphery of the sleeve, a key interposed between the sprocket wheel and the sleeve, a nut provided with internal screw threads arranged to fit the screw threads on the sleeve, and a split pin, said sprocket wheel being provided with holes and said nut arranged to cover the said holes and provided with a flat side arranged to successively uncover said holes as the nut is turned into



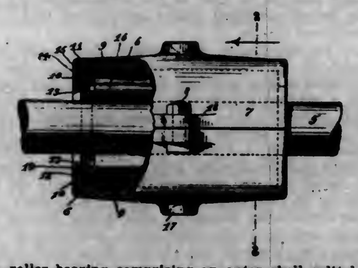
place, so that when the split pin is in said uncovered hole the nut is locked; substantially as described.

958,956. FORCING FRAME OR INCLOSURE FOR HORTICULTURAL OR OTHER PURPOSES. WILLIAM CUTLER, Edgbaston, Birmingham, England. Filed Oct. 4, 1909. Serial No. 520,997.



A forcing frame comprising a base having its top edges grooved, standards at two opposite sides of the base having their sides grooved, a longitudinal beam connecting the upper ends of the standards together, an obliquely disposed translucent cover with its bottom edge resting in the grooves of the base and its top edge resting against the longitudinal beam, a protector cap for the longitudinal beam embracing the top edge of the cover, end covers held in the grooves of the base and standards and engaging the top cover, and vertical pockets in the base for the top cover.

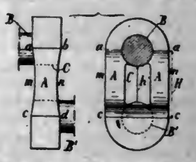
958,957. ROLLER-BEARING. WILLARD W. DENNIS, Los Angeles, Cal., assignor of one-half to John E. Ward, Los Angeles, Cal. Filed Nov. 24, 1908. Serial No. 464,327.



1. A roller bearing comprising an outer shell split longitudinally, said shell having inwardly projecting flanges, said flanges having annular grooves in their opposing faces, the outer surface of said grooves being rabbeted to form tracks; spacing rollers consisting of cylindrical bodies having the ends thereof projecting into said grooves and the end of the outer edge bearing against the inner rabbet or track; bearing rollers intermediate the spacing rollers, said bearing rollers having trunnions.

2. A roller bearing adapted for placement around a shaft comprising a series of load sustaining rollers and spacing rollers alternately arranged, the said spacing rollers being of less diameter and longer than the sustaining rollers; a member encompassing said rollers having annular internal flanges at the ends thereof, said flanges having annular grooves in their opposing surfaces, the outer portion of said grooves being stepped and so arranged that one of the steps bears against the ends of the spacing rollers to receive the end thrust thereof only at the outer edge of said rollers.

958,958. SHAFT OR AXLE CRANK. CHARLES FREMONT, Paris, France. Filed Feb. 28, 1905. Serial No. 247,770.



1. A crank shaft or bent axle connection comprising a shaft and a crank pin and crank members connecting the same, said members each comprising two symmetrical arms situated in close proximity and parallel laterally to tangents joining the outer surfaces of the shaft and the crank pin, the said arms joining each other about the outer surface of said shaft and crank pin and being of uniform thickness measured in a direction transverse to the latter members, but of varying thickness longitudinally, the thickness being a maximum at the bearings of the shaft and crank pin and a minimum at the middle point between the same.

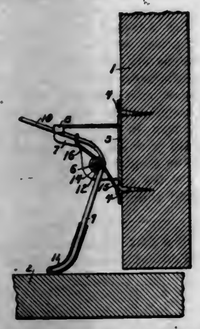
2. A crank shaft or bent axle connection comprising a shaft and a crank pin and crank members connecting the same, said members each comprising two symmetrical arms situated laterally at the exterior of tangents joining the outer surfaces of the shaft and crank pin, said arms joining each other about the outer surfaces of said shaft and crank pin and being of uniform thickness measured in a direction transverse to the shaft, but of varying thickness longitudinally, the thickness being a maximum at the bearings of the shaft and crank pin and a minimum at the middle point between the same.

958,959. COMBINED DOOR CHECK AND BUFFER. LEW L. HAMILTON, Albion, Mich., assignor to T. C. Prouty Company, Albion, Mich. Filed Oct. 13, 1909. Serial No. 522,452.

1. A combined door check and buffer, comprising a support having a pair of outwardly projecting ears, one of said ears having a downwardly facing catch thereon; a pivot carried by said ears; an engaging member adjustably arranged on said pivot and having a finger piece adapted to be engaged with said catch for holding said engaging member in its floor-engaging position, said engaging member and finger-piece being formed integrally of a piece of wire bent into a loop, the arms of the loop being coiled about said pivot, one arm being extended into said finger piece; and a coiled spring having an arm at each end arranged on said pivot between the arms of said engaging member with one arm in engagement with said finger piece and the other with said support.

2. A combined door check and buffer, comprising a support having a pair of outwardly projecting ears, one of said ears having a downwardly facing catch thereon; a pivot carried by said ears; and an engaging member adjustably arranged on said pivot and having a finger piece adapted to be engaged with said catch for holding said engaging member in its floor engaging position, said en-

gagipg member and finger piece being formed integrally of a piece of wire bent into a loop, the arms of the loop being coiled about said pivot, one arm being extended into said finger piece.



3. A combined door check and buffer, comprising a support having a catch thereon; a pivot carried by said support; an engaging member adjustably arranged on said pivot and having a finger piece adapted to be engaged with said catch for holding said engaging member in its floor engaging position; and a spring for supporting said engaging member in its elevated position.

4. A combined door check and buffer, comprising a support having a catch thereon; a pivot carried by said support; and an engaging member curved forwardly at its outer end, adjustably arranged on said pivot and having a spring finger piece adapted to be engaged with said catch for holding said engaging member in its floor engaging position.

5. A combined door check and buffer, comprising a support having a pair of outwardly projecting ears, one of said ears having an inwardly turned flange at its upper edge, the edge of said flange being inclined rearwardly; a pivot carried by said ears; and an engaging member adjustably arranged on said pivot and having a finger piece arranged to bear against the edge of said flange and adapted to be engaged beneath the same for holding said member in its floor engaging position.

[Claim 6 not printed in the Gazette.]

958,960. PROCESS OF INDELIBLY MARKING MEATS. JULIUS HAUSER, Los Angeles, Cal. Filed Mar. 16, 1905. Serial No. 250,440.

1. The process substantially as set forth of indelibly marking meats, which consists in subjecting the portions of the skin of the meat to be marked to the action of sodium-chlorid solution and also to the action of a compound of hydrochlorate of nitrobenzene, muriatic acid and a suitable vehicle.

2. The process of indelibly marking meats, which consists in subjecting the same to chlorid of sodium solution, removing excess moisture from the surface to be marked, and then marking such surface with a composition of hydrochlorate of nitrobenzene, muriatic acid, and glycerin.

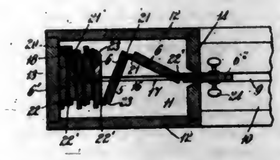
3. The process of indelibly marking meats, which consists in first subjecting the same to a salt brine, removing excess moisture from the surface to be marked, and imprinting such surface with a composition of hydrochlorate of nitrobenzene, muriatic acid and glycerin, and smoking the same.

4. The process of indelibly marking pork, which consists in subjecting the same to a salt brine, imprinting the skin with a composition of hydrochlorate of nitrobenzene, muriatic acid and glycerin, and then smoking the same.

5. The process of indelibly marking pork, which consists in subjecting the same to a salt brine, imprinting the skin with a composition of hydrochlorate of nitrobenzene, muriatic acid and a vehicle, and then smoking the same.

[Claim 6 not printed in the Gazette.]

958,961. COLLAPSIBLE DOOR. HENNING HEDWALL, Quincy, Mass. Filed Dec. 5, 1908. Serial No. 466,106.



1. In combination, a collapsible door consisting of a series of vertical strips hinged together, a door frame having a chamber at one side thereof adapted to hold said door when the same is collapsed, said frame being provided with a vertical slot through which said members are adapted to pass into and out of said chamber, a pin fast to one of the side strips of said door, and means provided with a groove in which said pin is located, a part of said groove leading from a point adjacent to said vertical slot and extending in the same direction as the plane of said door when extended and a part of said groove extending beyond and laterally with respect to said first part and at an obtuse angle thereto, said strips being disposed transversely of said first part of said groove when said door is collapsed.

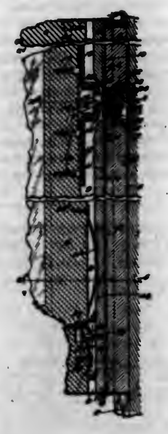
2. In combination, a collapsible door consisting of a series of vertical strips hinged together, a pin fast to one of the side strips of said door and projecting longitudinally therebeyond, and means provided with a groove in which said pin is located, a part of said groove extending in the same direction as the plane of said door when extended and a part of said groove extending beyond and laterally with respect to said first part and at an obtuse angle thereto, said strips being disposed transversely of said first part of said groove when said door is collapsed.

3. In combination, a collapsible door consisting of a series of vertical strips hinged together, a door frame having a chamber at one side thereof adapted to hold said door when the same is collapsed and provided with a groove in the bottom thereof, a threshold provided with a groove, and a stop pin fast to one of the side strips of said door and projecting downwardly therefrom into the first-mentioned groove, the lower ends of said strips being adapted to slide in the second-mentioned groove, the second-mentioned groove being located above the first-mentioned groove.

4. In combination, a collapsible door consisting of a series of vertical strips hinged together, a door frame having a chamber at one side thereof adapted to hold said door when the same is collapsed and provided with a groove at the bottom thereof, a threshold provided with a groove, and a stop pin fast to one of the side strips of said door and projecting downwardly therefrom into the first-mentioned groove, the lower ends of said strips being adapted to slide in the second-mentioned groove, the second-mentioned groove being wider than the first-mentioned groove.

5. In combination, a collapsible door consisting of a series of vertical strips hinged together, a door frame including a lintel provided with a groove, said frame having a chamber at one side thereof adapted to hold said door when the same is collapsed and being provided at the top and bottom thereof with grooves, a threshold provided with a groove, and stop pins projecting upwardly and downwardly from opposite ends, respectively, of one of said side strips into said grooves in the top and bottom of said chamber, the upper and lower ends of said strips being adapted to slide in said grooves in said lintel and threshold, respectively, said grooves in said lintel and threshold, respectively, being greater in width than said grooves at the top and bottom, respectively, of said chamber and being located, respectively, below and above said grooves at the top and bottom of said chamber.

958,962. REVERSIBLE WINDOW. DAVID E. HIPOLITO, Los Angeles, Cal. Filed July 2, 1909. Serial No. 505,756.



1. In a window, the combination with a channeled stile having holes at the bottom of the channel, of a loop fastened in the channel, a bolt extending through and having its head rotatable within the loop, forked retainers fastened in the channel and extending part-way over the holes, springs in the channel, a shoe fastened to the bolt and provided with a shallow rounded groove that faces the channel, said shoe being wider than the loop, tongues in the channel, the inner ends of said tongues being retained by the shoe, and stops fastened to the inner sides of the outer ends of the tongues and having heads inserted in said holes to engage the inner sides of said retainers to hold the outer ends of the tongues in place in the channel when the window-sash is turned relative to the shoe.

2. The combination with a channeled stile, of a shoe pivoted to the stile, a spring in the stile-channel, a retainer fastened in the channel, and a tongue provided with a stud having a head to engage the retainer to hold one end of the tongue in the channel when the window is swung on its pivot.

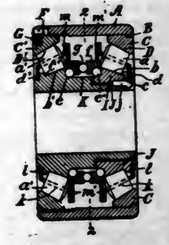
3. The combination with a channeled stile, of a loop having feet fastened in the channel of the stile, said loop being perforated, a bolt extending through the perforation and having a head inside the loop, the end of said bolt being transversely slotted, a shoe provided with a countersunk hole through which the bolt is inserted, a nut in the countersink, the same being screwed on the bolt, screws fastening the nut to the shoe, and a staple seated in the nut and having its middle portion seated in the slot.

4. The combination with a channeled stile, of a loop having feet fastened in the channel of the stile, said loop being perforated, a bolt extending through the perforation and having a head inside the loop, the end of said bolt being transversely slotted, a shoe provided with a countersunk hole through which the bolt is inserted, a nut in the countersink, said nut being screwed on the bolt, screws fastening the nut to the shoe, a staple seated in the nut and having its middle portion seated in the slot, and a screw-threaded washer screwed onto the bolt and against the inside of the shoe.

5. In a window, the combination of a channeled stile, a shoe over the channel of the stile, a pivot-bolt fixed to the shoe and having its head in the channel, and means engaging the head in the channel to pivotally hold said bolt.

[Claims 6 and 7 not printed in the Gazette.]

958,963. COMBINATION ROLLER-BEARING. CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed Oct. 18, 1909. Serial No. 523,286.



1. In a self-contained roller bearing, the combination, with a hub having oppositely inclined conical seats with a channel between their bases and a ball-race in the channel adjacent to each base with a series of balls therein, of two series of conical rolls fitted to the conical seats on the hub, a casing having tapering seats to embrace the outsides of the two series of rolls, and thrust-rings fitted movably to the inner ends of the rolls and provided with ball-races to embrace the two series of balls, and means for supporting the adjacent ends of the rings upon one another to resist end-thrust.

2. In a self-contained roller bearing, the combination, with a hub having oppositely inclined conical seats with a channel between their bases and a ball-race in the channel adjacent to each base with a series of balls therein, of two series of conical rolls fitted to the hub and beveled upon their adjacent ends, a casing having tapering seats to embrace the outsides of the two series of rolls, and thrust-rings having each a ball-race fitted to the said balls, and having a flat end fitted to the beveled ends of the rolls, the adjacent ends of the rings having ball-races with a series of balls fitted thereto between the rings to resist end-thrust.

3. In a self-contained roller bearing, the combination, with a hub having oppositely inclined conical seats with a channel between their bases and a ball-race in the channel adjacent to each base with a series of balls therein, of two series of conical rolls fitted to the hub and beveled upon their adjacent ends, a casing having tapering seats to embrace the outsides of the two series of rolls, and thrust-rings having each a ball-race fitted to the said balls, and having a flat end fitted to the beveled ends of the rolls, the adjacent ends of the rings having ball-races with a series of balls fitted thereto the hub having means for adjusting the ball-races in the channel toward one another, for snugly embracing the balls between the two rings.

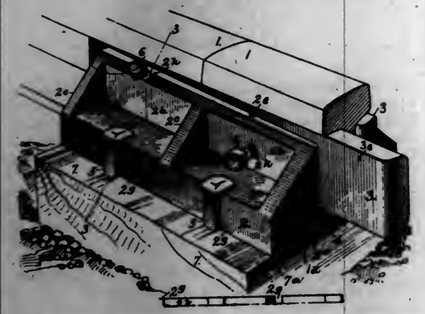
4. In a self-contained roller bearing, the combination, with a hub having a conical seat upon one end and a threaded boss upon the opposite end, of a threaded collar fitted to such boss and provided with an oppositely inclined conical seat, the boss and collar having a series of keyways and a key fitted to the same for locking the parts when adjusted, the bases of the conical seats having opposed ball-races thereon with series of balls fitted thereto, two series of conical rolls fitted to the conical seats on the hub with their adjacent ends beveled, a casing having tapering seats to embrace the outsides of the two series of rolls, thrust-rings fitted movably to the inner ends of the rolls and provided with ball-races to embrace the two series of balls, and having ball-races upon their adjacent ends with a series of balls fitted thereto, the collar on the hub being adjustable to embrace the three series of balls snugly.

5. In a self-contained roller bearing, the combination, with a hub having oppositely inclined conical seats with a channel between their bases and a ball-race in the channel adjacent to each base with a series of balls therein, of two series of conical rolls fitted to the conical seats on the hub, thrust-rings fitted movably to the inner ends

of the rolls and provided with ball-races to embrace the two series of balls, means for supporting the adjacent ends of the rings upon one another, a casing having a cylindrical shell with ring-sections secured in its opposite ends and provided each with a tapering seat to embrace the outer sides of the rolls, and one of such ring-sections being adjustable toward the other to vary their bearing upon the rolls, substantially as herein set forth.

[Claims 6 and 7 not printed in the Gazette.]

958,964. RAIL-CHAIR. CHARLES MALITCH, McKees Rocks, Pa. Filed Jan. 12, 1910. Serial No. 537,705.



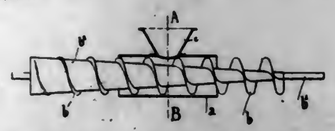
1. In a rail joint, a joint chair comprising a base having a rail base receiving chamber and upwardly extending parallel webs spaced apart, and having their inner faces parallelly disposed to one another and held in planes at an angle to the central vertical longitudinal axis of the chair and the web of the rail, rails having their ends held in said chair, wooden wedge keys interposed between the chair web and the rail web to secure the rail immovable, a wooden bed plate in the rail base receiving chamber under the rail ends, means for retaining said wedge keys in place, said means comprising protuberances on the inner faces of the rail chair webs to bite into the keys.

2. In a rail joint, a joint chair comprising a base having a rail base receiving chamber and upwardly extending parallel webs spaced apart, and having their inner faces parallelly disposed to one another and held in planes at an angle to the central vertical longitudinal axis of the chair and the web of the rail, rails having their ends held in said chair, wooden wedge keys interposed between the chair webs and the rail web to secure the rail immovable, a wooden bed plate in the rail base receiving chamber under the rail ends, means for retaining said wedge keys in place, said means comprising protuberances on the inner faces of the rail chair webs to bite into the keys, and set screws tapped into the chair webs to engage the keys.

3. In a rail joint, a joint chair comprising a base having a rail base receiving chamber and upwardly extending parallel webs spaced apart, and having their inner faces parallelly disposed to one another and held in planes at an angle to the central vertical longitudinal axis of the chair and the web or the rail, rails having their ends held in said chair, wooden wedge keys interposed between the chair webs and the rail web to secure the rail immovable, a wooden bed plate in the rail base receiving chamber under the rail ends, means for retaining said wedge keys in place, said means comprising protuberances on the inner faces of the rail chair webs to bite into the keys, set screws tapped into the chair webs to engage the keys, said set screws being arranged in pairs, one pair being directed downwardly and inwardly against the keys and the other pair being directed at substantially right angles to the keys.

4. In a rail joint, a joint chair comprising a base having a rail base receiving chamber and upwardly extending parallel webs spaced apart, and having their inner faces parallelly disposed to one another and held in planes at an angle to the central vertical longitudinal axis of the chair and the web of the rail, rails having their ends held in said chair, wooden wedge keys interposed between the chair webs and the rail web to secure the rail immovable, a wooden bed plate in the rail base receiving chamber under the rail ends, means for retaining said wedge keys in place, a tie having a transverse recess to receive said chair, said chair having a pair of spike grooves at each side, downwardly diverging from one another, the grooves of one side diverging downwardly from those of the other side, and spikes held in said grooves and entering said ties to secure said chair thereto and brace it from lateral and longitudinal movement.

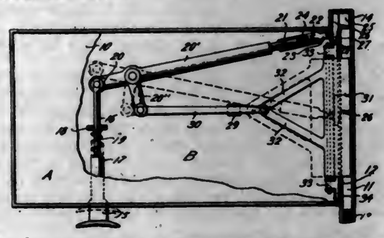
958,965. APPARATUS FOR MEASURING OR APPORTIONING MATERIALS OF A GRANULAR OR OTHER SUITABLE FORM. THOMAS HUGHES DELABÈRE MAY, Bath, England. Filed Nov. 18, 1907. Serial No. 402,724.



1. An apparatus for measuring or apportioning materials of granular or other suitable form comprising in combination a screw having a conical core and uniform pitch, a cylindrical barrel, bearing a feed hopper, movable on the screw to regulate the quantity of discharge by the depth alone of the space between the coils of the thread.

2. An apparatus for measuring or apportioning materials of granular or other suitable form comprising in combination a screw having a conical core and uniform pitch, a cylindrical barrel bearing a feed hopper having a discharge opening of constant size and movable and supported on said screw, substantially as set forth.

958,966. SINGLE-DELIVERY MATCH-BOX. MEYER MEYERSON, Bennettville, Minn. Filed Jan. 21, 1910. Serial No. 539,282.



1. In a match safe, the combination with a casing, of a horizontal partition dividing said casing into two compartments of unequal size, a bell crank pivotally mounted in the smaller of said compartments, and a plunger for operating said bell crank, a separating plate reciprocated by said bell crank, and a shuttle adapted to project matches from the safe, resiliently operated by the remaining arm of said bell crank.

2. In a match safe, the combination with a casing, having an outlet opening, of a horizontal partition dividing the casing into two compartments of unequal size, a bell crank pivotally mounted in the smaller of said compartments, a separating plate operated adjacent to said horizontal partition by one arm of said bell crank, a closure pivoted to said partition adjacent to the outlet opening of the casing, a shuttle resiliently connected to the remaining arm of said bell crank, adapted to raise and lower said closure and to project matches through said outlet opening, said matches being contained in the larger compartment aforesaid, and means whereby said bell crank may be operated.

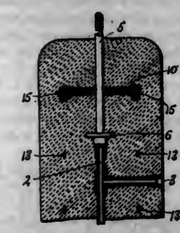
3. In a match safe, the combination with a casing, of a plunger adapted to reciprocate in the forward face thereof, a bell crank rotatably mounted in said casing and pivotally connected to said plunger, a shuttle operated by one arm of said bell crank in approximately a straight line, and a dividing plate reciprocated by the remaining arm.

4. In a match safe, the combination with a casing, of a partition in said casing dividing the same into two compartments, said compartments being connected by a transverse opening at one extremity of the safe, a partition provided adjacent said transverse opening forming a channel, a plunger reciprocating in said casing, a bell crank operated by said plunger, a shuttle operated by one arm of said crank adapted to reciprocate in said channel, and a separating slide operated by the other arm of said bell crank.

5. In a match safe, the combination with a casing having a delivery opening in one extremity thereof, of a plunger adapted to reciprocate therein, a bell crank radially operated by said plunger, a shuttle operated by one arm of said bell crank adapted to project matches through the delivery opening and at the same time separating the delivered match from the remaining supply, and a separating plate operated by the other arm of the bell crank adapted to separate the match next to be delivered from the remaining supply.

[Claims 6 to 9 not printed in the Gazette.]

958,967. METAL-REINFORCED CONCRETE PILE. EDWARD MOHUN, Victoria, British Columbia, Canada. Filed Sept. 29, 1909. Serial No. 520,166.

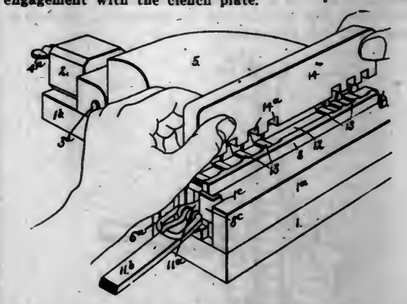


1. In a concrete pile, a plurality of angle irons running throughout the length of the pile, a series of spacing frames having apertures to permit passage of said angle irons and form seats therefor, expanded metal members wound around said angle irons between said spacing frames, means for tying said metal members to said angle irons and to said spacing frames, a sheet metal shoe laterally extended to the outside diameters of the pile and having cut portions inwardly bent, and means for securing one of said spacing frames to said inwardly bent portions.

2. In a concrete pile, a plurality of angle irons running throughout the length of the pile, a series of spacing frames having apertures to permit passage of said angle irons and form seats therefor, expanded metal members wound around said angle irons between said spacing frames, each of said spacing frames comprising an outer rectangular portion and diametrically disposed cross portions merging with a central apertured portion and a pipe within the pile projected through said apertured portions of said spacing frames.

958,968. LOOP-SETTING MACHINE. WILLIAM A. MCALLISTER, St. Joseph, Mo. Filed June 24, 1909. Serial No. 504,091.

1. A machine for setting metal loops having tangs, a base or support, a clench plate removably held therein, guide plates removably supported over said clench plate and having a plurality of loop receiving grooves, a loop holding rod operating between said plates and movable through the loops, said clench plate and said guide plates adapted to form a channel to receive the work to which the loops are to be secured, and means operating between said guide plates and engaging said loop holding rod for forcing the tangs of such loops through the work into engagement with the clench plate.



2. A machine for setting metal loops having tangs, a base or support, a clench plate held therein, guide plates removably supported over said clench plate and having a plurality of loop receiving grooves, a loop holding rod operating between said plates and movable through the loop, said clench plate and said guide plates adapted to form a channel to receive the work to which the loops are to be secured, and means operating between said guide plates and engaging said loop holding rod for forcing the tangs of such loops through the work into engagement with the clench plate.

3. A machine for setting metal loops having tangs, a base or support, a clench plate removably held therein, guide plates supported over said clench plate and having a plurality of loop receiving grooves, a loop holding rod operating between said plates and movable through the loop, said clench plate and said guide plates adapted to form a channel to receive the work to which the loops are to be secured, and means operating between said guide plates and engaging said loop holding rod for forcing the tangs of such loops through the work into engagement with the clench plate.

4. A machine for setting metal loops having tangs, a base or support, a clench plate held therein, guide plates supported over said clench plate and having a plurality of loop receiving grooves, a loop holding rod operating between said plates and movable through the loops, said clench plate and said guide plates adapted to form a channel to receive the work to which the loops are to be secured, and means operating between said guide plates and engaging said loop holding rod for forcing the tangs of such loops through the work into engagement with the clench plate.

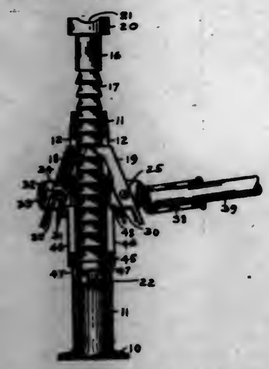
5. A machine for setting metal loops having tangs; a base or support having a groove, a clench plate mounted therein, a side guide plate having a plurality of guiding grooves removably secured to said base plate, a jaw hinged to said base plate, means preventing lateral movement of said jaw with relation to said base plate, a side guide plate having grooves removably secured to said jaw to cooperate with said first mentioned side guide plate, and means coöperating with the aforementioned parts for setting a plurality of loops into an article.

[Claims 6 and 7 not printed in the Gazette.]

958,969. LIFTING-JACK. ALBERT NEAL, Center, Ind. Filed Aug. 30, 1909. Serial No. 515,282.

1. In a lifting jack, a hollow standard having a squared upper end with pawl-openings through two opposite sides and pivot-lugs on the other two sides, a lifting-bar mounted in said hollow standard said bar having a plurality of notches to be engaged by pawls, a rocking-head substan-

tially in the form of a rectangular frame to receive the squared end of the standard and having notches to receive the pivot-lugs of the standard, said head having a handle and pivot recesses in its inner wall for the attachment of pawls, pawls in said head having trunnions seated in the pivot recesses of the head, the upper ends of said pawls passing through the pawl-openings of the standard and engaging in notches of the lifting-bar, and springs mounted in and carried by the pawls for moving the pawls into contact with the lifting-bar.

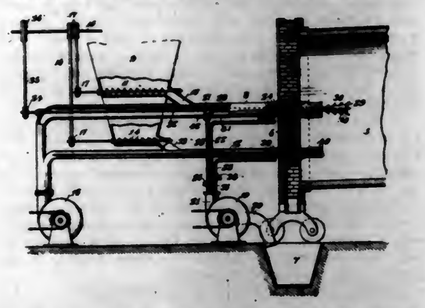


2. In a lifting jack, a hollow standard having a squared upper end with pawl-openings through two opposite sides and pivot-lugs on the other two sides, a lifting-bar round in cross section having a reciprocating travel in said standard said bar having a plurality of annular grooves to engage pawls, a rocking-head substantially in the form of a rectangular frame to receive the squared end of the hollow standard, said frame having underside notches to receive the pivot-lugs of the standard, said head having a handle and also pivot recesses in its inner wall for the attachment of pawls, a pair of pawls one on each side of the standard mounted in said head and having trunnions seated in the pivot recesses of the head, the upper ends of the pawls passing through the openings in the standard into contact with the grooved lifting-bar, said pawls having transverse openings with inwardly projecting pins in said openings, and springs secured to said pins and having one arm bearing against the lower end of the pawl and another arm bearing against a fixed portion of the head.

3. In a lifting jack, a hollow standard, a lifting-bar mounted in said hollow standard having a plurality of notches to be engaged by pawls, a rocking-head substantially in the form of a rectangular frame surrounding the standard, said frame having a handle for the manual rocking of the frame, pawls pivotally mounted within said head, one on each side of the standard, the upper ends of said pawls engaging notches of the lifting-bar said pawls each having an inwardly projecting lug, springs for moving the pawls into contact with the lifting-bar, adjustable trips arranged to be moved into contact with the lugs on the pawls to alternately move the pawls out of engagement with the rack and reverse the travel of the rack comprising a yoke with upward extensions terminating in trip-heads, a spring to press the yoke toward the pawls, and a fastening to lock the trips in their adjustments out of the paths of the pawl-lugs.

4. In a lifting jack, a hollow standard having a notch near its base, a lifting bar provided with notches and slidably mounted in the standard, a rocking-head substantially in the form of a rectangular frame surrounding the standard, said frame having a handle for the manual rocking of the frame, pawls pivotally mounted within said head, one on each side of the standard, the upper ends of said pawls engaging notches of the lifting-bar said pawls each having an inwardly projecting lug, springs for moving the pawls into contact with the lifting-bar, adjustable trips arranged to be moved into contact with the lugs on the pawls to alternately move the pawls out of engagement with the rack and reverse the travel of the rack comprising a rod having a lateral yoke with upward extensions terminating in trip-heads, a spring to press the yoke toward the pawls, and a hand lever pivoted to the lower end of the rod and having a flange arranged to be engaged with the notch near the base of the standard to lock the trip-heads out of the paths of the pawl-lugs.

958,970. FUEL-FEEDING MEANS FOR CEMENT-KILNS. ADOLF NEU, Tod Inlet, British Columbia, Canada. Filed Apr. 22, 1908. Serial No. 428,527.



1. The combination with a furnace, of a fuel conduit having its discharge end projecting thereinto, an air supply pipe extending longitudinally through the conduit and projecting beyond the discharge end thereof, said pipe having a closed rear end and having a plurality of laterally extending hollow air discharging members on its projecting portion to break up the column of fuel discharged from the conduit and also deliver air into the fuel, and means for rotating the pipe.

2. The combination with a furnace, of a fuel conduit leading thereinto, and an air supply pipe extending within the conduit and having a nozzle at the discharge end of said conduit, said nozzle being provided with a plurality of lateral discharge nipples.

3. The combination with a furnace, of a fuel conduit delivering thereinto, an air supply pipe extending longitudinally within the conduit, and having a discharge end disposed at the discharge end of said conduit and provided with lateral discharge ports, means for rotating said pipe, and outstanding members on the pipe and rotating therewith in the path of the fuel issuing from the conduit to deflect the fuel.

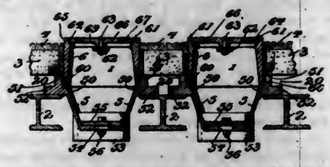
4. The combination with a furnace, of a fuel conduit delivering thereinto, an air supply pipe extending longitudinally within the conduit, a rearwardly flared nozzle carried by the discharge end of said pipe and located at the discharge end of the conduit, said nozzle having a plurality of outstanding discharge nipples, and a shaft extending into the conduit and connected to the pipe for rotating the same.

5. The combination with a furnace, of a fuel conduit communicating therewith, a plurality of air supply pipes discharging at the end of the conduit and causing gyratory currents of air longitudinally of said conduit, and an air supply pipe extending longitudinally within the conduit and having an outwardly flared nozzle at its rear end, said nozzle being located adjacent to the discharge end of the conduit.

[Claims 6 to 16 not printed in the Gazette.]

958,971. FORCED-DRAFT-FURNACE GRATE. WILLIAM HOWARD PALMER, Fort Scott, Kans. Filed Jan. 21, 1909. Serial No. 473,404.

1. A forced-draft furnace bed comprising supporting beams, hollow grate bars parallel with and between and resting on said beams and extending upwardly above the horizontal plane of said beams and having top forced-draft outlets and filling material between said bars and closing the spaces above said beams and between the bars.



2. A forced-draft furnace grate comprising spaced supporting beams, hollow grate bars parallel therewith and having intermediate flanges resting on said beams, said bars having top draft outlets and side ledges, and bricks in the spaces between said bars and above said beams and supported by said ledges.

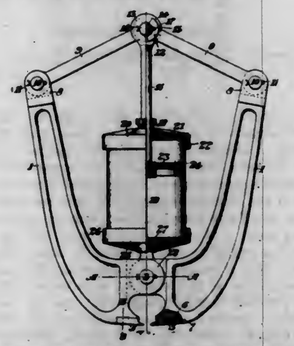
3. A hollow grate bar for a forced-draft furnace bed having top draft outlets and horizontal exterior opposite side flanges, and brick supporting ledges above said flanges.

4. A hollow grate bar having top air discharge openings, and throughout the length of its sides provided with longitudinal ledges for supporting filling material for closing the spaces between adjacent bars, and with longitudinal bar supporting portions, substantially as described.

5. A forced-draft furnace bed closed against the downward passage of fuel therethrough and comprising parallel spaced hollow grate bars having top air outlets, supporting beams arranged longitudinally of and parallel with and between said bars, and removable refractory material filling laid between said bars and above said beams to close the spaces between said bars.

[Claims 6 to 25 not printed in the Gazette.]

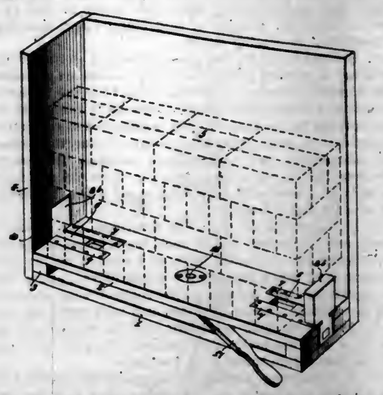
958,972. SHEARING-TOOL. GEORGE EDWARD PELLISSIER, Holyoke, Mass., assignor to Goldschmidt Thermit Company, New York, N. Y., a Corporation of New York. Filed Dec. 28, 1908. Serial No. 469,584.



1. A shear comprising a pair of arms having interlocked ears projecting from their inner sides, a pivot pin passing through openings in said ears, a pair of toggle levers pivoted to one end of said arms, a piston connected with the joint of said toggle levers, a power cylinder in which such piston works, and an eye-bolt on which said cylinder is supported mounted to rock on the pivot pin of the shear arms.

2. A shear comprising a pair of arms having interlocked ears projecting from their inner sides, a pivot pin passing through openings in said ears, a power cylinder for operating the shear disposed between the arms thereof, and an eye-bolt located between said interlocked ears and adapted to rock on the pivot pin connecting said ears, the shank of said bolt being screw threaded into the head of said cylinder and serving to support the same.

958,973. BRICK-SETTING FRAME. RAYMOND C. PENFIELD, New York, N. Y. Filed Oct. 30, 1908. Serial No. 460,249.



1. In a brick-setting support, the combination with an angular upright, of a horizontal board on which the bricks may be hacked up in stack formation, and parallel clamping blocks arranged to travel toward and away from each other on said horizontal board, for the purpose of closing up a series of bricks thereon.

2. In a brick-setting support, the combination with an angular upright, of a horizontal board on which the bricks may be hacked up in stack formation, and movable clamping blocks arranged in connection with the latter for acting upon a layer of bricks, one of said blocks being arranged to retreat through an opening in the upright.

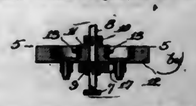
3. In a brick-setting support, the combination with a right-angled corner upright, of a horizontal support on which the bricks are placed, a clamping block arranged in connection with the upright so that it may be withdrawn through the latter after the bricks are set and thus removed from obstructing position, a second clamping block, said blocks being arranged to move toward and away from each other, and means for actuating the blocks.

4. In a brick-setting support, the combination with an angular upright, of a horizontal board on which the bricks are placed, and movable devices arranged in connection with the horizontal board for closing up a layer of bricks, said devices being adapted to be removed from beneath the overhanging mass of bricks after the latter are set, in order to allow lifting mechanism to engage the ends of the lower layer of the bricks.

5. In a brick-setting support, the combination with an angular upright, of a horizontal board on which the bricks are placed, parallel clamping blocks arranged at the ends of the board but inside the angular upright, said clamping blocks being adapted to move toward and away from each other, when moving toward each other clamping the layer of bricks and when moving away from each other leaving openings at the ends of the lower layer for the operation of a lifting mechanism.

[Claims 6 to 14 not printed in the Gazette.]

958,974. FLY-WHEEL FOR WARPING AND BALLING MACHINES. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Aug. 9, 1909. Serial No. 511,842.



1. In apparatus of the class described, a transmitting member, and normally inactive governing means, including

a momentum member frictionally connected with and rotated by the transmitting member when the latter is power driven, to assume control of the transmitting member positively and automatically when the power is thrown off and to effect the rotation of said transmitting member at a gradually decreasing speed.

2. In apparatus of the class described, a transmitting member, a driving shaft positively connected therewith, and normally inactive governing means for the apparatus, including a momentum member frictionally connected with and rotated by the transmitting member when the latter is power driven, and a direct and positive connection between the momentum and transmitting members, to continue the rotation of the latter in unison with the momentum member at a gradually decreasing speed when the power is thrown off the driving shaft.

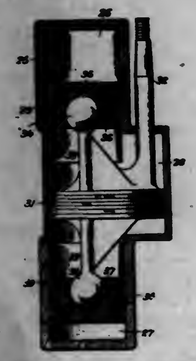
3. In apparatus of the class described, a transmitting shaft, and governing means, including a momentum member frictionally connected with and rotated by the transmitting shaft when the latter is power driven, and a device to positively and automatically connect said shaft and the momentum member to rotate as a unit when the power is thrown off to bring said shaft and the momentum member to a stop gradually and simultaneously as the energy of the momentum member is dissipated.

4. In a warping machine, a transmitting shaft, a balance wheel, a friction coupling between it and the transmitting shaft, to effect rotation of said balance wheel when the transmitting shaft is power driven, and a pawl and ratchet connection between said shaft and balance wheel and operating in the direction of normal rotation, whereby when the power is thrown off the balance wheel acts positively through the pawl and ratchet connection to continue rotation of the transmitting shaft in unison with the balance wheel and gradually bring them to a stop simultaneously.

5. In a warping machine, in combination, a transmitting member, and means, including a momentum member, to assume positive control automatically of said transmitting member when the power is thrown off, continuing the rotation of said member in unison with the momentum member at a gradually decreasing speed and finally stopping the transmitting member.

[Claim 6 not printed in the Gazette.]

958,975. GAS-ENGINE. JOHN V. RICE, Jr., Bordentown, N. J., assignor to Rice Gas Engine Company, Bordentown, N. J., a Corporation of New Jersey. Filed Aug. 24, 1909. Serial No. 514,369.



1. In a gas engine, the combination with a cylinder, of a piston having end sections and an intermediate part, said intermediate part being loosely connected with the end sections, and a piston rod connected to one side of the said intermediate part.

2. The combination in a gas engine with a cylinder, of a piston having end sections and a central portion loosely connected to said end sections, said end and central parts being cylindrical but the central part being eccentric to the others, and a piston rod connected to said eccentric center part.

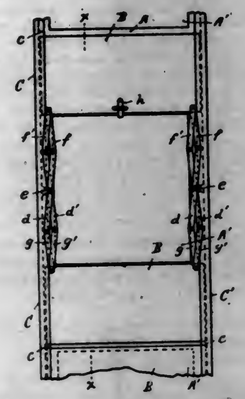
3. The combination with the cylinder of a gas engine, of a piston consisting of separate ends and a central part having balls loosely entering sockets in said ends, and a piston rod connected to one side of the said central part.

4. In a gas engine, the combination with a cylinder, of a piston having separate ends, a central part having balls loosely entering sockets in said ends, together with a piston rod applied to said central part.

5. In an internal combustion engine, the combination with a cylinder having an eccentric compression chamber between its ends, of a piston in said cylinder having separate ends and a central portion connected by ball and socket joints with said ends, said central portion being eccentric and fitted within said compression chamber.

[Claims 6 and 7 not printed in the Gazette.]

958,976. DOOR. ADAM RITTER, Cincinnati, Ohio. Filed June 18, 1906. Serial No. 322,189.



1. In a door, a plurality of door sections, guides engaging said sections to hold them in place and direct their movements, a series of links pivoted together, pivotal connections between said links and the respective door sections, a stud supporting said links relative to the wall, and recesses at the meeting edges of the door sections to house said links when the door sections close the opening.

2. In a door, a plurality of vertically moving door sections, guides engaging said sections to hold them in place and direct their movements, and separate link mechanisms at opposite sides of the opening, each comprising a series of links pivoted together, supported relative to the wall and pivotally connected to the respective door sections.

3. In a door, a plurality of vertically moving door sections, guides engaging said door sections to hold them in place and direct their vertical movements, and separate link mechanisms located at opposite sides of the opening, each link mechanism comprising a series of links pivoted together, pivotally supported relative to the wall and pivotally connected to the edges of said door sections, one of said door sections being slightly heavier than the other so that the door sections will automatically seek a predetermined position.

4. In a door, a plurality of door sections, guides engaging said sections to hold them in place and direct their movements, a series of links pivoted together, pivotal connections between said links and the respective door sections, pivotal supports connecting said links relative to the wall, and means carried by said door sections to inclose said links when the door is closed.

5. In a door, a plurality of vertically moving door sections, guides at opposite sides of said door sections and separate link mechanisms pivotally connected to opposite sides of the door sections and to the wall and projecting inwardly from opposite sides of the opening.

[Claims 6 and 7 not printed in the Gazette.]

958,977. COAT. PAUL SHOTLAND, New York, N. Y. Filed Sept. 25, 1909. Serial No. 519,652.



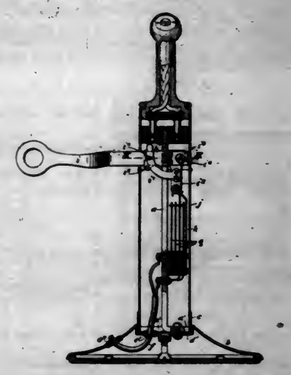
The combination with a coat, of a collar attached thereto and comprising two parts constructed and arranged to fold one part upon the other, having ventilating openings in the folds of said collar, and having sight openings also in said folds, perforated screens in said ventilated openings, flexible transparent screens in said sight openings, and said collar constructed and arranged to afford facility for, at one time, laying the same down upon the shoulders of the wearer, and at another time detachably fastening the same around the neck of the wearer, and at another time detachably fastening the same around the face and ears of the wearer, so that one of the ventilation openings will be opposite the mouth, and one of the sight openings opposite each of the eyes of the wearer.

958,978. TRIP GRAB-HOOK. MAJOR V. SPENCER, Deer River, Minn. Filed Mar. 10, 1909. Serial No. 482,541.



In a trip grab hook, a supporting member having opposite portions, a hook member pivotally connected to the lower ends of the opposite portions, said hook member having an arm provided with a terminal offset and with an angular slot, a trip member pivoted to the supporting member and formed with a slot to receive the offset terminal of the hook arm and with a projecting portion, and a link member pivoted in said angular slot adapted to engage the projecting portion of the trip member whereby the hook member is held in a holding position on the supporting member.

958,979. TELEPHONE SWITCH-HOOK. BURTON W. SWEET, Cleveland, Ohio, assignor to Harry Z. Sands, Cleveland, Ohio. Original application filed Apr. 1, 1907. Serial No. 365,698. Divided and this application filed Sept. 20, 1909. Serial No. 518,480.



1. In a telephone switch hook apparatus, the combination with a pivoted bell-crank member, of a set of switch springs connected to be actuated by a depending portion thereof, a removable supporting member fitting said bell-crank lever, an extended pin or stud thereon, and a spring adapted to engage the latter and removably secure the supporting member in place, substantially as set forth.

2. In apparatus of the class described, the combination with a pivoted actuating part, of switch springs connected to be moved into and out of electrical engagement thereby, a removable supporting member detachably fitting said actuating part, and a resilient or spring actuated detent adapted removably to hold the parts normally in operative relation, substantially as set forth.

3. In a telephone switch hook appliance, the combination with a set of switch springs, of an actuating member pivotally mounted adjacent to said springs, a removable receiver support, engaging parts for mechanically connecting the two latter elements, a springlike latch or detent for normally securing said elements against separation, substantially as set forth.

4. In a telephone switch hook appliance, the combination with a forwardly slotted actuating member, of a set of switch springs controlled thereby, a transverse pin pivotally mounting said member, a telephone receiver support rearwardly slotted to engage said pin, a transverse pin thereon adapted to engage the slotted portion of the actuating member, and a spring latch normally engaging said pin for maintaining the parts in operative relation, substantially as set forth.

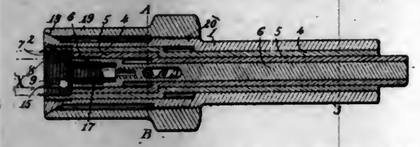
5. In a telephone hook switch for desk sets, the combination with a central mounting plate, of a housing rearwardly secured thereto, an actuating bell-crank member rearwardly pivoted in said housing, a set of switch springs positioned beneath and connected to be actuated by said member, a removable receiver support fitting the upper arm of the bell crank member, and a spring-actuated latch for securing the support and member together, substantially as set forth.

[Claim 6 not printed in the Gazette.]

958,980. CHUCK. GEORGE J. THOMAS, Watertown, Mass., assignor to Charles E. Chester, Boston, Mass. Filed Nov. 23, 1908. Serial No. 464,182.

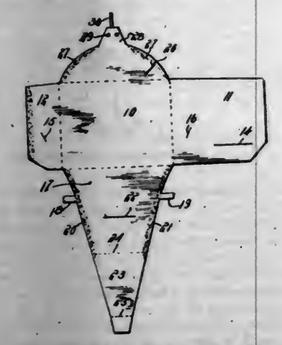
A chuck composed of a tubular casing screw threaded on the interior at one end thereof and contractible at said screw threaded portion, a plurality of tubes longitudinally adjustable within said casing each tube internally screw

threaded at one end thereof and contractible at said screw threaded portion, and means on the exterior of the casing



to contract said casing and any desired number of the contained tubes.

958,981. ENVELOP. JOHN W. TYISKA, Meridian, Okla. Filed Oct. 27, 1909. Serial No. 524,903.



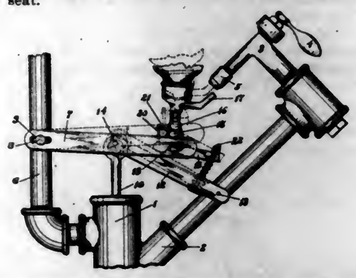
1. An envelop comprising a body and end flaps foldable over the body, one of the end flaps having a cleft, a back flap foldable over the body and provided with a cleft, a tongue extending from the free end of the back flap and foldable over the folded end flaps and with the terminal thereof passed through the cleft of the end flap, a closure flap provided with a tongue, and a bendable metal strip projecting from the closure flap tongue, said closure flap tongue insertible through the cleft of the back flap and the metal strip thereof passed through the tongue of the back flap and compressed thereon.

2. An envelop comprising a body and end flaps foldable over the body, each of said end flaps having a relatively short cleft and one of the end flaps having a relatively long cleft, a back flap foldable over the body and provided with relatively small tongues extending from its side edges and with a cleft, a tongue extending from the free end of the back flap and foldable over the folded end flaps and with the terminal thereof passed through the cleft of the end flap, and with the smaller tongues of the back flap passing through the smaller clefts of the end flaps, a closure flap provided with a tongue, and a bendable metal strip projecting from the closure flap tongue, said closure flap tongue insertible through the cleft of the back flap and the metal strip thereof passed through the tongue of the back flap and compressed thereon.

958,982. SIPHON-FILLER. PHILIP VOCK, New York, N. Y., assignor to New York Bottlers' Supplies Manufacturing Company, a Corporation of New York. Filed May 13, 1907. Serial No. 373,256.

1. In a siphon filler, the combination of a frame having diverging branches, a filling head support on one of said branches, a siphon seat, means pivotally connecting said seat to one of said branches and fixing its path of movement with respect thereto, means affording a sliding pivotal connection of the siphon seat to the other branch, and means for moving said seat upward.

2. In a siphon filler, the combination of a frame having diverging branches, a filling head support on one of said branches, a siphon seat, means pivotally connecting said seat to the branch having the filling head support and fixing its path of movement with respect thereto, means affording a sliding pivotal connection of the siphon seat to the other branch, and means for raising and lowering said siphon seat.



3. In a siphon filler, the combination of a frame comprising two branches one of which is adapted to support a filling head, an arm pivoted at one end to said filling head branch and providing a siphon seat, a second arm connecting said first-mentioned arm to the other branch of the frame with a slot-and-pin connection, means for swinging said arm, and valve operating means mounted on the siphon seat arm and connected to the frame.

4. In a siphon filler, the combination of a frame adapted to support a filling head, an arm fulcrumed on said frame and providing a siphon seat, a valve lever fulcrumed on said arm, a bolt at the end of said lever, a member pivoted to the frame and slidably receiving said bolt, a spring on said bolt at the opposite side of said member from the lever, and means for swinging said arm.

5. In a siphon filler, the combination with a frame adapted to support a filling head, an arm fulcrumed on said frame and forming a siphon support, a valve lever fulcrumed on said arm and extending at one end beneath the same, means pivotally connecting said end of the valve lever to the frame, a spring mounted on said frame and adapted to both tend to throw the valve lever into alinement with the arm and to lower said arm, and means for raising said arm.

[Claims 6 to 11 not printed in the Gazette.]

958,983. LOCKET. WILLIAM J. WAKEFIELD, Newark, N. J. Filed Mar. 13, 1908. Serial No. 420,784.

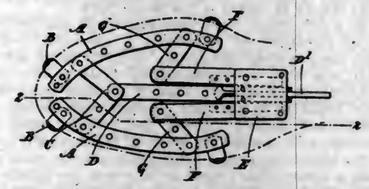


1. An improved piece of jewelry comprising swinging members, plates to fit around the edges of the said members, the plates having integral depressed portions on their opposed faces, pintle blocks secured in the depressed portions, and a pintle passing through the pintle blocks to secure the members in hinged relation.

2. An improved piece of jewelry comprising hinged members, each hinged member having recessed portions on one edge, plates, one to be secured to each member and having depressed portions integral therewith, the depressed portions fitting in the recesses of the members, pintle blocks secured in the depressed portions, and a pintle in the pintle blocks and maintaining the members in hinged relation.

3. An improved piece of jewelry comprising circular plates adapted to be hinged together and having raised edges, the raised edges at the hinged part having recesses therein, annular plates, one fitting in each member and having integral depressed portions to fit in the recesses of the hinged members, hollow wire pintle blocks secured in the grooves, and a pintle passing through the pintle blocks.

958,984. ATTACHMENT FOR BOOTS OR SHOES. CHARLES WALDSTEIN, Cambridge, England. Filed Jan. 19, 1909. Serial No. 473,070.



1. In a device of the character described, the combination with a pair of rigid bars adapted to be oppositely positioned near the side edges of the shoe sole, of a clip attached to each bar near each end thereof and adapted to engage the rim of the shoe sole, means for permitting the rear ends of the bars to move inwardly within fixed limits, a plate longitudinally arranged intermediate said rear ends, a rod longitudinally movable with reference to the plate, a pair of toggle links pivoted at their outer ends to the side bars near the forward ends thereof, and at their inner ends to said rod, and means for moving the rod longitudinally and locking it in position.

2. In a device of the character described, the combination with a pair of rigid bars adapted to be oppositely positioned near the side edges of the shoe sole, clips attached to said bars at their forward and rear ends, respectively, and adapted to engage the edges of the shoe sole, bars adapted to rest upon the shoe sole intermediate the side bars and provided with a longitudinal passageway between them, toggle links connecting said intermediate bars with the side bars near the rear ends thereof, other toggle links pivoted together and connected to the side bars near the forward ends thereof, a rod pivoted to the joint of the last named toggle links and adapted to be moved longitudinally in the aforesaid passageway and means for locking the rod in position.

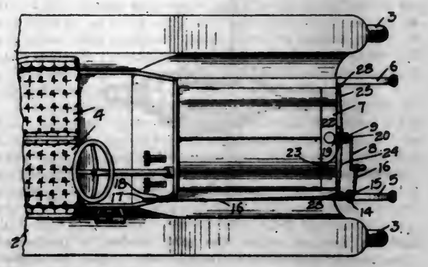
3. In a device of the character described, the combination with a pair of rigid bars adapted to be oppositely positioned near the side edges of the shoe sole, clips attached to said bars at their forward and rear ends, respectively, and adapted to engage the edges of the shoe sole, bars adapted to rest upon the shoe sole intermediate the side bars and provided with a longitudinal passageway between them, toggle links connecting said intermediate bars with the side bars near the rear ends thereof, other toggle links pivoted together and connected to the side bars near the forward ends thereof, a rod pivoted to the joint of the last named toggle links and adapted to be moved longitudinally in the aforesaid passageway, said rod being provided with rack teeth, a pair of springs attached to the under surface of the plate and having bearings at their forward ends, and a lever having pintles journaled in the bearings of the springs and provided with a curved end adapted to engage with the rack teeth of the rod to move the rod and lock it in position.

958,985. STARTING DEVICE FOR AUTOMOBILE-ENGINES. AXEL M. WALSTROM, Minneapolis, Minn. Filed Jan. 6, 1910. Serial No. 536,649.

1. In a starting device for automobile engines, the combination of an automobile having an explosive engine and a starting crank therefor, of a pulley provided near said crank, a flexible connection coöperating with said pulley and having one end attached to the handle of said crank and its other end provided with a handle detachably supported on a suitable bracket near the seat of said automobile.

2. In a starting device for automobile engines, the combination of an automobile having an explosive engine and a starting crank therefor, of a pulley provided near said crank, flexible means coöperating with said pulley and having one end attached to the handle of said crank and its other end detachably supported near the seat of said automobile and provided with a suitable handle, means for returning said crank to its starting point.

3. In a starting device for automobile engines, the combination of an automobile having an explosive engine and a starting crank therefor, of a pulley provided near said crank, flexible means coöperating with said pulley and having one end attached to the handle of said crank and its other end provided with a handle detachably supported near the seat of said automobile, means for returning said crank to its starting point, and means for connecting and disconnecting said engine and crank.



4. In a starting device for automobile engines, the combination of an automobile having an explosive engine and a starting crank therefor, of a pulley provided near said crank, flexible means coöperating with said pulley and having one end attached to said crank and its other end extending to a point near the seat of said automobile and provided with a suitable handle, means for returning said crank to its starting point, and automatic means for connecting and disconnecting said engine and crank.

5. In a starting device for automobile engines, the combination of an automobile having an explosive engine and a starting crank therefor, of a flexible means connecting said starting crank with a handle located near the seat of said automobile, automatic means for connecting and disconnecting said engine and crank and consisting of toggle-joints connecting said crank to a sliding collar thereon, means connecting the middle joint of said toggles to springs provided on said automobile, and said toggle-joints adapted to be alternately extended and collapsed at predetermined points in the revolution of said crank for the purpose mentioned.

958,986. PROCESS OF REGENERATING STANNIC-CHLORID SOLUTIONS. JOSEF WEBER, Essen-on-the-Ruhr, Germany. Filed May 29, 1909. Serial No. 499,107.

1. The process of purifying an aqueous solution of stannic chlorid that has been contaminated with lime by use in silk dyeing, which consists in adding to said aqueous solution a sufficient amount of sulfuric acid to precipitate all the lime content.

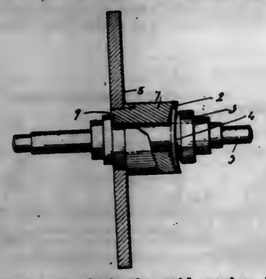
2. The process of purifying an aqueous solution of stannic chlorid that has been contaminated with lime and lead by use in silk dyeing, which consists in adding to said aqueous solution a sufficient amount of sulfuric acid to precipitate all the lime and lead contents.

3. The process of purifying and concentrating an aqueous solution of stannic chlorid that has been contaminated with lime and lead by use in silk dyeing, which consists in first adding to said aqueous solution a sufficient amount of sulfuric acid to precipitate all the lime and lead content, and afterward suitably concentrating said purified solution by adding anhydrous tetrachlorid of tin.

958,987. CENTER-FRICTION FOR WATCHES AND CLOCKS. FREDERICK WEHINGER, Waterbury, Conn., assignor to Waterbury Clock Company, Waterbury, Conn., a Corporation. Filed Feb. 17, 1910. Serial No. 544,440.

In a watch, the combination with the center-arbor thereof, of a friction shoulder located upon the said arbor, a center-pinion loosely mounted upon the said

arbor and abutted at one end against the said shoulder against which it is rotated with the production of friction, a center-wheel carried by the said pinion, a friction-collar nonrotatably mounted on the said arbor adjacent to the opposite end of the said center-pinion from the said shoulder, and a fricton-washer interposed between the center-pinion and the said friction-collar, one of the two



surfaces between which the said washer is interposed being convex and the other being concave, and the washer being compressed and placed under tension between the said surfaces and developing more or less friction between the opposite end of the center pinion and the said shoulder according to the degree to which the washer is cupped between the two surfaces.

958,988. PULL-SOCKET FOR ELECTRIC SWITCHES. FREDERIC BARR, New York, N. Y. Filed Nov. 12, 1909. Serial No. 527,614.



1. In a pull-switch for a lamp-socket, the combination, with the insulating-bed B carrying a screw-shell and central lamp-contact and having a boss c with segmental switch-segments at its opposite sides electrically connected as set forth, of a rotatable spindle pivoted upon the boss and having a ratchet-disk attached thereto and provided with downwardly and upwardly projecting tongues n' and n^2, an insulating-disk fitted to the spindle below the ratchet-disk and having recesses with shoulders h' to engage the tongues n' on the ratchet-disk, the insulating-disk having upon its under side leaf-springs g mounted at opposite sides of the spindle to contact with the switch-segments, and means for intermittingly turning the ratchet-disk by a pull-cord.

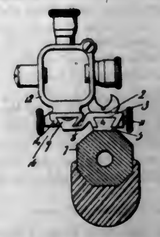
2. In a pull-switch for a lamp-socket, the combination, with the insulating-bed B carrying a screw-shell and central lamp-contact and having a boss c with recesses at its opposite sides, of the switch-segments having feet secured in the recesses and electrically connected as set forth, and having neck c^3 reflexed over the feet and provided respectively with segments adjacent to the opposite sides of the boss, and a pull-cord with means for electrically connecting the segments.

3. In a pull-switch for a lamp-socket, the combination, with the insulating-bed B carrying a screw-shell and central lamp contact and having a boss c with switch-segments c, c', at its opposite sides electrically connected as set forth, of a rotatable spindle having a square body with a ratchet-disk n attached to such body and having pivots at its opposite ends, a bearing in the boss to receive the lower pivot of the spindle, an insulating-disk having a square hole fitted to the square body, the ring g' having prongs g^3 securing it to the under side of the insulating-disk, and provided at opposite sides of the spindle with the reflexed leaf-springs g to contact with the segments c, c', and means operated by a pull-cord for intermittingly turning the spindle by means of the ratchet-disk.

4. In a pull-switch for a lamp-socket, the combination, with an insulating-bed B carrying a screw-shell and a central lamp contact and having upon its upper side a central boss with a spindle-bearing fitted therein and switch-contacts at opposite sides of the said boss, of a spindle rotatable in the said bearings, and having an insulating-disk secured thereon and provided upon its under side with leaf-springs adapted to electrically connect the switch-contacts, a ratchet-disk movable with the spindle, a toothed-disk o fitted to turn upon the spindle in contact with the ratchet-disk and having a cord-lever-segment integrally connected to such toothed-disk by arms with the metal between the arms bent downward and outward into a flange to form a channel for a cord, such flange having a tongue r' clamped upon the end of the pull-cord in the channel, and a spring operating to move the toothed-disk in opposition to the cord.

5. In a pull-switch for a lamp-socket, the combination, with the insulating-bed B having a central boss with a spindle-bearing fitted therein and having switch-segments at opposite sides of such boss, of a head-piece B' having a rotatably adjustable bearing in the center and posts connecting the head-piece to the bed B, a rotatable spindle fitted to the said bearings and having thereon an insulating-disk with leaf-springs attached to connect the switch-segments, a ratchet-disk secured to the spindle, a toothed-disk fitted movably to the spindle to engage the ratchet-disk, a cord-lever extended from the toothed-disk with cord for moving the same, the rotatable bearing in the head-piece having a locking flange upon such bearing engaging a recess in the bottom of the head-piece, a spiral spring having its coils upon the spindle and its ends engaged respectively with the cord-lever and with the rotatable bearing, and means for turning the bearing to adjust it upon the head-piece when the head-piece is loosened from its posts.

958,989. OFFSET-ADAPTER FOR TELESCOPES FOR FIREARMS. WINCHESTER BENNETT, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Feb. 17, 1910. Serial No. 544,453.

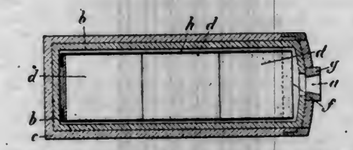


1. In a firearm, the combination with the gun-barrel, of a telescope, and two offset-adapters constructed to be fastened to the barrel, each having a lateral extension surmounted by a dovetail extending parallel with the longitudinal axis of the barrel, the dovetail of the forward adapter being in alinement with the dovetail of the rear adapter, whereby the telescope may be applied to and removed from the gun by a longitudinal movement parallel with the line of the gun-barrel.

2. In a firearm, the combination with the barrel thereof, of a telescope, and a rear and front offset-adapter, each consisting of a body-portion formed in its under face with a dovetail groove extending in line with the longitudinal axis of the barrel, and each having a lateral extension surmounted by a dovetail extending parallel with the line of the barrel, the dovetail of the front adapter being in line with the dovetail of the rear adapter, whereby the telescope is applied to and removed from the gun by a movement parallel with the line of the barrel.

3. In a firearm, the combination with the barrel thereof, of two telescope-bases fastened to the barrel and having dovetails, of a telescope having rear and front mounts each formed with a foot containing a dovetail groove, and a pair of offset-adapters each formed upon the lower face of its inner end with a dovetail groove and each having a lateral extension surmounted by a dovetail, the dovetails of the telescope-bases and those of the adapters corresponding in form and horizontal arrangement, but the latter being at one side of the former.

958,990. TORPEDO. EMILE BOURDELLES, Paris, France. Filed Nov. 10, 1908. Serial No. 461,864.



1. In a torpedo having a chamber formed therein, the combination with a powder charge in the chamber, of an extensible tensioned sheath about the powder charge.

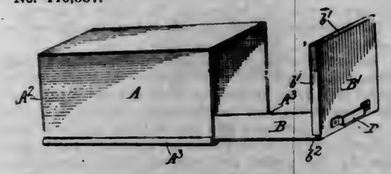
2. In a torpedo having a chamber formed therein, the combination with a plurality of juxtaposed powder blocks in the chamber, of an extensible tensioned sheath about the powder blocks.

3. In a torpedo having a chamber formed therein, the combination with an orificed metallic envelop in said chamber, of a powder charge in said envelop, and an extensible tensioned sheath about said powder charge.

4. In a torpedo having a chamber formed therein, the combination with an orificed metallic envelop in said chamber, of a lining of material in said envelop which is a non conductor of heat, a powder charge in said envelop, and a sheath of extensible tensioned material about said powder charge.

5. In a torpedo having a chamber formed therein, the combination with an insulation lined metallic envelop in said chamber, of a plurality of juxtaposed powder blocks in the envelop, and a tensioned rubber sheath about said powder blocks.

958,991. BUTTER OR CHEESE RECEPTACLE. ERNEST D. BURTON, Chicago, Ill. Filed June 25, 1908. Serial No. 440,337.



1. A food receptacle comprising two parts, one being a box open at the bottom and one end, the other being a slide having an upturned end, the lower edges of the sides of the box having inwardly open slide-ways and the slide having its lateral edges adapted to engage the slide-ways against spreading.

2. A food receptacle comprising a box-like element open at the bottom and at one end, and a slide having an upturned end, the box element having the lower edges of its sides folded inwardly in substantially three-quarters-cylindrical form, and the slide having its lateral edges reflexed upon its under surface to form marginal beads adapted to engage the slide-ways.

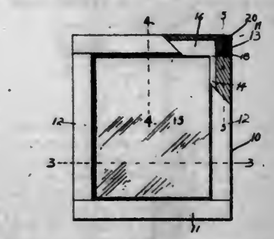
3. A food receptacle comprising a box element open at the bottom and one end, the lower edges of the sides being folded inwardly and upwardly so as to form wide-open longitudinal channels or slide-ways opening upwardly and inwardly with respect to the box, and a slide having an upturned end adapted to close the open end of the box, and having on the under side longitudinal shoulders parallel to its lateral edges for engaging the upturned edges of the box sides.

4. A food receptacle comprising a box element open at the bottom and one end, and a slide having an upturned end, the lower edges of the two sides of the box element being provided with upwardly and inwardly opening channels which extend outwardly past the vertical plane of the box sides so as to be overhung thereby, the slide having on its under side shoulders parallel to its lateral edges at such distance therefrom that said edges extend under the overhanging box sides when the shoulders are stopped against the inner edges of the channels.

5. A food receptacle comprising two parts, one part being a box open at the bottom and one end, the other being a slide having an up-turned end, each lateral edge of the slide being engaged with a corresponding longitudinal edge of the case by the infolding of the one about the other for stoppage in all transverse directions, the outer of said parts at each such engagement having its lines of contact with the opposite sides of the other part widely separated.

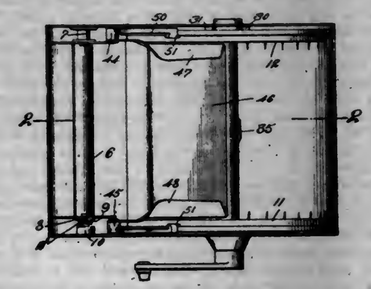
[Claims 6 and 7 not printed in the Gazette.]

958,992. WINDOW-SASH. FRED CALLIER, Menfro, Mo. Filed Apr. 19, 1909. Serial No. 490,902.



The combination with a window sash having side rails, of spaced tenons formed at the upper ends of the side rails, a slotted top-rail resting on the upper end of the side rails and having mortises receiving the tenons, the said top rail containing nut receiving sockets in its under face between the mortises and closed by the ends of said side rails, nuts held within said sockets, a strip seated upon the top rail and closing the slot therein, and fasteners passed through the strip and top rail and engaging the nuts.

958,993. DEVELOPING-TANK. LOUIS N. CHAPIN, New York, N. Y. Filed Apr. 26, 1909. Serial No. 492,195.



1. In a developing tank, a series of annular, rotatable film supports of progressively-increasing diameters, inde-

pendent bearings for each film support, means for revolving the smallest support and means for picking up an adjoining support at each revolution of such revolving support or supports.

2. In a developing tank, a series of concentric, rotatable film supports, separate bearings for each film support, the said bearings being concentric, means for revolving the inner support and means for picking up the immediately-surrounding support at each revolution of such revolving support or supports.

3. In a developing tank, a plurality of concentric, rotatable annular film supports of the same width, independent bearings for each support, means for revolving the inner support and means for successively revolving additional supports.

4. In a developing tank, a series of concentric, rotatable film supports, means for revolving the inner support and for successively revolving surrounding supports, and means for holding the non-revolving supports against movement, and out of contact with the film.

5. In a developing tank, a series of concentric, rotatable film supports, separate bearings for each film support, the said bearings being concentric and means for revolving each film support a limited distance free of its surrounding support, and means for picking up the surrounding support after such free movement.

[Claims 6 to 48 not printed in the Gazette.]

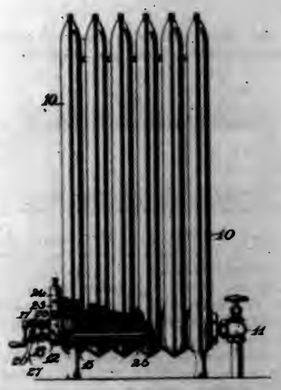
958,994. FORCE-FEED LUBRICATOR. HARRY LE ROY DAVIS, Seneca Falls, N. Y. Filed Jan. 11, 1910. Serial No. 537,441.



1. A force feed device for lubricants, comprising a cylinder having a discharge nozzle on one end and a guide opening in its opposite end, a piston movable in the cylinder and provided with a piston rod having a toothed rack on one side running lengthwise thereof, a lever operatively mounted on the cylinder, a pawl on the lever adapted to engage said rack and advance the piston as the lever is operated, and a spring operatively connected to the pawl to force the same into engagement with the rack when the lever is operated, said spring also operating through the medium of the pawl to retract the lever.

2. A force feed lubricating device, comprising a cylinder having a nozzle on one end and a guide opening in its opposite end, a piston movable in the cylinder and provided with a rod extending outwardly through said opening, a toothed rack on the rod, a bell crank lever operatively mounted on the cylinder having a long arm and a short arm the long arm constituting a handle and the short arm extending laterally beyond the rod and provided with an opening for receiving said rod, a pawl pivoted to the short arm of the lever and spring pressed against the rack when the lever is operated, said spring operating to retract the lever, a pin projecting laterally from one side of the pawl, a bracket on the cylinder, and a cam tooth on the bracket having its cam face in the path of movement of the pin on the pawl for engaging said pin and withdrawing the pawl from engagement with the rack when the lever is retracted to its normal position.

958,995. ATTACHMENT FOR RADIATORS. WILLIAM H. DRAKE, Hackettstown, N. J. Filed June 25, 1908. Serial No. 440,220.



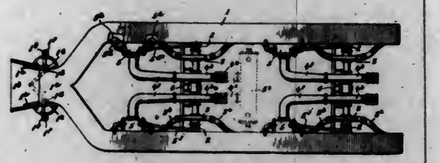
1. An attachment for radiators comprising a body portion, a partition therein forming a chamber, a pair of valve seats in the partition, valve stems in line with the seats, valves on the stems and adapted to be seated on the valve seats, means on one stem for its manual manipulation, gears on the stems and adapted to cause their simultaneous rotation to insure the closing of one when the other opens and vice versa, means for connecting the valve seats to different parts of a radiator for venting it, and means for venting the chamber.

2. An attachment for radiators comprising a body-portion, a partition therein to form a chamber, a pair of valve seats in the partition, valve stems in line with the seats, valves on the stems and adapted to close the seats, means on one stem for its manual manipulation, means for causing the stems to operate simultaneously and in opposite directions, a stop for indicating the limits of movement and the disposition of the valves, and means for venting the chamber.

3. An attachment for radiators comprising a body-portion, a partition therein to form a chamber, a screw-threaded cylindrical portion to enter the end section of a radiator, valve seats on the partition, a pipe on one valve seat to extend part way into the radiator, a pair of valve stems with valves to be seated on the valve seats, gears connecting the stems and causing their simultaneous movement and insuring their movement in opposite directions longitudinally, a handle on one stem, a stop on the other gear to cause a stoppage in each direction after one revolution, a legend or indication on the coöperating stopping means to indicate the disposition of the valves on their seats, and means for venting the chamber.

958,996. APPARATUS FOR PROPELLING VESSELS BY HYDRAULIC PRESSURE. HENRY A. DUC, Jr., Charleston, S. C. Filed Apr. 4, 1906. Serial No. 309,863.

1. In combination, a water channel leading through a vessel, and a pump and intake and return-pipes adapted to continuously withdraw a part of the water from the channel and inject it thereinto under pressure, substantially as described.



2. In combination with a water conduit leading through a vessel; of a rotary pump and intake and return-pipes adapted to continuously withdraw a part of the water from the channel, impart a high velocity and pressure thereto, and return it into the channel, substantially as described.

3. In an apparatus for propelling vessels by hydraulic power, a water channel leading through the vessel, a rotary pump communicating with said channel and adapted to withdraw a part of the water therefrom, impart a high velocity or pressure thereto, and means for directing the water from the pump into the channel in advance of or in rear of the intake of the pump at will.

4. In combination with a water conduit leading through a vessel, a pump, an inlet from the channel into the pump, return pipes leading from the pump casing into the channel at opposite sides of the intake of the pump, said pump adapted to withdraw water from the channel and return it thereinto at a higher velocity, and means for closing either return pipe.

5. In combination with a water conduit leading through a vessel, a rotary pump, an inlet from the channel into the pump, return pipes leading from the pump casing into the channel at opposite sides of the intake of the pump, said pump adapted to withdraw water from the channel and return it thereinto at a higher velocity, means for rotating the pump continuously in one direction, and means for closing either return pipe.

[Claims 6 to 21 not printed in the Gazette.]

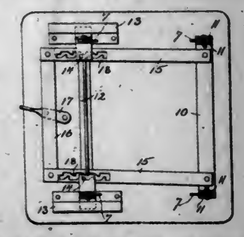
958,997. PROCESS OF MANUFACTURING BRICK. JOHN C. DUNTON, Grand Rapids, Mich. Filed Mar. 8, 1909. Serial No. 482,191.



1. The process of manufacturing brick consisting of passing a porous fabric through water, coating the surface of the fabric with a pulverized surface material, passing the fabric and facing material over molds and then firmly tamping plastic body material in the molds over the facing material, and then removing and curing the brick, substantially as herein described.

2. The process of manufacturing brick consisting of distributing finely pulverized facing material over moistened fabric and then passing the coated fabric over properly prepared molds and firmly tamping prepared plastic body material into the molds upon the facing material, in successive layers, and then removing the brick and curing it in a heat sufficient to destroy the fabric, substantially as herein described.

958,998. TILTING-CHAIR. JOHN FLINDALL, Chicago, Ill. Filed May 8, 1907. Serial No. 372,582.



In a chair of the class described the combination with slidable piece 12 provided with rack pins at its opposite ends of oscillating plates 15 provided with slots set with staggered teeth, connecting bar 16 and hand-lever 17.

958,999. HYDROCARBON-BURNER. OSCAR FORDICE, Los Angeles, Cal. Filed Dec. 16, 1909. Serial No. 533,353.



1. A hydro-carbon burner having a tip composed of two members adjustably secured together, one of said members containing an expansible fluid chamber and the other a liquid hydro-carbon fuel chamber, said chambers having converging outlets which may be brought in and out of register, and when in register having an outlet port extending from the junction of the outlet passages.

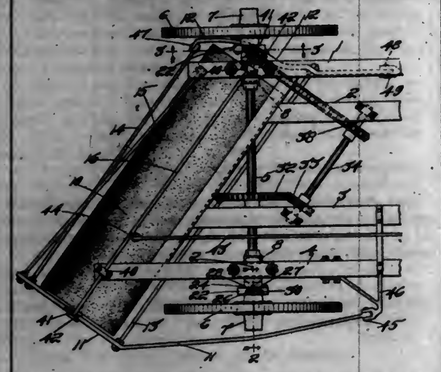
2. A hydro-carbon burner having a tip composed of two members adjustably secured together, one of said members containing an expansible fluid chamber and the other a liquid hydro-carbon fuel chamber, said chambers having converging outlets which may be brought in and out of register, and when in register having an outlet port extending from the junction of the outlet passages; and a separating plate secured to one of said members, said plate projecting toward the outlet port and separating said outlet passages when in register at the rear portion thereof.

3. A hydro-carbon burner having a tip composed of two members adjustably secured together, one of said members containing an expansible fluid chamber and the other a liquid hydro-carbon fuel chamber, said chambers having converging outlets which may be brought in and out of register and when in register having an outlet port extending from the junction of the outlet passages; a separating plate secured to one of said members and projecting toward the outlet port and separating said outlet passages when in register at the rear portion thereof; and removable wearing plates secured to said members and forming the upper and lower surfaces of the outlet port.

959,000. STREET-SWEEPING MACHINE. JOSIAH FOWLER, Cambridge, Mass. Filed May 5, 1909. Serial No. 494,050.

1. In a street sweeping machine, an axle on which two wheels are mounted, a rotary broom, two arms on which the axles of the broom are journaled intermediate their ends, said arms being pivoted at their forward ends to a fixed part of the frame of the machine, a tie-rod at the

rear of the broom axle rigidly connected with one of said arms and pivotally connected at the other end with the other of said arms and intermediate mechanism between the wheels and the broom axle whereby the rotation of the wheels gives rotation to the broom.



2. In a street sweeping machine, an axle on which two wheels are mounted, a rotary broom, two arms on which the axles of the broom are journaled intermediate their ends, said arms being pivoted at their forward ends to a fixed part of the frame of the machine to permit lifting of the broom from the ground, a tie-rod rigidly connecting together said arms in front of the broom axle, a tie-rod at the rear of the broom axle rigidly connected with one of said arms and pivotally connected at the other end with the other of said arms and intermediate mechanism between the wheels and the broom axle whereby the rotation of the wheels gives rotation to the broom.

3. In a street sweeping machine, an axle on which two wheels are mounted, a rotary broom, two arms on which the axles of the broom are journaled intermediate their ends, said arms being pivoted at their forward ends to a fixed part of the frame of the machine to permit lifting of the broom from the ground, a tie-rod rigidly connecting together said arms in front of the broom axle, a tie-rod at the rear of the broom axle rigidly connected with one of said arms and pivotally connected at the other end with the other of said arms and another tie-rod at the rear of said broom axle rigidly connected at one end with one of said arms and pivotally connected at the other end with the frame and intermediate mechanism between the wheels and the broom axle whereby the rotation of the wheels gives rotation to the broom.

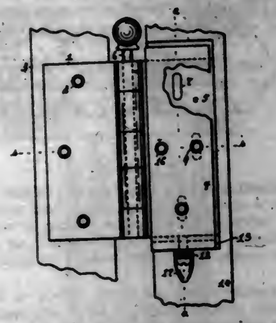
4. In a street sweeping machine, an axle on which two wheels are mounted, a rotary broom, two arms on which the axles of the broom are journaled intermediate their ends, said arms being pivoted at their forward ends to a fixed part of the frame of the machine, a tie-rod at the rear of the broom axle rigidly connected with one of said arms and pivotally connected at the other end with the other of said arms, and another tie-rod rigidly connected at one end with one of said arms and pivotally connected at the other end with a suitable support and intermediate mechanism between the wheels and the broom axle whereby the rotation of the wheels gives rotation to the broom.

959,001. HINGE. JULIUS TRITSCH, Cincinnati, Ohio. Filed Oct. 15, 1909. Serial No. 522,707.

1. In an adjustable hinge the combination of a hinge leaf, a clamping plate, means for moving and maintaining the one longitudinally in relation to the other, and means for clamping said member and said plate together.

2. In an adjustable hinge the combination of a hinge leaf, a clamping plate, an adjusting screw therein for adjusting the one longitudinally in relation to the other member and means for clamping the member and plate in different relative longitudinal adjustments.

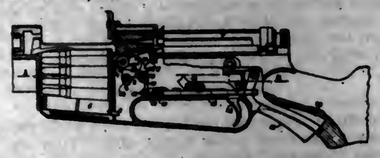
3. In an adjustable hinge the combination with a hinge leaf formed with slots, of a clamping plate formed with screw holes adapted to register with said slots and with a ledge on one of its ends and an adjusting screw in the ledge.



4. In an adjustable hinge the combination of a hinge leaf formed with longitudinal slots, a clamping plate formed with holes adapted to register with the slots and also formed with a ledge on one of its ends, and a screw adjustably secured in the ledge.

5. In an adjustable hinge the combination of a hinge leaf formed with slots, a reversible clamping plate formed with holes adapted to register with the slots in either of reversed positions on said member, and an adjusting screw in the plate for moving and maintaining the member and the plate in relative different positions of longitudinal adjustment.

959,002. AUTOMATIC FIREARM. RUDOLF FROMMER, Budapest, Austria-Hungary. Filed June 9, 1905. Serial No. 264,440.



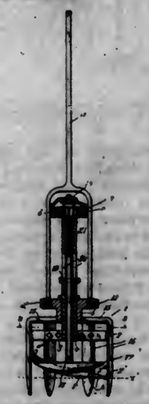
1. In automatic fire-arms the combination of a receiver provided at its top with a loading opening, a magazine, a follower therein, a breech-bolt, means adapted to retain said breech-bolt in its retracted position, intermediate means arranged between said follower and said bolt-retaining means and adapted to lock said bolt-retaining means in its retaining position being itself actuated by the said follower when the magazine becomes exhausted, and means independent of the said follower for releasing the said breech-bolt.

2. In automatic fire-arms the combination of a receiver provided at its top with a loading opening, a magazine having a follower, a breech-bolt, means adapted to hold said bolt in its retracted position, said means being actuated by said follower, when the magazine becomes exhausted, a hand-operated lever on the small of the stock, and means connected with said lever for releasing the said bolt holding means independently of the said follower, upon the actuation of the said lever.

3. In automatic fire-arms the combination of a receiver provided at its top with a loading opening, a reciprocating breech bolt having a range of movement beyond said opening, means adapted to hold said bolt in its retracted position, a magazine having a follower which actuates the said bolt-holding means upon the exhaustion of the magazine, a hand-operated lever on the small of the stock, a rod controlled by said lever, and a spring-actuated hook on said rod for disengaging the said bolt-holding means upon the actuation of the said lever.

4. In automatic fire-arms the combination of a receiver provided at its top with a loading opening, a reciprocating breech-bolt having a range of movement beyond said opening, means adapted to hold said bolt in its retracted position, a magazine having a follower which actuates the said bolt-holding means upon the exhaustion of the magazine, a hand-operated lever, a rod controlled by said lever and a spring-actuated hook on said rod for disengaging the said bolt-holding means upon the actuation of the said lever and a stud normally locking the trigger of the weapon, but releasing it upon the actuation of the said lever.

959,003. RUNNER-CUTTER AND PLANT-TOPPER. MILES E. GARWOOD, Georgetown, Wash. Filed Aug. 26, 1909. Serial No. 514,816.



1. A device of the type set forth comprising a support, cutting means thereon, means for operating said cutting means, and a spreader carried by said support for engagement with the top of a plant to spread the same into the path of said cutting means.

2. A device of the type set forth comprising a support, cutting means thereon, means for operating said cutting means, and a yieldingly held spreader carried by said support for engagement with the top of a plant to spread the same into the path of said cutting means.

3. A device of the type set forth comprising a support, a plant spreader thereon supported for vertical movement, a cutter on said support supported for movement for cutting around said spreader, and means for operating said cutter.

4. A device of the type set forth comprising a support, a plant spreader thereon supported for vertical movement, means yieldingly holding said plant spreader against upward movement, a cutter rotatably supported on said support for movement for cutting around said plant spreader, and means for operating said cutter.

5. A device of the type set forth comprising a support having spaced depending members, a plant spreader arranged within said support, a rotatable cutter supported for movement for cutting around said spreader in engagement with the depending members of said support, and means for operating said cutter.

[Claims 6 to 16 not printed in the Gazette.]

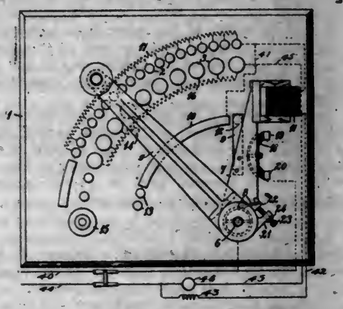
959,004. SHIP-TABLE. AUGUST MARTIN GUSTAFSON, Bisbee, Ariz. Filed Dec. 27, 1909. Serial No. 534,074.

In a device of the class described, the combination with a series of supports, each support comprising a pair of diverging legs adapted to be secured to the deck, having at their upper extremities a U-shaped element provided with a transverse bolt through the arms thereof, of a rectangular frame pivotally mounted on said supports through the instrumentality of transverse bars carrying pins adapted to be journaled in said U-shaped element and bear on said bolts, a series of coinciding spaced brackets attached to the longitudinal sides of said frame, a plurality of tables



pivotally mounted on said brackets, and a series of simultaneously operating weights carried on the under surface of said tables.

959,005. REGULATING-RHEOSTAT FOR ELECTRIC MOTORS. FLETCHER D. HALLOCK, Pittsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 3, 1910. Serial No. 536,054.



1. A rheostatic controller for electric motors comprising field and armature contact members, a pair of contact-bearing arms and adjustable means for restricting the independent adjustment of one of the arms relative to the other.

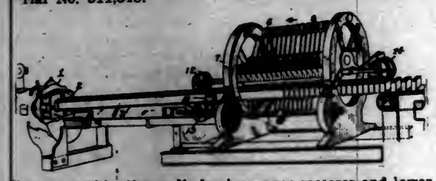
2. A rheostatic controller for electric motors comprising field and armature contact members, a pair of contact-bearing arms and adjustable means for restricting the independent adjustment of one of the arms relative to the other to insure any desired maximum motor speed.

3. The combination with a movable member, and two resistances adapted to be controlled thereby, of a second movable member, means governed thereby to render the first member effective to control but one of said resistances at one time, and adjustable means for limiting the independent movement of the first member.

4. The combination with a movable member, and two resistances adapted to be controlled thereby, of a second movable member which is effective to adjust only one of the resistances during movement of the second member from its initial to its extreme position and for thereafter rendering the first member effective to control only the other resistance, and adjustable means for restricting the independent movement of the first member.

5. The combination with a dynamo-electric machine having field and armature circuits, and a resistance for each of said circuits, of a movable member for controlling both of said resistances, a second movable member, means governed by the second member to render the resistance-governing member effective to control only the armature resistance during movement thereof in one direction and only the field resistance during movement thereof in the opposite direction, and adjustable means for limiting the maximum field-resistance variation.

959,006. APPARATUS FOR MAKING BRICKS. WILLIAM HANLEY, Bradford, Pa. Filed Aug. 5, 1909. Serial No. 511,343.

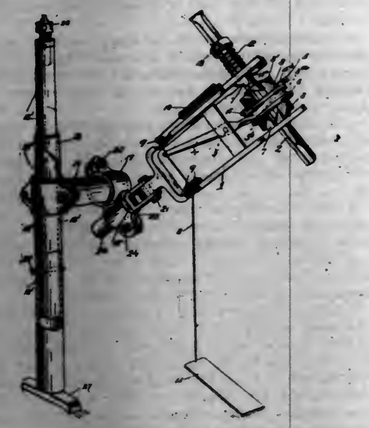


1. In combination a die having upper recesses and lower projections to form upper ribs and lower grooves in the strip of material forced therethrough, cutting means, a grooved roller to bear on the upper face of the material in advance of the cutting means, a ribbed roller to bear on the grooved underside of the material in advance of the cutting means, and a grooved roller to bear on the upper side of the material in rear of the cutting means, substantially as described.

2. In combination a die having upper recesses and lower projections to form upper ribs and lower grooves in the strip of material forced therethrough, cutting means, a grooved roller to bear on the upper face of the material in advance of the cutting means, a ribbed roller to bear on the grooved underside of the material in advance of the cutting means, a grooved roller to bear on the upper side of the material in rear of the cutting means, and a roller to bear on the side face of the material, substantially as described.

3. In combination a die through which the material is forced having projections and recesses, cutting means, a guide to bear on the lateral face of the material in advance of the cutting means, and a grooved roller to bear on the upper face of the material with its grooves engaging the ribs thereof, substantially as described.

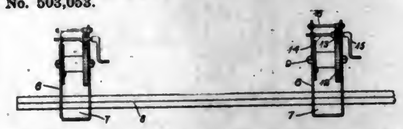
959,007. DRILLING-MACHINE. HENRY J. HARVEY, Seattle, Wash. Filed Mar. 1, 1909. Serial No. 480,788.



1. In a drilling machine, a support, a drill supported for movement on said support, and means for imparting partial rotation to said drill including a ratchet member arranged thereon for simultaneous rotation and for independent sliding, said ratchet member being divided longitudinally, and a ring arranged on said ratchet member provided with set screws engaging the sections thereof.

2. In a drilling machine, a support, a drill supported thereon for sliding and for rotation, means for imparting partial rotation to said drill including a member formed on its end portions with series of ratchet teeth, said member being supported on said drill for independent sliding and for simultaneous rotation, a ring on said member, a shifter pivoted on said support and engaged with said ring for sliding said member on said drill, a spring for operating said shifter in one direction, a flexible means having connection with a treadle for operating said shifter against the tension of said spring in the reverse direction, and lugs on said support arranged on opposite sides of said member for engagement each with a respective series of ratchet teeth thereof for effecting partial rotation thereof during its sliding movement.

959,008. SCAFFOLD-SUPPORTING MEANS. ELIAS H. HENDERSON, Chicago, Ill. Filed June 19, 1909. Serial No. 503,053.



1. A scaffold consisting in the combination of cross beams, floor pieces extending between such beams, and a hoisting device associated with each end of each beam, each hoisting device consisting of a continuous U-shaped metal bar extending around the under side of and upward from the associated beam, and a hoisting drum rotatably supported by the side members of such bar.

2. A scaffold consisting in the combination of cross beams, floor pieces extending between such beams, and a hoisting device associated with each end of each beam, each hoisting device consisting of a metal bar formed around and extending upward on both sides of the associated beam, a drum supported by the upwardly extending ends of the bar in bearings formed in such bar, such drum adapted to receive a cable for supporting the scaffold, a crank shaft also supported in bearings formed in such bar, and gearing between the drum and the crank shaft.

3. A scaffold consisting of a plurality of U-shaped bars arranged in pairs, a cross beam laid in and extending between each pair of such U-shaped bars, a floor laid upon said cross beam, a drum rotatably supported between the upwardly extending side members of each of said U-shaped bars, and means for controlling the rotation of said drum.

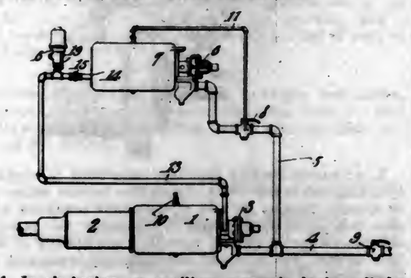
959,009. TOY. WALTER S. HENDREN, Nicholasville, Ky., assignor of one-fourth to Charles A. Knight, Nicholasville, Ky. Filed Feb. 4, 1910. Serial No. 542,014.



A toy comprising a platform, a figure located above the platform and having its body portion formed to provide vertical passages of different lengths, a vertical support

slidable through the platform and having its upper extremity interchangeably engaged in the said passages, a horizontal disk carried by said support, a revolubly mounted shaft beneath the platform, and radial pins extending from the shaft and adapted upon rotation of the said shaft to engage the disk to impart vertical reciprocatory motion to the said support and to impart dance-like movements to the figure.

959,010. AIR-BRAKE. THOMAS J. HENRETTA, Roanoke, Va., assignor of one-half to John Rose, Roanoke, Va. Filed Nov. 13, 1909. Serial No. 527,909.



1. In air brakes, an auxiliary reservoir, brake cylinder and triple valve, a supplemental reservoir and triple valve, and a conduit connecting the exhaust side of the first named triple valve with the brake cylinder connection of the second named triple valve and including a check valve opening toward the said second named triple valve.

2. In air brakes, a brake cylinder, a supplemental reservoir, and means for opposing the supplemental reservoir pressure to the exhaust from the brake cylinder.

3. In air brakes, a brake cylinder and means for establishing in the path of the exhaust from said brake cylinder a pressure superior to that of the exhaust.

4. In air brakes, a brake cylinder, means for retaining pressure on the exhaust side of the brake cylinder at a predetermined point, and means controlled by train pipe pressure for opposing superior air pressure to the exhaust or for causing the free escape of the exhaust to the atmosphere.

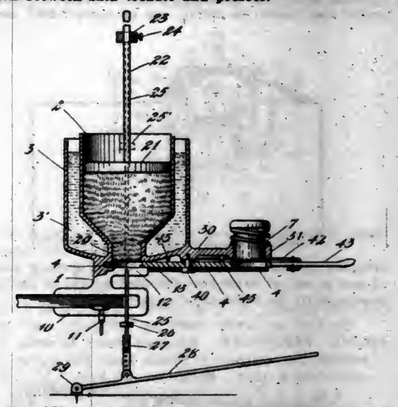
5. In air brakes, a brake cylinder, an auxiliary reservoir and triple valve for feeding the same, a supplemental reservoir, a triple valve for the supplemental reservoir, a connection therefrom to the train pipe, connections from the exhaust port of the brake cylinder to the brake cylinder port of the triple valve of the supplemental reservoir, said connection including a check valve, and a retaining valve included in said connection.

[Claims 6 and 7 not printed in the Gazette.]

959,011. MOLDING AND TRANSFERRING APPARATUS. JOHN LARRY HERMAN, Marblemount, Wash. Filed Jan. 11, 1910. Serial No. 537,554.

1. A molding and transferring apparatus comprising a container provided with a discharge throat and a guard spaced outwardly therefrom, a forwarding means movable between said throat and guard provided with spaced apart apertures for receiving material from the throat, a presser in said container, means for operating said presser, means for imparting a step by step movement to said forwarding means, and means mounted adjacent to the path of said forwarding means for ejecting material from the apertures thereof.

2. A molding and transferring apparatus comprising a container provided with a discharge throat and a guard spaced outwardly therefrom, a forwarding means movable between said throat and guard provided with spaced apertures for receiving material from the throat, a presser in said container, means for imparting a step by step movement to said forwarding means, means mounted adjacent the path of said forwarding means for ejecting material from the apertures thereof, a treadle, and a connection between said treadle and presser.



3. A molding and transferring apparatus comprising a container provided with a discharge throat and a guard spaced outwardly therefrom, a forwarding means movable between said throat and guard provided with spaced apertures for receiving material from the throat, a presser in said container having an outwardly projecting rod, means for operating said forwarding means, means mounted adjacent the path of said forwarding means for ejecting material from the apertures thereof, a cross head having releasable connection with the rod of said presser, and means connected with said cross head for operating said presser.

4. A molding and transferring apparatus comprising a container provided with a discharge throat and a guard spaced outwardly therefrom, a rotatably supported forwarding means having its edge portion arranged between said throat and guard and provided with spaced apertures for receiving material from said throat, a presser in said container, means for operating said presser, means for imparting intermittent rotary movement to said forwarding means, and means mounted adjacent the path of said forwarding means for ejecting material from the apertures thereof.

5. A molding and transferring apparatus comprising a container provided with a discharge throat and a guard spaced outwardly therefrom, a rotatably mounted forwarding means having its edge portion extending between said throat and guard and provided with spaced apart apertures for receiving material from said throat, a presser in said container, means for operating said presser, means for imparting a step by step movement to said forwarding means, a bracket extension on said container, and a spring retracted ejector slidably mounted in said bracket extension for ejecting material from the apertures of said forwarding means.

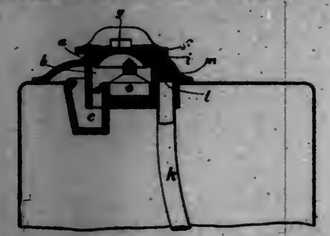
[Claims 6 and 7 not printed in the Gazette.]

959,012. CLOSING DEVICE FOR CANS OR THE LIKE. HERMANN HINTERMANN, Basel, Switzerland. Filed Dec. 31, 1909. Serial No. 535,780.

1. In a closing device for cans or the like, a delivery socket for liquid, a movable stopper for said delivery socket, a siphon combined with said delivery socket and formed, in part, by a side wall of the socket, a filling opening between the siphon and the side wall of the socket and inside the latter, and an independent movable stopping member fitted in said filling opening and arranged so as not to prevent the pouring out of the liquid, substantially as hereinbefore described.

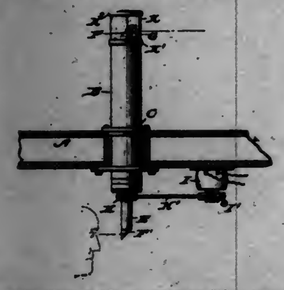
2. In a closing device for cans or the like, a delivery socket for liquid and having an air inlet, a movable stopper for closing simultaneously said delivery socket and air inlet, a siphon combined with said delivery socket and

formed, in part, by a side wall of the socket, a filling opening between the siphon and the side wall of the socket and inside the latter, and an independent movable



stopping member fitted in said filling opening and arranged so as not to prevent the pouring out of the liquid, substantially as hereinbefore described.

959,013. PERISCOPE. WILLIAM NEILL HOWELL, Philadelphia, Pa., assignor to Simon Lake, Bridgeport, Conn. Filed July 6, 1907. Serial No. 382,528.



1. The combination with a submergible vessel, of a rotatable observing tube projecting from the vessel and containing reflecting means, and means for rapidly rotating said tube.

2. The combination with a submergible vessel, of a rotatable observing tube projecting from the vessel, prisms located at the upper and lower ends of the tube, and means for rapidly rotating the tube continuously while in use.

3. The combination with a submergible vessel, of a rotatable observing tube projecting from the vessel, prisms located at the upper and lower ends of the tube, a lens located adjacent to the prism at the upper end of the tube, and means for rapidly rotating the tube.

4. The combination with a submergible vessel, of a rotatable tube projecting from the vessel, prisms arranged at the upper and lower ends of the tube, and means operatively connected to the tube for rapidly rotating it.

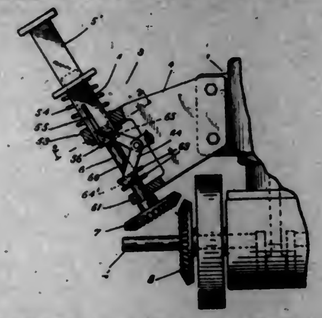
5. The combination with a submergible vessel, of a support, a rotatable observing tube journaled in the support and containing reflecting means, and means for rapidly rotating the tube continuously while in use.

[Claims 6 to 11 not printed in the Gazette.]

959,014. ENGINE-STARTING MECHANISM. FRANK D. JAMES, Seattle, Wash. Filed June 9, 1909. Serial No. 501,197.

1. An engine starting appliance comprising in combination with the engine shaft, a rotatably supported member, companion coupling parts secured to said member and shaft, said member being shiftable to couple and uncouple said parts, a slide member having spiral driving connection with said first member, and shifter mechanism connected with said member.

2. An engine starting appliance comprising in combination with the engine shaft, a rotatably supported member, companion coupling parts connected with said member and shaft, said member being shiftable to couple and uncouple said parts, a slidably supported member, a ratchet device carried by said last member having spiral driving connection with said first member, and means for shifting said first member by movement of said slide member.

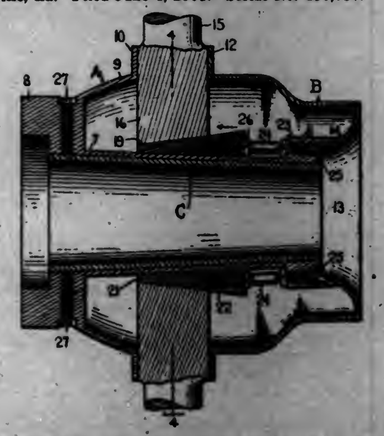


3. An engine starting appliance comprising in combination with the engine shaft, a rotatable member supported in angular relation to said shaft, means connected with said member and the shaft for coupling the same, a slidably supported member movable longitudinally of said first member, and a ratchet spiral driving connection between said members.

4. An engine starting appliance comprising in combination with the engine shaft, a rotatable member supported in angular relation to said shaft, releasable means connected with said member and the shaft for coupling the same, a slidably supported member movable longitudinally of said first member and yieldingly held in retracted position, a ratchet spiral driving connection between said members, and means whereby movements of said slidably supported member couples and uncouples said coupling means.

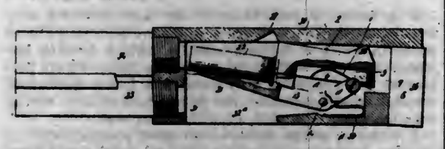
5. An engine starting appliance comprising in combination with the engine shaft, a rotatable member supported in angular relation to said shaft, companion coupling parts secured to said member and shaft, said member being shiftable to couple and uncouple said parts, a slidably supported member movable longitudinally of said first member and yieldingly held in retracted position, means connecting said members for shifting the rotatable member by movement of the slidable member, and a ratchet spiral driving connection between said members.

959,015. WHEEL-HUB. CHARLEY L. JOHNSON, Longville, La. Filed June 4, 1908. Serial No. 436,737.



A wheel hub comprising a main section and a cap section, spokes fitted between the sections, the main section including a sleeve extending beneath the butt ends of said spokes into said cap section, a collar formed on the outer end of said sleeve portion, said collar being provided with a series of openings formed therethrough, each of said openings including a threaded portion, a series of wedges each located between the butt end of a respective spoke and said sleeve portion, each of said wedges being provided with a threaded recess, the threads in the collar and in the recess being of opposite hand, screws held in the recesses of the wedges and the openings through the collar, the ends of said screws being threaded in opposite directions, lock nuts held on each of said screws and adapted to engage against the collar and the end of the wedge to which the respective screw pertains, and a key receiving end formed on the outer portion of each of said screws.

959,016. FIREARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Dec. 29, 1909. Serial No. 535,409.



1. In a repeating firearm, the combination with a compound movement breech-closure, the rear end of which is raised and lowered for being locked and unlocked, and the lower face of which is chambered and which is formed with a lifting-cam, a clearance-cam, and a sustaining-face; of a pivotal cartridge-carrier provided at its rear end with an arm extending upwardly into the chamber of the breech-closure, and a spring-plunger mounted in the said arm in position to coact with the said cams and face of the breech-closure.

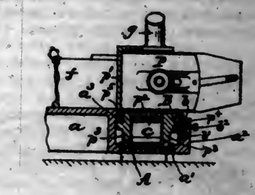
2. In a repeating firearm, the combination with a compound movement breech-closure, the rear end of which is raised and lowered for being locked and unlocked, of a pivotal cartridge-carrier having at its rear end an upwardly extending arm, and a spring-plunger mounted in the said arm and coacting with the breech-closure for the operation of the carrier.

3. In a repeating firearm, the combination with a compound movement breech-closure, the rear end of which is raised and lowered for being locked and unlocked, and which is formed in its lower face with a chamber one of the side walls of which is formed with a lifting-cam, a sustaining face and a clearance cam; of a pivotal cartridge-carrier having a spoon-like arm at its forward end, and at its rear end an upwardly extending arm terminating in a chambered hub, and a spring-actuated plunger mounted in the said hub in position to coact with the said cams and sustaining face.

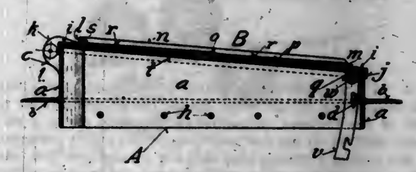
4. In a repeating firearm, the combination with a compound movement breech-closure the rear end of which is raised and lowered for being locked and unlocked and which is formed in its lower face with a chamber one of the side walls of which is formed on its inner face with a lifting-cam; of a pivotal cartridge-carrier coacting at its rear end with the said cam in the forward movement of the breech-closure for lifting the forward end of the carrier into its cartridge-delivering position.

959,017. JOINT OR MITER PLANER TOOL. CHARLES R. LADEVEZE, Providence, R. I. Filed Aug. 30, 1909. Serial No. 515,153.

The miter or bevel-plane herein described, the same consisting of a main table or base having a relatively deep front recessed part extending longitudinally thereof, a slidable cutting-plane tool having its lower portion laterally guided in and extending downward into said recess, and movable antifriction elements disposed between and bearing against the bottom and front faces of the plane's said lower portion and the adjacent inner surfaces of the walls of the recessed part, constructed and adapted to support the weight of the plane and at the same time to resist the outer lateral thrust of the tool.



959,018. SKYLIGHT. WILLIAM K. H. LANGER, Philadelphia, Pa. Filed Nov. 18, 1909. Serial No. 528,729.



The combination of a sky-light consisting of a lower frame and sash, the latter having a frame with a projecting flange and light bars, the horizontal flanges of which are supplied with extending bosses and are so disposed that the light panes may rest upon said bosses, and between the bosses, upon the holding material which fills the space between the rear face of the light pane and the horizontal flange of the light bar.

959,019. RECIPROCATING GAS-ENGINE. WALTER MILES LEEDOM, Colton, Cal. Filed Jan. 14, 1908. Serial No. 410,761.



1. In a reciprocating gas engine comprising a cylinder having a spheral cylinder head provided with inlet and exhaust ports, a spheral valve fitting in said head, and valve operating mechanism.

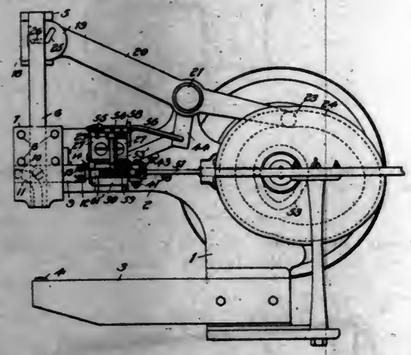
2. In a reciprocating gas engine comprising a cylinder with a spheral head provided with inlet and exhaust ports, a shaft in said head, a spheral valve splined on said shaft and fitting the head, and mechanism for rocking said shaft.

3. In a gas engine comprising a cylinder with a spheral head of greater diameter than the cylinder and having inlet and exhaust ports, a spheral valve fitting in said head, and means for operating said valve to open and close said ports.

4. In a gas engine, a cylinder having a spheral head with inlet and exhaust ports located at diametrically opposite points of the head, a spheral valve in said head, and means for operating the valve to open and close said ports.

5. In a gas engine, a cylinder having a spheral head with inlet and exhaust ports, a spheral valve in said head, means for operating said valve, and circular packing rings in said valve lying in planes substantially parallel with the axis of the valve.

959,020. MACHINE FOR SETTING AND FORMING METALLIC FASTENERS. ROBERT B. LEWIS, Philadelphia, Pa., assignor to American Metal Edge Box Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Apr. 7, 1905. Serial No. 254,414.



1. In a machine of the character described, a plurality of plungers, a normally horizontal female die pivoted to one of the plungers, means for moving said die to a vertical position on the downward movement of the plungers, a bar having a cutting edge movable toward and from the die, a forming plunger movable through the movable cutter and co-acting with the die, a clamping plate movable with the cutter and having an opening through which passes the forming plunger, a fixed blade coöperating with the cutting edge of the bar, and means for feeding a strip of fasteners between the movable cutter and the plate.

2. In a machine of the class described, a forming die, a bar having a cutting edge on one of its ends and movable toward and from the die, a clamping plate co-acting with the end of the bar provided with the cutting edge, a forming plunger movable through the bar and the plate, and coöperating with the die, and means for feeding a strip of fasteners between the plate and the bar.

3. In a machine of the class described, a fixed cutter and a movable cutter coöperating therewith, means for feeding a strip of fasteners between said cutters, a clamping plate to hold the strip in engagement with the movable cutter during the cutting operation, said plate having an opening therethrough, a forming plunger coöperating with said opening to form the severed fastener, and means to actuate said plunger.

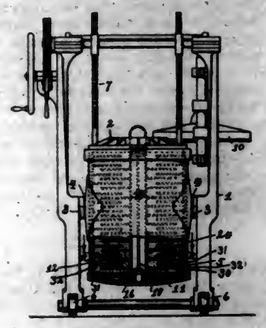
4. In a machine of the class described, a fixed cutter and a movable cutter coöperating therewith, a clamping plate having an opening therethrough and coöperating with the movable cutter to hold a strip of fasteners, means for feeding a strip of fasteners between the movable cutter and the clamping plate and in front of said opening, and a forming plunger movable through the opening whereby to form the fasteners.

5. In a machine of the character described, a strip-feeding means, a fixed cutter set at an oblique line to the longitudinal axis of the strip, a cutter-guide, a cutter-carrier movable parallel to said guide, a cutter slidably mounted on said guide, and comprising a prismatic bar having a plurality of cutting edges, a lateral extension on said carrier, and means for adjustably securing the slidable cutter on said extension so that one of its cutting edges will coöperate with the fixed cutter, and means for actuating the carrier to bring the movable and fixed cutters into coöperation.

[Claims 6 and 7 not printed in the Gazette.]

959,021. FILTER-PRODUCING APPARATUS. CHARLES H. LOMB, Lakewood, Ohio. Filed Oct. 7, 1908. Serial No. 456,606.

1. The combination with perforated spaced outer and inner filter forming walls, one being more highly perforated than the other, of means for pressing filtering material between the walls.



2. A device of the character set forth provided with an annular receptacle adapted to receive pulp mixed with water in which it is compressed to form a filtering medium, the inner wall of the receptacle being highly perforated and the outer wall being less highly perforated whereby when compressed the pulp is packed more tightly near the inner wall than near the outer wall.

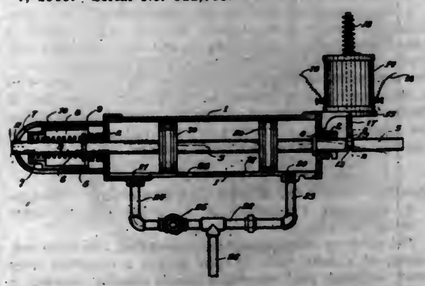
3. A device of the character set forth provided with an annular receptacle adapted to receive pulp mixed with water in which it is compressed to form a filtering medium, the inner wall of the receptacle being highly perforated and the outer wall being less highly perforated whereby when compressed the pulp is packed more tightly near the inner wall than near the outer wall, the outer wall of the receptacle being removable, and its inner wall being collapsible.

4. A device of the character set forth provided with an annular receptacle adapted to receive pulp mixed with water in which it is compressed to form a filtering medium, one wall of the receptacle being highly perforated and the other wall being less highly perforated, whereby when compressed the pulp is packed more tightly against the highly perforated wall than it is against the less highly perforated wall and its inner wall being collapsible.

5. A device of the character set forth provided with an inner perforated collapsible tube in combination with means for pressing wood pulp mixed with water against the same.

[Claims 6 to 16 not printed in the Gazette.]

959,022. REGULATING-VALVE FOR AIR-BRAKE SYSTEMS. JOSEPH C. LUNA, Oakland, Cal., assignor of one-half to Elmer Jacobson, Oakland, Cal. Filed Aug. 7, 1909. Serial No. 511,768.



1. A regulating valve for air brake systems comprising a casing provided with inlet ports and exhaust ports, a rod slidable through said casing, pistons carried by said rod, a locking device for said rod, and means for automatically releasing said rod to permit the incoming pressure to slide said rod to open said exhaust ports.

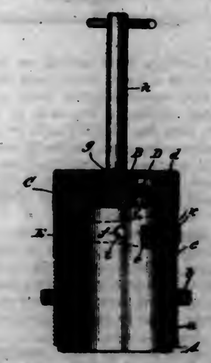
2. A regulating valve for air brake systems comprising a casing and provided with inlet and exhaust ports, a rod extending through said casing, pistons on said rod controlling said exhaust ports, a spring coiled about one end of said rod and exerting a tension to hold said rod in an exhaust closing position, a lock for said rod, pressure admitting pipes communicating with said inlet ports, a reducing valve carried by one of said pipes, and means for automatically releasing said lock to permit the incoming pressure through one of said pipes to slide said rod against the pressure of the pipe provided with the reducing valve and said spring and thereby uncover said exhaust ports.

3. A regulating valve for air brake systems comprising a casing provided with inlet and exhaust ports, a chamber carried thereby, a housing for said chamber, a rod slidable through said casing, chamber and housing, pistons carried by said rod and controlling said exhaust ports, a spring in said chamber and coiled about said rod, a locking device for said rod, and means for automatically releasing said locking device.

4. A regulating valve for air brake systems comprising a casing provided with an inlet port adjacent each end and exhaust ports between said inlet ports, a pressure pipe for each inlet port, a reducing valve for one of said inlet ports, a rod slidable through said casing, a pair of pistons carried by said rod and normally closing said exhaust ports, a locking device for said rod, and means for automatically releasing said locking device to permit the incoming pressure to move said pistons to open said exhaust ports.

5. A pressure regulating valve for air brake systems comprising a casing having an inlet port adjacent each end, spaced apart exhaust ports arranged between said inlet ports, a rod slidable in one direction in said casing, pistons on said rod for controlling and normally held in position to close said exhaust ports, and means for automatically releasing said pistons to permit the incoming pressure to slide the same and thereby open said exhaust ports.

959,023. GREASE-CUP. JAMES G. MATHENY, Terre Haute, Ind. Filed Feb. 15, 1910. Serial No. 543,949.



1. In a grease cup, the combination of a casing having an opening in its side and also having an aperture adjacent said opening, a follower movable in the casing, a closure-ring movable around the casing and having an opening arranged in one position of the ring to register with the opening of the casing, and a spring latch fixed at one end to the ring and having its opposite end extended outward from and movable outward and inward with respect to the ring, and a protuberance carried by the movable portion of the latch and movable through the ring and into and out of the said aperture in the casing.

2. A grease cup comprising a casing open at its inner end and exteriorly threaded and having an opening in its side and an aperture adjacent said opening, a jam-nut mounted on the casing, a threaded cap closing the outer end of the casing and having a central aperture, a chambered follower movable in the casing and having a handle guided in the aperture of the cap, an upwardly seating spring-pressed valve carried by the follower, a spring surrounding the follower handle and interposed between the follower and the cap, a closure ring supported on and movable around the casing and having an opening, and a spring latch fixed at one end to the ring and having its opposite end extending outward from and movable outward and inward with respect to the ring and carrying a protuberance movable through the ring and into and out of the said aperture in the casing.

959,024. TYPE-WRITER ATTACHMENT. THOMAS M. MORGAN, Williamsport, Pa. Filed Aug. 1, 1908. Serial No. 446,363.



1. In a structure as described, a writing machine including a platen, a frame supported on said machine, a plurality of supply rolls, and a plurality of receiving rolls, mounted in said frame, arms pivoted on said frame in which one of said rolls is journaled and whereby said roll is movable, independent of the other rolls, continuous paper strips mounted on the supply rolls and leading thence about said platen to the receiving rolls, and means to advance said paper strips from the supply to receiving rolls by the movement of said platen, substantially as specified.

2. In a structure as described, a writing machine, a platen, a frame mounted on said machine comprising a frame member located at each end of the machine, arms pivoted to said members, rods connecting said frame members into a rigid structure, a plurality of rolls mounted in said frame members, and an additional roll mounted in said pivoted arms and movable relative to the remaining rolls about the pivotal point of the supporting arms, and having paper strips passing from one set of rolls about the platen to corresponding rolls, means for advancing said paper strips, substantially as and for the purpose specified.

3. In a structure as described, a writing machine, a platen, a frame mounted on said machine, said frame having a plurality of corresponding notches or recesses therein, paper supply and receiving rolls removably journaled in said recesses, hook members pivoted to said frame adjacent to said notches and having notches therein arranged angular to the frame notches when the hook members are in normal position and adapted to engage the roll trunnions to retain said rolls in adjusted position and means for advancing the paper from the supply to receiving rolls and about the platen, substantially as specified.

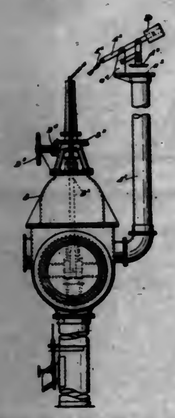
4. In a structure as described, a writing machine, a platen, a frame mounted on said machine, said frame having a plurality of notches or recesses therein, paper supply and receiving rolls, trunnions on said rolls of greater diameter than the width of said notches, said trunnions

having peripheral grooves therein of a diameter substantially equal to the width of the notch and adapted to engage therein to form a bearing for the roll, a hook member pivoted to the frame, the recess of which is arranged angular with the bearing notch, the groove of the trunnion being of such width that the hook member will likewise engage in said groove to retain said roll in position and means to advance the paper from the supply to the receiving rolls, substantially as specified.

5. In a structure as described, a writing machine, a platen, a frame on said machine, paper supply and receiving rolls journaled in said frame, said rolls comprising a cylindrical body having therein a longitudinal groove divided into a plurality of sections by continuous peripheral portions of said cylindrical body and a removable pin extending within said longitudinal groove and projecting through perforations in the dividing portions between the sundry sections of said groove, substantially as specified.

[Claims 6 to 9 not printed in the Gazette.]

959,025. DEVICE FOR CONTROLLING FLUIDS. ALFRED C. NELSON, Cleveland, Ohio, assignor of one-third to Arthur G. McKee and one-third to David T. Croxton, Cleveland, Ohio. Filed Apr. 2, 1909. Serial No. 487,559.



1. In a device of the class described, the combination of a fluid main intersected by a valve-space; a valve operating in said space, and adapted to control the flow through said main; the latter being provided with an outlet communicating with the said valve-space, independently of the fluid duct in said main; an inclosed receptacle below said valve-space and communicating therewith, such receptacle being provided with an opening; and means for opening and closing such opening.

2. In a device of the class described, the combination of a fluid main intersected by a valve-space; a valve operating in said space adapted to be moved upwardly so as to permit of the flow of fluid through the main, the downward movement of such valve intercepting such flow; a duct communicating with said valve-space and the atmosphere independently of the main; an inclosed receptacle beneath the valve-space provided with an opening; and means for controlling said opening.

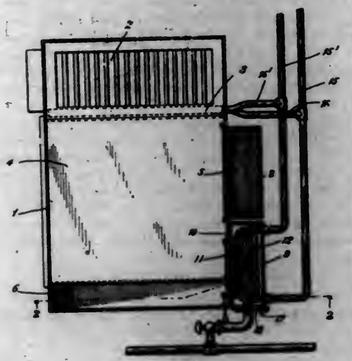
3. In a device of the class described, the combination of a fluid-main intersected by a valve-space; a valve operating in said space and adapted to intercept the flow of fluid through said main; a duct communicating with said valve-space; and a valve for controlling the flow of fluid through said duct; said main-valve and duct-valve being operatively connected with each other, whereby the position of the former will determine the position of the latter.

4. In a device of the class described, the combination of a fluid-main intersected by a valve-space; a valve operating in said space and adapted to intercept the flow of fluid through said main; a duct communicating with said valve-space; and a valve for controlling the flow of fluid through the latter; said main-valve and duct-valve being operatively connected whereby the duct-valve is caused to assume an open position when the main-valve is in its closing position.

5. In a device of the class described, the combination with two main-sections provided with opposing valve-seats and forming a valve-space between such seats; a double gate-valve movable in said space and adapted to engage said seats to close the opposing main-sections; a stem connected with said gate-valve; a duct communicating with said valve-space; a lever mounted upon said duct; a valve on one arm of said lever adapted to open and close said duct; a chain having one end connected with the other arm of said lever and the other end connected with said valve-stem.

[Claim 6 not printed in the Gazette.]

959,026. STOVE. ARTHUR L. PIPER, Seattle, Wash. Filed May 5, 1909. Serial No. 494,205.



1. In combination with a stove having an oven, a flue extending from above to a point below said oven, and a chamber for solid fuel communicating with said flue, a vertical external flue section at the back of said stove communicating with said flue beneath said oven, an auxiliary heating chamber secured to the back of said stove in proximity to said vertical external flue section so as to radiate heat thereto and communicating with said flue, and a damper in said flue for cutting off communication with said auxiliary heating chamber.

2. A stove body having an oven and a flue extending over the top, one side, bottom and back of said oven, a chamber for solid fuel communicating with said flue, and a chamber for fluid fuel communicating with said flue and extending alongside the back section thereof at the adjacent wall of said oven so as to radiate heat both to said back section of the flue and to said oven.

3. A stove body having an oven and a vertical flue section forming in conjunction with the adjacent wall of the stove body an external recess, a chamber for solid fuel communicating with said flue section, and a chamber for fluid fuel arranged in the external recess of the stove body so as to radiate heat to said flue section.

4. In combination with a stove having a chamber for solid fuel, an oven, a water back, and a flue extending over the top, one side, bottom and back, of said oven, a chamber for fluid fuel arranged externally of the stove alongside the back section of said flue at the adjacent wall of said oven, a water circulating coil in said liquid fuel chamber in communication with said water back, and a fluid burner arranged beneath said coil.

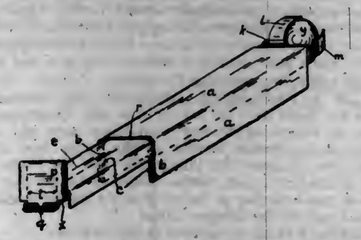
959,027. NEW GLUCOSID AND PROCESS OF MAKING SAME. SWIDEL POSTERNAK, Paris, France, assignor to The Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Filed Aug. 19, 1908. Serial No. 449,216.

1. The described process for the manufacture of a new glucosid isolated from the bark of *Rhamnus purshiana*, consisting in first eliminating as far as possible the inactive substances from the liquid extracts of the bark by precipitation with lead acetate and basic lead acetate in neutral solution, then filtering and producing a precipitate in the filtrate by adding basic lead acetate and ammonia, then removing the lead from this second precipitate in the herein described manner and finally evaporating *in vacuo* the solution thus obtained.

2. The described process for the manufacture of a new glucosid isolated from the bark of *Rhamnus purshiana*, consisting in first eliminating as far as possible the inactive substances from the liquid extracts of the bark by precipitation with lead acetate and basic lead acetate in neutral solution, then filtering and producing a precipitate in the filtrate by adding basic lead acetate and ammonia, then removing the lead from this second precipitate in the herein described manner, evaporating *in vacuo* the solution thus obtained and finally purifying the remaining mass by recrystallization from alcohol.

3. As a new article of manufacture the described glucosid which can be extricated from the bark of *Rhamnus purshiana* and which forms a yellowish powder of the formula $C_{14}H_{18}O_8$, easily soluble in water and glacial acetic acid with a yellow color, insoluble in ether and benzene, difficultly soluble in cold absolute alcohol, not giving Borntrāger's test and possessing the properties of a valuable purgative, the aqueous solution of the said glucosid showing an acid reaction, reducing Fehling's solution energetically, and being gradually decomposed on heating, a completely melted mass being obtained at 120° C, which afterward becomes again viscous.

959,028. MARBLE-SHOOTER. MICHAEL E. REILLY, Portland, Oreg., assignor to J. B. Godfrey, Portland, Oreg. Filed Sept. 3, 1909. Serial No. 516,128.



1. A toy gun comprising a body made rectangular, like an inverted U in cross-section, and provided with interior guideways on the interior of its sides; a plunger, comprising a central portion, bent down sides, and a stop or striking head at one end, said plunger being adapted to reciprocate in said guideways of the body; projectile-holding means at the outer end of the plunger; and a spring element arranged to project the plunger.

2. A toy gun comprising a body made rectangular, like an inverted U in cross-section, and provided with interior guideways on the interior of its sides; a plunger, comprising a central portion, bent down sides, and a stop or striking head at one end, said plunger being adapted to reciprocate in said guideways of the body; projectile holding means at the outer end of the plunger; a split ring connected with the striking head of the plunger; a pin transversely affixed in the sides of the body, and a rubber band connecting said ring and pin.

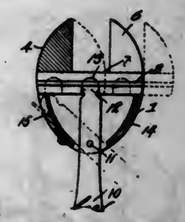
3. A toy gun comprising a body made rectangular, like an inverted U in cross-section, and provided with interior guideways on the interior of its sides; a plunger, comprising a central portion, bent down sides, and a stop or striking head at one end, said plunger being adapted to reciprocate in said guideways of the body; projectile-holding means at the outer end of the plunger; a split ring connected with the striking head of the plunger; a pin transversely affixed in the sides of the body, and adapted to be removed by springing the sides apart; and a rubber band connecting said ring and pin.

4. A toy gun comprising a body made of a single piece, formed rectangular, like an inverted U in cross-section, and provided at its sides with inturned members spaced apart and constituting guideways; a plunger, comprising a central portion, bent down sides, and a stop or striking head at one end, said plunger being adapted to reciprocate in said guideways of the body; projectile-holding means at the outer end of the plunger; a split ring connected with the striking head of the plunger; a pin transversely affixed in the sides of the body, and adapted to be removed by springing the sides apart; and a rubber band connecting said ring and pin.

5. A toy gun comprising a body made of a single piece, formed rectangular, like an inverted U in cross-section, and provided at its sides with inturned members spaced apart and constituting guideways; a plunger, comprising a central portion, bent down sides, and a stop or striking head at one end, said plunger being adapted to reciprocate in said guideways of the body; projectile-holding means at the outer end of the plunger; and a spring element arranged to project the plunger.

[Claims 6 to 9 not printed in the Gazette.]

959,029. WRENCH. FREDERICK SCHNEIDER, Velva, N. D. Filed Oct. 30, 1909. Serial No. 525,434.



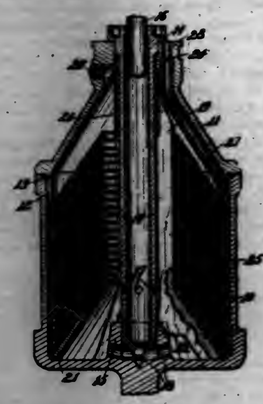
1. A wrench including a body comprising spaced plates, a jaw formed integrally with the body and projecting above the plates, a movable jaw including a jaw proper and a guide bar of cruciform shape, said plates being formed with grooves to receive the guide bar, and a handle pivotally mounted between the plates and terminally engaging the notch in the guide bar.

2. A wrench including a body comprising spaced plates, a jaw formed integrally with the body and projecting above the plates, a movable jaw including a jaw proper and a guide bar of cruciform shape, said plates being formed with grooves to receive the guide bar, a handle pivotally mounted between the plates and terminally engaging the notch in the guide bar, and a spring secured at one end of the plates to close the space between the handle and guide bar.

959,030. HOLLOW SHAFT FOR CENTRIFUGAL SEPARATORS. CHARLES H. SHAW, Milwaukee, Wis., assignor to Standard Separator Company, a Corporation of New Jersey. Filed Jan. 21, 1909. Serial No. 473,418.

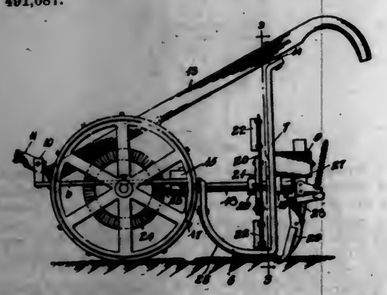
In a centrifugal separator, a hollow shaft comprising radially arranged ribs with outwardly bent lower ends, a frusto-conical base mounted on the outwardly bent ends of the ribs, a bowl in which the outer edge of the base is seated to form a pocket therein for collecting impurities from the liquid, a tube connecting the upper ends of the ribs, a boss in the bottom of the bowl, a feed tube extending down between the ribs and fitting in the boss,

there being passageways through the boss leading from the feed tube to the pocket within the base and there being a space between the upper edge of the base and the feed tube through which the liquid may pass between the ribs, a projection on one of the ribs engaging the



boss for keying the hollow shaft to the bowl, and separator disks mounted on the ribs and spaced thereby from the feed tube to receive the liquid passing between the ribs and between the upper edge of the base and the feed tube.

959,031. COTTON-CHOPPER. ROBERT TOLIVER SIMMONS, Wynne, Ark. Filed Apr. 20, 1909. Serial No. 491,087.

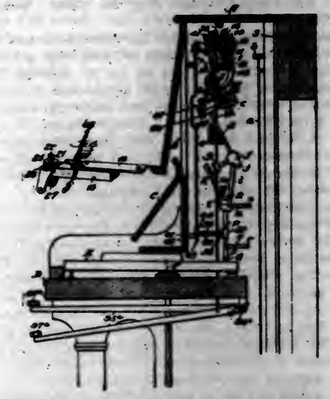


1. In a cotton chopper a disk wheel, a plurality of knives, each consisting of a right-angular piece of metal removably secured to one of the faces of the wheel in spaced relation to each other, said disk having cut therein a gap of suitable dimensions, substantially as described.

2. In a cotton chopper comprising a longitudinal shaft, a disk wheel adjustably secured to said shaft, said disk wheel provided with a plurality of knives, and having a gap cut therein, each of said knives composed of a right-angular piece of metal secured to one of the faces of the disk wheel.

959,032. ELECTRICAL SELF-PLAYING ATTACHMENT FOR PIANOS. IRVING B. SMITH, Philadelphia, Pa., assignor, by mesne assignments, to Electrelle Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 19, 1905. Serial No. 261,121.

1. In an electrical piano-playing attachment, the combination with the hammer action, of a clip on a unit of the action, a pull device having a head adapted when raised to engage a part of the clip to operate the action, and electro-mechanical means located in the upper part of the piano above the key-board for actuating said pull device.



2. In an electrical piano-playing attachment, the combination with the hammer action, of a clip, means for detachably connecting said clip to a unit of the action, a pull device having a head adapted to engage a part of the clip, and electro-mechanical means located in the upper part of the piano case above the hammer heads for actuating said pull device.

3. In an electrical piano-playing attachment, the combination with a hammer action, of a clip, means for detachably connecting said clip to a unit of the action, a pull rod having a free connection with the clip, and electro-mechanical means located in the upper part of the piano case above the hammer heads for actuating said pull rod.

4. In an electrical piano-playing attachment, the combination with the piano string plate, the keyboard and the hammer action, of electrically controlled shoe and roller actuating mechanism located in the upper part of the piano opposite the string-plate and above the keyboard, electro-magnets for causing said shoe to engage said roller, and a pull connection between said shoe and a unit of the action for actuating the latter.

5. In a piano-playing attachment, the combination with the piano case, the string plate and the hammer action, of electro-magnetically controlled shoe and roller actuated mechanism located in the upper part of the piano case opposite the string-plate and above the hammer heads and a pull device connected at one end with the shoe and having at its other end a lifting connection with a unit of the hammer action.

[Claims 6 to 33 not printed in the Gazette.]

959,033. SLIDE-BEARING FOR TROMBONES. SILAS J. SUMMERS, Wheeling, W. Va., assignor to Henderson N. White, Cleveland, Ohio. Filed July 20, 1908. Serial No. 444,514.



1. The combination with the outer and inner tubes of a trombone slide, of a bearing therefor, comprising a self-expanding sleeve held by the outer tube and embracing and slidable upon the inner tube.

2. The combination with the outer and inner tubes of a trombone slide, of a bearing therefor, comprising a self-expanding sleeve telescoped within the end of the outer tube and slidable with said tube over the inner tube.

3. The combination with the outer and inner tubes of a trombone slide, of a bearing therefor, comprising a spring-metal sleeve telescoped within the end of, and in binding engagement with, the outer tube, and freely slidable upon the inner tube.

4. The combination with the outer and inner tubes of a trombone slide, of a bearing therefor, comprising a spring-metal sleeve, slotted from end to end, telescoped within the end of, and in binding engagement with, the outer tube and freely slidable upon the inner tube.

5. The combination with the outer and inner tubes of a trombone slide, of a bearing therefor, comprising a spring-metal sleeve telescoped within the end of, and in binding engagement with, the outer tube and freely slidable upon the inner tube, said sleeve having its outer end outwardly flared.

[Claims 6 to 13 not printed in the Gazette.]

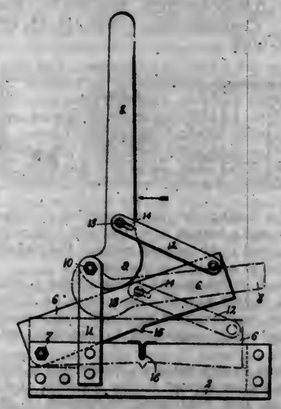
959,034. TROMBONE. SILAS J. SUMMERS, Wheeling, W. Va. Filed Mar. 5, 1909. Serial No. 481,408.



1. A trombone having a ring rigidly mounted upon one member of the inner slide and the cross-brace of the latter adjacent to the angle formed by said member and said cross-brace, said ring serving as a brace, and a second brace located on the opposite side of said cross-brace and rigidly connected at one end to the latter and at the other end to the other member of said slide, said brace comprising a ring and a semi-circular member, said rings and said semi-circular member affording finger rests whereby the instrument may be grasped.

2. In a trombone, braces for the cross-brace of the inner slide, one brace being located adjacent to the angle formed by the cross-brace and one member of said slide and rigidly connected to both, and the other brace being located on the side of said cross-brace opposite the first-mentioned brace and adjacent to the angle formed by said cross-brace and the other member of said slide and rigidly connected to both, said braces being substantially in alinement and the line of bearing being at substantially an angle of 45°, said braces affording finger-rests whereby the instrument may be supported.

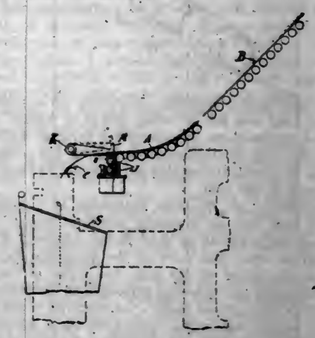
959,035. METAL-SHEAR. HARRY TAYLOR, Vancouver, British Columbia, Canada. Filed Sept. 2, 1909. Serial No. 515,797.



1. In a shear of the class described, the combination with two bolster plates secured the required distance apart the upper edges of which plates are notched to receive the material to be cut, a shear blade pivotally mounted so as to be slidable between the bolster plates the under side of which blade is provided with a downward V projection the apex of which corresponds with the center of the notches in the bolster plates, a lever having a cam end pivotally mounted so that the edge of the cam bears upon the upper edge of the shear plate, and links pin-connected to the free end of the shear blade and to the lever above the fulcrum said links having elongated slots at their connection with the lever.

2. In a shear of the character stated, the combination with a pair of bolster plates secured together and spaced apart, said bolster plates having an upper surface and a notched portion merging with said upper surface intermediate its ends to receive a flanged channel strip to rest with its channel portion in said notch and its flanges on said upper surface, a shearing blade hinged at one end to said bolster plates to be movable between the same, said shearing blade having a downwardly projecting V intermediate its ends to correspond with the mid-width of said notches in said bolster plates, and means for forcibly pressing down the shearing blade to first shearingly cut one of said flanges and to force said V to cut the channel portion of said flanged channel strip, and then shear the other flange of said strip, substantially as shown and described.

959,036. WEFT-REPLENISHING MECHANISM FOR LOOMS. JEAN CHARLES ALFRED WENNING, Mülhausen, Germany, assignor to Societe Alsacienne de Constructions Mecaniques, Mülhausen, Germany. Filed Oct. 13, 1908. Serial No. 457,503.



1. In an automatic weft replenishing mechanism for looms, the combination of a guide at the supply place of the loom, said guide being adapted to receive and feed pirn carriers toward such supply place, a removable charger connected to said guide so as to be capable of being removed therefrom, a reserve of independent pirn carriers carrying full pirns and movably mounted on said removable charger, said charger being adapted to direct said pirn carriers to said guide, and means for introducing the pirns from their carriers into the shuttle of the loom.

2. In an automatic weft replenishing mechanism for looms, the combination of a stationary guide at the supply place of the loom, said guide being adapted to receive and feed pirn carriers toward such supply place, a removable charger connected to said guide so as to be capable of being removed therefrom, a reserve of independent pirn carriers carrying full pirns and movably mounted on said removable charger, said charger being adapted to direct said pirn carriers to said guide, and means for introducing the pirns from their carriers into the shuttle of the loom.

3. In an automatic weft replenishing mechanism for looms, the combination of a stationary guideway at the supply place of a loom, a removable charger having an inclined position with regard to a horizontal plane and placed in line with said stationary guideway, and a reserve of independent pirn carriers carrying full pirns and

slidably mounted on the said removable charger so that they can freely slide, owing to the inclination of the latter and by their own weight, from the removable charger upon the stationary guideway and to the pirn supply point of the loom.

4. In an automatic weft replenishing mechanism for looms, the combination of a stationary guideway at the supply place of a loom, a removable charger placed in line with said stationary guideway and having lateral guide rails, and a reserve of independent pirn carriers, carrying full pirns, slidably mounted in a row side by side on the lateral guide rails of the removable charger so that they can freely slide from the removable charger upon the stationary guideway and to the pirn supply point of the loom.

5. In an automatic weft replenishing mechanism for looms, the combination of a stationary guideway at the supply place of a loom, a removable charger placed in line with said stationary guideway and a reserve of independent pirn carriers which are adapted to hold each one single pirn, and an unwound thread reserve to permit the automatic exchange, and are slidably mounted on the removable charger so that they can freely slide from the removable charger upon the stationary guideway and to the pirn supply point of the loom.

[Claims 6 to 10 not printed in the Gazette.]

959,037. PROJECTILE. JOSEPH H. WESSON, Springfield, Mass. Filed June 18, 1909. Serial No. 503,035.



1. A projectile for firearms consisting of a relatively soft metal body and an inclosing jacket of harder metal, there being perforations in said jacket through which the metal of the body portion extends beyond the surface of the jacket, to constitute bearing surfaces for the projectile in the barrel of the arm.

2. A projectile for firearms consisting of a relatively soft metal body and an inclosing jacket of harder metal, there being perforations in said jacket disposed in staggered relation over that part of the projectile having a bearing on the barrel of the arm, the metal of the body portion extending through said perforations and somewhat beyond the surface of the jacket, the channels between the soft metal areas constituting receptacles for a lubricant.

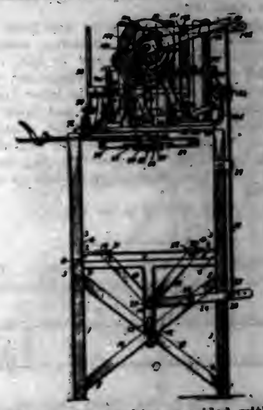
3. A projectile for firearms consisting of a relatively soft metal body, and a jacket therefor of harder metal, said jacket having perforations therein disposed circumferentially around that part of the projectile bearing on the barrel of the arm, the soft metal of the body being forced out through said perforations to provide bearing points for the projectile beyond the surface of the jacket.

4. A projectile for firearms consisting of a sheet metal jacket having perforations therein disposed over the cylindrical area of the projectile from the base forward, and a body of softer metal than the jacket pressed into the latter, whereby the body metal may fill said perforations and extend beyond the outer surface thereof to provide bearing surfaces for the projectile in the barrel of the arm.

5. A projectile for firearms consisting of a relatively soft metal body inclosed in a relatively hard metal jacket, the body metal extending through perforations in the wall of the jacket and beyond the surface thereof, whereby areas of soft metal are provided to support the projectile in the barrel of a firearm with its hard metal jacket out of contact therewith.

959,038. MACHINE FOR CAPPING MILK-BOTTLES. DAVID S. YARD, Olean, N. Y. Filed Dec. 14, 1909. Serial No. 533,108.

1. A bottle capping machine provided with a clamping frame having clamping plates and a positive locking device for such plates, and means for positively locking and positively unlocking the positive locking device.



2. A bottle capping machine provided with a clamping frame having clamping plates arranged in sets, a bar connected with such clamping plates and having a rack, a lever for moving such clamping plates, and a pawl connected to the lever and adapted to engage the rack.

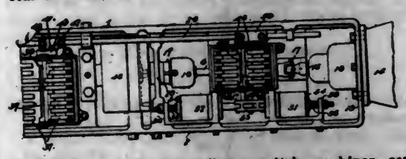
3. A bottle capping machine provided with a shaft having thereon cam wheels provided on each face with a cam, a lifter for a bottle receptacle, a clamping frame for the tops of the bottles, and mechanisms between the cams and the lifter and the clamping frame.

4. A bottle capping machine provided with a shaft having thereon cam wheels provided on one side with a cam rib and on the other side with a cam groove, a lifter for a bottle receptacle, and a clamping frame for the tops of the bottles, slides connected to the clamping frame and engaging the cam grooves, and levers connected to the lifter and engaging the cam ribs.

5. A bottle capping machine provided with a shaft having wheels provided with pins projecting from the faces thereof, oscillating arms provided with forks for engagement with such pins, a cap feeding frame, and connections between the oscillating arms and the frame.

[Claims 6 and 7 not printed in the Gazette.]

959,039. RAILWAY-SWITCH MACHINE. HARRY M. ABERNETHY, Cleveland, Ohio. Filed Apr. 14, 1908. Serial No. 427,076.



1. A box or casing for railway switch machines, comprising sides, and a bottom provided with a plurality of depressions adapted to fit between railway ties and serving as compartments to contain mechanism.

2. A railway switch machine, comprising a box or casing having a bottom formed with a plurality of depending compartments, mechanism within said compartments, and a longitudinal shaft supported in bearings within the casing.

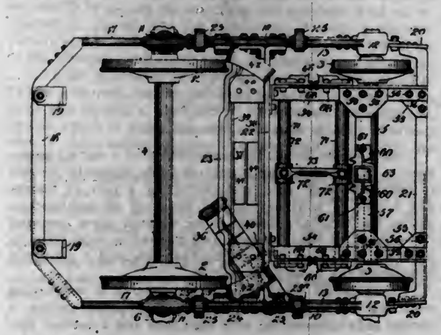
3. A railway switch machine, comprising a box or casing having a bottom formed with a plurality of depending compartments, each containing mechanism, a shaft disposed longitudinally of said box, and a motor casing at one end of said box.

4. A railway switch machine, comprising a box or casing having a bottom formed with transverse depressions serving as compartments, mechanism within said compartments, and mechanism supported upon the bottom of the box between said compartments, and a revoluble shaft extending longitudinally of said box.

5. A railway switch machine, comprising a box or casing having a bottom provided with transverse depending compartments, switch-rod locking mechanism arranged adjacent to one of said compartments, switch-bar operating mechanism within another of said compartments, clutch mechanism within another of said compartments, electrical selector devices, and a circuit controller supported upon the box bottom, a longitudinally-disposed shaft, and a motor for revolving said shaft.

[Claims 6 to 11 not printed in the Gazette.]

959,040. MAXIMUM-TRACTION TRUCK. WALTER S. ADAMS, Philadelphia, Pa., assignor to The J. G. Brill Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 19, 1908. Serial No. 439,433.



1. In a truck, a spring plank, and means for supporting the same, diagonally disposed elliptic springs mounted on said spring plank, and a bolster carried by and directly connected with said springs.

2. In a truck, a spring plank, and means for supporting the same, diagonally disposed elliptic springs mounted on said spring plank, a bolster carried by and directly connected with said springs, and means for connecting said bolster with a king bolt.

3. In a truck, a spring plank, and means for supporting the same, diagonally disposed elliptic springs mounted on said plank, a bolster carried by and directly connected with said springs and rub plates secured to said bolster.

4. In a car truck, the combination with a truck frame having side-bars, larger driving wheels and smaller wheels journaled in pairs in the frame, a pair of swinging links suspended from said frame on each side thereof, a spring-plank, means for connecting the pairs of links on each side and supporting the spring-plank thereon, springs on said spring-plank and diagonally disposed, a bolster on the springs having a bearing, said bearing being eccentrically disposed relative to the driving wheels, a transom located adjacent to the driving wheels, a two-part drawing device, the lower element being secured at one end to the transom and extending forwardly toward the driving wheels, the other and overlying part extending to the bolster, means for pivotally connecting the outer ends of both elements of said drawing device, a bearing on the upper element engaging the bolster bearing, and means for securing the said upper element to a car body.

5. In a truck having larger driving and smaller wheels, side frames, paired links pendent from the side frames, a spring-plank supported by horizontally disposed equalizers on each pair of links diagonally disposed, springs on the spring-plank, a bolster carried by said springs, a bearing on said bolster, a draw frame secured to the truck frame adjacent to and extending toward axle of the drive wheels, a companion frame secured to the outer end of the draw frame carrying bearing devices engaging the bearing on the bolster, and means for pivotally connecting the draw and companion frames together.

[Claims 6 to 21 not printed in the Gazette.]

959,041. VEHICLE-TIRE. JOSEPH ALLEND, Philadelphia, Pa. Filed Apr. 2, 1908. Serial No. 424,806.



1. The combination of a wheel rim having a channel therein, a sectional resilient tire extending into said channel, each section of said tire having a transverse opening therein, a member extending through said opening and comprising a pair of plates hinged together, and means connecting said member with said rim and holding said tire in place.

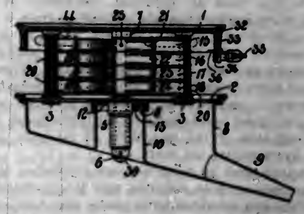
2. The combination of a wheel rim having a channel therein, a sectional resilient tire extending into said channel, each section of said tire having a transverse opening therein, a member extending through said opening and comprising a pair of plates hinged together, and bolts extending through said rim and tire and engaging said member.

3. The combination of a wheel rim having a channel therein, a sectional resilient tire extending into said channel, each section of said tire having a transverse opening therein, a member extending through said opening and comprising a pair of plates hinged together and having inwardly bent ends engaging the sides of the tire, and means connecting said member with said rim and holding said tire in place.

4. The combination of a wheel rim having a channel therein, a sectional resilient tire extending into said channel, each section of said tire having a transverse opening therein, a member extending through said opening and comprising a pair of plates hinged together and having inwardly bent ends engaging the sides of the tire, and bolts extending through said rim and tire and engaging said member.

5. The combination of a wheel rim having a channel therein, a sectional resilient tire extending into said channel, each section of said tire having a transverse opening therein, a member extending through said opening and comprising a pair of plates hinged together, a collar surrounding the hinged portion of said plates, and means connecting said member with said rim and holding said tire in place.

959,042. MILKING APPARATUS. GUSTAF EMIL ANDERSON, Stockholm, Sweden, assignor to Johan Georg Eugen Sundberg, Stockholm, Sweden. Filed Mar. 3, 1910. Serial No. 547,064.



1. In a milking apparatus the combination with a central driving shaft and a set of cams thereon, of milking members each consisting of a set of pivoted arms and an

outer adjustable plate, substantially as and for the purpose set forth.

2. In a milking apparatus the combination with a central driving shaft and a set of cams thereon, of milking members each consisting of a set of pivoted arms and an outer adjustable plate, and means for adjusting said outer plates simultaneously, substantially as and for the purpose set forth.

3. In a milking apparatus the combination with a central driving shaft and a set of cams thereon, of milking members each consisting of a set of pivoted arms, elastic cushions on said arms and an outer adjustable plate, a rotatable ring, abutments on said ring bearing against said outer plates, and means for rotating said ring, substantially as and for the purpose set forth.

4. In a milking apparatus the combination with a central driving shaft and a set of cams thereon, of milking members each consisting of a set of pivoted arms and an outer adjustable plate, a rotatable ring, spring plates on said ring bearing against said outer plates, means for rotating said ring, and means for locking the latter in position, substantially as and for the purpose set forth.

5. In a milking apparatus the combination with a central driving shaft and a set of cams thereon, of milking members each consisting of a set of pivoted arms and an outer adjustable plate, means for adjusting said outer plates simultaneously, and means for adjusting said plates independently of each other, substantially as and for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

959,043. SMOKING-PIPE. MARY A. BARGER, Hopedale, Ill. Filed Oct. 7, 1909. Serial No. 521,521.



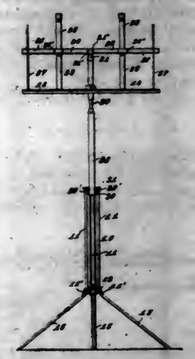
1. A pipe consisting of a two-part body provided with a tobacco cavity in one part and smoke channels extending from the outer extremity of one part to the mouth piece of the other, connected together by a rotative and longitudinally movable connection constituting a continuation of the smoke channel, and a ring or band secured to one of the parts and provided with radial air orifices and adapted to bridge the adjacent ends of the two parts of the body, substantially as hereinbefore set forth.

2. In a pipe such as described, and consisting of a two-part body, one formed with a tobacco cavity or receptacle, and each formed with a smoke channel adapted to be brought into communication; a rotative and longitudinally movable joint between the two parts of the body and constituting a continuation of the smoke channels and located in a longitudinal projection or seat on one of the parts and lateral to its axis; and a circumferential band secured to one of the parts and provided with air orifices and adapted to bridge the space between the adjacent ends of the two parts of the body, substantially as hereinbefore set forth.

3. In a pipe such as described, consisting of a two-part body with smoke channels extending from a tobacco cavity or receptacle in one of said parts to a mouth piece connected with the other through a rotative and longitudinally movable joint; a longitudinal extension on one of said parts lateral to its axis, and a circumferential band secured to one of said parts and provided with one or more air inlets communicating with the space between the adjacent ends of the two parts of the body, substantially as hereinbefore set forth.

4. In a pipe such as described and consisting of a two-part body connected in rotative and longitudinally movable relation and provided with smoke channels communicating through said connection; a tobacco cavity or receptacle in one of said parts, and an air chamber in the extremity of the other of said parts; and a circumferential band adapted to bridge the joint between the two parts, and provided with air inlets communicating with the said air chamber, substantially as hereinbefore set forth.

959,044. MUSIC-STAND. JOHN D. BARNES, Norfolk, Va. Filed June 16, 1909. Serial No. 502,550.



1. In a music stand, the combination of a spring goose-neck, a rack comprising a pair of angle supports pivoted to the goose-neck, said rack including a pair of fingers and a pair of auxiliary fingers mounted on independent pivots, the auxiliary fingers being adapted when operated to operate the other fingers and thereafter hold them in position, a supporting stem for the rack, and a pivot pin connecting the goose-neck thereto.

2. In a music stand, the combination of a supporting stem having a rounded face, a goose-neck having a curved body coöperating with said face and a portion disposed adjacent thereto, a music rack connected to the goose-neck, and a pivot pin passed through said stem, said goose-neck and said rack members.

3. In a music rack, the combination with an upright support and angle supports pivotally connected thereto and to each other, of links connected to said upright support, other links connected to said angle supports and to the aforesaid links, and pairs of fingers mounted on independent pivots near the outer ends of said links, one of each of said pairs of fingers being adapted to operate the other when swung on its pivot and to hold the same in open adjusted position.

4. In a music stand, the combination of a skeleton body, a cap rigidly connected to one end of the body and having a slot therein, a supporting stem pivotally connected to said cap and adapted to enter said slot when extended, and a spring to hold the stem in extended position.

5. In a music stand, the combination of a skeleton body, a cap rigidly connected to one end thereof substantially in a plane at right angles thereto, said cap having a slot extending inwardly from one edge to its center, a shackle connected to the inner face of the cap, a supporting tube pivoted to said shackle and adapted to enter said slot when extended and to swing within the body adjacent to one side thereof when collapsed, and a spring coöperating with the tube to hold it in its extended position.

[Claims 6 to 9 not printed in the Gazette.]

959,045. ELECTRIC-ARC LAMP. HEINRICH BECK, Frankfort-on-the-Main, Germany, assignor to Beck Flaming Lamp Company, Canton, N. Y., a Corporation of New York. Filed Nov. 14, 1906. Serial No. 343,450.

1. In an apparatus of the kind described, a conoidal electrode support, the external surface of which engages the electrode and a pivot having connection with the support and arranged eccentric to the axis thereof.

2. In an apparatus of the kind described, downwardly-extending electrode, a carrier, and an electrode support having a conoidal portion engaged with the lower end of the electrode and a pivot arranged eccentric to the axis of said conoidal portion and connecting the support to the carrier.



3. In an apparatus of the kind described, a support for an electrode, having a frustum shaped portion adapted externally to engage the electrode and provided with an eccentrically placed teat for connecting it with a suitable carrier and whereby it is adapted to be adjusted relatively to the electrode supported by it, for the purpose set forth.

4. In an apparatus of the kind described, the combination of a carrier, and an electrode support connected therewith and having a plurality of independent adjustments, one of which is eccentric, said electrode support provided with a downwardly sloping external wall to engage the electrode.

5. In an apparatus of the kind described, the combination of a carrier and a conoidal electrode support the outer tapered surface of which is adapted to engage the electrode, and means for connecting the support with the carrier, adapted to provide a plurality of independent adjustments, one of which is eccentric to the axis of the support and another of which is around the center of the same.

[Claims 6 to 11 not printed in the Gazette.]

959,046. DRIVE-CHAIN AND WHEEL THEREFOR. WARREN J. BELCHER, Hartford, Conn., assignor to The Whitney Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 8, 1909. Serial No. 488,716.



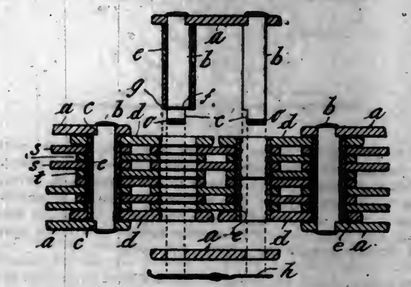
1. A chain-driving mechanism consisting of a toothed wheel and a chain of pivotally connected links, said links having depending end portions whereby recesses are provided to fit the ends of the teeth, the link members being adapted to be seated astride of the teeth which they drive, the pivotal points of the links being located nearer to the ends of the teeth than to the bottom of the spaces between the teeth.

2. A chain consisting of pivotally connected links, the metal between the pivotal points of the link members being disposed in a straight line, the link members having end portions extending one side of said straight line to constitute a tooth receiving recess, each link member being adapted to be seated astride of the tooth which it drives.

3. A toothed wheel and a drive-chain of pivotally connected link members each adapted to be seated on the end of the tooth which it drives, out of contact with any other tooth, the pivotal points of the link members being nearer to the ends of the teeth than to the bottom of the spaces between the teeth.

4. A toothed wheel and a drive-chain of pivotally connected link members, each member being adapted to be seated astride of the tooth which it drives, the metal between the pivotal points of the chain being disposed in a straight line over the ends of the teeth.

959,047. DRIVE-CHAIN. WARREN J. BELCHER, Hartford, Conn., assignor to The Whitney Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Dec. 16, 1909. Serial No. 533,423.



A drive-chain consisting of links comprising oppositely disposed side-plates and non-rotatable pins extending through the side-plates near the ends thereof, and other links comprising oppositely disposed side-plates and non-rotatable bushings extending through the plates near the ends thereof, a pin of one of said links extending through a bushing of the other link to constitute a chain, one of the side-plates having the pins secured therein, being separable from its opposite side-plate, and one of the bushings of the other link being secured to one of the pins in said separable plate whereby the removal of said plate will withdraw one bushing from the chain to permit the separation of the latter.

959,048. METHOD OF MAKING COPPER ALLOYS. GIDEON BOERICKE, Philadelphia, Pa. Filed Oct. 31, 1908. Serial No. 460,422.

1. The process of producing a copper alloy, which consists in reacting upon a salt of the metal which is to be alloyed with copper sulfate, thereby forming a precipitate, and reducing said precipitate to metallic form, substantially as described.

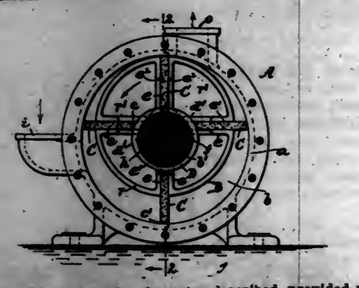
2. The herein described process of producing an alloy of copper, with vanadium, molybdenum, tungsten, chromium, or similar metal, which consists in the reacting upon of a solution of a salt of said metal with copper sulfate thereby forming a precipitate, and reducing said precipitate to metallic form, substantially as described.

3. The herein described method of forming copper alloys, which consists in reacting upon a solution of a salt of sodium tungstate, with copper sulfate, thereby forming a precipitate, and then reducing said precipitate to metallic form, substantially as described.

959,049. POSITIVE-PRESSURE BLOWER. FRANCIS P. BOLAND, Providence, R. I. Filed Nov. 8, 1909. Serial No. 526,771.

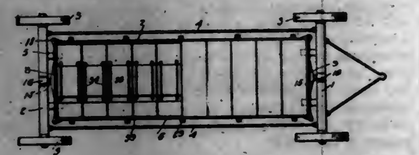
1. In a positive-pressure blower, the combination with a bored casing provided with intake and discharge passages, and end heads secured to the casing, each having a short, inwardly extending, slightly oval-shaped hub, of a cylindrical-shaped piston disposed eccentrically to and revolubly mounted in the casing's chamber, and a plurality of blades, uniformly alike in width and length, movably mounted in and carried bodily by the piston; the contour surface of the said hubs in connection with the bored surface of the casing forming a space therebetween such that, when in action, the inner and outer edges of the blades are adapted to be in substantial continuous fric-

tional contact with said surfaces during each revolution of the piston.



2. In a blower of the character described, provided with a casing and a revolubly mounted blade-carrying piston, a pair of head members secured to the casing, each having an inner hub portion disposed concentrically therewith, and a thin, oval-shaped metal ring bored to receive said hub and being removably secured to and positioned upon it, for the purpose hereinbefore set forth.

959,050. BLOCK-MOLDING MACHINE. JOSEPH W. BRAGSTAD, Canton, S. D., assignor to The Bragstad Bros. Co., Inc., Canton, S. D., a Corporation of South Dakota. Filed Dec. 3, 1909. Serial No. 531,268.



1. A block molding machine for manufacturing simultaneously a plurality of sectional blocks, comprising a rotatable body-portion provided with a removable bottom, an outer core secured to and projecting from the inner face of each of the sides of the body-portion, means to constitute a longitudinally-extending removable inner core arranged between the outer cores, upper and lower transversely-extending partitions seated upon the outer and inner cores, and means carried by the sides of the body-portion for maintaining said partitions in position.

2. A block molding machine for manufacturing simultaneously a plurality of sectional blocks, comprising a rotatable body-portion provided with a removable bottom, an outer core secured to and projecting from the inner face of each of the sides of the body-portion, means to constitute a longitudinally-extending removable inner core arranged between the outer cores, upper and lower transversely-extending partitions seated upon the outer and inner cores, means carried by the sides of the body-portion for maintaining said partitions in position, said outer cores alternately-disposed with respect to each other and each having its inner end cut-away to provide a passage for anchoring means.

3. A block molding machine for manufacturing simultaneously a plurality of sectional blocks, comprising a body-portion formed with side and end walls and a removable bottom, coupling devices embodying cam levers for adjustably connecting the bottom to the sides of the body-portion, a longitudinally-extending outer core projecting inwardly from the inner face of each of the side walls of the body-portion, longitudinally-extending means constituting a removable inner core arranged between the said outer cores, upper and lower transversely-extending partitions mounted upon both sides of said cores, and means carried by the sides of the body-portion for maintaining said partitions in position.

4. A block molding machine for manufacturing simultaneously a plurality of sectional blocks, comprising a body-portion formed with side and end walls and a removable bottom, coupling devices embodying cam levers for adjustably connecting the bottom to the sides of the body-portion, a longitudinally-extending outer core projecting inwardly from the inner face of each of the side walls of the body-portion, longitudinally-extending means constituting a removable inner core arranged between the said outer cores, upper and lower transversely-extending partitions mounted upon both sides of said cores, and means carried by the sides of the body-portion for maintaining said partitions in position, said outer cores being alternately-disposed with respect to each other and each having its inner end cut-away to provide for the passage of anchoring means.

5. A block molding machine for manufacturing a plurality of sectional blocks simultaneously, comprising a body-portion provided with side and end walls and a removable bottom, an inwardly-extending outer core projecting from the inner face of each of the sides of the body-portion, said cores alternately-disposed with respect to each other, a longitudinally-extending sectional and removable inner core having one of its sections mounted upon one face of the outer core and the other of its sections abutting against the other face of the outer core, and means for detachably connecting the bottom of the body-portion in position.

[Claims 6 to 8 not printed in the Gazette.]

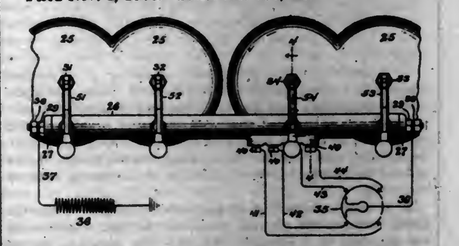
959,051. PHOTOMETER. HAAKON BRYHNI, Börsen, near Trondhjem, Norway. Filed Aug. 29, 1907. Serial No. 390,027.



1. In a photometer the combination of a mirror, and a transparent body mounted at a fixed distance from said mirror and having marks thereon to be reflected in the said mirror together with an image of the pupil.

2. In a photometer the combination of a mirror, and a lens mounted at a fixed distance from said mirror, the said lens being provided with marks to be reflected in the said mirror together with an image of the pupil of the eye.

959,052. INSULATOR AND CONDUCTOR FOR ELECTRIC CURRENTS. ALBERT CHAMPION, Flint, Mich., assignor to Champion Ignition Company, Flint, Mich. Filed Nov. 3, 1908. Serial No. 460,816.



1. The combination with a tube of insulating material having conductors embedded in its wall, of a casing for said tube, said casing having an opening for the insertion and removal of said tube, means for covering said opening, and a conductor extending through said tube and through said covering means and connected to said covering means whereby said covering means is fastened against said casing.

2. The combination with a tube of insulating material having conductors embedded in its wall, of a casing for said tube, said casing being open at both ends, covers for the openings in the ends of said casing, a conductor extending through said tube and through said covers, and means for connecting said conductor and said covers whereby said covers are fastened against said casing.

3. The combination with a tube of insulating material having conductors embedded in its wall, of a casing for said tube, said casing being open at both ends, covers for the openings in the ends of said casing, said covers being adapted to confine said tube in one position, a conductor extending through said tube out of contact therewith, and through said covers, and means on said conductor for engaging and holding said covers against their seats.

959,053. GOLF-CLUB. ALBERT C. FOWLER, St. Louis, Mo. Filed Aug. 16, 1909. Serial No. 513,065.



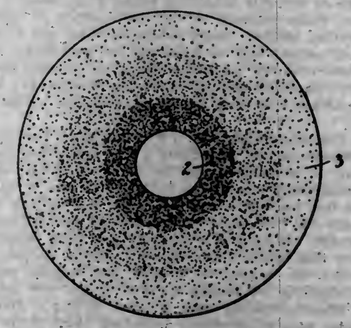
1. In a golf club, the combination with the head, of a shaft oval in cross section, and having its greatest width in a plane inclined to a vertical plane passing through the center of the shaft and head.

2. In a golf club, the combination with the head, of a shaft oval in cross section, and having its greatest width in a plane inclined to a vertical plane passing through the center of the shaft and head, the striking face of the club being also inclined to said vertical plane.

3. In a golf club, the combination with the head, of a shaft oval in cross section, and having its greatest width in a plane inclined to a vertical plane passing through the center of the shaft and the head, the striking face of the club being oppositely inclined to said vertical plane.

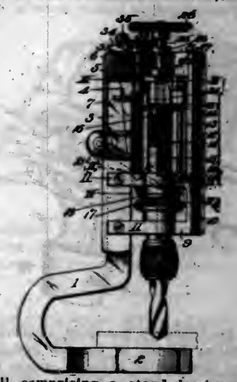
4. In a golf club, the combination with the head, of a shaft oval in cross section substantially from the head to the handle and having its greatest width in a plane inclined to a vertical plane passing through the center of the shaft and the head.

959,054. GRINDING AND POLISHING DISK. CHARLES GLOVER, New Britain, Conn. Filed Mar. 8, 1909. Serial No. 481,892.



As a new article of manufacture, a grinding and polishing means comprising a flexible disk, abrasive material applied to one surface of said disk, said abrasive being of different degrees of fineness varying gradually and uniformly from the center to the outer edge of said disk in all directions, the abrasive material nearest the center being the coarsest.

959,055. DRILL. ANTHONY GODLEWSKI, St. Louis, Mo. Filed June 21, 1909. Serial No. 503,329.



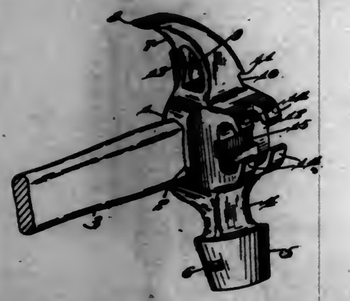
1. A drill comprising a stand having a standard, a bracket having an internally screw-threaded offset arm and secured to the standard, a supporting frame having an arm and a leg slidably fitted to the standard, a guide frame having an arm and secured to the leg, a shift screw stepped into the arm of the guide frame, operable in the offset arm and loosely fitted in the arm of the supporting frame and means for operating the shift screw.

2. A drill comprising a stand having a standard, a supporting frame having an upper arm and fitted to the standard, a guide frame having intermediate and lower arms secured to the supporting frame, a guide rod stepped into the intermediate arm and into the upper arm, a hollow spindle having an annular groove at its upper end and operable in the intermediate and lower arms, a feed block slidably fitted to the guide rod and into which the upper end of the hollow spindle is stepped, a feed screw extending through the feed block and into the hollow spindle and loosely fitted in the arm of the supporting frame, and a locking arm pivoted to the underside of the feed block and adapted to engage in the annular groove of the hollow spindle and support the latter from the feed block.

3. A drill comprising a stand having a standard, a supporting frame having an upper arm and fitted to the standard, a guide frame having intermediate and lower arms secured to the supporting frame, a guide rod stepped into the intermediate arm and into the upper arm, a hollow spindle having an annular groove at its upper end and operable in the intermediate and lower arms, a feed block slidably fitted to the guide rod and into which the upper end of the hollow spindle is stepped, a feed screw extending through the feed block and into the hollow spindle and loosely fitted in the arm of the supporting frame, a locking arm pivoted to the underside of the feed block and adapted to engage in the annular groove of the hollow spindle and support the latter from the feed block, and a spring secured to the feed block and bearing against the locking arm for seating the latter.

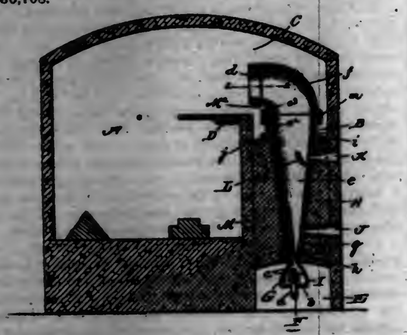
4. A drill comprising a stand having a standard, a supporting frame having an upper arm and fitted to the standard, a guide frame having intermediate and lower arms secured to the supporting frame, a guide rod stepped into the intermediate arm and into the upper arm, a hollow spindle having an annular groove at its upper end and operable in the intermediate and lower arms, a feed block slidably fitted to the guide rod and into which the upper end of the hollow spindle is stepped, a feed screw extending through the feed block and into the hollow spindle and loosely fitted in the arm of the supporting frame, a plate having a longitudinal slot, and a locking arm pivoted to the underside of the feed block and adapted to engage in the annular groove of the hollow spindle and support the latter from the feed block and having a pointer extending through the slot of the plate and providing means for shifting the locking arm.

959,056. WRENCH STRUCTURE. CHARLES B. GRIM, Camden, N. J. Filed Oct. 16, 1909. Serial No. 522,923.



A device of the character described, consisting of a single integral casting having an opening therein, a handle in said opening, said casting having a groove transversely of the casting at one side, and longitudinally with the handle, and integral inwardly curving lugs on said casting at opposite sides of the groove, substantially as described.

959,057. GLASS-HEATING APPARATUS. AMANDUS HANSON, Caney, Kans. Filed Jan. 6, 1910. Serial No. 536,708.



1. An apparatus for the purpose described, comprising a heating chamber, a burner located at one side of the lower portion thereof, and an upright conductor located at one side of said chamber and above the burner to receive the products of combustion therefrom; said conductor being made up of a lower upright section, and an upper section swiveled on the lower section and having a laterally deflected upper portion adapted to discharge said products into the upper portion of the heating chamber.

2. An apparatus for the purpose described, comprising a heating chamber, a burner located at one side of the lower portion thereof, and an upright conductor located at one side of said chamber and above the burner to receive the products of combustion therefrom; said conductor being made up of a lower upright section and an upper section swiveled on the lower section and having a laterally deflected upper portion adapted to discharge said products into the upper portion of the heating chamber, and being gradually increased in size from its lower portion to its upper end.

3. An apparatus for the purpose described, comprising a heating chamber, a burner located at one side of the lower portion thereof, and an upright conductor located at one side of said chamber and above the burner to receive the products of combustion therefrom, said conductor having a laterally deflected upper portion adapted to discharge said products into the upper portion of the heating chamber, and also having deflectors of wedge-shape in cross-section in its mouth.

4. An apparatus for the purpose described, comprising a heating chamber, a burner located at one side of the lower portion thereof, and an upright conductor located at one side of said chamber and above the burner to receive the products of combustion therefrom, said conductor having a laterally deflected upper portion adapted to discharge said products into the upper portion of the heating chamber, and also having lower and upper inwardly-tapered induction tubes connecting the interior of the conductor with the atmosphere, and further having an upwardly disposed deflector contained within it and arranged opposite the upper induction tube.

959,058. WHEEL. JOHN L. JACKSON, River Forest, Ill. Filed Mar. 11, 1909. Serial No. 482,846.



1. The combination with a wheel having a fixed rim, of a demountable rim comprising a tire-supporting member having tire-retaining flanges, one of said flanges being removably mounted on the outer surface of said supporting member, means fitting between said fixed rim and the supporting member and detachably connected with said supporting member for holding said removable flange in operative position thereon, and means for detachably securing said supporting member on the fixed rim.

2. The combination with a wheel having a fixed rim, of a demountable rim comprising a tire-supporting member having tire-retaining flanges, one of said flanges being removably mounted on the outer surface of said supporting member, an expansible split ring fitting between said fixed rim and the supporting member and detachably connected with said supporting member for engaging and holding said removable flange on the supporting member, and means for detachably securing said supporting member on the fixed rim.

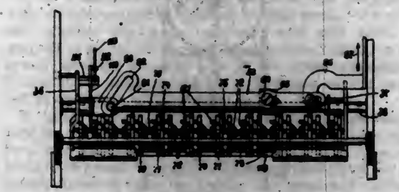
3. The combination with a wheel having a fixed rim, of a demountable rim comprising a tire supporting member having an inwardly projecting flange, a removable tire retaining flange mounted on the outer surface of said tire supporting member, means secured between said tire supporting member and the fixed rim and detachably engaging said inwardly projecting flange for holding said removable flange on said tire supporting member, and means for detachably securing the demountable rim on the fixed rim.

4. The combination with a wheel having a fixed rim, of a demountable rim comprising a tire supporting member having an inwardly projecting flange, a removable tire retaining flange mounted on the outer surface of said tire supporting member, a channeled split locking ring fitting between said tire supporting member and the fixed rim and detachably engaging said inwardly projecting flange, said locking ring having a portion that projects outwardly beside the tire supporting member and engages said removable flange for holding the same in operative position.

5. The combination with a wheel having a fixed rim provided with an outwardly-projecting flange at its inner margin, of a demountable rim comprising a tire supporting member having an inwardly-projecting flange adjacent to its inner margin, a removable tire-retaining flange mounted on said tire supporting member, an expansible ring fitting between said tire supporting member and the fixed rim, said expansible ring being adapted to embrace said inwardly-projecting flange and engaging said tire-retaining flange for holding said flange on the tire supporting member, and means for detachably securing the demountable rim on the fixed rim.

[Claim 6 not printed in the Gazette.]

959,059. ADDING AND SUBTRACTING MACHINE. CHARLES F. KETTERING, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corportion of Ohio, (Incorporated in 1906.) Filed Aug. 31, 1908. Serial No. 451,076.



1. In an accounting machine, the combination with a totalizer, of driving mechanism for the same, a keyboard which controls the driving mechanism, the totalizer comprising different denominational elements each of which consists of a register gear arranged to be rotated in a forward direction by the driving mechanism and a companion gear arranged to backwardly rotate the register gear when the companion gear is meshed with the driving mechanism, means for shifting the totalizer to move the register gears out of mesh and the companion gears into mesh with the driving mechanism.

2. In an accounting machine, the combination with a totalizer of driving mechanism for the same, the totalizer comprising different denominational elements each of which consists of a pair of accumulating gears said gears being geared together so that rotation of one of the gears will cause the opposite rotation of the other gear, means for shifting the totalizer so that one or the other of the sets of gears may be meshed with the driving mechanism.

3. In an accounting machine, the combination with a totalizer, of driving mechanism for the same, means for controlling the driving mechanism, the totalizer consisting of a plurality of accumulating wheels, and a duplicate set of wheels, all of said wheels mounted in axial alinement, intermediate gears between the duplicate set and the accumulating wheels so that when one set of wheels is rotated the other set will be oppositely rotated.

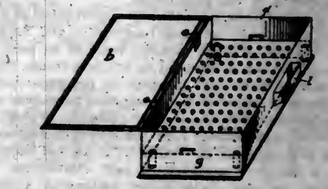
4. In an accounting machine, the combination with a totalizer, of driving mechanism for the same, means for controlling the driving mechanism, the totalizer consisting of a plurality of accumulating wheels, and a duplicate set of wheels, all of said wheels mounted in axial alinement, and intermediate gears between the duplicate set and the accumulating wheels so that when one set of the wheels is rotated the other set will be oppositely rotated, and transfer devices which may be controlled by either set.

5. In an accounting machine, the combination with a totalizer of driving mechanism for the same, a keyboard for controlling the driving mechanism, the totalizer comprising different denominational elements, each of which consists of a register wheel or gear arranged to be rotated in a forward direction by the driving mechanism and a companion wheel and intermediate gears between the two for backwardly rotating the register wheel when the companion gear is meshed with the driving mechanism, and a shifting device for causing the companion gears to be meshed with the driving mechanism, with connections for actuating said shifting device by the driving mechanism.

[Claims 6 to 38 not printed in the Gazette.]

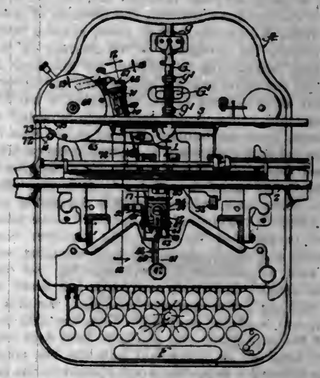
959,060. CIGAR-MAKER'S BOX AND ROLLING-BOARD. JOHANN KLETTI, III, Sandhausen, Germany. Filed Dec. 27, 1909. Serial No. 535,029.

Moistener and rolling board for the cover leaves of cigars, comprising a receptacle, a removable strainer dividing said receptacle into two parts, the lower for the reception of the moistening liquid, and the upper for the cover leaves, a metal coated rolling board hinged to said



receptacle, adapted to form the cover for the same, and a glue bowl at one side of said receptacle, substantially as described, and for the purpose set forth.

959,061. COLUMN-STOP MECHANISM FOR TYPE-WRITERS. THERON L. KNAPP and CLAYTON C. HARTING, Woodstock, Ill., assignors to The Oliver Typewriter Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 21, 1908. Serial No. 454,102.



1. In a typewriting machine, the combination of a base-frame, a shift-frame movable backwardly and forwardly thereon, a paper-carriage movable on said shift-frame, and a spring-barrel mounted on the base-frame, through the medium of which endwise movement is given to the paper-carriage, letter spacing mechanism for controlling the movement of the carriage on the shift-frame, column-stop mechanism for releasing said carriage from the letter-spacing mechanism and arresting its movement at a desired point, embracing a key-lever for operating said column-stop mechanism mounted on said shift-frame, brake mechanism mounted on the base-frame and acting on the spring-barrel, and means for actuating said brake mechanism from the key-lever embracing a movable member mounted on the base-frame and adapted to be acted upon by the key-lever in all positions of the shift-frame.

2. In a typewriting machine, the combination of a base-frame, a shift-frame movable backwardly and forwardly thereon, a paper-carriage movable on said shift-frame, a spring-barrel mounted on the base-frame, through the medium of which endwise movement is given to the paper-carriage, letter-spacing mechanism for controlling the movement of the carriage on the shift-frame, and column-stop mechanism for releasing said carriage from the letter-spacing mechanism and arresting its movement at a desired point, embracing a key-lever for operating said column-stop mechanism mounted on said shift-frame, a brake mechanism mounted on the base-frame and acting on the spring-barrel, and means for actuating said brake-mechanism embracing an actuating lever mounted on the machine frame, and which is provided with a horizontal arm

located at one side of the key-lever, said key-lever being provided with a laterally extending stud adapted to act upon the said horizontal arm of the brake actuating lever in all positions of the shift-frame.

3. In a typewriting machine, the combination of a base-frame, a shift-frame movable backwardly and forwardly thereon, a paper-carriage movable endwise on said shift-frame, a spring-barrel mounted on the base-frame, through which endwise movement is given to the paper-carriage, letter-spacing mechanism for controlling movement of the carriage on the shift-frame, and column-stop mechanism for releasing said carriage from the letter-spacing mechanism and arresting its movement at a desired point, embracing a key-lever mounted on said shift-frame, brake mechanism for the spring-barrel embracing a rocking member pivotally supported on the base-frame and provided with a brake-arm for contact with the spring-barrel, a brake actuating lever mounted on the machine frame by the said key-lever in all positions of the shift-frame, and an endwise movable operating rod on the base-frame, said rod being actuated by said operating lever and acting upon the said rocking member to press the brake-arm against the spring-barrel.

4. In a typewriting machine, the combination of a base-frame, a shift-frame movable backwardly and forwardly thereon, a paper-carriage movable endwise on said shift-frame, a spring-barrel through the medium of which motion is given the paper-carriage, letter-spacing mechanism for controlling the movement of the carriage on the shift-frame, and column-stop mechanism for releasing the carriage from the letter-spacing mechanism and arresting its movement at a desired point, embracing a key-lever for operating said column-stop mechanism mounted on said shift-frame, brake mechanism adapted to act upon the said spring-barrel and embracing a rocking member pivoted to the base-frame and provided with a brake-arm for contact with the spring-barrel, a bell-crank lever pivoted on the machine frame and provided with a depending arm and with a forwardly extending arm located at one side of and adjacent to the said key-lever, said key-lever being provided with a laterally extending stud engaging said horizontal arm, an endwise sliding operating rod connected with the depending arm of said bell-crank lever, the rear end of said rod being adapted to act upon the said rocking member, and a spring applied between the said operating rod and the base-frame and acting to hold said rod at the forward limit of its movement and the bell-crank lever with its forwardly extending arm adjacent to the said stud upon the key-lever.

5. In a typewriting machine, the combination of a base-frame, a paper-carriage, a spring-barrel mounted on the base-frame, through the medium of which endwise movement is given to said paper-carriage, letter-spacing mechanism for controlling the movement of the carriage, and column-stop mechanism for releasing said carriage from the letter-spacing mechanism and arresting its movement at a desired point, embracing a key-lever, a brake-mechanism provided with a brake-arm which presses upwardly on the spring-barrel, connections between said key-lever and the brake mechanism for operating the latter, and a supporting roller for the spring-barrel, mounted on the base-frame beneath the spring-barrel at a point diametrically opposite the brake-arm.

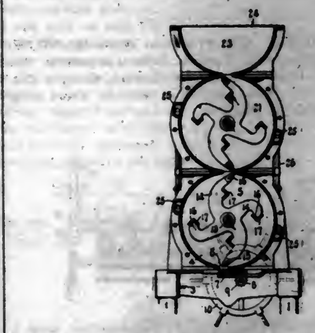
[Claims 6 to 9 not printed in the Gazette.]

959,062. MIXING APPARATUS FOR BRIQUET-MACHINES. GUSTAV KOMAREK, St. Louis, Mo. Filed Feb. 9, 1909. Serial No. 476,889.

1. In an apparatus of the character described, a series of superposed cylinders connected by communicating openings extending substantially the entire length thereof and revolving agitators in said cylinders.

2. In an apparatus of the character described, two superposed cylinders connected by a communicating opening extending substantially the entire length thereof and oppositely revolving agitators in said cylinders.

3. In an apparatus of the character described, a plurality of superposed cylinders connected by a communicating opening extending substantially the entire length thereof, agitators in said cylinders and steam chambers arranged along the sides of said cylinders and connected with the interior thereof by openings.



4. In an apparatus of the character described, the combination with head castings, two separated semi-cylindrical castings forming a cylinder, a shaft mounted in the head castings and agitators mounted on said shaft, one of said agitators traveling in a path adjacent said semi-cylindrical castings and across the separating space between them.

5. In an apparatus of the character described, the combination with head castings, semi-cylindrical castings arranged therebetween, and spaced apart to form inlet and outlet openings along their entire length, steam chambers in the side walls of said cylinder castings, and gates for closing the outlet opening.

[Claims 6 to 9 not printed in the Gazette.]

959,063. VENDING-MACHINE. CHARLES MANSHEL, Providence, R. I. Filed Jan. 2, 1909. Serial No. 470,379.



1. In a machine of the type set forth, the combination with a rotary feeding drum, of a supporting shaft on which it is mounted, vibrating means loosely supported on said shaft for rotating the drum, radial means on the support of said vibrating means, and a pivoted member coöperating with said drum and the radial means for locking the drum against over-rotation.

2. In a machine of the type set forth, the combination with a rotary feeding drum, of a shaft therefor, an arm loosely mounted on said shaft, means on and movable with said arm for rotating the drum, radial means on said arm, a pivoted member coöperating with the drum and the radial means for locking the drum against over-rotation, and means for giving the arm an intermittent motion for moving the strip the distance of a ticket at each intermittent advance of the drum.

3. In a machine of the type set forth, the combination with a rotary feeding drum, of a shaft therefor, vibrating means loosely mounted on said shaft for rotating the drum, radial means on said vibrating means, a pivoted member coöperating with said drum and the radial means for locking the drum against over-rotation, and means actuated by the feeding drum for printing tickets.

4. In a machine of the type set forth, the combination with an intermittently rotating feeding drum, of a vibratory member operatively connected with said drum and adapted to propel the same, a hand-operated shaft, an arm loosely mounted upon the axis of the drum and having a lateral finger, and pivotally mounted means having its free end in the plane of said finger.

5. In a machine of the type set forth, the combination with an intermittently rotating feeding drum, of a vibratory member operatively connected with said drum and adapted to propel the same, a hand-operated shaft, an arm loosely mounted upon the axis of the drum and having a lateral finger, and pivotally mounted means having its free end in the plane of said finger and normally contacting therewith.

[Claims 6 to 25 not printed in the Gazette]

959,064. CABLE-HANGER. FREDRIC D. OGDEN, Bayonne, N. J. Filed Jan. 27, 1910. Serial No. 540,325.



1. A cable hanger comprising a cable supporting loop and two terminal portions constituting hooks, one of the said terminal portions being provided with a guard for co-engagement with the hook upon the other portion.

2. A cable hanger comprising a strip of metal bent at the middle to form a cable supporting loop, and at the end to form hooks, one of the ends being bent below the hook thereat to form a guard for co-engagement with the hook of the other end.

3. A cable hanger comprising a cable supporting loop and two terminal portions, one comprising a hook consisting of two members spaced apart, and the other a hook arranged to be received between the two first mentioned hook members, the first said terminal portion being provided with a guard for co-engagement with the hook of the other said portion.

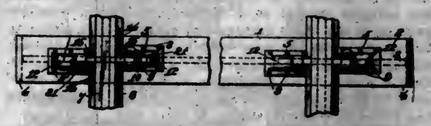
4. A cable hanger comprising a strip of metal bent at the middle to form a cable engaging loop, one end being bent over to form a hook, and the other end also bent over to form a hook but in addition bent transversely below the hook to constitute a guard for coengagement with the hook of the other end.

5. A cable hanger comprising a strip of metal bent at the middle to form a cable engaging loop, one end being bent over to form a hook, and the other end also bent over to form a hook but in addition bent transversely below the hook to constitute a guard for coengagement with the hook of the other end, and then again to form a second hook member parallel with the first said hook member at the same end.

[Claim 6 not printed in the Gazette.]

959,065. RAILWAY-TIE. CLAUS ARVID OLSON, Hibbing, Minn., assignor of one-half to Franklin B. Cundy, Hibbing, Minn. Filed Jan. 14, 1910. Serial No. 538,157.

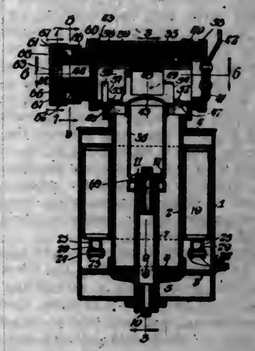
1. In a railway tie a body portion, in combination with a pair of socket members arranged adjacent each end thereof and the socket members of each pair being spaced apart to receive a rail between them and to form guides for the flange of the rail, rail clamping members pivotally mounted in the sockets and adapted to engage the web of the rail directly beneath the ball thereof to support the rail out of contact with the tie, substantially as described.



2. In a railway tie a body portion in combination with a pair of socket members arranged thereon and spaced apart to receive a rail between them, rail clamping members pivotally mounted in said socket members and adapted to engage the web of the rail directly beneath the ball thereof to support the rail out of contact with the tie, the base of the socket members forming guides for the flange of the rail and the socket members above the base being cut away to facilitate placing the rail in position, substantially as described.

3. In a railway tie a body portion in combination with a socket member arranged thereon, a rail clamping member mounted therein and adapted to impinge against the rail, one side of said socket member being cut away for a portion of its length to facilitate inserting and removing said clamping member, and means for locking said clamping member within said socket, substantially as described.

959,066. CARBURETER. WILLIAM OTTAWAY, Aurora, Ill., assignor to Aurora Automatic Machinery Company, Aurora, Ill., a Corporation of Illinois. Filed Sept. 29, 1906. Serial No. 336,685.



1. In a carbureter, a valve embracing a valve casing provided with an outlet port and an air supply port, and a hollow cylindric valve member in said casing adapted to turn therein for simultaneously increasing and decreasing the effective areas of said outlet and air supply ports and having endwise adjustment therein for varying the effective area of the air supply port without changing that of said outlet port; the part of said cylindric valve member which coöperates with the admission port being provided with circumferentially and axially extending working margins, so arranged as to increase and decrease the area of said air-port, in the rotative adjustment of the valve member, to correspond with the increase and decrease of the outlet port, and acting by the endwise adjustment of said valve member, to afford an increased or decreased effective area in said air-port, in all positions of rotative adjustment of said valve member.

2. In a carbureter, a valve comprising a valve casing having an outlet port and an auxiliary air supply port, and a hollow cylinder valve member in said casing adapted

to turn therein for simultaneously varying the effective areas of said outlet and air supply ports, and having endwise adjustment in said valve casing for varying the effective area of said air supply port without changing the effective area of the said outlet port; the port of said valve member which coöperates with the admission port having a plurality of circumferentially extending working margins located at a distance apart in a direction endwise of the valve member and acting to give either an intermediate or minimum effective area to the auxiliary air supply port when the outlet port has minimum effective area and to give either an intermediate or maximum effective area to the auxiliary air supply port when the outlet port has maximum effective area.

3. In a carbureter, a valve embracing a valve casing provided with an outlet port and with an auxiliary air supply port and a cylindric valve member in said casing apertured to co-act with said ports, and having its part which coacts with the said auxiliary air supply port stepped or offset at its margin to form two working margins extending in a direction circumferentially of the cylindric valve member and located at a distance apart in a direction endwise of said valve member, said valve member having turning movement in the valve casing to simultaneously open and close said ports, and endwise adjustment in said valve casing for shifting or moving said stepped or offset marginal part relatively to the auxiliary air supply port, and to thereby vary the effective area of said port.

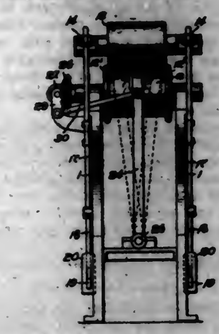
4. In a carbureter, an upright tube constituting a carbureting chamber, a valve casing provided with a port connecting the interior of said casing with the top of said tube, with an outlet port and with an auxiliary air supply port opening to a space outside of said tube, and a rotative cylindric valve member in the said casing having its axis of rotation transverse to the central axis of said upright tube and adapted to turn in said casing for simultaneously increasing and decreasing the effective areas of said outlet port and auxiliary air supply port, said valve member having endwise adjustment in said valve casing for varying the effective area of the auxiliary air supply port, without changing that of said outlet port; the part of said cylindric valve member which coöperates with the admission port being provided with circumferentially and axially extending working margins, so arranged as to increase and decrease the area of said air-port, in the rotative adjustment of the valve member, to correspond with the increase and decrease of the outlet port, and acting by the endwise adjustment of said valve member, to afford an increased or decreased effective area in said air-port, in all positions of rotative adjustment of said valve member.

5. A carbureter comprising an upright cylinder open at its bottom, an upright feed tube in the lower part of said cylinder, a tube constituting a carbureting chamber located in the upper part of said cylinder, open at its lower end and surrounding said feed tube at its said lower end, a valve casing to which said cylinder and the tube are attached at their upper ends, said valve casing being provided with an outlet port, with an inlet port communicating with the interior of said tube at its upper end, and with an auxiliary air supply port communicating with the upper end of the space between the said cylinder and tube, and a cylindric valve member in said casing adapted to turn therein for simultaneously opening and closing said outlet port and said auxiliary air supply port and having endwise adjustment therein for varying the effective area of the auxiliary air supply port.

[Claims 6 to 15 not printed in the Gazette.]

959,067. TEXTILE-CONDITIONING APPARATUS. ISAAC E. PALMER, Middletown, Conn. Filed May 26, 1909. Serial No. 498,423.

1. Textile conditioning apparatus comprising in combination a pair of contacting squeese rolls for operating upon wetted bands or ropes of material narrow in comparison with the length of said rolls to expel liquid therefrom and to discharge the said material, driving means for one or both of said rolls, a guide for directing said wetted band or rope of material between said rolls and traversing means for said guide, the speed of travel of said rolls and the speed of the to and fro movement of the guide being so proportioned with relation to each other that the change in direction of the traversed material in passing between the said rolls is thereby rendered so abrupt as to maintain a substantially crosswise delivery of the material between the rolls, whereby the liquid is expelled substantially crosswise therefrom.



2. Textile conditioning apparatus comprising in combination a pair of coöperating, contacting squeezing surfaces for operating upon wetted bands or ropes of material narrow in comparison with the length of said squeezing surfaces to expel liquor therefrom and to discharge said material, driving means for one or both of said surfaces, a guide for directing said band or rope of material between said surfaces, and traversing means for said guide, the speed of travel of said surfaces and the speed of the to and fro movement of the guide being so proportioned with relation to each other that the material is delivered between the surfaces in zigzag formation with adjoining branches thereof acutely inclined toward each other, thereby to expel the liquid from said material when in said zigzag formation.

3. Textile conditioning apparatus comprising in combination a pair of contacting squeese rolls for operating upon wetted bands or ropes of material narrow in comparison with the length of said rolls to expel liquor therefrom and to discharge said material, driving means for one or both of said rolls, a guide for directing said band or rope of material between said rolls and traversing means for said guide, the speed of travel of said rolls and the speed of the to and fro movement of the guide being so proportioned with relation to each other that the material is delivered between the rolls in zigzag formation, each branch of the zigzag being inclined less than forty-five degrees to the axis of the said rolls, thereby to expel the liquid from said material when in such zigzag formation.

4. Textile conditioning apparatus comprising in combination a pair of contacting squeeze rolls for operating upon wetted bands or ropes of material narrow in comparison with the length of said rolls, to expel liquor therefrom and to discharge said material, driving means for one or both of said rolls, a guide for directing said band or rope of material between said rolls, and traversing means for said guide, the speed of travel of said rolls and the speed of the to and fro movement of the guide being so proportioned with relation to each other that the change in direction of the traversed material in passing between the rolls is thereby rendered so abrupt as to maintain a substantially crosswise delivery of the material between said rolls, thereby to expel the liquid from the material substantially crosswise thereof, the speed of travel of said rolls and guide being also so proportioned that the surface relation of the rolls to the zigzag lines of contact of the material therewith constantly varies circumferentially of said rolls, thereby preventing localization of wear.

5. Textile conditioning apparatus comprising in combination a pair of contacting squeese rolls for operating upon wetted bands or ropes of material narrow in comparison with the length of said rolls to expel liquor therefrom, and to discharge said material, driving means for one or both of said rolls, a guide for directing said bands or ropes of material between said rolls, and serving to feed the material in rope or band form between the rolls, and traversing means for said guide, the speed of travel of said rolls and the speed of the to and fro movement of the guide being so proportioned with relation to each other that the material is presented substantially crosswise to the action of the said rolls, whereby the liquor may be expelled from the material in a direction substantially normal to the edges thereof instead of being forced substantially lengthwise thereof.

[Claims 6 to 14 not printed in the Gazette.]

959,068. COMPOSITION OF MATTER AND METHOD OF MAKING THE SAME. WILLIAM ANSYL PHILLIPS, St. Louis, Mo., assignor to Rheolite Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 12, 1907. Serial No. 392,484.

1. The herein described composition of matter containing a metal, calcium and sulfur, melted and fused together.

2. The herein described composition of matter containing a metallic electric conductor, calcium, and an element adapted to promote fusion or chemical combination, all melted and fused together.

3. The herein described composition of matter containing a metallic electric conductor, a non-conducting metallic salt, and an element adapted to promote fusion or chemical combination, all melted and fused together.

4. The herein described composition of matter containing a metal, calcium, and a highly refractory substance melted and fused together.

5. The herein described composition of matter containing a metal, calcium, and a substance more highly refractory than either the metal or the calcium, melted and fused together.

[Claims 6 to 15 not printed in the Gazette.]

959,060. ADJUSTABLE GUN-STOCK. SUMNER POWERS, Bridgeport, Conn. Filed Nov. 1, 1909. Serial No. 525,651.

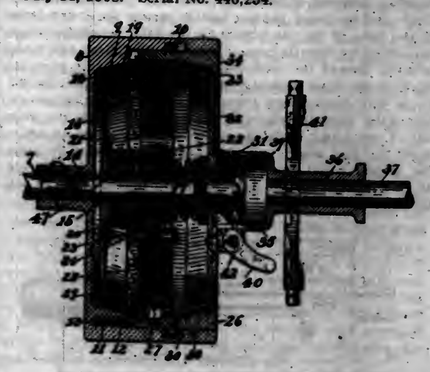


1. An adjustable gun stock comprising a member adapted to be fixed relatively to a barrel and having a head provided with transverse grooves, a butt member having a head plate slidingly mounted in said grooves, said plate having a slot leading in from each edge, stop pins carried by said head and coinciding with said slots to limit the relative adjustment of said members, and means for locking said head plate in any adjusted position.

2. A two-part gun stock comprising a member adapted to be fixed relatively to a barrel and having a head provided with transverse grooves and side strips for attachment to the member, a butt member having a head plate adapted to engage the grooves and side strips for attachment to the member and means for locking the butt member at any desired adjustment relatively to the fixed member.

3. A two-part gun stock comprising a member adapted to be fixed relatively to a barrel and having a head provided with transverse grooves, side strips adapted for attachment to the member and stop pins, a butt member having a head plate adapted to engage the grooves, side strips for attachment to the member and pins engaging the slots for the purpose set forth, and means for locking the butt member at any desired adjustment relatively to the fixed member.

959,070. STARTING MECHANISM FOR EXPLOSIVE-ENGINES. CHARLES E. REDDIG, Hartford, Conn. Filed July 31, 1908. Serial No. 446,254.



1. The combination of a driving shaft, a driven shaft, and gearing interposed between the said shafts comprising a two-part casing, one of which parts is connected with the driving shaft, a spring in the casing connected at one end to the other part of the casing, a starting clutch interposed between the other end of the spring and the first-mentioned part of the casing, a backing ratchet connection between the two parts of the casing, and a main clutch between the last-mentioned part of the casing and the driven shaft.

2. A driving shaft, a driven shaft, gearing interposed between the said shafts and including a two-part casing, one of which parts is connected with the driving shaft, a starting clutch to engage said part of the casing, a spring having one end connected with said clutch and its opposite end with the other part of the casing, and a clutch between said other part of the casing and the driven shaft.

3. A driving shaft, a driven shaft, gearing connecting said shafts and including a two-part casing, one of which parts is connected with the driving shaft, and a starting clutch adapted to engage said part of the casing, a spring having one end connected with said clutch and its opposite end with the other member of the casing, said two members of the casing forming an inclosure within which the spring is located, and a clutch between said other part of the casing and the driven shaft.

4. A driving shaft, a driven shaft, gearing interposed between the said shafts and including a two-part casing, one of which parts is connected with the driving shaft, a starting clutch to engage said member of the casing, a spring having one end connected with said clutch and its opposite with the other part of the casing, and a clutch between said other part of the casing and the driven shaft, said clutch forming a closure for the opening into the casing.

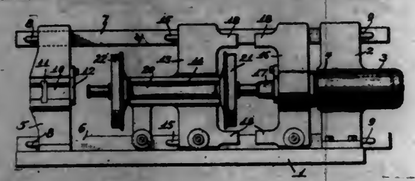
5. A driving shaft, a driven shaft, gearing interposed between said shafts and including a two-part casing, one of which parts is rigidly connected with the driving shaft thereby constituting a fly-wheel, a starting clutch to engage said member of the casing, a spring having one end connected with said clutch and its opposite end with the other part of the casing, and a clutch between said other part of the casing and the driven shaft.

[Claims 6 to 12 not printed in the Gazette.]

959,071. CAR-WHEEL PRESS. GEORGE T. REISS, Hamilton, Ohio, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Filed Jan. 28, 1910. Serial No. 540,502.

1. A car-wheel press comprising, a headblock, a tailblock, tie-bars between the headblock and tailblock, a ram carried by the headblock and adapted to be forced toward the tailblock, a thrust-piece disposed between the ram and

the tailblock and adapted to engage the end of a car-axle and be forced toward the tailblock by the ram, a main housing disposed shiftably between the ram and the tailblock and having a gapped hub to engage the inner faces of the hubs of the car wheels on the axle, removable stops supported by the tie-bars to prevent motion of the main housing toward the tailblock, and engaging-parts connected with the main housing and with the ram and adapted to go into contact and limit the approach of the ram to the main housing, whereby the ram may push the axle out of one wheel while the main housing acts as an abutment for that wheel and then cause the housing to push the second wheel from the axle while the tail-block acts as an abutment for the axle, combined substantially as set forth.



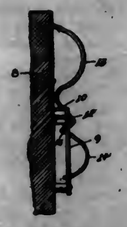
2. A car-wheel press comprising, a headblock, a hydraulic cylinder carried by the head-block, a ram in said cylinder, a tailblock, tie-bars between the headblock and tailblock, a thrust-piece disposed between the ram and the tailblock and adapted to engage the end of a car-axle and be forced toward the tailblock by the ram, a main housing disposed shiftably between the ram and the tailblock and having a gapped hub to engage the inner faces of the hubs of the car wheels on the axle, removable stops supported by the tie-bars to prevent motion of the main housing toward the tail-block, a follower disposed between the ram and thrust-piece, and engaging-parts connected with the main housing and with the follower and adapted to go into contact and limit the approach of the ram to the main housing, whereby the ram may push the axle out of one wheel while the main housing acts as an abutment for that wheel and then cause the housing to push the second wheel from the axle while the tail-block acts as an abutment for the axle, combined substantially as set forth.

3. A car-wheel press comprising, a headblock, a gapped tailblock, a removable stop-piece closing the inner end of the gap, a stop-piece within the gap, tie-bars between the headblock and tailblock, a ram carried by the headblock and adapted to be forced toward the tailblock, a thrust-piece disposed between the ram and the tailblock and adapted to engage the end of a car-axle and be forced toward the tailblock by the ram, a main housing disposed shiftably between the ram and the tailblock and having a gapped hub to engage the inner faces of the hubs of the car-wheels on the axle, removable stops supported by the tie-bars to prevent motion of the main housing toward the tailblock, and engaging-parts connected with the main housing and with the ram and adapted to go into contact and limit the approach of the ram to the main housing, whereby the ram may push the axle out of one wheel while the main housing acts as an abutment for that wheel and then cause the housing to push the second wheel from the axle while the tailblock acts as an abutment for the axle, combined substantially as set forth.

4. A wheel-press comprising, a headblock, a hydraulic cylinder carried thereby, a ram in said cylinder, a tailblock, tie-bars connecting the headblock and tailblock, removable means carried by the ram for engaging the end of a car-axle nearest the ram, movable abutting and thrusting means disposed between the car wheels and adapted to alternatively form an abutment for the wheel nearest the ram and to thrust upon the other wheel, removable stops carried by the tie-bars to limit the movement of said abutting and thrusting means toward the tailblock, and engaging-parts connected with the ram and with said thrusting and abutting means, whereby the ram may push the axle while said abutting and thrusting means furnish an abutment for the wheel nearest the ram and later push upon the other wheel while the tail-block furnishes an abutment for the axle, combined substantially as set forth.

5. A car-wheel press comprising, a headblock, a tailblock, tie-bars between the headblock and tailblock, a ram carried by the headblock and adapted to be forced toward the tailblock, a thrust-piece disposed between the ram and the tailblock and adapted to engage the end of a car-axle and be forced toward the tailblock by the ram, a main housing disposed shiftably between the ram and the tailblock and having a gapped hub to engage the inner faces of the hubs of the car wheels on the axle, a filler-piece disposable at the end of the gapped hub farthest from the thrust-piece, removable stops supported by the tie-bars to prevent motion of the main housing toward the tail-block, and engaging-parts connected with the main housing and with the ram and adapted to go into contact and limit the approach of the ram to the main housing, whereby the ram may push the axle out of one wheel while the main housing acts as an abutment for that wheel and then cause the housing and filler-piece to push the second wheel from the axle while the tailblock acts as an abutment for the axle, combined substantially as set forth.

959,072. UMBRELLA-HOLDER. SADIE A. REITHMILLER, Smicksburg, Pa. Filed Aug. 23, 1909. Serial No. 514,207.



In a device of the class described, a substantially V-shaped base plate having spaced parallel ears at its terminals, a curved jaw pivoted near one end between the ears and having an inturned extension provided with a tongue, a tongue projecting from the inner edge of the base plate at the crotch thereof, and a normally bowed spring connected at opposite ends to the said tongues to normally hold the jaw in closed position relative to the base plate.

959,073. RELAY AIR-VALVE. HARVEY J. RICHARDSON, Chicago, Ill. Filed Jan. 30, 1908. Serial No. 413,849.



1. In a device of the kind described, controlling mechanism comprising a fluid chamber, and means for controlling the gradual discharge of fluid therefrom, in combination with auxiliary means adapted to permit the substantially instantaneous discharge of fluid therefrom when the pressure reaches a predetermined amount, and instrumentalities whereby either or both of said means may be rendered inoperative.

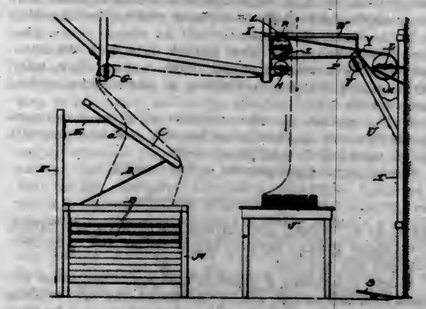
2. In a device of the kind described, an electrical relay provided with means for controlling the time of operation thereof, said means comprising a fluid chamber, means for forcing the contained fluid therefrom, and means for controlling the time of discharge of fluid from said chamber, in combination with independent means adapted to permit the substantially instantaneous operation of said relay when the fluid pressure in said chamber reaches a predetermined value, and instrumentalities whereby either or both of said means may be rendered inactive.

3. In a device of the kind described and in combination, a casing provided with an inlet and outlets, means for normally controlling the discharge of fluid from said casing, and means adapted to substantially instantaneously permit the discharge of fluid therefrom when the pressure therein reaches a predetermined value, comprising a movable valve member and means for normally retaining the same in the closed position, and means whereby the valve may be locked against movement.

4. In a device of the kind described and in combination, a casing provided with an inlet and outlets, means for normally controlling the discharge of fluid from said casing, and means adapted to substantially instantaneously permit the discharge of fluid therefrom when the pressure therein reaches a predetermined value, comprising a movable valve member and adjustable resilient means for normally retaining the same in the closed position, and means whereby the valve may be locked against movement.

5. In a device of the kind described, a relay controlling mechanism for electrical circuits, said means comprising a casing constituting a fluid chamber, means for forcing the content fluid therefrom, and means for controlling the discharge of fluid from said chamber including an outlet in the side wall of said casing and a valve for the outlet having an adjusting stem projecting through the side wall of the casing, in combination with independent means adapted to permit the substantial instantaneous operation of said relay when the fluid pressure in said chamber reaches a predetermined flow, the same including an auxiliary outlet in the side wall of the casing, a valve for controlling the same and adjusting mechanism for the latter projecting through the top of the casing.

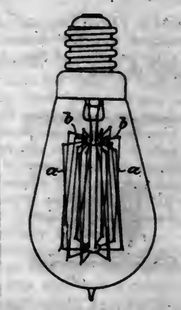
959,074. CLOTH-MEASURING MACHINE. OTTO RUHLIN, North Andover, Mass. Filed Nov. 26, 1909. Serial No. 529,926.



1. In a machine of the class described, the combination of a roller having friction-creating means on its perimeter, a pulley fixed to said roller, a drive-shaft having fixed thereon a pulley, a band connecting the two pulleys, a vertically movable bar carrying a bracket on which is a pulley for engaging the lower stretch of the band, a pedal lever having one arm disposed below the said vertically movable bar, and a pivoted arm carrying a brake shoe that is disposed above the first-named pulley and the band thereon; the said arm being connected and movable with the said bracket to relieve the pressure of the band against the pulley when the pulley on the bracket is pressed upward against the lower stretch of the band, and to press the band against the first-named pulley when the pulley on the bracket is moved downward.

2. In a machine of the class described, the combination of a holder having a bottom formed by a plurality of rollers and adapted to support a bolt of cloth that is folded longitudinally upon itself, an unfolder overhanging the holder, a guide roller disposed above the rear portion of the unfolder, a guide roller located forward of the first-named roller, a roller located above the second roller and having friction-creating means on its perimeter, means for receiving cloth from the third-named roller, a measuring device actuated by rotation of said third named roller, a band pulley fixed to the third-named roller, a drive-shaft provided with a band pulley, a band connecting said pulleys, a vertically movable bar carrying a bracket, a pulley on said bracket for engaging the lower stretch of the band, a pivoted arm connected with the bracket and provided with a brake shoe, and a pedal lever having one arm disposed under the vertically movable bar.

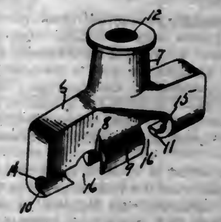
959,075. METAL-FILAMENT LAMP. CARL RUMENAPF, Augsburg, Germany. Filed Mar. 20, 1909. Serial No. 484,794.



1. A metal filament lamp, characterized by the arrangement of alternately long and short current distribution wires.

2. An incandescent electric lamp of the character described, having a plurality of filament-supporting arms of varying lengths, lying in subetantially the same horizontal plane.

959,076. TROLLEY-WIRE HANGER. JOHN T. SCANLON, Hartford, Conn. Filed Sept. 30, 1909. Serial No. 520,360.



1. A trolley wire hanger including a body part having means for attachment to a support, said body part having a throat formed to receive and hold a wire extending lengthwise of the body part; and opening at its edge to receive said wire, and recesses on the body part on oppo-

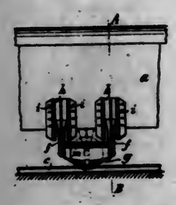
site sides of said throat opening in opposite directions and in a direction laterally of the direction of the throat opening.

2. A trolley wire hanger including a body part having means for attachment to a support, jaws projecting from the edge of the body part forming a throat to receive a wire, and lips integrally formed on the body part and projecting from its lower edge laterally in opposite directions forming recesses opening in opposite directions and laterally of the direction of opening of said throat.

3. A trolley wire hanger including a body part having means for attachment to a support and with integral jaws projecting from the edge of the body part forming a throat to receive a wire, and lips located on opposite sides of said jaws with a space between said jaws and lips, said lips forming recesses opening in opposite directions and in directions laterally of the directions of opening of said throat.

4. A trolley wire hanger including a body part having means for attachment to a support, jaws projecting from the edge of the body part forming a throat opening away from said edge to receive a wire at the center of the body part, and lips integrally formed with the body part and projecting from each end on opposite sides of said jaws forming recesses opening in opposite directions and laterally of the direction of opening of said throat, said lips being located to provide recesses therebetween and said jaws.

959,077. SINGLE-TRACK VEHICLE. RICHARD SCHERL, Berlin, Germany, assignor to Scherl Monorail Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 19, 1908. Serial No. 439,282.



1. The combination in a single track vehicle of a gyroscope, lateral guides on the vehicle, supports carried in said guides, means for raising the supports during normal working of the gyroscope and means for automatically lowering the supports so as to support the vehicle when the gyroscope is inoperative.

2. The combination in a single track vehicle of a gyroscope, lateral guides on the vehicle, supports carried in said guides, means for raising the supports during normal working of the gyroscope, a bolt to maintain the supports in the inoperative position and means connecting the bolt with the gyroscope whereby when the latter becomes inoperative the bolt is automatically moved and the supports are lowered.

3. The combination in a single track vehicle of a gyroscope, lateral guides on the vehicle, supports carried in said guides, means for raising the supports during normal working of the gyroscope a bolt to maintain the supports in inoperative position an electro-magnet to control the bolt an electric motor to drive the gyroscope and in circuit with the electro-magnet which automatically releases the bolt when the speed of the motor decreases to a given extent.

4. The combination in a single track vehicle of a gyroscope, lateral guides on the vehicle, supports in said guides and means for adjusting the supports in said guides at such an angle that they retain their position in the guides by friction without additional clamping means.

5. In a single track vehicle the combination of a gyroscope, an electric motor to drive said gyroscope, lateral guides on the vehicle, slidable supports in said guides a resilient member on said supports adapted to travel on suitable stationary members external to the car, a bolt to engage with the supports and maintain them in inoperative position, an electro-magnet in circuit with the electric-motor and controlling the said bolt, and means for automatically energizing the electro-magnet when the speed of the gyroscope falls below a given point whereby the bolt is moved and the supports dropped into operative position.

959,078. ORANGE AZO DYE. KARL SCHNITZSPAHN, Offenbach-on-the-Main, Germany, assignor to Corporation of Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany. Filed Aug. 4, 1909. Serial No. 511,167.

1. The process for the manufacture of new monoazo-dyestuffs, which consists in combining the diazo compounds of amins of the general formula:

$$C_6H_3.X.Y.Z.NH_2$$

wherein X, Y and Z means H, Cl and SO_3H, and wherein at least one of these substituents is a chlorin atom, with beta-naphthylaminsulfonic acids of the formula:

$$C_{10}H_6.X.NH_2.SO_3H$$

wherein X means H and SO_3H.

2. As new products, the azo coloring matter obtained by combining the diazo compounds of amins of the general formula:

$$C_6H_3.X.Y.Z.NH_2$$

wherein X, Y and Z means H, Cl and SO_3H, and wherein at least one of these substituents is a chlorin atom, with beta-naphthylaminsulfonic acids of the formula:

$$C_{10}H_6.X.NH_2.SO_3H$$

wherein X means H and SO_3H, which in the shape of its alkaline salt is an orange-yellow powder, soluble in water with orange-yellow color, in concentrated sulfuric acid with yellowish to bluish Bordeaux red color.

3. The process for the manufacture of new monoazo coloring matter, which consists in combining the diazo compounds of amins of the general formula:

$$C_6H_3.X.Y.Z.NH_2$$

wherein X, Y and Z means H, Cl and SO_3H, and wherein at least one of these substituents is a chlorin atom, with 2-naphthylamin-3 : 6-disulfonic acid.

4. As a new article of manufacture the coloring matter obtained by combining the diazo compounds of amins having the general formula:

$$C_6H_3.X.Y.Z.NH_2$$

wherein X, Y and Z means H, Cl and SO_3H, and wherein at least one of these substituents is a chlorin atom, with 2-naphthylamin-3 : 6-disulfonic acid, which coloring matter is in the shape of its alkaline salt an orange yellow powder, soluble in concentrated sulfuric acid with Bordeaux-red to violet color, in water with orange-yellow color, which is not changed by addition of hydrochloric acid or caustic soda lye.

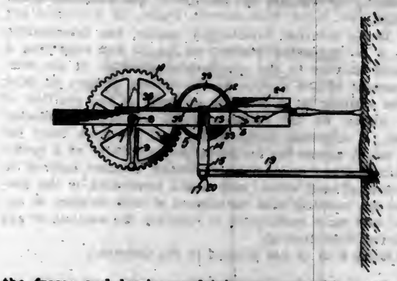
5. The process for the manufacture of new monoazo-dyestuffs which consists in combinating dichloroanilin with 2-naphthylamin-3 : 6-disulfonic acid.

[Claims 6 to 8 not printed in the Gazette.]

959,079. COAL AND ROCK DRILLING MACHINE. CHARLES SEALS, Lovilia, Iowa. Filed Oct. 16, 1907. Serial No. 397,724.

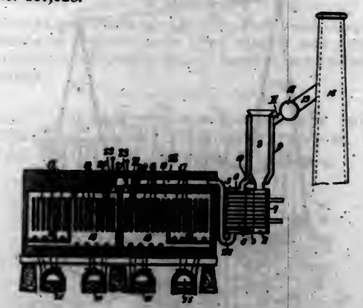
A drill comprising a frame, hinged upper and lower sections mounted at one end of the frame, the said sections being provided with registering threaded grooves in their inner adjacent faces, a drill shaft having a threaded portion engaging the threads in the grooves, means locking the sections in superimposed position, a shaft disposed transversely of the frame in the plane of the drill shaft and having a bight in which slides the said drill shaft, a cog gear loose upon said transverse shaft and having a crown pinion, a beveled pinion slidably receiving the drill

shaft and held connected to the section and also meshing with the crown pinion, and a driving shaft mounted in



the frame and having a driving gear meshing with the cog gear.

959,080. PROCESS FOR COKING COAL. SAMUEL B. SHELDON, Buffalo, N. Y. Filed Aug. 5, 1908. Serial No. 447,028.



1. The process of coking coal, which consists in introducing the coal into a supply bin, transferring the coal from said supply bin to a coking oven, conducting the heated products of combustion from burning fuel over the outer surface of the walls of said coking chamber to effect the coking of the coal therein, passing the air fed to the fuel through a regenerator to heat the air, conducting through a regenerator a portion of the said heated products of combustion and transmitting to the walls of the supply bin non-coking heat from another portion of said heated products of combustion to effect preliminary heating of the coal.

2. The process of coking coal, which consists in introducing coal into a supply bin, transferring the coal from said supply bin to a pre-coking passage, advancing the coal through said pre-coking passage into a coking chamber, conducting the heated products of combustion from burning fuel over the outer surfaces of the wall of said coking chamber to effect the coking of the coal therein, passing the air fed to the fuel through a regenerator to heat the air, conducting through a regenerator a portion of the said heated products of combustion, and applying coking heat to the coal in the pre-coking furnace and non-coking heat to the coal in said supply bin, by conducting into contact first with the walls of said pre-coking passage and thereafter with the walls of said supply bin another portion of said heated products of combustion.

959,081. COMBINATION SASH FASTENER AND LIFTER. FRANCIS SIMMONS, Chicago, Ill. Filed Sept. 8, 1909. Serial No. 516,156.

A combined window-sash lifter and fastener, comprising a casing fixed to the sash rail and having a face plate made of sheet metal with a flap cut therein forming a hand hole in the front thereof, said flap being bent backwardly from the lower edge of the hole to form a guide for the fingers, a bent lever located in the casing and pivoted thereto and having a horizontal arm located above the hand hole and flap, and arranged to stop against the



upper edge of the latter, and also having a depending arm, a bolt connected to the lower end of the depending arm and extending outwardly to the edge of the sash to engage the window casing, and a spring tending to advance the bolt.

959,082. SWINGLETREE ATTACHMENT. GEORGE D. SIMMONS, Clarksdale, Miss. Filed Mar. 7, 1910. Serial No. 547,878.

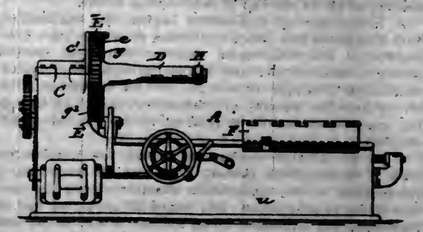


1. In a whiffle tree hook a shank and a hook thereon having an inturned end, in combination with a conical spiral spring fixed to the shank and adapted to receive said inturned end of the hook in its outer smaller convolution, substantially as described.

2. In a whiffle tree hook a shank and a hook thereon having an inturned end, in combination with a conical spring and means for securing said spring to said shank directly opposite said end and the outer smaller convolution of said spring being adapted to receive said inturned end, substantially as described.

3. An attachment for a whiffle tree hook comprising a base, means on said base for attaching the same to a shank of a whiffle tree hook and a conical coiled spring fixed to said base, substantially as described.

959,083. BORING-MACHINE. GEORGE H. SMITH, Providence, R. I., assignor to Beaman & Smith Company, Providence, R. I., a Corporation of Rhode Island. Filed Oct. 21, 1909. Serial No. 523,905.



1. In a boring-machine, the combination of a stationary center-bar rigidly supported at its head end only, a driven tubular boring-spindle revolubly mounted thereon and adapted for holding cutting or abrading tools in its free end, and means for driving the said spindle.

2. In a machine of the character described, the combination with a center bar rigidly secured in the head-stock or analogous member and extending rearwardly therefrom without other support, of a tubular drive-spindle revolubly mounted on the bar, means for actuating the spindle, and means adapted for removably securing cutting tools to the spindle.

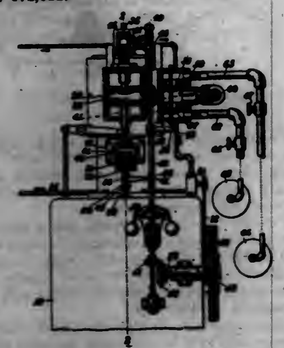
3. In a machine of the character described, the combination with a central bar and holding means adapted for rigidly maintaining it in a normally stationary position, of a tubular cutter-carrying spindle supported by and revolubly mounted on said bar.

4. In a machine of the character described, the combination of a central bar member rigidly held against longitudinal and rotary movements, a power-driven, tubular, cutter-carrying boring-spindle revolubly mounted and supported on said bar, and means adapted to prevent endwise movement of the thus mounted spindle.

5. In a machine of the character described, the combination of a rigidly supported central bar member having a portion thereof extending outwardly beyond its support, a cutter-carrying tubular spindle or sleeve revolubly mounted on said bar's extension, and suitably mounted anti-friction bearings arranged with relation to said bar and spindle members, adapted to prevent endwise movement of the spindle.

[Claims 6 and 7 not printed in the Gazette.]

959,084. INTERNAL-COMBUSTION ENGINE. OLIN A. STRANAHAN, New York, N. Y. Filed Jan. 6, 1909. Serial No. 471,012.



1. In an internal combustion engine, the combination with a reciprocating piston; of means for supplying a combustible and air to the compression chamber during the suction stroke of said piston; means for regulating the compression during the compression stroke; and means co-acting with said compression regulating means for supplying and regulating the admission of an additional amount of air at the end of said suction stroke.

2. In an internal combustion engine, the combination with a reciprocating piston; of means for supplying a combustible to the compression chamber during the suction stroke of said piston; and means for regulating the admission of a supply of air at the end of said suction stroke and the amount of compression produced during the compression stroke in relation to the amount of air supplied.

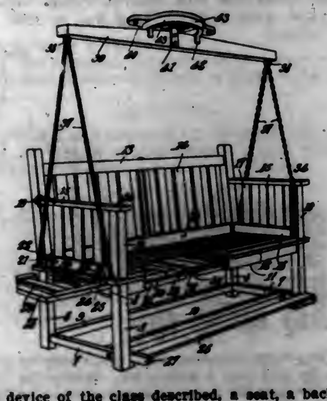
3. In an internal combustion engine, the combination with a reciprocating piston; of means for supplying a combustible to the compression chamber during the suction stroke of said piston; and means for supplying and so regulating the admission of an amount of air at the end of said suction stroke, and the volume of the compression space that the compression during the compression stroke will be inversely proportional to the amount of air supplied.

4. In an internal combustion engine, the combination with a reciprocating piston; of means for supplying a gaseous mixture to the compression chamber at the commencement of the suction stroke of said piston; an inlet to the cylinder at a point in advance of the position of said piston at the commencement of the compression stroke; a combined reciprocating and revoluble slotted valve for said inlet; means for reciprocating said valve at a predetermined time; and means for rotating said valve by the engine governor to uncover the slots in said valve sufficiently to regulate the amount of gas admitted therethrough.

5. In an internal combustion engine, the combination with a reciprocating piston; of means for supplying a gaseous mixture to the compression chamber at the commencement of the suction stroke of said piston; an inlet to the cylinder at a point in advance of the position of said piston at the commencement of the compression stroke; a combined reciprocating and revoluble valve for said inlet; means for reciprocating said valve at a predetermined time; a cup-shaped slotted member secured to the stem of said valve; and means controlled by the governor for rotating said cup-shaped slotted member to uncover said slots sufficiently to regulate the amount of gas admitted therethrough.

[Claims 6 to 18 not printed in the Gazette.]

959,085. SWING. WILLIAM H. VIRGIN, Clarksburg, W. Va. Filed Mar. 12, 1909. Serial No. 482,987.

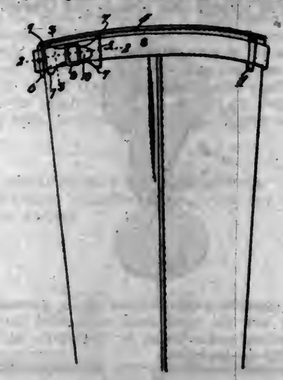


In a device of the class described, a seat, a back rigid with respect to the seat, an arm rest rigid with the back and seat at one end thereof, said arm rest including a front upright formed with a vertically extending groove in that side which is presented laterally inwardly, an arm rest removably supported at the opposite end of the seat, the said arm rest having tenons, the back at said end including an upright formed adjacent its upper and lower ends with sockets receiving said tenons, an eye member secured to one side of the upright opposite one of the sockets, an eye member secured to the opposite side of the upright opposite the other socket, hooks carried by the said removable arm rest and engaging said eyes, means removably holding the said removable arm rest, at its front end, to the seat, the said removable arm rest including a front upright formed with a groove in that side which is presented toward the first mentioned arm rest, a side removably fitted at its ends in the grooves in the arm rests and supported by said arm rests and the forward part of the seat, and means beneath the seat for supporting said removable side when removed from between said arm rests.

959,086. COMBINATION TROUSERS-BAND REGULATOR AND BELT-RETAINER. JULIUS E. WEIL, Chicago, Ill. Filed Oct. 13, 1908. Serial No. 457,521.

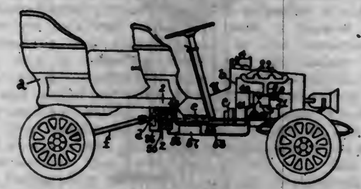
1. In a garment of the class described, a plurality of belt loops disposed about the waist of the garment, each of said loops being permanently secured at the top and at the bottom thereof, and means for adjusting such waist comprising members on adjacent loops adapted to be adjustably secured together, substantially as described.

2. In a garment of the class described, a plurality of belt loops secured at the top and at the bottom thereof, and disposed about the waist of the garment, whereby the belt may be passed around such waist and through



said loops, and means for adjusting such waist comprising members on adjacent loops lying without said belt, and adapted to be adjustably secured together, substantially as described.

959,087. CONTROLLING MECHANISM FOR MOTOR-VEHICLES. LAWRENCE WHITCOMB, Brookline, Mass. Filed Mar. 15, 1909. Serial No. 483,470.



1. In a motor vehicle, in combination, a motor of the explosive type, mechanism driven by said motor for propelling the vehicle, means to operatively connect and disconnect said mechanism with and from said motor, a valve to control the supply of explosive medium to said motor, a chamber containing a diaphragm operatively connected with said valve, a liquid pump driven by said mechanism and actuated only when the vehicle is in motion and connected with said chamber to create a pressure upon said diaphragm by a moving body of liquid, and means for regulating the liquid pressure upon said diaphragm to operate said valve and control said motor when the speed of the vehicle reaches a predetermined point, substantially as described.

2. In a motor vehicle, in combination, a motor of the explosive type, mechanism driven by said motor for propelling the vehicle, means to operatively connect and disconnect said mechanism with and from said motor, a valve to control the supply of explosive medium to said motor, a chamber containing a diaphragm operatively connected with said valve, a liquid pump driven by said mechanism and connected with said chamber to creats a pressure upon said diaphragm by a moving body of liquid, means for regulating the liquid pressure upon said diaphragm to operate said valve and control said motor when the speed of the vehicle reaches a predetermined point, a brake, and a diaphragm operatively connected with said brake and responsive to pressure of the said moving body of liquid, substantially as described.

3. In a motor vehicle, in combination, a motor of the explosive type, mechanism driven by said motor for propelling the vehicle, means to operatively connect and disconnect said mechanism with and from said motor, a valve to control the supply of explosive medium to said motor, a diaphragm operatively connected with said valve and actuated by a moving body of liquid, and means connected with the running gear of the vehicle to move said body of liquid and actuate said diaphragm to operate said valve when the speed of the vehicle reaches a predetermined limit irrespective of the speed of the motor, substantially as described.

4. In a motor vehicle, in combination, a motor of the explosive type, mechanism driven by said motor for propelling the vehicle, means to operatively connect and disconnect said mechanism with and from said motor, a device to control said motor actuated by a moving body of liquid, and means connected with the running gear of the vehicle to move said body of liquid and actuate said device irrespective of the speed of the motor, for the purpose specified.

5. In a motor vehicle, in combination, a motor of the explosive type, mechanism driven by said motor for propelling the vehicle, means to operatively connect and disconnect said mechanism with and from said motor, a device to control said motor actuated by a moving body of liquid, means connected with the running gear of the vehicle to move said body of liquid and actuate said device irrespective of the speed of the motor, and means for varying the action of the body of liquid upon said device according to the maximum speed limit determined upon for the vehicle to travel, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

959,088. GARMENT-SUPPORTER. CHARLES J. WHITE, New Britain, Conn., assignor to The C. J. White Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 8, 1909. Serial No. 481,891.



1. In a garment supporter, a button loop, a button tab, an elastic webbing, an adjustable buckle on said webbing, a clamping member for securing said loop to said webbing, said clamping member and said buckle having slots through which said button tab is threaded, the end of said tab being inserted within said clamping member, gripping prongs on said clamping member arranged to engage said tab and said webbing, whereby said loop, tab and buckle are secured to the end of said webbing.

2. In a garment supporter, a button loop, a button tab, an elastic webbing, a securing member for attaching said loop and tab to said webbing and consisting of a folded blank of sheet metal, one of the folded sides of which has a slot through which said tab is threaded, a buckle on said webbing adjacent said securing member and having a slot through which said tab is also threaded, means on said securing member for engaging said webbing and said tab, whereby said loop, tab and buckle are secured to said webbing.

3. In a garment supporter, a button loop, a button tab, an elastic webbing, a securing member for attaching said loop and tab to said webbing, and comprising a folded blank of sheet metal having a slot in one of the folded sides thereof and having engaging prongs struck inwardly adjacent the upper edges of each side thereof, the upper extremity of said tab being threaded through said slot and the loop being seated within the

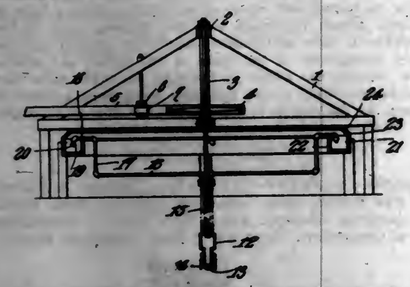
fold of said securing member, said parts being secured together by compressing said securing member on said webbing and tab and embedding the prongs therein.

4. An attaching member for a garment supporter comprising a folded blank of sheet metal having a webbing receiving slot in one of its sides removed from the fold thereof, and a series of securing prongs struck up from the upper edges of each side respectively.

5. In a garment supporter, the combination of a button loop and button tab, an elastic webbing, a buckle on said webbing, a slot in said buckle, the upper extremity of said tab being threaded through said slot, a securing member having means to receive and support said button loop, and having prongs adapted to be embedded in said webbing and said tab, whereby said button loop, tab and buckle are secured to said webbing.

[Claim 6 not printed in the Gazette.]

959,089. CENTRIFUGAL PUMP. PETER J. WICKBLOM, Bishop Hill, Ill. Filed Aug. 5, 1908. Serial No. 447,090.



1. A centrifugal pump including a circular trough, a concentric vertical shaft extending there below, an intake chamber located at the lower end of the shaft and revoluble therewith, pipes extending from diametrically opposed portions of the intake chamber and close to and parallel with the shaft, the upper portions of said pipes being extended radially and terminating in nozzles inclined downwardly into the trough in a direction opposite to that in which the shaft rotates, and means for rotating the shaft.

2. A centrifugal pump including a circular stationary trough open at the top, a concentric shaft mounted for rotation, means for actuating the same, an intake chamber secured to and revoluble with the lower end portions of the shaft, pipes extending from diametrically opposed portions of the intake chamber and close to and parallel with the shaft, means for holding the pipes and shaft together, said pipes being provided adjacent the trough, with oppositely extending radial portions terminating in downwardly inclined nozzles, the discharge ends of said nozzles being located below the surface of the water contained in the trough, and overhanging beams upon the outer wall of the trough for preventing the water within said trough from washing over the outer wall thereof during the movement of the nozzles within the trough.

959,090. SAFETY GAS-COCK. EDWARD VAN WICKLE, New York, N. Y. Filed Nov. 4, 1907. Serial No. 400,620.

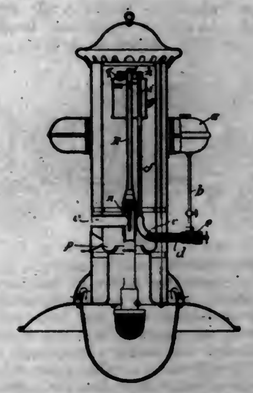
1. A locking device for gas cocks having in combination with a valve casing provided with notches on its edge, a plug provided in its body portion with a diagonal passage, one of whose ends open adjacent to said notches, and a movable pin slidable in said passage and normally engaging one of said notches, and adapted to be manually moved from such engagement to permit the movement of the plug within the valve casing.

2. A safety lock for a gas valve, comprising a valve casing having notches located at selected positions along a part thereof, a valve plug engaging therein, said plug being provided with an obliquely inclined passage having one end adapted to register with one of said notches when the valve is in fully opened or closed position, a pin slidably engaging through said passage and adapted to enter



the notch opposite which the end of the passage lies and thereby to lock the same from unintended movement in either direction, and a spring for forcing the pin outward, substantially as described.

959,091. INCANDESCENT LAMP FOR VAPORIZED-LIQUID COMBUSTIBLES. HEINRICH WIKTORIN, Vienna, Austria-Hungary. Filed Aug. 25, 1909. Serial No. 514,568.

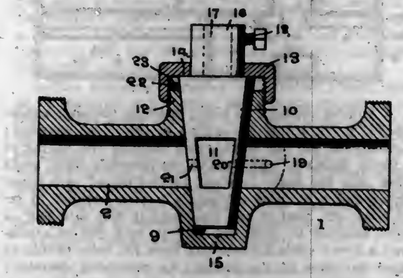


1. An incandescent vapor lamp comprising a fuel reservoir, a vaporizing chamber, a fuel conduit communicating with the reservoir extending into the chamber and communicating therewith through a longitudinal opening or openings in the fuel conduit, a superheating conduit extending longitudinally of the chamber and communicating with the latter through an opening in the superheating conduit near the top of the chamber, for the purpose specified, a burner, and a mixing conduit connecting the superheating conduit and burner.

2. An incandescent vapor lamp, comprising a fuel reservoir, a vaporizing chamber mounted above the latter, a fuel conduit communicating with the reservoir and extending longitudinally through the vaporizing chamber and communicating with the latter through openings extending longitudinally of the fuel conduit, a superheating pipe closed at the top and extending through the vaporizer and communicating with the latter through an opening in the superheating conduit near the top of the vaporizer, a burner, and a mixing tube connecting the burner and superheating conduit.

3. An incandescent vapor lamp, comprising a fuel reservoir, a preliminary vaporizer mounted below the latter and communicating therewith, a vaporizing chamber mounted above the reservoir, a tube communicating with the preliminary vaporizer extending through the vaporizing chamber and communicating therewith through a longitudinal opening extending substantially throughout the length of the vaporizing chamber, a removable cap on the end of the tube above the vaporizer chamber, a superheating pipe extending through the vaporizing chamber and communicating therewith through a lateral opening in the superheating tube near the top of the vaporizing chamber, a nozzle on the lower end of the superheating tube, a mixing tube into which the nozzle projects, a lateral air conduit communicating with the mixing tube, and a burner carried by the latter.

959,092. ATTACHMENT FOR HYDRANTS. WINFRED HUGH WILEMAN, Woodruff, Kans. Filed Oct. 13, 1908. Serial No. 457,496.



A device of the character described, comprising a tubular body having a transverse socket extending to a point below its bore and above said bore, a tapered plug received by said socket, means for the retention of said plug in operative position in said socket, said body having a venting port extending horizontally through one side thereof and at an acute angle to the axis of said body, said port having its outer end delivering in a direction about parallel with the length of said body, and said plug having a way through it of substantially the same cross sectional area as the bore of said body, said plug also having ports, one opening laterally therethrough and communicating with said bore and said way, and the other port also being adapted to communicate with said bore and to register with said venting port as said plug is turned to cut off communication between its way and the bore of the body.

959,093. MEANS FOR SECURING BEDSTEAD-SPINDLES. JOHN C. WILSON, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed Nov. 3, 1909. Serial No. 525,997.



1. In combination, a tube having slots in its end, and a connecting member extending across the tube end and engaging in said slots, only that part of the tube end adjacent said slots being bent against the connecting member to secure the connecting member to the tube, the remainder of the tube end remaining unbent.

2. In combination, a tube having two diametrically opposite slots extending longitudinally from the end of the tube, and a connecting member bridging across the tube end and engaging in said slots, the corners of the tube end adjacent said slots being bent inwardly against the connecting member to lock the connecting member in said slots, the remainder of the tube end remaining unbent.

3. In combination, a tube having two diametrically opposite slots extending longitudinally from one end of the tube, and a connecting member bridging across the end of the tube, said connecting member having a body part with curved ends to fit the interior of the tube and having extensions for passing through said slots, the ends of the tube adjacent said connecting member being bent against the connecting member to lock the connecting member to the tube.

4. In combination, a tube, and a connecting member bridging across one end of the tube, said connecting member having a body part abutting against the inside of the tube and having projections, there being slots through the tube wall for receiving said projections, only that part of the tube end adjacent said projections being bent over against the connecting member to secure said connecting member to the tube, the remainder of the tube end remaining unbent.

5. In combination, a tube, a connecting member bridging across one end of said tube, said connecting member having rounded ends for abutting against the inside of the tube, and extensions from the ends of said connecting member having curved outer surfaces for registering with the outside surface of the tube, said tube having slots extending longitudinally from its end through which slots said extensions extend, the material of the tube adjacent said slots being bent over against the connecting member to secure said member to the tube.

[Claims 6 to 10 not printed in the Gazette.]

959,094. FORGING PRESS AND HAMMER. EDWARD HENRY WRAY, Philadelphia, Pa., assignor to Niles-Bement-Pond Company, Jersey City, N. J. Filed Sept. 17, 1909. Serial No. 518,120.



1. A forging press and hammer comprising, a frame, a steam cylinder supported thereby, a hammer-head fitted to slide in the frame and disposed below the steam cylinder and in its axial line, a hammer-rod directly connecting the steam-piston and hammer-head, valvular mechanism for controlling the flow of steam to and from the steam cylinder, a water cylinder, a plunger in the water cylinder, the water cylinder and plunger surrounding the hammer rod between the steam-piston and hammer-head and forming a coöperative couple one of whose members is connected with the hammer-head, and valvular mechanism for controlling the flow of water to and from the water cylinder, the two valvular mechanisms being independent of each other, combined substantially as set forth.

2. A forging press and hammer comprising, a frame, a steam cylinder supported thereby, a hammer-head fitted to slide in the frame and disposed below the steam cylinder and in its axial line, a hammer-rod directly connecting

the steam-piston and hammer-head, valvular mechanism for controlling the flow of steam to and from the steam cylinder, a water cylinder formed in the hammer-head, a plunger rigidly supported by the frame below the steam cylinder and projecting down into the water cylinder, the water cylinder and plunger surrounding the hammer-rod and having their axes coincident with the axis of the hammer-rod, and valvular mechanism for controlling the flow of water to and from the water cylinder, the two valvular mechanisms being independent of each other, combined substantially as set forth.

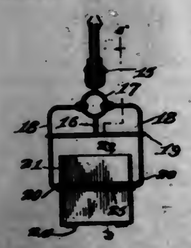
3. A forging press and hammer comprising a frame, a hammer-head fitted to slide in the frame and having a water-cylinder formed within it, a plunger coöperating with said water-cylinder and projecting upwardly therefrom, side flanges at the top of the plunger and resting on the frame, studs securing said flanges to the frame and projecting upwardly, a steam-cylinder secured to the upper ends of said studs, a piston in the steam-cylinder, a hammer-rod connecting the hammer-head and piston and passing axially through the plunger, and valvular mechanism for the steam-cylinder and water-cylinder, combined substantially as set forth.

959,095. CLOSING-DISK. WILBUR L. WRIGHT, Washington, D. C. Filed July 1, 1909. Serial No. 505,451.



A closure disk having a short wire length resting on the top surface thereof and at one end only passed transversely through the disk and bent laterally at the under surface thereof, the top single-ply free-end portion of said wire length bent laterally to rest flat on the disk and to form a finger hold, substantially as described.

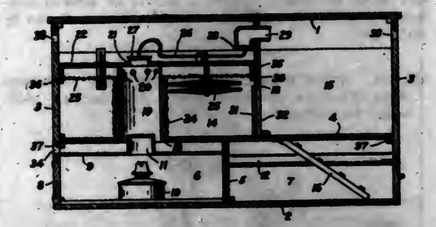
959,096. HOISTING AND DUMPING MECHANISM. JOHN P. ZOLLER, Cascade, Iowa. Filed Sept. 30, 1909. Serial No. 520,250.



1. A hoisting grapple comprising two lengths of resilient wire bent at right angles intermediate of their ends to form the sides of the grapple, the lower end of each of said wires being adapted for yieldable engagement in one side of a bucket, a bar connecting said wires, a ring carried by said bar, the upper ends of said side wires being connected thereto, and a sheave carried by said ring adapted to be traversed by the hoisting ropes, substantially as and for the purpose set forth.

2. A hoisting grapple comprising resilient wire side members having one of their ends inwardly bent and adapted for resilient engagement in the sides of a bucket, a bar connecting said side members intermediate of their ends, said bar having a central vertical extension with a ring formed upon its upper end, the upper ends of said side members being inwardly bent and loosely connected to said ring, and a sheave mounted in a bearing formed on the ring adapted to be traversed by the hoisting ropes substantially as and for the purpose set forth.

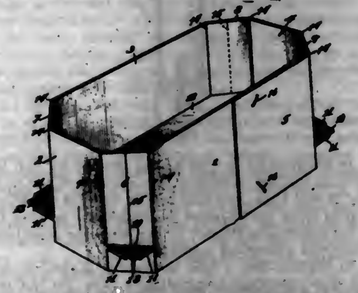
959,097. BROODER. CHARLES E. ADAIR, Buffalo, N. Y., assignor to Cyphers Incubator Company, Buffalo, N. Y., a Corporation of New York. Filed Jan. 22, 1906. Serial No. 297,118.



1. A brooder chamber; a hover chamber therein; a false ceiling of fabric below the ceiling of the hover chamber; a vertical, hot air flue discharging through the ceiling of the hover chamber, and having permanently open ports leading into the space between the ceiling of said hover chamber and said false ceiling; a heater adapted to receive fresh air, heat it and discharge it into said flue; a damper adapted to close the port in said flue to atmosphere; a hover curtain extending from the false ceiling to or near the floor of the border; an exercising chamber; an air conduit between the brooder chamber and the exercising chamber; a thermostatic device within the hover chamber and below said false ceiling, having connections with said damper, whereby heated air below a predetermined temperature is introduced from said flue into the space between the two ceilings, and is compelled to pass downward through the false ceiling and outward under the hover curtain, and when the temperature underneath the hover curtain rises above said temperature the hot air is discharged from the flue to atmosphere; and a damper for said air conduit operated by said thermostat and simultaneously with said first mentioned damper.

2. A brooder having, in combination, a hover chamber, an exercising chamber, a hover in the hover chamber, means for heating the hover, an air outlet from the hover, a damper controlling said outlet, a passage from the hover chamber to the exercising chamber, a damper controlling said passage, and thermostatic mechanism connected with both said dampers and operating to open and close them simultaneously in accordance with variations of temperature in the hover.

959,098. BOX-BLANK AND PROCESS OF USING THE SAME. JOSEPH F. ADAMS, St. Clair, Mich. Filed May 8, 1909. Serial No. 494,786.



1. The process of making boxes, which comprises the bending of the sides and corners around the bottom of the box, and exerting sufficient pressure in so doing to cause the corners of the bottom to punch holes in the corners of the box, as and for the purpose set forth.

2. The process of making boxes, which comprises the scoring of the band, wrapping the band around the bottom of the box, and causing the sharp corners of the bottom to pierce the band at the points where the same is scored, as and for the purpose set forth.

3. The process of making boxes, which comprises the scoring of the band at the corner portions of the box, so as to form flat corner portions which are scored vertically at the centers thereof, and then punching out the material of said corner portions to form slots, the punched-out material being caused to break at the said score lines, whereby the displaced material is left projecting from opposite ends of each slot.

4. The process of making boxes from thin sheet material, such as veneer, which includes, as an essential step therein, the transverse scoring of the sheet material to provide flat corner portions for the box, and also the scoring of the said flat corner portions vertically and centrally thereof, as and for the purpose set forth.

5. The process of making receptacles, which includes, as an essential step therein, the forcible disrupting of the fiber of the sheet material from which the receptacle is made, to permit one or more portions of the bottom of the receptacle to project through said sheet material, by causing said bottom portion or portions to impinge upon the sheet material at the point or points therein to be disrupted, whereby the said portion or portions punch the hole or holes necessary for the bottom of the receptacle.

[Claim 6 not printed in the Gazette.]

959,099. PIVOTAL SUPPORT FOR MIRRORS. FRANK O. ANDERSON, Jamestown, N. Y. Filed Feb. 14, 1910. Serial No. 543,692.

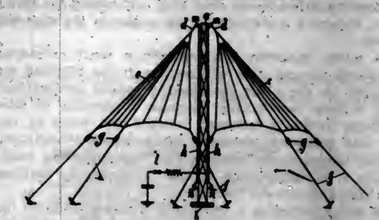


In a mirror support the combination with the members having base leaves for attachment to the mirror frame and standard, respectively, and outwardly projecting leaves at substantially right angles to said base leaves, one of said outwardly projecting leaves being provided with a slot and the other of said leaves being provided with an aperture therein, a pintle journaled in said aperture and having a head and a shank with flattened faces, spring washers mounted on said shank on opposite sides of the leaf and held by said flattened faces against rotation independently of the pintle, the end of said shank being upset and headed to clamp the leaf between the washers, said pintle having flat faced recesses in the projecting end for coöperation with the walls of the slot in the outwardly projecting leaf, whereby the pintle will be held against rotary movement.

959,100. AERIAL CONDUCTOR ARRANGEMENT FOR WIRELESS TELEGRAPHY. GEORG VON ARCO, Berlin, Germany. Filed Nov. 1, 1906. Serial No. 341,573.

1. An aerial conductor system for wireless telegraphy, consisting of a central electrically conducting support insulated from the ground and an umbrella shaped group of wires running obliquely toward the ground, said wires being at one end electrically connected with said support and at the other end fixed to several distant points on the ground and insulated therefrom, substantially as described.

2. An aerial conductor system for wireless telegraphy comprising a central support and an umbrella shaped group of wires consisting of a plurality of sections, each section individually held by said support at one end and means for stretching each section obliquely in umbrella shape toward the ground at the other end.



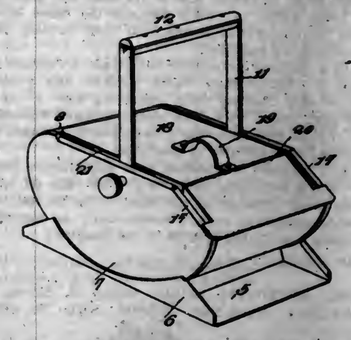
3. An aerial conductor system for wireless telegraphy comprising a central support and an umbrella shaped group of wires consisting of a plurality of sections, each section individually held by said support at one end and guy wires fastened to each section at the other end, but insulated therefrom and fastened to the ground circularly around said support for stretching said sections in umbrella shape toward the ground.

4. An aerial conductor system for wireless telegraphy comprising a central support and an umbrella shaped group of wires consisting of a plurality of sections, each section individually held at one end by said support and detachable therefrom, and means for stretching said sections obliquely in umbrella shape toward the ground.

5. An aerial conductor system for wireless telegraphy comprising a central support and an umbrella shaped group of wires consisting of a plurality of sections, each section individually held at one end by said support and detachable therefrom and guy wires fastened to each section, but insulated therefrom and fastened to the ground circularly around said support for stretching said sections in umbrella shape toward the ground.

[Claim 6 not printed in the Gazette.]

959,101. BREAD-MIXER. WILLIAM A. BABBITT, Lockport, N. Y. Filed Apr. 9, 1909. Serial No. 488,881.



1. A mixer including a receptacle, a kneading frame pivotally mounted for oscillation within the receptacle, a plurality of overlapping mixing blades eccentrically mounted for pivotal movement on the kneading frame, and means for limiting the pivotal movement of the blades in one direction.

2. A mixer including a receptacle, a frame pivotally mounted for oscillation within the receptacle, mixing blades pivotally mounted between the walls of the frame and free to swing in one direction only, and means for limiting the swinging movement of the blades in the opposite direction.

3. A mixer including a receptacle, a kneading frame pivotally mounted within the receptacle and provided with resilient side bars having perforations formed therein, blades pivotally mounted between the resilient walls

of the frame and provided with trunnions arranged to enter the adjacent perforations in said frame, said blades being free to swing in one direction, and means for limiting the swinging movement of the blades in the opposite direction.

4. A mixer including a receptacle, a shaft extending transversely through the receptacle, a frame mounted for oscillation on the shaft and having spaced perforations formed therein constituting bearings, a plurality of mixing blades pivotally mounted between the walls of the frame and provided with oppositely disposed trunnions engaging the adjacent bearings, and lugs extending longitudinally from the opposite ends of the blades for limiting the swinging movement thereof.

5. A mixer including a receptacle, a frame mounted for oscillation within the receptacle, and a plurality of feathering mixing blades pivotally mounted between the walls of the frame and disposed in overlapped relation.

[Claims 6 to 12 not printed in the Gazette.]

959,102. METHOD OF AND MACHINE FOR MAKING WIRE-GLASS. ARTHUR J. BALDWIN, East Orange, N. J. Filed July 8, 1907. Serial No. 382,814.



1. In a machine for making wire glass, a forming roller, and means for imparting an excessive peripheral speed to said forming roller, whereby the glass is crowded onto the wire mesh; substantially as described.

2. In a machine for making wire glass, a forming roller having a conjoined gear, the peripheral speed of said forming roller exceeding that of its conjoined gear, and a wire mesh which is buried beneath the sheet of glass formed by the crowding action of said forming roller; substantially as described.

3. In a machine for making wire glass, a forming roller having an uneven surface, the peripheral speed of said forming roller exceeding that of its conjoined gear, and a wire mesh which is buried beneath the sheet of glass formed by the crowding action of said forming roller; substantially as described.

4. In a machine for making wire glass, a forming roller having a longitudinally fluted surface, the peripheral speed of said forming roller exceeding that of its conjoined gear, and a wire mesh which is buried beneath the sheet of glass formed by the crowding action of said forming roller; substantially as described.

5. In a machine for making glass comprising a forming roller whose peripheral speed is greater than its advancing movement relative to the sheet being formed, and a following smoothing roller; substantially as described.

[Claims 6 to 29 not printed in the Gazette.]

959,103. SECTIONAL MOLD. BYRON M. BANGS, Lake Mills, Iowa. Filed Mar. 13, 1909. Serial No. 483,240.



1. A sectional mold including an outer shell formed of a stationary section having laterally movable sections pivotally connected therewith and provided with interlocking ends, a corresponding inner shell spaced from the outer shell to form an intermediate molding compartment and having its upper and lower edges provided with seating recesses, a sectional bottom plate forming a closure for the lower end of the inner shell and provided with lugs adapted to enter the seating recesses in the lower end of the inner shell, a collar resting on the top of said inner shell and provided with depending lugs adapted to enter the seating recesses in the upper end of said inner shell, a hopper carried by the outer shell, and means supported on the inner shell for directing the material into the molding compartment.

2. A sectional mold including an outer shell formed of a flat stationary section having curved laterally movable sections pivotally connected therewith and provided with interlocking parts, a correspondingly shaped inner shell spaced from the outer shell to form an intermediate molding compartment, a sectional bottom plate having means for engagement with the lower ends of the inner shell and adapted to be folded upwardly at the juncture of said plate sections and removed through the top of the outer shell, a collar resting on the top of the inner shell and provided with depending lugs entering recesses in said inner shell, vertically disposed lugs spaced inwardly from the inner edge of the collar, a flange resting on said collar and bearing against the vertical lugs thereof, and a cone supported by the collar for directing the material into the molding compartment.

3. A sectional mold including an outer shell formed of a stationary section having laterally movable sections pivotally connected therewith and having their adjacent longitudinal edges rabbeted, the rabbeted edge of one movable section being provided with laterally extending lugs adapted to enter recesses formed in the rabbeted edge of the adjacent movable shell section, an inner shell spaced from the outer shell to form an intermediate molding compartment, a bottom section forming a closure for the lower end of the inner shell and comprising mating plates having their inner edges pivotally united and adapted to be folded upwardly at the juncture of said plate sections and removed through the top of the outer shell, a collar resting on the top of the inner shell and provided with spaced vertically disposed lugs, a flange resting on said collar and bearing against the adjacent lugs, a cone surrounding the flange for directing the material into the molding compartment, and means for locking the movable sections of the outer shell in closed position.

4. A sectional mold including an outer shell, an inner shell spaced from the outer shell to form an intermediate compartment, said inner shell being provided with angularly disposed end plates and pivotally connected curved front plates having means for engagement with the angular portions of the back plates, the upper edges of the sectional front and rear plates of the inner shell being provided with seating recesses, a correspondingly shaped collar resting on the inner shell and provided with depending lugs entering the seating recesses in the front and rear plates of the inner shell, and means supported on said collar for directing the material into the molding compartment.

5. A sectional mold including an outer shell, a sectional inner shell disposed within the outer shell and spaced from the latter to form an intermediate molding compartment, said inner shell being formed of pivotally connected back sections, each having an angularly disposed wing, the vertical longitudinal edges of which are formed with spaced seating recesses, pivotally connected curved front sections having their vertical edges formed with lugs adapted to enter the seating recesses in the wings of the pivoted back plate sections, pivoted links forming a connection between the inner faces of the curved sections and the inner faces of the wings of the back plate sections, a bottom plate having means for engagement with the front and rear sections of the inner shell, a sectional collar resting on the upper edge of the inner shell and provided with means for engagement with the front and rear portions of said inner shell, and means supported on the collar for directing the material into the molding compartment.

959,104. REVOLVING CUTTER. JOHN HENRY BARKER, Sheffield, England. Filed July 26, 1909. Serial No. 509,712.

A tool comprising a cutter holder consisting of a number of disks having peripheral slots therein, the bottoms of said slots having inclined portions, cutters fitting in said slots and having inclined portions on the bottoms en-



gaging with the inclined portions of the slots, and means for securing together the disks.

959,105. STRAIGHT-SIDE SPECTACLES AND THE LIKE. EDWIN BARNES, Sheffield, England. Original application filed Aug. 13, 1906, Serial No. 330,492. Divided and this application filed June 22, 1908. Serial No. 439,798.
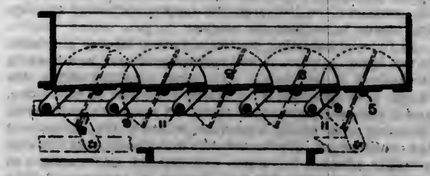


1. The combination of a spectacle spring side, a sleeve thereon adapted to be situated behind the ear of the wearer between the ear and the free end of the side, a projection on the sleeve, both the projection and the free end of the side being pressed into contact with the wearer's head by the pressure exerted by the spring side substantially as and for the purpose set forth.

2. The combination of a spectacle spring side, a projection, a flange on the projection and a sleeve on the spectacle side behind the ear of the wearer between the ear and the end of the side embracing the flange substantially as and for the purpose set forth.

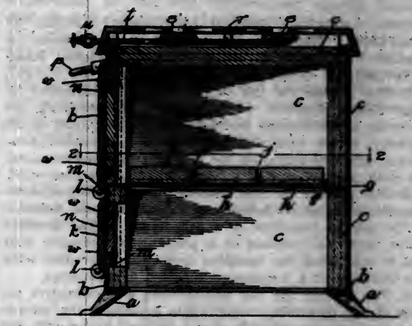
3. The combination of a spectacle spring side, a projection, a flange on the projection a sleeve on the spectacle side behind the ear of the wearer between the ear and the end of the side embracing the flange and a pad on a projection substantially as and for the purpose set forth.

959,106. ASH-PAN FOR LOCOMOTIVES. LEANDER R. BATTLE, Lakeland, Fla. Filed July 13, 1909. Serial No. 507,305.



A device of the character described, comprising an ash pan having a bottom composed of a series of overlapping slats, said slats being pivotally mounted within the frame of said pan, shield portions integral with said slats and extending upwardly and outwardly therefrom and contacting with the sides of said pan, said shield portions being substantially semi-circular in outline and overlapping one another when in a closed position, brackets approximately T-shaped secured at their heads to the under sides of said slats, the tongues of said brackets extending at angles of 45 degrees to the plane of said slats, an actuating lever comprising two parallel bars spaced-apart, said bracket-tongues being inserted therebetween and secured thereto, whereby when said lever is moved back and forth said slats are opened and closed.

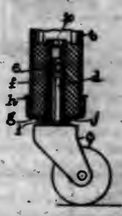
959,107. STOVE. GEORGE BAUCH and WALTER G. BAUCH, Chicago, Ill. Filed Jan. 23, 1908. Serial No. 412,258.



1. A stove of the class described whose walls are composed of blocks of earthenware of comparative thickness, said blocks being provided with chambers extending longitudinally of the blocks from end to end thereof, the outer faces of said blocks being provided with grooves adjacent to the edges thereof, channel-iron adapted to be slid over the corners of adjacent blocks of earthenware and into said grooves whereby the blocks forming the walls of the stove are removably held in place, a channel-iron taking between the blocks forming the side walls and extending inwardly to form a ledge within the oven, a metallic frame taking onto said ledge, and blocks of earthenware fitting within said frame.

2. A stove of the class described whose walls are composed of blocks of earthenware provided with chambers extending there-through, the edges of abutting blocks of different sides being beveled and provided with grooves in the outer faces thereof, a channel-iron adapted to take over the corners of the adjacent blocks and into the grooves, to hold the blocks in place, a channel-iron taking between the blocks forming the side walls and provided with an inwardly extending flange to form a ledge, blocks of earthenware extending from one side wall to the other and above said ledge within the oven, said blocks being so arranged as to permit of their expansion by the heat within the oven, and doors composed of metal and blocks of earthenware removably secured to the inside of the metal portion.

959,108. CASTER. GEORGE W. BENT, Cambridge, Mass. Filed May 8, 1909. Serial No. 494,926.



1. The combination with a hollow metal leg or post, of a socket piece of smaller diameter inserted therein, means to attach said socket piece to said leg or post, and a closure for the lower end of said socket piece capable of being forced up into the socket piece by the pintle of a caster, substantially as described.

2. The combination with a hollow metal leg or post, of a socket piece of smaller diameter inserted therein, means to attach said socket piece to said leg or post, and a disk of substantially the diameter of the socket piece inserted therein to close the lower end thereof and capable of being bodily moved into the socket piece by the pintle of the caster inserted into the socket piece, substantially as described.

959,109. ORANGE DISAZO DYE AND PROCESS OF MAKING. MELCHIOR BÖNIGER, Basel, Switzerland, assignor to Chemical Works formerly Sandoz, Basel, Switzerland. Filed Aug. 10, 1909. Serial No. 512,107.

1. The process for the manufacture of substantive orange disazo dyestuffs which consists in combining one molecule of the tetraso derivative of a paradiamin of the diphenyl series with one molecule of a phenolorthocarboxylic acid and acting on the resulting intermediate product with one molecule of a 1-aryl 5-pyrasolone compound.

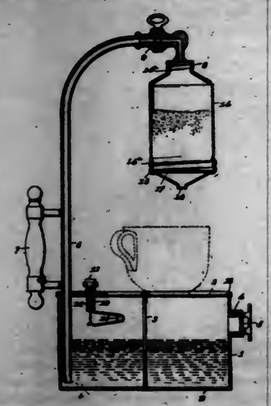
2. The process for the manufacture of substantive orange disazo dyestuffs consisting in combining one molecule of the tetraso compound of a paradiamin of the diphenyl series with one molecule of a phenolorthocarboxylic acid and in combining the resulting intermediate product with one molecule of a 1-sulfoaryl 3-methyl 5 pyrasolone.

3. The process for the manufacture of substantive orange disazo dyestuffs, consisting in combining the tetraso compound of a paradiamin of the diphenyl series with one molecule of a phenolorthocarboxylic acid and in combining the resulting intermediate product with one molecule of a 1-sulfoaryl 5-pyrasolone 3-carboxylic acid.

4. The process for the manufacture of substantive orange disazo dyestuffs, consisting in combining the tetraso compound of a paradiamin of the diphenyl series with one molecule of a phenolorthocarboxylic acid and in combining the resulting intermediate product with one molecule of a 1-aryl 5-pyrasolone 3-carboxylic acid.

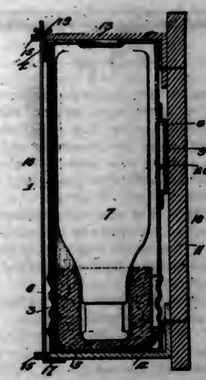
5. As new articles of manufacture the substantive orange disazo dyestuffs which can be obtained by combining one molecule of the tetraso derivative of a paradiamin of the diphenyl series with one molecule of a phenolorthocarboxylic acid and acting on the resulting intermediate product with one molecule of a 1-aryl 5-pyrasolone compound, these dyestuffs representing, in the form of their alkaline salts, brown-red powders soluble in water with orange coloration, and in strong sulfuric acid with red-violet coloration and dyeing unmordanted cotton in bright orange shades from a neutral or weakly alkaline salt-bath.

959,110. PERCOLATOR. CLARENCE U. BUCK, Coudersport, Pa., assignor of one-half to Charles H. Buck, Coudersport, Pa. Filed Apr. 21, 1909. Serial No. 491,371.



A percolator of the character described, comprising a vertically disposed boiler having a flat top and bottom, the top being designed to support a vessel for collecting the infusion, a vertically disposed water pipe passing through the top of the boiler and extending downwardly therein with its lower end open and arranged in close proximity to the bottom of the same, the pipe projecting upwardly beyond said top and having its upper end turned horizontally above the boiler and terminating in a downwardly facing threaded socket, a container for a charge having its opposite ends open and threaded, one end of the container being screwed into the socket to suspend the container in vertically spaced relation to the boiler, a substantially flat strainer extending across the lower end of the container with the charge resting thereon, a screw cap disposed at such lower end and embodying an annular rim having threaded engagement therewith and a bottom abutting the strainer to support the same in place, the bottom being substantially funnel-shaped and being provided with a central opening arranged to discharge the infusion into a collecting vessel supported on the top of the boiler, a manually operable valve mounted in the water pipe for regulating the flow of water to the charge container, and a safety valve mounted in the upper portion of the boiler for relieving the same of excessive steam pressure when the aforementioned valve is closed.

959,111. DISINFECTING DEVICE. AMOS B. BUCKLAND, Rochester, N. Y. Filed Nov. 4, 1909. Serial No. 526,269.



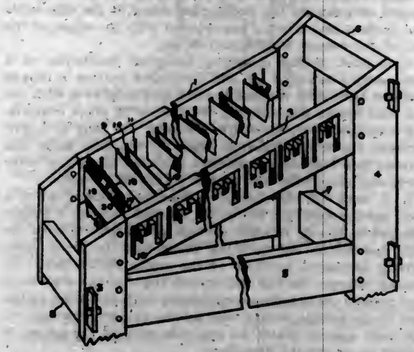
1. In a disinfecting device, a casing having a foraminated lower portion, a non-corrosible saucer arranged in the bottom of the casing, a container provided with a discharge neck arranged in an inverted position in the casing, and a porous cup mounted upon the saucer to receive the discharge neck of the container, whereby the contents of the container are discharged into and absorbed by the cup, and means to support the casing.

2. In a disinfecting device, a casing having a foraminated lower portion, a non-corrosible saucer arranged in the bottom of the casing, a container provided with a discharge neck arranged in an inverted position in the casing, and a porous cup mounted upon the saucer to receive the discharge neck of the container, whereby the contents of the container are discharged into and absorbed by the cup, a holder adapted to receive and support said casing and means whereby the latter is located in engagement with said holder to prevent tampering with the disinfecting device.

3. In a disinfecting device, a casing provided with a foraminated lower portion, a container provided with a discharge neck arranged in an inverted position in said casing, a porous cup arranged in the casing to receive the neck of the container whereby the contents of the latter will flow into the cup and be absorbed thereby and a non-corrosible saucer arranged to receive said cup and a portion of the contents of said container, whereby a seal is formed for the lower end or mouth of the container to prevent the contents from flowing therefrom faster than evaporated from said cup.

4. In a disinfecting device, a casing having a foraminated lower portion, a non-corrosible saucer arranged in the bottom of the casing, a container provided with a discharge neck arranged in an inverted position in the casing, a porous cup arranged in the casing upon the saucer to receive the neck of the container, and means to support the casing, said means comprising a back plate, a pair of vertically spaced supporting plates attached to the back plate to engage opposite ends of the casing, said supporting plates having vertically-alined slotted extensions, a locking bar passing vertically through the extensions of said supporting plates and having a right angularly bent portion at its lower end to engage the bottom of the bottom supporting plate and an eye in its upper end and a fastening device engaged with the eye of the locking bar to lock the casing against surreptitious removal.

959,112. TROUSERS-RACK. THOMAS A. CLEARY, Escanaba, Mich. Filed Mar. 3, 1910. Serial No. 547,147.



1. In an article of furniture, the combination of an inclined supporting member having a transverse slot and a longitudinal slot and vertical notches, a resilient retaining strip adapted to pass through said transverse slot and having a tongue adapted to seat in either of said vertical notches, means for retaining the other end of said resilient strip, and a second strip of resilient material removably seated in said inclined supporting member.

2. In an article of furniture, the combination of side panels, doweled cross-bars securing said panels together, said panels each having an inclined supporting member, blind recesses in one of said inclined members adapted to serve as seats for resilient retaining strips, the other of said inclined members having transverse slots and longitudinal slots and vertical notches, a pair of resilient retaining strips adapted to pass through said transverse slots, one of said strips having a tongue adapted to swing along one of said longitudinal slots to engage with one of said vertical notches.

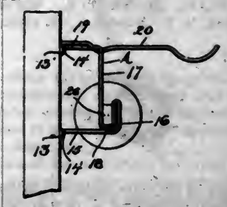
3. In an article of furniture, a panel comprising standards, a brace for said standards and an inclined supporting member carried by said standards, a second panel, a plurality of cross bars detachably connected to said panels, one of said inclined supporting members having a plurality of vertical recesses, the other of said inclined supporting members having openings there-through, a resilient strip having an end seated in one of said recesses and a notched end fitting in one of said openings, and a second resilient strip having an end seated in a recess and having a tongue at its other end, said tongue being movable with respect to the adjacent supporting member to increase or decrease the distance between said resilient strips.

4. A trouser rack comprising a pair of parallel supporting members and a series of pairs of clamping strips extending transversely between said supporting members and carried thereby, a plurality of groups of seats in said supporting members, there being one group for each pair of strips and the seats in each group being arranged so as to permit the strips of the respective pair to be relatively adjusted toward and away from the other whereby each pair of said strips is adapted to clamp and support garments of varying thicknesses.

5. A trouser rack comprising a pair of parallel supporting members, and a series of pairs of strips extending transversely between said members and carried thereby, each of said members having therein recesses for removably supporting one of the strips of each pair, said removable strips being of reduced size at one end and said recesses at said end being arranged in groups with transverse slots connecting them whereby said reduced parts may be shifted along said transverse slots to different recesses for adjusting said strips relatively of each other.

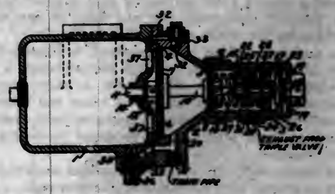
[Claim 6 not printed in the Gazette.]

959,113. SHADE AND CURTAIN SUPPORT. KELSIE CLICK, Cardington, Ohio. Filed Feb. 11, 1910. Serial No. 543,283.



A curtain bracket formed integrally from wire and comprising a lower slot eye, an outwardly extending supporting arm, an upwardly extending trunnion confining portion, a vertical standard spaced inwardly thereof to provide a trunnion receiving space outwardly thereof, and projecting above said trunnion confining member, an inwardly extending upper supporting arm having a slot eye formed thereon, and an outwardly projecting pole supporting arm projected outwardly from the upper end of the standard.

959,114. FLUID-PRESSURE BRAKE. JOHN WILLIS CLOUD, London, England, assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Mar. 26, 1903. Serial No. 149,691.



1. In a fluid pressure brake, the combination with a triple valve having a brake cylinder exhaust port, of a valve for controlling said port, and two diaphragms of different areas subject to the train pipe pressure for operating said valve, one of said diaphragms being subjected on its opposite side to pressure from a reservoir.

2. In a fluid pressure brake, the combination with a triple valve having a brake cylinder exhaust port, of a valve for controlling said port, and two connected diaphragms of different areas for operating said valve, the space between said diaphragms communicating with the train pipe, and one of said diaphragms being subjected on its opposite side to pressure from a reservoir.

3. In a fluid pressure brake, the combination with a triple valve having a brake cylinder exhaust port, of a valve for controlling said port, and two diaphragms for operating said valve, the diaphragms being subject on their

adjacent sides to train pipe pressure, one diaphragm subject on its opposite side to pressure from the triple valve exhaust, and the other diaphragm to pressure from a reservoir.

4. In a fluid pressure brake, the combination with a triple valve exhaust port, of a valve for controlling said port, a movable abutment subject to the opposing pressures of a reservoir and the train pipe and brake cylinder for operating said valve, means for feeding the reservoir from the train pipe, and a loaded valve between said reservoir and the train pipe chamber.

5. In a fluid pressure brake, the combination with a brake cylinder exhaust passage and a valve controlling said passage, of a movable abutment exposed on one side to train pipe pressure and on the opposite side to a variable fluid pressure, and another movable abutment exposed on one side to brake cylinder pressure, said valve being operated by both abutments.

[Claim 6 not printed in the Gazette.]

959,115. DREDGING APPARATUS. WALTER R. COMFORT, New York, N. Y. Filed Oct. 22, 1909. Serial No. 524,058.



1. In apparatus of the class described, in combination, a cutting implement comprising a cylindrical support, a knife carried thereby and projecting tangentially therefrom, a second knife carried thereby and projecting radially therefrom, the rear edge of said knife engaging the cutting edge of said first knife.

2. In apparatus of the class described, in combination, a cutting implement comprising a cylindrical support, a knife carried thereby and projecting tangentially therefrom, said knife being provided with a notch in one of its edges, and a second knife carried by said support and projecting radially therefrom, said second knife having one of its edges engaging the notch in said first knife.

3. In apparatus of the class described, in combination, a cutting implement comprising a cylindrical support, a knife carried thereby and projecting tangentially therefrom, said knife being provided with a notch in its cutting edge, and a second knife carried by said support and projecting radially therefrom, the rear edge of said second knife engaging the notch in said first knife.

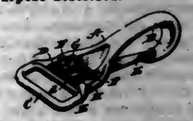
4. In apparatus of the class described, in combination, a support provided with an opening therethrough, a shaft upon which said support is mounted, a knife extending through said opening and having its inner end secured to said shaft and fastening means engaging said knife and extending through said support to assist in holding the knife in position.

5. In apparatus of the class described, in combination, a support provided with an opening therethrough, a shaft upon which said support is mounted, a knife extending through said opening and having its inner end secured to said shaft and fastening means engaging said knife and said support to assist in holding the knife in position.

[Claims 6 to 8 not printed in the Gazette.]

959,116. SPRING-TONGUE SNAP-HOOK. JAMES C. COVERT, Watervliet, N. Y., assignor to Covert Manufacturing Company, Watervliet, N. Y., a Corporation of New York. Filed May 2, 1908. Serial No. 430,520.

1. In a spring tongue snap hook a body portion having a hook, a seat, a spring tongue coöperating with said hook and said seat, the formation of the seat and spring leaving an inwardly tapering space between the edge thereof and the body of the hook, and the spring being secured in place by a part of the body forced into said tapering space whereby to engage the edge of the tongue substantially as and for the purpose described.



2. A casting for hooks of the character described, formed with a bill portion and a recessed portion for the reception of a tongue, the side walls of said recessed portion being reduced in width to provide recesses above relatively thick portions of said side walls located between the top and bottom edges of said side walls, and the metal of which thick portions is adapted to be displaced for the purpose described.

3. A hook of the character described consisting of a body portion having a bill and a recessed portion, a tongue adapted to fit said recessed portion and coöperate with the bill, and means for securing the tongue in place comprising displaced portions of the metal of the body arranged between the top and bottom edges of the side walls and pressed into binding engagement with the edges of the end of the tongue within said recess.

4. A hook of the character described consisting of a body portion having a bill and a recessed portion, a tongue adapted to fit said recessed portion and coöperate with the bill, and means for securing the tongue in place comprising displaced portions of the metal of the body arranged between the top and bottom edges of the side walls and pressed into binding engagement with the edges and outer surface of the end of the tongue within said recess.

5. A hook of the character described consisting of a body portion having a bill and a recessed portion, a tongue adapted to fit said recessed portion and coöperate with the bill, and means for securing the tongue in place, comprising displaced portions of the metal of the body arranged between the top and bottom edges of the side walls and pressed into binding engagement with the edges of the end of the tongue within said recess, and an abutment on the body against which an opposing edge of the spring is forced in an inward direction.

[Claims 6 to 8 not printed in the Gazette.]

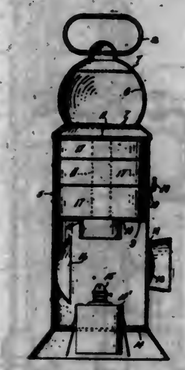
959,117. CUSPIDOR. FREDERICK J. CROSS, Rochester, N. Y., assignor to Rochester Stamping Company, Rochester, N. Y., a Corporation of New York. Filed July 7, 1906. Serial No. 325,066.



A cuspidor embodying a cup-shaped shell made from sheet material and provided with an annular depression in its edge, a bowl arranged within the shell, formed of sheet material and seamed to the shell above the depression, a solid body formed from plastic material and completely filling the space between the shell and the bowl, the body being engaged by the depressed portion of the shell so as to be held within the latter, and a funnel formed with an inturned flange on its rim, the edge of the flange being arranged to prevent accidental displacement of the funnel.

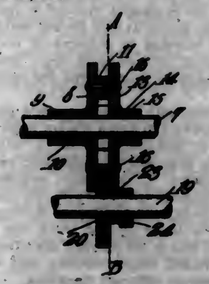
959,118. LANTERN AND LUNCH-RECEPTACLE. EDWARD CUNNINGHAM, Lebanon Junction, Ky. Filed Nov. 11, 1909. Serial No. 527,533.

1. In a combined lantern and lunch receptacle, a casing interiorly provided with a transverse disk having a central opening and further provided with a slot extending longitudinally of the casing, a tube insertible through the opening in the disk, and a receptacle arranged within the casing having a central opening for the said tube and an outlet pipe extending laterally from the receptacle and through the slot in the casing.



2. In a combined lantern and lunch receptacle, a casing interiorly provided intermediate its ends with a disk having a central opening and further provided with a longitudinal slot extending from its upper edge to a point adjacent said disk, a tube insertible through the opening in the disk, a receptacle arranged within the casing having a central opening for the said tube, an outlet pipe in communication with the interior of the receptacle and its opposite end extending through the slot of the casing and terminating in an upwardly extending portion parallel with the casing.

959,119. POWER-TRANSMITTING MECHANISM. OLIVER P. M. DAVIS, Bedford, Ind. Filed May 7, 1908. Serial No. 431,418.



1. In a machine of the character described, means for producing a progressive step by step movement without lateral or side play comprising a star wheel having a hub formed with an annular groove, and a pin wheel, the latter being formed of two spaced disks between which the star wheel enters for substantially the distance between its periphery and hub, one of the disks engaging in the groove in the hub of the star wheel.

2. In a machine of the character described, means for producing a progressive step by step movement, without lateral or side play, comprising a pin wheel formed of two plane spaced disks secured together for common action and one of the disks having a laterally projecting portion extending to the other disk, and a star wheel provided with a hub having a circumferential groove, said star wheel entering between the disks which latter closely embrace the star wheel up to the hub thereof, with one of the disks entering the groove in the said hub.

3. In a machine of the character described, means for producing a step by step progressive movement without lateral or side play comprising star and pin wheels with the pin wheel formed of a plane disk with a mutilated annular flange structure on one face and another plane disk secured to the first disk and spaced therefrom by the flange structure, said disks together being provided with pins forming engaging means for the star wheel, which pins are supported at both ends in the two disks, and other pins connecting the disks out of the path of the star wheel, and the star wheel having a hub with a circumferential groove entered by one of the disks of the pin wheel.

959,120. LIGHTNING-ARRESTER. WILLIAM W. DEAN, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed Apr. 26, 1909. Serial No. 492,232.



1. As a means for protecting electrical apparatus from disruptive discharges, an insulator and conductors, one of which latter consists of finely divided conducting material adapted to be punctured and dissipated at the puncture by the discharge.

2. As a means for protecting electrical apparatus from disruptive discharges, two conductors and an insulator between them, one of said conductors consisting of finely divided conducting material adapted to be punctured and dissipated at the puncture by the discharge.

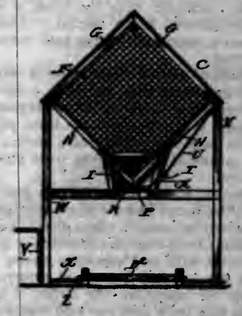
3. As a means for protecting electrical apparatus from disruptive discharges, a conductor consisting of finely divided conducting material adapted to be punctured and dissipated at the puncture by the discharge.

4. In a lightning arrester, the combination of two sheets of finely divided conducting material separated by an insulator.

5. In a lightning arrester, a sheet of insulation having both sides coated with a layer of finely divided conducting material and a strip of insulation on either exterior side of the first named strip.

[Claims 6 to 19 not printed in the Gazette.]

959,121. CHICKEN-CRATING APPARATUS. JAMES DE YOUNG, Manhattan, Kans. Filed Jan. 21, 1910. Serial No. 539,389.



1. In an apparatus for the purpose described, the combination with a body having an opening at one end for connecting its interior with that of a chicken house, and also having a trough at its bottom that is open at its top and bottom and closed at its ends and is provided at one side with an offset portion, and further having side walls

inclined inward and downward to the said trough; of a door hinged in the trough and arranged when opened to occupy the said offset portion.

2. In an apparatus for the purpose described, the combination with a body having an opening at one end for connecting its interior with that of a chicken house and also having an opening in its bottom through which chickens can pass into a crate or coop positioned below the body; of a door movable in the body for controlling the latter opening.

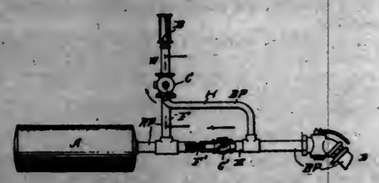
3. In an apparatus for the purpose described, the combination with a body having an opening at one end for connecting its interior with that of a chicken house and also having an opening in its bottom through which chickens can pass into a crate or coop positioned below the body; of a door connected with the body, for controlling the first-named opening, and a door movable in the body for controlling the latter opening.

4. In an apparatus for the purpose described, the combination with a body having an opening at one end for connecting its interior with that of a chicken house, and also having a trough at its bottom that is open at its top and bottom and closed at its ends and is provided at one side with a recess or offset portion; of a door hinged in the trough and arranged when opened to occupy the said recess or offset portion.

5. An apparatus for the purpose described, comprising a body having an opening at one end for connecting its interior with that of a chicken house and also having an opening in its bottom through which chickens may pass into a crate or coop positioned below the body; and means connected with the said body for moving and holding a crate or coop below the body.

[Claim 6 not printed in the Gazette.]

959,122. AIR-BRAKE SIGNALING DEVICE. FRANK HUTCHINSON DUKESMITH, Meadville, Pa., assignor to The General Railway Equipment Company, a Corporation of Maine. Filed July 9, 1909. Serial No. 506,758.

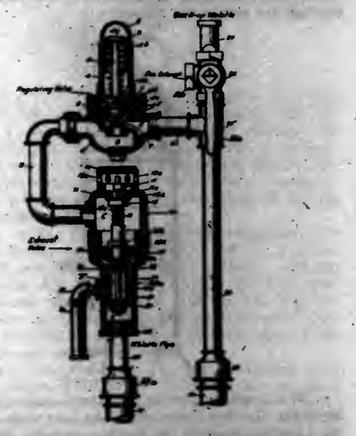


1. In combination with a brake pipe, a supplemental tank, a whistle connected with the tank, a controlling valve in said connection, and a discharge connection for train pipe pressure controlled by the said valve, substantially as described.

2. In combination with a brake pipe, a supplemental tank, a whistle connected with the tank, a valve controlling the said connection, a check valve between the tank and the train pipe, a pipe between the train pipe and the controlling valve, said controlling valve serving to permit or prevent the escape of air from the train pipe, substantially as described.

3. In combination with a train, a train pipe extending between the engineer's cab and a distant point of the train, fluid operated signaling means at said distant point, a supplemental reservoir for containing fluid under pressure operatively associated with said signaling means, means for controlling the flow of fluid from said reservoir to said signaling means for operating the latter, a conduit extending between said train pipe and said reservoir, a check valve interposed in said conduit, and adapted to prevent the flow of fluid from said reservoir to said train pipe when the pressure in the latter falls below a predetermined point, said conduit comprising a portion having a reduced cross section interposed between said check valve and said reservoir.

959,123. AIR-BRAKE-TESTING APPARATUS. FRANK HUTCHINSON DUKESMITH, Meadville, Pa., assignor to The General Railway Equipment Company, a Corporation of Maine. Filed July 9, 1909. Serial No. 506,759.



1. In combination with a train, a train brake pipe extending between the engineer's cab and a distant point of the train, signaling means at said distant point, and means responsive to an increase in pressure in the train brake pipe for controlling the operation of said signaling means.

2. In combination with a train, a train brake pipe extending between the engineer's cab and a distant point of the train, signaling means at said distant point, and valve mechanism responsive to an increase in pressure in the train brake pipe interposed between said train brake pipe and said signaling means for controlling the operation of the latter.

3. In combination with a train, a train brake pipe extending between the engineer's cab and a distant point of the train, signaling means at said distant point, and means responsive to an increase in pressure in the train brake pipe, and interposed between said train brake pipe and said signaling means, for controlling the operation of the latter.

4. In combination with a train, a train pipe extending between the engineer's cab and a distant point of the train, signaling means at said distant point, a valve interposed between said train pipe and said signaling means for controlling the operation of the latter, pressure operating means for maintaining said valve in its closed position when the pressure in said train pipe is normal and permitting said valve to be opened when the pressure exceeds normal, and means for varying the effective pressure of said last mentioned means whereby said valve may be adjusted to operate at different pressures.

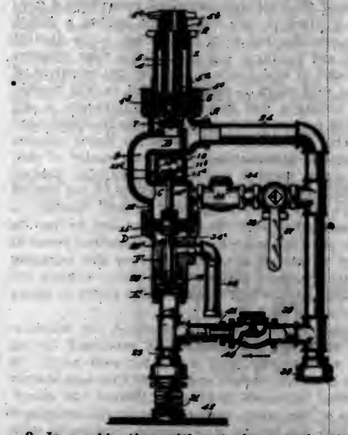
5. In combination with a train, a train pipe extending between the engineer's cab and a distant point of the train, fluid operated signaling means at said distant point, a valve to control the operation of said signaling means, a second valve responsive to an increase in pressure in said train pipe, and interposed between said train pipe and said first valve, for controlling the operation of the latter.

[Claims 6 to 24 not printed in the Gazette.]

959,124. APPARATUS FOR TESTING AIR-BRAKES. FRANK HUTCHINSON DUKESMITH, Meadville, Pa., assignor to The General Railway Equipment Company, a Corporation of Maine. Filed July 30, 1909. Serial No. 510,431.

1. In combination with a train, a train pipe extending between the engineer's cab and a distant point of the train, fluid operated signaling means at said distant point, a valve to control the operation of said signaling means, a

second valve responsive to an increase in pressure in said train pipe, and interposed between said train pipe and said first valve, for controlling the operation of the latter, and a manually operated valve for controlling the operation of said first mentioned valve.



2. In combination with a train, a train pipe extending between the engineer's cab and a distant point of the train, fluid operated signaling means at said distant point, a valve to control the operation of said signaling means, a second valve responsive to an increase in pressure in said train pipe, and interposed between said train pipe and said first valve, for controlling the operation of the latter, and a manually operated valve interposed between said train pipe and said first mentioned valve for controlling the operation of the latter.

3. In combination with a train, a train pipe extending between the engineer's cab and a distant point of the train, fluid operated signaling means at said distant point, a supplemental reservoir at said distant point for containing fluid under pressure operatively associated with said signaling means, and means responsive to a variation in pressure in the train pipe for controlling the flow of fluid from said reservoir to said signaling means for operating the latter.

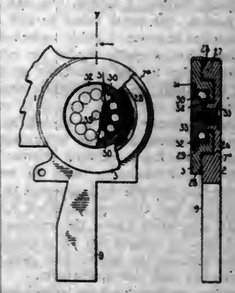
4. In combination with a train, a train pipe extending between the engineer's cab and a distant point of the train, fluid operated signaling means at said distant point, a supplemental reservoir at said distant point for containing fluid under pressure operatively associated with said signaling means, means responsive to a variation in pressure in the train pipe for controlling the flow of fluid from said reservoir to said signaling means for operating the latter, and means for maintaining the pressure in said reservoir substantially uniform.

5. In combination with a train, a train pipe extending between the engineer's cab and a distant point of the train, fluid operated signaling means at said distant point, a supplemental reservoir at said distant point containing fluid under pressure operatively associated with said signaling means, means responsive to a variation in pressure in the train pipe for controlling the flow of fluid from said reservoir to said signaling means for operating the latter, and automatically operated means for maintaining the pressure in said reservoir substantially uniform.

[Claims 6 to 12 not printed in the Gazette.]

959,125. TYPE-WRITING MACHINE. JOHN A. EDLUND, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 18, 1904. Serial No. 228,991.

1. The combination of a type bar hanger, a type bar, a rotatable pivot nut slidably connected with said hanger, a screw assisting to maintain the nut in a fixed relation with the hanger, said screw having its axis coincident with the axis of rotation of the type bar, and anti-friction balls interposed between the pivot nut and the type bar and also assisting to maintain said nut in a fixed relation with the hanger.



2. The combination of a two-piece hanger, a type bar interposed between the two pieces of the hanger, an independent screw securing the two pieces loosely together, said screw passing through the center of motion of the type bar and abutting against one part of the hanger, thereby preventing the two hanger parts from separating, and a plurality of anti-friction balls which prevent the two hanger parts from collapsing or falling together.

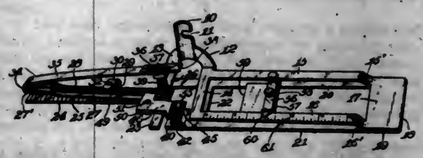
3. The combination of a two-piece hanger, a type bar interposed between the two pieces of the hanger, an independent screw securing the two pieces loosely together, and a set of anti-friction balls co-acting directly with one of said hanger pieces, said balls serving as a bearing for said type bar and also preventing the two pieces of the hanger from collapsing or falling together.

4. The combination of a type bar hanger, a type bar, a rotatable pivot nut slidably connected with said hanger, a connecting screw having its axis coincident with the axis of rotation of the type bar, a set of anti-friction balls interposed between the pivot nut and the type bar, said anti-friction balls and said screw coöperating with the type bar to maintain the type bar hanger and the pivot nut in a fixed relation.

5. The combination of a type bar hanger, a type bar, a rotatable pivot nut slidably connected with said hanger, a connecting screw having its axis coincident with the axis of rotation of the type bar, a set of anti-friction balls interposed between the pivot nut and the type bar, said anti-friction balls and said screw coöperating with the type bar to maintain the type bar hanger and the pivot nut in a fixed relation, and another set of anti-friction balls between the type bar and the hanger.

[Claims 6 to 11 not printed in the Gazette.]

959,126. COMBINATION SEWING-MACHINE ATTACHMENT. ROSA EVISTON, Indianapolis, Ind. Filed Apr. 20, 1909. Serial No. 493,032.



1. A combination sewing machine attachment including a support comprising an apertured upper plate, an apertured under plate connected at one end portion thereof to one end portion of the upper plate, the plates being slightly elastic, a hemmer plate on the lower plate, a guide bar connected with the upper one of the plates and supported in a plane that is opposite the plane of the under plate, and a hemmer plate mounted adjustably on the guide bar

to be moved to a position opposite the other hemmer plate or away therefrom, each hemmer plate having an aperture therein and a slot extending to the aperture, and a scroll attached to the plate and extending into the aperture.

2. A combination sewing machine attachment including a supporting shank having a lateral bar and also a supporting plate thereon, the plate being turned under itself and having a hemmer thereon, a guide mounted adjustably on the supporting plate, a guide bar on the lateral bar extending at right angles to the adjustable guide and in a plane opposite the plane of the hemmer, and a hemmer mounted adjustably on the guide bar to be moved above the first-mentioned hemmer or away therefrom.

3. A combination sewing machine attachment including a supporting shank having a member thereon comprising a plate that is turned under to form an under portion which has a gage-bar thereon with grooves in its top, the shank having also a bar thereon provided with a lateral bar that extends oppositely above the gage-bar, a marker-head adjustable on the lateral bar to coöperate with the grooves, a spring-arm on the lateral bar, and a spring between the lateral bar and the spring-arm.

4. A combination sewing machine attachment including a supporting shank having two members thereon, a hemmer plate mounted on one of the members and having an aperture therein and also a slot extending to the aperture, the plate having also a scroll on the under side thereof that extends into the aperture, and a guide mounted on the other one of the two members and adjustable thereon toward or from the hemmer-plate.

5. A combination sewing machine attachment including a supporting shank having a member thereon comprising a guide-plate that is turned under itself and having a hemmer-plate mounted on the turned under portion, the hemmer-plate having an aperture therein and a slot extending to the aperture, and a scroll attached to the top of the hemmer-plate and extending into the aperture, the guide-plate supporting the hemmer-plate at a distance from the shank to clear the presser-foot of a sewing machine.

[Claim 6 not printed in the Gazette.]

959,127. UMBRELLA. WILLIAM EDWARDS, Easton, Pa. Filed June 11, 1909. Serial No. 501,616.

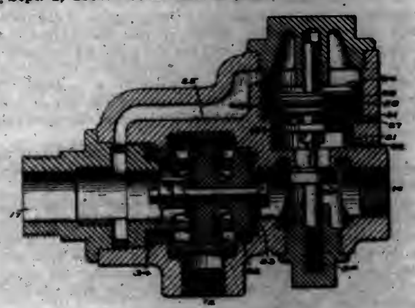


1. A device of the character described comprising a notch having a circular arrangement of sockets therein, and a corresponding arrangement of slots therein in communication with said socket, a cap member applied to said notch having a circular arrangement of slots in its lower edge adapted to register with the aforesaid slots, means for the retention of said cap upon said notch, ribs, sleeve members having spherical terminals received by said sockets and rectangular portions adjacent to said terminals received by the slots of said notch and cap, said sleeve members receiving said ribs at their inner ends, additional sleeves applied to said ribs at their outer ends, and means on both sleeve members for the reception of the attaching means for a cover.

2. A device of the character described comprising a handle, a notch applied to said handle and having a socket and a slot communicating with said socket, a cap applied to said notch and having a slot in its lower edge registering with the slot of said notch, means for the retention of said cap upon said notch, a runner applied to said handle, said runner having a like socket and slot therein, a cap applied to said runner also having a slot in its lower edge registering with the slot of said runner, a sleeve member having a spherical terminal received by the socket of said notch, said sleeve member having a rectangular portion adjacent to this spherical terminal, received by the slot of said notch, a rib received by said sleeve member, a stretcher connected to said rib at one end and having its opposite end provided with a spherical terminal received by the socket of said runner, said stretcher also engaging the slot of said runner, an additional sleeve member applied to said rib, a cover and means on said sleeve members for the retention of said cover.

3. In a device of the character described, the combination with a staff, a notch mounted on said staff having sockets and slots therein, and a cap for said notch; of ribs, a sleeve mounted on each end of said ribs, said sleeves having spherical terminals on the ends thereof, the spherical terminals of the inner sleeves engaging the sockets of said notch, said cap having slots therein registering with said other slots, means to retain said cap member on said notch, a cover and means on both sets of sleeves for attaching said cover thereto.

959,128. FLUID-PRESSURE BRAKE. FRED B. FARMER, St. Paul, Minn., and WALTER V. TURNER, Wilkinsburg, Pa., assignors to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Sept. 1, 1904. Serial No. 223,041.



1. The combination with an automatic air brake system and a straight air brake apparatus, of means operated by air from the straight air brake valve to permit the release of the brake after an automatic application.

2. The combination with an automatic air brake system and a straight air brake apparatus, of means operated by the locomotive brake cylinder pressure when the straight air is applied, for preventing a further supply of air to the brake cylinder by the automatic system in service applications.

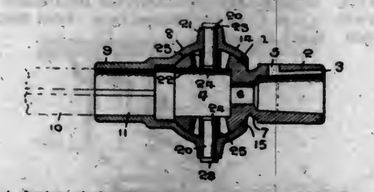
3. The combination with an automatic air brake system and a straight air brake apparatus, of means operated by the locomotive brake cylinder pressure when the straight air is applied, for venting to the atmosphere any further supply of air from the triple valve in a service application of the automatic system.

4. The combination with an automatic air brake system comprising an engineer's brake valve, train pipe, triple valves, and brake cylinders, of a straight air brake valve for also supplying the locomotive brake cylinders, and means operated by pressure from the straight air brake valve for opening communication to the atmosphere from the service supply from the triple valve.

5. The combination with an automatic air brake system comprising an engineer's brake valve, train pipe, triple valves, and brake cylinders, of a straight air brake valve for also supplying the locomotive brake cylinders, and a valve device having a piston operated by air from the straight air brake valve for releasing the air supplied to the locomotive brake cylinders by the automatic system in service applications.

[Claims 6 to 11 not printed in the Gazette.]

959,129. UNIVERSAL JOINT. ALLEN H. FRITZEN, Galion, Ohio. Filed Jan. 12, 1909. Serial No. 471,939.



1. A device of the character described, comprising complemental semi-globular socket-members, having complemental recesses forming stud-sockets, means for connecting together said socket members, a ball member received by said complemental semi-globular socket members, having slots therethrough, said slots being substantially S-shaped in general outline, studs forming trunnions, received by said stud sockets, and ring members arranged upon said trunnion forming studs, said trunnion forming studs engaging said S-shaped slots and having heads upon their ends engaging the outer ends of said sockets and the inner edges of said ring members, respectively.

2. A device of the character described, comprising complemental semi-globular socket members, having complemental recesses forming stud-sockets, means for connecting together said semi-globular socket members, a ball-member received by said semi-globular socket members, having slots therethrough, said slots being substantially S-shaped in general outline, ring members applied to said studs, said studs having screw-threaded extensions engaging the inner walls of said recesses, said studs also having collars at the inner ends of their threaded portions and tapered heads received by said S-shaped slots.

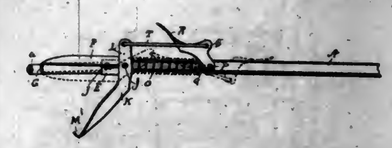
959,130. COMBINED MOP HEAD AND WRINGER. CHARLES GABEL, Hawkeye, Iowa. Filed June 29, 1909. Serial No. 505,010.



The combination with a stick and a mop clamp thereon, of a wringing device carried upon the stick intermediate of the ends of the stick, and consisting of a split sleeve adapted to surround and detachably grip the stick, a spiral screw slidably supported by said sleeve, means carried upon one end of the screw to engage the mop, and means upon the other end for operating the screw.

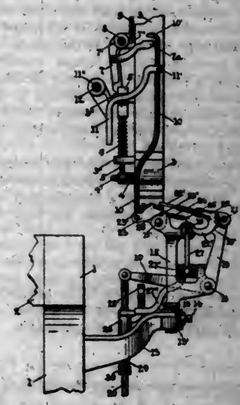
959,131. MOP-HEAD. CHARLES GABEL, Hawkeye, Iowa. Filed Jan. 21, 1910. Serial No. 539,416.

The combination with a mop stick, of a mop head, comprising a sleeve to fit upon the extreme end of the stick and provide a socket beyond the end of the stick and within the sleeve, a stationary jaw carried by said sleeve and having a recess in its gripping edge in line with the socket of the sleeve, another jaw pivoted to the sleeve and having operating arms straddling the stick and having their ends upon opposite sides of the stick, said pivoted jaw also having a recess in its gripping edge to co-act with the recess



of the stationary jaw when the jaws are closed, a spring surrounding the end of the stick and exerting a tension toward the sleeve, a lever pivoted to the inner end of the spring and adapted to move with said spring, and a ball connecting the lever and the arms of the pivoted jaw.

959,132. WEFT-REPLENISHING LOOM. ALBERT A. GORDON, Jr., Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Dec. 17, 1908. Serial No. 468,050.

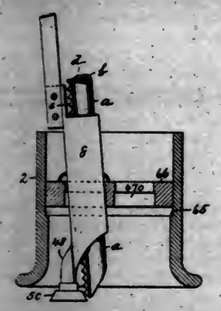


1. In a weft replenishing loom, having a magazine for filling carriers, and a filling carrier selecting mechanism and releasing mechanism, the combination with a filling detecting mechanism, and a dagger or lever controlled as to its operative position by the feeler of said filling detecting mechanism, of a releasing lever or device operated by said dagger, and connected with the filling releasing mechanism.

2. In a weft replenishing loom, a solenoid, a magnetised feeler, a dagger or lever controlled as to its operative position by said feeler and means for operating said dagger, a releasing lever or device, engaged and operated by said dagger, and released from engagement with said dagger, and connections from said device to the bobbin releasing mechanism and said bobbin releasing mechanism.

3. In a weft replenishing loom, having a filling detecting mechanism, comprising a solenoid, and a magnetised feeler mounted in the solenoid, and movable longitudinally therein, the combination with said feeler, of a pivotally mounted two-armed lever, one arm adapted to engage and positively move forward said feeler after it has been moved backward, and the other arm extending in the path of and positively adapted to be engaged and moved at predetermined intervals by a moving arm or lever, and said moving arm or lever.

959,133. ARC-LAMP ELECTRODE. JOSEP H. HALLBERG, New York, N. Y., assignor to The Beck Flaming Lamp Company, Canton, N. Y., a Corporation of New York. Filed Apr. 26, 1907. Serial No. 370,348.



1. An electrode for arc lamps, comprising a body of carbon having a core, a radially projecting external rib, and a longitudinal conductor arranged in the electrode in a plane which is approximately between the core and the outer surface of the rib.

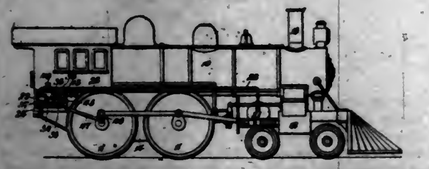
2. A cored electrode for arc lamps, having an external longitudinally extending rib and provided with a longitudinal metallic conductor which is arranged in the electrode in substantially the same radial plane as the rib.

3. A carbon electrode for arc lamps, comprising a body of carbon, a core, a radially projecting external rib and a longitudinal metallic conductor embedded in the rib.

4. A carbon electrode for arc lamps, having a radially projecting external rib, and a longitudinal metallic conductor embedded in the rib.

5. A cored electrode for electric arc lamps, having its body portion provided with an external serrated rib, said electrode also provided with a longitudinal metallic conductor which is arranged between the core and the serrated edge of the rib.

959,134. ATTACHMENT FOR LOCOMOTIVE OR OTHER BOILERS. CHARLES F. HARRIS, Altoona, Pa. Filed June 13, 1908. Serial No. 438,341.



1. The combination with a locomotive including a boiler having a furnace, a stack, and an engine that exhausts into the stack, of means independent of the exhaust and operated by and with the engine to periodically admit drafts of air into the furnace.

2. The combination with a boiler having a furnace and a stack, of an engine having exhaust mechanism that delivers into the stack, means for directing drafts into the furnace, and means separate from the exhaust mechanism and automatically operated by the engine for controlling the drafts.

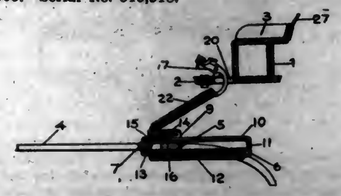
3. The combination of a locomotive including a boiler having a furnace, a stack, and an engine including a cylinder and a valve mechanism for controlling the admission of steam to the cylinder and the exhaust therefrom through the stack, of a fluid supply pipe communicating with the furnace, and automatically actuated means operated by and operatively connected with the engine for periodically increasing and diminishing the supply of fluid from the pipe to the furnace.

4. The combination with a locomotive including a boiler having a furnace, a stack and an engine that exhausts into the stack, and propelling mechanism for the locomotive, of an air reservoir carried by the locomotive, an air supply pipe connecting the reservoir and the furnace, a valve located in the pipe, and means connected to the propelling means of the locomotive to effect the operation of the valve.

5. The combination with a locomotive including a boiler having a furnace, a stack and an engine that exhausts into the stack, of an air reservoir carried by the locomotive, an air supply pipe connecting the reservoir and the furnace, a valve located in the pipe, a crank associated with one of the drive wheels of the locomotive, and mechanism connected to the crank for operating the valve.

[Claims 6 to 15 not printed in the Gazette.]

959,135. HORSE CONTROLLING OR HITCHING DEVICE. ALLEN L. HARVEY, Salem, Oreg. Filed Sept. 28, 1909. Serial No. 519,918.



1. In a device of the class described, the combination with parts of a vehicle, and a swingle tree; of a slidably mounted clevis, means to attach the swingle tree to the clevis, a latch adapted to engage parts of the clevis and hold the same against longitudinal movement, a manually actuated lever, means of connection between said latch and said lever resiliently actuated means adapted to hold said lever in such position as to effect the retention of said latch disengaged from said clevis.

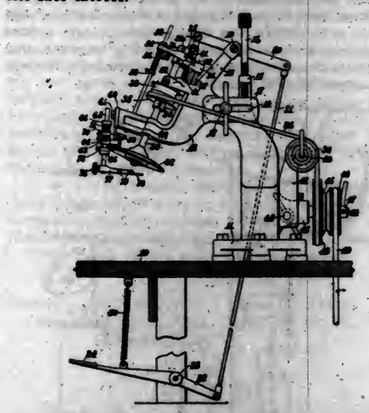
2. In a device of the class described, the combination with parts of a vehicle and means by which one or more animals may be attached to the vehicle; of slidably mounted means for carrying the animal securing parts, a keeper on said sliding means, a spring actuated latch adapted to engage said keeper and hold the sliding means against movement, means to disengage said latch from the keeper, and a spring adapted to return the sliding means to its normal position.

3. In a device of the class described, the combination with a vehicle and means for the attachment of one or more animals thereto, of slidably mounted means for carrying the animal attaching parts, a keeper arranged upon said sliding means, a spring actuated latch adapted to engage said keeper and hold said sliding means against movement, means to disengage said latch from said keeper, a spring adapted to return said sliding means to its normal position, means for holding said latch disengaging means in lowered position when said latch is elevated or disengaged from said keeper.

4. In a device of the character described, the combination with a vehicle and means for the attachment of one or more animals thereto; of slidably mounted means for carrying the animal attaching parts, a frame through which said sliding means operates, a spring-operated latch carried by said frame, a keeper on said sliding means adapted to be engaged by said latch, means to disengage said latch from said keeper to allow the forward movement of the sliding means and additional means to automatically force the sliding means to its normal position.

959,136. MACHINE FOR SHARPENING THE ROTARY KNIVES OF SKIVING AND SIMILAR MACHINES. GEORGE A. HENDERSON, Marblehead, Mass. Filed Oct. 28, 1908. Serial No. 459,939.

1. In a machine of the class described, the combination of a revoluble member adapted to sharpen a knife; a non-revoluble bur remover; and means for moving said revoluble member into contact with one face of said knife and near the end of its movement moving said bur remover toward said revoluble member into contact with the opposite face thereof.



2. In a machine of the class described, the combination of a standard; driving mechanism thereon; a frame pivoted to said standard; means for locking said frame in adjusted position about said pivot; a knife sharpener mounted on said frame; means connected with said driving mechanism for revolving said knife sharpener; a bur remover mounted on said frame; and a pivoted lever for moving it into engagement with the knife.

3. In a machine of the class described, the combination of a frame; a shaft reciprocable and revoluble therein; a knife sharpener thereon; a rod parallel with said shaft and movable endwise therewith; a bur remover; and mechanism interposed between said rod and bur remover whereby the operation of the latter is controlled by the end movement of the former.

4. In a machine of the class described, the combination of a frame; a shaft reciprocable and revoluble therein; a knife sharpener thereon; a rod parallel with said shaft and movable endwise therewith; a bar remover; a pivoted lever operable by said rod; and means interposed between said bur remover and pivoted lever for moving the bur remover into engagement with the knife by the movement of said pivoted lever.

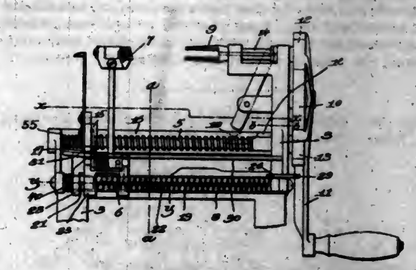
5. In a machine of the class described, the combination of a frame; a shaft reciprocable and revoluble therein; a knife sharpener thereon; a rod parallel with said shaft and movable endwise therewith; a bur remover; a pivoted lever operable by said rod; means interposed between said bur remover and pivoted lever for moving the bur remover into engagement with the knife by the operation of said pivoted lever; and a spring on said rod adapted to permit said rod to yield under abnormal conditions.

[Claims 6 to 15 not printed in the Gazette.]

959,137. APPLE-PARER. GEORGE H. HINCHLIFFE, Boston, Mass., assignor to Goodell Company, Antrim, N. H., a Corporation of New Hampshire. Filed July 17, 1909. Serial No. 508,207.

1. In a fruit parer, the combination with a knife-carriage, of a feed-screw for moving the knife-carriage forward, means to disengage the knife-carriage from the feed-screw at the end of the forward movement, a return spring for returning the carriage to its initial position, and means to prevent the return movement of the carriage for an appreciable length of time after it is disengaged.

2. In a fruit parer, the combination with a knife-carriage, of a feed-screw for giving said carriage its initial movement, means to automatically disengage the knife-carriage from the feed-screw at the end of the forward stroke, a spring to return the knife-carriage to its initial position, and a pawl to engage the carriage after the latter is disengaged from the feed screw thereby to prevent return movement of the carriage.



3. In a fruit parer, the combination with a knife-carriage having a half nut, of a feed-screw for engaging said nut thereby to move the knife-carriage forward, means to disengage said nut from the feed-screw at the end of the forward movement of the knife-carriage, a return spring for returning the carriage to its initial position, means to move the half nut into engagement with the feed-screw again, a spring surrounding the end of the feed-screw, and a collar engaging said spring and adapted to be engaged by the half nut as the latter comes into engagement with the feed-screw.

4. In a fruit parer, the combination with a frame, of a knife-carriage, a longitudinally-slotted tubular guide on which said knife-carriage is slidably mounted, means to give the knife-carriage its forward movement, a spring within said guide to return the knife-carriage to its initial position, and a follower for the spring within said tubular guide and connected to and movable with the carriage.

5. In a fruit parer, the combination with a frame, of a knife-carriage slidably mounted thereon, a feed-screw for giving the carriage its forward movement, means to disconnect the carriage from the feed-screw at the end of the forward movement, a spring to return the carriage to its initial position, and a guide for sustaining the carriage when it is disconnected from the feed-screw, said guide having a curved portion 31 which by its engagement with the carriage causes the latter to engage the feed screw again.

959,138. BUCKLE. WALTER A. HOLDEN, Ansonia, Conn., assignor to The Robert N. Bassett Company, Shelton, Conn., a Corporation of Connecticut. Filed Dec. 4, 1909. Serial No. 531,288.

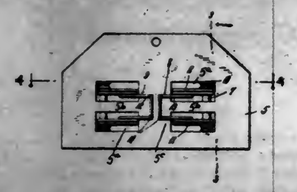


1. The combination with a running webbing, of a buckle having a back provided with a top bar extending entirely across the back and mounted on yielding supports and a lever hinged to said back provided with a web clamping member arranged to coact with the front of said bar, the said webbing having its extremity folded around said bar, then passed downwardly in back of said spring supports and returned upon itself passing upwardly between the lever and the top bar.

2. A buckle having a back bent up out of a single piece of wire so that its middle portion forms a continuous bar

extending entirely across the back, the said wire being carried downwardly and inwardly from the ends of said bar to form an opening in under the bar for threading the webbing, then doubled upon itself and bent forwardly and downwardly from the ends of the bar to form sides, then inwardly to form pintles, and a lever hinged to said pintles, the said lever being provided with a web gripping edge arranged to coact with the front side of said bar to clamp the running portion of a webbing.

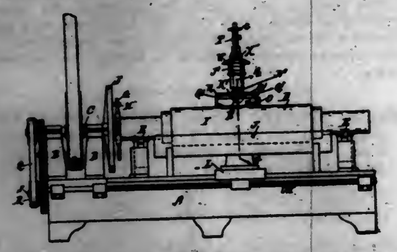
959,139. BROOM-HOLDER. JOHN T. HOLTS, Moorhead, Minn. Filed Apr. 23, 1909. Serial No. 491,751.



1. The herein described broom holder comprising a block having openings therein, clamping jaws having actuating spring coils housed in the said openings, bearing coils also in said openings and pins in said block extending through said openings and through the spring coils and bearing coils of the said clamps.

2. The herein described broom holder comprising a base having openings therein, clamping jaws each comprising a U-shaped spring having spring coils on its arms housed in said openings and bearing coils of less diameter than said spring coils and also in said openings and pins in said base extending through said openings, said spring coils and engaged by said bearing coils.

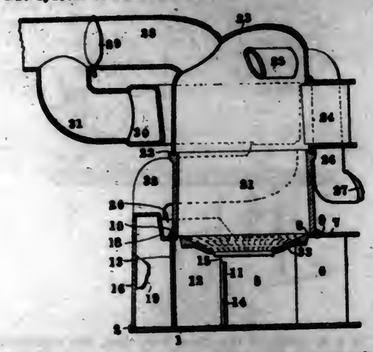
959,140. MACHINE FOR GRINDING THE SURFACES OF PRINTING OR EMBOSSING CYLINDERS. CHARLES H. HOFF, Providence, R. I. Filed Nov. 30, 1908. Serial No. 465,434.



In a machine for grinding the surface of printing or embossing cylinders, the combination of an upright rotary spindle the lower end of which forms an element of a socket joint, a flat grinding stone, and springs for holding the socket-joint members in working contact with each other.

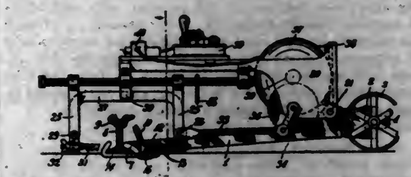
959,141. FURNACE. HIRAM J. HOUGH, Akron, and JOHN B. CROWL, Alliance, Ohio. Filed Apr. 14, 1909. Serial No. 489,799.

1. In a furnace an ash-pit provided with an opening in the roof thereof surrounded by a seat for a fire-pot, the inner face of each of the side walls of said ash-pit provided with grooves constituting seats, a deflecting member mounted in said seats extending across said ash-pit with the medial portion of said member formed upon curvilinear lines approximately concentric with the opening in the roof thereof and approximately in alinement therewith, said member further provided with openings in the lateral portions thereof to permit the products of combustion to escape therethrough, the roof of said ash-pit provided with a second opening rearwardly of said first mentioned opening for establishing communication with the flue system of the furnace whereby the products of combustion passing from said fire-pot through said opening into said ash-pit are permitted to pass through the openings in said deflecting member rearwardly and laterally to said second opening in said roof and from thence outwardly through the flue system of said furnace



2. In a furnace an ash-pit provided with an opening in the roof thereof surrounded by a seat for a fire-pot, the inner faces of the side walls of said ash-pit provided with means for supporting a deflecting member, a deflecting member sustained by said means and extending across said ash-pit the medial portion of which is curvilinearly-formed to approximately register with the marginal portions of the walls surrounding the opening in the roof of said fire-pot, said deflecting member provided with laterally-arranged openings to permit the products of combustion to pass therethrough and encounter the lateral walls of said ash-pit during their passage therethrough, the roof of said ash-pit provided with a second opening rearwardly of said first opening for establishing communication with the flue system of the furnace, a portion of the roof of said ash-pit between said deflecting member and said second opening upwardly-enlarged to permit the passage of the products of combustion from said ash-pit to said second opening.

959,142. MACHINE FOR CUTTING RAILS. BENJAMIN HUBD, Nutley, N. J. Filed Dec. 2, 1908. Serial No. 183,440.



1. In a portable cutting machine, the combination of a truck, a main frame mounted thereon having means for clamping the work, a supplementary frame and motor mounted to move relatively to said main frame, a saw mounted in said supplementary frame, and driving connections between said motor and said saw, substantially as described.

2. In a portable cutting machine, the combination of a truck, a main frame mounted thereon having means for clamping the work, a supplementary frame carrying a motor, pivotally mounted on said main frame, a saw mounted in said supplementary frame, and driving connections between said motor and said saw, substantially as described.

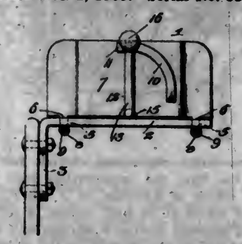
3. In a portable cutting machine, the combination of a truck, a main frame mounted thereon having means for clamping the work, a supplementary frame carrying a motor, pivotally mounted on said main frame, a reciprocating saw mounted in said supplementary frame, and driving connections between said motor and said reciprocating saw, substantially as described.

4. In a portable cutting machine, the combination of a main frame having a truck on one end, and a work clamping mechanism on the other end, a supplementary frame carrying a motor, mounted on said main frame, a cutting mechanism carried by said supplementary frame and disposed in proximity to the clamping mechanism, and driving connections between said motor and said cutting mechanism, substantially as described.

5. In a rail cutting machine, the combination with clamping means, of a frame carrying a motor and cutting mechanism, said frame being pivotally mounted relatively to said clamping mechanism, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

959,143. REIN-HOLDER. CARL M. JENSEN, Denver, Colo. Filed Dec. 2, 1909. Serial No. 530,998.

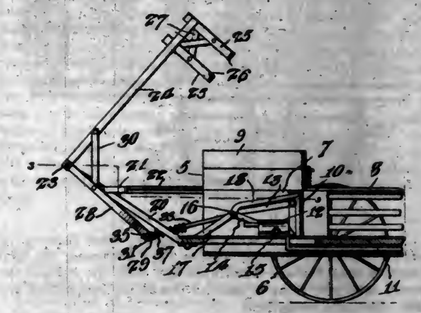


1. In a rein holder, a base plate, a rein receiving plate or bar secured to said base plate, a pair of rein clamping plates having offset ends adapted to be brought into engagement with the reins at the opposite ends of said rein receiving bar, operating lugs formed on said plates and projecting through said base plate, plate retracting springs to connect said lugs whereby the clamping plates are retracted or swung to an open position, a plate closing lever, and means on said plates adapted to be engaged by said lever to force the plates in operative engagement with the reins.

2. In a rein holder, a base plate having formed therein a series of slots, a central longitudinally disposed rein receiving bar, secured to said base plate, a pair of rein clamping plates, lugs formed on one edge of said plates and adapted to project through the slots in said base plate, coiled retracting springs to connect said lugs together whereby said plates are swung outwardly to an inoperative position, plate closing cams arranged on the outer sides of said plates, a stop formed on one of said cams, a plate clamping lever comprising a substantially U-shaped plate engaging portion pivotally mounted in the bearing notch of said rein receiving bar and adapted to be swung upwardly into engagement with the cams on said clamping plates whereby the latter are brought into operative engagement with the reins to clamp the latter against said bar, and an operating handle arranged on one end of said lever.

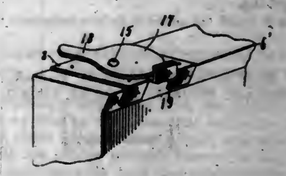
959,144. FEEDING DEVICE FOR BALING-PRESSES. CHARLIE J. JOHNSON, Osseo, Wis. Filed Dec. 11, 1909. Serial No. 532,667.

1. In a baling machine, the combination of a reciprocatory pressure head arranged within the baling chamber, diagonally extending supporting bars secured to the frame of the machine and extending rearwardly thereof, an angular frame pivoted between the ends of said bars, said frame comprising longitudinally extending parallel bars, vertical bars extending below said longitudinal bars, spaced feeding blocks carried by said longitudinal bars, a rod movable with the pressure head and connected to the lower ends of the vertical bars, said rod being movably held between said bars, a collar on said rod, and a spring arranged between the collar and said bars, the reciprocation of the pressure head being adapted to swing the frame between said diagonal bars whereby the feeding blocks are caused to descend into the baling chamber to feed the material into the same, substantially as and for the purpose set forth.



2. In a baling machine, the combination of a reciprocatory pressure head disposed within a baling chamber, parallel diagonally extending bars secured to the frame of said machine, a transverse pivot rod mounted in the outer ends of said bars, a frame rigidly secured upon said rod, said frame consisting of parallel longitudinal bars and vertical depending yoke bars, diagonal braces connecting said bars, a collar pivoted between the lower ends of said bars, a rod pivotally connected to the pressure head movable through said collar, a pin secured in the outer end of said rod, a collar rigidly secured on said rod, a spring disposed between said collar and the collar between the yoke bars, and spaced depending feeding members secured between the inner ends of the longitudinal bars adapted to force the material into said baling chamber upon the reciprocation of said pressure head, substantially as and for the purpose set forth.

959,145. WINDOW-SASH FASTENER. HARRY KELLEM, Rineyville, Ky. Filed Dec. 11, 1909. Serial No. 532,648.



A sash lock comprising an attaching plate adapted to be secured on the upper rail of the lower sash, said plate being provided with a flange on its outer end adapted to engage over the edge of the sash rail and having a longitudinal recess, a bearing member slidable on said attaching plate having a slotted longitudinally extending portion and a flange on its outer end, a pivot pin secured in the attaching plate extending through said slot, the outer end of said bearing member being disposed below the plane of the slotted portion and movable in the recess in said plate, a bar integrally formed with the plate extending over said bearing member, a disk eccentrically pivoted on said pivot pin, the periphery of said disk engaging with the flange of said bearing member, and a rubber facing plate secured to said flange adapted to be held in locking frictional engagement with the rail of the upper sash.

959,146. APPARATUS FOR MANUFACTURING STEEL. NORMAN E. MACCALLUM, Phoenixville, Pa., assignor of one-fourth to Frank P. Norris, Phoenixville, Pa., and one-half to The Phoenix Iron Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 4, 1909. Serial No. 475,958.



1. The combination with a stationary steel furnace, of a plurality of receptacles, means for discharging the contents of said furnace simultaneously from the furnace directly into said receptacles, and means for controlling the flow into each receptacle.

2. The combination with a stationary steel furnace provided with a channel for the discharge of molten steel from the furnace, of means communicating with said channel for conducting said molten steel simultaneously from the furnace directly into a plurality of receptacles, and means for controlling the flow into each of said receptacles.

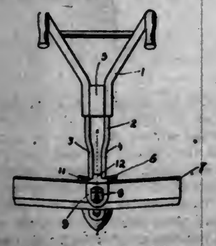
3. The combination with a stationary steel furnace provided with a channel for the discharge of molten steel from the furnace, of a plurality of portable ladles, means communicating with said channel for conducting said molten steel simultaneously from the furnace directly into said ladles, and means for controlling the flow into said ladles.

4. The combination with a steel furnace, of a substantially Y-shaped conductor communicating with said furnace for discharging molten metal from said furnace simultaneously into a pair of receptacles, and means for controlling the flow into each of said receptacles.

5. The combination with a steel furnace of a bifurcated conductor communicating with said furnace for discharging molten steel from said furnace into a pair of receptacles, and means for controlling the flow into each of said receptacles.

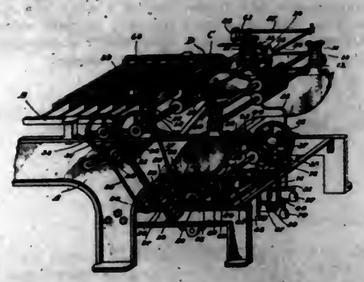
[Claims 6 to 25 not printed in the Gazette.]

959,147. BRACE-CLAMP. JOHN D. MADDOX, Culverton, Ga. Filed Aug. 23, 1909. Serial No. 514,273.



In combination with a U-shaped cultivator standard, a plow shovel on the front side and bearing against the front edges of the arms or sides thereof, a cultivator sweep bearing against the rear edges of the arms or sides thereof and opposite the said shovel, a plate bearing on the rear side of said sweep and having a vertical slot, said plate being further provided at its upper end with a forwardly extending flange lying on the upper edge of the sweep and also with a forwardly extending tongue, projecting medially from said flange, extending between sides or arms of the standard and bearing on the upper edge of the shovel, and a bolt extending through the shovel, the space between the arms or sides of the standard, the sweep and also through the said slot of the said plate, a nut on said bolt bearing against the rear side of the plate and co-acting with the bolt to clamp the shovel, the standard, the sweep and plate together.

959,148. AUTOMATIC REGULATING DEVICE FOR BREAKERS, SPREADERS, OR THE LIKE. WILLIAM HUME LITHGOW MELLIS, Peterborough, Ontario, Canada. Filed Apr. 23, 1909. Serial No. 491,867.



1. In an automatic regulating device for breakers, spreaders and the like, the combination with a pair of rollers, one of which is movable, of a carrying element adapted to feed material to said rollers, a driving gear for the carrying element having a normal and a fast motion, means operated by the raising of the roller, a determined amount, for throwing the fast motion out of action and means operated by the raising of the rollers an excessive amount for throwing both motions out of action, both of said means including multiplying gears.

2. In an automatic regulating device for breakers, spreaders and the like, the combination of a carrying element adapted to feed the sliver, hemp or the like, of a movable member adapted to bear on the sliver or hemp being fed, a driving shaft operatively connected to the carrying element, a gear on said shaft releasable automatically when the speed of the shaft exceeds that of the gear, means for driving the shaft, means for driving the gearing, and means thrown into operation by a raising of the movable member for throwing the gear driving the shaft out of operation, the said last mentioned means including a multiplying gear.

3. In an automatic regulating device for breakers, spreaders and the like, the combination with the carrying member adapted to feed the hemp or sliver, of a movable member adapted to bear on the sliver or like material being fed, a driving shaft operatively connected to the carrying member, a ratchet wheel fixed to said shaft, a gear loose on said shaft, having a pawl spring-held in engagement with the ratchet wheel, means for driving the gear and a fast gear connected to the shaft, and adapted to drive it at a faster rate of speed, than the gear, and means operated by the raising of the movable member a determined amount for throwing the fast gear out of operation, said last-mentioned means including a multiplying gear.

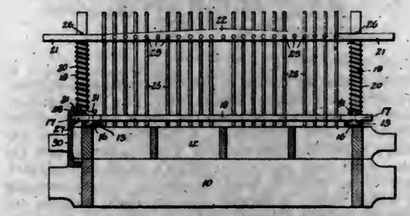
4. In an automatic regulating device for breakers, spreaders and the like, the combination with a movable roller adapted to bear on the sliver or the like, and to be raised and lowered thereby, feeding means for the sliver or the like, a driving gear for the same having fast and a normal speed, clutches respectively for the normal and fast speeds, a mechanism operatively connecting said clutches with the roller, whereby when the roller is raised a determined amount, a fast motion is thrown out of gear, and when it is raised an additional determined amount

the normal motion is thrown out of gear, said mechanism including a multiplying gear.

5. In an automatic regulating device for breakers, spreaders and the like, the combination with a feeding mechanism, a movable member adapted to bear on the sliver or the like being fed, and to be raised and lowered thereby, of a driving gear for the feeding mechanism, a clutch controlling the same, an operating lever for the clutch, a screw-shaft, a nut thereon, connected to the operating lever, a train of gears connected to the screw shaft, a lever operatively connected to one of the gears and means connecting the lever with the movable member whereby when said member is raised a determined amount, the screw shaft will be rotated to throw the clutch out of gear.

[Claim 6 not printed in the Gazette.]

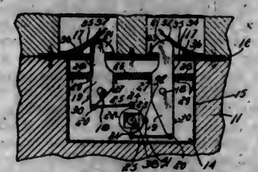
959,149. MOLD-VENTING APPARATUS. CHARLES BROOKS MOORE, Newport News, Va. Filed Mar. 28, 1910. Serial No. 551,871.



1. The combination of adjusting frames adapted to rest upon a cope and the like, a base member having its end portions adjustably connected to said frames, and having a plurality of openings, inter-changeable guide members having means to connect them to said base members and said frames, a carrier superposed above, and movable toward and away from, said base, and a series of venting pins carried by said carrier and projecting through the openings in said base.

2. The combination of adjusting frames, adapted to rest upon a cope or the like, a base member having a plurality of apertures, means to connect said base member upon said frames, adjustable longitudinally of the latter, interchangeable guide members having means to secure the same upon said base and one of said frames, a carrier superposed above, and movable toward and away from, said base, and having a plurality of apertures in alinement with said base apertures, and a plurality of set screws in communication with said apertures, and venting pins removably held within said carrier apertures by said set screws and extending through the apertures in the base.

959,150. SASH-FASTENER. HUGH MORRIS, Oklahoma, Okla. Filed Mar. 22, 1909. Serial No. 484,927.

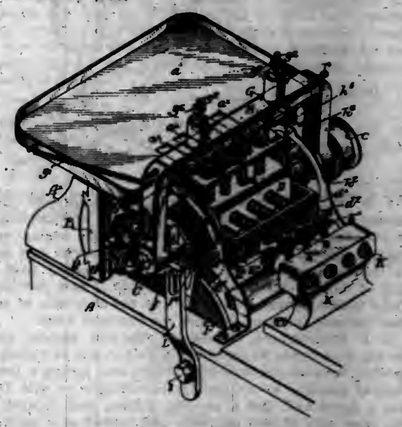


1. A sash fastener comprising a casing, pivotal catch members mounted in said casing, a key engaging hollow hub rotatably mounted in the casing between said catch members, link connections between said catch members and the hub, and a detachable key insertible in the hub for turning the same.

2. A sash fastener comprising opposed pivotal members each terminating at one end in a hook head and at the opposite end in an eye, a socketed hub rotatably mounted between said members, eyes projecting at diametrically opposite points from said hub, link members connected to the eyes and to the catch members, springs acting upon the catch members for holding the same in normal locked position, and a key having one of its ends detachably engaging the socketed hub for rotating the same to release the catch members.

3. The combination with a keeper plate having spaced alining openings therein, of a casing, pivotal catch members mounted in the casing and being adapted to work toward and away from each other, springs acting upon said catch members for normally holding the latter in engagement with the keeper when the members have been passed through the openings in the latter, a hollow hub disposed between the catch members, a rivet rotatably connecting the hub to the casing, a lug projecting from the hub, a stop pin on the casing and arranged in the path of movement of the lug to prevent the rotation of said hub in one direction, links loosely connected to the hub and to the inner ends of the catch members, and a turning key detachably insertible in the hollow of the hub for actuating said hook.

959,151. BUTTON CUTTING AND DRILLING MACHINE. ROBERT MCCOY, Vineland, N. J., assignor of one-half to Peerless Pearl Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 11, 1909. Serial No. 501,586.



1. The combination of a rotary structure having a series of chucks; a frame rotatable concentrically with said structure; means for locking the frame to the structure; means for releasing said frame from the structure; a cutter spindle, carried by the frame and rotatable therewith outside the chuck supporting structure, and substantially parallel with the axis of rotation thereof; a cutter on the spindle; a drill operative in a line substantially at right angles to said axis of rotation of the frame; with means for rotating the chuck-carrying structure to cause the chuck to be successively presented to the cutter and to the drill.

2. The combination of a drill, a series of chucks, a structure supporting said chucks, means for rotating said structure so as to successively present said chucks to the drill, a source of supply for articles to be drilled, a cutter placed to act upon articles carried by the chucks as they pass from the source of supply to the drill and bodily movable toward and from the axis of rotation of the chuck supporting structure, with a frame rotatable concentrically with the chuck-supporting structure.

3. The combination of a chuck, a drill, means for moving the chuck to present an article carried thereby to the drill, a frame, a cutter carried thereby and capable of acting on the article in the chuck, with means for detachably

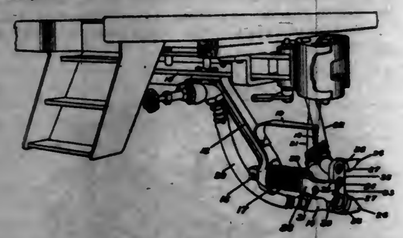
locking said frame to the chuck so that it moves with the same.

4. The combination of a chuck, a drill, means for moving the chuck to present an article carried thereby to the drill, a frame, a cutter carried thereby and capable of acting on the article in the chuck, means for detachably locking said frame to the chuck so that it moves with the same, and means for automatically causing the cutter to move into and out of operative position.

5. The combination of a rotatable structure, a series of chucks carried thereby, means for rotating said structure, a movable frame, a cutter carried thereby and capable of operating on objects carried by the chucks, a drill also placed to operate on said objects, means for locking together the chuck carrying structure and said frame, with means for releasing the said locking means at a predetermined time.

[Claims 6 to 13 not printed in the Gazette.]

959,152. AUTOMATIC TRAIN-HOSE COUPLING. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car-Heating Company, Albany, N. Y., a Corporation of West Virginia. Filed Feb. 14, 1907. Serial No. 357,282.



1. A straight-port automatic train-pipe coupler head having an abutting port-face substantially at right-angles to the line of thrust, means for yieldingly urging said coupler-head in a direction at right-angles to its port face to maintain a fluid-tight joint with the mating head, a pair of flared guiding horns on one side of said port-face, and a yielding flared guiding horn on the other side of said face opposite the space between the first-said horns.

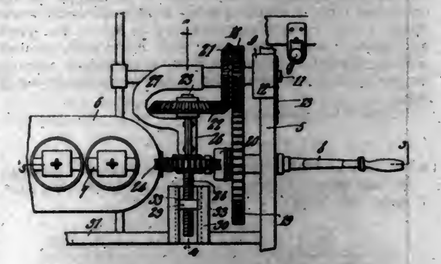
2. A straight-port automatic train-pipe coupler head having a port-face at right-angles to the line of thrust, a guiding horn on one side of said port-face having a longitudinal shoulder at its base at right-angles to said face and a flared end, and a yielding guiding horn located on the other side of said port-face and formed as a latch to automatically lock and unlock with the mating head and to force the latter transversely against said shoulder.

3. A coupler-head having a port face in a plane substantially at right-angles to the direction of thrust, a pair of fixed guiding horns on one side of said port face, a yielding latch hinged at its inner end on the other side of said port-face opposite the space between said fixed horns, and spring mechanism for laterally pressing said latch inwardly.

4. A pipe-coupler-head having a port face with a pair of V-shaped latch-engaging projections arranged on one side thereof with a space between them, and a yielding spring-latch on the opposite side of said port face formed with V-shaped recesses to receive the corresponding projections of a mating coupler-head, and an aligning-rib between said recesses adapted to enter the space between the projections on the mating coupler-head.

959,153. STARTING DEVICE. WILLIAM MCKISSICK, Carlisle, Iowa. Filed Jan. 10, 1910. Serial No. 537,334.

1. In a starting device for internal combustion engines, the combination with the engine shaft; of a spring motor; a driving connection between the motor and the shaft; a clutch in said connection; a winding device for the spring; a gearing between said winding device and the shaft; said gearing including a worm on the engine shaft, and a worm wheel; a support for the worm wheel shaft mounted for swinging movement toward and from the worm to engage said worm wheel with the worm, and to disengage the same; and means for swinging said support.



2. In a starting device of internal combustion engines, the combination with the engine shaft; of a spring motor; a driving connection between the motor and the shaft; a clutch in said connection; a winding device for the spring; a gearing between said winding device and the engine shaft, said gearing including a worm on the shaft, and a worm wheel in mesh therewith; a shaft carrying the worm wheel; a support for the shaft mounted for swinging movement toward and from the worm to engage and disengage the worm wheel; a screw on the worm wheel shaft; a traveling nut threaded on the screw; and a guide for the nut inclined in a direction to throw the worm wheel shaft support toward and from the worm.

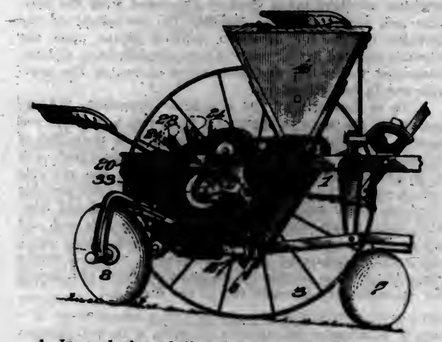
3. In a starting device for internal combustion engines, the combination with the engine shaft; of a spring motor; a driving connection between the motor and the shaft; a clutch in said connection; a winding device for the spring; a gearing between said winding device and the engine shaft, said gearing including a worm on the shaft, and a worm wheel in mesh therewith; a shaft carrying the worm wheel; a support for the worm wheel shaft pivotally mounted at one of its ends to swing toward and from the worm; a screw on that end of the last mentioned shaft which is adjacent to the free end of the swinging support; a traveling nut threaded on the screw; and a guide for the nut inclined in a direction to swing the worm wheel shaft support toward and from the worm.

4. In a starting device for internal combustion engines, the combination with the engine shaft; of a spring motor; a driving connection between the motor and the shaft; a clutch in said connection; a winding device for the spring; a gearing between said winding device and the engine shafts, said gearing including a worm on the shaft and a worm wheel in mesh therewith; a shaft carrying the worm wheel; a support for the worm wheel shaft mounted to swing toward and from the worm to engage and disengage the worm wheel; a screw on the worm wheel shaft; a traveling nut threaded on the screw; guides between which the nut is mounted, said guides being formed with shoulders inclined in the direction of the worm; tongues on the nut in contact with the shoulders; and yielding means for holding said tongues to the shoulder.

5. In a starting device for internal combustion engines, the combination with the engine shaft; of a spring motor; a driving connection between the motor and the shaft; a clutch in said connection; a winding device for the spring; a gearing between said winding device and the shaft; said gearing including a worm on the engine shaft, and a worm wheel; a support for the worm wheel shaft mounted for swinging movement toward and from the worm to engage said worm wheel with the worm, and to disengage the same; and automatically operating means for swinging said support.

[Claim 6 not printed in the Gazette.]

959,154. POTATO-PLANTER. ALLEN MCWHORTER, Riverton, N. J., assignor to McWhorter Manufacturing Company, Riverton, N. J., a Corporation of New Jersey. Filed Apr. 29, 1909. Serial No. 492,910.



1. In a device of the character described, a hopper, a casing communicating with said hopper and provided with an outlet opening, a movable conveyer adapted to deliver potatoes to said casing, a member rotatably mounted in said casing, a plurality of slidingly mounted impalers carried by said member, and yielding means to project each impaler into a potato.

2. In a device of the character described, a hopper, a casing communicating with said hopper and provided with an outlet opening, a movable conveyer adapted to deliver potatoes to said casing, a member rotatably mounted in said casing, a plurality of slidingly mounted impalers carried by said member, and a spring to project each impaler into a potato.

3. In a device of the character described, a hopper, a casing communicating therewith and provided with an outlet opening, a movable conveyer in said hopper adapted to deliver potatoes to said casing, a member rotatably mounted in said casing, a plurality of slidingly mounted impalers carried by said member, and yielding means to project each impaler into a potato.

4. In a device of the character described, a hopper, a casing communicating therewith and provided with an outlet opening, a movable conveyer adapted to deliver potatoes to said casing, a member rotatably mounted in said casing, a plurality of slidingly mounted impalers carried by said member, a spring to project each impaler into a potato, and means coöperating with each impaler to overcome the action of each spring.

5. In a device of the character described, a hopper, a casing communicating therewith and having an outlet opening, a movable conveyer adapted to deliver potatoes to said casing, a member rotatably mounted in said casing, a plurality of slidingly mounted impalers carried by said member, a spring to project each impaler into a potato, and means on said casing adapted to coöperate with each impaler to overcome the action of each spring.

[Claims 6 to 9 not printed in the Gazette.]

959,155. DEVICE FOR CATCHING FLIES AND OTHER INSECTS. JOHN NAULT, Chicago Heights, Ill. Filed June 12, 1909. Serial No. 501,781.



1. In a device of the class described, the combination of a tube; means for drawing a draft of air through the tube; a detachable insect trap at the discharge end of said tube; and a trap door for said trap normally held in open position by a spring, but adapted to be closed when the trap is detached, substantially as described.

2. In a device of the class described, the combination of a suitable casing; an electric fan in said casing and adapted to force a blast of air through the casing; a flexible tube attached to the intake of said casing; a flaring intake for said tube, having an electric light suspended therein; an insect trap consisting of an inclosure of wire netting and detachably secured to the discharge end of the fan casing; and a trap door for said trap, normally held in open position by a spring, but adapted to be closed when the trap is detached, substantially as described.

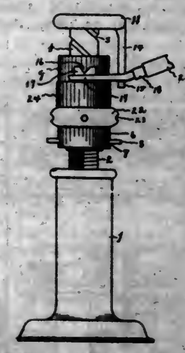
3. In a device of the class described, the combination of a suitable casing; an electric fan in said casing and adapted to force a blast of air therethrough; an intake tube for said casing; a discharge tube for said casing; an insect trap consisting of an inclosure of wire netting provided with an opening; and a flanged sleeve secured around said opening and adapted to detachably telescope said discharge tube, substantially as described.

4. In a device of the class described, the combination of a suitable casing; an electric fan in said casing and adapted to force a blast of air therethrough; an intake tube for said casing; a discharge tube for said casing; an insect trap consisting of an inclosure of wire netting provided with an opening; a flanged sleeve secured around said opening and adapted to detachably telescope said discharge tube; a trap door adapted to close said opening and provided with an operating handle extending through a slot provided in said inclosure; and a spring for normally holding said trap door in open position, substantially as described.

959,156. COMPOSITION METAL. JAMES NAULTY and JOHN SCANLIN, Philadelphia, Pa. Filed Jan. 4, 1910. Serial No. 536,360.

A composition of metals comprising fifty per cent. copper and chromium in ratio of nine to one combined with other metals.

959,157. LIFTING-JACK. CHARLES H. NOYES, Omaha, Nebr. Filed Jan. 21, 1910. Serial No. 539,414.



1. An attachment for lifting jacks, comprising, in combination with the screw of the lifting jack, a spindle removably secured to said screw and having a spiral groove formed thereon of greater pitch than the threads of the screw; a collar mounted upon and having a lug in engagement with the spiral groove of the spindle; and means to move the collar longitudinally of said spindle.

2. An attachment for lifting jacks, comprising, in combination with the screw of the lifting jack, a spindle removably secured to said screw and formed with spiral grooves of a greater degree of pitch than the threads of the screw; a bearing-head loosely seated upon the spindle and provided with a supporting-arm; a collar mounted

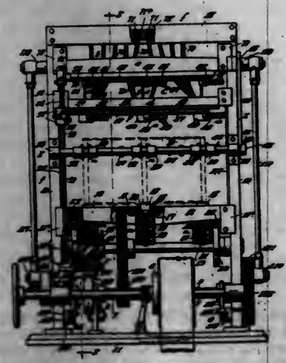
upon and having lugs engaging the grooves of the spindle; a lever arranged to engage said supporting-arm and said collar, the operation being that a movement of said lever causes a movement of the collar longitudinally of the spindle.

3. In devices for the purpose described, the combination with the screw of a lifting jack, of a threaded spindle removably mounted upon said screw and provided with a spiral groove having a greater pitch than the threads of the screw, a rotatable nut mounted upon the threaded part of said spindle, a collar arranged above the nut said collar being mounted upon and having a lug seated in the spiral groove of the spindle, said collar being movable longitudinally of the spindle by the rotatable movement of said nut.

4. In devices for the purposes described, the combination with the screw of a lifting jack, of a spindle provided with threads adjacent to one of its ends said spindle being removably mounted upon said screw and having spiral grooves of a greater degree of pitch than the threads of the screw; a rotatable nut mounted upon the threaded part of said spindle, a sleeve seated upon said rotatable nut and circumscribing the threaded part of said spindle, a collar mounted upon the spindle and disposed outwardly of said sleeve said collar having lugs engaging the spiral grooves of said spindle, and means to prevent a rotatable movement of said collar during the rotatable movement of said nut.

5. An improvement in lifting jacks, comprising in combination with the upright screw of the jack, a spirally grooved spindle disposed in alinement with and connected with said screw, a cap seated upon the terminal of said spindle and provided with a downwardly extending supporting-arm, a collar mounted upon said spindle adjacent to said supporting-arm and provided with lugs upon its interior wall engaging within the grooves of the spindle and having downwardly projecting lugs upon its exterior wall; a lever member arranged to have a seating upon said supporting-arm and to make engagement with the downwardly projecting lugs of said collar, said lever adapted to have a downwardly swinging movement to cause an upward movement of the collar and a rotatable movement of said screw.

959,158. BOX-MAKING MACHINE. GEORGE D. PARKER, Riverside, Cal. Filed Mar. 31, 1909. Serial No. 487,066.

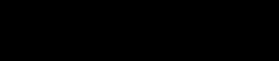


1. In a machine of the character described, holding means for the work comprising relatively movable gripping members, means for operating the gripping members to cause the relative movement of the same and the yielding engagement of the same with the work, there being tension means applied to one of the gripping members and included in said operating means, and independent tension means opposing relative movement of the gripping members.

2. In a machine of the character described, holding means for the work comprising relatively movable gripping members, a fixed rod, a movable rod, one of the gripping members being fixed to the fixed rod, the other of the gripping members being slidably connected with the movable rod, tension means opposing the movement of the movable rod in one direction, tension means upon the movable rod and acting upon the gripping member slidably connected therewith, and means for operating the movable rod in one direction.

3. In a machine of the character described, holding means for the work comprising a fixed rod, a movable rod spaced therefrom and parallel therewith, a plurality of gripping arms fixed to the fixed rod and provided each with an annular portion loosely encircling the movable rod, a plurality of gripping arms provided with annular portions respectively loosely encircling the fixed and movable rods, a coil spring encircling the movable rod and acting to oppose movement thereof in one direction, other coil springs connected with the movable rod and acting respectively upon certain of the gripping arms, and means for operating the movable rod in one direction.

959,159. ROD FOR AXLES, STAY AND OTHER BOLTS, AND SIMILAR ARTICLES. FRANKLIN M. PATTERSON, Bayonne, N. J., assignor of one-third to John H. Allen, New York, N. Y., and one-third to Alexander B. Scully, Chicago, Ill. Filed Jan. 15, 1910. Serial No. 538,292.



1. An article of the character described formed of a core portion and a series of radial longitudinal outer portions divided with respect to each other but integral with the core portion, and said series of radial outer portions being closely compacted side by side at their outer portions and separated at their inner portions adjacent to the core.

2. An article of the character described formed of a core portion and a series of radial longitudinal outer portions divided with respect to each other but integral with the core portion, and said series of radial outer portions being closely compacted side by side at their outer portions and separated at their inner portions adjacent to the core, and in which the longitudinal outer portions are helically arranged about the core portion.

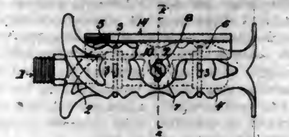
3. An article of the character described formed of a core portion and a series of radial longitudinal outer portions divided with respect to each other but integral with the core portion, and said series of radial outer portions being closely compacted side by side at their outer portions and separated at their inner portions adjacent to the core to form longitudinal chambers and in which both the longitudinal outer portions and chambers are helically arranged about the axis of the core.

4. An article of the character described formed of a core portion and a series of radial longitudinal outer portions divided with respect to each other but integral with the core portion and in which the longitudinal outer portions are helically arranged about the core portion and compressed into close contact for a part of their radial length so as to form a solid rod with helically arranged spaceless incisions at the outer surface and a plurality of longitudinal passages lengthwise of the bolt and between the axis and outer surface thereof.

5. An article of the character described formed of a core portion and a series of radial longitudinal outer portions divided with respect to each other but integral with the core portion, and said series of radial outer portions being closely compacted side by side at their outer portions and separated at their inner portions adjacent to the core, and in which the longitudinal outer portions are helically arranged about the core portion, and further having screw threads upon its outer surface.

[Claims 6 to 18 not printed in the Gazette.]

959,160. GRIPPER ATTACHMENT FOR PEDALS. EWALD F. PAWSAT and HERMANN PAWSAT, Sheboygan, Wis. Filed Jan. 17, 1910. Serial No. 538,418.



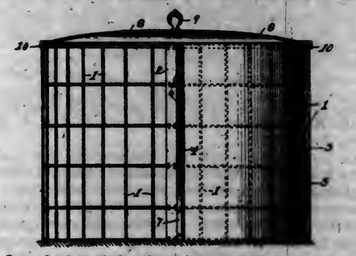
1. In a bicycle pedal having a scroll stirrup-strap; the combination of a gripping attachment comprising a continuous backing-plate having an unbroken flat tread portion, right angle flanged portions extending from the backing-plate and adapted to overlap the stirrup-strap, slotted ears extending from the flanges, the slots being arranged to coincide with apertures of the scrolled stirrup-strap, and a securing bolt for the gripping attachment, the securing bolt being arranged to pass through the slotted apertures of the ears and scroll apertures of the stirrup-strap aforesaid.

2. In a bicycle pedal having a scroll stirrup-strap; the combination of a gripping attachment comprising a continuous backing-plate having an unbroken tread portion, right angle flanges extending from the backing-plate adapted to overlap the stirrup-strap, slotted ears extending from the flanges and means for securing the slotted ears to said stirrup-strap.

3. In a bicycle pedal having a scroll stirrup-strap; the combination of a gripping attachment comprising a backing-plate having apertured flanged extensions adapted to engage the stirrup-strap, a corrugated sheet secured to the backing-plate and a securing bolt for the backing-plate, the securing bolt being provided with an intermediate offset portion.

4. In a bicycle pedal having a central sleeve and apertured stirrup-strap; a gripping attachment for the pedal comprising a backing-strip having apertured flanges adapted to straddle the stirrup-strap, a corrugated sheet secured to the backing-plate and a securing bolt for the gripping attachment arranged to pass through the flanged apertures and stirrup apertures, the bolt being provided with an intermediate offset portion disposed to one side of the pedal sleeve, the offset portion being connected by oblique sections to the head and shank portions of said bolt.

959,161. CHICKEN-HOVEL. JAMES S. PHRONNER, Wheaton, Ill. Filed May 7, 1909. Serial No. 494,601.



1. In a device of the class described, the combination of an outer mesh closure open at its upper extremity, an inner housing detachably arranged within said closure and provided with a passage communicating with said outer closure, and a cover for said outer closure, substantially as described.

2. In a device of the class described, the combination of an outer substantially cylindrical mesh closure open at its upper and lower extremities, an inner substantially semi-cylindrical housing detachably arranged within said closure and provided with a passage communicating with said outer closure, and a removable cover for said outer closure, substantially as described.

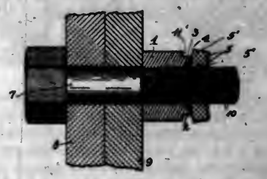
3. In a device of the class described, the combination of an outer mesh closure open at its upper and lower extremities, a housing arranged within said closure, means provided upon the inner surface of said closure for holding said housing in position therein, said housing being provided with an opening communicating with the interior of said closure, and a removable cover for said closure, substantially as described.

4. In a device of the class described, the combination of an outer wire mesh closure open at its upper and lower extremities, a housing having its upper and lower extremities open arranged within said closure, said housing being of a cross sectional area less than that of said closure, said housing being provided with an opening communicating with the interior of said closure, and a removable cover for said closure, substantially as described.

5. In a device of the class described, the combination of an outer cylindrical wire mesh closure, a semi-cylindrical housing arranged within said closure and provided with a passage communicating with said closure and cleats provided on the inner surface of said closure and adapted to hold said housing against rotary movement therein, substantially as described.

[Claim 6 not printed in the Gazette.]

959,162. LOCK-NUT MECHANISM. JOHN PEARIS, Roseland, Ill. Filed Nov. 15, 1909. Serial No. 527,979.



1. In lock nut mechanism, the combination of a main nut, an annular flange extending from one face of said main nut and forming an annular pocket, and a flexible supplemental nut for abutting along a circular line against the outer end of said flange to be deflected thereby when said main and supplemental nuts are applied to a bolt.

2. In combination, a bolt, a main nut engaging said bolt, a circular projection from one face of said main nut, and a comparatively thin flexible supplemental nut abutting against the end of said projection and deflected by such abutting engagement to force its threads radially in all directions into clamping engagement with the bolt.

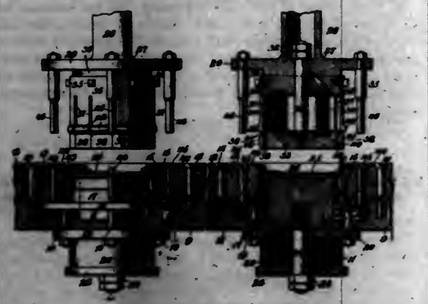
3. In lock nut mechanism, the combination of a main nut, an annular flange extending from one face of the main nut and forming the outer wall of an annular pocket when the nut is applied to a bolt, and a comparatively thin, flexible supplemental nut, said supplemental nut being primarily flat and adapted when applied to the bolt to engage along a circular line with the end of said flange, and when drawn forcibly against the end of said flange to be dished to thereby both radially and longitudinally uniformly clamp said bolt to lock itself and the main nut to the bolt.

4. In a lock nut mechanism, the combination of a main nut, an annular flange extending from one face of the main nut and forming the outer wall of an annular pocket when the main nut is applied to a bolt, and a primarily flat comparatively thin and flexible supplemental nut threaded to receive the bolt and to be drawn up forcibly against the outer end of said flange, engagement of said flange with said supplemental nut causing the entire outer section of the supplemental nut to be uniformly deflected outwardly and the entire inner section thereof to be uniformly drawn into said pocket whereby said supplemental nut will securely clamp the bolt uniformly at all points in a radial direction and will exert longitudinal clamping pressure against the bolt and the main nut to thereby securely lock itself and the main nut to the bolt.

5. In lock nut mechanism, the combination of a main nut having a threaded central opening for receiving a bolt,

an annular flange extending from one face of the nut at a point intermediate said threaded opening and the outer faces of the nut and having a comparatively sharp outer end, and a comparatively thin and flexible supplemental nut having a central threaded opening for receiving a bolt, said supplemental nut being primarily flat, said supplemental nut when applied to the bolt abutting against the end of said flange to be dished outwardly to uniformly clamp the bolt at all points in a radial direction and in a longitudinal direction to lock itself and the main nut securely to the bolt.

959,163. MEANS FOR APPLYING SOLDER RINGS TO CAN-CAPS. WALTER J. PHELPS, Baltimore, Md. Filed Feb. 11, 1908. Serial No. 415,424.



1. In mechanism of the character set forth, the combination with a bed, of means for positioning a disk thereon with its margin projecting beyond the bed, means for positioning a flat ring with its inner margin overlapping the margin of the disk and its outer margin projecting beyond the edge of the disk, and means for successively clamping the inner margin of the ring to the disk, bending the outer margin of the ring across the edge of the disk, bending the margin of the ring inward, and clamping both margins of the ring against the opposite sides of the disk.

2. In mechanism of the character set forth a bed plate adapted to receive and center a disk and ring of larger diameter than said disk, a bumper die movable into engagement with the disk, adapted to hold the inner margin of the ring against one side of the margin of the disk, means movable past the periphery of the disk and engaging with the projecting edge of the ring to force the margin of the ring downward and inward, and means movable against said inturned margin for forcing said margin against the adjacent face of the disk.

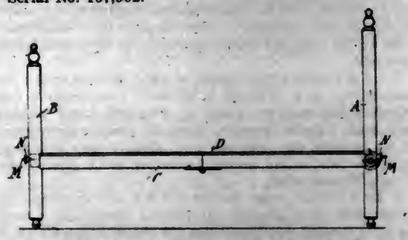
3. In mechanism of the class described, a concave bed adapted to support a concave disk of larger diameter than the bed, a centering ring spaced from but surrounding the bed and adapted to center a solder ring upon the upturned edge of the disk, a bumper die movable toward the bed for holding the solder ring and disk clamped thereon, and means for bending the projecting margin of the ring over the edge of the disk and for then clamping said overturned edge against the opposite margin of the disk.

4. In mechanism of the character set forth, the combination with a bed adapted to center and hold a disk, of a bumper die movable to and from the disk to hold a solder ring against the margin of the disk with the margin of the ring projecting beyond the disk, a drawing ring movable past the periphery of the disk and engaging with the projecting edge of the solder ring to force it downward and inward, and a supporting and bumping ring movable into engagement with the inwardly bent margin of the solder ring for forcing the ring inward against the opposite face of said disk.

5. In mechanism of the class described, the combination with a bed adapted to receive a disk-like article, of a bumper die movable into engagement with the article to hold one margin of a solder ring against the margin of the article to which the ring is to be applied, a drawing ring greater in diameter than the diameter of said bed and movable past the edge of the article to engage the outer margin of the ring and bend it downward, means surrounding the bed and supporting the circumferential margin of the article, mechanism for moving said supporting means away from contact with the margin of the disk after the exterior margin of the solder ring has been bent downward by said drawing ring, means for turning in the margin of the ring, and mechanism for again moving said supporting means upward to compress said inturned margin of the ring against the margin of the disk.

[Claims 6 to 38 not printed in the Gazette.]

959,164. FRAMELESS SPRING-BED. THEODORE A. B. PUTNAM, New York, N. Y., assignor of one-fourth to Cyrus F. Tibbals, Brooklyn, N. Y. Filed Dec. 16, 1908. Serial No. 467,902.



1. A bed having a head board and a foot board, one of said boards having two uprights, a roller pivoted in said uprights and springs connected to the other of said boards, and also connected to said roller, means for rotating said roller to wing up upon it substantially the entire springs, the board carrying said roller having above and below it a sufficient free space to permit said roller to receive said springs, and two side bars connected with said head and foot boards and adapted to be removed therefrom, said side bars being unconnected with said springs.

2. A bed having a head board and a foot board, one of said boards having two uprights, a roller pivoted in said uprights and springs connected to the other of said boards, and also connected to said roller, means for rotating said roller to wind up upon it substantially the entire springs, the board carrying said roller having above and below it a sufficient free space to permit said roller to receive said springs, and two side bars connected with said head and foot boards and adapted to be removed therefrom, said side bars being unconnected with said springs and independent of each other, and said side bars being jointed at their middles whereby the same may be collapsed.

959,165. REPEATING WATCH. HARRY M. REINER and OSCAR REINER, New York, N. Y. Filed Aug. 9, 1909. Serial No. 512,069.

1. In a repeating watch, the combination of a pusher-knob, a fulcrumed actuating main-lever operated thereby, a motor-spring for said actuating main lever, hour and quarter-hour racks at one end of said lever, a rack at the opposite end of the lever, a moderating gear operating upon the latter, an hour-heel on the actuating main-lever, an hour-snail, a star-wheel on said hour-snail, a quarter-hour snail, means for turning the star-wheel from the quarter hour-snail, a fulcrumed and spring-actuated quarter-hour heel-lever, and locking means for connecting the quarter-hour heel-lever with or releasing it from the actuating main-lever and sounding devices operated by the hour and quarter-hour racks on the actuating main-lever.

2. In a repeating watch, the combination, with an oscillating main-lever provided with hour and quarter-hour racks at one end and a moderating gear operating rack at the opposite end, of a motor spring for said main-lever, a quarter hour snail on the hour hand arbor, an hour-snail, means between the quarter-hour and hour-snails for turning the latter, an hour-heel on the main-lever contacting with the steps of the hour-snail, a spring-actuated heel and heel-lever acting in conjunction with the quarter-hour snail, locking means between the quarter-hour heel-lever and the main-lever, striking devices for the hour and quarter-hour, and an auxiliary quarter-hour rack for sounding the quarter-hours by double strokes.

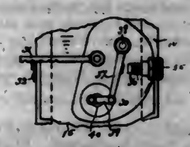


3. In a repeating watch, the combination, with a spring-actuated main-lever provided with hour and quarter-hour racks at one end and a rack at the opposite end, of a moderating gear engaging with the latter rack, hour and quarter-hour striking devices operated by the hour and quarter-hour racks, an hour snail, a quarter-hour snail, means for connecting the quarter-hour snail with the hour-snail for actuating the latter, an hour-heel on the main-lever, a quarter-hour heel-lever contacting with the quarter-hour snail, a curved spring-actuated arm pivoted to the quarter-hour heel-lever and provided with teeth at its outer end and adapted to engage by its toothed end a pin on the main-lever for locking the main-lever and quarter-hour heel-lever when in normal position or releasing the heel-lever from the main-lever for moving the latter in striking position.

4. In a repeating watch, the combination, with an actuating main-lever provided with an hour and quarter-hour rack, of an auxiliary rack attached on top of the hour-rack, spring-actuated clicks operated by the hour and quarter-hour racks and the auxiliary rack, spring-actuated hammers actuated successively by said clicks, and gongs actuated by said hammers.

5. In a repeating watch, the combination, with the spring-actuated main lever provided with an hour-rack, a quarter-hour rack and an auxiliary rack on top of the hour-rack, the teeth of the hour and quarter-hour rack being approximately at a distance from each other equal to the distance between the hammer-operating clicks, of spring-actuated clicks engaging the hour, quarter-hour and auxiliary racks, and striking devices actuated by said clicks.

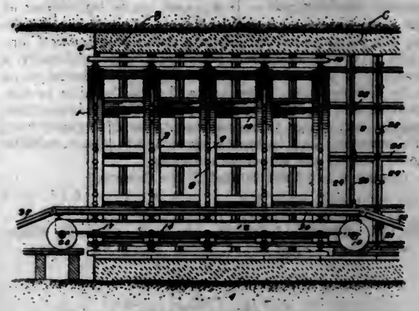
959,166. MAGNETO-ELECTRIC GENERATOR. BENJAMIN P. REMY and FRANK I. REMY, Anderson, Ind., assignors to Remy Electric Company, Anderson, Ind., a Corporation. Filed Mar. 3, 1909. Serial No. 481,210.



1. A magneto electric ignition apparatus including an inductor shaft, a plate loosely mounted on the shaft, a circuit closing and breaking lever pivotally mounted at one end of said plate, means eccentrically and positively reciprocated by said shaft that is pivotally connected with the other end of said lever for oscillating it, a terminal in position to be engaged by said lever, and means for adjusting the position of said plate.

2. A magneto electric ignition apparatus including an inductor shaft, a plate loosely mounted on the shaft, a circuit closing and breaking lever pivotally mounted at one end on said plate, a disk on said shaft, a connecting bar pivoted eccentrically on said disk and pivotally connected with the other end of said lever for oscillating it, and a terminal in position to be engaged by said lever.

959,167. CENTERING APPARATUS. JOSEPH T. RICH, New York, N. Y. Filed Dec. 11, 1908. Serial No. 467,030.



1. Centering apparatus for use in constructing linings for tunnels and the like, comprising, as set up, a transportable structure having supporting wheels at front and rear between which said structure spans the bottom of the excavation, a series of ribs carried by said structure between said wheels, and sectional sheathing consisting of separate members built up on said ribs and adapted to be self-supporting, and said transportable structure being adapted to be transported longitudinally of the excavation leaving the sheathing standing.

2. Centering apparatus for use in constructing tubular linings for tunnels and the like in monolithic tubular sections of considerable length, comprising, as set up, a transportable center having front and rear supports at remote regions lengthwise of the excavation, between which supports said center spans the bottom of the excavation, and a tubular length of sectional sheating carried by and encircling said center between said supports, the said sheathing comprising cross-sectionally a plurality of separate members adapted to be united so as to be self-supporting when backed by the lining to be constructed and deprived of the support of the transportable center, said center being adapted to be disengaged from the sheathing and to be transported into the excavation ahead leaving the sheathing standing.

3. Centering apparatus for use in constructing tubular linings for tunnels and the like in monolithic tubular sections of considerable length, comprising, as set up, a transportable center having front and rear supports at remote regions lengthwise of the excavation, between which supports said center spans the bottom of the excavation, said transportable center being constructed to permit of free passage therethrough, and a tubular length of sectional sheathing carried by and encircling said center between said supports, the said sheathing comprising cross-sectionally a plurality of separate members adapted to be united so as to be self-supporting when backed by the lining to be constructed and deprived of the support of the transportable center, said center being adapted to be disengaged from the sheathing and to be transported into the excavation ahead leaving the sheathing standing.

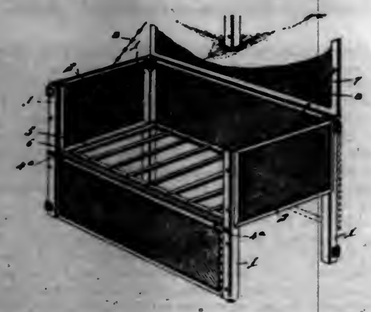
4. Centering apparatus for use in constructing tubular linings for tunnels and the like in monolithic tubular sections of considerable length, comprising, as set up, a transportable center having front and rear supports at remote

regions lengthwise of the excavation, between which supports said center spans the bottom of the excavation, a tubular length of sectional sheathing, comprising cross-sectionally a plurality of members, carried by and encircling said center between said supports, and means uniting the members of said sheathing so as to render the sheathing self-supporting, said center being adapted to be disengaged from said sheathing and to be transported longitudinally of the excavation leaving the sheathing standing.

5. Centering apparatus for use in constructing tubular linings for tunnels and the like in monolithic tubular sections of considerable length, comprising, as set up, a transportable skeleton tubular center having front and rear supports at remote regions lengthwise of the excavation, between which supports said center spans the bottom of the excavation, and a tubular length of sectional sheathing carried by and encircling said center between said supports, the said sheathing comprising cross-sectionally a plurality of separate members adapted to be united so as to be self-supporting when backed by the lining to be constructed and deprived of the support of the transportable center, said center being adapted to be disengaged from the sheathing and to be transported into the excavation ahead leaving the sheathing standing.

[Claims 6 to 16 not printed in the Gazette.]

959,168. SCREEN-BED. OLIVER O. RICHARDSON, Brookville, Kans. Filed Oct. 7, 1909. Serial No. 521,476.



A bed comprising corner posts formed in longitudinal triangular shaped hingedly connected sections, screen covered side and end frame secured to said posts, one of said side frames having a vertically sliding engagement with the posts at one side of said bed, catch devices arranged on two of the corner posts to hold the vertically-sliding frame in closed or raised position, a screened cover frame hingedly connected to the upper portion of the opposite side of the bed and adapted to be opened and closed and to be folded down against the outer adjacent side of the bed, chains to hold said frame in open position, and a bottom frame hingedly connected to said corner posts and adapted to be swung upwardly into engagement with the adjacent side of the bed.

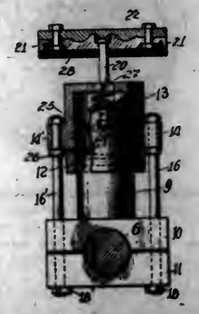
959,169. LENS-MOUNT. HENRY E. RICHMOND, Westwood, N. J. Filed Mar. 1, 1909. Serial No. 480,696.



1. In a lens mount, a plate, sides formed integral with the plate, the ends of the plate projecting beyond the edges of the sides to form flanges, the free ends of the sides being outturned to form flanges, a lens resting against the plate and between the sides, another plate having an opening therein resting against the lens, and ears on the sides bearing against said second plate.

2. A lens mount consisting of a plate having an opening therein and two sides projecting therefrom, said plate projecting beyond the sides to form flanges, the free ends of the sides being outturned to form flanges, a lens resting against said plate and between the sides, another plate having an opening therein and flanges resting against the face of the lens, and ears on the sides and resting against the second mentioned plate to hold the lens in place.

959,170. SHOCK-ABSORBER FOR VEHICLES. JOHN RILEY and RANDALL D. HUNT, Laporte, Ind. Filed Oct. 18, 1909. Serial No. 523,266.



1. In a shock absorber the combination of a piston member and a cylinder member, relatively movable and adapted for attachment with coacting relatively movable parts of a vehicle or the like, the movable one of said members being provided with a small vent opening, and a resilient cushioning valve exteriorly overlying said vent opening, and normally out of contact therewith.

2. In a shock absorber, the combination of a relatively stationary piston, a relatively movable cylinder having a small vent aperture in its head, a cushioning valve overlying said vent opening and out of contact therewith, and a part arranged for movement toward and from the cylinder to force the valve into closing position.

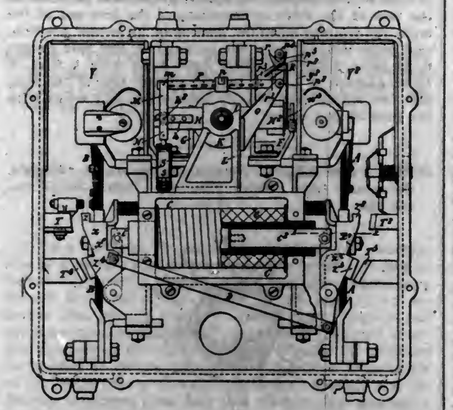
3. In a vehicle shock absorber, the combination of a relatively stationary piston, a base therefor, a cylinder mounted for reciprocation on said piston, having a vent in its end; a cushioning valve part overlying said aperture and normally out of contact with it; a bracket beyond said cushioning valve arranged for connection with a relatively movable vehicle part to move toward and from said cylinder; and guiding connections between said bracket and the cylinder, whereby the bracket by its downward movement may force the valve into vent-closing position on the cylinder and then force the cylinder in on the piston.

4. In a device of the character described, the combination of a base, a bracket separated therefrom, a piston on the base, a cylinder movable on the piston and having an end vent, guiding means connecting said cylinder with the base and piston for limited movement, guiding means connecting said cylinder with the bracket for limited movement, a spring interposed between said piston and cylinder, a resilient cushioning valve overlying the vent in the end of the cylinder and associated with the bracket to be moved thereby into position to close the vent.

959,171. ELECTRIC-CIRCUIT BREAKER. WILLIAM HARDING SCOTT, Norwich, England. Filed Dec. 28, 1907. Serial No. 407,830.

1. In a relay circuit breaker, a switch member, a relay circuit controlling the same, means for automatically breaking the relay circuit upon the occurrence of excessive current and electromagnetic means in connection with the movable switch member and said excessive current, for forcibly opening the main switch, substantially as described.

2. In a relay circuit breaker, a relay circuit controlling the switch member, means for automatically breaking said relay circuit upon the occurrence of excessive current, a movable switch member of magnetic material and means in connection with the magnetic field produced when said excessive current flows through said switch member for forcibly opening the main switch, substantially as described.



3. In a relay circuit breaker, a switch member and a relay controlling the same, means for automatically breaking the relay circuit, comprising a pivoted member and electromagnetic means for actuating the same upon the occurrence of excessive current, and a contact member subject to the movement of said pivoted member, together with a piece of magnetic metal so arranged with relation to said pivoted member that its magnetic attraction for the latter comes into effective action after said pivoted member has been partially actuated, to increase its movement and thereby effect a quick break of the contact, substantially as described.

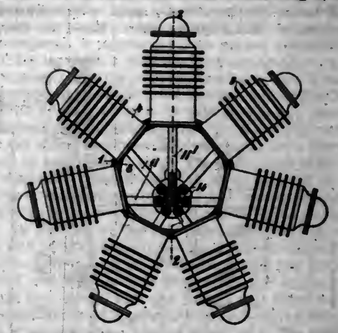
4. In a relay circuit breaker, a movable main switch member, a relay circuit controlling the same and means for breaking the relay circuit upon the occurrence of excessive current whereby the main switch is opened, in combination with a magnetic member moving with the main switch member and coöperating stationary magnetic members, said magnetic members being mutually attracted upon the passage of excessive current through said main switch member, whereby the switch is forcibly opened, substantially as described.

5. In a relay circuit breaker, a movable main switch member, a relay circuit controlling the same, and a stationary magnetic member arranged within the magnetic field produced when an excessive current flows in the main switch member, whereby the switch is forcibly opened upon the occurrence of excessive current.

[Claim 6 not printed in the Gazette.]

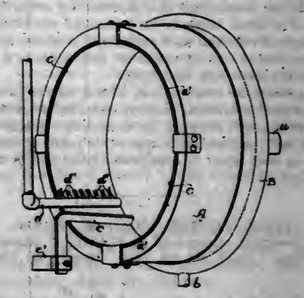
959,172. ROTARY ENGINE. LOUIS LAZARE AUGUSTE SEGUIN, Paris, France, assignor to Societe des Moteurs Gnome, Paris, France. Filed June 12, 1909. Serial No. 501,763.

In a rotary engine with radial cylinders the combination with a ring 1 having a plurality of radial holes, annular seats formed inwardly about said holes and transverse bores 10 intermediate the radial holes, of cylinders 4 fitted in the radial holes and provided at one end with an annular groove 6, elastic rings 7 engaging said grooves, bearing against the annular seats of the ring 1, and projecting into the transverse bores of the ring 1, and keys



forced into said bores against the elastic rings, substantially as described and for the purpose set forth.

959,173. CENTRIFUGAL FILTER FOR CYANID PLANTS. COOPER SHAPLEY, Guanajuato, Mexico. Filed Mar. 30, 1909. Serial No. 486,838.



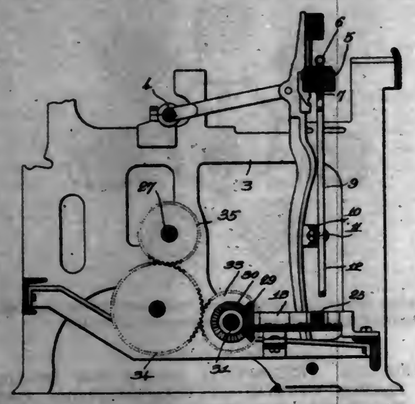
1. The combination of a rotatable cylinder having one end open, means for supporting said cylinder with its axis horizontal, a conduit at the open end of the cylinder for delivering liquid to the interior thereof, a scraper acting within the cylinder for removing solid material, filtering material in the cylinder, there being liquid collecting passages in the walls of said cylinder placed to collect liquid passing through said filtering material, and a liquid collecting casing placed to receive liquid flowing from said passages.

2. The combination of a rotary cylinder having a cylindrical lining of filtering material, a scraper mounted to remove the solid material from the surface of said filtering material, with means for delivering liquid to be filtered to said cylinder, said scraper extending at an angle to the axis of the cylinder across the surface of the filtering material.

3. The combination of a rotary cylinder having a lining of filtering material, a liquid discharge pipe extending into said cylinder adjacent to one side thereof, said pipe having a series of openings placed to discharge liquid substantially in the direction of rotation of the cylinder, with means for continuously removing solid material from the cylinder.

4. The combination of a rotary cylinder having liquid conveying passages in its inner surface, a body of filtering material mounted upon said cylindrical surface of the cylinder, means for collecting liquid from said passages, and a scraper mounted to continuously remove solid material from the surface of the filtering material, with means for delivering liquid to be filtered into the cylinder.

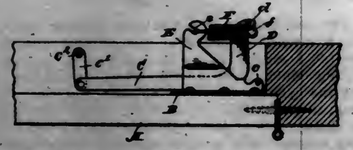
959,174. LOOM. RENCHLER C. SNOW, Ware, Mass., assignor, by direct and mesne assignments, to Ware Machine & Loom Company, Ware, Mass., a Corporation of Massachusetts. Filed Apr. 11, 1908. Serial No. 426,625.



1. In a loom, the combination with a lay, of two pickers thereon, a bar connecting said pickers, an actuating lever pivoted at a point between its ends and operatively connected to said bar, and two oppositely-rotating tappets to engage the lower end of the lever and actuate it first in one direction and then the other.

2. In a loom, the combination with a lay, of two pickers thereon, a bar connecting said pickers, an actuating lever pivoted at a point between its ends and operatively connected to said bar, and two oppositely-rotating shafts and a tappet on each shaft to engage the lower end of the lever and actuate it.

959,175. DOOR-CLOSER. MELL K. SNYDER, Detroit, Mich., assignor of one-half to William D. Royce, Cleveland, Ohio. Filed Oct. 14, 1909. Serial No. 522,529.



1. A door closer, comprising a plate adapted to be attached to a door, a projection provided on the face of the plate, a lever fulcrumed on the plate and adapted to have its free end connected to a door-case and provided with an angularly disposed arm adjacent its fulcrum, a spring attached to the outer end of said projection, and means for movably connecting said spring to said arm.

2. A door closer, comprising a plate adapted to be attached to a door, a lever fulcrumed on the plate and normally extending parallel thereto and adapted to have its free end connected to a door-case, said lever being provided with an angularly disposed arm adjacent its fulcrum, two spaced projections provided on the face of the plate intermediate of the free end of the lever and the arm when the lever is in its normal position, said lever lying between the spaced projections, two springs respectively attached to the outer ends of said projections, and means for movably connecting said springs to said arm.

3. A door closer, comprising a plate adapted to be attached to a door, a lever fulcrumed on the plate and normally extending parallel thereto and adapted to have its free end connected to a door-case, said lever being provided with an angularly disposed arm adjacent its fulcrum, two spaced projections provided on the face of the plate intermediate of the free end of the lever and the arm when the lever is in its normal position, said lever lying between the projections, a roller adapted to have a bearing on one face of said arm, and two springs respectively attached to the outer ends of said projections and respectively connected with the ends of said roller.

4. A door closer, comprising a plate adapted to be attached to a door, a lever fulcrumed on the plate and normally extending parallel thereto, said lever being provided with an angularly disposed arm adjacent its fulcrum, a link pivoted to the free end of said lever and adapted to be pivoted to a door-case, two spaced projections provided on the face of the plate intermediate of the free end of the lever and the arm when the lever is in its normal position, said lever lying between the projections, and said projections being formed at their outer ends with a hook, a roller adapted to have a bearing on one face of the arm, and two springs respectively connecting said hooks with the ends of said roller.

959,176. RESILIENT WHEEL. GUSTAVE A. SPAETH, Columbus, Ohio. Filed Nov. 18, 1908. Serial No. 463,168.



In a device of the character described, the combination with an axle having an angular enlargement, of a hub having an angular recess within which said enlargement lies, the inner wall of said recess being spaced from the outer wall of the axle enlargement and parallel therewith, and bowed springs disposed between the outer wall of the axle enlargement and the inner wall of the angular recess, there being a plurality of concavities formed in the face of the angular enlargement of the axle, said concavities receiving the bowed portions of the springs and both ends of said springs freely and slidably engaging the inner wall of the angular recess of the wheel hub.

959,177. RIVET. EDWIN BALL STIMPSON, New York, N. Y., assignor to Edwin B. Stimpson Company, a Corporation of New York. Filed Aug. 1, 1907. Serial No. 386,579.



A rivet comprising a shank, a head cup, a flange on the shank within the cup, and a wearing block secured within the cup and clamping the flange against the bottom of the cup, substantially as described.

959,178. WATERPROOF FABRIC. GEORGE STREAT, New York, N. Y. Filed June 26, 1909. Serial No. 504,562.



1. A waterproof fabric consisting of a woven facing fabric, a woven lining fabric and an interposed sheet of waterproofing compound, one of said fabrics being loosely woven of well twisted yarns, the interstices between the yarns of said fabric being entered by the waterproofing compound, the yarns of said fabric where they pass over transverse yarns lying above the waterproofing compound and the yarns where they pass under transverse yarns being embedded in the waterproofing compound.

2. A waterproof fabric consisting of a facing fabric loosely woven of well twisted yarns, a lining fabric loosely woven of well twisted yarns, and an interposed sheet of waterproofing compound, the interstices between the yarns of the facing fabric and the lining fabric being entered by the waterproofing compound, the yarns where they pass over transverse yarns lying above the waterproofing compound and the yarns where they pass under transverse yarns being embedded in the waterproofing compound.

959,179. TELESCOPE. AMBROSE SWASEY, Cleveland, Ohio, assignor to The Warner & Swasey Co., Cleveland, Ohio, a Corporation of Ohio. Filed June 21, 1907. Serial No. 380,031.



1. In a device of the character described, the combination of a tubular support having a reflector at each end to receive rays from a distant object and reflect these rays toward the intermediate portion of the support, an objective lens located adjacent each of said reflectors, an eye-piece member extending transversely from the intermediate part of the support, a pair of reflecting members in position to receive complemental portions respectively of the image rays projected by said end reflectors and objectives to project these rays into the eye piece member, a lens arranged between each objective and the image that would be formed thereby, and a double convex lens arranged to receive the image rays from each said latter lens producing an inverted magnified image of the object, the eye-piece member being arranged to receive both the image rays produced by the last mentioned lens to produce a magnified image thereof.

2. In a device of the character described, the combination of a tubular support having a reflector at each end to receive rays from a distant object and reflect these rays toward the intermediate portion of the support, an objective lens located adjacent each of said reflectors, an eye-piece member extending transversely from the intermediate part of the support, a pair of reflecting members in position to receive complemental portions respectively of the image rays projected by said end reflectors and objectives to project such rays into the eye-piece member, a lens arranged between each objective lens and the image that would be thereby projected to produce a magnified image of enlarged field, and a double convex lens arranged to receive the image rays from each said latter lens producing an inverted and magnified image, the eye-piece member being arranged to receive the image rays produced by the last mentioned lens to produce a magnified image thereof, each said third lens together with the eye-piece lens system constituting a compound microscope system to magnify the image rays projected from the said second lens adjacent the objectives.

3. In a device of the character described, the combination of a tubular support, having a reflector at one end to receive light rays from a distant object and reflect them through the support, an objective lens located adjacent said reflector, a microscope lens system comprising an objective and eye-piece carried by the support, the said end objective being of a focal length to produce an image of the object beyond the position to be received by the objective of said microscope system, and a condensing lens intercepting the rays projected by the said end objective to condense the image rays and form an image of the object between the microscope objective and the condensing lens in position to be received by the objective of the microscope system and thereby magnified and erected to be observed by the eye-piece of the microscope.

4. In a device of the character described, the combination of a tubular support, having a reflector at one end to receive light rays from a distant object and reflect them through the support, an objective lens located adjacent said reflector, a microscope lens system consisting of an objective lens and a two lens positive eye-piece carried by the support, the said end objective being of a focal length to produce an image of the object beyond the position to be received by the objective of said microscope system, and a condensing lens intercepting the rays projected by the said end objective to condense the image rays and form an image of the object between the microscope objective and the condensing lens in position to be received by the objective of the microscope system and thereby magnified and erected to be observed by the eye-piece of the microscope.

5. In a device of the character described, the combination of a tubular support having a reflector at each end to receive light rays from a distant object and reflect them toward the intermediate portion of the support, an objective lens located adjacent each of said reflectors, an eye-piece member extending transversely from the intermediate part of the support, a pair of reflectors in the support, one in alinement with each of said objectives and organized to reflect complemental portions of image rays from the end objectives into the same eye-piece member, two lenses in the tubular support, one between each said intermediate reflector and its corresponding objective, each of said latter lenses forming with their common eye-piece member a compound microscope system of which the said two lenses constitute the objective for the eye-piece member, said outer objectives being each of a focal length to form an image beyond the said microscope objectives, and a condensing lens arranged between each said outer objective and the microscope objective and organized to intercept the image rays projected by the outer objective and condense them to form an image between itself and the corresponding microscope objective in position to be received by the latter and thereby magnified and erected to be observed by the eye-piece member.

[Claims 6 to 9 not printed in the Gazette.]

959,180. COMBINATION GARMENT-HANGER. WILLIAM CRAIGHEAD THATCHER, Chattanooga, Tenn., assignor to Kennie T. Eaton, Chattanooga, Tenn. Filed Aug. 24, 1908. Serial No. 450,012.



In a garment hanger, the combination of a fixture having an offset pendent hook, the latter having a rearward upstanding stud, and a coat-supporting yoke having a medial socket adapted to receive said stud whereby said yoke can be hung on the fixture to be removable therefrom, the hook having an enlarged flat portion in front of said yoke adapted to afford a bearing surface that will hold the coat-supporting yoke against swinging on said stud.

959,181. TROUSERS-HANGER. WILLIAM C. THATCHER, Chattanooga, Tenn., assignor to Kennie T. Eaton, Chattanooga, Tenn. Original application filed Aug. 24, 1908, Serial No. 450,012. Divided and this application filed July 9, 1909. Serial No. 506,814.

1. A trousers-hanger composed of a pair of sheet metal jaws or plates having medial tongues, one plate having resilient curved or approximately cylindrical extensions encompassing the upper edge and bearing on the back side

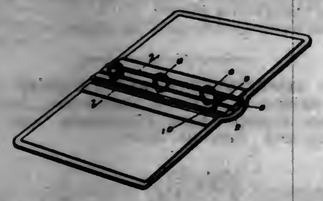
of the other plate, and one plate having upper projections bearing against lips on the other plate, thereby holding the jaws closed and the tongues separated, one tongue serving as a means for attaching the clamp to a support, and the other serving as a handle for opening the clamp.



2. A trousers-hanger comprising a pair of sheet metal jaws or plates, one having resilient curved extensions encompassing the upper edge and bearing upon the back of the other plate, and one plate having upper projections bearing against lips on the other plate, thereby yieldingly holding the jaws closed.

3. A trousers-hanger comprising a pair of sheet metal jaws or plates constructed and assembled to provide a hinged connection, one plate having resilient extensions overlying the upper edge and bearing against the back side of the other plate and yieldingly holding the jaws closed, said jaws having medial tongues, the back one of which serves as a means for attaching the clamp to a support while the other tongue extends upwardly and forwardly and serves as a handle for opening the clamp, and a link embracing said tongues and adapted to hold the clamp open, substantially as described.

959,182. TEMPORARY BINDER. CLARENCE D. TRUSSELL, New York, N. Y., assignor to Trussell Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1908. Serial No. 411,655.



1. In a temporary binder, a spring plate, oppositely arranged prong-carrying plates engaging said spring-plate but not engaging each other, mating prongs rigidly mounted by notched engagement on the prong-carrying plates having, when closed, their joints below the lines of contact between the prong-carrying plates and the spring-plate and, when open, having their joints above said lines, and a stop device to limit the opening movement of the prongs by contact with the prong-carrying plates.

2. In a temporary binder, a main plate extending lengthwise of the binder, a pair of covers each comprised of a plurality of layers, a double binding strip adjacent to the main plate having extensions which are secured on each side of one of the layers in each cover, and means to secure said binding strip in position upon the main plate.

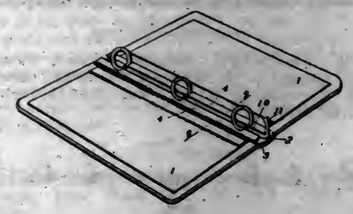
3. In a temporary binder, a spring plate, oppositely arranged prong-carrying plates engaged by said spring-plate, mating prongs, and a stop device seated above the prong-carrying plates and held from sidewise movement by notches in said prong-carrying plates.

4. In a temporary binder, a spring plate, prong-carrying plates engaged by said spring-plate, but not engaging each other, mating prongs upon the prong-carrying plates having their joints below the level of said plates, and a narrow stop device seated above the prong-carrying plates and held by engagement therewith from sidewise movement.

5. In a temporary binder, a spring plate, prong-carrying plates, mating prongs, and a narrow metallic strip engaging notches in the prong-carrying plates so as to have no sidewise movement and so as to limit the opening of the prongs.

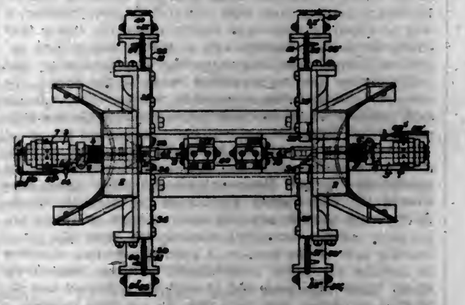
[Claims 6 to 8 not printed in the Gazette.]

959,183. TEMPORARY BINDER. CLARENCE D. TRUSSELL and EMORY A. TRUSSELL, New York, N. Y., assignors to Trussell Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1908. Serial No. 411,750.



In a temporary binder, a spring plate, mating prongs carried thereon, and an operating device provided with an eccentric surface for each pair of prongs the movement of which opens the prongs against the pressure of the spring plate.

959,184. UPSETTING-MACHINE. DAVID R. WARD, Struthers, Ohio. Filed Oct. 18, 1908. Serial No. 457,468.



1. In a machine of the character described, the combination with a feed-in cylinder, a piston or plunger working therein, feed-in mechanism operated by the piston or plunger, a second cylinder, a heading tool carried by the plunger, of cut-off mechanism, power cylinders for actuating the cut-off mechanism, and valve means and connections for utilizing the exhaust from the feed-in cylinder for controlling the operation of the cut-off cylinders; substantially as described.

2. In a machine of the character described, the combination with cutting-off dies, and power cylinders for actuating the same, of a heading or upsetting tool, a power cylinder for controlling the operation of such tool, and valve means and connections for utilizing the exhaust from the cut-off actuating cylinders to control the operation of the power cylinder which operates the heading tool; substantially as described.

3. In a machine of the character described, the combination with cutting-off dies and power cylinders for effecting the operation of the same, of gripping means for holding the stock to the action of the heading tool, a heading tool, a power cylinder for actuating the heading tool, and valve means and connections controlled by the cut-off die actuating cylinders for controlling the operation of the cylinders which actuate the holding means and the heading tool; substantially as described.

4. In a machine of the character described, feed-in mechanisms located at opposite ends of the machine, gripping and cutting off mechanisms in connection with each feed-in mechanism, and a double acting heading cylinder arranged intermediately of the two sets of feed-in, cut-off and holding mechanisms, a piston or plunger in said cylinder, and two oppositely operating heading tools actuated by said piston or plunger together with actuating connections between the mechanisms at opposite ends of the machine, and means in connection therewith whereby the operations at one end of the machine are in part timed and controlled by the operations at the opposite end of the machine; substantially as described.

5. In a machine of the character described, the combination of two feeding mechanisms located at opposite ends of the machine, two sets of cut-off and gripping mechanisms, one set of each such mechanisms operating in connection with one of the feed-in mechanisms, a double-acting power cylinder arranged intermediately of the two sets of mechanisms, a piston or plunger working in said cylinder, two oppositely acting heading tools carried by the piston or plunger, and valve means or connections whereby the operation of the cut-off mechanisms controls the admission and exhaust valves of the said cylinder together with actuating connections between the mechanisms at opposite ends of the machine, and means in connection therewith whereby the operations at one end of the machine are in part timed and controlled by the operations at the opposite end of the machine; substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

959,185. COMPOSITION OF MATTER ADAPTED FOR USE IN THE ART OF COLOR-STAMPING. SIEGFRIED WEINBERG, Berlin, Germany, assignor to Martin Zehden, New York, N. Y. Filed Dec. 20, 1909. Serial No. 534,007.

A liquid composition of matter embracing the following ingredients when combined in substantially the proportions named:—25 kilograms of zinc white, 4 liters of glycerin, 6 grams of gum-arabic, 500 grams of shellac and 400 grams of borax, with 27 liters of water.

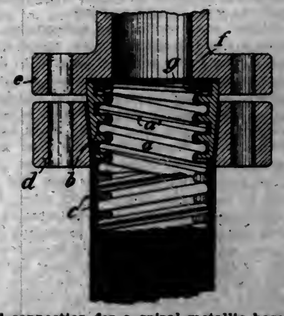
959,186. NON-REFILLABLE BOTTLE. WILLIAM COTTER WILSON, Brooklyn, N. Y. Filed Apr. 19, 1909. Serial No. 490,976.



1. A bottle closure comprising a capsule designed to be permanently secured to the exterior of a bottle neck, a valve casing depending within said capsule and having a seat at its normally lower end, a valve fitted in said casing and having a tubular portion extending into the bottle and open at its lower end, said valve having a vent communicating with its tubular portion, a cap permanently secured to the upper end of said capsule inclosing said valve casing and having an outlet, a disk located within the cap for normally closing the outlet from the valve casing, and means within the cap for preventing such disk from interfering with the outlet of the cap when the bottle is inverted.

2. The herein described bottle closure comprising a capsule designed to be permanently secured to a bottle neck, a valve casing located within said capsule and having a valve seat at its lower end, a valve of cone-like formation having a tubular portion and a vent which is normally closed by said valve-seat, a cap inclosing said valve casing, said cap being permanently secured within the upper end of said capsule and having an outlet opening and a perforated diaphragm, a disk between said valve casing and said diaphragm, and a secondary cap for normally closing the outlet of the first mentioned cap.

959,187. END CONNECTION FOR METALLIC HOSE-PIPES. EMIL WITZENMANN, Pforzheim, Germany. Filed Nov. 30, 1909. Serial No. 530,532.



An end connection for a spiral metallic hose pipe comprising, in combination, a pipe end, the spirals of which are compressed together so as to form a square end, a muff and a ring shaped metal plate welded to the squared end of the pipe.

959,188. SECTIONAL WIND-SHIELD FOR AUTOMOBILES. ALBERT LORENZO WOODWARD, Philadelphia, Pa., assignor to E. F. Rogers & Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 25, 1909. Serial No. 498,283.



1. In sectional wind shields for automobiles, a shield frame comprising a lower fixed section; an upper folding section; and rotatable connections between said sections, the upper section being loosely mounted on said rotatable connections and adapted to slide thereon in a direction at right angles to the axis of its rotation, whereby to permit the upper folding section to slide on its support, to decrease the radius of the circle described thereby in folding.

2. In wind shields for automobiles, a shield frame comprising a fixed lower section and an upper section; hinges secured to and carried by the fixed section of the frame, said hinges having tubular upper sections slidably receiving the upper section of the frame, said upper sections

of the hinges being adapted to swing rearwardly to permit the swinging section of the frame to slide forwardly and rearwardly upon the fixed lower section when brought into an oblique position relatively thereto; and means for locking said sections of the hinges in fixed relation to each other.

3. In wind shields for automobiles, a shield frame comprising a lower section an upper section adapted to fold upon the lower section; a support for engaging the upper section when in its folded position; hinges having lower sections adapted to rigidly engage the lower section of the frame and upper sections adapted to slidably engage the upper section of the frame; said hinges being adapted to permit the upper folding section of the frame to slide forwardly upon the other when brought to an oblique position relatively thereto; and locking means carried by the upper section of the frame, and adapted to engage the lower hinge section to lock the two parts of the frame in operative relation to each other, and also adapted to engage the upper section of the hinge when the upper section of the frame is resting upon said support in its folded position to lock the same in said position.

4. In sectional wind shields for automobiles, a shield frame having a lower section and an upper sliding section; hinges having lower sections adapted to be secured to the lower section of the frame and upper sections adapted to slidably engage the upper section of the frame, said lower hinge sections each having a portion provided with a slot concentric with the pivot of the hinge and further provided with a flared recess around the inner end of said slot; transverse threaded sleeves carried by the upper section of the frame and adapted to pass into said concentric slots to the inner ends thereof when the upper section of the frame is brought into its operative position; and a binding nut mounted upon said projecting sleeve and having its inner end adapted to fit said flared recess in the lower section of the hinge to lock the upper section of the frame in its operative position upon the lower section.

5. In sectional wind shields for automobiles, a shield frame having a lower section and an upper folding section; hinges having lower sections adapted to be rigidly secured to the lower section of the frame and tubular upper sections adapted to slidably engage the upper section of the frame, said tubular hinge sections having vertical slots extending upwardly from their lower ends with flared recesses surrounding the upper ends of said slots, said lower hinge sections each having a portion provided with a slot concentric with the pivot of the hinge and also provided around the inner end of said slot with a flared recess similar to the flared recesses of the upper hinge sections; transverse projecting sleeves carried by the upper section of the frame and passing out through the upper ends of the vertical slots in the upper sections of the hinges, and adapted to enter and pass laterally into the concentric slots in the lower hinge sections as the upper section of the frame is brought from its folding to its operative position, the inner ends of said concentric slots of the lower hinge sections being adapted to be in alinement with the upper ends of the slots in the upper hinge sections when the upper section of the frame is brought to its operative position; and threaded binding nuts mounted upon said projecting sleeves and having their inner ends adapted to engage and fit said flared recesses in the upper and lower hinge sections, the former to lock the upper section of the frame against sliding movement on its hinge sections when it is in its folded position and the latter to lock it in its operative position.

[Claims 6 to 8 not printed in the Gazette.]

959,189. CORER. JOSEPH E. WYANT, Omaha, Nebr. Filed Feb. 19, 1910. Serial No. 544,823.

1. A corer comprising a metallic plate having curved terminals, one end-portion of the plate being bent transversely to provide a longitudinally grooved blade, the opposite end-portion being bent longitudinally adjacent to said blade to dispose its curved terminal within the groove of said blade, and to provide a terminal sleeve; and a handle mounted within said sleeve.

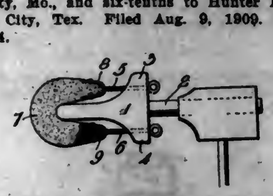
2. A corer comprising a metallic plate having curved terminals, one end-portion of the plate being bent transversely to provide a longitudinally grooved blade, the opposite end-portion being bent longitudinally adjacent to said blade to provide a terminal sleeve and to dispose its curved terminal inclinedly within the groove of said blade, said curved terminal making contact with the wall of the groove; and a handle mounted within said sleeve.



3. A corer comprising a metallic plate having curved terminals, one end-portion of the plate being bent transversely to provide a longitudinally grooved blade, the opposite end-portion being bent longitudinally adjacent to said blade to provide a terminal sleeve and to dispose its curved terminal within the groove of said blade, said curved terminal making contact with the wall of the groove and forming a bearing-plate inclined downwardly and in a direction from the sleeve toward the free end of the blade; and a handle mounted within said sleeve.

4. In combination, a corer as described, comprising a metallic plate having a first end-portion and a second end-portion, said first end-portion having a greater width than the second end-portion, and having projections with concaved surfaces formed at its terminal edges adjacent to the second end-portion; said first end-portion being bent transversely to provide a longitudinally grooved blade, the second end-portion being bent longitudinally adjacent to said blade to provide a terminal sleeve and to dispose its curved terminal inclinedly within the groove of said blade, said curved terminal bearing upon the curved wall of the groove; a cylindrical handle mounted within said sleeve, the concaved surfaces of said projections adapted to bear upon the convexed surface of said handle.

959,190. PIANO-HAMMER. HENRY E. YOUNG, Ogden, Utah, assignor of three-tenths to Frank X. Allen, Kansas City, Mo., and six-tenths to Hunter E. Vaughan, Wolfe City, Tex. Filed Aug. 9, 1909. Serial No. 511,964.



1. A piano hammer comprising a head, a felt strip extending around the free end thereof and means operable in said head and engaging the free ends of said strip to tighten it to the desired tension, and operable to adjust it relatively to said head to vary the striking surface.

2. A piano hammer comprising a head, a felt strip extending around the free end thereof, and adjusting screws operable in said head and engaging the free ends of said strip to tighten it to the desired tension and operable to adjust it relatively to said head to vary its striking surface.

3. A piano hammer comprising a head, a felt strip extending around the free end thereof and having metal clips secured to its opposite ends, apertured lugs extending laterally from said head, and adjusting screws extending through said lugs and engaging the clips at the free ends of the felt strip.

959,191. DENTAL BRUSH. JAMES HERMAN ABBOTT, Philadelphia, Pa., assignor to The Abbott Dental Brush Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 22, 1906. Serial No. 339,917.

1. In a device of the character described, a mandrel having a recessed end, a flanged sleeve thereon, the end of the sleeve and the recessed end of the mandrel being flared to form enlargements engaging each other, a disk upon said sleeve retained by the enlargement thereof, and bristles held between the flange of the sleeve and the disk mounted thereon.



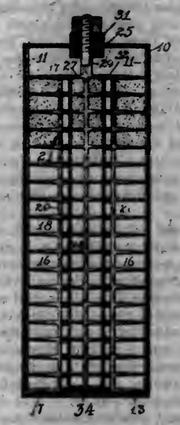
2. In a device of the character described, a mandrel having a recessed end, a flanged sleeve thereon, an annulus seated upon said sleeve, and bristles between the flange and annulus, the recessed end of the mandrel being swelled to retain the sleeve and the annulus in place.

3. In a device of the character described, a mandrel having a flared extension, a flanged sleeve thereon engaged by the said extension by reason of the flaring thereof, an annulus upon said sleeve, and bristles retained between the flange of the said sleeve and the said annulus.

4. In a device of the character described, a mandrel having a hollow end enlarged to form a head, said mandrel being reduced between the head and the body of the mandrel, a sleeve having a flange and fitting the reduced portion of the said mandrel, an apertured disk surrounding said sleeve, and bristles held between said disk and flange, the said disk and sleeve being held in position by said head.

5. In a device of the character described, a mandrel having an expanded end, a flanged sleeve on the said mandrel, the sleeve extending from the flange toward the said expanded end, bristles surrounding said sleeve, and means on the mandrel between which and the flange on said sleeve the bristles are held, the said means being retained on said mandrel by the expanded end thereof.

959,192. STORAGE BATTERY. VINCENT G. APPLE, Dayton, Ohio. Filed Dec. 21, 1908. Serial No. 468,517.



1. In a battery, two plate-grid electrodes comprising a series of tapered ribs crossing at angles to form tapered cells for the reception of active material, said cells partially closed at their smaller ends by a perforated plate, said electrodes spaced apart with the perforated sides facing, and a containing cell the walls of which close the other ends of the tapering cells within the grids when said grid structure is placed therein.

2. In a battery, a metallic cell, two grids spaced apart and joined at their respective edges by plates to form a rectilinear structure and connected at their top edges by a perforated plate, the top edges of said plate metallically joined to the top edges of the cell, and a positive plate within the space between the two box-like negative plates with its terminal projecting through the perforation in said perforated plate.

959,193. ANNUNCIATOR-DROP. CHARLES AUTH, New York, N. Y. Filed July 7, 1908. Serial No. 442,396.



1. In a device of the character described, the combination of an electro-magnet, a supporting frame therefor, a shaft, bearings for said shaft in said frame, and a target carried by said shaft beyond the adjacent bearing.

2. In a device of the character described, the combination of a shaft having pointed ends, bearings adapted to receive said points, means for rotating said shaft, a target, and means for supporting said target from said shaft outside the adjacent bearing.

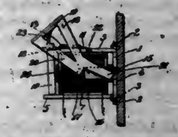
3. In a device of the character described, the combination with the front plate of an annunciator, a target adapted to move parallel to said plate, a shaft having pointed ends, bearings for said ends of said shaft, one of said bearings being situated between said target and said shaft, and a member adapted to support said target from said shaft.

4. In a device of the character described, the combination of a signaling means, an overbalanced pivoted armature for operating the same having its center of gravity above the pivot and a pair of electromagnets located one above the other for operating the armature.

5. In a device of the character described, the combination of a signaling means, an overbalanced pivoted armature for operating the same having its center of gravity above the pivot, and a pair of electro-magnets located one above the other at one side of the pivoted armature for operating the armature.

[Claims 6 and 7 not printed in the Gazette.]

959,194. ANNUNCIATOR-DROP. CHARLES AUTH, New York, N. Y. Filed Mar. 5, 1909. Serial No. 481,391.



1. In a device of the character described, the combination of an electro-magnet, a core therefor, an armature movable at one end, and an adjustable plate engaging and limiting the movement of said end.

2. In a device of the character described, the combination of an electro-magnet, a core therefor, an armature, means for supporting the armature in front of the core, an adjustable slotted plate engaging with the armature, for limiting the movement thereof toward the said core and a signaling device operable by said armature.

3. In a device of the character described, the combination of an electro-magnet, the core of which is extended so as to bring the poles in the same plane, an armature supported for movement in front of said poles, an adjustable plate upon the core for limiting the movement of the armature toward the core and a signaling device operable by said armature.

4. In a device of the character described, the combination of an electro-magnet, a core therefor, a plate attached thereto, said plate having a plurality of extensions, an armature supported in one of said extensions in such a manner that the extension magnetizes the armature, a limiting stop for the armature upon another extension and a signaling device operable by said armature.

5. In a device of the character described, the combination of an electro-magnet, a core therefor, a plate attached thereto, said plate having a plurality of extensions, an armature supported in one of said extensions in such a manner that the extension magnetizes the armature, a limiting stop for the armature upon another extension, said electro-magnet being supported between the said extensions and a signaling device operable by said armature.

[Claims 6 to 12 not printed in the Gazette.]

959,195. APPARATUS FOR PICKLING. JOHN T. AUWERTER, Braddock, Pa. Filed Oct. 12, 1909. Serial No. 522,382.



1. Apparatus for pickling, comprising a pickling vat having a plurality of heating pipes extending transversely across substantially the entire width of the vat, the transversely extending pipes having a series of separated openings therein, and means for supplying steam to said pipes; substantially as described.

2. Apparatus for pickling, comprising a pickling vat having a plurality of heating pipes extending across the width of the vat below the surface of the bath, and means for supplying steam to said pipes; substantially as described.

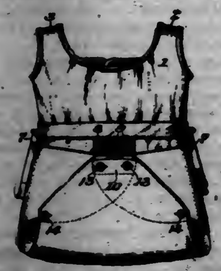
3. Apparatus for pickling, comprising a pickling vat having a plurality of heating pipes extending across the width of the vat below the surface of the bath, said pipes having a plurality of openings therein; substantially as described.

4. Apparatus for pickling, comprising a pickling vat, a plurality of heating pipes extending across the width of the vat below the surface of the bath, said pipes having openings of varying sizes, and means for supplying steam to the bath through said openings; substantially as described.

5. Apparatus for pickling, comprising a pickling vat having a plurality of heating pipes extending transversely across the width of the vat below the surface of the bath, said pipes having a plurality of openings extending at an oblique angle to the horizontal, and means for introducing steam to said bath through the openings; substantially as described.

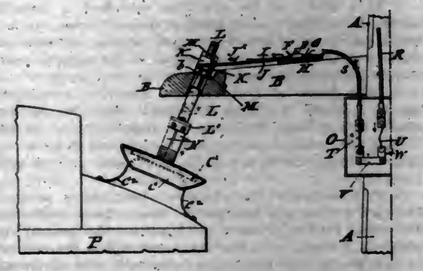
[Claims 6 to 8 not printed in the Gazette.]

959,196. UNDERCLOTHING. CAROLINE M. BEGLEY, Oakford, Pa. Filed Aug. 19, 1909. Serial No. 513,555.



In a device of the character stated, a waist, pads at the front and rear of said waist and having elastic support from the same, transverse sets of a plurality of buttons respectively upon said front and rear pads, and a substantially triangular diaper having a set of button-holes at the upper edge of its back portion engaging the buttons upon the rear pad, side-flaps formed with button-holes near their ends and having such ends overlapped to have the button-hole of each flap engaging the button upon the farther side of the front pad and having a front flap formed with a transverse row of button-holes engaging the buttons on the front pad to overlap and cover the lapping portions of the side-flaps.

959,197. OVERHEAD CONTACT SYSTEM FOR ELECTRIC RAILWAYS. JULIUS BELZNER, Jr., Mount Vernon, N. Y. Filed Jan. 5, 1909. Serial No. 470,755.



1. An overhead contact-system for electric railways, comprising a cross-arm having an opening and supported by the side of the track, a brush-bar loosely passing through said opening, yieldable means secured to the upper end of the brush-bar and to the cross-arm at a point intermediate its ends for holding the brush-bar in the opening, a contact-brush at the lower end of the brush-bar, and a conductor connecting the yieldable means with a feed-wire.

2. In an overhead contact-system for electric railways, a contact-brush consisting of a box-shaped support open at the bottom, closed at the top and having side and end walls, a plurality of contact-plates with their upper ends fitting in the support transversely from side to side, blocks located between said plates, said plates and said blocks filling the support from end to end, and bolts passing through the end-walls, the blocks and the plates.

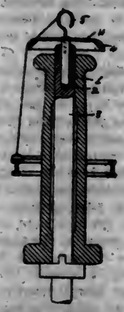
3. In an overhead contact-system for electric railways, the combination of a cross-arm supported by the side of the track and having a squared opening at its end, a squared brush-bar loosely passing through said opening, a yielding resilient conductor secured to the upper end of the brush-bar and to an intermediate point of the cross-arm, a conductor connecting the yielding conductor to the feed-wire, and a contact-brush on the lower end of the brush-bar.

4. In an overhead contact-system for electric railways, the combination of an upright pole, a cross-arm on said pole, a brush bar, a contact-brush supported on said brush bar, a switch connected with the feed-wire, a copper conducting plate connected with the upper end of the brush-bar, steel spring-plates above the conducting plate, a terminal plate for said plates, an insulating block between the terminal plate and cross-arm, means for attaching the terminal plate, conducting plate and spring-plate to the insulator and cross-arm, and a conductor connecting said terminal plate with said switch.

5. In an overhead contact-system for electric railways, the combination of an upright pole, a cross-arm supported on the same and having an opening, a copper terminal plate on the cross-arm, an insulating-block below the terminal plate, a conducting plate on said terminal plate, steel spring-plates above the conducting plate, means for attaching the spring-plate and terminal plate to the conducting plate and insulator, a brush-bar provided with a threaded upper end adjustable in the opening of the cross-arm, said brush-bar being provided with a square lower part and a base-plate, and contact-brushes attached to the base-plate.

[Claim 6 not printed in the Gazette.]

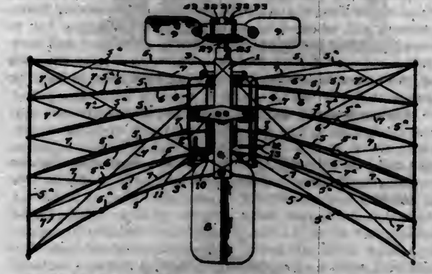
959,198. SPINNING AND TWISTING FRAME. THOMAS A. BOYD and HAROLD A. BOYD, Shettleston, Scotland. Filed Feb. 23, 1909. Serial No. 479,341.



1. In ring spinning and twisting frames, the combination of a revolving spindle having a socket at its upper end with a flier having a spindle projecting downward and working freely in said socket.

2. In spinning and twisting frames of the ring, cap or inverted flier construction, the combination of a revolving carrier having a socket at its upper end with a flier consisting of a metal disk with a hollow at its edge, an eye at the top and a central spindle projecting down and revolving freely in said socket.

959,199. FLYING-MACHINE. JOHN BUCHANAN, Holland, Mich. Filed Oct. 9, 1909. Serial No. 521,875.



1. A flying machine, comprising a main frame, aeroplanes extending oppositely from the upper member thereof, a car pivotally suspended from the main frame, a toothed segment attached to the main frame and extending downward therefrom, a manually operated worm engaging the segment and mounted on the car, a propeller wheel at the front of the frame, a rudder pivoted on a vertical axis at the rear of the frame, a motor on the car and connected to the propeller wheel to rotate the same, and means for adjusting the rudder on its vertical axis.

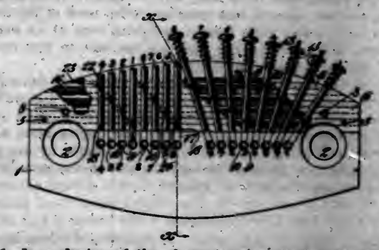
2. In a flying machine, a longitudinally extended frame member at the top thereof, ribs oppositely projecting from said member, downwardly extended hangers attached to the member, side bars attached to the frame, stays connecting the ribs at intervals to the side bars, a car suspended below the frame, a propeller at the front, a rudder at the rear, means for rotating the propeller mounted on the car, and means for adjusting the rudder on its vertical axis.

3. In a flying machine, a longitudinally extended frame member at the top, a yoke extending downward from the same, side bars attached to the yoke, downwardly and rearwardly curved ribs projecting oppositely from the frame member, said ribs having joints intermediate their ends, stays extending from near the joints to the side bars and attached thereto and stays extending from the outer ends of the ribs to the side bars and detachably connected thereto, whereby the ribs may be folded upward, a car pivotally suspended beneath the yoke, means for adjusting the angular relation of the car and frame, a propeller at the front, a rudder at the rear, means for rotating the propeller, and means for adjusting the rudder.

4. In a flying machine, a frame having a longitudinally extended upper member, a downwardly extended yoke arranged transversely of said member, a main frame beneath said member and parallel therewith, a driving shaft journaled in the first named yoke, a driven shaft journaled in the main frame, a propeller mounted on the driven shaft, gearing connecting said shafts, a car pivotally suspended beneath the yoke, a segment concentric with the axis of the driving shaft, and a worm on the car engaging the segments.

5. In a flying machine, an upper frame member, ribs extending oppositely therefrom and curved rearward progressively from the front to rear, a main frame extending downward from said frame member, side bars attached to the frame, stays connecting the ribs to each other and to the side bars, a propeller wheel at the front, a rudder at the rear, a car pivotally suspended below the frame, and means for adjusting the angular relation of the car and frame.

959,200. HEAD FOR PUNCHING FIVE AND SIX FRAME BRUSSEL-CARDS. WILLIAM K. CALDWELL, Philadelphia, Pa. Filed Sept. 24, 1909. Serial No. 519,349.



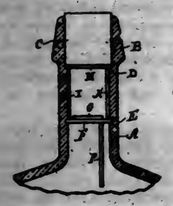
1. In a device of the character described, a head, two independent groups of plungers mounted in said head, a set of laterally movable keys for each set of plungers adapted to engage the upper end of said plungers to lock the same in operative position, a plurality of rock shafts corresponding to the number of keys in each group, a rock arm on each shaft operatively connected with the key of one group, a second rock arm on the same operatively connected with the corresponding key in the other group whereby when a plunger in one group is locked the corresponding plunger in the other group will be locked simultaneously therewith, all of said rock shafts and rock arms being located wholly within said head and resilient means for maintaining said keys in inoperative position.

2. In a device of the character described, the combination with a movable head, of two groups of vertically arranged plungers mounted therein, said plungers having a shoulder thereon for limiting their downward movement, a cap interlocked with said head, a set of keys carried by said cap and movable within the head and adapted to lock the plungers in one group in operative position, a second set of keys having a bearing partly in said cap and partly in said head and adapted to lock the plungers of the other group in operative position, a connection from a key in one group to the corresponding key in the other group, said connections being located wholly within said head and means for maintaining the keys normally in inoperative position.

959,201. NON-REFILLABLE BOTTLE. CHARLES COUNCELL, Philadelphia, Pa. Filed June 24, 1909. Serial No. 503,986.

1. In combination with a bottle, the neck of which has an off-set and an annular groove, a valve seat having a

central opening and a slot therein, strips formed with said valve seat at opposite sides thereof adapted to be bent at right angles to said valve seat, a perforated guard formed with one of said strips adapted to be bent at right angles thereto, the valve seat adapted to rest within the annular groove and the guard against the shoulder formed by the off-set, a valve and a valve stem adapted to be inserted in the slot in the valve seat.

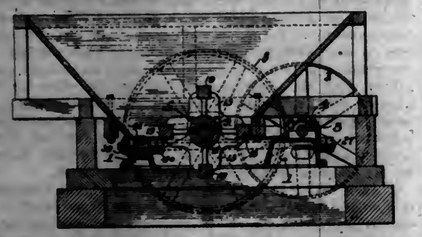


2. The combination with a bottle, of a valve seat having a central opening and a slot formed therein, said valve seat having strips formed therewith bent at right angles thereto, one of said strips having a perforated guard formed therewith bent at right angles thereto, and a valve having a stem formed therewith bent at an angle thereto, said stem adapted to be inserted in the slot, as specified.

3. In combination with a bottle, a valve seat having a central opening and a slot formed therein, strips, a perforated guard, said valve seat, strips and perforated guard being formed integral and inserted in the neck of the bottle, a valve and a stem formed therewith bent at an angle thereto, said stem passing through the slot in the valve seat, for the purpose set forth.

4. In combination with a bottle, a valve seat having a central opening and a slot formed therein, a perforated guard, and strips, one of which connects said guard and seat, all formed of one piece of material, and a valve and stem formed of one piece bent at right angles to one another, said stem passing through the slot in the valve seat for operating the valve by gravity.

959,202. SHALE-BREAKER. WILLIAM R. CUNNINGHAM, Bucyrus, Ohio, assignor to The American Clay Machinery Company, Bucyrus, Ohio, a Corporation. Filed May 10, 1909. Serial No. 495,095.



1. A shale breaker for reducing lump material for grinding pans, said breaker having in combination a horizontal frame with a vertical opening therethrough, a hopper having its lower end substantially in line with said opening, a stationary breaker bar fixed to the frame at one side of said opening, and a revoluble breaker head mounted on the frame so as to revolve in the lower open end of the hopper and also in the opening in the frame, said head having breaker bars fixed to it and adapted to reduce material positioned between said bars and the stationary bar.

2. A shale breaker for reducing lump material for grinding pans, said breaker having in combination a horizontal frame with a vertical opening therethrough, a hopper having its lower end substantially in line with and proximate to the opening in said frame, a breaker bar secured to the upper side of the frame proximate to the lower end of the hopper, and a revoluble breaker head centrally positioned in the opening and adapted to revolve through the lower end of the hopper and the opening in the frame, said head having breaker bars fixed to it and extending from end to end and adapted to co-act with the stationary breaker bar to reduce material positioned between said bars.

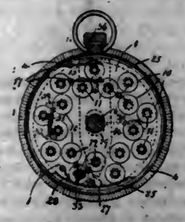
3. In a shale breaker, the combination with a supporting frame, and a hopper, said frame having an open center which is substantially in line with the lower end of the hopper, the upper side of the frame and lower end of the hopper being adjacent, a breaker bar fixed to the frame at one side of the opening and close to the lower end of the hopper, and upon which the lump material is received, a breaker head revoluble through the lower end of the hopper and through the opening in said frame, and breaker bars fixed to the head and co-acting with the stationary bar to shear material positioned between said bars.

4. A shale breaker comprising a horizontal frame having a vertical opening, a breaker bar fixed at one side of said opening adjacent a wall thereof, and a breaker head journaled centrally in said opening and revoluble therethrough, said head comprising a hub portion and end flanges, said hub portion being of less diameter than the flanges so as to provide an opening between the flanges, and breaker bars fixed to the flanges and extending across the opening therebetween and adapted to coact with the stationary bar to shear material positioned between the stationary and movable bars.

5. A shale breaker comprising a horizontal frame having a vertical opening, a breaker bar fixed at one side of said opening adjacent a wall thereof, a breaker head journaled centrally in said opening and revoluble therethrough, said head comprising a hub portion and end flanges, said hub portion being of less diameter than the flanges so as to provide an opening between the flanges, breaker bars fixed to the flanges and extending across the opening therebetween and adapted to coact with the stationary bar to shear material positioned between the stationary and movable bars, said flanges having recesses to receive the ends of the bars and means for securing said bars in said recesses.

[Claims 6 and 7 not printed in the Gazette.]

959,203. SCORE-REGISTER. MARIA GERTRUDE DECIUS, Slough, England. Filed Dec. 10, 1907. Serial No. 405,908.



1. In a score register, the combination of a casing formed with front and back plates mounted to be relatively rotatable, a series of studs mounted on one of the plates, a series of disks mounted on said studs and bearing numbers visible through suitable openings in the front plate, a pointer operative in a segmental slot in said front plate, and a longitudinally movable striking device having means for simultaneously rotating said disks and moving the pointer in the slot.

2. In a score recorder the combination of a casing having front and back plates rotatably mounted relatively to each other; means whereby the plates are secured together; and registering devices; with means, including a longitudinally movable plunger, for actuating said registering devices.

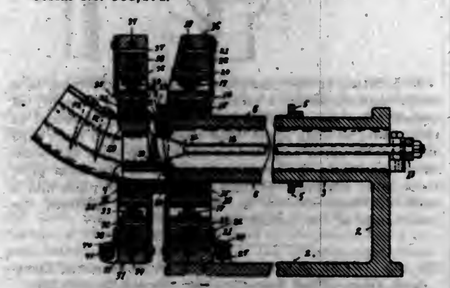
3. In a score register, the combination of a front plate formed with a segmental slot, rotatably mounted recording disks on said front plate, a pointer visible through said slot, an internally toothed wheel carrying the pointer, an operating spring pawl, and a plunger device for actuating said pawl.

4. In a score register, the combination of a casing having two relatively movable plates, a pointer attached to one plate and visible through an opening in the other, a gear wheel mounted in the casing and connected to said pointer, means for actuating said gear wheel at will and means for operatively connecting the gear wheel to one of the plates when desired.

5. The combination in a score register, of a casing having a relatively rotatable plate, a series of independently movable disks mounted on said plate and visible through openings in the casing, a pinion for each disk and a longitudinally movable actuating device capable of being brought into operative engagement with any one of said pinions.

[Claims 6 to 9 not printed in the Gazette.]

959,204. SHEET-METAL-ELBOW MACHINE. ADOLF DIECKMANN, Cincinnati, Ohio. Filed Dec. 16, 1909. Serial No. 533,474.



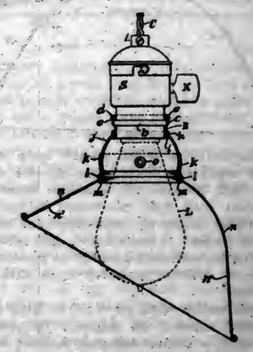
1. In a mechanism of the character indicated a cylindrical stationary mandrel, a crimp former of circular outline located at the free end of said mandrel, means to clamp the elbow blank upon the free end of said stationary mandrel, means to actuate said crimp former, a secondary movable mandrel located on the opposite side of said crimp former, the exterior of said secondary mandrel having a pattern other than cylindrical, and a series of substantially radially moving jaws shaped to the counterpart of said movable mandrel and acting in conjunction with said movable mandrel to clamp the elbow upon said movable mandrel and shape the elbow to a cross sectional pattern other than cylindrical.

2. In a mechanism of the character described a cylindrical mandrel, a circular crimp former at the free end of said mandrel, a series of jaws movable in substantially radial directions to and from said mandrel to clamp the blank thereto, a secondary movable mandrel located on the opposite side of said crimp former, the exterior of said secondary mandrel having a pattern other than cylindrical, and a series of jaws moving in substantially radial directions and shaped to the counter part of said secondary mandrel to clamp the elbow upon said movable mandrel and shape the elbow to a cross sectional pattern other than cylindrical.

3. In a mechanism of the character described, a cylindrical mandrel, means to clamp the elbow blank upon said cylindrical mandrel, a crimp lifter of circular outline located at the free end of said cylindrical mandrel, and adapted to lift crimps from cylindrical sections of the elbow blank, a secondary movable mandrel having on its exterior a pattern other than cylindrical, a series of jaws movable to and from said secondary mandrel and having a pattern similar to that of said secondary mandrel, said jaws being adapted to clamp the elbow blank upon said secondary mandrel and to shape the elbow to a pattern other than cylindrical.

4. In a mechanism of the character described, a cylindrical mandrel, means to clamp the elbow blank upon said cylindrical mandrel, a crimp lifter of circular outline located at the free end of said cylindrical mandrel, and adapted to lift crimps from cylindrical sections of the elbow blank, a secondary movable mandrel having on its exterior a pattern other than cylindrical, a series of jaws movable to and from said secondary mandrel and having a pattern to co-act with the pattern of said secondary mandrel to clamp the elbow blank upon said secondary mandrel and to shape the elbow to a pattern other than cylindrical, said secondary mandrel and its clamping jaws being movable to and from said cylindrical mandrel to collapse the crimps.

959,205. REFLECTOR ATTACHMENT. HENRY D'OLIER, Jr., Rutherford, N. J. Filed Oct. 7, 1908. Serial No. 456,656.



1. In combination, a lamp socket, a bead thereon, a reflector or shade, means for supporting said reflector or shade upon said lamp socket comprising a resilient ring member having a bead adapted to register with said lamp socket bead, a reinforcing ring on one side of said bead on said ring member, and a steep shouldered bead and a flange upon said ring member.

2. A reflector or shade attachment comprising a resilient ring member, a bead thereon, a reinforcing ring secured by said ring member on one side of said bead, a second bead, a lip or flange, and a groove formed between said second bead and said lip or flange.

3. The combination with a lamp socket, of a lamp held thereby, a resilient ring member attached to said socket, a member circumferentially surrounding said lamp and supported by said ring member, a reflector or shade, a member to which said reflector or shade is attached and extending around said lamp, and a pivotal connection between said members, whereby said reflector or shade may be tilted with respect to said lamp socket.

4. The combination with a lamp socket, of a ball member attached thereto, a second ball member, said ball members being attached to and movable with respect to each other, and a shade or reflector supported upon said second ball member.

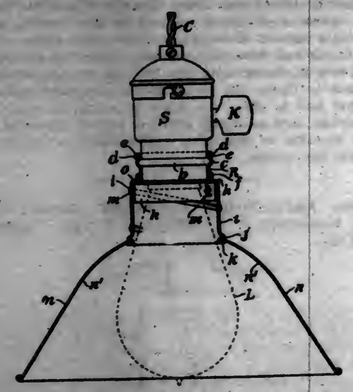
5. In combination, a reflector or shade member having an aperture therein, a ball member adapted to engage said reflector or shade member and having a mouth coaxial with said aperture, and a second ball member attached to and movable with respect to said ball member.

[Claims 6 to 11 not printed in the Gazette.]

959,206. REFLECTOR ATTACHMENT. HENRY D'OLIER, Jr., Rutherford, N. J. Filed Oct. 7, 1908. Serial No. 456,657.

1. The combination with an electric lamp socket, of a lamp held thereby, a resilient ring member engaging said socket, an adjuster member supported by said ring member, a second adjuster member having an aperture adapted to receive said lamp, a shade or reflector supported by said

second adjuster member, and means permitting telescopic adjustment of said adjuster members upon each other.



2. The combination with an electric lamp socket, of an electric lamp supported thereby, an adjuster member supported upon said lamp socket, a second adjuster member supported upon said first mentioned adjuster member, means permitting telescopic adjustment of said adjuster members with respect to each other, said second adjuster member having an aperture adapted to receive said lamp, and a shade or reflector mounted upon said second adjuster member.

3. The combination with an electric lamp socket, of a lamp supported thereby, an adjuster member supported upon said socket, a second adjuster member supported by said first mentioned adjuster member, a projection and groove connection between said adjuster members for permitting longitudinal adjustment of said adjuster members upon each other, and a shade or reflector supported upon said second adjuster member.

4. In combination, a reflector or shade member having an aperture therein, an adjuster member supporting said reflector or shade member and having a mouth coaxial with said aperture, a second adjuster member supporting said first mentioned adjuster member and its attached reflector or shade member, said adjuster members adapted to telescope one upon the other for adjusting said shade or reflector member.

5. The combination with a shade or reflector, of means for longitudinally adjusting said reflector or shade comprising two adjuster members supported one upon the other, said shade or reflector secured upon one of said adjuster members, and a projection and groove connection between said adjuster members for permitting said adjuster members to telescope one upon the other.

[Claims 6 to 11 not printed in the Gazette.]

959,207. PLUMBING-FIXTURE. JOSEPH L. DONAT, Chicago, Ill. Filed July 29, 1909. Serial No. 510,259.

1. A unitary plumbing fitting comprising a straight main stack provided with a main opening and adapted to constitute part of both the waste and vent pipes; and a branch pipe, integral therewith, communicating with the waste and the vent ends of the main stack, and provided with one or more stubs for connection with sources of drainage.

2. A plumbing fitting comprising in an integral structure a continuous main stack having a main opening therein adjacent its lower end and a branch pipe in open communication with said main pipe adjacent its two ends only, and provided with an opening for connection with a source of drainage.

3. A plumbing fitting comprising in a unitary, single-piece structure, a straight main pipe of relatively large diameter having adjacent its lower end a main opening, and a branch pipe communicating at both ends with the main pipe adjacent the ends of the latter and completely inclosed throughout its length independently of the main pipe, there being one or more openings to the branch pipe.



4. A fitting of the character described, comprising in a single-piece structure, a straight main pipe, a plurality of branch pipes spaced apart from said main pipe except at their ends, at their upper ends opening to said main pipe adjacent its upper end, and at their lower ends independently opening to the lower end portion of the main pipe, there being drainage openings to said branch pipes and a main drainage opening to the main pipe adjacent the lower ends of the branch pipes.

959,208. FUSE-PLUG. WILLIAM F. DUCKWITZ, Cleveland, Ohio. Filed Nov. 22, 1909. Serial No. 529,250.



1. In a fuse plug, the combination of a sleeve, a fusible member therein, and a plurality of pins extending through the sleeve and member at an angle to each other.

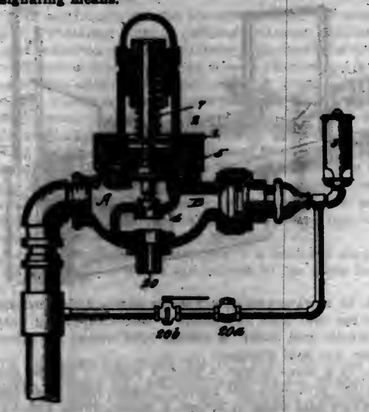
2. In a fuse plug, the combination with a sleeve having a tapered bore and having exterior threads, a head on the outer end of the plug and an unthreaded portion near the inner end, a correspondingly tapered fusible member occupying said bore and terminating at its ends substantially flush with the ends of the sleeve, and one or more pins extending transversely through the sleeve and plug at the unthreaded portion of the sleeve.

3. In a fuse plug, the combination of a sleeve having a bore tapered outwardly, a fusible member occupying said bore, and one or more pins carried by the sleeve and projecting transversely of the bore to sustain the fusible member therein.

4. In a fuse plug, the combination of a sleeve, a fusible member therein, and a pin carried by the sleeve and extending into the bore thereof and into the fusible member.

959,209. AIR-BRAKE-TESTING SYSTEM. FRANK H. DUKESMITH, Meadville, Pa., assignor to John H. Iselin, New York, N. Y. Filed May 13, 1909. Serial No. 495,615.

1. In combination with a train, a train brake pipe extending between the engineer's cab and a distant point of the train, signaling means at said distant point, means responsive to an increase in pressure in the train brake pipe for controlling the operation of said signaling means, and manually actuated means for controlling the operation of said signaling means.



2. In combination with a train, a train pipe extending between the engineer's cab and a distant point of the train, signaling means at said distant point, means responsive to an increase in pressure in the train pipe for controlling the operation of said signaling means, and manually actuated means at said distant point for controlling the operation of said signaling means.

3. In combination in an air brake testing mechanism, the train pipe, a chamber connected therewith, a valve therein, a whistle signal controlled by the valve, and a by-pass between the train pipe and the whistle signal, substantially as described.

4. In combination in an air brake testing mechanism, the train pipe, a chamber connected therewith, a valve therein, a whistle signal controlled by the valve and a by-pass between the train pipe and the whistle signal, said by-pass having a valve by which the whistle may be sounded or the pressure in the train pipe reduced to set the brakes, substantially as described.

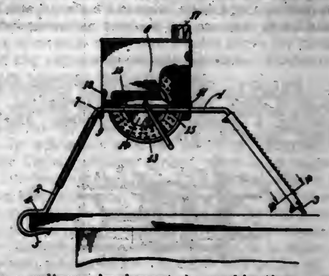
5. In apparatus of the class described, a chamber connected with the train pipe, a whistle signal, a valve and diaphragm in the chamber for controlling the whistle signal from the train pipe pressure, a by-pass passage which may be opened or closed according to whether the apparatus is to be used on a freight or passenger train, a connection to receive a whistle exhaust pipe or whistle pressure pipe having also a connection for a hand controlled by-pass which also may be closed, an escape port for the pressure in the whistle signal pipe, which may be closed when used on a freight signal system and having finally a connection for a hand controlled whistle which may be closed.

[Claims 6 to 9 not printed in the Gazette.]

959,210. CULINARY IMPLEMENT. THEODORE J. FISCHER, Chicago, Ill. Filed Apr. 7, 1908. Serial No. 425,698.

1. In a culinary implement, the combination with a support frame comprising oppositely disposed resilient members, of a material-reducing device consisting of a body portion and projections extending downwardly from said body portion, said projections being formed with lateral extensions adapted to be forced between the resilient members of said support frame and engage beneath said resilient members.

2. In a culinary implement, the combination with a support frame comprising oppositely disposed resilient members carrying a retaining hook, of a material-reducing device consisting of a body portion having projections extending downwardly therefrom, said projections being formed with lateral extensions adapted to be forced between the resilient members of said support frame and engage beneath said resilient members, said material-reducing device being also provided with a retaining hook for engaging the retaining hook of said support frame.



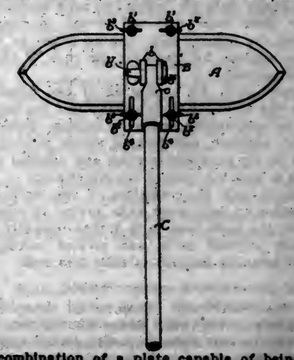
3. In a culinary implement, in combination, a support-frame consisting of a rod, bent to form two substantially horizontal and parallel members and two pairs of inclined legs therefor, and a guard plate fixed between one pair of said legs and having a hook at its upper part; and a removable material reducing device provided with means for engaging said hook, said material reducing device being supported on said frame, between said horizontal members.

4. In a culinary implement, in combination, a support-frame consisting of a rod, bent to form a pair of substantially horizontal and parallel members, a rear pair of legs for said horizontal members connected at their lower ends, a front pair of legs for said horizontal members, horizontal extensions for said front pair of legs, said extensions being formed with table edge engaging hooks at their outer ends, and a guard plate mounted between one pair of said legs and having a hook at its upper part; and a material reducing device, supported on said frame, between said horizontal members, and means on said material reducing device for engaging the hook of said guard plate.

5. In a culinary implement, in combination, a support-frame comprising two substantially horizontal members and legs therefor, a hook supported by said frame, and a material reducing device comprising a body part, having a hook adjacent one end for engagement with the first-mentioned hook, and a downwardly extending flange adjacent the other end provided with lateral projections capable of being forced between the horizontal members of the support frame and locking the material reducing device thereon.

[Claims 6 to 10 not printed in the Gazette.]

959,211. BRUSH-HOLDER. PHILIP T. FLACH, Norwood, Pa. Filed Jan. 11, 1909. Serial No. 471,822.



The combination of a plate capable of being mounted transversely on the head of a scrubbing brush; two hooked

bolts at each end of the plate; wing nuts for holding said bolts with their hooked portions in engagement with the under side of said brush head; with a handle for the plate; said bolts lying in pairs to either side of a vertical plane including the handle, and the bolts at one end of the plate being adjustably mounted in elongated slots therein.

959,212. PULLEY. JOHN J. FRICK, Philadelphia, Pa., assignor to Thos. Devlin Manufacturing Co., Philadelphia, Pa., a Corporation of New Jersey. Filed Sept. 24, 1909. Serial No. 519,333.

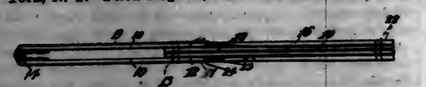


1. In a pulley, sections having interengaging connecting means, an axial bushing forming the hub of the pulley, sleeves surrounding said bushing, said sections having a central opening, the edges of the walls of which are turned laterally and seated in an annular depression in the bushing.

2. In a pulley, sections having interengaging connecting means, an axial bushing forming the hub of the pulley, and sleeves surrounding said bushing, said sections having a central opening, the edges of the walls of which are turned laterally and seated in an annular depression in the bushing, the ends of said hub being headed on the outer ends of said sleeves.

3. In a pulley, sections having interengaging means, a hub, sleeve surrounding said hub, said hub having its ends formed with heads which embrace the ends of said sleeves, an axle in said hub, supporting means for said axle, the inner ends of said sections being passed through said sleeves and provided with rims which are interlocked with said hub.

959,213. EMERY-CLOTH FILE. EDWARD GANS, New York, N. Y. Filed Aug. 30, 1909. Serial No. 515,228.



1. In an emery cloth file having two sections hinged at one of their ends, fastening means near the free ends of the sections for detachably securing both ends of a piece of emery cloth passing over the hinged ends of the sections to the sections when the sections are in open position, and holding the said cloth in position when closing the sections.

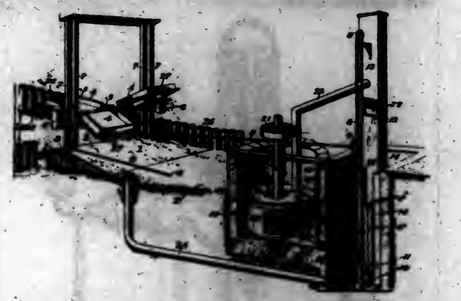
2. In an emery cloth file having two main sections hinged together at their inner ends and having an emery strip passing over the hinged ends, locking pieces at the free ends of the sections for clamping the ends of the emery strip to the sections.

3. An emery-cloth file consisting of two hinged main sections having an emery-strip passing over the same, each formed of an overlapping and underlapping extension-portion riveted together, and locking strips pivoted to the outer ends of the extension-portion and adapted at their inner edges to lock the ends of the emery-strip.

4. An emery-cloth file consisting of two main sections hinged together at their inner ends having an emery-strip passing over the same, and each having inwardly beveled and laterally inclined parts, and pivoted locking strips beveled and laterally inclined at their free ends.

959,214. WAVE-POWER. SAMUEL B. GOFF, Camden, N. J. Filed Feb. 24, 1910. Serial No. 545,589.

1. In a wave power, a pump-operating float composed of hinged members, a rising and falling shaft carrying the same, an auxiliary float member, the latter being stationarily connectible with said shaft, and an inclined plane floor on the bed of the water below said several members.



2. In a wave power, a float, a pump, a flexible connection for said float and pump, a water supplying chamber in which said pump is seated, and means for directing water into said chamber.

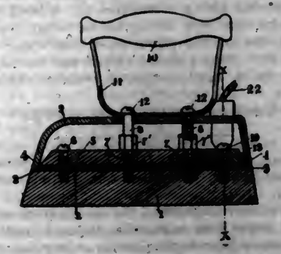
3. In a wave power, a float, a pump, a flexible connection for said float and pump, a water supplying chamber in which said pump is seated, a water wheel, and a house therefor, said chamber being in communication with said house.

4. In a wave power, a float, a pump, a bar connected with the piston thereof, a beam attached to said bar and adapted to be operated through the medium of said float, the barrel of said pump having a vertically extending slot in the side thereof for the passage of said bar, therethrough in the movement of the piston, and means attached to said bar adapted to cover said slot.

5. In a wave power, a float, a pump, a projecting member on the piston of said pump, an attachment for said member with said float whereby said piston is operated by the latter, the barrel of said pump having a vertical slot in the side thereof for the passage of said member therethrough in the operation of the pump, a plate on the exterior of said barrel connectible with said attachment and movable therewith over said slot, and means on the barrel for guiding said plate and retaining it in position.

[Claims 6 to 8 not printed in the Gazette.]

959,215. ELECTRIC HEATING DEVICE. ROBERT L. HAILEY, New York, N. Y., assignor to The Lowe Electric Company, New York, N. Y., a Corporation of New York. Filed Mar. 9, 1909. Serial No. 482,256.



1. In an electrically heated iron, the combination of a radiating plate, a zigzag resistance element all the turns of which are located in the same horizontal plane and insulated from said radiating plate and a clamping plate insulated from said resistance element and adapted to press all the parts of said resistance element uniformly toward said radiating plate.

2. In an electrically heated iron, the combination of a radiating plate, a zigzag resistance element all the turns of which are located in the same horizontal plane and insulated from said radiating plate, a clamping plate insulated from said resistance element and means adapted to clamp said plate to said radiating plate both at the sides and through the middle.

3. In an electrically heated smoothing iron, the combination of a radiating plate, a resistance element insulated from said radiating plate, a clamping plate insulated from said resistance element, clamping screws adapted to clamp said resistance element to said radiating plate, a cover plate and a handle secured to said radiating plate by said clamping screws.

4. In an electrically heated smoothing iron, the combination of a radiating plate, a resistance element insulated from said plate, a clamping plate insulated from said resistance element, clamping screws near the edge of said clamping plate, clamping screws in the middle of said plate and provided with vertical posts, a cover plate and a handle secured to said vertical posts.

5. A resistance element consisting of a flattened zig-zag wire, all the parts of which are located in the same horizontal plane.

[Claims 6 to 9 not printed in the Gazette.]

959,216. LIQUID-DELIVERING DEVICE. WILLIAM B. HAINES, Sunbury, Pa., assignor to Haines Oil Measuring Pump Company, Harrisburg, Pa. Original application filed June 9, 1908, Serial No. 437,568. Divided and this application filed Mar. 19, 1909. Serial No. 484,498.



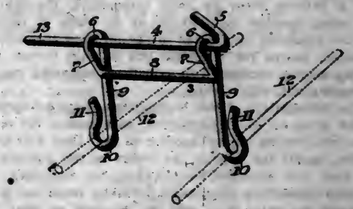
1. In a liquid delivering device, the combination with a pump cylinder provided at its upper end with a closed air chamber, and a piston working in said cylinder, of a horizontally disposed delivery spout connected with the cylinder below the air chamber and having a portion extending above its point of connection with the cylinder, and provided with a lip within the air chamber, extending upwardly from the lower edge of the communicating aperture between the cylinder and said spout.

2. In a liquid delivering device, the combination with a pump cylinder provided at its upper end with a closed air chamber, and a piston working in said cylinder, of a horizontally disposed delivery spout communicating with the cylinder by an aperture located adjacent to but below the upper end of the air chamber portion of the cylinder, and provided with a lip extending inwardly and upwardly from the lower edge of said communicating aperture, said spout having portions between said aperture and its delivery end extending above the upper edge of said lip, and having a valve seat located adjacent to the horizontal plane of the upper edge of said lip, and a valve in said spout engaging said seat.

3. In a liquid delivering device, the combination with a pump cylinder provided at its upper end with a closed air chamber, and a piston working in said cylinder, of a horizontally disposed delivery spout communicating with the cylinder by an aperture located adjacent to but below the upper end of the air chamber portion of the cylinder, and provided with a lip extending inwardly and upwardly from the lower edge of said communicating aperture, said spout having portions between said aperture and its delivery end extending above the upper edge of said lip, and having a horizontal valve seat located above the horizontal plane of the upper edge of said lip and a vertically movable valve engaging said valve seat.

4. In a liquid delivering device, the combination with a pump cylinder having a closed air chamber portion extending above the same, a piston working in said cylinder, a rack bar connected with the piston and adapted to extend into the air chamber portion when in its upper position, a horizontal operating shaft provided with a pinion engaging said rack and having a portion extending outside of said cylinder, a handle secured to the outwardly extending portion of said shaft, a delivery spout connected to the air chamber portion of the cylinder by a communicating aperture located below the upper end of the air chamber, and having a lip extending inwardly and upwardly from the lower edge of said aperture, said spout having portions between its inner and outer ends extending above the horizontal plane of the upper edge of said lip, and a valve located at the highest part of said spout.

959,217. SUPPORT FOR CONCRETE. JOHN P. HALLAHAN, Philadelphia, Pa., assignor of one-half to George B. Carey, Philadelphia, Pa. Filed Apr. 13, 1907. Serial No. 368,073.



1. In a support for fire prooding structural material wires longitudinally disposed with reference to the same and in proximity thereto, a clip coöperating with the face of the metal and a double hook pivotally connected at a plurality of spaced points with said clip and supporting said wires.

2. In a support for fire prooding and as an article of manufacture, an open ended clip in combination with a double depending hook having intermediate spaced eyes surrounding said first mentioned clip.

3. As an article of manufacture, a clip initially having one end straight and the other end bent, in combination with a wire support of a single piece of wire comprising terminal hooks and intermediate spaced eyes for engagement with the clip.

4. In a support for fire prooding and as an article of manufacture, a clip for engagement with the facing to be protected in combination with a double hook comprising terminal open hook members and intermediate spaced eyes of a single piece for engagement with the clip.

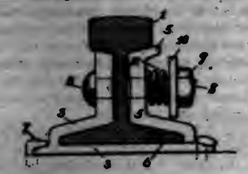
5. In a support for fire prooding for structural shapes, a clip for engagement with the shape whose face is to be protected, wires substantially parallel with the said face, and a hook for supporting said wires from the clip, and comprising a pair of terminal hooks, and eyes spaced by an intermediate bar for movable engagement with the clip.

[Claims 6 and 7 not printed in the Gazette.]

959,218. RAIL-JOINT. ULCY R. HATFIELD, Macon, Ga. Filed Mar. 1, 1910. Serial No. 546,611.

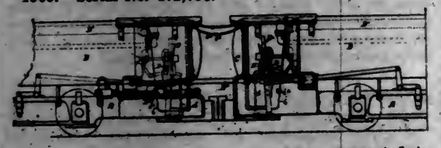
The herein-described rail-joint device, comprising the combination of two rails with ends abutted; plates on opposite sides of said abutted ends; a plural number of bolts, 8, through the rails and said plates; a vibration

bar through which all of said bolts extend; a spring on each bolt and interposed between the said vibration bar



and one of said side plates, and a nut on each bolt and at the outer side of said vibration bar.

959,219. COMPRESSED-AIR LOCOMOTIVE. CHARLES G. HERMAN, Philadelphia, Pa., assignor, by mesne assignments, to Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 16, 1909. Serial No. 472,736.



1. The combination of two locomotives connected together, a reverse lever on each locomotive, the reverse levers being coupled together so as to work in unison, means for retaining each lever in the position to which it is adjusted, means for releasing one of said levers, and actuating means, connected to said lever releasing means, for releasing the other lever.

2. The combination of two locomotives coupled together, a reverse lever on each locomotive, with means for coupling the two reverse levers together so that they will work in unison, pawls for locking the levers in the position to which they are adjusted, mechanism for releasing, the pawls, and connecting mechanism whereby when one pawl is released the other will also be released so that the reverse levers can be moved together.

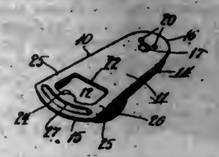
3. The combination of two locomotives coupled together, each locomotive having a reverse lever, said reverse levers being coupled together so as to move in unison, a pawl on each reverse lever for locking the lever in the position to which it is adjusted, a pawl trip lever, a valve on one reverse lever connected to the pawl trip lever, a pawl releasing device on the other reverse lever connected to the valve of the first mentioned lever, so that when the trip lever is actuated it will shift the valve to cause the fluid under pressure to operate the pawl releasing device of the other lever, releasing both levers simultaneously so that they can be operated in unison.

4. The combination of two locomotives coupled together, each locomotive having a reverse lever, means for coupling the reverse levers so that they will work in unison, a pawl carried by each lever and engaging a segment, hand means for actuating the pawl, a valve on each lever connected to the operating means, a fluid actuated pawl releasing device carried by each lever, and tubes extending from the valve on one lever to the pawl releasing device on the other lever, means for supplying fluid under pressure so that when one hand operated pawl releasing device is actuated the other pawl will be released simultaneously so as to free both reverse levers from the segment.

5. The combination of two compressed air locomotives coupled together, each carrying an air reservoir, a reversing lever on each locomotive, means for coupling the reverse levers so that they will move in unison, a hand operated pawl tripping device on each lever, a valve on each lever, a pawl releasing device on each lever, two sets of tubing, one set of tubing extending from one air reservoir to the valve of one reverse lever and from the valve to the pawl releasing device on the other lever, the other set of tubes extending from the air reservoir of the other locomotive to the valve on one lever and from the valve to the pawl releasing device on the other lever so that an operator on either locomotive can control the reverse levers on both locomotives.

[Claim 6 not printed in the Gazette.]

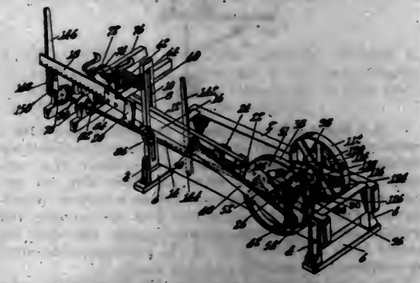
959,220. COMBINED BOTTLE-CAP REMOVER AND STOPPER. ADOLPH R. HOEFT, Chicago, Ill. Filed June 1, 1909. Serial No. 499,514.



1. A combined bottle cap remover and bottle closure comprising a flat sheet metal plate formed at one end with the opening 12, one margin of which constitutes a bottle cap engaging lip and provided at the side margins of its imperforate part with the narrow stiffening flanges 14 and at the sides of said opening with the deeper stiffening flanges 26 and between said opening and the adjacent end margin with the stiffening bead 27 and a separately formed stopper fixed to and extending at right angles from the flange of said plate and designed to enter a bottle mouth.

2. A combined bottle cap remover and bottle closure comprising, in combination with a sheet metal plate provided at one end with cap removing means, of a yieldable stopper at the other end of the plate, clamping means extending axially through the stopper and through an opening in the plate for clamping the stopper on the plate and spurs struck up from the plate and embedded in the base of the yieldable stopper to prevent turning of the stopper about its axis.

959,221. SAWING-MACHINE. A. BERTSELL IRELAND and FRANK L. IRELAND, Norwich, N. Y. Filed Aug. 28, 1909. Serial No. 515,030.



1. A sawing machine having, in combination, saw operating mechanism and work feeding mechanism, a power driven pulley with which each of said mechanisms may be operatively connected, and means for effecting an operative connection between one of said mechanisms and said pulley constructed to interrupt the operative connection between the other of said mechanisms and said pulley.

2. A sawing machine having, in combination, saw operating mechanism and work feeding mechanism, a power driven pulley with which each of said mechanisms may be operatively connected, and a single means for effecting an operative connection between one of said mechanisms and said pulley and for interrupting the operative connection between the other of said mechanisms and said pulley, said means having provision for maintaining both of said mechanisms in inoperative condition.

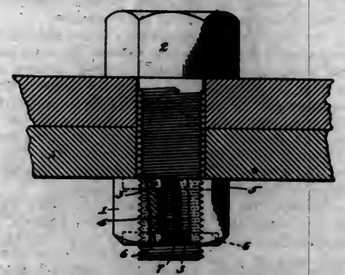
3. A sawing machine having, in combination, saw operating mechanism and work feeding mechanism, power driven means with which each of said mechanisms may be operatively connected, and a single means for effecting an operative connection between either of said mechanisms and said power driven means.

4. A sawing machine having, in combination, saw operating mechanism and work feeding mechanism, power driven means with which each of said mechanisms may be operatively connected, and a single means for effecting, only in succession, operative connections between said two mechanisms and said power driven means, said means for effecting operative connections having provision for maintaining both of said mechanisms in inoperative condition.

5. A sawing machine having, in combination, saw operating mechanism and work feeding mechanism, power driven means with which each of said mechanisms may be operatively connected, means for effecting an operative connection between either of said mechanisms and said power driven means comprising a cam constructed and arranged to interrupt the operative connection between one of said mechanisms and said power driven means before the operative connection between the other of said mechanisms and said power driven means can be effected, and means under the control of the operator for operating said cam.

[Claims 6 to 17 not printed in the Gazette.]

959,222. SELF-LOCKING NUT. MORRIS JACOBS, New York, N. Y. Filed June 8, 1908. Serial No. 437,309.



1. The combination with a screw-threaded bolt, of a screw-threaded nut having a recess in its threaded portion forming a cam surface, a locking roller in the recess and adapted to roll along the cam surface thereof, the locking roller being adapted to be frictionally engaged by the screw threads of the bolt to roll the locking roller along the cam surface of the recess, and a pivotal lost motion connection at both ends of the locking roller between the locking roller and the nut to retain the locking roller in the recess, the lost motion being in a direction transverse to the longitudinal axis of the bolt, this lost motion permitting the locking roller to roll transversely to the length of the bolt along the cam surface of the recess and being sufficient to permit the locking roller to roll to and from its locking position.

2. The combination, with a screw-threaded bolt, of a screw-threaded nut having a roller-receiving recess in its threaded portion forming a cam surface, such recess having closed ends forming fixed portions of the ends of the nut, a substantially cylindrical locking roller in the recess adapted to roll along the cam surface thereof and have locking engagement with the bolt, the closures of the ends of the recess retaining the locking roller in the recess longitudinally, and means at the ends of the locking roller for preventing the locking roller from dropping out through the bolt-receiving hole in the nut when the nut is not on the bolt.

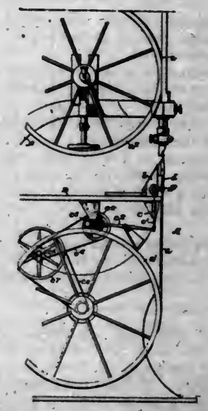
3. The combination, with a screw-threaded bolt, of a screw-threaded nut having a roller-receiving recess in its threaded portion forming a cam surface, plugs closing the ends of the recess and forming fixed portions of the ends of the nut, a substantially cylindrical locking roller in the recess adapted to roll along the cam surface thereof and have locking engagement with the bolt, and means at the ends of the locking roller and engaging the plugs for preventing the locking roller from dropping out through the bolt-receiving hole in the nut when the nut is not on the bolt.

4. The combination with a screw-threaded bolt, of a screw-threaded nut having a recess in its threaded portion forming a cam surface, such recess having closed ends, a locking roller in the recess and adapted to roll along the cam surface thereof, the locking roller being provided with an axial bore extending therethrough, and a retaining pin fixed at its ends in the end closures of the recess and passing loosely through the axial bore of the locking roller so as not to impede the rolling movement of the locking roller along the cam surface of the recess, the locking roller being adapted to be frictionally engaged by the screw threads of the bolt to roll the locking roller along the cam surface of the recess.

5. The combination with a screw-threaded bolt, of a screw-threaded nut having a recess in its threaded portion forming a cam surface, such recess having closed ends, an annular threaded plug concentric with the nut and countersunk flush with the end thereof and forming a closure for the end of the recess, a locking roller in the recess and adapted to roll along the cam surface thereof, the locking roller being adapted to be frictionally engaged by the screw threads of the bolt to roll the locking roller along the cam surface of the recess, and means for continuously retaining the locking roller in the nut at all times including when the nut is off the bolt.

[Claims 6 to 10 not printed in the Gazette.]

959,223. WELT-BEVELING MACHINE. WILLIAM BOTTOMLEY KEIGHLEY, Vineland, N. J. Filed June 30, 1909. Serial No. 505,210.



1. The combination of an endless cutter having a straight operating run; means for driving the cutter; a feeding plate; an arm supporting the plate in a plane at an acute angle to the plane of the operating run of said cutter; and means for automatically actuating said arm to cause the plate to be reciprocated adjacent the cutter.

2. The combination of an endless band cutter, means for driving the same, a feeding plate, and means for automatically moving said plate toward and from said band cutter, one face of the plate being inclined at an angle to the plane of the cutter.

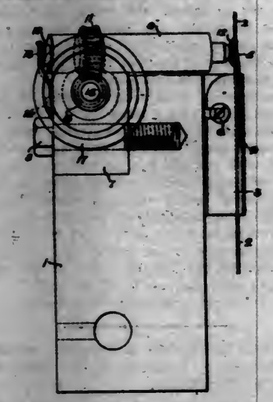
3. The combination with an endless band cutter of means for driving the same; a slide; an arm projecting therefrom; a feeding plate carried on the slide and projecting therefrom toward the knife; and means for moving the slide to reciprocate said plate immediately adjacent said cutter.

4. The combination of a cutter, a feeding plate adjustable to vary its angle to the cutter extending adjacent to the same, a slide supporting said plate, and a cam operative on the slide to cause reciprocation of the same.

5. The combination of a cutter, a slide having a feeding plate adjustable on an axis parallel to the line of the cutter extending adjacent to the same, a cam operative on the slide to cause reciprocation of the same, and a spring acting in opposition to said cam.

[Claims 6 to 10 not printed in the Gazette.]

959,224. SHOE-TRIMMING MACHINE. WILLIAM BOTTOMLEY KEIGHLEY, Vineland, N. J. Filed Sept. 23, 1909. Serial No. 519,270.



1. A shoe trimming machine consisting of a band knife and a rotary cutter forming a work support mounted immediately adjacent thereto.

2. The combination in a shoe trimming machine of a band knife and a rotary cutter in engagement therewith.

3. The combination of a band knife, a rotary cutter mounted on one side of said knife, and a work support on the other side of the knife directly opposite said cutter.

4. The combination in a shoe trimming machine of a band knife, a rotary cutter in engagement with one side of said knife, and a work supporting plate in engagement with the opposite side of the knife directly opposite the cutter.

5. The combination of a band knife and a rotary toothed cutter in engagement with one side of the same.

[Claims 6 to 15 not printed in the Gazette.]

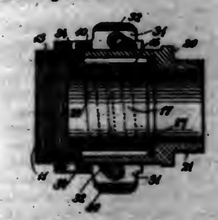
959,225. PULP STOPPER OR THE LIKE. JOHN H. KETCHESON, St. Louis, Mo., assignor to United States Fibre Stopper Company, St. Louis, Mo., a Corporation of South Dakota. Original application filed May 22, 1908, Serial No. 434,403. Divided and this application Filed Nov. 12, 1908. Serial No. 462,248.



As a new article of manufacture, an impervious yielding stopper or the like, composed of a homogeneous mass of fibrous material completely impregnated with a resilient filler.

959,226. HOSE-COUPLING. WALTER W. KEYS, Yonkers, N. Y. Filed June 1, 1909. Serial No. 499,521.

1. A coupling for fluid conductors comprising an inner member and an outer member, means for connecting said members, a locking collar upon one of the members, and a spring between the collar and said member, said collar being arranged to be brought into engagement with the other member and to cause the spring to force said connecting means together.



2. A coupling for fluid conductors comprising an inner member, an outer member, means for forcing said members together, and a spring-pressed collar mounted upon the outer member and arranged to be brought into locking engagement with the inner member by a combined rotary and sliding movement, and to act upon said forcing means to lock said members together.

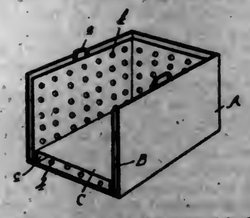
3. A coupling for fluid conductors comprising an inner member and an outer member, said members being provided with threads whereby they may be held together, a collar rotatably and slidably mounted upon the outer surface of the outer member and arranged to engage with the inner member, and a spring associated with said collar and arranged to force said threads together when said collar is engaged with the inner member.

4. A coupling for fluid conductors comprising an inner member provided with segmental threads, an outer member provided with segmental threads adapted to pass and to engage with the threads upon the inner member, whereby said members may be held together, a collar rotatably and slidably mounted upon the outer surface of the outer member and arranged to engage with the inner member, and a spring connected with the collar and the outer member and arranged to force said threads together when said collar is engaged with the inner member.

5. A coupling for fluid conductors comprising an inner member provided with pockets, an outer member, means for engaging said members together, a collar mounted upon the outer member, a spring connection between said collar and the outer member, said collar being provided with lugs adapted to fit into said pockets upon a combined rotary and sliding movement of the collar against the action of the spring to thereby lock said members together.

[Claims 6 to 8 not printed in the Gazette.]

959,227. APPARATUS FOR REMOVING TARNISH FROM METALS. MARSHALL H. KEYT, Chicago, Ill. Filed Feb. 2, 1910. Serial No. 541,623.



1. In an apparatus for removing tarnish from metals, the combination of a receptacle and a removable article-support therein, each formed of non-corrodible material, and a removable metallic member forming the anode of the apparatus, presenting a surface within the carrier for contact with the article or articles therein.

2. In an apparatus for removing tarnish from metals, the combination of a receptacle and a carrier removably mounted therein, each formed of non-corrodible material, and a flat metallic plate constituting the anode of the apparatus arranged within the carrier and having depending portions contacting with the carrier bottom.

3. In an apparatus for removing tarnish from metals, the combination of an oblong receptacle and a box-shaped perforated tray removably mounted therein, each formed of non-corrodible material, and a flat metallic plate constituting the anode of the apparatus arranged within the tray and having downturned flanges at two of its sides contacting with the tray bottom.

959,228. BUILDER'S TRESTLE. OTTO KNOERZER, Hammond, Ind. Filed Jan. 18, 1909. Serial No. 472,775.



1. In builders' trestles, the combination with a base having substantially vertical guideways therein that incline toward each other, and retaining dogs, of a vertically movable supporting frame having posts guided in said inclined guideways, a rack bar on each of said posts and co-acting with the dogs to carry the supporting frame in a plurality of positions.

2. In builders' trestles, the combination with a base having substantially vertical guideways therein that incline toward each other, and retaining dogs, of a vertically movable supporting frame, comprising a cross bar, downwardly extending hollow posts pivoted thereto and guided in said inclined guideways in the base, and a rack bar secured in each of said posts and co-acting with the dogs to carry the supporting frame in a plurality of positions.

3. In builders' trestles, the combination with a base having substantially vertical guideways therein that incline toward each other, and retaining dogs, of a vertically movable supporting frame comprising a cross bar, downwardly extending pins pivotally secured to said cross bar, posts having sockets at their upper ends for engagement with said pins and guided in said inclined guideways and teeth on said posts for engagement with the retaining dogs.

4. In builders' trestles, the combination with a base having substantially vertical guideways therein that incline toward each other, and retaining members, of a vertically movable supporting frame comprising a channel shaped cross bar, two downwardly extending pins pivotally secured to said cross bar, channel shaped posts running in said inclined guideways and having sockets in their upper ends for engagement with said pins, and teeth for engagement with said retaining dogs.

5. In builders' trestles, the combination with a base having two upwardly extending and inwardly inclining side frames which are provided with guideways therein that incline toward each other, retaining dogs, and a strut connecting said side frames, of a vertically movable supporting frame, comprising a cross bar and two posts removably connected with said cross bar and guided in said inclined guideways, said posts being provided with teeth on their inner edges for engagement with the retaining dogs of the side frames.

[Claims 6 to 12 not printed in the Gazette.]

959,229. FIREARM. HENRY M. KOLB, Philadelphia, Pa. Filed Feb. 28, 1910. Serial No. 546,329.



1. In a fire arm, a firing pin and a cylinder having a plurality of cartridge chambers with intervening walls, said pin and cylinder being so disposed that an intervening wall of adjacent chambers and the end of the pin are normally in alinement and opposed, a trigger, separate means actuated by the trigger, one for rotating the cylinder to place a cartridge chamber in line with the firing pin and the other for further rotating the cylinder to place a wall in line with said pin, and separate means actuated by the trigger, one for locking the cylinder during the act of firing and the other for locking the cylinder when a wall is in line with the firing pin.

2. In a fire arm, a firing pin, a cylinder having a plurality of cartridge chambers with intervening walls, said pin and cylinder being so disposed that an intervening wall of adjacent chambers and the end of the pin are normally in alinement, means for rotating the cylinder to place a cartridge chamber in line with said pin during the act of firing, means for further rotating the same to again place an intervening wall in alinement with said pin after firing and separate means for locking said cylinder during the act of firing and when an intervening wall is in line with said pin.

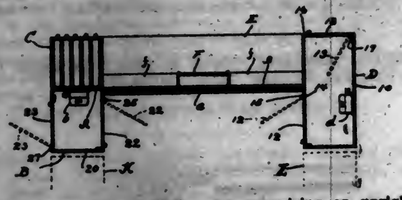
3. In a fire arm, a firing pin, a cylinder having a plurality of cartridge chambers with intervening walls, said pin and cylinder being so disposed that an intervening wall of adjacent chambers and the end of the pin are normally in alinement, means for rotating the cylinder to place a cartridge chamber in line with said pin and for further rotating the same to again place an intervening wall in alinement with said pin, a trigger, means actuated with the trigger for locking the cylinder during the act of firing and means actuated by the trigger for locking said cylinder when an intervening wall is in line with said firing pin.

4. In a fire arm, a firing pin, a cylinder having a plurality of cartridge chambers with intervening walls, a trigger, and separate means pivotally mounted on the trigger for rotating the cylinder to place a cartridge chamber in line with said pin when the pin is actuated to discharge a cartridge, and thereafter to place an intervening wall, between two adjacent cartridge chambers, in line with the firing pin.

5. In a fire arm, a trigger, a firing pin, a cylinder having a plurality of cartridge chambers with intervening walls, and adapted to normally present a wall, between two adjacent chambers, in line with the firing pin, means controlled by the trigger, engaging with the cylinder on one side of its support for rotating the cylinder to place a cartridge chamber in line with the firing pin, until the cartridge is fired, and means engaging with the cylinder on the other side of its support for further rotating the cylinder to place one of said intervening walls in line with the firing pin.

[Claims 6 to 17 not printed in the Gazette.]

959,230. PORTABLE PRESCRIPTION-CASE. CHARLES F. KUBA, Cleveland, Ohio. Filed Jan. 12, 1910. Serial No. 537,658.



1. A portable prescription-case comprising an upright partition having a counter at the rear side of and rigid with the partition, and a telephone-booth which is arranged at one end of and rigid with the partition and provided with a passageway which extends through the booth and has two doors for closing opposite ends respectively of the passageway.

2. A portable prescription-case comprising an upright partition having a counter at the rear side of the partition and a telephone-booth which is arranged at one end of the partition and provided with a passageway which extends through the booth, said booth extending rearwardly to the front of the counter and forming a side wall of the space formed next above the counter.

3. A portable prescription-case comprising an upright partition having a counter at the rear side of the partition and a telephone-booth which is arranged at one end of the partition and provided with a passageway which extends through the booth and has two doors for closing opposite ends respectively of the passageway, said booth extending forwardly of the partition.

4. A portable prescription-case comprising an upright partition having a counter at the rear side of the partition and a telephone-booth which is arranged at one end and extends forwardly and rearwardly of the partition, said booth being provided with a passageway which extends through the booth and has opposite ends thereof arranged forward and rearward respectively of the partition.

5. A portable prescription-case comprising an upright partition having a counter at the rear side of the partition and a telephone-booth arranged at one end and extending forwardly of the partition and being provided with a passageway which at its forward end extends through the inner side wall of the booth forward of the said partition and to the rear extremity of the booth between the side walls of the booth, said booth having two hinged doors for closing opposite ends respectively of the passageway, which doors are arranged to swing in a horizontal plane.

[Claims 6 to 15 not printed in the Gazette.]

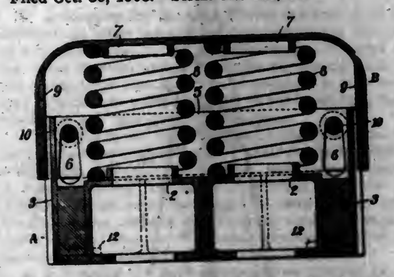
959,231. PROPELLING MECHANISM FOR MOTOR-VEHICLES. ELIE LACOSTE and EMILE BATTMANN, Paris, France. Filed Dec. 14, 1909. Serial No. 533,123.



1. A motor mechanism for vehicles composed of a series of separate independent casings each containing its own mechanism, the ends of the casings being provided at the circumference with tongue and groove joints, and having journaled in their ends coaxially with the tongue and groove a series of separate, independent-driving shaft units adapted to engage automatically at their ends in driving relation, the casings when bolted together at their ends forming a continuous rigid straight line connection between the cranking shaft and the back axle-tree.

2. A motor mechanism for vehicles composed of a series of separate independent casings each containing its own mechanism, the casings being provided on their abutting circumferences with tongue and groove joints, and having journaled in their ends, co-axially with the tongue and groove, a series of independent driving shaft units adapted to engage automatically at their ends in driving relation, the casings when bolted together, forming a continuous rigid straight line connection between the cranking shaft and the vehicle hind wheel, the continuous casing being suspended, entirely independently of the wagon frame at one end by a universal joint attached to the front cross-bar of the vehicle body and at the other end by the back axle-tree.

959,232. MINE-CAR BUFFER. VICTOR E. LANE, Berwick, Pa., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Oct. 30, 1908. Serial No. 460,813.



1. In a car buffer, the combination of a base, a cap shiftable longitudinally of the same, a spring arranged between the cap and base and disposed for resisting compressing strains on the cap and base, and a bolt and slot connection between the cap and base formed to guide and limit the relative movements of the parts at times and to permit lateral play of the cap only when under compression.

2. In a car buffer, the combination comprising a base member with obliquely disposed hollow spring seats and slotted perimetrical flange, said flange being provided with longitudinal guide grooves in its outer face, a perforated cap member provided with obliquely disposed spring seats on its inner face and with inwardly projecting guide ribs registering with the grooves in said base, and bolts extending through said base and cap.

3. In a car buffer, the combination of a base, a cap shiftable longitudinally of the same, a spring arranged between the cap and base, seats for the spring on the cap and base, and a bolt and slot connection between the cap and base, the slot of said connection being tapered from one end to the other and at its narrower end being of a width to snugly receive the bolt of said connection, said connection being formed to guide and limit the relative movements of the parts and to permit lateral play of the cap when under compression.

4. In a car buffer, the combination comprising a base member with perforations to receive securing means, spring seat, a perimetrical slotted flange; a cap member with integral spring seat and a perforated perimetrical flange adapted to telescope with the flange of the base member, retaining means projected through the perforation and slot in said flanges and a spring on said spring seats, said spring being obliquely disposed.

5. In a car buffer, the combination of members longitudinally shiftable relative to each other, and bolt and slot connections therebetween adapted to allow lateral play of the parts at one terminal of the slot.

[Claims 6 to 12 not printed in the Gazette.]

959,233. SOLDERING-IRON. WALTER R. LANUM, Philadelphia, Pa. Filed Mar. 15, 1910. Serial No. 549,456.

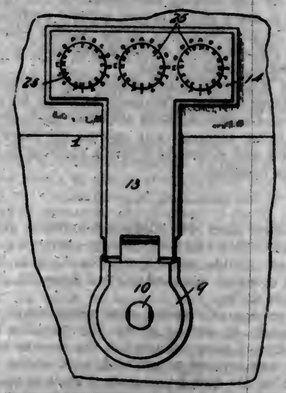
1. The combination in a soldering iron, of a bolt having a solder receiving chamber therein and a port leading from said chamber, the outer face of said port forming a valve seat, a valve located exteriorly of said bolt and co-acting with said seat, said bolt having a groove leading from said valve seat to the point of the bolt, a handle secured to said bolt, and yielding means for securing said valve with respect to said handle, whereby said valve is normally maintained in its closed position.



2. The combination in a soldering iron, of a bolt having a solder receiving chamber therein and provided with a port communicating with the atmosphere, the outer end of said port forming a valve seat, said bolt having a groove leading from said valve seat to the point of the bolt, said bolt having a filling aperture communicating with the solder receiving chamber, a closure for such aperture, a handle carried by said bolt, and a lever movably carried by said handle and having its end deflected to form a valve member adapted to engage with said valve seat.

3. The combination in a soldering iron, of a bolt having a solder receiving chamber therein and a port communicating with the atmosphere, the outer end of said port forming a valve seat, said bolt having a groove leading from said valve seat to the point of the bolt, said bolt having a filling aperture and a vent aperture communicating with the solder receiving chamber, a closure for each of said apertures, a handle secured to said bolt, and a lever fulcrumed on said handle and having one end thereof deflected to form a valve co-acting with said seat, the other end of said lever engaging said handle to maintain said valve in its closed position, whereby when the pressure of the operator is exerted on said lever intermediate its fulcrum and the end engaging the handle, said valve will be disengaged from its seat.

959,234. COMBINATION-LOCK. OLIVER M. LARKIN, St. Louis, Mo. Filed Dec. 12, 1908. Serial No. 467,166.



1. In a lock, a stationary slotted member, a plurality of latching members carried by a movable part to coöperate with the slot in said member, of a gravitating member located in the path of the latching members and designed to fall out of the path of the latching members when they are in an unlocked position.

2. In a device as set forth, a stationary slotted plate, a plurality of latching plates carried by a movable part and adapted to be brought into and out of registration with the slot in said plate to lock or unlock said device, of a gravitating member located in the path of the latching plates and designed to fall out of the path of the latching plates when they are in registration with said slot, said latching plates having their lower edges reduced to insure the passing of the latching plates by the gravitating member.

3. In a device as set forth, a stationary slotted plate, a plurality of latching plates carried by a movable part and adapted to be brought into and out of registration with the slot in said plate to lock or unlock said device, of a pivoted gravitating member located in the path of the latching plates and designed to fall out of the path of the latching plates when they are in registration with said slot, said latching plates having their lower edges reduced to insure the passing of the latching plates by the gravitating member, and means for operating the latching plates.

4. In a device as set forth, a stationary slotted plate, a plurality of latching plates carried by a movable part and adapted to be brought into and out of registration with the slot in said plate to lock or unlock said device, of a pivoted gravitating member located in the path of the latching plates and designed to fall out of the path of the latching plates when they are in registration with said slot, said latching plates having their lower edges reduced to insure the passing of the latching plates by the gravitating member, and means for operating the latching plates, said means having a member to limit the movement of said means in one direction thereof.

5. A lock of the character described comprising a plate having a central opening and a recessed or notched edge, a gravity locking plate located adjacent to said plate, a plurality of operating shafts carrying latching plates having one edge conforming to the contour of the opening in the plate, and adapted to be alined therewith to open the lock, said latching plates having their lower edges reduced to permit the gravity plate to drop below the same, and means for operating said shafts.

[Claim 6 not printed in the Gazette.]

959,235. HANDLE. GEORGE LEMINUX, Washburn, Wis. Filed Aug. 18, 1909. Serial No. 513,426.



1. The improved trunk attachment comprising an angle-iron having an inwardly projecting socket, a handle pivoted in the upper portion of the socket and adapted to be raised and adjusted in horizontal position in contact with the upper portion of said socket, and a spring arranged in the socket in rear of the pivot end of the lever, upon which it bears and thereby holds it normally in retracted position within the socket or supports it in the horizontal position as required for use, substantially as described.

2. The improved trunk attachment comprising an iron adapted for application to the trunk body and provided with a socket projecting inwardly and having one side thereof cut away, a handle pivoted in the upper portion

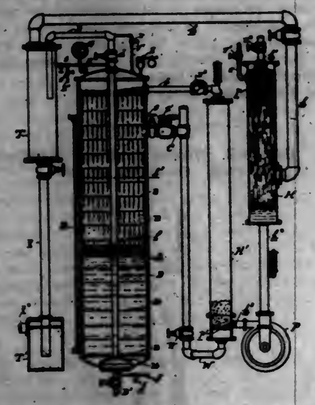
of the socket and lying normally within the latter, but with a portion thereof exposed to view, and a spring for holding the handle in the normal retracted position, substantially as described.

959,236. VEHICLE-RIM. ADOLPH A. LEY, Akron, Ohio. Filed May 10, 1909. Serial No. 495,004.



In a vehicle wheel, a tire retaining means consisting of a split ring having each of its ends provided with a slot and a laterally-extending loop constituting a U-shaped keeper of less width than the length of the slot, each of said keepers extending over a portion of a respective slot, and a separate key provided with a pair of laterally-extending arms adapted to engage the inner sides of the keepers for coupling the split ends of the ring together, each of said slots positioned approximately centrally of the end of the ring in which it is formed and each of said keepers extending at right angles with respect to that slot over which it is arranged.

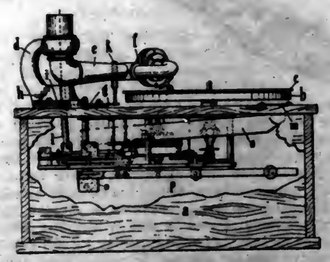
959,237. PROCESS OF CONVERTING STARCH INTO DERIVATIVES, DEXTRIN, DEXTROSE, &c. SAMUEL MORRIS LILLIE, Philadelphia, Pa. Original application filed Feb. 18, 1908, Serial No. 416,455. Divided and this application filed Jan. 14, 1910. Serial No. 538,126.



1. The process of converting starch into its derivatives, dextrin, glucose, etc., consisting in mixing the starch with water and acid to form a mixture suitably mobile and acid; in passing this mixture with a constant rate of flow through heating devices and heating it therein quickly to the desired converting temperature with only a partial conversion, if any; in passing the heated mixture as a uniformly moving column through a retaining vessel to complete the conversion desired by the heat stored in the mixture; in adjusting the time the mixture remains in the column so as to produce the degree of conversion desired; and in adding the neutralising agent continuously and in proper quantities to the liquor while still under the converting pressure and temperature and just prior to its release from same.

2. The process of converting starch into its derivatives, dextrin, glucose, etc., consisting in mixing the starch with water and acid to form a mixture suitably mobile and acid; in passing this mixture with a constant rate of flow through heating devices and heating it therein quickly to the desired converting temperature, with only a partial conversion, if any; in passing the heated mixture as a uniformly moving column through a retaining vessel to complete the conversion desired by the heat stored in the mixture, and in adjusting the time the mixture remains in the column so as to produce the degree of conversion desired.

959,238. TALKING-MACHINE MECHANISM. CARL LINDSTRÖM, Berlin, Germany. Filed Feb. 27, 1909. Serial No. 480,447.



1. In a mechanism for talking machines, the combination of a sound-arm an axle carrying the sound-arm, said axle being adapted to stand in a slanting position when said arm is in its extreme positions, and means for placing said axle into vertical position, for the purpose specified.

2. In a mechanism for talking machines, the combination of a sound-arm an axle carrying the sound-arm, said axle being adapted to stand in a slanting position when said arm is in its extreme positions, driving mechanism, and releasing mechanism comprising a spring-pulled lever carrying said axle, and a wheel on the lever adapted to be driven by the driving mechanism, and to place said axle into vertical position, for the purpose specified.

3. In a mechanism for talking machines, the combination of a sound-arm an axle carrying the sound-arm, said axle being adapted to stand in a slanting position when said arm is in its extreme positions; releasing mechanism comprising a spring-pulled lever carrying said axle, and a wheel eccentrically mounted on the lever and adapted to be driven by the driving mechanism of the talking machine, and to place said axle into vertical position; detent means for holding said axle in its vertical position; and means for releasing said detent means and returning the axle into its slanting position.

4. In an automatic talking machine, the combination, with the sound-arm, of a normally slanting axle carrying the same, and motor-actuated releasing mechanism carrying the axle for automatically placing the same into vertical position and returning it into a slanting position, for the purpose specified.

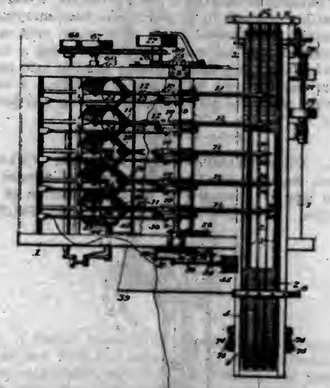
959,239. PROCESS OF TREATING ORES AND CARBONIFEROUS EARTHS. ALFRED ARTHUR LOCKWOOD, London, England, assignor to The L. & S. Syndicate, Limited, London, England. Filed June 26, 1909. Serial No. 504,530.

1. The process of treating ores hereinbefore described, which consists in adding to an oily liquid a substance which renders it more adherent to the ore and which prevents the washing out of an oxid, and mixing such oily liquid wth an ore and a magnetic oxid to cause the magnetic oxid to adhere to some constituent part of the ore in preference to the others, and then magnetically separating the mixture.

2. In a process of treating ores, combining an oily liquid with a substance which renders it more adherent to the ore and less emulsifiable, and agitating such oily liquid with an ore, magnetic oxid of iron and water, and then separating the mixture.

3. In a process of treating ores, mixing an oily liquid with sulfate of alumina to prevent the washing out of an oxid, and agitating the oily liquid thus treated with an ore, a magnetic oxid and water, and then magnetically separating the mixture.

959,240. APPARATUS FOR SEPARATING AND COMBING GRASS, STRAW, AND THE LIKE. GEORGE A. LOWRY, Chicago, Ill., assignor of one-half to James F. O'Shaughnessy, New York, N. Y. Continuation of application Serial No. 21,306, filed June 23, 1900. This application filed Nov. 17, 1902. Serial No. 131,734.



1. In a machine for separating grass, etc., the combination with the conveyer for the mixed material, of a rotatable shaft provided with a series of arms secured thereto, each arm having pivoted jaws and a spring for closing the same, of cams for opening or closing the several jaws at different intervals with respect to each other and points of rotation, and releasing cams for operating the jaws to release the grass, stems or stalks.

2. In a machine for separating grass, etc., the combination with the conveyer for the mixed material, of mechanism for selecting and separating stems or stalks of different lengths from such material and from each other, and delivery hoppers into which the selected stems or stalks are delivered.

3. In a machine for separating grass, etc., the combination with a series of rotatable jaws and mechanism for causing such jaws to select stems or stalks of grass of different lengths, and a series of delivery hoppers, and devices for causing the jaws to deliver the selected stems or stalks into these hoppers; substantially as and for the purpose set forth.

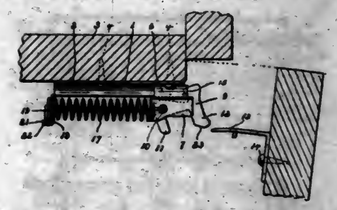
4. In a machine for separating grass, etc., the combination with the selecting mechanism, of hoppers into which the selected stems or stalks are delivered, and a shelf arranged under the bottoms of such hoppers for arresting the downward movement of the stems or stalks, and means for toppling over the stems or stalks from the shelf; substantially as and for the purpose set forth.

5. In a machine for separating grass, etc., the combination with mechanism for selecting the stems or stalks and delivering the same, of hoppers adapted to receive such stems or stalks, and provided with vertical slits at their ends, of a vibrating shelf arranged to support the butts of such stems or stalks, a receptacle, and means for toppling over such stems or stalks onto said receptacle; substantially as and for the purpose set forth.

[Claims 6 to 23 not printed in the Gazette.]

959,241. DOOR CATCH OR CHECK. GEORGE W. MALLORY, Blenheim, Ontario, Canada. Filed Mar. 29, 1909. Serial No. 486,538.

1. In a device of the character described, the combination of a base, a slide on the base, a coiled spring attached at one end to the slide, means having an opening to receive the opposite end of the spring, and a removable plate adapted to be inserted between the turns of the spring and engage said means to detachably and adjustably hold the spring within said opening.



2. In a device of the character described, the combination of a base, a slide on the base, a coiled spring attached at one end to the slide, a projection on the base having an opening to receive the opposite end of the spring, a removable plate adapted to be inserted between the turns of the spring and provided with a protuberance projecting laterally therefrom to extend within the interior of the spring and detachably hold the plate in place.

3. In a device of the character described, the combination of a base, a slide upon the base, a coiled spring attached at one end of the slide, an outwardly turned portion on the base having an opening to receive the opposite end of the spring and provided with a laterally extending flange at its free end, a plate adapted to be inserted between the turns of the spring and formed with a concavo-convex portion to extend within the spring, and a laterally turned flange on the plate adapted to lie beneath the other flange when the plate is in place.

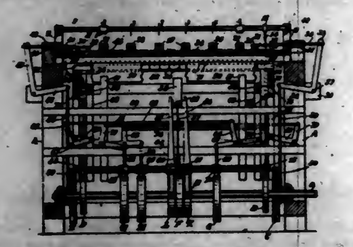
4. In a device of the character described, the combination with a base plate formed with a longitudinally extending raised guide, a slide engaging said guide and formed with parallel outwardly extending flanges connected at one end, a dog between said flanges, a tubular rivet extending through the flanges and dog to form a pivot for the dog and secure the flanges, a coiled spring to actuate the slide attached thereto by having its end extended through the tubular rivet, a plate adapted to be inserted between the turns of the spring at its opposite end to hold the spring in position on the base plate, and a plate to coöperate with the dog and actuate the slide.

5. In a device of the character described, the combination of a base plate formed with a longitudinally extending dovetail guide, a slide upon said guide having outwardly extending parallel flanges, a dog pivoted between said flanges and provided with a shoulder at one side adapted to engage the end of the raised guide and parallel arms at its opposite side, one of which arms is of greater length than the other and formed with a beveled end, a spring secured at one end to actuate the slide in one direction, an apertured projection on the base to receive the opposite end of the spring, a plate adapted to be inserted between the turns of the spring to hold the spring in said apertured projection, and an apertured plate adapted to be attached to a door and to coöperate with the arms on the dog.

959,242. MACHINE FOR APPLYING TO FABRICS ORNAMENTS INTERWOVEN WITH A BRASS WIRE. HENRI MARTIN, Paris, France. Filed Aug. 6, 1909. Serial No. 511,588.

1. A machine for mechanically applying to fabrics ornaments composed of whipped or covered metal wires, comprising a series of pliers consisting each, of a pair of flexible spaced arms or jaws adapted to be intermittently rotated, a reciprocating member arranged to move the arms or jaws of the pliers toward each other, and a flat oscillating bar supporting the pliers in parallel relation and adapted to carry their points at first upward in order that they may take hold of the ornament which is directly cut by shears, then downward, after the arms have been

brought together, in order that the pliers may convey the ornament into the meshes of the fabric which is stretched horizontally and fix it by the rotary motion imparted at that moment to the pliers.



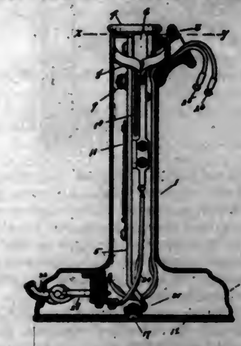
2. In a machine for mechanically applying to fabrics ornaments composed of whipped or covered metal wires, the combination with a series of pliers consisting each of a pair of flexible spaced arms or jaws mounted to intermittently rotate, of a reciprocated member arranged to effect the mutual approach of the arms and an oscillating bar adjustably supporting the pliers and adapted to first raise and then lower their points while their open arms close and they are rotated about their respective axes, a series of shears equal in number to the pliers and provided each with two superposed oscillating horizontal blades, said shears being carried on two horizontal rods whereby their normally spaced arms, in order to allow the ornament to pass, come above and opposite the arms of the pliers, these shears cutting the ornament as soon as the pliers in moving downward begin to carry it along.

3. A machine for mechanically applying ornaments to fabrics, comprising a series of pliers consisting each of a pair of flexible spaced arms or jaws, a reciprocating rod adapted to close the arms of said pliers, means for intermittently rotating the pliers about their longitudinal axis, an oscillating plier supporting bar for raising and then lowering the points of the pliers, a series of shears corresponding in number to the pliers placed above and opposite the jaws of the latter and adapted to cut the ornaments as soon as the jaws of the pliers begin to carry it along, and two parallel vertical rods provided with equi-distantly spaced points or pins which enter the meshes of the fabric, that is extended horizontally, the said pins serving to stretch and to slacken the fabric, a vertically movable frame on which said rods are mounted, a driving shaft, and means including a cam on the driving shaft for actuating said frame.

4. A machine for mechanically applying ornaments to fabrics, comprising a series of pliers consisting each, of a pair of flexible jaws adapted to move toward and from each other, means including a reciprocating rod for closing the jaws at a certain period in the operation of the machine, means for intermittently rotating the pliers about their longitudinal axis, an oscillating plier-carrying bar for raising and then lowering the points of the pliers, a series of shears equal in number to the pliers, arranged above and opposite the jaws of the latter, and adapted to cut the ornaments when the jaws of the pliers begin to carry it along, a pair of parallel rods provided with equi-distantly spaced pins or points which enter meshes of the extended portion of the fabric, said pins or points serving to stretch and to slacken the fabric, a vertically-movable horizontal rectangular frame upon which said rods are mounted, one of said rods being fixed and the other oscillating for the purpose of loosening the fabric, a pair of fixed and movable horizontal parallel bars provided with equi-distantly spaced hooks which enter the meshes of the fabric and serve to move the fabric bodily after the ornaments have been applied, a horizontally reciprocating carriage upon which said hook-carrying bars are mounted, a horizontal vertically movable frame on which said carriage is mounted and means for intermittently moving the movable hook-carrying bar.

5. In a machine for mechanically applying ornaments to fabrics, the combination with a series of parallel pliers, of an oscillating bar on which said pliers are mounted, a series of shears equal in number to the pliers to cut the ornaments when the arms of the pliers in moving down begin to carry it along, a pair of fixed and movable parallel bars provided with pins or points and adapted to tighten and loosen the fabric, a vertically movable horizontal frame upon which said bars are mounted, means for intermittently raising and lowering said frame, two horizontal parallel bars provided with equi-distantly spaced hooks adapted to enter the meshes of the fabric for the purpose of moving it intermittently, a horizontal reciprocating carriage upon which said hook-carrying bars are mounted, a horizontal frame upon which said carriage is mounted, a driving shaft, means including a cam on the driving shaft for intermittently moving said movable hook-carrying bar and other means including a cam on the driving shaft for intermittently raising and lowering said bar.

959,243. DESK-TELEPHONE STANDARD. CHARLES T. MASON, Sumter, S. C., assignor to The Sumter Telephone Mfg. Co., Sumter, S. C., a Corporation of South Carolina. Filed Oct. 20, 1909. Serial No. 523,727.



1. A one piece desk stand casing, a transmitter supported thereon, the casing having an opening for the insertion of a unit switch hook mechanism, a unit hook switch mechanism, and means for supporting the hook mechanism to allow of its removal without disturbing the transmitter connections.

2. In a telephone desk stand, the combination of a suitable base, a stem carried thereby, a transmitter support attached to said stem all forming a casing, a transmitter attached to the support, a hook mechanism placed within said casing and closing the top thereof, means for attaching the hook mechanism to the casing, terminals mounted within the base and electrical connections between the terminals hook mechanism and transmitter.

3. In a telephone desk standard, a base tubular casing and transmitter support forming one structure, in combination with a hook mechanism adapted to be inserted in the top of said casing, and means for removably supporting said hook mechanism therein.

959,244. GAS-BURNER. BENJAMIN E. MRACHAM, Lorain, Ohio, assignor to American Stove Company, St. Louis, Mo. Filed Oct. 13, 1909. Serial No. 522,450.

1. A burner comprising a vertical tube provided at its top with two separated upwardly projecting hollow arms, cap plates, one cap plate forming the inner wall of each arm, the cap plates separated to form a vertical space between them, and each cap plate having outwardly opening gas exits.

2. A burner comprising a vertical tube provided at its upper end with two separated upwardly extending hollow arms, cap plates, one cap plate forming the inner wall of each arm, the cap plates separated to form a vertical space between them, the sides of the hollow separated arms extending below the lower edge of the cap plates, thereby forming depending passageways at the ends of said vertical space and communicating therewith.



3. A burner comprising a vertical tube provided at its upper end with two separated upwardly extending hollow arms, cap plates, one cap plate forming the inner wall of each arm, the cap plates separated to form a vertical space between them, the bottom wall of said vertical space between the arms having depending ends and a straight central portion.

959,245. STOVEPIPE-SNIPS. HENRY G. MILLINGTON, Dannemora, N. Y. Filed Mar. 18, 1909. Serial No. 484,095.

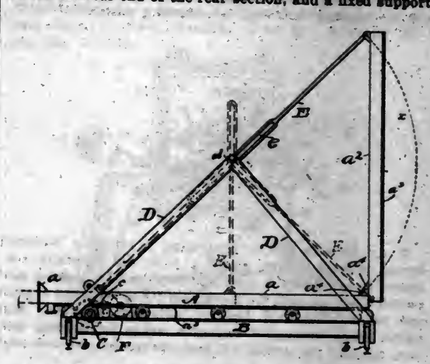


In snips of the class described, a pair of pivotally connected handles, forwardly tapered jaws formed on said handles, one of said jaws being pointed and formed with a beveled cutting edge, the other jaw being provided with a rearwardly inclined central groove correspondingly shaped to the cutting edge and extending only partially the depth of said jaw to snugly receive the said cutting edge of the other jaw when the jaws have been completely closed, and a spur projecting from the last named jaw beyond the pointed end of the other jaw.

959,246. FOLDING COKE AND COAL HANDLING MACHINE FOR COKE-OVENS. JAMES E. A. MOORE, Cleveland, Ohio, assignor to John W. Beaver, Cleveland, Ohio. Filed Aug. 7, 1908. Serial No. 447,378.

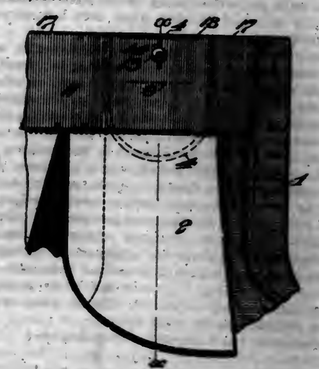
1. In a machine for pushing and leveling coke, coal and analogous material, the combination of a ram composed of a front section, and a rear section hinged together, means for supporting and moving said ram forward and backward, a rigid link pivoted to the rear end of the rear section having a slot near its other end, and a fixed shaft extended through said slot.

2. In a machine for pushing and leveling material, the combination of a ram composed of a front section and a rear section hinged together, means for supporting and moving said ram forward and backward, a connection between the rear end of the rear section, and a fixed support,



and stop lugs near the hinge pivot limiting the hinge movement of the sections relative to each other.

959,247. POCKET FOR GARMENTS. CHARLES E. MORRIS, Philadelphia, Pa. Filed Dec. 31, 1909. Serial No. 535,857.



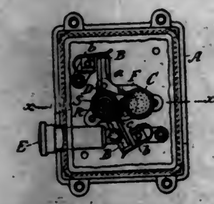
1. In a garment, a curtain lining, a pocket suitably connected with said garment, a secret pocket situated between said first named pocket and the one side of the garment proper, the outer upper edge of said secret pocket being connected with said garment, a stay connected with said secret pocket, the ends of which are connected with said garment, said curtain lining and stay having a button hole therethrough and a button connected on the interior of said pocket and adapted to pass through said button hole for holding the pocket closed.

2. In a garment, a pocket secured thereto, a secret pocket secured along its entire upper outer edge to said garment and lying between the garment and said first mentioned pocket, a curtain lining exterior of both pockets connected along its edges to said garment but disconnected therefrom for the distance of the mouth of said safety pocket, and stitching connecting the side top edges of the safety pocket to the garment.

959,248. ELECTRIC SWITCH. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car Heating Company, a Corporation of West Virginia. Filed Sept. 16, 1909. Serial No. 517,958.

1. An electric switch comprising a pivotally mounted spring pressed switch block, a push rod pivotally con-

nected to said block, an automatic lock for locking said switch block against the tension of its spring, and a push rod for moving said lock to unlocking position.



2. An electric switch comprising a pivotally mounted spring pressed switch block, a push rod pivotally connected to said block, a spring pressed lock for locking said switch block against the tension of its spring, and a push rod for moving said lock to unlocking position, said switch block being provided with means for holding said lock against the action of said spring in the unlocked position.

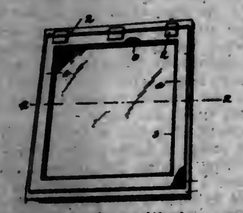
3. An electric switch comprising a pivotally mounted spring pressed switch block, a push rod pivotally connected to said block, said switch block being provided with a projection, a spring pressed lock for said projection to hold said switch block against the tension of its spring, and a push rod for moving said lock to the unlocking position, said projection being constructed to retain said lock in the unlocked position when said lock is actuated by its push rod.

4. An electric switch comprising a pivotally mounted spring pressed switch block, a push rod pivotally connected to said block, a depressible locking member, and means for operating the same, said switch block being arranged to pass over said locking member when the same is depressed, whereby said locking member is operated when the switch block is actuated by its push rod.

5. An electric switch comprising a pivotally mounted spring pressed switch block, a push rod pivotally connected to said block, said switch block being provided with a projection, a locking member provided with a depressible lug arranged to engage said projection to hold said switch block against the action of its spring, means for depressing said lug, said projection being arranged to pass over said locking lug when the latter is depressed, whereby said locking member is released when the switch block is actuated by its push rod.

[Claims 6 to 8 not printed in the Gazette.]

959,249. MEANS FOR PRINTING PHOTOGRAPHS. SAMUEL A. NIELSON, Madison, Wis. Filed Dec. 22, 1908. Serial No. 468,776.



1. A holder or guide for positioning a sensitive sheet in proper relation to a negative from which a print is to be taken, comprising a sheet of relatively thin non-actinic material having an opening therein through which the light rays may pass to the sensitive sheet, the margin of said opening defining the outline of the picture; means arranged upon that side of the thin sheet which, when the holder is in use is remote from the negative, for engaging the edges of the sensitive sheet and holding the same in a definite relation to the opening and consequently to the negative underlying the same; and means for securing the holder directly to and in a definite position upon the negative.

2. A holder or guide for positioning a sensitive body in proper relation to a negative from which a print is to be taken, comprising a thin sheet of non-actinic material having an opening therein through which the light rays may pass to the sensitive body, the margin of said opening defining the outline of the picture; a second sheet overlying the first sheet, said second sheet having an opening formed therein said opening being larger than the opening in the first sheet and adapted to hold the sensitive body by contact with the edges thereof; and means for securing the holder or guide directly to the negative.

959,250. SULFUR-BURNER. GIUSEPPE ODDO, Pavia, Italy. Filed Oct. 7, 1908. Serial No. 456,600.



1. A sulfur burner comprising a plurality of internal hearths disposed one above the other, means for introducing the ore into the center one of the hearths, the floor of such hearths being provided internally with channels for the passage of cold air, the upper hearths constructed for the completion of the combustion and the lower ones for the extraction of the ashes, and means for introducing air into the combustion chamber to be heated in said lower hearths.

2. A sulfur burner comprising a plurality of hearths, one of which is provided with a floor of greater thickness and strength and comprising a chamber for the circulation of air, said chamber being open to the atmosphere, means for introducing ore into a hearth above the lowermost one, and rabbles rotatably mounted above and below the lowermost floor and having downwardly extending teeth.

3. A sulfur burner comprising a plurality of hearths, one of which is provided with a floor of greater thickness and strength and comprising a chamber for the circulation of air, said chamber being open to the atmosphere, a hopper and an exterior conduit therefrom for conducting the ore to a hearth above the bottom, rabbles rotatably mounted above and below the lowermost floor and having downwardly extending teeth, and a vertically disposed shaft carrying said rabbles, there being a central opening through said floor for the passage of the gradually burning material downwardly at the center.

4. A sulfur burner comprising a casing, a plurality of internal hearths disposed one above the other, the floor receiving the heavy mineral being thicker than the other, means for introducing the ore upon such floor, means for introducing air to cool said thickened floor and insuring a circulation to prevent decomposition, and a vertical flue communicating with said air introducing means to create a vertical draft.

5. A sulfur burner comprising a casing, a plurality of internal hearths disposed one above the other, the floor receiving the heavy mineral being thicker than the others, means for introducing the ore upon such floor, means for introducing air to cool said thickened floor and insuring a circulation to prevent decomposition, a vertical flue communicating with said air introducing means to create a vertical draft, and means for introducing ore through the side of the casing upon said thickened floor.

959,251. BAGGAGE-TRUCK BRAKE. HARRY S. PARKER and EDWARD O. LEE, Trenton, N. J. Filed Aug. 6, 1909. Serial No. 511,575.

1. The combination with a vehicle having running gear including front wheels which may be shifted to control the direction of movement of the vehicle, of a draft tongue pivotally connected to a portion of the running gear and having a brake beam secured thereto in advance of the said front wheels, the said brake beam being continuous from end to end and of rigid structure throughout its length and uniformly movable to and from the said wheels, the draft tongue being so applied that when it is raised the brake beam will be forcefully brought against the front portions of the front wheels, and means for automatically elevating the tongue and forcefully applying the brake beam to the wheels when the tongue is released from lowered position.



2. The combination with a vehicle having running gear and front wheels mounted for shifting movement to change the direction of travel of the vehicle, of a draft tongue movably connected to the front portion of the running gear, a brake beam rigidly and directly secured on the rear end of the tongue and extending transversely across the latter and rigid from end to end, the rigid ends of the brake beam being normally slightly in advance of the front portions of the forward wheels of the vehicle, the brake beam being also in advance of the means for movably connecting the tongue to the running gear, and means for automatically elevating the brake bar or beam and forcefully applying the latter to the front portions of the wheels when the tongue is released from a lowered draft position.

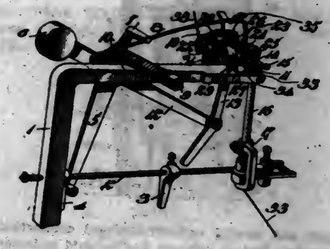
3. The combination with a vehicle having a running gear with front steering wheels and a vertically movable tongue pivotally connected to said running gear, of a brake beam rigidly secured on the rear portion of the tongue in advance of the pivotal point of the tongue and out of contact with the wheels when depressed by the tongue, and means directly connected to the tongue in advance of the pivotal connection of the latter for automatically elevating the tongue and applying the brake beam to the front portion of the said wheels when the draft tongue is released from a lowered position.

4. The combination with a vehicle having a running gear with front wheels and a tongue movably connected to said running gear, of a brake bar or beam rigidly secured to the tongue and held out of engagement with relation to the wheels when the tongue is lowered, automatically operating means for locking the tongue and brake bar or beam in lowered position, the said automatically operating locking means being released by slightly elevating the tongue, and means for automatically elevating the brake bar or beam and throwing the latter in forceful contact with the wheels when the said locking means is released.

5. The combination with a vehicle having a running gear with front steering wheels and a vertically movable tongue connected to said running gear, of a brake bar or beam rigidly attached to and extending across a portion of the tongue and having rigid ends to engage the wheels when the said bar or beam is elevated, a gravitating catch to engage over the beam when the latter and the tongue are lowered, said catch having a trip arm to contact with a portion of the tongue, a part of the tongue being movable and operative to release the catch, and automatically operating means for elevating the brake bar or beam and throwing the latter into contact with the wheels when the catch is released.

[Claims 6 to 9 not printed in the Gazette.]

959,252. YARN-TRAP FOR KNITTING-MACHINES. JOSEPH PEARSON, Philadelphia, and HARRY CARTER, Wrightsville, Pa.; Joseph J. Pearson administrator of said Joseph Pearson, deceased. Filed Nov. 4, 1907. Serial No. 400,558.



1. In a device of the character described, a support, securing means therefor, presser members carried by said support, a yarn guide for said presser members carried by said support, a tension device for said members, and means for preventing lateral movement of said members, said means also limiting the movement of the yarn between said members.

2. In a device of the character described, a support, securing means therefor, a yarn guide carried thereby, a rod secured to said support, presser members having one end loosely mounted on said rod, a tension device engaging one of said members, and means for preventing improper lateral movement of said members, said means also limiting the movement of the yarn between said members.

3. In a device of the character described, a support, securing means therefor, a yarn guide carried by said support, a rod carried by said support, presser members having one end movably mounted on said rod, an adjusting nut on said rod, a spring intermediate said nut and one of said presser members, a lock nut for said adjusting nut, and means for preventing improper lateral movement of said members, said means also limiting the movement of the yarn between said members.

4. In a device of the character described, a support, securing means therefor, a yarn guide carried by said support, a rod carried by said support, presser members having one end loosely mounted on said rod, a tension device engaging one of said members, and pins on opposite sides of said members and engaging said members to prevent their lateral movement.

5. In a device of the character described, a support, securing means therefor, a yarn guide carried by said support, a rod carried by said support, presser members each having one end outwardly deflected and their outer ends loosely mounted on said rod, a tension device engaging one of said members, and means for preventing improper lateral movement of said members, said means also limiting the movement of the yarn between said members.

[Claims 6 and 7 not printed in the Gazette.]

959,253. FURNACE. JAMES A. PENNEY, McKeesport, Pa. Filed May 7, 1909. Serial No. 494,533.

A furnace of the type described embodying an outer shell or casing, transverse bars arranged in the lower portion of said shell, a burner casing supported by said bars and comprising two shells having converging upper edges, means connecting said shells and holding them in spaced relation, an annular burner located between said shells and supported on said spacing means, a drum supported on said burner casing and inclosing the upper end thereof and providing an annular combustion chamber, a col-

lector located in said drum having an open lower end received within the inner shell of said burner casing and at



its upper end having radially-disposed connections with said chamber, and an exhaust flue for said collector.

959,254. BUGGY-SHAFT TUG. WALTER GARFIELD PETERS, Danbury, N. C. Filed Aug. 19, 1909. Serial No. 513,547.



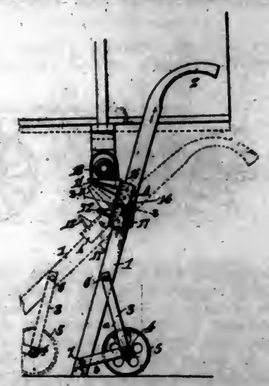
1. A device of the character specified, comprising a plate provided at one end with a buckle and at the other with a ring, a curved keeper on one side of the plate the free end of the keeper being inclined outwardly and upwardly, and spaced apart from the plate, said keeper having an opening at the junction of the plate therewith, a curved latch slidable in the opening and closing the space between the end of the keeper and the plate, said latch having a cross head below the opening, a bar pivoted by one end to the plate and by the other to the latch and a spring between the bar and the plate for retaining the latch in closed position.

2. A device of the character specified, comprising a supporting plate, a curved keeper on one side thereof, the free end of the keeper being spaced apart from the plate, and inclined outwardly and upwardly for the purpose specified, a latch slidable on the keeper for closing the space between the end thereof and the plate, a bar pivoted to the plate and to the outer end of the latch, and a spring engaging the bar for retaining the latch in closed position.

3. A device of the character specified comprising a support, a keeper on the support, a latch coöperating with the keeper to form a ring for receiving the shaft, a spring normally retaining the latch in closed position, and a bar pivoted by one end to the support and by the other to the latch, said bar being inclined for the purpose specified, and a guide on the keeper for directing the shaft against the bar.

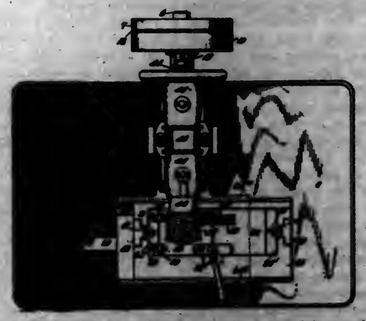
4. A device of the character specified, comprising a support, a ring comprising a section fixed to the support, and a section slidable on the fixed section, a bar pivoted by one end to the support and by the other to the movable section of the ring, said bar being inclined for the purpose specified, means for directing the shaft against the bar, and a spring for retaining the movable section in closed position.

959,255. WAGON-JACK. STEPHEN L. PORN, Rugby, N. D., assignor of one-half to Henry Luth, Duluth, Minn. Filed June 9, 1909. Serial No. 501,045.



A wagon jack consisting of a lever having an upper end constituting a handle and equipped on its rear side at its lower end with a roller constituting a fulcrum and a carrying means, the said lever being provided between its ends with a longitudinal series of transverse openings, a head having a central plate bearing against the front of the lever and side plates extending from the edges of the central plate and fitting closely against the sides of the lever and provided with openings adapted to register with the openings in the lever, a plurality of horns of unequal lengths projecting forwardly from the central plate of the head, and a pin inserted through the registering openings in the lever and the side plates of the head.

959,256. SHOE-MACHINE. ADAM HENRY PFENNEL, Halifax, Pa. Filed July 9, 1909. Serial No. 506,698.



1. A device for recessing shoe parts, comprising a stand, a rotary cutter carried by said stand, a reciprocating supporting plate for holding the parts to be recessed, a clamp carried by said plate and a movable retaining member arranged to move toward and away from said clamp for holding a portion of said shoe part and for gaging the extent of the recess.

2. A device for recessing shoe parts comprising a stand, a rotary cutter carried by said stand, a slidable frame, a plate pivoted in said frame, means for securing the shoe part upon said plate and means for causing the reciprocation of said frame and plate.

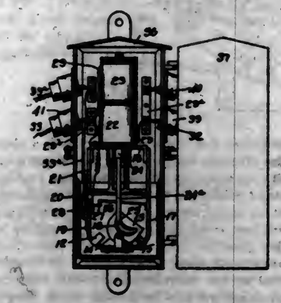
3. A device for recessing shoe parts, comprising a stand, a rotary cutter carried by said stand, a slidable frame, a plate pivoted in said frame, means for swinging the plate on its pivots and for retaining it in its shifted position, means for raising the plate and its pivots and means for reciprocating the plate.

4. In a device for recessing shoe parts, a base portion, a run-way, a slidable frame mounted therein, a pivoted plate carried by said slidable frame, a gage mounted on said pivoted plate, means for adjusting said gage to a predetermined position, means for raising either end of the plate, and means for reciprocating the plate.

5. In a device for recessing shoe parts, a base portion, a run-way mounted thereon, a slidable frame disposed in said run-way, a pivoted plate carried by said slidable frame arranged to be tilted at various angles, a gage carried by said plate and constituting a stop for the shoe part, a clamp carried by said plate for holding the shoe part in position, a series of rotary cutters and means for causing the engagement of the shoe part with said cutters.

[Claims 6 and 7 not printed in the Gazette.]

959,257. ELECTRICALLY-ACTUATED SWITCH. FREDERICK G. PROUTT, Memphis, Tenn. Original application filed Sept. 13, 1904, Serial No. 224,814. Divided and this application filed Nov. 30, 1908. Serial No. 465,067.



1. An electrically operated switch comprising a switch blade pivoted below its center of gravity and provided with an arcuate slot above the point at which it is pivoted, a solenoid, and a core actuated by said solenoid and working in the arcuate slot of the switch blade.

2. An electrically operated switch comprising a switch blade pivoted below its center of gravity and having an arcuate slot extending on both sides above the pivot of the blade, and electrically operated means engaging with the walls of said slot.

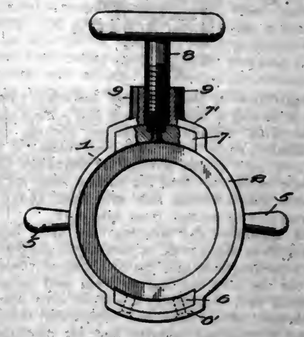
3. An electrically operated switch comprising a pivoted switch blade having an arcuate slot extending on both sides of its pivot, a solenoid, a movable core actuated by the solenoid and operatively engaging the arcuate slot of the switch blade, and an electro-magnet above said solenoid and provided with a stationary core for holding the core in a raised position.

4. An electrically operated switch comprising a switch blade pivoted adjacent to its lower edge and having an arcuate slot extending on both sides of its pivot above the same, a solenoid, a core operatively connected with said solenoid and engaging the arcuate slot of the switch blade, an electro-magnet in series with the solenoid for holding the core in a raised position, and means for automatically short circuiting the electro-magnet when the core is released by the magnet.

5. A switch comprising a switch blade having an arcuate slot, a solenoid, a core having a pivoted section working in the slot, raised by the solenoid and lowered by gravity, an electro-magnet in series with said solenoid for holding the core in a raised position, and connections through which the solenoid may be energized independently of the magnet.

[Claim 6 not printed in the Gazette.]

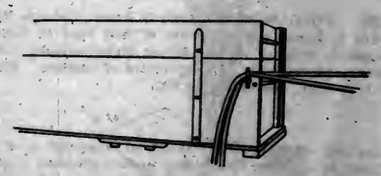
959,258. FIRE-HYDRANT COUPLING. EDWARD W. PURVES, Chicago, Ill. Filed Dec. 7, 1909. Serial No. 531,788.



1. In a fire-hydrant coupling, an annular casing, an adjustable exteriorly threaded nozzle secured in one end of the annular casing, offsets forming interior recesses in the opposite end of the casing, a segmental threaded section detachably secured in one recess and a radially adjustable segmental threaded section seated in the other recess.

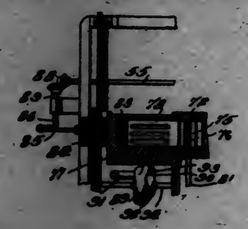
2. In a fire-hydrant coupling, an annular casing, a pair of diametrically opposite offsets forming a pair of interiorly opening recesses in one end of the annular casing, a detachable segmental threaded locking section seated in one recess, a radially adjustable segmental threaded locking section seated in the opposite recess, interior threads found in the opposite end of the casing, a gasket seated in the intermediate portion of the casing, a nozzle adjustable in the threaded end of the casing and adapted to be forced against the gasket and move the same laterally in the casing.

959,259. REIN-HOLDER. ERNEST P. RASMUSSEN, Denmark, Nebr. Filed Dec. 2, 1908. Serial No. 465,709.



In a device for the purpose set forth, a plate having its edges provided with integrally formed offset ears, a second plate having its lower portion bent at an angle from its body and the extremity of the said bent portion provided with integrally formed offset ears, the ears of both of the members being provided with alined openings, a pintle connecting the openings of the ears, a spring member wound around the pintle having one of its ends contacting the first plate and its opposite end contacting the straightened portion of the second plate, and the second plate having its upper portion extending above the first plate and offset substantially as and for the purpose set forth.

959,260. CLEANER AND SEPARATOR FOR SHELLED CORN. DICKSON B. RAWORTH, Brownsville, Tenn. Filed Dec. 18, 1909. Serial No. 533,904.



1. An apparatus of the character described comprising a receptacle having a screen bottom and a duct communicating therewith through said screen bottom, corn ear outlet communicating with said receptacle, a plunger movable over said screen bottom to discharge the corn ear into said outlet and free the shelled corn for passage through said screen bottom into said duct, and a shelled corn delivery device leading from said duct.

2. In an apparatus for treating corn after separation of the ears from the stalks, a receptacle adapted to receive the separated ears and the corn shelled therefrom, a conveyer for the corn ear leading from said receptacle, a screen within said receptacle, a shelled corn discharging device communicating with the receptacle through the screen, and a combined agitator and ear discharging device movable in said receptacle above the screen.

3. An apparatus of the character described comprising a receptacle for ears of corn and grains shelled therefrom, said receptacle having a screen bottom and a duct communicating therewith through said screen bottom, a corn ear conveyer leading from said receptacle, a plunger movable within the receptacle for forcing the ears of corn to said conveyer and to free the shelled corn to permit the same to drop through the screen bottom into the duct, and a suction device communicating with the duct for the discharge of the shelled corn.

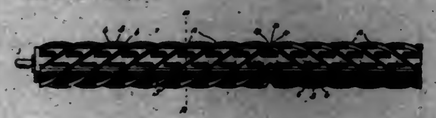
4. An apparatus of the character described comprising a receptacle for ear and shelled corn, said receptacle being provided with a screen bottom and a duct communicating therewith through said screen bottom, a corn ear conveyer communicating with the receptacle, a plunger movable within the receptacle for feeding the corn ear to said conveyer and freeing the shelled corn for discharge through said screen bottom into said duct, means for delivering a blast of air through the screen bottom for loosening up the mass within the receptacle, and a shelled corn discharge device leading from the duct.

959,261. FOLDING BOX. JOHN G. REBER, Chicago, Ill.; Olive S. Reber, administratrix of said John G. Reber, deceased, assignor to The Sefton Manufacturing Company, Anderson, Ind., a Corporation of Indiana. Filed Nov. 9, 1901. Serial No. 81,703.



A box blank having a bottom and sides two of which have extension flaps 14 and one of which has an extension 12, all adapted to fold over upon the contents of the box, a strip connected with said blank and adapted when the blank is folded into box form to rest adjacent the bottom and two opposite sides, said strip having pasting flaps at its opposite ends pasted to the blank adjacent said extension flaps; substantially as described.

959,262. ROLLER FOR HIDE-UNHAIRING MACHINES. HARALD B. RUSS, Asheville, N. C. Filed Sept. 16, 1909. Serial No. 518,111.

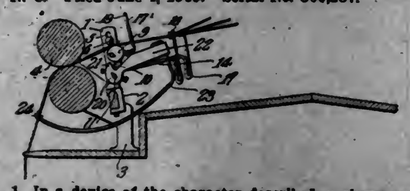


1. A cylinder for a hide unhairing machine comprising helically arranged metal spreading blades and a series of longitudinally arranged working blades, said longitudinally arranged working blades being constructed of a composition of stone and staggered over the periphery of the roller, substantially as described.

2. A cylinder for a hide-unhairing machine comprising helically arranged steel spreading blades and longitudinally arranged stone working blades, said longitudinally arranged stone working blades being staggered over the periphery of the cylinder.

3. A roller for a hide-unhairing machine comprising helically spreading blades and longitudinally arranged stone working blades, said longitudinally arranged stone working blades being staggered over the periphery of the cylinder.

959,263. STOP-MOTION FOR DOUBLING AND TWISTING MACHINES. ROBERT S. REINHARDT, Lincolnton, N. C. Filed June 4, 1909. Serial No. 500,237.



1. In a device of the character described, a clamp common to all the strands, single clamp operating means individual to and controlled by the strands, and another clamp operating means controlled by the strands collectively.

2. In a device of the character described, a single engaging means common to all the strands and tending normally to the inactive position, creel drop wires individual to and controlled by the strands, and a front preventive guide wire controlled by the strands collectively, said creel drop wires and the front guide wire acting, when released from the control of the strands, to move the common engaging means to active position, each independently of the others.

3. In a device of the character described, a clamp common to all the strands and tending normally to the inactive position, creel drop wires each held by a strand in inactive position and each, when released from the control of the strand, engaging the clamp and moving it to active position to all the strands, and a front preventive guide wire held in inactive position by all the strands collectively and movable when released to actuate the clamp to active position.

4. In a device of the character described, a normally fixed member, a cam movable into and out of operative relation to the normally fixed member and normally tending to inactive position, members individually active to the cam and each carrying a creel drop wire, another member active to the cam and a front preventive guide wire carried by said last named member.

5. In a device of the character described, a suitable support, a cam member mounted thereon and having a normal tendency to inactive position, a pin coacting with the cam member to constitute a clamp and adjustable to and from said cam member, and creel wires individually movable into engagement with the cam member to move the latter to active position with relation to the pin, said creel wires being adapted to be under the normal control of the strands to be twisted.

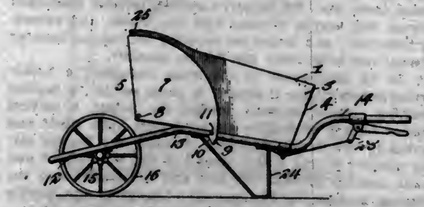
[Claim 6 not printed in the Gazette.]

959,264. DOOR-FITTING VISE. CHARLEY E. ROSS, Canistota, S. D. Filed May 14, 1909. Serial No. 495,924.



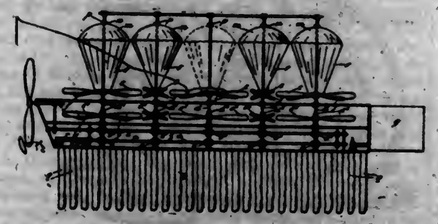
In a door clamp, a body having a vertical groove, spaced projecting threaded elements upon the body adjacent one of the vertical walls provided by the groove, a plate connected with the bottom of the body and projecting beyond face of the body, said plate being provided with a spur positioned central of the vertical groove, a clamping plate having its lower edge resting upon the body portion of the plate and of a length equaling the height of the body, said clamping plate being provided with longitudinal slots adapted to engage the threaded elements of the body, removable securing elements for the threaded elements, a back hingedly connected to the rear face of the body member and adapted to swing at an angle to the body, and means for locking the back in its swung position.

959,265. DUMPING-BARROW. LEON M. SCHOONMAKER, Long Island City, N. Y. Filed Nov. 10, 1909. Serial No. 527,254.



A wheel barrow including a body, a section movably connected to the body, and including one of the body walls, a locking ear depending from the section, a spring locking rod carried by the body, and normally tensioned to terminally engage the ear and lock the section in body-completing position, and manually operable means whereby the rod may be operated to force the ear engaging end from locking engagement with said ear and thereby free the section.

959,266. AERIAL SHIP. FREDERICK W. SCHROEDER, Kennington, London, England. Filed Nov. 4, 1909. Serial No. 526,242.



1. In an air ship, a plurality of shafts having lifting propellers or helicopters arranged in coaxial and oppositely rotating pairs thereon, auxiliary lifting vanes lying below and across the main blades of the helicopters at a slight angle and connected therewith, and means for rotating each helicopter in a direction opposite to adjacent helicopters.

2. In an air ship, a plurality of lifting propellers or helicopters arranged in coaxial and oppositely rotating pairs, auxiliary lifting vanes lying below and across the main blades of the helicopters at a slight angle, ties connecting the main blades of the helicopters with the auxiliary vanes to prevent them from bending, and means for rotating each helicopter in a direction opposite to adjacent helicopters.

3. In an air ship, a plurality of lifting propellers or helicopters arranged in upper and lower positions and in coaxial and oppositely rotating pairs, means for operating the helicopters, and a series of parachutes normally collapsed and resting upon the upper surfaces of the upper helicopters and adapted to expand automatically when the ship acquires any considerable downward velocity.

4. In an air ship of the character specified, a frame, a plurality of lifting propellers or helicopters arranged in coaxial and oppositely rotating pairs on the frame, means for operating each helicopter to rotate the same in a direction opposite to adjacent helicopters, and a series of vertically disposed gas bags carried below the frame of the ship.

5. In an air ship of the class specified, the combination of a frame, a longitudinal row of vertical shafts arranged on the frame, upper and lower lifting propellers or helicopters arranged in coaxial and oppositely rotating pairs, means for rotating each helicopter in a direction opposite to adjacent helicopters, auxiliary lifting vanes lying below and across the main blades of the helicopters at a slight angle and connected to said blades, a series of parachutes normally collapsed and resting upon the upper surfaces of the uppermost helicopters and adapted to expand automatically when the ship acquires any considerable downward velocity, and a series of vertically disposed gas bags carried below the frame of the ship.

959,267. AUTOMATIC LUBRICATOR. JOHN WILLIAM SHAFER, Chicago, Ill., assignor of one-half to Frank Young, Chicago, Ill. Filed Feb. 4, 1909. Serial No. 476,075.

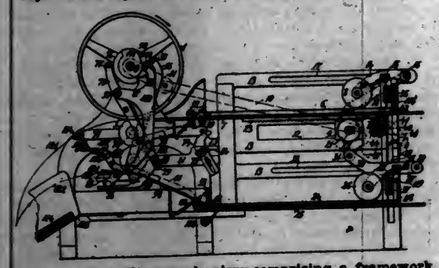


1. A lubricator for piston cylinders or the like comprising a reservoir having a discharge opening, an attaching and feeding nipple having a bore and a valve within an enlarged transfer chamber, said chamber being located intermediate the discharge opening and the nipple, said valve seating alternately to close the bore of the nipple and the discharge opening of the reservoir; said discharge opening and the seat for the valve that closes it being formed in a neck projecting into the transfer chamber and leaving a surrounding space.

2. A lubricator comprising a shell providing a reservoir, a neck depending from said shell and having an outlet opening, the lower end of said neck being concave to provide a valve seat, a depending throat formed integral with said shell and providing a lubricant transferring chamber,

said neck portion located within said chamber, a nipple detachably secured to said throat and communicating with the transferring chamber, a semi-spherical valve mounted on a stem and operable within said transferring chamber whereby to alternately close the neck and nipple openings, the spherical face of said valve adapted to seat within the concave face of the neck portion, and a spring seated within the reservoir and surrounding the valve stem and operating to normally seat the valve on said concave face.

959,268. STENCILING-MACHINE. JACOB SOKOLOV, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 9, 1908. Serial No. 452,330.



1. A sheet-feeding mechanism comprising a framework, a reciprocating carriage guided upon the framework, a pair of racks fixed upon the framework at the ends of the carriage, a pair of pinions meshing with said racks, a shaft upon which said pinions are fixed, said shaft journaled upon said carriage, and upper and lower sheet-feeding rolls attached to said carriage to run respectively upon upper and lower piles of sheets.

2. A sheet-feeding mechanism comprising a framework, a reciprocating carriage guided upon the framework, a pair of racks fixed upon the framework at the ends of the carriage, a pair of pinions meshing with said racks, a shaft upon which said pinions are fixed, said shaft journaled upon said carriage, upper and lower sheet-feeding rolls attached to said carriage to run respectively upon upper and lower piles of sheets, a power-driven shaft having a crank, and a link connecting said crank to said carriage.

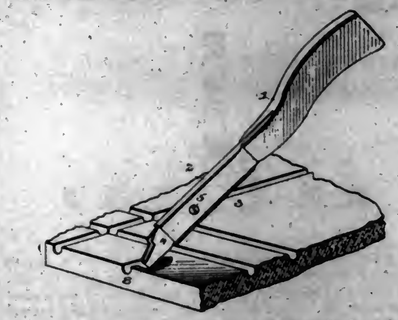
3. A sheet-feeding mechanism comprising a framework, a reciprocating carriage guided upon the framework, a pair of racks fixed upon the framework at the ends of the carriage, a pair of pinions meshing with said racks, a shaft upon which said pinions are fixed, said shaft journaled upon said carriage, upper and lower sheet-feeding rolls attached to said carriage to run respectively upon upper and lower piles of sheets, and means connected only to one end of the carriage for driving the same.

4. In a sheet-feeding mechanism, the combination with a sheet-feeding roller carriage, of an actuator in the path of a part of said carriage to be engaged thereby at the final portion of the feeding movement of the carriage, a pawl driven by said actuator, a ratchet operated by said pawl, paper-pile clamps lifted by the ratchet from upper and lower piles of sheets, and means for tripping the pawl from the ratchet during the return stroke of said actuator at the initial portion of the advance movement of said carriage.

5. A stenciling or printing machine having a stencil cylinder and means coöperating therewith to deliver the sheets as they are stenciled or printed upon, and an interleaving sheet-feeding mechanism upon the introductory side of the machine and including a table to receive the pile, a pair of feeding rolls, and means to advance the sheets to said rolls, the interleaving mechanism being constructed, arranged and timed to carry the sheets past the stencil cylinder to the delivery side thereof to alternate with the sheets delivered by the stenciling or printing machine.

[Claims 6 to 66 not printed in the Gazette.]

959,269. TILE-MARKER. WILLIAM H. STARR, Denver, Colo. Filed June 30, 1909. Serial No. 505,278.



1. In an instrument of the class described, a holder formed substantially U-shaped in cross section, a cutting member fitted into the holder and extending therefrom in the form of a loop, a binding member carried by the holder and engaging the cutting member, and means for securing the cutting member in engagement with the holder and the binding member.

2. In an instrument of the class described, a holder having flanges turned substantially at right angles to the main body portion, a cutting member positioned on the holder between the flanges and extending from the end thereof in the form of a loop, and means for securing the cutting member to the holder.

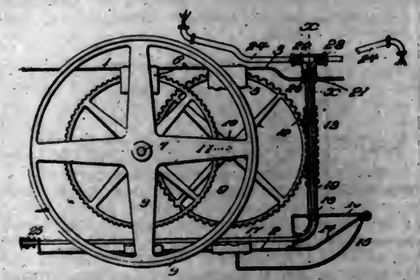
3. In an instrument of the class described, a holder provided at its end with a flexible clamping member spaced apart from the holder, a cutting member positioned between the flexible member and the holder, and extending therefrom, and means for securing the cutting member between the holder and the flexible member.

4. In an instrument of the class described, a holder formed substantially U-shaped in cross section, a flexible clamping member movable toward the holder, a cutting member formed of flexible material bent upon itself and carried by the flexible clamping member, the flexible cutting member having a slot formed in the end thereof and means passing through the slot and the holder and the clamping member for the purpose of securing the flexible clamping member and the cutting member to the holder.

5. In an instrument of the class described, a holder, and a cutting member secured thereto, said cutting member comprising a bifurcated rear end, a beveled front end having an offset arranged in the bevel, and a cutting point formed for cutting a predetermined shaped groove.

[Claim 6 not printed in the Gazette.]

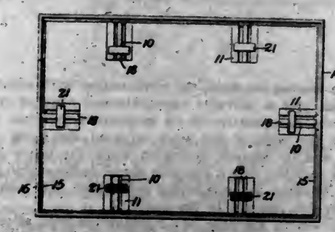
959,270. LAWN-SPRINKLER. JAMES B. STEELE, Pentwater, Mich. Filed Sept. 14, 1909. Serial No. 517,738.



1. In a lawn sprinkler, the combination with a frame, a shaft, traction wheels on the shaft, a revolving sprinkler, a vertically disposed feed water pipe connected to the revolving sprinkler, having a flange and a cap which engage the opposite sides of a part of the frame to hold said vertically disposed pipe in position, a stationary coupling mounted on the frame, and on which the vertically disposed feed water pipe is mounted, a water inlet pipe connecting with the coupling, a worm on the vertically disposed feed water pipe, a counter shaft between the worm and the first mentioned shaft, a worm gear on the counter shaft which meshes with the worm, a pinion on the counter shaft, and a gear on the first mentioned shaft which engages the pinion, the action of the water passing through the sprinkler imparting motion through the gearing to the traction wheels.

2. In a lawn sprinkler, the combination, of a main frame including a runner to support the front of the frame, a shaft, wheels on the shaft to support the frame back of the runner, a supplemental frame on the main frame, a feed water inlet pipe mounted on said supplemental frame and extending above the latter to provide a bearing, a vertical pipe mounted on said bearing and provided at its upper end with a flange which seats against the under side of the main frame, a cap member secured to the upper end of the vertical pipe and overlying the main frame, the said cap member and flange retaining the vertical pipe on the bearing, a plurality of pipes extending from the cap member, a worm gear on the vertical pipe, a gear on the shaft, and gears between the gear on the shaft and the worm on the vertical pipe.

959,271. STEREOTYPE-BLOCK. ARTHUR O. TAYLOR, Brooklyn, N. Y. Filed May 25, 1909. Serial No. 498,308.



1. A stereotype block provided with a recess, a slotted plate secured to the block opposite said recess, a jaw arranged to operate in the slot of the plate and provided with a pendent stem in which an opening is formed, a shaft journaled in opposite walls of the recess and passed through the opening in the stem of the jaw and provided with a cam portion extending substantially the entire length thereof, means for turning said shaft, and coöperative means between the shaft, jaw, and plate to cause a binding of the jaw upon the slotted plate to hold the jaw in the adjusted position.

2. A stereotype block provided with a recess, a slotted plate secured to the block opposite the recess, a jaw slidably mounted in said slotted plate and having a pendent stem formed with an opening, a shaft journaled at its ends in opposite walls of the recess and passing through the opening of the stem of the jaw and having a cam portion extending substantially the entire length thereof, coöperative means between the shaft, jaw, and plate to cause a binding of the jaw upon said plate, a lever fitted to the outer end of the shaft, and a strip secured to the block and spaced therefrom to receive said lever after the same has been operated to effect securance of the jaw in the adjusted position.

3. In combination a stereotype block provided with a recess, a slotted plate arranged opposite the recess and provided with pendent members entering said recess and forming walls thereof, a jaw mounted in the slotted plate and having notches in opposite sides to receive the edge portions of the plate bordering upon the slot, and having a pendent stem formed with an opening, a shaft journaled in the pendent portions of the slotted plate and passing through the opening of the stem of the jaw and formed with a cam portion extending approximately the entire length thereof, means for turning said shaft, and coöperative means between the shaft, jaw, and plate to hold the jaw in the adjusted position.

4. In a stereotype block, the combination with a block having lateral recesses, of slotted plates covering the recesses, jaws adjustable along the upper sides of the plates and serrated on their under sides, slotted stems depending from the jaws, loose collars on the stems and impinging the lower sides of the plate, shafts having a flattened side and playing in the slots of the stems to cause the jaws and the collars to grip the opposite sides of the plates and levers at the ends of the shafts to turn same.

5. In combination a stereotype block having a recess, a slotted plate secured to the block over the recess thereof and having pendent members entering the recess, the inner member having a projecting portion extending into the inner wall of the recess near the bottom thereof, a jaw mounted in the slotted plate and having notches in opposite sides to receive the inner edge portions of the slotted plate bordering upon the slot thereof and having a pendent stem formed with an opening, a cam shaft journaled in the pendent portions of the slotted plate and passing through the opening in the stem of the jaw, a collar mounted upon the stem of the jaw between the slotted plate and cam shaft, spaced strips secured to an edge of the block, the inner plate having the outer end of said cam shaft journaled therein, and a lever fitted to the projecting end of the cam shaft and adapted to lie in the space formed between said spaced plates.

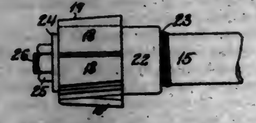
959,272. CIGAR-CLIPPER ATTACHMENT FOR PENCILS. JOSIAH CHARLES THORNE, Napa Junction, Cal., assignor of four-tenths to Samuel A. Clarke, Napa Junction, Cal. Filed Apr. 13, 1909. Serial No. 489,584.



1. The herein described pencil attachment comprising a sleeve to fit on a pencil, a ledger plate at the outer end and extending across the center of said sleeve, said ledger plate having an opening, a cutter plate pivotally mounted on said ledger plate and having a cutting edge to move across the opening of the ledger plate, said sleeve having a guide notch in its outer end at the inner end of said ledger plate, said cutter plate operating in said notch, said notch operating to keep the cutter plate in contact with the ledger plate.

2. The herein described pencil attachment comprising a sleeve to fit on a pencil, a ledger plate at the outer end and extending across the center of said sleeve, said ledger plate having an opening, a cutter plate pivotally mounted on said ledger plate and having a cutting edge to move across the opening of the ledger plate, said sleeve having a guide notch in its outer end at the inner end of the said ledger plate, said cutter plate operating in said notch, said notch operating to keep the cutter plate in contact with the ledger plate, said cutter plate having a thumb piece at its inner side, bearing against one side of the sleeve when the cutter plate is in closed position.

959,273. ADJUSTABLE REAMER. WILLIAM TURNEY, Hyde Park, Mass. Filed Jan. 22, 1909. Serial No. 473,764.

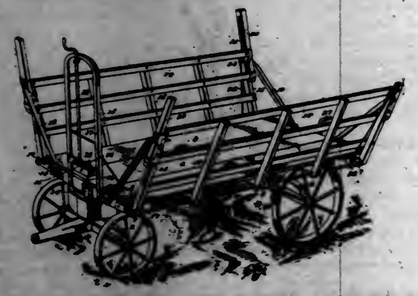


1. A reamer comprising a shank, a pair of cutting members each formed to embrace opposite sides of the shank, complemental tongues and grooves in the shank and cutting members adapted to secure opposite portions of each cutting member to opposite sides of the shank and prevent radial displacement of the cutting members, said complemental portions being equally inclined with relation to the axis of the shank, and means for securing the cutting members against movement in line with the grooves.

2. A reamer comprising a shank, a pair of cutting members each formed to embrace opposite sides of the shank, and complemental tongues and grooves connecting opposite portions of each cutting member with opposite sides of the shank, said tongues being adjustable and adapted to bind in the grooves and prevent endwise and radial displacement of the cutting members, and said grooves being equally convergent to the axis of the shank.

3. A reamer comprising a shank formed with converging grooves on each of two opposite sides, a pair of cutting members each adapted to embrace two opposed grooved portions of the shank, and screw-threaded tongues oppositely disposed in the cutting members adapted to extend into the grooves so as to bind the cutting members on the shank.

959,274. HAY-RACK. JACOB VOLL, Yankton, S. D., and DANIEL DRINGMAN, Sutherland, Nebr. Filed July 1, 1908. Serial No. 441,506.



1. The combination with a vehicle body including a platform and sides pivotally connected to the platform and movable above and below the same, of extension members carried by the respective sides and movable substantially in the planes thereof beyond the swinging ends of the same, whereby to elevate the body in the lowered position of the sides.

2. The combination with a vehicle body, of rigid extension members carried by and movably connected to the vehicle body and movable downwardly below the same to elevate said body, and a winch mounted on the body and operatively connected to the extension members to move the same relatively to the body.

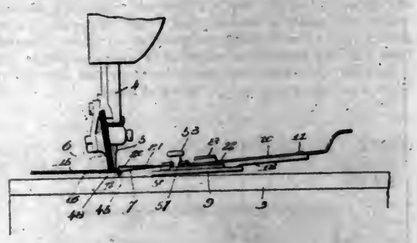
3. The combination with a running gear and a vehicle body having sides adapted to be moved downwardly, of extension members slidingly connected to the sides, sheaves mounted in the sides, ropes secured at one end to the extension members and passing around the sheaves, drums to which the other ends of the ropes are secured, and a shaft journaled in the body and upon which the drums are mounted.

4. The combination with the body of a vehicle, of extension members connected thereto for vertically sliding movement, and a winch connected to the extension members for positively moving the same relative to the body to elevate the latter.

5. The combination with a vehicle body, of standards pivotally connected thereto and movable to substantially vertical position below the same, extension members connected to the standards and movable beyond the same and in alinement therewith, and actuating means for projecting the extension members downwardly beyond said standards to elevate the vehicle body.

[Claims 6 to 14 not printed in the Gazette.]

959,275. EDGE-TRIMMER ATTACHMENT FOR SEWING-MACHINES. ALFRED B. WALES, Whitman, Mass., assignor to B. Fleigel Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 24, 1909. Serial No. 491,932.



1. In a sewing machine, the combination with stitching mechanism and a movable edge trimmer adapted to be moved from its operative to its inoperative position, of a guide for the edge of the work situated above the edge trimmer and in contact therewith when the latter is in operative position, and a resilient shank independent from the edge trimmer for supporting said guide, said trimmer being movable relative to the guide.

2. In a sewing machine, the combination with stitching mechanism and a movable edge trimmer, of a resiliently-supported guide for the edge of the work situated above and in contact with the trimmer when the latter is in its operative position, said guide being supported independently from the trimmer and operating to guide the work when the trimmer is in its inoperative position.

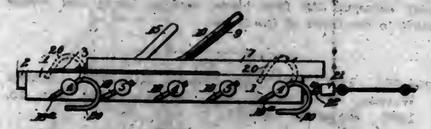
3. In a sewing machine for sewing together two layers of material, the combination with stitching mechanism including a needle and an under-edge trimmer adapted to trim the edge of the under layer at a point opposite the needle, of a resiliently-supported guide for the edge of the upper layer situated above and in contact with the trimmer when the latter is in operative position.

4. In a sewing machine for sewing together two layers of material, the combination with stitching mechanism including a needle and an under-edge trimmer arranged to trim the edge of the under layer at a point opposite said needle and movable from its operative to its inoperative position, of a guide for the upper edge of the work resiliently supported independently from the trimmer and adapted to engage said edge of the work whether the trimmer is in its operative or its inoperative position.

5. In a sewing machine, the combination with stitching mechanism including a needle, of an under-edge trimmer for trimming the edge of the under piece of the two pieces being sewed together, of a guide for the edge of the upper piece situated above and in contact with the trimmer when the latter is in operative position, and means to resiliently support said guide whereby when the trimmer is swung into its inoperative position the guide will assume a proper position to guide the edge of the work.

[Claim 6 not printed in the Gazette.]

959,276. HARROW. WILLIAM D. WALTON, Covington, Tenn., assignor of one-half to Richard B. Shoaf, Covington, Tenn. Filed July 3, 1909. Serial No. 505,909.



1. In a harrow, the combination, with tooth-carrying bars, and means to actuate said bars to bring their teeth into or out of operative position, of hook-shaped rods carried by said bars for supporting the harrow above the ground when the teeth are in inoperative position, said hook-shaped rods being mounted to turn in their bearings in said bars whereby they may be turned up out of the way when desired for the purpose specified.

2. In a harrow, the combination, with tooth-carrying bars, and means to actuate said bars to bring their teeth into or out of operative position, of hook-shaped rods carried by said bars for supporting the harrow above the ground when the teeth are in inoperative position, said hook-shaped rods being made integral with the teeth located nearest the extremities of said bars.

959,277. CARPET-FASTENER. HENRY WEINSTOCK, Marietta, Ohio. Filed June 22, 1909. Serial No. 503,657.



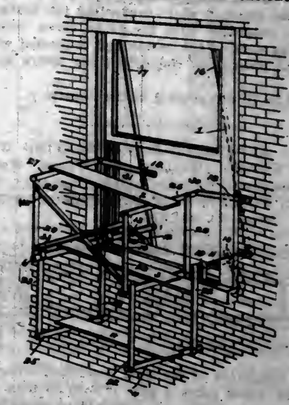
1. A carpet fastener comprising a base plate provided with retaining pins on its upper side, and a U-shaped clamping member having parallel arms formed integral with its base, the upper arm being adapted to pass over the carpet and the lower arm being adapted to pass under the carpet and be held by the base plate.

2. In a fastener of the class described, the combination of a base plate having a pair of upwardly bent ears at one extremity, a leaf spring secured to the other extremity thereof, carpet-securing pins on the base plate, a U-shaped carpet clamping member having its shoulder or base portion pivoted between the ears on the base plate and having the end of its lower arm projecting under and slidably connected to said leaf spring.

3. In a fastener of the class described, the combination with a base plate having upwardly projecting ears at one longitudinal extremity thereof and a leaf spring secured to the opposite end, of a pair of downwardly projecting fabric engaging hooks on its lower surface, retaining pins on its upper side and a U-shaped fabric clamping member pivoted between said ears and adapted to be held in its engaging position by means of said leaf spring, said spring being operated by the reciprocation of the clamping member in such a way that it disengages the fabric from the pins carried on the base plate when the clamping member is lifted.

959,278. SCAFFOLDING. WILLIE WELLS, Lake Charles, La. Filed Sept. 8, 1909. Serial No. 516,710.

1. In a device of the character described, a pair of supporting arms, a hook for each of said arms engaging the inner part of the window frame to which the device is attached, a brace associated with said arms engaging the top and bottom of the framework of said window for bracing said arms, a movable platform mounted on the outer end of said arms, a plurality of hook shaped members engaging said arms and depending therefrom, means for bracing said depending hook members, a platform movably mounted on said last mentioned bracing means, pivotally mounted upstanding braces projecting from said arms, connecting bars for connecting each pair of said upstanding members, a platform mounted on said connecting bars, and means for adjustably connecting each of said connecting bars with said first mentioned brace.



2. In a device of the character described, a pair of supporting arms, hooks for holding the same in position, a platform mounted on said arms, upstanding members extending from said arms, cross bars connecting said upstanding members, a platform mounted on said connecting bars and arranged in vertical alinement with said first mentioned platform, depending members extending from said arms, means for connecting a platform to said depending members, said last mentioned platform being in vertical alinement with the first two mentioned platforms.

959,279. AUTOMATIC VEHICLE-BRAKE. GEORGE W. WHITCOMB, Duff, Nebr. Filed Jan. 14, 1909. Serial No. 472,303.



1. An automatic vehicle brake including a reciprocatory weight, opposite plungers arranged in the path of the weight, a brake shoe, and means connected with the plungers and with the brake shoe for moving the latter into and out of engagement with the wheel.

2. An automatic vehicle brake comprising a tubular casing, a reciprocatory weight guided by the casing, opposite plungers arranged to be actuated by the weight, a brake shoe, and means connected with the plungers for moving the brake shoe into and out of engagement with the wheel.

3. An automatic vehicle brake comprising a tubular casing, heads arranged at the ends of the casing, plungers operating in the casing and having stems extending through the said heads, levers fulcrumed at the ends of the casing and connected with the plungers, a brake shoe, a weight slidable in the casing for actuating the plungers, and means connected with the levers for moving the brake shoe into and out of engagement with the wheel.

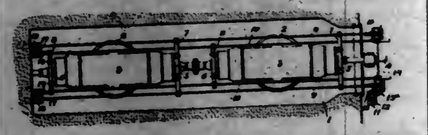
4. An automatic vehicle brake comprising an inclined casing designed to be mounted on a vehicle, plungers operating at the ends of the casing, a reciprocatory weight guided in the casing and arranged to actuate the plungers,

opposite brake shoes, a shaft connecting the brake shoes, an arm also connected with the brake shoes, and means for connecting the arm with the said plungers.

5. An automatic vehicle brake comprising an inclined casing designed to be mounted on a vehicle, plungers operating at the ends of the casing, a reciprocatory weight guided in the casing and arranged to actuate the plungers, opposite brake shoes, a shaft connecting the brake shoes, an arm also connected with the brake shoes, levers fulcrumed at the ends of the casing and connected with the plungers, and means for connecting the levers with the said arm.

[Claims 6 to 10 not printed in the Gazette.]

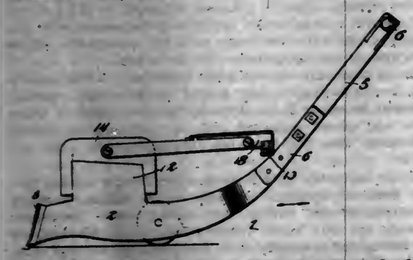
959,280. APPARATUS FOR OPERATING WATER-WHEEL GATES. WILLIAM W. WHITE, Worcester, Mass., assignor to Holyoke Machine Company, Worcester, Mass., a Corporation of Massachusetts. Filed May 7, 1908. Serial No. 431,516.



1. In an apparatus of the class described, the combination of water wheel gates, a pair of rods on both sides of said water wheel operatively connected to open and close said gates, means at one end of said rods arranged to move said rods simultaneously in opposite directions, and a pinion interposed between and in engagement with the other end of said rods beyond said water wheel gates, whereby the motion of the end of one rod in one direction is transmitted to the end of the other rod in the other direction.

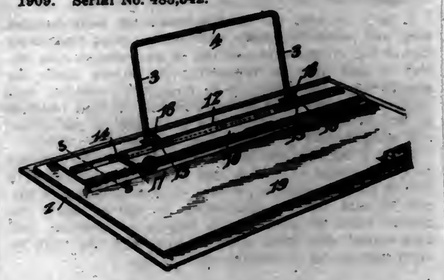
2. In an apparatus of the class described, the combination of a series of water wheels provided with gates, a pair of horizontal rods on both sides of said water wheels operatively connected to open and close said gates, means at one end of said rods arranged to move the rods of each pair simultaneously in opposite directions, and a vertical shaft provided with a pinion between the opposite ends of each pair of rods beyond said series of water wheels, with said opposite ends in engagement with opposite sides of said pinion, whereby the motion of the end of one rod of each pair in one direction is transmitted to the end of the other rod of the same pair in the other direction.

959,281. FLOOR-SURFACING DEVICE. CHARLES W. WILEY, Winterport, Me., assignor of three-fifths to Ralph L. Wiley, Springville, N. Y. Filed June 5, 1908. Serial No. 436,982.



In a floor scraping device, a frame constructed of a single casting comprising a front provided with parallel sides, said sides having upwardly extending rectangular portions, the sides diverging rearwardly and upwardly from the rectangular projections and joined to form a handle receiving member, rectangular projections formed with shoulders upon their adjacent faces, a weight box adapted to rest upon the shoulders, a wedge plate upon the front of the frame, a scraper blade upon the wedge plate, a face plate upon the blade, and means for removably securing the face blade, scraper blade and wedge plate to the front of the frame.

959,282. DOCUMENT FILE AND HOLDER. JOSEPH WILSON, Christchurch, New Zealand. Filed Mar. 15, 1909. Serial No. 483,642.



1. In a filing device, the combination of a base having a pocket, a standard mounted thereon and having a laterally-extending member at its lower end engaging in the pocket, a clamping plate movable along the standard and coöperating with the base for holding leaves or the like, a cam clamping means on the plate arranged to engage the standard, and serrations on the standard coöperating with the clamping means for holding the plate in clamped position.

2. In a filing device, the combination of a base, a standard rising therefrom, a plate having an aperture through which the standard extends for permitting the plate to be adjusted toward and away from the base to hold loose leaves or the like, a clamping device mounted on the plate to engage the standard, and a swinging handle connected with the device and arranged to bear on the plate when the device is in clamping position, said plate forming a stop to limit the locking movement of the handle.

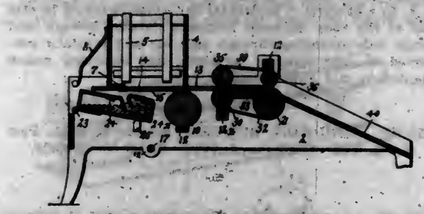
3. In a filing device, the combination of a base, a clamping plate coöperating with the base for holding loose leaves, a standard secured to the base and extending loosely through the plate, a bar on the plate, means on the plate forming bearings for the bar, a cam device mounted on and extending from one side of the bar to engage the standard for clamping the plate in position, and a swinging handle connected with the cam device for operating the same and extending laterally from the side of the bar opposite from the cam device, said handle being arranged to bear on the plate when the device is in clamping position.

4. In a filing device, the combination of a base, a clamping plate coöperating with the base to hold a plurality of loose leaves, a frame comprising a pair of standards secured to the base and connected by a cross bar at the top, said clamping plate being movable on the standards and retained thereon by the base and cross-bar, said cross bar serving to hold the standards rigidly in spaced relation and forming a handle for the device, and clamping means on the blade arranged to engage the standards for holding the plate in position to clamp the leaves between the base and plate.

5. In a filing device, the combination of a base, a plurality of standards thereon, a single plate slidably connected with all the standards and arranged to coöperate with the base for clamping the leaves, and a wire structure carried by the plate and formed with cam portions for engaging the standards and formed with a swinging handle for moving the cam portions into and out of engagement with the standards to hold the plate in clamping position, said plate forming a stop for limiting the locking movement of the handle.

[Claims 6 to 13 not printed in the Gazette.]

959,283. ENVELOP SEALING AND STAMPING MACHINE. EDWARD J. ABBOTT, Mission City, British Columbia, Canada. Filed May 10, 1909. Serial No. 495,018.



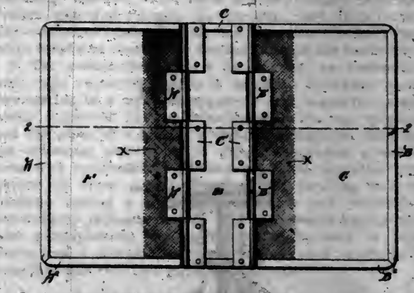
1. As a means for sealing envelops, the combination with an open bottomed envelop receptacle in which the envelops may be horizontally disposed, means for pivotally supporting the envelop holding receptacle toward the back edge of the bottom, a freely rotatable roller on which the opposite edge of the receptacle rests, a plate slidable along the bottom of the receptacle past the free edge which rests upon the roller said plate having a pad of absorbent material on its under side, opposed rollers between which the plate will deliver the bottom envelop removed from the receptacle, means for rotating the opposed rollers, means coöperative therewith for reciprocating the plate, and means for moistening the absorbent pad on the under side of the plate.

2. As a means for sealing envelops, the combination with a pivotally mounted envelop holding receptacle, of a freely rotatable roller supporting the edge of the envelop holding receptacle opposite to that where it is pivotally mounted, a plate slidable beneath the under side of the receptacle that will engage the flap of the bottom envelop in the receptacle and deliver it between the roller and the edge of the receptacle resting on it said plate having a pad of absorbent material on its under side, a water containing vessel pivotally mounted beneath the slidable plate and having at its free end a sponge or other absorbent material, opposed rollers between which the slidable plate will deliver an envelop removed from the receptacle, means for rotating the rollers, means coöperative therewith for reciprocating the plate, and means for lifting the sponge holding end of the water vessel into contact with the absorbent pad of the slidable plate during the backward movement of the same.

3. As a means for sealing envelops, the combination with a pivotally mounted envelop holding receptacle, of a freely rotatable roller supporting the edge of the receptacle opposite to that supported on the pivots, a plate slidable along the bottom of the receptacle which plate will engage the depending flap of the bottom envelop and remove it from the receptacle said plate having a pad of absorbent material on its under side, a water vessel pivotally mounted beneath the plate said vessel having a place for the reception of a sponge or other absorbent material toward its free end, two pair of opposed rollers the line of contact of which is in the plane of movement of the slidable plate each pair of said opposed rollers being movable apart against the resistance of springs, a supporting plate between the lower rollers, means for rotating the rollers, means coöperative therewith for reciprocating the slidable plate, and means for lifting the free end of the water vessel to bring the sponge into contact with the pad of absorbent material on the slidable plate during the backward movement of that plate.

959,284. METALLIC BOOK-COVER. SAMUEL S. ANDREWS and FLOYD TURNER, Fredericktown, Mo.; said Turner assignor to said Andrews. Filed Aug. 22, 1908. Serial No. 449,779.

1. A book cover comprising a pair of metal side pieces having loops, of a back piece provided with loops alining with the loops of the side pieces, pintle pins extending through the loops of the back piece and side pieces, pieces of card board arranged on the inner face of said side pieces and back piece, said pieces of card board being secured thereon by crimping the edges of the back piece and side pieces.



2. As a new article of manufacture, a book cover formed of a pair of metal side pieces provided with loops, a back piece provided with loops alining with the loops of the side pieces, said loops being formed by tongues which are bent back upon the respective pieces and secured by pins, pintle pins extending through the loops of the side pieces and back piece for securing the pieces together, pieces of card board arranged on the inner faces of said back piece and side pieces, said pieces of card board being secured thereon by crimping the edges of the respective pieces and by the tongues of the respective pieces.

3. A metallic book cover formed of sheet metal plates, said cover comprising a flat back piece and flat side pieces provided with loops alining with each other, pins extending through said loops, facings arranged upon the inner faces of said side pieces, said side pieces having their outer edges bent back upon themselves forming retaining grooves for holding the inner facings.

959,285. MOP-WRINGER. SAMUEL THATCHER ATKIN, Georgetown, Tex. Filed Feb. 21, 1910. Serial No. 545,080.



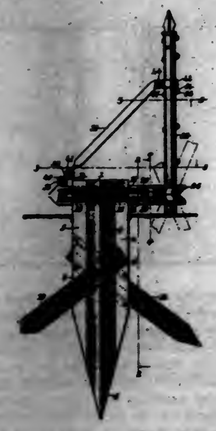
In a mop wringer, a bucket having within it upper and lower bearings spaced apart and a wringing arm within the bucket and substantially below the top thereof and having upper and lower members connected at one end and provided at their other or free ends with trunnion like portions held in the bearings of the bucket whereby the arm may be swung into position for use in the wringing operation or back against the inner face of the bucket, substantially as set forth.

959,286. FENCE-POST AND ANCHORAGE-BASE. PERCY TRIPP BAILEY, Newport, R. I. Filed Dec. 30, 1908, Serial No. 470,068. Renewed Apr. 22, 1910. Serial No. 557,076.

1. An anchorage base, comprising a blade having a longitudinal channel and laterally-extending wings, and a pair of anchorage spikes, one passing through the walls of said channel and the other retained in position by means on said wings.

2. The combination of a tapered anchorage blade having a longitudinal channel and laterally-extending wings,

and a pair of anchorage spikes, one passing through the walls of said channel and the other retained in position by means on said wings.



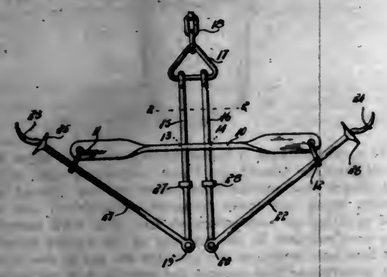
3. An anchorage base, comprising a blade having the upper end thereof bent back upon itself to form a transverse passage, a transversely-extending bar secured within said passage, and a post secured to said bar.

4. In combination, an anchorage blade having a longitudinal channel and laterally-extending wings, the upper end of said blade being bent back upon itself to form a transverse passage, a bar secured within said passage, and a post secured to said bar.

5. In combination, a tapered anchorage blade having a longitudinal channel and laterally-extending wings, a transverse channel adjacent the upper end thereof, a transverse bar secured within said transverse channel, and a post secured to said bar.

[Claims 6 to 13 not printed in the Gazette.]

959,287. GAMBREL. HIRAM BARROWS, Hebron, Ill. Filed Mar. 28, 1910. Serial No. 551,879.



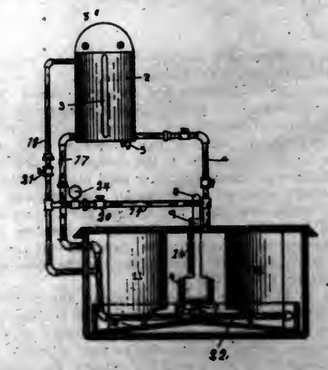
1. In a gambrel, a horizontal bar having guides at the ends, spreader members slidable through said guides, rods extending through said bar and pivotally connected to said spreader members, and elevating means applied to said rods.

2. In a gambrel, a horizontal bar having guides at the ends, spreader members slidable through said guides and formed with terminal spurs, stops upon said spreaders near said spurs, rods extending through said bar and pivotally connected to said spreader members, and elevating means applied to said rods.

3. In a gambrel, a horizontal bar having guides at the ends, spreader members slidable through said guides, rods extending through said bar and pivotally connected to said spreader members, stops upon rods to limit their upward movement, and elevating means applied to said rods.

4. In a gambrel, a horizontal bar, rings swinging in said bar at the ends, spreader members slidable through said rings, rods extending through said bar and pivotally connected to said spreader members, and elevating means applied to said rods.

959,288. CRUDE-OIL BURNER. ROBERT E. BASS, Fort Worth, Tex. Filed Jan. 7, 1910. Serial No. 536,928.



1. A crude oil burner having a converting pan, the central portion of the bottom thereof being raised and the bottom being inclined from said central portion toward the sides for spreading oil, an igniter pivotally mounted above said central portion, deflectors mounted in said pan, and extending up on each side of said igniter, and means for feeding oil to said igniter.

2. A crude oil burner having a converting pan for spreading oil, an igniter pivotally mounted above said pan, a handle attached to said igniter for tilting said igniter to one side or the other, means for holding said handle in different positions, and means for feeding oil to said igniter.

3. A crude oil burner having a converting pan for spreading the oil, deflectors mounted in and resting on the bottom of said pan and having portions thereof cut away adjacent to said pan, an igniter pivotally mounted above said pan between said deflectors, means for holding said igniter at different adjustments, and means for feeding oil to said igniter.

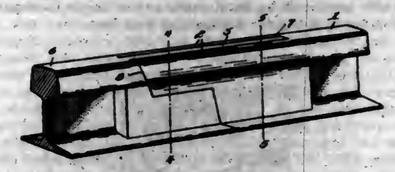
4. A crude oil burner having a converting pan for spreading oil, deflectors mounted in and resting on the bottom of said pan and having the rear sides cut away, an igniter pivotally mounted centrally over said pan between said deflectors, and means for feeding oil to said igniter.

5. In a crude oil burner having a converting pan for spreading oil, deflectors mounted in said pan, an igniter pivotally mounted above said pan between said deflectors, a divided tank for holding oil and water, a pipe connected to said tank and terminating above said igniter for feeding oil to said igniter, water pipes connected to said tank and supported in said pan, a connecting pipe connected with one of said water pipes and with said oil feeding pipe, and cocks controlling the flow of water and steam and oil through said pipes.

959,289. RAILWAY-JOINT. CLARENCE A. BAUDER, Herrin, Ill. Filed Oct. 6, 1909. Serial No. 521,185.

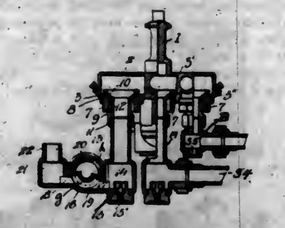
A railway joint comprising a rail having a tongue formed on the free end thereof and projecting therefrom, said tongue having oppositely located inclined walls, an enlarged portion forming a part of said rail and located below the tread portion of the rail and having grooves

formed in the upper surface of said enlarged portion adjacent to the oppositely inclined walls of said tongue, a second rail, the uniting end of which is forked providing a longitudinal groove or slot extending from the free end of said rail to a suitable distance along its length and



adapted to snugly receive the tongue formed on the first named rail, the ends of the several parts being properly inclined in respect to one another, forming abutting surfaces when the uniting ends of the rails are brought together as and for the purpose described.

959,290. METALLIC CONNECTION FOR AUTOMATIC CONNECTORS FOR TRAIN-PIPES. PETER BEAHM, Altoona, Pa., assignor of one-third to Charles A. Buch and one-third to James P. Forsyth, Wayne, Pa. Original application filed Jan. 21, 1910, Serial No. 539,430. Divided and this application filed Feb. 8, 1910. Serial No. 542,687.



1. The combination with a car coupler, an automatic train pipe connector supported entirely thereby, and the pipes of the car, of a pipe connection between the automatic train pipe connector and the pipes of the car, comprising a sleeve having a downwardly flaring channel, a vertical pipe having a semi-spherical upper end fitting in and above the channel, whereby the pressure of the fluid and the weight of the connection will hold the upper end into close contact with the upper end of the flaring channel and said pipe will have a gyratory movement within said channel to accommodate the transverse and tilting movements of the car coupler.

2. The combination with a car coupler, an automatic train pipe connector supported bodily thereby, and the pipes of the car, of a pipe connection between the automatic train pipe connector and the pipes of the car, comprising a sleeve having a downwardly flaring channel and an upper concaved seat, a vertical pipe having a semi-spherical upper end fitting upon the seat and within the channel, and connections between the vertical pipe and the train pipes capable of a gyratory movement.

3. The combination with a car coupler, an automatic train pipe connector supported bodily thereby, and the pipes of the car, of a metallic pipe connection between the automatic train pipe connector and the pipes of the car, comprising a sleeve forming a support at the automatic connector, a vertical pipe supported in said sleeve and capable of a gyratory movement therein, and ball-and-socket connected conduits connecting said vertical pipe and the pipes of the car.

4. The combination with an automatic train pipe connector and the pipes of the car, of a connection between the connector and the heating pipe of the car, comprising a vertical pipe connected to the automatic connector and capable of a gyratory movement with relation thereto, a casing at the lower end of the pipe, a pipe connecting the casing to the pipe of the car, and a valve having a manually operated member, of a pipe coupler mounted in the casing, whereby when the connector is operating automatically, the said valve permits steam to flow into the vertical pipe and through the connector, but when manually connected, switches the flow of steam through the valve itself and prevents it flowing through the connector.

5. The combination with a car coupler, an automatic train pipe connector having a series of connector ports terminating in a series of chambers, said connector being bodily supported by and movable with the car coupler, and the pipes of a car, of a metallic connection between the connector and the train pipes, comprising a sleeve removably mounted in each chamber of the connector and having an upper concaved seat and a tapering bore, a coupling having a semi-spherical upper end projecting downwardly through each of said sleeves and having the said semi-spherical end resting upon the seat of said sleeve, and a universal coupling between each of the said couplings and the train pipes, as set forth.

959,291. SUPPORT FOR GUNS. LAURENCE V. BENET and HENRI A. MERCIÉ, Paris, France. Filed Mar. 12, 1909. Serial No. 483,006.



1. The combination with a gun of the character described, of a pair of supporting legs hinged to the gun near the muzzle, and a rear support comprising a compound screw detachably connected to the stock of the gun, with a segmental nut carried by the gun stock and normally engaging one member of said compound screw, with means for withdrawing said nut from said engagement, when desired, substantially as described.

2. The combination with a gun of the character described, of a pair of supporting legs hinged to the gun near the muzzle, and a rear support comprising a compound screw detachably connected to the stock of the gun, with a segmental nut carried by the gun stock and normally engaging one member of said compound screw, with means for withdrawing said nut from said engagement, when desired, and means for supporting the lower end of said compound screw clear of the ground while permitting freedom of lateral movement, and also while holding it against turning with the other member, substantially as described.

3. The combination with a gun of the character described, of a pair of supporting legs hinged to the gun near the muzzle, a rear support comprising a compound screw detachably connected to the stock of the gun, and a shoe placed on the ground and engaging the lower end of said compound screw, and holding same against turning while permitting lateral movement to said screw, with a segmental nut carried by the gun stock and normally engaging the upper member of said compound screw, with means for withdrawing said nut from said engagement, when desired, substantially as described.

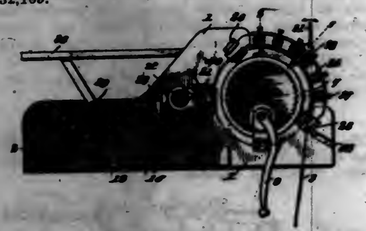
4. The combination with a gun of the character described, of means for supporting the muzzle end of the gun, and a rear support comprising a compound screw detachably connected to the stock of the gun, with a segmental nut carried by the gun stock and normally engaging one member of said compound screw, with means for withdrawing said nut from said engagement, when desired, substantially as described.

5. The combination with a gun of the character described, of means for supporting the muzzle end of the gun, and a rear support comprising a compound screw detachably connected to the stock of the gun, with a seg-

mental nut carried by the gun stock and normally engaging one member of said compound screw, with means for withdrawing said nut from said engagement, when desired, and means for supporting the lower end of said compound screw clear of the ground while permitting freedom of lateral movement, and also while holding it against turning with the other member, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

959,292. PRESS-COPYING DEVICE. HARVEY A. BENNER, Washington, D. C. Filed Dec. 9, 1909. Serial No. 532,169.



1. In a press copying device, a main pressure roller, a series of pressure rollers, a resilient band carried by said pressure roller, means for simultaneously adjusting said pressure rollers toward or away from said main roller and means for individually adjusting said pressure rollers toward and away from said main roller.

2. A press copying device comprising a main frame, a roll of paper carried by said frame, moistening means, means for regulating the amount of moisture, a main pressure roller, a series of pressure rollers, a resilient band carried by said pressure rollers, means for simultaneously adjusting said pressure rollers toward or away from said main roller, and means for individually adjusting said pressure rollers toward and away from said main rollers.

3. A press copying device comprising a main frame, a roll of paper carried by said frame, moistening means, means for regulating the amount of moisture, a main pressure roller, a series of small pressure rollers adapted to coact with said main roller for producing impression copies, a cam for moving all of said rollers simultaneously toward or away from said main pressure roller, and individual adjusting screws for each of said small pressure rollers.

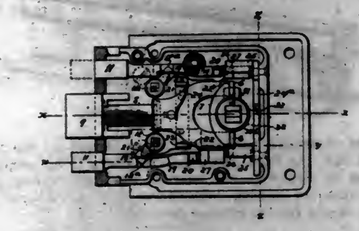
4. In a press copying device, a main pressure roller, a series of auxiliary pressure rollers arranged concentrically of said main pressure roller, means for moving said concentric series toward or away from said main pressure roller, a paper roller, moistening means therefor, and means for squeezing out the excess moisture, said means comprising a roller, a cam for moving said roller toward and away from the main roller, and additional means for varying the position of the roller with respect to the position of the cam.

959,293. LOCK. CHARLES A. BERRY, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed June 10, 1909. Serial No. 501,418.

1. In a lock, the combination with a latch bolt and knob mechanism for actuating same, of a dead bolt, a cam for moving the dead bolt to its two positions and for deadlocking it in each position, means for turning the cam, and coöperating projecting members on the dead bolt and latch mechanism, whereby when the dead bolt is projected, the knob mechanism of the latch will be deadlocked.

2. In a lock, the combination with a latch bolt, and knob mechanism for actuating same, of two dead bolts, independent means for moving each dead bolt to its two positions and for deadlocking it in each position and coöperating projecting members on the latch mechanism and both dead bolts, whereby when either bolt is projected the knob mechanism of the latch will be deadlocked.

3. In a lock, the combination with a latch bolt and knob mechanism for actuating same, of two dead bolts, independent means for actuating the bolts, coöperating projecting members on the latch mechanism and both bolts whereby when either bolt is projected the knob mechanism of the latch will be deadlocked, and a single mechanism actuated by a key for deadlocking both bolts.

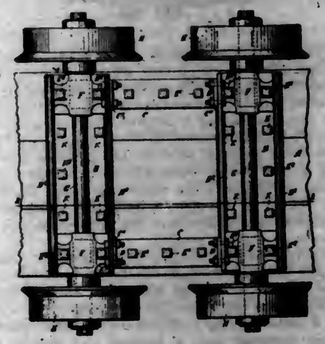


4. In a lock, the combination with latch mechanism, of a dead bolt, means for actuating same, coöperating means on the latch mechanism and bolt, whereby when the bolt is projected, the latch mechanism will be deadlocked, and key actuated mechanism carried by the lock casing for deadlocking the bolt in its two positions.

5. In a lock, the combination with latch mechanism, of two dead bolts, means for independently actuating the bolts, coöperating means on the latch mechanism and both bolts whereby when either bolt is projected the latch mechanism will be deadlocked, and a single mechanism actuated by a key for deadlocking both bolts irrespective of their positions.

[Claims 6 to 9 not printed in the Gazette.]

959,294. MINING-CAR. JAMES BLAIR, St. Benedict, Pa. Filed Dec. 14, 1909. Serial No. 533,006.



1. A mining car having a truck frame, comprising cross plates provided at their inner sides with depending flanges, longitudinal plates having depending flanges at the ends and abutting against the said cross plate flanges, and means for fastening the flanges together.

2. A mining car having a truck frame comprising cross plates provided at their inner sides with depending flanges, longitudinal plates having depending flanges at the ends and abutting against the said cross plate flanges and being bolted thereto, the said cross plates and the said longitudinal plates being flush at their upper faces, and a car body having its bottom seated and bolted in place on the said frame plates.

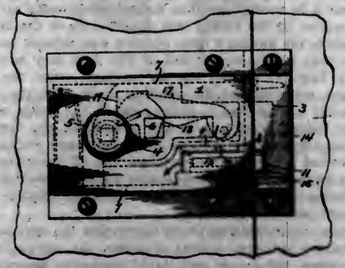
3. A mining car having a truck frame comprising cross plates provided at their inner sides with depending flanges, longitudinal plates having depending flanges at the ends and abutting against the said cross plate flanges, bolts for fastening the said abutting flanges together, axle boxes seated on the under side of the said cross plates and fastened thereto, and car axles journaled in the said boxes and carrying car wheels at their outer ends.

4. A mining car having a truck frame comprising cross plates provided at their inner sides with depending flanges, longitudinal plates having depending flanges at the ends and abutting against the said cross plate flanges, bolts for fastening the said abutting flanges together, axle boxes seated on the under side of the said cross plates and fastened thereto, car axles journaled in the said boxes and carrying car wheels at their outer ends, a car body having its bottom seated on the said frame, and bolts for fastening the said car bottom and frame together, sundry of the said bolts also engaging the said axle boxes to fasten the latter in place on the cross plates.

5. A mining car having a truck frame, comprising cross plates provided at their inner sides with depending flanges, having their outer sides reinforced by integral transverse ribs, longitudinal plates having depending flanges at the ends and abutting against the said cross plate flanges, and means for fastening the flanges together.

[Claim 6 not printed in the Gazette.]

959,295. LATCH. ALFRED BOCK, Brooklyn, N. Y., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Oct. 29, 1909. Serial No. 525,371.



1. In a latch the combination with a casing, a bolt having slots in one edge, a tumbler for deadlocking the bolt, and means for retracting the bolt, of a bolt controlling lever pivoted to the casing and projecting through the face plate of the latter so as to engage the strike plate, and a pin carried by said lever and always resting and moving in slots in the bolt, whereby when the bolt is retracted it will be so held by the pin on the lever engaging a wall of the slot, and will be released by the engagement of the lever with the strike plate of the lock.

2. In a latch, the combination with a casing, a bolt having a transverse slot and communicating longitudinal slot, a tumbler carried by the bolt and adapted to engage a fixed part in the casing for deadlocking the bolt when the latter is projected, and means for actuating the tumbler and retracting the bolt, of a spring pressed lever pivoted to the latch case and projecting through the face plate thereof, and a pin carried by said lever and resting in the slots in the bolt and adapted to engage the wall of the transverse slot and hold the bolt retracted while the door is open and to release the bolt when the lever carrying the pin engages the strike plate or keeper.

3. In a latch, the combination with a casing, a bolt therein, a spring tending to force the bolt outwardly and automatically operating means for holding the bolt retracted against the action of the spring, of a manually actuated cam adapted when turned in one direction to retract the bolt, and also adapted when turned in the opposite direction after the bolt has been retracted to hold the bolt retracted and render it inoperative against the action of the automatic holding means.

4. In a latch, the combination with a casing, a bolt therein, a spring tending to force the bolt outward, and a tumbler for deadlocking the bolt in its projected position, of a lever pivoted adjacent to the bolt and provided with a pin adapted to engage a shoulder on the latter for holding the bolt retracted, a fixed stop for tripping said lever to release the bolt as the door is closed, and a cam for actuating the tumbler and retracting the bolt, and also adapted after the bolt has been retracted to be moved into position to hold the bolt into its retracted position inoperative against the releasing action of the pin on the pivoted lever.

5. In a latch, the combination with a casing, a bolt therein having a transverse slot and a longitudinal slot, a deadlocking tumbler for the bolt and means for retracting the bolt, of a lever pivoted to the latch casing, projecting through the face plate thereof and adapted to engage the strike plate or keeper and be moved thereby as the door is closed, and a pin on said lever, the said pin resting in the longitudinal slot in the edge of the bolt, and adapted to move into the transverse slot when the bolt is fully retracted and engage a wall of said slot to hold the bolt retracted.

959,296. SPIRIT-LEVEL. CHRISTIAN BODMER, New Britain, Conn., assignor to The Stanley Rule & Level Company, New Britain, Conn., a Corporation of Connecticut. Filed Nov. 11, 1909. Serial No. 527,379.



1. In an instrument of the character described, a bubble glass, a carrier therefor comprising a socket portion having a sight opening, a rib or fin projecting laterally from said socket portion, a coupling rigidly secured to said fin, a beam, a pair of ears laterally offset and extending from one edge of said coupling, said ears being arranged to lie adjacent to said beam, and means for adjustably securing said ears to said beam, the edges of said beam having laterally projected flanged portions arranged to protect the aforesaid mechanism.

2. In an instrument of the character described, a beam, a bubble glass, a carrier therefor comprising a socket having a sight opening, a rib or fin depending from said socket and extending longitudinally thereof, a pair of coupling plates arranged to be secured on opposite sides of said fin, an opening in said fin arranged to receive said parts, ears on said coupling plates arranged to stand on opposite sides of said beam, a clamping screw connecting said coupling plates, said beam having a clearance opening for said clamping screw of a size to permit said screw to be moved laterally therein.

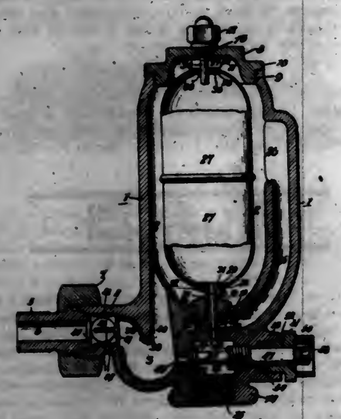
3. In an instrument of the character described, a stock of I-beam cross section, and including a web having an opening therein, a leveling device arranged in said opening and extending across the same, said leveling device comprising a bubble glass, a socket having a sight opening, a rib or fin projecting therefrom and extending longitudinally thereof, a pair of coupling plates, one of the same being rigidly secured to one side of said fin, the other being detachably secured to the opposite side of said fin, and means to adjustably secure said coupling plates to the web of said stock, said means straddling said web.

4. In an instrument of the character described, a beam, a bubble glass, a carrier therefor comprising a socket having a sight opening, a rib or fin having an opening therein and depending from said socket and extending longitudinally thereof, a pair of coupling plates arranged to be secured on opposite sides of said fin, in said opening, ears on said coupling plate arranged to stand on opposite sides of said beam, a clamping screw connecting said coupling plates, said beam having a clearance opening for said clamping screw of a size to permit said screw to be moved laterally therein, a bearing shoulder on said web adjacent to a portion of the bubble glass carrier, whereby said carrier may be adjusted by a suitable tool arranged between said shoulder and carrier.

5. In a spirit-level, the combination of a stock or beam having circular openings therein, a bubble glass holder having an integral projecting rib in the outer surface of the same, a coupling plate having a circular outer edge conforming to the said circular opening in the level stock, the said plate having a plurality of similar projecting ears at the outer curved edges thereof, and a fastening means to adjustably clamp the said ears to said stock.

[Claim 6 not printed in the Gazette.]

959,297. STEAM, AIR, AND WATER TRAP VALVE. JOHN E. BORGEN, Berwyn, Ill., assignor to Charles P. Monash, Chicago, Ill. Filed Sept. 29, 1908. Serial No. 455,385.



1. In a steam, air and water trap valve, the combination of a casing inclosing a chamber, the casing having an inlet passage for water of condensation to enter the chamber, and having in its side and bottom wall a downwardly and inwardly extending conduit for escaping water of condensation from the chamber, the inlet end of the conduit opening into the chamber with its under side in a plane below the line of flotation of a float in the chamber and having its terminal end below the chamber, a hollow float operative within the chamber of the casing and having at its upper end an unrestricted passage, furnishing, when the float is in normal position, free communication between the interior of the float and the float chamber for educting air from the chamber of the casing into the interior of the float, and a guide tube depending from the lower end of and in communication with the interior of the float, for educting air from the interior of the float and discharging the educted air below the terminal end of the side conduit, said guide tube serving as a closure for the discharge end of the downwardly and inwardly extending conduit, substantially as described.

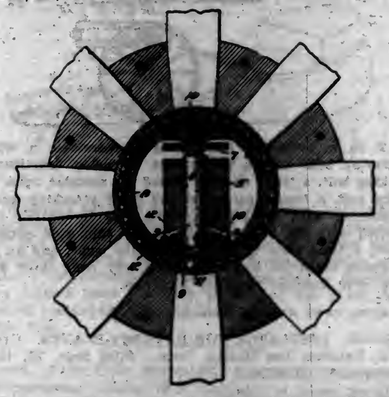
2. In a steam, air and water trap valve, the combination of a casing inclosing a chamber, the casing having an inlet passage for water of condensation to enter the chamber, and having in its side and bottom wall a downwardly and inwardly extending passage for water of condensation to escape from the chamber, said side passage having its inlet end opening into the chamber with its under side in a plane below the line of flotation of a float in the chamber and having its terminal end below the chamber, a hollow float in the chamber, the float having a passage at the upper end, furnishing, when the float is in normal position, free and unrestricted communication between the interior of the float and the chamber of the casing, a solid guide pin having a fixed position and entering into the air passage of the upper end of the float and having a seating face for closing the air passage when the float is raised, and stopping the educting of air from the chamber of the casing, a guide tube entered into the lower end of and communicating with the interior of the float for educting air from the interior of the float and discharging the educted air below the terminal end of the water discharge passage, the guide tube also having a seating face for closing the terminal end of the water discharge passage for the water of condensation from the chamber of the casing, substantially as described.

3. In a steam, air and water trap valve, the combination of a casing inclosing a float chamber, the casing having an inlet passage for water of condensation to enter the chamber and leading into the chamber at the bottom, and having in its side and bottom wall a downwardly and inwardly extending passage for escaping water of condensation from the float chamber, said side passage having its inlet end opening into the chamber with its under side in a plane below the line of flotation of a float in the chamber and having its terminal end below the chamber, a plug in the bottom wall of the casing, the plug having a lateral discharge passage and port leading therefrom into a discharge chamber in the bottom wall of the casing, said lateral passage and its port and the downwardly and inwardly extending side passage having communication with each other for discharging the water of condensation from the float chamber, a float within the float chamber, the float having at its upper end an unrestricted passage in its end wall, furnishing, when the float is in normal position, means for educting air from the chamber of the casing into the interior of the float, a solid guide pin having a fixed position and entered into the air passage at the upper end of the float and having a seating face for closing the air passage, when the float is raised, and stopping the educting of air from the chamber of the casing, and a guide tube at the lower end of and in communication with the interior of the float for educting air from the interior of the float and discharging the educted air below the terminal end of the water discharge passage, the guide tube also having a seating face for closing the port of the water discharge passage, substantially as described.

4. In a steam, air and water trap valve, the combination of a casing inclosing a float chamber, the casing having in its lower end an air and liquid discharge passage and having in its side wall a liquid discharge passage leading from the float chamber in a plane adjacent to the horizontal line of flotation of a float in the float chamber, and the casing having also a conduit adapted to provide communication between a radiator and said float chamber and arranged to be sealed by accumulation of water of condensation in the conduit and the float chamber, a hollow float operating within the float chamber and having at its upper end a guide opening, a guide pin extending downward from the top wall of the float and passing loosely through the guide opening of the float, and a hollow valve piece on the lower end of the float for controlling the liquid discharge passage, said valve piece affording communication between the interior of the hollow float and the air and liquid discharge passage of the lower end of the casing, whereby an air discharge passage is provided through the guide opening of the float, the hollow float and the hollow valve piece, substantially as described.

5. In a steam, air and water trap valve, the combination of a casing inclosing a float chamber, the casing having a liquid discharge passage leading from the float chamber in a plane adjacent to the horizontal line of flotation of a float in the float chamber, and the casing having also a conduit adapted to provide communication between a radiator and said float chamber, a hollow float operating within the float chamber and having at its upper end a guide opening, a guide pin depending from the upper wall of the casing and passing loosely through the guide opening of the float, a hollow seating plug entered into the bottom wall of the float chamber and having a port communicating with the liquid discharge passage from the float chamber, and a hollow valve piece on the lower end of the float for controlling the liquid discharge passage from the float chamber, said valve piece affording communication between the interior of the float and the port of the seating plug, whereby an air discharge passage is provided through the guide opening of the float, the hollow float, the hollow valve piece and the port of the seating plug, substantially as described.

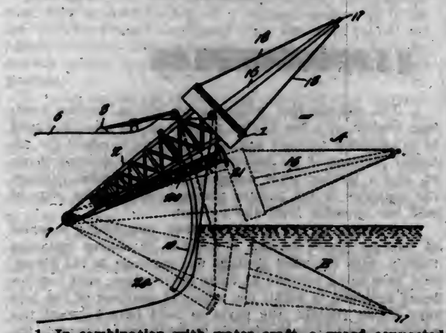
959,298. STEERING-WHEEL FOR AUTOMOBILES. ROY E. BOWERS, Hartville, Ohio, assignor to John A. Bowers, Payette, Idaho. Filed Oct. 30, 1909. Serial No. 525,438.



1. An axle having a terminal eye, a bolt extending vertically therethrough and having a cap nut, and a steering knuckle consisting of a casing having bearings for the lower end of the bolt and for the cap nut at the upper end of said bolt.

2. An axle having a terminal eye, a bolt extending vertically therethrough and having a vertically adjustable cap nut at one end, a knuckle casing having interiorly disposed bearings for one end of the bolt and for the nut at the opposite end of the bolt, a race supported upon the lower bearing, and anti-friction members interposed between said bearing and the axle.

959,299. BOAT FENDER-BRAKE. JAMES BOYDELL, Sudbury, Ontario, Canada. Filed Nov. 30, 1909. Serial No. 530,604.



1. In combination with water craft, a guard connected with said craft and adapted to be submerged, means for holding said guard elevated out of the way, a detent for holding the guard supporting means in active operation, and means for automatically releasing said detent by impact to admit of the guard automatically dropping into operative position.

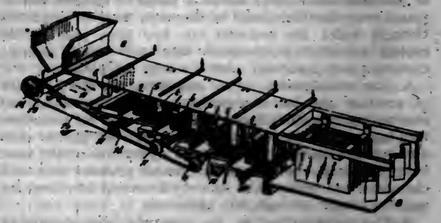
2. In combination with water craft, a fender consisting of a plane located at an end of the craft, arms located upon opposite sides of the craft and pivoted at their inner ends thereto and having said fender secured to their outer ends, braces connected at their outer ends to the middle portion of the fender and at their inner ends to the said arms, other braces connecting the first mentioned braces with the outer ends of the arms substantially at their point of connection with the fender, and means for raising and lowering the fender by a pivotal movement of the arms.

3. In combination with water craft, a fender located at an end thereof, arms embracing opposite sides of the craft and pivoted at their inner ends thereto and having said fender rigidly connected to their outer ends, a boom projected forwardly from a middle part of the fender, stays between the outer end of the boom and the end portions of said fender, and means mounted upon the craft for effecting a raising or a lowering of the fender and boom.

4. In combination with water craft, a vertically movable fender located at an end thereof and consisting of a plane to be immersed in the water to check the speed of the craft, connecting means between said fender and craft, means for raising the fender and holding the same elevated, a boom projected forwardly from the fender, means for effecting release of the fender elevating mechanism, and means carried by the outer end of the boom to automatically bring into play the means whereby the fender elevating mechanism is released to permit said fender to drop when the means at the outer end of the boom is actuated by impact with an obstruction.

5. In combination with water craft, a fender located at an end thereof and consisting of a plane to be immersed in the water to check the speed of the craft, arms located upon opposite sides of the craft and pivoted at their ends thereto and having their outer ends firmly connected to said fender, braces connecting the arms with the middle portion of the fender, a second set of braces between the first mentioned braces and the arms, a third set of braces exterior to the arms and connecting them with the ends of the fender, and means for raising the fender and holding the same elevated.

959,300. TRAP FOR PRECIOUS METALS. PIERRE ARMAND BRANGIER, Agnew, Cal., and ROYER LUCKENBACH, Philadelphia, Pa. Filed Sept. 20, 1909. Serial No. 518,714.



1. A trap for precious metals, said trap having in combination a trough-like sluice, riffle plates located in the bottom of the sluice, means for agitating said riffle plates, and traps alternating with the riffle plates and suspended from points above the plates, said traps adapted to have the water carried by the sluice pass through them.

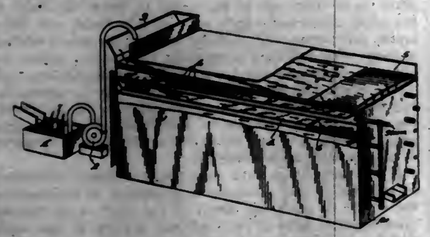
2. An improved trap for precious metals, said trap having in combination a trough-like sluice, amalgamated metal plates forming riffles in the bottom of the sluice, means for agitating said plates, traps interposed between adjacent plates and suspended from points above the plates and adapted to have the water carried by the sluice pass through them, said traps and plates forming cathodes, and anodes alternating with the traps.

3. An improved trap for precious metals, said trap having in combination a trough-like sluice, a series of overlapping plates forming the bottom of the sluice and serving as riffles for the flowing liquid, means for agitating each of the plates from a common source of power, filtering traps interposed between adjacent plates and suspended from points above the plates and disposed to have the liquid carried by the sluice passing through them, said

traps containing subdivided mercury coated material forming interstices and surfaces over and through which the liquid is caused to pass, and anodes alternating with the traps and arranged in the path of the flowing liquid.

4. In an apparatus for the recovery of precious metals, gravity operated agitating riffle plates, electrically energized traps extending above the riffle plates, said traps forming cathodes, and anodes suspended from above the riffles and between the traps whereby an electric current is passed through the apparatus.

959,301. APPARATUS FOR QUICK CYANIDING OF PRECIOUS METALS. PIERRE ARMAND BRANGIER, Agnew, Cal., and ROTER LUCKENBACH, Philadelphia, Pa. Filed Sept. 22, 1909. Serial No. 519,086.



1. The combination in an apparatus for lixiviating and recovering precious metals, of a sluice, a series of superposed alternating heated plates, and air chambers, and means to inject air under pressure into the passing material.

2. The combination in an apparatus for recovering precious metals, of a sluice, a series of superposed, inclined heated plates, and air chambers forming continuations of said plates through which material is caused to pass, and means to inject air under pressure into said chambers.

3. The combination in an apparatus for the recovery of precious metals, of a sluice, a series of inclined heated plates over which material is caused to flow, air chambers through which the material can flow from each of the plates, electrical connections with the plates forming cathodes, and insulated anodes set in the plates.

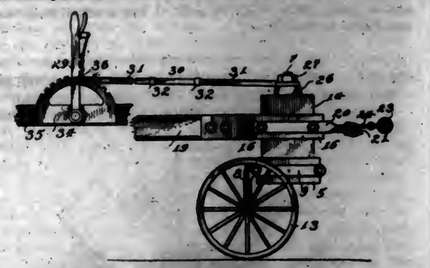
4. The combination in an apparatus for the recovery of precious metals, of a sluice, a series of superposed alternating oppositely inclined heated plates, air chambers forming continuations beneath each of said plates, each air chamber discharging upon the upper end of the next heated plate means to inject air under pressure into said chambers, and connections whereby a current of electricity may be passed through the apparatus.

5. The combination in an apparatus for recovering precious metals, of a sluice, a series of superposed inclined alternating heated plates, with air chambers interposed and return channels between said plates, means to inject air under pressure into the channels, electrical connections directly with the upper plates and insulated connections with the bottom plates.

[Claims 6 to 11 not printed in the Gazette.]

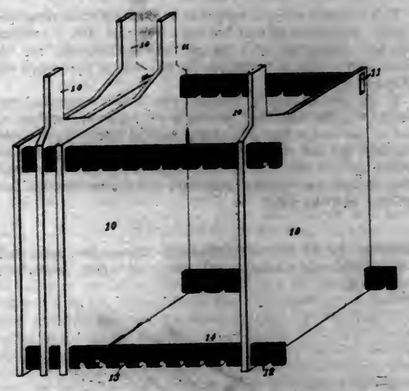
959,302. FRONT TRUCK FOR PLANTERS, &c. ISAAC D. BRIM, Caps, Tex. Filed Nov. 27, 1909. Serial No. 530,121.

1. In a device of the character described, a base, wheel carrying crank axles connected therewith, a king bolt rising from the base and having an upwardly extending partially threaded nipple provided with a non-circular portion, a block member supported for rotation upon the king bolt, a tongue extension connected with said block member, draft attaching means connected with the block member, a lever seated upon the non-circular portion of the nipple extending from the king bolt, and means for manipulating said lever to oscillate the king bolt and related parts.



2. In a device of the character described, a wheel carrying base having an upward extension constituting a king bolt, a block member seated for rotation upon the king bolt, a tongue extension and draft attaching means connected with the block member, a lever securely connected with the king bolt, a suitably supported segment rack, a hand lever fulcrumed upon the same, and an adjustable extension link connecting said hand lever with the lever mounted upon the king bolt.

959,303. INSULATOR FOR BATTERY-PLATES. CYRUS J. BRISTOL, Des Moines, Iowa. Filed Sept. 27, 1909. Serial No. 519,729.

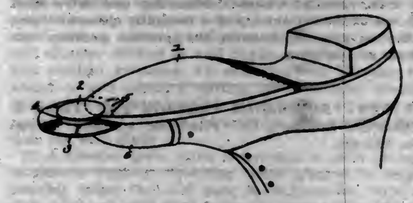


1. The combination with battery plates, having openings therein, of a bar having notches at one edge, designed to be extended through said openings and to admit the adjacent portions of the battery plates in the notches thereof, and a locking strip designed to be extended through the openings in the battery plates to engage the edge of said bar opposite from the notches.

2. A device of the class described, comprising a series of battery plates having a number of oblong openings therein, bars extended through the openings in the plates, said bars being notched at their lower edges, said notches being designed to admit the adjacent portions of the battery plates therein, the parts of said bars between the notches being of such size as to freely pass through the openings in the plates, and a locking strip for each bar designed to pass through the openings in the battery plates when the said battery plates are resting in the notches of the bars and to engage the adjacent portions of the battery plates and also the top edges of said bars, for the purposes stated.

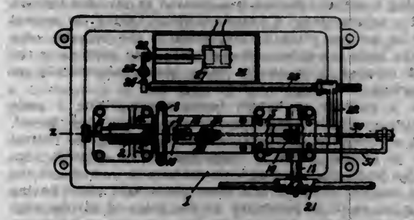
3. The combination with battery plates, having openings therein, of a bar having notches at one edge, designed to be extended through said openings and to admit the adjacent portions of the battery plates in the notches thereof, and a locking strip designed to be extended through the openings in the battery plates to engage the edge of said bar opposite from the notches.

959,304. PATCH FOR SHOE-SOLES. JOSEPH W. BRITTON, Martinsville, Ind. Filed Jan. 6, 1910. Serial No. 536,662.



A patch for the soles of articles of foot wear, said patch comprising a symmetrically shaped body portion adapted to fill in a worn away portion of the sole and formed with an annular tapering flange adapted to extend under and reinforce the surrounding edges of the sole, a shoulder being formed upon the body portion of the patch for abutting against the edges of the said worn away portion of the sole.

959,305. ELECTRIC WELDING-MACHINE. ALVIN E. BUCHENBERG, Toledo, Ohio, assignor, by mesne assignments, to The Toledo Electric Welder Company, Toledo, Ohio, a Corporation of Ohio. Filed Sept. 25, 1909. Serial No. 519,619.



1. In an electric metal-working apparatus, the combination with a work-holder, of a current-conducting member movable toward and away from the work-holder and having a socket in its inner end, a work-holder removably carried within such socket, and means for moving said member.

2. In an apparatus of the class described, the combination with an electrically conductive work-holder, of an electrically conductive member movable toward and away from said work-holder and having a socket in the inner end thereof and opening toward said work-holder, a socketed work-holding part removably fitted into the member socket, and means for imparting reciprocatory movements to said member.

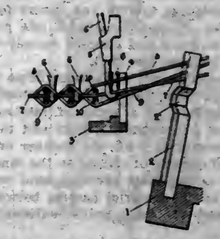
3. In an apparatus of the class described, the combination with a stationary work-holder, of a member longitudinally movable toward and away from said work-holder, said member having a hole longitudinally therethrough which terminates at its inner end in a socket, a socketed work-holding part removably mounted in said socket and having its socket opening into said hole, a fixed ejector rod working in said hole and operative to eject work from said part at a predetermined point in the retracting movements of said member, and means for moving said member.

4. In an electric metal-working apparatus, a standard having a tapered boss projecting therefrom which is axially bored and longitudinally split, a chuck fitted into such socket and having its outer end split to adapt it to cooperate with the split end of such boss to grip work therein, means fitted onto such boss and movable to effect a contraction of its outer end, a member movable toward and away from said boss and having a work-holding socket in its inner end, and means for imparting reciprocatory movements to such member.

5. In an electric metal-working apparatus, two relatively fixed spaced standards, a work-holding chuck carried by one standard and a reciprocally movable arm carried by the other standard and having a removable socketed work-holding part in its inner end in register with such chuck, and means for moving such arm toward and away from said chuck.

[Claims 6 and 7 not printed in the Gazette.]

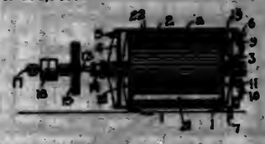
959,306. METHOD OF WEAVING PILE FABRICS. JAMES BUCKLEY, Philadelphia, Pa., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Oct. 23, 1909. Serial No. 524,145.



1. An improved method of weaving pile fabrics which have the pile tufts separate from the body of the fabric, and passed around the stuffer warps, and which consists in moving the stuffer warps to one side, to leave a space between the stuffer warps and the binder warps, inserting the free ends of the pile tuft yarns between the stuffer warps and the binder warps, changing the shed, moving the free ends of the pile tuft yarns around the stuffer warps, and up between the stuffer warps and the binder warps, cutting the pile tuft yarns, changing the shed, inserting a filling in the lower plane of the shed, and beating up said filling, changing the shed again, and inserting a filling in the upper plane of the shed, and beating up said filling.

2. An improved method of weaving pile fabrics which have the pile tufts separate from the body of the fabric, and passed around a binder warp, and which consists in moving some of the binder warps to one side, to leave a space between the binder warps in the upper plane of the shed, and the stuffer warps and the binder warps in the lower plane of the shed, inserting the free ends of the pile tuft yarns between the binder warps in the upper plane of the shed, and the stuffer warps and the binder warps in the lower plane of the shed, changing the shed, moving the free ends of the pile tuft yarns around the binder warps in the upper plane of the shed, cutting the pile tuft yarns, changing the shed, inserting a filling in the lower plane of the shed, and beating up said filling, changing the shed again, and inserting a filling in the upper plane of the shed, and beating up said filling.

959,307. PULP-MAKING MACHINE. WILLIAM BURTON, St. John, New Brunswick, Canada. Filed Jan. 29, 1909. Serial No. 474,979.



1. The combination with an outer receptacle, of an inner receptacle spaced therefrom, the space between said receptacles being adapted to contain a heating agent, said receptacles having openings and covers therefor through which chips may be placed in said inner receptacle, crush-

ing rolls provided in said inner receptacle, and driving connection for said inner receptacle.

2. The combination, with an outer stationary receptacle, of an inner revolving receptacle spaced therefrom, means for admitting a fluid heating agent to said space, said receptacles having filling openings and covers therefor, and idle rolls provided in said inner receptacle.

3. The combination, with a stationary drum, of a revolving drum arranged within said stationary drum and spaced from the walls thereof, means for admitting a fluid heating agent to said space, said drums having filling openings and covers therefor, and idle rolls provided within said inner drum and adapted to roll on the inner walls thereof as said drum revolves, substantially as described.

4. The combination, with an outer stationary drum of an inner drum arranged within said outer one and spaced from the walls thereof, means for admitting a fluid pressure such as steam to the space between said drums, said drums having openings therein and covers for said openings and a series of smooth-surfaced idle rolls provided within said inner drum and adapted to roll on the walls thereof for the purpose specified.

5. The combination, with a revolving drum having a filling opening and a cover therefor and provided with a corrugated inner surface, of a series of idle rolls provided within said drum and extending from end to end thereof and normally connecting with one another on the bottom of said drum and capable of rolling on the inner surface of said drum wall as the drum revolves, said rolls having a crushing action on the material passing between them and between them and the drum walls, substantially as described.

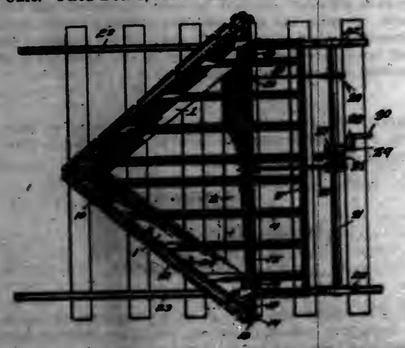
[Claims 6 to 9 not printed in the Gazette.]

959,308. ATTACHING MEANS FOR FASTENING MEMBERS. FRED S. CARR, Brookline, Mass., assignor to Carr Fastener Company, Boston, Mass., a Corporation of Maine. Filed Jan. 10, 1908. Serial No. 410,125.



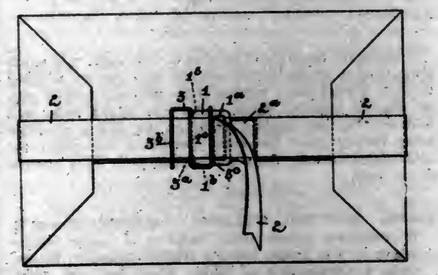
A fastening member comprising a circular base or body portion provided with an opening and an upright flange surrounding said opening, said base or body portion being also provided with prongs having radially arranged bases located entirely within the margin of said base or body portion, and an upper or anvil portion against the underside of which the prongs are clenched and turned backward.

959,309. CAR-FENDER. ARCHIE H. CARTER, Canton, Ohio. Filed Dec. 1, 1909. Serial No. 530,871.



A car fender comprising a pilot frame embodying forwardly converging side bars, rolls journaled in bearings on said forwardly converging bars and arranged parallel thereto, each of said rolls comprising a shaft and a plurality of cylindrical roll sections between which the shaft is left uncovered, guard springs secured to the pilot frame and overhanging the shafts of said rolls at the intervals between the roll sections, said guard springs being arched to project above the periphery of the roll sections, a roll drive shaft extending transversely of the direction of movement of the fender and geared to the rear ends of said rolls, sprocket elements connecting said drive shaft with one of the car axles, and a manually operated clutch on the car axle for throwing the sprocket elements into and out of operation.

959,310. BUNDLE OR PACKAGE TIE. FRANK S. CHAPPELL, Bradford, Pa. Filed Dec. 10, 1909. Serial No. 532,484.

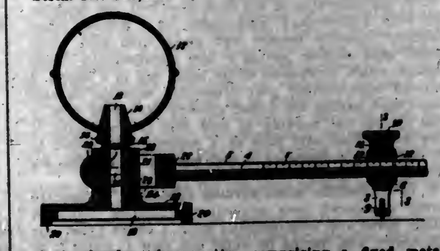


1. A package or bundle fastener comprising a plate having a suitable flexible tape secured at one edge thereof, and a substantially S shaped member having its central bar or portion pivotally connected to the opposite edge of the plate the outer and central bars or portions of the said member lying in the same plane substantially as described.

2. A package or bundle fastener comprising a plate having a suitable flexible tape secured at one edge thereof, and a substantially S shaped member having its central bar or portion pivotally connected to the opposite edge of the plate, the outer and central bars or portions of the said member lying in the same plane said plate having gripping teeth in proximity to the point of pivotal support of the S shaped member to grip a tape passed beneath the outer arms of the S-shaped member.

3. A package tie comprising a plate having a flexible tape secured to one edge thereof, a substantially S shaped member having three parallel bars lying in the same plane, integral tongues at the ends of one edge of the plate encircling the central bar and integral teeth or projections from the edge of the plate between said tongues to grip a tape passed beneath the outer arms of the S-shaped member.

959,311. CIRCULAR-GLASS CUTTER. WILLIAM CHASE, Jr., Indianapolis, Ind. Filed July 1, 1909. Serial No. 505,349.



1. A circular glass cutter comprising a fixed metal plate having a depending yielding continuous flange and a vertical extension adapted to form a pivot for a swinging arm, said extension being perforated to form communication with the under side of the said plate, means for extracting the air from under said plate to cause a partial vacuum thereunder, and an extension arm pivotally connected with said vertical extension and carrying a cutting instrument adapted to cut glass.

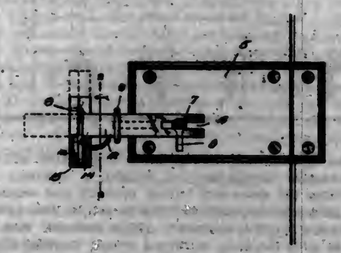
2. A circular glass cutter comprising a metal plate having a coptinuous yielding depending flange adapted to form a chamber under said plate in conjunction with the glass to be cut, said plate having a vertical extension provided with a tubular perforation opening outward from said chamber formed by said flange, a collar surrounding said vertical extension, an extension rod hingedly connected to said collar, a cutting device slidably mounted upon said rod, and means for rarefying the air below said plate to form a suction to seat the said yielding flange upon the said glass.

3. A circular glass cutter comprising a plate having a continuous yielding depending flange adapted to form a chamber below the said plate in conjunction with the glass to be cut, said plate having a tubular extension provided with a perforation leading outward from said chamber, a collar pivotally mounted upon said vertical extension, a rod hingedly connected with said collar, a cutting instrument slidably mounted upon said rod, and a resilient compressible bulb adapted to fit over the said vertical extension to be compressed to displace the air in said chamber, and expanded to rarefy the remaining air in said chamber.

4. A circular glass cutter comprising a plate having a rubber gasket depending from said plate to form a chamber below the same, said plate having a tubular extension forming an air passage outward from said chamber, a collar pivotally mounted upon said extension, an extension rod hingedly connected to said collar and provided with scale markings, a cutting instrument slidably mounted upon said rod, means for holding the said cutting instrument in position on said rod, and a compressible rubber bulb adapted to extend over said extension and adapted by a compression and expansion thereof to form a rarefication of the same in said chamber under said plate.

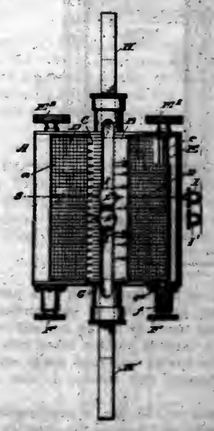
5. A circular glass cutter comprising a plate having a continuous rubber gasket depending therefrom to form a chamber beneath the said plate in conjunction with the glass to be cut, a vertical tube mounted upon said plate and forming open communication with the chamber below the same, said tube having a groove at the upper end to receive and hold a compression bulb, a collar pivotally mounted upon said tube, an extension rod hingedly connected to said collar, a cutting implement adapted to slide longitudinally on said rod, means for maintaining said cutting implement in a vertical position, and a collapsible rubber bulb adapted to extract the air from the chamber formed under the said plate and within the said rubber gasket.

959,312. NIGHT-LOCK. CARL M. COOK, Denver, Colo. Filed Dec. 31, 1909. Serial No. 535,800.



In a key lock, the combination with a pair of guides, and a locking member slidingly fitted in said guides, of a slide carried by one of said guides and having an opening to be brought into the path of movement of the locking member and further provided with a projection to abut against one end of the locking member when the opening in the slide is out of the path of movement of the locking member.

959,313. APPARATUS FOR TABULATING THE PASSENGER TRAFFIC ON CAR-LINES. JOSEPH T. CRABBS, Brooklyn, N. Y. Filed Jan. 13, 1910. Serial No. 537,954.



1. An apparatus of the character described comprising a paper holder adapted to carry a strip of ruled paper, provided with graduations to indicate elements of time, and other graduations to indicate numerals, means for moving said strip of paper, means for making two sets of marks on said paper, and two calibrated scales to guide said mark making means, substantially as described.

2. An apparatus of the character described comprising a paper holder adapted to carry a casing, a strip of paper movably mounted in said casing and provided with a series of graduations arranged in rectangular form, scales mounted in front of said paper, pointers traveling along said scales, and means for marking on said paper the position of the respective pointers, substantially as described.

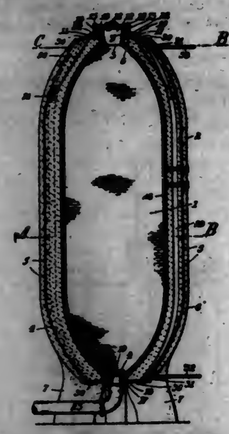
3. An apparatus of the character described comprising a paper holder adapted to carry a strip of ruled paper, provided with graduations to indicate elements of time, and other graduations to indicate numerals, means for moving said strip of paper, punches for making two sets of marks on said paper, pointers carried by said punches, and two calibrated scales beneath said pointers, substantially as described.

4. An apparatus of the character described comprising a paper holder adapted to carry a casing, a strip of paper movably mounted in said casing and provided with a series of graduations arranged in rectangular form, the abscisse to indicate elements of time, the ordinates to indicate numbers of passengers, scales mounted in front of said paper, pointers traveling along said scales, and means for marking on said paper the position of the respective pointers, substantially as described.

5. An apparatus of the character described comprising a paper holder adapted to carry a strip of ruled paper, provided with abscisse graduated to indicate elements of time, and ordinates graduated to indicate numbers of passengers, means for moving said strip of paper, and means for making two sets of marks on said paper, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

959,314. DIGESTER AND THE LIKE. CHARLES HENRY CRAIGUE, Berlin, N. H. Filed Apr. 6, 1909. Serial No. 488,284.



1. A digester or the like formed of a plastic substance in its consistent state and of substantially cylindrical formation having openings in the top and bottom thereof, sleeves having a tapered portion fitted into said openings and anchor rods having enlarged heads embedded in the wall of said digester and secured to the sleeve in said top opening.

2. In a digester or the like, a shell molded of concrete suitably reinforced and having the interior thereof cylindrical in shape for the greater portion of its length and the ends converging to inlet and outlet openings, sleeves having a tapered portion fitting into said openings, anchor rods having enlarged heads embedded in the walls of said digester and secured at the upper ends thereof to said top sleeves.

3. A digester or the like comprising a shell formed of plastic material in its consistent state, a lining of brick and an inter-lining of sheet lead.

4. A digester or the like comprising a shell formed of plastic material in its consistent state, tie-rods embedded in said shell from the inner side thereof, an inter-lining of sheet lead, bolts extending through said inter-lining into said tie-lugs, caps of sheet lead secured over the heads of said bolts and a lining of brick.

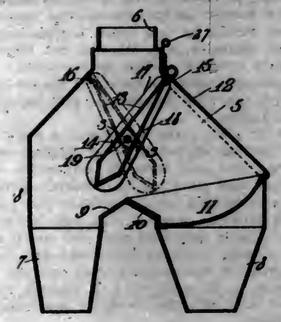
5. In a digester or the like, a shell molded of concrete suitably reinforced and having the interior thereof cylindrical in shape for the greater portion of its length and the ends converging to inlet and outlet openings, sleeves fitting said inlet and outlet openings, tie-rods embedded in the walls of said shell and secured at the upper ends thereof to said top sleeve, tie-lugs embedded in said shell from the inner side thereof, an inter-lining of sheet lead, bolts extending through said inter-lining into said tie-lugs, caps of sheet lead secured over the heads of said bolts and a lining of brick.

[Claims 6 to 11 not printed in the Gazette.]

959,315. AUTOMATIC CUT-OFF AND FILTER. FRED J. CRANZ, Wilmington, Ohio. Filed July 12, 1909. Serial No. 507,149.

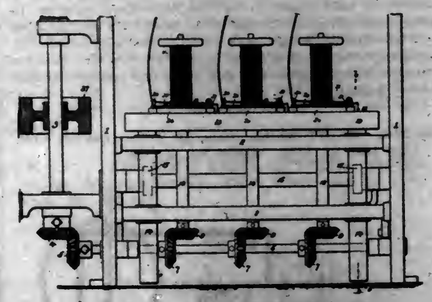
1. The combination with a casing having an inlet, and a pair of outlets, and a valve pivotally mounted intermediate its ends in the casing beneath the inlet, said valve comprising an elongated casing having an opening below its pivot in one of its sides, and said valve in one position discharging in one of the aforesaid outlets and in another position in the other outlet, the position of the valve being changed by the filling thereof through the opening in its side.

2. The combination with a casing having an inlet, and a pair of outlets, the wall between the outlets being oppositely inclined in the direction of the respective outlets, and a valve pivotally mounted in the casing beneath the inlet, said valve comprising an elongated casing having an opening in one of its sides, and said valve in one position discharging on one of the aforesaid inclines, and in another position on the other incline, the position of the valve being changed by the filling thereof through the opening in its side.



3. The combination with a casing having an inlet, and a pair of outlets, of a valve pivotally mounted in the casing beneath the inlet, said valve comprising an elongated casing having an opening in one of its sides, said valve in one position discharging into one of the outlets, and in another position into the other outlet, the position of the valve being changed by the filling thereof through the opening in its side, nuts secured to the end walls of the valve on the inside thereof, said end walls and the adjacent walls of the casing having openings, a rod passing through said openings and through the nuts, and means for rotating the rod.

959,316. SPINNING AND TWISTING MACHINE. ROBERT DAWES, Philadelphia, Pa., assignor, by mesne assignments, to himself and Edmund Dawes, Philadelphia, Pa., and Edward H. Haskell, Newton, Mass. Filed Jan. 2, 1908. Serial No. 408,922.



1. The combination, in a spinning or twisting machine, of a rotatable bobbin-carrying spindle, a rotatable ring surrounding the same and having primary and secondary thread guides so disposed that the thread in passing from the primary to the secondary guide contacts with the bobbin or with the body of thread wound thereon, a bearing for the ring, and means for increasing or diminishing the effect of centrifugal action upon that portion of the ring which carries the secondary guide.

2. The combination, in a spinning or twisting machine, of a rotatable bobbin-carrying spindle, a rotatable ring surrounding said spindle and having primary and secondary thread guides so disposed that the thread in passing from the primary to the secondary guide contacts with the bobbin or with the body of thread wound thereon, a bearing for said ring, and removable washers applied to the secondary thread guide and serving to increase or diminish the effect of centrifugal action upon that portion of the ring which carries said guide.

3. The combination, in a spinning or twisting machine, of a rotatable bobbin-carrying spindle, a bearing surrounding said spindle, a ring having primary and secondary thread guides so disposed that the thread in passing from the primary to the secondary guide contacts with the bobbin or with the body of thread wound thereon, and segments secured to said ring and contacting with the bearing therefor, said segments being so disposed that they will present a greater body on that side of the ring carrying the secondary thread guide than on the side carrying the primary thread guide.

4. The combination, in a spinning or twisting machine, of a rotatable bobbin-carrying spindle, a continuous bearing ring surrounding the same and having an internal groove therein, and a ring carrying thread-guiding means and provided with external segments adapted to the groove of the bearing ring and secured to the guide ring from the inside of the same.

5. The combination, in a spinning or twisting machine, of a rotatable bobbin-carrying spindle, a rotatable ring surrounding the same and having primary and secondary thread guides so disposed that the thread, in passing from the primary to the secondary guide, contacts with the bobbin or with the body of thread wound thereon, a bearing for the ring, means for disturbing the balance of the ring so that the centrifugal force due to its rotation will cause it to press upon the bearing and create friction, and means for increasing or diminishing such disturbance of balance.

959,317. LAP-LINK. PERKINS H. DE ROCHEMONT, Chattanooga, Tenn., assignor of one-half to Charles Toppino, Jr., New Orleans, La. Filed May 16, 1907. Serial No. 374,048.



A link of the class described composed wholly of strap metal of plano-convex shape in cross section and consisting of two members of oblong shape adapted to fit and fold one within the other, the outer member having the plane surface at the inner contour and the convex surface at the outer periphery thereof while the inner member has the plane surface at its outer periphery and the convex surface upon the inner side, whereby the plane surfaces lie in contact with each other when the link as a whole is closed, the outer member being provided with an entrance throat to one side of the minor axis thereof and the inner member being provided with an entrance throat at the opposite side of the minor axis thereof and the two members being pivotally connected together at the side opposite the entrance throat of the outer member and to one side of the center of the entrance throat of the outer member, substantially as described.

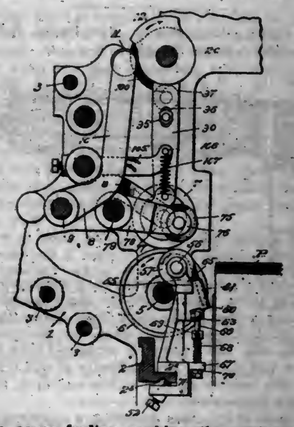
959,318. MUSICAL INSTRUMENT. WILLIAM H. DESURBAU, Hazelhurst, Wis. Filed Sept. 22, 1909. Serial No. 518,988.

1. In combination, a casing provided with a rest, a record mounted to turn on the casing, a violin having its neck resting on the rest, and having its body extending over the record, a stylus, and means for securing the stylus on the bridge, said means comprising a carrier provided at each end with clamping forks for engaging the bridge, said carrier having on its upper side a curved contact portion for engaging the bridge.



2. In a device of the class described, a carrier provided at each end with a clamping fork for engaging a bridge, and with a contact portion intermediate the forks, said forks being spaced apart from the ends of the contact portion to receive a string therebetween.

959,319. PAPER-FEEDING MACHINE. TALBOT C. DEXTER and VERNON GARNER, Pearl River, N. Y., assignors, by direct and mesne assignments, to Dexter Folding Company, Pearl River, N. Y., a Corporation of New York. Filed Feb. 25, 1909. Serial No. 479,957.



1. In a paper feeding machine, the combination of a support for a pile of sheets, and a feeding off device operating upon said pile, with a rearwardly feeding roller operating below the plane of feed and over which sheets are passed by said feeding off device, sheet calipering means operating simultaneously with said feeding off device and preventing the action of said roller upon a sheet when a single sheet is passing, and causing the action of said roller upon the under sheet or sheets when more than one sheet is passing, pile holding clamps adapted to engage the pile in rear of the top sheet, and suitable sheet delivery mechanism.

2. In combination with the feeding off and sheet delivery devices of a paper feeding machine, a separator roller mounted in stationary bearings below the plane of feed, an upper calipering member movable toward and away from said roller, a yieldingly mounted lower calipering member supported adjacent to the periphery of said roller, and means for operating said roller in the direction to move sheets rearwardly.

3. In combination with the feeding off devices the sheet delivery devices and pile holding clamps of a paper feeding machine, a separator roller mounted in stationary bearings beneath the plane of feed, an upper calipering member movable toward and away from said roller, and a yieldingly mounted calipering shoe supported adjacent to the periphery of said roller and means for operating said roller in the direction to move sheets rearwardly.

4. In a paper feeding machine, the combination of a pile support, sheet feeding devices operating above said support, drop roller sheet delivery mechanism, and a sheet calipering and separating mechanism comprising a lower rearwardly feeding roller supported beneath the plane of feed, an upper forwardly feeding roller supported above the plane of feed, means for raising and lowering said upper roller with relation to said lower roller, and a yieldingly mounted lower calipering member arranged adjacent to said lower roller and adapted to support single sheets out of contact with said lower roller, substantially as set forth.

5. In a paper feeding machine, the combination of a pile support, sheet feeding devices operating above said support, sheet delivery mechanism including a constantly driven lower shaft carrying rollers and intermittently operated drop rollers coöperating therewith, a sheet separating roller supported beneath the plane of feed and geared to said constantly rotating shaft to rotate reversely to said under feed rollers, an upper calipering member supported above the plane of feed, in proper relation to said separator roller, and a yieldingly mounted lower calipering member arranged adjacent to said lower separating roller and adapted to support single sheets out of contact with said separator roller.

[Claims 6 and 7 not printed in the Gazette.]

959,320. JACK. JOHN DIXON, West Baden, Ind. Filed Oct. 14, 1909. Serial No. 522,679.



1. In a jack of the class described, a supporting frame, an actuating screw journaled in the opposite ends of said frame, rollers carried by the sides of the frame, the rollers upon one side being out of alinement with the rollers upon the opposite side, and a platform connected with the actuating screw and movable longitudinally of said frame with its lower face bearing on said rollers and upon the upper edges of the frame sides.

2. In a jack of the class described, a supporting frame, an actuating screw having its opposite ends journaled in the opposite ends of said frame, bed plates secured to the opposite inner faces of the sides of said frame, said bed plates being provided with sockets opening through the upper sides of the bed plates, rollers loosely fitted in said sockets with portions on their peripheries extending above the planes of the upper sides of the bed plates, a platform connected with the actuating screw and movable longitudinally of the frame, with its lower face bearing on said rollers, said platform being provided with undercuts forming guides and bearing on the upper edges and inner faces of the frame sides.

959,321. DOUBLE-ACTING DEEP-WELL PUMP. JOHN G. DOWARD, San Francisco, Cal. Filed July 26, 1909. Serial No. 509,483.

1. The combination in a pump, of upper and lower heads and an intermediate cylinder, said heads and cylinder being formed of concentric spaced cylinders and each of said heads having a plurality of exterior ports and an interior chamber, and a closed partition within said chamber, a valve for admitting water through the head, and a plunger movable within the inner cylinder, the space between the cylinders forming a discharge passage from the lower head.

2. In a pump, the combination of a cylinder and a concentric head spaced therefrom to form a water passage, said head having a lateral opening, connecting with said space and having an interior chamber with which the opening connects, a horizontal partition between the cylinder and head said head having a water passage through it, and said head having a lateral opening below said partition connecting with the space between the head and cylinder, a valve controlling the water passage through the head, and a plunger below the valve and connecting with the apace between the head and cylinder, said cylinder having a discharge passage.



3. The combination in a pump, the upper and lower heads and an intermediate connection, cylinders surrounding the heads and connection and forming a water passage therebetween, one of said cylinders having a horizontal partition with a central water passage and said heads having lateral openings above and below the partition connecting with the space between the heads and cylinders, other partitions extending transversely across the heads, and valves above and below said second partitions and controlling the passage of water through the lateral openings in the heads, and a piston operable in said intermediate connection.

4. The combination in a pump, of upper and lower valve containing heads and an intermediate connection with a plunger movable therein, said heads and connection being formed of concentric spaced cylinders with lateral openings therethrough, and said inner cylinder having a closed chamber connecting with said openings, closed partitions extending across the space between said cylinders, a valve controlling the discharge from said chamber and delivering water into the space at the other side of the partition, and a main discharge pipe with which the water passages communicate.

5. The combination in a pump of outer and inner concentric tubes, a plunger reciprocable in the inner tube, said plunger having a plurality of parallel spiders and oppositely turned cup leathers, heads formed of inner and outer cylinders and to which opposite ends of the tubes are secured, ports and channels formed in the heads and connecting with the annular space between the two, spring-pressed valves by which said ports are secured, and closed partitions extending across the space between the inner and outer cylinders of an intermediate portion of the heads, said heads having an inner chamber connecting with said space, whereby reciprocation of the plunger produces alternate suction and ejection of water through each of the heads.

[Claims 6 to 13 not printed in the Gazette.]

959,322. WRENCH. WILLIAM DUCHARME, Johnstown, Pa. Filed Oct. 22, 1909. Serial No. 524,062.

1. In a tool, a fixed jaw, a movable jaw having a terminal disk-like wing pivotally connected to said fixed jaw, a pair of shoulders formed on said wing adjacent to its pivot, and a screw carried by said fixed jaw having a head projecting between said shoulders and adapted to engage one of said shoulders as the screw is advanced and the other of said shoulders as the screw is retracted whereby to adjust said jaws relatively to each other.



2. In a tool, a fixed jaw, a movable jaw having a lateral wing pivotally connected to said fixed jaw, a pair of spaced shoulders disposed upon said wing substantially opposite the working end of said jaw, a screw carried by said fixed jaw having a head projecting between said shoulders and adapted to engage one of said shoulders as the screw is advanced and the other of said shoulders as the screw is retracted whereby to vary the size of the opening between said jaws.

3. In a tool, a fixed jaw, a movable jaw having lateral wings pivotally connected to said fixed jaw, each of said wings having a pair of spaced shoulders disposed in rear of its pivot and remote from the forward or working end of the jaw, a screw carried by said fixed jaw having a head projecting between the spaced jaws of each wing and adapted to engage one of said jaws when the screw is advanced whereby to narrow the apace between the working faces of said jaws and to engage the other of said shoulders when the screw is retracted whereby to widen the space between the working faces of said jaws.

4. In a tool, a fixed jaw, a movable jaw terminating in a head having lateral wings to slidingly fit said fixed jaw, a pivot pin carried by said fixed jaw and having its terminals journaled in said wings, each of said wings being provided with a series of bearings adapted to receive the pivot pin whereby to vary the normal opening between said jaws, a pair of spaced shoulders formed on each of said wings, and a screw carried by said fixed jaw having a head projecting between the spaced shoulders of each wing and adapted to engage one of said shoulders as the screw is advanced and the other of said shoulders as the screw is retracted whereby to close and open said jaws.

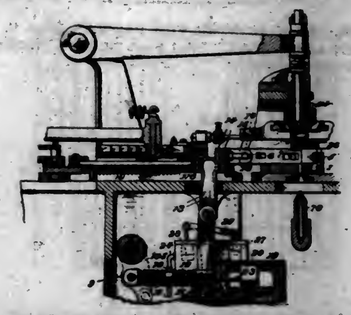
5. In a tool, a fixed jaw, a movable jaw terminating in a head provided with a pair of spaced wings adapted to slidingly fit said fixed jaw, a pivot pin carried by the fixed jaw having its ends journaled in said wings, each of said wings being provided with a pair of spaced shoulders inclined toward its pivotal connection, a screw carried by said fixed jaw having its head projecting between the spaced shoulders of said wing and adapted to engage one of said shoulders as the screw is advanced and the other of said shoulders as the screw is retracted whereby to open and close said jaws, and a spring seated on said screw head and exerting a pressure on said movable jaw head whereby to normally hold said movable jaw in open position.

[Claim 6 not printed in the Gazette.]

959,323. MOLD AND OPERATING MECHANISM FOR TYPE-MACHINES. EVERETT S. DUNAVANT, Louisville, Ky., assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed July 26, 1906. Serial No. 327,912.

1. In a type casting machine provided with movable matrices and clamping means, the combination therewith of a long and short body mold provided with a casting chamber comprising two longitudinal sections defined by a cross-piece or bridge and adjacent matrix receiving opening at one end; and a plurality of independently movable members one for each section adapted to occupy their respective sections.

2. In a type casting machine such as described and in combination with its movable matrices and clamping devices for the selected matrix, of a long and short body mold adapted for the production of long or short body type as desired, the same including a single casting chamber comprising adjacent longitudinal sections defined by an end wall partially closing said chamber, a primary mold blade movable across the open section to wholly or partially occupy the latter and a supplemental mold-blade movable across the closed section to wholly or partially occupy the same.



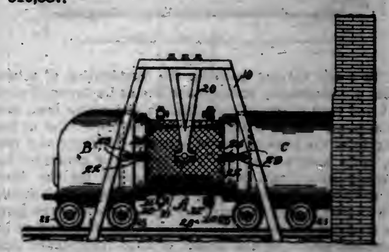
3. A type mold provided with a plurality of mold-blades coöperating with a single casting chamber, said mold blades being disposed in lateral sequence between opposing side walls and each contacting with one of said side walls only.

4. A type mold provided with a plurality of independently movable mold blades disposed in parallel relation and in lateral sequence between the opposite side walls of a common casting chamber and means for adjusting or positioning said mold-blades so that either may cover the adjacent side wall while the other dimensions the chamber formed between the first named mold blade and the opposite side wall.

5. A type mold provided with side blocks, a movable cross block and a plurality of mold-blades arranged side by side between and in sequence with the side blocks and means for advancing either mold blade to cover the casting face of the adjacent side block and for positioning the other mold blade to dimension the casting chamber formed between the side of the advanced mold blade and the side block opposite thereto.

[Claims 6 to 39 not printed in the Gazette.]

959,324. GAS-MAKING APPARATUS. PHILIP A. EMANUEL, Aiken, S. C. Filed Aug. 2, 1909. Serial No. 510,887.



In a distillation apparatus, the combination of a furnace, a retort, a smoke stack, connecting means between said retort and said smoke stack, said retort being cylindrical and provided with end plates, having tubes passing therethrough, and also with covers and valved pipes connected to said covers, a layer of asbestos covering said retort and with wire netting securing the same in place, said furnace being provided with a perforated plate, the perforations in which are in line with the tubes of the retort, said furnace and said connecting means being pro-

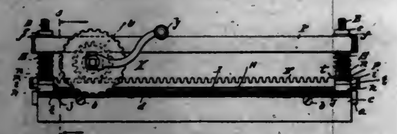
vided with wheels and with means for firmly attaching the retort to said furnace and to connecting means, whereby said apparatus may be moved bodily from one part of the plant to another on a track, and means located outside of said track for centrally supporting said retort when disconnected from said furnace and said connecting means, substantially as described.

959,325. DISK JOINTER FOR PLOWS. JOHN F. EMMETT, Adrian, Wash. Filed Sept. 10, 1908. Serial No. 452,437.



In a device as specified the combination with a plow, of a standard adjustably mounted upon the plow for vertical and rotatable movement, the lower end of said standard being cranked, a plate carried by said standard and having a vertical bore at one end thereof for the reception of the standard, set screws passed through the plate and engaging with the standard to retain said plate in adjusted position upon the standard, a covering plate detachably mounted upon the upper face of the first named plate, the inside faces of both of said plates having corresponding semi-cylindrical depressions extending from one end thereof, the depressions being enlarged at their inner ends to form semi-spherical sockets, an axle having an enlarged spherical end positioned between said plates and carried in said depressions, and a disk rigidly mounted upon said axle.

959,326. SAW-SETTING MACHINE. RAYMOND W. ENTREKIN, Craig, Nebr. Filed Jan. 29, 1910. Serial No. 540,871.



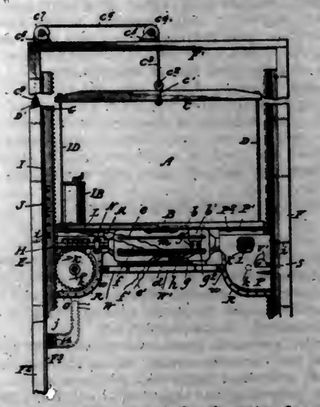
1. In a saw setting machine, the combination of a base having a downwardly inclined surface at its forward edge, front and rear threaded rods fixed to and rising from said base adjacent the ends thereof, threaded bolts fixed to and rising from the base at points between the front and rear rods, nuts mounted on the rear rods and arranged immediately above the base, nuts mounted on the front rods and arranged immediately above the base, nuts mounted on the bolts and arranged immediately above the base, nuts mounted on the threaded rods at the rear and at intermediate points in the height of said rods, upper nuts mounted on the bolts, plates arranged below said nuts on the rear rods and the bolts, rack bars supported on the lower nuts of the rear rods and bolts and interposed between said nuts and the plates; one of said rack bars having recesses in its outer side receiving the adjacent nuts, wedge blocks interposed between the other rack bar and the bolts, coiled springs mounted on the rear rods, above the intermediate nuts thereof, a longitudinal bar loosely mounted on said rods and supported by the springs, nuts mounted on the rear rods above said bar, a longitudinal bar secured on the front rods, means for holding a saw blade in the space between the base and the rack bars, a transverse shaft interposed between the rack bars and the longitudinal bars and having spur gears intermeshed with the rack bars and also having a collar movable at the outer side of the rear longitudinal bar and further having a wheel adapted to travel over and exert pressure against a saw blade, a rotary traveling set fixed on the shaft and having a beveled periphery opposed to the said inclined surface of the base and also having setting teeth on said periphery, and means on the shaft for turning the same.

2. In a saw setting machine, the combination of a base having a downwardly inclined surface at its forward edge, rack bars supported above the base to afford a saw-receiving space between them and the base, longitudinal bars supported above the rack bars, and a transverse shaft movable between the rack bars and the longitudinal bars and equipped with spur gears and with a rotary traveling set having a beveled and toothed periphery opposed to the said downwardly inclined surface of the base.

3. In a saw setting machine, the combination of a base having a downwardly inclined surface at its forward edge, a rack supported above the base to afford a saw-receiving space between it and the base, a transverse shaft having a spur gear intermeshed with the rack and also having a rotary traveling set the periphery of which is beveled and toothed and opposed to the said downwardly inclined surface of the base, and means disposed above the shaft and connected with the base for retaining the spur gear in engagement with the rack during the traverse of the set.

4. In a saw setting machine, the combination of a base having a downwardly inclined surface at its forward edge, rack bars supported above the base to afford a saw-receiving space between them and the base, front and rear longitudinal bars arranged above the rack bars and connected with the base, coiled springs disposed below and yieldingly supporting the rear longitudinal bar, means for crowding said bar downward against the action of the springs, and a transverse shaft movable between the rack bars and the longitudinal bars and having spur gears and a wheel at its rear end adapted to travel over a saw blade and also having on its forward portion a rotary traveling set the periphery of which is beveled and toothed and opposed to the said inclined surface of the base.

959,327. ELEVATOR. BARNETT EPSTEIN, New York, N. Y. Filed Feb. 18, 1909. Serial No. 478,728.



1. In an elevator system of the character described, a shaft, a track within the shaft, comprising oppositely situated rails, said rails provided with flanges respectively, and intermediate web and tread surfaces for each, the tread surfaces of each being provided with spirally formed gearing teeth, said rails having inclined internal edges disposed as tread surfaces, a car playing within the shaft, a motor, a casing for the motor, spiral gearing carried by the casing adapted to engage the spiral teeth of the said rails and worm gearing carried by the casing and driven by the motor adapted to engage the said spiral gearing, covers for the casing and rollers carried by the casing and embraced by the covers adapted to engage the lateral margins of the rails at opposite sides of the shaft.

2. In an elevator system of the character described, an elevator shaft, a pair of toothed tee rails carried by the shaft and secured thereto, an electrical conduit within the shaft, a car suspended within the shaft, an electric motor carried by the car and adapted to make electrical contact with the aforesaid conduit, a casing for the motor, worm gears carried in the casing and adapted to engage the tee rails, worms driven by the motor engaging the worm gears, rollers provided with spindles carried by the casing adapted to engage the tee rails laterally and convergingly under the rack surface thereof and covers for the casing embracing the spindles of the said rollers in bearing relation, substantially as described.

959,328. MILLING-TOOTH. THOMAS EYNON, Chicago, Ill. Filed Jan. 29, 1908. Serial No. 413,300.



1. In a device of the character described, a milling head having an aperture formed therein, a tool securing member positioned in said aperture and formed with a tool receiving aperture, said tool securing member being formed with a primary cavity and an auxiliary cavity, said auxiliary cavity being connected with the primary cavity and adapted to be connected with hydraulic pressure for forcing the tool securing member out of the aperture formed in the milling head, and a tool positioned in the aperture in said tool securing member.

2. In a device of the character described, a milling head having an aperture formed therein, a securing member positioned in the aperture and provided with an upstanding tool bracing projection projecting beyond the milling head, said securing member being formed with an aperture for receiving a cutting tool, and a cavity adapted to receive hydraulic pressure for forcing the securing member out of the aperture formed in the milling head.

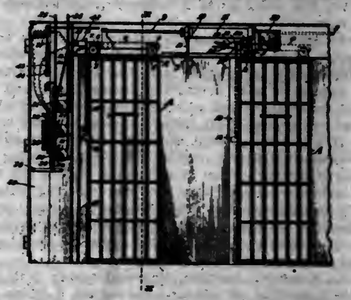
3. In a device of the character described, a milling head having an aperture formed therein, a securing member formed with a cavity positioned in said aperture, and a cutting tool positioned in said cavity and extending beyond the securing member, said securing member being formed with an aperture beneath the cutting tool, and a second aperture connected therewith designed to receive hydraulic pressure for the purpose of forcing the securing member out of engagement with the milling head.

4. In a device of the character described, a milling head, an aperture formed therein, a securing member positioned in the aperture and provided with a cavity adapted to receive a cutting tool, a second cavity formed in the receiving member and having threads formed internally thereof, and adapted to receive a fluid for forcing the securing member out of engagement with the milling head.

959,329. JAIL-DOOR-OPERATING DEVICE. CHARLES M. FINCH and FREDERICK A. KOHTITZ, San Francisco, Cal., assignors to Finch Jail Building and Metal Company, San Francisco, Cal. Filed Nov. 18, 1909. Serial No. 528,735.

1. The combination in a door actuating device, of a slidable door, a slidable bar to which the door is connected, said bar having a longitudinal slot and said door having a part engaging the same, fluid pressure devices for operating the bar, and connections between the bar and the door lock for operating the latter during the movement of said bar.

2. The combination in a door actuating device, of a plurality of guided, slidable doors, arranged substantially in the same plane, means for simultaneously locking and unlocking said plurality of doors, longitudinally slotted bars connected to the doors, fluid pressure cylinders with pistons and piston rods for operating the bars, and intermediate connections between the bars and the doors whereby each door is first unlocked and then opened.



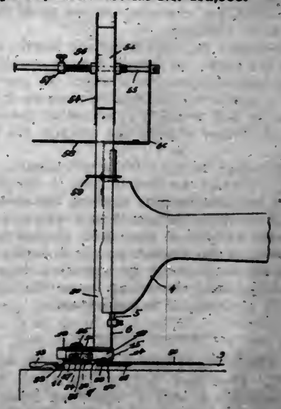
3. The combination in a door-actuating device, of a plurality of guided, slidable doors, independent fluid pressure cylinders, pistons, and rods, slidable bars with which the rods are connected, connections between said bars and the doors, and locking devices actuated by the bars.

4. The combination in a door-actuating device, of a plurality of guided, slidable doors, longitudinally slotted bars, fluid pressure cylinders and connections by which the bars may be moved, pins carried by the door hangers and adapted to engage the slots of the bars, locking devices, and means whereby the bars first actuate said locking devices, and subsequently move the doors.

5. The combination in a door-actuating device, of guided, slidable doors, longitudinally slotted bars, and pins carried by the doors entering the slots, fluid pressure motors connected to move the bars, latches carried by the doors and vertically guided, slidable bolts engageable with the latches, angular extensions on the bars, and a slot formed in the bolts and engaging said extensions.

[Claims 6 to 13 not printed in the Gazette.]

959,330. GUIDE FOR SEWING-MACHINES. BENJAMIN FLEIGEL, Boston, Mass., assignor to B. Fleigel Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 24, 1909. Serial No. 491,933.



1. In a sewing machine, the combination with a base-plate adapted to be secured to the bed of the machine, of a top facing guide pivoted to the plate and having a part

adjustable for different widths of top facing, and a lining guide carried by and adjustable with said adjustable part of the top facing guide.

2. In a sewing machine, the combination with a lining guide, of a top facing guide situated above the lining guide and provided with an adjustable part for adjusting said top facing guide for different widths of top facing, and means connecting said lining guide to said adjustable part whereby the lining guide is adjusted simultaneously with said part.

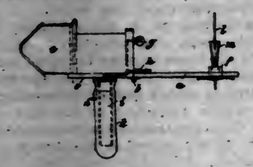
3. In a sewing machine, the combination with a top facing guide having a part adjustable for different widths of top facing, of a lining guide carried by and adjustable with said adjustable part of the top facing guide, and a resilient finger associated with the lining guide and adapted to rest on the edge of the lining to prevent it from curling.

4. In a sewing machine, the combination with stitching mechanism including a needle, of a U-shaped lining guide having a gulding portion to engage the edge of the lining, said guiding portion being provided with an extension which terminates at a point substantially opposite the needle, of a top facing guide having a part adjustable for different widths of top facing, and means for securing said lining guide to said adjustable part.

5. In a sewing machine, the combination with a bed having a shoulder, of stitching mechanism, a lining guide, a top facing guide situated above the lining guide and having an angular relation thereto, a base plate for sustaining said guides, and a cam-actuated clamping member arranged to engage the edge of the base and clamp the latter against said shoulder.

[Claims 6 to 10 not printed in the Gazette.]

959,331. STEREOSCOPE. ALBERT EDWARD FOOTE, Berlin, Germany. Filed May 11, 1908. Serial No. 432,086.



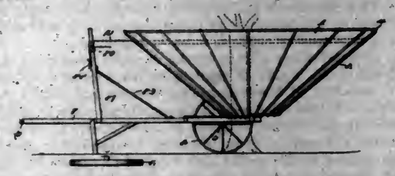
1. A stereoscope having a handle, and contacts on the handle, a source of electricity in the said handle, a switch carried by the handle, a push button projecting from the handle and adapted to operate the switch, conductors of electricity in the stereoscope, an electric lamp connected to said conductors, and contacts adapted to be engaged by the contacts on the handle.

2. A stereoscope having a frame and handle, conductors carried by the frame, an electric lamp in circuit with the conductors, terminal contacts to which the conductors are connected, a handle having contacts, a source of electricity in the handle and means for detachably connecting the handle to the frame whereby the contacts are in engagement.

3. A stereoscope having a frame and handle, conductors carried by the frame, an electric lamp in circuit with the conductors, terminal contacts to which the conductors are connected, a handle having contacts, a source of electricity in the handle, a switch in the handle adapted to establish a circuit through the conductors, a push button extending to the surface of the handle for operating the switch and means for detachably connecting the handle to the frame whereby the contacts are in engagement.

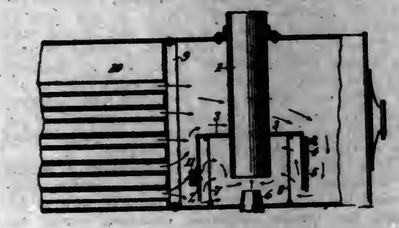
959,332. FRUIT-GATHERER. ROBERT FOUNTAIN, Banning, Cal. Filed Sept. 8, 1909. Serial No. 516,793.

1. In combination with a supporting frame provided with openings, a textile body, braces for said textile body having their lower ends resting upon said supporting frame, and hooks at the lower ends of said braces passing through the openings of the supporting frame and engaging the lower surface thereof to hold the braces in position thereon against both vertical and lateral displacement.



2. In combination a truck comprising a supporting frame, a standard projected upward from the truck, a textile body, braces sustaining the textile body and mounted upon said supporting frame, an operating cord having running connection with the upper ends of said braces for contracting the textile body and directed by said standard in its running movements, and means for securing the operating cord to hold the textile body and braces in an adjusted position.

959,333. DRAFT-EQUALIZER FOR LOCOMOTIVE FRONT ENDS. JOHN FOURNIA, Albany, N. Y., assignor of one-half to Frederick Randall Greene, Albany, N. Y. Filed Dec. 11, 1909. Serial No. 532,557.



1. A draft-equalising device in locomotive front ends comprising, in combination with a flue sheet and a draft pipe, a baffling device embracing the draft pipe and extending downward in front and rear thereof and having its principal draft opening in the front thereof at the bottom of the smoke-box.

2. A draft equaliser in locomotive front ends comprising, in combination with the flue sheet and a draft pipe extending below the center of the smoke-box, a baffling device disposed wholly in front of the lower flues and embracing the draft pipe and arranged to deflect the draft from the flues to the draft pipe over said baffling device and thence down over the bottom of the smoke-box.

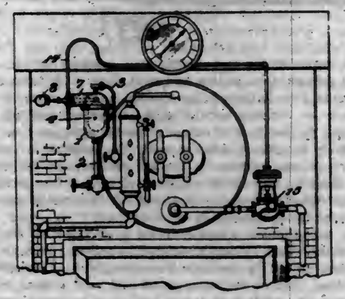
3. In a locomotive front end, in combination with the draft pipe extending below the center of the smoke-box, a draft-equalising device embracing the lower end of the draft pipe and arranged to deflect the draft over said device and thence down over the bottom of the smoke box.

4. A locomotive front end comprising, in combination with a draft pipe extending below the center of the smoke-box, a draft-equalising device comprising a deflector extending downward from the draft pipe and arranged to deflect the draft over said deflector and thence down over the bottom of the smoke box.

5. A locomotive front end comprising, in combination with a draft pipe extending below the center of the smoke-box, a draft-equalising device comprising a deflector extending downward from the draft pipe and across the smoke box and arranged to permit the draft to clean the bottom of the smoke box in the rear of the deflector, and to deflect the draft over said deflector and thence down over the bottom of the smoke box.

[Claims 6 to 11 not printed in the Gazette.]

959,334. FEED-WATER REGULATOR. LOUIS B. FULTON, Pittsburg, Pa., assignor to The Chaplin-Fulton Manufacturing Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Feb. 18, 1909. Serial No. 478,599.



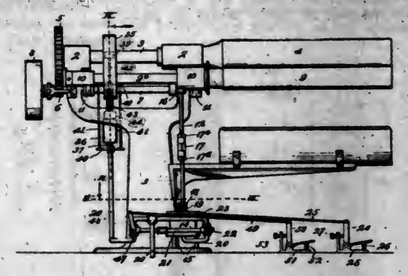
1. In combination with a prime mover, a chamber therefor located above the normal water level in a boiler, and means for alternately admitting steam and water to said chamber for causing the prime mover to travel in opposite directions, a controlling valve in the feed-line, a steam pipe leading from said chamber to said controlling valve, an exhaust outlet, and a slide valve for controlling the passage of steam and air from the upper portion of such chamber through said pipe to the controlling valve and from said pipe to the exhaust outlet, said slide valve being actuated by the movements of the prime mover and located wholly within said chamber, near the top thereof, and held to its seat by steam pressure within the chamber.

2. In combination with a prime mover, a chamber therefor located above the normal water level in a boiler, and means for alternately admitting steam and water to said chamber for causing the prime mover to travel in opposite directions, said chamber having near its top a valve seat and two ports leading therefrom, a controlling valve in the feed-line, a steam pipe leading from one of said ports to said controlling valve, a steam valve fitted loosely on such seat against which it is held wholly by steam pressure within said chamber, and means actuated by said prime mover for moving said valve to permit steam and accumulated air to pass from the chamber to said pipe and to exhaust therefrom.

3. In a feed-water regulator, the combination with a chamber located above the normal water level in a boiler, a prime mover in such chamber, and a shaft actuated by such prime mover, said chamber having supply and exhaust ports and a valve seat through which said ports open, of a controlling valve in the feed-line, a steam-pipe leading from said supply port to said controlling valve, a valve for admitting steam and accumulated air from the chamber through said supply-port to said pipe, said valve having a port for connecting the first mentioned ports to permit the steam and air to escape from said pipe, said valve being held against its seat by steam-pressure, and means mounted on said shaft and engaging said valve for moving it on its seat when the prime mover is actuated.

4. In a feed-water regulator, the combination with a chamber, a prime mover therein, and a controlling valve, of a plate secured to said chamber and having ports for controlling the passage of steam to and its exhaust from said controlling valve, said plate having a valve seat through which said ports open, a segmental valve designed to move on the arc of a circle on said valve seat, said valve having a single port for connecting the first mentioned ports, means actuated by the prime mover for moving said valve, and grooves extending transversely of said valve seat at or about the termination of the travel of said steam valve.

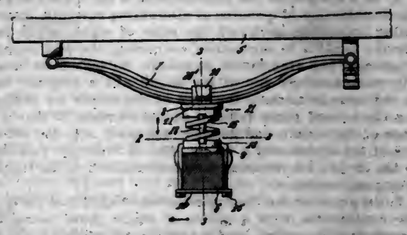
959,335. IRONING-MACHINE. CHARLES B. GARTRELL, Kansas City, Mo. Filed Sept. 28, 1908. Serial No. 455,072.



1. In combination, a laundry machine consisting of a stationary roll, a laterally movable roll, a pedestal for supporting said rolls, a casing rockingly-mounted upon the stationary roll, a piston for actuating said casing, a cylinder in which said piston operates, a cross-head secured to said piston, rods secured to said cross-head, a second cross-head secured to said rods, a rod connecting the second cross-head to the casing, a cushion interposed between the second cross-head and the pedestal, cog wheels fixed to the rolls, and an idler carried by the casing, engaging the cog-wheel on the stationary roll and adapted to engage the cog-wheel on the movable roll when the casing is rocked.

2. In combination, a laundry machine consisting of a stationary roll, a laterally movable roll, means supporting said rolls, a casing rockingly-mounted upon the stationary roll, gear wheels fixed to the rolls, an idler carried by the casing, engaging the cog-wheel on the stationary roll and adapted to engage the cog-wheel on the movable roll when the casing is rocked, fluid-controlled means for actuating the movable roll, fluid-controlled means for actuating the casing, and treadles arranged adjacent each other for controlling the fluid-controlling means.

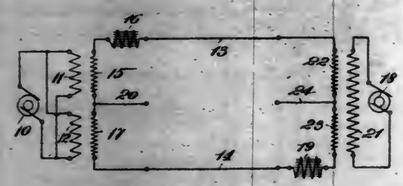
959,336. VEHICLE-SPRING. CHARLES B. GEIGER, Manning, S. C. Filed Dec. 18, 1909. Serial No. 533,931.



1. In a shock absorber for vehicles, the combination with an axle and body spring, of upper and lower plates fixedly secured to said body spring and axle, helical springs interposed between said plates and dished holders arranged on the opposite terminals of said springs and bearing on said plates, and tension rods passing through said springs, plates and dished holders.

2. In a shock absorber, a helical compression spring, a combined guide and holder arranged on one end of the spring and having a flat annular bearing surface provided with a peripheral flange to bear on the outer side of the end helix of said spring, an inwardly extending lug on said flange bearing on the terminal of the said end helix and a vertical lug on said flat bearing surface bearing on the inner side of the said end helix.

959,337. TRANSMISSION OF ELECTRICAL ENERGY. WILLIAM F. GRADOLPH, St. Louis, Mo., and WILLIAM C. HAHNE, Chicago, Ill., assignors to Gradolph Electric Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 20, 1905. Serial No. 292,529.



1. In a system for the transmission of electrical energy, a source of alternating currents, a metallic circuit, the lines of which are in inductive relation to each other, an impedance device located in one of the said lines, and a surging line in inductive relation to both of the said lines, the said impedance and surging line coöperating to alter the normal phase relation of the current in one line relative to that in the other, substantially as set forth.

2. In a system for the transmission of electrical energy over a metallic circuit, the lines of which are in inductive relation to each other, a source of alternating currents, an impedance device located in one of the lines of the circuit and arranged to cause a lag in the phase of the current in that line, and a non-continuous or incomplete metallic circuit in inductive relation to the two lines of the circuit arranged to alter the normal phase relations of the current in the two lines of the working circuit.

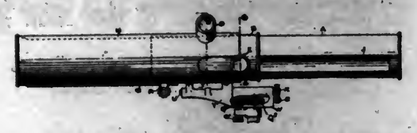
3. In a system for the transmission of electrical energy over a metallic circuit, the two lines of which are in inductive relation to each other, a source of alternating currents, impedances located respectively in series with the lines and near the opposite ends of the said circuits, and surging lines in inductive relation to both lines of the said circuit and arranged respectively near each end of the circuit for altering the normal phase relations of the currents in the lines of the circuit and causing the transmitted currents to be of like polarity on both lines of the circuit, and for restoring the currents to their original polarity at the receiving end of the line.

4. In a system for the transmission of electrical energy, the combination of a source of alternating currents, translating apparatus, a circuit, the sides of which are in inductive relation to each other, connecting the said source of current and translating apparatus, an impedance near the current supply end of the circuit and a surging line in inductive relation to the lines of the circuit for changing the normal phase relation of the currents in the two lines of the circuit, and another impedance near the other end of the circuit and a surging line in inductive relation to the circuit, for restoring the phase relation at the translating apparatus.

5. In a system for the transmission of electrical energy, the combination with a source of single phase currents, translating apparatus, and a circuit, the sides of which are in inductive relation to each other, connecting said source of currents and the translating apparatus, of means located near the end of the circuit at which is the source of currents for retarding the phase of the current in one side of the circuit, means also located near the aforesaid end of the circuit, in inductive relation to and coöperating with one line of the circuit to advance the phase of the current in the other side of the circuit, and means located near the current delivery end of the circuit, substantially similar to the aforesaid means at the current-supply end of the circuit but oppositely disposed with reference to the lines of the circuit, for restoring the phase relations before the current is delivered to the translating apparatus.

[Claims 6 to 10 not printed in the Gazette.]

959,338. RANGE-FINDER. GRAVES GRIFFITH, San Francisco, Cal. Filed June 15, 1909. Serial No. 502,238.



1. A range-finder comprising two systems of reflecting prisms arranged to reflect the rays from a distant object to produce two images in proximity to each other, a fixed eye piece for viewing both of said images, a fixed indicator arranged to be viewed through said eye-piece, a scale graduated in correspondence with the position of one of said prisms, and means for moving said scale relatively to the indicator, and, with said scale, said latter prism to correspondingly vary the position of the image received therethrough, substantially as described.

2. A range-finder comprising an eye-piece and two systems of reflecting prisms arranged to reflect the rays from a distant object to produce two images in proximity to each other, means for moving one of said prisms, and a scale movable with said latter prism, the correct reading of the scale being, by the movement of said prism and scale brought into position to be read through the eye-piece, substantially as described.

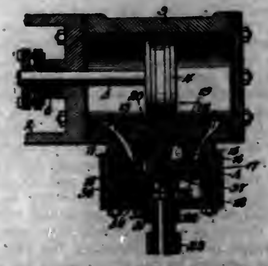
3. A range-finder comprising two systems of reflecting prisms located in two planes at right angles to each other, and arranged to form, from a common object, images in proximity to each other, and means for varying the distance between two prisms of one of the systems correspondingly to the distance of the object, substantially as described.

4. A range-finder comprising two systems of reflecting prisms located in two planes at right angles to each other, and arranged to form, from a common object, images in proximity to each other, and two tubes, one slidable upon the other, one of the tubes carrying a prism of one of said systems and the other tube carrying another prism of the same system, substantially as described.

5. A range-finder comprising an eye-piece, two systems of reflecting prisms located in two separate planes, the prisms of one system being arranged to reflect the rays proceeding from a distant object to the eye-piece in a direction parallel with, but removed from, the path of the rays direct from the object, and the prisms of the other system being arranged to reflect the rays proceeding from the object into a path to the eye-piece slightly oblique to the direction of their path immediately leading from the object, and means for varying the relative position of the rays of the latter system, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

959,339. VALVE MECHANISM FOR ENGINES. JOHN W. GUTHRIE, Falls Creek, Pa. Filed Mar. 18, 1909. Serial No. 484,190.



1. In an engine, the combination of a cylinder, a piston therein, a valve chest, ports between the valve chest and ends of the cylinder, a rotary valve periodically registering with the said ports for admitting and exhausting the steam, a valve stem, a flexible connection between the valve and stem, means driven by the engine for rotating the stem, and a spring interposed between the valve and inner end of the stem tensioned to move the stem and valve apart for holding the valve rotatably on its seat.

2. In an engine, the combination of a cylinder, a piston therein, a valve chest, ports between the valve chest and ends of the cylinder, a rotary valve periodically registering with the said ports for admitting and exhausting the steam, a valve stem, a flexible connection between the valve and stem, a spring interposed between the stem and valve for holding the latter against its seat, and means driven by the engine for rotating the stem.

3. In an engine, the combination of a cylinder, a rotary valve for controlling the admission and exhaust of steam, a chest for the valve, a stem extending into the chest through one of the walls thereof and having an abutment, said valve having a chambered boss provided with diametrically disposed recesses which extend inwardly from the outer end of the boss, a head on the stem disposed in the chamber, laterally-extending members on the head loosely engaging in the said recesses for rotating the valve by the members, and a spring housed in the valve and tensioned to hold the latter against the seat and the said abutment on the stem against the wall of the valve chest.

4. In an engine, the combination of a cylinder, a valve chest, a rotary valve therein having ports for admitting and exhausting steam to and from the cylinder, said valve chest having a central chamber provided with undercut walls, a valve stem extending into the chamber, a cylindrical head on the inner end of the stem disposed in the chamber, a collar adjacent the head bearing against the wall of the valve chest, means connecting the head with the valve for turning with the stem, a spring interposed between the valve and head for holding the valve against its seat and the collar against the wall of the valve chest, and a stuffing box through which the valve stem passes.

959,340. BELT PIN OR BUCKLE. LEOPOLD HAUSER, New York, N. Y., assignor of one-half to Simon Weil, New York, N. Y. Filed Apr. 17, 1908. Serial No. 427,642.



The combination of a frame having teeth bent at right angles thereto, letters having extensions at top and bottom to fit between the teeth, and means bearing upon the extensions as they lie between the teeth and the frame to retain the letters in position.

959,341. JOINT FOR WELL-TOOLS, &c. CHARLES M. HEETER, Butler, Pa. Filed Sept. 24, 1909. Serial No. 519,331.

1. The method of uniting the stem and socket of a well tool or equivalent structure, consisting in forming the stem with a depression, entering the stem in the socket portion and contracting the latter into the depression to form an interlock, and welding the socket portion to the stem portion.

2. The method of uniting the stem and socket of a well tool or equivalent structure, consisting in forming the stem with an encircling depression, entering the stem within the socket and forming the latter with an encircling depression which is entered in the stem depression and forms an interlock, and welding the socket to the stem.

3. The method of uniting the stem and socket of a well tool or equivalent structure, consisting in forming the stem with an encircling depression, entering the stem in the socket and contracting the latter into the depression, encircling the depressed portion of the socket with a collar, and welding together the collar socket and stem.

4. The method of uniting the stem and socket of a well tool or equivalent structure, consisting in forming the stem with a depression, passing the socket over the stem and contracting the same into the depression, and welding together the stem and socket for a portion of the length of their depressions.



5. The method of uniting the stem and socket of a well tool or equivalent structure, consisting in forming the stem with a depression, passing the socket over the stem and contracting the same into the depression, and welding together the overlapping parts from an extremity of the socket to a line intersecting the stem depression.

[Claims 6 and 7 not printed in the Gazette.]

959,342. BANK-NOTE CUTTER. HENRY EYSTER HOKE, Hanover, Pa., assignor of one-fourth to Clarence J. Hoke and one-fourth to Ralph H. Hoke, Hanover, Pa. Filed June 11, 1909. Serial No. 501,513.



1. In a bank note cutter, a frame open between its sides and ends, a plurality of stationary blades secured to the sides of the frame and disposed thereacross, lugs projecting rearwardly from the frame, a shaft journaled in bearings in the lugs, blades secured to the shaft, one adapted to co-act with each of the stationary blades, the planes of the cutting edges of the blades secured to the shaft being disposed forwardly of the connection between the cutting edges and the shaft, and means to rock the shaft.

2. In a bank note cutter, a frame, a plurality of stationary blades secured to the sides of the frame disposed thereacross, lugs projecting outwardly from the frame, a shaft journaled in the lugs, blades secured to the shaft adapted to co-act with the stationary blades respectively, a lever secured to the shaft by which it may be operated, two fingers secured to the shaft, a spring secured to one of the fingers and to the frame adapted to hold the shaft yieldingly in a pre-determined position, and a stop on the frame against which the other finger is adapted to strike to limit the downward stroke of the movable blades secured to the shaft.

3. In a bank note cutter, a frame open between its sides and ends, a plurality of stationary blades secured to the sides of the frame and disposed thereacross, lugs projecting rearwardly from the frame, a shaft journaled in bearings in the lugs, blades secured to the shaft, one adapted

to co-act with each of the stationary blades, the planes of the cutting edges of the blades secured to the shaft being disposed forwardly of the connection between the cutting edges and the shaft, a lever secured to the shaft by which it may be operated, two fingers secured to the shaft, a spring secured to one of the fingers and to the frame adapted to hold the shaft yieldingly in a pre-determined position, and a stop on the frame against which the other finger is adapted to strike to limit the downward stroke of the movable blades secured to the shaft.

4. In a bank note cutter, an open frame, a plurality of stationary blades secured to the sides of the frame and disposed thereacross, lugs projecting rearwardly from the frame, a shaft journaled in the lugs, blades having sleeves disposed on the shaft so that the blades may be adjusted independently of each other, means to hold the sleeves in a pre-determined position, the said blades projecting through cut-away portions of the frame and being adapted to co-act with the stationary blades respectively, and means to limit the radial movement of the shaft.

5. In a bank note cutter, a frame, a plurality of stationary blades secured to the sides of the frame and disposed thereacross, lugs projecting outwardly from the frame, a shaft journaled in bearings in the lugs, blades secured to the shaft adapted to co-act with the stationary blades respectively, two fingers secured to the shaft, a spring secured to one of the fingers and to the frame adapted to hold the shaft yieldingly in a pre-determined position, and a stop on the frame against which the other finger is adapted to strike to limit the downward stroke of the movable blades secured to the shaft.

[Claim 6 not printed in the Gazette.]

959,343. GAS BURNER OR HEATER. CHARLES F. HOLTMANN, Pittsburg, Pa., assignor of three-fifths to Stewart C. Galley, Wilkinsburg, Pa. Filed May 22, 1908. Serial No. 434,381.



1. A burner comprising a flat disk or plate having vertical fuel passages, and a drum supported by said plate, the edge of the plate being formed to provide an annular series of spaced air inlet passages between the drum and periphery of the plate.

2. A burner comprising a flat disk or plate having vertical fuel passages, and a drum or casing supported by the plate, an annular series of spaced air inlet ports being formed between the edge of the plate and the adjacent surface of said drum or casing.

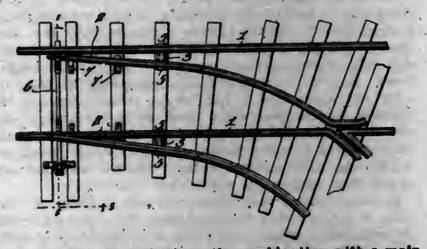
3. A burner tip comprising a flat disk or plate, having vertical fuel passages and peripheral cut away portions or recesses, retaining lugs projecting upwardly from the plate, and retaining lugs projecting downwardly therefrom and having laterally extending supporting members.

4. A burner tip comprising a flat disk or plate having vertical fuel passages and peripheral cut away portions or recesses, retaining lugs projecting upwardly from the plate, and retaining lugs projecting downwardly from the plate and having laterally extending lower ends provided with upturned extremities.

5. A burner tip comprising a flat disk or plate having vertical fuel passages and upwardly and downwardly projecting retaining members, and a casing inclosing said disk or plate, the peripheral edge of said disk or plate being formed to provide a series of air passages between said plate and said casing or chamber.

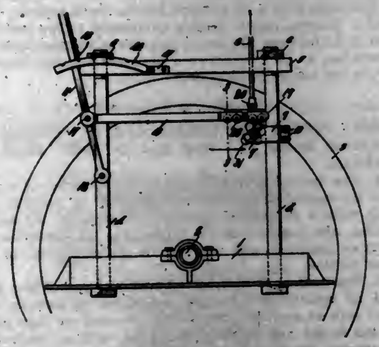
[Claims 6 to 14 not printed in the Gazette.]

959,344. SWITCH. FRANK HOMAN, Carbon, W. Va. Filed Nov. 4, 1908. Serial No. 461,037.



In a switch for coal mines, the combination with a main track and a switch constructed of resilient points, one of said points adapted to spring toward and contact with one of the rails of the main track, the outer point adapted to spring away from the main track, a connecting bar for the points, a lever for the connecting bar, retaining plates for the switch points and main rails, said retaining plates being each provided with inclined edges having overlying lips, the lips upon one of the edges of the plates adapted to engage the outer base flanges of the main rails, the lips upon the opposite ends of the plates adapted to contact the inner base flanges of the switch points, the lip of one of the plates adapted to limit the movement of one of the resilient points in relation to the rail, the lip upon the opposite plate adapted to serve as a point from which the switch point is swung when the lever is operated.

959,345. GAS-ENGINE-VALVE TIMER. THOMAS P. HUDEN, North Bend, Oreg. Filed June 29, 1909. Serial No. 504,980.



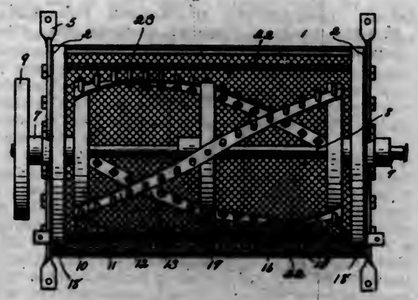
1. A device of the class described comprising in combination with the valve operating rod of the engine, of a cam shaft with a plurality of cams, a lever pivoted adjacent to the engine, means for securing the lever in adjusted position, a link pivoted by one end to the lever and provided at the other with a fork, shafts journaled in the arms of the fork and corresponding in number to the number of the cams on the cam shaft, a roller on each shaft, said rollers being arranged in staggered relation with respect to each other, and corresponding in position to the position of the cams, said link having a surface above the rollers, the push rod having a roller moving on said surface, said rollers being arranged in pairs, the pairs being spaced apart from each other for the purpose set forth.

2. A device of the class described, comprising in combination with the valve operating rod of the engine, a link having a plane surface upon which the rod rests, a cam shaft, a plurality of cams thereon arranged in spaced relation, a roller for engagement by each cam on the link, and arranged longitudinally thereof and in spaced relation, means for moving the link whereby to engage the rollers with the respective cam, and means for retaining the link in adjusted position.

3. A device of the class described, comprising in combination with the valve operating rod of the engine, a link having a plane surface upon which the rod rests, a cam shaft, a plurality of cams thereon arranged in spaced relation, a roller for engagement by each cam on the link, and arranged longitudinally thereof and in spaced relation and means for moving the link whereby to engage the rollers with the respective cam.

4. A device of the class described comprising in combination with the valve operating rod of the engine, of a link having a plane surface upon which the rod rests, a cam shaft, a plurality of cams thereon, rollers on the link corresponding in number and position to the number and position of the cams, and means for moving the links whereby to engage the rollers with the respective cams.

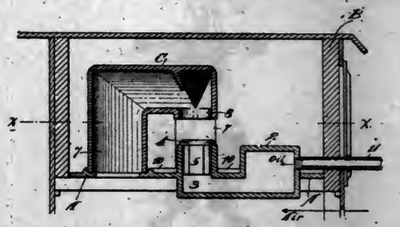
959,346. SEED-THRESHING MACHINE. DANIEL HUMMEL, Louisville, Ky. Filed Feb. 25, 1909. Serial No. 479,868.



1. A seed threshing machine comprising the end plates, a plurality of bolts tying said end plates together, a central shaft passing through said end plates, a plurality of spiders on said shaft, tooth bars arranged spirally on said spiders, a stationary tooth bar arranged longitudinally of the machine, teeth thereon to co-act with the teeth on the spirally arranged tooth bars, a guide arranged above the stationary tooth bar, the said end plates being each provided with an annular flange, a screen arranged under the annular flanges, a removable hood or cover carried on said annular flanges and means on said end plates and on said hood or cover for securing the hood or cover in position on said annular flanges, the whole arranged in such manner that the said hood or cover can be entirely removed from the machine to permit access to the interior thereof.

2. A seed threshing machine comprising two end plates, a shaft passing through said end plates, a plurality of spiders on said shaft, spirally arranged tooth bars on said spiders, a stationary tooth bar arranged longitudinally of the machine, a guide above said stationary tooth bar, a screen under said spirally arranged tooth bars, a removable cover, a hopper carried thereon, a fastening on said end plates and on said cover, and means on said end plates and on said cover for drawing the cover snugly around the said end plates.

959,347. OIL-BURNER. THOMAS W. HUNTER, Petaluma, Cal. Filed Oct. 12, 1909. Serial No. 522,297.



1. The combination in an oil burner, of a rectangular, horizontal plate, a cylindrical well centrally formed in said plate, a loose cap resting upon the top of the well whereby fuel is deflected in a horizontal plane, a housing formed with the plate approximately in the plane of the top of the well so as to intercept flames during combustion, whereby the fuel may be heated, a pipe for supplying oil within the housing and to the well, and a conduit having triangular-shaped legs resting upon the plate and registering with apertures therein.

2. The combination in an oil burner, of a horizontal plate, a well located centrally of and projecting upwardly from the surface of said plate, a housing formed on the plate and in line with the top of the well and having a chamber communicating with the well, a cap loosely fitting the well whereby flame may be deflected against the housing, a series of ribs formed upon the surface of the plate, a pipe connected to the housing whereby fuel may be supplied to the well, and a conduit resting on the plate having triple supports through which air may be admitted and discharged in close proximity to and just above the well.

3. An oil burner comprising a base-plate, an upwardly projecting well centrally thereof, a housing formed with the plate, having its upper portion in the plane of the top of the well, and having a chamber communicating therewith, a loose, removable cap having projections extending down in the well, pan-forming ribs on the upper surface of the plate, a T-shaped conduit, and triangular hollow supports formed on said conduit adapted to register with apertures formed in the plate upon which the supports rest, said apertures being triangular in form and having their apices proximate to the well.

959,348. ADHESIVE COMPOUND OR SIZING. MOSES R. ISAACS, Philadelphia, Pa. Filed Jan. 9, 1908. Serial No. 409,969.

1. A glue or adhesive compound composed of rennet casein, a hydrofluoric acid compound, alkaline matter and water.

2. A glue or adhesive compound composed of rennet casein, sodium fluorid, alkaline matter and water.

3. A composition of matter, consisting of rennet casein, a hydrofluoric acid compound, and alkaline matter.

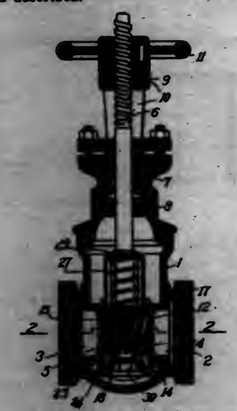
4. A composition of matter, consisting of rennet casein, sodium fluorid, and alkaline matter.

5. The mode herein described of rendering rennet casein soluble, said mode consisting in adding thereto a hydrofluoric acid compound and alkaline matter.

959,349. VALVE. EUGENE D. JEFFERSON, Lowell, Mass. Filed Apr. 9, 1908. Serial No. 426,052.

1. A valve, having, in combination, a casing provided with a cylindrical valve chamber, an outlet and an inlet, an inlet valve and an outlet valve having semi-cylindrical

faces, plates for supporting the valves in vertical position, means on the valves coöperating with the plates for preventing rotary movement of the valves a conical wedge located between the said valves and means for actuating said parts to first move the wedge relatively to the valves to remove the valves directly from their seats and then to remove the plates and valves from the line of flow, substantially as described.



2. A valve, having, in combination, a casing provided with a cylindrical valve chamber, an outlet and an inlet, valve members therefor, a conical wedge located between the valve members, and dumb-bell links having an interlocking relation with said valve members and said wedge whereby they are actuated to open and close the outlet and inlet, substantially as described.

3. A valve, having, in combination, a casing provided with a valve chamber, an outlet and an inlet, an outlet valve and an inlet valve, actuating means for moving said valves into and out of said valve chamber, and dumb-bell links having interlocking relation with said valves and actuating means whereby the valves are actuated to open and close the outlet and inlet, substantially as described.

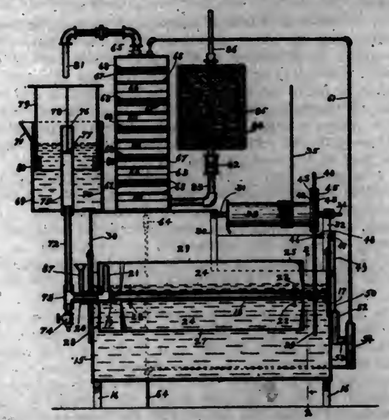
4. A valve, having, in combination, a casing provided with a cylindrical valve chamber, an outlet and an inlet, an outlet valve and an inlet valve having semi-cylindrical faces, plates for supporting the valves in vertical position, means on the valves coöperating with the plates for preventing rotary movement of the valves, and means located between the valves for moving them into and out of the valve chamber and for spreading and retracting them to close and open the outlet and inlet, substantially as described.

5. A valve, having, in combination, a casing provided with a cylindrical valve chamber, an outlet and an inlet, a collapsible cylinder, actuating means for moving said cylinder into and out of said chamber, a conical wedge for expanding said cylinder to close the outlet and inlet, and dumb-bell links between the wedge and the cylinder.

959,350. CARBURETING APPARATUS. GUSTAF JOHNSON, Chicago, Ill. Filed June 1, 1908. Serial No. 435,966.

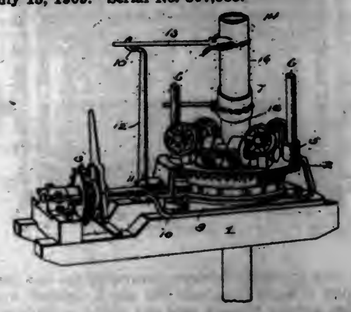
1. A carbureting apparatus comprising, in combination with an air compressor, a housing secured to the top of the compressor at one end thereof, an airometer having its bottom secured to the outer end of said housing, a connection between the air compressor and the airometer, a carbureter supported on said housing adjacent said airometer, a connection between the top of the carbureter and said airometer, a gasolene tank, a connection between the bottom of said carbureter and said tank, means carried by one end of said air compressor for conveying gasolene from the tank to the carbureter, and means on the air compressor arranged between the housing and the adjacent end of the air compressor for operating the gasolene conveying means and the air compressor.

2. A carbureting apparatus, comprising, in combination with an air compressor, a housing secured to the top of the air compressor at one end thereof, an airometer supported on the housing, a carbureter also supported on the housing and in communication with the airometer, means on the opposite end of the air compressor for supplying



gasolene to the carbureter, and means supported from said housing and the air compressor and arranged on the latter in the space between the housing and the adjacent end of the air compressor for operating the latter and said gasolene supplying means.

959,351. UNSCREWING MECHANISM FOR WELL-TUBES. HORACE G. JOHNSTON, Corsicana, Tex. Filed July 13, 1909. Serial No. 507,385.



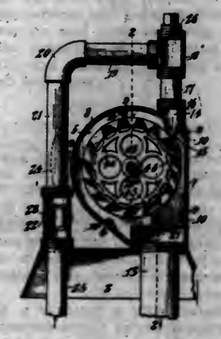
1. The combination with a base, of a table mounted to rotate upon the base, pipe grippers carried by the rotatable table, sockets formed adjacent the periphery of the table, columns adapted to be erected upon the table by being inserted in the sockets, and a removable upright adapted to be erected upon the frame and extend above the rotatable table.

2. The combination with a base, of a table mounted to rotate upon the base, pipe grippers carried by the table, a removable column carried by the periphery of the table extending above the grippers and a removable upright carried by the framework without the periphery of the table and extending above the removable column.

959,352. HYDRAULIC MOTOR FOR DENTAL ENGINES. OSCAR L. KELLETT, West Plains, Mo. Filed Dec. 4, 1908. Serial No. 465,997.

1. In a motor, the combination of a casing, a wheel rotatably mounted therein and including a pair of rings, and

blades secured to the rings with the spaces between adjacent blades open at the top and bottom and also at one side, a nozzle disposed with its axis approximately tangentially to the wheel to discharge fluid against the blades, and an outlet conduit disposed under the wheel and nozzle.



2. In a motor, the combination of a casing, a wheel mounted therein including a plurality of peripheral blades, and a ring disposed inwardly from the blades and connected with the inner corners thereof and also including a second ring secured to all the blades at one side, the fluid impinging faces of the said blades being arranged at an obtuse angle to the periphery of the first ring, a nozzle in the casing arranged to discharge fluid against the blades, and an outlet conduit arranged under the nozzle and wheel.

3. In a motor, a casing having opposed inlet and outlet openings, a wheel located in said casing below the inlet opening, the axis of the outlet opening of the casing being in line with one face of the wheel said opening being laterally larger than the width of the wheel extending beneath the same but having its axis offset to the vertical plane of the wheel.

4. In a motor, the combination of a casing having inlet and outlet openings and formed with a flat wall disposed in a plane approximately coincident with the diameter of the outlet opening, an offset chamber in the said side wall communicating with the outlet opening, with a wheel rotatably mounted in the casing, said wheel consisting of a spider formed with a peripheral ring, blades having their inner portions secured to the ring and disposed with their fluid impinging faces at an obtuse angle to the periphery of the ring, and a second ring disposed in proximity to the said flat wall of the casing and secured to the edges of the blades only at one side thereof.

5. In a motor, the combination of a casing, a nozzle mounted therein, a discharge conduit disposed opposite the nozzle, and a wheel arranged in the casing in coöperative relation with the nozzle and outlet conduit, said wheel comprising a body, a plurality of outwardly-extending blades projecting from the periphery of the body and having their inner edges integrally connected therewith, a ring separate from the body and located out of the plane thereof and integrally connected with the blades at the side edges thereof.

[Claims 6 to 14 not printed in the Gazette.]

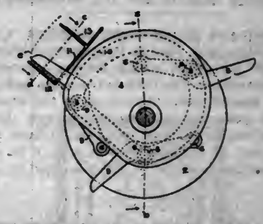
959,353. TIRE. ALEXANDER KRESSLER, Jr., Windom, Mo. Filed Mar. 4, 1908. Serial No. 419,206.

A wheel having its body constructed of a pair of disks, said disks having their upper edges contacting and provided with substantially U-shaped offsets and extending around their entire periphery, the offset portions adapted to provide a pocket, a solid resilient tire within the pocket,



a pneumatic tire below the solid tire, and the central portion of the disks being spaced and provided with a hub.

959,354. FOLDING DEVICE. WILLIAM F. KLINCK, Akron, Ohio. Filed Oct. 24, 1908. Serial No. 459,406.



1. In a folding device, the combination of a slotted guide adapted to receive a sheet to be folded, the said sheet extending across the slot, a rotatable disk, a folding finger pivoted upon the rotatable disk and adapted to pass through the slot of the guide so as to fold the sheet as it carries it through the slot, and cam means coöperating with the folding finger for causing it to travel in an irregular path whereby it is moving laterally as it passes through the slot but is moving longitudinally when it is withdrawn from the guide.

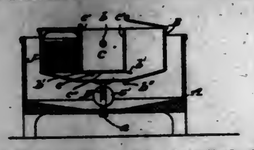
2. In a folding device, the combination of a slotted guide adapted to receive a sheet to be folded, the said sheet extending across the slot, a rotatable member, a folding finger pivoted upon the rotatable member and adapted to pass through the slot of the guide so as to fold the sheet as it carries it through the slot, a member projecting from the folding finger, and a stationary cam coöperating with the said member projecting from the folding finger to cause the folding finger to travel in an irregular path whereby it is moving laterally as it passes through the slot but is moving longitudinally when it is withdrawn from the guide.

3. In a folding device, means for rotating fingers about an axis, and in a desired relation with a guide, comprising a revolving shaft and member, fingers having an end fulcrumed to said member, a stationary cam provided with a groove to engage with rollers supported by the central portion of said fingers, and the outer portion of the fingers adapted to pass through an opening provided in said guide adapted to support the material to be folded.

959,355. DISH-WASHING MACHINE. JOHN G. KNAPP, Boonville, N. Y. Filed Mar. 13, 1908. Serial No. 420,799.

1. A machine of the character described comprising a tank, a tilting tank mounted therein having two interior

partitions with a bottom connected thereto and spaced above the bottom of the tilting tank, means on said partitions for supporting (in conjunction with the bottom of the tilting tank) dish-receptacles substantially on a level, and means for oscillating the tilting tank to and fro, substantially as described.

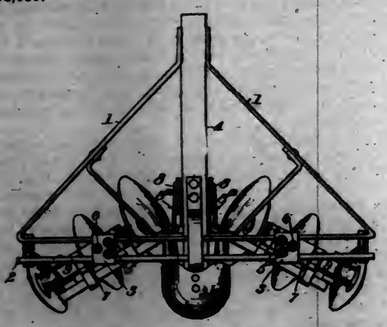


2. In a machine of the character described, the combination of a main tank and a secondary tank pivotally mounted therein and having partitions fixed therein whereby to form an inner receptacle and outer receptacles in the secondary tank, the bottom of the former or inner receptacle being spaced above the bottom of the main tank with a passage therebetween, and means for supporting dish-carriers in the outer receptacles in the secondary tank, substantially as described.

3. A machine of the character described comprising a tank, a tilting tank mounted therein having two interior partitions with a bottom connected thereto and spaced above the bottom of the tilting tank, and means for oscillating the tilting tank to and fro, substantially as described.

4. In a device of the character described, a pivotally mounted washing tank having its bottom with a dip between the ends and walls with a bottom connected therewith placed transverse the tank between its ends, the said bottom being spaced above the bottom of the washing tank to provide a clearance between the bottom thereof and the bottom of the inner tank, whereby to force the water from end to end of the tank and agitate it in each such end of the washing tank as the same is tilted to and fro.

959,356. DISK PLOW. LEONARD KREBS and CONRAD KREBS, Salem, Oreg. Filed May 24, 1909. Serial No. 498,039.



1. In a plow of the character described, the combination, with two axles arranged obliquely in vertical planes and oppositely inclined to the line of progression, of a plurality of concave disks mounted equi-distant apart on said axles, those on each axle being of graduated sizes and increasing in diameters and depths at the ratio of substantially one-eighth of an inch additional depth for each extra inch in diameter.

2. In a plow of the character described, the combination, with two axles arranged obliquely in vertical planes and oppositely inclined to the line of progression, of three concave disks mounted on each of said axles, the smallest one being twenty inches in diameter and two and one-half inches deep, the middle one twenty-one and one-half inches in diameter and two and eleven-sixteenths inches deep and the largest one twenty-three inches in diameter and two and seven-eighths inches deep, said disks being spaced nine inches apart on said axles for the purpose specified.

959,357. CIGAR-BAND. GEORGE LABARRE, New Orleans, La. Filed Dec. 19, 1908. Serial No. 468,354.



1. The combination with a cigar, of a band applied thereto and having an enlarged portion, and a linear stripper arranged transversely beneath the enlarged portion of the band and between the same and the cigar, said stripper extending out of alinement but parallel with the center of said enlarged portion and having one of its ends bent or deflected laterally and fastened to said enlarged portion in the central line thereof, and having its opposite end projecting beyond the band.

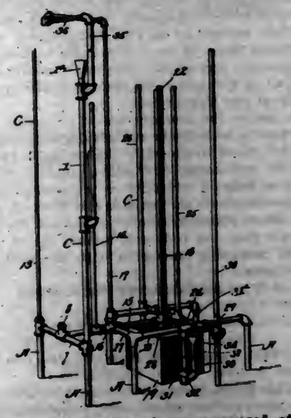
2. The combination with a cigar, of a band applied thereto, and a stripper having a deflected portion secured to the inner side of the band, between said band and the cigar, and a portion projecting beyond the band.

959,358. REPLACEABLE TOOTH. FRANCIS LA CHAPELLE, San Francisco, Cal. Filed Jan. 21, 1908. Serial No. 411,925.



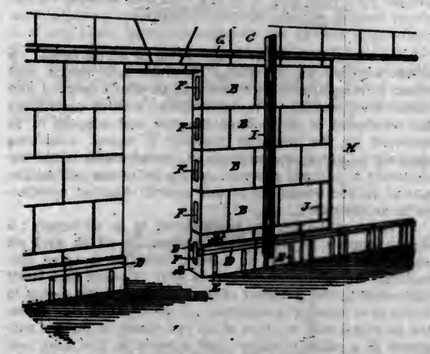
The combination with a veneer having a headed lug projecting from its rear face, of a backing comprising two plates, one being arranged parallel to the rear face of said veneer and having a key-slot to receive said lug, the other plate being imperforate and furnished with a depression covering the slot and lug and secured around its edge to the slotted plate, whereby a closed recess is formed containing the head of the lug and adapted to be filled with cement for retaining said head.

959,359. PIPE-FRAME FOR ACETYLENE-MACHINES. LEVI B. LAKE, St. Joseph, Mo. Filed June 19, 1909. Serial No. 503,168.



The combination, with a frame composed of horizontally-arranged pipes; of an acetylene generator and a storage tank supported directly on said pipes; a vertical discharge pipe for the generated gas arranged within the generator and connected at its outlet end to one of the frame pipes; a vertical inlet pipe arranged within the storage tank and connected at its inlet end to said frame pipe for supplying the gas to said tank; a valve arranged in said frame pipe between the points of connection of said discharge and inlet pipes thereto, to open and close communication between said generator and tank; and an operating lever for said valve extending normally above the bell of the generator, for preventing removal of the same when the said generator and tank are in communication through said valve.

959,360. CONCRETE WALL CONSTRUCTION. LOUIS LAPERSONNERIE, New York, N. Y. Filed Mar. 8, 1909. Serial No. 482,006.



1. A concrete block provided with a longitudinal furring strip embedded in one face thereof and having extensions projecting beyond the ends of the same, said extensions forming a continuous nailing strip over the joint and producing a spacing means for the blocks, a plurality of vertical furring strips embedded in the block below the longitudinal strips, and a furring strip embedded in one end of the block, said strip being spaced from the sides, top and bottom of the block.

2. A concrete block provided with furring strips embedded in opposite sides of the block and having extensions projecting beyond the ends of said block, said extensions forming a continuous nailing strip over the joint and producing a spacing means for the blocks, and transverse bars connecting the said strips.

3. A concrete block provided with a longitudinal strip embedded in one face thereof and having its ends projecting beyond the ends of the block, said projecting ends forming a continuous nailing strip over the joint and producing a spacing means for the blocks, and a plurality of vertical furring strips in the said face of the block below the longitudinal furring strip.

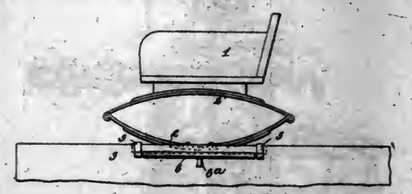
4. A concrete block provided with a longitudinal furring strip embedded in a face of the block and projecting beyond the ends thereof, whereby provision is made for properly spacing the blocks and forming a continuous strip over the joint of the blocks.

5. A concrete block provided with a longitudinal furring strip embedded in a face of the block and projecting beyond the ends thereof, the furring strip being dove-tailed, the projecting ends of the strip serving as a means for spacing the blocks and forming a continuous strip over the joint of the blocks.

[Claim 6 not printed in the Gazette.]

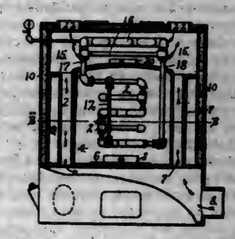
959,361. WAGON-SEAT FASTENER. LEWIS M. LATTIMORE, Shubert, Nebr. Filed Feb. 15, 1910. Serial No. 544,008.

1. The combination, with a wagon-seat and wagon body, of a detachable support and fastening for the former, consisting of a bar, angular metal hangers secured to its ends, the same being adapted to embrace and fit upon the upper edges of a wagon body, and a roller pivoted in the pendent outer portions of said hangers and having a cam or eccentric portion and a handle for rotating it, whereby the roller is adapted to be turned into contact with the wagon body or out of contact therewith, as required for fastening or releasing the seat, substantially as described.



2. An improved wagon-seat for the purpose specified, comprising a bar for support of a wagon-seat spring, angular metal hangers secured to the ends of said bar and having pendent outer arms provided with eyes at their extremities, and an eccentric roller journaled in said eyes and provided with a handle for rotating it, substantially as described.

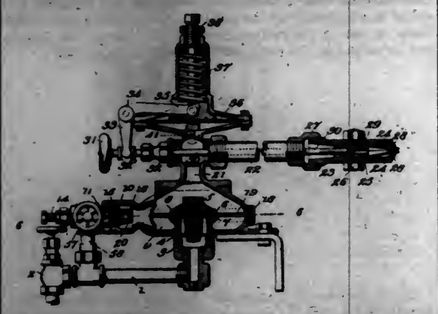
959,362. AIR-HEATER. WILLIAM N. LE PAGE, Vancouver, British Columbia, Canada, assignor to Ethel May Le Page, Vancouver, Canada. Filed Oct. 9, 1909. Serial No. 521,944.



1. In an air heater, an outer casing, partitions in said casing dividing the same into three horizontal chambers, one above the other, a primary water containing coil in the intermediate chamber, a heater for said coil within said intermediate chamber, a secondary heating coil in the upper chamber, pipe connections between the secondary heating coil and the primary heating coil, a secondary burner in the upper chamber for said secondary heating coil, means for admitting fresh air into the lower chamber, means for exhausting heated air from the upper chamber, and a pipe of segmental arc form in said second chamber surrounding said primary heating coil and connecting the lower and upper chambers to permit passage of air from the lower to the upper chamber.

2. In a hot air furnace, a casing having a plurality of horizontal partitions dividing the same into an upper, an intermediate and a lower chamber, a door opening into said intermediate chamber, a primary heating coil in said intermediate chamber, a secondary heating coil in the upper chamber, pipe connections between said heating coils, means for applying heat to said primary heating coil, and independent means for applying heat to said secondary heating coil, and means within said intermediate chamber for effecting communication between said upper and lower chambers, means for admitting fresh air into said lower chamber, means for conveying air out of said upper chamber, all being arranged that said secondary heating coil and said upper chamber will also be heated from the heat in said intermediate chamber, substantially as shown and described.

959,363. OIL-BURNER. ARTHUR H. LIGHT, Los Angeles, Cal., assignor to A. H. Light Engineering Company, Los Angeles, Cal., a Corporation of Arizona. Filed Feb. 10, 1909. Serial No. 477,200.



1. In a fuel burner, the combination of a fuel supply, a supply for fluid under pressure; a valve controlling said fuel supply adapted to be lifted by said fuel and to be seated by the pressure of said fuel and fluid; a chamber provided with a tangential entrance for said fluid supply, adapted to cause said fluid to rotate; said chamber also provided with upwardly inclined walls and with an escape passage for said fluid located above said entrance; substantially as described.

2. In a fuel burner, the combination of a fuel supply; a supply for fluid under pressure; a chamber provided with a tangential entrance for said fluid adapted to cause the same to rapidly rotate while expanding; a valve in said chamber controlling the entrance of fuel therein; said valve adapted to be opened by the pressure of said fuel and closed by the pressure of said fuel and fluid; said chamber also provided with an upwardly inclined wall and with an escape passage for the mixed fuel and fluid located above said valve and fluid entrance; and a suitable tip for the burner; substantially as described.

3. In a fuel burner, the combination of a fuel supply; a supply for fluid under pressure; a chamber provided with a tangential entrance adapted to cause said fluid to rapidly rotate, and with an escape passage located above said entrance; and means for collecting unatomized particles of fuel and preventing them from passing through said escape passage, substantially as described.

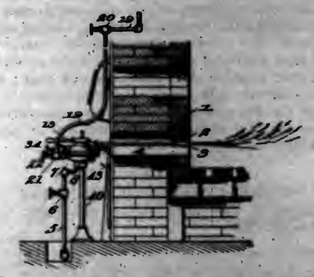
4. In a fuel burner, the combination of a fuel supply; a supply for fluid under pressure; a chamber provided with a tangential entrance for said fluid supply and adapted to cause said fluid to rapidly rotate therein, and with an escape passage located above said entrance; and a passage outside of said chamber adapted to receive any unatomized particles of fuel and to conduct the same back into said chamber, substantially as described.

5. In an oil burner, the combination of a mixing chamber for oil and steam; a supply adapted to deliver a film of oil in said chamber; a steam supply; means to cause said steam to rotate in said chamber and to atomise said oil; a passage outside of said chamber adapted to receive any unatomised particles of oil and to cause the same to be resubjected to the atomising action, substantially as described.

[Claims 6 to 16 not printed in the Gasette.]

959,364. OIL-BURNER. ARTHUR H. LIGHT, Los Angeles, Cal., assignor to A. H. Light Engineering Company, Los Angeles, Cal., a Corporation of Arizona. Filed Apr. 22, 1909. Serial No. 491,556.

1. In an oil burner the combination of an oil supply; a supply for fluid under pressure; an atomising chamber in which said oil and fluid are mixed; means for causing said oil and fluid to rotate around said chamber; a valve governing the admission of oil into said chamber said valve being controlled by the pressure of said oil and fluid; and baffle plates adapted to cause the further subdivision of the coarser particles of said oil while the same is being rotated by said fluid, substantially as described.



2. In an oil burner the combination of an oil supply; a steam supply; an atomizing chamber into which said steam is tangentially delivered and in which said oil and steam is subjected to a rapid rotation; a valve controlling the admission of oil to said chamber and adapted to be operated by the pressure therein; a second atomising chamber in which said mixture of oil and steam is further subjected to a rapid rotation; and a valve controlling the exit of oil and steam out of said second chamber, substantially as described.

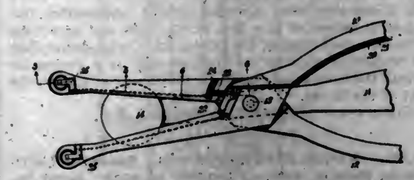
3. In an oil burner the combination of an oil supply; a steam supply; an atomising chamber in which said oil and steam is subjected to a rapid rotation; a valve controlling the admission of oil to said chamber and itself controlled by the pressure of said mixture; baffle plates to which said mixture is subjected; a second atomising chamber in which said mixture of oil and steam is further subjected to a rapid rotation; and a valve in the same controlling the exit of oil and steam out of said second chamber, substantially as described.

4. In an oil burner the combination of an oil supply; a steam supply; a plurality of burner tips; an atomising chamber in which said oil and steam is subjected to a rapid rotation; a valve controlling the admission of oil to said chamber; a second atomising chamber in which said mixture of oil and steam is further subjected to a rapid rotation; a plurality of connections between said second chamber and said tips; and a valve controlling the exit of oil and steam out of said second chamber, substantially as described.

5. In an oil burner the combination of supplies of oil and steam; a plurality of atomising chambers in which said oil and steam is subjected to successive rapid rotations; a valve governing the admission of oil to and controlled by the pressure of the oil and steam in the first of said chambers; a second valve governing the exit of oil and steam from the last of said chambers; and means for operating said second valve independently of said first valve, substantially as described.

[Claims 6 to 11 not printed in the Gasette.]

959,865. DENTAL FORCEPS. ERNEST C. LOMBARD, New York, N. Y. Filed Dec. 16, 1909. Serial No. 533,316.



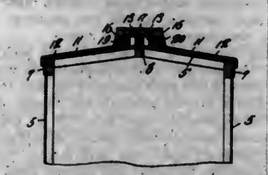
1. A dental forceps having two members pivotally connected together and each terminating in a removable jaw portion, means for insulating each removable jaw portion from the remainder of its corresponding member, and electric connections insulated from said members and leading to said jaw members.

2. A dental forceps having two members pivotally connected together, and electric conductors extending along one of said members to a point adjacent the pivot thereof and thence separating and extending along both of said members to their outer or free ends, the circuit being closed between said ends by the tooth or gum when the forceps are in use.

3. A dental forceps having two members pivotally connected together, each having a jaw extending substantially at right angles to the general direction of the member, means for locking said members together, and a fulcrum member pivoted to the first-mentioned members adjacent the pivotal connections between the latter.

4. A dental forceps having two members pivotally connected together and each having a jaw, means for locking said members together, a fulcrum member pivoted to the first-mentioned members adjacent the pivotal connections between the latter, and a spring engaging with both of the first-mentioned members and normally tending to separate them and also engaging with said fulcrum member and normally tending to separate it from said first-mentioned members.

959,366. CAR-ROOF. JOHN MAROLD, Madison, Ill. Filed Jan. 28, 1910. Serial No. 540,623.



1. A car roof comprising a plurality of sheets having their outer ends secured to the eaves and their inner ends upturned and arranged adjacent to the ridge, each of said sheets having similarly rebent side margins, and a locking strip having side margins bent over one of its faces to receive the bent portions of the sheets, and a cap plate secured to the ridge and extending throughout the length of the roof and having downwardly bent side portions to bear on the said locking strips at points adjacent to the upturned inner ends of the sheets.

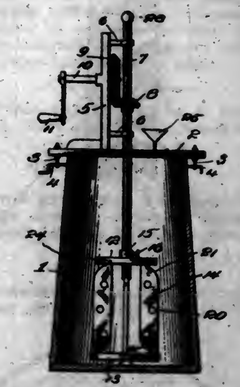
2. A car roof comprising a plurality of sheets having their outer ends secured to the eaves and their inner ends upturned and arranged adjacent to the ridge, each of said sheets having similarly rebent side margins, and a locking strip having side margins bent over one of its faces to receive the bent portions of the sheets and terminating at its inner end in an upwardly extending tongue to bear on the upturned inner ends of two adjacent sheets, an auxiliary locking member having similarly rebent side margins to receive the said locking tongue and the rebent sides of the upturned inner ends of two adjacent sheets, and a cap plate secured to the ridge and extending throughout the length of the roof and having downwardly bent side portions to bear on the said locking strips at points in advance of the said tongues.

959,367. CHURN. ALCINOUS MASSIE, Nashville, Ohio, assignor of one-half to Michael J. Wolf, Loudonville, Ohio. Filed June 23, 1909. Serial No. 503,897.

1. A churn comprising a casing, a dasher, operating therein, a hollow shaft connected with the dasher, a thermometer, and means for inserting and withdrawing the thermometer through the hollow shaft.

2. A churn comprising a casing, a hollow shaft extending therein, a dasher carried by said shaft, a thermometer carried by the dasher, and means for extracting said thermometer through said shaft for inspection.

3. A churn comprising a casing, a hollow shaft operating therein, a dasher carried by said shaft and provided with a seat recess, a thermometer resting within said seat recess, and an extracting device connected with the thermometer for withdrawing the same through said hollow shaft.



4. A churn comprising a casing, a shaft operating therein, a dasher carried by the shaft, a thermometer normally supported by the shaft and dasher, and an extracting rod extending through the shaft and connected with the thermometer, whereby the latter may be withdrawn from the casing.

5. A churn comprising a casing, a hollow shaft journaled in and extending within and without the casing, a dasher arranged within the casing and mounted upon the lower end of the shaft, gearing connected with the upper end of the shaft for imparting rotary motion thereto, a thermometer inclosed by the blades of the dasher and adapted to be supported by a portion of said dasher, a rod extending through the hollow shaft and connected with said thermometer, and a handle upon the upper end of the rod adapted to rest upon and close the upper end of the shaft, said rod and handle providing a means by which the thermometer may be inserted into the casing and withdrawn therefrom through said hollow shaft.

959,368. SAFETY GUARD OR SUPPORT. LYMAN B. MELIUS, New York, N. Y. Filed Nov. 10, 1908. Serial No. 461,861.



A device of the class described comprising a pin and a top member connected at one end by a coil, the top member having a loop at its other end for engagement by the free end of the pin, said top member having at approximately its center an open loop opening toward the pin, and on each side of the open loop a secondary loop opening away from the pin for the purpose specified, the junction of the secondary loop with the primary loop overlying the pin.

959,369. STAPLE. HORACE FRANKLIN MERRILL, Williston, N. D. Filed June 26, 1909. Serial No. 504,505.

1. A staple, comprising an elongated device having extensions from the middle section formed with a cutting edge adapted to be driven edgewise into wood, and having lateral extensions therefrom.

2. A staple, comprising a device having end extensions from a middle section flattened to form a cutting edge and joined by a middle extension bendable in the direction of the flattened dimension of the said extensions, and lateral extensions set out from said end extensions.

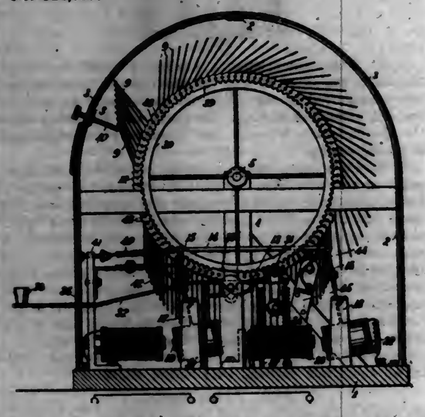
3. A staple, comprising a device having end extensions flattened to form a cutting edge and corrugated length-

wise of the flattened extension, said extensions being joined by a middle section bendable in the direction of said flattened dimension of said extensions.



4. A staple, comprising a device having flattened corrugated end sections adapted to be driven edgewise into wood, and having projections extended from the ends thereof.

959,370. STATION-INDICATOR. CHRISTOPHER MESSING, New York, N. Y. Filed Aug. 21, 1909. Serial No. 514,039.



1. In a station indicator, the combination of a rotatable member, a plurality of display-cards pivotally connected to said member, a ratchet-wheel on said member, a plurality of pairs of floating magnets for operating said ratchet-wheel, and a plurality of pairs of stationary magnets coacting with said floating magnets.

2. In a station indicator, the combination with a rotatable member, of a plurality of display-cards secured to said member, electrical means for rotating said member, and manual means for rotating said member, said manual means being adapted to be automatically operatively disconnected from said member at a predetermined point.

3. In a station indicator, the combination with a rotatable member, of a plurality of display-cards secured to said member, electrical means for rotating said member, manual means for rotating said member, and means for normally holding said manual means out of operative connection with said member.

4. In a station indicator, the combination with a rotatable member, of a plurality of display cards secured to said member, electrical means for rotating said member, manual means for rotating said member, and means for forcing said manual means into operative connection with said member.

5. In a station indicator, the combination with a rotatable member, of a plurality of display cards secured to said member, electrical means for rotating said member, manual means for rotating said member, said manual means being adapted to be automatically operatively disconnected from said member at a predetermined point, means for normally holding said manual means out of operative connection with said member, and means for forcing said manual means into operative connection with said member.

[Claims 6 to 10 not printed in the Gazette.]

959,371. ELECTRIC SIGN. LEONARD MILLER, Brownwood, Tex., assignor of one-half to Boy Stephanus Boysen, Brownwood, Tex. Filed Jan. 18, 1909. Serial No. 472,912.



1. A flashing device for an electric sign comprising a tilting frame, electric means for rocking the same, circuit closers carried by said frame, means movably supported on said frame for successively operating the circuit closers, and switches shifted by said movable means for shunting the current through the electric means and rock the frame.

2. A flashing device for an electric sign comprising a tilting frame, independent electromagnets for rocking the same, circuit closers on said frame each adapted to close a circuit through the lamps of a separate element of an electric sign, means movably supported on said frame for successively operating said circuit closers, and switches shiftable by said movable means for shunting the current from one electromagnet to the other.

3. A flashing device for an electric sign comprising a tilting frame, independent electromagnets for rocking the same, circuit closers pivotally mounted on said frame each adapted to close a circuit through the lamps of a separate element of an electric sign, a switch at each end of said tilting frame, and movable means supported on said frame for successively operating said circuit closers and shifting said switches to shunt the current from one electromagnet through the other.

4. A flashing device for an electric sign comprising a tilting frame, independent electromagnets for rocking said frame to change its inclination, circuit closers pivotally mounted on said frame each adapted to close a circuit through the lamps of a separate element of an electric sign, a switch at each end of said frame connected together, and gravity operated means mounted for automatic travel from end to end of the tilting frame for successively operating the circuit closers and shifting said connected switches to shunt the current from one electromagnet to the other.

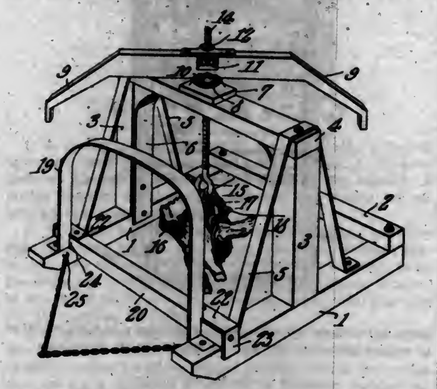
5. In combination, an electric sign, an automatic flashing device comprising a tilting frame, independent electromagnets for rocking the same to change its inclination, circuit closers each provided with a shifting weight and pivotally mounted on said frame each circuit closer adapted to close a circuit through the lamps of a separate element of said electric sign, a switch lever at each end of said frame, means connecting said switch levers, a gravity operated means adapted to travel automatically from end to end of the tilting frame for successively operating the circuit closers and simultaneously shifting the switch levers, a switch alternately closed to shunt the current from one electromagnet to the other, a second switch on one end of the frame and a shunt circuit from all the lamps of the sign closed when said second switch is closed and the end of the frame carrying the same is lowered.

[Claims 6 to 18 not printed in the Gazette.]

959,372. STUMP-PULLER. JOHN M. MITCHELL, Joppa, Ala., assignor of one-half to George W. Jeffers, Joppa, Ala. Filed Nov. 8, 1909. Serial No. 526,895.

1. A device of the class described comprising a frame; lifting means mounted in the frame; a pair of endless flexible loops carried by the lower end of the lifting means; and a pair of stump engaging hooks arranged to slide upon one of the said loops.

2. A device of the class described comprising spaced sills permanently connected at one end; stump pulling mechanism supported by the sills; a removable brace arranged to be mounted upon the other end of the sills, and having a depending portion to engage the adjacent faces of the sills; and plates mounted upon the upper face of the brace at its ends and terminally down-bent to engage the remote faces of the sills.

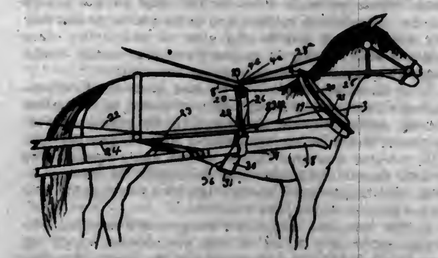


3. A device of the class described comprising spaced sills; an upwardly arched tie connecting the sills; a removable brace arranged to engage the sills against lateral movement, the brace and tie being provided with interlocking elements; and stump pulling mechanism supported by the sills and operative between the sills.

4. A device of the class described comprising spaced sills permanently connected at one end; stump pulling mechanism supported by the sills and operative between the sills; a removable brace arranged to be mounted upon the other ends of the sills and having a depending portion to engage the adjacent faces of the sills; plates mounted upon the upper face of the brace at its ends and terminally downbent to engage the remote faces of the sills; and an upwardly arched tie connecting the sills, the plates and the brace being notched to receive the tie.

5. A device of the class described comprising spaced sills; a carrying member connecting the sills; stump pulling mechanism assembled with the carrying member; an arched tie connecting the sills; straps connecting the carrying member with the sills; a removable brace arranged to engage the sills against lateral movement, the tie and the brace being provided with interlocking elements and the straps being arranged to engage the brace to hold the interlocking elements in engagement.

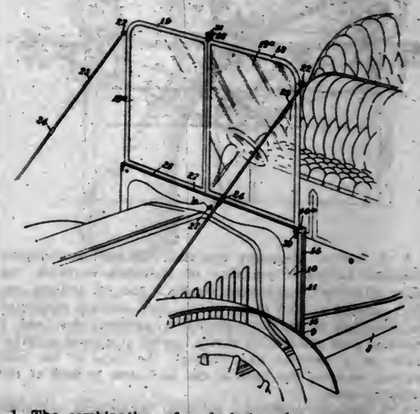
959,373. HORSE-DETACHER. STEFAN MOLNAR, Pittsburg, Pa. Filed Feb. 18, 1910. Serial No. 544,662.



1. In a horse detacher, hames provided with separable fasteners, a girth provided with a fastener, a saddle provided with a removable yoke having rein terrets mounted thereon, said yoke having a separable fastener, and a cable connected with all of said fasteners for releasing the girth, the yoke and hame simultaneously.

2. A horse detacher comprising hames provided with separable fasteners at the upper and lower ends thereof, a girth provided with a separable fastener, a yoke detachably-secured by separable fasteners to the hames and a single operating cable connected with all of said fasteners for operating the same in unison.

959,374. WIND-SHIELD. EMILE J. MONTIGNY, New York, N. Y. Filed May 14, 1909. Serial No. 495,960.



1. The combination of a dash board provided with a panel, a plurality of sashes journaled relatively to said panel and disposed to fold side by side in planes parallel therewith, one of said sashes having a diagonal measurement greater than the width of said panel, and a side panel journaled relatively to said first-mentioned panel and adapted to fold relatively thereto for the purpose of protecting the edges of said sashes when the latter are folded.

2. The combination of a dash board provided with a front panel and a back panel separated by a slot, a plurality of sashes journaled relatively to said dash board and adapted to swing into said slot, one of said sashes having a diagonal measurement greater than the width of said slot, and side panels journaled relatively to said dash board and adapted to swing into said slot for the purpose of partially closing the same.

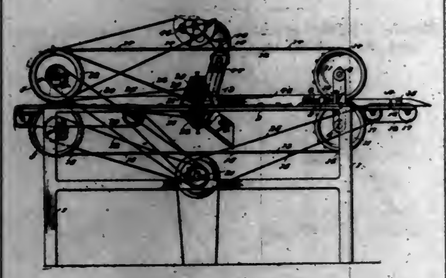
3. The combination of a dash board provided with a plurality of panels, sashes journaled relatively to said dash board and adapted to be folded intermediate said panels, also to be unfolded, one of said sashes having a diagonal measurement greater than the width of said panels being mounted loosely so as to swing into and out of the plane occupied by the other of said sashes, and clamping mechanism for holding said sashes rigid relatively to each other and to said dash board when said sashes occupy the same plane.

4. The combination of a dash board, sashes connected therewith and adapted to swing, a strip journaled upon the upper edge of said dash board and adapted to swing in a plane crossing the general direction of said sashes, and clamping mechanism carried by said strip for the purpose of clamping said sashes relative to said dash board.

959,375. TOBACCO-STEMMING MACHINE. JOHN ODEN MORRIS, Washington, D. C., assignor to Southern Stemming Machine and Manufacturing Company, Guthrie, Okla., a Corporation of Oklahoma. Filed Feb. 16, 1907. Serial No. 357,684.

1. A tobacco stripping machine comprising horizontally-rotating shafts placed one in a plane above the other, and provided with wheels, endless carriers passing

around said wheels, each carrier provided with a gripping member co-acting with each other, and arranged to grip the leaf stem at a point about in a vertical line through the axis of the wheels, and a movable stem positioner located substantially at said gripping point to insure the gripping of the leaf stems.



2. A tobacco stemming machine, comprising stripping members having a plurality of stripping surfaces, the pairs of vertically-arranged wheels 5 and 11, endless carriers passing around these wheels, said carriers connected by co-acting horisontally-extending gripper bars, and a movable stem positioning device located at a point substantially in a vertical line through the axis of the said wheels, whereby the butt of the leaf stem is held at the gripping point.

3. A tobacco stemming machine comprising stripping members having a plurality of stripping surfaces, the pairs of vertically-arranged wheels 5 and 11, endless chains passing around these wheels, horizontal gripper bars connecting said chains as described, and a stem positioning device located in the path traveled by said gripper bars and at a point beyond the gripping action of said bars.

4. A tobacco stemming machine comprising stemming devices having a plurality of stemming surfaces adapted to simultaneously stem several leaves, a traveling gripper having an elongated gripping surface to simultaneously grip and deliver several leaves to the stripping devices, and a stem-positioning device located at the gripping point and elongated in a direction corresponding to the elongation of the grippers.

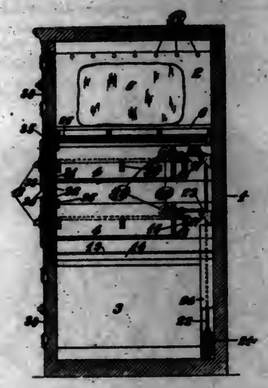
5. In a tobacco stemming machine, stripping devices consisting of co-acting rolls each having a plurality of grooves divided by ridges, the apex of the ridges formed into circumferential smooth alined knife edges, and the bottoms of the grooves roughened.

[Claims 6 to 10 not printed in the Gazette.]

959,376. REFRIGERATOR. THOMAS GEORGE MCELROY, Ottumwa, Iowa. Filed Feb. 28, 1906. Serial No. 303,406.

1. The combination of a refrigerator-casing having apertures; vertical members arranged in spaced parallel relation within said casing and transversely of the same; drawers arranged between said members and normally closing said apertures; series of brackets secured to said members; a track secured to each series of brackets; a pair of supporting wheels secured to opposite sides of each drawer and arranged to travel upon the adjacent tracks; a flexible element connected to the rear end of each drawer; and a weight secured to each of said flexible elements for automatically returning the corresponding drawer to closed position after having been opened.

2. The combination of a refrigerator casing having apertures in its front wall; drawers slidable through said apertures and normally closing the same; and buttons attached to the inner face of said wall adjacent said apertures and arranged for movement into one position to contact with the rear ends of the drawers, to prevent com-



plete withdrawal of the latter, and into a second position to escape such contact and to permit such removal.

959,377. BUSH-PULLER. JOHN G. O'DONNELL, Washington, D. C. Filed Feb. 1, 1910. Serial No. 541,370.



1. The improved bush puller comprising a lever, a hook and bracket rigidly connected and pivoted to the lever, a second and adjustable bracket secured to the first-named one and provided with parallel slotted arms, a fulcrum roller whose journals work in the slots of the second bracket, compression springs, and guide pins to which they are applied, said pins having eyes to receive the roller journals and working in guides forming a portion of the adjustable bracket, substantially as described.

2. In an implement for the purpose specified, the combination with a lever, a hook, a fulcrum roller, an adjustable bracket applied to said roller and rigidly connected with the hook, the same having parallel slotted arms provided with integral apertured ears or flanges, guide pins working in said flanges and having eyes embracing the roller journals, and compression springs applied to said guide pins in the manner shown and described.

3. The improved bush puller comprising a hook and fulcrum, and a lever to which they are pivoted, a pull rod loosely attached to the smaller end of the lever and having its free end provided with a hook, and a retaining ring pivoted centrally on the lever and adapted for engaging and holding the pull rod, substantially as described.

959,378. FLEXIBLE BALL-JOINT. CHARLES O'NEILL and WILLIAM H. NEUBECK, Louisville, Ky. Filed May 19, 1909. Serial No. 497,063.



1. A casing, a pipe connecting thimble having a hollow spherical head positioned within the casing, a follower member contacting the spherical head of the thimble, a wedge member engaging the follower, and means for adjusting the wedge member.

2. A casing, a pipe connecting thimble having a hollow spherical head within the casing, a follower member contacting the spherical head of the thimble, a wedge member engaging the follower and a threaded element adapted to act in conjunction with the wedge, substantially as and for the purpose set forth.

3. A casing having its mouth provided with a spherical depression, a washer member within said depression, a thimble having a hollow headed portion within the casing and having a threaded extension, a follower member engaging the spherical head of the thimble within the casing, a wedge member engaging the follower and means for adjusting the wedge member.

4. A casing provided with a cap having an open mouth and being provided with a washer, a pipe connecting thimble having a hollow spherical head, and a threaded extending portion contacting the cap thereof, a follower member engaging the hollow head of the thimble, a wedge member engaging the face of the follower, and means for adjusting the wedge member.

5. In combination with a casing having a threaded extension upon one of its faces and a cap engaging its opposite open face, said cap being provided with a spherical opening, a thimble member having a spherical headed portion within the casing and engaging the face provided by the opening of the cap, a follower member having one of its faces inclined and engaging the thimble, a wedge member engaging the inclined face of the follower member and a threaded element contacting with the wedge member, substantially as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

959,379. ELASTIC BED-PAN. FLORA M. OTIS, Ann Arbor, Mich. Filed Aug. 6, 1909. Serial No. 511,639.

1. A bed pan formed from elastic material and comprising a main body portion, a cushioning rim partly surrounding the said main body portion, a hollow neck extending from the main body portion, and a detachable handle forming a reservoir removably engaged with the neck.

2. A bed pan formed from elastic material and provided with a main body portion having an inflatable rim, a neck extending from the said main body portion, a guard carried by the neck and disposed in spaced relation to the body, and a detachable handle forming a reservoir operatively connected with the neck and opening directly thereinto at one end, the opposite end of the reservoir being closed.

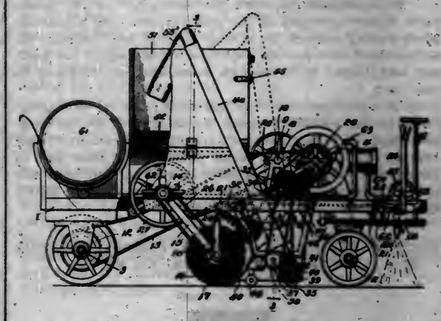
3. A bed pan formed from elastic material and comprising a main body portion, a cushioning rim upon the main body portion, an outwardly extending hollow neck upon the body portion, a guard upon the neck and extending partly across the body portion, reinforcing means extending transversely of the guard and supported at its ends upon portions of the rim, and a detachable handle forming a reservoir closed at its outer end and open at its inner end, the said inner end being detachably connected with the said neck.

4. A bed pan comprising a main body portion, a cushioning rim upon the main body portion, said rim having an enlarged central portion and reduced end portions, a hollow neck upon the main body portion and opening directly



thereinto at one end, a handle forming a reservoir connected at one of its ends to the other end of the neck, and a guard extending from the neck and partly across the said main body portion of the pan.

959,380. STREET-SWEEPER. JAMES OTIS, Ann Arbor, Mich., assignor of one-half to Flora Otis, Ann Arbor, Mich. Filed June 19, 1909. Serial No. 502 123.



1. A street sweeping machine comprising a portable frame, a revoluble brush suspended from the frame and mounted thereon for vertical adjustment, a wheeled trough forwardly of the brush, a conveyer located in the trough, a blast fan at one end of the conveyer, a receptacle, and a conveying tube connecting the receptacle with the blast fan.

2. A street sweeping machine comprising a portable frame, a revoluble brush suspended from the frame and mounted thereon for vertical adjustment, a wheeled trough located forwardly of the brush, a conveyer extending approximately throughout the length of the trough, a blast fan at one end of the trough and disposed immediately outwardly of one end of the conveyer, a receptacle mounted on the frame, and a pivoted conveyer tube communicating with the blast fan and with the said receptacle.

3. A street sweeping machine comprising a portable frame, a sweeping brush extending transversely of the frame and suspended therefrom whereby it can be adjusted vertically, a trough located forwardly of the brush, an endless conveyer located in the trough, a blast fan at

one end of the conveyer, a receptacle mounted on the frame, and an angularly adjustable conveyer tube extending upwardly at one side of the receptacle and communicating at one end with the receptacle and at the other end with the blast fan.

959,381. HARNESS BACK-PAD AND COLLAR-PAD. LINCOLN P. OVERSHINER, San Diego, Cal. Filed Oct. 12, 1909. Serial No. 522,227.



1. The improved pad for the uses specified, comprising a back-strap, a back-plate secured thereto and having anti-friction rollers, a movable top or bearing plate having tongues engaging the aforesaid rollers and anti-friction bearings consisting of balls held in keepers on the under side of said bearing plate, substantially as described.

2. The combination, with the back-plate having transverse rollers, of the top or bearing plate having tongues projecting beneath said rollers and adapted to engage the same when the back plate is moved a certain distance, substantially as described.

3. The combination, with the back-plate having rollers arranged transversely and the central one made shorter than the others, of the bearing-plate having tongues projecting beneath the top of the rollers and made narrower than the length of the rollers and provided with shoulders adapted for contact with the rollers whereby the lateral oscillation and endwise movement of the bearing-plate are limited as described.

4. The combination, with the back-plate having transverse rollers arranged on the side portions, and a bearing-plate having tongues projecting outward and beneath the said rollers, whereby the bearing-plate is held to the back-pad and limited in its endwise movement, substantially as described.

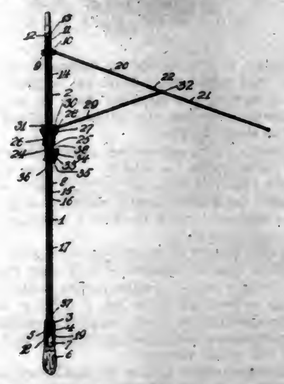
5. The combination, with the back-plate, of a bearing-plate having slidable keepers which hold it to the back-plate and yet permit endwise and lateral movement of said bearing-plate, the latter being provided on each side of its middle with transverse rows of anti-friction balls and slotted keepers for holding them in due position, as shown and described.

959,382. INK-WELL. HENRY B. PARSONS, Zanesville, Ohio. Filed May 20, 1909. Serial No. 497,179.



An ink-well comprising a body having a reduced neck formed with an open top, and in one side with an opening adapted to receive a penholder, the reduced neck forming within the body an annular shoulder, and a one-piece, elastic rubber stopper plug rotatably arranged in the neck, said stopper plug having a solid body formed in its bottom and one side a cavity adapted to be turned into register with the opening in the neck to receive a penholder, the closed portion of the body of the plug being adapted to close the opening in the neck when said cavity is turned out of register therewith, the bottom of said plug body being formed with an integral outwardly flared portion or flange adapted to engage said shoulder whereby the plug will be retained in the neck, and may be inserted in and removed from the neck by springing together the end portions of said flange, the top of said stopper plug being formed with an enlarged portion or head to provide a shoulder adapted to rest upon the upper edge of the neck.

959,383. FOLDING UMBRELLA. PETER PEZZENE, Coraopolis, Pa. Filed Dec. 9, 1909. Serial No. 532,233.



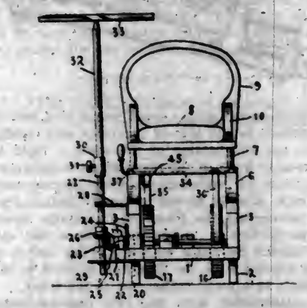
1. In a folding umbrella, a stick, of a pair of tubular sections, one of said sections having reduced ends, the other of said sections adapted to fit upon one of said ends, a rod extending through that section provided with the reduced ends and further extending into the other of said sections, a tip mounted upon the other of said reduced ends of said section and provided with a recess in which extends one end of said rod, a link connected to the other end of said rod, a rod connected to said link and projecting from the other of said sections having a threaded end, a nut mounted upon the threaded end of said rod adapted when screwed home to retain said rods in a rigid position whereby the said sections are maintained in longitudinal alinement, and a handle detachably connected to one of said sections for inclosing said nut.

2. In a folding umbrella, a stick comprising a tubular section 1 and a tubular section 2, said section 1 having reduced ends, said section 2 adapted to fit upon one of said ends, a rod extending through the section 1 and projecting into the section 2, a tip mounted in the other reduced end of the section 1 and provided with a recess for receiving one end of said rod, means for connecting the said end of the rod to the tip, a link attached to the other end of said rod, a rod 17 connected to said link and projecting from said section 1, means mounted upon the projecting end of the rod 17 for maintaining the rods rigid and for retaining the stick sections in longitudinal alinement, and a handle detachably connected to the section 1 and inclosing said means carried by the rod 17.

959,384. FAN ATTACHMENT FOR ROCKING-CHAIRS. PETER PEZZENE, Coraopolis, Pa. Filed Feb. 24, 1910. Serial No. 545,587.

1. In a fan attachment for rocking chairs, a base, a rocking chair movably supported by said base, a revoluble shaft supported by said base, a fan attached to said shaft, and a ratchet mechanism adapted to impart a rotary movement to said shaft by an oscillatory movement of said rocking chair, said mechanism including ratchet wheels, gearing adapted to transmit power to said shaft from said ratchet wheels, and alternately operating gravity pawls carried by said rocking chair and adapted to actuate said ratchet wheels.

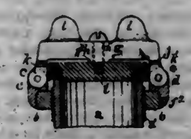
2. In a fan attachment for rocking chairs, a base, a rocking chair movably supported by said base, a revoluble shaft supported by said base, a fan attached to said shaft, and a ratchet mechanism adapted to impart a rotary movement to said shaft by an oscillatory movement of said rocking chair, said mechanism including ratchet wheels, gearing adapted to transmit power to said shaft from said ratchet wheels and alternately operating gravity pawls carried by said rocking chair and adapted to actuate said ratchet wheels, and means carried by said rocking chair and adapted to control the operation of said gravity pawls.



3. In a fan attachment for rocking chairs, a base, rails carried by said base, rockers movably mounted upon said rails and adapted to support a chair, depending guide flanges carried by said rockers and adapted to engage in said rails, a revoluble vertical shaft supported by said base, a rod detachably connected to the upper end of said shaft, a fan supported by said rod, a ratchet mechanism adapted to impart a rotary movement to said shaft from an oscillatory movement of said rockers, said mechanism including ratchet wheels, and gearing carried by the base and adapted to transmit a rotary movement to said shaft from said ratchet wheels, and gravity pawls supported by said rockers and adapted to engage said ratchet wheels.

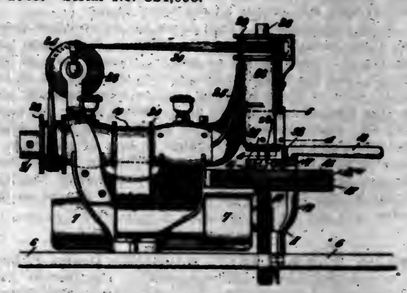
4. In a fan attachment for rocking chairs, a base, rails carried by said base, rockers movably mounted upon said rails and adapted to support a chair, depending guide flanges carried by said rockers and adapted to engage in said rails, a revoluble vertical shaft supported by said base, a rod detachably connected to the upper end of said shaft, a fan supported by said rod, a ratchet mechanism adapted to impart a rotary movement to said shaft from an oscillatory movement of said rockers, said mechanism including ratchet wheels and gearing carried by the base and adapted to transmit a rotary movement to said shaft from said ratchet wheels, gravity pawls supported by said rockers and adapted to engage said ratchet wheels, and means carried by said rockers and adapted to control the operation of said pawls.

959,385. PIPE-END CLOSURE. MARION W. PITNER, Chicago, Ill. Filed Oct. 21, 1908, Serial No. 458,816. Renewed Apr. 6, 1910. Serial No. 553,841.



An internally threaded collar, a bar held by it at each end, whereof one end is hinged fixedly and the other end is releasable, a threaded pipe-end, and an axially rotatable valve on said bar and pipe-end.

959,386. MACHINE FOR RECESSING SHOE PARTS. ADAM HENRY PRENZEL, Halifax, Pa. Filed Oct. 22, 1909. Serial No. 524,093.



1. A device for recessing shoe parts comprising a stand, a vertical shaft carried by said stand, a cutter at the end of said shaft arranged to revolve in a horizontal plane, a knife disposed near said rotary cutter and arranged to coöperate therewith, a slidable frame, means for securing a shoe part upon said frame, and means for causing the reciprocation of said frame.

2. A device for recessing shoe parts comprising a stand, a vertical shaft carried by said stand, a cutter at the end of said shaft, arranged to revolve in a horizontal plane, a stationary adjustable knife disposed near said rotary cutter, and arranged to coöperate therewith, means for securing a shoe part upon said frame, and means for causing the reciprocation of said frame.

3. A device for recessing shoe parts comprising a stand, a sleeve secured to said stand, a vertical shaft arranged to revolve in said sleeve, means for suspending said shaft, a rotary cutter disposed on the lower end of said shaft for rotation in a horizontal plane, a slidable frame disposed beneath said cutter, a knife carried by said sleeve and adjustable toward and away from said frame and arranged to coöperate with said cutter, a clamp carried by said frame for securing a shoe part to said frame, and means for reciprocating said frame.

4. A device for recessing shoe parts comprising a stand, a sleeve secured to said stand, a vertical shaft arranged to revolve in said sleeve, and to bear upon the upper end of said sleeve for suspending the shaft, means for preventing the upward movement of said shaft, a rotary cutter disposed on the lower end of said shaft for rotation in a horizontal plane, a slidable frame disposed beneath said cutter, a knife carried by said sleeve, a clamp for adjusting said knife toward and away from said frame and arranged to coöperate with said cutter, a clamp carried by said frame for securing a shoe part, and means for reciprocating said frame.

959,387. LENS-MOUNT. HENRY E. RICHMOND, Westwood, N. J. Filed Mar. 1, 1909. Serial No. 480,695.



1. In a lens mount, a plate having an opening therein, two sides connected with said plate, an inturned flange on each side, and an outturned flange at the ends of said sides.

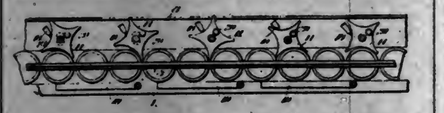
2. A lens holder consisting of a plate having an opening therein, sides on said plate, flanges on said plate extending beyond the sides, inturned flanges formed on the sides, and outturned flanges at the ends of the sides.

3. A lens holder consisting of a plate having an opening therein, two sides of less length than the length of the

said plate, inturned flanges provided on each of said sides, each flange being partly cut away and also partly separated from the side and bent toward the plate, the free end of each side having an outturned flange.

4. In a stereoscope, a lens frame having openings therein, a lens mount in each of said openings, said mount consisting of a plate having an opening therein, sides of less length than the length of the plate to leave flanges on the plate, each of the sides being bent to form inwardly projecting flanges, each of said flanges being partly cut away and also partly separated from the side and bent toward the plate, and an outturned flange on each of said sides, a lens in said mount and held in position by the inturned flanges, the mount being held in the opening in the lens frame by the flanges on the plate and the flanges on the sides.

959,388. CAN-SOLDERING MACHINE. DANIEL P. ROBINSON, Baltimore, Md., assignor to Continental Can Company, Baltimore, Md., a Corporation of New Jersey. Filed May 25, 1909. Serial No. 498,128.



1. A can soldering machine including in combination, a soldering iron, means for conveying the cans to said iron, means for supporting the iron so that it may freely rotate, said iron having a plurality of similarly shaped and disposed cut-away portions adapted to be brought into contact successively with the cans.

2. A can soldering machine including in combination a soldering iron, means for conveying the cans to said iron, means for supporting said iron so that it may freely rotate, said iron having a plurality of concaved soldering surfaces.

3. A can soldering machine including in combination a soldering iron, means for conveying the cans to said iron, means for supporting said iron so that it may be freely rotated by the cans, said iron having a plurality of curved soldering surfaces of a less curvature than the curvature of the cans, said surfaces being located adjacent each other and adapted to be brought into contact successively with the cans.

4. A can soldering machine including in combination a soldering iron, means for conveying the cans to said iron, means for supporting said iron so that it may be freely rotated by the cans, said supporting means being so constructed as to allow said iron to move vertically, said iron having a plurality of concaved soldering surfaces.

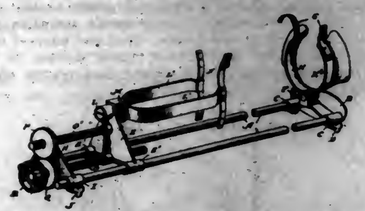
5. A soldering machine including in combination, a run way for the cans, means for feeding the cans along said run way, a soldering iron, means for supporting said soldering iron, whereby it may rest on said cans and be freely rotated thereby, said iron having a concave soldering-surface.

[Claim 6 not printed in the Gazette.]

959,389. SURGICAL APPLIANCE. THOMAS E. RODGERS, Memphis, Tenn., assignor of one-half to Walter Goodman, Memphis, Tenn. Filed Sept. 29, 1909. Serial No. 520,133.

1. The combination with a rigid track provided at one end with a transverse plate to rest against the body alongside a limb to be operated upon, of a lateral clamp, adjacent to said plate, adapted to clamp the track to the limb, a second limb clamp supported from the track and rotatably adjustable about the common axis of the limb and the two clamps, and means for forcibly varying the distance between the two clamps while leaving the second free to be rotatably adjusted.

2. The combination with a rigid track having at one end a lateral limb clamp and a transverse plate to bear against the body alongside the limb, of a rigid frame adjustably fixed to the track at some distance from said end, an intermediate sliding carriage bearing a limb clamp rotatable about the axis of the limb held in the two clamps, and a screw connection between the frame and carriage for compelling the latter to move along the track.



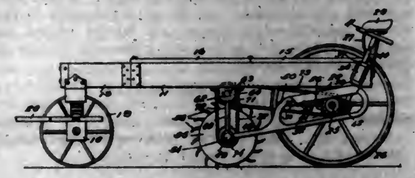
3. The combination with a rigid track, of a limb clamp at some distance to one side of the track and rigidly connected with one end portion of the same, a rigid sliding frame adjustably fixed to the track at some distance from said end portion, an intermediate sliding carriage mounted upon the track, parallel screws unequally distant from the track and connecting the frame and carriage, means for rotating the screws in unison to advance the carriage without changing its angle with the track, and a second limb clamp alining with the first and pivoted to the carriage to rotate in a plane transverse to the track.

4. The combination with the two parallel rods connected at one end by a transverse plate adapted to rest against the body of a patient, of a limb clamp secured to the plate at some distance from the rods, a rigid, longitudinally adjustable frame connecting the rods near their opposite ends, an intermediate sliding carriage a second limb clamp alining with the first and pivoted to the carriage to rotate in a plane transverse to the rods, and two oppositely threaded rods connecting the frame and carriage and arranged for simultaneous rotation, substantially as set forth.

5. The combination with a rigid track having near one end a lateral clamp for securing that end to the limb to be operated upon, of a clamp support mounted upon the track at some distance from that end, a second clamp pivotally secured to said support to rotate about an axis approximately parallel to said track and including hinged clamping jaws and means for binding the free ends of the jaws against the limb, and means for forcibly adjusting said support along the track.

[Claim 6 not printed in the Gazette.]

959,390. BREAKING-PLOW. JOHN H. ROGGE, Smishek, N. D. Filed June 26, 1909. Serial No. 504,532.

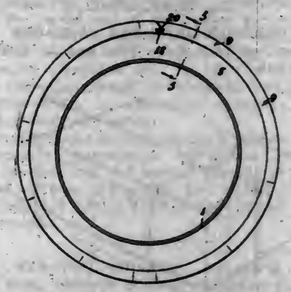


1. The combination with a wheel-supported driving axle, of a frame carried by said axle, a chain sprocket secured to said axle, a drum, cutting blades projecting from said drum, hangers securing said drum to said frame, a chain sprocket carried by said drum, a chain passing over said sprockets, a gear revolubly secured on said axle, a rack secured at one end to said drum, said rack end engaging said gear, and means to operate said gear.

2. The combination with a wheel-supported axle, of a frame carried by said axle, a chain sprocket secured to said axle, a drum, cutting blades projecting from said drum, hangers securing said drum to said frame, a chain passing over said sprocket and operatively connected to said cylinder, a gear revolubly secured to said axle near each end, a bar provided with a rack secured to each end of said drum, the rack of said bar engaging said gears, and arranged to be actuated by said gears.

3. The combination with a wheel-supported driving axle, of a frame carried by said axle, a chain sprocket secured to said axle, a drum, a shaft carried by said drum, blades projecting from said drum, a hanger secured to each end of said shaft and secured to said frame, a chain sprocket secured to said drum shaft, chains passing over said sprockets, a gear revolubly secured to each end of said axle, a worm pinion secured to each of said gears, a link secured to each end of said drum shaft, said links having racks, said racks engaging said gears, and a worm secured to each side of said frame to engage said worm pinions, as and for the purpose set forth.

959,391. TIRE-CASE. CHARLES A. RUSSELL, New York, N. Y. Filed Apr. 14, 1909. Serial No. 489,811.



1. A tire case composed of an endless inner web strip, endless side strips secured to the edges of said web strip, an outside strip secured to the outer edge of one of said side strips, said outside strip having gore seams and a slit provided with a fastening device, a crown strip secured to the outer edge of the other side strip, and a crimped strip secured to the outer edge of said crown strip, said crown strip and said crimped strip having a folding flap provided with a fastening device.

2. A tire case having an endless inner web strip, endless side strips attached thereto, outside strips forming the edges of the case attached to the free edges of said side strips, one of said outside edges being formed and provided with means whereby when the edge of the case is in position on the tire it is securely held in position, and the other edge being formed of a strip having gore seams and a slit, and a fastening device by means of which said edge of the case is held securely in position on the tire.

3. A tire case adapted to be wrapped laterally around the tire, comprising an outside edge strip adapted to lie against the tire tread having a constricted diameter preventing said strip from passing over the greatest diameter of the tread, endless annular strips attached to said outside edge strip and adapted to cover the sides and the inner face of the tire, and a second outside edge strip lying on the tire tread over said first outside edge strip, the diameter of said case at said second outside edge strip being less than the diameter of the tire over the tread and lying on the opposite side of the middle plane of the tire opposite to said first outside edge strip, said second outside edge strip having an outlet with overlapping layers of material and a releasable clasp permitting said strip to pass over the greatest diameter of said tire.

4. A tire case adapted to be wrapped laterally around the tire, comprising an outside edge strip adapted to lie against the tire tread having a constricted diameter preventing said strip from passing over the greatest diameter of the tread, endless annular strips attached to said outside edge strip and adapted to cover the sides and the inner face of the tire, and a second outside edge strip lying on the tire tread over said first outside edge strip, the diameter of said case at said second outside edge strip being less than the diameter of the tire over the tread and lying on the opposite side of the middle plane of the tire opposite to said first outside edge strip, said second outside edge strip having an outlet with normally overlapping layers and a releasable clasp permitting the same to pass over the greatest diameter of said tire, said first named outside edge strip also having an outlet in the edge thereof with normally overlapping layers and a releasable clasp permitting said first-named outside strip to be passed over the greatest diameter of the tire.

959,392. ROTARY FAN OR PROPELLER. HERMANN RUTHENBERG, Villen Colonie Grunewald, near Berlin, Germany. Filed July 2, 1909. Serial No. 505,574.



1. A rotary fan or propeller comprising a hub, spaced tubular rings, tubular rods connecting the rings, tubular spokes secured to the hub and to the rings, the spokes being arranged in pairs and the spokes of the pairs being at an angle one to the other, and vanes secured to the spokes.

2. A rotary fan or propeller, comprising a hub, spaced tubular rings, tubular rods connecting the rings, tapering blades projecting from the rods between the rings, tubular spokes secured to the hub and rings, the spokes being arranged in pairs and the spokes of the pairs being at an angle one to the other, and vanes secured to the spokes.

3. A rotary fan or propeller, comprising a hub having a plurality of sockets, spaced tubular rings, tubular rods connecting the rings, tubular spokes fitting in the sockets of the hub and secured to the rings, tubular rods secured to the rings between each pair of spokes, and vanes secured to the spokes and to the last named tubular rods.

4. A rotary fan or propeller, comprising a central hub having a plurality of sockets, spaced rings, rods connecting the rings, spokes fitting in the sockets and secured to the rings, rods connecting the rings, one between each pair of spokes, vanes secured to the spokes and to the last named rods, auxiliary hubs, and wires extending from the rings to the auxiliary hubs.

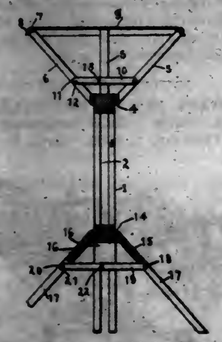
5. A rotary fan or propeller, comprising a central hub, spaced rings, rods connecting the rings, spokes secured to the hub and rings, rods connecting the rings, one between each pair of spokes, vanes secured to the spokes and to the last named rods, auxiliary hubs, wires secured to the rings and to the auxiliary hubs, and tension wires also secured to the rings and auxiliary hubs, sundry of the tension wires passing through the vanes.

[Claim 6 not printed in the Gazette.]

959,393. STOOL. SAMUEL RYAVE, McKees Rocks, Pa. Filed Feb. 12, 1910. Serial No. 543,439.

A stool of the type described comprising a vertically-disposed post having a bifurcated lower end with the furcations intersecting each other, foldable seat supporting arms having beveled inner ends, hinges each having a leaf secured to the side face of a post at the top thereof and its other leaf directly secured against the beveled end of the arm, retaining bars interlocking with each other and arranged above the post and pivoted to the sides of certain of said arms and adapted to detachably engage the sides of the other of said arms for maintaining these latter extended, legs having beveled inner ends and bifurcated outer

portions adapted to receive said arms when folded, means carried by the beveled inner ends of said legs and connected to the post for hinging the legs, retaining bars interlocking with each other and pivoted at one end in the furcations of certain of the legs and extending through the bifurcated lower end of the post and adapted to detachably engage the other of the legs for maintaining these



latter extended, said post provided with intersecting longitudinal slots extending from a point removed from the lower end of a post to a point removed from the upper end of the post and adapted to receive said bars should they swing inwardly when the arms and legs are folded against the post, and the outer ends of said legs when extended being in a plane with the bottom of the post.

959,394. DIFFERENTIAL GEARING. HENRY AUGUST HUGO SALOMO, Melbourne, Victoria, Australia. Filed Nov. 27, 1908. Serial No. 464,589.



1. A speed varying gearing comprising an oscillating wheel, a ball and socket bearing for said wheel, a projecting spindle on said wheel, a crank connected with said spindle for actuating the wheel, said oscillating wheel being provided with a series of teeth, a stationary part having a series of teeth thereon of corresponding depth but different in number from the teeth on the wheel, and means on the periphery of the wheel for transmitting its rotary motion.

2. A speed varying gearing comprising an oscillating wheel, said wheel having a socket upon one side, a fixed sphere engaging said socket, said wheel having a concentric face on its other side, a part having a fixed socket with which said face engages, said fixed part being provided with teeth and said wheel being provided with teeth engaging with the teeth on said fixed part, and means on the periphery of the wheel for transmitting its rotary motion.

3. A speed varying gearing comprising an oscillating wheel, a double ball and socket bearing for said wheel, a fixed part having teeth thereon, said wheel having teeth thereon engaging with the before mentioned teeth, and means on the periphery of the wheel for transmitting its rotary motion.

4. A speed varying gearing comprising an oscillating toothed wheel of corrugated form in cross section and provided with teeth, stationary parts having teeth thereon engaging with the teeth on the wheel, and means on the outer periphery of the wheel for transmitting its rotary motion.

959,395. TOOTH-CROWN. PAULINE SCHAEFER, Oakland, Cal. Filed Sept. 10, 1909. Serial No. 517,016.

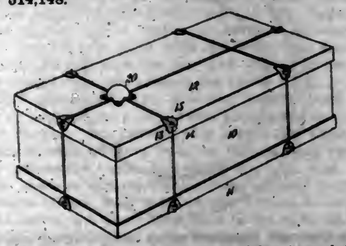


1. A pattern for use in the manufacture of metallic tooth crowns, having a combustible band portion and a plastic body portion.

2. A pattern for use in the manufacture of metallic tooth crowns, having a celluloid band portion, and a plastic body portion.

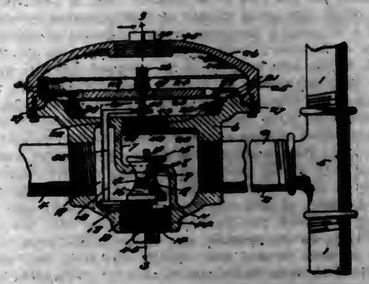
3. A pattern for use in the manufacture of metallic tooth crowns, having a celluloid band portion and a wax body portion.

959,396. CORD-RETAINER FOR PACKAGES. MORRIS SCHMIDT, New York, N. Y. Filed Aug. 23, 1909. Serial No. 514,148.



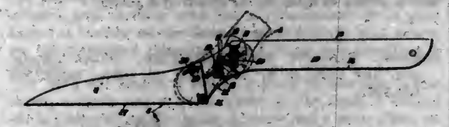
A cord retainer for packages, comprising two plate portions at an angle to each other for engagement with two adjacent surfaces of a package or container, to protect the edge of the latter, each of said plate portions having its outer end inserted through the side of the package or container and folded back upon the inner surface of said side, an eyelet securing said folded ends in position, and means carried by one of said plates for preventing the cord from slipping along the edge of the container.

959,397. GAS-CONTROLLING DEVICE. WALTER C. SIMMONS, Gassaway, W. Va. Filed Sept. 7, 1909. Serial No. 516,510.



In combination, a diaphragm casing made in two parts, a diaphragm secured between the two parts, a plate positioned on the upper side of the diaphragm, a pin extending through the plate and diaphragm, a valve casing formed on one of the parts of the diaphragm casing, said casing being provided with a wall having a slot therein, an angular wall in a valve casing formed with a valve seat, a double valve movable against the seat, and means movable in the slot of the wall first named connecting the pin with the valve.

959,398. ADJUSTABLE PATTERN FOR TONGUE-HOUNDS. NATHAN JAMES SMITH, Halstead, Kans. Filed Sept. 1, 1909. Serial No. 515,570.



1. A tongue hound pattern having a bracket section, a body section, an intermediate link section, pivotal connections between said link section and the bracket section, and pivotal and sliding connections between said link section and said body section.

2. A tongue hound pattern having a bracket section formed with an aperture therethrough adjacent one corner and a curved slot concentric with said aperture, a link section having an aperture therethrough and a slot extending lengthwise thereof, pivotal connections extending through the curved slot of the bracket section and connected to said link section for adjustably connecting said sections together, and a body section having two substantially parallel transverse slots therein and two securing members extending through said slots and through the slot of the link section for adjustably connecting said link section and said body section.

3. A tongue hound pattern, having a bracket section, a body section, an intermediate link section, pivotal connections between said link section and one of said first-mentioned sections, and pivotal and sliding connections between said link section and the other of said first-mentioned sections.

959,399. ELECTRIC HEATER. GEORGE E. STEVENS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 25, 1908. Serial No. 454,745.



1. An electric heater, comprising a resilient heating element, and a device for closing the circuit therethrough normally held in open position by said element.

2. An electric heater, comprising a resilient heating element, and a member for closing the circuit therethrough arranged to be moved by said element.

3. An electric heater, comprising a resilient heating element and a switch controlled thereby and arranged to be operated to close a circuit therethrough by flexing the element.

4. A water heater comprising a heating element in the path of water flow, and a normally open circuit closer responsive to water flowing over the heating element to close the circuit through the heating element.

5. An electric water heater, comprising a container, a resilient resistance element therein fixed at one end, and a contact member at the opposite end arranged to be moved by the flow of water through the container to close a circuit through the element.

[Claims 6 to 8 not printed in the Gazette.]

959,400. GUN-MUFFLER. JAMES HENRY STINSON, Cooke, Mont. Filed June 23, 1909. Serial No. 503,830.



1. The combination in a gun muffler, of a casing having gas-tight side walls, and a series of heads dished in the same direction throughout and arranged within the casing in spaced relation and having a projectile passage leading therethrough, with the dished edges of the heads extending to the inner wall of the casing, and with the concave sides of the heads facing rearwardly to arrest the forward movement of the powder gases and give the same a backward curling motion at successive points.

2. The combination in a gun muffler, of a casing, and a series of heads arranged within the casing in spaced relation and having a projectile passage leading therethrough, the heads being dished in the same direction throughout, with the central portions thereof extending farthest outwardly and the dished edges thereof extending to the inner wall of the casing, and with the concave sides of the heads facing rearwardly to arrest the forward movement of the powder gases and give the same a backward curling motion at successive points.

3. The combination in a gun muffler, of a casing having spaced walls at its rear end provided with alining openings to receive the muzzle of the gun, with the outer wall having a slot extending from the opening thereof and leading into an opening formed in the side of the casing to receive the sight of the gun, with the opening in the casing relatively wider than the slot to form a shoulder to engage behind the sight.

4. The combination in a gun muffler, of a casing, a series of dished heads arranged within the casing in spaced relation, with the concave sides of the heads facing rearwardly to turn the powder gases back, and a sectional barrel eccentrically arranged within the casing, with each section spaced apart and carried by one of said heads.

5. The combination in a gun muffler, of a casing, a series of dished heads arranged within the casing in spaced relation, with the concave sides of the heads facing rearwardly to arrest the powder gases at successive points, and a sectional barrel arranged within the casing, with each section of the barrel carried by and projecting to the opposite sides of one of the heads, and with the outer edges of the barrel sections substantially conforming to the convexity of the heads.

[Claim 6 not printed in the Gazette.]

959,401. METAL SEAL. SIGMUND STROH, London, England. Filed Apr. 2, 1909. Serial No. 487,476.



1. A seal comprising a dished metal plate, a second dished plate adapted to fit within said first plate, a shoulder on said second plate, a neck connecting said plates, a flange on said first plate adapted to be closed over said second plate, and serrations disposed in a recess in said flange and adapted to engage with the cord to be sealed.

2. A seal comprising a dished metal plate, a second dished metal plate adapted to fit within said first plate, a shoulder on said second plate, a neck connecting said plates, serrations disposed at an angle to the plane of said neck and along the edges thereof, a flange on said first plate adapted to be closed over said second plate, and serrations disposed in a recess in said flange, the serrations on said neck and in said recess being adapted to engage with the cord to be sealed.

3. A seal comprising a dished metal plate, a second dished metal plate adapted to fit within said first plate, a shoulder on said second plate, a neck connecting said plates, serrations disposed at an angle to the plane of said neck and along the edges thereof, a flange on said first plate adapted to be closed over said second plate, serrations disposed in a recess in said flange, the serrations on said neck and in said recess being adapted to engage with the cord to be sealed, and said plates having depressions the bottoms of which are in contact, the depressed parts of said plates being adapted to receive impressions when the seal is being closed.

959,402. GAME APPARATUS. WILLIAM A. SULLIVAN, New York, N. Y. Filed Aug. 4, 1909. Serial No. 511,158.

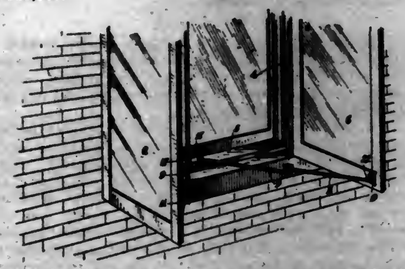


1. In a game apparatus, a vertical frame, a weight adapted to travel relatively to the frame, pulleys secured to the top of the vertical frame, lateral frame members spaced apart and secured to the vertical frame, a shaft journaled in the lateral frame members, a drum secured thereto, an arm also secured to the shaft, and a cable secured to the weight, the cable extending over the pulley and having a terminal secured to the drum.

2. In a game apparatus, a vertical frame, a weight adapted to travel relatively to the frame, a pulley secured near the top of the vertical frame, lateral frame members spaced apart and secured to the vertical frame, a shaft journaled in the lateral frame members, a drum secured to the shaft, two radially disposed arms secured to the shaft, balls secured to the arms at their outer terminals, and a cable secured to the weight, the cable being disposed over the pulley and having a terminal secured to the drum.

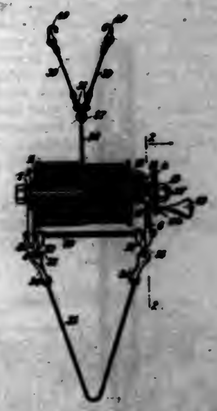
3. In a game apparatus, a frame having a member adapted to support a cable, a weight adapted for traveling relatively to the frame, a shaft journaled in the frame and extending outwardly therefrom a distance above the ground, an arm secured to the shaft, a ball secured to the arm near its outer terminal, and a cable secured to the weight, the cable being disposed over the member of the frame and being adapted to be wound on the shaft, there being marks on the frame separating a portion of its outer surface into divisions on which are marked 1, 2, 3 and "Home", respectively, the weights in connection with the said marks serving to indicate how hard the ball is struck by a bat in the hands of a player.

959,403. WINDOW-BLIND HOLDER. OLAUS THOMASEN, New York, N. Y. Filed Nov. 23, 1909. Serial No. 529,560.



The combination of a stem provided with a head having a beveled upper surface, a jointed rod journaled to said head, a swinging blind, a latch carried by said swinging blind, a bracket mounted upon said swinging blind and connected with said jointed rod, and a latch journaled upon said bracket and provided with a thumb piece whereby it may be actuated, said latch being further provided with a hook for engaging said beveled upper surface of said head.

959,404. FIRE-ESCAPE. JOHN WILLIAM THOMPSON, Hinchcliff, Miss. Filed Sept. 1, 1909. Serial No. 515,577.



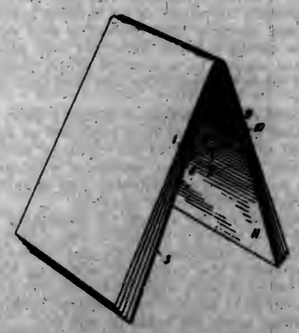
1. In a fire escape, a frame having orifices, a shaft disposed in the orifices in the frame, a drum and a worm wheel on the shaft, a second shaft journaled in the frame, a worm and a gear wheel on the second-mentioned shaft, the worm being adapted for operating the worm wheel, a third shaft, two gear wheels on the third shaft, one of the said two gear wheels meshing with the gear wheel on the second-mentioned shaft, and a hand wheel having a gear meshing with the other of the said two gear wheels on the third shaft, the hand wheel being mounted loosely on the first-mentioned shaft.

2. In a fire escape, a frame having two depending members, a shaft journaled in bearings in the frame, a drum and a worm wheel on the shaft, a second shaft journaled in the frame at right angles to the first shaft, a worm and a gear wheel on the second shaft, the worm being adapted to engage the worm wheel, a third shaft journaled in bearings in the frame substantially parallel with the second shaft, the third shaft having two gear wheels, one of which is beveled, the other of the gear wheels engaging the gear wheel on the second shaft, a hand wheel having a bevel gear meshing with the first-mentioned bevel gear mounted loosely on the first-mentioned shaft, and means on the depending members of the frame for attaching a support.

3. In a fire escape, a frame, a shaft in bearings in the frame, a drum and a worm wheel on the shaft, a second shaft journaled in the frame, a worm and a gear wheel on the second-mentioned shaft, the worm being adapted for operating the worm wheel, a third shaft, two gear wheels on the third shaft, one of the said two gear wheels meshing with the gear wheel on the second-mentioned shaft, the gear of the other of the two said gear wheels being beveled, a hand wheel having a beveled gear meshing with the first-mentioned bevel gear, mounted loosely on the first-mentioned shaft, and another bevel gear wheel mounted to rotate on the frame, the last-mentioned bevel gear wheel acting as an idler engaging the gear on the hand wheel.

4. In a fire escape, two frame members, a bolt serving as a shaft journaled in the frame members and being readily removable therefrom, a drum and a worm wheel on the shaft, two additional bearings in one of the frame members, a shaft journaled in one of the said additional bearings, the shaft having a worm and a gear wheel, the worm engaging the worm wheel on the bolt, another shaft journaled in the second of the two additional bearings, a gear wheel on the said shaft engaging the gear wheel on the other shaft journaled in the first of the two additional bearings, a bevel gear wheel on the shaft journaled in the second of the said two additional bearings, and a hand wheel with bevel teeth mounted to rotate on the bolt, the bevel gear teeth on the hand wheel engaging the said bevel gear wheel.

959,405. BOOK-HOLDER. WILFRED CHARLES TRAHER, London, Ontario, Canada. Filed Aug. 19, 1909. Serial No. 513,559.



1. In a book-holder, a plate adapted to be pivoted to a book, and a wire member pivoted to the plate, the wire member having fingers adapted for engaging the covers of a book to hold them relatively to each other.

2. In a book-holder, a plate adapted to be attached to the book, and a wire member pivoted to the plate on an axis at an angle to the middle portion of the wire member, the wire member having fingers adapted for engaging the covers of a book to hold them relatively to each other.

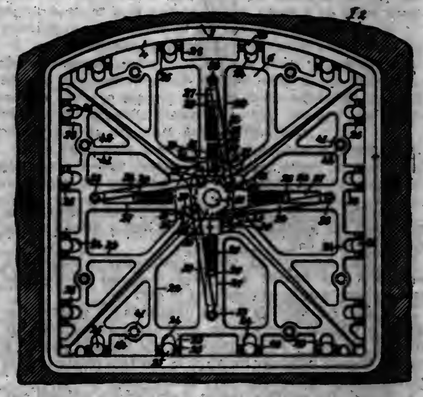
3. In a book-holder, a plate adapted to be attached to a book, the plate having an elongated bearing, and a wire member journaled in the bearing, the body of the wire member being disposed substantially at right angles to the bearing and having fingers which are adapted for engaging the covers of a book to hold them relatively to each other.

4. In a book-holder, a plate adapted to be attached to a book, and a wire member pivoted to the plate, the wire member having looped portions for engaging portions of the book to hold them relatively to each other.

5. A book, a wire member, and means by which the wire member is pivoted to the book, the wire member having looped portions forming fingers which are adapted for engaging portions of the book to hold them relatively to each other.

[Claims 6 and 7 not printed in the Gazette.]

959,406. VAULT-CLOSURE. FERDINAND UNCKRICH, Galion, Ohio. Filed May 15, 1908. Serial No. 433,010.



1. A vault closure comprising a door adapted to seat against a door frame, bolts carried by said door, a key member having an initial movement adapted to project said bolts behind said frame, and having a second movement adapted to clamp said bolts against said frame, and links for operatively connecting said key member and each of said bolts.

2. A vault closure, comprising a door adapted to seat against a door frame, slidable bolts, means for successively projecting said bolts toward said frame and forcing said bolts into inclined positions with respect to the face of said door to clamp said bolts against said frame, and links operatively connecting said means and said bolts.

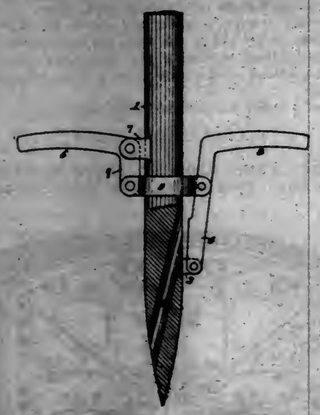
3. A vault closure, comprising a door adapted to seat against a door frame, bolts movably mounted on said door, an operating member formed in sections and serving to project said bolts, a frangible member connecting said sections and adapted to be broken when said bolts are forced home, means for clamping said bolts against said frame by the continuous movement of said operating member, a member preferably a dog for locking said operating member against a return movement, and links operatively connecting said operating member and said bolts.

4. A vault closure, comprising a door adapted to seat against a door frame, bolts movably mounted upon said door, an operating member controlling said bolts to project the same, and a resiliently projected tongue whereby one of said bolts when projected, controls said operating member to lock the same against a return movement.

5. A vault closure, comprising a door adapted to seat against a door frame, bolts movably mounted upon said door, and an operating member controlling said bolts to project the same, one of said bolts having a normally projected tongue whereby when said bolt is projected said tongue engages said operating member to lock the same against a return movement, said operating member being adapted by a continuous movement to clamp said bolts against the door frame when said bolts are projected.

[Claims 6 to 15 not printed in the Gazette.]

959,407. CABLE-SPLICER. JACKOB URBANZ, Porter, Wash. Filed Oct. 14, 1909. Serial No. 522,655.



1. A tool for splicing cables comprising a diagonally perforated bar having a pointed end and a strand clamp secured to said bar.

2. A tool for splicing cables comprising a diagonally perforated bar having a pointed end and a combined strand clamp and handle secured to said bar.

3. A tool for splicing cables comprising a pointed bar having a diagonal perforation with one opening near the point of the bar, a lever pivoted to the bar and having a portion thereof adjacent its pivot in position to engage the strand as it emerges from said perforation.

4. A tool for splicing cables comprising a pointed bar having a diagonal perforation near its point, a strand-clamping lever pivoted to the bar between the other opening and the point and extending over the same opening.

5. A tool for splicing cables comprising a pointed bar having a diagonal, strand-receiving perforation near its point, a lever pivoted to said bar between its point and the end of said perforation which is farthest removed from its point, said lever having one part extending from its pivot lengthwise the bar and opposite the adjacent end of said perforation and its other end extending away from the bar to form a handle.

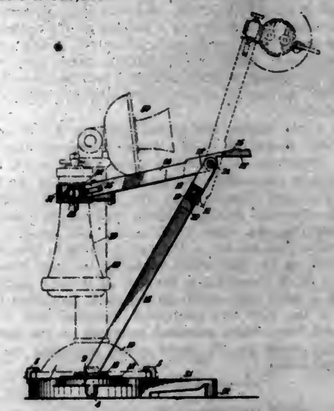
[Claims 6 to 8 not printed in the Gazette.]

959,408. RATCHET TOOL-HOLDER. JOHN VOLBERT, Pittsburg, Pa. Filed Jan. 28, 1910. Serial No. 540,705.



A ratchet tool holder comprising a body portion adapted to have a tool coupled thereto, a ratchet wheel fixed to said body portion, a rotatable head straddling the body portion and shiftably connected thereto, a pair of oppositely disposed pawls pivotally connected to said head and each adapted to engage said ratchet wheel to couple the body portion with the head so as to rotate therewith when the head is rotated in one direction and to ride over the teeth of the ratchet wheel when the head is rotated in the opposite direction, a spring holding element surrounding the body portion and permanently in engagement with the pivoted ends of said pawl and provided with a pair of resilient arms adapted to engage said pawls for holding them in an inoperative position, each of said pawls provided with a flat bearing surface adapted to be engaged by one of said arms for maintaining the pawl in an inoperative position when shifted to such position.

959,409. BRACKET FOR TELEPHONE-RECEIVERS. HUGO P. VOSS, New York, N. Y. Filed Nov. 22, 1909. Serial No. 529,222.



1. In an attachment of the class described, in combination, a base adapted to be attached to a telephone, a main arm having a swivel connection with said base and extending upwardly therefrom in an inclined position, an extension arm having a joint connection with said main arm, a yoke having a swivel connection with said extension arm and adapted to be attached to the telephone receiver, and means for supporting said yoke from the telephone hook.

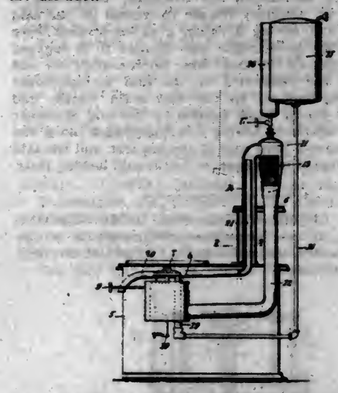
2. In combination, a telephone having a hook, a yoke having a hook plate adapted to be supported on said hook and adapted to be secured to the telephone receiver, an extension arm having a joint connection with said yoke, and means for securing said extension arm so as to swing said yoke carrying the receiver upwardly.

3. A telephone having a hook for supporting the receiver, said hook having a transverse bar, a base in connection with said telephone, a main arm carried by said base, an extension arm carried by said main arm, and a member having a joint connection with said extension arm and adapted to support the telephone receiver, said member having means for engaging said bar.

4. In combination, a base having a substantially circular part having means for engaging a circular telephone base and having a substantially horizontal foot, an inclined arm having a swivel connection with said foot and extending upwardly therefrom, an extension arm having a joint connection with said main arm, and a yoke having a swivel connection with said extension arm and adapted to engage the telephone receiver, said yoke having a hook plate affording means for supporting a telephone receiver on the telephone hook.

959,410. VAPOR-BURNER. ARNO H. WAITE, El Paso, Ill. Filed July 15, 1909. Serial No. 507,714.

1. The combination of a generating burner, an evaporating burner located in heating relation to the generating burner, a vaporizer arranged in an elevated position and connected with the evaporating burner, an air-duct leading into the vaporizer, and an air-intake-pipe arranged in the flame of the burners and passing to the vaporizer through the air-duct.



2. The combination of a generating burner, an evaporating burner located in heating relation to the generating burner, a vaporizer arranged in an elevated position and connected with the evaporating burner, an air-duct leading into the vaporizer, and air-intake-pipes arranged at opposite sides and in the flame of the evaporating burner and connected with a common pipe passing to the vaporizer through the air-duct.

3. The combination of a vapor stove having a shelf or support rising at the back thereof, a generating burner, an evaporating burner located in heating relation to the generating burner, a vaporizer arranged above said shelf or support, having a duct passing through said shelf or support and connecting with the evaporating burner, an air duct connected with the upper portion of the vaporizer leading from a point near the top of the stove through the shelf or support, and an air-intake pipe arranged in the flame of the evaporating burner and passing to the vaporizer through the air duct.

4. The combination of a casing having a chamber provided with a gauze covering, constituting an evaporating burner, a generating burner arranged above the evaporating burner, a vaporizer located at an elevation above said burners, having a duct leading to the chamber, and an air-intake-pipe located above the gauze of the evaporating burner and passing to the vaporizer.

5. The combination of a stove, a generating burner arranged under the top of the stove, an evaporating burner arranged below and located in heating relation to the generating burner, a vaporizer located above the stove and having a connection with the evaporating burner, passing into the stove, an air-duct leading from the top of the stove into the upper portion of the vaporizer, and air-intake-pipes arranged in the flame of the evaporating burner underneath the top of the stove and connected with a common pipe passing to the vaporizer through said air-duct.

959,411. EXTENSIBLE CONNECTION. MYRON E. WELLS, Massillon, Ohio. Filed July 27, 1909. Serial No. 509,876.

1. An extensible connection, comprising a forked member provided with slots, a second member having a portion extending into said forked member and provided with slots, the slots in said forked member partially registering with the slots in said member extending into said forked member, a substantially wedge-shaped key extending through one of said slots in said forked member and through one of said slots in the other member, and another key also of substantially wedge-shape, inserted in the opposite direction through another of said slots in said forked member and through another of said slots in said member inserted in said forked member.



2. An extensible connection, comprising a plurality of members movable relatively to each other, a key engaging both of said members and adapted to move them relatively to each other in one direction, and another key engaging both of said members and adapted to move them relatively to each other in the opposite direction.

3. An extensible connection, comprising a plurality of members movable relatively to each other, a key for moving said members relatively to each other in one direction, another key for moving said members relatively to each other in the opposite direction, so that one key can be advanced only as the other key is withdrawn.

4. An extensible connection, comprising a plurality of members movable relatively to each other, one of said members being provided with a plurality of slots, each of which, throughout its entire length, is parallel to another of said slots in the same member, the other of said members having a plurality of slots staggered relatively to each other so that one overlaps another, and a plurality of tapered keys each extending through a slot in one member and a slot in the other member.

5. An extensible connection, comprising a plurality of members movable relatively to each other, one of said members being provided with a plurality of slots, each of which, throughout its entire length, is parallel to another of said slots in the same member, the other of said members having a plurality of slots staggered relatively to each other so that one overlaps another, and a plurality of tapered keys inserted through said members from opposite sides thereof, each key extending through a slot in one member and a slot in the other member, so that a movement of one key necessitates a reverse movement of the other key.

959,412. SANCTUARY-LAMP. LEWIS M. WILDE, North Walpole, N. H. Filed Sept. 11, 1909. Serial No. 517,191.



1. The combination of frame plates rigidly secured together in spaced relation, a motor carried by said plates, a vertical wick tube passing centrally through the frame plates and having a burner, a vertical shaft journaled in the frame plates and driven from the motor, having an attached gear arranged above the upper plate, an escapement mechanism driven from the vertical shaft, a gear

journaled on the wick tube and in mesh with the first mentioned gear, having a socket, and a wick trimmer vertically adjustable in said socket and having a trimming finger overhanging the burner.

2. The combination of frame plates rigidly secured together in spaced relation, a vertically arranged wick tube passing through said plates and having a burner above the upper plate, a wick trimmer revoluble about the burner, and a clock mechanism carried by said plates and operatively connected to the wick trimmer.

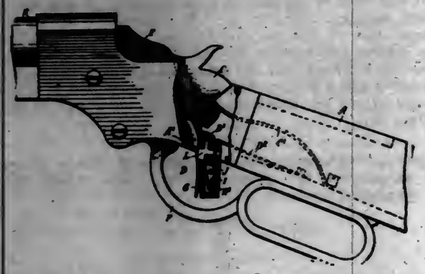
3. The combination of an upper, lower and intermediate frame plate rigidly secured together in spaced relation, a wick tube passing centrally through the intermediate and upper plate and having a burner at the upper end portion thereof, a motor carried on the upper and lower plate and extending above the intermediate plate, a winding mechanism for the motor, arranged below the lower plate, a wick trimmer revoluble about the burner, means for driving the wick trimmer from the motor, and an escapement mechanism arranged between the upper and intermediate plates and driven from said means.

4. The combination of frame plates rigidly secured together in spaced relation, a wick tube passing vertically through said plates, a motor-actuated mechanism carried by the plates and having a driven member journaled on the wick tube, and a wick trimmer carried by said member.

5. The combination in a lamp, of a burner, a wick trimmer revoluble about the burner and normally engaging the wick, and a clock mechanism operatively connected to the wick trimmer to move the trimmer continuously over the wick.

[Claim 6 not printed in the Gazette.]

959,413. TRIGGER MECHANISM. ELZY R. WILLIAMS, St. Joseph, Mo. Filed Feb. 2, 1910. Serial No. 541,584.



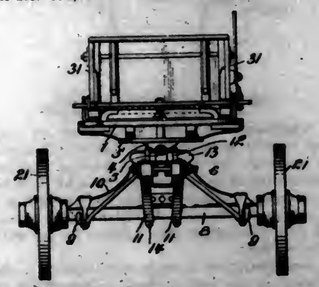
1. A trigger mechanism for fire-arms, comprising a main trigger, an abutment mounted to swing and adapted to abut against a fixed part of the fire-arm, a spring-pressed manually-controlled mechanism mounted on the said main trigger and adapted to engage the said abutment, and an auxiliary trigger fulcrumed on the said main trigger and provided with a catch adapted to engage the said mechanism to hold the latter under tension and against the said abutment.

2. A trigger mechanism for fire-arms, comprising a main trigger, an abutment hung loosely on the pivot of the said main trigger and adapted to abut against a fixed part of the fire-arm, a spring fixed on the said main trigger, a manually-controlled device mounted on the said main trigger and adapted to place the said spring under tension and to abut on the said abutment, and an auxiliary trigger adapted to engage and lock the said mechanism in active position.

3. A trigger mechanism for fire-arms, comprising a main trigger, an abutment mounted to swing on the pivot of the main trigger and adapted to abut against a fixed part of the fire-arm, a spring-pressed block movable on the said abutment, a spring fixed on the said main trigger, a manually controlled lever device mounted on the said main trigger and adapted to place the said spring under tension and to engage the said abutment block, and an auxiliary trigger fulcrumed on the said main trigger and having a catch for engaging the said lever mechanism to lock the same at the time the said spring is under tension.
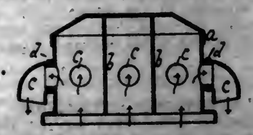
4. A trigger mechanism for fire-arms, comprising a main trigger, an auxiliary trigger fulcrumed on the said main trigger and having a catch, a spring-pressed lever fulcrumed on the main trigger and adapted to be engaged by the said catch, an abutment lever fulcrumed on the said main trigger and controlled by the said spring-pressed lever, a spring secured on the said main trigger and adapted to be placed under tension by the said abutment lever, and an abutment having a spring-pressed block and adapted to engage a fixed part of the fire-arm, and the said block being adapted to be engaged by the said locking lever.

959,414. FIFTH-WHEEL FOR DUMP-WAGONS. LORENZO H. YOUNG, Hagerstown, Md., assignor of one-half to V. P. Hill, Hagerstown, Md. Filed Oct. 16, 1908. Serial No. 458,050.



In a dump wagon having a front platform mounted on the frame thereof, a flat cylindrical ring beneath the platform and connected therewith, a hound, U-shaped members upon the hound arranged diametrically opposite each other and disposed normally longitudinal of the center of the wagon frame, curved shoes pivotally connected between the arms of the U-shaped member and bearing upon the ring, a bolster connected with the hound, an axle upon the bolster, bracing members for the axle and hound, yoke members positioned upon each side of the bolster and engaging the said brace members adjacent each side of the axle, a king bolt, said king bolt comprising a pair of members, the lower member being connected with the bolster and being provided with an enlarged perforated head, the second member of the king bolt being connected with the platform and being provided with a bifurcated head having openings adapted to aline with the opening within the head of the first section and a removable bolt for these openings, substantially as and for the purpose set forth.

959,415. CHIMNEY-TOP. ARNOLD ZWINGLI, Brooklyn, N. Y. Filed Jan. 29, 1910. Serial No. 540,906.



1. A device of the kind described, comprising a casing of substantially rectangular form having a domed top, a series of partitions arranged in the casing to subdivide the interior of the casing into a series of compartments, a series of openings leading out of the casing and located at a greater distance from the top than from the bottom of the casing and adapted to form a series of warm air spaces between the domed top and the outlet openings.

2. A device of the kind described, comprising a casing of rectangular form having a domed top, a series of partitions arranged in the casing to subdivide the interior of the casing into a series of compartments, a series of outlets leading from the casing and having elbows projecting outwardly with downwardly extending exit portions, said outlets being located near the bottom of the casing to form warm air spaces in the top of the casing.

3. A device of the kind described, comprising a casing of rectangular form, having a domed top, partitions arranged in the casing to form a number of compartments, and outlets for the compartments, each having an elbow adapted to engage a fastening device on the outlet portion of the casing to lock the elbow in place.

959,416. DENTAL BRUSH. JAMES HERMAN ABBOTT, Philadelphia, Pa., assignor to The Abbott Dental Brush Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Original application filed Apr. 16, 1907, Serial No. 368,457. Divided and this application filed May 4, 1908. Serial No. 430,692.



1. In a device of the character described, a mandrel, a sleeve upon the mandrel having a closed head and annular flange thereon, bristles, and a flanged sleeve mounted upon the first sleeve retaining the bristles between the flanges of the two sleeves.

2. In a device of the character described, bristles, a pair of flanged sleeves retaining the bristles between them, a mandrel within the one sleeve and a closed head for said sleeve.

959,417. FLUID-OPERATED CONTROLLING MECHANISM. JOHN W. ANDERSON, Sisson, Cal. Filed Nov. 30, 1908. Serial No. 465,024.



1. In combination, a cylinder, a piston, hollow rods extending from said piston through the opposite ends of the cylinder and serving for the delivery and exhaust of fluid to said cylinder at opposite sides of said piston, and a valve movable longitudinally of said cylinder for controlling the flow of fluid through said rods, said valve being adapted to be manually opened and automatically closed by the movement of the piston in the same direction as the valve and to the same extent, whereby the parts will be locked in the position to which they have been moved.

2. In combination, a cylinder, a piston in the cylinder, hollow rods extending from the piston through opposite ends of the cylinder and serving for the delivery and exhaust of fluid to and from the cylinder, and a longitudinally movable valve, manually operated to open the same, the movement of the piston corresponding to that of the valve and serving to automatically close the valve to lock the parts in the position to which they have been moved.

3. In combination, a cylinder, a piston, rods extending from said piston through opposite ends of the cylinder, one of said rods serving for the delivery of fluid to either end of said cylinder and the other of said rods serving for the exhaust of fluid from either end of said cylinder, a valve within said piston for controlling the direction of flow of fluid, and manually operated means for operating the valve to open the same, said valve being automatically closed by the movement of the piston to lock the parts in the position to which they have been moved.

4. In combination, a cylinder, a piston, and two concentric rods, one of said rods serving as an inlet conduit for the delivery of fluid to said cylinder at either side of said piston, and the other of said rods serving for the exhaust of fluid from either end of said cylinder, one of said rods being movable with said piston and the other of said rods being movable in respect to the other rod to control the flow of fluid.

5. In combination, a cylinder, a piston in the cylinder, hollow rods extending from the piston through opposite ends of the cylinder, one of said rods serving for delivery of fluid to the cylinder and the other rod serving for the exhaust of the fluid from the cylinder, one of said rods being fixedly secured to the piston and the other connected to the piston to have movement with respect thereto to control the flow of fluid.

[Claims 6 to 9 not printed in the Gazette.]

959,418. AERIAL MAIL TROLLEY AND BOX. THOMAS G. ANDERSON, SEYMOURE C. ANDERSON, and ELIE G. ANDERSON, Langdon, Mo. Filed Mar. 19, 1910. Serial No. 550,481.



1. An aerial apparatus for delivering and receiving mail, comprising a trolley line, a car movable thereon, a series of boxes having an opening opposite the car and an opening near the lower portion of the box, an elevator car within the box, ropes secured to said elevator car, pulleys journaled in the box and over which the ropes pass, counterbalanced weights fastened to said ropes, guard casings about said weights, and a closure over the top of said guard casings.

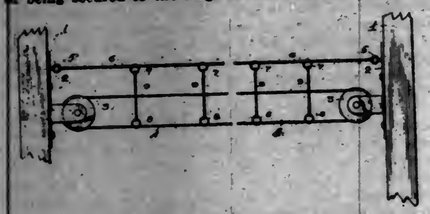
2. An aerial apparatus for delivering and receiving mail, comprising a trolley line, a car movable thereon, a series of boxes having an opening opposite the car and an opening near the lower portion of the box, an elevator car within the box, ropes secured to said elevator car, pulleys journaled in the box and over which the ropes pass, counterbalanced weights fastened to said ropes, guard casings about said weights, said box having an opening in its top, a closure hinged to the box and having laterally projecting wings designed to fit over the upper ends of said guard casings.

3. An aerial apparatus for delivering and receiving mail, comprising a trolley line, a car movable thereon, a series of boxes having an opening opposite the car and an opening near the lower portion of the box, an elevator car within the box, ropes secured to said elevator car, pulleys journaled in the box and over which the ropes pass, counterbalanced weights fastened to said ropes, guard casings about said weights, said box having an opening in its top, the latter being convexed, a concaved closure hinged to said box and having laterally extending concaved wings, the latter being adapted to fit over the tops of said guard casings and provided with flanges.

959,419. CLOTHES-LINE SUPPORT. WILLIAM L. ANDERSON, Davenport, Cal. Filed Jan. 19, 1909. Serial No. 473,380.

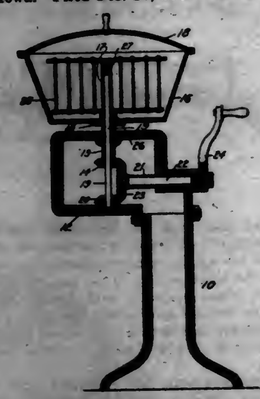
In a device of the character described, the combination with oppositely positioned supports of a pair of plates having arms projecting laterally therefrom and eyelets secured thereto above said arms, vertically positioned pulleys mounted on said arms, a messenger wire between said supports secured to said eyelets, an endless line mounted on said pulleys, a plurality of rings on said messenger wire, a plurality of rings on the lower extension of said

endless line, and vertically extending guys, one end thereof being secured to the rings on said messenger wire and



the other end thereof being secured to the rings on the lower extension of said line.

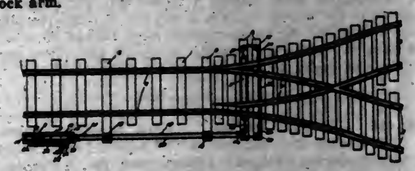
959,420. BEATER AND MIXER. WILLIAM H. ASHBY, Boone, Iowa. Filed Feb. 27, 1909. Serial No. 480,482.



In a device of the character described, a stand having a broad base, a box mounted detachably upon the stand and offset to one side thereof, said box constituting a gear casing, a tubular shaft supported for rotation in the top of the box and having a bevel gear at its lower end and a flange at its upper end, a shaft having a non-circular upper end extending through the tubular shaft and stepped for rotation in the bottom of the box, said shaft having a bevel gear adjacent to its lower end, a bearing tube extending through a side wall of the box, a shaft supported for rotation in said bearing tube and having at its inner end a bevel gear meshing with the bevel gears upon the shafts within the box and at its outer end a crank, a receptacle supported upon the flange at the upper end of the tubular shaft and having an open-ended tube rising from the bottom thereof, a skeleton stirrer having a flanged bearing member exteriorly engaging the tubular shaft and resting upon the bottom of the receptacle and a non-circular bearing member engaging the non-circular end of the shaft extending through the tubular shaft, and a detachable cover for the receptacle.

959,421. RAILWAY-SWITCH. FRANK BATUSZ and VICTOR KOVACS, New Castle, Pa. Filed Nov. 18, 1908. Serial No. 462,484.

1. In a railway switch, the combination with a main track, a siding track, switch tongues controlling the movement of rolling stock from said main track to said siding track, and an actuating rod movably carried by the cab of a locomotive adapted to travel upon said tracks, of a bar connecting with said switch tongues, a casing located adjacent to said main track, a rock arm fulcrumed in said casing and having connections with said bar for shifting said bar, said rock arm being adapted to be engaged by said actuating rod for shifting said bar and the switch tongues connected thereto, a hanger carried by said arm, a weight movably mounted upon said hanger for firmly holding the switch tongues in a shifted position, and means arranged in said casing for limiting the movement of said rock arm.



2. In a railway switch, the combination with a main track, a siding track, switch tongues controlling the movement of rolling stock from said main track to said siding track, and an actuating rod movably carried by the cab of a locomotive adapted to travel up on said tracks, of a bar connecting with said switch tongues, a casing located adjacent to said main track, a rock arm fulcrumed in said casing and having connections with said bar for shifting said bar, said rock arm being adapted to be engaged by said actuating rod for shifting said bar and the switch tongues connected thereto, a hanger carried by said arm, and a weight movably mounted upon said hanger for firmly holding the switch tongues in a shifted position.

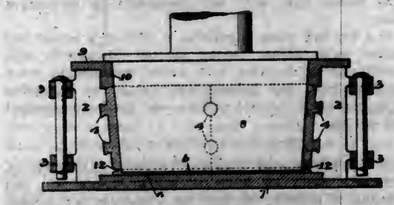
959,422. HOG-HOLDER. JAMES ORLAND BECHDOLT, Portland, Ind. Filed May 22, 1908. Serial No. 434,377.



1. A hog holder comprising a tubular handle, a snout block having a passage extending entirely through the same and into one end of which the handle is secured, the remaining portion of the passage being disposed obliquely to the axis of the handle and at an acute angle to the snout engaging face of the block and coöperating with the bore of the handle rod to form a continuous guide-way, a slide rod movable longitudinally in the handle and terminating short of the snout block, an approximately circular flexible band having one end connected with the snout block at one side of the axis of the handle and the other end extending into the guide-way of the snout block at a point disposed to the opposite side of the axis of the handle and connected with the slide rod, the snout engaging face of the block coöperating with the band to form substantially a continuous snout engaging means.

2. A hog holder comprising a tubular handle, a snout block having a passage composed of two portions, one arranged approximately at right-angles to the snout engaging face of the block and the other at an acute angle thereto, means for securing the handle in the first mentioned portion of the passage of the block, whereby the second mentioned portion of the passage coöperates with the bore of the handle to form a continuous guide-way, the obliquely disposed portion of the passage having its open end terminating in the snout engaging face of the block at one side of the axis of the handle, said block having a lateral projection disposed at the opposite side of the axis of the handle from the said open end of the passage, a flexible band having one end secured to the extremity of the projection and the other end slidably extending into the passage of the block, and an operating rod slidable in the handle and connected with the movable end of the band, the portions of the band adjacent the block being disposed approximately in tangential relation to the snout engaging face of the block.

959,423. MANUFACTURE OF GLASS TILES AND SIMILAR ARTICLES. GEORGE W. BLAIR, Pittsburg, Pa., assignor of four-tenths to F. G. Wallace, Pittsburg, Pa., one-tenth to Charles E. Voltie, and one-tenth to James D. Johnston, Jeannette, Pa. Filed Mar. 6, 1905. Serial No. 248,489.



1. The method of making tiles, consisting in pressing a hollow blank with flat finished sides having external projections and a closed bottom, and then severing the sides; substantially as described.

2. The method of forming tiles, consisting in pressing a hollow blank with flat finished sides having external projections and a closed bottom forming weakened portions in the glass extending vertically along the corners, and then severing the sides; substantially as described.

3. The method of making tiles, consisting in pressing a hollow blank with angular flat sides having external projections and a closed bottom forming weakened portions in the glass extending around the article near the bottom, and also extending vertically along the corner portions, and then severing the sides; substantially as described.

4. The method of making tiles, consisting in pressing a hollow blank with angular flat sides having external projections and a closed bottom, forming weakened portions in the glass extending around the article near the top and bottom, and also extending vertically along the corner portions, and then severing the sides; substantially as described.

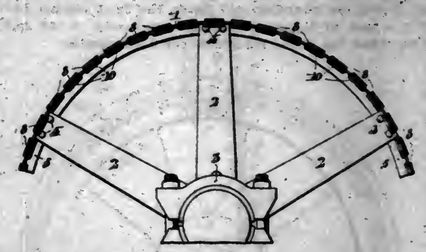
5. A glass mold for forming tiles, or similar articles, having hinged sides with recessed interior finishing faces, and a closed bottom said mold having projections arranged to weaken the corners of the hollow article; substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

959,424. PULLEY. RUSSELL H. BOWEN, Palmyra, N. J., assignor to The American Pulley Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 26, 1910. Serial No. 546,082.

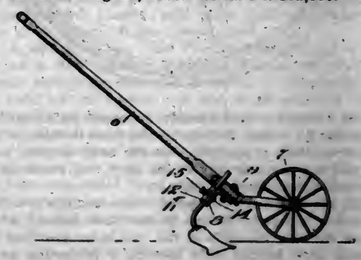
1. In a pulley, the combination, with a rim having apertures adapted to receive insets; of inwardly extending integral bands; and integral bottom pieces carried by said bands and having an extended surface, the edges of said bottom pieces being free from the metal of the rim except at the portions adjacent to said bands, substantially as set forth.

2. In a pulley, the combination, with a rim having apertures adapted to receive insets; of inwardly extending integral bands, arranged in diametrical relation to said apertures and forming shoulders adjacent to said apertures, and disk-shaped integral bottom pieces conforming substantially to the outline of said apertures and carried



by said bands, the edges of said bottom pieces being free from the metal of the rim except at the parts adjacent to said bands, substantially as set forth.

959,425. HAND-PLOW. ALDON R. CORRINGTON, Hartley, Iowa. Filed Aug. 14, 1909. Serial No. 512,830.



1. An implement having a beam, a cross piece angular in cross section, extending across under the beam, one flange of said cross piece being fastened to the beam, a clamping plate secured to and extending along the other flange of the cross piece and provided with recesses on the side adjacent to the cross piece to receive the shanks of blades or tools, means to secure the clamping plate to the flange of the cross piece, and means to adjustably hold said shanks in said recesses.

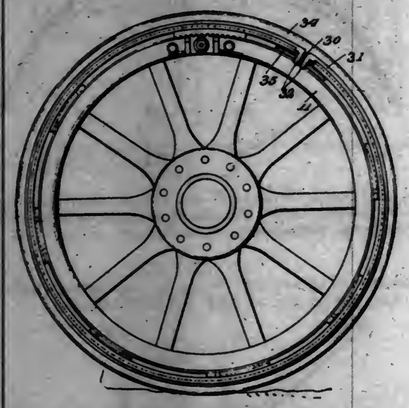
2. An implement having a beam, a cross piece extending across and fastened to the beam and having a depending flange, a clamping plate extending along one side of the flange and provided with cross corrugations forming a series of recesses on the side adjacent to said flange, to receive the shanks of blades or tools, adjustable clamping devices releasably connecting the plate and flange and located between said recesses whereby the space between the plate and flange may be varied to receive shanks of different sizes, and means to hold said shanks in said recesses.

3. An implement having a beam, an angle iron having one flange secured to and extending across said beam and the other flange depending below said beam, a clamping plate secured to and extending along said depending flange, and means to clamp the shanks of tools or blades between said plate and depending flange.

959,426. MEANS FOR LOCKING DETACHABLE FLANGES ON DEMOUNTABLE RIMS. ALEXANDER Dow, New York, N. Y., assignor to Dow Rim Company, New York, N. Y., a Corporation of New York. Filed Dec. 11, 1909. Serial No. 532,659.

1. In a wheel, a fixed member, a demountable rim therefor, means to secure the rim to the fixed member, a split ring on the rim, the fixed member having a part to engage the end portions only of the split ring to lock it in position when the rim is secured to the fixed member.

2. In a wheel, a fixed member, a demountable rim therefor, means to secure the rim to the fixed member, a detachable tire retaining flange on the rim, a removable split ring for retaining said flange, the fixed member having a part to engage the end portions only of the split ring when the rim is secured to the fixed member.

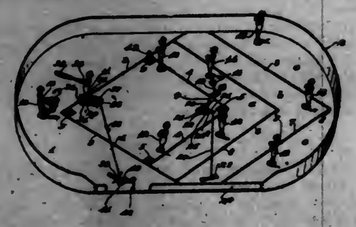


3. In a wheel, a fixed member, a demountable rim therefor, means to secure the rim to the fixed member, a split ring on the rim, a projection on the fixed member to engage the end portions only of the split ring when the rim is secured to the fixed member.

4. In a wheel, a fixed member, a demountable rim therefor, means to secure the rim to the fixed member, a split ring on the rim, the ends of the ring being provided with inturned ends having slots therein, a projection on the fixed member adapted to engage the channels in the end portions of the split ring when the rim is secured to the fixed member.

5. In a wheel, a fixed member, a demountable rim therefor, coöperating locking means carried by the fixed member and the demountable rim adapted to be brought into engagement with each other by a relative circumferential movement of the rim, a split ring on the rim, and a projection on one of the coöperating locking devices mounted on the fixed member adapted to engage the split ring at its end portions when the rim is locked on the fixed member to lock the split ring on the rim.

959,427. TOY BASE-BALL-GAME APPARATUS. JOHN A. EKBLUND, Minneapolis, Minn., assignor of one-half to James F. Williamson, Minneapolis, Minn. Filed Mar. 10, 1909. Serial No. 482,451.



1. In a toy ball game apparatus, a pitcher, a batter and a catcher, the said catcher having a ball receptacle located above the floor and arranged to catch the ball thrown by the said pitcher, at a point above the floor, and means for imparting pitching movements to said pitcher and batting movements to said batter.

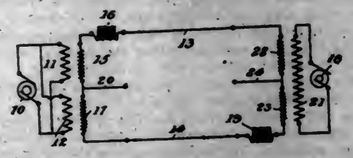
2. In a toy ball game apparatus, a pitcher, a batter and a catcher, the said pitcher being arranged to throw the ball above the floor and the said catcher having hands forming a ball receptacle located above the floor and adapted to catch the pitched ball at a point above the floor, and independently operated means for imparting pitching movements to said pitcher and batting movements to said batter.

3. In a toy ball game apparatus, a pitcher, a batter and a catcher, the said pitcher having an arm mounted for ball-throwing movements and for adjustments in a vertical plane, and said catcher having a ball receptacle located above the floor and arranged to catch the pitched ball at a point above the floor, and means for imparting pitching movements to said pitcher and batting movements to said batter, substantially as described.

4. In a toy ball game apparatus, a pitcher, a batter and a catcher, said catcher having a pair of hands forming a ball receptacle located above the floor, adapted to catch the pitched ball, and the said hands being spring-pressed together and adapted to be forced apart by downward pressure thereon from the ball, whereby the said ball may be forced from said ball receptacle by downward pressure.

5. In a toy ball game apparatus, a pitcher, a batter and a catcher, said catcher having pivoted frictionally held vertically adjustable arms with hands arranged to catch the pitched ball, and independent means for imparting pitching movement to said pitcher and batting movement to said batter.

959,428. METHOD OF TRANSMITTING ELECTRICAL ENERGY. WILLIAM F. GRADOLPH, St. Louis, Mo., and WILLIAM C. HAHNE, Chicago, Ill., assignors to Gradolph Electric Company, St. Louis, Mo., a Corporation of Arizona. Original application filed Dec. 20, 1905, Serial No. 292,529. Divided and this application filed Apr. 7, 1910. Serial No. 553,976.

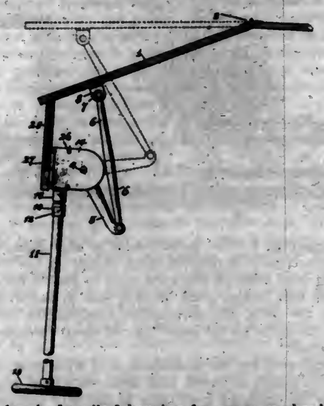


1. The herein described method of transmitting electrical energy which consists in generating an alternating current and delivering it to a circuit, altering adjacent to the generator end of the circuit the normal phase relations of the currents in the two sides of the circuit, and finally restoring the normal phase relations of the currents in the two sides of the circuit near the receiving end of the circuit before delivering them to translating apparatus.

2. In a system for the transmission of electrical energy, the method which consists in generating an alternating current and delivering it to a circuit, retarding the phase of the current approximately ninety degrees in one line of the circuit, and causing the current to lead approximately ninety degrees in the other line of the circuit, whereby the currents in the two lines are approximately one hundred and eighty degrees out of phase at the same instant at opposite points, and restoring the normal phase relations of the currents in the two lines of the circuit before delivering them to translating apparatus.

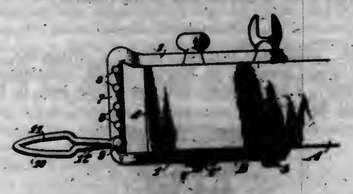
3. The herein described method of transmitting electric energy over a circuit, the sides of which are in inductive relation to each other, which consists first in generating an electric current and delivering it to the circuit, then retarding the flow of the current in one side of the circuit at the transmitting end thereof, and correspondingly advancing the flow in the opposite side of the circuit, and finally restoring the normal phase relations of the current before it is delivered to the translating apparatus.

959,429. SKYLIGHT-LIFT. WILLIAM C. HABICHT, Baltimore Md., assignor to The Kirk, Habicht Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Jan. 20, 1910. Serial No. 538,986.



The herein-described housing for worm mechanism that operates the sash of sky-lights, comprising a metal box having two sides 14, 15, each provided with a lateral flange constituting a flat back-wall and each of said sides also having a bearing for a horisontal shaft; the front of said box having two semi-circular flanges which are concentric with said side bearings and which project toward each other but are separated by an open vertical slot, said box adjacent the flat back-wall having an upper and a lower bearing, 17, 18, in vertical alinement with each other, in combination with a segment-gear provided with an arm projecting through said vertical slot and said gear having a shaft that turns in said side bearings, and a worm engaging the teeth of the segment-gear and having journals, 19, which fit in said upper and lower bearings.

959,430. CLEVIS. ROYAL H. HAMMOCK, Monroe, Ga. Filed Oct. 19, 1909. Serial No. 523,412.



1. The combination with a clevis, of a lap ring composed of a rod bent to form a loop having the ends crossed said ends having openings formed therein and a pin passing through the openings in the ends for connecting said ends of the lap ring to the outer surfaces of the clevis.

2. The combination with a clevis having two arms provided with a split end member integral with the arms, the bifurcated portion having openings formed therethrough in alinement, of a lap ring composed of a rod bent to form a loop, having the ends crossed, said ends having openings formed therein, and a pin passing through the openings in the ends for connecting said ends of the lap ring to the outer surfaces of the split end member.

959,431. LAMP. OLIVER J. HOLT, Chelsea, Mass., assignor to Holt & Beebee, Boston, Mass., a Firm. Filed Feb. 21, 1908. Serial No. 416,982.

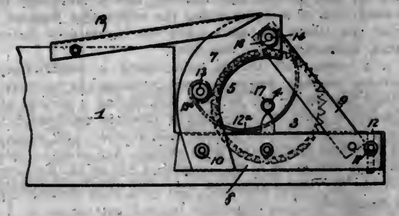
1. A device of the class described comprising a back member, a flanged front member substantially semi-elliptical in outline, a curved top member positioned between said front and back members, a transparent bottom plate and said back, top, and front members having inturned edges engaging over and securing said plate in position.



2. A device of the class described comprising a back member, a front member substantially semi-elliptical in general outline, a curved top member positioned between said front and back members, a transparent bottom plate and said back, top, and front members having inturned edges engaging over and securing said plate in position, said front member provided with a circular opening, and a lens mounted therein, said plate positioned below the plane of the center of the circular lens.

3. A device of the class described comprising a back member, a front member, a curved top member positioned between said front and back members, a transparent bottom plate and said back, top, and front members having inturned edges engaging over and securing said plate in position, said front member provided with a circular opening, a lens mounted therein, said plate positioned below the plane of the center of the circular lens, and a lamp interiorly suspended from said top member and alining with the center of both the lens and plate, and a bracket secured to said back member.

959,432. BAND-CUTTER AND FEEDER FOR THRESHING-MACHINES. EVERETT MCREYNOLDS and PHILIP S. GRAHAM, Fennimore, Wis. Filed Aug. 31, 1907. Serial No. 390,979.



1. In a band-cutter for threshing machines, the combination with a chute, of base members connected to the chute, curved arms connected to the base members, members connected to the base members and curved arms, a bar supported at each end by an arm and member, a cutter-shaft mounted on the base members and having cutters mounted thereon, and strippers mounted on the bar and passing beneath the cutter-shaft and between the cutters.

2. In a band-cutter, the combination with a chute, of base members mounted upon the chute, standards on the base members, a shaft mounted on the standards, cutters mounted on the shaft, curved arms connected to the base members, members pivotally connected to the base members and curved arms, a bar supported at each end upon an arm and a member, strippers connected to the bar extending between the cutters, and means for supporting the strippers.

3. In a band-cutter, the combination with a chute, of base members adjustably mounted thereon, standards connected to the base members, a shaft mounted on the standards, cutters mounted on the shaft, curved arms connected

to the base members, members pivotally connected to the base members and curved arms, a bar supported at each end upon an arm and a member, strippers upon the bar extending between the cutters, and means for supporting the strippers upon the arms.

4. In a band-cutter for threshing machines, the combination with a chute, of base members adjustably connected to the chute, curved arms connected to the base members, members connected to the base members and curved arms, a bar supported at each end by an arm and member, a cutter-shaft mounted on the base members and having cutters mounted thereon, strippers mounted on the bar and passing beneath the cutter-shaft and between the cutters, and a bar supported by the arms for supporting the strippers.

959,433. CROSS-ROLL TROUGH. HARLEY D. PENNINGTON, Pittsburg, Pa., assignor to United Engineering & Foundry Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Mar. 1, 1910. Serial No. 546,721.



1. A cross roll trough, comprising a longitudinally movable carriage, a trough carried thereby, said trough having a pivoted member, and a vertically movable support for the pivoted member, together with means whereby the longitudinal reciprocating movement of the carriage will raise and lower the support, substantially as described.

2. A cross roll trough, comprising a longitudinally movable carriage, a trough carried thereby, said trough having a pivoted member, a pair of vertically movable members supporting the movable section of the trough near opposite ends thereof, and connections operated by the longitudinal reciprocating movement of the carriage for raising and lowering said members, substantially as described.

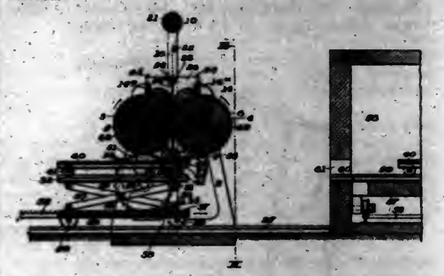
3. A cross roll trough, comprising a longitudinally movable carriage, means for reciprocating the carriage, a trough supported by the carriage and having a pivoted side member, a vertically movable member forming a support for the pivoted side member, and a relatively stationary arm or lever engaging the supporting member to raise and lower the same when the carriage is reciprocated, substantially as described.

4. A cross roll trough, comprising a longitudinally movable carriage, means for reciprocating the carriage, a trough carried by the carriage and having a pivoted side member, a plurality of vertically movable members forming a support for the pivoted side member, said supporting members having cam slots therein, and arms or levers pivotally connected to the stationary bed of the apparatus and having rollers engaging said cam slots, substantially as described.

5. A cross roll trough, comprising a longitudinally movable carriage, means for reciprocating the carriage, a trough carried by the carriage and having a pivoted side member, a plurality of vertically movable members forming a support for the pivoted side member, said supporting members having cam slots therein, and arms or levers pivotally connected to the stationary bed of the apparatus and having rollers engaging said cam slots, said arms or levers also carrying other rollers and the carriage having bearings for said rollers, substantially as described.

959,434. APPARATUS FOR MAKING WIRE-GLASS. WILLIAM S. TEMPLE, New Bethlehem, Pa., assignor of one-half to Thomas Spillane, New Bethlehem, Pa. Filed July 22, 1909. Serial No. 509,012.

1. Apparatus for the manufacture of wire glass, a movable table, a pair of forming rolls, means on the rolls for engaging both sides of the wire cloth to feed it forwardly, means to feed molten glass on each side of the wire cloth between the rolls, and means for rotating the rolls and moving the table at the same speed; substantially as described.



2. Apparatus for the manufacture of wire glass, a movable table, a pair of forming rolls, means on the rolls for engaging both sides of the wire cloth to feed it forwardly, means to feed molten glass on each side of the wire cloth between the rolls, and gearing for rotating the rolls and moving the table at the same rate of speed; substantially as described.

3. Apparatus for the manufacture of wire glass, a movable table, means to adjust said table vertically, means on the rolls for engaging both sides of the wire cloth to feed it forwardly, means to feed molten glass on each side of the wire cloth between the rolls, and means for rotating the rolls; substantially as described.

4. Apparatus for the manufacture of wire glass, a longitudinally movable platform, a longitudinally movable table mounted on the platform, a pair of forming rolls, means to adjust the platform vertically to adjust the height of the table with relation to the rolls, means for rotating the rolls and moving the table at the same rate of speed, and means for feeding wire cloth and molten glass between the rolls; substantially as described.

5. Apparatus for the manufacture of wire glass having a table mounted on a track, an adjustable platform for supporting said track, a second track for supporting said adjustable table, a pair of forming rolls, means for feeding wire cloth and glass between the rolls, and means for rotating the rolls and moving the platform at the same rate of speed; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

959,435. CIRCUIT-CLOSER. HENRY C. THOMSON, Boston, Mass., assignor to Electric Goods Manufacturing Company, a Corporation of Maine. Filed Mar. 6, 1909. Serial No. 481,620.



1. An electric circuit closer comprising essentially a base block, electrically insulated contact members mounted upon said base block, and forming the terminals of an electric circuit, a distortible conducting member positioned adjacent said contact members, a plunger longitudinally movable with respect to the said base block, said plunger being adapted to secure said distortible member in its assembled relation in the circuit closer, and to position the same with reference to said contact members so that in its undistorted condition it is inoperative as an electrical connection between the same, and means rendered operative by the movement of the plunger to distort said distortible member and thereby to render it effective as an electrical connection between said contact members.

2. An electric circuit closer comprising essentially a base block, electrically insulated contact members mounted upon said base block, and forming the terminals of an electric circuit, a distortible conducting member positioned adjacent said contact members, a plunger longitudinally movable with respect to the said base block, said plunger being adapted to secure said distortible member in its assembled relation in the circuit closer and to position the same with reference to said contact members so that in its undistorted condition it is inoperative as an electrical connection between the same, said plunger and base block having coöperating surfaces which become effective, as the plunger is moved longitudinally with respect to the base block, to cause a distortion of the distortible member whereby the same is rendered operative to electrically connect said contact members.

3. An electric circuit closer comprising essentially a base block, electrically insulated contact members mounted on said base block and forming the terminals of an electric circuit, a plunger longitudinally movable with respect to the said base block, said plunger having a tapered portion, a resilient diametrically expansible conducting ring normally contracted about the said plunger adjacent the smaller end of the tapered portion of the same, said ring in such contracted condition being positioned by said plunger so as to lie adjacent to said contact members but inoperative as an electrical connection between the same, the longitudinal movement of said plunger being adapted to cause a diametral expansion of said conducting ring whereby it is caused to contact with both said contact members.

4. An electric circuit closer comprising essentially a base-block, electrically insulated contact members mounted on said base-block and forming the terminals of an electric circuit, a plunger longitudinally movable with respect to said base-block, and having a tapering portion, a resilient diametrically expansible conducting ring normally contracted about the plunger adjacent the smaller end of the tapering portion of the same, said ring in such contracted condition being positioned by said plunger so as to lie peripherally adjacent to, but out of contact with said contact members, the longitudinal movement of said plunger being adapted to cause a diametral expansion in said ring whereby it is caused to simultaneously contact with both said contact members.

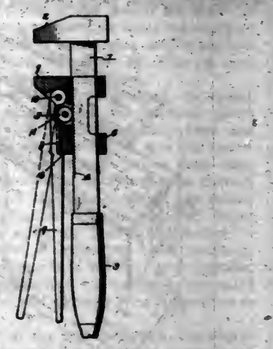
5. An electric circuit closer comprising essentially a base-block, electrically insulated contact members mounted at one end of the base-block and forming the terminals of an electric circuit, a resilient diametrically expansible conducting ring supported by the base-block, and lying between but normally out of contact with said contact members, and a plunger longitudinally movable with relation to said base-block, and embodying a tapering portion adapted to be entered within the central opening in said ring as said plunger is moved toward said ring, and thereby to cause a diametral expansion of said ring sufficient to bring the same into simultaneous contact with said contact members.

[Claim 6 not printed in the Gazette.]

959,436. QUICK-ADJUSTING WRENCH. ROBERT L. WALTERS, Lavonia, Ga. Filed Feb. 14, 1910. Serial No. 543,671.

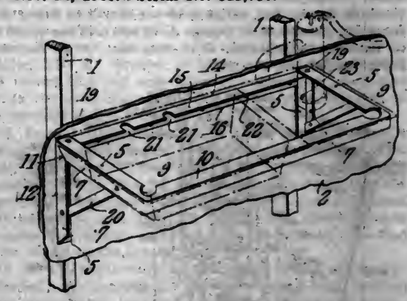
1. In a wrench, the combination of a shank, a fixed jaw carried by the shank, a slide mounted upon the shank and provided with a movable jaw adapted to coöperate with the fixed jaw, a wheel journaled upon the slide and engaging the shank so as to be rotated when the slide is moved thereon, and a lever pivoted upon the slide and adapted to engage the wheel to lock the same against rotation, the said lever being notched for engagement with the slide whereby it is locked against longitudinal movement when in an inoperative position.

2. In a wrench, the combination of a shank, a fixed jaw carried by the shank, a slide mounted upon the shank and formed with a movable jaw adapted to coöperate with the fixed jaw, the said slide being also provided with a pair of spaced flanges, a wheel journaled upon the slide and engaging the shank so as to be rotated when the slide is moved upon the shank, and a lever pivoted upon the slide and adapted to engage the wheel to lock the same against rotation, the said lever being notched for engagement with the slide whereby it is held against longitudinal movement,



and being received between the before mentioned spaced flanges whereby it is held against lateral movement when in an inoperative position.

959,437. SINK-FRAME. BRADY MARTIN, Lansing, Mich., assignor to Forrest E. Jordan, Lansing, Mich. Filed Nov. 24, 1909. Serial No. 529,757.



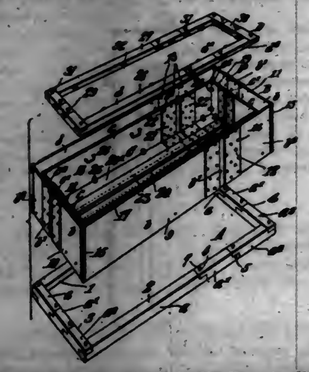
1. A supporting bracket fashioned from an angle iron having a pair of notches in one of its flanges and a pair of notches in its other flange located between the first named notches, the angle being bent in a common plane at the last named notches to define the platform of the bracket, and being bent at the first named notches to form legs disposed normal to the plane of the platform.

2. A supporting bracket fashioned from an angle iron having a pair of notches in one of its flanges and a pair of notches in its other flange located beneath the first named notches, the iron being bent in a common plane at the last named notches to define the platform of the bracket, and being bent at the first named notches to form legs disposed normal to the plane of the platform; a tie fashioned from angle iron, one flange thereof being terminally extended beneath the platform adjacent the legs, the other flange thereof being terminally cut away to form a shoulder to receive the legs; and retaining elements connecting the platform with the flange of the tie member therebeneath.

959,438. MOLD. WILLIAM H. BLOSS, Greenville, Ohio. Filed May 4, 1909. Serial No. 493,882.

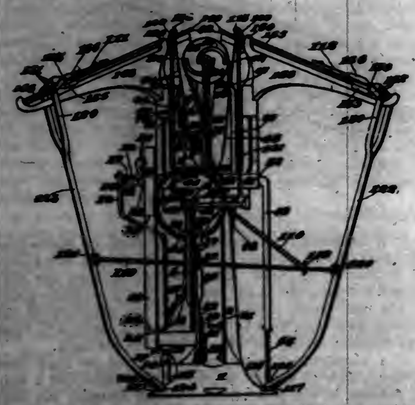
In a mold of the class described, an inner form consisting of sectional walls, and a sectional bottom, each of said walls including fastening plates upon the inner face thereof and lapping the meeting portions of the wall sections, and fastening devices extending through the plates and sec-

tions, and the bottom of said form including parallel series of detachably connected bottom sections, plates upon the meeting portions of said sections and secured thereto, said plates being arranged upon the inner or up-



per face of the bottom, and longitudinally extending plates lapping the meeting portions of the series of sections constituting the bottom and secured to said series, said plates constituting means for holding the series together.

959,439. BROOM-SEWING MACHINE. LOUIS PAUL RAFF, St. Louis, Mo., assignor of one-fourth to Henry A. Diamant, one-fourth to George A. Sykes, and one-twelfth to Herman L. Schaefer, St. Louis, Mo. Filed Oct. 9, 1908. Serial No. 456,886.



1. In a machine of the character described, the combination with needle actuating members, of a connection between them that is pivotally connected thereto, a rotatable driving member, and a pitman having a crank connection with the driving member, said pitman being pivoted to the connection between the members.

2. In a machine of the character described, the combination with opposite pivotally mounted needle actuating members, of a bar pivotally connected at its ends to the members, a drive shaft having a crank, and a pitman connected to the crank and to the bar between its ends.

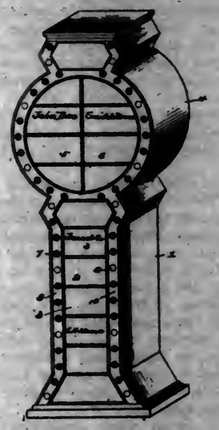
3. In a machine of the character described, the combination with a driving shaft, of swinging needle actuating members located on opposite sides of the shaft, a bar connecting the members and extending transversely of the shaft, and a crank and pitman connection between the shaft and bar.

4. In a machine of the character described, the combination with a supporting frame, of needle carriers movable thereon, longitudinally reciprocatory needle threaders, each comprising relatively and longitudinally reciprocatory elements, an actuating lever for each threader having a direct connection with both elements for moving them relatively and also simultaneously, and means engaging the levers for operating them.

5. In a machine of the character described, the combination with a supporting frame, of needle carriers mounted thereon, needle threaders, each comprising relatively reciprocatory elements also capable of simultaneous movement, an actuating bell crank lever for each threader having a pin engaged with both elements thereof for moving them relatively and simultaneously, and means engaging the levers for actuating said levers.

[Claims 6 to 67 not printed in the Gazette.]

959,440. ELECTRICAL SIGN. HARRY I. BLITS, Clearfield, Pa. Filed Aug. 1, 1908. Serial No. 446,493.



In a sign, a housing, a door arranged in said housing, a clock operated switch mounted on said door, said door being pivotally mounted for permitting free access to said clock mechanism, a plurality of translucent advertising panels, a border surrounding said panels, and means for illuminating said panels and said border, said means being adapted to be turned on and off by said clock operated switch.

REISSUES.

13,117. APPARATUS FOR CONCENTRATING LIQUIDS. PAUL KESTNER, Lille, France, assignor to Kestner Evaporator Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 14, 1910. Serial No. 549,385. Original No. 882,822, dated Mar. 17, 1908, Serial No. 334,698.

1. In a vertical tube evaporator, the combination of a receiving chamber at the base of the tubes for the liquid under treatment, evaporating tubes leading upwardly from the said chamber, portions of said tubes extending into the receiving chamber, and an inlet pipe for said liquid, said pipe having its discharge outlet within said receiving chamber at a point above the tube inlets.

2. In a vertical tube evaporator, the combination of a receiving chamber at the base of the tubes for the liquid under treatment, evaporating tubes leading upwardly from said chamber, portions of said tubes extending into the receiving chamber, an inlet pipe for said liquid, and a discharge nozzle carried by said pipe having its outlet within said receiving chamber at a point above the tube inlets.

3. In a tubular evaporator, the combination of a receiving chamber for the liquid to be concentrated, evaporating tubes leading from said chamber and having portions extending therein, said portions being slotted, and an inlet pipe for said liquid having its outlet above the upper margin of said slots.



4. In a tubular evaporator, the combination of a receiving chamber for the liquid to be concentrated, evaporating tubes leading from said chamber and having portions extending therein, said portions being slotted, an inlet pipe for said liquid, and a discharge nozzle for said pipe having its outlet above the upper margin of said slots.

5. In tubular evaporators, the combination of a series of vertical evaporating tubes, a receiving chamber for the liquid to be evaporated communicating with said tubes, the latter having slotted extensions extending into said receiving chamber, and a feed pipe for delivering liquid to said receiving chamber having its outlet extending above the inlet openings to said tubes.

6. In tubular evaporators, the combination of a series of vertical evaporating tubes, a receiving chamber for the liquid to be evaporated communicating with said tubes, the latter having slotted extensions extending into said receiving chamber, a feed pipe for delivering liquid to said receiving chamber, and a nozzle carried by said feed pipe and extending above the inlet openings to said tubes.

7. In a vertical tube evaporating apparatus, the combination of a series of long vertical evaporating tubes, means for heating the same, a receiving chamber for the liquid under treatment into which the lower ends of said tubes extend, and means for discharging liquid into said chamber at a point above the tube inlets whereby a separation of said liquid from accompanying steam may be accomplished and providing an even distribution of said steam and liquid to the inlet openings of the several tubes.

8. In a vertical tube evaporator, the combination of a steam casing, a series of evaporating tubes mounted therein, a receiving chamber at the bottom of said casing in communication with said tubes and into which the latter projects, slotted ends carried by said tubes within said chamber, and means for discharging the liquid under treatment into said chamber at a point above said slotted ends whereby the distribution of said liquid to the tubes will be uniform.

9. In evaporators of the long vertical tube type, the combination of the tubes, plates to which said tubes are secured, a cylindrical casing forming with said plates a steam space, a chamber for receiving and distributing the liquid under treatment exterior of said steam space and communicating with all of said tubes, slotted extensions carried by said pipes and projecting through the lower plate into said chamber, the height of said slots being the same in each case whereby a steam space is provided between the same and the top of said chamber in order that any steam entering said chamber may be separated from the liquid entering therewith and may be evenly distributed to said tubes, and means for discharging liquid into said chamber at a point above the inlet to said tubes.

10. In an evaporator of the type described, the combination of a receiving chamber at the base of the same for the liquid under treatment, evaporating tubes leading from said chamber, an inlet pipe for discharging said liquid into the receiving chamber, and means for effecting an even feed of said liquid to the evaporating tubes.

11. In an evaporator of the type described, the combination of a receiving chamber for the material under treatment, evaporating tubes leading upwardly from said chamber, portions of said tubes extending into the receiving chamber to provide a steam space above their ends, and an inlet into said chamber for the liquid to be treated.

12. In an evaporator of the type described the combination of a receiving chamber for the material under treatment, tubes leading upwardly from said chamber for evaporating said material in ascending films, prolongations of said tubes extending into the receiving chamber, said prolongations being provided with laterally presented orifices, and an inlet into said chamber for the liquid to be treated.

13. In an evaporator of the type described, the combination of a receiving chamber for the liquid under treatment, means for supplying such liquid mixed with a large quantity of vapor to said chamber, and evaporating tubes leading upwardly from said chamber, said tubes having portions disposed within the receiving chamber creating separate spaces therein for vapor and liquid, the lower ends of said tubes being adapted to receive material from both of said spaces.

14. In an evaporator of the type described, the combination of a receiving chamber at the base of the same for the liquid under treatment, evaporating tubes leading upwardly from said chamber, said tubes having portions extending into the chamber to form a vapor space therein, and means effecting separation of vapor from the liquid within the receiving chamber preparatory to the feed of the material to the tubes.

15. In a vertical tube evaporator, the combination of a receiving chamber at the base of the same for the liquid under treatment, evaporating tubes leading from said chamber, an inlet pipe for discharging said liquid into the receiving chamber, said inlet pipe being centrally disposed with respect to said receiving chamber and discharging in an upward direction, and means for effecting an even feed of the liquid to the several tubes.

16. In a vertical tube evaporating apparatus of the type described, the combination of a series of long vertical evaporating tubes, means for heating the same, a receiving chamber for the liquid under treatment into which the lower ends of said tubes extend, and means for discharging liquid into said chamber in such manner that a separation of said liquid from accompanying steam may be accomplished and providing an even distribution of said steam and liquid to the inlet openings of the several tubes.

DESIGNS.

40,702. JEWEL-SETTING FOR FINGER-RINGS OR SIMILAR ARTICLES. MAX C. MEYER, New York, N. Y. Filed Oct. 23, 1909. Serial No. 524,277. Term of patent 14 years.



The ornamental design for a jewel setting for finger rings or similar articles, as shown.

40,703. SPOON. JOHN CLULEE, Wallingford, Conn., assignor to The Baldwin Jewelry Co., San Francisco, Cal., a Corporation. Filed Apr. 13, 1910. Serial No. 555,315. Term of patent 7 years.



The ornamental design for a spoon as shown.

40,704. SPOON, FORK, OR SIMILAR ARTICLE. ROBERT R. KINTZ, Meriden, Conn., assignor to International Silver Co., Meriden, Conn., a Corporation of New Jersey. Filed Mar. 28, 1910. Serial No. 552,123. Term of patent 7 years.



The ornamental design for a spoon, fork or similar article as shown.

40,705. BUTTON. ALBERT SYDNEY ROLLINGS, Cambridge, Mass., assignor to Boston-1915 (Inc.), a Corporation of Massachusetts. Filed Mar. 28, 1910. Serial No. 552,119. Term of patent 7 years.





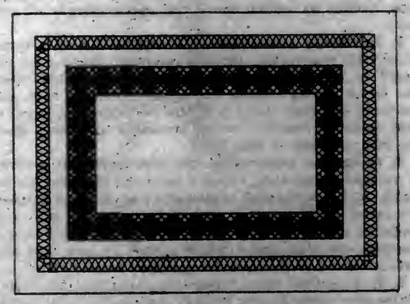
The ornamental design for a button, as shown.

40,706. ARTIFICIAL-LIGHT SHADE. CHARLES E. PERRING, New York, N. Y., assignor to The Gleason-Tiebout Glass Company, a Corporation of New York. Filed Mar. 5, 1910. Serial No. 547,615. Term of patent 7 years.



The ornamental design for an artificial light shade, as shown.

40,707. LACE-PAPER MAT. WILLIAM W. BEVAN, Melrose Highlands, Mass. Filed Jan. 27, 1910. Serial No. 540,465. Term of patent 3½ years.



The ornamental design for a lace paper mat, as shown.

40,708. LACE-PAPER MAT. WILLIAM W. BEVAN, Melrose Highlands, Mass. Filed Feb. 2, 1910. Serial No. 541,651. Term of patent 3½ years.



The ornamental design for a lace paper mat, as shown.

TRADE-MARKS

PUBLISHED MAY 24, 1910.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 10,189. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) NATIONAL BRAKE & CLUTCH CO., Boston, Mass. Filed July 12, 1905.

COMPO

Particular description of goods.—Brake-Shoes for Railway Rolling-Stock.

Ser. No. 21,123. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ERSTE TRIESTER REISSCHÄL-FABRIKS ACTIEN-GESELLSCHAFT, Triest, Austria-Hungary. Filed July 24, 1906.

PROTAMOL

Particular description of goods.—Rice, Rice-Starch, and Rice-Flour.

Ser. No. 33,801. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE PASTEUR VACCINE COMPANY LIMITED, London, England. Filed Apr. 1, 1908.

RATITE

Particular description of goods.—Vermin-Destroying Preparations.

Ser. No. 38,030. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) FRANTIŠEK HAAS, Prague, Bohemia, Austria. Filed Oct. 15, 1908.



No claim being made for the words "System" and "Haas."

Particular description of goods.—Orthopædic Appliances.

Ser. No. 40,283. (CLASS 39. CLOTHING.) H. WOLF & SONS, Cincinnati, Ohio. Filed Feb. 1, 1909.



The firm-name "H. Wolf & Sons" appearing as written by Julius L. Wolf, a member of the firm.

Particular description of goods.—Hosiery and Undershirts.

Ser. No. 42,198. (CLASS 39. CLOTHING.) ROUSE, HEMPSTONE & Co., Baltimore, Md. Filed May 3, 1909.

RED CROSS

The cross being printed in red.

Particular description of goods.—Outer Dress-Shirts, Negligée Shirts, Night-Shirts, Pajamas, Textile and Celluloid Collars and Cuffs, Hosiery, Gloves, Leggings, Overalls, and Trousers.

Ser. No. 42,631. (CLASS 2. RECEPTACLES.) LOUIS W. KEYSER, Dayton, Ohio. Filed May 24, 1909.

ALVARO

DE LUNA

The letters of the word "Alvaro" being red.

Particular description of goods.—Cigar-Boxes.

Ser. No. 42,642. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) MARY ELIZABETH JOHNSON, trustee, Fitchburg, Mass. Filed May 24, 1909.



Particular description of goods.—Rifles, Shotguns, Pistols, and Revolvers.

Ser. No. 42,753. (CLASS 15. OILS AND GREASES.) GEO. T. CLARKSON, Pittsburg, Pa. Filed May 29, 1909.

ROLINCO

Particular description of goods.—Core-Makers' Oils Used for Making Cores for Molds and Castings.

Ser. No. 43,219. (CLASS 39. CLOTHING.) C. COMMICHAU & Co. LIMITED, Silkeborg, Denmark. Filed June 23, 1909.

C

Particular description of goods.—Outer Shirts, Undershirts, Drawers, Undervests, Chemise, Corset-Covers, Petticoats, Stockings, and Union Suits.

Ser. No. 43,271. (CLASS 39. CLOTHING.) NATHAN STEIN & Co., Pittsburg, Pa. Filed June 25, 1909.

STECH

Particular description of goods.—Undershirts, Drawers, Union Suits, Dress-Shirts, Negligée Shirts, Work-Shirts, Hosiery, and Sweater-Coats.

Ser. No. 43,675. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) F. C. CALVERT & Co., Bradford, Manchester, England. Filed July 21, 1909. Used ten years.

CALVERT'S

Particular description of goods.—Smelling-Salts, Carbolic Acid Either in Fluid or Crystals, Carbolised Tow, Carbolized Cabinet-Paper, Disinfectants, Ointment, and Dentifrices in Powder, Paste, or Liquid Form, Comprising Tooth-Powder, Tooth-Paste, and Antiseptic Mouth-Wash.

Ser. No. 44,164. (CLASS 39. CLOTHING.) COTRELL & LEONARD, New York, N. Y. Filed Aug. 16, 1909.

SANI-SED

Particular description of goods.—Leather Boots and Shoes for Men, Women, and Children.

Ser. No. 44,579. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HENRY ROSSELL & Co. LTD., Sheffield, England. Filed Sept. 8, 1909.

"IVANHOE"

Particular description of goods.—Twist, Mining, Rock-Boring, and Wood-Boring Drills; Slotting, Shaping, Turning, Wood, Bone, Wheel, Dividing, and Grooving Cutters, Machine-Knives, and Machine-Tools, All Being Parts of Machinery, Knives, Files, Saws, and Edge-Tools.

Ser. No. 44,852. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ENRICH & GRAETZ, Berlin, Germany. Filed Sept. 21, 1909.

Graetzin

Particular description of goods.—Arc-Lamps and Electrodes Therefor, Holders and Regulators for the Electrodes of Arc-Lamps, Incandescent Electric Lamps, Metallic Filaments and Carbon Filaments for Incandescent Electric Lamps, Sockets for Incandescent Electric Lamps, Switches, Fuses, Cut-Outs, Resistances, Plugs, Insulated Conductors and Protecting Metal Tubes Therefor, Electric Heating-Stoves and Cookers, and Electrically-Heated Baking-Ovens.

Ser. No. 44,923. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HARGREAVES BROS. & Co., LIMITED, Kingston-upon-Hull, England. Filed Sept. 28, 1909.

LINOLEO

Particular description of goods.—A Polish for Furniture, Leather, Leather Goods, Imitation-Leather Goods, China, Bicycle-Frames, Tiled Hearths and the Like, Piano-Frames, Japanned Ware, Polished or Varnished Surfaces, Wood, Parquet, and Stained Floors, Motor and Carriage Bodies, Golf-Clubs, Gun-Stocks, Marble, Paintwork, and Floor Cloths.

Ser. No. 45,430. (CLASS 12. CONSTRUCTION MATERIALS.) THE PARAFFINE PAINT COMPANY, San Francisco, Cal. Filed Oct. 20, 1909. Used ten years.



Particular description of goods.—Building-Paper and Composite Roofing.

Ser. No. 45,750. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ROBERTS, SANFORD & TAYLOR COMPANY, Sherman, Tex. Filed Nov. 8, 1909.

TEXAMA

Particular description of goods.—Pocket, Table, Drawing, and Butcher Knives, Sawbucks, Churns, Hoes, Agricultural Forks, Rakes, Shovels, Spades, Scoops, Post-Hole Drivers, Coffee-Mills, Sifters, Corn-Planters, Garden-Plows, Grass-Cutters, Scissors, Shears, Razors, Hammers, Hatchets, Files, Saws, Axes and Handles, Adzes, Planes, Chisels, Braces, and Auger-Bits, Screw-Drivers, Drills, Gimlets, Rivet-Sets, Punches, Nail-Sets, Saw-Clamps, Saw-Blades, Meat-Cutters, Lawn-Mowers, and Wrenches.

Ser. No. 46,274. (CLASS 39. CLOTHING.) CHAS. E. SHEDAKER & SONS, Philadelphia, Pa. Filed Dec. 4, 1909.



Particular description of goods.—Negligée and Dress Shirts, Undershirts, Drawers, and Union Suits.

Ser. No. 46,590. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK L. GREER, Bloomington, Wis. Filed Dec. 18, 1909.

MEXOTI

Particular description of goods.—Lotions for the Face, Hands, and Skin.

Ser. No. 46,677. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) ARNOLD BIBER, Baden, Germany. Filed Dec. 22, 1909.

BIBERIT

Particular description of goods.—Plastic Compositions for Making Gums for Artificial Teeth.

Ser. No. 46,969. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) INGRAM-RICHARDSON MANUFACTURING COMPANY, Beaver Falls, Pa. Filed Jan. 7, 1910.

IR ING-RICH

Particular description of goods.—Advertising-Signs.

Ser. No. 47,222. (CLASS 39. CLOTHING.) WOONSOCKET RUBBER COMPANY, Woonsocket, R. I. Filed Jan. 18, 1910.



Particular description of goods.—Rubbers Boots and Shoes.

Ser. No. 47,223. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) J. F. BATTS, Garner, N. C. Filed Jan. 18, 1910.



Particular description of goods.—Seed-Corn.

Ser. No. 47,258. (CLASS 17. TOBACCO PRODUCTS.) JOSEPH WEINREICH, Dayton, Ohio. Filed Jan. 20, 1910.

KOPPER KETTLE

KLUB

Particular description of goods.—Cigars.

Ser. No. 47,307. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GREEN & MARS, Pittsburg, Pa. Filed Jan. 22, 1910.

Tech

Particular description of goods.—Blended Coffee.

Ser. No. 47,464. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NEW YORK PHARMACAL ASSOCIATION, Yonkers, N. Y. Filed Jan. 29, 1910. Used ten years.

LACTOPEPTINE

Particular description of goods.—A Medicine for Internal Use in Disorders Arising from Imperfect or Perverted Digestion and as Aid to Increase the Power of Digestive Organs.

Ser. No. 47,467. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) J. DAMPNEY & Co. LD., Cardiff, Wales, Great Britain. Filed Jan. 29, 1910.

APEXIOR

Particular description of goods.—Compound in the Nature of a Paint for Coating Iron and Steel Work for Preventing Corrosion and Incrustation.

Ser. No. 47,470. (CLASS 27. HOROLOGICAL INSTRUMENTS.) ILLINOIS WATCH CASE CO., Elgin, Ill. Filed Jan. 29, 1910.

NAPOLEON

Particular description of goods.—Watchcases.

Ser. No. 47,533. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE PALISADE MANUFACTURING CO., Yonkers, N. Y. Filed Feb. 2, 1910.

Hemabloids

Particular description of goods.—A Nutritive Medicinal Liquid.

Ser. No. 47,534. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE PALISADE MANUFACTURING CO., Yonkers, N. Y. Filed Feb. 2, 1910. Used ten years.

BOROLYPTOL

Particular description of goods.—An Antiseptic and Germicidal Medicine.

Ser. No. 47,662. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS J. FAY, New York, N. Y. Filed Feb. 8, 1910.

RED WING

Particular description of goods.—Ointments.

Ser. No. 47,705. (CLASS 37. PAPER AND STATIONERY.) L. & C. HARDTMUTH, London, England, and Budweis, Austria-Hungary. Filed Feb. 10, 1910.

AVIATOR

Particular description of goods.—Lead-Pencils.

Ser. No. 47,798. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE BREESE BROTHERS COMPANY, Cincinnati, Ohio. Filed Feb. 12, 1910.

BRECO

Particular description of goods.—Wagons.

Ser. No. 47,871. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ERNEST LINWOOD ANDREWS, Bristol, Tenn. Filed Feb. 17, 1910.



The portrait shown being that of John Sinclair, deceased.

Particular description of goods.—A Medicinal Tonic.

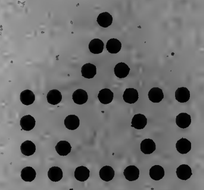
Ser. No. 47,932. (CLASS 39. CLOTHING.) COHEN, GOLDMAN & Co., New York, N. Y. Filed Feb. 19, 1910.

VERTO

Consisting of the word "Verto."

Particular description of goods.—Coats, Overcoats, and Rain-Coats Provided with a Reversible Collar.

Ser. No. 47,943. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) AMERICAN POSTING SERVICE, Chicago, Ill. Filed Feb. 21, 1910.



Particular description of goods.—Sheet-Metal Bill, Sign, and Advertising Boards.

Ser. No. 47,988. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) FORT WAYNE ELECTRIC WORKS, Fort Wayne, Ind. Filed Feb. 24, 1910.

FWEW

Consisting of the letters "FWEW."

Particular description of goods.—Electric Fans.

Ser. No. 47,998. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOE R. BEBOUT, Cincinnati, Ohio. Filed Feb. 24, 1910.



Particular description of goods.—A Liquid Remedy for Dyspepsia.

Ser. No. 48,015. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN H. KUHL, Peoria, Ill. Filed Feb. 25, 1910.

NEMO

Particular description of goods.—A Cleaning Compound for Cleaning Kid Gloves, Laces, Ribbons, Velvets, Satin, Furs, Fancy Waists, Skirts, Clothing, Carpets, Rugs, Matting, and Woolen Goods.

Ser. No. 48,046. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EMIL W. ROESKY, Coffeyville, Kans. Filed Feb. 26, 1910.



Particular description of goods.—A Remedy for Rheumatism.

Ser. No. 48,172. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ABRAM G. LANSING, New York, N. Y. Filed Mar. 4, 1910.

LAN-SOL

Particular description of goods.—Alkaline Salts.

Ser. No. 48,215. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) H. CHANNON COMPANY, Chicago, Ill. Filed Mar. 5, 1910.



Particular description of goods.—Automobile Tool Kits.

Ser. No. 48,226. (CLASS 39. CLOTHING.) JOSEPH ASKINS, Lima, Ohio. Filed Mar. 5, 1910.

Electropodes

Particular description of goods.—Insoles for Shoes.

Ser. No. 48,230. (CLASS 2. RECEPTACLES.) DAVID LEON SOLOMAN, St. Louis, Mo. Filed Mar. 7, 1910.

FIRE-BALL

Particular description of goods.—Gas-Tanks.

Ser. No. 48,244. (CLASS 37. PAPER AND STATIONERY.) DRESSKELL PAPER CO., Detroit, Mich. Filed Mar. 7, 1910

Ad Craft

Particular description of goods.—Writing and Printing Paper.

Ser. No. 48,280. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) TILL MANUFACTURING CO., Los Angeles, Cal. Filed Mar. 8, 1910.

MACIC

MACIC

Particular description of goods.—Collar-Supports.

Ser. No. 48,323. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALBERT R. KASDORF, Seattle, Wash. Filed Mar. 10, 1910.

BLUE GRASS

Particular description of goods.—Butter.

Ser. No. 48,341. (CLASS 33. GLASSWARE.) THE CORNING GLASS WORKS, Corning, N. Y. Filed Mar. 11, 1910.

NONEX

Particular description of goods.—Lantern and Lamp Globes and Chimneys of Glass.

Ser. No. 48,360. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HAMILTON WOOLEN COMPANY, Boston, Mass. Filed Mar. 12, 1910. Used ten years.

DANISH

Particular description of goods.—Woolen and Cotton Piece Goods.

Ser. No. 48,415. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOUTHWESTERN REMEDY COMPANY, Dallas, Tex. Filed Mar. 15, 1910.



In which the portrait of Mr. J. A. Winfrey is shown.

Particular description of goods.—A Remedy for Liver Complaints.

Ser. No. 48,440. (CLASS 31. FILTERS AND REFRIGERATORS.) GURNEY REFRIGERATOR COMPANY, LIMITED, Fond du Lac, Wis. Filed Mar. 16, 1910.

Cold Wave

Particular description of goods.—Refrigerators.

Ser. No. 48,492. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAS. H. FORBES TEA & COFFEE COMPANY, St. Louis, Mo. Filed Mar. 16, 1910.

F.F.

Particular description of goods.—Blended Coffee, Spices, and Food-Flavoring Extracts.

Ser. No. 48,562. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) TURNER, DAY & WOOLWORTH HANDLE CO., Louisville, Ky. Filed Mar. 21, 1910.

IDEAL

Particular description of goods.—Tool-Handles.

Ser. No. 48,576. (CLASS 39. CLOTHING.) HARRIS-LIPSITZ COMPANY, Dallas, Tex. Filed Mar. 21, 1910.

ADMIRAL

Particular description of goods.—Dress-Shirts.

Ser. No. 48,619. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE FULFORD-HANSON CO., Schenectady, N. Y. Filed Mar. 23, 1910.



Particular description of goods.—Herb-Tea.

Ser. No. 48,621. (CLASS 39. CLOTHING.) JOSEPH YESKA, New York, N. Y. Filed Mar. 23, 1910.



The picture shown being fanciful.

Particular description of goods.—Fancy Waistcoats, Alpaca Coats, Sicilian Coats, Serge Coats, Linen Coats, Vests, and Trousers, Mohair Coats, Vests, and Trousers, Flannel Outing-Trousers, Riding-Breeches, Automobile-Coats, Chauffeurs' Coats, Vests, and Trousers, Khaki Norfolk Suits, Cotton Dusters, Linen Dusters, Linen Trousers, Duck Trousers, Smoking-Jackets, Lounging-Robes, Bath-Robes, Waiter-Jackets, Bar and Barber Coats, Aprons, Caps.

Ser. No. 48,623. (CLASS 12. CONSTRUCTION MATERIALS.) SANITARY CONSTRUCTION & MFG. CO., Terre Haute, Ind. Filed Mar. 23, 1910.

KELLASTONE

Particular description of goods.—Building-Cement.

Ser. No. 48,648. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ST. MUNGO MANUFACTURING COMPANY, Glasgow, Scotland. Filed Mar. 25, 1910.

COLONEL

Particular description of goods.—Golf-Balls.

Ser. No. 48,849. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES L. MITCHELL, Philadelphia, Pa. Filed Apr. 4, 1910.

ELERITAS

Particular description of goods.—Photographic Developing Material.

Ser. No. 48,854. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GISBERTO GRANUCCI, San Francisco, Cal. Filed Apr. 4, 1910. Used ten years.





Particular description of goods.—Olive-Oil.

Ser. No. 48,863. (CLASS 12. CONSTRUCTION MATERIALS.) OWEN K. HARRY, Dallas, Tex. Filed Apr. 5, 1910.

BLACK WAXY BELL

Particular description of goods.—Metal Cellars.

Ser. No. 48,874. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUECKHEIM BROS. & ECKSTEIN, Chicago, Ill. Filed Apr. 6, 1910.

NEW WRINKLE

Particular description of goods.—Candied Popcorn.

Ser. No. 48,884. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PLATT & CO., Baltimore, Md. Filed Apr. 7, 1910. Used ten years.

FAVORITE

Particular description of goods.—Canned Oysters, Fruits, and Vegetables.

Ser. No. 48,892. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) VICTOR HALPER, New York, N. Y. Filed Apr. 7, 1910.

JAPPATONE

Particular description of goods.—Massage-Cream.

Ser. No. 48,894. (CLASS 39. CLOTHING.) JOHN WANAMAKER, NEW YORK, New York, N. Y. Filed Apr. 7, 1910.

RUE DE LA PAIX

Particular description of goods.—Women's and Men's Gloves.

Ser. No. 48,896. (CLASS 17. TOBACCO PRODUCTS.) EDWIN MYERS, York, Pa. Filed Apr. 7, 1910.



Particular description of goods.—Cigars.

Ser. No. 48,906. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BURROUGH BROTHERS MANUFACTURING COMPANY, Baltimore, Md., assignor, by mesne assignments, to Augustus G. Stollenwerck, Baltimore, Md. Filed Apr. 7, 1910.

RESOR-BISNOL

Particular description of goods.—A Gastro Intestinal Antiseptic.

Ser. No. 48,905. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) C. E. BUSEY, Lynchburg, Va. Filed Apr. 7, 1910.

NABUSO

Particular description of goods.—Catarrhal Remedy.

Ser. No. 48,916. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) BLOCK LIGHT COMPANY, Youngstown, Ohio. Filed Apr. 8, 1910.

VY-TAL-TY

Particular description of goods.—Incandescent Gas-Burners and Gas-Mantles.

Ser. No. 48,920. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC AMERICAN FISHERIES, Chicago, Ill. Filed Apr. 8, 1910.

7-11

Particular description of goods.—Canned Salmon.

Ser. No. 48,921. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC AMERICAN FISHERIES, Chicago, Ill. Filed Apr. 8, 1910.

Terrapin

Particular description of goods.—Canned Salmon.

Ser. No. 48,924. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC AMERICAN FISHERIES, Chicago, Ill. Filed Apr. 8, 1910.

Vivants

Particular description of goods.—Canned Salmon.

Ser. No. 48,926. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC AMERICAN FISHERIES, Chicago, Ill. Filed Apr. 8, 1910.

RACELAND

Particular description of goods.—Canned Salmon.

Ser. No. 48,927. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC AMERICAN FISHERIES, Chicago, Ill. Filed Apr. 8, 1910.

SHELL

Particular description of goods.—Canned Salmon.

Ser. No. 48,928. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC AMERICAN FISHERIES, Chicago, Ill. Filed Apr. 8, 1910.

WARRIOR

Particular description of goods.—Canned Salmon.

Ser. No. 48,929. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC AMERICAN FISHERIES, Chicago, Ill. Filed Apr. 8, 1910.

SPORT

Particular description of goods.—Canned Salmon.

Ser. No. 48,930. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC AMERICAN FISHERIES, Chicago, Ill. Filed Apr. 8, 1910.

Jungle

Particular description of goods.—Canned Salmon.

Ser. No. 48,932. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC AMERICAN FISHERIES, Chicago, Ill. Filed Apr. 8, 1910.

CYCLE

Particular description of goods.—Canned Salmon.

Ser. No. 48,934. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC AMERICAN FISHERIES, Chicago, Ill. Filed Apr. 8, 1910.

OAK LEAF

Particular description of goods.—Canned Salmon.

Ser. No. 48,936. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC AMERICAN FISHERIES, Chicago, Ill. Filed Apr. 8, 1910.

Amoo

Particular description of goods.—Canned Salmon.

Ser. No. 48,940. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC AMERICAN FISHERIES, Chicago, Ill. Filed Apr. 8, 1910.

Clove

Particular description of goods.—Canned Salmon.

Ser. No. 48,945. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DEMING & GOULD CO., Chicago, Ill. Filed Apr. 8, 1910.

D.A.R.

Particular description of goods.—Canned Salmon.

Ser. No. 48,946. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DEMING & GOULD CO., Chicago, Ill. Filed Apr. 8, 1910.

Stork

Particular description of goods.—Canned Salmon.

Ser. No. 48,948. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DEMING & GOULD CO., Chicago, Ill. Filed Apr. 8, 1910.

Javelin

Particular description of goods.—Canned Salmon.

Ser. No. 48,949. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DEMING & GOULD CO., Chicago, Ill. Filed Apr. 8, 1910.

HUMPTY DUMPTY

Particular description of goods.—Canned Salmon.

Ser. No. 48,950. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DEMING & GOULD CO., Chicago, Ill. Filed Apr. 8, 1910.

PLOVER

Particular description of goods.—Canned Salmon.

Ser. No. 48,952. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DEMING & GOULD CO., Chicago, Ill. Filed Apr. 8, 1910.

RED FEATHER

Particular description of goods.—Canned Salmon.

Ser. No. 48,953. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DEMING & GOULD CO., Chicago, Ill. Filed Apr. 8, 1910.

SABER

Particular description of goods.—Canned Salmon.

Ser. No. 48,954. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DEMING & GOULD CO., Chicago, Ill. Filed Apr. 8, 1910.

CHIC

Particular description of goods.—Canned Salmon.

Ser. No. 48,955. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DEMING & GOULD CO., Chicago, Ill. Filed Apr. 8, 1910.

JACK HORNER

Particular description of goods.—Canned Salmon.

Ser. No. 48,956. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DEMING & GOULD CO., Chicago, Ill. Filed Apr. 8, 1910.

VIRGINIUS

Particular description of goods.—Canned Salmon.

Ser. No. 48,957. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DEMING & GOULD CO., Chicago, Ill. Filed Apr. 8, 1910.

AUK

Particular description of goods.—Canned Salmon.

Ser. No. 48,965. (CLASS 38. PRINTS AND PUBLICATIONS.) ANDREW J. DURAN, South Boston, Mass. Filed Apr. 9, 1910.

WOMAN'S ACHIEVEMENT

Particular description of goods.—A Monthly Magazine.

Ser. No. 48,974. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) ALFRED L. JOHNS, Fort Wayne, Ind. Filed Apr. 9, 1910. Used ten years.

SUMMIT CITY

Particular description of goods.—Harness-Pads.

Ser. No. 48,979. (CLASS 12. CONSTRUCTION MATERIALS.) BARRETT MANUFACTURING COMPANY, Charleston, W. Va., and Philadelphia, Pa. Filed Apr. 9, 1910.

STURMKONIG

Particular description of goods.—Felt Roofing Materials.

Ser. No. 48,993. (CLASS 2. RECEPTACLES.) CHICAGO OYSTER PAIL COMPANY, Chicago, Ill. Filed Apr. 9, 1910.

MONARCH

Particular description of goods.—Paper Pails and Boxes.

Ser. No. 49,024. (CLASS 39. CLOTHING.) LOUIS METZGER & Co., New York, N. Y. Filed Apr. 12, 1910.

SOIRETTE

Particular description of goods.—Hats.

Ser. No. 49,025. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) F. E. KREUGER, London, England. Filed Apr. 12, 1910.

BEACON

Particular description of goods.—Matches.

Ser. No. 49,032. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HAAS, BARUCH & Co., Los Angeles, Cal. Filed Apr. 12, 1910.

IRIS

Particular description of goods.—Baking-Powder.

Ser. No. 49,138. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE GIBSON CANNING COMPANY, Gibson, Ill. Filed Apr. 16, 1910.

YOURS TRULY

Particular description of goods.—Beer.

Ser. No. 49,141. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE GIBSON CANNING COMPANY, Gibson, Ill. Filed Apr. 16, 1910.

YOURS TRULY

Particular description of goods.—Salt, Baking-Powder, and Baking-Soda.

Ser. No. 49,143. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SEARS, ROEBUCK AND Co., Chicago, Ill. Filed Apr. 16, 1910.

ECONOMY

Particular description of goods.—Cream-Separators.

Ser. No. 49,154. (CLASS 39. CLOTHING.) LEWIS VAN ALLEN, Buffalo, N. Y. Filed Apr. 16, 1910.

The Poisette

Particular description of goods.—Corsets.

Ser. No. 49,180. (CLASS 12. CONSTRUCTION MATERIALS.) ASH GROVE LIME AND PORTLAND CEMENT COMPANY, Kansas City, Mo. Filed Apr. 18, 1910. Used ten years.

ASH GROVE

Particular description of goods.—Lime and Cement.

Ser. No. 49,200. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) GUTHMAN, SOLOMONS & Co., New York, N. Y. Filed Apr. 20, 1910.

SYLVIA

Particular description of goods.—Hair-Rolls.

Ser. No. 49,210. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE RANDLE MACHINERY COMPANY, Cincinnati, Ohio. Filed Apr. 20, 1910. Used ten years.



Particular description of goods.—Injectors.

Ser. No. 49,226. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) SOCIÉTÉ EN NOM COLLECTIF DOLAT ET CIE., Paris, France. Filed Apr. 21, 1910.



Particular description of goods.—Dressed Hare and Rabbit Skins for Fur Garments.

Ser. No. 49,272. (CLASS 12. CONSTRUCTION MATERIALS.) GENERAL RAILWAY SUPPLY Co., Chicago, Ill. Filed Apr. 23, 1910.

RESISTO

Particular description of goods.—Heat and Sound Insulating Substance.

Ser. No. 49,278. (CLASS 39. CLOTHING.) F. BERG & Co., Orange Valley, N. J., and New York, N. Y. Filed Apr. 25, 1910. Used ten years.

STERLING BRAND

Particular description of goods.—Soft and Stiff Felt Hats for Men.

Ser. No. 49,288. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HENRY DISSTON & SONS INCORPORATED, Philadelphia, Pa. Filed Apr. 25, 1910.

ZIP.

Particular description of goods.—Saws.

Ser. No. 49,294. (CLASS 39. CLOTHING.) BOSTON RUBBER SHOE COMPANY, Malden and Boston, Mass. Filed Apr. 25, 1910.

SLEDDING

Particular description of goods.—Rubber Overshoes.

Ser. No. 49,298. (CLASS 31. FILTERS AND REFRIGERATORS.) NORTH BRO'S M'F'G Co., Philadelphia, Pa. Filed Apr. 26, 1910.

HERO

Particular description of goods.—Ice-Cream Freezers.

Ser. No. 49,304. (CLASS 43. THREAD AND YARN.) JOHN LONKE, New York, N. Y. Filed Apr. 26, 1910.



Particular description of goods.—Yarns and Threads Made of Wool, Worsted, Hair, Artificial or Imitation Hair, Cotton, Silk, Artificial or Imitation Silk, Flax, Hemp, Jute, Jute-Butts, Jute-Cuttings, Ramie, and Twists and Any other Admixtures, Combinations, Compositions, or Unions of These Fibers or Filaments, or Any of Them.

Ser. No. 49,313. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WILLIAM T. GROSSE, San Francisco, Cal. Filed Apr. 26, 1910.



Particular description of goods.—Soap.

Ser. No. 49,359. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) KENNETH CRITTENDEN, Detroit, Mich. Filed Apr. 28, 1910.

KRIT

Particular description of goods.—Automobiles.

Ser. No. 49,386. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) E. I. DU PONT DE NEMOURS POWDER COMPANY, Hoboken, N. J., and Wilmington, Del. Filed Apr. 29, 1910.

RSQ

Particular description of goods.—Smokeless Powder.

Ser. No. 49,389. (CLASS 37. PAPER AND STATIONERY.) THE CHAMPION COATED PAPER COMPANY, Hamilton, Ohio. Filed Apr. 29, 1910.

BISQUE

Particular description of goods.—Paper.

Ser. No. 49,458. (CLASS 10. FERTILIZERS.) DAVID D. JOHNSON, Chicago, Ill. Filed May 2, 1910.

EVERGREEN

Particular description of goods.—Fertilizers.

Ser. No. 49,472. (CLASS 15. ADHESIVES.) THE ARABOL M'F'G. CO., New York, N. Y. Filed May 2, 1910.

SLUGGL

Particular description of goods.—Paste for Labeling on Plain or Lacquered Tin.

TRADE-MARKS

REGISTERED MAY 24, 1910.

77,975. PLAYER-PIANOS, PIANO-PLAYERS, AND PERFORATED MUSIC-SHEETS. THE AEOLIAN COMPANY, Meriden, Conn.; Garwood, N. J., and New York, N. Y.
Filed January 21, 1910. Serial No. 47,280. PUBLISHED MARCH 22, 1910.

77,976. CANNED SALMON. ALASKA PACKERS ASSOCIATION, San Francisco, Cal.
Filed August 14, 1908. Serial No. 36,683. PUBLISHED OCTOBER 27, 1908.

77,977. MARINE PAINTS. AMALGAMATED PAINT COMPANY, Jersey City, N. J.
Filed February 1, 1910. Serial No. 47,509. PUBLISHED MARCH 22, 1910.

77,978. BROOMS. AMERICAN BROOM MFG. CO. LTD., New Orleans, La.
Filed January 4, 1910. Serial No. 46,900. PUBLISHED MARCH 22, 1910.

77,979. CERTAIN FOODS. WILLIAM BARRATT, Lansing, Mich.
Filed October 28, 1909. Serial No. 45,476. PUBLISHED MARCH 22, 1910.

77,980. TOOTH-BRUSHES. ALBERT P. BAUMANN, New York, N. Y.
Filed January 3, 1910. Serial No. 46,843. PUBLISHED MARCH 22, 1910.

77,981. SILK IN THE FORM OF PIECE GOODS. BELDING BROS. & COMPANY, Rockville, Conn.
Filed January 27, 1910. Serial No. 47,420. PUBLISHED MARCH 22, 1910.

77,982. WIND MUSICAL INSTRUMENTS. BESSON AND COMPANY LIMITED, London, England.
Filed July 9, 1909. Serial No. 43,458. PUBLISHED MARCH 22, 1910.

77,983. DRILLS. CHESWELL COTTON MILLS CO., Westminster, S. C.
Filed June 17, 1909. Serial No. 43,067. PUBLISHED MARCH 22, 1910.

77,984. CANDIES. COLBY CANDY CO., Kansas City, Mo.
Filed April 26, 1909. Serial No. 42,035. PUBLISHED MARCH 22, 1910.

77,985. COTTON DUCK. CONSOLIDATED COTTON DUCK COMPANY, Baltimore, Md.
Filed June 29, 1909. Serial No. 43,323. PUBLISHED MARCH 22, 1910.

77,986. SEEDS, PLANTS, AND BULBS. DAKOTA IMPROVED SEED COMPANY, Mitchell, S. D.
Filed October 4, 1909. Serial No. 45,108. PUBLISHED MARCH 22, 1910.

77,987. REMEDY FOR USE IN THE TREATMENT OF COLDS, CROUP, AND PAIN. LEON B. DIEZ, New Orleans, La.
Filed December 7, 1909. Serial No. 46,319. PUBLISHED MARCH 22, 1910.

77,988. OLIVE-OIL. FARRINGTON & WHITNEY, New York, N. Y.
Filed January 3, 1910. Serial No. 46,864. PUBLISHED MARCH 22, 1910.

77,989. CANNED FRUITS, VEGETABLES, AND OYSTERS. D. E. FOOTE & COMPANY, INC., Baltimore, Md.
Filed November 18, 1909. Serial No. 45,968. PUBLISHED MARCH 22, 1910.

77,990. CANNED FRUITS, VEGETABLES, BAKED BEANS, AND OYSTERS. D. E. FOOTE & COMPANY, INC., Baltimore, Md.
Filed November 18, 1909. Serial No. 45,970. PUBLISHED MARCH 22, 1910.

77,991. TOOTHPICKS. FORSTER MANUFACTURING COMPANY, Dixfield, Me.
Filed January 24, 1910. Serial No. 47,329. PUBLISHED MARCH 22, 1910.

77,992. READY-MIXED PAINTS AND PASTE COLORS. SAMUEL H. FRENCH & CO., Philadelphia, Pa.
Filed February 5, 1910. Serial No. 47,609. PUBLISHED MARCH 22, 1910.

77,993. POLISHING AND CUTTING WHEELS. PAUL H. GERSWEIN, New York, N. Y.
Filed November 24, 1909. Serial No. 46,104. PUBLISHED MARCH 22, 1910.

77,994. SAFETY-CLAMPS FOR BOXES. EDOUARD CHARLES GLARDON, Hamburg, Germany.
Filed October 11, 1909. Serial No. 45,242. PUBLISHED MARCH 22, 1910.

77,995. CERTAIN TEXTILES. MOSES GOLDENBERG, Washington, D. C.
Filed July 16, 1909. Serial No. 43,561. PUBLISHED MARCH 22, 1910.

77,996. CERTAIN CLOTHING. MOSES GOLDENBERG, Washington, D. C.
Filed July 16, 1909. Serial No. 43,562. PUBLISHED MARCH 22, 1910.

77,997. POCKET-BOOKS, CARD-CASES, HAND-BAGS, PURSES, AND BOOK AND SHAWL STRAPS. MOSES GOLDENBERG, Baltimore, Md., and Washington, D. C.
Filed January 4, 1910. Serial No. 46,908. PUBLISHED MARCH 22, 1910.

77,998. LINOLEUM AND OILED CLOTH. MOSES GOLDENBERG, Baltimore, Md., and Washington, D. C.
Filed January 4, 1910. Serial No. 46,907. PUBLISHED MARCH 22, 1910.

77,999. WASHING AND BLEACHING FLUID. GASPARE GRECO, New Orleans, La.
Filed January 11, 1910. Serial No. 47,056. PUBLISHED MARCH 22, 1910.

78,000. UNDERSHIRTS, DRAWERS, AND UNION SUITS. GUTMAN BROS., New York, N. Y.
Filed January 5, 1910. Serial No. 46,919. PUBLISHED MARCH 22, 1910.

78,001. COFFEE. THE E. C. HARLEY CO., Dayton, Ohio.
Filed January 19, 1910. Serial No. 47,248. PUBLISHED MARCH 22, 1910.

78,002. HANDKERCHIEFS. HERRMANN, AUKAM & CO., New York, N. Y.
Filed February 9, 1910. Serial No. 47,673. PUBLISHED MARCH 22, 1910.

78,003. HANDKERCHIEFS. HERRMANN, AUKAM & CO., New York, N. Y.
Filed February 9, 1910. Serial No. 47,674. PUBLISHED MARCH 22, 1910.

78,004. HANDKERCHIEFS. HERRMANN, AUKAM & CO., New York, N. Y.
Filed February 9, 1910. Serial No. 47,675. PUBLISHED MARCH 22, 1910.

78,005. GLOVES. HUTCHENS & POTTER, Johnstown, N. Y.
Filed January 7, 1910. Serial No. 46,989. PUBLISHED MARCH 22, 1910.

78,006. GLOVES. HUTCHENS & POTTER, Johnstown, N. Y.
Filed January 22, 1910. Serial No. 47,309. PUBLISHED MARCH 22, 1910.

78,007. BUTTON-MOLDS AND BUTTON-RIMS. INDEPENDENT BUTTON & MACHINE COMPANY, Chicago, Ill.
Filed October 1, 1909. Serial No. 45,046. PUBLISHED MARCH 22, 1910.

78,008. COUGH REMEDIES AND BREATH-PURIFIER. FRED W. IARAM, Wichita, Kans.
Filed January 13, 1910. Serial No. 47,105. PUBLISHED MARCH 22, 1910.

78,009. COLD-CREAM AND TALCUM POWDER. S. KANN SONS & CO., Washington, D. C.
Filed December 6, 1909. Serial No. 46,293. PUBLISHED MARCH 22, 1910.

78,010. SODIUM PHOSPHATE. THE KEYSTONE CHEMICAL MANUFACTURING COMPANY OF NEW JERSEY, Philadelphia, Pa.
Filed January 5, 1910. Serial No. 46,917. PUBLISHED MARCH 22, 1910.

78,011. LINEN THREAD. LINDSAY THOMPSON & CO., LIMITED, Belfast, Ireland.
Filed January 12, 1910. Serial No. 47,084. PUBLISHED MARCH 22, 1910.

78,012. LINEN THREAD. LINDSAY THOMPSON & CO., LIMITED, Belfast, Ireland.
Filed January 12, 1910. Serial No. 47,085. PUBLISHED MARCH 22, 1910.

78,013. OLIVE-OIL. MACMONNIES & VON ELM, New York, N. Y.
Filed March 25, 1909. Serial No. 41,406. PUBLISHED MARCH 22, 1910.

78,014. CIGARS AND SMOKING-TOBACCO. ANTONIO DE MARCO, New York, N. Y.
Filed January 25, 1910. Serial No. 47,365. PUBLISHED MARCH 22, 1910.

78,015. CERTAIN FOODS. EDWARD C. MATHEWSON, New York, N. Y.
Filed December 1, 1908. Serial No. 39,022. PUBLISHED MARCH 22, 1910.

78,016. MEDICINES AND TOILET PREPARATIONS. MEXICAN AMOLE SOAP CO., Peoria, Ill.
Filed January 22, 1908. Serial No. 32,383. PUBLISHED MARCH 22, 1910.

78,017. CANNED OYSTERS. MILLER BROS. & CO., Baltimore, Md.
Filed November 8, 1909. Serial No. 45,768. PUBLISHED JANUARY 25, 1910.

78,018. CANDY. NATIONAL CANDY COMPANY, Jersey City, N. J., and St. Louis, Mo.
Filed January 10, 1910. Serial No. 47,043. PUBLISHED MARCH 15, 1910.

78,019. RAZORS, HATCHETS, AND SHEARS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,173. PUBLISHED MARCH 22, 1910.

78,020. TEAS. PARK & TILFORD, New York, N. Y.
Filed January 18, 1910. Serial No. 47,231. PUBLISHED MARCH 22, 1910.

78,021. RUGS. PEOPLE'S OUTFITTING COMPANY, Detroit, Mich.
Filed July 2, 1909. Serial No. 43,378. PUBLISHED MARCH 22, 1910.

78,022. REMEDY FOR THE TREATMENT OF GENITO-URINARY DISEASES. H. ROLFF PLANTEN, New York, N. Y.
Filed January 22, 1910. Serial No. 47,316. PUBLISHED MARCH 22, 1910.

78,023. PRINTING-INK REDUCER AND DRIER COMBINED. ELIAS M. PRATT, Detroit, Mich.
Filed January 3, 1910. Serial No. 46,851. PUBLISHED MARCH 22, 1910.

78,024. POPLIN PIECE GOODS. REILING AND SCHOEN, New York, N. Y.
Filed January 25, 1910. Serial No. 47,374. PUBLISHED MARCH 22, 1910.

78,025. POPLIN PIECE GOODS. REILING AND SCHOEN, New York, N. Y.
Filed January 25, 1910. Serial No. 47,375. PUBLISHED MARCH 22, 1910.

78,026. POPLIN PIECE GOODS. REILING AND SCHOEN, New York, N. Y.
Filed January 25, 1910. Serial No. 47,376. PUBLISHED MARCH 22, 1910.

78,027. POPLIN PIECE GOODS. REILING AND SCHOEN, New York, N. Y.
Filed January 25, 1910. Serial No. 47,377. PUBLISHED MARCH 22, 1910.

78,028. CANNED FRUITS AND VEGETABLES. W. R. ROACH & CO., Hart, Mich.
Filed December 30, 1909. Serial No. 46,806. PUBLISHED MARCH 22, 1910.

78,029. BUTTER. JAMES R. TICHENOR, Louisville, Ky.
Filed December 13, 1909. Serial No. 46,469. PUBLISHED MARCH 22, 1910.

78,030. MEDICINES AND TOILET PREPARATIONS. VERTRIEBS-GESELLSCHAFT PROF. DR. SCHLEICH'SCHER PRÄPARATE G. M. B. H., Berlin, Germany.
Filed March 26, 1909. Serial No. 41,426. PUBLISHED MARCH 22, 1910.

78,031. SOAP. W. AND F. WALKER LIMITED, Liverpool, England.
Filed October 19, 1909. Serial No. 45,401. PUBLISHED MARCH 22, 1910.

78,032. SOAP. THE J. B. WILLIAMS COMPANY, Glastonbury, Conn.
Filed July 28, 1909. Serial No. 43,835. PUBLISHED OCTOBER 19, 1909.

78,033. DOLLS. LOUIS WOLF & CO., Boston, Mass.
Filed January 27, 1910. Serial No. 47,427. PUBLISHED MARCH 22, 1910.

78,034. TOILET-PAPER. ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y.
Filed January 24, 1910. Serial No. 47,332. PUBLISHED MARCH 22, 1910.

78,035. BLENDED COFFEE. AUSTIN NICHOLS & CO., New York, N. Y.
Filed July 13, 1909. Serial No. 43,501. PUBLISHED MARCH 22, 1910.

78,036. GRANITE MANUFACTURES FOR BUILDING, PAVING, OR DECORATION. BROOKES LIMITED, Lightcliffe, England.
Filed October 6, 1909. Serial No. 45,157. PUBLISHED MARCH 22, 1910.

78,037. GIN. BURRICHTER BROS., Galena, Ill.
Filed January 28, 1909. Serial No. 40,186. PUBLISHED MARCH 22, 1910.

78,038. ROLLED OATS AND OATMEAL. F. B. CHAMBERLAIN COMPANY, St. Louis, Mo.
Filed December 6, 1909. Serial No. 46,314. PUBLISHED MARCH 22, 1910.

78,039. SHEETINGS AND DRILLINGS. EXPOSITION COTTON MILLS, Atlanta, Ga.
Filed December 22, 1905. Serial No. 15,584. PUBLISHED APRIL 3, 1906.

78,040. CERTAIN ALCOHOLIC BEVERAGES. M. B. FOSTER & SONS, LIMITED, London, England.
Filed July 10, 1908. Serial No. 36,049. PUBLISHED MARCH 22, 1910.

78,041. CERTAIN STATIONERY AND PAPER. MOSES GOLDENBERG, Baltimore, Md., and Washington, D. C.
Filed January 4, 1910. Serial No. 46,909. PUBLISHED MARCH 22, 1910.

78,042. PURE VEGETABLE PROTEIN FOOD. FRIEDRICH AUGUST VOLKMAR KLOPFER, Leubnitz, near Dresden, Germany.
Filed January 11, 1910. Serial No. 47,059. PUBLISHED MARCH 22, 1910.

78,043. GIN. P. LOOPUYT & Co., Schiedam, Netherlands.
Filed December 16, 1909. Serial No. 46,566. PUBLISHED MARCH 22, 1910.

78,044. WRITING AND PRINTING PAPER. NEENAH PAPER CO., Neenah, Wis.
Filed January 27, 1910. Serial No. 47,416. PUBLISHED MARCH 22, 1910.

78,045. WRITING AND PRINTING PAPER. PARSONS PAPER CO., Holyoke, Mass.
Filed January 25, 1910. Serial No. 47,352. PUBLISHED MARCH 15, 1910.

78,046. CERTAIN PIECE GOODS. THE PITTSBURGH DRY GOODS COMPANY, Pittsburg, Pa.
Filed October 19, 1909. Serial No. 45,406. PUBLISHED FEBRUARY 22, 1910.

78,047. CANNED OYSTERS. RUGE BROS. CANNING COMPANY, Englewood, N. J.; Apalachicola and Cedar Keys, Fla., and Baltimore, Md.
Filed September 2, 1909. Serial No. 44,511. PUBLISHED MARCH 22, 1910.

78,048. TABLE-CHINA. BEN STRAUSS COMPANY, New York, N. Y.
Filed November 10, 1909. Serial No. 45,803. PUBLISHED MARCH 22, 1910.

78,049. PICKLES. LISETTE TRUNK, New York, N. Y.
Filed April 20, 1908. Serial No. 34,235. PUBLISHED JUNE 9, 1908.

78,050. CERTAIN ASBESTOS PRODUCTS. UNITED STATES ASBESTOS CO., Manheim, Pa.
Filed August 17, 1909. Serial No. 44,182. PUBLISHED MARCH 22, 1910.

LABELS

REGISTERED MAY 24, 1910.

15,183.—*Title:* "GETREIDE-KÜMMEL." (For Kümmel.) E. LICHTWITZ & Co., Troppan, Austria-Hungary. Filed May 10, 1910.

15,184.—*Title:* "SALADA." (For Coffee.) PETER CHARLES LARKIN, Toronto, Ontario, Canada, and New York, N. Y. Filed May 11, 1910.

15,185.—*Title:* "OXY THE PEROXIDE CREAM." (For Toilet Cream.) VICTOR HALPER, New York, N. Y. Filed April 4, 1910.

15,186.—*Title:* "DANIEL'S WITCH HAZEL." (For Witch-Hasel.) DR. A. C. DANIEL'S INC., Boston, Mass. Filed April 8, 1910.

15,187.—*Title:* "ABERTH'S CLOTHES CLEANSER." (For a Compound for Cleansing Clothes.) WALTER CHARLES ABERTH, Buffalo, N. Y. Filed May 12, 1910.

15,188.—*Title:* "SHARPS." (For Toilet-Pins.) THE STAR PIN COMPANY, Derby and Shelton, Conn. Filed May 14, 1910.

15,189.—*Title:* "VELVET GRIP BOSTON GARTER." (For Hose-Supporters.) GEORGE FROST COMPANY, Boston, Mass. Filed May 14, 1910.

15,190.—*Title:* "BUTTON-BUTTON." (For a Game.) FRANK F. HONECK, Oradell, N. J. Filed May 13, 1910.

PRINTS

REGISTERED MAY 24, 1910.

2,593.—*Title:* "STANDARD FOLDING TYPEWRITER." (For Type-Writing Machines.) STANDARD FOLDING TYPEWRITER SALES CO., New York, N. Y. Filed May 11, 1910.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

WENTWORTH *v.* SUTTON, STEELE & STEELE.

Decided April 5, 1910.

INTERFERENCE—CONSIDERATION BY THE PRIMARY EXAMINER AS TO OPERATIVENESS OF THE DEVICE OF ONE OF THE PARTIES.

Where after hearing a motion to dissolve the Primary Examiner acquired jurisdiction of the interference for the purpose of considering the operativeness of the device of one of the parties and gave notice that on a certain day practical demonstration of this matter might be presented by either or both of the parties, *Held* that a petition that the jurisdiction of the Examiner be withdrawn was premature.

ON PETITION.

ELECTROSTATIC SEPARATOR.

Mr. Odin Roberts and *Messrs. Meyers, Cushman & Rea* for Wentworth.

Mr. E. B. Stocking for Sutton, Steele & Steele.

MOORE, *Commissioner:*

This is a petition by Wentworth requesting that the jurisdiction of the Primary Examiner in the matter of a motion to dissolve be withdrawn or modified.

It appears from the record that a motion to dissolve was brought by Wentworth and was heard by the Primary Examiner about February 18, 1910. Thereafter, and before rendering any decision, the Primary Examiner of his own motion asked for and was given jurisdiction of the case for the further purpose of considering the operativeness of the device shown by Sutton *et al.* to perform the process constituting the subject-matter of the issue. The Examiner then informed the parties that on a certain day practical demonstration of the matter to be considered might be presented by either or both parties. This petitioner then brought a motion before the Primary Examiner to exclude any demonstration by apparatus in the nature of a model to prove that the device shown by Sutton *et al.* was capable of performing the process in issue. It appears that the Primary Examiner refused to consider this motion and informed the parties that at the hearing to be had he would consider the admissibility of matter presented by either party. This petition was then taken.

As appears from the above facts this is, in effect, a request that the Primary Examiner be instructed that certain evidence, which it is supposed will be presented, is inadmissible.

Wentworth points out that his motion to dissolve is based upon the ground that the application of Sutton *et al.* does not disclose the process in issue and that it is immaterial whether the apparatus shown in that application can by certain manipulation be made to perform that process. He insists, with some force, that the right of Sutton *et al.* to make the claim must be decided solely upon the record of their case. These are questions, however, which relate to the merits of the motion now pending before the Examiner. The present petition is, in effect, an attempt to review his ruling before he has rendered a decision.

It is not apparent why the Examiner desires a demonstration by means of a model; but his right to call for or admit any evidence which he considers pertinent to the question pending before him cannot be disputed at this time. It is possible that his request for such a demonstration was prompted by the allegation contained in Wentworth's motion to dissolve to the effect that an apparatus constructed as described in the Sutton *et al.* application cannot develop or produce certain actions essential to the process in issue.

However that may be petitioner cannot be injured by the consideration of any evidence which the Examiner thinks pertinent unless a decision adverse to him is based upon such testimony, and in that event he will have an opportunity to review the action of the Examiner in this matter at final hearing. A decision admitting evidence is interlocutory and not appealable independently of a decision on the merits, and this petition is premature in any event, since it seeks to exclude evidence which has not yet been submitted to the Examiner.

The petition is dismissed.

HOLLIFIELD *v.* CUMMINGS.

Decided March 28, 1910.

1. INTERFERENCE—MOTION TO AMEND—TRANSMISSION—OPPOSITION RAISED FOR FIRST TIME ON APPEAL.

The fact that transmission of a motion to amend under Rule 109 was not opposed before the Examiner of Interferences is a sufficient reason for the dismissal of an appeal from his decision transmitting such motion.

2. SAME—SAME—CLAIMS NOT PATENTABLY DIFFERENT FROM THE ISSUE.

Where the Primary Examiner finds that claims proposed under Rule 109 do not differ in a patentable sense from the claims already constituting the issue of

the interference, they should not be admitted, since to admit them would permit the filing of new preliminary statements without sufficient excuse therefor.

APPEAL on motion.

TARGET-PRACTICE APPARATUS.

Mr. Wallace Greene for Hollifield.

Messrs. Emery & Booth for Cummings.

BILLINGS, *First Assistant Commissioner:*

This is an appeal by Hollifield from the decision of the Examiner of Interferences transmitting a motion filed by Cummings to amend the issue of the interference under Rule 109.

Times were set for taking testimony on January 15, 1910. On February 14 Cummings filed a motion to dissolve the interference as to count 2 thereof and to amend the issue of the interference by the addition of twelve counts. On February 23, 1910, these motions were both transmitted by the Examiner of Interferences, who stated in his decision that their transmission was not opposed.

Transmission of motions to dissolve and motions to amend under Rule 109 is left largely to the discretion of the Examiner of Interferences, and his decisions transmitting such motions will not be reviewed in the absence of a showing that such discretion has been abused. The mere fact that the transmission of the motion to amend was not opposed before the Examiner of Interferences would of itself be sufficient ground for the dismissal of this appeal. Opposition to the transmission of a motion should not be raised for the first time on appeal.

The question of the admissibility of the claims presented in the amendment is one which must be considered by the Primary Examiner. Cummings's motion was brought strictly in accordance with Rule 109. Whether the proposed counts are patentable over the issue of the interference and should be added to the issue is a question to be decided by the Primary Examiner in the first instance.

It may be said that if the Examiner finds that the proposed claims, or any of them, do not differ in a patentable sense from the claims already constituting the issue they should not be admitted, for to admit them would merely have the effect of permitting new preliminary statements to be filed without sufficient justification therefor.

The appeal is dismissed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

OTIS *v.* INGOLDSBY AND BOWLING. INGOLDSBY AND BOWLING *v.* OTIS.

Decided April 5, 1910.

REISSUE—BROADENED CLAIMS.

The law does not permit a patent to be reissued for the mere purpose of enlarging a claim unless there has been a clear mistake, inadvertently committed, in the wording of a claim. If the description in the reissue application finds no real support in the original application, a case for reissue is not made.

Mr. W. A. Scott and *Mr. C. F. Fitts* for Otis.

Mr. S. E. Foute for Ingoldsby *et al.*

ROBB, *J.:*

Appeals from the decision of the Commissioner of Patents in an interference proceeding in which four of the five counts involved were awarded Otis and one claim was awarded the joint applicants, Ingoldsby and Bowling.

The invention in issue is a dump-car and is set forth in the following counts:

1. In a dump-car, the combination of a dumping-door, means for closing the door, means for holding the door closed, and means for returning the door-closing means to initial position without operating the door, substantially as described.

2. In a dump-car, the combination of a door pivotally mounted in the car so as to open automatically when released, means for closing the door, means for holding the door closed, and means for returning the door-closing means to initial position without operating the door substantially as described.

3. In a dump-car, the combination of a dumping-door, gear mechanism for operating such door provided with means for releasing the door to permit it to swing open independently thereof, means for connecting such gear mechanism with the door, and means for supporting the swinging side of the door in closed position independently of the gear mechanism, substantially as described.

4. In a dump-car, the combination of a dumping-door, gear mechanism for operating such door movable into releasing position while the door is stationary in its closed position, means for supporting the swinging side of the door in closed position during the movement of such gear mechanism to releasing position, and means for releasing the swinging side of the door from such supporting mechanism, substantially as described.

5. In a dump-car, the combination of a plurality of dumping-doors, mechanism for operating such doors movable into releasing position while the doors are stationary in closed position, means for supporting the swinging sides of the doors independently of such operating mechanism, and locking-rod mechanism for locking and releasing such supporting mechanism, substantially as described.

Ingoldsby and Bowling's application was filed March 6th, 1906, and was the reissue of their Patent No. 784,265, granted March 7th, 1905, upon an original application filed December 21st, 1903. Otis filed his application September 3d, 1904, and on November 21st, 1905, was granted Patent No. 804,970. From this it appears that the joint applicants' original application and the application upon which Otis was granted a patent were copending. After the grant of the Otis patent Ingoldsby and Bowling filed their application for reissue. In this application they inserted certain amendments to the descriptive matter of the original application and copied the claims of the Otis patent.

It is contended by Otis that the invention in issue was not shown, described or claimed in the original application of his adversaries and that therefore the reissue application constitutes new matter; in short, that Ingoldsby and Bowling have no right to make the claims of the issue.

Neither side took testimony. The Examiner of Interferences sustained the view of the Primary Examiner that the joint applicants have the right to make the claims but did not discuss the meaning of the issue or the disclosure upon which he based his decision. The Examiners-in-Chief, in an elaborate and to our mind convincing opinion, awarded all the claims to Otis. Their opinion concludes as follows:

For the above reasons we do not think that the counts when given their ordinary meaning are readable upon the Ingoldsby and Bowling construction as originally described, and especially when viewed in the light of the Otis application. Therefore Otis, the patentee and the party originally advancing the claims, is entitled to an award of priority in view of the fact that his rival has no basis in his case to support the issue.

The Commissioner sustained the decision of the Examiners-in-Chief as to all save count 4, which he awarded to Ingoldsby and Bowling upon the following grounds:

Count 4 specifies that the mechanism for operating the doors is "movable into releasing position" while the doors are stationary in closed position. The door-operating mechanism of the Ingoldsby and Bowling device is movable into releasing position while the doors are stationary, for when the gear-wheel is thrown out of mesh with the pinion the bell-crank levers could be moved by hand to their initial position, even if their weight is not such that they will fall by gravity. For these reasons it must be held that Ingoldsby and Bowling are entitled to make a claim corresponding to this count.

The reasoning of the Board of Examiners-in-Chief and of the Commissioner as to four of the counts is so satisfactory that we do not deem it necessary to add anything thereto. A careful examination of the record convinces us that until Ingoldsby and Bowling saw Otis's patent the subject-matter of these claims had never occurred to them and that the structure described in their patent was not designed to operate, and would not in fact operate, in the manner described in the claims of the issue.

In the structure of both parties the downwardly-opening doors of a car forming a car-floor are hinged adjacent the center of the car. These doors are provided with means for holding them closed, which means must of course sustain not only the doors but the load thereon. Means are also provided for closing the doors after a load has been released through the agency of a locking means. In the Ingoldsby and Bowling structure the means whereby the doors are closed consist of bell-crank levers pivoted near the center, the upper ends of which being fastened to chains passing around a shaft upon which is mounted a gear-wheel. The gear-wheel normally meshes with a manually-operated pinion. The journals of the gear-wheel are so arranged that at one movement of a lever the wheel is thrown out of mesh with the pinion. This prevents, according to their original application, the—

rotation of the crank at the time when the doors are dropped,

thereby protecting the operator.

The Examiners-in-Chief and the Commissioner found, and we concur in the finding, that there is no reference in the original Ingoldsby and Bowling application to the relative size and weight of the bell-crank levers, and that the original specification fails of the suggestion that they were intended to fall to the position they assume when the doors are open prior to the release of the doors. The Board of Examiners-in-Chief disposed of count 4 as follows:

Count 4 includes gear mechanism for operating the door movable into releasing position while the door is stationary in its closed position. The gear mechanism of the joint applicants is not movable into releasing position except as to a part thereof.

The Commissioner, however, as above noted, ruled that because "the bell-crank levers could be moved by hand" Ingoldsby and Bowling are entitled to make that claim. We are unable to concur in this view. It is not the object of section 4916, Revised Statutes, relating to the reissue of a patent, to encourage or permit the insertion of claims in the reissue application which involve an impracticable mode of operation or which are obviously inserted for the sole purpose of appropriating claims of other inventors. The law does not permit a patent to be reissued for the mere purpose of enlarging a claim unless there has been a clear mistake, inadvertently committed, in the wording of a claim. If the description in the reissue application finds no real support in the original application, a case for reissue is not made. (*Steward et al. v. American Lava Company et al.*, 215 U. S., 161; 149 O. G., 602; *Coon v. Wilson*, 113 U. S., 268.) This claim in the Otis application referred to a device capable of automatic operation. The device of Ingoldsby and Bowling to respond to the issue requires that a man should crawl under the car and manipulate it. This fact of itself is sufficient to negative the contention that their original application furnishes any substantial basis for the claim. To award this claim to Ingoldsby and Bowling we would be compelled to give it a forced and unreasonable construction and one inconsistent with the construction which would naturally be placed upon the claim as it appears in the Otis application, from which it was taken.

The decision of the Commissioner of Patents is therefore affirmed as to counts 1, 2, 3, and 5, and reversed as to count 4. The clerk will certify this opinion as by law required.

Affirmed in part and reversed in part.

Court of Appeals of the District of Columbia.

MATHY *v.* THE REPUBLIC METALWARE COMPANY.

Decided April 6, 1910.

1. TRADE-MARKS—INTERFERENCE—PRIORITY ONLY CONSIDERED.

The only purpose of a trade-mark interference is to determine the question of priority of adoption and use, (citing *Giles Remedy Co. v. Giles*, 120 O. G., 1826; 26 App. D. C., 375; distinguishing from *In re Herbst*, 141 O. G., 287; 32 App. D. C., 269.)

2. SAME—ABANDONMENT.

Where M., a patentee who had adopted and used a trade-mark on roasting-pans, gave a license to R. to manufacture and sell the roasting-pans of such patent and suggested the use thereon of the mark which he had adopted, *Held* that the giving of the license did not constitute an abandonment of the trade-mark.

Mr. A. E. Dowell for the appellant.

Mr. L. S. Bacon for the appellee.

VAN ORSDEL, *J.:*

This is an appeal from the decision of the Commissioner of Patents in an interference proceeding, which affirmed the decision of the Examiner of Interferences, refusing registration to appellant of the word "Savory" as a trade-mark for baking or roasting pans.

Appellee filed its application for registration of the mark in question on October 18, 1907, which was granted March 10, 1908. Appellant filed his application June 9, 1908.

It appears from the record that appellant applied in 1888 and again in 1894 for Letters Patent on pans of the same general character as the one upon which the mark is now used, which applications were rejected by the Patent Office, and that, in March, 1898, he filed another application, which matured into a

patent on July 19, 1898. The evidence of appellant is to the effect that he adopted the mark here in question as early as 1891. Between that time and the end of 1897, he sold about one hundred pans which were made entirely by hand, after which later date, he had "a cheap die made and sold many more."

On August 8, 1898, he entered into a contract with the Sidney Shepard Company, wherein it was agreed that the company should have the exclusive right, with the exception of appellant, to manufacture and sell the roasting-pans embodied in the Letters Patent, appellant orally suggesting the desirability of designating the pans by the mark he had previously used. The Sidney Shepard Company was succeeded by the appellee in November, 1905. Appellant, on February 3, 1906, renewed the license and executed a new agreement with appellee, which, in substance, provided that the appellant—

does hereby license, empower and grant to said second party, its successors and assigns, the exclusive right (except as hereinafter stated) to manufacture and sell the said roasters in the United States for the full term of said patent, and agrees not to empower or license any other parties in the United States to manufacture or sell said roasters during the continuance of this agreement. But it is mutually agreed that the said party of the first part shall have the right to make and sell said roasters in an experimental way or in any territory not covered by said Republic Metalware Company;

that the appellee would pay certain royalties to the appellant; that—

the party of the first part may terminate this agreement if the party of the second part shall default in the payment of royalties as herein provided, or if the royalties paid to him by said party of the second part shall be less than $2,500.00 in the last preceding calendar year; or if the party of the second part changes the design or construction contrary to Article III;

and that, in the event of the termination of the license, the appellant should purchase from the appellee such tools and dies as were used in the manufacture of the invention embraced in the contract.

It does not appear that appellant manufactured roasters for sale after the date of the contract with the Sidney Shepard Company, although he continued to make them for experimental purposes until 1906.

The Commissioner of Patents refused to register the mark in question on the ground that its function is to describe a specific article made under a certain patent, and not to indicate origin. This raises a question the decision of which must be limited to an *ex parte* proceeding. No one is interested in its determination but the appellant and the Patent Office. Appellee is in no position to urge the invalidity of a mark for which it has applied for and received a certificate of registration. The only purpose of an interference is to determine the question of priority of adoption and use. (*Giles Remedy Co.* v. *Giles*, 28 App. D. C., 375.) There was nothing in the proceedings to lead appellant to anticipate this objection to the registration of his mark, and his testimony was necessarily limited to the issue raised by the interference. He has had no opportunity to show that the mark has been used on pans differing from those manufactured under his patent. His testimony establishes that he used the mark as early as 1891. It may well be, so far as disclosed by this record, that the pans made at that time were substantially different in construction from those now being placed on the market, especially in view of the fact that the Patent Office rejected his applications of 1888 and 1894 and allowed that of 1898. If they be the same, then his patent must be void. Therefore, this question is not a proper one to be considered in this proceeding.

There is nothing in this holding inconsistent with that *in re Herbst*, (32 App. D. C., 289.) There, there were three parties to an interference, one of whom was the appellant Herbst. On hearing, it developed that a fourth party had adopted and used the mark prior to the earliest date established by any of the applicants. All of the applicants were thereupon refused registration, which decision was affirmed by the Commissioner. Herbst then applied to the Examiner of Trade-Marks for the registration of his mark, which application was refused, and, on appeal, that ruling was sustained by this court. In that case the same record was presented for the consideration of the *ex parte* matter as was considered by the Commissioner in the interference. In both proceedings, the question of priority of adoption and use was manifestly the only one in issue, and all of the evidence taken bore directly on that point. All of the facts necessary for a determination of the *ex parte* question were before the Commissioner on the hearing of the interference, and the decision there given could work no injustice to any of the parties. Hence, the ruling in that case can have no application to a case like the present where one of the parties has had no opportunity to offer testimony on the point decided.

We now come to the question of priority of adoption and use. It is admitted that appellant was the first to apply the mark to roasting-pans, and it is also admitted that appellee's predecessor began the use of the mark at the suggestion and with the consent of appellant. But it is contended on behalf of appellee that the agreement between appellant and appellee amounted, in effect, to an assignment of the patent rights, and that appellant has no longer any interest in the patent or in the article manufactured thereunder. This contract, however, can be construed to be nothing more than a mere license. It granted to appellee only the right to manufacture and sell. The right to use was retained.

The exclusive rights secured by a patent are the right to make, the right to use, and the right to vend the invention it protects. A grant, transfer, or conveyance of these exclusive rights throughout the United States, or a grant of an undivided part of these exclusive rights, or a grant of these exclusive rights throughout a specified part of the United States, is an assignment of an interest in the patent, by whatever name it may be called. A grant, transfer, or conveyance of any right or interest less than these is a license. (*Paulus* v. *Buck Mfg. Co.*, 129 Fed. Rep., 594.)

Prior to the date of appellant's contract with appellee's predecessor in business, appellant had manufactured a number of roasting-pans which he had sold under the name of "Savory." These pans had become known to the trade and were purchased by customers by that designation. Appellant, therefore, before the use of the mark by appellee or its predecessor, had acquired a property-right therein, of which he could only be divested by strict proof of its abandonment. Abandonment being in the nature

of a forfeiture, it is incumbent upon the person alleging it to prove by clear and convincing evidence that the right claimed has been relinquished. The question of abandonment must be decided by the facts in each particular case; but a mark will never be held abandoned unless a clear intention to do so appears. In *Saxlehner* v. *Eisner & Mendelson*, (179 U. S., 19,) where the question of abandonment was raised in a case of unfair competition, the Court said:

To establish the defence of abandonment it is necessary to show not only acts indicating a practical abandonment, but an actual intent to abandon. Acts which unexplained would be sufficient to establish an abandonment may be answered by showing that there never was an intention to give up and relinquish the right claimed. And in a recent English case this doctrine has been applied to a case of trade-marks.

And in *Browne on Trade-Marks* (sec. 682) it was said:

As to the lapse of time that could justify an inference of abandonment, it has been judicially said, that no statute of limitations bars one from protection of his trade-mark. On this point are many decisions, alike in principle, although varied with circumstances. In one case, a lapse of twenty years was held to be no bar; in another case, ten years; in another case, nine years.

Appellee, under its contract with appellant, agreed to pay him, in return for the privilege of making and vending, certain royalties on the articles sold. It was therefore to appellant's interest to use every means in his power to increase the sale of the patented articles and to make them popular with the trade. His roasters had become known by means of his mark, and it was but natural for him to desire that they continue to be so designated. That he found it more advantageous to purchase the articles from appellee company than to manufacture them himself, cannot destroy the rights he had already acquired. His interests simply demanded that pans be placed on the market manufactured under his patent and designated by his mark. This, with appellant's consent and approval, the appellee company was doing. The invention was being offered to the public in the manner originally adopted by appellant, and in the manner he would have the right to use should he desire to manufacture after the patent had expired, or to the extent permitted under the contract, or in case the license was revoked as provided therein. His interests were so closely connected with those of the appellee that he was actively engaged in assisting that company, even to the extent of contributing toward the expense of advertising the "Savory" roasters. In no sense do we think that the contract with appellee can be construed as an assignment of the patent or as an abandonment by appellant of his right to claim the trade-mark adopted by him long prior to the date of the contract. To award to appellee company the exclusive right to the use of a mark which originated with appellant, who consented to its use by appellee company only for the purpose of better protecting his interests under the license, which award would carry with it the exclusive right to the use of the mark on appellant's invention after the patent had expired and also the right to use it on other goods of the same descriptive qualities, would be manifestly unjust.

The decision of the Commissioner of Patents is reversed, and the clerk is directed to certify these proceedings as by law required.

Reversed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 19, 1910.

The Kenosha Watch Case Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Philadelphia Watch Case Company, of Riverside, N. J.; an application of Hauser, Zivy & Cia., of Mexico City, Mexico, both for registration of certain trade-marks, and a trade-mark registration of The Kenosha Watch Case Company, of Kenosha, Wis., and the notice of such declaration sent by registered mail to The Kenosha Watch Case Company, at the address given above, has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said The Kenosha Watch Case Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 17, 1910.

Albert C. Murphy, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the patent of A. C. Murphy, of East St. Louis, Ill., and an application for patent by Edward C. Meisner, C/o Eagle Generator Co., St. Louis, Mo., and the notice of said declaration sent by registered mail to the said Murphy having been returned undelivered, notice is hereby given to the said Murphy, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 11, 1910.

Radical Remedy Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Barclay & Barclay, of New York, N. Y., for registration of a trade-mark and trade-mark registrations to the following-named parties: (1) Radical Remedy Company, of Hickory, N. C., and (2) Walter M. Carr, of Stoughton, Wis., and the notice of such declaration sent by registered mail to the Radical Remedy Company at the address given above has been returned with the statement that this corporation has been dissolved.

Notice is therefore hereby given to the said Radical Remedy Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

F. A. TENNANT, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 10, 1910.

The St. Paul Roller Mill Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the C. A. Gambrill Mfg. Company, of 100 Commerce street, Baltimore, Md., for registration of a trade-mark and trade-marks registered to the Barber Milling Company, of Minneapolis, Minn., The St. Paul Roller Mill Co., of St.

Paul, Minn., and H. Becker & Co., of New York, N. Y., and the notice of said declaration sent by registered mail to The St. Paul Roller Mill Co. having been returned undelivered, notice is hereby given to the said The St. Paul Roller Mill Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 19, 1910.

William Brokhahne, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the Norvell-Shapleigh Hardware Company, of Fourth and Washington avenues, St. Louis, Mo., for registration of a trade-mark and trade-marks registered to Krusius Brothers, 296 Broadway, New York, N. Y., the Challenge Cutlery Corp., of Seymour and Kossuth streets, Bridgeport, Conn., the A. F. Shapleigh Hardware Company, of St. Louis, Mo., and William Brokhahne, of New York, N. Y., and the notice of said declaration sent by registered mail to the said William Brokhahne having been returned undelivered, notice is hereby given to the said William Brokhahne, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 9, 1910.

William Brokhahne, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the Norvell-Shapleigh Hardware Company, of Fourth street and Washington avenue, St. Louis, Mo., for registration of a trade-mark and trade-marks registered to Hibbard, Spencer, Bartlett & Company, northeast corner of State and South Water streets, Chicago, Ill., the A. F. Shapleigh Hardware Company, of St. Louis, Mo., and William Brokhahne, New York, N. Y., and the notice of said declaration sent by registered mail to the said William Brokhahne having been returned undelivered, notice is hereby given to the said William Brokhahne, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 28, 1910.

Joseph Parker & Son, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Keith Paper Company, of Turners Falls, Mass., for registration of a trade-mark and a trade-mark registered to Joseph Parker & Son, of 27 Elm street, New Haven, Conn., and the receipt for the registered letter in which notice of this interference was mailed to Parker & Son being signed Joseph Parker & Son Co. instead of Joseph Parker & Son, notice is hereby given to the said Joseph Parker & Son, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 22, 1910.

Julian Alvarez, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Moore & Calvi, of 30 Water street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Julian Alvarez, of 919 Broadway, New York, N. Y., and the notice of said declaration sent by registered mail to the said Julian Alvarez having been returned undelivered, notice is hereby given to the said Julian Alvarez, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 21, 1910.

Strassheim & Jaeger, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Frederick W. Gardner, of 316 East Thirty-fourth street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Strassheim & Jaeger, of 173 and 175 South Water street, Chicago, Ill., and the notice of said declaration sent by registered mail to the said Strassheim & Jaeger having been returned undelivered, notice is hereby given to the said Strassheim & Jaeger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 21, 1910.

Hugo Pfabe, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Sugar Products Company, of Caro, Mich., for registration of a trade-mark and a trade-mark registered to Hugo Pfabe, of Chicago, Ill., and the notice of said declaration sent by registered mail to the said Hugo Pfabe having been returned undelivered, notice is hereby given to the said Hugo Pfabe, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 8, 1910.

Day, Rollins & Company, their assigns or legal representatives, take notice:

An interference exists in this Office between an application of Sparks Milling Company, of Alton, Ill., for registration of a trade-mark and a trade-mark registration to Day, Rollins & Company, of Minneapolis, Minn., and a notice of redeclaration of said interference which was sent by registered mail on January 26, 1910, to the said Day, Rollins & Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Day, Rollins & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

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Montana	3	....	Philippine Islands	....	....
Nebraska	10	3	Porto Rico	....	1
Nevada	....	....	U. S. Army	....	....
New Hampshire	2	2	U. S. Navy	....	....
New Jersey	20	9	Total to citizens of the United States	732	242
New York	104	38			
North Carolina	3	1			
North Dakota	5	....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	....	1	Netherlands	....	....
Austria-Hungary	3	....	Newfoundland	....	....
Belgium	2	....	New South Wales	....	....
Brazil	....	....	New Zealand	....	....
British West Indies	....	....	Norway	1	....
Canada	12	....	Persia	....	....
Cape Colony	....	....	Queensland	....	....
Chile	....	....	Russia	2	....
China	....	....	Scotland	1	2
Costa Rica	....	....	South Australia	....	....
Cuba	....	....	Spain	....	....
Denmark	2	....	Sweden	1	....
Ecuador	....	....	Switzerland	5	....
England	26	4	Tasmania	....	....
France	4	4	Transvaal, South Africa	1	....
Germany	18	6	Victoria	....	....
Haiti	....	....	Western Australia	....	....
Ireland	....	....	Total to citizens of foreign countries	79	17
Italy	....	....			
Japan	....	....			
Mexico	1	....			

Attorneys.

(ORDER No. 1,857.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 25, 1910.

Pursuant to the provisions of section 487 of the Revised Statutes and section 5 of the act of July 4, 1883, and with the approval of the Secretary of the Interior David P. Moore, of Washington, D. C., registry No. 2673, is hereby disbarred from practice before the United States Patent Office for gross misconduct.

EDWARD B. MOORE,
Commissioner.

By supplemental order of May 27 David P. Moore has been allowed until July 1, 1910, to close business already initiated.

(ORDER No. 1,860.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 27, 1910.

Pursuant to the provisions of section 487 of the Revised Statutes and section 5 of the act of July 4, 1883, and with the approval of the Secretary of the Interior Robert W. Ashley, of Washington, D. C., and New York, N. Y., registry No. 6608, is hereby disbarred from practice before the United States Patent Office for gross misconduct.

EDWARD B. MOORE,
Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business May 24, 1910.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Apr. 26	Apr. 26	360
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Mar. 3	Apr. 1	278
173	3. Annealing and Tempering; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Apr. 25	May 10	151
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Apr. 11	Apr. 19	397
167	5. Bookbinding; Harvesters; Jewelery; Music.	Mar. 18	Mar. 31	476
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Apr. 12	Apr. 8	230
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Movements; Nut and Bolt Locks; Optics; Velocipedes.	Mar. 28	Mar. 30	328
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Stove Furniture; Supports.	Apr. 25	Apr. 25	212
142	9. Air and Gas Pumps; Fire-Extinguishers; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Sewerage; Wind-Wheels.	Feb. 5	Apr. 5	449
235	10. Carriages and Wagons	Mar. 19	Mar. 21	533
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Apr. 19	Apr. 14	347
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Apr. 18	Apr. 18	587
229	13. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, Etc.	Mar. 28	Apr. 25	525
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Mar. 19	Apr. 25	356
308	15. Bread, Pastry, and Confection Making; Coating; Fruit Glass; Laminated Sheets and Fabrics; Liquid Coating Compositions; Paper-Making; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Mar. 23	May 5	450
109	16. Telegraphy; Telephony	Mar. 25	Mar. 9	269
308	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Apr. 29	Apr. 25	176
237	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Mar. 2	Mar. 3	248
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Apr. 14	Apr. 25	209
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Apr. 26	Apr. 23	237
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Apr. 4	Apr. 22	396
3	22. Amusements; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Jan. 14	Mar. 19	660
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 15	Apr. 20	326

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
144	24. Apparel; Apparel Apparatus; Electricity, Medical and Surgical; Sewing-Machines; Surgery.	Apr. 7	Apr. 13	535
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	May 9	May 11	126
106	26. Electric Heating and Rheostats; Electricity, Generation; Motive Power.	Feb. 1	Mar. 5	365
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Apr. 21	Apr. 20	382
65	28. Electric Railways; Internal-Combustion Engines.	Mar. 11	Apr. 13	475
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	Mar. 5	Apr. 2	426
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Apr. 18	Apr. 23	366
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Mar. 2	Apr. 8	344
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Fine Arts; Packaging Liquids; Refrigeration.	Apr. 25	Apr. 27	356
164	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 24	Apr. 7	408
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Apr. 20	Apr. 27	333
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Apr. 19	May 5	649
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Mar. 9	Mar. 16	645
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 15	Mar. 14	693
378	38. Artesian and Oil Wells; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working.	Mar. 22	Mar. 26	537
321	39. Baths and Closets; Water Distribution.	Feb. 7	Apr. 18	534
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Apr. 26	Apr. 11	429
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Feb. 28	Mar. 1	626
279	42. Electric Signaling; Railway Signaling; Signals.	Jan. 6	Mar. 19	472

Oldest new case, Jan. 6; oldest amended, Mar. 1.

Total number of applications awaiting action 17,600

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Apr. 26	May 11	667
	Designs	Apr. 26	May 16	130
	Labels and Prints	May 20	May 16	21

Trade-Marks.

Extra copies of the trade-mark portion of the GAZETTE, which will be sold separately, may be obtained single or in quantities for five cents each. Coupons will be taken in payment thereof.

PATENTS

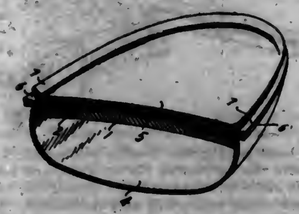
GRANTED MAY 31, 1910.

959,441. SWIMMING-SHIRT. WILLIAM T. ANDERSON, Brooklyn, N. Y. Filed June 11, 1909. Serial No. 501,522.



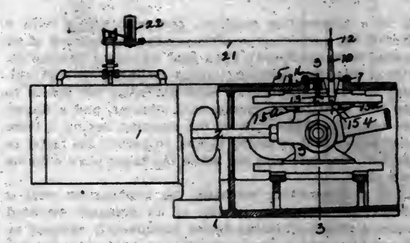
The herein described shirt provided with a front extended portion and a back portion extending to the waist line, thigh straps connected to the lower end of said extended portion, said straps being creased and provided with means for adjustment as to length, suspender ends connected to the sides of the shirt, a metal loop connected to said ends and provided with an outwardly projecting stud, and an eye member connected to each of said thigh straps for engagement with said studs.

959,442. SHOE-SOLE ATTACHMENT. THOMAS J. ALDRIDGE, Rochester, N. Y. Filed Dec. 23, 1909. Serial No. 534,670.



An article of manufacture, comprising an inner sole having a channel formed therein, said channel being spaced from the edge of said inner sole and being cut inwardly and upwardly creating a lip, an upper stitched to said lip, the stitching and upper being adapted to be contained entirely within said channel, and an outer sole having an inwardly and upwardly extending channel formed in the under side of the edge thereof creating a lip and stitched to the upper and the inner sole, said stitching passing through the outer sole, inner sole, and the upper between the edge thereof and the inner sole channel, and being protected by said lip.

959,443. INDICATOR REDUCING-MOTION MECHANISM. FREDERICK O. BALL, Plainfield, N. J. Filed Nov. 15, 1907. Serial No. 402,310.



1. The combination of a cross head; a stationary engine part adjacent thereto; an indicator reducing motion mechanism secured to said part comprising an actuating device mounted thereon, a yielding means for moving the device in one direction, a cam on the cross head for actuating said device in the opposite direction, and means for locking said device out of path of the cam.

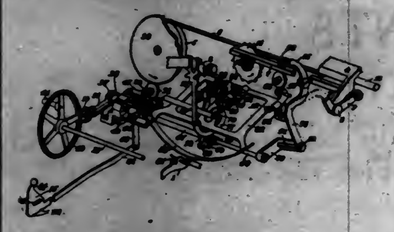
2. The combination of a cross head; a stationary engine part adjacent thereto; an indicator reducing motion mechanism removably secured to said part comprising an actuating device mounted thereon, a yielding means for moving the device in one direction, a cam on the cross head for actuating said device, and means for locking said device out of path of the cam.

3. The combination of the cross head; the cam 15 thereon; indicator motion mechanism comprising the plate 7, having the arms 8 extending therefrom and the slot 9 between them; the bell crank lever 10 pivotally secured to arm 8, one end of lever being adapted to engage the cam 15, and the other forming a means for attaching an indicator cord; pin 16 extending from the lever through the plate 7 and spring arranged on the pin 16 for yieldingly forcing the lever toward the cam.

4. The combination of a cross head; the cam 15 thereon; indicator motion mechanism comprising the plate 7, having the arms 8 extending therefrom and the slot 9 between them; the bell crank lever 10 pivotally secured to the arms 8, one end 13 of the lever being adapted to engage the cam 15, and the other forming a means for attaching an indicator cord; pin 16 extending from the arm 13 through the plate 7; a spring arranged on the pin 16 for yieldingly forcing the arm 13 toward the cam; and means for locking the pin 16 in its upper position.

5. The combination of the cross head; the cam 15 thereon; indicator motion mechanism comprising the plate 7, having the arms 8 extending therefrom and the slot 9 between them; the bell crank lever 10 pivotally secured to the arms 8, one end 13 of lever being adapted to engage the cam 15, and the other forming a means for attaching an indicator cord; pin 16 extending from the lever 13 through the plate 7, and having the perforation 20 therein so located as to be just above the plate with the arm 13 in its uppermost position; and a pin for insertion in the perforation 20.

959,444. TYPE-WRITING MACHINE. WALTER E. BARNARD, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed July 6, 1908. Serial No. 442,018.



1. In a typewriting machine, the combination with a universal bar device reciprocating at the key strokes, of an actuator mounted loosely upon said universal bar device, a ribbon vibrator, releasing means mounted on said universal bar device, to enable said universal bar device to cause said actuator to operate said vibrator, and a finger-piece upon the framework of the machine having a loose connection to said releasing means, to permit the latter to move with the universal bar while the finger piece remains stationary.

2. In a typewriting machine, the combination with a universal bar frame or device, of an actuator swiveled thereon, a ribbon-vibrating device permanently engaged by said actuator, and a lever pivoted upon said universal bar device to releasably lock said actuator to the universal-bar device to cause the actuator to operate said ribbon-vibrating device.

3. In a typewriting machine, the combination with a universal bar device reciprocating at the key strokes, of an actuator mounted loosely upon said universal bar device, a ribbon vibrator permanently connected to said universal bar device, releasing means to enable said universal bar device to cause said actuator to operate said vibrator, and a finger-piece for said releasing means.

4. In a typewriting machine, the combination with a universal bar frame or device, of an actuator swiveled thereon, a ribbon-vibrating device engaged by said actuator, a lever pivoted upon said universal bar device to lock and release said actuator, a link connected to said releasing means, and an arm pivoted upon the framework and connected to said link.

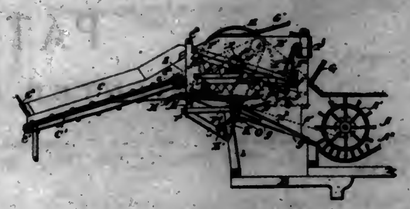
5. In a typewriting machine, the combination with a universal bar frame or device, of an actuator swiveled thereon, a ribbon-vibrating device engaged by said actuator, a lever pivoted upon said universal bar device to lock and release said actuator, a link connected to said releasing means, an arm pivoted upon the framework and connected to said link, and a finger-piece upon the framework and connected to said arm.

[Claims 6 to 57 not printed in the Gazette.]

959,445. BAND-CUTTER AND FEEDER. JOHN B. BARTHOLOMEW, Peoria, Ill., assignor, by mesne assignments, to Avery Company, a Corporation of Illinois. Filed Sept. 8, 1894, Serial No. 522,437. Renewed Oct. 30, 1909. Serial No. 525,552.

1. The combination with the independently mounted reciprocating tables H, H^2, the former situated approximately horizontal, and the latter being inclined therefrom downwardly, and the crank shaft F above the adjacent ends of the said tables, of the bars F' connected to the said crank shaft, the links for supporting the bars, and the cutters below the bars, each bar having a series of cutters situated on a line approximating parallelism with the table H, and a series of cutters on another line approximating parallelism with the table H^2, substantially as set forth.

2. In a band cutter and feeder the herein described cutter bars F having a series of cutters f approximately parallel with the bar, and cutters f^6 on a line inclined thereto, and mechanism substantially as set forth for imparting a combined rotary and reciprocating motion to said bars, as described.



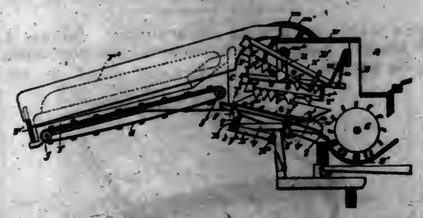
3. In a band cutter, the combination with the cutter bars free at their rear ends and the crank shaft connected to said bars intermediately of their ends, of the supplemental cutter-supporting bars extending downward from the bars F', and the links F^5 at the front ends of the bars, substantially as set forth.

4. The combination of the main cutter bars F', means for imparting a rotary movement to the rear ends of said bars and a longitudinal reciprocating movement at their front ends, the cutter bars f^6 each supported by and below one of the bars F' and means for adjusting vertically the bars f^6 at one end, substantially as set forth.

5. The combination with the straw supporting and advancing devices having a rear part approximately horizontal and a front part inclined to the rear part, of the cutter bars F' having cutters f over the rear part of the support, and cutters f^6 situated over the front inclined part of the said support and formed each with an inclined edge at the rear and a vertical edge at the front, and means for imparting a continuous or rotational movement to the rear part of the bars F' and a reversing or oscillatory movement to the front part thereof, substantially as set forth.

[Claims 6 to 48 not printed in the Gazette.]

959,446. BAND-CUTTER AND FEEDER. JOHN B. BARTHOLOMEW, Peoria, Ill., assignor, by mesne assignments, to Avery Company, a Corporation of Illinois. Filed Nov. 29, 1898, Serial No. 697,782. Renewed Oct. 30, 1909. Serial No. 525,553.



1. In a band cutting and feeding mechanism, the combination with the mechanism for receiving and advancing the bundles and the mechanism for cutting the bands, of the two-part frame supporting said mechanism, the hinge uniting the parts of said frame and the spring arranged substantially as set forth to exert pressure upon the movable part of the frame, in one direction when the said part is in its unfolded or operative position and in an approximately opposite direction when said part is in its folded position.

2. In a band cutting and feeding mechanism, the combination with the devices for receiving and advancing the bundles and the mechanism for cutting the bands, of the two part supporting frame, the hinge uniting the two parts thereof, and the spring, abutting against both parts of the frame and arranged substantially as set forth to have its line of action, when the swinging part of the frame is in its position of operation approximately coincident with a line between the hinge and one of the abutments for the spring and to exert a lifting action on the said frame when it moves away from said operative position, substantially as set forth.

3. In a band cutting and feeding mechanism, the combination with the devices which receive and advance the bundles, and the means for cutting the bands, of the two part frame, of which one part can swing from a position over the top of the other to a position at the end thereof, the hinge uniting the parts of the frame, and the spring arranged to abut against both parts of the frame and having its line of action, when the movable part of the frame is in its packed position, approximately coincident with the line from the hinge to the point of abutment on the swinging part of the frame, substantially as set forth.

4. In a band cutting and feeding mechanism, the combination with the devices which receive and advance the bundles, and the mechanism which severs the bands, of a stationary frame for a part of said devices and a swinging frame for the others, the hinge uniting the said frames, and the spring having two points of attachment, one connecting it to the stationary frame and one to the swinging frame, the line between said points of attachment being approximately coincident with the line from the hinge to the more remote point of attachment, both when the swinging frame is in its folded position and when it is in its unfolded or operating position, substantially as set forth.

5. In a band cutting and feeding mechanism, the combination with the receiving and advancing carrier G and the cutting and threshing mechanism, of the swinging frame F F^1, the hinge K^1, the spring I pivotally connected to the swinging frame at f^5, and pivotally connected to the stationary frame at K^1, the pivot at K^1, when the swinging frame is in its operating position, being adjacent to the line from the hinge H to the pivot at f^5, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

959,447. BAGGING-MACHINE. ADELMER M. BATES, Cleveland, Ohio, assignor to Bates Valve Bag Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Mar. 3, 1906. Serial No. 304,021.



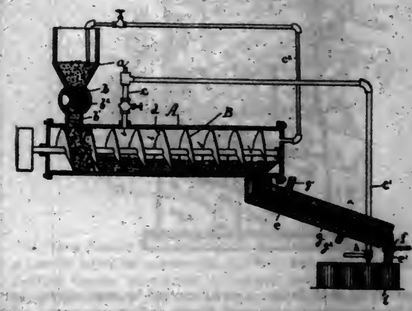
1. In a machine for filling valve bags, the combination of a supply chamber and bag filling tube with forcing feeding means to receive the material from the supply chamber and feed the same into the bags, and a rotary agitator consisting of a curved propeller blade at the place where the material passes from the supply chamber into the feeding means.

2. In a machine for filling valve bags, the combination of a supply chamber with a bag filling tube, and means for forcibly agitating and feeding the material through the tube, comprising two propeller devices arranged one above the other.

3. In a machine for filling valve bags, the combination of a material supply chamber with a bag filling tube, and means for forcibly agitating and feeding the material from the supply passage through the tube comprising two curved propeller devices arranged one above the other, said bag filling tube arranged substantially at a tangent to the arc described by the lower of the two propellers.

4. In a machine for filling valve bags, the combination of a filling chamber, a supply chamber, arranged so that the material flows from one to the other by gravity, of a bag filling tube and a forcing agitator near the base of the vertical column of material and a forcing feeding device in the filling chamber.

959,448. APPARATUS FOR COOKING CORN AND OTHER FOOD PRODUCTS. HARTLEY C. BAXTER, Brunswick, Me. Filed Feb. 21, 1907. Serial No. 358,621.



1. In a machine for preparing green corn and other like food products, the combination of a sterilizing chamber having an inlet and an outlet, and adapted to maintain an internal steam pressure, means for supplying steam under pressure to said sterilizing chamber, a feeding device for introducing corn into the sterilizing chamber against the internal pressure, means for stirring and conveying the corn from the inlet to the outlet, and a steam tight cooling chamber connected with said outlet by an open passage whereby the steam pressure is permitted to aid the passage of the corn through the cooling chamber.

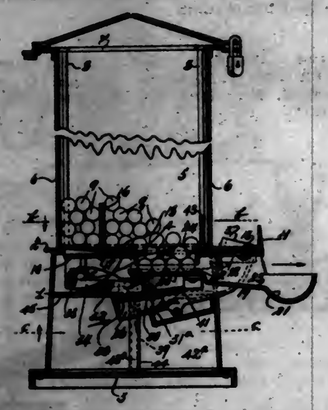
2. In a machine for preparing green corn and other like food products, the combination of a sterilizing chamber having an inlet and an outlet, and adapted to maintain an internal steam pressure, means for supplying steam under pressure to said sterilizing chamber, a feeding device for introducing corn into the sterilizing chamber against the internal pressure, means for stirring and conveying the corn from the inlet to the outlet, a steam tight cooling chamber connected with said outlet by an open passage whereby the steam pressure is permitted to aid the passage of the corn through the cooling chamber and means for controlling the outlet of said cooling chamber.

959,449. VENDING-MACHINE. PAULINE S. BLOCH, New York, N. Y., assignor to Rogers Verybest Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Sept. 25, 1909. Serial No. 519,608.

1. In a check controlled operating device, a movable ejector, a pawl carried thereby, a coin chute adjacent thereto, comprising a plurality of members adapted to form an inclined raceway, a plurality of stops, carried by one of said members, in alinement with said pawl, a stop carried by said pawl, and a stop carried by the other of said chute members, and located in the bottom of said raceway.

2. In a check controlled operating device, a movable ejector, a coin chute adjacent thereto, a plurality of connected members adapted to form an inclined raceway, a flange carried by one of said members, a plurality of stops carried by said flange, a pawl carried by said ejector normally in contact with said flange and in alinement with the stops on said flange, and a stop carried by the other of said coin chute members and located in the bottom of said raceway.

3. In a check controlled operating device, a movable ejector, a coin chute adjacent thereto, a plurality of connected members adapted to form an inclined raceway, a flange carried by one of said members, a plurality of stops



carried by said flange, a pawl carried by said ejector normally in contact with said flange and in alinement with the stops on said flange, a stop carried by said pawl, and a stop carried by the other of said coin chute members and located in the bottom of said raceway.

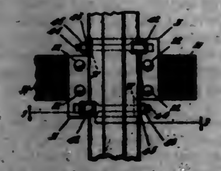
959,450. CHERRY-PITTER. CATHERINE W. BRIDGEMAN, Chicago, Ill. Filed Sept. 2, 1909. Serial No. 515,860.



1. A device of the class described comprising a substantially cylindrical body portion constituting a handle and a longitudinally grooved extension of said handle, the said groove being forwardly tapering in form and terminating at the rear in an upwardly extending discharging surface, substantially as described.

2. A device of the class described, comprising a substantially cylindrical knurled body portion constituting a handle and a longitudinally grooved extension of said handle, the said groove being forwardly tapering in form and terminating at the rear in an upwardly extending discharging surface, and the said extension being sharpened at its end but blunt on the sides, substantially as described.

959,451. RAIL-HOLDER. WILLIAM H. BROWN, Indianapolis, Ind. Filed Mar. 11, 1910. Serial No. 548,599.

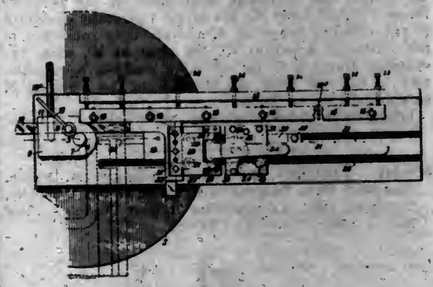


1. The combination, with a rail and its support, of a fastener for securing the rail to the support, consisting of a plate having down-turned portions and slots therein, and hooked bolts the hooks whereof pass up through said slots and engage with a flange on the rail and the threaded ends whereof pass through perforations in the down-turned portions of the plate, whereby when the bolts are tightened the rail is gripped firmly onto the plate.

2. The combination, with a rail and its support, of a fastener whereby the rail is secured to the support, comprising a plate having portions at diagonally opposite corners turned downwardly and perforated, and also having slots therein opposite said down-turned portions, hooked bolts, the hooks whereof are adapted to pass up through the slots and engage with the flanges on the rail, and the threaded ends of which are adapted to pass through the perforations in the down-turned portions of the plate, the bolts being thus disposed to operate oppositely to each other, whereby an exact adjustment of the rail on the support may be secured.

3. The combination, with a rail and its support, of a fastener for securing the rail to the support comprising a slotted plate, hooked bolts adapted to pass through the slots in the plate and engage with the flanges of the rail, said bolts being also provided with flanges adapted to bear against the under side of the plate alongside the slots therein and thereby hold the hooked portions of the bolts more securely against the flanges of the rail.

959,452. COIL-BENDING MACHINERY. JAMES A. BURNS, Homestead, and JAMES W. SWOGER, Pittsburg, Pa., assignors to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed July 3, 1905. Serial No. 268,264.



1. The combination with a table, of a block movably mounted thereon and provided with means for clamping a body against the table, and a second block adjustably clamped to the table and provided with a lever-operated cam to engage one end of the first block.

2. The combination with a table and a block mounted thereon and adjustable along the face thereof, of a plate pivotally mounted upon said block with its pivotal axis parallel to the table and projecting beyond one end of said block, of a lever-operated cam to turn said plate upon its axis and force its projecting end toward the table.

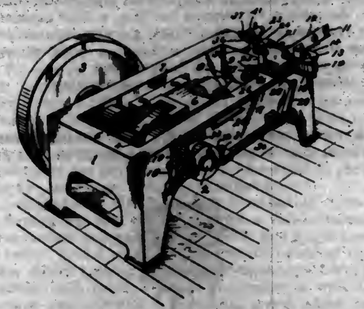
3. The combination with a table and a block adjustably clamped thereto and provided with a lever-operated cam having its axis parallel to the table, of a movable block one end of which is engaged by said cam.

4. A clamping device comprising a base block, a member pivotally mounted thereon and provided with a clamping plate, a lever-operated cam for actuating said member to exert a downward pressure, a second block, a rotatably mounted eccentric head and a handle lever for turning said head to exert horizontal pressure against the first block.

5. The combination with a slotted plane table, of a plurality of blocks having means to engage the slots in said table, a hinged plate mounted upon one of said blocks to exert a downward pressure, a lever-operated cam to actuate said plate, and a lever-operated cam mounted upon the other block to exert longitudinal pressure against the first block.

[Claims 6 to 10 not printed in the Gazette.]

959,453. REVERSE-FEED FOR HEADING-MACHINES. ANDREW C. CAMPBELL, Waterbury, Conn., assignor to The E. J. Manville Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 28, 1909. Serial No. 492,694.



1. A feed mechanism for a header, having fingers adapted to receive a blank, mechanism for swinging the fingers, and mechanism for rotating the fingers on their longitudinal axis when they are swung.

2. A feed mechanism for a header, having fingers adapted to receive a blank, an oscillatory support for said fingers, a rotatory guiding support for said fingers, and mechanism for rotating the fingers on their longitudinal axis as they are oscillated.

3. A feed mechanism for a header, having fingers adapted to receive a blank, an oscillatory support for said fingers, a swiveled guide for said fingers, mechanism for oscillating the support, and mechanism for rotating the fingers on their longitudinal axis.

4. A feed mechanism for a header, having fingers adapted to receive a blank, a rocker arm supporting said fingers, a pivotal connection between the rocker arm and said fingers, a swiveled block for guiding the fingers, mechanism for oscillating the rocker arm, and mechanism for rotating the fingers on their longitudinal axis.

5. A feed mechanism for a header, having fingers adapted to receive a blank, a rocker arm, a pivotal connection between the rocker arm and the fingers, a block for guiding the fingers, a rotatory support for said block, mechanism for oscillating the rocker arm, and mechanism for rotating the fingers on their longitudinal axis.

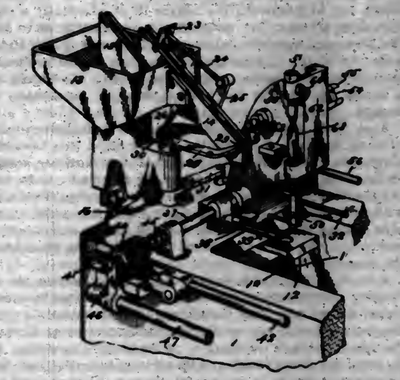
[Claims 6 to 10 not printed in the Gazette.]

959,454. MACHINE FOR HEADING METAL BLANKS. ANDREW C. CAMPBELL, Waterbury, Conn., assignor to The E. J. Manville Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 28, 1909. Serial No. 492,695.

1. In a header in combination, a blank supporting track, a cut-off movable across the delivery end of the track, a carrier movable from a substantially horizontal to a substantially vertical position and vice versa toward and from the delivery end of the track, reciprocating fingers, and mechanism for moving the fingers to and from, then down past the carrier.

2. In a header in combination, a blank supporting track, a cut-off movable across the delivery end of the track, a carrier movable from a substantially horizontal to a substantially vertical position and vice versa toward and from the delivery end of the track, reciprocatory and rotatory fingers, mechanism for moving the fingers to and from, then down past the carrier, and mechanism for rotating the fingers on their longitudinal axis as they reciprocate.

3. In a header in combination, a blank supporting track, a cut-off movable across the delivery end of the track, a carrier movable from a substantially horizontal to a substantially vertical position and vice versa toward and from the delivery end of the track and also movable transversely of the plane of the track, mechanism for moving the carrier to and from the track and also transversely, reciprocatory fingers, and mechanism for moving the fingers to and from, then down past the carrier.

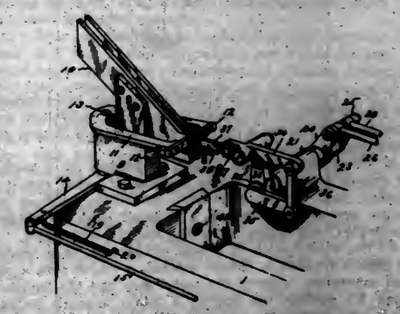


4. In a header in combination, a blank supporting track, a cut-off movable across the delivery end of the track for feeding blanks therefrom, a carrier movable toward and from the delivery end of the track for receiving the blanks fed by the cut-off, mechanism for moving the carrier in a vertical plane to and from the delivery end of the track, mechanism for moving the carrier transversely of the track in a horizontal plane, fingers for taking blanks from the carrier, mechanism for moving the fingers longitudinally to and from, then down past the carrier, and mechanism for rotating the fingers on their longitudinal axis as they move longitudinally.

5. In a header in combination, a blank supporting track, a carrier movable toward and from the delivery end of the track, a cut-off with an oblique opening movable back and forth across the delivery end of the track for forcing blanks, one at a time, from the track to the carrier, and rotatory and reciprocatory fingers movable toward and from the carrier for taking blanks therefrom.

[Claims 6 to 12 not printed in the Gazette.]

959,455. BLANK-FEED FOR METAL HEADING, PUNCHING, AND TRIMMING MACHINES. ANDREW C. CAMPBELL, Waterbury, Conn., assignor to The E. J. Manville Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 28, 1909. Serial No. 492,696.



1. A feed mechanism having fingers, mechanism for advancing the fingers in substantially a right line toward a blank, for withdrawing the fingers in substantially a right line with a blank, for oscillating the fingers so as to turn

the blank substantially 90 degrees, and for carrying the fingers with the blank in substantially a right line after having been turned 90 degrees.

2. A feed mechanism having fingers, mechanism for advancing the fingers in substantially a right line toward a blank, for withdrawing the fingers in substantially a right line with a blank, for oscillating the fingers so as to turn the blank substantially 90 degrees, for carrying the fingers with the blank in substantially a right line after having been turned 90 degrees, a track for holding the blanks and a cut-off for forcing the blanks from the track into the fingers.

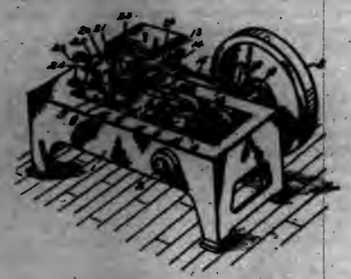
3. A feed mechanism having fingers, mechanism for advancing the fingers in substantially a right line toward a blank, for withdrawing the fingers in substantially a right line with a blank, for oscillating the fingers so as to turn the blank substantially 90 degrees, for carrying the fingers with the blank in substantially a right line after it has been turned 90 degrees, an inclined track, and a cut-off movable at the end of the track for forcing the blanks into the fingers.

4. A feed mechanism having fingers, mechanism for advancing the fingers in substantially a right line toward a blank, for withdrawing the fingers in substantially a right line with a blank, for oscillating the fingers so as to carry the blank from a vertical to a horizontal position, for carrying the fingers with the blank in substantially a right line after it has been swung 90 degrees, a track for holding the blanks, and a wedge-shaped cut-off for controlling the blanks in and forcing the blanks from the track to the fingers.

5. A feed mechanism having a finger-lever, spring fingers extending longitudinally of said lever, means for moving the lever forwardly and backwardly in substantially a right line, means for oscillating the lever, and means for raising and lowering the lever in substantially a right line.

[Claims 6 to 11 not printed in the Gazette.]

959,456. FEED MECHANISM FOR HEADING-MACHINES. ANDREW C. CAMPBELL and NORMAN W. CUMMINS, Waterbury, Conn., assignors to The E. J. Manville Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 28, 1909. Serial No. 492,732.



1. The combination in a feed mechanism for a header, of fingers adapted to receive a blank, an oscillatory support for said fingers, a swiveled guide for said fingers, and mechanism for oscillating the support.

2. The combination in a feed mechanism for a header, of fingers adapted to receive a blank, a rocker arm supporting said fingers, a pivotal connection between the rocker arm and the fingers, a swiveled block for guiding the fingers, and means for oscillating the rocker arm.

3. The combination in a feed mechanism for a header, of fingers adapted to receive a blank, a rocker arm, a pivotal connection between the rocker arm and the fingers, a block for guiding the fingers, a rotary support for said block, and mechanism for oscillating the rocker arm.

4. The combination in a feed mechanism for a header, of spring fingers adapted to receive a blank, a block to which said spring fingers are connected, a rocker arm, a pivotal connection between said block and rocker arm, a rod connected with the finger block, a guiding block in which the rod has a longitudinal movement, a rotary support for said guiding block, and mechanism for oscillating the rocker arm.

5. In combination in a blank feed mechanism, a rocker arm, mechanism for rocking the arm, a fixed support, fingers adapted to receive a blank, a swivel connection between fingers and the rocker arm, and a swivel connection between the fingers and the fixed support.

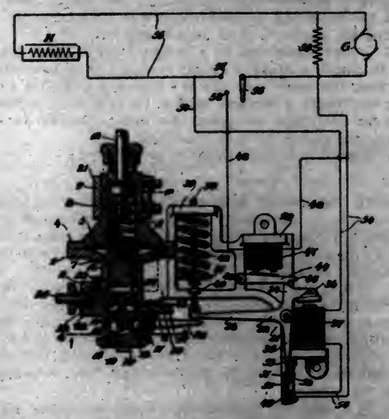
[Claims 6 and 7 not printed in the Gazette.]

959,457. VEHICLE-TIRE. JOHN WESLEY CARHART, Austin, Tex. Filed July 1, 1908. Serial No. 441,270.



A tire comprising a series of lamine arranged side by side and provided with transverse registering openings for the reception of dowel pins passing through the openings, a ring plate arranged on each side of the tire and against whose inward face the adjacent ends of the dowel pins abut, bolts traversing the ring plates for securing them in place, and an elastic envelop on the outer face of the tire and lapped on the side thereof, the edges of the envelop abutting the edges of the ring plates, and nails driven through the envelop into the laminated body of the tire.

959,458. DOUBLY-ACTUATED EXPANSION-VALVE. GEORGE P. CARROLL, Bridgeport, Conn. Filed Apr. 30, 1907. Serial No. 371,172.



1. In combination a chamber having a valve seat, a diaphragm forming one wall of said chamber, a valve adapted for seating on said seat, means operating upon a sufficient outward movement of said diaphragm to seat said valve, means tending to force said diaphragm inward and to unseat said valve, a device for applying power either to absolutely seat said valve or to permit it to be actuated independently of the device, and means operating to shut off the power applied in such second alternative.

2. In combination a chamber having a valve seat, a diaphragm forming one wall of said chamber, a valve adapted for seating on said seat and so connected to said diaphragm as to be seated upon a sufficient outward movement of the diaphragm, means tending to force said diaphragm inward and to unseat said valve, a device for applying power either to absolutely seat said valve or to permit it to be actuated independently of the device, and means operating to shut off the power applied in such second alternative.

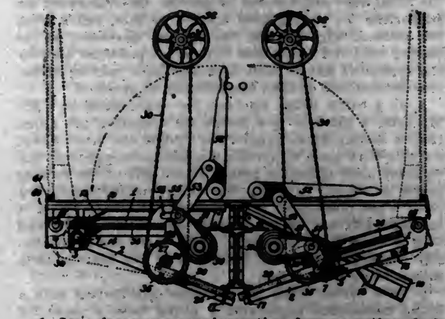
3. In combination a chamber having a valve seat, a diaphragm forming one wall of said chamber, a valve adapted for seating on said seat, means operating upon a sufficient outward movement of said diaphragm to seat said valve, means tending to force said diaphragm inward and to unseat said valve, a device penetrating a wall of said chamber and available for applying power either to absolutely seat said valve or to permit it to be actuated independently of the device, and means operating to shut off the power applied in such second alternative.

4. In combination a chamber having a valve seat, a diaphragm forming one wall of said chamber, a valve adapted for seating on said seat and so connected to said diaphragm as to be seated upon a sufficient outward movement of the diaphragm, means tending to force said diaphragm inward and to unseat said valve, a device penetrating a wall of said chamber and available for applying power either to absolutely seat said valve or to permit it to be actuated independently of the device, and means operating to shut off the power applied in such second alternative.

5. In combination a valve, mechanism operative upon being released to open said valve, a shaft, a lever connected to said shaft and adapted either to close said valve and to position said mechanism so that it may subsequently open said valve or else to release said mechanism, and means for applying power to rotate said shaft and lever so as to release said mechanism, for automatically shutting off such power and for subsequently applying power to rotate said shaft and lever so as to close said valve and to so position said mechanism.

[Claims 6 to 32 not printed in the Gazette.]

959,459. DOOR-OPERATING MECHANISM FOR DUMP-CARS. WILLIAM A. CASWELL, Chicago, Ill., assignor to National Dump Car Company, a Corporation of Maine. Filed Apr. 5, 1907. Serial No. 366,580.



1. In a dump car a reciprocating door operating shaft, and a pivotally supported track supporting said shaft.

2. In a dump car a reciprocating door operating shaft, and a supporting track therefor, part of said track being movable from a horizontal to an inclined position.

3. In a dump car a reciprocating door operating shaft, an operating arm comprising a track for supporting said shaft, part of said track being rigid with said arm and part being pivoted thereto, and means for supporting the free end of said pivoted part.

4. In a dump car a reciprocating door operating shaft, an operating arm comprising a track for supporting said shaft, part of said track being rigid with said arm and part being pivoted thereto, means for supporting the free end of said pivoted part, and means for moving said shaft along said track.

5. In a dump car a reciprocating door operating shaft, a track therefor, part of said track being inclined and the other part being movable from an inclined to a horizontal position.

[Claims 6 to 26 not printed in the Gazette.]

959,460. PROCESS OF REDUCING NICKEL HYDROSILICATE ORES. ADOLPHE CHALAS, Philadelphia, Pa. Filed Sept. 20, 1909. Serial No. 518,568.

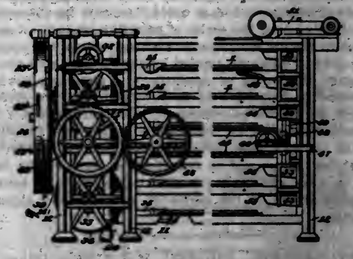
1. The process of reducing nickel hydrosilicate ores, which consists in briqueting a mixture of said ore, serving as a binding material, and finely-divided iron ore, and smelting the briquets with production of nickeliferous pig-iron.

2. The process of reducing nickel hydrosilicate ores, which consists in briqueting a mixture of said ore, serving as a binding material, and finely-divided iron ore, and smelting a charge of the briquets, fuel and limestone, with production of a basic slag and nickeliferous pig-iron low in sulfur and phosphorus.

3. The process of reducing nickel hydrosilicate ores, which consists in briqueting a mixture of said ore, serving as a binding material, and finely-divided iron ore, smelting a charge of the briquets, fuel and limestone, with production of a basic slag and nickeliferous pig-iron low in sulfur and phosphorus, separating the major portion of the pig-iron from the slag by gravitation, chilling the molten slag with water, crushing it, and magnetically separating the nickel-iron granules therefrom.

4. The process of reducing nickel hydrosilicate ores, which consists in briqueting a mixture of said ore, hydraulic lime, and finely-divided iron ore, and smelting the briquets with production of nickeliferous pig-iron.

959,461. FILTERING APPARATUS. CLARENCE MERTON CHAMBERLAIN, Denver, Colo. Filed July 22, 1909. Serial No. 508,894.



1. In a filtering mechanism, the combination of a plurality of trays, each tray containing a filter bed which divides it into an upper and lower compartment, a common filling chamber, and conduits connecting each upper compartment with such chamber.

2. In a filter mechanism, the combination of a plurality of trays, each tray containing a filter bed which divides it into an upper and lower compartment, a common filling chamber, one or more conduits connecting each upper compartment with such chamber, and conduits arranged to connect the lower compartments with a suction apparatus.

3. In a filter mechanism, the combination of a plurality of trays, each tray containing a filter bed which divides the tray into an upper and lower compartment, and conduits arranged to connect the lower compartments with a suction apparatus.

4. The combination with a vertically arranged series of filters, of means for supplying the material thereto, and automatic mechanism for operating such means at proper intervals.

5. The combination with a vertically arranged series of filters, of means for supplying material thereto, means for discharging the residues therefrom, and automatic means for operating such supply and discharge means at proper intervals.

[Claims 6 to 18 not printed in the Gazette.]

959,462. CALL-DISTRIBUTING SWITCH. PETER VALDEMAR CHRISTENSEN, Copenhagen, Denmark, assignor to Aktiebolaget L. M. Ericsson & Co., Stockholm, Sweden. Filed June 23, 1906. Serial No. 323,100.



1. The combination of a motor, a member moved by the motor and comprising a plurality of contacts, a search magnet in circuit with one of the contacts, a series of selecting contacts, over which the last named contact travels, series of speaking and signaling contacts adapted to engage the other movable contacts, and a locking means operated by the search magnet and adapted to stop the travel of the moved member against the force of the driving motor.

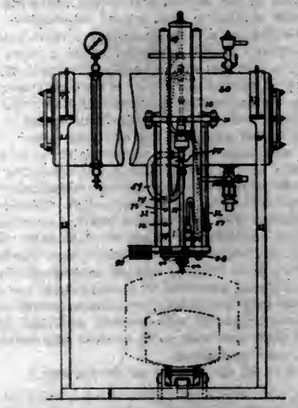
2. The combination of a series of selecting contacts, series of speaking and signaling contacts, a motor, a member moved by the motor, a contact carried by the member and traveling over the series of selecting contacts, a search magnet in circuit with the contact carried by the member, a plurality of contacts carried by the member and adapted to engage the series of speaking and signaling contacts, but normally supported so as to not engage the series of contacts during the movement of said member, and a locking means operated by the search magnet and adapted to stop the travel of the moved member against the force of the driving motor and to effect the movement of the plurality of movable contacts into engagement with contacts of the series of speaking and signaling contacts.

3. The combination of a series of selecting contacts, series of speaking and signaling contacts, a motor, a member moved by the motor, a contact carried by the member and traveling over the series of selecting contacts, a search magnet in circuit with the contact carried by the member, a plurality of contacts carried by the member and adapted to engage the series of speaking and signaling contacts, but normally supported so as to not engage the series of contacts during the movement of said member, and a locking means operated by the search magnet and adapted to stop the travel of the moved member against the force of the driving motor and to transfer the force of the motor so as to move and press the plurality of movable contacts against contacts of the series of speaking and signaling contacts.

959,463. BARREL-FILLING MACHINE. HARRY W. COLBY, Chicago, Ill., assignor to Automatic Racking Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 30, 1905. Serial No. 293,882.

1. In a barrel filling machine, the combination and arrangement of a motor cylinder, and its piston, a filling tube and a sealing head, a tank for holding the beer under gaseous pressure, a beer communicating pipe between the tank and the filling tube, an air communicating pipe between the tank and the sealing head, a valve in this pipe, an air communicating pipe from the source of power to the cylinder, and a valve in this latter pipe, a rod or connection between these two valves so that they shall operate simultaneously, said rod being connected to a hand lever, a valve at the foot of the filling tube so constructed that when said tube is raised to its upper position, said foot valve will close both the filling tube and the air supply between the tank and the barrel and open the same when the filling tube is lowered, and means for automatically opening the valve at the lower end of the filling tube when the latter reaches its lower position, whereby by a single movement of the hand lever in one direction, the filling tube and sealing head may be caused to descend and engage the barrel, the air communication between the tank and the barrel be opened and thereafter the beer communication between the tank and the barrel also be opened, and by a single movement of the hand lever in the other direction, the beer communication and air communication be closed and the filling tube and sealing head lifted out of engagement with the barrel, all substantially as specified.

2. In a barrel filling machine comprising a sealing head and a filling tube telescoping therethrough, a motor cylinder and piston for raising and lowering the filling tube, a dash-pot having a piston of lesser area and interposed between the motor cylinder and the filling tube and a stop on the filling tube to limit its descent, and a valve at the lower end of the filling tube connected to the dash-pot piston rod, whereby the motor cylinder will act to lower the filling tube and subsequently to open the valve and in the reverse action to close the valve and raise the filling tube, substantially as specified.



3. In a barrel filling machine, the combination of the tank, the filling tube, the cylinder and piston for moving said filling tube up and down, the sealing head lifted by the filling tube and lowered by gravity, the framework for supporting the sealing head and filling tube, and a latch for automatically limiting the upward movement of the sealing head and filling tube in different positions whereby the apparatus may be used upon barrels of varying diameters without loss of time, substantially as specified.

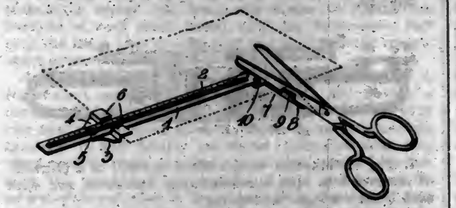
4. In a barrel filling machine, the combination of a filling tube, a cylinder and piston for operating the filling tube, a sealing head, weights for holding the latter down, a frame-work upon which this mechanism is supported and mounted upon trunnions placed at one side of the vertical center of gravity whereby the weight of the mechanism itself when disengaged from the barrel tends to swing it automatically out of the vertical operative position and hold it away from the barrel, and a latch for automatically limiting the upward movement of the sealing head, substantially as specified.

5. In a barrel filling machine, the combination with a filling mechanism comprising a filling tube, a valve for closing said filling tube, a valve stem, of a dash-pot movable with the filling tube and containing a piston, said piston being connected to the valve stem so that the valve will be held normally closed by a fluid pressure, and means for moving said dash-pot piston to open the valve, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

959,464. GAGE ATTACHMENT FOR SHEARS. ORPHA B. COLE and JAMES E. WRIGHT, Omaha, Nebr. Filed June 2, 1909. Serial No. 499,714.

A device of the character described comprising a gage bar having formed therein a longitudinally disposed slot and having arranged thereon a scale of measurement, a cloth guide adjustably mounted on said bar, means to secure said guide in its adjusted positions, a shears attaching member comprising a plate, blade engaging lugs formed on said plate and adapted to be engaged with the



blade of the shears, and a bar engaging lug formed on said plate and adapted to be secured to the inner end of the gage bar.

959,465. LAPPET FOR SPINNING AND TWISTING FRAMES. JOHN WILLIAM COOK, Eastleigh, Didsbury, England. Filed Oct. 14, 1908. Serial No. 457,663.



1. A lappet for spinning and twisting machines formed from a single piece of metal the body portion of which is bent over upon itself to form the top, bottom and one end thereof, and the sides of which are bent up to complete a box-like inclosure, the bottom being free from fluff-retaining projections, a block mounted within the inclosure and having an aperture, said block being confined between said top and bottom, and a thread guide having its shank mounted in said aperture.

2. A lappet for spinning and twisting machines formed from a single piece of metal the body portion of which is bent over upon itself to form the top, bottom and one end thereof, and the sides of which are bent up to complete a box-like inclosure, the bottom being free from fluff-retaining projections, a block mounted within the inclosure and having an aperture, said block being confined between said top and bottom, and having a projection fitting an opening in one wall of the said box-like inclosure, and a thread guide having its shank mounted in said aperture.

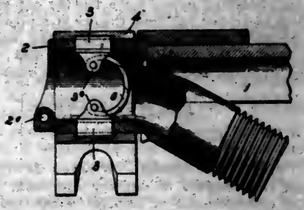
3. A lappet for spinning and twisting machines formed from a single piece of metal the body portion of which is bent over upon itself to form the top, bottom and one end thereof, and the sides of which are bent up to complete a box-like inclosure, the bottom being free from fluff-retaining projections, a block mounted within the inclosure and having an aperture, a thread guide having its shank mounted in said aperture, and means accessible from outside the box-like inclosure for securing the thread guide in position.

4. A lappet for spinning and twisting machines formed from a single piece of metal the body portion of which is bent over upon itself to form the top, bottom and one end thereof, and the sides of which are bent up to complete a box-like inclosure, a block mounted within the inclosure and having a tapering aperture, a thread guide having its shank mounted in said aperture, and set screws mounted in said block and projecting into the aperture from opposite sides.

959,466. ADJUSTABLE BRAKE-HEAD. FREDERICK R. CORNWALL, St. Louis, Mo., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 10, 1910. Serial No. 537,140.

1. The combination of an adjustable brake head, a pair of friction blocks coöperating therewith, and means whereby said friction blocks may be retracted so as to release said head.

2. The combination of an adjustable brake head, a part of a brake beam on which said head is mounted, friction blocks mounted in said part, said part having a space into which the ends of said friction blocks extend, said projecting ends being provided with means whereby said blocks may be retracted.



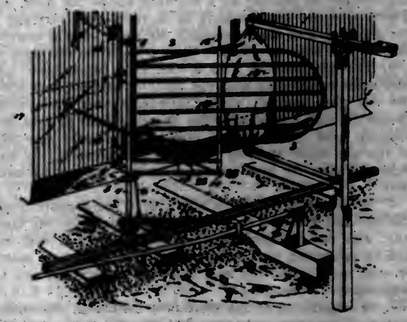
3. The combination of an adjustable brake head, a recessed part of a brake beam on which the same is mounted, friction blocks carried by said part, and means arranged in said recess for forcing said friction blocks in contact with said brake head to hold it in adjusted positions, and means whereby said friction blocks may be retracted out of engagement with said head.

4. The combination of an adjustable brake head, a recessed part of a brake beam on which the same is mounted, friction blocks carried by said recessed part, a spring in said recess coöperating with said friction blocks to force them outwardly in opposite directions to hold the brake in adjusted positions, and means whereby said friction blocks may be retracted out of engagement with said head.

5. The combination of an adjustable brake head having circumferentially disposed grooves in its socket of the part of a brake beam on which the said head is mounted, a plurality of friction blocks arranged in said part, means for pressing said friction blocks outwardly, and means whereby said friction blocks may be retracted out of engagement with said head.

[Claim 6 not printed in the Gazette.]

959,467. MAIL-COLLECTING DEVICE. WILLIAM M. CORTHELL, Chicago, Ill., assignor to Railway Automatic Mail Device Co., Chicago, Ill., a Corporation of Illinois. Filed Oct. 6, 1909. Serial No. 521,803.



1. A mail handling gate or body comprising a vertical shaft and a transverse body comprising longitudinal rods, a cross bar secured to the longitudinal rods at a distance from the shaft, said cross rod extending below the main part of the gate, and a gate-returning spring connected to the lower end of said cross-rod, as set forth.

2. A mail collecting device adapted to swing out from and back to a car doorway to collect mail, an arm extending downward therefrom to the level of the bottom of the car body, and a stop connected to said arm.

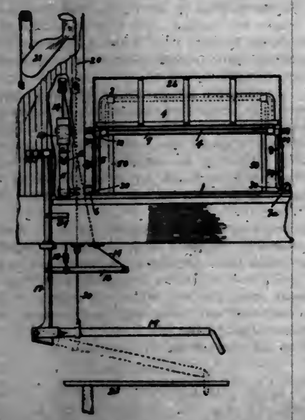
3. A mail collecting device adapted to swing out from and back to a car doorway to collect mail, combined with a stop to limit the outward swing of said device, and automatic means for swinging said device in both directions.

4. A mail catching device adapted to swing out from and back to a car doorway to collect mail, and automatic means for swinging said device in both directions combined with a stop to limit outward swing of said device, and a returning spring.

5. A mail-handling device for a moving car adapted to swing so as to project out from the car at a predetermined angle, combined with means for arresting said device when it reaches the predetermined limit, and automatic means for swinging said device both out as stated and reversely.

[Claims 6 to 14 not printed in the Gazette.]

959,468. MAIL-DELIVERER. WILLIAM M. CORTHELL, Chicago, Ill., assignor to Railway Automatic Mail Device Co., a Corporation of Illinois. Filed Oct. 6, 1909. Serial No. 521,304.



1. The combination with a car having a doorway, of a bag-support in the car at a distance above the floor, and means whereby said support is moved bodily forward in the doorway and simultaneously its outer edge is lowered and its rear edge is raised to eject a bag from the support.

2. The combination with a car, of a bag-support, pivoted arms adapted to hold the front of said support above the car floor and to swing forwardly and downwardly therewith, and legs supporting the rear edge of said bag-support, said legs inclining forward from said rear edge to the car floor, whereby forward movement of the bag-support raises its rear edge and lowers its front or outer edge.

3. The combination with a car, of a bag-support inside the car and adapted to be inclined toward the car doorway, and means comprising a vertical shaft, a cam rail and an operating arm connected to said shaft and moved by said rail for moving said bag-support forward and increasing its inclination.

4. In apparatus of the character described, the combination of an elevated bag-support adapted to be placed in a car inside a doorway, pivoted supports for the bag-support, means temporarily locking the supports in position to hold the bag-support elevated, and means comprising a vertical shaft, an operating arm, and a cam rail, for releasing the supports and starting the bag-support forward.

5. The combination of a bag-support adapted to be placed inside the doorway of a car, pivoted supports for the bag-support above the car floor, and means including temporarily locking the pivoted supports in position to hold the bag-support above the car floor, and means including a cam rail and an arm operated thereby for bending said levers and starting the bag-support forward.

[Claims 6 to 16 not printed in the Gazette.]

959,469. BEARING. OSCAR GARLAND COSBY, Hampton, Va., assignor of forty-nine one-hundredths to Francis F. Causey, Hampton, Va. Filed June 8, 1909. Serial No. 500,819.



1. The combination with a pivot bearing, of a plurality of reservoirs in open communication therewith and with each other through the bearing.

2. The combination with a pivot bearing, of a plurality of reservoirs in open communication therewith and with each other through the bearing, said reservoirs being formed for a gravity feed.

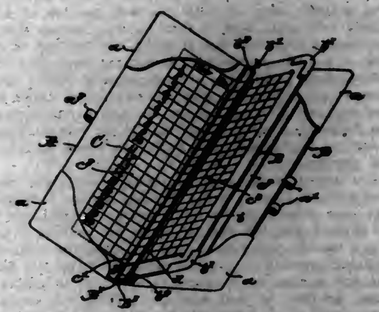
3. The combination with a pivot bearing, of a plurality of reservoirs in open communication therewith, the upper edges of the female portion of the bearing being above the possible height of lubricant in the reservoirs.

4. The combination with a pivot bearing, of a plurality of reservoirs in open communication with the lower portion of the bearing, the upper edges of the oil confining space of the bearing being above the possible height of lubricant in the reservoirs.

5. The combination with a pivot bearing having the female portion formed with an oil channel encircling and in communication with the bearing recess, and a reservoir in open communication with said channel.

[Claims 6 to 8 not printed in the Gazette.]

959,470. CONDUCTOR'S REPORT-BOOK. SAMUEL E. CREASEY, Sanford, Me. Filed Feb. 9, 1910. Serial No. 542,897.

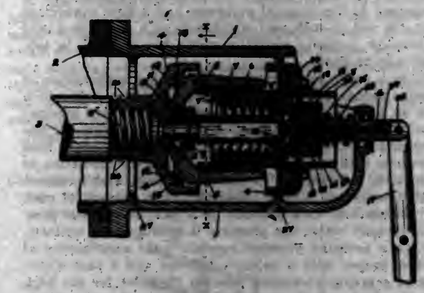


1. In a conductor's report-book of the class described, the combination with two flexibly connected outer-cover leaves, and an intermediate inner-cover leaf flexibly connected therewith and provided with an elongated slot adjacent its free edge, of a report-sheet provided with suitable forms and passed through the slot in and folded centrally upon the opposite sides of the inner-cover leaf and laid upon the inner sides of said outer-cover leaves, and means to removably retain said report-sheet in place upon the inner-cover leaf, whereby by swinging the latter over upon one or the other of the outer-cover leaves the entire surface of the report-sheet can be exposed for entries thereupon.

2. In a conductor's report-book of the class described, the combination with two flexibly connected outer-cover leaves, and an intermediate inner-cover leaf flexibly connected therewith and provided with an elongated slot adjacent its free edge, of a report-sheet provided with suitable forms and passed through the slot in and folded centrally upon the opposite sides of the inner-cover leaf and laid upon the inner sides of said outer-cover leaves, overhanging corner-lips on the latter to coöperate with and retain in place the portions of the report-sheet laid upon said outer-cover leaves, and detachable means to engage the portions of such sheet folded upon the inner-cover leaf near the inner edge of such leaf and maintain the report-sheet in place thereupon.

3. In a conductor's report-book of the class described, a report-sheet provided with suitable forms and having a central fold and oppositely turned side folds, combined with two flexibly connected outer-cover leaves, an intermediate inner cover-leaf flexibly connected therewith and provided with an elongated longitudinal slot adjacent its free edge, the upper and lower edges of said leaf having diagonal slots enlarged at their inner ends, the central fold of the report-sheet lying within the longitudinal slot while the side folds lie substantially adjacent the junction of the outer and inner-cover leaves at opposite sides of the latter, an elastic retaining band embracing the portions of the sheet lying upon opposite sides of the inner-cover leaf and held in place in the enlarged inner ends of the diagonal slots, and means on the outer-cover leaves to engage and hold in place the corners of the report-sheet.

959,471. GOVERNOR FOR STEAM OR ELASTIC-FLUID ENGINES. CHARLES W. DAKE, Grand Rapids, Mich., assignor to The Dake-American Steam Turbine Company, Grand Rapids, Mich. Filed June 13, 1908. Serial No. 438,416.



1. In a governor mechanism, the combination of the external protecting casing 1; a revoluble shell 4 suitably secured to the end of the engine shaft; governor weights within the said shell having suitable knife edge projections; bearings within the shell to receive the knife edges; ball bearings in suitable pockets at the inner ends of said weights; an internal spring connection spindle 8 with a collar 9 thereon for receiving the force of the said governor weights; an external adjustable spring connecting sleeve 7; a coiled tension spring fitting in suitable screw thread recesses between the said sleeve and internal spring connection; a collar 14 on the outer end of the said shell 4 within which the said sleeve 7 is adjustably supported by suitable screw threads; a suitable ball race with bearing balls 19 arranged in the outer end of the spindle 8; a governor stem 16, conical at its outer end to fit the said ball bearing; a suitable oil-packing 20—21 around the said stem; a spring 23 around the said stem; and a collar 16' on the stem for receiving the thrust of the said spring for holding it in yielding contact with the ball bearing, all coacting substantially as described and for the purpose specified.

2. In a governor mechanism, the combination of a revoluble shell 4 suitably secured to the end of the engine shaft; governor weights within the said shell having suitable knife edge projections; bearings within the shell to receive the said knife edges; ball bearings in suitable pockets at the inner ends of said weights; an internal spring connection spindle 8 with a collar 9 thereon for receiving the force of the said governor weights; an external adjustable spring connecting sleeve 7; a coiled tension spring fitting in suitable screw thread recesses between the said sleeve and internal spring connection; a collar 14 on the outer end of the said shell 4 within which the said sleeve 7 is adjustably supported by suitable screw threads; a suitable ball race with bearing balls 19 arranged in the outer end of the spindle 8; a governor stem 16, conical at its inner end to fit the said ball bearing, with means for holding it yieldingly against said bearing, all coacting substantially as described and for the purpose specified.

3. In a governor mechanism, the combination of a revoluble shell 4 suitably secured to the end of the engine shaft; governor weights within the said shell having suitable knife edge projections; bearings within the shell to receive the said knife edges; ball bearings in suitable pockets at the inner ends of said weights; an internal connection spindle 8 with a collar 9 thereon for receiving the force of the said governor weights; an external adjustable spring connecting sleeve 7; a coiled tension spring fitting in suitable screw thread recesses between the said sleeve and internal spring connection; a collar 14 on the outer end of the said shell 4 within which the said sleeve 7 is adjustably supported by suitable screw threads; a suitable ball race with bearing balls 19 arranged in the outer end of the spindle 8; and a governor stem 16, conical at its inner end to fit the said ball bearing, with means for holding it yieldingly against said bearing, all coacting substantially as described and for the purpose specified.

4. In a governor mechanism, the combination of a revoluble shell 4 suitably secured to the end of the engine shaft; governor weights within the said shell; an internal spring connection spindle 8 with a collar 9 thereon for receiving the force of the said governor weights; an external adjustable spring connecting sleeve 7; a coiled tension spring fitting in suitable screw thread recesses between the said sleeve and internal spring connection; a collar 14 on the outer end of said shell 4 within which the said sleeve 7 is adjustably supported; a suitable ball race with bearing balls 19 arranged in the outer end of the spindle 8; and a governor stem 16, conical at its inner end to fit the said ball bearing, with means for holding it yieldingly against said bearing, all coacting substantially as described and for the purpose specified.

5. In a governor mechanism, the combination of a revoluble shell 4 suitably secured to the end of the engine shaft; governor weights within the said shell; an internal spring connection spindle 8 with a collar 9 thereon for receiving the force of the said governor weights; an external adjustable spring connecting sleeve 7; a coiled tension spring fitting in suitable screw thread recesses between the said sleeve and internal spring connection; a collar 14 on the outer end of the said shell 4 within which the said sleeve 7 is adjustably supported; a suitable thrust bearing at the outer end of the spindle 8; a governor stem fitting against said bearing, with means for holding it yieldingly against said bearing, all coacting substantially as described and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

959,472. SAFETY-PIN. WILLIAM R. DANCY and CHARLES B. WESTCOTT, Savannah, Ga. Filed Dec. 23, 1908. Serial No. 468,947.



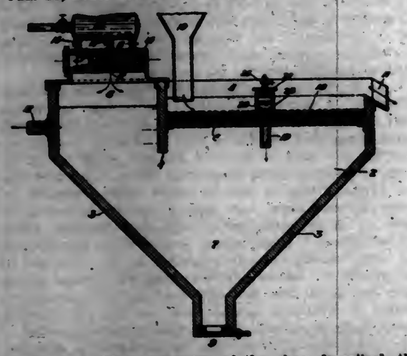
1. A safety pin comprising a fixed bar, a pointed bar having a resilient connection with said fixed bar, a sheath carried by said fixed bar and having a pocket presenting an open side, said pocket having a gap at the side remote from said open side and being adapted to receive the point of said movable bar, a keeper rigidly carried by

said fixed bar and having a flexible arm extending into said pocket, said flexible arm having an offset normally obstructing the gap in said pocket, said sheath having a slot, said flexible arm extending through said slot and having a knob, said sheath having a fixed knob normally spaced from said knob of said arm.

2. A safety pin comprising a fixed bar, a movable pointed bar having a resilient connection with said fixed bar, a sheath carried by said fixed bar and having a gap, and a keeper normally obstructing said gap and projecting beyond said sheath, whereby said keeper can be released from the outside of said sheath, said fixed bar projecting through said sheath and carrying a knob affording a grip for the operation of said keeper.

3. The combination with a safety pin, of a sheath secured thereto having a slot through which the point of the pin is movable and a yoke-shaped keeper having arms extending through the sheath and provided with knobs for the purpose set forth, one of said arms being secured to the sheath and the other having an offset for obstructing the slot.

959,473. COAL-WASHING APPARATUS. EDMUND P. DANDRIDGE and JOHN B. CRESNA, Pittsburg, Pa. Filed Jan. 18, 1910. Serial No. 538,768.

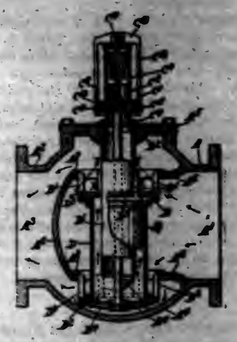


1. In a washing apparatus of the class described, the combination with the tank and its perforated screen, and means for imparting pulsations to the water in the tank, of a conduit pipe extending through the screen to the interior cavity of the tank and having its open lower end within the tank, an inlet pipe having a freely open upper inlet end adjustably mounted in the upper end of said pipe, and a surrounding shell concentrically spaced away from said conduit and above the screen providing a circulation space for impurities and having a closing head and a valve controlled air port, substantially as set forth.

2. In a washing apparatus, the combination of a main tank having a dividing partition providing a washing compartment at one side and a pulsation compartment at the other side thereof, means for supplying water to the pulsation compartment and for producing pulsations therein, a discharge gate for impurities at the base of the tank, a screen arranged across the washing compartment provided with a vertically disposed conduit pipe leading to the interior lower portion of the tank and having adjustably secured in its upper end a terminal inlet pipe, a surrounding shell spaced above the screen and concentrically around the pipe and providing an air chamber; and means for supplying raw material to the screen and for leading off the washed mineral, substantially as set forth.

959,474. PRESSURE-REGULATOR. GEORGE C. DAVIS, and WALTER A. DALBY, Chicago, Ill., assignors to George M. Davis Regulator Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 7, 1908. Serial No. 461,476.

1. In a reducing pressure regulator, the combination of a valve proper with a balancing device and a part which acts as a deflector parallel with the line of movement of that portion of the balancing device which is exposed to the internal fluid pressures and a fluid connection from the end of such part which acts as a deflector to a part of the low pressure chamber where the pressure is substantially uniform.



2. In a reducing pressure regulator, the combination of a valve proper with a balancing device and a part which acts as a guard interposed between the inlet for the high pressure fluid and that part of the balancing device which is exposed to the internal pressures and a fluid connection from the end of such part which acts as a guard to a part of the low pressure chamber where the pressure is substantially uniform.

3. In a reducing pressure regulator, the combination of a valve proper with a balancing device and a part which acts as a deflector to deflect high pressure fluid streams in a line substantially parallel with that portion of the balancing device which is exposed to the internal fluid pressures, said part which acts as a deflector consisting of a cylinder intersecting the paths of such high pressure fluid streams and a fluid connection from the end of such part which acts as a deflector to a part of the low pressure chamber where the pressure is substantially uniform.

4. In a reducing pressure regulator, the combination of a valve proper with a balancing device and a part which acts as a guard interposed between the inlet for the high pressure fluid and that part of the balancing device which is exposed to the internal pressures, said part which acts as a guard consisting of a cylinder intersecting the paths of such high pressure fluid streams and a fluid connection from the end of such part which acts as a guard to a part of the low pressure chamber where the pressure is substantially uniform.

5. In a reducing pressure regulator, the combination of a valve proper with a balancing device and a part which acts as a conduit leading from that portion of the balancing device, which is exposed to the internal pressures, to the delivery chamber of the valve at a point remote from the point where the in-leading streams of high pressure fluids enter the delivery chamber on lines directed toward the exposed portion of the balancing device, said part which acts as a conduit consisting of a cylinder intersecting the paths of such high pressure fluid streams and inclosing the moving part of the balancing device.

[Claims 6 to 25 not printed in the Gazette.]

959,475. ARM AND LEVER. SPENCER E. DAVIS, Minneapolis, Minn., assignor to Monitor Drill Company, St. Louis Park, Minn., a Corporation of Minnesota. Filed June 21, 1909. Serial No. 503,361.

1. The combination with an angular shaft, of an arm made up of laterally spaced arm members, having seats engaging said shaft, and a double-ended spacing wedge, the ends of which are inserted between said shaft and the shaft seats of said arm members and project through said arm members, substantially as described.

2. The combination with an angular shaft, of an arm made up of laterally spaced arm members having seats engaging said shaft, a double-ended spacing wedge, the ends of which are inserted between said shaft and the shaft seats of said arm members and project through said arm members, and a nutted bolt for drawing the said arm members against said spacing wedge, substantially as described.



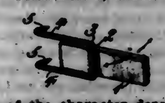
3. The combination with an angular shaft, of an arm made up of laterally spaced arm members having angular seats engaging said shaft, a double-ended wedge bar which is angular in cross section, placed on one of the angular edges of said shaft with its ends interposed between said shaft and the angular shaft seats of said arm members and projecting through said arm members, and means for clamping said arm members against the ends of said wedge bar, substantially as described.

4. The combination with a rectangular shaft, of an arm made up of laterally spaced arm members having rectangular seats fitting said rectangular shaft, said seats at one corner having an angular enlargement, a double-ended wedge bar fitting one corner of said shaft with its ends inserted in the enlargements of the said shaft seats and pressing one corner of said shaft, and a bolt for clamping said arm members against said wedge bar, substantially as described.

5. The combination with an angular shaft, of an arm made up of laterally spaced arm members having angular seats fitting said shaft, a longitudinally bowed double-ended wedge bar that is angular in cross section with its ends engaging one corner of said shaft and interposed between said shaft and the shaft seats of said arm members, and means for clamping said arm members onto said wedge bar, substantially as described.

[Claim 6 not printed in the Gazette.]

959,476. FASTENING DEVICE FOR DOORS. LOUIS A. DAY, Philadelphia, Pa., assignor to John B. Hall, Philadelphia, Pa. Filed Feb. 1, 1910. Serial No. 541,218.

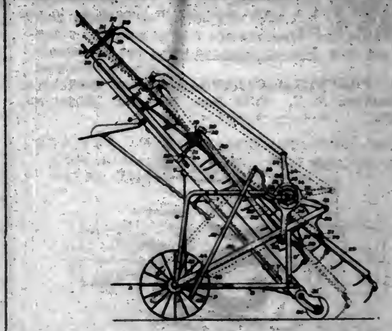


In a device of the character described, a substantially rectangular flat body portion formed with a bore through its width and located at a distance from its middle dividing said body into a long and a short arm, a pintle in said bore, and arms at the ends of such pintle and extending at an angle thereto and of greater length than the short arm of the body portion and having angularly disposed pointed ends adapted to be driven into a door jamb or similar rigid support.

959,477. HAY-LOADER. SAMUEL K. DENNIS, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Dec. 2, 1909. Serial No. 530,924.

1. In a hay loader, the combination of traction wheels, an elevator frame, a series of rake gangs, a crank shaft deriving motion from said traction wheels, means for transmitting a reciprocatory movement to said rake gangs, said means including rocking lever members having a series of arms, said members being mounted upon opposite sides of said elevator frame, pitmen connecting said lever members with said crank shaft, and other pitmen connecting said lever members with said rake gangs.

2. In a hay loader, the combination of an elevator frame, an axle mounted thereon, carrying wheels mounted upon said axle, cranks secured to opposite ends of said axle, a series of rake gangs, means for transmitting a reciprocatory movement to said rake gangs, said means including rocking lever members having a series of arms, said lever members being mounted upon opposite sides of said elevator frame, pitmen connecting said lever members with said cranks, and other pitmen connecting said lever members with said rake gangs.



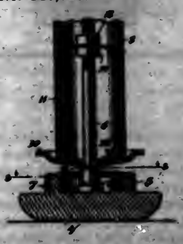
3. In a hay loader, the combination of an elevator frame, an axle mounted thereon, carrying wheels mounted upon said axle, double cranks secured to both ends of said axle, a series of rake gangs, means for transmitting a reciprocatory movement to said rake gangs, said means including rocking lever members mounted upon opposite sides of said elevator frame and provided with a series of arms, means for giving a rising and falling movement to said rake gangs, pitmen connecting said lever members with said rake gangs, pitmen connecting said lever members with said double cranks, and other pitmen connecting said double cranks with the means for giving a rising and falling movement to said rake gangs.

4. In a hay loader, the combination of an elevator frame, an axle mounted thereon, carrying wheels mounted upon said axle, cranks secured to opposite ends of said axle, a series of rake gangs, means for giving a rising and falling movement alternately to said rake gangs, said means including transversely arranged rock shafts mounted upon said elevator frame, arms connecting said shafts with individual rakes in said gangs, and pitmen connecting said rock shafts with said cranks in a manner to rock them in opposite directions.

5. In a hay loader, the combination of an elevator frame, an axle mounted thereon, carrying wheels mounted upon said axle, cranks secured to opposite ends of said axle, a series of rake gangs, means for giving a rising and falling movement to said rake gangs alternately, said means including transversely arranged rock shafts mounted upon said elevator frame, toothed segments secured to opposite ends of said rock shafts and operative in a manner to cause said shafts to move in opposite directions, resilient arms connecting said shafts with said rake gangs, arms secured to the segments attached to one of said shafts, and pitmen connecting said arms with said cranks.

[Claim 6 not printed in the Gazette.]

959,478. SLIDING-SHOE FURNITURE ATTACHMENT. WILLIAM DICHMANN, Oshkosh, Wis. Filed Mar. 7, 1910. Serial No. 547,730.



A sliding shoe attachment for furniture etc., comprising a disk having a central socket, a stem the lower end

of which has loose sliding contact with the bottom of said socket, and a centrally apertured socket-cap attached to the disk in loose engagement with the stem, said stem being provided with a lower shoulder in opposition to the underside of the cap.

959,479. PERPETUAL CALENDAR. ELI W. DOOLITTLE, Binghamton, N. Y. Filed Sept. 20, 1909. Serial No. 518,534.



1. A device of the class described including a body, a series of leaves hingedly connected thereto, each face of each leaf having a portion of a character indicated thereon, the exposed faces of adjoining leaves having the portions of the characters thereon arranged to register to form a complete character, and a similar arrangement of leaves upon the body and at opposite sides of the first mentioned leaves, said last mentioned leaves being arranged to extend over and conceal the first mentioned leaves.

2. A calendar including a body, a base extending therefrom and constituting means for holding the body in an inclined position, a central and side series of leaves movably connected to the body, there being a portion of a character formed upon each face of each leaf, the exposed faces of adjoining leaves of each series coöperating to disclose a complete character, upper and lower series of leaves movably connected to the body, there being the upper portions of a series of characters on one face of each leaf and the lower portions of a series of characters upon the other face of each leaf, the exposed faces of adjoining leaves coöperating to disclose complete characters, the leaves of the side series being proportioned to extend over and conceal the leaves of the central series.

959,480. LAMP-FILLER. GEORGE B. N. DOW and ALBERT W. COLE, Manchester, N. H. Filed Feb. 25, 1910. Serial No. 545,860.



1. A lamp filler including a stationary reservoir section, the bottom of which is provided with a central opening surrounded by a nipple to be secured to the lamp, and the sides of said reservoir section extending below the plane of the bottom thereof, a channeled closure section having a central opening to receive the burner and the lower portions of its side walls being upturned to receive the depending sides of the reservoir section.

2. A lamp filler including an oblong stationary reservoir section, the bottom of which is provided with a central opening surrounded by a nipple to be secured to the lamp, and the sides of which extend below the plane of the bottom, a channeled closure section having a central opening to receive the burner and the lower portions of its side walls being upturned, said upturned portions constituting ways to receive the depending sides of the reservoir section, and lateral lugs on the outer faces of the opposite sides of the channeled closure section.

959,481. SCISSORS. JOHN WESLEY DOWDEN, Reeves, La., assignor of one-half to Albert A. Koonce, Lake Charles, La. Filed June 16, 1909. Serial No. 502,408.



1. In a device of the character described, a pair of scissor blades provided with handles, a screw rivet securely attached to one of said blades, a nut threaded on said rivet for holding the blades together, and means for holding said nut stationary in relation to the adjacent blade.

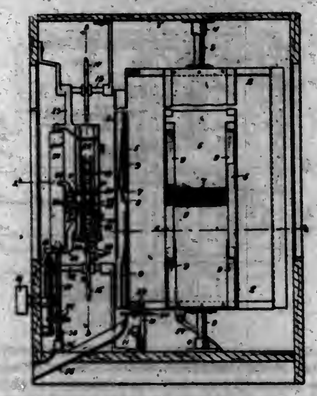
2. In a device of the character described, a scissors blade provided with a handle having an opening formed therein, a screw rivet mounted in said opening and securely attached to the blade, another scissors blade provided with a handle and having a beveled opening formed therein through which passes the screw rivet, a circular nut having beveled sides provided on its periphery with notches and having a screw driver slot formed therein, said nut adapted to be threaded upon the screw rivet, and a spring dog mounted upon one of the blades adapted to engage the notches in the nut, as specified.

3. In a device of the character described, a scissors blade provided with a handle and having an opening formed therein, a screw rivet mounted in said opening and securely attached to the blade, another scissors blade provided with a handle and having a beveled opening formed therein through which passes the screw rivet, a circular nut having beveled sides provided on its periphery with notches and having a screw driver slot formed therein, said nut adapted to be threaded upon the screw rivet, a spring dog being virtually U-shaped having a screw receiving opening formed in one end and having teeth formed therewith adapted to engage the nut, and means for securing said spring dog to one of the blades.

4. In a device of the character described, a scissors blade provided with a handle, and having an opening formed therein, a screw rivet mounted in said opening and securely attached to the blade, another scissors blade provided with a handle and having a beveled opening formed therein through which passes the screw rivet, a circular nut having beveled sides provided on its periphery with notches and having a screw driver slot formed therein, said nut adapted to be threaded upon the screw rivet, a spring dog being virtually U-shaped having a screw receiving opening formed in one end and having teeth formed therewith adapted to engage the nut, a screw for securing the spring dog to one of the blades, and a downwardly extending pin mounted on the spring dog in proximity to the screw receiving opening extending into the blade for holding the spring dog in position.

6. In combination, two cutting blades, a screw rivet attached to one of said blades and held against rotation in relation thereto, and a nut threaded on said rivet and held against rotation in relation to the adjacent blade, so that when said blades are opened the nut will back off the rivet, causing the blades to move away from one another, and when said blades are closed the nut will thread on to the rivet, causing the blades to come together.

959,482. CARD-VENDING MACHINE. RICHARD F. DOWNEY, Milwaukee, Wis., assignor to Automatic Card Seller Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Apr. 10, 1909. Serial No. 489,037.



1. A vending machine comprising a housed revoluble reel, lineal series of vertically disposed rows of pockets carried by the reel, delivery guide flanges common to the pockets of each row, a yielding card retaining and stripping finger for each card pocket, selector mechanism disposed adjacent to the reel whereby access is had to each pocket of a particular row, means for actuating the selector mechanism, and a lock and release mechanism in connection with the selector actuating means.

2. A vending machine comprising a housing having a revoluble reel mounted therein, lineal series of vertically disposed rows of pockets carried by the reel, uninterrupted delivery guide flanges extending from the sides of the pockets of each row, and yielding card retaining and stripper finger for each pocket, a selector in juxtaposition to the face of said reel, means exterior of the housing for imparting longitudinal movement to the selector relative to the particular row of reel pockets, a spring-controlled selector actuating mechanism, and lock and release means for the actuating mechanism.

3. A card vending machine comprising a housing having a revoluble reel mounted therein, card pockets carried by the reel, a vertically disposed conveyer arranged to have movement longitudinally of the reel, a spring-actuated card-selector carried by the conveyer, fixed means for locking the spring-actuated card-selector disposed at intervals adjacent to the path of travel of said card-selector, a releasing-bar for the aforesaid card-selector locking means, the bar being arranged parallel with the travel of said card-selector.

4. A card vending machine comprising a vertically disposed reel having rows of longitudinally disposed card-pockets therein, a closed housing for the reel, a longitudinally movable card-selector mechanism disposed adjacent to the reel, means exterior of the housing for imparting longitudinal movement to the selector mechanism, other means exterior of the housing for imparting rotation to the reel, spring-controlled actuating means for the selector mechanism, a locking-latch for the spring-controlled selector actuating means, a releasing-bar arranged to actuate the locking-latch, whereby the selector mechanism is released, and a series of resetting lugs disposed in the path of said selector-mechanism, whereby the latter is reset after each releasing operation.

5. A card vending machine comprising a housing having a revoluble reel mounted therein, lineal series of vertically disposed rows of pockets carried by the reel, delivery guide flanges common to the pockets of each row, a yielding card retainer and stripper finger for each pocket, a vertically disposed endless conveyer arranged to have movement longitudinally of the reel, a spring actuating card selector carried by the conveyer, fixed means for locking the spring actuating card selector disposed at intervals adjacent to the path of travel of said card selector, and a releasing bar for the aforesaid card selector locking means, the bar being arranged parallel with the travel of said card selector.

[Claim 6 not printed in the Gazette.]

959,483. WAGON-REACH ADJUSTER. WILLIAM P. DUNLAP, Maquoketa, Iowa. Filed Sept. 30, 1909. Serial No. 520,325.



1. A wagon reach consisting of a pair of alined bars, sockets secured to the opposed ends of said bars, bearing heads working in said sockets, and a retaining element loosely engaged through said bearing heads whereby to connect said bars.

2. In a wagon reach, a pair of alined bars, sockets removably secured to the opposed ends of said bars, bearing heads working in said sockets, each of said bearing heads having a lateral projection provided with a flat working face adapted to bear against the projection of the opposed bearing head, and a retaining element connecting said bearing heads.

3. In a wagon reach, a pair of alined bars, sockets detachably secured to the opposed ends of said bars, each of said sockets having a flat working face for contact with the opposed socket, bearing heads working in said sockets, and a retaining element passed centrally through said bearing heads whereby to hold said sockets in contact.

4. In a wagon reach, a pair of alined bars, a pair of sockets disposed on the opposed end faces of said bars, bearing heads working in said sockets, said bearing heads being provided with annular bearing collars on their opposed surfaces adapted for contact, and a retaining element connecting said bearing heads.

959,484. ART OF SMELTING ORES. ARTHUR S. DWIGHT, San Luis Potosi, Mexico. Filed Mar. 2, 1903. Serial No. 145,803.



1. The herein described improvement in the art of smelting ore, which consists in heating the ore in a vertically disposed body in a shaft, feeding to the top of the shaft near the walls thereof masses of material containing smaller particles and larger particles of the ore, fuel and fluxes mixed together, arresting the inward flow of the said masses of newly fed commingled material at the top of the shaft, causing them to slowly settle step by step and simultaneously causing the finer particles to separate from the larger ones of the commingled masses on vertical lines adjacent to the shaft walls, and after the material has been thus arrested for a predetermined distance in its downward travel releasing the larger particles and per-

mitting them to roll toward the central vertical lines of the shaft.

2. The herein described method of treating ore and smelting it, it consisting in heating the ore in a vertically disposed body in a shaft, feeding to the top of said body near the walls of the said shaft a substantially continuous supply of masses of material containing smaller particles and larger particles of the ore, fuel and fluxes mixed together, causing the gases and fumes from the heated lower part of the body to pass upward substantially on the vertical central lines thereof, arresting the inward flow beyond a predetermined point of the said masses of newly fed commingled material at the top of said body and around the upward passage for said gases and fumes, causing them to settle slowly downward gradually toward the heating region, simultaneously causing the finer particles to separate from the larger ones of the commingled mass as it settles, and causing them to travel on vertical lines adjacent to the shaft walls, and then after the material has been thus arrested for a given distance in its downward flow releasing the larger particles of the commingled material at a horisontal plane below the plane of feeding and permitting them to roll toward those central vertical lines of the shaft along which the gases and fumes escape upward across the horisontal plane of feed.

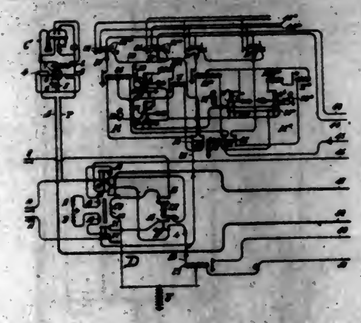
3. The herein described method of initially supplying ore, fuel and fluxes to the top of the shaft of a smelter, which consists in filling the said shaft with the said commingled materials to the horisontal line where the material will settle in accordance with natural flow under the action of gravity, feeding to the top of the body of material thus formed commingled masses of said material, temporarily restraining the upper piled portions of material from natural flow inward, causing them to settle step by step on lines near the side walls of the furnace and simultaneously causing the finer particles to separate from the larger ones and to move downward on said lines, and then after the material thus restrained has moved downward a given distance allowing the larger particles in accordance with natural flow under gravity and the pressure of the superincumbent mass to roll or move toward the central vertical part of the lower mass.

4. The herein described improvement in the art of smelting ore which consists in heating the ore in a vertically disposed body in a shaft, feeding to the top of said body near the walls of said shaft masses of material containing smaller particles and larger particles of the ore, fuel and fluxes mixed together, restraining the masses of newly fed material from inward flow beyond a predetermined point toward the central vertical lines of the shaft, causing them while thus restrained to settle slowly step by step and simultaneously causing the finer particles to separate from the larger ones of the commingled mass on vertical lines adjacent to the shaft walls, and then after the material thus restrained has traveled downward adjacent to the shaft walls a predetermined distance, releasing the larger particles thereof and permitting them to move under the action of gravity and the pressure of the superincumbent mass of material toward the central vertical lines of the shaft.

5. The herein described improvement in the art of smelting ore, which consists in heating the ore in a vertically disposed body whose central top portion is shaped by the natural flow of the material under gravity, feeding to the top of said body on vertical lines outside of the vertical planes surrounding said central top portion masses of commingled smaller and larger particles of ore, temporarily restraining the particles of said newly fed masses against inward flow while causing them to slowly settle step by step, simultaneously causing the finer particles to separate from the larger ones on vertical lines adjacent to the shaft walls and causing them to travel continuously downward on said vertical lines, and then when the particles of said newly fed masses have moved downward along the furnace walls a predetermined distance releasing the larger particles and permitting them to roll along the inclined lines of natural flow toward the central vertical lines of the shaft.

[Claims 6 and 7 not printed in the Gazette.]

959,485. AUTOMATIC TELEPHONE SYSTEM. ALFRED H. DYSON, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Jan. 8, 1909. Serial No. 471,314.



1. In a telephone system, the combination with an organization comprising telephone lines, and a circuit adapted to be influenced responsive to current over any of said lines, of a second like circuit and a switch automatically operated responsive to trouble in said organization to substitute said second circuit for said first-mentioned circuit in said organization.

2. In a telephone system, the combination with an organization comprising telephone lines, selectors, a starting circuit operable responsive to current over said lines and mechanism sensitive to the electrical condition of said circuit to connect said selectors interchangeably with said lines, of a second starting circuit, and a switch automatically operated responsive to trouble in said organization to substitute said second circuit for said first-mentioned circuit in said organization.

3. In a telephone system, the combination with selectors and means for starting the same, of a starting circuit operatively associated with said selectors, a second starting circuit, and means responsive to disabling of the first starting circuit to automatically connect into operative relation with said selectors said second circuit.

4. In a telephone system, the combination with selectors, of a conductor for starting the same, means for interchangeably associating said conductor with different selectors, a second starting conductor not in operative relation with said selectors, and apparatus responsive to an abnormal condition of said means for automatically connecting said second conductor into operative relation with said selectors.

5. In a telephone system, the combination with selectors, of a conductor for distributively starting the same and operatively associated therewith, a second conductor for distributively starting said selectors and inoperatively associated therewith, means for altering the electrical condition of said first conductor in order to start a connected selector, and an automatic switch operated responsive to failure of said connected selector to start to operatively dissociate said first conductor from said selectors and operatively associate said second conductor therewith.

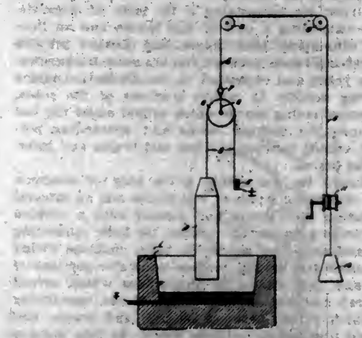
[Claims 6 to 27 not printed in the Gazette.]

959,486. ELECTRODE SUPPORT AND CONDUCTOR. ISAAC R. EDMANDS, Niagara Falls, N. Y., assignor to Electro Metallurgical Company, New York, N. Y., a Corporation of West Virginia. Filed Jan. 8, 1909. Serial No. 471,850.

1. An electrode, a flexed electrode conductor, and means for adjusting said electrode and for maintaining said conductor taut.

2. An electrode, a flexed electrode conductor, and means for adjusting and counterbalancing said electrode and for maintaining said conductor taut.

3. An electrode, a flexible conductor fixed at one end and connected at its other end to said electrode, and means for adjusting said electrode and for maintaining said conductor taut.

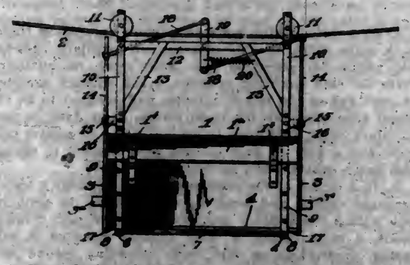


4. A vertically-adjustable electrode, a flexible conductor connected at one end to said electrode and at its other end to a fixed electric main, and an adjustable support for said conductor, between said electrode and main, maintaining said conductor taut.

5. A vertically-adjustable electrode, a flexible conductor connected at one end to said electrode and at its other end to a fixed electric main, and a counterbalanced adjustable support for said conductor, between said electrode and main, maintaining said conductor.

[Claims 6 and 7 not printed in the Gazette.]

959,487. OVERHEAD CARRIER. JAMES EARL EISENHUTH, Buckingham, Ill., assignor to William J. Herscher, Buckingham, Ill. Filed Apr. 16, 1908, Serial No. 427,531. Renewed Oct. 25, 1909. Serial No. 524,556.



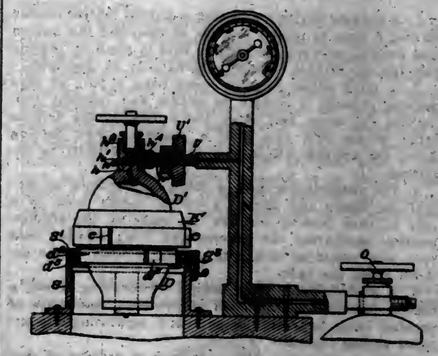
1. In a device of the character described, the combination with an elevated track, of a carrier having a body, a drop bottom for the latter, hangers adjacent to the ends of the body, track wheels upon the hangers for engagement with the track, a connecting bar between the hangers, a lever pivoted intermediate its ends upon the connecting bar, catch levers pivoted intermediate their ends upon the hangers and having their lower ends provided with catch hooks adapted to support the drop bottom of the body, links connecting the upper ends of said catch levers to the ends of the lever upon the connecting bar and a spring for actuating the catch levers to their locking or operative position.

2. In a device of the character described, the combination with an elevated track, of a carrier having a body, a drop bottom for the latter, hangers adjacent to the ends of the body, track wheels upon the hangers for engagement with the track, a connecting bar between the hangers, a lever pivoted intermediate its ends upon the connecting bar, catch levers pivoted intermediate their ends upon the hangers and having their lower ends provided with inwardly projecting beveled catch hooks adapted to support the drop bottom of the body, links connecting the upper ends of said catch levers to the ends of the lever upon the connecting bar, a spring for actuating the catch levers to their locking or operative position, and a trip stop upon the track and adapted to be engaged by one of the catch levers.

3. In a device of the character described, the combination with an elevated track, of a carrier having a body, vertical hangers adjacent to the opposite ends of the body and each having at its upper end a loop to receive the track and its lower end provided with diverging straps secured to the opposite sides of the body, track wheels journaled in the loops of said hangers and adapted to travel upon the track, a drop bottom for the body and a catch device for retaining said bottom in its elevated or closed position.

4. The combination of the body of a carrier, vertically extending reinforcing straps secured upon the opposite sides of the same and having their lower ends projecting and shaped to form hinge members, a drop bottom consisting of two downwardly and outwardly swinging sections, transverse reinforcing straps secured upon said bottom sections and each having one end shaped to form a hinge member and connected to one of said hinge members upon the reinforcing straps on the sides of the body, the opposite ends of the reinforcing straps on one bottom section being extended to overlap the other bottom section when said sections are in their elevated or closed position, and catch devices at the opposite ends of the body adapted to engage said extended ends of the last mentioned reinforcing straps.

959,488. CHARGING DEVICE FOR CALORIMETER-BOMBS. CHARLES J. EMERSON, Providence, R. I. Original application filed Aug. 20, 1908, Serial No. 449,445. Divided and this application filed July 9, 1909. Serial No. 506,733.



1. A support for a bomb of the character described, comprising a frame or standard, an annular holder adapted to hold a bomb mounted on said standard and angularly adjustable thereon in a horisontal plane, and means to fix said annular holder in said adjusted position.

2. The combination with an oxygen supply apparatus having a rigidly fixed delivery conduit adapted to be connected with the gas inlet port of a bomb, and a holder for the bomb revolubly mounted upon an axis fixed with relation to the oxygen delivery conduit and adapted to hold the bomb in connective relationship with the oxygen delivery conduit.

3. The combination with an oxygen supply apparatus having a rigidly fixed delivery conduit adapted to be coupled with the gas inlet port of a bomb, and a support for the bomb comprising a standard and an annular bomb holder adapted to hold the same in coöperative relationship with said oxygen delivery conduit, the said holder mounted on the standard and angularly adjustable there-

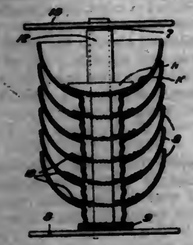
in, and means to fix said annular support in adjusted position.

4. A support for a bomb of the character described, comprising a frame or standard, an annular holder provided with notches to engage projections on and thus to hold a bomb mounted on said standard, the said holder being angularly adjustable on the standard in a horizontal position and means to fix said annular holder in said adjusted position.

5. The combination with an oxygen supply apparatus having a rigidly fixed delivery conduit adapted to be connected with the gas inlet port of a bomb, and a holder for the bomb revolubly mounted upon an axis fixed with relation to the oxygen delivery conduit, said holder provided with notches adapted to engage projections on and to hold the bomb in connected relationship with the oxygen delivery conduit.

[Claim 6 not printed in the Gazette.]

959,489. PACKING DEVICE. THOMAS R. EVANS and LORIN W. YOUNG, Pittsburg, Pa., assignors to Macbeth-Evans Glass Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Dec. 24, 1909. Serial No. 534,839.



1. A packing device comprising a divided central column having a base to receive articles surrounding the column and packing between the articles held in place by passing through the divided column, substantially as described.

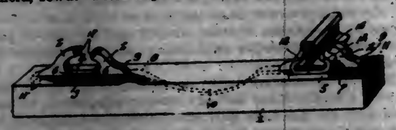
2. A lamp shade package, comprising a pair of bars passing through a column of shades and laterally supporting the same, and paper strips between the articles lying within said bars, and a retaining block holding down the articles within said bars, substantially as described.

3. The combination with a column of articles of general cup shape and having a central hollow neck, of a pair of bars passing through the necks of the articles, packing separating the articles and lying between said bars, and retaining means to prevent sliding of the articles along the bars.

4. A packing crate comprising a surrounding frame, a central post therein composed of two bars, and strips of packing lying between the bars and separating the articles packed therein.

5. The combination with a column of articles of general cup shape, having hollow necks, of a packing device in contact with the articles only on the necks and holding them rigidly in nested position, substantially as described.

959,490. RAILROAD-TIE. THOMAS LEE EVERETT, Fairfield, Iowa. Filed Sept. 10, 1909. Serial No. 517,121.

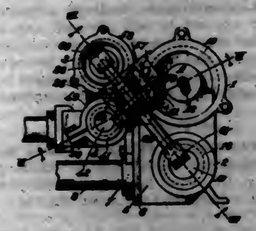


1. A railroad tie comprising a tie body of concrete, yokes each comprising a pair of rail braces and an integral base connecting said braces and formed with a cushion receiving recess between the braces, and a tie bar connecting the yokes and having its central portion depressed between the yokes and its opposite extremities projected downward beyond the yokes, the said tie bar being embedded in the tie body.

2. A railroad tie comprising a tie body of concrete, yokes each embodying a pair of rail braces and an integral base connecting said braces and formed with a cushion receiving recess between the braces, a tie bar connecting the yokes and embedded in the tie body, cushion blocks having notches to receive portions of the yokes, and rail clamps having braces which extend under the rail and rest upon the cushion blocks and upstanding portions which extend between the rail and braces and interlock with the braces.

3. A railroad tie comprising a tie body of concrete, yokes each embodying a pair of rail braces and an integral base connecting said braces and formed with a cushion receiving recess between the braces, tie bars connecting the yokes and embedded in the tie body, cushions fitting in said recesses and having notches to receive portions of the yoke, and rail clamps having braces which extend under the rail and rest on the cushion blocks, upstanding portions which extend between the rail and braces, and lugs on said upstanding portions which fit into notches in the braces.

959,491. WATER-MOTOR. HENRY T. FARNSWORTH, Altavista, Va. Filed Apr. 14, 1909. Serial No. 489,822.



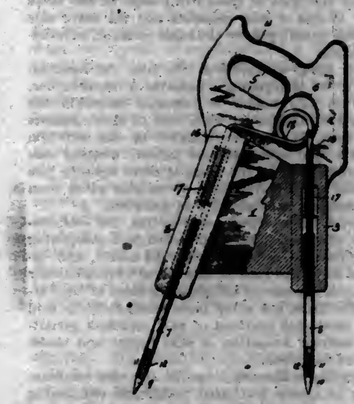
1. In a water motor a power cylinder and piston therein, a main valve for said cylinder, an auxiliary cylinder and piston for actuating said main valve, an auxiliary valve for said auxiliary cylinder, a rod slidably mounted at each end of the power cylinder and adapted to be engaged alternately by the main piston, arms fixed to said auxiliary valve, said arms being perforated to receive said rods, and a stop on each of said rods adapted to engage said arms, substantially as described.

2. In a device of the class described a cylinder a piston arranged therein and heads on said cylinder, in combination with a rod slidably mounted in each of said cylinder heads, a valve casing, a valve slidably mounted in said casing, projections on said valve extending beyond said casing at each end, arms on said projections, said arms extending into the path of said rods respectively, said arms being perforated to receive said rods, and thrust nuts threaded on said rods, substantially as described.

3. In a device of the class described, a power cylinder and power piston arranged therein a main valve casing cast integrally with said power cylinder, a main valve slidably mounted therein, an auxiliary cylinder and piston an auxiliary valve, means actuated by said power piston at each end of its stroke for shifting said auxiliary valve, an auxiliary piston rod and a rock lever connecting said piston rod and said main valve for shifting the latter, substantially as described.

4. In a device of the class described, a cylinder and a piston arranged therein in combination with a valve casing, a hollow cylindrical valve slidably mounted in said casing, said casing and said valve being open at the ends, a source of fluid pressure supply, ports forming a communication between said casing and said cylinder and between said source of supply and said casing, said valve being provided with peripheral grooves adapted to establish communication through said ports from said source to said cylinder, said valve also being provided with a peripheral exhaust groove and apertures extending through said valve from said exhaust groove to the interior thereof, substantially as described.

959,492. DEVICE FOR SHOCKING GRAIN BY HAND. HENRY FERRIS, Ardoch, N. D. Filed Mar. 11, 1909. Serial No. 482,851.



1. A hand shocking-device comprising a body portion provided at one end with a hand-hold, pointed tines projecting from said body portion, pivoted fingers carried by said tines, and manually operated means terminating coincident with the hand-hold for causing said fingers to be projected laterally from said tines in rear of the pointed ends thereof.

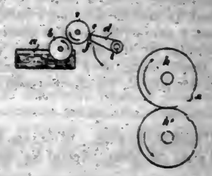
2. A hand shocking-device comprising a body portion, divergent tines projecting forwardly therefrom, pivoted fingers carried by said tines in rear of the pointed ends thereof, means for causing said fingers to be inclosed within the tines, and a hand hold means terminating coincident with the hand hold for causing said fingers to be projected laterally from said tines.

3. A hand shocking-device comprising a body portion provided with a hand hold, forwardly projecting tubular tines having pointed free ends, fingers pivotally supported in each tine in rear of the pointed end thereof, rods freely movable in said tines, means for connecting said rods with the pivoted fingers for operating the latter, springs for moving said rods in one direction and manually operated means terminating coincident with the hand hold for moving the fingers in the other direction.

4. A hand shocking-device comprising a body portion and a plurality of forwardly projecting tubular tines having pointed heads at their free ends, two fingers mounted in each of said heads and provided with lugs, each of said heads being made with lateral slots for the passage of the pivoted fingers, rods freely movable in the tubular tines, links connecting said rods with the lugs of the pivoted fingers, a hand hold on said body portion, a manually operated trigger located coincident with said hand hold for operating both rods to cause the pivoted fingers to be projected through the lateral slots in the heads of the pointed tines, and springs for moving said rods in the reverse direction.

959,493. GUMMING DEVICE FOR ENVELOP, BAG, AND LIKE MAKING MACHINES. ROBERT ERNST FISCHER and MAX WESCHER, Elberfeld, Germany. Filed Mar. 5, 1908. Serial No. 419,294.

1. In a gumming device of the character described, the combination of a gumming roll, a transferring roll, a rotary feeder for feeding adhesive from the gumming roll to the transferring roll, and means for rotating said feeder in a direction opposite to that of the gumming roll and at a greater circumferential velocity than the gumming roll, whereby the adhesive is scraped off of the gumming roll by said rotary feeder.



2. In a gumming device of the character described, the combination of a gumming roll, a transferring roll, a roll coöperating therewith, said rolls having complementary engaging elements, and a rotary feeder for feeding adhesive from the gumming roll to the transferring roll; said feeder being provided with a scraping edge adapted to scrape the adhesive off the gumming roll and having a pocket adjacent to the scraping edge complementary to the engaging member of the transferring roll, said pocket adapted to receive the adhesive scraped off by the scraping edge and deliver the same to said engaging member of the transferring roll.

3. In a gumming device of the character described, the combination of a gumming roll, a transferring roll, a roll coöperating therewith, said rolls having complementary engaging elements, a rotary feeder for feeding adhesive from the gumming roll to the engaging element of the transferring roll, a shaft on which the feeder is mounted, a driving member for the shaft, and means whereby the driving member can be coupled to and uncoupled from the shaft; said means being effective to bring the feeder into proper relative position with said engaging element of the transferring roll.

4. In a gumming device of the character described, the combination of a gumming roll, a transferring roll, a rotary feeder for feeding adhesive from the gumming roll to the transferring roll, a shaft on which the feeder is mounted, a driving member loosely mounted on said shaft, and means whereby the driving member can be coupled to and uncoupled from the shaft; said means comprising a coupling member slidably mounted on the shaft, normally engaging the driving member and provided with a cam face, and a movable member adapted to be brought into position to be engaged by the cam face of the coupling member to cause the coupling member to be withdrawn from the driving member.

959,494. CASEMENT-FASTENER. GEORGE L. FISHER, Omaha, Nebr. Filed June 19, 1906. Serial No. 322,468.

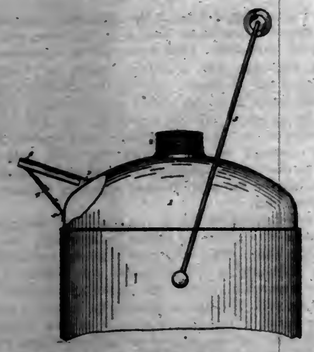


1. In a casement fastener, a casing, a cam-body rotatably held in said casing, there being on said cam-body a helical surface adapted to engage a socket, an elliptical portion carried by the cam-body and disposed eccentrically to the axis thereof, a spring having a hooked end adapted

to engage the point of the elliptical portion when the cam-body is at one extreme of movement and when disengaged from said point to press the cam-body toward its other extreme of movement, a stem connected with the cam-body, and means for turning said stem.

2. In a fastener of the class described, a casing having an offset or shouldered front, a socket of which the front is similarly offset or shouldered, there being on the shoulder of the socket a projecting portion extending into a recess in the shoulder of the casing front, and the recess in the casing front being of a length greater than the height of the entire socket, for the purpose set forth.

959,495. LIQUID-RETAINER. WILLIAM B. FISK, Upton, Mass. Filed July 21, 1909. Serial No. 508,789.



1. In a liquid-retainer, the combination with the retainer-body, of a discharge-chamber secured to the upper part thereof, a restricted passage leading from the interior of the retainer-body to the lower part of the discharge-chamber, and an outlet tube or passage secured in said discharge-chamber and disposed out of line with said restricted passage.

2. In a liquid-retainer, the combination with the retainer-body, of a discharge-chamber secured to the upper part thereof, a restricted passage leading from the interior of the retainer-body to the lower part of the discharge-chamber, and an outlet tube or passage secured in the upper part of said discharge-chamber and extending inwardly to a point adjacent said retainer-body.

3. In a liquid-retainer, the combination with the retainer-body, of an outwardly-tapering discharge-chamber secured to the upper part thereof, an outlet tube or passage secured in said discharge-chamber and forming therewith a baffling-compartment in the latter, and a restricted passage leading from the interior of the retainer-body to the lower part of said discharge-chamber or baffling-compartment therein.

959,496. RAZOR-BLADE SHARPENER. GEORGE G. FLOYD, Granite, Ill., assignor, by mesne assignments, to Twinplex Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed July 28, 1909. Serial No. 510,054.



1. In a razor blade sharpener or the like, the combination of a pair of sharpening elements, a blade-holder rotatable intermittently in one direction and adapted to swing the blade alternately from one element to the other, and operating means for said elements and holder, whereby one side of the cutting edge of the blade is acted upon by one of said elements and the other side of the blade edge acted upon by the other element, substantially as described.

2. In a razor blade sharpener or the like, the combination of a pair of rotary sharpening elements, a blade-holder rotatable intermittently in one direction and adapted to swing the blade alternately from one element to the other, and operating means to rotate said elements and holder, whereby one side of the cutting edge of the blade is acted upon by one of said elements and the other side of the blade edge acted upon by the other element, substantially as described.

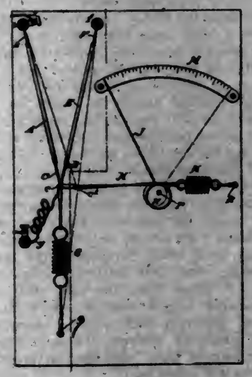
3. In a razor blade sharpener or the like, the combination of a pair of sharpening elements, a blade-holder, means acting on said holder to yieldably maintain the blade in operative engagement with both of said elements at the same time, and means actuated in one direction only to operate said elements and holder, whereby one side of the cutting edge of the blade is acted upon by one of said elements and the other side of its edge acted upon by the other element, substantially as described.

4. In a razor blade sharpener or the like, the combination of a pair of rotary mutilated cylindrical sharpening elements, an intermittently-movable blade-holder, and operating means to rotate said elements and intermittently actuate said holder, whereby the opposite sides of the cutting edge of the blade are acted upon alternately by said elements, the mutilated portions of said elements permitting the intermittent actuation of said holder and blade, substantially as described.

5. In a razor blade sharpener or the like, the combination of a pair of rotary mutilated cylindrical sharpening elements, an intermittently rotatable blade-holder, and means actuated in one direction only to rotate said elements and holder, whereby the opposite sides of the cutting edge of the blade are acted upon alternately by said elements, the mutilated portions of said elements permitting the intermittent rotation of the holder and blade, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

959,497. ELECTRICAL MEASURING INSTRUMENT. CHARLES EDWIN FOSTER, Rochester, N. Y. Filed Feb. 24, 1908. Serial No. 417,255.



1. The combination with a pair of thermal members arranged at an angle to each other and connected together, of a tension device acting on both members at their point of connection and mounted to swing with said point in a direction transverse to the direction of the pull of said tension device, means for directing an electric current through one of the members and means for determining the transverse movement of the point of connection.

2. The combination with a pair of thermal members arranged at an angle to each other and connected together, of a tension device acting on both members and secured at one end to swing and at its other end connected to the thermal members at their point of connection, means for directing an electric current through one of said thermal members and means for determining the movement of said point of connection.

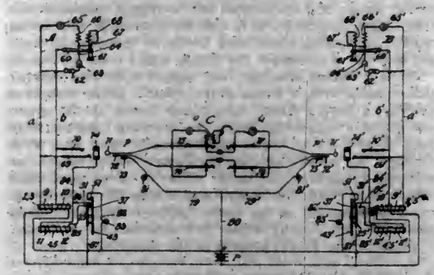
3. The combination with a pair of thermal members arranged at an angle to each other and connected together, of a tension device acting on both members at their point of connection, an indicator, and a flexible connection between the indicator and the thermal members extending from their point of connection in a direction transverse to the direction of the pull of the tension device.

4. The combination with a thermal member, of a pair of bending members at the ends of the thermal member, having greater flexibility than the thermal member and offering less resistance to the passage of an electric current, and means for directing an electric current through the bending members and the thermal member.

5. The combination with a thermal member, of a pair of bending members arranged at the end of the thermal member and each comprising a broad thin strip having greater flexibility than the thermal member, and offering less resistance to the passage of an electrical current, and means for directing an electric current through the bending members and the thermal member.

[Claims 6 to 8 not printed in the Gazette.]

959,498. TELEPHONE-EXCHANGE SYSTEM. SAMUEL B. FOWLER, La Fayette, Ind. Filed May 27, 1907. Serial No. 375,811.



1. In a telephone exchange system, the combination of a central exchange and lines leading therefrom to substations, a line signal, a supervisory signal, line relay mechanism, cut-off relay mechanism, and armature mechanisms for the relay mechanisms coöperating mechanically to control the line and supervisory signals.

2. In a telephone exchange system, the combination of a central exchange, substations connected with the exchange through telephone lines, a cord circuit at the exchange for connecting subscribers, a line signal, a supervisory signal, and a compound relay mechanism for controlling the operation of said signals.

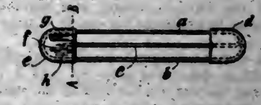
3. In a telephone exchange system, the combination of a central exchange, substations connected with the exchange through telephone lines, a line signal and a supervisory signal at the exchange, line relay mechanism and cut-off relay mechanism, an armature for the line relay mechanism and an armature for the cut-off relay mechanism, energization of the line relay mechanism causing movement of the cut-off relay mechanism armature to close the line signal circuit, energization of the cut-off relay mechanism causing movement of its armature to open the line signal circuit, the armature of the line relay mechanism controlling the supervisory signal circuit.

4. In a telephone exchange system, the combination of a central exchange, substations connected with the exchange through telephone lines, a line signal and a supervisory signal at the exchange, line relay mechanism and cut-off relay mechanism, an armature for the line relay mechanism, an armature for the cut-off relay mechanism, energization of the line relay mechanism causing movement of the cut-off relay mechanism armature to close the line signal circuit, energization of the cut-off relay mechanism causing movement of its armature to open the line signal circuit, the armature for the line relay mechanism when inert closing the supervisory signal circuit to cause illumination of the supervisory signal.

5. In a telephone exchange system, the combination of a central exchange, substations connected with the exchange through telephone lines, a cord circuit at the exchange for connecting with telephone lines, a line signal at the exchange, a supervisory signal at the exchange, a source of current at the exchange, line relay mechanism for each line controlled by the current flow therethrough, cut-off relay mechanism for each line, an armature for the line relay mechanism mechanically connected with the armature for the cut-off relay mechanism, energization of the line relay mechanism upon actuation of substation apparatus causing movement of the armatures, the movement of the cut-off relay mechanism armature causing closure of the line signal circuit, movement of the line relay mechanism armature and the connection of the cord circuit with the line causing closure of a circuit through the cut-off relay mechanism whereby its armature is attracted to open the line signal circuit, restoration of apparatus at the substation to its normal condition causing deënergization of the line relay mechanism to release its armature, and a supervisory circuit closed through the supervisory signal upon release of the line relay mechanism armature whereby the supervisory signal is actuated.

[Claims 6 and 7 not printed in the Gazette.]

959,499. THREE-PRONGED SAFETY-PIN. ANTON FREDERIKSEN, Copenhagen, Denmark. Filed Mar. 11, 1909. Serial No. 482,840.



A safety pin comprising in combination, two parallel members constituting the frame, a pin positioned centrally of said members and provided with a pin point, and a shield provided with upper and lower portions inclosing said members and pin point, one of said portions being recessed to receive the pin point when the same is in a normal or central position and also having a slit located laterally of the normal position of said point, said upper and lower portions being in close relation on that side of said recessed portion opposite said said slit to prevent substantial movement of said point in such direction.

959,500. MANUFACTURE OF GLASSWARE. HENRY C. FRY, Rochester, Pa. Filed May 7, 1908. Serial No. 431,391.

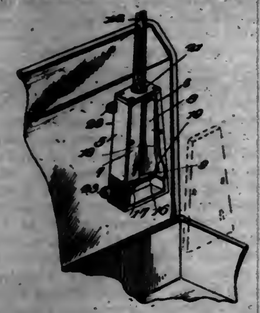


1. The method of finishing the surfaces of glass articles, which consists in gradually heating the surface to be finished to a degree of temperature above that of formation of the glaze, and then remelting the surface.

2. The method of finishing the surfaces of glass articles, which consists in gradually heating the article to a degree of temperature above that of formation of the glaze, and then remelting the surface to be finished.

2. The method of finishing the surfaces of glass articles, which consists in gradually heating the article to a degree of temperature above that of formation of the glass, and then remelting the surface to be finished, maintaining the shape of the article throughout the operation, and then allowing the article to cool.

959,501. WHIP-SOCKET LOCK. GEORGE GABEL, Fairpoint, Ohio. Filed June 30, 1909. Serial No. 505,290.



1. A whip socket including a casing, a clamping member, and a detent normally engaging the clamping member for holding the latter in inoperative position, said detent being actuated by engagement with a whip to release the clamping member.

2. A whip socket including a casing, relatively stationary and movable clamping members disposed within the casing, and a detent normally engaging the movable clamping member for holding the latter out of engagement with a whip, said detent being actuated by engagement with the butt end of the whip to release said movable clamping member when a longitudinal movement is imparted to the whip.

3. A whip socket including a casing, a clamping member provided with a depending stop lip, and a detent normally engaging the stop lip for holding the clamping member out of engagement with a whip, said detent being moved out of engagement with the stop lip when a longitudinal movement is imparted to the whip.

4. A whip socket including a casing, a clamping member pivotally mounted within the casing and provided with a depending stop lip, a detent normally engaging the stop lip for supporting the clamping member in inoperative position, and a spring bearing against the detent, said detent being disengaged from the stop lip by contact with the butt end of a whip when a longitudinal movement is imparted to the latter.

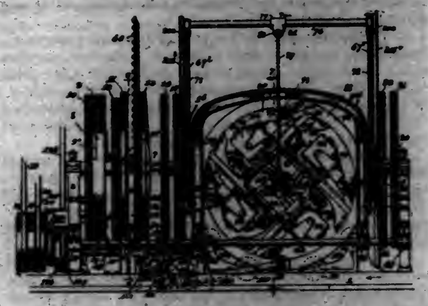
5. A whip socket including a casing, a clamping member pivotally mounted in the casing and provided with a depending stop lip, a detent normally engaging the stop lip for supporting the clamping member in inoperative position and movable out of engagement with the stop lip by contact with the butt end of a whip, and a pin extending laterally from the clamping member for engagement with the bit of a key.

[Claims 6 to 10 not printed in the Gazette.]

959,502. BUFFING-MACHINE. JOHN F. GAIL, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed Nov. 15, 1909. Serial No. 528,055.

1. In a buffing machine, the combination of a buffing member, a motor for driving the buffing member, means for carrying an object to be buffed through the field of the buffing member, and means for automatically causing bodily movement of the driving motor to shift the buffing position of the buffing wheel with respect to the object.

2. In a buffing machine, the combination of a buffing wheel, a motor for carrying and driving the buffing wheel, means for moving an object to be buffed back and forth through the field of the buffing wheel, means for moving the motor frame to withdraw the buffing wheel from the object when the ends of the object are reached, and means for moving the motor to carry the buffing wheel about the object to engage another area of the object.



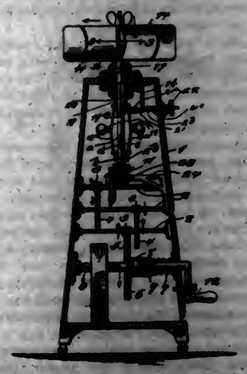
3. In a buffing machine, the combination of a driving motor, a buffing wheel supported and driven by the driving motor, supporting mechanism for carrying a comparatively long object lengthwise back and forth through the buffing field of the buffing wheel, and means for causing bodily movement of the motor at predetermined intervals to carry the buffing wheel from one buffing area to another of the object.

4. In a buffing machine, the combination of a driving motor, a buffing wheel supported and driven by the driving motor, supporting mechanism for carrying a comparatively long object lengthwise back and forth through the buffing field of the buffing wheel, and means for periodically moving said motor to remove the buffing wheel from the object.

5. In a buffing machine, the combination of a driving motor comprising a frame and operative parts supported thereby, a buffing wheel carried and driven by the operative parts, a supporting frame for carrying comparatively long objects to be buffed longitudinally back and forth through the buffing field of the buffing wheel, means for periodically moving the motor frame to carry the buffing wheel away from the object, and means for periodically causing movement of the motor frame to shift the buffing position of the buffing wheel with reference to the object.

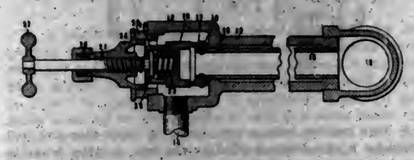
[Claims 6 to 31 not printed in the Gazette.]

959,503. FAN. JOSHUA H. GALLAND, Florence, Colo., assignor of one-half to Simon P. Smith, Florence, Colo. Filed Apr. 24, 1907. Serial No. 369,940.



In a device as set forth, a casing, a spring motor mechanism disposed therein, a fan-carrying shaft operated by said motor mechanism, said casing having a ball bearing for the fan-carrying shaft, comprising upper and lower plates forming borings secured to the upper and lower faces of the casing, a slidable removable sleeve having a rectangular bore, said fan-carrying shaft being provided with a rectangular portion to fit said bore to cause the two to rotate together, anti-frictional members contained in the borings, said fan-carrying shaft being composed of two sections so that one section and its fan may be removed without disturbing the other section thereof, said sections of the fan-carrying shaft being disposed continuous in a vertical plane and having their adjacent ends abutting, and a governor mechanism for regulating speed of the fan, as and for the purpose specified.

959,504. STEAM-HEATING SYSTEM. WILLIAM L. GARLAND, Llanerch, Pa., assignor to Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Sept. 26, 1907. Serial No. 394,601.



1. In a heating system for railway cars or like structures, in combination, a discharge conduit, a tubular member threaded into the inner end of said discharge conduit and extending longitudinally therethrough the outer end of said tubular member being adapted to slide in the outer end of said discharge conduit, a valve seat formed upon the outer end of said tubular member, a cap mounted upon the outer end of said discharge member, a valve stem threaded in said cap and capable of manipulation from a position exterior thereto, a cap loosely mounted on the inner end of said stem, a valve member secured thereto and a spring within said cap for urging said valve member toward its seat, said discharge conduit and said tubular member constituting a thermostatic device to move said valve seat toward or from the valve to regulate the discharge from the heating system in accordance with the internal heat conditions thereof.

2. In a heating system for railway cars or like structures, in combination, a discharge conduit, a tubular member threaded at one end into the inner end of said discharge conduit and extending longitudinally thereof, a valve seat formed upon the opposite end of said tubular member, a valve stem threaded into the outer end of said conduit capable of manipulation from a position exterior thereto, a flange on the inner end of said stem, a cap slidably mounted upon said stem and limited in its movement by said flange, a valve member secured to said cap and having a face thereon adapted to engage said valve seat and a spring interposed between said valve member and said flange adapted to resiliently press said valve member toward said valve seat.

3. In a heating system of the class described, in combination, a discharge conduit and a valve in said discharge conduit, said valve comprising a stem, a cap loosely mounted on the end thereof, means for retaining said cap on said stem, a valve member connected with said cap, and a spring between said retaining means and said valve member.

959,505. PROCESS OF PRESERVING WOOD. JEAN GERLACHE, Brussels, Belgium. Filed Apr. 10, 1909. Serial No. 489,228.

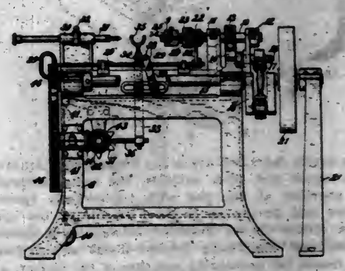
1. A process of preserving wood consisting in treating the wood with a solution of free ammonia, and salts of copper and zinc dissolved in said ammonia solution.

2. A process of preserving wood, consisting in treating the wood with a solution of free ammonia, and copper sulfate and a zinc salt dissolved in said ammonia solution.

3. A process of preserving wood consisting in treating the wood with a solution of free ammonia containing ¼ per cent. of a copper salt, and ¼–1 per cent. of a zinc salt dissolved therein.

4. A process of preserving wood consisting in treating the wood with a solution of free ammonia, and sulfate of copper and chlorid of zinc dissolved in said ammonia solution.

959,506. MACHINE FOR GRINDING COCKS. PAUL GERSTENKORN, Milwaukee, Wis. Filed Mar. 29, 1909. Serial No. 486,846.



1. A cock grinding machine, comprising a frame, a plurality of rotatable grinding devices mounted on said frame, gear forming part of each device and constructed to be operatively connected thereto, an oscillating work holding member for each device, a single reciprocating rack in constant mesh with each gear, and a clutch for operatively connecting each device to the rack.

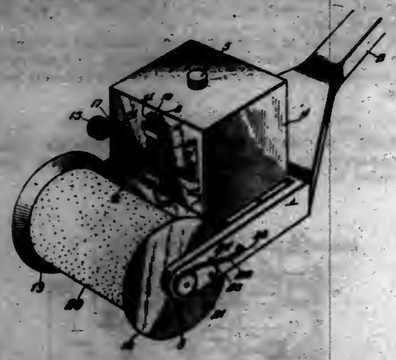
2. A cock grinding machine, comprising a frame, a plurality of rotatable grinding devices mounted on said frame, a gear and a clutch forming parts of each device and constructed to be operatively connected thereto, a pivoted work holding lever for each device and adapted to be oscillated at intervals of time, a single rack in constant mesh with all of the gears, and a crank for reciprocating the rack.

3. A cock grinding machine, comprising a frame, a plurality of rotatable grinding devices mounted on said frame, a single reciprocating means for rotating all of the devices, means for independently connecting each device to the reciprocating means, and a latch for holding the connecting device means in adjusted position.

4. A cock grinding machine, comprising a frame, a plurality of rotatable grinding devices journaled in bearings on said frame, a gear forming part of each device and constructed to be operatively connected thereto and positioned between two bearings, a rack in constant mesh with all of the gears and adapted to rotate each gear alternately in opposite directions, a pivoted work holding member for each device, a cam toothed wheel for oscillating each lever, a shaft on which said wheels are mounted, a pinion on said shaft, a short shaft provided with a pinion in mesh with said pinion, a large gear on the short shaft, and a pinion on the cranked shaft in mesh with the large gear.

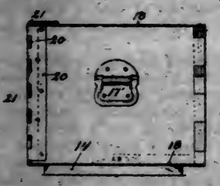
5. A cock grinding machine, comprising a frame, a plurality of rotatable grinding devices journaled in bearings on said frame, a gear forming part of each device and constructed to be operatively connected thereto and positioned between two bearings, a rack in constant mesh with all of the gears and adapted to rotate each gear alternately in opposite directions slidably mounted on said frame, a stud pin connected to said rack, a cranked shaft for reciprocating the rack, a connecting rod pivotally connected to the cranked portion of the shaft and to the stud pin, a pivoted work holding lever for each device, a cam toothed wheel for oscillating each lever, and a connection between the crank shaft and the wheel for causing their rotation.

959,507. SHOE-BLACKENER. SAMUEL G. H. GLASGOW, Palestine, Tex. Filed June 5, 1909. Serial No. 500,325.



The herein described appliance for applying liquid dressing to shoes and other articles, the same comprising a body provided at one end with transversely spaced extensions and having an inclined handle at the opposite end, a rotary dauber mounted between said spaced extensions and comprising beveled heads and a yieldable body, means for preventing rotation of the dauber, a tank mounted upon said body and having a discharge opening, a cut-off for closing said opening, means for adjusting said cut-off including a rack bar and pinion, a shaft carrying said pinion and provided with teeth, and a pawl attached to the tank and adapted to coöperate with the teeth of said shaft to hold the cut-off in adjusted position.

959,508. BUTTER-TREATING APPARATUS. CHRISTIAN GLAUB, Milwaukee, Wis. Filed Oct. 27, 1909. Serial No. 524,926.



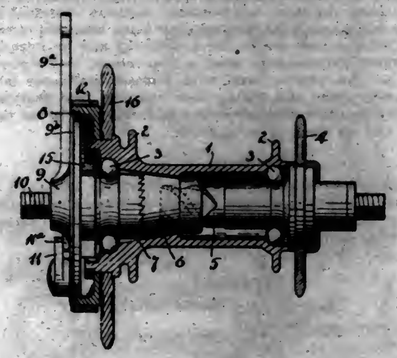
1. In a butter-treating apparatus, a stock-board, a snap-flask having detachable connection with the stock-board to encompass the same and therewith form a receptacle in which to mold butter, a support for said board and mold thereon, and a butter stop in connection with the support.

2. In a butter-treating apparatus, a support, a block in pivotal connection with the support, a stock-board designed to rest upon the block this board constituting the bottom of a snap-flask in which to mold butter, and a butter-stop in connection with said support.

3. In a butter-treating apparatus, a support having screw-threaded pins extending therefrom, thumb-nuts run on the pins, a butter-stop having a vertical shank provided with a longitudinal slot engaged by said pins, and a bail arranged in connection with the support to be swung up against the stop-shank and thereby cramp the same in vertically adjusted position against said nuts.

959,509. COASTER-BRAKE. CHARLES GLOVER, New Britain, Conn. Filed Dec. 18, 1908. Serial No. 468,125.

1. In a coaster hub, a hub proper, a brake therefor comprising a brake drum carried by the hub, a brake strap located externally of said drum, actuating means for said brake strap arranged within said drum, means of connection between the actuator within the drum and the strap external of the drum, including toggle levers.



2. In a coaster hub, a hub proper, a brake therefor comprising a brake drum carried by the hub, a strap brake located externally of said drum, an actuator for said strap brake arranged within said drum, a cover and protecting member for the latter, and operative means of connection between the actuator and strap brake passing through said cover member.

3. In a coaster hub, a hub proper, a brake therefor comprising a brake drum carried by the hub, a stationary abutment, a lever carried by the latter, a brake strap connected with said lever and arranged externally of the drum, and an actuator within the drum and operatively connected with said lever.

4. In a coaster hub, a hub proper, a brake drum, a strap brake surrounding the same and normally free thereof, toggle levers connected to said strap brake, a relatively stationary abutment for supporting and holding said toggle levers, an oscillating actuator and means for operatively connecting the actuator with said toggle levers, a driver, and means for coupling and uncoupling said driver with said hub or said actuator, respectively, by a forward motion of said actuator on the one hand, or a reverse motion of said driver on the other hand.

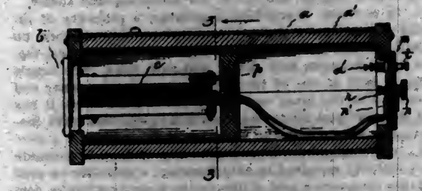
5. In a coaster hub, a hub proper, a brake drum, a strap brake surrounding the same and normally free thereof, toggle levers connected to said strap brake, a relatively stationary abutment for supporting and holding said toggle levers, an oscillating actuator concentric with said hub, and means for operatively connecting the actuator with said toggle levers, a driver, and means for coupling and uncoupling said driver with said hub or said actuator, respectively, by a forward motion of said actuator on the one hand or a reverse motion of said driver on the other hand.

[Claims 6 to 11 not printed in the Gazette.]

959,510. RECEIVING APPARATUS FOR WIRELESS TELEGRAPHY. ROBERT R. GOLDTHORP, Hartford, Conn. Filed Oct. 29, 1909. Serial No. 525,264.

1. A receiving apparatus for wireless telegraphy comprising a hollow tuning coil, a condenser located within said coil and supported from one end thereof, a condenser regulator mounted at the opposite end of said coil, electrical connections between said condenser and said regulator, and a detector mounted within said coil, substantially as described.

2. A receiving apparatus for wireless telegraphy comprising a hollow tuning coil, a condenser located within said coil and supported from one end thereof, a condenser regulator mounted at the opposite end of said coil, electrical connections between said condenser and said regulator, a detector mounted within said coil adjacent to said regulator, electrical connections between said detector and said regulator, a contact pin located in the circuit of said detector and adapted to make electrical connections with said regulator when the latter is in its "off" position to short circuit said detector.



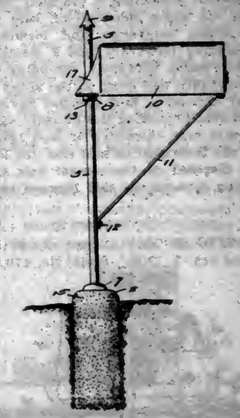
3. A receiving apparatus for wireless telegraphy comprising a hollow tuning coil, a condenser located within said coil and supported from one end thereof, a mounting plate hinged to the opposite end of said coil and adapted to close the opening therein, a condenser regulator rotatably mounted on the outside of said mounting plate, electrical connections between said condenser and said regulator, a detector secured to the inside of said mounting plate and connected with the binding post on the outside thereof, substantially as described.

4. A receiving apparatus for wireless telegraphy comprising a hollow tuning coil, a sectional condenser located within said coil and supported from one end thereof, a mounting plate hinged to the opposite end of said coil and adapted to close the opening therein, a detector rotatably mounted on said mounting plate, terminals on said mounting plate corresponding in number to the sections of said condenser, electrical connections between the sections of said condenser and said terminals, a regulator rotatably mounted on said mounting plate and having fingers adapted to be moved into operative relation with said terminals, a detector secured to said mounting plate, electrical connections between said tuning coil and said detector, electrical connections between said detector and said regulator, a terminal in said mounting plate connected into the circuit of said detector and adapted to be engaged by one of the fingers of said regulator when in its "off" position.

5. A receiving apparatus for wireless telegraphy comprising a hollow tuning coil, a sectional condenser located within said coil and supported from one end thereof, a mounting plate hinged to the opposite end of said coil and closing the opening therein, a detector mounted on the inside of said mounting plate, electrical connections from said coil to said detector through said hinges, condenser terminals on said mounting plate corresponding in number to the number of sections of said condenser, electrical connections between each section of said condenser and one of said terminals, a regulator rotatably mounted in said mounting plate and having a plurality of fingers corresponding in number to the number of condenser terminals and adapted to coöperate therewith for the purpose of determining the number of condenser sections in circuit, electrical connections between said detector and said regulator, a terminal in said detector circuit adapted to be engaged by one of the fingers of said regulator when in its "off" position, substantially as described.

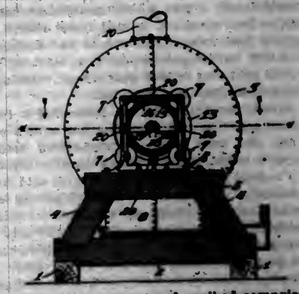
959,511. MAIL-BOX. WILLIAM J. GOLGERT, Juniata, Nebr. Filed Sept. 17, 1909. Serial No. 518,285.

In combination, a tubular standard having an enlargement at the lower end, a concrete base cast about the lower end of said standard, cylindrical in outline, a drain collar secured to said standard and resting upon the upper end of said base and supporting said standard, a collar secured near the upper end of said standard, a mail box having its base extending beyond the rear end of the box with an aperture, said standard passing through said aperture, and



brace rods extending from the forward corners of said box and secured to said standard above said drain collar.

959,512. MACHINE FOR MIXING CONCRETE. ALVIN K. GOODMUNDSON and ROBERT F. SMITH, Oakland, Cal. Filed July 31, 1909. Serial No. 510,622.



A machine of the character described comprising a base, end cross beams connected to said base, a casing, a rotatable drum having mixing paddles therein mounted in said casing and having a collar at each end, one of said collars being terminally enlarged to form a pulley, bearings for said collars, and means for conveying the material from said drum.

959,513. FASTENING FOR HEEL-CUSHIONS. WILLIAM LEONARD GORDON, Deal, N. J. Filed Nov. 11, 1908. Serial No. 462,050.

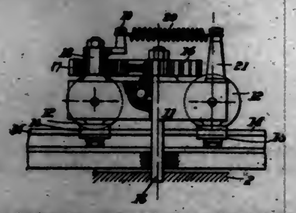


1. A heel cushion consisting of a pad having a plurality of substantially horseshoe-shaped ribs on the under side thereof forming channels therebetween having their openings disposed forwardly, and a metallic fastener attached to the under side of said pad near the forward edge thereof and having a tongue extending rearwardly depressed at its rear end to a point near the level of the lower edges of said ribs and surrounded by said ribs, said tongue having a

claw grip formed at the rear end thereof having spurs adapted to engage the upper side of the heel of the shoe.

2. A heel cushion presenting a plurality of horseshoe-shaped ribs on the under side thereof, said ribs having forwardly projecting extensions and forming channels therebetween opening forwardly, and a metallic fastener attached to said cushion forwardly, extending rearwardly, projecting downwardly, and lying on the upper face of the heel at its rear extremity, said fastener having spurs at the rear end thereof projecting downwardly and engaging the heel, the said rear extremity of said fastener being surrounded by the innermost of said ribs, the body of said fastener being disposed on the central axis of said heel cushion and lying between the said forward extensions of said ribs.

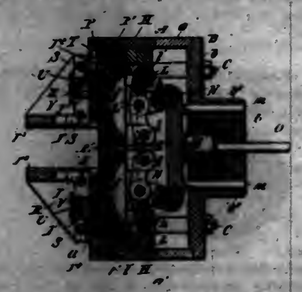
959,514. TURNING DOOR. ALBERT GOUBEAUT, Melun, France. Filed Jan. 5, 1909. Serial No. 470,852.



1. In a device for automatically returning a revolving door into closing position the combination, with a suspending pivot for the door, a truck supporting said pivot, wheels for said truck, a gear wheel mounted on said pivot, a second gear wheel mounted on said truck and in engagement with said first named gear wheel and means for returning said last named gear wheel into starting position with respect to said first named gear wheel, rotating thereby said first named gear and said door.

2. In a device for automatically returning a revolving door into closing position the combination with a suspending pivot for the door, a truck supporting said pivot, wheels for said truck, a gear wheel, axially mounted on said pivot, a second gear wheel in mesh with said first gear wheel and mounted on said truck, a crank pin on said second gear wheel, a projecting pin attached to said truck and in alinement with said crank pin and the axis of said pivot, a spring connecting said pins, and adapted to return said second gear in starting position with respect to said first named gear, rotating thereby the first named gear and said door.

959,515. CHUCK. PAUL J. GRIEBEL, Chicago, Ill. Filed May 17, 1909. Serial No. 496,577.



1. In a chuck, a housing, a plurality of radially-movable jaws slidably mounted in said housing, a plurality of toggles within said housing, each toggle having one end connected to said housing and the other end connected to one of the jaws, an axially-movable spider lying in rear of the toggles and projecting radially into proximity to the knuckles of the toggles, and links connecting said spider to the knuckles of the toggles.

2. In a chuck, a housing, a plurality of radially-movable jaws slidably mounted in said housing, a spider positioned within the housing in rear of the jaws, a plurality of toggles lying within said housing and between said spider and said jaws, each of said toggles being connected at one end to said housing and at its other end to the inner end of one of the jaws, and a link connecting said spider with each of said toggles, and means for actuating said spider.

3. In a chuck, a supporting member, a plurality of radially-movable jaws slidably mounted on said member, an axially-movable spider positioned in rear of said jaws, toggles lying between said spider and said jaws, each toggle lying in rear of one of the jaws and having its inner end connected to the inner end of the jaw behind which it lies and its outer end connected to said member, and links connecting said spider to the knuckles of the toggles.

4. In a chuck, a housing, a plurality of radially-movable jaws slidably mounted in said housing, a plurality of pins slidably connecting said spider to the housing so as to permit relative axial movement between the spider and the housing; toggles lying between the spider and jaws, each of said toggles having its inner end connected to the inner end of one of said jaws and its outer end connected to the housing, and links connecting the knuckles of said toggles to said spider.

5. In a chuck, a box-like housing, radially-movable jaws slidably mounted in one face of said housing, radially-removable blocks secured to said housing at the periphery thereof and in rear of said jaws, a spider in said housing in rear of said jaws, toggles lying between said spider and said jaws, each of said toggles being connected at one end to one of said blocks and at its other end to one of said jaws, and connections between said spider and knuckles of said toggles.

[Claim 6 not printed in the Gazette.]

959,516. PRODUCTION OF ANILIN BLACK ON FIBERS AND FABRICS. ARTHUR GEORGE GREEN, Leeds, England. Filed Jan. 15, 1908. Serial No. 410,934.

1. A process for the production of emeraldin and anilin black upon textile fibers and fabrics, comprising oxidation of an anilin base substantially by atmospheric oxygen in the presence of a copper salt associated with a substance capable of producing an indamin by condensation with anilin.

2. A process for the production of emeraldin and anilin black upon textile fibers and fabrics, comprising oxidation of an anilin base substantially by atmospheric oxygen in the presence of a copper salt associated with a paradiamin.

3. A process for the production of emeraldin and anilin black upon textile fibers and fabrics, comprising oxidation of an anilin base substantially by atmospheric oxygen in the presence of a copper salt associated with paraphenylenediamin.

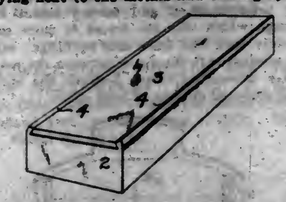
4. A process for the production of emeraldin and anilin black upon textile fibers and fabrics, comprising the application to the same of a mixture containing an anilin base, an acid, a salt of copper and a substance capable of producing an indamin by condensation with anilin, and afterward subjecting the material to atmospheric oxidation.

5. A process for the production of emeraldin and anilin black upon textile fibers and fabrics, comprising the application to the same of a mixture containing an anilin base, an acid, a salt of copper and a paradiamin, and afterward subjecting the material to atmospheric oxidation.

[Claim 6 not printed in the Gazette.]

959,517. METHOD OF UNITING METALS. WILLIAM GRIFFITH, Pittsburg, Pa., assignor of one-half to John M. Anderson, Pittsburg, Pa. Filed Dec. 7, 1908. Serial No. 466,285.

1. The hereindescribed process of uniting or welding metals of different kinds, which consists in first cleaning one of the kinds of metal, applying a coating of alkali solution, coating with a metal by depositing from a metallic salt, applying the desired metal to the last named coating, then applying heat to the metals and uniting by pressure.



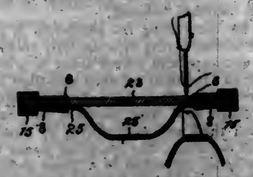
2. The hereindescribed process of uniting or welding metals of different kinds, which consists in first cleaning one of the kinds of metal, applying a coating of alkali solution, coating with a metal by depositing from a metallic salt, applying a second metallic coating, covering the last named coating with the desired metal, then applying heat to the metals and uniting by pressure.

959,518. ART OF PRODUCING HOLLOW ARTICLES OF METAL. WILLIAM GRIFFITH, Pittsburg, Pa. Filed Mar. 20, 1909. Serial No. 484,776.



The method of forming a body consisting of welding iron or steel to an inner core of softer metal, and piercing the softer metal, thus leaving a coating of softer metal adhering to the iron or steel.

959,519. MACHINE FOR MANUFACTURING HARNESS-PADS. CASPER H. GRINGS, Dubuque, Iowa, assignor to The Waterloo Saddlery Co., Waterloo, Iowa, a Corporation of Iowa. Filed Sept. 24, 1909. Serial No. 519,466.



1. In a device of the class described, a frame provided with an opening in its central portion, means on the inner edge of the frame for sustaining the bur-piece, and means secured to the frame for holding the pad bottoms upon the bur-piece while the bur-piece and pad bottoms are being united together.

2. In a device of the class described, a frame, a shoulder projecting from the inner edge of the frame adapted to support the bur-piece, and means connected with the frame for holding the pad bottoms upon the bur-piece while the bur-piece is being united to the pad bottoms.

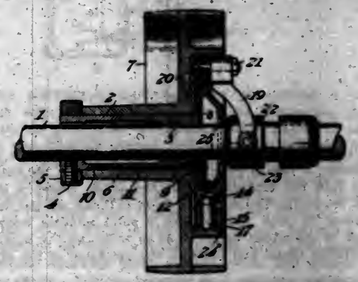
3. In a device of the class described, a frame, means attached to the inner edge of the frame for supporting the bur-piece, wings secured to the frame and adapted to engage the pad bottoms upon the bur-piece, and means connected with the frame for holding the wings rigidly on the pad bottoms and while the bur-piece and the pad bottoms are being secured together.

4. In a device of the class described, a frame provided with an opening near the center, a shoulder on the inner edge of the frame for supporting the bur-piece, wings attached to the frame and adapted to engage the edges of the pad bottoms, and clamps engaging the frame and wings for holding the wings upon the pad bottoms upon the bur-piece while the same are being united together.

5. In a device of the class described, a frame, a shoulder projecting from the inner edge of the frame for supporting the bur-piece, wings hinged to the opposite outer edges of the frame and adapted to engage the pad bottom resting upon the bur-piece, and a clamp adapted to engage one side of the frame and opposite side of the wing and securely clamp the pad bottom upon the bur-piece while the two are being united together.

[Claims 6 and 7 not printed in the Gazette.]

959,520. COMBINED OIL-BUSH AND FRICTION DEVICE. WILLIAM F. GROENE, Cincinnati, Ohio, assignor to R. K. Le Blond Machine Tool Company, a Corporation of Ohio. Filed Jan. 22, 1910. Serial No. 539,530.



1. The combination with a shaft, of a bushing secured on said shaft, said bushing being formed with a hollow head serving as an oil reservoir and having an opening for the passage of the shaft, said opening being of greater diameter than the shaft to afford an inlet for oil, a plurality of external bosses on the bushing, a loose pulley revoluble on the bushing, a friction ring loosely supported on said bosses, and a connection between said ring and one of said bosses, whereby said boss and shaft will be revolved with the ring when the latter is clamped to said pulley.

2. The combination with a shaft, of a bushing secured thereon, and provided with an oil reservoir having a plurality of external bosses, a loose pulley revoluble on said bushing, a friction ring loosely supported on said bosses, and a connection between said ring and one of said bosses, whereby said boss and shaft will be revolved with the ring when the latter is clamped to said pulley.

3. The combination with a shaft, of a bushing secured thereon, and provided with an oil reservoir, a loose pulley revoluble on said bushing and an expansible clamping ring interposed between said reservoir and pulley, and connected to said reservoir.

4. The combination with a shaft, of a bushing secured thereon, and provided with an oil reservoir, a loose pulley revoluble on said bushing, a friction device surrounding said reservoir, and connected thereto, and means for expanding said friction device into clamping engagement with said pulley to revolve said bushing and shaft.

5. The combination with a shaft, of a bushing secured thereon, and provided with an oil reservoir, a loose pulley revoluble on said bushing, a friction device surrounding said reservoir, and connected thereto, and means for expanding said friction device into clamping engagement with said pulley to revolve said bushing and shaft, comprising a lever pivotally secured to said friction device, and a longitudinally movable device on said shaft for forcing said lever outward.

959,521. ELECTROLYTIC APPARATUS WITH LIQUID ANODE. KONRAD HAHN, Winkel, near Gifhorn, Germany, assignor to The Firm of Schott & Gen., Jena, Germany. Filed May 27, 1909. Serial No. 498,739.

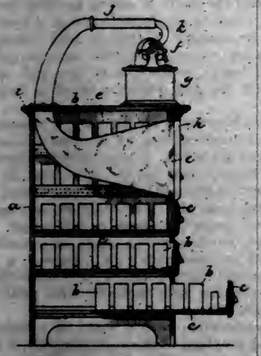
1. In an electrolytic apparatus an anode vessel, a cathode vessel arranged below the anode vessel and communi-

cating with it at a place superior to its bottom, a liquid anode covering this bottom, a solid cathode, an electrolyte contained in both vessels and a solid body arranged in the vertical direction above the bottom of the anode vessel so as to restrain the agitation of the anode.



2. In an electrolytic apparatus an anode vessel, a cathode vessel, a mouth projecting upwardly from the cathode vessel into the central part of the anode vessel, a liquid anode encircling the mouth, a solid cathode, an electrolyte contained in both vessels, and a solid annular body arranged in the anode vessel so as to surround the mouth of the cathode vessel and restrain the agitation of the anode.

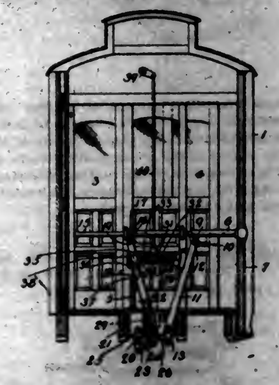
959,522. PHONOGRAPH-CABINET. EDWIN A. HALL, Hyde Park, Mass. Filed Mar. 9, 1908. Serial No. 419,862.



A phonograph cabinet having horn-receiving openings in its top and one side, a horn with an extended curved neck formed in one piece, the main body of the horn being within the cabinet, with its mouth in the side opening, and the curved neck extending through the opening in the top and extending for some distance above, and arched inwardly over the top, a phonograph and its casing mounted on said top, and having a short tube projecting inwardly in a single curve directly from its diaphragm holder, and a flexible tube connecting the said short curved tube with the extended end of the horn.

959,523. DOOR-OPERATOR. PHILIP T. HANDIGES, Cleveland, Ohio, assignor of one-half to Albert Waycott, Cleveland, Ohio. Filed May 9, 1908. Serial No. 431,804.

1. Means for controlling the admission of persons comprising fixed barriers lying substantially transverse to the direction of entrance, having openings therethrough to provide a passage-way for entrance, and spaced apart to provide a standing space for an attendant between said fixed barriers, and movable barriers mounted in controlling relation to the openings through said fixed barriers and having means through which they may be operated to alternately open and close said openings; the operating means for the movable barriers being connected in a plane extending across but outside of the attendant space so as to avoid obstructing the latter, and said connection enforcing reciprocal movements in the movable barriers.



2. Means for controlling the admission of persons comprising fixed barriers lying substantially transverse to the direction of entrance, having openings therethrough to provide a passage-way for entrance, and spaced apart to provide a standing space for an attendant and an auxiliary passage-way between said fixed barriers, and movable barriers mounted in controlling relation to the openings through said fixed barriers and having means through which they may be operated to alternately open and close said openings; the operating means for the movable barriers being connected in a plane extending across but outside of the attendant space so as to avoid obstructing the latter, and said connection enforcing reciprocal movements in the movable barriers.

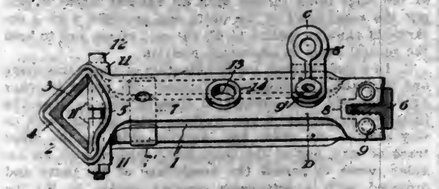
3. Means for controlling the admission of persons comprising fixed barriers lying substantially transverse to the direction of entrance, and spaced apart to provide a standing space for an attendant between said fixed barriers, and movable barriers mounted in controlling relation to the openings through said fixed barriers and having means through which they may be operated to alternately open and close said openings; the operating means for the movable barriers being connected in a plane extending across but outside of the attendant space so as to avoid obstructing the latter, and said connection enforcing reciprocal movements in the movable barriers, and having controlling means operable from said attendant space.

4. In combination with a barrier having entrance and exit openings, means for controlling admission through the entrance opening comprising a fixed barrier spaced from the barrier first named providing an attendant space between them barring ingress through the exit opening and providing an auxiliary passageway communicating with said entrance opening, movable barriers mounted in controlling relation to the opening past the fixed barrier and the entrance opening respectively, and means through which said movable barriers may be controlled to enforce reciprocal movements in them.

5. In combination with a barrier having entrance and exit openings, means for controlling admission through the entrance opening comprising a fixed barrier spaced from the barrier first named providing an attendant space between them barring ingress through the exit opening but leaving an opening giving access to the entrance, movable barriers mounted in controlling relation to the opening past the fixed barrier and the entrance opening respectively, and means through which said movable barriers may be controlled to enforce reciprocal movements in them; said attendant space communicating with the exit and also with the space between the movable barriers.

[Claims 6 to 14 not printed in the Gazette.]

959,524. FORGED-STEEL FULCRUM FOR TRUSSED TYPE OF BRAKE-BEAMS. PHILIP T. HANDIGES, Cleveland, Ohio, assignor to The Damascus Brake Beam Co., Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 1, 1910. Serial No. 546,665.



1. In a trussed brake beam, a fulcrum comprising a forging having a torsionally deflected and expanded end portion, an eye formed within said expanded portion and adapted to be secured by compression to the compression member of the brake beam, and a means adapted to effect said compression and simultaneously therewith to tension the fulcrum against the compression and tension members.

2. In a trussed brake beam, a fulcrum comprising a two-part forging designed to conform to and embrace a section of the compression member of the beam, and means whereby to secure the same thereon, and simultaneously therewith to tension said fulcrum against the compression and tension members.

3. In a trussed brake beam, a fulcrum comprising a two-part forging formed at one end with eyes adapted to embrace a section of the compression member of the beam, and means for clamping said fulcrum parts to the beam and simultaneously therewith tensioning the same against the compression and tension members.

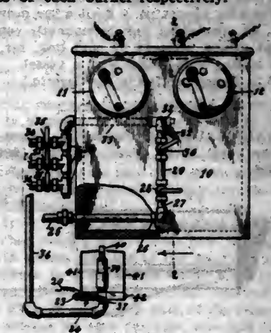
4. In a trussed brake beam, a fulcrum comprising a two-part forging having expanded end portions provided with eyes adapted to be secured by compression to the compression member of the brake beam, and a means adapted to effect the compression of said expanded eye portions and to simultaneously therewith tension the fulcrum against the compression and tension members.

5. In a trussed brake beam, a fulcrum comprising a two-part forging, each member whereof is torsionally deflected and is formed with an eye, said eyes adapted to embrace a section of the compression member and provide a free space immediately adjacent the front face thereof, and a clamping device interposed between the fulcrum parts adjacent the compression member and adapted to secure said fulcrum to the beam and simultaneously therewith effect the tensioning of the fulcrum against the compression and tension members, said free space permitting of the compression of the eyes and tensioning of the fulcrum parts.

[Claims 6 to 10 not printed in the Gazette.]

959,525. ELECTRIC GAS-LIGHTING APPARATUS. DAVID M. HARTFORD, CARLTON M. TAYLOR, and LEWIS S. STONE, Los Angeles, Cal. Filed Apr. 26, 1909. Serial No. 492,188.

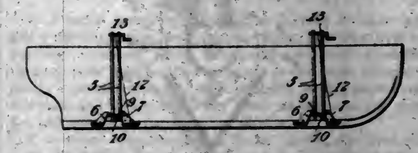
1. A plurality of gas burners, feed pipes leading respectively thereto, individual valves mounted in said feed pipes for controlling the flow to said burners, a supply pipe leading the gas to said feed pipes, a main valve in said supply pipe adapted to be closed completely or opened to its extreme capacity, a regulating valve in said supply pipe between said main valve and said feed pipes and adapted to be set to a fixed degree of opening, a plurality of sparking points adjacent to the flame of said burners, a sparking circuit including said sparking points, a main switch for rendering said sparking circuit active and an auxiliary switch closing the said sparking circuit through the sparking points of each burner respectively.



2. An electrically lighted burner comprising a tube through which the gas may issue, an insulating block mounted on said tube, a sparking point having a body with a pair of slots therein and having an extension presenting a point near the position of the flame of said burner, fastening devices passing through said slots into said block and adapted to fix said sparking point thereto, a second sparking point opposite said first sparking point and also having slots in the body thereof, fastening devices passing through said last named slots and securing said second sparking point to said block, and means for passing electric current between said sparking points.

3. An electrically lighted burner comprising a tube through which the gas may issue, an insulating block mounted on said tube, a sparking point having a body with a pair of slots therein and having an extension presenting a point near the position of the flame of said burner, fastening devices passing through said slots into said block and adapted to fix said sparking point thereto, a second sparking point opposite said first sparking point and also having slots in the body thereof, fastening devices passing through said last named slots and securing said second sparking point to said block, and means for passing electric current between said sparking points, one of said fastening devices being in engagement with said tube whereby the current through said sparking points is grounded through said tube.

959,526. WRECKING APPARATUS. JENS M. W. HASSING and JAMES V. FITZSIMMONS, San Francisco, Cal. Filed July 27, 1909. Serial No. 509,951.



1. In a wrecking apparatus, an elongated flexible bag, reinforcing bands thereon, an opening for admitting air thereto, an open sided link connected to said bag and guide rods adapted to be engaged by said link.

2. In a wrecking apparatus, a flexible bag containing a pipe for admitting air thereto, a traveler permanently connected to said bag and guide rods engaged by said traveler and permanently connected to the side of a vessel, substantially as set forth.

3. In a wrecking apparatus, a flexible bag containing an opening for admitting air thereto, a traveler permanently fastened to said bag and vertically disposed guide rods engaged by said traveler and permanently connected to the side of a vessel.

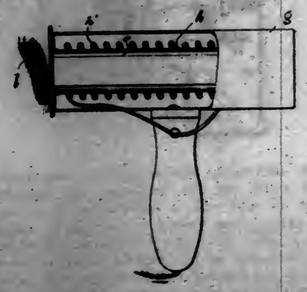
4. In a wrecking apparatus, a flexible bag provided with a traveler and guide rods, rigidly secured to the side of a

vessel, engaged by said traveler and terminating, at their lower ends, within the opening of an automatic clutch.

5. In a wrecking apparatus, a flexible bag provided with an air inlet, an open sided link permanently connected to said bag and means, engaged by said link, for retaining the same in sliding engagement with a vessel.

[Claims 6 to 17 not printed in the Gazette.]

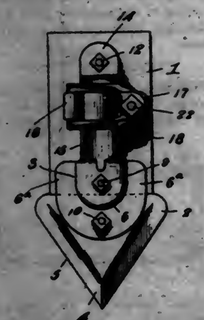
959,527. HAIR-WAVING APPARATUS. PAUL E. HERRMANN, New York, N. Y. Filed June 23, 1909. Serial No. 503,905.



1. The herein described device for waving hair, comprising a perforated metal tube constituting a curler, an asbestos tube adapted to fit over the curler with the curl thereon and an electric drier to be applied over the asbestos tube.

2. The herein described device for waving hair, comprising a perforated metal tube constituting a curler, an asbestos tube adapted to fit over the curler with the curl thereon, an electric drier to be applied over the asbestos tube and a heat protector for the head.

959,528. CULTIVATOR-SHOVEL. WILLIAM J. HERSCHER, Buckingham, Ill. Filed Jan. 16, 1909. Serial No. 472,694.



The herein described cultivator shovel comprising body and point sections arranged with their edges abutting, a combined attaching clamp and connecting member having flattened upper and lower ends, the lower end being formed upon its bottom and side edges with an outwardly projecting integral flange 6^a to extend over the abutting edges of the two sections, and to provide a support for the lower point section, bolts passed through the upper and lower ends of said member and the upper body section, another bolt passed through the lower central portion of the flange 6^a and said lower point section, and standard and receiving clamping means upon the intermediate portion of said member.

959,529. BALL-BEARING. HENRY HESS, Wawa, Pa. Filed Aug. 13, 1908. Serial No. 448,309.



1. In a ball bearing, the combination of the casing rings and the balls, the rings being formed with complementary tracks or ways for the balls which extend about and beyond the transverse diameters thereof, one of the rings being formed with an annular recess to permit the assemblage of the parts and provided with a detachable annular section to fill the said recess and to hold the several parts in assembled position.

2. In a ball bearing, the combination of the casing rings and the balls, the rings being formed with tracks or ways approximately semi-circular in cross-section, so that the balls are supported on two working sides by one track or way and on the other two working sides by the other track or way, one of the rings being formed with an annular recess to permit the assemblage of the parts and provided with a detachable annular section to fill the said recess and to hold the several parts in assembled position.

3. In a ball bearing, the combination of the inner and outer rings and the balls, the inner ring being formed with a track or way for the inner working side of the balls and projecting outwardly beyond the transverse diameters thereof to contact with one of the lateral working sides, and the outer ring being formed with a complementary track or way for the outer working side of the balls and projecting inwardly to contact with the other of the lateral working sides, one of the rings being formed with an annular recess to permit the assemblage of the parts and provided with a detachable annular section to fill the said recess and to hold the several parts in assembled position.

4. In a ball bearing, the combination of the casing rings and the balls, the rings being formed with tracks or ways approximately semi-circular in cross-section, so that the balls are supported on two working sides by one track or way and on the other two working sides by the other track or way, one of the rings being cut away throughout its periphery to permit the assemblage of the parts and provided with suitable retaining means to hold it in assembled relation to the other parts.

959,530. TOOL-RETAINER FOR AIR, ELECTRIC, OR MECHANICALLY-DRIVEN IMPLEMENTS. MEIER G. HILPERT, Pittsburg, Pa. Filed Nov. 30, 1904. Serial No. 234,923.



1. In an implement of the character specified, the combination with a barrel containing a plunger and having an unobstructed opening through which the tool may be withdrawn, of a tool projecting through said opening, and a coiled spring encircling the barrel and held at one end by the barrel and having the other end provided with tool engaging means.

2. In an implement of the character specified, the combination with a barrel containing a plunger and having an unobstructed opening through which the tool may be withdrawn, of a tool projecting through said opening, and a helical tension spring surrounding the axis of the barrel and having the inner end held by the barrel and the outer end provided with tool engaging means and being extensible along the axis of the barrel when the tool is driven outward by the plunger.

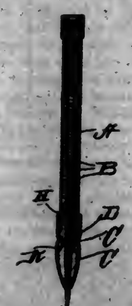
3. In an implement of the character specified, the combination with a barrel containing a plunger and having an unobstructed opening through which the tool may be withdrawn, of a tool projecting through said opening, and a plurality of helical springs surrounding the axis of the barrel and having one end held by the barrel and the other end provided with tool engaging means.

4. In an implement of the character specified, the combination with a barrel containing a plunger and having an unobstructed opening through which the tool may be withdrawn, of a tool projecting through said opening, and a plurality of helical springs of the same diameter nested together with their coils in a common curved surface and provided on one end with means for engaging the barrel and on the opposite end with tool engaging means.

5. In an implement of the character specified, the combination with a barrel containing a plunger and having an unobstructed opening through which the tool may be withdrawn and provided with a conical end, of a tool projecting through said opening, and a plurality of conical coiled springs surrounding said barrel and held at their inner ends by the barrel and having their outer ends provided with tool engaging means.

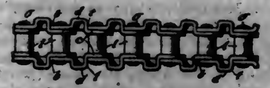
[Claims 6 to 26 not printed in the Gazette.]

959,531. MAGAZINE-PENCIL. JOHN A. HOLLENBERGER, Hagerstown, Md. Filed June 1, 1909. Serial No. 499,357.



A magazine pencil comprising a barrel adapted to contain a plurality of leads, a centrally and longitudinally apertured block telescoping within said barrel and provided with a circumferential shoulder to limit the telescoping movements thereof, the inner end of said block being concaved and adapted to direct a lead coming in contact therewith into said central aperture, the circumference of the block having an annular recess and a tapering end which is longitudinally slotted, a shell telescoping over said block and barrel and provided with an interior annular rib engaging said recess in the block, said shell having a tapering end conformed to the tapering end of the block, as set forth.

959,532. DRIVE-CHAIN. HENRY K. HOLSMAN, Chicago, Ill., assignor to Independent Harvester Company, a Corporation. Filed July 31, 1908. Serial No. 446,231.



1. A drive chain consisting of overlapped metallic side bars having converging friction-drive bearing-surfaces extending in planes parallel to the length of the chain, and rivets, each connecting both the side bars of one link directly to the side bars of the adjacent link, said friction-drive bearing-surfaces being outside the planes of the ends of the rivets.

2. A drive chain consisting of overlapped metallic side bars having converging friction-drive bearing-surfaces extending in planes parallel to the length of the chain, and rivets, each connecting both the side bars of one link directly to the side bars of the adjacent link, and bearing sleeves between the side bars and through which the rivets pass, said friction-drive bearing-surfaces being outside the planes of the ends of the rivets.

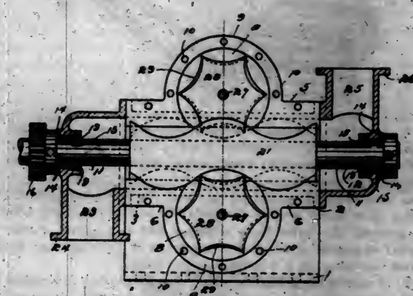
3. A drive chain consisting of overlapped metallic side bars having converging friction-drive bearing-surfaces extending in planes parallel to the length of the chain and stop surfaces to prevent the chain from sagging on its upper run, and rivets, each connecting the side bars of one link directly to the side bars of the adjacent link, said friction drive bearing-surfaces being outside the planes of the ends of the rivets.

4. A drive chain consisting of overlapped metallic side bars having converging friction-drive bearing-surfaces extending in planes parallel to the length of the chain and stop surfaces to prevent the chain from sagging on its upper run, rivets, each connecting both the side bars of one link directly to the side bars of the adjacent link, and bearing sleeves between the side bars and through which the rivets pass, said friction-drive bearing-surfaces being outside the planes of the ends of the rivets.

5. A drive chain consisting of overlapped side bars, each side bar composed of a metal strip of substantially uniform thickness throughout and with the friction-drive bearing-surfaces extending beyond the ends of the connecting rivets, and rivets, each connecting both the side bars of one link directly to the side bars of the adjacent link.

[Claims 6 to 12 not printed in the Gazette.]

950,533. PUMP. JOHN HOLST, Berkeley, Cal. Filed Apr. 15, 1909. Serial No. 490,188.



1. A pump comprising a cylinder having an inlet pipe and a discharge pipe, said cylinder being provided with oppositely arranged piston chambers, a shaft extending through each chamber and arranged in the same horizontal plane, a worm mounted on each shaft, said worms intermeshing, and upper and lower disks mounted in the cylinder and projecting between the said worms.

2. A pump comprising a cylinder having an inlet pipe and a discharge pipe, said cylinder being provided with oppositely arranged piston chambers, a shaft extending through each chamber and arranged in the same horizontal plane, a worm mounted on each shaft, said worms intermeshing, an upper and a lower disk projecting between said worms and rotated thereby, and means for rotating said shafts in opposite directions.

3. A pump comprising a cylinder having an inlet pipe and a discharge pipe, a shaft extending through each side of said cylinder, a worm mounted on each shaft and held in spaced relation, said worms intermeshing, an upper and a lower disk projecting between said worms, and means for rotating said shafts in opposite directions.

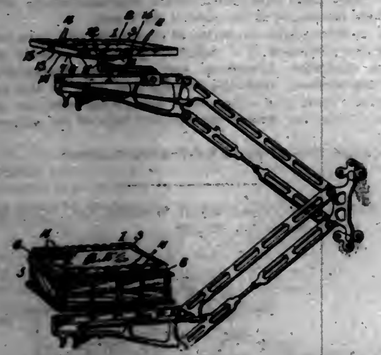
4. A pump comprising a cylinder provided with side chambers, a shaft extending through each chamber, a worm mounted on each shaft, said worms intermeshing, said shafts being provided with means for causing them to

rotate in opposite directions, and disks carried by said cylinder and projecting between said worms and being rotated thereby.

5. A pump comprising a cylinder formed of two sections, each section being provided with a longitudinally arranged piston chamber, and also provided, respectively with an upstanding and a depending plate, whereby when the sections of the cylinder are together, upper and lower chambers are provided, a shaft extending through each side chamber of the cylinder, a worm on each shaft and extending longitudinally of its chamber, said worms being held in spaced relation and intermeshing, means for rotating said shafts, and a disk mounted in each upper and lower chamber of the cylinder and projecting between said worms and adapted to contact therewith.

[Claim 6 not printed in the Gazette.]

959,534. SANITARY DENTAL-BRACKET TRAY. GUSTAV HOLTZ, Gouldsboro, Pa. Filed Mar. 26, 1909. Serial No. 485,928.



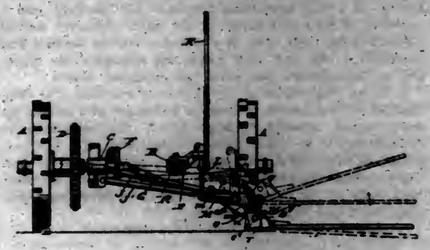
1. A sanitary dental bracket tray constructed of a single piece of glass and consisting of a flat bottom, and marginal side walls scalloped at their upper edges to form spaced instrument-receiving recesses, the upper face of the bottom and the side walls having smooth surfaces, and the lower face being frosted to render it semi-transparent and to prevent the hand from slipping and to produce a frictional engagement between the bottom of the tray and the plush covering of a wooden dental table.

2. A sanitary dental bracket tray including a shallow tray consisting of a flat bottom, and integral marginal walls, and a tray-carrying frame composed of outwardly extending centrally connected arms provided intermediate of their ends with longitudinal slots to receive fastening devices for securing the frame to the support of a bracket, said arms being provided with raised outer supporting portions receiving the tray and adapted to hold the same out of contact with the fastening devices of the said frame.

3. A sanitary dental bracket tray including a shallow tray consisting of a flat bottom, and integral marginal walls, and a tray-carrying frame composed of outwardly extending centrally connected arms provided intermediate of their ends with longitudinal slots to receive fastening devices for securing the frame to the support of a bracket, said arms being bent upward beyond the slots and having outer raised supporting portions receiving the tray and provided with upwardly extending lugs engaging the outer faces of the marginal walls of the said tray.

959,535. MOWER AND HARVESTER. HARVEY L. HOPKINS, Chicago, Ill., assignor to Hopkins Patent Company, a Corporation of Illinois. Filed June 19, 1905. Serial No. 266,033.

1. In a harvester or mower, the combination with the frame, the cutting apparatus and the lifting mechanism, of the gag lever, and the cam on the cutting apparatus, the cam having an upwardly and stubbleward inclined operative face, with which the gag lever is arranged to engage, the cam being constructed and arranged to first cause a moving upward of the outer end of the cutting apparatus, and then, without locking the same, to cause a bodily lifting of the entire cutting apparatus, substantially as set forth.



2. In a harvester or mower, the combination with a main frame, a cutting apparatus, a swinging connecting frame mounted on the main frame and pivotally connected to the cutting apparatus, and lifting mechanism, of a gag lever and an abutment or projection with which the gag lever engages carried by the cutting apparatus, the leverage relations between these parts being substantially as described, whereby the gag lever acts upon the cutting apparatus to tilt it upward with greater efficiency when the latter is inclined downward toward its outer end than when it occupies a substantially horizontal position, in which latter position the parts are substantially at a balance without being locked, permitting the cutting apparatus to be bodily lifted without changing its inclination.

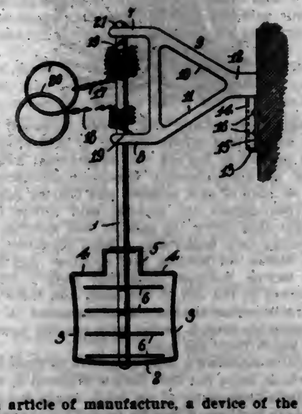
3. In a harvester or mower, the combination of a main frame, a swinging coupling frame mounted on the main frame, a cutting apparatus hinged to the coupling frame, a lifting lever, a gag lever fulcrumed on the coupling frame and connected to the lifting lever, a roller mounted on the gag lever, a lever projection carried by the cutting apparatus and having a surface with which the said roller engages, the form and relation of the gag lever and cutting apparatus parts being such that the mechanical advantage of the gag lever decreases as the outer end of the cutting apparatus moves upward to the level of its inner end, whereby the application of power to the gag lever may cause the outer end of the cutting apparatus to be swung upward to approximately the level of its inner end, at which point the parts become so balanced that continued application of power to the gag lever causes the cutting apparatus to be bodily lifted with the coupling frame without being tilted, substantially as set forth.

4. In a mower or harvester, the combination of a main frame, a cutting apparatus, a swinging coupling frame mounted on the main frame and pivotally connected to the cutting apparatus, a lifting lever, a gag lever connected with the lifting lever and supported by the coupling frame and adapted to transmit power to elevate the latter relative to the main frame, a projection carried by the cutting apparatus with which the gag lever engages, the leverage relations between the gag lever and the projection it engages being substantially such as described, whereby the cutting apparatus will be rocked into a substantially horizontal position when power is applied to the lifting lever, when the parts will come to a substantial balance and further movement of the lifting lever will lift the coupling frame, a stop for arresting the movement of the coupling frame, the cutting apparatus being free to be further tilted by the gag lever after the coupling frame comes to rest, and a stop for limiting the operation of the gag lever on the said projection.

5. In a harvester or mower, the combination of a main frame, a pivoted coupling frame, a cutting apparatus hinged to the coupling frame, a gag lever fulcrumed on the coupling frame, a projection carried by the cutting apparatus upon which the gag lever bears, the cutting apparatus being free to follow the ground and have its end inclined or dropped down below its hinged end, and the weight and leverage relations of the gag lever, coupling frame, and cutting apparatus being substantially as described, whereby when power is applied to the gag lever the outer end of the cutting apparatus is first lifted, and this apparatus brought into a substantially horizontal position, and then the cutting apparatus is bodily lifted with the coupling frame without being further tilted, and means for arresting the joint upward movement of the parts while allowing a further upward tilting of the cutting apparatus, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

959,536. EGG-BEATER. JOHN W. HORNER and GEORGE L. PATTERSON, Revere, Mass. Filed May 2, 1908. Serial No. 430,580.

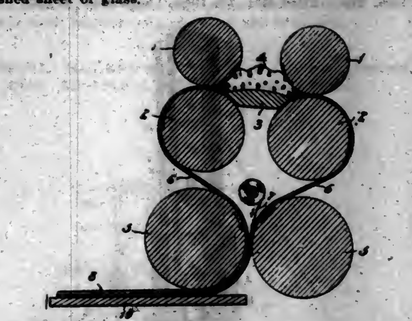


As an article of manufacture, a device of the class described comprising a socket member adapted to be attached fixedly to a vertical support such as a wall, a bracket member provided with a shank removably fitted in the socket member and having vertically spaced horizontally projecting bearing arms, a vertical spindle journaled in said bearing arms and provided at its upper extremity with a head resting on the upper bracket arm, a beater fast on said spindle below the lower bracket arm, flexible driving elements connected to and wrapped around said spindle in opposite directions between the spaced bearing arms, attaching rings connecting said flexible driving elements to the spindle, one of said rings passing through the spindle beneath the upper bracket arm and serving as a stop to limit the upward movement of the spindle, and handles in the form of loops at the free ends of said flexible driving elements.

959,537. METHOD OF AND MACHINE FOR MAKING WIRE-GLASS. JULIUS W. HOYER, St. Louis, Mo., assignor to Mississippi Wire Glass Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 2, 1907. Serial No. 404,721.

1. The method of making wire glass which consists in dumping a mass of molten glass onto a fixed stationary support or table, rolling said mass of glass in opposite directions to form two independent layers of glass, combining said layers together with pressure to form a single finished sheet of glass, and interposing a piece of wire mesh or fabric between the two layers of glass at the time the same are combined, substantially as set forth.

2. The herein described method of making wire glass which consists in placing a single mass of molten glass upon a stationary table, and drawing it in opposite directions between two pairs of rollers to form two layers of uniform thickness, interposing a piece of wire fabric between said layers and finally passing the two layers between a pair of rollers to combine the same and form a finished sheet of glass.



3. The herein described method of making wire glass consisting in dumping a mass of molten glass onto a stationary support, feeding the mass of glass from the opposite ends of support to form two independent layers, combining said layers together to form a finished sheet and interposing a piece of wire fabric between the layers before the same are combined.

4. An apparatus for making wire glass comprising a horizontally disposed supporting surface, a pair of rolls arranged on each side of said surface for forming a single mass of molten glass into two independent layers, means for introducing a wire mesh between said layers, and means for combining said layers together after said wire mesh is introduced therebetween; substantially as described.

5. An apparatus for making wire glass comprising a horizontally disposed supporting surface, a pair of rolls arranged at each side of said surface to form a mass of glass deposited on said surface into two independent layers, rolls arranged underneath said forming rolls for combining said layers together, and means for embedding a wire mesh in the inner face of one of said layers prior to combining said layers together; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

959,538. PLOW-CLEANER. OSCAR HUFFMON, Pactolus, Ky. Filed Aug. 31, 1909. Serial No. 515,523.



1. In a hillside plow, the combination with a plow standard, of a pair of cleaners, one of said cleaners slidably secured to each side of said standard, each of said cleaners comprising a plunger, a knife blade secured to said plunger, and spring means mounted thereon and adapted to restrain the downward movement of the plunger.

2. In a hillside plow, the combination with a plow standard, a yoke-shaped bracket secured to said standard, the free ends thereof having outwardly extending flanges provided with bearings, a transverse plate secured to the inclosed end of said bracket, and provided with bearings, of a pair of cleaners, each comprising a plunger rod adapted to be slidably held in the bearings of the transverse plate and the flanged ends of the bracket, a blade secured to said plunger rod and constructed to fit closely to the side of the standard, and a coil spring mounted on the plunger rod and adapted to normally restrain the plunger rod from downward movement.

959,539. ROLLER-DRILL. HOWARD R. HUGHES, Houston, Tex. Filed Mar. 11, 1909. Serial No. 482,655.



1. A boring drill comprising a head, a spindle on said head arranged at an angle to the longitudinal axis of the head, and a single roller of approximately frusto-conical shape mounted on said spindle and covering the end of same, said roller projecting slightly beyond the side face of the head so that it will form a hole of greater diameter than the head when the head is rotated.

2. A boring drill comprising a head provided with an angularly disposed bearing surface, an inclined spindle projecting from said surface, and an approximately frusto-conical-shaped roller on said spindle that covers the end thereof and bears against said angularly disposed surface, said roller being of such size that it will form a hole of greater diameter than the head of the drill.

3. A boring drill comprising a head provided with an angularly disposed end face, an inclined spindle projecting from said end face, and an approximately frusto-conical-shaped cutting roller on said spindle that covers the end thereof and bears upon the angularly disposed end face of said head, the peripheral edge of said roller terminating adjacent the periphery of the drill head and the apex or lower end of said roller terminating beyond the longitudinal center of the head.

4. A boring drill provided with a head having an angularly-disposed end face, a spindle projecting from said face, and an approximately frusto-conical-shaped cutting roller rotatably mounted on said spindle and covering the end of same, said roller having a cutting surface which is of great enough dimensions to form a hole of greater diameter than the head of the drill.

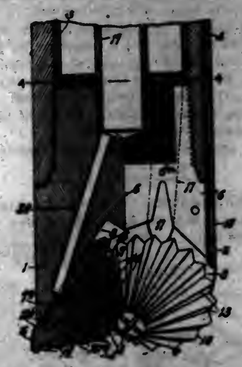
5. A boring drill provided with a head that is composed of a plurality of parts or members one of which is provided with a socket, means for holding said members together, a spindle projection on one of said members that lies in the socket in the other member, and a cutting roller rotatably mounted on said spindle projection.

[Claims 6 to 31 not printed in the Gazette.]

959,540. ROLLER-DRILL. HOWARD R. HUGHES, Houston, Tex. Filed Mar. 27, 1909. Serial No. 486,166.

1. A boring drill comprising a head having a tapered triangular-shaped pocket formed in the lower end thereof, three frusto-conical-shaped rollers arranged in said pocket with their bases or inner ends bearing against the side walls of said pocket, and supporting spindles for said rollers which terminate inside of the rollers.

2. A boring drill comprising a head provided at its lower end with three bearing surfaces which are arranged at an angle to each other and also at an angle to the longitudinal axis of the head, three approximately frusto-conical-shaped rollers arranged with their bases or inner ends in engagement with the angularly disposed bearing surfaces of the head, and spindles which project into said rollers but do not pass clear through the rollers.



3. A boring drill comprising a head composed of three members, an inclined spindle carried by each of said members and projecting toward the longitudinal axis of the head, and an approximately frusto-conical-shaped roller mounted on each of said spindles and bearing against the member that carries the spindle, said rollers being so formed that they cover the ends of said spindles.

4. A boring drill comprising a head composed of three members, means for holding said members together, said members having inclined faces that form a triangular-shaped pocket in the end of the head, and three approximately frusto-conical-shaped rollers arranged in said tapered triangular-shaped pocket and bearing against the members which form the head.

5. A drill comprising a head composed of three members each of which has a flat face that is disposed at an angle to the longitudinal center of the head, means for clamping said members together, a spindle projecting inwardly from each of said flat faces toward the longitudinal center of the head, and an approximately frusto-conical-shaped cutting roller mounted on each of said spindles and covering the end thereof.

[Claims 6 to 23 not printed in the Gazette.]

959,541. STEAM-TRAP. GEORGE E. HULSE, Jersey City, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Sept. 20, 1905. Serial No. 279,230.



1. In a device of the class described, in combination, a casing, an inlet leading thereinto, an automatic valve, a cylindrical screen interposed between said valve and said inlet, said casing being provided with an opening adjacent said screen and independent of said inlet, and a removable shouldered member tapped within said opening and having said screen secured to said shoulder.

2. In a device of the class described, in combination, a casing, an inlet leading thereinto, a discharge conduit secured to and spaced from said casing, a hand valve controlling the passage from said inlet between said discharge conduit and said casing, an automatic valve controlling the passage through said discharge conduit, a cylindrical screen interposed between said inlet and said outlet valve, and a removable shouldered member threaded in the walls of said casing and having said screen secured to said shoulder.

3. In a device of the class described, in combination, a casing, an inlet leading thereinto, an outlet leading from said casing, an expansible discharge conduit having one end in fixed relation to said outlet, relatively expansible means having one end in fixed relation to said inlet, said expansible means and said conduit extending toward one another and controlling the passage from said inlet to said outlet.

4. In a device of the class described, in combination, a casing, an inlet leading thereinto, a discharge conduit, a relatively expansible member positioned within said casing adjacent said inlet and having one end thereof in fixed relation thereto adapted to co-act with said conduit and control the passage therethrough from said inlet.

5. In a device of the class described, in combination, a casing, an inlet leading thereinto, an expansible discharge conduit within said casing, a valve upon the said discharge conduit, and a removable relatively expansible member positioned within said casing adjacent said inlet adapted to co-act with said valve in controlling the discharge from said inlet through said conduit.

[Claims 6 to 16 not printed in the Gazette.]

959,542. BRAKE HEAD AND SHOE. BENJAMIN F. HYSELL and ROBERT M. CAVEDO, Middleport, Ohio. Filed Oct. 7, 1909. Serial No. 521,523.

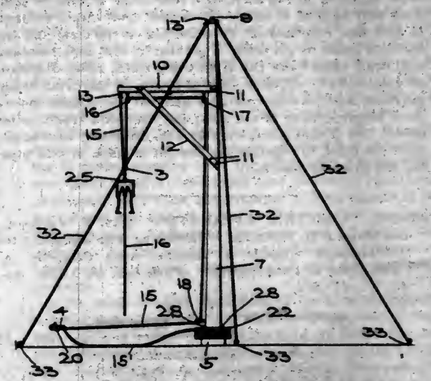


1. As an improvement in brakes, the combination with the car wheel, a brake head, a pivoted hanger, and means for connecting said hanger to said brake head, a removable shoe carried by said brake head, means for moving said hanger to bodily oscillate said shoe through an arc having as its center of curvature the pivotal point of said hanger, said connection between said brake head and said hanger being located at a point outside of a line drawn normal to and bisecting the chord of the arc of curvature of the face of said shoe.

2. As an improvement in brakes, the combination with a car wheel, a pivoted hanger, a brake head connected thereto to be swung in an arc having as its center of curvature the pivot of said hanger, means for operating said hanger to swing said brake head, a brake shoe carried by said brake head, the point of connection between said brake head and said hanger being such that when said brake shoe is in contact with the wheel rim a line drawn from the center of said wheel to bisect the chord of the arc of curvature of the face of the brake shoe will not pass through the point of connection between such brake head and said hanger and that a line drawn between said point of connection of said brake head with said hanger and the center of said wheel will make an angle with said first mentioned line dependent upon the wearing force caused by the rotation of the wheel that is to be counteracted.

3. An improvement in brakes comprising the combination with the pivoted brake applying member, of a brake head, a removable shoe carried by said brake head and a connection between said brake head and said brake applying member, said connection being located near one end of said head, substantially as shown and described.

959,543. HAY-STACKER. WILLIAM S. INBODY, McComb, Ohio. Filed Feb. 6, 1909. Serial No. 476,466.

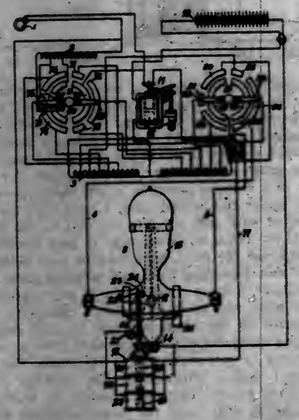


1. A haystacker comprising a base block having a central pivot opening, a mast having a pivot at each end thereof, the pivot at the lower end of said mast being revolubly engaged within said pivot opening, a swivel collar disposed upon the pin at the upper end of the mast, means secured to said swivel collar and the ground for bracing said mast in a vertical position, a gaff rigidly secured adjacent the upper end of the mast, a hoisting rope secured to the end of said gaff, sheaves secured to the gaff, one adjacent to the point of attachment to said hoisting rope, and one adjacent the mast, said hoisting rope being looped upon itself and depending from said securing point and the adjacent sheave, a drum rigidly secured adjacent the lower end of the mast and adapted to move therewith, a third sheave carried by the mast adjacent to said drum, said hoisting rope being disposed around said sheave, and draft means secured to said rope, and to the drum, the portion of said draft means intermediate the hoisting rope and the drum being loosely disposed, whereby the movement of the draft means will raise the looped sections aforesaid before the rotation of the drum and mast carried thereby.

2. In a device of the character described, a mast, a base block upon which said mast is revolubly mounted, means for bracing said mast in a vertical position and revolubly mounting the same from its upper end in conjunction with said base block, a gaff extending outwardly from said mast and rigidly secured thereto, brace arms for said gaff and secured thereto and to the mast, a hoisting rope secured to the outer end of said gaff, sheaves carried by the gaff, one adjacent to the point of attachment of said hoisting rope and one adjacent to the mast, said rope depending from said securing point, said rope also being looped and passed around said sheaves carried by the gaff, a fork carrying sheave carried by the looped portion of said rope, a third sheave secured to the mast adjacent its lower end, a drum rigidly secured to the mast adjacent its lower end and the sheave last mentioned, said drum being adapted to rest upon said base block, when in position to revolve with the mast, said rope aforesaid also passing around the sheave carried by the mast and having its remaining end secured to the drum and adapted to be wound thereon, said drum being disposed adjacent the sheave carried by the mast and draft means secured to said hoisting rope outwardly of the sheaves, the portion of said rope intermediate the draft means and the drum having a slack portion, whereby the pull upon the draft means will raise said fork carrying sheaves to such distance, before said drum is rotated, and the gaff thereby swung into position with the mast.

3. The combination in a device of the character described, of a base block having a central pivot opening, a mast provided with pivot pins at its upper and lower ends, the lower pivot being received within said pivot opening of the base block, a gaff carried by said mast, a hoisting rope secured to one end of the gaff, said hoisting rope also being movably mounted on said gaff and mast at its lower end, a drum mounted on the mast, said rope being secured to said drum and adapted to be wound thereon, draft means secured to said rope intermediate its mounting on the mast and its securing point to the drum, a portion of said rope between said draft means and the drum being slack, stiles disposed on diametrically opposite sides of the mast, the drum being provided with internal notches adapted for sliding movement longitudinally of the mast and over said stiles, to be moved free of said stiles, whereby said drum may be rotated upon the mast, to regulate the amount of slack in said rope for the purpose described.

959,544. ELECTRIC APPARATUS. RAY P. JACKSON and HAROLD M. SCHEIBE, Wilkinsburg, Pa., assignors to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 21, 1909. Serial No. 473,541.



1. A relay switch comprising a stationary frame, stationary and movable core members, an actuating coil for opening the switch, a lever operatively connected to the switch, means for opposing the final action of the magnet winding to a greater degree than the initial action of the magnet winding, and means dependent upon a slight energization of the coil for locking the switch in an intermediate open position.

2. A relay switch comprising a stationary frame, stationary and movable core members, a coil, a lever operatively connected to the switch, a weight suspended from one end of the lever which tends to close the switch, a second weight adapted to be picked up by the lever at a predetermined point in the switch movement, and means for locking the switch, in an intermediate open position if the coil is only slightly energized.

3. A relay switch comprising a stationary frame, stationary and movable core members, a coil, a lever operatively connected to the switch, weights suspended from one end of the lever, a projection on the stationary frame for supporting one of the weights under predetermined conditions and means for locking the lever to prevent subsequent closure of the switch when it is opened by a relatively small current applied to the magnet winding.

4. A relay switch comprising a stationary frame, stationary and movable core members, and an opening magnet, mechanical means for holding the switch closed and means dependent upon a slight energization of the coil for locking the switch in an intermediate open position.

5. A relay switch comprising a stationary frame, stationary and movable core members, an opening coil, a lever pivotally mounted on the stationary frame and operatively connected to the movable member of the switch, weights suspended from the lever and a pawl for locking the lever in an intermediate position when the magnet coil is energized to a slight degree.

[Claims 6 to 12 not printed in the Gazette.]

959,545. FASTENER. CARL JOSEPH, Bayonne, N. J. Filed Feb. 23, 1909. Serial No. 479,462.



1. A fastener adapted for use in securing articles to the front of a surface inaccessible from the rear, comprising a soft metal body having an inner transverse member and an outer laterally extending member weakened in one or more places.

2. A fastener adapted for use in securing articles to the front of a surface inaccessible from the rear, comprising a soft metal body, consisting of two transverse apertured members and a plurality of intermediate longitudinal members, each of the latter having depressions along their edges, one of the transverse members being weakened in one or more places.

3. A fastener adapted for use in securing articles to the front of a surface inaccessible from the rear, comprising a soft metal body, consisting of two transverse apertured members, and a plurality of intermediate longitudinal members, each of the latter having one or more V-shaped recesses along each edge and one of them being extended laterally to form a hand hold.

4. A fastener comprising inner and outer transverse members, the latter extended laterally and weakened in one or more places whereby its extremity may readily be removed, and intermediate longitudinal members also weakened in one or more places whereby they may readily be collapsed.

5. A fastener adapted for use in securing articles to the front of a surface inaccessible from the rear, comprising a soft metal body having an inner transverse member and an outer laterally extending member weakened in one or more places by transverse scoring.
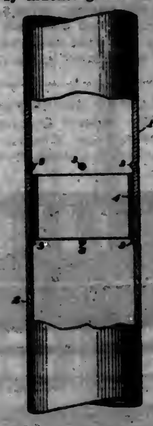
959,546. JOINT FOR TUBES. JOHN KENNY, New York, N. Y., assignor to John Simmons Company, New York, N. Y., a Corporation of New York. Filed June 14, 1909. Serial No. 502,020.

1. In a joint for tubes, the combination with a plurality of tube sections each section being substantially of the same exterior diameter throughout and the sections being provided near their proximate ends with stops, of an interior guide engaging the ends of the sections and located wholly between the stops.

2. In a joint for tubes, the combination with a plurality of tube sections each section being substantially of the same exterior diameter throughout and the sections being provided near their proximate ends with stops, of an interior guide engaging the ends of the sections and located wholly between the stops, the ends of the sections being arranged to abut.

3. In a joint for tubes, the combination with a plurality of tube sections each section being of substantially the same exterior diameter throughout its length and the sections being provided near their proximate ends with stops, of an interior guide engaging the ends of the sections with a driving fit, said guide being located wholly between the stops.

4. In a joint for tubes, the combination with a plurality of tube sections each section being of substantially the same exterior diameter throughout its length and the sections being provided near their proximate ends with stops formed by indenting the walls of the sections,



of an interior guide engaging the ends of the sections and located wholly between the stops.

959,547. FLUID-OPERATED APPARATUS. EUGEN KETTERER, Essen-on-the-Ruhr, Germany. Filed Jan. 21, 1910. Serial No. 539,343.



1. In fluid operated apparatus of the class described, in combination, a cylinder, a piston within said cylinder adapted to be reciprocated by the fluid, an oscillating valve for controlling the admission of the fluid to the cylinder, said valve comprising two leaves, and means for causing the fluid from the cylinder to act simultaneously upon one surface of one of said leaves and upon the opposite surface of the other of said leaves to cause said valve to oscillate.

2. In fluid operated apparatus of the class described, in combination, a cylinder, a piston within said cylinder adapted to be reciprocated by the fluid, an oscillating valve for controlling the admission of the fluid to the cylinder, said valve comprising two leaves, means for causing the fluid from the cylinder to act simultaneously upon one surface of one of said leaves and upon the opposite surface of the other of said leaves to cause said valve to oscillate said leaves serving at the same time for controlling the fluid from the source of supply.

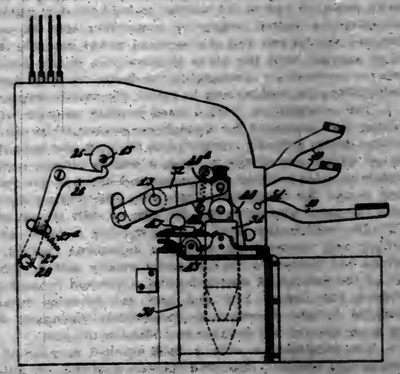
3. In fluid operated apparatus of the class described, in combination, a cylinder, a piston therein adapted to be reciprocated by the fluid, an oscillating valve comprising two leaves, a casing within which said valve is supported, said casing comprising two spaced chambers adapted to be connected to the source of supply of the fluid, said valve being so positioned that one of said leaves extends within one of said chambers and the other of said leaves extends within the other of said chambers, each of said chambers being in communication with each end of said cylinder, said valve being so positioned that when it is in one of its alternate positions communication between said chambers and one end of said cylinder is effected, and when the valve is in its other alternate position communication between said chambers and the other end of said cylinder is effected.

4. In fluid operated apparatus of the class described, in combination, a cylinder, a piston therein adapted to be reciprocated by the fluid, a valve casing comprising two spaced chambers adapted to be connected with the source of supply of the fluid, an oscillating valve within said casing for controlling the admission of the fluid to said cylinder, said valve comprising two leaves, one of which extends within one of said chambers and the other of which extends within the other of said chambers, oppositely disposed passages leading from each of said chambers and adapted to be alternately opened and closed as said valve oscillates, one of said passages of one of said chambers and the oppositely disposed passage of the passages of the other of said chambers being in communication with one end of said cylinder and the other of the passages of the first-named chamber and the oppositely disposed passage of the passages of the other chamber being in communication with the other end of said cylinder, said valve being so positioned that in one of its alternate positions it will close the passages of both chambers leading to one end of said cylinder and open the passages of both chambers leading to the other end of said cylinder and that in the other of its alternate positions it will open the first named passages and close the last named passages.

5. In fluid operated apparatus of the class described, in combination, a cylinder, a piston within said cylinder, adapted to be reciprocated to the fluid, an oscillating valve for controlling the admission of the fluid to the cylinder, said valve comprising two leaves, means for causing the fluid from the cylinder to act simultaneously upon one surface of one of said leaves and upon the opposite surface of the other of said leaves to cause said valve to oscillate, said leaves serving at the same time for controlling the fluid from the source of supply and for controlling the exhaust of the fluid from said cylinder.

[Claim 6 not printed in the Gazette.]

959,548. ELECTRIC DRIVING DEVICE FOR REGISTERING-MACHINES. CHARLES F. KETTERING, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio. (Incorporated in 1906.) Filed July 15, 1905, Serial No. 269,811. Renewed Oct. 20, 1908. Serial No. 458,672.



1. In an electric driving device, the combination with a source of electric energy included in a circuit with an inductive element; of a switch for making and breaking said circuit; and a shunt circuit between the terminals of said switch, said shunt circuit including a condenser and an inductive resistance.

2. In an electric driving device, the combination with a source of electric energy included in a circuit with an inductive element, of a switch for making said circuit; means operated through the medium of said inductive

element for automatically operating said switch to break said circuit; and a shunt circuit between the terminals of said switch, said shunt circuit including a condenser and an inductive resistance.

3. In an electric driving device, the combination with a source of electric energy included in circuit with an inductive element, of a switch for making and breaking said circuit; a shunt circuit around said inductive element and including therein a non-conductive element; and a second shunt circuit between the terminals of said switch, said second shunt circuit including a condenser and an inductive resistance.

4. In an electric driving device, the combination with a source of electric energy included in a circuit with an inductive element, of a switch for making and breaking said circuit; a shunt circuit around said inductive element and including a non-inductive resistance; and a second shunt circuit between the terminals of said switch, said second shunt circuit including a condenser and an inductive resistance.

5. In an electric driving device for registering machines, the combination with a driving member of the registering machine, of an operating solenoid comprising a solenoid coil and a solenoid core attached to said driving member; a circuit including said solenoid coil; a switch for making and breaking said circuit; a shunt circuit around said solenoid coil and including a non-inductive element; and a second shunt circuit between the terminals of said switch and including a condenser and an inductive resistance in series.

[Claims 6 to 24 not printed in the Gazette.]

959,549. RAILWAY-SWITCH. ROBERT P. KIBLINGER, Mineral, Va. Filed Sept. 29, 1909. Serial No. 520,158.



1. The combination with a notched stationary member, of a locking arm mounted for swinging movement thereon, a locking device movably connected to the arm and normally seated in one of the notches to hold the arm against movement, a switch tongue, a connection between said arm and the tongue, and car operated means movable in a plane parallel with the plane of movement of the locking arm for successively disengaging the device from the notch and shifting the locking arm to throw the switch tongue.

2. The combination with a fixed notched member, of a locking arm mounted for swinging movement thereon, a locking device movably connected to the arm and normally seated within one of the notches, a switch tongue, a pivoted connection between the tongue and arm and car operated means for successively releasing the locking device from the notch and actuating the arm to shift the tongue.

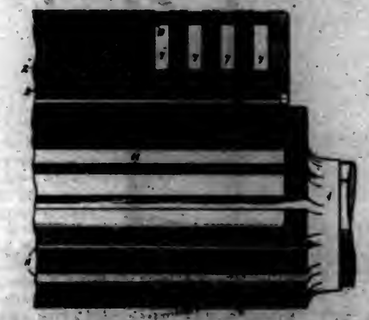
3. The combination with a fixed notched member, of a locking arm mounted for swinging movement thereon, a locking dog carried by the arm and normally seated within one of the notches, a switch tongue, a pivoted connection between the tongue and arm and car operated means shiftable in one direction to successively disengage the dog from the notched member and shifting the arm.

4. The combination with a fixed notched member of a locking arm pivotally mounted thereon, a spring controlled dog carried thereby and normally seated within one of the notches, a switch tongue, a pivoted connection between the arm and tongue, a releasing arm, separate means thereon for successively disengaging the dog from the notched member and shifting the arm, and car operated means for actuating the releasing arm.

5. A railway switch including a fixed notched member, a locking arm mounted for swinging movement thereon, a spring controlled dog carried by the arm and normally seated within one of the notches, means actuated by the arm for shifting a switch tongue, a releasing arm pivotally mounted adjacent the notched member, separate means upon said arm for successively engaging the dog and locking arm to release the dog and shift the arm, and car operated means for actuating the releasing arm.

[Claims 6 and 7 not printed in the Gazette.]

959,550. VENTILATING MEANS FOR DYNAMO-ELECTRIC MACHINES. ALBERT KINGSBURY, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed July 9, 1906. Serial No. 325,280.



1. A rotatable field magnet for dynamo-electric machines comprising a shaft having longitudinal grooves in its circumference, a plurality of magnetizable disks mounted on the shaft, ventilating plates located at intervals between the disks, two opposite groups longitudinal slots near the surface of the laminated structure, and circumferential end slots which interconnect the two groups of longitudinal slots.

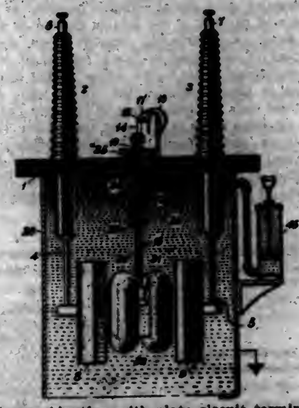
2. A rotatable field magnet for dynamo-electric machines comprising a shaft having longitudinal grooves in its circumference, a plurality of magnetizable disks mounted on the shaft, two opposite groups of longitudinal slots near the surface of the laminated structure, and circumferential end slots which interconnect the two groups of longitudinal slots, and non-magnetizable keys or wedges which are fitted into the openings of the longitudinal slots in the core structure.

3. A rotatable field magnet for dynamo-electric machines comprising a shaft having longitudinal grooves in its circumference, a plurality of magnetizable disks mounted on the shaft, ventilating plates located at intervals between the disks, two opposite groups of longitudinal slots near the surface of the laminated structure, circumferential end slots which interconnect the two groups of longitudinal slots, relatively shallow longitudinal slots between the two groups of longitudinal slots which extend only across the circumferential slots.

4. A rotating field magnet member for dynamo-electric machines comprising a substantially cylindrical shaft having longitudinal grooves in its surface, a plurality of magnetizable disks assembled thereon, having two diametrically opposite groups of longitudinal slots near the outer surface of the laminated cylinder, circumferential slots near its ends which connect the two groups of longitudinal slots, relatively shallow slots extending from the ends across the circumferential slots, similar grooves near the openings of all longitudinal slots, keys or wedges fitted into said grooves, and spacing grids or ventilating plates located at intervals between the disks.

959,551. ELECTRICAL MEASURING INSTRUMENT. SAMUEL M. KINTNER, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 17, 1905. Serial No. 250,642.

1. The combination with curved plate circuit terminals having opposing faces and a vertically elongated conducting member rotatably suspended between the said faces, of a compressed insulating fluid in which the said parts are immersed, and a grounded metallic receptacle for the insulating fluid.



2. The combination with plate circuit terminals having opposing concave faces, and a vertically elongated hollow conducting member rotatably suspended between the said faces, of an insulating fluid in which the said parts are immersed, and a grounded metallic receptacle for the insulating fluid.

3. The combination with plate circuit terminals having concave opposing faces, and a vertically elongated member movably supported between the terminals, of a compressed insulating fluid in which said parts are immersed, and a grounded receptacle for the insulating fluid.

4. An electrical measuring instrument comprising vertically elongated and relatively movable members, a body of compressed fluid in which they are immersed, and a metallic receptacle for the fluid.

5. An electrical measuring instrument comprising vertically elongated and relatively movable members, a body of compressed fluid in which they are immersed, and a grounded receptacle for the fluid.

[Claims 6 to 19 not printed in the Gazette.]

959,552. FUSE FOR ELECTRICAL CIRCUITS. SAMUEL M. KINTNER, Pittsburg, Pa., and GIRARD B. ROSENBLATT, New York, N. Y., assignors to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 4, 1905. Serial No. 285,842.



1. A fuse for electrical circuits comprising a sealed insulating tube of frangible material and a fusible conductor suspended therein, in combination with means for making circuit connections to the terminals of the fusible conductor, a receptacle filled with insulating liquid in which the insulating tube is immersed, and an insulating strip located within the tube and supporting the fusible conductor throughout its length.

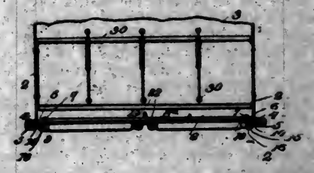
2. A fuse for electrical circuits comprising a sealed insulating tube, a fusible conductor suspended therein, and means within the tube for supporting the conductor from end to end throughout its length, in combination with means for making circuit connections to the terminals of the fusible conductor, and a receptacle containing insulating fluid in which the insulating tube is immersed.

3. A fuse for electrical circuits comprising an insulating tube, conducting end caps therefor, a fuse suspended within the tube between the end caps, a support therefor upon which the fuse may rest throughout its length, and a receptacle filled with an insulating liquid in which the said parts are immersed and provided with circuit terminals that engage the end caps and support the tube.

4. A fuse for electrical circuits comprising an insulating tube, conducting end caps therefor, a fusible conductor suspended within the tube between the end caps, an insulating support upon which the fusible conductor may rest throughout its length, and a receptacle containing an insulating fluid in which the said parts are immersed, and provided with circuit terminals that engage the end caps and support the tube.

5. The combination with an insulating fluid and a fusible conductor, of an inclosing device for the conductor that normally maintains the insulating fluid out of contact therewith and is provided with a weakened portion which is ruptured upon the fusing of the conductor.

959,553. METAL BOX AND CRATE. GOTTLIEB KLENK, Defiance, Ohio, assignor, by mesne assignments, to The Defiance Pressed Steel Company, a Corporation of Ohio. Filed Sept. 21, 1907. Serial No. 394,000.



1. In a box, the combination of sides, ends and a bottom, the bottom comprising wires formed with angularly disposed bent portions, around the edges of the bottom and sheet metal beads attached to the box formed with openings through which the wires pass, the angularly bent portion fitting in and crimped in the beads, and a reinforcing rib secured at its ends to the box and formed with openings through which the wires pass.

2. In a box, the combination of ends, sides and a bottom, said bottom comprising wire supporting strips formed with beads, wires formed with bent portions which are seated in the beads, means for securing the strips to the box, a reinforcing strip secured to the box and formed with openings through which the wires pass.

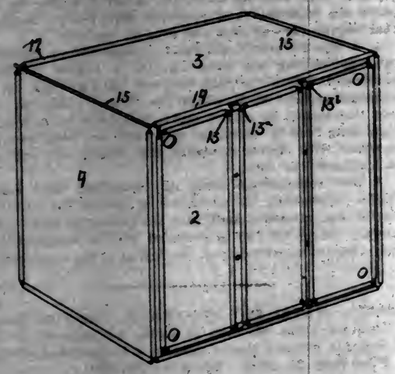
3. In a box, the combination of ends, sides and a bottom, said bottom comprising a series of wires secured on opposite sides of the box, a reinforcing rib formed with openings through which the wires pass, and with depending beads, strips formed with beads around the bottom of the sides and ends, and reinforcing elements inclosed by the latter beads and the beads on the reinforcing rib.

4. In a box, the combination of sides, ends and a bottom, said bottom comprising wire receiving strips formed with openings and beads, wires passing through the openings and having a portion seated in and secured by the beads, flanged strips fitted against the beads of the supporting strips to hold the beads thereof closed, reinforcing means for strengthening the flanged strips, the lower edges of the box being bent to hold the said strips in position.

5. In a box, the combination of sides, ends and a bottom, said bottom comprising a series of wires, means securing the wires on opposite sides of the box, a reinforcing rib arranged transversely of the wires and formed of a strip bent upon itself and formed with openings, and then bent outwardly in opposite directions and formed on its edges with beads, the ends of the rib being extended beyond the beads, the wires passing through the openings in the rib and being also supported on the oppositely bent portions, and reinforcing elements engaging the beads and providing a depending flange.

[Claims 6 to 15 not printed in the Gazette.]

959,554. SHEET-METAL BOX. GOTTLIEB KLENK, Defiance, Ohio, assignor to The Defiance Pressed Steel Company, a Corporation of Ohio. Filed Aug. 3, 1909. Serial No. 511,064.



1. A metal box or package for bottles having the side walls and end walls formed of sheet metal sections, a bottom formed of a section of sheet metal having its edges crimped or bent with the lower edges of the side walls and end walls to form an outwardly extending horizontal flange, and a reinforcing support for the bottom comprising a series of two or more wire rectangles immediately below the bottom sheet, and reinforcing tie-strips of sheet metal having their outer edges crimped or bent into the aforesaid bottom flanges, and having their inner edge parts beaded around the wires of the reinforcing rectangles, substantially as set forth.

2. A metal box or package for bottles, having side walls and end walls formed of sections of sheet metal, a flat bottom formed of a section of sheet metal, the edges of the bottom and the lower edges of the side walls and end walls being crimped together to form a relatively wide outwardly projecting horizontal flange, and a reinforcing support for the bottom comprising a series of two or more wire rectangles having the side bars of the rectangles extending longitudinally of the box bottom, and sheet metal tie-strips beaded to the rectangle wires and crimped or bent into the aforesaid bottom flanges, and the inner adjacent wires of the rectangle supports being tied together by beaded sheet strips, substantially as set forth.

3. A metal box or package for bottles having side walls and end walls formed of sections of sheet metal, a bottom formed of a section of sheet metal having its edges crimped or bent together with the lower edges of the sides and ends, a series of two or more wire rectangle supports immediately below the bottom, and reinforcing tie-strips of sheet metal having their outer edge parts crimped or bent into and forming parts of two of the said outwardly extending bottom flanges and each having at their inner edges a series of beads engaging the end parts of all the wire rectangles of said series, and supplemental reinforcing tie-strips beaded to the outermost side wires of the rectangles and having their edges crimped in two of the said outwardly extending flanges, substantially as set forth.

4. A metal box or package for bottles having sheet metal side walls and end walls, a bottom formed of a section of sheet metal having its edges crimped or bent together with the lower edges of the sides and ends to form outwardly extending flanges, and a reinforcing support for the bottom comprising a series of two or more wire rectangles immediately below the bottom, re-inforcing tie-strips of sheet metal beaded to the outer side wires of the outermost rectangles, and crimped or bent into or forming parts of the said flanges, reinforcing tie-pieces of sheet metal beaded to the end parts of the said rectangles and crimped or bent to form parts of the aforesaid flanges, and stays or stops between each wire rectangle and the next to prevent lateral displacement, substantially as set forth.

5. The herein-described sheet metal box or package for bottles, it having side walls and end walls formed of separate sections of sheet metal crimped together at the vertical corners of the box, a flat bottom formed of a section of sheet metal, a reinforcing support upon which the lower surface of said bottom bears formed of wire rectangles, reinforcing sheet metal strips beaded around the outer wires of the rectangles, the bottom edge parts of said sides and ends the edge parts of the said flat bottom sheet and the edge parts of the said reinforcing strips being crimped or bent to form outwardly extending flanges at the bottom corners of the box, and sections of sheet metal beaded around and tying together the inner adjacent parts of the rectangle wires, substantially as set forth.

959,555. LANDING-NET. GEORGE J. KOERBSTEIN, Baldwin, Wis. Filed June 2, 1909. Serial No. 490,695.



1. A landing net having a tubular frame and an elastic cord which extends into the bore of said tubular frame.

2. A landing net having a handle formed with grooves which extend lengthwise in opposite sides thereof; and a two-part frame one end of one of the parts of said frame engaging with the opposed end of the other part and the other ends of said parts being rotatably mounted in said grooves, whereby said parts may be folded upon each other, when the first-named ends are disengaged from each other.

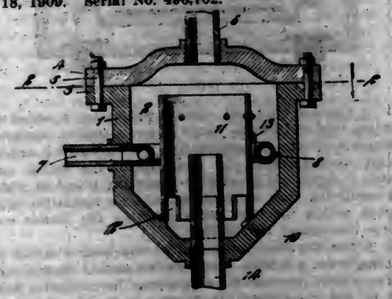
3. A landing net having a two-part tubular frame the parts of which are detachable from each other; and an elastic cord the ends of which lie in the bore of said tubular frame.

4. A landing net having a two-part tubular frame the parts of which are detachable from each other; and an elastic cord the ends of which lie in the bore of said tubular frame and are provided with fastening means.

5. A landing net having a two-part tubular frame the parts of which are detachable from each other; and a cord the ends of which lie in the bore of said tubular frame and are provided with fastening means.

[Claims 6 to 8 not printed in the Gazette.]

959,556. REFRIGERATING APPARATUS. FRANK D. KOZAKLE, New York, N. Y., assignor of three eighths to Samuel L. Richardson, New York, N. Y. Filed May 18, 1909. Serial No. 496,702.



1. In a device of the character described, the combination with a casing having a gas admission port and fluid emission port, of means for admitting fluid to the casing to be charged with gas, and means surrounding the fluid emission port for deflecting gas saturated fluid to the emission port and retaining unsaturated fluid within the casing, substantially as described.

2. In a device of the character described, the combination with a casing having a gas admission port and a fluid emission port, of an annular liquid distributer for admitting fluid to the casing, and means surrounding the emission port for deflecting gas saturated fluid to the emission port and retaining unsaturated fluid within the casing, substantially as described.

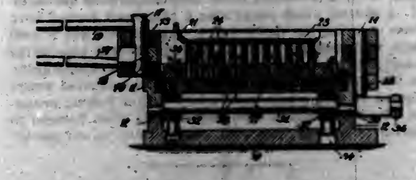
3. In a device of the character described, the combination with a casing provided with a gas admission port and a fluid emission port, of means for admitting fluid to the casing, and a baffle shell for deflecting gas saturated fluid to the emission port and retaining unsaturated fluid within the casing, substantially as described.

4. In a device of the character described, the combination with a casing provided with a gas admission port and a fluid emission port, of an annular liquid distributer for admitting fluid to the casing, and a baffle shell for deflecting gas saturated fluid to the emission port and retaining unsaturated fluid within the casing, substantially as described.

5. In a device of the character described, the combination with a casing having a gas admission port and a fluid emission port, of an annular liquid distributer within the casing, and a baffle shell embraced by the distributer, substantially as described.

[Claim 6 not printed in the Gazette.]

959,557. MACHINE FOR MAKING CASTINGS. ANTHONY KAINS, Brooklyn, N. Y. Filed Sept. 8, 1909. Serial No. 516,677.

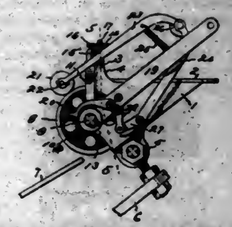


1. In a casting machine, the combination with two mold elements relatively movable in a horizontal direction, and means for securing them together, of a core element for coöperation with the said mold elements, a shaft having a crank portion engaging the said core element, and means for rotating the said shaft to raise or lower the core element, substantially as set forth.

2. In a casting machine, the combination with two mold elements relatively movable in a horizontal direction, and means for securing them together, of a core element for coöperation with the said mold elements, a shaft journaled in a portion perpendicularly stationary with respect to the first said mold elements, the said shaft having an extended crank portion, yokes connected with the said core element at opposite ends thereof arranged for engagement with the said crank portion of the shaft, and means for imparting movements of rotation to the shaft to raise or lower the core element, substantially as set forth.

3. The combination with a bed plate comprising a hollow structure having a base piece, end walls, and a top plate, of two horizontally movable mold elements pivotally connected to the said bed plate and mounted to move horizontally upon the said top plate, each of the said elements containing a mold section having a plurality of individual mold recesses, a core element comprising a bar and a plurality of individual cores arranged to be received within the said mold recesses, the said bar being mounted within the said bed plate, a shaft journaled in the end walls of the said bed plate and having a crank portion between the said end walls, yokes secured to the ends of the said bar and engaging the crank portion of the said shaft, and means for vertically guiding the said yokes.

959,558. DISTRIBUTING INK-FOUNTAIN. ELWOOD S. LADD, New York, N. Y. Filed Sept. 16, 1909. Serial No. 518,009.



1. An ink distributing apparatus having a font, an ink supply roller closing one end of the font, a sectional brayer frame, said sections being hinged together and one section being hinged to the font, a brayer roller carried by the outer section of the brayer frame, an actuating lever, means carried by said lever for rotating the supply roller, and a connection between the actuating lever and the inner section of the brayer frame for oscillating said frame.

2. An ink distributing apparatus having a font, an ink supply roller closing one end of the font, a yoke carrying the supply roller, means for raising and lowering said yoke and adjusting the roller in the end of the font, a sectional brayer frame, said sections being hinged together and one section being hinged to the font, a brayer roller carried by the outer section of the brayer frame, an actuating lever, means carried by said lever for rotating the supply roller, and a connection between the actuating lever and the inner section of the brayer frame for oscillating said frame.

3. An ink distributing apparatus having a font, an ink supply roller closing one end of the font, a shaft carrying said roller, a ratchet wheel secured to the shaft, a yoke supporting said shaft, means for raising and lowering said yoke, a sectional brayer frame, said sections being hinged together and one section being hinged to the font, a brayer roller carried by the outer section of the brayer frame, an actuating lever pivoted on the supply roller shaft, a pawl pivoted on the said lever and engaging the ratchet on the supply roller shaft, and a connection between the actuating lever and the inner section of the brayer frame for oscillating said frame.

4. An ink distributing apparatus having a font, an ink supply roller closing one end of the font, a yoke carrying said supply roller, said yoke having a forked upper end, a screw swiveled to the top of the font, a thumb nut turning on said screw, said nut being embraced by the forked end of the yoke, a sectional brayer frame, said sections being hinged together and one section being hinged to the font, a brayer roller carried by the outer section of the brayer frame, an actuating lever, means carried by said lever for rotating the supply roller, and a connection between the actuating lever and the brayer frame for oscillating said frame.

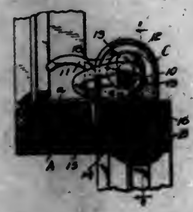
5. An ink distributing apparatus having a font, an ink supply roller closing one end of the font, a brayer frame formed of two sections, said sections being jointed together and one section being hinged to the side of the font, springs arranged to draw the sections of the brayer frame together, a brayer roller carried by the brayer frame, an actuating lever, means carried by said lever for rotating the supply roller, and a connection between the actuating lever and the brayer frame for oscillating said frame.

[Claims 6 to 8 not printed in the Gazette.]

959,559. SASH-LOCK. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Aug. 18, 1909. Serial No. 513,481.

1. A window sash-lock comprising a locking part secured to the upper sash and a locking part secured to the lower sash each formed with tapered hook-shaped ends adapted to engage when in locked position, a crank-shaft carrying one of said locking parts, means for holding said crank-shaft in position to keep said locking parts disen-

gaged and means for automatically throwing said crank-shaft to engage said locking parts when the two sash are brought to closed position, substantially as set forth.



2. In a sash-lock, the combination, of a locking part to be secured to one of the sash and formed with a hook-shaped outer end, another locking part to be secured upon the other sash and comprising a casing, a crank-shaft mounted in said casing, a hook-shaped latch mounted on the crank of said crank-shaft, a pawl for holding the parts in open position and a spring for throwing them into closed position, said pawl being arranged to be tripped by the closing of the window, substantially as set forth.

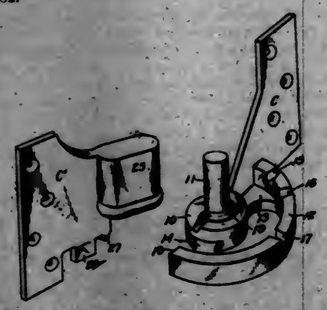
3. In a sash-lock, the combination, of a part with a hook-shaped end to be secured on one sash of a window, another part to be secured on the other sash comprising a casing, a crank-shaft in said casing, a latch mounted on the crank of said crank-shaft, a lever for operating said shaft in one direction, a spring for operating it in the other direction, an arm on said crank-shaft, and a pawl mounted in said casing and arranged to engage said arm to hold the parts in unlocked position, said pawl being arranged to be tripped by the closing of the window, substantially as set forth.

4. A sash-lock comprising a casing to be secured upon one sash of the window, a crank-shaft mounted in said casing, a latch with a hook-shaped inner end frictionally secured on the crank of said crank-shaft by a spring clip, the outer end of said latch being also formed hook-shaped and extending through a slot in said casing, a hook-shaped part to be mounted on the other sash and adapted to be engaged with the hook-shaped end of said latch, and a pawl for holding said parts in unlocked position arranged to be tripped by the closing of the window, substantially as set forth.

5. A sash-lock comprising a hook-shaped catch to be secured on one sash and a hook-shaped latch to be secured on the other sash, said hook-shaped latch being mounted upon a crank-shaft and means for operating said crank-shaft to engage and disengage said parts, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

959,560. SHUTTER-HINGE. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Aug. 18, 1909. Serial No. 513,482.



1. A shutter hinge comprising a hinge-part having a segment concentric with the pintle and containing notches with tapered sides, and a hinge-part mounted on said pintle by means of an elongated socket and having a projection with tapered sides adapted to engage with one or the other of said notches of said segment, said part being thus adapted to slide on said pintle to permit said engagement, substantially as set forth.

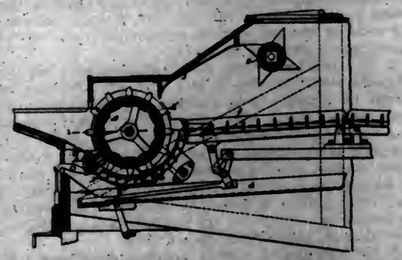
2. A shutter hinge comprising a hinge-part carrying a pintle mounted upon a base formed with a groove terminating in an outwardly and downwardly inclined surface at the point of the open position and surrounded by an A-shaped ridge, a segment adjacent to and at a distance from said ridge formed with a series of radial notches, another hinge-part mounted on said pintle by means of an elongated socket and formed with a V-shaped lug for engagement with said groove and with a locking projection outside of the said lug adapted to engage with said radial notches, substantially as set forth.

3. A shutter hinge comprising a hinge-part formed to be attached to the window-frame and with a base carrying the pintle extending up from the center thereof and with a groove adjacent to said pintle and a ridge adjacent to said groove, a segment on said hinge-part at a distance from said groove with radial notches therein, the other hinge-part formed with an elongated socket for engagement with said pintle and with a lug on its lower edge for engagement with said groove and a lug for engagement with said notches in said segment when on the outside of said ridge, substantially as set forth.

4. A shutter hinge comprising two parts one carrying the pintle and formed with a surrounding base having a groove extending on the working side of said pintle to a point in line with the open position of the shutter where it is formed with a downwardly and outwardly inclined face and a segment with locking faces adjacent to said groove, the other hinge-part being mounted on said pintle and formed with a portion adapted to run in said groove and a part to engage with said locking faces, substantially as set forth.

5. A shutter hinge comprising a hinge-part formed with a base carrying the pintle and a segment adjacent to said pintle with notches therein, the top of said base being formed with a portion tapered downwardly and outwardly, and the other hinge-part formed with an elongated socket mounted on said pintle and formed with a locking projection adapted to engage with said notches when brought to position to register therewith, substantially as set forth.

959,561. SEPARATING-GRATE FOR THRESHING-MACHINES. FRANK F. LANDIS, Waynesboro, Pa. Filed Apr. 25, 1902. Serial No. 104,688.



1. The combination, in a threshing machine separator, with the cylinder thereof, of the separating grate located beneath and in position to coöperate with the teeth of said cylinder, said grate comprising angle-bars extending transversely of the machine with the two wings of each bar arranged to serve as deflectors for the grain and straw and provided on their top edges with short webs projecting at substantially right angles with said bars and in line with the course of the straw, substantially as set forth.

2. A separating grate for threshing machines comprising angle-bars extending transversely of the course of the straw and set with one face to deflect the grain downwardly and provided on their upper edges with short webs projecting in line with the course of the straw, the top edges of said webs being at an elevation above the top edges of their respective angle-bars, substantially as set forth.

3. A separating grate for threshing machines comprising bars with a plurality of faces set at different angles to the course of the straw and arranged to extend across the course of the straw and having short webs thereon which extend in line with the course of the straw, one of the faces of each of the bars being arranged in the path of the flying grain at an angle to deflect said grain away from the direction of said straw, substantially as set forth.

4. In a threshing machine, the combination, of the cylinder, the concave, and the separating mechanism embodying a separating grate extending rearwardly from said concave and curved substantially concentric with said cylinder comprising angle-bars extending across the machine each of said bars having a series of transverse webs arranged along its top edge, the webs of one bar being in line with those of the next adjacent bars, substantially as set forth.

5. A concaved separating grate for threshing machines arranged to be in close proximity to the outer ends of the teeth of the threshing cylinder, said grate being composed of a series of transverse downwardly-deflecting grate-bars with a series of webs on each successively arranged to form practically continuous webs with interstices between the ends of said short webs, said webs being arranged approximately under and in line with the travel of the outer ends of the teeth of the threshing cylinder and adapted to receive the straw as it is stripped by centrifugal force from the ends of said teeth, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

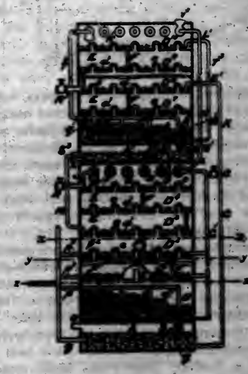
959,562. DISH-WASHER. MAGNUS W. LARSON, Albert Lea, Minn. Filed Mar. 10, 1910. Serial No. 548,421.

1. A dish-washing apparatus comprising a plurality of water containing tanks, an overhead transverse supporting bar, a lever pivoted on said bar and capable of sliding movements thereon, and a basket suspended from said lever adapted to be moved upward and downward within either of the said tanks, substantially as described.

2. A dish-washing apparatus comprising a table, a multiplicity of water containing washing tanks supported by and depending from said table, a supporting frame having a transverse bar overlying said table, a lever having an intermediate transversely extended sleeve pivotally and slidably mounted on the transverse bar of said frame, a basket adapted to enter either of the said tanks, a flexible connection suspending said basket from one end of said lever, and an operating connection depending from the other end of the said lever, substantially as described.

959,563. METHOD FOR THE SEPARATION OF GASES, &c. RENÉ JACQUES LÉVY, Manchester, England, and ANDRÉ HELBRONNER, Paris, France. Filed Feb. 16, 1903. Serial No. 143,703.

1. The process of separating oxygen and nitrogen from liquefied mixtures thereof which consists in vaporizing liquid rich in oxygen, rectifying the gas resulting from the said vaporization by causing it to pass upward through layers of liquids richer and richer in nitrogen the liquids progressively enriched in oxygen overflowing downward, reliquefying the gaseous mixture rich in nitrogen obtained by the first rectification by submitting it to a sufficient pressure and causing it to vaporize another portion of the reliquefied mixture and rectifying the gas resulting from the said vaporisation by means of the reliquefied mixture.



2. The process of separating oxygen and nitrogen from liquefied mixtures of same comprising (*a*) liquefying dry cold compressed air by vaporising liquids rich in oxygen, (*b*) submitting the gas resulting from the said vaporisation to a rectification by means of the liquefied mixture, (*c*) reliquefying the gas rich in nitrogen resulting from the first rectification by causing it to vaporize liquid mixtures of oxygen and nitrogen, and (*d*) rectifying the gas resulting from the said vaporisation by means of the reliquefied mixture.

3. In the separation of oxygen and nitrogen from liquefied mixtures of same, the use of a vaporised liquid rich in oxygen for cooling to liquefaction the dry cold mixture of the gases before submitting the liquefied gas to first separation, and subsequently reliquefying the gas rich in nitrogen resulting from the said separation and using such reliquefied mixture in completing the separation.

4. A process for obtaining pure nitrogen by means of liquefied mixtures of oxygen and nitrogen (air) which consists in vaporising a liquid mixture of oxygen and nitrogen evolved from a reliquefaction of a similar gas by liquefying cold gaseous mixtures of oxygen and nitrogen and subjecting the gas resulting from the said vaporisation to the rectifying action of liquid mixtures of oxygen and nitrogen less and less rich in oxygen and finally to the rectifying action of liquid mixtures richer in nitrogen than atmospheric liquefied air.

5. In the separation of oxygen and nitrogen by means of a liquefaction of the air and its rectification, in combination, a first rectification, the reliquefaction of the gas rich in nitrogen resulting from the said first rectification with a further rectification by means of the reliquefied mixture.

959,564. SURGEON'S OPERATING-PAN. FREDERICK R. LINTLEMAN, Harlan, Iowa. Filed June 29, 1909. Serial No. 504,961.

1. A device for the purpose described, comprising a plurality of horizontal hingeably connected supporting members, a flexible sheet having a part of its area seated upon and upwardly of the supporting members and having a depressed part disposed intermediate the connected supporting members.

2. In a device of the class described, the combination of an elongated cushion, a pair of links each having an end secured upon an end of the cushion, their opposite ends having a hingeable connection; a cover seated upon and

overhanging said cushion and links and providing a depressed area intermediate said cushion and said hingeably connected links.



3. In combination, a device of the class described; a pair of terminal links; intermediate links hingeably connected at one of their ends, their opposite ends being hingeably connected to an end of the terminal links; an elongated cushion removably secured upon the opposite ends of said terminal links; and a cover removably secured upon and disposed to overhang said links and cushion, said cover providing a depressed part between said cushion and said links.

4. In combination, an article for the purpose described; a pair of terminal links; a pair of intermediate links hingeably connected at one of their ends, their opposite ends being hingeably connected to an end of the terminal links; an elongated cushion having its ends removably secured upon the opposite ends of the terminal links and providing a containing space intermediate said links and said cushion; a flexible, impervious sheet removably secured upon said links and cushion, said sheet being disposed to overhang said links and cushion and having a depressed part seated within said containing space.

5. A device for the purpose described, comprising a pair of terminal links, a pair of outwardly curved links pivotally connected at one of their ends, their opposite ends being pivotally connected to an end of one of said terminal links, said terminal links and outwardly curved links having fastening devices thereon; a cushion adapted to have a seating between and to have a removable mounting upon the free ends of said terminal links; a flexible, impervious sheet provided with fastening devices and adapted to have a seating upon and with a depressed surface-portion disposed intermediate said cushion and said links, the fastening devices of said sheet adapted to register with the fastening devices of said links.

[Claim 6 not printed in the Gazette.]

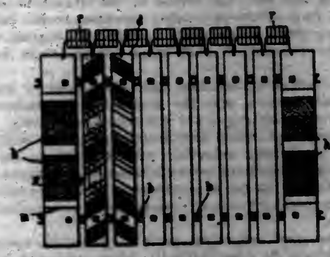
959,565. RACK-RAIL. GEORGE E. LYNCH, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed June 19, 1907. Serial No. 379,779.



1. A rack rail for railways consisting of a rail of inverted trough shape, having the top plate c and the inclined sides plates c', the former plate being perforated to receive the teeth of the rack wheel of a locomotive, in combination with supporting blocks upon which the rail rests, the upper surfaces of the blocks being shaped to fit the under surfaces of the rail, and the blocks having formed in their upper parts recesses arranged to register with the apertures in the top plate of the rail, substantially as set forth.

2. A rack rail for railways of inverted trough shape, having a substantially horizontal perforated upper plate c and side plates c', c', extending downward therefrom, supporting blocks fitting into the trough or channel of the said rail, having recesses in their upper parts arranged to register with the apertures in the rack rail, and screws passing through the side plate c' of the rail and into the blocks for securing the rails in place, substantially as set forth.

959,566. CLEANER FOR SHIPS' HULLS AND THE LIKE. WILLIAM RICHARD MACDONALD, Eel Pie Island, Twickenham, England. Filed Nov. 21, 1908. Serial No. 463,807.



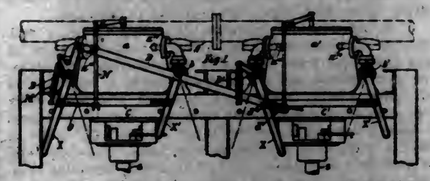
1. In an apparatus for cleaning submerged iron surfaces the combination of a plurality of battens, flexible connections between said battens, curve faced brushes on said battens, and electromagnets on said battens side by side with said brushes, with pole faces more sharply curved than the brush faces.

2. In an apparatus for cleaning submerged iron surfaces the combination of a plurality of battens, continuous chains securing said battens flexibly together, curve faced brushes on said battens, and electromagnets on said battens side by side with said brushes, with pole faces more sharply curved than the brush faces.

3. In an apparatus for cleaning submerged iron surfaces the combination of two end battens each having an outward bevel on its upper side, intermediate battens having the two upper edges beveled, flexible connections between said battens, curve faced brushes on said battens, and electromagnets on said battens side by side with said brushes, with pole faces more sharply curved than the brush faces.

4. In an apparatus for cleaning submerged iron surfaces the combination of two end battens each having an outward bevel on its upper side, intermediate battens having the two upper edges beveled, continuous chains securing said battens flexibly together, curve faced brushes on said battens, and electromagnets on said battens side by side with said brushes, with pole faces more sharply curved than the brush faces.

959,567. MOTOR FOR CENTRIFUGAL DRYING-MACHINES. JAMES WRIGHT MACFARLANE and WILLIAM ALLAN MACFARLANE, Cathcart, Scotland. Filed Sept. 4, 1908. Serial No. 451,707.



1. An installation comprising a plurality of motors rotated by fluid under pressure, nozzles for supplying jets of fluid to said motors, and valves controlling the passage of fluid through said nozzles, said valves provided with means arranged to permit the passage of fluid through a fraction only of the total number of nozzles at the same time.

2. An installation comprising a plurality of motors rotated by fluid under pressure, nozzles for supplying jets of fluid to said motors, and connected valves controlling the passage of fluid through said nozzles, said valves and the connections being arranged to permit the passage of fluid through a fraction only of the total number of nozzles at the same time.

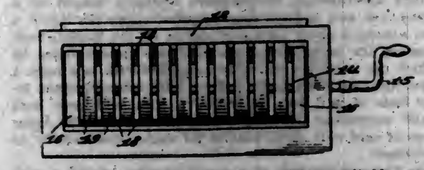
3. An installation comprising a plurality of motors rotated by fluid under pressure, nozzles for supplying jets of fluid to said motors, valves controlling the passage of fluid through said nozzles, and devices for interlocking the valves constructed and arranged to permit only a fraction of the total number of nozzles to be open at the same time.

4. An installation comprising a plurality of motors rotated by fluid under pressure, an accelerating and a maintaining valve for controlling the jets for each motor, levers on said valves, connections between the levers on the valves of each motor, and a connection between the accelerating valves of different motors constructed and arranged to permit a fraction only of the total number of accelerating jets to be in operation at the same time.

5. An installation comprising a plurality of motors rotated by fluid under pressure, valves controlling the supply of fluid to said motors and devices for interlocking the valves constructed and arranged to permit only a fraction of the total number of valves to be open at the same time.

[Claim 6 not printed in the Gazette.]

959,568. GRATE. WILLIAM E. MARENCO, Worcester, Mass., assignor of one-half to John B. Proulx, Southbridge, Mass. Filed Apr. 21, 1909. Serial No. 491,305.



1. In a grate, the combination with a suitable grate frame, of a series of independent grate bars loosely supported at their ends on the side bars of said frame and provided with central openings, and a shaft passing through said openings, and having a series of alternating cams or projections engaging said bars at said openings, the latter being of such size, relative to said shaft and projections that the walls of said openings will closely inclose said shaft and projections, so that by turning said shaft the said grate bars may be moved up and down and back and forth, the movements of the alternate bars being in opposite directions.

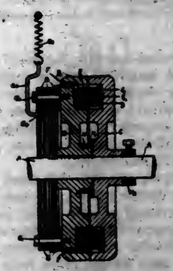
2. In a grate, the combination with a suitable grate frame, of a series of independent grate bars loosely supported at their ends on the side bars of said frame and provided with central openings, and a shaft passing through said openings and having a series of alternating cams or projections engaging said bars at said openings and the walls of which openings closely embrace said shaft and cams or projections, so that by turning said shaft the said grate bars may be moved up and down and back and forth, the movements of the alternate bars being in opposite directions, each of said grate bars having a forked end loosely embracing one of said side bars.

3. In a grate, the combination with a suitable grate frame, of a series of independent grate bars loosely supported at their ends on the side bars of said frame and provided with central openings, and the walls of which openings closely inclose said shaft and cams or projections, a shaft passing through said openings and having a series of alternating cams or projections engaging said bars at said openings, so that by turning said shaft the said grate bars may be moved up and down and back and forth, the movements of the alternate bars being in opposite directions, and a suitable stationary frame or support in which said grate frame is pivotally mounted by said shaft, so that said grate frame may be tilted for dumping.

4. In a grate, the combination with a suitable grate frame, of a series of independent grate bars loosely supported at their ends on the side bars of said frame and provided with central openings, a shaft passing through said openings and having a series of alternating cams or projections engaging said bars at said openings, and the walls of which openings closely embrace said shaft and cams or projections so that by turning said shaft the said grate bars may be moved up and down and back and forth, the movements of the alternate bars being in opposite directions, each of said grate bars having a forked end loosely embracing one of said bars, and a suitable stationary frame or support in which said side grate frame is pivotally mounted by said shaft, so that said grate frame may be tilted for dumping.

5. In a grate, the combination with a suitable grate frame, of a series of independent grate bars loosely supported at their ends on the side bars of said frame and provided with central openings, a shaft passing through said openings and having a series of alternating cams or projections engaging said bars at said openings, and the walls of which openings closely inclose said shaft and cams or projections, so that by turning said shaft the said grate bars may be moved up and down and back and forth, the movements of the alternate bars being in opposite directions, each of said grate bars having a forked end loosely embracing one of said bars, a suitable stationary frame or support in which said grate frame is pivotally mounted by said shaft, so that said grate frame may be tilted for dumping when said shaft is turned in one direction, and stops for preventing tilting movement of said grate frame when said shaft is turned in an opposite direction to agitate said grate bars.

959,569. MAGNETIC CLUTCH. FREDERICK RIPON MARTIN and OSWALD MONTAGU SHEPHERD, London, England. Filed Feb. 13, 1907. Serial No. 357,226.



1. A magnetic clutch including a wire equipped core, with the wire coiled in separate and continuous sections or coils and a lead wire connected thereto about midway of the wire of said sections or coils, and means for rapidly demagnetizing one coil or section thereof for releasing said clutch.

2. A magnetic clutch including a wire equipped core with the wire coiled in separate and contiguous sections or coils and a lead wire connected thereto about midway of the wire of said sections or coils, said core comprising a bobbin receiving said wire coils, and members containing said bobbin, one of said members being movable toward and away from the other.

3. A magnetic clutch including opposed members one being movable away from and toward the other and having annular meeting recesses, a bobbin arranged in said recesses, being tightly fitted in one recess and received loosely in the other recess, a wire-formed core in separate coils or sections arranged in said bobbin, and a lead wire connected to the wire of said coils about midway thereof.

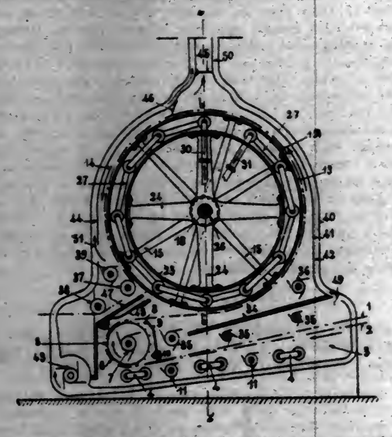
4. In a magnetic clutch, magnetizable members having annular grooves, a coil in the grooves, wire connected midway the coil for conveying the current through both portions of the coil.

5. A magnetic clutch including opposed clutch members, a shaft having one of said members loosely mounted thereon and having the other of said members keyed thereto, a resilient member arranged to aid the removal of one clutch

member from the other, a bobbin arranged in annular recesses of said clutch members, being fitted tightly in one recess and loosely received by the other recess, a wire formed core in separate sections or coils arranged in said bobbin, and a lead wire connected to the wire of said coils about midway thereof.

[Claims 6 and 7 not printed in the Gazette.]

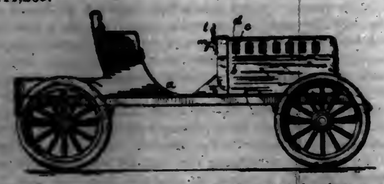
959,570. DRYING-MACHINE FOR SIZED WARPS. GEORGES MASUREL, Roubaix, France. Filed Sept. 16, 1909. Serial No. 518,036.



1. Improved drying machine for sized warp, comprising in combination, a double casing, a primary drying drum inside said casing, channels between the casings for carrying away the moisture evaporated from the warps passing to said drum, a secondary drying drum, a heating apparatus inside said drum, and means for circulating heated air in contact with said warp.

2. Improved drying machine for sized warp, comprising in combination, a double casing, a rotary primary drum, a drying fan on the shaft of said drum, projections on said drum, a spring supported brush adapted to cleanse said projections, a rotatable secondary drum, stationary heating tubes within said drum, guide rolls adapted to draw the warp around said drum and out of the machine, and means for inducing a duplex drying air current, whereof the one portion is compelled by the drying fan of the primary drum to travel in the opposite direction to the incoming warp and to escape through one side of the double casing, while the other portion passes upward over the warp on the secondary drum and escapes at the top of the apparatus from within the inner casing.

959,571. HOOD FOR MOTOR-VEHICLES. WILSON P. MAYS, Portland, Oreg. Filed July 18, 1908. Serial No. 444,269.



1. The combination of a motor-housing having a roof consisting of two half-sections hinged on a longitudinal axis, each section provided with a series of longitudinally alined apertures, movable closure-plates arranged to control said apertures, a quadrant and lever, and connections of the universal-joint principle between said lever and the connecting rods of the closure-plates adapted to operate the latter as a unit.

2. The combination of a motor-housing having a roof consisting of two half-sections hinged on a longitudinal axis, each section provided with a series of longitudinally alined apertures, a closure-plate rotatably hinged on a transverse axis in each aperture controlling the latter, a pair of rods, and connections fastening said closure-plates thereto, a quadrant and lever, and connections of the universal-joint principle between said lever and the connecting rods of the closure-plates adapted to operate the latter as a unit.

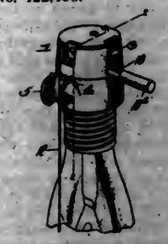
3. The combination of a motor-housing having a roof consisting of two half-sections hinged on a longitudinal axis, each section provided with a series of longitudinally alined apertures, a closure-plate rotatably hinged on a transverse axis in each aperture controlling the latter, a rod arranged under each half-section of the housing-roof, lugs on the underside of the rotatable closure-plates by which the latter are pivotally connected with said rods, a quadrant and lever, and connections of the universal-joint principle between said lever and the connecting rods of the closure-plates adapted to operate the latter as a unit.

4. The combination of a motor-housing having a roof consisting of two half-sections hinged on a longitudinal axis, each section provided with a series of longitudinally alined apertures, a closure-plate rotatably hinged on a transverse axis in each aperture, controlling the latter, a rod arranged under each half-section of the housing-roof, lugs on the underside of the rotatable closure-plates by which the latter are pivotally connected with said rods, a quadrant and lever, and a pair of links connecting the inner ends of said rods, respectively, with said lever, said links comprising jointedly connected members, the inner ends of said rods being bent at an angle, substantially as described.

5. The combination of a motor-housing having a roof consisting of two half-sections hinged on a longitudinal axis, each section provided with a series of longitudinally alined apertures, a closure-plate rotatably hinged on a transverse axis in each aperture, controlling the latter, and adapted, when closed, to be arranged flush with the top of said housing-roof, a rod arranged under each half-section of the housing-roof, lugs on the underside of the rotatable closure-plates by which the latter are pivotally connected with said rods, a quadrant and lever, and a pair of links connecting the inner ends of said rods, respectively, with said lever, said links comprising jointedly connected members, the inner ends of said rods being bent at an angle, substantially as described.

[Claim 6 not printed in the Gazette.]

959,572. SWITCH FOR INCANDESCENT LAMPS. JAMES A. MEBANE, South Boston, Va. Filed Mar. 21, 1908. Serial No. 422,498.

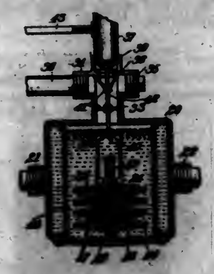


1. The combination with an incandescent lamp socket, of a key shaft, co-acting ratchet disks mounted on said shaft, one of said disks being keyed to the shaft and the other being loose, a contact spring, a double cam carried by the loose disk, and a push rod working through the socket and pivotally connected to the keyed disk.

2. The combination with an incandescent lamp socket, of a key-shaft passing therethrough, a disk keyed to said shaft, a face of said disk being partially cut out and its periphery being grooved, a rod working through the socket and pivotally connected to the cut out portion of said disk, a cord also working through the socket, secured to the disk and running in the groove, a second disk loose on the shaft and having a cam portion, and a contact spring in position to be engaged by said cam, the disks having co-operating ratchet faces.

3. In an incandescent lamp socket, a grooved ratchet disk fixed on the shaft, a loose ratchet disk upon said shaft, coöperating with and operated by the fixed disk, a contact spring, a double cam carried by said loose disk, and bearing on said contact spring, a push rod pivotally connected to the fixed disk, and a flexible cable secured to the pivotal point of said rod, and working in the groove of the disk.

959,573. AUTOMATIC WATER-HEATER. ANDREW E. MILLER, Baltimore, Md. Filed Apr. 6, 1909. Serial No. 488,228.



1. A controlling device for automatic gas heaters comprising a valve, a thermostat, and means formed to impart a sudden movement to said valve to open and close the latter, said means being carried by the thermostat and movable with respect to said valve.

2. A controlling device for automatic gas heaters comprising a valve, a thermostat, and a resilient member formed to impart a sudden movement to said valve to open and close the latter, said member being carried by the thermostat and movable with respect to said valve.

3. A controlling device for automatic gas heaters, comprising a valve, a thermostat, and spring fingers carried by said thermostat and constructed to actuate said valve.

4. A controlling device for automatic gas heaters, comprising a valve, a thermostat, spring fingers carried by said thermostat and adapted to operate said valve, and means for spreading said fingers and suddenly releasing the same as the thermostat expands and contracts.

5. A controlling device for automatic gas heaters, comprising a valve, a thermostat, spring fingers carried by said thermostat, and a flange carried by said valve and arranged to engage said fingers.

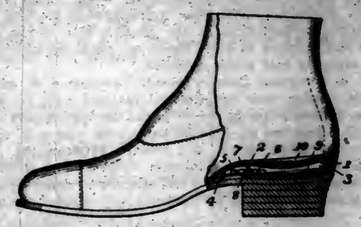
[Claims 6 to 13 not printed in the Gazette.]

959,574. BRUSH. JOSEPH F. MOORE, Philadelphia, Pa. Filed Jan. 30, 1909. Serial No. 475,168.



A brush having a handle provided with a socket having a groove in the bottom thereof, and a bristle portion provided with a back having a rib adapted to enter the groove and with ends engaging the end walls of the socket, substantially as described.

959,575. SPRING-INSOLE. RICHARD W. MORGAN, Sunbury, Pa., assignor of one-half to Benjamin F. Bastian, Sunbury, Pa. Filed Jan. 28, 1909. Serial No. 474,750.



1. A spring insole comprising upper and lower leaves connected at one end, a transverse adjustable fulcrum between the leaves, means in one of said leaves for retaining said fulcrum in place.

2. A spring insole comprising upper and lower leaves connected at one end, a transverse adjustable fulcrum between the leaves, the edges of the lower leaf turned upward having notches or serrations therein to retain said fulcrum in place.

3. A spring insole comprising upper and lower leaves connected at one end, a transverse fulcrum between the leaves, the edges of the lower leaf turned upward having notches or serrations therein to retain the fulcrum, flanges on the fulcrum to prevent any accidental dislodgment of the same.

959,576. FIREPROOF DOOR OR SHUTTER. EDWARD H. MCCLOUD, Columbus, Ohio. Filed Oct. 21, 1908. Serial No. 458,793.



1. A fire proof door or shutter comprised of metallic strips having their longitudinal margins bent to extend from the same side of the strip, the margins of adjacent strips at one side of the structure being butted and located between the corresponding margins of a similarly formed strip at the opposite side of the structure, combined with means for securing said strips together consisting of a uniting member passed through said margins.

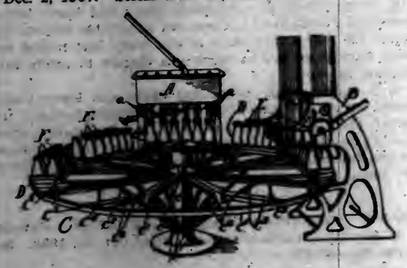
2. A fire proof door or shutter comprised of metallic strips having their longitudinal margins bent to extend from the same side of the strip, the margins being provided with perforations and the margins of adjacent strips at one side of the structure being butted and located between the margins of a similarly formed strip at the opposite side of the structure, bracing tubes between said margins in line with said perforations, combined with a uniting bolt or rod passed through said tubes.

3. A fire proof door or shutter comprised of metallic strips having their longitudinal margins bent to extend from the same side of the strip, the margins of adjacent strips at one side of the structure being butted and located between the corresponding margins of a similarly formed strip at the opposite side of the structure and extending to the opposite side to brace the same, combined with means for securing said strips together.

4. A fire proof door or shutter comprised of metallic strips having their longitudinal margins bent to extend from the same side of the strip, the margins of adjacent strips at one side of the structure being butted and located midway between the corresponding margins of a similarly formed strip at the opposite side of the structure and adapted to brace the same, combined with means for securing said strips together.

5. A fire proof door or shutter comprised of metallic strips having their longitudinal margins bent to extend from the same side of the strip and having tongues thereon the margins of adjacent strips at one side of the structure being butted and located between the corresponding margins of a similarly formed strip at the opposite side of the structure and adapted to brace the same, combined with means for securing said strips together.

959,577. BOTTLE-FILLING MACHINE. CHARLES F. MCEWAN, Marengo, Ill., assignor to Borden's Condensed Milk Company, a Corporation of New Jersey. Filed Dec. 2, 1907. Serial No. 404,737.



1. In a device of the class described, a bottle-filling machine having means to raise a bottle-tray, a bottle-closing machine, and a revolving tray-carrier arranged adjacent said machines and having guides to engage a tray during its raising movement.

2. A revolving tray-carrier adapted to support a plurality of bottle-trays having openings in position to be successively presented at predetermined points, and guides on the carrier engaging the openings of the trays in their raised and lowered positions on the carrier.

3. A revolving tray-carrier comprising a base or pedestal, a revolving sleeve on the base, a series of radial arms carried by the sleeve and having angular outer portions provided with upright pins, the angular portions of adjacent arms being parallel to form a tray-base.

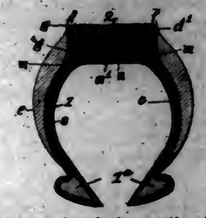
4. A revolving tray-carrier comprising a base, a revolving sleeve on the base and having an upper flange or head, a series of radial arms secured to said head and having angular ends, the arms being arranged in pairs, a brace between the sleeve and each pair of arms, and upright pins in the angular portions of the arms.

5. A revolving tray-carrier comprising a base, a revolving sleeve on the base and having an upper flange or head, a series of radial arms secured in pairs to said flange and having angular ends, the angular ends of adjacent arms being parallel to form a tray-base and having upright pins, and a brace extending from the sleeve to each pair of arms.

959,578. PROCESS OF TREATING SULFID ORES CONTAINING COPPER. JOSEPH MCFETRIDGE, Vandergrift, Pa. Filed Nov. 21, 1908. Serial No. 463,908.

The process of treating copper bearing pyrites, sulfid ores and mattes, consisting in reducing the same to a pulverulent condition, then injecting the same by means of an air blast or fan or blower suction, into a furnace heated to a temperature high enough to at once ignite the sulfur and simultaneously agglomerate the ore and convert the copper into sulfate and oxid, grinding the agglomerated ore, then lixiviating the ore with water and dilute acid to dissolve the copper, and finally precipitating the copper.

959,579. ELASTIC TIRE FOR VEHICLES. ISAAC SEAMAN MCGIEHAN, Westminster, London, England. Filed Jan. 6, 1908. Serial No. 409,379.



A tire comprising a foundation portion formed of layers of fabric impregnated with rubber lying transversely of the tread portion, and a tread portion composed of annular layers of fabric impregnated with rubber standing perpendicular to the layers of the foundation portion, and side binders of fabric impregnated with rubber, said foundation portion, side binders, and tread portions and the layers of fabric and rubber therein being permanently united by vulcanization.

959,580. SHOE-CLEANER. GEORGE NARANCE, St. Joseph, Mo., assignor of one-half to Thomas J. Smith, St. Joseph, Mo. Filed Oct. 11, 1909. Serial No. 522,079.



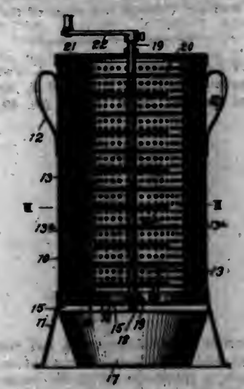
1. In a shoe cleaner, the combination with a base and two sides and a plurality of scrapers, supported by said sides, of a fixed brush post, projecting upward from one of said sides, said brush post having a plurality of apertures formed transversely through the upper end portion thereof; a brush thimble, a brush secured thereto, said thimble being rotatably mounted on said post; a cap rotatably mounted on said post, said cap being adapted to rotatably hold the upper end of said thimble in place; a spiral torsion spring in said thimble and encircling said post, the lower end of said spring being secured to said thimble and the upper end thereof secured to said cap, and a pin extending through said cap and through one of said apertures through said post; a projection on said side and a stop on said thimble, adapted to contact said projection and thereby limit the rotation of said thimble.

2. In a shoe cleaner, the combination with a base and two sides projecting upward at opposite edges of said base and a plurality of shoe scrapers, supported by the upper edges of said sides, of a bracket post projecting upward from said base and formed therewith, said bracket post having a plurality of apertures formed transversely through the upper end portion thereof; a bracket provided with a bracket thimble formed therewith, said bracket thimble being rotatably mounted on said bracket post; a cap rotatably mounted on said post, said cap being adapted to rotatably hold the upper end of said thimble in place; a spiral torsion spring in said thimble and encircling said bracket post, the lower end of said spring being secured to said bracket thimble and the upper end thereof secured to said cap and a pin extending through said cap and through one of said apertures through said bracket post; said bracket being adapted to be rotated into contact with one of said sides and thereby limit the rotation of said bracket.

3. In a shoe cleaner, a bracket post having a bracket rotatably mounted thereon, and a spring on said bracket post for actuating said bracket; a brush post, projecting upward from the free end of said bracket and formed therewith, said brush post having a plurality of apertures formed transversely through the upper end portion thereof; a brush thimble, adapted to carry an ordinary brush secured thereto, said thimble being rotatably mounted on said post; a cap rotatably mounted on said post, said cap being adapted to rotatably hold the upper end of said thimble in place; a spiral torsion spring in said thimble and encircling said brush post, the lower end of said spring being secured to said thimble and the upper end thereof secured to said cap, and a pin extending through said cap and through one of said apertures through said post; a projection on said bracket and a stop on said thimble, adapted to contact said projection and thereby limit the rotation of said thimble.

4. In a shoe cleaner, in combination, a pair of brush posts, brush thimbles rotatably mounted, one on each of said posts, a brush carrier of tapered dovetailed shape, formed with each of said thimbles, a brush fastener, adapted to be secured by screws on the back of an ordinary brush, said brush fastener having a tapered dovetailed channel therein, adapted to fit either of said brush carriers and being provided with screws whereby said fastener is secured on said back of said brush.

959,581. STRAINER. EMMA M. NEWTON, New York, N. Y. Filed Nov. 5, 1909. Serial No. 526,396.

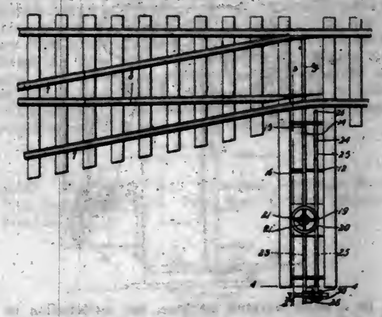


A device of the class described, comprising a plurality of cylindrical members, one of said members being open at both ends and the walls thereof perforated, the other member adapted to incase said first mentioned member and having a perforated base and an imperforate top, an annular upwardly extending flange formed on the interior portion of said base and adapted to engage the lower edge of the first mentioned member and retain the same in position spaced from the walls of the other member, a bearing formed on the base, a shaft provided with agitating means rotatably mounted in said bearing and in the top of the first mentioned member substantially as described.

959,582. AUTOMATIC SELF-CLOSING RAILWAY SWITCH MECHANISM. HARRISON B. NOBLE, Heyworth, Ill. Filed Nov. 17, 1908. Serial No. 463,071.

1. In mechanism of the class described, movable switch rails, a sliding rod connected thereto, an expansion spring acting upon said rod to hold the rails in open position, a rotary shaft having a crank, a bar pivotally connected to the sliding rod and loosely connected to the crank, said crank being in alinement with the longitudinal extent of the bar when the switch rails are in open position, striker plates on said bar, and trip means adapted to be operated by a passing train to engage the striker plates for moving the bar whereby the switch rails will be shifted to a closed position.

2. The combination, of switch rails, a sliding rod connected thereto, expansion means acting on said rod for holding the switch rails in open position, a rotatable shaft having a crank, a bar having connection with the crank and the sliding rod, and trip means operative upon the swinging bar to cause the closing of the switch rail, and actuated by a passing train.



3. In combination with a main track line and its siding, of a movable switch opening the siding into the main line, means maintaining the switch in open position, a vertically disposed rotatable shaft having a crank, a connection between the crank and the switch and being in alinement with said crank when the switch is in open position, and train actuated trip means operative upon the connection to move the switch to closed position.

4. In combination with a main track line and its siding, of a movable switch opening the siding into the main line, means maintaining the switch in open position, a vertically disposed rotatable shaft having a crank, a connection between the crank and the switch and being in alinement with said crank when the switch is in open position, train actuated trip means operative upon the connection to move the switch to closed position, and automatically releasable locking means holding the switch in open position.

5. In combination with a main track line and its siding, of a movable switch opening the siding into the main line, means maintaining the switch in open position, a vertically disposed rotatable shaft having a crank, a connection between the crank and the switch and being in alinement with said crank when the switch is in open position, train actuated trip means operative upon the connection to move the switch to closed position, automatically releasable locking means holding the switch in open position, and locking means to hold the switch in closed position.

959,583. WOODWORKING-MACHINE. ARTHUR B. NORRIS, Rochester, N. Y. Filed May 27, 1909. Serial No. 498,597.

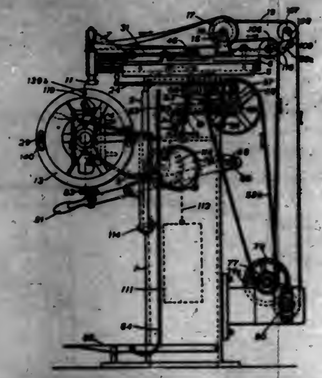
1. In a machine for shaping the ends of a piece of work, the combination with a pattern-guided cutter having universal movement in a single plane, of a work holder reversible to present opposite ends of the work to the cutter.

2. In a machine for shaping the ends of a piece of work, the combination with a pattern-guided cutter having universal movement in a single plane, of a pivoted work holder arranged to turn to present opposite ends of the work to the cutter.

3. In a machine for shaping the ends of a piece of work, the combination of a cutter, a follower operatively connected therewith to guide the cutter, and a work and pattern holder in common reversible to present opposite ends of the work and the pattern to the cutter and follower respectively.

4. In a machine for shaping the ends of a piece of work, the combination of a cutter, a follower operatively connected therewith to guide the cutter, and a pivoted work

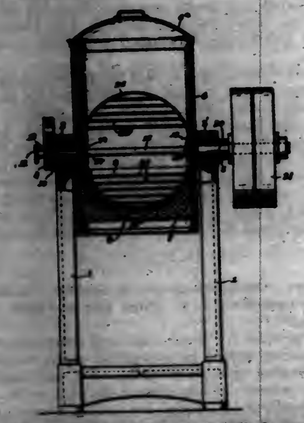
and pattern holder in common arranged to turn to present opposite ends of the work and pattern to the cutter and follower respectively.



5. In a wood working machine, the combination of a work and pattern holder arranged to hold the work and pattern side by side, and movable in one plane, a cutter, a follower operatively connected therewith to guide the cutter according to the movement of the follower, means to drive the cutter, and means to move the follower and cutter around and in contact with the pattern and work respectively, including a support for both the follower and the cutter having pattern-controlled movement in a plane at an angle to the plane of movement of the work and pattern holder.

[Claims 6 to 38 not printed in the Gazette.]

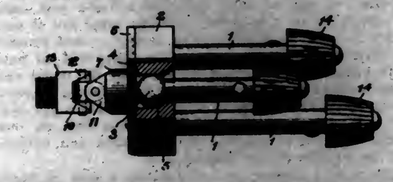
959,584. MIXING-MACHINE. FELIX NOTZ, Chicago, Ill. Filed Sept. 8, 1908. Serial No. 451,948.



1. A machine of the character described, comprising a casing for containing the material to be mixed or beaten, a plurality of rotatable beater frames carrying blades, means for supporting said frames and wherein one at least of said frames is eccentrically and pivotally mounted, and mechanism for imparting rotation to said beater frames.

2. A machine of the character described, comprising a casing for containing the material to be mixed or beaten, a plurality of rotatable beater frames carrying blades, means for supporting said frames, having seats or sockets wherein one at least of said frames is pivotally mounted, and mechanism for imparting rotation to said beater frames.

959,585. TOOL FOR CLEANING TUBES. CHARLES F. OVERLY, Pittsburg, Pa., assignor, by mesne assignments, to Enterprise Machine Manufacturing Company, a Corporation of Pennsylvania. Filed May 27, 1908. Serial No. 435,224.



1. A tool for cleaning tubes having in combination a rotatable head provided with pockets or openings having their walls shaped to form curved seats in directions tangential or approximately tangential to arcs of circles concentric with the axis of rotation of the head, the openings being enlarged above the seats, fingers provided with cutters and having balls at their ends adapted to bear upon the seats in the pockets or openings, and a plate for holding the ball like enlargements in the openings.

2. A tool for cleaning tubes, having in combination a head, fingers movably connected to the head, toothed cutters and pins passing through the cutters into the ends of the fingers and out through the sides of the fingers.

959,586. HAT-FASTENER. WALTER J. PATON, Galva, Kans., assignor of one-half to Lural S. Ryan, Galva, Kans. Filed Apr. 20, 1909. Serial No. 491,091.



As a new article of manufacture, a hat fastener comprising a substantially flat shank formed at one end with a tubular socket, a spindle fitted in the socket and projecting therebeyond, spring-pressed jaws rotatably mounted on the spindle and coacting to form a swiveled clasp, a pivot pin extending perpendicularly from the other end of the shank on one side of the plane thereof, and a comb mounted near its middle point on the pivot pin to rotate in a plane substantially parallel to the plane of the shank, the shank being offset in proximity to the socket to form, in effect, a seating recess to accommodate the comb, when the latter is positioned in the direction of the length of the shank.

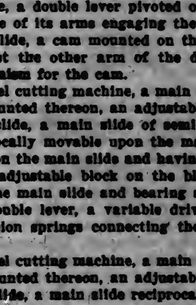
959,587. FISH-HOOK. ANDREW PAYSEN, St. Louis, Mo. Filed Oct. 20, 1908. Serial No. 458,695.

1. A device of the class described, comprising a bait hook, a gaff hook hinged to the bait hook, and a buoyant body carried by the gaff hook.

2. In a device of the class described, the combination with a bait carrying hook, of a gaff hook pivotally connected to the upper end of the bait hook, and a buoyant body applied to the gaff hook.

3. A device of the class described, comprising a pair of hooks hinged to one another, the points of which hooks project toward one another, and a buoyant body carried by one of said hooks.

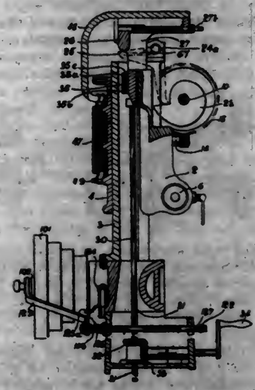
4. A fishing device including a plurality of hooks pivotally connected to each other, and floating means acting to normally separate said hooks when in the water, said hooks being so arranged that when one of them is drawn upon by a fish, the opposed hook will be forced inward and downward into adjacency with the pulled hook.



5. A fishing device including a gaff hook having a float thereon and adapted to be attached at one end to a fishing line, and a bait hook having a pivotal connection to the shank of the gaff hook.

[Claims 6 to 9 not printed in the Gazette.]

959,588. WHEEL-CUTTING MACHINE. MIKAEL PEDERSEN, Dursley, England. Original application filed Sept. 10, 1906, Serial No. 333,930. Divided and this application filed Mar. 11, 1908. Serial No. 420,385.



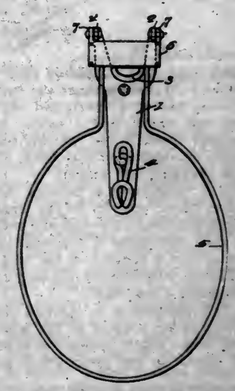
1. In a wheel cutting machine a main bed, a block slide adjustably mounted thereon, an adjustable block mounted on the block slide, a main slide reciprocally movable upon the main bed, tension springs connecting the main slide and block slide, a double lever pivoted on the main slide and having one of its arms engaging the adjustable block on the block slide, a cam mounted on the main slide and bearing against the other arm of the double lever, and driving mechanism for the cam.

2. In a wheel cutting machine, a main bed, a block slide adjustably mounted thereon, an adjustable block mounted on the block slide, a main slide of semi-cylindrical cross section reciprocally movable upon the main bed, a double lever pivoted on the main slide and having one of its arms engaging the adjustable block on the block slide, a cam mounted on the main slide and bearing against the other arm of the double lever, a variable driving gear for the cam, and tension springs connecting the main slide and block slide.

3. In a wheel cutting machine, a main bed, a block slide adjustably mounted thereon, an adjustable block mounted on the block slide, a main slide reciprocally movable upon the main bed, a double lever pivoted on the main slide and having one of its arms engaging the adjustable block on the block slide, a cam mounted on the main slide and bearing against the other arm of the double lever, driving mechanism for the cam, springs connecting the main slide and the block slide, and manually operable means for raising and lowering the block slide.

4. In a wheel cutting machine, a main bed, a block slide adjustably mounted thereon, an adjustable block mounted on the block slide, a main slide reciprocally movable upon the main bed, a double lever pivoted on the main slide and having one of its arms engaging the adjustable block on the block slide, a cam mounted on the main slide and bearing against the other arm of the double lever, driving mechanism for the cam, tension springs connecting the main slide and block slide, manually operable means for raising and lowering the block slide, and manually operable means for locking the block slide in any desired position.

959,589. HAT AND COAT HANGER. CHARLES H. PELTON, Springfield, Ohio. Filed Sept. 4, 1909. Serial No. 516,249.



1. In a device of the character described, the combination, with a fixed part, and a locking projection mounted on said fixed part and having a recess, of a retaining member, a pivoted locking part carried by said retaining member and adapted to enter the recess in said projection, and means for moving said locking part about its pivotal center.

2. In a device of the character described, the combination, with a base and a retaining member pivotally connected thereto, of a locking projection carried by one of said parts, a lever pivotally mounted on the other of said parts, a locking member carried by said lever and adapted to engage said projection, and means for actuating said lever.

3. In a device of the character described, the combination, with a base, and a retaining member pivotally connected thereto, of a locking projection secured to said base, a casing secured to said retaining member, a lever pivotally mounted in said casing and having a part adapted to engage said projection, and means for actuating said lever.

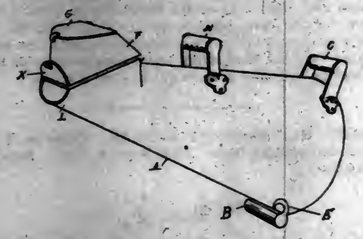
4. In a device of the character described, the combination, with a base and a retaining member pivotally connected thereto, of a locking projection secured to said base, a casing secured to said retaining member, a lever pivotally mounted in said casing and having a finger extending at an angle thereto, a locking member carried by said lever and adapted to engage said projection, and a key adapted to enter said casing and engage said finger to actuate said lever.

5. In a device of the character described, the combination, with a base and a retaining member pivotally connected thereto, of a locking projection secured to said base, a casing securrd to said retaining member, a lever pivotally mounted in said casing, a locking member carried by

one edge of said lever and adapted to engage said projection, a projection extending from the edge of said lever opposite said locking member, and a key adapted to enter said casing and actuate said lever and having a notch to receive the projection carried by said lever.

[Claims 6 and 7 not printed in the Gazette.]

959,590. MILK-PAIL. JUDSON D. PERRY, Montgomery, Ala. Filed Jan. 30, 1909. Serial No. 475,101.



1. A milk pail comprising a tapering body portion, a detachable milk-receiving receptacle at the small end thereof, said receptacle having a contracted orifice, a hinged lid for closing said orifice, and a second hinged lid for closing a discharge orifice in the tapering end of the pail.

2. A milk pail provided with a rockable support, and a detachable shoe engaging said support.

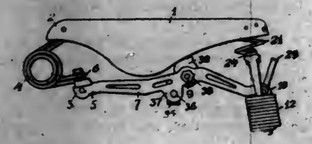
3. A milk pail comprising a tapering body, a transversely-extending rocker support at the large end of said body, and a detachable shoe for engaging said support.

4. A milk pail comprising a tapering body, a transversely-extending rocker support at the large end of said body, and a handle diametrically opposed to said rocker support and forming a seat back.

5. A milk pail comprising a tapering body, a transversely-extending rocker support at the large end of said body, a handle diametrically opposite said rocker support and a second handle in the intermediate portion of the body.

[Claims 6 to 11 not printed in the Gazette.]

959,591. SADDLE. CHARLES A. PERSONS, Worcester, Mass. Filed May 25, 1908. Serial No. 434,911.



1. In a device of the class described, a seat, a supporting frame, means for resiliently connecting the peak of the seat with the supporting frame, a cantle under the rear portion of said seat, downwardly extending resilient members attached to under side of the cantle, downwardly extending resilient members attached to the rear of the supporting frame, means for rigidly connecting the lower ends of the frame supported members with the lower ends of the corresponding cantle supported members, and means for bracing these connecting means.

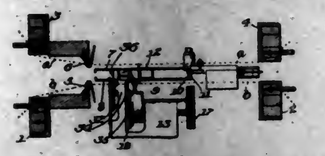
2. In a device of the class described, a seat, a supporting frame, means for resiliently connecting the peak of the seat with the supporting frame, a cantle under the rear portion of said seat, downwardly extending compressible springs attached to the under side of the cantle, downwardly extending extensible springs attached to the rear of the supporting frame, means for rigidly connecting the lower ends of the extension springs with the lower ends of the corresponding compression springs, and means for bracing these connecting members.

3. In a device of the class described, a seat a supporting frame, means for resiliently connecting the peak of the saddle with the supporting frame, a cantle under the rear portion of said seat, downwardly extending compressible springs attached to the cantle, downwardly extending extensible springs attached to the rear of the supporting frame, rods connecting the lower ends of the extensible springs with the lower ends of the corresponding compressible springs, and means for bracing these connecting rods.

4. In a device of the class described, a seat, a supporting frame, means for resiliently connecting the peak of the seat with the supporting frame, a cantle under the rear portion of said seat, downwardly extending compressible springs attached to the under side of the cantle, downwardly extending extensible springs attached to the rear of the supporting frame, rods connecting the lower ends of the extensible springs with the lower ends of the corresponding compressible springs, and a bridge joining these connecting rods.

5. In a device of the class described, a seat a supporting frame, means for resiliently connecting the peak of the seat with the supporting frame, a cantle under the rear portion of said seat, downwardly extending compressible coil springs attached to the under side of the cantle, downwardly extending extensible coil springs attached to the rear of the supporting frame, rods connecting the lower ends of the extensible coil springs with the lower ends of the corresponding compressible coil springs, said rods passing within the coil of said extensible coil springs, and bracing means for said connecting rods.

959,592. KNOTTER. BURT A. PETRASON, Rockford, Ill., assignor, by mesne assignments, to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners, Rockford, Ill. Filed Oct. 5, 1906. Serial No. 337,648.



1. In a knot-tying mechanism, in combination, a tying-bill; means for continuously rotating said tying-bill; a rotatably supported member adapted to engage the knotted threads and strip them from said tying-bill; and means for rotating said member once for every two revolutions of said tying-bill.

2. The combination, with means for supporting two threads at two points in their lengths, of means located between said supporting means for forming a knot; and a rotatory member, also located between said supporting means, and adapted to remove the knotted threads from said knot-forming means.

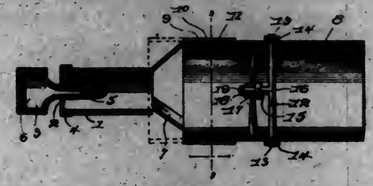
3. In a knot-tying mechanism, in combination, a rotatory tying-bill adapted to clamp and shear the threads, a rotatory hook adapted to engage the strands extending from the knot and remove the knot and the strands from the tying-bill and tighten the knot, and means across which the strands are pulled by said hook in tightening and removing the knot.

4. In a knot-tying mechanism, in combination, means for forming a knot and shearing the ends of the knotted strands; a hook adapted to engage the strands extending from the knot and remove the knot and the strands from said knot-forming means and tighten the knot; means across which the strands are pulled by said hook in tightening and removing the knot; and means for continuously actuating said knot-forming means and rotating said hook.

5. In a knot-tying mechanism, in combination, a tying-bill, a thread guide, and means located between said bill and said guide for stripping the knot from said bill and wiping the knotted ends into the space between said stripping means and said guide.

[Claims 6 to 11 not printed in the Gazette.]

959,593. GAS AND AIR MIXER FOR BURNERS. GUS A. PETRAKOS and JESSE L. LACKEY, Clarksburg, W. Va. Filed May 22, 1909. Serial No. 497,619.



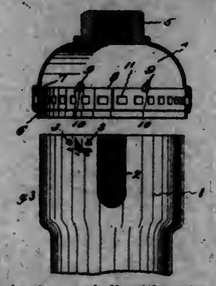
1. A gas and air mixer comprising a primary mixing chamber and an auxiliary mixing chamber, a nozzle having one end positioned in said primary chamber and extending longitudinally thereof for admitting gas thereto, said primary chamber provided with means for admitting air therein, diverging arms integrally connected to said chambers for connecting the same thereby forming an opening between said chambers, a sleeve slidably mounted upon said auxiliary chamber and adapted to slide thereon and partly close said opening, and a fan carried by said auxiliary chamber and adapted to facilitate the mixing of the gas and air.

2. A gas and air mixer comprising a primary mixing chamber and an auxiliary mixing chamber, means secured to said primary chamber for admitting gas thereto, means for admitting air to both of said chambers, a transverse rod secured in said auxiliary chamber and provided with an angle extension, said angle extension provided with an enlarged portion intermediate its ends, a fan positioned upon said angle portion and engaging the outer face of said enlarged portion, and means positioned upon the outer end of said angle portion for holding the fan upon said angle portion between said enlarged portion and said last-mentioned means.

3. In a gas and air mixer the combination with a primary and an auxiliary chamber, means for admitting gas secured thereto, said chambers provided with means for admitting air therein, of a rod passing transversely through said auxiliary chamber, an extension carried by said rod, and a fan mounted upon said extension for facilitating the mixing of the gas and air in the auxiliary chamber.

4. A device of the class described the combination with a primary and an auxiliary chamber, a rod passing transversely through said auxiliary chamber and provided with screw-threaded ends, said ends passing through the casing of said chamber, nuts threaded upon said ends for securing said rods in a set position within said chamber, an integral angle extension formed upon said rod, and a fan loosely mounted upon said angle extension.

959,594. ELECTRIC-LAMP SOCKET. JOHANN G. PETRASON, Hartford, Conn., assignor to The Arrow Electric Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 3, 1909. Serial No. 525,982.



1. A socket having a shell with outwardly projecting tongues, a cap fitting said shell, and a perforated split ring located in the cap, said tongues being adapted to enter openings in said ring when the shell and cap are put together.

2. A socket having a shell with outwardly projecting tongues, a cap fitting said shell, a perforated split ring located in the cap, and depressions from said cap retaining the ring in position, said tongues being adapted to enter openings in said ring when the shell and cap are put together.

3. A socket having a shell with outwardly projecting tongues, a cap fitting said shell, a split ring located in a recess in the cap, said ring having openings in its side and notches in its edge, and depressions from the cap entering said notches and holding the ring against movement, said tongues being adapted to enter openings in said ring when the shell and cap are put together.

959,595. ROPE-RAILWAY. RUDOLF PFAFFENBACH, Leipzig, Germany, assignor to Adolf Bleichert & Company, Leipzig-Gohlis, Germany. Filed Mar. 13, 1908. Serial No. 420,965.



1. In a rope railway the combination of a continuously moving main hauling member, a second hauling member at certain sections thereof, cars adapted to be moved by said hauling members, double grip devices on the cars adapted respectively to coact with the two hauling members, common coupling members on the cars and common coupling members at the aforesaid sections, adapted to automatically operate said grip devices whereby one is engaged with and the other simultaneously disengaged from a hauling member, substantially as described.

2. In a rope railway the combination of a continuously moving main hauling member, a second hauling member at certain sections thereof, said second member being formed by the return run of said main member, cars adapted to be moved by said hauling members, double grip devices on the cars adapted respectively to coact with the two hauling members, common coupling rollers on the cars, and common coupling rails at the aforesaid sections adapted to automatically operate said grip devices whereby one is engaged with and the other simultaneously disengaged from a hauling member, substantially as described.

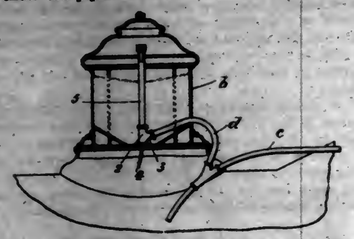
3. In a rope railway the combination of a track, a continuously moving main hauling member, a second hauling member at certain sections thereof, cars suspended from said track and adapted to be moved by said hauling members, superposed double grip devices on the cars adapted respectively to coact with the two hauling members, common coupling rollers on the cars, and common coupling rails at the aforesaid sections adapted to automatically operate said grip devices whereby one is engaged with and the other simultaneously disengaged from a hauling member, substantially as described.

959,596. TRACK-SANDER. WILLIAM ALEXANDER PITT, Montreal, Quebec, Canada, assignor of three-fourths to Sidney Smith Underwood, Montreal, Canada. Filed Jan. 21, 1910. Serial No. 539,392.

1. In a track sander the combination with a sand box, of a suction chamber located within the sand box and adapted to communicate with the body of sand in the box, a suction pipe leading from the chamber, and an air supply pipe connected to the said chamber at a point above the sand communication for the purpose of causing a vortex of air and sand within the chamber.

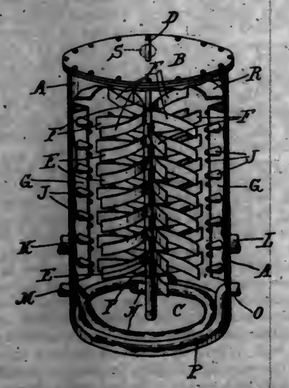
2. A track sander comprising in combination with a sand box and a motive fluid pipe with a suction branch, a pipe casting fixed to the bottom of the interior of the sand box and having sand intake ports in its lower portion, a vertical pipe screwed into the top of the casting,

a cap upon the top of each vertical pipe, and the said pipe and cap being constructed and arranged to permit air to enter the pipe.



3. A track sander comprising in combination with a sand box and a motive fluid pipe with a suction branch, a pipe casting fixed to the bottom of the interior of the sand box and having sand intake ports in its lower portion, a vertical pipe screwed into the top of the casting and having slits in its top, and a cap screwed upon the top of such vertical pipe.

959,597. GAS-MIXER. CHARLES V. POLLOCK, Madison, Wis. Filed Sept. 8, 1908. Serial No. 452,117.



1. A gas mixing device comprising a chamber, a plurality of gas inleading ducts, and intermediate them means for distributing and mixing such gases comprising a plurality of independent rotatable fan-like structures, and means for directing the gas against their wings.

2. A gas mixing device comprising a chamber, a plurality of gas inleading ducts in the sides thereof, and intermediate them means for distributing and mixing such gases comprising rotatable fan-like structures, and means for directing the gas against their wings, said fan-like structures adapted to successively rotate in opposite directions.

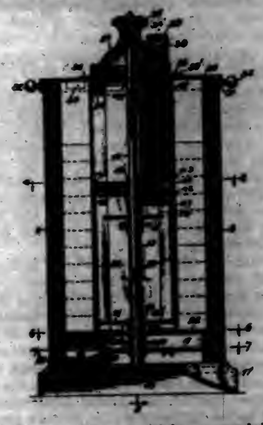
3. A gas mixing device comprising a cylindrical chamber with a plurality of inleading gas ducts in the sides thereof and discharging into the chamber, and a series of plates between the pipes in the chamber mounted so as to rotate, said plates arranged in fan-like form, the successive fans set to rotate in opposite directions.

4. A gas mixing device comprising a cylindrical chamber with a plurality of inleading gas ducts discharging into the chamber, a series of plates between the pipes in the chamber mounted so as to rotate, said plates arranged in fan-like form, the successive fans set to rotate in opposite directions, and deflector and distributing plates in front of the ducts.

5. A gas mixing device comprising a cylindrical chamber with a plurality of inleading gas ducts discharging into the chamber, a series of plates between the pipes in the chamber mounted so as to rotate, said plates arranged in fan-like form, the successive fans set to rotate in opposite directions, and deflector and distributing plates in front of the ducts, each consisting of a series of tangentially arranged funnel shaped pipes.

[Claim 6 not printed in the Gazette.]

959,598. VENDING-MACHINE. HARRY SAYLES POND, Chicago, Ill. Filed Apr. 22, 1907. Serial No. 369,603.



1. A vending machine comprising a revoluble magazine consisting of a plurality of compartments to receive the goods to be vended, a plate beneath the magazine forming a bottom therefor and on which the stack of goods in each compartment rests, said plate having an opening therein through which the goods drop from the magazine when a compartment is moved to position above said opening the edges of said opening being in different horizontal planes, and ejector means beneath said plate to revolve in unison with the magazine.

2. A vending machine comprising a revoluble magazine to receive the goods to be vended, a plate beneath the magazine forming a bottom therefor and provided with an opening therein through which the goods drop from the magazine, said plate being made to form a cam track adjacent to one edge of said opening on which the goods in the magazine travel as they approach the opening, and ejector means beneath said plate.

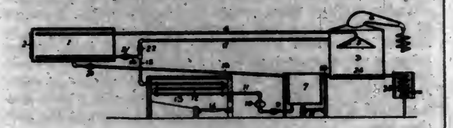
3. A vending machine comprising a revoluble magazine consisting of a plurality of compartments to receive the goods to be vended, a stationary plate beneath the magazine forming a bottom therefor and provided with an opening therein through which the goods drop from the magazine as the compartments are moved successively into position above said opening and having a cam portion adjacent one edge of said opening, and a revoluble ejector plate beneath said bottom plate and provided with a plurality of ejectors corresponding in number to the compartments.

4. A vending machine comprising a revoluble magazine consisting of a plurality of compartments to receive the goods to be vended, a plate beneath the magazine forming a bottom therefor and provided with an opening therein through which the goods drop from the magazine as the compartments are moved successively into position above said opening and having one side of said opening raised to provide a cam surface, and an ejector plate beneath said bottom plate to support a package of the goods in said opening in the bottom plate while another package is being delivered by said ejector plate.

5. A vending machine comprising a revoluble magazine consisting of a plurality of compartments to receive the goods to be vended, a plate beneath the magazine forming a bottom therefor and provided with an opening higher at one side than the other therein through which the goods drop from the magazine as the compartments are moved successively into position above said opening, and an ejector plate beneath said bottom plate to support a package of the goods in said opening in the bottom plate while another package is being delivered by said ejector plate, said ejector plate having recesses therein corresponding in number and location to said compartments to receive the packages of goods successively from the opening in the bottom plate and ejectors adjacent to said recesses.

[Claims 6 to 8 not printed in the Gazette.]

959,599. PROCESS OF EXTRACTING PRODUCTS FROM WOOD. FREDERICK POPE, New York, N. Y., assignor to Southern Manufacturing Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed June 6, 1907. Serial No. 377,634.



1. The method of extracting products from wood, which consists in circulating over the wood contained in a suitable vessel a hot bath, conducting the bath to a separate chamber and there agitating it while maintaining it at substantially the same temperature as in the absorbing vessel.

2. The method of extracting products from wood, which consists in circulating over the wood while held in a suitable vessel a hot bath, conducting said bath to a separate chamber and there agitating it while maintaining it at substantially the same temperature as in the absorbing vessel, reheating said bath and again conducting it to the chamber containing the wood.

3. The method of extracting products from wood, which consists in circulating over the wood while contained in a suitable chamber a hot bath, continuing the circulation of the bath through a separate chamber, and agitating that portion of the bath which is in the separate chamber without reducing the temperature thereof.

4. The method of extracting products from wood, which consists in circulating over the wood contained in a suitable chamber a hot bath, continuing the circulation of the bath into a separate chamber and there agitating the same by introducing into said chamber steam superheated to a temperature substantially the same as the bath as it enters said separate chamber.

5. The method of extracting products from wood, which consists in circulating a hot bath over the wood while contained in a closed vessel, conducting the bath and absorbed products to a closed separating chamber, and there agitating the bath while maintaining it at substantially the same temperature as in the absorbing vessel.

959,600. ADJUSTABLE BRAKE-HEAD. LEMUEL PORTER and CHARLES H. WILLIAMS, Jr., Chicago, Ill., assignors to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 12, 1910. Serial No. 537,747.

1. The combination of an adjustable brake head, a part of the brake beam on which the same is mounted, and means carried by the brake head and exerting outward pressure on the part of the brake beam to clamp the same against the brake head to hold said head in adjusted position.

2. The combination of a brake head, a part of the brake beam on which the same is mounted, said brake beam part being recessed, a locking-block arranged in said recess and means for exerting yielding pressure against said locking-block to force the same outwardly whereby a part of the brake beam on which the head is mounted is clamped between said locking block and said head.

3. The combination of a brake head, a part of the brake beam on which the same is mounted, said part having a recess and a circumferential slot, a locking-block operating in said recess and having a stem or bolt extending outwardly through said slot and through the brake head, and a spring coöperating with the outer end of said stem or bolt.



4. The combination of a brake head, a part of the brake beam on which the same is mounted, said part having a recess and a circumferential slot, a locking-block operating in said recess and having a stem or bolt extending outwardly through said slot and through the brake head, and a spring arranged upon the outer end of said stem or bolt and means for regulating the compression of said spring.

959,601. FIREPROOF MAGAZINE FOR FILM-REELS. NICHOLAS POWER, New York, N. Y. Filed May 5, 1908. Serial No. 431,358. Renewed Jan. 24, 1910. Serial No. 539,881.



1. A magazine for inflammable films comprising a casing or housing of non-inflammable material, a narrow guideway or passage having closed sides projecting from the casing through which the film must pass into said casing or housing, and guiding means external to the casing or housing associated with said guideway or passage to prevent rubbing contact of the film with said guideway or passage.

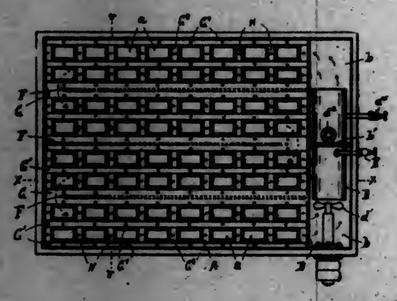
2. A device for extinguishing ignited picture films comprising a narrow guideway or passage and a plurality of guide rollers so arranged relative to said passage as to prevent rubbing contact of the film with the fixed portions of said guideway or passage, and a shiftable roller normally resting against said film and holding it in contact with one of said guide rollers, said shiftable roller and the adjacent guide roller being supported at the outer end of said guideway or passage.

3. In apparatus of the character specified, the combination with a narrow guideway or passage for a moving picture film of a guide roller arranged adjacent to the outer end of said passage, and a shiftable roller arranged opposite said guide roller and normally pressing against the film and holding it in contact with said guide roller.

4. In apparatus of the character specified, the combination with a narrow guideway or passage for a moving picture film of a guide roller mounted adjacent to the outer end of said passage and a shiftable roller having an axle mounted in inclined slots so arranged that said shiftable roller lies normally in contact with the film and presses it against said guide roller.

5. A film magazine comprising a casing, a narrow guideway having closed sides projecting therefrom through which the film must pass, and guiding means at the outer end of the guideway.

959,602. ICE-MACHINE. HENRY D. POWNALL, Cincinnati, Ohio. Filed Nov. 15, 1909. Serial No. 528,047.



1. In combination with the brine tank of an ice machine, a vertical partition plate secured to the bottom of the tank, a member forming a close joint between the tank and said partition plate, and a sill recessed on its under side to receive the upper edge of said partition plate, said sill being adjustable relative to said plate.

2. In combination with an ice machine brine tank a vertical partition plate, secured to the bottom of said tank, and an adjustable sill recessed on its under side to receive the upper edge of said partition plate.

3. In combination with an ice machine brine tank a vertical partition plate secured to the bottom of said tank, a member clamped in position to form a close joint between said partition plate and tank, a sill recessed on its under side to receive the upper edge of said partition plate, and means to adjust said sill relative to said plate.

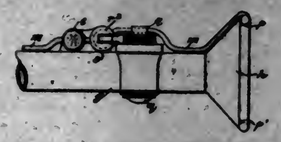
4. In combination with an ice machine brine tank a vertical partition dividing said tank into a loop shaped circulating channel, a brine cooling member included in said circulating channel, brine circulating mechanism, and a top for said brine tank comprising a series of sills adjustably supported relative to said tank, and a series of can lids supported upon said sills.

5. In combination with an ice machine brine tank, a vertical partition dividing said tank into a loop shaped circulating channel, brine circulating mechanism, a series of sills adjustably supported above said tank at intervals apart depending upon the dimensions of the ice cans, said sills being adapted to support a series of can lids.

[Claims 6 to 11 not printed in the Gazette.]

959,603. COTTON-PICKING MACHINE. FREDERIC FARNWORTH, Bolton, England. Filed May 18, 1907. Serial No. 374,477.

1. A cotton picking machine consisting of a suction chamber, suction tubes communicating therewith, a source of compressed air supply provided with outlets adapted to deliver compressed air into the mouths of said suction tubes, and mechanism operated by the compressed air for controlling the suction of said suction tubes.



2. A cotton picking machine consisting of a suction chamber, suction tubes communicating therewith, a source of compressed air supply provided with outlets adapted to deliver compressed air into the mouths of said suction tubes, a pressure operated valve controlling said suction pipe and a second valve controlling admission of pressure from said compressed air supply to operate the valve in said suction pipe.

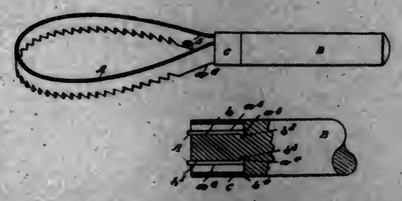
3. A cotton picking machine consisting of a suction chamber, suction tubes communicating therewith, a source of compressed air supply provided with outlets adapted to deliver compressed air into the mouths of said suction tubes, a valve controlling each suction tube, a piston operated by pressure from said compressed air supply, a valve controlling the admission of pressure to said piston and connections between said piston and the valve in the suction tube.

4. A cotton picking machine consisting of a suction chamber, suction tubes communicating therewith, a source of compressed air supply provided with outlets adapted to deliver compressed air into the mouths of said suction tubes, a valve controlling each suction tube and provided with a toothed segment, a piston operated by pressure from said compressed air supply and provided with a rack engaging said segment and a valve controlling the admission of pressure to said piston.

5. A cotton picking machine comprising a suction chamber, suction tubes communicating therewith, a source of compressed air supply provided with outlets adapted to deliver compressed air into the mouths of said suction tubes, a pressure operated valve controlling each suction pipe, a spring pressed normally seated valve controlling admission of pressure to operate the first mentioned valve and a stem on said pressure controlling valve provided with an enlargement whereby the same may be manually operated.

[Claims 6 to 11 not printed in the Gazette.]

959,604. WEEDER. HENRY H. QUA, Concord, Mass. Filed Apr. 11, 1908. Serial No. 426,426.



1. The combination of a handle and a blade secured thereto, said blade consisting of a loop-shaped strip of metal having teeth inclined in opposite directions from the middle of said loop toward said handle.

2. The combination of a handle having a reduced inner end and external parallel flattened inner end-portions, provided with notches, a blade consisting of a loop-shaped strip of metal, having ends bent toward each other and arranged in said notches, and a ferrule surrounding said reduced end and flattened portions of said handle and in contact with the end-portions of said blade.

3. The combination of a handle having parallel flattened inner end-portions and provided with notches, a blade consisting of a loop-shaped strip of metal having ends bent toward each other and arranged in said notches, and a ferrule surrounding the flattened portions of said handle and the ends of said blade, said blade having teeth inclined in opposite directions from the middle of said blade toward said handle.

959,605. STABLE COMPOSITION CONTAINING HYDROGEN PEROXID. MAX ALFRED QUNISSER, Hamburg, Germany, assignor to The Firm of Pearson & Co., Gesellschaft mit beschränkter Haftung, Hamburg, Germany. Filed Aug. 5, 1908. Serial No. 447,124. (Specimens.)

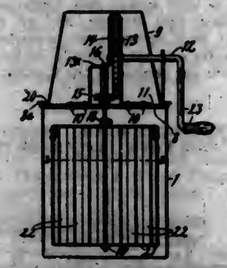
1. The method of making toilet preparations, which comprises mixing a vegetable mucilaginous substance with peroxid of hydrogen, adding thereto a substance adapted to chemically combine the water containing the peroxid, as water of crystallization, the hydrogen peroxid in excess being mechanically held by the mixture.

2. The method of making toilet preparations, which comprises mixing a vegetable mucilaginous substance with peroxid of hydrogen, adding thereto burnt gypsum, whereby the water containing the peroxid combines with the gypsum, the hydrogen peroxid in excess being mechanically held by the mass so formed.

3. A composition of matter consisting of a mixture of a mucilaginous substance with a crystalline abrasive containing water of crystallisation, and hydrogen peroxid mechanically held in the mixture.

4. A composition of matter consisting of a mucilaginous substance, gypsum, and hydrogen peroxid mechanically held in the mixture.

959,606. EGG-BEATER. JOHN N. RAMSTAD, Seattle, Wash. Filed Apr. 24, 1909. Serial No. 492,076.

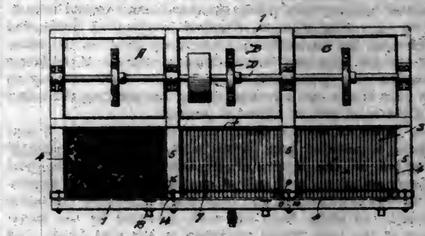


An egg-beater comprising a vessel, or receptacle, with a removable cover, a frame fixed upon the cover, a horizontal shaft journaled in the frame and having at its outer end a crank and at the inner end a bevel gear, an agitator shaft journaled in the frame and suspended in a vertical central position in the vessel, a skeleton agitator fixed on said shaft within the vessel, said agitator having vertically disposed flat wings some of which are so inclined as to gather the contents of the vessel toward the shaft and some wings being inclined in the opposite direction so as to spread the contents away from the shaft, said cover having an annular recess at its top, and a cap adapted to cover up the gearing and frame for same and having a rim about its base adapted to engage frictionally in the recess of the cover.

959,607. GRAVITY-JIG ATTACHMENT. FRED RICHARDSON, Webb City, Mo. Filed Sept. 23, 1909. Serial No. 519,167.

1. In a gravity jig having a plurality of cells, longitudinal partitions arranged adjacent one side of the jig thereby forming a passageway parallel to the cells, said partitions being elevated above the jig grate, gates controlling movement of material through said passageway, and connecting yokes, said yokes connecting one portion of said passageway with another, as and for the purpose set forth.

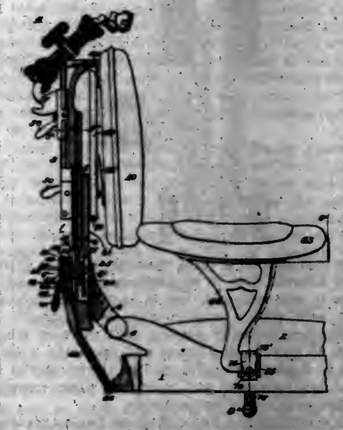
2. A gravity jig comprising a plurality of cells, said cells being in different horizontal planes, grates forming a bottom for each cell, partitions arranged lengthwise in each cell and adjacent one side, the partitions being spaced from said grate, connecting yokes, said yokes connecting one cell with another and having openings alining with the passages formed between the partitions and the side of the jig, and vertically adjustable gates arranged at the forward ends of said yokes, and controlling movement of material through said passages.



3. A gravity jig having a plurality of cells and a passageway formed longitudinally upon one side of each cell, said passageways communicating, means for regulating the flow of free ore and chats from the jig cells into said passageway, means for permitting passage of the free ores from one passage to another and checking passage of the chats from one passage to another, and means whereby the chats accumulating in each passage may be drawn therefrom through the side of the jig, as and for the purpose set forth.

4. A gravity jig having a plurality of cells in different horizontal planes and having passageways formed along one side of said cells, said passageways communicating, a grate arranged in each cell and adapted to force the water at an angle to the ore bed on said grate, the ore beds having limited communication with the said passageways, and vertically adjustable gates adapted to permit passage of free ore from one passageway to another but checking movement of chats from one passage to the other, as and for the purpose set forth.

959,608. DENTAL CHAIR. FRANK RITTER, Rochester, N. Y. Filed May 5, 1904. Serial No. 206,460.



1. In an adjustable chair, the combination with a seat frame, an adjustable back frame and a locking device for securing the two frames in relative adjusted position, of a movable back rest and connections between it and the locking device for moving it relatively to the seat frame.

2. In an adjustable chair, the combination with a seat frame, an adjustable back frame and a back rest mounted thereon and movable relatively toward and from the seat, of an operating member attached to the seat frame and movably engaging the back frame and connections between said member and the back rest whereby the latter will be moved toward the seat as the back frame is moved outwardly relatively thereto.

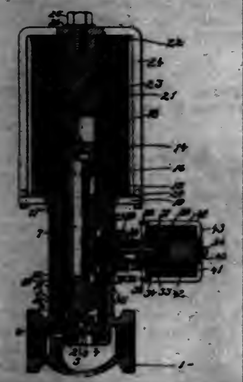
3. In an adjustable chair, the combination with a seat frame, an adjustable back frame and a back rest mounted thereon and movable relatively toward and from the seat, of an operating member attached to the seat frame and guided on the back frame, connections between the member and the back rest for causing a movement of the latter in a direction opposite to the movement of the member on the back frame and a locking device for securing the latter and the back rest in adjusted position.

4. In an adjustable chair, the combination with a seat frame, a movable back frame and a back rest movably mounted on the latter, of an arm pivoted to the seat frame having an end guided on the back frame, connections between the arm and back rest for moving the latter toward and away from the seat, operated by the movement of the back frame relatively to the seat frame, and a locking device carried on said arm for retaining the parts in adjusted position.

5. In an adjustable chair, the combination with a seat frame and an adjustable back frame, a back rest movably supported on the latter and a head rest carried on the back rest, of operating connections between the seat frame and back rest for causing their relative movement toward and away from each other and operated by the movement of the back frame relatively to the seat frame and locking devices between said operating connections and the back frame for securing the parts in adjusted position.

[Claims 6 to 19 not printed in the Gazette.]

959,609. ELECTRIC VALVE. FRANK N. ROSEBRICH, Jersey City, N. J., assignor to George P. Carroll, Bridgeport, Conn. Filed July 30, 1909. Serial No. 510,490.



1. In combination a valve chamber having a valve seat, a valve adapted first to be positioned in one position in relation to said seat and then in another position in relation to said seat, a magnetizable device wholly within said chamber, normally holding said valve in whichever position it may be positioned and operating when magnetised to release said valve, and an electric device wholly without said chamber and operating when energised to magnetise said magnetizable device.

2. In combination a valve chamber having a valve seat, a valve adapted first to be positioned in one position in relation to said seat and then in another position in relation to said seat, means tending to position said valve in one of said positions, a magnetizable device wholly within said chamber, normally overcoming the tendency of said means and operating when magnetised to release said means, and an electric device wholly without said chamber and operating when energised to magnetise said magnetizable device.

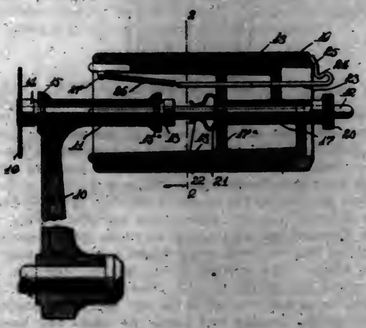
3. In combination a valve chamber having a valve seat, a magnetizable valve wholly within said chamber and adapted first to be positioned in one position in relation to said seat and then in another position in relation to said seat, means tending to position said valve in one of said positions, a magnetizable device wholly within said chamber, normally overcoming the tendency of said means and operating when magnetised to release said means, an electric device wholly without said chamber and operating when energised to magnetise said magnetizable device, and an electric device wholly without said chamber and operating when energised to magnetise said valve so as to position it in the other of said positions.

4. In combination a valve chamber having a valve seat, a valve adapted first to be positioned in one position in relation to said seat, a reciprocating member secured to said valve and adapted for so positioning said valve, a magnetizable device wholly within said chamber, normally holding said member in whichever position it may be positioned, thereby holding said valve in a corresponding position, and operating when magnetised to release said member, and an electric device wholly without said chamber and operating when energised to magnetise said magnetizable device.

5. In combination a valve chamber having a valve seat, a valve adapted first to be positioned in one position in relation to said seat and then in another position in relation to said seat, a reciprocating member secured to said valve, means tending to position said valve in one of said positions, a magnetizable device wholly within said chamber, normally acting on said member so as to overcome the tendency of said means and operating when magnetised to release said member, and an electric device wholly without said chamber and operating when energised to magnetise said magnetizable device.

[Claims 6 to 9 not printed in the Gazette.]

959,610. RECORD-HOLDER. JULIUS ROEVER, New York, N. Y. Filed June 8, 1909. Serial No. 500,982.



1. A record holder comprising a supporting shaft, a spider having a central sleeve to slide on the shaft, and longitudinal ribs rigidly connected with the sleeve and fitting the walls of a record, a friction device securing the sleeve slidably on the shaft, and an auxiliary yielding tension device arranged longitudinally of the spider and engaging one end of the record.

2. A record holder comprising a supporting shaft, a rigid spider having ribs to engage the wall of a record, and a sleeve to slide on the shaft, a friction spring secured to the spider and engaging the shaft, a sliding tension rod mounted on the spider and engaging one end of the record, and a spring having less tension than the first mentioned spring connecting the tension rod with the spider.

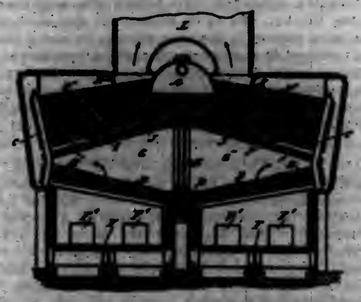
3. A record holder, comprising a supporting shaft, a rigid spider longitudinally movable thereon, and in frictional engagement therewith, said spider being adapted to engage the inner wall of a cylindrical record, and a spring-pressed tension rod arranged longitudinally in the spider and adapted to turn on its axis, said rod having a finger to engage the end of a record.

959,611. SHIRT. BERNARD ROSEN, Cincinnati, Ohio. Filed Aug. 21, 1909. Serial No. 513,943.



In a shirt having hemmed portions in the front, buttons placed on one hemmed portion and button holes in the other hemmed portion, the two hemmed portions being fastened together at the waist line, the hemmed portion with the buttons thereon having an integral tab at its lower end, said tab located on the inner side of said shirt, and having a button hole placed therein, substantially as and for the purposes set forth.

959,612. WATER-TUBE STEAM-GENERATOR. JAMES H. ROSENTHAL and ARTHUR SPIER, London, England, assignors to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Feb. 16, 1909. Serial No. 478,288.

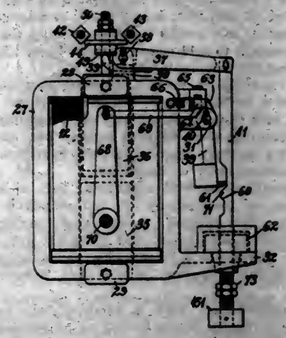


1. A water tube boiler comprising a water drum and a steam and water drum, headers, a bank of tubes extending from opposite sides of the water drum to the lower part of the headers and inclined upwardly, a bank of tubes extending from opposite sides of the steam and water drum to the headers and inclined downwardly, and baffles in the upper banks of tubes forming passes for the products of combustion, the first pass being at the lower ends of the tubes, and down-comer tubes connecting the said drums.

2. A water tube boiler comprising a water drum and a steam and water drum, headers, a bank of tubes extending from opposite sides of the water drum to the lower part of the headers and inclined upwardly, a bank of tubes extending from opposite sides of the steam and water drum to the headers and inclined downwardly, a short longitudinal baffle arranged above and parallel with each of the lower bank of tubes, and transverse baffles across the upper banks of tubes to provide a plurality of passes, the uptake pass being at the lower ends of the upper bank of tubes, and down-comer tubes connecting the said drums.

3. A water tube boiler comprising a water drum and a steam and water drum, headers, a bank of tubes extending from opposite sides of the water drum to the lower part of the headers and inclined upwardly, a bank of tubes extending from opposite sides of the steam and water drum to the headers and inclined downwardly, said tubes being pitched closer together in a vertical plane in the said drums than they are in the headers, and down-comer tubes connecting the said drums.

959,613. RELAY-SWITCH. HAROLD M. SCHEIER, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 21, 1909. Serial No. 473,544.



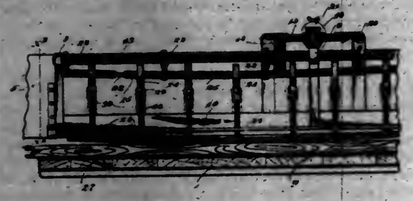
1. A relay switch comprising a movable contact member, an actuating lever therefor, weights suspended from the lever and tending to close the switch, and means dependent upon a predetermined movement of the contact member from either its open or its closed position for holding the switch in an intermediate open position.

2. A relay switch comprising a movable contact member, an actuating lever therefor, weights suspended from the lever and tending to close the switch, and a latch which is dependent upon a predetermined movement of the contact member from either its open or its closed position for locking the switch in an intermediate open circuit position, a greater movement of the contact member being independent of the latch.

3. A relay switch comprising a stationary frame, stationary and movable core members, an opening coil, a lever pivotally mounted on the stationary frame and operatively connected to the movable member of the switch, a rod suspended from the lever and having a notched projection at one side, weights attached to the rod, an arm or latch suspended adjacent to the rod and provided with a finger, and means tending to force the finger into engagement with the notch in the rod.

4. A relay switch comprising a stationary frame, a movable core member, an opening coil associated with the core member, a lever pivotally mounted on the stationary frame and operatively connected to the movable member of the switch, a rod suspended from the lever and having a notched projection at one side, weights mounted on the rod, an arm or latch suspended adjacent to the rod and having a finger adapted to engage the notch in the rod at a predetermined intermediate position of the switch, one of said weights being carried by a projection of the frame when the switch occupies its open position and being picked up by the rod in said predetermined intermediate position of the switch.

959,614. SANDPAPERING-MACHINE. FRIDOLIN SCHIMMEL, Faribault, Minn. Filed May 3, 1909. Serial No. 493,462.



1. The combination with a finishing belt and guides therefor, of means for pressing the operative portion of said belt with a wave-like action, comprising spirally arranged pressure controlling means and coöperating devices for transmitting the variable pressure therefrom to the said operative portion of the belt.

2. The combination with a finishing belt and guides therefor, of a flexible presser bar engageable with the operative portion of said belt, a rock shaft having spirally arranged tappets, and means for transmitting the pressure from said tappets to said presser bar for imparting a wave-like belt-engaging movement thereto.

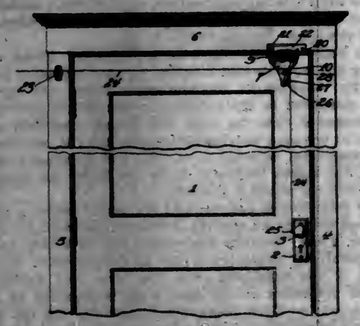
3. The combination with a finishing belt and guides therefor, of a flexible presser bar overlying the operative portion of said belt, a multiplicity of independently movable plungers operative on said presser bar, and a rock shaft having spirally spaced tappets operative on said plungers, substantially as described.

4. The combination with a finishing belt, of an oscillatory frame, a multiplicity of independently movable plungers mounted thereon, a rock shaft having spirally spaced tappets operative on said plungers, and a flexible presser bar subject to said plungers, and arranged to act upon the operative portion of said belt, substantially as described.

5. The combination with a finishing belt and guides therefor, of a pivoted frame having an adjustable counterweight, a rock shaft having spirally spaced tappets, a multiplicity of plungers mounted on said frame and subject to said tappets, and a flexible presser bar subject to said plungers, and arranged to act upon the operative portion of said belt.

[Claims 6 to 9 not printed in the Gazette.]

959,615. DOOR-OPENING DEVICE. THEODOR J. C. SCHIERMACHER, Oakland, Cal. Filed July 16, 1909. Serial No. 508,055.



1. A device of the character described comprising a doorway cam plate, a latching knob, a door plate, a lever pivoted to said plate, a roller carried by said lever for contact with said cam surface, and a cable for simultaneously operating said knob and said lever.

2. A device of the character described comprising a door frame cam plate, a latching knob, a pivotally mounted door lever, said cam plate being arranged in the path of movement of said lever when the door is closed, and means for simultaneously operating said knob and lever.

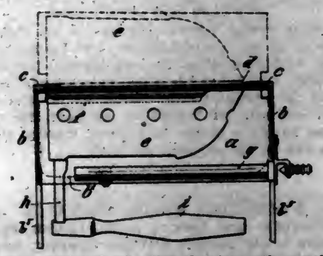
3. A device of the character described comprising a latch adapted for attachment to a door, a lever adapted for pivotal attachment to a door, a cam plate adapted for attachment to a doorway and supported in the path of movement of said lever when the door is closed, and a cable for operating said lever and releasing said latch.

4. A device of the character described comprising a latch-releasing lever adapted for attachment to a door, a second lever adapted for pivotal attachment to said door, a cam plate adapted for attachment to a doorway and supported in the path of movement of said second lever when said door is closed, and means for simultaneously operating said lever to open said door.

5. A device of the character described comprising a door latch, a door plate, a lever pivoted to said plate, a guide bar for said lever, a cam plate adapted for attachment to a doorway and in the path of movement of said lever, and means for operating said lever and releasing said latch.

[Claims 6 and 7 not printed in the Gazette.]

959,616. APPARATUS FOR HEATING FLAT-IRONS. FERDINAND SCHITKA, Vienna, Austria-Hungary, assignor of one-half to Wladislaw Kollscher, Vienna, Austria-Hungary. Filed Feb. 2, 1910. Serial No. 541,536.

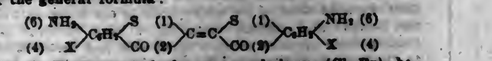


In an apparatus for heating flat irons the combination of a heating chamber surrounded by side walls and covered by a turnable supporting plate having ribs or grooves for fastening the flat iron to be heated, one side wall of the casing being secured to the supporting plate and a heating device arranged in such a manner that by turning the supporting plate the bridge of the handle of the flat iron passes between the end of the heating device and the opposite cross wall of the heating chamber, substantially as set forth.

959,617. VAT DYE AND PROCESS OF MAKING. ALBRECHT SCHMIDT and ERNST BAYK, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Aug. 14, 1909. Serial No. 512,811.

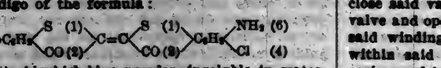
1. The process of manufacturing vat-dyestuffs, which consists in reducing ortho-ortho-dinitrothioindigo and the ortho-ortho-dinitro-para-para-dihalogenthioindigoes, substantially as above described.

2. As new products, the ortho-ortho-diaminothioindigoes of the general formula:



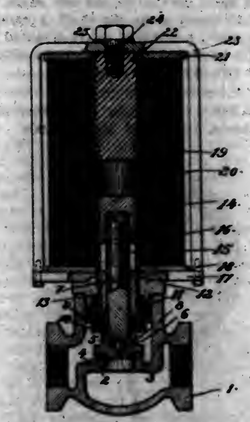
wherein X represents hydrogen or a halogen (Cl, Br), being black to blackish-blue powders, insoluble in water, alcohol, diluted alkalies and diluted acids, soluble in concentrated sulfuric acid with a blue color, difficultly soluble in hot nitrobenzene with a violet-brown to violet color, yielding on treatment with alkaline reducing agents, such as hydrosulfite, a vat from which wool and cotton are dyed dark-blue to blackish tints.

3. As a new product, the ortho-ortho-diamino-para-para-dichlorothioindigo of the formula:



being a black to blackish-blue powder, insoluble in water, alcohol and diluted acids, soluble in sulfuric acid-monohydrate with a steel-blue color, very difficultly soluble in hot nitrobenzene with a dull violet-brown color, yielding on treatment with alkaline reducing agents, such as hydrosulfite, a vat from which wool and cotton are dyed steel-blue to blackish-blue tints.

959,618. ELECTRIC VALVE. LOUIS M. SCHMIDT, New Britain, Conn., assignor to George P. Carroll, Bridgeport, Conn. Filed May 6, 1909. Serial No. 494,391.



1. In combination a solenoid winding, a valve chamber having a valve seat and having an imperforate part of its wall within said winding, a valve within said chamber adapted first to be positioned in one position in relation to said seat and then in another position in relation to said seat, and a magnetizable core secured to said valve and adapted to reciprocate within the part of said chamber within said winding.

2. In combination a solenoid winding, a valve chamber having a valve seat and having an imperforate part of its wall within said winding, a valve within said chamber initially positioned in one position in relation to said seat, and a magnetizable core secured to said valve and operating upon the passage of a current through said winding to move within the part of said chamber within said winding and to position said valve in the other of its positions.

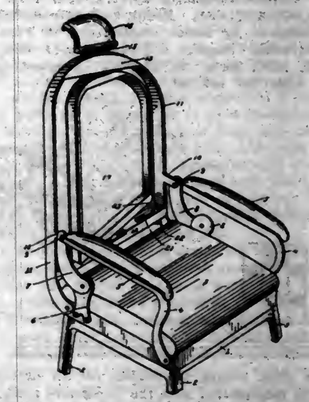
3. In combination a solenoid winding, a valve chamber having a valve seat and having an imperforate part of its wall within said winding, a valve within said chamber adapted first to be positioned in one position in relation to said seat and then in another position in relation to said seat, a spring tending to position said valve in one of its positions, and a magnetizable core secured to said valve and operating upon the passage of a current through said winding to move within the part of said chamber within said winding, to overcome the tendency of said spring and to position said valve in the other of its positions.

4. In combination a solenoid winding, a valve chamber having a valve seat and having an imperforate part of its wall within said winding, a valve within said chamber initially closing said seat, and a magnetizable core secured to said valve and operating upon the passage of a current through said winding to move within the part of said chamber within said winding and to open said valve.

5. In combination a solenoid winding, a valve chamber having a valve seat and having an imperforate part of its wall within said winding, a valve within said chamber adapted to open or to close said seat, a spring tending to close said valve, and a magnetizable core secured to said valve and operating upon the passage of a current through said winding to move within the part of said chamber within said winding, to overcome the tendency of said spring and to open said valve.

[Claims 6 to 15 not printed in the Gazette.]

959,619. CHAIR. ARTHUR SEARLES, Philadelphia, Pa. Filed Apr. 23, 1909. Serial No. 491,808.



In a device of the class described, a chair seat having legs, arm rests secured to the opposite sides of the chair seat, brackets secured to the opposite sides of the chair seat, bars secured to the brackets and to the rear ends of the arm rests, supporting links secured to the upper ends of the bars, a holding frame secured to the links, a reversible back for the frame having a bamboo covered side and a velvet covered side, a shaft on the lower end of the frame extending upwardly through a portion of the reversible back, a shaft on the upper end of the back extending through the upper end of the frame, and means for latching the back in fixed position on the frame.

959,620. PROCESS FOR MAKING INSULATING MATERIAL. WILLIAM R. SEIGLE, Nashua, N. H. Filed Dec. 20, 1909. Serial No. 534,045.

1. The process which consists in first forming a compacted composition of fibrous material, cement and finely divided liquefiable solid hydrocarbon distributed therethrough, and then immersing the said composition in liquefied hydrocarbon at a temperature sufficiently high to liquefy the included hydrocarbon.

2. The process which consists in first forming a compacted composition of asbestiform fiber, a cement, and finely divided liquefiable solid hydrocarbon distributed therethrough and then immersing the said composition in liquefied hydrocarbon at a temperature sufficiently high to liquefy the hydrocarbon included in the composition.

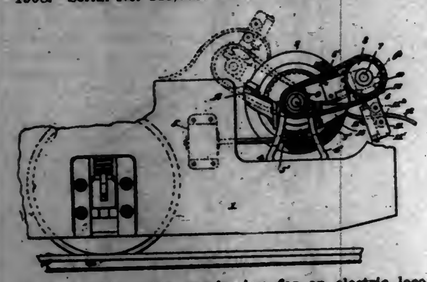
3. The process which consists in first forming a compacted composition of asbestiform fiber cemented with magnesium hydrate and containing finely divided liquefiable solid hydrocarbon distributed therethrough, and then immersing the said composition in a liquefied body of the same hydrocarbon.

4. The process which consists in first forming a compacted composition of fibrous material, cement and finely divided liquefiable solid hydrocarbon, distributed therethrough, then heating the composition to a temperature sufficient to liquefy the included hydrocarbon, and thereafter immersing the hot composition in a liquefied hydrocarbon at a temperature sufficiently high to maintain the liquefaction of the included hydrocarbon.

5. The process which consists in first forming a compacted composition of asbestiform fiber, a cement, and finely divided liquefiable hydrocarbon distributed therethrough, then heating the composition to a temperature sufficiently high to liquefy the included hydrocarbon, and thereafter immersing the hot composition in liquefied hydrocarbon at a temperature sufficiently high to maintain the liquefaction of the included hydrocarbon.

[Claim 6 not printed in the Gazette.]

959,621. CABLE-REELING MECHANISM FOR ELECTRIC LOCOMOTIVES. FRANK L. SESSIONS, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Dec. 18, 1905, Serial No. 292,345. Renewed Aug. 11, 1908. Serial No. 448,003.



1. In a cable reeling mechanism for an electric locomotive, the combination with the locomotive truck, and a cable reel arranged to travel therewith and adapted to have a flexible cable wound upon and paid off from it, of a cable spooling and guiding device for directing the cable onto the reel, comprising a double threaded shaft, a follower adapted to travel along said shaft, supporting arms for said shaft pivoted about the axis of said reel, means for rotating said shaft, and brackets for engaging said supporting arms and holding said double threaded shaft and follower at different points about the periphery of said reel.

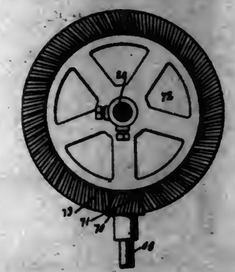
2. In a cable reeling mechanism for an electric locomotive, the combination with a cable reel mounted on a transverse horizontal axis and means for operating it, of a cable spooling and guiding mechanism mounted to swing about the axis of the reel and to be supported in a position in front of the reel or in a position behind the reel and comprising a double threaded shaft parallel to the reeling axis, and a follower adapted to travel along said shaft, and power transmitting gearing positively connecting the reel and the said shaft irrespective of the position of adjustment of the cable spooling and guiding mechanism.

3. In a cable reeling mechanism for an electric locomotive, the combination with a cable reel mounted on a transverse horizontal axis and means for operating it, of a cable spooling and guiding mechanism mounted on a frame adapted to swing about the axis of the reel, means for supporting the frame in a position in front of the reel, means for supporting the frame in a position behind the reel, the cable spooling and guiding mechanism comprising a threaded shaft parallel to the reeling axis, and a follower adapted to travel along said shaft, and power transmitting gearing positively connecting the reel and the said shaft irrespective of the position of adjustment of the cable spooling and guiding mechanism and mounted upon the said swinging frame.

4. In a cable reeling mechanism for an electric locomotive, the combination with a horizontal reel shaft, a cable reel mounted thereon and means for operating it, of a frame mounted to swing about the axis of the reel, a cable spooling and guiding mechanism mounted on the frame, means for supporting the frame in a position in front of the reel or in a position behind the reel, the cable spooling and guiding mechanism comprising a threaded shaft parallel to the reel axis, and a follower adapted to travel along said shaft, and power transmitting gearing positively connecting the reel and the shaft, irrespective of the position of adjustment of the cable spooling and guiding mechanism, the apparatus being arranged to automatically reverse the direction of movement of the follower at each end of its travel, irrespective of the direction of movement of the cable.

5. In a cable reeling mechanism, for an electric locomotive, the combination of a horizontal transverse reel shaft, with a cable reel mounted thereon, means for operating the reel, the frame mounted to swing about the axis of the reel shaft, a cable spooling and guiding mechanism mounted to swing about the axis of the reel, means for supporting the frame in a position in front of the reel, means for supporting the frame in a position behind the reel, the cable spooling and guiding mechanism comprising a threaded shaft parallel to the reel shaft, and a follower adapted to travel along the shaft, a sprocket wheel fixed upon the shaft, a sprocket wheel mounted concentric with and rigidly connected to the reel, and a sprocket chain connecting the two sprocket wheels.

959,622. GEARING. CHARLES P. SMITH and HENRY OELKERS, Peoria, Ill. Filed May 9, 1908. Serial No. 431,826.



1. In a machine of the class described in combination, a driving shaft, a driven shaft, the axes of said shafts intersecting, a gear wheel on said driving shaft, said gear wheel having straight teeth the axes of which are angular with respect to the radii of said gear wheel, and a pinion having teeth in mesh with said gear teeth.

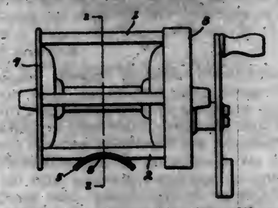
2. In a machine of the class described in combination, a driving shaft, a driven shaft whose axis intersects the axis of said driving shaft, a gear wheel on said driving shaft, said gear wheel being provided with teeth having their axes co-incident with tangents drawn from a circle circumscribed about said driving shaft, and a pinion on said driven shaft having teeth engaging the teeth of said gear.

3. In a device of the class described in combination, a driving shaft, a driven shaft, the axes of said shafts intersecting, a gear wheel on said driving shaft, said gear wheel having teeth that are tangent to a circle circumscribed about said driving shaft, a pinion on said driven shaft, the teeth of said pinion being such that no two lie in the same plane.

4. In a device of the class described in combination, a driving shaft, a beveled gear wheel carried by said driving shaft, said gear wheel being provided with teeth having their axes at an angle to the radii of said gear wheel, a driven shaft whose axis intersects the axis of said driving shaft at right angles, a beveled pinion carried by said driven shaft, the teeth of said pinion being in mesh with the teeth of said gear constantly on the pitch line of said gear.

959,623. FISHING-REEL. WILLIAM SHAKESPEARE, Jr., and SAMUEL GUY RUSSELL, Kalamazoo, Mich., assignors to William Shakespeare, Jr., Company, Kalamazoo, Mich. Filed June 22, 1908. Serial No. 439,729.

1. In a fishing reel, the combination with a base plate curved in cross section, of a reel frame including a pair of base plate pillars having alined seats in their under sides, said seats being curved longitudinally of the pillars to correspond to the curvature of the base plate and being concaved in cross section, and rivets for securing said base plate to said pillars located centrally of said seats and formed integrally with the pillars.



2. In a fishing reel, the combination with a base plate curved in cross section, of a pillar having a seat in its under side said seat being curved longitudinally of the pillar to correspond to the curvature of the base plate and being concaved in cross section; and a rivet for securing said base plate to said pillar formed integrally with the pillar.

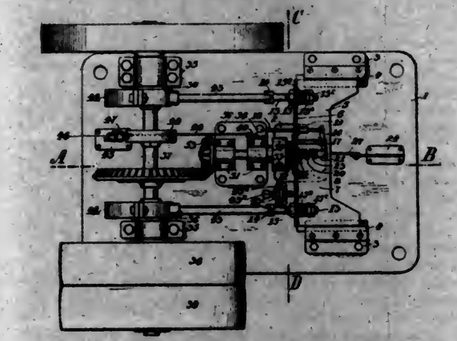
3. In a fishing reel, the combination with a base plate, of a pillar having a seat in its under side adapted to receive said base plate, said seat being concaved in cross section; and a rivet for securing said base plate to said pillar formed integrally with the pillar.

4. In a fishing reel, the combination with a base plate, of a pillar arranged transversely of said base plate and having an inwardly-curved seat in its under side adapted to receive said base plate; and a rivet for securing said base plate to said pillar formed integrally with the pillar and projecting centrally from said seat.

5. In a fishing reel, the combination with the base plate curved in cross section, of a pillar having a seat in its under side adapted to receive said base plate, said seat being concaved in cross section; and a rivet for securing said base plate to said pillar.

[Claim 6 not printed in the Gazette.]

959,624. NUT BURRING AND FACING MACHINE. WILLIAM SHAND, Montreal, Quebec, Canada, assignor of one-half to Joseph Presner, Montreal, Canada. Filed Apr. 12, 1909. Serial No. 489,429.



1. In a nut facing machine, the combination with the frame of the machine, of a carriage supporting a suitable nut holder and slidably arranged, a main shaft suitably driven, eccentrics mounted on said main shaft, rods connecting said eccentrics to said carriage, yielding means in the connections of said rods to the said carriage, a cutter, and means for driving said cutter.

2. In a device of the class described, in combination, a base, a pair of guides supported on said base, an angle plate sliding in said guides and forming a carriage and having a nut holder thereon arranged, standards rigidly secured and projecting upwardly from said base, bearings supported thereby, a main shaft journaled in said bearings, a pair of eccentrics mounted on said main shaft, and straps encircling said eccentrics, rods adjustably secured in the vertical section of said carriage having forked ends, connecting rods joining said straps to said forked ends, a cutter shaft, bearings supported from said base for said cutter shaft, a tool holder mounted on said cutter shaft and cutters therein arranged, a pinion mounted at the other end of said cutter shaft, a gear wheel mounted on said main shaft and coacting with said pinion, and means for operating said main shaft.

3. In a device of the class described, in combination, a base, guides supported on said base, an angle plate forming a carriage and having a suitable nut holder and sliding in said guides, standards projecting from said base and rigidly secured thereto, bearings supported by said standards, a main shaft journaled in said bearings, a cutter shaft, bearings therefor supported from said base, means for operating said cutter shaft from said main shaft, an eccentric and rod mechanism connecting said carriage and main shaft, a cam mounted on said main shaft, a kicker pin pivotally supported to the rear of said nut holder and extending thereinto, and a chain of levers operatively connecting said cam and said kicker pin.

4. In a device of the class described, in combination, a base, guides supported on said base, an angle plate forming a carriage and having a suitable nut holder and sliding in said guides, standards projecting from said base and rigidly secured thereto, bearings supported by said standards, a main shaft journaled in said bearings, a cutter shaft, bearings therefor supported from said base, means for operating said cutter shaft from said main shaft, an eccentric and rod mechanism connecting said carriage and main shaft, a cam mounted on said main shaft, a kicker pin having a suitable head and extending into said nut holder from the rear of the vertical plate of said carriage, a rocker arm suitably supported and pivotally joined to said kicker pin, a spiral spring encircling said kicker pin between the head thereof and said plate, a rod pivotally joined to the other end of said rocker arm and extending through said vertical plate, a crank lever pivotally supported engaging the latter rod, a pivoted cam, and a rod connecting said pivoted lever and said crank lever.

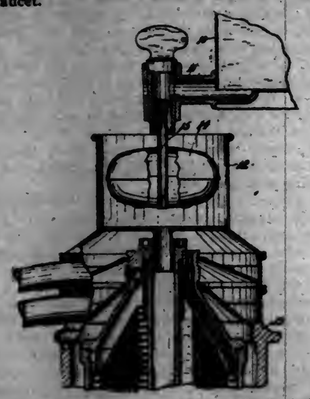
5. In a device of the class described, in combination, a base, guides supported by said base, an angle plate forming a carriage and traveling in said guides and having a suitable nut holder, a nut hopper having a suitable chute therefrom, a shelf extending rearwardly from the vertical plate of said carriage under said chute, a slotted plate, pins extending from the vertical plate of said carriage having suitable shoulders and in vertical alinement and extending through the slot in said plate, nuts securing said plate on said pins, a bracket rigidly secured to the underside of the horizontal plate of said carriage, a rod pivotally secured in said bracket and connected with the lower end of said plate, a bracket rigidly secured to said base and having an angle slot therein arranged, a roller journaled on said pivoted rod extending into said slot, a main shaft, bearings for said main shaft supported from said base, a cutter shaft, bearings supported from said base therefor, a cutter, and means for moving said carriage to and from said cutter and insuring a slight pause for feeding purposes.

[Claims 6 to 8 not printed in the Gazette.]

959,625. FLOAT FOR CENTRIFUGAL SEPARATORS. CHARLES H. SHAW, Milwaukee, Wis., assignor to Standard Separator Company, a Corporation of New Jersey. Filed Jan. 21, 1909. Serial No. 473,421.

1. In a centrifugal separator, a supply tank having a discharge faucet with a depending nozzle, a receiving chamber into which the faucet discharges, and a float contained in the receiving chamber beneath the faucet and adapted to seat its upper surface on the lower end of the nozzle of the faucet for restricting the flow therefrom, there being a passageway through the float to allow a flow

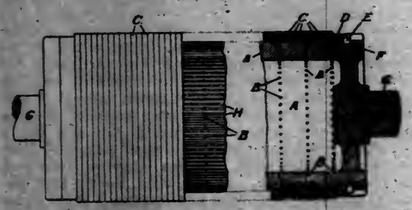
of milk therethrough when the float is seated on the nozzle of the faucet.



2. In a centrifugal separator, a supply tank having a discharge faucet with a depending nozzle, a receiving chamber into which the faucet discharges, a float contained in the receiving chamber beneath the faucet and adapted to seat its upper surface on the lower end of the nozzle of the faucet for restricting the flow therefrom, and a tube extending through the float to form a passageway for milk when the float is seated on the nozzle of the faucet.

3. In a centrifugal separator, a supply tank having a discharge faucet with a depending nozzle, a receiving chamber into which the faucet discharges, a float contained in the receiving chamber beneath the faucet and adapted to seat its upper surface on the lower end of the nozzle of the faucet for restricting the flow therefrom, and a tube extending through the float and above the same to form a stem entering the nozzle of the faucet to guide the float in its movements, said tube forming a passageway for maintaining a reduced flow of milk when the float is seated on the nozzle of the faucet and thereby prevent the spraying of the milk between the nozzle of the faucet and the float.

959,626. PAPER-MAKING MACHINERY. WILLIAM E. SHERMAN, Albany, N. Y. Filed Jan. 20, 1908. Serial No. 411,783.



1. A roll for use in paper making machinery, comprising a perforated cylinder; a series of disks of felted fibrous material placed on said cylinder; the surface of said densely felted disks being continuous throughout its entire extent.

2. In paper making machinery; a roll comprising a perforated core; a hard, densely felted fibrous material placed thereon, whereby is formed a continuous fibrous surface throughout its entire extent and a means for drainage and vent into the perforated core through said fibrous material.

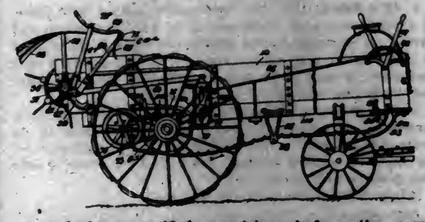
3. In paper making machinery; a roll comprising a continuous body of promiscuously felted disks of fibrous material pressed to the form of a densely, compact, uniform surfaced mass upon a perforated core.

959,627. FOLDING EGG-CRATE. CHARLES T. SIBOLD, Dorr, W. Va. Filed Aug. 5, 1909. Serial No. 511,888.



A collapsible crate including hingedly supported side panels, said panels being foldable one upon the other, a socket member extending through and secured to the lower one of said folded side panels, there being an aperture within the upper side panel and registering with the socket member, a top, a casing extending through and secured to the top and having an aperture registering with the aperture and socket member in the lapping side panels, and a threaded fastening device mounted for rotation within the apertures in the casing and the upper one of the lapping panels, said fastener being insertible into and adapted to engage the socket member in the lower one of the lapping panels to bind said panels and the top together.

959,628. FERTILIZER-DISTRIBUTER. OTTO W. SIEBENHAAR, Rosendale, Wis., assignor to Rosendale Spreader Company, Rosendale, Wis. Filed Apr. 13, 1909. Serial No. 489,594.



1. A device as specified comprising a body portion, a cylinder mounted on said body portion, means disposed between said cylinder and said body portion for actuating said cylinder, a U-shaped frame eccentrically connected at its opposite ends to said cylinder, a plurality of tines depended from said U-shaped frame for engagement in material in said body portion, two frames upwardly extended and diverged from said body portion over said cylinder, supporting bars loosely and adjustably positioned between said U-shaped frame and the inner of said diverged frames for supporting said U-shaped frame and a plurality of deflectors carried by said diverged frame and extended rearwardly from the same to direct material thrown upon said cylinder laterally of said body portion.

2. A fertilizer distributer including a body, a cylinder mounted in said body, a pitman mounted on said body, and connected to one end of said cylinder, and actuated by the same, a pinion carried by the opposite end of said cylinder, a U-shaped frame mounted on said body, the arms of said frame being respectively pivotally connected to said pitman and said pinion at points differently distant from the axis of said cylinder for producing vibration of said frame, tines depended from the cross bar of said frames and means disposed on said body for adjustably supporting the upper end of said frame.

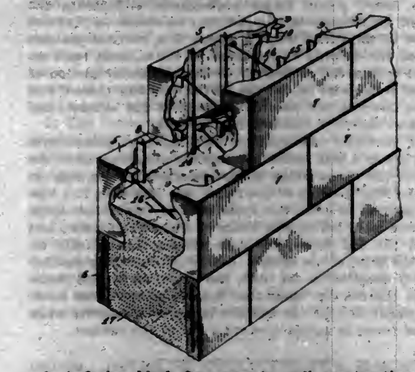
3. A fertilizer distributer including a body, a pair of U-shaped frames extended over the end of said body, a plurality of metallic strips carried by said frames and extended rearwardly therefrom, said strips being curved downwardly and being twisted transversely to form a deflector, the strips being decreased in curvature consecutively from the central portion of said body.

4. A fertilizer distributor having a body and a cylinder mounted in the body in combination with a plurality of deflectors disposed on said body above said cylinder, said deflectors being extended rearwardly and downwardly over said cylinder, and being twisted at their outer ends to approach vertical planes, the deflectors toward the sides of the body being bent downwardly and being twisted to a less degree as they are removed from the center of the body.

5. A fertiliser distributer having a plurality of deflectors arranged transversely, the deflectors being curved backwardly and downwardly and being twisted to approach vertical planes, the outer of said deflectors being curved and twisted to a less degree proportionate to the outward positions of the same.

[Claims 6 to 9 not printed in the Gazette.]

959,629. CONCRETE BLOCK AND WALL CONSTRUCTION. JOSEPH J. SLEEPER, Moore, Pa. Filed Nov. 5, 1908. Serial No. 461,152.



1. A facing block for concrete wall construction comprising a block provided with peripheral flanges or walls having faces extending in planes angular with respect to and intersecting each other, said flanges or walls being recessed intermediate the points of intersection to provide separated angular corners projecting inwardly and each having its outer faces angular with respect to each other, the recessed portions being of less length than the distance between the faces of opposing flanges, the block being of substantially equal thickness throughout the length of a vertical cross section thereof taken through the recesses at a point spaced from the intersecting points, whereby a horizontally extending projecting portion of the upper and lower flanges will be provided at each corner of the block.

2. A facing block for concrete wall construction comprising a block provided with peripheral flanges or walls having faces extending in planes angular with respect to and intersecting each other, said flanges or walls being recessed intermediate the points of intersection to provide separated angular corners projecting inwardly and each having its outer faces angular with respect to each other, the recessed portions being of less length than the distance between the faces of opposing flanges, the block being of substantially equal thickness throughout the length of a vertical cross section thereof taken through the recesses at a point spaced from the intersecting points, whereby a horizontally extending projecting portion of the upper and lower flanges will be provided at each corner of the block, said block having an inwardly projecting rib extending vertically intermediate the ends of the block.

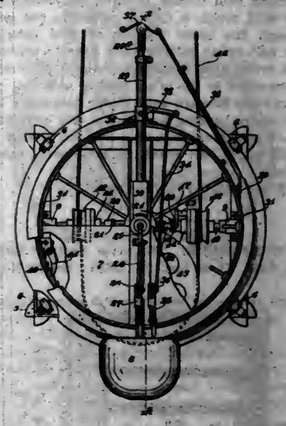
3. A facing block for concrete wall construction, having inwardly projecting corners, each corner having its faces extending angular with respect to each other, and a reinforcing member for each corner, each member being angular in cross section, and having its direction of length corresponding with the direction of projection of the corner, the angle faces of the member being in approximate parallelism with the faces of the corner.

4. A facing block for concrete wall construction, having inwardly projecting corners, each corner having its faces extending angular with respect to each other, and a reinforcing member for each corner, each member being angular in cross section and having its direction of length corresponding with the direction of projection of the corner, the angle faces of the member being in approximate parallelism with the faces of the corner, said member being of a length to project beyond the inner end of the corner to provide an exposed metallic portion embedded within the corner and extending in a direction corresponding with the direction of length of the corner.

5. A concrete wall structure comprising parallel tiers of facing blocks, each block embodying a block provided with peripheral flanges or walls having faces extending in planes angular with respect to and intersecting each other, said flanges or walls being recessed intermediate the points of intersection to provide separated angular corners projecting inwardly and each having its outer faces angular with respect to each other, the recessed portions being of less length than the distance between the faces of opposing flanges, the block being of substantially equal thickness throughout the length of a vertical cross section thereof taken through the recesses at a point spaced from the intersecting points, whereby a horizontally extending projecting portion of the upper and lower flanges will be provided at each corner of the block, and a filling of concrete material between the tiers of blocks, said filling embedding faces of the corner projections.

[Claims 6 to 10 not printed in the Gazette.]

959,630. HORSE-POWER HOIST. ADAM M. SMITH, Minneapolis, Minn. Filed Nov. 1, 1909. Serial No. 525,682.



1. In a horse power mechanism comprising a sweep, a horizontally disposed driving wheel, means for connecting said sweep and wheel at will, a pair of cable driving drums located beneath and covered by said driving wheel, means for alternately driving said drums from said driving wheel, and a cable working on and arranged to be driven in reverse directions by said drums.

2. In a horse power mechanism, the combination with a sweep, a driving wheel mounted on a center bearing, and means for connecting said sweep to said wheel at will, of a counter shaft driven from said driving wheel, a pair of cable driving drums loosely journaled on said countershaft, clutches for connecting said drums to said shaft, a clutch reversing mechanism operative on said clutches to alternately connect said drums to said countershaft, and a cable working on and arranged to be reversely driven by said drums.

3. A horse power mechanism comprising a sweep and a driving wheel mounted on a common center bearing, means for connecting said sweep to said wheel at will, a horizontal countershaft driven from said driving wheel, a pair

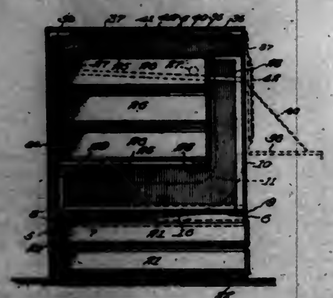
of cable driving drums loosely journaled on said countershaft, clutches with connections for alternately connecting said drums to said countershaft, a horizontally disposed idle guide sheave in the vicinity of said drums, and a cable working around said drums and passed around said idle sheave, the latter serving to receive the cable from the one drum and to guide the same to the other drum.

4. In a horse power mechanism, the combination with a driving wheel mounted on an upright center bearing, of a horizontal countershaft driven from said driving wheel, cable driving drums loosely journaled on said countershaft, clutches for connecting said drums to said countershaft, a clutch reversing lever carried by said driving wheel and having connections to said clutches for alternately rendering the same operative, a cable arranged to run over and to be reversely driven by said drums, a sweep, a clamping band frictionally engageable with said driving wheel and connected to said sweep at one end, a lever carried by said sweep and connected to the other end of said clamping band, and a second lever carried by said driving wheel and connected to the lever at the end of said clamping band, for connecting said sweep to said driving wheel at will.

5. In a horse power mechanism, the combination with an upright tubular center bearing, of a driving wheel and a sweep journaled on said center bearing, said driving wheel having an annular gear, of a counter shaft extended through the lower portion of said center bearing and provided with a pinion meshing with said annular gear, means for connecting said reach to said driving wheel at will, cable driving drums loosely journaled on said countershaft, one on each side of said center bearing, clutches for connecting said drums to said countershaft, a lever carried by said reach, a clutch reversing rod mounted to slide through the lower portion of said tubular center bearing, a bell crank within said tubular center bearing having its lower arm connected to said reversing rod, a plunger connected to the other arm of said bell crank and extended upward through said center bearing, a bell crank above said center bearing having one arm connected to the upper end of said plunger, and a link connecting the other arm of said upper bell crank to said lever, substantially as described.

[Claim 6 not printed in the Gazette.]

959,631. FURNITURE. WILLIAM ASHLEY SNYDER, Los Angeles, Cal. Filed Jan. 20, 1910. Serial No. 539,037.



1. A furniture construction, comprising a cabinet, a bed frame slidably mounted in the cabinet, the bed frame being hinged and the foot portion adapted to swing to a vertical position to close the cabinet opening, a member mounted in the cabinet above the horizontal portion and behind the vertical portion of the bed frame, and means to move the member forwardly when the bed frame is moved out of the cabinet.

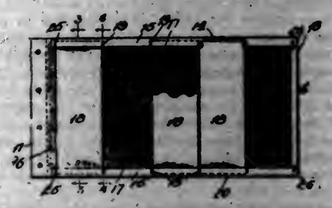
2. A furniture construction, comprising a cabinet having an open front, a bed frame slidably mounted within the cabinet, the outer portion of the bed frame being hinged to the inner portion so as to be swung to a vertical position to close the upper portion of the cabinet opening, a drawer containing member slidably mounted in the cabinet above the horizontal portion of the bed frame and behind the vertical portion thereof, means to force the drawer containing member forward when the bed frame is moved forwardly, and means to hold the two portions of the bed frame in their relative angular position.

3. A furniture construction, comprising a cabinet, a bed frame horizontally slidable in the cabinet, the frame being hinged near its center so that one portion of the frame may be swung to a vertical position, a member slidably mounted in the cabinet above the horizontal portion and in back of the vertical portion of the bed frame, and means to move the member forwardly.

4. A furniture construction, comprising a cabinet open at its front, a bed frame horizontally slidable in the cabinet, the frame being hinged near its center so that one portion of the frame may be swung to a vertical position to close the opening at the front of the cabinet, rails arranged within the cabinet above the horizontal portion of the bed frame and behind the vertical portion thereof and sloping downwardly toward the front of the cabinet, and a member movably mounted on the rails.

5. A furniture construction, comprising a cabinet open at its front, a bed frame horizontally slidable within the cabinet, the frame being hinged intermediate its ends so that the outer portion of the frame may be swung to a vertical position to close the upper part of the cabinet opening, rails mounted on the inside of the cabinet above and behind the bed frame, the rails sloping downwardly toward the front of the cabinet, a drawer containing member movably mounted on the rails, and means on the bed frame and on the drawer containing member adapted for interengagement so that the member is moved forwardly when the bed frame is moved forwardly out of the cabinet.

959,632. SAMPLE-CARD BOOK. JOHN A. SODERSTROM, Chicago, Ill. Filed Oct. 21, 1907. Serial No. 398,336.



1. A leaf for a sample card book comprising a backing, and binding strips secured to the side edge of said backing by a series of interconnected spaced stitches which pass through the backing and binding midway its edges and again through the backing inside the inner edge of the binding at a point removed therefrom, thereby loosely holding the edge of the binding to the backing and providing a plurality of card end receptacles.

2. A leaf for a sample card book comprising a backing, binding strips inclosing the side edges of said backing and extending inwardly therefrom to form flanges on both faces of the backing, and stitches spaced apart at intervals for securing both flanges of each binding strip to the backing, said stitches overlapping the inner free edges of both flanges and holding said flanges loosely throughout their length and breadth to permit them to yield for the insertion and removal of cards.

3. A leaf for a sample card book comprising a backing, and binding strips secured to the side edge of said backing by spaced stitches which pass through the backing and binding midway its edges and again through the backing inside the inner edge of the binding at a point removed therefrom, thereby loosely holding the edge of the binding to the backing and providing a plurality of card end receptacles.

959,633. METHOD OF OBTAINING SPECIFIC GRAVITY. ALBERT SOMMER, New York, N. Y. Filed June 12, 1909. Serial No. 501,714.



1. The improvement in the method of determining the specific gravity of semi-fluid and solid fusible substances which consists in filling a container with the substance whose specific gravity is to be ascertained in melted condition and retaining on the top thereof an amount of the substance sufficient to contain the cavity formed by cooling, cooling said substance, and thereafter removing the portion thereof which is outside of said container so as to leave a plain surface flush with the mouth of said container and ascertaining the weight of the remaining contents of said container while still within said container.

2. The improvement in the method of determining the specific gravity of semi-fluid and solid fusible substances which consists in filling a container with the substance whose specific gravity is to be ascertained in melted condition and retaining on the top thereof an amount of said substance sufficient to contain the cavity formed by cooling, cooling said substance, and thereafter removing the portion thereof which is outside of said container so as to leave a plain surface flush with the mouth of said container and supporting said container and its remaining contents from an aerometer in a liquid of known specific gravity and ascertaining the submergence of said aerometer.

959,634. BRUSH OR COLLECTOR FOR ELECTRICAL MACHINES. SIMON SPARROW, St. Louis, Mo., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 23, 1909. Serial No. 479,466.



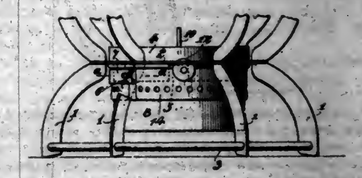
1. In a brush for dynamo-electric machines, the combination with a collecting member provided with a cavity, of a resilient member under compression situated in said cavity, and a conductor lying between said resilient member and the wall of said cavity.

2. In a brush for dynamo-electric machines, the combination with a collecting member provided with a cavity, of a spring under compression situated in said cavity, and a conductor lying between said spring and the wall of said cavity.

3. In a brush for dynamo-electric machines, the combination with a collecting member provided with a cylindrical cavity, of a spring under compression situated in said cavity, and a flexible conductor lying between said spring and the wall of said cavity.

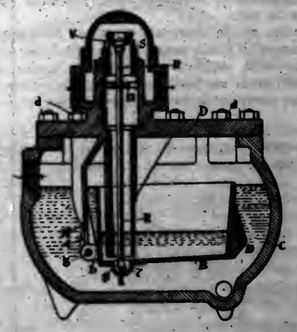
4. A carbon brush, having a cylindrical cavity, a web conducting cable, extending into and entirely around the walls of said cavity, and a helical spring under compression within said cable.

959,635. LANTERN. FURMAN D. SPEAR, Brooklyn, N. Y., assignor to Armspear Manufacturing Company, New York, N. Y. Filed Jan. 23, 1909. Serial No. 473,821.



In a lantern provided with a burner, the regulating shaft whereof projects outside the body of the lantern, the combination with a horizontal ring guard connected to upright guards and to a body hoop, of an oil font provided with a hoop, the upper edge whereof approximately abuts against the under side of the horizontal ring guard and on the exterior of the body hoop, and means for detachably securing the oil font in place.

959,636. STEAM-TRAP. CHARLES E. SQUIRES, Cleveland, Ohio. Filed July 19, 1909. Serial No. 508,278.



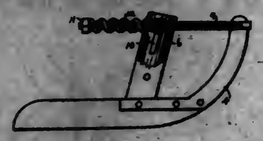
1. In steam traps, a body open across its top, in combination with a cover removably bolted upon said body and provided with a hanger on its inside, a bucket pivotally mounted in said hanger having a projection at its rear and bottom, a pivot pin mounted in said projection and having conical extremities and bearing tubes in the bottom of said hanger in which said extremities are engaged.

2. A trap comprising a body and a cover thereon having a hanger on its inside, in combination with a bucket pivotally supported at one end in said hanger and having a projection on its rear and bottom, a bearing pin fixed in said projection having conical ends and removable bearing tubes fixed in the bottom of said hanger having flared extremities matching the conical ends of said bearing pin.

3. The body of the trap and a removable cover therefor, in combination with a bucket pivotally supported from said cover and provided with a depression in its bottom having parallel side walls, a valve rod extending into said depression and a coupling pin therefor projecting through said side walls, and a guide for the upper end of said valve rod to center the valve on its seat.

4. In steam traps, a bucket having a relatively narrow and elongated depression in its bottom centrally at one end, in combination with a valve rod having its lower end extending into said depression, a pin transversely through the wall, said depression and said rod and a fixed guide for the upper end of said rod in the exhaust passage for the trap.

959,637. COLTER. WILLIAM STACY, Devers, Tex. Filed July 31, 1909. Serial No. 510,652.



1. A device of the character described comprising a supporting means; a blade support pivotally attached thereto; a cutter carried by said support and resilient means operating against said blade support for holding the cutter yieldably against the obstruction to be removed thereby.

2. A device of the character described including a rotatable support and means for securing the same to an immovable frame; a cutting member carried thereby; a blade carried by said cutting member; a rod secured to the said cutting member and having a slidable resilient connection with said support whereby said blade is held yieldably against the obstruction to be cut thereby.

3. In a device of the character described, a cutting member; a blade carried thereby; a female joint member attached to said cutting member and carrying a laterally projecting ear; a stay rod attached to said cutting member and projecting through said ear and carrying a resilient mechanism for operating against said rod and ear and thereby operating to hold said blade yieldably against the surface to be cut.

4. A device of the character described comprising a supporting means; a blade support attached thereto; a cutter carried by said support and resilient means operating against said blade support for holding the cutter yieldably against the obstruction to be removed thereby.

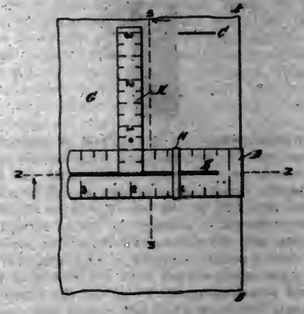
959,638. TOY. JAMES T. STAFFORD, New York, N. Y. Filed July 17, 1908. Serial No. 444,085.



An amusement apparatus comprising a base, a setting mounted upon the base and representing a sanatorium, a horse mounted upon the base in rear of and at the ends of the setting, horizontal shafts extending transversely of and journaled on the underside of the base, said shafts being disposed at points spaced from the ends of the setting, another shaft journaled on the underside of the base centrally between said first named shafts, said last named shaft extending transversely of the base, a vertical sprocket wheel mounted upon each of said first named shafts, vertical sprocket wheels mounted upon said last named shaft, sprocket chains mounted upon the vertical sprocket wheels, the sprocket chains being adapted to travel in a vertical plane located in rear of and extending longitudinally of the setting, a set of figures mounted upon each chain, one set of figures representing people in advanced ages, the other set of figures representing the same people at earlier ages, and a motor connected with one of said first named shafts.

959,639. BUTTONHOLE-GUIDE. MARY L. STANTON, Newton, Mass. Filed Jan. 28, 1910. Serial No. 540,679.

A buttonhole guide comprising a graduated guide piece adapted to embrace and slide upon the buttonhole edge of the garment and having a longitudinal opening centrally located thereon and having a sliding gage whereby the length of the buttonhole is determined, and a second graduated guide sliding upon the said guide piece whereby the



space between the buttonholes is determined, substantially as and for the purpose set forth.

959,640. CONDENSER. ALFRED STEINHART, Pittsburg, Pa. Filed Oct. 30, 1909. Serial No. 526,558.



1. A condenser having in combination a horisontally arranged shell provided with inlet, separating and outlet chambers, a plurality of tubes extending from the inlet chamber into the separating chamber, means for cooling such tubes intermediate of the inlet and separating chambers, means in the separating chamber for removing condensation from the gaseous fluid and means for conducting the gaseous fluid to the outlet chamber.

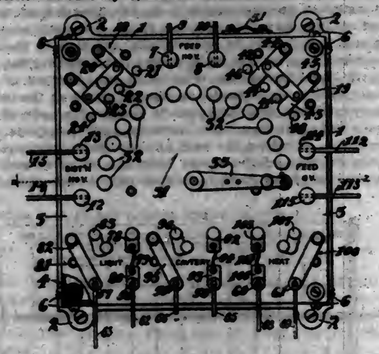
2. A condenser having in combination a horisontally arranged shell provided with inlet, separating and outlet chambers, a plurality of tubes extending from the inlet chamber to the separating chamber, means for cooling such tubes intermediate of the inlet and separating chambers, openings from the separating chamber into the outlet chamber substantially in line with the discharge ends of the tubes and shields or deflectors arranged to prevent the condensation entering the streams of air passing through the separating chamber.

3. A condenser having in combination a plurality of horisontally arranged tubes for the passage of gaseous fluids, means for cooling the tubes intermediate of their ends and means for changing the direction of flow of condensation, and means for preventing the condensation escaping from the upper tubes commingling with the gaseous fluid from the lower tubes.

4. A condenser having in combination a plurality of horisontally arranged tubes for the passage of gaseous fluids, means for cooling such tubes intermediate of their ends, and shields interposed between the streams of air escaping from the ends of the tubes.

5. A condenser having in combination a plurality of horisontally arranged tubes for the passage of gaseous fluids, means for cooling such tubes intermediate of their ends, and tubular sections provided with openings in their lower sides supported in line with the discharge ends of the tubes.

959,641. SWITCHBOARD FOR DENTAL, MEDICAL, OR SURGICAL PURPOSES. DAVID STERN, Cincinnati, Ohio. Filed July 6, 1909. Serial No. 506,169.



1. In an electric switchboard for dental, medical or surgical purposes, the combination of electric connections for a dynamo-circuit embracing high-voltage feed terminals, rheostat-resistances, a conductor between one of said feed-terminals and one end of said resistances, and a conductor embracing a low-voltage switch between the other of said feed-terminals and the other end of said resistances, high-voltage distributing terminals, electric conductors embracing a high-voltage switch between said feed-terminals and high-voltage distributing terminals, and a plurality of low-voltage shunt-circuits formed by connection with the arm of said rheostat and said low-voltage switch, said low-voltage shunt-circuits embracing terminals, low-voltage lamp and instruments, and releasable connections between the latter and said last-named terminals, substantially as described.

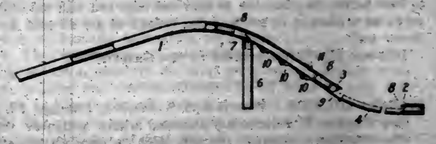
2. In an electric switchboard for dental, medical or surgical purposes, the combination of a plate, a rheostat embracing buttons and an arm located at the middle of said plate, electric connections for a dynamo circuit embracing high-voltage feed-terminals, the resistances of said rheostat, a conductor between one of said feed-terminals and one end of said resistances, and a conductor embracing a low-voltage switch between the other of said terminals and the other end of said resistances of said rheostat, high-voltage distributing terminals, electric conductors embracing a high-voltage switch between said feed-terminals and high-voltage distributing terminals, and a plurality of shunt-circuits formed by connection with the arm of said rheostat and said low-voltage switch and embracing terminals located below said rheostat-buttons and arm, the said switches being located in separated relation above said rheostat and arm, and said high-voltage feed-terminals being located above said rheostat and arm between said switches, substantially as described.

3. In an electrical switchboard for dental, medical or surgical purposes, the combination of electric connections for a dynamo-circuit embracing an initial resistance, rheostat-resistances, a conductor leading from said rheostat-resistances, and a switch in said conductor, and forming a direct circuit, a low-voltage shunt circuit formed by connection with the arm of said rheostat and said switch and embracing conductors for parts operated by low-voltage current, and a low-voltage battery circuit having connection with said rheostat-resistances and said switch and embracing said shunt-circuit for forming a direct battery-circuit therethrough, substantially as described.

4. In an electric switchboard for dental, medical or surgical purposes, the combination of electric connections for a dynamo-circuit embracing an initial resistance, rheostat-resistances, a conductor leading from said rheostat-resistances, and a switch in said conductor, and forming a direct circuit, a plurality of low-voltage shunt-circuits formed by connection with the arm of said rheostat and said switch and embracing conductors for a miniature lamp and instruments operated by a low-voltage current, a resistance interposed in the shunt-circuit for said miniature-lamp, and a low-voltage battery-circuit having connection with the conductor of said dynamo-circuit between said initial resistance and said rheostat-resistances, and with said switch and embracing said shunt-circuit for forming a direct battery-circuit therethrough, substantially as described.

5. In an electric switchboard of the character described, the combination of a rheostat centrally disposed on the front of said switchboard, high-voltage feeding connections located on said switchboard above said rheostat, a series of low-voltage supply binding-posts located side by side below said rheostat for permitting the supply-wires therefrom to depend therefrom below said switchboard, high-voltage supply binding-posts and a switch therefor at one side of said rheostat, and low-voltage binding-posts and a switch therefor at the other side of said rheostat, said binding-posts and switches being located on the front of said switchboard closely adjacent to said rheostat, substantially as described.

959,642. PNEUMATIC TRANSMISSION SYSTEM. JOSEPH J. STOSTEEL, Chicago, Ill., assignor of one-half to Henry J. Cohn, Chicago, Ill. Filed Feb. 24, 1908. Serial No. 417,514.



1. A pneumatic despatch apparatus, comprising a transit tube normally open at its delivery end, a suction branch communicating therewith at a point a considerable distance inward from said delivery end, means located between said delivery end and said suction branch to prevent a carrier from moving in a reverse direction after having passed said suction branch, the length of the tube between said suction branch and said delivery end being such that a carrier after passing said suction branch will be brought to rest before passing out of said delivery end and thereby serve as a closure to prevent the inrush of air at said delivery end.

2. A pneumatic despatch apparatus, comprising a transit tube normally open at its delivery end, a suction branch communicating therewith at a point a considerable distance inward from said delivery end, means located between said delivery end and said suction branch to prevent a carrier from moving in a reverse direction after having passed said suction branch, the length of the tube between said suction branch and said delivery end being such that a carrier after passing said suction branch will be brought to rest before passing out of said delivery end and thereby serve as a closure to prevent the inrush of air at said delivery end, each carrier being adapted to be ejected from the tube through the pressure of air in advance of the succeeding carrier after said succeeding carrier has passed said suction branch.

3. A pneumatic despatch apparatus, comprising a transit tube normally open at its delivery end, a suction branch communicating therewith at a point a considerable distance inward from said delivery end, means located between said delivery end and said suction branch to prevent a carrier from moving in a reverse direction after having passed said suction branch, the length of the tube between said suction branch and said delivery end being such that a carrier after passing said suction branch will be brought to rest before passing out of said delivery end and thereby serve as a closure to prevent the inrush of air at said delivery end, the tube extending downwardly at said delivery end to permit a carrier to be discharged by gravity when the pressure behind it rises so as to counteract that of the outer air.

4. A pneumatic despatch apparatus, comprising a transit tube normally open at its delivery end, a suction branch communicating therewith at a point a considerable distance inward from said delivery end, means located between said delivery end and said suction branch to prevent a carrier from moving in a reverse direction after having passed said suction branch, the length of the tube between said suction branch and said delivery end being such that a carrier after passing said suction branch will be brought to rest before passing out of said delivery end and thereby serve as a closure to prevent the inrush of air at said delivery end, the tube extending downwardly at said delivery end to permit a carrier to be discharged by gravity when the pressure behind it rises so as to counteract that of the outer air, and an auxiliary air inlet between said delivery end and suction branch for admitting air behind a carrier when it is in said downwardly extending part of the transit tube.

5. A pneumatic despatch apparatus, comprising a transit tube normally open at its delivery end, a suction branch communicating therewith at a point a considerable distance inward from said delivery end, a spring pressed dog normally urged into the path of carriers between said delivery end and said suction branch to prevent a carrier from moving in a reverse direction after having passed said suction branch, the length of the tube between said suction branch and said delivery end being such that a carrier after passing said suction branch will be brought to rest before passing out of said delivery end and thereby serve as a closure to prevent the inrush of air at said delivery end.

[Claims 6 to 8 not printed in the Gazette.]

959,643. OIL-CUP. WILLIAM E. S. STRONG, Chicago, Ill., and FRANK V. BARTLETT, Detroit, Mich., assignors to The Winkley Company, Detroit, Mich., a Corporation of Michigan. Filed July 9, 1909. Serial No. 506,694.

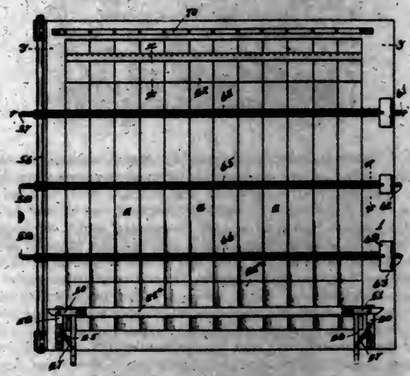


1. An oiling device comprising an annular body member having an apertured threaded stem for securing the same to a suitable support, in combination with a cap member having an annular depending portion adapted to have a telescopic engagement with the internal walls of said body member, a guide member secured to said body member, a stud secured to said cap member and adapted to project within said guide member, and a spring interposed between the end of said stud and the end of said guide member whereby a movement of said cap away from said body member contracts said spring, substantially as described.

2. An oiling device comprising an annular body member having an apertured depending stem portion for securing the same to a suitable support, a guide within said body member having an opening in alinement with the aperture in said stem, in combination with a cap member having an annular depending portion adapted to have a telescopic engagement with the internal walls of said body member, an apertured stud secured at one end to said cap member, and its other end projecting within said guide member, a spring, and means for retaining said spring between the free ends of said guide and stud member, substantially as described.

959,644. COMPILING-MACHINE. WILLIAM T. SULLIVAN, Cincinnati, Ohio. Filed Oct. 27, 1906. Serial No. 340,905.

1. In a machine of the class described, a compilation table having a parallel series of similarly inclined supports, reciprocating means for delivering a parallel series of sheets upon said inclined supports respectively, a cross carrier mechanism on the compilation table intercepting the series of parallel supports in the direction of movement of the upward inclination of the supports, whereby the said sheets may be sequentially compiled as the carrier travels across the table, means for actuating the carrier in time movements relative to the delivery of the sheets upon their supports, an alining device at the end of the compilation table adapted to engage the ends of the sheets and right them upon their respective supports, and means for actuating the said alining device intermediate of the delivery of the sheets upon the supports and the compilation of the carrier, substantially as described.



2. In a machine of the class described, a compilation table having a parallel series of supports, reciprocating means for delivering a parallel series of sheets upon the said series of supports respectively, a cross carrier mechanism on the compilation table intercepting the series of parallel supports transversely and adapted to sequentially compile the severed sheets and deliver them from said table, means for actuating the carrier in time movements relative to the delivery of the sheets upon their supports, an alining device at the end of the compilation table adapted to engage the ends of the sheets and right them upon their respective supports, and means for actuating the said alining device intermediate of the delivery of the sheets upon the supports and the compilation of the carrier, substantially as described.

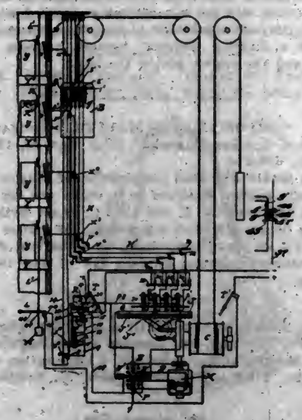
3. In a machine of the class described, a compilation table having a parallel series of supports, means for delivering a parallel series of sheets upon the said series of supports respectively, a cross carrier mechanism on the compilation table intercepting the series of parallel supports transversely and adapted to sequentially compile the severed sheets and deliver them from said table, means for actuating the carrier in time movements relative to the delivery of the sheets upon their supports, an alining device at the end of the compilation table adapted to engage the ends of the sheets and right them upon their respective supports, means for actuating the said alining device intermediate of the delivery of the sheets upon the supports and the compilation of the carrier, and means for bringing to bear a momentary arresting pressure upon the faces of the sheets as they are delivered upon the supports, substantially as described.

4. In a machine of the class described, a compilation table having a parallel series of supports, means for adjusting said supports for various sizes of sheets, reciprocating means for delivering a parallel series of sheets upon the said series of supports respectively, alining mechanism for said supports, actuating mechanism for said alining mechanism and cross carrier mechanism on the compilation table intercepting the series of parallel supports transversely, adapted to sequentially compile the severed sheets and deliver them from said table, substantially as described.

5. In a machine of the class described, a compilation table having a parallel series of supports, means for adjusting said supports for various sizes of sheets, means for delivering a parallel series of sheets upon the said series of supports respectively, alining mechanism for said supports, actuating mechanism for reciprocating said alining mechanism, guiding mechanism mounted on the compilation table for maintaining a longitudinal alinement of said sheets, cross carrier mechanism on the compilation table intercepting the series of parallel supports transversely and adapted to sequentially compile the severed sheets and deliver them from said table, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

959,645. MECHANICALLY-CONTROLLED AUTOMATIC ELEVATOR. AUGUST SUNDH, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 2, 1907. Serial No. 395,624.



1. In an apparatus for controlling elevators, the combination with a motor and a car, of a stationary controlling device for the motor, levers in the car, and a mechanical connection between each lever and the controlling device.

2. In an apparatus for controlling elevators, the combination with a car and a motor, of motor controlling circuits, stationary switches in the circuits, switch operating devices in the car, and separate mechanical connections between said devices and the switches.

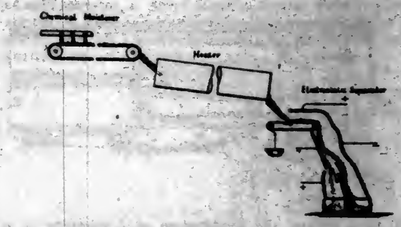
3. In an apparatus for controlling elevators, the combination with a car and a motor, of switches in the motor circuits located outside the path of travel of the car, switch operating devices in the car, and separate mechanical connections between said devices and the switches.

4. In an apparatus for controlling elevators, the combination with a car and a motor, of a motor controlling circuit, switches in said circuit located outside the path of travel of the car, manually operable devices within the car, and mechanical connections between each of said devices and one of said switches.

5. In an apparatus for controlling elevators, the combination with a car and a motor, of electrical circuits for the motor located outside of the path of travel of the car, a plurality of independently operable circuit controlling devices within the car, and mechanical connections between said devices and the circuits.

[Claims 6 to 13 not printed in the Gazette.]

959,646. ELECTROSTATIC SEPARATING PROCESS. WALTER G. SWART, Denver, Colo., assignor to The Blake Mining and Milling Company, a Corporation of Maine. Filed Jan. 18, 1905. Serial No. 241,599.



1. The electrostatic separating process which consists in treating disintegrated material with a dilute solution of copper sulfate to cause a diverse deposition upon the particles of different material, in drying said material and in electrostatically separating the same.

2. The electrostatic separating process which consists in treating zinc bearing material with a solution of copper sulfate, in drying and electrostatically separating the same.

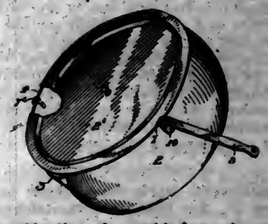
3. The separating process which consists in treating material with a sulfate solution adapted to selectively alter the electro-conductivity of portions of said material and in electrically separating said material.

4. The separating process which consists in treating mingled ore or mineral material with copper sulfate solution to alter the electro-conductivity of some of said material, and in electrically separating said material.

5. The electrostatic separating process which consists in treating particles of material of varying composition to cause decomposition in and alter the electro-conductivity of some of said particles and in electrostatically separating said material.

[Claims 6 to 35 not printed in the Gazette.]

959,647. COOKING VESSEL. WILLIAM SYLVESTER, Pittsburg, Pa., assignor to Four Utensil Manufacturing Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Mar. 29, 1909. Serial No. 486,318.



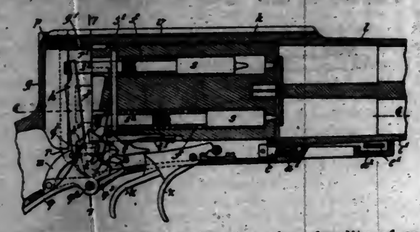
1. The combination of a cooking vessel, a cover therefor, a handle having a down-turned portion secured to the vessel, and a cover-holding lug having a depending portion confined between the body of the vessel and the depending portion of the handle.

2. The combination of a cooking vessel having a bead at its top edge forming an external shoulder, a cover, a handle having a depending portion secured to the vessel beneath the bead, and a cover-holding lug embracing the bead and having a portion confined between the depending part of the handle and the vessel, said lug held by the shoulder of the bead against upward displacement.

959,648. GUN. MICHAEL TELECHEFF, St. Petersburg, Russia. Filed Aug. 27, 1908. Serial No. 450,582.

1. In a firearm the combination of a plurality of superposed barrels, a lock for the breech end of said barrels, said lock being rotatable about a vertical axis disposed

laterally of the axes of said barrels and a vertically movable bolt adapted to secure said lock in closed position, substantially as described.



2. In a firearm the combination of a plurality of superposed barrels, a lock for the breech end of said barrels rotatable about a vertical axis disposed laterally of the axes of said barrels, a vertically movable bolt adapted to secure said lock in closed position, a pivoted lever and a connection between said bolt and lever, substantially as described.

3. In a fire arm the combination of a plurality of superposed barrels, a lock for the breech end of said barrels rotatable about a vertical axis disposed laterally of the axes of said barrels, said lock having a recess, a vertically movable bolt adapted to secure said lock in closed position and having a recess coacting with the recess in the lock whereby the lock may be opened before complete withdrawal of said bolt, substantially as described.

4. In a firearm the combination of a plurality of superposed barrels, a lock for the breech end of said barrels, rotatable about a vertical axis disposed laterally of the axes of said barrels, a firing pin for each barrel movable longitudinally within said lock, a hammer co-acting with each of said firing pins, a vertically movable bolt adapted to secure said lock in closed position, a manually operatable lever and a connection between said bolt and lever, substantially as described.

5. In a firearm the combination of a plurality of superposed barrels, a lock for the breech end of said barrels rotatable about a vertical axis disposed laterally of the axes of said barrels and at the end of the lock remote from said breech end, said lock having a recess, a firing pin for each barrel movable longitudinally within said lock, a hammer co-acting with each of said firing pins and mounted within said lock, a vertically movable bolt adapted to secure said lock in closed position and having a recess co-acting with the recess in the lock whereby the latter may be opened before complete withdrawal of said bolt, a manually operatable lever and means actuated by said lever whereby the bolt is caused to secure and release said lock, substantially as described.

[Claim 6 not printed in the Gazette.]

959,649. SMOKING-PIPE, &c. JUDSON L. THOMSON, New York, N. Y. Filed Jan. 25, 1909. Serial No. 474,102.



1. A pipe comprising a bowl, and a stem consisting of detachable sections formed with internal shoulders, in combination with a filtering device provided with perforated ends and with annular shoulders adjacent said ends.

2. The combination with a pipe comprising a bowl and a stem made up of detachable sections provided with internal shoulders of a filtering device consisting of a cylindrical body portion perforated at one end and formed with an external shoulder, and having its opposite end circumferentially reduced and a perforated cap formed with an external shoulder, and fitting upon the reduced end of the body portion.

3. A smoker's article having a chamber formed with confronting annular shoulders, in combination with a filtering device of cylindrical form consisting of a body portion perforated at one end, and reduced at its opposite end, and formed with an external shoulder, and a removable perforated cap fitting upon the reduced end of the body portion, and formed with an external shoulder.

4. A smoker's article, a filtering device comprising a casing formed with an end having openings therethrough, and with a shoulder adjacent to said end, a cap member provided with a perforated outer end, and with a shoulder adjacent to said end, and a filtering material confined between the cap member and the casing within the same.

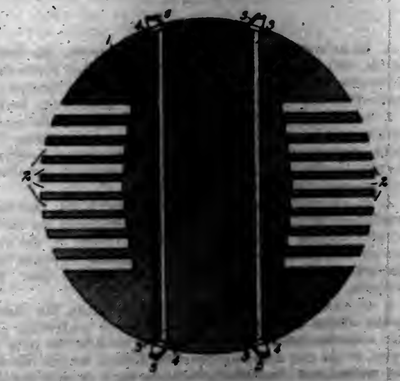
5. In a smoker's article, a filtering device comprising a casing having openings therethrough at one end, and with a shoulder adjacent to said end, said casing having a reduced portion, a cap member detachably held to the reduced portion, said cap member being provided with a perforated outer end, and with a shoulder adjacent to said end, and a filtering material confined between the cap member and the casing within the same.

959,650. COMPOSITION OF MATTER. WILLIAM JAMES THOBOLD, London, England. Filed May 15, 1909. Serial No. 496,314.

1. The herein described composition of matter consisting of pure rubber dissolved in a crude gas tar benzene distilling between 125° C. and 180° C. as set forth.

2. The herein-described composition of matter consisting of 4.3% of pure rubber dissolved in 95.7% of a crude gas tar benzene distilling between 125° C. and 180° C. as set forth.

959,651. DYNAMO-ELECTRIC MACHINE. EGBERT M. TINGLEY, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 2, 1906. Serial No. 328,884.



1. In a dynamo-electric machine, the combination with a rotatable member having ventilating holes which extend therethrough substantially perpendicular to its axis, of deflectors at the ends of each hole which project laterally therefrom and have openings at the same side.

2. In a dynamo-electric machine, the combination with a rotatable member having a series of ventilating holes disposed in one or more planes substantially perpendicular to its axis, of guides at the opposite ends of each hole which have a similar inclination with reference to the center line of the hole in order to direct the air into one end of the hole and out of the opposite end, when the member rotates in either direction.

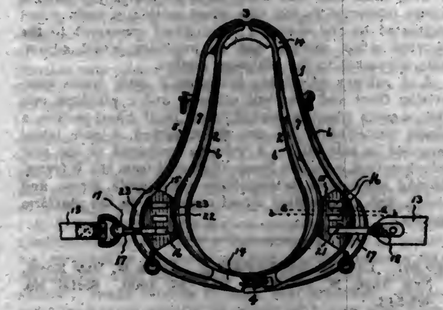
3. In a dynamo-electric machine, the combination with a rotatable member having holes for ventilation which are transverse to its axis, of scoops which project from the member near the ends of the holes with their openings oppositely disposed relative to the direction of rotation of the member.

4. In a dynamo-electric machine, the combination with a rotatable core member having a plurality of longitudinal slots, and a series of ventilating holes extending through the core member and substantially perpendicular to its axis, of a plurality of scoop projections located on the surface of the core member near the ends of the ventilating holes, and means for holding the scoop projections in position.

5. In a dynamo-electric machine, the combination with a rotatable core member having ventilating holes which extend transversely therethrough and terminate at its periphery, of scoops at the opposite ends of each hole that project oppositely with reference to the direction of rotation, for creating a circulation of air through the holes as the core member rotates.

[Claims 6 and 7 not printed in the Gazette.]

959,652. HORSE-COLLAR. GEORGE W. TODD, Omaha, Nebr. Filed June 16, 1909. Serial No. 502,513.



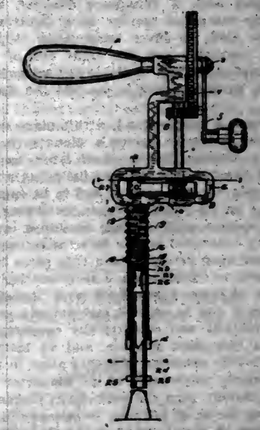
A horse collar comprising a pair of oppositely curved loops each of said loops comprising separated bowed reinforcing edge members, a filling member extending between and spacing said edge members and a concavo-convex holding plate the edges of which are engaged beneath the bent edges of the edge members and the intermediate portion of which is outwardly bowed from the filling member, each holding plate having a plurality of transverse slots formed therein.

959,653. VALVE-SEAT GRINDER. ELVIN E. TOWNSEND, Oakland, Cal. Filed Apr. 17, 1909. Serial No. 490,463.

1. A device of the character described comprising a frame, a barrel carried by said frame, a bit insertible in said barrel and adapted for attachment with a valve, a vibrator carried by said frame for oscillating said barrel and said bit, and means carried by said barrel for imparting a partial rotation to said bit while being vibrated.

2. A device of the character described comprising a frame, a vibrator rotatably mounted therein, a barrel carried by said frame, yoke arms carried by said barrel and held in the path of movement of said vibrator, said barrel being provided with guiding slots, a clutch member mounted in said barrel and having pins projecting through the slots therein, a spring coiled about said barrel and bearing upon one of said pins, and a bit insertible in said barrel and provided with a clutch head which is engaged by said clutch member.

3. A device of the character described comprising a frame, a vibrator mounted therein, means for rotating said vibrator, a barrel carried by said frame, yoke arms carried by said barrel, and held in the path of movement of said vibrator, a clutch member in said barrel, a bit insertible in said barrel and adapted for engagement by said clutch member, and means carried by said barrel for imparting a partial rotation to said clutch member.

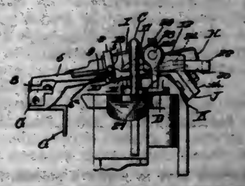


4. A device of the character described comprising a frame provided with a handle, a rotatable vibrator mounted in said frame, a barrel carried by said frame and operated by said vibrator, said barrel being provided with guiding slots, a bit adapted to be inserted in said barrel and provided with a toothed head, a clutch member slidable in said barrel and provided with outstanding pins which project through the slots of the barrel, and a spring coiled about said barrel and having one end secured thereto and its other end secured to one of the pins of the clutch member, whereby when a downward pressure is exerted upon said handle, a partial rotation may be imparted to the bit.

5. A device of the character described comprising a frame, a handle therefor, a gear wheel carried by said frame, a vertically disposed shaft mounted in said frame and provided with a pinion held in mesh with said gear wheel, a vibrator carried by said shaft, a barrel carried by said frame and operated by said vibrator, and a bit carried by said barrel.

[Claim 6 not printed in the Gazette.]

959,654. THIN-PLACE-DETECTING MECHANISM FOR LOOMS. WILLIAM C. TROMBLY, Lowell, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Nov. 13, 1909. Serial No. 527,841.



1. In a loom, a temple having a reciprocating shank, a thin-place detector, a shipper, releasing means therefor, and an actuating device comprising a rock-shaft and a dog carried thereby, and a connector pivotally attached to and to effect rotation of the rock-shaft, combined with means controlled by the detector to position the connector in the path of and to be temporarily engaged and moved forward

by the temple shank on its forward stroke, to turn the rock-shaft upon detection of a thin place in the cloth and effect the actuation of the shipper-releasing means by the dog.

2. In a loom, a temple having a reciprocating shank, a shipper, releasing means therefor, and a device to actuate said means, comprising a movable dog, and a connector operatively connected with and to effect movement of the dog, combined with a thin-place detector, and an instrumentality controlled thereby upon detection of a thin place in the cloth to effect temporarily coöperation between said connector and the front end of the temple shank, forward movement of the latter acting through the connector to move said dog to operate the shipper-releasing means.

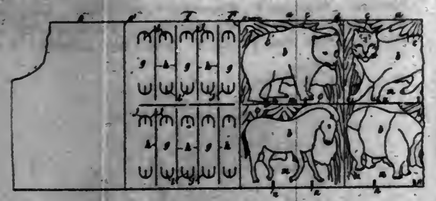
3. In a loom, a temple-stand, a thin-place detector supported thereby, a temple having a shank to reciprocate in the stand, a shipper, its knock-off lever, and means to move it and effect shipper release, including a link having a head movable into the path of and to be engaged by the temple shank on its forward stroke, to draw the link forward and operate said means, combined with an instrumentality controlled by the detector to operatively position the link upon detection of a thin place in the cloth.

4. In a loom, in combination, a reciprocating temple and its shank, a shipper, a knock-off lever therefor, a rock-shaft having a dog to engage and actuate said lever, a connector pivotally and eccentrically connected with the rock-shaft, a thin-place detector, and an instrumentality rendered active by detection of a thin place in the cloth to effect temporarily coöperation of the connector and temple shank, and thereby turn the rock-shaft, movement of the dog actuating the knock-off lever to release the shipper.

5. In a loom, a temple-stand, a temple having a shank to reciprocate in the stand, a rocking carrier mounted on the temple-stand and having a front extension, a thin-place detector mounted on the carrier and normally resting upon the cloth, a shipper, and a knock-off lever therefor, combined with a fixed stand, a rock-shaft mounted thereon and having an attached dog to actuate the knock-off lever, a headed link pivotally and eccentrically connected with the rock-shaft and governed as to its position by the extension of the detector-carrier, and means operated by the rock-shaft to rock the carrier and retract the detector from the cloth after detecting action, downward movement of said detector upon detection of a thin place causing the carrier-extension to position the head of the link in front of and to be moved by the temple shaft on its forward stroke, to operatively turn the rock-shaft.

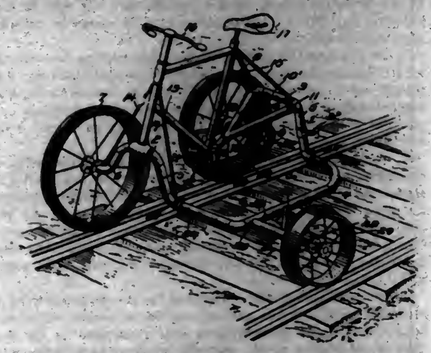
[Claims 6 to 14 not printed in the Gazette.]

959,655. TOY OR PICTURE BOOK. GUSTAVE TUCK, Moorfields, London, England. Filed Jan. 9, 1909. Serial No. 471,437.



A toy or picture book in which a portion is printed or illustrated with pictorial objects, each object being formed with slits at its base, and another portion of the book being divided into sections which constitute stands for the objects when detached, each stand having lugs formed by bending up partially severed portions thereof, and each lug having a slit, the respective slits on the objects and stands enabling them to mutually engage each other.

959,656. VELOCIPEDE. ELIJAH V. TURNER, Johnson City, Tenn. Filed July 27, 1909. Serial No. 509,767.



1. A railway velocipede including a main frame comprising front and rear wheel sections and a platform, a sleeve connected to the rear wheel section, a main wheel supported by the sleeve, a main wheel connected to the forward wheel section, and an auxiliary wheel connected to the platform section.

2. A railway velocipede including a main frame comprising front and rear wheel sections and a platform, a sleeve connected to the rear wheel section, a main wheel supported by the sleeve, a main wheel connected to the forward wheel section, and an auxiliary wheel adjustably connected to the platform section.

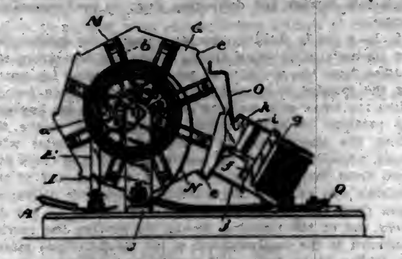
3. A railway velocipede including a main frame comprising front and rear rail sections, and a platform section, a main wheel connected to the front wheel section, a sleeve connected to the rear wheel section, a main wheel mounted in said sleeve, a V-frame connected to the rear wheel section, a bicycle frame supported from the V-frame, driving mechanism intermediate the bicycle frame and sleeve, and an auxiliary wheel connected to the platform section.

959,657. LIQUID-RECEPTACLE. ALICE M. VAN BONK, New York, N. Y. Filed May 26, 1909. Serial No. 498,546.



A bottle stopper having formed therein a recess comprising a relatively wide body portion opening through the lower end of the stopper, and a narrow longitudinal branch opening at one end into the first named portion and having its other end enlarged to provide an anchoring space, an anchor of self-hardening cementitious material completely filling the recess, and a bag of textile fabric having a gathered mouth embedded in the cementitious material in the body portion of said recess, said material completely surrounding and inclosing said mouth and the folds thereof and penetrating the meshes of the fabric of which the same is constructed.

959,658. LIGHTNING-ARRESTER. HUGH C. WALFORD, Berlin, Ontario, Canada. Filed Nov. 23, 1908. Serial No. 464,120.



1. A lightning arrester system comprising a rotatably mounted disk; a series of arresters carried by said disk each including an independent air gap; a common ground for said arresters; and a contact arm for connection electrically with a line wire and adapted to engage the arresters *seriatim* as the disk is rotated.

2. A lightning arrester system comprising a rotatably mounted disk provided with a series of radial pockets; a series of arresters removably carried by said disk in said pockets each including an air gap; a common ground for said arresters; and a contact arm for connection electrically with a line wire and adapted to engage the arresters *seriatim* as the disk is rotated.

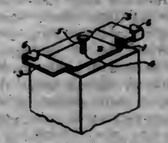
3. A lightning arrester system comprising a rotatably mounted disk; a ground plate carried thereby; a series of arresters carried by said disk and adapted to ground through said plate; and a contact arm for connection electrically with a line wire and adapted to engage the arresters *seriatim* as the disk is rotated

4. A lightning arrester system comprising a rotatably mounted disk; a ground plate carried thereby; a series of arresters carried by said disk at opposite sides of said plate and adapted to ground through said plate; and contact arms for connection electrically with line wires adapted to engage the arresters *seriatim* as the disk is rotated.

5. A lightning arrester system comprising a contact arm adapted for connection to a line wire; a series of arresters, arranged on a common support, movable *seriatim* into engagement with the contact arm and having a common ground; means tending to move said arresters; escapement mechanism adapted to permit of a step wise movement of said arresters one by one; and means whereby the passage of a disruptive discharge through the arm and an arrester conditions the operation of said escapement mechanism.

[Claims 6 to 15 not printed in the Gazette.]

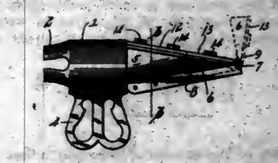
959,659. TRAP-REST. JOHN W. WALTER, Canton, Ohio. Filed Jan. 28, 1909. Serial No. 474,821.



1. A trap rest including a horisontal plate supported from below on which the base bar of the trap is adapted to bear, the plate having a depressed middle portion and having inturned flanges on alternate sides of its end portions adapted to releasably engage over the side edges of the base bar.

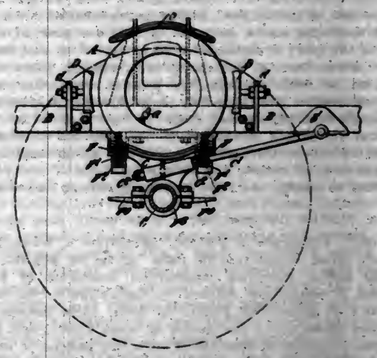
2. A trap rest including a horisontal plate supported from below on which the base bar of the trap is adapted to bear, the plate having inturned flanges on alternate sides of its end portions adapted to releasably engage over the side edges of the base bar.

959,660. PENCIL-SHARPENER. MARTIN W. WALTER, Dayton, Ohio. Filed Mar. 14, 1910. Serial No. 549,325.



In a lead pencil sharpener, the combination with a barrel having a slotted conical extension, of a stationary blade secured to said conical extension within said slot and extending substantially from a point midway of the slot to the upper end of said slot, said stationary blade being adapted to remove the wood of the pencil, and a pivotal knife mounted upon said conical extension and extending from the outer end of the stationary blade to the outer end of the slot, said pivotal blade being adapted to point the graphite after the wood has been sufficiently removed by the stationary blade.

959,661. ROAD-VEHICLE SUSPENSION. FREDERICK WALTON, London, England. Filed Aug. 17, 1908. Serial No. 448,992.

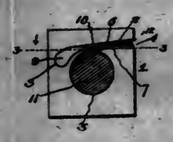


1. The combination with the frame or body of a vehicle and its wheel axles, of a suspension device comprising an annular flexible cushion containing fluid under pressure, arranged edgewise in relation to the frame and axles and unsupported at its inner periphery so that its resiliency is primarily derived by resistance to deflection irrespective of compression and consequent reduction in capacity.

2. The combination with the frame or body of a vehicle and its wheel axles, of a suspension device comprising an annular flexible cushion containing fluid under pressure, and arranged in an approximately upright position between a bracket carried by the vehicle frame and a bracket carried by the wheel axle, the said cushion being unsupported at its inner periphery so that its resiliency is derived by resistance to deflection irrespective of compression and consequent reduction in capacity.

3. The combination with the frame or body of a vehicle and its wheel axles, of a suspension device comprising an annular flexible cushion containing fluid under pressure, and arranged in an approximately upright position between a bracket carried by the vehicle frame and a bracket carried by the wheel axle, the said cushion being unsupported at its inner periphery so that its resiliency is derived by resistance to deflection irrespective of compression and consequent reduction in capacity, and a supplementary resilient supporting device adapted to come into operation only in the event of the flexible cushions becoming deflated.

950,662. NUT-LOCK. JOHN B. WATSON, Bradford, Pa. Filed Dec. 6, 1909. Serial No. 531,607.



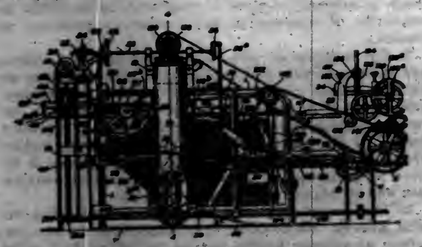
1. In a device of the character described, a nut having formed therein a tapered groove or channel communicating at its inner end with a socket or recess and at its opposite end with a right angularly projecting groove, and a notch or passage between said tapered groove and the bolt hole of the nut, a spring pawl having on one end an enlarged head adapted to fit the socket or recess in the nut whereby said end of the pawl is rigidly secured, a detent formed on said pawl and adapted to work through the passage connecting said tapered groove with the bolt hole in the nut, and means whereby a tool is engaged with the outer end of said pawl to release the same and permit the nut to be unscrewed from the bolt.

2. In a nut lock, a nut having formed therein a tapered groove communicating at its smaller end with an enlarged recess or socket and at its opposite end with a right angularly formed groove in the side of said nut, and a passage connecting said tapered groove with the bolt hole of the nut, a spring pawl having on one end an enlarged head to fit the socket or recess in said nut whereby said end of the pawl is rigidly secured, a detent on said pawl, said detent having the shape of a ratchet tooth and adapted to work through the passage connecting said tapered groove with said bolt hole whereby said detent is forced into engagement with the bolt to lock the nut against retrograde movement on the bolt and to permit the same to be screwed onto the bolt, and a right-angularly formed pawl retracting arm on the outer end of said pawl adapted to engage the right angular groove in the nut.

959,663. FIREPROOF PAINT. MATTHEW S. WATT, Duluth, Minn. Filed Jan. 18, 1909. Serial No. 472,897.

The herein described composition consisting of fifty gallons of asphaltum reduced by turpentine to the consistency of paint, five gallons of drier, three pounds of litharge dissolved in one gallon of wood alcohol and five pounds of powdered zinc mixed with two gallons of wood alcohol.

959,664. CANDY-MOLDING MACHINE. JOHN WERNER, Rochester, N. Y. Filed Nov. 7, 1906. Serial No. 342,375.



1. In a candy molding machine, means for discharging the contents of molding trays, means for separating the candies from the contents of said trays, means for refilling the trays with molding material, means for impressing patterns in said molding material, and means for filling the impressions in said molding material with candy, propelling means for moving the molding trays forward from the receiving end to the delivery end of the machine, one or more tray carriers, means for delivering trays from the propelling means to a carrier at the delivery end of the machine, means for moving the carrier backward to the receiving end of the machine, and means for taking trays from said carrier and delivering them to said propelling means.

2. In a candy molding machine, means for discharging the contents of molding trays, means for separating the candies from the contents of said trays, means for carrying the candies to a predetermined point, means for refilling the trays with molding material, means for impressing patterns in said molding material, and means for filling the impressions in said molding material with candy, propelling means for moving the molding trays forward from the receiving end to the delivery end of the machine, one or more tray carriers, means for delivering trays from the propelling means to a carrier at the delivery end of the machine, means for moving the carrier backward to the receiving end of the machine, and means for taking trays from said carrier and delivering them to said propelling means.

3. In a candy molding machine, means for discharging the contents of molding trays, means for separating the candies from the contents of said trays, means for cleaning the candies and means for carrying the candies to a predetermined point, means for refilling the trays with molding material, means for impressing patterns in said molding material, and means for filling the impressions in said molding material with candy, propelling means for moving the molding trays forward from the receiving end to the delivery end of the machine, one or more tray carriers, means for delivering trays from the propelling means to a carrier at the delivery end of the machine, means for moving the carrier backward to the receiving end of the machine, and means for taking trays from said carrier and delivering them to said propelling means.

4. In a candy molding machine, means for discharging the contents of molding trays, means for separating the candies from the contents of said trays, means for refilling the trays with molding material, means for carrying the discharged molding material to said refilling means, means for impressing patterns in said molding material, and means for filling the impressions in said molding material with candy, propelling means for moving the molding trays forward from the receiving end to the delivery end of the machine, one or more tray carriers, means for delivering trays from the propelling means to a carrier at the delivery end of the machine, means for moving the carrier backward to the receiving end of the machine, and means for taking trays from said carrier and delivering them to said propelling means.

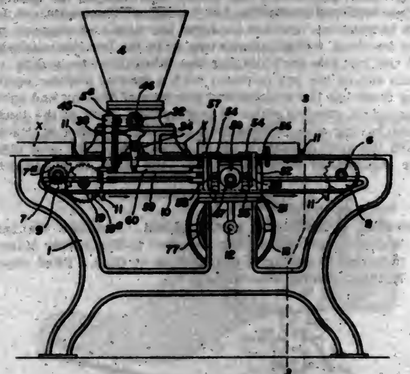
5. In a candy molding machine, means for discharging the contents of molding trays, means for separating the candies from the contents of said trays, means for carrying the candies to a predetermined point, means for refilling the trays with molding material, means for carrying the discharged molding material to said refilling means, means for impressing patterns in said molding material, and means for filling the impressions in said molding material with candy, propelling means for moving the molding trays forward from the receiving end to the delivery end of the machine, one or more tray carriers, means for delivering trays from the propelling means to a carrier at the delivery end of the machine, means for moving the carrier backward to the receiving end of the machine, and means for taking trays from said carrier and delivering them to said propelling means.

[Claims 6 to 75 not printed in the Gazette.]

959,665. CANDY-CASTING MACHINE. JOHN WERNER, Rochester, N. Y. Filed July 25, 1908. Serial No. 445,416.

1. In a candy casting machine, the combination of means for depositing candy-syrup in regulated quantities; automatic means for moving a succession of mold-trays with reference to the depositing means step by step; driving means for said parts; and automatic means for disconnecting the depositing means from the driving means during the change from one tray to another.

2. In a candy-casting machine, a container for candy-syrup; a casing having an inlet connection with the container, and a series of discharge-orifices; a rotary valve sleeve within the casing having inlet and discharge-orifices adapted to register with corresponding orifices of the casing; a series of spaced pistons in the valve sleeve adapted, respectively, to reciprocate between said orifices for drawing syrup thereinto and forcing the syrup therefrom; means for turning the valve sleeve; and means for operating the pistons.



3. In a candy-casting machine, a container for candy-syrup; a casing having an inlet connection with the container, and a series of discharge-orifices; a rotary valve sleeve within the casing having two series of inlet orifices and two series of discharge-orifices adapted to register with the inlet and discharge-orifices of the casing; a series of pistons in the valve sleeve for drawing syrup thereinto and forcing the syrup therefrom; means for turning the valve sleeve; means for operating the pistons; stopping means operating at predetermined intervals for stopping the movements of the valve sleeve and of the pistons for predetermined times; and tray moving mechanism operating alternately with said stopping means.

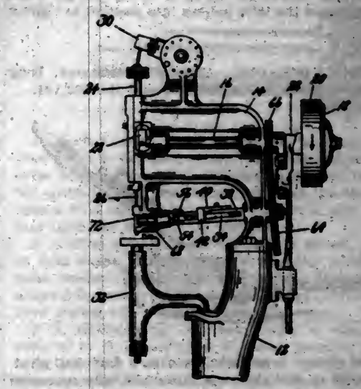
4. In a candy-casting machine, a container for candy-syrup; means for depositing syrup therefrom in regulated quantities, consisting of a casing having an inlet connection with the container and a series of discharge-orifices; a rotary valve sleeve within the casing having two series of inlet orifices and two series of discharge-orifices adapted to register with the corresponding orifices of the casing; a series of pistons in the valve sleeve for drawing syrup thereinto and forcing the syrup therefrom; means for turning the valve sleeve; means for operating the pistons; and manual means for instantaneously stopping the valve sleeve and the pistons.

5. In a candy-casting machine, a container for candy-syrup; a casing having a series of inlet orifices connected with the container, and a removable plate having a series of discharge-orifices; a removable valve mechanism consisting of a rotary sleeve within the casing having two series of inlet and discharge-orifices adapted to register with the inlet and discharge-orifices of the casing, and a series of reciprocating pistons in the valve sleeve for drawing syrup thereinto and forcing the syrup therefrom; means for turning the valve sleeve; and means for reciprocating the pistons.

[Claims 6 to 17 not printed in the Gazette.]

969,666. MACHINE FOR INSERTING FASTENINGS. WALTER O. WHEELER, Worcester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Aug. 7, 1901, Serial No. 71,182. Divided and this application filed Feb. 23, 1907. Serial No. 359,017.

1. The combination with a shaft constructed to carry a ribbon of fastening material and means for imparting to said shaft an angular movement, of means for intermittingly feeding forward a section of said ribbon, means for severing said ribbon after it has been fed forward, and connections between both of said means and said shaft whereby they are controlled by the movement of said shaft.



2. In a machine for inserting fastenings, the combination with the frame of the machine, of a rotatable shaft mounted in said frame and constructed to carry a ribbon of fastening material, fastening-severing mechanism carried by the frame, ribbon feeding mechanism carried by the shaft, means carried by the shaft for actuating the severing mechanism, and means carried by the frame for actuating the feeding mechanism.

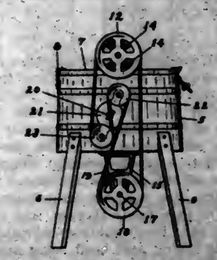
3. The combination with a shaft constructed to carry a ribbon of fastening material and means for imparting to said shaft an angular movement, of means for intermittingly feeding forward a section of said ribbon, cutters for severing said ribbon after it has been fed forward, and means carried by said shaft for actuating said cutters.

4. The combination with a shaft carrying a ribbon of fastening material, and means for imparting to said shaft an angular movement, of feed rolls carried by the shaft for engaging said ribbon, operating means for said rolls comprising a rotatable member attached to one of the rolls and having a plurality of engaging projections and a stationary member adapted to engage these projections successively upon successive rotations of the shaft.

5. In a machine of the class described the combination with a frame a shaft mounted therein constructed to carry a ribbon of fastening material and means for rotating said shaft, of cutters mounted upon the frame, between which cutters the fastening material is fed, and means upon the shaft for actuating the cutters to sever the portion of fastening material fed between them.

[Claim 6 not printed in the Gazette.]

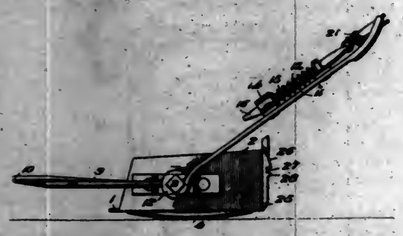
959,667. BELT-TIGHTENER. LUCY WHITE, Deer Park, Wash. Filed June 10, 1909. Serial No. 501,311.



A belt tightener comprising a support, an arm pivotally connected intermediate its ends to the support, and

formed with a housing into which the pivot extends, an idler pulley carried by the respective ends of the arm, a belt passing over said pulleys, and a spring in the housing coiled around the pivot, and connected at one end thereto, the other end of the spring being connected to the housing, said spring tending to normally swing the arm in a direction to throw the idler pulleys into position to tighten the belt.

959,668. ROAD-SCRAPER. HENRY WIECHELMAN, Long Pine, Nebr. Filed Dec. 8, 1909. Serial No. 532,101.



1. A road scraper comprising a shovel, a draft ball pivotally connected to said shovel, a frame pivotally connected to said shovel, a keeper secured to the back of said shovel, a spring bolt connected to said frame to engage said keeper, and a lever pivoted to the frame and connected to said bolt for operating the same to dump the contents of the shovel.

2. A road scraper comprising a shovel, a draft ball pivotally connected to said shovel, a U-shaped frame pivotally connected to said shovel, a keeper secured to the back of said shovel, a cross bar connected to said frame, a keeper connected to said cross bar, a bolt mounted in said keeper, a bar extending across said frame, through which said bolt extends, a spring encircling the bolt between the keeper and the bar, and a lever connected by a link to the bolt, said lever being pivoted to the frame and operable for releasing the shovel to discharge its contents.

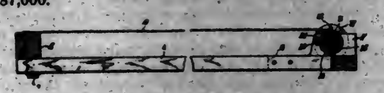
959,669. TIRE-REMOVER. PETER C. WIEST, York, Pa. Filed May 19, 1909. Serial No. 496,959.



1. A pneumatic tire remover embodying a handle having a reduced end portion, a sleeve of uniform diameter fitting loosely around the reduced portion of the handle, and a conical member or head mounted to turn freely on the reduced portion of the handle independently of the sleeve and beyond the outer extremity of the sleeve, said head being provided with a circumferential flange at its outer end where it is of the greatest diameter.

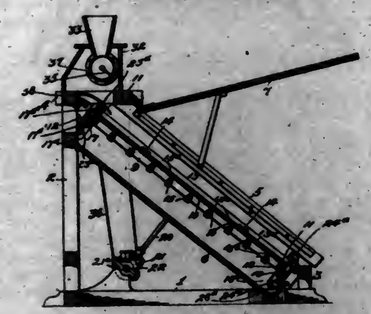
2. A pneumatic tire remover embodying a handle, a sleeve mounted to turn freely thereon, and a conical head also mounted to turn freely thereon independently of and reversely to said sleeve, said head being provided with a circumferential retainer flange at its outer end where it is of the greatest diameter.

959,670. BED-SPRING APPLIANCE. MARY E. WILDER, Tehama county, Cal. Filed Mar. 31, 1909. Serial No. 487,000.



In a device of the class described comprising a supporting frame provided with spaced bearings at one end, a cross sectionally angular bar having portions adjacent to its extremities rounded to form journals and engaged in the bearings, means coöperating with the bar intermediate of the journals for clamping the fabric thereto, a disk at each end of the bar provided with a central angular opening receiving the angular end portions of the bar and each having an annular series of perforations, each of the journals having also perforations disposed to aline at times with the perforations of the corresponding disks, and pins for engagement with the perforations when in alinement.

959,671. SCREENING MECHANISM. WILLIAM WALTER WILLSON, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Sept. 7, 1907. Serial No. 391,849.



1. In a separator of the class described, the combination of the box or housing, the vibrating screen in the said box or housing inclined to the horizontal, the carrying frame having the cross bars extending across the box or housing and the inclined bars outside thereof, the means for vibrating the screen bodily from end to end, the knocker devices outside of the box or housing at the upper and lower ends of the carrying frame, the knocker blocks or buttons secured to the screen fabric and the knocker bars above and the knocker bars below the fabric and adapted to be impinged on by the said knocker blocks or buttons, substantially as described.

2. In a separator of the class described, the combination with a main frame, and a screen vibrating bodily from end to end uniformly on lines transverse to the plane of the screen, of the knocker blocks or buttons secured to the screen fabric, the knocker bars above the screen fabric, and the knocker bars below the screen fabric, adapted to be impinged upon by said blocks or buttons, substantially as described.

3. In a separator of the class described, the combination of the main frame or casing, the screen therein vibrating bodily from end to end on lines transverse to the plane of the screen, the knocker blocks or buttons each formed in two parts or sections one part above and the other below the screen fabric and knocker devices above and knocker devices below the screen fabric against which the knocker blocks or buttons on the fabric are adapted to impinge, substantially as described.

4. In a separator of the class described, the combination with the main frame and the screen arranged to vibrate bodily from end to end, of the blocks or buttons each formed in two parts one above the screen fabric and one below it the linings interposed between the parts of the knocker block and the fabric, the knocking devices above and the knocking devices below the fabric and adapted to be impinged upon by the knocker blocks or buttons, substantially as described.

5. A separator provided with a main frame, a screen, means acting on the screen at about the center to impart a shaking motion to the screen, stops for engaging the ends of the screen at the top and bottom, the knocker blocks or buttons secured to the screen fabric the bars above the screen fabric in the path of the knocker blocks, and the bars below the screen fabric in the path of the knocker blocks, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

959,672. DIVIDED LAST. JAMES D. WINCHESTER, Beverly, Mass. Filed July 3, 1909. Serial No. 506,226.



1. A last, divided on an irregular line from top to bottom thereof and thereby forming two sections, the opposing faces of which are normally in contact; a movable latch pivotally secured in one of said sections and projecting into the other section, said latch being provided with two slots therethrough substantially at right angles and the upper one normally nearly horizontal; and two pins in said other section extending through said slots in said latch, one of said pins being normally on the same horizontal line with said pivot pin while the other is above said line and intermediate the other pin and said pivot pin.

2. A last, comprising two sections, the opposing faces of which are normally in contact; a movable latch pivotally secured in one of said sections and projecting into the other section, said latch being provided with two slots therethrough substantially at right angles and the upper one normally nearly horizontal; two pins in said other section extending through said slots in said latch; and a spring acting on said latch to retain said sections in their normal unbroken position.

3. A last, comprising two sections, the opposing faces of which are normally in contact; a movable latch pivotally secured to one section and provided with a curved notch extending from one edge and slightly eccentric to said pivot and a slot therethrough extending transversely to said notch; a pin in the pivot section adapted to enter said notch; a pin in the other section extending through said transverse slot; and a spring acting upon said latch to normally retain said pin at the inner end of said notch.

4. A last, comprising two sections, the opposing faces of which are normally in contact; a movable latch pivotally secured to one section and provided with a curved notch extending from one edge and slightly eccentric to said pivot and a slot therethrough extending transversely to said notch; a pin in the forepart adapted to enter said notch and a pin in the other section extending through said transverse slot.

5. A last, comprising a forepart and a heel part, the opposing faces of which are normally in contact; a movable latch secured to the heel part and pivotally secured in the forepart and provided with a curved notch extending from one edge, the engaging wall of which, at its outer end, is farther from the latch pivot than at its inner end; and a pin in the forepart adapted to enter said notch and engage said wall.

[Claim 6 not printed in the Gazette.]

959,673. RIVET-CALKING TOOL. GEORGE E. WOOD and EDWARD C. MEIER, Phoenixville, Pa., assignors to Heine Safety Boiler Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 7, 1909. Serial No. 488,535.



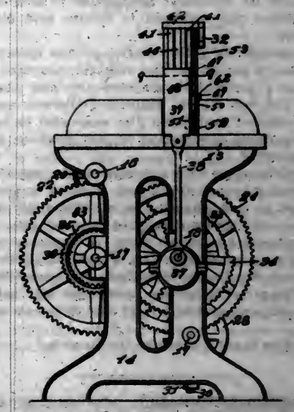
1. A rivet-calking tool comprising a shank having a head which is provided with a conical-shaped socket whose outer edge portion is of different angularity than the inner portion of the socket, so that when the tool is placed upon a rivet only the outer edge portion of said socket will bear upon the head of the rivet.

2. A rivet-calking tool comprising a shank, and a head on said shank provided with a plurality of rigid spaced teeth having calking edges and inclined surfaces that are adapted to bear upon the peripheral edge portion of a rivet head during the operation of calking same.

3. A rivet-calking tool comprising a shank that is adapted to be connected to a power hammer, said shank being provided with a head having a calking edge and an approximately conical-shaped socket whose outer edge portion is of different angularity than the inner portion of the socket so that when the tool is placed upon a rivet only the outer edge portion of said socket will bear upon the head of the rivet.

4. A rivet-calking tool, comprising a shank having a cylindrical-shaped extension that is adapted to be connected to a power-operated hammer so as to enable said shank to be rotated relatively to said hammer during the calking operation, an integral head on said shank provided with a plurality of integral teeth having calking edges and inclined faces that conform to the peripheral edge portion of a rivet-head, the head on said shank also being provided with a socket into which the rivet-shaped projects and said socket being so shaped that the shank can be canted relatively to the rivet during the calking operation.

959,674. PAPER CUTTING AND TRIMMING MACHINE. HARRY S. WOODWARD, St. Louis, Mo. Filed Aug. 30, 1909. Serial No. 515,842.



In a paper cutting and trimming machine, the combination of a frame; a table horizontally mounted in the frame; a knife slidably and vertically mounted in the frame and provided with a plurality of cutting teeth; means for raising and lowering the knife; a vertical revoluble shaft adapted to impart reciprocating motion to the

knife during its upward and downward movements; a weight mounted above the upper surface of the table; means for raising and lowering said weight in unison with the raising and lowering of the knife, to hold or release the layers of paper being cut or trimmed, substantially as described.

959,675. MOTION-PICTURE APPARATUS. DALLAS C. WOODWORTH, Chicago, Ill. Filed May 7, 1909. Serial No. 494,563.



1. The combination with a motion-picture machine, of a film magazine, a paying-out reel mounted in said magazine on a horizontally disposed axis, a film coil loosely suspended on said reel, guiding means for directing said film from its innermost convolution to said machine, and a receiving reel arranged to receive said film from said machine.

2. The combination with a motion-picture machine, of a paying-out reel mounted on a horizontally disposed axis and adapted to support a film coil loosely suspended thereon, and guiding means adapted to direct a film suspended on said reel from its innermost convolution to said machine, substantially as described.

3. The combination with a motion-picture machine, of a film magazine, a paying-out reel rotatably mounted in said magazine on a substantially horizontal axis, a film coil loosely suspended on said reel, guiding means for directing said film from its innermost convolution to said machine, and a receiving reel arranged to receive said film from said machine.

4. The combination with a motion-picture machine, of a film magazine, a paying-out reel rotatably mounted in said magazine on a horizontally disposed axis and adapted to support a film coil loosely suspended thereon, and guiding means adapted to direct a film suspended on said reel from its innermost convolution to said machine, substantially as described.

5. The combination with a motion-picture machine, of a film magazine mounted above said machine, a paying-out reel mounted in said magazine on a horizontally disposed axis, a film coil loosely suspended on said reel, guiding means for directing said film from its innermost convolution to said machine, said guiding means being arranged to withdraw said film in a substantially downward direction, and a receiving reel in vertical alinement with said guiding means and arranged to receive said film from said machine.

[Claims 6 to 9 not printed in the Gazette.]

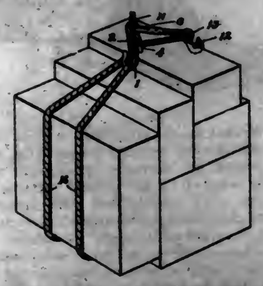
959,676. NEEDLE-THREADER. CLAUDE LUCIUS WOOLLEY, Baltimore, Md., assignor of one-half to Robert Lewis Brooks, Baltimore, Md. Filed Apr. 9, 1909, Serial No. 488,839. Renewed Apr. 27, 1910. Serial No. 558,001.

1. In a needle-threader, the combination of a magnifying glass having the usual rim and handle, and a metallic resilient clamp integral with the said rim, substantially as specified.



2. In a needle-threader, the combination of a magnifying glass having the usual rim and handle, a metallic resilient clamp integral with the said rim, the said clamp being at right angles with respect to the magnifying glass, and being adapted to support a needle in juxtaposition to the focusing center of said glass, substantially as shown and for the purpose specified.

959,677. HOISTING DEVICE. SAMUEL WRIGHT, Owen Sound, Ontario, Canada, assignor of two-thirds to John Sidney, Owen Sound, Canada. Filed Jan. 30, 1909. Serial No. 475,183.



1. In a hoisting device, a hook having an eye at the upper end and a laterally and downwardly projecting arm forming a crotch, a pennant having its end secured in the eye of said hook and looped under said crotch arm, and a hook slidably arranged on the looped portion of said pennant.

2. In a hoisting device, a hook having an eye at the upper end and a laterally and downwardly projecting arm forming a crotch, a metal loop having semi-cylindrical ends adapted to receive a cable, a pennant having its end secured between the ends of said metal loop and looped under said crotch arm, and a hook having its eye-end loosely encircling said pennant.

3. In a hoisting device, a hook having an eye at the upper end and a laterally and downwardly projecting arm forming a crotch, an anti-friction device secured in the crotch formed by the lateral arm of said hook, a pennant secured at the end to the eye of said hook and looped under said arm and engaging said anti-friction device, and a supplementary hook slidably secured to said pennant.

4. In a hoisting device, a hook having an eye at the upper end and a laterally and downwardly projecting arm forming a crotch, a roller journaled on the shoulder of said arm, a pennant secured at the end to the eye of said hook and looped under said arm and engaging said anti-friction device, and a supplementary hook slidably secured to said pennant.

959,678. METHOD OF REFINING URAO. NOAH WEINELS and ROBERT G. PADDOCK, San Francisco, Cal., assignors to Natural Soda Products Company, a Corporation of California. Filed May 21, 1908. Serial No. 434,096.

1. The method herein described of treating crude urao which consists in breaking the same into small pieces, washing said pieces with a strong solution of urao to mechanically remove insoluble and organic matters, dissolving in water the pieces thus treated clearing the solution by settling, decanting and filtering, evaporating the solution by boiling to form crystals of refined urao, and separating said crystals from the residual liquor.

2. The method herein described of treating crude urao containing chlorids and sulfates of sodium, which consists in breaking the same into small pieces, removing insoluble and organic matter, dissolving said pieces in water to form a solution, evaporating by boiling to a density allowing refined urao to precipitate, and drawing off the chlorids and sulfate in the residual liquor.

3. The method herein described, of treating crude urao, which consists in breaking the same into small pieces, washing said pieces with a strong solution of urao to mechanically remove therefrom insoluble and organic matter, dissolving said pieces in hot fresh water, clearing the solution by settling, decanting and filtering, evaporating said solution by boiling the same by the application of heat thereto, so as to separate carbonates of sodium from the hot mother liquid, drawing off the chlorids and sulfates of sodium and other impurities in said mother liquor, and finally removing the precipitated crystals of sodium carbonates and drying the same by centrifugal action.

959,679. PORTABLE ELEVATOR. GEORGE E. WUNDER, Melvin, Ill., assignor to Independent Harvester Company, Plano, Ill., a Corporation of Maine. Filed Sept. 24, 1908. Serial No. 454,643.



1. A portable conveyer and elevator comprising a conveyer having one end elevated; an elevator having its receiving end overhung by the discharge end of the conveyer; a gearing frame comprising two members connected respectively to the conveyer and to the elevator; a shaft journaled in both said members and constituting the pivotal connection between them, the two members being parted intermediate the ends of said shaft transversely thereto, and flanged at their parting plane for stopping one against the other and turning one upon the other.

2. In combination with a conveyer casing and an elevator casing, a conveying and elevating mechanism in said casings respectively, the discharge end of the conveyer being positioned for delivering by gravity into the receiving end of the elevator; a gearing frame which connects the two casings where the one overhangs the other, comprising two members which are pivotally connected for swiveled action about the axis transverse to both conveyers; a shaft journaled in both said members at their swiveled axis; conveyer operating trains in the two members respectively, and gears fast on the opposite ends of said shaft and constituting the steps for the shaft in its bearings in said two members respectively for retaining said two members together, said two members meeting end to end between the gears, and flanged at their said meeting ends transversely to the axis of the shaft.

959,680. GUN-CLEANER. MARION O. YERKEY, Weston, W. Va. Filed Feb. 25, 1910. Serial No. 545,913.



1. A device of the class described comprising a cup; and a member connected with the cup for moving the cup along the bore of a fire arm, the said member being movable within the contour of the cup to displace the contents thereof.

2. A device of the class described comprising a supporting member; a cup rotatably mounted upon the supporting member; the cup having an element to engage the rifling of a fire arm; and the supporting member and the cup having interengaging elements to advance the supporting member within the cup upon a rotation of the cup.

3. A device of the class described comprising an internally threaded cup; a supporting member threaded to engage the cup and movable within the cup; and means upon the cup to engage the rifling of a fire arm.

4. A device of the class described comprising an internally threaded grease cup provided with a port; a plug removably mounted in the end of the grease cup and rigidly assembled therewith, the said plug having ribs to engage the rifling of a firearm; a piston threaded to engage the interior of the cup and to travel therein; and a plunger rigidly assembled with the piston.

5. A device of the class described comprising a grease cup provided with a port; a plug removably mounted in the end of the cup and rigidly assembled therewith, the said plug being provided with ribs to engage the rifling of a firearm, and with an axial bore; attrition means removably mounted in the bore of the plug; and a plunger for advancing the plug in the rifling, the plunger being rotatably mounted in the cup and being movable to force a lubricant through the port upon the movement of the plug in the rifling.

[Claims 6 to 12 not printed in the Gazette.]

959,681. ADJUSTABLE FASTENING DEVICE FOR SUSPENDER-STRAPS. JACOB H. YOUNG, Chicago, Ill. Filed Dec. 21, 1908. Serial No. 468,512.

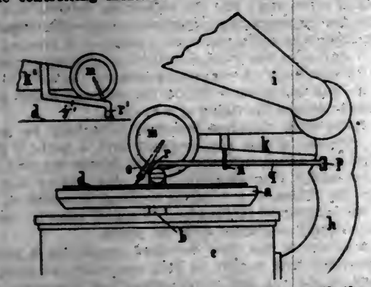


A device of the class described comprising a tubular member to receive the crossed straps of a pair of suspenders, the passage through said member being narrow and elongate in cross section, indentures provided in one of the walls of said member, the inner extremities of said indentures being in close proximity to the opposite wall and each adapted to permit frictional passage of a suspended strap between it and said opposite wall, each of said indentures being adapted to engage but one of the straps and said tubular member having a large opening in the wall thereof at the point of intersection of the straps whereby a portion of the frictional pressure at the point of intersection is dispensed with, substantially as described.

959,682. BRAKE FOR DISK TALKING-MACHINES. WALTER ZENGING, Stettin, Germany. Filed June 22, 1907. Serial No. 380,343.

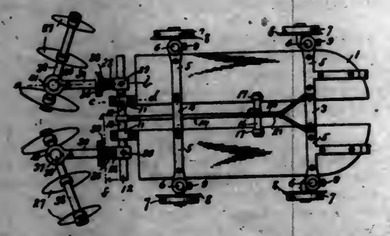
1. A talking-machine-brake mechanism comprising a disk record support, an axial support for said record support, upon which said record support rotates, a brake member for stopping the movement of said record sup-

port, a reproducer movable across said record support toward said axial support, a brake controlling member associated with said axial support, and means movable across said record support with said reproducer for causing the actuation of said brake member through said brake controlling member.



2. In a talking machine, the combination, with the disk-carrier, of a hollow central spindle to rotate the same, a spiral slot provided in said hollow spindle, a central stem located within the hollow spindle, a pin projecting from said central stem through the spiral slot, a brake lever under control of said projecting pin, an arm mounted to the said central stem, and an arm connected to the diaphragm-carrier and adapted to engage the said arm on the central stem, substantially as and for the purpose set forth.

959,683. CULTIVATOR. PAUL T. ZOLLARS, Edgerton, Mo. Filed July 10, 1909. Serial No. 506,989.



1. In a cultivator, the combination with a rock shaft, of an arm secured radially thereto, a member secured rotatively on the arm and having a hole, a plate secured rigidly to the arm and having a plurality of holes concentric with the arm, a locking device rotative on the arm and movable lengthwise thereon into and out of the holes in the plate and said member, a spring for normally forcing the locking device into said holes, and means for supporting cultivating devices on said member.

2. In a cultivator, the combination with a rock shaft, of an arm secured radially thereto, cultivating devices, a member rotative on said arm and having a hole, a plate secured rigidly to the arm and having a plurality of holes concentric with the arm, a locking device movable lengthwise into and out of said holes of the member and plate, a spring for forcing said device into said holes, a bar pivoted on said member and supporting said cultivating devices, and locking means for locking said bar in the position to which it may be adjusted.

3. In a cultivator, the combination with a plurality of cultivating devices, of a rock shaft, an arm secured radially to said shaft, a member rotative on said arm to different positions, releasable means for locking the member in said positions, the member having a hole, a bar supporting said cultivating devices and pivoted to said member and having a plurality of holes concentric with the axis of said bar, a locking device movable into and out of the holes of said bar and said member, and a spring for forcing the locking device into said holes.

4. In a cultivator, the combination with cultivating devices, of a rock shaft, an arm secured rigidly to the rock shaft, a member rotative on said arm and having two holes, a plate secured rigidly on said arm and having a plurality of holes concentric with the arm and adapted to register with one of the holes of the arm, a locking device insertible into the holes of the plate and the adjacent hole in said member, a spring for holding said locking device in locked position, a bar supporting said cultivating devices, and pivoted to said member, the bar having a plurality of holes concentric with its axis and adapted to register with the other hole of said member, a second locking device adapted to be inserted into said holes of said bar and the adjacent hole in said member, and a spring for forcing said last-named locking device into the locked position.

5. In a cultivator, the combination with cultivating devices, of a rock shaft, a radial arm secured to said rock shaft, a member rotative on said arm and having two sets of holes, a plate secured rigidly to said arm and having holes concentric with the arm adapted to register with one set of holes in said member, a locking member rotative on said arm and having two projections adapted to respectively enter one set of holes and the two holes adjacent thereto of said plate, a bar pivoted to said member, a second locking member having two projections adapted to respectively enter the other two holes in said member and the adjacent holes in said bar, and a spring for normally holding said second locking member in the locked position.

959,684. DENTAL MOUTH-PROP. WILLIAM ADELMAN, Hoboken, N. J. Filed Mar. 17, 1910. Serial No. 550,046.



1. A dental mouth prop comprising a tubular post, a freely raisable plunger engaging the same, a spring tending to project the plunger out of the post to its maximum extent, and means for locking the plunger against descent.

2. A dental mouth prop comprising a tubular post, a freely raisable plunger centered within the same and having a series of teeth, a spring inclosed within the post and bearing against the plunger to place the same under a constant raising tension, and a catch carried by the post and adapted to engage the teeth, whereby the post is locked against descent.

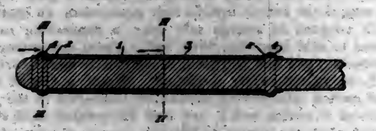
959,685. SANITARY MEAT-RACK. WILLIAM L. ADLAM, Milwaukee, Wis. Filed Nov. 24, 1909. Serial No. 529,679.



In a sanitary meat rack the combination with angle iron hook members of hooks provided with a triangular part

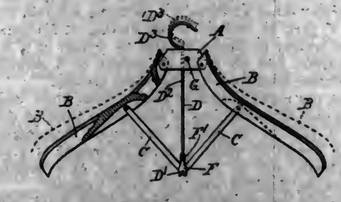
adapted to be removably placed upon said hook members, supports for said hook members, said supports being provided with recessed notches adapted to receive said angle iron hook members to prevent them from tipping.

959,686. GUARD FOR WHIP-LABELS. NICHOLAS F. ALSTON, Ines, N. C. Filed Nov. 5, 1908. Serial No. 461,118.



The combination with a whip body, having projecting buttons and an intervening portion of less diameter than said buttons, of a guard member of textile material having elastic end portions stretched on said buttons and a closely fitting portion connecting said end portions and covering the portion of the whip body between said buttons, said guard member being readily removable from the whip.

959,687. GARMENT-HANGER. JOHN F. ALTERMATT, Chicago, Ill. Filed Oct. 3, 1908. Serial No. 456,012.



1. A garment hanger comprising a bridge piece; stretchers pivoted to the opposite ends of the bridge piece; brace links pivotally connected to the stretchers respectively, and an axially-apertured pivot connecting them together, and a supporting stem for the bridge piece extended therebelow and having an offset at the lower end for disengageably engaging in the aperture of said pivot.

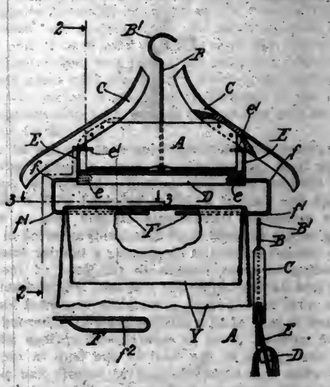
2. A garment hanger comprising a bridge piece; stretchers pivoted to the opposite ends of the bridge piece; brace links pivotally connected to the stretchers respectively; an axially apertured pivot connecting them together; a supporting stem for the bridge piece extended therebelow and having an offset at the lower end for disengageably engaging in the aperture of said pivot, and a fork mounted slidably on the stem adapted to engage the offset of the latter when inserted through said apertured pivot.

959,688. GARMENT-HANGER. JOHN F. ALTERMATT, Chicago, Ill. Filed Oct. 3, 1908. Serial No. 456,013.

1. A garment hanger comprising a supporting bar having a rigid stem for suspending it; a garment lodgment bar suspended by its ends from the supporting bar, and a pair of fingers suspended by their remote ends from the lodgment bar below and parallel with the latter and projecting in alinement toward each other.

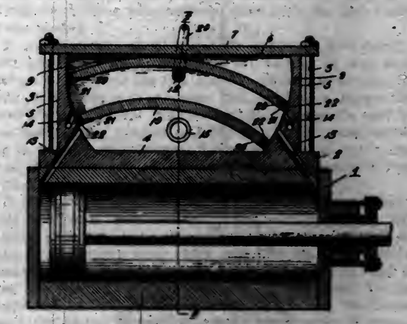
2. A garment hanger comprising a supporting bar and a rigid stem; a garment-lodgment bar; fittings rigid with the lodgment bar at the opposite ends thereof extending upward therefrom, and having their upper ends pivotally connected with the supporting bar and extended downward from their attachment to the lodgment bar, and at a distance below the latter extended toward each other in alinement.

3. A garment hanger comprising a supporting bar and a pair of fingers suspended by their remote ends from the supporting bar and projecting in alinement toward each



other and terminating for the admission of the garment edgewise between their proximate ends.

959,689. ENGINE-VALVE. ARTHUR J. ANDERSON and GEORGE A. HANSON, Aberdeen, S. D. Filed Apr. 22, 1909. Serial No. 491,515.



1. The combination of a valve chest having an arc-shaped valve seat formed with ports, a tubular valve mounted for oscillation and adapted to co-act with said valve seat, the end of the valve opposed to said seat being formed with intersecting grooves, overlapping packing strips arranged in said intersecting grooves and having their crossed portions notched to receive each other and springs in said grooves for projecting said packing strips.

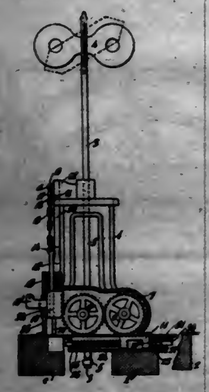
2. The combination with a steam engine cylinder, of a steam chest arranged thereon and of substantially the same length, the end walls of said steam chest being shaped to provide arc-shaped valve seats and being formed with steam ports communicating with the ends of the cylinder, and also with exhaust ports, stuffing boxes arranged centrally in the side walls of the chest, a rock shaft extending through one of said stuffing boxes and having its inner end arranged in the other stuffing box, a tubular valve fixed to the intermediate portion of said shaft and adapted to co-act with said valve seats, the ends of said valve being formed with intersecting grooves, overlapping packing strips arranged in said intersecting grooves and having their crossed portions notched to receive each other, and springs in said grooves for projecting said packing strips.

959,690. RATCHET-WRENCH. CONRAD ROBERT ANDERSON, West Duluth, Minn. Filed Dec. 9, 1909. Serial No. 532,232.



A ratchet wrench comprising a stock, spaced arms extending from one end of said stock, a ratchet wheel journaled between said arms having a transverse bore therethrough the wall of which is provided with a continuous groove extending transversely of said bore, a work engaging socket adapted to be detachably inserted in the bore of the ratchet wheel and comprising a tubular member corresponding in cross section to the bore of the ratchet wheel and having oppositely disposed longitudinal grooves in the outer face thereof, a normally expanded leaf spring mounted in each of said grooves projecting beyond one end of said member, a lug in each of said springs adapted to enter the groove in the wall of the bore in the ratchet wheel when said socket is inserted therein and means for locking said ratchet wheel against independent rotation with respect to the stock when said stock is oscillated in one direction.

959,691. SWITCH SAFETY MECHANISM. FRANK C. ANDERSON, Cincinnati, Ohio, assignor to The American Valve & Meter Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 19, 1910. Serial No. 538,875.



1. In switch safety mechanism, a switch stand connected to the point rails of a switch, a pad lock for locking said switch stand, a flexible connection attached to said pad lock, an interlocking bar connected to said point rails, a plunger adapted to engage said interlocking bar, means to manually disengage the plunger from said interlocking bar and adapted to engage said flexible connection for said pad lock, and means to automatically throw said plunger into engagement with said interlocking bar and permit the use of said pad lock only when the switch is properly closed.

2. In switch safety mechanism having a switch stand and switch interlocking mechanism connected to the point rails of a switch, and a pad lock for locking said switch stand when the switch is properly closed, a gear adapted to engage the switch interlocking mechanism, an operating rack adapted to actuate said gear, and a connection between said rack and said pad lock to limit and control its use for locking said switch stand.

3. In switch safety mechanism having a switch stand and switch interlocking mechanism connected to the point rails of a switch, and a pad lock for locking said switch stand when the switch is properly closed, a gear adapted to engage the switch interlocking mechanism, an operating rack adapted to actuate said gear, a foot trip for said operating rack, and a connection between said operating rack and said pad lock to limit and control its use for locking said switch stand.

4. In switch safety mechanism having a switch stand and switch interlocking mechanism connected to the point rails of a switch, and a pad lock for locking said switch stand when the switch is properly closed, a gear adapted to engage the switch interlocking mechanism, an operating rack adapted to engage said gear, a connecting rod secured to said operating rack, and a chain connecting said connecting rod and pad lock, substantially as set forth.

5. In switch safety mechanism having a switch stand and switch interlocking mechanism connected to the point rails of a switch and a pad lock for locking said switch stand when the switch is properly closed, a gear adapted to engage the switch interlocking mechanism, an operating rack adapted to actuate said gear, a foot trip on said operating rack, and a housing for said gear and operating rack provided with an elongated slot adapted to limit the movement of said trip whereby movement of the interlocking plunger is limited, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

959,692. REPRODUCTION OF IMAGES ON GLASS, PORCELAIN, CERAMIC, METALLIC, OR OTHER SURFACES. MAURICE ANTHES, London, England. Filed Jan. 28, 1908. Serial No. 413,071.

1. For the reproduction of images upon glass, ceramic, metallic and other surfaces, a sensitising solution consisting of 1 part by weight of sensitising bichromate, 2.5 parts by weight of water, 2 parts by weight of a soluble carbohydrate, and 80 parts by weight of a solution of nitrocellulose miscible with the water present.

2. For the reproduction of images upon glass, ceramic, metallic and other surfaces, a sensitising solution consisting of 1 part by weight of ammonium bichromate, 2.5 parts by weight of water, 2 parts by weight of a soluble carbohydrate, and 80 parts by weight of a solution of nitrocellulose miscible with the water present.

3. For the reproduction of images upon glass, ceramic, metallic and other surfaces, a sensitising solution consisting of 1 part by weight of sensitising bichromate, 2.5 parts by weight of water, 2 parts by weight of a soluble carbohydrate, and 80 parts by weight of a mixture of collodion and alcohol.

4. For the reproduction of images upon glass, ceramic metallic and other surfaces, a sensitising solution consisting of one part by weight of ammonium bichromate, 2.5 parts by weight of water, 2 parts by weight of a soluble carbohydrate, and 80 parts by weight of a mixture of collodion and alcohol.

959,693. DEVICE FOR ASSEMBLING PARTS OF A CENTRIFUGAL SEPARATING-BOWL. EDGERLY R. BAILEY, Clarinda, Iowa. Filed Dec. 14, 1908, Serial No. 467,502. Renewed Nov. 26, 1909. Serial No. 530,006.

1. In a centrifugal separator, having a series of apertured disks or plates, an assembling and disassembling device comprising a plurality of spring metal arms adapted to be passed through the apertures in said disks whereby the latter are removed from the separator and held in their relative positions, a spacing bar to hold said arms in position to pass through the apertures of said disks or plates and means to prevent the casual disengagement of the disks from said holding arms after being removed from the separator.

2. A device for assembling and disassembling the disks or plates of a centrifugal separator of the character described comprising a plurality of spring rods spaced apart and having in their outer ends notches or recesses, a disk retaining plate having formed therein key-hole slots adapted to be engaged by the notched ends of the arms whereby said plate is secured to the arms to hold said disks in place thereon.

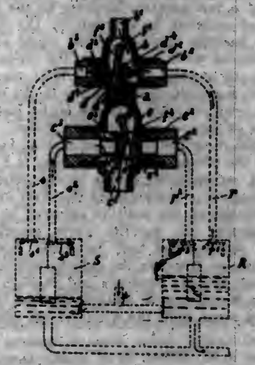
3. A device for assembling and disassembling the disks or plates of a centrifugal separator of the character described comprising a plurality of spring rods or arms, a spacing bar arranged on said rods or arms to hold the same in proper position to be engaged with the disks, a retaining plate adapted to be engaged with the free ends of said arms to hold the disks in their relative positions thereon, and means whereby said plate is secured to the ends of the arms.



4. A device for assembling and disassembling the disks of a centrifugal separator comprising a spring metal bar bent upon itself to form disk engaging and supporting arms, a spacing plate arranged on said arms adjacent to their connected ends whereby the arms are held in proper position for engagement with the disks, and a disk retaining plate adapted to be engaged with the free ends of the arms to hold the disks in position thereon.

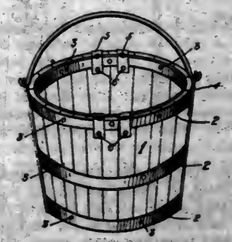
5. In a centrifugal separator having a series of apertured disks or plates, an assembling and disassembling device comprising a plurality of spring metal arms adapted to be passed through the apertures in said disks whereby the latter may be removed from the separator and held in their relative positions, a spacing bar to hold said arms in position to pass through the apertures of said disks or plates, and a retaining plate adapted to be engaged with the free ends of said arms to hold the disks in position thereon.

959,694. APPARATUS FOR FORCING LIQUID OUT OF RESERVOIRS. LÉONARD BARBAS, Paris, France. Filed June 20, 1908. Serial No. 439,769.



A distributing device for gas, steam or air under pressure destined to force a liquid out of reservoirs comprising in combination: a valve casing with six tubular joints of which three serve for the motor part and the three others for the distributing part of the device, a piston for each set of three tubular joints having each a central slot and passages at both ends, and seats, each seat engaging the joint at that end of the piston toward which it faces, means for keeping the seats of said pistons tight, an axle for each piston revolubly mounted in the valve casing so that its outer end projects from the same, an arm upon the inner end of each axle engaging with the slot of the corresponding piston, and means for connecting the outer ends of said axles with one another so that the rectilinear motion of one piston is inversely transferred to the other piston, substantially as described and shown and for the purpose set forth.

959,695. BUCKET. JAMES S. BARRON, New York, N. Y. Filed Jan. 15, 1910. Serial No. 538,185.



1. As an article of manufacture, a bucket comprising a body portion, a hoop secured to the outside of said body portion adjacent to the rim, a recess extending around the body at its upper inner edge and forming a supporting shoulder, and an internal reinforcing band located in said recess and bearing against said shoulder the upper edge of said band being substantially flush with the upper edge of the bucket.

2. As an article of manufacture, a bucket comprising a body portion, a hoop secured to the outside of said body portion adjacent to the rim, a recess extending around the body at its upper inner edge and forming a supporting shoulder, an internal reinforcing band located in said recess and bearing against said shoulder, and means operating to connect said external hoop and internal reinforcing band the upper edge of said band being substantially flush with the upper edge of the bucket.

3. As an article of manufacture, a bucket comprising a body portion, a hoop secured to the outside of said body portion adjacent to the rim, a recess extending around the body at its upper inner edge and forming a supporting shoulder, a wear member overstanding and embracing said hoop and reinforcing band, and means for securing said wear member in place.

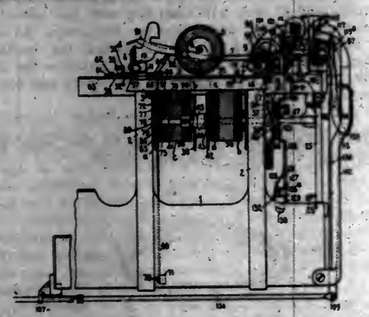
4. As an article of manufacture, a bucket comprising a body portion, a metallic hoop secured to the outside of the rim thereof, a metallic reinforcing band extending around the inner side of the rim and secured to said outer hoop at intervals, said hoop and said band being substantially flush with the rim, a bail for said bucket, and wear members located on the rim at right angles to said bail and extending over said hoop and band and secured to the rim.

5. As an article of manufacture, a bucket comprising a body portion built up of staves arranged edge to edge, the upper inner edge of said staves being recessed to form an inner supporting shoulder at the discharge rim of the bucket, a horizontally arranged internal reinforcing strip in the recessed portion and bearing against the shoulders and overlapping a plurality of staves, and an external strip around the outer side of the bucket at its upper edge and opposite to said first mentioned strip, with means for connecting said strips.

959,696. TYPE-WRITING MACHINE. WALTER J. BARRON, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 29, 1908. Serial No. 429,996.

1. In a typewriting machine, the combination with a platen, of ribbon mechanism comprising a movable guide

which maintains the printing portion of the ribbon substantially at right angles to the printing line, means for feeding the ribbon longitudinally, and interchangeable means for reciprocating the guide different extents to impart different extents of cross feed to the ribbon.



2. In an under-strike typewriting machine, the combination with a platen, of ribbon mechanism comprising ribbon spools, a ribbon guide movable beneath the platen independently of said spools, means for feeding the ribbon longitudinally, and interchangeable means for reciprocating the guide different extents to impart different extents of cross feed to the ribbon.

3. In a typewriting machine, the combination with a carriage, carriage driving means and a platen, of ribbon spools, connections between said ribbon spools and said carriage driving means for turning the spools to feed the ribbon longitudinally, a ribbon guide which guides the printing portion of the ribbon transversely of the printing line, and means connecting said guide with said carriage driving means for automatically reciprocating said guide independently of said spools to feed the ribbon crosswise, said connecting means including interchangeable devices for varying the extent of cross feed.

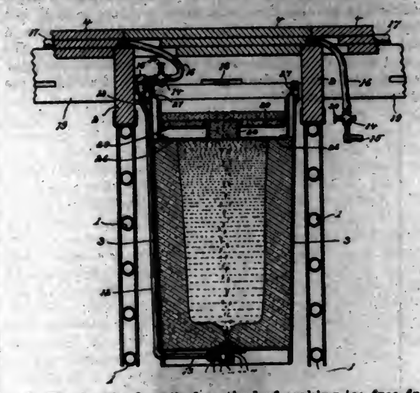
4. In an under-strike typewriting machine, the combination with a carriage, carriage driving means and a platen, of ribbon spools, connections between said ribbon spools and said carriage driving means for turning the spools to feed the ribbon longitudinally, a ribbon guide mounted to slide on ways beneath the platen, and means connecting said guide with said carriage driving means for automatically reciprocating said guide independently of said spools to feed the ribbon crosswise, said means including interchangeable devices for varying the extent of the cross feed.

5. In a typewriting machine, the combination of a platen, ribbon spools, means for turning the ribbon spools to feed the ribbon longitudinally, a ribbon guide which guides the printing portion of the ribbon transversely of the printing line, and connections between said guide and said ribbon spool-turning means for moving the guide lengthwise of the printing line, said connections comprising an arm pivoted on said guide and provided with a slot, an operating arm pivoted on the machine frame and adapted to engage the slot in the first recited arm, a spring for maintaining said arms engaged, and an eccentric device operative on said operating arm.

[Claims 6 to 23 not printed in the Gazette.]

959,697. PROCESS OF MAKING ICE. ALBERT E. BEALS, Detroit, Mich. Filed Nov. 23, 1908. Serial No. 463,985.

1. The herein described method of making ice free from impurities by the process of freezing water in cans through application of a refrigerating medium to the exterior of a can, which consists in confining water in a can during the process of freezing within the space initially occupied by it, in directing the water forced out by the expansion of the confined body through a restricted outlet, and in maintaining circulation in the uncongealed and expelled portion of the body by forcing air therethrough until the whole of the confined body of water is solidified.



2. The herein described method of making ice free from impurities by the process of freezing water in cans by application of a refrigerating medium to the outside of the can, which consists in confining water in the can during the process of freezing within the space initially occupied by it, in directing the water expelled by the expansion of the confined body through a central outlet, in forcing a stream of air centrally through the confined body of water and through the outlet and in continuing the forcing of air therethrough until the whole of the confined body of water in the can is frozen.

3. The herein described method of making ice free from impurities by the process of freezing water in cans by application of a refrigerating medium to the can exteriors which consists in confining the water in the can during the process of freezing within the space initially occupied by it, directing the surplus water expelled by the expansion of the confined body while the freezing progresses upwardly through a central restricted aperture, in forcing air centrally through the body of water in the can whereby the air and the surplus water escapes through the same outlet, in continuing to force air through the body of water until the whole of the confined body is frozen, and in gradually increasing the force of the air as the freezing progresses.

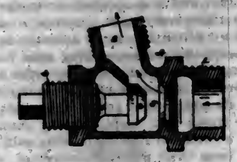
4. The herein described method of making ice free from impurities by the process of freezing water in a can by application of a refrigerating medium to the exterior of the can, which consists in maintaining the level of the water at the position assumed in the liquid state, in directing the surplus water expelled by the expansion of the confined body to a point above the level through a restricted outlet, maintaining circulation in the uncongealed portion of the can contents into the outlet until the confined contents of the can is completely frozen.

5. The herein described method of making ice free from impurities by the process of freezing water in a can by application of a refrigerating means to the exterior of the can, which consists in maintaining the level of the water while being frozen at the position assumed in the initial state, in directing the surplus water expelled by the expansion of the confined body upwardly through a restricted opening, in trapping the expelled water, and forcing air through the can contents and through the outlet of the surplus water, and in maintaining the trapped water in a liquid state until the whole of the confined body is frozen.

959,698. DRAW-OFF COCK FOR BOILERS. WILLIAM L. BELKNAP, Bridgeport, Conn. Filed Oct. 21, 1909. Serial No. 523,743.

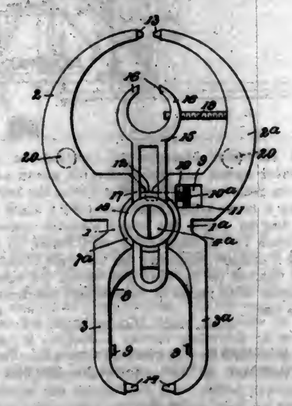
A draw off valve cock comprising a body having inlet and outlet ports and a valve seat and an adjustable valve

plug for the seat, and a member integral with the body and positioned to serve as an outer stop for said plug, the



member having been so positioned after the insertion of the plug.

959,699. COMBINATION CALIPERS AND POISING-TOOL. ELOF BENSON, Youngstown, Ohio. Filed Oct. 30, 1908. Serial No. 460,259.



1. A tool of the character described, comprising a pair of arms formed at their extremities with jaw members, a pivot pin securing the arms to each other intermediate the extremities of the arms, bearings secured to said jaws, an indicator bar longitudinally shiftable on the pivot pin, and means for adjusting and controlling the positions of the arms and jaws relatively to each other.

2. A tool of the character described, comprising a pair of arms formed at their extremities with jaw members, a pivot pin pivotally securing the arms to each other, an indicator bar provided with a guide point and having a longitudinal slot through which the pivot pin passes, and means for adjusting the arms and jaws relatively to each other.

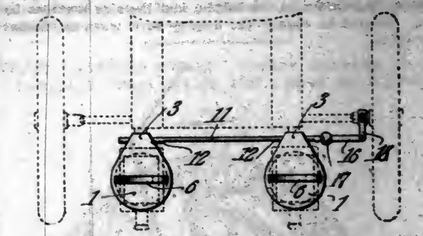
3. A tool of the character described, comprising a pair of arms formed at their extremities with jaw members and pivotally secured to each other, and an indicator bar provided with opposed separated guide points, said bar being mounted on but longitudinally shiftable and adjustable with relation to said arms.

4. In a tool of the character described, a pair of arms formed at their extremities with jaw members and pivotally secured to each other, one of said arms being provided with a resilient pin distanced from said jaw member and projecting from the arm, said pin having a free end and being roughened on its face whereby minute vibrations may be communicated to the arms.

5. A tool of the character described, including a pair of arms formed at their extremities with jaw members and pivotally secured to each other, means for holding the arms adjusted nearer to or farther from each other, and a pin projecting inward from one of the said jaws and having a free end, said pin having a roughened face, whereby minute vibrations may be communicated to the arms.

[Claims 6 to 10 not printed in the Gazette.]

959,700. HEADLIGHT. CARL R. BLACKMAN, Colorado Springs, Colo. Filed Dec. 4, 1909. Serial No. 531,875.



1. A device of the class described including a case arranged to be mounted upon a vehicle; a lamp-carrying shaft journaled for rotation in the case; a pinion secured to the shaft within the case; a second pinion mounted in the case and in mesh with the other pinion; a rack bar slidably mounted in the case and in mesh with the second pinion; an arm arranged at its lower end for connection with the movable portion of a vehicle axle, and arranged to extend to the front of the axle and above the same; and a rigid connecting bar located in the plane of the rack bar and pivotally connected at one end to the upper end of the arm and pivotally connected at the other end to the rack bar.

2. A device of the class described including a case arranged to be mounted upon a vehicle; a lamp-carrying shaft journaled for rotation in the case; a pinion secured to the shaft within the case; a second pinion mounted in the case and in mesh with the other pinion; a rack bar slidably mounted in the case and in mesh with the second pinion; an arm arranged at its lower end for connection with the movable portion of a vehicle axle, and arranged to extend to the front of the axle and above the same; a rigid connecting bar located in the plane of the rack bar and pivotally connected at one end to the upper end of the arm; a ball and socket joint uniting the other end of the connecting bar with the rack bar; and a spring located within the case and bearing against the rack bar to hold the same in mesh with the second pinion.

3. A device of the class described comprising spaced cases adapted to be mounted upon a vehicle; lamp-carrying shafts journaled for rotation in the cases; a bar held by the cases for sliding movement in the direction of its length; means located within the cases for operatively connecting the bar with the shafts to secure a rotation of the latter upon a reciprocation of the former; and axle-carried means for sliding the bar.

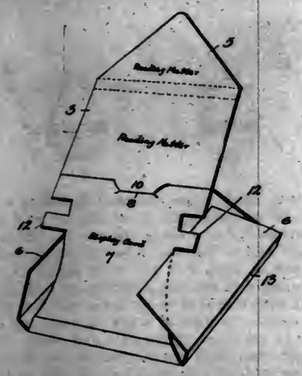
4. A device of the class described comprising spaced cases adapted to be mounted upon a vehicle; lamp carrying shafts journaled for rotation in the cases; a bar held by the cases for sliding movement in the direction of its length, and provided with racks; gear trains for the operation of the shafts located in the cases and engaging the racks; resilient, case-carried means for maintaining the racks in engagement with the gear trains; and axle-carried means for moving the bar.

5. A device of the class described comprising spaced cases adapted to be mounted upon a vehicle; lamp-carrying shafts journaled for rotation in the cases; a bar held by the cases for longitudinal sliding movement, and provided with racks; gear trains for the operation of the shafts located in the cases and engaging the racks; axle-carried means for moving the bar; and a swivel connection between said means and the bar.

959,701. DISPLAY-BOX. CHARLES M. BLACKMAN, New York, N. Y., assignor to The S. H. Wetmore Company, New York, N. Y., a Corporation of New York. Filed July 15, 1909. Serial No. 507,861.

1. In a display box the combination of a bottom, a display card, a cover portion and side portions, the display card being adapted to receive an article to be displayed,

the cover portion and display cards having engaging members for supporting the display card in an elevated position in relation to the bottom and the side portions being adapted to engage the display card when in display position.



2. A box blank comprising a bottom portion provided with a slit, a panel extending from one side thereof, a second panel extending from the first, a slit intermediate said panels forming a tongue, a flap extending from the last named panel, a display card extending from the opposite side of the bottom portion and provided with a slit and side flaps extending from the ends of the bottom portion.

959,702. PIPE-UNION. FREDERICK C. BLANCHARD and ERNEST B. CROCKER, Bridgeport, Conn., assignors to The Ashcroft Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed July 21, 1909. Serial No. 508,772.

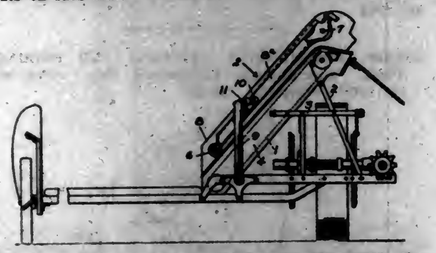


In a pipe union, the combination with a coupling nut and a male member, of a female member provided with a groove or seat having a recess at its inner edge and a lip at its outer edge, and a gasket of ductile metal having its inner edge resting within said recess and its outer edge locked beneath said lip.

959,703. HARVESTER-ELEVATOR. JOSEPH BODA, Plano, Ill., assignor to Independent Harvester Company, Plano, Ill., a Corporation of Maine. Filed Oct. 19, 1909. Serial No. 523,415.

1. In a harvester elevator, in combination with the lower elevator apron, an upper elevator apron and frame which at the rear end is suspended above the lower apron for forming a rearwardly open elevator, a rigid fore-and-aft frame bar by which the upper elevator frame is supported, and means for so supporting said frame on such bar comprising a two-membered connecting device, consisting of a bracket screwed to the rear frame bar of the upper elevator apron, and a bracket screwed to said rigid frame bar, the two members being pivoted together, and means connecting them for relative adjustment about their pivot.

2. In a harvester elevator, in combination with the lower elevator apron, an upper elevator apron and frame, which at the rear end is suspended above the lower apron for forming a rearwardly open elevator, a rigid fore-and-aft frame bar by which the upper elevator apron frame is supported; means for so supporting said frame on such bar comprising a two-membered connecting device consisting of a bracket mounted rigidly on the rear side bar of the upper elevator apron frame and a bracket screwed to said rigid frame bar, and pivotally connected to the first bracket; a threaded link connecting said two brackets at a distance from their pivotal connection, and adjusting nuts on said link.



3. In a harvester elevator, in combination with the lower elevator apron, an upper elevator apron and frame which at the rear end is suspended above the lower apron for forming a rearwardly open elevator; a rigid fore-and-aft frame bar by which the upper elevator frame is supported; means for so supporting said frame on such bar comprising a bracket supported on the rigid frame bar and adjustably secured on the rear side bar of the upper apron elevator frame with range of adjustment longitudinally of said frame bar.

959,704. BANDAGE. SAMUEL BOTTOMLEY, Providence, R. I. Filed Mar. 6, 1907. Serial No. 360,908.



A bandage composed of a casing formed of a strip of open mesh material folded to form two portions, a series of spaced loops carried by the free side edges of said portions, the loops of one portion being arranged in the space between the loops of the other portion, a string extending alternately through the loops of said portions and having its ends extended beyond the ends of said portions so that the string may be removed by a pulling action, said string being secured to said loops solely by frictional contact therewith, and a filling of shredded material arranged between said portions, said material being treated so as to be capable of being shaken out of said casing in a disintegrated condition.

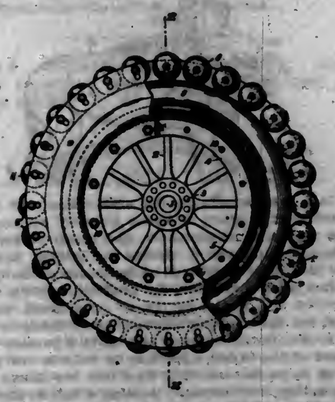
959,705. VEHICLE-WHEEL. ARTHUR BRISBANE, New York, N. Y. Filed May 4, 1907. Serial No. 371,871.

1. In a vehicle wheel, the combination of a plurality of solid tread members forming the tread surface of the wheel, said members forming a practically continuous tread surface, a hub, an annular flange extending radially from the hub, a plurality of projections on the flange, a plurality of holding devices ⊔-shaped in cross section, one for each tread member, each of said holding devices having a projection on its underside, a plurality of springs, one for each tread member, supported by the flange and located between the flange and the holding devices and engaging the projections on the flange and on the holding devices, slotted side plates secured to the flange, and means on the tread members for engaging said slots to limit the movement of said tread members.



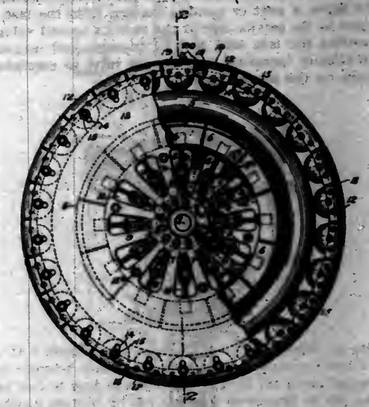
2. In a vehicle wheel, the combination of a plurality of solid tread members forming the tread surface of the wheel, a hub, an annular flange extending radially from the hub, a plurality of projections on the flange, a plurality of holding devices ⊔-shaped in cross-section, one for each tread member, means for securing said tread members in the holding devices, a projection on the underside of each of the holding devices, a plurality of tapered helical springs, one for each tread member, supported by the flange, and located between the flange and the holding devices and engaging the projections on the flange and on the holding devices, slotted side plates secured to the flange, and means on the tread members for engaging said slots to limit the movement of said tread members.

959,706. VEHICLE-WHEEL. ARTHUR BRISBANE, New York, N. Y. Filed May 4, 1907. Serial No. 371,872.



In a vehicle wheel, the combination with a spoke-rim or felly, of a tube of elastic material extending completely around the outer periphery of the felly, side plates secured to the felly at their lower extremities and slotted at their upper extremities, and a plurality of solid spherical members forming the tread surface of the wheel mounted in the side plates in contact with the tube of elastic material and arranged so as to have a limited radial movement with respect thereto.

959,707. VEHICLE-WHEEL. ARTHUR BRISBANE, New York, N. Y. Filed May 31, 1907. Serial No. 376,689.



1. In a vehicle wheel, the combination of a sectional spoke rim or felly, an air or gas tight tube of resilient metal supported by the felly and extending completely around the outer periphery thereof, means for moving the sections of the felly whereby its circumference is increased or decreased to hold the tube in position or permit its removal, a hub, slotted side plates secured to the hub at their inner edges, and a plurality of tread members having curved tread surfaces forming the tread surface of the wheel mounted in said side plates so as to contact with said resilient body and have a limited movement with respect to said tube.

2. In a vehicle wheel, the combination of a sectional spoke rim or felly, an air or gas tight tube of resilient metal extending completely around the outer periphery thereof, divided spokes secured to the felly, adjusting nuts connecting the ends of the divided spokes for moving the sections to increase or decrease the circumference of the felly, a hub, side plates secured to the hub at their inner edges, said side plates being apertured to permit access to the adjusting nuts, slots in the upper edges of the side plates, and a plurality of tread members having curved tread surfaces forming the tread surface of the wheel mounted in said slots so as to contact with said tube and have a limited movement with respect thereto.

959,708. PRESSURE-REGULATOR. JOHN ROWLAND BROWN, Mansfield, Ohio, assignor to Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Nov. 20, 1909. Serial No. 529,081.

1. In a pressure regulator, a casing having an initial pressure inlet and a service pressure outlet, a valve seat disposed between said inlet and outlet, a valve coöperating with the seat for regulating the passage of fluid therethrough, a fluid influenced element with which the said valve is connected for operation, a chamber on one side of the said element, a restricted passage connecting said chamber with the initial pressure side of the valve, a chamber on the other side of said element, a passage leading from the last said chamber to the initial pressure side of the valve, a port or passage leading from the last said chamber to the service side of the valve, and means for automatically controlling the last said passage to regulate the pressure on the service side of the valve.

2. In a pressure regulator, a casing having an initial pressure inlet and a service pressure outlet, a valve seat

disposed between said inlet and outlet, a valve coöperating with the seat for regulating the passage of fluid therethrough, a fluid influenced element, with which the said valve is connected for operation, a chamber on the opening side of the said element, a restricted passage connecting said chamber with the initial pressure side of the valve, a chamber on the closing side of said element, a passage connecting the last said chamber with the initial pressure side of the valve, a port or passage leading from the last said chamber to the service side of the valve, a second valve for controlling the last said port or passage, and means for automatically operating the last said valve to regulate the pressure on the service side.



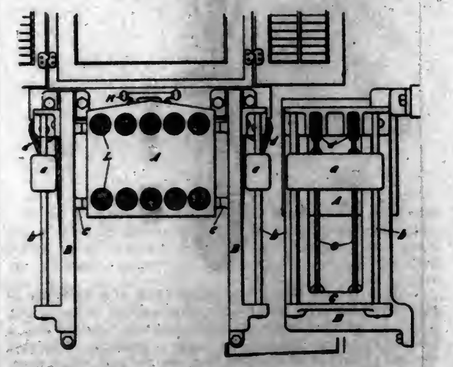
3. In a pressure regulator, a casing having an initial pressure inlet and a service pressure outlet, a valve seat disposed between said inlet and outlet, a valve coöperating with the seat for regulating the passage of fluid therethrough, a fluid influenced element with which the said valve is connected for operation, a chamber on the opening side of the said element and having a restricted passage connecting it with the initial pressure side of the valve, a chamber on the closing side of said element, a port or passage connecting the last said chamber with the initial pressure side of the valve, a port or passage leading from the last said chamber, a second valve for controlling the last said passage, means for automatically operating the last said valve to regulate the pressure on the service side, and means whereby either of said valves may be removed independently of the other valve.

4. In a pressure regulator, a casing having an initial pressure inlet and a service pressure outlet, a valve seat disposed between said inlet and outlet, a valve coöperating with the seat for regulating the passage of the fluid therethrough, a fluid influenced element with which the said valve is connected for operation, a chamber on the opening side of said element and having a restricted passage connecting it with the initial pressure side of the valve, a chamber on the closing side of said element, a port or passage connecting the last said chamber with the initial pressure side of the valve, a port or passage leading from the last said chamber to the service side of the valve, a valve controlling the last said passage, a chamber having communication with the service side of the valve, and a fluid influenced element in the last said chamber and operating to control the movement of the last said valve.

5. In a pressure regulator, a casing having an initial pressure inlet and a service pressure outlet, a valve seat disposed between said inlet and outlet, a valve coöperating with the seat for regulating the passage of the fluid therethrough, a fluid influenced element with which the said valve is connected for operation, a chamber on the opening side of said element and having a restricted passage connecting it with the initial pressure side of the valve, a chamber on the closing side of said element, a port or passage connecting the last said chamber with the initial pressure side of the valve, a port or passage leading from the last said chamber to the service side of the valve, a valve controlling the last said passage, a chamber having communication with the service side of the valve, and means for seating and means for unseating the last said valve to regulate the pressure on the service side, and means for automatically controlling the movements of the last said valve.

[Claims 6 to 13 not printed in the Gazette.]

959,709. SANITARY COLD-AIR FOOD-CABINET. CHARLES ALBERT BUHL, JR., St. Louis, Mo. Filed Mar. 27, 1909. Serial No. 486,250.



A cold air food cabinet for windows comprising a frame with V-shaped grooves suspended beneath the window by a bracket, a cabinet with V-shaped guides adapted to slide in said grooves, guide rods connected to the frame, counterbalancing weights sliding on the guide rods, said weights being connected to the cabinet by means of a cord passing over pulleys at top of frame, substantially as described.

959,710. GAME APPARATUS. CHARLES E. BURBANK, Philadelphia, Pa., assignor to Mary L. Burbank, Philadelphia, Pa. Filed Jan. 24, 1910. Serial No. 539,673.

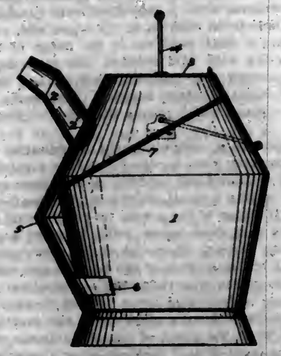


1. In a game apparatus, the combination with the representation of a figure, of means normally holding an object in the mouth of the figure, and means adapted when struck by a projectile to release the holding means and permit the object to fall out of the mouth of the figure.

2. In a game apparatus, the combination with the representation of a figure, having an open mouth, that portion of the figure representing the jaws being curved in cross section in the mouth of the figure, a passage back of the head of the figure, a plurality of balls in said passage adapted to be fed one at a time into the mouth of the figure, a trip lever normally holding a ball in the mouth of the figure, and means adapted when struck by a projectile to operate said trip lever and release the ball from the mouth of the figure.

3. In a game apparatus, the combination with the representation of a figure having an open mouth, of a passage back of the figure adapted to contain a plurality of balls and direct them into the mouth of the figure, said mouth being of a size to accommodate but a single ball at a time, a support secured to the figure, a trip lever of general bell-crank form having its longer member disposed in front of the mouth of the figure, the shorter member of said lever having a slot therein to receive said support, a lever fulcrumed at one end behind the figure, a link connecting the free end of said last mentioned lever with the trip lever, a plunger rod projecting through the figure and connected at one end to said last mentioned lever, a button or target on the front end of said lever, and a spring normally pressing said target outward.

959,711. OIL-CAN. JOHN G. BURCH and WILLIAM R. TAYLOR, Chicago, Ill. Filed June 1, 1909. Serial No. 499,344.



1. In a device of the class described, the combination with a can provided with a spout, of a water trap located under the spout and opening into the can near the bottom, a tube leading from the top of said water trap said tube communicating with the outside atmosphere, substantially as described.

2. In a device of the class described, the combination with a can provided with a spout, of a water trap located under the spout and opening into the can near the bottom, and a tube leading from the top of said water trap across the upper portion of the can and communicating with the ouside atmosphere, substantially as described.

959,712. DOUBLE-TONGUE BARRETTE. ALFRED BURKE, Leominster, Mass. Filed Sept. 23, 1908. Serial No. 454,326.

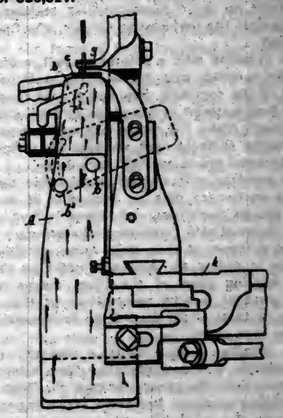


1. In a barrette, a body, a clamp comprising two superposed parts pivoted to said body, a bifurcated lug on said body, and shoulders on each of said parts adapted to be engaged by said lug whereby said parts are flexed and held in a bowed position.

2. In a barrette, a bow shaped body, a clamp comprising two normally straight, superposed parts pivoted to said body, a bifurcated lug on said body, and shoulders on each of said superposed parts adapted to be engaged by said lug whereby said superposed parts are flexed and held in a position approximately parallel to the said bowed body.

3. In a barrette, a body, two superposed, resilient members coinciding, shoulders on said members, a lug on said body adapted to engage said shoulders, and means pivotally connecting the resilient members to the body.

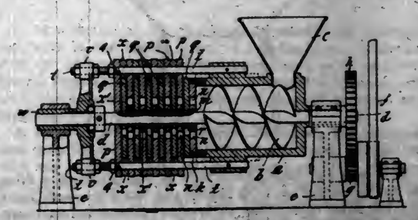
959,713. GUARD FOR SHOE-STITCHING MACHINES. CHARLES S. CABLE, Portland, Me. Filed Nov. 6, 1909. Serial No. 526,517.



1. In a shoe sewing machine having a needle, an attachment therefor comprising a support, a plate pivoted to the upper end of said support, the axis of the pivot being substantially parallel to the plane of movement of the needle, so as to allow the plate to swing laterally therefrom, and said pivoted plate being movable to inoperative position in a direction diametrically opposite to the direction of passage of the shoe through the machine whereby the frictional contact of the shoe tends to maintain said attachment in operative position.

2. An attachment for shoe stitching machines of the class described consisting of a supporting plate secured to the body of the machine and a guard plate adapted to be positioned normally between the looper and the shoe upper and a pair of rivets pivoting the guard plate to the upper portion of the supporting plate, a slot being formed in the lower end of the guard plate concentric with one of said rivets and permitting the passage of the other rivet.

959,714. GRINDING-MILL. GABRIEL CARLSON, Springfield, Mass. Filed May 8, 1908. Serial No. 431,568.



1. A grinding mill comprising a shaft, grinding disks thereon to rotate with the shaft, spacing washers between the disks and located on the shaft, non-rotatable disks fitted over said washers between the rotatable disks; other spacing washers located between the peripheries of the stationary disks of the same thickness as the spacing washers on the shaft, and means to secure the disks in close contact with the spacing washers to provide a uniform spacing of the disks on the shaft, together with means to feed material to the disks, substantially axially thereof.

2. A grinding mill comprising a shaft and a plurality of suitably spaced rotatable and non-rotatable disks alternately disposed on the shaft, means for securing the rotatable disks to the shaft and spacing said disks from the non-rotatable disks, both sides of both the stationary and the rotatable disks constituting a grinding surface, to-

gether with one or more feeding conduits transversely disposed relative to the disks to convey material to be ground into the spaces between the disks, the feeding conduits being arranged so as to intermittently register with each other to permit the material to axially pass from one disk to the other.

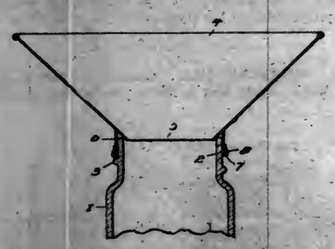
3. In a grinding mill, a rotatable shaft, a disk mounted thereon for rotation with the shaft, a stationary disk on each side of the rotatable disk and spaced therefrom, and means to feed material to the space between said rotatable and stationary disks, the contiguous surfaces of both disks being grinding surfaces, and washers for definitely determining the axial space between each disk.

4. In a grinding mill, a shaft, a rotatable disk mounted thereon, a stationary disk on each side of the rotatable disk and spaced therefrom, and means to feed material to the space between said rotatable and stationary disks, the contiguous surfaces of both disks being grinding surfaces, and means to adjust the rotatable disks on the shaft to vary the spacing apart of the disks, means including a series of washers located respectively at the center and peripheral portions of the fixed disks for determining their relation to each other.

5. In a grinding mill, a shaft, a plurality of suitably spaced rotatable and non-rotatable disks alternately disposed on the shaft, the spaces between the disks constituting the grinding surfaces, feed-holes extending transversely through both the rotatable and non-rotatable disks, the feed-holes in the non-rotatable disks being located at a greater distance from the axis of the shaft than the feed-holes in the rotatable disks, so disposed that when in substantial registration they will constitute feed conduits intersecting the spaces between the disks, and means to supply material to be ground to said conduits, said feeding means including a screw member carried by the shaft, said shaft being located in a chamber having outlet openings in registration with feed-holes of the non-rotatable disks.

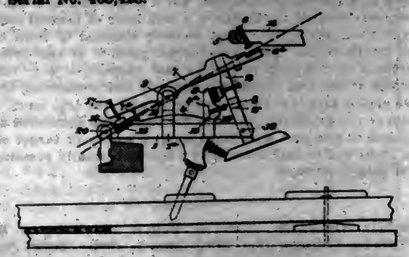
[Claim 6 not printed in the Gazette.]

959,715. JAR-FILLER. MYRA C. CARSON, Vonore, Tenn. Filed Jan. 19, 1909. Serial No. 473,139.



As a new and improved article of manufacture, a filler for use in connection with Mason and like screw-neck fruit jars, the same comprising an inverted frusto-conical vessel having a comparatively wide mouth at its lower reduced end substantially coextensive in diameter with the internal diameter of the mouth of the jar, whereby the mouth portion of the vessel is adapted to slightly enter the mouth of the jar and rest upon the inner edge of the rim of the jar, thus sealing the mouth of the jar and supporting the weight of the vessel, and an annular resilient band secured at its upper edge to the outer surface of the vessel above the lower edge of said vessel and projecting downward below the vessel, said band being coextensive in diameter with the outside diameter of the neck of the jar above the threads thereon, whereby said band is adapted by its resiliency to snugly hug or grip the jar and prevent tilting of the vessel thereon and hold the vessel in engagement with the rim edge of the jar to prevent escape of the fruit juices.

959,716. REPETITION-ACTION FOR GRAND PIANOS. LOUIS CHARPIAT, New York, N. Y. Filed Nov. 30, 1908. Serial No. 465,423.



1. A piano-action comprising the combination of a pivoted jack-carrying arm, a repetition-lever pivoted thereon having a plane-faced cushion on its upper end, and a drop screw having a small head set in the flange of the action for coöperating with said cushion, the engaging surfaces of the drop-screw and cushion being at, and before, the moment of initial contact between these parts, approximately in a plane which passes through the pivot of said arm.

2. A piano action comprising the combination of a pivoted jack-carrying arm, a repetition-lever pivoted thereon and having a plane-faced cushion on its upper end, and a drop screw having a small slightly convex head set in the hammer butt flange of the action for coöperating with said cushion, the said drop screw being at right angles to a plane passing through the pivot of the jack-carrying arm and tangent to the surface of the head of the screw.

3. A piano action comprising the combination of a jack-carrying arm, a repetition lever pivoted thereon, and co-operating cushions having plane faces and located on the lever and arm at the point of contact between said lever and arm, the faces of said cushions lying approximately in a plane passing through the pivot of the lever.

4. A piano action comprising the combination of a jack-carrying arm, a repetition lever pivoted thereon, and co-operating cushions having plane faces and located on the lever and arm at the point of contact between said lever and arm, the faces of said cushions lying approximately in a plane passing through the pivot of the lever, and said pivot being located below the medial line of the lever.

5. A piano action comprising the combination of a jack carrying arm, a repetition lever pivoted thereon, and co-operating cushions having plane faces and located on the lever and arm at the point of contact between said lever and arm, the faces of said cushions lying approximately in a plane passing through the pivot of the lever, and said pivot being located in a projection from the under side of the lever.

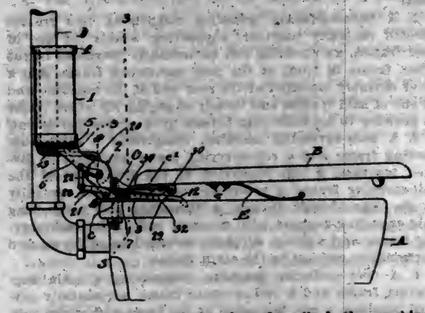
[Claims 6 to 8 not printed in the Gazette.]

959,717. APPARATUS FOR DISPENSING MOBILE SUBSTANCES. CHARLES CHRISTENSEN, Chicago, Ill. Filed June 26, 1908. Serial No. 440,512.

1. In an apparatus of the class described, the combination with a reservoir, a measuring cylinder connected therewith and having a suitable discharge opening, said reservoir, measuring cylinder and discharge pipe being arranged so that liquid may flow solely by gravity from the reservoir out through the discharge pipe, a plug in said cylinder for establishing and cutting off communication with the reservoir, and trigger mechanism for actuating said plug, arranged to be operated by movement of a suitable seat.

2. In an apparatus of the class described, the combination of a reservoir, a measuring cylinder connected therewith and having a suitable discharge pipe, said reservoir, measuring cylinder and discharge pipe being arranged so that liquid may flow solely by gravity from the reservoir out through the discharge pipe, a plug in said cylinder for establishing and cutting off communication between the

reservoir and cylinder, a rocking element for actuating said plug and a trigger carried by a suitable seat and arranged to actuate said rocking element through the movement of the seat.



3. In an apparatus of the class described, the combination of a reservoir, a cylinder connected thereto, and having a suitable discharge pipe, said reservoir, measuring cylinder and discharge pipe being arranged so that liquid may flow solely by gravity from the reservoir out through the discharge pipe, a plug in said cylinder for establishing and cutting off communication between said reservoir and the cylinder, an arm for said plug, a rocking lever, a link connecting the arm and rocking lever and a trigger carried by a suitable seat arranged to engage said rocking lever through the depression of the seat.

4. In an apparatus of the class described, the combination of a reservoir, a cylinder, a supply pipe between the reservoir and cylinder, a discharge pipe leading away from said cylinder, all arranged so that liquid may flow solely by gravity from said reservoir and out through the discharge pipe, a shiftable plug in said cylinder arranged to divide said cylinder into two chambers and containing a double set of alternately acting inlet and outlet ports for alternately establishing communication between the supply pipe and the chambers, and between the chambers and the discharge pipe, and suitably operated trigger mechanism for actuating said plug.

5. In an apparatus of the class described, the combination of a reservoir, a measuring cylinder, a supply pipe connecting said reservoir with the cylinder, a discharge pipe leading away from the cylinder, all arranged so that liquid may flow solely by gravity from said reservoir and out through the discharge pipe, a shiftable plug in said cylinder arranged to divide said cylinder into two chambers and having separate alternately acting inlet and outlet ports for each chamber, and suitably operated trigger mechanism for actuating said plug.

[Claims 6 to 16 not printed in the Gazette.]

959,718. RAIL-BOND. WILLIAM B. CLEVELAND, Cleveland, Ohio, assignor to The Electric Railway Improvement Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 2, 1908. Serial No. 430,498.



1. As a new article of manufacture, a rail-bond comprising a plurality of strands, and clips securing the ends of said strands together to form the terminal portions of the bond, said clips extending inwardly beyond the inner ends of the faces of such terminal portions designed to contact with the rail.

2. As a new article of manufacture, a rail-bond comprising a plurality of copper strands, and clips of substantially the same degree of fusibility securing the ends of said strands together to form the terminal portions of the bond, said clips extending inwardly beyond the inner ends of the faces of such terminal portions designed to contact with the rail.

3. As a new article of manufacture, a rail-bond comprising a flat copper strand wound upon itself a plurality of times to form a laminated strip, and clips of the same material secured to the terminal portions of said strip to bind the component strands together, said clips extending inwardly beyond the inner ends of the faces of such terminal portions designed to contact with the rail.

4. As a new article of manufacture, a rail-bond comprising a plurality of strands wound together to form terminal portions and an intermediate body portion, sheets of cementing material secured across the contact faces of such terminal portions, said sheets being in the form of clips wrapped about such portions so as to be frictionally held in place, and clips of the same material as said bond secured to such terminal portions adjacent to the corresponding clips of cementing material and serving to bind said strands together irrespective of the latter.

5. As a new article of manufacture, a rail-bond comprising a flat copper strand wound upon itself a plurality of times to form a laminated strip, sheets of cementing material secured across the contact faces of the terminal portions of said strip, said sheets being in the form of clips wrapped about such portions so as to substantially inclose the same and be frictionally held in place, and clips of the same material as said bond secured to such terminal portions adjacent to the corresponding clips of cementing material and serving to bind the component strands in such portions together irrespective of said latter clips.

[Claims 6 to 9 not printed in the Gazette.]

959,719. FUSED TERMINAL. RICHARD H. CONWAY and HARRY E. BISBING, Philadelphia, Pa. Filed May 12, 1909. Serial No. 495,485.



1. In a device of the character described, the combination with blocks spaced apart, a turning plug contacting with the adjacent faces of said blocks, two pairs of metal inserts forming electric contacts at opposite sides of said plug, and fuse wires connecting said pairs of contacts and insulated from each other.

2. In a device of the character described, the combination with blocks spaced apart, a turning plug contacting with the adjacent faces of said blocks, electric contacts at opposite sides of said plug, a groove around said plug, a fuse wire in said groove and connected at its ends to said contacts, a second pair of contacts at opposite sides of the plug, and located midway between the first mentioned pair of contacts, said plug having an opening extending transversely through the same, and a fuse wire projecting through said opening and secured at its ends to said last mentioned pair of contacts.

3. In a device of the character described, the combination with blocks spaced apart, a turning plug contacting with the adjacent faces of said blocks, electric contacts at opposite sides of said plug, a groove around said plug, a fuse wire in said groove and connected at its ends to said contacts, a second pair of contacts at opposite sides of the plug, and located midway between the first mentioned pair of contacts, said plug having an opening extending transversely through the same, and a fuse wire projecting through said opening and secured at its ends to said last mentioned pair of contacts, all of said contacts spaced

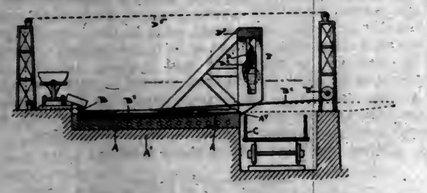
an equal distance apart, and the distance between said contacts being greater than the contact ends of the blocks, whereby said plug may be turned to a position where none of its contacts will be in engagement with the blocks.

4. In a device of the character described, the combination with blocks spaced apart, a plug contacting with the adjacent faces of said blocks, two pairs of electric contacts secured in the periphery of the plug, and projecting inwardly at the end of the plug, and all insulated from each other, enlargements at the ends of said contacts, screws in said enlargements, and two pairs of fuse wires connecting the screws of the respective pairs of contacts and insulated from each other.

5. In a device of the character described, the combination with blocks spaced apart, and having registering screw threads in their adjacent ends, a plug having screw threads engaging the screw threads of the blocks, two pairs of electric contacts at opposite sides of said plug, and fuse wires connecting said pairs of contacts and insulated from each other.

[Claims 6 to 8 not printed in the Gazette.]

959,720. METHOD OF HANDLING SLAG. DAVID T. CROXTON, Cleveland, Ohio. Filed Mar. 15, 1909. Serial No. 483,354.

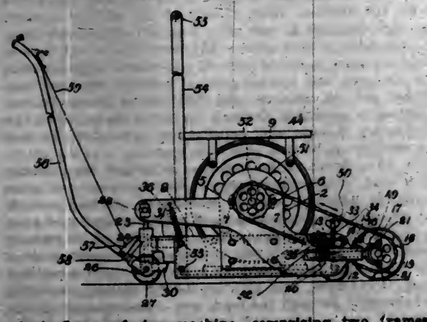


1. The method of handling slag which comprises casting it on a table into sheets, cooling and solidifying the same in sheet form, moving the sheet over the edge of its support and breaking the unsupported portion into fragments.

2. The method of handling slag which comprises casting it into sheets of suitable thickness upon a suitable support, cooling and solidifying the same, separating the slag from its support by lateral sliding movement and breaking the sheet slag into fragments as it is moved.

3. The method of handling slag which comprises casting it into sheets of suitable thickness, maintaining it in sheet form until the solidification has been effected, separating the sheets from the support by a sliding movement, breaking the separated slag into fragments and delivering the same into a suitable carrier.

959,721. FLOOR-SURFACING MACHINE. FREDERICK L. CUMMINGS, Everett, and EDWARD HATHAWAY, Malden, Mass. Filed Aug. 15, 1907. Serial No. 388,645.



1. A floor-surfacing machine, comprising two frames pivoted centrally together, supporting wheels for one of said frames, an abrading roll horisontally journaled in the other frame in front of the first mentioned frame, and a propelling handle at the rear ends of said frames for momentarily moving them apart to raise said roll from the floor.

2. A floor-surfacing machine, comprising two frames pivoted centrally together, supporting wheels for one of said frames, an abrading roll horisontally journaled in the other frame in front of the first mentioned frame, and a lever movably mounted at the rear end of the machine and of one of said frames and loosely engaging the other frame in position to separate said frames upon proper movement.

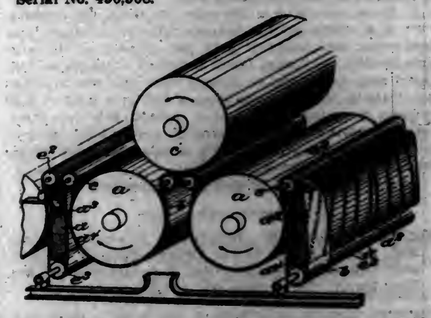
3. A floor-surfacing machine, comprising a main supporting frame and a roll-carrying frame horisontally pivoted together, a roll journaled at the front end of the roll-carrying frame, a traveling support located centrally at the rear of said frames, a depending post connecting said traveling support with the rear end of the roll-carrying frame, and a sleeve slidingly mounted on said post and horisontally pivoted to the main frame.

4. A floor-surfacing machine, comprising a main supporting frame and a roll-carrying frame horisontally pivoted together, a roll journaled at the front end of the roll-carrying frame, a traveling support located centrally at the rear of said frames, a depending post connecting said traveling support with the rear end of the roll-carrying frame, a sleeve slidingly mounted on said post and horisontally pivoted to the main frame, and a lever pivotally mounted adjacent said post having a projecting lip for lifting the roll-carrying frame when the lever is turned on its pivot.

5. In a floor-surfacing machine, a main supporting frame and a roll-carrying frame horisontally pivoted together, an abrading roll mounted at the front end of the roll-carrying frame, and a spring for normally holding the front ends of said two frames under tendency to move toward each other for maintaining the roll under proper abrading tension.

[Claims 6 to 11 not printed in the Gazette.]

959,722. DRYING-MACHINE. GEORGE A. CUTTER, Taunton, Mass., assignor to Cell Drier Machine Company, a Corporation of Maine. Filed Apr. 19, 1909. Serial No. 490,908.



1. In a drying machine, the combination with rotatable drying cylinders; of an endless conveyer of felt or other suitable material held in contact with said cylinders; and a stationary heated drying cell projecting into the path of said conveyer and lying in contact therewith at points where said conveyer is not in contact with the cylinders.

2. In a drying machine, a plurality of heated cylinders; an endless conveyer adapted to travel in peripheral contact with said cylinders; a stationary heated drying cell projecting into the path of said conveyer; and means for guiding said conveyer whereby it comes in contact with said drying surfaces.

3. In a drying machine, a plurality of heated cylinders; an endless conveyer adapted to travel in peripheral contact with said cylinders; a stationary heated drying cell

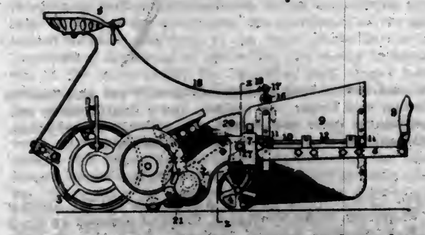
the surface of which is provided with projecting engaging parts diverging from the middle thereof toward the ends thereof; and means for guiding said conveyer whereby it comes in contact with said surface.

4. The herein described drying element for a continuously traveling web, which is provided with a surface portion adapted to be heated and to be located in contact with said traveling web, and diverging ribs or projections on said surface.

5. The herein described drying element for a traveling web, which consists of a stationary heated element having a convex surface provided with projecting engaging parts diverging from the middle of said element toward the ends thereof.

[Claims 6 and 7 not printed in the Gazette.]

959,723. GRASS-CATCHING DEVICE FOR LAWN-MOWERS. HENRY DECK, Philadelphia, Pa., assignor to John F. Braun and William P. M. Braun, Copartners trading as John Braun & Sons, Philadelphia, Pa. Filed July 7, 1908. Serial No. 442,352.



1. A lawn mower having a support at its forward part combined with a grass receiving box adjustably sustained by the support so as to be movable to and from the cutter of the lawn mower and also so as to tilt to one side of the support to dump the grass.

2. A lawn mower having a support at its forward part, combined with an adjustable grass box, guides upon the sides of the box for sustaining and pivoting the box upon the support, and wheels on the support upon which the guides travel and rock.

3. A lawn mower having a support at its forward part, combined with an adjustable grass box, guides upon the sides of the box for sustaining and pivoting the box upon the support, wheels on the support upon which the guides travel and rock, brackets secured to the support and in which the wheels are journaled, and detachable means for the brackets to lock the guide at either side of the box in hinged position upon the wheels.

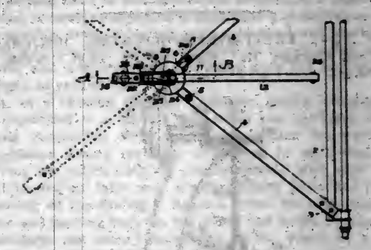
4. A lawn mower having a support at its forward part, combined with an adjustable grass box, guides upon the sides of the box for sustaining and pivoting the box upon the support, wheels on the support upon which the guides travel and rock, and means extending from the cutters to guide the cut grass into the box.

5. A lawn mower having a frame formed with a forward transverse portion and a revolving cutter, combined with a grass receiving box longer at the bottom than at the top to extend under the forward transverse portion of the frame, and means upon and in front of the lawn mower frame arranged for supporting the box so that it may be shifted horisontally toward or from the revolving cutter and the transverse portion of the frame, said means providing a clear unobstructed space in front of the box equal at least to the distance to which the box extends under the forward transverse frame toward the cutter.

[Claims 6 to 13 not printed in the Gazette.]

959,724. DRAFT CONNECTION FOR HAY-LOADERS. SAMUEL K. DENNIS, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Feb. 2, 1910. Serial No. 541,568.

1. A draft connection for hay loaders including, in combination, a draft frame, a plate secured to the forward end of said draft frame, a draft member pivotally connected with said plate and adapted to swing from side to side thereon, a loose tongue slidably mounted upon said draft member, and releasable means operative to secure the parts in adjusted relation.



2. A draft connection for hay loaders including, in combination, a draft frame, a plate secured to the forward end of said draft frame, a draft member pivotally connected with said plate and adapted to swing from side to side thereon, the axis of said member being inclined downward and rearward, a loose tongue slidably mounted upon said draft member, and releasable means operative to secure the parts in adjusted relation.

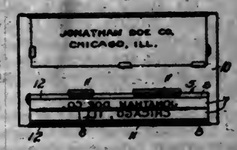
3. A draft connection for hay loaders including, in combination, a draft frame, a sleeve pivotally connected with the forward end of said draft frame and adapted to swing from side to side relative thereto, means for locking said sleeve against a swinging movement, and a loose tongue member slidably received thereby.

4. A draft connection for hay loaders including, in combination, a draft frame, a sleeve pivotally connected with the forward end of said draft frame and adapted to swing from side to side, means for locking said sleeve against a swinging movement, and a loose tongue member slidably received thereby.

5. A draft connection for hay loaders including, in combination, a draft frame, a sleeve pivotally connected with the forward end of said draft frame and adapted to swing from side to side, means for locking said sleeve against a swinging movement, a loose tongue member slidably received by said sleeve, and releasable means mounted upon said sleeve and adapted to engage with a fixed part of said tongue member in a manner to prevent a sliding movement thereof.

[Claims 6 to 9 not printed in the Gazette.]

959,725. PRINTING-PLATE. JOSEPH S. DUNCAN, Chicago, Ill., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed May 24, 1909. Serial No. 497,922.



1. A printing plate comprising a plurality of elevated panels provided with printing characters stamped thereon, and a strengthening rib integral with the plate and disposed longitudinally of and between the panels at the back of the plate to form a strengthening support for the plate between the panels.

2. A printing plate comprising a plurality of elevated panels provided with printing characters stamped thereon, and a rib integral with the plate and extending longitudinally thereof between the panels, said rib being adapted to serve as a strengthening rib for the plate and a support for the panels.

3. A printing plate comprising a plurality of elevated panels, provided with printing characters, flanges at either edge of said plate, and a strengthening rib, said rib and flanges adapted to engage a printing frame and support said panels above the face of said frame.

959,726. FRUIT-MIXING MACHINE. BENJAMIN F. FISH, Chicago, Ill. Filed July 7, 1909. Serial No. 506,413.



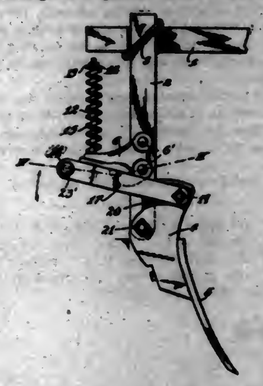
1. In a mixing machine of the character described, a supporting frame, comprising a base plate, a standard secured to said plate, a guide bracket formed on said standard, a mixing tub arranged on said base plate, a dasher operating shaft having formed in one side a longitudinal keyway, an operating gear slidably keyed to said shaft, a dasher secured to said shaft, a tubular exteriorly threaded dasher raising and lowering shaft arranged on said dasher operating shaft, said tubular shaft having formed in one side a key-way, a key arranged on the guide bracket of said supporting frame to engage said key way and hold said tubular shaft against rotation, means to loosely connect said dasher with the lower end of said tubular shaft, an interiorly threaded hand wheel operatively mounted in said guide bracket, and engaged with said threaded shaft whereby the latter and the dasher and dasher operating shaft are raised and lowered out of and into said tub.

2. In a mixing machine, a supporting frame comprising a standard, a guide bracket on the standard, a mixing tub arranged on the base of the supporting frame, a dasher operating shaft, an operating gear slidably keyed to said shaft, a dasher at the lower end of the shaft, an exteriorly threaded dasher raising and lowering sleeve, inclosing a portion of the dasher operating shaft, means to hold the sleeve against rotation, means to loosely connect the dasher with the lower end of the sleeve and manually operable means for raising and lowering the sleeve, whereby the dasher and dasher operating shaft may be raised and lowered into and out of the tube.

959,727. SPRING-TRIP. CHARLES C. FLAMBO, Kansas City, Kans., assignor to Eagle Manufacturing Company, Kansas City, Mo., a Corporation of Missouri. Filed Apr. 14, 1909. Serial No. 489,885.

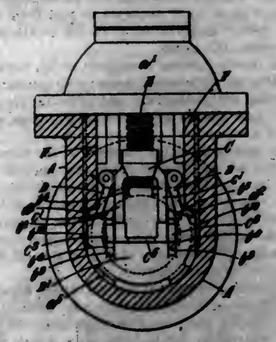
1. In a spring trip a bracket having a concaved socket, a rocker arm comprising a head having frictional connection with the socketed portion of said bracket, bosses projecting laterally from said arm, a pivoted shank, links connected with said shank and provided with apertures adapted for receiving said bosses, and a spring member carried by said bracket and connected with said arm.

2. The combination of a suitable bar, a bracket rigidly mounted on said bar and provided with a concaved socket and an aperture, a shovel shank pivotally mounted on said bar, a socket arm, having a head revolubly mounted in the socket in said bracket, a rod connected with said arm and projecting through the aperture in said bracket, a keeper



on said rod, a spring surrounding said rod and bearing against said keeper and bracket, and a link pivotally connecting the outer end of said arm with the shovel shank, substantially as and for the purpose set forth.

959,728. STOP-VALVE AND THE LIKE. JOSEPH FLETCHER, Stoke Newington, England, assignor to Clark Way Harrison, London, England. Filed Mar. 6, 1909. Serial No. 481,664.



1. In a stop valve, the combination with a longitudinally and laterally movable valve proper, of a device for imparting the longitudinal movement to the valve proper, a member carried by the said device and adapted to move relatively to the valve proper, hinged members bearing on the valve proper under the force transmitted from the movable member through the hinges, means for restraining the hinged members from leaving their force transmitting position until the valve proper completes its longitudinal closing movement, and means whereby said movable member then operates to impart the lateral movement to the valve proper independently of the hinged members.

2. In a stop valve, the combination with a longitudinally and laterally movable valve proper, of a device for imparting the longitudinal movement to the valve proper, a member carried by the said device and adapted to move relatively to the valve proper, hinged members connected to the movable member and bearing at their free ends on the valve proper under the force transmitted from the movable member through the hinges, means for restraining the hinged members from leaving their force transmitting position until the valve proper completes its longitudinal

closing movement, and means whereby said movable member then operates to impart the lateral movement to the valve proper independently of the hinged members.

3. In a stop valve, the combination with a longitudinally and laterally movable valve proper, of a device for imparting the longitudinal movement to the valve proper, a member carried by the said device and adapted to move relatively to the valve proper, hinged members connected to the movable member and bearing at their free ends on the valve proper under the force transmitted from the movable member through the hinges, guides for restraining the hinged members from leaving their force transmitting position until the valve proper completes its longitudinal closing movement, and means whereby said movable member then operates to impart the lateral movement to the valve proper independently of the hinged members.

4. In a stop valve, the combination with a longitudinally and laterally movable valve proper, of a movable member for imparting the lateral movement to the valve proper, hinged members connected with the said movable member and coöperating with the said valve proper, extensions on said hinged members, means coöperating with said extensions for restraining the movement of the said hinged members relatively to the valve proper during the longitudinal movement of the latter, and means independent of the valve proper for liberating said hinged members as the valve proper completes its longitudinal closing movement.

5. In a stop valve, the combination with a longitudinally and laterally movable valve proper, of a movable member for imparting the lateral movement to the valve proper, hinged members connected with said movable member, projections on the valve proper with which said hinged members coöperate, means for restraining the movement of the said hinged members relatively to the solid projections during the longitudinal movement of the valve proper, and means independent of the valve proper for liberating said hinged members as the valve proper completes its longitudinal closing movement.

[Claims 6 to 11 not printed in the Gazette.]

959,729. VACUUM-CLEANER. CHARLES B. FOSTER and WILMOT W. GLIDDEN, Oak Park, Ill. Filed Feb. 21, 1908. Serial No. 416,974.



1. In a vacuum cleaner, a tubular handle arranged to be connected with a suction apparatus, and having a nozzle supporting head in communication therewith, a nozzle revolubly attached to said head and opening into the same, and a suitably operated agitating brush mounted in said nozzle.

2. In a vacuum cleaner, a tubular handle arranged to be connected to a suction apparatus, and having a chambered supporting head in communication therewith, a chambered casing revolubly attached to said head and having an inlet slot, and a suitably operated rotary brush mounted in the chamber in the casing.

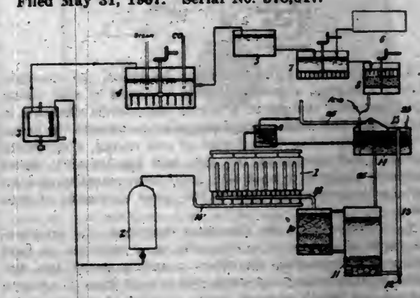
3. In a vacuum cleaner, a tubular handle arranged to be connected to a suction apparatus and having a chambered supporting head in communication therewith, a chambered casing revolubly supported in said head and having an outlet opening communicating with said head and having an inlet slot, a suitably operated rotary brush mounted in the chamber of said casing, and a shelf, supported within said chamber and arranged to receive particles thrown thereupon by the brush.

4. In a vacuum cleaner, a tubular handle arranged to be connected to a suction apparatus and having a chambered supporting head in communication therewith, a chambered casing revolubly supported in said head and having an outlet opening communicating with said head and having an inlet slot, a rotary brush journaled in the chamber of the casing and a traction wheel running upon the floor and arranged to revolve the brush.

5. In a vacuum cleaner, a tubular handle arranged to be connected to a suction apparatus and having a chambered supporting head in communication therewith, a chambered casing revolubly supported in said head and having an outlet opening communicating with said head and having an inlet slot, a rotary brush journaled in the chamber of the casing, a traction wheel running upon the floor and gearing between the wheel and brush arranged to transform the rotary movement of the wheel to a high speed rotatory movement of the brush.

[Claims 6 to 16 not printed in the Gazette.]

959,730. PROCESS OF TREATING ELECTROLYTIC AND SIMILAR SOLUTIONS. GEORGE A. GABRIEL, New York, N. Y., assignor to Bleach & Caustic Process Company, New York, N. Y., a Corporation of New York. Filed May 31, 1907. Serial No. 376,647.



1. In an electrolytic process, in combination with the step of electrolysis, a continuous cycle of steps constituting a circulation of the electrolyte, for supplying pure electrolyte equal to that decomposed or discharged and a cycle of steps constituting an auxiliary circulation for purifying and strengthening the electrolyte, treating in said cycle a greater volume than in the main cycle.

2. In an electrolytic process, in combination with the step of electrolysis, a continuous cycle of steps constituting a circulation of the electrolyte and comprising, concentrating the same to solid form, dissolving, and introducing amounts of raw electrolyte, and a cycle of steps constituting an auxiliary circulation of such electrolyte in the form of an aqueous solution, and including the steps of purifying and strengthening the same.

3. In an electrolytic process, in combination with the step of electrolysis, a continuous cycle of steps constituting a circulation of the electrolyte and comprising concentrating the same to solid form, dissolving and introducing amounts of new electrolyte, and a cycle of steps constituting an auxiliary circulation of the electrolyte in the form of an aqueous solution and comprising the step of adding quantities of the pure electrolyte.

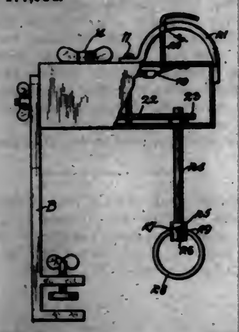
4. In an electrolytic process, in combination with the step of electrolysis, a continuous cycle of steps constituting a circulation of the electrolyte and comprising, concentrating and separating said electrolyte from the products of decomposition so that the same may be again submitted to electrolysis, and a cycle of steps constituting an auxiliary circulation of the anolyte for purifying and strengthening the same.

5. In an electrolytic process, in combination with the step of electrolysis, a continuous cycle of steps constitut-

ing a circulation and treatment of the electrolyte for eliminating the products of decomposition and supplying pure electrolyte, and a cycle of steps constituting an auxiliary circulation for purifying and strengthening the electrolyte, said cycles including the step of heating to the temperature of the electrolyte maintained during electrolysis.

[Claims 6 to 34 not printed in the Gazette.]

959,731. EGG-BEATER AND CREAM-WHIPPER. HUGH KERR GILMOUR, Owensboro, Ky. Filed Feb. 15, 1909. Serial No. 477,954.



1. In a device of the character described, the combination of a casing, a rotatable stem mounted in said casing and depending therefrom, a spring mechanism disposed in said casing and connected to said stem to actuate the same, a handle secured to the exterior of said casing, a vertically movable rod extending through said handle and casing normally adapted to hold said stem from rotation, and an agitator removably secured to the lower extremity of said stem.

2. In a device of the character described, the combination with a casing, of a rotatable stem mounted in said casing and depending therefrom, a spring mechanism disposed in said casing and connected to said stem to actuate the same, a handle secured to the exterior of said casing, a vertically movable rod extending through said handle and casing, means secured within the casing normally holding said stem against rotation, said means being engaged by the lower end of said rod to actuate said stem, said rod having a projection formed thereon adapted to engage with said handle during the rotation of said stem.

3. In a device of the character described, the combination with a casing, of a stem mounted in said casing and depending therefrom, a spring mechanism disposed in said casing and connected to the stem to actuate the same, a handle secured to the exterior of said casing, a stop secured to the interior of said casing normally adapted to hold said stem against rotation, a vertically movable rod extending through said handle and casing, the lower end of said rod being engaged with said stop and adapted to depress the same, said rod being laterally movable, a stud integrally formed with said rod adapted to engage with said handle to retain the same in its depressed position during the actuation of said stem, an agitator detachably disposed upon the lower extremity of said stem, and a spring pressed stud carried by said agitator adapted to engage in a recess formed in the stem to retain the agitator in position thereon.

4. In a device of the character described, the combination with a casing, of an arbor vertically mounted in said casing, a spiral spring secured to said arbor and casing, a gear loosely mounted on said arbor, a ratchet rigidly secured on said arbor, a pawl carried by said gear and engaged with said ratchet to lock said gear upon the arbor, a shaft disposed in said casing, a pinion on said shaft meshed with said gear, a gear carried by said shaft, a stem mounted in said casing, a pinion on said stem meshed with said last mentioned gear, an agitator detachably secured to the lower extremity of said stem, and a vertically movable rod adapted to lock said stem against rotation.

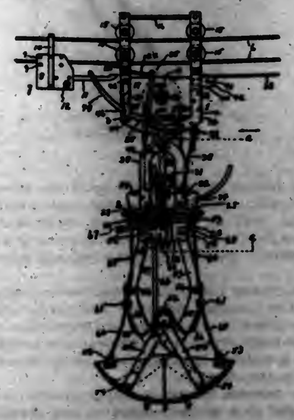
5. A device of the character described comprising a casing, an arbor mounted in said casing, a spiral spring secured to said arbor and said casing, a gear loosely mounted on said arbor, means for locking said gear thereon, a shaft mounted in said casing, a pinion on said shaft meshed with said gear, a gear carried by said shaft, a stem mounted in said casing and depending therefrom, a pinion on said stem meshed with said last mentioned gear, a handle secured to the exterior of said casing, a stop secured in said casing normally engaged with the pinion on said shaft, a rod extending through said handle and casing adapted to release said pinion, and an agitator detachably secured to the lower extremity of said stem.

959,732. VEHICLE-WHEEL RIM. WILLIAM E. GREER, Kenmore, Ohio, assignor of one-third to William F. Pfeiffer, Akron, Ohio, and one-third to Jacob Pfeiffer, Columbus, Ohio. Filed Apr. 19, 1909. Serial No. 490,977.



In a vehicle wheel, a tire retaining means consisting of a split ring having one end thereof provided with a slot and a transversely-extending U-shaped keeper of less width than the length of the slot, said keeper extending over a portion of the slot, said ring having its other end formed with a laterally-extending shouldered lug adapted to engage one side of said keeper for connecting the split ends of the ring together, said keeper integral with the ring and said lug being rigid and integral with the ring, and said keeper extending transversely with respect to the ring and having its outer portion flush with the outer edge of the ring, said slot arranged approximately at the end of the ring in which the slot is formed and said lug positioned approximately centrally of that end of the ring with which it is formed integral.

959,733. CARRIER. LEONARD F. HADDON, Louisville, Nebr., assignor of one-half to Charles A. Richey, Louisville, Nebr. Filed Apr. 26, 1909. Serial No. 492,267.



1. The combination with a supporting cable, of a detent-bar and transverse engaging-arms thereon, a carrier comprising a frame supported upon said cable; a hoisting-block having an upright releasing-bar secured thereon; an operating cable for said block; sheaves on the carrier frame and on the hoisting-block over which the operating cable runs; dogs upon the carrier arranged to make engagement with the hoisting-block, each of said dogs having an arm disposed outwardly of the plane of the carrier and arranged to make contact with the transverse engaging-arms of said detent bar; an upper contact-plate pivotally mounted upon the carrier for engaging said detent-bar; and a lower contact-plate pivotally mounted upon the carrier and connected to the upper contact-plate; said releasing-bar arranged to engage the lower contact-plate during one of the movements of the hoisting-block.

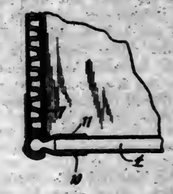
2. A carrier as described, comprising, in combination with an overhead trackway, a stop-plate secured upon the trackway and provided with a detent-bar, a pair of hangers supported by the trackway and disposed below and outwardly thereof; an upper contact-plate arranged to engage the detent-bar; a lower contact-plate; said contact-plates having one of their terminals pivotally mounted upon said hangers, their opposite terminals having a pair of links mounted therebetween; a pair of dogs mounted upon the hangers; a hoisting-block disposed below the hangers; a flexible operating strand connected between the hangers and hoisting-block; and a releasing-bar mounted upon and having a terminal disposed above said hoisting-block; and members carried by the hoisting block with which said dogs engage, said releasing bar contacting with the lowermost contact-plate when the hoisting block moves upwardly.

3. A carrier for the purpose described, comprising, in combination with an overhead trackway, a stop-plate secured upon the trackway and provided with a detent-bar and with transverse tripping bars; a pair of hangers supported by said trackway and disposed below and outwardly thereof, each having a pair of upright guide bars secured upon their outer sides; an upper contact-plate; a lower contact-plate; said contact-plates having one of their ends pivotally mounted upon said hangers, their opposite ends having a link pivotally mounted therebetween; dogs mounted upon the hangers and having arms seated between said guide bars; a hoisting-block disposed below said hangers and arranged to be engaged by said dogs, said hangers being movable upon the trackway to cause an engagement of the arms of said dogs with the tripping-bars, the upper contact-plate making engagement with said detent-bar, the arms of the dogs moving between said guide-bars.

4. The combination with a pair of trackway cables, one above the other, of a detent carrying member secured thereon, a projecting detent hook extending therefrom substantially parallel with said cables, a carrier mounted to travel upon said cables, an upper latch plate pivotally mounted upon the carrier and arranged to engage the detent hook, hoisting cable sheaves mounted in said carrier, a hoisting cable passing thereover, a second latch plate pivotally mounted upon the carrier, a bar connecting said latch plates, a hoisting block, a pair of shafts extending transversely therethrough, the ends of the uppermost of said shafts projecting beyond the sides of the hoisting block, dogs pivotally mounted upon the outer and lower portions of the carrier and arranged to engage the projecting ends of the last named shaft, forwardly and upwardly curved arms carried by said dogs, transversely extending bars projecting from the sides of the detent carrying member with which said arms engage, and a release bar extending vertically from the hoisting block and engaging both of the transverse shafts of said hoisting block.

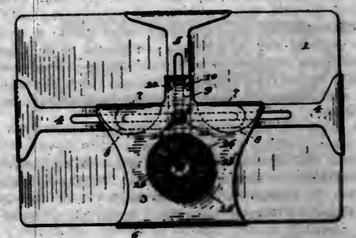
959,734. LOCK-CORNER. EDGAR R. HALL, Austin, Tex. Filed Sept. 2, 1909. Serial No. 515,829.

The combination with the sides of a box, of a member constructed of a single piece of metal bent upon itself to form parallel spaced side plates between which one side of the box is secured, said piece having the portion thereof which connects said side plates doubled and curved to form outer and inner concentric walls and a groove in said inner wall having a contracted neck on one side; and a second member constructed from a single piece of metal bent upon itself to form parallel spaced side plates between which an adjacent side of the box is secured said piece being bent at its right portion to form a cylindrical tongue



having a contracted neck and adapted to be inserted in the groove of the first named member through the contracted mouth of said groove.

959,735. AUTOMOBILE-LICENSE-TAG HOLDER. ELMER E. HANCOCK, Philadelphia, Pa. Filed Aug. 19, 1909. Serial No. 513,567.



1. A license tag holder, comprising a body portion having parallel turned over upper and lower edges, the lower edge adapted to engage the lower edge of a license tag, and an upward extension on the center of the upper edge of said body portion having inturned side edges, tag engaging members located at right angles to each other, one of said members movable between the inturned side edges of the upward extension, and the other movable against the turned over edges of the upper portion of the body portion, and a bolt clamping all of said members to said body portion, substantially as described.

2. A license tag holder, comprising a body portion having a perforation therein, a bent over lower edge on said body portion, bent over upper edges on said body portion, a central upward extension on said body portion having its side edges bent inward, horizontally disposed slotted members disposed against the body portion and engaging under the over turned upper edges of the body portion, a vertically disposed slotted member against the body portion and between the flanges of the upward extension of body portion, bent over edges on said side members and vertical member, adapted to engage the edges of a license tag, a bolt positioned through the slots in said horizontal and vertical members and through the body portion, and a clamping thumb nut on said bolt.

959,736. SCREW-CUTTING STOCK AND DIE. FRANK L. HARKER, Butler, La., assignor of one-half to John W. Ramsey, Butler, La. Filed June 30, 1908. Serial No. 441,167.



A die stock of the class described comprising a pair of jaws hinged together at one side and provided with lever

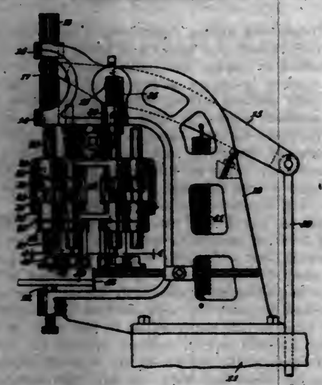
handles at their ends, one of said jaws having a cut-away portion in its side opposite to said hinged connection which forms a transversely disposed shoulder a latch member pivoted to the other jaw and having an angular extension adapted to protrude into said cut-away portion of the first named jaw and having its inner face inclined toward said shoulder when disposed in locking position, an adjusting screw movable longitudinally in said jaw and having its free end disposed in said cut-away portion, and semi-circular thread cutting surfaces mounted in the mutually adjacent faces of said jaws.

959,737. GLOVE-FASTENER. WILLIAM H. HARRIS, Gladstone, N. Mex. Filed Mar. 15, 1909. Serial No. 483,434.



In a glove fastener, a body portion composed of outer and inner plies, a series of loops on said body portion formed from tongues on said outer ply bent over and stitched to said inner ply, a flap overlapping said body portion composed of outer and inner plies, a series of loops on said flap alternating with said body loops and formed from tongues on said inner flap ply bent over and stitched to said outer ply, a lacing drawn through said loops and means for securing said lacing, substantially as described.

959,738. SINGLE-HEAD MULTIPLE RIVET-SETTING MACHINE. ARTHUR R. HAVENER, Waltham, Mass., assignor to Judson L. Thomson M'fg Co., a Corporation of Maine. Filed Apr. 3, 1909. Serial No. 487,666.



1. A machine for setting rivets and the like having, in combination, a stationary anvil, a stationary frame, a slide adapted to slide vertically on said stationary frame, a carrier, a vertical shaft upon which said carrier is rotatably mounted relatively to said frame, a plurality of rivet setting plungers mounted to slide vertically upon said carrier, and a plurality of rivet holders adapted to slide vertically upon said carrier, whereby one of said rivet setting plungers and one of said rivet holders at a time may be moved into alinement with said anvil between said slide and anvil, and a lever adapted to impart a reciprocatory motion to said slide.

2. A machine for setting rivets and the like having, in combination, a stationary anvil, a stationary frame, a slide adapted to slide vertically on said stationary frame, a carrier, a vertical shaft upon which said carrier is rotatably mounted relatively to said frame, a plurality of rivet setting plungers mounted to slide vertically upon said carrier, a plurality of rivet holders adapted to slide vertically upon said carrier, whereby one of said rivet setting plungers and one of said rivet holders at a time may be moved into alinement with said anvil between said slide and anvil, a lever adapted to impart a reciprocatory motion to said slide, and means to selectively lock said carrier to said frame with any one of said plungers in alinement with said anvil.

3. A machine for setting rivets and the like in sheet material having, in combination, an anvil, a rotary carrier, a plurality of spring-supported rivet setting plungers mounted to slide upon said carrier, a plurality of independently spring-supported rivet holders adapted to coöperate, respectively, with said rivet setting plungers, whereby one of said plungers at a time may be moved into alinement with said anvil, a gage for said material, and a movable stop adapted to limit the distance to which one of said holders may be moved upwardly by its respective spring.

4. A machine for setting rivets and the like in sheet material having, in combination, an anvil, a rotary carrier, a plurality of spring-supported rivet setting plungers mounted to slide upon said carrier, a plurality of independently spring-supported rivet holders adapted to coöperate, respectively, with said rivet setting plungers, whereby one of said plungers at a time may be moved into alinement with said anvil, a gage for said material, a stationary stop to limit the distance to which one of said holders may be moved upwardly by its respective spring, and a movable stop adapted to be interposed between said holder and said stationary stop to reduce the extent of said upward movement of said holder.

959,739. PRISM-BINOCULAR. JAKOB HECKEL, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed Jan. 16, 1908. Serial No. 411,106.



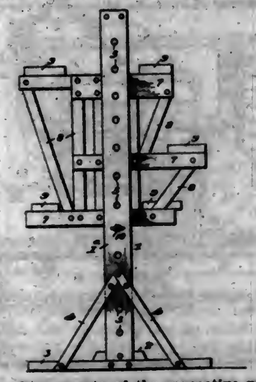
1. In a hinged prism binocular the combination, in each of the single telescopes, with the prism system and the two component lens systems, of means for adjusting one of the component lens systems in a plane perpendicular to the axis of the hinge.

2. In a hinged prism binocular the combination, in each of the single telescopes, with the prism system and the two component lens systems, of a double eccentric for adjusting one of the component lens systems in a plane perpendicular to the axis of the hinge.

3. In a hinged prism binocular the combination, in each of the single telescopes, with the prism casing, of an ocular connected with the prism casing, an objective casing fastened to the prism casing, an objective lens mounted in an eccentric ring, another eccentric ring rotatably fitted on the eccentric lens mount and also in the objective casing, and means for fixing the objective parts as adjusted.

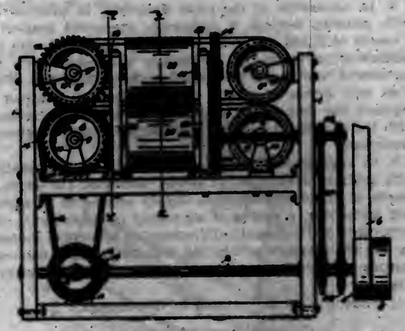
959,740. ELEVATING-SCAFFOLD. MIKE HERRELL, Evansville, Ind. Filed Apr. 30, 1909. Serial No. 493,210.

In an elevating scaffold, the combination with two uprights each consisting of spaced parallel members having alined transverse openings therethrough at intervals from top to bottom, of a movable scaffolding having guides sliding between the spaced members of the respective uprights aforesaid, and provided with transverse extensions and with planks supported by the respective transverse extensions of the respective guides aforesaid on opposite sides of the uprights, pins adapted to be received in any of the openings aforesaid to support the guides for the movable scaffolding where adjusted, sheaves on upper parts of the uprights facing toward each other, cables connected to the respective guides and passing over the respective sheaves and down between the planks, and winding mechanisms



on the inner lower parts of the respective uprights, comprising drums, cranks, and power gearing for operating the drums by the cranks, said cables being connected to said winding mechanisms.

959,741. WILLOW-STRIPPING MACHINE. GEORGE S. HERRICK and CHARLES J. HERRICK, Syracuse, N. Y. Filed Apr. 12, 1909. Serial No. 489,384.



1. In a machine for removing the bark from willows, the combination of a pair of stripping-belts traveling in contact, means for receiving the willows endwise to crack the bark and to feed the willows transversely between the stripping-belts, and mechanisms for driving said belts and operating the combined bark-cracking and feeding means as set forth.

2. In a machine for removing the bark from willows, the combination of two continuous horizontally moving flexible stripping members sustained yieldingly in contact, a pair of rollers disposed at one side of the stripping-members and adapted to receive the willows endwise therebetween to crack the bark and feed the willows between the stripping members, a pair of auxiliary rollers disposed at the opposite side of the stripping-members for drawing the stripped willows therefrom, and mechanisms for operating the said stripping-members and rollers as set forth.

3. In a machine for removing the bark from willows, the combination of two stripping-belts traveling in contact and having their contacting faces oppositely beveled, means for feeding the willows between the said belts, and at right angles to the travel thereof, mechanism for driving the stripping-belts at a comparatively low speed, and mechanism for operating the feeding means at a relatively high speed as set forth.

4. In a machine for the purpose stated, the combination of stripping-means comprising a pair of parallel horizontal belts traveling in contact, two pairs of feed rollers supported at opposite sides of the contact portions of the stripping-belts and having their axes disposed parallel with the belts, means for driving said belts at a slow speed, and means for rotating the rollers at a comparatively high speed as set forth.

5. In a machine for the purpose stated, the combination of stripping-means comprising a pair of parallel horizontal slow traveling belts disposed in the same vertical plane and in contact, two pairs of high-speed rollers disposed at opposite sides of the contacting portions of the belts to feed the willows transversely between the belts, one roller of each pair being yieldingly supported, and yieldingly sustained means pressing one belt against the other belt as set forth.

[Claims 6 to 13 not printed in the Gazette.]

959,742. MUFFLER. WILLIAM J. HEWITT, San Francisco, Cal., assignor to Frank B. Keever, San Francisco, Cal. Filed July 27, 1909. Serial No. 509,948.



1. A muffler comprising a casing having an inlet and an outlet, means within the casing for guiding gases in a helical path between the inlet and the outlet, and devices extending transversely from said means for producing eddies in said gases, substantially as described.

2. A muffler comprising a casing having an inlet and an outlet, a series of apertured muffler plates between the inlet and the outlet, said muffler plates being provided with deflecting walls compelling the gases to pass in a circuitous path from the aperture of one muffler plate to that of the next, and a rifle on each muffler plate, substantially as described.

3. A muffler comprising a casing having an inlet and an outlet, a series of apertured muffler plates between the inlet and the outlet, said muffler plates being provided with deflecting walls compelling the gases to pass in a circuitous path from the aperture of one muffler plate to that of the next, and a rifle with a curved edge on each muffler plate, substantially as described.

4. A muffler comprising a casing having an inlet and an outlet, a suction fan in said casing, means within the casing for guiding gases in a helical path between the inlet and the outlet, and devices disposed transversely to said means for producing eddies in said gases, substantially as described.

5. A muffler comprising a casing having an inlet and an outlet, a suction fan in said casing, and a series of apertured muffler plates between the inlet and the outlet, said muffler plates being provided with deflecting walls compelling the gases to pass in a circuitous path from the aperture of one muffler plate to that of the next, substantially as described.

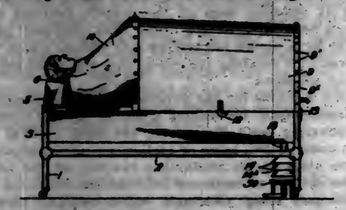
[Claims 6 and 7 not printed in the Gazette.]

959,743. BATH-CABINET. JOHN C. HOYT, Kansas City, Mo. Filed Apr. 14, 1909. Serial No. 489,876.

1. A bath cabinet comprising a supporting frame and a cover adapted to inclose a portion of said frame, and a heating box supported on an inclosed portion of said frame, and adapted to receive heated air and free air from the exterior of the cabinet and circulating air from the interior of the cabinet and for discharging same into the cabinet.

2. A bath cabinet comprising a supporting frame, a canopy adapted for inclosing a portion of said frame, a heating box supported on an inclosed portion of said frame and having openings near the bottom adapted for the intake of circulating air and provided with an upper dis-

charge port, and a common conduit adapted to receive heated air and free air from the exterior of said cabinet and discharge same into said interior heating box.



3. In a bath cabinet, a heating box having a top mouth and lower air ports, a corrugated inner facing on said box beneath said mouth, a hood located within and supported above the base of said box, an outlet on the top of said hood projecting through said box, and means for conducting heated air to said box and hood.

4. In a hot air bath cabinet, a shelf, a heating box seated on said shelf and having lateral intake ports at the bottom and an air discharge port at the top, a corrugated facing on the inner surface of one of the box sides, beneath said discharge port and terminating a short distance above the box bottom, an open bottomed hood supported in said box, with its lower edge above said lateral ports, said hood being tapered inwardly toward the top and provided with an outlet passing through the box top, and a tube passing through said cabinet and adapted for discharge into the bottom of said box beneath said hood.

5. In combination, a cabinet, a steam generator within the cabinet, said generator comprising an open bottomed fire shell and a closed bottomed water shell, an outer casing spaced from said generator and provided near its bottom with an air inlet, communicating with said fire shell, a steam outlet from the generator, into the cabinet, and a depending flame-flue discharging upwardly into said fire shell.

[Claims 6 and 7 not printed in the Gazette.]

959,744. SNAP-HOOK. GEORGE M. HUBBARD, New Haven, Conn., assignor to The W. & E. T. Fitch Co., New Haven, Conn., a Corporation. Filed Jan. 11, 1909. Serial No. 471,734.

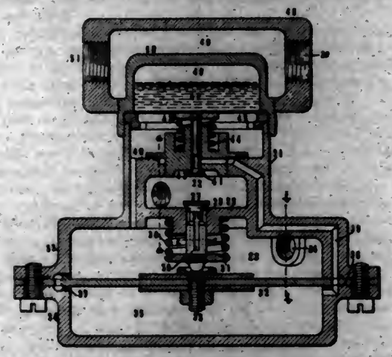


A snap hook comprising a body formed with a nose at one end, flat sides, and an upwardly projecting arm at the opposite end, a tongue adapted at its forward end to engage with said nose, and formed at its rear end with chambered ears on opposite sides of said arm, a single spring bearing on the body and against the tongue, and formed with a coil arranged on each side of said arm and within said chambers, substantially as described.

959,745. REGULATOR FOR GAS-LIGHTING SYSTEMS. GEORGE E. HULSE, Newark, N. J., assignor to Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Aug. 7, 1907. Serial No. 387,451.

1. In apparatus of the class described, in combination with utilising devices, a carbureter connected to supply said utilising devices, a source of hydro-carbon supply connected with said carbureter, means for supplying air under pressure to the carbureter, and means operated by the temperature of the hydro-carbon gas delivered from the carbureter for regulating the pressure of air delivered thereto.

2. In apparatus of the class described, in combination with utilising devices, a carbureter connected with said utilising devices and with a source of liquid hydro-carbon supply, means for supplying air to said carbureter, and thermostatic means operated by the temperature of the hydro-carbon gas delivered from the carbureter for regulating the amount of air to be delivered to the carbureter.



3. In apparatus of the class described, in combination with utilising devices, a carbureter connected with said utilising devices and also connected with a source of liquid hydro-carbon supply, a source of air supply connected with the carbureter, and means in operative contact with the combustible mixture delivered from the carbureter for automatically regulating the amount of air delivered thereto in accordance with the temperature of said combustible mixture.

4. In apparatus of the class described, in combination with utilising devices, a carbureter connected therewith, a source of liquid hydro-carbon supply connected with the carbureter, a source of air supply connected with the carbureter, and means interposed in the path of flow of air from said source of supply to the carbureter adapted to regulate the flow of air to the carbureter in accordance with the temperature of the combustible mixture delivered therefrom.

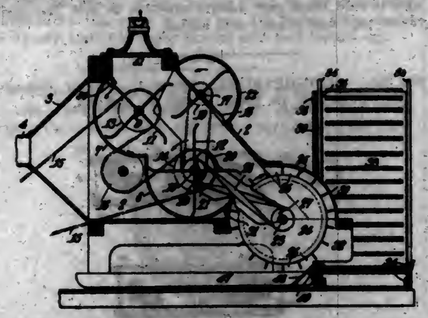
5. In apparatus of the class described, in combination with utilising devices, a carbureter connected therewith, a source of liquid hydro-carbon supply connected to supply said carbureter, a source of air-supply connected with the carbureter, and automatically operating means for increasing the air pressure within the carbureter when the combustible mixture delivered therefrom increases in temperature.

[Claims 6 to 30 not printed in the Gazette.]

959,746. MACHINE FOR CLEANING COTTON. GRANVILLE A. HUMASON, Natchez, Miss., assignor of one-third to Adam Monroe Byrd, Philadelphia, Miss., and one-half to Ellen O. Riordan, Washington, D. C. Filed Feb. 7, 1907, Serial No. 356,230. Renewed July 29, 1909. Serial No. 510,270.

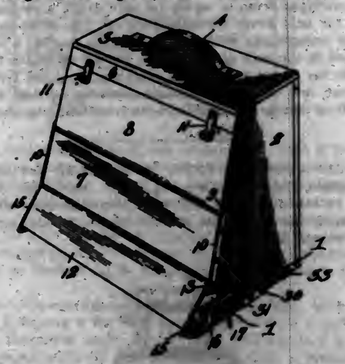
1. The combination with a casing having an inlet and an outlet, and a screen within the casing; of similar upper and lower beaters revolubly mounted above the screen and between the inlet and outlet, and an intermediate beater corresponding with and located above the first mentioned beaters, all of said beaters being revoluble in the same direction and along intersecting circles and disposed to produce a double stripping action upon material carried by the upper beater.

2. The combination with a casing, means for establishing suction therethrough, and a screen intersecting the line of suction, said casing having an outlet; of revoluble beaters coöperating with the screen and having radiating arms, a beater above and adjoining the first mentioned beaters and having radial arms, and means for simultaneously rotating all of the beaters in the same direction, the terminals of the arms of all the beaters describing intersecting circles, the arms of each beater being movable between the arms of the other beaters and constituting stripping means.



3. The combination with a casing, means for establishing suction therethrough, and a screen intersecting the line of suction, said casing having an outlet; of revoluble beaters coöperating with the screen and having radiating arms, a beater above and adjoining the first mentioned beaters and having radial arms, means for simultaneously rotating all of the beaters in the same direction, the terminals of the arms of all the beaters describing intersecting circles, the arms of each beater being movable between the arms of the other beaters and constituting stripping means, a separating drum mounted within the outlet to rotate in a direction opposite to that of the beaters and disposed to receive material from the beaters, and an endless conveyer for receiving and elevating material discharged by the drum.

959,747. FLY-TRAP. FRANCIS M. HUMPHREY, Pendleton, Oreg. Filed Aug. 28, 1909. Serial No. 515,096.



1. A trap of the character described comprising a body having an inlet, partitions in the body dividing it into a bait chamber and a retaining chamber, said partitions having woven wire sheets spaced apart along one edge to permit flies and insects to pass from the bait compartment to the retaining compartment, and clips arranged between said edges of the sheets to space them apart, said clips being constructed of metal strips bent into U-form and inserted between the woven wire sheets, and the ends of the strips being bent outwardly in opposite directions around the edges of said sheets.

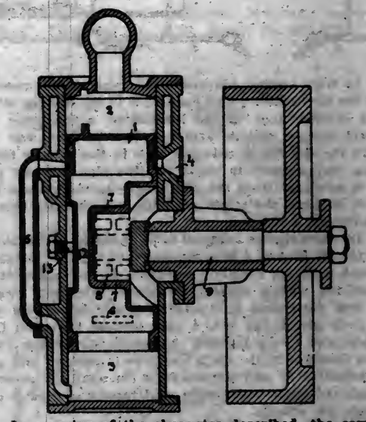
2. A trap of the character described comprising a body having an inlet and an open side covered with foraminous material, an adjustable door to vary the size of said inlet, and partitions in said body to divide it into a bait chamber and a retaining chamber, said partitions having spaced woven wire sheets to permit insects to pass from the bait chamber to the retaining chamber.

3. A trap of the character described comprising a body having an open side covered with foraminous material, and an inlet upon the bottom of its other side, an adjustable door to vary the size of said inlet, partitions in the bottom portion of the body to divide it into a bait chamber and a retaining chamber, said partitions having spaced woven wire sheets, and a bait supporting means in said bait chamber.

4. A trap of the character described, comprising a body having spaced bottom sections, upright end walls, a connecting top and spaced front sections, a woven wire sheet covering the open front of the body, a hinged bottom door between the spaced bottom sections, a fastening for said bottom door, an upper front door between said front sections, a lower front door hinged to swing toward and from the bottom to provide an adjustable inlet, means for retaining said swinging front door in adjusted position, partitions in the lower portion of the body to divide it into a bait chamber and a retaining chamber, said partitions having spaced woven wire sheets and a bait-receiving trough on the bottom of the bait chamber.

5. A trap of the character described comprising a body having a retaining compartment and a bait compartment, the latter communicating with the retaining compartment through a contracted opening and having an inlet, said body having an opening communicating with one of said compartments, a swinging door to close the opening in said body, the free edge of said door being formed with a longitudinal groove, and one wall of said opening in the body being formed with a similar groove, the two grooves being adapted to register when the door is in closed position, and a removable locking plate in the registering grooves.

959,748. EXPLOSION OR COMBUSTION MOTOR OR PUMP. CARL ALRIK HULT and OSCAR WALFRID HULT, Stockholm, Sweden. Filed Oct. 11, 1907. Serial No. 396,964.



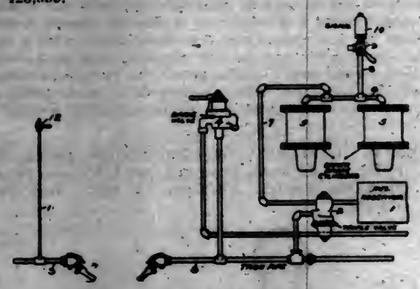
1. In a motor of the character described, the combination with a motor casing, of a piston in said casing, the lateral wall of said piston being intact and having no parts thereof projecting outwardly beyond its cylindrical surface, said wall being bent inwardly to form a chamber, and a crank pin having a roller rotatably mounted thereon and designed to operate in the chamber formed in the piston.

2. In a motor of the character described, the combination with a motor casing having its body portion formed in a single piece, of a piston reciprocable in said casing, the lateral wall of said piston being intact and having no part thereof projecting outwardly beyond its cylindrical surface, said wall being bent inwardly to form an inclosed chamber, a crank pin having a part thereof adapted to operate within said chamber, and an air compression chamber formed at one end of the motor casing below one end of said piston.

3. In a motor of the character described, the combination with a motor casing, of a cylindrical piston reciprocable therein, the lateral wall of said piston being intact and having no part thereof projecting outwardly beyond its cylindrical surface, said wall being bent inwardly to form an inclosed chamber, a crank pin having a part thereof bearing and operable in said chamber, there being a passage (12) connecting spaces formed at either side of the inwardly bent part of the piston wall.

4. In a motor of the character described, the combination with a motor casing, of a cylindrical piston reciprocable therein, the lateral wall of said piston being intact and having no part thereof projecting outwardly beyond its cylindrical surface, said wall being bent inwardly to form an inclosed chamber, there being a space in the piston wall on either side of said inwardly bent portion, a passage connecting said spaces, means between the piston and the casing for guiding the former in the latter, and a crank pin having a part thereof operable in the said chamber.

959,749. TRAIN-SIGNALING AND BRAKE-RELEASING MECHANISM. HARRY H. HUNT, Winfield township, Butler county, Pa. Filed Mar. 30, 1908. Serial No. 423,999.



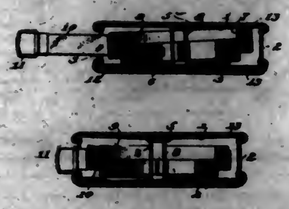
1. In train signals adapted to be operated in connection with the air brakes, a pipe connected to the driving wheels brake cylinder pipe on the locomotive, a three-way cock on said pipe, a whistle attached to said three-way cock within the cab and a reducing cock in the caboose for reducing the pressure in the train line pipe whereby pressure is admitted from the auxiliary reservoir on the locomotive through the triple valve to said cylinder pipe for the purposes described.

2. In train signals adapted to be operated in connection with the air brakes, a pipe connected to the pipe delivering pressure from the auxiliary reservoir on the locomotive to the driving wheels brake cylinders, a three-way cock on said first mentioned pipe and a whistle connecting with said cock within the cab, a pipe leading from the train line pipe and a reducing cock thereon in the caboose whereby the pressure in the train line pipe is reduced and pressure admitted to said whistle from the auxiliary reservoir through the triple valve when said three-way cock is open through the whistle.

3. In driving wheel brake releasing and signal sounding apparatus operatable in connection with the air brakes, a pipe operatively connected with the driving wheel brake cylinders, a three-way cock in said pipe, a whistle connecting with said pipe and a reducing cock attached to the train line, whereby when said three-way cock is open through the whistle the reduction of pressure in the train line pipe by means of said reducing cock sounds said whistle and the opening of said three-way cock to atmosphere when the brakes are applied releases the driving wheel brakes without affecting the remaining train brakes, for the purposes described.

4. The combination with a fluid pressure brake apparatus, of a pipe on the locomotive connected to the pipe delivering pressure from the auxiliary reservoir on the locomotive to the driving wheels brake cylinders and normally relieved of pressure when the pressure in the train pipe is constant, a signal device connected with said first mentioned pipe and means whereby a reduction of pressure in said train pipe admits pressure to said first mentioned pipe and sounds said signal.

959,750. TAPE-MEASURE. LOUIS L. JOSEPH, Chicago, Ill. Filed Jan. 19, 1910. Serial No. 538,008.



1. A tape holder comprising a rotary spring-actuated tape-carrying drum, a casing for said drum having a friction surface within it, a resilient support for said drum arranged to force the drum into frictional engagement with said surface, a resilient portion in the wall of the casing, and an extension projecting from said support into proximity to said resilient portion whereby the drum can be released from its frictional engagement.

2. A tape holder comprising a rotary spring-actuated tape-carrying drum, a casing for said drum, a resilient support for said drum arranged to force the drum into frictional engagement with the wall of the casing, a resilient portion in the wall of the casing, and an extension projecting from said support into proximity to said resilient portion whereby the drum can be released from its frictional engagement.

3. A tape holder comprising a rotary spring-actuated tape-carrying drum, a casing for said drum, a resilient support for said drum arranged to force the drum into frictional engagement with the wall of the casing, a resilient portion in the wall of the casing, and an extension forming a hub for the drum, which extension projects from said support into proximity to said resilient portion whereby the drum can be released from its frictional engagement.

959,751. POISON-BOTTLE. SYLVANUS H. KOLLOGG, Los Angeles, Cal. Filed Nov. 11, 1909. Serial No. 527,549.

1. In combination, a bottle, a closure means therefor, a box upon the inner side of said closure means, and balls within said box.



2. In combination, a bottle, and closure means therefor consisting of a screw cap, a box on the inner side of said cap, extensions on said box extending through said cap with their ends turned down on the upper face of said cap, and balls within said box.

3. In combination, a bottle, a circular flange in the mouth of said bottle, a cap resting on said flange, a closure means over the mouth of said bottle, an alarm box on the under side of said closure means resting on said cap, and balls within said box.

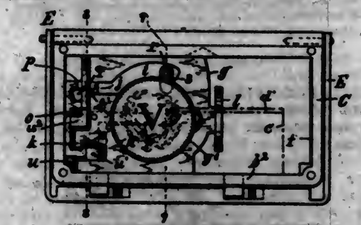
4. In combination, a bottle, a circular flange in the mouth of said bottle, a cap resting on said flange, a screw cap over the mouth of said bottle, a box on the under side of said screw cap, balls in said box, the under side of said box resting upon the upper face of said first named cap.

959,752. SAFETY CONNECTION FOR SHAFT-COLLARS AND THE LIKE. JOHN H. KELLY, San Francisco, Cal. Filed Sept. 22, 1909. Serial No. 519,010.



In combination with a shaft, a shell fitting closely around the shaft and formed with an internal chamber and with a track within the chamber eccentric to said shaft, and a roller parallel with the shaft and having a part arranged to roll upon said track and a part formed with a circumferential cutting edge arranged to engage said shaft when brought into contact therewith by the movement of said roller on said eccentric track, substantially as described.

959,753. COIN-CONTROLLED LOCK. SAMUEL J. KELLY, White Plains, N. Y. Filed Nov. 12, 1909. Serial No. 527,738.



1. In a coin-operated lock, the combination, with a bolt-carrier and a bolt projected therefrom, of a coin-slide for shifting the carrier to unlock the bolt, a latch-bar having a latch engaged with the coin-slide when the latter is pushed into the case with the coin, and the case having a keyhole with a detachable key adapted to retract the latch-bar from engagement with the coin-slide, whereby the coin-slide may be shifted to its initial position to remove the coin.

2. In a coin-controlled lock, the combination, with a lock-case E having a movable bolt-carrier *c* with a bolt *b* projected therefrom and a spring *d* to hold the bolt normally engaged with its guard, of a coin-slide *g* movable over the bolt-carrier and actuated also by the said spring, and having a pocket *g'* for the coin *h* and a slot *i* in the coin-slide at one side of the pocket and having a toe *c'* operating at the end of its movement to shift the bolt-carrier to retract and unlock the bolt, and having a hook *k* to engage a latch, a latch-bar *o* having the latch *o'* to engage the hook *k*, a pivoted latch-lever *q* jointed at one end to the latch-bar and having a roll *r* projected into the slot *i*, the coin operating upon the roll to retract the latch-bar until the hook and latch become engaged, whereby the coin-slide is locked within the case with the coin.

3. In a coin-controlled lock, the combination, with a case E having a movable bolt-carrier *c* with a bolt *b* projected therefrom and a spring *d* to hold the bolt normally engaged with its guard, of a coin-slide *g* movable over the bolt-carrier and actuated also by the said spring, and having a pocket *g'* for the coin *a* and a slot *i* in the slide at one side of the pocket and having a toe *c'* operating at the end of its movement to shift the bolt-carrier to retract and unlock the bolt, and having a hook *k* to engage a latch, a latch-bar *o* having the latch *o'* to engage the hook *k*, a pivoted latch-lever *q* jointed at one end to the latch-bar and having a roll *r* projected into the slot *i*, the coin operating upon the roller to retract the latch-bar until the hook and latch become engaged, a tumbler actuated by the latch-lever, and the case having a keyhole with a key adapted to shift the tumbler, the latch-lever and the latch-bar, whereby the coin-slide may be retracted to its initial position to remove the coin.

4. In a coin-operated lock, the combination, with a bolt-carrier and a bolt projected therefrom, of a coin-slide for shifting the carrier to unlock the bolt, a latch-bar having a latch engaged with the coin-slide, a latch-lever *q* having a roll *r* actuated by the coin to engage the latch with the coin-slide, a release-lever *w* having a tumbler *x*² thereon and a seat *x'* to engage a key, a locking-lever *y* to engage the said tumbler, with an arm to engage the key, and the case having a keyhole with key adapted to first shift the locking-lever, and then the release-lever, and thereby shifting the latch-lever and the latch-bar to permit the retraction of the coin-slide and the removal of the coin.

5. The combination, with a receptacle for containing a package and a cover adapted to retain the package in the receptacle, of coin-actuated locking mechanism for holding the cover closed, said mechanism embracing a lid with a circular aperture for inserting the coin, a coin-slide movable beneath the lid and provided with a corresponding aperture, means actuated by the coin when moved beneath the lid with the coin-slide for unlocking the cover, means engaging the coin to retain it under the lid, and means for releasing the coin-slide and restoring it to its initial position, whereby the coin can be removed through the same aperture by which it was inserted.

[Claims 6 and 7 not printed in the Gazette.]

959,754. PICTURE. ALBERT ERNEST KENNEDY, Leyton, England. Filed Mar. 16, 1909. Serial No. 483,772.



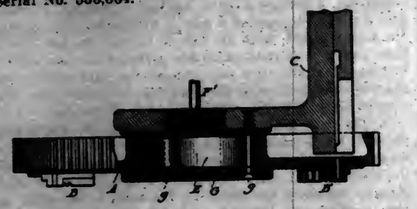
1. A picture having, in combination, a facing of card board constituting the ground of the picture and having apertures cut therethrough; a backing of card board secured to said facing and covering said apertures at the rear, said backing having imprinted matter on its front face within the boundaries of said apertures; and detachable sections fitting said apertures and seating on said backing, said sections having pictorial representations corresponding to the imprinted matter on the backing with which they respectively register.

2. A picture having, in combination, a facing constituting the ground of the picture and having apertures cut therethrough; a backing secured to said facing and covering said apertures at the rear, said backing having im-

printed matter on its front face within the boundaries of said apertures; and detachable sections fitting said apertures and seating on said backing, said sections having pictorial representations corresponding to the imprinted matter on the backing with which they respectively register.

3. A picture having, in combination, a backing having imprinted matter on its front face; and detachable sections having pictorial representations corresponding to the imprinted matter on the backing with which they respectively register.

959,755. LINE-CASTING MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Jan. 4, 1910. Serial No. 536,364.

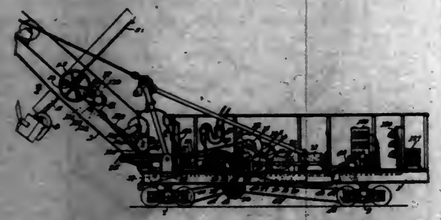


1. In a line casting machine, a slotted mold and a rotatable disk in which said mold is secured, in combination with a non-rotating, hollow, closed support around which the disk revolves, and means rigidly connected to said support for delivering a cooling medium therethrough.

2. In a line casting machine and in combination with the mold slide, a hollow, non-rotating stud thereon, means rigidly connected to said stud for delivering a cooling fluid therethrough, a mold disk mounted to revolve on the stud, and a mold secured in the disk adjacent to the stud, whereby the overheating of the mold is prevented.

3. In a line casting machine, a stationary, closed chamber and relatively fixed means for delivering a cooling fluid therethrough, in combination with a movable mold carrier mounted on and sustained by said chamber.

959,756. EXCAVATING-MACHINE. GEORGE W. KING, HARRY J. BARNHART, and CHARLES B. KING, Marion, Ohio, assignors to The Marion Steam Shovel Company, Marion, Ohio, a Corporation of Ohio. Filed Mar. 20, 1909. Serial No. 484,651.



1. In an excavating machine, the combination, with an excavating member, a motor for actuating said excavating member, a motor circuit, and a master-controller for said circuit, of means controlled by said excavating member for cutting resistance into said circuit, and means to prevent the cutting out of the resistance from said circuit before said master-controller has been moved to zero.

2. In an excavating machine, the combination, with an excavating member having a plurality of movements, of a separate motor for imparting each of said movements to said excavating member, independent automatic controlling mechanism for each of said motors, an independent master controller for each of said motors, said master controllers being grouped about a common point and arranged within reach of the operator from a single position.

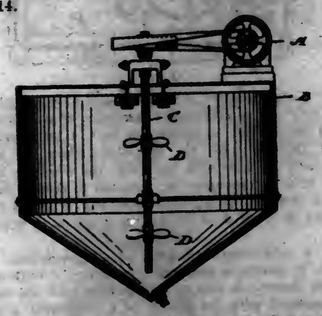
3. In an excavating machine, the combination, with a frame, and an excavating member, of a shaft arranged transversely to said frame, means for operatively connecting said shaft to said excavating member, gears mounted on said shaft near the opposite ends thereof, other shafts arranged near the opposite sides of said frame, pinions mounted on said other shafts and meshing with the respective gears on said first-mentioned shaft, and means for actuating the last-mentioned shafts in unison.

4. In an excavating machine, the combination, with a frame, and an excavating member, of a shaft arranged transversely to said frame, means for operatively connecting said shaft to said excavating member, gears mounted on said shaft near the opposite ends thereof, a shaft arranged near each side of said frame and extending longitudinally thereto, pinions mounted on said longitudinal shafts and meshing with said gears, an electric motor connected to each of said longitudinal shafts, and means for controlling said motors in common.

5. In an excavating machine, the combination, with a frame, and an excavating member, of a shaft arranged transversely to said frame, means for operatively connecting said shaft to said excavating member, gears mounted on said shaft near the opposite ends thereof, a shaft arranged near each side of said frame and extending longitudinally thereto, pinions mounted on said longitudinal shafts and meshing with said gears, an electric motor connected to each of said longitudinal shafts, means for controlling said motors in common, a second transverse shaft arranged in the rear of the first-mentioned transverse shaft, means for operatively connecting said second transverse shaft to said excavating member, an electric motor arranged between said longitudinal shafts and operatively connected to said second transverse shaft, and means for controlling said motor independently of the first-mentioned motors.

[Claims 6 to 14 not printed in the Gazette.]

959,757. PRECIPITATION OF METALS FROM CYANID SOLUTIONS. STAFFORD F. KIRKPATRICK, Kingston, Ontario, Canada. Filed Dec. 7, 1909. Serial No. 531,914.

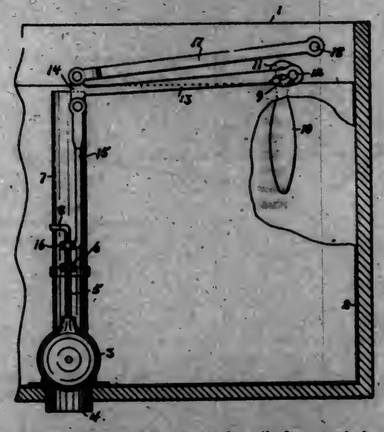


1. A process of precipitating metals from solutions containing their salts, by the action of another metal, which consists in treating the solution containing the metal to be precipitated in a suitable tank by adding the precipitating metal to the solution in the form of powder and then creating a vortex in the solution to draw the powder down toward the bottom of the tank thence to pass laterally and upwardly through the solution.

2. A process of precipitating precious metals from cyanid solutions, by the action of another metal, which consists in treating the solution containing the metal to be precipitated in a suitable tank by adding the precipitating metal in the form of powder and then creating a vortex in the solution to draw the powder down toward the bottom of the tank thence to pass laterally and upwardly through the solution.

3. A process of precipitating precious metals from cyanid solutions, by the action of aluminum, which consists in treating the solution containing the metal to be precipitated in a suitable tank by adding the aluminum in the form of powder and then creating a vortex in the solution to draw the powder down toward the bottom of the tank thence to pass laterally and upwardly through the solution.

959,758. VALVE-OPERATING MECHANISM. JOHN T. KNOTT, Fort Wayne, Ind., assignor to Knott Van Arnam Manufacturing Company, a Corporation of Indiana. Filed Oct. 24, 1907. Serial No. 398,935.



1. In apparatus of the class described, a tank having a discharge opening; a valve in the tank adapted to normally close the opening; a shaft extending through the wall of the tank; a handle fixed upon the outer end of the shaft; a crank fixed upon the inner end of the shaft; an arm having connection at one of its ends with said crank; a connecting rod having pivoted connection at the outer end of the arm and engagement with the valve to actuate the latter; a stud projecting from the inner face of the wall of the tank; and a strut pivoted at one of its ends upon the stud and having connection at its opposite end with the outer end of the arm.

2. In apparatus of the class described, a tank having a discharge opening extending through its bottom; a valve within the tank adapted to close the opening; a crank; a handle for operating the crank; an arm having connection at one of its ends with the crank and at its opposite end connected relation with the valve to lift the latter; and a strut having pivoted connection at one of its ends to a stationary point higher than the crank, and at its opposite end with the outer end of the arm, the strut being adapted to guide the outer end of the arm upwardly when the latter is actuated by the crank.

3. In apparatus of the class described, a tank having a discharge opening in its bottom; a valve for said opening; a crank; an arm connected at one of its ends with said crank and at its opposite end with the valve; and a strut having pivotal support at one of its ends and connection at its opposite end with the corresponding end of the arm and being adapted to guide the arm upwardly when the latter is actuated by the crank.

959,759. LEVEL. JAMES H. KOUNS, Eugene, Oreg. Filed Mar. 25, 1909. Serial No. 485,635.

1. In a level, the combination comprising a beam having an aperture, a transparent containing case in said aperture, said case being filled with a liquid, an indicator oscillating in said case in a vertical plane, said indicator being provided with peripheral graduations, and a globular hollow body constituting an air-chamber affixed to the upper part of said indicator in line with the vertical radius thereof when in equilibrium, said globular body being provided with an aperture opening into the liquid filling the case, for the purpose specified.



2. In a level, the combination comprising a beam having an aperture, a transparent containing case in said aperture, said case being filled with a liquid, an indicator oscillating in said case in a vertical plane, said indicator being provided with peripheral graduations, and a globular hollow body constituting an air-chamber affixed to the upper part of said indicator in line with the vertical radius thereof when in equilibrium, said globular body being provided with a narrow apertured neck opening into the liquid filling the case, for the purpose specified.

3. In a level, the combination comprising a beam having an aperture, a transparent containing case in said aperture, said case being filled with a liquid, an indicator oscillating in said case in a vertical plane, said indicator being provided with peripheral graduations, and a globular hollow body constituting an air-chamber affixed to the upper part of said indicator in line with the vertical radius thereof when in equilibrium, said globular body being provided with an aperture opening into the liquid filling the case, for the purpose specified, and the lower part of the indicator being weighted to right the same.

4. In a level, the combination comprising a beam having an aperture, a transparent containing case in said aperture, said case being filled with a liquid, a wheel-like indicator pivoted in the case and oscillating in a vertical plane, said indicator being provided with peripheral graduations, and a globular hollow body constituting an air chamber affixed to the upper part of said indicator in line with the vertical radius thereof when in equilibrium, said globular body being provided with an aperture opening into the liquid filling the case, for the purpose specified.

5. In a level, the combination comprising a beam having an aperture, a transparent containing case in said aperture, said case being filled with a liquid, a wheel-like indicator pivoted in the case and oscillating in a vertical plane, said indicator being provided with peripheral graduations, and a globular hollow body constituting an air chamber affixed to the upper part of said indicator in line with the vertical radius thereof when in equilibrium, said globular body being provided with an aperture opening into the liquid filling the case, for the purpose specified, and the lower part of the indicator being weighted to right the same.

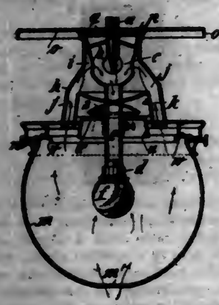
[Claims 6 to 8 not printed in the Gazette.]

959,760. INCANDESCENT GAS-BURNER FOR INVERTED AND UPRIGHT INCANDESCENT LIGHTS. FRANZ KRATKY, Vienna, Austria-Hungary. Filed Jan. 24, 1907. Serial No. 353,810.

1. An incandescent gas burner as described comprising a mixing tube, an injector tube, a mixing chamber carried by the mixing tube and surrounding said injector tube and having air inlets, and also having an external mouth or aperture *p*, a disk *q* adjustable toward and from the aperture *p* for closing and opening the latter as described, and a jacket *h* surrounding the mixing chamber and leaving an intervening air space and having a flange-like extension *o* for the purposes set forth.

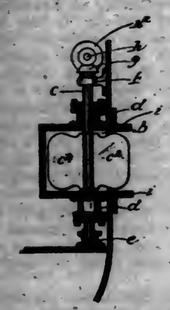
2. An incandescent gas burner as described comprising a mixing tube, an injector tube, a mixing chamber carried by the mixing tube and surrounding said injector tube and having air inlets and also having an external mouth

or aperture *p*, a disk *q* adjustable toward and from the aperture *p* for closing and opening the latter as described, a jacket *h* surrounding the mixing chamber and leaving an intervening air space, tubes *f* communicating



with the said air space, a jacket *k* surrounding the mixing tube and having an opening *s*, and a cap *u* adjustably mounted on the mixing tube and adapted to cover and uncover the opening *s*.

959,761. PROPELLER FOR SHIPS. STEFAN LABEYSKEWSKI, Brooklyn, N. Y. Filed July 2, 1909. Serial No. 505,552.



A vessel, the sides of the hull of which are provided with longitudinal channels which open outwardly and a plurality of propellers mounted in said channels on vertically arranged shafts and the blades of which project beyond the hull of the vessel, the shafts of said propellers extending upwardly and downwardly through the top and bottom walls of said channels and within the hull of said vessel and a drive shaft geared in connection with the upper ends of said propeller shafts, the top and bottom walls of said channels being also provided with stuffing boxes through which the end portions of said propeller shafts pass and the lower ends of said propeller shafts being provided with supports, in which they rotate, and the hull of the vessel being provided above and below said propellers with longitudinally ranging guards.

959,762. PANEL-BOARD. EDWARD N. LAKE, Wheaton, and JOHN CUTHBERT, Chicago, Ill. Filed Mar. 20, 1908. Serial No. 422,215.

1. In a panel board, a structure comprising three insulating slabs, one of which is a base slab and the other two of which are side slabs mounted perpendicularly to the face of said base slab and forming sides of an apartment containing apparatus mounted upon the central portion of said base slab; bus bars and meter terminals located upon said base slab between said slabs; conductor bars mounted upon the back of said base slab; load bars upon said side slabs; meter bars upon said side slabs, said meter bars running transversely of said load bars, and upon the opposite side of said side slabs from said load bars; load circuits extending from said bus bars on the face of said base slab out to and from the load devices, and returning to the face of said base slab and thence connected to said conductor bars mounted upon the back of said base slab and thence connected to said load bars upon said side slabs; meters; meter circuits extending from said bus bars to and through said meters and thence to said meter bars upon said side slabs; and switch plugs connecting meter bars and load bars whereby complete circuits are provided for current from bus bar to bus bar, each such complete circuit comprising one of said meter circuits in series with one or more of said load circuits, substantially as described.



2. In a panelboard, a structure comprising two insulating slabs, the first of which is a main slab and comparatively broad, and the second of which is an auxiliary slab and narrow as compared with said main slab; bus power terminals and circuit-controlling switches located upon said main slab; load-terminal bars located upon one side of said auxiliary slab; load circuits extending from a first bus power terminal and through a switch and adapted to extend thence by house wiring to and through the load elements and return, and thence extending to said load-terminal bars; meter-terminal bars located upon the other side of said auxiliary slab; meter circuits extending from a second bus power terminal and through a meter to said meter-terminal bars; and means for inter-connecting said load-terminal and said meter-terminal bars; said auxiliary slab being set in front of the plane of said main slab so as to render the face of said main slab and both sides of said auxiliary slab simultaneously accessible to the manipulator of the panelboard, substantially as described.

3. In a panelboard, a structure comprising two insulating slabs, the first of which is a main slab and comparatively broad, and the second of which is an auxiliary slab and narrow as compared with said main slab; bus power terminals and circuit-controlling switches located upon said main slab; load-terminal bars located upon one side of said auxiliary slab; load circuits extending from a first bus power terminal and through a switch and adapted to extend thence by house wiring to and through the load elements and return, and thence extending to said load-terminal bars; meter-terminal bars located upon the other side of said auxiliary slab; meter circuits extending from a second bus power terminal and through a meter to said meter-terminal bars; and means for interconnecting said load terminal and said meter-terminal bars; said main slab and said auxiliary slab being set at an angle to each other so as to render the face of said main slab and both sides of said auxiliary slab simultaneously accessible to the manipulator of the panelboard, substantially as described.

4. In a panel-board, a structure comprising two insulating slabs, the first of which is a main slab and comparatively broad, and the second of which is an auxiliary slab and narrow as compared with said main slab; bus power terminals and circuit-controlling switches located upon said main slab; load-terminal bars located upon one side of said auxiliary slab; load circuits extending from a first bus power terminal and throug a switch and adapted to extend thence by house wiring to and through the load elements and return, and thence extending to said load-terminal bars; meter-terminal bars located upon the other side of said auxiliary slab; meter circuits extending from a second bus power terminal and through a meter and to said meter-terminal bars; and switch plugs passing through said auxiliary slab and interconnecting said load-terminal and said meter-terminal bars; said main slab and said auxiliary slab being set at an angle to each other so as to render the face of said main slab and both sides of said auxiliary slab simultaneously accessible to the manipulator of the panelboard, substantially as described.

5. In a switchboard, two plates or insulating material; terminal bars of two classes; the bars of one class being included between said two plates of insulating material and the bars of the second class being mounted upon the outer face of one of said insulating plates and running transversely of said first bars; said insulating plate thus included between the two classes of bars being provided with holes through the plate, one hole at each crossing of any two bars of the two classes respectively, said bars also being perforated to correspond with such holes in the insulating plate; and switch plugs adapted to pass through any outer bar and to screw into an inner bar, thereby constituting a universal switch for connecting any two bars of different classes, substantially as described.

959,763. BEDCLOTHES-HOLDER. WILLIAM J. LEHR, East Palestine, Ohio. Filed Sept. 28, 1909. Serial No. 520,004.



1. In a bed clothes holder the combination of an angled plate, one member of said angled plate provided with elongated slots, a U-shaped spring secured to the vertical member of the vertical plate, one member of said U-shaped spring having an inward bent upper portion, a block secured to the spring member, said holding block provided with a semi-circular recess and a holding pin provided with a flat surface, said flat surface adapted to abut against the outer member of the U-shaped spring, substantially as and for the purpose specified.

2. In a bed clothes holder of the class described, the combination of a U-shaped spring, means for securing said U-shaped spring in fixed position, a block secured to said U-shaped spring and a detachable retaining pin adapted to be clamped between the block and one of the members of the U-shaped spring, said holding pin provided with a flat surface, substantially as and for the purpose specified.

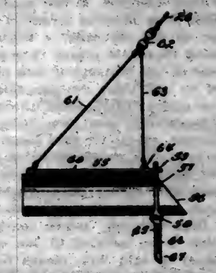
3. In a bed clothes holder of the class described, the combination of an angled plate, said angled plate adjustably connected to the bedstead structure, a U-shaped spring secured to said angled plate, the free ends of said U-shaped spring extended above the top of the angled plate, one member of said spring provided with a recessed element, a detachable clothes holding pin, said detachable pin provided with a flat surface adapted to abut against the flat surface of one of the spring arms and the other surface with the recessed element, all arranged, substantially as and for the purpose specified.

959,764. SOUNDING APPARATUS. CHARLES S. LENZ, New York, N. Y. Filed Mar. 13, 1909. Serial No. 483,222.

1. An apparatus of the class described comprising a reel, a cable wound upon the reel, a shaft, a fixed electrically connected contact element, a movable electrically connected contact element, an alarm, an electric source, a trailer carried by the cable, and connections between the contact element and the said source and alarm respectively.

2. In a sounding apparatus, a cable, a trailer carried by the cable, a locking member carried by the trailer, and a pivoted member carried by the trailer and adapted to be engaged with the said locking member so that the said pivoted member will lie at right angles to the trailer.

3. In a sounding apparatus, a cable, a trailer carried by the cable, an arm carried by the trailer and adapted for engagement with the same to hold it at times in a horizontal position, and a scoop carried by said arm and disposed normally at right angles to the trailer.

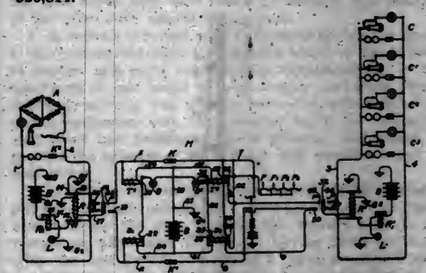


4. In a sounding apparatus, a cable, a swivel at one end of the cable, a trailer, connections between the swivel and the trailer, a pivotally mounted arm carried by the trailer and adapted to hold the same at times in a horizontal position, and a scoop carried by the arm and disposed normally beneath the trailer and at right angles thereto.

5. In a sounding apparatus, a cable, a trailer connected with the cable adapted to assume a horizontal position, and obstruction operated means when the trailer assumes a horizontal position whereby the trailer will be free for angular swinging movement and free to rise to the surface of the water.

[Claims 6 to 9 not printed in the Gazette.]

959,765. TELEPHONE SYSTEM. ALBION D. T. LIBBY, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Original application filed May 28, 1909, Serial No. 498,911. Divided and this application filed Nov. 8, 1909. Serial No. 526,814.



1. In a telephone system, a plurality of telephone lines leading from substations to a central exchange, a three-strand cord at said central exchange for connecting two of said lines for conversation, switching means by which said central circuit is connected to said lines, two of said strands connected directly to a common contact of said switching means to complete two independent circuits in said cords.

2. In a telephone system the combination of a plurality of subscribers' lines extending from sub-stations to an exchange, a three conductor link at the exchange for connecting said lines together, said lines terminating in spring jacks, a two conductor plug for said link, two of said strands being connected directly to the same contact of said plug, a cut-off relay, a source of current in said link, a circuit for said relay completed when said plug is inserted into a jack of a line, a talking circuit completed when two of said lines are linked together, said talking circuit and said cut-off relay circuit having but one common point, said source supplying current to said talking circuit through a part of said cut-off relay circuit to said common point.

3. In a telephone system, the combination of a plurality of telephone lines, sub-stations on said lines, an exchange

as to render the face of said main slab and both sides of said auxiliary slab simultaneously accessible to the manipulator of the panelboard, substantially as described.

5. In a switchboard, two plates or insulating material; terminal bars of two classes; the bars of one class being included between said two plates of insulating material and the bars of the second class being mounted upon the outer face of one of said insulating plates and running transversely of said first bars; said insulating plate thus included between the two classes of bars being provided with holes through the plate, one hole at each crossing of any two bars of the two classes respectively, said bars also being perforated to correspond with such holes in the insulating plate; and switch plugs adapted to pass through any outer bar and to screw into an inner bar, thereby constituting a universal switch for connecting any two bars of different classes, substantially as described.

959,763. BEDCLOTHES-HOLDER. WILLIAM J. LEHR, East Palestine, Ohio. Filed Sept. 28, 1909. Serial No. 520,004.



1. In a bed clothes holder the combination of an angled plate, one member of said angled plate provided with elongated slots, a U-shaped spring secured to the vertical member of the vertical plate, one member of said U-shaped spring having an inward bent upper portion, a block secured to the spring member, said holding block provided with a semi-circular recess and a holding pin provided with a flat surface, said flat surface adapted to abut against the outer member of the U-shaped spring, substantially as and for the purpose specified.

2. In a bed clothes holder of the class described, the combination of a U-shaped spring, means for securing said U-shaped spring in fixed position, a block secured to said U-shaped spring and a detachable retaining pin adapted to be clamped between the block and one of the members of the U-shaped spring, said holding pin provided with a flat surface, substantially as and for the purpose specified.

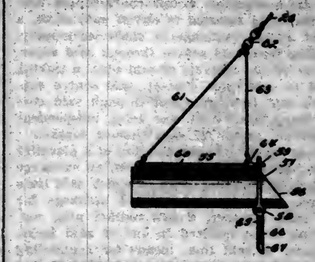
3. In a bed clothes holder of the class described, the combination of an angled plate, said angled plate adjustably connected to the bedstead structure, a U-shaped spring secured to said angled plate, the free ends of said U-shaped spring extended above the top of the angled plate, one member of said spring provided with a recessed element, a detachable clothes holding pin, said detachable pin provided with a flat surface adapted to abut against the flat surface of one of the spring arms and the other surface with the recessed element, all arranged, substantially as and for the purpose specified.

959,764. SOUNDING APPARATUS. CHARLES S. LUNZ, New York, N. Y. Filed Mar. 13, 1909. Serial No. 483,222.

1. An apparatus of the class described comprising a reel, a cable wound upon the reel, a shaft, a fixed electrically connected contact element, a movable electrically connected contact element, an alarm, an electric source, a trailer carried by the cable, and connections between the contact element and the said source and alarm respectively.

2. In a sounding apparatus, a cable, a trailer carried by the cable, a locking member carried by the trailer, and a pivoted member carried by the trailer and adapted to be engaged with the said locking member so that the said pivoted member will lie at right angles to the trailer.

3. In a sounding apparatus, a cable, a trailer carried by the cable, an arm carried by the trailer and adapted for engagement with the same to hold it at times in a horizontal position, and a scoop carried by said arm and disposed normally at right angles to the trailer.

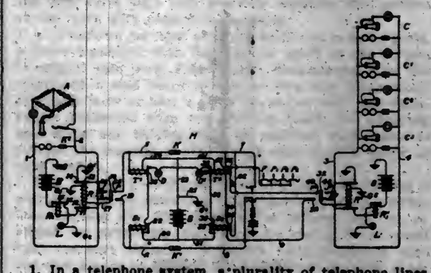


4. In a sounding apparatus, a cable, a swivel at one end of the cable, a trailer, connections between the swivel and the trailer, a pivotally mounted arm carried by the trailer and adapted to hold the same at times in a horizontal position, and a scoop carried by the arm and disposed normally beneath the trailer and at right angles thereto.

5. In a sounding apparatus, a cable, a trailer connected with the cable adapted to assume a horizontal position, and obstruction operated means when the trailer assumes a horizontal position whereby the trailer will be free for angular swinging movement and free to rise to the surface of the water.

[Claims 6 to 9 not printed in the Gazette.]

959,765. TELEPHONE SYSTEM. ALBION D. T. LIBBY, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Original application filed May 28, 1909, Serial No. 498,911. Divided and this application filed Nov. 8, 1909. Serial No. 526,814.



1. In a telephone system, a plurality of telephone lines leading from substations to a central exchange, a three-strand cord at said central exchange for connecting two of said lines for conversation, switching means by which said central circuit is connected to said lines, two of said strands connected directly to a common contact of said switching means to complete two independent circuits in said cords.

2. In a telephone system the combination of a plurality of subscribers' lines extending from sub-stations to an exchange, a three conductor link at the exchange for connecting said lines together, said lines terminating in spring jacks, a two conductor plug for said link, two of said strands being connected directly to the same contact of said plug, a cut-off relay, a source of current in said link, a circuit for said relay completed when said plug is inserted into a jack of a line, a talking circuit completed when two of said lines are linked together, said talking circuit and said cut-off relay circuit having but one common point, said source supplying current to said talking circuit through a part of said cut-off relay circuit to said common point.

3. In a telephone system, the combination of a plurality of telephone lines, sub-stations on said lines, an exchange

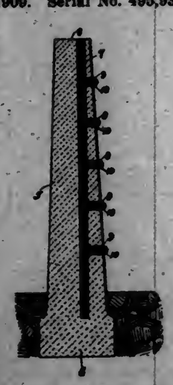
to which said lines lead, spring jacks in which said lines terminate, a three conductor link at said exchange for connecting said lines together, a two contact plug connected to said link to be inserted in one of said jacks, a source of current at the exchange, a supervisory relay, a conductor leading from said source through said supervisory relay to one of the contacts of said plug, a talking strand connected to said same contact, said source supplying current to said talking strand through said contact, said supervisory relay conductor being independent of said talking strand, except for said common contact.

4. In a telephone system, the combination of a plurality of telephone lines, sub-stations on said lines, an exchange to which said lines lead, spring jacks in which said lines terminate, a three conductor link at said exchange for connecting said lines together, a two contact plug connected to said link to be inserted in one of said jacks, a supervisory signal in said link, means for controlling said signal associated with said link, a circuit for said means connected to one of the contacts of said plug, a talking circuit through said plug, the talking circuit being free from the current through the circuit of said supervisory signal controlling means.

5. In a telephone system, the combination of a plurality of telephone lines, sub-stations on said lines, an exchange to which said lines lead, spring jacks, in which said lines terminate, a three conductor link at said exchange for connecting said lines together, a two contact plug connected to said link to be inserted in one of said jacks, a supervisory relay, a circuit therefor leading through a contact of said plug, a talking circuit through said contact, said talking circuit being free from the current through said relay circuit.

[Claim 6 not printed in the Gazette.]

959,766. WIRE-FASTENER. JACOB LIFE, Ridgeville, Ind., assignor of one-half to Lewis Life, Ridgeville, Ind. Filed May 14, 1909. Serial No. 495,937.

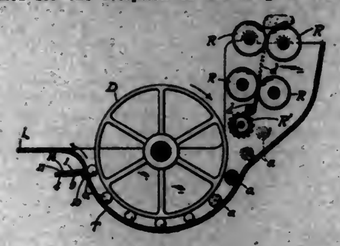


The combination with a fence post having an interior longitudinal recess, and having a slot leading outwardly from said recess and opening through the wall of the post, of a resilient wire staple the legs of which are parallel and engage the end walls of said slot, said legs being bent at right angles for a portion of their length and forming shoulders that snugly engage the front walls of said recess, and are thence extended approximately parallel and disposed in said recess.

959,767. BREAD-LABELING DEVICE. JOHN LIMMER, St. Louis, Mo. Filed Jan. 10, 1910. Serial No. 537,322.

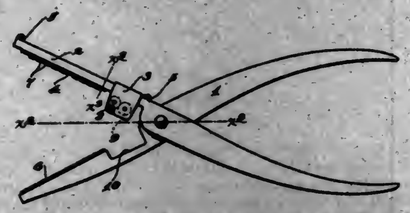
In combination with a trough-shaped bread-label holder having a discharge end positioned in the path of travel of the dough pieces of a bread machine, the terminal wall opposite the discharge end being extended laterally and forming a wing beyond the adjacent side wall of the trough, a bracket-shield or casing for supporting the holder and provided with a terminal wall spaced or sev-

ered from the side walls of the bracket whereby a recess is formed for the reception of the wing of the holder



aforesaid, and longitudinal displacement of the holder prevented.

959,768. CHECK-STAMPING DEVICE. FRANK G. LUNDEEN, Courtenay, N. D. Filed Sept. 25, 1909. Serial No. 519,578.



1. In a stamping device of the kind described, the combination with a pair of intermediately pivoted levers, one of the said levers having a jaw with straight edges and with type secured thereto, a rectangular frame mounted to slide on the straight edged jaw, and a pair of coöperating rollers mounted within said frame, one thereof having an absorbent face adapted to hold ink and the other roller being arranged to engage the face of said type, under a sliding movement of said frame, substantially as described.

2. In a stamping device of the kind described, the combination with a pair of intermediately pivoted levers, the jaw of one of the said levers having straight edges, inner and outer stops and a longitudinally extended detachably secured bar with type thereon, a rectangular frame mounted to slide on the straight edge of said jaw, between said stops, a pair of frictional engaging rollers journaled in said frame, one thereof having an absorbent face adapted to hold ink and the other roller arranged to engage the face of said type, under sliding movements of said jaw, the jaw of the other lever being provided with a matrix bar for engagement with said type, also having a notch affording a clearance for said roller-supporting frame, when the latter is moved inwardly to an operating position, substantially as described.

959,769. ELECTRIC SWITCH. WESLEY DUNCAN RICHARD MACDIARMID, Ottawa, Ontario, Canada, assignor of one-third to Horace Casler Dier and one-third to Claude Elmer Wiltsie, Ottawa, Canada. Filed June 3, 1908. Serial No. 436,231.

1. In an electric switch and in combination, a base, a central post thereon, a depressible member slidably mounted on the end of the post, means for preventing rotation of the same, a tubular reciprocating connecting member also rotatably mounted on the post, connecting means extending between the depressible member and the connecting member, whereby the depression and raising of the depressible member reciprocates the reciprocating member, a commutator mounted on the post and means for communicating the movement of the reciprocating member in one direction only to the commutator.

2. In an electric switch, and in combination, a base, a

central post thereon, having a pin outwardly protruding therefrom, a tubular depressible member mounted on the top of the post, having a longitudinal slot in which the pin extends, a tubular reciprocative connecting member mounted on the shaft having an inclined slot therein, a pin on the depressible member entering said slot, a commutator and means for communicating the movement of the reciprocative member in one direction only to the commutator.



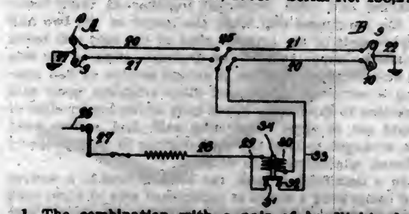
3. In an electric switch, the combination with the brushes, of a binding post consisting of a strip of metal folded on itself to engage the brush between its outer ends, a screw extending through the inner end of the strip adapted to clamp a conducting wire inserted therein, and a flange on one end of the folded strip bent beneath the same, by means of which the binding post may be attached to the base.

4. In an electric switch, the combination with the base and central post thereon, of a casing having a central aperture therein, a screw-threaded member formed on the interior of the aperture, and a pin on the post engaging the screw-threaded member.

5. In an electric switch, the combination with the base, of a casing mounted thereon having a central aperture therein with a spring supported on the interior of the aperture, and means extending from the base and engaging between the coils of the spring, whereby on rotation of the casing and spring, the casing will be clamped to the base.

[Claim 6 not printed in the Gazette.]

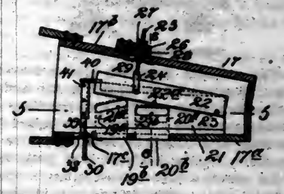
959,770. HEADLIGHT. ROB ROY MACDONALD, Woodbury, N. J. Filed June 13, 1908. Serial No. 438,271.



1. The combination with a pair of headlights for an electric car each containing a vacuum bulb equipped with a pair of filaments, of a ground connection connected with one of the ends of each of said filaments, a double pole double throw switch having two pairs of its terminals connected respectively with the ungrounded terminals of said filaments, a conductor adapted to be connected with a source of current supply having two branches connected respectively with the remaining terminals of said double pole double throw switch, a magnet coil included in one of said branches and an armature operated by said magnet coil adapted to break said second branch when current is passing through said first named branch.

2. The combination with a pair of headlights for an electric car each equipped with a pair of filaments, of a ground connection connected with one of the ends of each of said filaments, a double pole double throw switch having two pairs of its terminals connected respectively with the ungrounded terminals of said filaments, a conductor adapted to be connected with the source of current supply having two branches connected respectively with the remaining terminals of said double pole double throw switch, a magnet coil included in one of said branches, and an armature operated by said magnet coil adapted to break said second branch when current is passing through said first named branch.

959,771. REVERSIBLE BELLOWS. LOUIS H. MAIER, New York, N. Y., assignor to John H. Ludwig, New York, N. Y. Original application filed Mar. 22, 1906, Serial No. 307,342. Divided and this application filed Sept. 28, 1907. Serial No. 394,964.



1. A bellows provided with a plurality of interior ports connected to different coöperating chambers whereby the flow through the bellows may be reversed, and a valve connected with the movable board of the bellows to control said ports substantially simultaneously by the movements of said board.

2. A reversible bellows provided with a plurality of interior ports, an adjustable valve seat having ports to co-act with the first named ports, to vary the position of the ports with respect to the movable board of the bellows, and a valve to co-act with the second named ports, said valve being connected with the movable board of the bellows whereby said ports will be controlled in substantially similar degree during the movement of said movable board to permit the direction of air flow to be reversed.

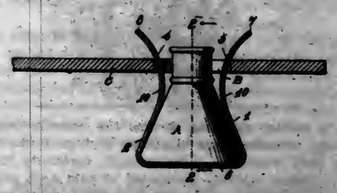
3. A bellows provided with a plurality of interior ports, a valve connected with the movable board of the bellows to control said ports substantially simultaneously by the movements of said board to open or close said ports simultaneously more or less, and means for adjustably connecting said valve with said board to regulate the position of the valve with respect to the ports.

4. A bellows provided with a plurality of interior ports, a valve connected with the movable board of the bellows to control said ports substantially simultaneously by the movement of said board to open or close said ports simultaneously more or less, a screw connected with said valve, means connected with the movable board for adjusting said screw and holding it in set position, and means to prevent the passage of air through said movable board at said screw.

5. A bellows provided with an interior block having a plurality of ports connected to different coöperating chambers whereby the flow through the bellows may be reversed, an adjustable valve seat having ports to co-act with the first named ports, and a valve connected with the movable board of the bellows to control the flow of air through said ports.

[Claims 6 and 7 not printed in the Gazette.]

959,772. INK-BOTTLE HOLDER FOR DESKS. VIRGINIA D. MANEZ, Hallettsville, Tex. Filed Feb. 13, 1909. Serial No. 477,881.



An ink bottle holder comprising a resilient wire oblong loop bent to form a substantially U-shaped member with the cross bars and legs formed by the respective sides of the loop spaced laterally apart.

959,773. PRINTING-MACHINE. MILES H. MANN, Louisiana, Mo., assignor to Buffum Tool Company, Louisiana, Mo., a Corporation of Missouri. Filed Dec. 27, 1909. Serial No. 535,159.



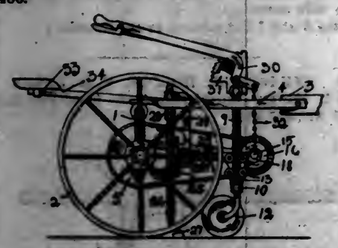
1. A printing machine provided with a movable member, a type-carrying member arranged on the under side of same, a locking device on one of said members arranged within the marginal edges of same and adapted to engage the other member and thus lock it in operative position, said locking device having a shank that projects into an opening in the member that carries same, a shoulder on said shank, and a slide carried by one of said members and provided with an inclined surface that is adapted to engage said shoulder and move said locking device into an inoperative position.

2. A printing machine provided with a movable member, a type-carrier arranged on the under side of same, a spring-actuated locking pin on said movable member arranged within the marginal edges of same and adapted to engage said type-carrier to lock it in position, said pin projecting upwardly through said movable member, and a slide arranged on the top face of said movable member for engaging said locking pin to move it into an inoperative position.

3. A printing machine provided with a movable member having a dove-tailed rib on the under side of same, a type-carrier provided in its upper face with a groove that receives said rib, a spring-actuated locking pin mounted in said movable member and projecting upwardly through same, said type-carrier being provided in its top face with a notch or recess for receiving said pin, a slide arranged on the upper side of said movable member and provided with an inclined surface, and a shoulder on said pin that is adapted to be engaged by said inclined surface.

4. A printing machine provided with a movable member having a dove-tailed rib on the under side of same, a type-carrier provided in its upper face with a groove for receiving said rib, a spring-actuated locking pin arranged in an opening in said movable member and having its upper end bifurcated, a notch or recess in the top face of said type-carrier for receiving said pin, a manually-operated slide mounted on the upper side of said movable member and projecting into the bifurcated portion of said locking pin, said slide having an inclined surface, and a cross-piece on said locking pin under which the inclined surface of said slide passes.

959,774. COTTON-CHOPPING MACHINE. JOHN M. MARTIN, Frisco, Tex. Filed Oct. 19, 1908. Serial No. 458,486.

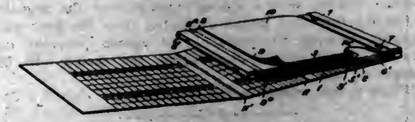


1. In a cotton chopping device, the combination of a main frame provided with depending arch portions, wheels carrying said frame, an independently vertically movable secondary frame slidably connected to said arch portions, the entire support for said secondary frame being approximately in a plane with said depending arch portions, a chopping device carried by said secondary frame, and driving connections for said chopping device operated from said wheels the slidable connection between said secondary frame and depending arch portions comprising oppositely disposed series or rollers on the secondary frame bearing upon said depending arch portions.

2. In a cotton chopping device, the combination with a main frame provided with depending arch portions, wheels carrying said main frame, an independently vertically movable secondary frame slidably connected to said extensions, the entire support for said secondary frame being approximately in a plane with said depending arch portions, a chopping device carried by said secondary frame, and driving connections for said chopping device operated from said wheels in combination with a pair of ground rollers connected to the secondary frame whereby the latter will be automatically raised and lowered.

3. In a cotton chopping device, the combination of a main frame provided with depending arch portions wheels carrying said main frame, an independently vertically movable secondary frame slidably connected to said depending arch portions, friction rollers mounted on said secondary frame and adapted to engage the opposite sides of said depending arch portions, the entire support for said secondary frame being approximately in a plane with said depending portions, a chopping device carried by said secondary frame, driving connections for said chopping device operated from said wheels and means positioned approximately above said slidable connections for raising and lowering said secondary frame.

959,775. MANIFOLDING-BOOK. BERT C. MAXWELL, Canton, Ohio, assignor to Julius Whiting, Jr., trustee, Canton, Ohio. Filed June 17, 1907. Serial No. 379,453.



1. In a manifolding book, the combination of a section or pad comprising a series of superposed sets of slips, each set having two slips connected together at their lower ends, the lowermost slip being the longer of the two and the upper ends of the original slips of the said sets being free and the upper ends of the duplicate slips of the sets being suitably held together, a second section or pad comprising a series of superposed slips arranged upon said first section to expose the upper ends of the longer slips of the said set of slips comprising said first section, and means arranged to hold the said sections or pads properly positioned relative to each other.

2. In a manifolding book, the combination of a section or pad comprising a series of superposed sets of slips, each set having two slips connected together at their lower ends, the lowermost slip being the longer of the two and the upper ends of the original slips of the said sets being free and the upper ends of the duplicate slips of the set being suitably held together, a second section or pad comprising a series of superposed slips arranged upon said first section to expose the upper ends of the longer slips of the set of slips comprising said first section, means arranged to hold the said sections or pads properly positioned relative to each other, and suitable transfer medium between the two slips of the set of slips in use, and between the lowermost slip of said set and the uppermost slip in said second section or pad.

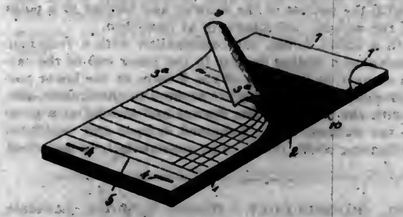
3. In a manifolding book, the combination of a section or pad comprising a series of superposed sets of slips, each set having two slips connected together at their lower ends, the upper ends of the original slips of the said sets being free and the upper ends of the duplicate slips of the sets being suitably held together, a transfer sheet suitably held to be interposed between the slips of each of said sets when in use, a second section or pad arranged upon said first section and comprising a series of superposed slips, a second transfer sheet arranged to lie upon the uppermost slip of said second section and between it and the lowermost slip of the set of slips of said first section in use, and means arranged for holding the said sections properly positioned relative to each other, the said means permitting the withdrawal of a set of slips of the first section from beneath the said second section.

4. In a manifolding book, the combination of a section or pad comprising a series of superposed sets of slips, each set made from a piece of paper folded intermediate of its ends to form two slips connected together at their lower ends of which the original slip is shorter than the duplicate slip, a second section or pad comprising a series of superposed slips arranged upon said first section to expose the upper ends of the longer slips comprised in said first section, means engaging the upper ends of the said longer slips and also engaging the said slips of the said second section to hold the sections or pads properly positioned relative to each other, a suitable transfer medium to be interposed between the slips of each set of slips of said first section when they are in use, and a suitable transfer medium interposed between the duplicate slips of said set of slips in use and the top slip of said second section.

5. In a manifolding book, the combination of a section or pad comprising a series of superposed sets of slips, each set having two slips connected together at their lower ends, and the original slip of each set being shorter than the one to which it is connected, a second section comprising a series of superposed slips arranged upon said first section so as to always leave exposed above the upper ends of said second section a portion of the original slip of the topmost set of slips of the first section, and means arranged to engage the upper ends of the longer slips of said first section and the lower ends of the slips of said second section to hold the said sections properly positioned relatively to each other.

[Claims 6 to 9 not printed in the Gazette.]

959,776. MANIFOLDING-BOOK. BERT C. MAXWELL, Canton, Ohio, assignor to Julius Whiting, Jr., trustee, Canton, Ohio. Filed June 17, 1907. Serial No. 379,454.



1. In a manifolding book, the combination of a series of superposed alternately arranged original and duplicate slips, the latter being shorter than the former, means arranged at one end of said slips for holding them in pad form, a transfer sheet, and a holder for said transfer sheet arranged adjacent to the free ends of said original slips and having a cut-away portion at a point beyond the free ends of said duplicate slips adapted to expose, one after the other, the corners of the portions of the free ends of the original slips which extend beyond the free ends of the duplicate slips.

2. In a manifolding book, the combination of series of superposed alternately arranged original and duplicate slips, the latter being shorter than the former, means arranged at one end of said slips for holding them in pad form, a transfer sheet, a suitable back, and a holder for said transfer sheet flexibly connected to said back, arranged adjacent to the free ends of said original slips and having a cut-away portion at a point beyond the free ends of said duplicate slips adapted to expose, one after the other, the corners of the portions of the free ends of the original slips which extend beyond the free ends of the duplicate slips.

3. In a manifolding book, the combination of a series of superposed alternately arranged original and duplicate slips, the latter being shorter than the former, a back provided at one end with a pocket to receive the free ends of said original slips and having its upper wall cut away at one end to expose, one after the other, corners of the portions of the free ends of the original slips which extend beyond the free ends of the duplicate slips, means for holding the original and duplicate slips in pad form arranged at the other end of said back, and a transfer sheet arranged to be interposed between the original and duplicate slips in use.

4. In a manifolding book, the combination of a series of superposed alternately arranged original and duplicate slips, the latter being shorter than the former, a back provided at one end with a pocket to receive the free ends of said original slips and having a cut-away portion in its upper wall at a point beyond the free ends of said duplicate slips adapted to expose, one after the other, the corners of the portions of the free ends of the original slips which extend beyond the free ends of the duplicate slips, and a transfer sheet having its upper end connected to the upper wall of said pocket.

5. In a manifolding book, the combination of a series of superposed alternately arranged original and duplicate slips, the latter being shorter than the former, and the duplicate slip for one operation of the book and the original slip for the next being formed from a sheet of paper folded intermediate of its ends, means arranged at the connected ends of said slips for holding them in pad form, a transfer sheet, and a holder for said transfer sheet arranged adjacent to the free ends of said original slips and having a cut away portion at a point beyond the free ends of said duplicate slips adapted to expose, one after the other, the corners of the portions of the free ends of the original slips which extend beyond the free ends of the duplicate slips, whereby when the said exposed corner of the original slip next beneath said transfer sheet is grasped and the said original slip is withdrawn from beneath the transfer sheet, the duplicate slip immediately above said original slip is carried out from beneath said transfer sheet.

[Claims 6 to 9 not printed in the Gazette.]

959,777. SMOKE-CONVEYING ATTACHMENT FOR RAILWAY-TRAINS. ALLEN MAY, Philadelphia, Pa. Filed Jan. 15, 1910. Serial No. 538,202.



1. The combination with pipes adapted to be carried by movable members, of a coupling connecting the ends of said pipes, said coupling comprising two members, and means for adjusting the diameter of said coupling members at their free ends, whereby either member may be positioned inside the other, substantially as described.

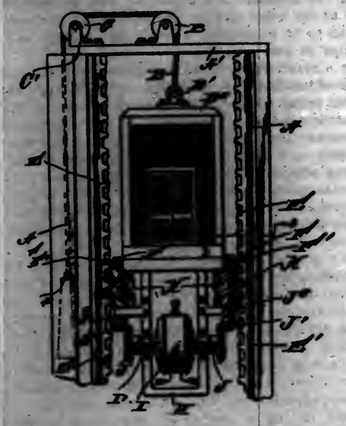
2. The combination with pipes adapted to be carried by movable members, of a coupling connecting the ends of said pipes and comprising two members, devices at the free ends of both of said members for contracting said members, and other devices at the free ends of said members for expanding said members, substantially as described.

3. The combination with pipes adapted to be carried by movable members, of a coupling connecting the ends of said pipes, said coupling comprising two members, each member consisting of a flexible tube, clamps securing said tubes around the smoke pipes, a spring inside of each tube at its free end, and a clamp around the outside of each tube at its free end, substantially as described.

959,778. ELEVATOR APPARATUS. PETER H. MELANDER, Tacoma, Wash. Filed Jan. 16, 1909. Serial No. 472,719. Renewed Oct. 25, 1909. Serial No. 524,584.

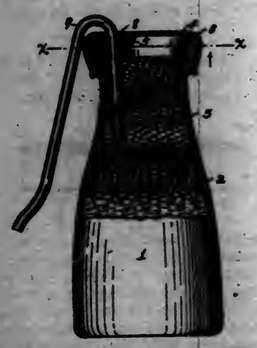
In combination with an elevator car, a shaft having worm tracks thereon, vertically mounted worms carried by the car and engaging said tracks, a motor carried by

the car, gear connections between the same and said worms, bracket guide members fixed to the car and having arms, each of which is concaved upon its inner edge, the opposite sides of said tracks having convexed portions



over which the concaved parts of said arms extend, each of said arms being bent at a right angle and extending longitudinally with said tracks behind said convexed portions, as set forth.

959,779. SIPHON. ARTHUR C. MILLS, Toledo, Ohio, assignor to E. G. Lawrence, Toledo, Ohio. Filed July 23, 1909. Serial No. 509,212.



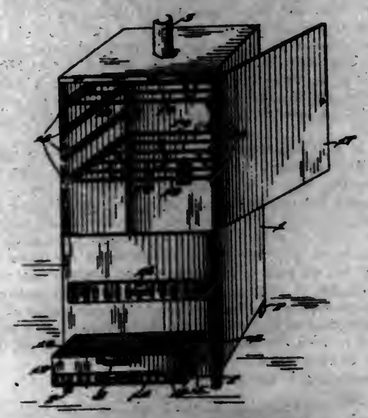
1. A siphon device, comprising a cap adapted to fit air-tight over the mouth of a receptacle and having a flexible diaphragm, said diaphragm having a vent opening and being thickened contiguous to one side of the receptacle mouth and provided with an opening, and a siphon-tube projected through such opening.

2. A siphon device, comprising a member of resilient material adapted to fit air tight over the mouth of a receptacle and having a vent opening therein, said member having a thickened portion at one side thereof adapted to coact with the receptacle rim, and a siphon-tube projected through such thickened portion.

3. In a siphon device, the combination with a bottle, of a cap adapted to fit air-tight over the neck of the bottle and having an air-vent therein, said cap having a compressible portion over the bottle mouth, a firm portion disposed at one side of the compressible portion and adapted to retain its normal position relative to the bottle neck when said compressible portion is compressed, and a siphon tube projected through the firm portion of the cap, substantially as described.

4. In a siphon device, the combination with a bottle, of a cap of flexible material fitted air tight over the neck of the bottle and having its diaphragm formed at one side thereof with a thickened portion which shoulders against the bottle rim to maintain it substantially rigid relative to the bottle, said thickened portion having two openings therethrough, and a siphon-tube projected through one of such openings.

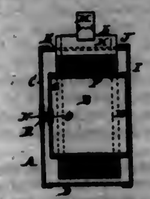
959,780. SMOKE-HOUSE. VICTOR MOLITOR, Swedesboro, N. J. Filed Dec. 29, 1909. Serial No. 535,462.



1. In a smoke house, the combination with a rectangular casing, of a sliding drawer in the lower end of the casing, a damper in the front of the drawer at the lower portion thereof, a perforated plate secured in the drawer, parallel with the bottom of the drawer, and located at a point above the damper, substantially as described.

2. In a smoke house, the combination with a rectangular casing, of a sliding drawer in the lower end of the casing, a damper in the front of the drawer at the lower portion thereof, a perforated plate secured in the drawer, parallel with the bottom of the drawer and located at a point above the damper, and a combined damper and ventilator in said casing above the drawer, substantially as described.

959,781. RIBBON-BOLT. HARVEY S. MOYER, Lansdale, Pa., assignor of one-half to Menno S. Moyer, Lansdale, Pa. Filed July 31, 1908. Serial No. 446,229.



1. In a ribbon bolt, the combination of a hollow drum of card-board upon which the ribbon is rolled having at one end a flanged head of approximately the diameter of the drum and at the other end having a flanged head of a diameter greatly in excess of the diameter of the drum, a case of larger diameter than the drum closed at one end and its open end adjustably fitting the large flanged head of the drum and also having a slot for the passage of the ribbon, means independent of the structure of the drum for detachably locking the drum and case together consisting of a snap socket piece on the center of the closed end of the case, and a headed stud on the center of the drum and of greatly less diameter than it adapted to snap into the

socket piece, and the ribbon rolled upon the drum and having its end arranged through the slot in the case.

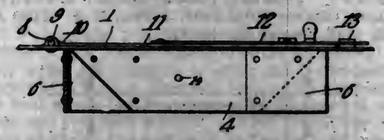
2. In a ribbon bolt, the combination of a sheet material drum for the ribbon having a flanged head of large diameter, a cylindrical box-shaped case of sheet material and of greater depth than the depth of the drum for inclosing the drum and having its open end adjustably fitted to the flanged head and also having its cylindrical body slotted from the open end inward for the ribbon, and a clamping pivot independent of the drum and case between the center of the drum and the center of the closed end of the cylindrical case for centering them relatively to each other and detachably holding them together.

3. In a ribbon bolt, the combination of a cylindrical slotted case open at one end and formed of a stamped sheet with an annular flange within which is secured the slotted case, a ribbon supporting hollow drum of sheet material journaled within the case and having a flanged head of large diameter fitting over the open end of the cylindrical case, means for detachably locking the case and hollow drum together while permitting of the rotation of the drum portion, and a ribbon wound upon the drum and having its end extended through the slot in the case.

4. In a ribbon bolt, the combination of a drum upon which the ribbon is rolled formed of flanged head with a tubular interposed body and a flanged head of large diameter secured to one end of the said drum, a case of larger diameter than the drum closed at one end and its open end adjustably fitting the large flanged head of the drum and also having a slot for the passage of the ribbon extending beyond the flange, means for detachably locking the adjacent head of the drum and closed end of the case together, and the ribbon rolled upon the drum and having its end arranged through the slot in the case.

5. A ribbon support consisting of a case formed of a cylindrical slotted body of card-board closed at one end by a cardboard flanged head, combined with a cylindrical drum of smaller diameter than the body and having at one end a large flanged head of card-board the flange of which fits over the open end of the cylindrical slotted body, whereby the drum is centrally supported and may be rotated.

959,782. METAL DOOR. SAMUEL F. MYERS, Los Angeles, Cal. Filed July 13, 1909. Serial No. 507,391.



1. A door frame consisting of a sheet metal plate having integral wings extending perpendicularly therefrom along lines removed from the outer edges of the plate, and corner irons connecting the ends of adjoining wings.

2. A door frame including a sheet metal plate having diametrical incisions therein forming wings therebetween, said wings being extended perpendicularly to the plate and angular corner irons secured upon the adjoining ends of the wings.

3. A door frame including a sheet metal plate having diametrical incisions forming wings therebetween, said wings being extended at right angles to the plate, corner irons fixedly secured upon the end portions of the wings, and closing the spaces therebetween, and pintle-receiving eyes struck from the plate, there being recesses within said plate and adjacent the eyes.

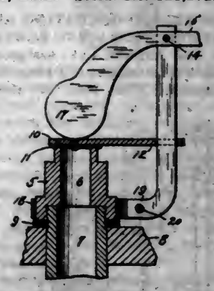
959,783. APPARATUS FOR PRODUCING BURNT-WOOD ARTICLES. FRANK G. MCALPIN, Forreston, Ill. Filed Apr. 5, 1909. Serial No. 488,151.

The combination with a bed having a series of centrally disposed transverse openings therethrough, of a heating plate adapted to receive an impression plate and located in front of the bed in spaced relation thereto and extending across the openings, spacing ribs interposed between the bed and plate and extending between the openings, forming flues with which said openings communicate, and burners disposed transversely to the bed and plate



and having their front discharge ends located in the openings and terminating short of the heating plate, said ends directing the heating medium against the rear face of the plate, and said plate causing the heating medium to be deflected in opposite directions in the flues.

959,784. VALVE. SAMUEL E. MCKNIGHT, Lohn, Tex. Filed Oct. 29, 1909. Serial No. 525,271.



1. A valve comprising a body having a seat at one end, a guide carried by the body, a disk engageable with the seat, an arm on the disk having an opening to receive the guide, said arm being slidable on the guide in a right line toward and from the seat, and a float lever engageable with the back of the disk.

2. A valve comprising a body having a seat at one end, a disk engageable with the seat, a band encircling the body, and adjustable thereon, standards rising from the band, an arm on the disk having an opening to receive the standards, said arm being slidable on the standards toward and from the seat, and a float lever fulcrumed on the standards, and engageable with the back of the disk.

3. A valve comprising a body having a seat at one end, a disk engageable with the seat, a band encircling the body, ears projecting from the ends of the band, a clamping means passing through the ears for adjustably securing the band on the body, standards rising from the ears, an arm on the disk having an opening to receive the standards, said arm being slidable on the standards toward and from the seat, and a float lever fulcrumed on the standards, and engageable with the back of the disk.

959,785. METHOD OF REDUCING METALS. ROBERT J. MCNITT, Niagara Falls, N. Y., assignor to Roessler and Hasslacher Chemical Company, New York, N. Y., a Corporation of New York. Filed Sept. 9, 1909. Serial No. 516,919.

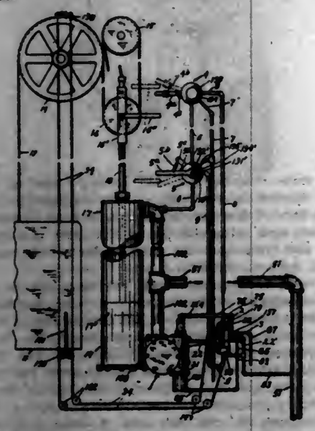
1. The method of reducing a metal from its compounds which consists in dissolving, alloying or chemically combining said metal with another metal or mixture of metals less volatile than the metal desired, submitting the resultant solution, alloy or compound to a pressure lower than that due to the atmosphere and to a temperature suitable for the distillation of the metal desired.

2. The method of reducing a metal from its compounds which consists in dissolving, alloying or chemically combining said metal with another metal or mixture of metals less volatile than the metal desired, submitting the resultant solution, alloy or compound to a pressure lower than that due to the atmosphere and maintaining the same at a temperature suitable for the distillation of the metal desired.

3. The method of reducing a metal from its compounds which consists in dissolving, alloying or chemically combining said metal with another metal or mixture of metals less volatile than the metal desired, submitting the resultant solution, alloy or compound to a pressure lower than that due to the atmosphere, maintaining the same at a temperature suitable for the distillation of the metal desired, redissolving, realloying or chemically recombining a fresh supply of the metal desired with the residual metal and indefinitely repeating the operation substantially as described.

4. The method of reducing a metal from is compounds which consists in dissolving, alloying or chemically combining said metal with another metal or mixture of metals of different volatility from that of the metal desired, submitting the resultant solution, alloy or compound to a pressure lower than that due to the atmosphere and maintaining the same at a temperature suitable for the separation of the metals from each other by distillation.

959,786. COMBINED OPERATING AND CONTROLLING MEANS FOR HYDRAULIC ELEVATORS. SPENCER G. NEAL, Los Angeles, Cal., assignor to California Valve and Air Brake Company, Palms, Cal., a Corporation of California. Filed Mar. 31, 1909. Serial No. 487,065.



1. In a hydraulic elevator, the combination, with the main hoisting cylinder, piston therein, elevator car, and tiller connections, of an inner tiller wheel, an outer tiller wheel operatively connected with said connections, said outer tiller wheel being disconnectively mounted on said inner tiller wheel to normally rotate therewith, a shaft to which said inner wheel is fixed, means to automatically disconnect said inner wheel from said outer wheel when the elevator car approaches one of the limits of its travel, and means to automatically stop said piston after the disconnection of the outer tiller wheel from the inner tiller wheel.

2. In a hydraulic elevator, the combination, with the main hoisting cylinder, piston therein, elevator car and tiller connections, of a tiller wheel operated by said connections, a main valve to control the operation of said piston, devices between said wheel and main valve to operate the same, and means to automatically close the valve and disconnect said wheel from said devices when the elevator car approaches one of the limits of its travel.

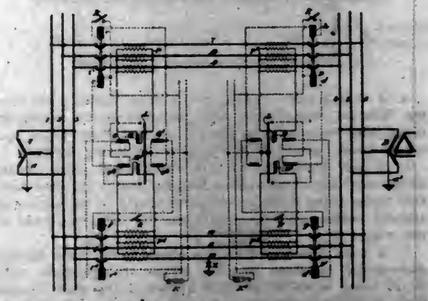
3. In a hydraulic elevator, the combination with the main hoisting cylinder, elevator car, and tiller connections, of a tiller wheel operated by said connections, a main valve to control the operation of said piston, devices between said wheel and said main valve to operate the same, means to automatically disconnect said wheel from said devices when the elevator car approaches one of the limits of its travel, and means to automatically operate said main valve after the disconnection of said wheel from said mechanism.

4. In a hydraulic elevator, a double tiller wheel comprising an inner and an outer wheel, a dog carried by one of said wheels and normally engaging the other wheel to cause said wheels to rotate together, means to operate said dog when the elevator car approaches a limit of its travel to disconnect said wheels from each other to rotate independently, and means to automatically cause said dog to connect said wheels together again when the tiller ropes are brought to a position mid-way between the limits of their extreme travel.

5. In a hydraulic elevator, a double tiller wheel consisting of an inner and an outer wheel, a dog carried by one of said wheels and normally engaging the other wheel to cause said wheels to rotate together, a pressure supply, a limit cylinder operatively connected with said supply, a plunger in said cylinder and means operated thereby to operate said dog, a valve to control the supply of fluid to said cylinder, and means to automatically operate said valve when the elevator car approaches one of the limits of its travel.

[Claims 6 to 27 not printed in the Gazette.]

959,787. CIRCUIT-CONTROLLING APPARATUS. LLOYD CARLTON NICHOLSON, Buffalo, N. Y. Filed July 22, 1908. Serial No. 444,711.



1. Two polyphase transmission lines connected at each end, a circuit breaker in each, a relay arranged to actuate either of said circuit breakers but normally ineffective, means for producing currents corresponding respectively to the algebraic sum of the currents in the two transmission lines, and means for causing said currents to simultaneously act upon said relay.

2. Two polyphase transmission lines connected at each end, a circuit breaker in each, means dependent upon the flow of current to a fault for producing currents corresponding respectively to the algebraic sums of the currents in the two transmission lines, and means for causing said currents to coöperatively act to open the circuit breaker in the faulty line without affecting the other.

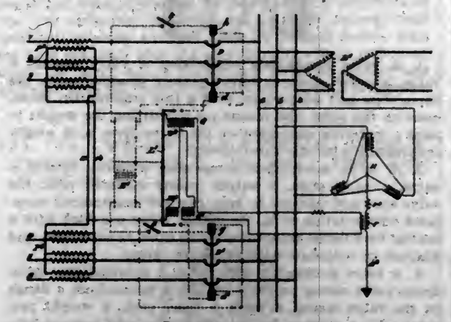
3. Two transmission lines connected at each end, a circuit breaker in each, conductors normally without current, means for producing two currents determined by the flow of current to a fault in a transmission line and means supplying said currents to said conductors, and for causing said currents to coöperatively act to open the circuit breaker in the faulty line without affecting the other.

4. The combination with a polyphase power station, a receiving station, and two transmission lines connected to the buses at each station, of a series transformer in each conductor of each line, the transformers having their secondaries connected in parallel, a coil in the circuit of each set of connected secondaries, a relay oppositely acted upon by said coils, and a circuit breaker in each transmission line in operative relation to said relay.

5. Two polyphase transmission lines connected at each end, a circuit breaker in each, and a relay arranged to operate either breaker and to be acted upon oppositely by currents each corresponding in value to the algebraic sum of the currents of the phases of one of the transmission lines.

[Claims 6 to 34 not printed in the Gazette.]

959,788. CIRCUIT-CONTROLLING APPARATUS. LLOYD CARLTON NICHOLSON, Buffalo, N. Y. Filed July 22, 1908. Serial No. 444,712.



1. Two parallel polyphase transmission lines, a circuit breaker in each, means responsive to the development of a fault in any one conductor of either line for producing a current with a phase depending upon which line contains the fault, means also responsive to the development of the fault for producing another current having the same phase whichever line is at fault, and means acted upon cooperatively by said currents and acting selectively according to the relative phases thereof for actuating the circuit breaker in the faulty line.

2. Two parallel polyphase transmission lines, a circuit breaker, means responsive to the development of a fault for producing a current with a phase depending upon which line contains the fault, means also responsive to the development of the fault for producing another current having the same phase whichever line is at fault, and means acted upon coöperatively by said currents for actuating the circuit breaker.

3. Two parallel polyphase transmission lines, a circuit breaker, means responsive to the development of a fault for producing a current with a phase depending upon which line contains the fault, means also responsive to the development of the fault for producing another current having the same phase whichever line is at fault, a movable member operatively arranged to actuate said circuit breaker, a coil receiving said first mentioned current and means for causing the current in said coil when of a given phase to move said member to actuate the circuit breaker.

4. Two parallel polyphase transmission lines, a circuit breaker, means responsive to the development of a fault for producing a current with a phase depending upon which line contains the fault, means also responsive to the development of the fault for producing another current having the same phase whichever line is at fault, a movable member operatively arranged to actuate said circuit breaker, a coil receiving said first mentioned current and means for causing the current in said coil to oppositely move said member according to the phase of said current.

5. Two parallel polyphase transmission lines, a circuit breaker in each, means for producing two electro-motive-forces determined by the algebraic sums of the currents of the two transmission lines, a circuit to which both of said electro-motive-forces are applied, and means for selectively actuating said circuit breakers according to the phase of the current in said circuit.

[Claims 6 to 29 not printed in the Gazette.]

959,789. PLANT-SUPPORT. LEWIS W. NIED, Akron, Ohio. Filed Sept. 22, 1909. Serial No. 519,000.



1. A plant support comprising a standard formed of upright lateral spaced wires, said wires at intervals being inwardly-bent and engaging each other, the portions of said wires between the engaging portions thereof formed into loops, the lower ends of said wires being downwardly-bent to constitute prongs capable of being inserted in the earth for supporting said standard and a detachable supporting member comprising a broken loop having downwardly-turned juxtapositioned parallel ends, the latter adapted to be passed into one of said loops of said standard and sprung against and extending below the upper portion of the next lower loop.

2. A plant support comprising a standard formed of upright lateral spaced wires, said wires at intervals being inwardly-bent and engaging each other, the portions of said wires between the engaging portions thereof formed into loops, the lateral portions of said loop being approximately parallel, the lower ends of said wires being downwardly-bent to constitute prongs capable of being inserted in the earth for supporting said standard and a detachable supporting member comprising a broken loop having downwardly-turned juxtapositioned parallel ends, the latter adapted to be passed into one of said loops of said standard and sprung against and extending below the upper portion of the next lower loop, the lower ends of said arms being bent to interloch with the lower loop.

959,790. CARRIAGE-TOP REST. ROBERT L. NOTMAN, Buffalo, N. Y., assignor to McKinnon Dash Company, Buffalo, N. Y. Filed Feb. 17, 1908. Serial No. 416,174.

1. In a top rest, the combination of an attaching sleeve adapted to embrace the supporting bolt and comprising a trough-shaped body portion and a separate cover plate therefor, the sides of said body portion being provided with

flanges which extend outwardly therefrom forming a seat for said cover plate, a cushion located on said cover plate, means for securing said cushion in place on said cover plate, and interlocking connections between said flanges and said cover plate which are formed integrally on one of said parts and engage the other part for securing said cover plate in place on said body portion, substantially as set forth.



2. In a top rest, the combination of an attaching sleeve adapted to embrace the supporting bolt and comprising a trough-shaped body portion and a separate cover plate therefor, the sides of said body portion being provided at their upper edges with laterally-extending flanges forming a seat for said cover plate, a cushion located on said cover plate, and locking flanges extending from said lateral flanges and embracing the sides of said cover plate and securing said cover plate and said cushion in place on said body portion, substantially as set forth.

3. In a top rest, the combination of an attaching sleeve adapted to embrace the supporting bolt and comprising a trough-shaped body portion and a separate cover plate therefor, the sides of said body portion being provided at their upper edges with laterally-extending flanges forming a seat for said cover plate, locking flanges at the ends of said cover plate engaging said lateral flanges to secure said cover plate in place on said body portion, a cushion located on said cover plate, and locking flanges extending from said lateral flanges and embracing the sides of said cover plate and securing said cushion in place thereon, substantially as set forth.

959,791. CARRIAGE-TOP REST. ROBERT L. NOTMAN, Buffalo, N. Y., assignor to McKinnon Dash Company, Buffalo, N. Y. Filed Mar. 26, 1908. Serial No. 423,386.



1. In a top rest, the combination of an attaching sleeve comprising a hollow body portion having the form of a horizontal cylinder with a top segment thereof removed, and provided at its top with a longitudinal opening, clamping jaws extending downwardly into said body portion on opposite sides of said opening for engagement with the attaching bolt, and a pad secured to said sleeve above said opening and forming the top segment of said cylindrical body portion, substantially as set forth.

2. In a top rest, the combination of an attaching sleeve comprising a hollow body portion having the form of a horizontal cylinder with a top segment thereof removed, and provided at its top with a longitudinal opening, horizontal top flanges adjacent to the opposite sides of said opening, clamping jaws extending downwardly into said body portion from the inner ends of said flanges for engagement with the attaching bolt, and a pad secured to said horizontal top flanges and forming the top segment of said cylindrical body portion, substantially as set forth.

3. In a top rest, the combination of an attaching sleeve comprising a hollow body portion and a flat top portion having a longitudinal opening therein, clamping jaws extending downwardly from said top portion into said body portion on opposite sides of said opening for engagement with the attaching bolt, a cover plate for said opening, a cushion located on said cover plate, and means for securing said cushion to said cover plate in place on the flat top portion of said sleeve, substantially as set forth.

4. In a top rest, the combination of a sheet metal attaching sleeve comprising a hollow body portion, horizontal top flanges, clamping jaws extending downwardly into said body portion from the inner ends of said flanges and bottom flanges at the lower ends of said jaws, said clamping jaws being adapted to engage the attaching bolt, and a pad secured to said horizontal top flanges, substantially as set forth.

959,792. NON-REFILLABLE BOTTLE. LUCIUS MORTON PACKARD, Brockton, Mass. Original application filed Jan. 15, 1909, Serial No. 472,513. Divided and this application filed July 2, 1909. Serial No. 505,553.



1. A valve mechanism comprising a valve casing, a valve, a valve stem, a weight loosely mounted upon the valve stem and adapted to have a free longitudinal movement on the same, and means for permitting the weight to have a teetering movement on the valve stem, said weight coöperating with the valve casing.

2. A valve mechanism comprising a valve casing, a valve, a valve stem, a weight loosely mounted upon the valve stem and adapted to have relative longitudinal movement with relation to it, the weight being provided with a central bore flared substantially the same at both ends, and adapted to coöperate with the valve casing.

3. A valve mechanism comprising a substantially cylindrical valve casing provided with lateral openings, a flange on the valve casing, a valve, a valve stem, a weight provided with a passage for the valve stem said passage having a substantially uniform flare at either end and said weight being adapted to have longitudinal movement on the valve stem, and a button or stop on the end of the valve stem, the weight being adapted to coöperate with the valve casing.

4. A valve mechanism comprising a substantially cylindrical glass valve casing provided with lateral openings, an integral flange on the valve casing, a glass valve, a glass valve stem integral with the valve, a glass weight provided with a passage for the valve stem said passage having a substantially uniform taper to either end, said weight adapted to have free longitudinal movement on the same, and an integral glass button or stop on the end of the valve stem.

5. In a valve mechanism comprising a valve casing provided with openings, a valve, a rigid valve stem connected to the valve having its lower end provided with a stop to engage with the bottom of the weight, a weight loosely mounted on the valve stem and provided with an opening flared at both ends, the bottom of the weight coöperating with the stop carried by the valve stem.

959,793. ENVELOP-MOISTENER. HARRY E. PACKER, Chicago, Ill., assignor of one-half to B. E. Delcamp, Chicago, Ill. Filed June 21, 1909. Serial No. 503,520.

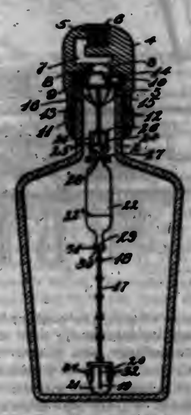
1. In a device for moistening envelops, the combination of a base or receptacle having an opening in one side thereof, a cover for said receptacle, having an opening in the top thereof, and a sponge secured in said receptacle, with one portion thereof extending through said side opening and another portion thereof extending through said cover opening.



2. In an envelop moistener, the combination of a substantially rectangular receptacle having an opening in one side thereof, a cover for said receptacle, having a downward projection extending into the upper portion of said opening, said cover being also provided with an opening therein adjacent to the opening in the side of said receptacle and having downwardly projecting deflectors at the ends of said opening, and moisture retaining and distributing means in said receptacle, said means being held by the deflectors and extending into said side and cover openings.

3. In a device of the character set forth, the combination of a heavy base portion having an opening in one side thereof and having a recess in the bottom thereof opposite to said opening, a cover for said base portion, having a downwardly projecting lip extending into said side opening to form a guide for the envelop flaps, said cover also having an opening in the center thereof, downwardly and inwardly projecting ribs at the ends of said opening, and a sponge in said base portion, said sponge being engaged and held in position by means of said deflectors or ribs and extending upwardly and laterally through said openings, whereby envelops passed over said device, with the flaps engaging with the side thereof, will be moistened along the backs where the sealing is to be effected and will also have the gum or mucilage on the flaps moistened.

959,794. NON-REFILLABLE BOTTLE. ALFRED W. PATRICK, Yonkers, N. Y. Filed July 1, 1909. Serial No. 505,373.



1. A non-refillable bottle comprising a bottle proper, a cap secured upon the neck thereof and having a valve seat therein, a valve located adjacent said seat, a float movably connected with said valve and adapted to seat the same within its seat by the action of the liquid upon said float, and means to permit said float to descend with the descent of the liquid in said bottle but to prevent its return to a higher level.

2. In a non-refillable bottle, a bottle proper, a cap adapted to be secured upon the neck thereof, a valve seat in said cap, a valve located adjacent said seat, a rod depending from said valve, a float movably mounted on said rod adapted to seat said valve, and means to permit said float to descend with the descent of the liquid but to prevent its return to a higher level.

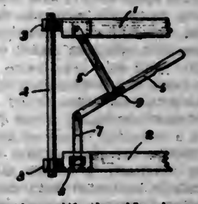
3. In a non-refillable bottle, a bottle proper, a cap adapted to be secured to the neck thereof, a valve seat in said cap, a valve within said cap adjacent said seat, a rod secured to said valve and extending substantially to the bottom of the bottle, a float movably mounted on said rod and adapted to raise the same and seat the valve through the action of the liquid, stops on said rod, and means connected with said float arranged to coöperate with said stops, said parts arranged to permit the float to descend with the descent of the liquid and to prevent its return to a higher level.

4. In a non-refillable bottle, a bottle proper, a cap adapted to be secured to the neck thereof, a valve seat in said cap, a valve within said cap coöperating with said seat, a float connected with said valve and arranged to seat the same through the action of the liquid, means to permit said float to follow the descending level of the liquid but to prevent its return to a higher level, and means to tilt said valve when the bottle is tilted to permit the exit of the liquid.

5. In a non-refillable bottle, a bottle proper, a cap secured to the neck of said bottle, a valve seat in said cap, a valve adjacent said valve seat, and a float connected with said valve and adapted to hold the same against said seat at excessive levels of the liquid.

[Claims 6 to 13 not printed in the Gazette.]

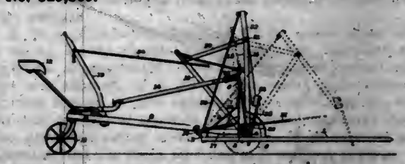
959,795. SUSPENSION-COUCH. JAMES B. PATTERSON, Philadelphia, Pa. Filed Sept. 2, 1908. Serial No. 451,320.



1. The combination with the side pieces of a suspension couch of castings applied to the ends of said pieces, and means detachably connected to the castings to permit of the side pieces being arranged side by side and said means adapted to operate upon the castings to adjust and hold the side pieces apart, substantially as described.

2. The combination with the side pieces of a couch of castings applied to the ends of the side pieces, a bolt, keeper or socket connected with one of said castings, a link pivoted to the other of said castings, a lever pivoted to the link, and a bolt pivoted to the lever, substantially as described.

959,796. HAY-RAKE. CHARLES PEARSON, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Nov. 26, 1909. Serial No. 529,869.



1. In a hay rake, the combination of a rake frame, rake teeth secured to said frame, a load discharging mechanism including a swinging frame having its lower end pivotally connected with said rake frame and adapted to swing in a longitudinal direction relative to said rake teeth, levers pivotally connected intermediate their ends to the upper end of said swinging frame, a load discharging head secured to the lower ends of said levers, said levers having their upper ends connected with said rake frame in a man-

ner to cause said discharging head to move substantially parallel with said rake teeth when said swinging frame is rocked about its pivotal connection with the rake frame.

2. In a hay rake, the combination of a rake frame, rake teeth secured to said frame, a load discharging mechanism including a swinging frame having its lower end pivotally connected with said rake frame and adapted to swing in a longitudinal direction relative to said rake teeth, levers pivotally connected intermediate their ends to the upper end of said swinging frame, a load discharging head secured to the lower ends of said levers, and a link connection between the upper ends of said levers and said rake frame in rear of the pivotal connection of said swinging frame therewith.

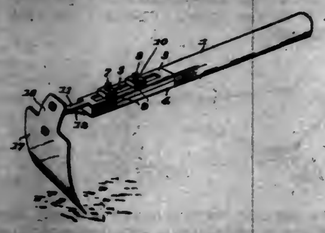
3. In a hay rake, the combination of a rake frame, rake teeth secured to said frame, a load discharging mechanism including a plurality of vertically arranged levers mounted intermediate their ends upon a movable fulcrum and adapted to rock in a longitudinal direction relative to said rake teeth, a load discharging head secured to the lower ends of said levers, the upper ends of said levers being connected with said rake frame, and means for moving the fulcrum on which they are mounted.

4. In a hay rake, the combination of a rake frame, rake teeth secured to said frame, a load discharging mechanism including a swinging frame having its lower end pivotally connected with said rake frame and adapted to swing in a longitudinal direction relative to said rake teeth, levers pivotally connected intermediate their ends to the upper end of said swinging frame, a load discharging head secured to the lower ends of said levers, a link connection between the upper ends of said levers and said rake frame, draft poles secured to said rake frame, and means coöperating with the backward movement of the draft animals to cause said swinging frame to rock about its pivotal connection with said rake frame.

5. In a hay rake, the combination of a rake frame, rake teeth secured to said frame, draft poles secured to opposite sides of said rake frame, a load discharging mechanism including a swinging frame adapted to move in a longitudinal direction relative to said rake teeth, said frame including vertically arranged bars having their lower ends pivotally connected with the rake frame, a stay rod connection between the upper ends of said bars, supplemental bars extending rearward, upward and inward, having their lower ends pivotally connected with the rake frame and their upper ends connected with said vertically arranged bars, levers mounted upon said stay rod intermediate their ends, a load discharging head secured to the lower ends of said levers, a link connection between their upper ends and the rake frame, and means for rocking said swinging frame about its pivots.

[Claim 6 not printed in the Gazette.]

959,797. GARDEN IMPLEMENT. OSCAR HAMTON PEEPLES and WILLIAM GASTON PEEPLES, Grenada, Miss. Filed Nov. 9, 1909. Serial No. 526,989.



1. An implement of the character described, comprising a handle, plates longitudinally adjustably carried by the handle, and an implement independently and removably secured to the outer ends of said plates.

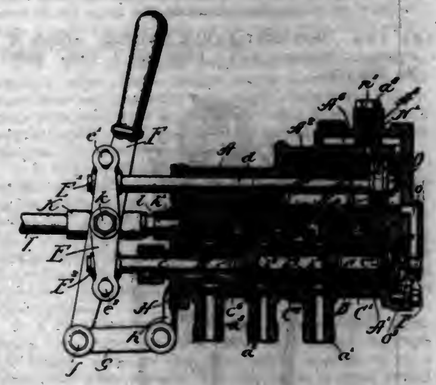
2. An implement of the character described, comprising a handle, plates on opposite sides of said handle and having longitudinal slots therein, bolts carried by the handle and passing through said slots and holding the plates in their adjusted position on the handle, and an implement independently and removably secured to said plates.

3. An implement of the character described, comprising a handle, plates on opposite sides of the handle and having longitudinal slots therein, bolts carried by the handle and passing through the slots and adapted to lock the plates in their adjusted position, the outer ends of the plates turned laterally in opposite directions, an implement resting against said laterally turned ends of the plate and bolts passing through the laterally turned ends and implement and removably securing the same thereto.

4. An implement of the character described, comprising a handle, plates adjustably carried thereby and having laterally turned ends provided with openings, and implements of different character having openings adapted to register with the opening in the laterally turned ends and bolts passing through the openings whereby the different implements may be readily attached.

5. An implement of the character described, comprising a handle, plates on opposite sides of the handle to inclose the same, and having longitudinal slots therein, bolts carried by the handle and passing through slots and adapted to lock the plates in their adjusted position, the plates having reduced extensions having laterally turned ends in opposite directions, said laterally turned ends having openings therein, an implement resting against said laterally turned ends and having openings registering therewith, and bolts passing through the laterally turned ends and implement, and removably securing the same thereto, substantially as shown and described.

959,798. ENGINEER'S VALVE. WILLIAM A. PENDRY, Detroit, Mich. Filed Apr. 12, 1909. Serial No. 489,419.



1. In an engineer's valve, the combination with a cylindrical valve casing communicating with a train pipe, main reservoir and exhaust port, of a piston valve in said casing for controlling the exhaust of pressure from the train pipe, of means for automatically moving said valve to discontinue the exhaust of train pipe pressure after a predetermined reduction thereof.

2. In an engineer's valve, the combination with a cylindrical valve casing communicating with a train pipe, main reservoir and exhaust port, of a manually operated piston valve in said casing for controlling the exhaust of pressure from the train pipe, of fluid pressure operative means for automatically moving said valve into position to discontinue the exhaust of train pipe pressure after a predetermined reduction thereof.

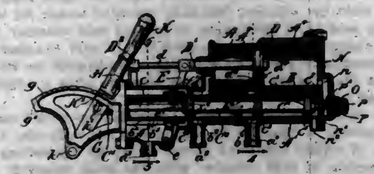
3. In an engineer's valve, the combination with a manually operated valve for controlling the exhaust of pressure from the train pipe, of a piston exposed to train pipe pressure on one side and to a balancing pressure equal to the normal train pipe pressure on its other side, and means operatively connecting said piston to said valve, whereby upon a predetermined reduction in train pipe pressure said piston will move said valve to discontinue the exhaust of train pipe pressure.

4. In an engineer's valve, the combination with a manually operated valve for controlling the exhaust of pressure from the train pipe, of a piston, a cylinder surrounding said piston in free communication with the train pipe at one side of the piston, a supplemental reservoir in communication with said cylinder at the opposite side of the piston, and means operatively connecting said piston with said valve, whereby the movement of said piston upon a reduction in the train pipe pressure will actuate said valve to discontinue the exhaust of train pipe pressure.

5. In an engineer's valve, the combination with a manually operated valve for controlling the exhaust of pressure from the train pipe, of a piston, a cylinder surrounding said piston in free communication with the train pipe at one side, of the piston, a supplemental reservoir in communication with said cylinder at the opposite side of the piston, means for operatively connecting said piston with said valve, whereby the movement of said piston upon a reduction in train pipe pressure will actuate said valve to discontinue the exhaust of train pipe pressure, and means for exhausting pressure from said supplemental reservoir to effect the return of said piston to its initial position.

[Claims 6 to 12 not printed in the Gazette.]

959,799. ENGINEER'S VALVE. WILLIAM A. PENDRY, Detroit, Mich. Filed Apr. 12, 1909. Serial No. 489,420.



1. In an engineer's valve, the combination with a cylindrical valve chamber having ports communicating with the train pipe and exhaust, of a piston valve controlling said ports to exhaust train pipe pressure, and means for automatically closing the exhaust port after a predetermined reduction in train pipe pressure.

2. In an engineer's valve, the combination with a cylindrical valve chamber communicating with the train pipe and having a series of exhaust ports, of a piston valve for connecting the train pipe successively with the several exhaust ports, and means for automatically successively covering the several exhaust ports after predetermined reductions in train pipe pressure.

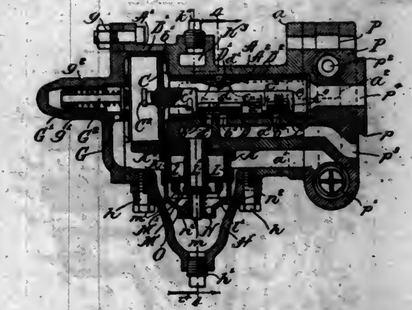
3. In an engineer's valve, the combination with a valve chamber communicating with the train pipe and having a series of exhaust ports, of a valve for connecting the train pipe successively with the several exhaust ports, a cut-off valve located exterior to said chamber for closing the exhaust ports, and means operatively connected to said cut-off valve for automatically moving the same to successively cover the several exhaust ports after predetermined reductions in train pipe pressure.

4. In an engineer's valve, the combination with a cylindrical valve chamber communicating with the train pipe and having an exhaust port, of a piston valve in said chamber for connecting the train pipe with the exhaust port, an annular valve surrounding the valve chamber for closing the exhaust port, and means operatively connected to said annular valve automatically actuated upon a predetermined reduction in train pipe pressure to move said valve into position to close the exhaust port.

5. In an engineer's valve, the combination with a cylindrical valve chamber communicating with the train pipe and having a series of exhaust ports, of a piston valve in said chamber for connecting the train pipe successively with the several exhaust ports, an annular valve surrounding said chamber controlling the exhaust ports, and means for automatically actuating said annular valve to successively close the several exhaust ports.

[Claims 6 to 12 not printed in the Gazette.]

959,800. TRIPLE VALVE. WILLIAM A. PENDRY, Detroit, Mich. Filed Apr. 12, 1909. Serial No. 489,421.



1. In a quick acting triple valve casing, the combination with a main section having a valve chamber therein communicating with train pipe, auxiliary reservoir, exhaust, and brake cylinder, passages extending longitudinally through and terminating in the end surface of said section, of a cap for inclosing the quick acting valve mechanism detachably secured to said main section and forming an extension of the train pipe passage intermediate of its ends.

2. A quick acting triple valve casing having piston and valve chambers therein, and also having formed therein at one side of and above the valve chamber a quick action reservoir chamber.

3. In a quick acting triple valve casing, the combination with a main section having piston and valve chambers therein communicating with train pipe, auxiliary reservoir and brake cylinder, passages extending longitudinally through and terminating in the end surface of said section, said section also having formed therein a quick action reservoir chamber, of a cap for inclosing the quick acting valve mechanism detachably secured to said main section intermediate of the ends and forming an extension of the train pipe passage.

4. In a quick action triple valve casing, the combination with an end section adapted to be permanently secured to a supporting member of the brake apparatus and having passages communicating with the train pipe, auxiliary reservoir and brake cylinder, of a main section detachably supported upon said end section and having train pipe, auxiliary reservoir and brake cylinder passages communicating with the corresponding passages in said end section, and a cap for inclosing the quick acting valve mechanism detachably secured to said main section intermediate of the ends and forming an extension of the train pipe passage.

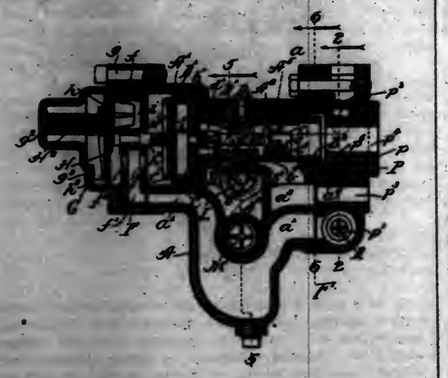
5. In a quick acting triple valve, the combination with a casing having therein piston and valve chambers and passages communicating with the train pipe, brake cylinder and exhaust, of a piston and slide valve actuated thereby located in said chambers for controlling the supply and exhaust of pressure to and from the brake cylinder, and quick acting valve mechanism for connecting and disconnecting the train pipe and said exhaust passage.

[Claims 6 to 10 not printed in the Gazette.]

959,801. TRIPLE VALVE. WILLIAM A. PENDRY, Detroit, Mich. Filed Apr. 12, 1909. Serial No. 489,422.

1. In a triple valve casing, the combination with an end supporting section having axial passages therethrough adapted to be connected with the auxiliary reservoir and brake cylinder, and having a transverse train pipe pas-

sage communicating with an intermediate axial port, of means for permanently attaching said section to a supporting member of the brake apparatus, a main casing containing the valve mechanism and having longitudinal main reservoir, train pipe and brake cylinder passages registering with the adjacent surface ports of the corresponding passages in said end section, and means for detachably supporting said main section upon said end section.



2. In a quick acting triple valve casing, the combination with an end supporting section having axial passages therethrough adapted to be connected with an auxiliary reservoir and brake cylinder, and having transverse train pipe and exhaust passages therethrough each communicating with an intermediate axial port, of means for permanently attaching said section to a supporting member of the brake apparatus, a main casing section containing the valve mechanism and having longitudinal main reservoir, train pipe, brake cylinder and exhaust passages therein adapted to register with the adjacent surface ports of the corresponding passages in said end section, and means for detachably supporting said main section upon said end section.

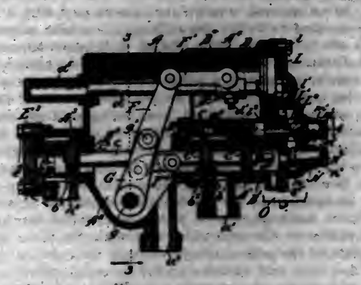
3. In a triple valve casing, the combination with a main section adapted to contain the valve mechanism and having brake cylinder, train pipe, and auxiliary reservoir passages therein terminating in ports in the end surface thereof, of a supporting section having passages registering with said ports in the main section, the train pipe passage being T-shaped and adapted to connect at either of its alined ends with the train pipe.

4. In a triple valve casing, a main section adapted to contain the valve mechanism and having brake cylinder, train pipe, and auxiliary reservoir passages therein, and also having an exhaust passage extending transversely of and partially around said section and thence longitudinally within said section to the surface thereof which is adapted to engage the surface of a supporting member.

5. In a triple valve casing, the combination with a main section adapted to contain the valve mechanism and having brake cylinder, train pipe and auxiliary reservoir passages therein terminating in an end surface of said section, of an end section adapted to be permanently attached to a supporting member of the brake apparatus, and upon which said main casing is removably supported, said end section having axial brake cylinder and auxiliary reservoir passages therethrough registering with the brake cylinder and auxiliary reservoir passages in the main section, and adapted to be connected with the auxiliary reservoir and brake cylinder, said end section also having a transverse passage and intermediate port registering with the train pipe passage in the main section, either end of said transverse passage adapted to be connected with the train pipe.

[Claims 6 to 12 not printed in the Gazette.]

959,802. ENGINEER'S VALVE. WILLIAM A. PENDAY, Detroit, Mich. Filed Apr. 12, 1909. Serial No. 489,423.



1. In an engineer's valve, the combination with a casing comprising a chamber in communication with the train pipe, of rigidly connected piston valves for controlling the connection of said chamber with the main reservoir and with the exhaust, and means for actuating said piston valves located in said chamber.

2. In an engineer's valve, the combination with a casing comprising a chamber in communication with the train pipe, of valve cylinders communicating with said chamber, valve mechanism within said cylinders for controlling the connection of said chamber with the main reservoir and with the exhaust, manually operated means for actuating said valve mechanism to connect said chamber with the exhaust, and means located within said chamber for automatically actuating said valve mechanism to discontinue the exhaust of train pipe pressure after a predetermined reduction thereof.

3. In an engineer's valve, the combination with a casing comprising a chamber in communication with the train pipe, of rigidly connected piston valves for controlling the connection of said chamber with the main reservoir and exhaust, a cylinder in free communication with said chamber, a piston in said cylinder exposed on one side to the pressure in said chamber, means for exposing the opposite side of said piston to a balancing pressure, and means located in said chamber connecting said piston and piston valves for automatically discontinuing the exhaust of train pipe pressure after a predetermined reduction thereof.

4. In an engineer's valve, the combination with a casing comprising a chamber in communication with the train pipe, of alined valve cylinders formed in said casing on opposite sides of and in communication with said chamber, one of said valve cylinders communicating with the main reservoir and the other of said valve cylinders communicating with the exhaust, rigidly connected piston valves in said valve cylinders controlling the connection of said chamber with the main reservoir and exhaust, and mechanism located in said chamber for automatically actuating said valves to discontinue the exhaust of train pipe pressure upon a predetermined reduction thereof.

5. In an engineer's valve, the combination with a casing comprising a chamber in communication with the train pipe, of valve mechanism for controlling the connection of said chamber with the main reservoir and exhaust, a cylinder in free communication with said chamber, a piston in said cylinder exposed on one side to the train pipe pressure, a supplemental reservoir to pressure from which the opposite side of said piston is exposed, means for charging said supplemental reservoir from said chamber, manually operated means for actuating said valve mechanism to connect said chamber with the exhaust, and means located in said chamber operatively connecting said piston and valve mechanism for automatically discontinuing the exhaust of pressure from said cylinder after a predetermined reduction of the pressure therein.

[Claims 6 to 9 not printed in the Gazette.]

959,803. KNIFE-CLEANER. ERNST PHILIPP and JACOB AEPPLI-MEIER, Zurich, Switzerland. Filed Jan. 21, 1910. Serial No. 539,305.

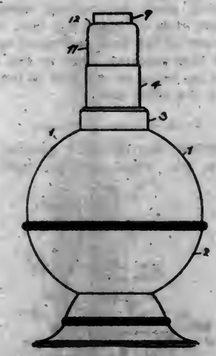


1. A knife cleaner comprising a trough like member and a complementary member provided respectively with interlocking lateral projections and recesses, and links pivotally connected to the ends of both members whereby a rocking movement may be imparted to the complementary member.

2. In a knife cleaner, the combination with a trough-like member; of a complementary member hinged to the trough-like member and means to prevent the longitudinal movement of the latter member with respect to the former member.

3. In a knife cleaner, the combination with a trough-like member having projections opposite and extending toward one another; of a block loosely fitting the trough-like member and having recesses for the reception of said projections, links pivotally connected at one end to the trough-like member and at the other to the block, and a pin in the block engaging a slot in a link.

959,804. LAMP. JOHN H. PURDY, Chicago, Ill. Filed Jan. 3, 1910. Serial No. 536,188.

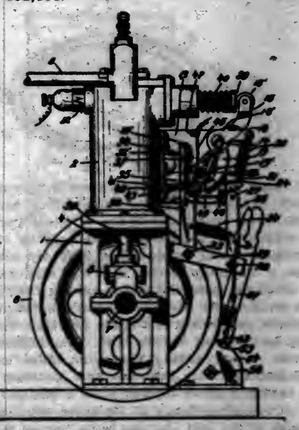


1. A filling device for lamps in which is combined a wick-tube, a telescoping tube mounted upon said wick-tube, a tube of larger diameter than that of said telescoping tube, the same being connected therewith at the top but open at the bottom, another tube extending upwardly from the reservoir opening to receive the lower end of said last-named tube, said telescoping tube being perforated to provide communication between its interior and the annular space between said telescoping tube and the one by which it is surrounded.

2. A filling device for lamps comprising a wick-tube inclosed within an outer tube secured within the font opening, a telescoping tube mounted upon said wick-tube, and a conduit tube arranged to telescope with said outer tube, the lower end of said conduit tube being open while the upper end thereof is closed around said first named telescoping tube, which latter is perforated below the level of said connection.

3. A filling device for lamps comprising a wick-tube and an inclosing tube, the two being arranged to telescope, and a conduit in communication with the reservoir and the outer tube, whereby when one of said telescoping tubes is moved longitudinally with respect to the other a cavity or receiving chamber may be formed above the wick for the reception of liquid to flow therefrom into the reservoir.

959,805. INTERNAL-COMBUSTION ENGINE. LAURITS T. RASMUSSEN, Council Bluffs, Iowa, assignor to Walker Manufacturing Company, Council Bluffs, Iowa, a Corporation of South Dakota. Filed Apr. 29, 1909. Serial No. 492,834.



1. In a four-stroke cycle internal combustion engine, having a valve, the combination of a valve-opening lever, a ratchet having two opposite teeth adapted to actuate said lever, and having shorter intermediate teeth, and a reciprocating member actuated by a moving part of the engine for driving said ratchet by alternate engagement with longer and shorter teeth.

2. In a four-stroke cycle internal combustion engine, having a valve, the combination of a piston extension, a rock lever actuated thereby, a pawl-arm actuated by the rock-lever, a ratchet actuated by the pawl-arm, a spring drawing the pawl-arm toward the ratchet, said ratchet comprising alternate longer and shorter teeth, and a valve-opening lever arranged to be actuated by the longer teeth of the ratchet.

3. In a four-stroke cycle internal combustion engine, having a valve, the combination of a valve-opening lever, a ratchet having alternate longer and shorter teeth, the longer teeth being adapted to actuate said lever, a reciprocating member actuating the ratchet by engaging each tooth thereof, and means preventing the closure of said valve before the close of a cycle.

4. In a four-stroke cycle internal combustion engine, having a valve, the combination of a valve-opening lever, a ratchet having alternate longer and shorter teeth, the longer teeth being adapted to actuate said lever, a reciprocating member actuating the ratchet by engaging each tooth thereof, and a hook-arm pivotally mounted on the reciprocating member and adapted to retard the movement of the ratchet, for the purpose set forth.

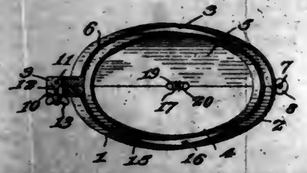
5. In an internal combustion engine, having a valve, the combination of a valve lever, a lever located adjacent to the valve lever and having a lug adapted for engagement therewith, a ratchet adapted for engagement with both of said levers, a spring for returning the second lever after its ratchet engagement, and means, connected with the engine piston, for actuating said ratchet.

959,806. MOLD. REUBEN C. RICKER, Canal Dover, Ohio. Filed Aug. 19, 1909. Serial No. 513,669.

1. A mold of the character described, comprising two members formed on their edges with continuous surrounding flanges, the flange of one being adapted to enter within and oppose the flange of the other, and a centrally arranged fastening means for uniting the members.

2. A mold of the character described, comprising two flanged members, the flange of one being adapted to enter within and oppose the flange of the other, and a clamping

bolt for uniting the two members, one of the latter having an elongated opening to receive the bolt whereby said members may be shifted longitudinally with respect to each other to vary the size of the mold space between their flanges.



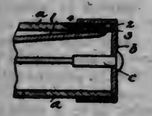
3. A mold of the character described, comprising two members having continuous surrounding flanges formed on their outer edges, the flange of one being adapted to enter within and oppose the flange of the other, one of said members being composed of hingedly connected half sections, a fastening uniting said half sections, and a centrally arranged fastening means uniting the two members.

4. A mold of the character described, comprising an inner member consisting of a plate provided with a central opening and formed on its inner face adjacent with its edge with a surrounding flange, an outer mold member divided longitudinally into two half sections, each of the latter having a plate formed with a straight inner edge and a surrounding flange at its outer edge, said straight inner edge of the half sections being formed with opposing centrally arranged elongated notches and with opposing notches arranged adjacent one end, the last mentioned notches forming a filling opening, a hinge connection uniting one end of the half sections, a detachable fastening means uniting the opposite ends of the half sections and a clamping bolt having one end secured in the central opening in the plate of the inner mold member, and its other end adjustable in the elongated centrally arranged notches of the half sections of the outer mold member.

5. A mold of the character described comprising two opposing plates, one having a surrounding flange at its edge, and the other having a continuous surrounding flange adjacent to its edge, the last mentioned flange being adapted to enter within the flange of the other whereby a mold space is formed between the two flanges and plates, and a centrally arranged fastening detachably uniting the two plates.

[Claim 6 not printed in the Gazette.]

959,807. SAFETY-FUSE. JOSEPH SACHS and FRANK D. REYNOLDS, Hartford, Conn., assignors to The Sachs Company, Hartford, Conn., a Corporation of Connecticut. Filed Mar. 22, 1906. Serial No. 307,310.



1. A safety fuse comprising a tube, end caps therefor, a fuse strip inclosed therein, and means between an end cap and the tube for indicating the condition of the said fuse strip.

2. A safety fuse comprising a tube, end caps therefor, a fuse strip inclosed therein, a wire electrically connected at one end with one of the said end caps and having a portion at its opposite end between an end cap and the tube and means between an end cap and the tube for indicating the condition of the fuse strip.

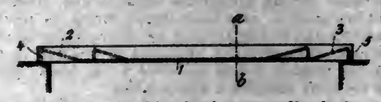
3. A safety fuse comprising a tube, end caps therefor, a fuse strip inclosed therein and a wire electrically connected at one end with one of the said end caps and having an imperfect contact at its opposite end between the same and the other end cap.

4. A safety fuse comprising a tube, end caps for the said tube, there being a recess on one end of said tube and between the same and the adjacent end cap, a fuse strip electrically connected with said end caps and a wire electrically connected at one end with one of said end caps and having a portion at its opposite end in the said recess which is so disposed as to afford an exterior indication of the condition of the said fuse strip.

5. A safety fuse comprising a tube having a recess in its outer surface at one end thereof, end caps for the said tube, a fuse strip electrically connected with said end caps and a wire electrically connected at one end with one of said end caps and at its opposite end being in contact with the other end cap within the said recess, which latter is so disposed as to afford an exterior indication of the condition of the said fuse strip.

[Claims 6 to 8 not printed in the Gazette.]

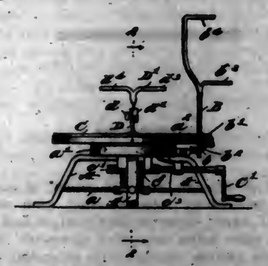
959,808. STEEL BAR FOR REINFORCEMENT OF SLABS, BEAMS, OR SIMILAR CONSTRUCTIONS OF CONCRETE. FREDRIK SELMER, Christiania, Norway. Filed June 1, 1907. Serial No. 376,888.



1. A reinforcing steel bar having upwardly sloping parts, the extreme ends of which are bent downward and to opposite sides of the vertical plane of the body portion of the bar so as to form supporting legs reaching down to the upper surface of the form.

2. A reinforcing steel bar having upwardly sloping parts, the extreme ends of which are bent down and out of the vertical plane of the body portion of the bar so as to form supporting legs reaching down to the upper surface of the form, one leg being on one side of the body portion and the other on the other side.

959,809. DRAPING-MACHINE. SAMUEL S. SENCENBAUGH, Aurora, Ill. Filed Apr. 13, 1909. Serial No. 489,613.



1. A draping machine, comprising a base, a revoluble platform mounted thereon, a stationary upright supported in proximity to the edge of said platform, said upright having an arm extending approximately at right angles thereto, an adjustable draping bar secured to said upright, and mechanism for revolving the platform and automatically locking it against revolution.

2. In a draping machine, the combination of the base, a flat top mounted thereon, provided with a bore therein a revoluble platform pivotally mounted in the bore through said top, a stationary upright supporting an adjustable draping bar in proximity to the edge of the revoluble platform, and mechanism for revolving said platform and automatically locking it against revolution, substantially as described.

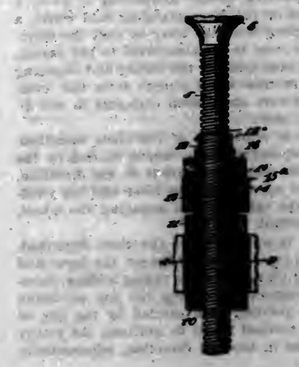
3. In a draping machine, the combination of the base, a flat top thereon, provided with a bore therein a revoluble platform pivotally mounted through the bore in said top, ball bearings between said top and the revoluble platform mediate the center and circumference thereof, a vertically adjustable measuring bar supported upon a stationary upright in proximity to the edge of said platform, means on said bar for holding the clothing away from the garment being draped, and means for revolving said platform and automatically locking it against revolution, substantially as described.

4. In a draping machine, the combination of a base, a flat top mounted thereon, a revoluble platform, ball bearings between said top and the platform mediate of the center and circumference thereof, an adjustable centering device, an adjustable draping bar supported upon a stationary upright in proximity to said platform, mechanism for revolving said platform and automatically locking it against revolution, substantially as described.

5. In a draping machine, the combination of a base, a flat top supported thereon, provided with a bore therein, a revoluble platform having a central pivot extending through the bore in said flat top, a gear mounted on said pivot, a worm meshing with said gear, means for transmitting motion to said worm and gear to revolve the platform, an adjustable draping bar supported upon a stationary upright in proximity to the revoluble platform, and means on said bar for holding the clothing away from the garment being draped, substantially as described.

[Claim 6 not printed in the Gazette.]

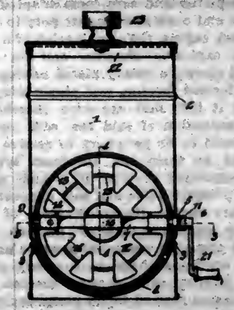
959,810. ADJUSTING MEANS FOR FEED-SCREWS. PETER SHAMPOU and ISAAC DONAHUE, Websterville, Vt., assignors of one-third to Joseph Bedard, Websterville, Vt. Filed Apr. 22, 1909. Serial No. 491,465.



1. The combination of a feed screw and its nut, the latter having an externally screw threaded portion at one end, a supplemental nut engaged with the screw and having an externally screw threaded portion, a sleeve nut having a swiveled connection with said supplemental nut, and having its internal screw threads engaged with the external screw threads on the end of the first mentioned nut, and a clamping nut engaged with the external screw threads of said supplemental nut for locking said swiveled connection.

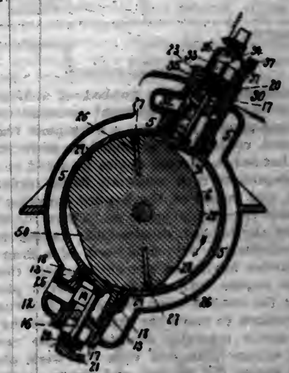
2. The combination of a feed screw and its nut, the latter having an externally screw threaded portion at one end, a supplemental nut formed at one end with an annular outwardly projecting flange, at its other end with flat faced portions, and on its intermediate portion with external screw threads, a sleeve nut internally threaded to engage the threaded end of the first mentioned nut, said sleeve nut being formed at one end with a concentric recess to receive the flange of the supplemental nut, a ring secured in said recess of the sleeve nut, and a clamping nut engaged with the external screw threads of the supplemental nut to frictionally lock said sleeve and supplemental ends.

959,811. CAKE-BEATER. GOODWIN B. SMITH, Philadelphia, Pa. Filed Sept. 1, 1908, Serial No. 451,184. Renewed Oct. 19, 1909. Serial No. 523,427.



A vessel provided with a journal through its wall, and with a journal bracket secured therein, diametrically opposite to said first named journal, and a dasher shaft for engagement through said first named journal and provided with a reduced headed end, said journal bracket comprising opposing non-contacting and horizontally alined spring members for detachable engagement with said headed shaft end, substantially as described.

959,812. ROTARY ENGINE. FRANK JOSEPH SPROEHNLE, Philadelphia, Pa. Filed May 19, 1909. Serial No. 497,124.



1. In a rotary engine, the combination of a casing, a rotary piston having depressions formed in its periphery and arranged in different vertical planes, an explosion chamber communicating with the said depression formed in one plane of said piston and with the said depression formed in the other plane of said piston.

2. In a rotary engine, the combination of a casing, a rotary piston having depressions formed in its periphery and arranged in different vertical planes, an inlet valve and a compression valve in said casing located in one of the vertical planes of said piston, a pressure valve in said casing located in the other one of said vertical planes of said piston, an explosion chamber formed in said casing connecting said compression valve with said pressure valve and said casing having an exhaust port formed therein.

3. In a rotary engine, the combination of a casing, an inlet valve and a compression valve located in the same vertical plane in said casing, a pressure valve located in a different plane in said casing, a chamber formed in said casing connecting said compression valve with said pressure valve, a rotary piston having superior and inferior cams formed on the periphery of the same, adapted to open said inlet valve, inhale gas, force it into said explosion

chamber and close said compression valve, means for exploding gas in said explosion chamber, said cams on said piston adapted to open said pressure valve to allow the gas to rotate said piston and said cams adapted to close said pressure valve and open the exhaust port in said casing.

4. In a rotary engine, the combination of a casing, an inlet valve, an explosion chamber and an exhaust port formed in said casing, a rotary piston having superior and inferior cams formed thereon, said piston adapted to inhale gas and force it into said explosion chamber and be rotated by the expansion of said gas, said piston having a depression formed in its periphery to receive air, and said piston adapted to force the air from said depression through said explosion chamber to cleanse said explosion chamber, said pressure valve and said exhaust port.

5. In a rotary engine, the combination of a casing, an inlet valve, an explosion chamber, and an exhaust port formed in said casing, a compression valve and a pressure valve in said explosion chamber, a rotary piston having superior and inferior cams formed thereon, said piston having a depression formed in its periphery to receive air through said inlet valve, and said piston adapted to force air through said compression valve, said explosion chamber, said explosion valve and said exhaust port.

[Claims 6 to 12 not printed in the Gazette.]

959,813. DRAG-OUT FOR HOTBEDS. RICHARD H. STEVENS, Munhall, Pa. Filed Mar. 27, 1908. Serial No. 423,787.



1. The combination with a hot-bed, of a drag-out comprising a carrier having an element mounted thereon arranged to engage with and move a work piece transversely of the hot-bed, connections arranged to move the carrier across the hot-bed, a turning device mounted on said carrier and adapted to turn materials being transferred on the hot-bed, and means on the hot-bed engaging with and operating said turning device so as to turn the work as it moves across the hot-bed, substantially as described.

2. The combination with a hot-bed, of a drag-out comprising a carrier having an element mounted thereon and arranged to engage with and move a work piece transversely over the hot-bed when the carrier is actuated, connections arranged to move the carrier across the hot bed, a turning device pivotally mounted on the carrier and adapted to engage with and turn the work piece being transferred across the hot-bed, and means on the hot-bed engaging with and operating said turning device so as to turn the work as it moves across the hot-bed, substantially as described.

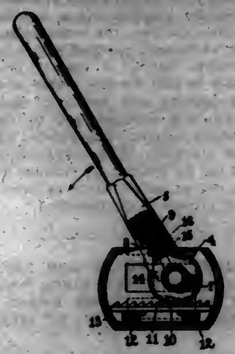
3. The combination with a hot-bed, of a transferring and turning mechanism, coöperating therewith comprising an element arranged to engage with and move or transfer a work piece transversely of the bed, connections for moving the same, an element for turning the work piece during its transfer, and means coöperating with means on the hot-bed and said turning element constructed and arranged to operate said turning element when the transferring element moves along the bed, substantially as described.

4. The combination with a hot bed, of a drag-out comprising a movable carrier, connections arranged to move the carrier transversely across the width of the hot bed, a turning arm pivotally mounted on said carrier and arranged to turn the materials on the hot bed during the movement of the carrier across the width of the hot bed, and means on the hot bed arranged to actuate said turning arm; substantially as described.

5. The combination with a hot bed, of a drag-out comprising a movable carrier arranged to transfer materials across the bed and having connections arranged to move the same, an arm mounted on said carrier arranged to turn the materials, and means located on the hot bed arranged to swing said arm when said carrier is being moved in a forward direction; substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

959,814. POWER-TRANSMISSION APPARATUS. TOOKE GEORGE STRAKER, New York, N. Y. Filed Mar. 31, 1908. Serial No. 424,400.



1. A power transmitting device comprising a lever, a ratchet wheel, a pawl on the lever engaging said wheel, a casing having connection with the lever so that the direction of motion of the lever is communicated to the casing, and a spring pressed rack lying in the casing and engaging that portion of the ratchet wheel remote from the lever, the teeth on the said rack and pinion engaging in one direction of movement only.

2. In combination in apparatus of the class described, a toothed wheel, an operating lever, means carried by the lever and engaging the wheel to rotate it in one direction, a sliding frame or box operated by the lever and the yielding rack carried by the said box and engaging the wheel, substantially as described.

3. In combination in apparatus of the class described, the rotary wheel, the lever, a pawl between the lever and the wheel, a chuck or block, a box or casing sliding thereon, a pin and slot connection between the box or casing and the lever and a yielding rack carried by the box or casing to engage the toothed wheel to continue the rotary movement of the same in the one direction, substantially as described.

959,815. EYEGLASSES. ERHARD J. STROHM, Livingston, Mont.; Edith W. Strohm, Newton township, Calhoun county, Mich., administratrix of said Erhard J. Strohm, deceased. Filed Aug. 31, 1909. Serial No. 515,464.



1. The combination in eye glasses with the bow-spring and lens, of a lens-holding member in engagement therewith, comprising ears between which said lens is mounted, a member passing through said ears and lens, a lens-engaging member provided with a tongue and adapted to engage said lens slidably mounted between said ears for having relative longitudinal movement therewith, and a spring surrounding said tongue and abutting a portion of said lens-holding member, substantially as described.

2. The combination in eye glasses with the bow-spring and lens, of a lens-holding member in engagement there-

with, comprising slotted ears between which said lens is mounted, a member passing through said ears and lens, a lens-engaging member arranged between said ears and adapted to have relative longitudinal movement therewith, a member passing through said lens-engaging member and adapted to operate within said slots, said lens-engaging member being provided with cut out portions and a tongue, a spring arranged around said tongue and within said cut out portions, and abutting a portion of said lens-holding member, substantially as described.

3. The combination in eye glasses with the bow-spring and lens, of a lens-holding member in engagement therewith, a lens-engaging member mounted upon said lens-holding member, and having relative longitudinal movement therewith, means for normally yieldingly holding said lens-engaging member in contact with said lens, said lens-holding member being provided with spaced sides between which is arranged a lug and recesses, said bow-spring being provided with an aperture adapted to contain said lug and having lugs adapted to fit within said recesses, a nose guard-carrying member arranged upon said bow-spring within said spaced sides, and having interlocking engagement therewith, and means for rigidly securing said lens-holding member, said bow-spring, and said nose guard-carrying member in engagement with each other, substantially as described.

4. The combination in eye glasses with the bow-spring and lens, of a lens-holding member in engagement therewith, means for detachably securing said lens-holding member to said lens, a lens-engaging member movably mounted upon said lens-holding member, means for guiding said lens-engaging member during its movement, and a spring arranged upon said lens holding member and in engagement with said lens engaging member, substantially as described.

5. The combination in eye glasses with the bow-spring and lens, of a lens-holding member in engagement therewith, means for detachably securing said lens-holding member to a lens, a lens-engaging member mounted upon said lens-holding member for moving longitudinally thereof, and a spiral-spring arranged upon said lens-holding member and in engagement with said lens-engaging member, substantially as described.

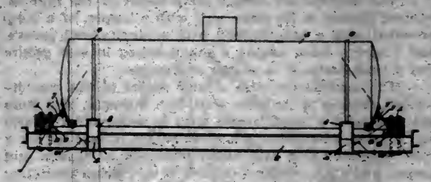
959,816. EYEGLASS-MOUNTING. ERHARD J. STROHM, Livingston, Mont.; Edith W. Strohm, Newton township, Calhoun county, Mich., administratrix of said Erhard J. Strohm, deceased. Filed Nov. 2, 1909. Serial No. 525,894.



1. In an eye-glass mounting, the combination with a support, of a nose-guard pivotally mounted thereon, one end of said nose-guard being bent to form a spiral spring, for engagement with the nose and serving as a grip, the free end of said spiral spring being pivotally connected to said support, said spiral spring tending to urge the entire nose-guard toward the nose, and said spiral spring being subjected to a torsional movement when the nose-guard is swung outwardly.

2. In an eye-glass mounting, the combination with a support, of a nose-guard pivotally mounted thereon, comprising a substantially S-shaped body portion provided with an actuating lever and a grip secured to the upper end thereof, the lower end of said substantially S-shaped body portion being produced to form a spiral spring adapted to directly engage the nose, and said spiral spring being produced and extending substantially vertically for loosely engaging said support.

959,817. TANK-CAR. VICTOR M. SUMMA, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Mar. 31, 1910. Serial No. 552,509.



1. In a tank car, the combination with a frame and a tank mounted thereon of means connected with the ends of the tank, and under-hanging portions of the frame positioned and adapted for transmitting lifting stresses to the end portions of the frame as components of the bending moment of the central portion of the tank.

2. In a tank car, the combination with a frame having inclined beveled portions contiguous the ends, and a tank mounted on said frame, of extensions projecting from the ends of the tank and under-hanging said inclined portions in position for engaging the same.

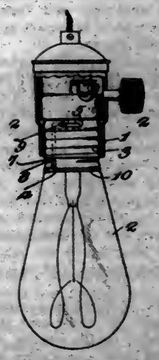
3. In a tank car, the combination with a frame, and a tank mounted thereon, of extensions projecting from the ends of the tank and having inclined surfaces under-lying portions of the frame.

4. In a tank car, the combination with a frame, and a tank mounted thereon, of a bracket extending from one end of the tank longitudinally of the frame, and having an inclined portion under-lying a portion of the frame contiguous to the end thereof.

5. In combination, a frame having bolsters with upstanding cradles, a tank mounted in said cradles and having its ends extending beyond the cradles and its intermediate portions between the saddles independent of the frame, and means at the ends of the tank under-lapping portions of the frame contiguous the ends thereof.

[Claim 6 not printed in the Gazette.]

959,818. LOCKING DEVICE FOR INCANDESCENT LAMPS. CLARENCE J. TIMM and JAMES A. BARNHARDT, Duluth, Minn. Filed Apr. 27, 1909. Serial No. 492,497.



1. The combination with a lamp socket of the type described, formed in its inner wall with a keeper, and a lamp adapted to work into said socket, of a spring catch having a loop at one end and adapted to encircle the base of the lamp and a hook at its inner end adapted to engage said keeper.

2. The combination with a lamp socket of the type described and formed in its inner wall with a keeper, and a lamp adapted to be worked into said keeper by a rotary

movement thereof, a catch having an intermediate portion extending longitudinally of the base of the lamp, and a hook at one end with an outwardly turned bill adapted to engage the keeper.

3. The combination with a lamp socket of the type described, formed in its inner wall with a keeper, of a lamp provided with a base formed with a longitudinal groove, and a spring catch having a shank seated in said groove and a hook designed to engage said keeper.

4. The combination with a lamp socket of the type described, formed in its inner wall with a keeper, of a lamp provided with a base formed with a longitudinal groove and a spring catch having a shank seated in said groove, a hook at one end of said shank, designed to engage said keeper, and a loop at the other end of said shank encircling the lamp.

5. The combination with a lamp socket of the type described, formed in its inner wall with a keeper, and a lamp provided with a base adapted to work into the socket by a rotary movement, of a catch having an intermediate portion extending longitudinally of the base, a loop at one end adapted to encircle the base, and a hook at the other end with an outturned bill adapted to engage the keeper upon a reverse movement of the lamp and socket.

959,819. GRAIN-HEADER. REED C. TOWNER, Fairport, Kans. Filed Oct. 7, 1909. Serial No. 521,611.



1. A grain header, comprising a wheeled frame, sleeves pivoted to said frame for movement in a vertical plane, rack bars slidingly mounted in the sleeves, a frame carried by and forward of the rack bars and equipped with a traveling conveyer and a cutting mechanism, a reel overlying the cutting mechanism, an elevator conveyer to receive the grain from the traveling conveyer, means for operating the cutting mechanism, the reel and said conveyers, cog-wheels engaging said rack bars, and means for turning said cog-wheels to impart upward or downward movement to the rack bars.

2. A grain header, comprising a wheeled frame, sleeves pivoted to said frame for movement in a vertical plane, rack bars slidingly mounted in the sleeves, a frame carried by and forward of the rack bars and equipped with a traveling conveyer and a cutting mechanism, a reel overlying the cutting mechanism, an elevator conveyer to receive the grain from the traveling conveyer, means for operating the cutting mechanism, the reel and said conveyers, cog-wheels engaging said rack bars, means for turning said cog-wheel to impart upward or downward movement to the rack bars, and means for simultaneously tilting said sleeves in one direction or the other and thereby imparting like movement to the rack bars and the parts carried thereby.

3. A grain header, comprising a wheeled frame, sleeves pivoted to said frame for movement in a vertical plane, bars slidingly mounted in the sleeves, a frame carried by and forward of said bars, a traveling conveyer, a cutting mechanism, a reel and an elevator conveyer carried by said frame and movable with said frame, means for vertically-adjusting said bars in said sleeves, and means for pivotally adjusting the sleeves and the parts carried thereby.

4. A grain header, comprising a suitable frame, a pair of rear wheels therefor, a pair of front swiveled wheels therefor, means to simultaneously turn said swiveled wheels to guide the machine in the desired direction, a pivoted upright, a perforated bar pivoted to the frame, a sleeve slidingly mounted on said bar, a removable pin engaging the sleeve and one of the perforations of the arm, a tension rod pivotally connecting the sleeve and the upper end of said upright, a brace bar pivotally connected to the said sleeve and to the lower part of said upright, a sleeve upon the upright, means connected to said sleeve tending to swing the same rearwardly, a pair of sleeves pivoted to the front end of the frame, bars extending slidingly through said sleeves, and a traveling conveyer, cutting mechanism and a reel carried by the last-named frame.

5. A grain header, comprising a suitable frame, a pair of rear wheels therefor, a pair of front swiveled wheels therefor, means to simultaneously turn said swiveled wheels to guide the machine in the desired direction, a pivoted upright, a perforated bar pivoted to the frame, a sleeve slidingly mounted on said bar, a removable pin engaging the sleeve and one of the perforations of the arm, a tension rod pivotally connecting the sleeve and the upper end of said upright, a brace bar pivotally connected to the said sleeve, and to the lower part of said upright, a sleeve upon the upright, means connected to said sleeve tending to swing the same rearwardly, a pair of sleeves pivoted to the front end of the frame, bars extending slidingly through said sleeves, a traveling conveyer, cutting mechanism and a reel carried by the last-named frame, a transverse shaft journaled in the first-named frame and forming the pivotal support of the sleeves at the front end of said frame, wheels rotatable with said shaft and engaging the bars extending slidingly through the said sleeves, and means for turning said shaft for the purpose of imparting upward or downward movement to the said bars extending through the pivoted sleeves.

959,820. ART OF MAKING HYDROCARBON SOAPS. ISAAC VANDEN BROEK, New York, N. Y. Filed June 6, 1907. Serial No. 377,506.

1. The improvement in the art of making hydrocarbon soaps, which consists in first emulsifying the hydrocarbon with soap and the aid of a relatively minute quantity of ammonia and then gradually stirring it into a heated mass of soap and cooling the same.

2. The improvement in the art of making hydrocarbon soaps, which consists in first emulsifying the hydrocarbon with a dilute solution of soap containing a small quantity of ammonia and then gradually stirring it into a heated mass of soap and cooling the same and then granulating the mass so produced.

3. The improvement in the art of making hydrocarbon soaps, comprising the step of emulsifying a volatile hydrocarbon with a warm aqueous solution of soap containing a small quantity of ammonia for causing or aiding the emulsifying action.

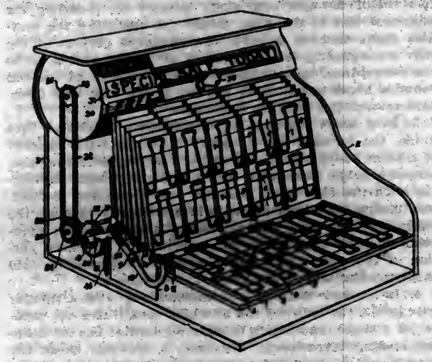
4. The improvement in the art of making hydrocarbon soaps, comprising the step of emulsifying a volatile hydrocarbon consisting largely of naphtha by stirring the hydrocarbon into a solution of soap containing approximately ten parts by weight of soap to one part of ammonia water at a temperature approximating one hundred and twenty degrees Fahrenheit.

5. The improvement in the art of making hydrocarbon soaps, comprising the step of emulsifying a volatile hydrocarbon consisting largely of naphtha by stirring the hydrocarbon into a solution of soap containing approximately ten parts by weight of soap to one part of ammonia water at a temperature approximating one hundred and twenty degrees Fahrenheit and continuing the addition of hydrocarbon until at least one hundred parts thereof for each part of soap are present.

[Claims 6 to 8 not printed in the Gazette.]

959,821. CREDIT-CABINET. BOLLO M. VICK, Detroit, Mich., assignor to The American Case & Register Company, Salem, Ohio, a Corporation of Ohio. Filed July 20, 1909. Serial No. 508,628.

1. In a credit cabinet, the combination of a case, a series of credit slip holding leaves linked together at their bottom or lower portion, the links of the leaves pivotally attached together, bearings secured to the leaves, and supports provided with open recesses, said open recesses adapted to receive the bearings, substantially as and for the purpose specified.



2. In a credit cabinet, the combination of a case, a series of credit slip holding leaves linked together at their bottom or lower portion, the links of the leaves pivotally attached together, bearings secured to the leaves, supports provided with open recesses, said open recesses adapted to receive the bearings, and means for limiting the pivotal movement of the links intermediate the leaves, substantially as and for the purpose specified.

3. In a credit cabinet of the class described, the combination of a casing, a series of credit slip holding leaves provided with credit slip holding clips, said credit slip holding leaves linked together at their bottom or lower ends and provided with bearings, supports provided with stepped open recesses, said recesses adapted to receive the bearings of the credit slip holding leaves, and the links pivoted together, substantially as and for the purpose specified.

4. In a credit cabinet of the class described, the combination of a casing, a series of credit slip holding leaves provided with slip holding clips, said credit slip holding leaves linked together at their bottom or lower ends and provided with bearings, supports provided with stepped open recesses, said recesses adapted to receive the bearings of the credit slip holding leaves and the links pivoted together and means for limiting the downward movement of the links at their pivotal connections, substantially as and for the purpose specified.

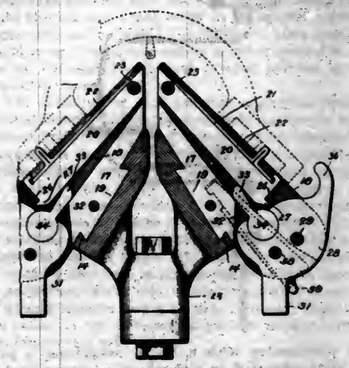
959,822. KNITTING-MACHINE BED. WILLIAM O. WAIT, Jackson, Mich., assignor of one-half to Charles H. Patterson, Jackson, Mich. Filed Apr. 22, 1909. Serial No. 491,507.

1. In mechanism of the character described, the combination with a movable needle supporting track, of means movable to and from a position beneath the supporting track for maintaining the same in a predetermined position, and an actuating member for said means pivotally connected thereto.

2. In mechanism of the character described, the combination with a needle support pivotally mounted at one end, of a stop located beneath the support, a device movable between the support and stop, and a pivotal actuating member on which the device is mounted.

3. In mechanism of the character described, the combination with a needle support pivotally mounted at one end, of a stop located beneath the support, a device movable between the support and stop, and a pivotal actuating member, said device being pivotally mounted on the member.

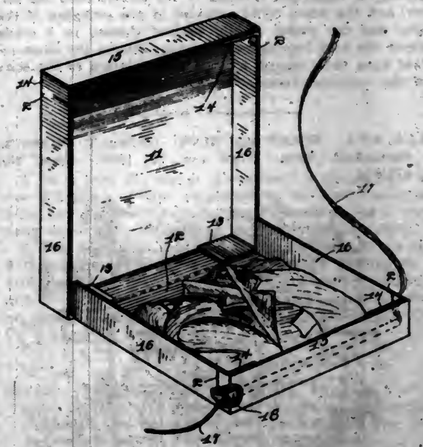
4. In mechanism of the character described, the combination with a needle support pivotally mounted at one end, of a stop located beneath the needle support, an actuating member pivotally mounted in rear of the support, and a wedge block pivotally mounted on the actuating member and movable between the stop and support.



5. In mechanism of the character described, the combination with a movable needle support, of means for raising and lowering the same, and means that moves with the raising and lowering means to a position over the needle placed on the support and over the support to hold said needle and support in depressed position.

[Claims 6 to 11 not printed in the Gazette.]

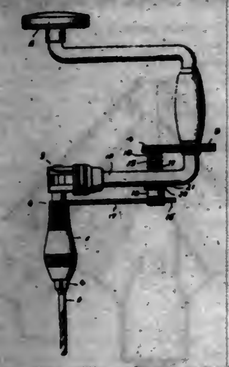
959,823. SHIPPING-CASE. EMIL WALCH, Keokuk, Iowa. Filed June 10, 1909. Serial No. 501,867.



1. A box comprising a body provided with oppositely disposed side slits, a cover for the body and also provided with side slits which aline with the slits of the body when the cover is closed thereon, a hanger bar within the body, and a fastening string passing through the alined openings or slits of the body and cover and suspending said hanger bar and also serving to hold the box and cover in closed relation.

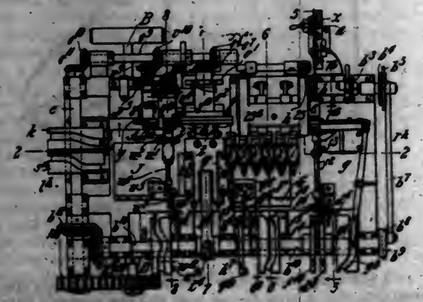
2. A box comprising a body provided with flanged side edges having slits formed therein, a cover also provided with slitted side flanges which aline with the slits of the flanges of the body when the cover is closed thereon, a hanger bar within the body, and a fastener string passing through the slitted portions of said flanges for suspending the bar within the body and also serving to hold the body and cover in closed relation.

959,824. DRILL-BRACE. CHARLES WARMHOLTZ, Chicago, Ill. Filed Mar. 4, 1907. Serial No. 360,528.



The combination with a frame comprising a pair of crank arms connected by a shank, of a bearing head rotatably mounted upon one of said crank arms, a tool holder rotatably mounted upon the other of said crank arms, a rotatable and longitudinally stationary grip provided with a pinion rigidly and permanently secured thereto, a pinion rotatably mounted upon said second named crank arm and engaging said first named pinion, means for sliding said second named pinion on its longitudinal axis into and out of engagement with said first named pinion and means for maintaining said slidable pinion in either extreme position, means connecting said tool holder and said last named pinion for imparting rotation to the former from the latter, and the whole being actuated by the swinging of the grip and the pinion rigidly secured thereto in a circle about the said bearing head without letting the same rotate upon their central axis or with relation to the body of the operator, substantially as described.

959,825. SCREW-MACHINE. GEORGE T. WARWICK, Springfield, Mass. Filed Jan. 22, 1909. Serial No. 473,676.



1. In a screw machine, in combination, a wire guide, and a shear comprising a fixed member and a movable member, the latter having an aperture therein, a swaging mechanism, means for advancing wire intermittently through the apertured shear member, a mechanism, located forward of the apertured shear member, for rounding the advanced end of the wire, means for operating the movable shear member to sever the advanced portion of the wire subsequent to the rounding of its end and to cause the conveyance, by said movable shear member of the end rounded blank constituting portion of the wire in a direction toward the swaging mechanism.

2. In a screw machine, in combination, a wire guide, and a shear comprising a fixed member and a movable member, the latter having an aperture therein, a swaging mechanism, means for advancing wire intermittently through the apertured shear member, a device for temporarily holding the wire in its advanced position, a mechanism, located forward of the apertured shear member for rounding the advanced end of the wire, means for operating the movable shear member to sever the advanced portion of the wire subsequently to the rounding of its end and to cause the conveyance, by said movable shear member of the end rounded blank constituting portion of the wire in a direction toward the swaging mechanism.

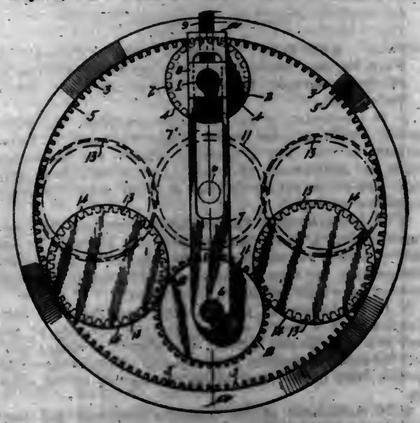
3. In a screw machine, in combination, a tubular wire guide, the forward end of which constitutes one member of a shear and a movable shear bar coacting with the tubular wire guide, having an aperture therethrough registering with the tube guide passage, and a swaging mechanism, means for advancing wire intermittently through the guide and apertured shear member, and means for operating such shear member, for severing the advanced portion of the wire and for causing its conveyance, by said shear mechanism, to the swaging mechanism.

4. In a screw machine, the combination with a tubular wire guide, the forward end of which constitutes one member of a shear, and which tubular wire guide has an opening leading transversely thereinto, a movable shear bar coacting with the tubular wire guide, having an aperture therethrough registering with the tube guide passage, a swaging mechanism, means for advancing wire intermittently through the guide and apertured member, a spring retracted wire holding rod movable in said transverse opening, cam actuated means for projecting and temporarily retaining the rod in its wire holding position, means for rounding the advanced end of the wire, and means for operating said movable shear bar for severing the advanced portion of the wire and conveying the blank from the shear bar in a direction toward the swaging mechanism.

5. In a screw machine, in combination, a wire guide, means for feeding wire intermittently therethrough, a shear bar coacting with the wire guide and having an aperture through which the advanced portion of the wire is passed, a rotative spindle mounted for axial movements in alinement with the wire guide and carrying a wire rounding tool at its extremity which is adjacent the shear bar and wire guide, means for rotating said spindle, and means for periodically endwise moving the spindle to carry said tool to its working action on its advanced end of the wire.

[Claims 6 to 35 not printed in the Gazette.]

959,826. MECHANICAL MOVEMENT. THEODORE WILLI, Dayton, Ohio, assignor of one-half to Edward G. Pease, Dayton, Ohio. Filed Mar. 28, 1910. Serial No. 551,903.



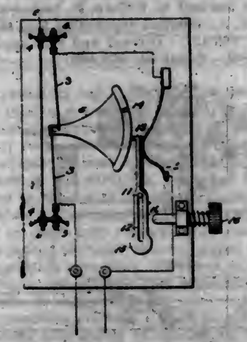
1. In a mechanical movement, a rotatable ring and means for driving said ring, of a shiftable pinion driven by said ring and around which the ring rotates, means for shifting said pinion to and from the axis of the ring, and idlers interposed between opposite sides of the shiftable pinion and the inner periphery of the ring and through which the shiftable pinion is driven from said ring.

2. In a mechanical movement, the combination with an internal gear, and means for driving the same, of a shiftable pinion mounted within the circumference of said gear, means for shifting the position of said pinion to and from the center of the ring, and idlers interposed between opposite sides of said shiftable pinion and the inner circumference of the ring and through which the shiftable pinion is driven from said ring.

3. In a mechanical movement, the combination with an internal gear, and means for driving said gear, of a shiftable pinion mounted within the circumference of said internal gear, and shrouded gears in mesh with said internal gear and said pinion, the shrouds of said gears engaging the teeth of the internal gear and of the pinion to hold said gears and pinion in mesh.

4. In a mechanical movement, the combination with an internal gear having smooth annular internal surfaces on each side of the teeth thereof, a shrouded driving gear in mesh with said internal gear, the peripheries of the shrouded portions of said driving gear being in engagement with the smooth annular surfaces of the internal gear, a shiftable pinion provided with side disks and mounted within the circumference of said internal gear, shrouded gears interposed between opposite sides of said shiftable pinion and the internal gear, the shrouds of said shrouded gears being in engagement with the smooth annular surfaces of the internal gear, and with the peripheries of the disks of the shiftable pinion, and means for supporting and shifting the shiftable pinion.

959,827. CIRCUIT-BREAKER. MAURICE J. WOHL, New York, and HARRY HERTZBERG, Brooklyn, N. Y., assignors to Abbot A. Low, Horseshoe, N. Y., Maurice J. Wohl, New York, N. Y., and Harry Hertzberg, Brooklyn, N. Y., trustees. Filed Mar. 20, 1908. Serial No. 422,273.



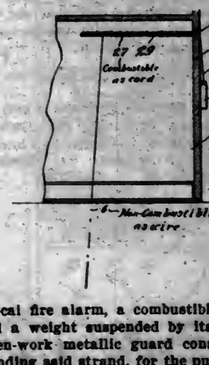
1. The combination of a thermal expansible conductor, a pivoted member connected with said conductor to be swung thereby, said member having a working face provided with a recess, an electrical cut-out, and a projection connected therewith and adapted to ride on said working face and to enter said recess, said cut-out being adapted to open automatically when said projection enters said recess.

2. The combination of a thermal expansible conductor, a pivoted segment connected with said conductor to be swung by the contraction thereof against the force of gravity, said segment having its periphery provided with a recess, an electrical cut-out, and a projection connected therewith and adapted to ride on said periphery and to enter said recess, said cut-out being adapted to open automatically when said projection enters said recess.

3. The combination of a thermal expansible conductor, a pivoted member connected with said conductor to be swung thereby, said member having a working face provided with a recess, an electrical cut-out adapted to open automatically when not held closed, and a member intermediate said working face and said cut-out, being adapted to hold the cut-out closed when in engagement with said working face and to permit the cut-out to open upon entering said recess, said intermediate member being also adapted to be translated with said pivoted member after entering said recess.

4. The combination of a thermal expansible conductor, a pivoted member connected with said conductor so as to be raised by the contraction thereof and to descend upon the expansion thereof, said member having a working face provided with a recess, an electrical cut-out adapted to open automatically when not held closed, and a second pivoted member intermediate said working face and said cut-out and provided with a projection adapted to ride on said working face and to enter said recess, being adapted to hold the cut-out closed while said projection rides on said working face and to permit the cut-out to open when said projection enters said recess, the pivotal mounting of said second member being slotted to permit said member to be raised by the first-named pivoted member after said projection enters said recess.

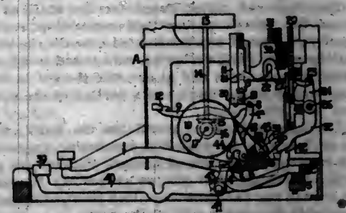
959,828. AUTOMATIC FIRE-ALARM. JOSEPH YATES, Leemaster, Va. Filed Aug. 27, 1908. Serial No. 450,519.



1. In a local fire alarm, a combustible strand fixed at one end and a weight suspended by its other, combined with an open-work metallic guard consisting of a wire helix surrounding said strand, for the purpose set forth.

2. In a fire alarm, a combustible strand fixed at one end within a compartment, passing through a bushing in a wall thereof into the adjacent compartment or hallway, and a weight suspended by its other end; combined with an open-work metallic guard surrounding said strand, for the purpose set forth.

959,829. TYPE-WRITING MACHINE. FRANK A. YOUNG, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 24, 1910. Serial No. 551,388.



1. In a typewriting machine, the combination with a key-operated escapement and a ribbon-feeding mechanism operated thereby, including a pawl and ratchet device, of

a space bar operatively connected with the escapement, and release mechanism operated by the space bar to disconnect the pawl and ratchet.

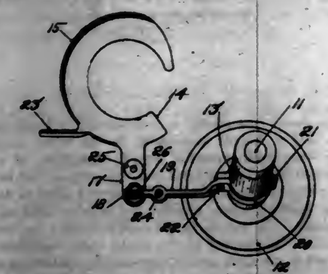
2. In a typewriting machine, the combination with a key-operated escapement and a ribbon-feeding mechanism operated thereby, including a pawl and ratchet device, of a space bar operatively connected with the escapement, and a fulcrum moved by the operation of the space bar into the path of the pawl to effect the disengagement of the latter from the ratchet.

3. In a typewriting machine, the combination with a key-operated escapement and a ribbon-feeding mechanism operated thereby, including a pawl and ratchet device, of a space bar operatively connected with the escapement, a cam or nose on the pawl, and a finger movable into the path of said cam or nose when the space bar is operated to effect the disengagement of the pawl and ratchet.

4. In a typewriting machine, the combination with an escapement and a ribbon-feeding mechanism operated thereby, including a pawl and ratchet device, of a space bar operatively connected with the escapement mechanism, and a ribbon-feed release operated by the space bar to intercept the pawl on its idle stroke and effect its release from the ratchet.

5. In a typewriting machine, an escapement mechanism capable of operating a pawl, whereby to actuate a ribbon-feeding ratchet, and a space bar to operate the escapement through which the ribbon-feeding pawl is actuated, of a ribbon-feed release interposed in the path of the pawl when operated from the space bar, whereby to utilize the movement imparted to the pawl by the escapement, to disengage said pawl from the ratchet.

959,830. CUTTER-GUARD FOR SKIVING-MACHINES. ARTHUR B. ALDEN, Brockton, and LOUIS W. REINHARDT, Whitman, Mass., assignors to Charles S. Pierce, Brockton, Mass. Filed Feb. 29, 1908. Serial No. 418,473.



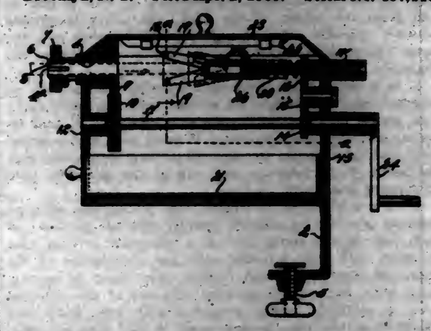
1. In a machine of the character described, the combination with a knife having the under side thereof concave, of a guard comprising a guard member located beneath the knife in a plane parallel to and adjacent the under side thereof and having its upper surface convexed to correspond with the adjacent concave under surface of the knife.

2. The improved cutter guard for the knife of a machine of the character described comprising a substantially circular guard member located beneath the knife adjacent the under surface thereof, said guard member being cut away at the center and at one side thereof so that the central portion of the knife and a portion of the periphery thereof are left exposed.

3. The improved cutter guard for the knife of a machine of the character described comprising a guard member of crescent shape located beneath the knife in a plane parallel to and adjacent the under surface thereof, said guard having one end drawn out to a point to lie nearly in contact with the under side of the knife.

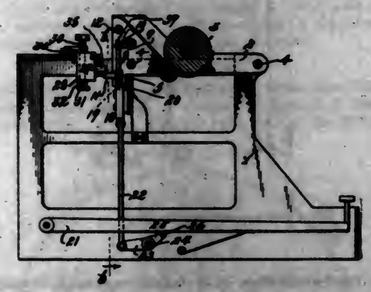
4. The improved cutter guard for the knife of a machine of the character described which said knife is concaved on its lower surface, comprising a guard member having its upper surface convexed to correspond with the said concave surface of the knife and being cut away at the center and at one side thereof so that the central portion of the knife and a portion of the periphery thereof are left exposed.

959,831. PENCIL-SHARPENER. FREDERICK ALEXANDER, Brooklyn, N. Y. Filed Apr. 2, 1909. Serial No. 487,440.



In a pencil sharpener, a rotatable chuck, a gear carried by said chuck, a rotatable spindle, a gear carried thereby, a cone carried by said spindle, cutters carried by said cone, said cone being adapted for advancement along said spindle, a spring adapted to advance said cone, an idle gear in mesh with the gear on said spindle, an operating shaft, pinions carried by said shaft, adapted to mesh with the gear on said chuck and said idle gear, and a handle carried by said operating shaft.

959,832. TABULATING DEVICE FOR TYPE-WRITING MACHINES. FREDERICK ALEXANDER, New York, N. Y., assignor of one-half to William F. Laskowski, Jr., West Hoboken, N. J. Original application filed Mar. 29, 1909, Serial No. 486,421. Divided and this application filed June 8, 1909. Serial No. 500,889.



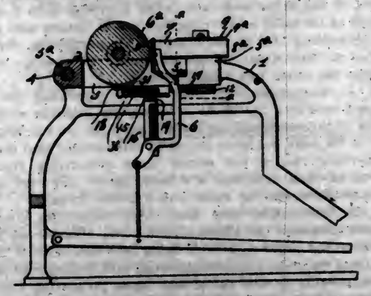
1. In a typewriting machine, the combination of a frame provided with a guideway, a plurality of blocks slidably supported in said guideway, a rack adjacent said guideway, a vertically movable spring opposed pin carried by each of said blocks, a latch carried by each of said pins adapted to engage the teeth of said rack, a carriage, an escapement comprising movable pawls carried by said frame and a vertically movable rack carried by said carriage and normally in engagement with said pawls, a pin carried by said escapement rack, and means to move said escapement rack out of engagement with said pawls and to bring the pin on the rack into the path of said blocks.

2. In a typewriting machine, the combination of a frame provided with a guideway, a plurality of blocks slidably supported in said guideway, a rack adjacent said guideway, a vertically movable spring opposed pin carried by each of said blocks, a latch carried by each of said pins

adapted to engage the teeth of said rack, a carriage, an escapement comprising movable pawls carried by said frame and a vertically movable rack carried by said carriage and normally in engagement with said pawls, a pin carried by said escapement rack, and a vertically movable slide adapted to move said escapement rack out of engagement with said pawls and to bring the pin on the rack into the path of said blocks.

3. In a typewriting machine, the combination of a frame provided with a guideway, a plurality of blocks slidably supported in said guideway, a rack adjacent said guideway, a vertically movable spring opposed pin carried by each of said blocks, a latch carried by each of said pins adapted to engage the teeth of said rack, a horn projecting from each of said blocks, a carriage, an escapement comprising movable pawls carried by said frame and a vertically movable rack carried by said carriage and normally in engagement with said pawls, a pin carried by said escapement rack, and a vertically movable slide adapted to move said escapement rack out of engagement with said pawls and to bring the pin on the rack into the path of said horns.

959,833. RIBBON-FEEDING MECHANISM FOR TYPE-WRITING MACHINES. FREDERICK ALEXANDER, New York, N. Y., assignor of one-half to William F. Laskowski, Jr., West Hoboken, N. J. Filed June 8, 1909. Serial No. 500,890.



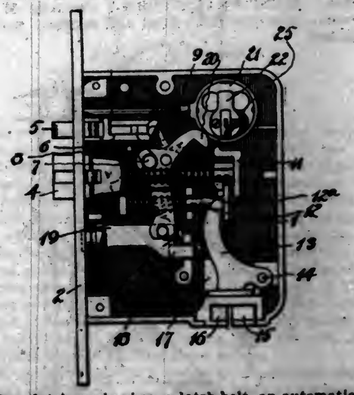
1. In a typewriting machine, a movable carriage, a platen on said carriage, a plurality of spools, an inking ribbon carried by said spools, gears adapted to rotate said spools, a plurality of racks carried by said carriage, one of said racks being adapted to mesh with one of said gears to operate the ribbon in one direction, the other of said racks being adapted to mesh with the other of said gears to operate the ribbon in the opposite direction, only one of said racks being in mesh with its respective gear at a time, and means adapted to throw the disengaged rack in mesh with its coöperating gear when the ribbon has reached the end of its length, the engaged rack being adapted to automatically leave its engaging gear.

2. In a typewriting machine, a movable carriage, a platen carried thereby, a plurality of spools, an inking ribbon carried thereby, gears adapted to rotate said spools, a plurality of racks slidably mounted on said carriage, one of said racks being adapted to mesh with one of said gears to operate said ribbon in one direction, the other of said spools being adapted to mesh with the other of said gears to operate said ribbon in the opposite direction, only one of said racks being in mesh with its respective gear at a time, and means operated by the engaged rack adapted to cause the disengaged rack to mesh with its coöperating gear when the ribbon has reached the end of its length, the engaged rack being adapted to automatically leave its engaging gear.

3. In a typewriting machine, a movable carriage, a platen carried thereby, a plurality of spools, an inking ribbon carried thereby, gears adapted to rotate said spools, a plurality of racks slidably mounted on said carriage, one of said racks being adapted to mesh with one of said gears to operate said ribbon in one direction, the other of said spools being adapted to mesh with the other of said gears to operate said ribbon in the opposite direction, only one of said racks being in mesh with its respective gear at a time, and levers operated by the engaged rack adapted to cause the disengaged rack to mesh with its coöperating gear when the ribbon has reached the end of its length, the engaged rack being adapted to automatically leave its engaging gear.

4. In a typewriting machine, a movable carriage, a platen carried thereby, a plurality of rotatable spools, an inking ribbon carried thereby, and a plurality of coöperating devices carried by said carriage adapted to rotate said spools, one of said devices being adapted to operate one of said spools in one direction, the other of said devices being adapted to operate the other of said spools in the opposite direction, said devices being adapted to automatically change their position to rotate their respective spools, whereby the movement of the ribbon is reversed at intervals.

959,834. ENTRANCE-DOOR LOCK. AUGUST ARENS, New Britain, Conn., assignor to P. & F. Corbin, New Britain, Conn., a Corporation of Connecticut. Filed Dec. 20, 1909. Serial No. 534,058.



1. In a latch mechanism, a latch-bolt, an automatic stop therefor, an actuator coöperating with said stop, said stop engaging the latch when said actuator is repressed, two separate latch retracting devices for operation respectively from opposite sides of the door, a dogging device for one of said latch retracting devices, two independent key-controlled devices operable from opposite sides of the door, one of said devices being arranged to operate said dogging device, the other device being arranged to operate said latch stop to release the same and said latch to retract the same.

2. In a latch mechanism, a latch-bolt, an automatic stop therefor, an actuator coöperating with said stop, said stop engaging the latch when said actuator is repressed, two separate latch retracting devices for operation respectively from opposite sides of the door, a dogging device for one of said latch retracting devices, two independent key-controlled devices operable from opposite sides of the door, one of said devices being arranged to operate said dogging device, the other device being arranged to operate said latch stop to release the same and then retract the latch, said key-operated devices being arranged directly opposite to one another.

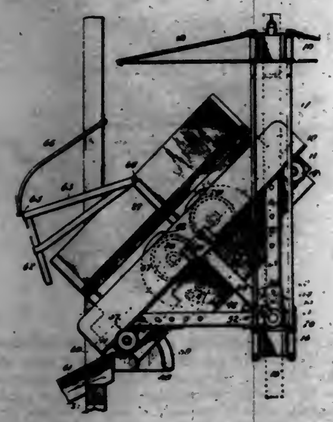
3. In a latch, a case and cap, a latch-bolt, a stop therefor, two independent means for operating said latch-bolt, a dog for one of said operating means, said dog being inclosed in said case, two cylinder locks carried by said case and cap arranged oppositely, a key-controlled roll-back for each cylinder lock, one of said roll-backs being shorter than the other and arranged to operate said dog, the longer of said roll-backs being arranged to operate said stop and withdraw said latch.

4. In a latch, a case and cap, a latch-bolt, a stop therefor, two independent means for operating said latch-bolt, a dog for one of said operating means, said dog being inclosed in said case, two cylinder locks carried by said case and cap arranged oppositely, a key-controlled roll-back for each cylinder lock, one of said roll-backs being shorter than the other and arranged to operate said dog, the longer of said roll-backs being arranged to operate said stop and withdraw said latch, and means independent of the key-operated means for operating said stop by one of the two independent means for operating the latch-bolt.

5. In a lock, a case including a removable cap, two oppositely positioned lock-receiving openings in said case and cap, two cylinder locks carried therein, a roll-back carried by each of said cylinder locks, one of said roll-backs being shorter than the other, latch mechanism, stop mechanism for said latch mechanism, the longer of said arms being arranged to operate said stop and latch to retract the same, independent latch-operating mechanism, dogging mechanism therefor, the shorter roll-back being adapted to operate said dogging mechanism.

[Claim 6 not printed in the Gazette.]

959,835. HOISTING-PLATFORM. CHARLES M. ARMSTRONG, Boonville, Ind. Filed Apr. 9, 1909. Serial No. 488,908.



1. In a hoisting platform, a receding track section mounted thereon, car engaging keepers carried by said section and connected to said platform, and means mounted upon said section for movement independently thereof to engage and automatically move said keepers by contact of a car member with said means.

2. In a hoisting platform, a receding track section, car engaging keepers carried by said section to travel in a plane parallel to the tracks thereon, means carried by said section for producing a preliminary movement of said keepers, and means connecting said keepers and platform for effecting a complete movement of the keepers in the raising movement of the platform.

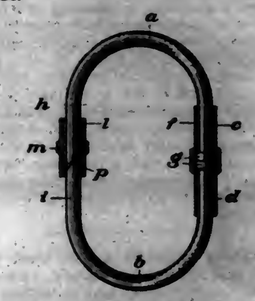
3. In a hoisting platform, a receding track section, car engaging keepers carried by said section to travel in a plane parallel to the tracks thereon, means carried by said receding section to automatically operate said keepers, a pivotal bearing for said platform, and locking means carried by said section to engage said platform to prevent movement of said keepers when the platform is dumped.

4. In a hoisting platform, a receding track section, car engaging keepers carried by said platform, means carried by said receding section to automatically operate said keepers, a pivotal bearing for said platform, and a locking bolt carried by said section and adapted to engage a fixed member upon the pivotal bearing of said platform.

5. In a hoisting platform, a receding track section, a wheel engaging keeper pivoted upon said section, and a link extending from said keeper to a fixed part of said platform.

[Claims 6 to 34 not printed in the Gazette.]

959,836. CONVERTIBLE RING AND HOOK. GOTTLIEB BEER, Hanover, Germany. Filed June 3, 1909. Serial No. 500,024.

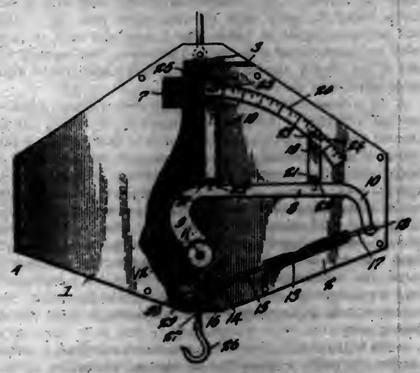


1. A convertible ring and hook comprising two U-shaped members the limbs of one being alinable with the limbs of the other and each being provided with a flange at one of its ends, a sleeve inclosing said flanges and thereby connecting two of the alined limbs permitting them to swivel on their axes, and means operative to engage or disengage the other two alinable limbs.

2. A convertible ring and hook comprising two U-shaped members the limbs of one being alinable with the limbs of the other and each being provided with a flange at one of its ends, a sleeve inclosing said flanges and thereby connecting two of the alined limbs permitting them to swivel on their axes, and a slidable sleeve operative to engage or disengage the other two alinable limbs.

3. A convertible ring and hook comprising two U-shaped members the limbs of one being alinable with the limbs of the other and each being provided with a flange at one of its ends, a sleeve inclosing said flanges and thereby connecting two of the alined limbs permitting them to twivel on their axes, a slidable sleeve operative to engage or disengage the other two alinable limbs, and a plate-spring carried by said slidable sleeve and bearing against said limbs.

959,837. SCALE. BERT E. BLAIR, Barre, Vt. Filed July 7, 1909. Serial No. 506,848.

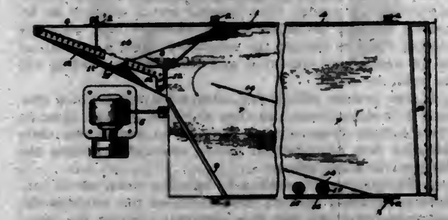


1. A weighing scale comprising a casing provided with an opening in one of its walls, an indicator secured to said wall, a ball secured to the casing, a beam pivotally secured at one end within the casing, a spring secured at one end to the casing and at its opposite end to the free end of the beam, arms secured to the beam, a dial plate secured to the arms, a flexible element secured to the beam, and a hook secured to the flexible element.

2. A weighing scale comprising a support, a beam pivotally secured at one end to said support, a spring secured at one end to said support and at its opposite end to the free end of the beam, arms secured to the beam, an indicator, a dial plate adjustably secured to the arms for coöperation with the indicator, and a hook secured to the beam.

3. A weighing scale comprising a support, a beam pivotally secured at one end to the support, a spring secured at one end to the support and at its opposite end to the free end of the beam, an indicator, arms secured to the beam, a dial plate secured to the arms for coöperation with the indicator, a roller journaled on the support, a flexible element secured at one end to the beam and passing over the roller, and a hook secured to the free end of the flexible element.

959,838. ORE CONCENTRATOR AND CLASSIFIER. MARTIN PRIOR BOSS, San Francisco, Cal. Filed Mar. 23, 1908. Serial No. 422,629.



1. In an ore concentrator and classifier, a shaking tray constituting a settling zone and a section projecting beyond the tray, connected to the concentrates delivery terminal of the tray and having oppositely disposed upstanding sides constructed and arranged to form a channel of lessening cross area from its junction with the tray portion to its outer end, and one of which upstanding sides constitutes an overflow weir for the material delivered to the section.

2. In an ore concentrator and classifier, a shaking tray constituting a settling zone and a section projecting beyond the tray, connected to the concentrates delivery terminal of the tray and having a bottom and upstanding sides constructed and arranged to form a channel narrowing and shallowing toward its outer end, one of which upstanding sides constituting a continuous overflow weir for the material delivered to the section.

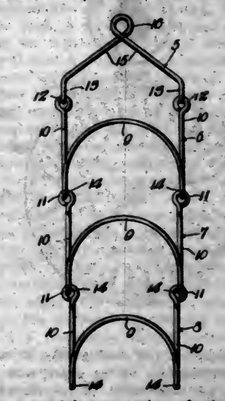
3. In an ore concentrator and classifier, a shaking tray constituting a settling zone, said tray having a depth lessening from its receiving end to the concentrates delivery terminal, and a section projecting beyond the tray portion connected to the concentrates delivery terminal thereof, the projecting section having a bottom and upstanding sides constructed and arranged to form a longitudinally extending channel narrowing and shallowing toward its outer end, one of which upstanding sides constituting a continuous overflow weir.

4. In an ore-concentrator and classifier, a shaking-table comprising a tray portion constituting a settling zone, and a section projecting beyond the tray portion connected to the concentrates delivery terminal of said tray portion, said section having a concentrating surface and oppositely disposed bordering upstanding sides, one of which constitutes a continuous overflow border for the contained concentrates.

5. In an ore concentrator and classifier, a shaking-table comprising a tray portion constituting a settling zone, and a section extending beyond the tray portion and communicating with the delivery terminal of said tray portion, the said extending section having upstanding sides, one of which upstanding sides forms a continuous overflow border for the contained concentrates, and means for delivering wash water to effect a cross flow to and over said overflow border.

[Claims 6 to 17 not printed in the Gazette.]

959,839. PAPER-RACK. PHILIP J. BUEHLER, Ritzville, Wash. Filed Oct. 22, 1909. Serial No. 524,051.



1. A rack comprising a series of pivotally connected article engaging sections arranged in a vertical row; and an attaching section pivotally connected to the uppermost first named section, each of said first named sections being constructed of a U-shaped wire strip having its bight portion bent forwardly and upwardly into spaced parallel relation with the legs thereof to provide a retaining lip, each leg terminating in an eye slidably engaged with the adjacent leg of the section next above, the second named section comprising a wire strip bent to form a pair of diverging legs provided at their point of intersection with an eye, and at their free ends with eyes, the last named eyes being engaged with the eyes formed upon the ends of the legs of said uppermost first named section.

2. A rack comprising a plurality of skeleton sections pivotally and slidably connected together and arranged one above the other in a vertical row, each section being constructed of a single wire strip bent upon itself to provide a retaining lip, said sections gradually decreasing in width from the upper to the lower end of the row, whereby they may be nested when the rack is not in use; and an attaching section pivotally connected to the uppermost first named section.

3. A rack comprising a series of skeleton sections pivotally and slidably connected together and arranged one above the other in a vertical row, each section being constructed of a U-shaped wire strip having its bight portion bent upwardly and forwardly into spaced parallel relation to the legs thereof to provide a retaining lip, each leg terminating in an eye slidably engaged with the adjacent leg of the section next above, the eyes of certain of said sections being forwardly inclined; and an attaching section pivotally connected at its ends to the eyes of the uppermost first named section.

4. A rack comprising a series of skeleton sections pivotally and slidably connected together and arranged one above the other in a vertical row, each section being constructed of a U-shaped wire strip having its bight portion bent upwardly and forwardly into spaced parallel relation to the legs thereof to provide a retaining lip, each leg terminating in an eye slidably engaged with the adjacent leg of the section next above, the eyes of certain of said sections being forwardly inclined, said section gradually decreasing in width from the upper to the lower end of the row, whereby they may be nested together when the rack is not in use; and an attaching section pivotally connected at its ends to the eyes of the uppermost first named section.

959,840. CASH-REGISTER. ADOLPH G. CARLSON, Chicago, Ill., assignor of one-half to Fred H. Fitch, Pittsburg, Kans. Filed Aug. 25, 1905. Serial No. 275,701.



1. In a cash register, the combination of two members, one movable independently of the other, and each having printing means, an impression device therefor with respect to which said members are movable, means for indicating the position of either of said members with respect to said impression device, means for supporting and securing a record sheet between said impression device and said members and in a fixed position with respect to the said impression device and members, and means for moving said sheet at will after each impression.

2. In a cash register, the combination of two members, one movable independently of the other, and each having printing means, an impression device therefor with respect to which said members are movable, means for indicating the position of either of said members with respect to said impression device, a single means for moving said members in unison and one independently of the other, *ad libitum*, means for interposing a record sheet between said impression device and said members, and means for moving the sheet at will after each impression.

3. In a cash register, the combination of two movable members each bearing printing means, an impression device therefor with respect to which said members are freely movable in a forward and backward direction, one independently of the other, and which is common to both of said members, a single means whereby one of said members may be moved a plurality of times while the other one is at rest, means for actuating said impression device *ad libitum* independently of the motion of said members, means for interposing a record sheet between said impression device and members, and means for moving the record sheet at will after each impression.

4. In a cash register, the combination of two movable, annular, concentric members, bearing printing means, an impression device therefor with respect to which said members are movable and which projects across said members, the printing devices on one of said members being arranged in lines tending toward the center, and each of said lines being at an angle to the longitude of said impression device when registering therewith, means whereby the latter one of said members may be moved a plurality of times while the other one is at rest, means for actuating said impression device *ad libitum* independently of the motion of said members, and means for interposing a record sheet between said impression device and members.

5. In a cash register, the combination of two movable, annular, concentric members, bearing printing means, an impression device therefor, with respect to which said members are movable, and which projects across said members, the printing devices on one of said members being arranged in lines tending toward the center, and each of said lines being at an angle to the longitude of said impression device when registering therewith, means whereby the latter one of said members may be moved a plurality of times while the other one is at rest, means for actuating said impression device *ad libitum* independently of the motion of said members, means for interposing a record sheet between said impression device and members, and means for moving the sheet at will after each impression, and means for indicating the positions of said members with respect to said impression device.

[Claims 6 to 15 not printed in the Gazette.]

959,841. PROCESS OF RENDERING POTASH COMPOUNDS SOLUBLE. FRANKLIN R. CARPENTER, Denver, Colo., assignor to The American Iron and Steel Alloys Company, Denver, Colo., a Corporation of Colorado. Filed Dec. 31, 1906. Serial No. 350,099.

1. The process of preparing rocks containing potash compounds for use in agriculture which consists in intensely heating the same and then suddenly cooling the heated material to change its molecular structure and render the compounds soluble and available for plant life and then finely grinding the same for use.

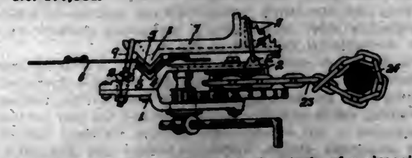
2. The process of preparing rocks containing potash compounds to render them soluble which consists in intensely heating the same with a flux and then suddenly cooling them to change the compounds from a crystalline to an amorphous condition and then finely grinding the material for use.

3. The process of treating feldspathic rocks which consists in heating them and then suddenly chilling them to change them from a crystalline to an amorphous state whereby they are rendered soluble and then reducing the material to a fine powder.

4. The process of treating feldspathic rocks, which consists in intensely heating them to loosen the bonds of the molecular structure and then suddenly chilling the material to hold the molecular structure in this condition and to render the material soluble and then reducing the material to a fine powder.

5. The process of treating feldspathic rocks, which consists in intensely heating them, and then suddenly chilling the fused material to cause it to retain the heat of crystallization and to thereby render it soluble and then reducing the material to a fine powder.

959,842. MEANS FOR CLAMPING FENCES TO STRETCHER-JACKS. ANDREW CHURCH and CHARLES A. CHURCH, Adrian, Mich. Filed Feb. 15, 1909. Serial No. 477,844.



1. The combination with a stretcher-jack, of a clamping part carried thereby at one side thereof, and a set of normally loose fence clamping bars adapted to be clamped together by the coöperating action of said part and jack and being capable of longitudinal adjustment relative to the jack.

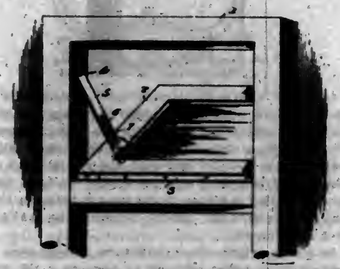
2. A stretcher-jack having two relatively movable parts having complemental protuberant and recessed clamp-bar engaging portions, and a set of normally loose clamp-bars carried by and clamped together by said parts.

3. A fence stretcher-jack having two relatively movable parts which coöperate to clamp a set of clamping bars together, an adjustable swinging fulcrum member connecting said parts at one end, means connecting the other end of said parts adapted to permit relative longitudinal movements thereof, and fence clamping bars held by said parts.

4. A fence-stretcher-jack having a part provided with a socket, a part movable relative to said socketed part and having a protuberance complemental to said socket, a fence-clamping bar seated in said socket, and a companion clamping-bar in engagement with and held to its companion by said protuberance.

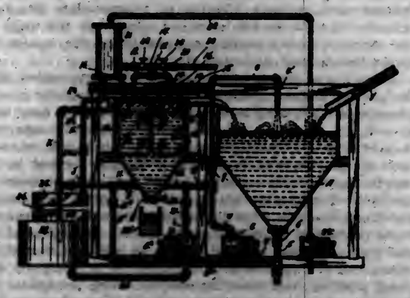
5. A fence stretcher jack having a part hingedly connected to one side thereof and movable to coöperate with the jack to clamp a pair of interposed fence clamping bars together, and a coöperating bail and stepped surface for adjustably securing said part in clamped position.

959,843. TRANSOM-HOLDER. WALTER COX and PETER R. PETERSON, Provo, Utah. Filed Dec. 5, 1907. Serial No. 405,277.



In a transom holder, the combination with a swinging transom and its frame, of an elastic or flexible link pivoted to the frame so as to be in alinement with the transom when the latter is closed, and provided with an elongated slot extending lengthwise thereof, a screw carried by the transom, lying in the plane thereof and passing through the slot aforesaid, and friction washers carried by said member on opposite sides of the link, said members by their frictional engagement with the link holding the transom where positioned.

959,844. FILTERING APPARATUS. ERNEST P. DARGIN, Denver, Colo., assignor to Mary E. Dargin, Denver, Colo. Filed Sept. 14, 1907. Serial No. 392,888.



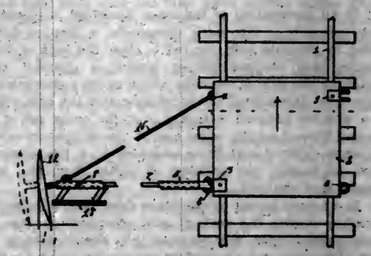
1. The combination of a filter tank, a slime-solution tank, means for passing the slime solutions from the last named tank into the lower portion of the filter tank, the said means having a capacity for introducing the slime solutions into the filter tank faster than the supply to the slime tank, means for withdrawing the metal solution from the filter tank, the said means having a less capacity than the means for introducing the slime solution to the filter tank, and means for permitting an overflow of the surplus from the filter tank to the slime-solution tank whereby the solution in both tanks is kept in a continual state of agitation.

2. The combination of a filter tank provided with filter bags suspended therein, a slime tank, means for removing the slime solution from the last named tank and introducing the same into the filter tank, suction mechanism connected with the filter bags for removing the metal solutions from the tank through the said bags, the means for supplying slime solution to the filter tank having a greater capacity than the means for removing the metal solutions from the filter tank, and means for permitting an overflow of the surplus from the filter tank to the slime tank, whereby the solutions in both tanks are kept in a continual state of agitation, substantially as described.

3. The combination of a filter tank, filter bags suspended in the tank, a slime tank, means connected with the filter bags for removing the metal solutions from the filter tank, said means comprising a suction pump, an air chamber, means for siphoning the metal solutions from the air chamber to prevent their passage through the suction pump, and means for passing the slime solution from the slime tank into the filter tank, said means having a capacity greater than the capacity of the suction pump and the siphoning devices, and means for permitting an overflow of the surplus from the filter tank to the slime tank, substantially as described.

4. The combination of a filter tank, filter bags suspended in said tank, a slime tank, suction mechanism connected with the bags for removing the metal solution from the tank through the bags, whereby the exterior surfaces of the latter become coated with the solid portion of the slime solution, means for introducing wash water to the filter tank for the purpose of removing from the coating of the bags any remaining values, means to permit an over-flow from the filter tank to provide for the escape of the surplus of supply, means for draining the solution from the filter tank after the washing operation is completed, means for introducing fluid under pressure to the filter bags for the purpose of expelling the aforesaid coating, the bottom of the filter tank being provided with a door or gate for the escape of the solution after the washing operation, and means for passing the slime solution from the slime tank into the filter tank at a greater speed than it is passed to the slime tank, substantially as described.

959,845. GRASS AND DITCH-LINE CUTTER. CHARLES DAWES, Liberty, Ind., assignor of one-half to John P. Howe, Liberty, Ind. Filed June 21, 1909. Serial No. 503,832.



In a grass and ditch line cutter, the combination with a truck adapted to run on a track, a tubular arm removably hinged at one end to the rear portion of one side thereof, a brace rod secured to the other end of the arm, and removably hinged to the front portion of the same side of the truck, and a handle secured on the arm whereby a downward pressure may be exerted thereon, of a shaft mounted within the arm, and both longitudinally and rotatively adjustable in relation thereto, said arm being formed with a spindle on its outer end and turned at an angle to its length, and means for maintaining the shaft in different positions of adjustment both longitudinal and rotative in relation to the arm, for the purpose specified.

959,846. BUILDING-BLOCK. ANTONIO D'ELIA, Jersey City, N. J. Filed Aug. 27, 1909. Serial No. 514,927.

A removable block or brick comprising a rectangular body portion, projections formed on the diagonally opposite

corners of the same, rectangular locking projections arranged on opposite sides of and adjacent to the edges of the block, the said projections being arranged alternately in respect to one another, the spaces thus formed being of



greater area than the corner projections and locking projections, the said projections being out of contact with one another and arranged in a reverse position on the opposite side of the block, as and for the purpose described.

959,847. DROPPER. THOMAS A. DE VILBISS, Toledo, Ohio, assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Aug. 27, 1909. Serial No. 514,849.

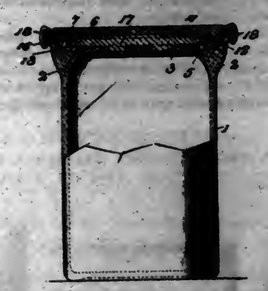


1. In an instrument of the class described, a receptacle, a tube projecting into such receptacle, a stopper-member carried by the tube and adapted to close the neck of the receptacle, said stopper-member having a channel therethrough at the side of the tube which opens communication between the interior of the receptacle and the atmosphere, and a member adapted to thread over the outer end of said tube and to seat on the outer end of the stopper-member to close said channel and to be unseated to a predetermined extent to permit the shaking of liquid from the bottle through said channel.

2. In an instrument of the class described, a receptacle, a member closing the neck of said receptacle, a tube projected through said member and into the receptacle, and having its outer end adapted to removably carry an atomiser spray-head, said tube and member coöperating to form a channel through the member at the side of the tube, and a cap adapted to thread over the outer end of said tube and to seat on the outer end of said member to close the outer end of said channel, or to be unseated to a predetermined extent to permit a shaking of the contents of the bottle therefrom through said channel.

3. In an instrument of the class described, a receptacle, a member for closing the neck of the receptacle, a sleeve projected through said member, a liquid tube projected through said sleeve and into the receptacle and having its outer end open and adapted to carry an atomiser spray-head, said tube having a portion longitudinally depressed to provide a channel between the sleeve and tube from the interior of the receptacle to the exterior of said member, and a cap threaded to the outer end of said tube and adapted to close the outer end thereof and, when seated on the outer end of said sleeve, to close said channel, substantially as described.

959,848. JAR-CLOSURE. GEORGE W. DUNGAN, Strasburg, Pa. Filed Oct. 7, 1909. Serial No. 521,452.



1. As a new article of manufacture, a receptacle formed on its inner wall with a lid supporting ledge, an inner lid supported on said ledge, the receptacle being formed in its mouth rim with a channel, an outer lid formed with a rib mounted in said channel and with supporting lugs adapted to hold the lid in spaced relation to the walls of the channel, and a sealing medium in the spaces between the inner and outer lids and the spaces between the walls of the channel and the rib.

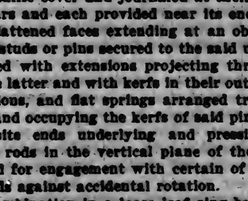
2. As a new article of manufacture, a receptacle formed with an interior ledge adapted to support a lid, an inner lid arranged to rest on said ledge, the receptacle being also formed in its mouth rim with a channel, and with recesses in one wall of said channel, an outer lid formed with a rib arranged to be positioned in said channel and with depending lugs adapted to be positioned in said recesses and arranged to support the outer lid and its rib in spaced relation to the walls of the channel, and a sealing medium filling the spaces between the rib and the channel walls.

3. As a new article of manufacture, a receptacle formed in its mouth rim with a channel tapering in cross section with downwardly converging inner and outer walls, a lid formed with a correspondingly shaped rib arranged to be positioned in said channel and with lugs formed on the inner wall of said rib, the inner wall of the channel being formed with recesses adapted to accommodate the lugs whereby to hold the rib in spaced relation to the walls of the channel, and a sealing medium filling the spaces between the channel walls and the rib.

4. As a new article of manufacture, a jar provided with an interior annular ledge and an undercut annular groove above said ledge with recesses opening upwardly from said groove, an inner lid adapted to rest on said ledge and formed with lugs arranged to pass through said recesses into the groove, said receptacle being also formed in its mouth rim with an annular channel and with recesses in one wall of said channel, an outer lid formed with a depending rib set in from the margin thereof and arranged to be positioned in said channel, the rib being formed in one wall with lugs adapted to rest in said last named recesses and arranged to hold the inner lid in a slightly elevated position, and a sealing medium filling the spaces between the inner and outer lids and the spaces between the rib and the walls of the channels, the body portion being provided at its rim edge with an upwardly projecting flange flush with the margin of the outer lid.

959,849. LOOSE-LEAF-BOOK DEVICE. CHARLES FORGERSON, Kansas City, Mo. Filed Feb. 7, 1910. Serial No. 542,566.

1. A loose leaf ring book, comprising a book cover, a casing secured thereto consisting of a base plate having downwardly-disposed hooks at its side margins, and upturned ears at its ends, a metallic top or cover overlying the casing and provided at its side margins with upwardly-disposed hooks interlocked with the hooks of the base plate and with transverse slots, parallel rods arranged between the base plate and the metallic cover and journaled at their ends in said upturned ears and provided near their ends and at their undersides with faces extending at obtuse angles to each other, oppositely-bowed hooks extending through said slots and secured at their lower ends to said rods, and means for exerting a yielding pressure upon one of the said faces of each of said rods to hold the same against accidental movement.



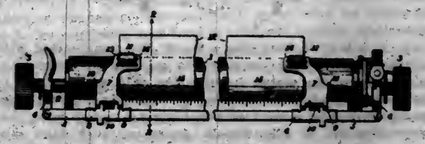
2. A loose leaf ring book, comprising a book cover, a casing secured thereto consisting of a base plate having downwardly-disposed hooks at its side margins, and upturned ears at its ends, a metallic top or cover overlying the casing and provided at its side margins with upwardly-disposed hooks interlocked with the hooks of the base plate and with transverse slots, parallel rods arranged between the base plate and the metallic cover and journaled at their ends in said upturned ears and provided near their ends and at their undersides with faces extending at obtuse angles to each other, oppositely-bowed hooks extending through said slots and secured at their lower ends to said rods, and springs suitably secured between the base plate and the top or cover and engaging certain faces of said rods to hold the same against accidental rotation.

3. A loose leaf ring book, comprising a book cover, a casing secured thereto consisting of a base plate having downwardly-disposed hooks at its side margins, and upturned ears at its ends, a metallic top or cover overlying the casing and provided at its side margins with upwardly-disposed hooks interlocked with the hooks of the base plate and with transverse slots, parallel rods arranged between the base plate and the metallic cover and journaled at their ends in said upturned cover and provided near their ends and at their undersides with faces extending at obtuse angles to each other, oppositely-bowed hooks extending through said slots and secured at their lower ends to said rods, pins or studs between the base plate and the top or cover and bearing a rigid relation to the former, flat springs extending through said pins or studs and underlying and exerting an upward pressure upon certain of said faces of the rods to hold the latter against accidental rotatable movement.

4. A loose leaf ring book, comprising a book cover, a casing secured thereto consisting of a base plate having downwardly-disposed hooks at its side margins and upturned ears at its ends, a metallic top or cover overlying the casing and provided with upwardly-disposed hooks interlocked with the hooks of the base plate and with transverse slots, parallel rods arranged between the base plate and the metallic cover and journaled at their ends in said upturned ears and each provided near its ends with inner and outer flattened faces extending at an obtuse angle to each other, studs or pins secured to the said upturned ends and provided with extensions projecting through and secured to the latter and with kerfs in their outer ends above said extensions, and flat springs arranged transversely in the casing and occupying the kerfs of said pins and having their opposite ends underlying and pressing upwardly against the rods in the vertical plane of their said faces and adapted for engagement with certain of said faces to hold the rods against accidental rotation.

5. The combination in a loose leaf ring book, of a book cover, a base plate upon the same and provided with upturned ears and at its side margins with downwardly-disposed hooks, a binding strip stretched upon and of greater width than said base plate and secured to the book cover at opposite sides of the base plate, a metallic top or cover overlying the base plate and said binding strip and provided with side walls engaging the outer sides of the base plate and upturned hooks engaging the downwardly-disposed hooks of the base plate and clamping the interposed binding strip in the latter, and also provided with transverse slots, parallel rods arranged between the base plate and the metallic cover and journaled at their ends in said upturned ears and provided near their ends and undersides with faces extending at obtuse angles to each other, oppositely-bowed hooks extending through said slots and secured at their lower ends to said rods, and means for exerting a yielding pressure upon one of the said faces of each of said rods to hold the same against accidental movement.

959,850. PAPER-FINGER FOR TYPE-WRITING MACHINES. CARL GABRIELSON, Syracuse, N. Y., assignor to L. C. Smith & Bros. Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed June 7, 1906. Serial No. 320,628.



1. In a typewriting machine, the combination with the carriage and the platen, of a paper finger having its support at one side of the printing line and its free end adapted to engage the paper at the other side of the printing line, the free end of the finger being offset toward the middle of the platen beyond the printing line, the offset portion of the paper finger being flared away from the platen to receive the paper and adapted to hold the paper when the remaining portion of the finger is beyond the margin of the paper, whereby the entire width of the paper at the printing line is exposed when the paper finger is in operative position.

2. In a typewriting machine, the combination with the carriage and the platen, of a bar arranged adjacent to the platen, and a pair of paper fingers adjustably mounted on said bar, the said bar being at one side of the printing line and the free ends of said paper fingers upon the other side of said line, and the free ends of the paper fingers being offset toward each other beyond the printing line, the offset portion of each paper finger being flared away from the platen to receive the paper and adapted to hold the paper when the remaining portion of each finger is beyond the margin of the paper, whereby the entire width of the paper is exposed at the printing line while the paper fingers are in operative position.

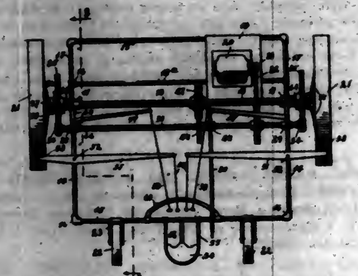
3. In a front strike typewriting machine, the combination with the carriage and the platen, of a pair of paper fingers having supports adjacent to the platen and below the printing line and having free ends above the printing line adapted to engage the margins of the paper, the said paper fingers being offset toward each other at their free ends and the offset portions being provided with pressure rollers, whereby the printing line is exposed to view throughout the entire width of the paper while the paper fingers are in engagement with the margins of the paper.

959,851. MOTOR-VEHICLE. EMANUEL GERBER, Kansas City, Mo. Filed Feb. 2, 1906. Serial No. 299,120.

1. In a motor vehicle, the combination with a main frame, of an axle journaled on said frame, means connected with the motor for rotating said axle, a pair of driving wheels loosely mounted on the ends of said axle, sleeves loosely mounted upon said axle adjacent to said wheels, gears mounted upon said sleeves, friction clutches on the sleeves adapted to engage said wheels, and operative connection between said gears and the motor.

2. In a motor vehicle, the combination with a frame, of an axle journaled on said frame, means connected with the motor for rotating said axle, a pair of driving wheels loosely mounted on said axle, channel rings on said wheels, sleeves loosely mounted upon said axle adjacent to said

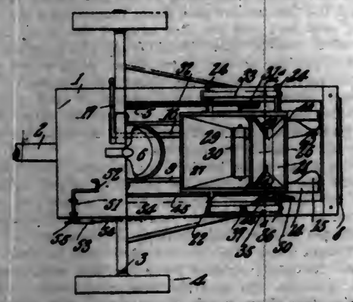
wheels, gears mounted upon said sleeves, friction clutches slidable on said sleeves and adapted to engage said channel rings, and operative connection between said gears and the motor.



3. In a vehicle, including a motor, the combination with a frame, of an axle journaled on said frame, means connected with the motor for rotating said axle, a pair of driving wheels loosely mounted on said axle, channel rings mounted on said wheels, sleeves loosely mounted upon said axle adjacent to said wheels, gears mounted upon said sleeves, clutch rings slidable on said sleeves, radially arranged arms pivoted on said rings, friction blocks on said arms adapted to engage said channel rings, and operative connection between said gears and the motor.

4. In a motor vehicle, the combination with a frame, of an axle journaled on said frame, a drive-shaft on the frame parallel with said axle, a pair of driving wheels loosely mounted on said axle, friction clutches loosely mounted on said axle and adapted to engage said wheels, gearing connecting said clutches with said shaft, gearing connecting the shaft and said axle, and operative connection between the motor and the shaft.

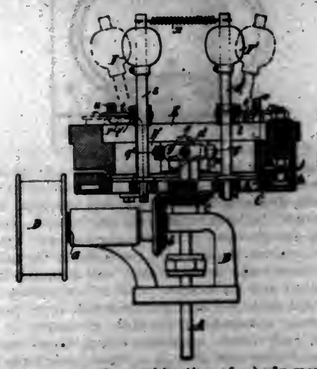
959,852. PLANTER. FREDERICK M. GORDON, Cave Spring, Ga. Filed Nov. 27, 1909. Serial No. 530,217.



A planter comprising a frame having stops, a hopper having at its forward and rear sides cross bars adapted to lie between the said stops, a clamp bar located at one side of the frame, a means for clamping said bar against the cross bar, a lever located at the opposite side of the frame and adapted to be swung so that one end will bear against one face of one of the cross bars and at the other end will lie over the edge of the other cross bar, a slide mounted for reciprocation in the hopper, said slide and hopper having openings adapted to register as the slide reciprocates, and means for operatively connecting the slide with the supporting wheels of the planter.

959,853. ENGINE-GOVERNOR. CHARLES GRANT, New York, N. Y., assignor of one-half to Richard Plunkett, New York, N. Y. Filed May 21, 1906. Serial No. 317,972.

1. In a governor, the combination of a body mounted for rotation in a fixed plane, an inertia wheel coaxial therewith and movable thereto in a fixed plane, a centrifugal weight mounted on said body to swing freely, a connection between said centrifugal weight and said inertia wheel adapted to cause said centrifugal weight to lag relatively to said governor body in the direction opposite the direction of rotation when said centrifugal weight moves outwardly under centrifugal force, and said connection being adapted to cause said centrifugal weight to advance relatively to said governor body when the former moves inwardly, and a transmission connection adapted to be moved by the movement of the parts before mentioned.



2. In a governor, the combination of a body mounted for rotation in a fixed plane, an inertia wheel coaxial therewith and movable thereto in a fixed plane, a centrifugal weight mounted on said body to swing freely, a connection between said centrifugal weight and said inertia wheel adapted to cause said centrifugal weight to lag relatively to said governor body in the direction opposite the direction of rotation when said centrifugal weight moves outwardly under centrifugal force, and said connection being adapted to cause said centrifugal weight to advance relatively to said governor body when the former moves inwardly, and a transmission connection adapted to be moved by the movements of the parts before mentioned, said connection comprising a toggle mechanism, a joint of which is connected with said centrifugal weight.

3. In a governor, the combination of a body mounted for rotation in a fixed plane, an inertia wheel coaxial therewith and movable thereto in a fixed plane, a centrifugal weight mounted on said body to swing freely, a connection between said centrifugal weight and said inertia wheel adapted to cause said centrifugal weight to lag relatively to said governor body in the direction opposite the direction of rotation when said centrifugal weight moves outwardly under centrifugal force, and said connection being adapted to cause said centrifugal weight to advance relatively to said governor body when the former moves inwardly, and a transmission connection adapted to be moved by the movement of the parts before mentioned, said connection comprising a toggle mechanism, a joint of which is connected with said centrifugal weight, and said centrifugal weight being mounted upon an elongated shaft the end of which is loosely connected to said governor body.

4. In a governor, the combination of a body mounted for rotation in a fixed plane, an inertia wheel coaxial therewith and movable thereto in a fixed plane, a plurality of centrifugal weights mounted on said body to swing freely, a connection between said centrifugal weights and said inertia weights adapted to cause said centrifugal weights to lag relatively to said governor body in the direction opposite the direction of rotation when said centrifugal weights move outwardly under centrifugal force, a spring tending to hold said centrifugal weights in their inward positions, and a transmission connection adapted to be moved by the movements of said inertia wheel and weights.

5. In a governor, the combination of a body mounted for rotation in a fixed plane, and an inertia wheel coaxial

therewith and movable relatively thereto in a fixed plane, a centrifugal weight mounted on said body at a point which is eccentric to the axis of said body and adapted to move rearwardly as it moves outwardly, a connection between said centrifugal weight and said inertia weight, and a transmission connection adapted to be moved by the movements of the parts before mentioned.

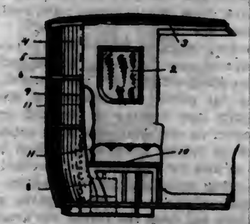
[Claim 6 not printed in the Gazette.]

959,854. PIPE-COUPLING. THOMAS C. GRIERSON, Eveleth, Minn. Filed Apr. 26, 1905. Serial No. 257,465.



As a new article of manufacture, a detachable pipe coupling formed of two disks of equal size having integral bosses provided with threaded openings adapted to receive the respective ends of the pipes to be connected, one of said disks being provided with a dove-tail shaped slot in its face opposite the boss, the walls of which are provided with notches of unequal size forming a transverse groove, the edge of said disk being provided with a notch at the larger end of said dove-tail groove, the other disk being provided with a dove-tail tongue formed on its inner face adapted to fit within said groove and provided with a lug adapted to fit within the notch of said disk, said tongue being provided with a tapering transverse groove adapted to register with the grooves of the first mentioned disk when said disks are forced together, a wedge-shaped pin adapted to be driven through said transverse groove for locking said disks together, the first mentioned disk being provided with an annular groove adapted to receive a washer for co-acting with the second mentioned disk so as to form a watertight joint between the same.

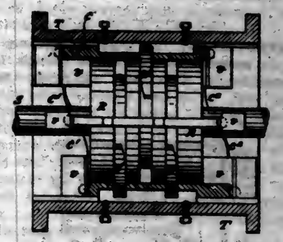
959,855. WAGON-BODY. FREDERICK F. GROFF, Lancaster, Pa. Filed May 10, 1909. Serial No. 495,140.



In a vehicle body of the class described, the combination with a body having panel sides and an extending top, of a rear closed and paneled extension, formed with rounded corners and integral with the sides of said body, a door formed in the rear of said extension communicating with the compartment formed therein, and means secured to the back of the vehicle seat for securing articles within said compartment.

959,856. ROTARY ENGINE. GEORGE HURLSTONE HARDY, Twickenham, England. Filed Mar. 20, 1909. Serial No. 484,841.

1. A rotary engine having a rotor provided with a plurality of working chambers in the form of parallel-sided annular channels separated from each other by uniform disk-like partitions and having adjacent working chambers diagonally opposite each other, abutments of adjacent annular channels diagonally opposite each other, peripheral inlet and outlet ports for said chambers, sets of vane-like pistons reciprocative longitudinally in radial grooves across the rotor and having wing-like extremities, and a stator having external sinusoidal inclines against which said wing-like extremities bear.



2. A rotary engine having a rotor provided with a plurality of working chambers in the form of parallel-sided annular channels separated from each other by uniform disk-like partitions and having adjacent working chambers diagonally opposite each other, abutments of adjacent annular channels diagonally opposite each other, peripheral inlet and outlet ports for said chambers, sets of vane-like pistons reciprocative longitudinally in radial grooves across the rotor and having wing-like extremities, and a stator having external peripheral cams on the end faces of its cylindrical part with sinusoidal curved inclines intervening between flats on alternate quadrants.

3. A rotary engine having a rotor provided with a plurality of working chambers in the form of parallel-sided annular channels separated from each other by uniform disk-like partitions and having adjacent working chambers diagonally opposite each other, abutments of adjacent annular channels diagonally opposite each other, peripheral inlet and outlet ports for said chambers, sets of vane-like pistons reciprocative longitudinally in radial grooves across the rotor and having wing-like extremities, and a stator comprising a cylindrical case having cam-curves on its end faces, the wing-like extremities of said pistons bearing against said end faces of the stator.

4. A rotary engine having a rotor comprising a drum-like body provided with a plurality of adjacent annular groove-like chambers, a stator having fixed abutments entering said chambers, the abutment of one chamber being diagonally opposite the abutment of an adjacent chamber, intercommunicating passages to convey the outflow from one chamber to the inlet ports of other chambers.

5. A rotary engine having a rotor provided with a plurality of working chambers in the form of parallel-sided annular channels separated from each other by uniform disk-like partitions and having adjacent working chambers diagonally opposite each other, abutments of adjacent annular channels diagonally opposite each other, peripheral inlet and outlet ports for said chambers, sets of vane-like pistons reciprocative longitudinally in radial grooves across the rotor and having wing-like extremities, and a stator comprising a cylindrical case encompassing the rotor and formed in two parts, one part being an external case and the other an internal case which latter has cam-curves on its end faces, the abutments being securely held in position by the stator, said stator having inlet and outlet passages communicating with peripheral ports that communicate with the chambers in the rotor.

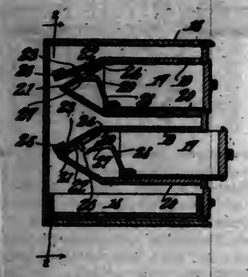
959,857. LOCK-WASHER. ELMER D. HEAGNEY, French Camp, Cal., assignor of one-fourth to Barry M. Bainbridge, French Camp, Cal. Filed Sept. 7, 1909. Serial No. 516,452.



A lock washer comprising a washer proper having a central orifice, a plurality of ears on said washer around

said orifice projecting out of the plane of the washer, a spring ring disposed obliquely across the top of said washer and a locking means on said ring.

959,858. STERILIZER. WILLIAM T. HENDON, Laurinburg, N. C., assignor of one-half to Francis L. Bundy, Laurinburg, N. C. Filed May 11, 1909. Serial No. 495,248.



1. A sterilizing cabinet comprising a casing, a drawer therefor, a wall in the casing surrounding the drawer, said wall having an opening, a valve controlling said opening, means for closing the valve when the drawer is open, a loop projecting from the valve, a stem rising from the drawer, and a lateral projection of the stem engageable with the loop for opening the valve when the drawer is closed, said extension having a notch which is engageable with the loop.

2. A sterilizing cabinet comprising a casing, a drawer therefor open at its rear end, partitions in the casing between which the drawer is slidably mounted, one of said partitions serving as a closure for the top of the drawer, a wall extending between the partitions behind the rear end of the drawer, said wall having a downwardly inclined portion provided with an opening, a valve controlling said opening, and a stem carried by the drawer, and engageable with the valve for opening the same when the drawer is closed.

959,859. WINDOW-SCREEN. HENRY HIGGIN, Newport, Ky., assignor to The Higgin Manufacturing Company, Newport, Ky., a Corporation of West Virginia. Filed Aug. 26, 1904. Serial No. 222,296.



1. The binding consisting of the part D having the curved portion D^4, the portion D^5 extending away from the part C, the part C having the curved portion C^9 and the terminal free enlarged rounded edge C^2, the curved portion D^6 located within the rounded edge C^2, and means for locking the opposite end of part D to the opposite end of part C, substantially as and for the purposes specified.

2. In a screen, a binding composed of the parts C, C^9, C^9 and the part D, formed and united, substantially as and for the purposes specified.

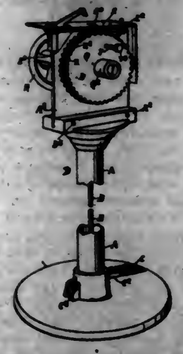
3. In a screen, the part D having the curve D^6, and the part C having the curve C^9 and the curve C^2, inclosing the curved part D^6, and the screen cloth caught in the curve C^9 and located between the parts D^6 and C^2, substantially as and for the purposes specified.

4. In a screen, the part D having the curve D^6, and the part C having the curve C^9, terminating at its free edge in the beaded part C^2, and the screen cloth curved on the bead and extending between the curved part C^9 and the curved part D^6, the curved part C^9 in connection with the back part of the curved portion C^9 inclosing the curved part D^6, substantially as and for the purposes specified.

5. In a screen binding, the binding part D having the curve D^6 and curve D^5, D^4, and foot curve D^5 and bottom D^7, and the part C having part C^9, and part C^4, and bottom curve C^5, and bottom C^9, and final bottom bend C^7, the part D being located relatively to the part C, as follows, the part C^9 being made to inclose and be the outside of the part D^6, the bottom bends C^5 and C^7 and bottom C^4 being made by pressure to permanently inclose the bend D^6 and the bottom D^7, substantially as and for the purposes specified.

[Claims 6 to 21 not printed in the Gazette.]

959,860. MACHINE FOR MARKING LAUNDRY-TAGS, CLOTHES, AND OTHER ARTICLES MADE OF TEXTILE FABRICS. HENRY HIGGIN, Newport, Ky. Filed Sept. 21, 1906. Serial No. 335,644.



1. In a marking machine, the vertical frame, and the carrying plate movable relatively thereto, the guides between said frame and said plate for enabling the plate to move in a regular path, a table, a hammer, a spring for speeding the hammer in its descent, a latch for releasing the hammer at a given moment, and mechanism between the carrying plate and the latch for enabling this plate to unlock the latch from the hammer, substantially as and for the purposes specified.

2. In a marking machine, the vertical frame, and the vertically reciprocatory plate, the frame and the plates respectively provided with guides that interfit, and means for depressing the plate, and means for elastically elevating this plate and holding it elevated until lowered by human agency, in combination with a table, carried by the plate, and an inking mechanism united to the plate, substantially as and for the purposes specified.

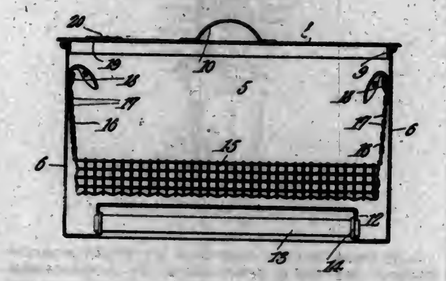
3. In a marking machine, the combination of the vertical frame, the reciprocatory carrying plate, guides thereon, the projecting lug from the frame, the arms of the carrying plate between which the said lug of the frame is located, guide for keeping the arms in alinement with the lug, and a spring between the arm and the lug for elastically elevating the carrying plate, substantially as and for the purposes specified.

4. In a marking machine, the combination of the vertical frame, the reciprocatory carrying plate, guides thereon, the projecting lug from the frame, the arms of the carrying plate, one of said arms above the said lug and the other arm below the said lug, a rod connected to the arms and passing through the said lug, and a spring between the arm and the lug for elastically elevating the carrying plate, substantially as and for the purposes specified.

5. In a marking machine, the combination of the vertical frame, the reciprocatory carrying plate, guides thereon, the projecting lug from the frame, the arms of the carrying plate between which the said lug of the frame is located, a rod connected to the arms and passing through the said lug, and a set sleeve on the rod, and a spring between the sleeve and a part of the stationary frame, for elastically elevating the carrying plate, substantially as and for the purposes specified.

[Claims 6 to 21 not printed in the Gazette.]

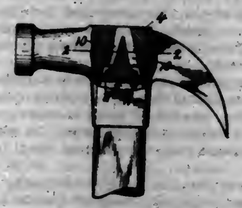
959,861. CANNING APPARATUS. JOHN SOLOMON HILDEBRAND, near Hildebran, N. C. Filed Sept. 29, 1909. Serial No. 520,153.



1. In a device of the class described, a container, this container being provided in its bottom wall with a plurality of channels having end walls, and water tubes arranged one within each of the channels and opening at its ends through the said end walls thereof.

2. In a device of the class described, a container, this container being provided in its bottom wall with a plurality of channels having end walls, and water tubes arranged one within each of the channels and opening at its ends through the said end walls thereof, said water tubes being completely housed in said channels.

959,862. HANDLE-FASTENING WEDGE. THOMAS HOOKER, Syracuse, N. Y. Filed Mar. 10, 1908. Serial No. 420,244.

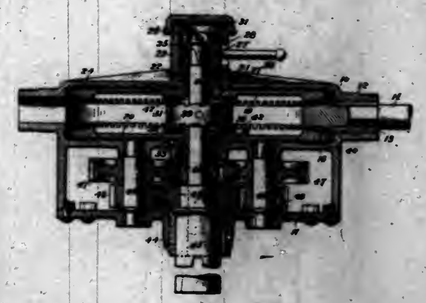


A handle fastening wedge formed of a bar triangular in cross section doubled upon itself to form two parallel equal length arms, the bar being doubled so that the apexes of the triangle abut throughout the length of the arms, the free ends of said arms being pointed, the pointed ends being triangular in contour and triangular in cross-section and having the opposite faces thereof beveled outwardly with the apex of the triangle in continuity with the apex of the arms.

959,863. TOOL-DRIVING MECHANISM. HENRY W. JACOBS, Topeka, Kans. Filed May 9, 1908, Serial No. 431,994. Renewed Apr. 6, 1910. Serial No. 553,848.

1. In a tool driving machine, the combination of a casing, a shaft having bearing in said casing, a bevel pinion carried by said shaft, oppositely facing bevel gears engaging said pinion, a clutch member carried by each of said gears, a shaft co-axial with said bevel gears and supporting the same and having an intermediate clutch member tight thereon, a tool driving spindle connected with said clutch shaft, and means for shifting said latter shaft to throw the intermediate clutch member into engagement with either of said first-mentioned clutch members.

2. In a tool driving machine, the combination of a casing, a shaft having bearing in said casing, a pinion on said shaft, oppositely facing bevel gears engaging said pinion, each of said gears having a hub on the back thereof, said hubs having bearing in the casing, each of said gears having a clutch member formed on the face thereof, a shaft having bearing in said hubs, an intermediate clutch member on said shaft, a ring inclosing said clutch member and bearing against the inner faces of said gears to hold said gears apart, means for shifting said intermediate clutch member, a tool driving spindle, and connections between said spindle and said shaft.



3. In a tool driving machine, the combination of a casing, a shaft having bearing therein, a pinion on said shaft, oppositely facing bevel gears having hubs on the back thereof that have bearing in said casing, clutch members formed on the faces of said gears, a shaft having bearing in said hubs, an intermediate clutch member tight on said shaft, means for shifting said last-mentioned shaft and clutch member, anti-friction washers mounted in said casing and bearing on the back of said gears near the periphery thereof, a tool driving spindle, and connections between said shaft and said spindle.

4. In a tool driving machine, the combination of a casing, a shaft having bearing therein, a bevel pinion on said shaft, oppositely facing bevel gears meshing with said pinion, a shaft co-axial with said gears, clutch members by which said shaft may be engaged with either of said gears, a tool driving spindle co-axial with said gears and said shaft, a pinion keyed to said shaft, a pinion keyed to said spindle, a shaft parallel to said first-mentioned shaft and reduction gearing carried upon said last mentioned shaft and meshing with said pinions.

5. In a tool driving machine, the combination of a casing, a shaft having bearing therein, a bevel pinion on said shaft, oppositely facing bevel gears meshing with said pinion, a shaft co-axial with said gears, clutch members by which said shaft may be engaged with either of said gears, a tool driving spindle co-axial with said gears and said shaft, a pinion keyed to said shaft, a pinion keyed to said spindle, and reduction gearing conveying motion from the first to the second of said pinions.

[Claims 6 to 10 not printed in the Gazette.]

959,864. ELECTRIC CLOCK. RUDOLPH JAHRMANN, St. Louis, Mo. Filed Feb. 14, 1910. Serial No. 543,744.

1. In combination with a reciprocating electro-magnetically-actuated armature, a reciprocating escapement, a swinging pendulum, and members projecting from the pendulum in the respective paths of movement of the armature and es-

escapement, whereby the pendulum is impelled in one direction by the armature, and the escapement is actuated by the pendulum with the successive vibrations thereof.

2. In an electric-clock, a swinging pendulum, an oscillating electro-magnetically-actuated armature, an energising coil therefor, a wiper on said armature, a contact member having a conducting and an insulated face over which the wiper plays with the respective oscillations of the armature, suitable electric connections between the coil and wiper for closing the circuit during the passage of the wiper over the conducting surface of the contact member whereby the armature is suddenly attracted toward the coil and an impulse thereby communicated to the pendulum in one direction, means for breaking the circuit after said impulse has been effected, the opposite swing of the pendulum effecting a return of the armature to its original position in which return the wiper passes over the insulated face of the contact member.



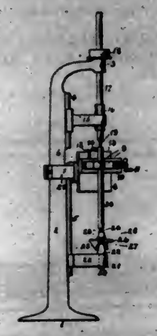
3. In an electric-clock, a swinging pendulum, an oscillating spring-controlled electro-magnetically-actuated armature, an energising coil therefor, a wiper in connection with said armature, a contact member having a conducting and an insulated face over which the wiper plays with the respective oscillations of the armature, suitable electric connections between the coil and wiper for closing the circuit during the passage of the wiper over the conducting surface of the contact member whereby the armature is suddenly attracted toward the coil and the wiper passes off the contact member, the pendulum receiving an impulse by said armature in the movement thereof aforesaid, the opposite swing of the pendulum effecting a return of the armature to its original position, in which return the wiper passes over the insulated face of the contact member.

4. In an electric-clock, an oscillating armature, an energising coil therefor, a yielding wiper arm in connection with said armature, a contact member having opposite conducting and insulated faces respectively disposed in planes at an angle to the path of movement of the wiper arm and at an angle to the plane of oscillation of the armature, whereby with an oscillation of the armature in one direction, the wiper contacts along the conducting face of the contact member, and along the insulated face thereof with an oscillation of the armature in the opposite direction.

5. In an electric-clock, an energising coil, an oscillating armature actuated thereby in one direction, an extension on the armature projecting beyond the energising coil, a swinging pendulum, a member projecting from the pendulum toward the armature extension and swinging in the path of oscillation of the extension whereby with an oscillation of the armature in one direction an impulse in a corresponding direction is communicated to the projecting member and to the pendulum.

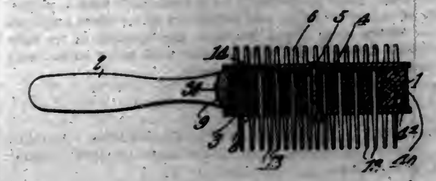
[Claims 6 to 9 not printed in the Gazette.]

959,865. CENTERING-MACHINE. WILLIAM B. JOHNSON, Rockford, Ill., assignor to Rockford Lathe & Drill Company, Rockford, Ill., a Corporation of Illinois. Filed Apr. 3, 1908. Serial No. 424,911.



A centering machine comprising a vertically arranged column, a vertically arranged drill-spindle, a table capable of adjustment into a vertical position, and a universal vise secured to the table in alinement with the drill-spindle.

959,866. COMB. EUGENE E. KEEFE, Bellows Falls, Vt. Filed Sept. 10, 1909. Serial No. 517,082.



1. A device of the class described including a casing, teeth extending therefrom, and means within the casing for generating heat, and teeth extending through said heat generating means.

2. A device of the class described including a casing, heat generating means therein, oppositely extending teeth upon the casing, one set of teeth extending through the said heat generating means and beyond the casing, said set constituting means for transmitting heat to the other teeth.

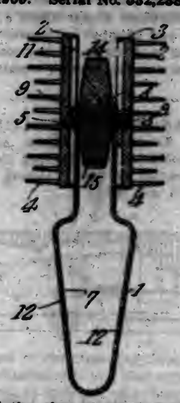
3. A device of the class described including a casing, an apertured block removably mounted therein for absorbing liquid fuel, and teeth extending through the block and beyond said casing.

4. A device of the class described including a frame, plates detachably mounted upon opposed portions of the frame, teeth integral with and outstanding from one of the plates, a fuel absorbing block mounted within the frame and between the plates, and teeth extending through the block and beyond one of the plates, said latter teeth contacting with the plate on which the first mentioned teeth are mounted.

5. A device of the class described including a frame, an apertured block therein for absorbing liquid fuel, plates detachably mounted upon opposite portions of the frame and constituting means for holding the block within the frame, said block having a fuel receiving recess in one face, teeth extending from and integral with one of the plates, the other plate having apertures therein, and teeth extending through the block and the apertured plate and contacting with the toothed plate.

[Claims 6 to 8 not printed in the Gazette.]

959,867. COMB. EUGENE E. KEEFE, Bellows Falls, Vt. Filed Dec. 9, 1909. Serial No. 532,238.



1. A device of the class described comprising spaced, yieldable arms; and combs carried by the arms adjacent the ends of the arms, the combs having peripheral flanges arranged to outstand beyond the adjacent faces of the combs.

2. A device of the class described comprising spaced, yieldable arms; combs carried by the arms adjacent the ends of the arms, the combs having peripheral flanges arranged to outstand beyond the adjacent faces of the combs; and a pin terminally mounted in one arm and arranged to reciprocate in the other arm.

3. A device of the class described comprising spaced, yieldable arms; combs carried by the arms adjacent the ends of the arms, the combs having peripheral flanges arranged to outstand beyond the adjacent faces of the combs; and a pin mounted at one end in one of said arms for limited swiveled movement and arranged to reciprocate longitudinally in the other arm.

4. A device of the class described comprising spaced, yieldable arms; combs carried by the arms adjacent the ends of the arms; a supporting member terminally connected with one of said arms; and a heating device removably carried by the supporting member; the arms being separable to provide for the passage of the heating device between the supporting member and the other arm.

5. A device of the class described comprising spaced, yieldable arms; combs carried by the arms adjacent the ends of the arms; a supporting member terminally connected with one of said arms and arranged to reciprocate longitudinally in the other arm; and a heating device removably carried by the supporting member; the arms being separable to provide for the passage of the heating device between the supporting member and the other arm.

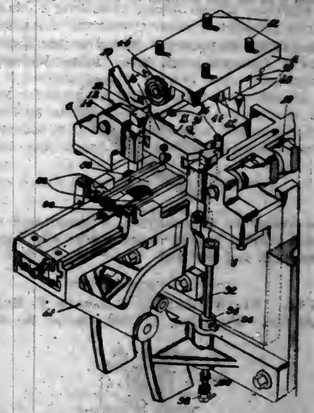
[Claims 6 to 9 not printed in the Gazette.]

959,868. TRACE-BUCKLE. EARL C. KIMBALL, Naper, Nebr. Filed Jan. 12, 1910. Serial No. 537,769.



A device of the class described comprising a lower plate; a clevis transversely mounted on the lower plate; an upper plate hinged for longitudinal movement upon the lower plate and arranged to extend within the clevis; a cam carried by the clevis and arranged to engage the upper plate; a ball inclosing the plates; the upper plate being provided with a shoulder and a recess to receive the ball; and the cam being arranged to engage the ball to lock the same in the recess and against the shoulder.

959,869. COMPRESSING-MACHINE. THOMAS LUND, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 7, 1909. Serial No. 488,426.



1. A machine for applying pressure to top lifts, having in combination, means for molding the peripheral surface of a lift, means for molding the outer or grain side of the lift and means having a plane face for molding the flesh side of the lift, said latter face being formed to overlap the edge of the lift.

2. In a machine for compressing heel-lifts, means for molding the peripheral surface of a lift formed to provide a downwardly flaring portion at the bottom of the mold cavity and constituting a mold having its greatest dimension at its bottom and a member constructed to form the bottom of said cavity and apply pressure to the flesh side of the lift engaged by it and arranged for movement into an inoperative position wherein the lift may be discharged downwardly from the cavity, said member having a plane acting face formed to overlap said means in the operative position of the member.

3. In a machine for compressing heel-blanks, dies for molding the peripheral surface of a blank, said dies beveled at one margin of their acting surface to provide an outwardly flaring portion and having a straight portion on the inner side of and joining the beveled portion, a member arranged to close the mold cavity on the side adjacent to said beveled portion and having its face in the plane of the outer edge of the bevel and a presser arranged for movement between said dies in contact with said straight portion toward said member to a point short of the junction of the straight portion and the beveled portion.

4. In a machine for compressing heel-blanks, dies for molding the peripheral surface of a blank, beveled at one margin of their acting surface to provide an outwardly flaring portion and having a straight portion at the inner side of and joining the beveled portion, a member arranged to close the mold cavity on the side adjacent to said beveled portion and having its face in the plane of the outer edge of the bevel, a presser arranged for movement between said dies in contact with said straight portion toward said member to a point short of the junction of the straight portion and the beveled portion, and means for moving relatively said member and said presser to subject a blank to vertical pressure constructed for adjustment to

vary the limit of movement of the presser toward said member.

5. In a machine of the class described, a head arranged for reciprocatory movement, side dies and a breast die mounted upon said head and arranged to subject a blank to lateral pressure, means for inserting the blank between said dies by movement in the plane of said dies, and means for moving one of said dies out of the path of the blank and out of the plane of the remaining dies to permit the insertion of the blank and for returning said die to operative relation to the remaining dies after the passage of the blank beyond its inner surface.

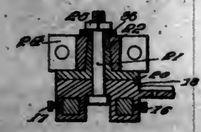
[Claims 6 to 24 not printed in the Gazette.]

959,870. FUEL-BRIQUET. DAVID C. MCCAN, Los Angeles, Cal. Filed Feb. 25, 1909. Serial No. 480,076.



As an article of manufacture, a compressed elongated cylindrical briquet having rounded ends and composed of wood shavings and the like.

959,871. PLOW-FRAME. PLEASANT T. MCDONNOLD, Terrell, Tex. Filed Aug. 5, 1909. Serial No. 511,812.



1. In a plow frame the combination with a plow beam, of a block pivotally connected to said beam for supporting the same and having angular channels formed in the opposite sides of said block, and independent axle sections of corresponding angular cross-section adjustably disposed in the channels and oppositely extended therefrom.

2. A plow frame including a beam, a block pivotally mounted upon said beam to support the same, channel members formed at the opposite sides of said block, independent axle sections adjustably disposed through said channel members to admit of the independent adjustment of said sections, and wheels adjustably mounted upon the outer ends of said sections.

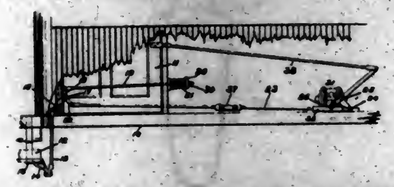
959,872. ELECTRIC HEATER. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car-Heating Company, Albany, N. Y., a Corporation of West Virginia. Filed June 25, 1907. Serial No. 380,780.



1. In an electric heater, the combination with a conduit inclosing a leading-in wire, of a heater base, an electric heating resistance mounted thereon, means for clamping said conduit to the base, and a junction-box covering said clamping means and the connection between the leading-in wire and the heating resistance and adapted to be removed and replaced without disturbing said clamping means or said connection.

2. In an electric heater, the combination of a heater base having a clamp for anchoring the end of a conduit containing a leading-in wire, an electric heating resistance mounted on said base, and a cover for said heating resistance having an extension which forms a junction-box inclosing the clamp and adapted to be removed and replaced without disturbing said clamp or the connection between the leading-in wire and the heating resistance.

959,873. MECHANISM FOR OPERATING CAR STEPS AND DOORS. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car-Heating Company, Albany, N. Y., a Corporation of West Virginia. Filed Dec. 13, 1907. Serial No. 406,263.



1. In combination, a hinged step having counterbalancing means which substantially neutralizes the effect of the weight of the step in resisting pivotal movement, a door, a device for conjointly operating the door and step, and connections whereby the door is caused to perform the first part of its closing movement without substantial movement of the step.

2. The combination of a car-body, a door mounted to slide longitudinally of said body, a step hinged at its rear edge to move into an inoperative upright position or an operative horizontal position, connections for raising and lowering the step, a motor, a lever oscillated thereby in a plane parallel to that of the door, and separate rods 38 and 23 connecting said lever with the door and the step-operating connections respectively.

3. In combination, an adjustable step, a motor therefor, and a connection between the motor and step including a spring.

4. In combination, a door, an adjustable step, operating rods for said door and step, and an operating lever having an arm connected with the door-operating rod at a point whose arc of movement is substantially in line with the rod and a second arm connected with the step-operating rod at a point whose arc of movement is partly across said rod and partly in substantial line therewith.

5. In combination, a door, an adjustable step, operating rods for said door and step, and an operating lever having an arm connected with the door-operating rod and a second arm connected with the step-operating rod and substantially parallel therewith when the door is fully open.

[Claims 6 to 12 not printed in the Gazette.]

959,874. GRIPPERS. RONALD F. MCFEELY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Oct. 12, 1906, Serial No. 338,635. Divided and this application filed July 27, 1907. Serial No. 385,805.

1. In a machine of the class described, the combination with grippers, and means for opening the grippers to release the stock, of means for limiting the opening movement of the grippers, said machine having provision for further opening the grippers to reëngage stock.

2. In mechanism of the class described, the combination with grippers, of a grippers controlling device, means for actuating said controlling device to open the grippers preparatory to engaging stock and for thereafter actuating said device to close the grippers, means to actuate said device for partially opening the grippers to release the stock, and means for limiting the latter movement of the grippers.

3. In a machine of the class described, the combination with relatively movable grippers, of automatic actuating mechanism therefor having provision for closing the grippers to engage stock, for opening the grippers a limited distance to release stock, and for subsequently opening the grippers further preparatory to reëngaging stock.

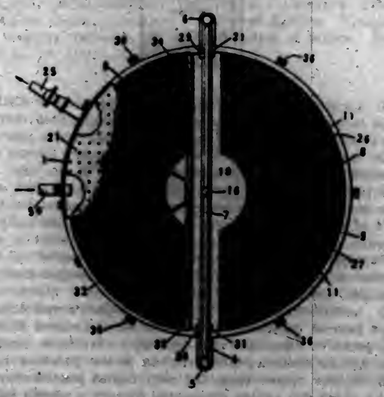


4. In a machine of the class described, the combination with grippers, comprising a movable gripper member, and a coöperating gripper member, of a controlling device for engaging the movable gripper member, means for actuating the controlling device to close the grippers for gripping stock, means for actuating the controlling device to open the grippers for releasing stock, and means for limiting the latter movement of the grippers, said machine having provision for further opening the grippers to reëngage stock.

5. In a machine of the class described, the combination with grippers, of a controlling device therefor, an operating bar, means for detachably connecting the bar and device, means for actuating the bar and device to close the grippers, means for effecting disengagement of the bar and device, a spring for actuating the device relatively to the bar for opening the grippers, and means for limiting the opening movement of the grippers, said machine having provision for subsequently actuating the controlling device for further opening the grippers.

[Claims 6 to 21 not printed in the Gazette.]

959,875. MOISTENING-MACHINE FOR ADHESIVE MATERIALS. JAMES D. MCLAURIN, New York, N. Y. Filed June 10, 1909. Serial No. 501,433.



1. In a device of the character described, a base-piece provided with a vapor box or chamber, a movable perforated table operatively arranged with reference to said base and vapor box, whereby heated vapor may be passed through a limited area of said table, and means for moving said table whereby a portion thereof may be projected over said vapor box.

2. In a device of the character described, a base, a vapor box located therein, means for supplying heated vapor to said vapor box and a perforated carrier operatively arranged with reference to said base and vapor box, and having a portion of its area projecting over said vapor box, said carrier and vapor box being relatively movable whereby vapor may be passed through a limited area of said carrier.

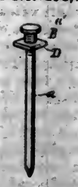
3. In a device of the character described, a base forming a support, a rotary carrier mounted thereon, and means appurtenant to the base for passing a warm vapor through a limited area of the rotary carrier.

4. In a device of the character described, a base forming a receptacle, a perforated rotary carrier centrally pivoted with reference to the base, a vapor box located in the base, and means for supplying heated vapor to said vapor box.

5. In a device of the character described, a base-piece forming a receptacle and divided into compartments, a vapor box arranged in one of said compartments, a movable receiving and moistening table operatively mounted with reference to the base and vapor box, said table being perforated, and means for supplying heated vapor to the vapor box.

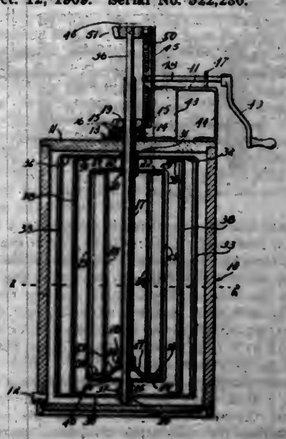
[Claims 6 to 8 not printed in the Gazette.]

959,876. NAIL. FRED A. NEIDER, Augusta, Ky. Filed May 12, 1909. Serial No. 495,487.



The combination of a nail having near one end an enlargement capable of being formed by upsetting the metal, and a hard metal washer fitting the shank of the nail snugly and abutting against the shoulder, whereby the washer is adapted to withstand the force of blows necessary to draw timbers together by blows upon the nail.

959,877. CHURN. NELS B. OSHER, Estherville, Iowa. Filed Oct. 12, 1909. Serial No. 522,230.



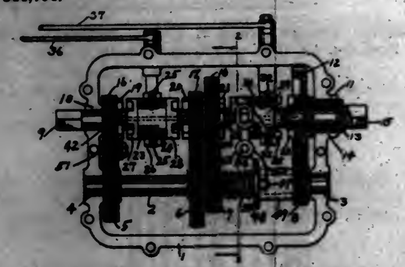
1. In a churn, a receptacle having a detachable cover, a tubular member mounted for rotation through said closure and threaded at its lower end, a sleeve internally threaded and engaging the threaded portion of the tubular member and provided with a plurality of radially extend-

ing arms, a sleeve mounted for rotation upon said tubular member and provided with a plurality of radially extending arms having downwardly directed outer portions with the lower terminals of said downwardly directed portions directed downwardly, fastening means between the radial arms of said threaded sleeve and inwardly directed portions, a shaft extending through said tubular member, a sleeve mounted for rotation upon said tubular member adjacent to said cover and provided with a plurality of radially extending arms having downwardly directed portions at the terminals thereof, the free ends of said downwardly directed portions being directed inwardly, and a sleeve carried by said shaft below said tubular member and united to the last mentioned inwardly directed portions.

2. In a churn, a receptacle having a detachable cover, an outer tubular shaft mounted for rotation through said cover and externally threaded at the lower end, an inner shaft extending through said tubular shaft and rotative therein, an outer dasher device including spaced vertical members and connected to said inner shaft below the tubular shaft and provided with a sleeve rotative upon the tubular shaft, an inner dasher device includes spaced vertical members, a threaded sleeve engaging the threaded portion of the tubular shaft and connected to said inner dasher device, and means for actuating said tubular shaft and said inner shaft in opposite directions.

3. In a churn, a receptacle having a detachable cover, a tubular shaft extending through said cover and suspended therefrom, an inner shaft extending through said tubular shaft and rotative therein, a churning element carried by said tubular shaft, another churning element carried by said inner shaft, a standard formed from a single plate of metal and comprising a base portion having depending legs, and an upwardly directed standard out-turned at its free end to form a bearing for said inner shaft, said base portion having a U-shaped cleft to provide a vertical bearing, a driving shaft extending through said vertical bearing and likewise through said standard, a pinion carried by said tubular shaft, a pinion carried by said inner shaft, and a gear wheel carried by said driving shaft and engaging said pinions.

959,878. SPEED-CHANGING MECHANISM. ARTHUR A. PAGE, Providence, R. I. Filed Mar. 2, 1910. Serial No. 546,796.



1. A speed changing mechanism comprising a main driving shaft, a jack shaft, a plurality of sets of gears on both shafts in constant engagement through which different speeds may be obtained, clutches for connecting said main shaft with the different speed gears, a power transmitting gear on the jack shaft meshing with the high speed gear, and means for withdrawing said transmitting gear from engagement with said high speed gear when the clutch is connected to the latter.

2. A speed changing mechanism comprising a main driving shaft, a jack shaft, gears on both shafts in constant engagement through which different speeds may be obtained, clutches for connecting said main shaft with the different speed gears, a power transmitting gear on the jack shaft meshing with the high speed gear, and means for automatically withdrawing said transmitting gear from engagement with said high speed gear when the clutch is connected to the latter.

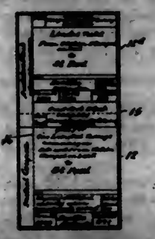
3. A speed changing mechanism comprising a main driving shaft, a jack shaft, gears on both shafts in constant engagement through which different speeds may be obtained, clutches for connecting said main shaft with the different speed gears, a power transmitting gear on the jack shaft meshing with the high speed gear, and a lever operatively connecting one of said clutches with said transmitting gear whereby the latter is withdrawn from engagement with said high speed gear as said clutch is moved into engagement with said speed gear.

4. A speed changing mechanism comprising a main driving shaft, a jack shaft, a plurality of sets of gears on said shafts in constant engagement through which different speeds may be obtained, clutches for connecting said main shaft with the different speed gears, a power transmitting gear on the jack shaft meshing with the high speed gear, a pivoted lever operatively connecting one of said clutches with said transmitting gear whereby the latter is withdrawn from engagement with said high speed gear as said clutch is moved into engagement with said speed gear, and a spring for returning said transmitting gear to its engaging position when said clutch is released.

5. In a speed changing mechanism, the combination of a main driving shaft, a key in said shaft, a gear mounted to turn freely on said shaft, a collar on said shaft engaging the face of said gear for preventing the same from moving endwise on said shaft, said collar being provided with a recess in its face for receiving the end of said key whereby it is held from rotating and also from moving endwise on said shaft, a jack shaft, a gear on said jack shaft meshing with that on the said main shaft, and a clutch for connecting said main shaft with the gear mounted thereon.

[Claim 6 not printed in the Gazette.]

959,879. RAILWAY-TICKET. WILLIAM S. PARKER, Ottumwa, Iowa. Filed Sept. 7, 1909. Serial No. 516,460.



1. An interline ticket composed of separate and distinct slips secured together, one slip having designated thereon the point of departure, the route therefrom and a junction point terminating such route, and another slip having designated thereon the said junction point of the first slip and the various routes from the said junction point, each slip constituting a separate and distinct coupon for that part of a journey and such coupons being individually removable from the ticket as a whole, which ticket is completed for issue by particularly designating one of the said routes on the second mentioned slip and the point of destination, substantially as set forth.

2. An interline ticket composed of separate and distinct slips secured together, one slip having designated thereon the point of departure and the route therefrom, another slip having designated thereon an initial junction point and various routes from the said initial junction point, and a third slip having designated thereon a second initial junction point and various routes therefrom, which ticket is completed for issue by particularly designating one of the said routes on the second mentioned slip, being a route leading to the said second junction point, and by particularly designating on the third slip one of the routes thereon leading from the said second junction point, and by particularly designating on each slip the terminal junction

or destination point thereof, the initial junction point on each slip being the same as the terminal junction point of the next preceding slip, substantially as set forth.

3. An interline ticket composed of separate and distinct slips superposed on each other and secured together, each succeeding slip having designated thereon a junction point at which the passage for which it is good begins, and having designated thereon various routes from such junction point, the slips being selected to comprise in succession the junction points through which the passage is sold, and each successive slip having particularly designated thereon the route which terminates in the junction point of the next succeeding slip and having particularly designated thereon such terminal junction point, substantially as set forth.

4. An interline ticket composed of separate slips superposed and secured together, one slip having designated thereon the point of departure, the route therefrom and a junction point terminating such route, and another slip having designated thereon the said junction point of the first slip and various routes from the said junction point, the said slips being also provided with auditor's portions or stubs having designations of junction point and routes corresponding with those of their respective slips, and the stubs being correspondingly arranged and superposed on each other and simultaneously detachable after the ticket has been completed, which ticket is completed for issue by particularly designating one of the said routes on the second slip and its stub and the point of destination on the second slip and its stub, substantially as set forth.

5. An interline ticket composed of separate slips, each slip having designations showing the route by which it is to be used and adapted to serve as an individual ticket for that part of a continuous journey, and each slip having also an auditor's portion or stub from which stub it is individually removable independently of the other slips and stubs, the said stub having designations corresponding with those of the body of its slip, the stubs being arranged together and superposed on each other and the bodies of the slips being arranged together and superposed on each other, means securing the slips together and independent means securing the stubs together, whereby the stubs may be severed as a whole from the bodies of the slips, on a line between the securing means of the bodies and the securing means of the stubs, when the ticket is completed, substantially as set forth.

959,880. BURNISHING-MACHINE. CHARLES PEASE, Salem, Mass., assignor to United-Xpedite Finishing Company, Berwick, Me., a Corporation of Maine. Filed June 18, 1904. Serial No. 213,191.



1. A device of the class described, comprising a work member, a yielding support upon which said work member is movably mounted, and means coöperating with said work member for determining its normal position.

2. A device of the class described, comprising a work member, a yielding support upon which the work member is pivotally mounted, and unyielding means for determining the normal position of the work member with relation to its pivot.

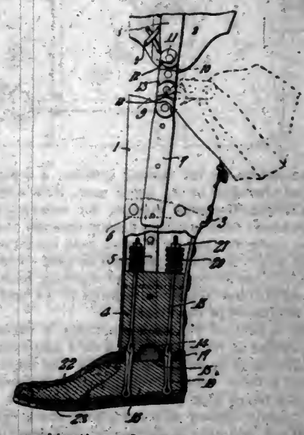
3. A device of the class described, comprising a work member, a yielding support for the work member, a pivotal connection between the work member and the support arranged to permit tipping of the work member transversely of the working face of the work member, and unyielding means for determining the normal position of the work member.

4. A device of the class described provided with supporting means and having a working face comprising a plurality of work members mounted upon the supporting means and normally free for independent rocking transversely of said working face.

5. A device of the class described provided with supporting means and having a working face comprising a plurality of work members yieldingly mounted upon the supporting means and normally free for independent rocking transversely of said working face.

[Claims 6 to 27 not printed in the Gazette.]

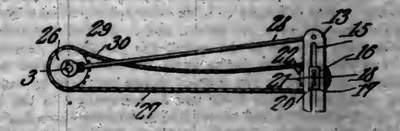
959,881. JOINT FOR ARTIFICIAL LEGS. DAVID W. PRICE, Owensboro, Ky. Filed July 23, 1909. Serial No. 509,150.



1. The combination of upper and lower reinforcing straps, a connecting plate pivoted to the upper end of the lower reinforcing strap, a connecting plate pivoted to the lower end of the upper reinforcing strap, and a link having its opposite ends pivoted to the ends of the connecting plates, the convex end of one member playing in an eccentric concave end of the meeting member.

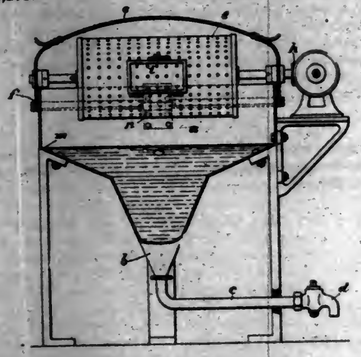
2. The combination of upper and lower reinforcing straps having convex end edges terminating in transversely disposed shoulders at the front edges of the straps, connecting plates pivoted to the said straps and having their meeting ends formed with transverse shoulders at their front edges, the said ends in rear of said shoulders presenting engaging convex and concave faces arranged eccentrically to each other, and a link pivoted to and connecting the said connecting plates and having its ends formed with concave faces disposed eccentrically to the convex ends of the reinforcing straps and with shoulders at its front edge adapted to engage the shoulders of the ends of the reinforcing straps.

959,882. MOWING-MACHINE. JOHN A. PUEA, Gonzales, Cal. Filed Oct. 22, 1909. Serial No. 524,022.



A mower including an axle shaft and a pivoted cutting apparatus, standards mounted upon the cutting apparatus, a reel journaled for rotation upon the standards, means operatively connecting the reel with the axle shaft, and a swiveled brace rod connected at one end with one of the standards and at its other end with the axle shaft.

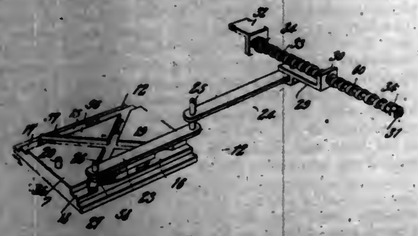
959,883. APPARATUS FOR CHEMICAL CLEANING. HERMANN RESCH, Lörrach, Germany, assignor to Hermann Resch, Jr., and Carl Rudolph Otto Gutsch, Lörrach, Germany. Filed Aug. 17, 1909. Serial No. 513,273.



1. In an apparatus for rinsing articles, a container for benzin, and provided, at its lower part, with a clarifying funnel having a discharge opening for separation of impurities removed from articles drawn through the benzin, a movable cover for tightly closing said container and a centrifugal drum rotatably mounted in said cover, for reception of articles aforesaid and for draining benzin therefrom by centrifugal action, substantially as and for the purposes hereinbefore described.

2. In an apparatus for rinsing articles, a container for benzin, provided at its lower part with a clarifying funnel having a discharge opening for separation of impurities removed from articles drawn through the benzin, said funnel having a discharge pipe provided with a cock, a movable cover for tightly closing said container, and a centrifugal drum rotatably mounted in said cover, for reception of articles aforesaid and for draining benzin therefrom by centrifugal action, substantially as and for the purpose hereinbefore described.

959,884. AUTOMATIC SWITCH-THROWING DEVICE. CLINTON J. G. RICKERSON, Colorado Springs, Colo. Filed Sept. 2, 1909. Serial No. 515,812.



1. In a device of the class described, a switch point; a casing; a rod arranged to slide transversely of the casing and connected with the switch point; a lever pivoted intermediate its ends in the casing and yieldingly connected at one end with the rod to move the rod; a slotted head slidably mounted in the casing; means arranged to engage the other end of the lever and to reciprocate in the slot of the head to tilt the lever; and means for operating the head.

2. In a device of the class described, a switch point; a casing; a threaded rod arranged to slide transversely of the casing and connected with the switch point; a lever pivoted intermediate its ends in the casing and slidably connected at one end with the rod; compression springs carried by the rod upon either side of the lever; nuts upon the rod to engage the compression springs; a slotted head slidably mounted in the casing; means arranged to engage the other end of the lever and to reciprocate in the slot of the head to tilt the lever; and means for operating the head.

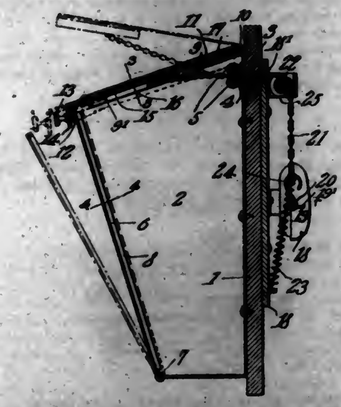
3. In a device of the class described, a switch point; a casing; a rod arranged to slide transversely of the casing and connected with the switch point; a lever pivoted intermediate its ends in the casing; a rider pivoted to one end of the lever and having an upright extension to slide upon the rod; compression springs carried by the rod on either side of the rider; means mounted upon the rod for adjusting the springs; a slotted head slidably mounted in the casing; means arranged to engage the other end of the lever and to reciprocate in the slot of the head to tilt the lever; and means for operating the head.

4. In a device of the class described, a casing; a lever comprising longitudinally alined members spaced vertically from each other, there being a pivot pin forming a rigid connection between the adjacent ends of the members and arranged to be received by the casing to form a pivotal mounting for the lever; a rod slidably mounted in the casing transversely of the same and connected with one end of the lever; a switch point connected with the rod; a head slidably mounted in the casing and arranged to engage the other end of the lever to tilt the same; and means for operating the head.

5. In a device of the class described, a switch point; a casing; a lever pivoted intermediate its ends in the casing; a connection between the switch point and one end of the lever; a slotted head slidably mounted in the casing; a shoe mounted rotatably in the other end of the lever and arranged to move in the slot of the head; and means for operating the head.

[Claims 6 to 12 not printed in the Gazette.]

959,885. MAIL-BOX. LLOYD VINCENT ROOD, Marietta, Ohio. Filed Sept. 22, 1909. Serial No. 518,942.

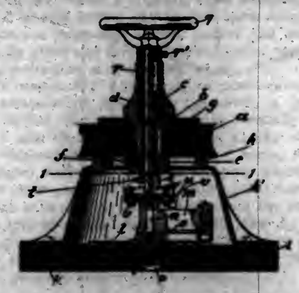


1. The combination of a mail box, a downwardly swinging door arranged to close the front thereof, a swinging cover on the upper end of the box terminating short of the front of the box and provided with a bail engaging the upper end of the door, a slotted slide mounted on the under side of said cover and normally covering the upper end of the box between the front side thereof and the front end of the cover, and means for limiting the movement of the slide and for holding the cover normally in its closed position.

2. The combination of a mail box, a swinging cover therefor, a slide on the cover controlling the admission of matter to the box, a pulley arranged in rear of the box, a bell below the pulley, a housing for the pulley, a chain attached to the slide and extending over the pulley, and depending therefrom through the housing, a spring secured to the end of the chain, and a hook carried by the chain and detachably connected to the bell and adapted to engage the lower edge of the housing.

3. The combination of a mail box having ribs on its sides near its upper end, a cover hinged to the box and extending over the top of the same, a slide mounted below the said cover and having cleats engaging under the ribs on the box, an alarm, and a flexible connection between the said slide and the alarm.

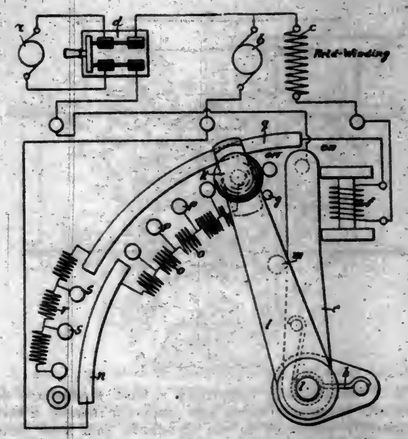
959,886. ELECTRICAL SWITCHBOARD. JOSEPH A. SCHAEFER, Chicago, Ill., assignor to John Schaefer, Chicago, Ill. Filed July 15, 1907. Serial No. 383,864.



An electrical switchboard including a foundation plate e of insulating material, a housing h' disposed to the rear of said plate, said housing having a flange h that engages the back face of the plate, said housing also carrying a nut e inclosed by said flange, clearance intervening between said plate and nut to secure better clamping action between the nut and the part with which it has threaded engagement, a threaded sleeve c passing through an aperture in said plate and into threaded connection with said nut, a nut d on the opposite side of said plate from where the housing is disposed having threaded connection with said sleeve c, said nut d having an extended flange portion g, the rim of which alone engages the plate a, a shaft r passing freely through the nuts d and e and the sleeve c and into the housing h', an operating lever q upon the front end of said shaft, and a switch arm within the housing h' upon the other end of said shaft.

959,887. SPEED AND CIRCUIT CONTROLLING APPARATUS FOR ELECTRIC MOTORS. JOSEPH A. SCHAEFER, Chicago, Ill., assignor to John Schaefer, Chicago, Ill. Filed Aug. 24, 1907. Serial No. 389,984.

1. A speed regulating and circuit controlling mechanism for electric motors including a main switch, a speed regulating switch serving to variably regulate both the armature and field circuits of the motor and adapted to remain in various speed regulating positions independently of the main switch, the speed-regulating mechanism including resistance sections o having terminal buttons p, a sector or bar n in serial relation with the resistance sections o and the armature, resistance sections r having terminal buttons s, and a sector or bar q in serial relation with the resistance sections r and the field of the motor, the sector n being located opposite the buttons s and being so located with respect to said buttons that the switch may simultaneously engage a button s and said sector, while the sector q is located opposite the buttons p and is so located with respect to the buttons p that the switch may simultaneously engage a button p and said sector, the speed regulating switch in being moved to its initial position engaging the main switch to move it from its "off" position to its "on" position, an electro-magnetic retaining device for holding the main switch in its "on" position whose circuit is closed upon the operation of the switching mechanism that brings the main switch to its "on" position, and means for removing the main switch from its "on" position to its "off" position when said electro-magnetic mechanism ceases its hold upon the main switch.



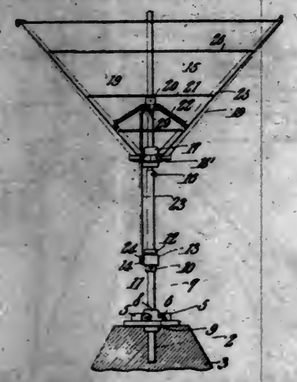
2. A speed regulating and circuit controlling mechanism for electric motors including a main switch, a speed regulating switch serving to variably regulate both the armature and field circuits of the motor and adapted to remain in various speed regulating positions independently of the main switch, the speed-regulating mechanism including resistance sections o having terminal buttons p, a sector or bar n in serial relation with the resistance sections o and the armature, resistance sections r having terminal buttons s, and a sector or bar q in serial relation with the resistance sections r and the field of the motor, the sector n being located opposite the buttons s and being so located with respect to said buttons that the switch may simultaneously engage a button s and said sector, while the sector q is located opposite the buttons p and is so located with respect to the buttons p that the switch may simultaneously engage a button p and said sector, the speed regulating switch in being moved to its initial position engaging the main switch to move it from its "off" position to its "on" position, an electro-magnetic retaining device for holding the main switch in its "on" position whose winding is included in circuit with the motor and is consequently energized upon the operation of the switching mechanism that brings the main switch to its "on" position, and means for removing the main switch from its "on" position to its "off" position when said electro-magnetic mechanism ceases its hold upon the main switch.

959,888. CLOTHES-DRIER. GOTTLEIB SCHNEIDER, Bluffton, Ind., assignor of one-half to Seymour Robinson, Bluffton, Ind. Filed Nov. 6, 1909. Serial No. 526,576.

1. In a clothes drier, the combination with a standard, of a stem slidably and revolubly mounted therein, a series of arms pivotally connected to the stem and extending radially therefrom, a sleeve slidably mounted on the stem, pivotal connections between the sleeve and the arms, means for shifting the sleeve, and revoluble means upon the standard for engaging said shifting means to lock the sleeve and arms in a predetermined position.

2. A clothes drier including a standard, a stem revolubly and slidably mounted therein, means for locking the stem against movement within the standard, arms pivotally connected to the stem and extending radially therefrom, a sleeve slidably mounted on the stem, pivotal connections between the sleeve and arms, an actuating rod connected to the sleeve, a sleeve adjustably mounted

on the standard, a ring mounted for rotation on said adjustable sleeve, and means upon the ring for detachably engaging the rod to lock the slidable sleeve and arms in predetermined positions.



3. A clothes drier comprising a base, a standard detachably connected thereto and supported thereby, a stem adjustably connected to the standards, said stem being revoluble within the standard, arms pivotally connected to the stem and foldable thereagainst, slidable means connected to the arms for simultaneously shifting the same toward or away from the stem, means for actuating said slidable means, and a locking device revoluble upon the standard and detachably engaged by said shifting means to hold the arms in predetermined positions.

959,889. AIR-GUN. ELBERT HAMILTON SEARLE, Springfield, Mass. Filed Aug. 2, 1907, Serial No. 386,847. Renewed Sept. 17, 1909. Serial No. 518,284.



1. In a gun, the combination of the stock member, the frame member, and a screw passing through the rear wall of the frame member into the stock member and drawing said members together; the abutting portion of each of said members being provided by faces at an angle to each other; the abutting faces on one member forming a reentrant angle, and those on the other member forming an external angle, whereby the members interlock to prevent relative transverse movement.

2. In a gun, the combination of the stock member, the frame member, and a screw passing through the rear wall of the frame member into the stock member and drawing said members together; the abutting portion of each of said members being provided by two faces meeting in a central vertical line; the faces of one member forming a reentrant angle or V-shaped groove and those of the other member forming an external angle or V-shaped projection.

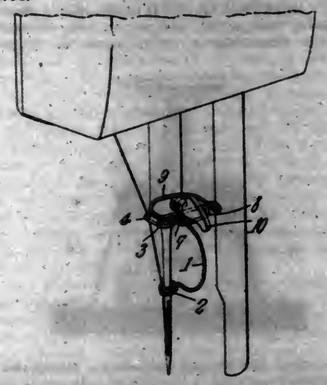
3. In a gun, the combination of the reciprocating member, the fixed sear engaged by the reciprocating member, and the trigger for disengaging the reciprocating member from the sear, and means moving the trigger bodily out of reach of the reciprocating member during the cocking of the gun.

4. In a gun the combination of the frame, the frame extension fitted within the frame, the barrel member fitted over the frame extension, and means securing said parts in the relation described.

5. In a gun the combination of the frame, the frame extension fitted within the frame, and the barrel member fitted over the frame extension, having projections engaging the frame extension and fitted within the end of the frame to hold the parts in such engagement.

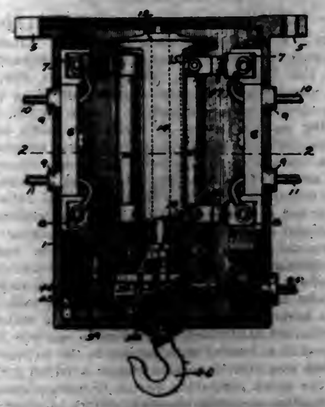
[Claims 6 to 32 not printed in the Gazette.]

959,890. EMBROIDERY ATTACHMENT. RICHARD WATSON SHOCKLEY, San Angelo, Tex. Filed Aug. 9, 1907, Serial No. 387,877. Renewed Apr. 11, 1910. Serial No. 554,792.



An embroidery attachment comprising a single wire having convolutions formed therein and forming eyes for the reception of a needle, a non-volute bowed portion connecting the eyes together, a laterally disposed elongated thread guide formed in the wire at the base of the upper eye and a clamping member formed at the upper end of the wire by providing opposed loop sections in the wire which project at their ends beyond the opposite sides of the bowed portion and which converge toward each other at the inlet end of the clamp.

959,891. HANGER-BOARD SWITCH. HENRY L. SMITH, Pittsfield, Mass., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Feb. 21, 1908. Serial No. 416,980.



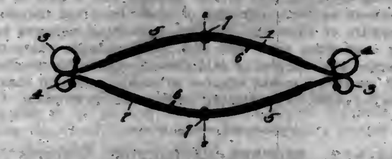
1. The combination with a rotary contact-carrying drum, of an escape-wheel connected therewith, a pivoted member carrying a pallet coöperating with said wheel, a spring having one end engaging with said wheel, a wheel engaging with the other end of said spring, and provided with means to trip said pallet, and means for actuating said tripping wheel.

2. The combination with a rotary contact-carrying drum, of an escape-wheel connected therewith, a pivoted anchor carrying a pallet coöperating with said wheel, a spring having one end engaged with said wheel, a tripping wheel engaging the other end of said spring and provided with teeth adapted to act upon said anchor and trip said pallet, and means for actuating said tripping wheel.

3. The combination with a rotary contact-carrying drum, of an escape-wheel connected therewith, a pivoted anchor having a curved inner edge normally eccentric with the axis of said escape-wheel, a pallet on said anchor coöperating with said escape-wheel, a spring having one end engaged with said wheel, a tripping wheel engaging with the other end of said spring and having teeth adapted to engage with the inner edge of said anchor and oscillate the same on its pivot and thereby trip the pallet, and a pivoted lever for actuating said tripping wheel.

4. The combination with a rotary contact-carrying drum, of an escape-wheel connected therewith, a pivoted U-shaped anchor having a curved edge normally eccentric with the axis of said wheel, a pallet at one end of said anchor coöperating with said wheel, a spring having one end engaged with said wheel, a tripping wheel engaging with the other end of said spring and having teeth adapted to engage with said anchor and oscillate the same on its pivot to trip said pallet, and a pivoted lever for actuating said tripping wheel, and for bringing the end of the anchor opposite said pallet into line with a tooth on the tripping wheel to stop the motion of said wheel.

959,892. VEHICLE-SPRING. HENRY WALLACE SMITH, Canton, Ohio. Filed Nov. 11, 1908. Serial No. 462,078.



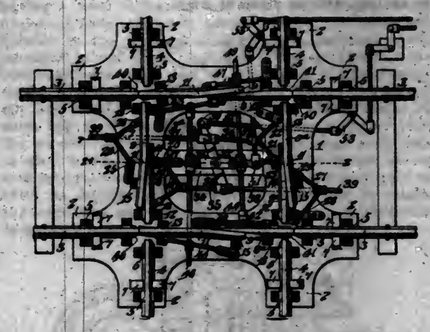
1. A vehicle spring consisting of upper and lower main springs, the upper spring having its end portions resting upon the end portions of the lower spring, the end portion of each spring being bent to form a scroll, said scrolls being oppositely formed, rigid inclined bars connecting the ends of adjacent scrolls, interior springs bearing on the main springs throughout their body portions, and means for securing said interior springs in their normal position with respect to the main springs.

2. A vehicle spring comprising upper and lower main springs, the ends of said springs being bent to form upwardly and downwardly extending scrolls, respectively, the scrolls of the upper spring being larger than those of the lower spring, rigid bars inclining out of the perpendicular, said bars connecting the ends of the upper scrolls to the ends of the lower scrolls, exterior supplemental springs, and interior supplemental springs arranged substantially as and for the purpose described.

959,893. RAILROAD-CROSSING. JOHN S. SMITH, Fort Wayne, Ind. Filed Aug. 31, 1909. Serial No. 515,473.

1. A railroad crossing including endwise shiftable rail sections, individual toggles for the said rail sections, each toggle having one member mounted on a fixed pivot and connected at its other member with its rail section, and means for straightening and breaking the toggles to shift the rail sections longitudinally.

2. A railroad crossing including inner and outer endwise shiftable rail sections arranged in pairs, inner toggles each having one member mounted in a fixed pivot and its other member connected with one of the inner rail sections, outer toggles mounted at one end on a fixed pivot and connected at the other end with the outer rail sections, and means for straightening and breaking the toggles.



3. A railroad crossing including inner and outer endwise shiftable rail sections arranged in pairs, inner toggles each having one member mounted in a fixed pivot and its other member connected with one of the inner rail sections, outer toggles mounted at one end on a fixed pivot and connected at the other end with the outer rail sections, a lever located between the pairs of rail sections, and rods connecting the toggles with the said lever.

4. A railroad crossing including inner and outer endwise shiftable rail sections arranged in pairs, inner toggles located at opposite sides of the center of the crossing and mounted at one end on a fixed pivot and connected at the other end with the inner rail sections, outer toggles also located at opposite sides of the center of the crossing and mounted at one end on a fixed pivot and connected at the other end with the outer rail sections, a lever fulcrumed at a point between its ends and located between the pairs of rail sections, and rods extending in opposite directions from the arms of the lever and connected with the toggles.

5. A railroad crossing including a base plate, inner and outer endwise shiftable rail sections guided on the base plate, inner toggles permanently pivoted at one end to the base plate and connected at the other end with the inner rail sections, outer toggles mounted at one end on a fixed pivot and connected at the other end with the outer rail sections, and relatively short and long connections between the lever and the inner and outer toggles.

[Claims 6 to 11 not printed in the Gazette.]

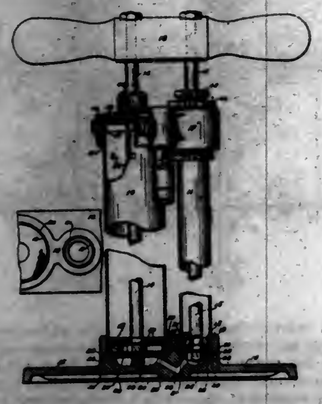
959,894. TIRE-PUMP. WILLIAM S. STAPLEY, Bridgeport, Conn., assignor to The Coe-Stapley Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Nov. 8, 1909. Serial No. 526,769.

1. In a pump, the combination with a base having a threaded hole, a circumferential enlargement below the thread, and a shoulder below the enlargement and a metallic washer of slightly less diameter than the enlargement which rests on the shoulder and is provided with an upwardly and inwardly beveled edge, of a threaded cylinder screwed into the hole and permanently secured to the base by flanging the end thereof outward between the beveled edge of the washer and the wall of the enlargement.

2. In a pump, the combination with a base, large and small cylinders secured thereto and pistons and piston rods, of a cap which receives the upper ends of the cylinders and screw plugs through which the piston rods pass so that the pistons may be removed without detaching the cylinders from the base or the cap from the cylinders.

3. In a pump, the combination with a base, large and small cylinders secured thereto and pistons and piston

rods, of a cap having holes to receive the upper ends of the cylinders, a screw plug in one of said holes through which the large piston rod passes, a screw plug in the other hole provided with a stuffing box through which the small piston rod passes and means for securing the small cylinder to the cap with an air-tight joint.



4. In a pump, the combination with a base, large and small cylinders secured thereto, said small cylinder having at its outer end an outwardly turned flange, pistons in said cylinders and piston rods, of a cap having holes to receive the upper ends of the cylinders, a screw plug in one of said holes through which the large cylinder rod passes, upper and lower shoulders in the other hole, a packing washer between the flange of the small cylinder and the lower shoulder, a screw plug engaging said flange, a packing washer upon the upper shoulder, a screw plug engaging said washer and a stuffing box in said screw plug through which the small piston rod passes.

5. In a pump, the combination with a base and a cylinder secured thereto and having at its upper end an outwardly turned flange, of a cap having a hole with upper and lower shoulders, a packing washer between the flange of the cylinder and the lower shoulder, a screw plug engaging said flange, a packing washer on the upper shoulder, a screw plug engaging said washer and a stuffing box in said screw plug, for the purpose set forth.

959,895. SIGN. JOSEPH STAREN, Chicago, Ill. Filed Apr. 13, 1909. Serial No. 489,557.



1. A character holder comprising a frame, a plurality of half-round grooves arranged on the face of said frame in suitably spaced relation, sign characters having projecting dished lips adapted to seat in said grooves, and a half-round filling strip adapted to be carried in each of said grooves and engage the upper face of dished lips of said sign characters.

2. A device of the class described, comprising a holder, a pair of spaced parallel grooves arranged on the face of said holder and running the full length thereof, suitably spaced characters having projecting lips adapted to be seated in said grooves, a filling strip adapted to seat in each of said grooves, and engage said lips for holding said characters in their proper spaced relation, and fastening means for securely locking said filling strips in position.

959,896. PORTABLE SIGN. JOSEPH STAREN, Chicago, Ill. Filed June 5, 1909. Serial No. 500,436.



1. A sign comprising a portable frame, adjustable character supporting members carried by said frame, characters having dished supporting lips adapted to be carried by said supporting members, a half-round bar carried by each of said supporting members adapted to engage the dished lips of said characters, and means for removably retaining said bars in place.

2. A sign comprising a portable frame, a plurality of channel members removably secured to said frame in suitable spaced relation, sign characters having dished supporting lips adapted to be supported by means of said channel members, locking bars adapted to engage the dished lips of said sign characters, and means for securely locking said bars in position.

3. A sign comprising a rectangular portable frame, consisting of a top and bottom member and a pair of end members having a plurality of alined openings therein, a plurality of adjustable channel supporting members having connection with said end members, sign characters adapted to be carried by said channel supporting members, and removable means adapted to engage said sign characters for removably retaining said characters in place.

959,897. STOPPER-EXTRACTOR. AUGUSTUS W. STEPHENS, Waltham, Mass. Filed Apr. 2, 1910. Serial No. 553,043.

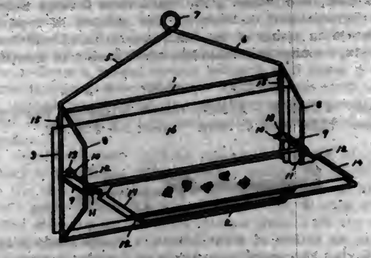


A stopper extractor comprising a body having a handle portion and a short arm at an angle to said portion, said body having two holes in its handle portion near the junction of the short arm therewith and an S shaped hook engaged with said holes, and having a pointed outer end projecting under the short arm.

959,898. FLY-PAPER HOLDER. CHRISTIAN F. STONER and FRANK B. TROUT, Lancaster, Pa. Filed Apr. 29, 1909. Serial No. 492,831.

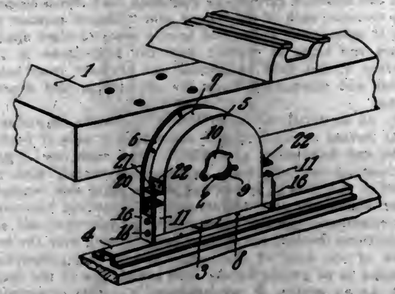
In a fly-paper holder, in combination with a supporting frame, of hinge studs and bracket arms carried by said

frame, a paper-holding shelf formed with rearwardly projecting ends, eyes formed in said projecting ends and



adapted to engage said studs, the forward ends of said bracket arms formed with hooked ends for the purpose of supporting said shelf.

959,899. MILL-CARRIAGE ATTACHMENT. CHARLES E. SWEET, Fort Madison, Iowa. Filed Jan. 10, 1910. Serial No. 537,284.



1. A device of the class described comprising a casing adapted to be secured to a wheel-mounted platform to house the wheel thereof; and a track-engaging scraper arranged to slide upon the casing.

2. A device of the class described comprising a casing adapted to be secured to a wheel-mounted platform to house the wheel thereof; a track-engaging scraper arranged to slide upon the casing; and resilient means for depressing the scraper.

3. A device of the class described comprising a casing adapted to be secured to a wheel-mounted platform to house the wheel thereof; a track-engaging scraper arranged to slide upon the casing; resilient means for depressing the scraper; and a device for adjusting the tension of the resilient means.

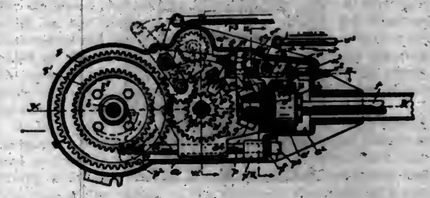
4. A device of the class described comprising a block having guide-ways; a plate to slide in the guide-ways; a scraper removably secured to the plate; and means for mounting the block upon a wheel-mounted platform to position the scraper in advance of the wheel thereof.

5. A device of the clabs described comprising a block having over-hanging ribs defining guide-ways in the block; a plate to slide in the guide-ways; a scraper removably secured to the plate for sliding upon the outer face of the block and having an extension to fit between the ribs and to bear upon the plate; and means for mounting the block upon a wheel-mounted platform to position the scraper in advance of the wheel thereof.

[Claims 6 and 7 not printed in the Gazette.]

959,900. TRANSMISSION-GEARING. WILLIAM F. SWORD, Pawtucket, R. I., assignor to Everett S. Cameron, Beverly, Mass. Filed June 24, 1909. Serial No. 504,185.

1. In a speed-changing device of the character described, the combination with the casing; a two-part case mounted therein; a large ring spur gear fast on said case; a ring spur gear fast on said case and of lesser diameter than the first mentioned gear; a driving-shaft; a bevel-gear keyed on said shaft; stub-axles journaled in said case and a compensating gearing thereon; a spider-frame having a head embracing said shaft and integral walls projecting from said head; bolts secured in the casing and slidable in the walls of said frame; a flat-sided shaft journaled in said frame; a second bevel-gear keyed on the last mentioned shaft and in mesh with the first mentioned bevel-gear; two integral spur gears of different size and slidable on the last mentioned shaft; means to move the frame and carry said integral gears so that the smaller one may engage the large ring spur gear to effect a low speed transmission, and the larger one of said integral gears to engage said large ring spur gear to effect an intermediate speed transmission and to engage the small ring spur gear to effect a high speed transmission.



2. In a speed-changing device of the character described, the combination with the casing; a two-part case mounted therein; stub-axles journaled in said case and compensating gearing thereon; the ring spur gears q, q^1 carried by said case; a driving-shaft; a bevel-gear fast on said shaft; the guide-rails p, p mounted in said casing; a spider-frame slidably mounted on said rails and having a head embracing said shaft and said head provided with grooves; the shaft f journaled in said frame; the two gears k, k^1 on the last mentioned shaft; means to cause the last mentioned gears to slide on the last mentioned shaft; a bevel-gear on the last mentioned shaft and in mesh with the first mentioned bevel-gear; the latch v to engage in either groove of the frame-head; the bolts v^2 to permit of adjustment of said latch; the cam w, and means to cause said cam to contact upon and hold said latch in position.

3. In a speed-changing device of the character described, the combination with the casing; a two-part case mounted therein; stub-axles journaled in said case and a compensating gearing thereon; two different size ring spur gears carried by said case; a driving-shaft; a bevel-gear fast on said shaft; guide-rails mounted in the casing; a spider-frame slidable on said rails and having a head embracing said shaft; a flat-sided shaft mounted on said frame; a second bevel-gear fast on the last mentioned shaft and in mesh with the first mentioned bevel-gear; two different size integral spur gears on said flat-sided shaft; means to cause the last mentioned gears to slide on the last mentioned shaft whereby the smaller integral gear may engage with the large ring spur gear, and the larger integral gear to engage either of said ring spur gears; a pinion; and means to swing said pinion into engagement with the large ring spur gear and the smaller one of the integral gears.

4. In a speed-changing device, the combination of the casing a; the cover a^2 provided with entering-passages t^1, t^2, t^3; the rails p, p; the frame e slidably mounted on said rails and having a head e^1 provided with grooves e^2, e^3; the driving-shaft f embraced by said frame-head; a bevel-gear fast on said shaft; the flat-sided shaft j carried by said frame; the gears k, k^1; the ring gears q, q^1; means to move said frame and also slide either of said gears k, k^1 into mesh with either of said gears q, q^1; a bevel-gear fast on said flat-sided shaft and in mesh with the first mentioned bevel-gear; the gear r^2; means to carry the said gear into engagement with said gears k^1, q,

the latch c having a lug to enter in either groove in said frame-head; the pull-spring connection c^4 to said latch; means to adjust said latch whereby the teeth of said gears k, k^1 and gears q, q^1 are caused to mesh uniformly, and means to hold said latch in a locked position.

959,901. DYNAMO-ELECTRIC MACHINE. LOUIS E. UNDERWOOD and CHARLES P. SMITH, Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed Oct. 27, 1906. Serial No. 340,812.



1. A rotor member for dynamo-electric machines consisting of a shaft, a spacing member on said shaft, a pair of cores mounted on the shaft on opposite sides of the spacing member and held against the ends of said member, and windings on one of said cores having end turns or connections supported upon said spacing member.

2. A rotor member for dynamo-electric machines consisting of a shaft, a pair of cores arranged on said shaft, a drum mounted upon said shaft and clamped between the ends of said cores, and windings on one of said cores having end turns or connections supported upon said drum.

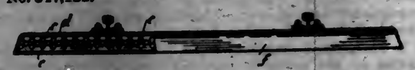
3. A rotor member for dynamo-electric machines, consisting of a shaft, a pair of cores arranged on said shaft, and a hollow drum mounted on the shaft between the said cores, said cores having ventilating openings leading into the interior of the drum.

4. A rotor member for dynamo-electric machines, consisting of a shaft, a pair of cores arranged on said shaft, a hollow drum mounted on the shaft between said cores, and windings upon said cores having end turns or connections supported upon said drum.

5. A rotor member for dynamo-electric machines consisting of a shaft, a pair of cores arranged on said shaft, a hollow drum mounted on the shaft between said cores, and windings on said cores having end turns or connections supported upon said drum, said cores having ventilating openings leading into the interior of said drum.

[Claims 6 to 15 not printed in the Gazette.]

959,902. METAL RAILWAY-TIE. JACOB WETTSTEIN, Greifensee, Switzerland. Filed Mar. 3, 1910. Serial No. 547,122.

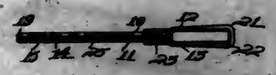


1. A trough-shaped metal railway-tie, whose inner walls have a large number of cavities pressed in them for the purpose of receiving and retaining stones of the ballasting-material, substantially as described.

2. A trough-shaped metal railway-tie presenting vertical sides whose edges are thickened on the inside, and having closed ends, and whose inner walls have a large number of cavities pressed in them for the purpose of receiving and retaining stones of the ballasting-material, substantially as described.

3. A trough-shaped metal railway-tie presenting vertical sides whose edges are thickened on the inside, and having closed ends, and whose inner walls have a large number of cavities pressed in them for the purpose of receiving and retaining stones of the ballasting-material, and transverse stays connecting the sides, substantially as described.

959,903. PUZZLE. ALBERT HARRY WHEELER, Worcester, Mass. Filed Nov. 5, 1909. Serial No. 526,337.

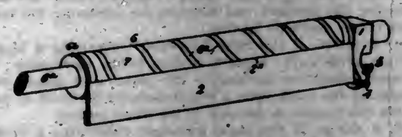


1. As an article of manufacture, a puzzle comprising a body having two opposite surfaces each made up of projections and depressions, said projections and depressions constituting a continuous path between two points on the surface of the body, a traveler, consisting of two parts one on each side of said body having a device adapted to be guided by said projections and depressions on the two sides of the body, and a frame consisting of a U-shaped member, the two legs of which are adapted to project over the two opposite surfaces of said body, and which support the traveler, each of the legs of said U-shaped member being of substantial width, and having opposite edges spaced apart and lying in contact with the projections on the surface of the body to prevent the traveler from being tilted and disengaged from the projections and depressions.

2. As an article of manufacture, a puzzle comprising a body having on the opposite sides thereof sets of projections and depressions arranged in rows, each row of projections on one side being arranged alternately with respect to the rows of projections on the other side, whereby clear spaces are provided on each side between two rows of projections, opposite which spaces on the other side are projections thereof, and a traveler projecting over the two sides of the body of the puzzle and having projections adapted to be guided among said projections of the body.

3. As an article of manufacture, a puzzle comprising two circular disks rotatable with respect to each other on their axis, each having projections and depressions thereon forming a maze on each disk, and comprising a path between two regions on each disk, and a traveler having means adapted to be guided within the depressions to move over the surfaces of the disks.

959,904. ROLL FOR CORN-HUSKING MACHINES AND THE LIKE. ARTHUR P. WOLFE, Buffalo, N. Y., assignor to Huntley Mfg. Co., Incorporated, Silver Creek, N. Y. Filed Apr. 17, 1908. Serial No. 427,630.



1. A corn husking roll having a helical peripheral rib on its surface to form a helical groove and a yieldable material held in said groove, said peripheral rib and said yieldable material having their outer cylindrical surfaces coincident.

2. A corn husking roll comprising a cylindrical body, end disks carried thereby and spaced apart, a helical rib on the periphery of said body extending between said end disks to form a helical groove between said disks, and a strip wound in said helical groove and means for securing said strip at the ends.

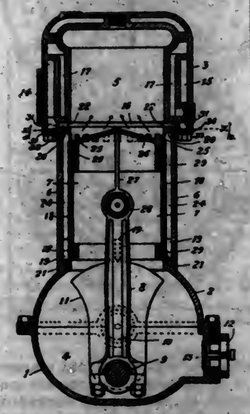
3. A corn husking roll comprising a cylindrical body, end disks carried thereby and spaced apart, a helical rib on the periphery of said body extending between said end disks to form a helical groove between said disks, a strip wound in said helical groove, means for securing said strip at the ends, said last named means comprising a wire member secured around said strip and said rib ends.

4. A corn husking roll comprising a cylindrical body, end disks carried thereby and spaced apart, a helical rib on the periphery of said body extending between said end disks to form a helical groove between said disks, a strip wound in said groove, means for securing said strip at the end, said last named means comprising a wire member secured around said strip and said rib ends and fused together.

5. A roll for corn husking machines and the like comprising a cylindrical body having a peripheral helical rib, and the end disks between which said rib runs to form a helical groove from end to end of the roll, a strip wound in said groove with its outer surface flush with the outer surface of the rib.

[Claims 6 to 8 not printed in the Gazette.]

959,905. EXPLOSIVE-ENGINE. JAY F. WOOLF, Minneapolis, Minn., assignor of one-half to Ellis J. Woolf, Minneapolis, Minn. Filed Feb. 16, 1909. Serial No. 478,198.



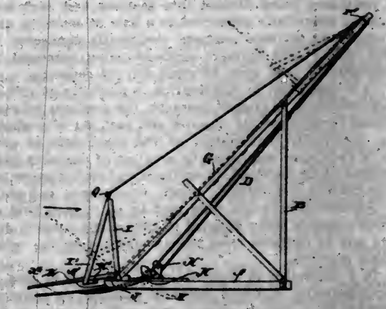
1. In an explosive engine, the combination with casing members providing compression and explosion chambers and an intermediate cylinder, of a piston therein separating the compression chamber from the explosion chamber, a sleeve separated from the cylinder by an annular space and slidable on and with the piston and having ports past which the piston head reciprocates to control the flow of gas through said ports from said annular space to the explosion chamber, and stops provided on the casing members for limiting the sleeve reciprocations to permit the piston head to open said ports near the end of its down-stroke and close them during its up-stroke, substantially as set forth.

2. In an explosive engine, the combination with casing members providing compression and explosion chambers and a cylinder connecting said casing members and providing a circular exhaust outlet between its upper end and the base of the casing of the explosion chamber, of a piston located within the cylinder and casing members and separating the compression chamber from the explosion chamber, a sleeve slidable thereon and therewith and provided in its upper portion with ports past which the piston reciprocates, the sleeve being separated from the body of the cylinder by an annular fluid passage-way and serving, at times, to connect the compression chamber with said passage-way and the sleeve ports being in communication with the annular passage-way in position to be uncovered by the piston near the end of its down-stroke to connect the explosion chamber with said passage-way, and a stop provided on the casing below said passage-way for limiting the movement of the sleeve and coöperating therewith to shut off the passage-way from the compression chamber on the down-stroke of the piston, substantially as set forth.

3. In an explosive engine, the combination with casing members providing compression and explosion chambers and a cylinder connecting said casing members and providing a circular exhaust outlet between its upper end and the base of the casing of the explosion chamber, of a piston located within the cylinder and casing members and separating the compression chamber from the explosion chamber, a sleeve slidable thereon and therewith and provided in its upper portion with ports past which the piston reciprocates, the sleeve being separated from the body of the cylinder by an annular fluid passage-way and serving, at times, to connect the compression chamber with said passage-way and the sleeve ports being in communication with the annular passage-way in position to be uncovered by the piston near the end of its down-stroke to connect the explosion chamber with said passage-way, a stop provided on the casing below said passage-way for limiting the downward movement of the sleeve, and a stop provided on the casing above the exhaust outlet for limiting the upward movement of the sleeve and coöperating therewith to close the exhaust outlet at the beginning of the up-stroke of the piston, substantially as set forth.

4. In an explosive engine, the combination with casing members providing compression and explosion chambers and a cylinder connecting said casing members and providing a circular exhaust outlet between its upper end and the base of the casing of the explosion chamber, of a piston, a sleeve slidable thereon and therewith to and from contact with the base of the casing of the explosion chamber, and a rim on the cylinder for guiding the sleeve, whereby the sleeve is adapted to open and close the exhaust outlet, substantially as set forth.

959,906. HAY-STACKER. HERBERT S. ARMITAGE and DAVID J. STEPHENS, Briston, Mont. Filed Sept. 7, 1909. Serial No. 516,575.



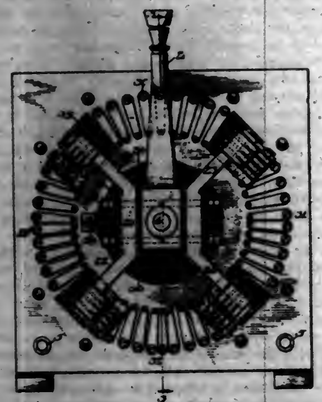
1. A hay stacker comprising an inclined way, a basket comprising series of tines, a rectangular outlined open frame rigidly fastened to the rear end of said tines, a cable connected to the corners of said rectangular outlined frame, pulleys upon the inclined way over which said cable is passed, said rectangular outlined frame being adapted to swing against the inclined way and contact therewith as the load is being hoisted.

2. In combination with an inclined way of a hay stacker, a basket comprising an open rectangular outlined frame, series of tines spaced apart projecting from said frame and rigidly secured thereto, braces connecting said tines to the frame, rings upon said frame, cables fastened to said rings, and pulleys upon the inclined way over which said cables pass.

3. A hay stacker comprising an inclined way with an opening near its upper end through which the hay is dumped, guide strips upon said inclined way, a basket comprising an open rectangular frame and tines spaced

apart, said tines being positioned at right angles to the frame and rigidly secured thereto, said frame being adapted to tilt and ride upon the inclined way as the load is being hoisted, cables connected to said frame, and pulleys over which the cables pass.

959,907. MOTOR-CONTROLLER. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 14, 1907. Serial No. 362,354.



1. In a controller, in combination, a plurality of sets of circumferentially arranged contacts, the contacts of each set being electrically connected in pairs and each set of contacts being electrically independent of the other sets of contacts, a resistance connected to each set of contacts, said resistance being divided into sections and each section being electrically connected to a pair of contacts, and a plurality of movable contacts electrically connected in groups, all of said movable contacts being arranged to simultaneously pass over different sets of contacts.

2. In a controller, in combination, a plurality of sets of circumferentially arranged contacts, the contacts of each set being cross-connected in pairs and each set of contacts being electrically independent of the other sets of contacts, a resistance connected to each set of contacts, said resistance being divided into sections and each section being electrically connected to a pair of contacts, and movable contacts electrically connected in pairs each pair of movable contacts being adapted to electrically connect different sets of contacts from those connected by the other movable contacts.

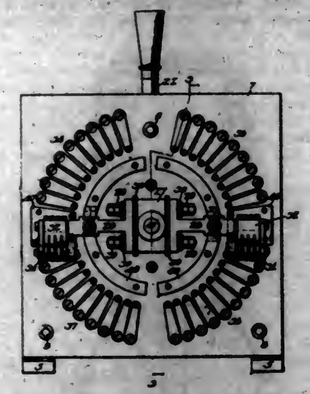
3. In a controller, in combination, a plurality of sets of circumferentially arranged contacts, each set of contacts consisting of a center contact and several contacts arranged on each side of said center contact, each contact on one side of said center contact being electrically connected to its corresponding contact upon the other side of said center contact and each set of contacts being electrically independent of the other sets of contacts, a resistance connected to each set of contacts, one end of said resistance being connected to the center contact and the other end to the end contacts, said resistance at intermediate points being connected to the contacts arranged between said center contact and said outer contact, and movable contacts arranged to pass one over each set of contacts.

4. In a controller, in combination, a plurality of sets of circumferentially arranged contacts, each set of contacts consisting of a center contact and several contacts arranged on each side of said center contact, each contact on one side of said center contact being electrically connected to its corresponding contact upon the other side of said center contact and each set of contacts being electrically independent of the other sets of contacts, a resistance connected to each set of contacts, one end of said resistance being connected to the center contact and the other end to the end contacts, said resistance at intermediate points being connected to the contacts arranged between said center contact and said outer contact, and movable contacts electrically connected in pairs and arranged to pass one over each set of contacts.

5. In a motor controller, in combination, four sets of contacts circumferentially arranged, two diametrically opposite sets being electrically connected to the terminals of the line and the other two diametrically opposite sets to the terminals of the motor, and movable contacts electrically connected in pairs and arranged to pass one over each set of contacts.

[Claims 6 to 22 not printed in the Gazette.]

959,908. MOTOR-CONTROLLING DEVICE. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 9, 1907. Serial No. 372,747.



1. The combination with arc shaped contacts, of a plurality of sets of circumferentially arranged contacts, a resistance connected to each set of circumferentially arranged contacts, and movable contacts connected in pairs arranged to pass off said contacts, one movable contact of each pair being arranged to always be in engagement with the arc shaped contacts.

2. The combination with a pair of continuous contacts, of a plurality of sets of circumferentially arranged contacts, a resistance connected to each set of circumferentially arranged contacts, and a plurality of movable contacts arranged to pass over said contacts, the contacts passing over the continuous contacts, being arranged to be continuously in engagement therewith.

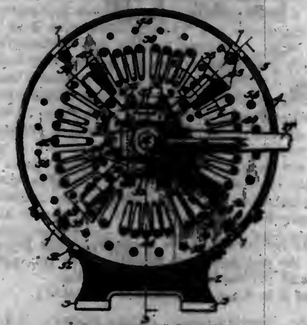
3. In a motor controller the combination with a plurality of sets of contacts circumferentially arranged, two of said sets having resistance sections connected thereto and being electrically connected to the terminals of the line, of a pair of continuous contacts connected to the terminals of the motor, and movable contacts arranged to pass over said contacts, the movable contacts engaging said continuous contacts being arranged to always remain in engagement therewith.

4. In a motor controller the combination with four sets of contacts circumferentially arranged, the sets of contacts being divided into pairs, and the contacts of each pair being electrically connected, of a resistance connected to each set, one set of each pair being electrically connected to the terminals of the line, a pair of continuous contacts electrically connected to the motor terminals, and four movable contacts electrically connected in pairs arranged to pass over said contacts, the movable contacts passing over the continuous contacts being arranged to continuously engage the same.

5. The combination with a plurality of circumferentially arranged set of contacts, of a resistance connected to each set, a plurality of continuous contacts, a plurality of movable contacts arranged to pass over said contacts but adapted to open the circuit only on the contacts of the circumferentially arranged sets, and a blowout coil arranged to disrupt the arc formed at the contacts when the circuit is opened.

[Claims 6 to 10 not printed in the Gazette.]

959,909. CRANE-CONTROLLER. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Aug. 27, 1907. Serial No. 390,305.



1. In a controller, the combination with a face plate, of a plurality of sets of circumferentially arranged contacts, the contacts of each set being electrically connected in pairs, and each set of contacts being electrically independent of the other sets of contacts, a resistance mounted on said face plate and connected to each set of contacts, said resistance being divided into sections and each section being electrically connected to a pair of contacts, and movable contacts mounted on said face plate, and arranged to pass over said sets of contacts.

2. In a controller, the combination with a casing, of a face plate set therein, a plurality of sets of circumferentially arranged contacts mounted on said face plate, the contacts of each set being electrically connected in pairs, and each set of contacts being electrically independent of the other sets of contacts, a resistance mounted on said face plate and within said casing connected to each set of contacts, said resistance being divided into sections and each section being electrically connected to a pair of contacts, and movable contacts mounted on said face plate arranged to pass over said sets of contacts.

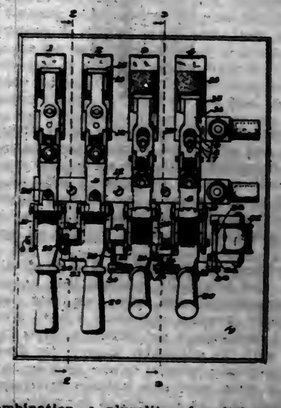
3. In a motor controller, in combination, a face plate, four sets of face plate contacts arranged thereon, said contacts being arranged one in each of four arcs equi-distant apart on the same circumference, two diametrically opposite sets being electrically connected to the terminals of the line, and the other two diametrically opposite sets being electrically connected to the terminals of the motor, cross connections connecting the contacts of each set in pairs, each set of contacts being electrically independent of the other sets of contacts, a resistance mounted on said face plate and connected to each set of contacts, and four contact arms forming two pairs of arms mounted on said face plate the arms of each pair being integral, and said arms being adapted to pass one over each set of contacts.

4. In a controller, in combination, a face plate, a plurality of sets of circumferentially arranged contacts, the contacts of each set being electrically independent of the other sets of contacts, a plurality of resistance units mounted upon said face plate and connected to each set of contacts, and movable contacts carried on said face plate arranged to pass over said sets of contacts.

5. In a motor controller, in combination, a face plate, four sets of face plate contacts arranged thereon, said sets of contacts being arranged one in each of four arcs equi-distant apart upon the same circumference, two diametrically opposite sets being electrically connected to the terminals of the line, and the other two diametrically opposite sets being electrically connected to the terminals of the motor, cross connections connecting the contacts of each set in pairs, each set of contacts being electrically independent of the other sets of contacts, a plurality of resistance units for each set of contacts mounted upon said face plate, and four contact arms forming two pairs of arms mounted on said face plate, the arms of each pair being integral and said arms being adapted to pass over each set of contacts.

[Claims 6 to 10 not printed in the Gazette.]

959,910. MULTIPLE-SWITCH STARTER. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed July 26, 1909. Serial No. 509,537.



1. In combination, a plurality of switches tending to stand in open position, and a plurality of latches for holding said switches in closed position, said latches tending to move into a position to release said switches, and each of said switches being adapted, when closed, to retain the latch of a preceding switch in holding position.

2. In combination, a plurality of switches tending to stand in open position, and a plurality of latches for holding said switches in closed position, said latches tending to stand in position to release said switches, and each of said switches, when closed, being adapted to move the latch of a preceding switch into holding position.

3. In combination, a plurality of switches tending to stand in open position, and a plurality of latches for holding said switches in closed position, said latches tending to move into position to release said switches and to insure closure of said switches in a definite sequence, and each of said switches being adapted, when closed, to retain the latch of a preceding switch in holding position.

4. In combination, a plurality of switches tending to stand in open position, and a plurality of latches for holding said switches in closed position, said latches tending to move into position to release said switches and to insure closure of said switches in a definite sequence, and each of said switches being adapted, when closed, to move the latch of a preceding switch into holding position.

5. In combination, a plurality of switches tending to stand in open position, a plurality of latches for holding said switches in closed position, said latches tending to move into position to release said switches, and to insure closure of said switches in a definite sequence, each of said switches being adapted, when closed, to retain the latch of a preceding switch in holding position, and an electromagnet for retaining the latch of the last switch of the sequence in holding position.

[Claims 6 to 10 not printed in the Gazette.]

959,911. FEED-SCREW MECHANISM. LEWIS C. BAYLIS, Johannesburg, Transvaal, assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 28, 1909. Serial No. 525,001.



1. A feed screw, a sleeve divided longitudinally to form stationary and adjustable members both having a screw threaded engagement with said screw, said members having oppositely arranged shoulders, a body interposed between said shoulders and a nut having a screw threaded engagement with the adjustable member for drawing it toward the stationary member to take up wear on the screw.

2. A feed screw, a sleeve divided longitudinally to form stationary and adjustable members both having a screw threaded engagement with said screw, said members having oppositely arranged shoulders, a body interposed between said shoulders, a nut having a screw threaded engagement with the adjustable member for drawing it toward the stationary member to take up wear on the screw, and one or more removable washers interposed between the said body and the shoulder on the adjustable member.

3. A feed screw, a sleeve divided longitudinally to form stationary and adjustable members both having a threaded engagement with said screw, said members having oppositely arranged shoulders, a body interposed between said shoulders, the stationary member having a plain semi-cylindrical portion and the adjustable member a screw threaded semi-cylindrical portion exterior to the body and a nut surrounding said end and engaging the screw threaded portion on the adjustable member for drawing the same toward the stationary member.

959,912. CLINOMETER FOR WELL-BORES. ARTHUR F. L. BELL, San Francisco, Cal. Filed Jan. 15, 1908. Serial No. 410,897.

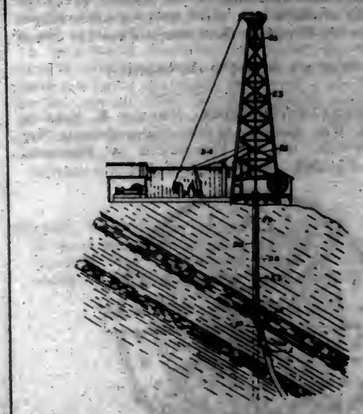
1. An apparatus for testing the deviation of well-bores from a vertical, comprising a clinometer instrument having means for recording a continuous diagram of its readings, means for suspending it in the well-bore, and means for determining its location therein.

2. An apparatus for testing the deviation of well-bores from a vertical, comprising a clinometer instrument having means for recording a continuous diagram of the times of its readings, means for suspending said instrument in the well-bore, and means for measuring the depth of the instrument therein.

3. An apparatus for testing the deviation of well-bores from a vertical, comprising a clinometer instrument having means for recording a continuous diagram of the times of its readings, and a suspending device for said instrument measured off into distances.

4. An apparatus for testing the deviation of well-bores from a vertical, comprising a clinometer instrument having means for recording its readings; a connection therewith for frictionally contacting with the wall of the well bore to prevent the instrument from revolving therein; and means for suspending said instrument in the well-bore.

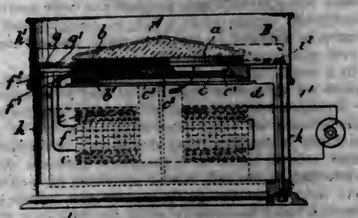
5. An apparatus for testing the deviation of well-bores from a vertical, comprising a clinometer instrument having



ing means for recording its readings, means for suspending it in the well-bore, and flexible means for centering it therein, and preventing it from revolving.

[Claims 6 to 8 not printed in the Gazette.]

959,913. ELECTRICALLY-HEATED APPARATUS SUITABLE FOR COOKING AND OTHER PURPOSES. ARTHUR FRANCIS BERRY, Ealing, England, assignor to General Electric Company, a Corporation of New York. Filed Nov. 8, 1907. Serial No. 401,279.



1. Electrical heating apparatus comprising primary and secondary elements on a magnetic core and a heating portion supported upon but insulated from said core and comprising an inductive element of bent form in circuit with said secondary element, a plate insulated from but subject to the uniform inductive effect heat radiation of the inductive element, and a metal protecting plate secured to said insulated plate and forming therewith an air tight chamber inclosing said inductive element, and a casing inclosing said core with primary and secondary elements and surrounding said heating portion.

2. Electrical heating apparatus comprising primary and secondary elements on a magnetic core, a heating portion supported upon but insulated from said core and comprising a metal plate grooved on its lower side, an insulated inductive winding arranged within said groove and constituting an inductive element arranged in circuit with said secondary element, and a casing inclosing said core with primary and secondary elements and surrounding said heating portion.

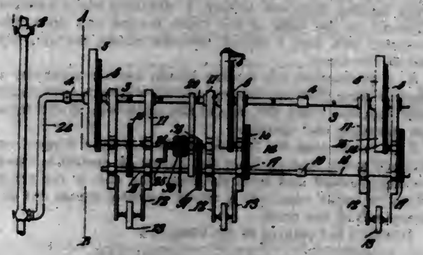
3. Electrical heating apparatus comprising primary and secondary elements on a magnetic core and a heating portion supported upon but insulated from said core and comprising a metal plate having a groove in one surface thereof, an insulated inductive winding completely confined in said groove and arranged in circuit with said secondary element, a protecting plate arranged to cover the said grooved surface of the plate and the winding therein and form with said plate an air tight chamber for protecting said winding from the action of the external air, and a casing inclosing said core with primary and secondary elements and surrounding said heating portion.

4. Electrical heating apparatus comprising primary and secondary elements on a magnetic core and a heating portion surmounting the said elements and comprising two parallel and adjacent plates of magnetic material clamped together and inclosing between them an air tight groove, an insulated inductive winding, confined in said groove and arranged in circuit with said secondary element, the metal of the inclosing holder extending between adjacent bent portions of said inductive winding, and a casing inclosing said core with primary and secondary elements and surrounding said heating portion.

5. Electrical heating apparatus comprising primary and secondary elements on a magnetic core and a heating portion surmounting the said elements and comprising a plate of magnetic material having a groove in one surface adapted to confine an inductive winding therein, an inductive winding in circuit with said secondary element and arranged completely within said groove with the metal of said plate extending between adjacent bent portions of said winding, and a plate adapted to constitute a closed magnetic circuit with the aforesaid grooved plate around said inductive winding and forming with said plate an air tight holder for said winding.

[Claims 6 to 17 not printed in the Gazette.]

959,914. IRRIGATING APPARATUS. CLAIBOURN BEVILL, Bushnell, Fla. Filed Apr. 24, 1909. Serial No. 492,008.

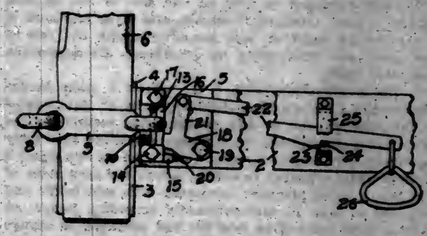


1. Irrigating apparatus comprising a series of detachably connected alining distributing pipes, supporting wheels for each pipe, said pipe extending through the wheels, a truck supported at one end by each pipe, a drive shaft journaled upon each truck, the shafts of the trucks being disposed in alinement and detachably connected, and mechanism carried by each truck for transmitting motion from said shafts to the supporting wheels.

2. Irrigating apparatus comprising a sectional distributing pipe, non-flexible couplings holding the sections of the pipe substantially in alinement, these sections being detachably connected, wheels constituting supports for each section, a truck movable with each section, a shaft journaled upon each truck, means detachably connecting the shafts for insuring simultaneous rotation thereof, means for actuating the shafts, and means upon each truck for transmitting motion from its shaft to the wheels adjacent thereto.

959,915. STAKE-HOLDER. ARTHUR J. BOSTWICK, Eau Claire, Wis., assignor of one-half to Eau Claire Mill Supply Co., Eau Claire, Wis. Filed June 19, 1909. Serial No. 503,153.

1. A stake holder, comprising a box having means for attachment to a sill, said box being open on two sides, a pivoted bridle having links arranged to extend across said open sides, a locking latch connected with said links, and means for securing said latch against premature movement.



2. A stake holder comprising a box having two open sides and means for securing it to a sill, the closed sides of said box forming long bearing surfaces for the stake, a bridle arranged to extend across said open sides and a locking means for said bridle adapted to be operated from the opposite end of said sill, substantially as described.

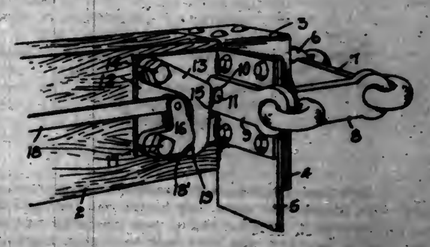
3. A stake holder for logging cars comprising a box, having plates or walls on two sides and open on two sides, and means for securing said box to a car sill, the closed sides of said box forming long bearing surfaces for the stake, a pivoted bridle arranged to extend across the open sides of said holder, and means for locking said bridle against premature movement.

4. The combination, with a car sill, of a stake holder secured thereto and having two open sides, the closed sides of said holder depending below said sill and forming comparatively long bearing surfaces for the stake, and a bridle composed of links pivoted to a fixed point on one side of said holder, said links extending across the two open sides of said holder at right angles substantially to one another, a locking latch pivotally connected to one of said links, and means for temporarily holding said latch in its locking position.

5. The combination, with a car sill, of a stake holder secured thereto, a bridle extending across the open side of said holder, a locking latch pivotally connected with the links of said bridle and having an inwardly turned end fitting within a socket in said holder, and means for locking said latch in said socket.

[Claims 6 and 7 not printed in the Gazette.]

959,916. STAKE-HOLDER. ARTHUR J. BOSTWICK, Eau Claire, Wis., assignor of one-half to Eau Claire Mill Supply Co., Eau Claire, Wis. Filed Sept. 23, 1909. Serial No. 519,259.



1. A stake holder open on two sides, a bridle pivoted at one side of said stake holder and arranged to extend across said open sides, a locking latch having a socket therein, a head provided on said holder and adapted to enter said socket and means preventing the premature disengagement of said latch and head.

2. The combination, with a car sill, of a stake holder composed of flanges arranged substantially at right angles to one another, one of said flanges being secured to said sill and the other projecting therefrom substantially at

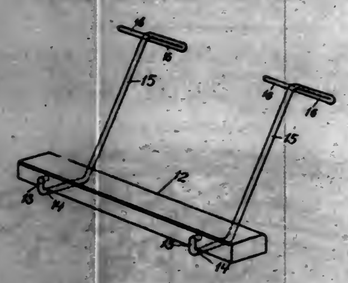
right angles thereto, said flanges forming a box or holder with two open sides, a bridle arranged to extend across said open sides, a locking latch pivotally connected to said bridle and arranged to bear on one side of one of said flanges, a pawl arranged to engage said latch and hold it in its locking position, and means engaging the end of said pawl and preventing its premature disengagement from said latch.

3. The combination, with a car sill, of a stake holder composed of flanges arranged substantially at right angles to one another, one of said flanges being secured to the side of said sill and the other flange projecting outwardly therefrom, said flanges forming a box open on two sides, a pivoted bridle arranged to extend across the open sides of said box, a latch pivotally connected with said bridle and arranged to bear on said outwardly extending flange, an angular pawl pivoted on said sill and arranged to engage the end of said latch and hold it in its locking position, and means operable from the opposite side of the car for holding said angular pawl in engagement with said latch.

4. The combination, with a car sill, of a stake holder composed of angularly arranged plates, one of which is secured to said sill, the other plate projecting outwardly therefrom, said plates depending below the car sill and forming comparatively long bearing surfaces for the stake, a pivoted bridle arranged to extend across the opening between said angle plates, a latch pivotally connected with said bridle and arranged to bear on one side of said outwardly extending flange and having a socket, a head mounted on said outwardly extending flange and adapted to enter said socket, means for holding said latch in its locking position and means operable from the opposite side of the car for locking said holding means.

5. A stake holder composed of angularly arranged plates adapted to be rigidly secured to a car sill, and having comparatively broad bearing surfaces and supporting the lower end of the stake against lateral movement, a pivoted bridle arranged to extend across the angle formed by the junction of said plates with one another, a locking latch connected with said bridle and means for holding said locking latch in its locking position.

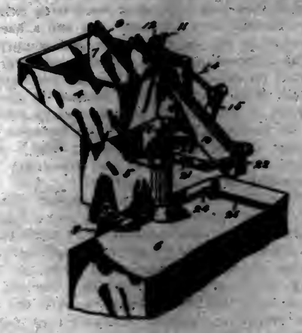
959,917. FOOT-REST FOR RADIATORS. ELMER C. BARGES, Wareham, Mass. Filed Jan. 3, 1910. Serial No. 536,026.



1. A foot rest attachment for radiators comprising a shelf, two independent arms each having one end bent to support said shelf, the other end of each arm being bent at an angle to said arm and then bent back upon itself to form lateral ears extending parallel with said shelf and adapted to engage the sections of a radiator.

2. A foot rest attachment for radiators comprising a shelf, two independent arms each having one end bent to support said shelf, the other end of each arm being bent at an angle to said arm and then bent back upon itself to form lateral ears extending parallel with said shelf and adapted to engage the sections of a radiator, each arm being also provided with lateral bearing ears adjacent the shelf supporting portion.

959,918. BLANK-FEED MECHANISM. ANDREW C. CAMPBELL, Waterbury, Conn., assignor to The E. J. Manville Machine Company, Waterbury, Conn., a Corporation of Connecticut. Original application filed Apr. 28, 1909, Serial No. 492,695. Divided and this application filed Feb. 3, 1910. Serial No. 541,689.



1. A mechanism for feeding blanks having a hopper, a track leading from the hopper, and a clearance comb movable along the upper edge of the track toward and from the receiving end thereof.

2. A mechanism for feeding blanks having a hopper, a track leading from the hopper, a clearance comb movable adjacent to the edge of the track toward and from the receiving end, and an oscillatory cut-off movable across the delivery end of the track.

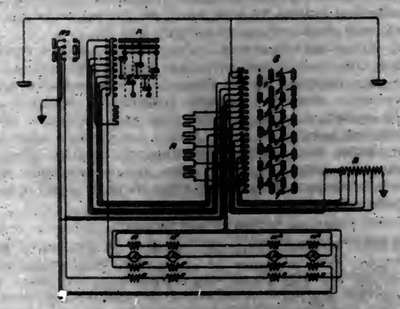
3. A mechanism for feeding blanks having a hopper, a track leading from the hopper, a clearance comb movable adjacent to the edge of the track toward and from the receiving end, and a cut-off movable across the delivery end of the track.

4. A mechanism for feeding blanks having a hopper, a track leading from the hopper, and an adjustable clearance comb movable along the edge of the track toward and from the receiving end thereof.

5. A mechanism for feeding blanks having a hopper, an inclined track leading from the hopper, a clearance comb movable toward and from the receiving end of the track along its upper edge, and a cut-off movable across the delivery end of the track.

[Claim 6 not printed in the Gazette.]

959,919. ELECTRIC-RAILWAY SYSTEM. FRANK E. CASE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 29, 1905. Serial No. 289,591.



1. In an electric railway, two adjacent supply conductor sections energised by currents differing in character, an intermediate section between said supply sections and insulated therefrom, and a switch for electrically connecting said intermediate section to either of said supply sections.

2. In an electric railway, two supply conductor sections energised by currents differing in character, an intermediate conductor section between said supply conductor sections and insulated therefrom, and a switch for connecting said intermediate section electrically to either of said supply sections and arranged to prevent said intermediate section from being connected electrically to both supply sections at the same time.

3. In an electric railway, two supply conductor sections energised by currents differing in character, an intermediate conductor section between said supply sections and insulated therefrom, a switch and connections to connect said intermediate section electrically to either supply section, and means for normally maintaining said switch in an inoperative position wherein said intermediate section is disconnected electrically from both supply sections.

4. In an electric railway, two supply conductor sections, an intermediate conductor section between said supply conductor sections and insulated therefrom, a stop or projection arranged adjacent the roadway between the ends of said intermediate section for operating switch mechanism on a car traversing said intermediate section, and means for electrically connecting said intermediate section to either of said supply conductor sections.

5. In an electric railway, a track, supply conductor sections energised by currents differing in character, a normally dead conductor section intermediate said supply sections, a car having a motor or a group of motors adapted to be operated by current from either supply section, switch mechanism arranged to vary the electrical conditions of the motor circuit, and the connection between the motor circuit and the supply conductors, means located at a fixed point along said track for automatically operating said switch mechanism while the car is on the dead section, and a switch for electrically connecting said dead section to either of said supply conductor sections.

959,920. ADJUSTABLE HEADLIGHT. ALFRED S. CHURTON, Chicago, Ill. Filed Oct. 29, 1909. Serial No. 525,248.



1. The combination of a car body and a truck, of a gear secured to the pivot pin of said truck and movable therewith, a lamp mounted upon a standard, said standard being rotatably mounted in bearings secured to said car body, and having a gear at its lower end, a shaft mounted on suitable bearings secured to said car body and having a gear at one end in mesh with the gear on said standard, and a pinion gear at its other end, the pinions of which are arranged in an arc, and in mesh with the teeth of the gear on said pivot pin.

2. The combination of a car body and a truck, of a gear having relatively long teeth secured to the pivot pin of said truck and movable therewith, a lamp mounted upon a standard, said standard rotatably mounted in bearings secured to said car body and having a gear at its lower end, a shaft mounted on suitable bearings and secured to said car body and having a gear at one end in mesh with the gear on said standard, and a pinion gear on the other end of said shaft in mesh with the teeth of the gear on said pivot pin, the pinions on said pinion gear being arranged in an arc.

959,921. CURTAIN RING AND HOOK. ANNIE MANNY CLERK, Montreal, Quebec, Canada. Filed Oct. 2, 1909. Serial No. 520,642.



In a curtain ring and hook, a band forming the ring portion and having outwardly bent end extensions, one of said extensions having inwardly turned prongs forming a hook portion, and a rivet rigidly and permanently joining said bent end extensions.

959,922. BOX. CHARLES W. COHN, New York, N. Y. Filed July 2, 1909. Serial No. 505,598.



1. The combination of a box having a picture frame mounted on the top thereof, said frame having an opening and a marginal portion surrounding such opening, and means for mounting a photograph or the like with its edges close behind such marginal portion so that its main portion is visible through such opening.

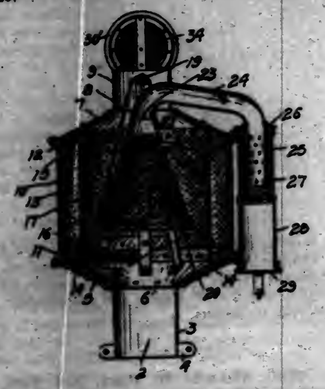
2. The combination of a box having a picture frame mounted on the top thereof, said frame having an opening and a marginal portion surrounding such opening, said box having a portion back of said opening, and a passage in such portion through which a picture may be inserted with its edges behind the marginal portion of the frame.

3. The combination of a box having a picture frame mounted on the top thereof, said frame having an opening and a marginal portion surrounding such opening, and means for mounting a photograph or the like with its edges close behind such marginal portion so that its main portion is visible through such opening, and means for suspending the picture frame.

4. The combination of a box having a picture frame mounted on the top thereof, said frame having an opening and a marginal portion surrounding such opening, means for mounting a photograph or the like with its edges close behind such marginal portion so that its main portion is visible through such opening, and a leg or support for holding said picture frame in an upright position.

5. The combination of a box having a cover, a picture frame mounted on said cover, said frame having an opening and a marginal portion surrounding such opening, and said cover being constructed to permit the insertion of a photograph or the like within such opening, said marginal portion and said cover being separate around said opening so that the edges of the photograph may lie behind said marginal portion.

959,923. SPARK-ARRESTER. KENNETH M. COLQUHOUN, Owatonna, Minn. Filed June 12, 1908. Serial No. 438,029.



1. A spark arrester comprising a bottom plate in the form of an inverted cone having a central opening and means for attachment to a stack, a top conical shaped plate having a central opening and a pipe connection therefor, an outer vertically arranged screen connecting the peripheries of said top and bottom plates, an intermediate screen depending from said top plate and spaced from said outer screen and having its lower edge raised above the surface of said bottom plate whereby the accumulation of cinders between said screens may slide into the opening in said bottom plate, a cylindrical hood centrally arranged between the openings in said top and bottom plates and raised out of contact with said bottom plate and above the level of the lower portion of said intermediate screen whereby circulation of air will be permitted under said hood and between it and said intermediate screen, the upper portion of said hood being of substantially the same diameter as the opening in said top plate, and a pipe connected with the top of said hood and extending upwardly through the opening in said top plate and outwardly therefrom and depending outside of and near said outer screen, for the purpose specified, and a screen inclosing the outer end of said pipe.

2. A spark arrester, comprising a bottom plate downwardly inclined toward the center and having a central opening with means for attachment to a stack, a top plate also having an opening therein, and a pipe inclosing said opening, an outer screen connecting the peripheries of said top and bottom plates, an intermediate screen depending from said top plate and spaced from said outer screen, the lower edge of said intermediate screen being raised out of contact with said lower plate, a hood inclosed by said intermediate screen and having its lower edge raised out of contact with said lower plate the upper portion of said hood being of substantially the same diameter as the opening in said top plate, and a pipe attached to the top of said hood and extending upwardly and outwardly through the pipe on said top plate and having a downwardly turned outer end, and a cinder can supported outside and near said outer screen and into which can the open discharge end of said hood pipe is inserted the upper portion of said can inclosing said pipe being perforated, substantially as described.

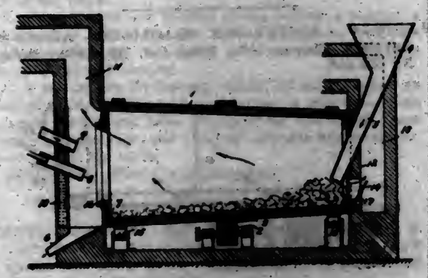
3. A spark arrester, comprising top and bottom plates, and screens arranged one within another intermediate thereto, the lower plate having an opening therein inclosed by said screens, and means for connection with a boiler smack, a hood located over the opening in said lower plate and raised out of contact with the same, a pipe connected with said hood and extending upwardly and outwardly through said top plate and provided with a downwardly turned end having a series of perforations therein, and a cinder can, supported by said plates and having a perforated upper portion into which the perforated end of said pipe is inserted, substantially as described.

4. A spark arrester, comprising a top and bottom plate, said top plate having a discharge opening, and said bottom plate having an opening therein, and means for attachment to a stack, a hood located over the opening in said lower plate and raised out of contact with said plate screens arranged one within another and secured to said plates and inclosing said hood, a cinder can arranged outside of said screens and having an imperforate lower portion and a perforated upper portion, and a pipe connected with the top of said hood and extending outwardly through said top plate and having a depending perforated end that is inserted within the perforated upper portion of said cinder can, the perforations in said can and pipe permitting a circulation through said pipe and insuring combustion of the inflammable material therein, substantially as described.

5. A spark arrester, comprising top and bottom plates, said top plate having a discharge opening, and said bottom plate having an opening provided with means for connection with the stack, screens interposed between said plates one within another and inclosing said opening, a hood supported over the opening in said lower plate and raised out of contact with said plate, a cinder can supported by said plates outside said screens and having an imperforate lower portion and a wire mesh screen forming its upper portion, a pipe connected to the upper portion of said hood and extending outwardly through said top plate and having a depending perforated end fitting within the screen in the top of said cinder can, and a removable water can arranged within said cinder can below said screen portion, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

959,924. SMELTING PROCESS. EDUARD DEDOLPH, Kaslo, British Columbia, Canada. Filed Nov. 4, 1909. Serial No. 526,168.



1. The continuous process of extracting lead or zinc or both from their ores or slag as oxid in the form of fume, which consists in continuously supplying the material, mixed with fuel, to an inclosed chamber, causing the material to travel slowly along the bottom of said chamber, admitting flame and air to the chamber, the flame being admitted at a region remote from the region where the material is admitted to the chamber, continuously liberating the metal as oxid in the form of fume and carrying off and collecting the fume thus formed, and continuously removing the residue from the chamber.

2. The process of extracting lead or zinc or both from their ores or slag as oxid in the form of fume, which consists in supplying the material mixed with carbonaceous fuel, to an inclosed chamber, causing the material to travel slowly along the bottom of said chamber, directing flame and air toward the material remote from the region where the material is admitted to the chamber, causing the hot draft to travel over the material in the direction reverse to the travel of the material liberating the metal as oxid in the form of fume, and carrying off and collecting the fume thus formed.

3. The process of extracting lead or zinc or both from their ores or slag as oxid in the form of fume, which consists in supplying the material mixed with fuel, to one end of a revolving drum, causing the material to travel along the bottom of the drum, admitting flame and air at the other end of the drum and causing the hot draft to travel over the material in the direction reverse to the travel of the material, thus liberating the metal as oxid in the form of fume, and carrying off and collecting the fume thus formed.

4. The process of smelting ore or slag containing both lead and zinc, effecting separation of the metals, which consists in supplying the material mixed with fuel to a chamber, causing the material to travel slowly along the bottom of the chamber, heating the material as it travels with access of air to form an oxidizing atmosphere, thus oxidizing the lead and carrying it off in the form of fume, mixing the residue with more fuel and supplying it to a second chamber, causing it to travel slowly along the bottom thereof, heating the residue as it travels with access of air to form an oxidizing atmosphere, the residue being heated to a higher temperature than the original mixture, thus oxidizing the zinc and carrying it off in the form of fume.

5. The continuous process of smelting lead ores, zincy lead ores, leady zinc ores, lead ores and slag, recovering the metal in the form of fume, which consists in continuously charging the material, mixed with fuel, to a rotating drum along the bottom of which the material is caused to travel, heating the material as it travels with access of air to form an oxidizing atmosphere, thus continuously as the material travels, reducing the metal, then oxidizing it, and carrying off and collecting the fume thus formed.

[Claims 6 and 7 not printed in the Gazette.]

959,925. FLY-NET. JOHN DUDLEY EVANS, Chesterfield, S. C. Filed Feb. 23, 1910. Serial No. 545,530.



A fly trap comprising a shell, wires pivotally connected thereto, a netting covering fastened about said wires and to said shell and adapted to form, when opened, a tapering inclosure, a stem movable through an opening in said shell, a disk fastened to said shell and adapted to open the netting, and means for holding said stem in different positions.

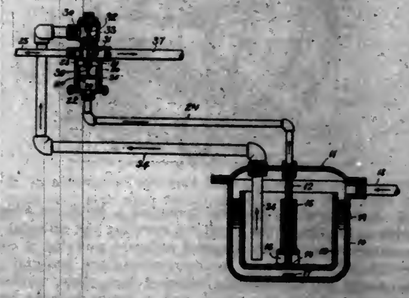
959,926. DUST-PAN. MAX FELD and DAVID FROEHLICH, New York, N. Y. Filed Mar. 8, 1910. Serial No. 547,966.

A dust pan device, comprising a tubular handle provided at one end with a fork-shaped support, a dust pan, one end of which is open and the other closed, the open end portion of said pan being pivoted in said support, a runner sleeve mounted on said handle, a spiral spring secured in the end portion of the handle opposite said support and connected with said sleeve, a flexible device connected



with the closed end of the pan and passed into the handle and connected with said spring and means for holding the runner sleeve in a predetermined position on said handle.

959,927. ATTACHMENT FOR STEAM-TRAPS. RICHARD J. FLINN, Boston, Mass. Filed July 24, 1909. Serial No. 509,350.



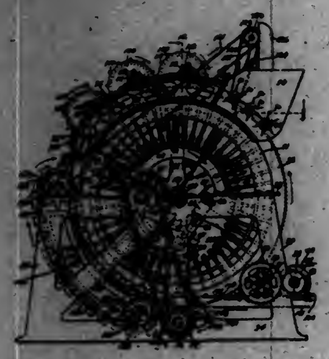
1. An attachment for supplementing the discharge from a steam trap, comprising a casing formed with a primary chamber, a supplemental chamber, and a partition closing said chambers, one with relation to the other, a discharge conduit from the trap valve communicating with said primary chamber, a movable member arranged in said primary chamber and constructed to be moved by pressure therein, a supplemental conduit extending from the lower part of the trap to said supplemental chamber, an outlet in said supplemental chamber, a valve controlling said outlet, and a valve rod extending from said valve through said partition to the movable member in said primary chamber, whereby the valve may be opened.

2. An attachment for supplementing the discharge from a steam trap, comprising a casing formed with a cylinder, a supplemental chamber, and a partition closing said cylinder and chamber, one with relation to the other, a discharge conduit from the trap valve communicating with said cylinder, a piston arranged in said cylinder, a supplemental conduit from the lower part of the trap to said supplemental chamber, an outlet for said chamber, a supplemental valve controlling the discharge from said chamber, a rod extending from said piston through said partition and arranged to open said supplemental valve, an escape opening for the primary discharge from the trap valve, and adjustable means controlling the escape of said primary discharge.

3. An attachment for a steam trap comprising a casing having two separate chambers, of which one is arranged to form a part of the discharge conduit of the trap valve, a supplemental discharge conduit including the other chamber and terminating within the trap, a valve for the outlet of the supplemental chamber, means coöperating with the flow in the primary chamber for opening the supplemental valve, said means including a flow passage for the primary discharge, and adjustable means for varying said passage whereby the means may be rendered inoperative.

4. An attachment for a steam trap comprising a primary discharge conduit for water controlled by the trap valve, a supplemental discharge conduit for water, a valve for controlling the supplemental conduit, means in the primary conduit and operable by the pressure therein for opening the supplemental valve, and means in the primary conduit for varying the outlet thereof.

959,928. COMPRESSING-MACHINE. WILLIAM M. GENTLE, Indianapolis, Ind., assignor to National Pressed Fuel Company, Indianapolis, Ind. Filed Nov. 13, 1908. Serial No. 462,892.



1. A compressing machine including a revoluble wheel, molds in the rim of the wheel for receiving the material to be compressed, radially disposed plungers mounted in connection with the wheel for compressing the material in the molds, an eccentrically disposed cam plate mounted stationary within the wheel, and a chain movable over said cam plate for actuating the plungers, whereby there will be no friction between the inner ends of the plungers and the means for actuating the same.

2. A compressing machine including a revoluble wheel, molds in the rim of the wheel for receiving the material to be compressed, radially disposed plungers mounted in connection with the wheel for compressing the material in the molds, an eccentrically disposed cam plate mounted stationary within the wheel, means for yieldingly supporting said cam plate at one end, and a chain movable over said cam plate for actuating the plungers.

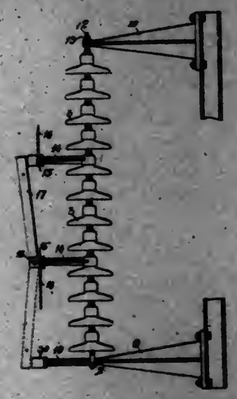
3. A compressing machine including a revoluble wheel, radially disposed molds mounted in connection with the rim thereof, radially disposed plungers for compressing the material in the molds, an eccentrically disposed cam plate mounted stationary within the wheel for causing the actuation of said plungers, means for yieldingly supporting one end of said cam plate, and means externally operative for regulating said yielding means in order to control the pressure of the plungers.

4. A compressing machine including a revoluble wheel, molds in the rim of the wheel for receiving the material to be compressed, radially disposed plungers mounted in connection with the wheel for compressing the material in the molds, an eccentrically disposed cam plate mounted stationary within the wheel, a sprocket wheel on each end of said cam plate, a chain operating thereon longitudinally over the surface of said cam plate and against which the inner ends of the plungers bear and whereby the plungers are actuated, and means for driving said chain at substantially the same relative speed as the mold wheel.

5. A compressing machine including a revoluble wheel having a rim, a hollow mold casing secured to each side of said rim and provided with mold holes tapering inwardly, tapering molds within said mold holes screw-threaded on their inner ends, and nuts on the inner ends of the molds for holding them in place.

[Claims 6 to 16 not printed in the Gazette.]

959,929. HIGH-VOLTAGE SWITCH. WALTER T. GODDARD, Victor, N. Y., assignor to Locke Insulator Manufacturing Company, Victor, N. Y., a Corporation of New York. Original application filed June 12, 1908, Serial No. 438,055. Divided and this application filed Oct. 25, 1909. Serial No. 524,470.



1. The combination with a pair of supports, of a terminal, and an insulator between the supports carrying the terminal and having insulating flanges about it on both sides of the terminal.

2. The combination with a pair of supports, of a terminal, an insulator between the supports carrying the terminal and comprising a plurality of insulator units, devices for uniting proximate ends of the units, and means for placing said insulator under tension independently of the conductor connected to the terminal.

3. The combination with a pair of terminals, of an insulating carrier for the terminals, having an insulating flange about it between the terminals.

4. The combination with a pair of supports, and terminals, of an insulating terminal-carrier connecting the supports and having an insulating flange between the terminals, and an insulating flange between each terminal and its proximate support.

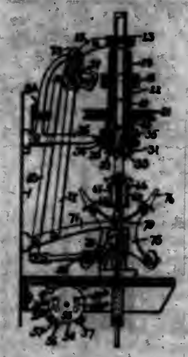
5. The combination with an insulator supported at opposite ends, having a plurality of insulating flanges about it and comprising a plurality of units, of terminals insulated from each other by said insulator and having insulating flanges of the latter located between them.

[Claims 6 to 14 not printed in the Gazette.]

959,930. AUTOMATIC FLANGING-MACHINE. JOHN E. GRATBILL, York, Pa., assignor to General Electric Company, a Corporation of New York. Filed Apr. 17, 1908. Serial No. 427,702.

1. In a machine for flanging tubes, the combination with a hopper for the tubes, of a flanging mechanism having a vertical hollow shaft extending through the bottom of the hopper, and a curved vane mounted on the shaft, said vane having one edge in alinement with the shaft and another edge in engagement with the bottom of the hopper and being shaped to stand the tubes on end in the opening in the shaft.

2. In a machine for flanging tubes, the combination with a hopper for the tubes, of a flanging mechanism having a vertical hollow shaft extending through the bottom of the hopper, and a vane mounted on the shaft with one edge in alinement with the shaft and another edge shaped to fit the bottom of the hopper, said vane being curved to cause it to feed one end of a tube into the shaft and to stand the tube on end.



3. In a machine for flanging tubes, the combination with a hopper having a conical bottom, of a flanging mechanism having a hollow shaft with the open end at the apex of the bottom of the hopper, and a vane mounted on the shaft with one edge in alinement with the shaft and another edge shaped to fit the bottom of the hopper, whereby the tubes are fed one at a time into the tube.

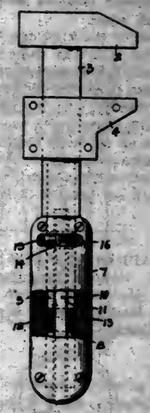
4. In a tube flanging machine, the combination with a hollow shaft for receiving the tubes, of a chuck at one end of the shaft having one set of jaws for holding the tube in position to be flanged, and a second set of jaws for preventing a movement of the other tubes along the shaft while the first set of jaws is open for releasing the flanged tube, and automatic actuating mechanism for the jaws of said chuck.

5. In a tube flanging machine, the combination with a vertical hollow shaft for receiving the tube to be flanged, of a rotatable chuck having two sets of jaws mounted at different points along the axis of the chuck to grip the device in said shaft, and means for operating said sets of jaws in predetermined sequence.

[Claims 6 to 18 not printed in the Gazette.]

959,931. WRENCH. FREDERICK HACHMANN, St. Paul, Minn., assignor of nineteen thirty-seconds to George A. Doran, seven thirty-seconds to Frank W. Lapham, and two thirty-seconds to William H. Springer, St. Paul, Minn. Filed Mar. 18, 1909. Serial No. 484,116.

A monkey wrench comprising a shank, a fixed jaw thereon at one end, a hollow handle secured to the other end of said shank, a movable jaw slidable on said shank, a plate secured at its outer end to said movable jaw and adapted to lie flat on said shank and slide thereon, one end of said plate projecting into said hollow handle and having a block formed thereon provided with an interiorly threaded socket, said block contacting with the walls of said hollow handle and forming a guide for said plate, a flattened bar having threaded edges arranged within said hollow handle and having one end mounted in said shank and its opposite end in said handle, a collar secured on said flattened bar and having an operating lug projecting through a transverse slot provided in the wall of said handle and said flattened bar projecting through the socket in said block and adapted, when moved to one position, to engage the threads of said socket and lock said movable jaw and when moved



to the opposite position, to release said threads, substantially as described.

959,932. FOOTWEAR-STRETCHER. HELGE A. HALVORSEN, Chicago, Ill. Filed May 18, 1908. Serial No. 433,536.



1. In a device of the kind described and in combination, a relatively separated form, an adjustable rear part for said form provided with a plurality of guide rods and slidable within said form, means for forcibly separating said form and rear part comprising a screw member and a coöperating member arranged on said screw member.

2. In a device of the kind described and in combination, a form, an adjustable rear part for said form provided with a plurality of guide rods coöperating with said form, means for forcibly separating said form and rear part comprising a screw member and a coöperating member arranged on said screw member and means for preventing rotation of said coöperating member on the screw member relative to said rear part.

3. In a device of the kind described and in combination a form comprising a plurality of parts, means for substantially securing said parts together, means for expanding said parts comprising an expanding member and operating screw member therefor coöperating with the form, an adjustable rear part for said form, means for substantially operatively connecting said rear part with said operating screw member including a nut, said rear part provided with a plurality of extending rods coöperating with said form and slidably extending therein and arranged to prevent rotation of the form and rear part relative to each other.

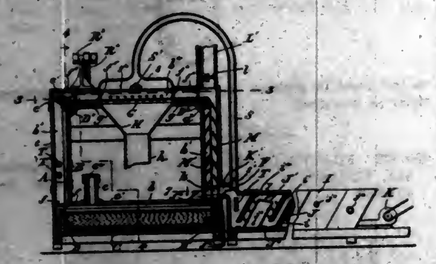
4. In a device of the kind described and in combination a form comprising a plurality of parts, means for substantially securing said parts together, means for expanding said parts comprising an expanding member and operating screw member therefor coöperating with the form, an adjustable rear part for said form, means for substantially operatively connecting said rear part with said operating screw member including a nut, and means for locking said

nut against rotation, said rear part provided with a plurality of extending rods coöperating with said form and arranged to prevent rotation of the form and rear part relative to each other.

5. In a device of the kind described, a form divided on a transverse line with the parts slidably connected by a plurality of guide rods carried by one part and slidable into the opposite part, the forward part of said form divided in a longitudinal line, in combination with means for forcibly separating the parts on the transverse line and holding them in an extended position, and means for thereafter forcibly separating the forward parts on the longitudinal line to increase the width thereof.

[Claims 6 to 9 not printed in the Gazette.]

959,933. APPARATUS FOR DEHYDRATING FOOD PRODUCTS. GORDON DON HARRIS, Bay Shore, N. Y., assignor of one-half to Albert R. Brandly, New York, N. Y. Filed May 24, 1907. Serial No. 375,528.



1. In a dehydrating apparatus, a substantially closed chamber, a receptacle in said chamber for containing the liquid material to be treated, a flexible web adapted to pass through liquid material in said receptacle, means coöperating with the web for producing a thin film of the liquid material on the web, means for dehydrating air, and means for subjecting the materia. on a part of said web to the action of such dehydrated air, whereby said liquid material is distributed in a thin film on said web and exposed while in a filmy condition to contact with dehydrated air.

2. In a dehydrating apparatus, a substantially closed chamber, a receptacle in said chamber for containing the liquid material to be treated, a fabric web adapted to pass through said material and to absorb the same, whereby a thin film of material is distributed over the surface of said web, means for alternately heating and cooling air, whereby said air is dehydrated, and means for subjecting the material while in a filmy condition and on a part of the web to the action of air so dehydrated, whereby the water present in the material on a part of the web is absorbed by such dehydrated air.

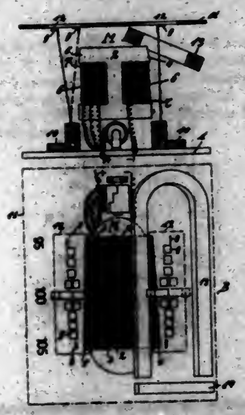
3. In a dehydrating apparatus, a substantially closed chamber, means for containing the liquid material to be treated, a flexible web adapted to pass through the material, means for dehydrating the material taken up by the web, and means for heating said web and thereby removing the dried material from the web.

4. In a dehydrating apparatus, a substantially closed chamber, means for containing the liquid material to be treated, a flexible web adapted to pass through the material, means for dehydrating the material taken up by the web, means for removing the dried material from the web, and a hopper in communication with said chamber and into which hopper a current of dehydrated air is adapted to be introduced for carrying off the product after its removal from the web.

5. In a dehydrating apparatus, an absorbent web adapted to carry the liquid material to be treated, a substantially closed chamber in which said web is adapted to travel, means for dehydrating air and supplying it to said chamber, and means for directing the dehydrated air in a tortuous course through the chamber and along part of the web therein.

[Claims 6 to 24 not printed in the Gazette.]

959,934. RESONANCE-TACHOMETER. ROBERT HARTMANN-KEMPF, Frankfort-on-the-Main, Germany, assignor to The Firm of Hartmann & Braun A G, Frankfort-on-the-Main, Germany. Filed Mar. 12, 1906. Serial No. 305,710.



1. In an instrument of the character described, the combination of a graduated plate, a plurality of resonators arranged in groups adjacent said plate according to thickness and tuned in accordance with the values represented by the graduations thereon, the resonators of the same thickness being supported independently of the others, and an electromagnet for setting the resonators in motion.

2. In an instrument of the character described, the combination of a graduated plate, a plurality of resonators arranged in a plurality of independently supported groups adjacent said plate and tuned in accordance with the values represented by the graduations thereon, and an electromagnet for setting the resonators in motion, the members of the several groups of resonators being arranged at different distances from the magnet, the member having the lowest number of vibrations being at the greatest distance from the magnet.

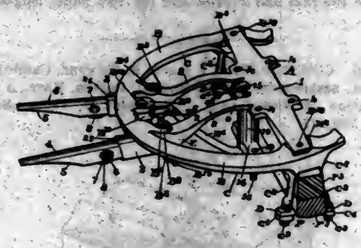
3. In an instrument of the character described, the combination of two scales or graduated members, an electromagnet, and two series of resonators, the members of each group being arranged at different distances from the magnet in accordance with the number of vibrations represented thereby and tuned in accordance with the values represented by the adjacent scale graduations.

4. In an instrument of the character described, the combination of a slotted scale or graduated plate, a plurality of resonators tuned in accordance with the graduations on said plate and one or more of said resonators having a lateral projection adapted to oscillate transversely across the slot in said plate as the resonators vibrate, and an electromagnet for vibrating the resonators, the several resonators being arranged at different distances from the magnet, the space separating the magnet and different resonators decreasing gradually from the one representing the lowest number of vibrations to that representing the highest.

5. In an instrument of the character described, the combination of a slotted scale or graduated plate, a series of resonators tuned in accordance with the graduation on said plate, all of said resonators except those at the ends of the series having lateral projections adapted to oscillate transversely across the slot in said plate as the resonators vibrate, and an electromagnet for vibrating the resonators.

[Claims 6 to 10 not printed in the Gazette.]

959,935. RUNNING-GEAR. HENRY HIGGIN, Newport, Ky., assignor to The Higgin Manufacturing Company, Newport, Ky., a Corporation of West Virginia. Filed Aug. 1, 1908. Serial No. 446,469.



1. In a running gear, the perch extension provided with the horizontal transverse countersunk hole, and a perch shell embracing a portion of the perch extension and having a hole whose countersunk flange fits into the countersunk recess of the hole of the perch extension, and a bolt located in said hole of the perch and the hole of the extension, and completing the union of the perch and of the extension, substantially as and for the purposes specified.

2. In a running gear, the perch extensions and a perch shell connected to each perch extension, the latter having the recesses 34, 34, one at each side of the perch extension and these respectively receiving the overlapping flanges of the perch shell, and means for bolting the perch shell to the perch extension, substantially as and for the purposes specified.

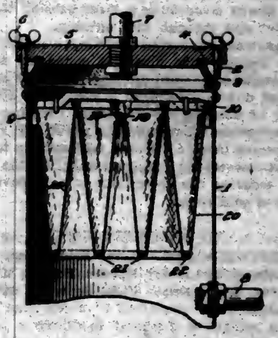
3. In a running gear, the perch extension provided with the horizontal transverse countersunk hole, and a perch shell embracing a portion of the perch extension and having a hole whose countersunk flange fits into the countersunk recess of the hole of the perch extension, and a bolt located in said hole of the perch and the hole of the extension, and completing the union of the perch and of the extension, and the vertical reinforcement on the perch extension below the countersunk portion of the said perch extension, substantially as and for the purposes specified.

4. In a running gear, a headblock plate, a fifth wheel, the perch extensions connected to the headblock plate and strengthened at and forward of the rear portion of the fifth wheel and provided with the vertical reinforcement behind the fifth wheel, and with the countersunk horizontal hole, the perch extensions connected to the upper half of the fifth wheel and to the connections with the king bolt, and a perch shell having the incurved edges 15, 15, and connected to each perch extension, the latter having the recesses 34, 34, one at each side of the perch extension and these respectively receiving the said incurved overlapping flanges of the perch shell, the perch shell provided with the hole and countersunk flange, interfitting the countersunk recess of the perch extension, and a bolt through said perch extension, at said countersunk point, substantially as and for the purposes specified.

5. In a running gear, a fifth wheel, a headblock plate, the perch extensions connected to the headblock plate and connected to the upper half of the fifth wheel and to braces of the king bolt, and provided with the horizontal hole, and the perch shell having incurved edge flanges, and a bottom perch piece having edge flanges curved to fit the inner sides of said incurved edges of the flanges of the perch shell, the perch extension having recesses adapted to receive the incurved flanges of the perch shell, and also having recesses to receive the curved flanges of the bottom of the perch shell, substantially as and for the purposes specified.

[Claims 6 to 18 not printed in the Gazette.]

959,936. DUST-COLLECTOR. HENRY HILL, Portland, Oreg., assignor of one-half to John Hill. Filed May 25, 1909. Serial No. 498,266.



1. A dust arrester for cleaning apparatus comprising a supporting member, a bag-like body secured to and supported solely by the member at different points in the length of the body, and means engaging the body between the points of connection to the member to arrange the body in a series of concentric layers freely pendent from the member and being supported solely by the body.

2. A dust receptacle, a folding supporting member removably secured in the receptacle adjacent the upper end thereof, a bag-like body secured at spaced points to and supported solely by said member, and a plurality of single spreader rings disposed in freely-hanging relation to the receptacle for holding the sections of said body which are free of connection with the member in a position pendent from the member to dispose the entire inner surface of the body in the path of the dust current.

3. A dust receptacle, a supporting member arranged adjacent the upper end thereof, said member comprising separable duplicate sections, a bag-like fabric secured to and supported solely by the member, and means to hold said fabric freely pendent from the member to provide a series of angularly related concentric walls, said parts being arranged within the receptacle to permit their removal therefrom as an entirety.

4. A dust collector including a dust receptacle, a foldable supporting member removably arranged within the receptacle and comprising hingedly-connected sections, and means for locking the sections in rigid extended relation, a bag-like body secured at one end and at intermediate points to and supported solely by the member, and loosely-disposed independent rings respectively engaging those portions of the body intermediate the points of connection of the body and member.

939,937. GARMENT-SUPPORTER. HENRY C. HINE, New Britain, Conn., assignor of one-half to George W. Traut, New Britain, Conn. Filed Sept. 2, 1909. Serial No. 515,832.



1. In a garment supporter trimming, a frame, a metal bearing tube connected thereto, a tubular rivet for con-

secting said parts, an envelop of non-corrosive material conforming substantially to the outside of said tube and arranged externally upon the same, means for holding said envelop firmly in place on the external surface of said tube, said means comprising a rivet passing through said tubular rivet and through said envelop.

2. In a garment supporter trimming, a supporting frame, a metallic bearing tube pivotally connected thereto and having a longitudinal cord passage, the ends of said tube being turned down to form an arched track for the cord, an envelop of non-corrosive material covering said tube, said envelop extending around the lower side thereof and being conformed thereto whereby said envelop is held from independent movement longitudinally of the tube and means for securing the upper part of said envelop to the upper part of said tube.

959,938. RECORD-CARD. DAVID E. HUNTER, Cambridge, Mass., assignor to Library Bureau, Boston, Mass., a Corporation of New Jersey. Filed Sept. 23, 1908. Serial No. 454,431.



1. As a new article of manufacture, a record card provided with a tab or projection, the edges of said tab or projection being wholly incased in and protected by a transparent material adapted to resist wear.

2. As a new article of manufacture, a record card provided with a tab or projection, the edges of said tab or projection being wholly incased in and protected by celluloid.

3. As a new article of manufacture, a record card provided with a tab or projection, the edges of said tab or projection being wholly incased in and protected by a seamless covering of a transparent material adapted to resist wear, shaped to conform with the contour of the tab or projection.

4. As a new article of manufacture, a record card provided with a tab or projection, the edges of said tab or projection being wholly incased in and protected by a seamless sheet of celluloid shaped to conform with the contour of the tab or projection.

5. As a new article of manufacture, a record card provided with a tab or projection, said tab or projection being both at its sides and at its edges incased in and protected by a transparent material adapted to resist wear.

[Claims 6 to 14 not printed in the Gazette.]

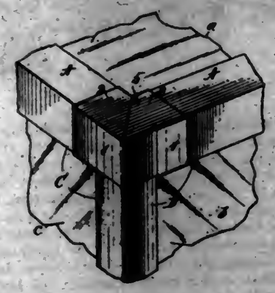
959,939. MARGIN-PIECE FOR CABINETS OR THE LIKE. DAVID E. HUNTER, Cambridge, Mass., assignor to Library Bureau, Boston, Mass., a Corporation of New Jersey. Filed Sept. 7, 1909. Serial No. 516,529.



1. In a margin piece for cabinets and the like, the combination of a base and a cap, the base provided with an abutment, a panel ledge, and a fulcrum for the cap between the abutment and the ledge, and the cap provided with a lip to engage the abutment, a tongue to engage the fulcrum, and a panel ledge between which and the panel ledge on the base a panel piece may be compressively inserted, to lock the cap to the base by reaction between the abutment and lip, the fulcrum and tongue, and the two panel ledges.

2. In a margin piece for cabinets and the like, the combination of a base and a cap, the base provided with an abutment having a flange, a panel ledge, and a fulcrum consisting of a forwardly extending projection between the abutment and the ledge, and the cap provided with a lip to engage the abutment and its flange, a tongue rearwardly turned to engage the forwardly extending projection, and a panel ledge, between which and the panel ledge of the base a panel piece may be compressively inserted to lock the cap to the base by reaction between the abutment and lip, the fulcrum and tongue and the two panel ledges.

959,940. CORNER-JOINT. DAVID E. HUNTER, Cambridge, Mass., assignor to Library Bureau, Boston, Mass., a Corporation of New Jersey. Filed Sept. 7, 1909. Serial No. 516,531.



1. The combination with the corner of two juxtaposed frames arranged in angular relation to each other, of a corner clip consisting of a rectangular plate and a trapezoidal plate in angular relation to each other similar to that between the two frames, and inturned tongues on the opposite free edges of said plates adapted to engage and hold said juxtaposed frames.

2. The combination with the corner of two juxtaposed frames arranged in angular relation to each other, of a corner clip made of a single piece of resilient sheet metal having a rectangular part and a trapezoidal part bent into angular relation to each other similar to that between the two frames, and inwardly bent tongues on the opposite edges of said parts adapted to engage and hold said juxtaposed frames.

3. The combination with the corner of two juxtaposed frames arranged in angular relation to each other, of a corner clip made of a single piece of resilient sheet metal having a rectangular part and a trapezoidal part bent into angular relation to each other similar to that between the two frames, and inwardly bent tongues on the opposite edges of said parts adapted to engage and hold said juxtaposed frames, the edge of the outer free end of said rectangular part being beveled to form a miter joint with another similar clip.

4. In a cabinet or similar structure, the combination with the meeting corner of three panel frames, of a pair of mitered corner clips, each consisting of a rectangular part adapted to overlie one of said frames and a trapezoidal part made with an inclined or mitered edge adapted to overlie an adjacent frame, and inwardly turned tongues on the opposite edges of said parts adapted to engage and hold said two frames, the trapezoidal parts of the two clips overlying the same frame, the mitered edges of the trapezoidal parts and the free outer ends of the rectangular parts, respectively, being juxtaposed, whereby the two clips wholly incase the cabinet corner.

5. A mitered clip made of a single piece of sheet material, comprising the rectangular part 1, the angularly disposed mitered or trapezoidal part 2, and the oppositely arranged inturned lips 3 and 4 on the outer edges of parts 1 and 2 respectively, substantially as described.

959,941. MACHINE FOR FORMING BUCKLE-FRAMES. CHARLES S. HUNTINGTON, Omaha, Nebr. Filed June 8, 1908. Serial No. 437,883.



1. In a machine of the character described, the combination of a slidable form, a coöperating shaper slidable longitudinally over said form, means to actuate said shaper, whereby a rod or wire during the movement of the shaper toward said form is pressed by the shaper into contact with and assumes the contour of said form, a spring to return said form to normal operative position, and means to slide said form from the shaped rod or wire to release the latter therefrom, substantially as described.

2. In a machine of the character described, the combination of a form, a coöperating shaper slidable longitudinally over said form, means to actuate said shaper, whereby a rod or wire during the movement of the shaper toward said form is pressed by the shaper into contact with and assumes the contour of said form, means to cause the retraction of the shaped rod or wire with said shaper, and an ejector to discharge the shaped rod or wire from said shaper, substantially as described.

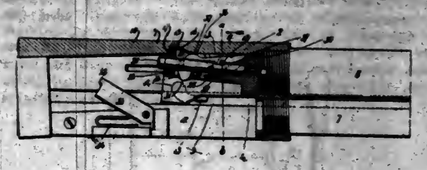
3. In a machine of the character described, the combination of a movable form, a coöperating shaper slidable longitudinally over said form, means to actuate said shaper, whereby a rod or wire during the movement of the shaper toward said form is pressed by the shaper into contact with and assumes the contour of said form, means to remove the form from the shaped rod or wire, means to retract the shaped rod or wire with said shaper, and an ejector adapted to discharge the shaped rod or wire from said shaper, substantially as described.

4. In a machine of the character described, the combination of a movable form, a coöperating shaper slidable longitudinally over said form, means to actuate said shaper, whereby a rod or wire during the movement of the shaper toward said form is pressed by the shaper into contact with and assumes the contour of said form, means to remove said form from the shaped rod or wire, means to retract the shaped rod or wire with said shaper, a spring-actuated ejector slidable in said shaper and adapted to discharge the shaped rod or wire from said shaper, and means to operate said ejector, substantially as described.

5. In a machine of the character described, the combination of a form, a coöperating shaper slidable longitudinally over said form, means to actuate said shaper, whereby a rod or wire during the movement of the shaper toward said form is pressed by the shaper into contact with and assumes the contour of said form, a gate or obstruction, means to operate said gate or obstruction, an ejector to discharge the shaped rod or wire from said shaper on to said gate or obstruction, and means to operate said ejector, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

959,942. FIREARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Nov. 20, 1909. Serial No. 529,108.



1. In a firearm, the combination with a frame or receiver having a solid top the under face of which is formed with a locking-notch, of a reciprocating breech-block the rear end of which is raised and lowered into and out of the said notch, a firing-pin mounted in the said breech-block, a combined firing-pin retracting and locking lever mounted in the breech-block and coacting with the firing-pin, and means positively operating the said lever in opposite directions for positively retracting the firing-pin and locking it in its retracted position and for positively unlocking the firing pin after the breech-block has been lifted into its locked position.

2. In a firearm, the combination with a frame or receiver having a solid top, the under face of which is formed with a locking-notch, of a breech-block the rear end of which is raised and lowered into and out of the said notch, a firing-pin mounted in the breech-block, and a combined firing-pin retracting and locking-lever also carried by the breech-block and engaged when the breech-block is raised, with the under face of the solid top of the frame for unlocking the firing-pin after the block has been moved into its locked position.

3. In a firearm, the combination with a frame or receiver having a solid top the under face of which is formed with a locking-notch, of a longitudinally movable breech-block the rear end of which is raised and lowered into and out of the said locking-notch after the block has reached the limit of its forward movement, a firing-pin, a hammer, and a firing-pin retracting and locking lever positively operated by engagement with the under face of the solid top of the frame for unlocking the firing-pin and positively operated by engagement with the hammer for retracting the firing-pin and locking it in its retracted position.

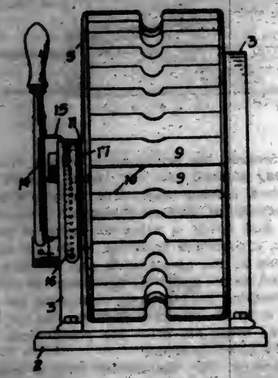
4. In a firearm, the combination with a frame or receiver having a solid top the under face of which contains a locking-notch, of a longitudinally movable breech-block the rear end of which is moved into and out of the said notch after the block is at the limit of its forward movement, a firing-pin mounted in the breech-block, a combined firing-pin retracting and locking lever carried by the breech-block, and a hammer, the said lever being constructed at its rear end to engage with the hammer as the block is moved longitudinally back and forth to insure the positive retraction and locking of the pin, and the said lever being adapted to engage with the under face of the solid top of the frame or receiver after the block has reached the limit of its forward movement to insure the positive unlocking of the pin.

5. In a firearm, the combination with a frame or receiver having a solid top the under face of which contains a locking-notch, of a reciprocating and vertically moving breech-block the rear end of which is raised and lowered into and out of the said notch after the block is at the limit of its forward movement, a longitudinally reciprocating action-bar connected at its rear end with the said block for reciprocating and vertically moving the same, a firing-pin mounted in the breech-block, a combined firing-pin retracting and locking lever pivotally mounted in the breech-block, and a hammer, the said lever engaging with the under face of the solid top of the frame or receiver for unlocking the firing-pin and engaging with the said ham-

mer during the rearward movement of the block, for the positive retraction and locking of the firing-pin.

[Claim 6 not printed in the Gazette.]

959,943. CHECK-ASSORTER. CHARLES H. JONES, Starkweather, N. D. Filed Dec. 23, 1909. Serial No. 534,665.

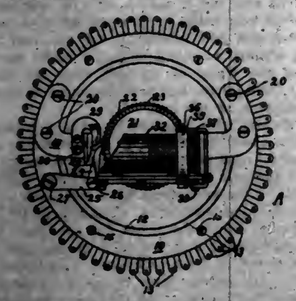


1. A check assorter comprising a drum revolving in a vertical plane and having a series of peripheral pockets adapted to receive packages of bank checks or drafts, means for gripping the checks to hold them in a pocket when it is on the underside of the drum, and means for releasing the pressure on the checks when the pocket is on the upper side of the drum to allow the convenient removal of the checks or the insertion of others, for the purpose specified.

2. An apparatus of the class described comprising a revolving drum having a series of peripherical pockets, spring pressed clamps provided therein and adapted to grip the articles to be clamped, and means for actuating said clamps against the tension of their springs to relieve the pressure on the articles at a predetermined point in the revolution of said drum.

3. A revolving drum having a series of peripherical pockets adapted to receive packages or checks or similar articles, spring pressed clamps arranged to grip the checks in said pockets, said clamps having off-set arms, and stationary means having a curved surface in the path of said off-sets and adapted to actuate said clamps to release the packages of checks at a predetermined point.

959,944. SWITCH-MOVEMENT. WILLIAM KAISLING, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Mar. 22, 1909. Serial No. 484,991.



1. In an electric switch, the combination of a movable member provided with a set of ratchet teeth, a driving pawl for engaging said teeth, a driving magnet, an armature for said magnet, a yielding connection between said armature and pawl, and means for locking said member against movement until said armature reaches a definite point in its movement.

2. In an electric switch, the combination of a movable member provided with a set of ratchet teeth, a driving pawl for engaging said teeth, an actuating member, a yielding connection between said actuating member and said pawl, and means for locking said movable member against movement until said actuating member reaches a definite point in its movement.

3. In an electric switch, the combination of a movable member provided with a set of ratchet teeth, a driving pawl for engaging said teeth, an actuating member, a yielding connection between said actuating member and said pawl, coöperating projections on said movable member and said actuating member adapted to lock the former against movement until the latter reaches a definite point in its movement.

4. In an electric switch, the combination of a movable member provided with two sets of teeth, an actuating member, a driving pawl for the former yieldingly mounted on the latter, and operative to engage the teeth of one of said sets, and a projection on said actuating member operative to engage the teeth of said second set until said actuating member reaches a definite point in its movement.

5. In an electric switch, the combination of a movable member provided with two sets of teeth, a driving magnet, an armature for said magnet, a driving pawl for engaging the teeth of one of said sets, a spring connection between said armature and pawl, and a projection on said armature for engaging the teeth of said second set during a definite range of movement of said armature.

[Claim 6 not printed in the Gazette.]

959,945. AUTOMATIC RIBBON-REVERSING MECHANISM FOR TYPE-WRITING MACHINES. GEORGE M. KITZMILLER, Norfolk, Va. Filed Jan. 12, 1910. Serial No. 537,701.



1. In a type-writing machine and in a ribbon-reversing mechanism, the combination with a power-shaft carrying gears and rotatable shifting devices, of spool-shafts carrying gears and spools, and mechanism controlled by the ribbon to be projected into engagement with one of said devices to arrest the movement thereof.

2. In a type-writing machine and in a ribbon-reversing mechanism, the combination with a power-shaft carrying gears and rotatable shifter-teeth, of spool-shafts carrying gears and spools, ribbon-spools, and means controlled by the ribbon to be projected into engagement with one set of shifter-teeth to arrest the movement thereof.

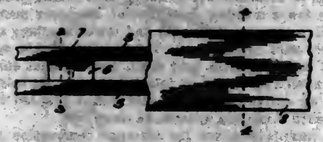
3. In a type-writing machine and in a ribbon-reversing mechanism, the combination of a power-shaft carrying gears and a plurality of sets of rotatable shifters, one set of shifters positioned near the spool-shaft gears, spool-shafts carrying gears and spools, and means controlled by the ribbon to be projected into engagement with one of said shifters to arrest the movement thereof.

4. In a type-writing machine and in a ribbon-reversing mechanism, the combination of a power-shaft carrying gears, a plurality of sets of shifters mounted near the ends thereof, one set of shifters secured to the power-shaft and one set mounted loosely on the power-shaft, spool-shafts carrying gears and spools, and mechanism controlled by the ribbon to be projected into engagement with the loosely mounted shifters to arrest the movement thereof.

5. In a type-writing machine and in a ribbon-reversing mechanism, the combination of a power-shaft carrying gears and a plurality of sets of rotatable shifters provided with teeth, spool-shafts carrying concaved gears, and means controlled by the ribbon to be projected into engagement with one set of teeth for halting the rotation thereof.

[Claims 6 to 14 not printed in the Gazette.]

959,946. COMPOSITION STUDDING. OLIVER M. KNODE, Chicago, Ill., assignor to United States Gypsum Company, Chicago, Ill., a Corporation of New Jersey. Filed Dec. 23, 1909. Serial No. 534,665.



1. A studding comprising parallel slats, suitable blocks between said slats and secured thereto, and a body material embedding said slats and forming the body of the studding, substantially as described.

2. A studding comprising parallel wooden slats, reinforcing blocks arranged between said slats and secured thereto and a plastic material embedding said slats and forming the body of the studding when set, substantially as described.

959,947. SELF-HEATING SOLDERING-IRON. HARRY KOENIG, Philadelphia, Pa. Filed Feb. 2, 1910. Serial No. 541,471.



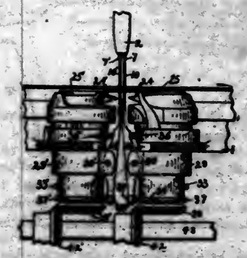
1. The combination with a tank to contain liquid fuel, of a plug connected to said tank and having two ducts therein, pipes connecting said ducts with the respective ends of the tank, a single valve controlling the passage through both of said ducts, a burner tube on the outer end of the plug, a liquid fuel tube communicating with both ducts in the plug, extending throughout the burner tube and coiled in the open end thereof, and a soldering iron removably connected to the free end of the burner tube.

2. The combination with a tank to contain liquid fuel, of a plug connected to said tank and having two ducts therein, pipes connecting said ducts with the respective ends of the tank, a single valve controlling the passage through both of said ducts, a burner tube on the outer end of the plug, a soldering iron, arms secured to the soldering iron, a ring fixed to the arms and adapted to be positioned around the burner tube, a set screw in the ring securing the same on the burner tube, said iron having a recess in line with the burner tube and openings communicating with the recess.

959,948. SEWING-MACHINE. WILLIAM F. LAUTENSCHLAGER, Cincinnati, Ohio. Filed Apr. 17, 1907. Serial No. 368,735.

1. In a sewing machine, the combination with a needle having a thread-eye, of a rotary loop-taker having a loop-penetrating hook, a loop-shifter having a contact-part thereon in rear of said needle for directing the seam-limb of the loop laterally into the plane of operation of said loop-penetrating hook, operating means between said loop-taker and shifter for operating the same in unison, a shield acting on the supply-limb of said loop maintaining said supply-limb out of range of said hook of said loop-taker, and means for adjusting said shield toward and from the path of movement of said needle, substantially as described.

2. In a sewing machine, the combination with a needle having a thread-eye, of a rotary loop-taker, a loop-shifter having a contact-part thereon in rear of said needle for directing the seam-limb of the loop laterally into the plane of operation of said loop-taker, operating means between said loop-taker and shifter for operating the same in unison, a shield acting on the supply-limb of said loop for maintaining said supply-limb out of range of the point of said loop-taker, and means for adjusting said shield toward and from the path of movement of said needle, said shield having a clearance-recess for said loop-taker, substantially as described.



3. In a sewing machine, the combination with a needle having a thread-eye extending substantially parallel with the direction of feed of the machine, of a loop-penetrator operating at the side of said needle, means for directing the seam-limb of the loop formed by withdrawal of said needle laterally of the needle for receiving said loop-penetrator, said means having a contact-part for said seam-limb in rear of said needle, a shield acting on the supply-limb of said loop for maintaining said supply-limb out of range of the point of said loop-taker, and means for adjusting said shield toward and from the path of movement of said needle, substantially as described.

4. In a sewing machine, the combination with a needle having an eye at its piercing end, a loop-taker operating at one side and a loop-shifter having an engaging part for the seam-limb of the loop normally at the other side of the vertical plane of extension of said needle-eye, said loop-shifter operating across the rear face of said needle, a supply-limb shield at the forward face of said needle acting on the supply-limb of the loop for maintaining said supply-limb out of range of the point of said loop-taker, and means for adjusting said shield toward and from the path of movement of said needle, substantially as described.

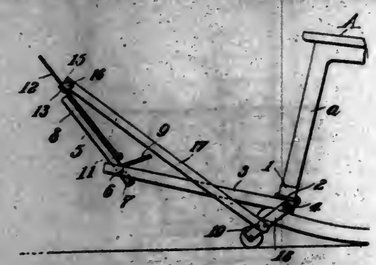
5. In a sewing machine, the combination with a needle having a thread-eye extending substantially parallel with the direction of feed of the machine, a loop-taker rotating at the side of said needle, a finger for directing the seam-limb of the loop laterally into the plane of operation of said loop-taker, said finger having a contact-part for said loop operating across the rear face of said needle, means for rotating said loop-taker, a cam rotated by said latter means for operating said finger, means for adjusting said cam about its rotary axis and a spring for normally retracting said finger, substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

959,949. ACTUATING FOOT-REST FOR ROCKING-CHAIRS. FRIEDRICH W. CURT LEIPERT, Philadelphia, Pa. Filed Jan. 8, 1910. Serial No. 537,039.

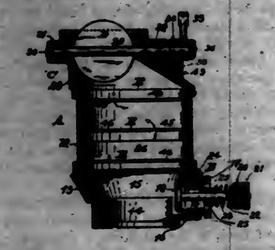
1. A rocking attachment for chairs, consisting of a foot rest having an opening therein, means for detachably connecting the foot rest to a chair and for holding said rest fixed relative to the chair, a roller supported arm pivotally mounted upon said means, an actuating lever fulcrumed upon the foot rest and movable into the opening therein, and means fixed relative to the arm and slidably engaging the lever for transmitting motion from said lever to the arm.

2. A rocking attachment for chairs, consisting of arms, means for detachably securing the arms to a chair and holding them fixed relative to the chair, a foot rest pivotally mounted between the arms, means for holding said foot rest normally at a predetermined angle to the arms, said foot rest having an opening therein, a lever fulcrumed upon the foot rest and movable into the opening, a roller supported arm pivotally connected to each of the first mentioned arms, and a connection between said lever and the roller supported arm, said connection being fixed relative to the arm and slidably connected to the lever.



3. An operating attachment for rocking chairs consisting of a slotted foot rest, means for fixedly attaching the same to the front portion of a rocking chair, an elevating arm pivotally connected to said means, an actuating lever fulcrumed upon the foot rest and movable into the slot, an actuating strip fixed relative to each elevating arm, a pivotal connection between said strips, and means upon said connection for slidably engaging the lever.

959,950. AUXILIARY MIXER FOR INTERNAL-COMBUSTION MOTORS. ROBERT D. LOOMS, Chicago, Ill. Filed Dec. 29, 1909. Serial No. 535,467.



1. An auxiliary mixer adapted to be located in the intake pipe of an internal combustion motor, between the carbureter and the motor cylinder, said auxiliary mixer comprising, in combination, a shell; a bottom member on said shell; an upper member on said shell, there being means on said upper and lower members whereby said shell is adapted for attachment to the intake pipe of said motor; a series of baffle-plates in said shell and spaced a sufficient distance apart to afford a tortuous passage in said shell, and a valve in the bottom member, said valve being adapted to admit air to the interior of said shell below said baffle-plates.

2. As an improved article of manufacture, an auxiliary mixer adapted for use in the intake-pipe of an internal combustion motor, comprising an outer shell, a bottom-member on said shell, an upper member on said shell, and a series of horizontally-disposed baffle-plates located therein, said baffle-plates being closely spaced and having approximately one-half of their surface perforated, the perforated portion being opposite the non-perforated portion of the adjacent plates, whereby a tortuous, zig-zag passage is afforded in said shell, as described.

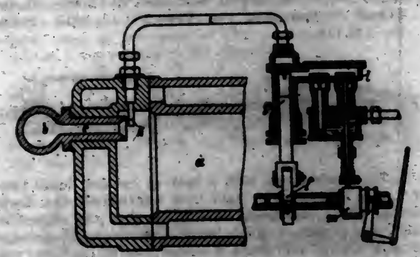
3. An auxiliary mixer adapted to be located in the intake pipe of an internal combustion motor, said mixer including a casing comprising a shell, a bottom member on said shell, an upper member on said shell, there being means on said upper and lower members for attachment to the intake pipe of said motor, a series of baffle-plates in said shell, a valve in the bottom member adapted to admit air to said shell below said baffle-plates, and a throttle valve in the upper member above said baffle-plates, said throttle valve being provided with means for limiting its rotative movement.

4. An auxiliary mixer for internal combustion motors, including, in combination, a casing, said casing comprising a shell, a lower member on said shell, an upper member on said shell, means on said upper and lower members adapted to connect said casing to the intake pipe of said motor, a series of baffle-plates in said shell, and a jacket surrounding said shell and in spaced relation thereto, an inlet member, and an outlet member on said jacket adapted for connection with a heating system, as described.

5. An auxiliary mixer for internal combustion motors, including, in combination, a casing, said casing comprising a shell, a lower member on said shell, an upper member on said shell, a tubular member in said shell, said tubular member being slotted, and a series of baffle-plates in said tubular member.

[Claims 6 and 7 not printed in the Gazette.]

959,951. METHOD OF OPERATING EXPLOSIVE-ENGINES. PROSPER L'ORANGE, Mannheim, Germany. Filed Jan. 27, 1909. Serial No. 474,529.



1. The method of operating combustion engines, having a heated retort or combustion chamber constantly communicating with the working cylinder, which consists in feeding an explosive mixture of fuel and air into the said combustion chamber, causing the said mixture to explode within the combustion chamber solely by contact with the hot walls of the latter, and forcing fuel into the working cylinder near the discharge of the combustion chamber into the cylinder while the hot gas from the combustion chamber shoots out into the cylinder.

2. The method of operating combustion engines having a retort or combustion chamber constantly communicating with the working cylinder, which consists in forcing a small amount of fuel into the working cylinder before the explosion stroke of the same, causing the ignition of the mixture of air and fuel pushed by compression from the cylinder into the combustion chamber, and forcing fuel into the working cylinder near the discharge of the combustion chamber into the cylinder while the hot gas from the combustion chamber shoots out into the cylinder.

3. The method of operating combustion engines having a retort or combustion chamber constantly communicating with the working cylinder, which consists in forcing an amount of fuel into the combustion chamber which is sufficient to drive the engine when there is no load, causing the said mixture to explode within the combustion chamber and forcing fuel into the working cylinder near the discharge of the combustion chamber into the cylinder while the hot gas from the combustion chamber shoots out into the cylinder.

4. The method of operating combustion engines having a retort or combustion chamber communicating with the working cylinder, which consists in feeding into said combustion chamber a relatively fixed amount of explosive mixture, causing such mixture to explode within the combustion chamber, and forcing fuel into the jet issuing from the combustion chamber into the cylinder, in correspondence with the load on the engine.

959,952. ADJUSTABLE TROUSERS. ASHER P. MELEN, Buffalo, N. Y. Filed Nov. 10, 1909. Serial No. 527,166.



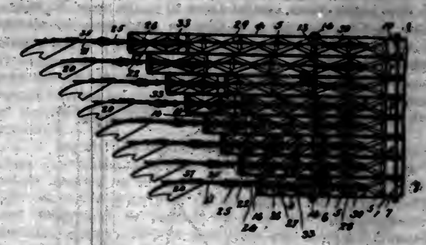
1. A pair of adjustable trousers having their front and back parts separated by a pocket-opening extending to the upper edge of the waist-band, said parts lapping over each other, an open-top pocket extending substantially to the top of the waist-band and having its vertical rear edges secured to said parts or laps, respectively, fastening means arranged on the inner side of said outer lap and adjustably engaging the upper front portion of the pocket, and means for adjustably securing the rear portions of the outer lap to the inner lap.

2. A pair of adjustable trousers having their front and back parts separated by a pocket-opening extending to the upper edge of the waist-band, said parts lapping over each other, an open-top pocket extending substantially to the top of the waist-band and having its vertical rear edges secured to said parts or laps, respectively, and a fastening for adjustably securing the upper front portion of the pocket to said outer lap, said fastening being arranged on the inner side of the outer lap and overlapping the upper portion of the pocket.

3. A pair of adjustable trousers having their front and back parts separated by a pocket-opening extending to the upper edge of the waist-band, said parts lapping over each other, an open-top pocket extending substantially to the top of the waist-band and having its vertical rear edges secured to said parts or laps, respectively, a fastening for adjustably securing the upper front portion of the pocket to said outer lap, said fastening being arranged on the inner side of the outer lap and overlapping the upper portion of the pocket, and a second fastening arranged on the inner side of the outer lap in rear of the first-named fastening and overlapping the inner lap.

959,953. GANG-PLOW. CALVIN P. MILLER, Pierre, S. D., assignor of one-half to A. W. Ewert, Pierre, S. D., and one-third to The Wilkinson Plough Company, Limited, a Corporation of Canada. Filed Apr. 24, 1909. Serial No. 491,927.

1. A steam gang plow comprising in combination with a tractor, a plurality of plow carriages mounted behind said tractor and having a limited longitudinal movement independent of said tractor, plows carried by said carriage, and means for yoking said carriages together behind said tractor.



2. A steam gang plow comprising in combination with a tractor, a plurality of plow carriages mounted behind said tractor and having a limited longitudinal movement independent of said tractor, plows carried by said carriage, and means for yoking said carriages together behind said tractor, said means comprising a U-shaped yoke embracing said carriages, and a rod joining its arms to entirely encircle said carriages.

3. A steam gang plow comprising in combination with a tractor, a plurality of plow carriages mounted behind said tractor and having a limited longitudinal movement independent of said tractor, plows carried by said carriage, and means for yoking said carriages together behind said tractor, said means comprising a U-shaped yoke embracing said carriage, eyes or rings carried by the arms of said yoke, and a rod entered through said eyes or rings to close said yoke.

4. A steam gang plow comprising in combination with a tractor, a plurality of plow carriages harnessed to said tractor, plows mounted on said carriages, and means for elevating and lowering said plows, said means comprising cam-plates pivoted to said carriages, and having the plow beams pivoted thereto, a vertical lever pivoted to said carriage, levers connecting said cam-plates and said plow beams to said vertical levers, and hand-levers in operative connection with said vertical lever.

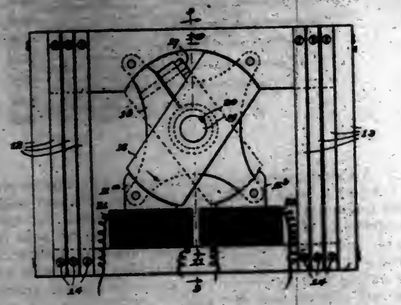
5. A steam gang plow, comprising in combination with a tractor, a plurality of plow carriages harnessed to said tractor, plows mounted on said carriages, and means for elevating and lowering said plows, said means comprising cam-plates pivoted to said carriages, and having the plow beams pivoted thereto, a vertical lever pivoted to said carriage, levers connecting said cam-plates and said plow beams to said vertical levers, and hand levers in operative connection with said vertical lever, said levers connecting said plow beams and said vertical levers having pin and slot connections with said plow beams, whereby said levers do not act on said beams until the levers connecting the vertical levers and said cam plates have tilted said plows upwardly.

[Claims 6 and 7 not printed in the Gazette.]

959,954. ELECTRIC GENERATOR. JOHN L. MILTON, Chicago, Ill., assignor of one-half to Towner K. Webster, Chicago, Ill. Filed Mar. 22, 1906. Serial No. 307,291.

1. In an indicator-alternator for ignition purposes, the combination of two oppositely disposed groups of permanent straight-bar magnets, the magnets of each group being substantially parallel to each other, pole-pieces in engagement with the ends of like polarity of said magnets and forming therewith a substantially rectangular frame, one of said pole-pieces having a pair of inwardly turned polar projections, said magnets and pole-pieces lying in a single plane, a winding arranged in inductive relation to one of said polar projections, and an unwound inductor rotatable between said polar projections and the pole-piece opposite thereto, the width of said inductor being less than the shortest distance between said pole-pieces but greater than the distance between the adjacent sides of

said polar projections, whereby at certain intervals the inductor opens the magnetic path of the field and at other intervals establishes two substantially parallel paths through said pole-pieces, an increase in reluctance in one of said paths being accompanied by a decrease in reluctance in the other path to produce graduated variations of magnetic flux through said winding during said last mentioned intervals.



2. In an inductor-alternator, the combination of a suitable support, a magnetic field-structure provided with inwardly turned polar projections, a winding on said field-structure, an unwound inductor movable within said field-structure in close proximity to said polar projections to vary the magnetic flux through said winding, an adjustable member mounted on said support, and a connection between said polar projections and adjustable member, whereby the field-structure may be readily adjusted.

3. In an inductor-alternator for ignition purposes, the combination of a field-magnet structure comprising a pair of magnets having like poles joined by pole-pieces provided with inwardly turned polar projections, a supporting member of non-magnetic material connected to the inner ends of said polar projections to support the field-structure, a bearing for supporting said non-magnetic member, windings in inductive relation to said polar projections, and an unwound inductor rotatable between said polar projections to vary the magnetic flux through said windings.

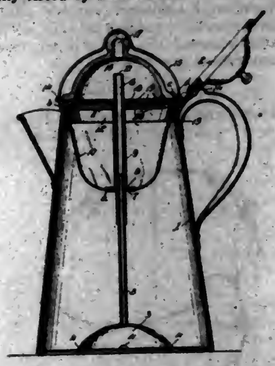
4. In an inductor-alternator for ignition purposes, the combination of two parallel groups of permanent magnets, pole pieces in engagement with the ends of like polarity of said magnets, inwardly turned polar projections on said pole pieces, a bearing plate of non-magnetic material connected at either side to the adjacent pole piece and having a centrally disposed bearing with its axis at right angles to the plane of said pole pieces, a shaft rotatable in said bearing, an inductor carried by said shaft and rotatable between said pole pieces to vary the distribution of the magnetic flux through diametrically opposite polar projections, and windings in inductive relation to said pole pieces.

5. In an inductor-alternator for ignition purposes, the combination of a pair of permanent straight-bar magnets arranged substantially parallel to each other, pole-pieces arranged between and in engagement with the ends of like polarity of said magnets and forming therewith a substantially rectangular frame, one of said pole-pieces having a pair of inwardly turned polar projections, an unwound inductor movable in said frame between said pole-pieces, and a winding in inductive relation to one of said polar projections.

[Claims 6 to 9 not printed in the Gazette.]

959,955. PERCOLATOR. DAVID P. MOORE, Washington, D. C., assignor of one-half to Frank H. Walker, Washington, D. C. Filed Feb. 4, 1910. Serial No. 542,161.

1. In a percolator, the combination of a heating chamber, a fountain tube, a drip basket, a cover for the basket, and means carried by the basket and accessible from the exterior of the basket and cover for clamping the cover to the basket and forming a means whereby the percolator may be bodily lifted by said means.



2. In a percolator, the combination of a heating chamber, a fountain tube, a drip basket, a cover for the basket, and a ball pivoted to the basket and adapted to engage the cover to clamp the cover upon the basket and form a handle for bodily lifting the percolator.

3. In a percolator, the combination of a heating chamber, a fountain tube, a drip basket, a cover for the basket, and a spring tensioned handle carried by the basket and adapted to engage the cover to clamp the cover upon the basket and form a handle for bodily lifting the percolator.

4. In a percolator, the combination of a heating chamber, a fountain tube, a drip basket, a cover for the basket, and a ball pivoted to the basket and having coiled portions intermediate of its ends, whereby the ball will clamp the cover to the basket and provide a handle for lifting the percolator.

5. In a percolator, the combination of a drip basket, a fountain tube, a heating chamber, a cover for the basket, a band surrounding the upper edge of the basket, and a ball handle pivoted to the band and adapted to engage the cover to clamp the cover and upper edge of the basket in place and act as a means whereby the percolator may be lifted bodily.

[Claims 6 to 12 not printed in the Gazette.]

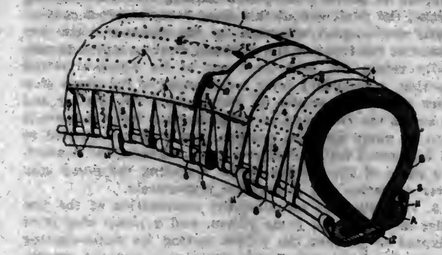
959,956. HEEL-SUPPORT. JOHN C. MOOREFIELD, Houston, Tex. Filed Sept. 25, 1909. Serial No. 519,529.



In a heel support comprising, an elongated plate having an aperture at its upper end adapted to engage over the counter of a shoe, a screw passing through the plate near its other end and engaged with the heel of the shoe, a wedge shaped lug arranged on the plate intermediate its ends adapted to be driven between the counter and the heel of the shoe and to rest on top of the heel having a slot therein, and a nail passing through the slot in the lug to engage with the heel.

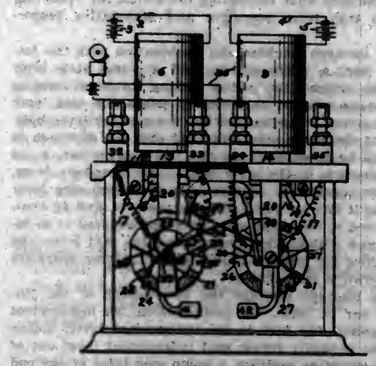
959,957. PROTECTOR FOR PNEUMATIC TIRES. ROBERT J. MORRISON, St. Louis, Mo. Filed Dec. 24, 1909. Serial No. 534,828.

A tire protector comprising transverse inner pliable strips having extensions at both ends formed to provide loops, transverse metal strips overlying the inner pliable strips, a circumferential outer pliable band surrounding all of said strips, rivets passing through the metal strips and connecting the inner pliable strips to the outer



pliable band, adjustable draw rings extending through said loops, and buttons secured to one of said metal strips, one end of said pliable band being provided with button-holes adapted to receive said buttons.

959,958. INTERLOCKING CONTACT-RELAY. WILLIAM M. MCCLINTOCK, St. Paul, Minn. Filed Mar. 30, 1908. Serial No. 424,083.



1. The combination, with a track having a highway crossing and insulated track sections on each side of said crossing, of normally closed relay circuits connected respectively with said insulated track sections, a normally open signal circuit, said signal circuit comprising hollow vacuum receptacles containing a conducting fluid and having contact points and said relay circuits comprising relays to control said contact points.

2. The combination, with a track having a signaling point or station and track sections insulated from one another upon each side of said station, normally closed relay circuits connected with said track sections and short circuited by the presence of a train on said sections, a normally open signal circuit, means including vacuum rings containing a conducting fluid and having contact points controlled by said relay circuits to close said signal circuit when a train is approaching the signaling station on either of said insulated track sections and to allow said signal circuit to remain open when the train has passed from one track section to the other and is leaving said signaling station.

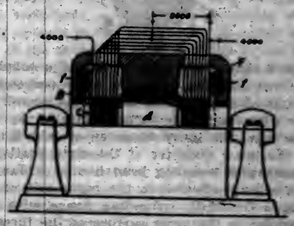
3. The combination, with a track having insulated track sections and normally closed relay circuits, of a normally open signal circuit, circuit closers controlled by said relay circuits and arranged to close said signal circuit, said circuit closers comprising hollow rings containing a conducting fluid and having contact points and actuated through said relay circuits to close said signal circuit, and a mechanism arranged to prevent the operation of one of said circuit closers.

4. The combination, with a track having insulated track sections, and normally closed relay circuits, of a normally open signal circuit, circuit closers comprising hollow vacuum rings containing a conducting fluid and having contact points adapted to close said signal circuit through said conducting fluid, means whereby said rings will be rotated when said relay circuits are broken, and means carried by one of said rings to prevent the closing of the circuit through the other ring, substantially as described.

5. A circuit closing device comprising hollow vacuum rings containing a conducting fluid and having contact points adapted to be immersed in said fluid, a signal circuit connected with said contact points, means whereby said rings will be rotated to close the circuits therethrough, arms carried by said rings and springs arranged to contact with said arms and limit their movement and prevent the closing of the circuit through one ring when the circuit has been previously closed through the other ring.

[Claims 6 to 10 not printed in the Gazette.]

959,959. DYNAMO-ELECTRIC MACHINE. JAKOB E. NORDGREATH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 30, 1906. Serial No. 324,262.



1. A rotary transformer having a unipolar field structure, an armature core, a plurality of armature conductors distributed around the armature core near its periphery, and collecting devices and cross-connections for placing said conductors in series, a circuit including all of said conductors, and a second circuit including a portion of said conductors, each conductor included in the second circuit being arranged close to one or more of the remaining conductors, whereby the magnetizing effect of each conductor is neutralized by the current in adjacent conductors.

2. A rotary transformer having a unipolar field structure, an armature core, a plurality of armature conductors distributed around said armature core near its periphery, and collecting devices and cross-connections for placing said conductors in series, a circuit including all of said conductors, and a second circuit including a portion of said conductors, each conductor included in the second circuit being arranged close to one or more of the remaining conductors, and the space between adjacent conductors being arranged with high reluctance.

3. A rotary transformer having a unipolar field structure, an armature core, a plurality of armature conductors distributed around said armature core near its periphery, and collecting devices and cross-connections for placing said conductors in series, a circuit including all of said conductors, and a second circuit including a portion of said conductors, each conductor included in the second circuit being arranged close to one or more of the remaining conductors, and separated therefrom by a non-magnetic space.

4. In a dynamo-electric machine, a unipolar field structure, an armature core, a plurality of armature conductors distributed around said armature core near its periphery, collecting devices and cross-connections for placing said conductors in series, said conductors being grouped and

the conductors in each group being placed close to each other so that the flux path between the conductors of each group is restricted.

5. In a dynamo-electric machine, a unipolar field structure, an armature core, a plurality of armature conductors distributed around said armature core near its periphery, collecting devices and coss-connections for placing said conductors in series, said conductors being grouped and the conductors in each group being placed close to each other and separated from each other by a restricted non-magnetic space.

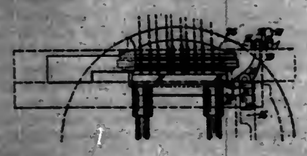
[Claims 6 and 7 not printed in the Gazette.]

959,960. PIPE-COUPLING. OLAF E. OLESON, Chicago, Ill. Filed Sept. 18, 1908. Serial No. 453,585.



In a pipe coupling, the combination of a coupling head having a front coupling face in a plane perpendicular to the main axis of the pipe and having a forwardly extending flange with the outer surface parallel to the main axis of the pipe, the inner diameter of said flange being less than the inner diameter of the main portion of said head, a companion coupling head having a flange whose front face is perpendicular to the main axis of the pipe and having a forwardly extending flange with an inner surface parallel to the outer surface of the forwardly extending flange of the first coupling head and adapted to fit over the outer surface of said first coupling member, the inner diameter of said forwardly extending flange being less than the inner diameter of the main portion of said second coupling head, the front inner edge of the second coupling member being beveled away to form a slanting surface with which the perpendicular face of the first coupling member and the outer surface of the flange extending from said coupling member form a small triangular pocket, a ductile metallic packing ring of circular cross-section within said pocket, said ring filling only part of the space within said pocket, and coupling means for drawing the coupling heads together to decrease the volume of said pocket and to compress the ring in order to form a sealing medium between said coupling heads.

959,961. AUTOMATIC PUMP STOP MECHANISM FOR LINOTYPE-MACHINES. HERBERT PEARCE and JOHN ERNEST BILLINGTON, Broadheath, England. Filed June 26, 1909. Serial No. 504,614.



1. In a linotype machine the combination with the justification bar or table, the pump piston and the pump stop lever thereof, of means adapted to normally retain said stop lever out of its piston arresting position, and an independent secondary double armed lever having one arm in the path of said bar or table and the other arm in the path of the free end of said stop lever.

2. In a linotype machine, the combination of the justifier mechanism, a pump piston, and a pump stop lever adapted to prevent the piston making its metal-ejecting stroke, the front end of this lever being situated conveniently for manual operation by the operator when stationed at the front of the machine, means adapted to normally retain the said lever out of its piston-arresting position, a secondary lever independent of the pump stop lever adapted to receive its motion from the justifier and to act on the front end of the pump stop lever to move it into its pump stopping position, and a device adapted to be interposed and withdrawn from between the contacting parts of the two levers for rendering the pump stop lever operative and inoperative respectively.

3. In a linotype machine, the combination of the justifier mechanism, a pump piston, and a pump stop lever adapted to prevent the piston making its metal-ejecting stroke, the front end of this lever being situated conveniently for manual operation by the operator when stationed at the front of the machine, means adapted to normally retain the said lever out of its piston-arresting position, a secondary lever independent of the pump stop lever adapted to receive its motion from the justifier and to act on the front end of the pump stop lever to move it into its pump stopping position, and an abutment pivoted to the pump stop lever and adapted to be interposed and withdrawn from between the said lever and the part of the secondary lever contacting therewith, for rendering the pump stop lever operative and inoperative respectively.

4. In a linotype machine, the combination with the justification bar, a pump piston, and a pump stop lever adapted to prevent the piston making its metal-ejecting stroke, means adapted to normally retain the said lever out of its piston-arresting position, a secondary lever independent of the pump stop lever and one end of which is adapted to be acted upon by the justification bar, a set screw adjustable in the other end of the secondary lever, adapted to operatively contact with the pump stop lever for moving it into its pump stopping position, and an abutment pivoted to the pump stop lever and adapted to be interposed and withdrawn from between the said lever and the set screw for rendering the pump stop lever operative and inoperative respectively.

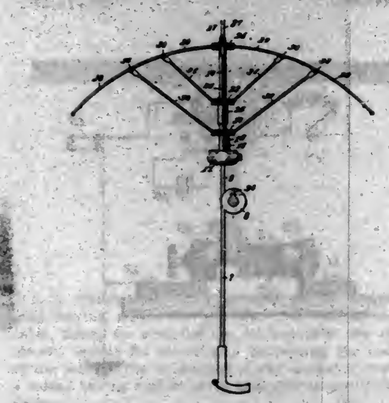
5. In a linotype machine the combination of the justification bar or table, the pump piston, an independent lever, a pump stop fast to the independent lever, means adapted to normally retain said independent lever out of its piston-arresting position, a pump stop lever at one end in operative connection with the independent lever and with its other end situated conveniently for manual operation by the operator when stationed at the front of the machine, and a double armed lever having one arm in the path of the free end of the pump stop lever and its other arm in the path of the justification bar or table, the latter in rising, being adapted to operate the said levers to cause the stoppage of the pump.

[Claim 6 not printed in the Gazette.]

959,962. FOLDING UMBRELLA. JAMES PETERSON and JAMES G. CALLAWAY, Price, Utah. Filed July 13, 1909. Serial No. 507,389.

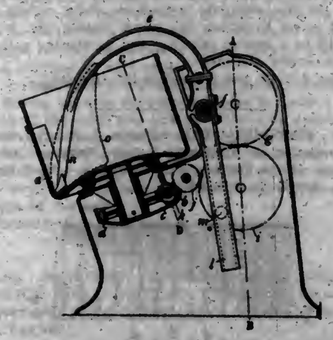
1. A folding umbrella comprising a handle, a sleeve mounted on the handle, a spring catch upon the sleeve, the sleeve having an opening to permit the catch to project through it and into the handle, a lower runner secured to the sleeve, said sleeve being also provided with a vertical slot, an upper runner vertically slotted on one side, a wing projecting radially from the handle through the slots in the sleeve and upper runner, top notches secured to the sleeve, ribs comprising inner sections pivoted to the top notches and outer sections pivoted to the inner sections, stretchers connecting the upper runner with the joint between the inner and outer sections of the ribs, and stretchers connecting the lower runner with the outer sections of the ribs intermediate their ends.

2. A folding umbrella comprising a handle consisting of a plurality of sections hinged together, a sleeve mounted on the handle, a hand hold mounted on the sleeve, a spring catch pivoted to the sleeve and having a head projecting from the hand hold, the sleeve having an opening to permit the catch to project through it into the handle, a lower runner secured upon the sleeve, the sleeve being provided with a vertical slot, an upper runner vertically



slotted on one side, a wing projecting radially from the handle through the slots in the sleeve and upper runner, top notches secured to the sleeve, ribs comprising inner sections pivoted to the top notches and outer sections pivoted to the inner sections, stretchers connecting the upper runner with the joint between the inner and outer sections of the ribs, and stretchers connecting the lower runner with the outer sections of the ribs intermediate their ends.

959,963. MACHINE FOR MIXING AND KNEADING DOUGH AND LIKE PLASTIC SUBSTANCES. JOHN EDWARD POINTON and CHARLES EDWARD POINTON, Peterborough, England. Filed Feb. 1, 1909. Serial No. 475,395.



1. In machines for mixing and kneading dough and like plastic materials, the combination of a rotatable trough or dough receptacle, a kneading arm having one end arranged to operate in the trough and the other situated at one side of the trough, a pivot situated at one side of the trough, and supporting one end of the said kneading arm, means for traversing the said pivot through a circular path, a bar in rigid connection with the pivoted end of the kneading arm, an element movably engaging said bar and adapted to move relatively thereto and means for traversing the said element through a circular path, said pivot and said engaging element being so positioned relatively to one another and to the centers of the paths through which they travel that a slow movement will be imparted to the end of the kneading arm as it passes from the upper to the lower portion of the trough and a quick movement will be imparted to said arm as it passes from the lower to the upper portion of said trough substantially as described.

2. In machines for mixing and kneading dough and like plastic materials, the combination of a rotatable trough or dough receptacle, a kneading arm having one end arranged to operate in the trough and the other situated at one side of the trough, a pivot situated at one side of the trough and supporting one end of the said kneading arm, a bar in rigid connection with the pivoted end of the kneading arm, an element movably engaging said bar and adapted to move relatively thereto, and means for the synchronous traversing of the said pivot and the said engaging element through circular paths, said pivot and said engaging element being so positioned relatively to one another and to the centers of the paths through which they travel that a slow movement will be imparted to the end of the kneading arm as it passes from the upper to the lower portion of the trough and a quick movement will be imparted to said arm as it passes from the lower to the upper portion of said trough substantially as described.

3. In machines for mixing and kneading dough and like plastic materials, the combination of a rotatable trough or dough receptacle, a kneading arm having one end arranged to operate in the trough and the other situated at one side of the trough, a pivot situated at one side of the trough and supporting one end of the said arm, a slotted bar in rigid connection with the pivoted end of the kneading arm, an engaging element for the said bar, and a pair of interengaging gear wheels having the said pivot and the said engaging element respectively secured thereto, substantially as described.

4. In machines for mixing and kneading dough and like plastic materials, the combination of a rotatable trough or dough receptacle, a kneading arm having one end arranged to operate in the trough and the other end situated at one side of the trough, a pivot situated at one side of the trough and supporting one end of said kneading arm, means for traversing the said pivot through a circular path, a bar in rigid connection with the pivoted end of the kneading arm, an engaging element for the said bar, and means for traversing the said element through a circular path, said pivot and said engaging element being so positioned relatively to one another and to the centers of the paths through which they travel that a slow movement will be imparted to the end of the kneading arm as it passes from the upper to the lower portion of the trough and a quick movement will be imparted to said arm as it passes from the lower to the upper portion of the trough.

959,964. NUT-LOCK. JOSEPH ANSLEY RANKIN, Mill City, Oreg. Filed May 26, 1909. Serial No. 498,463.



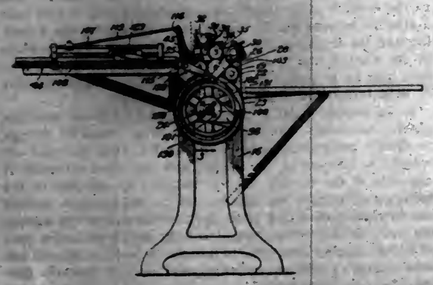
In a nut lock, the combination with a nut and bolt, of a key-way or seat extending crosswise of the threads of one of them and having an inclined bottom, and a key adapted to fit said seat which in its original condition has a single raised cutting edge adapted to cut across the screw-threads and which is inclined at its extremity in relation to its general extent to facilitate its being driven across the screw-threads.

959,965. KEY-GUIDE. FLORA A. REFFELT, Chicago, Ill. Original application filed Nov. 30, 1908, Serial No. 465,034. Divided and this application filed Mar. 8, 1909. Serial No. 481,884.



A blank for forming a key guide comprising a single strip of flexible sheet metal of uniform width throughout and provided with laterally projecting triangular perforated ears which extend from the ends thereof for a considerable distance, substantially as described.

959,966. PERFORATING-MACHINE. FREDERICK P. ROSBACK, Benton Harbor, Mich. Filed Oct. 27, 1909. Serial No. 524,827.



1. In a perforating machine, the combination of means for perforating sheets of material, and means for pressing out the bur produced on the sheet by the perforating operation comprising a positively-driven roll moving at a surface speed in excess of the speed of travel of the sheet through the machine, and a roller coöperating with said roll and between which and said roll the sheet passes, for the purpose set forth.

2. In a perforating machine, the combination of means for perforating sheets of material, and means for pressing out the bur produced on the sheet by the perforating operation comprising a positively-driven roll moving at a surface speed in excess of the speed of travel of the sheet through the machine, and a roller yieldingly bearing against said roll and between which and said roll the sheet passes, for the purpose set forth.

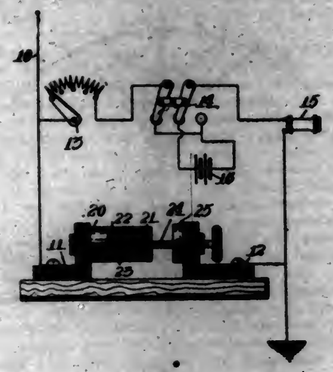
3. In a perforating machine, the combination of means for perforating sheets of material, and means for pressing out the bur produced on the sheet by the perforating operation comprising a positively-driven roll moving at a surface speed in excess of the speed of travel of the sheet through the machine, and a spring-pressed roller bearing against said roll and between which and said roll the sheet passes, for the purpose set forth.

4. In a perforating machine, the combination of means for perforating sheets of material, means for presenting the sheets to said first-named means, and means for pressing out the bur produced on the sheet by the perforating operation comprising a positively-driven roll moving at a surface speed in excess of the speed of travel of the sheet through the machine, and a roller coöperating with said roll and between which and said roll the sheet passes, for the purpose set forth.

5. In a perforating machine, the combination of a plurality of perforating devices for producing spaced lines of perforations in sheets of material, and means for pressing out the burs produced on the sheet by the perforating operation comprising a positively-driven roll moving at a surface speed in excess of the speed of travel of the sheet through the machine, and a plurality of rollers arranged in line with said perforating devices and coöperating with said roll and between which and said roll the sheet passes, for the purpose set forth.

[Claims 6 to 50 not printed in the Gazette.]

959,967. WAVE-RECEIVING DEVICE. FREDERICK G. SARGENT, Westford, Mass. Filed July 8, 1908. Serial No. 442,487.



1. A coherer having a pointed zinc electrode, and a conducting metalloid electrode having a flat surface in position to be engaged by the zinc electrode.

2. A coherer having a pointed zinc electrode, a conducting metalloid electrode having a flat surface in position to be engaged by the zinc electrode, and resilient means for holding said electrodes in loose contact.

3. A coherer having a zinc electrode, and a carbon electrode.

4. A coherer having a stationary electrode, a movable electrode, resilient means for normally holding the movable electrode away from the stationary electrode, and adjustable means for moving the movable electrode toward the stationary electrode, said adjustable means being capable of being affected by wave action.

5. In a coherer, the combination of a carbon electrode, a zinc electrode adapted to engage it, a metallic screw for holding the zinc electrode in position, and a carbon sleeve for said screw in which the screw loosely fits, whereby there will be a second cohering and decohering action between the screw and sleeve.

[Claims 6 to 11 not printed in the Gazette.]

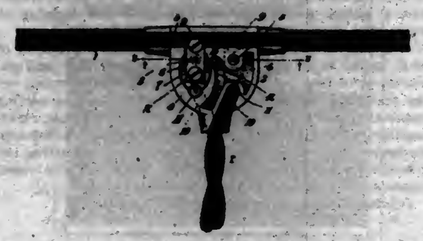
959,968. PRINTING-TYPE. HAZOR J. SMITH, Chicago, Ill., assignor to Automatic Letter Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 1, 1909. Serial No. 515,586.



1. In a printing form, the combination of blank and printing type, the blank type, to obstruct withdrawal thereof, interlocking with adjacent type, and the printing type being unobstructed, by either the blank type or other printing type, against withdrawal.

2. In a printing form, the combination of printing type having a shoulder on one side and blank type having shoulders on opposite sides, so constructed and arranged that the printing type shoulders serve to hold down the blank type but not other printing type, and the blank type shoulders serve to hold down other blank type, but not printing type, for the purpose set forth.

959,969. BRANCH BLOCK FOR SUSPENDED CABLES. JAMES S. STEWART, New York, N. Y., assignor to Annie Stewart, New York, N. Y. Filed Jan. 27, 1909. Serial No. 474,579.



1. A branch-block for suspended cables, comprising a body having means for grasping the conductors of the cable, means for grasping the conductors of the extension circuit, means for electrically connecting the conductors of the cable to the conductors of the extension circuit, and a casing having eyes to grasp unmutilated portions of said cable.

2. A branch-block for suspended cables, comprising a body having grooves to receive the conductors of the cable, means for firmly grasping the conductors of the extension circuit, means for electrically connecting the conductors of the cable to the conductors of the extension circuit, and a casing having eyes to grasp unmutilated portions of said cable.

3. A branch-block for suspended cables, comprising a body having means for firmly grasping the conductors of the cable and having grooves to receive the conductors of the extension circuit, means for electrically connecting the conductors of the cable to the conductors of the extension circuit, and a casing having eyes to grasp unmutilated portions of said cable.

4. A branch block for suspended cables, comprising an insulating body having grooves to receive the conductors of the cable and grooves to receive the conductors of the extension circuit, metallic clips on said body each adapted to be connected to a conductor of said cable and of said extension circuit, and a casing having eyes to grasp unmutilated portions of said cable.

5. A branch-block for suspended cables, comprising a body having grooves on opposite sides to receive the conductors of the cable and having grooves on opposite sides to receive the conductors of the extension circuit, metallic clips on opposite sides of said body each adapted to be connected to a conductor of said cable and of said extension circuit, and means having eyes to grasp unmutilated portions of the cable.

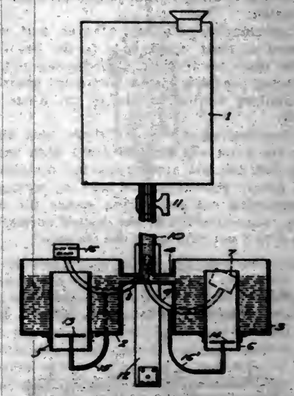
[Claims 6 to 12 not printed in the Gazette.]

959,970. SANITARY CLEANSING AND INDICATING DEVICE FOR DRINKING VESSELS. CHARLES W. THORNTON, Dalhart, Tex. Filed Feb. 2, 1910. Serial No. 541,660.

1. An automatic cleaning and indicating apparatus comprising a solution containing receptacle, provision in said receptacle for immersing vessels in said solution, and indicating devices automatically actuated by the immersing of one vessel in said solution to show which vessel has been cleansed.

2. An automatic cleansing apparatus comprising solution holding members, means for holding vessels to be cleansed in said solution, and means for indicating which vessel has been cleansed.

3. An automatic cleansing and indicating apparatus comprising solution holding devices, vessel holding members in said solution, and automatically actuated indicating devices to indicate which vessel has been cleansed.

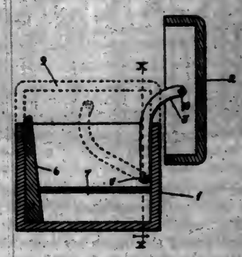


4. An automatic cleansing and indicating apparatus comprising a pair of solution containing receptacles, open vertical tubes mounted in said receptacles and projecting through the bottoms thereof, a pair of arms pivotally mounted, signs carried by said arms, and platforms movable vertically in said tubes and operatively connected with said arms.

5. An automatic cleansing and indicating apparatus comprising a solution containing receptacle, an open vertical tube mounted in said receptacle and projecting through the bottom thereof, a sign for use with each tube, and platforms movable vertically in said tubes and each platform being operatively connected with one of said signs.

[Claim 6 not printed in the Gazette.]

959,971. HINGE AND LOCK FOR BOX-COVERS. FRED W. TORBY, Grand Rapids, Mich. Filed June 18, 1908. Serial No. 439,241.



1. The combination of a box, a cover, bent hinge arms pivotally connected to the cover and to the box, means for permitting vertical motion of the hinge arms at one of their points of attachment, means for limiting such vertical motion and a projection carried by the box front for removably engaging the front cover edge which projection extends upwardly in the plane of the box front far enough to prevent any initial swinging motion by the cover on its hinge.

2. The combination of a box, a cover, a bent hinge arm pivotally connected to the cover and to the box, means for permitting and for limiting vertical motion of the hinge arm at one of such points of attachment and yielding means for holding such hinge arm at one determined point and for returning the same thereto.

3. The combination of a box, a cover, a bent hinge arm pivotally connected to the cover structure at its upper end and to the box structure at its lower end, one of such structures being provided with an opening permitting and limiting vertical motion by the adjacent hinge arm pivotal connection.

4. The combination of a box, a cover, and bent hinge arms pivoted at their upper ends to the box cover and carrying at their lower ends a connecting rod, the box structure being provided with a horizontal groove permitting and limiting vertical motion by the hinge arm connecting rod.

5. The combination of a box, a cover, bent hinge arms pivoted to the cover and at their lower ends united by a connecting rod, the box structure being provided with a horizontal groove permitting and limiting vertical motion by the connecting rod and spring means for resiliently holding the connecting rod at the desired normal position.

[Claims 6 to 8 not printed in the Gazette.]

959,972. MEASURING-RULE FOR TAILORS. ANTONIO TOMASELLI, Cleveland, Ohio. Filed July 19, 1909. Serial No. 508,284.



A measuring rule for tailors having a plurality of parallel lead lines extending lengthwise of the blade, each having a distinguishing character different from that of the other or others and all said characters being grouped together transversely of the blade, and a plurality of series of transverse marks arranged in multiple at irregular distances along the edge of the rule and respectively extending from said lead lines to said edge, and the different series of marks being distinguished from one another by different characters at each mark.

959,973. CAGE FOR GAMES. ALFRED TOMKINS, Pittsburg, Pa. Filed Jan. 12, 1910. Serial No. 537,628.



1. A cage of the type described comprising a plurality of wall units, each unit comprising vertical bars and inwardly-extending upper and lower horizontal bars, an upper frame connecting the upper horizontal bars, a lower frame connecting the lower horizontal bars, and a netting connecting said frames inwardly of the vertical bars.

2. A cage of the type described comprising a plurality of wall units, each unit comprising vertical bars and inwardly-extending upper and lower horizontal bars, an upper frame connecting the upper horizontal bars, a lower frame connecting the lower horizontal bars, a netting connecting said frames inwardly of the vertical bars, and bracing members secured to the horizontal and vertical bars.

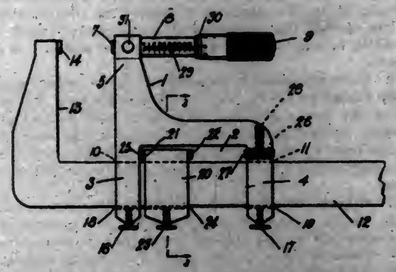
3. A cage of the type described comprising a plurality of wall units, each unit comprising vertical bars and inwardly-extending upper and lower horizontal bars, an upper frame connecting the upper horizontal bars, a lower frame connecting the lower horizontal bars, a netting connecting said frames inwardly of the vertical bars, vertically-disposed uprights mounted upon the upper frame, and a screen secured to said uprights and forming in connection therewith a superimposed cage.

4. A cage of the type described comprising a plurality of wall units, each unit comprising vertical bars and inwardly-extending upper and lower horizontal bars, an upper frame connecting the upper horizontal bars, a lower frame connecting the lower horizontal bars, a netting connecting said frames inwardly of the vertical bars, bracing members secured to the horizontal and vertical bars, vertically-disposed uprights mounted upon the upper frame, and a screen secured to said uprights and forming in connection therewith a superimposed cage.

5. A cage of the type described comprising a plurality of wall units, each unit comprising vertical bars and inwardly-extending upper and lower horizontal bars, an upper frame connecting the upper horizontal bars, a netting connecting said frames inwardly of the vertical bars, right-angularly disposed and outwardly-extending foundation blocks projecting from the lower frame and supporting the lower horizontal bars, and bearings carried by the upper frame and engaging the upper horizontal bars.

[Claims 6 to 8 not printed in the Gazette.]

959,974. MICROMETER-CALIPERS. ZECHARIAH R. TUCKER, Providence, R. I. Filed May 12, 1909. Serial No. 495,461.



1. In a measuring instrument, the combination with a frame, of a micrometer mounted upon the frame, arms upon the frame, a bar slidably mounted in the arms, a jaw upon the bar in coöperative relation to the micrometer, and a slidable member adjustably mounted upon the bar intermediate the arms and movable upon the bar a distance equal to the measuring capacity of the micrometer.

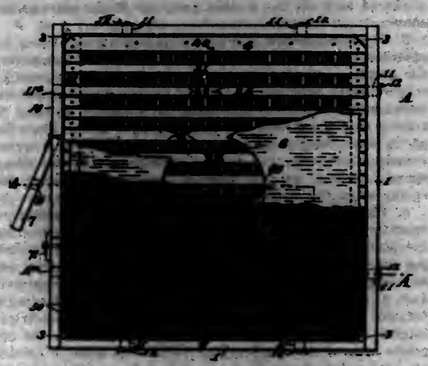
2. In a measuring instrument, the combination with a frame, of a micrometer mounted on the frame, arms upon the frame, a bar slidably mounted in the arms, a jaw upon the bar in coöperative relation to the micrometer, clamping members in the arms, a slidable member upon the bar intermediate the arms, and a clamping member upon the slidable member.

959,975. BROODER. ANTHON WALDWICK, Oak Heights Poultry Farm, Wash. Filed June 1, 1909. Serial No. 499,583.

1. A hover for brooders comprising a frame work having a series of spaced bars extending in the same direction across the frame, fabric strips looped over and depending from said bars, and a series of binding bars inserted between the other bars and engaging the fabric strips to bind them in place.

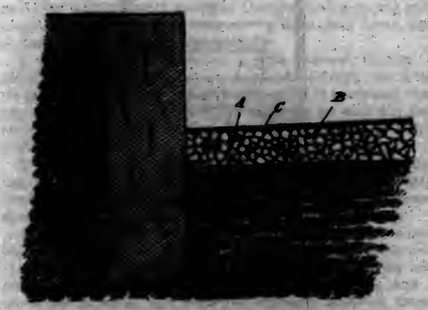
2. A hover for brooders comprising a frame, a series of spaced bars extending in the same direction across said frame, a series of fabric strips looped over and depending from said bars and being spaced apart upon the bars, and a set of binding bars inserted between the other bars and engaging the fabric strips to bind them in place.

3. A hover for brooders comprising a frame, a series of spaced bars extending in the same direction across said frame, fabric strips looped over and depending from said bars and spaced slightly apart upon the bars, a set of binding strips inserted between the other strips and engaging the fabric strips to bind them in place, and an air-pervious fabric covering the upper surface of said frame.



4. A hover for brooders comprising a frame having a series of spaced bars extending across said frame in the same direction, fabric strips looped over said bars and depending therefrom, a set of binding strips inserted between said other strips and engaging the fabric strips to bind them in place, and an impervious layer of material covering said frame except for a space at the center.

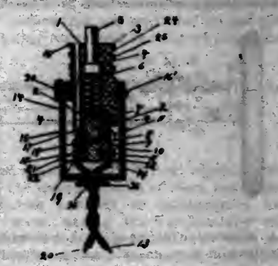
959,976. COMPOSITE PAVEMENT. EDWIN C. WALLACE, East Auburn, Cal. Filed June 28, 1909. Serial No. 504,858.



1. A pavement consisting of a lower course of large pieces of stone, smaller pieces of stone and stone dust mixed with sufficient bitumen of proper consistency to thoroughly coat all of the particles which is previously mixed and then laid, without compression, on a suitable foundation, and a previously mixed, upper course composed of finely divided mineral matter mixed with sufficient bituminous binding material to thoroughly coat all of the particles which is first spread in a thin layer on the lower course and thereafter blended and bonded with the lower course by compression, whereby the two courses are made a compact and substantially integral mass which is densest at its top.

2. A pavement comprising a foundation, a lower course thereon made up of large pieces of stone, smaller pieces of stone and stone dust, mixed with sufficient bitumen of proper consistency to thoroughly coat all of the particles, and an upper thin course disposed on the lower course and made up of finely-divided mineral matter mixed with sufficient bituminous binding material to thoroughly coat all of the particles, and blended with the coarse mixture at the top of the mass, whereby the two layers are bonded into one and a compact rigid layer densest at the top is formed.

959,977. ELECTRICAL CONNECTOR. FRANK L. WASHBURN and GEORGE E. LAWRENCE, Los Angeles, Cal. Filed Jan. 13, 1910. Serial No. 537,953.



1. In combination with an incandescent lamp bulb, of a base, an insulated body secured in said base, said body having a longitudinal bore and a central contact member positioned therein, a bracket positioned within said bore, a helical spring positioned upon said bracket, and normally projecting said central contact, electrical connection between said bracket and a line wire, a leaf-spring positioned upon one side of said insulated body, segmental threads positioned upon said leaf-spring, a push-button positioned upon said leaf-spring, said spring having electrical connection with another line wire, a carbon filament within said bulb and said line wires in circuit therewith.

2. A device of the class described comprising an incandescent lamp bulb, an insulating body secured thereto and provided with a bore extending therethrough, a contact member positioned in said bore, electrical connection between said member and a line wire, a spring secured to said body, a push button positioned upon said spring, the latter having electrical connection with another line wire, and a carbon filament within said bulb and said line wires in circuit therewith.

3. A device of the class described comprising an insulated body, said body having a longitudinal bore and a central contact member positioned therein, a bracket positioned within said bore, a helical spring positioned upon said bracket and normally projecting said central contact, electrical connection between said bracket and a line wire, a leaf spring positioned upon one side of said insulated body, segmental threads positioned upon said leaf spring, a push button positioned upon said leaf spring, said spring having electrical connection with another line wire and said wires adapted to form an electrical circuit.
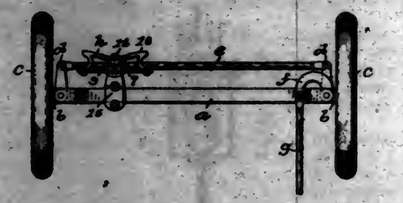
4. A device of the class described comprising an insulated body, said body provided with a longitudinal bore, a resiliently mounted central contact positioned in said bore, said bore substantially filled with an insulating material, a leaf spring secured to the side of said insulated body, a conducting threaded portion secured to said spring and electrical connection between said spring and another line wire, a tubular casing for said body and provided with a cut-out portion, and a push button carried by the spring and projecting through said cut-out portion beyond the plane of the exterior of said casing.

959,978. STEERING MECHANISM FOR AUTOMOBILES. CYRA B. WATTLES, Providence, R. I., assignor to Providence Gas Motor Company, Providence, R. I., a Corporation of Rhode Island. Filed Aug. 3, 1908. Serial No. 446,573.

1. A steering attachment for automobiles comprising in combination with an axle, and a connecting rod, a base block secured on said connecting rod, a bi-branched member pivoted on said base-block, means to oppose the rotation of said member and means to tilt said member against the pressure of said opposing means.

2. A steering attachment for automobiles, comprising in combination with an axle and a connecting rod, a base-block, secured on said connecting rod, an armed member

pivoted on said base-block, resilient means fixed on said block and in engagement with said arms for maintaining them in a normal state of equilibrium and means to tilt said arms in opposition to said resilient means.



3. A steering attachment for automobiles comprising in combination with an axle and a connecting rod, a base-block secured on said connecting rod, an armed member centrally pivoted on said base-block, means for locking said armed member in a central or balanced position, and resilient means for returning said member to the said normally locked or central position.

4. A steering attachment for automobiles comprising in combination with an axle and a connecting rod, a base-block secured on said connecting rod, an armed member centrally pivoted on said base-block, means for locking said armed member in a central or balanced position, and resilient means in connection with said arms and secured to said base-block.

5. A steering attachment for automobiles comprising, in combination with an axle and a connecting rod, a base-block secured on said connecting rod, a member pivoted on said base-block, means for yieldingly maintaining said member in a central balanced position and means coacting with said last means for yieldingly locking said member in its central position.

[Claims 6 to 9 not printed in the Gazette.]

959,979. FASTENING MEANS FOR SCREEN-PLATES. WILLIAM G. WEBB, Glens Falls, and JOHN H. BARNARD, Sandy Hill, N. Y. Filed June 16, 1906. Serial No. 488,785.



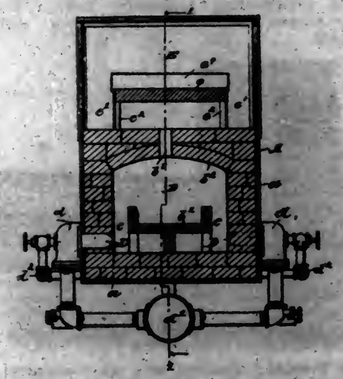
1. The combination of a pair of screen plates having their adjacent edges engaging one another in overlapped relation, the overlapped portions of the plates having registering apertures, a frame having a supporting bar arranged beneath the overlapped portions of the plates, and fastening means extending through the registering apertures of the overlapped portions of the plates to lock such plates from relative separation or shifting movement, said fastening means being also secured to said supporting bar to hold said plates rigidly thereon.

2. The combination of a pair of screen plates having cooperatively arranged adjacent edges, a bar for supporting the plates and having a transverse cylindrical opening extending into the same from one side and also having a second opening leading into the opening first mentioned from the opposite side of the bar, screws for fastening the plates in coöperative relation with said bar, and a nut for each screw, said nut being of cylindrical form and arranged within the cylindrical opening of the bar, the nut having a diametrical tapped opening coöperative with its respective screws, the nut also having a diametrical tool-receiving slot exposed at one end thereof and a slot extending inwardly from its opposite end to a point beyond the tapped opening to form a second tool-receiving portion and also serving to divide the nut whereby a binding action is produced between the divided portions of the nut and the screw.

3. The combination of a pair of screen plates having cooperatively arranged adjacent edges, a bar for supporting the plates, a screw for securing the plates in coöperative relation with said bar, and a nut having a cylindrical exterior and provided with a diametrical tapped opening to receive said screw, the nut being divided in the direction of its axial length by means of a slot extending transversely of its axis, the divided sections of the nut being sprung apart so as to produce a binding action upon the spring when the latter is introduced into the nut.

4. The combination of a pair of screen plates having cooperatively arranged adjacent edges, a bar for supporting the plates and provided with cylindrical openings extending inwardly from its opposite lateral sides, a screw for securing the plates in coöperative relation with said bar, and a cylindrical nut engaged in the correspondingly formed aperture of the bar and having a diametrical tapped opening coöperating with the said screw, the opposite ends of the nut being provided with slots to receive an appropriate implement introduced from either side of said bar whereby the nut may be turned about the axis of its cylindrical form so as to receive the screw.

959,980. FURNACE. JACOB WEINTZ, Cleveland, Ohio, assignor to The Strong, Carlisle & Hammond Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 15, 1909. Serial No. 517,940.



1. A furnace comprising, a heating oven; a combustion chamber below the heating oven; a flue leading from either side of the combustion chamber into the heating oven; a secondary chamber above the heating oven; a shelf supported in the secondary chamber; a flue extending from the heating oven through the top thereof into the secondary chamber; and burners directed into the combustion chamber; combined substantially as set forth.

2. A furnace comprising, a heating oven; a combustion chamber below the heating oven; a flue leading from either side of the combustion chamber into the heating oven; a secondary chamber above the heating oven; a shelf supported in the secondary chamber, said shelf being spaced from the walls of the chamber; a flue extending from the heating oven through the top thereof into the secondary chamber; and burners directed into the combustion chamber; combined substantially as set forth.

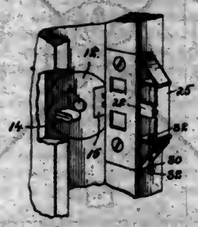
3. A furnace comprising, a heating oven; a combustion chamber below the heating oven; a flue leading from either side of the combustion chamber into the heating oven; a secondary chamber above the heating oven; a shelf supported in the secondary chamber, said shelf being spaced from the walls of the chamber; a flue extending from the heating oven into the secondary chamber, said flue entering the secondary chamber directly beneath the shelf; and burners directed into the combustion chamber; combined substantially as set forth.

4. In a furnace, the combination with a heating oven, of a secondary chamber above the heating oven; a shelf supported in the secondary chamber; and a flue extending from the heating oven through the top thereof into the secondary chamber.

5. In a furnace, the combination with a heating oven, of a secondary chamber above the heating oven; a shelf supported in the secondary chamber, said shelf being spaced from the walls of the chamber; and a flue extending from the heating oven through the top thereof into the secondary chamber.

[Claims 6 to 9 not printed in the Gazette.]

959,981. SASH-LOCK. SAMUEL G. WELLMAN, Corry, Pa. Filed Sept. 21, 1909. Serial No. 518,809.



1. In a sash lock, a casing, a post disposed therein, a plate provided with a locking dog and a sleeve surrounding said post and slidingly mounted thereon, and a spring surrounding said post and disposed between said plate and casing.

2. In a sash lock, a casing, a post disposed therein, a plate provided with a locking dog and slidingly mounted on said post, a spring disposed between said plate and casing, a cap plate provided with an aperture for said dog and an aperture opposite the dog plate, and a sleeve carried by said dog plate and surrounding said post.

3. In a sash lock, a locking dog comprising a plate having one end bent at an angle to the body and thence upon itself to form a dog and formed with an oppositely disposed sleeve projected therefrom.

4. In a sash lock, a circular casing provided with a centrally disposed post, a cap plate having a side wall provided with an interlocked connection with said casing and secured to said post, a plate provided with a dog and a sleeve surrounding said post and slidingly mounted thereon, and a spring surrounding said post to maintain the dog plate in contact with said cap.

5. In a sash lock, a casing, a sliding plate in said casing provided with a locking dog, a spring disposed between said plate and casing, a push plate engaging said sliding plate; and a latch plate mounted to intercept the push plate in its outward travel and retain said push plate in projected position.

[Claims 6 to 9 not printed in the Gazette.]

959,982. PROTECTOR FOR HEELS AND SOLES OF BOOTS AND SHOES. FRANK W. WHITCHER and CHARLES F. RANDALL, Boston, Mass., assignors, by direct and mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 16, 1899. Serial No. 737,206.

1. A protector adapted to be driven edgewise into the wear-surface of the heels and soles of boots and shoes, consisting of strip-like material of substantially uniform width having the substantially uniform entering edge thereof composed of relatively wide sections adapted to cut their way into the leather into which the protector is driven, and having the said sections separated by one or more deep and relatively narrow mouths or notches to leave intact in the said leather a corresponding neck or necks joining together at an intermediate point or points the portions of leather that are separated by the said sections of the entering edge, substantially as described.



2. A protector adapted to be driven edgewise into the wear-surface of the heels and soles of boots and shoes, consisting of strip-like material of substantially uniform width in bent form, having the substantially uniform entering edge thereof composed of relatively wide sections adapted to cut their way into the leather into which the protector is driven, and having the said sections separated by one or more deep and relatively narrow mouths or notches to leave intact in the said leather a corresponding narrow neck or necks joining together at an intermediate point or points the portions of leather that are separated by the protector, substantially as described.

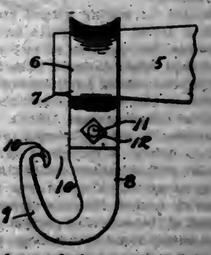
3. A protector adapted to be driven edgewise into the heels and soles of boots and shoes, of substantially uniform width and having the form of a complete inclosure, with the substantially uniform entering edge thereof composed of relatively wide sections adapted to cut their way into the leather into which the protector is driven, and having the said sections separated by one or more relatively narrow deep notches to leave intact in the said leather a corresponding neck or necks joining the portion of stock that is inclosed by the protector with the portion thereof surrounding the latter, substantially as described.

4. A protector adapted to be driven edgewise into the heels and soles of boots and shoes, and consisting of strip-like material of substantially uniform width having the substantially uniform entering edge thereof formed with the deep notch or notches which are narrow in proportion to the adjoining portions of the said entering edge and also having the shallow notches formed in the sections of said entering edge laterally adjacent said notch or notches as described and substantially as set forth.

5. A protector adapted to be driven edgewise into the wear-surface of the heels and soles of boots and shoes, and consisting of strip-like material of substantially uniform width in bent form, with the substantially uniform entering edge thereof composed of relative wide sections adapted to cut their way into the leather into which the protector is driven, having a relatively narrow slot or notch to leave intact in the said leather a corresponding neck and having one or both surfaces thereof provided with burs, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

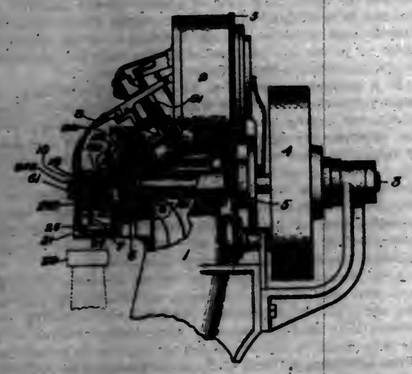
959,983. SWINGLETREE-HOOK. JOHN E. WISER, Spearville, Kans. Filed Sept. 4, 1909. Serial No. 516,175.



As an article of manufacture, a swingletree hook comprising a single length of malleable iron or steel bent adjacent to one end to provide a ferrule, the end of the bar being extended laterally therefrom, said ferrule being of

concavo-convex cross sectional form, the other end of said bar being extended in parallel relation to said lateral end portion and having a hook formed thereon, the extremity of said hook being extended outwardly, a clamping bolt extending through an intermediate portion of the bar and one of the ends thereof adjacent to the ferrule, and a nut having threaded engagement upon said bolt adapted to bind the inner convex surface of the ferrule upon the periphery of a swingletree to secure the hook in position thereon.

959,984. MACHINE FOR SETTING HEEL AND SOLE PROTECTORS FOR BOOTS AND SHOES. HENRY W. WINTER and BARTHOLOMEW J. CONLON, Lawrence, Mass., assignors, by direct and mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 14, 1901. Serial No. 43,108.



1. In a machine for setting winged protectors, the combination with a driver, a foot-plate having a driver-passage, and devices for feeding protectors singly in succession, of a momentum-check which retards the weightier side of a protector during the flight of the protector toward the said driver-passage and thereby causes the wings of the protector to assume a horizontal position when fully within the driver-passage.

2. In a machine for setting winged protectors, the combination with a driver, a foot-plate having a driver-passage, devices for feeding the winged protectors singly in succession, and a raceway along which a protector thus delivered makes flight by gravity toward the driver-passage, of a momentum-check which retards the weightier side of the protector in the said flight and thereby throws the wings of the protector into a horizontal position within the driver-passage.

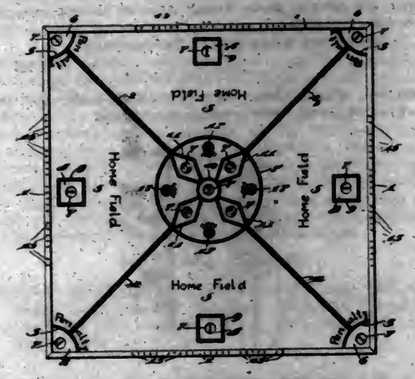
3. In a machine for setting winged protectors, the combination with a driver, a foot-plate having a driver-passage, and devices for causing protectors to make flight singly toward said driver-passage, of means to reverse the lead of the weightier side of a protector during the flight of the latter to throw the wings thereof into a horizontal position within the driver-passage.

4. In a machine for setting winged protectors, the combination with a driver, a foot-plate having a driver-passage, devices for delivering protectors singly in succession, and a raceway along which a protector thus delivered descends by gravity toward the driver-passage, of means to reverse the lead of the weightier portion of the protector in its flight as it enters the driver-passage and thereby cause the wings of the protector to assume a horizontal position within the driver-passage.

5. In a machine for setting winged protectors, the combination with a driver, a foot-plate having a driver-passage, and devices for causing protectors singly to make flight to the driver-passage, of a deflecting raceway-section by which in the flight of a winged protector the lead, due to momentum, of the weightier portion of the protector is overcome and the wings of the protector are caused to assume a horizontal position within the driver-passage.

[Claims 6 to 21 not printed in the Gazette.]

959,985. GAME APPARATUS. HENRY F. WRIGHT, Philadelphia, Pa. Filed Mar. 26, 1910. Serial No. 551,620.

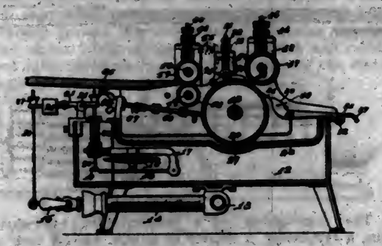


1. A game apparatus, comprising a rectangular field, an upwardly projecting wall around the edge of said field, lines connecting the walls at the corners of the field, a circle in the center of the field, diagonal lines connecting said first mentioned lines with said circle, forming four fields under the caption "Home field," and scoring spaces in said home fields, in said circle at the center, and in the corners of the board, between said first mentioned lines and the walls, substantially as described.

2. A game apparatus, comprising a rectangular field, an upwardly projecting wall around the edge of said field, lines connecting the walls at the corners of the field, a comparatively large circle in the center of said board, diagonal lines connecting said circle with said first mentioned lines, dividing the board into four fields under the caption "Home field," and said spaces formed by the first mentioned lines in the corners of the board under the caption "Penalty," a small circle in the center of the field concentric with the first mentioned circle, diamond shaped figures diagonally disposed, located within the larger circle and connecting the smaller circle with the diagonal lines, and ball receiving depressions in said small circle and diamond figures, substantially as described.

3. A game apparatus, comprising a rectangular field, an upwardly projecting wall around the edge of said field, lines connecting the walls at the corners of the field, a comparatively large circle in the center of said board, diagonal lines connecting said circle with said first mentioned lines, dividing the board in to four fields under the caption "Home field," and said spaces formed by the first mentioned lines in the corners of the board under the caption "Penalty," a small circle in the center of the field concentric with the first mentioned circle, diamond shaped figures diagonally disposed, located within the larger circle and connecting the smaller circle with the diagonal lines, depressions in the larger circle between the diamond figures, under the caption "Spot," rectangular figures in each home field and each rectangular figure, each penalty field, each diamond figure, and the central circle having ball receiving depressions, and numerals in said depressions, substantially as described.

959,986. GLUING-MACHINE. JOHN FREDERICK ZAPF, St. Louis, Mo. Filed Aug. 30, 1909. Serial No. 515,360.



1. A gluing machine comprising a tank; a means for heating said tank; a vat mounted in said tank and heated thereby; a gluing roller seated in said vat; a receiving table mounted above said tank; receiving rolls mounted in front of said receiving table; guide-fingers mounted above said gluing roller; a pressure roller mounted above said gluing roller; a series of adjustable fingers contacting with the periphery of said gluing roller; and a mechanism whereby the feeding rolls may be tilted, substantially as described.

2. A gluing machine comprising a tank; a means for heating said tank; a vat mounted in said tank and heated thereby; a gluing roller seated in said vat; a receiving table mounted above said tank; receiving rolls mounted in front of said receiving table; guide-fingers mounted above said gluing roller; a pressure roller mounted above said gluing roller; a series of adjustable fingers contacting with the periphery of said gluing roller; and a guard mounted in said vat to contact with the surface of said gluing roller, substantially as described.

3. A gluing machine comprising a tank; a means for heating said tank; a vat mounted in said tank and heated thereby; a gluing roller seated in said vat; a receiving table mounted above said tank; receiving rolls mounted in front of said receiving table; guide-fingers mounted above said gluing roller; a pressure roller mounted above said gluing roller; a series of adjustable fingers contacting with the periphery of said gluing roller; and a guard adjustably mounted in said vat to contact with the surface of said gluing roller, substantially as described.

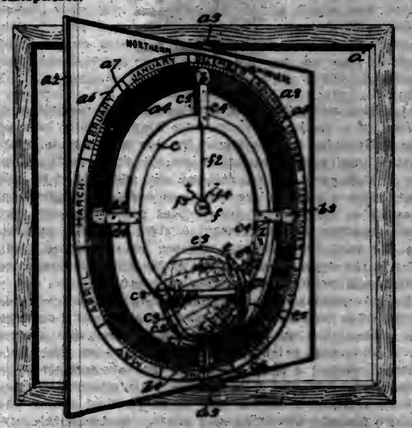
4. A gluing machine comprising a tank; a means for heating said tank; a vat mounted in said tank and heated thereby; a gluing roller seated in said vat; a receiving table mounted above said tank; receiving rolls mounted in front of said receiving table; guide-fingers mounted above said gluing roller; a pressure roller mounted above said gluing roller; a series of adjustable fingers contacting with the periphery of said gluing roller; and a thermostatic regulator whereby the temperature of said vat is controlled, substantially as described.

959,987. EDUCATIONAL APPARATUS. LEON BARRITT, Brooklyn, N. Y. Filed July 16, 1908. Serial No. 443,870.

1. An educational device, comprising a support having the divisions of a year marked in relatively reversed order on each of two sides, a sphere representing the sun carried by said support, and a globe representing the earth rotatably carried by the support and revoluble about the sun.

2. An educational device, comprising a support having the divisions of a year marked in relatively reversed order on each of two sides, a sphere representing the sun carried by said support, a globe representing the earth rotatably carried by the support and revoluble about the sun and an indicator movable over said divisions, on each side of said support, with the earth in revolution about the sun.

3. An educational device, comprising a support having the divisions of a year on one side thereof for the northern hemisphere and the complemental divisions of a year in the southern hemisphere on the opposite side thereof, a sphere representing the sun carried by the support, a globe representing the earth rotatably carried by the support and revoluble about the sun, and a pointer for simultaneously indicating complemental yearly divisions in both hemispheres.

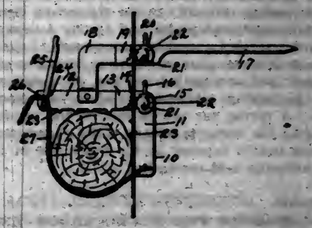


4. An educational device, comprising a support having the divisions of a year marked in relatively reversed order on each of two sides, a sphere representing the sun, a segment revoluble in said support about said sun and a globe representing the earth carried by the ends of said segment and independently rotatable.

5. An educational device, comprising a support having the divisions of a year marked in relatively reversed order on each of two sides, a segment revoluble in said support, a sphere representing the sun carried by said segment, a supplemental segment held between the ends of said segment and at right angles to said support, a globe segment pivoted to said supplemental segment, and a globe representing the earth rotatably held in said globe segment in an inclined position.

[Claims 6 to 8 not printed in the Gazette.]

959,988. WIRE-STRETCHER. BOYD BYRON BOSS, Haynes, N. D. Filed Nov. 16, 1908. Serial No. 462,829.



A wire stretcher comprising in combination, a base anchor member including integral right angle arms having post-engaging means on their inner faces, a lever pivoted upon the anchor member, integral wire-engaging lugs formed upon the anchor member and the lever, pivoted clamping members disposed adjacent said lugs for coengagement therewith in stretching a wire, a lever pivoted to the outer end of one of the arms of the anchor, a check pin carried by the arm inwardly of the lever for checking engagement therewith, a pin carried by the lever inwardly of its pivot point, and a chain carried by the outer end of the opposite arm and adapted for adjustable engagement around a post and over said last named pin for binding engagement with a post upon movement of the lever into engagement with the check pin and to hold the lever in such engaged position.

959,989. WINDOW. ISRAEL A. BOYD, Baltimore, Md. Filed Jan. 28, 1909. Serial No. 474,709.



1. The combination with the frame having vertical guide strips, of a vertical strip movable longitudinally between the guide-strips and having at its side edge a metal plate with a longitudinal channel at one side of its vertical center; a sash having a side rail and also provided at its side edge with a metal plate which also has a longitudinal channel at one side of its vertical center and the two plates confronting each other; a rivet pivotally connecting the said two plates; a locking bar extending vertically in the registering channels of the pivotally-connected plates, and means for operating said bar.

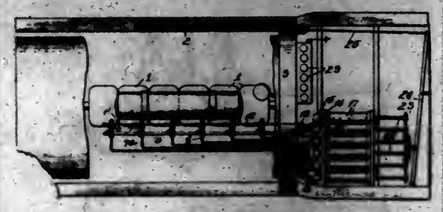
2. The combination with the frame having vertical guide strips, of a vertical strip movable longitudinally between the guide-strips and having at its vertical side edge a metal plate with a longitudinal channel at one side of its vertical center; a sash having a side rail and also provided at its side edge with a metal plate which latter has a vertical channel at one side of its vertical center and the two plates confronting each other,—said sash-rail having a recess extending inwardly from its front face and communicating with the channels of the confronting plates and the channeled plate of the sash rail having spring tongues punched therefrom and projecting into the channel thereof; a rivet pivotally connecting the two channeled plates; a locking bar extending vertically in the two channels of the plates and seated against the spring tongues of the latter and having an arm that enters the recess of the sash rail; a plate secured to the front face of the sash rail and covering said sash-rail recess, and a lever pivotally mounted with respect to said plate and having one end connected with the arm of the locking bar in said sash-rail recess.

3. The combination with the frame having vertical guide strips, of a vertical strip movable longitudinally between the guide-strips and having a channeled metal plate at its vertical side; a sash having a side rail with a channeled metal plate at its vertical side which confronts the plate on the strip,—said two channeled plates being pivotally connected at one side of their registering channels; a locking bar extending vertically in the registering channels of the pivotally-connected plates and having a laterally-projecting arm; springs operating on one side of the locking bar in said sash-rail channel; a lever pivotally sustained on the sash rail and having one end connected with the arm of the locking bar and the other end exposed for operation; a spring bar at one side of the pivoted lever for engaging the latter to hold it in its operated position and a push button exposed on the outer side of the sash rail for releasing said spring bar.

959,990. STARTER FOR HYDROCARBON-ENGINES. ODILON BELSOIS, Chicago, Ill., assignor to Automatic Starter Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 17, 1908. Serial No. 427,651.

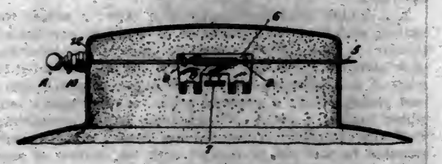
1. The combination of a multicylinder hydrocarbon engine, a carbureter, a battery of pumps, one for each cylinder, having the plunger rods connected to a single transverse bar, passages connecting each pump with the carbureter and with its respective engine cylinder, and mechanism for causing the oscillation of said bar for forcing an explosive mixture into the engine cylinders.

2. In an automobile the combination of a multicylinder hydrocarbon engine, a carbureter, a battery of pumps, one for each cylinder, having the plunger rods connected to a single transverse bar, passages connecting each pump with the carbureter and with its respective engine cylinder, and mechanism controlled from the seat of the operator, for causing the oscillation of said bar for forcing an explosive mixture into the engine cylinders.



3. The combination of a multicylinder hydrocarbon engine, a carbureter, a battery of pumps, one for each cylinder, having the plunger rods connected to a single transverse bar, passages connecting each pump with the carbureter and with its respective engine cylinder, and a single mechanism for causing the oscillation of said bar for forcing an explosive mixture into all of the engine cylinders.

959,991. HAT-FASTENER. LEON BRODY, New York, N. Y. Filed Apr. 6, 1909. Serial No. 488,318.



1. The combination of a hat pin, a hair engaging device carried by the pin and rotatable therewith, and a pin slidable on the hat pin to pass into the hat and lock the hat pin against rotation.

2. The combination of a hat pin, and a device carried by the hat pin and rotatable therewith, said device having teeth to engage the hair and draw the hat to the head and having a guard set inwardly of the teeth to bear on the top of the head and limit the insertion of the teeth in the hair.

3. The combination of a hair engaging device, and a hat pin on which the device is carried, having a sectional head, with one section of the head movable longitudinally of the body of the pin and provided with means to engage the hat and lock the pin against rotation.

4. The combination of a hat pin, a device rotatable with the pin to engage the hair and draw the hat to the head, said pin having a head provided with a pin to pass into the hat and lock the device in place.

5. The combination of a hair engaging device, and a hat pin on which the device is carried constructed of an inner and an outer section with the inner section secured to the body of the pin and the outer section having a limited longitudinal movement relative to the inner section and provided with pins slidable through the inner section to engage the hat and lock the hat pin against rotary movement.

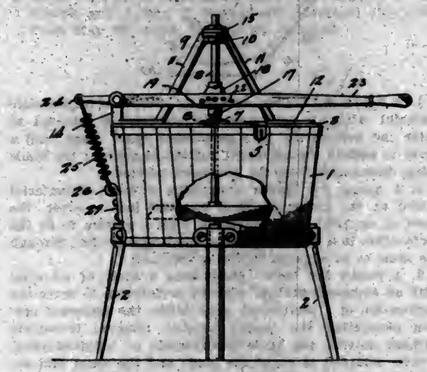
[Claim 6 not printed in the Gazette.]

959,992. WASHING-MACHINE. JOHN F. BURKHOLDER and WILLIAM P. BURKHOLDER, Harrisonburg, Va. Filed July 13, 1909. Serial No. 507,377.

1. In mechanical movements, the combination with a shaft, bearings therefor, an abutment collar thereon, a shell cone secured thereon, a cylinder frictionally engaged thereby and means for moving the shaft and rotating the cylinder.

2. In a device of the character described, the combination with the shaft, of an abutment collar thereon, means mounted on the shaft forming a friction clutch, and pivotally secured means intermeshing with a pinion on one of the members of the clutch for operating the device.

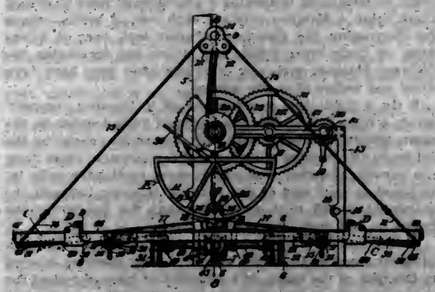
3. In a device of the character described, the combination with a vertically slidable shaft, an abutment collar thereon, means mounted on the shaft forming a friction clutch, the loosely mounted member thereof having a pinion formed thereon, a pivoted lever for moving the shaft having means intermeshing with said pinion and causing it, and thus the shaft through the medium of the clutch, to revolve.



4. In combination with a washing machine, a shaft vertically movable therein, a dasher secured on the lower end of the shaft, an abutment collar secured on the shaft, a shell cone secured there-above, a pinion bearing cylinder loosely mounted therebetween, the upper end of the cylinder and the cone forming a friction clutch, a lever pivoted to the side of the machine and engaging the cylinder, and intermeshing means engaging the pinion carried thereby, said lever serving to vertically move the shaft and to revolve the cylinder.

5. In a device of the character described, the combination with a vertically movable shaft, an abutment thereon, a shell cone secured to the shaft above said abutment, revoluble means loosely mounted on the shaft having frictional engagement with the cone, means for moving the shaft and revolving said revoluble means, said latter means being pivotally secured to the device, and means also secured to the device and to the end of said pivoted means for counterbalancing the weight thereof.

959,993. WOOD-BENDING MACHINE. JOHN B. CAMERON, Lawrence, Mass. Filed Apr. 17, 1909. Serial No. 490,538.



1. In a device of the kind described, a frame, a mold supported thereon, a flexible member adapted to support an article to be bent, rigid bars attached to the ends of said member, telescopic bars pivoted to the frame and connected to the first mentioned bars, springs holding the telescopic bars extended, a power shaft, and an operative connection between the power shaft and the ends of the rigid bars to move the same and cause the flexible member to conform to the mold, said connection including a winding drum and cables leading from the drum to said rigid bars.

2. In a device of the kind described, a frame, a mold supported thereon, a flexible member adapted to support an article to be bent, rigid bars attached to the ends of said member, telescopic bars pivoted to the frame and connected to the first mentioned bars, springs holding the telescopic bars extended, a power shaft, and an operative connection between the power shaft and the ends of the rigid bars to move the same and cause the flexible member to conform to the mold, said connection including a winding drum and cables leading from the drum to said rigid bars.

3. In a device of the kind described, a frame, a mold supported thereon, a flexible member adapted to support an article to be bent, rigid bars attached to the ends of said member, telescopic bars pivoted to the frame and connected to the first mentioned bars, springs holding the telescopic bars extended, elements slidably mounted on said bars and embracing the flexible member adjacent its ends to limit the length of the flexible portion of said member and control the position of the article thereon, means to hold said elements in adjusted position on the rigid bars, a power shaft, and an operative connection between the power shaft and the ends of the rigid bars to move the same and cause the flexible member to conform to the mold.

4. In a device of the kind described, a frame, a mold supported thereon, a flexible member adapted to support an article to be bent, rigid bars attached to the ends of said member, telescopic bars pivoted to the frame and connected to the first mentioned bars, springs holding the telescopic bars extended, elements slidably mounted on said bars and embracing the flexible member adjacent its ends to limit the length of the flexible portion of said member and control the position of the article thereon, means to hold said elements in adjusted position on the rigid bars, a power shaft, and an operative connection between the power shaft and the ends of the rigid bars to move the same and cause the flexible member to conform to the mold, said connection including a winding drum and cables leading from the drum to said rigid bars.

5. In a device of the kind described, a frame, a mold supported thereon, a flexible member adapted to support an article to be bent, rigid bars attached to the ends of said member, telescopic bars pivoted to the frame and connected to the first mentioned bars, springs holding the telescopic bars extended, a support attached to said flexible member, mechanism to move said support to and from said mold, elements slidably mounted on said bars and embracing the flexible member adjacent its ends to limit the length of the flexible portion of said member and control the position of the article thereon, means to hold said elements in adjusted position on the rigid bars, a power shaft, and an operative connection between the power shaft and the ends of the rigid bars to move the same and cause the flexible member to conform to the mold.

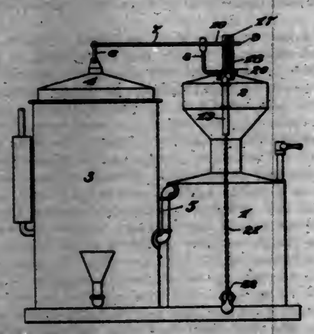
[Claim 6 not printed in the Gazette.]

959,994. ACETYLENE-GAS GENERATOR. MERWIN W. CARRIER, Fredericton, New Brunswick, Canada, assignor to The Monitor Manufacturing Company, Limited, Fredericton, Canada. Filed July 29, 1909. Serial No. 510,217.

1. In an acetylene generator, a generating chamber, a carbid chamber adapted to deliver carbid thereto, a gas tank, connections between the generating chamber and gas tank, a bell movably mounted in the gas tank, a lever operated by the bell and provided with one bifurcated end, valves mounted in the carbid chamber, means for detachably connecting the valves to the lever, a movably mounted arm connected to the bifurcated end of the lever and adapted to maintain the valve connecting means in operative position, and means for maintaining the movable arm in operative position.

2. In an acetylene generator, a generating chamber, a carbid chamber adapted to deliver carbid thereto, a gas

tank, connections between the generating chamber and gas tank, a bell movably mounted in the gas tank, a lever operated by the bell and provided with one bifurcated end, valves mounted in the carbid chamber, a connecting rod attached to said valves, an adjusting nut on said rod, a movably mounted arm connected to the bifurcated end of the lever and adapted to support the adjusting nut to maintain operable connections between the lever and valve mechanism, and means for maintaining said arm in operable position.



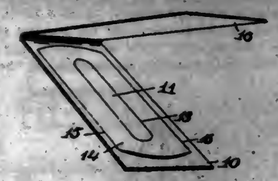
3. In combination with an acetylene gas generator, a generating chamber, a carbid chamber adapted to deliver carbid thereto, a gas tank, connections between the generating chamber and gas tank, a bell movably mounted in the gas tank, a lever operated by the bell and provided with one bifurcated end, valves mounted in the carbid chamber, means for detachably connecting the valves to the lever, an arm movably connected to the bifurcated end of the lever and adapted to maintain the valve connecting means in operative position, and a weighted lever to engage said movable arm and hold it in operable position.

4. In combination with an acetylene gas generator, a generating chamber, a carbid chamber adapted to deliver carbid thereto, a gas tank, connections between the generating chamber and gas tank, a bell movably mounted in the gas tank, a lever operated by the bell and provided with one bifurcated end, valves mounted in the carbid chamber, means for detachably connecting the valves to the lever, an arm movably connected to the bifurcated end of the lever and adapted to maintain the valve connecting means in operative position, a weighted lever adapted to engage said arm and hold it in operative position, a rod movably mounted on the carbid chamber and adapted to be operated when the closure for the filling opening of the carbid chamber is opened, and a fork extending from the end of the weighted lever and adapted to be engaged and operated by said rod.

5. In combination with an acetylene gas generator, a generating chamber, a carbid chamber adapted to deliver carbid thereto, a gas tank, connections between the generating chamber and gas tank, a bell movably mounted in the gas tank, a lever operated by the bell and provided with one bifurcated end, valves mounted in the carbid chamber, means for detachably connecting the valves to the lever, an arm movably connected to the bifurcated end of the lever and adapted to maintain the valve connecting means in operative position, a weighted lever adapted to engage said arm and hold it in operative position, a rod movably mounted on the carbid chamber and adapted to be operated when the closure for the filling opening of the carbid chamber is opened, a fork extending from the end of the weighted lever and adapted to be engaged and operated by said rod, a waste cock connected to said generating tank, and connections between said movably mounted rod and said waste cock whereby the waste cock will be opened as the rod is raised.

[Claims 6 to 8 not printed in the Gazette.]

959,995. FOLDER FOR BLADES. OSBOR A. CLARK, Newark, N. J. Filed Aug. 12, 1909. Serial No. 512,498.

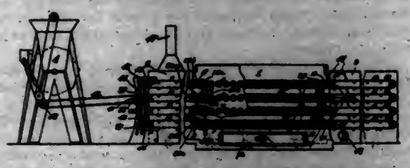


1. A holder for blades comprising a sheet of imperforate material with an embossed portion thereon adapted to enter the perforation in a perforated razor blade, and a cover to engage the embossed portion to prevent the blade being disengaged from the embossed portion.

2. A holder for blades comprising a sheet of material folded at the center to form one end into a cover, the sheet of material being embossed with a portion to fit the perforation in a perforated razor blade and project through the same to be engaged by the cover.

3. A holder for blades comprising a sheet of material with an embossed portion without perforation to enter the perforation of a perforated razor blade, the embossed portion permitting the blade's vertical removal therefrom without moving the blade transversely or longitudinally, a cover adapted to cover the blade and the sheet and engage the embossed portion to lock the blade thereon.

959,996. KILN. EDWARD COLE, New York, N. Y., assignor to Jennette Cole, New York, N. Y. Filed Jan. 26, 1906. Serial No. 297,928.



1. In a kiln, the combination with a burning compartment, means for conveying a plurality of rows of bricks, there being a distance between each row of bricks, and means for decreasing the distance between each row of bricks in the direction of their progression prior to their being burned.

2. In a kiln, the combination with a burning compartment, of means for conveying a plurality of rows of bricks, there being a distance between each row of bricks, means for decreasing the distance between each row of bricks prior to their being dried, and means for decreasing the distance between each row of bricks after they have been dried and before they are burned.

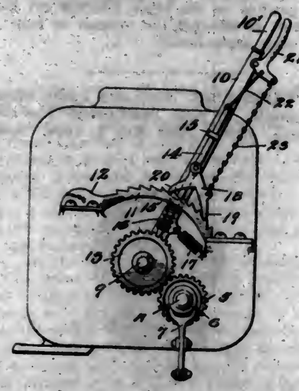
3. In a kiln, the combination of a burning compartment, a plurality of polygonal-shaped rolls located in the same, means for driving said rolls, means for conveying the bricks to the burning chamber and for carrying them from the burning chamber, and one or more stationary rolls interposed at each end of the burning chamber between the polygonal-shaped rolls and the means for conveying the bricks to and from the same.

4. The combination with a kiln, of a drying chamber located in front of the same, and a cooling chamber located in the rear of the same, of a plurality of tiers of rollers for conveying the bricks through the said kiln, a plurality of tiers of carrier aprons located in the drying chamber, a plurality of tiers of carrier aprons located in the cooling chamber, and means for feeding bricks to either of the said tiers of carrier aprons in the drying chamber.

5. In a kiln, the combination of a burning chamber, a plurality of tiers of rolls located therein, a drying chamber, a plurality of tiers of carrier aprons located therein, a cooling chamber, a plurality of tiers of carrier aprons located therein and means for driving the rolls and carrier aprons of any one tier located in the same plane at will.

[Claims 6 and 7 not printed in the Gazette.]

959,997. ENGINE-STARTING DEVICE. HARRY C. COLHOWER and JAMES T. SAINSBURY, Hartford City, Ind. Filed May 27, 1909. Serial No. 498,646.



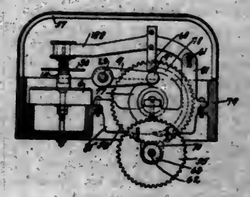
1. In an engine starter of the character described, the combination with a crank shaft, of a stud shaft, a segmental rack, a lever swingingly mounted upon the said stud shaft to move alongside said segmental rack, means connected to said lever adapted to rotate said crank shaft, said means comprising gears, a movable member arranged upon said lever and adapted to engage one of said gears for rotating the same, means comprising a movable pawl connected to said movable member and coöperating with said segmental rack for automatically moving said movable member out of engagement with said gear, when said lever is swung a predetermined distance in either direction, substantially as described.

2. In an engine starter of the character described, the combination with a crank shaft, of a swinging lever to rotate said crank shaft, means connecting said lever and said crank shaft, embodying gears and a longitudinally slidable latch bar carried by said lever and having its inner end formed for engagement with the teeth of one of said gears, and means comprising a double-ended pawl and rack, the former being centrally pivoted upon said latch bar to travel upon the latter, whereby movement of the said lever in either direction after completion of its swinging movement, causes oscillation of the pawl upon one of its ends to withdraw the said latch bar from said gear, substantially as described.

3. In an engine starter of the character described, the combination with a crank shaft, of a swinging lever to rotate said crank shaft, a stud shaft upon which the inner end of said lever is mounted, a pinion loosely mounted on said stud shaft adjacent said lever, a pinion splined upon said crank shaft in engagement with said first named pinion, means for moving said last named pinion out of engagement, a latch bar longitudinally slidable upon said lever to engage with its inner end, said first named pinion, a rack mounted above said pinions, and provided with an upper shoulder upon one end having an inclined face, a double ended pawl centrally pivoted upon said latch bar above said rack and having its ends engaging the same on opposite sides of said latch bar, and a swinging grip member, pivoted adjacent the outer end of said lever and having connection with said latch bar and said pawl to withdraw the same, substantially as described.

4. In an engine starter of the character described, the combination with a crank shaft, of a stud shaft, a segmental rack provided with an elevated portion, a lever swingingly mounted upon said stud shaft to move alongside said segmental rack, means connected to said lever and adapted to rotate said shaft, said means comprising gears, a movable member arranged upon said lever adapted to engage one of said gears for rotating the same, a movable member arranged upon said first named movable member and coöperating with said segmental rack for automatically moving said first named movable member out of engagement with said gear, when said lever is swung a predetermined distance in either direction, and manually operative means for disengaging said first named movable member from said gear and said second named movable member from said segmental rack, for returning said lever to its operative position, substantially as described.

959,998. STOP-MOTION APPARATUS FOR HOISTS. ANDREW M. COYLE, New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 28, 1907. Serial No. 381,314.



1. The combination with a hoisting device and driving means therefor, of automatic means for releasing said hoisting device from its driving means at a predetermined point in the operation of the hoisting device, and appliances for reducing the speed of said driving means prior to such release.

2. The combination with a hoisting device and an electric motor for driving the same, of automatic devices for reducing the speed of the motor at a predetermined point in the operation of the hoisting device, and means for disconnecting the hoisting device after the speed-reducing means has operated.

3. The combination with a hoisting device and an electric motor connected to drive the same, of a starting resistance, a field resistance, automatic means for successively controlling said resistances at predetermined points in the operation of the hoisting device to reduce the speed of the motor, and means for automatically again increasing the speed of the motor when the hoisting device is stopped.

4. The combination with a hoisting device and an electric motor for driving the same, of accelerating apparatus for said motor, and means for causing said accelerating apparatus to reduce the speed of the motor before the hoisting device is stopped and again increasing the speed of the motor after such hoisting device is stopped.

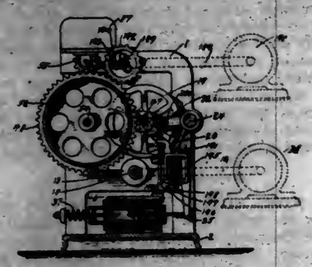
5. The combination with a hoisting device, of brake mechanism therefor, an electric motor connected to the hoisting device for operating the same, and automatic means for successively reducing the speed of the motor, effecting the application of the brake mechanism, and then accelerating the speed of the motor.

[Claims 6 to 23 not printed in the Gazette.]

959,999. CURTAIN-HOISTING APPARATUS. ANDREW M. COYLE, New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 14, 1907. Serial No. 397,310.

1. The combination with a rotatable member, of two motors, power-transmitting means between one of said motors and said rotatable member, and means between the other motor and said member for retarding the rotation of said member to a speed proportional to that of said last named motor.

2. The combination with a hoisting drum, of a wheel connected thereto, a support for said wheel, a driving member, means for lifting said wheel to disconnect the same from said driving member, and an electro-responsive device for holding said wheel in its lifted position.



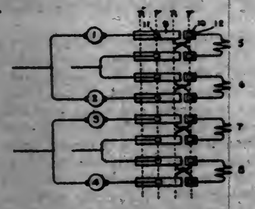
3. The combination with a hoisting drum, of a wheel geared thereto, a prime mover for driving said wheel, apparatus for moving said wheel to disconnect the same from said prime mover, and electrically controlled means for holding said wheel in its disconnected position.

4. The combination with a hoisting drum, of a brake wheel connected thereto, a driving shaft associated with said brake wheel, a brake, a spring for applying the brake to the brake wheel and disconnect the latter from said driving shaft, and an electro-mechanical tripping device for holding said brake wheel in its disconnected position independently of said spring and brake.

5. The combination with a hoisting drum, of a friction wheel geared thereto, a friction member for driving said friction wheel to transmit motion to said hoisting drum, a brake associated with said friction wheel, mechanism for applying said brake and holding said friction wheel out of engagement with said friction member, an electro-magnet for releasing said brake, and an electro-mechanical tripping appliance for holding said friction wheel out of engagement with said friction member even after said electro-magnet has released said brake.

[Claims 6 to 10 not printed in the Gazette.]

960,000. METHOD OF AND MEANS FOR REVERSING MOTORS. ARCHIBALD S. CUBITT, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 3, 1909. Serial No. 499,860.



1. The method of reversing simultaneously two motors normally operated in parallel which consists in short-circuiting the fields by establishing the reverse connections between said fields and their armatures while the original connections still exist and then interrupting the original connections.

2. The method of reversing simultaneously two series motors normally operated in parallel which consists in short-circuiting the fields by establishing the reverse connections between said fields and their armatures while the original connections still exist and then interrupting the original connections.

3. In combination with two motors normally operated in parallel, a reverser of the finger and segment type having a forward and reverse position and a transition position in which certain of the fingers bridge the space between segments in the same line and effect the short circuiting of the motor fields in changing the relation of the latter with reference to their armatures.

4. In combination with two motors normally operated in parallel, a reverser of the finger and segment type having four groups of two segments each, two fingers cooperating with each group of segments, the space between the segments in each group being so small that it is bridged by one of the fingers when the reverser is thrown from one position to the other whereby the fields are short-circuited in effecting the reversal of their connections with their armatures.

960,001. WHEEL-TIRE. BENJAMIN DAHL, Minneapolis, Minn., assignor to Dahl Punctureless Tire Company, Minneapolis, Minn. Filed May 8, 1908. Serial No. 431,680.



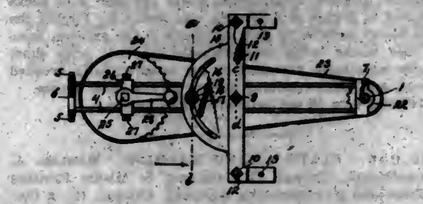
1. The combination, with a wheel felly having transverse sockets therein, of a non-pneumatic tire comprising an outer casing and a filler therefor composed of yielding, resilient material, interiorly threaded tubes fitting within said transverse sockets and slidable therein and having hooks on their outer ends, rings having flanges provided with recesses to receive said hooks, said rings being arranged on each side of the casing and engaging the same, and pins having right and left hand threads thereon engaging the threads of said tubes by means of which said rings can be drawn together and said filler compressed.

2. The combination, with a wheel felly having transverse sockets therein, of interiorly threaded tubes fitting within said sockets and slidable therein and having hooks at their outer end, pins having right and left hand threads thereon and fitting within said tubes and engaging the threads thereof, an outer casing, a filler of resilient material inclosed by said casing, rings provided on each side of said casing and engaging the same, and said rings being adapted to be engaged by the hooks on said tubes, the degree of compression of said casing on said resilient material being regulated by the adjustment of said pins and the relative position of said tubes.

3. The combination, with a felly having transverse sockets therein, of pins within said sockets and having right and left hand threads, an outer casing, a filler inclosed thereby and composed of resilient material, rings provided on each side of said casing and having means to engage the edges of the same, and means engaging said rings and having threads to engage the threads of said pins whereby when said pins are revolved, said rings will be drawn together to compress said filler.

4. The combination, with a felly, of a non-pneumatic tire comprising an outer casing and a resilient filler therefor, rings provided on each side of said casing and having flanges to engage the same, and edges which are adapted to pass between said filler and said felly, said rings being freely movable toward and from one another until the desired degree of compression is obtained on said filler, pins having right and left hand threads thereon and sockets therefor connected with said rings, the ends of said pins being adapted to receive an operating wrench or key, substantially as described.

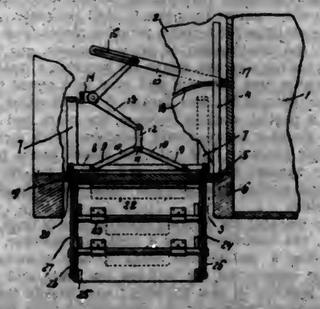
960,002. PORTABLE BORING-MACHINE. LORENZO DAILEY, Kansas City, Kans. Filed Mar. 2, 1909. Serial No. 480,855.



1. In a portable boring machine, the combination with a supporting frame having a vertical rod, of a block rotative on said rod and slidable lengthwise thereof, a swinging frame supported by said block and slidable thereon at right angles to said rod, a tool holder rotative on said swinging frame and having its axis parallel with said rod, a belt wheel secured on and rotative with said tool holder, a second belt wheel rotative on said swinging frame, a belt connecting said two wheels, and means for rotating said second belt wheel.

2. In a portable boring machine, the combination with a supporting frame, of a block vertically slidable on said frame and rotative thereon on a vertical axis, a swinging frame having four horizontal rods disposed in pairs, one pair above the other, said rods being horizontally slidable in said block, a tool holder rotative in said swinging frame and having its axis parallel with the axis of said block, a belt wheel rotative with said tool holder, a second belt wheel rotative on said swinging frame, a belt connecting said two wheels, means by which the second belt wheel may be rotated, and releasable clamping means for locking the swinging frame from swinging and from horizontal sliding movement, said clamping means comprising two horizontal plates disposed respectively above and below the four horizontal rods and slidable vertically with said block on said supporting frame, said plates having each an arcuate slot disposed concentric with the axis of said block, two bearing blocks respectively slidably mounted on said two pairs of horizontal rods, two vertical rods disposed between the upper and lower pairs of horizontal rods, and a clamping bolt extending through said slots and through said bearing blocks and having means by which it may draw said two plates toward each other so as to clamp said two vertical rods between the upper and lower pairs of horizontal rods.

960,003. FOLDING STEPS. ALEXANDER F. DIVOK, Pittsburg, Pa. Filed Sept. 11, 1909. Serial No. 517,345.



1. The combination with a car having a doorway provided with a sill, a platform, and a door adapted to close said doorway, of foldable steps extending when folded in parallelism with respect to said sill and when extended adapted to lead to said platform, and a mechanism beneath said platform and connected with said steps and adapted to be actuated on the opening movement of said door to extend said steps and on the closing movement of the door to shift the steps to a position in parallelism with said sill.

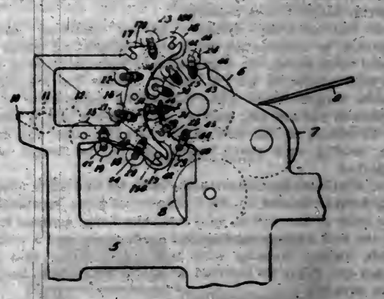
2. The combination with a car having a doorway, a platform, and a door adapted to close said doorway, of foldable steps adapted to lead to said platform, a mechanism beneath said platform and adapted to be actuated by a movement of said door for opening and closing said steps, said mechanism including side bars, a cross head connecting said bars, a bell crank lever for moving said cross head and an arm connecting with said door and said bell crank lever and adapted to be guided by said floor of said platform.

3. The combination with a platform provided with a door and a sill, of foldable steps when folded extending in parallelism with respect to said sill and when extended leading to said platform, a mechanism supported by the platform and actuated on the opening movement of the door to extend the steps and on the closing movement of the door shifting the steps to a position in parallelism with the sill.

4. The combination with a car having a platform, a door sill and a door, of foldable steps connected to said sill, a mechanism located beneath said platform and adapted to be actuated by a movement of said door for opening and closing said steps, said mechanism including bars extending through said sill and extending with the lower step, a cross head adapted to connect with said bars, a bell crank lever adapted to move said cross head, and an arm movable with said door and connecting with said bell crank lever.

5. The combination with a support, a door mounted thereon and a sill connected with the support, of foldable steps connected with the sill and formed of treads, risers and sectional side rails, means for hinging the risers to the treads whereby the treads will extend in parallelism with the risers when the steps are closed, means for hinging each pair of sections of the side rails together and to a riser and tread whereby said sections will fold inwardly between the risers and treads when the steps are closed, and means connected with said support and with said steps and adapted when actuated in one direction to open the steps and in the opposite direction to close the steps and position the treads and risers in parallelism with said sill.

960,004. INKING MECHANISM FOR PRINTING PRESSES. MICHAEL A. DROITCOUR, Chicago, Ill., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed July 1, 1909. Serial No. 505,335.



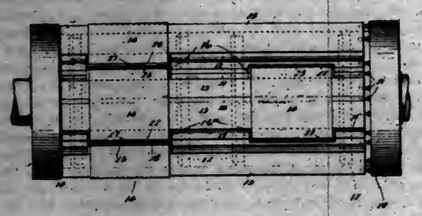
1. In an inking mechanism for printing presses, the combination of a frame having arc-shaped slots in its sides adjacent the cylinder, said slots being open at one end; and a cylinder; with a group of form inking roll bearings at-

tached to the frame beside said slots, inking rolls journaled in said bearings the journals of the rolls extending through said slots, a removable distributing roll located adjacent the open ends of said slots, said distributing roll confining the form inking rolls in said slots and said form inking rolls being removable when the distributing roll is removed.

2. In an inking mechanism for printing presses, the combination of a press frame having pairs of upper and lower arc-shaped slots formed in its sides adjacent the plate cylinder, each slot being open at one end; and a plate cylinder journaled in the frame beside said slots; upper and lower sets of parallel form inking rolls having their journals extending through said slots, removable bearings for the journals of said rolls attached to the main frame beside the slots, and distributing rolls located at the open ends of the slots and confining the form inking rolls therein, substantially as described.

3. In an inking mechanism for printing presses, the combination of a press frame having an arc-shaped slot adjacent the plate cylinder, and a plate cylinder journaled in the frame beside said slot; with a plurality of adjustable inking roll bearings opposite and projecting over said slots, form inking rolls having their journals in said bearings, removable bushings in the bearings for the journals of said rolls, and distributing rolls for supplying ink to said form inking rolls, substantially as described.

960,005. PRINTING CYLINDER AND PLATE. MICHAEL A. DROITCOUR, Chicago, Ill., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed July 17, 1909. Serial No. 508,094.



1. The printing cylinder, provided with undercut annular grooves, in combination with plate supporting blocks, and having depending hooks adapted to enter said grooves, some of said blocks being of full height and others of partial heights, means for forcing said blocks lengthwise to cause the engagement of the hooks in the grooves, short length blocks adapted to be placed on the partial height blocks, and means for locking the said short length and partial height blocks together.

2. The printing cylinder having undercut annular grooves, in combination with plate supporting blocks provided with means for engaging said annular grooves, some of said blocks of partial height, means for forcing the blocks lengthwise to cause the locking engagement of said means in the annular grooves, short length blocks adapted to be placed on the said partial height blocks, and means for locking such short length and partial height blocks together.

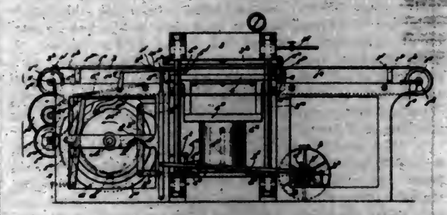
3. The combination with the cylinder and plate supporting blocks secured to the cylinder, of plate retainers for the ends of the plates, said retainers being secured to the blocks and having overhanging hook edges, and a printing plate having margins with lips for engaging said hook edges and fillers 28 inserted under the margins to keep the lips engaged.

4. In combination, a cylinder, blocks having hooks on their under side adapted to engage corresponding recesses in the cylinder, and means for forcing the blocks endwise to lock the hooks in the recesses and secure the blocks in position; with short blocks, means for adjustably attaching the short blocks to the other blocks, and plate retaining devices attached to said short blocks.

5. In combination, a cylinder provided with annular undercut grooves, longitudinal blocks provided with hooks adapted to engage said grooves, and means for forcing the said blocks endwise to lock the hooks in the grooves, some of said blocks being longitudinally grooved; with short blocks adjustably attached to the longitudinally grooved blocks, and plate retaining devices on the short blocks.

[Claims 6 to 16 not printed in the Gazette.]

960,006. PLATE-MAKING MACHINE. MICHAEL A. DROITCOUR, Chicago, Ill., assignor to Miehle Printing Press and Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 6, 1909. Serial No. 511,641.



1. In a matrix forming machine, the combination of means for pressing a plate against a matrix to receive a printing surface therefrom; with means for exhausting air from between the matrix and the plate, and at the back of the plate, prior to the pressing operation, and for continuing suction between the plate and matrix during the pressing operation, and means for relieving the vacuum beneath the plate prior to the pressing operation.

2. In a matrix forming machine, the combination of means for pressing a plate against a matrix to receive a printing surface therefrom; with means for exhausting air from between the back of the matrix and its support, and from between the matrix and the plate, and at the back of the plate, prior to the pressing operation, and for continuing suction between the plate and matrix, and the matrix and its support during the pressing operation, and means for relieving vacuum beneath the plate prior to the pressing operation.

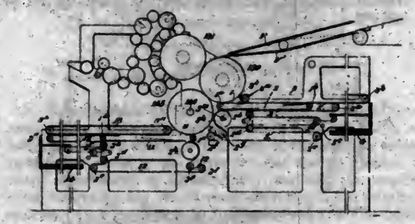
3. In a machine for forming printing plates from plastic material, the combination of press members, one of said members having a recess, means for securing a matrix and plate between said members and over said recess to close the latter, means for introducing pressure fluid into the closed recess to force the plate against the matrix, and means for thereafter introducing cooling fluid into said recess directly against the plate to chill the plate.

4. In a machine for forming printing plates from plastic material, the combination of press members, one of said members having a recess, means for securing a matrix and plate between said members and over said recess to close the latter air-tightly, and means for exhausting air to produce a partial vacuum between the plate and matrix when in position between said members; with means for introducing pressure fluid into the closed recess to force the plate against the matrix, and means for thereafter introducing cooling fluid into the closed recess to chill the formed plate.

5. In a machine for forming printing plates from plastic material, the combination of a pressure chamber, means for securing a matrix and plate in said chamber, and means for exhausting air between the plate and matrix when in position in said chamber; with means for introducing pressure fluid into the chamber to force the plate against the matrix, and means for introducing cooling fluid into said chamber to chill the plate after the pressing operation.

[Claims 6 to 46 not printed in the Gazette.]

960,007. SHEET-DELIVERY MECHANISM FOR PRINTING-PRESSES. MICHAEL A. DROITCOUR, Chicago, Ill., assignor to Miehle Printing Press and Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Original application filed June 7, 1909, Serial No. 500,672. Divided and this application filed Aug. 10, 1909. Serial No. 512,216.



1. In combination, a cylinder, tapes adapted to receive sheets from said cylinder and running at the peripheral speed of the cylinder, extensible tapes for transferring sheets from the first set of tapes, and rider tapes co-acting with the tapes; with means for intermittently traveling the rider and extensible tapes while the sheets are being carried to the point of delivery, and for stopping said tapes during the contraction thereof.

2. In combination, an impression cylinder, means for feeding sheets thereto, a delivery cylinder adapted to take alternate sheets from said impression cylinder, a tape delivery for delivering the alternate sheets from the impression cylinder, and a second tape delivery for taking the sheets from said delivery cylinder, each of said tape deliveries comprising a set of endless tapes receiving sheets from its related cylinder, and a set of extensible tapes for receiving sheets from the first set of tapes.

3. In combination, an impression cylinder, means for feeding sheets thereto, a delivery cylinder adapted to take sheets from said impression cylinder, a tape delivery operable at the peripheral speed of the impression cylinder for delivering the alternate sheets from the impression cylinder, and a second tape delivery mechanism operable at the speed of the delivery cylinder for taking the sheets from said delivery cylinder, each of said tape deliveries comprising a set of endless tapes receiving sheets from its related cylinder, and a set of extensible intermittently traveled tapes for receiving sheets from the first tapes.

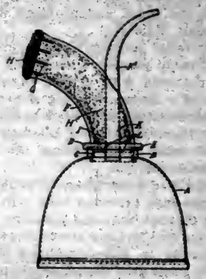
4. In combination, an impression cylinder, means for feeding sheets thereto, a delivery cylinder adapted to take alternate sheets from said impression cylinder, a tape delivery mechanism for delivering the alternate sheets from the impression cylinder, and a second tape delivery mechanism for delivering the sheets from said delivery cylinder, and sets of rider tapes co-acting with the sheet carrying portions of the delivery tapes.

5. In combination, an impression cylinder, means for feeding sheets thereto, a delivery cylinder adapted to take sheets from said impression cylinder, a tape delivery for delivering sheets from the impression cylinder, and a second tape delivery for taking the sheets from said delivery cylinder, each of said tape deliveries comprising a set of endless tapes receiving sheets from its related cylinder, a set of extensible intermittently traveled tapes for receiving sheets from the first tapes; means for driving the first set of tapes continually, and means for intermittently traveling the extensible tapes.

[Claims 6 to 17 not printed in the Gazette.]

960,008. OIL-CAN. WILLIAM V. EVANS and HENRY C. GORDON, San Diego, Cal. Filed June 21, 1907, Serial No. 380,185. Renewed Mar. 30, 1910. Serial No. 552,412.

1. An oil can consisting of a body, a curved spout secured at its inner end to said body, a similar spout passing through said first spout, being secured to the latter and having its inner end communicating with said can body, and a wick arranged in said first spout and surrounding said smaller spout.

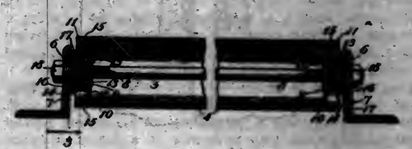


2. An oil can composed of a body, a spout secured to said body, and a second spout of less diameter than said first spout having its inner end projected through one of the walls of the first spout so as to communicate with the interior of said body, and a wick in the first spout which surrounds the inner end of the second spout.

3. An oil can composed of a body having an oil opening, a spout having a wick therein communicating with said opening, and a second spout having one end arranged in the first spout and communicating with said opening, said opening providing an oil passage for each of the spouts.

4. An oil can composed of a body having an oil opening, a spout having its inner end communicating with said opening, a second spout having its inner end passed through said first spout to project in said oil opening and being secured to said first spout, the free ends of each of the spouts being curved in opposite directions.

960,009. BALL-BEARING FOR CONVEYER-ROLLERS. SIGMUND L. GOLDMAN, Chicago, Ill. Filed Oct. 2, 1909. Serial No. 520,726.



In combination, side-supports, a tubular roller, ball-bearings on the roller ends, each comprising a cap composed of an outer annular section of spring metal, a separate annular section within said outer section and forming the ball-race, balls in said race, cone-forming stepped sleeves confining the balls therein and provided with angular heads extending beyond the peripheral edge of said inner annular sections and closing the same, a shaft extending centrally through said roller and having threaded end-sections upon which said cones are screwed and adjusted relative to the ball-races, and means on the shaft-ends for securing the shaft in place on the side-supports and for adjusting the cones relative thereto, as set forth.

960,010. CONVEYER-ROLLER. SIGMUND L. GOLDMAN, Chicago, Ill. Filed Dec. 27, 1909. Serial No. 535,095.



1. A conveyer-roller comprising, in combination, a tube, heads on the tube-ends, having central openings, a shaft

extending through the heads, and roller-journaling nuts on the shaft-ends bearing, at their inner faces, against the opposite heads about the openings therein and centering the tube on the shaft, and provided with outer faces of relatively small diameter.

2. A conveyer-roller comprising, in combination, a tube, heads having circular shoulders, separably confined on the tube-ends and provided with central openings, and nuts, each consisting of a journal-forming sleeve screwing on a shaft-end and terminating in a head having a nipple projecting from its inner face into a head-opening, said nuts bearing at their inner faces against the opposite heads about the openings therein.

3. A conveyer roller comprising, in combination, a tube, heads on the tube-ends provided with central openings, a shaft extending through the head-openings, and nuts, each consisting of a journal-forming sleeve screwing on a shaft-end and terminating in a spacing-head having an inner face of relatively great area with a nipple projecting therefrom into a head-opening, and an outer surface of relatively small area.

960,011. VAPOR-LAMP. CHARLES HALSTEAD, Brooklyn, N. Y. Filed Oct. 16, 1909. Serial No. 522,969.



1. In a vapor lamp, a wick tube having a port in its side, a mantle over the upper end of said wick tube, a sleeve surrounding said wick tube, and communicating with said mantle, and a movable shutter adapted to cover the port in said wick tube.

2. In a vapor lamp, a wick tube, a cap thereon, said tube having a port in its side, the same being adapted to be in communication with said cap, a mantle above said wick tube and within which said cap extends, said cap being adapted to be in communication with the interior of said mantle and said wick tube, and a shutter adapted to be raised and lowered and cover the port in said wick tube.

3. In a vapor lamp, a wick tube having passages on the exterior and interior thereof, and an outlet port in its side, and a cap on said tube, said cap having its lower end open adjacent to said port, and its upper end provided with an outlet port and a movable member independent of the cap and providing a vent when the lamp is extinguished.

4. In a vapor lamp, a wick tube having passages on the exterior and interior thereof, an outlet port in its side, a cap on said tube, a collar encircling the cap, with passages respectively between the tube and cap and the cap and collar, said cap having its lower end open adjacent to said port, and its upper end provided with an outlet port, and a shutter which is adapted to close said outlet port of the wick tube.

5. In a vapor lamp, a wick tube, a cap encircling said tube and a collar encircling said cap, with passages respectively between said tube and cap and said cap and collar, said passages being in communication below with said wick tube and the atmosphere.

[Claims 6 to 16 not printed in the Gazette.]

960,012. CURTAIN-STRETCHER. JOHN SOLOMON HEMLEY, Gallatin, Pa. Filed Dec. 30, 1909. Serial No. 535,688.



A curtain stretcher comprising a top, a bottom, and a pair of end bars, each of said bars formed of a pair of sections, an outwardly-extending right-angularly disposed supporting member carried by the inner end of each of the sections of each of the bars and having its outer end formed with a screw-threaded opening, the members carried by the sections of each bar opposing each other, means for connecting the outer ends of each of the sections of the top and bottom bars to the outer ends of the sections of the end bars, an adjustable coupling screw extending through the screw-threaded openings of each set of opposed end members and provided with an enlarged central portion formed with an opening, a shiftable handle extending through the opening of the said enlarged central portion and having each of its ends enlarged, a series of inwardly-extending and spaced curtain attaching hooks carried by each of the sections of each of said bars, and a brace member pivoted to the upper section of each of the end bars.

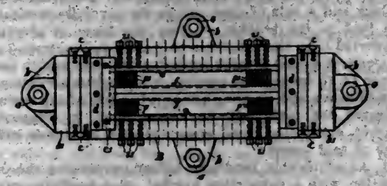
960,013. CLIP OR FASTENER APPLICABLE FOR SECURING BOOT-LACES AND NECKTIES. CAROLINE JOHANNA FREDERICA HIGHFIELD, Bayswater, London, England. Filed June 24, 1909. Serial No. 504,035.



In a clasp, the combination with a flat base provided with a central open portion, a loop hook connected with the sides of said base and extending across said open portion, and clasp members of substantially equal length hinged to the ends of said base and arranged to be turned into overlapping relation with respect to each other and abreast of that side of the base opposite to the side on which the hook is disposed to clamp the material between said base and members, each member having on its free end one element of a two part fastening device.

960,014. MACHINE FOR CUTTING SHEET METAL. HERMANN HILL, West Haven, Conn., assignor to Steel Fireproofing Company, Wheeling, W. Va., a Corporation of West Virginia. Filed July 24, 1906. Serial No. 445,076.

1. In a machine of the class described, two sets of cutters of two coöperating series in each set; means for supporting the two series of each set in coöperative relation to the two series of the other set and spaced apart a distance represented by substantially one half the length of a cut formed by any one of such cutters plus the length of a space between the cuts to be formed by either set of cutters and means for reciprocally moving the series of cutters in one of such sets coöperatively to and from the series of cutters in the other set.



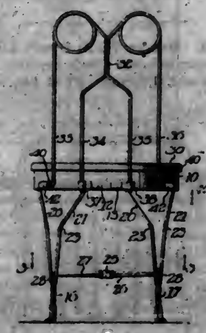
2. In a machine of the class described, two sets of cutters of two coöperating series in each set; means for supporting the two series of each set in coöperative relation to the two series of the other set and spaced apart a distance represented by substantially one half the length of a cut formed by any one of such cutters plus the length of a space between the cuts to be formed by either set of cutters; means for reciprocally moving the series of cutters in one of such sets coöperatively to and from the series of cutters in the other set and means for intermittently advancing the sheet between the cutters and between the operations of the cutters thereon a distance longitudinally of the sheet represented by the length of a cut formed therein by one of such cutters and added thereto the length of such a space between the cuts to be formed by either set of cutters.

3. As a means for holding a series of individual cutters properly spaced with their cutting edges in substantially parallel planes in a machine of the class described, a pair of rack bars having beveled grooves therein; beveled edges on the cutters adapted to engage the beveled grooves in the rack bars and means for clamping the rack bars together with the cutters between them.

4. As a means for holding a series of individual cutters properly spaced with their cutting edges in substantially parallel planes in a machine of the class described, a base piece for supporting such cutters; a pair of rack bars having beveled grooves therein; beveled edges on the cutters adapted to engage the beveled grooves in the rack bars and means for clamping the rack bars together with the cutters between them, such means connected to such base piece.

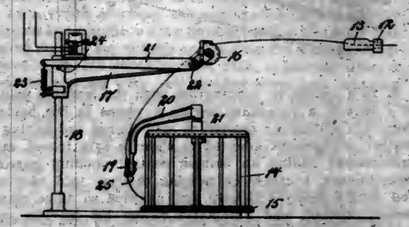
5. A cutter for the purpose described comprising a plate having a substantially flat bevel formed thereon near the cutting edge and having a segmental cutting edge formed by a second and a segmentally curved bevel less acute than the flat bevel.

960,015. COLLAPSIBLE FURNITURE. ALFRED B. HOLMES, Chicago, Ill. Filed Dec. 4, 1909. Serial No. 531,368.



In a chair of the class described, a seat frame comprising an annular band of metal, a pair of vertical sockets spaced apart and lying on opposite sides of the central portion of the back of the band, a pair of horizontal sockets spaced around the band toward the front thereof and equidistant from the respective vertical sockets, and a back comprising a pair of rods twisted together, one end of each of said rods being straight and fitted within a respective vertical socket and the other end having a right angled extremity fitted in one of the horizontal sockets.

960,016. WIRE-DRAWING MACHINE AND UNCOILING APPLIANCE THEREFOR. JAMES A. HORTON, Providence, R. I., assignor to Iroquois Machine Company, New York, N. Y., a Corporation of New York. Filed Apr. 18, 1906. Serial No. 312,288.



1. An uncoiling appliance comprising a coil-holder, and a reciprocatable guide adapted to engage and laterally swing the stretch of material passing from a coil on the holder.

2. An uncoiling appliance comprising a fixed coil-holder, a reciprocatable guide adapted to engage and laterally swing the stretch of material passing from a coil on the holder and a revolving guide movable in a path substantially concentric with the holder, and engaging the wire between the coil and the reciprocating guide.

3. An uncoiling appliance comprising a coil-holder, a reciprocatable guide adapted to engage and laterally swing the stretch of material passing from a coil on the holder, an arm mounted to revolve on a fixed center and having a guide at its outer end movable in a path substantially concentric with the holder, said arm having a separator interposed between the guide and the coil on the holder.

4. An uncoiling appliance comprising a coil-holder, a guide arranged to engage the stretch of material passing from a coil on the holder, and guide-supporting means having provisions for permitting a sidewise movement of the guide to swing the stretch of wire, and a yielding movement of the guide under an increase of strain on the material engaged therewith.

5. In a wire drawing machine, the combination with a wire drawing die, a lubricant-holder adjacent thereto, a guide adapted to engage a stretch of material passing through the lubricant-holder and die, and means for movably supporting the guide, said means having provisions for permitting the guide to oscillate in the directions required to laterally swing the stretch of material in the lubricant-holder.

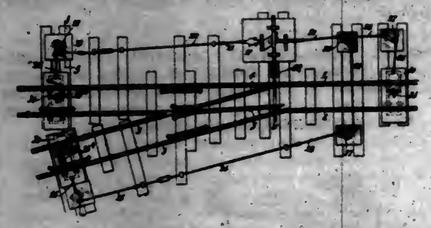
[Claim 6 not printed in the Gazette.]

960,017. AUTOMATIC RAILWAY-SWITCH. EMMETT HOWARD, Eugene, Oreg., assignor, by direct and mesne assignments, to The Howard Automatic Railway Switch Company, Eugene, Oreg., a Corporation of Oregon. Filed July 22, 1909. Serial No. 508,960.

1. In an automatic switch, the combination with the movable points, a sliding bar connected to the points and having an intermediate opening, a movable cam-block passing through said opening, means for yieldably holding said cam-block at either limit of movement, a movable roller, motion imparting means connecting said roller and said cam-block and means for engaging and operating said roller.

2. In an automatic switch, the combination with the movable points of a tie-rod secured to the points, a slide-

bar, means for automatically moving said slide-bar, a housing secured to the slide-bar, a threaded rod secured to the tie-rod and passing longitudinally through the housing, disks on said threaded rod, springs interposed between the disks and the ends of the housing, and nuts on said threaded rod for adjustably holding said disks in position.



3. In a switch in combination with the movable points of a tie-rod, a base-plate having a recess in the bottom thereof, a sliding-bar secured to said tie-rod and having a central enlargement adapted to slide in said recess, said enlargement having an oblique central opening passing therethrough, a cam-block passing through said opening, and snugly received therein and adapted to move transversely thereof, and automatic means for moving said cam-block.

4. In a switch the combination with the movable points of a base-plate, a cam-bar slidable on said base-plate and having an enlargement near one end, rods slidably mounted on said plate, rollers carried on said rods and engaging said enlargement, collars on said rods, helical springs on said rods and engaging said collars to press said rollers against said enlargement, means for imparting movement to the cam-bar and means for communicating motion from the cam-bar to the points.

5. In a switch the combination with the movable points of a supporting-plate having an intramarginal opening, brackets secured to the under face of said plate, a frame slidable in said brackets, a roller-carrying plate mounted on the frame and in said opening, a stub-shaft secured on said roller-carrying plate, a roller on said shaft, an additional bracket mounted on the roller-carrying plate and having a bore receiving the upper end of the stub-shaft, vehicle carried means adapted to engage and move said roller and motion imparting means connecting said frame and said points.

[Claims 6 and 7 not printed in the Gazette.]

960,018. HEADLIGHT. WALTER C. HUEBNER, Johnstown, Pa. Filed Sept. 24, 1909. Serial No. 519,426.



1. An adjustable headlight holder comprising the combination with a supporting bracket, of a headlight carrying plate having projecting rearwardly therefrom a pair of lugs and a pair of eyes, means for pivotally-connecting the lugs to the bracket whereby the plate is pivotally-supported from the bracket, a pair of spring-controlled and vertically-disposed pivoted actuating levers normally maintained in an inoperative position, and a connection between each of said levers and an eye whereby when one of the levers is operated the plate will be swung upon its supporting bracket.

2. An adjustable headlight holder comprising the combination with a supporting bracket, of a headlight carrying plate having projecting rearwardly therefrom a pair of lugs and a pair of eyes, means for pivotally-connecting the lugs to the bracket whereby the plate is pivotally-supported from the bracket, a pair of spring-controlled and vertically-disposed pivoted actuating levers normally maintained in an inoperative position, a connection between each of said levers and an eye whereby when one of the levers is operated the plate will be swung upon its supporting bracket, and a foot tread connected with the lower end of each of said levers.

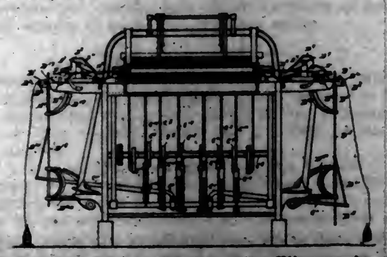
3. An adjustable headlight holder comprising the combination with a supporting bracket, of a headlight carrying plate having projecting rearwardly therefrom a pair of lugs and a pair of eyes, means for pivotally-connecting the lugs to the bracket whereby the plate is pivotally-supported from the bracket, a pair of vertically-disposed pivoted actuating levers, each of said levers provided with a slot, a spring fixed intermediate its ends and having its ends extending through the slots of the levers and constituting means for returning the levers to inoperative position, and a connection between each of the levers and an eye whereby when one of the levers is operated the plate will swing upon its supporting bracket.

4. An adjustable headlight holder comprising the combination with a supporting bracket, of a headlight carrying plate having projecting rearwardly therefrom a pair of lugs and a pair of eyes, means for pivotally-connecting the lugs to the bracket whereby the plate is pivotally-supported from the bracket, a pair of vertically-disposed pivoted actuating levers, each of said levers provided with a slot, a spring fixed intermediate its ends and having its ends extending through the slots of the levers and constituting means for returning the levers to inoperative position, a pair of shiftable links a connection between each of the links and an eye whereby when one of the links is shifted the plate will swing upon its supporting bracket, and a connection between each of the links and the upper end of each of the levers whereby the links are shifted when the levers are actuated.

5. An adjustable headlight holder comprising the combination with a supporting bracket, of a headlight carrying plate having projecting rearwardly therefrom a pair of lugs and a pair of eyes, means for pivotally-connecting the lugs to the bracket whereby the plate is pivotally-supported from the bracket, a pair of vertically-disposed pivoted actuating levers, each of said levers provided with a slot, a spring fixed intermediate its ends and having its ends extending through the slots of the levers and constituting means for returning the levers to inoperative position, a connection between each of the levers and an eye whereby when one of the levers is operated the plate will swing upon its supporting bracket, and a foot tread projecting from the lower end of each of the levers.

[Claims 6 to 8 not printed in the Gazette.]

960,019. LOOM. ROBERT H. H. HUNT, Alameda, Cal., assignor to Economic Loom Company, San Francisco, Cal., a Corporation of California. Filed Aug. 3, 1896. Serial No. 601,546.



1. In a loom, the combination of a filling carrier provided with a pair of nipper jaws at each end, means for presenting in succession to the jaw at either end the ends of a thread, automatic mechanism for opening the nipper jaws on one side of the loom to seize an end of filling yarn presented thereat and automatic mechanism for opening the jaws at the other side of the loom to release said end, substantially as described.

2. In a loom, the combination of a filling carrier, means for moving said carrier from side to side of the loom, means for presenting at either side of the loom the ends of a thread, means carried by said filling carrier for seizing said ends in succession, and means operated at the opposite side of the loom for causing said filling carrier to twice release in succession ends of alternate threads, substantially as described.

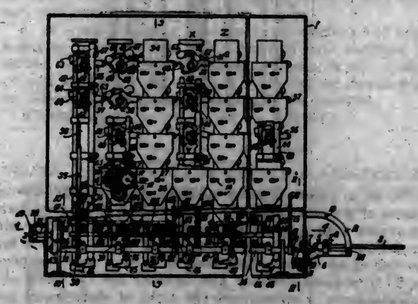
3. In a loom the combination of a filling carrier, means for presenting at the side of the loom the end of a thread, means for measuring off a predetermined length of said thread, means carried by said filling carrier for seizing said end, means for reciprocating the carrier across the loom, means for cutting off the thread so measured and presenting the second end to the filling carrier on its return to the same side of the loom, and means for automatically causing the filling carrier to engage the second end and to carry it across the loom, substantially as described.

4. In a loom, the combination of a pair of shears at each side thereof adapted to cut the filling yarn into lengths, feeding mechanism adapted to hold the ends of such filling thread when severed and successively present them to a filling carrier and a filling carrier adapted to successively transport said ends to the opposite side of the loom to be laid in the warp in the process of weaving, substantially as described.

5. In a loom, the combination of a filling carrier for carrying a thread across the warp, means for momentarily arresting said filling carrier at the close of its flight and subsequently releasing the same and means for moving it on in the same direction to cause it to release a thread so as to leave the end thereof in the selvage and to seize the end of another thread from a feeder, and said feeder for said end, substantially as described.

[Claims 6 to 71 not printed in the Gazette.]

960,020. VOTING-MACHINE. GUSTAF JOHNSON, Pigeon Cove, Mass., assignor to Francis J. V. Dakin, Boston, Mass. Filed Aug. 12, 1905. Serial No. 273,914.



1. In a voting machine, the combination of a manually controlled key-spindle, a rack having teeth, a toothed wheel mounted on said key-spindle and having diametrically disposed teeth for engaging said rack, means to lock said key-spindle, after it has been turned a half-revolution, against further forward rotation until the machine is set for the next voter, and means to lock said key-spindle against rearward rotation when the machine is set for the next voter.

2. In a voting machine, the combination of a manually controlled key-spindle, a rack having teeth, a toothed wheel mounted on said key-spindle and having two diametrically-disposed teeth for engaging said rack, and means which lock said key-spindle to prevent more than a half revolution thereof by any one voter but permit the key-spindle to be turned back at any time before the machine is set for the next voter; said means comprising a cam-wheel mounted on said key-spindle, a locking lever and a dog all operatively arranged.

3. In a voting machine, the combination of a manually controlled key-spindle, a rack having teeth, a wheel having teeth for engaging said rack, a locking lever, and a cam-wheel turning with said toothed-wheel and engaging said locking-lever to prevent more than a half revolution forward of said key-spindle by any one voter but which permits the key-spindle to be turned back at any time before the machine is set for the next voter.

4. In a voting machine, the combination of a manually controlled key-spindle, a rack having teeth, a toothed wheel mounted on said key-spindle and having two diametrically-disposed teeth for engaging said rack, a locking lever, a cam-wheel turning with said toothed-wheel and engaging said locking lever to limit the rotation of the key-spindle after it has been turned to register a single vote, and a dog adapted to engage said cam-wheel to prevent its rotation rearward after the machine has been set for the next voter.

5. In a voting machine, the combination of a manually controlled key-spindle, a rack having teeth, a toothed wheel mounted on said key-spindle and having two diametrically-disposed teeth for engaging said rack, a locking lever, a cam-wheel turning with said toothed-wheel and engaging said locking lever to lock the key-spindle after it has been turned a half revolution and a dog adapted to engage said cam-wheel to lock the key-spindle against rearward turning after the machine has been set for the next voter.

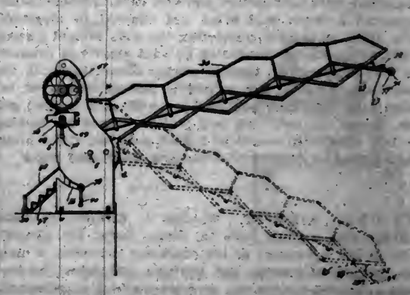
[Claims 6 to 8 not printed in the Gazette.]

960,021. DIAPHRAGM FOR TALKING-MACHINES. FRANK KANE, Tacony, Pa. Filed July 28, 1907, Serial No. 385,203. Renewed Jan. 10, 1910. Serial No. 537,339.



A diaphragm composed of a central cupped portion of uniform thickness and a horizontal disk like portion being of greatest thickness at the periphery of said cupped portion and thence gradually decreasing in thickness and tapering to the periphery of said disk-like portion which is of least and wafer like thickness.

960,022. GANG-PLANK. ANDREW KELEMEN and STEPHEN LAZIS, Youngstown, Ohio. Filed July 15, 1909. Serial No. 507,767.



1. A gang plank, comprising standards, a shaft journaled in said standards, a plank fixed to said shaft be-

tween said standards, toothed sectors loosely mounted upon said shaft, bars fixed upon said shaft, lazy tong arms connecting with said bars and said toothed sectors, planks arranged between said arms and adapted to aline with the first mentioned plank, collapsible railings supported by said arms and connecting with said toothed sectors, means carried by said bars for moving said toothed sectors, and means arranged between said standards for raising and lowering the lower ends of said bars.

2. A gang-plank comprising standards, a shaft journaled in said standards, a plank fixed to said shaft between said standards, toothed sectors loosely mounted upon said shaft, bars fixed upon said shaft, lazy tong arms connecting with said bars and said toothed sectors, planks arranged between said arms and adapted to aline with the first mentioned plank, collapsible railings supported by said arms and connecting with said toothed sectors, means carried by said bars for moving said toothed sectors, means arranged between said standards for raising and lowering the lower ends of said bars.

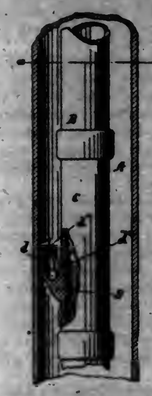
3. A gang-plank comprising a revoluble platform, standards carried by said platform, a shaft journaled in said standards, a plank fixed upon said shaft between said standards, toothed sectors loosely mounted upon said shaft, a shaft journaled in the lower ends of said bars, pinions mounted upon said shaft and meshing with said toothed sectors, lazy tong arms connecting with said sectors and said bars, movable planks supported between said arms and adapted to longitudinally aline, a collapsible railing supported by said arms and connecting with said sectors, toothed pitmen connecting with the lower ends of said bars, revoluble pinions supported between said standards and meshing with said toothed sectors, means for revolving said pinions, and means for locking the last mentioned means in a closed position.

4. A gang-plank comprising a revoluble platform, standards carried by said platform, a shaft journaled in said standards, a plank fixed upon said shaft between said standards, toothed sectors loosely mounted upon said shaft, bars fixed upon said shaft, a shaft journaled in the lower ends of said bars, pinions mounted upon said shaft and meshing with said toothed sectors, lazy tong arms connecting with said sector and said bar, movable planks supported between said arms and adapted to longitudinally aline, means for connecting the ends of said planks, a collapsible railing supported by said arms and connecting with said sectors, toothed pitmen connecting with the lower ends of said bars, revoluble pinions supported between said standards and meshing with said toothed pitmen, means for revolving said pinions, and means for locking the last mentioned means in a fixed position.

5. A gang-plank comprising a revoluble platform, standards carried by said platform, a shaft journaled in said standards, a plank fixed upon said shaft between said standards, toothed sectors loosely mounted upon said shaft, bars fixed upon said shaft, a shaft journaled in the lower ends of said bars, pinions mounted upon said shaft and meshing with said toothed sectors, lazy tong arms connecting with said sectors and said bars, movable planks supported between said arms and adapted to longitudinally aline, means for connecting the ends of said planks, a collapsible railing supported by said arms and connecting with said sectors, toothed pitmen connecting with the lower ends of said bars, revoluble pinions supported between said standards and meshing with said toothed pitmen, means for revolving said pinions, means for locking the last mentioned means in a fixed position, and a stairway adapted to connect with the first mentioned plank.

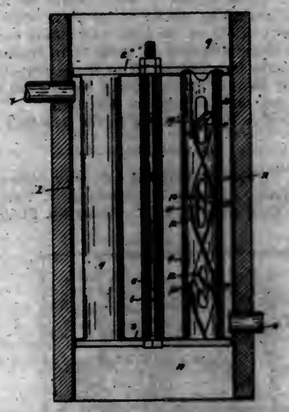
960,023. AIR-LIFT. WALTER A. KNIGHT, Pleasant Ridge, Ohio. Filed June 15, 1908. Serial No. 438,647.

In air-lift apparatus of the character indicated, a main tube section of smooth and uniform cylindrical interior surface, provided with one or more air-feed apertures extending through the tube-wall, inclined upwardly from without inwardly and terminating flush with said interior surface, and provided also with an external chambered projection at the some of the tube apertures and connecting the chamber therewith, said projection having a sup-



ply aperture fitted for connection of a supply pipe at the outside of the main tube.

960,024. AGITATOR FOR GRAIN-HEATERS. AUGUST J. KOEGLER, Milwaukee, Wis. Filed Sept. 7, 1909. Serial No. 516,535.

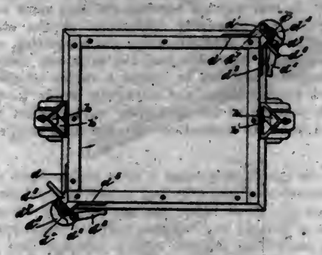


1. In a grain deflector and agitator for the heating ducts of a grain heater, an elongated strip of sheet metal provided with a series of apertures, in combination with a plurality of deflecting plates, one of which plates is supported at an angle to said strip in each of said apertures.

2. In a grain deflector and agitator for the ducts of a grain heater, a spirally curved strip of sheet metal provided with a series of elongated apertures in combination with a plurality of deflecting plates, one of which plates is supported at an angle to the vertical in each of said apertures.

3. In a grain deflector and agitator for the ducts of a grain heater, a spirally curved strip of sheet metal provided with a series of elongated apertures in combination with a plurality of integrally formed deflecting plates, one of which plates is supported at an angle to the vertical in each of said apertures, and a plurality of radial arms connected with the upper end of said strip for supporting the latter from the upper end of a grain heating tube.

960,025. MOLDER'S FLASK. GEORGE E. LINN, Springfield, Ohio, assignor, by direct and mesne assignments, to Lillian M. Mitchell, Springfield, Ohio. Filed Dec. 31, 1909. Serial No. 535,881.



1. In a molder's flask, a plurality of members, means for removably securing said members together, and means for separating the walls of one of said members independently of the other member or members when in assembled condition, said separating means comprising pivoted operating levers located at diametrically opposite corners, substantially as specified.

2. In a molder's flask, a plurality of members, means for removably securing said members together, sand strips on one of said members, and means for separating the walls of said sand strip member independent of the other member or members when in assembled condition, said separating members comprising pivoted operating levers, substantially as specified.

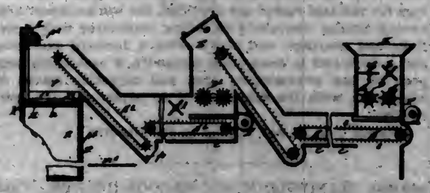
3. In a molder's flask, a plurality of members, means for separating the walls of one of said members independently of the other member or members when in assembled condition, said separating members comprising pivoted operating means, and interengaging parts between said members for removably securing the same together, said interengaging parts being so constructed as to permit the separating of said separable member, substantially as specified.

4. In a molder's flask, a plurality of members, elongated guide sockets on one of said members and guide pins on the other of said members, a sand strip on one of said members, and means for separating the walls of said member, substantially as specified.

5. In a molder's flask, a plurality of members and interengaging parts for removably securing said members together, and means for separating the walls of one or more of said members independent of said securing means when in assembled condition, substantially as specified.

[Claims 6 to 9 not printed in the Gazette.]

960,026. APPARATUS FOR REDUCING AND PACKING WASTE PAPER. ABBOT AUGUSTUS LOW, Horseshoe, N. Y. Filed Sept. 9, 1909. Serial No. 516,847.



1. In apparatus for treating waste paper, the combination of the dump hopper, disintegrating mechanism arranged to receive the waste paper from said dump hopper and discharge it in shredded form upon perforated shaking and forwarding mechanism, said shaking and forwarding mechanism, arranged to receive the reduced paper and deliver it to a packing device, said packing device, and means for compressing the disintegrated paper within the packing device, for the purpose described.

2. In apparatus for treating waste paper, the combination of the dump hopper, disintegrating mechanism arranged to receive the waste paper from the said dump hopper and discharge it in shredded form upon perforated shaking and forwarding mechanism, a mechanical agitator arranged to stir the paper on said shaking and forwarding mechanism, a packing device arranged to receive the reduced paper from said shaking and forwarding mechanism, and means for compressing the disintegrated paper within the packing device, for the purpose described.

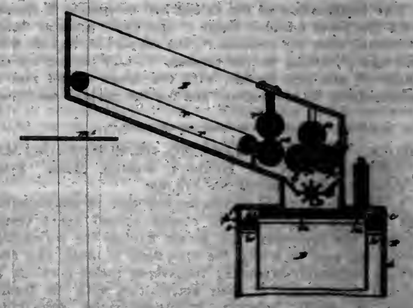
3. In apparatus for treating waste paper, the combination with the dump hopper, disintegrating mechanism arranged to receive the waste paper from said dump hopper, and discharge it in shredded form upon perforated shaking and forwarding mechanism, said shaking and forwarding mechanism, air blast mechanism arranged to forward the reduced paper over said shaking and forwarding mechanism, packing device arranged to receive the reduced paper from said shaking and forwarding mechanism, and means for compressing the disintegrated paper within the packing device, for the purpose described.

4. In apparatus for treating waste paper, the combination of the dump hopper, disintegrating mechanism, arranged to receive the waste paper from said dump hopper and discharge it in shredded form upon perforated shaking and forwarding mechanism, said shaking and forwarding mechanism, an agitator arranged above said shaking and forwarding mechanism, air blast mechanism arranged to forward the reduced paper over the shaking and forwarding mechanism, a packing device arranged to receive the reduced paper from said shaking and forwarding mechanism, and means for compressing the disintegrated paper in the said receptacle, for the purpose described.

5. In apparatus for treating waste paper, the combination of the dump hopper, disintegrating mechanism arranged to receive waste paper from said dump hopper and discharge it in shredded form upon perforated shaking and forwarding mechanism, said shaking and forwarding mechanism, a screen interposed between said shaking and forwarding mechanism, and a refuse receptacle, a packing device arranged to receive the reduced paper from said shaking and forwarding mechanism, and means for compressing the disintegrated paper within the packing receptacle, for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

960,027. APPARATUS FOR REDUCING AND PACKING WASTE PAPER. ABBOT AUGUSTUS LOW, Horseshoe, N. Y. Filed Oct. 1, 1909. Serial No. 520,577.



1. In apparatus of the character described, the combination with the feed and disintegrating mechanism, of a bag holder consisting of two rectangular frames, means for clamping the edges of a bag between said rectangular frames, means for supporting said frames in the casing

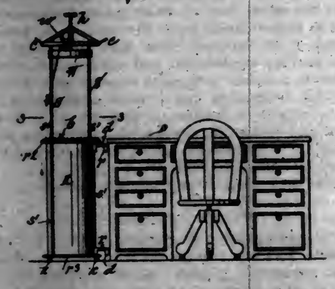
and a packing follower arranged to compress the desiccated material in the bag, for the purpose described.

2. In apparatus of the character described, the combination of a receiving box, an endless screen in the lower portion thereof arranged to convey the material to receiving rollers, said receiving rollers, feed rollers arranged to take the material from said receiving rollers and feed it to a disintegrator, said disintegrator and a packing device arranged to receive the desiccated material from the disintegrator and compress it within a receptacle, for the purpose described.

3. In apparatus of the character described, the combination of a receiving box, an endless screen in the lower part thereof arranged to convey the material from the receiving rollers, said receiving rollers, one of which is free to adapt itself to the thickness of material passing between them, feed rollers arranged to take the material from the receiving rollers and feed it to a disintegrator, an idler roller resting upon said feed rollers, said disintegrating device and mechanism arranged underneath the same for packing the desiccated material, for the purpose described.

4. In apparatus of the character described, the combination of a receiving box an endless screen in the lower portion thereof arranged to convey the material to receiving rollers, said receiving rollers, feed rollers arranged to take the material from said receiving rollers and feed it to a disintegrator, said disintegrator and a packing device arranged to receive the desiccated material from the disintegrator and compress it within a receptacle, and means for reversing the motion of the receiving and feed rollers for the purpose of preventing clogging, substantially in the manner and for the purpose described.

960,028. WASTE-PAPER RECEPTACLE. ABBOT AUGUSTUS LOW, Horseshoe, N. Y. Filed Oct. 19, 1909. Serial No. 523,400.

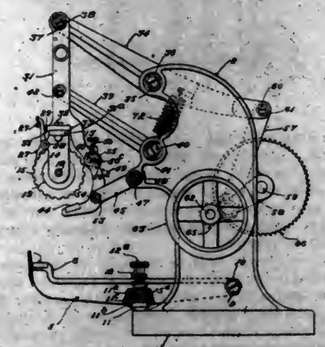


The combination of the cylindrical receptacle R formed with the lower annular flange r^3 and upper annular flange r^6 formed with the recesses r', the support S, formed with the legs s', fitting in the recesses r', and resting on the flange r^6, and also formed with the hooks c, and rest h, substantially in the manner and for the purpose described.

960,029. STAMPING, MARKING, OR NUMBERING MACHINE. FRANK W. MERRICK, Boston, Mass. Filed June 12, 1907. Serial No. 378,609.

1. In a stamping or numbering machine, in combination, the opposite frame-sides or cheeks spaced apart transversely, the type-head, the rocker having the forwardly-projecting arm to which the type-head is hung, and also having oppositely-extending transverse rocker-portions in pivotal engagement at their extremities with the frame-sides or cheeks, whereby widely-separated supporting bearings for the said rocker are provided, and the stationary work-support arm having similar oppositely-extending transverse rocker-portions and bearings, and also having a forward extension and a work-rest provided thereon.

2. In a stamping or numbering machine, the combination with the machine-frame having its opposite sides or cheeks separated by an unoccupied space rearward of the work-rest, the type-head, and the rocker to the forward end of which the type-head is hung, the said rocker itself being hung by its rear portion between the said sides or cheeks and projecting forwardly therefrom, of the stationary work-support arm similarly hung and projecting, and having its forward extension and the work-rest clear of the machine-frame and bed to permit a carton or the like to be fitted around them, and adjusting means to vary the working position of the stationary work-support arm vertically around its connection with the sides or cheeks.



3. In a stamping or numbering machine, in combination, the opposite frame-sides or cheeks spaced apart transversely, the type-head, the rocker having the forwardly-projecting arm to which the type-head is hung, and also having oppositely-extending transverse rocker-portions in pivotal engagement at their extremities with the frame-sides or cheeks, whereby widely-separated supporting bearings for the said rocker are provided, the work-support arm having similar oppositely-extending transverse rocker-portions and bearings, and also having a forward extension and a work-rest in connection therewith, and a cushioning support for the work-support arm itself.

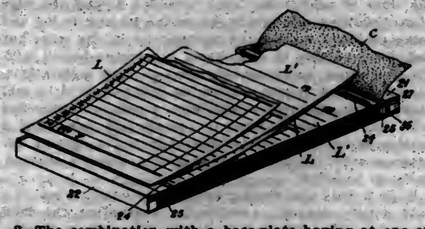
4. In a stamping or numbering machine, the combination with the machine-frame having opposite sides or cheeks, of the type-head, and the type-head supporting rocker to which the type-head is hung, and the stationary work-support arm provided with a work-rest, both hung between the said sides or cheeks, of means to adjust vertically the working position of the said stationary arm and its work-rest upon its connection with the sides or cheeks.

5. In a stamping or numbering machine, in combination, the opposite frame-sides or cheeks spaced apart transversely, the type-head, the rocker having the forwardly-projecting arm to which the type-head is hung, and also having oppositely-extending transverse rocker-portions in pivotal engagement at their extremities with the frame-sides or cheeks, whereby widely-separated supporting bearings for the said rocker are provided, the work-support arm having similar oppositely-extending transverse rocker-portions and bearings, and also having a forward extension and a work-rest in connection therewith, a cushioning support for the work-support arm, and adjusting means in connection with the said support to adjust the arm vertically.

[Claims 6 to 33 not printed in the Gazette.]

960,030. MANIFOLDING-SALES-BOOK HOLDER. CARL A. MONSON, Hartford, Conn. Filed June 2, 1908. Serial No. 436,191.

1. A sales-book-holder comprising a base-plate having at one of its ends a box, a bar for engaging the sales-slips, arms carrying said bar and pivoted in the end walls of said box, and means disposed within and entirely inclosed by said box for actuating said arms to force said bar toward the base-plate.



2. The combination with a base-plate having at one of its ends an inclosed hollow box, of a blank-holder comprising a bar for engaging the top of the blank pile near one end thereof, arms carrying said bar and pivoted in the end walls of said box and having angular extensions within said box, and a spring disposed within said box for engaging both of said extensions to actuate said arms so as to force the bar toward the base-plate.

3. The combination with a sheet metal base-plate having one of its ends bent to form an inclosed hollow box comprising a wall extending across the base-plate and a pair of end walls, of a wire blank-holder bent to form a blank-engaging bar and a pair of arms pivoted in said end walls and having an angular extension, and a blade-spring within said box and interposed between said cross-wall and said extension for actuating said bar toward the base-plate.

4. The combination with a sheet metal base-plate having one of its ends bent to form a box comprising a wall extending across the base-plate for positioning a blank pile and a pair of end walls, of a blank-holder comprising a bar extending across said base-plate, and a pair of arms pivoted in said end walls, one of said arms having an angular extension within the confines of the box, and a spring in engagement with said extension and inclosed within said box for forcing said bar toward the base plate.

5. The combination, with a base-plate having at one of its ends an inclosed hollow box comprising a wall extending across said base-plate, and a pair of end walls, of a wire blank-holder bent to form a blank-engaging bar, and a pair of arms pivoted in said end walls and having angular extensions, and a blade-spring inclosed within said box, and resting against the inner surface of said wall and having its ends in engagement with said extensions, respectively, for forcing said bar toward the base-plate.

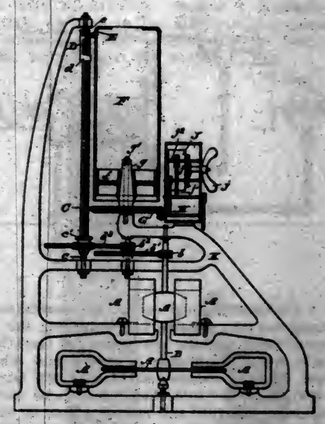
[Claims 6 to 8 not printed in the Gazette.]

960,031. POSTING-RULER. WILLARD MORRIS, Danville, N. Y. Filed Sept. 14, 1908. Serial No. 452,936.



A ruler formed of a flat relatively-thin single piece of material having on each side thereof spaces for account-names arranged in the same order and in the same relative positions apart, respectively, as corresponding names on account-pages on which the ruler is to be used, and a flange secured to and projecting from each side of the ruler and arranged to engage with an edge of the page whereby the names on the ruler are brought in line with those on the page, the ruler being adapted to be placed on said page to designate at one place the lines thereof which bear at another place names corresponding to those of the ruler.

960,032. RECORDING MECHANISM. WILLIAM L. MORRIS, Chicago, Ill. Filed Jan. 20, 1904. Serial No. 189,790.



1. In recording mechanism or the like, the combination with two vertically-disposed rotatable members, of a marking device traveling upon one of said members and adapted to mark upon the other thereof, said marker being held against such second member by frictional contact with said first member.

2. In recording mechanism or the like, the combination with a record-receiving member, of a rotatable member adjacent thereto, and a marking device movable along said rotatable member and held against said record-receiving member by frictional contact with said rotatable member only, whereby said marking device is enabled to accommodate itself to inequalities in the surface of said record-receiving member and a uniform resistance is offered to the movement of said rotatable member at all times.

3. In recording mechanism or the like, the combination with a record-receiving drum rotating at a uniform rate of speed, of a threaded shaft parallel therewith, and a marking device mounted upon said shaft and held against said drum by frictional contact with said shaft only, whereby said marking device is adapted to oscillate about said shaft to accommodate itself to inequalities in the surface of said record-receiving drum and a uniform resistance is offered to the movement of said shaft at all times.

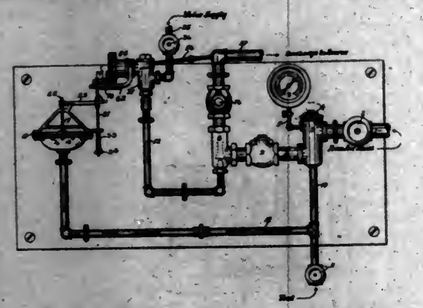
4. The combination with a meter calibrated to overcome a constant resistance, of recording mechanism therefor, such mechanism including a record-receiving member, a rotatable member adjacent thereto, and a marking device movable along said rotatable member and held against said record-receiving member by frictional contact with said rotatable member only, whereby said marking device is enabled to accommodate itself to inequalities in the surface of said record-receiving member and a uniform resistance is offered to the movement of said rotatable member at all times.

5. The combination with a meter calibrated to overcome a constant resistance, of recording mechanism therefor, such mechanism comprising a record-receiving drum, rotating at a uniform rate of speed, a threaded shaft par-

ailel therewith, and a marking device mounted upon said shaft and held against said drum by frictional contact with said shaft only, whereby said marking device is adapted to oscillate about said shaft to accommodate itself to inequalities in the surface of said record-receiving drum and a uniform resistance is offered to the movement of said rotatable member at all times.

[Claims 6 to 15 not printed in the Gazette.]

960,033. AUTOMATIC FLUID-REGULATOR. JAMES J. MCDONALD, Cleveland, Ohio. Filed Sept. 17, 1906. Serial No. 334,882.



1. In a fluid distributing system, the combination of a fluid supply conduit, a valve for controlling the flow of fluid through said conduit, and means for operating said valve, said means comprising a second fluid conduit, a diaphragm chamber communicating with the latter conduit, a diaphragm for said chamber, a frame carried by said diaphragm chamber and having a foot or extension projecting beyond the edge of said chamber, a stem connected with said diaphragm, a lever pivoted to said frame and connected to said stem, a connection between said lever and said valve, a rod connected with said lever and extending through said foot or extension, a spring on said rod, and means for adjusting the tension of said spring, substantially as specified.

2. In a fluid distributing system, the combination of a fluid supply conduit, a valve for controlling the flow of fluid through said conduit, and means for operating said valve, said means comprising a second fluid conduit, a fluid pressure motor having a chamber communicating with the latter conduit, a frame carried by said chamber and having a foot or extension projecting beyond the edge thereof, a stem connected with said motor, a lever pivoted to said frame and connected to said stem, a connection between said lever and said valve, a rod connected with said lever and extending through said foot or extension, and means on said rod and engaging said foot or extension for adjusting the pressure at which the motor shall operate, substantially as specified.

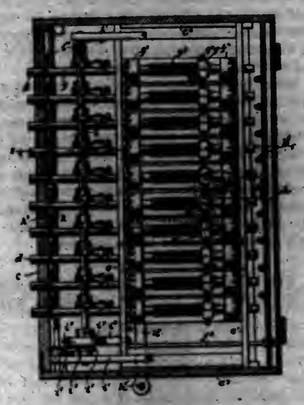
3. In a fluid distributing system, the combination of a fluid supply conduit, a valve for controlling the flow of fluid through said conduit, and means for operating said valve, said means comprising a second fluid conduit, a diaphragm chamber connected therewith, a diaphragm in said chamber, a frame secured to said chamber and having a foot or extension projecting beyond an edge thereof, a stem connected with said diaphragm, a lever pivotally supported from said frame and connected to said stem, a connection between said lever and said valve, and a rod connected to said lever and extending through the foot or extension of said frame, a nut on said rod and a spring interposed between said nut and said foot or extension, substantially as specified.

4. In a fluid distributing system, the combination of a fluid supply conduit, a valve for controlling the fluid through said conduit, and means for operating said valve, said means comprising a second fluid conduit, a diaphragm chamber connecting therewith, a diaphragm in said chamber, an A-shaped frame secured to said chamber, one of the sides of said frame being extended beyond the edge of said chamber and said frame having an arm or lug and being provided with alined perforations in the cross bar and upper portion of said frame, a stem connected with the diaphragm and extending through said perforations, a lever pivoted to said arm or lug and connected to said stem, a link connected to said lever, a rock arm connected with said link and adapted to operate said valve, and a tension device connected with said lever for varying the pressure under which the diaphragm is operated, substantially as specified.

5. In a fluid distributing system, the combination of a fluid supply conduit, a valve for controlling the fluid through said conduit, and means for operating said valve, said means comprising a second fluid conduit, a diaphragm chamber communicating therewith, a diaphragm in said chamber, an A-shaped frame secured to said chamber, one of the sides of said frame being extended beyond the edge of said chamber and said frame having adjacent the upper portion thereof an arm or lug and being provided with a perforation in the cross bar thereof, a stem connected with the diaphragm and extending through said perforation, a lever pivoted to said arm or lug and connected to said stem, a connection between said lever and said valve, and means connected with said lever for varying the pressure under which the diaphragm is operated, substantially as specified.

[Claims 6 to 22 not printed in the Gazette.]

960,034. VOTING-MACHINE. JOHN MCTAMMANY, Worcester, Mass. Filed Sept. 28, 1898. Serial No. 692,068.



1. A voting machine consisting of a casing having a flat removable front wall, voting lists on the face of said front wall vote-tabulating mechanism supported by said casing, and arranged in the rear of said front wall, and a series of actuators carried and supported entirely by the front wall and having their rear ends disconnected from but in operative relation to the vote-tabulating mechanism, said elements being arranged and combined whereby the front wall may be removed, carrying with it the actuators, without affecting or disturbing the vote tabulating mechanism or any part thereof.

2. A voting machine consisting of a casing, vote-tabulating mechanism supported by said casing, a flat removable front wall detachably connected to said casing and carrying a voting list, a plurality of actuators supported entirely by said front wall, said actuators having their inner ends in operative relation to but disconnected from the vote-tabulating mechanism, when the said front wall is in operative position, said parts being arranged and combined whereby the front wall may be removed without affecting or dismantling any portion of the vote-tabulating mechanism.

3. A voting machine having a casing inclosing vote tabulating mechanism, and having a flat removable or detachable front wall, and a plurality of actuators, carried by said wall inserted from the casing, outward through said wall, said actuators being provided with heads on their inner ends only and being disconnected from the tabulating mechanism.

4. A voting machine comprising a casing having a hinged flat front wall carrying a plurality of actuators with heads or flanges bearing against the inner face of said wall, hinges connecting said front wall to said casing and vote-tabulating mechanism in said casing, in operative relation to but disconnected from said actuators.

5. A voting machine having a series of actuators, a vote-tabulating mechanism comprising a series of rotary members, a series of reciprocatory members coincident with the axes of said rotary members for imparting movement to the rotary members, and reciprocatory members being in alinement with said actuators and moved rectilinearly in one direction by the actuators, and means for positively moving the reciprocatory members in the opposite direction.

[Claims 6 to 31 not printed in the Gazette.]

960,035. FOOT-GUARD. WALTER S. NEWHALL, Cleveland, Ohio, assignor to The Cleveland Railway Supply Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 8, 1909. Serial No. 506,474.



1. A foot-guard made of a single piece and having a tapered plate that is adapted to fit between the diverging portions of the railway rails, abutments extending downwardly from the said plate at intervals for supporting the plate, a depending flange at the wider end of the plate, said flange closing the space between the rails, and means connected with said flange by which the foot-guard may be secured in its position between the said rails.

2. A foot-guard for railways, said guard being formed of a single piece and having a tapered main plate that is provided with a horizontal groove, said plate being adapted to substantially fit between the diverging portions of the rails and below the heads of the rails, abutments formed integral with the said plate and extending transversely below the rails, the edges of the abutments being adapted to substantially fit the sides of the webs of the rails and the lower edges of the abutments substantially fitting the base flanges of the rails, said abutments being provided with cutaway portions for the purpose specified, an end flange depending from the wider end of the main plate, said flange closing the spaces between the rails, and means connected with the end flange for securing the foot-guard in position between the rails.

3. A foot guard made of a single piece and having a tapered plate that is adapted to fit between the diverging portions of railway rails, abutments extending downwardly from said plate at intervals for supporting the plate, a depending flange at the wider end of the plate, said flange closing the space between the rails, and an eye-piece projecting from the end flange, said eye piece having a spike aperture therein through which a spike may be driven for holding the foot guard in position.

4. A foot guard for railways, said guard being formed of a single piece and having a tapered main plate provided with a horizontal groove, said plate being adapted to substantially fit between the diverging portions of rails and below the heads of the latter, abutments made integral with the said plate and extending transversely below the latter, the edges of the abutments being adapted to substantially fit the sides of the webs of the rails and the lower edges of the abutments substantially fitting the base flanges of the rails, said abutments being provided with cutaway portions for the purpose specified, an end flange depending from the wider end of the main plate, said flange closing the space between the rails, and an eye piece cast integral with the end plate and projecting substantially at right angles from the end flange, said eye piece being provided with an aperture through which a spike may be driven for holding the guard in position.

960,036. INKING-RIBBON. GEORGE T. NEWTON, Dover Bay, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, A Corporation of Ohio. Filed Oct. 21, 1907. Serial No. 398,304.



1. As a new article of manufacture, an impression ribbon inked throughout its length, and means impregnating and covering portions of said ribbon adjacent to its extremities, whereby the ribbon may be handled without soiling the operator's hands.

2. An inked impression ribbon protected by a chemical impregnating the ribbon and covering a portion of the ink.

3. An inked impression fabric having means impregnating an inked portion thereof, such impregnant being adjacent to the end of the fabric and extending for a sufficient distance to enable it to cover the fabric when wound up.

4. As a new article of manufacture, an inked impression ribbon having a chemical impervious to ink impregnating a portion of the inked surface and thereby protecting the operator's hands from being soiled by contact with such portion of the surface.

5. An inked ribbon having near its ends over the ink a chemical impervious to ink and water-proof, said chemical impregnating the ribbon and protecting the operator's hands from soiling and adapted to protect the wound-up ribbon from moisture.

[Claim 6 not printed in the Gazette.]

960,037. REFLECTOR. WILLIAM HENRY O'BEIRNE, Pauls Valley, Okla., assignor, by mesne assignments, to Edward J. O'Beirne and Company, Elgin, Ill., a Firm. Filed Sept. 23, 1909. Serial No. 519,152.

1. A reflector for tungsten and analogous lamps, having a light diffusing surface of a form that would be gen-

erated by rotating a reversed curve about an axis in its own plane, said reversed curve having a portion substantially tangent to a plane normal to the axis of rotation somewhat more than two-thirds the distance out from the axis to the periphery, said surface flaring generally outward and relatively abruptly upward from its central lowermost edge and being most nearly vertical at said edge and at its periphery.



2. A reflector for tungsten and analogous lamps, having a light diffusing surface of a form that would be generated by rotating a reversed curve about an axis in its own plane, said reversed curve having a portion substantially tangent to a plane normal to the axis of rotation somewhat more than two-thirds the distance out from the axis to the periphery, said curve having substantially the arc of a circle in each direction from said point, the arc on one side being of large curvature substantially tangent to the axis of rotation, and the arc on the other side being of small curvature substantially tangent to a vertical line through the circumference of the reflector.

3. A reflector for tungsten and analogous lamps, having a light diffusing surface of a form that would be generated by rotating a reversed curve about an axis in its own plane, said surface flaring generally outward and relatively abruptly upward from its central lowermost edge and being most nearly vertical at said edge and at its periphery, said surface being adapted to diffuse light both laterally and downwardly thereabout.

960,038. UMBRELLA. AUSTIN PECK, St. Louis, Mo., assignor of forty one-hundredths to John A. Peck, St. Louis, Mo. Filed Mar. 13, 1909. Serial No. 483,307.



1. In an umbrella, a central supporting rod, a cover which extends over the frame of the umbrella, a member loosely mounted on said rod outside of said cover and engaging same, a key passing through a slot in said rod and arranged in a groove in said member, said key having a notch that receives one edge of the slot in said rod, and yielding means for exerting pressure on said member so as to hold said key seated.

2. In an umbrella, a central supporting rod provided with a pair of transversely extending slots, keys arranged in said slots and each provided with a notch that receives one edge of the slot in which it is arranged, a member mounted on said rod and having a groove for receiving one of said keys, a rib-carrying device mounted on said rod underneath said member, and a coiled spring mounted on said rod between said device and one of said keys.

3. In an umbrella, a central rod, a stationary member on said rod, a removable key for retaining said member in position, a movable member on said rod provided with a socket or recess, ribs provided at their upper ends with heads or projections that enter said socket, and a coiled spring surrounding said rod and arranged between said rib-supporting member and an abutment on the rod for exerting upward pressure on said rib-supporting member, the pressure of said spring also acting to hold the stationary member in engagement with said key.

4. In an umbrella, a central supporting rod, a stationary member on said rod arranged outside of the cover which extends over the ribs of the umbrella, a removable key for retaining said member in position, a rib-supporting member slidingly mounted on the rod, ribs having their upper ends detachably connected to said rib-supporting member, and a coiled spring mounted on said rod for exerting upward pressure on said rib-supporting member to retain the ribs and the cover of the umbrella in position.

5. An umbrella comprising a central supporting rod, a stationary member on said rod arranged outside of the cover which extends over the ribs of the umbrella, a washer arranged on the rod inside of the cover, a rib-supporting member slidingly mounted on the rod directly underneath said washer, ribs provided at their upper ends with heads or projections that are interposed between said washer and rib-supporting member, a coiled expansion spring mounted on said rod for exerting upward pressure on said rib-supporting member, a sliding sleeve mounted on the rod, and braces connected to the ribs and to said sleeve.

[Claim 6 not printed in the Gazette.]

960,039. MARKING-GAGE. WILLIAM POTTER, New York, N. Y. Filed Feb. 15, 1909. Serial No. 477,892.



1. A device of the class described, comprising a base having a guide thereon, a plate slidable on said base and having an end guide thereon, a bar slidable on said base and having two marking points thereon, the distance between the points and corresponding guides being identical in any position of said bar while the plate and base remain fixed in respect to each other.

2. A device of the class described, comprising a base having a guide thereon, a plate slidable on said base and having an end guide thereon, a bar slidable on said base and having two marking points thereon, the distance between the points and corresponding guides being normally identical in any position of said bar, and means for adjusting said end guide with relation to its marking point while the plate and base remain fixed in respect to each other.

3. A device of the class described, comprising a base, having a rabbet guide thereon, a plate slidable on said base and having an end guide thereon, a bar slidable on said base and having two marking points thereon, the distance between the points and corresponding guides being identical in any position of said bar while the plate and base remain fixed in respect to each other.

4. A device of the class described, comprising a base having a rabbet guide on said base, an adjustable plate thereon having an end guide, a bar provided with a marking point for each of said guides adjustable in said base and supplemental marking points adapted to be brought into operative position and operate in conjunction with said first named points.

5. A device of the class described, comprising a base having a guide thereon, a plate slidable on said base and having an end guide thereon, said base having an extension and said slide having a block in normal juxtaposition, means for adjustably moving said plate in said base, the degree of said movement being indicated by said extension and slide positions, and a bar slidable on said base and having two marking points thereon, one for each of said guides.

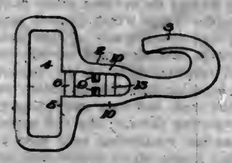
960,040. NUT-LOCK. CHARLES D. RUSSELL, St. Paul, Minn. Filed Mar. 18, 1909. Serial No. 484,091.



1. In combination with a threaded bolt formed through its threads with a longitudinal open ended groove said groove being formed at its inner end with a laterally extending portion the upper wall of said laterally extending portion being inclined oppositely to the pitch of the bolt threads, and a plate formed with an opening to receive said bolt and with a projection fitted to said groove, said projection being thin enough to enter the laterally extending portion of said groove with vertical play.

2. In combination, a threaded bolt formed with longitudinally extending grooves at one end, said grooves being formed at their inner ends with laterally extending portions, the upper walls of said laterally extending portions being inclined oppositely to the pitch of the bolt threads, and a plate formed with an opening to receive said bolt and with projections fitted to said grooves, the tops of said projections being beveled for the purpose set forth.

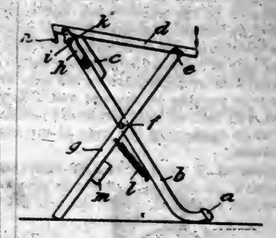
960,041. SNAP-HOOK. WILLIAM A. SCHLICHER, Cleveland, Ohio. Filed Sept. 3, 1907. Serial No. 391,018.



A snap hook having a loop at the end of the shank thereof, the front part of which is recessed at its central portion and the recess having parallel sides, the shank having a second recess with parallel sides in front of the first recess, the space between the sides of the first recess being greater than the space between the sides of the second recess, a spring seat in the second recess, a pin in the first recess, a tongue pivotally engaging said pin and lying within both recesses, the sides of the heel of the tongue engaging the walls of the second recess at all times, the heel of the tongue being of less width than the first recess, and a leaf spring seated on the spring seat and engaging the shank and the tongue; substantially as described.

960,042. COMBINED BOOTJACK AND FOOT-REST. HERMANN SECKENDORFF, Hanover, Germany. Filed Aug. 31, 1909. Serial No. 515,510.

1. In a boot-jack and foot-support the combination of a pair of legs having upturned ends, a crotched board connected to the opposite ends of said legs, a second pair of legs pivoted to the aforesaid pair, a board pivoted to said second pair of legs, and links connecting said last mentioned board to the first pair of legs, said links being so disposed that the two boards clear each other when the device is collapsed and the one overrides the other when the device is erected.



2. In a boot-jack and foot-support the combination of a pair of legs having upturned ends, a crotched board connected to the opposite ends of said legs, a second pair of legs pivoted to the aforesaid pair, a board pivoted to said second pair of legs, and links connecting said last mentioned board to the first pair of legs, said links being so disposed that the two boards clear each other when the device is collapsed and the one overrides the other when the device is erected, and pins on said first pair of legs engaging the links in erected position.

960,043. WALL-TIE. LEWIS H. SELDEN, Minneapolis, Minn. Filed Mar. 21, 1910. Serial No. 550,626.



1. A wall tie having a series of depressions therein, those at the ends of the tie being of greater depth than those near the middle thereof, whereby a wedging effect will be obtained to resist longitudinal strain on the tie in both directions, for the purpose specified.

2. As a new article of manufacture, a wall tie consisting of a comparatively narrow strip of metal, having at each end a series of transverse corrugations or crimps, some of said corrugations being deeper than others, whereby a lock is formed to resist longitudinal pull on the tie.

3. The combination, with an inner building wall, of an outer or finished wall spaced from said inner wall and a tie plate having its ends embedded in the mortar of the joints of said walls respectively and bridging said space, the ends of said plate having transverse corrugations therein gradually decreasing in depth from the ends of the plate toward the middle portion thereof, whereby when the tie is embedded in the joints a wedging effect will be obtained to resist longitudinal pull or strain on the tie.

960,044. BOILER-HEADER. WILLIAM F. SELLERS, Wilmington, Del. Filed May 28, 1909. Serial No. 498,805.

1. A vertical sinuous header for a sectional boiler with inclined water tubes, in the form of a one piece shell comprising a vertical series of cylindrical portions having their axes parallel to the water tubes, and arranged with alternate portions laterally displaced with respect to the intermediate portions, each cylindrical portion having ends perpendicular to the axis of the portion, with a tube opening in one end and a hand hole in the other end with an internal cover seat at the margin of the hand hole.

2. A vertical sinuous header for a sectional boiler with inclined water tubes, in the form of a one piece shell of substantially uniform thickness comprising a vertical series of cylindrical portions having their axes parallel to the water tubes, and arranged with alternate portions laterally displaced with respect to the intermediate portions, each cylindrical portion having ends perpendicular to the axis of the portion, with a tube opening in one end and a hand hole in the other end with an internal cover seat at the margin of the hand hole.

3. A vertical sinuous header for a sectional boiler with inclined water tubes, in the form of a one piece shell comprising a vertical series of cylindrical portions having their axes parallel to the water tubes, and arranged with alternate portions laterally displaced with respect to the intermediate portions, and connecting portions between each adjacent pair of cylindrical portions, each cylindrical portion having ends perpendicular to the axis of the portion, with a tube opening in one end and a hand hole in the other end, and each of said connecting portions having oblique end walls connecting the ends of the adjacent cylindrical portions.



4. A vertical sinuous header for a sectional boiler with inclined water tubes, in the form of a one piece shell comprising a vertical series of cylindrical portions having their axes parallel to the water tubes, and arranged with alternate portions laterally displaced with respect to the intermediate portions, and connecting portions between each adjacent pair of cylindrical portions, each cylindrical portion having ends perpendicular to the axis of the portion, with a tube opening in one end and a hand hole in the other end, and each of said connecting portions having oblique end walls connecting the ends of the adjacent cylindrical portions, and concave side walls connecting the bodies of the adjacent cylindrical portions.

5. A vertical sinuous header for a sectional boiler with inclined water tubes in the form of a one piece shell comprising a vertical series of cylindrical portions having their axes parallel to the water tubes and arranged with alternate portions laterally displaced with respect to the intermediate portions, and connecting portions between each adjacent pair of cylindrical portions, each cylindrical portion having ends perpendicular to the axis of the portion, with a tube opening in one end and a hand hole with an internal machined bearing at its margin in the other end, and each of said portions having oblique end walls connecting the ends of the adjacent cylindrical portions.

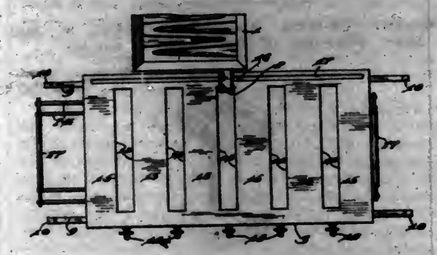
[Claim 6 not printed in the Gazette.]

960,045. MILK-HEATING APPARATUS. SAMUEL SHAPIRO, Philadelphia, Pa. Filed Jan. 8, 1910. Serial No. 537,041.

1. In an apparatus of the character described, the combination with a water chamber, of a plurality of parallel milk receiving tanks in the water of said water chamber, said water chamber having a longitudinal slot in its upper wall and a steam pipe projecting through said slot and having its open lower end in the water in said water chamber.

2. In an apparatus of the character described, the combination with a rectangular water chamber, of legs supporting the said chamber, rails, wheels or rollers on the lower ends of said legs, mounted to move on said rails, a series of milk receiving tanks projecting into said water chamber, and means for heating the water in said chamber.

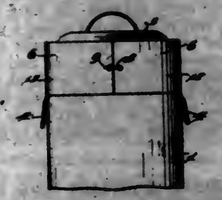
3. In an apparatus of the character described, the combination with a chamber divided into a plurality of milk receiving tanks, an agitator located in each tank and rods connecting all of said agitators and projecting through the chamber and tanks, and handles on the ends of said rods outside of the chamber.



4. In an apparatus of the character described, the combination with a rectangular water chamber, of a milk chamber smaller in all dimensions than the water chamber and projecting into the water chamber, whereby a water jacket is provided around the said milk chamber, said milk chamber divided by transverse partitions into a plurality of milk receiving tanks, an upper wall across said chambers, said wall having an opening above each of the tanks and forming upper walls which project longitudinally of the apparatus and transversely of the tanks beyond the walls of the tanks, and agitators movable transversely of the tanks and longitudinally of the apparatus, whereby said top walls serve as deflectors to deflect the milk thrown up, back into the tanks.

5. In an apparatus of the character described, the combination with a rectangular water chamber, of a milk chamber smaller in all dimensions than the water chamber and projecting into the water chamber, whereby a water jacket is provided around the said milk chamber, said milk chamber divided by transverse partitions into a plurality of milk receiving tanks, an upper wall across said chambers, said wall having an opening above each of the tanks and forming upper walls which project longitudinally of the apparatus and transversely of the tanks beyond the walls of the tanks, and agitators movable transversely of the tanks and longitudinally of the apparatus, whereby said top walls serve as deflectors to deflect the milk thrown up back into the tank, and rods connecting all of said agitators and projecting through the end walls of the apparatus, and handles connecting said rods at their outer ends.

960,046. REFRIGERATING ATTACHMENT FOR MILK-CANS. SAMUEL SHAPIRO, Philadelphia, Pa. Filed Jan. 8, 1910. Serial No. 537,042.



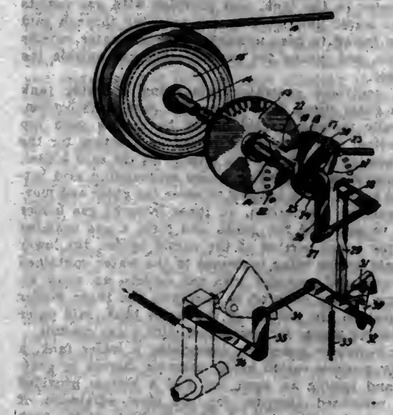
1. An attachment for milk cans, comprising a circular ring independent of the can and of the cover, constituting an annular refrigerant chamber, and constructed to be positioned around the neck of an ordinary milk can, substantially as described.

2. An attachment for milk cans, comprising a can neck confining ring consisting of two semi-circular sections, each section constituting a refrigerant chamber, said sections connected at one end by a hinge, a fastening device at the other ends of said sections, and removable plugs in the walls of said chamber, closing entrances to the chambers, substantially as described.

3. An attachment for milk cans, comprising a can neck confining ring consisting of two semi-circular sections, a hinge connecting said sections at one end, a hook and eye connecting said sections at the other end, each section comprising a hollow refrigerant receiving chamber, removable plugs normally closing entrances to said chambers, and the inner walls of said sections shaped to conform to the flaring sponts or neck portions of the ordinary milk cans, substantially as described.

4. In combination with a milk can, having a restricted neck and a cover on the upper end of said neck, of a refrigerating ring positioned around the neck below the cover, and bearing upon the upper end of the can, said ring comprising two half sections hinged together at one end and removably connected at their other ends, each section constituting a refrigerant chamber, substantially as described.

960,047. TYPE-CASTING MACHINE. ODDUR V. SIGURDSSON, New York, N. Y., assignor to Oddur Manufacturing Company, New York, N. Y., a Corporation of West Virginia. Filed Nov. 17, 1909. Serial No. 528,477.



1. A rotatable disk having in its side a plurality of series of matrices, combined with a type casting mold, means for changing the relation of said parts radially of the disk to bring either series into operative relation to the mold and means for selecting a matrix in either series for casting a type.

2. A rotatable disk having in its side a plurality of concentric series of matrices, combined with a stationary type casting mold, means for translating the disk in a plane at right angles to its axis to bring either of the series into operative relation to the mold and means for selecting a matrix in either series for casting.

3. A rotatable disk having in its side a plurality of concentric series of matrices, combined with a stationary type casting mold, means for translating the disk in a plane at right angles to its axis to bring either of the series into operative relation to the mold, means for selecting a matrix in either series for casting, and means for closing the face of the matrix against the mouth of the mold.

4. A flat disk mounted to turn only in a plane at right angles to its axis and having in its side a plurality of concentric series of matrices, the matrices of the different series being arranged in the same radial lines combined with a single circular series of movable stops adapted to arrest the disk with a matrix of either series in operative relation to a molding point.

5. A rotatable disk mounted to turn only in a plane at right angles to its axis and having in its side a plurality of concentric series of matrices, means for rotating the disk in a plane at right angles to its axis to bring any one of the matrices in one series to a molding point and means for moving the disk at right angles to its axis to bring another series of matrices into operative relation to the molding point.

[Claims 6 to 9 not printed in the Gazette.]

960,048. SAFETY-TREAD. JOHN T. SIMPSON, Newark, N. J., assignor of one-half to John B. Wright, Newark, N. J. Filed Dec. 24, 1908. Serial No. 469,071.



1. A safety tread, comprising a sheet foundation, flaps bent upward forming pockets between the flaps, blocks within the pockets, openings between the pockets in one direction and strips between the pockets in the other direction, such strips separating the openings, in combination with a cementitious supporting medium within which the sheet is buried, the said medium lying within the openings and also lying between the ends of the blocks.

2. A safety tread having a sheet foundation, rectangular flaps bent upward forming rectangular pockets between the flaps, oblong blocks within the pockets, rectangular openings between the pockets in one direction and rectangular strips between the pockets in the other direction, said strips separating the openings, in combination with a cementitious supporting medium within which the foundation is buried, the medium lying within the openings and also lying between the ends of the blocks.

3. A safety tread having a sheet foundation, rectangular flaps bent upward forming oblong pockets between the flaps, oblong blocks within the pockets, rectangular openings between the pockets lying adjacent to the long side of the blocks, and strips between the ends of the blocks and separating the openings, in combination with a cementitious supporting medium within which the foundation is buried, the medium lying within the openings and also lying between the ends of the blocks.

4. A safety tread formed of a supporting foundation immersed in a cementitious supporting medium, the said foundation having pockets with a non-slipping surface supported thereby, said surface being in the form of stripe of non-slipping material interrupted at short intervals, the cementitious material lying in the interruptions.

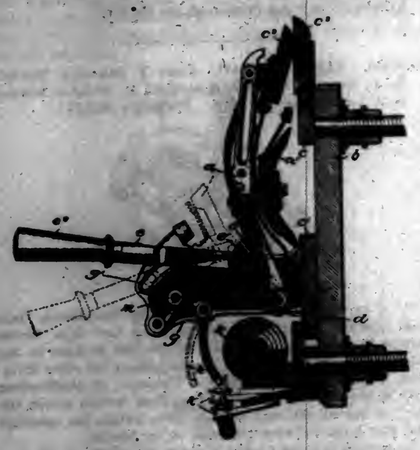
5. A safety tread formed of a cementitious support and a sheet foundation having pockets, the said foundation being embedded in the support, blocks of non-slipping material within the pockets, such blocks being arranged in rows and interrupted at short intervals, the place of interruption in the several rows being coincident, and the cementitious material lying within the places of interruption.

[Claims 6 to 9 not printed in the Gazette.]

960,049. CIRCUIT-BREAKER. EDWIN H. SMYTHE, Chicago, Ill., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Oct. 21, 1904, Serial No. 229,476. Renewed Dec. 18, 1905. Serial No. 292,159.

1. In a circuit breaker, the combination with a switch, of a lever for closing the switch, a movable fulcrum for the lever, said lever being inoperative to close the switch when the fulcrum is displaced, and electromagnetic mechanism adapted to control said fulcrum.

2. In a circuit breaker, the combination with a switch, of power multiplying mechanism for closing the switch, a movable support for said mechanism, and electromagnetic mechanism adapted to control said support, said power multiplying mechanism being inoperative to close the switch when said movable support is moved from its normal position.



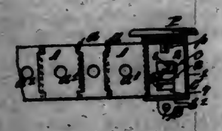
3. In a circuit breaker, the combination with a switch, of closing means therefor, said means including a toggle through which the force is applied to the switch to close the same, a movable fulcrum for said toggle, and electromagnetic tripping means controlling said fulcrum.

4. In a circuit breaker, the combination with a switch, a part to be moved to close said switch, a movable support for said part adapted to take the thrust thereof in closing the switch, said parts being inoperative to close the switch when the movable support is displaced from its normal position, and mechanism controlling the movement of said support.

5. In a circuit breaker, the combination with a switch, of a manual lever for closing the switch and a spring for opening it, a movable fulcrum for said lever, said lever being inoperative to close the switch when the fulcrum is displaced, an electromagnet and tripping mechanism operated by said electromagnet controlling the movement of said fulcrum.

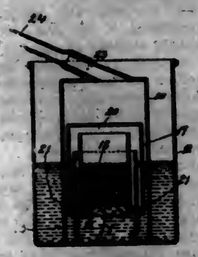
[Claims 6 to 16 not printed in the Gazette.]

960,050. BRACELET, BELT, &c. JOHN J. SOMMER, North Attleboro, Mass. Filed Aug. 28, 1909. Serial No. 514,997.



In an article of the character described, the combination with a series of articulated links, the members of which are formed each with a bolt socket, of a clasp link formed with a bolt stud adapted to project into a bolt socket of any one of the said articulated links formed thereon, a latch plate pivotally attached to the clasp link and means for holding said latch plate in its closed position, for the purpose described.

960,051. ACETYLENE-GENERATOR. CHARLES F. SPAULDING, Waltham, Mass. Filed Sept. 26, 1907. Serial No. 394,945.



1. An acetylene generator comprising a water tank, a vertically movable carbid holder having an open top and a bottom provided with a restricted aperture for the slow admission of water to the interior of the holder, and a downwardly extending flange surrounding said bottom, the said holder being movable in the tank by gravitation, an inverted gas holder adapted to surround the carbid holder, the lower end of the gas holder being immersed in the water in the tank, and provided with gas outlets below the water line, whereby gas escaping through said outlets is forced to pass upwardly through water outside the holder, and means for accumulating gas outside the said holder.

2. An acetylene generator comprising a water tank having a guide rising from the central part of its bottom, a vertically movable carbid holder having an open top and a bottom provided with a restricted aperture for the slow admission of water to the interior of the said holder, and a downwardly extending flange surrounding said bottom, said holder being adapted to enter the guide and movable therein by gravitation, an inner inverted gas holder adapted to surround the guide, and form a gas chamber around the upper portion of the carbid holder, the lower end of said holder being immersed in the water contained in the tank, and provided with gas outlets, an outer inverted gas holder adapted to surround the inner holder and to rest on the bottom of the water tank, said outer holder having means for connection with a gas conduit.

3. An acetylene generator comprising a water tank, a vertically movable carbid holder movable therein by gravitation and having an open top and a bottom provided with a restricted aperture for the slow admission of water to the interior of the holder, the body of the tank being extended below said bottom to form an air trap, and means for accumulating gas above the carbid holder.

960,052. WHEELED SCRAPER. THOMAS H. STAGG, Columbus, Ohio, assignor to The Kilbourne and Jacobs Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed May 24, 1909. Serial No. 498,069.



1. In a wheeled scraper, a bowl pivotally mounted thereon, draft appliances mounted on said scraper comprising hitching apparatus, pivoted hook members connected therewith, and means carried by said bowl with which said hook members are adapted to be engaged, said draft appliances being arranged to exert a pull in a direct line from the cutting edge of the bowl to the shoulders of the draft animals.

2. In a wheeled scraper, a pivotally mounted bowl, a tongue member, draft appliances mounted on said tongue member comprising hitching apparatus, pivoted hook members connected therewith, means carried by said bowl with which said hook members are adapted to be engaged, said draft appliances being arranged to exert a pull in a direct line from the cutting edge of the bowl to the shoulders of the draft animals, and bars rigidly connected with said tongue member at one end and to said bowl at its other end at a point somewhat beyond the axle of said scraper.

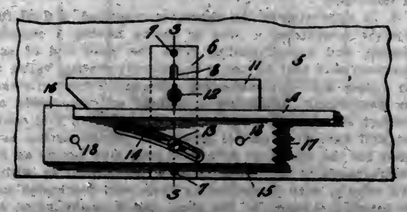
3. In a wheeled scraper, a bowl pivotally mounted thereon, a tongue member, bars rigidly connected with said tongue member at one end and with said bowl at its other end at a point beyond the axle of said scraper, draft appliances mounted on said tongue member comprising hitching devices, bar members associated therewith, hook members pivotally connected with said bar members, means carried by said bowl adjacent its cutting edge with which said hook members are adapted to be engaged, said draft appliances being arranged in a direct line from a point adjacent to the cutting edge of the bowl to the shoulders of the draft animals.

4. In a wheeled scraper, a pivotally mounted bowl, a tongue member, draft appliances mounted on said tongue member comprising hitching devices, bar members associated therewith, springs encircling said bar members, pivoted hook members connected with said bar members, and means carried by said bowl adjacent to its cutting edge with which said hook members are adapted to be engaged, said draft appliances being arranged in a direct line from a point adjacent to the cutting edge of the bowl to the shoulders of the draft animals.

5. In a wheeled scraper, a pivotally mounted bowl, a tongue member, draft appliances mounted on said tongue member comprising hitching devices, bar members associated therewith, springs encircling said bar members, a pivoted hook member connected with said bar members, and means carried by said bowl adjacent to its cutting edge with which said hook members are adapted to be engaged, said draft appliances being arranged in a direct line from a point adjacent to the cutting edge of the bowl to the shoulders of the draft animals, bars having rigid connection with said tongue member at one end and pivotal connection with said bowl at its other end at a point in said bowl on the side of the axle of said scraper opposite to that on which the tongue is located.

[Claim 6 not printed in the Gazette.]

960,053. BENCH-DOG. WILLIAM J. STIVER, Grove, Okla. Filed Nov. 18, 1909. Serial No. 527,931.



A device of the character described comprising an attaching plate secured to a work bench, a guide block disposed upon said plate and extending at right angles thereto, a bolt positioned through a slot in said plate and extending through said guide block, said bolt having a head on its lower end to retain the same in the slot, an adjusting nut threaded upon the upper end of said bolt to secure the block in position on the bench, a clamping member arranged upon said attaching plate, a stud secured in said plate extending through an arcuate slot in the clamping member, said clamping member and guide block having their opposed edges arranged in spaced longitudinal parallel relation, an extension formed on the forward end of said clamping member and adapted to be engaged by a piece of work inserted between the opposed longitudinal edges of said block and clamping member, whereby the forward movement of the work will cause the clamping member to move forwardly and inwardly upon the bench, said members maintaining their longitudinal parallel relation and clamping the work between their opposed longitudinal edges.

960,054. STRUCTURAL-METAL SHAPE FOR REINFORCED CONCRETE CONSTRUCTION. PIETRO STRAGIOTTI, Hurley, Wis. Filed May 27, 1909. Serial No. 498,621.



1. A structural metal shape for reinforcing concrete construction, the central portion of said shape constituting a bar having a plurality of ribs radiating from a common center, said central portion of the bar being in a plane parallel with and at one side of the plane of the remaining portion of the bar, and the central and end sections being longitudinally split and the split portions bent to form the ribs which integrally connect the said central and end portions.

2. A structural metal shape for reinforcing concrete construction, the central and the end parts of which are constituted by a bar provided with several ribs radiating from a common center, said central part being on a lower line, while the end portions are above on an upper line; said central and end parts being connected by tie-members, the several parts being integral to each other.

3. A structural metal shape for reinforcing concrete construction, said shape having its central part constituting a bar and having ribs radiating from a common center, said central portion being in a plane substantially parallel with and at one side of that of the end portions of the shape and the said ribs connecting the central and end portions to form tension members of the latter, said shape being longitudinally and transversely slitted and the slitted portions being bent to form said ribs, the ribs being spaced from each other and made integral with said central and end portions.

4. A structural metal shape for reinforcing concrete construction, the central part of which is constituted by a bar provided with several ribs radiating from a common center, said central part being on a lower line, while the end portions are made of tension members directed upward, which are obtained by means of longitudinal slits to separate each rib from the other together with transversal cuts on the ribs at the external end of each slit and by consequent bending upward of the ribs.

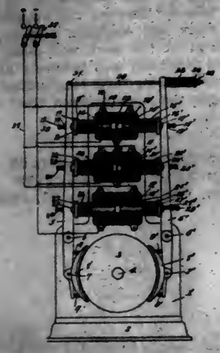
5. A structural metal shape for reinforcing concrete construction made in a single piece from a bar composed of ribs radiating from a common center and having reduced web portions connected to each other, said reduced web portions being slitted in longitudinal lines, the ribs remaining attached to the bar at one end of said slits, and said shape being obtained by expanding so that the end portions of the bar are in a different line from the central part, the end parts being connected to the central part by means of the bent ribs which act as tie-members.

[Claim 6 not printed in the Gazette.]

960,055. ELECTROMAGNETIC BRAKE APPARATUS. AUGUST SUNDH, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 2, 1907. Serial No. 395,626.

1. The combination with a brake, of mechanism for applying the brake, and a plurality of electro-magnets of different capacities for effecting a release of the brake and

each being operative independently of the operation of the others.



2. The combination in a brake, of a brake lever, a brake shoe, mechanism for operating the brake lever in one direction to apply the brake shoe to a movable member, and a plurality of electro-magnets of varying capacities operative in opposition to said operating mechanism.

3. In electro-magnetic brake apparatus, the combination with a brake lever and a brake shoe, of a plurality of electro-magnets of different inductances operatively connected to the brake lever to control the operation of the same in one direction, and mechanism for actuating said lever in another direction.

4. In electro-magnetic brake apparatus, the combination with a brake lever and a brake shoe, of mechanism for operating the lever to apply the brake, and a plurality of electro-magnets of varying inductances opposing said brake applying mechanism, and of sufficient strength when energized to overcome the power of said applying mechanism and permit the release of the brake.

5. In electro-magnetic brake apparatus, the combination with a brake lever, a brake shoe and springs for applying the brake, of a plurality of electro-magnets of different inductances connected in parallel circuits, and switch mechanism for controlling said electro-magnets.

[Claims 6 to 17 not printed in the Gazette.]

960,056. CAR-FENDER. ALBERT J. THORNLEY, Pawtucket, R. I., assignor to Consolidated Car Fender Company, Providence, R. I., a Corporation of Rhode Island. Filed Apr. 29, 1909. Serial No. 492,816.



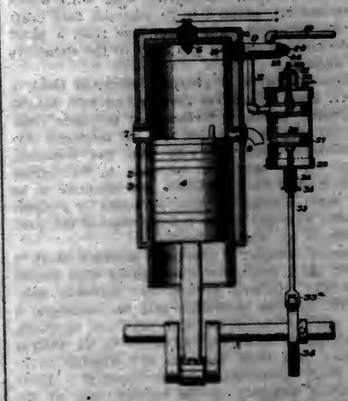
1. A car fender, comprising a fender, means for holding said fender normally raised, and means for releasing said fender, said fender comprising front and rear transverse bars, side rods, and curved intermediate rods, alternate rods having elevations formed at their outer extremities to form a barrier along the front of the fender.

2. A car fender, comprising a fender, means for holding said fender normally raised, and means for releasing said fender, said fender comprising front and rear transverse bars, side rods, and curved intermediate rods, alternate rods having elevations formed to permit objects to roll easily on said fender but to obstruct their tendency to drop off therefrom.

3. A car fender, comprising a fender, means for holding said fender normally raised, and means for releasing said fender, said releasing means comprising a rotatable shaft having depending clamps, said clamps being vertically adjustable on said shaft, and carrying at their lower ends a transverse rod which is adapted to receive the blows of objects to trip the fender.

4. A car fender, comprising a fender, means for holding said fender normally raised, and means for releasing said fender, said releasing means comprising a shaft, depending vertical rods adjustably secured to said shaft, clamps carried on the lower ends of said vertical rods, and a trip rod formed U-shaped at each end and adjustably held in said clamps to obstruct the line of travel of the car.

960,057. MEANS FOR FEEDING FLUID OIL. THOMAS TURNBULL, Jr., Pittsburg, Pa. Filed Jan. 29, 1910. Serial No. 540,822.



1. In apparatus of the character described, an injector comprising a casing or shell having a chamber therein provided with a discharge port leading from its inner end, a valve seating backwardly to close said port, a plug adjustably seated within the chamber of the shell or casing, an air supply pipe communicating with said chamber, a fuel discharge in said plug, an adjustable valve for controlling said passage, the plug having fuel ports communicating with a fuel supply, and means for periodically admitting a volume of compressed air to said chamber; substantially as described.

2. In apparatus of the character described, a fluid fuel injector comprising a plug or casing having a chamber therein, and a port leading from the inner end of said chamber, said port having a backwardly seating valve, an air supply pipe communicating with said chamber, means for periodically admitting a volume of compressed air through said pipe, a plug adjustably seated in said chamber and having a reduced inner end portion acting as a valve for the discharge port, said plug also having an annular groove or depression therein communicating with a fuel supply, with ports leading from said depression into an interior chamber in the plug, and a needle valve adjustably seated in said plug and controlling the outlet from said chamber, the outlet from said chamber being in line with the said discharge port; substantially as described.

3. Means for feeding fluid fuel, comprising an injector having a fuel supply, and an air supply, an air compressing cylinder to which the air supply is connected, and means for periodically delivering a volume of compressed air from said cylinder into the air supply, and thence into the injector, together with means for varying the pressure of said air; substantially as described.

4. In an explosive engine, a fuel feeding injector having a fuel supply and an air supply, an air compressing cylinder to which the air supply is connected, and means for periodically delivering a volume of compressed air from said cylinder into the air supply and thence into the injector, together with means for varying the pressure of the air and its time of delivery relatively to the beginning of the compression stroke of the engine piston, without changing the volume of the air; substantially as described.

960,058. COMBINED CARTRIDGE-BANDOLEER, GUN-REST, SHOULDER-STRAP, AND RECOIL-PAD. RUSSELL CLEVELAND WEST, Arbuckle, Cal. Filed Oct. 28, 1909. Serial No. 525,055.

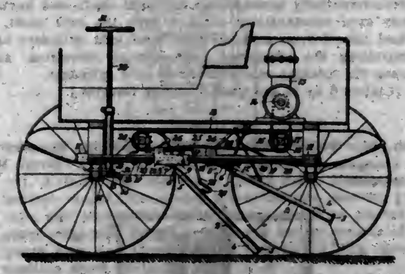


1. The combination of a gun rest shoulder strap, and an ammunition bandoleer connected to and arranged to overlap the strap adjacent to its inner edge and bind it to the shoulder.

2. The combination of an ammunition bandoleer, a gun rest shoulder strap connected to the bandoleer, and a recoil pad constructed to be detachably connected to either side of the shoulder strap whereby the bandoleer is adapted to be worn on either shoulder.

3. The combination of a gun rest shoulder strap, an ammunition bandoleer connected to the strap, and a recoil pad depending from the strap and having a hinged connection therewith.

960,059. VEHICLE TRACTION MECHANISM. JOHN LEONIDAS WILLIAMS, Ellsey, Fla. Filed Apr. 10, 1909. Serial No. 489,096.



1. A vehicle traction mechanism comprising a motor; a driving shaft mounted crosswise of said vehicle provided with sprocket wheels; sprocket wheels mounted on said vehicle and removed from said driving shaft; sprocket chains mounted on the said sprocket wheels on the said driving shaft and the said sprocket wheels removed from the said driving shaft; a plurality of guide rods extended in a single span between the axles of said vehicle parallel with the ground and in a single plane; reciprocating cross heads slidably mounted on said guide rods to move parallel with the ground; suitable connecting devices connecting the said heads with the said chains; thrust poles pivoted to said heads adapted to thrust against the ground to arrest the motion of said heads; and adjustable lifting devices to raise the said poles out of engagement with the ground.

2. A vehicle traction mechanism comprising a motor; a driving shaft mounted crosswise on said vehicle provided with sprockets; sprockets mounted on said vehicle at the end thereof removed from said driving shaft; endless sprocket chains mounted on said sprockets and extended between the same; a plurality of guide rods extended in a single span between the axles of said vehicle parallel with the ground and in a single plane; reciprocating cross heads mounted on the said guide rods and having antifriction devices bearing against the under side of said rods; devices connecting the said heads with said chains; thrust poles pivotally connected to said heads and adapted to thrust against the ground to arrest the motion of said heads; and adjustable lifting devices adapted to raise the said poles out of engagement with the ground.

960,060. CAN-OPENER. JASPER MCDONNEL ALLEN, St. Jo, Tex., assignor of one-half to Patrick P. McDermott, St. Jo, Tex. Filed Jan. 24, 1910. Serial No. 539,715.



1. A can opener, comprising a resilient bar flattened near its center and return-bent thereat, forming two spring diverged handle members, a flat cutting blade formed on the free end of one handle member and having a concaved cutting edge, a fulcrum limb bent upward on the free end of the other handle member, a laterally-bent toe on the upper end of said limb, and projecting toward but above the cutter blade, and an oblong ring adapted, when mounted on the handle members, for holding them compressed toward each other.

2. A can opener, comprising a resilient bar doubled upon itself to form two normally diverging portions, one of said portions being flattened and sharpened to form a blade, and the other having a free end bent upward and laterally toward the blade for engaging the top of the can, and a link encircling the doubled portion of the bar for normally holding the doubled portions adjacent to each other.

960,061. FLEXIBLE CONNECTION. FRANK WILLIAM BAADEN, Newark, N. J. Filed May 21, 1909. Serial No. 497,464.

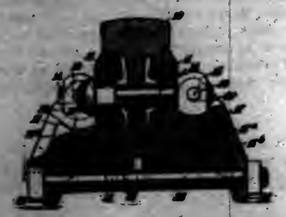


1. A universal joint, comprising two members, each having two longitudinal openings spaced a short distance apart and a transverse opening between and at right angles to the longitudinal openings, said transverse opening being of a diameter greater than the distance between the longitudinal openings, two links each formed of a rod bent to form an eye and two spaced and parallel arms having recesses in their adjacent sides, the eyes of the links being in engagement with each other and the arms of the links extending into the longitudinal openings of the members with their recesses opposite the transverse openings of the members, and pins fitting in the transverse openings of the members and the recesses of the arms of the links.

2. A universal joint, comprising two members, each

having two longitudinal openings spaced a short distance apart and a transverse opening between and at right angles to the longitudinal openings, said transverse opening being of a diameter greater than the distance between the longitudinal openings, two links, each formed of a rod bent to form an eye and two spaced and parallel arms, the eyes of the links being in engagement with each other and the arms of the links extending into the longitudinal openings of the members, and pins fitting in the transverse openings of the members and in firm engagement with the arms of the links.

960,062. RAIL-JOINT. WALTER BARNETT, Hackettstown, N. J. Filed Sept. 28, 1909. Serial No. 519,975.



1. The combination of a railway rail, a fish-plate arranged at the side of the rail, a bolt passing through the web of the rail and fish-plate, having a nut, a cam-dog to lock the nut from turning, engaged with the nut and arranged to bear on the fish-plate, and means arranged to engage the under side of the dog at a point outwardly from the fish-plate and prevent the dog from moving outwardly under a downward pressure.

2. The combination of a rail, a fish-plate assembled therewith, a bolt passing through the rail and fish-plate, having a nut provided with trunnions at opposite sides, a cam-dog to prevent the nut from turning, engaged with the trunnions and arranged to bear on the fish-plate, and means to relieve the trunnions of strain when the cam-dog is subjected to a downward pressure.

3. The combination of railway rails arranged end to end, fish-plates overlapping the joint between the rails, having a bottom flange overlapping the base flanges of the rails, with one of the fish-plates provided with an upwardly-projecting portion, a bolt passing through the fish-plates and one of the rails, having a nut, and a cam-dog to lock the nut from turning, engaged therewith and adapted to be engaged by said upwardly-projecting portion of the bottom flange when the dog is moved to operative position.

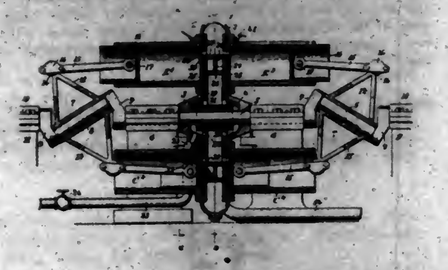
4. The combination of railway rails arranged end to end, fish-plates overlapping the joint between the rails, having bottom flanges overlapping the base flanges of the rails and provided with upwardly-projecting portions arranged outwardly of the fish-plates, bolts passing through the webs of the rails and the fish-plates, having nuts, and cam-dogs to lock the nuts from turning operatively engaged therewith and arranged to be engaged by said upwardly-projecting portions of the base flanges when the cam-dogs are moved to operative position.

5. The combination of railway rails arranged end to end, fish-plates at the opposite sides of the rails, lapping the joint therebetween, bolts securing the fish-plates together and having nuts, and cams locking the nuts from turning, alternately arranged at opposite sides of the rail and having means coöperative with the fish-plate to hold them against outward movement.

[Claim 6 not printed in the Gazette.]

960,063. GAS-ENGINE. CARL BECKMANN, New York, N. Y. Filed Dec. 29, 1908. Serial No. 469,796.

1. An engine having a shaft with skew cranks, a wheel mounted on said shaft between said cranks, cylinders disposed on opposite sides of said wheel and circumferentially arranged around said shaft, the axes of said cylinders being substantially parallel with the axis of said shaft, rockers carried by said skew cranks for rotating the same, pistons reciprocating in said cylinders, and rods connecting said pistons with said rockers.



2. An engine having a shaft with skew cranks, a wheel mounted on said shaft between said cranks, cylinders disposed on opposite sides of said wheel and circumferentially arranged around said shaft, the axes of said cylinders being substantially parallel with the axis of said shaft, rockers carried by said skew cranks for rotating the same, pistons reciprocating in said cylinders, and rods connecting said pistons with said rockers, said wheel having ports affording means for controlling the admission to said cylinders.

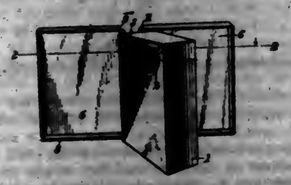
3. An engine having a case, a shaft passing through said case and having skew cranks on opposite sides of said case, a plurality of cylinders attached to the sides of said case and circumferentially arranged about said shaft, the axes of said cylinders being substantially parallel with the axis of said shaft, rockers attached to said cranks and adapted to rotate said shaft, pistons reciprocating in said cylinders, rods connecting said pistons with said rockers, and a wheel within said case mounted on said shaft.

4. An engine having a case, a shaft passing through said case and having skew cranks on opposite sides of said case, a plurality of cylinders attached to the sides of said case and circumferentially arranged about said shaft, the axes of said cylinders being substantially parallel with the axis of said shaft, rockers attached to said cranks and adapted to rotate said shaft, pistons reciprocating in said cylinders, rods connecting said pistons with said rockers, and a wheel within said case mounted on said shaft, said wheel having ports affording means for controlling the admission and exhaust from said cylinders.

5. An engine having a shaft, a plurality of cylinders circumferentially arranged around said shaft and having their axes substantially parallel with the said shaft, a wheel mounted on said shaft between said cylinders and controlling the admission and exhaust therefrom, and means for rotating said shaft from said cylinders.

[Claims 6 to 16 not printed in the Gazette.]

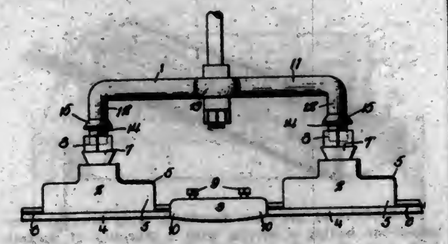
960,064. PORTABLE HEATER. SAMUEL BERGSTEIN, Youngstown, Ohio. Filed Dec. 23, 1908. Serial No. 468,956.



1. A heater, comprising a hollow body, a partition within said body, whereby the lower portion of said body is formed to constitute a reservoir adapted to receive a liquid fuel, an opening in said partition, a wick adapted to be arranged within said reservoir and to project through the opening in said partition, an absorbent material located in the upper portion of said body, openings in each side of said body at which the liquid fuel held by said absorbent material can be ignited, and lids movably secured to said body and adapted to close said openings, said lids further serving as a support for mounting an object to be heated.

2. A heater comprising a hollow body for containing a liquid fuel, said body having a flat base whereby it may stand alone on the support and a closed flat top for receiving an object to be heated, and having side openings adjacent to the top for the emission of the products of combustion and lids hinged to the side edges of the hollow body for assisting in the support of the said body when open.

960,065. SUSPENSION MEANS FOR TROLLEY-WIRES. SAMUEL S. BRAKLEY, Ralphton, Pa. Filed Aug. 27, 1909. Serial No. 514,967.



1. The combination with two trolley wire sections, of a hanger disposed longitudinally of the trolley wire sections, clamps secured to the trolley wire sections and to the ends of the hanger, and a splice uniting the ends of the trolley wire sections and disposed between the clamps.

2. A trolley wire suspending means including a hanger comprising an elongated body provided at its ends with depending arms terminating in threaded studs, the body being provided at a point intermediate its ends with an opening having its wall threaded, and stop and reinforcing flanges formed on the arm above the threaded studs.

960,066. THIRD RAIL. CHARLES A. BLUHM, Michigan City, Ind. Filed Mar. 3, 1909. Serial No. 481,066.



1. A third rail comprising guard rails, having hollow centers, conductors located below the slot between guard rails and chairs, the chairs being slotted to receive the guard rails and extended to fit the hollow centers of the guard rails and afford support therefor in their elevated position above the conductor.

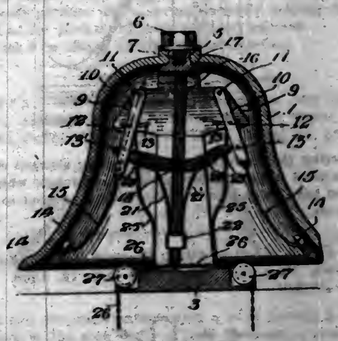
2. A third rail comprising a guard rail and twin rail chairs, the guard rails held therein, a conductor supported upon and insulated from the said chairs and fish plates connecting the upper ends of the twin chairs together.

3. In a third rail the combination with a chair, the upright portions of which are vertically slotted and provided with extensions, these chairs having crotches between the slotted portions of inverted L-shaped guard rails fitting said extensions and slots and secured therein, and a conductor supported in the crotches of the chairs.

4. In a third rail the combination with a chair, the upright portions of which are vertically slotted and provided with extensions, these chairs having crotches between the slotted portions of inverted L-shaped guard rails fitting said extensions and slots and secured therein, a conductor supported in the crotches of the chairs, metallic saddles for securing the conductor to the chairs, and insulating saddles interposed between the metallic saddles, and the crotches of the chairs.

5. In a third-rail, the combination with chairs having crotches at the center, guard rails secured to the chairs on opposite sides of the crotches, saddles secured in the crotches, and insulated from the chairs, and a conductor held by the saddles at a point below and between the guard rails.

960,067. BELL-RINGING MECHANISM. GEORGE BOYD, Winona, Miss. Filed May 25, 1909. Serial No. 498,319.



1. A bell ringing mechanism comprising a post, a bell supported upon the post, clappers pivoted to the post, springs for throwing said clappers outward toward the inner wall of the bell, a lever pivoted to the post, a clapper-operating bar pivoted to the lever, flexible connections attached to the lower end of said lever, a walking beam, and a lever for operating said walking beam for actuating the flexible connections and the ringing mechanism.

2. Bell ringing mechanism comprising a post, a bell supported upon the post, spring clappers pivoted upon the post, springs for throwing the clappers outward, a lever, a clapper-operating bar pivoted to the lever and provided with notches at its opposite ends and upon its opposite sides, pins upon the clappers to be engaged by the clapper-operating bar, and means for oscillating said lever.

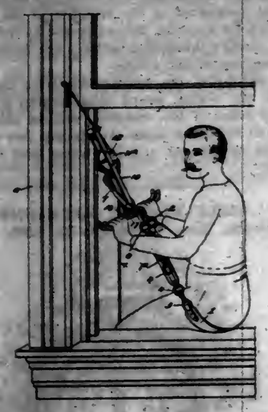
3. A bell ringing mechanism comprising a post, a bell secured to the post, a plurality of clappers pivoted to the post, said clappers having resilient portions, an operating lever pivoted between the clappers to the post, and a clapper-operating bar pivoted to the lever, and means connected to the lever for oscillating the same and actuating the ringing mechanism.

960,068. FIRE-ESCAPE. ALFRED BROWN, Ottawa, Ontario, Canada. Filed June 4, 1909. Serial No. 500,066.

1. A fire escape comprising a sling, a rope or cable, a gripping device consisting of bars pivoted together and provided with handles, said bars having secured thereto opposing disks, one of said disks having a series of studs and the other disk being provided with openings through which said studs project, a supporting element pivoted to one of said bars, said supporting element comprising parallel members between which said bars extend, and means for connecting the sling to the supporting element.

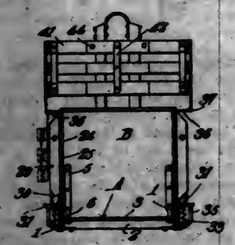
2. A fire escape comprising a rope or cable, an anchor for said rope or cable, a gripping device through which said rope or cable extends, said gripping device comprising

pivoted bars, carrying disks, one of said disks being provided with studs and the other with openings through which said studs project, oppositely disposed handles, and a supporting element having a sling connected thereto for



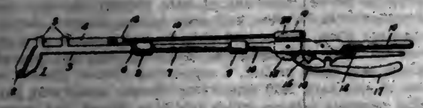
supporting the operator, said supporting element comprising parallel members forming a loop through which said pivoted bars extend, said element being pivoted to one of said bars.

960,069. ADJUSTABLE WAGON-RACK. JOHN W. BROWN, Nappanee, Ind. Filed Oct. 12, 1908. Serial No. 457,968.



A wagon body, a side panel hingedly connected thereto, means for supporting said panel at a desired angle to the bottom of the body, a series of angular brackets secured to the outer face of the panel adjacent the upper edge thereof, said brackets extending outwardly from the panel, straps pivotally connected to the brackets and an auxiliary wing secured to the straps, said straps being movable onto the side panel to support the wing at right angles to the panel and said straps being movable into position outside of the panel to support the wing outside of and parallel with the panel.

960,070. TIRE-LIFTER. JOHN WESLEY BROWN, Arroyo Grande, Cal. Filed May 17, 1909. Serial No. 496,887.



1. In a device of the class described, a pair of relatively movable jaws, a shank connected to one of said jaws, a gear pivoted to said shank and having connection with the other of said jaws, means for operating said gear, and means pivoted to said operating means for engagement with the gear for locking the same.

2. In a device of the class described, a pair of relatively movable jaws, a shank connected to one of said jaws, a gear pivoted to said shank and having connection with the other of said jaws, means for operating said gear, and a pawl pivoted to said operating means for engagement with the teeth of the gear.

3. In a device of the class described, a pair of relatively movable jaws, a shank connected to one of said jaws, a gear pivoted to said shank and having connection with the other of said jaws, a lever pivoted to said shank, a segmental rack carried by the lever forward of the pivotal point of said lever and adapted to engage the teeth of said gear, and a pawl pivoted upon said lever and adapted to engage the teeth of said gear.

960,071. PUZZLE. CHARLES BRUDERLEIN, New York, N. Y. Filed July 16, 1909. Serial No. 507,898.



1. A device of the class described, comprising an elongated box having a bottom with a plurality of pockets formed therein, and a pen formed within said box remote from said pockets adapted to receive a plurality of balls and from which the balls may be removed one by one, said pen being adapted to prevent said balls from rolling toward said pockets.

2. A device of the class described, comprising an elongated box having a plurality of pockets formed in the bottom thereof at one end, a pen formed at the other end and adapted to retain a plurality of balls, and means for removing said balls one by one from said pen.

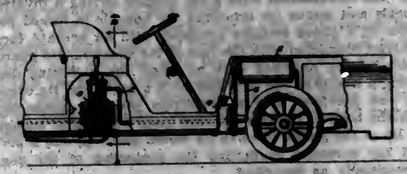
3. A device of the class described, comprising an elongated box having an elevated runway with a gutter at the side thereof, said runway having a plurality of pockets formed near one end thereof, and a ball pen cut off from said gutter formed within said box remote from said pockets and adapted to retain a plurality of balls which may lodge in said pockets.

4. A device of the class described, comprising an elongated body having an elevated runway with a gutter at the side thereof, said runway having a plurality of pockets at one end thereof, a ball pen formed in said box remote from said pockets and adapted to receive a plurality of balls, means for removing the balls from said ball pen one by one, and a block filling the gutter opposite said pen.

5. A device of the class described, comprising an elongated box having an elevated central runway with a gutter at the side thereof, said runway having a plurality of pockets formed therein near one end thereof, a ball pen formed within said box remote from said pockets and adapted to retain a plurality of balls, and a pit formed in the rear end of said box adjacent to said pockets and adapted to retain balls.

960,072. EXPLOSIVE-ENGINE STARTER. GEORGE BURSON, Winamac, Ind. Filed Jan. 19, 1909. Serial No. 473,060.

The combination of a motor, a motor actuated shaft, a tank adapted to contain fluid under pressure, means for compressing fluid therein, a motor starting device embodying a cylinder to which the compressed fluid is fed, a rotary piston working in said cylinder and mounted loosely on the motor actuated shaft, a clutch connecting said piston to the motor actuated shaft, a valve controlling the admission of fluid to said cylinder, and a



manually operated element acting to simultaneously shift the clutch and valve.

960,073. TUFTING-MACHINE. WILLIAM E. BUSER, Chillicothe, Ohio. Filed Sept. 28, 1908. Serial No. 454,969.



1. A tufting machine comprising a mold-board, supported button supports, and a follower-board having cone-shaped clenching pockets at its lower face.

2. A tufting machine comprising a mold-board, button supports carried thereby, a follower-board having cone-shaped clenching pockets in its lower face, and said pockets having a metallic covering.

3. A tufting machine comprising a mold board, button supports rigidly carried thereby, a follower-board vertically movable in the mold board, and having cone-shaped pockets in its lower face, and a metal covering for the lower face of the follower-board and having cone-shaped pockets fitting in and lining the pockets in the follower-board, and arranged to correspond with the button supports.

4. A tufting machine comprising a mold-board, button supports rigidly carried thereby, a follower vertically movable in the mold-board and composed of a flat wooden member of a size to fit within the mold-board and having cone-shaped pockets in its lower face and the upper end of said pockets extending through the follower-board to the upper face thereof, and a metal covering for the lower face of the follower-board and having cone-shaped pockets of a size to snugly fit in the pockets in the board and arranged to correspond with the button supports of the mold-board, and screws holding the metal covering on the mold clenching board.

960,074. BUTTON-SUPPORT FOR TUFTING-MACHINES. WILLIAM E. BUSER, Chillicothe, Ohio. Filed Mar. 18, 1909. Serial No. 484,272.

1. A button support, comprising a fixed body-portion, and clamping jaws pivoted thereto on opposite sides and surrounding the same.

2. A button support, comprising a fixed body-portion, clamping jaws pivoted thereto on opposite sides and surrounding the body-portion and extending above the upper end of the body-portion.

3. A button support, comprising a fixed body-portion, and clamping jaws pivoted thereto on opposite sides and surrounding the body-portion and extending over the upper end of the body-portion, and means for holding said jaws in their inward position.



4. A button support, comprising a body portion, clamping jaws pivoted to the body portion and surrounding the same, and a spring normally holding the upper end of the jaws away from the body portion.

5. A button support, comprising a body portion, pivoted clamping jaws surrounding said body portion and having inwardly turned upper ends extending over the upper end of the body portion, and a spring normally holding the upper end of the jaws away from the body portion.

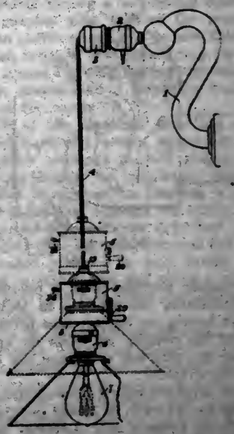
[Claims 6 to 28 not printed in the Gazette.]

960,075. TOY. FRANCIS H. CALLAHAN, New Haven, Conn., assignor of one-half to James P. Clyne, New Haven, Conn. Filed Mar. 21, 1910. Serial No. 550,603.



In a toy, the combination with a body having a chamber, slots in the side walls of said chamber, a roller, an axle on which the roller may turn, said axle adapted to be entered into said slots, a yoke on said axle, means for attaching the end of the yoke to the body, and an elastic band the opposite ends of which are looped over the axle on opposite sides of the wheel between the walls of the chamber and the arms of the yoke.

960,076. ADJUSTABLE ELECTRIC-LAMP SUPPORT. JOHN B. COE, Boston, Mass., assignor of one-fourth to John E. Hilton, Boston, Mass. Filed Nov. 26, 1909. Serial No. 529,899.



1. An adjustable electric lamp, comprising a socket, a reel holder rigidly united to said socket, a reel rotatably

supported by said holder, a flexible electrical conductor upon said reel, manual means for rotating said reel to wind said conductor more or less thereon to adjust the height of the lamp, and electrical connections between said conductor and the terminals of said socket arranged to maintain electrical connection while permitting rotation of the reel.

2. An adjustable electric light holder comprising a casing, a lamp socket rigidly connected to said casing, a reel journaled within said casing, a suspension cord, including an electrical conductor passing into said casing and attached to said reel, means for rotating the reel to wind up said cord and thereby adjust the height of said holder, a toothed wheel secured to said reel, a lock arranged to engage any of the teeth of said wheel for securing said reel in any position and having a portion extending outside of the casing for manipulation, and contact brushes for transmitting current from the conductor to the terminals of the socket.

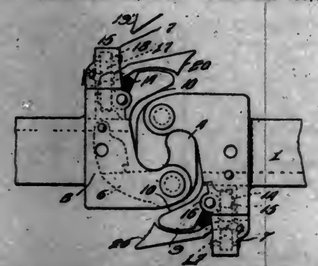
3. An adjustable electric light holder, comprising a casing having a removable base, a lamp socket rigidly secured to said base, standards also rigidly secured to said base, a reel of non-conducting material rotatably supported by said standards, metallic flanges or disks upon said reel, contact brushes bearing against said disks and having electrical connection with the terminals of said socket, and an electric light cord passing into said casing, adapted to be wound upon said holder between said flanges secured thereto in electrical connection therewith.

4. An adjustable electric light holder comprising a lamp socket, supports rigidly connected to said socket, a reel rotatively held by said supports, metallic flanges or disks attached to said reel at a distance from one another, blocks of insulating material secured to said supports, contact springs or brushes mounted upon said blocks and bearing against said flanges, connections leading from the terminals of said lamp socket to said brushes, and an electric light cord mounted upon said reel and having its terminals in electrical connection with the respective flanges.

5. In an adjustable electric light holder, a lamp socket, a reel rotatively mounted upon standards rigidly connected to said socket, an electric light cord adapted to be wound upon said reel and metallic flanges on said reel on each side of said cord to which the terminals of the latter are respectively connected, said flanges serving both as retainers for the wound-up cord and as conductors for transmitting electric current to the lamp socket.

[Claims 6 and 7 not printed in the Gazette.]

960,077. CAR-COUPLING. HARRY J. DAUBERT, Tamaqua, Pa. Filed Mar. 25, 1909. Serial No. 485,716.



1. A car coupler provided with a pivoted knuckle and means for sustaining the knuckle in locked position, a guard member having an arcuate face pivotally connected to the face of the coupler, an offset lip upon the guard, and a pivoted dog adapted to engage the lip to lock the guard upon the coupler.

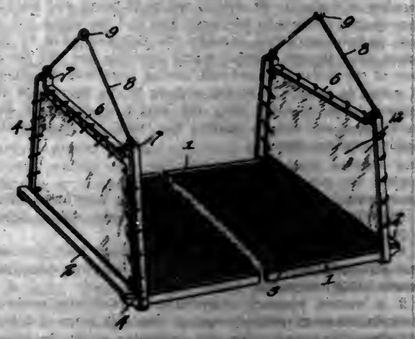
2. A coupler provided with a pivoted knuckle and means for sustaining the knuckle in locked position, of a guard provided with an arcuate face pivotally connected with the face of the coupler, said guard being provided with a lip, a weighted dog provided with a tooth adapted to engage the lip of the guard when the guard is swung closed upon its pivot, substantially as described.

3. The combination with a car coupler having a pivoted knuckle and means for retaining the knuckle in locked position, of a guard member provided with an arcuate face pivotally connected with the face of the coupler, said guard member being provided with an offset lip, a locking dog having a weighted end provided with a tooth and its opposite end provided with a projection pivotally connected with the head of the coupler, said tooth adapted to engage the lip of the guard when in its closed position, and a pivoted key normally contacting the projection of the dog, substantially as described.

4. The combination with a car coupler having a pivoted knuckle and means for retaining the knuckle in locked position, the said head being provided with an extending compartment, a guard member pivotally connected with the top and bottom walls of this extension, said guard member being provided with an offset having a lip, a locking dog pivotally secured within the compartment, said locking dog being provided with an upstanding portion and a weighted extremity having a depending tooth adapted to engage the lip of the guard when in its closed position, and a key having its body portion overlying the body of the locking dog beyond its projection, and said key being provided with an enlarged arcuate end adapted to extend beyond the end of the guard.

5. A car coupler provided with a pivoted knuckle and means for retaining the knuckle in locked position, an extension forming a compartment on one side of the draw bar, a guard for the coupler, said guard comprising a member having an arcuate front face and its rear face provided with extensions, one of said extensions being larger than the other and provided with an upwardly projecting lip, both of said extensions being provided with a bore and having a vertical wall, the guard having its enlargements positioned within the compartment and pivotally connected with the ears provided in the top and bottom walls thereof, and the extending portions of the rear face of the guard adapted to engage the offsets within the top and bottom when the guard is in its closed position, a locking dog pivotally secured within the compartment, said dog being provided with an upstanding portion and a weighted end provided with a tooth adapted to engage the lip provided upon the extension of the guard to lock the guard upon the coupler, a horisontally pivoted key within the compartment normally engaging the upstanding portion of the locking dog, said key having one of its faces of an arcuate formation, and the end key being enlarged and curved, substantially as described.

960,078. BED-HAMMOCK. CHARLES B. EATON, Belfast, Me. Filed Aug. 18, 1909. Serial No. 513,476.



1. A bed hammock comprising a mattress, head and foot members connected to the mattress, said head and foot members each comprising a pair of uprights, inwardly extending feet, staples connecting the side rails of the mattress to said feet, loops at the upper ends of said uprights and a connected cross bar, curtains connected to said head and foot members, and suspending ropes or cables connected to said loops.

2. A bed hammock comprising a wire mattress having a wooden frame, head and foot members connected to said frame and provided with inwardly extending feet upon which the frame rests, staples for securing said frame to said head and foot members, the latter being provided with upwardly extending loops and a cross bar, and suspending ropes or cables connected to said loops.

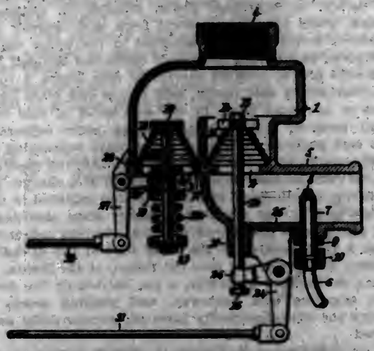
960,079. BRACELET-FASTENING. ALFRED EMRICH, Pforzheim, Germany. Filed Jan. 26, 1909. Serial No. 474,282.



1. The combination of a pair of end fastening members, one of said members being open and interiorly grooved, and the other said member being of lesser width and exteriorly grooved, and an intermediate spring member, said members being movable relative to each other to lock same together in the same plane, with said spring member disposed inside of said open end member and straddling said other end member and engaging said grooves, substantially as described.

2. In a fastening for bracelets the combination of a middle link formed as a spring bow with two links adapted to be folded on the middle link and each having grooves to engage with the middle link.

960,080. CARBURETER. THOMAS J. FAY, New York, N. Y., and JOHN MAGEE ELLSWORTH, Bernardsville, N. J. Filed Nov. 15, 1906. Serial No. 343,505.



1. A casing having an air inlet port, an explosive charge inlet port, and an exhaust port, a coil spring surrounding said explosive charge inlet port, a valve rod, a stop on said valve rod for limiting the expansion of said spring, a second coil spring surrounding the air inlet port, a third spring for preventing the expansion of the second mentioned spring until a definite suction pressure exists within the casing, means for varying the tension of the last mentioned spring, and means for varying the position of the stop.

2. A carbureter having a port, an expansible member constituting a valve controlling said port, a valve rod, a coil spring surrounding said rod for retarding the opening of said valve until a definite suction pressure exists within the carbureter, a lever terminating adjacent one end of said spring, and means for operating said lever to vary the tension of the spring.

3. A carbureter having a plurality of ports, valves controlling said ports, each of said valves comprising an expansible member subjected to the suction pressure of the engine and expanding to permit the passage of fluid through the walls thereof when its predetermined suction pressure is attained, the suction pressure required to open one of said valves being greater than the suction pressure required to open another one of said valves, means for varying the extent of the opening movement of one of said valves, and means for varying the suction pressure required to open another of said valves.

960,081. DEVICE FOR REGULATING DELIVERY OF PLASTIC SUBSTANCES. JAMES J. FEARON and THOMAS E. FEARON, Philadelphia, Pa., assignors, by mesne assignments, to The Banding Machine Company, Wilmington, Del., a Corporation of Delaware. Filed Apr. 8, 1909. Serial No. 488,784.



1. In a device of the character described, the combination of a receptacle having a contracted delivery nozzle whose axis is parallel with that of the receptacle, an inclined neck connecting the delivery nozzle and receptacle, means for maintaining the material under pressure in the nozzle, and a rotatable feed regulating device located in said nozzle.

2. In a device of the character described, the combination of a receptacle having a contracted delivery nozzle, whose axis is parallel with that of the receptacle, said nozzle having an outlet whose axis is coincident with that of the nozzle, an inclined neck connecting the nozzle and the receptacle, means for maintaining the material under pressure in the nozzle, and a rotatable feed regulating device located in the nozzle.

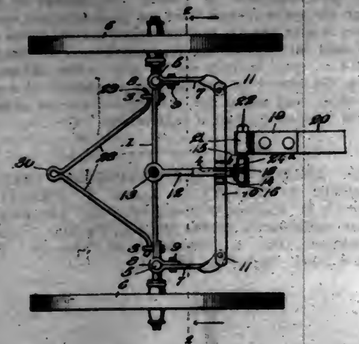
3. In a device of the character described, a receptacle having an inclosed delivery nozzle, means for maintaining the material under pressure in said nozzle, and means contained in said nozzle for regulating delivery therefrom, said means having, as an element, a spiral flange which prevents direct flow through the nozzle.

4. In a device of the character described, a receptacle having an inclosed delivery nozzle, means for maintaining the material under pressure in said nozzle, and a feed screw contained in said nozzle and serving to regulate the delivery therefrom, said feed screw preventing direct flow through the nozzle.

5. In a device of the character described, the combination of a receptacle having an inclosed delivery nozzle, means for maintaining the material under pressure in said nozzle, and movable delivery means in said nozzle which prevents direct flow therethrough, and, when quiescent, presents such frictional resistance to the flow of the material under pressure as to prevent delivery of the same.

[Claims 6 to 12 not printed in the Gazette.]

960,082. TONGUE-TRUCK. CHARLES A. FOELL, Rockwell, Iowa. Filed Feb. 25, 1909. Serial No. 479,869.



1. A tongue truck comprising an axle spindle journaled on the axle, wheels journaled on the spindle, arms secured to the spindles, a bar secured to the arms, a hound pivotally secured at one end to the axle and provided at its free end with a hollow cylindrical head extending axially of the truck, means securing the hound to the bar, a draft-bar adjustably mounted in the head and extending axially of the truck, a set screw carried by the head and engaging the draft-bar, a tongue, and a thill iron secured to the tongue and provided with an opening receiving the draft-bar.

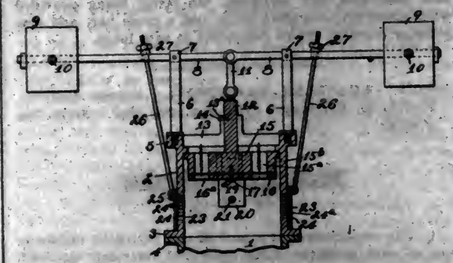
2. A tongue truck comprising an axle having its ends bent and secured to form bearings, axle spindles having angular members journaled in the bearings, arms each having one of its ends bent and secured to form an eye, the eyes of the arms receiving the angular members of the spindles, said arms projecting forwardly from the angular members of the spindles and having their free ends inclined inwardly, a bar secured at its ends to the free ends of the arms, said bar being angular in cross section, a bolt secured at its lower end to the axle, a hound pivotally secured at one end to the bolt and formed at its free end with a hollow cylindrical head extending axially of the truck, said head being disposed above and beyond the bar, a clip securing the hound to the bar, a draft-bar adjustably mounted in the head and extending axially of the truck, a set screw carried by the head and engaging the draft-bar, a clevis bar secured at one end to the bolt having its free end provided with a flange, means engaging the flange and hound, and a strap secured to the clevis bar.

960,083. MACHINE FOR MAKING STRAW PADS. CHESTER M. FRASER, Hammond, Ind. Filed Dec. 18, 1907. Serial No. 406,334.



In a machine for making straw pads, a substantially horizontal endless conveyer for delivering straw, a slightly inclined table having its highest end in the plane of the rear end of said conveyer, and spaced therefrom, a roller mounted in the space between said conveyer and said table, the upper face of said roller being flush with the upper faces of both conveyer and table, a curved guide, a roll of paper carried below the table, the paper running over said curved guide and passing through the space between the conveyer and the table and over the roller, a folder arranged upon the table immediately in the rear of said roller, a plurality of pressing rollers mounted transversely across the rear portion of the table, and a sewing mechanism arranged between two of said pressing rollers.

960,084. AUXILIARY AIR-VALVE FOR CHARGE-FORMING DEVICES. JACOB H. FRIEDENWALD, Baltimore, Md. Filed Jan. 3, 1910. Serial No. 536,246.



1. An auxiliary vale for charge forming devices comprising an air intake member having a part provided with an opening, an apertured plate mounted to have movement with relation to said part to vary the size of the opening, a weighted lever and a connection operating automatically under the suction of the piston to vary the size of the opening, substantially as described.

2. The combination with an air intake member of a charge forming device, of a cylindrical part having a piston mounted to move therein, a pivoted lever having one end connected to said piston and a weight carried upon the other end, a rotary plate carried by the piston, said piston and plate having ports or openings, and a pin and cam groove connection between the rotary plate and the cylindrical part, substantially as described.

3. In combination with an air intake of a charge forming device, an apertured piston adapted to reciprocate therein, posts extending upward from said cylinder part, a pair of levers pivotally mounted in the upper ends of said posts, and having their ends connected through links with said piston, weights carried by said levers, a rotary plate carried by said piston, said piston and plate having ports or openings, ports in the side walls of said cylindrical member, sliding plates having ports coöperating with said ports in the cylinder, and links connecting said sliding plates with the levers, substantially as described.

4. In combination with the air intake of a charge forming device, a cylindrical member, a piston mounted to move therein and having a rabbet, a rotary plate mounted on said piston, said piston and said plate having coöperating ports, a plate secured to the inner wall of the cylindrical member, and projecting into the rabbet of the piston, and having an inclined guideway, a pin carried by the rotary plate engaging said guideway, and yielding means for holding the piston normally elevated, substantially as described.

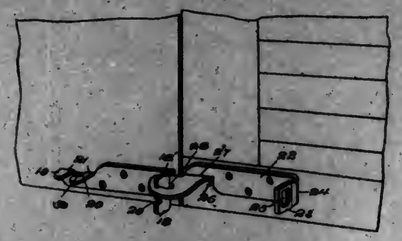
5. In combination a cylindrical member having a spider at its outer end, a plunger guided in said spider and having a splined connection therewith, a piston carried by said plunger within the cylindrical member, a plate rotatably mounted upon the piston, said piston and plate having coöperating ports, means whereby the vertical movement of the piston effects rotary movement of the plate, a pair of oppositely extending levers having their inner ends linked to said plunger, and weights carried by the outer ends of said levers, substantially as described.

[Claim 6 not printed in the Gazette.]

960,085. HINGE. CHESLEY T. J. GILES, Greenville, S. C. Filed Jan. 24, 1910. Serial No. 539,776.

1. In a hinge, a leaf having a tongue bent at right angles to the body and carrying a pintle, locking tongues carried by the body and disposed at right angles thereto, another leaf provided with an offset portion disposed at

right angles to the plane of the leaf and provided with an opening proportioned to engage upon the pintle, and with an offset portion having an opening adapted to engage between the locking tongues.

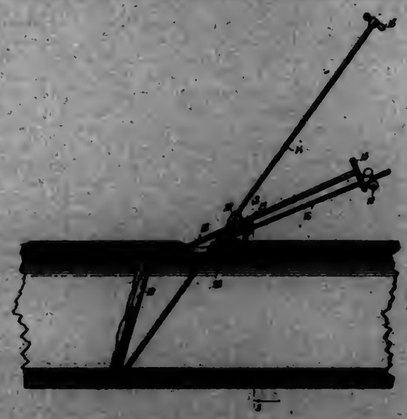


2. In a hinge, a body portion, a tongue struck up at right angles from one end of the body portion, pintles extending from opposite sides of the tongue, locking tongues struck up at right angles to the body portion and disposed in spaced relation at the ends opposite the pintle, another leaf provided with an ear struck up at right angles to the body portion and having an opening proportioned to engage upon either of the pintles, and an offset portion struck up at the end opposite the first-mentioned offset portion and provided with an opening adapted to engage between the locking tongues.

3. In a hinge, a leaf provided with an offset pintle having an enlarged head and reduced shank, locking tongues disposed at the end of the leaf opposite the pintle, another leaf having a D-shaped opening adapted to be inserted over the enlarged head of and engage upon the reduced shank of the pintle, and an offset portion provided with an opening adapted to engage between the locking tongues.

4. In a hinge, a leaf provided with pintles extending in opposite directions upon both sides laterally thereof, locking tongues formed at the end of the leaf opposite the pintle, a leaf provided with an offset portion having an opening adapted to engage over either of the pintles, and another offset portion adapted to engage between the locking tongues whereby the relation of the leaves may be reversed to produce right and left hinges.

960,086. GAS-MAIN STOPPER. PATRICK GOODMAN, New York, N. Y. Filed Jan. 27, 1910. Serial No. 540,448.



1. An expansible and contractible gas main stopper adapted to be inserted in an opening in the side of the main, having handle-bars, a projection arranged on one of the handle-bars to engage the inner wall of the main adjacent to the said opening, and means to exert pressure on the other handle-bar to lock the stopper in the main, adapted to be connected to the first-named handle-bar.

2. A gas main stopper having handle-bars pivotally connected at substantially diametrically opposite points, an eye adjustable along the length of one of the handle-bars, and a hook adapted to engage in said eye and adjustably carried by the other handle-bar.

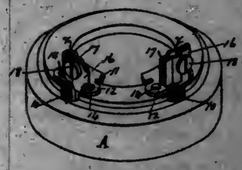
3. An expansible and contractible gas main stopper adapted to be inserted in an opening in the side of the main, having handle-bars, a projection adjustable on one of the handle-bars and arranged to engage the inner wall of the main adjacent to the said opening, and means to exert a pressure on the other handle-bar, detachably connected to the first-named handle-bar.

4. An expansible and contractible gas main stopper adapted to be passed through an opening in the side of the main and expanded in the main to cut off the flow of gas, having handle-bars connected to the upper and lower portions thereof, a finger carried by the handle connected to the lower portion of the stopper and arranged to engage the inner wall of the main adjacent to the said opening, an eye carried by the handle-bar having the finger, and a hook adapted to be engaged within the eye and adjustably connected to the other handle-bar.

5. An expansible and contractible gas main stopper adapted to be inserted in an opening in the side of the main and having handle-bars pivotally connected to the upper and lower portions thereof, a member adjustable along the length of one of the handle-bars connected to the lower portion of the stopper, having a finger arranged to engage the inner wall of the main adjacent to said opening and provided with an eye located to stand at the outer wall of the main when the finger is engaged, and a hook adapted to engage in the eye, having means for forcing the other handle-bar inwardly.

[Claim 6 not printed in the Gazette.]

960,087. BINDING-POST. GILBERT W. GOODRIDGE, Bridgeport, Conn., assignor to The Perkins Electric Switch Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 17, 1908. Serial No. 468,043.



1. A combined contact and binding post, comprising a base with laterally extending perforated securing ears and a contact blade integral therewith and projecting between the same, together with an integral upright standard having a lug struck therefrom and bent around to form a clamp and an actuating screw passing through the members of the clamp, said base being cut away between the laterally extending ears to leave clearance for a leading-in wire and said clamp being located thereover to receive said wire, substantially as described.

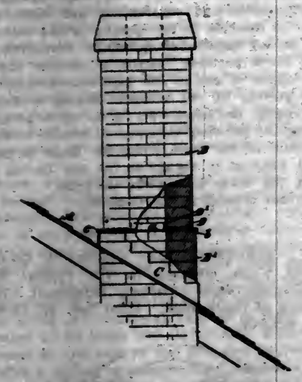
2. An insulating base of a rotary snap switch having holes for the passage of the wires, together with an integral combined contact and binding post comprising a base piece with laterally extending ears and a contact blade projecting between the same, together with an upright standard having a lug bent around to form a binding clamp, and an actuating screw passing through the members of the clamp, said base being cut away between the laterally extending ears to leave clearance for a leading-in wire and said clamp being located over the wire hole in the base and adapted to receive the leading-in wire threaded therethrough, substantially as described.

3. A blank for a combined contact and binding post, comprising a metal strip having one end shaped for a

contact blade, a base portion adjacent said blade having perforated lugs extending laterally on either side of said blade, a post portion adjacent said base portion having a lateral flange adapted to be bent around to form a clamp, said base portion being perforated to afford clearance for the leading-in wire and said post and clamp-lug portions being perforated with holes of the same size adapted to be brought into register and threaded to receive an actuating screw.

4. A combined integral contact and binding post, comprising a base with laterally extending perforated securing ears, a contact blade projecting horizontally from between said ears, together with an upright standard having a lug struck therefrom and bent around to form a clamp, an actuating screw passing through the clamp, said base being cut between the securing ears to leave clearance for a leading-in wire, said clamp being located thereover to receive said wire and one member of the clamp being vertically grooved to hold the wire in position, substantially as described.

960,088. WATER-GUARD FOR CHIMNEYS. WILLIAM F. GREENLEE, Atchison, Kans. Filed July 28, 1908. Serial No. 445,748.

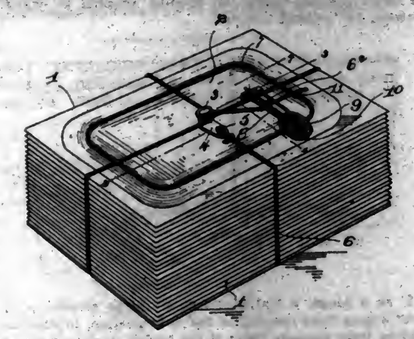


A water guard for a chimney, comprising a plate having a central opening for registering with the draft opening of the chimney, said opening having a marginal upwardly extending flange adapted to engage the inner wall of the chimney, the upper surface of the plate being inclined downwardly from the central opening to the outer edge thereof for the purpose specified.

960,089. BUNDLE-TYING DEVICE. JOSEPH GREGORY, Washington, Mo., assignor of one-third to John Isbell and one-third to Jesse H. Schaper, Washington, Mo. Filed Oct. 4, 1909. Serial No. 520,781.

1. A device of the class described, comprising a plate, a post centrally arranged thereon, said post adapted to have one end of a cord secured thereto, said plate provided with a notch formed upon the upper surface thereof, a hook formed from a single piece of wire carried thereby and provided with a folded end adapted to normally hang within said notch, means engaging the end of said hook for securing the same to said plate, a tongue secured at one end to said plate by means of said mentioned securing means and extending to said notch, for preventing the accidental removal of a cord adapted to be secured thereby.

2. A device of the class described, comprising a plate, means for attaching a cord thereto carried by said plate, said plate provided with a notch formed upon one side thereof, a hook fixedly secured at one end to said plate, said hook provided with a folded portion, said folded portion opening inwardly and adapted to normally fit within said notch portion, said hook adapted to clamp the cord between the inner face of the plate and the body of the hook, and said folded portion adapted to prevent the removal of the cord from the hook when the folded portion is placed within said notch formed in said plate.



960,090. SELF-LOCKING NUT. EDWARD R. HIBBARD, Chicago, Ill., assignor to Grip Nut Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 19, 1906. Serial No. 344,164.



1. A screw threaded nut having a continuous flat lower bearing surface and having a thread continuous from the upper surface of the nut to approximately said lower surface thereof, and all of its threads along one or more lines extending longitudinally through the opening in said nut bent from their original planes.

2. A screw threaded nut having a continuous flat lower bearing surface and having a thread continuous from the upper surface of the nut to approximately said lower surface thereof bent from its normal plane along one or more lines extending longitudinally through the threaded opening in said nut less than one-half the pitch of said thread.

3. A screw threaded nut, provided with a continuous flat lower bearing surface and having threads continuous from the upper surface of the nut to approximately said lower surface thereof each varying from a true helix along one or more lines extending through said nut.

4. A screw threaded nut, wherein the threads are continuous and normal along a plurality of lines extending longitudinally of the threaded opening in said nut, the remaining portions of the threads being of a slightly different pitch from the normal portion of the threads.

5. A screw threaded nut having an approximately continuous flat lower surface, wherein the threads are continuous from the upper surface of the nut to said lower surface thereof and the thread varies from a true helix at a plurality of lines about the threaded opening each extending longitudinally through said opening.

[Claims 6 to 8 not printed in the Gazette.]

960,091. SPARK-PLUG HOLDER. CHARLES MORTON HOLDEN and HENRY GLOWACKI HENDERSHOT, San Francisco, Cal. Filed Dec. 21, 1909. Serial No. 534,360.

1. A spark plug holder consisting of a tubular socket screw-threaded to be fixed in the ignition chamber and having a screw-threaded flange at the top, with upwardly projecting lugs, an interiorly screw-threaded collar turnable upon said flange, the interior of which is in the form

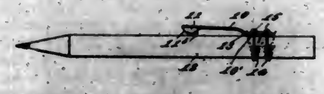
of opposed segments, and straight sides uniting said segments and capable of registering with the lugs of the flange, and a spark plug fitting between the lugs of the socket flange, and lockable by turning the collar.



2. A tubular socket piece adapted to be fixed in the ignition chamber, a screw threaded collar on the socket piece, having a top opening with flattened opposite walls, and a spark plug fashioned to conform substantially to the interior of the socket piece and having a flange at the top with flattened opposite edges adapted to register with the like walls of the opening in the collar, said plug being locked in place by screwing down the collar to bring the flattened walls thereof crosswise of the like walls of the plug.

3. The combination in a spark plug holder, of a tubular socket adapted to be secured in a combustion chamber, and having interior seats, a plug having surfaces to fit and form a joint with said seats, and a flange around the top with flattened opposite edges, a screw-threaded flange upon the socket, with upwardly projecting segmental lugs upon opposite sides, a screw-threaded collar turnable upon the socket flange, and adapted to engage and lock the plug.

960,092. SAFETY-CLIP FOR PENS AND PENCILS. WILLIAM OLIN HUNTER, Topeka, Kans. Filed May 29, 1909. Serial No. 499,193.



1. In combination with a stem, a clip comprising a straight rigid head adapted to conform snugly to said stem, said head being provided with transverse eyes, a flexible body formed integral with and extending downwardly from said head, a jaw connected to said flexible body and adapted to coöperate with said stem to form a clamp, and a pair of spring rings loosely pivoted in the said head eyes and adapted to embrace the stem to hold the head snugly against the stem and adapted to permit a slight longitudinal movement thereof on the stem, substantially as set forth.

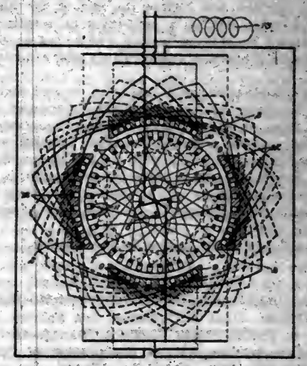
2. In combination with a stem, a flexible body having at one end a jaw coöperating with the stem to form a clamp and having at the other end a straight rigid head, and a pair of spring rings loosely pivoted to said head and adapted to surround the stem to secure said head against the stem, substantially as set forth.

960,093. DYNAMO-MACHINE. DUGALD C. JACKSON, Madison, Wis. Filed May 16, 1904. Serial No. 208,064.

1. In a dynamo, the combination with a field magnet having salient pole pieces, of an armature, unequally spaced slots formed in and distributed unequally and entirely across said pole pieces, and a compensation winding laid in said slots, substantially as described.

2. In a dynamo, the combination with a field magnet having salient pole pieces, of an armature core, slots formed in said armature core, an armature winding laid in said slots, slots formed in said pole pieces, said slots being equal in number to the slots in said armature core, and a winding laid in said slots in the pole pieces, substantially as described.

3. In a dyna[illegible] the combination with a field magnet having pole pieces, of an armature, slots formed in said pole pieces, and a compensation winding composed of similar previously formed coils laid wholly in said slots, substantially as described.



4. In a dynamo, the combination with a field magnet having salient pole pieces, of an armature core, slots formed in said armature core, an armature winding laid in said slots, unequally spaced slots formed in said pole pieces, said slots being equal in number to the slots in said armature, and a compensation winding laid in said slots in the pole pieces, substantially as described.

5. In a dynamo, the combination with a field magnet having pole pieces, of an armature, slots formed in said pole pieces, said slots being spaced farther apart toward the center of the pole faces than near the pole tips, and a compensation winding composed of previously formed coils laid in said slots, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

960,094. FUSEE. WILTON D. JACKSON, Philadelphia, Pa. Filed Apr. 1, 1904. Serial No. 201,129.



1. A cap or cover for fusees made of a plurality of relatively stiff, non-metallic sections fitted together and having internal portions definitely spaced apart with means for retaining said sections in place, one of said sections engaging the tube of the fusee, an ignitible substance carried by the fusee and protected by a section, and an ignition substance carried by the section engaging the tube of the fusee and protected by another section.

2. A cap or cover for fusees, comprising a member fitting the end of the fusee and having a projection, an ignitible composition carried by said projection, a member having a recess to fit said projection, said member carrying another projection, a scratching substance carried by said projection, and a cap or cover fitting said projection and inclosing the scratching substance.

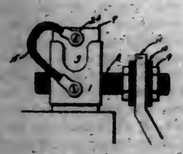
3. A cap or cover for fusees, comprising a member fitting the end of the fusee tube and having a threaded projection, an ignitible composition carried by said projection at the end of the illuminating material carried by the tube, a member having a recess to fit said projection, said member carrying another threaded projection, a scratching substance carried by said latter projection, and a cap or cover fitting said projection and inclosing the scratching substance.

4. The combination in a fusee, of an end member secured to the same, and having a body of greater strength than the fusee or its composition, said end member having a projecting portion, a recessed member adapted to engage said projecting portion and inclose the end of the fusee, said recessed member having a projection, a scratching substance carried by said projection and a cap or cover for engaging said projection and inclosing said scratching substance.

5. The combination in a fusee, of an end member secured to the same, and having a body of greater strength than the fusee or its composition, said end member having a threaded portion, a recessed member adapted to engage said threaded portion and inclose the end of the fusee, said recessed member having a threaded projection, a scratching substance carried by said projection and a cap or cover for engaging said threaded projection and inclosing said scratching substance.

[Claims 6 and 7 not printed in the Gazette.]

960,095. BRUSH-HOLDER FOR DYNAMO-ELECTRIC MACHINES. CARL E. JOHNSON, Los Angeles, Cal., assignor to United States Electrical Manufacturing Company, Los Angeles, Cal., a Corporation of California. Filed Feb. 23, 1909. Serial No. 479,661.



1. In a brush-holder, the combination, with a supporting stud-pin, of a holder having arms provided with oppositely-disposed holes through which said stud-pin extends, and means for clamping said holder to said pin, said holes being larger than said pin to permit the position of the holder to be varied before the same is clamped in place.

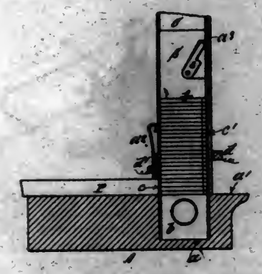
2. The combination, with the brush-holder proper, of a threaded stud, means to adjustably secure said holder on said stud, a lever fastened to said holder, said lever having a thin resilient spring fastened thereto and projecting toward its free end, that end of the lever through said resilient spring resting on the brush, means to pivotally fasten said lever to the brush-holder proper, and a spring connecting the brush-holder proper and said lever to tend to move the free end of the lever toward the brush.

3. The combination in a brush-holder, of a piece of sheet metal, a threaded stud, a tube fitting loosely on said stud, and nuts on said threaded stud facing said tube to fasten said holder on said stud, substantially as described.

4. The combination in a brush-holder, of a piece of sheet metal with two opposite limbs to constitute the holder itself, a threaded stud, a tube to fit over said stud, nuts to fit stud, a lever of sheet metal to fit between the limbs of said holder, a threaded stud through said lever, a nut to fit said stud that goes through the lever, and a spiral spring fastened on one end of the stud going through the lever, the other end of the spring being fastened to a rod fastened on said sheet metal holder.

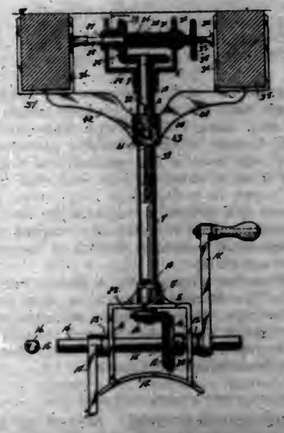
5. The combination with the brush-holder proper manufactured of sheet metal, of a threaded stud, a tube fitting on said stud, two nuts fitting on said stud to hold said tube in place, a lever of sheet metal, one end of said lever resting on a fulcrum fastened to the sides of said holder, said lever having a thin resilient spring fastened to one end, the end of the lever to which said resilient spring is fastened being thereby supported on the brush, a stud passing through a hole in said lever, a nut on the end of said stud above said lever, a spiral spring fastened to the other end of said stud, a rod made fast to said sheet metal holder, one end of said spring being fastened to said rod to maintain a pressure of the brush on the commutator, and means to prevent said stud from working loose.

960,096. TYPE-SETTING APPARATUS. LOUIS KOSUTH JOHNSON, New York, N. Y. Filed Jan. 10, 1910. Serial No. 537,288.



In type setting mechanism of the character described, the combination with channel supporting means, and with type forwarding mechanism, of a metallic type containing channel formed with the rear slot *c*, and the front slot *c'*, the metallic type follower S, formed with the recess *s'*, the metallic gravity contact *s*, fitting in said recess and pivotally attached to the type follower S, the electric terminal *d*, the electric circuit *e*, the electro magnet signal *f*, and the electric terminal *d'*, whereby when the gravity contact protrudes through the slot *c'*, it will close the electric circuit in the manner and for the purpose described.

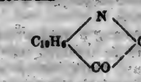
960,097. ANGLE-BORING MACHINE. LUTHER M. KEITHLEY and ANDREW E. SCHIEN, Denver, Colo. Filed Aug. 27, 1908. Serial No. 450,466.



A machine of the class described comprising two separated frames, a hollow column forming a rigid connection between the two frames, an operating shaft journaled in one frame, a boring shaft journaled in the other frame, an operative connection between the two shafts, the lower frame extending below the operating shaft, a concavo-convex member integrally connecting the two sides of the extending portion of the said frame; and an abutment longitudinally adjustable upon the hollow column, the latter being graduated, the abutment having a central depression adapted to receive a portion of the boring frame, when the latter is properly adjusted, substantially as described.

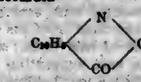
960,098. GREEN VAT DYE AND PROCESS OF MAKING SAME. HERMANN KRAFT, Basel, Switzerland, assignor to Society of Chemical Industry in Basle, Basel, Switzerland. Filed May 4, 1909. Serial No. 493,903.

1. The herein described process for the manufacture of green vat-dyestuffs by condensing an indoxylic compound with an alpha-substitution product of the betanaphthisatin of the general formula



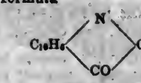
and treating the so-obtained condensation product with a halogenising agent.

2. The herein described process for the manufacture of green vat-dyestuffs by condensing an indoxylic compound with an alpha-substitution product of the betanaphthisatin of the general formula



and treating the so obtained condensation product with bromin.

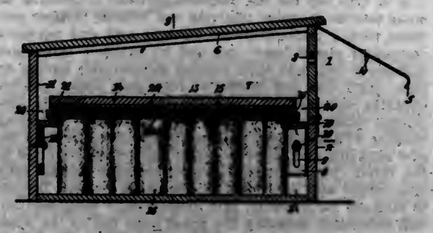
3. The herein described process for the manufacture of green vat-dyestuffs by condensing an indoxylic compound with an alpha-substitution product of the betanaphthisatin of the general formula



4. As new products, the described halogenated green vat-dyestuffs derived from the condensation products of indoxylic compounds with alpha-substitution products of betanaphthisatin, the said dyestuffs being in dry state greenish black powders, soluble in concentrated sulfuric acid to a green solution and yielding by their treatment with caustic soda-lye and a hydrosulfite an orange colored vat which dyes cotton green tints fast to washing, light and chlorin.

5. As a new article of manufacture, the described brominated green vat-dyestuff derived from the condensation product of acetindoxyl with mono-bromo-betanaphthisatin chlorid, the said dyestuff being in dry state a greenish-black powder soluble in concentrated sulfuric acid to an olive green solution and yielding by its treatment with caustic soda lye and a hydrosulfite an orange vat, which dyes cotton full, blue-green tints fast to washing, light and chlorin.

960,099. FIRELESS BROODER. GEORGE HOWARD LEE, Omaha, Nebr. Filed May 19, 1908. Serial No. 433,680.



1. A brooder having a body, a hover plate supported at an intermediate point therein and dividing the interior of said body into an air space and a chick compartment therebelow, said hover plate having stringers attached to the under edges thereof, with openings therethrough, and tubes passing through said openings and having communication at their ends with said air space, said tubes having perforations throughout the length thereof to withdraw foul air from points throughout the interior of said chick compartment.

2. A brooder having a body, a hover plate supported at an intermediate point therein and dividing the interior of said body into an air space and a chick compartment therebelow, said hover plate having stringers fixed to the under edges thereof, with openings therethrough, tubes passing through said openings and having communication at their ends with said air space, said tubes having perforations throughout the length thereof for withdrawing foul air from points throughout the interior of said chick compartment, and blankets attached to the under side of said hover plate and hanging in said chick compartment.

3. A brooder having a hover forming an air space in the upper portion thereof, and a chick compartment in the lower part thereof, and substantially cutting off communication therebetween, said hover having ventilating openings at the side edges thereof and ventilating tubes passing through said openings, and communicating at their ends with said air space, said ventilating tubes having openings throughout the length thereof for withdrawing air from points in the interior of said chick compartment.

960,100. COMPOUND FOR PRODUCING SILK-LIKE EFFECTS. LEON LILIENFELD, Vienna, Austria-Hungary. Filed May 4, 1907. Serial No. 371,765.

1. Coloring matter for producing silk-like effects, consisting of a mixture of mica and a compound formed of viscose and a metal of the magnesium group.

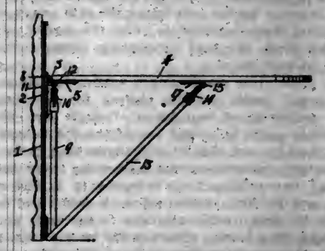
2. Coloring matter for producing silk-like effects, consisting of a mixture of finely pulverized mica and a zinc salt of viscose.

3. Coloring matter for producing silk-like effects, consisting of a mixture of pulverized mica and a zinc salt of viscose obtained by precipitating a neutral or slightly acid viscose with a zinc salt solution dissolved in dilute alkalies, ammonia, solutions of alkaline salts and the like.

4. Coloring matter for producing silk-like effects, consisting of a mixture of mica and a compound formed of viscose and a metal of the magnesium group, and pigments.

5. Coloring matter for producing silk-like effects, consisting of a mixture of finely pulverized mica and a zinc salt of viscose, and pigments.

960,101. IRONING-BOARD. JOHN A. LOWE, Toledo, Ohio. Filed Feb. 25, 1910. Serial No. 546,014.

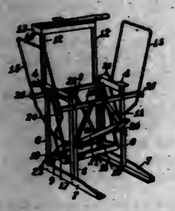


1. The combination with a wall-plate having loops, of a board, a member secured to the wall end of such board and having fingers projecting upwardly at the end of the board for engagement with the loops of the wall-plate, a vertical leg having its upper end in removable pivotal engagement with said member and adapted to support the wall end of the board with said member in engagement with the wall-plate, and a leg removably attached to the board adjacent its center.

2. The combination with a wall-plate having eyes, of a board, a member secured to the under side of the board and having fingers at the wall end of the board for projecting upwardly through said eyes, and also having pivot lugs at the wall end of such board, a support beneath the wall end of the board having a head provided with hooks

for removably engaging such lugs, a plate secured to the underside of the board adjacent its center having pivot lugs, and a diagonal support having its lower end adjacent the lower end of the first support and its upper end provided with hooks for removably engaging the lugs of such plate, substantially as described.

960,102. PRESS FOR FRUIT. THOMAS PLINY MADDOX, Aztec, N. Mex. Filed June 15, 1909. Serial No. 502,196.



1. A fruit press comprising a supporting frame having a shelf to hold the crate in elevated position; a treadle pivotally mounted in said frame below said shelf; two pulling loops adapted to extend over said crate and pivotally connected upon said treadle; means connected with said treadle to elevate the same; a foot power lever pivotally mounted in said supporting frame; links connecting said loops and said power lever and arranged to draw the said loops over the said crates by the depression of the said power lever; means connected with said power lever for raising the same; and rests extended from the said supporting frame to limit the spread of said loops.

2. A fruit press comprising a supporting frame having four corner posts; holding shelves for said supporting frame consisting of two pieces of angle iron riveted to said corner posts to extend one of the flat flanges of said angle irons on each side of said supporting frame; a treadle pivotally mounted in said supporting frame below said shelves; two pulling loops adapted to extend over the crates and pivotally connected with said treadle; lifting springs for said treadle attached to the same and to the said supporting frame; a foot power lever pivotally mounted in said supporting frame; links connecting said loops and said power lever and arranged to draw the said loops over the said crates by the depression of the said power lever; a spring connecting the said power lever and supporting frame adapted to raise the former; and rests extended from the said supporting frame to limit the spread of said loops.

3. A fruit press comprising a supporting frame having four corner posts; holding shelves for said supporting frame consisting of two pieces of angle iron riveted to said corner posts to extend one of the flat flanges of said angle irons on each side of said supporting frame; a treadle pivotally mounted in said supporting frame below said shelves; two pulling loops adapted to extend over the crates and pivotally connected with said treadle; lifting springs for said treadle attached to the same and to the said supporting frame; a foot power lever pivotally mounted in said supporting frame; links connecting said loops and said power lever and arranged to draw the said loops over the said crates by the depression of the said power lever; a spring connecting the said power lever and supporting frame adapted to raise the former; and laterally extended brace rods constructed from bar metal and riveted to the said corner posts, the ends of said braces being extended beyond the said corner posts and having outwardly turned ends to form guides and rests for the said loops.

4. A fruit press comprising a supporting frame having a shelf to hold the crate in elevated position; a treadle pivotally mounted in said frame below said shelf; two pulling loops adapted to extend over said crate and pivotally connected upon said treadle; means connected with said treadle to elevate the same; a foot power lever pivotally mounted in said supporting frame; links connecting said loops and said power lever and arranged to draw the said loops over the said crate by the depression of the said power lever; means connected with said power lever for raising the same; rests extended from the said supporting frame to limit the spread of said loops; a standing back frame rigidly secured to said supporting frame and elevated above the said loops; and a tool holding shelf supported upon said frame.

5. A fruit press comprising a supporting frame having a shelf to hold the crate in elevated position; a treadle pivotally mounted in said frame below said shelf; two pulling loops adapted to extend over said crate and pivotally connected upon said treadle; means connected with said treadle to elevate the same; a foot power lever pivotally mounted in said supporting frame; links connecting said loops and said power lever and arranged to draw the said loops over the said crate by the depression of the said power lever; means connected with said power lever for raising the same; rests extended from the said supporting frame to limit the spread of said loops; a standing back frame rigidly secured to said supporting frame and elevated above the said loops; a tool holding shelf supported upon said frame; and laterally disposed gages connected with said first mentioned shelf and upturned above the same to hold the said crate in position.

[Claim 6 not printed in the Gazette.]

960,103. DRIP-CUP FOR REFRIGERATORS AND ICE-BOXES. AUGUSTUS MAY, New Orleans, La. Filed June 21, 1909. Serial No. 503,412.



1. A drip cup for the purposes specified comprising an outer tubular drainage receiving and holding member provided with a perpendicularly straight wall and having a completely closed lower end and an overflow exit above said lower end, said outer tubular member also having an open upper end and means at such open upper end for engaging and holding the outer member vertically suspended through a refrigerator floor, a drainage delivering member with a straight wall and of less diameter than the said receiving and holding member and removably fitted in the latter, the drainage delivering member having fully open upper and lower extremities and a portion thereon to increase its diameter, said diametrically increased portion removably engaging the upper open end of the outer member and holding the delivering member in proper position in the outer member, the drainage delivering member being of such length as to project into the receiving and holding member below the overflow exit of the latter member and held suspended by said portion, and a tubular device removably inserted in the upper open end of the drainage delivering member, the cup as an entirety being removable through the interior of the receptacle in which it is placed.

2. A drip cup for the purposes specified, consisting of an outer tubular drainage receiving and holding member having a normally closed lower end and an overflow opening above the said end, the upper end of the said member being open and having means to vertically suspend the member through the bottom of a receptacle, and a tubular drainage delivering member removably inserted in the upper open end of the drainage receiving member and projecting downwardly into the latter, said members having means at the upper portions thereof for holding them in positive assembled relation.

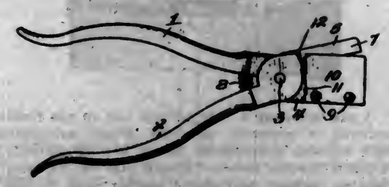
3. A drip cup for the purposes specified consisting of an outer tubular drainage receiving and holding member with a normally closed lower end and an upper open end, the said member having an overflow opening above its lower closed end, a tubular drainage delivering member removably inserted in the upper open end of the drainage receiving member and projecting downwardly into the latter, and means coöperating with the upper extremities of the two members for holding them in positive associated relation.

4. A drip cup for the purposes specified consisting of an outer tubular drainage receiving and holding member with a normally closed lower end and an upper open end, the said member having an overflow opening above its lower closed end, and a tubular drainage delivering member removably inserted in the upper open end of the drainage receiving member and projecting downwardly into the latter, each member carrying means which coöperate to secure the two members in assembled relation.

5. A drip cup having an outer tubular drainage receiving and holding member provided with means for vertically suspending the same through the bottom of a receptacle and also with a lower closed end and an overflow opening above the said lower end, a drainage delivering member removably inserted in the outer member, the drainage receiving and delivering members being provided with means for holding them in associated relation, and a drain pipe for connecting the drip cup with the ice chamber of a receptacle.

[Claims 6 to 9 not printed in the Gazette.]

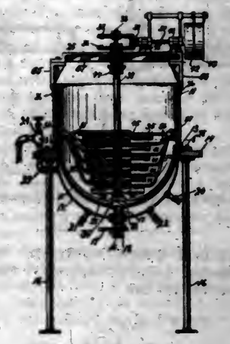
960,104. EYELET SETTING AND EMBOSSING PUNCH. PAUL O. MIETH, Newark, N. J. Filed Mar. 14, 1910. Serial No. 549,160.



1. A car seal fastening and embossing device comprising a pair of crossed and pivoted handles, comparatively long and narrow jaws upon the forward ends of the handles, a spring acting on the handles to normally hold the jaws open, a pair of male and female eyelet setting punches upon one jaw, arranged one in advance of the other, coöperating punches upon the other jaw, coöperating embossing dies upon the jaws in rear of said punches, and cheek plates carried by one of the jaws and forming guides for the other jaw and for the entrance of the ends of the seal between said jaws.

2. A car seal fastening and embossing device comprising a pair of crossed and pivoted handles, comparatively long and narrow jaws upon the forward ends of the handles, one of said jaws having cut away or recessed sides forming shoulders at the inner ends thereof, a spring acting on the handles to normally hold the jaws open, coacting sets of eyelet setting and embossing dies on said jaws, and cheek plates secured to the sides of the other jaw and engaging the recessed faces of the first-named jaw to form guides for said jaw and the ends of the seal, and adapted to abut against said shoulders to limit the closing movement of the jaws.

960,105. COOKING VESSEL. CHARLES F. MOLANDER, Chicago, Ill., assignor to Charles Holmberg & Company, Chicago, Ill., a Partnership. Filed Nov. 4, 1907. Serial No. 400,657.



1. In combination, a fluid receiving vessel, a dasher rotatable about the vertical axis of the vessel and comprising a horizontal stirring blade movable within the body of the vessel and a scraper movable over the floor and side wall of the vessel beyond the end of the stirring blade, a radiator coil located within the vessel below the stirring blade, and terminal connections for the coil leading through the vessel in the space intervening between the path of the end of the stirring blade and the path of the scraper.

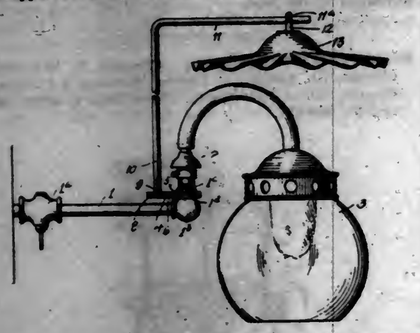
2. In combination, a fluid receiving vessel, a dasher rotatable about the vertical axis of the vessel and comprising a plurality of horizontal stirring blades arranged at different levels within the body of the vessel and a scraper movable over the floor and side wall of the vessel beyond the ends of the stirring blades, a plurality of horizontal radiator coils located within the vessel between the stirring blades, and terminal connections for each of the coils leading through the vessel in the space intervening between the paths of the ends of the stirring blades and the path of the scraper.

3. In combination, a fluid receiving vessel, and a radiator within the vessel comprising a pair of horizontal header pipes located adjacent the walls of the vessel near the top of its fluid receiving portion both ends of each of the header pipes being extended laterally through the wall of the vessel, a plurality of horizontal spiral pipe coils arranged at different levels within the fluid receiving portion of the vessel, and connection within the vessel between each end of all the coils and one of the header pipes, the vertically extending portions of such connections being adjacent but not in contact with the side walls of the vessel, whereby the space between the coils is unobstructed for the operation of horizontally movable stirring blades and the wall of the vessel below the header pipes is unobstructed for the operation of a scraper.

960,106. SMOKE-BELL SUPPORT. DANIEL F. MCCARTHY, McKeesport, Pa. Filed Nov. 3, 1909. Serial No. 526,061.

A smoke bell support comprising a base plate adapted to be mounted upon the elbow of a gas fixture and formed with a cut-away portion to provide an interiorly-arranged seat against which abuts the elbow, said plate further provided with an opening communicating with said cut-

away portion through which is adapted to extend a threaded nipple carried by the elbow, and a suspension arm con-



nected to said base plate and adapted to suspend a smoke bell.

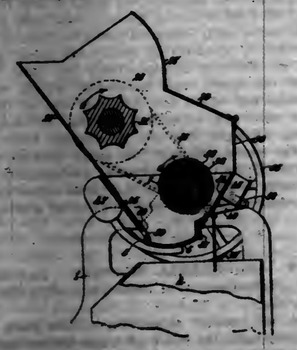
960,107. GILL-BOX DRAWING-HEAD. HUBERT LEOPOLD OTTERMANN, Leipzig, Germany. Filed July 18, 1908. Serial No. 444,242.



1. In a drawing head for gill boxes, a faller having rows of pins, the pins of one row being of greater length than the pins of the other row, a main hammer, an auxiliary hammer, the hammers being mounted on different axes, and means for operating the hammers alternately and at intervals.

2. In a drawing head for gill boxes, a faller having rows of pins, the pins of the rear row being of greater length than the pins of the front row, a rotary main hammer, a rotary auxiliary hammer mounted on the shaft adjacent to the main hammer shaft, a guide screw, and gearing for operating the auxiliary hammer from the guide screw.

960,108. AUTOMATIC WEIGHING-MACHINE. HENRY RICHARDSON, New York, N. Y. Filed Nov. 16, 1908. Serial No. 462,862.



1. Feed mechanism for weighing machines comprising a hopper having a discharge gate in its bottom, and a revolubie feeding device mounted in the hopper above said gate, one wall of the hopper being curved substantially about the axis of the feeding device and leading to said gate, a curved feed passage being thereby formed between the hopper and the feeding device.

2. Feed mechanism for weighing machines comprising a hopper having a discharge gate in its bottom, and a cylindrical brush feeder mounted in the hopper, one wall of the hopper being curved at a level below the axis of the brush to conform substantially to the curvature thereof and having its end terminating at a point to direct the material in a transverse direction across the top of the gate.

3. Feed mechanism for weighing machines comprising a hopper having a depressed discharge gate in its bottom, and a revoluble feeding device mounted in the hopper above said gate, the front wall of the hopper being curved to conform approximately to the curvature of the feeding device and the rear wall of the hopper sloping toward the gate in a reverse direction, the curved front wall of the hopper forming a discharge for the material at a point above the gate and being positioned to direct the material against the rear wall of the hopper.

4. Feed mechanism for weighing machines comprising a feed hopper, a gate controlling the discharge of material therefrom, and primary and secondary feeding devices mounted on parallel axes within the hopper, the secondary feeding device being arranged adjacent to the gate, and means for driving the secondary feeding device at a greater speed relatively to the speed of the primary feeding device.

5. Feed mechanism for weighing machines comprising a feed hopper, a gate controlling the discharge of material therefrom and having front and rear walls sloping toward said gate, a primary feeding device arranged adjacent to the rear wall of the hopper and a secondary feeding device arranged in immediate proximity to the front wall of the hopper, the latter being curved so as to direct the material in an approximately horizontal plane as it approaches the gate.

[Claims 6 to 10 not printed in the Gazette.]

960,109. CAN END. DANIEL P. ROBINSON, Baltimore, Md. Filed Oct. 22, 1908. Serial No. 458,964.



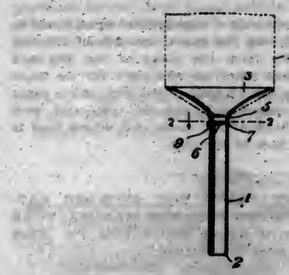
1. A can including a body portion and an end therefor, comprising a normally inwardly dished substantially smooth portion, a projecting nozzle located centrally of said dished portion and so disposed that one can may be stacked on another, said dished portion being capable of being sprung outwardly to form a smooth outwardly extending surface to aid in emptying the contents of the can.

2. A can including a body portion and an end therefor, comprising a normally inwardly dished smooth portion, an outward projecting nozzle located centrally of said dished portion and having its outermost portions lying inside a plane containing the outermost portions of the end, whereby one can may be stacked on another, said dished portion being capable of being sprung outwardly to form a smooth outwardly extending surface to aid in emptying the contents of the can.

3. A can including a body portion and an end therefor, comprising a normally inwardly dished portion located centrally of said end, an integral nozzle located centrally of said dished portion and projecting outwardly therefrom, said nozzle having its outermost portions lying inside a plane containing the outermost portions of the end, whereby one can may be stacked on another and said central portion being capable of being dished outwardly to aid in emptying the contents of the can.

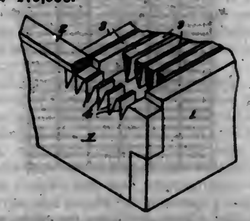
4. A can having an imperforate top with an outwardly-projecting central nozzle formed integrally therewith whose uppermost surface has position in a horizontal plane below the plane of the rim edge of the top and said top having an annular depressed yielding portion which extends laterally from the base of the nozzle whereby upon being sprung outwardly said annular portion will form a drain toward the outwardly-projecting central nozzle.

960,110. CIGARETTE-FORMER. HARRY E. ROBINSON, New York, N. Y. Filed Mar. 10, 1909. Serial No. 482,424.



A cigarette former comprising a forming tube having a funnel-shaped receiving mouth and provided adjacent to the junction of the tube and mouth with a slot in the side of the tube, a spring closed cut off in the form of a disk movable through said slot in a plane perpendicular to the length of the forming tube, and an operating thumb piece for said cut-off.

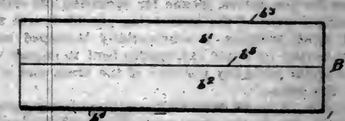
960,111. GRATE FOR CONCENTRATOR-JIGS. STERLING P. ROBINSON, Galena, Kans. Filed Feb. 25, 1909. Serial No. 479,956.



The herein described grate for concentrator jigs comprising a rectangular frame, the opposite longitudinal upper edges of which are provided with V-shaped notches properly spaced along their length, grate bars V-shaped in cross section and having their opposite ends cut away to form notches, keeper bars extending over said cut away ends of the bars, the upper surfaces of which are flush or on a plane with the grate bars, intermediate longitudinal bars extending the full length of the grate thus formed and dovetailed in cross section, said bars being adapted to be received by correspondingly shaped depressions formed in both the grate bars and oppositely located transverse walls of the frame in such a manner as to cause the upper surfaces of the intermediate bars to be on a plane with the remaining construction and suitable means for fastening the several parts in rigid position in respect to one another as and for the purpose described.

960,112. LAP-BOARD. JOSEPH PARK ROMEM, Philadelphia, Pa. Filed Mar. 18, 1910. Serial No. 550,117.

1. A lap-board formed of paper laminæ with interior corrugations, said corrugations extending diagonally to the length of the board, and the material being folded so that the corrugations will cross each other on opposite sides, substantially as described.



2. A lap-board formed of corrugated paper cut so that the corrugations will extend diagonally to the length of the board, and folded to form flaps meeting intermediate of the edges thereof, substantially as described.

3. A lap-board formed of corrugated paper cut so that the corrugations will extend diagonally to the length of the board, folded to form flaps meeting intermediate of the edges, and having reinforcing means at the ends, substantially as described.

4. A lap board formed of corrugated paper, folded on a line oblique to the direction of the corrugations, with the flaps secured together so as to form a unitary structure with the corrugations crossing each other and having metal plates secured upon the opposite ends, substantially as described.

5. A lap board composed of corrugated paper, with side flaps of equal dimensions folded together on lines diagonal to the corrugations and held in position by a suitable adhesive material, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

960,113. TRANSPLANTER. ALEXANDER C. RUMBLE, San Jose, Cal., assignor of one-half to Ernest H. Wuhrmann, San Jose, Cal. Filed June 29, 1909. Serial No. 505,101.



1. A pair of cross sectionally U-shaped arms hingedly connected together, automatic means for normally closing the arms against each other, substantially U-shaped knife members carried by the arms, and sliding ejectors upon the knives.

2. A pair of substantially U-shaped arms pivotally connected together, U-shaped knife members carried by each of the arms, ejectors upon the knives, means for operating the ejectors, a handle for the arms, automatic means for normally forcing the arms into engagement with each other, and means for spreading the arms and the knives carried thereby.

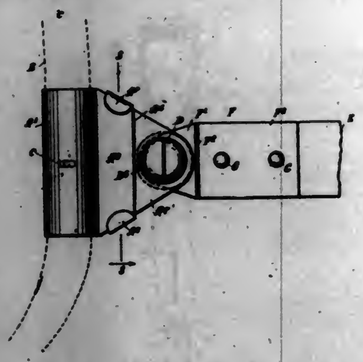
3. A pair of cross sectionally U-shaped arms, cross sectionally U-shaped knife members carried by the arms, said knife members having their lower portions offset toward each other, sliding ejectors upon the knives, means for operating the ejectors, automatic means for closing the arms together, and a handle for the arms.

4. A pair of cross sectionally U-shaped arms hingedly connected together, the upper portion of the arms adja-

cent their pivots being enlarged, knife members secured to the lower portions of each of the arms, sliding ejector members for the knives, means for operating the ejectors, the enlarged sides of the arms being provided with angular cut away portions, a substantially U-shaped handle member having its lower extremities bent to engage within the angular cut away portions of the arms, and a handle for the arms.

5. A pair of cross sectionally U-shaped arms having their upper side portions enlarged and pivotally connected together, said enlarged portions being each provided with oppositely disposed slots, a handle for the arms, a second handle having downwardly extending arms for the device, the extremity of the said arms being bent inwardly to engage the angular slots of the main arms, offset plates upon the sides of the handle for the arms, tension members between these plates and the offsets of the secondary handle, substantially U-shaped knife members upon the lower portion of each of the arms, said knife members each having its opposite faces slitted longitudinally, ejector members projecting upon each side of the knife members slidably mounted within the cut away portions, the opposite faces of the arms having their lower portions provided with a longitudinally extending groove, a member having a headed portion engaging the grooves and connecting the ejector members, a bail pivotally connected with the upper portion of one of the arms of the main handle, and rods secured to the bail and connecting the headed members mounted within the slots at the lower portion of the arms.

960,114. HAME-TUG. AMBROSE L. SADDLEMIRE, Knox, N. Y. Filed Aug. 12, 1909. Serial No. 512,545.



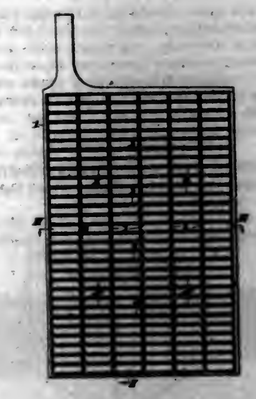
1. A hame tug comprising a clip made of a single piece of sheet metal bent to form doubled up members and an eye for engagement with the hame stick, one of the doubled up members having lugs bent onto the other member to fasten the members together, the ends of the doubled up members having outward offsets terminating in spaced flanges, a pivot extending transversely through the said flanges, an end piece on the trace and formed of a single piece of sheet metal bent to form spaced ends, and a doubled up portion extending between the said flanges and engaging the said pivot, the said spaced ends receiving the trace terminal between them, and rivets for connecting the trace ends and the spaced ends.

2. A hame tug comprising a clip doubled upon itself to form an eye for encircling the hame, the ends of the clip being offset outwardly from the inner face of the clip and spaced apart from each other and transversely perforated, the end piece for the trace extending between the spaced ends and being transversely perforated, said perforation registering with the perforations of the clip, and a pivot passing through the registering perforations, said pivot comprising a plurality of sections, each consisting of a head and a stem, the stem of the inner section being externally threaded and the stem of the outer section being internally threaded for engaging the first named stem, the inner section having a flat head whose face is flush with the inner face of the clip.

3. A hame tug comprising a clip doubled upon itself to form an eye for encircling the hame, the ends of the clip being offset outwardly from the plane of the clip and spaced apart from each other, an end piece for the trace arranged between the spaced ends of the clip, and a pivot traversing the said spaced ends and the trace end, said pivot comprising interengaging sections, the inner section having a flat head whose face is flush with the inner face of the clip.

4. A hame tug comprising a clip doubled upon itself to form an eye for encircling the hame, the ends of the clip being offset outwardly from the plane of the clip and spaced apart from each other, an end piece for the trace arranged between the spaced ends of the clip, and a pivot traversing the said spaced ends and the trace end, said pivot having a flat head at the inner end whose face is flush with the inner face of the clip.

960,115. NEGATIVE PLATE FOR STORAGE BATTERIES AND PROCESS FOR THE MANUFACTURE THEREOF. PEDRO G. SALOM, Philadelphia, Pa. Filed July 27, 1909. Serial No. 509,855.



1. An initially "formed" negative plate for a storage battery, consisting of a conducting support and spongy lead particles mechanically applied as such thereto, in a co-herent but non-coalescent mass.

2. The hereinbefore described process for the manufacture of negative plates of a storage battery, which consists in subjecting spongy lead particles, initially "formed" externally to the plate, to superficial oxidation; arresting said oxidation when it has progressed sufficiently to prevent substantial coalescence of the lead particles, while still permitting cohesion thereof, under pressure; and compressing the superficially oxidized particles into a coherent but non-coalescent mass upon a conducting support.

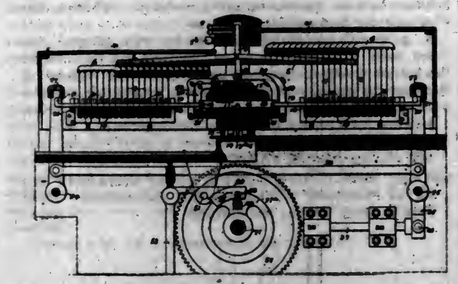
3. The hereinbefore described process for the manufacture of negative plates for a storage battery which consists in preparing spongy lead particles in a mass, containing water, said particles being initially "formed" externally to the plate; permitting partial evaporation of the water to occur by exposure to the air, and thereby producing a superficial low oxidation of the particles; arresting said oxidation when it has progressed sufficiently to prevent substantial coalescence of the particles, while permitting cohesion thereof, under pressure; and compressing the superficially oxidized particles into a coherent but non-coalescent mass upon a conducting support.

960,116. METHOD OF PRODUCING A CAOUTCHOUC-LIKE ELASTIC SUBSTANCE. MAX SCHLUSS, Bredeney, near Essen-on-the-Ruhr, Germany. Filed Nov. 29, 1907. Serial No. 404,335.

1. The herein described composition of matter for forming a caoutchouc-like, elastic substance, consisting of the following ingredients, and combined in the following proportions, to wit; 1000 grams gelatin, 1333 grams glue, 50 grams chromate, 8 grams flowers of sulfur, and 5 grams flaky graphite.

2. The herein described composition of matter for forming a caoutchouc-like, elastic substance, consisting of the following ingredients, and combined in the following proportions, to wit; 1000 grams gelatin, 1333 grams glue, 50 grams chromate, 8 grams flowers of sulfur, 5 grams flaky graphite, 4 grams para rubber, and 60 grams nitrated linseed oil.

960,117. JACQUARD-CARD-PUNCHING MACHINE. JOHN SCHULL, Philadelphia, Pa. Filed Aug. 8, 1908. Serial No. 447,549.



1. In jacquard card punching mechanism, the combination of a series of keys, a series of punches, slidable members coöperating with said punches, pivoted rods attached to said slidable members, means for raising said rods upon the operation of the keys, and means independent of the keys for moving said rods and slidable members longitudinally to bring the punches into action.

2. In jacquard card punching mechanism, the combination of a series of keys, a series of punches, slidable members coöperating with said punches, pivoted rods connected to the same, means for raising said rods by the action of the keys, said rods having hooked ends, means independent of the keys for engaging said hooked ends to move the rods and slidable members longitudinally to render the punches active, and means for depressing said punches.

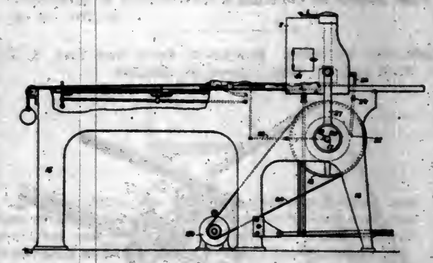
3. In jacquard card punching mechanism, the combination of a block, a series of keys movable therein, a head, a series of punches mounted therein, slidable members mounted in said head coöperating with said punches, pivoted rods connected to said slidable members, vertically movable selector bars controlled by said keys, means carried by said bars for coöperation with the pivoted rods whereby the bars may be actuated, and means for moving said rods and slidable members to render said punches active.

4. In jacquard card punching mechanism, the combination of a series of keys, a series of punches, slidable members coöperating with said punches, and means independent of the keys for moving said slidable members longitudinally upon the operation of the keys to render the punches active.

5. In a jacquard card punching machine, the combination of a series of punches, a series of selector bars, means for raising said selector bars by the operation of said keys, sliding members in line with said punches, pivoted bars connected to said sliding members and disposed for engagement by said selector bars, means for moving said pivoted bars and sliding members to render the punches active, and means for operating said punches.

[Claims 6 to 21 not printed in the Gazette.]

960,118. JACQUARD-CARD-CUTTING MACHINE. JOHN SCHULL, Philadelphia, Pa. Filed Aug. 16, 1909. Serial No. 513,035.



1. The combination, in a card punching machine, of key levers, punch mechanism, and interchangeable selective mechanism disposed in operative relation therewith, said selective mechanism being removable independently of the key levers and punch mechanism.

2. The combination, in a card punching machine, of punch keys, punch mechanism, punch selector mechanism comprising a series of movable pins and a series of bars for coöperation therewith, and a frame carrying said punch selector mechanism, said frame being removable independently of the punch selector mechanism.

3. The combination, in a card punching machine, of punches, levers for actuating said punches, selector mechanism for controlling the operation of said punches, said selector mechanism comprising a frame carrying removable pins, and means for operating said pins, said selector mechanism being disposed in operative relation with the punches and pins, and said frame being removable independently of the rest of the mechanism.

4. The combination, in a card punching machine, of a series of punches, levers for actuating said punches, selector mechanism controlling the operation of said punches, said mechanism comprising bars, removable pins connected by and with said bars and means for operating said bars, and a frame carrying said bars and disposed in operative relation with respect to the levers and punches and being removable independently thereof.

5. In jacquard card punching machines, the combination of punches, mechanism for causing the same to operate, selecting means for coaction therewith, comprising horizontally disposed bars, a series of pins removably mounted with respect to said bars, and supporting means for said pins independent of the bars, said pins forming a connection between the key operated levers and the punch controlling levers.

[Claims 6 to 16 not printed in the Gazette.]

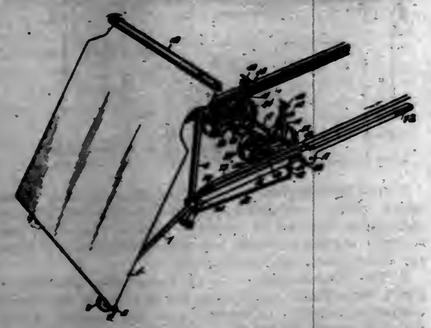
960,119. AUTOMOBILE-TIRE. HOWARD S. SHAFER, Nazareth, Pa. Filed May 27, 1909. Serial No. 498,668.



A tire provided with anti-skidding and puncture-proof means comprising a series of rivets molded in the tread portion of the tire with their heads disposed beneath the outer surface thereof and their stems extending flush with the outer surface, and other series of longer rivets ar-

ranged in the tread portion of the tire with their heads disposed beneath and alternating with those of the first-mentioned rivets and their stems extending flush with the outer surface of the tread portion.

960,120. FENDER. EDWARD F. SHUE, New York, N. Y. Filed July 27, 1909. Serial No. 509,764.



1. A fender comprising parallel sliding elements, actuating means therefor, a flexible apron, and apron spreading means actuated by the movement of the sliding elements.

2. A fender comprising parallel sliding elements, actuating means therefor, a flexible apron, and apron spreading arms actuated by the movement of the sliding elements.

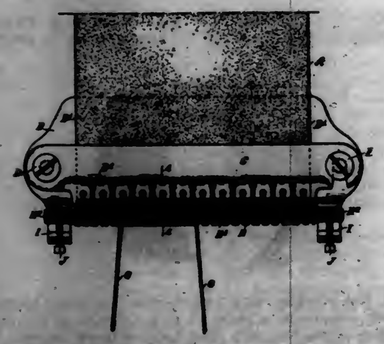
3. A fender comprising a sliding element, a flexible fender apron, oppositely movable apron spreaders actuated by the sliding element, and a roller carried by and movable with one pair of spreaders and having said apron wound thereon.

4. A fender comprising jointed spreader arms, a roller carried by one pair of said arms and movable therewith, a flexible fender apron connected with said arms and wound upon said roller, and means including a sliding member operating to spread and fold said arms.

5. A fender comprising jointed spreader arms, a flexible fender apron connected with said arms, and means for spreading and folding said arms including a sliding member connected with said arms and a sheath in which said arms and sliding member are received.

[Claims 6 to 14 not printed in the Gazette.]

960,121. DEVICE FOR FASTENING BELTS. GEORGE W. SOUTHWICK, Noroton, Conn. Filed May 29, 1909. Serial No. 499,163.



1. A device for fastening belts by wire hinges, comprising guiding means for guiding a piercing tool to provide the belt with apertures for the passage of the wire used for the hinge eye, and looping means adjacent to the said guiding means and around which the wire is passed to form the hinge eye.

2. A device for fastening belts by wire hinges, comprising a clamping means for clamping the belt in place, having means for guiding a piercing tool to provide the clamped belt with apertures for the passage of the wire, and a looping member around which passes the wire to form the hinge eye.

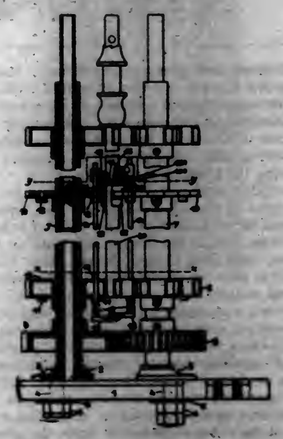
3. A device for fastening belts by wire hinges, comprising a pair of plates between which the belt is clamped, the plates being provided with registering guiding slots for the guiding of a piercing tool to provide the belt with apertures for the passage of the wire used for the hinge eye, and a looping member around which the wire is passed to form the eye of the hinge.

4. A device for fastening belts by wire hinges, comprising a pair of plates between which the belt is clamped, the plates being provided with registering guiding slots for guiding a piercing tool to provide the belt with apertures for the passage of the wire used for the hinge eye, and a looping member having spiral grooves for winding the wire spirally to form the hinge eye.

5. A device for fastening belts by wire hinges, provided with a pair of clamping members between which the belt is clamped, the said members having registering slots for the passage of a piercing tool to provide the belt with apertures for the passage of the wire for the hinge.

[Claims 6 to 14 not printed in the Gazette.]

960,122. BRAIDING-MACHINE. OTTO STEINMANN and XAVER PFRUNDER, Wohlen, Aargau, Switzerland. Filed July 9, 1909. Serial No. 506,769.



1. A braiding machine comprising two adjacent revolving disks formed with notches to receive bobbins, an annular member on each bobbin, couplers in each notched disk, said couplers being slidably mounted in the disks, and means for causing every two couplers, which together effect the switching operation to act one upon the other to cause them to slide vertically to engage and disengage the annular member.

2. A braiding machine comprising adjacent revolving disks formed with notches to receive bobbins, an annular member on each bobbin formed with an edge, rods mounted in each notched disk, couplers mounted on the rods, each coupler having a beveled portion and flange which cooperates with the edge of the annular member to position the couplers to engage a bobbin, a sharp lifting plate on each rod, the lifting plates carried by the rods of one set of disks being arranged at a different level from the lifting plates on the rods carried by the adjacent notched disks, whereby when two adjacent lifting plates meet, the lifting plate situated at the higher level will first move up along the lower lifting plate and will then be raised further by the latter, as set forth.

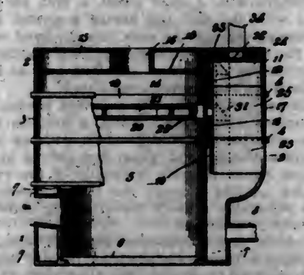
3. In a braiding machine without a track plate, the combination with means for coupling each bobbin automatically with one of two adjacent notched disks, an annular member on each bobbin, drivers vertically movable in each notched disk, and means for causing every two couplers, which together effect the switching operation, to act one upon the other, of a table carrying the spindles of the notched disks, formed with slots, whereby any desired number of spindles may be mounted on said table without constructional alteration of the latter, as set forth.

4. In a braiding machine without a track plate, the combination with means for coupling each bobbin automatically with one of two adjacent notched disks, of an annular member on each bobbin, couplers vertically movable in each notched disk, means for causing every two couplers, which together effect the switching operation, to act one upon the other, a slotted table carrying the spindles of the notched disks, stationary tubes constituting axes of rotation for said spindles and screws disposed eccentrically to said axes for fixing said tubes on said table, as set forth.

5. In a braiding machine, the combination with rotative notched disks, of means to couple a bobbin having an annular member, to said disk, said means comprising slidable and rotatable rods mounted on the disks, beveled plates on the rods, a coupling member secured to each coupling rod, each member having a beveled surface and an annular member to coöperate with the flange on the bobbin to couple the latter to a disk, and means for returning the rods and the coupling members to normal position.

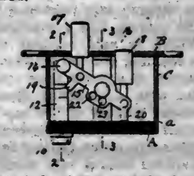
[Claims 6 to 10 not printed in the Gazette.]

960,123. WATER-HEATER. THEODORE A. STELLER, Houghton, Mich. Filed July 24, 1909. Serial No. 509,286.



A water heater comprising a base section having a combustion chamber and a water jacket, a top section horizontally partitioned to provide superposed hot water and smoke chambers, each having an outlet, the smoke outlet extending through the water chamber, and an intermediate section having partitions forming smoke and water chambers, the latter provided with smoke flues extending therethrough, said sections having their smoke chambers in communication through said flues, and portions upon said sections forming a vertical passage communicating with the water jacket and through pairs of cold and hot water ports with the respective water chambers, vertical partitions upon the sections separating said ports and dividing said passage to provide hot and cold water channels, a horizontal shield arranged below the water outlet of the top section and closing the upper ends of the channels, said shield having an extension projecting inwardly beyond the ports connecting said channels with the upper water chamber, and outwardly projecting deflectors arranged in the cold water channel and overhanging and partially inclosing said cold water ports.

960,124. PUSH-BUTTON SWITCH. GEORGE B. THOMAS, Bridgeport, Conn., assignor to The Perkins Electric Switch Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Nov. 10, 1909. Serial No. 527,284.



1. A push switch having a standard, a perforated rock lever pivoted thereon, a contact piece moving with said rock lever and a spring pin adapted to engage the perforations in and temporarily detain said rock lever.

2. A push switch having a standard, a perforated rock lever pivoted thereon, a contact piece moving with said rock lever and a spring pin carried by said standard adapted to engage the perforations in and temporarily detain said rock lever.

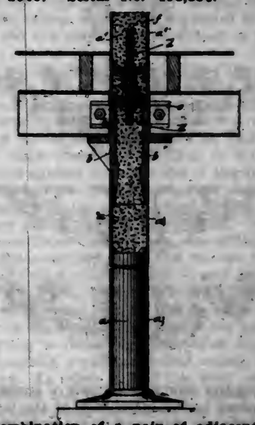
3. A push switch having a standard, a perforated rock lever pivoted thereon, a contact piece moving with said rock lever and a spring pin adapted to engage the perforations in and temporarily detain said rock lever, said standard being angled at one end and perforated to form bearings for said pin, substantially as described.

4. A push switch having a standard, a perforated rock lever pivoted thereon, a contact piece moving with said rock lever and a spring pin adapted to engage the perforations in and temporarily detain said rock lever, together with means carried by said rock lever for limiting its oscillation.

5. A casing for push switch or the like comprising a metallic wall portion with positioning lugs, independent top and base, one of the latter having recesses corresponding to said lugs and the other being peripherally offset to receive the edges of said wall portion, in combination with a standard extending between said top and base and carried by one of the latter and means in connection with the other for rigidly uniting said top and base to the wall, as described.

[Claim 6 not printed in the Gazette.]

960,125. FIREPROOF COLUMN. JOHN J. TRESIDDER, New York, N. Y., assignor to Acme Column Company, Brooklyn, N. Y., a Corporation of New York. Filed May 28, 1909. Serial No. 498,856.



1. The combination of a pair of adjacent columns, a centering collar having an axial bore and spaced inner and outer flanges both flanges snugly fitting in the lower

part of one of said columns, a centering piece having an axial bore and a thickened lug and abutting portion rigidly secured to the other of said columns, a coupling pin in the abutting portion of the centering piece and passing through the centering collar and having a forked end, a set screw passing through said thickened lug and the adjacent side of the column and contacting said coupling pin, a concrete-filling in said columns and around the forked end of the coupling pin and between said flanges.

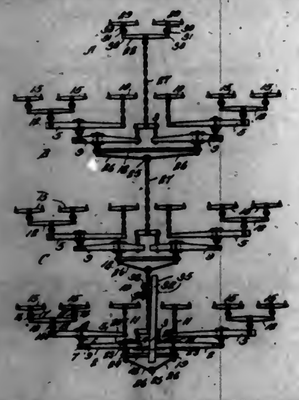
2. The combination of a lower floor column, a cap for the same provided with a centering piece integral with the side and abutting portion of the cap and having an axial bore, an upper floor-column adjacent to the lower-floor column, a centering collar having an axial bore and upper and lower spaced flanges both snugly fitting in the lower part of the upper-floor column, a coupling pin in the abutting portion of the centering piece and extending through the abutting portion of the centering collar and having its free end forked, a set screw passing through said cap and centering piece and engaging said coupling pin, and concrete filling in said upper column around the forked end.

3. The combination of a lower floor column, a cap for the same, an upper-floor column adjacent thereto, a centering-collar at the lower part of base of the upper column, a coupling-pin extending through the cap of the lower column into the centering-collar of the upper column, a set-screw for locking the coupling-pin to one of the columns, and a jam-nut for holding the set-screw in position on the column and coupling-pin.

4. The combination, of a lower floor column, a cap for the same, an upper floor column, a centering-collar having upper and lower spaced flanges both fitting snugly within the lower part or base of the upper column, a coupling-pin extending through the cap of the lower column into the centering-collar of the upper-column, and means locking the coupling-pin to one of the columns.

5. The combination of a lower-floor column, a cap for the same, an upper-floor column, a centering-collar, having upper and lower spaced flanges both fitting snugly within the lower part or base of the upper column, a coupling-pin extending through the cap of the lower column into the centering-collar of the upper column, means locking the coupling-pin to one of the columns a concrete-filling in said upper column above and between said flanges.

960,126. DRAFT-EQUALIZER. JENNINGS VAN MATRE, Paso Robles, Cal. Filed Apr. 4, 1908, Serial No. 425,223. Renewed Nov. 9, 1909. Serial No. 527,072.



A draft equalizer comprising a pair of levers, an evener, eye bolts secured to the inner ends of the levers, chains connected to the eye bolts and to the ends of the evener, plates secured to the levers, clevises adjustably secured to the plates to permit the levers to be relatively adjusted, rings carried by the clevises, a lever spacing bar having its ends removably disposed in the rings, links connected to the rings, a ring carried by the links, and swingletrees connected to the outer ends of the levers.

960,127. GAS-BURNER FOR FLARE-LIGHTS. CHARLES CHEERS WAKEFIELD, London, England. Filed Mar. 30, 1908. Serial No. 424,252.



1. A burner of the character described provided with an external shoulder, a reflector embracing the burner and engaging the front of the shoulder, and a nut upon the burner for clamping the reflector against the shoulder, said nut being movable forwardly from the burner, substantially as described.

2. A burner of the character described having a valve-controlled jet orifice, an external shoulder, a reflector embracing the burner and engaging the front of the shoulder, and a nut fitted upon the burner and clamping the reflector against the shoulder, said nut being removable forwardly from the burner, substantially as described.

3. A burner of the character described, having a needle valve provided with a hand wheel, a dial, an index co-operating with the dial and having a slotted disk, and screws passing through the slots into the hand wheel, the slots in the disk being arranged to permit adjustment of the index on the hand wheel about its axis as a center; substantially as described.

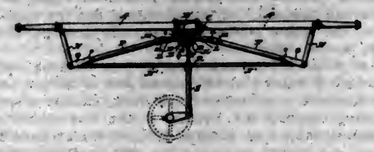
4. A burner of the character described having a needle valve provided with a hand wheel, a dial, an index co-operating with the dial and provided with an attaching plate applied to the hand wheel and having an arcuate slot therein concentric with the center of the wheel, and a fastening passing through the slot and entering the wheel to adjustably connect the attaching plate thereto, substantially as described.

5. A burner of the character described, comprising a tubular body, a transverse partition in said body, a jet orifice through said partition, the front end of the tubular body forwardly of the partition forming a mouth piece, a series of perforations extending at an acute angle through the tubular body and the partition, said perforations surrounding the jet orifice and converging forwardly into the mouth piece, the front ends of the preparations being in substantially the same plane as the front end of the jet orifice, and a needle valve extending through the body and having a pointed terminal coöperating with the jet orifice; substantially as described.

960,128. STEERING-GEAR. JAMES R. WALKER, Pine Ridge, S. D. Filed June 16, 1909. Serial No. 502,543.

1. In a steering gear, a threaded reciprocating rod, a nut engaging said rod, means for holding said nut against longitudinal movement, a shaft extending parallel to said threaded rod, a train of gears interposed between said shaft and the nut, and means for actuating said gears.

2. In a steering gear, a frame comprising parallel bars, a threaded steering rod mounted in said bars and extending transversely thereof, a nut engaging said steering rod and positioned between the side bars of the frame with its ends lying alongside the inner faces thereof, a shaft supported in said bars and extending parallel to said threaded steering rod, and a train of gears interposed between said shaft and the nut on the threaded rod.



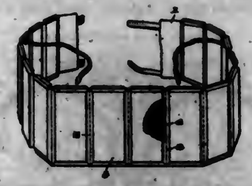
3. In a steering gear, a threaded rod, a nut engaging said rod, said nut being in the form of a sleeve having a gear secured thereto, an actuating member loosely mounted on said sleeve, and gearing connecting said actuating member and the gear secured to the sleeve.

4. In a steering gear, a threaded rod, a nut engaging said rod, said nut being in the form of a sleeve provided with a fixed gear, an actuating gear loosely mounted on said sleeve, and multiplying gearing connecting said actuating gear and the gear fixed on the sleeve.

5. In a steering gear, a frame, a threaded rod mounted to reciprocate therein, a nut engaging said threaded rod, said nut being in the form of a sleeve and provided with a fixed gear thereon, a fixed shaft mounted in the frame and extending parallel with said threaded rod, a gear loosely mounted on said fixed shaft, an actuating gear loosely mounted on the sleeve and meshing with the gear on the fixed shaft, and gearing between the gear on the fixed shaft and the gear carried by the sleeve.

[Claims 6 and 7 not printed in the Gazette.]

960,129. LIFE-PRESERVER. WALTER S. WILKINSON, Wytheville, Va., and GEORGE B. UPHAM, Boston, Mass. Filed May 20, 1905. Serial No. 261,470.



1. As an article of manufacture, a filler for life preservers comprising blocks composed of granules or small bodies of buoyant material, a waterproof fabric covering therefor, and an outer covering of buoyant material.

2. As an article of manufacture, a filler for life preservers comprising a block composed of granules or small bodies of buoyant material coated by thin films of bituminous cement, a fabric covering for said block coated exteriorly with said cement, and an outer covering of comminuted buoyant material.

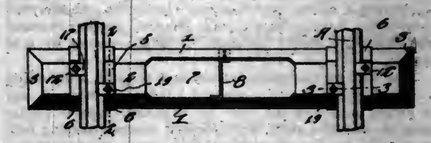
3. As an article of manufacture, a filler for life preservers comprising blocks composed of granules or small bodies of buoyant material, a coating therefor of cementitious material, and an outer covering of buoyant material.

4. As an article of manufacture, a life preserver comprising a plurality of buoyants composed of small buoyant waterproof units, means for attaching each of said units to the adjacent units to form a structural block, a waterproof covering for said structural block, and a protecting coating composed of buoyant material for said waterproof covering.

5. As an article of manufacture, a life preserver, comprising a plurality of buoyants composed of small buoyant waterproof units, means for attaching each of said units to the adjacent units to form a structural block, a waterproof covering for said structural block, and an exteriorly non-adhesive protecting coating composed of buoyant material for said waterproof covering.

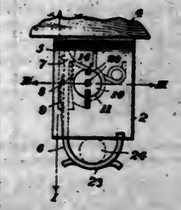
[Claims 6 to 17 not printed in the Gazette.]

960,130. RAIL-TIE. WILLIS D. WILLIAMS, Chicago, Ill. Filed Sept. 8, 1909. Serial No. 516,151.



A tie comprising a metal body having spaced squared slots adjacent to its ends, rail-engaging members, lugs upon the said members adapted to be engaged in the slots, said members having squared passages formed therein, retaining bolts having squared portions engaged in the passages formed in the rail-engaging members, clamping nuts carried by the bolts and adapted for frictional engagement with the rail-engaging members, and heads upon the lower extremities of the bolts adapted for frictional engagement with the top wall of the tie.

960,131. LOCK FOR UMBRELLA-HOLDERS. CLARENCE F. WILSON and JOHN H. HARMAN, Uniontown, Pa. Filed Mar. 29, 1910. Serial No. 552,194.



1. A lock for umbrella holders and the like, comprising a casing, a series of catches or teeth in said casing, a hasp having one end sliding in said casing and adapted to be engaged by said catches or teeth and its outer end capable of gripping an umbrella or the like, a key plate rotatably supported in said casing, a spring reacting against the inner end of the hasp and normally tending to thrust the same from the casing, and means connected to said spring for locking the key plate when said hasp is thrust from the casing.

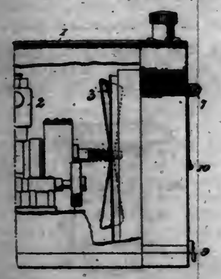
2. A lock for umbrella holders and the like, comprising a casing, a series of teeth or catches in said casing, a hasp having one end sliding in said casing and adapted to be engaged by said catches and released therefrom by a key, and its outer end capable of gripping an umbrella or the like, a key plate rotatably supported in said casing, a spring reacting against the inner end of the hasp and normally tending to thrust the same from the casing, a sliding bolt engaging the spring and operated thereby for locking the key plate after the key has released the hasp and thrust the same from the casing by said spring.

3. A lock for umbrella holders and the like, comprising a casing, a series of catches or teeth in said casing, a hasp having one end sliding in said casing and adapted to be engaged by said catches or teeth and its outer end capable of gripping an umbrella or the like, a key plate adapted to receive a key to release the hasp from the catches or teeth, and rotatably supported in said casing, a spring reacting against the inner end of the hasp and normally tending to thrust the same from the casing, and means connected to said spring for locking the key plate and retaining the key in the holder when said hasp is thrust from the casing.

4. A lock for umbrella holders and the like, comprising a casing, a series of fixed teeth in said casing, a hasp having one end sliding in said casing and adapted to engage one of the teeth and released therefrom by a key, and its outer curved end capable of gripping an umbrella or the like between said curved end and casing, a key plate rotatably supported in said casing and provided with suitable key recesses, a coil spring reacting against the inner end of the hasp and normally tending to thrust the same from the casing, a sliding bolt engaging the spring and operated thereby for locking the key plate after the key has released the hasp and thrust the same from the casing by said spring.

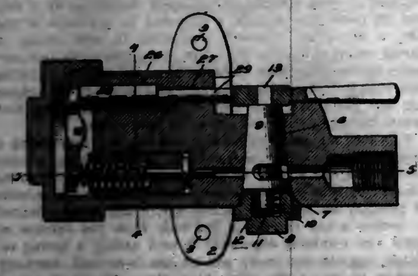
5. A lock for umbrella holders and the like, comprising a casing, a hasp having one end adapted to slide in and be locked to said casing, and the outer end capable of gripping an umbrella stick, key operated means releasing said hasp from its locked position, and means for preventing the operation of the key operating means and withdrawal of the key from the holder when said hasp is in its unlocked or withdrawn position.

960,132. AUTOMOBILE-ENGINE HOOD. ALEXANDER WINTON and HAROLD B. ANDERSON, Cleveland, Ohio, assignors to The Winton Motor Carriage Company, Cleveland, Ohio. Filed Feb. 1, 1909. Serial No. 475,422.



The combination with an automobile engine of the explosive type of a hood inclosing the engine, a water radiator occupying the front end of the hood and having air passages communicating with the interior of the hood, a flexible sheet located at the front end of the hood and outside of the radiator and fitting against the front face of the radiator, a support for the sheet supported by the front end of the hood, said support being in the form of a roller upon which the sheet may be rolled and unrolled, and the sheet thereby caused to either close the front end of the hood or to be removed therefrom to leave it open, for the purpose described.

960,133. RETAINING-VALVE. FREDERICK H. WOODS, Olean, N. Y. Filed July 24, 1909. Serial No. 509,279.



1. A pressure retaining valve formed with an escape port, a check valve controlling the same, a spring arranged to exert pressure upon said check valve, an operating valve controlling the triple valve exhaust and means for adjusting the operating valve and simultaneously varying the tension of the spring to adjust the pressure upon the check valve.

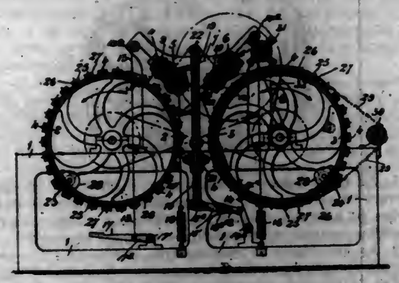
2. A pressure retaining valve formed with an escape port, a check valve controlling said port, a rod projecting from the valve, a sleeve loosely encircling the rod, a spring encircling the rod and bearing at one end against the sleeve, and manually adjustable means for the opposing end of the spring whereby to vary the pressure of the spring on the valve.

3. A pressure retaining valve formed with an escape port, a check valve controlling said port, a rod projecting from the valve, a sleeve loosely encircling the rod, a spring encircling the rod and bearing at one end against the sleeve, a pressure lever mounted for pivotal movement having one end loosely encircling the valve rod and bearing on the spring, and means for manually adjusting the position of the opposing end of the lever.

4. A pressure retaining valve formed with an escape port, a check valve controlling said port, a rod projecting from the valve, a sleeve loosely encircling the rod, a spring encircling the rod and bearing at one end against the sleeve, a pressure lever mounted for pivotal movement having one end loosely encircling the valve rod and bearing on the spring, a pressure rod bearing on the opposing end of the lever, and means for causing a movement of said rod to increase the tension of the spring at will.

5. A pressure retaining valve formed with an escape port, a check valve controlling said port, a rod projecting from the valve, a sleeve loosely encircling the rod, a spring encircling the rod and bearing at one end against the sleeve, a pressure lever mounted for pivotal movement having one end loosely encircling the valve rod and bearing on the spring, a pressure rod bearing on the opposing end of the lever, and a hand lever formed with a cam edge to bear on one end of the pressure rod.

960,134. MACHINE FOR DECORTICATING THE FIBROUS LEAVES OR STEMS OF PLANTS. ERNEST WRIGHT, Pinner, England. Filed Jan. 4, 1909. Serial No. 470,656.



1. The combination, in a decorticating machine, of a yieldingly-mounted supporting frame; a stretching mechanism comprising two sets of feeding devices, one set located upon each side of the frame, for engagement with the material supported thereupon, one set of feeding devices comprising normally interengaged, relatively fixed and movable members; and connections between said frame and the movable member, for automatically moving the latter away from the fixed member during the stretching operation, to permit the material to be fed through the other set of feeding devices.

2. The combination, in a decorticating machine, of a yieldingly-mounted support; a stretching mechanism comprising devices located upon opposite sides of said support for engagement with the material supported thereupon, each material engaging device comprising normally interengaged relatively fixed and movable members; connections between said support and the movable member of one device for automatically moving said member away from the corresponding fixed member; and manually-operated means connected with the movable member of the other device for moving the same away from the fixed member thereof.

3. The combination, in a decorticating machine, of a yieldingly-mounted material support; means for holding said support normally in elevated position; feeding devices located upon opposite sides of the support, said feeding devices forming, in combination, a device for stretching the material, to depress said support, one of said devices comprising interengaged relatively fixed and movable members; and connections between said support and the movable member, for automatically disengaging the latter from the fixed member, when the support is depressed, to permit the material to be fed through the other feeding device.

4. The combination, in a decorticating machine, of a yieldingly-mounted material support; means for holding said support normally in elevated position; a pair of interengaged feed rollers located upon each side of the support, said feed rollers forming, in combination, a device for stretching the material, to depress the said support, one roller of one pair being fixed and the other roller movable with respect thereto; and connections between the support and the movable roller for automatically disengaging the latter from the fixed roller when the support is depressed, to permit the material to be fed through the other pair of rollers.

5. The combination, in a decorticating machine, of a yieldingly-mounted material support; means for holding said support normally in elevated position; a pair of interengaged feed rollers located upon each side of the support, said rollers forming, in combination, a device for stretching the material, to depress said support, one roller of each pair being fixed and the other roller movable with respect thereto; connections between the support and the movable roller of one pair for automatically disengaging said roller from the corresponding fixed roller when the support is depressed, to permit the material to be fed through the other pair of rollers; and manually operated means connected with the movable roller of said other pair, for disengaging the same from the fixed roller thereof.

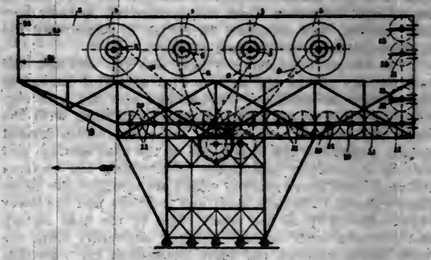
[Claims 6 and 7 not printed in the Gazette.]

960,135. VEHICLE-TIRE. JOHN A. WRIGHT, Brownsville, Pa. Filed Dec. 10, 1908. Serial No. 466,854.



In a vehicle wheel, a rim having an annular groove or channel in its outer face, the side walls of which are flared upwardly and outwardly with the free edges thereof provided with inturned laterally extending lips or flanges to form a channel substantially semi-circular in cross section, the outer faces of said lips being rounded and curved downwardly toward their free edges, a pneumatic tire conforming to the shape of and housed within said channel with the opposite sides of its flat upper face arranged under and engaging the inner faces of said lips or flanges, a solid tire of substantially the same width as the space between the edges of said inturned flanges, said solid tire being arranged over and around the exposed upper face of said pneumatic tire between said flanges, with the opposite sides thereof contacting with the rounded edges of said rim flanges, said rim and solid tire forming a complete protective covering for said pneumatic tire, and means for connecting said solid tire with said rim to hold said tire against displacement.

960,136. MOTOR FLYING-MACHINE. ALFRED WUNDERLICH, Brussels, Belgium. Filed Aug. 27, 1909. Serial No. 514,867.

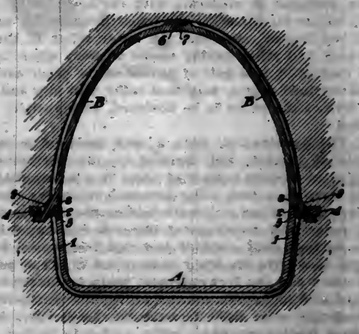


1. In an air-ship of the kind described, the combination with a frame structure divided into parallel alternately disposed suction and pressure chambers, and means disposed in said pressure chambers for withdrawing air from said suction chambers and compressing the same in the pressure chambers, of suitable controlling devices at the open bottom and the rear end of the pressure chambers capable of controlling the discharge of air from the latter, and means for adjusting said controlling devices as desired, substantially as set forth.

2. In an air-ship of the kind described, the combination with a frame structure divided into parallel alternately disposed suction and pressure chambers, and means disposed in said pressure chambers for withdrawing air from said suction chambers and compressing the same in the pressure chambers, of adjustable flaps arranged at the open bottom of the pressure chambers, similar flaps arranged at the open rear end of the latter, suitable means for connecting all the flaps so that the bottom flaps are closed when the rear flaps are opened and vice versa, and means for adjusting the flaps as desired, substantially as set forth.

3. In an air-ship of the kind described, the combination with a frame structure divided into parallel alternately disposed suction and pressure chambers, lateral apertures forming a connection between the latter, and a rotary air-screw in each aperture, of suitable controlling devices at the open bottom and the rear end of the pressure chambers, capable of controlling the discharge of air from the latter, and means for adjusting said controlling devices as desired, substantially as set forth.

960,137. CULVERT. FRANK B. ZIMG, Fredericktown, Ohio. Filed Sept. 2, 1909. Serial No. 515,747.

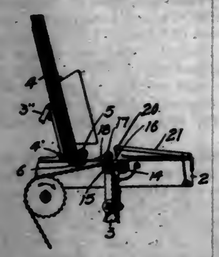


1. A culvert comprising a base, and top sections, the base composed of bottom and sides, the sides having lugs extending outwardly flush with the upper edges of the sides of the base, said lugs having slots or mortises formed

therein mainly beyond the edge so that sufficient of the edges remain to form tight and unbroken joints, with the top sections, the top sections having tenons, the lower ends of which project outwardly beneath the lugs and in engagement therewith when the sections are in their normal position, and coöperate therewith in supporting the upper sections in their normal position.

2. A culvert comprising a base and top sections, the base section flat on the bottom with diverging sides, the upper edges of which are straight and provided with outwardly extending slotted or mortised lugs flush with the upper edge of the base section, the slots therein formed mainly outside of the upper edge of the base section, and curved, expansible, detachable, interlocking top sections the upper and lower edges of which are straight, the upper edges adapted to fit each other and interlock and the lower edges adapted to fit the upper edges of the base section and provided with tenons extending outwardly from the lower edges whereby the edges themselves are unbroken in position to fit the slots or mortises in the lugs of the lower section and terminating in outwardly extending projections which engage the lower edges of the slotted lugs and coöperate therewith in supporting the upper sections in their normal position.

960,138. FEED DEVICE FOR FOLDING-MACHINES. JOHN H. ADAMS and ELMER D. WALLACE, Minneapolis, Minn., assignors, by mesne assignments, to Adams Letter Folding Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 19, 1908, Serial No. 422,157. Renewed Oct. 15, 1909. Serial No. 522,806.



1. In a folding machine, the combination, with a feed table, and a carriage thereon, of a feed roller between which and said carriage the sheets of paper are supported in a stack with their lower ends contacting with the top of the table, a pair of rollers arranged one above the other to which the paper is delivered from said feed roller, a roller arranged to coöperate with the lower roller of the pair, means for directing the paper downwardly between said last named roller and the lower roller of the pair, and said feed roller having means whereby when the tension exerted by said pair of rollers on the paper exceeds a predetermined degree, said feed roller will slip and allow the feed of the paper to be hastened, substantially as described.

2. The combination, with a feed table, of a carriage supported thereon and inclined to the horizontal and adapted to support a stack of paper in a substantially upright position, a feed roller arranged to engage the stack of paper, means for yieldingly holding the carriage toward said roller, and a corrugated idle roller mounted in said table between said carriage and said feed roller, and arranged to receive the lower ends of the sheets of paper in said stack and the forward sheet being in advance of the axis of said idle roller, and said idle roller being revolved to feed the outer sheet forward by the pressure of said carriage feeding means.

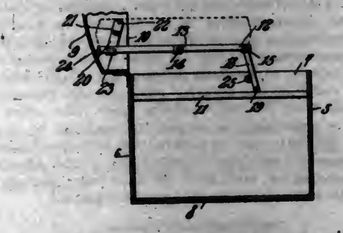
3. The combination, with a feed table, of a carriage movable thereon, and having an inclined portion that is hinged at its lower end on said table and adapted to support a stack of paper at an angle to the horizontal, means comprising a slotted bar for adjusting said hinged section to vary its degree of inclination, a feed roller and means for holding said carriage toward said feed roller with a yielding pressure.

4. The combination, with a feed table, of a carriage adapted to support a stack of paper in a substantially upright position, a feed roller arranged to engage the sheets and feed them forward one at a time, and a roller having a roughened surface arranged below said feed roller and engaging the lower ends of the stack of sheets, the forward sheet contacting with said roughened surface roller in front of its axis, means for holding said carriage toward said feed roller with a yielding pressure whereby the engagement of the forward sheet with the roughened surface roller will rotate the same to feed the sheets forward, substantially as described.

5. The combination, with a feed table, of a carriage adapted to support a stack of paper in a substantially upright position, and a moving surface provided in said table and with which the lower end of the stack of paper is in contact, said surface being adapted to feed the sheets forward in the operation of the machine and means for pressing said carriage forward and the engagement of the forward sheet with said moving surface actuating the same to feed the sheets, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

960,139. TRAY-RAISER. OSCAR B. ADAMS, Atlanta, Ga., assignor of one-half to Robert E. Smith, Atlanta, Ga. Filed Mar. 9, 1909. Serial No. 482,286.



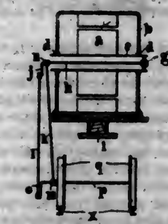
1. In a device of the class described, the combination with a trunk body and lid, of bars located one at each end of the body, spaced lugs upon the bars for supporting a tray at its ends from the bars, a link pivotally connected to one end of each bar and the corresponding end wall of the trunk body, and a link rigidly connected to the other end of each bar and pivotally to the lid.

2. In a device of the class described, the combination with a trunk body and lid, of bars located one at each end of the body, spaced lugs upon the bars for supporting a tray at its ends from the bars, a link pivotally connected at one end to the forward end of each bar and the corresponding end wall of the trunk body, and a link rigidly connected to the other end of each bar and pivotally to the lid, the last mentioned links having their ends which are connected to the bars turned inwardly laterally to afford additional supports for the said tray.

3. In a device of the class described, the combination with a trunk body and lid, of bars located one at each end of the body, spaced lugs upon the bars for supporting a tray at its ends from the bars, a link pivotally connected to one end of each bar and the corresponding end wall of the trunk body, and a link rigidly connected to the other end of each bar and pivotally to the lid, the last mentioned links having their ends which are connected to the bars turned inward laterally to afford additional supports for the said tray, the adjacent ends of each bar being also turned inwardly laterally to afford a stop to limit the backward movement of the tray.

4. In a device of the class described, the combination with a trunk body and lid, of bars located one at each end of the body, spaced lugs upon the bars for supporting a tray at its ends from the bars, a link pivotally connected to one end of each bar at the corresponding end wall of the trunk body, and a link rigidly connected to the outer end of each bar and pivotally to the lid, the ends of the last mentioned links which are connected to the said bars being bent inwardly laterally to afford additional supports for the said tray, the adjacent ends of the bars being bent inwardly laterally to afford stops to limit the backward movement of the tray upon the support, the opposite ends of the bars being bent outwardly laterally to afford stops against which the first mentioned links abut when the lid is raised to a predetermined position whereby to limit the movement of the lid in such direction.

960,140. ELECTRIC DRIVING MECHANISM FOR VEHICLES. ALBERT AICHELE, Baden, Switzerland, assignor to Aktiengesellschaft Brown Boveri & Cie., Baden, Switzerland. Filed Nov. 18, 1909. Serial No. 528,742.



1. In an improved means for transmitting power and in combination, a driving shaft and a driven shaft, one of said shafts being hollow, and flexible power transmitting mechanism connected with said hollow shaft at one end and extending through said hollow shaft, and having connection with the other shaft at the opposite end.

2. In an improved means for transmitting power and in combination, a driving shaft and a driven shaft, said shafts being substantially parallel and one of them being hollow, an auxiliary shaft within the hollow shaft and having one end connected thereto by a universal joint, a driving connection connecting the opposite end of said auxiliary shaft with the other shaft, and a rigid coupling between said other shaft and said auxiliary shaft.

3. In an improved means for transmitting power and in combination, a driving and a driven shaft, one of said shafts being hollow and the other having a crank at one end, an auxiliary shaft within the hollow shaft having one end projecting from the hollow shaft and carrying a crank and having its other end connected to the hollow shaft by a universal joint, a pitman connecting the said cranks, and a brace rod extending between the cranked shaft and auxiliary shaft.

4. An improved electric drive for rail vehicles comprising in combination a motor axle and a rail wheel axle, one of said axles being hollow and flexible power transmitting mechanism connected at one end with said hollow axle and extending at least partially through the same and at the other end connected with the other axle; as set forth.

5. An improved electric drive for vehicles comprising in combination an electric motor, a hollow shaft for said motor, a shaft within said hollow shaft and connected thereto by a flexible coupling, a wheel axle, a driving connection between said axle and said shaft, and a rigid coupling between the axle and the shaft; as set forth.

[Claim 6 not printed in the Gazette.]

960,141. MEDIUM FOR OIL-COLOR. WALTER B. ALLEN, Worcester, Mass., assignor to Allen, Hall & Co., Reading, Mass, a Copartnership. Filed Nov. 6, 1907. Serial No. 400,927.

1. In a process for compounding a medium for the application of oil color, boiling water containing starch until the same is dissolved, heating wax with paint reducer until the wax is held in solution, heating water and soap until the same are in solution, and then combining the two latter solutions and thereafter mixing the same while warm with the first named solution.

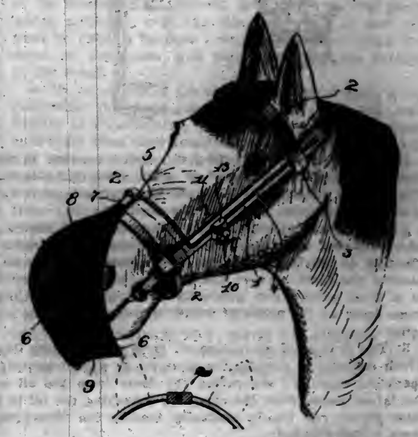
2. In a process for compounding a medium for the application of oil color, heating wax with paint reducer until the wax is held in solution, heating water containing soap and ammonia until the same are in solution, and pouring one of said solutions into the other while both are in a heated condition, boiling water containing starch until the same is dissolved, and then stirring the starch solution and pouring the mixture of the two first named solutions into the same while the stirring is taking place.

3. The process of compounding an oil color medium composed of a paste ingredient formed by dissolving a substance which when dissolved is incapable of being absorbed by a porous surface, of a fluid ingredient formed by dissolving wax in paint reducer, and of a liquid ingredient formed by dissolving soap in water, consisting of first commingling said liquid ingredient with one of the other ingredients, and then mixing with said compound the remaining ingredient.

4. The herein described composition of matter, consisting of pure water two and three-quarters pints, starch two ounces, wax four and one-half ounces, paint reducer two and three-quarters pints, and soap nine ounces.

5. The herein described composition of matter, consisting of pure water two and three-quarters pints, starch two ounces, wax four and one-half ounces, turpentine and paint oil two and three-quarters pints, and soap nine ounces.

960,142. NOSTRIL-PROTECTOR FOR HORSES. ULRIC ANCTIL, Pittsfield, Me. Filed Oct. 16, 1909. Serial No. 522,955.



1. A protector comprising a pair of outer wires shaped to provide bridle engaging arms and having their lower portions inturned and then bent downward and outward, a central wire curved downward and outward, a clamp for fastening the upper end of said central wire to the upper portion of said downwardly and outwardly curved portions of the outer wires, and a fabric covering for the central wire and said downwardly and outwardly curved portions of the outer wires.

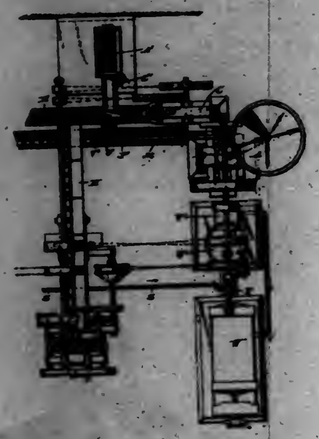
2. In a device of the character described, the combination with the cheek straps of a bridle, of a nostril protector having attaching arms, bolts projecting through said straps and each provided with an opening for said arms, and a lock nut for each bolt.

3. In a device of the character described, the combination with the cheek straps of a bridle, of threaded bolts passed therethrough and each provided with a transverse

opening, a wide flat head for each bolt, a nostril protector having straight attaching arms which pass through said bolt openings, and a lock nut for each bolt for adjustably clamping said arms to said cheek strap.

4. A device of the character described comprising a frame composed of a pair of outer wires and an inner wire, the inner wire having its upper end connected to the outer wires, and said outer wires being outwardly bent above their point of connection with the inner wire to provide attaching arms, and a cover for said frame.

960,143. PROCESS OF EXTRACTING OIL. FRANK B. ANDERSON, Cleveland, Ohio, assignor to The V. D. Anderson Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 21, 1907. Serial No. 398,426.



1. The process of extracting oil, which consists in expelling the oil from the seed or other material; filtering the oil; and gradually feeding the filter-press foots to the stock which is being passed to the expellers.

2. The process of extracting oil from seed and the like, which consists in passing the stock through an expeller; effecting an initial separation of the foots from the oil; passing the foots back to the expeller; returning the oil to a filter press; and gradually distributing the filter-press foots to the material which is being fed to the expeller.

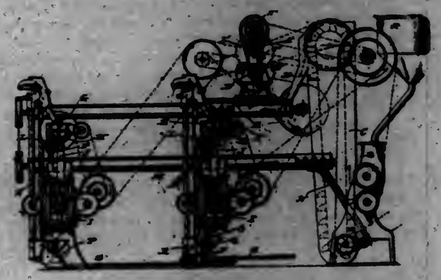
3. The process of extracting oil from seed and the like, which consists in feeding the material to a continuously-operating expeller; separating the foots from the oil as the latter passes from the expeller; conveying the oil to a filter press; and finally gradually feeding the filter-press foots to the expeller.

4. The process of extracting oil from seed and the like, which consists in feeding the stock to a continuously-operating expeller; securing the initial separation of the foots from the oil as it passes from the expeller; returning the foots thus separated to the expeller; passing the oil so obtained to a filter press; and finally feeding the filter-press foots gradually back to the expeller.

5. The process of extracting oil from seed and the like, which consists in constantly feeding the stock to a continuously-acting expeller; securing an initial separation of the foots from the oil; returning the foots thus separated to the expeller; passing the oil to a filter press and permitting the foots to gradually accumulate therein; and finally withdrawing the foots when accumulated and gradually feeding the same in a disintegrated condition back to the expeller, along with the new stock or material to be treated.

[Claims 6 to 10 not printed in the Gazette.]

960,144. APPARATUS FOR EXTRACTING OIL. FRANK B. ANDERSON, Cleveland, Ohio, assignor to The V. D. Anderson Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 21, 1907. Serial No. 398,427.



1. In an apparatus for extracting oil, the combination of an expelling press; a filter press; means for conveying the oil from the expeller to the filter press; and means for feeding the filter-press foots to the stock placed in the expeller whereby it may be mingled with such stock and thereafter passed through the expeller with the stock.

2. In an apparatus for extracting oil, the combination of an expelling press; a filter press; means for conveying the oil from the expeller to the filter press; and means for gradually feeding and mixing the filter-press foots with the stock which is to be passed through the expeller.

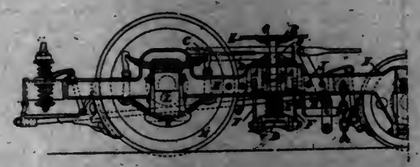
3. In an apparatus for extracting oil, the combination of a continuously-acting expelling press; means for crushing the seed or other material from which the oil is to be extracted; means for feeding the stock thus treated to the expeller; a filter press; means for conveying the oil from the expeller to the filter press; and means for gradually feeding the filter-press foots to the stock being fed to the expeller.

4. In combination with a shell or casing; a feed hopper opening into one end thereof; a shaft extending through said shell or casing; a series of screws mounted on the shaft, said screws serving to condense and to force the material through the discharge end of the shell; and a rapidly-rotating member located at said discharge end and serving to disintegrate the material as it is forced outwardly.

5. In combination with a shell or casing; a feed hopper opening into one end thereof; a shaft extending through said shell or casing; a series of screws mounted thereon and serving to condense and to force the material through the discharge end of the shell; a rotary disintegrator located at the discharge end of the shell; and means for imparting a slow movement to the screws and a rapid movement to the disintegrator.

[Claims 6 to 8 not printed in the Gazette.]

960,145. RAILWAY, TRAMWAY, AND OTHER VEHICLE. JOHN EDWARD ANGER, Preston, England. Filed Dec. 13, 1909. Serial No. 532,888.



1. A railway truck including in combination, side members, a centering plate on which the car bolster rests and through which the king bolt extends, a truck bolster on which the center plate rests, means for slidingly supporting the truck bolster on said side members, whereby the truck bolster, the center plate, and king bolt may be shifted longitudinally of the truck, and means for securing said truck bolster in said adjusted positions.

2. A railway truck including in combination, side members, tracks secured to said side members, a centering plate on which the car bolster rests, and through which the king bolt extends, a truck bolster on which the center plate rests, said truck bolster having its ends shaped to rest and slide on said tracks secured to the side members, whereby said truck bolster, center plate and king bolt may be shifted longitudinally of the truck, and means for securing said truck bolster in its adjusted positions.

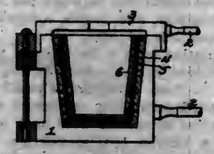
3. A railway truck including in combination, a truck bolster, a bogie center plate on which the car bolster rests, a pair of levers pivoted to the truck bolster, and extending transversely of said truck, means for connecting the adjacent ends of said levers to the under side of said bogie center plate so that when said bogie center plate is depressed, the opposite ends of said levers are raised, and a bearing plate carried by the end of each lever and engaging the sides of the car body, for preventing the rolling of the car body.

4. A railway truck including in combination, a truck bolster, a bogie center plate on which the car bolster rests, levers extending transversely of the truck, means for pivotally supporting said levers on said truck bolster, said center bogie plate having downwardly extending arms, pivot pins for connecting the adjacent inner end of said levers with said downwardly extending arms, and bearing plates carried by the outer ends of said levers, and engaging the car body for preventing the side rolling of said car body.

5. A railway truck including in combination, a truck bolster, a bogie center plate on which the car bolster rests, levers extending transversely of the truck, means for pivotally supporting said levers on said truck bolster, said center bogie plate having downwardly extending arms, pivot pins for connecting the adjacent inner end of said levers with said downwardly extending arms, and bearing plates carried by the outer ends of said levers and engaging the car body for preventing the side rolling of said car, the inner ends of said levers extending to a point beyond their pivotal connection with the bogie center plate, and means for connecting the inner ends of said levers with each other, whereby the levers will move simultaneously about their pivotal supports.

[Claim 6 not printed in the Gazette.]

960,146. METHOD OF PRODUCING WIRE-GLASS ARTICLES AND VESSELS. JOHN I. ARBOGAST, Pittsburg, Pa., assignor of one-half to Henry L. Collins, Pittsburg, Pa. Filed Oct. 4, 1907. Serial No. 395,827.



The herein described method of producing glass finished vessels of a predetermined shape and size without reheating or further treatment, consisting in blowing within a suitable mold corresponding in shape to the shape of the vessel to be formed a quantity of molten glass so as to form an outer shell having the shape of the finished vessel, fitting within said blown shell a wire mesh basket corresponding in shape to the shape of the shell, and then blowing and simultaneously shaping within the wire basket a second shell of molten glass of sufficient temperature and in sufficient quantity that said second or inner shell amalgamates with the outer shell and envelops the wire basket.

960,147. HAMMER OR THE LIKE. FRANK BALDWIN, Toledo, Ohio. Filed June 16, 1909. Serial No. 502,480.

1. In an article of the class described, a head having a shank which is thinned for a portion of its length from its free end inwardly and provided with sockets at the sides of the inner end of such thinned portion, and a handle having an end forked and straddling the thinned portion of the shank with the ends of its furcations fitting into said sockets.



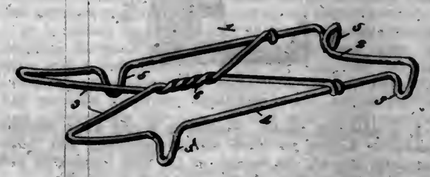
2. In an article of the class described, a head having a shank which is longitudinally grooved on opposite sides thereof, such grooves terminating at their inner ends in sockets, and a handle having an end forked with the furcations thereof lying in such grooves and their free ends fitting into said sockets.

3. In an article of the class described, a head having a shank which is longitudinally grooved on opposite sides thereof, such grooves terminating at their inner ends in sockets, a handle having an end forked with the furcations thereof lying in such grooves and their free ends fitting into said sockets, such free ends being beveled whereby a forcing of the same into said sockets causes a relative contraction thereof, and means securing the shank and handle against removal.

4. In an article of the class described, a head, a shank projecting therefrom, a handle having an end forked and straddling the shank with the outer edges of the free ends of its furcations chamfered, said shank having portions which coöperate with the chamfered ends of said furcations to effect a relative contraction thereof when forced home on the shank, and means securing the furcations to the shank.

5. In an article of the class described, a head, a shank projecting therefrom and having its outer end portion I-shape in cross-section, the flanges thereof being tapered outwardly from their inner ends and each thickening gradually from its outer end inwardly and the web thereof gradually diminishing in depth from its outer end inwardly, said shank having wedge shaped sockets at the inner ends of the grooves formed by said flanges and web, and a handle having its inner end split and straddling said web with the ends of its furcations fitted into said sockets, and means coöperating with said sockets to secure the handle to the shank.

960,148. COMBINATION SHOE-BLACKING STAND AND BOOTJACK. ARTHUR BANCROFT, Los Angeles, Cal. Filed Dec. 11, 1909. Serial No. 532,705.



In a device of the class set forth, a member constructed of a single strand of wire, said member comprising a substantially rectangular frame, the end portions of which being bent inwardly to form a U-shaped member and a V-shaped member, the longitudinal members of the wire being bent downwardly to form feet, the V-shaped portion of the wire being bent upon itself and having its extremities coiled upon the longitudinal members of the frame, substantially as described.

960,149. SLIPPER-SOLE. ERNEST A. BICKFORD and WALTER A. SWEET, Worcester, Mass. Filed Dec. 17, 1908. Serial No. 467,984.



1. As an article of manufacture, a sole for a slipper having a strip secured to the sole for the attachment of an upper, lying horizontally along the outer edge of the top of the sole and projecting upwardly beyond the outer extremity of said edge, and constituting the only means for the attachment of the upper.

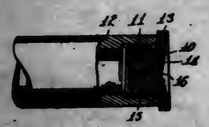
2. As an article of manufacture, a sole comprising an insole, an outsole projecting upwardly above the top thereof, and a strip for the attachment of an upper lying directly on the outer edge of the insole, projecting outwardly and upwardly above said edge and secured directly on the insole, and its upwardly projecting portion overcast to the inside of the upwardly projecting edge of the outsole.

3. As an article of manufacture, a sole comprising an insole, an outsole provided with upwardly projecting edges extending up at and around the edges of the insole, and a strip for the attachment of an upper stitched along the edge of the insole and projecting upwardly directly over said edge inside the projecting edge of the outsole and parallel therewith and overcast thereto above the insole, whereby the raw edges of the outsole and insole are covered.

4. As an article of manufacture, a sole comprising an insole, an outsole provided with upwardly projecting edges extending up around the edges of the insole, and means for the attachment of an upper secured flat along the edge of the insole and projecting up thereover inside the projecting edge of the outsole and parallel therewith and secured to the insole inside the edge thereof and to the outsole outside the edge of the insole.

5. As an article of manufacture, a sole for a slipper having a strip secured to the top of the sole for the attachment of an upper, lying flat along the sole near the outer edge thereof, and projecting upwardly beyond said edge, said strip consisting of a tubular fabric suitable for the attachment of a crocheted upper.

960,150. SPRAYING-NOZZLE. HARRY D. BINKS, Chicago, Ill. Filed Oct. 16, 1909. Serial No. 522,960.



1. A spraying nozzle, comprising a cap for a tubular conductor having its inner end diametrically and longitudinally slotted, the bottom of the slot converging and its apex opening through the outer face of the cap.

2. A spraying nozzle, comprising a cap for a tubular conductor, having a tapering recess in its outer face and having its inner end diametrically and longitudinally slotted, the bottom of the slot being tapered in form, its apex extending through the outer face of the cap.

3. A spraying nozzle, comprising a cap for a tubular conductor, the outer face of the cap being dished, the inner end of the cap being diametrically and longitudinally recessed, the bottom of the recess tapering to an apex extending through the outer face of the cap.

960,151. TELEPHONE-SUPPORT. HARRY BLUMENTHAL, Dorchester, Mass. Filed July 31, 1909. Serial No. 510,534.



1. A telephone support of the character described, comprising, in combination, a base, a polygonal member swiveled thereon, a plurality of equiangular but irregular polygonal members movable within the first mentioned member and relatively movable longitudinally one within the other, and means secured to the innermost member for gripping a telephone.

2. A telephone support of the character described, comprising, in combination, a base, a polygonal member swiveled thereon, a plurality of equiangular but irregular polygonal members movable within the first mentioned member and relatively movable longitudinally one within the other, a member swiveled on the innermost polygonal member, and a plurality of semi-circumferential clamp members including outturned portions to engage with the swiveled member.

3. A telephone support of the character described, comprising in combination with a base and swiveled thereon, a plurality of equiangular but irregular polygonal members relatively movable longitudinally one within the other, limiting means upon the adjacent irregular faces of the polygonal members, a member swiveled upon the innermost polygonal member for securing thereto telephone gripping means, and semi-circumferential telephone gripping means to engage with the swiveled member.
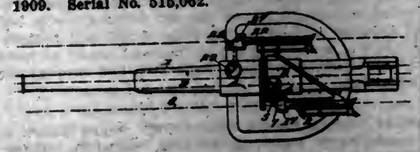
960,152. TROLLEY-POLE. CHARLES E. BRADFORD, Lakeview, Wash. Filed Aug. 24, 1909. Serial No. 514,429.



1. The combination with a trolley pole having two sections, of joint members having their opposing ends cut away to form shoulders whereby said members may have a limited lateral oscillatory movement with respect to each other, a longitudinal pivot uniting said members, a leaf spring having its central portion secured and its end portions free and projecting between the shouldered portions of said members, and means connecting said members to the trolley pole sections.

2. The combination with a trolley pole having two sections, of two tubular joint members having their opposing ends cut away to form shoulders whereby said members will have a limited oscillatory movement with respect to each other, a pivot extending from said members, a leaf spring having a curved central portion to engage the pivot, and projecting ends arranged between the shouldered portions of said members, and means connecting said members to the trolley pole sections.

960,153. MEANS FOR ADJUSTING GUN-SIGHTS. DE WITT C. CLEARY, Seneca Falls, N. Y. Filed Aug. 28, 1909. Serial No. 515,062.



1. In a gun the combination of a sight; a reflecting means attached to the exterior of the gun; a support for said reflecting means; means by which the axis of said sight may, with the aid of said reflecting means be brought into parallelism with the bore of said gun; and an independent support for said last mentioned means, substantially as described.

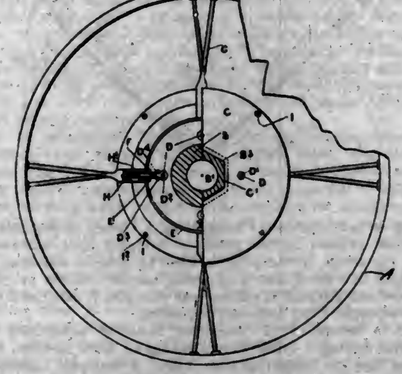
2. In a gun, the combination of a sighting telescope; a reflecting means attached to the gun; a second reflecting means in front of said telescope, adapted to reflect in connection with said first means and to independently transmit images of the same distant object, and independent supports for said reflecting means; the arrangement of the parts being such that when said reflected and transmitted images coincide, the axis of the telescope will be parallel to the axis of the bore of the gun, substantially as described.

3. In a gun, the combination of a reflecting means attached thereto; means for angularly adjusting said reflecting means; a second reflecting means provided with a clear and a reflecting surface adapted to reflect and to transmit images of the same distant object; and a telescope adapted to receive said images; substantially as described.

4. A gun provided with a plurality of sights; a plurality of reflecting means having a fixed relation to the axis of the bore one for each sight and mounted on independent supports; and a plurality of additional reflecting means adapted to reflect in connection with said first mentioned means, and to transmit independently, images of the same distant object, the arrangement of the parts being such that when said reflected and transmitted images coincide, the axis of the telescope will be parallel to the axis of the bore of the gun, substantially as described.

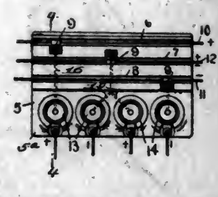
5. A gun provided with a slide; a plurality of angularly adjustable prisms attached to said slide; a plurality of partially silvered mirrors placed at predetermined angles to said prisms; and a plurality of sighting telescopes adapted to receive reflected and transmitted images of the same distant object through said mirrors; substantially as described.

960,154. CUSHION-WHEEL. ROBERT EDGAR COLE, Highland Creek, Ontario, Canada. Filed Apr. 13, 1908. Serial No. 426,879.



In a vehicle wheel, the combination with a hub having reduced outer ends formed with flat sided portions and a further reduced threaded portion, of annular plates designed to fit on the flat sided reduced portions of the hub, nuts designed to be threaded onto the threaded portion of the hub against the central portion of the annular plates, cross bolts connecting the annular plates in proximity to the hub, intermediate cross bolts connecting the plates in proximity to the outer edge thereof, spacing rings held between the plates and having peripheral slots in the peripheral portion thereof, eye bolts swung upon the cross bolts located in proximity to the hub and extending intermediately of their length through the slots in the spacing rings, nuts threaded on to the outer ends of the bolts, spiral springs inserted between the eyes of eye bolts and the spacing rings, and between the spacing rings and the aforesaid nuts, and spokes suitably secured to such spacing rings and extending outwardly in an inclined direction to the rim of the wheel.

960,155. FUSE-BLOCK. JOHN COLLINS, Washington, D. C. Filed Apr. 18, 1908. Serial No. 427,036.



A three-wire fuse block having at least four branch circuit terminal connections at one and the same side thereof and at such side only, to provide for two two-wire branches being led from the same side of the block, in combination with three terminal connections at the opposite side of the block and whereby the branch circuit terminal connections may be connected to the positive, neutral and negative wires of a three-wire feeder.

960,156. RAILWAY-FROG. JOHN E. CONLEY, Memphis, Tenn. Filed July 1, 1909. Serial No. 505,805.



1. A railway frog comprising an integral central portion forming the guide rails, a portion of the wing rails and a portion of the point, two point rail portions removably connected to the central portion, the guide rails and wing rail portions of the central portion extending beyond the inner ends of the two point rail portions.

2. A railway frog comprising a frog point, a filler, wing rails and guide rails formed from a single integral part, and removable rails detachably attached to each end of the frog so as to complete the same.

3. A railway frog comprising an integral central portion forming the guide rails, a portion of the wing rails, the filler and a portion of the point, two wing rail portions removably connected to the central portion, and two point rail portions removably connected to the central portion.

4. A railway frog comprising an integral central portion forming the guide rails, a portion of the wing rails, the filler and a portion of the point, two wing rail portions removably connected to the central portion, and two point rail portions removably connected to the central portion, and a supporting part integral with said central portion, which passes under the ends of said removable rails so as to support the same.

5. A railway frog comprising an integral central portion forming the guide rails, a portion of the wing rails, the filler and a portion of the point, said central portion provided with a receiving space in proximity to said wing rail portions, two removable rails contained within said receiving space and forming continuations of said wing rail portions, a supporting part below said removable rails and extending from one of said guide rails to the other, and means for detachably connecting said removable rails in position.

[Claims to 6 to 8 not printed in the Gazette.]

960,157. MAIL-BOX. SAMUEL C. COX, Washington, D. C. Filed Mar. 5, 1910. Serial No. 547,517.



1. A mail box comprising a casing, a bottom section pivotally connected to the lower edge of one wall of said casing, a door section pivotally connected to the free edge of said bottom section, means for limiting the relative movements of said bottom and door sections, whereby the two are brought into alinement when the door section is opened, and means for supporting said bottom section during the opening of the door section.

2. A mail box comprising a body having its end walls provided with lugs, a pivotally supported bottom section, and a door section pivotally connected to said bottom section and having end plates provided with recesses adapted to fit over said lugs to support the bottom section when the box is closed.

3. A mail box comprising a body having its end walls provided with lugs, a pivotally supported bottom section, a door section pivotally connected to said bottom section and having end plates provided with recesses adapted to fit over said lugs to support the bottom section when the box is closed, and means for supporting said bottom section when said recess is out of engagement with said lug.

4. A mail box comprising a body having its end walls provided with lugs, a pivotally supported bottom section, and a door section pivotally connected to said bottom section and having end plates provided with recesses adapted to fit over said lugs to support the bottom section when the box is closed, means for limiting the relative movement of said sections, whereby the two are held in alinement when the box is opened, and means for supporting said bottom section when said recess is out of engagement with said lug.

5. A mail box provided with a pivoted bottom section and a door section pivoted to said bottom section, means for limiting the relative movement of said sections, whereby the two are in alinement when the box is open, and means for retarding the opening movement of said bottom section.

[Claims 6 to 9 not printed in the Gazette.]

960,158. BROOM-COVER. JAMES G. CUMMINGS and JOHN LYNCH, Chicago, Ill. Filed July 22, 1908. Serial No. 444,809.

1. In a new article of manufacture, a broom cover, comprising a sack or casing having a central aperture for the passage of the broom handle, a slitted side opening and a closed bottom portion.

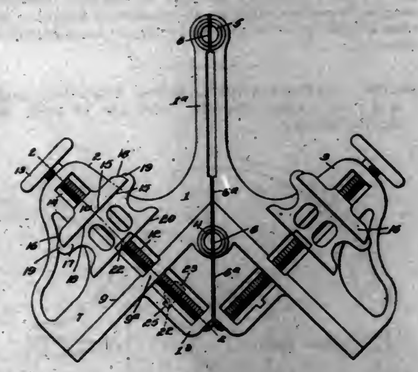
2. As a new article of manufacture, a broom cover consisting of a casing having a central aperture at one end for the passage of the broom handle, opposite shoulders sloping from said aperture, a slitted opening extending from one of the shoulders to the bottom of the casing, and means for closing said opening.

3. As a new article of manufacture, a broom cover consisting of a casing made from a single piece of suitable material, having a central aperture for the passage of the



broom handle, opposite shoulders sloping from the said aperture, a closed bottom, a slitted opening extending from one shoulder to the closed bottom, and a cord for closing said opening.

960,159. MITER-CLAMP VISE. HERMANN B. DIFWORTH, Saginaw, Mich. Filed Mar. 15, 1910. Serial No. 549,434.



1. A mitering device comprising a frame, an adjusting screw mounted on the frame, a clamping block operated by the screw, a clamping member adapted to detachably engage the block, and a retaining member carried by the screw and adapted to engage said clamping member and to be adjusted to an inoperative position.

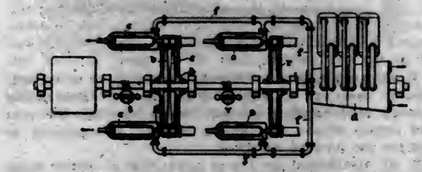
2. A device of the character described comprising a frame having a guide slot, a clamping block movable in said slot for adjusting said block, a clamping member adapted to detachably engage the block, and a nut freely revoluble on the screw within said slot and provided with a projection to engage and hold said clamping member.

3. A device of the character described comprising a frame having a fixed clamping surface and provided with a longitudinal slot at an angle thereto, a clamping block movable in said slot toward and from said surface, a screw extending longitudinally of the slot for adjusting said block, a clamping member having a clamping surface provided with means to detachably engage said block, the said clamping surface of the clamping member being formed with a recess, and a nut revolubly mounted on the screw

within the slot and having a projection to engage said recess.

4. A device of the character described comprising a frame having a fixed clamping surface and a guide slot disposed at an angle thereto, the inner end of said slot being provided with a notch or offset, a clamp block movable in the slot toward and from said surface, a screw extending lengthwise of the slot for adjusting said block, an auxiliary clamping member having portions to detachably engage the block and having a clamping surface provided with a beveled recess, and a nut loosely mounted on the screw and having a beveled projection to engage said recess, said nut being adapted for adjustment to the inner end of the screw to a position to permit said projection to move through said notch or recess on the revolution of the screw.

960,160. COMBUSTION-TURBINE. SEBASTIAN ZIANI DE FERRANTI, Hampstead, London, England. Filed Sept. 20, 1906. Serial No. 335,431.



1. In combination, a casing, a low speed positive work turbine wheel in said casing; a high speed negative work turbine wheel in said casing; a machine connected to said positive work wheel; a compressor connected to said negative work wheel; a combustion chamber for supplying working fluid to said turbine wheels, together with means for leading compressed fluid to said combustion chamber.

2. In combination a casing; a low speed positive work turbine wheel in said casing; a high speed negative work turbine wheel in said casing; a machine connected to said positive work wheel; a compressor connected to said negative work wheel; a combustion chamber for supplying working fluid to said turbine wheels; means for leading compressed fluid to said combustion chamber together with separate motor means independent of the fluid transferred from said work wheels for augmenting the power developed by said negative work wheel.

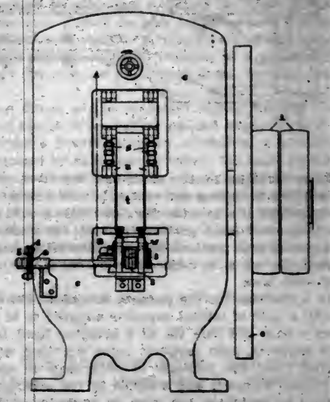
3. In combination a casing; a low speed positive work turbine wheel in said casing; a high speed negative work turbine wheel in said casing; a machine connected to said positive work wheel; a compressor connected to said negative work wheel; a combustion chamber for supplying working fluid to said turbine wheels; means for leading compressed fluid to said combustion chamber together with motor means for assisting said negative work wheel.

4. In combination, a casing; a low speed positive work turbine wheel in said casing; a high speed negative work turbine wheel in said casing; a machine connected to said positive work wheel; a compressor connected to said negative work wheel; a combustion chamber for supplying working fluid to said turbine wheels; means for leading compressed fluid to said combustion chamber together with means for reversing the direction of said positive work wheel while the direction of the rotation of the negative work wheel remains constant.

5. In combination, a casing; a low speed positive work turbine wheel in said casing; a high speed negative work turbine wheel in said casing; a machine connected to said positive work wheel, a compressor connected to said negative work wheel; a combustion chamber for supplying working fluid to said turbine wheels; means for leading compressed fluid to said combustion chamber together with means for governing the speed of said work wheels.

[Claim 6 not printed in the Gazette.]

960,161. MANUFACTURE OF STRIP MATERIAL SUITABLE FOR THE BLADES OF TURBINES, TURBO-PUMPS, AND THE LIKE. SEBASTIAN ZIANI DE FERRANTI, Grindleford Bridge, near Sheffield, England. Filed Feb. 18, 1907. Serial No. 358,047.



1. A process of manufacturing strip material, consisting in first producing by any suitable process strip material of any desired degree of approximation to the cross section ultimately desired and subsequently defining the cross section of the strip length by length by a series of longitudinally progressive and overlapping swaging operations acting to cause a transverse flow of the metal of the strip.

2. A process of manufacturing strip material of a certain cross section, consisting in first producing by any suitable process strip material having a comparatively thick part and a comparatively thin part at a given cross section and subsequently defining the cross section of the strip length by length by a series of longitudinally progressive and overlapping swaging operations causing transverse flow of the metal of the strip from said comparatively thick to said comparatively thin part.

3. A process of manufacturing turbine blades or blade strip consisting in first producing by any suitable process strip material of any desired degree of approximation to the cross section ultimately desired and subsequently defining the cross section of the strip length by length by a series of longitudinally progressive and overlapping swaging operations acting to cause a transverse flow of the metal of the strip.

4. A process of manufacturing turbine blades or blade strip consisting in first producing by any suitable process strip material having a comparatively thick body portion tapering away to a comparatively thin edge portion at a given cross section and subsequently thinning and extending transversely said edge portion by a series of longitudinally progressive and overlapping swaging operations.

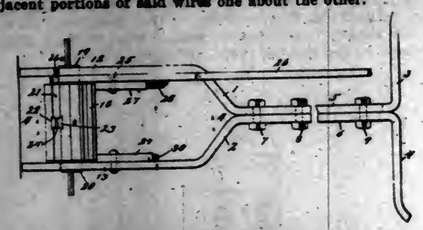
5. A process of manufacturing turbine blades or blade strip consisting in first producing by any suitable process strip material having a comparatively thick body portion tapering away to a comparatively thin edge portion at a given cross section and subsequently by a series of longitudinally progressive and overlapping swaging operations causing metal to flow transversely from said thick portion to said edge portion to extend the same laterally.

[Claim 6 not printed in the Gazette.]

960,162. WIRE-TWISTING MACHINE. JAMES F. FOLEY, Chicago, Ill. Filed June 7, 1909. Serial No. 500,534.

1. In a machine of the character described, a portable support, means for gripping overlapping portions of two wires at the middle of said portions, said means being adapted to permit the unrestrained movement of said portions on either side of the middle, and means for movably mounting the gripping means on the support, the last

said means adapting the gripping means to revolve the adjacent portions of said wires one about the other.



2. In a machine of the character described, side supports adapted to be disposed centrally with respect to overlapped portions of a bale tie, jaws movable on said supports about said overlapped portions and in the medial transverse plane of said portions said machine being constructed to permit the wires to adjust themselves freely on either side of said jaws.

3. In a machine for the purpose described, the combination with a pair of lateral supports adapted to be inserted between a bale and bale tie, of a gripping head journaled in said supports, said supports being provided with slots extending from the journals of said head to the upper edges of said supports and adapted by the arrangement of said slots to maintain the wire in engagement with the gripping head.

4. In a machine for connecting the overlapping portions of two wires, side supports within which said wires may be revolved one about the other, a head mounted thereon to rotate about without engaging said overlapped portions, and gripping jaws carried by said head, said machine being adapted to be applied to the wire with the gripping jaws engaging said overlapped portions remote from the ends of said portions.

5. In a machine for the purpose described, the combination with a pair of lateral supports, of a gripping head journaled in said supports, said gripping head together with its journals being slotted longitudinally to permit the overlapped portions of a wire to be inserted thereinto to approximately the axis of rotation of said head, and said supports being provided with slots extending from the journals of said head to the upper edges of said supports, said supports being adapted by the arrangement of said slots to maintain the wire in engagement with the gripping head.

[Claims 6 to 14 not printed in the Gazette.]

960,163. CLAMPING DEVICE FOR GRINDING LAWN-MOWERS. JAMES F. S. GOBLE, New Albin, Iowa. Filed Feb. 19, 1909. Serial No. 478,790.



In a device of the character described, a crank bar adapted to be fitted to the hub of a lawn mower wheel for turning the axle in grinding the cutters, said bar having a centrally enlarged portion provided with an opening and oppositely disposed longitudinal slots, curved clamps, each provided with a curved slot, screws and thumb nuts for adjustably securing the curved clamps to said bar, said screws extending through the longitudinal slots in the bar, and a crank handle provided with means for adjustably connecting the same to a slot in the end of said bar.

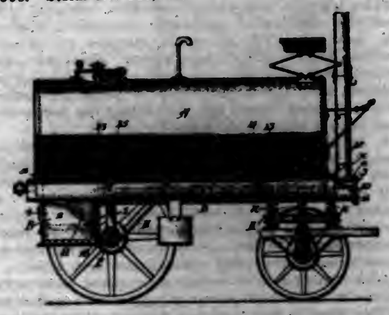
960,164. FENCE ATTACHMENT. JOHN R. GRAFT, Cedar Rapids, Iowa. Filed Feb. 21, 1910. Serial No. 545,062.



1. An attachment for fences, consisting of a vertical tubular member, a looped wire passing downwardly through said tubular member, thence through the post and thence around the tubular member, substantially as and for the purpose described.

2. An attachment for fences comprising a tubular member, a looped wire extending through said tubular member, said wire being arranged to hold one of the fence wires against the upper end of said tubular member and also a fence wire against the lower end of said tubular member, the extremities of said looped wire being so arranged as to rigidly connect said tubular member to a post.

960,165. TANK-WAGON. WILLIAM GRAVES and ALEXANDER MACDONALD GRAVES, Chicago, Ill. Filed June 25, 1908. Serial No. 440,341.



1. A tank-wagon comprising a tank, a fire-chamber under one end thereof, and a flue extending therefrom longitudinally under the entire length of said tank; the shell of the tank forming the top of the flue, the sides thereof consisting of longitudinal metal flanged beams the upper flanges of which are permanently secured to the tank, and the bottom of which consists of a plate whose side edges are secured to the lower flanges of said beam.

2. A tank-wagon comprising a tank, a fire-chamber under one end thereof, and a flue extending therefrom longitudinally under the entire length of said tank, the shell of the tank forming the top of the flue, the sides thereof consisting of longitudinal metal flanged beams the upper flanges of which are permanently secured to the tank and the bottom of which consists of a transversely curved plate whose side edges are secured to the lower flanges of said beams and the curvature of which is struck from the center of the tank.

3. A tank-wagon comprising a tank, a fire-chamber under one end thereof, and a flue extending therefrom longitudinally under the tank the sides of which consist of flanged metal beams whose upper flanges are secured direct to the tank and have their ends extended to the entrance end of the fire-chamber, which latter has the upper edges of its sides secured to the lower flanges of said beam.

4. A tank wagon comprising a tank, a fire-chamber under one end thereof, and a flue extending therefrom under the tank the sides of which consist of flanged metal beams whose upper flanges are secured direct to the tank, and the bottom thereof consisting of a transversely curved plate the longitudinal edges of which are secured to the lower flanges of said beams, which latter have their ends extended beyond the end edge of the flue to the rear of the fire-chamber, the upper edges of whose side-walls are secured to the lower flange of said beams.

5. A tank-wagon comprising a tank, a fire-chamber under one end thereof and a flue extending therefrom longitudinally under said tank, the sides of which consist of longitudinal metal beams the ends of which opposite the fire-box extend beyond the end of the tank and form the sides of the smoke-box, a plate the side edges of which are secured to the lower flanges of said beams, a horizontal plate in front of the tank forming the top of the smoke-box, and a vertical plate forming the end of the smoke-box farthest from said tank.

[Claims 6 to 15 not printed in the Gazette.]

960,166. WATCH-STEM MOVEMENT. GEORGE WM. GRISDALE, Jr., Trenton, N. J. Filed Jan. 13, 1910. Serial No. 537,926.



1. In a device of the character stated, a stem, a winding pinion, a minute wheel, a clutch, a clutch lever having one end engaging with said clutch, and having bearings and a stem lever actuated by said stem and having members exteriorly engaged by said bearings whereby when the stem is depressed said members are compressed.

2. In a device of the character stated, a stem, a winding pinion, a minute wheel, a clutch adapted to engage either said pinion or said wheel, a clutch lever engaging said clutch and having bearings, and a pivotally mounted stem lever adapted to be engaged by said stem and having an arm exteriorly engaged by one bearing, and a cam member, the cam of which engages the other bearing whereby when said stem is depressed the arm and cam member are contracted.

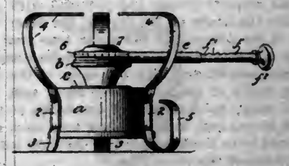
3. In a device of the character stated, a stem, a clutch, a clutch lever pivotally supported and engaging said clutch and having a bearing and an extension, a pivoted stem lever having an arm on one side of the pivot engaging said bearing, and a cam on the other side of said pivot adapted to bear in said extension, whereby when the stem is depressed said arm and cam are moved toward each other, and the clutch is elevated and when said stem is raised the arm and cam member force out said extension to lower said clutch.

4. In a device of the character stated, a stem, a clutch, a pivoted clutch lever having an end engaging said clutch, and having a bearing and an extension, a pivoted stem lever engaged by said stem to rotate the same on its pivot, said stem lever having an arm engaging said bearing, normally in line with the two pivots, a cam on said stem lever adapted to engage the said extension at a greater distance from said clutch lever pivot than is the bearing from said pivot.

5. In a device of the character stated, a stem, a clutch, a pivoted clutch lever having an end engaging said clutch and having a bearing and an extension, a pivoted stem lever engaged by said stem to rotate the same on its pivot, said stem lever having an arm engaging said bearing normally in line with the two pivots, a cam on said stem lever adapted to engage said extension at a greater distance from said clutch lever pivot than is the bearing from said pivot, and an arm on said clutch lever adapted to abut the arm of said stem lever to limit the movement of said clutch.

[Claims 6 to 14 not printed in the Gazette.]

960,167. VAPOR-LAMP BURNER. HARRISON GRISWOLD, New York, N. Y. Filed Aug. 21, 1909. Serial No. 513,941.



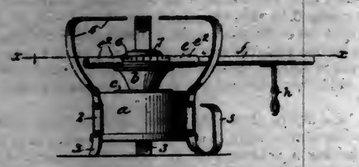
1. In a vapor lamp burner, the combination with a reservoir and a burner, of a device secured to the burner and having openings and a second device occupying a co-acting relation with the first device and also having openings and slidably movable in relation to the first device and in its movement discovering the openings provided therein for permitting the escape of the pent up vapor.

2. In a vapor lamp burner the combination with a reservoir, a burner and a stationary wick, of a tube secured to the burner passing through within the same and projecting and provided with openings in the tube within the burner, and a slidable tube co-acting with the said tube and adapted in one position to prevent the escape of the surplus vapor and in another position to provide for the regulatable escape thereof into the atmosphere.

3. In a vapor lamp burner the combination with a reservoir, a burner and a stationary wick, of a tube secured to the burner passing through within the same and projecting and provided with openings in the tube within the burner, and a tube fitting within the aforesaid tube and longitudinally movable in relation thereto open at its inner end and closed at its outer end and provided with a series of openings longitudinally arranged therein and varying in size and providing with the longitudinal movement of said tube for exposing any desired number of said openings permitting the escape of the pent up vapor.

4. In a vapor lamp burner and in combination, a reservoir, a burner and stationary wick, telescoping tubes the larger of which extends across within the burner through the wall at one side and projects and is provided with a series of openings within the limits of the burner which permit the pent up vapor to pass into said tube, the inner telescoping tube fitting snugly within the outer one, and a finger-engaging knob closing its outer end, said inner tube being provided with a series of spaced apart openings of various sizes which may be exposed with the longitudinal movement of the inner tube, providing for the escape of the pent up vapor in the burner into the open air.

960,168. VAPOR-LAMP BURNER. HARRISON GAISWOLD, New York, N. Y. Filed Aug. 21, 1909. Serial No. 513,942.



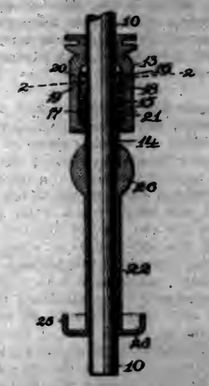
1. The combination with a fluid reservoir, a burner and a stationary wick, of telescoping tubes, the outer one passing across through the burner and projecting beyond the same at the respective ends and provided with a series of holes within the limits of the burner, the inner tube being revoluble in its relation to the outer tube and removable and being provided with a series of holes adapted to be brought into coincidence with the holes of the outer tube within the limits of the burner, and means providing when said holes are brought into coincidence for the escape of surplus vapor from within the reservoir.

2. The combination with a fluid reservoir, a burner and a stationary wick, of telescoping tubes, the outer one passing across through the burner and projecting beyond the same at the respective ends and provided with a series of holes within the limits of the burner, the inner tube being revoluble in its relation to the outer tube and removable and being provided with a series of holes adapted to be brought into coincidence with the holes of the outer tube within the limits of the burner, the outer tube being provided with small holes outside of the limits of the burner and closed at one end, and the inner tube open at one end and provided with holes adapted to coincide with some of the small holes of the outer tube.

3. The combination with a fluid reservoir, a burner and a stationary wick, of telescoping tubes, the outer one passing across through the burner and projecting beyond the same at the respective ends and provided with a series of holes within the limits of the burner, the inner tube being revoluble in its relation to the outer tube and removable and being provided with a series of holes adapted to be brought into coincidence with the holes of the outer tube within the limits of the burner, means providing when said holes are brought into coincidence for the escape of surplus vapor from within the reservoir, the outer tube having a small pin projecting within the tube and the inner tube at its open end provided with a circumferential groove and an entrance groove thereto, the said inner tube being thus adapted to receive said pin and be removably interlocked with said outer tube.

4. In a vapor lamp burner, the combination with a reservoir, supports therefor, a burner, a dishing cover for the reservoir secured to the burner and a stationary wick, of a tube passing transversely across through the burner, the one end closed and the other end open, said tube having a series of large holes therein within the limits of the burner and small holes therein outside the limits of the burner and in the upper part thereof in a spaced apart relation, a tube adapted to be received within the aforesaid tube, open at its inner end and closed at its outer end, and a finger-grip secured to said inner tube as a means for turning the same, a pin in the outer tube, a circumferential groove and entrance groove in the inner end of the inner tube adapted to receive said pin, permitting the rotation of the inner tube, said inner tube also having a series of perforations within the limits of the burner adapted to be brought into coincidence with the series of holes in the outer tube, and other holes in the inner tube also adapted to be brought into coincidence by the turning of the inner tube with the small openings in the outer tube at one end thereof, whereby the pent up vapors within the burner may escape in a regulatable manner.

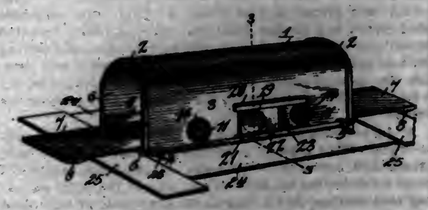
960,169. UMBRELLA-RUNNER. GEORGE F. HALL, Summit, N. J., assignor of one-half to George Rubsamen, Jersey City, N. J. Filed Mar. 16, 1908. Serial No. 421,442.



1. The combination of the rod the stretchers and the ribs of an umbrella, with an umbrella runner comprising two members movable toward and from each other, the end of one member being attached to the stretcher, a spring to move the members of the runner toward each other, co-acting means on the two members to cause them to be locked on the umbrella rod, a cup on the end of the second member of the runner and adapted to embrace the ends of the ribs, and a head on the second member adapted to bear on the inside of the ribs to exert a pressure on them to bind on the inner sides of the cup and adapted to place an increased pressure on them to cause a wedging action on the ribs when the cup is operated to release them so that the ribs are caused to spring apart when the cup releases them.

2. The combination of the rod the stretchers and the ribs of an umbrella, with a runner consisting of two members, the stretchers of the umbrella being attached to one member, a cup on the second member adapted to receive the ends of the ribs when the umbrella is shut and forming a means for simultaneously releasing the ends of the ribs and releasing the runner from the rod, a head on the second member to bear on the inner edges of the ribs when the umbrella is shut to exert a pressure on the ribs, gripping means in the members adapted to lock the members on the rod when the members are forced toward each other, and a spring to force the members toward each other, said spring also acting to force the cup longitudinally in engagement with the ends of the ribs when the umbrella is shut, the head, when the cup is operated, exerting an increased pressure on the ribs to force them apart when the cup releases them.

960,170. ANIMAL-TRAP. DAVID H. HARMAN, Spokane, Wash. Filed July 17, 1909. Serial No. 508,151.



1. An animal trap of the class described comprising a substantially semi-circular body portion terminating at its lower edges into rolled portions, a wire passing through said rolled portions and crossing the open ends of said body, a tilting door hinged to said portions extending across said ends, and means adapted to limit the inward swing of said door.

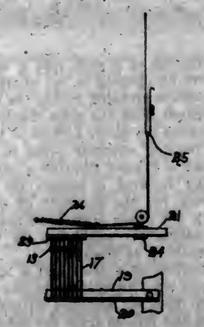
2. An animal trap of the class described comprising a body substantially semi-circular in cross section, the sides of said body terminating upon the bottom into rolled portions, a strengthening member passing through said rolled portions and across the ends of said trap, the ends of said body folded upon the outer edge thereof for reinforcing the same and presenting a smooth edge therefor, and tilting doors secured to said strengthening member.

3. An animal trap of the class described comprising a body provided upon the lower edge of each side with a rolled portion, a strengthening member extending therethrough and provided with a portion extending across the end of said body, tilting doors, journals provided with laterally-extending portions, said journals straddling said strengthening member and having their laterally-extending portions secured to the under surface of said tilting doors for hingedly connecting the same to said strengthening member, and means carried by the body for limiting the inward swing of said door.

4. The combination with a supporter for a trap comprising a pair of side members, a pair of end members, brackets carried by the under surfaces of said end members, the ends of said side members adjustably mounted within said brackets, a trap supported upon said support and provided with a rolled portion upon the bottom thereof, and clamp members fixedly secured to the side members and straddling or engaging the rolled portions for holding the trap firmly upon the adjustable frame.

5. The combination with a support for a trap, comprising a pair of side members, a pair of end members slidably mounted upon said side members, a trap mounted upon said support, and means carried by said support and engaging said trap for holding the trap upon said support.

960,171. LOOM FOR WEAVING PILE FABRIC. LEONARD H. HARTLEY, Lowell, Mass., assignor to Hartley Loop Weave Company, Amesbury, Mass., a Corporation of Massachusetts. Filed June 26, 1909. Serial No. 504,457.



1. A loom for weaving pile fabric, comprising a series of guide blades, the lower ends of said blades being free to move laterally independent of the movement of their upper ends, means for imparting a reciprocating motion to the upper portion of said blades, and pile wires extending between said blades to receive a lateral motion therefrom.

2. A loom for weaving pile fabric, comprising a series of guide blades supported at their lower ends, said ends being free to move laterally, a transversely moving bar for imparting a reciprocating motion to the upper portion of said blades, and pile wires extending between said blades to receive a lateral motion therefrom.

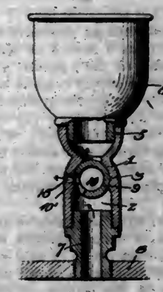
3. A loom for weaving pile fabric, comprising a series of guide blades supported at their lower ends, said ends being free to move laterally to automatically adjust themselves to the gage of the reed, a transversely movable bar for imparting a reciprocating motion to the upper portion of said blades, and pile wires, one end of which extends between said blades for the purpose of receiving a lateral motion therefrom.

4. A loom for weaving pile fabric, comprising a series of unattached loosely mounted upright guide blades, a cross bar on which the lower ends of said blades are supported, said ends being free to move laterally and accommodate themselves to the warp threads, a transversely movable bar for imparting a reciprocating motion to the upper portion of said blades, a comb attached to said bar for separating said blades, and pile wires, one end of which extends between said blades for the purpose of receiving a lateral motion therefrom.

5. A loom for weaving pile fabric, comprising a series of unattached loosely mounted upright guide blades, a cross bar provided with a lip on which the lower ends of said blades rest, said ends being free to move laterally and accommodate themselves to the warp threads, means for imparting a reciprocating motion to the upper portion of said blades, and pile wires extending between said blades to receive a lateral motion therefrom.

[Claim 6 not printed in the Gazette.]

960,172. OIL-CUP. JOSEPH N. HAWKINS, Mannington, W. Va. Filed May 7, 1908. Serial No. 431,389.



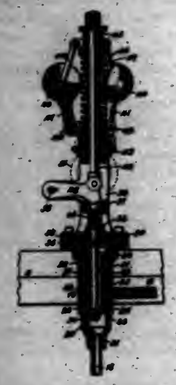
An oil cup, a two-way valve casing connected to and communicating therewith and having a vertical and a transverse bore intersecting each other, said casing having an outlet port extending through the wall of its transverse bore, a hollow rotary valve plug mounted in said transverse bore and having a longitudinal opening or slot arranged to register with the vertical bore of the casing above the hollow valve plug when said plug is turned into receiving or filling position, said opening being of sufficient width to establish communication between the vertical bore below said plug and said outlet port on the turning of the plug from discharging into filling position, whereby steam is admitted into said valve through said slot-like opening and discharged through said outlet port.

960,173. GOVERNING MECHANISM FOR EXPLOSIVE-ENGINES. GARFIELD H. HAYES, Franklin, Pa., assignor to Sterling Oil Engine Company, Pittsburg, Pa., a Corporation. Filed July 31, 1907. Serial No. 386,423.

1. The combination with an explosive engine, of a source of fuel supply, means for feeding fuel from the source to the engine, a normally-closed by-pass, a speed responsive mechanism driven by the engine and operating to open the by-pass when the demand for fuel at the engine is light, and means arranged to be held in inoperative position during the operation of the said mechanism and controlled by the latter to fully open the by-pass and automatically shut down the engine when the said mechanism becomes inoperative.

2. The combination with an explosive engine, of a fuel

reservoir, a pump connected with the reservoir and engine, a by-pass between the pump and reservoir, a speed responsive device for controlling the flow of fuel through the by-pass, operative connections between the device and engine, and an emergency means automatically operated independently of the speed responsive device when the said connections between the latter and engine become deranged to fully open the by-pass.



3. The combination with an explosive engine, of a supply conduit leading from a source of motive fluid supply to the engine, a pump in the conduit, a separate return conduit leading from the supply conduit between the pump and engine and back to the source of supply, a valve acting to direct the motive fluid through the return conduit, a governor operating this valve, a belt connection between the engine and the governor, and means for automatically opening said return valve to direct the motive fluid back to the source of supply upon the breaking of said belt connection.

4. The combination with an explosive engine, of a reservoir for motive fluid, a supply conduit leading from the reservoir to the engine, a pump in said conduit, a return conduit leading from the supply conduit between the pump and engine, a valve in the return conduit, a spring for normally holding the valve closed, a centrifugal governor for opening the valve against the action of the spring, a belt connection between the engine and governor for operating the former, and a weighted arm normally supported by the belt and having connections with the valve to open the same if said belt breaks.

5. The combination with an engine, of a reservoir for motive fluid, a supply conduit connecting the reservoir and engine, a pump located in the supply conduit, a return conduit connected to the supply conduit between the pump and engine, and a controlling device located in said return conduit, said device comprising a casing, opposed valve seats through one of which said motive fluid passes and having an outlet passage between the valve seats, and a controlling valve co-acting with one of said seats and having a spindle passing through the valve casing and acting, when moved in one direction, to close against said seat, and a packing valve mounted on the spindle and acting to move toward the other valve seat when the controlling valve moves away from its seat.

[Claims 6 to 14 not printed in the Gazette]

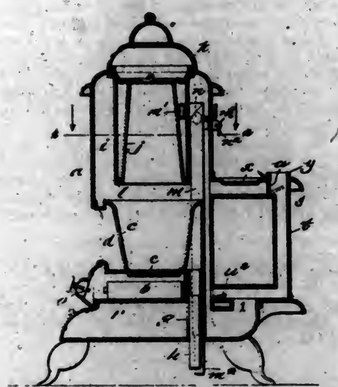
960,174. ASH-PAN. THOMAS R. HIGDON, Repton, Ala. Filed Mar. 26, 1909. Serial No. 486,064.

1. An ash pan of the class described consisting of a single piece of metal bent upwardly at the sides, front and rear, said bent portions being provided with a supporting wire, said bent portions being rolled over said wire, said wire being formed into a pair of loops, and adapted to be engaged by a handle, a grip or loop mounted on the front of said device and adapted to frictionally engage said handle.



2. An ash pan, consisting of a single piece of metal, having its side and end portions inclined and provided at its edges with a reinforcing wire, formed into loops, a band passing beneath the bottom of the pan and against the sides and having its terminals bifurcated and rolled over the wired edge to reinforce the loops and a handle in engagement with the loops.

960,175. BASE-BURNING STOVE. WILLIAM W. HOFFMAN, La Fayette, Ind. Filed Feb 6, 1906. Serial No. 299,750.



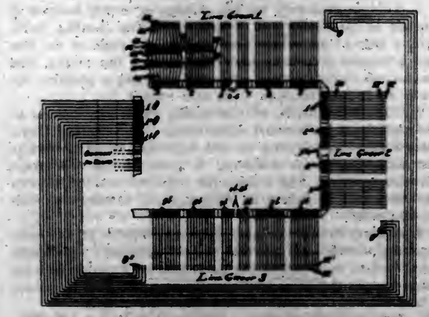
1. The combination of a shell and a hollow base, said shell formed with an opening in one of its sides, air heating and ash chambers situated within the lower portion of the shell and spaced from the sides thereof, forming communications between the upper portion of the shell and the base, said air heating chamber being in communication with said opening, a fire-pot situated within said air heating chamber and forming a closure for the upper end thereof, exit flues for the products of combustion communicating with the upper portion of the shell and with the base, and means for supplying air to said heating chamber, substantially as described.

2. The combination of a shell and a hollow base, said shell being formed with an opening in one of its sides, air heating and ash chambers situated within the lower portion of the shell and spaced from the sides thereof, forming communications between the upper portion of the shell and the base, said air heating chamber being in communication with said opening, a fire-pot situated within said air heating chamber and forming a closure for the upper end thereof, exit flues for the products of combustion, communicating with the upper portion of the shell and with the base, and a telescopic pipe for delivering air to said air heating chamber through the base, substantially as described.

3. The combination of a shell and a hollow base, said shell being formed with an opening in one of its sides, air heating and ash chambers situated within the lower portion of the shell and spaced from the sides thereof, forming communications between the upper portion of the shell and the base, said air heating chamber being in communication with said opening, a fire-pot situated within said air heating chamber and forming a closure for the upper end thereof, exit flues for the products of combustion, communicating with the upper portion of the shell and with the base, a magazine, and pipes for delivering air to the air heating chamber and to the magazine or room through the base, substantially as described.

4. The combination of a shell and a hollow base, said shell formed with an opening in one of its sides, air heating and ash chambers situated within the lower portion of the shell and spaced from the sides thereof, forming communications between the upper portion of the shell and the base, said air heating chamber being in communication with said opening, a fire-pot situated within said air heating chamber and forming a closure for the upper end thereof, exit flues for the products of combustion, communicating with the upper portion of the shell and with the base, a magazine, pipes for delivering air to the air heating chamber and to the magazine or room, and an oven attached to the back of said stove and having flues above and below said oven, provided with valves therein, said flues communicating with the upper portion of the shell and with the base, respectively, substantially as described.

960,176. AUTOMATIC DISTRIBUTING SYSTEM. LEROY D. KELLOGG, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed June 15, 1907. Serial No. 379,238.



1. A telephone system including a plurality of groups of subscribers' lines, a switchboard having a number of operators' positions for each group of lines, overflow positions included in said switchboard, a number of main groups of operators' link-circuits, one for each group of subscribers' lines, a plurality of sub-groups included in each main group of link-circuits, each main group being distributed by sub-groups among the operators' positions of the respective line group and to the overflow positions, signals for said link-circuits, automatic testing means whereby any calling line of a group may cause the testing of, first, the circuits of a first sub-group, then the circuits of a second sub-group, and so on, and finally the circuits of the last sub-group leading to the overflow positions, to find an idle link-circuit, switching means for connecting the first link-circuit found idle with the calling line and displaying its signal, and manually operated switches for rendering the link-circuits of the sub-groups of a main group extending to positions other than the overflow positions artificially busy, whereby the calls of the line groups may be turned at will to the overflow positions.

2. A telephone system including a plurality of groups of subscribers' lines, a switchboard having a number of operators' positions for each group of lines, overflow positions included in said switchboard, a number of main groups of operators' link-circuits, one for each group of subscribers' lines, a plurality of sub-groups included in each main group of link-circuits, each main group being distributed by sub-groups among the operators' positions of the respective line group and to the overflow positions, signals for said link-circuits, automatic testing means whereby any calling line of a group may cause the testing of, first, the circuits of a first sub-group, then the circuits of a second sub-group, and so on, and finally the circuits of the last sub-group leading to the overflow positions, to find an idle link-circuit, switching means for connecting the first link-circuit found idle with the calling line and displaying its signal, manually operated switches for rendering the link-circuits of the sub-groups of a main group extending to positions other than the overflow positions artificially busy, whereby the calls of the line groups may be turned at will to the overflow positions, and operators' switching mechanism associated with said link-circuits for extending link-circuits connected to calling lines to any desired line.

3. A telephone system including a group of subscribers' lines, a switchboard having operators' positions, an overflow position included in said board, a number of groups of operators' link-circuits and signals therefor, each operator's position having signals of one group, automatic testing means for said lines for testing, first, the link-circuits of a first group, thereafter the link-circuits of a second group, etc., and finally the link-circuits of the group assigned to the overflow position, when calls are initiated over said lines, to find an idle circuit, switching means for connecting the first link-circuit found idle with a calling line and displaying its signal, and manually operated switches for rendering the link-circuits extending to positions other than the overflow position artificially busy, whereby the calls of the line group may be turned at will to the overflow position.

4. A telephone system including a group of subscribers' lines, a switchboard having operators' positions, an overflow position included in said board, a number of groups of operators' link-circuits and signals therefor, each operator's position having signals of one group, automatic testing means for said lines for testing, first, the link-circuits of a first group, thereafter the link-circuits of a second group, etc., and finally the link-circuits of the group assigned to the overflow position, when calls are initiated over said lines, to find an idle circuit, switching means for connecting the first link-circuit found idle with a calling line and displaying its signal, manually operated switches for rendering the link-circuits extending to positions other than the overflow position artificially busy, whereby the calls of the line group may be turned at will to the overflow position, and operators' switching mechanism for extending the selected link-circuit to connection with a called line.

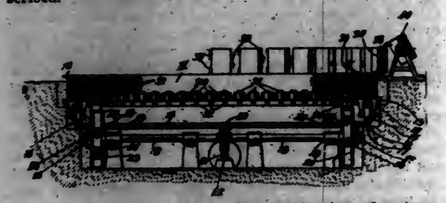
5. A telephone system including a plurality of groups of subscribers' lines, corresponding groups of operators' link-circuits, one for each group of lines, a switchboard to which said circuits extend having operators' positions with link-circuits individual to particular groups of lines, another operator's position having link-circuits of a plurality of groups of lines, automatic test means for the line groups responsive to initiation of calls for serially testing the link-circuits of their respective line groups beginning at normal points having definite serial relations with the link-circuits of the respective groups, means whereby the link-circuits of said other operator's position will be last tested, and manually controlled switching means for, at will, artificially rendering the link-circuits busy other than those of said other operator's position.

[Claims 6 to 26 not printed in the Gazette.]

960,177. MOLDING-MACHINE. HARRY P. KEYHOE and EDWARD HANDLEY, Ottumwa, Iowa. Filed June 1, 1909. Serial No. 499,495.

1. In a molding machine, the combination of a turntable, molds carried by the turntable in the form of a circular rim, said rim being composed of independent inner and outer rails held together by spacing plates, a ladle in position to pour charges of metal successively into the molds, means for imparting an intermittent rotary movement to the turntable, said means comprising oppositely disposed ratchet teeth adjacent to the turntable, means for actuating said ratchet teeth, a continuously driven shaft upon which said means are mounted, and pins adapted to

be engaged by said ratchet teeth, substantially as described.



2. In a molding machine, the combination of a turntable, molds carried by the turntable, a ladle mounted in position to pour charges of metal successively into the molds, means for imparting an intermittent rotary movement to the turntable, said means comprising a ratchet tooth on each side of and below the turntable, pins adapted to be engaged by said ratchet teeth, two cams for actuating said ratchet teeth in unison with one another, and a shaft on which said cams are mounted, substantially as described.

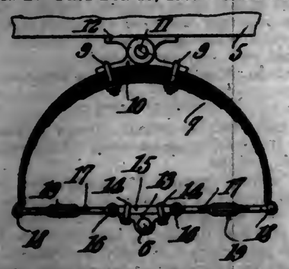
3. In a molding machine, the combination of a turntable in the form of a circular rim, composed of inner and outer rails and spacing pieces, wheels journaled to the turntable, a track upon which the wheels revolve, molds carried by the turntable, a ladle adapted to deliver charges of metal successively to the molds, and oppositely disposed means located beneath the turntable for imparting an intermittent rotary movement to the turntable, substantially as described.

4. In a molding machine, the combination of a turntable in the form of a circular rim, composed of inner and outer rails and spacing pieces, wheels journaled to the turntable, a track upon which the wheels revolve, molds carried by the turntable, a ladle adapted to deliver charges of metal successively to the molds, means for imparting an intermittent rotary movement to the turntable, said means comprising a ratchet tooth on each side of and below the turntable, and pins adapted to be engaged by said ratchet teeth, substantially as described.

5. In a molding machine, the combination of a turntable comprising inner and outer rails and spacing pieces, wheels journaled to the turntable, a track upon which the wheels revolve, molds carried by the turntable, a ladle adapted to deliver charges of metal successively to the molds, means for imparting an intermittent rotary movement to the turntable, said means comprising a ratchet tooth on each side of and below the turntable, pins adapted to be engaged by said ratchet teeth, two cams for actuating said ratchet teeth in unison with one another, and a shaft on which said cams are mounted, substantially as described.

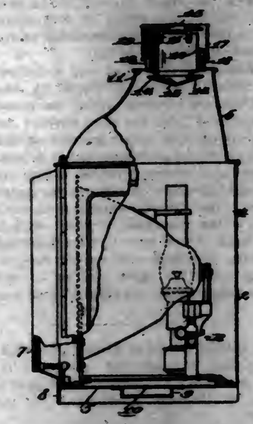
[Claim 6 not printed in the Gazette.]

960,178. VEHICLE-SPRING. ABEL M. KINDWALL, Minot, N. D. Filed Dec. 29, 1909. Serial No. 535,423.



The combination with a vehicle body and running gear, of a spring pivotally connected intermediate its ends to the body, and links pivotally connected at their ends to the running gear and to the ends of the spring.

960,179. LAMP-CASING. JOHN LAWLER, Clinton, Iowa, assignor of one-half to Frank G. Benjamine, Clinton, Iowa. Filed Sept. 28, 1909. Serial No. 519,928.



1. The combination, with a casing; of a cap located at the top of the casing and comprising a flue opening thereinto, a pair of deflectors connected to the ends of the flue and arranged exteriorly and interiorly of the casing, and means associated with the flue for inducing a positive upward draft therethrough from said casing.

2. The combination, with a casing; of a cap located at the top of the casing and comprising a flue opening thereinto, a tube surrounding the flue and open at both ends to the atmosphere for inducing a positive upward draft through said flue, and a deflector connected to one edge of said flue and extending at its periphery toward the wall of said tube.

3. A lamp casing having a dome provided with an opening; a flue fitted at one end in said opening; a deflector connected to each end of the flue; and an annular member connected to the dome and surrounding the flue, to induce a direct draft through said flue from the casing.

4. A lamp casing having a dome provided with a flat top portion formed with an opening; a flue having its lower end fitted in said opening; and an open-ended tube surrounding the flue and arranged in spaced relation thereto, said tube having its upper end projecting above that of the flue, and its lower end elevated above said flat portion.

5. A lamp casing having a perforated bottom, and a shield secured to said bottom directly beneath the perforations therein, the ends of said shield terminating short of the corresponding edges of said bottom and being open to supply air therethrough to said perforations.

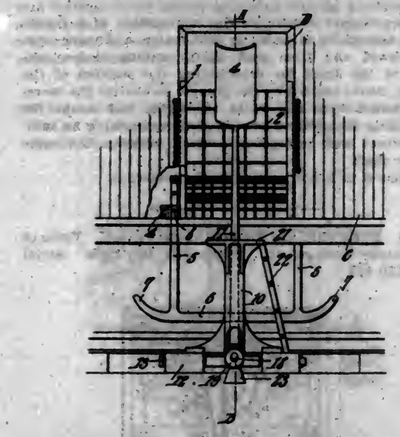
[Claims 6 and 7 not printed in the Gazette.]

960,180. APPARATUS FOR RECEIVING AND DELIVERING MAIL. ROGER W. LOMAX, Lynchburg, Va. Filed Feb. 9, 1910. Serial No. 542,914.

1. Apparatus of the class described including a throwing arm mounted for swinging movement, bag holding means upon the arm, means for holding the arm normally in a predetermined position, a depressible member extending from the arm, and adjustable car supported means movable past the arm for depressing said member to swing the arm toward the car.

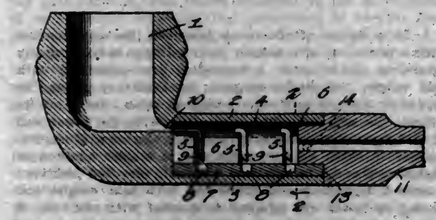
2. Apparatus of the class described including a throwing arm, a depressible member extending therefrom, a car having a bag receiving opening, bag holding means upon the arm, a runner adjustably supported by the car and movable against the depressible member to swing the bag holding means toward the opening in the car during the movement of said car past the throwing arm, and cushioning means in the path of the throwing arm.

3. Apparatus of the class described including an upstanding casing, a throwing arm mounted for swinging movement therein in a vertical plane, a depressible arm extending from the throwing arm and beyond the casing, adjustable means for holding the arms normally in predetermined positions, and an adjustable car supported runner movable against the depressible arm to shift the throwing arm toward the car while passing the casing.



4. Apparatus of the class described including an upstanding casing, a throwing arm mounted to swing therein in a vertical plane, a bag holding device upon the arm, a stop device in the path of said arm, a depressible member extending from the arm, adjustable means for holding the arm normally in a predetermined position, an anti-friction device carried by the depressible member, and an adjustably mounted car supported runner movable against said anti-friction device to actuate the throwing arm.

960,181. TOBACCO-PIPE. AUSTIN N. MALCOMB, Burbank, Ohio. Filed Jan. 28, 1910. Serial No. 540,616.



1. A tobacco pipe having its stem provided with a plurality of communicating smoke cooling chambers, the said chambers being arranged in communication with the bowl and with the mouth piece, conveying tubes arranged in communication with chambers, and a nicotin collector arranged beneath the chambers and provided with a plurality of cavities which are located immediately beneath the discharge ends of the tubes.

2. A tobacco pipe having its stem provided with a plurality of chambers which are arranged in communication with each other, one of the chambers being in communication with the bowl, another of the chambers arranged in communication with the bit, and a nicotin collector located in the stem and provided with cavities which are disposed at the bottom of the chambers.

3. A tobacco pipe having a plurality of smoke conveying tubes in its stem, and a collector located in the stem and provided with cavities located immediately beneath the discharge ends of the tubes.

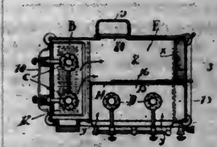
4. A tobacco pipe having its stem provided with a plurality of chambers, smoke conveying tubes arranged in communication with the chambers, one of said tubes being arranged in communication with the bowl, another of said tubes being arranged in communication with the bit, and a nicotin collector beneath the chamber and located beneath the discharge ends of the tubes.

960,182. GRAY ANTHRAQUINONE DYE. WALTER MEIG, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Aug. 19, 1909. Serial No. 513,652.

1. The herein described vat dyes, obtainable by preparing nitro-alpha-alpha-anthrimids and treating the nitro-compounds thus produced with reducing agents, which are after being dried and pulverized dark powders soluble with difficulty in quinolin and forming vats with hydrosulfite and caustic soda lye, which vats dye unmordanted cotton gray shades, substantially as described.

2. The herein described vat dye, obtainable by nitrating alpha-alpha-dianthrimid and reducing the nitro-compound thus produced, which dye is after being dried and pulverized a greenish-black powder scarcely soluble in organic solvents, soluble in concentrated sulfuric acid with a green color which turns violet by the addition of formic aldehyde and forming an olive-brown vat with hydrosulfite and caustic soda lye, which vat dyes unmordanted cotton fast greenish-gray shades, substantially as described.

960,183. KITCHEN-RANGE. CHARLES H. MILLER, Cleveland, Ohio. Filed Jan. 7, 1909. Serial No. 471,050.



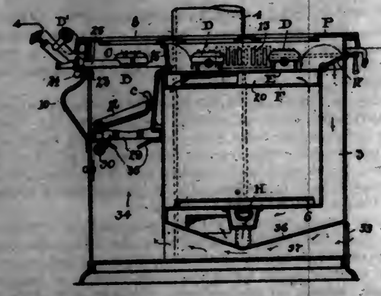
A kitchen range adapted to use both solid and gaseous fuel having a fire-pot for hard fuel and a draft flue therefrom over the rear half and top of the range lengthwise thereof to the oven beneath, a pair of gas burners in the front half of the top of the range and a fixed wall between said fire-pot and flue and the portion of the top occupied by said burners, the space occupied by said burners being closed about its sides by said fixed wall and permanently open over the top to the outside air, whereby draft to the oven heating flues is permanently closed off from said burners.

960,184. COMBINED SOLID-FUEL AND GAS RANGE. CHARLES H. MILLER and CARL H. MILLER, Jr., Cleveland, Ohio. Filed July 19, 1909. Serial No. 508,277.

1. A kitchen range provided with a space in its top extending from the front of the range to the rear thereof and a partition which divides said space into a rear draft flue in communication with the fire pot and a front space, said front space being provided with gas burners and having dampers at its ends by which the products of combustion from the fire pot can be prevented from reaching said gas burners, and provided with holes in its top adapted to be closed by lids.

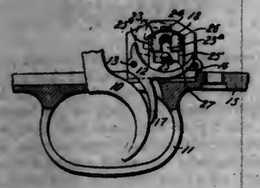
2. A kitchen range adapted to use both solid and gaseous fuel and provided with a draft space at its top extending from the fire pot to the rear of the range and a partition dividing said space into a draft flue at the rear and a front space, respectively, dampers at the ends of said front space adapted to exclude the products of combustion from the fire pot, and gas burners mounted in said front space between said dampers.

3. A convertible solid fuel and gas range having a fire pot adapted to burn gas or solid fuel provided with a top space which extends from the fire pot to the rear of the range and a partition dividing said space into a rear draft flue and a front space, dampers at the ends of said front space adapted to be closed when gas is burned therein and to be opened for draft from the fire pot when hard fuel is exclusively used, and burners in said front space, the top of the range being provided with holes for vessels over said front space and means to cover said holes.



4. In kitchen ranges, a range having a fire-pot for solid fuel and a grate at the bottom thereof, in combination with a tubular gas burner beneath the outer edge of said grate and an ashguard closed over the immediate top of said burner and having a downwardly inclined portion inward from said tube provided with perforations, whereby openings are provided for the passage of the gas flame to said grate and ashes are shed from the said guard.

960,185. TRIGGER-CONTROLLER. ROBERT A. MOORE, Chicago, Ill., assignor, by mesne assignments, to The Moore Trigger Controller Company, New York, N. Y. Filed Nov. 22, 1909. Serial No. 529,345.



1. In combination with a trigger, a trigger controller comprising an abutment having a notch, a plunger slidable toward and from the abutment, a gravity roller carried by the plunger between the plunger and the abutment, the roller in a certain predetermined position being adapted to enter said notch and in other positions to impinge against the abutment, and means coöperating with the trigger and normally supporting said plunger.

2. In combination, a trigger, a dog pivotally mounted adjacent to the trigger and in engagement therewith, an abutment having a notch, a plunger supported upon said dog and slidable toward and from said abutment, a roller carried upon the plunger between the plunger and the abutment and adapted to enter said notch when the plunger is moved toward the abutment, and means to normally force the plunger away from the abutment.

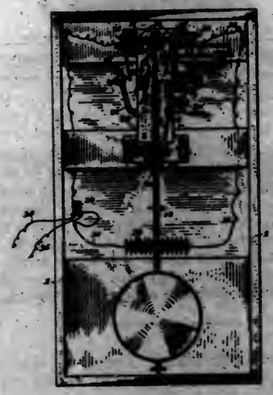
3. In a trigger controller, the combination with a trigger, of an abutment having a notch, a plunger coöperating with said abutment, a gravity roller carried upon the plunger between the plunger and the abutment, and a bell crank one portion of which engages with the trigger and the other portion of which normally supports said plunger, whereby when the roller support is horizontal the roller will enter the notch but when the said support is other than horizontal the roller will impinge against the abutment, preventing operation of the trigger.

4. In a trigger controller, the combination of an abutment having a notch, a plunger associated with said abutment and movable toward the same under certain conditions, means to support and move said plunger, and gravity means carried upon the plunger and under certain other conditions preventing movement thereof toward the abutment.

5. In a trigger controller, the combination of a frame, a shaft adjustably mounted in said frame, a plunger movable toward and from said shaft, guiding means connected to the shaft for determining the position of the plunger, means carried by the plunger to control the movement thereof with respect to the shaft, and means for determining the position of said shaft comprising an indicator wheel and interposed gearing between the same and the shaft.

[Claims 6 to 9 not printed in the Gazette.]

960,186. ELECTRICALLY-OPERATED CLOCK. THOMAS MUNGALL, Chicago, Ill. Filed July 30, 1909. Serial No. 510,443.

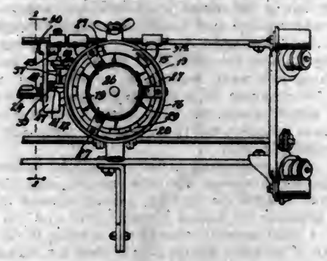


1. In a device of the class described, the combination with a pendulum of a weight mounted upon a horizontally extending pivotal arm; a depending arm connected with said weight; an electro-magnet; an armature pivoted to be drawn toward said electro-magnet upon closing of its circuit, the said armature contacting with the lower end of said depending arm and arranged to elevate said electro-magnet; a catch on said armature; a trigger adapted to engage said catch to lock said weight in elevated position; a second depending arm connected with said weight and having its lower end adapted to contact with one side of said pendulum; a pivotal circuit closing member carrying an arm adapted to engage said trigger to release said weight when said circuit is broken; a depending arm connected with said circuit closing member and contacting with the other side of said pendulum to cause said member to be moved to circuit closing position; and a stationary contact adapted to coöperate with said circuit closing member to close said electro-magnet circuit, substantially as described.

2. In a device of the class described, the combination with a pendulum of a weight adjustably mounted upon a horizontally extending pivotal arm; a depending arm connected with said weight; an electro-magnet; an armature pivoted to be drawn toward said electro-magnet upon closing of its circuit, the said armature contacting with the lower end of said depending arm and arranged to elevate said weight upon its movement toward said electro-magnet; a catch on said armature; a trigger adapted to

engage said catch to lock said weight in elevated position; a second depending arm connected with said weight and having its lower end adapted to contact with one side of said pendulum; an adjustable pivotal circuit closing member carrying an arm adapted to engage said trigger to release said weight when said circuit is broken; a depending arm connected with said circuit closing member and contacting with the other side of said pendulum to cause said member to be moved to circuit closing position; and a stationary spring contact adapted to coöperate with said circuit closing member to close said electro-magnet circuit, substantially as described.

960,187. DIFFERENTIAL DROPPING MECHANISM. FRANK P. MURPHEY, Decatur, Ill. Filed Nov. 3, 1908. Serial No. 460,954.



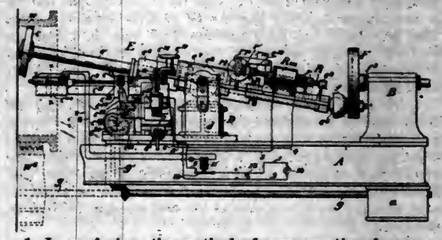
1. In a corn planter, the combination of a dropper plate provided at its periphery with pockets, a cut-off slide adapted to control the discharge from the pockets, means for revolving the dropper plate, and means adapted to be adjusted to different positions for moving the cut-off slide at varying degrees of frequency, substantially as described.

2. In a corn planter, the combination of a dropper plate provided at its periphery with pockets, a cut-off slide adapted to control the discharge from the pockets, means for revolving the dropper plate, a cam disk provided with a plurality of cam surfaces of different lengths, a member adapted to be brought into engagement with any one of the cam surfaces, and means actuated by the movements of said member for imparting movements of varying frequency to the cut-off slide, substantially as described.

3. In a corn planter, the combination of a rotatably mounted dropper plate provided around its periphery with pockets, a discharge passage adapted to receive the grain carried by the pockets, a cut-off slide regulating the discharge through said passage, a shaft, gearing on the shaft, and gearing connected with the dropper plate for imparting rotation to the latter, a cam disk carried by the shaft and provided with a plurality of cam surfaces of different lengths at varying distances from the center of the disk, a dog adapted to engage any one of said surfaces, and connections between the dog and the cut-off slide for regulating the predetermined movement of the latter, substantially as described.

4. In a corn planter, the combination of a rotatably mounted dropper plate provided around its periphery with pockets, a discharge passage adapted to receive the grain carried by the pockets, a cut-off slide regulating the discharge through said passage, a shaft, gearing on the shaft and a gearing connected with the dropper plate and in mesh with the gearing on the shaft, for imparting rotation to the dropper plate, a cam disk carried by and rotatable with the shaft and provided on its face with a plurality of cam surfaces of different lengths at varying distances from the center of the disk, a dog adapted to be moved toward and from the center of the disk and adapted to engage with any one of said surfaces, and connections between the dog and the cut-off slide for regulating the movement of the latter, substantially as described.

960,188. METHOD OF GRINDING AND SURFACING. HENRY B. NICHOLS, Philadelphia, Pa. Original application filed Oct. 29, 1907, Serial No. 398,699. Divided and this application filed Aug. 21, 1908. Serial No. 449,673.

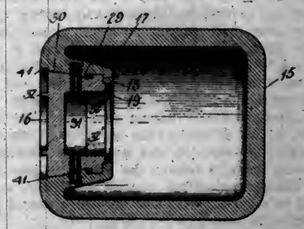


1. In surfacing, the method of compensating for wear of the tool, and of maintaining a constant cut at all times, which comprises the following steps: (1) causing the continuous removal of material from the surface to be reduced while progressing from one portion thereof to another; (2) gaging the depth of each portion of the cut, or the amount of the material removed at periodic intervals alternating with the advance and recession of the cutting means; (3) automatically determining the position and cutting effect of the tool during each period according to the gage indication for the preceding period, substantially as described.

2. The method of accurately surfacing, and of compensating for wear in the surfacing tool, which comprises the following steps: (1) effecting a progressive cut or removal of the material in recurring periodic cycles covering related portions of the surface; (2) gaging the depth of the cut for each cycle; and (3) automatically regulating the position of the tool and the consequent cut for the next cycle in accordance with the gage indications of the preceding cycle, substantially as described.

3. The method of accurate grinding, by compensating for wear of the grinding tool surface, which comprises the following steps: (1) causing the grinding surface to pass over advancing portions of the work at periodic intervals; (2) calipering the depth of the cut at alternating intervals; and (3) regulating the position of the grinding surface and thereby the depth of the cut for each succeeding interval according to the gage indication for the preceding interval, these operations being continuous in their recurrence from the beginning to the end of the cut, so as to maintain the same constant for a single manual setting of the grinding tool, substantially as described.

960,189. SAFE. WESLEY G. NICHOLS, Chicago, Ill., assignor of one-half to American Brake Shoe & Foundry Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 25, 1906. Serial No. 323,217.



1. In a safe, a part of relatively refractory metal having openings therein, inserts of toolable metal within said perforations, said inserts being provided with radial and axial grooves upon their outer surfaces, and locking means for said inserts located within said grooves engaging the walls of said perforations whereby to securely retain said inserts in position, substantially as described.

2. In a safe cast of a single piece, having an inwardly-extending door jamb provided with lugs, and an annular strengthening ring located at the inner limits of the jamb and projecting radially into the door opening, in combination with a door provided with securing lugs around its periphery coacting with the lugs on the jamb and having a continuous annular surface of smaller diameter than that portion of the door between said lugs, said annular surface coacting with the confronting surface of said strengthening ring to provide a broken, gas tight joint, substantially as described.

3. In a safe, the combination with a door having its front face in a substantially straight plane, of a casting providing an interior door jamb for receiving said door in tight fit, a straight ledge in alinement with the front face of the door when the latter is positioned in the jamb, and a portion, 41, extending radially inwardly at an angle to said straight portion to overlie the said straight portion as described.

4. In a safe, the combination with a door having its front face in a substantially straight plane, of a casting providing an interior door jamb for receiving said door in tight fit, a straight ledge in alinement with the front face of the door when the latter is positioned in the jamb, and a portion, 41, extending radially inwardly at an angle to said straight portion to overlie the said straight portion as described, and a rim on the front face of the door in alinement with the outer plane of the portion 41.

960,190. GAME. JAMES ROBERT NIXON, New Orleans, La., assignor to George L. Martin, New Orleans, La. Filed Dec. 18, 1909. Serial No. 533,749.



1. A game comprising a field having near one edge a circular opening, a plurality of hazards around the opening, a depressible disk normally closing the opening, a shelter at the opposite edge having an open front toward the opening, a plurality of figures in the shelter, a bar to which the figures are secured, a telescoping stem connected with the bar and slidable in bearings in the shelter, a spring normally acting to move the bar out of the shelter, a lever to which the rear end of the stem is pivoted, an arc-shaped bar pivoted by one end and having a notch, a pin on the lever for engaging the notch to hold the bar to which the figures are secured in the shelter, a vertically slidable weight for engaging the free end of the arc shaped bar to release the pin, a lever pivoted at one end and having a lug upon which the weight seats to retain it in elevated position, said lever having an angular portion at its lower end, a lever pivoted by its center below the field, and having a pin for engaging and moving the angular end of the swinging lever to release the weight, a post to which the disk closing the central opening is secured, and an engagement between the post and the other end of the lever for moving said lever.

2. A game comprising a field having an opening near one edge, and a shelter near the opposite edge having an open front toward the opening, hazards around the opening, a plurality of figures movable into and out of the shelter, a plate normally closing the opening in the field, a plurality of movable figures on the field for engaging the plate to depress the same, and a connection between the plate and the figures in the shelter for moving said figures into and out of the shelter when the plate is depressed by the movable figures, said means comprising a rocking lever having one end connected to the plate, a spring acting normally to move the figures out of the shelter, means for restraining the action of the spring, and means whereby the rocking of the lever will move the swinging lever to release the weight.

3. A game comprising a field having an opening near one edge, and a shelter near the opposite edge having an open front toward the opening, hazards around the opening, a plurality of figures movable into and out of the shelter, a plate normally closing the opening in the field, a plurality of movable figures on the field for engaging the plate to depress the same, and a connection between the plate and the figures in the shelter for moving said figures into and out of the shelter when the plate is depressed by the movable figures, said means comprising a rocking lever having one end connected with the plate, a spring acting normally to move the figures out of the shelter, means for restraining the said movement, a vertically movable weight for releasing the restraining means, means for lifting the weight, means for retaining it in elevated position, and means whereby the rocking of the lever will release the retaining means.

4. A game comprising a field having an opening near one edge, and a shelter near the opposite edge having an open front toward the opening, hazards around the opening, a plurality of figures movable into and out of the shelter, a plate normally closing the opening in the field, a plurality of movable figures on the field for engaging the plate to depress the same, and a connection between the plate and the figures in the shelter for moving said figures into and out of the shelter when the plate is depressed by the movable figures, said means comprising a rocking lever having one end connected to the plate, a spring acting normally to move the figures out of the shelter, means for restraining the action of the spring, and means whereby the rocking of the lever will release the restraining means.

5. A game comprising a field having an opening near one edge, and a shelter near the opposite edge having an open front toward the opening, hazards around the opening, a plurality of figures movable into and out of the shelter, a plate normally closing the opening in the field, a plurality of movable figures on the field, and a connection between the plate and the figures in the shelter for moving said figures into and out of the shelter when the plate is depressed by the movable figures.

[Claims 6 to 8 not printed in the Gazette.]

960,191. SOUND-BOX FOR TALKING-MACHINES. PERCIVAL JAMES PACKMAN, Highbury, London, England. Filed July 24, 1909. Serial No. 509,863.

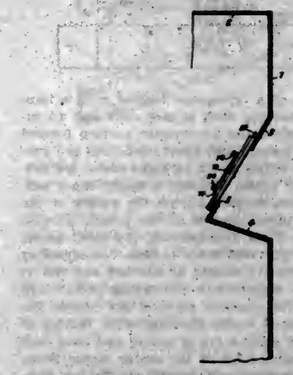


1. In a sound box provided with a shell containing a diaphragm; the combination of a stylus bar having a double bearing; a spindle provided with an eccentric working in said bearing; and a lever rigid with said spindle adapted to lock said stylus in two different positions upon moving the same in a direction away from the record over which said stylus plays, substantially as described.

2. A sound box comprising a shell containing a diaphragm, a stylus bar, a double bearing attached to said stylus bar, a spindle provided with an eccentric working in the said bearing, a plate on the said spindle carrying the stylus holder and means comprising a lever for locking the plate and stylus holder in either of two positions for the purpose set forth.

3. A sound box comprising a shell containing a diaphragm, a stylus bar, a double bearing attached to said stylus bar, a spindle working in the said bearing, the said spindle having an eccentric portion coming between the bearing plates, such eccentric portion passing through a plate carrying the stylus holder, such plate being provided with two pairs of surfaces inclined to one another in such a way that by actuating a suitable handle the plate and stylus holder can be locked in either of two required positions substantially as and for the purpose set forth.

960,192. PHOTOGRAPHIC-PRINTING DEVICE. TRUSSIE ALEXANDER PATTON, Cabool, Mo. Filed Mar. 23, 1909. Serial No. 485,180.



1. A device of the class described, comprising a shield provided with a recess having an inclined upper wall, and a substantially horisontal lower wall, said upper wall meeting the lower wall and having a substantially rectangular opening, a frame covering the opening, said frame comprising parallel plates secured together in spaced relation and each provided with a central opening registering with the opening of the other plate, a transparent sheet covering the opening of one plate, a folding door hinged to the plate and covering said opening when closed, means for limiting the movement of the door from the plate, a shutter having sections arranged between the plates and movable toward and from each other for closing the opening in the other plate, and means for simultaneously moving said shutters in opposite directions.

2. In a device of the class described, a frame, said frame comprising parallel plates secured together in spaced relation and each provided with a central opening registering with the opening of the other plate, a transparent sheet covering the opening of one plate, a folding door hinged to the plate and covering said opening when closed, means for adjusting the door to and from the plate, a shutter having sections arranged between the plates and movable toward and from each other for closing the opening in the other plate, and means for simultaneously moving said shutters in opposite directions.

3. In a device of the class described, a frame comprising plates superimposed and secured together in spaced relation, and provided each with a central opening, the opening of one plate registering with the opening of the other, means for supporting a negative and a sensitised sheet at one of the openings, a shutter consisting of sections movable toward and from each other between the plates for closing the other opening, and means for simultaneously moving the shutters in opposite directions.

4. In a device of the class described, a frame comprising spaced parallel plates, provided with registering substantially rectangular openings, means for supporting a negative and a sensitized sheet at one of the openings, a pair of shutters movable toward and from each other between the plates for closing the other opening, and means for simultaneously moving the shutters.

5. In a device of the class described, a main frame provided with an opening, a sectional shutter for closing the opening, each of the sections comprising a frame resting against the edge of the opening, a sheet of material translucent and impervious to the actinic light rays supported in the shutter frame, means for moving the sections simultaneously in opposite directions, a strip secured to the inner edge of each shutter and extending through the opening, the ends of said strips being undercut to form lugs for engaging the opposite face of the plate for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

960,193. COMBINATION-TOOL. PER ADOLF PETERSON, New York, N. Y. Filed Feb. 19, 1909. Serial No. 478,812.

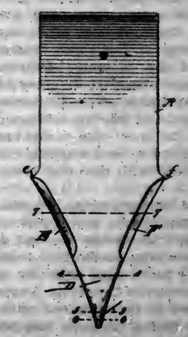


1. In a tool of the class described, a shank having a flattened outer end portion adapted to form a fulcrum, and a slidable sleeve mounted on the shank and provided with a bifurcated outer portion which extends outwardly at an angle from the said flattened fulcrum-forming portion of the shank.

2. As a new article of manufacture, a tool of the class specified embodying a shank having a flattened fulcrum-forming portion at one end, a sleeve slidable upon the shank and provided with a bifurcated extension which is disposed at an angle to the said fulcrum forming portion of the shank, and means carried by the sleeve for engaging the shank to hold the sleeve against sliding movement thereon.

3. A tool of the class described comprising a shank having a flattened fulcrum-forming portion at one end, said shank having a slot formed therein, a slidable sleeve mounted upon the shank and provided with a lug which is disposed between the walls of the slot to prevent rotation of the said sleeve, said sleeve having an extension extending out of the plane of the shank and provided with a bifurcated portion, and means carried by the sleeve for engaging the shank to hold the sleeve against movement.

960,194. CULTIVATOR-PLOW. GEORGE W. POHANZ, Geneseo, Ill. Filed Apr. 2, 1910. Serial No. 552,975.

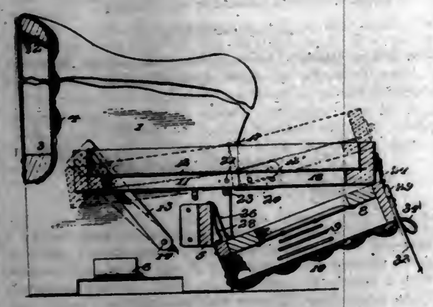


1. A cultivator blade or shovel comprising a body portion terminating in a triangular shaped head, having a

point of cylindrical cross section, a flattened portion having rounded edges immediately adjacent said point, and a flattened portion having beveled or sharpened edges between the body portion and the first mentioned flattened portion.

2. A cultivator blade or shovel comprising a body portion terminating in a triangular shaped head, having a point of cylindrical cross section adapted to enter the ground, and a flattened portion between said point and said body portion, provided with beveled or cutting edges.

960,195. COMBINED COUCH AND BED. BURTON C. POSTON, Chillicothe, Ohio. Filed May 12, 1909. Serial No. 495,406.



1. A couch of the character described, comprising a couch frame, a spring carrying frame formed of two sections hinged together, the upper section hinged to the lower section at its outer edge and a movable seat frame hinged to the rear edge of the upper spring frame and the outer edge of the couch frame.

2. A couch of the character described, comprising a couch frame, a spring carrying frame formed of two sections hinged together and adapted to rest one upon the other and the lower frame hinged to the couch frame, the upper section adapted to swing outward in a longitudinal plane with the lower frame, and a movable seat frame pivoted to the inner edge of the upper spring frame and the outer edge of the couch frame.

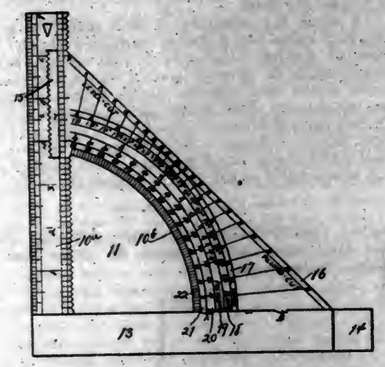
3. A couch of the character described, comprising a couch frame, a spring carrying frame formed of two sections one upon the other and hinged together at their outer edges, a hinge connection between the outer edge of the lower spring frame and couch frame, the upper frame adapted to swing outward in a horizontal plane with the lower frame, a movable seat frame pivoted to the inner edge of the upper spring frame and a double hinge connection between the inner edge of the upper spring frame and the outer edge of the couch frame.

4. A couch of the character described, comprising a frame, a seat frame hinged at its outer edge to said frame, a spring carrying frame pivotally connected at its outer edge to the frame and having a hinge connection at its inner edge with the inner edge of the seat frame and separate therefrom, and a second spring carrying frame pivoted at its outer end with the outer lower edge of the first spring frame.

5. A couch of the character described, comprising a frame, a seat frame hinged at its outer edge to said frame, a spring carrying frame below the seat and pivotally connected at its outer edge to the frame and having a hinge connection at its inner edge with the inner edge of the seat frame and separate therefrom, a second spring carrying frame pivoted at its outer end with the outer lower edge of the first spring frame, a link connection between the inner end of said second frame and the couch frame.

[Claims 6 to 14 not printed in the Gazette.]

960,196. SQUARE AND BEVEL. FRANK E. POWELL, Des Moines, Iowa. Filed Sept. 14, 1908. Serial No. 453,014.

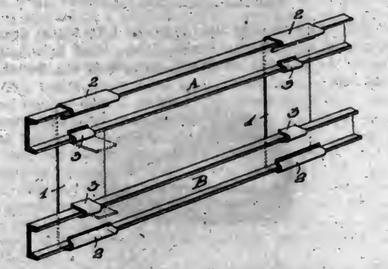


1. The combination of a try-square formed with a handle portion and rule portion with square ends and an integral hypotenuse portion, the hypotenuse portion formed with a straight outer margin and subdivided into and provided with arc-shaped scales and a straight scale, the outermost two arc-shaped scales and the straight scale subdivided on angular lines radiating from the vertex of the angle formed by the inner margin of the handle portion and the outer margin of the rule portion, the subdivisions of the straight scale provided with indices retrogressing from twelve at its center to naught at one end and two at its opposite end and respectively indicating plumb and level cuts of rafters on opposite sides of its center, the outermost two arc-shaped scales provided with indices of pitch and of degrees of inclination of plumb and level cuts of hip rafters on opposite sides of the center respectively, the remaining arc-shaped scales variously subdivided, handle members on opposite sides of the handle portion, the handle portion projecting at one end beyond the handle members, the handle and rule portions projecting at their inner margins beyond the straight outer margin of the hypotenuse portion whereby the tool is adapted for use as a siding gage, the rule portion formed with a slot crossing one end of the hypotenuse portion, the rule portion notched on its inner margin and on one margin of said slot, the handle members formed with notches A, B on their inner margins, and a plumb adapted to be engaged with one end of either handle member at the vertex of the angle aforesaid to depend across the hypotenuse portion.

2. The combination of a try-square formed with a handle portion and rule portion with square ends and an integral hypotenuse portion, the hypotenuse portion subdivided into and provided with arc-shaped scales and a straight scale, the outermost two arc-shaped scales and the straight scale subdivided on angular lines radiating from the vertex of the angle formed by the inner margin of the handle portion and the outer margin of the rule portion, the subdivisions of the straight scale provided with indices retrogressing from twelve at its center to naught at one end and two at its opposite end and respectively indicating plumb and level cuts of rafters on opposite sides of its center, the outermost two arc-shaped scales provided with indices of pitch and of degrees of inclination of plumb and level cuts of hip rafters on opposite sides of the center respectively, the remaining arc-shaped scales variously subdivided, handle members on opposite sides of the handle portion, and a plumb adapted to be engaged with one end of either handle member at the vertex of the angle aforesaid to depend across the hypotenuse portion.

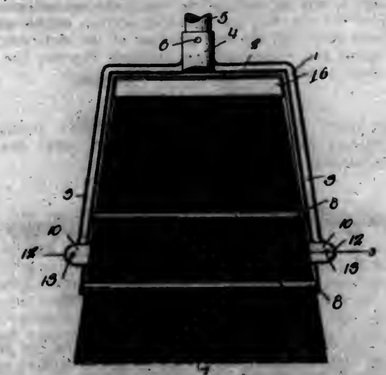
3. A square comprising a handle portion, a rule portion at right angles to said handle portion, and a hypotenuse portion integrally connected, the inner margin of the rule portion being graduated and notched coincident thereto, said rule portion formed with a slot, one side of said slot being notched, the outer margin of the rule portion being graduated, handle members on opposite sides of the handle portion, said handle members formed with notches A, B on their inner faces, ends of the handle portion projecting at their inner margins beyond ends of the hypotenuse portion.

960,197. FIREPROOF CONSTRUCTION. ARTHUR PRIDDLE, San Francisco, Cal. Filed Feb. 25, 1909. Serial No. 480,008.



In a fire proof construction, a pair of clips each comprising a body, hooks bent from said body at each end, said hooks extending throughout the width of the body, malleable tongues struck up from an intermediate portion of the width of the body and adjacent the hooks, said tongues being bent inwardly away from the hooks and toward each other, and a pair of members arranged parallel to each other and engaged by said hooks and lying over the apertures formed by the displacement of the tongues, said members being held in place by bending the tongues over the same toward the hooks.

960,198. BROOM-HEAD. LESTER R. REEDER, Walkersville, W. Va. Filed Sept. 14, 1909. Serial No. 517,632.



1. The herein described broom head comprising a frame to receive and bear against one side of the straw, said frame having transversely disposed portions at its sides provided with pairs of outwardly extending ears and further provided with slots, a clamp to bear against the opposite side of the straw and having arms at its sides to move in said slots and extend between the said ears and adjusting worms having their bearings in the said pairs of ears, said adjusting worms engaging the outer ends of said arms for the purpose set forth.

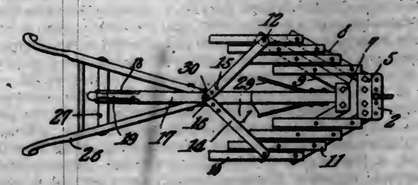
2. The herein described broom head comprising a frame to receive and bear against one side of the straw, said frame consisting of a cross bar having a socket for the reception of a broom stick, side bars which extend downwardly from the ends of said cross bar, and bars connecting said side bars and to bear against one side of the broom straw, said side bars being provided with transverse portions having outwardly extending pairs of ears and further provided with slots between said ears, a clamp to bear against the opposite side of the straw and having outwardly projecting arms operating in said slots and adjusting worms having their bearings in the said pairs of ears, said adjusting worms engaging the outer ends of said adjusting arms.

960,199. CRATE AND SHOW-BENCH. WILLIAM ORMISTON ROY, Montreal, Quebec, Canada. Filed Nov. 27, 1908. Serial No. 464,750.



A show bench, comprising a front, sides, and back hinged together and formed with legs, a raised floor, the front having an opening therein on line with the floor, a door closing said opening, the back being higher than the front, a wire net door hinged to the upper edge of the back and being secured to the upper portion of the face of the front, and turn buttons on the upper edges of the sides for securing the said wire net door thereto.

960,200. HARROW. CHARLES B. ROZAR, Empire, Ga. Filed Aug. 19, 1909. Serial No. 513,618.



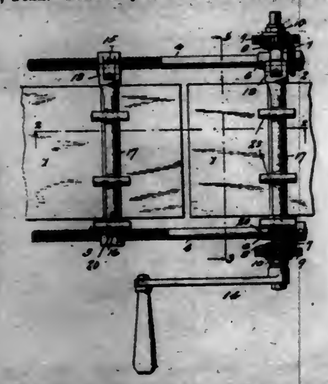
1. A device of the class described comprising a beam; arms disposed upon each side of the beam and pivoted at their adjacent ends thereto; teeth carried by said arms; a mold board mounted upon the beam adjacent its forward end; a handle mounted upon the beam adjacent its rear end; a rider slidably mounted upon the beam between the handle and the mold board and arranged to contact therewith; braces pivoted at their remote ends to the arms, and at their adjacent ends pivoted to the rider; and means for operating the rider and for holding the same in a predetermined position.

2. A device of the class described comprising a beam; arms disposed upon each side of the beam and pivotally connected therewith at their adjacent ends; teeth carried by the arms; a rider slidably mounted upon the beam to the rear of the arms; braces pivotally connected at their remote ends with the arm; means for adjustably mounting the adjacent ends of the braces upon the rider; and means for operating the rider and for holding the same in a predetermined position.

3. A device of the class described comprising a beam; parallel arms disposed upon each side of the beam and pivotally connected therewith at their adjacent ends; teeth

located to the rear of the arms and having extensions disposed upon the upper faces of the arms; pivot elements uniting the extensions with the arms; a rider to reciprocate upon the beam; braces having their adjacent ends assembled with the rider, their remote ends being mounted upon certain of the pivot elements; means for operating the rider; and means for holding the rider in a predetermined position.

960,201. BELT-STRETCHER. DANIEL RUDY, Jr., Nashville, Tenn. Filed May 6, 1909. Serial No. 494,436.



1. In combination with a frame, shafts journaled therein, means carried thereby for revolving the shafts, said shafts having screw-threaded ends, blocks mounted on the shafts, and a clamping member loosely mounted on the shafts, said member having ears spanning said blocks and being adapted to be moved back and forth on the shafts by the contact of the blocks with said ears caused by the revolution of the shafts, and said clamping member and frame each having a horizontal jaw formed thereon and lying between the shafts and a lug rising above the shafts at each side of the jaw, said lug having its inner face perpendicular to the face of the jaw, a clamping plate having bifurcated ends spanning said lugs, a clamping jaw pivotally secured to one of the lugs and adapted to be clamped upon the other, and means carried by said clamping jaw for adjustably clamping the clamping plate in position.

2. In a device of the character described, the combination with a frame, of a clamping member, means for adjustably spacing them with respect to each other, a lower clamping jaw formed on each member, a lug rising at each end of the jaw and having its inner face perpendicular thereto, an upper clamping jaw pivotally secured to one of the lugs, the free end of said jaw being shaped to fit over the other lug and having a socket formed in its upper face, a clevis pivotally secured to the lug and adapted to be swung over the end of the jaw, said clevis having a threaded socket formed therein at its central portion, and a bolt engaged in said socket and adapted to be screwed down therein and be engaged in the socket in the end of the jaw to lock said jaw in position and prevent the accidental displacement of the clevis.

3. In a device of the character described, the combination with a frame, of a clamping member, means for adjusting them with respect to each other, a lower clamping jaw formed on each member, a lug rising at each end of the jaw and having its inner face perpendicular thereto, an upper clamping jaw pivotally secured to one of the lugs, the free end of said jaw being shaped to fit over the other lug and having a socket formed in its upper face, a clevis pivotally secured to the lug and adapted to be swung over the end of the jaw, said clevis having a threaded socket formed therein, a bolt engaged in said socket and adapted to be screwed down therein and be engaged in the socket in the end of the jaw to lock said jaw in position and prevent the accidental displacement of the clevis, a clamping plate extending the length of the lower clamping jaw and terminating at each end in a bifurcated portion spanning the lug, said plate having apertures formed therein, the upper jaw having a series of corresponding threaded sockets formed therein above said apertures, and bolts having threaded portions engaged in said sockets, said bolts terminating in a plane portion surmounted by a shoulder and being so disposed that the shoulder rests upon the clamping plate with the plane portion extending through the apertures and rotatably secured therein, the rotation of the bolts serving to raise and lower the plate with reference to the clamping jaws, the lugs serving to guide the plate when so moved.

960,202. MANUFACTURE OF BOOT AND SHOE SOLES. CYRUS E. SANDERSON, Lincoln, Nebr. Filed Aug. 8, 1907, Serial No. 387,642. Renewed Apr. 26, 1910. Serial No. 557,800.



The combination in a boot or shoe, of an insole, of leather, skived at its underside to afford portions for the passage of connecting stitches, an outer or tap sole of leather, a layer, of asbestos, arranged within the said portions of the insole and interposed between the major portion of the insole and the tap sole, a layer, of asbestos, arranged directly on the insole and having depending portions arranged at the outer sides of the said portions of the insole, a cushion arranged on the last-named asbestos layer, a covering, of material that will not readily stretch, arranged over the cushion and having depending portions arranged at the outer sides of the depending portions of the upper asbestos layer, a vamp having portions arranged at the outer sides of the depending cover portions, and stitches extending through the vamp, the depending portions of the covering, the depending portions of the upper asbestos layer and the said portions at the underside of the insole and connecting said elements together and to the outer or tap sole.

960,203. FLUSH-HINGE DOOR. JOHN GUSTAVE SCHMIDT, Passaic, N. J. Filed June 25, 1909. Serial No. 504,301.



1. The combination of a door frame having one side thereof formed with a vertical wall and a horizontal wall projecting inwardly from the vertical wall, the second wall having a transverse slot extending from the inner edge of said wall outwardly toward the vertical wall, a casing standing in opposed relation to the slot under the horizontal wall, means for removably securing the casing to each of said walls, and a door hinged in the casing and having its hinge portion movable in said slot, substantially as described.

2. The combination of a door frame having one side thereof formed with a vertical wall and a horizontal wall projecting inwardly from the vertical wall, the second wall having a transverse slot extending from the inner edge of said wall outwardly toward the vertical wall, a casing standing in opposed relation to the slot under the horizontal wall, means for removably securing the casing to each of said walls, a pin removably arranged in the casing and a door fulcrumed on said pin and having its fulcrum portion movable in said slot, substantially as described.

3. The combination of a door frame having one side thereof formed with a vertical wall and a horizontal wall projecting inwardly from the vertical wall, the second wall having a transverse slot extending from the inner edge of said wall outwardly toward the vertical wall, a casing standing in opposed relation to the slot under the horizontal wall, means for removably securing the casing to each of said walls, a pin removably arranged in the casing and held in place by the same and the frame and a door fulcrumed on said pin and having its fulcrum portion movable in said slot, substantially as described.

4. The combination of a door frame having one side thereof formed with a vertical wall and a horizontal wall projecting inwardly from the vertical wall, the second wall having a transverse slot extending from the inner edge of said wall outwardly toward the vertical wall, a casing standing in opposed relation to the slot under the horizontal wall and being inwardly open, means for removably securing the casing to each of said walls, and a door hinged in the casing and having its hinge portion movable in said slot and in the opening of said casing, substantially as described.

5. The combination of a door frame having one side thereof formed with a vertical wall and a horizontal wall projecting inwardly from the vertical wall, the second wall having a transverse slot extending from the inner edge of said wall outwardly toward the vertical wall, a casing standing in opposed relation to the slot under the horizontal wall, means for removably securing the casing to said frame, and a door hinged in the casing and having its hinge portion movable in said slot, substantially as described.

[Claim 6 not printed in the Gazette.]

960,204. PIPE CONNECTION. FRED L. SEHNERT and GEORGE J. MCMANUS, Houston, Tex., assignors of ninety-five one-hundredths to said McManus and five one-hundredths to said Sehnert. Filed Dec. 26, 1908. Serial No. 469,401.



1. In a coupling of the character described the combination with a plurality of sections of a joint member carried by each section; a tubular connecting member projecting through one of said joint members and having a threaded engagement at one end with the other of said joint members, an overhanging shoulder carried by the free end of said connecting member for engaging with the first mentioned member, said shoulder having a circular ground groove upon the under side thereof; a circular truncated ground flange carried by said first mentioned joint member and coinciding with and fitting said groove, said groove being of such a depth as to only partially embrace the flange and a removable cap for permitting access to the interior of said coupling.

2. In a coupling of the character described, the combination with a plurality of sections of a joint member carried by each section; a tubular connecting member having a threaded engagement at one end with one of said members and projecting through the wall of the other of said members in such a manner as to provide an unrestricted passage way between the interior passage ways of the said section; an annular outwardly extending flange carried by the free end of said connecting member and adapted to engage with the said wall of the last mentioned joint member, said flange being provided upon its under side with a circular ground groove; an upstanding truncated ground flange carried by said wall and projecting into said groove; a removable cap carried by said last mentioned joint member for permitting access to the interior of said coupling; a means for securing said coupling member against detachment from its joint member and means for permitting the insertion of the last mentioned means.

3. In a coupling of the character described, the combination with a plurality of sections of a joint member carried by each section; a tubular connecting member having a threaded engagement at one end with one of said members and projecting through the wall of the other of said members in such a manner as to provide an unrestricted passage way between the interior passage ways of the said sections; an annular outwardly extending flange carried by the free end of said connecting member and adapted to engage with the said wall of the last mentioned joint member, said flange being provided upon its under side with a circular ground groove; an upstanding truncated ground flange carried by said wall and projecting into said groove; a removable cap carried by said last mentioned joint member for permitting access to the interior of said coupling; a top screw for securing said coupling member against detachment from its joint member and a removable screw cap carried by said joint member for permitting the insertion of said securing screw.

4. In a coupling of the character described the combination with a plurality of sections of a joint member carried by each section; a connecting member projecting through one of said joint members and having engagement at one end with the other of said joint members, an overhanging shoulder carried by the free end of said connecting member for engaging with the first mentioned member, said shoulder having a circular ground groove upon the under side thereof; a circular truncated ground flange carried by said first mentioned joint member and coinciding with and fitting said groove, said groove being of such a depth as to only partially embrace the flange, and a removable cap for permitting access to the interior of said coupling.

5. In a coupling of the character described, the combination with a plurality of sections of a joint member carried by each section; a connecting member having detachable engagement at one end with one of said members and projecting through the wall of the other of said members in such a manner as to provide an unrestricted passage way between the interior passage ways of the said sections; an annular outwardly extending flange carried by the free end of said connecting member and adapted to engage with the said wall of the last mentioned joint member, said flange being provided upon its under side with a circular ground groove; an upstanding truncated ground flange carried by said wall and projecting into said groove; a removable cap carried by said last mentioned joint member for permitting access to the interior of said coupling; a means for securing said coupling member against detachment from its joint member and means for permitting the insertion of the last mentioned means.

[Claims 6 to 8 not printed in the Gazette.]

960,205. PLAYING-CARDS. WILLIAM SHAKESPEARE, Jr., Kalamazoo, Mich. Filed Apr. 22, 1907. Serial No. 369,610.

1. A game device comprising a set of cards divided into a plurality of suits, each suit comprising two series of cards having corresponding indicating pips and numbers, the cards of one series having positive signs and cards of the other series negative signs, each of said suits having a zero card.

2. A game device comprising a set of cards divided into a plurality of suits, each suit comprising two series of cards having corresponding indicating pips and numbers, the cards of one series having positive signs and cards of the other series negative signs.

3. A game device comprising a set of cards divided into

a plurality of suits, each suit comprising two series of cards, the cards of one series having positive signs and cards of the other series negative signs, each of said suits having a zero card.

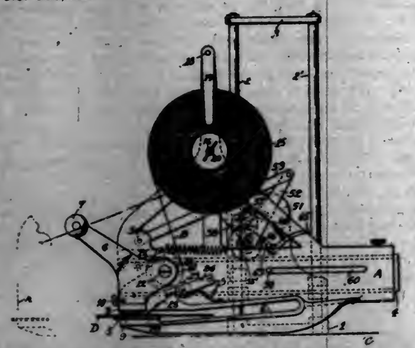


4. A game device comprising a set of cards divided into a plurality of suits, each suit comprising two series of cards, the cards of one series having positive signs and cards of the other series negative signs.

5. A game device comprising a set of cards divided into suits, each suit comprising two series of cards having suit pips and value indicia thereon, the suit pips of both series of each suit being the same, and the value indicia of one series indicating values offsetting that of the other series of the suit, each of the suits having a zero card.

[Claim 6 not printed in the Gazette.]

960,206. TAG-ATTACHING APPARATUS. ISIDOR SILVERSTEIN, New York, N. Y. Filed Jan. 3, 1910. Serial No. 536,179.



1. In an apparatus of the class specified, the combination with a slide rest, of a carrier head mounted to slide upon said rest, an operating lever pivoted upon the carrier, web feeding and severing means, and stapling means; said operating lever, web feeding and severing means, and stapling means carried upon the carrier.

2. In an apparatus of the class specified, the combination with the framework, of a slide rest mounted upon the framework for up and down movement, a carrier head mounted upon said slide rest for reciprocating movement, an operating lever having a handle mounted for swinging movement upon the carrier, web carrying and feeding devices mounted upon said carrier, impression devices mounted on said operating lever, and stapling mechanism; said operating lever when a forward stroke is applied thereto operating the stapling mechanism, making an impression upon the web, and as it returns to normal position operating the web feeding means.

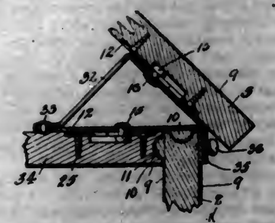
3. In an apparatus of the class specified, the combination with the framework, of a slide rest mounted upon the framework, a reciprocating carrier head mounted upon the rest, web feeding means mounted upon the carrier, an operating lever having a handle pivoted upon the carrier, impression devices carried by said lever, stapling mechanism mounted upon the carrier, a web severing blade mounted upon the lever; said operating lever when a forward stroke is applied thereto severing the web, operating the stapling mechanism and making an impression upon the severed web, and as it returns to normal position operating the web feeding means.

4. In an apparatus of the class specified, the combination with the framework, of a slide rest mounted upon the framework, a reciprocating carrier head mounted upon the rest, web feeding means mounted upon the carrier, an operating lever having a handle pivoted upon the carrier, impression devices carried by said lever, a blade or cutter also mounted upon the lever for severing the web, an inking roller for the impression devices rotatably mounted, an arm pivoted to the carrier, and stapling mechanism mounted upon the carrier; said lever when a forward stroke is applied thereto causing the inking roller to pass over the impression devices supplying ink thereto, severing the web, operating the stapling mechanism and making an impression upon the severed web, and upon its return to normal position operating the web feeding means.

5. In apparatus of the class specified, the combination with the framework, of a slide rest mounted upon the framework, a reciprocating carrier head mounted upon the rest, web feeding means mounted upon the carrier, an operating lever having a handle pivoted upon the carrier, impression devices carried by said lever, a blade or cutter also mounted upon the lever for severing the web, an inking roller for supplying ink to the impression devices, said roller rotatably mounted upon an arm pivoted to the carrier, and stapling mechanism mounted upon the carrier; said lever when a forward stroke is applied thereto causing the inking roller to pass over the impression devices supplying ink thereto, severing the web, operating the stapling mechanism and making an impression upon the severed web, and upon its return to normal position operating the web feeding means, said web feeding means comprising a roller rotatably mounted upon the carrier, an idle roller yieldingly mounted upon an arm to engage the first roller, a ratchet fixed to the first mentioned roller, and a pawl pivoted upon the lever, the pawl riding idly over the ratchet when the forward stroke is applied to the lever and engaging with a tooth on the ratchet to rotate the ratchet and rollers when the lever returns to normal position.

[Claims 6 to 13 not printed in the Gazette.]

960,207. PORTABLE HOUSE. DWIGHT C. SLATER, Essex Junction, Vt. Filed June 1, 1909. Serial No. 499,280.



1. The combination with a house as described and its supporting sleepers, of a series of upright posts with brackets thereon, to receive the sleepers, and adjustable foot plates on said posts.

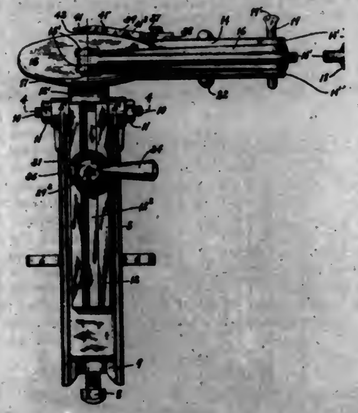
2. In a portable house, the combination with the ceiling and roof sections having recesses formed therein, of locking plates secured to the sections above said recesses, and angular braces bearing means for engaging the locking plates to secure the sections in position with respect to each other.

3. In a portable house, the combination with the ceiling and roof sections having recesses formed therein, of plates secured to the sections above said recesses, said plates having centrally disposed key-hole slots formed therein, and an angular brace having headed pins projecting therefrom, said pins being adapted to be inserted in the slots in the plates with their heads received in the recesses and slid into the narrow portion of the slots, locking the sections to the brace and retaining them in position with reference to each other.

4. In a portable house, the combination with the ceiling and roof sections having recesses formed therein, of locking plates secured to the sections above said recesses, and braces bearing means for engaging the locking plates to secure the sections in position with respect to each other, said braces being of triangular shape and projecting outward beyond the sealing section, the portion of the brace at the projecting vertex being bent downward at right angles to the plane of the ceiling section and being adapted to be secured to the side wall section to secure said latter section between said portion and the ceiling section.

5. In a portable house, a floor, a sill carried thereby, a plate having a slot formed therein secured to the under side of the sill and projecting therefrom, a side wall section supported by the sill, said section having a recess formed therein, a key-hole slotted plate surmounting said recess, means engaged in said slot and projecting into the recess, the lower end of the means extending through the slot in the sill plate, and means engaged on the end of the first mentioned means for locking them in place and thus to secure the floor and side wall sections together.

960,208. SAW-CLAMP. CLAYTON S. STEVENS, New Britain, Conn. Filed Dec. 7, 1905. Serial No. 290,682.



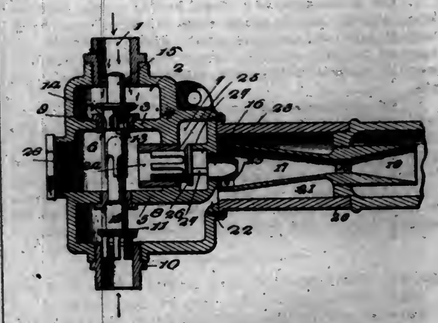
1. The combination of a standard, a pair of jaws elongated in a direction transverse to said standard, a saw-supporting stud on said standard, an arm extending from said standard in the same direction as the elongation of said jaws, and a swinging member supported by said arm, one of said jaws being rigid with said standard and the other being supported for swinging movement by said swinging arm, the two swinging parts turning about parallel axes transverse to that of said stud.

2. A saw clamp comprising a fixed jaw, a relatively fixed part to which said jaw is connected, a swinging substantially U-shaped member connected pivotally between its ends to said relatively fixed part, a screw tapped through one branch of said U-shaped member and bearing against said relatively fixed part, and a jaw pivoted to the other branch of said U-shaped member approximately at one end thereof and movable toward and from the fixed jaw on the movement of said U-shaped member.

3. A saw clamp comprising a fixed jaw, a relatively fixed part to which said jaw is connected, a swinging substantially U-shaped member pivotally connected between its ends to said relatively fixed part, means operatively associated with one branch of said U-shaped part and active against said relatively fixed part, for shifting the former, and a swinging jaw connected with the other branch of said U-shaped part.

4. A saw clamp having a fixed jaw, a swinging arm, a jaw pivoted to said swinging arm for movement toward and from the fixed jaw on the swinging movement of said arm, the two jaws being adapted to receive a saw in the space therebetween, and a gage member having a saw stop and also having a saw slot, the latter being adapted to register with said space, and the gage member being movably mounted whereby when it is not in use it can be moved out of the way.

960,209. FEED-WATER HEATER. JARED S. SWEENY and WILLIAM W. GRINDLE, Decatur, Ill. Filed Jan. 24, 1910. Serial No. 539,897.



1. A feed water heater comprising a casing having steam and water chambers, a water heating discharge connection therefrom having a receiving inlet from the water chamber, a steam nozzle discharging thereinto from the steam chamber, and an emergency check valve arranged between the nozzle and steam chamber, substantially as described.

2. A feed water heater comprising a casing, a water pipe connection therefrom, said casing having a water passage to said connection, a steam nozzle from the casing discharging into said connection, said casing having a steam passage therethrough to said nozzle and separate from said water passage, and an emergency check valve arranged in the casing adjacent to the inner end of said nozzle to close said steam passage against back flow of water from said nozzle.

3. A feed water heater comprising a casing having a steam chamber, a steam inlet thereto and a steam outlet therefrom, a steam discharge nozzle from said outlet, an injector in cooperative relation with respect to said nozzle and having a water supply passage, and an emergency check valve arranged between said steam chamber and said nozzle to close said outlet against backflow of water into said chamber.

4. A feed water heater comprising a water heating and forcing injector, and means having a water supply passage thereto and a separate steam passage thereto embodying a steam chamber and an outlet to said injector, and an emergency check valve arranged between said chamber and said outlet and normally held open by the passage of steam to the injector and adapted to close said passage

against back flow of water into said chamber from the injector.

5. A feed water heater comprising a casing, a water heating and forcing injector leading therefrom, said casing having a water passage to said injector, and also having a steam passage to the injector, said steam passage embodying a steam chamber having a steam inlet and a separate steam outlet communicating with the injector nozzle, and an emergency check valve arranged between said steam outlet and said nozzle and normally held open toward said nozzle by the passage of steam thereto, and adapted to close said outlet against back flow of water from the injector.

[Claim 6 not printed in the Gazette.]

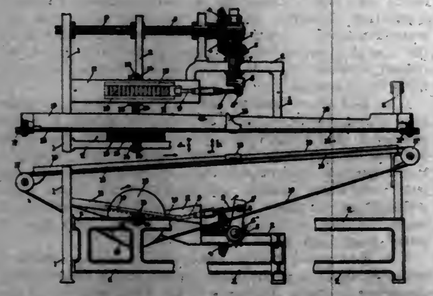
960,210. TROWEL. JOSEPH G. THATFORD, Sharon Hill, Pa. Filed July 10, 1909. Serial No. 506,903.



1. The combination of a trowel having a tang, a handle into which the tang is driven, a pin extending transversely through said tang and lying wholly within the handle, the aperture for said pin being longer than the pin, and nonmetallic material filling said aperture and covering the pin.

2. The combination of a trowel having a tang, a handle into which the tang is driven, a transverse hole extending through one side of the handle and through the tang and partly through the other side of the handle, a pin adapted to said hole and passing through the tang and stopping short of each side of the handle, and a wooden plug driven in the hole after the pin so that no metal is exposed on the surface of the handle with the exception of the ferrule.

960,211. WIRE MOTION FOR LOOMS. FRED A. WHITMORE, Philadelphia, Pa., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Oct. 28, 1909. Serial No. 525,192.



1. In a mechanism for inserting and withdrawing the pile wires of a pile fabric loom, the combination with a cord carrying the wire hook or clamp, of a drum around which said cord passes, a pinion operatively connected with said drum, a rack engaging said pinion, means for guiding said rack in a constant plane, a shaft having its axis in a plane which is out of line of the plane of movement of said rack, said shaft being provided with a crank, and a pitman connected at one end to said crank and having a jointed connection at its other end with said rack, whereby differential movements in opposite directions will be imparted to said wire hook or clamp, the wire withdrawing movement of the said hook or clamp being slower than the wire inserting movement thereof.

2. In a mechanism for inserting and withdrawing the pile wires of a pile fabric loom, the combination with a cord carrying the wire-hook or clamp, of a drum around which said cord passes, a shaft on which said drum is mounted, a pinion secured to said shaft, a rack engaging said pinion, means for guiding said rack in a constant plane, a second shaft having its axis in a plane which is out of line of the plane of movement of said rack, said second shaft being provided with a crank, and a pitman jointed to said crank and to said rack, whereby differential movements in opposite directions will be imparted to said wire hook or clamp, the wire withdrawing movement of the said hook or clamp being slower than the wire inserting movement thereof.

960,212. VEHICLE-WHEEL TIRE. FRIEDRICH WIECHARD, Hanover, Germany. Filed Oct. 1, 1908. Serial No. 455,674.



In a vehicle wheel, the combination with the felly, annular flanges secured thereto and projecting radially therefrom, the inner faces of said flanges being serrated at points beyond the periphery of the felly, a solid tire provided on its inner surface with an annular rib reduced in width with respect to the width of the base or inner surface of said tire and normally holding the base thereof out of contact with the felly, the side faces of said tire being serrated, and annular rings of yielding material having their opposite faces serrated and interposed between the serrated faces of said flange and tire, said rings having an internal diameter greater than the diameter of said felly, and normally out of contact therewith.

960,213. IRONING-BOARD. AUSTIN D. WILLIAMS, Roseville, Cal. Filed June 24, 1909. Serial No. 504,148.

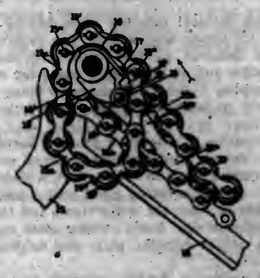


1. An ironing board mounted at its inner end for vertical movement, an angularly disposed support therefor hingedly connected to the floor of a room and having its upper portion bifurcated to form projections, said ironing board having a restricted portion upon its lower surface adapted to receive the bifurcated portion of the support, said restricted portion having grooves or guides, and said projections having means to extend into said grooves or guides.

2. An ironing board mounted at its inner end for vertical movement, an angularly disposed trough-shaped support therefor having its upper portion bifurcated to form projections, said ironing board having a restricted portion upon its lower surface provided with grooves or guideways having depressions, and said projections of the support having means to extend into the grooves or guideways and adapted to engage said depressions.

3. An ironing board mounted at its inner end for vertical movement, an angularly disposed support having at its lower end hingedly connected to the floor of the room, gravity actuated means for holding the ironing board and support in collapsed position, said angularly disposed support being trough-shaped and having its upper portion bifurcated to form projections, said ironing board having a restricted portion upon its lower surface provided with grooves or guide-ways having depressions, and said projections of the support having means to extend into the grooves or guideways and adapted to engage said depressions.

960,214. PATTERN MECHANISM FOR LOOMS. JOSEPH T. CYR, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Feb. 4, 1910. Serial No. 541,972.



1. In pattern mechanism for looms of the class described, the combination with a pattern cylinder, and a pattern chain, of a plurality of chain strippers, having portions to loosely engage the pattern cylinder barrel or shaft, a rod or device to connect said strippers, and an arm on one of said strippers within the fold of the pattern chain, to prevent the revolution of said strippers.

2. In pattern mechanism for looms of the class described, the combination with a pattern cylinder, of a device to prevent the winding of the pattern chain on the pattern cylinder, said device having parts to loosely embrace portions of the pattern cylinder, and means to prevent the rotation of said device with the cylinder.

3. In pattern mechanism for looms of the class described, the combination with a pattern cylinder, of a device to prevent the winding of the pattern chain on the pattern cylinder, said device having parts to loosely embrace portions of the pattern cylinder, and means to prevent the rotation of said device with the cylinder, said means comprising a weighted arm extending within the fold of the pattern chain.

960,215. PEN AND PENCIL HOLDER. JOHN DEAN, Racine, Wis., assignor to John Dean Manufacturing Company, Racine, Wis., a Corporation of Wisconsin. Filed June 1, 1909. Serial No. 499,835.

1. A holder for pens and pencils comprising a flexible sheet folded on itself along an intermediate transverse folding line to form two plies with free longitudinal and top edges, the rear ply extended to form a securing and guide flap, the front ply reinforced at its transverse free top edge, means reinforcing the sheet at the fold line, and elastic means yieldingly holding the plies together.

2. A pen and pencil holder comprising front and rear walls joined at the lower end of the holder and having free top and side edges, and elastic means yieldingly holding said walls together, the rear wall being provided with an adhesive coating, whereby the holder can be cemented in the pocket.



3. A pen or pencil holder comprising front and rear flexible walls having longitudinal cuts therethrough, and means passing through said cuts and yieldingly pressing said walls together.

4. A pen and pencil holder comprising front and rear sheet material walls flexibly joined at the lower end of the holder and having longitudinal cuts therethrough closed short of the upper and lower ends of the front wall, and elastic means embracing the holder and extending through said cuts.

5. A pen and pencil holder comprising a sheet transversely folded to form front and rear walls, means yieldingly holding said walls together, said sheet formed with a longitudinal cut extending longitudinally of the front and rear walls and terminating short of the upper ends thereof, and a binding strip secured transversely across the lower end of the holder and closing said cuts at the lower portions of said walls.

[Claims 6 to 9 not printed in the Gazette.]

960,216. JEWELER'S POLISHING-BRUSH. WILLIAM DIXON, Newark, N. J. Filed June 19, 1909. Serial No. 503,071.



1. A polishing brush consisting of a cylindrical socket having a cylindrical bore having at its inner end a small reduced portion forming a shoulder and, at its outer end, a beveled portion, a ring of bristles in said socket resting against said shoulder and having their inner ends secured together with a wire fabric stitched thereto, and a core having an outwardly flaring portion at its outer end and secured at its inner end in said reduced portion of the socket and tightly clamping said bristles in said cylindrical socket between said flaring and beveled portions.

2. A polishing brush consisting of a cylindrical socket having an axial bore enlarged at the outer end to form a cylindrical recess having an annular shoulder at its inner end and having a beveled portion at its outer end, a ring of bristles inserted in said cylindrical recess against said shoulder, and a core provided at its outer end with an outwardly flaring shoulder opposed to said beveled portion, said core being tightly secured at its inner end and its smaller end to the bore of said socket whereby said bristles are firmly secured to said cylindrical recess and between said flaring shoulder and said beveled portion, said core having an axial opening in each end, said openings being extended into each other, the inner opening being larger than the outer one.

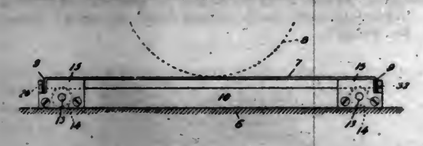
960,217. BUILDING-BLOCK. WILLIAM R. DODDS, San Francisco, Cal., assignor to Dodds' Interlocking Block Co., Inc., a Corporation of California. Filed Feb. 23, 1909. Serial No. 479,542.



1. A block comprising a body portion having on its lower edge a longitudinally extended groove 2, on its upper edge a longitudinally extending tongue 3, a projecting tongue 7 on one end of said block, the opposite end of said block having a groove 9 therein, a series of bores 6 extending through said block and a series of inclined passages 12 communicating with the extreme end bores 6 and adapted to receive plastic material.

2. A block comprising a body portion having on its lower edge a longitudinally extended groove 2, having the channel 5, and on its upper edge a longitudinally extended tongue 3, the latter being channeled on its edge to form a longitudinally extended groove 4, a projecting tongue 7 on one end of said block provided with a central groove 8, the opposite end of said block having a groove 9 therein, provided with a central depressed portion 10, a series of bores 6 extending through said block and a series of inclined passages 12 communicating with the extreme end bores 6 and adapted to receive plaster.

960,218. FLEXIBLE PRINTING-PLATE AND MEANS FOR SECURING THE SAME. MICHAEL A. DRGITCOUR, Chicago, Ill., assignor to Miehle Printing Press and Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 23, 1908. Serial No. 468,936.



1. In combination, a support for a printing plate, a series of plate clamps at the end thereof, springs for closing said clamps, a longitudinally movable rod beside said clamps having a threaded end, means whereby the longitudinal movement of said rod causes said clamps to open, and a rotatably threaded sleeve engaging the threaded end of the rod.

2. In combination, a support for a printing plate, a series of plate clamps at the end thereof, springs for closing said clamps, said clamps being provided with diagonal slots, a longitudinally movable rod beside said clamps having a threaded end, pins on said rod engaging the slots whereby said clamps may be simultaneously opened, and a rotatably threaded sleeve engaging the threaded end of the rod.

3. In combination, a support for printing plates, a series of plate clamps on said support each comprising a pair of members adapted to bite the edge of a plate between them, and a spring connected with said members for causing them to bite the plate, said members being provided with oppositely inclined slots, a transverse rod having pins engaging the slots in the members and adapted to be longitudinally moved to open the clamps, and springs for forcing said clamps bodily outward so as to put the plates under tension.

4. In combination, a support for a flexible printing plate, spring pressed clamps at the end thereof having diagonal slots, a transverse longitudinally movable rod beside the clamps, and pins on said rod engaging said slots and adapted upon longitudinal movement of said rod to open the clamps.

5. In combination, a support for a flexible printing plate, two-part spring pressed clamps at the end thereof, the parts of the clamps having intersecting diagonal slots, and a transverse longitudinally movable rod having pins engaging said slots and adapted upon longitudinal movement of said rod to open the clamps.

[Claims 6 to 9 not printed in the Gazette.]

960,219. FLEXIBLE PRINTING-PLATE. MICHAEL A. DRGITCOUR, Chicago, Ill., assignor to Miehle Printing Press and Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 23, 1908. Serial No. 468,938.



1. A flexible integral printing plate having transverse channels in its upper side beyond the printing surface forming thin integral margins with projecting lips on their upper sides and at their outer edges for engagement with the clamping devices, said margins being preliminarily bent down to facilitate engagement of the lips with the clamps.

2. In combination, a support, a printing surface thereon comprising a flexible printing plate, means securing one end of said printing plate to the support, a clamp securing the other end of said printing plate, and a freely rocking plate interposed between the latter clamp and the adjacent edge of the support, said freely rocking plate engaging the under surface of the printing plate and holding it under tension.

3. In combination, a flexible printing plate having a printing surface and margins at its ends beyond the printing surface for engagement with clamping devices; with a support for said printing plate, clamps at the ends of said support engaging the ends of said plate, and a freely rocking plate interposed between the clamp at one end of the support and the adjacent edge of the support, and adapted to hold the printing plate under tension.

4. In combination, a support, a printing surface thereon comprising a flexible printing plate having a printing surface and a clamp engaging margin, a clamp adjacent the end of the support engaging said margin of the printing plate and a freely rocking plate interposed between the clamp and support and engaging the under surface of said margin and adapted to keep the printing plate under constant tension.

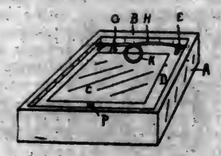
5. In combination, a flexible printing plate having reduced integral margins at its ends, a support for said printing plate, and adjustable clamps at opposite ends of said support engaging said flexible margins to secure the printing plate; with a freely rocking tensioning plate intermediate one clamp and the adjacent end of the support and engaging the under surface of the adjacent flexible margin of the printing plate, and adapted to maintain the printing plate under tension.

[Claims 6 to 9 not printed in the Gazette.]

960,220. BOX. GEORGE J. EICHHORN, Dubuque, Iowa. Filed Oct. 11, 1909. Serial No. 522,348.

1. In a box, a body, a cover, a spring removably attached to the cover and adapted to engage the sides of the box and serve to removably secure the cover in the box, and means connected with the spring, and cover for locking the ends of the spring in engagement with the sides of the box.

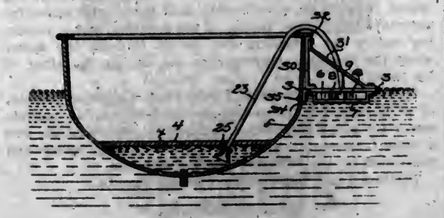
2. In a box, a body, a cover, a spring fastener formed of a single piece, means for removably securing the fastener on the cover, and means when the spring has been brought into engagement with the sides of the box to hold said spring in such engagement and thereby removably fasten the cover to the box.



3. In a box, a body, a removable cover, a fastener formed of a single spring, loops near opposite sides of the cover for removably holding the fastener to the cover, and a hook adapted to be engaged by the spring and force the ends of the fastener into engagement with the sides of the box and hold the cover removably secured to the box.

4. A box consisting of a body, a cover removably attached to the body, a fastener formed of a single spring bent into a loop near its center, loops on the cover for removably holding the fastener on the cover, and means attached to the cover and engaging the fastener to expand the spring for removably holding the cover on the box.

960,221. BAILING MECHANISM. CARL J. FOGELMARK, Sr., Excelsior, Minn. Filed Oct. 25, 1909. Serial No. 524,448.



1. An automatic boat bailing mechanism, including a housing having a longitudinally disposed channel including an intake chamber of gradually decreasing capacity ending in a straight comparatively narrow channel in turn terminating in an enlarged chamber of a capacity considerably less than said intake chamber, said housing having an aperture above said enlarged chamber, and a drain pipe extending from said aperture.

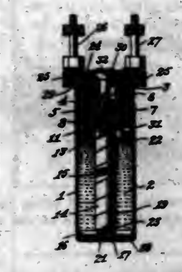
2. An automatic boat bailing mechanism including a housing having an intake chamber of gradually decreasing capacity communicating with a straight narrow channel ending in an enlarged chamber with an aperture communicating therewith, of a drain pipe extending from said chamber, and a check valve within said drain pipe.

3. An automatic boat bailing mechanism including a housing having an intake chamber of gradually decreasing capacity communicating with a straight narrow channel ending in an enlarged chamber with an aperture communicating therewith, and a drain pipe extending from said chamber.

960,222. ELECTRIC-BATTERY CELL. MANES E. FULD, Baltimore, Md. Filed Mar. 12, 1906. Serial No. 305,638.

1. An electric battery cell, comprising a tubular receptacle, a resilient sealing plug inserted in one end of said receptacle and having a central opening extending therethrough longitudinally of said cell, a cap over the top of said receptacle, a screw passing through said cap into said opening in said plug and limited in its longitudinal movement in one direction by said cap, an insulated metallic follower adapted to travel on said screw and to engage the opposite face of said plug from said cap and also the interior side walls of said cell.

2. An electric battery cell, comprising a tubular receptacle, a resilient sealing plug inserted in one end of said receptacle and having a central opening extending therethrough longitudinally of said cell, said receptacle being crimped around said plug to retain the same, a cap over the top of said receptacle, a screw passing through said cap into said opening in said plug and limited in its longitudinal movement in one direction by said cap, and a metallic follower covered with insulating material and adapted to travel on said screw and to engage the opposite face of said plug from said cap and also the interior side walls of said cell.



3. An electric battery cell, comprising a tubular receptacle, a resilient sealing plug inserted in one end of said receptacle and having a central opening extending therethrough longitudinally of said cell, said receptacle being crimped around said plug to retain the same, a cap over the top of said receptacle, a screw passing through said cap into said opening in said plug and limited in its longitudinal movement in one direction by said cap, and a rubber covered metallic follower adapted to travel on said screw and to engage the opposite face of said plug from said cap and also the interior side walls of said cell.

4. An electric battery cell, comprising a tubular receptacle, a resilient sealing plug inserted in one end of said receptacle and having a central opening extending therethrough longitudinally of said cell, said receptacle being crimped around said plug to retain the same, a cap over the end of said receptacle in which said plug is inserted, a screw having its head countersunk in said cap and its body passing through said cap into the central opening in said plug, and a follower adapted to travel on said screw and to engage the opposite face of said plug from said cap.

5. An electric battery cell, comprising a tubular receptacle, a resilient sealing plug inserted in one end of said receptacle and having a central opening extending therethrough longitudinally of said cell, said receptacle being crimped around said plug to retain the same, a cap over the end of said receptacle in which said plug is inserted, a screw having its head countersunk in said cap and its body passing through said cap into the central opening in said plug, a follower adapted to travel on said screw and to engage the opposite face of said plug from said cap, and a composition seal over the head of said screw.

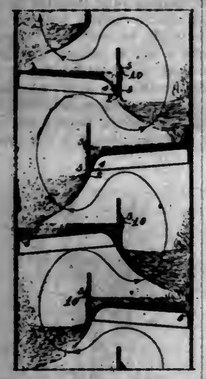
[Claims 6 to 13 not printed in the Gazette.]

960,223. BAFFLE-PLATE FOR COLUMN-STILLS. EMILE GUILLAUME, Paris, France. Filed May 26, 1906. Serial No. 318,929.

1. In a system of baffle plates for rectangular or cylindrical column stills, a partition (3) having apertures (5) forming overflows, along the whole length of the periphery thereof, the said apertures being uniformly distributed and placed at the same level, and having small grooves (9) starting from their base in order to facilitate the uniform distribution of the liquid.

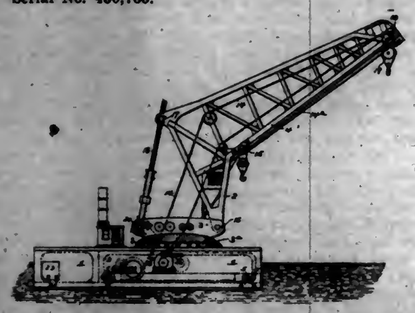
2. In a system of baffle plates for rectangular or cylin-

drical columns stills, a partition (3) having apertures (5) forming overflows, along the whole length of the periphery thereof, the side apertures being uniformly distributed



and placed at the same level and being provided with a shield (10) to prevent the passage of the vapors through the said apertures.

960,224. PONTOON-CRANE. GEORGE HENRY HULETT, Cleveland, Ohio, assignor to The Wellman-Seaver-Morgan Company, Cleveland, Ohio. Filed Aug. 28, 1908. Serial No. 450,765.



1. In a floating crane, the combination with a pontoon, of a crane base within the pontoon, a counterweight, the latter being in a plane below the water line of the pontoon, a boom pivoted to the base, and means for raising and lowering the boom.

2. In a floating crane, the combination with a pontoon having a circular trackway therein below the deck, of a crane mounted to rotate on said trackway and a movable counterweight located on the pontoon in a plane below the water line of the latter.

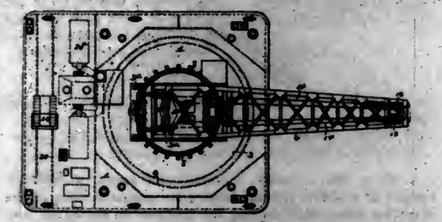
3. In a floating crane, the combination with a pontoon having a circular trackway therein below the deck, of a crane the base of which is mounted to rotate on said trackway, and a counterweight located below the deck and mounted to move transversely of the pontoon in rear of the crane.

4. In a floating crane, the combination with a pontoon having a circular trackway, of a crane mounted to rotate on said trackway, and a counterweight mounted on a track located transversely of the pontoon, and in a plane below the water line.

5. In a floating crane, the combination with a pontoon having a circular trackway, of a crane base mounted to turn on said trackway, a movable counterweight and means automatically operated by the tipping of the pontoon for controlling the movements of the counterweight.

[Claims 6 to 8 not printed in the Gazette.]

960,225. COUNTERWEIGHT FOR PONTOON-CRANES. GEORGE HENRY HULETT, Cleveland, Ohio, assignor to The Wellman-Seaver-Morgan Company, Cleveland, Ohio. Filed Aug. 28, 1908. Serial No. 450,766.



1. The combination with a pontoon and a crane thereon, of a movable counterweight on the pontoon, and electrically controlled means for moving said counterweight.

2. The combination with a pontoon and a crane thereon, of a movable counterweight on the pontoon, an electric motor for propelling said counterweight, and means for controlling the operation of said motor.

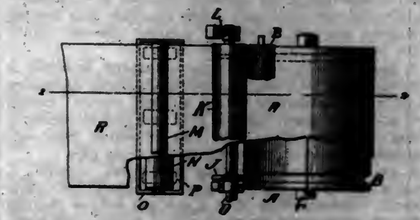
3. The combination with a pontoon and a crane thereon, of a movable counterweight on the pontoon, an electric motor for propelling said counterweight, and means operative automatically by the tilting of the pontoon for controlling the operation of said electric motor.

4. The combination with a pontoon and a crane thereon, of a movable counterweight on the pontoon, an electric motor for propelling said counterweight, circuit closing means included in circuit with said motor and operative automatically by the tilting of the pontoon, and a reversing switch for reversing the circuit through the motor when the counterweight reaches one end or the other of its travel.

5. The combination with a pontoon and a crane thereon, of a movable counterweight on the pontoon, an electric motor for propelling said counterweight, a pendulum, and a circuit closer included in circuit with said motor and controlled by the swinging of the pendulum.

[Claims 6 and 7 not printed in the Gazette.]

960,226. APPARATUS FOR MAKING PAPER BOTTLES. CHARLES FRANCIS JENKINS, Washington, D. C., assignor to Single Service Package Corporation of America, New York, N. Y., a Corporation of New Jersey. Filed Mar. 22, 1909. Serial No. 484,874.



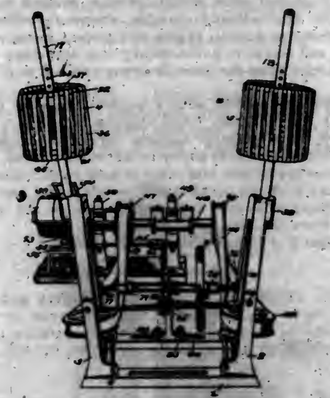
1. The combination with a mandrel and means for winding a paper strip in a plurality of turns about the same, of means for pressing the portion first wound to form circumferential ribs as the winding progresses, means for gumming the succeeding portion, and means for pressing the gummed portion firmly down upon the ribbed portion.

2. The combination with a circumferentially grooved rotary mandrel, of means for pressing into the grooves paper winding upon the mandrel, devices for moving said means into and out of action at predetermined intervals, means for applying adhesive material at predetermined intervals to paper winding upon the mandrel, and means for pressing the gummed portion upon the portion embossed by being pressed into the grooves.

3. The combination with a rotary mandrel having circumferential grooves, of rotary disks arranged to be forcibly swung into said grooves, a spring pressed roller parallel to and pressing against said mandrel, and a reciprocating gumming device arranged for applying adhesive material upon widely separated transverse sections of a paper strip passing beneath the pressing roller and winding upon the mandrel.

4. The combination with a collapsible mandrel circumferentially grooved near its ends of rotary disks adapted to press paper into said grooves, respectively, and mounted upon a swinging support, a cam arranged to swing the support in one direction, a spring resisting the action of the cam, a spring pressed roller working against the mandrel, an adhesive applying roller, a cam adapted to move said adhesive applying roller at intervals against a paper strip passing between the spring pressed roller and the mandrel, and a roller arranged to prevent the paper from moving from the adhesive applying roller.

960,227. PIPE-LOADING MACHINE. CORNELIUS JORDAN, Cohoes, N. Y., assignor to Jordan Machine Co., Cohoes, N. Y., a Corporation of New York. Filed July 10, 1909. Serial No. 507,009.



1. In a pipe loading machine, the combination with a pipe, of means for forcing fabric over said pipe, means for operating said first mentioned means, and power controlling means for automatically throwing into operation said second mentioned means when said first mentioned means are brought into contact with said pipe.

2. In a pipe loading machine, the combination with a pipe, of a pair of gripping members in contact with said pipe, means for operating said gripping members, and means for automatically throwing into operation said last mentioned means when said gripping members have been forced in contact with said pipe.

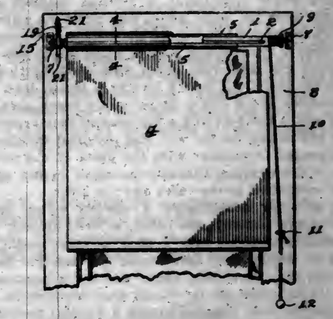
3. In a pipe loading machine, the combination with a pipe, of gripping members for forcing fabric over said pipe, means for forcing said gripping members into contact with said pipe, means for rotating said gripping members, and means connected with said gripping members for automatically throwing into operation said last mentioned means when the gripping members are forced into contact with said pipe.

4. In a pipe loading machine, the combination with a pipe, of a pair of gripping members for forcing fabric over said pipe, an independent pivotally mounted rotating shaft for each of said gripping members for independently rotating the same, movable brackets for moving each of said shafts for causing said gripping members to move toward and from said pipe, a pivotally mounted shaft receiving member positioned in each of said brackets, a shaft threaded at each end engaging said shaft receiving member, and means for rotating said threaded shafts whereby said brackets are moved toward and from each other.

5. In a pipe loading machine, the combination with a pipe, of a pair of gripping members for forcing fabric over said pipe, a rotatable shaft for each of said gripping members, pivotally mounted brackets carrying said shafts, a transverse shaft threaded at each end, a threaded nut pivotally mounted in each of said brackets, said nuts being designed to engage the threaded end of said shaft, and means for rotating said threaded shaft for causing said brackets to move toward and from each other.

[Claims 6 to 15 not printed in the Gazette.]

960,228. WINDOW-SHADE AND ROLLER. PURLEY E. LOWE and BLANCHE DE YOUNG, Houston, Tex. Filed July 27, 1908. Serial No. 445,668.



1. In a window shade, a roller adapted to receive the shade, a flexible connection having engagement with the roller for revolving the same, a friction brake comprising a flexible strip coiled around one end of the roller and having one end held in position and a coiled spring attached to the opposite end of the strip, and means for varying the tension of said spring.

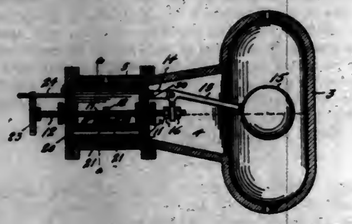
2. In a window shade, a roller adapted to receive a shade, a flexible connection having engagement with the roller for revolving the same and a friction brake comprising a flexible strip coiled about one end of the roller and having one end held in position and a coiled spring attached to the opposite end of the strip, and means for adjusting the tension of the said spring so as to vary the tension of the flexible strip.

3. In a window shade, a roller adapted to receive the shade, a flexible connection having engagement with the roller for revolving the same, a staple having a series of notches, a friction brake comprising a flexible strip coiled around one end of the roller and having one of its ends held in position by the staple and a coiled spring attached to the opposite end of the strip, the free end of the spring being hooked and adapted to engage any one of the said notches of the staple.

960,229. BOILER ATTACHMENT. GID M. MORRIS and JOHN H. WATKINS, Palestine, Tex., assignors of three-twelfths to J. O. Roberson, three-twelfths to W. R. Collier, one-twelfth to Nat M. Crawford, Grand Saline, Tex., and one-twelfth to W. B. Wynne, Wills Point, Tex. Filed Dec. 9, 1909. Serial No. 532,292.

1. In a boiler attachment, a vertical water chamber having connection with the boiler, a lever pivoted in the chamber and provided with a float, a valve casing separated from the chamber and having a transverse flat web separating the casing into upper and lower portions, the casing having opening for steam pipe connections above and below the web, the web having a vertical port, a slide valve operating in the upper portion of the casing on the flat web and provided with a port adapted to register with

the port of the web, and a horizontal valve rod extending from the valve into the chamber and having connection with the lever.



2. In a boiler attachment, a vertical chamber having connection with the boiler above and below its water line, a lever mounted to swing in the chamber, a float connected to the lever, a valve casing having a horizontal web therein dividing the same into upper and lower portions, the web having ports, the casing having a steam inlet in its upper portion and a steam outlet in its lower portion below the web, a valve having a flat contact face arranged to slide in the casing on the web and provided with vertical ports arranged to register with the ports of the web, and a valve rod operating through the valve casing and the chamber connected to the valve and the lever.

3. In a boiler attachment, a vertical water chamber having connection with the boiler, a lever pivoted in the chamber and provided with a float, a valve casing separated from the chamber and having a transverse flat web separating the casing into upper and lower portions, the casing having openings for steam pipe connections above and below the web, the web having a vertical port, a slide valve operating in the upper portion of the casing on the flat web and provided with a port adapted to register with the port of the web, a horizontal valve rod extending from the valve into the chamber and having connection with the lever, and means for turning the horizontal valve rod to adjust the valve thereon with relation to the port of the web.

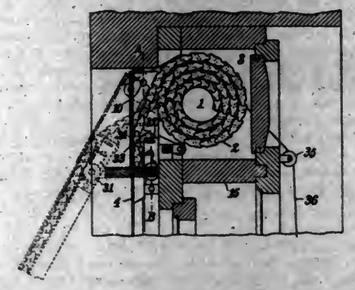
4. In a boiler attachment, a vertical water chamber having connection with the boiler, a lever pivoted in the chamber and provided with a float, a valve casing separated from the chamber and having a transverse flat web separating the casing into upper and lower portions, the casing having openings for steam pipe connections above and below the web, the web having a vertical port, a slide valve operating in the upper portion of the casing on the flat web and provided with a port adapted to register with the port of the web, a horizontal valve rod extending from the valve into the chamber and having connection with the lever, means for turning the horizontal valve rod to adjust the valve thereon with relation to the port of the web, and means for locking the valve rod against turning but permitting it to slide.

960,230. BLIND OR AWNING. STEFAN MROKOWSKI, Sosnowice, Russia. Filed Feb. 19, 1909. Serial No. 478,760.

1. The combination, with a window frame, of a roller blind, a pivoted guide frame therefor, and longitudinally movable screws mounted in the window frame and pivotally connected to said guide frame whereby the latter is positively secured to the former and may be adjusted at various angles thereto.

2. The combination, with a window frame, of a roller blind, a pivoted guide frame therefor, screws mounted in the window frame and pivotally connected to said guide frame whereby the latter is positively secured to said window frame, and rotary members having screw connection with said screws whereby the latter may be moved longitudinally to adjust the guide frame at various angles with respect to the window frame.

3. The combination, with a window frame, of a roller blind, a pivoted guide frame therefor, screws pivotally connected to said guide frame near the lateral edges thereof, revoluble sprocket wheels mounted around said screws, casings secured to the window frame and containing said sprocket wheels, and chains engaging said wheels for the purpose of adjusting said guide frame at various angles with respect to said window frame.

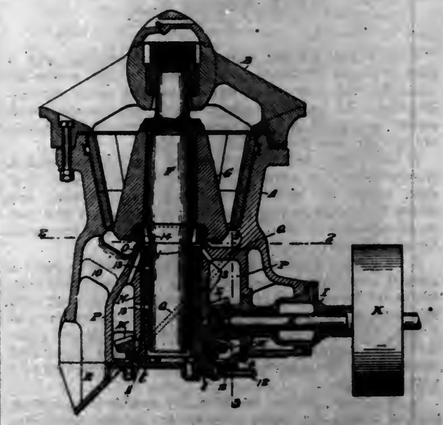


4. The combination, with a window frame, of a roller blind, a pivoted guide frame therefor, adapted to swing outward, longitudinally movable screws to adjust said guide frame at various angles with respect to the window frame, and means to automatically lock said blind in said guide frame when the latter is swung outward to a certain angle.

5. The combination, with a window frame, of a roller blind, a pivoted guide frame therefor, adapted to swing outward, longitudinally movable screws to adjust said guide frame at various angles to the window frame, means to automatically lock said blind in said guide frame when the latter is swung outward to a certain angle, and means to automatically lock said guide frame to the window frame when the former is closed.

[Claims 6 to 12 not printed in the Gazette.]

960,231. CRUSHER. ARTHUR NIEDERMEYER and RICHARD BERNHARD, Milwaukee, Wis., assignors to Power and Mining Machinery Company, a Corporation of New Jersey. Filed Aug. 2, 1909. Serial No. 510,688.



1. In a gyratory crusher, the combination with the crusher shaft and crushing head thereon, of shaft driving mechanism including an eccentric directly below the head, an eccentric hub and gear inclosing chamber below the head with space between the outer casing and the hub and gear chamber for the delivery of the crushed material.

2. In a gyratory crusher, the combination with the crusher shaft and crushing head thereon, of shaft driving mechanism including an eccentric directly below the head, an eccentric hub and gear inclosing chamber below the head with space between the outer casing and the hub and gear chamber for the delivery of the crushed material, and an inclined diaphragm in said delivery space.

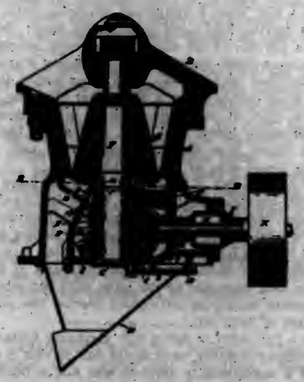
3. In a gyratory crusher, the combination with the crusher shaft, the crushing head thereon and the shaft driving mechanism including an eccentric, of an eccentric hub directly below the crushing head, and a dust excluding ring engaging the hub and closing the space between the hub and crushing head.

4. In a gyratory crusher, the combination with the crusher shaft, the crushing head thereon, and the shaft driving mechanism including an eccentric, of an eccentric hub directly below the crushing head, and a dust excluding ring separate from the head and engaging the hub and closing the space between the hub and crushing head.

5. In a gyratory crusher, the combination with the crusher shaft and crushing head thereon, of an eccentric below the head, a driving gear at the bottom of the eccentric, a counter shaft gear engaging the top of the driving gear, and an eccentric hub surrounding the eccentric and formed integrally with the casing and with a chamber arranged to inclose the gearing with an annular space surrounding the chamber between the chamber and casing for the delivery of the crushed material.

[Claims 6 to 13 not printed in the Gazette.]

960,232. CRUSHER. ARTHUR NIEDERMEYER and RICHARD BERNHARD, Milwaukee, Wis., assignors to Power and Mining Machinery Company, a Corporation of New Jersey. Filed Aug. 2, 1909. Serial No. 510,689.



1. In a gyratory crusher, the combination with a crusher shaft and crushing head thereon, of shaft driving mechanism including an eccentric directly below the head, an eccentric hub and gear inclosing chamber below the head, and an outer casing providing an annular delivery space extending to the bottom of the crusher about the gear chamber through which the crushed material is delivered below the driving mechanism.

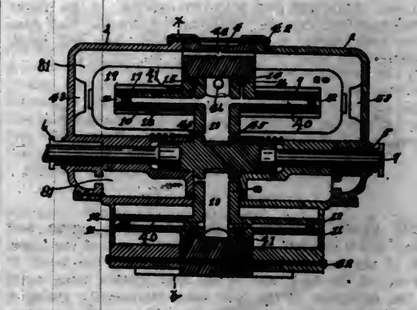
2. In a gyratory crusher, the combination with a crusher shaft and crushing head thereon, and shaft driving mechanism including an eccentric and gearing for driving the eccentric, of an eccentric hub below the crushing head, a dust excluding ring engaging the hub and closing the space between the hub and crushing head, a gear inclosing chamber, and an outer casing providing an annular delivery space extending to the bottom of the crusher about the gear chamber through which the crushed material is delivered below the driving mechanism.

3. In a gyratory crusher, the combination with a crusher shaft and crushing head thereon of an eccentric below the head, a driving gear at the bottom of the eccentric, a counter-shaft gear engaging the top of the driving gear, and an eccentric hub surrounding the eccentric and formed integrally with the casing and with a chamber arranged to inclose the gearing, the casing and chamber being formed to provide an annular delivery space extending to the bottom of the crusher about the gear chamber through which the crushed material is delivered below the driving mechanism.

4. In a gyratory crusher, the combination with the crusher shaft and crushing head thereon, of shaft driving mechanism below the head, a chamber inclosing the driving mechanism, and an outer casing separated from the chamber to provide an annular delivery space extending to the bottom of the crusher about the chamber through which the crushed material is delivered below the driving mechanism.

5. In a gyratory crusher, the combination with a crusher shaft and crushing head thereon, of eccentric M and eccentric hub O below the head, driving gear M and counter-shaft gear L above the gear, gear chamber P integral with the casing and separated from the casing to form an annular delivery space extending to the bottom of the crusher about the gear chamber through which the crushed material is delivered below the driving mechanism and a cap C closing the bottom of the chamber within said annular delivery space.

960,233. PROCESS OF COMPRESSING AIR, GAS, OR OTHER GASEOUS FLUIDS. EUGENE F. OSBORNE, Chicago, Ill., assignor to Henry A. Branch, Chicago, Ill. Filed Nov. 23, 1905. Serial No. 288,652.



1. The process herein described which consists essentially of conducting the fluid to be compressed into a compression chamber, of lunate form, of a rotary compressing device, therein compressing it in lamina by varying the volume of the compression chamber, bringing a cooling agent in contact with the internal surfaces of the compressing device, and also intermixing the cooling agent with the fluid in the act of compression, for the purpose set forth, substantially as described.

2. The process herein described which consists essentially of conducting the fluid to be compressed into a compression chamber, of lunate form, of a rotary compressing device, therein compressing it in lamina by varying the volume of the compression chamber, bringing a cooling agent in contact with the internal surfaces of the compressing device and also intermixing the cooling agent with the fluid in the act of compression, thence conducting the mixture to a separating chamber wherein it is brought in contact with cooling surfaces, thus causing a precipitation of a portion of the condensable part of the mixture and using the cooled liquid resulting therefrom as a cooling agent for the compressor and the fluid being compressed, for the purpose set forth.

3. The process herein described which consists essentially of conducting the fluid to be compressed into a compression chamber of lunate form, of a rotary com-

pressing device, therein compressing it in lamina by varying the volume of the compression chamber, bringing a cooling agent in contact with the internal surfaces of the compressing device and introducing the cooling agent intermittently into the compression chamber during compression, for the purpose set forth.

4. The process herein described which consists essentially of conducting the fluid to be compressed into a compression chamber of lunate form, of a rotary compressing device, therein compressing it in lamina by varying the volume of the compression chamber, bringing a cooling agent in contact with the internal surfaces of the compressing device and also intermixing the cooling agent with the fluid in the act of compression, thence conducting the mixture to a separating chamber wherein it is brought in contact with cooling surfaces, thus causing a precipitation of a portion of the condensable part of the mixture and using the cooled liquid resulting therefrom as a cooling agent for the compressor and the fluid being compressed, the said cooling agent being at all times subjected to the head pressure of the system and circulated through the compressor and thence returned to the cooling chamber to be cooled, for the purpose set forth.

5. The process herein described which consists essentially of conducting the fluid to be compressed into a compression chamber, of lunate form, of a rotary compressing device, therein compressing it in lamina by varying the volume of the compression chamber, bringing a cooling agent in contact with the internal surfaces of the compressing device, for the purpose set forth, substantially as described.

960,234. PROCESS FOR MAKING SHOES. ADAM HENRY PRENZEL, Halifax, Pa. Original application filed June 25, 1909, Serial No. 504,276. Divided and this application filed Sept. 1, 1909. Serial No. 515,574.



The herein described process of making spring heel shoes, which consists in cutting away a part of the upper side of the heel portion of a bottom piece, the depth of the cut at the front end of the heel portion being equal to the thickness of the heel seat, temporarily gluing a heel seat of uniform thickness in said cut-away portion, forming a continuous channel in the sole and heel seat, sewing along said channel to unite the upper wrong side out to the sole and heel seat, turning the shoe, separating the temporarily glued heel seat from the bottom piece, inserting a wedge between said separated parts, and permanently securing the wedge between the bottom and the heel seat.

960,235. [WITHDRAWN.]

960,236. DENTIST'S COTTON-HOLDER AND WASTE-RECEPTACLE. BERT GIFFORD SIMMONS, New Brunswick, N. J., assignor to Johnson & Johnson, New Brunswick, N. J., a Corporation of New Jersey. Filed Mar. 3, 1910. Serial No. 547,061.

1. The combination of a carton of cotton having a suitable feed opening, and a casing or holder open at the bottom for the reception of the carton and provided at top with an inwardly directed flange which arrests the upward movement of the carton, and an invertible cover having receptacles on both ends.

2. The combination of a carton of cotton having a suitable feed opening, and a casing or holder open at the bottom for the reception of the carton and provided at top with an inwardly directed marginal rim or flange that arrests the upward movement of the carton, and in offset, and an invertible cover adapted for use as a receptacle



and having on one end a skirt-like flange adapted to the offset and having on the other end a boss adapted to the flange.

960,237. SPLICE-BAR FOR RAIL-JOINTS. WILLIAM P. THOMSON and SAMUEL G. THOMSON, Philadelphia, Pa., assignors to Thomson-Thomson Company, Philadelphia, Pa., a Partnership. Filed Mar. 13, 1908. Serial No. 420,898.



1. In a rail joint, a splice bar, clamping bolts and nuts, said bar having bolt holes through its upper member and having a portion of the outer face of said member formed by a substantially vertical face extending above the bolt and interposed between two other faces which diverge outwardly from points below a horizontal plane at the top of the nuts, part of the lower one of said divergent faces lying vertically below said nuts, said splice bar having a concave upper face slanting downwardly and outwardly from the lower edge of the rail head.

2. In a rail joint, a splice bar, clamping bolts and nuts, and a nut-bearing member, said splice bar having a concave upper face slanting downwardly and outwardly from the lower edge of the rail head and also having adjacent to the bolt holes a substantially vertical outer face of greater height than the diameter of said bolts and of less height than the long diameter of the nuts, said bar also having a foot member extending outwardly beyond the plane of the inner face of said nut.

3. In a rail joint, a splice bar, clamping bolts, nuts, and a nut-bearing member, said splice bar having a foot member and a substantially vertical web and a head lying entirely below the lower edge of the rail head, said foot member extending outwardly beyond said nut-bearing member and beyond the outer edge of said head, said head projecting outwardly beyond the outer face of said web, the greater portion of the under face of the projection slanting upwardly and outwardly between horizontal planes at the top of the bolts and at the top of the nuts to form a bearing for said nut-bearing member.

4. In a rail joint, a splice bar fitted under the rail head, and a nut-bearing member, said bar having an outwardly extending stiffening rib adjacent to its top and along its outer face and also having a reinforcing and spiking member extending outwardly a substantial distance beyond said rib, said bar also having a concave face inclined downwardly and outwardly from the lower edge of the rail head, and said rib having a downwardly and inwardly slanting under face extending below the top of the nut to form a bearing for said nut-bearing member.

5. In a rail joint, a splice bar fastened to both rails and having a longitudinal stiffening rib extending along its outer face adjacent to its top, clamping bolts and nuts, and a nut-bearing member engaging the outer face of the bar, said stiffening rib having a concave upper face inclined downwardly and outwardly from the lower outer edge of the rail head and an outer face inclined downwardly and inwardly, said nut-bearing member lying wholly below the top of the nuts, and being of sufficient thickness to space the overlapping nuts a sufficient distance from the bar to clear a portion of said rib; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

960,238. SPLICE-BAR FOR RAILS. WILLIAM P. THOMSON and SAMUEL G. THOMSON, Philadelphia, Pa., assignors to Thomson-Thomson Company, Philadelphia, Pa., a Partnership. Filed Apr. 26, 1909. Serial No. 492,344.



1. A splice bar for rails to stand free from the rail web and having bolt holes through it, said bar having an inwardly-projecting head portion formed with an upright inner face adjacent to its top intersected by an outwardly extending face at a point between horizontal planes at the top and at the bottom of the bolt holes.

2. A splice bar for rails to stand free from the rail web and having an inwardly-projecting head portion adjacent to its top, a web and holes for clamping bolts, the lower inner edge of said head lying below the top of the bolt holes.

3. A splice bar for rails, having bolt holes through it and also having an enlarged upper head with an inwardly-projecting portion, the lower inner edge of said projecting portion lying between horizontal planes at the top and at the center of the bolt holes.

4. A splice bar for rails to stand free from the rail web and having bolt holes through it, and also having an enlarged head at its top with an inwardly-projecting portion, said projecting portion having an inner face substantially parallel to the rail web and extending below a horizontal plane at the top of the bolt holes.

5. A splice bar for rails, having bolt holes through it, and also having a foot member, a web member and a head portion projecting inwardly from said web, the lower inner edge of said head portion lying below a horizontal plane at the top of the bolt holes, and the upper face of said foot member being joined to the outer face of said web member by an enlarged fillet.

[Claims 6 to 8 not printed in the Gazette.]

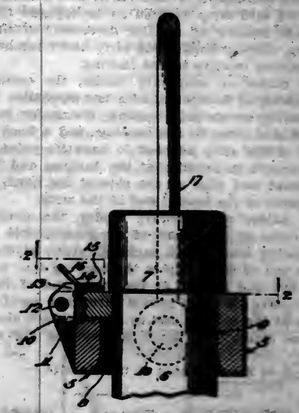
960,239. CASING-ELEVATOR. FRANK S. BARKELEW, Los Angeles, Cal. Filed Dec. 17, 1908. Serial No. 467,948.

1. A casing elevator, comprising a solid ring having an internal diameter larger than the external diameter of the casing collar, a catch member pivoted to one side of the ring at the top thereof and projecting inwardly into the internal opening of the ring, and locking means to prevent the displacement of the catch member.

2. A casing elevator, comprising a ring adapted to surround the casing, a catch member pivoted to one side of the ring at the top thereof and projecting inwardly into the internal opening of the ring, and locking means to prevent the displacement of the catch member.

3. A casing elevator, comprising a ring adapted to surrouud the casing, a bearing surface on the upper end of the ring at one side, a catch member pivoted to the upper end of the ring at the other side thereof and adapted to swing downwardly and inwardly into the interior opening of the ring to supply a bearing surface opposite the first named surface, a lock member mounted on the catch member, and a lug on the ring with which the lock member is adapted to engage.

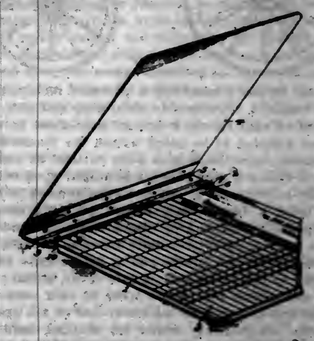
4. A casing elevator, comprising a ring adapted to surround the casing, a bearing surface on one side of the interior upper edge of the ring, a catch member pivoted to the upper end of the ring at the other side thereof and adapted to swing downwardly and inwardly into the interior opening of the ring to supply a bearing surface opposite the first named surface, a lock member pivoted to the catch member, a lug on the ring adapted to engage the end of the lock member when the catch member is down, and a handle attached to the lug engaging end of the lock member.



5. A casing elevator, comprising a solid ring adapted to surround the casing and having a bearing surface on one side at its top for engagement with the casing collar, a catch member mounted on the other side thereof and projecting into the internal opening of the ring, its inner end forming a bearing for the casing collar on the side opposite that supported by the bearing surface on the ring, and lock means for securing the catch member in place against the casing.

[Claims 6 and 7 not printed in the Gazette.]

960,240. TEMPORARY BINDER. CHARLES B. BUCK, Washington, D. C. Filed June 3, 1909. Serial No. 499,917.



1. In a holder or temporary-binder, the combination with a backing or base-plate, of a non-extensible binding strip extending across said plate, means for fastening one end of said strip to the backing, and a hook at the other end of said strip adapted to be engaged about an edge of said backing by relative movement of the strip and backing, thereby holding the strip in its binding position relative to the backing.

2. In a holder or temporary-binder, the combination with a backing or base-plate, of a non-extensible binding strip extending across said plate, means pivotally securing

one end of said strip to the backing, and a hook at the other end of said strip adapted to be engaged about an edge of said backing by swinging said strip on its pivot, thereby securing the strip in its binding position relative to the backing.

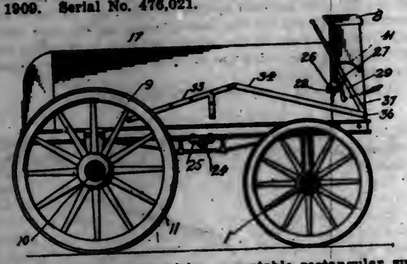
3. In a holder or temporary-binder, the combination with a backing or base-plate, of a non-extensible binding strip of spring material extending across said plate, a pin securing one end of said strip to the backing but permitting relative movement of said parts, and a hook at the other end of said strip adapted to be engaged about an edge of said backing by relative movement of the strip and backing, thereby holding the strip under tension in its binding position relative to the backing.

4. In a holder or temporary binder, the combination with a backing or base-plate, of a non-extensible binding strip extending across said backing, means for fastening one end of said strip to the backing, and a hook at the other end of the strip adapted to have its point passed through a notch in an edge of the backing and be then engaged about said edge at one side of the notch by lateral movement of the hooked end of the strip.

5. In a holder or temporary binder, the combination with a backing or base-plate, of a non-extensible binding strip extending across said backing, means pivotally securing one end of said strip to the backing near one edge of the latter, and a hook at the other end of the strip adapted to have its point passed through a notch in the other edge of the backing and be then engaged about said edge at one side of the notch by swinging the strip on its pivot.

[Claims 6 to 8 not printed in the Gazette.]

960,241. DUMP-WAGON. WILLIAM S. COATES, Cedar Rapids, Iowa; Jennie E. Coates, administratrix of said William S. Coates, deceased, assignor of one-half to Henry J. McCabe, Cedar Rapids, Iowa. Filed Feb. 4, 1909. Serial No. 476,021.

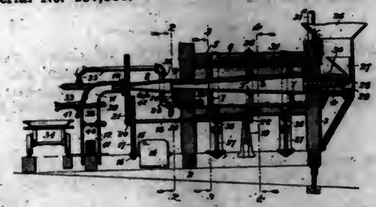


A dump wagon comprising a portable rectangular supporting frame, a transversely extending shiftable element connected to said frame, a wagon body fixed to said element and adapted to be tilted within the frame when the said element is shifted, said body-portion of less length than said frame, a seat support arranged upon said frame forwardly of the body, a pair of straps secured to the sides of the body, a transversely extending shaft mounted in said support, a crank arm attached to one end of said shaft, a lever fixed intermediate its ends to said shaft, a link attached at one end to one of said straps and at its other end to the lower end of said lever, a link attached at one end to one end of the other of said straps and at its other end attached to the lower end of the crank arm, said lever constituting means for shifting said element whereby said body can be tilted and restored to normal position, a rock-shaft mounted in said support, stops carried by the wagon body, shiftable latches adapted to extend in the path of said stops, whereby the wagon body is retained in normal position, cranks connected to the latches and to the rock-shaft, and a foot tread connected to the rock-shaft for operating the same when pressure is applied to the tread.

960,242. [WITHDRAWN.]

REISSUES.

13,118. REVOLVING FURNACE FOR VOLATILIZING METALS FROM THEIR ORES. HARRY H. HUGHES, Springfield, Mo. Filed Jan. 20, 1910. Serial No. 539,208. Original No. 922,906, dated May 25, 1909, Serial No. 487,836.



1. In a revolving furnace for volatilising ore, a revolving retort, a revolving condensing chamber coupled to the retort, and means for feeding the material into the retort automatically.

2. In a revolving furnace for volatilising ore, a revolving retort, a cylindrical casing having an inner lining of refractory and non-heat conducting material surrounding and adapted to rotate with the retort, providing an annular combustion chamber between the retort and casing, a condenser tube coupled to the retort, means for feeding the material into the retort during rotation, and means for feeding fuel to the combustion chamber.

3. In a furnace of the class described, a revolving retort, a cylindrical casing provided with an inner layer or lining of refractory and non-heat conducting material surrounding the retort and adapted to rotate therewith, leaving a combustion chamber between the retort and casing, means for feeding ore into the retort, a condensing chamber for the ore vapors, means for leading the carbon monoxid gas generated by volatilising the ore to the combustion chamber, and means for feeding fuel to the combustion chamber.

4. In a furnace of the class described, a revolving retort provided with a tubular trunnion bearing having an interior thread forming a feed screw, a main hopper inclosing the outer end of the trunnion bearing of the retort, a secondary hopper in the main hopper, said secondary hopper having a tube leading into the trunnion bearing, a support in the main hopper beneath the body of the secondary hopper, and means for heating the retort.

5. In a furnace of the class described, a revolving retort provided with a tubular trunnion bearing having an interior thread forming a feed screw, a main hopper inclosing the outer end of the trunnion bearing of the retort, a secondary hopper in the main hopper, said secondary hopper having a tube leading into the trunnion bearing, a support in the main hopper beneath the body of the second hopper, means for heating the retort, and means for condensing the zinc vapors.

6. In a furnace of the class described, a revolving retort, a condenser tube coupled to one end of the retort, an upright frame having an upper hollow portion communicating with the outer end of the condenser tube and forming a continuation thereof, said frame also having a duct for leading the condensed ore to a suitable receiver, a slide in said frame at a point near said duct, and means for heating the retort.

7. In a furnace of the class described, a revolving retort, a condenser tube coupled to one end of the retort, an upright frame having an upper hollow portion communicating with the outer end of the condenser tube and forming a continuation thereof, said frame also having a duct for leading the condensed ore to a suitable receiver, a slide in said frame at a point near said duct, means for heating the retort, and means for leading the carbon monoxid gas generated by volatilising the ore to the combustion chamber, and means for excluding air from the chamber of the retort.

8. In a furnace for volatilising metallic zinc from its ores, a revoluble retort, means for revolving the retort, a condensing chamber in communication with the retort, means for supplying material to the retort during rotation, and means permitting the withdrawal of the condensed metal from the condenser.

9. In a furnace for volatilising metallic zinc from its ores, a rotary retort, a furnace surrounding the retort means for revolving the retort, and a condenser located at the discharge end of the retort and into which the zinc fumes and residue is deposited from the retort.

10. In a furnace for volatilising metallic zinc from its ores, the combination with a furnace, of an inclined revoluble retort, means for turning the retort, a condenser connected to the discharge end of the retort so as to receive therefrom the zinc fumes and residue, and means for feeding material to the retort during rotation.

11. In a furnace for volatilising metallic zinc from its ores, a retort mounted for rotation, a furnace surrounding the retort, means for revolving the retort, a condenser into which the retort discharges, and a sealed discharge for the condenser.

12. In a furnace for volatilising metallic zinc from its ores, the combination with an inclined retort, a rotary furnace carrying the retort, a condenser into which the retort discharges, and a sealed outlet for the condenser.

13. In a furnace for volatilising metallic zinc from its ores, a rotary retort, a furnace within which the retort is located, means for turning the furnace retort, and auxiliary turning means for said retort remotely located relative to the said other turning means for the purposes stated.

14. In a furnace for volatilising metallic zinc from its ores, a rotatable retort, means for heating the retort, means for supplying material to one end of the retort, a condenser into which the retort discharges, a sealed outlet for the condenser, and a gas escape leading from the condenser.

15. In a furnace for volatilising metallic zinc from its ores, the combination with a rotatable furnace, a retort supported within the furnace and having extensions leading through the end walls thereof, a feed hopper communicating with one end of the retort, a condenser communicating with the opposite end of the retort, and means for rotating the furnace and retort.

16. In a furnace for volatilising metallic zinc from its ores, the combination with a furnace, of a retort located within the furnace having its end portions projecting through the end walls of the furnace, a feed at one end of the retort, and a condenser communicating with the opposite end of the retort so as to receive the zinc fumes and residue therefrom.

17. In a furnace for volatilising metallic zinc from its ores, the combination with a rotatable retort, a rotatable furnace within which the retort is positioned and through the end walls of which parts of the retort project, means for supporting the retort within the furnace, means for supporting portions of the retort without the furnace, and means for rotating the retort.

18. In a furnace for volatilising metallic zinc from ores, the combination with a furnace, of a retort located therein and projecting beyond the same, means associated with the projecting end of the retort for rotating the same, and means associated with the retort within the furnace for also rotating the said retort.

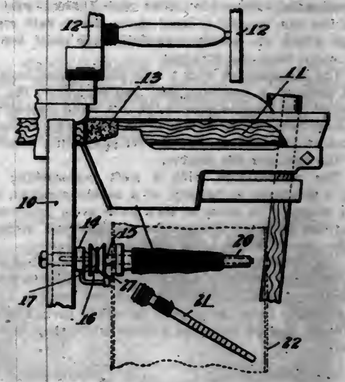
19. In a furnace for volatilising metallic zinc from ores, a retort, means for heating the retort, means for supplying the retort with material comprising a receptacle located at the end thereof, a feed hopper within the receptacle and communicating with the end of the retort, and means for turning the retort.

20. In a furnace for volatilising metallic zinc from ores, the combination with a furnace mounted for rotation, of a retort, supported within the furnace and having one end projecting beyond the furnace, an anti-friction bearing for said projecting end, means for turning the furnace and the retort, and means independent of the furnace associated with the projecting end of the retort for assisting in the turning thereof.

21. In a furnace for volatilising metallic zinc from ores, a retort within the furnace, a feed entering the end of the retort comprising a hopper, a container surrounding the hopper and into which the end of the retort projects, and a protecting screen above the projecting end of the retort within the said container.

22. In a furnace for volatilising metallic zinc from its ore, the combination with a rotating retort, a condenser for the zinc fumes in communication with said retort, a feed for the retort, means permitting the removal of metallic zinc from the condenser, means for sealing the joints against the ingress of air, and means for preventing air from entering the feed end of the retort.

13,119. BOBBIN-STRIPPER FOR WEFT-REPLENISHING LOOMS. FREDERIC W. MOORE, Millbury, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Dec. 28, 1908. Serial No. 469,031. Original No. 890,865, dated June 16, 1908, Serial No. 368,180.



1. The combination with a weft replenishing loom, of means mounted on the frame thereof for stripping yarn from the bobbins as they are discharged from the shuttle, and a clearer located in position to engage the loose ends of the yarn to retard the same and lay the yarn upon said stripping means during the descent of the bobbin.

2. The combination with a loom having a frame, a main shaft and a lay, of means operated by the main shaft and mounted on the frame for stripping yarn from the bobbins as they are discharged from the shuttle, and a clearer on the lay for engaging and retarding the end of the yarn on the bobbin.

3. The combination with a loom having a lay, of means on the loom for stripping yarn from the bobbins as they are discharged from the shuttle, and a clearer cloth on the lay for engaging and retarding the ends of the yarn on the bobbins, whereby the same will be brought more surely into contact with the stripping device.

4. The combination with a weft replenishing loom, of a bobbin stripper therefor, and means located in position to engage loose ends of the yarn on the bobbins as they are discharged for retarding said loose ends, said means being so located as to cause said ends to engage said stripper.

5. The combination with a weft replenishing loom, of a yarn stripper for the bobbins thereof comprising a spindle, and a bobbin removably mounted thereon and provided with a cloth surface for engaging the yarn.

6. The combination with a loom, of a bobbin stripper therefor, and a can for receiving the bobbins having a shelf located below said stripper and spaced at its free end from one of the walls of the can, said shelf being hinged so as to swing upwardly.

7. The combination with a loom, of a bobbin stripper therefor and a can for receiving the bobbins, having a

swinging adjustable shelf at a lower level than said stripper and in position to act as a temporary obstruction for the falling bobbin spaced at its free end from the wall of the can whereby a space is provided through which the bobbin may fall when the shelf is in horizontal position.

8. The combination with a weft replenishing loom, of a bobbin stripper, and a receiving can, said stripper being located immediately above the top of the can which is provided with an open top, the space between which and the adjacent shuttle-box of the loom is unobstructed.

9. The combination with a weft replenishing loom, having a battery, of a bobbin stripper, and a receiving can, said bobbin stripper being located near the side of the can nearest the battery, and the can being provided with a shelf extending from the other side thereof part way across the can below the stripper, and spaced from the can at its free end whereby a space is provided through which the bobbin may fall.

10. The combination with a weft replenishing loom having a battery, of a bobbin stripper, and a receiving can, said bobbin stripper being located near the side of the can nearest the battery, and the can being provided with a shelf extending from the other side thereof part way across the can leaving a clear space under said stripper through which the bobbin may fall, said shelf being located lower than the stripper.

11. The combination with a weft replenishing loom, of a bobbin stripper, a receiving can, and a clearer, the space over which the bobbins pass to the can being unobstructed, the clearer being located in position to engage the ends of the yarn on the bobbins, and the stripper being located between the can and the clearer.

12. The combination with a weft replenishing loom, having a magazine or battery, of a bobbin stripper, and a clearer mounted to move in such path as to intercept the ends of the yarn on the bobbins as they are discharged from the shuttle toward the stripper.

13. A weft replenishing loom having a magazine or battery, and a lay provided with a clearer located in position to engage the loose ends of yarn on the bobbins as they are discharged from the shuttle to retard them and cause the yarn to unwind from the bobbins while they fall.

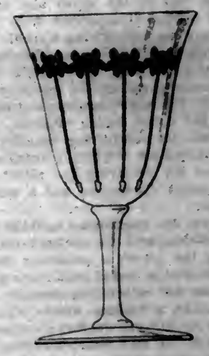
DESIGNS.

40,709. BADGE OR SIMILAR ARTICLE. JOHN J. DIDCOCT, Streator, Ill. Filed Jan. 6, 1910. Serial No. 536,774. Term of patent 3½ years.



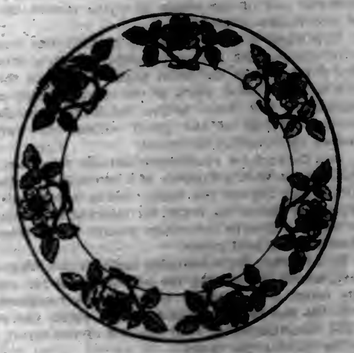
The ornamental design for a badge or similar article as shown.

40,710. GOBLET OR SIMILAR ARTICLE. JULES H. VERNON, New York, N. Y. Filed Feb. 25, 1910. Serial No. 546,033. Term of patent 7 years.



The ornamental design for a goblet or similar article, as shown and described.

40,711. PLATE OR SIMILAR ARTICLE. JULES H. VERNON, New York, N. Y. Filed Feb. 25, 1910. Serial No. 546,034. Term of patent 7 years.



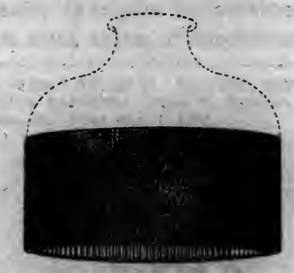
The ornamental design for a plate or similar article, as shown and described.

40,712. LAMP-SHADE. HUGH MCAFEE, Pittsburg, Pa., assignor to Consolidated Lamp & Glass Co., Coraopolis, Pa., a Corporation of West Virginia. Filed Mar. 25, 1910. Serial No. 551,590. Term of patent 7 years.



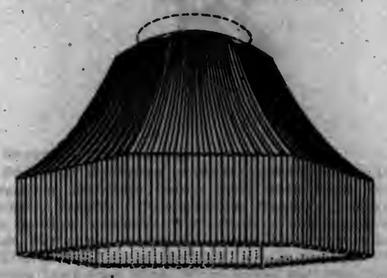
The ornamental design for a lamp shade, substantially as shown and described.

40,713. SHADE, REFLECTOR, OR SIMILAR ARTICLE. OTIS A. MYGATT, New York, N. Y. Filed June 5, 1908. Serial No. 437,005. Term of patent 14 years.



The ornamental design for a shade, reflector, or similar article, as shown.

40,714. SHADE, REFLECTOR, OR SIMILAR ARTICLE. OTIS A. MYGATT, New York, N. Y. Filed June 5, 1908. Serial No. 437,026. Term of patent 14 years.



The ornamental design for a shade, reflector, or similar article, as shown.

40,715. HANDLE-PLATE FOR CASKETS. FRANCIS K. ALLEN, Springfield, Ohio, assignor to The Springfield Metallic Casket Company, Springfield, Ohio, a Corporation of Ohio. Filed Apr. 2, 1910. Serial No. 553,156. Term of patent 7 years.



The ornamental design for a handle plate for caskets, as shown.

40,716. HANDLE-PLATE FOR CASKETS. FRANCIS K. ALLEN, Springfield, Ohio, assignor to The Springfield Metallic Casket Company, Springfield, Ohio, a Corporation of Ohio. Filed Apr. 2, 1910. Serial No. 553,157. Term of patent 7 years.



The ornamental design for a handle plate for caskets, as shown.

40,717. HAND-WHEEL. WILLIAM NELSON, Binghamton, N. Y., assignor to The Fairbanks Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 4, 1908. Serial No. 521,019. Term of patent 7 years.



The ornamental design for a hand wheel as shown.

40,718. FONT OF TYPE. WILLIAM A. SCHRAUBSTADTER, St. Louis, Mo. Filed May 13, 1909. Serial No. 495,829. Term of patent 14 years.

ABCDEFGHIJKLMNOPQR
STUVWXYZ&.,;:-'!?$£
abcdefghijklmnopqrstuvwxyzÆŒ
1234567890

The ornamental design for a font of type as shown.

40,719. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Mar. 30, 1910. Serial No. 552,477. Term of patent 3½ years.



The ornamental design for a rug, as shown.

TRADE-MARKS

PUBLISHED MAY 31, 1910.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 33,234. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOHN V. FARWELL COMPANY, Chicago, Ill. Filed Mar. 7, 1908.



Showing a fanciful figure.

Particular description of goods.—India Linons, Lawns, Organdies, Nainsooks, Cotton Mulls, Swiss Mulls, Dotted Swisses, Batistes, Dimities, Linen Cambrics, Linen-Finish Suitings, Mercalins, Welt Piques, White Cotton Suitings, Hardanger Canvas, Tarletans, White Cotton Reps, White Cotton Poplins, Tuckings, French Reverses, White Cotton Lawn Piece Goods, White Cotton Mull Piece Goods, White Cotton Mercerized Piece Goods, White Embroidered Swiss Piece Goods, and White Woven Swiss Piece Goods.

Ser. No. 36,174. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHEMISCHE FABRIKEN VORM. WEILER-TER MEER, Uerdingen on the Rhine, Germany. Filed July 7, 1908.

MANNOL

Particular description of goods.—A Substitute for Camphor in Celluloid Manufacture.

Ser. No. 37,486. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LANE-LIBBY FISHERIES CO., Vinalhaven, Me. Filed Sept. 17, 1908.

WHITE WAVE

Particular description of goods.—Cured Shredded Codfish and Salted and Dried Cusk, Haddock, and Hake.

Ser. No. 39,475. (CLASS 39. CLOTHING.) MADAME IRENE, New York, N. Y. Filed Dec. 22, 1908.

ERAINE

Particular description of goods.—Corsets.

Ser. No. 40,870. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) OAKLEY CHEMICAL Co., New York, N. Y. Filed Mar. 1, 1909.

OAKITE

Particular description of goods.—A Granulated Chemical Cleansing Compound.

Ser. No. 41,244. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) A. KARLSON METALL- & MASKIN-AKTIEBOLAG, Stockholm, Sweden. Filed Mar. 17, 1909.

ALFA

Particular description of goods.—Pulverizing-Machines.

Ser. No. 42,279. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed May 6, 1909.

NEW IDEA

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 42,849. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THEODOR SCHIEGALL, New York, N. Y. Filed May 11, 1909.



No claim being made to the representation of the dial.
Particular description of goods.—Clocks.

Ser. No. 42,841. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) GEORGE ROWNEY & Co., London, England. Filed June 5, 1909.



Particular description of goods.—Artists' Colors and Artists' Varnishes.

Ser. No. 44,832. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) EDWARD H. WAGNER, New York, N. Y. Filed Sept. 21, 1909.

MIN-ALA

Particular description of goods.—Natural Mineral Water.

Ser. No. 45,181. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM J. LAUTS, Buffalo, N. Y. Filed Oct. 7, 1909.



Particular description of goods.—Remedy for Body-Odors.

Ser. No. 45,227. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WADHAMS & COMPANY, Portland, Oreg. Filed Oct. 9, 1909.

DIAMOND



Particular description of goods.—Olives, Peanut-Butter, Tomato Catsup, Mustard, Ginger, Cinnamon, Flavoring Extracts, Dried Fruits, Raisins, Pearl-Barley, Split Peas, Farina, Pearl-Tapioca, Popcorn, Tea, Spices, Jams, Jellies, Maple-Syrup, Honey, and Canned Oysters, Lobsters, Shrimps, and Clams.

Ser. No. 45,626. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BORDEN-STEWART COMPANY, Dallas, Tex. Filed Oct. 30, 1909.

FIRESIDE



Particular description of goods.—Canned Fruits, Vegetables, Red Kidney-Beans, Fish, Oysters, Sauer-Kraut, and Lye-Hominy; Jellies, Jams, Preserved Fruits, Pickles, Tomato Catsup, Apple Butter, Maple-Sugar Butter, Dried Fruits, Macaroni, Spaghetti, Prepared Mustard, Olives, and Cream-Cheese.

Ser. No. 46,304. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) GEORGE F. LUFBERY, Jr., Elizabeth, N. J. Filed Dec. 6, 1909.

OWASA

Particular description of goods.—Packing in the Form of Washers, Disks, Balls, Gaskets, and Sheets.

Ser. No. 46,391. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GOLDEN GATE PACKING COMPANY, San Jose, Cal. Filed Dec. 10, 1909.

AJAX BRAND



The picture being fanciful.
Particular description of goods.—Canned Fruits.

Ser. No. 46,944. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) TINGUE, BROWN & COMPANY, New York, N. Y. Filed Jan. 6, 1910.

TIBRODE

Particular description of goods.—Double-Woven Cotton Cloth Napped on Both Sides.

Ser. No. 47,047. (CLASS 12. CONSTRUCTION MATERIALS.) DURAND CHURCHILL, San Diego, Cal. Filed Jan. 10, 1910.

AGGRICRETE

Particular description of goods.—Hollow Tiles, Posts, and Blocks Made of Concrete.

Ser. No. 47,050. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANCESCO DESTEFANO, San Francisco, Cal. Filed Jan. 11, 1910.



Particular description of goods.—Medicinal Herb Extracts and Compounds Thereof.

Ser. No. 47,184. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NORTHEL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Jan. 17, 1910.

Particular description of goods.—Axes, Hatchets, Hammers, Saws, Concrete-Groovers, Concrete-Corner Tools, Concrete-Edgers, Concrete-Corrugating Tools, Concrete-Indentation Rollers, Tack-Claws, Tack-Hammers, Picks, Mattocks, Chisels, Drawing-Knives, Auger-Bits, Car-Bits, Nut-Augers, Expansive Bits, Braces, Screw-Drivers, Cross-cut-Saws, Ice-Saws, Saw-Tools, Handsaws, Butcher-Saws, Compass-Saws, Keyhole-Saws, Pruning-Saws, Wood-Saws, Grub-Hoes, Saw-Sets, Files, Plane-Irons, Planes, Plastering-Trowels, Brick-Trowels, Pointing-Trowels, Hollow-Handle Tool Sets, File and Tool Handles, Pliers, Pincers, Staple-Pullers, Farm-Tools, Comprising Forks, Hoes, and Rakes, Shovels, Spades, Sprout-Hoes, Hay-Forks, Hay-Knives, Corn-Knives, Auger-Bits, Sidewalk-Cleaners, Post-Hole Diggers, Kitchen Chopping-Knives, Pocket-Knives, Butcher-Knives, Carving-Knives, Razors, Scissors, Shears, Carvers.

Ser. No. 47,229. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) MACDONALD & MUIR, Leith, Scotland. Filed Jan. 18, 1910.



The name "Macdonald & Muir," which appears on the drawing, is a facsimile of the firm's signature, written by Mr. Alexander Muir, a partner in the firm.
Particular description of goods.—Blended Scotch Whisky.

Ser. No. 47,278. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) WILL C. MILES, Huntington, Ind. Filed Jan. 21, 1910.

Storm Queen

Particular description of goods.—Vehicle-Shields.

Ser. No. 47,335. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) BAUSCH & LOMB OPTICAL CO., Rochester, N. Y. Filed Jan. 24, 1910.



Particular description of goods.—Lenses, Mangin Mirrors, Magnifiers, Prisms, Search-Light Mirrors, Condensers, (Optical,) Lens-Barrels, Lens-Mounts, Microscopes and Parts and Repairs Therefor, Microscope-Micrometers, Microtomes, Range-Finders, Field-Glasses, Opera-Glasses, Telescopes, Transits, Levels, Sextants, Projection Apparatus and Parts and Repairs Therefor, Transit-Micrometers, Photographic Ray-Filters, Photographic Shutters, Photomicrographic Cameras, Alidades, and Theodolites.

Ser. No. 47,493. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DORMAN BROS., New York, N. Y. Filed Jan. 31, 1910.



Particular description of goods.—Cream-Cheeses.

Ser. No. 47,515. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE JOHN DANNER MANUFACTURING COMPANY, Canton, Ohio. Filed Feb. 1, 1910. Used ten years.

DANNER

Particular description of goods.—Sectional Bookcases and Revolving Bookcases.

Ser. No. 47,790. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE IRISH INDUSTRIAL DEVELOPMENT ASSOCIATION (INCORPORATED), Cork, Ireland. Filed Feb. 12, 1910.



No claim being made to the Erse words "Oéancain dirinn."

Particular description of goods.—Straight Irish Whisky.

Ser. No. 48,118. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) WILLIAM JESSOP & SONS, LIMITED, Sheffield, England. Filed Mar. 2, 1910.



Particular description of goods.—Metal Castings and Forgings.

Ser. No. 48,119. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) WILLIAM JESSOP & SONS, LIMITED, Sheffield, England. Filed Mar. 2, 1910.



Particular description of goods.—Metal Castings and Forgings.

Ser. No. 48,145. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) GARDNER BROOM COMPANY, Amsterdam, N. Y. Filed Mar. 3, 1910.



The pictures shown being fanciful.
Particular description of goods.—Brooms.

Ser. No. 48,192. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LYSTER CHEMICAL COMPANY, Lawrence, Mass. Filed Mar. 4, 1910.

DE-SEP-TOL

Particular description of goods.—Liquid Disinfectant and Antiseptic for External Use.

Ser. No. 48,265. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JAMES HYMANS, London, England. Filed Mar. 8, 1910.

HYMO

Particular description of goods.—Haircloth in the Piece.

Ser. No. 48,338. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES J. MOUNT, Kansas City, Mo. Filed Mar. 11, 1910.

Ponayo

Particular description of goods.—Laxatives; Hair-Tonic; Remedy for Rheumatism; Charcoal and Pepsin Lozenges; Remedies for Catarrh; Celery, Iron, and Quinin Compound; Worm-Powders; Headache-Tablets; Eczema-Lotion; Colic and Cholera Remedy; Cough-Syrup; Pile-Ointment; Remedies for Diseases of the Kidneys and Bladder; Remedies for Diseases of the Liver; Liniments and Salves; Eye-Salve, Eye-Lotion.

Ser. No. 48,378. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) TREMONT WORSTED CO., Methuen, Mass. Filed Mar. 14, 1910.



Particular description of goods.—Worsted Piece Goods.

Ser. No. 48,413. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WESTER BROS., New York, N. Y. Filed Mar. 15, 1910.

AUSTENITE

Particular description of goods.—Razors, Scissors, Barbers' Shears, and Steel Table-Cutlery.

Ser. No. 48,414. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WESTER BROS., New York, N. Y. Filed Mar. 15, 1910.

SPUN

Particular description of goods.—Razors, Scissors, Barbers' Shears, and Steel Table-Cutlery.

Ser. No. 48,448. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EHRHART-CONRAD COMPANY, INC., Hanover, Pa. Filed Mar. 16, 1910.



Particular description of goods.—A Combination of Cane, Corn, and Sugar Syrup.

Ser. No. 48,468. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GERHARD MENNEN CHEMICAL CO., Newark, N. J. Filed Mar. 16, 1910.



Portrait being that of Gerhard Mennen, deceased.
Particular description of goods.—Talcum Powder.

Ser. No. 48,572. (CLASS 39. CLOTHING.) MORRIS J. BARUCH, New York, N. Y. Filed Mar. 21, 1910.



Particular description of goods.—Caps and Outer Coats.

Ser. No. 48,580. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) THE JOSEPH LAY COMPANY, Ridgeville, Ind. Filed Mar. 21, 1910. Used ten years.



Consists of a red band applied to the extreme upper end of the body portion of the broom.
Particular description of goods.—Brooms.

Ser. No. 48,581. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) THE JOSEPH LAY COMPANY, Ridgeville, Ind. Filed Mar. 21, 1910. Used ten years.



Consists of a green band applied to the extreme upper end of the body portion of the broom.
Particular description of goods.—Brooms.

Ser. No. 48,582. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) THE JOSEPH LAY COMPANY, Ridgeville, Ind. Filed Mar. 21, 1910. Used ten years.



Consists of a blue band applied to the extreme upper end of the body portion of the broom.
Particular description of goods.—Brooms.

Ser. No. 48,690. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE WESTERN CLOCK MFG. CO., Peru, Ill. Filed Mar. 28, 1910.

MONITOR

Particular description of goods.—Clocks.

Ser. No. 48,737. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ISAAC D. MAGNES, New York, N. Y. Filed Mar. 30, 1910.

Red Top

Magnes & Co

Consisting of the words "Red Top," printed in red, and the name "Magnes & Co." as written by Isaac D. Magnes, embellished with the letters "I. D. M." and "D. M."

Particular description of goods.—Fresh California Shrimps.

Ser. No. 48,762. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE W. C. HENDRIE RUBBER COMPANY, Denver, Colo., and Salt Lake City, Utah. Filed Mar. 31, 1910.

JUMBO

Particular description of goods.—Tanned Lace-Leather.

Ser. No. 48,848. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) F. F. RICK & Co., Buffalo, N. Y. Filed Apr. 4, 1910.



Particular description of goods.—Rubber Tires.

Ser. No. 48,856. (CLASS 22. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JAMES T. FULLER, Chattanooga, Tenn. Filed Apr. 5, 1910.



Particular description of goods.—Cotton-Ginning Machinery and Parts Thereof.

Ser. No. 48,893. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) W. E. PRUDEN HARDWARE CO., New York, N. Y. Filed Apr. 7, 1910.

ATLAS

Particular description of goods.—Brake-Linings.

Ser. No. 48,914. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM H. WEDEKTZ, Chicago, Ill. Filed Apr. 8, 1910.



Particular description of goods.—A Remedy for Malarial Fever and La Grippe.

Ser. No. 48,971. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. M. BOUR COMPANY, Toledo, Ohio. Filed Apr. 9, 1910.

PILOT

Particular description of goods.—Blended Coffee.

Ser. No. 48,973. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) INDIANA CANNING COMPANY, Evansville, Ind. Filed Apr. 9, 1910.

Mutton Chop

Particular description of goods.—Canned Tomatoes.

Ser. No. 48,983. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RALPH GOLDSMITH, New Orleans, La. Filed Apr. 9, 1910.

Domino



Particular description of goods.—Rice.

Ser. No. 48,986. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE DAVIS MILLING COMPANY, St. Joseph, Mo. Filed Apr. 9, 1910.

AUTHORITY

Particular description of goods.—Wheat-Flour.

Ser. No. 48,987. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BRUNO-FRANK COMPANY, Dayton, Ohio. Filed Apr. 9, 1910.



Particular description of goods.—Wheat-Flour.

Ser. No. 48,992. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) M. EWING FOX & Co., New York, N. Y. Filed Apr. 9, 1910.



Particular description of goods.—Shellac, Varnishes, Dry, Water, and Oil Paints, Calcimines, and Dry and Water Colors.

Ser. No. 48,998. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) QUAKER CITY FLOUR MILLS COMPANY, Philadelphia, Pa. Filed Apr. 9, 1910.



Particular description of goods.—Wheat-Flour.

Ser. No. 48,999. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) QUAKER CITY FLOUR MILLS COMPANY, Philadelphia, Pa. Filed Apr. 9, 1910.



Particular description of goods.—Wheat-Flour.

Ser. No. 49,001. (CLASS 10. FERTILIZERS.) NATIONAL FERTILIZER CO., Nashville, Tenn. Filed Apr. 11, 1910.

HERMITAGE

Particular description of goods.—Fertilizers.

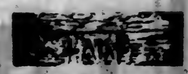
Ser. No. 49,004. (CLASS 10. FERTILIZERS.) NATIONAL FERTILIZER CO., Nashville, Tenn. Filed Apr. 11, 1910.

JUMBO



Particular description of goods.—Fertilizers.

Ser. No. 49,018. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) LOUIS A. VOORHEES, New Brunswick, N. J. Filed Apr. 11, 1910.



Particular description of goods.—Polishing-Cloths.

Ser. No. 49,020. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BENJAMIN HOLT, Stockton, Cal. Filed Apr. 11, 1910.

CATERPILLAR

Particular description of goods.—Traction-Engines and Harvesters.

Ser. No. 49,034. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. B. MILLAR & Co., Chicago, Ill. Filed Apr. 12, 1910. Used ten years.

CURACOA

Consists of the word "Curacoa."

Particular description of goods.—Coffee.

Ser. No. 49,035. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. B. MILLAR & Co., Chicago, Ill. Filed Apr. 12, 1910.

CHARM

Consists of the word "Charm."

Particular description of goods.—Coffee.

Ser. No. 49,053. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. B. MILLAR & Co., Chicago, Ill. Filed Apr. 18, 1910.

Yoga

Consisting of the word "Yoga."
Particular description of goods.—Coffee.

Ser. No. 49,110. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE ELLERY TWIST DRILL CO., Portsmouth, N. H. Filed Apr. 15, 1910.

E

Particular description of goods.—Boring-Drills.

Ser. No. 49,131. (CLASS 17. TOBACCO PRODUCTS.) GEORGE C. KNIGHT, Chicago, Ill. Filed Apr. 16, 1910.

Frat

Particular description of goods.—Smoking-Tobacco.

Ser. No. 49,137. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HINE, THOME COMPANY, Fort Dodge, Iowa. Filed Apr. 16, 1910.

PESKE PES

Particular description of goods.—An Ant-Exterminating Composition.

Ser. No. 49,189. (CLASS 17. TOBACCO PRODUCTS.) THE GIBSON CANNING COMPANY, Gibson, Ill. Filed Apr. 16, 1910.

YOURS TRULY

Particular description of goods.—Cigars, Cigarettes, and Tobacco.

Ser. No. 49,194. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JAMES W. PRINKEY, Scottsdale, Pa. Filed Apr. 19, 1910.

I.X.CL.
(TRADE-MARK)

Particular description of goods.—A Game-Board.

Ser. No. 49,205. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) HOLLIS H. MOSER, Atlanta, Ga. Filed Apr. 20, 1910.

Smile!
TRADE MARK

Particular description of goods.—A Game of Playing-Cards.

Ser. No. 49,217. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) SOCIÉTÉ CINÉMATOGRAPHIQUE DES AUTEURS ET GENS DE LETTRES, Paris, France. Filed Apr. 21, 1910.

SCAGL

Particular description of goods.—Kinematographic Films.

Ser. No. 49,229. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE J. B. WILLIAMS COMPANY, Glastonbury, Conn. Filed Apr. 21, 1910.

Dentalactic

Particular description of goods.—Preparations for Cleaning the Teeth.

Ser. No. 49,301. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) UNTERBERG & HELMLE, Durlach, Germany. Filed Apr. 26, 1910.

Particular description of goods.—Magnetos.

Ser. No. 49,350. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NORTH BRO'S M'F'G CO., Philadelphia, Pa. Filed Apr. 28, 1910.

YANKEE

Particular description of goods.—Ratchet Hand-Tools, Tools for Drilling by Hand, Screw-Drivers, Drill-Chucks, and Drill-Bits.

Ser. No. 49,385. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE DEAN ELECTRIC COMPANY, Elyria, Ohio. Filed Apr. 29, 1910.

WAYSIDE

Particular description of goods.—Telephones, Police-Boxes, Switchboards for Police Systems, Jack-Boxes, and other Telephone Apparatus.

Ser. No. 49,421. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ECONOMY ELECTRIC COMPANY, New York, N. Y. Filed Apr. 30, 1910.

LUMINETTE

Particular description of goods.—Arc-Lamps.

Ser. No. 49,422. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ECONOMY ELECTRIC COMPANY, New York, N. Y. Filed Apr. 30, 1910.

DIADEM

Particular description of goods.—Arc-Lamps.

Ser. No. 49,463. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) E. C. ATKINS & COMPANY, Indianapolis, Ind.; Atlanta, Ga.; Chicago, Ill.; Memphis, Tenn.; Minneapolis, Minn.; New Orleans, La.; New York, N. Y.; Portland, Oreg.; San Francisco, Cal.; Seattle, Wash., and Hamilton, Ontario, Canada. Filed May 2, 1910.



Consists of the representation of a horse.
Particular description of goods.—Saws of All Kinds.

Ser. No. 49,526. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) SAFETY-ARMORITE CONDUIT COMPANY, Pittsburg, Pa. Filed May 5, 1910.

LEADITE

Particular description of goods.—Coated Pipes and Tubes for Electric Conduits.

Ser. No. 49,536. (CLASS 39. CLOTHING.) HAMBURGER BROS., St. Louis, Mo. Filed May 5, 1910.



The picture being a likeness of James G. Blaine.
Particular description of goods.—Leather Boots and Shoes.

Ser. No. 49,539. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) GORHAM MANUFACTURING COMPANY, Providence, R. I. Filed May 5, 1910.



Particular description of goods.—Solid and Sterling Silverware.

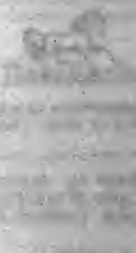
Ser. No. 49,554. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) JOSEPH L. HERZOG & COMPANY, New York, N. Y. Filed May 6, 1910.

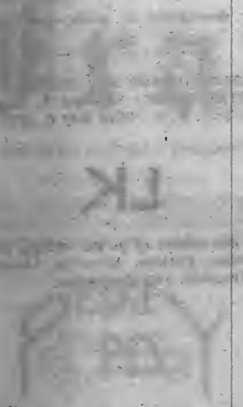
LK

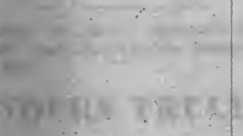
Particular description of goods.—Rings, Lockets, Cuff-Buttons, Emblem-Buttons, Brooches, Lavalliers, Scarf-Pins, Fobs, Bracelets, and Monograms.



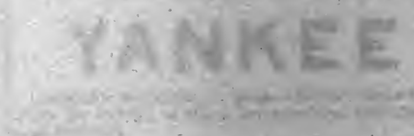














TRADE-MARKS

REGISTERED MAY 31, 1910.

78,051. SILVER-PLATED TABLEWARE. C. F. Adams Company, Erie, Pa.
Filed February 26, 1910. Serial No. 48,088. PUBLISHED MARCH 29, 1910.

78,052. APPLE-JUICE AND GRAPE-JUICE. American Fruit Product Co., New York, N. Y.
Filed November 2, 1909. Serial No. 45,676. PUBLISHED MARCH 29, 1910.

78,053. WRITING AND PRINTING PAPER. American Writing Paper Company, Holyoke, Mass.
Filed July 22, 1907. Serial No. 28,963. PUBLISHED MARCH 29, 1910.

78,054. WRITING AND PRINTING PAPER. American Writing Paper Company, Holyoke, Mass.
Filed July 22, 1907. Serial No. 28,964. PUBLISHED MARCH 29, 1910.

78,055. WRITING AND PRINTING PAPER. American Writing Paper Company, Holyoke, Mass.
Filed July 22, 1907. Serial No. 28,967. PUBLISHED MARCH 29, 1910.

78,056. WRITING AND PRINTING PAPER. American Writing Paper Company, Holyoke, Mass.
Filed July 22, 1907. Serial No. 28,972. PUBLISHED MARCH 29, 1910.

78,057. HOSIERY. A. B. Andrews Company, New York, N. Y.
Filed January 22, 1910. Serial No. 47,322. PUBLISHED MARCH 29, 1910.

78,058. CERTAIN ELECTRICAL SUPPLIES. Appleton Electric Company, Chicago, Ill.
Filed March 2, 1908. Serial No. 33,131. PUBLISHED MARCH 29, 1910.

78,059. HYPOSULFITE OF SODA AND SULFID OF SODIUM. F. E. Atteaux & Co., Jersey City, N. J., and Boston, Mass.
Filed February 10, 1909. Serial No. 40,463. PUBLISHED MAY 11, 1909.

78,060. CROCHET-HOOKS. C. J. Bates & Son, Chester, Conn.
Filed August 10, 1909. Serial No. 44,072. PUBLISHED MARCH 29, 1910.

78,061. EFFERVESCENT APERIENTS. Alfred A. Burnham, Boston, Mass.
Filed January 31, 1910. Serial No. 47,490. PUBLISHED MARCH 29, 1910.

78,062. REMEDY FOR CERTAIN DISEASES. Burwell & Dunn Co., Charlotte, N. C.
Filed February 8, 1910. Serial No. 47,647. PUBLISHED MARCH 29, 1910.

78,063. NATURAL MEDICINAL WATER. California Medicinal Springs Co., Deer Lick Springs, Cal.
Filed January 4, 1910. Serial No. 46,896. PUBLISHED MARCH 29, 1910.

78,064. CERTAIN PRECIOUS-METAL WARE. Chapin & Hollister Company, Providence, R. I.
Filed January 12, 1910. Serial No. 47,060. PUBLISHED MARCH 29, 1910.

78,065. ANTISEPTIC MOUTH-WASH. Chemische Werke vorm. Dr. Heinrich Byk, Berlin, Germany.
Filed August 9, 1909. Serial No. 44,060. PUBLISHED MARCH 29, 1910.

78,066. CHEMICALS USED FOR THE PURIFICATION OF ACETYLENE GAS. The Commercial Acetylene Company, New York, N. Y.
Filed January 6, 1910. Serial No. 46,925. PUBLISHED MARCH 29, 1910.

78,067. LAUNDRY STARCH. Corn Products Refining Company, Jersey City, N. J., and New York, N. Y.
Filed February 10, 1910. Serial No. 47,716. PUBLISHED MARCH 29, 1910.

78,068. WRITING-PAPER. Crocker-McElwain Company, Holyoke, Mass.
Filed January 22, 1910. Serial No. 47,302. PUBLISHED MARCH 29, 1910.

78,069. SOAP. The J. P. Davies Company, Dayton, Ohio.
Filed February 1, 1910. Serial No. 47,504. PUBLISHED MARCH 22, 1910.

78,070. CHROME-TANNING MATERIALS. The Martin Dennis Company, Newark, N. J.
Filed January 13, 1909. Serial No. 39,863. PUBLISHED MARCH 29, 1910.

78,071. OLEAGINOUS COMPOUNDS FOR CURRIERS' AND LEATHER-DRESSERS' USE. The Martin Dennis Company, Newark, N. J.
Filed January 13, 1909. Serial No. 39,867. PUBLISHED MARCH 29, 1910.

78,072. BROAD SILK PIECE GOODS. Duplan Silk Co., New York, N. Y.
Filed January 15, 1910. Serial No. 47,126. PUBLISHED MARCH 29, 1910.

78,073. LEATHER GLOVES, MITTENS, AND GAUNTLETS. The Joseph N. Eisendrath Company, Chicago, Ill.
Filed February 23, 1910. Serial No. 47,962. PUBLISHED MARCH 29, 1910.

78,074. DRESS-SHIRTS AND NEGLIGÉE SHIRTS. Elias Bros. & Co., New York, N. Y.
Filed March 1, 1910. Serial No. 48,110. PUBLISHED MARCH 29, 1910.

78,075. TANNING COMPOUNDS. El Quebracho Sociedad Anonima, Buenos Ayres, Argentina.
Filed January 15, 1910. Serial No. 47,140. PUBLISHED MARCH 29, 1910.

78,076. VAGINAL CAPSULES. Everhart & Company, Laurel, Md.
Filed February 19, 1910. Serial No. 47,917. PUBLISHED MARCH 29, 1910.

78,077. PENCILS. A. W. Faber, Stein, near Nuremberg, and Berlin, Germany.
Filed February 18, 1910. Serial No. 47,897. PUBLISHED MARCH 29, 1910.

78,078. ELECTRICAL FITTINGS. The Fairmount Electric and Manufacturing Company, Philadelphia, Pa.
Filed July 27, 1909. Serial No. 43,811. PUBLISHED MARCH 29, 1910.

78,079. FELT HATS. The Fay-Gorman Company, Bethel, Conn.
Filed February 11, 1910. Serial No. 47,754. PUBLISHED MARCH 29, 1910.

78,080. MEDICINES. Foster-McClellan Co., Buffalo, N. Y.
Filed November 13, 1909. Serial No. 45,964. PUBLISHED MARCH 29, 1910.

78,081. REGISTERS. ERNEST C. FOX, Cleveland, Ohio.
Filed December 15, 1909. Serial No. 46,521. PUBLISHED MARCH 29, 1910.

78,082. LUBRICATING-OIL. FULCRUM OIL COMPANY, Franklin, Pa.
Filed September 18, 1908. Serial No. 37,465. PUBLISHED MARCH 29, 1910.

78,083. MEDICINAL REMEDY. GEO. H. GARDINER, Thomaston, Me.
Filed January 7, 1910. Serial No. 46,954. PUBLISHED MARCH 29, 1910.

78,084. MEN'S FUR HATS. GAUSS-LANGENBERG HAT COMPANY, St. Louis, Mo.
Filed January 7, 1910. Serial No. 46,983. PUBLISHED MARCH 29, 1910.

78,085. LEATHER GLOVES. GESHLIDER BROS., New York, N. Y.
Filed January 29, 1910. Serial No. 47,468. PUBLISHED MARCH 29, 1910.

78,086. CERTAIN CLOTHING. MOSES GOLDENBERG, Washington, D. C.
Filed June 2, 1908. Serial No. 35,079. PUBLISHED MARCH 29, 1910.

78,087. MEDICINES AND TOILET PREPARATIONS. MOSES GOLDENBERG, Washington, D. C.
Filed January 4, 1910. Serial No. 46,906. PUBLISHED MARCH 29, 1910.

78,088. CERTAIN ELECTRICAL APPARATUS. LEO. GUDEMAN, New York, N. Y.
Filed February 15, 1910. Serial No. 47,831. PUBLISHED MARCH 29, 1910.

78,089. PENCILS, RUBBER ERASERS, AND RUBBER BANDS. J. W. GUTTKNECHT, Stein, near Nuremberg, Germany.
Filed July 20, 1909. Serial No. 43,649. PUBLISHED MARCH 29, 1910.

78,090. LEATHER BOOTS AND SHOES. HAMBURGER BROS., St. Louis, Mo.
Filed September 9, 1909. Serial No. 44,596. PUBLISHED MARCH 29, 1910.

78,091. WATCH, CLOCK, AND CHRONOMETER OILS. HAMMEL, RIGLANDER & Co., New York, N. Y.
Filed January 19, 1910. Serial No. 47,250. PUBLISHED MARCH 29, 1910.

78,092. HOSIERY. HARRIS-LIPSITZ COMPANY, Dallas, Tex.
Filed November 15, 1909. Serial No. 45,888. PUBLISHED MARCH 29, 1910.

78,093. GINGHAMS. HARRIS-LIPSITZ COMPANY, Dallas, Tex.
Filed November 22, 1909. Serial No. 46,050. PUBLISHED MARCH 29, 1910.

78,094. REMEDY FOR CERTAIN DISEASES. NATHAN A. HARRIS, Conway, Mo.
Filed February 11, 1910. Serial No. 47,735. PUBLISHED MARCH 29, 1910.

78,095. OVERCOATS, ULSTERS, RAIN-COATS, AND AUTOMOBILE-COATS. HEIDELBERG, WOLFF & Co., New York, N. Y.
Filed February 12, 1910. Serial No. 47,765. PUBLISHED MARCH 29, 1910.

78,096. ELECTRIC APPARATUS AND SUPPLIES. HEMINGRAY GLASS Co., Muncie, Ind., and Covington, Ky.
Filed February 8, 1910. Serial No. 47,650. PUBLISHED MARCH 29, 1910.

78,097. CERTAIN WOODEN TRAYS AND PLANKS. ROBERT CECIL HERREN, Kenton, Ohio.
Filed February 11, 1910. Serial No. 47,746. PUBLISHED MARCH 29, 1910.

78,098. ELASTIC ARMBANDS. HEWES & POTTER, Boston, Mass.
Filed February 14, 1910. Serial No. 47,819. PUBLISHED MARCH 29, 1910.

78,099. TALKING-MACHINES AND SUPPLIES THEREFOR. HOMOPHON COMPANY, G. M. B. H., Berlin, Germany.
Filed June 30, 1909. Serial No. 43,344. PUBLISHED MARCH 29, 1910.

78,100. LOTIONS. MARCUS JOHNSON, St. Paul, Minn.
Filed August 16, 1909. Serial No. 44,167. PUBLISHED MARCH 29, 1910.

78,101. NON-INTOXICATING TONIC BEVERAGES AND TABLETS AND POWDERS FOR MAKING THE SAME. VIRGIL JONES, Atlanta, Ga.
Filed December 17, 1909. Serial No. 46,582. PUBLISHED MARCH 29, 1910.

78,102. KNITTED ATHLETIC GOODS. E. KLEIN & COMPANY, New York, N. Y.
Filed December 29, 1909. Serial No. 46,780. PUBLISHED MARCH 29, 1910.

78,103. CERTAIN TEXTILES. KRAFT & CUTTER, New York, N. Y.
Filed January 20, 1910. Serial No. 47,252. PUBLISHED MARCH 29, 1910.

78,104. MEDICINES. FRITZ KRIPER, Berlin, Germany.
Filed September 29, 1909. Serial No. 45,012. PUBLISHED MARCH 29, 1910.

78,105. REMEDY FOR PURIFYING THE BLOOD. CARLES KUNATH, Newport, Ky.
Filed January 11, 1910. Serial No. 47,065. PUBLISHED MARCH 29, 1910.

78,106. HAIR-TONIC. LOUIS KUNTSCHER, Tarpon, Tex.
Filed November 23, 1909. Serial No. 46,082. PUBLISHED MARCH 29, 1910.

78,107. LINIMENTS. LANMAN & KEMP, New York, N. Y.
Filed October 2, 1909. Serial No. 45,105. PUBLISHED MARCH 29, 1910.

78,108. WRITING AND PRINTING PAPER. LASHER & LATHROP INC., New York, N. Y.
Filed January 29, 1910. Serial No. 47,448. PUBLISHED MARCH 29, 1910.

78,109. WRITING AND PRINTING PAPER. LASHER & LATHROP INC., New York, N. Y.
Filed January 29, 1910. Serial No. 47,453. PUBLISHED MARCH 29, 1910.

78,110. WRITING AND PRINTING PAPER. LASHER & LATHROP INC., New York, N. Y.
Filed January 29, 1910. Serial No. 47,454. PUBLISHED MARCH 29, 1910.

78,111. WRITING AND PRINTING PAPER. LASHER & LATHROP INC., New York, N. Y.
Filed January 29, 1910. Serial No. 47,455. PUBLISHED MARCH 29, 1910.

78,112. ANTIRHEUMATIC, ANTIPYRETIC, AND ANALGESIC REMEDIES. LEIGHTON-WRIGHT COMPANY, Buffalo, N. Y.
Filed February 13, 1909. Serial No. 40,519. PUBLISHED MARCH 29, 1910.

78,113. LEATHER BOOTS AND SHOES. W. J. MARTINEZ & BROS., New Orleans, La.
Filed February 4, 1910. Serial No. 47,589. PUBLISHED MARCH 29, 1910.

78,114. CERTAIN TEXTILES. E. MCKITTRICK & Co., New York, N. Y.
Filed February 9, 1910. Serial No. 47,680. PUBLISHED MARCH 29, 1910.

78,115. CERTAIN TEXTILES. E. MCKITTRICK & Co., New York, N. Y.
Filed February 10, 1910. Serial No. 47,713. PUBLISHED MARCH 29, 1910.

78,116. ACCOUNT-BOOKS. MIDLAND PUBLISHING CO., St. Louis, Mo.
Filed January 26, 1910. Serial No. 47,294. PUBLISHED MARCH 29, 1910.

78,117. LOCAL ANESTHETICS. MILLER AND BLAKE CHEMICAL CO., Adrian, Mich.
Filed August 31, 1909. Serial No. 44,463. PUBLISHED MARCH 29, 1910.

78,118. REMEDY FOR RHEUMATISM. CHARLES W. MILLER, San Antonio, Tex.
Filed December 13, 1909. Serial No. 46,467. PUBLISHED MARCH 29, 1910.

78,119. REMEDY FOR RHEUMATISM. THE ARTHUR H. MUNN COMPANY, Detroit, Mich.
Filed January 17, 1910. Serial No. 47,189. PUBLISHED MARCH 29, 1910.

78,120. DRY-CELL ELECTRIC BATTERIES. NATIONAL CARBON COMPANY, Cleveland, Ohio.
Filed December 13, 1909. Serial No. 46,472. PUBLISHED MARCH 29, 1910.

78,121. DRY-CELL ELECTRIC BATTERIES. NATIONAL CARBON COMPANY, Cleveland, Ohio.
Filed December 13, 1909. Serial No. 46,473. PUBLISHED MARCH 29, 1910.

78,122. LEATHER SHOES AND SLIPPERS. ABRAHAM NEWMAN, New York, N. Y.
Filed August 12, 1909. Serial No. 44,104. PUBLISHED MARCH 29, 1910.

78,123. HANDKERCHIEFS. OTTENHEIMER & Co., Chicago, Ill.
Filed January 24, 1910. Serial No. 47,343. PUBLISHED MARCH 29, 1910.

78,124. BROODERS. THE PARK & POLLARD COMPANY, Boston, Mass.
Filed February 17, 1910. Serial No. 47,866. PUBLISHED MARCH 29, 1910.

78,125. REMEDIES FOR VENEREAL DISEASES. ROBERT N. PARTIN, Petersburg, Va.
Filed December 20, 1909. Serial No. 46,628. PUBLISHED MARCH 29, 1910.

78,126. HAIR-NETS. POIRIER & LINDEMAN, New York, N. Y.
Filed February 20, 1909. Serial No. 40,729. PUBLISHED MARCH 29, 1910.

78,127. GARTER-WEBS AND HAIR-NETS. POIRIER & LINDEMAN, New York, N. Y.
Filed May 3, 1909. Serial No. 42,210. PUBLISHED MARCH 29, 1910.

78,128. REMEDY FOR CONSTIPATION. JEFFERSON T. POTTER, Seward, Nebr.
Filed February 12, 1910. Serial No. 47,764. PUBLISHED MARCH 29, 1910.

78,129. POPLIN PIECE GOODS. REILING AND SCHOEN, New York, N. Y.
Filed January 25, 1910. Serial No. 47,378. PUBLISHED MARCH 29, 1910.

78,130. MERCERIZED BLEACHED-COTTON DAMASK NAPKINS. EDWARD F. RICE & Co., Millbury, Mass.
Filed January 12, 1910. Serial No. 47,088. PUBLISHED MARCH 29, 1910.

78,131. MEN'S HATS AND CAPS. HENRY H. ROELOFS AND COMPANY, Philadelphia, Pa.
Filed February 12, 1910. Serial No. 47,796. PUBLISHED MARCH 29, 1910.

78,132. MEDICINAL TABLETS. FRANK E. RUSSELL, Binghamton, N. Y.
Filed January 12, 1910. Serial No. 47,077. PUBLISHED MARCH 29, 1910.

78,133. UMBRELLAS, PARASOLS, WALKING-STICKS, AND PARTS THEREOF AND CASINGS THEREFOR. "SCHIRMHERR" REFORMSCHIRM-FABRIK FRIEDLAENDER & KAUFMANN, Frankfort-on-the-Main, Germany.
Filed December 22, 1909. Serial No. 46,687. PUBLISHED MARCH 29, 1910.

78,134. COMPOUND FOR CERTAIN PURPOSES. ARTHUR SEIDMAN, Cleveland, Ohio.
Filed August 4, 1909. Serial No. 43,936. PUBLISHED MARCH 29, 1910.

78,135. CERTAIN TEXTILES. SEYDOUX & CIE., Paris, France.
Filed June 14, 1909. Serial No. 43,013. PUBLISHED MARCH 29, 1910.

78,136. DRESS-SKIRTS. SIMON SHAPIRO, New York, N. Y.
Filed January 31, 1910. Serial No. 47,497. PUBLISHED MARCH 29, 1910.

78,137. GIRLS' DRESSES. LOUIS SONN & Co., New York, N. Y.
Filed January 25, 1910. Serial No. 47,356. PUBLISHED MARCH 29, 1910.

78,138. MIXED PAINT. THE STANDARD IMPROVED ELASTIC PAINT COMPANY, Marietta, Ohio.
Filed January 7, 1910. Serial No. 46,957. PUBLISHED MARCH 29, 1910.

78,139. SULFATE OF COPPER. STRAWSONS & COMPANY, London, England.
Filed February 10, 1910. Serial No. 47,715. PUBLISHED MARCH 29, 1910.

78,140. CERTAIN CLOTHING. SUSQUEHANNA SILK MILLS, New York, N. Y.
Filed August 30, 1909. Serial No. 44,417. PUBLISHED MARCH 29, 1910.

78,141. CERTAIN FURNISHINGS. SUSQUEHANNA SILK MILLS, New York, N. Y.
Filed August 31, 1909. Serial No. 44,449. PUBLISHED MARCH 29, 1910.

78,142. LINEN AND COTTON PIECE GOODS. TURNER, HALSEY CO., New York, N. Y.
Filed December 11, 1909. Serial No. 46,452. PUBLISHED MARCH 29, 1910.

78,143. COLD-CREAM. WALKER CHEMICAL COMPANY, Des Moines, Iowa.
Filed October 25, 1909. Serial No. 45,533. PUBLISHED MARCH 29, 1910.

78,144. STEAM-CONDENSERS, EVAPORATORS, AND PREHEATERS FOR BOILERS. G. & J. WEIR LD., Cathcart, Scotland.
Filed August 31, 1908. Serial No. 37,071. PUBLISHED MARCH 29, 1910.

78,145. LEATHER BOOTS AND SHOES. J. E. & W. G. WESSON, Worcester, Mass.
Filed February 16, 1910. Serial No. 47,843. PUBLISHED MARCH 29, 1910.

78,146. CLOCKS AND WATCHES. THE WESTERN CLOCK MFG. CO., Peru, Ill.
Filed February 25, 1910. Serial No. 48,007. PUBLISHED MARCH 29, 1910.

78,147. RUGS AND CARPETS. MATTHEW J. WHITTALL, Worcester, Mass.
Filed December 4, 1909. Serial No. 46,271. PUBLISHED MARCH 29, 1910.

78,148. WRITING-PAPERS. WHITING PAPER COMPANY, Holyoke, Mass.
Filed January 21, 1910. Serial No. 47,288. PUBLISHED MARCH 29, 1910.

78,149. CANDLES. THE WILL & BAUMER COMPANY, Syracuse, N. Y.
Filed January 7, 1910. Serial No. 46,978. PUBLISHED MARCH 29, 1910.

78,150. CANDLES. THE WILL & BAUMER COMPANY, Syracuse, N. Y.
Filed January 7, 1910. Serial No. 46,979. PUBLISHED MARCH 29, 1910.

78,151. CANDLES. THE WILL & BAUMER COMPANY, Syracuse, N. Y.
Filed January 7, 1910. Serial No. 46,980. PUBLISHED MARCH 29, 1910.

78,152. VIOLINS AND VIOLIN-BOWS. THE RUDOLPH WURLITZER CO., Cincinnati, Ohio.
Filed September 3, 1908. Serial No. 37,146. PUBLISHED MARCH 29, 1910.

78,153. NEGLIGÉE AND WORK SHIRTS. YANKEE SHIRT CO., New York, N. Y.
Filed January 24, 1910. Serial No. 47,248. PUBLISHED MARCH 29, 1910.

78,154. DISINFECTANTS AND INSECTICIDES. ZONOL PRODUCTS COMPANY, New York, N. Y.
Filed February 21, 1910. Serial No. 47,937. PUBLISHED MARCH 29, 1910.

78,155. COAL. WILSON D. ALTHOUSE, Philadelphia, Pa.
Filed January 10, 1910. Serial No. 47,015. PUBLISHED MARCH 29, 1910.

78,156. POULTRY FOOD. J. J. BADENOCH CO., Chicago, Ill.
Filed November 13, 1909. Serial No. 45,877. PUBLISHED MARCH 29, 1910.

78,157. WASHERS. N. E. BOOTH, Brooklyn, N. Y.
Filed September 17, 1909. Serial No. 44,744. PUBLISHED MARCH 29, 1910.

78,158. COMPOUND BITTER WINES. MICHAEL BORAK, Scranton, Pa.
Filed December 8, 1909. Serial No. 46,364. PUBLISHED MARCH 29, 1910.

78,159. SPOOL AND SKEIN SILK. THE BRAINERD AND ARMSTRONG COMPANY, New London, Conn.
Filed April 29, 1909. Serial No. 42,136. PUBLISHED JUNE 29, 1909.

78,160. WHEAT-FLOUR. WILLIAM F. BERRY, Philadelphia, Pa.
Filed November 18, 1909. Serial No. 45,990. PUBLISHED MARCH 29, 1910.

78,161. WHEAT-FLOUR. BROWN MILLING COMPANY, Minneapolis, Minn.
Filed November 18, 1909. Serial No. 45,989. PUBLISHED MARCH 29, 1910.

78,162. GRASS-SEEDS, GARDEN-SEEDS, AND SEED-GRAINS. CARGILL ELEVATOR CO., Minneapolis, Minn.
Filed December 9, 1909. Serial No. 46,378. PUBLISHED MARCH 29, 1910.

78,163. WASHING-SODA. CHURCH & DWIGHT CO., New York, N. Y.
Filed January 25, 1910. Serial No. 47,358. PUBLISHED MARCH 29, 1910.

78,164. REMEDY FOR DISEASES OF THE KIDNEYS. CONSUMERS SERVICE COMPANY, INC., South Bend, Ind.
Filed December 23, 1909. Serial No. 46,701. PUBLISHED MARCH 29, 1910.

78,165. TOMATO-PASTE. A. CUSIMANO & CO., New Orleans, La.
Filed April 9, 1909. Serial No. 41,687. PUBLISHED JULY 6, 1909.

78,166. CERTAIN GUMS. DANKER & MARSTON, Boston, Mass.
Filed January 25, 1910. Serial No. 47,372. PUBLISHED MARCH 29, 1910.

78,167. SALT. DIAMOND CRYSTAL SALT CO., St. Clair, Mich.
Filed January 31, 1910. Serial No. 47,489. PUBLISHED MARCH 29, 1910.

78,168. FURNITURE-CASTERS. DIAMOND STEEL TRUCK CO., Grand Rapids, Mich.
Filed February 14, 1910. Serial No. 47,813. PUBLISHED MARCH 29, 1910.

78,169. WHEAT-FLOUR. DONMEYER, GARDNER & CO., Peoria, Ill.
Filed January 3, 1910. Serial No. 46,836. PUBLISHED MARCH 15, 1910.

78,170. WHEAT-FLOUR. DONMEYER, GARDNER & CO., Peoria, Ill.
Filed January 3, 1910. Serial No. 46,838. PUBLISHED MARCH 15, 1910.

78,171. WHEAT-FLOUR. DONMEYER, GARDNER & CO., Peoria, Ill.
Filed January 3, 1910. Serial No. 46,841. PUBLISHED MARCH 15, 1910.

78,172. REMEDY FOR CERTAIN DISEASES. FOX CHEMICAL COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,200. PUBLISHED MARCH 29, 1910.

78,173. MEDICINAL PREPARATION FOR THE SKIN AND SCALP. HORACE D. GRISWOLD, Nashua, N. H.
Filed April 22, 1909. Serial No. 41,927. PUBLISHED MARCH 29, 1910.

78,174. COFFEE. HANLEY & KINSELLA COFFEE & SPICE COMPANY, St. Louis, Mo.
Filed February 5, 1910. Serial No. 47,597. PUBLISHED MARCH 29, 1910.

78,175. MACHINES FOR SETTING METALLIC FASTENERS. HEATON-PENINSULAR BUTTON FASTENER CO., Boston, Mass.
Filed October 13, 1909. Serial No. 45,286. PUBLISHED MARCH 29, 1910.

78,176. MOLASSES AND CORN-SYRUP COMPOUND. THOMAS J. HENDERSON, New Orleans, La.
Filed December 4, 1909. Serial No. 46,267. PUBLISHED MARCH 29, 1910.

78,177. CRACKERS. HENRY G. & J. ADAM HESS, Ogden, Utah.
Filed November 17, 1908. Serial No. 38,720. PUBLISHED MARCH 29, 1910.

78,178. MEDICINAL PLASTERS. MARY HOGG, Buffalo, N. Y.
Filed January 31, 1910. Serial No. 47,474. PUBLISHED MARCH 29, 1910.

78,179. CHOCOLATES. INGERSOLL CANDY COMPANY, San Diego, Cal.
Filed December 6, 1909. Serial No. 46,295. PUBLISHED MARCH 29, 1910.

78,180. CERTAIN POWDER. INTERNATIONAL PULP COMPANY, New York, N. Y.
Filed November 16, 1909. Serial No. 45,916. PUBLISHED MARCH 29, 1910.

78,181. WINES. ITALIAN SWISS COLONY, San Francisco, Cal.
Filed December 9, 1909. Serial No. 46,384. PUBLISHED MARCH 29, 1910.

78,182. GRAPE BRANDY. ITALIAN SWISS COLONY, San Francisco, Cal.
Filed January 29, 1910. Serial No. 47,465. PUBLISHED MARCH 29, 1910.

78,183. HYDRAULIC MACHINERY AND FITTINGS. BYRON JACKSON IRON WORKS, San Francisco, Cal.
Filed January 12, 1910. Serial No. 47,079. PUBLISHED MARCH 29, 1910.

78,184. NUT-LOCKS AND METAL WASHERS. KEYSTONE NUT LOCK MFG. CO., Pittsburg, Pa.
Filed February 12, 1910. Serial No. 47,780. PUBLISHED MARCH 29, 1910.

78,185. VALVES AND COCKS AND PARTS THEREOF. KINSEY & MAHLER CO., Peoria, Ill.
Filed August 30, 1909. Serial No. 44,415. PUBLISHED MARCH 29, 1910.

78,186. COUGH-DROPS. LINDBECK & NELSON, Kewanee, Ill.
Filed January 20, 1910. Serial No. 47,266. PUBLISHED MARCH 29, 1910.

78,187. CHAMOIS-SKINS. MCKESSON & ROBBINS, New York, N. Y.
Filed August 21, 1909. Serial No. 44,287. PUBLISHED MARCH 29, 1910.

78,188. PAPER BAGS. THE MICHIGAN BAG & PAPER COMPANY, Jackson, Mich.
Filed February 28, 1910. Serial No. 48,059. PUBLISHED MARCH 29, 1910.

78,189. PAPER BAGS. THE MICHIGAN BAG & PAPER COMPANY, Jackson, Mich.
Filed February 28, 1910. Serial No. 48,060. PUBLISHED MARCH 29, 1910.

78,190. PAPER BAGS. THE MICHIGAN BAG & PAPER COMPANY, Jackson, Mich.
Filed February 28, 1910. Serial No. 48,061. PUBLISHED MARCH 29, 1910.

78,191. WHEAT-FLOUR. THE MODEL MILLING & ELEVATOR COMPANY, Greeley, Colo.
Filed February 12, 1910. Serial No. 47,785. PUBLISHED MARCH 29, 1910.

78,192. REMEDY FOR ASTHMA. LILLIAN W. MOON, New London, Conn.
Filed May 25, 1909. Serial No. 42,658. PUBLISHED MARCH 29, 1910.

78,193. COMPOUND FOR SEASONING WELSH RABBITS. AMBROS MUDERLAK, New York, N. Y.
Filed April 24, 1909. Serial No. 41,976. PUBLISHED MARCH 29, 1910.

78,194. BITUMINOUS COAL. THE NATIONAL COAL COMPANY, Akron, Ohio.
Filed May 28, 1909. Serial No. 42,730. PUBLISHED MARCH 29, 1910.

78,195. PAPER BOTTLES AND PAPER CUPS. NATIONAL CONING MACHINERY COMPANY, Indianapolis, Ind.
Filed December 1, 1909. Serial No. 46,240. PUBLISHED MARCH 29, 1910.

78,196. STOCK FOOD. NATIONAL HAY, GRAIN AND STORAGE CO., Macon, Ga.
Filed December 8, 1909. Serial No. 46,347. PUBLISHED MARCH 29, 1910.

78,197. REMEDY FOR DISEASES OF THE LUNGS. THE NATURE'S CREATION CO., Columbus, Ohio.
Filed December 17, 1909. Serial No. 46,579. PUBLISHED MARCH 29, 1910.

78,198. SOLE-LEATHER FOR SHOES. CARL J. NIEMANN & BROS., Omaha, Nebr.
Filed February 7, 1910. Serial No. 47,626. PUBLISHED MARCH 29, 1910.

78,199. WHEAT-FLOUR. THE NORTHWESTERN ELEVATOR & MILL CO., Toledo, Mount Vernon, and Londonville, Ohio.
Filed December 11, 1909. Serial No. 46,493. PUBLISHED MARCH 29, 1910.

78,200. CERTAIN HORSE EQUIPMENTS AND SUPPLIES. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,152. PUBLISHED MARCH 29, 1910.

78,201. REFRIGERATORS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,169. PUBLISHED MARCH 29, 1910.

78,202. CERTAIN HORSE EQUIPMENTS AND SUPPLIES. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,171. PUBLISHED MARCH 29, 1910.

78,203. CRATES. THE OVERSTREET CRATE CO., Lockhart, Fla.
Filed November 18, 1909. Serial No. 45,954. PUBLISHED MARCH 29, 1910.

78,204. PULLEYS. THE PAUL MANUFACTURING COMPANY, Fort Wayne, Ind.
Filed February 12, 1910. Serial No. 47,777. PUBLISHED MARCH 29, 1910.

78,205. WORK-SHIRTS, OVERALLS, AND WORK-JACKETS. RELIANCE MANUFACTURING COMPANY, Chicago, Ill.
Filed November 22, 1909. Serial No. 46,053. PUBLISHED MARCH 15, 1910.

78,206. DOMESTIC WASHING-MACHINES. RICHMOND CEDAR WORKS, Richmond, Va.
Filed March 2, 1910. Serial No. 48,128. PUBLISHED MARCH 29, 1910.

78,207. HORSESHOE-CALKS. THE BOWE PATENT CALK COMPANY, Hartford, Conn.
Filed January 24, 1910. Serial No. 47,241. PUBLISHED MARCH 29, 1910.

78,208. CANNED OYSTERS. BUCK BROS. CANNING COMPANY, Englewood, N. J.; Apalachicola and Cedar Keys, Fla., and Baltimore, Md.
Filed December 15, 1909. Serial No. 46,519. PUBLISHED MARCH 29, 1910.

78,209. TEAS. WILLIAM S. SCULL COMPANY, Camden, N. J.
Filed February 10, 1910. Serial No. 47,703. PUBLISHED MARCH 29, 1910.

78,210. BRUSHES. ALFRED H. SMITH CO., New York, N. Y.
Filed January 15, 1910. Serial No. 47,127. PUBLISHED MARCH 29, 1910.

78,211. COAL. THE SNEAD & MEGUIRE COAL COMPANY, Louisville, Ky.
Filed January 11, 1910. Serial No. 47,051. PUBLISHED MARCH 29, 1910.

78,212. RAZORS AND RAZOR-BLADES. EDWIN WILBUR SPRING, London, England.
Filed February 7, 1910. Serial No. 47,625. PUBLISHED MARCH 29, 1910.

78,213. DRIVING-BITS. THE STALKER MANUFACTURING COMPANY, New York, N. Y.
Filed February 8, 1910. Serial No. 47,557. PUBLISHED MARCH 29, 1910.

78,214. BAKING-POWDER AND BAKING-SODA. ST. LOUIS COFFEE & SPICE MILLS, St. Louis, Mo.
Filed January 22, 1910. Serial No. 47,310. PUBLISHED MARCH 29, 1910.

78,215. ENGINE-GOVERNORS, ENGINE-STOPS, AND PUMP-GOVERNORS. THE STRONG, CARLISLE & HAMMOND CO., Cleveland, Ohio.
Filed October 16, 1909. Serial No. 45,375. PUBLISHED MARCH 29, 1910.

78,216. BOOTS AND SHOES OF LEATHER. ROBERT L. SUMMERS, Boston, Mass.
Filed November 8, 1909. Serial No. 45,759. PUBLISHED MARCH 29, 1910.

78,217. FRESH FRUITS. E. G. AND A. H. VIVELL, Rio Piedras, Porto Rico.
Filed December 29, 1909. Serial No. 46,794. PUBLISHED MARCH 29, 1910.

78,218. WHEAT-FLOUR. WASHBURN CROSBY COMPANY, Minneapolis, Minn.
Filed November 12, 1909. Serial No. 45,842. PUBLISHED MARCH 29, 1910.

78,219. HARVESTERS, BINDERS, REAPERS, AND MOWERS. WALTER A. WOOD MOWING & REAPING MACHINE COMPANY, Hoosick Falls, N. Y.
Filed February 7, 1910. Serial No. 47,634. PUBLISHED MARCH 29, 1910.

78,220. PETTICOATS MADE OF TEXTILE FABRIC. YOUNKER BROS., Des Moines, Iowa, and New York, N. Y.
Filed November 4, 1909. Serial No. 45,707. PUBLISHED MARCH 29, 1910.

78,221. SHUTTER-FASTENERS. G. F. S. ZIMMERMAN & COMPANY, Frederick, Md.
Filed February 2, 1910. Serial No. 47,550. PUBLISHED MARCH 29, 1910.

78,222. OIL-PUMPS. THE AMERICAN OIL PUMP & TANK CO., Dayton, Ohio.
Filed November 26, 1909. Serial No. 46,128. PUBLISHED MARCH 29, 1910.

78,223. TEAS AND COFFEES. ARNOLD & ADORN, New York, N. Y.
Filed February 8, 1910. Serial No. 47,658. PUBLISHED MARCH 29, 1910.

78,224. SILK PIECE GOODS. ATUYER, BIANCHINI, FÉRIER & Co., Lyon, France.
Filed March 2, 1909. Serial No. 40,883. PUBLISHED MARCH 15, 1910.

78,225. SILK PIECE GOODS. ATUYER, BIANCHINI, FÉRIER & Co., Lyon, France.
Filed March 2, 1909. Serial No. 40,884. PUBLISHED MARCH 15, 1910.

78,226. FRESH OYSTERS. AUBREY G. BAILEY, Norfolk, Va.
Filed January 21, 1910. Serial No. 47,284. PUBLISHED MARCH 29, 1910.

78,227. WHEAT-FLOUR. CANNON VALLEY MILLING COMPANY, Minneapolis, Minn.
Filed January 17, 1910. Serial No. 47,219. PUBLISHED MARCH 29, 1910.

78,228. SOAPS FOR TOILET USE AND SHAVING-SOAP. COLGATE & Co., Jersey City, N. J., and New York, N. Y.
Filed November 16, 1909. Serial No. 45,912. PUBLISHED MARCH 29, 1910.

78,229. WHEAT-FLOUR. WM. A. COOMBS MILLING COMPANY, Coldwater, Mich.
Filed February 2, 1910. Serial No. 47,528. PUBLISHED MARCH 29, 1910.

78,230. CERTAIN FOODS. H. T. COTTAM & Co. LTD., New Orleans, La.
Filed September 2, 1909. Serial No. 44,500. PUBLISHED MARCH 29, 1910.

78,231. PAPER BAGS. CROWN-COLUMBIA PULP AND PAPER CO., San Francisco, Cal.
Filed November 11, 1909. Serial No. 45,880. PUBLISHED MARCH 29, 1910.

78,232. OIL-WELL AND ARTESIAN-WELL PUMPS AND PARTS OF SAME. THE DARLING PUMP & MAN'FG CO., (LIMITED,) Williamsport, Pa.
Filed December 9, 1909. Serial No. 46,882. PUBLISHED MARCH 29, 1910.

78,233. CERTAIN FOODS. JOHN E. DIAMENT COMPANY, Cedarville and Tuckahoe, N. J.
Filed February 5, 1910. Serial No. 47,601. PUBLISHED MARCH 29, 1910.

78,234. MONTHLY MAGAZINES. WILLIAM S. DINSMORE, Los Angeles, Cal.
Filed January 20, 1910. Serial No. 47,254. PUBLISHED MARCH 29, 1910.

78,235. CERTAIN FOODS. FAXON, WILLIAMS & FAXON, Buffalo, N. Y.
Filed January 20, 1909. Serial No. 40,041. PUBLISHED MARCH 29, 1910.

78,236. ORANGES AND LEMONS. FILLMORE CITRUS FRUIT ASSOCIATION, Fillmore, Cal.
Filed December 15, 1909. Serial No. 46,525. PUBLISHED MARCH 29, 1910.

78,237. CURTAIN-FIXTURES. J. W. FLYNN & BRO., Wilkinsburg, Pa.
Filed November 3, 1909. Serial No. 45,692. PUBLISHED MARCH 29, 1910.

78,238. MONTHLY MAGAZINE. JOSEPH H. FRANCIS, Chicago, Ill.
Filed January 28, 1910. Serial No. 47,447. PUBLISHED MARCH 29, 1910.

78,239. CIGARS. JOSEPH C. HAMMER, Hartford, Conn.
Filed February 3, 1910. Serial No. 47,562. PUBLISHED MARCH 29, 1910.

78,240. CRACKERS AND BISCUITS. IOWA BISCUIT CO., Burlington, Iowa.
Filed January 22, 1910. Serial No. 47,295. PUBLISHED MARCH 29, 1910.

78,241. BISCUITS. ITEN BISCUIT CO., Omaha, Nebr.
Filed November 11, 1909. Serial No. 45,827. PUBLISHED MARCH 29, 1910.

78,242. CERTAIN ALCOHOLIC BEVERAGES. GEORGE JANSSEN, Highlandtown, Md.
Filed January 22, 1910. Serial No. 47,319. PUBLISHED MARCH 29, 1910.

78,243. CANNED VEGETABLES. GRAFTON JOHNSON, Greenwood, Ind.
Filed January 25, 1910. Serial No. 47,380. PUBLISHED MARCH 29, 1910.

78,244. CANNED VEGETABLES. GRAFTON JOHNSON, Greenwood, Ind.
Filed January 25, 1910. Serial No. 47,382. PUBLISHED MARCH 29, 1910.

78,245. CANNED VEGETABLES. GRAFTON JOHNSON, Greenwood, Ind.
Filed January 25, 1910. Serial No. 47,383. PUBLISHED MARCH 29, 1910.

78,246. PREPARED FLOUR. H. A. JOHNSON Co., Boston, Mass.
Filed February 7, 1910. Serial No. 47,629. PUBLISHED MARCH 29, 1910.

78,247. SAFETY-RAZORS. KAMPFE BRO'S, New York, N. Y.
Filed January 17, 1910. Serial No. 47,208. PUBLISHED MARCH 29, 1910.

78,248. ZWIEBACK. FERDINAND KRAFT, San Francisco, Cal.
Filed January 17, 1910. Serial No. 47,202. PUBLISHED MARCH 29, 1910.

78,249. STITCHED CANVAS BELTING. WILLIAM S. LANGFORD, Baltimore, Md.
Filed January 26, 1910. Serial No. 47,396. PUBLISHED MARCH 29, 1910.

78,250. CIGARS. S. LEVY & COMPANY, New York, N. Y.
Filed August 12, 1909. Serial No. 44,098. PUBLISHED NOVEMBER 2, 1909.

78,251. PLASTIC MOLDING MATERIAL. THE LEWIS PUBLISHING CO., St. Louis, Mo.
Filed December 24, 1909. Serial No. 46,722. PUBLISHED MARCH 29, 1910.

78,252. TOWEL-ROLLERS. SAMUEL LEWIS, New York, N. Y.
Filed December 27, 1909. Serial No. 46,747. PUBLISHED MARCH 29, 1910.

78,253. EQUIPMENT FOR TOOTHACHE-RELIEF. WILLIAM J. LITTLEHALES, New Britain, Conn.
Filed September 16, 1909. Serial No. 44,719. PUBLISHED MARCH 29, 1910.

78,254. METALLIC COOKING UTENSILS. THE LOCKWOOD MANUFACTURING CO., Cincinnati, Ohio.
Filed November 9, 1909. Serial No. 45,782. PUBLISHED MARCH 29, 1910.

78,255. SHOE AND LEATHER DRESSING. LONE STAR BLACKING & MFG. CO., Dallas, Tex.
Filed November 29, 1909. Serial No. 46,178. PUBLISHED MARCH 29, 1910.

78,256. COMIC SECTION OF A NEWSPAPER. THE MCCLURE NEWSPAPER SYNDICATE, New York, N. Y.
Filed January 15, 1910. Serial No. 47,133. PUBLISHED MARCH 29, 1910.

78,257. COMIC SECTION OF A NEWSPAPER. THE MCCLURE NEWSPAPER SYNDICATE, New York, N. Y.
Filed January 15, 1910. Serial No. 47,134. PUBLISHED MARCH 29, 1910.

78,258. EYEGLASSES AND SPECTACLES. THE METROWITE MANUFACTURING CO., New York, N. Y.
Filed February 8, 1910. Serial No. 47,651. PUBLISHED MARCH 29, 1910.

78,259. IRON AND STEEL CHAINS. MILL & MINE SUPPLY CO., Seattle, Wash.
Filed January 18, 1910. Serial No. 47,097. PUBLISHED MARCH 29, 1910.

78,260. CHINAWARE. JOHN J. MILLER, New York, N. Y.
Filed November 4, 1909. Serial No. 45,698. PUBLISHED MARCH 29, 1910.

78,261. WHEAT-FLOUR. THE MODEL MILLING & ELEVATOR COMPANY, Greeley, Colo.
Filed February 12, 1910. Serial No. 47,786. PUBLISHED MARCH 29, 1910.

78,262. DISK MANDRELS, PORTE-POLISHERS, AND POLISHER-HOLDERS. MORGAN AND MAXFIELD, Holyoke, Mass.
Filed December 14, 1909. Serial No. 46,482. PUBLISHED MARCH 29, 1910.

78,263. STOCK FOOD. NATIONAL HAY, GRAIN AND STORAGE CO., Macon, Ga.
Filed December 8, 1909. Serial No. 46,346. PUBLISHED MARCH 29, 1910.

78,264. WHEAT-FLOUR. THE NATIONAL MILLING COMPANY, Toledo, Ohio.
Filed February 12, 1910. Serial No. 47,778. PUBLISHED MARCH 29, 1910.

78,265. PRINTED PICTURES AND ILLUSTRATIONS. THE NEW YORK HERALD COMPANY, New York, N. Y.
Filed January 17, 1910. Serial No. 47,209. PUBLISHED MARCH 29, 1910.

78,266. BELT-LAP. NEW YORK LEATHER BELTING CO., New York, N. Y.
Filed January 26, 1910. Serial No. 47,411. PUBLISHED MARCH 29, 1910.

78,267. ENAMELED SHEET-METAL WARE. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed December 24, 1909. Serial No. 46,716. PUBLISHED MARCH 29, 1910.

78,268. BOYS' WAGONS AND GO-CARTS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,154. PUBLISHED MARCH 29, 1910.

78,269. MEASURING-TAPES AND SCALE-BEAMS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,157. PUBLISHED MARCH 29, 1910.

78,270. INNER TUBES, HOSE, AND FRUIT-JAR RUBBERS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,170. PUBLISHED MARCH 29, 1910.

78,271. FILES. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,185. PUBLISHED MARCH 29, 1910.

78,272. WIND-SHIELDS FOR VEHICLES. ALONSON D. PERKINS, Los Angeles, Cal.
Filed October 20, 1909. Serial No. 45,436. PUBLISHED MARCH 29, 1910.

78,273. CANNED FOODS. L. PICKERT FISH CO., Boston, Mass.
Filed March 11, 1908. Serial No. 38,318. PUBLISHED AUGUST 3, 1909.

78,274. CANNED FRUITS AND VEGETABLES. PRATT-LOW PRESERVING COMPANY, Santa Clara, Cal.
Filed October 4, 1909. Serial No. 45,135. PUBLISHED MARCH 29, 1910.

78,275. PLUMBING-TRAPS. PROVIDENCE STEAM TRAP COMPANY, Providence, R. I.
Filed January 19, 1910. Serial No. 47,245. PUBLISHED MARCH 29, 1910.

78,276. WHEAT-FLOUR. THE REA-PATTERSON MILLING COMPANY, Coffeyville, Kans.
Filed January 7, 1910. Serial No. 46,968. PUBLISHED MARCH 29, 1910.

78,277. CANNED FRUITS AND VEGETABLES. W. R. ROACH & Co., Hart, Mich.
Filed December 30, 1909. Serial No. 46,805. PUBLISHED MARCH 29, 1910.

78,278. POWDER FOR POLISHING METAL SURFACES. AUGUSTUS ROSENBERG, London, England.
Filed October 16, 1909. Serial No. 45,858. PUBLISHED MARCH 29, 1910.

78,279. HORSESHOE-CALKS. THE ROWE PATENT CALK COMPANY, Hartford, Conn.
Filed January 24, 1910. Serial No. 47,342. PUBLISHED MARCH 29, 1910.

78,280. APPARATUS FOR TREATING RECTAL DISEASES AND CONSTIPATION. JOHN P. SANBORN, Cleveland, Ohio.
Filed January 15, 1910. Serial No. 47,137. PUBLISHED MARCH 29, 1910.

78,281. AUTOMOBILES. SOCIÉTÉ DES AUTOMOBILES BRASIER, Ivry, France.
Filed March 12, 1909. Serial No. 41,154. PUBLISHED MARCH 29, 1910.

78,282. DETERGENT. THE SOUTHERN SPECIALTY CO., Franklin, Ky.
Filed December 31, 1909. Serial No. 46,834. PUBLISHED MARCH 29, 1910.

78,283. VALVES AND PARTS THEREOF. STAR BRASS MANUFACTURING COMPANY, Boston, Mass.
Filed January 17, 1910. Serial No. 47,206. PUBLISHED MARCH 29, 1910.

78,284. CERTAIN FOODS. G. F. SUTTON SONS & Co., London, England.
Filed November 26, 1907. Serial No. 31,369. PUBLISHED MARCH 29, 1910.

78,285. SOLE-LEATHER. TANNERS CUT SOLE COMPANY, Portland, Me., and Boston, Mass.
Filed January 27, 1910. Serial No. 47,419. PUBLISHED MARCH 29, 1910.

78,286. BLEND OF STRAIGHT SCOTCH WHISKIES. JOHN WALKER & SONS, LIMITED, Kilmarnock, Scotland, and London, England.
Filed December 16, 1909. Serial No. 46,565. PUBLISHED MARCH 29, 1910.

78,287. MONTHLY MAGAZINE. EDWIN WALTER, Norfolk, Va.
Filed January 22, 1910. Serial No. 47,314. PUBLISHED MARCH 29, 1910.

78,288. ICE-CREAM CONES. WASHINGTON CONE MANUFACTURING COMPANY, Seattle, Wash., and San Francisco, Cal.
Filed January 15, 1910. Serial No. 47,145. PUBLISHED MARCH 29, 1910.

78,289. MEDICINAL SOAPS. PAUL WERNER, Berlin, Germany.
Filed July 19, 1909. Serial No. 43,639. PUBLISHED MARCH 29, 1910.

78,290. CIGARS. J. FRED WILCOX, Chicago, Ill.
Filed February 8, 1910. Serial No. 47,570. PUBLISHED MARCH 29, 1910.

78,291. HORSE FEED. J. J. BADENOCH Co., Chicago, Ill.
Filed November 13, 1909. Serial No. 45,878. PUBLISHED MARCH 29, 1910.

78,292. CANNED SARDINES. P. DUFF & SONS, Pittsburg, Pa.
Filed March 6, 1909. Serial No. 40,968. PUBLISHED MARCH 29, 1910.

78,293. OVERCOATS, OUTER SUITS, AND TROUSERS. THE FRED'K SILBERBERG COMPANY, Cincinnati, Ohio.
Filed May 18, 1905. Serial No. 6,080. PUBLISHED MARCH 29, 1910.

78,294. BRANDY. MICHAEL WEINER, Milwaukee, Wis.
Filed January 29, 1910. Serial No. 47,466. PUBLISHED MARCH 29, 1910.

LABELS

REGISTERED MAY 31, 1910.

15,191.—*Title:* "BANNER ROSE." (For Cigars.) THE MOEHLE LITHOGRAPHIC CO., New York, N. Y. Filed May 6, 1910.

15,192.—*Title:* "MOON BEAM." (For Coffee.) THE GENERAL SERVICE COMPANY, Boston, Mass. Filed May 18, 1910.

15,193.—*Title:* "THE FRANCO-AMERICAN FOOD CO'S CONCENTRATED TOMATO SOUP." (For Concentrated Tomato Soup.) THE FRANCO-AMERICAN FOOD CO., Jersey City, N. J. Filed April 19, 1910.

15,194.—*Title:* "TOP-N-OCH." (For Bread.) THE RONEMOUS SIGN COMPANY, INC., Baltimore, Md. Filed May 11, 1910.

15,195.—*Title:* "FRIENDS OF THE HAM." (For Sliced Ham.) THE AUTOMATIC SLICED HAM CO., Cincinnati, Ohio. Filed May 2, 1910.

15,196.—*Title:* "GERMA OIL." (For a Medicine.) A. W. O'BRIAN & CO., Hutchinson, Kans. Filed April 25, 1910.

15,197.—*Title:* "PYNETAR HAIR TONIC." (For Hair-Tonic.) OKA D. ETTINGER, Cleveland, Ohio. Filed May 10, 1910.

15,198.—*Title:* "DIMOND'S EGG MAKER AND CHICK GROWER." (For Poultry Food.) JAMES S. DIMOND, Franklin, N. H. Filed April 11, 1910.

15,199.—*Title:* "RATOXIN." (For Rat-Exterminators.) CONTINENTAL CHEMICAL COMPANY OF OHIO, Covington, Ky. Filed April 21, 1910.

15,200.—*Title:* "EVERGREEN BRAND FLOWER AND LAWN FERTILIZER." (For Fertilizer.) DAVID D. JOHNSON, Chicago, Ill. Filed May 7, 1910.

15,201.—*Title:* "RICHMOND DYE." (For Hosiery.) RICHMOND HOSIERY MILLS, Rossville, Ga., and Chattanooga, Tenn. Filed May 23, 1910.

PRINTS

REGISTERED MAY 31, 1910.

2,594.—*Title:* "YOU MAY DENT THE WOOD BUT YOU CAN'T CRACK THE VARNISH." (For Floor-Varnish.) PRATT & LAMBERT, INC., Buffalo, N. Y. Filed May 19, 1910.

2,595.—*Title:* "TEST IT WITH YOUR HEEL." (For Floor-Varnish.) PRATT & LAMBERT, INC., Buffalo, N. Y. Filed May 19, 1910.

2,596.—*Title:* "'EUREKA' CLOTH CLEANING PAD." (For Cloth-Cleaning Pads.) JOSEPH THOMPSON, Sioux City, Iowa. Filed May 7, 1910.

2,597.—*Title:* "METHOD OF CASTING GAS ENGINE PISTONS." (For Gas-Engine Pistons.) W. W. MCCARTER, Beaumont, Tex. Filed April 18, 1910.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE HOLZ.

Decided May 9, 1910.

AMENDMENT UNDER RULE 78.—DISCRETION OF EXAMINER.

The question of admitting amendments presented under the provisions of Rule 78 rests largely in the discretion of the Examiner, and his recommendations as to such amendments will not be overruled except under unusual circumstances.

ON PETITION.

BOTTLE-HANDLING DEVICE.

Mr. Curt B. Mueller for the applicant.

MOORE, *Commissioner:*

This is a petition that the Examiner be instructed not to persist in recommending adversely on a proposed amendment under Rule 78.

Before bringing this petition applicant has twice presented the amendment, and in each instance the Examiner has recommended that it be not admitted, which recommendations were adopted by the Assistant Commissioner. The petition is, in effect, a request for the exercise of supervisory authority.

Rule 78 provides that amendments may be made while a case is in issue—

on the recommendation of the Primary Examiner, approved by the Commissioner.

The wording of the rule is such as to give the Examiner a large discretion in the admission of amendments of this character. He is peculiarly in a position to judge of the propriety of admitting them, and his judgment in the matter will not be overruled except under unusual circumstances. It is well settled that an amendment will not be admitted after allowance where it requires a reëxamination of the case.

In the present case the proposed amendment consists of a substitute specification, claims, and drawing. As pointed out by the Examiner the proposed drawing clearly differs from the original one in many particulars. To admit this amendment would practically necessitate a reëxamination of the case to determine whether it included new matter and if the case were otherwise in proper condition for allowance.

I find no circumstances which justify overruling the recommendation of the Examiner in this instance.

The petition is denied.

EX PARTE MOYERS.

Decided February 24, 1910.

EXAMINATION OF APPLICATION—EXPLANATION OF THE REFERENCES—FINAL REJECTION.

Where in rejecting the claims in an application disclosing a very simple device the Examiner states that the claims present no invention over the references and in response to the statement by the applicant as to certain differences between the device of the application and those disclosed in the references the Examiner makes his rejection final, *Held* that in view of the simple character of the device the Examiner's statement that the claims present no invention over the references gave applicant all the information necessary to intelligently prosecute his case and that the final rejection was proper.

ON PETITION.

FIRE-ESCAPE.

Messrs. O'Meara & Brock for the applicant.

BILLINGS, *First Assistant Commissioner:*

This is a petition that the Examiner be directed to withdraw the final rejection in this case as being premature.

The invention is a very simple one and in the first Office letter the claims were rejected in view of three patents, the following statement being made:

The claims are not seen to present invention over Griswold in the provision of a hand-guard as in Gleason or in forming the device in detachable sections such as shown in Pitney.

In response to this action the applicant pointed out that certain features of the device which were claimed were not shown in the references. The Examiner then stated that claim 2 presented no invention over the patent to Gleason in merely placing the hand-guard on the other side of the sleeve and that claim 3 presented no invention over Gleason in view of Pitney. Thereupon applicant canceled claim 1 and asked for reconsideration as to claims 2 and 3, pointing out again that certain features of his device were not shown in the references. The Examiner repeated his rejection, stating that the claims did not present invention over the references, and in response to another request that the references be applied in detail he made the rejection final.

As stated above the devices disclosed in this application and in the references are exceedingly simple. It is apparent from the inspection of the references that applicant's device differs therefrom in certain respects, as pointed out by him. While in his second letter the Examiner might have said

that, admitting these differences, the claims stated nothing requiring invention over the references, it is not seen that this was necessary, since in view of the simple character of the device the Examiner's statement that the claims presented no invention thereover is believed to have given applicant all the information necessary in order that he might intelligently prosecute his case. Applicant having pointed out wherein he considered that the claims possessed patentable novelty over the references and the Examiner having stated that the claims did not present invention thereover, thereby admitting that there were certain differences, a clear issue was reached and the final rejection was in order.

The petition is denied.

EX PARTE STEPHENS.

Decided April 5, 1910.

EXAMINATION OF APPLICATION—FINAL REJECTION.

Where in a letter finally rejecting the claims of an application the Examiner states that his previous action was a request for information and not a rejection and it appears that the claims as amended were not twice rejected by the Examiner on the same ground, *Held* that the final rejection was premature.

ON PETITION.

ATTACHMENT FOR AUTOMOBILES.

Mr. Victor J. Evans for the applicant.

BILLINGS, *First Assistant Commissioner:*

This is a petition that the action of the Examiner finally rejecting the claims of the above-entitled application be set aside as premature and that the Examiner be instructed to withdraw certain criticisms which he has made of the invention for alleged inoperativeness and inutility.

The record shows that in the first Office action the Examiner rejected the claims. The applicant then amended the claims and submitted an argument. The next action of the Office contained suggestions that the device might be inoperative under certain conditions and that it was not useful in a patentable sense. It was further stated that unless these criticisms were explained away four of the claims must stand rejected on references and, further, that if the criticisms should be shown to be without force another claim might be allowed. Applicant responded to this action by a statement of his understanding of the law applicable to the case, in view of which he requested a reconsideration. The Examiner then wrote a letter which began with the following statement: "The Examiner's last action was a request for information." The letter also contains a statement of the Examiner's views upon the questions of inutility and inoperativeness and concludes as follows:

The claims are rejected on three grounds; first, on the references Robinson and Steffens of record; second, for inoperativeness and, third, for inutility. This rejection is final.

In view of the Examiner's statement in the last letter that the previous action was a request for information it is apparent from the record that the claims as amended have not been twice rejected by the Examiner on the same ground, and therefore the final rejection is premature. The petitioner urges that the rejection on the ground of inoperativeness and inutility for the reasons advanced by the Examiner is not valid. This is a matter, however, which cannot be passed upon at this time, for clearly to do so would require judgment on the merits prior to a consideration by the Examiners-in-Chief on appeal. It may be said, however, that the reasons for the rejection on the grounds of inoperativeness and inutility are not stated with sufficient definiteness to comply with the rules in such cases.

The petition is granted to the extent indicated.

EX PARTE KADOW.

Decided March 31, 1910.

1. CLAIMS—MULTIPLICITY OF.

The practice of presenting a needless multiplicity of claims of substantially the same scope is to be condemned.

2. SAME—SAME.

Where an Examiner requires that the claims of an application be restricted to a reasonable number, he should point out the claims which he believes to be of substantially the same scope.

ON PETITION.

WATER-TRAP.

Messrs. Bates, Fouts & Hull for the applicant.

TENNANT, *Assistant Commissioner:*

This is a petition from the action of the Examiner holding that the fifteen claims presented in this case constitute an unreasonable and needless multiplicity of claims.

This case is similar in all material respects to the case of *ex parte Chapman*, (120 O. G., 2446,) in which it is pointed out that the action of the Examiner holding that the claims are unnecessarily multiplied is to be regarded as a rejection, and therefore appealable to the Examiners-in-Chief and not reviewable upon petition. The only manner in which the present case differs from *ex parte Chapman, supra*, is that in this case the Examiner has not grouped the claims which are in his opinion of substantially the same scope. The applicant and also the appellate tribunals should have the benefit of the Examiner's opinion as to the identity of the claims.

The practice of presenting a needless multiplicity of claims of substantially the same scope has been repeatedly condemned by the courts, (*Carlton* v. *Bokee*, 2 O. G., 520; 17 Wall., 463; *The Brush Electric Company* v. *The Electric Accumulator Company*, 56 O. G., 1334; 1891, C. D., 477; *Thomson-Houston Electric Company* v. *Elmira and Horseheads Railway Company*, 74 O. G., 144; 1896, C. D., 122; *Computing Scale Company* v. *Automatic Scale Company*, 119 O. G., 1586; 1905, C. D., 704; 26 App. D. C., 238; *in re Carpenter*, 112 O. G., 508; 1904, C. D., 669; 24 App. D. C., 110; *in re Thomson*, 120 O. G., 2756; 1906, C. D., 566; 26 App. D. C., 419,) as well as by successive Commissioners of Patents, (*ex parte Woodruff*, 1880, C. D., 90; *ex parte Johnson*, 1891, C. D., 16; *ex parte Sawn*, 1891, C. D., 44; *ex parte Griffith*, 85 O. G., 986; *ex parte Hoegh*, 100 O. G., 453; *ex parte Jacobson*, 107 O. G., 1378; *ex parte Chapman*, 120 O. G., 2446.) The requirement that applicants should restrict their claims to a reasonable number is a salutary one and should be insisted upon, the Examiner pointing out the claims which he believes to be of substantially the same scope.

The petition is dismissed.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Sixth Circuit.

CHICAGO GRAIN DOOR CO. *v.* NATIONAL MALLEABLE CASTINGS CO. *et al.*

Decided November 16, 1909.

PATENTABILITY—ANTICIPATION—BRACKET FOR CAR-DOORS.

The Hill patent, No. 527,792, for a bracket for car-doors, fastened to the side of the car by a screw having a square countersunk head not rotatable on the bracket and removable only by revolving the bracket itself, which cannot be done when the door is closed, *Held* anticipated by the Eubank patent, No. 512,467, the device of which operates on the same principle, the only difference being that instead of a screw, a fastening is used consisting of a stud integral with the bracket and having flanges working in the manner of the threads of a screw.

Mr. O. R. Barnett for the appellant.

Mr. C. P. Byrnes for the appellee.

Before LURTON, SEVERENS, and WARRINGTON, Circuit Judges.

SEVERENS, *Cir. J.:*

The patent of the appellant, for the infringement of which this suit was brought, is No. 527,792, and was granted to Edward A. Hill, October 23, 1894, for an invention by him of improvements in brackets for car-doors. The appellant derives his title from him and his assignees. The defenses are that the invention was anticipated by an earlier patent to Eubank, No. 512,467, and a prior use of similar devices by the Louisville and Nashville Railroad Company, and that the defendants do not infringe. At the hearing upon pleading and proofs, the court held that there was no novelty in the supposed invention; that it was anticipated by the Eubank patent, and probably by the prior use above mentioned; and further, that, if the appellant's patent were held valid, the appellees have not infringed it. Thereupon the bill was dismissed.

It appears that, prior to either of the inventions above mentioned, brackets for car-doors had long been in use for the purpose of guiding the doors while sliding along the side of the car, and preventing them from opening away from the car at the bottom. Such brackets consisted of cast-iron plates, having a flat inner surface where they came in contact with the car, a horizontal offset a little wider than the thickness of the door, and an upward projection at the outer end of the offset. This upward projection overlapped the outside of the door at the bottom. The brackets were fastened to the side of the car by ordinary screws running into the sill, or by bolts running through it. The door was also equipped with a lock and seal at one side. Depredations by thieves upon the cars, while they were closed and locked, for the purpose of stealing their contents, had become common. Their method of getting into a car was by taking out the screws or bolts by which the brackets were attached. This being done, the lower part of the door was pulled outwardly to a sufficient extent to enable the thief to get in. After getting his plunder, he came out, put the brackets back, and attached them as before. So no indication from the appearance of the car that it had been opened would be given to operators or inspectors. It was the object of these inventions to provide means for attaching the brackets to the car in such a way that they would be inaccessible to the thief when the door was closed. It had been customary to make this attachment by three screws or bolts, the central one being at and somewhat below the middle of the horizontal length of the bracket; and all of them had their heads exposed.

Hill's method, as disclosed by his patent, was to use a lag-screw, having a square head, at the middle of the length of the bracket, and countersink it in the outer surface of the bracket either by forming a square recess in the casting of only a sufficient size and depth to receive the square head of the lag-screw, or by raising two parallel projections on the casting, one on each of the two sides of the hole for the screw and far enough apart to take in the head of the screw. In either case, the bracket and the screw were not rotatable upon each other when the head of the latter was sunk in the recess of the former provided for it; nor could the screw be turned by any other means than by turning the bracket, and this could not be done when the door was closed, because the horizontal extension of the bracket would be under the door. The two outside screws might be taken out, and still the bracket be held fast by the middle screw and the bottom of the door. But when the door stands open, and the end screws are removed, the central lag-screw may be turned out by revolving the bracket until the head of the screw rises out of the recess, when it may be seized by a wrench. The bracket is attached by turning in the central lag-screw until its head is engaged in the recess of the bracket, or driving it in, whereupon the process is finished by revolving the bracket until the latter is brought up to the side of the car, and thereupon turning in the end screws. All this, of course, while the door is standing open. Then all is ready for sliding it to its closed position. The whole organization is illustrated by Figures 2 and 4 of the drawings which are here inserted.

Fig 2.



Fig 4.



The claims are as follows:

1. The combination, with a sliding door, of a bracket and an attaching screw or bolt having non-rotative en-

gagement with the bracket; said bracket having movable contact with a part of the structure in such manner as to prevent rotation of the bracket, substantially as set forth.

2. The combination, with a sliding door, of a guide-bracket engaged and held against rotation by the door and a retaining screw or bolt having non-rotatable engagement with the bracket, substantially as and for the purpose described.

We think there is sufficient ingenuity in this to justify a patent, unless the device had been anticipated; and this is the next question to be considered. The earlier patent to Eubank disclosed one way by which the same result could be accomplished; that is, so attaching the bracket that its fastening was inaccessible when the door was closed. It appears to have been the first one to have accomplished this object. For this reason it embraced a wider range of equivalents than if it had followed other inventions attaining the same result. Nevertheless, Eubank could not usurp the whole field, but would subject all other devices for attaining the same result by employing the same or substantially equivalent means. To be substantially equivalent means, they must perform the same office by a similar organization and mode of operation. Given the problem of making inaccessible the means of attaching the bracket, he adopted this method of organization: He prepared the place for inserting his fastening by boring a hole into the side of the car, and on two opposite sides of the hole made slots extending to the bottom of the hole. Then on the inner side of the bracket he erected a stud, having flanges or projections on the farther end adapted to fit the slots at the sides of the hole in the side of the car. These flanges had a narrow beveled edge on one side. In order to effect the attachment, the stud on the bracket was pressed into the hole; the flanges on the farther end of the stud passing in through the slots at the sides of the hole. Then, when the stud had reached the bottom of the hole, he turned the bracket a quarter-way around. The flanges on the stud, passing out of the slots, entered the wood of the car-sill; the operation ending when each of the flanges was a quarter-way around a circle. The bracket was in its place and anchored to the side of the car, and when the door was closed the bracket was immovable, and was held so in precisely the same way as in Hill's patent. Supplementing this description with Figs. 2 and 4 of the drawings of Eubank, which we here insert, we presume no difficulty will be found in understanding the patent.



In the Eubank patent, the stud was integral with the bracket, and so was not rotatable upon it. In Hill's patent the bracket and the screw were not rotatable upon each other. They were in two parts; but in their application and effect, when applied, they performed the same office and by the same mode of operation. There was no invention in making two parts or two pieces of the integral member as employed by Eubank. (*Bundy Mfg. Co.* v. *Detroit Time Register Co.*, 94 Fed., 524; 36 C. C. A., 375; *D'Arcy* v. *Staples & Henford Co.*, 161 Fed., 733, and the cases cited at page 742, 88 C. C. A., 606.) The threads of the screws of Hill's patent performed the same office as the flanges on the stud of the Eubank patent, and are in substance a multiplication of those flanges. Thus the stud with its flanges are in principle the equivalent with the stem of the lag-screw and its threads, and in combination with the bracket make the same or an equivalent organization. In both inventions the same result was accomplished. Slight differences no doubt exist, as must always exist where one device is not a mere copy of another. There is more similarity between these two forms than there is between the combination of Hill's patent and that of the defendants which is alleged to infringe it. It seems to us that the Hill device was an infringement of Eubank's, and, if it was so, the latter was an anticipation of Hill's.

Having reached this conclusion it is unnecessary to consider the structure of the bracket in prior use on the Louisville and Nashville Railroad, which we regard as more remote than Eubank's patent, or the question of infringement.

The judgment must be affirmed, with costs.

Changes in Classification.

(ORDER No. 1,855.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 7, 1910.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In Division IV, class 37, EXCAVATING, establish subclass—

Scoops—
54. Buckets.

In Division VIII, class 5, Beds, change the title of subclass 39, Bed bottoms, Fabrics, to read—

Bed bottoms—
39. Fabric.

In same Division, same class, establish the following subclasses:

Bed bottoms—
Fabric—
62. Binding and fastening,
63. Corner irons and rivets,
64. Frames—
65. Sectional,
66. Reinforces,
67. Tighteners—
68. Roller,
69. Screw operated.

In same Division, class 248, Supports, establish subclass—

41. Stands.

In Division XI, class 12, Boot and Shoe Making, establish the following subclasses and definitions:

Lasting machines—
End lasting—
14.1. End clasps,
Nipper stretcher—
11.1. Nippers.
Welt and rand machines—
67.1. Welt and rand formers,
67.2. Welt beaters.

11.1. LASTING MACHINES, NIPPER STRETCHER, NIPPERS. Includes only nippers employed in lasting machines of the nipper stretcher type.

Search Class—
12—BOOT AND SHOE MAKING, subclasses 108, Lasting tools, Nailing and stretching, and 110, Lasting tools, Stretchers, and the subclasses thereunder.

14.1. LASTING MACHINES, END LASTING, END CLASPS; Includes the toe and heel clasps used in end lasting.

67.1. WELT AND RAND MACHINES, WELT AND RAND FORMERS. Machines for crimping or molding welts and rands.

67.2. WELT AND RAND MACHINES, WELT BEATERS. Machines for beating out the welt after attachment to the upper and insole.

In same Division, class 218, Button, Eyelet, and Rivet Setting, establish the following subclasses and definitions:

Machines—
Eyeleting—
Magazine—
15.1. Feeding,
17.2. Gages,
0.5. Gang,
Lacing hook—
Magazine—
17.1. Feeding.

0.5. MACHINES, GANG. Machines of the types in class 218 having a gang of tools for setting a plurality of rivets, eyelets, lacing studs, or buttons.

15.1. MACHINES, EYELETING, MAGAZINE, FEEDING. Devices for feeding eyelets to eyeleting machines.

17.1. MACHINES, LACING HOOK, MAGAZINE, FEEDING. Devices for feeding lacing hooks to lacing hook setting machines.

17.2. MACHINES, GAGES. Edge gages for machines of the types in class 218.

In Division XLII, class 177, Electric Signaling, abolish subclass 204, Circuit closers, Retarded, the patents therein having been transferred to a new subclass hereinafter established in class 161.

In Division XXIII, class 161, Time Controlling Mechanism, establish the following subclasses and definitions:

26. Shutter actuating mechanism.
25. Switch actuating mechanism.

25. SWITCH ACTUATING MECHANISM. Electric switches combined with mechanism for operating them at predetermined times.

Switches or circuits breakers which will not operate until conditions in the circuit have continued abnormal for a certain interval are classified in class 175, ELECTRICITY, GENERAL APPLICATIONS, under "Circuit breakers."

Search Class—
161—TIME CONTROLLING MECHANISM, subclass 13, Lighting mechanism, Electric light.

26. SHUTTER ACTUATING MECHANISM. Mechanism for opening or closing camera shutters at predetermined times.

The ordinary mechanism for determining the duration of the exposure, and which constitutes an integral part of the shutter, is classified in class 95, PHOTOGRAPHY, subclass 53, Cameras, Shutters, and the subclasses thereunder.

In Division XXVIII, class 123, Internal Combustion Engines, establish the following subclass and definition:

Starting devices—
187.5. Primers.

187.5. STARTING DEVICES, PRIMERS. Devices designed to introduce a fluid into the working cylinder of the engine, which when mixed with the gaseous contents thereof forms a combustible mixture which is ignited to start the engine, the device in question being distinct from the elements constituting the engine and not involved in the normal operation thereof.

In Division XXI, class 12, Brakes and Gins, establish subclasses—

22. Rag cutters.
23. Feather reducers.

In Division XXV, class 92, Mills, abolish subclass 21, Grinding mills, Bark, and establish subclasses—

74. Chip graders.
75. Wood and bark.

In Division XXVII, class 141, Washing Apparatus, establish subclass.

12. Miscellaneous fiber and pulp washers.

In Division XV abolish class 92, Paper Making, and class 154, Laminated Sheets and Fabrics, and in lieu thereof establish classes 92, Paper Making and Fiber Liberation, and 154, Laminated Fabric and Analogous Manufactures. * * * *

EDWARD B. MOORE,
Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 21, 1910.

Hamilton & Whittin, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of John Elefritz, of St. Louis, Mo., for registration of a trade-mark and a trade-mark registration to Hamilton & Whittin, of Chicago, Ill., and the notice of such declaration sent by registered mail to the said Hamilton & Whittin at the address given above has been returned by the Post-Office Department as undeliverable.

Notice is therefore hereby given to the said Hamilton & Whittin, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 21, 1910.

Lariat Manufacturing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Fishbeck Soap Company, of San Francisco, Cal., for registration of a trade-mark and trade-mark registrations to the following-named parties: (1) Joseph R. Ford, of New York, N. Y., (2) Joseph Oberndorfer, of Salt Lake City, Utah, (3) Clara C. Day, of St. Louis, Mo., (4) Charles C. Gerhart, of Clarksville, Tenn., and (5) Lariat Manufacturing Company, of Jersey City, N. J., and Boston, Mass., and the notice of such declaration sent by registered mail to the Lariat Manufacturing Company at Boston, Mass., has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the Lariat Manufacturing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 19, 1910.

The Kenosha Watch Case Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Philadelphia Watch Case Company, of Riverside, N. J.; an application of Hauser, Zivy & Cia., of Mexico City, Mexico, both for registration of certain trade-marks, and a trade-mark registration of The Kenosha Watch Case Company, of Kenosha, Wis., and the notice of such declaration sent by registered mail to The Kenosha Watch Case Company, at the address given above, has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said The Kenosha Watch Case Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 17, 1910.

Albert O. Murphy, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the patent of A. C. Murphy, of East St. Louis, Ill., and an application for patent by Edward C. Meissner, C/o Eagle Generator Co., St. Louis, Mo., and the notice of said declaration sent by registered mail to the said Murphy having been returned undelivered, notice is hereby given to the said Murphy, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 11, 1910.

Radical Remedy Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Barclay & Barclay, of New York, N. Y., for registration of a trade-mark and trade-mark registrations to the following-named parties: (1) Radical Remedy Company, of Hickory, N. C., and (2) Walter M. Carr, of Stoughton, Wis., and the notice of such declaration sent by registered mail to the Radical Remedy Company at the address given above has been returned with the statement that this corporation has been dissolved.

Notice is therefore hereby given to the said Radical Remedy Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

F. A. TENNANT, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 10, 1910.

The St. Paul Roller Mill Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the C. A. Gambrill Mfg. Company, of 100 Commerce street, Baltimore, Md., for registration of a trade-mark and trade-marks registered to the Barber Milling Company, of Minneapolis, Minn., The St. Paul Roller Mill Co., of St. Paul, Minn., and H. Becker & Co., of New York, N. Y., and the notice of said declaration sent by registered mail to The St. Paul Roller Mill Co. having been returned undelivered, notice is hereby given to the said The St. Paul Roller Mill Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 10, 1910.

William Brobhahne, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the Norvell-Shapleigh Hardware Company, of Fourth and Washington avenues, St. Louis, Mo., for registration of a trade-mark and trade-marks registered to Krusius Brothers, 206 Broadway, New York, N. Y., the Challenge Cutlery Corp., of Seymour and Kossuth streets, Bridgeport, Conn., the A. F. Shapleigh Hardware Company, of St. Louis, Mo., and William Brobhahne, of New York, N. Y., and the notice of said declaration sent by registered mail to the said William Brobhahne having been returned undelivered, notice is hereby given to the said William Brobhahne, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 9, 1910.

William Brobhahne, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Norvell-Shapleigh Hardware Company, of Fourth street and Washington avenue, St. Louis, Mo., for registration of a trade-mark and trade-marks registered to Hibbard, Spencer, Bartlett & Company, northeast corner of State and South Water streets, Chicago, Ill., the A. F. Shapleigh Hardware Company, of St. Louis, Mo., and William Brobhahne, New York, N. Y., and the notice of said declaration sent by registered mail to the said William Brobhahne having been returned undelivered, notice is hereby given to the said William Brobhahne, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 30, 1910.

Joseph Parker & Son, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Keith Paper Company, of Turners Falls, Mass., for registration of a trade-mark and a trade-mark registered to Joseph Parker & Son, of 27 Elm street, New Haven, Conn., and the receipt for the registered letter in which notice of this interference was mailed to Parker & Son being signed Joseph Parker & Son Co. instead of Joseph Parker & Son, notice is hereby given to the said Joseph Parker & Son, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 28, 1910.

Julian Alvarez, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Moore & Calvi, of 39 Water street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Julian Alvarez, of 919 Broadway, New York, N. Y., and the notice of said declaration sent by registered mail to the said Julian Alvarez having been returned undelivered, notice is hereby given to the said Julian Alvarez, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 21, 1910.

Strassheim & Jaeger, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Frederick W. Gardner, of 316 East Thirty-fourth street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Strassheim & Jaeger, of 173 and 175 South Water street, Chicago, Ill., and the notice of said declaration sent by registered mail to the said Strassheim & Jaeger having been returned undelivered, notice is hereby given to the said Strassheim & Jaeger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 21, 1910.

Hugo Pfabe, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Sugar Products Company, of Caro, Mich., for registration of a trade-mark and a trade-mark registered to Hugo Pfabe, of Chicago, Ill., and the notice of said declaration sent by registered mail to the said Hugo Pfabe having been returned undelivered, notice is hereby given to the said Hugo Pfabe, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

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TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND THE UNITED STATES COURTS.

MAY, 1910.

[Decisions of the Court of Appeals of the District of Columbia are indicated by a star (*) and of the United States Circuit Court of Appeals by the letter ᵈ.]

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DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND THE UNITED STATES COURTS.

MAY, 1910.

[Decisions of the Court of Appeals of the District of Columbia are indicated by a star (*) and of the United States Circuit Court of Appeals by the letter *a*.]

ABANDONMENT OF TRADE-MARKS.

(See Trade-Marks, 6.)

ACTION BY THE EXAMINER.

(See Amendment; Examination of Applications; Motion to Amend Application, 2, 4; Motion to Dissolve Interference, 4, 6; Trade-Marks, 2.)

ALLEGATIONS.

(See Motion to Dissolve Interference, 3, 4; Trade-Marks, 3.)

AMENDMENT.

RULE 78—DISCRETION OF EXAMINER.

The question of admitting amendments presented under the provisions of Rule 78 rests largely in the discretion of the Examiner, and his recommendations as to such amendments will not be overruled except under unusual circumstances.

[*Ex parte* Hols, 1411.

ANTICIPATION.

(See Construction of Specifications and Patents; Motion to Dissolve Interference, 3.)

APPEAL.

(See Motion to Dissolve Interference, 1, 2, 3, 4; Trade-Marks, 2.)

APPEAL FROM THE EXAMINER OF INTERFERENCES.

(See Motion to Dissolve Interference, 1, 3, 4.)

APPEAL TO THE COMMISSIONER OF PATENTS.

(See Motion to Dissolve Interference, 4.)

APPEAL TO THE COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

(See Expert Testimony.)

APPLICATION FOR REGISTRATION OF TRADE-MARKS.

(See Trade-Marks, 3.)

ASSIGNMENT OF ERROR.

(See Motion to Dissolve Interference, 1.)

CLAIMS.

(See Construction of Claims; Divisional Application; Examination of Applications; Motion to Amend Application, 2, 4; Reissue.)

MULTIPLICITY OF.

The practice of presenting a needless multiplicity of claims of substantially the same scope is to be condemned.

[*Ex parte* Kadow, 1412.

CONCEPTION OF INVENTION.

(See Priority of Invention.)

CONSTRUCTION OF CLAIMS.

1. INTERFERENCE—PRIORITY—RIGHT TO MAKE THE CLAIMS.

In the device of W. each of the positive electrodes is connected to an individual or distinct coil of a polyphase generator. *Held* that W. is entitled to make the claims in issue, in which it is specified that each of the positive electrodes is connected to a separate source of current. [*Weintraub *v.* Hewitt, 264.

2. SAME—LIMITATION OF CLAIMS.

"A limitation in a claim that is merely arbitrary and without function ought not to be permitted to deprive the first inventor of reward simply because the one first to file an application has inserted it." [*Arbetter *v.* Lewis, 516.

3. SAME—SAME.

Where in an interference involving a sewed seam the sole reason assigned for the limitation in the claim "under the edge" is concealment of one of the threads and neither seam accomplishes that result, *Held* that "the one in which such result is more nearly accomplished ought not to be put aside for the other." [*Id.

4. PATENTABILITY—VACUUM CLEANING APPARATUS.

Applicant connected an internal-combustion engine with a vacuum cleaning-machine in such a manner that the air supplied to the air and fuel mixing means of the engine is drawn through the cleaning device. *Held* that this substitution of the pump of the engine for the separate air-pump of the cleaning device is ingenious, but is not invention. [*In re Noyes, 838.

CONSTRUCTION OF RULES.

(See Amendment; Motion to Amend Application, 1, 3, 4.)

CONSTRUCTION OF SPECIFICATIONS AND PATENTS.

PATENTABILITY—ANTICIPATION—BRACKET FOR CAR-DOORS.

The Hill patent, No. 527,782, for a bracket for car-doors, fastened to the side of the car by a screw having a square countersunk head not rotatable on the bracket and removable only by revolving the bracket itself, which cannot be done when the door is closed, *Held* anticipated by the Eubank patent, No. 512,467, the device of which operates on the same principle, the only difference being that instead of a screw a fastening is used consisting of a stud integral with the bracket and having flanges working in the manner of the threads of a screw.

[*Chicago Grain Door Co. *v.* National Malleable Castings Co. *et al.*, 1413.

DATE OF FILING APPLICATION.

(See Divisional Application; Trade-Marks, 3.)

DECISIONS OF THE EXAMINER OF INTERFERENCES.

(See Motion to Dissolve Interference, 1, 3.)

DELAY IN BRINGING MOTIONS.

(See Motion to Amend Application, 1, 3.)

DESIGNS.

PATENTABILITY.

In considering the question of the patentability of a design utility may, in a close case, be given some consideration; but the real question is whether there is such originality shown as to call for the exercise of the inventive faculty. [*In re* Sherman, 839.

DILIGENCE.

(See Priority of Invention.)

DISCRETION OF THE COMMISSIONER OF PATENTS.

(See Expert Testimony.)

DISCRETION OF THE EXAMINER.

(See Amendment.)

DIVISIONAL APPLICATION.

1. ENTITLED TO DATE OF ORIGINAL AS DATE OF CONSTRUCTIVE REDUCTION TO PRACTICE.

A divisional application is entitled to the date of filing of the original application as a date of constructive reduction to practice whether the claims of the divisional application were presented in the earlier application or not. (*Saunders* v. *Miller*, 146 O. G., 506; 33 App. D. C., 486, distinguished.) [*Von Recklinghausen v. Dempster, 252.

2. SAME.

Where as the result of an adverse decision in an interference all the claims of an application are rejected, *Held* that a divisional application filed within one year from the date of such rejection is entitled to the date of the original application as a date of constructive reduction to practice. [*Id.

EARLIER APPLICATIONS.

(See Divisional Application, 1.)

EVIDENCE.

(See Priority of Invention.)

EXAMINATION OF APPLICATIONS.

1. FINAL REJECTION—EXPLANATION OF THE REFERENCES.

Where in rejecting the claims in an application disclosing a very simple device the Examiner states that the claims present no invention over the references and in response to the statement by the applicant as to certain differences between the device of the application and those disclosed in the references the Examiner makes his rejection final, *Held* that in view of the simple character of the device the Examiner's statement that the claims present no invention over the references gave applicant all the information necessary to intelligently prosecute his case and that the final rejection was proper. [*Ex parte* Moyers, 1411.

2. SAME.

Where in a letter finally rejecting the claims of an application the Examiner states that his previous action was a request for information and not a rejection and it appears that the claims as amended were not twice rejected by the Examiner on the same ground, *Held* that the final rejection was premature. [*Ex parte* Stephens, 1412.

3. MULTIPLICITY OF CLAIMS.

Where an Examiner requires that the claims of an application be restricted to a reasonable number, he should point out the claims which he believes to be of substantially the same scope. [*Ex parte* Kadow, 1412.

EXAMINER OF INTERFERENCES.

(See Motion to Amend Application, 3; Motion to Dissolve Interference, 1, 2, 3, 6.)

EXAMINER OF TRADE-MARKS.

(See Motion to Dissolve Interference, 4; Trade-Marks, 2.)

EXPERT TESTIMONY.

TESTIMONY—TAKING OF—DISCRETION OF THE COMMISSIONER OF PATENTS.

The question of allowing expert testimony to be taken in an interference is one which is entirely within the discretion of the Commissioner of Patents and which will not be reviewed upon appeal to the Court of Appeals of the District of Columbia. [*Weintraub v. Hewitt, 264.

EXPUNGING APPEAL FROM RECORD OF INTERFERENCE PROCEEDINGS.

(See Motion to Dissolve Interference, 2.)

FINAL HEARING.

(See Motion to Amend Application, 1; Motion to Dissolve Interference, 5.)

FINAL REJECTION OF CLAIMS.

(See Examination of Applications, 1, 2.)

FIRST AND ORIGINAL INVENTOR.

(See Construction of Claims, 1.)

FORMER DECISIONS CITED.

(See Trade-Marks 5.)

FORMER DECISIONS DISTINGUISHED.

(See Divisional Application, 1; Trade-Marks, 5.)

INFRINGEMENT.

(See Construction of Specifications and Patents.)

INTERFERENCE.

(See Construction of Claims; Divisional Application; Expert Testimony; Motion to Amend Application; Motion to Dissolve Interference; Priority of Invention; Trade-Marks, 5.)

CONSIDERATION BY THE PRIMARY EXAMINER AS TO OPERATIVENESS OF THE DEVICE OF ONE OF THE PARTIES.

Where after hearing a motion to dissolve the Primary Examiner acquired jurisdiction of the interference for the purpose of considering the operativeness of the device of one of the parties and gave notice that on a certain day practical demonstration of this matter might be presented by either or both of the parties, *Held* that a petition that the jurisdiction of the Examiner be withdrawn was premature. [Wentworth v. Sutton, Steele & Steele, 1107.

INVENTION.

(See Construction of Claims, 4; Construction of Specifications and Patents: Designs; Examination of Applications, 1.)

JURISDICTION OF THE EXAMINER.

(See Interference.)

JURISDICTION OF THE EXAMINER OF INTERFERENCES.

(See Motion to Dissolve Interference, 5.)

LICENSES.

(See Trade-Marks, 6.)

LIMITATION OF CLAIMS.

(See Construction of Claims, 2, 3.)

LIMIT OF APPEAL.

(See Motion to Dissolve Interference, 2.)

MOTION TO AMEND APPLICATION.

1. INTERFERENCE—TRANSMISSION.

A motion to amend the issue under Rule 109 brought long after the time set for bringing such motions and after the case is ready for final hearing *Held* properly refused transmission where the only excuse for the delay in bringing such motion was that the moving party did not order a complete copy of his opponent's application until shortly prior to the bringing of the motion and it appeared that the delay in obtaining such copy was inspired by a policy of economy rather than impelled by poverty. [Haudenschild v. Huyck, 515.

2. SAME—PRACTICE.

Where a motion to amend the issue of an interference is transmitted to the Primary Examiner, he should consider all the grounds raised in opposition to the motion. [Lotterhand v. Cornwall, 515.

3. SAME—TRANSMISSION—OPPOSITION RAISED FOR FIRST TIME ON APPEAL.

The fact that transmission of a motion to amend under Rule 109 was not opposed before the Examiner of Interferences is a sufficient reason for the dismissal of an appeal from his decision transmitting such motion. [Hollifield v. Cummings, 1107.

4. SAME—CLAIMS NOT PATENTABLY DIFFERENT FROM THE ISSUE.

Where the Primary Examiner finds that claims proposed under Rule 109 do not differ in a patentable sense from the claims already constituting the issue of the interference, they should not be admitted, since to admit them would permit the filing of new preliminary statements without sufficient excuse therefor. [Id.

MOTION TO DISSOLVE INTERFERENCE.

(See Interference.)

1. TRANSMISSION—APPEAL—SPECIFICATION OF ERROR.

An appeal from a decision of the Examiner of Interferences refusing to transmit a motion to dissolve will not be dismissed for failure to include a specific assignment of error where the question it is desired to have reviewed is clear. [Gibson v. Valentine, 835.

2. SAME—SAME.

Where the Examiner of Interferences refuses to transmit a motion to dissolve and a renewed motion is filed, it was proper for the Examiner of Interferences to set a limit of appeal from his decision refusing to transmit the second motion. [Id.

3. SAME—SAME.

The fact that an appeal from a decision of the Examiner of Interferences refusing to transmit a motion to dissolve contains a reference to a patent alleged to anticipate the issue constitutes no ground for expunging the appeal from the record. [Id.

4. NO INTERFERENCE IN FACT—APPEAL.

Appeal lies to the Commissioner from the decision of the Examiner of Trade-Marks on a motion to dissolve alleging no interference in fact.

[Columbia Drug Co. v. The Lester H. Greene Co. v. John R. Smith v. Scott and Bowne, 836.

5. SAME—SAME—SEGREGATION OF MARKS.

Where on a motion to dissolve it is urged that the mark sought to be registered by one of the parties is not in fact the mark actually used, but only a part thereof, *Held* that this question cannot be decided on a motion to dissolve, but must be deferred until final hearing. [Id.

6. SAME—PATENTABILITY OF THE ISSUE—JURISDICTION OF THE EXAMINER OF INTERFERENCES.

Where in response to an order to show cause a party filed a motion for dissolution on all the grounds provided by the rules and the motion was denied by the Primary Examiner, *Held* that a motion to direct the Examiner of Interferences to consider the question of the patentability of the issue is without standing. [Wood v. Pfister, 837.

MULTIPLICITY OF CLAIMS.

(See Claims; Examination of Applications.)

NAME OF APPLICANT.

(See Trade-Marks, 1.)

NEW MATTER.

(See Reissue.)

OPERATIVE DEVICES.

(See Interference.)

OPPOSITION RAISED ON APPEAL.

(See Motion to Amend Application, 3.)

ORIGINAL APPLICATION.

(See Divisional Application; Reissue.)

PATENTABILITY.

(See Construction of Claims, 4; Construction of Specifications and Patents; Designs; Motion to Amend Application, 4; Motion to Dissolve Interference, 6.)

POVERTY.

(See Motion to Amend Application, 1.)

PRACTICE IN THE PATENT OFFICE.

(See Motion to Amend Application, 2, 4.)

PRELIMINARY STATEMENT.

(See Motion to Amend Application, 4.)

PRIORITY OF ADOPTION AND USE.

(See Trade-Marks, 5.)

PRIORITY OF INVENTION.

(See Construction of Claims, 1, 2, 3.)

INTERFERENCE—DILIGENCE.

Evidence considered and *Held* to show that C., who was the first to conceive the invention in issue, was exercising due diligence in reducing it to practice at the time S. entered the field and subsequently thereto. [*Scott and Scott, executors of the estate of Walter Scott, deceased, v. Cruse, 252.

REDUCTION TO PRACTICE.

(See Divisional Application; Priority of Invention.)

REFERENCES.

(See Examination of Applications, 1; Motion to Dissolve Interference, 3.)

REGISTRABILITY.

(See Motion to Dissolve Interference, 5; Trade-Marks, 1, 2, 4.)

REISSUE.

BROADENED CLAIMS.

The law does not permit a patent to be reissued for the mere purpose of enlarging a claim unless there has been a clear mistake, inadvertently committed, in the wording of a claim. If the description in the reissue application finds no real support in the original application, a case for reissue is not made. [*Otis v. Ingoldsby and Bowling, 1108.

REJECTION OF CLAIMS.

(See Divisional Application, 2; Examination of Applications, 1, 2.)

RENEWED MOTION.

(See Motion to Dissolve Interference, 2.)

RIGHT TO MAKE CLAIMS.

(See Construction of Claims, 1.)

SCOPE OF CLAIM.

(See Claims; Examination of Applications, 3.)

SEGREGATION OF MARK.

(See Motion to Dissolve Interference, 5.)

SIMILARITY OF MARKS.

(See Trade-Marks, 4.)

TESTIMONY.

(See Expert Testimony.)

TRADE-MARKS.

(See Motion to Dissolve Interference, 4, 5.)

1. NAME OF APPLICANT—PECULIAR AND DISTINCTIVE MANNER OF WRITING.
Where the three words composing the name of the applicant are so formed that the tops of each show a continuous slant downward from beginning to end and all of the horizontal parts of the letters are provided with a representation of snow or ice, *Held* that the name is not printed or written in such peculiar and distinctive manner as to justify its registration as a trade-mark.
[*Ex parte* Polar Knitting Mills, 251.

2. ACTION OF EXAMINER REFUSING TO REGISTER A MARK NOT REVIEWABLE ON PETITION.
The action of the Examiner of Trade-Marks refusing registration on the ground that the mark had not been used in commerce at the time the application for registration was filed is reviewable on appeal and not on petition.
[*Ex parte* The Commercial Vehicle, 235.

3. APPLICATION—CHANGING DATE OF FILING.
Where an application for registration of a trade-mark was filed alleging that the mark had been in use since a certain date and it appeared from specimens subsequently filed that the mark had not been used at that time, *Held* that the date of filing cannot be changed to the date on which the specimens were filed.
[Id.

4. SIMILARITY.
A mark consisting of the words and symbols "Wm. A. Rogers A. 1.," followed by a horseshoe inclosing the letter "R," *Held* not deceptively similar to the marks "Wm. Rogers Mfg. Co." and "Wm. Rogers & Son."
[*Wm. A. Rogers, Limited, v. International Silver Co., 337.

5. INTERFERENCE—PRIORITY ONLY CONSIDERED.
The only purpose of a trade-mark interference is to determine the question of priority of adoption and use, (citing *Giles Remedy Co. v. Giles*, 126 O. G., 1826; 28 App. D. C., 376, distinguishing from *In re Hertel*, 141 O. G., 287; 33 App. D. C., 269.)
[*Mathy *v.* The Republic Metalware Company, 1109.

6. ABANDONMENT.
Where M., a patentee who had adopted and used a trade-mark on roasting-pans, gave a license to R. to manufacture and sell the roasting-pans of such patent and suggested the use thereon of the mark which he had adopted, *Held* that the giving of the license did not constitute an abandonment of the trade-mark. [*Id.

TRANSMISSION OF MOTIONS.

(See Motion to Amend Application; Motion to Dissolve Interference, 1, 2, 3.)

UTILITY.

(See Designs.)

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF MAY, 1910.

[Abbreviations: "Sp."—Monthly Volume of Specifications; "Gaz."—Official Gazette.]

A. Mecky Co. (See Ledig, Richard G., assignor.)
A. Schrader's Son. (See Neubert, Alois, assignor.)
A. B. Farquhar Company. (See Eisenhart, Henry W., assignor.)
A. H. Andrews Co. (See Anderson, George E., assignor.)
A. H. Light Engineering Company. (See Light, Arthur H., assignor.)
Abbott Dental Brush Manufacturing Company, The. (See Abbott, James H., assignor.)
Abbott, Edward J., Mission City, British Columbia, Canada. Envelop sealing and stamping machine. No. 959,283; May 24; Sp. p. 6206; Gaz. vol. 154; p. 1037.
Abbott, James H., assignor to The Abbott Dental Brush Manufacturing Company, Philadelphia, Pa. Dental brush. No. 959,191; May 24; Sp. p. 6023; Gaz. vol. 154; p. 1006.
Abbott, James H., assignor to The Abbott Dental Brush Manufacturing Company, Philadelphia, Pa. Dental brush. No. 959,416; May 24; Sp. p. 6454; Gaz. vol. 154; p. 1081.
Abell, Robert, Uttoxeter, borough of Derby, England. Picking-motion for vertical looms. No. 957,725; May 10; Sp. p. 2593; Gaz. vol. 154; p. 449.
Abernethy, Harry M., Cleveland, Ohio. Railway-switch machine. No. 959,039; May 24; Sp. p. 5693; Gaz. vol. 154; p. 956.
Acme Column Company. (See Trestidder, John J., assignor.)
Acme Flexible Clasp Company. (See Norton, Elliott S., assignor.)
Actien Gesellschaft für Anilin Fabrikation. (See Haugwitz, Rudolph, assignor.)
Adair, Charles E., assignor to Cyphers Incubator Company, Buffalo, N. Y. Brooder. No. 959,097; May 24; Sp. p. 5826; Gaz. vol. 154; p. 976.
Adams, Alfred N., Stockton, Cal. Gearing. No. 958,061; May 17; Sp. p. 3533; Gaz. vol. 154; p. 595.
Adams, Alonzo T., assignor to Marseilles Manufacturing Company, Marseilles, Ill. Wagon jack or elevator. No. 956,507; May 3; Sp. p. 1; Gaz. vol. 154; p. 8.
Adams Company, The. (See Farwell, Fay O., assignor.)
Adams, Edwin W. (See Brooks, John M., assignor.)
Adams, Francis W. (See Sawitzke, Yates, and Adams, assignors.)
Adams, Harry E., Pittsburg, Pa. Combined soldering-iron and blow-torch. No. 956,921; May 3; Sp. p. 917; Gaz. vol. 154; p. 145.
Adams, Harry H., Baltimore, Md. Passenger-car. No. 957,639; May 10; Sp. p. 2420; Gaz. vol. 154; p. 418.
Adams, Huston S., Harrington, Wash. Grain-separator. No. 956,617; May 3; Sp. p. 237; Gaz. vol. 154; p. 40.
Adams, John H., and E. D. Wallace, Minneapolis, Minn., assignors, by mesne assignments, to Adams Letter Folding Machine Company, Chicago, Ill. Feed device for folding-machines. No. 960,188; May 31; Sp. p. 8046; Gaz. vol. 154; p. 1352.
Adams, John M. (See Sawitzke, Yates, and Adams.)
Adams, Joseph F., St. Clair, Mich. Box-blank and using the same. No. 959,098; May 24; Sp. p. 5828; Gaz. vol. 154; p. 976.
Adams Letter Folding Machine Company. (See Adams and Wallace, assignors.)
Adams, Oscar B., assignor of one-half to R. E. Smith, Atlanta, Ga. Tray-raiser. No. 960,139; May 31; Sp. p. 8048; Gaz. vol. 154; p. 1352.
Adams, Thomas J. (See Berkebile, Robert F., assignor.)
Adams, Walter S., assignor to The J. G. Brill Co., Philadelphia, Pa. Maximum-traction truck. No. 959,040; May 24; Sp. p. 5695; Gaz. vol. 154; p. 957.
Adding Typewriter Company. (See Raber, Joseph, assignor.)
Addressograph Company. (See Duncan, Joseph S., assignor.)
Adelman, William, Hoboken, N. J. Dental mouth-prop. No. 959,684; May 31; Sp. p. 7045; Gaz. vol. 154; p. 1196.
Adkins, Joseph H., assignor of one-half to T. G. Walker, Chatham, Va. Lace-cabinet. No. 958,062; May 17; Sp. p. 3535; Gaz. vol. 154; p. 596.
Adkins, Sylvester E. (See Hawkins, Adkins, and Call.)
Adlam, William L., Milwaukee, Wis. Sanitary meat-rack. No. 959,685; May 31; Sp. p. 7045; Gaz. vol. 154; p. 1196.
Adreon, Edward L., Jr. (See Clarke, Marcus S., assignor.)
Ady, Joseph W. (See Morrison, Byron L., assignor.)
Aeppli-Meier, Jacob. (See Philipp and Aeppli-Meier.)
Agel, Oscar, and C. F. Isleib, Paterson, N. J. Stop-motion mechanism for spinning-machines, &c. No. 957,453; May 10; Sp. p. 2053; Gaz. vol. 154; p. 356.
Ahlbom, Karl A., Stockholm, Sweden. Milking-machine. No. 958,685; May 17; Sp. p. 4922; Gaz. vol. 154; p. 808.
Aichele, Albert, assignor to Aktiengesellschaft Brown Boveri & Cie., Baden, Switzerland. Electric driving mechanism for vehicles. No. 960,140; May 31; Sp. p. 8049; Gaz. vol. 154; p. 1353.
Aiken, Edward L., East Orange, assignor to New Jersey Patent Company, West Orange, N. J. Phonograph-record mold. No. 956,922; May 3; Sp. p. 919; Gaz. vol. 154; p. 146.
Ainge, George H., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Boiler-tube cleaner. No. 958,205; May 17; Sp. p. 3820; Gaz. vol. 154; p. 646.
Ainsworth, Alfred W., S. J. Putnam, and K. A. Edstrom, Denver, Colo. Blank-trimming machine. No. 956,871; May 3; Sp. p. 808; Gaz. vol. 154; p. 128.
Air-Line Carrier Company. (See Thompson, Clement E., assignor.)
Aktiebolaget L. M. Ericsson & Co. (See Christensen, Peter V., assignor.)
Aktiengesellschaft Brown Boveri & Cie. (See Aichele, Albert, assignor.)
Alberger Condenser Company. (See Alberger, Louis R., assignor.)
Alberger, Louis R., Greenwich, Conn., assignor to Alberger Condenser Company, New York, N. Y. Surface condenser. No. 957,175; May 10; Sp. p. 1449; Gaz. vol. 154; p. 259.
Alberti, Augusto, Rome, Italy. Recovering potash salts. No. 957,295; May 10; Sp. p. 1733; Gaz. vol. 154; p. 308.
Alden, Arthur B., Brockton, and L. W. Reinhardt, Whitman, assignors to C. S. Pierce, Brockton, Mass. Cutter-guard for skiving-machines. No. 959,830; May 31; Sp. p. 7359; Gaz. vol. 154; p. 1246.
Aldridge, Thomas J., Rochester, N. Y. Shoe-sole attachment. No. 959,442; May 31; Sp. p. 6510; Gaz. vol. 154; p. 1115.
Alexander, Frederick, Brooklyn, N. Y. Pencil-sharpener. No. 959,831; May 31; Sp. p. 7361; Gaz. vol. 154; p. 1246.
Alexander, Frederick, New York, N. Y., assignor of one-half to W. F. Laskowski, Jr., West Hoboken, N. J. Tabulating device for type-writing machines. No. 959,832; May 31; Sp. p. 7362; Gaz. vol. 154; p. 1246.
Alexander, Frederick, New York, N. Y., assignor of one-half to W. F. Laskowski, Jr., West Hoboken, N. J. Ribbon-feeding mechanism for type-writing machines. No. 959,833; May 31; Sp. p. 7364; Gaz. vol. 154; p. 1247.
Alexander, Truman. (See Myers and Alexander.)
Alexander, Walter N., assignor of one-half to K. T. Miller, Sidney, Nebr. Sealing device for electric meters. No. 958,686; May 17; Sp. p. 4924; Gaz. vol. 154; p. 808.
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Motor control. No. 957,454; May 10; Sp. p. 2055; Gaz. vol. 154; p. 356.
Alger, Franklin A., Grand Rapids, Mich. Fish-bait. No. 956,872; May 3; Sp. p. 809; Gaz. vol. 154; p. 129.
Allan, James, Omaha, Nebr., assignor to Larsen-Baker Ice Machine Co. Liquid-cooler. No. 956,788; May 3; Sp. p. 612; Gaz. vol. 154; p. 98.
Allan, James, Omaha, Nebr., assignor to Larsen-Baker Ice Machine Co. Discharge-valve for elastic-fluid compressors. No. 956,789; May 3; Sp. p. 613; Gaz. vol. 154; p. 99.
Allen, Albert H., Wakefield, Mass. Bottle-holder. No. 956,749; May 3; Sp. p. 528; Gaz. vol. 154; p. 86.
Allen, Albert M., Cleveland, Ohio. Regulating-valve. No. 958,206; May 17; Sp. p. 3821; Gaz. vol. 154; p. 646.
Allen, Ebben S., New Haven, Conn. Electrically-controlled gas igniting and extinguishing device. No. 958,574; May 17; Sp. p. 4707; Gaz. vol. 154; p. 773.
Allen, Everett P., assignor to Norwall Manufacturing Company, Chicago, Ill. Valve. No. 957,592; May 10; Sp. p. 2315; Gaz. vol. 154; p. 402.

Allen, Everett P., assignor to Norwall Manufacturing Company, Chicago, Ill. Radiator-valve. No. 957,593; May 10; Sp. p. 2317; Gaz. vol. 154; p. 403.
Allen, Frank X., *et al.* (See Young, Henry E., assignor.)
Allen, Hall & Co. (See Allen, Walter B., assignor.)
Allen, James B., Detroit, Mich. Linotype-machine. No. 956,790; May 3; Sp. p. 615; Gaz. vol. 154; p. 99.
Allen, Jasper M., assignor of one-half to P. P. McDermott, St. Jo, Tex. Can-opener. No. 960,060; May 31; Sp. p. 7905; Gaz. vol. 154; p. 1327.
Allen, John H., *et al.* (See Patterson, Franklin M., assignor.)
Allen, Walter B., Worcester, assignor to Allen, Hall & Co., Reading, Mass. Medium for oil-color. No. 960,141; May 31; Sp. p. 8051; Gaz. vol. 154; p. 1353.
Allend, Joseph, Philadelphia, Pa. Vehicle-tire. No. 959,041; May 24; Sp. p. 5699; Gaz. vol. 154; p. 957.
Alley, William S., Ingalls, Kans. Header-barge. No. 957,483; May 10; Sp. p. 2107; Gaz. vol. 154; p. 366.
Allis-Chalmers Company. (See McKee, Robert A., assignor.)
Allis-Chalmers Company *et al.* (See Pomeroy, William D., assignor.)
Allis-Chalmers Company *et al.* (See Wouters, Alfred H., assignor.)
Allis-Chalmers Company *et al.* (See Wright, Edwin C., assignor.)
Alphin, Gilbert E., Mount Olive, N. C. Lamp-chimney holder. No. 956,663; May 3; Sp. p. 336; Gaz. vol. 154; p. 56.
Alston, Nicholas F., Ines, N. C. Guard for whip-labels. No. 959,686; May 31; Sp. p. 7047; Gaz. vol. 154; p. 1197.
Altermatt, John F., Chicago, Ill. Garment-hanger. No. 959,687; May 31; Sp. p. 7048; Gaz. vol. 154; p. 1197.
Altermatt, John F., Chicago, Ill. Garment-hanger. No. 959,688; May 31; Sp. p. 7049; Gaz. vol. 154; p. 1197.
American Aron Electricity Meter Company, The. (See Aron, Hermann, assignor.)
American Bakers Machinery Company. (See Streich, Frank, assignor.)
American Brake Shoe & Foundry Company. (See Nichols, Wesley G., assignor.)
American Bridge Company. (See Thompson, John H., assignor.)
American Can Company. (See Graham, Charles W., assignor.)
American Can Company. (See Leitch, Meredith, assignor.)
American Can Company. (See Sharp, Lee C., assignor.)
American Car & Foundry Company. (See Ames, Joseph H., assignor.)
American Car and Foundry Company. (See Lane, Victor E., assignor.)
American Car and Foundry Company. (See Summa, Victor M., assignor.)
American Case & Register Company, The. (See Vick, Rollo M., assignor.)
American Clay Machinery Company, The. (See Callaway, Edward H., assignor.)
American Clay Machinery Company, The. (See Cunningham, William R., assignor.)
American District Telegraph Company. (See Johnson, Clarence C., assignor.)
American Fire Cracker Manufacturing Company. (See Schulman, Louis and J., assignors.)
American Graphophone Company. (See Macdonald, Thomas H., assignor.)
American Iron and Steel Alloys Company, The. (See Carpenter, Franklin R., assignor.)
American Lithographic Company. (See Pancoast, George E., assignor.)
American Mason Safety Tread Company. (See Campbell, James L., assignor.)
American Metal Edge Box Company. (See Lewis, Robert B., assignor.)
American Moistening Company. (See Smith, Robert P., assignor.)
American Multigraph Company, The. (See Newton, George T., assignor.)
American Pulley Company, The. (See Bowen, Russell H., assignor.)
American Pulley Company, The. (See Brinley and Bowen, assignors.)
American Steam Gauge and Valve Manufacturing Company. (See Manning, Coleman J., assignor.)
American Steel and Wire Company of New Jersey, The. (See Sturdevant, Charles R., assignor.)
American Steel Foundries. (See Floyd, George G., assignor.)
American Stove Company. (See Meacham, Benjamin E., assignor.)
American Tar Company. (See Price, Charles P., assignor.)
American Typographic Corporation. (See Richards, Francis H., assignor.)
American Valve & Meter Company. (See Anderson, Frank C., assignor.)
American Water Main Cleaning and Contracting Co. (See Greenan and Redford, assignors.)
American Wireless Institute. (See Butler, Frank E., assignor.)
Ames, Joseph H., Oak Park, assignor to American Car & Foundry Company, Chicago, Ill. Built-up die. No. 958,455; May 17; Sp. p. 4492; Gaz. vol. 154; p. 735.
Amick, Clit W., New Franklin, Mo. Sad-iron. No. 957,532; May 10; Sp. p. 2212; Gaz. vol. 154; p. 382.
Amies Asphalt Company, The. (See Amies, Joseph H., assignor.)
Amies, Joseph H., assignor to The Amies Asphalt Company, Philadelphia, Pa. Street and road construction. No. 958,063; May 17; Sp. p. 3537; Gaz. vol. 154; p. 596.
Amies, Joseph H., assignor to The Amies Asphalt Company, Philadelphia, Pa. Road construction. No. 958,064; May 17; Sp. p. 3538; Gaz. vol. 154; p. 596.
Amsden, George A., Littleton, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Cable-carrier apparatus. No. 958,207; May 17; Sp. p. 3826; Gaz. vol. 154; p. 646.
Anctil, Ulric, Pittsfield, Me. Nostril-protector for horses. No. 960,142; May 31; Sp. p. 8053; Gaz. vol. 154; p. 1353.
Andersen, Carl J., Brooklyn, N. Y. Level. No. 958,349; May 17; Sp. p. 4262; Gaz. vol. 154; p. 696.
Anderson, Arthur J., and G. A. Hanson, Aberdeen, S. D. Engine-valve. No. 959,689; May 31; Sp. p. 7050; Gaz. vol. 154; p. 1197.
Anderson, Con D., Lima, Ohio. Vehicle-wheel. No. 958,350; May 17; Sp. p. 4266; Gaz. vol. 154; p. 696.
Anderson, Conrad R., West Duluth, Minn. Ratchet-wrench. No. 959,690; May 31; Sp. p. 7051; Gaz. vol. 154; p. 1198.
Anderson, Elias B., Rock Falls, Ill. Buckle. No. 958,065; May 17; Sp. p. 3530; Gaz. vol. 154; p. 597.
Anderson, Elias B., Rock Falls, Ill. Fly-trap. No. 958,208; May 17; Sp. p. 3827; Gaz. vol. 154; p. 647.
Anderson, Elie G. (See Anderson, Thomas G., S. C., and E. G.)
Anderson, Frank B., assignor to The V. D. Anderson Company, Cleveland, Ohio. Extracting oil. No. 960,143; May 31; Sp. p. 8054; Gaz. vol. 154; p. 1354.
Anderson, Frank B., assignor to The V. D. Anderson Company, Cleveland, Ohio. Apparatus for extracting oil. No. 960,144; May 31; Sp. p. 8056; Gaz. vol. 154; p. 1354.
Anderson, Frank C., assignor to American Valve & Meter Company, Cincinnati, Ohio. Valve-chamber for water-columns. No. 957,533; May 10; Sp. p. 2214; Gaz. vol. 154; p. 383.
Anderson, Frank C., assignor to American Valve & Meter Company, Cincinnati, Ohio. Valve mechanism for water-columns. No. 958,351; May 17; Sp. p. 4268; Gaz. vol. 154; p. 697.
Anderson, Frank C., assignor to The American Valve & Meter Company, Cincinnati, Ohio. Switch safety mechanism. No. 959,691; May 31; Sp. p. 7052; Gaz. vol. 154; p. 1198.
Anderson, Frank O., Jamestown, N. Y. Pivotal support for mirrors. No. 959,009; May 24; Sp. p. 5829; Gaz. vol. 154; p. 977.
Anderson, George E., assignor to A. H. Andrews Co., Chicago, Ill. Adjustable support for furniture. No. 957,176; May 10; Sp. p. 1455; Gaz. vol. 154; p. 259.
Anderson, Gustaf E., assignor to J. G. E. Sundberg, Stockholm, Sweden. Milking apparatus. No. 959,042; May 24; Sp. p. 5700; Gaz. vol. 154; p. 957.
Anderson, Harold B. (See Winton and Anderson.)
Anderson, Henry, Calamus, Iowa. Corn-hanger. No. 958,687; May 17; Sp. p. 4025; Gaz. vol. 154; p. 609.
Anderson, James S., Newport, Ky. Display-machine. No. 957,640; May 10; Sp. p. 2422; Gaz. vol. 154; p. 419.
Anderson, John M. (See Griffith, William, assignor.)
Anderson, John V., *et al.* (See Bjorklund, Charley, assignor.)
Anderson, John W., Sisson, Cal. Fluid-operated controlling mechanism. No. 959,417; May 24; Sp. p. 6455; Gaz. vol. 154; p. 1081.
Anderson, Nels D., Parkersburg, Iowa, assignor of one-half to J. A. Bokel, Baltimore, Md. Shelter-tent. No. 958,066; May 17; Sp. p. 3541; Gaz. vol. 154; p. 597.
Anderson, Seymour C. (See Anderson, Thomas G., S. C., and E. G.)
Anderson, Thomas G., S. C., and E. G., Langdon, Mo. Aerial mail trolley and box. No. 959,418; May 24; Sp. p. 6458; Gaz. vol. 154; p. 1081.
Anderson, William J., *et al.* (See Bell, Dillwyn M., assignor.)
Anderson, William L., Davenport, Cal. Clothes-line support. No. 959,419; May 24; Sp. p. 6459; Gaz. vol. 154; p. 1081.
Anderson, William T., Brooklyn, N. Y. Swimming-shirt. No. 959,441; May 31; Sp. p. 6509; Gaz. vol. 154; p. 1115.
Andrews, Orwen K., Clarksburg, assignor of one-third to C. E. White and one-third to W. S. O'Brien, Buckhannon, W. Va. Folding umbrella. No. 958,714; May 24; Sp. p. 4982; Gaz. vol. 154; p. 843.
Andrews, Samuel S., and F. Turner, Fredericktown, Mo.; said Turner assignor to said Andrews. Metallic book-cover. No. 959,284; May 24; Sp. p. 6208; Gaz. vol. 154; p. 1037.
Andriano, Albert K., assignor to Direct-Line General Telephone Company, San Francisco, Cal. Telephone system and apparatus. No. 958,067; May 17; Sp. p. 3543; Gaz. vol. 154; p. 597.
Anger, John E., Preston, England. Railway, tramway, and other vehicle. No. 960,145; May 31; Sp. p. 8059; Gaz. vol. 154; p. 1354.
Ansley, John A., Thessalon, Ontario, Canada. Convertible box-car. No. 958,575; May 17; Sp. p. 4709; Gaz. vol. 154; p. 773.
Anthes, Maurice, London, England. Reproduction of images on glass, porcelain, ceramic, metallic, or other surfaces. No. 959,692; May 31; Sp. p. 7056; Gaz. vol. 154; p. 1198.
Anthony, Frank A., and J. P. Cregg, Amsterdam, N. Y. Bottle-closure. No. 956,923; May 3; Sp. p. 921; Gaz. vol. 154; p. 146.

Apple, Vincent G., Dayton, Ohio. Storage battery. No. 959,192; May 24; Sp. p. 6024; Gaz. vol. 154; p. 1007.
Arbogast, John I., assignor of one-half to H. L. Collins, Pittsburg, Pa. Producing wire-glass articles and vessels. No. 960,146; May 31; Sp. p. 8062; Gaz. vol. 154; p. 1355.
Arbuckle, Alexander J., Johannesburg, Transvaal. Means for separating comminuted ores or other solid matter from liquids. No. 958,068; May 17; Sp. p. 3540; Gaz. vol. 154; p. 596.
Arco, Georg von, Berlin, Germany. Portable station for wireless telegraphy. No. 958,209; May 17; Sp. p. 3828; Gaz. vol. 154; p. 647.
Arco, Georg von, Berlin, Germany. Aerial conductor arrangement for wireless telegraphy. No. 959,100; May 24; Sp. p. 5830; Gaz. vol. 154; p. 977.
Arena, August, assignor to P. & F. Corbin, New Britain, Conn. Entrance-door lock. No. 959,834; May 31; Sp. p. 7366; Gaz. vol. 154; p. 1247.
Arena, August, and E. L. Teich, assignors to P. & F. Corbin, New Britain, Conn. Hotel-lock. No. 958,352; May 17; Sp. p. 4271; Gaz. vol. 154; p. 697.
Arena, August, and E. L. Teich, assignors to P. & F. Corbin, New Britain, Conn. Latch mechanism for emergency-doors. No. 958,353; May 17; Sp. p. 4278; Gaz. vol. 154; p. 698.
Armitage, Herbert S., and D. J. Stephens, Briston, Mont. Hay-stacker. No. 959,906; May 31; Sp. p. 7523; Gaz. vol. 154; p. 1271.
Armspear Manufacturing Company. (See Spear, Furman D., assignor.)
Armstead, Frank C., Pittsburg, Pa., assignor to The Westinghouse Machine Company. Mechanical stoker for furnaces. No. 957,296; May 10; Sp. p. 1735; Gaz. vol. 154; p. 303.
Armstrong, Charles M., Boonville, Ind. Hoisting-platform. No. 959,835; May 31; Sp. p. 7368; Gaz. vol. 154; p. 1248.
Armstrong, Richard W., Parkers Landing, Pa. Wrench. No. 957,726; May 10; Sp. p. 2594; Gaz. vol. 154; p. 449.
Arnheiter, Louis, Jersey City, N. J. Airship. No. 958,460; May 17; Sp. p. 4494; Gaz. vol. 154; p. 735.
Arnold, Alexander, *et al.* (See Rapp, William J., assignor.)
Arnold, Philip C., assignor to Bevin Brothers Manufacturing Company, East Hampton, Conn. Bell-support. No. 956,664; May 3; Sp. p. 337; Gaz. vol. 154; p. 56.
Aron, Hermann, Charlottenburg, Germany, assignor to The American Aron Electricity Meter Company. Prepayment electricity-meter. No. 957,534; May 10; Sp. p. 2216; Gaz. vol. 154; p. 383.
Aron, Hermann, Charlottenburg, Germany, assignor to The American Aron Electricity Meter Company. Prepayment electricity-meter. No. 957,535; May 10; Sp. p. 2221; Gaz. vol. 154; p. 384.
Arrow Electric Company, The. (See Peterson, Johann G., assignor.)
Arsac, Jean B., Le Puy, France. Safety device for anti-refillable bottles. No. 956,750; May 3; Sp. p. 530; Gaz. vol. 154; p. 86.
Art Metal Construction Company. (See Ekedahl, Erik A., assignor.)
Asbury, William, assignor to Square Deal Machine Co., New York, N. Y. Coin-director for vending-machines. No. 957,135; May 3; Sp. p. 1349; Gaz. vol. 154; p. 216.
Ascue, Elbert, Blum, assignor of one-third to R. H. Crank, Cleburne, Tex. Sheep-shears. No. 958,069; May 17; Sp. p. 3553; Gaz. vol. 154; p. 599.
Ashby, William H., Boone, Iowa. Beater and mixer. No. 959,420; May 24; Sp. p. 6460; Gaz. vol. 154; p. 1082.
Ashcroft Manufacturing Company, The. (See Blanchard and Crocker, assignors.)
Ashdown, Sydney, Vancouver, British Columbia, Canada. Means for removably attaching logs or the like to hauling-tackle. No. 957,297; May 10; Sp. p. 1738; Gaz. vol. 154; p. 304.
Ashley, Burton J., Chicago, Ill. Apparatus for sewage disposal. No. 956,665; May 3; Sp. p. 338; Gaz. vol. 154; p. 56.
Ashley, Frank M., New York, N. Y. Truck. No. 957,136; May 3; Sp. p. 1350; Gaz. vol. 154; p. 216.
Ashworth, Daniel, Wappingers Falls, N. Y. Rail-fastener. No. 957,641; May 10; Sp. p. 2424; Gaz. vol. 154; p. 419.
Atkin, Samuel T., Georgetown, Tex. Mop-wringer. No. 959,285; May 24; Sp. p. 6209; Gaz. vol. 154; p. 1037.
Ator, Sidney D. and T. F., Plentywood, Mont. Wrench. No. 956,924; May 3; Sp. p. 922; Gaz. vol. 154; p. 146.
Ator, Thomas F. (See Ator, Sidney D. and T. F.)
Attractograph Company. (See Spiegel, Alexander S., assignor.)
Atwater, Harry R., assignor to The Osborn Manufacturing Co., Cleveland, Ohio. Lawn mower sharpener. No. 956,573; May 3; Sp. p. 811; Gaz. vol. 154; p. 129.
Atwood, Clarence R., assignor to National Sewing Machine Company, Belvidere, Ill. Stock-stop for automatic screw-machines and the like. No. 956,874; May 3; Sp. p. 811; Gaz. vol. 154; p. 129.
Au Werter, John T., Braddock, Pa. Apparatus for pickling. No. 959,195; May 24; Sp. p. 6031; Gaz. vol. 154; p. 1008.
Aubertel, Max, Cornwall on the Hudson, N. Y. Detachable wagon-skate. No. 958,461; May 17; Sp. p. 4495; Gaz. vol. 154; p. 735.
Aubuchon, Gertrude, Jefferson, assignor of one-half to J. C. Stephens, St. Louis, Mo. Hat-holder. No. 958,070; May 17; Sp. p. 3556; Gaz. vol. 154; p. 599.
Auel, Carl B., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Brush-holder for dynamo-electric machines. No. 956,666; May 3; Sp. p. 344; Gaz. vol. 154; p. 57.
Augusta Knitting Company. (See Marville, George S., assignor.)
Aurora Automatic Machinery Company. (See Ottaway, William, assignor.)
Austin Manufacturing Company. (See Mustin, Herbert S., assignor.)
Austinson, Oliver T., Lyle, Minn. Adjustable live-stock stanchion for wagons. No. 956,791; May 3; Sp. p. 623; Gaz. vol. 154; p. 99.
Auth, Charles, New York, N. Y. Annunciator-drop. No. 959,193; May 24; Sp. p. 6026; Gaz. vol. 154; p. 1007.
Auth, Charles, New York, N. Y. Annunciator-drop. No. 959,194; May 24; Sp. p. 6028; Gaz. vol. 154; p. 1007.
Auto Lock Co. (See Markham, Romondo D., assignor.)
Auto Pneumatic Action Co. (See Danquard, Thomas, assignor.)
Automatic Card Seller Company. (See Downey, Richard F., assignor.)
Automatic Individual Butter Cutter Company. (See Hart, William P., assignor.)
Automatic Letter Machine Company. (See Smith, Hasor J., assignor.)
Automatic Racking Machine Company. (See Colby, Harry W., assignor.)
Automatic Starter Company. (See Brisbois, Odilon, assignor.)
Avery, Charles E., Jersey City, N. J., assignor to Manhattan Electrical Supply Company. Electric motor. No. 958,354; May 17; Sp. p. 4261; Gaz. vol. 154; p. 698.
Avery Company. (See Bartholomew, John B., assignor.)
Aylsworth, Jonas N., East Orange, assignor to New Jersey Patent Company, West Orange, N. J. Duplicate sound-record. No. 958,210; May 17; Sp. p. 3829; Gaz. vol. 154; p. 647.
B. Fleigel Company. (See Fleigel, Benjamin, assignor.)
B. Fleigel Company. (See Wales, Alfred B., assignor.)
Baab, Jacob A., New York, N. Y. Gas-engine. No. 958,211; May 17; Sp. p. 3831; Gaz. vol. 154; p. 647.
Baab, Jacob A., assignor of one-half to D. Rohrer, New York, N. Y. Transmission apparatus. No. 958,212; May 17; Sp. p. 3832; Gaz. vol. 154; p. 648.
Baaden, Frank W., Newark, N. J. Flexible connection. No. 960,061; May 31; Sp. p. 7906; Gaz. vol. 154; p. 1327.
Babbitt, William A., Lockport, N. Y. Bread-mixer. No. 959,101; May 24; Sp. p. 5832; Gaz. vol. 154; p. 977.
Babcock, Josephine M., Spokane, Wash. Pillow-sham holder. No. 957,455; May 10; Sp. p. 2057; Gaz. vol. 154; p. 357.
Babcock & Wilcox Company, The. (See Maher, John J., assignor.)
Babcock & Wilcox Company, The. (See Rosenthal and Spyer, assignors.)
Backstay Machine and Leather Company. (See Schemmel, Robert C., assignor.)
Bacon, H. T. (See Brand, George M., assignor.)
Bader, Gustav A., Rochester, N. Y. Eyeglass-mounting. No. 957,925; May 17; Sp. p. 3041; Gaz. vol. 154; p. 546.
Badische Anilin & Soda Fabrik. (See Bosch, Carl, assignor.)
Badische Anilin & Soda Fabrik. (See Julius, Villiger, and Nawiasky, assignors.)
Baekeland, Leo H., Yonkers, N. Y. Container for food products. No. 957,137; May 3; Sp. p. 1352; Gaz. vol. 154; p. 216.
Bailey, Charles H. H., South Braintree, Mass. Assorting and routing case for post-offices. No. 956,925; May 3; Sp. p. 924; Gaz. vol. 154; p. 147.
Bailey, Edgerly R., Clarinda, Iowa. Device for assembling parts of a centrifugal separating-bowl. No. 959,693; May 31; Sp. p. 7057; Gaz. vol. 154; p. 1198.
Bailey, Percy T., Newport, R. I. Fence-post and anchorage-base. No. 959,286; May 24; Sp. p. 6210; Gaz. vol. 154; p. 1037.
Bailhache, John M., San Francisco, Cal. Baggage-check. No. 957,484; May 10; Sp. p. 2109; Gaz. vol. 154; p. 366.
Bain, Benjamin M., Winnipeg, Manitoba, Canada. Ironing-board. No. 958,071; May 17; Sp. p. 3557; Gaz. vol. 154; p. 599.
Bainbridge, Barry M. (See Heagney, Elmer D., assignor.)
Baird, Robert P., Berry, Ky. Trousers-stretcher. No. 958,576; May 17; Sp. p. 4712; Gaz. vol. 154; p. 773.
Baker, Frank, Dalton, N. Y. Water-gage. No. 958,072; May 17; Sp. p. 3559; Gaz. vol. 154; p. 599.
Baker, George S., London, England. Vacuum-pan. No. 956,508; May 3; Sp. p. 5; Gaz. vol. 154; p. 3.
Baker, James H., Pittsburg, Pa. Side frame for car-trucks. No. 958,462; May 17; Sp. p. 4496; Gaz. vol. 154; p. 736.
Baker, John H., and J. A. French, Toronto, Ontario, Canada. Car-ticket holder. No. 958,577; May 17; Sp. p. 4713; Gaz. vol. 154; p. 774.
Baker, Manuel J., and V. M. Pierce, Buffalo, N. Y. Clothes-pounder. No. 957,298; May 10; Sp. p. 1740; Gaz. vol. 154; p. 304.
Baker, Milo A., Los Angeles, Cal. Automobile transfer turn-table. No. 957,536; May 10; Sp. p. 2224; Gaz. vol. 154; p. 385.
Baker Motor Vehicle Company, The. (See Grunenfeldt, Emil, assignor.)
Baker Motor Vehicle Company, The. (See Reade, Edward H., assignor.)

Baker, Richard W., Roselle, N. J., assignor to The Watson-Stillman Company, Hydraulic jack. No. 957,177; May 10; Sp. p. 1458; Gaz. vol. 154; p. 260.

Balcom, Nelia C., *et al.* (See Balcom, William D., assignor.)

Balcom, William D., assignor of one-half to N. C. Balcom, Greeley, one-fourth to J. W. Morey, and one-fourth to E. E. Sellers, Denver, Colo. Coffee-cleaning apparatus. No. 957,138; May 3; Sp. p. 1353; Gaz. vol. 154; p. 217.

Balden, John S. (See Ulbrich, Gustav H., assignor.)

Baldwin, Arthur J., East Orange, N. J. Machine for making wire-glass. No. 957,594; May 10; Sp. p. 2320; Gaz. vol. 154; p. 403.

Baldwin, Arthur J., East Orange, N. J. Method of and machine for making wire-glass. No. 959,102; May 24; Sp. p. 5835; Gaz. vol. 154; p. 978.

Baldwin, Frank, Toledo, Ohio. Hammer or the like. No. 960,147; May 31; Sp. p. 8062; Gaz. vol. 154; p. 1355.

Baldwin Locomotive Works. (See Herman, Charles G., assignor.)

Baldwin Locomotive Works. (See Vauclain, Samuel M., assignor.)

Baldwin, Mary E., Chicago, Ill. Sunbonnet. No. 958,715; May 24; Sp. p. 4983; Gaz. vol. 154; p. 843.

Baldwin, Nathaniel, Heber, Utah. Telephone-receiver. No. 957,403; May 10; Sp. p. 1958; Gaz. vol. 154; p. 338.

Ball, Benjamin A., *et al.* (See Peck, Ira F., assignor.)

Ball, Frederick O., Plainfield, N. J. Indicator reducing-motion mechanism. No. 959,443; May 31; Sp. p. 6511; Gaz. vol. 154; p. 1115.

Ballard, Frederick W., Cleveland Heights, Ohio. Hydro-electric power plant. No. 958,578; May 17; Sp. p. 4714; Gaz. vol. 154; p. 774.

Ballou, Eugene H., Pawtucket, R. I. Drop-shuttle-box mechanism of looms. No. 958,688; May 17; Sp. p. 4926; Gaz. vol. 154; p. 809.

Baltzley, Edwin, Glen Echo, Md., assignor to L. E. Baltzley, Washington, D. C. Sound-absorbing device for type-writers. No. 956,618; May 3; Sp. p. 238; Gaz. vol. 154; p. 40.

Baltzley, Louis E. (See Baltzley, Edwin, assignor.)

Bancroft, Arthur, Los Angeles, Cal. Combination shoe-blacking stand and bootjack. No. 960,148; May 31; Sp. p. 8064; Gaz. vol. 154; p. 1355.

Banding Machine Company, The. (See Fearon, James J. and T. E., assignors.)

Bangs, Byron M., Lake Mills, Iowa. Sectional mold. No. 959,103; May 24; Sp. p. 5838; Gaz. vol. 154; p. 978.

Banks, James W., assignor of two-thirds to Denison, Proussner and Company, Bradford, England. Apparatus for piling piece goods. No. 958,579; May 17; Sp. p. 4717; Gaz. vol. 154; p. 774.

Barbas, Leonard, Paris, France. Apparatus for forcing liquid out of reservoirs. No. 959,694; May 31; Sp. p. 7059; Gaz. vol. 154; p. 1199.

Barcalo Manufacturing Company. (See Rogers and Vallone, assignors.)

Bard, George M., assignor to Norwall Manufacturing Company, Chicago, Ill. Valve. No. 958,716; May 24; Sp. p. 4984; Gaz. vol. 154; p. 844.

Bardet, Jean, Paris, France. Parceling-machine. No. 957,833; May 10; Sp. p. 2312; Gaz. vol. 154; p. 483.

Barens, Jacob, Altus, Ark. Baling-press. No. 957,026; May 3; Sp. p. 1143; Gaz. vol. 154; p. 180.

Barger, Mary A., Hopedale, Ill. Smoking-pipe. No. 959,043; May 24; Sp. p. 5702; Gaz. vol. 154; p. 958.

Barkelew, Frank S., Los Angeles, Cal. Crown-block. No. 956,926; May 3; Sp. p. 926; Gaz. vol. 154; p. 147.

Barkelew, Frank S., Los Angeles, Cal. Casing-elevator. No. 960,229; May 31; Sp. p. 8242; Gaz. vol. 154; p. 1387.

Barker, Edward, Chicago, Ill. Cooking-stove. No. 957,642; May 10; Sp. p. 2426; Gaz. vol. 154; p. 420.

Barker, George M., assignor of one-eighth to J. Rans, St. Louis, Mo. Check-writing machine. No. 957,595; May 10; Sp. p. 2321; Gaz. vol. 154; p. 403.

Barker, John H., Sheffield, England. Revolving cutter. No. 959,104; May 24; Sp. p. 5841; Gaz. vol. 154; p. 978.

Barker, John W. (See Sisson, Jasper A., assignor.)

Barlow, Richard H., and P. Barton, Bury, near Manchester, England. Loose-leaf binder. No. 956,509; May 3; Sp. p. 7; Gaz. vol. 154; p. 4.

Barnard, John H. (See Webb and Barnard.)

Barnard, Walter E., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 959,444; May 31; Sp. p. 6512; Gaz. vol. 154; p. 1116.

Barnes, Edwin, Sheffield, England. Straight-side spectacles and the like. No. 959,105; May 24; Sp. p. 5842; Gaz. vol. 154; p. 979.

Barnes, John D., Norfolk, Va. Music-stand. No. 959,044; May 24; Sp. p. 5704; Gaz. vol. 154; p. 958.

Barnes, John S., and J. H. Vincer, assignors to W. F. & John Barnes Company, Rockford, Ill. Drilling-machine. No. 958,604; May 17; Sp. p. 4764; Gaz. vol. 154; p. 782.

Barnes, Joseph C., Montrose, Colo. Aim-director. No. 957,299; May 10; Sp. p. 1741; Gaz. vol. 154; p. 304.

Barnett, Walter, Hackettstown, N. J. Rail-joint. No. 960,062; May 31; Sp. p. 7907; Gaz. vol. 154; p. 1328.

Barney, Edwin E., assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 957,178; May 10; Sp. p. 1459; Gaz. vol. 154; p. 261.

Barnhardt, James A. (See Timm and Barnhardt.)

Barnhart, Harry J. (See King and Barnhart.)

Barnhart, Harry J. (See King, Barnhart, and King.)

Barnstead, William J., Galesburg, Ill. Corporation-cock. No. 958,073; May 17; Sp. p. 3560; Gaz. vol. 154; p. 600.

Barnum, Thomas E., assignor to The Cutler-Hammer Manufacturing Company, Milwaukee, Wis. Motor-controller. No. 959,907; May 31; Sp. p. 7524; Gaz. vol. 154; p. 1272.

Barnum, Thomas E., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controlling device. No. 959,908; May 31; Sp. p. 7530; Gaz. vol. 154; p. 1272.

Barnum, Thomas E., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Crane-controller. No. 959,909; May 31; Sp. p. 7533; Gaz. vol. 154; p. 1273.

Barnum, Thomas E., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Multiple-switch starter. No. 959,910; May 31; Sp. p. 7538; Gaz. vol. 154; p. 1273.

Baron, Charles S., and J. F. Haffey, Tiffin, Ohio. Receptacle or container. No. 958,713; May 24; Sp. p. 4981; Gaz. vol. 154; p. 843.

Barr, Frederic, New York, N. Y. Pull-socket for electric switches. No. 958,988; May 24; Sp. p. 5591; Gaz. vol. 154; p. 940.

Barr, John H., Kansas City, Mo. Cylinder printing-press. No. 956,751; May 3; Sp. p. 532; Gaz. vol. 154; p. 86.

Barritt, Leon, Brooklyn, N. Y. Educational apparatus. No. 959,987; May 31; Sp. p. 7721; Gaz. vol. 154; p. 1301.

Barron, James S., New York, N. Y. Bucket. No. 959,695; May 31; Sp. p. 7060; Gaz. vol. 154; p. 1199.

Barron, Walter J., New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 959,696; May 31; Sp. p. 7062; Gaz. vol. 154; p. 1199.

Barrows, Hiram, Hebron, Ill. Gambrel. No. 959,287; May 24; Sp. p. 6213; Gaz. vol. 154; p. 1038.

Barry, John, Jr., Antelope, Tex. Detachable neck-yoke. No. 957,179; May 10; Sp. p. 1463; Gaz. vol. 154; p. 261.

Bartholomew, John B., Peoria, Ill., assignor, by mesne assignments, to Avery Company. Threshing-machine frame. No. 958,213; May 17; Sp. p. 3835; Gaz. vol. 154; p. 648.

Bartholomew, John B., Peoria, Ill., assignor, by mesne assignments, to Avery Company. Band-cutter and feeder. No. 959,445; May 31; Sp. p. 6522; Gaz. vol. 154; p. 1116.

Bartholomew, John B., Peoria, Ill., assignor, by mesne assignments, to Avery Company. Band-cutter and feeder. No. 959,446; May 31; Sp. p. 6530; Gaz. vol. 154; p. 1116.

Bartlett Capping Machine Company. (See Bartlett, Leonard, assignor.)

Bartlett, Frank V. (See Strong and Bartlett.)

Bartlett, George W., assignor to George W. Bartlett Rotary Engine Company, Tacoma, Wash. Rotary engine. No. 957,860; May 17; Sp. p. 2883; Gaz. vol. 154; p. 523.

Bartlett, Leonard, assignor to Bartlett Capping Machine Company, Philadelphia, Pa. Compensating device for bottle-capping machines. No. 957,926; May 17; Sp. p. 3044; Gaz. vol. 154; p. 546.

Bartlett, Leonard, assignor to Bartlett Capping Machine Company, Philadelphia, Pa. Compensating device for bottle-capping machines. No. 957,927; May 17; Sp. p. 3045; Gaz. vol. 154; p. 546.

Bartlett, Leonard, assignor to Bartlett Capping Machine Company, Philadelphia, Pa. Compensating device for bottle-capping machines. No. 957,928; May 17; Sp. p. 3046; Gaz. vol. 154; p. 547.

Bartlett, Leonard, assignor to Bartlett Capping Machine Company, Philadelphia, Pa. Clutch for capping-machines. No. 957,929; May 17; Sp. p. 3048; Gaz. vol. 154; p. 547.

Barton, Percy. (See Barlow and Barton.)

Bascom, Willard B., New York, N. Y. Vehicle-seat. No. 956,667; May 3; Sp. p. 346; Gaz. vol. 154; p. 57.

Bass, Robert E., Fort Worth, Tex. Crude-oil burner. No. 959,288; May 24; Sp. p. 6214; Gaz. vol. 154; p. 1038.

Bassett, Foster W., and W. A. Hunter, Jr., Los Angeles, Cal. Flushing device. No. 956,575; May 3; Sp. p. 818; Gaz. vol. 154; p. 129.

Bassett, Foster W., and W. A. Hunter, Jr., Los Angeles, Cal. Flushing-valve. No. 957,027; May 3; Sp. p. 1145; Gaz. vol. 154; p. 181.

Bassett, Foster W., and W. A. Hunter, Jr., Los Angeles, Cal. Flushing-valve mechanism. No. 957,028; May 3; Sp. p. 1146; Gaz. vol. 154; p. 181.

Bassett, Foster W., and W. A. Hunter, Jr., Los Angeles, Cal. Flushing-valve. No. 957,029; May 3; Sp. p. 1149; Gaz. vol. 154; p. 182.

Bassett, Moses, Cleveland, Ohio. Shade and curtain bracket. No. 958,463; May 17; Sp. p. 4498; Gaz. vol. 154; p. 736.

Bassist, Ellis, assignor to E. G. Soltmann, New York, N. Y., Producing printing-plates. No. 957,596; May 10; Sp. p. 2323; Gaz. vol. 154; p. 404.

Bastian, Benjamin F. (See Morgan, Richard W., assignor.)

Bastian, Charles L., assignor to Bottlers Machinery Manufacturing Company, Chicago, Ill. Filling-machine. No. 956,876; May 3; Sp. p. 816; Gaz. vol. 154; p. 130.

Bastian, Martin L., assignor to Olney Automobile Company, Limited, Philadelphia, Pa. Tire-inflating pump. No. 957,507; May 10; Sp. p. 2325; Gaz. vol. 154; p. 404.

Bates, Adelmer M., assignor to Bates Valve Bag Company, Cleveland, Ohio. Bagging-machine. No. 959,447; May 31; Sp. p. 6535; Gaz. vol. 154; p. 1117.

Bates Valve Bag Company. (See Bates, Adelmer M., assignor.)

Batos, John. (See Hrivnák and Batos.)

Battle, Leander R., Lakeland, Fla. Ash-pan for locomotives. No. 959,106; May 24; Sp. p. 5842; Gaz. vol. 154; p. 979.

Battmann, Emile. (See Lacoste and Battmann.)

Batty, Richard B. (See Todd and Batty.)

Bauch, George and W. G., Chicago, Ill. Stove. No. 959,107; May 24; Sp. p. 5843; Gaz. vol. 154; p. 979.

Bauch, Walter G. (See Bauch, George and W. G.)

Bauder, Clarence A., Herrin, Ill. Railway-joint. No. 959,289; May 24; Sp. p. 6215; Gaz. vol. 154; p. 1038.

Baudry, Albert, Kief, Russia. Purifying and sterilising water. No. 958,848; May 24; Sp. p. 5303; Gaz. vol. 154; p. 893.

Bauer, Wilhelm, Vohwinkel, near Elberfeld, and A. Herre, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Blue vat dye. No. 958,464; May 17; Sp. p. 4499; Gaz. vol. 154; p. 736.

Bauer, Wilhelm, Vohwinkel, near Elberfeld, and A. Herre, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Blue vat dye. No. 958,465; May 17; Sp. p. 4500; Gaz. vol. 154; p. 737.

Bäuerle, Tobias, St. Georgen, Germany, assignor to The Velochrone Company, New York, N. Y. Combined speed and time indicator. No. 958,074; May 17; Sp. p. 3561; Gaz. vol. 154; p. 600.

Baugh, Thomas J., Hopkinsville, Ky. Cable-clip. No. 957,300; May 10; Sp. p. 1744; Gaz. vol. 154; p. 305.

Baumann, Albert A., Wauwatosa, Wis. Plumb-level. No. 957,334; May 10; Sp. p. 2320; Gaz. vol. 154; p. 484.

Baumer, Bertha. (See Baumer, Clarence E. and B.)

Baumer, Clarence E. and B., Troy, Ohio. Safety attachment for elevators. No. 958,580; May 17; Sp. p. 4719; Gaz. vol. 154; p. 775.

Bausch & Lomb Optical Company. (See Patterson, William L., assignor.)

Baxter, Hartley C., Brunswick, Me. Apparatus for cooking corn and other food products. No. 959,448; May 31; Sp. p. 6537; Gaz. vol. 154; p. 1117.

Bayer, William F., assignor to Chase & Baker Company, Buffalo, N. Y. Spool for music-sheets. No. 958,214; May 17; Sp. p. 3835; Gaz. vol. 154; p. 648.

Bayles, Lewis C., Johannesburg, Transvaal, assignor to Ingersoll-Rand Company, New York, N. Y. Feed-screw mechanism. No. 959,911; May 31; Sp. p. 7541; Gaz. vol. 154; p. 1274.

Bayusz, Frank, and V. Kovács, New Castle, Pa. Railway-switch. No. 959,421; May 24; Sp. p. 6461; Gaz. vol. 154; p. 1092.

Beahm, Peter, Altoona, assignor of one-third to C. A. Buch and one-third to J. F. Forsyth, Wayne, Pa. Metallic connection for automatic connectors for train-pipes. No. 959,290; May 24; Sp. p. 6217; Gaz. vol. 154; p. 1039.

Beals, Albert E., Detroit, Mich. Making ice. No. 959,697; May 31; Sp. p. 7070; Gaz. vol. 154; p. 1200.

Beaman & Smith Company. (See Smith, George H., assignor.)

Bean, Joseph A., assignor of one-third to L. Durfee, Mahwah, N. J. Ironing-board. No. 957,537; May 10; Sp. p. 2225; Gaz. vol. 154; p. 385.

Beard, Daniel S., assignor to The Geiser Manufacturing Company, Waynesboro, Pa. Hay-press. No. 957,538; May 10; Sp. p. 2227; Gaz. vol. 154; p. 385.

Beasley, Green O., Winona, La. Wheel-guard and track-cleaner for sawmill-carriages. No. 958,689; May 17; Sp. p. 4928; Gaz. vol. 154; p. 809.

Beattie, Francis, Leete Island, Conn. Tester for electric blasting-fuses. No. 956,877; May 3; Sp. p. 818; Gaz. vol. 154; p. 131.

Beaty, Arthur, Azusa, Cal. Penholder. No. 957,835; May 10; Sp. p. 2321; Gaz. vol. 154; p. 484.

Beaumont, George, assignor of one-half to R. Glendining, Dunedin, New Zealand. Pattern mechanism for weaving. No. 956,510; May 3; Sp. p. 9; Gaz. vol. 154; p. 4.

Beaver, Isaac K., assignor of one-half to E. E. Straub, Wilburton, Pa. Latch for end-gates of mining-cars. No. 958,075; May 17; Sp. p. 3563; Gaz. vol. 154; p. 600.

Bebout, Anna, St. Louis, Mo. Telephone-mouthpiece. No. 957,404; May 10; Sp. p. 1961; Gaz. vol. 154; p. 339.

Bechdolt, James O., Portland, Ind. Hog-holder. No. 959,422; May 24; Sp. p. 6463; Gaz. vol. 154; p. 1092.

Beck, Andrew F., Milwaukee, Wis. Calk-welding attachment for anvils. No. 956,927; May 3; Sp. p. 927; Gaz. vol. 154; p. 147.

Beck Flaming Lamp Company. (See Beck, Heinrich, assignor.)

Beck Flaming Lamp Company, The. (See Hallberg, Josef H., assignor.)

Beck, Heinrich, Frankfort-on-the-Main, Germany, assignor to Beck Flaming Lamp Company, Canton, N. Y. Electric-arc lamp. No. 959,045; May 24; Sp. p. 5707; Gaz. vol. 154; p. 958.

Becker, Anton, assignor to The Ralston Steel Car Company, Columbus, Ohio. Car-underframe. No. 956,841; May 3; Sp. p. 742; Gaz. vol. 154; p. 117.

Becker, Ludwig F., Brooklyn, N. Y. Crane for clothes-line pulleys. No. 958,215; May 17; Sp. p. 3839; Gaz. vol. 154; p. 649.

Becker, Valentine G., St. Paul, Minn. Flue-cleaner. No. 956,668; May 3; Sp. p. 348; Gaz. vol. 154; p. 58.

Beckmann, Carl, New York, N. Y. Gas-engine. No. 960,063; May 31; Sp. p. 7908; Gaz. vol. 154; p. 1328.

Bedard, Alexander A., Detroit, Mich. Soldering-tool. No. 957,180; May 10; Sp. p. 1465; Gaz. vol. 154; p. 261.

Bedard, Joseph, *et al.* (See Shampou and Donahue, assignors.)

Bedell, Richard M., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, Matrix for line-casting machines. No. 958,076; May 17; Sp. p. 3564; Gaz. vol. 154; p. 601.

Beech-Nut Packing Company *et al.* (See Hontas, William H., assignor.)

Beer, Gottlieb, Hanover, Germany. Convertible ring and hook. No. 959,836; May 31; Sp. p. 7373; Gaz. vol. 154; p. 1248.

Beers, Harry F., and H. C. Bumpus, New York, N. Y. Antidrip device for fire-hose. No. 956,562; May 3; Sp. p. 115; Gaz. vol. 154; p. 21.

Begg, Colin E., Mosman, Sydney, New South Wales, Australia. Wire-netting-weaving machine. No. 957,643; May 10; Sp. p. 2426; Gaz. vol. 154; p. 420.

Begley, Caroline M., Oakford, Pa. Underclothing. No. 959,196; May 24; Sp. p. 6032; Gaz. vol. 154; p. 1008.

Behr, Hans C., Johannesburg, Transvaal. Means for handling and distributing dewatered crushed ore products, &c. No. 956,669; May 3; Sp. p. 349; Gaz. vol. 154; p. 58.

Belcher, Warren J., assignor to The Whitney Manufacturing Company, Hartford, Conn. Drive-chain construction. No. 958,466; May 17; Sp. p. 4501; Gaz. vol. 154; p. 737.

Belcher, Warren J., assignor to The Whitney Manufacturing Company, Hartford, Conn. Drive-chain and wheel therefor. No. 959,046; May 24; Sp. p. 5708; Gaz. vol. 154; p. 959.

Belcher, Warren J., assignor to The Whitney Manufacturing Company, Hartford, Conn. Drive-chain. No. 959,047; May 24; Sp. p. 5710; Gaz. vol. 154; p. 959.

Beilts, Robert, Cleveland, Wis. Milk-can, top-rim, cover, and lock. No. 956,511; May 3; Sp. p. 11; Gaz. vol. 154; p. 4.

Bellveau, Octave A., St. Paul, Minn. Wire-clip. No. 957,485; May 10; Sp. p. 2111; Gaz. vol. 154; p. 366.

Belknap, William L., Bridgeport, Conn. Draw-off cock for boilers. No. 959,698; May 31; Sp. p. 7073; Gaz. vol. 154; p. 1200.

Bell, Arthur F. L., San Francisco, Cal. Clinometer for well-bores. No. 959,912; May 31; Sp. p. 7542; Gaz. vol. 154; p. 1274.

Bell, Dillwyn M., Oak Park, assignor to W. J. Anderson and G. F. Lewis, Chicago, Ill. Speedometer. No. 957,727; May 10; Sp. p. 2595; Gaz. vol. 154; p. 449.

Bell, William G. (See Messer, Jeremiah C., assignor.)

Bellamy, Henry J., Bridge-of-Weir, Scotland, assignor to W. V. Bowater & Sons, London, England. Hydraulic press. No. 956,752; May 3; Sp. p. 546; Gaz. vol. 154; p. 87.

Belmer, Julius, Jr., Mount Vernon, N. Y. Overhead contact system for electric railways. No. 959,197; May 24; Sp. p. 6033; Gaz. vol. 154; p. 1008.

Bender, Albert N., Milwaukee, Wis. Knockdown box. No. 956,512; May 3; Sp. p. 13; Gaz. vol. 154; p. 5.

Bender, Peter, Slater, Mo. Disk-harrow-sharpening apparatus. No. 958,077; May 17; Sp. p. 3565; Gaz. vol. 154; p. 601.

Benedict, John W., Hastings, Mich. Keyhole-guard. No. 958,840; May 24; Sp. p. 5306; Gaz. vol. 154; p. 893.

Benét, Laurence V., Paris, France. Feed apparatus for automatic guns. No. 958,078; May 17; Sp. p. 3566; Gaz. vol. 154; p. 601.

Benét, Laurence V., and H. A. Mercié, Paris, France. Support for guns. No. 959,291; May 24; Sp. p. 6219; Gaz. vol. 154; p. 1039.

Benjamin Electric Manufacturing Company. (See Benjamin, Reuben B., assignor.)

Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Electric-lamp socket. No. 958,216; May 17; Sp. p. 3840; Gaz. vol. 154; p. 649.

Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Extension-socket. No. 958,217; May 17; Sp. p. 3842; Gaz. vol. 154; p. 649.

Benjamine, Frank G. (See Lawler, John, assignor.)

Benner, Harvey A., Washington, D. C. Press-copying device. No. 959,292; May 24; Sp. p. 6222; Gaz. vol. 154; p. 1040.

Bennett, Albert A., Essex, Ontario, Canada. Hydrant. No. 958,079; May 17; Sp. p. 3569; Gaz. vol. 154; p. 601.

Bennett, George R., Denver, Colo. Tunneling-machine. No. 958,952; May 24; Sp. p. 5519; Gaz. vol. 154; p. 927.

Bennett, James E., Atlantic City, N. J. Wave or current motor. No. 958,467; May 17; Sp. p. 4502; Gaz. vol. 154; p. 737.

Bennett, James H., Detroit, Mich., assignor of two-thirds to W. E. Merritt, Chatham, Canada, and one-third to A. J. McKinnon, Detroit, Mich. Combined china-cabinet and table. No. 956,619; May 3; Sp. p. 239; Gaz. vol. 154; p. 41.

Bennett, Joseph H., New York, N. Y. Candy-cutting machine. No. 958,717; May 24; Sp. p. 4986; Gaz. vol. 154; p. 844.

Bennett, Josiah Q., and R. A. Parry, Cambridge, assignors to Boston Brick Company, Boston, Mass. Burning brick. No. 956,620; May 3; Sp. p. 242; Gaz. vol. 154; p. 41.

Bennett, Thomas F. (See Price and Bennett.)

Bennett, Winchester, assignor to Winchester Repeating Arms Co., New Haven, Conn. Offset-adapter for telescopes for firearms. No. 958,980; May 24; Sp. p. 5594; Gaz. vol. 154; p. 940.

Bensing, Jacob, Malinta, Ohio. Tile-cutting machine. No. 957,486; May 10; Sp. p. 2111; Gaz. vol. 154; p. 366.

Benson, Elof, Youngstown, Ohio. Combination calipers and poising-tool. No. 959,699; May 31; Sp. p. 7073; Gaz. vol. 154; p. 1201.

Bent, George W., Cambridge, Mass. Bed. No. 958,355; May 17; Sp. p. 4283; Gaz. vol. 154; p. 699.

Bent, George W., Cambridge, Mass. Caster. No. 959,108; May 24; Sp. p. 5845; Gaz. vol. 154; p. 979.

Bentley, Fred W. (See Junggren and Bentley.)
Bentley, Fred W., Schenectady, N. Y., assignor to General Electric Company. Centrifugal governor. No. 957,861; May 17; Sp. p. 2885; Gaz. vol. 154; p. 523.
Benz, John, and P. Roesbach, Chicago, Ill. Ventilating-sash. No. 957,836; May 10; Sp. p. 2822; Gaz. vol. 154; p. 484.
Benze, George, assignor to A. Wimpfheimer & Bro., New York, N. Y. Display or color card. No. 958,080; May 17; Sp. p. 3570; Gaz. vol. 154; p. 602.
Benze, George, assignor to A. Wimpfheimer & Bro., New York, N. Y. Display or color card. No. 958,218; May 17; Sp. p. 3945; Gaz. vol. 154; p. 650.
Bensinger Brothers. (See Yoos, Charles, assignor.)
Bensinger Brothers. (See Van Guelpen, Otto H., assignor.)
Berbecker & Rowland Manufacturing Company. (See Lawa, Christian F., assignor.)
Berchelmann, Wilhelm, Vohwinkel, near Elberfeld, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Wool dye. No. 958,850; May 24; Sp. p. 5307; Gaz. vol. 154; p. 894.
Bergen, Mary E. L., Brooklyn, N. Y. Bedclothing-rest. No. 958,718; May 24; Sp. p. 4967; Gaz. vol. 154; p. 844.
Berger, Charles A., Clay Center, Kans. Foldable stand for canopy-hammocks. No. 957,644; May 10; Sp. p. 2430; Gaz. vol. 154; p. 420.
Bernstein, Samuel, Youngstown, Ohio. Portable beater. No. 960,064; May 31; Sp. p. 7914; Gaz. vol. 154; p. 1328.
Berkebile, Robert F., assignor of one-half to T. J. Adams, Kantner, Pa. Advertisement-holder. No. 957,539; May 10; Sp. p. 2228; Gaz. vol. 154; p. 386.
Berkley, Samuel S., Ralphton, Pa. Suspension means for trolley-wires. No. 960,065; May 31; Sp. p. 7915; Gaz. vol. 154; p. 1329.
Berkshire Hills Paper Co. (See Ramage and Shaw, assignors.)
Berkshire Machine Company. (See Marshall and Clark, assignors.)
Bernati, Gaspare, *et al.* (See Cipollina, Giuseppe, assignor.)
Bernauer, George W., St. Charles, Mo. Fine-blower. No. 956,670; May 3; Sp. p. 352; Gaz. vol. 154; p. 58.
Berndt, Reinhold, Berlin, Germany. Phonograph. No. 958,671; May 3; Sp. p. 354; Gaz. vol. 154; p. 59.
Bernhard, Richard. (See Niedermeyer and Bernhard.)
Bernhard, Richard, Milwaukee, assignor to Power and Mining Machinery Company, Cudahy, Wis. Crushing-roll. No. 956,878; May 3; Sp. p. 819; Gaz. vol. 154; p. 131.
Bernier, Jean B., Lowell, Mass. Car-fender. No. 957,540; May 10; Sp. p. 2230; Gaz. vol. 154; p. 386.
Berry, Arthur F., Ealing, England, assignor to General Electric Company. Electrically-heated apparatus suitable for cooking and other purposes. No. 959,913; May 31; Sp. p. 7545; Gaz. vol. 154; p. 1274.
Berry, Charles A., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Combined rim and mortise lock. No. 957,139; May 3; Sp. p. 1357; Gaz. vol. 154; p. 217.
Berry, Charles A., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Knob and spindle fastening. No. 957,837; May 10; Sp. p. 2824; Gaz. vol. 154; p. 484.
Berry, Charles A., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Lock. No. 959,293; May 24; Sp. p. 6223; Gaz. vol. 154; p. 1040.
Berry, Edgar H., New York, assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine. No. 956,672; May 3; Sp. p. 356; Gaz. vol. 154; p. 59.
Berry, George W., Bayonne, N. J. Drain-pipe fitting. No. 957,487; May 10; Sp. p. 2113; Gaz. vol. 154; p. 367.
Berry, William, Fond du Lac, Wis. Rail-clamp. No. 957,838; May 10; Sp. p. 2825; Gaz. vol. 154; p. 485.
Berryman, Abraham R., East Altoona, Pa. Rail-joint. No. 957,030; May 3; Sp. p. 1150; Gaz. vol. 154; p. 182.
Bertin, Paul E. and R. L., assignors to Reinforcement Supply Company, New York, N. Y. Truss-bar. No. 957,131; May 10; Sp. p. 1466; Gaz. vol. 154; p. 261.
Bertin, Rene L. (See Bertin, Paul E. and R. L.)
Bertram, Henry W., and F. L. Lamoreaux, assignors to Standard Auto Accessory Mfg. Co., Detroit, Mich. Wind-shield for vehicles. No. 957,541; May 10; Sp. p. 2233; Gaz. vol. 154; p. 386.
Bertrand, Clovis, Barnes, London, England. Hood for road-vehicles. No. 956,563; May 3; Sp. p. 117; Gaz. vol. 154; p. 22.
Beskow, Knut J., Helsingborg, and M. Ekedahl, Limhamn, Sweden. Device for emptying superphosphate out of decomposition-chambers. No. 956,702; May 3; Sp. p. 625; Gaz. vol. 154; p. 100.
Best, Edward, London, Ontario, Canada, and D. A. Scott, Oshkosh, Wis. Car-replacer. No. 957,405; May 10; Sp. p. 1943; Gaz. vol. 154; p. 339.
Bestgen, John G., Quincy, assignor to King of All Stropper Company, Boston, Mass. Razor-stropper. No. 957,140; May 3; Sp. p. 1360; Gaz. vol. 154; p. 218.
Bethlehem Steel Company. (See Meigs and Hammar, assignors.)
Bethlehem Steel Company. (See Meigs and Jakobsen, assignors.)
Bethlehem Steel Co. (See Philp, Casimir von, assignor.)
Bettendorf, William P., Davenport, Iowa. Beamless brake mechanism for railway-cars. No. 956,673; May 3; Sp. p. 362; Gaz. vol. 154; p. 60.
Bettendorf, William P., Davenport, Iowa. Underframe for cars. No. 957,182; May 10; Sp. p. 1467; Gaz. vol. 154; p. 262.
Bevill, Claibourn, Bushnell, Fla. Irrigating apparatus. No. 959,914; May 31; Sp. p. 7550; Gaz. vol. 154; p. 1275.
Berlin Brothers Manufacturing Company. (See Arnold, Philip C., assignor.)
Bichler, Leopold. (See Wagener, Clemens, assignor.)
Bickel, Charles W., Evansville, Ind. Type-writer desk. No. 956,513; May 3; Sp. p. 14; Gaz. vol. 154; p. 5.
Bickford, Arthur O. (See Vanderlip, Earl, assignor.)
Bickford, Ernest A., and W. A. Sweet, Worcester, Mass. Slipper-sole. No. 960,149; May 31; Sp. p. 8064; Gaz. vol. 154; p. 1356.
Biehl, Antonio, El Paso, Tex. Advertising-chair. No. 958,793; May 24; Sp. p. 5178; Gaz. vol. 154; p. 871.
Biggert, Florence C., Jr., assignor to United Engineering & Foundry Company, Pittsburg, Pa. Clutch mechanism. No. 958,710; May 17; Sp. p. 4963; Gaz. vol. 154; p. 816.
Billing, William, St. Boniface, Manitoba, Canada. Key-seating machine. No. 958,081; May 17; Sp. p. 3572; Gaz. vol. 154; p. 602.
Billington, John E. (See Pearce and Billington.)
Binks, Harry D., Chicago, Ill. Spraying-nozzle. No. 960,150; May 31; Sp. p. 8066; Gaz. vol. 154; p. 1356.
Birchall, Benjamin H., Baltimore, Md., assignor of one-half to H. L. Troxell, Philadelphia, Pa. Shoe-rack. No. 957,839; May 10; Sp. p. 2827; Gaz. vol. 154; p. 485.
Bisbing, Harry E. (See Conway and Bisbing.)
Bischof, Joseph, Boston, Mass. Garment-presser. No. 957,141; May 3; Sp. p. 1362; Gaz. vol. 154; p. 218.
Bishop & Babcock Company, The. (See Champ and Schatt, assignors.)
Bissell, Percy R., assignor to The Waterbury Farrell Foundry and Machine Company, Waterbury, Conn. Metal-scraping machine. No. 957,081; May 3; Sp. p. 1151; Gaz. vol. 154; p. 182.
Bjorklund, Charley, Bowesmont, assignor of one-third to H. M. Waldren and one-third to J. V. Anderson, Drayton, N. D. Basket attachment for barrel-trucks. No. 957,406; May 10; Sp. p. 1964; Gaz. vol. 154; p. 339.
Bjorklund, Charley, Bowesmont, assignor of one-third to H. M. Waldren and one-third to J. V. Anderson, Drayton, N. D. Barrel-truck. No. 957,840; May 10; Sp. p. 2828; Gaz. vol. 154; p. 485.
Blackman, Carl R., Colorado Springs, Colo. Headlight. No. 959,700; May 31; Sp. p. 7076; Gaz. vol. 154; p. 1201.
Blackman, Charles M., assignor to The S. H. Wetmore Company, New York, N. Y. Display-box. No. 959,701; May 31; Sp. p. 7078; Gaz. vol. 154; p. 1201.
Blair, Bert E., Barre, Vt. Scale. No. 959,837; May 31; Sp. p. 7373; Gaz. vol. 154; p. 1248.
Blair, Frank O., Fort Scott, Kans. Railway-tie. No. 957,841; May 10; Sp. p. 2830; Gaz. vol. 154; p. 486.
Blair, George W., assignor of four-tenths to F. G. Wallace, Pittsburg, one-tenth to C. E. Veitle and one-tenth to J. D. Johnston, Jeannette, Pa. Manufacture of glass tiles and similar articles. No. 959,423; May 24; Sp. p. 6464; Gaz. vol. 154; p. 1083.
Blair, James, St. Benedict, Pa. Mining-car. No. 959,294; May 24; Sp. p. 6225; Gaz. vol. 154; p. 1040.
Blake, Charles C., Brookline, Mass. Rod-supporting device. No. 958,219; May 17; Sp. p. 3846; Gaz. vol. 154; p. 650.
Blake Mining and Milling Company, The. (See Swart, Walter G., assignor.)
Blanchard, Frederick C., and B. B. Crocker, assignors to The Ashcroft Manufacturing Company, Bridgeport, Conn. Pipe-union. No. 959,702; May 31; Sp. p. 7079; Gaz. vol. 154; p. 1202.
Blanchard, Samuel B., Grand Rapids, D. B. Uhl, Grandville, and F. W. Koch, Grand Rapids, Mich.; said Uhl and said Koch assignors to D. K. Ide. Guard for cutting-machines. No. 956,564; May 3; Sp. p. 118; Gaz. vol. 154; p. 22.
Bland, Louis, Chicago, Ill. Adjustable display-card holder. No. 958,082; May 17; Sp. p. 3574; Gaz. vol. 154; p. 602.
Blank, George, Burlington, Iowa. Float. No. 958,581; May 17; Sp. p. 4720; Gaz. vol. 154; p. 775.
Blankenhagen, Herman G., Chicago, Ill. Match-holder. No. 958,690; May 17; Sp. p. 4980; Gaz. vol. 154; p. 809.
Blasdell, William T., Chicago, Ill. Clasp. No. 957,488; May 10; Sp. p. 2115; Gaz. vol. 154; p. 367.
Bleach & Caustic Process Company. (See Gabriel, George A., assignor.)
Blechschmidt, Charles E., Connersville, Ind. Wall-safe. No. 957,183; May 10; Sp. p. 1470; Gaz. vol. 154; p. 262.
Bleichert & Company, Adolf. (See Pfaffenbach, Rudolf, assignor.)
Blickensderfer, George C., Stamford, Conn. Type-writing machine. No. 956,879; May 3; Sp. p. 822; Gaz. vol. 154; p. 131.
Bliss, Frederick W., East Orange, N. J. Cabinet for stationery. No. 957,359; May 10; Sp. p. 2871; Gaz. vol. 154; p. 492.
Bliss, William L., Brooklyn, N. Y. Window. No. 957,728; May 10; Sp. p. 2601; Gaz. vol. 154; p. 450.
Blitz, Harry L., Clearfield, Pa. Electrical sign. No. 959,449; May 24; Sp. p. 6504; Gaz. vol. 154; p. 1088.
Bloch, Alfred. (See Krüger, Ernst A., assignor.)
Bloch, Pauline S., assignor to Rogers Verybest Manufacturing Company, New York, N. Y. Vending-machine. No. 959,449; May 31; Sp. p. 6839; Gaz. vol. 154; p. 1117.

Blood, Edwin J., Chicago, Ill. Cannon. No. 958,220; May 17; Sp. p. 3847; Gaz. vol. 154; p. 650.
Bloomer Bros. Company. (See Kiefeker, Charles B., assignor.)
Blose, William H., Greenville, Ohio. Mold. No. 959,438; May 24; Sp. p. 6490; Gaz. vol. 154; p. 1087.
Blower, Joseph W., Columbus, Ohio. Railway-track construction. No. 956,514; May 3; Sp. p. 16; Gaz. vol. 154; p. 5.
Blower, Joseph W., Columbus, Ohio. Railway-track construction. No. 956,880; May 3; Sp. p. 826; Gaz. vol. 154; p. 132.
Blower, Joseph W., Columbus, Ohio. Railway-track construction. No. 957,407; May 10; Sp. p. 1966; Gaz. vol. 154; p. 340.
Bluen, Georg, Berlin, Germany. Winding apparatus for inking-ribbons. No. 957,542; May 10; Sp. p. 2234; Gaz. vol. 154; p. 387.
Bluhm, Charles A., Michigan City, Ind. Third rail. No. 960,066; May 31; Sp. p. 7916; Gaz. vol. 154; p. 1329.
Blumenthal, Harry, Dorchester, Mass. Telephone-support. No. 960,151; May 31; Sp. p. 8067; Gaz. vol. 154; p. 1356.
Bobb, Boyd B., Haynes, N. D. Wire-stretcher. No. 959,988; May 31; Sp. p. 7724; Gaz. vol. 154; p. 1301.
Bock, Alfred, Brooklyn, N. Y., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Latch. No. 959,295; May 24; Sp. p. 6227; Gaz. vol. 154; p. 1041.
Bock, Samuel W., Milwaukee, Wis. Match-box. No. 958,468; May 17; Sp. p. 4506; Gaz. vol. 154; p. 738.
Bock, Udo W. (See Crutkshank and Bock.)
Boda, Joseph, assignor to Independent Harvester Company, Plano, Ill. Harvester-elevator. No. 959,703; May 31; Sp. p. 7079; Gaz. vol. 154; p. 1202.
Bode, Philipp G. A., Hamburg, Germany. Upholstered chair. No. 958,356; May 17; Sp. p. 4285; Gaz. vol. 154; p. 699.
Bodine, Harry E., Merchantville, N. J. Combination fashion and sample book. No. 958,582; May 17; Sp. p. 4721; Gaz. vol. 154; p. 775.
Bodmer, Christian, assignor to The Stanley Rule & Level Company, New Britain, Conn. Spirit-level. No. 959,296; May 24; Sp. p. 6229; Gaz. vol. 154; p. 1041.
Boegen, John E., Berwyn, assignor to C. P. Monash, Chicago, Ill. Steam, air, and water trap valve. No. 959,297; May 24; Sp. p. 6230; Gaz. vol. 154; p. 1042.
Boericke, Gideon, Philadelphia, Pa. Reducing refractory ores, particularly oxids and sulfids. No. 958,851; May 24; Sp. p. 5308; Gaz. vol. 154; p. 894.
Boericke, Gideon, Philadelphia, Pa. Making copper alloys. No. 959,048; May 24; Sp. p. 5712; Gaz. vol. 154; p. 959.
Boeson, Torkild, Grayling, Mich. Hose-holder. No. 957,930; May 17; Sp. p. 3050; Gaz. vol. 154; p. 548.
Bogenschutz, William C., assignor of two-thirds to W. Thompson and D. Curtenius, Kalamazoo, Mich. Flask. No. 956,621; May 3; Sp. p. 248; Gaz. vol. 154; p. 41.
Boggs, Alvin C., Jr., Fort Dodge, Iowa. Stopper-retainer. No. 957,645; May 10; Sp. p. 2431; Gaz. vol. 154; p. 421.
Bohr, Nicholas C., assignor, by mesne assignments, to Thomas G. Plant, Boston, Mass. Holddown for lasting-machines. No. 958,083; May 17; Sp. p. 3576; Gaz. vol. 154; p. 603.
Bokel, J. A. (See Anderson, Nels D., assignor.)
Boland, Francis P., Providence, R. I. Positive-pressure blower. No. 959,049; May 24; Sp. p. 5718; Gaz. vol. 154; p. 959.
Bolander, Louis P., San Francisco, Cal. Feeder for furnaces. No. 957,184; May 10; Sp. p. 1471; Gaz. vol. 154; p. 262.
Boleg, Adolf, Rorschach, Switzerland. Apparatus for drying textile and other materials. No. 958,469; May 17; Sp. p. 4507; Gaz. vol. 154; p. 738.
Bolton, George E., Chicago, Ill. Bottle-stopper. No. 958,221; May 17; Sp. p. 3850; Gaz. vol. 154; p. 651.
Bond, George W., assignor to The Elwood Iron Works, Elwood, Ind. Brick-machine. No. 957,543; May 10; Sp. p. 2235; Gaz. vol. 154; p. 387.
Bond, Henry J., Pittsburg, Pa. Nut-lock. No. 957,931; May 17; Sp. p. 3051; Gaz. vol. 154; p. 548.
Böniger, Melchior, assignor to Chemical Works formerly Sandoz, Basel, Switzerland. Orange disazo dye and making. No. 959,109; May 24; Sp. p. 5846; Gaz. vol. 154; p. 980.
Bonnell, Hattie W. F. (See Bonnell, William A., assignor.)
Bonnell, William A., assignor to H. W. F. Bonnell, Brooklyn, N. Y. Switch or outlet box. No. 956,674; May 3; Sp. p. 365; Gaz. vol. 154; p. 60.
Bonnet, Adrien, Paris, France. Pneumatic tire. No. 956,928; May 3; Sp. p. 928; Gaz. vol. 154; p. 148.
Bonnett, John C., New Haven, Conn., assignor to Taylor, Stiles & Company, Riegelsville, N. J. Gasolene-engine. No. 956,851; May 3; Sp. p. 827; Gaz. vol. 154; p. 132.
Boogher, John F., St. Louis, Mo. Railway-tie. No. 956,622; May 3; Sp. p. 248; Gaz. vol. 154; p. 42.
Boothby, Joseph, and C. A. Brown, Marietta, Ohio. Handle for oil-cans. No. 956,883; May 3; Sp. p. 840; Gaz. vol. 154; p. 133.
Borden, George L., Campbell, N. Y. Engine. No. 958,583; May 17; Sp. p. 4723; Gaz. vol. 154; p. 776.
Borden's Condensed Milk Company. (See McEwan, Charles F., assignor.)
Borneside, Harry B., Providence, R. I. Leather-compressing mechanism for shoe-finishing machines. No. 956,565; May 3; Sp. p. 119; Gaz. vol. 154; p. 22.
Bosch, Carl, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Production of titanium-nitrogen compounds. No. 957,842; May 10; Sp. p. 2833; Gaz. vol. 154; p. 486.
Bosch, Carl, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Making ammonia. No. 957,843; May 10; Sp. p. 2834; Gaz. vol. 154; p. 486.
Bosch, Carl G., Cedar Rapids, Iowa. Air-heater. No. 957,862; May 17; Sp. p. 2883; Gaz. vol. 154; p. 524.
Boss, Martin P., San Francisco, Cal. Ore concentrator and classifier. No. 959,838; May 31; Sp. p. 7375; Gaz. vol. 154; p. 1249.
Bossert, Charles P., Milwaukee, Wis. Hair-grinding machine. No. 957,729; May 10; Sp. p. 2603; Gaz. vol. 154; p. 450.
Boston Brick Company. (See Bennett and Parry, assignors.)
Boston Machine Works Company. (See Cook, Miller, Jr., assignor.)
Bostwick, Arthur J., assignor of one-half to Eau Claire Mill Supply Co., Eau Claire, Wis. Stake-holder. No. 958,915; May 31; Sp. p. 7552; Gaz. vol. 154; p. 1275.
Bostwick, Arthur J., assignor of one-half to Eau Claire Mill Supply Co., Eau Claire, Wis. Stake-holder. No. 959,916; May 31; Sp. p. 7553; Gaz. vol. 154; p. 1275.
Bottlers Machinery Manufacturing Company. (See Bastian, Charles L., assignor.)
Bottlers Machinery Manufacturing Company. (See Strasburger, Frank C. H., assignor.)
Bottlers' Seal Company. (See Stark and Turner, assignors.)
Bottomley, Samuel, Providence, R. I. Bandage. No. 959,704; May 31; Sp. p. 7081; Gaz. vol. 154; p. 1202.
Boughton, Horace G., Cleveland, Ohio. Mixing and blending machine. No. 957,646; May 10; Sp. p. 2432; Gaz. vol. 154; p. 421.
Bourdelles, Emile, Paris, France. Torpedo. No. 958,090; May 24; Sp. p. 5595; Gaz. vol. 154; p. 941.
Bourquin, Elliott, Latta, S. C. Foot-treadle. No. 957,863; May 17; Sp. p. 2891; Gaz. vol. 154; p. 524.
Bouslog, Rawley H., Peru, Ind. Automatic time-computer. No. 958,584; May 17; Sp. p. 4725; Gaz. vol. 154; p. 776.
Bowen, Russell H. (See Brinley and Bowen.)
Bowen, Russell H., Palmyra, N. J., assignor to The American Pulley Company, Philadelphia, Pa. Pulley. No. 959,424; May 24; Sp. p. 6466; Gaz. vol. 154; p. 1083.
Bowers, John A. (See Bowers, Roy E., assignor.)
Bowers, Roy E., Hartville, Ohio, assignor to J. A. Bowers, Payette, Idaho. Steering-wheel for automobiles. No. 959,298; May 24; Sp. p. 6234; Gaz. vol. 154; p. 1043.
Bowles, Fred C., Groton, S. D. Coupling. No. 956,753; May 3; Sp. p. 547; Gaz. vol. 154; p. 87.
Bowman, Robert L., Knoxville, Tenn. Coin-controlled telephone. No. 956,754; May 3; Sp. p. 548; Gaz. vol. 154; p. 87.
Bown, Charles T., and T. E. Smith, Pittsburg, Pa. Faucet. No. 957,647; May 10; Sp. p. 2436; Gaz. vol. 154; p. 421.
Boyd, George, Winona, Minn. Bell-ringing mechanism. No. 960,067; May 31; Sp. p. 7917; Gaz. vol. 154; p. 1329.
Boyd, Harold A. (See Boyd, Thomas A. and H. A.)
Boyd, Isreal A., Baltimore, Md. Window. No. 959,980; May 31; Sp. p. 7725; Gaz. vol. 154; p. 1302.
Boyd, Thomas A. and H. A., Shettleston, Scotland. Spinning and twisting frame. No. 959,198; May 24; Sp. p. 6036; Gaz. vol. 154; p. 1009.
Boyd, Wheeler, Idaho Springs, Colo. Revolving hammer. No. 956,515; May 3; Sp. p. 17; Gaz. vol. 154; p. 6.
Boydell, James, Sudbury, Ontario, Canada. Boat tender-brake. No. 959,299; May 24; Sp. p. 6235; Gaz. vol. 154; p. 1043.
Boysen, Boy S. (See Miller, Leonard, assignor.)
Boysen, Oscar P. (See Colgen and Boysen.)
Bracy, Edward L., Scotland Neck, assignor to R. H. Wright, Durham, N. C. Machine for making paper bags and for packeting tobacco and other materials. No. 956,623; May 3; Sp. p. 248; Gaz. vol. 154; p. 42.
Bradburn, Charles F., Delmer, Ontario, Canada. Telephone apparatus. No. 957,489; May 10; Sp. p. 2116; Gaz. vol. 154; p. 367.
Bradburn, Charles F., Delmer, Ontario, Canada. Telephone apparatus. No. 957,490; May 10; Sp. p. 2121; Gaz. vol. 154; p. 368.
Bradburn, Charles F., Delmer, Ontario, Canada. Telephone system. No. 957,491; May 10; Sp. p. 2125; Gaz. vol. 154; p. 368.
Bradbury, Fred R., East Brownfield, Me. Device for greasing cooking utensils. No. 956,929; May 3; Sp. p. 929; Gaz. vol. 154; p. 148.
Bradford, Charles E., Lakeview, Wash. Trolley-pole. No. 960,152; May 31; Sp. p. 8068; Gaz. vol. 154; p. 1356.
Bradley, William A., Spokane, Wash. Jig. No. 957,648; May 10; Sp. p. 2437; Gaz. vol. 154; p. 422.
Brady, Francis W., New York, N. Y. Valve for internal-combustion engines. No. 957,730; May 10; Sp. p. 2605; Gaz. vol. 154; p. 450.
Brady, Francis W., New York, N. Y. Carburetor. No. 957,731; May 10; Sp. p. 2606; Gaz. vol. 154; p. 451.
Brady, James R., Parole, Md. Churn. No. 958,585; May 17; Sp. p. 4728; Gaz. vol. 154; p. 776.
Brady, William J., Jackson, Ohio. Dental attachment. No. 957,032; May 3; Sp. p. 1153; Gaz. vol. 154; p. 182.
Bragstad Bros. Co., The. (See Bragstad, Joseph W., assignor.)

Bragstad, Joseph W., assignor to The Bragstad Bros. Co., Canton, S. D. Block-molding machine. No. 959,050; May 24; Sp. p. 5714; Gaz. vol. 154; p. 960.

Braham, George M., and J. Lill, Hammond, Ind. Car-brake. No. 957,408; May 10; Sp. p. 1967; Gas. vol. 154; p. 340.

Branch, Henry A. (See Osborne, Eugene F., assignor.)

Brand, George M., Brighton, assignor of one-fourth to H. T. Bacon, Greeley, Colo. Field-leveler. No. 957,732; May 10; Sp. p. 2609; Gaz. vol. 154; p. 451.

Brand, George P., New York, N. Y. Tracker-bar. No. 958,470; May 17; Sp. p. 4509; Gaz. vol. 154; p. 738.

Brandly, Albert R. (See Harris, Gordon D., assignor.)

Brangier, Pierre A., Agnew, Cal., and R. Luckenbach, Philadelphia, Pa. Trap for precious metals. No. 959,300; May 24; Sp. p. 6238; Gaz. vol. 154; p. 1043.

Brangier, Pierre A., Agnew, Cal., and R. Luckenbach, Philadelphia, Pa. Apparatus for quick cyaniding of precious metals. No. 959,301; May 24; Sp. p. 6239; Gaz. vol. 154; p. 1044.

Brantz, August, Richmond, Va. Chalk-sharpening device. No. 957,733; May 10; Sp. p. 2611; Gaz. vol. 154; p. 452.

Brassert, Hermann A., Chicago, Ill., assignor to J. Gayley, New York, N. Y. Drying air. No. 958,471; May 17; Sp. p. 4511; Gaz. vol. 154; p. 738.

Bratzel, George V., Hebron, N. D. Folding umbrella. No. 957,734; May 10; Sp. p. 2612; Gaz. vol. 154; p. 452.

Braun & Sons, John. (See Deck, Henry, assignor.)

Braun, William C., Marysville, Ind. Horse-drag. No. 957,185; May 10; Sp. p. 1473; Gaz. vol. 154; p. 263.

Bray & Kates. (See Bray, Richard, assignor.)

Bray, Richard, assignor to Bray & Kates, Arlington Heights, Ill. Milk-can and making the same. No. 956,675; May 3; Sp. p. 368; Gaz. vol. 154; p. 60.

Brazil-Dineen, Thomas, North Sydney, New South Wales, Australia. Loose-leaf binder. No. 957,649; May 10; Sp. p. 2441; Gaz. vol. 154; p. 422.

Brearley, Harry, and F. C. Moorwood, Sheffield, England. Manufacture of silica bricks, ganister, and other refractory materials. No. 958,084; May 17; Sp. p. 3579; Gaz. vol. 154; p. 603.

Breck, George, San Francisco, Cal. Inverted gas-fixture. No. 958,857; May 17; Sp. p. 4286; Gaz. vol. 154; p. 699.

Brening, Louis F., assignor, by mesne assignments, to The Ridgely Trimmer Company, Springfield, Ohio. Paper-cutter. No. 957,409; May 10; Sp. p. 1968; Gaz. vol. 154; p. 341.

Brennan, Daniel, Jr. (See Williamson and Brennan.)

Brennan, Marcus F., Carbondale, Pa. Adjuster for locomotive drive-boxes. No. 957,735; May 10; Sp. p. 2614; Gaz. vol. 154; p. 452.

Bresee, William R., Bellevue, Pa. Quick-acting wrench. No. 957,992; May 17; Sp. p. 3051; Gaz. vol. 154; p. 548.

Bresnahan, Maurice V. (See Holbrook, Frank, assignor.)

Bresnahan Shoe Machinery Company. (See Heys, John J., assignor.)

Breuchaud, Jules, Yonkers, N. Y. Constructing foundations of buildings. No. 957,844; May 10; Sp. p. 2835; Gaz. vol. 154; p. 486.

Brewer, Walter, Malcolm, Nebr. Animal-poke. No. 956,755; May 3; Sp. p. 549; Gaz. vol. 154; p. 88.

Brewer, William J., Brooklyn, N. Y. Roller-bearing. No. 958,586; May 17; Sp. p. 4729; Gaz. vol. 154; p. 777.

Brewington, Henry S., Baltimore, Md. Fountain-pen-holder. No. 958,472; May 17; Sp. p. 4512; Gaz. vol. 154; p. 739.

Bridgeman, Catherine W., Chicago, Ill. Cherry-pitter. No. 959,450; May 31; Sp. p. 6541; Gaz. vol. 154; p. 1118.

Brigance, Alice O., Navasota, Tex. Box and package elevating apparatus. No. 956,756; May 3; Sp. p. 551; Gaz. vol. 154; p. 88.

Briggs, Elmer C., Wareham, Mass. Foot-rest for radiators. No. 959,917; May 31; Sp. p. 7554; Gaz. vol. 154; p. 1276.

Briggs, Jesse. (See Ralston and Briggs.)

Briggs, William A., and I. Millett, Chicago, Ill. Dust-guard for car-axle boxes. No. 958,953; May 24; Sp. p. 5527; Gaz. vol. 154; p. 927.

Brigham, Edward A., Grafton, assignor to Rotary Ring Spinning Company, Boston, Mass. Spinning-ring. No. 956,930; May 3; Sp. p. 931; Gaz. vol. 154; p. 148.

Bright, Fred E., Philadelphia, Pa. Separator for antifriction-bearings. No. 956,676; May 3; Sp. p. 369; Gaz. vol. 154; p. 61.

Bright Manufacturing Company. (See Van Ripen, Lewis C., assignor.)

Bright, Martin C., assignor of one-half to C. W. Meikel, Indianapolis, Ind. Floatless carbureter. No. 956,882; May 3; Sp. p. 837; Gaz. vol. 154; p. 132.

Brim, Isaac D., Cape, Tex. Front truck for planters, &c. No. 959,302; May 24; Sp. p. 6241; Gaz. vol. 154; p. 1044.

Brinkman, Louis H., Hartford, assignor to Whitlock Coil Pipe Company, West Hartford, Conn. Refrigerating apparatus. No. 958,852; May 24; Sp. p. 5308; Gaz. vol. 154; p. 864.

Brinkmann, Edward H., and H. O. Wente, Cincinnati, Ohio. Desiccating distillery-slop. No. 958,902; May 24; Sp. p. 5440; Gaz. vol. 154; p. 911.

Brinley, Charles A., Philadelphia, Pa., and E. H. Bowen, Palmyra, N. J., assignors to The American Pulley Company, Philadelphia, Pa. Pulley and attachment therefor. No. 957,845; May 10; Sp. p. 2839; Gaz. vol. 154; p. 487.

Brisbane, Arthur, New York, N. Y. Vehicle-wheel. No. 959,706; May 31; Sp. p. 7082; Gaz. vol. 154; p. 1202.

Brisbane, Arthur, New York, N. Y. Vehicle-wheel. No. 959,706; May 31; Sp. p. 7084; Gaz. vol. 154; p. 1203.

Brisbane, Arthur, New York, N. Y. Vehicle-wheel. No. 959,707; May 31; Sp. p. 7085; Gaz. vol. 154; p. 1203.

Brisbois, Odilon, assignor to Automatic Starter Company, Chicago, Ill. Starter for hydrocarbon-engines. No. 959,990; May 31; Sp. p. 7727; Gaz. vol. 154; p. 1302.

Bristol, Cyrus J., Des Moines, Iowa. Insulator for battery-plates. No. 959,303; May 24; Sp. p. 6242; Gaz. vol. 154; p. 1044.

Bristol, Gaylord L., Cross Fork, Pa. Draft-evener. No. 957,736; May 10; Sp. p. 2614; Gaz. vol. 154; p. 452.

Britton, Joseph W., Martinsville, Ind. Patch for shoe-soles. No. 959,304; May 24; Sp. p. 6243; Gaz. vol. 154; p. 1045.

Brock, John E., Mayoworth, Wyo. Jaw-trap. No. 956,624; May 3; Sp. p. 254; Gaz. vol. 154; p. 43.

Brockman, Oscar, Louisville, Ky. Stuffing-rod. No. 957,737; May 10; Sp. p. 2615; Gaz. vol. 154; p. 453.

Brodhead, Andrew J., Greenville, Pa. Locomotive ash-pan. No. 957,142; May 3; Sp. p. 1363; Gaz. vol. 154; p. 218.

Brody, Leon, New York, N. Y. Hat-fastener. No. 959,991; May 31; Sp. p. 7728; Gaz. vol. 154; p. 1302.

Bromwell Brush & Wire Goods Company, The. (See Melish and Gatch, assignors.)

Bronson, Clarence P., Corning, N. Y. Car-fender. No. 958,473; May 17; Sp. p. 4513; Gaz. vol. 154; p. 739.

Bronson, Frederick S., assignor to Denio General Electric Company, Rochester, N. Y. Signal-box for fire-alarm systems. No. 958,719; May 24; Sp. p. 4988; Gaz. vol. 154; p. 844.

Brooks, Edward J., East Orange, N. J. Snap-seal. No. 956,931; May 3; Sp. p. 932; Gaz. vol. 154; p. 148.

Brooks, Everett W., *et al.* (See Nistle, George W., assignor.)

Brooks, John M., assignor of one-half to E. W. Adams, Baltimore, Md. Furnace. No. 958,903; May 24; Sp. p. 5441; Gaz. vol. 154; p. 911.

Brooks, Paul P. B., Kent township, Warren county, Ind. Cutting and pruning tool. No. 958,587; May 17; Sp. p. 4731; Gaz. vol. 154; p. 777.

Brooks, Robert L. (See Woolley, Claude L., assignor.)

Brostrom, Frederick, Chico, Cal. Pencil-sharpener. No. 958,904; May 24; Sp. p. 5442; Gaz. vol. 154; p. 911.

Brothers, Ralph N., Oklahoma, Okla. Cuff-button. No. 957,864; May 17; Sp. p. 2892; Gaz. vol. 154; p. 524.

Brough, John S., Reeds, Mo. Rein-holder. No. 957,738; May 10; Sp. p. 2616; Gaz. vol. 154; p. 453.

Brown, Alfred, Ottawa, Ontario, Canada. Fire-escape. No. 960,065; May 31; Sp. p. 7919; Gaz. vol. 154; p. 1329.

Brown, Andrew A. (See Schneider, Joseph A., assignor.)

Brown, Charles, assignor of forty-nine one-hundredths to J. M. Smith, Chicago, Ill. Fountain-squeegee. No. 956,566; May 3; Sp. p. 122; Gaz. vol. 154; p. 23.

Brown, Charles A. (See Boothby and Brown.)

Brown, Frank H. and F. H., Portland, Oreg. Grinding and crushing mill. No. 958,085; May 17; Sp. p. 3580; Gaz. vol. 154; p. 603.

Brown, Fred H. (See Brown, Frank H. and F. H.)

Brown, Henry C., Woodbury, N. J. Case for holding talking-machine records. No. 956,516; May 3; Sp. p. 18; Gaz. vol. 154; p. 6.

Brown, Henry L., Paterson, N. J., assignor to Brown Spin-Wright Company, New York, N. Y. Power-transmitting apparatus. No. 957,650; May 10; Sp. p. 2442; Gaz. vol. 154; p. 423.

Brown, Herman M. (See Brown, Joseph F. and H. M.)

Brown Hoisting Machinery Company, The. (See Deucher, Eugene G., assignor.)

Brown, John H., West Hoboken, N. J., assignor to Brown Perfection Tube Company, Inner tube for pneumatic tires. No. 956,884; May 3; Sp. p. 841; Gaz. vol. 154; p. 133.

Brown, John R., assignor to Ohio Brass Company, Mansfield, Ohio. Pressure-regulator. No. 959,708; May 31; Sp. p. 7088; Gaz. vol. 154; p. 1208.

Brown, John W., Nappanee, Ind. Adjustable wagon-rack. No. 960,069; May 31; Sp. p. 7920; Gaz. vol. 154; p. 1330.

Brown, John W., Arroyo Grande, Cal. Tire-lifter. No. 960,070; May 31; Sp. p. 7922; Gaz. vol. 154; p. 1330.

Brown, Joseph F. and H. M., Bristol, Tenn. Front-end arrangement. No. 958,720; May 24; Sp. p. 4993; Gaz. vol. 154; p. 845.

Brown, Lewis W., St. Louis, Mo. Fastener for gloves and other articles. No. 957,651; May 10; Sp. p. 2446; Gaz. vol. 154; p. 423.

Brown Perfection Tube Company. (See Brown, John H., assignor.)

Brown, Robert H., Los Angeles, Cal. Hose. No. 957,492; May 10; Sp. p. 2132; Gaz. vol. 154; p. 369.

Brown Spin-Wright Company. (See Brown, Henry L., assignor.)

Brown, William H., Indianapolis, Ind. Rail-holder. No. 959,451; May 31; Sp. p. 6542; Gaz. vol. 154; p. 1118.

Bruce, Harry L., Portland, Oreg. Hot-water heating system. No. 956,677; May 3; Sp. p. 370; Gaz. vol. 154; p. 61.

Bruderlein, Charles, New York, N. Y. Puzzle. No. 960,071; May 31; Sp. p. 7923; Gaz. vol. 154; p. 1330.

Bryan, Clarence H. (See Holsman and Bryan.)

Bryant Electric Company, The. (See Castonguay, Leger J., assignor.)

Bryant Electric Company, The. (See Goodridge, Gilbert W., assignor.)

Bryant Electric Company, The. (See Seeley, Frank E., assignor.)

Bryant Electric Company, The. (See Slady, Frank W., assignor.)

Bryen, George J., Duquesne, Pa. Engine-cylinder. No. 958,905; May 24; Sp. p. 5443; Gaz. vol. 154; p. 912.

Bryhni, Haakon, Börsen, near Trondhjem, Norway. Photometer. No. 959,051; May 24; Sp. p. 5718; Gaz. vol. 154; p. 960.

Bryk, Ernst. (See Schmidt and Bryk.)

Buch, Charles A., *et al.* (See Beahna, Peter, assignor.)

Buchanan, John, Holland, Mich. Flying-machine. No. 959,199; May 24; Sp. p. 6037; Gaz. vol. 154; p. 1009.

Buchenberg, Alvin E., assignor, by mesne assignments, to The Toledo Electric Welder Company, Toledo, Ohio. Electric welding-machine. No. 959,305; May 24; Sp. p. 6245; Gaz. vol. 154; p. 1045.

Buchheit, Charles, St. Louis, Mo. Brush bottle-cleaning machine. No. 957,301; May 10; Sp. p. 1745; Gaz. vol. 154; p. 305.

Buck, Charles B., Washington, D. C. Temporary binder. No. 960,240; May 31; Sp. p. 8246; Gaz. vol. 154; p. 1387.

Buck, Charles H. (See Buck, Clarence U., assignor.)

Buck, Clarence U., assignor of one-half to C. H. Buck, Coudersport, Pa. Percolator. No. 959,110; May 24; Sp. p. 5848; Gaz. vol. 154; p. 980.

Buckey, Thomas W., *et al.* (See Christmas, William W., assignor.)

Buckeye Steel Castings Company, The. (See Bush, Samuel P., assignor.)

Buckius, Albert O., Jr., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio. Truck side frame. No. 958,474; May 17; Sp. p. 4516; Gaz. vol. 154; p. 739.

Buckland, Amos E., Rochester, N. Y. Disinfecting device. No. 959,111; May 24; Sp. p. 5849; Gaz. vol. 154; p. 980.

Buckler, James, Philadelphia, Pa., assignor to Crompton & Knowles Loom Works. Weaving pile fabrics. No. 959,306; May 24; Sp. p. 6247; Gaz. vol. 154; p. 1045.

Buckley, Joseph, Methuen, Mass. Steam-generator. No. 958,358; May 17; Sp. p. 4267; Gaz. vol. 154; p. 699.

Budke, George H., Nanuet, N. Y. Dump-bucket. No. 958,222; May 17; Sp. p. 3852; Gaz. vol. 154; p. 651.

Buehler, Philip J., Ritzville, Wash. Paper-rack. No. 959,839; May 31; Sp. p. 7378; Gaz. vol. 154; p. 1249.

Buel, Charles A., Jr., St. Louis, Mo. Sanitary cold-air food-cabinet. No. 959,709; May 31; Sp. p. 7093; Gaz. vol. 154; p. 1204.

Buer, Kristian. (See Bye and Buer.)

Buffum Tool Company. (See Mann, Miles H., assignor.)

Bukolt, John J., Stevens Point, Wis. Milking-machine. No. 958,954; May 24; Sp. p. 5529; Gaz. vol. 154; p. 928.

Bules, Edward G., San Diego, Cal. Blower for rocking-chairs. No. 957,739; May 10; Sp. p. 2617; Gaz. vol. 154; p. 453.

Bulger, John K., assignor to The Bulger Lock-Coupling Company, San Francisco, Cal. Lock-joint coupling. No. 958,086; May 17; Sp. p. 3583; Gaz. vol. 154; p. 604.

Bulger Lock-Coupling Company, The. (See Bulger, John K., assignor.)

Bulley, George W., New York, N. Y. Stoking apparatus. No. 956,757; May 3; Sp. p. 555; Gaz. vol. 154; p. 88.

Bulley, George W., New York, N. Y. Energy storing and using system. No. 958,853; May 24; Sp. p. 5310; Gaz. vol. 154; p. 894.

Bullock, Charles A. H. (See Daniel and Bullock.)

Bullock Electric Manufacturing Company, The. (See Pomeroy, William D., assignor.)

Bullock Electric Manufacturing Company *et al.*, The. (See Wouters, Alfred H., assignor.)

Bullock Electric Manufacturing Company *et al.*, The. (See Wright, Edwin C., assignor.)

Bullock, Fred J. (See Clark, Bullock, and Watkins.)

Bulman, Elvah O., Grand Rapids, Mich. Egg-carrier. No. 958,087; May 17; Sp. p. 3585; Gaz. vol. 154; p. 604.

Bumpus, Hermon C. (See Beers and Bumpus.)

Bundy, Francis L. (See Herndon, William T., assignor.)

Bunn, Oron L., Peoria, Ill. Self-cleaning trocar. No. 958,854; May 24; Sp. p. 5313; Gaz. vol. 154; p. 895.

Bunting, John J., Grandview, Wash. Combined level and gradient instrument. No. 958,088; May 17; Sp. p. 3586; Gaz. vol. 154; p. 604.

Bunting, John J., Grandview, Wash. Whiffletree. No. 958,089; May 17; Sp. p. 3588; Gaz. vol. 154; p. 605.

Buob, Frederick, Cincinnati, Ohio. Joint-tie for cushion-tires. No. 956,625; May 3; Sp. p. 255; Gaz. vol. 154; p. 43.

Burbank, Charles E., assignor to M. L. Burbank, Philadelphia, Pa. Game apparatus. No. 959,710; May 31; Sp. p. 7094; Gaz. vol. 154; p. 1204.

Burbank, Mary L. (See Burbank, Charles E., assignor.)

Burch, John G., and W. R. Taylor, Chicago, Ill. Oil-can. No. 959,711; May 31; Sp. p. 7096; Gaz. vol. 154; p. 1205.

Burch, Marsden L., Chicago, Ill., assignor to A. Jackman, Lewistown, Mont. Shepherd's crook. No. 956,932; May 3; Sp. p. 934; Gaz. vol. 154; p. 149.

Burk, Frank, McHenry, N. D. Shock-loader. No. 958,090; May 17; Sp. p. 3590; Gaz. vol. 154; p. 605.

Burke, Alfred, Leominster, Mass. Barretta. No. 956,793; May 3; Sp. p. 628; Gaz. vol. 154; p. 100.

Burke, Alfred, Leominster, Mass. Double-tongue barrette. No. 959,712; May 31; Sp. p. 7096; Gaz. vol. 154; p. 1205.

Burke, Edward J., Brooklyn, N. Y. Game apparatus. No. 957,740; May 10; Sp. p. 2619; Gaz. vol. 154; p. 453.

Burkholder, John F. and W. P., Harrisonburg, Va. Washing-machine. No. 959,992; May 31; Sp. p. 7730; Gaz. vol. 154; p. 1302.

Burkholder, William P. (See Burkholder, John F. and W. P.)

Burleigh, William J., Rome, N. Y. Non-refillable bottle. No. 958,588; May 17; Sp. p. 4732; Gaz. vol. 154; p. 777.

Burnap, James S. (See Hendricks and Burnap.)

Burnham, Rol D. (See Engert and Burnham.)

Burns, Albert L., Mill Creek, Okla. Vehicle-step. No. 956,933; May 3; Sp. p. 935; Gaz. vol. 154; p. 149.

Burns, Anthony J., Hegewisch, assignor of one-half to E. Shuler, Chicago, Ill. Motor-starter. No. 957,741; May 10; Sp. p. 2624; Gaz. vol. 154; p. 454.

Burns, C. P. (See Goodrum, Charles L., assignor.)

Burns, E. S. (See White, Robert, assignor.)

Burns, James A., Homestead, and J. W. Swoger, Pittsburg, Pa., assignors to Westinghouse Electric & Manufacturing Company. Coil-bending machinery. No. 959,452; May 31; Sp. p. 6543; Gaz. vol. 154; p. 1118.

Burns, Luke T., Waterbury, Conn. Siphon-valve. No. 958,589; May 17; Sp. p. 4733; Gaz. vol. 154; p. 778.

Burrell, Luther A. (See Gregg, Francis F., assignor.)

Burrmeister, Martin, Worcester, Mass. Egg-separator. No. 956,678; May 3; Sp. p. 372; Gaz. vol. 154; p. 61.

Burson, George, Winamac, Ind. Explosive-engine starter. No. 960,072; May 31; Sp. p. 7925; Gaz. vol. 154; p. 1330.

Burton, Charles S., Oak Park, assignor to M. Clark, Chicago, Ill. Duplex duct-tracker for automatic music-playing instruments. No. 958,721; May 24; Sp. p. 4995; Gaz. vol. 154; p. 845.

Burton, Ernest D., Chicago, Ill. Butter or cheese receptacle. No. 958,991; May 24; Sp. p. 5597; Gaz. vol. 154; p. 941.

Burton, William, St. John, New Brunswick, Canada. Pulp-making machine. No. 959,307; May 24; Sp. p. 6249; Gaz. vol. 154; p. 1045.

Busald, Frank, Coshocton, Ohio. Double-facer. No. 956,794; May 3; Sp. p. 629; Gaz. vol. 154; p. 100.

Busby, Harley S., Girard, Kans. Adjustable beam and frame for sulky and gang plows. No. 958,091; May 17; Sp. p. 3593; Gaz. vol. 154; p. 606.

Buser, William E., Chillicothe, Ohio. Tufting-machine. No. 960,073; May 31; Sp. p. 7926; Gaz. vol. 154; p. 1331.

Buser, William E., Chillicothe, Ohio. Button-support for tufting-machines. No. 960,074; May 31; Sp. p. 7928; Gaz. vol. 154; p. 1331.

Busey, John F. and J. F., Jr., Concord, Cal. Stovepipe water-heater. No. 956,934; May 3; Sp. p. 936; Gaz. vol. 154; p. 149.

Busey, John F., Jr. (See Busey, John F. and J. F., Jr.)

Bush, Burnett, Kennedy, N. Y. Bag-holder. No. 957,652; May 10; Sp. p. 2447; Gaz. vol. 154; p. 423.

Bush, Samuel P., assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Car-coupling. No. 958,359; May 17; Sp. p. 4289; Gaz. vol. 154; p. 700.

Bush, Samuel P., assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Car-coupling. No. 958,360; May 17; Sp. p. 4290; Gaz. vol. 154; p. 700.

Bush, Samuel P., assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Car-coupling-operating device. No. 958,361; May 17; Sp. p. 4292; Gaz. vol. 154; p. 701.

Bush, Samuel P., assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Truck construction for cars. No. 958,362; May 17; Sp. p. 4293; Gaz. vol. 154; p. 701.

Busbey, Eli J., New York, N. Y. Oil-proof spark-plug. No. 957,653; May 10; Sp. p. 2449; Gaz. vol. 154; p. 423.

Buss, Clayton D., Easton, Pa. Mail-bag catcher and delivery apparatus. No. 956,935; May 3; Sp. p. 938; Gaz. vol. 154; p. 150.

Buss, Wendell R., Grand Rapids, and A. J. Fairbanks, Holland, Mich.; said Fairbanks assignor to said Buss. Journal-box. No. 957,186; May 10; Sp. p. 1475; Gaz. vol. 154; p. 263.

Buswell, Eugene, and T. Cascaden, Jr., Waterloo, Iowa; said Buswell assignor to said Cascaden. Wagon running-gear. No. 956,795; May 3; Sp. p. 634; Gaz. vol. 154; p. 101.

Butcher, Offie M., Coeur d'Alene, Idaho. Current-motor. No. 958,590; May 17; Sp. p. 4735; Gaz. vol. 154; p. 778.

Butler, Albert C., Mineral Wells, Tex. Burner. No. 957,143; May 3; Sp. p. 1364; Gaz. vol. 154; p. 218.

Butler, Frank E., Detroit, Mich., assignor to American Wireless Institute. Apparatus for teaching wireless telegraphy. No. 956,936; May 3; Sp. p. 940; Gaz. vol. 154; p. 150.

Butler, James A., Winthrop, Mass., and L. Flick, Sayleville, R. I. Keir. No. 958,591; May 17; Sp. p. 4736; Gaz. vol. 154; p. 778.

Butler, James M., assignor of one-fourth to J. G. De Turk, Los Angeles, Cal. Wave-motor. No. 956,706; May 3; Sp. p. 634; Gaz. vol. 154; p. 101.

Butler, Walter, St. Paul, Minn. Tunnel. No. 958,592; May 17; Sp. p. 4740; Gaz. vol. 154; p. 778.

Bye, Erling, and K. Buer, Brooklyn, N. Y. Plaster-board. No. 957,144; May 3; Sp. p. 1366; Gaz. vol. 154; p. 219.

Byers, James A., Centerville, Tenn. Railway-tie. No. 958,691; May 17; Sp. p. 4931; Gaz. vol. 154; p. 810.

Byrd, Adam M., *et al.* (See Humason, Granville A., assignor.)

C. J. White Manufacturing Company, The. (See White, Charles J., assignor.)

Bragstad, Joseph W., assignor to The Bragstad Bros. Co., Canton, S. D. Block-molding machine. No. 959,050; May 24; Sp. p. 5714; Gaz. vol. 154; p. 960.

Braham, George M., and J. Lill, Hammond, Ind. Car-brake. No. 957,408; May 10; Sp. p. 1967; Gaz. vol. 154; p. 340.

Branch, Henry A. (See Osborne, Eugene F., assignor.)

Brand, George M., Brighton, assignor of one-fourth to H. T. Bacon, Greeley, Colo. Field-leveler. No. 957,732; May 10; Sp. p. 2600; Gaz. vol. 154; p. 451.

Brand, George P., New York, N. Y. Tracker-bar. No. 958,470; May 17; Sp. p. 4509; Gaz. vol. 154; p. 738.

Brandly, Albert R. (See Harris, Gordon D., assignor.)

Brangier, Pierre A., Agnew, Cal., and R. Luckenbach, Philadelphia, Pa. Trap for precious metals. No. 959,300; May 24; Sp. p. 6238; Gaz. vol. 154; p. 1043.

Brangier, Pierre A., Agnew, Cal., and R. Luckenbach, Philadelphia, Pa. Apparatus for quick cyaniding of precious metals. No. 959,301; May 24; Sp. p. 6239; Gaz. vol. 154; p. 1044.

Brantz, August, Richmond, Va. Chalk-sharpening device. No. 957,723; May 10; Sp. p. 2611; Gaz. vol. 154; p. 452.

Brassert, Hermann A., Chicago, Ill., assignor to J. Gayley, New York, N. Y. Drying air. No. 958,471; May 17; Sp. p. 4511; Gaz. vol. 154; p. 738.

Bratzel, George V., Hebron, N. D. Folding umbrella. No. 957,784; May 10; Sp. p. 2612; Gaz. vol. 154; p. 452.

Braun & Sons, John. (See Deck, Henry, assignor.)

Braun, William C., Marysville, Ind. Horse-drag. No. 957,185; May 10; Sp. p. 1473; Gaz. vol. 154; p. 263.

Bray & Kates. (See Bray, Richard, assignor.)

Bray, Richard, assignor to Bray & Kates, Arlington Heights, Ill. Milk-can and making the same. No. 956,675; May 3; Sp. p. 368; Gaz. vol. 154; p. 60.

Brasil-Dineen, Thomas, North Sydney, New South Wales, Australia. Loose-leaf binder. No. 957,649; May 10; Sp. p. 2441; Gaz. vol. 154; p. 422.

Brearley, Harry, and F. C. Moorwood, Sheffield, England. Manufacture of silica bricks, ganister, and other refractory materials. No. 958,084; May 17; Sp. p. 3579; Gaz. vol. 154; p. 603.

Breck, George, San Francisco, Cal. Inverted gas-fixture. No. 958,357; May 17; Sp. p. 4286; Gaz. vol. 154; p. 690.

Brening, Louis F., assignor, by mesne assignments, to The Ridgely Trimmer Company, Springfield, Ohio. Paper-cutter. No. 957,400; May 10; Sp. p. 1968; Gaz. vol. 154; p. 341.

Brennan, Daniel, Jr. (See Williamson and Brennan.)

Brennan, Marcus F., Carbondale, Pa. Adjuster for locomotive drive-boxes. No. 957,735; May 10; Sp. p. 2614; Gaz. vol. 154; p. 452.

Bresse, William E., Bellevue, Pa. Quick-acting wrench. No. 957,932; May 17; Sp. p. 3061; Gaz. vol. 154; p. 548.

Bresnahan, Maurice V. (See Holbrook, Frank, assignor.)

Bresnahan Shoe Machinery Company. (See Heys, John J., assignor.)

Breuchaud, Jules, Yonkers, N. Y. Constructing foundations of buildings. No. 957,844; May 10; Sp. p. 2835; Gaz. vol. 154; p. 486.

Brewer, Walter, Malcolm, Nebr. Animal-poke. No. 956,755; May 3; Sp. p. 549; Gaz. vol. 154; p. 88.

Brewer, William J., Brooklyn, N. Y. Roller-bearing. No. 958,586; May 17; Sp. p. 4729; Gaz. vol. 154; p. 777.

Brewington, Henry S., Baltimore, Md. Fountain-pen-holder. No. 958,472; May 17; Sp. p. 4512; Gaz. vol. 154; p. 739.

Bridgeman, Catherine W., Chicago, Ill. Cherry-pitter. No. 959,450; May 31; Sp. p. 6541; Gaz. vol. 154; p. 1118.

Brigance, Alice O., Navasota, Tex. Box and package elevating apparatus. No. 956,756; May 3; Sp. p. 551; Gaz. vol. 154; p. 88.

Briggs, Elmer C., Wareham, Mass. Foot-rest for radiators. No. 959,917; May 31; Sp. p. 7554; Gaz. vol. 154; p. 1276.

Briggs, Jesse. (See Ralston and Briggs.)

Briggs, William A., and I. Millett, Chicago, Ill. Dust-guard for car-axle boxes. No. 958,953; May 24; Sp. p. 5527; Gaz. vol. 154; p. 927.

Brigham, Edward A., Grafton, assignor to Rotary Ring Spinning Company, Boston, Mass. Spinning-ring. No. 956,930; May 3; Sp. p. 931; Gaz. vol. 154; p. 148.

Bright, Fred E., Philadelphia, Pa. Separator for antifriction-bearings. No. 956,676; May 3; Sp. p. 369; Gaz. vol. 154; p. 61.

Bright Manufacturing Company. (See Van Ripen, Lewis C., assignor.)

Bright, Martin C., assignor of one-half to C. W. Meikel, Indianapolis, Ind. Floatless carburetor. No. 956,882; May 3; Sp. p. 837; Gaz. vol. 154; p. 132.

Brim, Isaac D., Caps, Tex. Front truck for planters, &c. No. 959,502; May 24; Sp. p. 6241; Gaz. vol. 154; p. 1044.

Brinkman, Louis H., Hartford, assignor to Whitlock Coil Pipe Company, West Hartford, Conn. Refrigerating apparatus. No. 958,852; May 24; Sp. p. 5308; Gaz. vol. 154; p. 894.

Brinkmann, Edward H., and H. O. Wente, Cincinnati, Ohio. Desiccating distillery-slop. No. 958,902; May 24; Sp. p. 5440; Gaz. vol. 154; p. 911.

Brinley, Charles A., Philadelphia, Pa., and R. H. Bowen, Palmyra, N. J., assignors to The American Pulley Company, Philadelphia, Pa. Pulley and attachment therefor. No. 957,845; May 10; Sp. p. 2839; Gaz. vol. 154; p. 487.

Brisbane, Arthur, New York, N. Y. Vehicle-wheel. No. 959,705; May 31; Sp. p. 7082; Gaz. vol. 154; p. 1202.

Brisbane, Arthur, New York, N. Y. Vehicle-wheel. No. 959,706; May 31; Sp. p. 7084; Gaz. vol. 154; p. 1203.

Brisbane, Arthur, New York, N. Y. Vehicle-wheel. No. 959,707; May 31; Sp. p. 7085; Gaz. vol. 154; p. 1203.

Brisbois, Odilon, assignor to Automatic Starter Company, Chicago, Ill. Starter for hydrocarbon-engines. No. 959,950; May 31; Sp. p. 7727; Gaz. vol. 154; p. 1302.

Bristol, Cyrus J., Des Moines, Iowa. Insulator for battery-plates. No. 959,303; May 24; Sp. p. 6242; Gaz. vol. 154; p. 1044.

Bristol, Gaylord I., Cross Fork, Pa. Draft-evener. No. 957,736; May 10; Sp. p. 2614; Gaz. vol. 154; p. 452.

Britton, Joseph W., Martinsville, Ind. Patch for shoe-soles. No. 959,304; May 24; Sp. p. 6243; Gaz. vol. 154; p. 1045.

Brock, John E., Mayoworth, Wyo. Jaw-trap. No. 956,624; May 3; Sp. p. 254; Gaz. vol. 154; p. 43.

Brockman, Oscar, Louisville, Ky. Stuffing-rod. No. 957,737; May 10; Sp. p. 2615; Gaz. vol. 154; p. 453.

Brodhead, Andrew J., Greenville, Pa. Locomotive ash-pan. No. 957,142; May 3; Sp. p. 1363; Gaz. vol. 154; p. 218.

Brody, Leon, New York, N. Y. Hat-fastener. No. 959,091; May 31; Sp. p. 7728; Gaz. vol. 154; p. 1302.

Bromwell Brush & Wire Goods Company, The. (See Melish and Gatch, assignors.)

Bronson, Clarence P., Corning, N. Y. Car-fender. No. 958,478; May 17; Sp. p. 4513; Gaz. vol. 154; p. 739.

Bronson, Frederick S., assignor to Denio General Electric Company, Rochester, N. Y. Signal-box for fire-alarm systems. No. 958,719; May 24; Sp. p. 4983; Gaz. vol. 154; p. 844.

Brooks, Edward J., East Orange, N. J. Snap-seal. No. 956,931; May 3; Sp. p. 932; Gaz. vol. 154; p. 148.

Brooks, Everett W., et al. (See Nistle, George W., assignor.)

Brooks, John M., assignor of one-half to E. W. Adams, Baltimore, Md. Furnace. No. 958,903; May 24; Sp. p. 5441; Gaz. vol. 154; p. 911.

Brooks, Paul P. E., Kent township, Warren county, Ind. Cutting and pruning tool. No. 958,587; May 17; Sp. p. 4731; Gaz. vol. 154; p. 777.

Brooks, Robert L. (See Woolley, Claude L., assignor.)

Brostrom, Frederick, Chico, Cal. Pencil-sharpener. No. 958,904; May 24; Sp. p. 5442; Gaz. vol. 154; p. 911.

Brothers, Ralph N., Oklahoma, Okla. Cuff-button. No. 957,564; May 17; Sp. p. 2892; Gaz. vol. 154; p. 524.

Brough, John S., Reeds, Mo. Rein-holder. No. 957,738; May 10; Sp. p. 2616; Gaz. vol. 154; p. 453.

Brown, Alfred, Ottawa, Ontario, Canada. Fire-escape. No. 960,065; May 31; Sp. p. 7910; Gaz. vol. 154; p. 1329.

Brown, Andrew A. (See Schneider, Joseph A., assignor.)

Brown, Charles, assignor of forty-nine one-hundredths to J. M. Smith, Chicago, Ill. Fountain-squeegee. No. 956,566; May 3; Sp. p. 122; Gaz. vol. 154; p. 23.

Brown, Charles A. (See Boothby and Brown.)

Brown, Frank H. and F. H., Portland, Oreg. Grinding and crushing mill. No. 958,085; May 17; Sp. p. 3580; Gaz. vol. 154; p. 603.

Brown, Fred H. (See Brown, Frank H. and F. H.)

Brown, Henry C., Woodbury, N. J. Case for holding talking-machine records. No. 956,516; May 3; Sp. p. 18; Gaz. vol. 154; p. 6.

Brown, Henry L., Paterson, N. J., assignor to Brown Spin-Wright Company, New York, N. Y. Power-transmitting apparatus. No. 957,650; May 10; Sp. p. 2442; Gaz. vol. 154; p. 423.

Brown, Herman M. (See Brown, Joseph F. and H. M.)

Brown Holding Machinery Company, The. (See Deucher, Eugene C., assignor.)

Brown, John H., West Hoboken, N. J., assignor to Brown Perfection Tube Company. Inner tube for pneumatic tires. No. 956,884; May 3; Sp. p. 841; Gaz. vol. 154; p. 133.

Brown, John R., assignor to Ohio Brass Company, Mansfield, Ohio. Pressure-regulator. No. 959,708; May 31; Sp. p. 7088; Gaz. vol. 154; p. 1203.

Brown, John W., Nappanee, Ind. Adjustable wagon-rack. No. 960,069; May 31; Sp. p. 7920; Gaz. vol. 154; p. 1330.

Brown, John W., Arroyo Grande, Cal. Tire-lifter. No. 960,070; May 31; Sp. p. 7922; Gaz. vol. 154; p. 1330.

Brown, Joseph F. and H. M., Bristol, Tenn. Front-end arrangement. No. 958,720; May 24; Sp. p. 4993; Gaz. vol. 154; p. 845.

Brown, Lewis W., St. Louis, Mo. Fastener for gloves and other articles. No. 957,651; May 10; Sp. p. 2446; Gaz. vol. 154; p. 423.

Brown Perfection Tube Company. (See Brown, John H., assignor.)

Brown, Robert H., Los Angeles, Cal. Hose. No. 957,492; May 10; Sp. p. 2132; Gaz. vol. 154; p. 369.

Brown Spin-Wright Company. (See Brown, Henry L., assignor.)

Brown, William H., Indianapolis, Ind. Rail-holder. No. 959,451; May 31; Sp. p. 6542; Gaz. vol. 154; p. 1118.

Bruce, Harry L., Portland, Oreg. Hot-water heating system. No. 956,677; May 3; Sp. p. 370; Gaz. vol. 154; p. 61.

Bruderlein, Charles, New York, N. Y. Puzzle. No. 960,071; May 31; Sp. p. 7928; Gaz. vol. 154; p. 1330.

Bryan, Clarence H. (See Holsman and Bryan.)

Bryant Electric Company, The. (See Castonguay, Leger J., assignor.)

Bryant Electric Company, The. (See Goodridge, Gilbert W., assignor.)

Bryant Electric Company, The. (See Seeley, Frank E., assignor.)

Bryant Electric Company, The. (See Slady, Frank W., assignor.)

Bryen, George J., Duquesne, Pa. Engine-cylinder. No. 958,905; May 24; Sp. p. 5443; Gaz. vol. 154; p. 912.

Bryhni, Haakon, Börsen, near Trondhjem, Norway. Photometer. No. 959,051; May 24; Sp. p. 6718; Gaz. vol. 154; p. 960.

Bryk, Ernst. (See Schmidt and Bryk.)

Buch, Charles A., et al. (See Beahna, Peter, assignor.)

Buchanan, John, Holland, Mich. Flying-machine. No. 959,199; May 24; Sp. p. 6037; Gaz. vol. 154; p. 1009.

Buchenberg, Alvin E., assignor, by mesne assignments, to The Toledo Electric Welder Company, Toledo, Ohio. Electric welding-machine. No. 959,805; May 24; Sp. p. 6245; Gaz. vol. 154; p. 1045.

Buchheit, Charles, St. Louis, Mo. Brush bottle-cleaning machine. No. 957,301; May 10; Sp. p. 1745; Gaz. vol. 154; p. 305.

Buck, Charles B., Washington, D. C. Temporary binder. No. 960,240; May 31; Sp. p. 8248; Gaz. vol. 154; p. 1387.

Buck, Charles H. (See Buck, Clarence U., assignor.)

Buck, Clarence U., assignor of one-half to C. H. Buck, Coudersport, Pa. Percolator. No. 959,110; May 24; Sp. p. 5848; Gaz. vol. 154; p. 980.

Buckey, Thomas W., et al. (See Christmas, William W., assignor.)

Buckeye Steel Castings Company, The. (See Bush, Samuel P., assignor.)

Buckius, Albert O., Jr., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio. Truck side frame. No. 958,474; May 17; Sp. p. 4516; Gaz. vol. 154; p. 739.

Buckland, Amos B., Rochester, N. Y. Disinfecting device. No. 959,111; May 24; Sp. p. 5849; Gaz. vol. 154; p. 980.

Buckler, James, Philadelphia, Pa., assignor to Crompton & Knowles Loom Works. Weaving pile fabrics. No. 959,806; May 24; Sp. p. 6247; Gaz. vol. 154; p. 1045.

Buckley, Joseph, Methuen, Mass. Steam-generator. No. 958,358; May 17; Sp. p. 4287; Gaz. vol. 154; p. 699.

Budke, George H., Nanuet, N. Y. Dump-bucket. No. 958,222; May 17; Sp. p. 3852; Gaz. vol. 154; p. 651.

Buehler, Philip J., Ritzville, Wash. Paper-rack. No. 950,839; May 31; Sp. p. 7378; Gaz. vol. 154; p. 1249.

Buel, Charles A., Jr., St. Louis, Mo. Sanitary cold-air food-cabinet. No. 959,709; May 31; Sp. p. 7093; Gaz. vol. 154; p. 1204.

Buer, Kristian. (See Bye and Buer.)

Buffum Tool Company. (See Mann, Miles H., assignor.)

Bukolt, John J., Stevens Point, Wis. Milking-machine. No. 958,954; May 24; Sp. p. 5629; Gaz. vol. 154; p. 928.

Bulen, Edward G., San Diego, Cal. Blower for rocking-chairs. No. 957,739; May 10; Sp. p. 2617; Gaz. vol. 154; p. 453.

Bulger, John K., assignor to The Bulger Lock-Coupling Company, San Francisco, Cal. Lock-joint coupling. No. 958,086; May 17; Sp. p. 3582; Gaz. vol. 154; p. 604.

Bulger Lock-Coupling Company, The. (See Bulger, John K., assignor.)

Bulley, George W., New York, N. Y. Stoking apparatus. No. 956,757; May 3; Sp. p. 555; Gaz. vol. 154; p. 88.

Bulley, George W., New York, N. Y. Energy storing and using system. No. 958,853; May 24; Sp. p. 5310; Gaz. vol. 154; p. 894.

Bullock, Charles A. H. (See Daniel and Bullock.)

Bullock Electric Manufacturing Company, The. (See Pomeroy, William D., assignor.)

Bullock Electric Manufacturing Company et al., The. (See Wouters, Alfred H., assignor.)

Bullock Electric Manufacturing Company et al., The. (See Wright, Edwin C., assignor.)

Bullock, Fred J. (See Clark, Bullock, and Watkins.)

Bulman, Elvah O., Grand Rapids, Mich. Egg-carrier. No. 958,087; May 17; Sp. p. 3585; Gaz. vol. 154; p. 604.

Bumpus, Hermon C. (See Beers and Bumpus.)

Bundy, Francis L. (See Herndon, William T., assignor.)

Bunn, Oron L., Peoria, Ill. Self-cleaning trocar. No. 958,854; May 24; Sp. p. 5313; Gaz. vol. 154; p. 895.

Bunting, John J., Grandview, Wash. Combined level and gradient instrument. No. 958,088; May 17; Sp. p. 3586; Gaz. vol. 154; p. 604.

Bunting, John J., Grandview, Wash. Whiffletree. No. 958,089; May 17; Sp. p. 3588; Gaz. vol. 154; p. 605.

Buob, Frederick, Cincinnati, Ohio. Joint-tie for cushion-tires. No. 956,625; May 3; Sp. p. 285; Gaz. vol. 154; p. 43.

Burbank, Charles E., assignor to M. L. Burbank, Philadelphia, Pa. Game apparatus. No. 959,710; May 31; Sp. p. 7094; Gaz. vol. 154; p. 1204.

Burbank, Mary L. (See Burbank, Charles E., assignor.)

Burch, John G., and W. R. Taylor, Chicago, Ill. Oil-can. No. 959,711; May 31; Sp. p. 7096; Gaz. vol. 154; p. 1205.

Burch, Marsden L., Chicago, Ill., assignor to A. Jackman, Lewistown, Mont. Shepherd's crook. No. 956,932; May 3; Sp. p. 934; Gaz. vol. 154; p. 149.

Burk, Frank, McHenry, N. D. Shock-loader. No. 958,090; May 17; Sp. p. 3590; Gaz. vol. 154; p. 605.

Burke, Alfred, Leominster, Mass. Barrette. No. 956,793; May 3; Sp. p. 628; Gaz. vol. 154; p. 100.

Burke, Alfred, Leominster, Mass. Double-tongue barrette. No. 959,712; May 31; Sp. p. 7096; Gaz. vol. 154; p. 1205.

Burke, Edward J., Brooklyn, N. Y. Game apparatus. No. 957,740; May 10; Sp. p. 2619; Gaz. vol. 154; p. 453.

Burkholder, John F. and W. P., Harrisonburg, Va. Washing-machine. No. 959,992; May 31; Sp. p. 7730; Gaz. vol. 154; p. 1302.

Burkholder, William P. (See Burkholder, John F. and W. P.)

Burleigh, William J., Rome, N. Y. Non-refillable bottle. No. 958,588; May 17; Sp. p. 4732; Gaz. vol. 154; p. 777.

Burnap, James S. (See Hendricks and Burnap.)

Burnham, Rol D. (See Engert and Burnham.)

Burns, Albert L., Mill Creek, Okla. Vehicle-step. No. 956,933; May 3; Sp. p. 935; Gaz. vol. 154; p. 149.

Burns, Anthony J., Hegewisch, assignor of one-half to E. Shuler, Chicago, Ill. Motor-starter. No. 957,741; May 10; Sp. p. 2624; Gaz. vol. 154; p. 454.

Burns, C. P. (See Goodrum, Charles L., assignor.)

Burns, E. S. (See White, Robert, assignor.)

Burns, James A., Homestead, and J. W. Swoger, Pittsburg, Pa., assignors to Westinghouse Electric & Manufacturing Company. Coil-bending machinery. No. 959,452; May 31; Sp. p. 6543; Gaz. vol. 154; p. 1118.

Burns, Luke T., Waterbury, Conn. Siphon-valve. No. 958,589; May 17; Sp. p. 4733; Gaz. vol. 154; p. 778.

Burrell, Luther A. (See Gregg, Francis F., assignor.)

Burrmeister, Martin, Worcester, Mass. Egg-separator. No. 956,678; May 3; Sp. p. 372; Gaz. vol. 154; p. 61.

Burson, George, Winamac, Ind. Explosive-engine starter. No. 960,072; May 31; Sp. p. 7925; Gaz. vol. 154; p. 1330.

Burton, Charles S., Oak Park, assignor to M. Clark, Chicago, Ill. Duplex duct-tracker for automatic music-playing instruments. No. 958,721; May 24; Sp. p. 4995; Gaz. vol. 154; p. 845.

Burton, Ernest D., Chicago, Ill. Butter or cheese receptacle. No. 958,991; May 24; Sp. p. 5597; Gaz. vol. 154; p. 941.

Burton, William, St. John, New Brunswick, Canada. Pulp-making machine. No. 959,307; May 24; Sp. p. 6249; Gaz. vol. 154; p. 1045.

Busaid, Frank, Coshocton, Ohio. Double-facer. No. 956,794; May 3; Sp. p. 629; Gaz. vol. 154; p. 100.

Busby, Harley S., Girard, Kans. Adjustable beam and frame for sulky and gang plows. No. 958,091; May 17; Sp. p. 3593; Gaz. vol. 154; p. 606.

Buser, William E., Chillicothe, Ohio. Tufting-machine. No. 960,073; May 31; Sp. p. 7926; Gaz. vol. 154; p. 1331.

Buser, William E., Chillicothe, Ohio. Button-support for tufting-machines. No. 960,074; May 31; Sp. p. 7928; Gaz. vol. 154; p. 1331.

Busey, John F. and J. F., Jr., Concord, Cal. Stovepipe water-heater. No. 956,934; May 3; Sp. p. 936; Gaz. vol. 154; p. 149.

Busey, John F., Jr. (See Busey, John F. and J. F., Jr.)

Bush, Burnett, Kennedy, N. Y. Bag-holder. No. 957,652; May 10; Sp. p. 2447; Gaz. vol. 154; p. 423.

Bush, Samuel P., assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Car-coupling. No. 958,359; May 17; Sp. p. 4289; Gaz. vol. 154; p. 700.

Bush, Samuel P., assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Car-coupling. No. 958,360; May 17; Sp. p. 4290; Gaz. vol. 154; p. 700.

Bush, Samuel P., assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Car-coupling-operating device. No. 958,361; May 17; Sp. p. 4292; Gaz. vol. 154; p. 701.

Bush, Samuel P., assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Truck construction for cars. No. 958,362; May 17; Sp. p. 4293; Gaz. vol. 154; p. 701.

Busbey, Eli J., New York, N. Y. Oil-proof spark-plug. No. 957,653; May 10; Sp. p. 2449; Gaz. vol. 154; p. 423.

Buss, Clayton D., Easton, Pa. Mail-bag catcher and delivery apparatus. No. 956,935; May 3; Sp. p. 938; Gaz. vol. 154; p. 150.

Buss, Wendell R., Grand Rapids, and A. J. Fairbanks, Holland, Mich.; said Fairbanks assignor to said Buss. Journal-box. No. 957,186; May 10; Sp. p. 1475; Gaz. vol. 154; p. 263.

Buswell, Eugene, and T. Cascaden, Jr., Waterloo, Iowa; said Buswell assignor to said Cascaden. Wagon running-gear. No. 956,795; May 3; Sp. p. 634; Gaz. vol. 154; p. 101.

Butcher, Offie M., Coeur d'Alene, Idaho. Current-motor. No. 958,590; May 17; Sp. p. 4735; Gaz. vol. 154; p. 778.

Butler, Albert C., Mineral Wells, Tex. Burner. No. 957,143; May 3; Sp. p. 1364; Gaz. vol. 154; p. 218.

Butler, Frank E., Detroit, Mich., assignor to American Wireless Institute. Apparatus for teaching wireless telegraphy. No. 956,936; May 3; Sp. p. 940; Gaz. vol. 154; p. 150.

Butler, James A., Winthrop, Mass., and L. Flick, Sayleeville, R. I. Keir. No. 958,591; May 17; Sp. p. 4736; Gaz. vol. 154; p. 778.

Butler, James M., assignor of one-fourth to J. G. De Turk, Los Angeles, Cal. Wave-motor. No. 956,796; May 3; Sp. p. 634; Gaz. vol. 154; p. 101.

Butler, Walter, St. Paul, Minn. Tunnel. No. 958,592; May 17; Sp. p. 4740; Gaz. vol. 154; p. 778.

Bye, Erling, and K. Buer, Brooklyn, N. Y. Plaster-board. No. 957,144; May 3; Sp. p. 1366; Gaz. vol. 154; p. 219.

Byers, James A., Centerville, Tenn. Railway-tie. No. 958,091; May 17; Sp. p. 4931; Gaz. vol. 154; p. 810.

Byrd, Adam M., et al. (See Humason, Granville A., assignor.)

C. J. White Manufacturing Company, The. (See White, Charles J., assignor.)

Cadillac Motor Car Company. (See Sweet, Ernest E., assignor.)
Cadle, Thomas M., Port Deposit, Md. Fence-wire clamp. No. 957,302; May 10; Sp. p. 1748; Gaz. vol. 154; p. 305.
Cadwell, Harry W. assignor to Frederick Stearns & Company, Detroit, Mich. Advertising device. No. 956,937; May 3; Sp. p. 942; Gaz. vol. 154; p. 150.
Caldwell, Robert J., New Southgate, and F. Pfleumer, London, England. Apparatus for use in the manufacture of elastic cellular filling material. No. 957,034; May 3; Sp. p. 1156; Gaz. vol. 154; p. 183.
Caldwell, William H., Mallaig, Scotland. Sensitized surface or film for photographic purposes. No. 956,567; May 3; Sp. p. 125; Gaz. vol. 154; p. 23.
Caldwell, William K., Philadelphia, Pa. Head for punching five and six frame brussel-cards. No. 959,200; May 24; Sp. p. 6039; Gaz. vol. 154; p. 1009.
California Valve and Air Brake Company. (See Neal, Spencer G., assignor.)
Call, Oliver C., Springfield, Mass. Dust and air guard for windows. No. 957,493; May 10; Sp. p. 2134; Gaz. vol. 154; p. 369.
Call, Willie C. (See Hawkins, Adkins, and Call.)
Callahan, Francis H., assignor of one-half to J. P. Clyne, New Haven, Conn. Toy. No. 960,075; May 31; Sp. p. 7931; Gaz. vol. 154; p. 1331.
Callaway, David A., assignor of one-fourth to H. G. De Tienne and one-fourth to L. I. Henry, Pueblo, Colo. Device for preserving eggs. No. 956,568; May 3; Sp. p. 127; Gaz. vol. 154; p. 23.
Callaway, Edward H., Westfield, N. J., assignor to The American Clay Machinery Company, Bucyrus, Ohio, and New York, N. Y. Portable blower for brick-kilns. No. 958,223; May 17; Sp. p. 3854; Gaz. vol. 154; p. 651.
Callaway, James G. (See Peterson and Callaway.)
Callender, James H., Brooklyn, N. Y., assignor to F. H. Lovell & Company, Arlington, N. J. Ear for trolley-wires. No. 958,906; May 24; Sp. p. 5445; Gaz. vol. 154; p. 912.
Calliet, Fred, Menfro, Mo. Window-sash. No. 958,992; May 24; Sp. p. 5599; Gaz. vol. 154; p. 941.
Caloric Fireless Cookstove Company. (See Thoets and Gronberg, assignors.) (Reissue.)
Cameron, Everett S. (See Sword, William F., assignor.)
Cameron, John B., Lawrence, Mass. Wood-bending machine. No. 959,993; May 31; Sp. p. 7732; Gaz. vol. 154; p. 1303.
Campbell, Andrew C., assignor to The E. J. Manville Machine Company, Waterbury, Conn. Reverse-feed for heading-machines. No. 959,453; May 31; Sp. p. 6545; Gaz. vol. 154; p. 1119.
Campbell, Andrew C., assignor to The E. J. Manville Machine Company, Waterbury, Conn. Machine for heading metal blanks. No. 959,454; May 31; Sp. p. 6548; Gaz. vol. 154; p. 1119.
Campbell, Andrew C., assignor to The E. J. Manville Machine Company, Waterbury, Conn. Blank-feed for metal heading, punching, and trimming machines. No. 959,455; May 31; Sp. p. 6552; Gaz. vol. 154; p. 1119.
Campbell, Andrew C., assignor to The E. J. Manville Machine Company, Waterbury, Conn. Blank-feed mechanism. No. 959,918; May 31; Sp. p. 7556; Gaz. vol. 154; p. 1276.
Campbell, Andrew C., and N. W. Cummins, assignors to The E. J. Manville Machine Company, Waterbury, Conn. Feed mechanism for heading-machines. No. 959,456; May 31; Sp. p. 6555; Gaz. vol. 154; p. 1120.
Campbell, Charles W. (See Studnicka and Campbell.)
Campbell, Colin, Rutherford, N. J. Furnace-arch construction. No. 957,494; May 10; Sp. p. 2135; Gaz. vol. 154; p. 369.
Campbell, George E., Chattanooga, Tenn. Sawmill-carriage. No. 958,593; May 17; Sp. p. 4743; Gaz. vol. 154; p. 779.
Campbell, James L., Lowell, Mass., assignor to American Mason Safety Tread Company, Saco, Me. Non-slipping tread-plug. No. 958,363; May 17; Sp. p. 4294; Gaz. vol. 154; p. 701.
Campbell, John L. (See Turner and Campbell.)
Campbell, Joseph M., Memphis, Tenn. Fence-post. No. 957,410; May 10; Sp. p. 1969; Gaz. vol. 154; p. 341.
Campbell-Kingsley Manufacturing Company, The. (See Currie, Otis C., assignor.)
Candler, Washington W. (See Cole and Candler.)
Canivan, Thomas J., Honesdale, Pa. Chimney protector or shield. No. 957,544; May 10; Sp. p. 2239; Gaz. vol. 154; p. 387.
Cannon, Edward F., Portland, Oreg. Display apparatus. No. 958,475; May 17; Sp. p. 4517; Gaz. vol. 154; p. 740.
Carb-Ox Company. (See Hays, Joseph W., assignor.)
Carey, George B. (See Hallahan, John P., assignor.)
Carhart, John W., Austin, Tex. Vehicle-tire. No. 959,457; May 31; Sp. p. 6557; Gaz. vol. 154; p. 1120.
Carle, Charles S., Portland, Me. Guard for shoe-stitching machines. No. 959,713; May 31; Sp. p. 7097; Gaz. vol. 154; p. 1205.
Carlson, Adolph G., Chicago, Ill., assignor of one-half to F. E. Fitch, Pittsburg, Kans. Cash-register. No. 956,840; May 31; Sp. p. 7879; Gaz. vol. 154; p. 1250.
Carlson, Gabriel, Springfield, Mass. Grinding-mill. No. 959,714; May 31; Sp. p. 7098; Gaz. vol. 154; p. 1205.
Carlson, Gustie A., Buda, Nebr. Car-door. No. 956,758; May 3; Sp. p. 557; Gaz. vol. 154; p. 89.
Carpenter, Franklin R., assignor to The American Iron and Steel Alloys Company, Denver, Colo. Rendering potash compounds soluble. No. 959,841; May 31; Sp. p. 7384; Gaz. vol. 154; p. 1250.
Carr Fastener Company. (See Carr, Fred S., assignor.)
Carr, Fred S., Brookline, assignor to Carr Fastener Company, Boston, Mass. Attaching means for fastening members. No. 959,308; May 24; Sp. p. 6251; Gaz. vol. 154; p. 1046.
Carrico, Leo E. (See Muller and Carrico.)
Carrier, Merwin W., assignor to The Monitor Manufacturing Company, Limited, Fredericton, New Brunswick, Canada. Acetylene-gas generator. No. 959,994; May 31; Sp. p. 7737; Gaz. vol. 154; p. 1303.
Carroll, Elbert H., assignor to Morgan Construction Company, Worcester, Mass. Wire-drawing machine. No. 956,885; May 3; Sp. p. 842; Gaz. vol. 154; p. 133.
Carroll, George P. (See Roehrich, Frank N., assignor.)
Carroll, George P. (See Schmidt, Louis M., assignor.)
Carroll, George P., Bridgeport, Conn. Doubly-actuated expansion-valve. No. 959,458; May 31; Sp. p. 6558; Gaz. vol. 154; p. 1120.
Carroll, Louis W., Anamosa, Iowa. Electric signaling apparatus. No. 958,224; May 17; Sp. p. 3856; Gaz. vol. 154; p. 652.
Carroll, Vincent D., Johnstown, Pa. Tongs. No. 956,594; May 17; Sp. p. 4745; Gaz. vol. 154; p. 779.
Carson, Myra C. Vonore, Tenn. Jar-filler. No. 959,715; May 31; Sp. p. 7102; Gaz. vol. 154; p. 1206.
Carter, Archie H., Canton, Ohio. Car-fender. No. 959,309; May 24; Sp. p. 6252; Gaz. vol. 154; p. 1046.
Carter, Dixon S., Bloomingdale, Ind. Ball-caster. No. 957,303; May 10; Sp. p. 1748; Gaz. vol. 154; p. 306.
Carter, Edwin E., assignor to The Day Ward Company, Warren, Ohio. Molding apparatus. No. 956,939; May 3; Sp. p. 943; Gaz. vol. 154; p. 151.
Carter, Harry. (See Pearson and Carter.)
Carter, Ralph B., Haworth, N. J., and J. L. Maull, New York, N. Y. Pneumatic pressure apparatus for water-tanks. No. 957,304; May 10; Sp. p. 1749; Gaz. vol. 154; p. 306.
Carvin, Edward O., assignor of one-fourth to J. M. Smith, Manhattan, Nev. Hoisting device. No. 957,865; May 17; Sp. p. 2893; Gaz. vol. 154; p. 525.
Cascaden, Thomas, Jr. (See Buswell and Cascaden.)
Case, Frank E., Schenectady, N. Y., assignor to General Electric Company. Electric-railway system. No. 959,919; May 31; Sp. p. 7558; Gaz. vol. 154; p. 1276.
Castonguay, Leger J., assignor to The Bryant Electric Company, Bridgeport, Conn. Shade-holder. No. 957,305; May 10; Sp. p. 1751; Gaz. vol. 154; p. 306.
Caswell, Annie E. (See Caswell, William B., assignor.)
Caswell, William A., Chicago, Ill., assignor to National Dump Car Company. Door-operating mechanism for dump-cars. No. 959,459; May 31; Sp. p. 6565; Gaz. vol. 154; p. 1121.
Caswell, William B., assignor of one-half to A. E. Caswell, Newport, R. I. Vertically-adjustable shade-hanger. No. 956,842; May 3; Sp. p. 744; Gaz. vol. 154; p. 118.
Causey, Francis P. (See Cosby, Oscar G., assignor.)
Cavedo, Robert M. (See Hyzell and Cavedo.)
Cecchi, Luigi, et al. (See Cipollina, Giuseppe, assignor.)
Cell Drier Machine Company. (See Cutter, George A., assignor.)
Cessna, John B. (See Dandridge and Cessna.)
Chadbourne, Edward M., San Francisco, Cal. Oiled concrete roadway. No. 956,940; May 3; Sp. p. 946; Gaz. vol. 154; p. 151.
Chalas, Adolphe, Philadelphia, Pa. Reducing nickel hydrosilicate ores. No. 959,460; May 31; Sp. p. 6568; Gaz. vol. 154; p. 1121.
Chalmers, Edward P., Norwood, Mass. Game apparatus. No. 958,722; May 24; Sp. p. 5001; Gaz. vol. 154; p. 846.
Chamberlain, Clarence M., Denver, Colo. Filtering apparatus. No. 959,461; May 31; Sp. p. 6569; Gaz. vol. 154; p. 1121.
Chambless, James A., Acme, Tex. Lock. No. 958,706; May 17; Sp. p. 4958; Gaz. vol. 154; p. 815.
Champ, Joseph H., and T. H. Schutt, assignors to The Bishop & Babcock Company, Cleveland, Ohio. Electric switch. No. 956,679; May 3; Sp. p. 374; Gaz. vol. 154; p. 62.
Champeon, De Forrest, Houlton, Me. Car-wheel jack-stand. No. 958,364; May 17; Sp. p. 4296; Gaz. vol. 154; p. 701.
Champion, Albert, assignor to Champion Ignition Company, Flint, Mich. Insulator and conductor for electric currents. No. 959,052; May 24; Sp. p. 5718; Gaz. vol. 154; p. 960.
Champion Ignition Company. (See Champion, Albert, assignor.)
Champion Metal Weather Strip and Parting Bead Company. (See Faulkner, Charles H., assignor.)
Chapin, Louis N., New York, N. Y. Developing-tank. No. 958,993; May 24; Sp. p. 5600; Gaz. vol. 154; p. 941.
Chaplin-Fulton Manufacturing Company, The. (See Fulton, Louis B., assignor.)
Chapman, Lewis S., Schenectady, N. Y., assignor to General Electric Company. Motor-controlling device. No. 958,965; May 17; Sp. p. 4297; Gaz. vol. 154; p. 701.
Chapman, Thomas E., Pittsburg, Pa. Paper bag or sack. No. 956,941; May 3; Sp. p. 948; Gaz. vol. 154; p. 151.
Chapman, William A., Smithville, Ark. Reverberatory sound-horn. No. 957,654; May 10; Sp. p. 2449; Gaz. vol. 154; p. 424.

Chappell, Frank S., Bradford, Pa. Bundle or package tie. No. 959,310; May 24; Sp. p. 6254; Gaz. vol. 154; p. 1046.
Chappell, George P., New York, N. Y. Forming tiling. No. 957,187; May 10; Sp. p. 1476; Gaz. vol. 154; p. 263.
Chappell, George P., New York, N. Y. Forming ornamental tiling. No. 957,188; May 10; Sp. p. 1477; Gaz. vol. 154; p. 264.
Chappell, George P., New York, N. Y. Tile-board. No. 957,189; May 10; Sp. p. 1479; Gaz. vol. 154; p. 264.
Charpentier, Joseph O., Concord, N. H. Hammer for tinsmiths, &c. No. 958,595; May 17; Sp. p. 4746; Gaz. vol. 154; p. 779.
Charpiat, Louis, New York, N. Y. Repetition-action for grand pianos. No. 959,716; May 31; Sp. p. 7103; Gaz. vol. 154; p. 1206.
Chase & Baker Company. (See Bayer, William F., assignor.)
Chase, William, Jr., Indianapolis, Ind. Circular glass-cutter. No. 959,311; May 24; Sp. p. 6254; Gaz. vol. 154; p. 1046.
Chemical Works formerly Sandos. (See Böniger, Meichlor, assignor.)
Chemische Fabrik Griesheim Elektron. (See Schnitzspahn, Karl, assignor.)
Chester, Charles E. (See Thomas, George J., assignor.)
Chew, Owen S., Brookfield township, Trumbull county, Ohio. Trolley-wheel. No. 957,655; May 10; Sp. p. 2452; Gaz. vol. 154; p. 424.
Chiantore, Pilade, Turin, Italy. Moving target. No. 957,742; May 10; Sp. p. 2630; Gaz. vol. 154; p. 454.
Chicago Railway Equipment Company. (See Cornwall, Frederick R., assignor.)
Chicago Railway Equipment Company. (See Harrison, Philip B., assignor.)
Chicago Railway Equipment Company. (See Porter and Williams, assignors.)
Chicago Railway Equipment Company. (See Williams, Charles H., Jr., assignor.)
Chippendale, Harry A., assignor to J. Sweeney, New London, Conn. Cigar-cutter forming part of a combination-tool. No. 958,092; May 17; Sp. p. 3594; Gaz. vol. 154; p. 606.
Chovan, Gustave, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Coil for dynamo-electric machines. No. 957,866; May 17; Sp. p. 2896; Gaz. vol. 154; p. 525.
Chreitzberg, Hilliard F., Monroe, N. C. Coin-operated lock. No. 957,743; May 10; Sp. p. 2632; Gaz. vol. 154; p. 454.
Christensen, Carl, Bradley, assignor, by mesne assignments, to Sears, Roebuck & Company, Chicago, Ill. Seat for agricultural implements. No. 957,411; May 10; Sp. p. 1970; Gaz. vol. 154; p. 341.
Christensen, Charles, Chicago, Ill. Apparatus for dispensing mobile substances. No. 959,717; May 31; Sp. p. 7105; Gaz. vol. 154; p. 1206.
Christensen, Christian H., assignor of forty-five one-hundredths to D. L. Sloan, Palo Alto, Cal. Siphon-closet. No. 957,306; May 10; Sp. p. 1752; Gaz. vol. 154; p. 306.
Christensen, Hans, assignor of one-half to C. Palm, Fort Atkinson, Wis. Pasteurizer. No. 957,035; May 3; Sp. p. 1160; Gaz. vol. 154; p. 183.
Christensen, Martin J., Chicago, Ill. Mechanism for elevating liquids. No. 957,656; May 10; Sp. p. 2453; Gaz. vol. 154; p. 424.
Christensen, Peter V., Copenhagen, Denmark, assignor to Aktiebolaget L. M. Ericsson & Co., Stockholm, Sweden. Call-distributing switch. No. 959,462; May 31; Sp. p. 6572; Gaz. vol. 154; p. 1122.
Christmas, William W., assignor of forty-nine one-hundredths to C. M. Fulton and T. W. Buckey, Washington, D. C., and L. C. McLeod, Astoria, Oreg. Flying-machine. No. 957,744; May 10; Sp. p. 2633; Gaz. vol. 154; p. 455.
Church, Andrew and C. A., Adrian, Mich. Means for clamping fences to stretcher-jacks. No. 959,842; May 31; Sp. p. 7385; Gaz. vol. 154; p. 1250.
Church, Charles A. (See Church, Andrew and C. A.)
Churton, Alfred S., Chicago, Ill. Adjustable headlight. No. 959,920; May 31; Sp. p. 7560; Gaz. vol. 154; p. 1277.
Chute, Harry O., and F. L. Randel, New York, N. Y. Producing rubber. No. 957,495; May 10; Sp. p. 2137; Gaz. vol. 154; p. 370.
Ciardelli, Luigi, Barre, Vt. Lewis. No. 956,938; May 3; Sp. p. 942; Gaz. vol. 154; p. 151.
Cipollina, Giuseppe, assignor to G. Bernati and L. Cecchi, Genoa, Italy. Steam-engine power-gage. No. 956,680; May 3; Sp. p. 378; Gaz. vol. 153; p. 62.
Cisek, Albert F., Tacoma, Wash. Window. No. 958,596; May 17; Sp. p. 4747; Gaz. vol. 154; p. 780.
Claessen, Conrad P. H., Berlin, Germany, assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Explosive. No. 957,307; May 10; Sp. p. 1753; Gaz. vol. 154; p. 307.
Clark, Alvin, Portland, Oreg. Grain spreader and feeder. No. 957,036; May 3; Sp. p. 1163; Gaz. vol. 154; p. 184.
Clark, Arthur L. (See Masters, David H., assignor.)
Clark, Charles M., P. J. Bullock, and E. D. Watkins, Lima, N. Y. Gate. No. 957,745; May 10; Sp. p. 2640; Gaz. vol. 154; p. 455.
Clark, Edward H. (See Hammett and Clark.)
Clark, James W., Janesville, Wis. Parcel-carrier. No. 958,723; May 24; Sp. p. 5002; Gaz. vol. 154; p. 846.
Clark Manufacturing Company, The. (See Strong, Leslie P., assignor.)
Clark, Melville. (See Burton, Charles S., assignor.)
Clark, Osroe A., Newark, N. J. Folder for blades. No. 959,995; May 31; Sp. p. 7740; Gaz. vol. 154; p. 1304.
Clark, Thomas H., and J. H. Nequette, Los Angeles, Cal. Hydrocarbon-burner. No. 956,892; May 17; Sp. p. 4932; Gaz. vol. 154; p. 810.
Clark, Warren F. (See Marshall and Clark.)
Clark, William E., Charlestown, N. H. Railway-tie and fastening. No. 958,225; May 17; Sp. p. 3861; Gaz. vol. 154; p. 652.
Clarke, Anna C., Scranton, Pa. Sewage system for railway-cars. No. 957,938; May 17; Sp. p. 3053; Gaz. vol. 154; p. 548.
Clarke, Charles E., Winthrop, assignor to Puritan Manufacturing Company, Boston, Mass. Foot-rest. No. 956,681; May 3; Sp. p. 380; Gaz. vol. 154; p. 63.
Clarke, James U. (See Tiedemann and Clarke.)
Clarke, Marcus S., Houston, Tex., assignor of one-half to E. L. Adreon, Jr., St. Louis, Mo. Combination claw and pinch bar. No. 957,190; May 10; Sp. p. 1480; Gaz. vol. 154; p. 264.
Clarke, Samuel A. (See Thorne, Josiah C., assignor.)
Clausen, Edgar C., Salt Lake City, Utah. Garment-hanger. No. 958,366; May 17; Sp. p. 4298; Gaz. vol. 154; p. 702.
Clawson, Abram L., Pleasant Hill, Mo. Motion-picture film. No. 958,367; May 17; Sp. p. 4300; Gaz. vol. 154; p. 702.
Clawson, Charles F., Mount Pleasant, Iowa. Nut-lock. No. 957,746; May 10; Sp. p. 2641; Gaz. vol. 154; p. 455.
Cleary, De Witt C., Seneca Falls, N. Y. Means for adjusting gun-sights. No. 960,153; May 31; Sp. p. 8069; Gaz. vol. 154; p. 1356.
Cleary, Joseph M., San Francisco, Cal. Railway-tie. No. 958,226; May 17; Sp. p. 3862; Gaz. vol. 154; p. 652.
Cleary, Thomas A., Escanaba, Mich. Trousers-rack. No. 959,112; May. 24; Sp. p. 5851; Gaz. vol. 154; p. 981.
Clegg, John. (See Miller and Clegg.)
Clegg, William H., Burnley, England. Take-up motion for looms. No. 958,597; May 17; Sp. p. 4749; Gaz. vol. 154; p. 780.
Clements, Chester D., Wymore, Nebr. Vest-corner stiffener. No. 958,093; May 17; Sp. p. 3595; Gaz. vol. 154; p. 606.
Clemmer, George B., Trenton, N. J. Condiment-holder. No. 956,942; May 3; Sp. p. 949; Gaz. vol. 154; p. 152.
Clerk, Annie M., Montreal, Quebec, Canada. Curtain ring and hook. No. 959,921; May 31; Sp. p. 7561; Gaz. vol. 154; p. 1277.
Cleveland Railway Supply Company, The. (See Newhall, Walter S., assignor.)
Cleveland, William B., assignor to The Electric Railway Improvement Company, Cleveland, Ohio. Rail-bond. No. 956,718; May 31; Sp. p. 7109; Gaz. vol. 154; p. 1207.
Click, Kelsie, Cardington, Ohio. Shade and curtain support. No. 959,113; May 24; Sp. p. 5853; Gaz. vol. 154; p. 981.
Clifford, George P. (See Quinn and Clifford.)
Clifton, James H. F., Pilotmountain, N. C. Cutting-machine. No. 957,747; May 10; Sp. p. 2642; Gaz. vol. 154; p. 455.
Cloud, John W., London, England, assignor to The Westinghouse Air Brake Company, Pittsburg, Pa. Fluid-pressure brake. No. 959,114; May 24; Sp. p. 5854; Gaz. vol 154; p. 981.
Clouse, Joseph N., St. Louis, Mo., assignor, by mesne assignments, to The Patent Heading Company. Barrel-head fastener. No. 956,759; May 3; Sp. p. 558; Gaz. vol. 154; p. 89.
Clupka, Daniel J., Gainesville, Fla. Weighing-scoop. No. 956,626; May 3; Sp. p. 256; Gaz. vol. 154; p. 43.
Clutter, John W., Rockford, Ohio. Clover-huller. No. 956,886; May 3; Sp. p. 844; Gaz. vol. 154; p. 134.
Clyne, James P. (See Callahan, Francis H., assignor.)
Coates, Jennie E., administratrix. (See Coates, William S.)
Coates, William S., deceased; Jennie E. Coates, administratrix, assignor of one-half to Henry J. McCabe, Cedar Rapids, Iowa. Dump-wagon. No. 960,241; May 31; Sp. p. 8248; Gaz. vol. 154; p. 1388.
Cobb, Henry Z., Malden, assignor to Revere Rubber Company, Boston, Mass. Braided hose. No. 957,867; May 17; Sp. p. 2897; Gaz. vol. 154; p. 525.
Cochell, Stephen A., Detroit, Mich. Polishing-wheel. No. 957,496; May 10; Sp. p. 2140; Gaz. vol. 154; p. 370.
Cochran, Joseph E., Elkhart, Ind. Computing-scale dial. No. 956,682; May 3; Sp. p. 381; Gaz. vol. 154; p. 63.
Cochran, Joseph E., Elkhart, Ind. Computing-scale dial. No. 957,934; May 17; Sp. p. 3055; Gaz. vol. 154; p. 549.
Cochran, Robert B., Charlotte, N. C. Machine for making bottle-caps. No. 956,887; May 3; Sp. p. 845; Gaz. vol. 154; p. 134.
Cockburn Barrow & Machine Company. (See McIlvrid, William, assignor.)
Cody, Robert D., Chicago, Ill. Incandescent light. No. 958,094; May 17; Sp. p. 3597; Gaz. vol. 154; p. 606.
Coe, John B., assignor of one-fourth to J. E. Hilton, Boston, Mass. Adjustable electric-lamp support. No. 960,076; May 31; Sp. p. 7932; Gaz. vol. 154; p. 1331.
Coe-Stapley Manufacturing Company, The. (See Stapley, William S., assignor.)
Coffin, Everett M., Oakland, Cal. Electric switch. (Reissue.) No. 13,114; May 10; Sp. p. 2679; Gaz. vol. 154; p. 495.
Cohen, Sam L., New York, N. Y. Sewing-machine. No. 956,888; May 3; Sp. p. 848; Gaz. vol. 154; p. 134.

Cohn, Charles W., New York, N. Y. Box. No. 959,922; May 31; Sp. p. 7562; Gaz. vol. 154; p. 1277.
Cohn, Henry J. (See Stoetzel, Joseph J., assignor.)
Cohn, Samuel, assignor to The Machine Mantle Sewing Company, New York, N. Y. Mantle-sewing machine. No. 956,943; May 3; Sp. p. 951; Gaz. vol. 154; p. 152.
Colborne, Oliver, Chicago, Ill. Pie-crust-forming machine. No. 956,683; May 3; Sp. p. 384; Gaz. vol. 154; p. 64.
Colborne, Oliver, Chicago, Ill. Pie-filling machine. No. 956,684; May 3; Sp. p. 385; Gaz. vol. 154; p. 64.
Colby, Harry W., assignor to Automatic Racking Machine Company, Chicago, Ill. Barrel-filling machine. No. 959,463; May 31; Sp. p. 6575; Gaz. vol. 154; p. 1122.
Colby, Madison G., Franklin, N. H. Wagon-jack. No. 957,308; May 10; Sp. p. 1754; Gaz. vol. 154; p. 307.
Cole, Albert W. (See Dow and Cole.)
Cole, Edward, assignor to J. Cole, New York, N. Y. Kiln. No. 959,996; May 31; Sp. p. 7741; Gaz. vol. 154; p. 1304.
Cole, Jennette. (See Cole, Edward, assignor.)
Cole, Orpha B., and J. E. Wright, Omaha, Nebr. Gage attachment for shears. No. 959,464; May 31; Sp. p. 6579; Gaz. vol. 154; p. 1122.
Cole, Robert E., Highland Creek, Ontario, Canada. Cushion-wheel. No. 960,154; May 31; Sp. p. 8071; Gaz. vol. 154; p. 1357.
Cole, William E., and W. W. Candler, Candler, N. C. Metallic cross-tie. No. 957,497; May 10; Sp. p. 2141; Gaz. vol. 154; p. 370.
Coleman, Clyde J., New York, N. Y. Heat-insulating wall. No. 958,095; May 17; Sp. p. 3598; Gaz. vol. 154; p. 607.
Colgen, Nicholas, and O. P. Boysen, St. Charles, Minn. Two-row potato-planter. No. 957,412; May 10; Sp. p. 1972; Gaz. vol. 154; p. 341.
Colhower, Harry C., and J. T. Sainsbury, Hartford City, Ind. Engine-starting device. No. 959,997; May 31; Sp. p. 7743; Gaz. vol. 154; p. 1305.
Collier, W. R., *et al.* (See Morris and Watkins, assignors.)
Collins, Fred L., and E. A. Hults, Chicago, Ill. Electric switch. No. 958,598; May 17; Sp. p. 4752; Gaz. vol. 154; p. 780.
Collins, George F. (See Overmyer, Charles G., assignor.)
Collins, Henry L. (See Arbogast, John L., assignor.
Collins, John, Washington, D. C. Fuse-block. No. 960,155; May 31; Sp. p. 8072; Gaz. vol. 154; p. 1357.
Colla, John, Newark, N. J. Return check-valve. No. 956,944; May 3; Sp. p. 955; Gaz. vol. 154; p. 153.
Colman, Howard D., *et al.* (See Peterson, Burt A., assignor.)
Colonna, Mildred, St. Louis, Mo. Umbrella-receptacle for cars. No. 958,096; May 17; Sp. p. 3601; Gaz. vol. 154; p. 607.
Colquhoun, Kenneth M., Owatonna, Minn. Spark-arrester. No. 959,923; May 31; Sp. p. 7564; Gaz. vol. 154; p. 1278.
Combest, James, Peoria, Ill. Sewing-machine. No. 957,845; May 10; Sp. p. 2240; Gaz. vol. 154; p. 388.
Comes, Keros L., Danbury, Conn. Heating utensil. No. 958,227; May 17; Sp. p. 3863; Gaz. vol. 154; p. 652.
Comfort, Walter R., New York, N. Y. Dredging apparatus. No. 959,115; May 24; Sp. p. 5857; Gaz. vol. 154; p. 982.
Commercial Acetylene Company, The. (See McCune, Charles A., assignor.)
Compagnie des Forges & Acieries de la Marine et d'Honrecourt. (See Nolly, Hector de, assignor.)
Computing Scale Company. (See Jones, Richard O., assignor.)
Confectioners' Machinery & Manufacturing Company, The. (See Walker, Walter F., assignor.)
Conklin, Charles M. (See Lunken and Conklin.)
Conkling Company. (See Snow, Frederick, assignor.)
Conkling, John P., New York, N. Y. Tunnel construction. No. 956,627; May 3; Sp. p. 257; Gaz. vol. 154; p. 43.
Conley, John E., Memphis, Tenn. Railway-frog. No. 960,156; May 31; Sp. p. 8073; Gaz. vol. 154; p. 1357.
Conley, Thomas, Pittsburg, Pa. Distance-spacing device for freight-cars. No. 958,368; May 17; Sp. p. 4802; Gaz. vol. 154; p. 702.
Conlon, Bartholomew J. (See Winter and Conlon.)
Conn, Charles A. (See Holt, Harris B., assignor.)
Connecut Company, The. (See Hine, William C., assignor.)
Connecticut Telephone & Electric Company, The. (See Cuno, Charles, assignor.)
Connecticut Telephone & Electric Company, The. (See Lawton, Burton L., assignor.)
Connell, William B., Chicago, Ill. Tire. No. 958,693; May 17; Sp. p. 4934; Gaz. vol. 154; p. 810.
Connersville Blower Co., The. (See Wilkin, John T., assignor.)
Conradson, Conrad M., Madison, Wis., assignor to V. E. Prentice, New York, N. Y. Grinding-machine feeding mechanism. No. 957,935; May 17; Sp. p. 3057; Gaz. vol. 154; p. 540.
Conradson, Conrad M., Madison, Wis., assignor to V. E. Prentice, New York, N. Y. Grinding-machine feeding mechanism. No. 957,936; May 17; Sp. p. 3062; Gaz. vol. 154; p. 550.
Conrow, Henry S., Wichita, Kans. Store-front and show-case construction. No. 958,228; May 17; Sp. p. 3864; Gaz. vol. 154; p. 653.
Consolidated Car Fender Company. (See Thornley, Albert J., assignor.)
Consolidated Car-Heating Company. (See McElroy, James F., assignor.)
Constantin, Angelo, Hanover, Germany. Protecting-cover for pneumatic tires. No. 957,413; May 10; Sp. p. 1973; Gaz. vol. 154; p. 342.
Continental Can Company. (See Robinson, Daniel P., assignor.)
Continuous Glass Press Company, The. (See Shuman, Frank, assignor.)
Conway, Richard H., and H. E. Bisbing, Philadephia, Pa. Fused terminal. No. 959,719; May 31; Sp. p. 7111; Gaz. vol. 154; p. 1207.
Cook, Carl M., Denver, Colo. Night-lock. No. 959,812; May 24; Sp. p. 6256; Gaz. vol. 154; p. 1047.
Cook, Frederick D., Blairsville, Pa. Rooding. No. 957,937; May 17; Sp. p. 3067; Gaz. vol. 154; p. 550.
Cook, George E., assignor of one-half to P. Schlosser, New York, N. Y. Carbureter. No. 958,476; May 17; Sp. p. 4518; Gaz. vol. 154; p. 740.
Cook, John W., Eastleigh, Didsbury, England. Lappet for spinning and twisting frames. No. 959,465; May 31; Sp. p. 6580; Gaz. vol. 154; p. 1123.
Cook, Miller, Jr., Whitman, assignor to Boston Machine Works Company, Lynn, Mass. Sole cutting and marking machine. No. 957,598; May 10; Sp. p. 2328; Gaz. vol. 154; p. 405.
Cookney, Mansfield, Baltimore, Md. Propeller. No. 958,599; May 17; Sp. p. 4757; Gaz. vol. 154; p. 781.
Coombs, Frank E., Natick, Mass. Defecation of saccharine liquids. No. 958,907; May 24; Sp. p. 5446; Gaz. vol. 154; p. 912.
Cooper Hewitt Electric Company. (See Thomas, Percy H., assignor.)
Cooper, Irvin H., South Bend, Ind. Shoe-polishing device. No. 958,724; May 24; Sp. p. 5005; Gaz. vol. 154; p. 847.
Cooper, William, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Regenerative system of control. (Reissue.) No. 13,115; May 17; Sp. p. 4971; Gaz. vol. 154; p. 917.
Copping, James L. (See Trautmann and Copping.)
Coppridge, Joel A., Browns Summit, N. C. Baking-stove. No. 957,748; May 10; Sp. p. 2643; Gaz. vol. 154; p. 456.
Corbin, Austin, 2d. (See Nye, Samuel, assignor.)
Corlew, Charles C., assignor to G. Corlew, Fresno, Cal. Sprinkler. No. 958,229; May 17; Sp. p. 3865; Gaz. vol. 154; p. 653.
Corlew, Gladys. (See Corlew, Charles C., assignor.)
Cornell, John M., Phillipstown, N. Y. Sectional sash-weight. No. 957,498; May 10; Sp. p. 2143; Gaz. vol. 154; p. 371.
Cornwall, Frederick R., St. Louis, Mo., assignor to Chicago Railway Equipment Company, Chicago, Ill. Adjustable brake-head. No. 959,466; May 31; Sp. p. 6583; Gaz. vol. 154; p. 1123.
Corrigan, John T., Rockford, Ill. Railway-gate. No. 957,868; May 17; Sp. p. 2899; Gaz. vol. 154; p. 625.
Corrington, Aldon E., Hartley, Iowa. Tire-grip. No. 957,309; May 10; Sp. p. 1755; Gaz. vol. 154; p. 307.
Corrington, Aldon R., Hartley, Iowa. Hand-plow. No. 959,425; May 24; Sp. p. 6467; Gaz. vol. 154; p. 1083.
Corthell, William M., assignor to Railway Automatic Mail Device Co., Chicago, Ill. Mail-collecting device. No. 959,467; May 31; Sp. p. 6584; Gaz. vol. 154; p. 1123.
Corthell, William M., Chicago, Ill., assignor to Railway Automatic Mail Device Co. Mail-deliverer. No. 959,468; May 31; Sp. p. 6587; Gaz. vol. 154; p. 1124.
Corwin, Elmer R., assignor, by mesne assignments, to Corwin Telephone Manufacturing Company, Chicago, Ill. Intercommunicating telephone system. No. 957,869; May 17; Sp. p. 2901; Gaz. vol. 154; p. 526.
Corwin, G. M., *et al.* (See Glympa, Frank W., assignor.)
Corwin Telephone Manufacturing Company. (See Corwin, Elmer R., assignor.)
Cosby, Oscar G., assignor of forty-nine one-hundredths to F. F. Causey, Hampton, Va. Bearing. No. 959,469; May 31; Sp. p. 6589; Gaz. vol. 154; p. 1124.
Côté, Henry, West Warren, assignor to Ware Machine & Loom Company, Ware, Mass. Loom. No. 957,546; May 10; Sp. p. 2243; Gaz. vol. 154; p. 388.
Couch, Samuel H. (See Stevens, Alton E., assignor.)
Councell, Charles, Philadelphia, Pa. Non-refillable bottle. No. 959,201; May 24; Sp. p. 6041; Gaz. vol. 154; p. 1009.
Covert, James C., assignor to Covert Manufacturing Company, Watervliet, N. Y. Spring-tongue snap-hook. No. 959,116; May 24; Sp. p. 5860; Gaz. vol. 154; p. 982.
Covert Manufacturing Company. (See Covert, James C., assignor.)
Cowan, John A., Winnipeg, Manitoba, Canada. Grain pickling and cleaning machine. No. 958,097; May 17; Sp. p. 3603; Gaz. vol. 154; p. 607.
Coward, William M., Sydney, New South Wales, Australia. Distributing and reversing expansion-valve. No. 957,499; May 10; Sp. p. 2145; Gaz. vol. 154; p. 371.
Cowles, Emma M., Milwaukee, Wis. Hook and eye. No. 958,569; May 17; Sp. p. 4704; Gaz. vol. 154; p. 703.
Cowley, James T., and E. G. Thomas, Boston, Mass., assignors to Lamson Consolidated Store Service Company, Newark, N. J. Sorting-table. No. 958,230; May 17; Sp. p. 3867; Gaz. vol. 154; p. 653.
Cox, John S., Yuma, Ariz. Variable-speed gearing. No. 958,604; May 17; Sp. p. 4935; Gaz. vol. 154; p. 810.
Cox, Samuel C., Washington, D. C. Mail-box. No. 960,157; May 31; Sp. p. 8075; Gaz. vol. 154; p. 1358.
Cox, Walter, and P. R. Peterson, Provo, Utah. Transom-holder. No. 959,843; May 31; Sp. p. 7387; Gaz. vol. 154; p. 1261.
Cox, William, Toronto, Ontario, Canada. Lock. No. 957,938; May 17; Sp. p. 3067; Gaz. vol. 154; p. 550.

Coyle, Andrew M., New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Stop-motion apparatus for hoists. No. 959,998; May 31; Sp. p. 7744; Gaz. vol. 154; p. 1305.
Coyle, Andrew M., New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Curtain-hoisting apparatus. No. 960,999; May 31; Sp. p. 7750; Gaz. vol. 154; p. 1305.
Crabbs, Joseph T., Brooklyn, N. Y. Apparatus for tabulating the passenger traffic on car-lines. No. 959,318; May 24; Sp. p. 6267; Gaz. vol. 154; p. 1047.
Cracraft-Leich Electric Company. (See Pedersen, Niels, assignor.)
Craigue, Charles H., Berlin, N. H. Digester and the like. No. 959,314; May 24; Sp. p. 6260; Gaz. vol. 154; p. 1048.
Crane, Edward B., California, Mo. Denture. No. 956,843; May 3; Sp. p. 747; Gaz. vol. 154; p. 118.
Crane, Fred J., Wilmington, Ohio. Automatic cut-off and filter. No. 959,315; May 24; Sp. p. 6263; Gaz. vol. 154; p. 1048.
Crane, Raymond E., Cameron, W. Va. Manufacture of wall-tanks. No. 958,281; May 17; Sp. p. 3869; Gaz. vol. 154; p. 653.
Crank, Richard H. (See Ascue, Elbert, assignor.)
Crary, Ralph W., Sturgeon Bay, Wis. Savings-bank. No. 956,685; May 3; Sp. p. 388; Gaz. vol. 154; p. 64.
Crates, James, Lorain, Ohio. Skylight and ventilating construction for ships. No. 957,846; May 10; Sp. p. 2842; Gaz. vol. 154; p. 467.
Crates, John W., Marion, Ind., and F. Longbrake, Arlington, Ohio. Gate. No. 958,695; May 17; Sp. p. 4937; Gaz. vol. 154; p. 811.
Crawford, Nat M., *et al.* (See Morris and Watkins, assignors.)
Creasey, Samuel E., Sanford, Mo. Conductor's report-book. No. 959,470; May 31; Sp. p. 6591; Gaz. vol. 154; p. 1124.
Cregg, James P. (See Anthony and Cregg.)
Creighton, H. H., *et al.* (See Rapp, William J., assignor.)
Cremean, William F., Logan, Ohio. Supporting-saddle for running-boards. No. 956,945; May 3; Sp. p. 961; Gaz. vol. 154; p. 153.
Crider, George M., Marion, Ky. Type-writer-ribbon box. No. 958,232; May 17; Sp. p. 3872; Gaz. vol. 154; p. 654.
Crites, Vernon H., Huntington, W. Va. Hoisting-bucket. No. 956,946; May 3; Sp. p. 962; Gaz. vol. 154; p. 154.
Crocker, Ernest B. (See Blanchard and Crocker.)
Crofutt, Willis S., assignor of one-half to J. C. Doody, New Haven, Conn. Spike. No. 956,844; May 3; Sp. p. 748; Gaz. vol. 154; p. 119.
Crompton & Knowles Loom Works. (See Buckler, James, assignor.)
Crompton & Knowles Loom Works. (See Cyr, Joseph T., assignor.)
Crompton & Knowles Loom Works. (See Gordon, Albert A., assignor.)
Crompton & Knowles Loom Works. (See Gordon, Albert A., Jr., assignor.)
Crompton & Knowles Loom Works. (See Holmes, Elbridge R., assignor.)
Crompton & Knowles Loom Works. (See Labonte, Peter, assignor.)
Crompton & Knowles Loom Works. (See Whitmore, Fred A., assignor.)
Crompton & Knowles Loom Works. (See Wyman, Horace, assignor.)
Cronin, Eli, Norton, N. Mex. Metallic tie. No. 956,628; May 3; Sp. p. 260; Gaz. vol. 154; p. 43.
Crose, Mabel O. (See Murphy, Roy E., assignor.)
Cross, Frank L., Mystic, Conn., assignor to Cross Paper Feeder Company, Boston, Mass. Sheet-feeding machine. No. 957,847; May 10; Sp. p. 2843; Gaz. vol. 154; p. 488.
Cross, Frank L., Detroit, Mich. Pressure-regulator for gas plants. No. 958,725; May 24; Sp. p. 5006; Gaz. vol. 154; p. 847.
Cross, Frank L., Detroit, Mich. Volume regulator and indicator. No. 958,726; May 24; Sp. p. 5008; Gaz. vol. 154; p. 848.
Cross, Frederick J., assignor to Rochester Stamping Company, Rochester, N. Y. Cuspidor. No. 959,117; May 24; Sp. p. 5862; Gaz. vol. 154; p. 982.
Cross Paper Feeder Company. (See Cross, Frank L., assignor.)
Cross, Walter M., Kansas City, Mo. Destruction of garbage and recovery of by-products. No. 956,569; May 3; Sp. p. 129; Gaz. vol. 154; p. 23.
Crossley, Charles C., Port Chester, N. Y. Collapsible core. No. 957,599; May 10; Sp. p. 2331; Gaz. vol. 154; p. 405.
Crossley, James S., Syracuse, assignor to Pass & Seymour, Inc., Solvay, N. Y. Electric rosette. No. 957,547; May 10; Sp. p. 2244; Gaz. vol. 154; p. 388.
Crosthwaite, Walter G., Leeds, assignor, by mesne assignments, to The United Cigarette Machine Company, Limited, London, England. Furnace of steam-boilers and the like. No. 957,810; May 10; Sp. p. 1756; Gaz. vol. 154; p. 307.
Crowl, John B. (See Hough and Crowl.)
Crowley, William P. (See Nisbett, Robert M., assignor.)
Croxton, David T., *et al.* (See Nelson, Alfred C., assignor.)
Croxton, David T., Cleveland, Ohio. Handling slag. No. 959,720; May 31; Sp. p. 7113; Gaz. vol. 154; p. 1206.
Cruikshank, Everett, Jersey City, N. J., and U. W. Bock, assignors to Farrington & Whitney, New York, N. Y. Top for pepper-boxes and the like. No. 957,037; May 3; Sp. p. 1185; Gaz. vol. 154; p. 185.
Cruse, Henry, Salford, Lancaster, England. Apparatus for superheating steam. No. 957,930; May 17; Sp. p. 3069; Gaz. vol. 154; p. 550.
Crutchley, Harry, Bayonne, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 957,749; May 10; Sp. p. 2646; Gaz. vol. 154; p. 456.
Cubitt, Archibald S., Schenectady, N. Y., assignor to General Electric Company. Relay. No. 957,870; May 17; Sp. p. 2905; Gaz. vol. 154; p. 526.
Cubitt, Archibald S., Pittsfield, Mass., assignor to General Electric Company. Method of and means for reversing motors. No. 960,000; May 31; Sp. p. 7754; Gaz. vol. 154; p. 1306.
Cullman, Otto, Chicago, Ill. Detachable sprocket-wheel. No. 958,955; May 24; Sp. p. 5532; Gaz. vol. 154; p. 928.
Culver, George A., Clarinda, Iowa. Lawn-mower. No. 957,145; May 3; Sp. p. 1367; Gaz. vol. 154; p. 219.
Cummings, Frederick L., Everett, and E. Hathaway, Malden, Mass. Floor-surfacing machine. No. 959,721; May 31; Sp. p. 7115; Gaz. vol. 154; p. 1208.
Cummings, James G., and J. Lynch, Chicago, Ill. Broom-cover. No. 960,158; May 31; Sp. p. 8077; Gaz. vol. 154; p. 1358.
Cumming, Norman W. (See Campbell and Cummins.)
Cundy, Franklin B. (See Olson, Claus A., assignor.)
Cunningham, Charles A., Chico, Cal. Decoy. No. 957,750; May 10; Sp. p. 2649; Gaz. vol. 154; p. 456.
Cunningham, Edward, Lebanon Junction, Ky. Lantern and lunch-receptacle. No. 959,118; May 24; Sp. p. 5863; Gaz. vol. 154; p. 982.
Cunningham, William R., assignor to The American Clay Machinery Company, Bucyrus, Ohio. Shale-breaker. No. 959,202; May 24; Sp. p. 6042; Gaz. vol. 154; p. 1010.
Cuno, Charles, assignor to The Connecticut Telephone & Electric Company, Meriden, Conn. Timer and distributer. No. 958,908; May 24; Sp. p. 5451; Gaz. vol. 154; p. 913.
Curlett, William, San Francisco, Cal. Knob-spindle fastener. No. 956,947; May 3; Sp. p. 964; Gaz. vol. 154; p. 154.
Currie, Otis C., assignor to The Campbell-Kingsley Manufacturing Company, Detroit, Mich. View-dissolver for magic lanterns. No. 958,870; May 17; Sp. p. 4306; Gaz. vol. 154; p. 703.
Curry, John. (See Fleming and Curry.)
Curtain Supply Company. (See Keeler, Herbert E., assignor.)
Curtenius, Dwight, *et al.* (See Bogenschutz, William C., assignor.)
Curtiss, James M., Cleveland, Ohio. Fishing-tackle. No. 958,233; May 17; Sp. p. 3873; Gaz. vol. 154; p. 654.
Curtright, Harry P., deceased, Holliday, Mo.; M. B. Curtright, administratrix. Sulky-plow. No. 958,696; May 17; Sp. p. 4939; Gaz. vol. 154; p. 811.
Curtright, Mary B., administratrix. (See Curtright, Harry P.)
Custis, Marvin A. (See Snyder and Custis.)
Cuthbert, John. (See Lake and Cuthbert.)
Cutler-Hammer Manufacturing Company, The. (See Barnum, Thomas E., assignor.)
Cutler-Hammer Mfg. Co., The. (See Cutler, Henry H., assignor.)
Cutler-Hammer Mfg. Co., The. (See Henderson, Clark T., assignor.)
Cutler, Henry H., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Phase-splitter. No. 956,686; May 3; Sp. p. 390; Gaz. vol. 154; p. 65.
Cutler, William, Edgbaston, Birmingham, England. Forcing frame or inclosure for horticultural or other purposes. No. 958,956; May 24; Sp. p. 5534; Gaz. vol. 154; p. 929.
Cutter, George A., Taunton, Mass., assignor to Cell Drier Machine Company. Drying-machine. No. 959,722; May 31; Sp. p. 7117; Gaz. vol. 154; p. 1208.
Cyphers Incubator Company. (See Adair, Charles E., assignor.)
Cyr, Joseph T., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Pattern mechanism for looms. No. 960,214; May 31; Sp. p. 8190; Gaz. vol. 154; p. 1379.
D'Elia, Antonio, Jersey City, N. J. Building-block. No. 959,846; May 31; Sp. p. 7391; Gaz. vol. 154; p. 1251.
D'Oller, Henry, Jr., Rutherford, N. J. Reflector and attachment therefor. No. 957,148; May 3; Sp. p. 1374; Gaz. vol. 154; p. 220.
D'Oller, Henry, Jr., Rutherford, N. J. Reflector attachment. No. 959,205; May 24; Sp. p. 6049; Gaz. vol. 154; p. 1011.
D'Oller, Henry, Jr., Rutherford, N. J. Reflector attachment. No. 959,206; May 24; Sp. p. 6051; Gaz. vol. 154; p. 1011.
Dacheux, René, Liege, Belgium. Type-distributing apparatus. No. 958,600; May 17; Sp. p. 4758; Gaz. vol. 154; p. 781.
Daggett, Harry M., Oakland, Cal. Oil-burner. No. 956,629; May 3; Sp. p. 261; Gaz. vol. 154; p. 44.
Dahl, Benjamin, assignor to Dahl Punctureless Tire Company, Minneapolis, Minn. Wheel-tire. No. 960,001; May 31; Sp. p. 7756; Gaz. vol. 154; p. 1306.
Dahl Punctureless Tire Company. (See Dahl, Benjamin, assignor.)

Dahlmann, Wilhelm, Berlin, Germany. Manufacturing ball-bearings and the like. No. 958,477; May 17; Sp. p. 4521; Gaz. vol. 154; p. 740.

Dailey, James G., Philadelphia, Pa. Duplicating-machine. No. 958,098; May 17; Sp. p. 3607; Gaz. vol. 154; p. 608.

Dailey, Lorenzo, Kansas City, Kans. Portable boring-machine. No. 960,002; May 31; Sp. p. 7757; Gaz. vol 154; p. 1307.

Dake-American Steam Turbine Company, The. (See Dake, Charles W., assignor.)

Dake, Charles W., assignor to The Dake-American Steam Turbine Company, Grand Rapids, Mich. Governor for steam or elastic-fluid engines. No. 959,471; May 31; Sp. p. 6593; Gaz. vol. 154; p. 1125.

Dakin, Francis J. V. (See Johnson, Gustaf, assignor.)

Dale, John H., New York, N. Y. Cluster lamp-socket. No. 958,727; May 24; Sp. p. 5010; Gaz. vol. 154; p. 848.

Dale, John H., New York, N. Y. Cluster lamp-socket. No. 958,728; May 24; Sp. p. 5011; Gaz. vol. 154; p. 848.

Dale, John H., New York, N. Y. Cluster lamp-socket. No. 958,729; May 24; Sp. p. 5014; Gaz. vol. 154; p. 849.

Daley, Walter A. (See Davis and Daley.)

Dalgety, Ferdinand P. (See Dalgety, William Z. and F. P.)

Dalgety, William Z. and F. P., Rochester, N. Y. Ice-chipping machine. No. 957,038; May 3; Sp. p. 1166; Gaz. vol. 154; p. 185.

Dalrymple, Lawrence R., Abilene, Kans. Gas-engine primer. No. 957,500; May 10; Sp. p. 2147; Gaz. vol. 154; p. 371.

Daly, Christopher L. (See Daly, John M., assignor.)

Daly, John M., Chicago, assignor of one-half to C. L. Daly, Peoria, Ill. Computing-machine. No. 956,687; May 3; Sp. p. 391; Gaz. vol. 154; p. 65.

Daly, John M., Chicago, assignor of one-half to C. L. Daly, Peoria, Ill. Tonnage-equating machine. No. 956,688; May 3; Sp. p. 395; Gaz. vol. 154; p. 66.

Daly, John M., Chicago, assignor of one-half to C. L. Daly, Peoria, Ill. Computing-machine. No. 956,689; May 3; Sp. p. 410; Gaz. vol. 154; p. 66.

Damascus Brake Beam Co., The. (See Handiges, Philip T., assignor.)

Damon, George L., Pittsburg, Pa. Controlling device for bolt-operating mechanisms. No. 956,889; May 3; Sp. p. 850; Gaz. vol. 154; p. 135.

Dancy, William R., and C. B. Westcott, Savannah, Ga. Safety-pin. No. 959,472; May 31; Sp. p. 6596; Gaz. vol. 154; p. 1125.

Dandridge, Edmund P., and J. B. Cessna, Pittsburg, Pa. Coal-washing apparatus. No. 959,473; May 31; Sp. p. 6596; Gaz. vol. 154; p. 1126.

Danek, David H., Chicago, Ill. Tooth-brush. No. 958,371; May 17; Sp. p. 4309; Gaz. vol. 154; p. 703.

Daniel, Paul, assignor to B. G. Paskus, New York, N. Y. Internal-combustion engine. No. 957,657; May 10; Sp. p. 2455; Gaz. vol. 154; p. 425.

Daniel, Percy G. E., Clevedon, and C. A. H. Bullock, London, England. Stamp-affixer. No. 957,658; May 10; Sp. p. 2457; Gaz. vol. 154; p. 425.

Daniels, Fred H., Worcester, Mass. Charging apparatus. No. 956,890; May 3; Sp. p. 852; Gaz. vol. 154; p. 135.

Danne, Harold A., Clarksburg, W. Va. Electric furnace. No. 958,855; May 24; Sp. p. 5314; Gaz. vol. 154; p. 895.

Danner, Adam, Yonkers, N. Y. Barrel-scrubbing machine. No. 957,659; May 10; Sp. p. 2463; Gaz. vol. 154; p. 425.

Danquard, Thomas, assignor, by mesne assignments, to Auto Pneumatic Action Co., New York, N. Y. Pneumatic motor. No. 957,751; May 10; Sp. p. 2650; Gaz. vol. 154; p. 457.

Danquard, Thomas, assignor, by mesne assignments, to Auto Pneumatic Action Co., New York, N. Y. Regulator for pneumatic motors. No. 957,752; May 10; Sp. p. 2652; Gaz. vol. 154; p. 457.

Dargin, Ernest P., assignor to M. E. Dargin, Denver, Colo. Filter-bag. No. 957,191; May 10; Sp. p. 1481; Gaz. vol. 154; p. 265.

Dargin, Ernest P., assignor to M. E. Dargin, Denver, Colo. Filtering apparatus. No. 959,844; May 31; Sp. p. 7387; Gaz. vol. 154; p. 1251.

Dargin, Mary E. (See Dargin, Ernest P., assignor.)

Darr, Charles A., Leavenworth, Kans. Adding-machine. No. 957,753; May 10; Sp. p. 2655; Gaz. vol. 154; p. 458.

Dambert, Harry J., Tamaqua, Pa. Car-coupling. No. 960,077; May 31; Sp. p. 7964; Gaz. vol. 154; p. 1332.

Davey, Wellington E., Kent, Ohio. Reinforcing trees. No. 957,940; May 17; Sp. p. 3070; Gaz. vol. 154; p. 550.

Davey, Wellington E., Kent, Ohio. Reinforcing trees. No. 958,234; May 17; Sp. p. 3874; Gaz. vol. 154; p. 654.

Davey, Wellington E., Kent, Ohio. Reinforcing trees. No. 958,478; May 17; Sp. p. 4522; Gaz. vol. 154; p. 740.

David, Abe J., *et al.* (See Knobbe, Charles H., assignor.)

David, Emma, Chico, Cal. Skirt-marker. No. 958,601; May 17; Sp. p. 4761; Gaz. vol. 154; p. 782.

Davidson, Frank B., Marseilles, Ill., assignor to Howe and Davidson Company, East Orange, N. J. Container. No. 958,372; May 17; Sp. p. 4310; Gaz. vol. 154; p. 704.

Davis, Alexander E., Belleville, Kans. Self-dumping hay-sweep. No. 957,456; May 10; Sp. p. 2058; Gaz. vol. 154; p. 357.

Davis, George C., and W. A. Daley, assignors to George M. Davis Regulator Company, Chicago, Ill. Stop and check valve. No. 957,311; May 10; Sp. p. 1759; Gaz. vol. 154; p. 363.

Davis, George C., and W. A. Daley, assignors to George M. Davis Regulator Company, Chicago, Ill. Pressure-regulator. No. 959,474; May 31; Sp. p. 6600; Gaz. vol. 154; p. 1126.

Davis, Harry L., Seneca Falls, N. Y. Force-feed lubricator. No. 958,994; May 24; Sp. p. 5606; Gaz. vol. 154; p. 942.

Davis, Joseph L. (See Webster and Davis.)

Davis, Oliver P., M., Bedford, Ind. Power-transmitting mechanism. No. 959,119; May 24; Sp. p. 5864; Gaz. vol. 154; p. 983.

Davis Sewing Machine Company, The. (See Lester, Harry B., assignor.)

Davis, Spencer E., Minneapolis, assignor to Monitor Drill Company, St. Louis Park, Minn. Arm and lever. No. 959,475; May 31; Sp. p. 6604; Gaz. vol. 154; p. 1126.

Davis, Walter M., New York, N. Y. Talking-machine and piano recording device. No. 958,730; May 24; Sp. p. 5015; Gaz. vol. 154; p. 849.

Davis, Walter M., New York, N. Y. Combined piano-player and talking-machine. No. 958,731; May 24; Sp. p. 5017; Gaz. vol. 154; p. 849.

Davis, William P., Memphis, Tenn. Rail-joint. No. 958,602; May 17; Sp. p. 4762; Gaz. vol. 154; p. 782.

Dawes, Charles, assignor of one-half to J. P. Howe, Liberty, Ind. Grass and ditch-line cutter. No. 959,845; May 31; Sp. p. 7390; Gaz. vol. 154; p. 1251.

Dawes, Edmond, *et al.* (See Dawes, Robert, assignor.)

Dawes, Robert, assignor, by mesne assignments, to himself, E. Dawes, Philadelphia, Pa., and E. H. Haskell, Newton, Mass. Spinning and twisting machine. No. 959,316; May 24; Sp. p. 6264; Gaz. vol. 154; p. 1048.

Dawson, James C., Webster Groves, Mo., assignor to Sieber & Trussell Manufacturing Company. Loose-leaf binder. No. 958,099; May 11; Sp. p. 3610; Gaz. vol. 154; p. 608.

Dawson, Thomas, Livingston Manor, N. Y. Furnace-grate. No. 956,517; May 3; Sp. p. 19; Gaz. vol. 154; p. 6.

Day, Albert V. T., assignor to C. Hubert, New York, N. Y. Hydraulic power-transmission system. No. 956,570; May 3; Sp. p. 134; Gaz. vol. 154; p. 24.

Day, Frederick, West Zorra township, Oxford county, Ontario, Canada. Potato-digging attachment for plows. No. 958,603; May 17; Sp. p. 4764; Gaz. vol. 154; p. 782.

Day, Isaac O., Ottumwa, Iowa. Scissors-sharpener. No. 956,518; May 3; Sp. p. 21; Gaz. vol. 154; p. 7.

Day, Louis A., assignor to J. B. Hall, Philadelphia, Pa. Fastening device for doors. No. 959,476; May 31; Sp. p. 6606; Gaz. vol. 154; p. 1127.

Day Ward Company, The. (See Carter, Edwin E., assignor.)

Dasey, Harry L., Dallas, Tex. Pneumatic tire. No. 956,948; May 3; Sp. p. 965; Gaz. vol. 154; p. 154.

De Bruycker, August M. H., New York, N. Y. Padlock. No. 957,033; May 3; Sp. p. 1155; Gaz. vol. 154; p. 183.

De Forge, Joseph H. C., Lynn, Mass. Garment. No. 957,875; May 17; Sp. p. 2919; Gaz. vol. 154; p. 528.

De Moulin, Erastus. (See Riggs, George P., assignor.)

De Moulin, Erastus, Greenville, Ill. Trick water-gun. No. 956,760; May 3; Sp. p. 580; Gaz. vol. 154; p. 89.

De Moulin, Erastus, Greenville, Ill. Trick water-gun. No. 958,711; May 17; Sp. p. 4966; Gaz. vol. 154; p. 817.

De Pasquale, Lawrence, San Francisco, Cal. Gas-burner. No. 958,102; May 17; Sp. p. 3613; Gaz. vol. 154; p. 609.

De Rochemont, Perkins H., Chattanooga, Tenn., assignor of one-half to C. Toppino, Jr., New Orleans, La. Lap-link. No. 959,317; May 24; Sp. p. 6266; Gaz. vol. 154; p. 1049.

De Salis, Joseph H., East Syracuse, N. Y. Device for controlling cylinder-cocks of locomotives. No. 958,858; May 24; Sp. p. 5326; Gaz. vol. 154; p. 896.

De Tienne, H. G., *et al.* (See Callaway, David A., assignor.)

De Turk, Joshua G. (See Butler, James M., assignor.)

De Vilbiss Manufacturing Company, The. (See De Vilbiss, Thomas A., assignor.)

De Vilbiss Pier Company. (See Hansen, Niels M., assignor.)

De Vilbiss, Thomas A., assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio. Dropper. No. 959,847; May 31; Sp. p. 7392; Gaz. vol. 154; p. 1252.

De Young, Blanche. (See Lowe and De Young.)

De Young, James, Manhattan, Kans. Chicken-crating apparatus. No. 959,121; May 24; Sp. p. 5869; Gaz. vol. 154; p. 983.

Dean, Charles H., *et al.* (See Hartman, Joseph, assignor.)

Dean Electric Company, The. (See Dean, William W., assignor.)

Dean Electric Company, The. (See Libby, Albion D. T., assignor.)

Dean Electric Company. (See Manson, Ray H., assignor.)

Dean, John, assignor to John Dean Manufacturing Company, Racine, Wis. Pen and pencil holder. No. 960,215; May 31; Sp. p. 8192; Gaz. vol. 154; p. 1379.

Dean, Patrick C. (See Rubrecht and Dean.)

Dean, William W., assignor to The Dean Electric Company, Elyria, Ohio. Telephone system. No. 958,856; May 24; Sp. p. 5318; Gaz. vol. 154; p. 895.

Dean, William W., assignor to The Dean Electric Company, Elyria, Ohio. Lightning-arrester. No. 959,120; May 24; Sp. p. 5867; Gaz. vol. 154; p. 983.

Dearborn, Frank H. (See Emden and Dearborn.)

Decies, Maria G., Slough, England. Score-register. No. 959,202; May 24; Sp. p. 6045; Gaz. vol. 154; p. 1010.

Deck, Henry, assignor to John Braun & Sons, Philadelphia, Pa. Grass-catching device for lawn-mowers. No. 959,723; May 31; Sp. p. 7119; Gaz. vol. 154; p. 1200.

Decker Electrical Manufacturing Company. (See Decker, Frank A., assignor.)

Decker, Frank A., Philadelphia, Pa., assignor to Decker Electrical Manufacturing Company, Wilmington, Del. Electric battery. No. 957,192; May 10; Sp. p. 1483; Gaz. vol. 154; p. 265.

Decker, Harry R., Houston, Tex. Strainer for oil and water wells. No. 958,100; May 17; Sp. p. 3611; Gaz. vol. 154; p. 608.

Decker, William H., assignor to The Solvay Process Company, Syracuse, N. Y. Making bilged barrel-bodies. No. 957,457; May 10; Sp. p. 2060; Gaz. vol. 154; p. 357.

Dedolph, Edmard, Kaslo, British Columbia, Canada. Smelting. No. 959,924; May 31; Sp. p. 7506; Gaz. vol. 154; p. 1278.

Deering, Uriah H., Cleburne, Tex. Attachment for coffins. No. 957,941; May 17; Sp. p. 3073; Gaz. vol. 154; p. 551.

Defiance Pressed Steel Company, The. (See Klenk, Gottlieb, assignor.)

Dehetre, Walter and W., Compton, Cal. Milk-condenser. No. 956,571; May 3; Sp. p. 139; Gaz. vol. 154; p. 24.

Dehetre, Wilfred. (See Dehetre, Walter and W.)

Deihl, McClellen, Washingtonville, Pa. Hog-scraper. No. 958,101; May 17; Sp. p. 3612; Gaz. vol. 154; p. 609.

Deinet, Joseph, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Vat dye. No. 957,039; May 3; Sp. p. 1167; Gaz. vol. 154; p. 185.

Deinet, Joseph, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Orange vat dye. No. 957,040; May 3; Sp. p. 1167; Gaz. vol. 154; p. 185.

Deinet, Joseph, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Vat dye. No. 957,041; May 3; Sp. p. 1168; Gaz. vol. 154; p. 185.

Deinet, Joseph, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Vat dye. No. 957,042; May 3; Sp. p. 1169; Gaz. vol. 154; p. 185.

Deinet, Joseph, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Vat dye. No. 957,146; May 3; Sp. p. 1368; Gaz. vol. 154; p. 219.

Delaney, John T., Worcester, Mass. Bung. No. 956,797; May 3; Sp. p. 636; Gaz. vol. 154; p. 101.

Delano, Charles G., Berkley, Mass. Automobile mowing-machine. No. 957,660; May 10; Sp. p. 2465; Gaz. vol. 154; p. 426.

Delany, Patrick B., South Orange, N. J. Telegraphic keyboard transmitting apparatus. No. 957,312; May 10; Sp. p. 1763; Gaz. vol. 154; p. 308.

Delay, Noah. (See Dow, Floyd, assignor.)

Delcamp, B. B. (See Packer, Harry E., assignor.)

Delpeuch, Leon A., Neuilly-sur-Seine, assignor to A. Gildenmeister, Paris, France. Whistle, siren, or the like. No. 957,661; May 10; Sp. p. 2469; Gaz. vol. 154; p. 427.

Demarest, David C. (See Senn and Demarest.)

Dement, Isaac S., St. Nicholas, Fla. Printing-wheel. No. 956,891; May 3; Sp. p. 854; Gaz. vol. 154; p. 135.

Deming, William L., Salem, Ohio. Lock for windows and analogous devices. No. 957,600; May 10; Sp. p. 2332; Gaz. vol. 154; p. 405.

Dempster, John T. H., Schenectady, N. Y., assignor to General Electric Company. Preventing surface oxidation of resistance-conductors. No. 957,193; May 10; Sp. p. 1485; Gaz. vol. 154; p. 265.

Denio General Electric Company. (See Bronson, Frederick S., assignor.)

Denison, Preussner and Company. (See Banks, James W., assignor.)

Denison, Wallace B., *et al.* (See Dickey, John B., assignor.)

Denison, William W., *et al.* (See Dickey, John B., assignor.)

Denne, Mark T., Rushden, Northampton, England. Machine for attaching soles to boots and shoes by screws. No. 958,373; May 17; Sp. p. 4312; Gaz. vol. 154; p. 704.

Dennis, John J., Chicago, Ill., assignor to Dennis Novelty Ladder Company. Ladder. No. 958,732; May 24; Sp. p. 5018; Gaz. vol. 154; p. 850.

Dennis, Mollie A., Deposit, N. Y. Dish-drainer. No. 958,857; May 24; Sp. p. 5326; Gaz. vol. 154; p. 896.

Dennis Novelty Ladder Company. (See Dennis, John J., assignor.)

Dennis, Samuel K., Chicago, Ill., assignor to International Harvester Company. Hay-loader. No. 959,477; May 31; Sp. p. 6607; Gaz. vol. 154; p. 1127.

Dennis, Samuel K., Chicago, Ill., assignor to International Harvester Company. Draft connection for hay-loaders. No. 959,724; May 31; Sp. p. 7122; Gaz. vol. 154; p. 1200.

Dennis, Samuel K., and F. W. Rice, Chicago, Ill., assignors to International Harvester Company. Feed-grinder. No. 956,892; May 3; Sp. p. 856; Gaz. vol. 154; p. 136.

Dennis, Willard W., assignor of one-half to J. E. Ward, Los Angeles, Cal. Roller-bearing. No. 958,957; May 24; Sp. p. 5535; Gaz. vol. 154; p. 929.

Dennison, William, New Orleans, La. Machine for beveling shoe-soles. No. 958,374; May 17; Sp. p. 4317; Gaz. vol. 154; p. 705.

Denny, Christopher C., *et al.* (See Vesey, Richard H., assignor.)

Denver Engineering Works Co., The. (See Lockwood, Frank A., assignor.)

Dessureau, William H., Hazelhurst, Wis. Musical instrument. No. 959,318; May 24; Sp. p. 6267; Gaz. vol. 154; p. 1049.

Destefani, Paul, assignor of one-half to The New Transvaal Chemical Company, Limited, Johannesburg, Transvaal. Illuminating device for burning wax. No. 958,235; May 17; Sp. p. 3876; Gaz. vol. 154; p. 655.

Detroit Dental Manufacturing Company. (See Kerr, Mathew M., assignor.)

Detroit Seamless Steel Tubes Company. (See Thurst, George J., assignor.)

Deucher, Eugene G., assignor to The Brown Hoisting Machinery Company, Cleveland, Ohio. Means for operating master-controllers. No. 957,662; May 10; Sp. p. 2470; Gaz. vol. 154; p. 427.

Dexter Folder Company. (See Dexter, Talbot C., assignor.)

Dexter Folding Company. (See Dexter and Garner, assignors.)

Dexter, Mark, Kenomi, Nebr. Revolving tiltable chair. No. 956,949; May 3; Sp. p. 966; Gaz. vol. 154; p. 154.

Dexter, Talbot C., assignor to Dexter Folder Company, Pearl River, N. Y. Sheet-conveying machine. No. 957,043; May 3; Sp. p. 1170; Gaz. vol. 154; p. 186.

Dexter, Talbot C., and V. Garner, assignors to Dexter Folding Company, Pearl River, N. Y. Paper-feeding machine. No. 959,319; May 24; Sp. p. 6268; Gaz. vol. 154; p. 1049.

Dey Time Register Company. (See Merritt, Benjamin F., assignor.)

Diamant, Henry A., *et al.* (See Rapp, Louis P., assignor.)

Dichmann, William, Oshkosh, Wis. Sliding-shoe furniture attachment. No. 959,478; May 31; Sp. p. 6609; Gaz. vol. 154; p. 1127.

Dickey, Elmer C., Kokomo, Ind. Can-vent-soldering machine. No. 957,147; May 3; Sp. p. 1368; Gaz. vol. 154; p. 219.

Dickey, John B., assignor of one-eighth to W. W. Denison and one-eighth to W. B. Denison, Columbus, Ind. Starting device for internal-combustion engines. No. 958,909; May 24; Sp. p. 5454; Gaz. vol. 154; p. 913.

Dickhaus, Otto. (See Holzhey and Dickhaus.)

Dickhaut, Henry, *et al.* (See Seitz, Frederick, assignor.)

Dickhaut, Valentine, *et al.* (See Seitz, Frederick, assignor.)

Dieckmann, Adolf, Cincinnati, Ohio. Sheet-metal-elbow machine. No. 959,204; May 24; Sp. p. 6047; Gaz. vol. 154; p. 1011.

Diehl, Charles, Cleveland, Ohio. Irrigating-gutter. No. 958,479; May 17; Sp. p. 4526; Gaz. vol. 154; p. 741.

Dier, Horace C., *et al.* (See MacDiarmid, Wesley D. R., assignor.)

Dikeman, Myron J., Joliet, Ill. Surveying instrument. No. 958,794; May 24; Sp. p. 5180; Gaz. vol. 154; p. 872.

Dingman, George, Penn, N. D. Screen. No. 958,859; May 24; Sp. p. 5329; Gaz. vol. 154; p. 896.

Dipworth, Hermann B., Saginaw, Mich. Miter-clamp vise. No. 960,159; May 31; Sp. p. 8077; Gaz. vol. 154; p. 1358.

Direct-Line General Telephone Company. (See Andriano, Albert K., assignor.)

Dittman, Joseph H. (See Getty, John C., assignor.)

Divok, Alexander F., Pittsburg, Pa. Folding steps. No. 960,003; May 31; Sp. p. 7759; Gaz. vol. 154; p. 1307.

Dixon, John, West Baden, Ind. Jack. No. 959,320; May 24; Sp. p. 6273; Gaz. vol. 154; p. 1050.

Dixon, Robert M., East Orange, N. J., assignor to The Safety Car Heating & Lighting Company. Gas-lamp. No. 956,572; May 3; Sp. p. 142; Gaz. vol. 154; p. 25.

Dixon, Robert M., East Orange, N. J., assignor to The Safety Car Heating & Lighting Company. Gas-lighting apparatus. No. 958,375; May 17; Sp. p. 4319; Gaz. vol. 154; p. 705.

Dixon, Walter L., Milford, assignor to Reece Folding Machine Company, Boston, Mass. Machine for folding blanks for cuffs and the like. No. 956,950; May 3; Sp. p. 967; Gaz. vol. 154; p. 155.

Dixon, William, Newark, N. J. Jeweler's polishing-brush. No. 960,216; May 31; Sp. p. 8194; Gaz. vol. 154; p. 1379.

Doane, Walter S., Worcester, Mass. Inhaler. No. 957,548; May 10; Sp. p. 2245; Gaz. vol. 154; p. 388.

Doble, Albert E., Scranton, Pa. Eyeglass-spring. No. 958,236; May 17; Sp. p. 3879; Gaz. vol. 154; p. 655.

Dodds' Interlocking Block Co. (See Dodds, William R., assignor.)

Dodds, William R., San Francisco, Cal., assignor to Dodds' Interlocking Block Co. Building-block. No. 960,217; May 31; Sp. p. 8195; Gaz. vol. 154; p. 1380.

Dodge, James M., Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill. Chain. No. 958,676; May 17; Sp. p. 4902; Gaz. vol. 154; p. 805.

Dodge, James M., Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill. Drive-chain. No. 958,677; May 17; Sp. p. 4904; Gaz. vol. 154; p. 805.

Doen, Nathan M., Lynn, Mass., assignor to General Electric Company. Automatic pneumatic chuck. No. 957,194; May 10; Sp. p. 1485; Gaz. vol. 154; p. 265.

Dole, Raymond C., and E. Ellis, Guthrie, Okla. Rail-joint for railway-rails. No. 958,733; May 24; Sp. p. 5020; Gaz. vol. 154; p. 850.

Domiszewski, Martin, Kolomea, Austria-Hungary. Apparatus for cleaning fire-tubes of boilers. No. 958,376; May 17; Sp. p. 4322; Gaz. vol 154; p. 705.

Donahoo, Peter B., assignor of one-half to R. H. Morris, Oakland, Cal. Tire-sleeve-fastening apparatus. No. 957,313; May 10; Sp. p. 1770; Gaz. vol. 154; p. 309.

Donahue, Isaac, *et al.* (See Shampon and Donahue.)

Donaldson, James W., Houston, Tex. Spectacles. No. 956,690; May 3; Sp. p. 421; Gaz. vol. 154; p. 66.

Donat, Joseph L., Chicago, Ill. Plumbing-fixture. No. 959,207; May 24; Sp. p. 6053; Gaz. vol. 154; p. 1012.
Donovan, Timothy J., Syracuse, N. Y. Rail-retainer. No. 958,103; May 17; Sp. p. 3615; Gaz. vol. 154; p. 609.
Doody, John C. (See Crofutt, Willis S., assignor.)
Doolittle, Eli W., Binghamton, N. Y. Perpetual calendar. No. 959,479; May 31; Sp. p. 6610; Gaz. vol. 154; p. 1128.
Doran, George A., *et al.* (See Hachmann, Frederick, assignor.)
Döring, Ernst, Zoesen, Germany. Automatic curtain-roller. No. 958,605; May 17; Sp. p. 4772; Gaz. vol. 154; p. 783.
Dorment, Frank C., Detroit, Mich. Atomiser. No. 958,697; May 17; Sp. p. 4942; Gaz. vol. 154; p. 812.
Dorsey, Robert L., assignor to Tucker & Dorsey Manufacturing Company, Indianapolis, Ind. Cutter. No. 958,377; May 17; Sp. p. 4323; Gaz. vol. 154; p. 706.
Dorward, John G., San Francisco, Cal. Double-acting deep-well pump. No. 959,321; May 24; Sp. p. 6275; Gaz. vol. 154; p. 1050.
Dougherty, John M., and H. C. Tabler, St. Louis, Mo. Regulating apparatus. No. 957,601; May 10; Sp. p. 2335; Gaz. vol. 154; p. 406.
Dougherty, Daniel A. (See McVeigh, John, assignor.)
Dow, Alexander, assignor to Dow Rim Company, New York, N. Y. Means for locking detachable flanges on demountable rims. No. 959,426; May 24; Sp. p. 6468; Gaz. vol. 154; p. 1063.
Dow Chemical Company, The. (See Dow, Herbert H., assignor.)
Dow, Floyd, assignor of one-half to N. Delay, Princeton, Ill. Lamp-burner. No. 958,378; May 17; Sp. p. 4325; Gaz. vol. 154; p. 706.
Dow, George B. N., and A. W. Cole, Manchester, N. H. Lamp-filler. No. 959,480; May 31; Sp. p. 6612; Gaz. vol. 154; p. 1128.
Dow, Herbert H. (See Gates and Dow.)
Dow, Herbert H., assignor to The Dow Chemical Company, Midland, Mich. Water seal. No. 957,314; May 10; Sp. p. 1772; Gaz. vol. 154; p. 309.
Dow Rim Company. (See Dow, Alexander, assignor.)
Dowden, John W., Reeves, assignor of one-half to A. A. Keonce, Lake Charles, La. Scissors. No. 959,481; May 31; Sp. p. 6613; Gaz. vol. 154; p. 1128.
Downey Machine Company. (See Downey, Richard F., assignor.)
Downey, Richard F., assignor to Downey Machine Company, Milwaukee, Wis. Vending-machine. No. 958,237; May 17; Sp. p. 3880; Gaz. vol. 154; p. 655.
Downey, Richard F., assignor to Automatic Card Seller Company, Milwaukee, Wis. Card-vending machine. No. 959,482; May 31; Sp. p. 6615; Gaz. vol. 154; p. 1129.
Drachmann, Max, Berlin, Germany. Copying-machine. No. 956,951; May 3; Sp. p. 967; Gaz. vol. 154; p. 155.
Drake, Julian F., Tracy, assignor of one-half to J. Kemna, Minneapolis, Minn. Detachable boiler-flue. No. 958,910; May 24; Sp. p. 5456; Gaz. vol. 154; p. 914.
Drake, William H., Hackettstown, N. J. Attachment for radiators. No. 958,995; May 24; Sp. p. 5608; Gaz. vol. 154; p. 942.
Draper Company. (See Eubanks, Sayers D., assignor.)
Draper Company. (See Moore, Frederic W., assignor.)
Draper Company. (See Rhoades, Alonzo E., assignor.)
Draper Company. (See Trombly, William C., assignor.)
Draper, William F. (See Northrop, Jonas, assignor.)
Dreher, Oscar, Stroudsburg, Pa. Paste-box. No. 958,480; May 17; Sp. p. 4527; Gaz. vol. 154; p. 741.
Dresner, Samuel, Chicago, Ill. Suit-case. No. 958,860; May 24; Sp. p. 5330; Gaz. vol. 154; p. 896.
Dressel Railway Lamp Works. (See Sanderson, Edward S., assignor.)
Dringman, Daniel. (See Voll and Dringman.)
Drinkwater, Edgar L., Chicago, Ill. Door or window guard. No. 958,481; May 17; Sp. p. 4529; Gaz. vol. 154; p. 741.
Driscoll, Daniel A. (See Quinn and Clifford, assignors.)
Droitcour, Michael A., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill. Inking mechanism for printing-presses. No. 960,004; May 31; Sp. p. 7760; Gaz. vol. 154; p. 1307.
Droitcour, Michael A., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill. Printing cylinder and plate. No. 960,005; May 31; Sp. p. 7762; Gaz. vol. 154; p. 1308.
Droitcour, Michael A., assignor to Miehle Printing Press and Manufacturing Company, Chicago, Ill. Plate-making machine. No. 960,006; May 31; Sp. p. 7764; Gaz. vol. 154; p. 1308.
Droitcour, Michael A., assignor to Miehle Printing Press and Manufacturing Company, Chicago, Ill. Sheet-delivery mechanism for printing-presses. No. 960,007; May 31; Sp. p. 7775; Gaz. vol. 154; p. 1309.
Droitcour, Michael A., assignor to Miehle Printing Press and Manufacturing Company, Chicago, Ill. Flexible printing-plate and means for securing the same. No. 960,218; May 31; Sp. p. 8196; Gaz. vol. 154; p. 1380.
Droitcour, Michael A., assignor to Miehle Printing Press and Manufacturing Company, Chicago, Ill. Flexible printing-plate. No. 960,219; May 31; Sp. p. 8199; Gaz. vol. 154; p. 1380.
Druck, Charles, Shaw, Oreg. Combination-tool. No. 957,044; May 3; Sp. p. 1173; Gaz. vol. 154; p. 186.
Drummond, George, Los Angeles, Cal. Oil-gas generator and burner. No. 958,861; May 24; Sp. p. 5331; Gaz. vol. 154; p. 896.
Drury, John, London, England. Crank. No. 958,104; May 17; Sp. p. 3616; Gaz. vol. 154; p. 610.
Du Belle, Charles S., Williamsport, Pa. Electrically-operated type-writer. No. 956,798; May 3; Sp. p. 637; Gaz. vol. 154; p. 101.
Du Brau, Herman, Baltimore, Md. Painting apparatus. No. 957,501; May 10; Sp. p. 1249; Gaz. vol. 154; p. 372.
Duc, Henry A., Jr., Charleston, S. C. Apparatus for propelling vessels by hydraulic pressure. No. 958,996; May 24; Sp. p. 5610; Gaz. vol. 154; p. 942.
Ducharme, William, Johnstown, Pa. Wrench. No. 959,322; May 24; Sp. p. 6278; Gaz. vol. 154; p. 1050.
Duckett, Edward C., and F. B. Lloyd, Spokane, Wash. Gopher-exterminator. No. 957,458; May 10; Sp. p. 2062; Gaz. vol. 154; p. 357.
Duckwitz, William F., Cleveland, Ohio. Fuse-plug. No. 959,208; May 24; Sp. p. 6054; Gaz. vol. 154; p. 1012.
Duesler, Francis H., Schenectady, N. Y. Music binder and carrier. No. 957,459; May 10; Sp. p. 2063; Gaz. vol. 154; p. 358.
Duff, Frank. (See Webster and Duff.)
Dufva, Axel E. (See Dufva, Knut O. and A. E.)
Dufva, Knut O. and A. E., assignors of one-third to F. Widmark, St. Paul, Minn. Grease-cup. No. 956,761; May 3; Sp. p. 561; Gaz. vol. 154; p. 90.
Dukesmith, Frank H., Meadville, Pa., assignor to The General Railway Equipment Company. Air-brake signaling device. No. 959,122; May 24; Sp. p. 5871; Gaz. vol. 154; p. 984.
Dukesmith, Frank H., Meadville, Pa., assignor to The General Railway Equipment Company. Air-brake-testing apparatus. No. 959,123; May 24; Sp. p. 5872; Gaz. vol. 154; p. 984.
Dukesmith, Frank H., Meadville, Pa., assignor to The General Railway Equipment Company. Apparatus for testing air-brakes. No. 959,124; May 24; Sp. p. 5876; Gaz. vol. 154; p. 984.
Dukesmith, Frank H., Meadville, Pa., assignor to J. H. Iselin, New York, N. Y. Air-brake-testing system. No. 959,209; May 24; Sp. p. 6056; Gaz. vol. 154; p. 1012.
Dunavant, Everett S., Louisville, Ky., assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Mold and operating mechanism for type-machines. No. 959,323; May 24; Sp. p. 6280; Gaz. vol. 154; p. 1051.
Dunbar, Thomas, assignor to The Pullman Company, Chicago, Ill. Antitelescoping construction for cars. No. 956,799; May 3; Sp. p. 644; Gaz. vol. 154; p. 102.
Duncan, Charles H., Erie, Pa. Closet-flushing device. No. 958,734; May 24; Sp. p. 5021; Gaz. vol. 154; p. 850.
Duncan, Joseph S., assignor to Addressograph Company, Chicago, Ill. Type-setting case. No. 956,691; May 3; Sp. p. 422; Gaz. vol. 154; p. 67.
Duncan, Joseph S., assignor to Addressograph Company, Chicago, Ill. Type-holder. No. 956,692; May 3; Sp. p. 425; Gaz. vol. 154; p. 67.
Duncan, Joseph S., assignor to Addressograph Company, Chicago, Ill. Printing-plate. No. 959,725; May 31; Sp. p. 7124; Gaz. vol. 154; p. 1209.
Duncan, William M., Alton, Ill. Ignition-arch for furnaces. No. 958,379; May 17; Sp. p. 4327; Gaz. vol. 154; p. 706.
Duncanson, William A., Boston, Mass. Surge-reliever or safety device for tow-lines. No. 957,315; May 10; Sp. p. 1774; Gaz. vol. 154; p. 310.
Dungan, George W., Strasburg, Pa. Jar-closure. No. 959,848; May 31; Sp. p. 7393; Gaz. vol. 154; p. 1252.
Dunkel, Rudolph, Boston, Mass. Steam-generator. No. 958,606; May 17; Sp. p. 4778; Gaz. vol. 154; p. 783.
Dunlap, William P., Maquoketa, Iowa. Wagon-reach adjuster. No. 959,483; May 31; Sp. p. 6619; Gaz. vol. 154; p. 1129.
Dunn, William L., Gaviota, Cal. Combination casing-wrench. No. 958,698; May 17; Sp. p. 4944; Gaz. vol. 154; p. 812.
Dunne, Ralph, Dunedin, New Zealand. Miter-box. No. 957,871; May 17; Sp. p. 2908; Gaz. vol. 154; p. 527.
Dunstone, James, Dollar Bay, Mich. Treating metallic slimes. No. 956,800; May 3; Sp. p. 645; Gaz. vol. 154; p. 102.
Dunton, John C., Grand Rapids, Mich. Manufacturing brick. No. 958,997; May 24; Sp. p. 5614; Gaz. vol. 154; p. 943.
Dupont, John B. P., Springfield, Mass. Guard for chimney-thimbles. No. 958,482; May 17; Sp. p. 4530; Gaz. vol. 154; p. 742.
Dupuis, Charles, Vincennes, France. Projection apparatus. No. 957,502; May 10; Sp. p. 2151; Gaz. vol. 154; p. 372.
Durand, Arthur F., Chicago, Ill. Safety-razor. No. 958,699; May 17; Sp. p. 4945; Gaz. vol. 154; p. 812.
Durfee, Lydia. (See Bean, Joseph A., assignor.)
Durham, John F., McKittrick, Cal. Pump for wells. No. 958,862; May 24; Sp. p. 5333; Gaz. vol. 154; p. 897.
Durkee, John, Clay Center, Nebr. Hay-stacker. No. 958,911; May 24; Sp. p. 5467; Gaz. vol. 154; p. 914.
Duryea, James F., and W. M. Remington, Springfield, Mass. Clutch mechanism. No. 957,602; May 10; Sp. p. 2337; Gaz. vol. 154; p. 406.
Dwight, Arthur S., San Luis Potosi, Mexico. Smelting ores. No. 959,484; May 31; Sp. p. 6620; Gaz. vol. 154; p. 1129.
Dyck, George E., Chicago, Ill., assignor to Schwarzschild & Sulzberger Co., New York, N. Y. Curing hair. No. 957,316; May 10; Sp. p. 1775; Gaz. vol. 154; p. 310.

Dyer, James B. (See Scott, John H., assignor.)
Dykstra, Henry, Spring Valley township, McCook county, S. D. Feeding attachment for fanning-mills. No. 958,488; May 17; Sp. p. 4532; Gaz. vol. 154; p. 742.
Dyott, George M., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Electrode for arc-lamps. No. 956,519; May 3; Sp. p. 22; Gaz. vol. 154; p. 7.
Dyson, Alfred H., Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company. Party-line call-register for automatic telephone systems. No. 958,863; May 24; Sp. p. 5334; Gaz. vol. 154; p. 897.
Dyson, Alfred H., Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company. Automatic telephone system. No. 959,485; May 31; Sp. p. 6624; Gaz. vol. 154; p. 1130.
E. Kirstein Sons Company. (See Rapp, Theodore, assignor.)
E. C. Stearns & Co. (See Raymond, Harry, assignor.)
E. F. Rogers & Company. (See Woodward, Albert L., assignor.)
E. I. du Pont de Nemours Powder Company. (See Claessen, Conrad P. H., assignor.)
E. J. Manville Machine Company, The. (See Campbell, Andrew C., assignor.)
E. J. Manville Machine Company, The. (See Campbell and Cummins, assignors.)
E. R. Thomas Motor Company. (See Thomas, Edwin L., assignor.)
Eagar, George T., Ballston Spa, N. Y., assignor to General Electric Company. Motor-controlling device. No. 958,330; May 17; Sp. p. 4329; Gaz. vol. 154; p. 707.
Eagle Manufacturing Company. (See Flambo, Charles C., assignor.)
Eaton, Charles B., Belfast, Me. Bed-hammock. No. 960,078; May 31; Sp. p. 7936; Gaz. vol. 154; p. 1332.
Eaton, Kennie T. (See Thatcher, William C., assignor.)
Eaton, Robert E., Union, Oreg., assignor of one-fourth to W. Wright, Denver, Colo., and one-fourth to C. W. Jones, Union, Oreg. Closure for fishing or other baskets. No. 956,801; May 3; Sp. p. 647; Gaz. vol. 154; p. 103.
Eau Claire Mill Supply Co. (See Bostwick, Arthur J., assignor.)
Eaveneon, Howard N. (See O'Toole and Eavenson.)
Ebeling, Moritz, and J. Hersog, Barmen, Germany. Plaiting and bobbin machine. No. 957,317; May 10; Sp. p. 1778; Gaz. vol. 154; p. 310.
Economic Loom Company. (See Hunt, Robert H. H., assignor.)
Edelen, Benjamin M., Jr., Bryantown, Md. Plow. No. 957,045; May 3; Sp. p. 1176; Gaz. vol. 154; p. 186.
Eden, Francis R., Montclair, N. J. Cutting or trimming machine for sheet metal. No. 957,942; May 17; Sp. p. 3074; Gaz. vol. 154; p. 551.
Edenharter, Frank T. (See Stiggleman, James H., assignor.)
Edlund, John A., assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 959,125; May 24; Sp. p. 5880; Gaz. vol. 154; p. 985.
Edmands, Isaac R., Niagara Falls, assignor to Electro Metallurgical Company, New York, N. Y. Electrode support and conductor. No. 959,486; May 31; Sp. p. 6635; Gaz. vol. 154; p. 1130.
Edstrom, Karl A. (See Ainsworth, Putnam, and Edstrom.)
Edwards, Arthur W., Chatham, Mass. Motor-cycle attachment. No. 958,607; May 17; Sp. p. 4774; Gaz. vol. 154; p. 783.
Edwards & Company. (See Miller, Christian, assignor.)
Edwards, William, Easton, Pa. Umbrella. No. 959,127; May 24; Sp. p. 5885; Gaz. vol. 154; p. 986.
Edwin B. Stimpson Company. (See Stimpson, Edwin B., assignor.)
Ehrsam, William J., *et al.*, trustees. (See Morscher, Lawrence N., assignor.)
Eichhorn, George J., Dubuque, Iowa. Box. No. 960,220; May 31; Sp. p. 8200; Gaz. vol. 154; p. 1381.
Eichman, Emil, Detroit, Mich. Flushing-tank. No. 958,105; May 17; Sp. p. 3620; Gaz. vol. 154; p. 610.
Elrich, Gustav, Hardheim, Germany. Mixing-machine. No. 958,608; May 17; Sp. p. 4775; Gaz. vol. 154; p. 783.
Eisenhart, Henry W., assignor to A. B. Farquhar Company, Limited, York, Pa. Pivot-axle cultivator. No. 958,609; May 17; Sp. p. 4776; Gaz. vol. 154; p. 784.
Eisenhuth, James E., assignor to W. J. Herscher, Buckingham, Ill. Overhead carrier. No. 959,487; May 31; Sp. p. 6636; Gaz. vol. 154; p. 1131.
Eitner, Berthold. (See Gohlke and Eitner.)
Ekedahl, Erik A., assignor to Art Metal Construction Company, Jamestown, N. Y. Door-frame. No. 958,795; May 24; Sp. p. 5182; Gaz. vol. 154; p. 872.
Ekedahl, Melcher. (See Beskow and Ekedahl.)
Ekelund, John A., assignor of one-half to J. F. Williamson, Minneapolis, Minn. Toy base-ball-game apparatus. No. 950,427; May 24; Sp. p. 6470; Gaz. vol. 154; p. 1084.
Elbel, Karl, assignor to Kalle & Company, Aktiengesellschaft, Biebrich, Germany. Nitro-ortho-oxy-azo colors and making same. No. 958,912; May 24; Sp. p. 5459; Gaz. vol. 154; p. 915.
Electrelle Company. (See Smith, Irving B., assignor.)
Electric Goods Manufacturing Company. (See Thomson, Henry C., assignor.)
Electric Machinery Company. (See Hibbard, Charles T., assignor.)
Electric Railway Improvement Company, The. (See Cleveland, William B., assignor.)
Electric Signagraph and Semaphore Co., The. (See Webb, Jean F., Jr., assignor.)
Electro Metallurgical Company. (See Edmands, Isaac R., assignor.)
Elliott, Alvin D., deceased; M. E. Elliott, Lawrence, Mass., executrix, assignor to United Shoe Machinery Company, Paterson, N. J. Shield for tools. No. 956,573; May 3; Sp. p. 146; Gaz. vol. 154; p. 25.
Elliott, David J., Monte Vista, Colo. Gang-plow. No. 957,149; May 3; Sp. p. 1376; Gaz. vol. 154; p. 220.
Elliott-Fisher Company. (See Turley, Patrick H., assignor.)
Elliott, Mary E., executrix. (See Elliott, Alvin D.)
Ellis, Carleton, Larchmont, N. Y., assignor to Fulton Chemical Company. Linen-smoother. No. 956,693; May 3; Sp. p. 426; Gaz. vol. 154; p. 68.
Ellis, Charles P. (See O'Donohoe, Maurice P., assignor.)
Ellis, Clifford A., Bayonne, N. J., assignor to Standard Oil Company of New York. Valve. No. 957,318; May 10; Sp. p. 1779; Gaz. vol. 154; p. 310.
Ellis, Ed. (See Dole and Ellis.)
Ellis, Ferrand F., Oneida, N. Y. Automatic lubricator. No. 956,694; May 3; Sp. p. 428; Gaz. vol. 154; p. 68.
Ellis, Frank H., Chicago, Ill. Spring-hinge. No. 957,603; May 10; Sp. p. 2339; Gaz. vol. 154; p. 406.
Ellsworth, John M. (See Fay and Ellsworth.)
Elsässer, Emil, Barmen-Rittershausen, Germany. Machine for spinning viscose liquids. No. 957,460; May 10; Sp. p. 2065; Gaz. vol. 154; p. 358.
Elsässische Maschinenbau-Gesellschaft. (See Frikart, Eugen, assignor.)
Elwell, Braden L., and W. Grimm, assignors to Interlocking Fence Company, Morton, Ill. Wire fence. No. 958,238; May 17; Sp. p. 3883; Gaz. vol. 154; p. 656.
Elwood Iron Works, The. (See Bond, George W., assignor.)
Ely, Lewellen A., Dayton, Ohio, assignor of one-fourth to W. E. Ennis and L. G. Ennis, Saginaw, Mich. Card-game apparatus. No. 957,872; May 17; Sp. p. 2910; Gaz. vol. 154; p. 527.
Elyria Iron and Steel Company. (See McKee, Willis, assignor.)
Emanuel, Philip A., Aiken, S. C. Making aluminum fluorid and other aluminum compounds. No. 957,754; May 10; Sp. p. 2658; Gaz. vol. 154; p. 458.
Emanuel, Philip A., Aiken, S. C. Treating ores. No. 957,755; May 10; Sp. p. 2661; Gaz. vol. 154; p. 458.
Emanuel, Philip A., Aiken, S. C. Treating ores. No. 957,756; May 10; Sp. p. 2665; Gaz. vol. 154; p. 459.
Emanuel, Philip A., Aiken, S. C. Making sodium aluminate. No. 957,848; May 10; Sp. p. 2846; Gaz. vol. 154; p. 488.
Emanuel, Philip A., Aiken, S. C. Gas-making apparatus. No. 959,324; May 24; Sp. p. 6286; Gaz. vol. 154; p. 1051.
Emden, Paul, and W. Fritz, Berlin, Germany. Means for securing turbine-blades. No. 958,239; May 17; Sp. p. 3884; Gaz. vol. 154; p. 656.
Emden, Victor, and F. H. Dearborn, New York, N. Y. Automatic stopping device for motor-vehicles. No. 956,952; May 3; Sp. p. 902; Gaz. vol. 154; p. 155.
Emerick, George B. F., Joliet, Ill. Feed-bag. No. 957,046; May 3; Sp. p. 1178; Gaz. vol. 154; p. 187.
Emerson, Charles J., Providence, R. I. Charging device for calorimeter-bombs. No. 960,488; May 31; Sp. p. 6638; Gaz. vol. 154; p. 1131.
Emerson, Merton L., Braintree, Mass. Carrier for pneumatic-despatch-tube apparatus. No. 958,240; May 17; Sp. p. 3885; Gaz. vol. 154; p. 656.
Emmett, John F., Adrian, Wash. Disk jointer for plows. No. 959,325; May 24; Sp. p. 6288; Gaz. vol. 154; p. 1052.
Empire Paper Company. (See Pulsifer, John R., assignor.)
Emrich, Alfred, Pforzheim, Germany. Bracelet-fastening. No. 960,079; May 31; Sp. p. 7937; Gaz. vol. 154; p. 1333.
Emrich, Alfred, assignor to Firm of I. Emrich, Pforzheim, Germany. Cigar-cutter. No. 958,610; May 17; Sp. p. 4779; Gaz. vol. 154; p. 784.
Emrich, Firm of I. (See Emrich, Alfred, assignor.)
Emrick, Artenaous J. (See Heller and Emrick.)
Emslie, Paula C., Boston, Mass. Alarm device for culinary utensils. No. 957,663; May 10; Sp. p. 2473; Gaz. vol. 154; p. 427.
Enck, Charles E. (See Vanosdall and Enck.)
Engelhardt & Sons, F. (See Hobart, Adam J., assignor.)
Engert, George J., and R. D. Burnham, Spokane, Wash. Sash-lock. No. 958,864; May 24; Sp. p. 5346; Gaz. vol. 154; p. 897.
Engineering Instruments Limited. (See Garside, Edmund, assignor.)
English, John C., Camden, N. J., assignor to Victor Talking Machine Company. Recording and reproducing sounds. No. 957,195; May 10; Sp. p. 1487; Gaz. vol. 154; p. 266.
English, William M., and H. M. Lichtenstein, San Francisco, Cal. Antiseptic telephone-mouthpiece. No. 956,953; May 3; Sp. p. 904; Gaz. vol. 154; p. 156.
Ennis, Lillie G., *et al.* (See Ely, Lewellen A., assignor.)
Ennis, William H., *et al.* (See Ely, Lewellen A., assignor.)
Eno, Frank F., Forest Hills, assignor to T. G. Plant, Boston, Mass. Counter-guard for heel-shaving machines. No. 957,943; May 17; Sp. p. 3075; Gaz. vol. 154; p. 551.
Enterprise Machine Manufacturing Company. (See Overly, Charles F., assignor.)

Entrekin, Raymond W., Craig, Nebr. Saw-setting machine. No. 959,326; May 24; Sp. p. 6289; Gaz. vol. 154; p. 1052.
Epstein, Barnett, New York, N. Y. Elevator. No. 960,827; May 24; Sp. p. 6292; Gaz. vol. 154; p. 1052.
Erdmann, Charles J., St. Louis, Mo. Malting apparatus. No. 957,664; May 10; Sp. p. 2475; Gaz. vol. 154; p. 428.
Erickson, Anton, Portland, Oreg. Tailor's level. No. 957,150; May 3; Sp. p. 1378; Gaz. vol. 154; p. 221.
Ericson, Joseph S., Burbank, Cal. Locking-faucet. No. 958,735; May 24; Sp. p. 5023; Gaz. vol. 154; p. 851.
Esders, John H., St. Joseph, Mo. Feed-bag. No. 958,611; May 17; Sp. p. 4779; Gaz. vol. 154; p. 784.
Eubanks, Sayers D., Durham, N. C. Picker-stick check for looms. No. 957,047; May 3; Sp. p. 1179; Gaz. vol. 154; p. 187.
Eubanks, Sayers D., West Durham, N. C., assignor to Draper Company, Hopedale, Mass. Thin-place-detecting mechanism for looms. No. 956,574; May 3; Sp. p. 140; Gaz. vol. 154; p. 25.
Evans, Arthur B., and G. C. H. Wichmann, Leeds, England. Rotary printing-machine. No. 958,484; May 17; Sp. p. 4534; Gaz. vol. 154; p. 742.
Evans, Jesse C., and P. G. Hill, Lumberton, N. C. Rail chair and coupling. No. 958,241; May 17; Sp. p. 3886; Gaz. vol. 154; p. 656.
Evans, John D., Chesterfield, S. C. Fly-net. No. 959,925; May 31; Sp. p. 7568; Gaz. vol. 154; p. 1279.
Evans, Thomas R., and L. W. Young, assignors to Macbeth-Evans Glass Company, Pittsburg, Pa. Packing device. No. 959,459; May 31; Sp. p. 6640; Gaz. vol. 154; p. 1132.
Evans, William V., and H. C. Gordon, San Diego, Cal. Oil-can. No. 960,008; May 31; Sp. p. 7779; Gaz. vol. 154; p. 1309.
Eveleth, Charles E., Schenectady, N. Y., assignor to General Electric Company. Circuit-breaker-retarding device. No. 957,319; May 10; Sp. p. 1782; Gaz. vol. 154; p. 311.
Evenson, Thomas. (See Smith, Edward H., assignor.)
Everett, Thomas L., Fairfield, Iowa. Railway-tie. No. 959,490; May 31; Sp. p. 6641; Gaz. vol. 154; p. 1132.
Evers, Ferdinand, Dusseldorf, Germany. Making paper and similar material pliable. No. 957,196; May 10; Sp. p. 1490; Gaz. vol. 154; p. 266.
Eviston, Rosa, Indianapolis, Ind. Combination sewing-machine attachment. No. 959,126; May 24; Sp. p. 5883; Gaz. vol. 154; p. 985.
Ewer, Thomas E., Fort Des Moines, Iowa. Whiffletree-hook. No. 956,630; May 3; Sp. p. 262; Gaz. vol. 154; p. 44.
Ewert, A. W., *et al.* (See Miller, Calvin P., assignor.)
Eyermann, Wilhelm H., Deutsch-Wilmersdorf, near Berlin, Germany. Means for balancing turbines and pumps. No. 958,612; May 17; Sp. p. 4781; Gaz. vol. 154; p. 785.
Eynon, Thomas, Chicago, Ill. Milling-tooth. No. 959,328; May 24; Sp. p. 6294; Gaz. vol. 154; p. 1053.
F. Wyatt Manufacturing Company, The. (See Wyatt, Frank, assignor.)
F. H. Lovell & Company. (See Callender, James H., assignor.)
Fahlstrom, Johan E., assignor of one-half to C. B. Hickox, Bridgeport, Conn. Spare-tire holder for automobiles. No. 956,954; May 3; Sp. p. 995; Gaz. vol. 154; p. 156.
Fairbanks, Alva J. (See Buss and Fairbanks.)
Fairchild, William G., Savannah, Ga. Calendar. No. 958,106; May 17; Sp. p. 3621; Gaz. vol. 154; p. 610.
Falk, Salomon, London, England. Means for holding globes or shades in the galleries of electric-light, gas, and other fittings. No. 958,381; May 17; Sp. p. 4331; Gaz. vol. 154; p. 707.
Falk, Walter C., Bluffton, Ind. Automobile transmission-gearing. No. 958,242; May 17; Sp. p. 3890; Gaz. vol. 154; p. 656.
Falkoe, Theodore, Aurora, Ill. Coaster-brake. No. 958,796; May 24; Sp. p. 5133; Gaz. vol. 154; p. 873.
Falvey, Thomas, London, England. Steam-turbine. No. 957,151; May 3; Sp. p. 1379; Gaz. vol. 154; p. 221.
Farbenfabriken vorm. Friedr. Bayer & Co. (See Bauer and Herre, assignors.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See Berchelmann, Wilhelm, assignor.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See Delnet, Joseph, assignor.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See Grüttefien, Wilhelm, assignor.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See Mieg, Walter, assignor.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See Runkel and Hersberg, assignors.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See Taub, Ludwig, assignor.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See Thomaschewski, Paul, assignor.)
Farbwerke vorm. Meister Lucius & Brüning. (See Schmidt and Bryk, assignors.)
Farbwerke vorm. Meister, Lucius & Brüning. (See Schmidt and Krünslein, assignors.)
Farbwerke vorm. Meister Lucius & Brüning. (See Scholl, Franz, assignor.)
Farmer, Fred B., St. Paul, Minn., and W. V. Turner, Wilkinsburg, assignors to The Westinghouse Air Brake Company, Pittsburg, Pa. Fluid-pressure brake. No. 959,128; May 24; Sp. p. 5887; Gaz. vol. 154; p. 986.
Farmer, George B. (See Matheson, Charles A., assignor.)
Farnsworth, Henry T., Altavista, Va. Water-motor. No. 959,491; May 31; Sp. p. 6642; Gaz. vol. 154; p. 1132.
Farrer, Charles S., Dunmore, Pa. Slate-picker. No. 957,320; May 10; Sp. p. 1784; Gaz. vol. 154; p. 311.
Farrington & Whitney. (See Cruikshank and Bock, assignors.)
Farwell, Fay O., assignor of one-half to The Adams Company, Dubuque, Iowa. Milling-machine. No. 958,243; May 17; Sp. p. 3891; Gaz. vol. 154; p. 657.
Fauber, T. O. (See Nix, John E., assignor.)
Fauids, Joseph E. (See Garnett, William B., assignor.)
Faulkner, Charles H., assignor to Champion Metal Weather Strip and Parting Bead Company, Boston, Mass. Weather-strip. No. 957,549; May 10; Sp. p. 2247; Gaz. vol. 154; p. 389.
Fawcett, John W., assignor of one-half to W. B. J. Johnson, Lawrenceburg, Ind. Lathe-dog. No. 958,382; May 17; Sp. p. 4332; Gaz. vol. 154; p. 708.
Fay, Thomas J., New York, N. Y., and J. M. Ellsworth, Bernardsville, N. J. Carburetor. No. 960,080; May 31; Sp. p. 7938; Gaz. vol. 154; p. 1333.
Fay, Waldo G., Pelham, N. Y. Eyeglass-mount. No. 958,485; May 17; Sp. p. 4536; Gaz. vol. 154; p. 743.
Fear, Charles E., Indianapolis, Ind. Horseshoe appliance. No. 956,955; May 3; Sp. p. 996; Gaz. vol. 154; p. 156.
Fearon, James J. and T. E., Philadelphia, Pa., assignors, by mesne assignments, to The Banding Machine Company, Wilmington, Del. Cigar-banding machine. No. 958,244; May 17; Sp. p. 3896; Gaz. vol. 154; p. 657.
Fearon, James J. and T. E., Philadelphia, Pa., assignors, by mesne assignments, to The Banding Machine Company, Wilmington, Del. Device for regulating delivery of plastic substances. No. 960,081; May 31; Sp. p. 7941; Gaz. vol. 154; p. 1333.
Fearon, Thomas E. (See Fearon, James J. and T. E.)
Feld, Max, and D. Froehlich, New York, N. Y. Dust-pan. No. 959,926; May 31; Sp. p. 7569; Gaz. vol. 154; p. 1279.
Feldmann, Charles H., Portland, Oreg. Removable water-holding arch-plate. No. 957,856; May 10; Sp. p. 2806; Gaz. vol. 154; p. 491.
Feldt, Ferdinand J., assignor to J. A. Engel & Company, Peoria, Ill. Wagon-jack. No. 956,631; May 3; Sp. p. 263; Gaz. vol. 154; p. 44.
Fentress, Frank P., Tacoma, Wash. Two-speed gearing. No. 958,797; May 24; Sp. p. 5185; Gaz. vol. 154; p. 873.
Ferguson, George W., Springfield, Mo. Automatic photographic-printing machine. No. 957,665; May 10; Sp. p. 2478; Gaz. vol. 154; p. 428.
Ferguson, George W., Plymouth, Wis. Jointed figure. No. 957,666; May 10; Sp. p. 2480; Gaz. vol. 154; p. 429.
Ferguson, William H., La Grande, Oreg. Rotary snow-plow. No. 957,503; May 10; Sp. p. 2153; Gaz. vol. 154; p. 372.
Ferranti, Sebastian Z. de, Hampstead, London, England. Combustion-turbine. No. 960,160; May 31; Sp. p. 8079; Gaz. vol. 154; p. 1339.
Ferranti, Sebastian Z. de, Grindleford Bridge, near Sheffield, England. Manufacture of strip material suitable for the blades of turbines, turbo-pumps, and the like. No. 960,161; May 31; Sp. p. 8081; Gaz. vol. 154; p. 1350.
Ferris, Edgar S., Holyoke, Mass. Shaft-alining device. No. 958,736; May 24; Sp. p. 5026; Gaz. vol. 154; p. 851.
Ferris, Henry, Ardoch, N. D. Device for shocking grain by hand. No. 959,492; May 31; Sp. p. 6645; Gaz. vol. 154; p. 1133.
Fetty, Leon, Hutchinson, Kans. Crude-oil burner. No. 956,695; May 3; Sp. p. 430; Gaz. vol. 154; p. 68.
Fetzer, Allen H., Galion, Ohio. Universal joint. No. 959,129; May 24; Sp. p. 5890; Gaz. vol. 154; p. 987.
Fiedler, Lothar, Stoke Newington, London, England. Battery charging and discharging system. No. 957,321; May 10; Sp. p. 1787; Gaz. vol. 154; p. 312.
Field, James E., *et al.* (See Weigand, Alfred, assignor.)
Field, Wallace L., West De Pere, Wis. Metal-sawing machine. No. 958,614; May 17; Sp. p. 4784; Gaz. vol. 154; p. 785.
Finch, Charles M., and F. A. Koetits, assignors to Finch Jail Building and Metal Company, San Francisco, Cal. Jail-door-operating device. No. 959,329; May 24; Sp. p. 6297; Gaz. vol. 154; p. 1053.
Finch Jail Building and Metal Company. (See Finch and Koetitz, assignors.)
Finch, Stanley W., Washington, D. C. Toy building-block. No. 956,632; May 3; Sp. p. 267; Gaz. vol. 154; p. 45.
Finnegan, George H., Fairbanks, Alaska. Steam thawing-tool. No. 958,737; May 24; Sp. p. 5028; Gaz. vol. 154; p. 852.
Fischer, Jakob, Zurich, Switzerland. Gas apparatus. No. 958,245; May 17; Sp. p. 3903; Gaz. vol. 154; p. 658.
Fischer, Moris, New York, N. Y. Fire-escape apparatus. No. 958,383; May 17; Sp. p. 4335; Gaz. vol. 154; p. 708.
Fischer, Robert E., and M. Weecher, Elberfeld, Germany. Stacking mechanism for printing, folding, or similar paper-treating machines. No. 958,798; May 24; Sp. p. 5186; Gaz. vol. 154; p. 874.
Fischer, Robert E., and M. Weecher, Elberfeld, Germany. Gumming device for envelop, bag, and like making machines. No. 959,493; May 31; Sp. p. 6647; Gaz. vol. 154; p. 1133.
Fischer, Theodore J., Chicago, Ill. Culinary implement. No. 959,210; May 24; Sp. p. 6053; Gaz. vol. 154; p. 1013.
Fish, Benjamin F., Chicago, Ill. Fruit-slicing machine. No. 959,726; May 31; Sp. p. 7125; Gaz. vol. 154; p. 1210.
Fisher, Albert, Holmfield, Manitoba, Canada. Cattle-guard for railways. No. 958,865; May 24; Sp. p. 5348; Gaz. vol. 154; p. 881.
Fisher, Alfred, Chicago, Ill. Furnace. No. 957,873; May 17; Sp. p. 2913; Gaz. vol. 154; p. 527.

Fisher, Alfred, Chicago, Ill. Metal-furnace. No. 958,384; May 17; Sp. p. 4337; Gaz. vol. 154; p. 708.
Fisher, George F., North Tonawanda, N. Y. Form for concrete building constructions. No. 957,414; May 10; Sp. p. 1974; Gaz. vol. 154; p. 342.
Fisher, George L., Omaha, Nebr. Casement-fastener. No. 959,494; May 31; Sp. p. 6648; Gaz. vol. 154; p. 1133.
Fisk, William B., Upton, Mass. Liquid-retainer. No. 959,495; May 31; Sp. p. 6650; Gaz. vol. 154; p. 1134.
Fitch, Fred H. (See Carlson, Adolph G., assignor.)
Fitzgerald, Jeremiah C., De Kalb, assignor to Smith Manufacturing Company, Chicago, Ill. Elevated track. No. 957,757; May 10; Sp. p. 2669; Gaz. vol. 154; p. 459.
Fitzgerald, William G., West Ealing, and J. G. Flood, Westcliffe-on-Sea, England. Submarine device for dredging and other similar purposes. No. 958,615; May 17; Sp. p. 4786; Gaz. vol. 154; p. 786.
Fitzgerald, William P., Easton, Pa. Bag. No. 958,385; May 17; Sp. p. 4341; Gaz. vol. 154; p. 709.
Fitzsimmons, James V. (See Hassing and Fitzsimmons.)
Flach, Philip T., Norwood, Pa. Brush-holder. No. 959,211; May 24; Sp. p. 6061; Gaz. vol. 154; p. 1013.
Flambo, Charles C., Kansas City, Kans., assignor to Eagle Manufacturing Company, Kansas City, Mo. Springtrip. No. 959,727; May 31; Sp. p. 7126; Gaz. vol. 154; p. 1210.
Fleigel, Benjamin, assignor to B. Fleigel Company, Boston, Mass. Guide for sewing-machines. No. 959,330; May 24; Sp. p. 6300; Gaz. vol. 154; p. 1053.
Fleming, Adrien S., and J. Curry, Vancouver, Wash.; said Fleming assignor to M. G. Fleming, Fort D. A. Russell, Wyo. Military field-table. No. 958,799; May 24; Sp. p. 5187; Gaz. vol. 154; p. 874.
Fleming, Daniel B., Hartford, Ark. Coffee-condenser. No. 958,616; May 17; Sp. p. 4789; Gaz. vol. 154; p. 786.
Fleming, Mabel G. (See Fleming and Curry, assignors.)
Fletcher, Joseph, Stoke Newington, assignor to C. W. Harrison, London, England. Stop-valve and the like. No. 959,726; May 31; Sp. p. 7128; Gaz. vol. 154; p. 1210.
Flick, Lorenz. (See Butler and Flick.)
Flindall, John, Chicago, Ill. Tilting-chair. No. 958,998; May 24; Sp. p. 5016; Gaz. vol. 154; p. 943.
Flinn, Richard J., Boston, Mass. Attachment for steam-traps. No. 959,927; May 31; Sp. p. 7570; Gaz. vol. 154; p. 1279.
Flood, John G. (See Fitzgerald and Flood.)
Flora, Ellsworth E., Chicago, Ill. Locking device for windows, transoms, or the like. No. 958,386; May 17; Sp. p. 4342; Gaz. vol. 154; p. 709.
Flower, Charles E., administrator. (See Flower, Samuel A.)
Flower, Samuel A., deceased, New York, N. Y.; C. E. Flower, administrator. Making a resilient fiber. No. 957,152; May 3; Sp. p. 1383; Gaz. vol. 154; p. 222.
Floyd, George G., Granite City, Ill., assignor to American Steel Foundries, New York, N. Y. Car-truck side frame and journal-box. No. 956,633; May 3; Sp. p. 271; Gaz. vol. 154; p. 45.
Floyd, George G., Granite, Ill., assignor, by mesne assignments, to Twinplex Manufacturing Company, St. Louis, Mo. Razor-blade sharpener. No. 959,496; May 31; Sp. p. 6651; Gaz. vol. 154; p. 1134.
Flynn, Olice A., Tacoma, Wash. Clown-doll. No. 958,387; May 17; Sp. p. 4343; Gaz. vol. 154; p. 709.
Flynt, Louis W. G., Rochester, N. Y., assignor to United Shoe Machinery Company, Paterson, N. J. Imitation-stitch machine. No. 958,913; May 24; Sp. p. 5460; Gaz. vol. 154; p. 915.
Foell, Charles A., Rockwell, Iowa. Tongue-truck. No. 960,082; May 31; Sp. p. 7943; Gaz. vol. 154; p. 1334.
Fogelmark, Carl J., Sr., Excelsior, Minn. Bailing mechanism. No. 960,221; May 31; Sp. p. 8201; Gaz. vol. 154; p. 1361.
Fogle, William E., Bath, N. Y. Swing for osteopathic tables. No. 957,758; May 10; Sp. p. 2671; Gaz. vol. 154; p. 459.
Foley, James F., Chicago, Ill. Machine for bundling or compressing broom-corn and the like. No. 958,866; May 24; Sp. p. 5349; Gaz. vol. 154; p. 898.
Foley, James F., Chicago, Ill. Wire-twisting machine. No. 960,162; May 31; Sp. p. 8084; Gaz. vol. 154; p. 1359.
Foote, Albert E., Berlin, Germany. Stereoscope. No. 959,331; May 24; Sp. p. 6303; Gaz. vol. 154; p. 1054.
Forbes, Charles S., assignor to High Speed Ring Company, Boston, Mass. Spinning-ring. No. 957,750; May 10; Sp. p. 2673; Gaz. vol. 154; p. 459.
Forchheimer, David S., White Plains, N. Y. Display-case. No. 957,461; May 10; Sp. p. 2069; Gaz. vol. 154; p. 350.
Ford, George H., Niagara Falls, N. Y. Stone-gatherer. No. 956,575; May 3; Sp. p. 150; Gaz. vol. 154; p. 26.
Ford, Joseph, Dunedin, New Zealand. Convertible perambulator. No. 957,874; May 17; Sp. p. 2917; Gaz. vol. 154; p. 528.
Fordice, Oscar, Los Angeles, Cal. Hydrocarbon-burner. No. 958,999; May 24; Sp. p. 5017; Gaz. vol. 154; p. 943.
Forgerson, Charles, Kansas City, Mo. Loose-leaf-book device. No. 959,849; May 31; Sp. p. 7396; Gaz. vol. 154; p. 1252.
Forgó, Stephan, New York, N. Y. Process and apparatus for making glassware. No. 958,613; May 17; Sp. p. 4782; Gaz. vol. 154; p. 785.
Forrer, Joseph D., Pittsburg, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa. Coil for dynamo-electric machines. No. 957,876; May 17; Sp. p. 2921; Gaz. vol. 154; p. 529.
Forrer, Joseph D., Pittsburg, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa. Armature-winding coil for dynamo-electric machines. No. 957,877; May 17; Sp. p. 2922; Gaz. vol. 154; p. 529.
Forsyth, James P., *et al.* (See Beahm, Peter, assignor.)
Foss, George F., Los Angeles, Cal. Cap for valve-stems for pneumatic tires. No. 958,867; May 24; Sp. p. 5354; Gaz. vol. 154; p. 899.
Foster, Charles B., and W. W. Glidden, Oak Park, Ill. Vacuum-cleaner. No. 959,720; May 31; Sp. p. 7132; Gaz. vol. 154; p. 1211.
Foster, Charles E., Rochester, N. Y. Electrical measuring instrument. No. 959,497; May 31; Sp. p. 6650; Gaz. vol. 154; p. 1134.
Foulke, John T., Richmond, Ind. Swivel-action cultivator attachment. No. 957,322; May 10; Sp. p. 1789; Gaz. vol. 154; p. 312.
Fountain, Robert, Banning, Cal. Fruit-gatherer. No. 959,332; May 24; Sp. p. 6304; Gaz. vol. 154; p. 1054.
Four Utensil Manufacturing Company. (See Sylvester, William, assignor.)
Fourman, Colonel E., Columbus, Ohio. Child's vehicle. No. 958,914; May 24; Sp. p. 5462; Gaz. vol. 154; p. 915.
Fournia, John, assignor of one-half to F. R. Greene, Albany, N. Y. Draft-equalizer for locomotive front ends. No. 959,333; May 24; Sp. p. 6305; Gaz. vol. 154; p. 1054.
Fowler, Albert C., St. Louis, Mo. Golf-club. No. 959,053; May 24; Sp. p. 5720; Gaz. vol. 154; p. 961.
Fowler, Joseph C., assignor, by mesne assignments, to J. R. Preston, Chicago, Ill. Machine for casting and setting individual type. No. 958,738; May 24; Sp. p. 5029; Gaz. vol. 154; p. 852.
Fowler, Josiah, Cambridge, Mass. Street-sweeping machine. No. 959,000; May 24; Sp. p. 5619; Gaz. vol. 154; p. 943.
Fowler, Samuel B., La Fayette, Ind. Telephone-exchange system. No. 959,498; May 31; Sp. p. 6658; Gaz. vol. 154; p. 1135.
Fox, George G., Kittanning, assignor of one-fourth to J. K. Johnston, Charleroi, Pa. Cooker. No. 956,802; May 3; Sp. p. 648; Gaz. vol. 154; p. 103.
Frame, George W., Fairfield, Iowa. Neck-yoke. No. 956,634; May 3; Sp. p. 273; Gaz. vol. 154; p. 45.
Francis, William P., Pensacola, Fla. Composite beam structure. No. 957,048; May 3; Sp. p. 1181; Gaz. vol. 154; p. 187.
Frankenhoff, Anthony G., Atchison, Kans. Lap-robe. No. 958,617; May 17; Sp. p. 4790; Gaz. vol. 154; p. 787.
Franklin Chemical Works. (See Ridenour, William E., assignor.)
Franklin, Robert M., Galveston, Tex. Bicycle. No. 958,618; May 17; Sp. p. 4791; Gaz. vol. 154; p. 787.
Frase, Albert J., Breckenridge, Minn. Flight attachment for conveyers. No. 956,520; May 3; Sp. p. 23; Gaz. vol 154; p. 7.
Fraw, Edward C., Jefferson, Ohio. Hopper-closet grappling-hook. No. 958,915; May 24; Sp. p. 5465; Gaz. vol. 154; p. 916.
Fray, John S., assignor to The John S. Fray Company, Bridgeport, Conn. Tool-chuck. No. 957,760; May 10; Sp. p. 2675; Gaz. vol. 154; p. 460.
Frayer, Lee A., and C. O. Howard, Columbus, Ohio, assignors, by mesne assignments, to The Kouns Manufacturing Company, Detroit, Mich. Rotary valve. (Reissue.) No. 13,108; May 3; Sp. p. 1437; Gaz. vol. 154; p. 230.
Frazee, Chester M., Hammond, Ind. Machine for making straw pads. No. 960,083; May 31; Sp. p. 7945; Gaz. vol. 154; p. 1334.
Frazier, Isaiah F., New Castle, Pa. Fence-post. No. 958,619; May 17; Sp. p. 4793; Gaz. vol. 154; p. 787.
Frederick Stearns & Company. (See Cadwell, Harry W., assignor.)
Frederiksen, Anton, Copenhagen, Denmark. Three-pronged safety-pin. No. 959,499; May 31; Sp. p. 6662; Gaz. vol. 154; p. 1135.
Freeman, Walter F., Tooting, London, England, assignor to Merkham Trading Company. Hair curler and waver. No. 957,462; May 10; Sp. p. 2070; Gaz. vol. 154; p. 359.
Fremont, Charles, Paris, France. Shaft or axle crank. No. 958,958; May 24; Sp. p. 5536; Gaz. vol. 154; p. 929.
French, John A. (See Baker and French.)
French, Marcus L., Onida, S. D. Trap. No. 957,049; May 3; Sp. p. 1182; Gaz. vol. 154; p. 187.
Frenot, Louis D., Newark, N. J. Nut-lock. No. 957,504; May 10; Sp. p. 2156; Gaz. vol. 154; p. 373.
Frick, John J., assignor to Thos. Devlin Manufacturing Co., Philadelphia, Pa. Pulley. No. 959,212; May 24; Sp. p. 6062; Gaz. vol. 154; p. 1014.
Friedenwald, Jacob H., Baltimore, Md. Auxiliary air-valve for charge-forming devices. No. 960,084; May 31; Sp. p. 7945; Gaz. vol. 154; p. 1334.
Friedrich, Richard, Glösa, near Chemnitz, Germany, and F. Hirsch, Vienna, Austria-Hungary. Making sodium sulfite and ammonium chlorid. No. 957,761; May 10; Sp. p. 2677; Gaz. vol. 154; p. 460.
Fries, John W., Winston Salem, N. C. Humidifier. No. 957,197; May 10; Sp. p. 1491; Gaz. vol. 154; p. 266.
Frikart, Eugen, assignor to Elektrische Maschinenbau-Gesellschaft, Mülhausen, Germany. Slide-valve motion for steam-engines. No. 957,762; May 10; Sp. p. 2679; Gaz. vol. 154; p. 460.
Fritz, John P., Paterson, N. J. Box-fastener. No. 958,916; May 24; Sp. p. 5466; Gaz. vol. 154; p. 916.

Fritz, Walter. (See Emden and Fritz.)
Froehlich, David. (See Feld and Froehlich.)
Frohlich, Richard C., Philadelphia, Pa. Turbine. No. 957,944; May 17; Sp. p. 3078; Gaz. vol. 154; p. 552.
Fromm, John F., Rochester, N. Y. Fish and fruit net. No. 956,803; May 3; Sp. p. 650; Gaz. vol. 154; p. 103.
Frominer, Rudolf, Budapest, Austria-Hungary. Automatic firearm. No. 959,002; May 24; Sp. p. 5621; Gaz. vol. 154; p. 944.
Frost, George W., Cleveland, Ohio. Hod. No. 957,604; May 10; Sp. p. 2341; Gaz. vol. 154; p. 407.
Frost, Charles L., Grand Rapids, Mich. Garment-supporting slide for wardrobes. No. 956,696; May 3; Sp. p. 433; Gaz. vol. 154; p. 68.
Frost, John B., assignor of one-half to F. Wenke, Buckley, Wash. Can-antibuckling press. No. 957,323; May 10; Sp. p. 1790; Gaz. vol. 154; p. 313.
Fry, Charley, Denver, Colo. Pounder. No. 956,697; May 3; Sp. p. 435; Gaz. vol. 154; p. 69.
Fry, Henry C., Rochester, Pa. Manufacture of glassware. No. 959,500; May 31; Sp. p. 6663; Gaz. vol. 154; p. 1135.
Fuld, Manes B., Baltimore, Md. Electric-battery cell. No. 960,222; May 31; Sp. p. 8203; Gaz. vol. 154; p. 1381.
Fuller, George and L., Bow, London, England. Apparatus for electrically heating running water. No. 957,667; May 10; Sp. p. 2483; Gaz. vol. 154; p. 429.
Fulloni, Roberto, Rome, Italy. Pigment with basis of calcium cyanamid and making same. No. 957,153; May 3; Sp. p. 1384; Gaz. vol. 154; p. 222.
Fulton Chemical Company. (See Ellis, Carleton, assignor.)
Fulton, Creed M., et al. (See Christmas, William W., assignor.)
Fulton, Louis B., assignor to The Chaplin-Fulton Manufacturing Company, Pittsburg, Pa. Feed-water regulator. No. 959,334; May 24; Sp. p. 6308; Gaz. vol. 154; p. 1055.
Furlong, Martin J., New Orleans, La. Means for unloading ships. No. 957,878; May 17; Sp. p. 2924; Gaz. vol. 154; p. 529.
Furlong, Patrick M., New York, N. Y. Plate-holder for use in bending electrotype-plates. No. 956,521; May 3; Sp. p. 24; Gaz. vol. 154; p. 7.
Furlong, Patrick M., New York, N. Y. Bending electrotype-plates. No. 956,522; May 3; Sp. p. 25; Gaz. vol. 154; p. 7.
Furrow, George W., Troy, Ohio. Hood for emery-wheels No. 956,762; May 3; Sp. p. 563; Gaz. vol. 154; p. 90.
Fynn, Valère A., London, England. Single-phase alternate-current motor and generator. No. 956,845; May 3; Sp. p. 748; Gaz. vol. 154; p. 119.
Fynn, Valère A., London, England. Alternating-current motor. No. 956,893; May 3; Sp. p. 857; Gaz. vol. 154; p. 136.
Fynn, Valère A., London, England. Alternating-current motor. No. 956,894; May 3; Sp. p. 858; Gaz. vol. 154; p. 137.
Fynn, Valère A., London, England. Alternating-current motor. No. 957,506; May 10; Sp. p. 2156; Gaz. vol. 154; p. 373.
Fynn, Valère A., London, England. Alternating-current motor. No. 957,668; May 10; Sp. p. 2486; Gaz. vol. 154; p. 430.
Gabel, Charles, Hawkeye, Iowa. Combined mop-head and wringer. No. 959,130; May 24; Sp. p. 5891; Gaz. vol. 154; p. 967.
Gabel, Charles, Hawkeye, Iowa. Mop-head. No. 959,131; May 24; Sp. p. 5892; Gaz. vol. 154; p. 987.
Gabel, George, Fairpoint, Ohio. Whip-socket lock. No. 959,501; May 31; Sp. p. 6665; Gaz. vol. 154; p. 1136.
Gabriel, George A., assignor to Bleach & Caustic Process Company, New York, N. Y. Treating electrolytic and similar solutions. No. 959,730; May 31; Sp. p. 7135; Gaz. vol. 154; p. 1211.
Gabrielson, Carl, assignor to L. C. Smith & Bros. Typewriter Company, Syracuse, N. Y. Ribbon mechanism for type-writing machines. No. 958,388; May 17; Sp. p. 4345; Gaz. vol. 154; p. 709.
Gabrielson, Carl, assignor to L. C. Smith & Bros. Typewriter Company, Syracuse, N. Y. Paper-finger for type-writing machines. No. 959,850; May 31; Sp. p. 7397; Gaz. vol. 154; p. 1253.
Gaeth, Paul, Cleveland, Ohio. Gearing. No. 957,763; May 10; Sp. p. 2681; Gaz. vol. 154; p. 461.
Gail, John F., assignor to The Simmons Manufacturing Company, Kenosha, Wis. Buffing-machine. No. 957,198; May 10; Sp. p. 1495; Gaz. vol. 154; p. 267.
Gail, John F., assignor to The Simmons Manufacturing Company, Kenosha, Wis. Machine for bending tubes. No. 957,199; May 10; Sp. p. 1503; Gaz. vol. 154; p. 267.
Gail, John F., assignor to The Simmons Manufacturing Company, Kenosha, Wis. Tube-bending machine. No. 957,200; May 10; Sp. p. 1506; Gaz. vol. 154; p. 268.
Gail, John F., assignor to The Simmons Manufacturing Company, Kenosha, Wis. Buffing machinery. No. 957,201; May 10; Sp. p. 1510; Gaz. vol. 154; p. 268.
Gail, John F., assignor to The Simmons Manufacturing Company, Kenosha, Wis. Bending machinery. No. 957,202; May 10; Sp. p. 1518; Gaz. vol. 154; p. 269.
Gail, John F., assignor to The Simmons Manufacturing Company, Kenosha, Wis. Link-forming machine. No. 957,203; May 10; Sp. p. 1523; Gaz. vol. 154; p. 269.
Gail, John F., assignor to The Simmons Manufacturing Company, Kenosha, Wis. Buffing-machine. No. 959,502; May 31; Sp. p. 6667; Gaz. vol. 154; p. 1136.
Galley, Stewart C. (See Holtmann, Charles F., assignor.)
Galbraith, David G., assignor to N. L. Galbraith, Mineral Wells, Tex. Paper-clip. No. 957,764; May 10; Sp. p. 2681; Gaz. vol. 154; p. 461.
Galbraith, Nannie L. (See Galbraith, David G., assignor.)
Gall, Julius, Ableman, Wis. Hanging cabinet. No. 957,824; May 10; Sp. p. 1792; Gaz. vol. 154; p. 313.
Galland, Joshua H., assignor of one-half to S. P. Smith, Florence, Colo. Fan. No. 959,003; May 31; Sp. p. 6679; Gaz. vol. 154; p. 1136.
Gallinek, Benno, New York, N. Y. Embroidery-stiletto. No. 957,154; May 3; Sp. p. 1385; Gaz. vol. 154; p. 222.
Gans, Edward, New York, N. Y. Emery-cloth file. No. 959,213; May 24; Sp. p. 6063; Gaz. vol. 154; p. 1014.
Garbarino, Victor, Malden, Mass. Steam-boiler regulator and feeder. No. 956,635; May 3; Sp. p. 276; Gaz. vol. 154; p. 45.
Garber, David N., assignor of one-half to A. V. Nyberg, Grand Marais, Mich. Bedstead. No. 958,107; May 17; Sp. p. 3624; Gaz. vol. 154; p. 611.
Garbo, Nils F., Minneapolis, Minn. Sales-book holder. No. 958,739; May 24; Sp. p. 5044; Gaz. vol. 154; p. 852.
Gardiner, James C., Montreal, Quebec, Canada. Multiple-signing machine. No. 957,765; May 10; Sp. p. 2682; Gaz. vol. 154; p. 461.
Gardner, Benjamin F., assignor to G. C. Richardson, Chicago, Ill. Tag. No. 958,620; May 17; Sp. p. 4794; Gaz. vol. 154; p. 788.
Gardner, Charles A. (See Mogg and Gardner.)
Gardner, Edwin L. (See Sherwood and Gardner.)
Gardner, Norman E., Easton, Pa. Machine for cleaning bags. No. 956,523; May 3; Sp. p. 27; Gaz. vol. 154; p. 8.
Garicsan, Anton, Chicago, Ill. Making a medicinal compound. No. 957,204; May 10; Sp. p. 1527; Gaz. vol. 154; p. 270.
Garland, William L., Llanerch, Pa., assignor to Safety Car Heating & Lighting Company. Steam-heating system. No. 959,504; May 31; Sp. p. 6681; Gaz. vol. 154; p. 1137.
Garner, Vernon. (See Dexter and Garner.)
Garnett, Lemuel E., Chanute, Kans. Pallet setting and adjusting tool. No. 956,956; May 3; Sp. p. 998; Gaz. vol. 154; p. 157.
Garnett, William B., assignor of one-half to J. E. Faulds, Tonkawa, Okla. Soap-dispenser. No. 957,669; May 10; Sp. p. 2492; Gaz. vol. 154; p. 430.
Garrett, Frank W., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Cover-fastener. No. 956,524; May 3; Sp. p. 29; Gaz. vol. 154; p. 8.
Garrett, Myers A., Chicago, Ill. Angle-cock and train-pipe connection. No. 957,325; May 10; Sp. p. 1793; Gaz. vol. 154; p. 313.
Garside, Edmund, assignor to Engineering Instruments Limited, Darlington, England. Starting-switch for electric motors. No. 957,945; May 17; Sp. p. 3080; Gaz. vol. 154; p. 552.
Garst, Julius. (See Lucier, David F., assignor.)
Gartrell, Charles B., Kansas City, Mo. Ironing-machine. No. 959,335; May 24; Sp. p. 6310; Gaz. vol. 154; p. 1055.
Garwood, Miles E., Georgetown, Wash. Runner-cutter and plant-topper. No. 959,003; May 24; Sp. p. 5623; Gaz. vol. 154; p. 945.
Gatch, Milton W. (See Melish and Gatch.)
Gates, Walter S., and H. H. Dow, Midland, Mich., assignors, by mesne assignments, to The Ontario Nickel Company, Limited, Worthington, Canada. Separating metals in solution. No. 956,763; May 3; Sp. p. 564; Gaz. vol. 154; p. 90.
Gaul, Henry M., Jr., Sinking Spring, Pa. Railway-tie and rail-fastener. No. 958,389; May 17; Sp. p. 4351; Gaz. vol. 154; p. 710.
Gayley, James. (See Brassert, Hermann A., assignor.)
Gaynor, Joseph, New York, N. Y. Extensible cabinet. No. 957,605; May 10; Sp. p. 2342; Gaz. vol. 154; p. 407.
Gaya, Giuseppe, Los Angeles, Cal. Propeller. No. 958,108; May 17; Sp. p. 3625; Gaz. vol. 154; p. 611.
Geiger, Charles B., Manning, S. C. Vehicle-spring. No. 959,336; May 24; Sp. p. 6311; Gaz. vol. 154; p. 1055.
Geiser Manufacturing Company, The. (See Beard, Daniel S., assignor.)
Geiszenlichter, John, Lynn, Mass., assignor, by mesne assignments, to Manufacturers Machine Company, Montclair, N. J. Automatic hand-tacker. No. 957,946; May 17; Sp. p. 3081; Gaz. vol. 154; p. 552.
Gendron Wheel Company. (See Nauts, Frank A., assignor.)
Gendts, Rudolf, New York, N. Y. Airship. No. 957,205; May 10; Sp. p. 1528; Gaz. vol. 154; p. 270.
General Electric Company. (See Alexanderson, Ernst F. W., assignor.)
General Electric Company. (See Bentley, Fred W., assignor.)
General Electric Company. (See Berry, Arthur F., assignor.)
General Electric Company. (See Case, Frank E., assignor.)
General Electric Company. (See Chapman, Lewis S., assignor.)
General Electric Company. (See Cubitt, Archibald S., assignor.)
General Electric Company. (See Dempster, John T. H., assignor.)

General Electric Company. (See Doen, Nathan M., assignor.)
General Electric Company. (See Eagar, George T., assignor.)
General Electric Company. (See Eveleth, Charles E., assignor.)
General Electric Company. (See Graybill, John E., assignor.)
General Electric Company. (See Green, Charles M., assignor.)
General Electric Company. (See Hall, John L., assignor.)
General Electric Company. (See Hentschel, Charles T., assignor.)
General Electric Company. (See Howell, Fred B., assignor.)
General Electric Company. (See Jodrey, Elbert W., assignor.)
General Electric Company. (See Junggren, Oscar, assignor.)
General Electric Company. (See Junggren and Bentley, assignors.)
General Electric Company. (See Kleser, Walter, assignor.)
General Electric Company. (See Lemp, Hermann, assignor.)
General Electric Company. (See Logan, Judson C., assignor.)
General Electric Company. (See Macloskie, George, assignor.)
General Electric Company. (See Noeggerath, Jakob E., assignor.)
General Electric Company. (See Olivier, Paul, assignor.)
General Electric Company. (See Rice, Edwin W., Jr., assignor.)
General Electric Company. (See Rice, Richard H., assignor.)
General Electric Company. (See Robinson and Miller, assignors.)
General Electric Company. (See Roos, Herman, assignor.)
General Electric Company. (See Sargent, Howard R., assignor.)
General Electric Company. (See Savage, Arthur C., assignor.)
General Electric Company. (See Smith, Henry L., assignor.)
General Electric Company. (See Smythe, Edwin H., assignor.)
General Electric Company. (See Stevens, George E., assignor.)
General Electric Company. (See Thomson, Elihu, assignor.)
General Electric Company. (See Underwood, Louis E., assignor.)
General Electric Company. (See Underwood and Smith, assignors.)
General Electric Company. (See Wirt, Herbert C., assignor.)
General Electric Company. (See Wright and Hoffman, assignors.)
General Electric Company. (See Yates, William C., assignor.)
General Electric Company. (See Yates and Lum, assignors.)
General Fireproofing Company, The. (See Wege, Peter M., assignor.)
General Railway Equipment Company, The. (See Dukesmith, Frank H., assignor.)
Gentle, William M., Southport, Ind. Steam-boiler. No. 957,155; May 3; Sp. p. 1387; Gaz. vol. 154; p. 223.
Gentle, William M., assignor to National Pressed Fuel Company, Indianapolis, Ind. Compressing-machine. No. 959,028; May 31; Sp. p. 7572; Gaz. vol. 154; p. 1280.
George M. Davis Regulator Company. (See Davis and Daley, assignors.)
George W. Bartlett Rotary Engine Company. (See Bartlett, George W., assignor.)
Gerb, William, Berlin, Germany. Producing lithographic-printing plates. No. 956,764; May 3; Sp. p. 570; Gaz. vol. 154; p. 91.
Gerber, Emanuel, Kansas City, Mo. Motor-vehicle. No. 959,851; May 31; Sp. p. 7390; Gaz. vol. 154; p. 1253.
Geriache, Jean, Brussels, Belgium. Preserving wood. No. 959,505; May 31; Sp. p. 6683; Gaz. vol. 154; p. 1137.
German-American Button Co. (See Hastings, Herbert, assignor.)
Gerstenkorn, Adolph, Moorfleth, near Hamburg, Germany. Coin-controlled apparatus. No. 958,621; May 17; Sp. p. 4795; Gaz. vol. 154; p. 788.
Gerstenkorn, Paul, Milwaukee, Wis. Machine for grinding cocks. No. 959,506; May 31; Sp. p. 6684; Gaz. vol. 154; p. 1137.
Gesellschaft für Drahtlose Telegraphie M. B. H. (See Schloemilch, Wilhelm, assignor.)
Gessler, Maximilian, Milwaukee, Wis. Water-filter. No. 956,698; May 3; Sp. p. 435; Gaz. vol. 154; p. 69.
Getty, John C., assignor of one-half to J. H. Ittman, Pittsburg, Pa. Rail. No. 958,486; May 17; Sp. p. 4538; Gaz. vol. 154; p. 743.
Gibbins, Virginia, Fruitvale, Cal. Adjustable sewing-machine table. No. 958,800; May 24; Sp. p. 5190; Gaz. vol. 154; p. 874.
Gibbs, Charles E., Malden, Mass. Paper-file. No. 958,801; May 24; Sp. p. 5192; Gaz. vol. 154; p. 875.
Gibbs, Lewis, assignor to The Gibbs Manufacturing Company, Canton, Ohio. Hoop sizing and clamping device. No. 958,390; May 17; Sp. p. 4352; Gaz. vol. 154; p. 710.
Gibbs Manufacturing Company, The. (See Gibbs, Lewis, assignor.)
Gibson, Angus H. (See Roberts and Gibson.)
Gibson, Robert L., Philadelphia, Pa., assignor to Victor Talking Machine Company. Talking-machine. No. 957,206; May 10; Sp. p. 1529; Gaz. vol. 154; p. 270.
Gibson, Robert L., Philadelphia, Pa., assignor to Victor Talking Machine Company. Supporting device for sound-box arms and horns of talking-machines. No. 958,109; May 17; Sp. p. 3626; Gaz. vol. 154; p. 611.
Giffee, William M., Green, Kans. Trace-buckle. No. 957,415; May 10; Sp. p. 1978; Gaz. vol. 154; p. 342.
Gifford, Robert L., et al. (See Nistle, George W., assignor.)
Gilbert, Henry W., and E. M. Martin, assignors to The Spirella Company, Meadville, Pa. Corset. No. 956,957; May 3; Sp. p. 1000; Gaz. vol. 154; p. 157.
Gildenmeister, Auguste. (See Delpeuch, Leon A., assignor.)
Giles, Chesley T. J., Greenville, S. C. Hinge. No. 960,085; May 31; Sp. p. 7947; Gaz. vol. 154; p. 1334.
Gill, Thomas E., Canton, Ohio. File-handle. No. 958,622; May 17; Sp. p. 4797; Gaz. vol. 154; p. 788.
Gilmour, Hugh K., Owensboro, Ky. Egg-beater and cream-whipper. No. 959,731; May 31; Sp. p. 7141; Gaz. vol. 154; p. 1212.
Gilstrap, David P., Brownwood, Tex. Fish-net. No. 957,766; May 10; Sp. p. 2686; Gaz. vol. 154; p. 462.
Giovannini, Sebastiano, Chicago, Ill. Means for propelling boats. No. 957,550; May 10; Sp. p. 2248; Gaz. vol. 154; p. 380.
Girod, Paul, Ugine, France. Crown or cover of electric furnaces. No. 956,699; May 3; Sp. p. 437; Gaz. vol. 154; p. 69.
Gist, William V., Sparta, Tenn. Whiffletree. No. 957,551; May 10; Sp. p. 2250; Gaz. vol. 154; p. 389.
Gladback, Peter, Mendon, Mo. Rake. No. 957,947; May 17; Sp. p. 3087; Gaz. vol. 154; p. 553.
Glaesel, Charles J., Boston, Mass. Automatic tanning-machine. (Reissue.) No. 13,116; May 17; Sp. p. 4979; Gaz. vol. 154; p. 818.
Glaser, Charles, and G. J. Muller, Baltimore, Md. Refining salt and recovering its impurities as by-products. No. 957,416; May 10; Sp. p. 1979; Gaz. vol. 154; p. 343.
Glaser, Charles, and G. J. Muller, Baltimore, Md. Refining salt. No. 957,417; May 10; Sp. p. 1986; Gaz. vol. 154; p. 343.
Glasgow, Samuel G. H., Palestine, Tex. Shoe-blackener. No. 959,507; May 31; Sp. p. 6686; Gaz. vol. 154; p. 1138.
Glass, Max, Vienna, Austria-Hungary. Torpedo. No. 957,670; May 10; Sp. p. 2404; Gaz. vol. 154; p. 431.
Glass, Max, Vienna, Austria-Hungary. Briqueting fines of ore, furnace-dust, waste metal, waste iron, &c. No. 958,623; May 17; Sp. p. 4797; Gaz. vol. 154; p. 788.
Glass, Max, Vienna, Austria-Hungary. Briqueting fines of ore, furnace-dust, waste metal, waste iron, &c. No. 958,700; May 17; Sp. p. 4947; Gaz. vol. 154; p. 813.
Glass, Max, Vienna, Austria-Hungary. Briqueting fines of ore, furnace-dust, waste metal, waste iron, &c. No. 958,701; May 17; Sp. p. 4948; Gaz. vol. 154; p. 813.
Glass, Perley R., Quincy, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Loading mechanism for hand-tackers. No. 957,948; May 17; Sp. p. 3090; Gaz. vol. 154; p. 553.
Glass, Perley R., Quincy, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Lasting-machine. No. 957,949; May 17; Sp. p. 3093; Gaz. vol. 154; p. 553.
Glass, Perley R., Quincy, Mass., assignor, by mesne assignments, to Manufacturers Machine Company, Montclair, N. J. Automatic rotary shoe-jack. No. 957,950; May 17; Sp. p. 3102; Gaz. vol. 154; p. 554.
Glaus, Christian, Milwaukee, Wis. Butter-treating apparatus. No. 959,508; May 31; Sp. p. 6688; Gaz. vol. 154; p. 1138.
Glazier, Lyman G., Pomfret Center, Conn. Burglar-proof safe door. No. 958,624; May 17; Sp. p. 4799; Gaz. vol. 154; p. 788.
Glendining, Robert. (See Beaumont, George, assignor.)
Glenn, William, Mount Vernon, Iowa. Voting-machine. No. 957,326; May 10; Sp. p. 1795; Gaz. vol. 154; p. 314.
Glidden, Wilmot W. (See Foster and Glidden.)
Globe Manufacturing Company. (See Watkins, Orla H., assignor.)
Globe Register Company, The. (See Konerman, Harry, assignor.)
Globe Vending Company. (See Hagen, Erik S., assignor.)
Globe-Wernicke Company, The. (See Senge, Liborius, assignor.)
Glover, Charles, New Britain, Conn. Hinge. No. 958,740; May 24; Sp. p. 5047; Gaz. vol. 154; p. 853.
Glover, Charles, New Britain, Conn. Grinding and polishing disk. No. 959,054; May 24; Sp. p. 5721; Gaz. vol. 154; p. 961.
Glover, Charles, New Britain, Conn. Coaster-brake. No. 959,509; May 31; Sp. p. 6689; Gaz. vol. 154; p. 1138.
Glymps, Frank W., assignor of nine-tenths to E. E. Peterson, Shinglehouse, and G. M. Corwin, Oswayo, Pa. Lifter. No. 957,463; May 10; Sp. p. 2072; Gaz. vol. 154; p. 359.
Goble, Frank, Fairpoint, Ohio. Package-holder. No. 957,767; May 10; Sp. p. 2687; Gaz. vol. 154; p. 462.

Goble, James F. S., New Albin, Iowa. Clamping device for grinding lawn-mowers. No. 960,163; May 31; Sp. p. 8087; Gaz. vol. 154; p. 1360.
Goddard, Walter T., assignor to Locke Insulator Manufacturing Company, Victor, N. Y. High-voltage switch. No. 959,929; May 31; Sp. p. 7878; Gaz. vol. 154; p. 1280.
Godfrey, J. B. (See Reilly, Michael E., assignor.)
Goding, Edwin L., Sanford, assignor to O. A. Miller Treeing Machine Company, Portland, Me. Block-last. No. 958,576; May 3; Sp. p. 152; Gaz. vol. 154; p. 26.
Godlewski, Anthony, St. Louis, Mo. Drill. No. 959,055; May 24; Sp. p. 5722; Gaz. vol. 154; p. 961.
Goff, Frank C., Denver, Colo. Heating system. No. 957,156; May 3; Sp. p. 1392; Gaz. vol. 154; p. 223.
Goff, Samuel B., Camden, N. J. Wave-power. No. 959,214; May 24; Sp. p. 6064; Gaz. vol. 154; p. 1014.
Gohlke, Max, Berlin, and B. Eltner, Reinickendorf-West, near Berlin, Germany. Antifriction-bearing. No. 956,700; May 3; Sp. p. 438; Gaz. vol. 154; p. 70.
Gold Car Heating & Lighting Company. (See Robertson, Henry M., assignor.)
Golden, Alphonsus L., Oakland, Cal. Telautograph instrument. No. 957,050; May 3; Sp. p. 1183; Gaz. vol. 154; p. 188.
Golden, Victor E., Byron, Nebr. Match-safe. No. 958,802; May 24; Sp. p. 5193; Gaz. vol. 154; p. 875.
Goldman, Henry, Berlin-Friedenau, Germany. Calculating-machine. No. 956,846; May 3; Sp. p. 755; Gaz. vol. 154; p. 119.
Goldman, Sigmund L., Chicago, Ill. Ball-bearing for conveyer-rollers. No. 960,009; May 31; Sp. p. 7780; Gaz. vol. 154; p. 1309.
Goldman, Sigmund L., Chicago, Ill. Conveyer-roller. No. 960,010; May 31; Sp. p. 7781; Gaz. vol. 154; p. 1309.
Goldschmidt Thermit Company. (See Peillissier, George E., assignor.)
Goldthorp, Robert R., Hartford, Conn. Receiving apparatus for wireless telegraphy. No. 959,510; May 31; Sp. p. 6692; Gaz. vol. 154; p. 1138.
Golgert, William J., Juniata, Nebr. Mail-box. No. 959,511; May 31; Sp. p. 6693; Gaz. vol. 154; p. 1139.
Goltra, Edward F., St. Louis, Mo. Cleaning iron ores. No. 957,157; May 3; Sp. p. 1394; Gaz. vol. 154; p. 224.
Goodall, Jeremiah M. (See Tate and Goodall.)
Goodell Company. (See Hinchliffe, George H., assignor.)
Gooding, Charles F., Oronogo, Mo. Bed-clamp. No. 958,246; May 17; Sp. p. 3909; Gaz. vol. 154; p. 638.
Goodman Manufacturing Company. (See Pratt, Charles A., assignor.)
Goodman, Patrick, New York, N. Y. Gas-main stopper. No. 960,095; May 31; Sp. p. 7949; Gaz. vol. 154; p. 1335.
Goodman, Walter. (See Rodgers, Thomas E., assignor.)
Goodmundson, Alvin K., and R. F. Smith, Oakland, Cal. Machine for mixing concrete. No. 959,512; May 31; Sp. p. 6694; Gaz. vol. 154; p. 1139.
Goodridge, Gilbert W., assignor to The Bryant Electric Company, Bridgeport, Conn. Pull-socket. No. 957,768; May 10; Sp. p. 2688; Gaz. vol. 154; p. 462.
Goodridge, Gilbert W., assignor to The Bryant Electric Company, Bridgeport, Conn. Electric-lamp-socket cap. No. 958,625; May 17; Sp. p. 4800; Gaz. vol. 154; p. 789.
Goodridge, Gilbert W., assignor to The Bryant Electric Company, Bridgeport, Conn. Electric-lamp-socket cap. No. 958,626; May 17; Sp. p. 4801; Gaz. vol. 154; p. 789.
Goodridge, Gilbert W., assignor to The Perkins Electric Switch Manufacturing Company, Bridgeport, Conn. Binding-post. No. 960,087; May 31; Sp. p. 7950; Gaz. vol. 154; p. 1335.
Goodrum, Charles L., Atlantic City, N. J., assignor, by mesne assignments, to C. P. Burns, Chicago, Ill. Telephone system. No. 958,627; May 17; Sp. p. 4802; Gaz. vol. 154; p. 789.
Gordon, Albert A., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Shuttle-binder for looms. No. 958,487; May 17; Sp. p. 4539; Gaz. vol. 154; p. 744.
Gordon, Albert A., Jr., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Weft-replenishing loom. No. 959,132; May 24; Sp. p. 5893; Gaz. vol. 154; p. 987.
Gordon, Frederick M., Cave Springs, Ga. Planter. No. 959,852; May 31; Sp. p. 7400; Gaz. vol. 154; p. 1254.
Gordon, Henry C. (See Evans and Gordon.)
Gordon, William L., Deal, N. J. Fastening for heel-cushions. No. 959,513; May 31; Sp. p. 6695; Gaz. vol. 154; p. 1139.
Gordon, William R., Philadelphia, Pa. Chair. No. 957,552; May 10; Sp. p. 2251; Gaz. vol. 154; p. 389.
Gorman, Frederick, Okemah, Okla. Tile-mold. No. 958,628; May 17; Sp. p. 4810; Gaz. vol. 154; p. 790.
Goss, John H., and G. R. Leggett, assignors to Scovill Manufacturing Company, Waterbury, Conn. Machine for attaching glove-fasteners. No. 956,847; May 3; Sp. p. 750; Gaz. vol. 154; p. 119.
Goss, John H., and G. R. Legett, assignors to Scovill Manufacturing Company, Waterbury, Conn. Machine for attaching glove-fasteners. No. 956,848; May 3; Sp. p. 759; Gaz. vol. 154; p. 120.
Goss, William, Newark, N. J. Smoker's outfit. No. 956,701; May 3; Sp. p. 440; Gaz. vol. 154; p. 70.
Goubeaut, Albert, Melun, France. Turning door. No. 959,514; May 31; Sp. p. 6697; Gaz. vol. 154; p. 1140.
Gould, Albert R., Grand Rapids, Mich. Metallic weather-strip. No. 956,702; May 3; Sp. p. 441; Gaz. vol. 154; p. 70.
Gould Storage Battery Company. (See Turbayne, William A., assignor.)
Gould Storage Battery Company. (See Winship, Walter E., assignor.)
Gowing, William N., San Augustine, Tex. Cushion-padded horseshoe. No. 958,629; May 17; Sp. p. 4812; Gaz. vol. 154; p. 790.
Gradolph Electric Company. (See Gradolph and Hahne, assignors.)
Gradolph, William F., St. Louis, Mo., and W. C. Hahne, Chicago, Ill., assignors to Gradolph Electric Company, St. Louis, Mo. Telephone system. No. 958,868; May 24; Sp. p. 5354; Gaz. vol. 154; p. 899.
Gradolph, William F., St. Louis, Mo., and W. C. Hahne, Chicago, Ill., assignors to Gradolph Electric Company, St. Louis, Mo. Transmission of electrical energy. No. 959,337; May 24; Sp. p. 6313; Gaz. vol. 154; p. 1056.
Gradolph, William F., St. Louis, Mo., and W. C. Hahne, Chicago, Ill., assignors to Gradolph Electric Company, St. Louis, Mo. Transmitting electrical energy. No. 959,428; May 24; Sp. p. 6472; Gaz. vol. 154; p. 1084.
Graft, John R., Cedar Rapids, Iowa. Fence attachment. No. 960,164; May 31; Sp. p. 8087; Gaz. vol. 154; p. 1360.
Graham, Charles W., assignor, by mesne assignments, to American Can Company, New York, N. Y. Can-forming apparatus. No. 958,741; May 24; Sp. p. 5048; Gaz. vol. 154; p. 853.
Graham, Philip S. (See McReynolds and Graham.)
Graney, Michael C., Hoosick Falls, N. Y. Conveyer-belt. No. 957,769; May 10; Sp. p. 2690; Gaz. vol. 154; p. 462.
Grant, Charles, assignor of one-half to R. Plunkett, New York, N. Y. Engine-governor. No. 959,853; May 31; Sp. p. 7403; Gaz. vol. 154; p. 1254.
Grant, Harry H., Warsaw, Ill. Metal brooding-coop. No. 958,630; May 17; Sp. p. 4813; Gaz. vol. 154; p. 790.
Grau, Henry W. (See Grau, O Peter, assignor.)
Grau, O Peter, assignor of one-half to H. W. Grau, Long Green, Md. Friction drive mechanism. No. 956,958; May 3; Sp. p. 1001; Gaz. vol. 154; p. 157.
Graver, Alexander M. (See Graver, William and A. M.)
Graver, William and A. M., Chicago, Ill. Tank-wagon. No. 960,165; May 31; Sp. p. 8088; Gaz. vol. 154; p. 1360.
Graves, Oriel M., Spokane, Wash. Burner. No. 957,857; May 10; Sp. p. 2868; Gaz. vol. 154; p. 491.
Gray, Homer L., Alameda, Cal. Mailing-tube. No. 956,636; May 3; Sp. p. 278; Gaz. vol. 154; p. 40.
Gray, Niel, Jr., Oswego, N. Y. Paper-cutting machine. No. 957,553; May 10; Sp. p. 2252; Gaz. vol. 154; p. 390.
Graybill, John E., York, Pa., assignor to General Electric Company. Automatic flanging-machine. No. 959,930; May 31; Sp. p. 7579; Gaz. vol. 154; p. 1280.
Greaves, Klusman and Company. (See Greaves, William A., assignor.)
Greaves, William A., assignor to Greaves, Klusman and Company, Cincinnati, Ohio. Tail-stock. No. 956,804; May 3; Sp. p. 653; Gaz. vol. 154; p. 104.
Grebel, Paul J., Chicago, Ill. Chuck. No. 959,515; May 31; Sp. p. 6699; Gaz. vol. 154; p. 1140.
Green, Arthur G., Leeds, England. Production of anilin black on fibers and fabrics. No. 959,516; May 31; Sp. p. 6701; Gaz. vol. 154; p. 1140.
Green, Charles M., Lynn, Mass., assignor to General Electric Company. Vapor-rectifier system. No. 958,891; May 17; Sp. p. 4354; Gaz. vol. 154; p. 710.
Green, Henry, Hartford, Conn. X-ray tube. No. 958,488; May 17; Sp. p. 4541; Gaz. vol. 154; p. 744.
Green, Leonard M. (See Holms, Green, and Pattinson.)
Green, Paul E. (See Ream and Green.)
Greenan, Hugh A., and F. O. Redford, assignors to American Water Main Cleaning and Contracting Co., Louisville, Ky. Cleaner for mains and pipes. No. 957,051; May 3; Sp. p. 1185; Gaz. vol. 154; p. 188.
Greene, Frederick R. (See Fournid, John, assignor.)
Greene, Harry J., North Brooksville, Me. Soldering implement. No. 957,327; May 10; Sp. p. 1801; Gaz. vol. 154; p. 314.
Greenelsen, R. R. (See Stoffer, Jacob L., assignor.)
Greenfield, Rudolf, Philadelphia, Pa. Combined fan and sun-shade. No. 956,959; May 3; Sp. p. 1007; Gaz. vol. 154; p. 158.
Greenlee, William F., Atchison, Kans. Water-guard for chimneys. No. 960,088; May 31; Sp. p. 7951; Gaz. vol. 154; p. 1336.
Greer, William E., Kenmore, assignor of one-third to W. F. Pfeiffer, Akron, and one-third to J. Pfeiffer, Columbus, Ohio. Vehicle-wheel rim. No. 959,732; May 31; Sp. p. 7143; Gaz. vol. 154; p. 1212.
Greeven, Walther, Crefeld, Germany. Card-cutting machine. No. 957,052; May 3; Sp. p. 1186; Gaz. vol. 154; p. 188.
Gregg, Francis F., Monessen, Pa., assignor to L. A. Burrell, Cincinnati, Ohio. Adjustable mechanism for feeding metal hoops, bands, stripe, or bars to rolls. No. 956,525; May 3; Sp. p. 30; Gaz. vol. 154; p. 8.
Gregory, Joseph, assignor of one-third to J. Isbell and one-third to J. H. Schaper, Washington, Mo. Bundle-tying device. No. 960,089; May 31; Sp. p. 7952; Gaz. vol. 154; p. 1336.
Greig, Harry B., Cleveland, Ohio. Lathe. No. 958,631; May 17; Sp. p. 4815; Gaz. vol. 154; p. 790.
Grierson, Thomas C., Eveleth, Minn. Pipe-coupling. No. 959,854; May 31; Sp. p. 7405; Gaz. vol. 154; p. 1255.
Grieshaber, Benjamin, Chicago, Ill. Self-filling fountain-pen. No. 956,895; May 3; Sp. p. 860; Gaz. vol. 154; p. 137.

Griffeth, Francis E., Athens, Ga. Sad-iron holder. No. 958,634; May 17; Sp. p. 4821; Gaz. vol. 154; p. 791.
Griffin, Anthony J., New York, N. Y. Submarine vessel. No. 958,742; May 24; Sp. p. 5051; Gaz. vol. 154; p. 853.
Griffin, Elvin H., South Boston, Va. Back-band attachment. No. 958,879; May 17; Sp. p. 2927; Gaz. vol. 154; p. 530.
Griffin, Hubert C., assignor of one-third to C. S. Ware, Bristol, England. Change-speed gear. No. 958,632; May 17; Sp. p. 4817; Gaz. vol. 154; p. 791.
Griffin, Michael G., Cincinnati, Ohio. Loose-leaf binder. No. 958,633; May 17; Sp. p. 4820; Gaz. vol. 154; p. 791.
Griffith, Graves, San Francisco, Cal. Range-finder. No. 959,338; May 24; Sp. p. 6317; Gaz. vol. 154; p. 1056.
Griffith, William, Pittsburg, Pa. Producing hollow articles of metal. No. 959,518; May 31; Sp. p. 6704; Gaz. vol. 154; p. 1141.
Griffith, William, assignor of one-half to J. M. Anderson, Pittsburg, Pa. Uniting metals. No. 959,517; May 31; Sp. p. 6703; Gaz. vol. 154; p. 1140.
Grim, Charles B., Camden, N. J. Wrench structure. No. 959,056; May 24; Sp. p. 5725; Gaz. vol. 154; p. 962.
Grimm, Paul H., assignor to The Sulphur Dioxide Co., Glen Cove, N. Y. Sulfur-burner. No. 957,418; May 10; Sp. p. 1989; Gaz. vol. 154; p. 345.
Grimm, William. (See Elwell and Grimm.)
Grimme, Natalis & Co. Kommanditgesellschaft auf Aktien. (See Jahns, Erwin, assignor.)
Grindle, William W. (See Sweeny and Grindle.)
Gringe, Casper H., Dubuque, assignor to The Waterloo Saddlery Co., Waterloo, Iowa. Machine for manufacturing harness-pads. No. 959,519; May 31; Sp. p. 6705; Gaz. vol. 154; p. 1141.
Grip Nut Company. (See Hibbard, Edward R., assignor.)
Grisdale, George W., Jr., Trenton, N. J. Watch-stem movement. No. 960,166; May 31; Sp. p. 8091; Gaz. vol. 154; p. 1361.
Griswold, Harrison, New York, N. Y. Vapor-lamp burner. No. 960,167; May 31; Sp. p. 8095; Gaz. vol. 154; p. 1361.
Griswold, Harrison, New York, N. Y. Vapor-lamp burner. No. 960,168; May 31; Sp. p. 8097; Gaz. vol. 154; p. 1362.
Groene, William F. (See Le Blond and Groene.)
Groene, William F., Cincinnati, Ohio, assignor to R. K. Le Blond Machine Tool Company. Combined oil-bush and friction device. No. 959,520; May 31; Sp. p. 6706; Gaz. vol. 154; p. 1141.
Groff, Frederick F., Lancaster, Pa. Wagon-body. No. 959,855; May 31; Sp. p. 7406; Gaz. vol. 154; p. 1255.
Grogan, James, Prescott, Ariz. Smelting-furnace. No. 957,554; May 10; Sp. p. 2257; Gaz. vol. 154; p. 391.
Gröger, Hugo, Vienna, Austria-Hungary. Reinforced-concrete sleeper. No. 957,328; May 10; Sp. p. 1802; Gaz. vol. 154; p. 314.
Grommé, John J., assignor to The Hocking Valley Manufacturing Company, Lancaster, Ohio. Knife-adjusting means for feed-cutters. No. 958,743; May 24; Sp. p. 5054; Gaz. vol. 154; p. 854.
Gronberg, John G. (See Tholts and Gronberg.) (Reissue.)
Gross, Edward H., Stamford, Conn. Foldable hand snow-plow. No. 956,896; May 3; Sp. p. 861; Gaz. vol. 154; p. 137.
Gruenfeldt, Emil, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio. Fastening device for vehicle-body structures. No. 959,917; May 24; Sp. p. 5467; Gaz. vol. 154; p. 916.
Grunwald, Carl, Bredeney, Germany. Apparatus for producing wheels in divided metallic molds. No. 958,635; May 17; Sp. p. 4822; Gaz. vol. 154; p. 792.
Grüttefien, Wilhelm, Vohwinkel, near Elberfeld, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Isobutyl ester of para-amino-benzoic acid. No. 958,110; May 17; Sp. p. 3629; Gaz. vol. 154; p. 612.
Guenther, Emil. (See Tiedemann and Clarke, assignors.)
Guenther, Jacob J. (See Tiedemann and Clarke, assignors.)
Guiguet, Léon, assignor to La Société pour l'Exploitation du Caoutchouc au Congo, Lyon-Villeurbanne, France. Apparatus for extracting rubber. No. 958,918; May 24; Sp. p. 5468; Gaz. vol. 154; p. 916.
Guillard, Eugene J., New York, N. Y. Hat-holder. No. 957,770; May 10; Sp. p. 2691; Gaz. vol. 154; p. 463.
Guillaume, Emile, Paris, France. Baffle-plate for column-stills. No. 960,223; May 31; Sp. p. 8206; Gaz. vol. 154; p. 1381.
Gunn, William A., and L. W. Link, Cincinnati, Ohio. Trolley-wheel holder and guide. No. 958,744; May 24; Sp. p. 5055; Gaz. vol. 154; p. 854.
Gurley, Charles K., Salt Lake City, Utah. Baby-jumper. No. 957,419; May 10; Sp. p. 1991; Gaz. vol. 154; p. 344.
Gustafson, August M., Bisbee, Ariz. Ship-table. No. 959,004; May 24; Sp. p. 5625; Gaz. vol. 154; p. 945.
Guthrie, John W., Falls Creek, Pa. Valve mechanism for engines. No. 959,339; May 24; Sp. p. 6320; Gaz. vol. 154; p. 1056.
Gutsch, Carl R. O., *et al.* (See Resch, Hermann, assignor.)
Haas, Ernest, Manchester, England. Apparatus for affixing postage-stamps, labels, or the like, and for selling postage-stamps. No. 956,526; May 3; Sp. p. 33; Gaz. vol. 154; p. 9.
Haase, Charles L., Jr., Milwaukee, Wis. Gas-igniter. No. 957,951; May 17; Sp. p. 3105; Gaz. vol. 154; p. 554.
Häberle, Michael, Brooklyn, N. Y. Pivoted sliding window. No. 956,527; May 3; Sp. p. 37; Gaz. vol. 154; p. 9.
Habicht, William C., assignor to The Kirk, Habicht Company of Baltimore City, Baltimore, Md. Skylight-lift. No. 959,429; May 24; Sp. p. 6475; Gaz. vol. 154; p. 1085.
Hachmann, Frederick, assignor of nineteen thirty-seconds to G. A. Doran, seven thirty-seconds to F. W. Lapham, and two thirty-seconds to W. H. Springer, St. Paul, Minn. Wrench. No. 959,931; May 31; Sp. p. 7585; Gaz. vol. 154; p. 1281.
Haddon, Leonard F., assignor of one-half to C. A. Richey, Louisville, Nebr. Carrier. No. 959,733; May 31; Sp. p. 7144; Gaz. vol. 154; p. 1212.
Hadfield, Burton L., and H. A. Hall, Wausau, Wis. Current-reducer. No. 958,111; May 17; Sp. p. 3630; Gaz. vol. 154; p. 612.
Hafemeister, William C., assignor, by mesne assignments, to The Van Dorn & Dutton Company, Cleveland, Ohio. Portable electric drill. No. 956,849; May 3; Sp. p. 763; Gaz. vol. 154; p. 120.
Haffey, James F. (See Baron and Haffey.)
Hagen, Erik S., assignor, by mesne assignments, to Globe Vending Company, Chicago, Ill. Coin-actuated mechanism. No. 958,489; May 17; Sp. p. 4542; Gaz. vol. 154; p. 744.
Hagen, Erik S., assignor, by mesne assignments, to Globe Vending Company, Chicago, Ill. Coin-chute. No. 958,490; May 17; Sp. p. 4545; Gaz. vol. 154; p. 745.
Hagen, Erik S., assignor, by mesne assignments, to Globe Vending Company, Chicago, Ill. Centering mechanism for rotary vending-machines. No. 958,491; May 17; Sp. p. 4548; Gaz. vol. 154; p. 745.
Hahn, Konrad, Winkel, near Gifhorn, assignor to Schott & Gen., Jena, Germany. Electrolytic apparatus with liquid anode. No. 959,521; May 31; Sp. p. 6708; Gaz. vol. 154; p. 1141.
Hahne, William C. (See Gradolph and Hahne.)
Hailey, Robert L., assignor to The Lowe Electric Company, New York, N. Y. Electric heating device. No. 959,215; May 24; Sp. p. 6066; Gaz. vol. 154; p. 1014.
Haines Oil Measuring Pump Company. (See Haines, William B., assignor.)
Haines, William B., Sunbury, assignor to Haines Oil Measuring Pump Company, Harrisburg, Pa. Measuring-pump. No. 958,910; May 24; Sp. p. 5470; Gaz. vol. 154; p. 917.
Haines, William B., Sunbury, assignor to Haines Oil Measuring Pump Company, Harrisburg, Pa. Liquid-delivering device. No. 959,216; May 24; Sp. p. 6068; Gaz. vol. 154; p. 1015.
Hair, Isaac M., Union, S. C. Dental cuspidor. No. 957,671; May 10; Sp. p. 2495; Gaz. vol. 154; p. 431.
Hale, Stephen H., St. Joseph, Mo. Exhaust-regenerating steam and water heater combined. No. 958,636; May 17; Sp. p. 4825; Gaz. vol. 154; p. 792.
Hall, Bicknell, Taunton, assignor to Rotary Ring Spinning Company, Boston, Mass. Holder for rotary rings. No. 958,352; May 17; Sp. p. 4356; Gaz. vol. 154; p. 711.
Hall, Edgar R., Austin, Tex. Lock-corner. No. 959,734; May 31; Sp. p. 7148; Gaz. vol. 154; p. 1213.
Hall, Edwin A., Hyde Park, Mass. Phonograph-cabinet. No. 959,522; May 31; Sp. p. 6708; Gaz. vol. 154; p. 1142.
Hall, Eugene D., Iuka, Miss. Cheese-cover. No. 957,053; May 3; Sp. p. 1193; Gaz. vol. 154; p. 189.
Hall, Francis W., Wickliffe, Ohio. Tagging-machine. No. 957,420; May 10; Sp. p. 1992; Gaz. vol. 154; p. 344.
Hall, George F., Summit, assignor of one-half to G. Rubsamen, Jersey City, N. J. Umbrella-runner. No. 960,169; May 31; Sp. p. 8099; Gaz. vol. 154; p. 1362.
Hall, Harry A. (See Hadfield and Hall.)
Hall, John B. (See Day, Louis A., assignor.)
Hall, John L., Schenectady, N. Y., assignor to General Electric Company. Apparatus for transmitting and receiving information. No. 956,960; May 3; Sp. p. 1008; Gaz. vol. 154; p. 158.
Hall, Roderic F., East Orange, N. J., assignor to Western Electric Company, Chicago, Ill. Electric cable. No. 957,506; May 10; Sp. p. 2158; Gaz. vol. 154; p. 373.
Hall, William G., Irvington, N. J. Fruit-jar sealer. No. 957,952; May 17; Sp. p. 3107; Gaz. vol. 154; p. 555.
Hallahan, John P., assignor of one-half to G. B. Carey, Philadelphia, Pa. Support for concrete. No. 959,217; May 24; Sp. p. 6070; Gaz. vol. 154; p. 1015.
Hallberg, Josef H., New York, N. Y., assignor to The Beck Flaming Lamp Company, Canton, N. Y. Arc-lamp electrode. No. 959,133; May 24; Sp. p. 5890; Gaz. vol. 154; p. 988.
Halliwell, Thomas S., and H. B. Maschmeier, Denver, Colo. Boring-tool. No. 958,112; May 17; Sp. p. 3631; Gaz. vol. 154; p. 612.
Hallock, Fletcher D., Pittsburg, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa. Controller. No. 958,803; May 24; Sp. p. 5194; Gaz. vol. 154; p. 875.
Hallock, Fletcher D., Pittsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Motor-starter. No. 958,804; May 24; Sp. p. 5196; Gaz. vol. 154; p. 876.
Hallock, Fletcher D., Pittsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Rheostatic controller for electric motors. No. 958,805; May 24; Sp. p. 5198; Gaz. vol. 154; p. 876.

Hallock, Fletcher D., Pittsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Regulating-rheostat. No. 958,806; May 24; Sp. p. 5201; Gaz. vol. 154; p. 877.

Hallock, Fletcher D., Pittsburg, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa. Rheostat. No. 958,869; May 24; Sp. p. 5360; Gaz. vol. 154; p. 899.

Hallock, Fletcher D., Pittsburg, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa. Starting-rheostat. No. 958,870; May 24; Sp. p. 5362; Gaz. vol. 154; p. 900.

Hallock, Fletcher D., Pittsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Regulating-rheostat for electric motors. No. 959,005; May 24; Sp. p. 5626; Gaz. vol. 154; p. 945.

Halstead, Charles, Brooklyn, N. Y. Vapor-lamp. No. 960,011; May 31; Sp. p. 7782; Gaz. vol. 154; p. 1310.

Halvorsen, Helge A., Chicago, Ill. Footwear-stretcher. No. 959,932; May 31; Sp. p. 7585; Gaz. vol. 154; p. 1281.

Halvorson, August, Spokane, Wash. Lifting-jack. No. 956,577; May 3; Sp. p. 154; Gaz. vol. 154; p. 26.

Hamby, Arthur W., *et al.* (See McDaniel, James E., assignor.)

Hamby, Theodotus C., *et al.* (See McDaniel, James E., assignor.)

Hamilton, James, Weir, Kans. Automobile-rim. No. 957,672; May 10; Sp. p. 2497; Gaz. vol. 154; p. 431.

Hamilton, Lew L., assignor to T. C. Prouty Company, Albion, Mich. Combined door check and buffer. No. 958,959; May 24; Sp. p. 5536; Gaz. vol. 154; p. 929.

Hamlin, Frederick N., Austin, Pa. Paper-making machine. No. 958,113; May 17; Sp. p. 3634; Gaz. vol. 154; p. 613.

Hammar, Sigard A. S. (See Meigs and Hammar.)

Hammerschmidt, Anthony F., Grand Rapids, Mich. Combined shovel and scoop. No. 956,961; May 3; Sp. p. 1014; Gaz. vol. 154; p. 159.

Hammett, Elbert A., and E. H. Clark, Kansas City, Mo. Gradometer. No. 956,962; May 3; Sp. p. 1015; Gaz. vol. 154; p. 159.

Hammock, Royal H., Monroe, Ga. Clevis. No. 959,430; May 24; Sp. p. 6476; Gaz. vol. 154; p. 1085.

Hammond, James T., Winsted, Conn. Handle. No. 958,114; May 17; Sp. p. 3636; Gaz. vol. 154; p. 613.

Hampton, Frank H., Pullman, Ill., assignor to Jackson Cushion Edge Company, Jackson, Mich. Cushion edge. No. 958,115; May 17; Sp. p. 3638; Gaz. vol. 154; p. 613.

Hampton, Frank H., Pullman, Ill., assignor to Jackson Cushion Edge Company, Jackson, Mich. Cushion edge. No. 958,116; May 17; Sp. p. 3640; Gaz. vol. 154; p. 614.

Hancock, Elmer E., Philadelphia, Pa. Automobile-license-tag holder. No. 959,735; May 31; Sp. p. 7149; Gaz. vol. 154; p. 1213.

Handiges, Philip T., assignor of one-half to A. Waycott, Cleveland, Ohio. Door-operator. No. 959,523; May 31; Sp. p. 6709; Gaz. vol. 154; p. 1142.

Handiges, Philip T., assignor to The Damascus Brake Beam Co., Cleveland, Ohio. Forged-steel fulcrum for trussed type of brake-beams. No. 959,524; May 31; Sp. p. 6713; Gaz. vol. 154; p. 1143.

Handlan-Buck Manufacturing Company. (See Rolfes, George H., assignor.)

Handley, Edward. (See Keyhoe and Handley.)

Hanley, William, Bradford, Pa. Apparatus for making bricks. No. 959,006; May 24; Sp. p. 5628; Gaz. vol. 154; p. 946.

Hanlon, John H., Somerville, Mass. Engineer's valve for pneumatic sanders. No. 958,393; May 17; Sp. p. 4357; Gaz. vol. 154; p. 711.

Hansen, Charles C. Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Mounting for drills. No. 956,850; May 3; Sp. p. 767; Gaz. vol. 154; p. 121.

Hansen, Edward M. E., St. Louis, Mo. Chemical fire-engine. No. 957,054; May 3; Sp. p. 1193; Gaz. vol. 154; p. 189.

Hansen, Hans P., Denver, Colo. Adjustable high chair. No. 957,055; May 3; Sp. p. 1195; Gaz. vol. 154; p. 190.

Hansen, Niels M., assignor to De Vilbiss Plier Company, Dundee, Mich. Tool. No. 958,807; May 24; Sp. p. 5203; Gaz. vol. 154; p. 877.

Hanson, Amandus, Caney, Kans. Glass-heating apparatus. No. 959,057; May 24; Sp. p. 5726; Gaz. vol. 154; p. 962.

Hanson, George A. (See Anderson and Hanson.)

Hard, Charles T., East Liverpool, Ohio. Adjustable support for books, papers, &c. No. 958,637; May 17; Sp. p. 4828; Gaz. vol. 154; p. 793.

Hardgrave, Robert G., Tucumcari, N. Mex. Fused distributing-board and cross-connecting rack. No. 958,808; May 24; Sp. p. 5204; Gaz. vol. 154; p. 878.

Hardy, George H., Twickenham, England. Rotary engine. No. 959,858; May 31; Sp. p. 7407; Gaz. vol. 154; p. 1255.

Hardy, John N., Columbus, Ohio. Water-motor. No. 958,492; May 17; Sp. p. 4549; Gaz. vol. 154; p. 746.

Hare, William L., and E. E. Winne, Hamilton, Mo. Rotary blotter for penholders. No. 957,329; May 10; Sp. p. 1804; Gaz. vol. 154; p. 315.

Hargraves, William H. (See Miller, Steinberger, and Hargraves.)

Hargraves, William H., and M. M. Miller, assignors of one-third to C. M. W. Keck, Allentown, Pa. Mail-handling apparatus. No. 957,330; May 10; Sp. p. 1805; Gaz. vol. 154; p. 315.

Harker, Frank T., assignor of one-half to J. W. Ramsey, Butler, Ia. Screw-cutting stock and die. No. 959,736; May 31; Sp. p. 7150; Gaz. vol. 154; p. 1213.

Harman, David H., Spokane, Wash. Animal-trap. No. 960,170; May 31; Sp. p. 8100; Gaz. vol. 154; p. 1362.

Harman, John H. (See Wilson and Harman.)

Harmuth, Gustave, St. Louis, Mo. Sash-lock. No. 956,963; May 3; Sp. p. 1016; Gaz. vol. 154; p. 159.

Harper, James M., Chicago, Ill., assignor to Harper Supply Company. Sad-iron. No. 958,638; May 17; Sp. p. 4829; Gaz. vol. 154; p. 793.

Harper Supply Company. (See Harper, James M., assignor.)

Harrell, Andy B., Pilotmountain, N. C. Shield for harness. No. 957,771; May 10; Sp. p. 2693; Gaz. vol. 154; p. 463.

Harrigan, John, Brooklyn, N. Y. Manure-receptacle. No. 957,772; May 10; Sp. p. 2693; Gaz. vol. 154; p. 463.

Harrington, James I., Sheffield, Mo. Washbench. No. 957,880; May 17; Sp. p. 2928; Gaz. vol. 154; p. 530.

Harris, Charles F., Altoona, Pa. Attachment for locomotive or other boilers. No. 959,134; May 24; Sp. p. 5897; Gaz. vol. 154; p. 988.

Harris, Gordon D., Bay Shore, assignor of one-half to A. R. Brandly, New York, N. Y. Apparatus for dehydrating food products. No. 959,933; May 31; Sp. p. 7588; Gaz. vol. 154; p. 1282.

Harris, Henry K., Providence, R. I. Envelop-sealing machine. No. 957,555; May 10; Sp. p. 2260; Gaz. vol. 154; p. 391.

Harris, Warren B., Milbury, Mass. Window-frame. No. 957,881; May 17; Sp. p. 2929; Gaz. vol. 154; p. 530.

Harris, William H., Gladstone, N. Mex. Glove-fastener. No. 959,737; May 31; Sp. p. 7151; Gaz. vol. 154; p. 1214.

Harrison, Clark W. (See Fletcher, Joseph, assignor.)

Harrison, Dabney C., Washington, D. C. Window-shade. No. 957,207; May 10; Sp. p. 1532; Gaz. vol. 154; p. 271.

Harrison, Harry O., Wichita, Kans. Foot-pump. No. 956,703; May 3; Sp. p. 442; Gaz. vol. 154; p. 70.

Harrison, Henry W., Clinton, Iowa. Broom-holding device. No. 957,673; May 10; Sp. p. 2498; Gaz. vol. 154; p. 432.

Harrison, Philip B., assignor to Chicago Railway Equipment Company, Chicago, Ill. Brake-beam. No. 956,637; May 3; Sp. p. 279; Gaz. vol. 154; p. 46.

Hart, Harry S., Chicago, Ill., assignor to Rodger Ballast Car Company. Dump-car. No. 956,851; May 3; Sp. p. 768; Gaz. vol. 154; p. 121.

Hart, William P., Boston, Mass., assignor to Automatic Individual Butter Cutter Company. Butter-cutter. No. 958,639; May 17; Sp. p. 4831; Gaz. vol. 154; p. 794.

Hartford, David M., C. M. Taylor, and L. S. Stone, Los Angeles, Cal. Electric gas-lighting apparatus. No. 959,525; May 31; Sp. p. 6715; Gaz. vol. 154; p. 1143.

Harting, Clayton C. (See Knapp and Harting.)

Hartley, Leonard H., Lowell, assignor to Hartley Loop Weave Company, Amesbury, Mass. Loom for weaving pile fabrics. No. 960,171; May 31; Sp. p. 8102; Gaz. vol. 154; p. 1363.

Hartley Loop Weave Company, The. (See Hartley, Leonard H., assignor.)

Hartman, Joseph, Chicago, Ill., assignor to W. T. Stall, Brockton, Mass., and C. H. Dean, Chicago, Ill. Baseball mitt. No. 958,117; May 17; Sp. p. 3641; Gaz. vol. 154; p. 614.

Hartmann & Braun A G (See Hartmann-Kempf, Robert, assignor.)

Hartmann-Kempf, Robert, assignor to Hartmann & Braun A G, Frankfort-on-the-Main, Germany. Resonance-tachometer. No. 959,934; May 31; Sp. p. 7595; Gaz. vol. 154; p. 1282.

Harvey, Allen L., Salem, Oreg. Horse controlling or hitching device. No. 959,135; May 24; Sp. p. 5900; Gaz. vol. 154; p. 988.

Harvey, Henry J., Seattle, Wash. Drilling-machine. No. 959,007; May 24; Sp. p. 5629; Gaz. vol. 154; p. 946.

Hascy, Harvey W., Brookline, Mass. Brush. No. 957,331; May 10; Sp. p. 1809; Gaz. vol. 154; p. 315.

Haskell, Edward H., *et al.* (See Dawes, Robert, assignor.)

Hassing, Jens M. W., and J. V. Fitzsimmons, San Francisco, Cal. Wrecking apparatus. No. 959,526; May 31; Sp. p. 6717; Gaz. vol. 154; p. 1143.

Hastings, Herbert, assignor to German-American Button Co., Rochester, N. Y. Separating-machine. No. 957,332; May 10; Sp. p. 1810; Gaz. vol. 154; p. 315.

Hatfield, Ulcy R., Macon, Ga. Rail-joint. No. 959,218; May 24; Sp. p. 6072; Gaz. vol. 154; p. 1015.

Hathaway, Edward. (See Cummings and Hathaway.)

Hauer, Elmer E., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Tube-cleaner. No. 958,118; May 17; Sp. p. 3643; Gaz. vol. 154; p. 614.

Haugwitz, Rudolf, Friedrichshagen, near Berlin, Germany, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Sulfur dye and making same. No. 958,640; May 17; Sp. p. 4835; Gaz. vol. 154; p. 794.

Haus, John N., New York, N. Y. Wind-shield for automobiles. No. 956,964; May 3; Sp. p. 1018; Gaz. vol. 154; p. 159.

Hauser, Julius, Los Angeles, Cal. Indelibly marking meats. No. 958,960; May 24; Sp. p. 5538; Gaz. vol. 154; p. 930.

Hauser, Leopold, assignor of one-half to S. Weil, New York, N. Y. Belt pin or buckle. No. 959,340; May 24; Sp. p. 6322; Gaz. vol. 154; p. 1057.

Haussner, Konrad, Eisenach, Germany. Differential-recoil gun. No. 958,119; May 17; Sp. p. 3645; Gaz. vol. 154; p. 615.

Havener, Arthur R., Waltham, Mass., assignor to Judson L. Thomson M'fg Co. Single-head multiple rivet-setting machine. No. 959,738; May 31; Sp. p. 7152; Gaz. vol. 154; p. 1214.

Havens, Seyd, Oakland, Cal. Rubber heel. No. 957,556; May 10; Sp. p. 2262; Gaz. vol. 154; p. 391.

Hawkins, Fredrick L., Mishawaka, Ind. Noodle-cutter. No. 958,809; May 24; Sp. p. 5205; Gaz. vol. 154; p. 878.

Hawkins, John M., S. E. Adkins, and W. C. Call, Spencer, Ind. Lifting-jack. No. 957,333; May 10; Sp. p. 1813; Gaz. vol. 154; p. 316.

Hawkins, Joseph N., Mannington, W. Va. Oil-cup. No. 960,172; May 31; Sp. p. 8104; Gaz. vol. 154; p. 1363.

Hawthorne & Sheble Manufacturing Company. (See Sheble and Kraemer, assignors.)

Hayes, Garfield H., Franklin, assignor to Sterling Oil Engine Company, Pittsburg, Pa. Governing mechanism for explosive-engines. No. 960,173; May 31; Sp. p. 8105; Gaz. vol. 154; p. 1363.

Haynes, Wallace D., Oakland, Cal. Propeller. No. 957,056; May 3; Sp. p. 1197; Gaz. vol. 154; p. 190.

Hays, Joseph W., Chicago, Ill., assignor to Carb-Ox Company, Furnace. No. 957,158; May 3; Sp. p. 1396; Gaz. vol. 154; p. 224.

Heagney, Elmer D., assignor of one-fourth to B. M. Bainbridge, French Camp, Cal. Lock-washer. No. 959,857; May 31; Sp. p. 7409; Gaz. vol. 154; p. 1255.

Healey, Fred B., and C. S. Homsher, Denver, Colo. Speedometer. No. 957,773; May 10; Sp. p. 2699; Gaz. vol. 154; p. 464.

Heasel, Frederick J., Cincinnati, Ohio. Spark-plug. No. 958,247; May 17; Sp. p. 3910; Gaz. vol. 154; p. 658.

Heckel, Jakob, assignor to Firm of C. Zeiss, Jena, Germany. Prism-binocular. No. 959,739; May 31; Sp. p. 7155; Gaz. vol. 154; p. 1214.

Hedge, Charles E., Beaverton, Oreg. Bag and twine holder. No. 957,507; May 10; Sp. p. 2159; Gaz. vol. 154; p. 373.

Hedwall, Henning, Quincy, Mass. Collapsible door. No. 958,961; May 24; Sp. p. 5539; Gaz. vol. 154; p. 930.

Heebner, William D. (See Metz, Nathaniel, assignor.)

Heeley, John S., Gallatin, Pa. Curtain-stretcher. No. 960,012; May 31; Sp. p. 7784; Gaz. vol. 154; p. 1310.

Heeren, William E., Pittsburg, Pa. Producing ornamental articles. No. 958,641; May 17; Sp. p. 4836; Gaz. vol. 154; p. 794.

Heeter, Charles M., Butler, Pa. Joint for well-tools, &c. No. 959,341; May 24; Sp. p. 6323; Gaz. vol. 154; p. 1057.

Heffner, Herman C., Martinsburg, W. Va. Passenger-car. No. 957,057; May 3; Sp. p. 1198; Gaz. vol. 154; p. 190.

Heine Safety Boiler Company. (See Wood and Meier, assignors.)

Heinz, Jacob, assignor to T. Neal, Detroit, Mich. Abrading-machine. No. 957,674; May 10; Sp. p. 2499; Gaz. vol. 154; p. 432.

Heinze, John O., Jr., Lowell, Mass. Electrical switch. No. 957,953; May 17; Sp. p. 3103; Gaz. vol. 154; p. 555.

Heiminger, Anton, New York, N. Y. Clothes-line holder. No. 958,493; May 17; Sp. p. 4551; Gaz. vol. 154; p. 746.

Heisel, Leonard, Fremont, Iowa. Antifreezing-tank. No. 957,557; May 10; Sp. p. 2263; Gaz. vol. 154; p. 392.

Heiser, Christian R., London, England. Apparatus for plaiting paper. No. 957,159; May 3; Sp. p. 1400; Gaz. vol. 154; p. 224.

Helbeno, Lena. (See Scott, Grace M., assignor.)

Helbronner, André. (See Lévy and Helbronner.)

Heller, Emanuel C. and A. J. Emrick, assignors of one-third to W. L. Hutchinson, Germantown, Ohio. Tube-cutter. No. 956,805; May 3; Sp. p. 654; Gaz. vol. 154; p. 104.

Heller, John L., Ravenna, Ohio, assignor to Manhattan Electrical Supply Company. Apparatus for filling dry batteries. No. 958,394; May 17; Sp. p. 4359; Gaz. vol. 154; p. 711.

Helm, Bruce M., Hagerstown, Md. Cutting-stick for paper-cutting machines. No. 958,395; May 17; Sp. p. 4362; Gaz. vol. 154; p. 712.

Helmer, William, Boston, Mass. Liquid-dispensing apparatus. No. 958,871; May 24; Sp. p. 5364; Gaz. vol. 154; p. 900.

Hendershot, Henry G. (See Holden and Hendershot.)

Henderson, Clark T., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Circuit-breaker. No. 957,334; May 10; Sp. p. 1815; Gaz. vol. 154; p. 316.

Henderson, Elias H., Chicago, Ill. Scaffold-supporting means. No. 959,008; May 24; Sp. p. 5631; Gaz. vol. 154; p. 946.

Henderson, George A. (See Muther and Henderson.)

Henderson, George A., Marblehead, Mass. Machine for sharpening the rotary knives of skiving and similar machines. No. 959,136; May 24; Sp. p. 5903; Gaz. vol. 154; p. 988.

Hendren, Walter S., assignor of one-fourth to C. A. Knight, Nicholasville, Ky. Toy. No. 959,009; May 24; Sp. p. 5632; Gaz. vol. 154; p. 946.

Hendricks, Milton and J. S. Burnap, Vanlue, Ohio. Flagstaff. No. 957,606; May 10; Sp. p. 2344; Gaz. vol. 154; p. 408.

Henke, Otto R., Grant, Wyo. Loading and unloading device. No. 958,396; May 17; Sp. p. 4363; Gaz. vol. 154; p. 712.

Henretta, Thomas J., assignor of one-half to J. Rose, Roanoke, Va. Air-brake. No. 959,010; May 24; Sp. p. 5633; Gaz. vol. 154; p. 947.

Henrichs, William, assignor of one-half to H. S. McDaniel, Moro, Oreg. Pencil-holder. No. 957,208; May 10; Sp. p. 1534; Gaz. vol. 154; p. 271.

Henry, Albert, Nebraska City, Nebr. Smoke-stack. No. 956,897; May 3; Sp. p. 863; Gaz. vol. 154; p. 138.

Henry, George J., Jr., San Francisco, Cal., assignor of one-half to The Pelton Water Wheel Company. Safety attachment for hydraulic motors. No. 958,120; May 17; Sp. p. 3648; Gaz. vol. 154; p. 615.

Henry, Lyman I., *et al.* (See Callaway, David A., assignor.)

Henry T. Sidway & Company. (See Spengler and Sidway, assignors.)

Hensley, William T., Wilkinsburg, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa. Coil for dynamo-electric machines. No. 957,882; May 17; Sp. p. 2931; Gaz. vol. 154; p. 531.

Hentschel, Charles T., Schenectady, N. Y., assignor to General Electric Company. Automatic circuit-breaker. No. 957,335; May 10; Sp. p. 1817; Gaz. vol. 154; p. 317.

Hepler, Roland L., Kewanee, Ill. Bottling device. No. 956,704; May 3; Sp. p. 443; Gaz. vol. 154; p. 71.

Herendeen, Charles, Chicago, Ill. Making flour. No. 958,494; May 17; Sp. p. 4553; Gaz. vol. 154; p. 746.

Herendeen, Charles, Chicago, Ill. Making flour. No. 958,495; May 17; Sp. p. 4554; Gaz. vol. 154; p. 746.

Herendeen, Charles, Chicago, Ill. Flour. No. 958,496; May 17; Sp. p. 4555; Gaz. vol. 154; p. 747.

Herman, Charles G., assignor, by mesne assignments, to Baldwin Locomotive Works, Philadelphia, Pa. Compressed-air locomotive. No. 959,219; May 24; Sp. p. 6073; Gaz. vol. 154; p. 1016.

Herman, Jacob, Braddock, Pa. Agricultural implement. No. 957,675; May 10; Sp. p. 2501; Gaz. vol. 154; p. 432.

Herman, John L., Marblemount, Wash. Molding and transferring apparatus. No. 959,011; May 24; Sp. p. 5636; Gaz. vol. 154; p. 947.

Herndon, William T., assignor of one-half to F. L. Bundy, Laurinburg, N. C. Sterilizer. No. 959,858; May 31; Sp. p. 7411; Gaz. vol. 154; p. 1256.

Herre, Alfred. (See Bauer and Herre.)

Herrel, Mike, Evansville, Ind. Elevating-scaffold. No. 959,740; May 31; Sp. p. 7156; Gaz. vol. 154; p. 1214.

Herrick, Charles J. (See Herrick, George S. and C. J.)

Herrick, George S. and C. J., Syracuse, N. Y. Willow-stripping machine. No. 959,741; May 31; Sp. p. 7157; Gaz. vol. 154; p. 1215.

Herrmann, Paul E., New York, N. Y. Hair-waving apparatus. No. 959,527; May 31; Sp. p. 6710; Gaz. vol. 154; p. 1144.

Herscher, William J. (See Eisenhuth, James E., assignor.)

Herscher, William J., Buckingham, Ill. Cultivator-shovel. No. 959,528; May 31; Sp. p. 6720; Gaz. vol. 154; p. 1144.

Hertzberg, Harry. (See Low, Wohl, and Hertzberg.)

Hertzberg, Harry. (See Wohl and Hertzberg.)

Hertzberg, Harry, *et al.*, trustees. (See Wohl and Hertzberg, assignors.)

Herzberg, Martin. (See Runkel and Herzberg.)

Herzog, Julius. (See Ebeling and Herzog.)

Hess, Edward B., assignor to Royal Typewriter Company, New York, N. Y. Writing-machine. No. 958,497; May 17; Sp. p. 4556; Gaz. vol. 154; p. 747.

Hess, Edward B., assignor to Royal Typewriter Company, New York, N. Y. Ball-bearing for type-writing-machine carriages. No. 958,498; May 17; Sp. p. 4558; Gaz. vol. 154; p. 747.

Hess, Edward B., assignor to Royal Typewriter Company, New York, N. Y. Type-writing machine. No. 958,702; May 17; Sp. p. 4950; Gaz. vol. 154; p. 813.

Hess, Henry, Wawa, Pa. Ball-bearing. No. 959,529; May 31; Sp. p. 6721; Gaz. vol. 154; p. 1144.

Hetz, Lewis, New York, N. Y. Kinetoscope. No. 956,528; May 3; Sp. p. 40; Gaz. vol. 154; p. 10.

Hewitt, William J., assignor to F. B. Keever, San Francisco, Cal. Muffler. No. 959,742; May 31; Sp. p. 7160; Gaz. vol. 154; p. 1215.

Heys, John J., assignor, by mesne assignments, to Bresnahan Shoe Machinery Company, Lynn, Mass. Shoe-sewing machine. No. 957,954; May 17; Sp. p. 3110; Gaz. vol. 154; p. 555.

Heys, John J., Lynn, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Pulling-over machine for boots and shoes. No. 957,955; May 17; Sp. p. 3115; Gaz. vol. 154; p. 556.

Hibbard, Charles T., assignor to Electric Machinery Company, Minneapolis, Minn. Electric generator and motor. No. 957,209; May 10; Sp. p. 1535; Gaz. vol. 154; p. 271.

Hibbard, Edward R., Oak Park, assignor to Grip Nut Company, Chicago, Ill. Making self-locking nuts. No. 958,810; May 24; Sp. p. 5206; Gaz. vol. 154; p. 878.

Hibbard, Edward R., assignor to Grip Nut Company, Chicago, Ill. Self-locking nut. No. 960,090; May 31; Sp. p. 7953; Gaz. vol. 154; p. 1336.

Hickerson, Jacob F., McComb, Ohio. Water-heating system. No. 958,121; May 17; Sp. p. 3650; Gaz. vol. 154; p. 615.

Hickman, John F. (See Martin, Abraham G., assignor.)

Hickox, Clifford B. (See Fahlstrom, Johan E., assignor.)

Hicks, George C., Jr., assignor to The P. H. & F. M. Roots Company, Connersville, Ind. Gas-engine starter. No. 956,852; May 3; Sp. p. 770; Gaz. vol. 154; p. 122.

Hicks, Leonidas E., Stinson, W. Va. Telephone system. No. 956,248; May 17; Sp. p. 3911; Gaz. vol. 154; p. 658.
Hicks, Thomas B. (See Youngiove, Thomas J., assignor.)
Hicks, William T., Bloomington, Ind. Water-heater. No. 958,499; May 17; Sp. p. 4559; Gaz. vol. 154; p. 747.
Higdon, Thomas E., Repton, Ala. Ash-pan. No. 960,174; May 31; Sp. p. 6109; Gaz. vol. 154; p. 1364.
Higgin, Henry, Newport, Ky. Machine for marking laundry-tags, clothes, and other articles made of textile fabrics. No. 959,940; May 31; Sp. p. 7416; Gaz. vol. 154; p. 1256.
Higgin, Henry, assignor to The Higgin Manufacturing Company, Newport, Ky. Window-screen. No. 959,859; May 31; Sp. p. 7411; Gaz. vol. 154; p. 1256.
Higgin, Henry, assignor to The Higgin Manufacturing Company, Newport, Ky. Running-gear. No. 959,935; May 31; Sp. p. 7599; Gaz. vol. 154; p. 1283.
Higgin Manufacturing Company, The. (See Higgin, Henry, assignor.)
Higgins, Samuel, Milwaukee, Wis. Fan-blower. No. 957,607; May 10; Sp. p. 2345; Gaz. vol. 154; p. 408.
Higgins, William H. C., Jr., assignor to M. Rumely Company, Laporte, Ind. Carburetor. (Reissue.) No. 13,111; May 5; Sp. p. 1444; Gaz. vol. 154; p. 232.
Higgs, Charles W., London, England. Internal-combustion engine. No. 957,836; May 10; Sp. p. 1821; Gaz. vol. 154; p. 317.
High Speed Ring Company. (See Forbes, Charles S., assignor.)
Highfield, Caroline J. F., Bayswater, London, England. Clip or fastener applicable for securing boot-laces and neckties. No. 960,013; May 31; Sp. p. 7785; Gaz. vol. 154; p. 1310.
Hildebrand, John S., near Hildebran, N. C. Canning apparatus. No. 959,861; May 31; Sp. p. 7428; Gaz. vol. 154; p. 1257.
Hildreth, Lawrence, Pine Grove, Ky. Match-safe. No. 958,122; May 17; Sp. p. 3652; Gaz. vol. 154; p. 616.
Hill, Arnold B., Chicago, Ill. Fuel. No. 958,920; May 24; Sp. p. 5473; Gaz. vol. 154; p. 917.
Hill, Henry, Portland, Oreg., assignor of one-half to J. Hill. Dust-collector. No. 959,936; May 31; Sp. p. 7604; Gaz. vol. 154; p. 1283.
Hill, Hermann, West Haven, Conn., assignor to Steel Fireproofing Company, Wheeling, W. Va. Machine for cutting sheet metal. No. 960,014; May 31; Sp. p. 7786; Gaz. vol. 154; p. 1310.
Hill, John. (See Hill, Henry, assignor.)
Hill, Palmer G. (See Evans and Hill.)
Hill, V. P. (See Young, Lorenzo H., assignor.)
Hillier, Joseph L., Mattapoisett, Mass. Crushing or pulverizing machine. No. 958,921; May 24; Sp. p. 5474; Gaz. vol. 154; p. 917.
Hilliard, Edward G. (See Shillin, Frank, assignor.)
Hillman, Henry G. (See Lumley and Hillman.)
Hilpert, Meier G., Pittsburg, Pa. Tool-retainer for air, electric, or mechanically-driven implements. No. 959,530; May 31; Sp. p. 6722; Gaz. vol. 154; p. 1144.
Hiltner, Martin E., Deadwood, S. D. Vacuum-filter. No. 957,558; May 10; Sp. p. 2264; Gaz. vol. 154; p. 392.
Hilton, John E. (See Coe, John B., assignor.)
Hilty, Charles R., Chicago, Ill. Rotary compound steam-engine. No. 957,508; May 10; Sp. p. 2161; Gaz. vol. 154; p. 374.
Hinchliffe, George H., Boston, Mass., assignor to Goodell Company, Antrim, N. H. Apple-parer. No. 959,137; May 24; Sp. p. 5907; Gaz. vol. 154; p. 989.
Hine, Henry C., assignor of one-half to G. W. Traut, New Britain, Conn. Garment-supporter. No. 959,937; May 31; Sp. p. 7606; Gaz. vol. 154; p. 1283.
Hine, William C., Cleveland, Ohio, assignor to the Conneaut Company. Shade and reflector support for lighting-fixtures. No. 957,956; May 17; Sp. p. 3125; Gaz. vol. 154; p. 556.
Hines, Alfred, Wasco, Oreg. Draft-equalising device. No. 958,811; May 24; Sp. p. 5208; Gaz. vol. 154; p. 878.
Hinman, Curtis, Akron, Ohio. Potato-planter. No. 958,922; May 24; Sp. p. 5475; Gaz. vol. 154; p. 918.
Hinshaw, George L., and H. A. Wade, Parsons, Kans. Traction-engine. No. 958,123; May 17; Sp. p. 3653; Gaz. vol. 154; p. 616.
Hintermann, Hermann, Basel, Switzerland. Closing device for cans or the like. No. 959,012; May 24; Sp. p. 5638; Gaz. vol. 154; p. 947.
Hipolito, David E., Los Angeles, Cal. Reversible window. No. 958,962; May 24; Sp. p. 5541; Gaz. vol. 154; p. 931.
Hirsch, Friedrich. (See Friedrich and Hirsch.)
Hirsh, Fred, New York, N. Y. Fastener. No. 958,240; May 17; Sp. p. 3918; Gaz. vol. 154; p. 659.
Hirst, John C., Reynoldsville, Pa. Mining-machine. No. 957,967; May 17; Sp. p. 3127; Gaz. vol. 154; p. 556.
Hirth, Carl A., Cannstatt, Germany. Leather-skiving machine. No. 958,124; May 17; Sp. p. 3655; Gaz. vol. 154; p. 616.
Hirtsel, George L., Jr., *et al.* (See Knobbs, Charles H., assignor.)
Hitt, Thomas G., Seattle, Wash. Rocket. No. 957,210; May 10; Sp. p. 1536; Gaz. vol. 154; p. 272.
Hixon, Hiram W., Philadelphia, Pa. Electric furnace. No. 957,068; May 3; Sp. p. 1200; Gaz. vol. 154; p. 191.
Hixon, Hiram W., Philadelphia, Pa. Electric furnace. No. 957,237; May 10; Sp. p. 1822; Gaz. vol. 154; p. 317.
Hobart, Adam J., assignor to F. Engelhardt & Sons, St. Johnsville, N. Y. Coin-controlled actuating mechanism for autopneumatic pianos. No. 958,125; May 17; Sp. p. 3657; Gaz. vol. 154; p. 617.
Hochriter, Theodore. (See Kurts and Hochriter.)
Hocking Valley Manufacturing Company, The. (See Grommé, John J., assignor.)
Hodgkinson, Francis, Edgewood Park, Pa., assignor to The Westinghouse Machine Company. Multistage turbine. No. 957,338; May 10; Sp. p. 1824; Gaz. vol. 154; p. 318.
Hoe and Co., R. (See Roesen, Oscar, assignor.)
Hoeft, Adolph E., Chicago, Ill. Combined bottle-cap remover and stopper. No. 959,220; May 24; Sp. p. 6075; Gaz. vol. 154; p. 1016.
Hoepner, George, Chicago, Ill. Automatic weighing-machine. No. 956,853; May 3; Sp. p. 772; Gaz. vol. 154; p. 122.
Hofacker, Fred, Portland, Me. Sleeve-board. No 956,705; May 3; Sp. p. 445; Gaz. vol. 154; p. 71.
Hoffer, George L., Laurel, Miss. Car-brass mold. No. 956,638; May 3; Sp. p. 281; Gaz. vol. 154; p. 47.
Hoffman, Joseph. (See Wright and Hoffman.)
Hoffman, William W., La Fayette, Ind. Base-burning stove. No. 960,175; May 31; Sp. p. 8110; Gaz. vol. 154; p. 1364.
Hogeland, Jason S., Holland, Pa. Potato-digger. No. 958,250; May 17; Sp. p. 3918; Gaz. vol. 154; p. 650.
Hogge, Richard A., assignor to F. M. McCracken, Louisiana, Mo. Center-punch. No. 956,765; May 3; Sp. p. 571; Gaz. vol. 154; p. 91.
Hohmann, Richard K., San Diego, Cal. Feeding attachment for sewing-machines. No. 957,211; May 10; Sp. p. 1538; Gaz. vol. 154; p. 272.
Hoke, Clarence J., *et al.* (See Hoke, Henry E., assignor.)
Hoke, Henry E., assignor of one-fourth to C. J. Hoke and one-fourth to R. H. Hoke, Hanover, Pa. Bank-note cutter. No. 959,342; May 24; Sp. p. 6324; Gaz. vol. 154; p. 1057.
Hoke, Ralph H., *et al.* (See Hoke, Henry E., assignor.)
Holbrook, Frank, assignor to M. V. Brennahan, Lynn, Mass. Bed-lasting machine. No. 957,883; May 17; Sp. p. 2932; Gaz. vol. 154; p. 531.
Holcomb, Frank L., Kingston, N. Y. Locomotive blower and air-pump-exhaust pipe. No. 956,706; May 3; Sp. p. 446; Gaz. vol. 154; p. 71.
Holden, Charles M., and H. G. Hendershot, San Francisco, Cal. Spark-plug holder. No. 960,091; May 31; Sp. p. 7955; Gaz. vol. 154; p. 1336.
Holden, Edward H., New York, N. Y. Line-clinometer. No. 957,059; May 3; Sp. p. 1202; Gaz. vol. 154; p. 191.
Holden, Walter A., Ansonia, assignor to The Robert N. Bassett Company, Shelton, Conn. Buckle. No. 958,397; May 17; Sp. p. 4365; Gaz. vol. 154; p. 713.
Holden, Walter A., Ansonia, assignor to The Robert N. Bassett Company, Shelton, Conn. Buckle. No. 959,138; May 24; Sp. p. 5909; Gaz. vol. 154; p. 989.
Holderman, Marion F., Washington, D. C. Universally-movable tracker-board. No. 957,676; May 10; Sp. p. 2503; Gaz. vol. 154; p. 433.
Holderman, Marion F., Washington, D. C. Tracker-board for piano-players. No. 957,774; May 10; Sp. p. 2700; Gaz. vol. 154; p. 464.
Holforty, Howard, Omaha, Nebr. Sewing-machine attachment. No. 956,965; May 3; Sp. p. 1019; Gaz. vol. 154; p. 160.
Hollenberger, John A., Hagerstown, Md. Magazine-pencil. No. 959,531; May 31; Sp. p. 6727; Gaz. vol. 154; p. 1145.
Hollon, George F., Waco, Tex. Razor. No. 957,060; May 3; Sp. p. 1206; Gaz. vol. 154; p. 192.
Holmberg & Company, Charles. (See Molander, Charles F., assignor.)
Holmes, Alfred E., Chicago, Ill. Collapsible furniture. No. 950,015; May 31; Sp. p. 7789; Gaz. vol. 154; p. 1311.
Holmes, Edward C., Ludlow, Ky. Curtain for vestibuled cars. No. 956,966; May 3; Sp. p. 1021; Gaz. vol. 154; p. 160.
Holmes, Elbridge R., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Lay for narrow-ware looms. No. 956,854; May 3; Sp. p. 778; Gaz. vol. 154; p. 123.
Holmes, Elbridge R., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Narrow-ware or ribbon loom. No. 958,703; May 17; Sp. p. 4962; Gaz. vol. 154; p. 814.
Holms, William L., Guadalajara, Mexico, Leonard M. Green, London, England, and John S. Pattinson, Zacatecas, Mexico. Means for separating water or solution from solids, such as slimy ores, pulp, and the like. No. 957,775; May 10; Sp. p. 2705; Gaz. vol. 154; p. 464.
Holsman, Henry K., Chicago, Ill., assignor to Independent Harvester Company. Drive-chain. No. 959,542; May 31; Sp. p. 6728; Gaz. vol. 154; p. 1145.
Holsman, Henry K., and C. H. Bryan, Chicago, Ill. Rope for power-transmission purposes. No. 956,578; May 3; Sp. p. 155; Gaz. vol. 154; p. 27.
Holst, John, Berkeley, Cal. Pump. No. 959,533; May 31; Sp. p. 6730; Gaz. vol. 154; p. 1145.
Holstrom, Carl, and A. B. Mascall, London, assignors of one-third to E. Middleton, Sheffield, England. Firing mechanism for ordnance. No. 956,642; May 17; Sp. p. 4838; Gaz. vol. 154; p. 794.
Holt, Albert T., Columbus, Ohio. Lacing. No. 957,559; May 10; Sp. p. 2267; Gaz. vol. 154; p. 392.
Holt & Beebee. (See Holt, Oliver J., assignor.)

Holt, Gardner L., Hartford, Conn. Pliers or pipe-tongs. No. 957,560; May 10; Sp. p. 2267; Gaz. vol. 154; p. 392.
Holt, Harris B., assignor of one-half to C. A. Conn, Pittsburg, Pa. Fluid-pressure motor. No. 957,339; May 10; Sp. p. 1828; Gaz. vol. 154; p. 318.
Holt, Oliver J., Chelsea, assignor to Holt & Beebee, Boston, Mass. Lamp. No. 959,431; May 24; Sp. p. 6477; Gaz. vol. 154; p. 1085.
Holte, John T., Moorhead, Minn. Broom-holder. No. 959,139; May 24; Sp. p. 5911; Gaz. vol. 154; p. 990.
Holtmann, Charles F., Pittsburg, assignor of three-fifths to S. C. Galley, Wilkinsburg, Pa. Gas burner or heater. No. 959,343; May 24; Sp. p. 6326; Gaz. vol. 154; p. 1058.
Holtz, Gustav, Gouldsboro, Pa. Sanitary dental-bracket tray. No. 959,534; May 31; Sp. p. 6732; Gaz. vol. 154; p. 1146.
Holtzhouser, Jacob P., assignor to The Stanley Works, New Britain, Conn. Hasp-handle for washing-machines and other containers. No. 958,745; May 24; Sp. p. 5058; Gaz. vol. 154; p. 854.
Holyoke Machine Company. (See White, William W., assignor.)
Holzhey, Otto, and O. Dickhaus, New York, N. Y. Braided necktie. No. 958,872; May 24; Sp. p. 5367; Gaz. vol. 154; p. 901.
Homan, Frank, Carbon, W. Va. Switch. No. 959,344; May 24; Sp. p. 6330; Gaz. vol. 154; p. 1058.
Homann, Alfred, New Braunfels, Tex. Harness-saddle. No. 958,643; May 17; Sp. p. 4842; Gaz. vol. 154; p. 795.
Homer Roberts Telephone Co. (See Roberts, Homer J., assignor.)
Homme, Frank O., J. T. Vollen, and I. L. Isaacson, Kloten, N. D. Churn. No. 956,639; May 3; Sp. p. 283; Gaz. vol. 154; p. 47.
Homsher, Carl S. (See Healey and Homsher.)
Honiss, William H., Hartford, Conn., assignor of one-half to Beech-Nut Packing Company, Canajoharie, N. Y., and one-fourth to W. A. Lorenz, Hartford, Conn. Leveler for jar-caps. No. 956,529; May 3; Sp. p. 42; Gaz. vol. 154; p. 10.
Hood, Charles E., Lynn, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Heel-burnishing machine. No. 957,958; May 17; Sp. p. 3129; Gaz. vol. 154; p. 557.
Hooker, Thomas, Syracuse, N. Y. Handle-fastening wedge. No. 959,862; May 31; Sp. p. 7430; Gaz. vol. 154; p. 1257.
Hooker, William E., Buffalo, N. Y. Tobacco-smoking pipe. No. 958,398; May 17; Sp. p. 4366; Gaz. vol. 154; p. 713.
Hooper, William H., Lynn, assignor to T. G. Plant, Boston, Mass. Machine for treating insoles of boots and shoes. No. 957,959; May 17; Sp. p. 3135; Gaz. vol. 154; p. 557.
Hooper, William H., Lynn, assignor to T. G. Plant, Boston, Mass. Insole-edge trimmer. No. 957,960; May 17; Sp. p. 3139; Gaz. vol. 154; p. 558.
Hooper, William H., Lynn, assignor to T. G. Plant, Boston, Mass. Insole-tempering machine. No. 957,961; May 17; Sp. p. 3142; Gaz. vol. 154; p. 558.
Hooper, William H., Lynn, assignor to T. G. Plant, Boston, Mass. Treeing-machine. No. 957,962; May 17; Sp. p. 3145; Gaz. vol. 154; p. 559.
Hooper, William H., Lynn, assignor to T. G. Plant, Boston, Mass. Treeing-machine. No. 957,963; May 17; Sp. p. 3154; Gaz. vol. 154; p. 559.
Hooper, William H., Swampscott, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Boot-treeing machine. No. 957,964; May 17; Sp. p. 3163; Gaz. vol. 154; p. 559.
Hope, Charles H., Providence, R. I. Machine for grinding the surfaces of printing or embossing cylinders. No. 959,140; May 24; Sp. p. 5912; Gaz. vol. 154; p. 990.
Hopkins, Harvey L., Chicago, Ill., assignor to Hopkins Patent Company. Mower and harvester. No. 959,535; May 31; Sp. p. 6734; Gaz. vol. 154; p. 1146.
Hopkins, James H., Manchester, England. Internal-combustion engine. No. 956,967; May 3; Sp. p. 1022; Gaz. vol. 154; p. 160.
Hopkins Patent Company. (See Hopkins, Harvey L., assignor.)
Hopkins, Samuel M., Emhouse, Tex. Churn. No. 957,608; May 10; Sp. p. 2347; Gaz. vol. 154; p. 408.
Horan, Michael A., Trenton, N. J. Emergency cut-off for gas-pipes. No. 958,126; May 17; Sp. p. 3659; Gaz. vol. 154; p. 617.
Horn, Frank, Columbus, Ohio. Car-door. No. 958,873; May 24; Sp. p. 5368; Gaz. vol. 154; p. 901.
Horne, Irving N., Portland, Me., assignor, by mesne assignments, to Sterilac Company, Boston, Mass. Milking-receptacle. No. 958,899; May 17; Sp. p. 4367; Gaz. vol. 154; p. 713.
Horner, John W., and G. L. Patterson, Revere, Mass. Egg-beater. No. 959,536; May 31; Sp. p. 6737; Gaz. vol. 154; p. 1147.
Horton, Charles M., Elizabeth, N. J., assignor to The Singer Manufacturing Company. Tabl-fastener attachment for sewing-machines. No. 958,251; May 17; Sp. p. 3920; Gaz. vol. 154; p. 659.
Horton, James A., Providence, R. I., assignor to Iroquois Machine Company, New York, N. Y. Cooling attachment for wire-drawing dies. No. 957,464; May 10; Sp. p. 2072; Gaz. vol. 154; p. 259.
Horton, James A., Providence, R. I., assignor to Iroquois Machine Company, New York, N. Y. Wire-drawing machine and uncoiling appliance therefor. No. 960,016; May 31; Sp. p. 7791; Gaz. vol. 154; p. 1311.
Hosley, Nelson D., assignor to The Wilcox & White Company, Meriden, Conn. Horizontal-grand player-piano. No. 957,421; May 10; Sp. p. 1996; Gaz. vol. 154; p. 344.
Hough, Hiram J., Akron, and J. B. Crowl, Alliance, Ohio. Furnace. No. 959,141; May 24; Sp. p. 5913; Gaz. vol. 154; p. 990.
Houldsworth, Henry, Keighley, England. Axle and bearing for vehicles. No. 956,579; May 3; Sp. p. 156; Gaz. vol. 154; p. 27.
Houston, Lewis H., Parral, W. Va. Twine-dispensing device. No. 956,640; May 3; Sp. p. 285; Gaz. vol. 154, p. 47.
Hovrud, Knut T., Butler, S. D. Pole-anchor. No. 958,127; May 17; Sp. p. 3661; Gaz. vol. 154; p. 617.
Howard, Aben G., Holdrege, Nebr. Attachment for telephones. No. 956,530; May 3; Sp. p. 44; Gaz. vol. 154; p. 10.
Howard Automatic Railway Switch Company, The. (See Howard, Emmett, assignor.)
Howard, Charles O. (See Frayer and Howard.) (Reissue.)
Howard, Emmett, assignor to The Howard Automatic Railway Switch Company, Eugene, Oreg. Automatic railway-switch. No. 960,017; May 31; Sp. p. 7793; Gaz. vol. 154; p. 1311.
Howard, Frank H. (See Morris and Kennedy, assignors.)
Howard, James F., Spokane, Wash. Lock-alarm. No. 956,580; May 3; Sp. p. 158; Gaz. vol. 154; p. 27.
Howarth, Albert, assignor, by mesne assignments, to Star Carburetor and Supply Company, Providence, R. I. Carburetor. No. 958,128; May 17; Sp. p. 3662; Gaz. vol. 154; p. 618.
Howe and Davidson Company. (See Davidson, Frank B., assignor.)
Howe, John P. (See Dawes, Charles, assignor.)
Howe, Percy Y., Yonkers, N. Y. Adjustable-rack reversible developing-tank. No. 958,500; May 17; Sp. p. 4561; Gaz. vol. 154; p. 748.
Howell, Charles T., Glen Flora, Wis. Fence-post. No. 957,677; May 10; Sp. p. 2506; Gaz. vol. 154; p. 433.
Howell, Fred B., Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine. No. 956,855; May 3; Sp. p. 780; Gaz. vol. 154; p. 123.
Howell, William N., Philadelphia, Pa., assignor to S. Lake, Bridgeport, Conn. Periscope. No. 959,013; May 24; Sp. p. 5638; Gaz. vol. 154; p. 948.
Howick, James M. (See Lutz, Benjamin F., assignor.)
Hoyer, Julius W., St. Louis, Mo., assignor to Mississippi Wire Glass Company, New York, N. Y. Method of and machine for making wire-glass. No. 950,537; May 31; Sp. p. 6738; Gaz. vol. 154; p. 1147.
Hoyt, John C., Kansas City, Mo. Bath-cabinet. No. 959,743; May 31; Sp. p. 7162; Gaz. vol. 154; p. 1215.
Hrivnak, John, and J. Batos, Blair Station, Pa. Automatic gas-valve. No. 958,506; May 17; Sp. p. 4572; Gaz. vol. 154; p. 750.
Hubbard, George M., assignor to The W. & E. T. Fitch Co., New Haven, Conn. Snap-hook. No. 959,744; May 31; Sp. p. 7164; Gaz. vol. 154; p. 1216.
Huber, Edward, Newport, Ky. Horseshoe-calk. No. 957,212; May 10; Sp. p. 1541; Gaz. vol. 154; p. 273.
Hubert, Conrad. (See Day, Albert V. T., assignor.)
Hubert, Frank, New York, N. Y. Dust-pan. No. 956,968; May 3; Sp. p. 1027; Gaz. vol. 154; p. 161.
Huddart, Edmund, Barneston, Nebr. Cuspidor-cleaner. No. 956,641; May 3; Sp. p. 280; Gaz. vol. 154; p. 48.
Huden, Thomas P., North Bend, Oreg. Gas-engine-valve timer. No. 959,345; May 24; Sp. p. 6331; Gaz. vol. 154; p. 1058.
Hudson, Daniel L., Chicago, Ill. Shoe-polishing machine. No. 958,400; May 17; Sp. p. 4369; Gaz. vol. 154; p. 718.
Huebner, Walter C., Johnstown, Pa. Headlight. No. 960,018; May 31; Sp. p. 7796; Gaz. vol. 154; p. 1312.
Huff, John S., New Brighton, Pa. Christmas-tree holder. No. 958,644; May 17; Sp. p. 4842; Gaz. vol. 154; p. 795.
Huffman, George W., Buckhorn, Mo. Horse-releaser. No. 957,340; May 10; Sp. p. 1829; Gaz. vol. 154; p. 318.
Huffmon, Oscar, Pactolus, Ky. Plow-cleaner. No. 959,538; May 31; Sp. p. 6740; Gaz. vol. 154; p. 1147.
Hughes, Harry H., Springfield, Mo. Revolving furnace for volatilizing metals from their ores. (Reissue.) No. 13,118; May 31; Sp. p. 8250; Gaz. vol. 154; p. 1388.
Hughes, Howard R., Houston, Tex. Roller-drill. No. 959,539; May 31; Sp. p. 6741; Gaz. vol. 154; p. 1148.
Hughes, Howard R., Houston, Tex. Roller-drill. No. 959,540; May 31; Sp. p. 6746; Gaz. vol. 154; p. 1148.
Huguenin, Albert, Zurich, Switzerland. Construction of rotating wheels for rotary fluid-compressors. No. 958,129; May 17; Sp. p. 3671; Gaz. vol. 154; p. 619.
Hulbert, Edwin F., South Norwalk, Conn. Hinge. No. 957,160; May 3; Sp. p. 1408; Gaz. vol. 154; p. 225.
Hulett, George H., assignor to The Wellman-Seaver-Morgan Company, Cleveland, Ohio. Pontoon-crane. No. 960,224; May 31; Sp. p. 8208; Gaz. vol. 154; p. 1382.
Hulett, George H., assignor to The Wellman-Seaver-Morgan Company, Cleveland, Ohio. Counterweight for pontoon-cranes. No. 960,225; May 31; Sp. p. 8210; Gaz. vol. 154; p. 1382.
Hulse, George E., Jersey City, N. J., assignor to The Safety Car Heating & Lighting Company. Steam-trap. No. 959,541; May 31; Sp. p. 6750; Gaz. vol. 154; p. 1148.
Hulse, George E., Newark, N. J., assignor to Safety Car Heating & Lighting Company. Regulator for gas-lighting systems. No. 959,745; May 31; Sp. p. 7165; Gaz. vol. 154; p. 1216.

Hult, Carl A. and O. W., Stockholm, Sweden. Internal-combustion motor. No. 957,965; May 17; Sp. p. 3174; Gaz. vol. 154; p. 560.

Hult, Carl A. and O. W., Stockholm, Sweden. Explosion or combustion motor or pump. No. 959,748; May 31; Sp. p. 7174; Gaz. vol. 154; p. 1217.

Hult, Oscar W. (See Hult, Carl A. and O. W.)

Hults, Eugene A. (See Collins and Hults.)

Humason, Granville A., Natchez, assignor of one-third to A. M. Byrd, Philadelphia, Miss., and one-half to E. O. Riordan, Washington, D. C. Machine for cleaning cotton. No. 959,746; May 31; Sp. p. 7171; Gaz. vol. 154; p. 1216.

Hummel, Daniel, Louisville, Ky. Seed-threshing machine. No. 959,340; May 24; Sp. p. 6333; Gaz. vol. 154; p. 1059.

Humphrey, Francis M., Pendleton, Oreg. Fly-trap. No. 959,747; May 31; Sp. p. 7172; Gaz. vol. 154; p. 1217.

Humphrey, Frank E., and F. H. Patrick, St. Johnsbury, Vt. Shutter-bower. No. 956,766; May 3; Sp. p. 574; Gaz. vol. 154; p. 91.

Humphreys, John, Henderson, Ky. Spoke and felly clip. No. 956,806; May 3; Sp. p. 657; Gaz. vol. 154; p. 104.

Hunt, Harry H., Winfield township, Butler county, Pa. Train-signaling and brake-releasing mechanism. No. 959,749; May 31; Sp. p. 7175; Gaz. vol. 154; p. 1218.

Hunt, Randall D. (See Riley and Hunt.)

Hunt, Robert H. H., assignor to Economic Loom Company, San Francisco, Cal. Loom. No. 958,874; May 24; Sp. p. 5371; Gaz. vol. 154; p. 901.

Hunt, Robert H. H., Alameda, assignor to Economic Loom Company, San Francisco, Cal. Loom. No. 960,019; May 31; Sp. p. 7797; Gaz. vol. 154; p. 1312.

Hunter, David E., Cambridge, assignor to Library Bureau, Boston, Mass. Record-card. No. 959,938; May 31; Sp. p. 7607; Gaz. vol. 154; p. 1284.

Hunter, David E., Cambridge, assignor to Library Bureau, Boston, Mass. Margin-piece for cabinets or the like. No. 959,939; May 31; Sp. p. 7610; Gaz. vol. 154; p. 1284.

Hunter, David E., Cambridge, assignor to Library Bureau, Boston, Mass. Corner-joint. No. 959,940; May 31; Sp. p. 7611; Gaz. vol. 154; p. 1284.

Hunter, Thomas W., Petaluma, Cal. Oil-burner. No. 959,347; May 24; Sp. p. 6334; Gaz. vol. 154; p. 1059.

Hunter, William A., Jr. (See Bassett and Hunter.)

Hunter, William O., Topeka, Kans. Safety-clip for pens and pencils. No. 960,092; May 31; Sp. p. 7956; Gaz. vol. 154; p. 1337.

Huntington, Charles S., Omaha, Nebr. Machine for forming buckle-frames. No. 959,941; May 31; Sp. p. 7612; Gaz. vol. 154; p. 1285.

Huntley Mfg. Co. (See Wolfe, Arthur P., assignor.)

Hurd, Benjamin, Nutley, N. J. Machine for cutting rails. No. 959,142; May 24; Sp. p. 5915; Gaz. vol. 154; p. 990.

Hurd, Norman B. (See Voight and Hurd.)

Hussey, Dennis B., St. Louis, Mo. Ball-caster. No. 956,960; May 3; Sp. p. 1028; Gaz. vol. 154; p. 161.

Hussey, John M., Wichita, Kans. Desiccating egg-batter. No. 957,061; May 3; Sp. p. 1207; Gaz. vol. 154; p. 192.

Hutchinson, Warren B., trustee. (See Rector, Alcorn, assignor.)

Hutchinson, Willard L. (See Heller and Emrick, assignors.)

Hutchison, Miller R., Bronxville, N. Y. Signaling-horn, &c. No. 956,898; May 3; Sp. p. 864; Gaz. vol. 154; p. 138.

Hutchison, Miller R., Summit, N. J. Diaphragm-actuated horn and resonator therefor. No. 957,161; May 3; Sp. p. 1409; Gaz. vol. 154; p. 225.

Huth, Hermann, St. Louis, Mo. Horseshoe attachment. No. 957,884; May 17; Sp. p. 2936; Gaz. vol. 154; p. 531.

Hyatt Roller Bearing Company. (See Lockwood, Charles S., assignor.)

Hyde, Henry E., Johannesburg, Transvaal. Safety mechanism for mine skips and cages. No. 956,707; May 3; Sp. p. 447; Gaz. vol. 154; p. 71.

Hyle, William A. (See Schuyler and Hyle.)

Hyre, David N., and J. W. Shirey, Los Angeles, Cal. Safety-holdback shaft-hook. No. 957,678; May 10; Sp. p. 2507; Gaz. vol. 154; p. 433.

Hysell, Benjamin F., and B. M. Cavedo, Middleport, Ohio. Brake head and shoe. No. 959,542; May 31; Sp. p. 6754; Gaz. vol. 154; p. 1149.

Ibson, John P., Denver, Colo. Kitchen utensil. No. 958,875; May 24; Sp. p. 5378; Gaz. vol. 154; p. 902.

Ide, Daniel K. (See Blanchard, Uhl, and Koch, assignors.)

Idstrom, William. (See Torjusen and Idstrom.)

Ilg, Robert A., Chicago, Ill. Ventilating-fan. No. 957,776; May 10; Sp. p. 2714; Gaz. vol. 154; p. 465.

Inbody, William S., McComb, Ohio. Hay-stacker. No. 959,543; May 31; Sp. p. 6755; Gaz. vol. 154; p. 1149.

Independent Harvester Company. (See Boda, Joseph, assignor.)

Independent Harvester Company. (See Holeman, Henry K., assignor.)

Independent Harvester Company. (See Wunder, George E., assignor.)

Independent Manufacturing Company. (See Price, Max C., assignor.)

Indiana Picker & Husker Company. (See Kaull, Burt J., assignor.)

Ingersoll-Rand Company. (See Bayles, Lewis C., assignor.)

Ingersoll-Rand Company. (See Hansen, Charles C., assignor.)

Ingham, Clark L., *et al.* (See Willet, John G., assignor.)

Inman, George W. (See Knowles and Inman.)

Interlocking Fence Company. (See Elwell and Grimm, assignors.)

International Engineering Company. (See Pollard, Edward T., assignor.)

International Harvester Company. (See Dennis, Samuel K., assignor.)

International Harvester Company. (See Dennis and Rice, assignors.)

International Harvester Company. (See Pearson, Charles, assignor.)

International Harvester Company. (See Ryther, Frank A., assignor.)

International Harvester Company. (See Smith, Daniel W., assignor.)

Ireland, A. Bertsell and F. L., Norwich, N. Y. Sawing-machine. No. 959,221; May 24; Sp. p. 6076; Gaz. vol. 154; p. 1016.

Ireland, Frank L. (See Ireland, A. Bertsell and F. L.)

Iroquois Machine Company. (See Horton, James A., assignor.)

Isaacs, Mone R. (See Stafford, Charles S., assignor.)

Isaacs, Mone R., Philadelphia, Pa. Adhesive compound or sizing. No. 959,348; May 24; Sp. p. 6335; Gaz. vol. 154; p. 1059.

Isaacson, Isaac L. (See Homme, Vollen, and Isaacson.)

Isachson, Norman, Mountain Home, Idaho. Device for lowering and hoisting head-gates for dams. No. 958,401; May 17; Sp. p. 4371; Gaz. vol. 154; p. 714.

Isakson, Karl J. A., Stockholm, Sweden. Speed retarding and reversing device. No. 957,509; May 10; Sp. p. 2163; Gaz. vol. 154; p. 374.

Isbell, John, *et al.* (See Gregory, Joseph, assignor.)

Iselin, John H. (See Dukesmith, Frank H., assignor.)

Iselin, Charles F. (See Agel and Iselin.)

Isles, Peter, Swissvale, Pa. Furnace-arch construction. No. 958,130; May 17; Sp. p. 3673; Gaz. vol. 154; p. 619.

Izer, Elmer E., Pomona, Cal. Irrigating-valve. No. 957,777; May 10; Sp. p. 2715; Gaz. vol. 154; p. 465.

J. Geo. Leyner Engineering Works Company, The. (See Leyner, John G., assignor.)

J. A. Engel & Company. (See Feldt, Ferdinand J., assignor.)

J. G. Brill Co., The. (See Adams, Walter S., assignor.)

J. M. Dodge Company, The. (See Johnston, Arthur C., assignor.)

J. P. Karns Tunneling Machine Co. (See Karns, John P., assignor.)

Jaciuk, George, Chicago, Ill. Scrubbing-machine. No. 957,102; May 3; Sp. p. 1414; Gaz. vol. 154; p. 226.

Jackman, A. (See Burch, Marsden L., assignor.)

Jackman, Charles R., New London, Iowa. Concrete-mold. No. 958,402; May 17; Sp. p. 4373; Gaz. vol. 154; p. 714.

Jackson, Charles E., assignor of one-half to himself and one-half to J. H. Spiker, Bushnell, Ill. Vehicle-brake. No. 956,899; May 3; Sp. p. 860; Gaz. vol. 154; p. 138.

Jackson, Coke. (See Matson, Emanuel E., assignor.)

Jackson Cushion Edge Company. (See Hampton, Frank H., assignor.)

Jackson, Dugald C., Madison, Wis. Dynamo-machine. No. 960,093; May 31; Sp. p. 7958; Gaz. vol. 154; p. 1337.

Jackson, Hiram L., Colfax, Iowa. Railway-box-car loader. No. 957,885; May 17; Sp. p. 2937; Gaz. vol. 154; p. 532.

Jackson, John, Chicago, Ill. Book-marker. No. 957,465; May 10; Sp. p. 2074; Gaz. vol. 154; p. 359.

Jackson, John L., River Forest, Ill. Wheel. No. 959,058; May 24; Sp. p. 5728; Gaz. vol. 154; p. 962.

Jackson, Ray F., and H. M. Scheibe, Wilkinsburg, Pa., assignors to Westinghouse Electric & Manufacturing Company, Electric apparatus. No. 959,544; May 31; Sp. p. 6757; Gaz. vol. 154; p. 1150.

Jackson, William L., Brookland, D. C. Device for supporting milk-bottles. No. 958,131; May 17; Sp. p. 3674; Gaz. vol. 154; p. 619.

Jackson, Wilton D., Philadelphia, Pa. Fusee. No. 960,094; May 31; Sp. p. 7962; Gaz. vol. 154; p. 1337.

Jacobi, Hugo, Leipzig, Germany. Apparatus for the automatic opening and closing of pipes, valves, &c., at fixed intervals. No. 957,341; May 10; Sp. p. 1830; Gaz. vol. 154; p. 319.

Jacobs, Arthur L., assignor, by mesne assignments, to J. M. Jacobs, Boston, Mass. Casing for electric-lamp sockets. No. 956,970; May 3; Sp. p. 1029; Gaz. vol. 154; p. 161.

Jacobs, Henry W., Topeka, Kans. Crane. No. 956,856; May 3; Sp. p. 781; Gaz. vol. 154; p. 123.

Jacobs, Henry W., Topeka, Kans. Tool-driving mechanism. No. 959,863; May 31; Sp. p. 7431; Gaz. vol. 154; p. 1257.

Jacobs, Jennie M. (See Jacobs, Arthur L., assignor.)

Jacobs, Morris, New York, N. Y. Self-locking nut. No. 959,222; May 24; Sp. p. 6082; Gaz. vol. 154; p. 1017.

Jacobson, Elmer. (See Luna, Joseph C., assignor.)

Jaegermann, Rudolph, St. Louis, Mo. Electric clock. No. 959,864; May 31; Sp. p. 7433; Gaz. vol. 154; p. 1257.

Jaentsch, Carl. (See Körtling and Jaentsch.)

Jahns, Erwin, Berlin, assignor to Grimme, Natalis & Co. Kommanditgesellschaft auf Aktien, Braunschweig, Brunswick, Germany. Calculating-machine. No. 957,062; May 3; Sp. p. 1212; Gaz. vol. 154; p. 192.

Jahr, Otto, Untermhaus, near Gera-Reuss, Germany. Barrel filling or tapping device. No. 958,403; May 17; Sp. p. 4375; Gaz. vol. 154; p. 715.

Jakob, Fred, Bartley, Nebr. Quilting-frame. No. 957,561; May 10; Sp. p. 2209; Gaz. vol. 154; p. 393.

Jakobsson, Herman G. (See Meigs and Jakobsson.)

James, Frank D., Seattle, Wash. Engine-starting mechanism. No. 959,014; May 24; Sp. p. 5641; Gaz. vol. 154; p. 948.

Jameson, George P., assignor to The Thomas P. Taylor Co., Bridgeport, Conn. Embroidery-ring. No. 956,767; May 3; Sp. p. 574; Gaz. vol. 154; p. 91.

Jameson, John R., Oak Park, Ill. Hat-pin attachment. No. 958,404; May 17; Sp. p. 4376; Gaz. vol. 154; p. 715.

Jamison, Robert G., assignor of one-half to C. M. Patterson, Pittsburg, Pa. Automatic gas-burner. No. 957,342; May 10; Sp. p. 1832; Gaz. vol. 154; p. 319.

Janney, Stewart S. (See Spencer, Jarvis, assignor.)

Janwich, William L., Cliffwood, N. J. Poker. No. 957,679; May 10; Sp. p. 2508; Gaz. vol. 154; p. 433.

Japhet, Charles A., Moran, Kans. Crude-oil burner. No. 957,063; May 3; Sp. p. 1215; Gaz. vol. 154; p. 192.

Jaquet, Jules F., Hyattsville, Md. Vehicle-dashboard. No. 957,858; May 10; Sp. p. 2860; Gaz. vol. 154; p. 491.

Jardine, Robert, Cleveland, Ohio. Fender for automobiles. No. 958,132; May 17; Sp. p. 3676; Gaz. vol. 154; p. 620.

Jarvis, Virgil O. (See Pence, Wolf, and Jarvis.)

Jauer, Christman D., Karnes City, Tex. Plowshare for grubbing-plows, &c. No. 956,768; May 3; Sp. p. 575; Gaz. vol. 154; p. 92.

Jay, Samuel. (See Noble and Jay.)

Jeffers, George W. (See Mitchell, John M., assignor.)

Jefferson, Eugene D., Lowell, Mass. Valve. No. 959,349; May 24; Sp. p. 6336; Gaz. vol. 154; p. 1059.

Jeffrey Manufacturing Company, The. (See Lynch, George E., assignor.)

Jeffrey Manufacturing Company, The. (See Sessions, Frank L., assignor.)

Jeffrey Manufacturing Company, The. (See Willson, William W., assignor.)

Jenkins, Charles F., Washington, D. C., assignor, by mesne assignments, to Single Service Package Corporation of America. Machine for forming and cutting off tubes. No. 957,966; May 17; Sp. p. 3175; Gaz. vol. 154; p. 560.

Jenkins, Charles F., Washington, D. C., assignor to Single Service Package Corporation of America, New York, N. Y. Device for holding bottle-bodies for the insertion of closures. No. 958,252; May 17; Sp. p. 3923; Gaz. vol. 154; p. 660.

Jenkins, Charles F., Washington, D. C., assignor to Single Service Package Corporation of America, New York, N. Y. Apparatus for making paper bottles. No. 960,226; May 31; Sp. p. 8213; Gaz. vol. 154; p. 1382.

Jennings, George E., Mount Vernon, N. Y. Sign. No. 959,857; May 3; Sp. p. 782; Gaz. vol. 154; p. 124.

Jensen, Aage, Eureka, Cal. Milk-testing bottle. No. 956,708; May 3; Sp. p. 450; Gaz. vol. 154; p. 72.

Jensen, Aage, Eureka, Cal. Sterilizer and drier. No. 958,133; May 17; Sp. p. 3677; Gaz. vol. 154; p. 620.

Jensen, Benjamin D., Chesterfield, Idaho. Mast-cap. No. 957,343; May 10; Sp. p. 1834; Gaz. vol. 154; p. 319.

Jensen, Carl M., Denver, Colo. Rein-holder. No. 959,143; May 24; Sp. p. 5918; Gaz. vol. 154; p. 991.

Jensen, Chester L. (See Lahey, Lonnie A., assignor.)

Jensen, Soren C., Kingman, Me. Device for carrying barrels. No. 958,023; May 24; Sp. p. 5478; Gaz. vol. 154; p. 918.

Jodrey, Elbert W., Lynn, Mass., assignor to General Electric Company. Coil for electrical purposes. No. 957,213; May 10; Sp. p. 1543; Gaz. vol. 154; p. 273.

Johanns, Leo, Pittsburg, Pa. Ventilator. No. 957,680; May 10; Sp. p. 2509; Gaz. vol. 154; p. 434.

John, Andrew T., New York, N. Y. Keyed finger-board for violins and similar stringed musical instruments. No. 957,681; May 10; Sp. p. 2510; Gaz. vol. 154; p. 434.

John Dean Manufacturing Company. (See Dean, John, assignor.)

John S. Fray Company, The. (See Fray, John S., assignor.)

John Simmons Company. (See Kenny, John, assignor.)

John Thomson Press Company. (See Thomson, John, assignor.)

Johnson, Albert E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Inseam-trimming machine. No. 956,971; May 3; Sp. p. 1032; Gaz. vol. 154; p. 162.

Johnson, Andrew G., Sutton, Nebr. Straw-burning furnace. No. 957,163; May 3; Sp. p. 1416; Gaz. vol. 154; p. 226.

Johnson, Axel, Oakland, Cal. Can-end-flanging and head-seaming apparatus. No. 956,709; May 3; Sp. p. 451; Gaz. vol. 154; p. 72.

Johnson, Axel, Oakland, Cal. Paste-applying apparatus for can ends. No. 957,967; May 17; Sp. p. 3178; Gaz. vol. 154; p. 561.

Johnson, Carl E., assignor to United States Electrical Manufacturing Company, Los Angeles, Cal. Brush-holder for dynamo-electric machines. No. 960,095; May 31; Sp. p. 7965; Gaz. vol. 154; p. 1338.

Johnson, Charles P., Eureka, Kans. Adjustable wrench. No. 957,214; May 10; Sp. p. 1545; Gaz. vol. 154; p. 273.

Johnson, Charley L., Longville, La. Wheel-hub. No. 959,015; May 24; Sp. p. 5642; Gaz. vol. 154; p. 948.

Johnson, Charlie J., Osseo, Wis. Feeding device for baling-presses. No. 959,144; May 24; Sp. p. 5920; Gaz. vol. 154; p. 991.

Johnson, Clarence C., Yonkers, assignor to American District Telegraph Company, New York, N. Y. Call-box signaling system and apparatus therefor. No. 957,968; May 17; Sp. p. 3181; Gaz. vol. 154; p. 561.

Johnson, Edwin M., Philadelphia, Pa. Automatic gas-fixture. No. 956,531; May 3; Sp. p. 50; Gaz. vol. 154; p. 11.

Johnson, Emil A., Olivia, Minn. Car-wheel. No. 958,924; May 24; Sp. p. 5479; Gaz. vol. 154; p. 918.

Johnson, Frank H., Faribault, Minn. Motor-vehicle. No. 958,501; May 17; Sp. p. 4583; Gaz. vol. 154; p. 748.

Johnson, Gustaf, Chicago, Ill. Carureting apparatus. No. 959,350; May 24; Sp. p. 6338; Gaz. vol. 154; p. 1060.

Johnson, Gustaf, Pigeon Cove, assignor to F. J. V. Dakin, Boston, Mass. Voting-machine. No. 960,020; May 31; Sp. p. 7809; Gaz. vol. 154; p. 1313.

Johnson, Gustaf H., Cimarron, N. Mex. Clevis. No. 958,645; May 17; Sp. p. 4844; Gaz. vol. 154; p. 795.

Johnson, Harry T., New York, N. Y. Commutator. No. 958,405; May 17; Sp. p. 4376; Gaz. vol. 154; p. 715.

Johnson, Isaac E., and G. Michaels, New York, N. Y. Signaling device. No. 957,164; May 3; Sp. p. 1418; Gaz. vol. 154; p. 227.

Johnson, John, Crookston, Scotland. Door-lock. No. 958,406; May 17; Sp. p. 4377; Gaz. vol. 154; p. 715.

Johnson & Johnson. (See Simmons, Bert G., assignor.)

Johnson, Louis K., New York, N. Y. Type-setting apparatus. No. 960,096; May 31; Sp. p. 7966; Gaz. vol. 154; p. 1338.

Johnson, Oscar L., Streator, Ill. Staging-bracket. No. 958,746; May 24; Sp. p. 5059; Gaz. vol. 154; p. 855.

Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Repeating firearm. No. 958,407; May 17; Sp. p. 4379; Gaz. vol. 154; p. 715.

Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Firearm. No. 959,016; May 24; Sp. p. 5643; Gaz. vol. 154; p. 949.

Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Firearm. No. 959,942; May 31; Sp. p. 7619; Gaz. vol. 154; p. 1285.

Johnson, William B., assignor to Rockford Lathe & Drill Company, Rockford, Ill. Centering-machine. No. 959,865; May 31; Sp. p. 7437; Gaz. vol. 154; p. 1258.

Johnson, William B. J. (See Fawcett, John W., assignor.)

Johnston, Arthur C., Philadelphia, Pa., assignor to The J. M. Dodge Company, Naugatuck, Conn. Means for turning hoisting-buckets. No. 958,646; May 17; Sp. p. 4845; Gaz. vol. 154; p. 796.

Johnston, Horace G., Corsicana, Tex. Unscrewing mechanism for well-tubes. No. 959,351; May 24; Sp. p. 6341; Gaz. vol. 154; p. 1060.

Johnston, James D., *et al.* (See Blair, George W., assignor.)

Johnston, Jesse K. (See Fox, George G., assignor.)

Johnston, Mahlon, Binghamton, N. Y. Safety line-hitch for wagons. No. 956,581; May 3; Sp. p. 160; Gaz. vol. 154; p. 28.

Jones, Albert I., assignor to The Pfaudler Company, Rochester, N. Y. Drainage connection. No. 958,876; May 24; Sp. p. 5380; Gaz. vol. 154; p. 902.

Jones, C. W., *et al.* (See Eaton, Robert E., assignor.)

Jones, Charles H., Starkweather, N. D. Check-assorter. No. 959,943; May 31; Sp. p. 7622; Gaz. vol. 154; p. 1286.

Jones, Dudley C. (See Jones, Jacob M. and D. C.)

Jones, Ernest J., Baltimore, Md. Hame-fastener. No. 958,253; May 17; Sp. p. 3924; Gaz. vol. 154; p. 660.

Jones, Jacob M. and D. C., St. John, Ky. Collapsible box. No. 958,647; May 17; Sp. p. 4846; Gaz. vol. 154; p. 796.

Jones, Joshua J. (See Mellin and Jones.)

Jones, Joshua W., Harrisburg, Pa. Coin-holder or change-maker. No. 958,648; May 17; Sp. p. 4847; Gaz. vol. 154; p. 796.

Jones, Richard O., assignor, by mesne assignments, to The Computing Scale Company, Dayton, Ohio. Centrifugal pump. No. 957,682; May 10; Sp. p. 2511; Gaz. vol. 154; p. 434.

Jordan, Cornelius, assignor to Jordan Machine Co., Cohoes, N. Y. Pipe-loading machine. No. 960,227; May 31; Sp. p. 8214; Gaz. vol. 154; p. 1383.

Jordan, Forrest E. (See Martin, Brady, assignor.)

Jordan Machine Co. (See Jordan, Cornelius, assignor.)

Jordan, Robert A., trustee. (See Smith, John R., assignor.)

Joseph, Carl, Bayonne, N. J. Fastener. No. 959,545; May 31; Sp. p. 6760; Gaz. vol. 154; p. 1150.

Joseph, Louis L., Chicago, Ill. Tape-measure. No. 959,750; May 31; Sp. p. 7177; Gaz. vol. 154; p. 1218.

Judge, Edward J., San Francisco, Cal. Washing vegetables and partially cooking the same. No. 957,466; May 10; Sp. p. 2075; Gaz. vol. 154; p. 360.

Judge, Edward J., San Francisco, Cal. Vegetable-washer. No. 958,812; May 24; Sp. p. 5211; Gaz. vol. 154; p. 879.

Judson L. Thomson M'f'g Co. (See Havener, Arthur R., assignor.)

Juin, Adolphe, Chicago, Ill., assignor to S. H. Veal, New York, N. Y. Frame for tents. No. 957,215; May 10; Sp. p. 1546; Gaz. vol. 154; p. 274.

Julius, Paul, V. Villiger, and P. Nawiasky, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Dichlor-dibrom-indigo and making same. No. 957,683; May 10; Sp. p. 2514; Gaz. vol. 154; p. 435.

Junggren, Oscar, Schenectady, N. Y., assignor to General Electric Company. Packing for elastic-fluid-turbine shafts. No. 957,887; May 17; Sp. p. 2942; Gaz. vol. 154; p. 533.

Junggren, Oscar, and F. W. Bentley, Schenectady, N. Y., assignors to General Electric Company. Centrifugal governor. No. 957,886; May 17; Sp. p. 2939; Gaz. vol. 154; p. 532.

Just, Frederick A., Judson, N. D. Spark-arrester. No. 958,134; May 17; Sp. p. 3679; Gaz. vol. 154; p. 620.

Kadow, Otto F., Cleveland, Ohio. Water-meter. No. 958,466; May 17; Sp. p. 4381; Gaz. vol. 154; p. 716.

Kahn, Alexander L., New York, N. Y. Ribbon-clip. No. 958,877; May 24; Sp. p. 5381; Gaz. vol. 154; p. 902.

Kaighn, James B., Philadelphia, Pa. Prepayment mechanism. No. 957,694; May 10; Sp. p. 2515; Gaz. vol. 154; p. 435.

Kaiserilk, John A., Stewartville, Minn. Hog-gambrel. No. 957,844; May 10; Sp. p. 1835; Gaz. vol. 154; p. 320.

Kaisling, William, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company. Telephone set. No. 958,925; May 24; Sp. p. 5480; Gaz. vol. 154; p. 919.

Kaisling, William, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company. Switch-movement. No. 959,944; May 31; Sp. p. 7623; Gaz. vol. 154; p. 1286.

Kalb, Albert G., Chicago, Ill., assignor to Natural Dry Products Company, Augusta, Me. Condensing fluid substances. No. 957,685; May 10; Sp. p. 2517; Gaz. vol. 154; p. 435.

Kalb, Albert G., Chicago, Ill., assignor to Natural Dry Products Company, Augusta, Me. Condensing fluid substances. No. 957,686; May 10; Sp. p. 2519; Gaz. vol. 154; p. 435.

Kalb, Albert G., Chicago, Ill., assignor to Natural Dry Products Company, Augusta, Me. Desiccating fluid substances. No. 957,849; May 10; Sp. p. 2849; Gaz. vol. 154; p. 488.

Kalb, Albert G., Chicago, Ill., assignor to Natural Dry Products Company, Augusta, Me. Desiccating fluid substances. No. 957,850; May 10; Sp. p. 2853; Gaz. vol. 154; p. 489.

Kales, William R., assignor to The Whitehead and Kales Iron Works, Detroit, Mich. Gin-pole. No. 957,216; May 10; Sp. p. 1548; Gaz. vol. 154; p. 274.

Kalle & Company, Aktiengesellschaft. (See Eibel, Karl, assignor.)

Kane, Frank, Tacony, Pa. Diaphragm for talking-machines. No. 960,021; May 31; Sp. p. 7815; Gaz. vol. 154; p. 1313.

Kane, Thomas H., Youngstown, Ohio, assignor to Trussed Concrete Steel Company, Detroit, Mich. Bending-machine. No. 957,609; May 10; Sp. p. 2348; Gaz. vol. 154; p. 409.

Kansas City Scale & Supply Company. (See Sherwood, Harry B., assignor.)

Kapferer, Marcel, assignor to Société Anonyme "Astra", Billancourt, France. Device for feeding ballonnets on airships. No. 958,026; May 24; Sp. p. 5482; Gaz. vol. 154; p. 919.

Karns, John F., assignor to J. P. Karns Tunneling Machine Co., Boulder, Colo. Tunneling-machine structure. No. 957,687; May 10; Sp. p. 2521; Gaz. vol. 154; p. 436.

Karpen, Solomon, assignor to S. Karpen & Bros., Chicago, Ill. Sofa-bed. No. 956,972; May 3; Sp. p. 1035; Gaz. vol. 154; p. 162.

Kast, Emil A., Brush, Colo. Buggy-evener. No. 956,973; May 3; Sp. p. 1037; Gaz. vol. 154; p. 163.

Kaufmann, Lou B., assignor of one-half to W. S. Salway, New York, N. Y. Lunch-platter. No. 956,858; May 3; Sp. p. 783; Gaz. vol. 154; p. 124.

Kaufman, Charles, Chicago, Ill. Coat-collar. No. 956,710; May 3; Sp. p. 457; Gaz. vol. 154; p. 73.

Kaufmann, Alphonse G., New York, N. Y. Receptacle for carrying and displaying cigars. No. 958,878; May 24; Sp. p. 5383; Gaz. vol. 154; p. 902.

Kaull, Burt J., assignor to Indiana Picker & Husker Company, La Fayette, Ind. Corn-picker. No. 958,649; May 17; Sp. p. 4849; Gaz. vol. 154; p. 796.

Kearns, William J., Fairchance, Pa. Coke-oven. No. 956,974; May 3; Sp. p. 1038; Gaz. vol. 154; p. 163.

Keck, Charles M. W. (See Hargraves and Miller, assignors.)

Keck, Charles M. W. (See Miller, Steinberger, and Hargraves, assignors.)

Keefe, Eugene E., Bellows Falls, Vt. Comb. No. 959,866; May 31; Sp. p. 7438; Gaz. vol. 154; p. 1258.

Keefe, Eugene E., Bellows Falls, Vt. Comb. No. 959,867; May 31; Sp. p. 7440; Gaz. vol. 154; p. 1259.

Keeler, Herbert E., New York, N. Y., assignor to Curtain Supply Company, Chicago, Ill. Curtain-fixture. No. 957,345; May 10; Sp. p. 1835; Gaz. vol. 154; p. 320.

Keeler, Herbert E., New York, N. Y., assignor to Curtain Supply Company, Chicago, Ill. Curtain-fixture. No. 957,346; May 10; Sp. p. 1840; Gaz. vol. 154; p. 320.

Keeran, Charles E., Bloomington, Ill. Top for jars. No. 957,064; May 3; Sp. p. 1217; Gaz. vol. 154; p. 193.

Keever, Frank B. (See Hewitt, William J., assignor.)

Keighley, William B., Vineland, N. J. Welt-beveling machine. No. 959,223; May 24; Sp. p. 6086; Gaz. vol. 154; p. 1017.

Keighley, William B., Vineland, N. J. Shoe-trimming machine. No. 959,224; May 24; Sp. p. 6088; Gaz. vol. 154; p. 1018.

Kell, Herman, Washington, D. C., assignor, by mesne assignments, to The Premier Last Company, Great River, N. Y. Last. No. 956,582; May 3; Sp. p. 161; Gaz. vol. 154; p. 28.

Keim, Nathan H. (See Walton and Keim.)

Keith, James, and W. W. Wardle, London, England. Apparatus for opening and separating threads of yarn and the like. No. 957,610; May 10; Sp. p. 2350; Gaz. vol. 154; p. 409.

Kelthley, Luther M., and A. B. Schien, Denver, Colo. Angle-boring machine. No. 960,097; May 31; Sp. p. 7967; Gaz. vol. 154; p. 1338.

Kelemen, Andrew, and S. Lazár, Youngstown, Ohio. Gangplank. No. 960,022; May 31; Sp. p. 7816; Gaz. vol. 154; p. 1313.

Kellem, Harry, Rineyville, Ky. Window-sash fastener. No. 959,145; May 24; Sp. p. 5922; Gaz. vol. 154; p. 991.

Kellemen, Henry F., assignor to Utica Drop Forge & Tool Company, Utica, N. Y. Feeding device for milling-machines. No. 957,562; May 10; Sp. p. 2270; Gaz. vol. 154; p. 393.

Keller, John F. (See Price and Bennett, assignors.)

Keller, Joseph F., and W. A. Warman, assignors to Keller Mechanical Engraving Company, New York, N. Y. Machine for engraving or sinking dies. No. 956,769; May 3; Sp. p. 577; Gaz. vol. 154; p. 92.

Keller, Louis E., Oil City, Pa. Car-journal, sponging-shield, and oil-saver. No. 958,135; May 17; Sp. p. 3681; Gaz. vol. 154; p. 621.

Keller Manufacturing Company. (See Keller, William H., assignor.)

Keller Manufacturing Company. (See Wiedemann and Templin, assignors.)

Keller Mechanical Engraving Company. (See Keller and Warman, assignors.)

Keller, William H., Philadelphia, Pa., assignor to Keller Manufacturing Company. Pumping apparatus for vacuum-cleaners and the like. No. 956,975; May 3; Sp. p. 1040; Gaz. vol. 154; p. 163.

Kellett, Oscar L., West Plains, Mo. Hydraulic motor for dental engines. No. 959,352; May 24; Sp. p. 6342; Gaz. vol. 154; p. 1060.

Kellogg, Carl A., Battle Creek, Mich. Window-wiping device. No. 956,770; May 3; Sp. p. 581; Gaz. vol. 154; p. 92.

Kellogg, Edgar C., Washington, D. C. Miter-block. No. 956,711; May 3; Sp. p. 490; Gaz. vol. 154; p. 73.

Kellogg, Leroy D., Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company. Automatic distributing system. No. 960,176; May 31; Sp. p. 8112; Gaz. vol. 154; p. 1365.

Kellogg Switchboard & Supply Company. (See Dyson, Alfred H., assignor.)

Kellogg Switchboard & Supply Company. (See Kaisling, William, assignor.)

Kellogg Switchboard & Supply Company. (See Kellogg, Leroy D., assignor.)

Kellogg, Sylvanus H., Los Angeles, Cal. Poison-bottle. No. 959,751; May 31; Sp. p. 7178; Gaz. vol. 154; p. 1218.

Kelly, David J., assignor to Kelly Filter Press Company, Salt Lake City, Utah. Filtering apparatus. No. 957,467; May 10; Sp. p. 2076; Gaz. vol. 154; p. 360.

Kelly Filter Press Company. (See Kelly, David J., assignor.)

Kelly, George, Mineral Point, Wis. Press. No. 958,813; May 24; Sp. p. 5212; Gaz. vol. 154; p. 879.

Kelly, John P., Trenton, N. J. Basin-cock. No. 958,927; May 24; Sp. p. 5483; Gaz. vol. 154; p. 920.

Kelly, John H., San Francisco, Cal. Safety connection for shaft-collars and the like. No. 959,752; May 31; Sp. p. 7179; Gaz. vol. 154; p. 1219.

Kelly, Samuel J., White Plains, N. Y. Coin-controlled lock. No. 959,753; May 31; Sp. p. 7180; Gaz. vol. 154; p. 1219.

Kelly, Thomas J., Foeston, Minn. Potato-planting machine. No. 956,563; May 3; Sp. p. 164; Gaz. vol. 154; p. 28.

Kelso, Joseph, assignor to The McConway & Torley Company, Pittsburg, Pa. Car-coupling. No. 956,976; May 3; Sp. p. 1044; Gaz. vol. 154; p. 164.

Kemler, William H., Ashland, Ky. Hydrating lime. No. 956,977; May 3; Sp. p. 1048; Gaz. vol. 154; p. 164.

Kemna, Joseph. (See Drake, Julian F., assignor.)

Kemp Hydro-Carbon Furnace Company, The. (See Worthen, Burt L., assignor.)

Kempshall, Iva B., Boston, Mass. Antiskidding tire. No. 957,165; May 3; Sp. p. 1419; Gaz. vol. 154; p. 227.

Kempshall, Iva B., Boston, Mass. Vehicle-tire. No. 957,166; May 3; Sp. p. 1421; Gaz. vol. 154; p. 228.

Kempshall, Iva B., Boston, Mass., assignor to Kempshall Tire Company. Tire. No. 957,167; May 3; Sp. p. 1423; Gaz. vol. 154; p. 228.

Kempshall, Iva B., Boston, Mass., assignor to Kempshall Tire Company. Tire. No. 957,168; May 3; Sp. p. 1424; Gaz. vol. 154; p. 228.

Kempshall Tire Company. (See Kempshall, Iva B., assignor.)

Keneven, Daniel. (See Smith and Keneven.)

Kennedy, Albert B., Leyton, England. Picture. No. 959,754; May 31; Sp. p. 7183; Gaz. vol. 154; p. 1219.

Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Line-casting machine. No. 959,755; May 31; Sp. p. 7185; Gaz. vol. 154; p. 1220.

Kennedy, Guy L., assignor to National Carbonated Liquid Co., San Francisco, Cal. Combined stuffing-box, gasket, valve, and spring. No. 957,347; May 10; Sp. p. 1843; Gaz. vol. 154; p. 321.

Kennedy, John L., Washington, D. C. Pillow. No. 958,502; May 17; Sp. p. 4565; Gaz. vol. 154; p. 749.

Kennedy, William. (See Morris and Kennedy.)

Kenny, John, assignor to John Simmons Company, New York, N. Y. Joint for tubes. No. 959,546. May 31; Sp. p. 6762; Gaz. vol. 154; p. 1150.

Kent, Charles, Pevensey, Ontario, Canada. Automatic jack for engine-boilers. No. 958,928; May 24; Sp. p. 5485; Gaz. vol. 154; p. 920.

Kenyon, William J. C. (See Stolp, Samuel S., assignor.)

Kepplinger, George J., Dwight, Ill. Floor-dressing machine. No. 958,929; May 24; Sp. p. 5486; Gaz. vol. 154; p. 920.

Kerfoot, James, Antwerp, Belgium. Apparatus for heating feed-water by exhaust-steam from steam-engines. No. 957,688; May 10; Sp. p. 2524; Gaz. vol. 154; p. 436.

Kern, George, Peru, assignor to The Western Clock Manufacturing Company, La Salle, Ill. Alarm-clock. No. 958,930; May 24; Sp. p. 5488; Gaz. vol. 154; p. 921.

Kerr, Mathew M., assignor to Detroit Dental Manufacturing Company, Detroit, Mich. Impression-tray for dentistry. No. 957,563; May 10; Sp. p. 2273; Gaz. vol. 154; p. 393.

Kersey, Otis A., Pulaski, Tenn. Cooler. No. 958,931; May 24; Sp. p. 5490; Gaz. vol. 154; p. 921.

Kessler, Alexander, Jr., Windom, Mo. Tire. No. 959,353; May 24; Sp. p. 6346; Gaz. vol. 154; p. 1061.

Kestner Evaporator Company. (See Kestner, Paul, assignor.) (Reissue.)

Kestner, Paul, Lille, France, assignor to Kestner Evaporator Company, Philadelphia, Pa. Apparatus for concentrating liquids. (Reissue.) No. 13,117; May 24; Sp. p. 6505; Gaz. vol. 154; p. 1088.

Ketcheson, John H., assignor to United States Fibre Stopper Company, St. Louis, Mo. Pulp stopper or the like. No. 959,225; May 24; Sp. p. 6089; Gaz. vol. 154; p. 1018.

Ketterer, Eugen, Essen-on-the-Ruhr, Germany. Fluid-operated apparatus. No. 959,547; May 31; Sp. p. 6763; Gaz. vol. 154; p. 1151.

Kettering, Charles F., assignor to The National Cash Register Company, Dayton, Ohio. Adding and subtracting machine. No. 959,059; May 24; Sp. p. 5730; Gaz. vol. 154; p. 953.

Kettering, Charles F., assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio. Electric driving device for registering-machines. No. 959,548; May 31; Sp. p. 6765; Gaz. vol. 154; p. 1151.

Ketterlinus Lithographic Manufacturing Company. (See Wiederseim, Theodore E., Jr., assignor.)

Keyhoe, Harry P., and R. Handley, Ottumwa, Iowa. Molding-machine. No. 960,177; May 31; Sp. p. 8121; Gaz. vol. 154; p. 1365.

Keys, Walter W., Yonkers, N. Y. Hose-coupling. No. 959,226; May 24; Sp. p. 6090; Gaz. vol. 154; p. 1018.

Keyt, Marshall H., Chicago, Ill. Apparatus for removing tarnish from metals. No. 959,227; May 24; Sp. p. 6092; Gaz. vol. 154; p. 1018.

Kiblinger, Robert P., Mineral, Va. Railway-switch. No. 959,549; May 31; Sp. p. 6773; Gaz. vol. 154; p. 1152.

Kiesel, William F., Jr., Altoona, Pa. Trap-door for vestibule-cars. No. 956,978; May 3; Sp. p. 1050; Gaz. vol. 154; p. 165.

Kieselhorst, Henry A., St. Louis, Mo. Safety-razor. No. 956,532; May 3; Sp. p. 51; Gaz. vol. 154; p. 11.

Kieser, Walter, Berlin, Germany, assignor to General Electric Company. Governing mechanism for elastic-fluid turbines. No. 957,888; May 17; Sp. p. 2944; Gaz. vol. 154; p. 533.

Kieser, Walter, Berlin, Germany, assignor to General Electric Company. Governing mechanism for elastic-fluid turbines. No. 957,889; May 17; Sp. p. 2949; Gaz. vol. 154; p. 533.

Kilbourne and Jacobs Manufacturing Company, The. (See Stagg, Thomas H., assignor.)

Killing, Ewald, Davenport, Iowa. Molding-machine. No. 957,564; May 10; Sp. p. 2274; Gaz. vol. 154; p. 393.

Kimball, Earl C., Naper, Nebr. Trace-buckle. No. 959,868; May 31; Sp. p. 7442; Gaz. vol. 154; p. 1259.

Kimbrell, Julius, Needles, Cal. Attachment for torpedo-tubes. No. 958,650; May 17; Sp. p. 4852; Gaz. vol. 154; p. 797.

Kindwall, Abel M., Minot, N. D. Vehicle-spring. No. 960,178; May 31; Sp. p. 8123; Gaz. vol. 154; p. 1366.

King, Charles H. (See King, Barnhart, and King.)

King, Charles B., and H. J. Barnhart, assignors to The Marion Steam Shovel Company, Marion, Ohio. Ballast-unloader. No. 957,848; May 10; Sp. p. 1845; Gaz. vol. 154; p. 321.

King, Frederick W., Jacksonville, Fla. Bedstead attachment. No. 957,422; May 10; Sp. p. 1998; Gaz. vol. 154; p. 345.

King, George W., H. J. Barnhart and C. B. King, assignors to The Marion Steam Shovel Company, Marion, Ohio. Excavating-machine. No. 958,756; May 31; Sp. p. 7186; Gaz. vol. 154; p. 1220.

King, John A., St. Maries, Idaho. Drift-bolt puller. No. 957,565; May 10; Sp. p. 2276; Gaz. vol. 154; p. 394.

King, John F., and J. Neary, Kalamazoo, Mich. Suction-box. No. 957,217; May 10; Sp. p. 1540; Gaz. vol. 154; p. 274.

King of All Stropper Company. (See Bestgen, John G., assignor.)

King, Samuel, London, England. Apparatus for dressing or truing grindstones. No. 957,689; May 10; Sp. p. 2526; Gaz. vol. 154; p. 437.

Kingsbury, Albert, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Ventilating means for dynamo-electric machines. No. 959,550; May 31; Sp. p. 6775; Gaz. vol. 154; p. 1152.

Kinnear, William R., New Castle, Pa. Fusible packing for annealing and other like apparatus. No. 958,409; May 17; Sp. p. 4386; Gaz. vol. 154; p. 716.

Kinney Justus R., Dorchester, Mass. Rotary pump. No. 958,136; May 17; Sp. p. 3683; Gaz. vol. 154; p. 621.

Kintner, Samuel M., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Electrical measuring instrument. No. 959,551; May 31; Sp. p. 6776; Gaz. vol. 154; p. 1152.

Kintner, Samuel M., Pittsburg, Pa., and G. B. Rosenblatt, New York, N. Y., assignors to Westinghouse Electric & Manufacturing Company. Fuse for electrical circuits. No. 959,552; May 31; Sp. p. 6779; Gaz. vol. 154; p. 1153.

Kirby Equipment Company. (See Woodman, George A., assignor.)

Kirk, Habicht Company of Baltimore City, The. (See Habicht, William C., assignor.)

Kirk, Robert H., assignor to The Long Arm System Company, Cleveland, Ohio. Plate-printing machine. No. 956,807; May 3; Sp. p. 658; Gaz. vol. 154; p. 105.

Kirke, William T., *et al.* (See Svenvig, Nikolai, assignor.)

Kirkham, Orlando, Marshalltown, Iowa. Roller-skate. No. 956,584; May 3; Sp. p. 168; Gaz. vol. 154; p. 29.

Kirkpatrick, Peter T., assignor of one-half to J. F. Russell, Battle Creek, Mich. Pneumatic straw-stacker. No. 958,137; May 17; Sp. p. 3685; Gaz. vol. 154; p. 622.

Kirkpatrick, Stafford F., Kingston, Ontario, Canada. Precipitation of metals from cyanid solutions. No. 959,757; May 31; Sp. p. 7193; Gaz. vol. 154; p. 1220.

Kirsch, Charles W., assignor to Kirsch Manufacturing Company, Sturgis, Mich. Stair-carpet fastener. No. 958,138; May 17; Sp. p. 3686; Gaz. vol. 154; p. 622.

Kirsch Manufacturing Company. (See Kirsch, Charles W., assignor.)

Kissel, William H., Council Bluffs, Iowa. Alfalfa-meal mixer. No. 958,254; May 17; Sp. p. 3925; Gaz. vol. 154; p. 660.

Kitsée, Isidor, Philadelphia, Pa. Telegraphic relay. No. 956,808; May 3; Sp. p. 670; Gaz. vol. 154; p. 105.

Kitzmiller, George M., Norfolk, Va. Automatic ribbon-reversing mechanism for type-writing machines. No. 959,945; May 31; Sp. p. 7625; Gaz. vol. 154; p. 1286.

Klefeker, Charles B., assignor to Bloomer Bros. Company, Newark, N. Y. Egg-box. No. 957,218; May 10; Sp. p. 1552; Gaz. vol. 154; p. 275.

Klein, Henry, New York, N. Y. Office-partition and the like. No. 956,642; May 3; Sp. p. 287; Gaz. vol. 154; p. 48.

Kleinmann, Leo. (See Schwartz and Kleinmann.)

Klenk, Gottlieb, Defiance, Ohio, assignor, by mesne assignments, to The Defiance Pressed Steel Company. Metal box and crate. No. 959,553; May 31; Sp. p. 6781; Gaz. vol. 154; p. 1153.

Klenk, Gottlieb, Defiance, Ohio, assignor to The Defiance Pressed Steel Company. Sheet-metal box. No. 959,554; May 31; Sp. p. 6783; Gaz. vol. 154; p. 1154.

Klepfer, Solomon, Indianapolis, Ind. Filing-cabinet. No. 957,423; May 10; Sp. p. 2000; Gaz. vol. 154; p. 345.

Klettl, Johann, III, Sandhausen, Germany. Cigar-maker's box and rolling-board. No. 959,060; May 24; Sp. p. 5741; Gaz. vol. 154; p. 963.

Klinck, William F., Akron, Ohio. Folding device. No. 959,354; May 24; Sp. p. 6347; Gaz. vol. 154; p. 1061.

Klindworth, John L., Bellevue, assignor to Mesta Machine Company, Pittsburg, Pa. Tipping furnace, mixer, &c. No. 958,503; May 17; Sp. p. 4567; Gaz. vol. 154; p. 749.

Kline, Charles R., Beechwood, Pa. Rocking grate-bar. No. 957,690; May 10; Sp. p. 2527; Gaz. vol. 154; p. 437.

Kline, Edward C., Streator, Ill. Portable greenhouse or the like. No. 956,771; May 3; Sp. p. 584; Gaz. vol. 154; p. 93.

Kline, Edward C., Streator, Ill. Treating asparagus and kindred plants. No. 958,932; May 24; Sp. p. 5490; Gaz. vol. 154; p. 921.

Knapp, John G., Boonville, N. Y. Dish-washing machine. No. 959,355; May 24; Sp. p. 6348; Gaz. vol. 154; p. 1061.

Knapp, Theron L., and C. C. Harting, Woodstock, Ill., assignors to The Oliver Typewriter Company, Chicago, Ill. Column-stop mechanism for type-writers. No. 959,061; May 24; Sp. p. 5742; Gaz. vol. 154; p. 963.

Knauf, Paul W., Cynwyd, assignor to Schulte and Koerting Company, Philadelphia, Pa. Valve-operating mechanism. No. 956,772; May 3; Sp. p. 587; Gaz. vol. 154; p. 93.

Kneas, Frank N., Norristown, Pa. Metal sheet-piling. No. 957,169; May 3; Sp. p. 1425; Gaz. vol. 154; p. 228.

Knickerbocker, Burton D., Chicago, Ill. Spraying-siphon attachment for bathing purposes. No. 957,566; May 10; Sp. p. 2277; Gaz. vol. 154; p. 394.

Knight, Charles A. (See Hendren, Walter S., assignor.)

Knight, Patrick H., St. Joseph, Mo. Stand-pipe for railway water-supply. No. 958,504; May 17; Sp. p. 4568; Gaz. vol. 154; p. 749.

Knight, Walter A., Pleasant Ridge, Ohio. Air-lift. No. 960,023; May 31; Sp. p. 7818; Gaz. vol. 154; p. 1314.

Knobbe, Charles H., assignor of one-fourth to G. L. Hirtzel, Jr., and one-fourth to A. J. David, Elizabeth, N. J. Cartruck. No. 956,900; May 3; Sp. p. 871; Gaz. vol. 154; p. 139.

Knode, Oliver M., assignor to United States Gypsum Company, Chicago, Ill. Composition studding. No. 959,946; May 31; Sp. p. 7628; Gaz. vol. 154; p. 1287.

Knoerner, Otto, Hammond, Ind. Builder's trestle. No. 959,228; May 24; Sp. p. 6094; Gaz. vol. 154; p. 1019.

Knott, John T., Fort Wayne, Ind., assignor to Knott Van Arnam Manufacturing Company. Valve-operating mechanism. No. 959,758; May 31; Sp. p. 7194; Gaz. vol. 154; p. 1221.

Knott Van Arnam Manufacturing Company. (See Knott, John T., assignor.)

Knowles, Frederick W., and G. W. Inman, Thornhill Lees, near Dewsbury, England. Machine for manufacturing glass bottles, jars, and the like. No. 957,349; May 10; Sp. p. 1847; Gaz. vol. 154; p. 321.

Koberstein, George J., Baldwin, Wis. Landing-net. No. 959,555; May 31; Sp. p. 6786; Gaz. vol. 154; p. 1154.

Koch, Frederick W. (See Blanchard, Uhl, and Koch.)

Koegler, August J., Milwaukee, Wis. Agitator for grain-heaters. No. 960,024; May 31; Sp. p. 7820; Gaz. vol. 154; p. 1314.

Koenig, George F., Le Sueur, Minn. Hoisting device. No. 957,969; May 17; Sp. p. 3185; Gaz. vol. 154; p. 562.

Koenig, Harry, Philadelphia, Pa. Self-heating soldering-iron. No. 959,947; May 31; Sp. p. 7629; Gaz. vol. 154; p. 1287.

Koerkle, Frank D., assignor of three-eighths to S. L. Richardson, New York, N. Y. Refrigerating apparatus. No. 959,556; May 31; Sp. p. 6787; Gaz. vol. 154; p. 1154.

Koerner, Albin. (See Trumpold and Koerner.)

Koertner, Conrad W., Pearl City, Ill. Dust-pan. No. 958,255; May 17; Sp. p. 3928; Gaz. vol. 154; p. 661.

Koetitz, Frederick A. (See Finch and Koetitz.)

Koken, Ernest E., deceased, St. Louis, Mo.; W. F. Koken, executor. Barber-chair seat. No. 957,970; May 17; Sp. p. 3190; Gaz. vol. 154; p. 562.

Koken, Walter F., executor. (See Koken, Ernest E.)

Kolb, Henry M., Philadelphia, Pa. Firearm. No. 959,229; May 24; Sp. p. 6096; Gaz. vol. 154; p. 1019.

Kolischer, Wladislaw. (See Schitka, Ferdinand, assignor.)

Komarek, Gustav, St. Louis, Mo. Mixing apparatus for briquet-machines. No. 959,062; May 24; Sp. p. 5748; Gaz. vol. 154; p. 964.

Konerman, Harry, Newport, Ky., assignor to The Globe Register Company, Cincinnati, Ohio. Autographic register. No. 957,567; May 10; Sp. p. 2278; Gaz. vol. 154; p. 394.

Koogler, John B., assignor of one-half to C. H. Robinsteen, Indiana, Pa. Tanning apparatus. No. 957,850; May 10; Sp. p. 1849; Gaz. vol. 154; p. 321.

Koonce, Albert A. (See Dowden, John W., assignor.)

Koons, Joseph K., Montgomery, Pa. Transmission-gearing. No. 958,256; May 17; Sp. p. 3929; Gaz. vol. 154; p. 661.

Koppers, Heinrich, Essen-on-the-Ruhr, Germany. Quenching coke. No. 958,651; May 17; Sp. p. 4854; Gaz. vol. 154; p. 797.

Kopriwa, Emanuel. (See Salstrom, David B., assignor.)

Körtling, Conrad, and C. Jaentsch, Cassel, Germany. Manufacture of building-blocks. No. 957,351; May 10; Sp. p. 1850; Gaz. vol. 154; p. 322.

Koskine, John, Detroit, Mich. Flying-machine. No. 958,747; May 24; Sp. p. 5060; Gaz. vol. 154; p. 855.

Kottum, Peter J., Sacred Heart, Minn. Animal-trap. No. 958,505; May 17; Sp. p. 4570; Gaz. vol. 154; p. 750.

Kouns, James H., Eugene, Oreg., Level. No. 959,759; May 31; Sp. p. 7195; Gaz. vol. 154; p. 1221.

Kouns Manufacturing Company. (See Frayer and Howard, assignors.) (Reissue.)

Kovács, Victor. (See Bayusz and Kovács.)

Kraemer, Thomas. (See Sheble and Kraemer.)

Kraft, Hermann, assignor to Society of Chemical Industry in Basle, Basel, Switzerland. Green vat dye and making same. No. 960,098; May 31; Sp. p. 7960; Gaz. vol. 154; p. 1336.

Kral, Károly, New York, N. Y. Extension-table. No. 957,611; May 10; Sp. p. 2352; Gaz. vol. 154; p. 409.

Kramer, Andrew A., Kansas City, Kans. Grain-door. No. 957,424; May 10; Sp. p. 2001; Gaz. vol. 154; p. 345.

Kranacher, Edward, New York, N. Y. Safety-gate. No. 957,066; May 3; Sp. p. 1219; Gaz. vol. 154; p. 193.

Krünslein, George. (See Schmidt and Krünslein.)

Kratky, Franz, Vienna, Austria-Hungary. Incandescent gas-burner for inverted and upright incandescent lights. No. 959,760; May 31; Sp. p. 7197; Gaz. vol. 154; p. 1221.

Krause, Carl F. and R. C., Westfield, Wis. Marine bicycle. No. 956,533; May 3; Sp. p. 53; Gaz. vol. 154; p. 11.

Krause, Rudolf C. (See Krause, Carl F. and R. C.)

Krcma, John F., Chicago, Ill. Vending-machine. No. 957,971; May 17; Sp. p. 3191; Gaz. vol. 154; p. 563.

Krebs, Conrad. (See Krebs, Leonard and C.)

Krebs, Leonard and C., Salem, Oreg. Disk plow. No. 959,356; May 24; Sp. p. 6349; Gaz. vol. 154; p. 1062.

Krejci, Antora, Leavenworth, Kans. Shelf for bedsteads. No. 957,890; May 17; Sp. p. 2954; Gaz. vol. 151; p. 534.

Krell Auto-Grand Piano Co. of America. (See Welin, Peter, assignor.)

Kreuscher, Peter, Canova, S. D. Fly-guard. No. 957,425; May 10; Sp. p. 2003; Gaz. vol. 154; p. 346.

Kreusler, Hans, Wilmersdorf, assignor to Siemens & Halske A. G., Berlin, Germany. Making a plastic mass from compound of tungsten, &c. No. 956,979; May 3; Sp. p. 1052; Gaz. vol. 154; p. 165.

Kribs, Anthony, Brooklyn, N. Y. Machine for making castings. No. 959,557; May 31; Sp. p. 6788; Gaz. vol. 154; p. 1155.

Krohnengold, Samuel, New York, and A. Raphael, Brooklyn, N. Y. Work-basket. No. 957,066; May 3; Sp. p. 1220; Gaz. vol. 154; p. 193.

Krokert, Felix, Halle-on-the-Saale, Germany. Printing process. No. 958,879; May 24; Sp. p. 5383; Gaz. vol. 154; p. 903.

Krüger, Ernst A., Seehausen, Altmark, Germany, assignor, by mesne assignments, to Alfred Bloch, Paris, France. Regenerating carbon-filament electric incandescent lamps. No. 958,652; May 17; Sp. p. 4855; Gaz. vol. 154; p. 797.

Krüger, Friedrich C., Hanover, Germany. Wedge-expanding device. No. 956,712; May 3; Sp. p. 461; Gaz. vol. 154; p. 74.

Krzywiec, Alexander, Warsaw, Russia. Incandescent lamp. No. 957,612; May 10; Sp. p. 2354; Gaz. vol. 154; p. 410.

Kuehn, Frank C. W., Huron, S. D. Sash-cord guide. No. 958,553; May 17; Sp. p. 4856; Gaz. vol. 154; p. 797.

Kuhn, Joseph, Pittsburg, Pa. Attachment for telephones. No. 957,067; May 3; Sp. p. 1221; Gaz. vol. 154; p. 193.

Kuhn, Rudolph C., Minneapolis, Minn. Writing-tablet. No. 958,507; May 17; Sp. p. 4574; Gaz. vol. 154; p. 751.

Kukkuck, Frederick, St. Louis, Mo. Composition-leather machine. No. 957,219; May 10; Sp. p. 1854; Gaz. vol. 154; p. 275.

Kullander, Frank O., Kensington, Minn. Match box and holder. No. 956,809; May 3; Sp. p. 671; Gaz. vol. 154; p. 106.

Kundtz, Theodor, Lakewood, Ohio. Combined school desk and seat. No. 957,426; May 10; Sp. p. 2004; Gaz. vol. 154; p. 346.

Kurz, Jacob, Darragh, and T. Hochriter, Greensburg, Pa. Coal-mining machine. No. 957,510; May 10; Sp. p. 2166; Gaz. vol. 154; p. 374.

Kurz, Charles F., Cleveland, Ohio. Portable prescription-case. No. 959,230; May 24; Sp. p. 6101; Gaz. vol. 154; p. 1020.

Kyle, Thomas D., Chicago, and E. H. Waugh, Evanston, Ill.; said Waugh assignor to said Kyle. Machine for washing and draining soiled bottles. No. 957,220; May 10; Sp. p. 1557; Gaz. vol. 154; p. 276.

L. & S. Syndicate, The. (See Lockwood, Alfred A., assignor.)

L. C. Smith and Bros. Typewriter Company. (See Gabrielson, Carl, assignor.)

L'Orange, Prosper, Mannheim, Germany. Operating explosive-engines. No. 959,951; May 31; Sp. p. 7640; Gaz. vol. 154; p. 1288.

La Bauve, Odelon J., Edna, Tex. Coop or crate. No. 957,068; May 3; Sp. p. 1223; Gaz. vol. 154; p. 194.

La Bauve, Odelon J., Edna, Tex. Coop or crate. No. 957,069; May 3; Sp. p. 1225; Gaz. vol. 154; p. 194.

La Chapelle, Francis, San Francisco, Cal. Replaceable tooth. No. 959,358; May 24; Sp. p. 6353; Gaz. vol. 154; p. 1062.

La Chapelle, Fred, Lynn, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Sewing-machine. No. 957,072; May 17; Sp. p. 3196; Gaz. vol. 154; p. 563.

La Driere, Joseph L., Albuquerque, N. Mex. External armor for pneumatic tires. No. 958,748; May 24; Sp. p. 5062; Gaz. vol. 154; p. 855.

La Société l'Air Liquide (Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude). (See Lévy and Helbronner, assignors.)

La Société pour l'Exploitation du Caoutchouc au Congo. (See Guiguet, Léon, assignor.)

Labarre, George, New Orleans, La. Cigar-band. No. 959,367; May 24; Sp. p. 6352; Gaz. vol. 154; p. 1062.

Labonte, Peter, Fall River, Mass., assignor to Crompton & Knowles Loom Works. Shedding mechanism for looms. No. 956,980; May 3; Sp. p. 1052; Gaz. vol. 154; p. 165.

Labryszewski, Stefan, Brooklyn, N. Y. Propeller for ships. No. 959,761; May 31; Sp. p. 7199; Gaz. vol. 154; p. 1222.

Lackett, Jesse L. (See Peterson and Lackett.)

Lacoste, Elie, and E. Batimann, Paris, France. Propelling mechanism for motor-vehicles. No. 959,231; May 24; Sp. p. 6104; Gaz. vol. 154; p. 1020.

Lácsay, George, New York, N. Y. Distilling apparatus. No. 957,613; May 10; Sp. p. 2355; Gaz. vol. 154; p. 410.

Ladd, Elwood S., New York, N. Y. Distributing ink-fountain. No. 959,558; May 31; Sp. p. 6790; Gaz. vol. 154; p. 1155.

Lademan, Otto T., Milwaukee, Wis. Signaling system. No. 957,973; May 17; Sp. p. 3190; Gaz. vol. 154; p. 563.

Ladevese, Charles R., Providence, R. I. Joint or miter planer tool. No. 959,017; May 24; Sp. p. 5645; Gaz. vol. 154; p. 949.

Lafont, Valéry, Lyon, France. Skein-winder. No. 957,427; May 10; Sp. p. 2009; Gaz. vol. 154; p. 347.

Lagonda Manufacturing Company, The. (See Ainge, George H., assignor.)

Lagonda Manufacturing Company, The. (See Hauer, Elmer E., assignor.)

Lagonda Manufacturing Company, The. (See Weinland, Henry F., assignor.)

Lahey, Lonnie A., assignor of one-half to C. L. Jensen, Spokane, Wash. Pad-holder. No. 956,534; May 3; Sp. p. 55; Gaz. vol. 154; p. 12.

Laing, Alexander, Detroit, Mich. Planetarium. No. 958,139; May 17; Sp. p. 3683; Gaz. vol. 154; p. 623.

Lake, Edward N., Wheaton, and J. Cuthbert, Chicago, Ill. Panel-board. No. 959,762; May 31; Sp. p. 7200; Gaz. vol. 154; p. 1222.

Lake, Levi B., St. Joseph, Mo. Pipe-frame for acetylene-machines. No. 959,359; May 24; Sp. p. 6354; Gaz. vol. 154; p. 1062.

Lake, Simon. (See Howell, William N., assignor.)

Lakin, Frank C., Manchester, Ill. Sliding grain-door for cars. No. 958,140; May 17; Sp. p. 3691; Gaz. vol. 154; p. 623.

Lamasney, Frank I., and F. H. Pierce, Beverly Farms, Mass. Shipping-receptacle. No. 956,810; May 3; Sp. p. 672; Gaz. vol. 154; p. 106.

Lambert, George A., Anderson, Ind. Neck-yoke center. No. 958,141; May 17; Sp. p. 3692; Gaz. vol. 154; p. 624.

Lamkin, Sayers B., Dawson, N. Mex. Hand for comptometers. No. 957,221; May 10; Sp. p. 1567; Gaz. vol. 154; p. 276.

Lamoreaux, Frank L. (See Bertram and Lamoreaux.)

Lamp, Joseph A., and S. C. Stiner, McKeesport, Pa. Apparatus for the manufacture of tin-plate. No. 956,961; May 3; Sp. p. 1054; Gaz. vol. 154; p. 165.

Lamson Consolidated Store Service Company. (See Amsden, George A., assignor.)

Lamson Consolidated Store Service Company. (See Cowley and Thomas, assignors.)

Lamson Consolidated Store Service Company. (See Thomas, Edward G., assignor.)

Land, Henry S., Brockley, England. Lathe and other tool holder for cutting, shaping, and screwing purposes. No. 958,654; May 17; Sp. p. 4857; Gaz. vol. 154; p. 798.

Landers, Frary and Clark. (See Smith, Charles F., assignor.)

Landis, Abraham B., Waynesboro, Pa. Sash-lock. No. 959,559; May 31; Sp. p. 6793; Gaz. vol. 154; p. 1155.

Landis, Abraham B., Waynesboro, Pa. Shutter-hinge. No. 959,560; May 31; Sp. p. 6795; Gaz. vol. 154; p. 1156.

Landis, Frank F., Waynesboro, Pa. Separating-grate for threshing-machines. No. 959,561; May 31; Sp. p. 6796; Gaz. vol. 154; p. 1156.

Lane, Victor E., Berwick, Pa., assignor to American Car and Foundry Company, St. Louis, Mo. Mine-car buffer. No. 959,232; May 24; Sp. p. 6106; Gaz. vol. 154; p. 1020.

Lang, Reuben R., Iola, Kans. Electric plug. No. 957,801; May 17; Sp. p. 2955; Gaz. vol. 154; p. 534.

Langer, William K. H., Philadelphia, Pa. Skylight. No. 959,018; May 24; Sp. p. 5646; Gaz. vol. 154; p. 949.

Langman, Max, New York, N. Y. Cloth-cutter. No. 957,070; May 3; Sp. p. 1227; Gaz. vol. 154; p. 195.

Langstroth, Walter, Washington, D. C. Gun-sight protector. No. 958,655; May 17; Sp. p. 4861; Gaz. vol. 154; p. 798.

Lanneau, Edgard de. (See Torchebeuf and Lanneau.)

Lanphier, Robert C., assignor to Sangamo Electric Company, Springfield, Ill. Shunt for electric meters. No. 958,508; May 17; Sp. p. 4575; Gaz. vol. 154; p. 751.

Lanston Monotype Machine Company. (See Dunavant, Everett S., assignor.)

Lanum, Walter R., Philadelphia, Pa. Soldering-iron. No. 959,233; May 24; Sp. p. 6108; Gaz. vol. 154; p. 1020.

Lapersonnerie, Louis, New York, N. Y. Concrete wall construction. No. 959,360; May 24; Sp. p. 6356; Gaz. vol. 154; p. 1063.

Lapham, Frank W., *et al.* (See Hachmann, Frederick, assignor.)

Larkin, Oliver M., St. Louis, Mo. Combination-lock. No. 959,234; May 24; Sp. p. 6110; Gaz. vol. 154; p. 1021.

Larsen-Baker Ice Machine Co. (See Allan, James, assignor.)

Larson, Charles G., Burlington, Iowa. Try-square. No. 958,257; May 17; Sp. p. 3933; Gaz. vol. 154; p. 662.

Larson, Magnus W., Albert Lea, Minn. Dish-washer. No. 959,562; May 31; Sp. p. 6799; Gaz. vol. 154; p. 1157.

Laskowski, William F., Jr. (See Alexander, Frederick, assignor.)

Lasrich, Robert, New York, N. Y. Bellows-actuating mechanism. No. 956,982; May 3; Sp. p. 1057; Gaz. vol. 154; p. 165.

Lässoe, Valdemar F., Brooklyn, N. Y. Oil-burner. No. 957,614; May 10; Sp. p. 2357; Gaz. vol. 154; p. 410.

Latham, Albert, Beverly, assignor of one-half to J. W. Nourbourne, Somerville, Mass. Combined frictional and positively locking clutch. No. 957,851; May 10; Sp. p. 2857; Gaz. vol. 154; p. 489.

Latham Machinery Company. (See Weber, Henry, assignor.)

Lattimore, Lewis M., Shubert, Nebr. Wagon-seat fastener. No. 959,361; May 24; Sp. p. 6357; Gaz. vol. 154; p. 1063.

Laughlin, James T., Boise, Idaho. Eyeglass-mounting. No. 957,071; May 3; Sp. p. 1230; Gaz. vol. 154; p. 195.

Laughlin, John L., Irwin, Pa. Churn. No. 958,656; May 17; Sp. p. 4862; Gaz. vol. 154; p. 798.

Laughter, Victor H., Detroit, Mich. Transmitting system for space telephony. No. 957,852; May 10; Sp. p. 2850; Gaz. vol. 154; p. 489.

Laun, Christian F., assignor to Berbecker & Rowland Manufacturing Company, Waterville, Conn. Bracket. No. 956,986; May 3; Sp. p. 1058; Gaz. vol. 154; p. 166.

Laurila, Hjalmar, Worcester, Mass. Mattress. No. 957,892; May 17; Sp. p. 2957; Gaz. vol. 154; p. 534.

Lautenschlager, William F., Cincinnati, Ohio. Sewing-machine. No. 959,948; May 31; Sp. p. 7630; Gaz. vol. 154; p. 1287.

Lauterbach, Jacob S., New York, N. Y. Box. No. 956,859; May 3; Sp. p. 785; Gaz. vol. 154; p. 124.

Laverty, John, and Hal S. Williams, Columbia, S. C. Carstep. No. 958,657; May 17; Sp. p. 4863; Gaz. vol. 154; p. 798.

Lawler, James J., Mount Vernon, N. Y. Mixing-valve. No. 956,860; May 3; Sp. p. 787; Gaz. vol. 154; p. 125.

Lawler, John, assignor of one-half to F. G. Benjamine, Clinton, Iowa. Lamp-casing. No. 960,179; May 31; Sp. p. 8124; Gaz. vol. 154; p. 1366.

Lawrence, E. G. (See Mills, Arthur C., assignor.)

Lawrence, George E. (See Washburn and Lawrence.)

Lawrence, Luther C., Newcastle, Ind. Wrench. No. 957,778; May 10; Sp. p. 2717; Gaz. vol. 154; p. 465.

Lawson, August, assignor to M. L. Oberg and E. A. Lawson, Jamestown, N. Y. Lock. No. 958,880; May 24; Sp. p. 5385; Gaz. vol. 154; p. 903.

Lawson, Ernest A., *et al.* (See Lawson, August, assignor.)

Lawton, Burton L., assignor to The Connecticut Telephone & Electric Company, Meriden, Conn. Vibrator for induction-coils. No. 958,500; May 17; Sp. p. 4578; Gaz. vol. 154; p. 751.

Layman, Clifford E., Keene, Ohio. Twine-holder. No. 957,568; May 10; Sp. p. 2280; Gaz. vol. 154; p. 395.

Layne, Mahlon E., Houston, Tex. Well mechanism. No. 957,974; May 17; Sp. p. 3201; Gaz. vol. 154; p. 564.

Lázár, Stephen. (See Kelemen and Lázár.)

Le Blanc, William T., New York, N. Y. Braiding-machine. No. 958,512; May 17; Sp. p. 4584; Gaz. vol. 154; p. 753.

Le Blond, Richard K., and W. F. Groene, assignors to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio. Milling-machine. No. 956,643; May 3; Sp. p. 293; Gaz. vol. 154; p. 48.

Le Faguays, Fernand, Nantes, France. Disinfecting device. No. 958,259; May 17; Sp. p. 3936; Gaz. vol. 154; p. 662.

Le Page, Ethel M. (See Le Page, William N., assignor.)

Le Page, William N., assignor to E. M. Le Page, Vancouver, British Columbia, Canada. Air-heater. No. 959,362; May 24; Sp. p. 6358; Gaz. vol. 154; p. 1063.

Lea Quee, George B., Mount Iron, Minn. Apparatus for locating sunken vessels. No. 957,222; May 10; Sp. p. 1570; Gaz. vol. 154; p. 277.

Lea, Thomas, New Brunswick, N. J. Shock-absorber for vehicles. No. 958,510; May 17; Sp. p. 4580; Gaz. vol. 154; p. 752.

Leach, Alice F., Andover, Mass. Game. No. 958,258; May 17; Sp. p. 3934; Gaz. vol. 154; p. 662.

Leach, Raymond J., Seekonk, Mass. Gas-engine. No. 958,881; May 24; Sp. p. 5387; Gaz. vol. 154; p. 903.

Leach, Richard E., Cobalt, Ontario, Canada. Latch mechanism for split stocks and dies. No. 958,511; May 17; Sp. p. 4583; Gaz. vol. 154; p. 752.

Leadbeater, Frederick, Detroit, Mich. Valve. No. 956,811; May 3; Sp. p. 675; Gaz. vol. 154; p. 106.

Leaver, James M., Jr., Sonora, Cal. Gage. No. 957,779; May 10; Sp. p. 2718; Gaz. vol. 154; p. 466.

Leaver, James M., Jr., Sonora, Cal. Gage. No. 957,780; May 10; Sp. p. 2724; Gaz. vol. 154; p. 466.

Leaver, James M., Jr., Sonora, Cal. Gage. No. 957,781; May 10; Sp. p. 2726; Gaz. vol. 154; p. 466.

Leaver, James M., Jr., Sonora, Cal. Gage. No. 957,782; May 10; Sp. p. 2727; Gaz. vol. 154; p. 467.

Leavitt, John E., Boston, Mass., assignor, by mesne assignments, to Manufacturers Machine Company, Montclair, N. J. Expansible foot-last. No. 957,975; May 17; Sp. p. 3204; Gaz. vol. 154; p. 564.

Leavitt Machine Co., The. (See Williams, Thomas B., assignor.)

Leber, George J., Cleveland, Ohio. Fluid-regulator. No. 956,585; May 3; Sp. p. 169; Gaz. vol. 154; p. 29.

Ledbetter, John E. (See Pollard, Paxton, assignor.)

Ledig, Richard G., assignor to A. Mecky Co., Philadelphia, Pa. Adjustable vehicle-seat. No. 958,410; May 17; Sp. p. 4388; Gaz. vol. 154; p. 716.

Lee, Frank E. (See Rogers and Lee.)

Lee, George H., Omaha, Nebr. Fireless brooder. No. 960,099; May 31; Sp. p. 7970; Gaz. vol. 154; p. 1336.

Lee, Stephen B., Danbury, Iowa. Fish and game hook. No. 958,142; May 17; Sp. p. 3694; Gaz. vol. 154; p. 624.

Leedom, Walter M., Colton, Cal. Reciprocating gas-engine. No. 959,019; May 24; Sp. p. 5648; Gaz. vol. 154; p. 949.

Leggett, George R. (See Goss and Leggett.)

Lehr, William J., East Palestine, Ohio. Bedclothes-holder. No. 959,763; May 31; Sp. p. 7203; Gaz. vol. 154; p. 1223.

Leibowitz, Leon M., New York, N. Y. Collapsible crate. No. 958,749; May 24; Sp. p. 5064; Gaz. vol. 154; p. 856.

Leipert, Friedrich W. C., Philadelphia, Pa. Actuating foot-rest for rocking-chairs. No. 959,949; May 31; Sp. p. 7636; Gaz. vol. 154; p. 1287.

Leitch, Meredith, assignor to American Can Company, New York, N. Y. Can-soldering and surplus-solder-removing machine. No. 958,750; May 24; Sp. p. 5065; Gaz. vol. 154; p. 856.

Lemay, Joseph, New York, N. Y. Garment-clasp. No. 958,411; May 17; Sp. p. 4389; Gaz. vol. 154; p. 717.

Lemieux, George, Washburn, Wis. Handle. No. 959,235; May 24; Sp. p. 6112; Gaz. vol. 154; p. 1021.

Lemp, Hermann, Lynn, Mass., assignor to General Electric Company, Welding thin tubing. No. 956,964; May 3; Sp. p. 1059; Gaz. vol. 154; p. 166.
Lemyre, Joseph E., Manchester, N. H., assignor to Patent Sales Company, Kittery, Me. Loom. No. 957,615; May 10; Sp. p. 2360; Gaz. vol. 154; p. 411.
Lenhart, William, Cuyahoga Falls, Ohio. Device for operating motors for sewing-machines and the like. No. 957,223; May 10; Sp. p. 1572; Gaz. vol. 154; p. 277.
Lenz, Charles S., New York, N. Y. Sounding apparatus. No. 959,764; May 31; Sp. p. 7204; Gaz. vol. 154; p. 1223.
Lester, Harry B., assignor to The Davis Sewing Machine Company, Dayton, Ohio. Cross-slide-operating mechanism. No. 957,224; May 10; Sp. p. 1575; Gaz. vol. 154; p. 278.
Levey, Marshall T., Indianapolis, Ind. Check-book. No. 958,861; May 3; Sp. p. 788; Gaz. vol. 154; p. 125.
Levin, Nils D., Chicago, Ill. Drilling-machine. No. 959,614; May 24; Sp. p. 5215; Gaz. vol. 154; p. 880.
Levin, Samuel, Highland Park, Ill. Stylus for sound-reproducing machines. No. 958,412; May 17; Sp. p. 4391; Gaz. vol. 154; p. 717.
Lévy, Réne J., Manchester, England, and A. Heibronner, Paris, France. Separation of gases, &c. No. 959,563; May 31; Sp. p. 6800; Gaz. vol. 154; p. 1157.
Lévy, Reué J., and A. Heibronner, assignors to La Société l'Air Liquide (Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude), Paris, France. Separation of gases from their mixtures. No. 957,170; May 3; Sp. p. 1427; Gaz. vol. 154; p. 229.
Lewis, George P., *et al.* (See Bell, Dilliwyn M., assignor.)
Lewis, Phillip P., Chicago, Ill. Railway-crossing. No. 957,225; May 10; Sp. p. 1577; Gaz. vol. 154; p. 278.
Lewis, Robert B., assignor to American Metal Edge Box Company, Philadelphia, Pa. Machine for setting and forming metallic fasteners. No. 959,020; May 24; Sp. p. 5649; Gaz. vol. 154; p. 950.
Ley, Adolph A., Akron, Ohio. Vehicle-rim. No. 959,236; May 24; Sp. p. 6113; Gaz. vol. 154; p. 1022.
Leyner, John G., Denver, assignor to The J. Geo. Leyner Engineering Works Company, Littleton, Colo. Cylinder lubrication. No. 958,260; May 17; Sp. p. 3938; Gaz. vol. 154; p. 663.
Libby, Albion D. T., assignor to The Dean Electric Company, Elyria, Ohio. Telephone system. No. 959,765; May 31; Sp. p. 7207; Gaz. vol. 154; p. 1223.
Libby, Charles L., Indianapolis, Ind. Tool-support for lathes. No. 957,783; May 10; Sp. p. 2729; Gaz. vol. 154; p. 467.
Library Bureau. (See Hunter, David E., assignor.)
Lichtenstein, Harry M. (See English and Lichtenstein.)
Lieb, Edward O. (See Parker and Lieb.)
Liebert, Constantin, Warsaw, and W. Liebert, Moscow, Russia. Rotary file-cabinet. No. 957,784; May 10; Sp. p. 2730; Gaz. vol. 154; p. 467.
Liebert, Waclaw. (See Liebert, Constantin and W.)
Life, Jacob, assignor of one-half to L. Life, Ridgeville, Ind. Wire-fastener. No. 959,766; May 31; Sp. p. 7210; Gaz. vol. 154; p. 1224.
Life, Lewis. (See Life, Jacob, assignor.)
Light, Arthur H., assignor to A. H. Light Engineering Company, Los Angeles, Cal. Oil-burner. No. 959,363; May 24; Sp. p. 6350; Gaz. vol. 154; p. 1064.
Light, Arthur H., assignor to A. H. Light Engineering Company, Los Angeles, Cal. Oil-burner. No. 959,364; May 24; Sp. p. 6363; Gaz. vol. 154; p. 1064.
Liles, William W., St. Louis, Mo. Moving sign. No. 957,352; May 10; Sp. p. 1851; Gaz. vol. 154; p. 322.
Lilienfeld, Leon, Vienna, Austria-Hungary. Compound for producing silk-like effects. No. 960,100; May 31; Sp. p. 7972; Gaz. vol. 154; p. 1336.
Lill, John. (See Braham and Lill.)
Lillie, Samuel M., Philadelphia, Pa. Converting starch into derivatives, dextrin, dextrose, &c. No. 959,237; May 24; Sp. p. 6115; Gaz. vol. 154; p. 1022.
Limbach, George, New York, N. Y., Horseshoe. No. 957,691; May 10; Sp. p. 2529; Gaz. vol. 154; p. 437.
Limmer, John, St. Louis, Mo. Bread-labeling device. No. 959,767; May 31; Sp. p. 7211; Gaz. vol. 154; p. 1224.
Lindström, Carl, Berlin, Germany. Talking-machine mechanism. No. 959,238; May 24; Sp. p. 6119; Gaz. vol. 154; p. 1022.
Lindstrom, Ernest A., Orange, N. J. Hasp-locking device. No. 957,853; May 10; Sp. p. 1853; Gaz. vol. 154; p. 322.
Link-Belt Company. (See Dodge, James M., assignor.)
Link-Belt Company. (See Pierce, Harold S., assignor.)
Link, Lewis W. (See Gunn and Link.)
Linn, George E., assignor to L. M. Mitchell, Springfield, Ohio. Molder's flask. No. 960,025; May 31; Sp. p. 7821; Gaz. vol. 154; p. 1315.
Linquest, Oscar B., Jamestown, assignor of one-half to A. F. Russell, Lakewood, N. Y. Electric heater for oil-wells. No. 957,785; May 10; Sp. p. 2732; Gaz. vol. 154; p. 468.
Lintleman, Frederick R., Harlan, Iowa. Surgeon's operating-pan. No. 959,564; May 31; Sp. p. 6803; Gaz. vol. 154; p. 1157.
Lipschutz, Arthur, St. Louis, Mo., assignor, by mesne assignments, to National Dump Car Company, Dump-car. No. 957,616; May 10; Sp. p. 2363; Gaz. vol. 154; p. 411.
Lithander, Nelson P., Hallock, Minn. Cutter for harvesters. No. 957,428; May 10; Sp. p. 2010; Gaz. vol. 154; p. 347.
Litle, Thomas J., Jr., Philadelphia, Pa. Mantle-supporting transportation device. No. 958,261; May 17; Sp. p. 3940; Gaz. vol. 154; p. 663.
Livering, Annie, *et al.* (See Livering, Charles J., assignor.)
Livering, Charles J., assignor of three-fifths to A. Livering, Louisville, and two-fifths to W. E. Pemberton, Clark, Ky. Combination implement. No. 957,692; May 10; Sp. p. 2530; Gaz. vol. 154; p. 438.
Ljunggren, Carl J., Providence, R. I. Closure-locking means. No. 957,354; May 10; Sp. p. 1854; Gaz. vol. 154; p. 323.
Ljunggren, Carl J., Providence, R. I. Closure-locking means. No. 957,355; May 10; Sp. p. 1856; Gaz. vol. 154; p. 323.
Lloyd, Ernest F., Detroit, Mich. Tar-displacement system. No. 956,586; May 3; Sp. p. 171; Gaz. vol. 154; p. 29.
Lloyd, Frank B. (See Duckett and Lloyd.)
Lobdell Car Wheel Company. (See Stuart, Joseph, assignor.)
Lochhead, George, Los Angeles, Cal. Wagon-nut. No. 958,262; May 17; Sp. p. 3941; Gaz. vol. 154; p. 664.
Locke Insulator Manufacturing Company. (See Goddard, Walter T., assignor.)
Locker, John B., St. Louis, Mo. Horseshoe. No. 957,072; May 3; Sp. p. 1231; Gaz. vol. 154; p. 195.
Lockwood, Alfred A., London, England. Treating ores and carboniferous earths. No. 956,773; May 3; Sp. p. 589; Gaz. vol. 154; p. 94.
Lockwood, Alfred A., assignor to The L. & S. Syndicate, Limited, London, England. Treating ores and carboniferous earths. No. 959,239; May 24; Sp. p. 6120; Gaz. vol. 154; p. 1022.
Lockwood, Charles S., Newark, assignor to Hyatt Roller Bearing Company, Harrison, N. J. Roller-bearing with angular rolls. No. 956,587; May 3; Sp. p. 174; Gaz. vol. 154; p. 30.
Lockwood, Charles S., Newark, assignor to Hyatt Roller Bearing Company, Harrison, N. J. Combined roll and ball bearing. No. 956,588; May 3; Sp. p. 176; Gaz. vol. 154; p. 30.
Lockwood, Charles S., Newark, assignor to Hyatt Roller Bearing Company, Harrison, N. J. Self-adjusting casing for roller-bearings. No. 958,143; May 17; Sp. p. 3696; Gaz. vol. 154; p. 624.
Lockwood, Charles S., Newark, assignor to Hyatt Roller Bearing Company, Harrison, N. J. Making helical rolls. No. 958,144; May 17; Sp. p. 3698; Gaz. vol. 154; p. 625.
Lockwood, Charles S., Newark, assignor to Hyatt Roller Bearing Company, Harrison, N. J. Combination roller-bearing. No. 958,963; May 24; Sp. p. 5543; Gaz. vol. 154; p. 931.
Lockwood, Frank A., Denver, Colo., assignor to The Denver Engineering Works Co. Pressure-controlling valve. No. 957,511; May 10; Sp. p. 2169; Gaz. vol. 154; p. 375.
Loeb, Adam, Portland, Oreg. Shell for cartridges. No. 957,171; May 3; Sp. p. 1430; Gaz. vol. 154; p. 229.
Loew, Charles H., Lakewood, Ohio. Filter-producing apparatus. No. 959,021; May 24; Sp. p. 5654; Gaz. vol. 154; p. 950.
Loewe, Philip, Chippewa Falls, Wis. Ear-muff. No. 958,263; May 17; Sp. p. 3943; Gaz. vol. 154; p. 664.
Logan, Judson C., Pittsfield, Mass., assignor to General Electric Company. Electric heater. No. 957,220; May 10; Sp. p. 1580; Gaz. vol. 154; p. 279.
Lomax, Roger W., Lynchburg, Va. Apparatus for receiving and delivering mail. No. 960,180; May 31; Sp. p. 8125; Gaz. vol. 154; p. 1366.
Lombard, Ernest C., New York, N. Y. Dental forceps. No. 959,365; May 24; Sp. p. 6366; Gaz. vol. 154; p. 1064.
Long Arm System Company, The. (See Kirk, Robert H., assignor.)
Long Furniture Company, The. (See Weeks, John B., assignor.)
Long, John R., Warren, Pa. Bench-vise. No. 958,658; May 17; Sp. p. 4366; Gaz. vol. 154; p. 799.
Long, John R., Akron, Ohio. Bench-vise. No. 958,659; May 17; Sp. p. 4367; Gaz. vol. 154; p. 799.
Longbrake, Frank. (See Crates and Longbrake.)
Loose, Robert D., Chicago, Ill. Auxiliary mixer for internal-combustion motors. No. 959,950; May 31; Sp. p. 7637; Gaz. vol. 154; p. 1288.
Lord, Charles A., Seattle, Wash. Pipe. No. 958,264; May 17; Sp. p. 3944; Gaz. vol. 154; p. 664.
Lorenz, William A., *et al.* (See Honius, William H., assignor.)
Lotz, Augustus, San Francisco, Cal. Pneumatic cleaner. No. 956,585; May 3; Sp. p. 56; Gaz. vol. 154; p. 12.
Lotz, Hermen F., Ironton, Mo. Corn-planter. No. 956,718; May 3; Sp. p. 462; Gaz. vol. 154; p. 74.
Love, Clyde D., Newark, N. J. Closure. No. 958,513; May 17; Sp. p. 4591; Gaz. vol. 154; p. 753.
Love, John D., Athens, Ohio. Brace for cross-arms. No. 958,933; May 24; Sp. p. 5491; Gaz. vol. 154; p. 921.
Lovett, Renix W., Cincinnati, Ohio. Clamp for mending broken trolley-poles and other articles. No. 958,751; May 24; Sp. p. 5067; Gaz. vol. 154; p. 856.
Low, Abbot A., *et al.*, trustees. (See Wohl and Hertzberg, assignors.)
Low, Abbot A., Horseshoe, N. Y. Apparatus for reducing and packing waste paper. No. 960,026; May 31; Sp. p. 7822; Gaz. vol. 154; p. 1315.

Low, Abbot A., Horseshoe, N. Y. Apparatus for reducing and packing waste paper. No. 960,027; May 31; Sp. p. 7824; Gaz. vol. 154; p. 1315.
Low, Abbot A., Horseshoe, N. Y. Waste-paper receptacle. No. 960,028; May 31; Sp. p. 7826; Gaz. vol. 154; p. 1316.
Low, Abbot A., Horseshoe, M. J. Wohl, and H. Hertzberg, New York; said Wohl and Hertzberg assignors to A. A. Low, Horseshoe, N. Y. Vaporizing device. No. 957,786; May 10; Sp. p. 2735; Gaz. vol. 154; p. 468.
Low, Andrew, Newark, N. J. Garden-hose carriage. No. 957,560; May 10; Sp. p. 2281; Gaz. vol. 154; p. 395.
Lowe Electric Company, The. (See Hailey, Robert L., assignor.)
Lowe, John A., Toledo, Ohio. Ironing-board. No. 960,101; May 31; Sp. p. 7973; Gaz. vol. 154; p. 1336.
Lowe, Nellie W., Omaha, Nebr. Garbage chute and receptacle. No. 958,265; May 17; Sp. p. 3945; Gaz. vol. 154; p. 664.
Lowe, Purley E., and B. De Young, Houston, Tex. Window-shade and roller. No. 960,228; May 31; Sp. p. 8218; Gaz. vol. 154; p. 1383.
Lowry, George A., Chicago, Ill., assignor of one-half to J. F. O'Shaughnessy, New York, N. Y. Apparatus for separating and combing grass, straw, and the like. No. 959,240; May 24; Sp. p. 6121; Gaz. vol. 154; p. 1023.
Lucas, John P., and J. A., Browerville, Minn. Horse-power loader. No. 958,882; May 24; Sp. p. 5389; Gaz. vol. 154; p. 904.
Lucas, Joseph A. (See Lucas, John P. and J. A.)
Lucas, Owen D., Bayswater, London, England. Atomizer and the like. No. 957,976; May 17; Sp. p. 3206; Gaz. vol. 154; p. 565.
Lucier, David F., assignor to J. Garst, Worcester, Mass. Short-weft fabric and making the same. No. 957,356; May 10; Sp. p. 1857; Gaz. vol. 154; p. 323.
Luckenbach, Boyer. (See Brangler and Luckenbach.)
Ludwig, John H. (See Maier, Louis H., assignor.)
Lufkin, Elgood C., *et al.* (See Willet, John G., assignor.)
Lum, Walter O. (See Yates and Lum.)
Lumley, Robert P., and H. G. Hillman, New York, N. Y., assignors to Public Safety Company, Washington, D. C. Interlocking safety device for elevators. No. 956,536; May 3; Sp. p. 57; Gaz. vol. 154; p. 12.
Lumley, Wilfrid, Conneaut, Ohio. Street-car. No. 956,774; May 3; Sp. p. 590; Gaz. vol. 154; p. 94.
Luna, Joseph C., assignor of one-half to E. Jacobson, Oakland, Cal. Regulating-valve for air-brake systems. No. 959,022; May 24; Sp. p. 5657; Gaz. vol. 154; p. 950.
Lund, Thomas, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Compressing-machine. No. 959,860; May 31; Sp. p. 7444; Gaz. vol. 154; p. 1250.
Lundeen, Frank G., Courtenay, N. D. Check-stamping device. No. 959,768; May 31; Sp. p. 7213; Gaz. vol. 154; p. 1224.
Lunken, Edmund H., and C. M. Conklin, Cincinnati, assignors to The Lunken Steel Window Company, Hamilton, Ohio. Window construction. No. 957,693; May 10; Sp. p. 2532; Gaz. vol. 154; p. 438.
Lunken Steel Window Company, The. (See Lunken and Conklin, assignors.)
Lupton, James M. (See Lupton, William T. and J. M.)
Lupton, William T. and J. M., Berkeley county, W. Va. Spark-arrester and smoke-consumer. No. 956,589; May 3; Sp. p. 178; Gaz. vol. 154; p. 31.
Luth, Henry. (See Porn, Stephen L., assignor.)
Lutz, Benjamin F., assignor of one-half to J. M. Howick, Celina, Ohio. Hay-tedder. No. 958,514; May 17; Sp. p. 4592; Gaz. vol. 154; p. 753.
Lutz, Henry E., Helena, Mont. Check-hook. No. 957,512; May 10; Sp. p. 2171; Gaz. vol. 154; p. 375.
Lynch, George E., Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company. Rack-rail. No. 959,565; May 31; Sp. p. 6805; Gaz. vol. 154; p. 1158.
Lynch, James S., Citronelle, Ala. Cutting mechanism for mowers. No. 957,468; May 10; Sp. p. 2080; Gaz. vol. 154; p. 360.
Lynch, John. (See Cummings and Lynch.)
Lynn-Superior Company. (See Ward, Paul S., assignor.)
Lyon & Healy. (See Neumann, Julius J., assignor.)
Lyon, Oscar B., Maricopa, and W. H. Young, Modesto, Cal. Life-preserver and swimming-machine. No. 957,513; May 10; Sp. p. 2172; Gaz. vol. 154; p. 375.
Lyon, Thomas E., Bucklin, Kans. Road-grader. No. 957,357; May 10; Sp. p. 1860; Gaz. vol. 154; p. 324.
MacDiarmid, Wesley D. R., assignor of one-third to H. C. Dier and one-third to C. E. Wiltsie, Ottawa, Ontario, Canada. Electric switch. No. 959,769; May 31; Sp. p. 7214; Gaz. vol. 154; p. 1224.
MacGahan, Paul, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Electrical measuring instrument. No. 956,714; May 3; Sp. p. 463; Gaz. vol. 154; p. 74.
MacPherson Company, The. (See MacPherson, John G., assignor.)
MacPherson, John G., Philadelphia, Pa., assignor to The MacPherson Company. Taximeter. No. 957,073; May 3; Sp. p. 1282; Gaz. vol. 154; p. 196.
Macbeth-Evans Glass Company. (See Evans and Young, assignors.)
Maccallum, Norman E., assignor of one-fourth to F. P. Norris, Phoenixville, and one-half to The Phoenix Iron Company, Philadelphia, Pa. Apparatus for manufacturing steel. No. 959,146; May 24; Sp. p. 5923; Gaz. vol. 154; p. 992.
Macdonald, Rob R., Woodbury, N. J. Headlight. No. 959,770; May 31; Sp. p. 7217; Gaz. vol. 154; p. 1225.
Macdonald, Thomas H., assignor to American Graphophone Company, Bridgeport, Conn. Disk sound-reproducing machine. No. 957,694; May 10; Sp. p. 2534; Gaz. vol. 154; p. 438.
Macdonald, William R., Eel Pie Island, Twickenham, England. Cleaner for ships' hulls and the like. No. 959,566; May 31; Sp. p. 6806; Gaz. vol. 154; p. 1158.
Macfarlane, James W. and W. A., Cathcart, Scotland. Motor for centrifugal drying-machines. No. 959,567; May 31; Sp. p. 6808; Gaz. vol. 154; p. 1158.
Macfarlane, William A. (See Macfarlane, James W. and W. A.)
Machine Mantle Sewing Company, The. (See Cohn, Samuel, assignor.)
Mackensen, Otto, assignor to Firm of C. Zeiss, Jena, Germany. Telescopic tube. No. 958,752; May 24; Sp. p. 5060; Gaz. vol. 154; p. 857.
Mackerey, Charles J., Newport News, Va. Valve for steam-traps and the like. No. 957,469; May 10; Sp. p. 2081; Gaz. vol. 154; p. 361.
Mackerey, Charles J., U. S. Navy. Valve for steam-traps. No. 957,470; May 10; Sp. p. 2082; Gaz. vol. 154; p. 361.
Macloskie, George, Schenectady, N. Y., assignor to General Electric Company. Electropneumatic air-brake system. No. 957,227; May 10; Sp. p. 1581; Gaz. vol. 154; p. 279.
Maddox, John D., Culverton, Ga. Brace-clamp. No. 959,147; May 24; Sp. p. 5927; Gaz. vol. 154; p. 992.
Maddox, Thomas P., Aztec, N. Mex. Press for fruit. No. 960,102; May 31; Sp. p. 7974; Gaz. vol. 154; p. 1340.
Maher, John J., Philadelphia, Pa., assignor to The Babcock & Wilcox Company, Bayonne, N. J. Boiler-tube spreader. No. 956,985; May 3; Sp. p. 1060; Gaz. vol. 154; p. 166.
Maher, John J., Philadelphia, Pa., assignor to The Babcock & Wilcox Company, Bayonne, N. J. Boiler-tube spreader. No. 956,986; May 3; Sp. p. 1062; Gaz. vol. 154; p. 166.
Maier, Emma. (See Marx and Maier.)
Maier, Louis H., assignor to J. H. Ludwig, New York, N. Y. Reversible bellows. No. 959,771; May 31; Sp. p. 7218; Gaz. vol. 154; p. 1225.
Malcomb, Austin N., Burbank, Ohio. Tobacco-pipe. No. 960,181; May 31; Sp. p. 8127; Gaz. vol. 154; p. 1367.
Malitch, Charles, McKees Rocks, Pa. Rail-chair. No. 958,964; May 24; Sp. p. 5546; Gaz. vol. 154; p. 932.
Mallory, George W., Blenheim, Ontario, Canada. Door catch or check. No. 959,241; May 24; Sp. p. 6126; Gaz. vol. 154; p. 1023.
Manchee, Wilfrid A., assignor to Newark Spring Mattress Company, Newark, N. J. Bed-bottom. No. 958,266; May 17; Sp. p. 3947; Gaz. vol. 154; p. 664.
Maney, Virginia D., Hallettsville, Tex. Ink-bottle holder for desks. No. 959,772; May 31; Sp. p. 7221; Gaz. vol. 154; p. 1225.
Manhattan Electrical Supply Company. (See Avery, Charles E., assignor.)
Manhattan Electrical Supply Company. (See Heller, John L., assignor.)
Mann, Edward N., Alma, Kans. Tool for watch makers and repairers. No. 957,228; May 10; Sp. p. 1583; Gaz. vol. 154; p. 279.
Mann, Miles H., assignor to Buffum Tool Company, Louisiana, Mo. Card-printing machine. No. 957,229; May 10; Sp. p. 1584; Gaz. vol. 154; p. 280.
Mann, Miles H., assignor to Buffum Tool Company, Louisiana, Mo. Printing-machine. No. 959,773; May 31; Sp. p. 7221; Gaz. vol. 154; p. 1226.
Manning, Coleman J., Medford, assignor to American Steam Gauge and Valve Manufacturing Company, Boston, Mass. Pressure-gage. No. 957,471; May 10; Sp. p. 2084; Gaz. vol. 154; p. 361.
Manshel, Charles, Providence, R. I. Vending-machine. No. 959,063; May 24; Sp. p. 5750; Gaz. vol. 154; p. 964.
Manson, Ray H., assignor to The Dean Electric Company, Elyria, Ohio. Protective device. No. 957,077; May 17; Sp. p. 3208; Gaz. vol. 154; p. 565.
Manson, Ray H., assignor to The Dean Electric Company, Elyria, Ohio. Telephone-meter system and apparatus. No. 958,145; May 17; Sp. p. 3700; Gaz. vol. 154; p. 625.
Manufacturers Machine Company. (See Geisenlichter, John.)
Manufacturers Machine Company. (See Glass, Perley B., assignor.)
Manufacturers Machine Company. (See Leavitt, John E., assignor.)
Manufacturers Machine Company. (See Phelan, Merton D., assignor.)
Mapes, John H., Burlington, Iowa. Ice-saw. No. 956,812; May 3; Sp. p. 676; Gaz. vol. 154; p. 107.
Marconi, David, Rennie, Manitoba, Canada. Method and construction for the prevention of sink-holes in railway-beds. No. 956,987; May 3; Sp. p. 1063; Gaz. vol. 154; p. 167.
Marek, Ernest, Chicago, Ill. Coupling. No. 957,695; May 10; Sp. p. 2536; Gaz. vol. 154; p. 439.
Maren-Covick, Edward, Buffalo, N. Y. Combined letter-sheet and envelop. No. 957,172; May 3; Sp. p. 1431; Gaz. vol. 154; p. 229.
Marengo, William E., Worcester, assignor of one-half to J. B. Proulx, Southbridge, Mass. Grate. No. 959,568; May 31; Sp. p. 6810; Gaz. vol. 154; p. 1159.

Marion Steam Shovel Company, The. (See King and Barnhart, assignors.)

Marion Steam Shovel Company, The. (See King, Barnhart, and King, assignors.)

Markert, John P., Brooklyn, N. Y. Blank for covering shouldered-neck boxes. No. 956,590; May 3; Sp. p. 182; Gaz. vol. 154; p. 31.

Markham, Romondo D., assignor to Auto Lock Co., Chicago, Ill. Lock for motor-starting cranks. No. 958,815; May 24; Sp. p. 5215; Gaz. vol. 154; p. 880.

Marks, Edward S., Auburn, N. Y., assignor to Ohio Tool Company. Bit-brace. No. 957,696; May 10; Sp. p. 2537; Gaz. vol. 154; p. 439.

Marold, John, Madison, Ill. Car-roof. No. 950,366; May 24; Sp. p. 6368; Gaz. vol. 154; p. 1065.

Marseilles Manufacturing Company. (See Adams, Alonzo T., assignor.)

Marshall, Homer F., North Adams, and W. F. Clark, assignors to Berkshire Machine Company, Pittsfield, Mass. Scouring-machine. No. 957,074; May 3; Sp. p. 1238; Gaz. vol. 154; p. 196.

Marshall, John, Sibley, Iowa. Grain-saving device. No. 956,591; May 3; Sp. p. 183; Gaz. vol. 154; p. 31.

Marta, Frank, *et al.* (See Stragiotti, Pietro, assignor.)

Martin, Abraham G., assignor of one-fourth to J. F. Hickman, Bruceton, Pa. Nut-lock and screw-socket for well-drilling machines. No. 957,429; May 10; Sp. p. 2012; Gaz. vol. 154; p. 348.

Martin, Brady, assignor to F. E. Jordan, Lansing, Mich. Sink-frame. No. 959,437; May 24; Sp. p. 6489; Gaz. vol. 154; p. 1087.

Martin, Eva M. (See Gilbert and Martin.)

Martin, Flora A. M. (See Martin, Thomas E., assignor.)

Martin, Frederick R., and O. M. Shepherd, London, England. Magnetic clutch. No. 959,580; May 31; Sp. p. 6811; Gaz. vol. 154; p. 1160.

Martin, George L. (See Nixon, James R., assignor.)

Martin, Henri, Paris, France. Machine for applying to fabrics ornaments interwoven with a brass wire. No. 959,242; May 24; Sp. p. 6128; Gaz. vol. 154; p. 1023.

Martin, John A., Centerville, Iowa. Violin. No. 958,146; May 17; Sp. p. 3703; Gaz. vol. 154; p. 625.

Martin, John M., Frisco, Tex. Cotton-chopping machine. No. 959,774; May 31; Sp. p. 7223; Gaz. vol. 154; p. 1226.

Martin, Thomas E., assignor to F. A. M. Martin, Buffalo, N. Y. Truss. No. 958,267; May 17; Sp. p. 3948; Gaz. vol. 154; p. 665.

Martley, Walter, Lebanon, Mo. Rerailing-frog. No. 957,230; May 10; Sp. p. 1585; Gaz. vol. 154; p. 280.

Marville, George S., Riegelsville, Pa., assignor to Augusta Knitting Company, Utica, N. Y. Undergarment. No. 957,893; May 17; Sp. p. 2958; Gaz. vol. 154; p. 535.

Marx, Jennie, and E. Maier, New York, N. Y. Combined corset-cover and bust-supporter. No. 957,617; May 10; Sp. p. 2374; Gaz. vol. 154; p. 412.

Mascall, Arthur E. (See Holmstrom and Mascall.)

Maschmeier, Henry B. (See Hallwell and Maschmeier.)

Maschmeyer, Hermann, assignor to Usini de Desargentation Société Anonyme, Hoboken, near Antwerp, Belgium. Treating impure copper matte and ores. No. 957,231; May 10; Sp. p. 1587; Gaz. vol. 154; p. 280.

Masek, John F., New York, N. Y. Net. No. 957,618; May 10; Sp. p. 2375; Gaz. vol. 154; p. 412.

Mason, Charles T., assignor to The Sumter Telephone Mfg. Co., Sumter, S. C. Desk-telephone standard. No. 959,243; May 24; Sp. p. 6131; Gaz. vol. 154; p. 1024.

Mason, Jarvis W. (See Svenvig, Nikolai, assignor.)

Massie, Alcinous, Nashville, assignor of one-half to M. J. Wolf, Loudonville, Ohio. Churn. No. 959,367; May 24; Sp. p. 6370; Gaz. vol. 154; p. 1065.

Masson, Andrew, Putney, England, and W. M. Wallace, Denny, Scotland. Beating-engine used in the manufacture of paper. No. 957,894; May 17; Sp. p. 2950; Gaz. vol. 154; p. 535.

Mast, Joseph, Fort Riley Kans. Sanitary garbage-tank. No. 958,414; May 17; Sp. p. 4304; Gaz. vol. 154; p. 718.

Masters, David H., assignor of one-half to A. L. Clark, Cliff, N. Mex. Running-gear for vehicles. No. 957,075; May 3; Sp. p. 1240; Gaz. vol. 154; p. 196.

Masurel, Georges, Roubaix, France. Drying-machine for sized warps. No. 959,570; May 31; Sp. p. 6814; Gaz. vol. 154; p. 1160.

Matějka, Frank, Rogers, Tex. Railway-tie. No. 956,537; May 3; Sp. p. 59; Gaz. vol. 154; p. 13.

Matheny, James G., Terre Haute, Ind. Grease-cup. No. 959,023; May 24; Sp. p. 5658; Gaz. vol. 154; p. 951.

Matheson, Charles A., assignor to G. B. Farmer, Perth, Ontario, Canada. Drying apparatus for peat and the like. No. 957,232; May 10; Sp. p. 1588; Gaz. vol. 154; p. 280.

Matson, Emanuel E., assignor of one-half to C. Jackson, Bigelow, Mo. Adjustable car-lock. No. 958,704; May 17; Sp. p. 4964; Gaz. vol. 154; p. 814.

Matthias, Karl, Dessau, Germany. Friction-clutch. No. 958,147; May 17; Sp. p. 3704; Gaz. vol. 154; p. 626.

Maull, James L. (See Carter and Maull.)

Maxfield, Fred B. (See Ware, Charles I., assignor.)

Maxim, Hiram P., Hartford, Conn. Tire-inflater for automobiles. No. 956,592; May 3; Sp. p. 184; Gaz. vol. 154; p. 32.

Maxim, Hiram P., Hartford, Conn., assignor to Maxim Silent Firearms Company, New York, N. Y. Silent firearm. No. 958,934; May 24; Sp. p. 5492; Gaz. vol. 154; p. 921.

Maxim, Hiram P., Hartford, Conn., assignor to Maxim Silent Firearms Company, New York, N. Y. Silent firearm. No. 958,935; May 24; Sp. p. 5495; Gaz. vol. 154; p. 922.

Maxim, Hudson, Brooklyn, N. Y. Apparatus for producing a motor fluid. No. 956,813; May 3; Sp. p. 678; Gaz. vol. 154; p. 107.

Maxim Silent Firearms Company. (See Maxim, Hiram P., assignor.)

Maxwell, Bert C., assignor to J. Whiting, Jr., trustee, Canton, Ohio. Manifolding book or pad. No. 957,233; May 10; Sp. p. 1589; Gaz. vol. 154; p. 281.

Maxwell, Bert C., assignor to J. Whiting, Jr., trustee, Canton, Ohio. Manifolding-book. No. 959,775; May 31; Sp. p. 7225; Gaz. vol. 154; p. 1226.

Maxwell, Bert C., assignor to J. Whiting, Jr., trustee, Canton, Ohio. Manifolding-book. No. 959,776; May 31; Sp. p. 7227; Gaz. vol. 154; p. 1227.

Maxwell, Edward, assignor of one-half to W. J. Wall, Montreal, Quebec, Canada. Humidifier. No. 957,430; May 10; Sp. p. 2014; Gaz. vol. 154; p. 348.

May, Allen, Philadelphia, Pa. Smoke-conveying attachment for railway-trains. No. 959,777; May 31; Sp. p. 7230; Gaz. vol. 154; p. 1227.

May, Augustus, New Orleans, La. Drip-cup for refrigerators and ice-boxes. No. 960,103; May 31; Sp. p. 7977; Gaz. vol. 154; p. 1340.

May, Louis, San Francisco, Cal. Pencil-holder. No. 957,787; May 10; Sp. p. 2736; Gaz. vol. 154; p. 468.

May, Thomas H. D., Bath, England. Apparatus for measuring or apportioning materials of a granular or other suitable form. No. 958,965; May 24; Sp. p. 5546; Gaz. vol. 154; p. 932.

Mayo, Wilson P., Portland, Oreg. Hood for motor-vehicles. No. 959,671; May 31; Sp. p. 6815; Gaz. vol. 154; p. 1160.

McAdams, William J., Ruby, Tex. Grain-separator for attachment to threshing-machines. No. 956,719; May 3; Sp. p. 472; Gaz. vol. 154; p. 76.

McAllister, William A., St. Joseph, Mo. Loop-setting machine. No. 958,968; May 24; Sp. p. 5552; Gaz. vol. 154; p. 933.

McAlpin, Frank G., Forreston, Ill. Apparatus for producing burnt-wood articles. No. 959,783; May 31; Sp. p. 7238; Gaz. vol. 154; p. 1229.

McCabe, Henry J. (See Coates, William S., assignor.)

McCan, David C., Los Angeles, Cal. Fuel-briquet. No. 956,901; May 3; Sp. p. 874; Gaz. vol. 154; p. 139.

McCan, David C., Los Angeles, Cal. Fuel-press. No. 956,902; May 2; Sp. p. 876; Gaz. vol. 154; p. 139.

McCan, David C., Los Angeles, Cal. Fuel-briquet. No. 959,870; May 31; Sp. p. 7450; Gaz. vol. 154; p. 1260.

McCanes, William, Hobart, Okla. Electric-light hanger. No. 958,269; May 17; Sp. p. 3952; Gaz. vol. 154; p. 666.

McCarthy, Clarence A., assignor to P. C. Murphy Trunk Company, St. Louis, Mo. Trunk. No. 957,704; May 10; Sp. p. 2553; Gaz. vol. 154; p. 442.

McCarthy, Daniel F., McKeesport, Pa. Smoke-bell support. No. 960,106; May 31; Sp. p. 7984; Gaz. vol. 154; p. 1341.

McClintock, J. Y., Rochester, N. Y. Making pavements. No. 959,985; May 17; Sp. p. 3227; Gaz. vol. 154; p. 567.

McClintock, William M., St. Paul, Minn. Interlocking contact relay. No. 959,958; May 31; Sp. p. 7654; Gaz. vol. 154; p. 1291.

McCloud, Edward H., Columbus, Ohio. Fireproof door or shutter. No. 959,576; May 31; Sp. p. 6823; Gaz. vol. 154; p. 1161.

McCollough, Newton C. (See McCown, John W., assignor.)

McConway & Torley Company, The. (See Kelso, Joseph, assignor.)

McCown, John W., assignor of one-half to N. C. McCollough, Butler, Pa. Valve. No. 958,521; May 17; Sp. p. 4608; Gaz. vol. 154; p. 756.

McCoy, Michael, Dexter, Minn. Separator. No. 956,776; May 3; Sp. p. 593; Gaz. vol. 154; p. 94.

McCoy, Olan B., Fort Worth, Tex. Adjuster for locomotive-headlights. No. 958,522; May 17; Sp. p. 4610; Gaz. vol. 154; p. 756.

McCoy, Robert, Vineland, N. J., assignor of one-half to Peerless Pearl Company, Philadelphia, Pa. Button cutting and drilling machine. No. 959,151; May 24; Sp. p. 5934; Gaz. vol. 154; p. 993.

McCracken, Frederick M. (See Hogge, Richard A., assignor.)

McCready, Ira T., Oak Park, Ill. Cork-tapering machine. No. 958,750; May 24; Sp. p. 5078; Gaz. vol. 154; p. 858.

McCune, Charles A., Jersey City, N. J., assignor to The Commercial Acetylene Company, New York, N. Y. Lamp. No. 956,720; May 3; Sp. p. 474; Gaz. vol. 154; p. 76.

McCune, William E., Kosciusko, Miss. Stovepipe-holder. No. 957,571; May 10; Sp. p. 2284; Gaz. vol. 154; p. 396.

McDanel, Hibbard S. (See Henrichs, William, assignor.)

McDaniel, James B., assignor of two-fifths to T. C. and A. W. Hamby, Columbia, S. C. Axle-box for vehicles. No. 958,270; May 17; Sp. p. 3955; Gaz. vol. 154; p. 666.

McDermott, Patrick P. (See Allen, Jasper M., assignor.)

McDonald, James J., Cleveland, Ohio. Automatic fluid-regulator. No. 960,033; May 31; Sp. p. 7844; Gaz. vol. 154; p. 1318.

McDonnold, Pleasant T., Terrell, Tex. Plow-frame. No. 959,871; May 31; Sp. p. 7451; Gaz. vol. 154; p. 1260.

McEachron, George, Oklahoma, Okla. Automatic flour-sifter. No. 957,438; May 10; Sp. p. 2026; Gaz. vol. 154; p. 351.

McElroy, James F., assignor to Consolidated Car-Heating Company, Albany, N. Y. Automatic train-hose coupling. No. 959,152; May 24; Sp. p. 5988; Gaz. vol. 154; p. 994.

McElroy, James F., Albany, N. Y., assignor to Consolidated Car Heating Company. Electric switch. No. 959,248; May 24; Sp. p. 6135; Gaz. vol. 154; p. 1025.

McElroy, James F., assignor to Consolidated Car-Heating Company, Albany, N. Y. Electric heater. No. 959,872; May 31; Sp. p. 7452; Gaz. vol. 154; p. 1260.

McElroy, James F., assignor to Consolidated Car-Heating Company, Albany, N. Y. Mechanism for operating car steps and doors. No. 959,873; May 31; Sp. p. 7453; Gaz. vol. 154; p. 1260.

McElroy, Thomas G., Ottumwa, Iowa. Refrigerator. No. 959,376; May 24; Sp. p. 6390; Gaz. vol. 154; p. 1068.

McEwan, Charles F., Marengo, Ill., assignor to Borden's Condensed Milk Company. Bottle-filling machine. No. 959,577; May 31; Sp. p. 6824; Gaz. vol. 154; p. 1162.

McFarlane, Peter, Central City, Colo. Concentrator. No. 956,777; May 3; Sp. p. 594; Gaz. vol. 154; p. 95.

McFeely, Ronald F., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Gripper. No. 959,874; May 31; Sp. p. 7455; Gaz. vol. 154; p. 1260.

McFetridge, Joseph, Vandergrift, Pa. Treating sulfid ores containing copper. No. 959,578; May 31; Sp. p. 6826; Gaz. vol. 154; p. 1162.

McGlehan, Isaac S., Westminster, London, England. Elastic tire for vehicles. No. 959,579; May 31; Sp. p. 6827; Gaz. vol. 154; p. 1162.

McGregor, Allan L., Duluth, Minn. Automobile-buffer. No. 958,420; May 17; Sp. p. 4404; Gaz. vol. 154; p. 720.

McGuigan, Joseph, assignor of one-half to E. Stein, Detroit, Mich. Ironing-table. No. 957,439; May 10; Sp. p. 2028; Gaz. vol. 154; p. 351.

McIlvrid, William, assignor to Cockburn Barrow & Machine Company, Jersey City, N. J. Grout-mixer. No. 958,421; May 17; Sp. p. 4406; Gaz. vol. 154; p. 721.

McIntyre, John J., Hartford, Conn. Tool-holder. No. 958,936; May 24; Sp. p. 5497; Gaz. vol. 154; p. 922.

McKee, Arthur G., *et al.* (See Nelson, Alfred C., assignor.)

McKee, Robert A., assignor to Allis-Chalmers Company, Milwaukee, Wis. Combined automatic throttle and stop valve. No. 956,595; May 3; Sp. p. 189; Gaz. vol. 154; p. 32.

McKee, Willis, assignor to Elyria Iron and Steel Company, Elyria, Ohio. Tie-plate. No. 958,271; May 17; Sp. p. 3958; Gaz. vol. 154; p. 666.

McKinney, William A., Gainesville, Ga. Driving mechanism. No. 956,721; May 3; Sp. p. 475; Gaz. vol. 154; p. 76.

McKinnon, Archibald J., *et al.* (See Bennett, James H., assignor.)

McKinnon Dash Company. (See Notman, Robert L., assignor.)

McKissick, William, Carlisle, Iowa. Starting device. No. 950,153; May 24; Sp. p. 5939; Gaz. vol. 154; p. 994.

McKnight, L. G. (See Nichols, Thomas, assignor.)

McKnight, Samuel E., Lohn, Tex. Valve. No. 959,784; May 31; Sp. p. 7236; Gaz. vol. 154; p. 1229.

McKuen, Margaret, Guelph, Ontario, Canada. Combined washing-machine and boiler. No. 957,361; May 10; Sp. p. 1868; Gaz. vol. 154; p. 325.

McLaughlin, Dennis W., assignor to McLaughlin Manufacturing Company, Berkeley, Cal. Reversing-gear. No. 957,362; May 10; Sp. p. 1869; Gaz. vol. 154; p. 325.

McLaughlin, Francis M. (See Wickersham, Enoch G., assignor.)

McLaughlin, John C., Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 958,817; May 24; Sp. p. 5222; Gaz. vol. 154; p. 881.

McLaughlin, John C., Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 958,818; May 24; Sp. p. 5224; Gaz. vol. 154; p. 881.

McLaughlin Manufacturing Company. (See McLaughlin, Dennis W., assignor.)

McLaurin, James D., New York, N. Y. Moistening-machine for adhesive materials. No. 959,875; May 31; Sp. p. 7460; Gaz. vol. 154; p. 1261.

McLean, Andrus B. (See Warne and McLean.)

McLellan, Harry B. (See Mowry, Albert L., assignor.)

McLeod, George T., assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Heel-breasting machine. No. 957,986; May 17; Sp. p. 3228; Gaz. vol. 154; p. 567.

McLeod, George T., Dedham, assignor to T. G. Plant, Boston, Mass. Welt laying and attaching machine. No. 957,987; May 17; Sp. p. 3234; Gaz. vol. 154; p. 568.

McLeod, George T., Dedham, assignor to T. G. Plant, Boston, Mass. Shoe-supporting rack. No. 957,988; May 17; Sp. p. 3237; Gaz. vol. 154; p. 568.

McLeod, George T., Dedham, assignor to T. G. Plant, Boston, Mass. Brush-cleaner. No. 957,989; May 17; Sp. p. 3239; Gaz. vol. 154; p. 569.

McLeod, George T., Dedham, assignor to T. G. Plant, Boston, Mass. Machine for cutting and slitting insole-reinforcing strips. No. 957,990; May 17; Sp. p. 3241; Gaz. vol. 154; p. 569.

McLeod, George T., Dedham, assignor to T. G. Plant, Boston, Mass. Fabric-supporting reel. No. 957,991; May 17; Sp. p. 3244; Gaz. vol. 154; p. 570.

McLeod, George T., Dedham, assignor to T. G. Plant, Boston, Mass. Machine for tempering outsoles of boots and shoes. No. 957,992; May 17; Sp. p. 3246; Gaz. vol. 154; p. 570.

McLeod, George T., Dedham, assignor to T. G. Plant, Boston, Mass. Heel-edge liner. No. 957,993; May 17; Sp. p. 3247; Gaz. vol. 154; p. 570.

McLeod, Lester C., *et al.* (See Christmas, William W., assignor.)

McMahon, Harry R., Cleveland, Ohio. Machine for making reinforced-concrete pipe. No. 958,166; May 17; Sp. p. 3724; Gaz. vol. 154; p. 620.

McManus, George J. (See Behnert and McManus.)

McMillan, Jetrus B., North Vernon, Ind. No. 957,081; May 3; Sp. p. 1250; Gaz. vol. 154; p. 198.

McMillen, Samuel J., Providence, R. I. Safety-catch for pins. No. 958,422; May 17; Sp. p. 4408; Gaz. vol. 154; p. 721.

McNamara, William J. (See Roose, Gustave E., assignor.)

McNitt, Robert J., Niagara Falls, assignor to Roessler and Hasslacher Chemical Company, New York, N. Y. Reducing metals. No. 959,785; May 31; Sp. p. 7239; Gaz. vol. 154; p. 1230.

McNulty, Thomas E., San Francisco, Cal. Ink-well. No. 958,068; May 17; Sp. p. 4887; Gaz. vol. 154; p. 802.

McReynolds, Everett, and P. S. Graham, Fennimore, Wis. Band-cutter and feeder for threshing-machines. No. 959,432; May 24; Sp. p. 6478; Gaz. vol. 154; p. 1085.

McTammany, John, Worcester, Mass. Voting-machine. No. 960,084; May 31; Sp. p. 7851; Gaz. vol. 154; p. 1318.

McVeigh, John, assignor of one-half to D. A. Dougherty, Philadelphia, Pa. Derrick. No. 957,239; May 10; Sp. p. 1602; Gaz. vol. 154; p. 283.

McWhorter, Allen, assignor to McWhorter Manufacturing Company, Riverton, N. J. Potato-planter. No. 959,154; May 24; Sp. p. 5942; Gaz. vol. 154; p. 995.

McWhorter Manufacturing Company. (See McWhorter, Allen, assignor.)

Meacham, Benjamin E., Lorain, Ohio, assignor to American Stove Company, St. Louis, Mo. Gas-burner. No. 950,244; May 24; Sp. p. 6133; Gaz. vol. 154; p. 1024.

Meade, Carl F., Cleveland, Ohio. Siphon. No. 958,415; May 17; Sp. p. 4395; Gaz. vol. 154; p. 718.

Mebane, James A., South Boston, Va. Switch for incandescent lamps. No. 959,572; May 31; Sp. p. 6817; Gaz. vol. 154; p. 1160.

Mechanical Devices Company. (See Walters, Julius W., assignor.)

Meier, Edward C. (See Wood and Meier.)

Meigs, John F., and H. G. Jakobsson, assignors to Bethlehem Steel Company, South Bethlehem, Pa. Training and elevating mechanism for guns. No. 958,515; May 17; Sp. p. 4593; Gaz. vol. 154; p. 754.

Meigs, John F., and S. A. S. Hammar, assignors to Bethlehem Steel Company, South Bethlehem, Pa. Firing mechanism for guns. No. 958,060; May 17; Sp. p. 4869; Gaz. vol. 154; p. 800.

Meikel, Charles W. (See Bright, Martin C., assignor.)

Meisel, Francis, assignor to Meisel Press and Manufacturing Company, Boston, Mass. Printing-press. No. 958,268; May 17; Sp. p. 3950; Gaz. vol. 154; p. 665.

Meisel, Francis, Dorchester, Mass. Machine for making box-blanks. No. 958,661; May 17; Sp. p. 4872; Gaz. vol. 154; p. 800.

Meisel, Francis, Dorchester, Mass. Printing-press. No. 958,662; May 17; Sp. p. 4876; Gaz. vol. 154; p. 800.

Meisel Press and Manufacturing Company. (See Meisel, Francis, assignor.)

Meister, Otto. (See Schreiber and Meister.)

Meixner, Theodore, Winchester, Wash. Fruit-bucket. No. 956,715; May 3; Sp. p. 464; Gaz. vol. 154; p. 74.

Melander, Peter H., Tacoma, Wash. Elevator apparatus. No. 959,778; May 31; Sp. p. 7231; Gaz. vol. 154; p. 1227.

Melen, Asher P., Buffalo, N. Y. Adjustable trousers. No. 959,952; May 31; Sp. p. 7643; Gaz. vol. 154; p. 1289.

Melish, Thomas G., Cincinnati, and M. W. Gaich, Mansfield, assignors to The Bromwell Brush & Wire Goods Company, Cincinnati, Ohio. Wire structure. No. 957,619; May 10; Sp. p. 2377; Gaz. vol. 154; p. 412.

Melius, Lyman B., New York, N. Y. Safety guard or support. No. 959,868; May 24; Sp. p. 6371; Gaz. vol. 154; p. 1065.

Meilin, Carl J., and J. J. Jones, Schenectady, N. Y. Articulated compound locomotive. No. 958,516; May 17; Sp. p. 4596; Gaz. vol. 154; p. 754.

Mellis, William H. L., Peterborough, Ontario, Canada. Automatic regulating device for breakers, spreaders, or the like. No. 959,148; May 24; Sp. p. 5928; Gaz. vol. 154; p. 992.

Menck & Hambrock, Gesellschaft mit Beschränkter Haftung. (See Menck, Hans F., assignor.)

Menck, Hans F., Gross-Flottbeck, assignor to Menck & Hambrock, Gesellschaft mit Beschränkter Haftung, Altona-Ottensen, Germany. Excavator. No. 957,234; May 10; Sp. p. 1591; Gaz. vol. 154; p. 281.

Mercié, Henri A. (See Benêt and Mercié.)

Mergenthaler Linotype Company. (See Dedell, Richard M., assignor.)

Mergenthaler Linotype Company. (See Kennedy, David S., assignor.)

Mergenthaler Linotype Company. (See Middleton, Winton G., assignor.)

Mergenthaler Linotype Company. (See Rogers, John R., assignor.)

Markham Trading Company. (See Freeman, Walter F., assignor.)
Markley, Elavera M., Blackfoot, Idaho. Traction-engine. No. 958,816; May 24; Sp. p. 5220; Gaz. vol. 154; p. 880.
Merrick, Frank W., Boston, Mass. Stamping, marking, or numbering machine. No. 960,029; May 31; Sp. p. 7827; Gaz. vol. 154; p. 1316.
Merrill, Horace F., Williston, N. D. Staple. No. 959,369; May 24; Sp. p. 6372; Gaz. vol. 154; p. 1065.
Merritt, Benjamin F., Canton, Mass., assignor to Dey Time Register Company, Syracuse, N. Y. Synchronising attachment for clocks. No. 958,148; May 17; Sp. p. 3705; Gaz. vol. 154; p. 626.
Merritt, James E., Atlanta, Ga. Railway-switch. No. 956,644; May 3; Sp. p. 295; Gaz. vol. 154; p. 49.
Merritt, Willard E., et al. (See Bennett, James H., assignor.)
Merry, Ernest B., Memphis, Tenn. Lumber-truck. No. 957,431; May 10; Sp. p. 2016; Gaz. vol. 154; p. 349.
Messer, Jeremiah C., assignor of two-thirds to W. C. Bell, Austin, Tex. Spring trip mechanism. No. 957,432; May 10; Sp. p. 2017; Gaz. vol. 154; p. 349.
Messing, Christopher, New York, N. Y. Station-indicator. No. 959,370; May 24; Sp. p. 6373; Gaz. vol. 154; p. 1066.
Messman, Herman, Kentland, Ind. Six-horse draft mechanism. No. 957,076; May 3; Sp. p. 1242; Gaz. vol. 154; p. 197.
Mesta, George, assignor to Mesta Machine Company, Pittsburg, Pa. Blowing-engine or compressor. No. 958,705; May 17; Sp. p. 4955; Gaz. vol. 154; p. 814.
Mesta Machine Company. (See Kilndworth, John L., assignor.)
Mesta Machine Company. (See Mesta, George, assignor.)
Metallurgical Company of America. (See Meyer, Frans, assignor.)
Metcalf, George A., W. C. and L. T. Rocheleau, Woonsocket, R. I. Rotary steam-engine. No. 958,416; May 17; Sp. p. 4396; Gaz. vol. 154; p. 718.
Mettler, John C., Evans City, Pa. Well-casing-repairing tool. No. 958,517; May 17; Sp. p. 4398; Gaz. vol. 154; p. 754.
Metz, Nathaniel, assignor of one-half to W. D. Heebner, Lansdale, Pa. Internal-combustion engine. No. 957,788; May 10; Sp. p. 2737; Gaz. vol. 154; p. 469.
Metzner, Maxwell A., Perth Amboy, N. J. Moistener. No. 958,149; May 17; Sp. p. 3706; Gaz. vol. 154; p. 626.
Meunier, Stanislaus, Heaton-Chapel, England. Hydraulic gas-main. No. 958,518; May 17; Sp. p. 4600; Gaz. vol. 154; p. 755.
Meyer, Ernest A., Freeport, Pa. Two-cycle internal-combustion engine. No. 956,814; May 3; Sp. p. 683; Gaz. vol. 154; p. 107.
Meyer, Frans, Englewood, N. J., assignor to Metallurgical Company of America, New York, N. Y. Regenerative furnace. No. 958,150; May 17; Sp. p. 3708; Gaz. vol. 154; p. 627.
Meyer, Heinrich W., Zehlendorf, near Berlin, Germany. Receptacle for liquid-weighing machines. No. 956,775; May 3; Sp. p. 591; Gaz. vol. 154; p. 94.
Meyer, John G., Portland, Oreg. Vacuum dust-remover. No. 956,862; May 3; Sp. p. 789; Gaz. vol. 154; p. 125.
Meyer, Ralph J., Grand Junction, Colo. Orchard-heater. No. 958,151; May 17; Sp. p. 3711; Gaz. vol. 154; p. 627.
Meyer, William, Chicago, Ill. Electric cautery. No. 958,753; May 24; Sp. p. 5070; Gaz. vol. 154; p. 857.
Meyer-Zimmerli, Ernst, Zurich, assignor to G. Schmid, Kreuzlingen, Switzerland. Gas-burner. No. 957,358; May 10; Sp. p. 1862; Gaz. vol. 154; p. 324.
Meyers, John P., Monroeville, Ohio. Cultivator. No. 957,359; May 10; Sp. p. 1862; Gaz. vol. 154; p. 324.
Meyers, Willard F., New York, N. Y. Stoneworking-lathe. No. 957,978; May 17; Sp. p. 3210; Gaz. vol. 154; p. 505.
Meyerson, Meyer, Bennettville, Minn. Single-delivery match-box. No. 958,966; May 24; Sp. p. 5548; Gaz. vol. 154; p. 932.
Mezger, Harry W., Springfield, Ohio. Water-motor. No. 958,152; May 17; Sp. p. 3712; Gaz. vol. 154; p. 627.
Michael, Edward, et al. (See Willet, John G., assignor.)
Michael, Isidore, et al. (See Willet, John G., assignor.)
Michaels, George. (See Johnson and Michaels.)
Michalka, Frank A. (See Michalka, Joseph and F. A.)
Michalka, Joseph and F. A., Cameron, Tex. Stalk-cutter. No. 957,620; May 10; Sp. p. 2378; Gaz. vol. 154; p. 412.
Michelsen, Hans, Minneapolis, Minn. Presser-foot for shoe-sole-stitching mechanisms. No. 957,697; May 10; Sp. p. 2539; Gaz. vol. 154; p. 439.
Middlebrook, James J., Sault Ste. Marie, Mich. Motor-plow. No. 957,979; May 17; Sp. p. 3213; Gaz. vol. 154; p. 506.
Middlebrook, James J., Sault Ste. Marie, Mich. Motor-vehicle. No. 958,519; May 17; Sp. p. 4602; Gaz. vol. 154; p. 755.
Middleton, Elias. (See Holmstrom and Mascall, assignors.)
Middleton, Winton G., Oakland, Cal., assignor to Mergenthaler Linotype Company. Line-casting machine, &c. No. 957,433; May 10; Sp. p. 2019; Gaz. vol. 154; p. 350.
Mieg, Walter, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Gray anthraquinone dye. No. 960,182; May 31; Sp. p. 8128; Gaz. vol. 154; p. 1367.
Miehle Printing Press and Manufacturing Company. (See Droitcour, Michael A., assignor.)
Mieth, Paul O., Newark, N. J. Eyelet setting and embossing punch. No. 960,104; May 31; Sp. p. 7980; Gaz. vol. 154; p. 1341.
Mikesell, Harry B., Spokane, Wash. Roof-joint. No. 957,980; May 17; Sp. p. 3214; Gaz. vol. 154; p. 506.
Miles, Samuel A., assignor to I. Stead, Philadelphia, Pa. Acetylene-gas generator. No. 957,698; May 10; Sp. p. 2540; Gaz. vol. 154; p. 440.
Milke, Louis J., Baltimore, Md. Automatic control device for elevators. No. 957,077; May 3; Sp. p. 1244; Gaz. vol. 154; p. 197.
Millard, Mabel, Oak Park, Ill. Undergarment for women. No. 957,360; May 10; Sp. p. 1866; Gaz. vol. 154; p. 325.
Miller, Andrew E., Baltimore, Md. Automatic water-heater. No. 959,573; May 31; Sp. p. 6810; Gaz. vol. 154; p. 1161.
Miller, Benjamin, and J. Clegg, Wetaskiwin, Alberta, Canada. Brush-cutting machine. No. 958,417; May 17; Sp. p. 4399; Gaz. vol. 154; p. 719.
Miller, Calvin P., assignor of one-half to A. W. Ewert, Pierre, S. D., and one-third to The Wilkinson Plough Company, Limited. Gang-plow. No. 959,083; May 31; Sp. p. 7844; Gaz. vol. 154; p. 1289.
Miller, Carl, Rochester, N. Y. Brush. No. 957,078; May 3; Sp. p. 1247; Gaz. vol. 154; p. 198.
Miller, Carl H., Jr. (See Miller, Charles H. and C. H., Jr.)
Miller, Charles H., Cleveland, Ohio. Kitchen-range. No. 960,183; May 31; Sp. p. 8120; Gaz. vol. 154; p. 1367.
Miller, Charles H. and C. H., Jr., Cleveland, Ohio. Combined solid-fuel and gas range. No. 960,184; May 31; Sp. p. 8130; Gaz. vol. 154; p. 1367.
Miller, Christian, New York, N. Y., assignor to Edwards & Company. Annunciator. No. 956,815; May 3; Sp. p. 686; Gaz. vol. 154; p. 108.
Miller, Clarence F., Marlette, Mich. Folding umbrella. No. 956,716; May 3; Sp. p. 465; Gaz. vol. 154; p. 75.
Miller, Karl T. (See Alexander, Walter N., assignor.)
Miller, Leonard, assignor of one-half to B. S. Boysen, Brownwood, Tex. Electric sign. No. 959,371; May 24; Sp. p. 6375; Gaz. vol. 154; p. 1066.
Miller, Luther L., et al. (See Peterson, Burt A., assignor.)
Miller, Milo M. (See Hargraves and Miller.)
Miller, Milo M., G. S. Steinberger, and W. H. Hargraves, assignors of one-fourth to C. M. W. Keck, Allentown, Pa. Mail-handling apparatus. No. 957,235; May 10; Sp. p. 1594; Gaz. vol. 154; p. 281.
Miller, Richard, Appleton, Wis. Hoist. No. 958,883; May 24; Sp. p. 5390; Gaz. vol. 154; p. 904.
Miller, Robert, Jr. (See Robinson and Miller.)
Miller, Robert M., Montgomery, Pa. Extension-table. No. 957,236; May 10; Sp. p. 1598; Gaz. vol. 154; p. 282.
Miller, William G., Ross township, Allegheny county, Pa. Water-closet. No. 956,988; May 3; Sp. p. 1065; Gaz. vol. 154; p. 167.
Millett, Israel. (See Briggs and Millett.)
Millice, Paul S., Hamilton, Ohio. Flushing apparatus. No. 956,863; May 3; Sp. p. 791; Gaz. vol. 154; p. 126.
Millington, David, Berlin, Germany, and H. Yates, Leicester, England. Razor-stropper. No. 957,434; May 10; Sp. p. 2020; Gaz. vol. 154; p. 350.
Millington, Henry G., Dannemora, N. Y. Stovepipe-snips. No. 959,245; May 24; Sp. p. 6134; Gaz. vol. 154; p. 1025.
Mills, Arthur C., assignor to E. G. Lawrence, Toledo, Ohio. Siphon. No. 959,779; May 31; Sp. p. 7232; Gaz. vol. 154; p. 1229.
Mills, Clyde J., Camden, N. J. Rail-joint. No. 958,418; May 17; Sp. p. 4400; Gaz. vol. 154; p. 719.
Mills, Wilber C., Denver, Colo. Automatic brake for phonographs. No. 957,570; May 10; Sp. p. 2282; Gaz. vol. 154; p. 395.
Millspaugh, William H., Sandusky, Ohio. Suction-slice. No. 957,981; May 17; Sp. p. 3214; Gaz. vol. 154; p. 506.
Milton, John L., assignor of one-half to T. K. Webster, Chicago, Ill. Electric generator. No. 959,954; May 31; Sp. p. 7647; Gaz. vol. 154; p. 1289.
Misner, Edgar D., assignor of one-third to J. E. Rutledge and one-third to J. Scullen, St. Louis, Mo. Molding-machine. No. 958,520; May 17; Sp. p. 4604; Gaz. vol. 154; p. 755.
Mississippi Wire Glass Company. (See Hoyer, Julius W., assignor.)
Mitchell, Dwight C., Gasport, N. Y. Game apparatus. No. 957,472; May 10; Sp. p. 2085; Gaz. vol. 154; p. 761.
Mitchell, John M., assignor of one-half to G. W. Jeffers, Joppa, Ala. Stump-puller. No. 959,372; May 24; Sp. p. 6381; Gaz. vol. 154; p. 1066.
Mitchell, Lillian M. (See Linn, George E., assignor.)
Mitchell, William C., Sydney, Nova Scotia, Canada. Water-cooled valve. No. 956,538; May 3; Sp. p. 60; Gaz. vol. 154; p. 13.
Mogg, Millard E., and C. A. Gardner, Chicago, Ill.; said Gardner assignor to said Mogg. Portable loader. No. 956,816; May 3; Sp. p. 689; Gaz. vol. 154; p. 108.
Mohun, Edward, Victoria, British Columbia, Canada. Metal-reinforced concrete pile. No. 958,967; May 24; Sp. p. 5551; Gaz. vol. 154; p. 933.
Molander, Charles F., assignor to C. Holmberg & Company, Chicago, Ill. Cooking vessel. No. 960,105; May 31; Sp. p. 7982; Gaz. vol. 154; p. 1341.
Molitor, Victor, Swedesboro, N. J. Smoke-house. No. 959,780; May 31; Sp. p. 7284; Gaz. vol. 154; p. 1228.
Molnar, Stefan, Pittsburg, Pa. Horse-detacher. No. 959,373; May 24; Sp. p. 6382; Gaz. vol. 154; p. 1067.
Monahan, Louis J., Oshkosh, Wis. Grass-twine machine. No. 956,539; May 3; Sp. p. 61; Gaz. vol. 154; p. 13.
Monarch Typewriter Company, The. (See Barney, Edwin E., assignor.)

Monarch Typewriter Company, The. (See Edlund, John A., assignor.)
Monarch Typewriter Company, The. (See Steele, Herbert H., assignor.)
Monash, Charles P. (See Boegen, John E., assignor.)
Monberg, Soren C., Leadville, Colo. Metal door and window frame. No. 958,663; May 17; Sp. p. 4878; Gaz. vol. 154; p. 801.
Monitor Drill Company. (See Davis, Spencer E., assignor.)
Monitor Manufacturing Company, The. (See Carrier, Merwin W., assignor.)
Monson, Carl A., Hartford, Conn. Manifolding-sales-book holder. No. 960,030; May 31; Sp. p. 7837; Gaz. vol. 154; p. 1316.
Montgomery, Daniel S., Columbus, Ohio. Car-coupling. No. 958,884; May 24; Sp. p. 5392; Gaz. vol. 154; p. 904.
Montigny, Emile P., New York, N. Y. Wind-shield. No. 959,374; May 24; Sp. p. 6384; Gaz. vol. 154; p. 1067.
Moody, Howard N., New Orleans, La. Water-heater. No. 956,989; May 3; Sp. p. 1066; Gaz. vol. 154; p. 167.
Moon, Sampson W., Chicago, Ill. Electric vibrator. No. 957,982; May 17; Sp. p. 3217; Gaz. vol. 154; p. 506.
Moore, Alanson A., Detroit, Mich. Automatic railway-switch. No. 957,699; May 10; Sp. p. 2541; Gaz. vol. 154; p. 440.
Moore, Alfred M. and C. M. (See Moore, Alfred M., assignor.)
Moore, Alfred M., Malden, Mass., assignor to A. M. Moore and C. M. Moore, copartners. Oven for tempering shoe-shanks and other small articles. No. 957,853; May 10; Sp. p. 2862; Gaz. vol. 154; p. 490.
Moore, Charles B., Newport News, Va. Mold-venting apparatus. No. 959,149; May 24; Sp. p. 5931; Gaz. vol. 154; p. 993.
Moore, Daniel M., Newark, N. J., assignor to Moore Electrical Co., New York, N. Y. Electric tube-lamp and similar device. No. 957,983; May 17; Sp. p. 3220; Gaz. vol. 154; p. 507.
Moore, David P., assignor of one-half to F. H. Walker, Washington, D. C. Percolator. No. 959,955; May 31; Sp. p. 7650; Gaz. vol. 154; p. 1290.
Moore, Edward J., Cleveland, Ohio. Combination valve and meter. No. 958,664; May 17; Sp. p. 4879; Gaz. vol. 154; p. 801.
Moore Electrical Co. (See Moore, Daniel M., assignor.)
Moore, Frederic W., Millbury, assignor to Draper Company, Hopedale, Mass. Bobbin-stripper for weft-replenishing looms. (Reissue.) No. 13,119; May 31; Sp. p. 8253; Gaz. vol. 154; p. 1380.
Moore, James E. A., assignor to J. W. Seaver, Cleveland, Ohio. Folding coke and coal handling machine for coke-ovens. No. 959,246; May 24; Sp. p. 6135; Gaz. vol. 154; p. 1025.
Moore, Joseph F., Philadelphia, Pa. Brush. No. 959,574; May 31; Sp. p. 6821; Gaz. vol. 154; p. 1161.
Moore, Robert A., Chicago, Ill., assignor, by mesne assignments, to The Moore Silencer Company, New York, N. Y. Silencer for firearms. No. 956,717; May 3; Sp. p. 467; Gaz. vol. 154; p. 75.
Moore, Robert A., Chicago, Ill., assignor, by mesne assignments, to The Moore Trigger Controller Company, New York, N. Y. Trigger-controller. No. 960,185; May 31; Sp. p. 8132; Gaz. vol. 154; p. 1368.
Moore Silencer Company, The. (See Moore, Robert A., assignor.)
Moore, Thomas R., Walden, N. Y. Machine for grinding cutlery-blades and the like. No. 956,645; May 3; Sp. p. 297; Gaz. vol. 154; p. 49.
Moore Trigger Controller Company, The. (See Moore, Robert A., assignor.)
Moorefield, John C., Houston, Tex. Heel-support. No. 959,956; May 31; Sp. p. 7652; Gaz. vol. 154; p. 1290.
Moorman, Sarah, Richmond, Ind. Garbage-receptacle. No. 957,237; May 10; Sp. p. 1600; Gaz. vol. 154; p. 282.
Moore, George F., Mt. Vernon, Ill. Rotary engine. No. 958,885; May 24; Sp. p. 5394; Gaz. vol. 154; p. 905.
Moorwood, Francis C. (See Brearley and Moorwood.)
Morey, John W., et al. (See Balcom, William D., assignor.)
Morgan, Arthur, Wilkes-Barre, Pa. Ribbon-holder. No. 957,700; May 10; Sp. p. 2545; Gaz. vol. 154; p. 440.
Morgan, Arthur J., Chicago, Ill. Lamp-shade holder. No. 958,665; May 17; Sp. p. 4882; Gaz. vol. 154; p. 801.
Morgan Construction Company. (See Carroll, Elbert H., assignor.)
Morgan, Richard W., assignor of one-half to B. F. Bastian, Sunbury, Pa. Spring-insole. No. 959,575; May 31; Sp. p. 6822; Gaz. vol. 154; p. 1161.
Morgan, Thomas M., Williamsport, Pa. Type-writer attachment. No. 959,024; May 24; Sp. p. 5660; Gaz. vol. 154; p. 951.
Morgan, Windfrey S., Lewisville, Ark. Adjustable cultivating-harrow. No. 957,701; May 10; Sp. p. 2546; Gaz. vol. 154; p. 440.
Morris, Charles E., Philadelphia, Pa. Pocket for garments. No. 959,247; May 24; Sp. p. 6136; Gaz. vol. 154; p. 1025.
Morris, Gid M., and J. H. Watkins, Palestine, assignors of three-twelfths to J. O. Roberson, three-twelfths to W. R. Collier, one-twelfth to N. M. Crawford, Grand Saline, and one-twelfth to W. B. Wynne, Wills Point, Tex. Roller attachment. No. 960,229; May 31; Sp. p. 8220; Gaz. vol. 154; p. 1383.
Morris, Hugh, Oklahoma, Okla. Sash-fastener. No. 959,150; May 24; Sp. p. 5932; Gaz. vol. 154; p. 993.
Morris, John O., Washington, D. C., assignor to Southern Stemming Machine and Manufacturing Company, Guthrie, Okla. Tobacco-stemming machine. No. 959,375; May 24; Sp. p. 6386; Gaz. vol. 154; p. 1067.
Morris, Robert B., and W. Kennedy, assignors of one-third to F. H. Howard, Harrisonville, Mo. Cotton and beet chopper and cultivator. No. 958,153; May 17; Sp. p. 3715; Gaz. vol. 154; p. 628.
Morris, Roy H. (See Donahoo, Peter B., assignor.)
Morris, Willard, Dansville, N. Y. Posting-ruler. No. 960,031; May 31; Sp. p. 7840; Gaz. vol. 154; p. 1317.
Morris, William, Brookport, Ill. Vehicle-wheel lubricator. No. 957,079; May 3; Sp. p. 1247; Gaz. vol. 154; p. 198.
Morris, William L., Chicago, Ill. Recording mechanism. No. 960,032; May 31; Sp. p. 7841; Gaz. vol. 154; p. 1317.
Morrison, Byron L., assignor of one-third to J. W. Ady, Colorado Springs, Colo. Journal-bearing. No. 957,435; May 10; Sp. p. 2023; Gaz. vol. 154; p. 350.
Morrison, Byron L., assignor of one-third to J. W. Ady, Colorado Springs, Colo. Tube-mill. No. 957,436; May 10; Sp. p. 2024; Gaz. vol. 154; p. 351.
Morrison, Robert J., St. Louis, Mo. Protector for pneumatic tires. No. 959,957; May 31; Sp. p. 7653; Gaz. vol. 154; p. 1290.
Morscher, Lawrence N., et al., trustees. (See Morscher, Lawrence N., assignor.)
Morscher, Lawrence N., Lawrence, assignor to W. J. Ehrsam, Enterprise, and L. N. Morscher, trustees, Lawrence, Kans. Grader. No. 956,817; May 3; Sp. p. 690; Gaz. vol. 154; p. 109.
Morse, Orville M., Jackson, Mich. Apparatus for dust collection. No. 958,666; May 17; Sp. p. 4883; Gaz. vol. 154; p. 802.
Mortensen, Harry J., Oakland, Cal. Demountable wheel-rim. No. 957,080; May 3; Sp. p. 1248; Gaz. vol. 154; p. 198.
Mottert, Emil C., Tenmile, La. Elevator-hood for harvesters. No. 957,437; May 10; Sp. p. 2024; Gaz. vol. 154; p. 351.
Mowat, Donald, San Francisco, Cal. Manufacture of fireproof partitions. No. 958,419; May 17; Sp. p. 4402; Gaz. vol. 154; p. 720.
Mowry, Albert L., assignor to H. R. McLellan, St. John, New Brunswick, Canada. Pinion. No. 957,984; May 17; Sp. p. 3225; Gaz. vol. 154; p. 507.
Moyer, Harvey S., assignor of one-half to M. S. Moyer, Lansdale, Pa. Ribbon-bolt. No. 959,781; May 31; Sp. p. 7235; Gaz. vol. 154; p. 1228.
Moyer, Menno S. (See Moyer, Harvey S., assignor.)
Mrokowski, Stefan, Sosnowice, Russia. Blind or awning. No. 960,230; May 31; Sp. p. 8222; Gaz. vol. 154; p. 1384.
Muckle, John S., assignor to Standard Elevator Interlock Company, Philadelphia, Pa. Interlock mechanism for elevators. No. 957,702; May 10; Sp. p. 2549; Gaz. vol. 154; p. 441.
Mueller, Max A., Brooklyn, N. Y. Knitted sweater. No. 957,854; May 10; Sp. p. 2863; Gaz. vol. 154; p. 490.
Mueller, Theodor M., New York, N. Y. High-frequency magneto. No. 958,754; May 24; Sp. p. 5072; Gaz. vol. 154; p. 857.
Mueller, Wilhelm, Dusseldorf, Germany. Coke-oven. No. 958,154; May 17; Sp. p. 3718; Gaz. vol. 154; p. 628.
Muller, Adolph S., and L. E. Carrico, Denver, Colo. Push-button switch. No. 958,755; May 24; Sp. p. 5076; Gaz. vol. 154; p. 858.
Müller, Alfred, Domaine Ruhleben, near Spandau, Germany. Firing mechanism for firearms. No. 956,593; May 3; Sp. p. 186; Gaz. vol. 154; p. 32.
Muller, George J. (See Glaser and Muller.)
Mungall, Thomas, Chicago, Ill. Electrically-operated clock. No. 960,186; May 31; Sp. p. 8134; Gaz. vol. 154; p. 1368.
Murphey, Frank P., Decatur, Ill. Differential dropping mechanism. No. 960,187; May 31; Sp. p. 8136; Gaz. vol. 154; p. 1369.
Murphy Beet Topper Company, The. (See Murphy, Roy E., assignor.)
Murphy, James, assignor to E. C. Smith, Greeley, Colo. Railway-rail and joint therefor. No. 957,789; May 10; Sp. p. 2740; Gaz. vol. 154; p. 469.
Murphy, Roy E., Colorado Springs, assignor of one-half to M. O. Crose, Montrose, Colo. Post-binder. No. 957,895; May 17; Sp. p. 2960; Gaz. vol. 154; p. 535.
Murphy, Roy E., Colorado Springs, Colo., assignor to The Murphy Beet Topper Company. Beet-topping attachment for mowing-machines. No. 957,896; May 17; Sp. p. 2962; Gaz. vol 154; p. 535.
Murphy, William L., Dorchester, Mass. Compass. No. 957,238; May 10; Sp. p. 1601; Gaz. vol. 154; p. 282.
Mustin, Herbert S., assignor to Austin Manufacturing Company, Chicago, Ill. Steering device. No. 956,718; May 3; Sp. p. 470; Gaz. vol. 154; p. 75.
Muther, Lorenz, Denver, Colo., and G. A. Henderson, Marblehead, assignors to The Peerless Machinery Company, Boston, Mass. Shaft for leather-skiving machines. No. 958,155; May 17; Sp. p. 3722; Gaz. vol. 154; p. 629.
Myers and Brother, F. E. (See Myers, Philip A., assignor.)
Myers and Brother, F. E. (See Myers and Toulmin, assignors.)
Myers, Philip A., assignor to F. E. Myers and Brother, Ashland, Ohio. Windmill connector for pumps. No. 958,886; May 24; Sp. p. 5397; Gaz. vol. 154; p. 905.

Myers, Philip A., Ashland, and H. A. Toulmin, Springfield, assignors to F. E. Myers and Brother, Ashland, Ohio. Pump. No. 956,990; May 3; Sp. p. 1067; Gaz. vol. 154; p. 167.

Myers, Samuel F., Los Angeles, Cal. Metal door. No. 959,782; May 31; Sp. p. 7237; Gaz. vol. 154; p. 1229.

Myers, William S., and T. Alexander, Ashland, Ky. Guard door-key. No. 958,667; May 17; Sp. p. 4886; Gaz. vol. 154; p. 802.

Mygatt, Otis A., New York, N. Y. Composite reflector for light-rays. No. 957,703; May 10; Sp. p. 2552; Gaz. vol. 154; p. 441.

Myles, David, Dundee, Scotland. Golf-club. No. 956,594; May 3; Sp. p. 185; Gaz. vol. 154; p. 32.

Nahm, Edward J. and W. L., St. Louis, Mo. Oil-cup closure. No. 957,994; May 17; Sp. p. 3249; Gaz. vol. 154; p. 571.

Nahm, Warren L. (See Nahm, Edward J. and W. L.)

Nakahara, Toich, New York, N. Y. Electric door-operator. No. 957,572; May 10; Sp. p. 2286; Gaz. vol. 154; p. 396.

Narance, George, assignor of one-half to T. J. Smith, St. Joseph, Mo. Shoe-cleaner. No. 959,580; May 31; Sp. p. 6828; Gaz. vol. 154; p. 1162.

Nash, Harry C. (See Thebaud, John E., assignor.)

Nash, Lewis H., South Norwalk, Conn., assignor to National Meter Company, New York, N. Y. Meter-register. No. 957,082; May 3; Sp. p. 1252; Gaz. vol. 154; p. 199.

Nathanson, Maurice B., Leominster, Mass. Puff-forming barrette. No. 956,991; May 3; Sp. p. 1069; Gaz. vol. 154; p. 168.

Nathusius, Hans, Friedenshütte, near Morgenroth, Germany. Electric melting and refining furnace. No. 958,757; May 24; Sp. p. 5083; Gaz. vol. 154; p. 859.

Nation, Don O., Oklahoma, Okla. Thermostatic temperature-regulator. No. 958,157; May 17; Sp. p. 3727; Gaz. vol. 154; p. 630.

National Carbonated Liquid Co. (See Kennedy, Guy L., assignor.)

National Cash Register Company, The. (See Kettering, Charles F., assignor.)

National Dump Car Company. (See Caswell, William A., assignor.)

National Dump Car Company. (See Lipschutz, Arthur, assignor.)

National Dump Car Company. (See Neikirk, John O., assignor.)

National Dump Car Company. (See Otis, Spencer, assignor.)

National Fibre Box Company. (See Walter, Harrison B., assignor.)

National Machine Company, The. (See Slater, Harris W., assignor.)

National Malleable Castings Company, The. (See Buckius, Albert O., Jr., assignor.)

National Malleable Castings Company, The. (See Richardson, Edward M., assignor.)

National Meter Company. (See Nash, Lewis H., assignor.)

National Pressed Fuel Company. (See Gentle, William M., assignor.)

National Sewing Machine Company. (See Atwood, Clarence B., assignor.)

Natural Dry Products Company. (See Kalb, Albert G., assignor.)

Natural Soda Products Company. (See Wrinkle and Paddock, assignors.)

Nauck, Carl A., Little Rock, Ark. Depositing-box and time-stamp. No. 957,083; May 3; Sp. p. 1253; Gaz. vol. 154; p. 199.

Naugle, John, Bedford, Ind. Folding bed. No. 957,240; May 10; Sp. p. 1604; Gaz. vol. 154; p. 283.

Nault, John, Chicago Heights, Ill. Device for catching flies and other insects. No. 959,155; May 24; Sp. p. 5944; Gaz. vol. 154; p. 995.

Naulty, James, and J. Scanlin, Philadelphia, Pa. Composition metal. No. 959,156; May 24; Sp. p. 5945; Gaz. vol. 154; p. 995.

Naum, Harry D., Newburgh, N. Y. Envelop. No. 958,523; May 17; Sp. p. 4611; Gaz. vol. 154; p. 756.

Nauts, Frank A., assignor to Gendron Wheel Company, Toledo, Ohio. Folding perambulator. No. 958,423; May 17; Sp. p. 4406; Gaz. vol. 154; p. 721.

Nawinsky, Paul. (See Julius, Villiger, and Nawinsky.)

Nawn, John P., assignor of one-half to G. Schilling, Philadelphia, Pa. Automatic water-regulator for gas-producers. No. 956,818; May 3; Sp. p. 693; Gaz. vol. 154; p. 109.

Neal, Albert, Center, Ind. Lifting-jack. No. 958,960; May 24; Sp. p. 5555; Gaz. vol. 154; p. 933.

Neal, John W., Kealia, Hawaii. Anchor. No. 957,621; May 10; Sp. p. 2384; Gaz. vol. 154; p. 413.

Neal, Spencer G., Los Angeles, assignor to California Valve and Air Brake Company, Palms, Cal. Combined operating and controlling means for hydraulic elevators. No. 959,786; May 31; Sp. p. 7241; Gaz. vol. 154; p. 1230.

Neal, Thomas. (See Heins, Jacob, assignor.)

Neary, James. (See King and Neary.)

Neef, Jacob F. (See Richardson and Neef.)

Negley, Claude E., Indianapolis, Ind. Excavator. No. 956,158; May 17; Sp. p. 3729; Gaz. vol. 154; p. 630.

Neider, Fred A., Augusta, Ky. Top-prop. No. 956,722; May 3; Sp. p. 478; Gaz. vol. 154; p. 77.

Neider, Fred A., Augusta, Ky. Nail. No. 959,876; May 31; Sp. p. 7443; Gaz. vol. 154; p. 1261.

Neikirk, John O., Morgan Park, assignor to National Dump Car Company, Chicago, Ill. Dump-car. No. 956,819; May 3; Sp. p. 695; Gaz. vol. 154; p. 109.

Nelson, Alfred C., assignor of one-third to A. G. McKee and one-third to D. T. Croxton, Cleveland, Ohio. Device for controlling fluids. No. 959,025; May 24; Sp. p. 5663; Gaz. vol. 154; p. 952.

Nelson, Arthur P., Le Beau, S. D. Globe for protecting mantles. No. 957,790; May 10; Sp. p. 2743; Gaz. vol. 154; p. 470.

Nelson, George B., Reddield, Iowa. Governor. No. 958,159; May 17; Sp. p. 3730; Gaz. vol. 154; p. 630.

Nequette, Joseph H. (See Clark and Nequette.)

Nerhaft, Anton, Budapest, Austria-Hungary. Padlock. No. 957,705; May 10; Sp. p. 2555; Gaz. vol. 154; p. 442.

Neu, Adolf, Tod Inlet, British Columbia, Canada. Fuel-feeding means for cement-kilns. No. 958,970; May 24; Sp. p. 5557; Gaz. vol. 154; p. 934.

Neubeck, William H. (See O'Neill and Neubeck.)

Neubert, Alois, Astoria, assignor to A. Schrader's Son, Incorporated, New York, N. Y. Tool-frame. No. 957,597; May 17; Sp. p. 2964; Gaz. vol. 154; p. 536.

Neubronner, Julius, Cronberg, Taunus, Germany. Mounting photographs, engravings, or the like in a dry condition. No. 956,723; May 3; Sp. p. 479; Gaz. vol. 154; p. 77.

Neuhs, Werner, Cleveland, Ohio. Journal-box. No. 958,758; May 24; Sp. p. 5085; Gaz. vol. 154; p. 859.

Neumann, Julius J., assignor to Lyon & Healy, Chicago, Ill. Accordion. No. 957,514; May 10; Sp. p. 2174; Gaz. vol. 154; p. 376.

Neville, Asa G., Wellsburg, W. Va. Gravity-automobile. No. 958,160; May 17; Sp. p. 3732; Gaz. vol. 154; p. 631.

Neville, Harry, Los Angeles, Cal. Pneumatic-hammer support. No. 958,669; May 17; Sp. p. 4888; Gaz. vol. 154; p. 803.

New Haven Clock Company. (See Porter, Wilson E., assignor.)

New Jersey Patent Company. (See Aiken, Edward L., assignor.)

New Jersey Patent Company. (See Aylsworth, Jonas W., assignor.)

New Transvaal Chemical Company, The. (See Destefani, Paul, assignor.)

New York Bottlers' Supplies Manufacturing Company. (See Vock, Philip, assignor.)

Newark Spring Mattress Company. (See Manchee, Wilfrid A., assignor.)

Newell, Alfred T., Birmingham, Ala. Air-compressor. No. 957,084; May 3; Sp. p. 1258; Gaz. vol. 154; p. 199.

Newhall, Walter S., assignor to The Cleveland Railway Supply Company, Cleveland, Ohio. Foot-guard. No. 960,035; May 31; Sp. p. 7857; Gaz. vol. 154; p. 1319.

Newman, John J., Rockwood, Pa. Frogless switch. No. 956,992; May 3; Sp. p. 1071; Gaz. vol. 154; p. 168.

Newmeyer, Alvin L., *et al.* (See Warfield, Earl P., assignor.)

Newton, Emma M., New York, N. Y. Strainer. No. 959,581; May 31; Sp. p. 6831; Gaz. vol. 154; p. 1163.

Newton, George T., Dover Bay, assignor to The American Multigraph Company, Cleveland, Ohio. Inking-ribbon. No. 960,036; May 31; Sp. p. 7859; Gaz. vol. 154; p. 1319.

Nicholls, George T., Providence, R. I. Knitting-machine. No. 956,820; May 3; Sp. p. 700; Gaz. vol. 154; p. 110.

Nichols, Charles B., Rockport, Ohio. Vehicle-wheel. No. 956,724; May 3; Sp. p. 480; Gaz. vol. 154; p. 77.

Nichols, Henry B., Philadelphia, Pa. Grinding and surfacing. No. 960,188; May 31; Sp. p. 8130; Gaz. vol. 154; p. 1360.

Nichols, Horace G., near Ymir, British Columbia, Canada. Separating liquids from solids. No. 958,272; May 17; Sp. p. 3959; Gaz. vol. 154; p. 667.

Nichols, Thomas, assignor of one-half to L. G. McKnight, Gardner, Mass. Sanding-machine. No. 957,515; May 10; Sp. p. 2174; Gaz. vol. 154; p. 376.

Nichols, Wesley G., Chicago, Ill., assignor of one-half to American Brake Shoe & Foundry Company, Jersey City, N. J. Safe. No. 960,189; May 31; Sp. p. 8142; Gaz. vol. 154; p. 1369.

Nicholson, Lloyd C., Buffalo, N. Y. Circuit-controlling apparatus. No. 959,787; May 31; Sp. p. 7249; Gaz. vol. 154; p. 1230.

Nicholson, Lloyd C., Buffalo, N. Y. Circuit-controlling apparatus. No. 959,788; May 31; Sp. p. 7258; Gaz. vol. 154; p. 1231.

Nied, Lewis W., Akron, Ohio. Plant-support. No. 959,789; May 31; Sp. p. 7266; Gaz. vol. 154; p. 1231.

Niedermeyer, Arthur, and R. Bernhard, Milwaukee, Wis., assignors to Power and Mining Machinery Company, Crusher. No. 960,231; May 31; Sp. p. 8226; Gaz. vol. 154; p. 1384.

Niedermeyer, Arthur, and R. Bernhard, Milwaukee, Wis., assignors to Power and Mining Machinery Company, Crusher. No. 960,232; May 31; Sp. p. 8229; Gaz. vol. 154; p. 1385.

Nielsen, Rasmus P., Tranebjerg, near Samsö, Denmark. Means for the propulsion of vessels. No. 957,622; May 10; Sp. p. 2385; Gaz. vol. 154; p. 413.

Nielsen, Stefanus, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 957,995; May 17; Sp. p. 3251; Gaz. vol. 154; p. 571.

Nielsen, Samuel A., Madison, Wis. Means for printing photographs. No. 959,249; May 24; Sp. p. 6139; Gaz. vol. 154; p. 1026.

Niemann, Clemens H., Cincinnati, Ohio. Alarm for glue-heaters. No. 958,424; May 17; Sp. p. 4410; Gaz. vol. 154; p. 722.

Nier, Harry L., Chicago, Ill. Cuspidor. No. 958,524; May 17; Sp. p. 4612; Gaz. vol. 154; p. 757.

Niles-Bement-Pond Company. (See Reiss, George T., assignor.)

Niles-Bement-Pond Company. (See Sears, Willard T., assignor.)

Niles-Bement-Pond Company. (See Wray, Edward H., assignor.)

Nilsen, Ernst A., Christiania, Norway. Water-turbine. No. 958,670; May 17; Sp. p. 4891; Gaz. vol. 154; p. 803.

Nilson, Lars G., Hoboken, N. J., assignor of one-half to W. B. Strang, New York, N. Y. Puppet-valve for heat-engines. No. 958,759; May 24; Sp. p. 5086; Gaz. vol. 154; p. 859.

Nisbett, Robert M., assignor of one-half to W. P. Crowley, San Francisco, Cal. Railway-car. No. 957,363; May 10; Sp. p. 1870; Gaz. vol. 154; p. 325.

Nistle, George W., North Muskegon, Mich., assignor of one-third to E. W. Brooks and one-third to R. L. Gifford, Chicago, Ill. Pressure-equalizing mechanism for cylinders. No. 957,241; May 10; Sp. p. 1605; Gaz. vol. 154; p. 283.

Nix, John E., assignor of one-half to T. O. Fauber, De Soto, Mo. Beet-harvesting machine. No. 956,821; May 3; Sp. p. 704; Gaz. vol. 154; p. 110.

Nixon, James B., assignor to G. L. Martin, New Orleans, La. Game. No. 960,190; May 31; Sp. p. 8146; Gaz. vol. 154; p. 1370.

Noble, Harrison B., Heyworth, Ill. Automatic self-closing railway switch mechanism. No. 959,582; May 31; Sp. p. 6832; Gaz. vol. 154; p. 1163.

Noble, William A. E., Hollywood, assignor to United Casting Company, Los Angeles, Cal. Automobile turn-table bearing and making the same. No. 958,162; May 17; Sp. p. 3733; Gaz. vol. 154; p. 632.

Noble, William A. E., Hollywood, and S. Jay, assignors to United Casting Company, Los Angeles, Cal. Automobile turn-table construction. No. 958,161; May 17; Sp. p. 3737; Gaz. vol. 154; p. 631.

Noeggerath, Jakob E., Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine. No. 957,242; May 10; Sp. p. 1607; Gaz. vol. 154; p. 284.

Noeggerath, Jakob E., Schenectady, N. Y., assignor to General Electric Company. Means for decreasing windage losses. No. 957,243; May 10; Sp. p. 1609; Gaz. vol. 154; p. 284.

Noeggerath, Jakob E., Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine. No. 959,959; May 31; Sp. p. 7657; Gaz. vol. 154; p. 1291.

Nold, John, Tolstoy, S. D. Manure-loader. No. 957,085; May 3; Sp. p. 1256; Gaz. vol. 154; p. 200.

Nolly, Hector de, assignor to Compagnie des Forges & Aciéries de la Marine et d'Homecourt, St. Chamond, France. Making hardened steel. No. 957,706; May 10; Sp. p. 2556; Gaz. vol. 154; p. 442.

Norby, John E., Scandinavia, Wis. Apparatus for laying drop-siding and matched material. No. 958,671; May 17; Sp. p. 4892; Gaz. vol. 154; p. 803.

Norris, Arthur B., Rochester, N. Y. Woodworking-machine. No. 959,583; May 31; Sp. p. 6834; Gaz. vol. 154; p. 1163.

Norris, Frank P., *et al.* (See Maccallum, Norman E., assignor.)

North American Chemical Company. (See Thoms, Andrew, assignor.)

Northern Electrical Manufacturing Company. (See Stevens, Andrew E., assignor.)

Northrop, Jonas, assignor to W. F. Draper, Hopedale, Mass. Loom-temple. No. 956,725; May 3; Sp. p. 482; Gaz. vol. 154; p. 78.

Northrop, Jonas, assignor to W. F. Draper, Hopedale, Mass. Filling-replenishing loom. No. 956,726; May 3; Sp. p. 486; Gaz. vol. 154; p. 78.

Norton, Elliott S., assignor to Acme Flexible Clasp Company, Chicago, Ill. Machine for making corrugated and saw-toothed metal fastener-strips. No. 956,540; May 3; Sp. p. 66; Gaz. vol. 154; p. 14.

Norwall Manufacturing Company. (See Allen, Everett P., assignor.)

Norwall Manufacturing Company. (See Bard, George M., assignor.)

Notman, Robert L., assignor to McKinnon Dash Company, Buffalo, N. Y. Carriage-top rest. No. 959,790; May 31; Sp. p. 7268; Gaz. vol. 154; p. 1231.

Notman, Robert L., assignor to McKinnon Dash Company, Buffalo, N. Y. Carriage-top rest. No. 959,791; May 31; Sp. p. 7269; Gaz. vol. 154; p. 1232.

Notz, Felix, Chicago, Ill. Mixing-machine. No. 959,584; May 31; Sp. p. 6841; Gaz. vol. 154; p. 1164.

Nourbourne, James W. (See Latham, Albert, assignor.)

Noyes, Charles H., Omaha, Nebr. Lifting-jack. No. 959,157; May 24; Sp. p. 5946; Gaz. vol. 154; p. 995.

Noyes, Pierrepont B., assignor to Oneida Community Limited, Oneida, N. Y. Reinforced concrete. No. 957,244; May 10; Sp. p. 1609; Gaz. vol. 154; p. 284.

Nuernberger, Otto, Comfort, Tex. Pump attachment. No. 957,791; May 10; Sp. p. 2744; Gaz. vol. 154; p. 470.

Nyberg, Andrew V. (See Garber, David N., assignor.)

Nye, Samuel, Corbin, Idaho, assignor of one-half to A. Corbin, 2nd, Spokane, Wash. Sprocket-chain link. No. 957,996; May 17; Sp. p. 3256; Gaz. vol. 154; p. 571.

O. A. Miller Treeing Machine Company. (See Goding, Edwin L., assignor.)

O'Beirne and Company, Edward J. (See O'Beirne, William H., assignor.)

O'Beirne, William H., Paula Valley, Okla., assignor, by mesne assignments, to E. J. O'Beirne and Company, Elgin, Ill. Reflector. No. 960,037; May 31; Sp. p. 7860; Gaz. vol. 154; p. 1319.

O'Brien, Edward J., St. Louis, Mo., assignor to The Proctor and Gamble Company. Making toothed cylinders. No. 957,440; May 10; Sp. p. 2029; Gaz. vol. 154; p. 352.

O'Brien, William S., *et al.* (See Andrews, Orwen K., assignor.)

O'Connor, William, Smith, Mich. Molding-machine. No. 956,596; May 3; Sp. p. 191; Gaz. vol. 154; p. 33.

O'Donnell, John G., Washington, D. C. Bush-puller. No. 959,377; May 24; Sp. p. 6392; Gaz. vol. 154; p. 1068.

O'Donohoe, Maurice F., assignor of one-half to C. P. Ellis, Nashville, Tenn. Gas-range attachment. No. 958,525; May 17; Sp. p. 4613; Gaz. vol. 154; p. 757.

O'Keenan, Charles E. J., St. Cloud, France. Electric meter. No. 957,792; May 10; Sp. p. 2746; Gaz. vol. 154; p. 470.

O'Neill, Charles, and W. H. Neubeck, Louisville, Ky. Flexible ball-joint. No. 959,378; May 24; Sp. p. 6394; Gaz. vol. 154; p. 1069.

O'Shaughnessy, James F. (See Lowry, George A., assignor.)

O'Toole, Edward, and H. N. Eavenson, Gary, W. Va. Removing coal from mines. No. 957,364; May 10; Sp. p. 1871; Gaz. vol. 154; p. 326.

Oberg, Martin L., *et al.* (See Lawson, August, assignor.)

Oddo, Giuseppe, Pavia, Italy. Sulfur-burner. No. 959,250; May 24; Sp. p. 6141; Gaz. vol. 154; p. 1026.

Oddur Manufacturing Company. (See Sigurdsson, Oddur V., assignor.)

Oehmig, Paul, Chicago, Ill. Mustard-grinding mill. No. 957,997; May 17; Sp. p. 3257; Gaz. vol. 154; p. 572.

Oelkers, Henry. (See Sester and Oelkers.)

Oesterheld, Adolf, Seelse, near Hanover, Germany. Roof. No. 957,623; May 10; Sp. p. 2386; Gaz. vol. 154; p. 413.

Offermann, Hubert L., Leipzig, Germany. Gill-box drawing-head. No. 960,107; May 31; Sp. p. 7986; Gaz. vol. 154; p. 1342.

Ogden, Fredric D., Bayonne, N. J. Cable-hanger. No. 959,064; May 24; Sp. p. 5755; Gaz. vol. 154; p. 965.

Ohio Brass Company. (See Brown, John R., assignor.)

Ohio Cultivator Company, The. (See Wygant, Lewis B., assignor.)

Ohio Tool Company. (See Marks, Edward S., assignor.)

Olafson, Johan A., Boston, Mass. Traveling scaffold for flagpoles and the like. No. 957,473; May 10; Sp. p. 2088; Gaz. vol. 154; p. 362.

Oldfield, Tom, and J. A. Schofield, Halifax, England. Resilient wheel for road-vehicles. No. 958,273; May 17; Sp. p. 3963; Gaz. vol. 154; p. 668.

Oleson, Olaf E., Chicago, Ill. Pipe-coupling. No. 959,960; May 31; Sp. p. 7659; Gaz. vol. 154; p. 1292.

Oliver Chilled Plow Works. (See Paul, William L., assignor.) (Reissue.)

Oliver Typewriter Company, The. (See Knapp and Hartling, assignors.)

Olivier, Paul, Paris, France, assignor to General Electric Company. Governing mechanism for elastic-fluid turbines. No. 957,808; May 17; Sp. p. 2966; Gaz. vol. 154; p. 536.

Olm, Oscar J., Minneapolis, Minn. Envelop. No. 958,819; May 24; Sp. p. 5227; Gaz. vol. 154; p. 882.

Olney Automobile Company. (See Bastian, Martin L., assignor.)

Olson, Andy. (See Walling and Olson.)

Olson, Claus A., assignor of one-half to F. B. Cundy, Hibbing, Minn. Railway-tie. No. 959,065; May 24; Sp. p. 5757; Gaz. vol. 154; p. 965.

Olson, Karl J., Gladstone, Mich. Self-waiting table. No. 958,672; May 17; Sp. p. 4893; Gaz. vol. 154; p. 803.

Olsson, Emilio, Buenos Ayres, Argentina. Irrigation apparatus. No. 958,937; May 24; Sp. p. 5498; Gaz. vol. 154; p. 922.

Oneida Community Limited. (See Noyes, Pierrepont B., assignor.)

Ontario Nickel Company, The. (See Gates and Dow, assignors.)

Orosz, Stephen, Motana Mines, W. Va. Horseshoe. No. 957,707; May 10; Sp. p. 2558; Gaz. vol. 154; p. 443.

Ortell, Bertha, St. Paul, Minn. Hose-supporter. No. 958,425; May 17; Sp. p. 4413; Gaz. vol. 154; p. 722.

Osborn, Frederick H., Garrison, N. Y. Sound-reproducing machine and record therefor. No. 956,727; May 3; Sp. p. 491; Gaz. vol. 154; p. 78.

Osborn, Josiah, Los Angeles, Cal. Fruit-box press. No. 958,163; May 17; Sp. p. 3739; Gaz. vol. 154; p. 632.

Osborn Manufacturing Co., The. (See Atwater, Harry R., assignor.)

Osborn, William D., South Bend, Ind. Clamp-press. No. 957,793; May 10; Sp. p. 2748; Gaz. vol. 154; p. 470.

Osborne, Eugene F., assignor to H. A. Branch, Chicago, Ill. Compressing air, gas, or other gaseous fluids. No. 960,233; May 31; Sp. p. 8231; Gaz. vol. 154; p. 1385.

Osher, Nels B., Estherville, Iowa. Churn. No. 959,877; May 31; Sp. p. 7463; Gaz. vol. 154; p. 1261.

Otis Elevator Company. (See Coyle, Andrew M., assignor.)

Otis Elevator Company. (See Sunch, August, assignor.)

Otis Elevator Company. (See Venn, Isaac H., assignor.)

Otis, Flora. (See Otis, James, assignor.)

Otis, Flora M., Ann Arbor, Mich. Elastic bed-pan. No. 959,379; May 24; Sp. p. 6396; Gaz. vol. 154; p. 1069.

Otis, James, assignor of one-half to F. Otis, Ann Arbor, Mich. Street-sweeper. No. 959,380; May 24; Sp. p. 6397; Gaz. vol. 154; p. 1089.

Otis, Spencer, assignor to National Dump Car Company, Chicago, Ill. Spliced-side gondola car. No. 958,426; May 17; Sp. p. 4414; Gaz. vol. 154; p. 722.

Ott, Ada. (See Ott, William J. and A.)

Ott, William J. and A., Hugo, Oreg. Clothes-tongs. No. 958,938; May 24; Sp. p. 5499; Gaz. vol. 154; p. 923.

Ottaway, William, assignor to Aurora Automatic Machinery Company, Aurora, Ill. Carbureter. No. 959,066; May 24; Sp. p. 5750; Gaz. vol. 154; p. 965.

Ovenshire, Elijah A., Los Angeles, Cal. Information and directory cabinet. No. 958,673; May 17; Sp. p. 4894; Gaz. vol. 154; p. 804.

Overly, Arless C. (See Snyder, George A., assignor.)

Overly, Charles F., Pittsburg, Pa., assignor, by mesne assignments, to Enterprise Machine Manufacturing Company. Tool for cleaning tubes. No. 959,585; May 31; Sp. p. 6848; Gaz. vol. 154; p. 1164.

Overmyer, Charles G., assignor of one-half to G. F. Collins, Coffeyville, Kans. Annealing-ring. No. 958,674; May 17; Sp. p. 4899; Gaz. vol. 154; p. 804.

Overshiner, Lincoln P., San Diego, Cal. Harness back-pad and collar-pad. No. 959,381; May 24; Sp. p. 6399; Gaz. vol. 154; p. 1070.

Owen Thomas Motor Car Company. (See Thomas, Willie O., assignor.)

Owen, William A., Johnson City, Tenn. Power-transmitting pulley. No. 958,274; May 17; Sp. p. 3965; Gaz. vol. 154; p. 668.

P. & F. Corbin. (See Arens, August, assignor.)

P. & F. Corbin. (See Arens and Teich, assignors.)

P. C. Murphy Trunk Company. (See McCarthy, Clarence A., assignor.)

P. H. & F. M. Roots Company, The. (See Hicks, George C., Jr., assignor.)

Packard, Lucius M., Brockton, Mass. Non-refillable bottle. No. 959,792; May 31; Sp. p. 7270; Gaz. vol. 154; p. 1232.

Packer, Harry E., assignor of one-half to B. E. Delcamp, Chicago, Ill. Envelop moistener. No. 959,793; May 31; Sp. p. 7273; Gaz. vol. 154; p. 1232.

Packman, Percival J., Highbury, London, England. Sound-box for talking-machines. No. 960,191; May 31; Sp. p. 8149; Gaz. vol. 154; p. 1370.

Padbury, John J., Philadelphia, Pa. Impact-tool. No. 957,708; May 10; Sp. p. 2550; Gaz. vol. 154; p. 443.

Paddock, Robert G. (See Wrinkle and Paddock.)

Page, Arthur A., Providence, R. I. Speed-changing mechanism. No. 959,878; May 31; Sp. p. 7465; Gaz. vol. 154; p. 1262.

Page, Charles B., Baltimore, Md. Two-cycle engine. No. 956,993; May 3; Sp. p. 1074; Gaz. vol. 154; p. 168.

Palm, Charles. (See Christensen, Hans, assignor.)

Palmer, Isaac E., Middletown, Conn. Thread-guide. No. 958,760; May 24; Sp. p. 5088; Gaz. vol. 154; p. 860.

Palmer, Isaac E., Middletown, Conn. Textile-conditioning apparatus. No. 959,067; May 24; Sp. p. 5766; Gaz. vol. 154; p. 966.

Palmer, Jefferson S., Clark, S. D. Adjustable spark-plug. No. 956,778; May 3; Sp. p. 595; Gaz. vol. 154; p. 95.

Palmer, Perley B., Orono, Me. Machine to manufacture soda and sulfite wood-pulp. No. 956,728; May 3; Sp. p. 498; Gaz. vol. 154; p. 79.

Palmer, William H., Fort Scott, Kans. Forced-draft-furnace grate. No. 958,971; May 24; Sp. p. 5500; Gaz. vol. 154; p. 934.

Pancoast, George E., Brooklyn, N. Y., assignor to American Lithographic Company. Press. No. 956,864; May 3; Sp. p. 793; Gaz. vol. 154; p. 126.

Panian, Martin, Eveleth, Minn. Respirator. (smoke-protector). No. 958,427; May 17; Sp. p. 4415; Gaz. vol. 154; p. 722.

Park, Joseph L., Sacramento, Cal. Stove-burner. No. 957,365; May 10; Sp. p. 1874; Gaz. vol. 154; p. 326.

Parker, Atwell A., Waterford, N. Y. Pump. No. 957,704; May 10; Sp. p. 2740; Gaz. vol. 154; p. 471.

Parker, Burton H., Port Colburn, Ontario, Canada. Current-controller. No. 957,516; May 10; Sp. p. 2177; Gaz. vol. 154; p. 376.

Parker, George D., Riverside, Cal. Fruit sizer and grader. No. 958,164; May 17; Sp. p. 3740; Gaz. vol. 154; p. 632.

Parker, George D., Riverside, Cal. Box-making machine. No. 959,158; May 24; Sp. p. 5948; Gaz. vol. 154; p. 996.

Parker, Harry S., and E. O. Lieb, Trenton, N. J. Baggage-truck brake. No. 959,251; May 24; Sp. p. 6142; Gaz. vol. 154; p. 1026.

Parker, Howard, Nashua, N. H. Packing for cylinder-molds. No. 958,275; May 17; Sp. p. 3966; Gaz. vol. 154; p. 668.

Parker, Joseph H., Los Angeles, Cal. Treatment of oils. No. 958,820; May 24; Sp. p. 5228; Gaz. vol. 154; p. 882.

Parker, Thomas, London, England. Production of fuel. No. 958,761; May 24; Sp. p. 5089; Gaz. vol. 154; p. 860.

Parker, William H., Passaic, N. J. Wire-beading machine. No. 957,245; May 10; Sp. p. 1612; Gaz. vol. 154; p. 285.

Parker, William S., Ottumwa, Iowa. Railway-ticket. No. 959,879; May 31; Sp. p. 7463; Gaz. vol. 154; p. 1262.

Parkes Machine Company, The. (See Parkes, William N., assignor.)

Parkes, William N., Brooklyn, assignor to The Parkes Machine Company, New York, N. Y. Pitman connection. No. 957,474; May 10; Sp. p. 2090; Gaz. vol. 154; p. 362.

Parkison, Wallace M., Rensselaer, Ind. Transmission-gearing. No. 957,795; May 10; Sp. p. 2751; Gaz. vol. 154; p. 471.

Parmele, Charles R., New Brighton, N. Y. Sealed receptacle. No. 958,887; May 24; Sp. p. 5399; Gaz. vol. 154; p. 906.

Parmenter, Henry E., Newport, R. I. Metal-bending machine. No. 956,541; May 3; Sp. p. 71; Gaz. vol. 154; p. 14.

Parmeter, Addison J., Milnor, N. D. Folding crate. No. 957,796; May 10; Sp. p. 2752; Gaz. vol. 154; p. 471.

Parr, Winfield S. (See White, Henry, assignor.)

Parrish-Alford Fence and Machine Company. (See Parrish, William N., assignor.)

Parrish, William N., Richmond, assignor to Parrish-Alford Fence and Machine Company, Knightstown, Ind. Machine for making wire fabric. No. 958,888; May 24; Sp. p. 5401; Gaz. vol. 154; p. 906.

Parry, Robert A. (See Bennett and Parry.)

Parson, Henry E., assignor to Parson Manufacturing Company, New York, N. Y. Burning gases. No. 958,428; May 17; Sp. p. 4417; Gaz. vol. 154; p. 722.

Parson, Henry E., assignor to Parson Manufacturing Company, New York, N. Y. Furnace for burning blast-furnace gases. No. 958,429; May 17; Sp. p. 4422; Gaz. vol. 154; p. 724.

Parson Manufacturing Company. (See Parson, Henry E., assignor.)

Parsons, Charles A., Newcastle-upon-Tyne, England. Turbine. No. 958,430; May 17; Sp. p. 4426; Gaz. vol. 154; p. 724.

Parsons, Charles A., Newcastle-upon-Tyne, and J. Turnbull, Wallsend, England; said Turnbull assignor to said Parsons. Lubrication of thrust-bearings. No. 957,797; May 10; Sp. p. 2754; Gaz. vol. 154; p. 472.

Parsons, Henry B., Zanesville, Ohio. Ink-well. No. 959,382; May 24; Sp. p. 6400; Gaz. vol. 154; p. 1070.

Parsons, Lewis E., Lewistown, Ill. Cutting mechanism for corn-harvesters. No. 956,165; May 17; Sp. p. 3744; Gaz. vol. 154; p. 633.

Parsons, Millard F., Kansas City, Kans. Grinding-tool. No. 956,822; May 3; Sp. p. 705; Gaz. vol. 154; p. 111.

Parsons, Winslow R., Chicago, Ill. Annealing and tempering apparatus. No. 957,998; May 17; Sp. p. 3259; Gaz. vol. 154; p. 572.

Parsons, Winslow R., Chicago, Ill. Compound for smoothing and polishing articles and parts. No. 957,999; May 17; Sp. p. 3263; Gaz. vol. 154; p. 572.

Partrick, Alfred W., Yonkers, N. Y. Non-refillable bottle. No. 959,794; May 31; Sp. p. 7274; Gaz. vol. 154; p. 1233.

Paskus, Benjamin G. (See Daniel, Paul, assignor.)

Pasley, Ira, Olds, Alberta, Canada. Casting-harness. No. 957,517; May 10; Sp. p. 2179; Gaz. vol. 154; p. 376.

Pass & Seymour. (See Crossley, James S., assignor.)

Pate, Robert L., Springfield, Mo. Article-holder. No. 958,526; May 17; Sp. p. 4614; Gaz. vol. 154; p. 757.

Patent Heading Company, The. (See Clouse, Joseph N., assignor.)

Patent Sales Company. (See Lemyre, Joseph E., assignor.)

Paton, Walter J., assignor of one-half to L. S. Ryan, Galva, Kans. Hat-fastener. No. 959,586; May 31; Sp. p. 6844; Gaz. vol. 154; p. 1164.

Patrick, Frank H. (See Humphrey and Patrick.)

Patterson, Charles H. (See Wait, William O., assignor.)

Patterson, Charles M. (See Jamison, Robert G., assignor.)

Patterson, Franklin M., Bayonne, N. J., assignor of one-third to J. H. Allen, New York, N. Y., and A. B. Scully, Chicago, Ill. Rod for axles, stay and other bolts, and similar articles. No. 959,159; May 24; Sp. p. 5954; Gaz. vol. 154; p. 996.

Patterson, George L. (See Horner and Patterson.)

Patterson, James B., Philadelphia, Pa. Suspension-couch. No. 959,795; May 31; Sp. p. 7277; Gaz. vol. 154; p. 1233.

Patterson, William L., assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Projection apparatus. No. 957,899; May 17; Sp. p. 2970; Gaz. vol. 154; p. 537.

Pattinson, John S. (See Holms, Green, and Pattinson.)

Patton, Charles W. (See Washington, Dixon E., assignor.)

Patton, John G., Philadelphia, Pa. Envelop and advertising device. No. 958,166; May 17; Sp. p. 3744; Gaz. vol. 154; p. 633.

Patton, Trussie A., Cabool, Mo. Photographic-printing device. No. 960,192; May 31; Sp. p. 8150; Gaz. vol. 154; p. 1371.

Paul, William C., New York, N. Y. Type-writing machine. No. 957,624; May 10; Sp. p. 2387; Gaz. vol. 154; p. 414.

Paul, William L., assignor to Oliver Chilled Plow Works, South Bend, Ind. Sulky-plow. (Reissue.) No. 13,112; May 10; Sp. p. 2872; Gaz. vol. 154; p. 492.

Paulson, Charles J., Karlskrona, Sweden. Moving-picture machine. No. 957,246; May 10; Sp. p. 1615; Gaz. vol. 154; p. 285.

Paustian, Emil H. (See Polo, Joseph B., assignor.)

Pawsat, Ewald F. and H., Sheboygan, Wis. Gripper attachment for pedals. No. 959,160; May 24; Sp. p. 5957; Gaz. vol. 154; p. 997.

Pawsat, Hermann. (See Pawsat, Ewald F. and H.)

Payne, Arthur S., and B. J. Wade, Troy, N. Y. Brush-making machinery. No. 958,431; May 17; Sp. p. 4437; Gaz. vol. 154; p. 725.

Paysen, Andrew, St. Louis, Mo. Fish-hook. No. 959,587; May 31; Sp. p. 6845; Gaz. vol. 154; p. 1164.

Pearce, Herbert, and J. B. Billington, Broadheath, England. Automatic pump stop mechanism for linotype-machines. No. 959,061; May 31; Sp. p. 7661; Gaz. vol. 154; p. 1292.

Pearson, Charles, Chicago, Ill., assignor to International Harvester Company. Sweep-rake. No. 958,432; May 17; Sp. p. 4438; Gaz. vol. 154; p. 725.

Pearson, Charles, Chicago, Ill., assignor to International Harvester Company. Hay-rake. No. 959,796; May 31; Sp. p. 7278; Gaz. vol. 154; p. 1233.

Pearson, Charles P., Providence, R. I. Swimming-glove. No. 958,527; May 17; Sp. p. 4615; Gaz. vol. 154; p. 757.

Pearson & Co., Gesellschaft mit beschränkter Haftung. (See Queisser, Max A., assignor.)

Pearson, Joseph, deceased, Philadelphia (J. J. Pearson, administrator), and H. Carter, Wrightsville, Pa. Yarn-trap for knitting-machines. No. 959,252; May 24; Sp. p. 6146; Gaz. vol. 154; p. 1027.

Pearson, Joseph J., administrator. (See Pearson and Carter.)

Pease, Charles, Salem, Mass., assignor to United-Xpedite Finishing Company, Berwick, Me. Burnishing-machine. No. 959,580; May 31; Sp. p. 7471; Gaz. vol. 154; p. 1263.

Pease, Edward G. (See Willi, Theodore, assignor.)

Peck, Austin, assignor of forty one-hundredths to J. A. Peck, St. Louis, Mo. Umbrella. No. 960,038; May 31; Sp. p. 7862; Gaz. vol. 154; p. 1320.

Peck, Ira F., Providence, R. I., assignor to B. A. Ball and H. A. Sévigné, Boston, Mass. Bread-wrapping machine. No. 956,994; May 3; Sp. p. 1076; Gaz. vol. 154; p. 169.

Peck, John A. (See Peck, Austin, assignor.)

Peckham, William T., Providence, R. I. Device for reflecting the concealed sides of cards. No. 958,762; May 24; Sp. p. 5090; Gaz. vol. 154; p. 860.

Pedersen, Mikael, Dursley, England. Wheel-cutting machine. No. 959,588; May 31; Sp. p. 6847; Gaz. vol. 154; p. 1163.

Pedersen, Niels, assignor to Cracraft-Leich Electric Company, Genoa, Ill. Transmitter-mounting. No. 958,167; May 17; Sp. p. 3747; Gaz. vol. 154; p. 633.

Peeples, Oscar H. and W. G., Grenada, Miss. Garden implement. No. 959,797; May 31; Sp. p. 7280; Gaz. vol. 154; p. 1234.

Peeples, Thomas G., Grenada, Miss. Back-hand hook. No. 957,366; May 10; Sp. p. 1876; Gaz. vol. 154; p. 326.

Peeples, William G. (See Peeples, Oscar H. and W. G.)

Peerless Machinery Company, The. (See Muther and Henderson, assignors.)

Peerless Motor Car Company, The. (See Schmidt, Charles, assignor.)

Peerless Pearl Company. (See McCoy, Robert, assignor.)

Peetz, Benjamin F., Moro, Oreg. Copy-holder. No. 957,798; May 10; Sp. p. 2756; Gaz. vol. 154; p. 472.

Peironnet, James S., Wheaton, Ill. Chicken-hovel. No. 959,161; May 24; Sp. p. 5959; Gaz. vol. 154; p. 997.

Peiseler, Gottlieb, Remscheid-Haddenbach, Germany. Machine for producing files and rasps. No. 957,367; May 10; Sp. p. 1877; Gaz. vol. 154; p. 327.

Pelletier, Alfred, Chicago, Ill. Means for generating power. No. 957,086; May 3; Sp. p. 1260; Gaz. vol. 154; p. 200.

Pellissier, George E., Holyoke, Mass., assignor to Goldschmidt Thermit Company, New York, N. Y. Shearing-tool. No. 958,972; May 24; Sp. p. 5505; Gaz. vol. 154; p. 935.

Pelton, Charles H., Springfield, Ohio. Hat and coat hanger. No. 959,589; May 31; Sp. p. 6851; Gaz. vol. 154; p. 1163.

Pelton Water Wheel Company. (See Henry, George J., Jr., assignor.)

Pemberton, Willis E., *et al.* (See Livering, Charles J., assignor.)

Pence, Warren, C. R. Wolf, and V. O. Jarvis, Los Angeles, Cal. Joint. No. 958,276; May 17; Sp. p. 3967; Gaz. vol. 154; p. 668.

Pendry, William A., Detroit, Mich. Engineer's valve. No. 959,798; May 31; Sp. p. 7282; Gaz. vol. 154; p. 1234.

Pendry, William A., Detroit, Mich. Engineer's valve. No. 959,799; May 31; Sp. p. 7286; Gaz. vol. 154; p. 1235.

Pendry, William A., Detroit, Mich. Triple valve. No. 959,800; May 31; Sp. p. 7290; Gaz. vol. 154; p. 1235.

Pendry, William A., Detroit, Mich. Triple valve. No. 959,801; May 31; Sp. p. 7294; Gaz. vol. 154; p. 1235.

Pendry, William A., Detroit, Mich. Engineer's valve. No. 959,802; May 31; Sp. p. 7298; Gaz. vol. 154; p. 1236.

Penfield, Raymond C., New York, N. Y. Machine for handling bricks. No. 957,368; May 10; Sp. p. 1880; Gaz. vol. 154; p. 327.

Penfield, Raymond C., New York, N. Y. Brick-setting frame. No. 958,973; May 24; Sp. p. 5506; Gaz. vol. 154; p. 935.

Penney, James A., McKeesport, Pa. Furnace. No. 959,253; May 24; Sp. p. 6149; Gaz. vol. 154; p. 1027.

Penney, John H., Hixon, Tenn. Metal railway-tie. No. 956,779; May 3; Sp. p. 596; Gaz. vol. 154; p. 95.

Pennington, Harley D., assignor to United Engineering & Foundry Company, Pittsburg, Pa. Cross-roll trough. No. 959,433; May 24; Sp. p. 6480; Gaz. vol. 154; p. 1086.

Pennsylvania Glass Globe Light Company of Philadelphia, The. (See Shaw, Arthur E., assignor.)

Pennsylvania Specialty Manufacturing Co. (See Sackman, William H., assignor.)

Pereboom, Theodore, C., Ireton, Iowa. Watering-trough. No. 958,528; May 17; Sp. p. 4616; Gaz. vol. 154; p. 758.

Peres, Miguel, Chicago, Ill. Non-refillable bottle. No. 956,597; May 3; Sp. p. 194; Gaz. vol. 154; p. 33.

Perfect Foot-Arch Supporter Co. (See Schumacher, Frederick C., assignor.)

Perkins Electric Switch Manufacturing Company, The. (See Goodridge, Gilbert W., assignor.)

Perkins Electric Switch Manufacturing Company, The. (See Thomas, George B., assignor.)

Perkins, William H., Ottawa, Ontario, Canada. Furnace. No. 958,763; May 24; Sp. p. 5091; Gaz. vol. 154; p. 860.

Perrie, John, Roseland, Ill. Lock-nut mechanism. No. 959,102; May 24; Sp. p. 5960; Gaz. vol. 154; p. 997.

Perry, Judson D., Montgomery, Ala. Milk-pail. No. 959,590; May 31; Sp. p. 6853; Gaz. vol. 154; p. 1166.

Persons, Charles A., Worcester, Mass. Saddle. No. 959,591; May 31; Sp. p. 6854; Gaz. vol. 154; p. 1166.

Peters, Thomas J., Perrine, Fla. Cane-stripping mechanism. No. 957,441; May 10; Sp. p. 2030; Gaz. vol. 154; p. 352.

Petersen, Thomas, Hartford, Conn. Line-holder. No. 958,168; May 17; Sp. p. 3749; Gaz. vol. 154; p. 634.

Peterson, Burt A., assignor, by mesne assignments, to H. D. Colman, L. L. Miller, and H. A. Severson, Rockford, Ill. Knotter. No. 959,592; May 31; Sp. p. 6856; Gaz. vol. 154; p. 1166.

Peterson, E. E., *et al.* (See Glympa, Frank W., assignor.)

Peterson, Gus A., and J. L. Lackett, Clarksburg, W. Va. Gas and air mixer for burners. No. 959,593; May 31; Sp. p. 6859; Gaz. vol. 154; p. 1167.

Peterson, Gustaf. (See Peterson, Olof and G.)

Peterson, Hjalmar, Falun, Wis. Automatic damper control. No. 956,542; May 3; Sp. p. 80; Gaz. vol. 154; p. 14.

Peterson, James, and J. G. Callaway, Price, Utah. Chair. No. 958,000; May 17; Sp. p. 3264; Gaz. vol. 154; p. 572.

Peterson, James, and J. G. Callaway, Price, Utah. Folding umbrella. No. 959,962; May 31; Sp. p. 7663; Gaz. vol. 154; p. 1202.

Peterson, Johann G., assignor to The Arrow Electric Company, Hartford, Conn. Electric-lamp socket. No. 959,594; May 31; Sp. p. 6860; Gaz. vol. 154; p. 1167.

Peterson, Louis A., Hannaford, N. D. Coupling for air-brake pipes. No. 957,087; May 3; Sp. p. 1264; Gaz. vol. 154; p. 201.

Peterson, Nils, assignor of one-third to C. L. Thompson, Moscow, Idaho. Antifreezing-closet. No. 956,729; May 3; Sp. p. 494; Gaz. vol. 154; p. 79.

Peterson, Octave W., Chicago, Ill. Acetylene-gas generator. No. 957,369; May 10; Sp. p. 1883; Gaz. vol. 154; p. 328.

Peterson, Olof and G., Alameda, Cal. Scraper. No. 958,889; May 24; Sp. p. 5410; Gaz. vol. 154; p. 907.

Peterson, Per A., New York, N. Y. Combination-tool. No. 960,193; May 31; Sp. p. 8153; Gaz. vol. 154; p. 1371.

Peterson, Peter L., Kelvin, N. D. Grapple. No. 956,995; May 3; Sp. p. 1082; Gaz. vol. 154; p. 169.

Peterson, Peter R. (See Cox and Peterson.)

Petree, Walter G., Danbury, N. C. Buggy-shaft tug. No. 959,254; May 24; Sp. p. 6150; Gaz. vol. 154; p. 1028.

Petri, Gunther H., Boston, Mass. Mixing machinery. No. 957,088; May 3; Sp. p. 1268; Gaz. vol. 154; p. 201.

Petri, Gunther H., Boston, Mass. Forming-machine. No. 957,247; May 10; Sp. p. 1616; Gaz. vol. 154; p. 285.

Pettibone, Mulliken & Company. (See Strom, Eugene N., assignor.)

Pettit, Winfield S., West Cape May, N. J. Churn. No. 957,248; May 10; Sp. p. 1619; Gaz. vol. 154; p. 286.

Pezzene, Peter, Coraopolis, Pa. Folding umbrella. No. 959,383; May 24; Sp. p. 6401; Gaz. vol. 154; p. 1070.

Pezzene, Peter, Coraopolis, Pa. Fan attachment for rocking-chairs. No. 959,384; May 24; Sp. p. 6403; Gaz. vol. 154; p. 1070.

Pfaffenbach, Rudolf, Leipsig, assignor to Adolf Bleichert & Company, Leipsig-Gohlis, Germany. Rope-railway. No. 959,595; May 31; Sp. p. 6861; Gaz. vol. 154; p. 1167.

Pfaudler Company, The. (See Jones, Albert J., assignor.)

Pfeiffer, Jacob, *et al.* (See Greer, William E., assignor.)

Pfeiffer, William F., *et al.* (See Greer, William E., assignor.)

Pfeumer, Fritz. (See Caldwell and Pfeumer.)

Pfrenzinger, John, Pittsburg, Pa. Table. No. 957,089; May 3; Sp. p. 1270; Gaz. vol. 154; p. 201.

Pfrunder, Xaver. (See Steinmann and Pfrunder.)

Phelan, Merton D., Boston, Mass., assignor, by mesne assignments, to Manufacturers Machine Company, Montclair, N. J. Heel-compressor. No. 958,001; May 17; Sp. p. 3267; Gaz. vol. 154; p. 573.

Phelan, Merton D., assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Portable power-tacker. No. 958,002; May 17; Sp. p. 3273; Gaz. vol. 154; p. 573.

Phelan, Merton D., Boston, Mass., assignor, by mesne assignments, to Manufacturers Machine Company, Montclair, N. J. Metallic-fastening machine. No. 958,003; May 17; Sp. p. 3278; Gaz. vol. 154; p. 574.

Phelan, Merton D., Boston, Mass., assignor, by mesne assignments, to Manufacturers Machine Company, Montclair, N. J. Starting and stopping mechanism. No. 958,004; May 17; Sp. p. 3282; Gaz. vol. 154; p. 574.

Phelan, Merton D., assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Machine for breasting the heels of boots and shoes. No. 958,005; May 17; Sp. p. 3287; Gaz. vol. 154; p. 575.

Phelan, Merton D., Dorchester, assignor to T. G. Plant, Boston, Mass. Heel-shaver. No. 958,006; May 17; Sp. p. 3300; Gaz. vol. 154; p. 575.

Phelps, Walter J., Baltimore, Md. Means for applying solder rings to can-caps. No. 959,163; May 24; Sp. p. 5962; Gaz. vol. 154; p. 968.

Philipp, Ernst, and J. Aeppli-Meier, Zurich, Switzerland. Knife-cleaner. No. 959,805; May 31; Sp. p. 7302; Gaz. vol. 154; p. 1237.

Phillips, Edwin S., El Paso, Tex. Fuel-economiser. No. 957,173; May 3; Sp. p. 1482; Gaz. vol. 154; p. 229.

Phillips, Hiram, St. Louis, Mo. Plumbing attachment. No. 957,709; May 10; Sp. p. 2561; Gaz. vol. 154; p. 443.

Phillips, John O., Canajoharie, N. Y. Sheet-music turner. No. 957,370; May 10; Sp. p. 1885; Gaz. vol. 154; p. 328.

Phillips, William A., St. Louis, Mo., assignor to Rheolite Company, Milwaukee, Wis. Composition of matter and making the same. No. 959,048; May 24; Sp. p. 5772; Gaz. vol. 154; p. 967.

Phillips, William S. Cameron, W. Va. Chair. No. 958,529; May 17; Sp. p. 4617; Gaz. vol. 154; p. 758.

Philp, Casimir von, assignor to Bethlehem Steel Co., Bethlehem, Pa. Rolling-mill for rolling car-wheels. No. 956,780; May 3; Sp. p. 597; Gaz. vol. 154; p. 95.

Phinny, Christopher W., Brownwood, Tex. Roof-shoe. No. 958,277; May 17; Sp. p. 3969; Gaz. vol. 154; p. 669.

Phippa, Clayton C., San Diego, Cal. Oil-burning furnace. No. 958,433; May 17; Sp. p. 4439; Gaz. vol. 154; p. 725.

Phoenix Iron Company, The, *et al.* (See Macallum, Norman R., assignor.)

Pickering, Ruben L., Falling Spring, W. Va. Chalk-line reel. No. 956,598; May 3; Sp. p. 196; Gaz. vol. 154; p. 24.

Pickett, Ocren G., Jefferson City, Mo. Linotype-machine attachment. No. 958,530; May 17; Sp. p. 4619; Gaz. vol. 154; p. 759.

Pierce, Charles S. (See Alden and Reinhardt, assignors.)

Pierce, Forrester H. (See Lamasney and Pierce.)

Pierce, Harold S., Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill. Drive-chain. No. 958,675; May 17; Sp. p. 4901; Gaz. vol. 154; p. 805.

Pierce, Valentine M. (See Baker and Pierce.)

Pigrott, Edmund, Detroit, Mich. Hand-cultivator. No. 957,578; May 10; Sp. p. 2288; Gaz. vol. 154; p. 396.

Pila, Moris, Brooklyn, N. Y. Bottle and stopper. No. 958,169; May 17; Sp. p. 3749; Gaz. vol. 154; p. 634.

Piper, Arthur L., Seattle, Wash. Stove. No. 959,026; May 24; Sp. p. 5665; Gaz. vol. 154; p. 952.

Pipes, Albert L., Clarence, Mo. Automatic switch for railways. No. 958,531; May 17; Sp. p. 4624; Gaz. vol. 154; p. 759.

Pitel, Conrad M., Meriden, Conn. Extension light-fixture. No. 956,823; May 3; Sp. p. 708; Gaz. vol. 154; p. 111.

Pitner, Marion W., Chicago, Ill. Pipe-end closure. No. 959,385; May 24; Sp. p. 6405; Gaz. vol. 154; p. 1071.

Pitt, William A., assignor of three-fourths to S. S. Underwood, Montreal, Quebec, Canada. Track-sander. No. 959,596; May 31; Sp. p. 6864; Gaz. vol. 154; p. 1167.

Pittsburgh Plate Glass Company. (See Slingluff, Harry G., assignor.)

Plamondon, Charles A., *et al.* (See Prins, William H., assignor.)

Plamondon, George, *et al.* (See Prins, William H., assignor.)

Plant, Thomas G. (See Bohr, Nicholas C., assignor.)

Plant, Thomas G. (See Eno, Frank F., assignor.)

Plant, Thomas G. (See Glass, Perley R., assignor.)

Plant, Thomas G. (See Heyn, John J., assignor.)

Plant, Thomas G. (See Hood, Charles E., assignor.)

Plant, Thomas G. (See Hooper, William H., assignor.)

Plant, Thomas G. (See La Chappelle, Fred, assignor.)

Plant, Thomas G. (See McLeod, George T., assignor.)

Plant, Thomas G. (See Phelan, Merton D., assignor.)

Plant, Thomas G. (See Ryan, Thomas J., assignor.)

Plant, Thomas G. (See Seely, Thomas H., assignor.)

Plant, Thomas G. (See Stanton, Charles P., assignor.)

Plant, Thomas G. (See Stewart, George F., assignor.)

Plant, Thomas G. (See Stewart, William C., assignor.)

Plant, Thomas G. (See Woodward, Erastus, assignor.)

Plant, Thomas G., Boston, Mass. Shoe-jack. No. 958,278; May 17; Sp. p. 3970; Gaz. vol. 154; p. 669.

Plant, Thomas G., Boston, Mass. Fastener-puller. No. 958,279; May 17; Sp. p. 3977; Gaz. vol. 154; p. 669.

Plant, Thomas G., Boston, Mass. Lasting-machine. No. 958,280; May 17; Sp. p. 3982; Gaz. vol. 154; p. 670.

Plant, Thomas G., Boston, Mass. Heeling-machine attachment. No. 958,281; May 17; Sp. p. 3995; Gaz. vol. 154; p. 670.

Plant, Thomas G., Boston, Mass. Heeling-machine. No. 958,282; May 17; Sp. p. 3998; Gaz. vol. 154; p. 671.

Plant, Thomas G., Boston, Mass. Laying and leveling machine. No. 958,283; May 17; Sp. p. 4015; Gaz. vol. 154; p. 671.

Plant, Thomas G., Boston, Mass. Canvas-cementer. No. 958,284; May 17; Sp. p. 4025; Gaz. vol. 154; p. 672.

Plant, Thomas G., Boston, Mass. Shoe-sole flexer. No. 958,285; May 17; Sp. p. 4027; Gaz. vol. 154; p. 672.

Plant, Thomas G., Boston, Mass. Auxiliary lasting device. No. 958,286; May 17; Sp. p. 4034; Gaz. vol. 154; p. 672.

Plant, Thomas G., Boston, Mass. Ironing and dressing jack for boots and shoes. No. 958,287; May 17; Sp. p. 4035; Gaz. vol. 154; p. 673.

Plant, Thomas G., Boston, Mass. Boot and shoe buffing machine. No. 958,288; May 17; Sp. p. 4042; Gaz. vol. 154; p. 673.

Plant, Thomas G., Boston, Mass. Boot and shoe machine. No. 958,289; May 17; Sp. p. 4044; Gaz. vol. 154; p. 674.

Plant, Thomas G., Boston, Mass. Starting and stopping mechanism. No. 958,290; May 17; Sp. p. 4048; Gaz. vol. 154; p. 674.

Plant, Thomas G., Boston, Mass. Bed-lasting machine. No. 958,291; May 17; Sp. p. 4052; Gaz. vol. 154; p. 674.

Plant, Thomas G., Boston, Mass. Heeling-machine. No. 958,292; May 17; Sp. p. 4060; Gaz. vol. 154; p. 675.

Plant, Thomas G., Boston, Mass. Machine for inserting metallic fastenings. No. 958,293; May 17; Sp. p. 4078; Gaz. vol. 154; p. 676.

Plant, Thomas G., Boston, Mass. Shoe-sewing machine. No. 958,294; May 17; Sp. p. 4083; Gaz. vol. 154; p. 676.

Plant, Thomas G., Boston, Mass. Stopping mechanism. No. 958,295; May 17; Sp. p. 4088; Gaz. vol. 154; p. 676.

Plant, Thomas G., Boston, Mass. Sewing-machine. No. 958,296; May 17; Sp. p. 4092; Gaz. vol. 154; p. 676.

Plant, Thomas G., Boston, Mass. Welt-holder for sewing-machines. No. 958,297; May 17; Sp. p. 4097; Gaz. vol. 154; p. 677.

Plant, Thomas G., Boston, Mass. Sewing-machine. No. 958,298; May 17; Sp. p. 4099; Gaz. vol. 154; p. 678.

Plant, Thomas G., Boston, Mass. Shoe-sewing-machine. No. 958,299; May 17; Sp. p. 4107; Gaz. vol. 154; p. 678.

Plant, Thomas G., Boston, Mass. Work-support for heeling-machines. No. 958,300; May 17; Sp. p. 4110; Gaz. vol. 154; p. 678.

Plant, Thomas G., Boston, Mass. Shoe-jack. No. 958,301; May 17; Sp. p. 4122; Gaz. vol. 154; p. 679.

Plant, Thomas G., Boston, Mass. Heeling-machine. No. 958,302; May 17; Sp. p. 4133; Gaz. vol. 154; p. 679.

Plant, Thomas G., Boston, Mass. Driving-shaft controlling means. No. 958,303; May 17; Sp. p. 4143; Gaz. vol. 154; p. 679.

Plant, Thomas G., Boston, Mass. Ironing and dressing machine. No. 958,304; May 17; Sp. p. 4148; Gaz. vol. 154; p. 680.

Plant, Thomas G., Boston, Mass. Work-holder for heeling-machines. No. 958,305; May 17; Sp. p. 4154; Gaz. vol. 154; p. 680.

Plant, Thomas G., Boston, Mass. Machine for operating on the bottoms of boots and shoes. No. 958,306; May 17; Sp. p. 4158; Gaz. vol. 154; p. 681.

Platt, Addison J., Sterling, Ill. Lawn-rake. No. 957,900; May 17; Sp. p. 2972; Gaz. vol. 154; p. 537.

Plourde, Eugene, Paterson, N. J. Baby-carriage. No. 958,307; May 17; Sp. p. 4173; Gaz. vol. 154; p. 681.

Plunkett, Hugh E., Charlestown, Mass. Attachment for electric-lamp sockets. No. 957,371; May 10; Sp. p. 1886; Gaz. vol. 154; p. 328.

Plunkett, Richard. (See Grant, Charles, assignor.)

Pobanz, George W., Genesee, Ill. Cultivator-plow. No. 960,194; May 31; Sp. p. 8154; Gaz. vol. 154; p. 1371.

Pointon, Charles E. (See Pointon, John E. and C. E.)

Pointon, John E. and C. E., Peterborough, England. Machine for mixing and kneading dough and like plastic substances. No. 959,963; May 31; Sp. p. 7665; Gaz. vol. 154; p. 1293.

Pokorny, Adolph, St. Paul, Minn. Stencilling apparatus. No. 956,730; May 3; Sp. p. 496; Gaz. vol. 154; p. 79.

Pollard, Edward T., London, England, assignor to International Engineering Company, Limited, Edinburgh, Scotland. Apparatus for delivering sheets of paper one by one from a pile. No. 958,764; May 24; Sp. p. 5092; Gaz. vol. 154; p. 861.

Pollard, Paxton, assignor of one-half to J. E. Ledbetter, Norfolk, Va. Holder for insectifuge. No. 958,678; May 17; Sp. p. 4906; Gaz. vol. 154; p. 806.

Pollay, George C., Ithaca, N. Y. Registering device for billiard-tables. No. 956,599; May 3; Sp. p. 198; Gaz. vol. 154; p. 24.

Pollock, Charles V., Madison, Wis. Gas-mixer. No. 959,597; May 31; Sp. p. 6864; Gaz. vol. 154; p. 1168.

Pollock, Grant S., Pittsburg, Pa. Clothes-pin. No. 958,532; May 17; Sp. p. 4626; Gaz. vol. 154; p. 759.

Polo, Joseph B., Clear Lake, S. D., assignor of one-half to E. H. Faustian, Hardwich, Minn. Starting and stopping mechanism for internal-combustion engines. No. 957,372; May 10; Sp. p. 1887; Gaz. vol. 154; p. 328.

Pomeroy, William D., Norwood, Ohio, assignor to Allis-Chalmers Company and The Bullock Electric Manufacturing Company. Dynamo-electric machine. No. 957,249; May 10; Sp. p. 1620; Gaz. vol. 154; p. 286.

Pond, Harry S., Chicago, Ill. Vending-machine. No. 959,598; May 31; Sp. p. 6865; Gaz. vol. 154; p. 1168.

Pontén, Anders, Berkeley, Cal. Centrifugal machine for purifying liquids. No. 957,250; May 10; Sp. p. 1622; Gaz. vol. 154; p. 286.

Pope, Frederick, New York, N. Y., assignor to Southern Manufacturing Company, Pittsburg, Pa. Extracting products from wood. No. 959,599; May 31; Sp. p. 6868; Gaz. vol. 154; p. 1169.

Porn, Stephen L., Rugby, N. D., assignor of one-half to H. Luth, Duluth, Minn. Wagon-jack. No. 959,255; May 24; Sp. p. 6151; Gaz. vol. 154; p. 1028.

Porter, Alonzo E., deceased, (M. L. Porter, administratrix,) Pompton Lakes, assignor of one-fourth to E. P. Searing, Jersey City, N. J. Fuse. No. 956,096; May 3; Sp. p. 1083; Gaz. vol. 154; p. 160.

Porter, Lemuel, Chicago, Ill. Adjustable brake-head. No. 957,251; May 10; Sp. p. 1624; Gaz. vol. 154; p. 287.

Porter, Lemuel, and C. H. Williams, Jr., assignors to Chicago Railway Equipment Company, Chicago, Ill. Adjustable brake-head. No. 959,600; May 31; Sp. p. 6870; Gaz. vol. 154; p. 1169.

Porter, Louis N., assignor to The Rayo Incubator Company, Blair, Nebr. Incubator. No. 956,600; May 3; Sp. p. 201; Gaz. vol. 154; p. 35.

Porter, Mary L., administratrix. (See Porter, Alonzo E.)

Porter, Wilson E., assignor to New Haven Clock Company, New Haven, Conn. Alarm-clock. No. 956,824; May 3; Sp. p. 710; Gaz. vol. 154; p. 112.

Portens, James P., Kirkwood, Mo. Sweeping compound and making same. No. 958,007; May 17; Sp. p. 3303; Gaz. vol. 154; p. 575.

Poeson, Edward, Chicago, Ill. Refrigerator-car hatch closure. No. 957,262; May 10; Sp. p. 1627; Gaz. vol. 154; p. 287.

Posternak, Swigel, Paris, France, assignor to Society of Chemical Industry in Basle, Basel, Switzerland. New glucoside and making same. No. 959,027; May 24; Sp. p. 5666; Gaz. vol. 154; p. 953.

Poston, Burton C., Chillicothe, Ohio. Combined couch and bed. No. 960,195; May 31; Sp. p. 8155; Gaz. vol. 154; p. 1372.

Poteet, Albert J., Lakeland, Fla. Window-shade fixture. No. 956,731; May 3; Sp. p. 498; Gaz. vol. 154; p. 80.

Potter, Walter G., Chicago, Ill. Proof-press. No. 957,373; May 10; Sp. p. 1893; Gaz. vol. 154; p. 329.

Potter, William, New York, N. Y. Marking-gage. No. 960,039; May 31; Sp. p. 7864; Gaz. vol. 154; p. 1320.

Potter, William M., assignor to E. C. Stearns & Co., Syracuse, N. Y. Lawn-mower. No. 956,601; May 3; Sp. p. 205; Gaz. vol. 154; p. 35.

Powell, Frank H., Des Moines, Iowa. Square and bevel. No. 960,196; May 31; Sp. p. 8158; Gaz. vol. 154; p. 1372.

Power and Mining Machinery Company. (See Bernhard, Richard, assignor.)

Power and Mining Machinery Company. (See Niedermeyer and Bernhard, assignors.)

Power, Nicholas, New York, N. Y. Fireproof magazine for film-reels. No. 959,601; May 31; Sp. p. 6871; Gaz. vol. 154; p. 1169.

Powers, Survilan, Bridgeport, Conn. Adjustable gun-stock. No. 959,069; May 24; Sp. p. 5774; Gaz. vol. 154; p. 967.

Pownall, Henry D., Cincinnati, Ohio. Ice-machine. No. 960,602; May 31; Sp. p. 6875; Gaz. vol. 154; p. 1170.

Pratt, Charles A., assignor to Goodman Manufacturing Company, Chicago, Ill. Rack-rail locomotive. No. 956,732; May 3; Sp. p. 499; Gaz. vol. 154; p. 80.

Pratt, Charles R., Montclair, N. J. Elevator safety device. No. 958,679; May 17; Sp. p. 4907; Gaz. vol. 154; p. 806.

Pratt, James S., Los Angeles, Cal. Water-cooler for refrigerators. No. 958,880; May 24; Sp. p. 5412; Gaz. vol. 154; p. 907.

Pratt, Leslie R. (See Schuyler and Hyle, assignors.)

Premier Last Company, The. (See Keil, Herman, assignor.)

Prentice, Vernette E. (See Conradson, Conrad M., assignor.)

Prensel, Adam H., Halifax, Pa. Shoe-machine. No. 959,256; May 24; Sp. p. 6153; Gaz. vol. 154; p. 1028.

Prensel, Adam H., Halifax, Pa. Machine for recessing shoe parts. No. 959,386; May 24; Sp. p. 6405; Gaz. vol. 154; p. 1071.

Prensel, Adam H., Halifax, Pa. Making shoes. No. 960,234; May 31; Sp. p. 8235; Gaz. vol. 154; p. 1386.

Prescott, Charles A., Brooklyn, N. Y. Automobile-heating appliance. No. 957,253; May 10; Sp. p. 1630; Gaz. vol. 154; p. 288.

Prescott, Edwin, Arlington, Mass. Boring-machine. No. 957,090; May 3; Sp. p. 1271; Gaz. vol. 154; p. 201.

Presner, Joseph. (See Shand, William, assignor.)

Pressler, Martin, Stamford, Conn. Spring-wheel. No. 957,574; May 10; Sp. p. 2239; Gaz. vol. 154; p. 396.

Preston, J. Renwick. (See Fowler, Joseph C., assignor.)

Preston, Lyman L., assignor of one-third to J. T. Smith, Dripping Springs, Tex. Well-tube holder. No. 957,091; May 3; Sp. p. 1274; Gaz. vol. 154; p. 202.

Preston, William H., New York, N. Y. Washing-machine. No. 957,475; May 10; Sp. p. 2093; Gaz. vol. 154; p. 363.

Prestwich, Frederic, Bolton, England. Cotton-picking machine. No. 959,603; May 31; Sp. p. 6875; Gaz. vol. 154; p. 1170.

Price, Charles P., Malden, assignor to American Tar Company, Boston, Mass. Oil-distributing apparatus. No. 958,434; May 17; Sp. p. 4440; Gaz. vol. 154; p. 725.

Price, David W., Owensboro, Ky. Joint for artificial legs. No. 959,881; May 31; Sp. p. 7476; Gaz. vol. 154; p. 1263.

Price, Edward F., Lancaster, and T. E. Bennett, Philadelphia, assignors of one-third to J. F. Keller, Lancaster, Pa. Incinerating-plant. No. 958,306; May 17; Sp. p. 4174; Gaz. vol. 154; p. 681.

Price, Max C., assignor to Independent Manufacturing Company, Muskegon, Mich. Hand-stamp. No. 958,533; May 17; Sp. p. 4627; Gaz. vol. 154; p. 760.

Price, William H., San Francisco, Cal. Single-trigger mechanism for firearms. No. 956,825; May 3; Sp. p. 712; Gaz. vol. 154; p. 112.

Priddle, Arthur, San Francisco, Cal. Fireproof construction. No. 960,197; May 31; Sp. p. 8160; Gaz. vol. 154; p. 1373.

Prindle, Edwin J., East Orange, N. J., assignor to Vita Electric Sign Company, New York, N. Y. Electric sign. No. 957,710; May 10; Sp. p. 2562; Gaz. vol. 154; p. 444.

Prindle, Harry A., Philadelphia, Pa. Centrifugal pump. No. 958,765; May 24; Sp. p. 5094; Gaz. vol. 154; p. 861.

Pringle, Percival J., Sidmouth, England. Brake for tramways and railways. No. 956,826; May 3; Sp. p. 715; Gaz. vol. 154; p. 113.

Prins, William H., Chicago, Ill. Malting apparatus. No. 958,821; May 24; Sp. p. 5238; Gaz. vol. 154; p. 882.

Prins, William H., Chicago, Ill. Malting apparatus. No. 958,822; May 24; Sp. p. 5238; Gaz. vol. 154; p. 883.

Prins, William H., Chicago, Ill. Malting apparatus. No. 958,823; May 24; Sp. p. 5240; Gaz. vol. 154; p. 883.

Prins, William H., Oak Park, assignor of two-thirds to C. A. and G. Plamondon, Chicago, Ill. Malting apparatus. No. 958,824; May 24; Sp. p. 5243; Gaz. vol. 154; p. 883.

Prins, William H., Oak Park, assignor of one-third to C. A. Plamondon and one-third to G. Plamondon, Chicago, Ill. Malting apparatus. No. 958,825; May 24; Sp. p. 5247; Gaz. vol. 154; p. 884.

Pritchard, Albert R., Rochester, N. Y. Faucet. No. 958,826; May 24; Sp. p. 5249; Gaz. vol. 154; p. 884.

Probst, Emil, Berlin, Germany. Collapsible shoe. No. 958,534; May 17; Sp. p. 4628; Gaz. vol. 154; p. 760.

Proctor, Alfred W., New York, N. Y. Game apparatus. No. 957,254; May 10; Sp. p. 1631; Gaz. vol. 154; p. 288.

Proctor and Gamble Company, The. (See O'Brien, Edward J., assignor.)

Proudfit, William S., Jr., Chicago, Ill. Bookbinding. No. 958,170; May 17; Sp. p. 3750; Gaz. vol. 154; p. 634.

Proudfit, William S., Jr., Chicago, Ill. Loose-leaf binder. No. 958,171; May 17; Sp. p. 3755; Gaz. vol. 154; p. 634.

Proulx, John B. (See Marengo, William E., assignor.)

Proutt, Frederick G., Memphis, Tenn. Electrically-actuated switch. No. 959,257; May 24; Sp. p. 6155; Gaz. vol. 154; p. 1029.

Providence Gas Motor Company. (See Wattles, Cyra B., assignor.)

Pryor, Thomas F., Jr., Newark, N. J. Cigar-tip cutter. No. 957,575; May 10; Sp. p. 2290; Gaz. vol. 154; p. 397.

Psilander, Charles A., and T. S. Scott, Pittsburg, Pa., assignors to Westinghouse Electric & Manufacturing Company. Dynamo-electric machine. No. 956,543; May 3; Sp. p. 82; Gaz. vol. 154; p. 15.

Public Safety Company. (See Lumley and Hillman, assignors.)

Puffenberger, Henry B., Tiffin, Ohio. Spring-scale weighing device. No. 958,172; May 17; Sp. p. 3759; Gaz. vol. 154; p. 635.

Pugh, John, *et al.* (See Wickersham, Benjamin F., assignor.)

Pullen, Leon W., Camden, N. J., assignor, by mesne assignments, to Waldron Clark Manufacturing Company. Electric-arc lamp. No. 958,827; May 24; Sp. p. 5250; Gaz. vol. 154; p. 884.

Pullen, Leon W., Camden, N. J., assignor, by mesne assignments, to Waldron Clark Manufacturing Company. Arc-lamp. No. 958,828; May 24; Sp. p. 5252; Gaz. vol. 154; p. 885.

Pulliam, Oswald S., Pittsburg, Pa. Body-bolster. No. 956,907; May 3; Sp. p. 1085; Gaz. vol. 154; p. 170.

Pullman Company, The. (See Dunbar, Thomas, assignor.)

Pulsifer, John R., Rochester, N. Y., assignor, by mesne assignments, to Empire Paper Company, Portland, Me. Coating-machine. No. 956,602; May 3; Sp. p. 206; Gaz. vol. 154; p. 36.

Pura, John A., Gonzales, Cal. Mowing-machine. No. 959,882; May 31; Sp. p. 7477; Gaz. vol. 154; p. 1263.

Purcell, Lee B., U. S. Marine Corps. Megaphone. No. 958,680; May 17; Sp. p. 4911; Gaz. vol. 154; p. 806.

Purdy, John H., Chicago, Ill. Lamp. No. 959,804; May 31; Sp. p. 7303; Gaz. vol. 154; p. 1237.

Puritan Manufacturing Company. (See Clarke, Charles E., assignor.)

Purves, Edward W., Chicago, Ill. Fire-hydrant coupling. No. 959,258; May 24; Sp. p. 6157; Gaz. vol. 154; p. 1029.

Pushee, George D., Weston, Mass. Apparatus for making brushes. No. 957,255; May 10; Sp. p. 1633; Gaz. vol. 154; p. 288.

Putman, Alice, Chicago, Ill. Hand knitting or weaving device. No. 957,711; May 10; Sp. p. 2566; Gaz. vol. 154; p. 444.

Putnam, Samuel J. (See Ainsworth, Putnam, and Edstrom.)

Putnam, Theodore A. B., New York, assignor of one-fourth to C. F. Tibbals, Brooklyn, N. Y. Frameless spring-bed. No. 959,104; May 24; Sp. p. 5970; Gaz. vol. 154; p. 998.

Pyper, George R., Salt Lake City, Utah. Massage apparatus. No. 958,939; May 24; Sp. p. 5500; Gaz. vol. 154; p. 923.

Qua, Henry H., Concord, Mass. Weeder. No. 959,604; May 31; Sp. p. 6878; Gaz. vol. 154; p. 1170.

Queisser, Max A., assignor to Pearson & Co. Gesellschaft mit beschränkter Haftung, Hamburg, Germany. Stable composition containing hydrogen peroxid. No. 959,605; May 31; Sp. p. 6879; Gaz. vol. 154; p. 1171.

Quinn, Patrick J., and G. P. Clifford, assignors of one-third to D. A. Driscoll, Buffalo, N. Y. Car-door lock. No. 957,518; May 10; Sp. p. 2161; Gaz. vol. 154; p. 377.

Quosbarth, Ludwig, Newark, N. J. Pyrographic point. No. 957,625; May 10; Sp. p. 2392; Gaz. vol. 154; p. 414.

R. K. Le Blond Machine Tool Company. (See Groene, William F., assignor.)

R. K. Le Blond Machine Tool Company, The. (See Le Blond and Groene, assignors.)

Raber, Joseph, Poplar Bluff, assignor to Adding Typewriter Company, St. Louis, Mo. Line-spacing mechanism. No. 958,173; May 17; Sp. p. 3761; Gaz. vol. 154; p. 635.

Raber, Nelson E., Akron, Ohio. Tire wrapping and unwrapping machine. No. 958,309; May 17; Sp. p. 4177; Gaz. vol. 154; p. 652.
Racine Economy Spring Company. (See Walker, Warren H., assignor.)
Rail Joint Company, The. (See Stanford, Arthur L., assignor.)
Railway Automatic Mail Device Co. (See Corthell, William M., assignor.)
Rainey, William J., Grove City, Pa. Computing device. No. 956,998; May 3; Sp. p. 1086; Gaz. vol. 154; p. 170.
Ralston, Isaac J., and J. Briggs, assignors of one-third to H. J. Walter, Kane, Pa. Glass-drawing furnace. No. 958,535; May 17; Sp. p. 4630; Gaz. vol. 154; p. 760.
Ralston, Robert D., Wilscot, Ga. Corn-crib. No. 956,903; May 3; Sp. p. 880; Gaz. vol. 154; p. 140.
Ralston Steel Car Company, The. (See Becker, Anton, assignor.)
Ramage, William E., and R. D. Shaw, assignors to Berkshire Hills Paper Co., Adams, Mass. Paper and grooving same. No. 958,174; May 17; Sp. p. 3763; Gaz. vol. 154; p. 636.
Ramsey, John W. (See Harker, Frank L., assignor.)
Ramstad, John N., Seattle, Wash. Egg-beater. No. 959,606; May 31; Sp. p. 6380; Gaz. vol. 154; p. 1171.
Ramström, Carl A. F., Stockholm, Sweden. Liner for centrifugal liquid-separators. No. 957,002; May 3; Sp. p. 1275; Gaz. vol. 154; p. 202.
Randall, Charles F. (See Whitcher and Randall.)
Randel, Frank L. (See Chute and Randel.)
Randle, Lazarus L., Muldon, Miss. Ventilator. No. 956,999; May 3; Sp. p. 1085; Gaz. vol. 154; p. 170.
Randolph, Marion C., San Francisco, Cal. Milk-bottle holder and lock. No. 957,712; May 10; Sp. p. 2568; Gaz. vol. 154; p. 444.
Rankin, Eugene, London, assignor of one-half to G. Spicer, Kingston-on-Thames, England. Braiding-machine. No. 958,175; May 17; Sp. p. 3765; Gaz. vol. 154; p. 636.
Rankin, Joseph A., Mill City, Oreg. Nut-lock. No. 959,964; May 31; Sp. p. 7666; Gaz. vol. 154; p. 1293.
Rankin, William K., assignor to J. E. Reyburn, Philadelphia, Pa. Brake-valve. No. 958,176; May 17; Sp. p. 3766; Gaz. vol. 154; p. 636.
Ranz, Jacob. (See Barker, George M., assignor.)
Raphael, Albert. (See Krohnengold and Raphael.)
Rapp, Louis P., assignor of one-fourth to H. A. Diamant, one-fourth to G. A. Sykes, and one-twelfth to H. L. Schaefer, St. Louis, Mo. Broom-sewing machine. No. 959,439; May 24; Sp. p. 6402; Gaz. vol. 154; p. 1088.
Rapp, Theodore, Los Angeles, Cal., assignor to E. Kirstein Sons Company, Rochester, N. Y. Eyeglass-mounting. No. 957,874; May 10; Sp. p. 1894; Gaz. vol. 154; p. 329.
Rapp, William J., Detroit, Mich., assignor to H. H. Creighton and A. Arnold, Toledo, Ohio. Circuit closer or timer. No. 957,713; May 10; Sp. p. 2560; Gaz. vol. 154; p. 444.
Raser, Henry T., Ashtabula, Ohio. Water-heater. No. 957,375; May 10; Sp. p. 1896; Gaz. vol. 154; p. 329.
Rasmussen, Albert E., North Yakima, Wash. Rotary engine. No. 957,799; May 10; Sp. p. 2758; Gaz. vol. 154; p. 472.
Rasmussen, Ernest P., Denmark, Nebr. Rein-holder. No. 959,259; May 24; Sp. p. 6158; Gaz. vol. 154; p. 1029.
Rasmussen, Laurits T., assignor to Walker Manufacturing Company, Council Bluffs, Iowa. Internal-combustion engine. No. 959,808; May 31; Sp. p. 7805; Gaz. vol. 154; p. 1237.
Rath, Charles H., Philadelphia, Pa. Spraying attachment. No. 958,536; May 17; Sp. p. 4631; Gaz. vol. 154; p. 761.
Rathbone, Andrew, Warrington, England. Wire-drawing machinery. No. 957,093; May 3; Sp. p. 1277; Gaz. vol. 154; p. 202.
Ratledge, George H., Sr., Colorado Springs, Colo. Adjustable trestle. No. 957,094; May 3; Sp. p. 1279; Gaz. vol. 154; p. 203.
Rangstad, John, Grassrange, Mont. Mail-bag catcher. No. 958,537; May 17; Sp. p. 4632; Gaz. vol. 154; p. 761.
Raworth, Dickson B., Brownsville, Tenn. Cleaner and separator for shelled corn. No. 959,260; May 24; Sp. p. 6159; Gaz. vol. 154; p. 1030.
Raymond, Harry, assignor to E. C. Stearns & Co., Syracuse, N. Y. Back-spacing mechanism for type-writers. No. 957,376; May 10; Sp. p. 1898; Gaz. vol. 154; p. 330.
Rayo Incubator Company, The. (See Porter, Louis N., assignor.)
Rasall, Henry G., Milwaukee, Wis. Blank book. No. 958,006; May 17; Sp. p. 3305; Gaz. vol. 154; p. 576.
Ream, George W., and P. E. Green, Butte, Mont. Belt. No. 958,538; May 17; Sp. p. 4634; Gaz. vol. 154; p. 761.
Reber, John G., deceased, Chicago, Ill.; O. S. Reber, administratrix, assignor to The Sefton Manufacturing Company, Anderson, Ind. Folding box. No. 959,261; May 24; Sp. p. 6161; Gaz. vol. 154; p. 1030.
Reber, Olive S., administratrix. (See Reber, John G.)
Rector, Alcorn, assignor to Rector Gas Lamp Company, New York, N. Y. Gas-lamp. No. 957,476; May 10; Sp. p. 2094; Gaz. vol. 154; p. 363.
Rector, Alcorn, assignor to W. R. Hutchinson, trustee, New York, N. Y. Alcohol-vapor lamp. No. 958,310; May 17; Sp. p. 4184; Gaz. vol. 154; p. 682.
Rector Gas Lamp Company. (See Rector, Alcorn, assignor.)
Reddig, Charles E., Hartford, Conn. Starting mechanism for explosive-engines. No. 959,070; May 24; Sp. p. 5775; Gaz. vol. 154; p. 967.
Redford, Frank O. (See Greenan and Redford.)
Reece Folding Machine Company. (See Dixon, Walter L., assignor.)
Reed, Charles J., Philadelphia, Pa. Process of detinning. No. 958,177; May 17; Sp. p. 3768; Gaz. vol. 154; p. 637.
Reed, John H., Lancaster, Wis. Pin. No. 958,311; May 17; Sp. p. 4185; Gaz. vol. 154; p. 682.
Reeder, Lester R., Walkersville, W. Va. Broom-head. No. 960,198; May 31; Sp. p. 8161; Gaz. vol. 154; p. 1373.
Rees, Harald B., Asheville, N. C. Roller for hide-unhairing machines. No. 959,262; May 24; Sp. p. 6162; Gaz. vol. 154; p. 1030.
Rees, Thomas, Chicago, Ill. Smoke-consumer. No. 957,377; May 10; Sp. p. 1899; Gaz. vol. 154; p. 330.
Reeves, Ila R., Adelphi, Iowa. Hay-rack brake. No. 958,766; May 24; Sp. p. 5097; Gaz. vol. 154; p. 862.
Reffelt, Flora A., Chicago, Ill. Key-guide. No. 959,065; May 31; Sp. p. 7667; Gaz. vol. 154; p. 1294.
Reid, James H., Newark, N. J. Combined electric arc or resistance and induction furnace. No. 956,544; May 3; Sp. p. 83; Gaz. vol. 154; p. 15.
Reiley, George K., Scottdale, Pa. Rail-jack. No. 958,539; May 17; Sp. p. 4636; Gaz. vol. 154; p. 762.
Reilly, Michael E., assignor to J. B. Godfrey, Portland, Oreg. Marble-shooter. No. 959,028; May 24; Sp. p. 5667; Gaz. vol. 154; p. 953.
Reilly, Isaac C., Natchez, Miss. Hat-remodeling tool. No. 956,965; May 3; Sp. p. 798; Gaz. vol. 154; p. 126.
Rein, Robert, Berlin, Germany. Reversing mechanism for calculating-machines. No. 957,095; May 3; Sp. p. 1280; Gaz. vol. 154; p. 203.
Reiner, Harry M. and O., New York, N. Y. Repeating watch. No. 959,165; May 24; Sp. p. 5972; Gaz. vol. 154; p. 998.
Reiner, Oscar. (See Reiner, Harry M. and O.)
Reinforcement Supply Company. (See Bertin, Paul E. and R. L., assignors.)
Reinhardt, Louis W. (See Alden and Reinhardt.)
Reinhardt, Robert S., Lincolnton, N. C. Stop-motion for doubling and twisting machines. No. 959,263; May 24; Sp. p. 6163; Gaz. vol. 154; p. 1030.
Reising, Frank L., Piper City, Ill. Road grader and scraper. No. 958,891; May 24; Sp. p. 5413; Gaz. vol. 154; p. 907.
Reiss, George T., Hamilton, Ohio, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Car-wheel press. No. 959,071; May 24; Sp. p. 5778; Gaz. vol. 154; p. 967.
Reissner, Hans, Aix-la-Chapelle, Germany. Gliding surface for operating in air or water. No. 958,009; May 17; Sp. p. 3306; Gaz. vol. 154; p. 576.
Reithmiller, Sadie A., Smicksburg, Pa. Umbrella-holder. No. 959,072; May 24; Sp. p. 5780; Gaz. vol. 154; p. 968.
Remde, Edward H., assignor to The Baker Motor Vehicle Company, Cleveland, Ohio. Vehicle-body structure. No. 958,540; May 24; Sp. p. 5501; Gaz. vol. 154; p. 923.
Remington Typewriter Company. (See Yaw, Clio B., assignor.)
Remington, William M. (See Duryea and Remington.)
Remy, Benjamin P. (See Remy, Frank I. and B. P.)
Remy, Benjamin P. and F. I., assignors to The Remy Electric Company, Anderson, Ind. Shaft-coupling. No. 958,540; May 17; Sp. p. 4637; Gaz. vol. 154; p. 762.
Remy, Benjamin P. and F. I., assignors to Remy Electric Company, Anderson, Ind. Magneto-electric generator. No. 959,166; May 24; Sp. p. 5975; Gaz. vol. 154; p. 999.
Remy Electric Company. (See Remy, Frank I. and B. P., assignors.)
Remy Electric Company, The. (See Remy, Benjamin P. and F. I., assignors.)
Remy, Frank I. (See Remy, Benjamin P. and F. I.)
Remy, Frank I. and B. P., assignors to Remy Electric Company, Anderson, Ind. Magneto-electric generator. No. 957,714; May 10; Sp. p. 2572; Gaz. vol. 154; p. 445.
Renfro, Robert E. (See Rieth, Charles H., assignor.)
Resch, Hermann, assignor to H. Resch, Jr., and C. R. O. Gutsch, Lörrach, Germany. Apparatus for chemical cleaning. No. 959,883; May 31; Sp. p. 7478; Gaz. vol. 154; p. 1264.
Reschke, William F., Wichita, Kans. Spring-support for vehicle-tongues. No. 957,096; May 3; Sp. p. 1282; Gaz. vol. 154; p. 204.
Resh, Claude K., Freeport, Ill. Label cabinet and moistener. No. 957,378; May 10; Sp. p. 1901; Gaz. vol. 154; p. 330.
Restucci, Giuseppe, Naples, Italy. Steam-controlling device. No. 957,097; May 3; Sp. p. 1284; Gaz. vol. 154; p. 204.
Reubold, Wilhelm, Karlshorst, near Berlin, Germany. Elevator. No. 957,379; May 10; Sp. p. 1903; Gaz. vol. 154; p. 331.
Reuter, William J., St. Louis, Mo. Sheet-metal vessel. No. 957,901; May 17; Sp. p. 2973; Gaz. vol. 154; p. 537.
Revere Rubber Company. (See Cobb, Henry Z., assignor.)
Reyburn, John E. (See Rankin, William K., assignor.)
Reynolds, Frank D. (See Sachs and Reynolds.)
Reynolds, Thomas J., Bessemer, Ala. Attachment for milk-bottles. No. 958,312; May 17; Sp. p. 4187; Gaz. vol. 154; p. 683.
Rheolite Company. (See Phillips, William A., assignor.)
Rhoades, Alonzo E., assignor to Draper Company, Hopedale, Mass. Fly-wheel for warping and balling machines. No. 958,974; May 24; Sp. p. 5566; Gaz. vol. 154; p. 935.
Ribereau y Marteaux, Luis, Habana, Cuba. Interlocking cellular building-block. No. 958,413; May 17; Sp. p. 4392; Gaz. vol. 154; p. 717.

Rice, Edwin W., Jr., Schenectady, N. Y., assignor to General Electric Company. Electric soldering-iron. No. 957,256; May 10; Sp. p. 1636; Gaz. vol. 154; p. 289.
Rice, Frank W. (See Dennis and Rice.)
Rice Gas Engine Company. (See Rice, John V., Jr., assignor.)
Rice, John V., Jr., assignor to Rice Gas Engine Company, Bordentown, N. J. Gas-engine. No. 958,975; May 24; Sp. p. 5571; Gaz. vol. 154; p. 936.
Rice, Joseph T., New York, N. Y. Centering apparatus. No. 959,167; May 24; Sp. p. 5976; Gaz. vol. 154; p. 999.
Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Governing mechanism for turbines. No. 957,902; May 17; Sp. p. 2974; Gaz. vol. 154; p. 538.
Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Portable fire-engine. No. 957,903; May 17; Sp. p. 2978; Gaz. vol. 154; p. 538.
Richards, Francis H., Hartford, Conn. Coiling and feed mechanism. No. 957,905; May 17; Sp. p. 2992; Gaz. vol. 154; p. 539.
Richards, Francis H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Machine for making types and type-bars. No. 957,904; May 17; Sp. p. 2979; Gaz. vol. 154; p. 538.
Richards, Francis H., Hartford, Conn., assignor, by mesne assignments, of one-half to American Typographic Corporation. Rolling mechanism. No. 958,010; May 17; Sp. p. 3307; Gaz. vol. 154; p. 576.
Richards, Francis H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Type-bar. No. 958,435; May 17; Sp. p. 4443; Gaz. vol. 154; p. 726.
Richards, Francis H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Making type and type-bars. No. 958,436; May 17; Sp. p. 4444; Gaz. vol. 154; p. 726.
Richards, Francis H., Hartford, Conn., assignor to E. D. Speer, New York, N. Y. Coiling mechanism. No. 958,767; May 24; Sp. p. 5000; Gaz. vol. 154; p. 862.
Richards, John T. (See Sower and Richards.)
Richardson, Edward M., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio. Truck side frame. No. 958,541; May 17; Sp. p. 4639; Gaz. vol. 154; p. 762.
Richardson, Fred. Webb City, Mo. Gravity-jig attachment. No. 959,607; May 31; Sp. p. 6881; Gaz. vol. 154; p. 1171.
Richardson, George C. (See Gardner, Benjamin F., assignor.)
Richardson, Harold A., Steelton, Pa. Game-board. No. 957,800; May 10; Sp. p. 2750; Gaz. vol. 154; p. 473.
Richardson, Harvey J., Chicago, Ill. Relay air-valve. No. 959,073; May 24; Sp. p. 5781; Gaz. vol. 154; p. 968.
Richardson, Henry, New York, N. Y. Automatic weighing-machine. No. 960,108; May 31; Sp. p. 7987; Gaz. vol. 154; p. 1342.
Richardson, Joseph, and J. F. Neef, Philadelphia, Pa. Dyeing-machine. No. 957,801; May 10; Sp. p. 2761; Gaz. vol. 154; p. 473.
Richardson, Oliver O., Brookville, Kans. Screen-bed. No. 959,168; May 24; Sp. p. 5982; Gaz. vol. 154; p. 1000.
Richardson, Samuel L. (See Koerkle, Frank D., assignor.)
Richardson, William K., Leavenworth, Kans. Centrifugal pump. No. 958,768; May 24; Sp. p. 5104; Gaz. vol. 154; p. 862.
Richardson, William K., Leavenworth, Kans. Purifying or clarifying water. No. 958,769; May 24; Sp. p. 5105; Gaz. vol. 154; p. 863.
Richardson, William K., Leavenworth, Kans. Centrifugal water-purifier. No. 958,770; May 24; Sp. p. 5107; Gaz. vol. 154; p. 863.
Richey, Charles A. (See Haddon, Leonard F., assignor.)
Richmond, Henry E., Westwood, N. J. Lens-mount. No. 959,169; May 24; Sp. p. 5983; Gaz. vol. 154; p. 1000.
Richmond, Henry E., Westwood, N. J. Lens-mount. No. 959,387; May 24; Sp. p. 6407; Gaz. vol. 154; p. 1071.
Ricker, Reuben C., Canal Dover, Ohio. Mold. No. 959,806; May 31; Sp. p. 7807; Gaz. vol. 154; p. 1237.
Rickerson, Clinton J. G., Colorado Springs, Colo. Automatic switch-throwing device. No. 959,884; May 31; Sp. p. 7480; Gaz. vol. 154; p. 1264.
Ricketts, Claude B., St. Louis, Mo. Illuminated threshold. No. 958,542; May 17; Sp. p. 4640; Gaz. vol. 154; p. 763.
Riddell, William A., Erie, Pa. Mold. No. 958,892; May 24; Sp. p. 5414; Gaz. vol. 154; p. 908.
Ridenour, William E., assignor to Franklin Chemical Works, Philadelphia, Pa. Composition of hydrated sodium carbonate and sodium tannate. No. 958,893; May 24; Sp. p. 5415; Gaz. vol. 154; p. 908.
Ridgely Trimmer Company, The. (See Brening, Louis F., assignor.)
Ridgway, John T., Hillsboro, Ohio. Silo. No. 958,178; May 17; Sp. p. 3769; Gaz. vol. 154; p. 637.
Ried, Philip, Lumberton, N. J. Window-screen. No. 957,906; May 17; Sp. p. 2995; Gaz. vol. 154; p. 539.
Riehl, John J., Cleveland, Ohio. Burner. No. 957,098; May 3; Sp. p. 1285; Gaz. vol. 154; p. 204.
Rieth, Charles H., St. Louis, Mo., assignor to R. E. Renfro, Carbondale, Ill. Combination game-blocks. No. 956,827; May 3; Sp. p. 718; Gaz. vol. 154; p. 113.
Riggs, George P., St. Marys, W. Va., assignor to E. De Moulin, Greenville, Ill. Trick-gun. No. 958,712; May 17; Sp. p. 4968; Gaz. vol. 154; p. 817.
Riley, John, and R. D. Hunt, Laporte, Ind. Shock-absorber for vehicles. No. 959,170; May 24; Sp. p. 5984; Gaz. vol. 154; p. 1000.
Riordan, Ellen O., *et al.* (See Humason, Granville A., assignor.)
Riordan, Robert W., Brooklyn, N. Y. Rotary valve. No. 958,313; May 17; Sp. p. 4188; Gaz. vol. 154; p. 683.
Rippetoe, Ada B., Yellville, Ark. Envelop. No. 958,543; May 17; Sp. p. 4643; Gaz. vol. 154; p. 763.
Rittase, Ephraim N., Manchester, Md. Engine-starter. No. 956,646; May 3; Sp. p. 804; Gaz. vol. 154; p. 59.
Ritter, Adam, Cincinnati, Ohio. Door. No. 958,976; May 24; Sp. p. 5573; Gaz. vol. 154; p. 936.
Ritter, Frank, Rochester, N. Y. Dental chair. No. 959,608; May 31; Sp. p. 6883; Gaz. vol. 154; p. 1171.
Rivers, Philip J., New Rochelle, N. Y. Driving-gear for automobiles. No. 957,626; May 10; Sp. p. 2593; Gaz. vol. 154; p. 414.
Roberson, J. O., *et al.* (See Morris and Watkins, assignors.)
Robert N. Bassett Company, The. (See Holden, Walter A., assignor.)
Roberts, Eugene, and A. H. Gibson, Lehi, Utah. Centrifugal machine. No. 957,715; May 10; Sp. p. 2573; Gaz. vol. 154; p. 445.
Roberts, Homer J., Evanston, Ill., assignor, by mesne assignments, to Homer Roberts Telephone Co. Party-line telephone system. No. 958,894; May 24; Sp. p. 5416; Gaz. vol. 154; p. 908.
Roberts, Leonard C., Nunda, N. Y. Feed-regulator. No. 958,314; May 17; Sp. p. 4190; Gaz. vol. 154; p. 683.
Robertson, George. (See White and Robertson.)
Robertson, Henry M., St. Paul, Minn., assignor to Gold Car Heating & Lighting Company, New York, N. Y. Hose-coupling lock. No. 958,437; May 17; Sp. p. 4440; Gaz. vol. 154; p. 726.
Robertson, Henry M., St. Paul, Minn., assignor to Gold Car Heating & Lighting Company, New York, N. Y. Hose-coupling lock. No. 958,438; May 17; Sp. p. 4450; Gaz. vol. 154; p. 727.
Robinson, Daniel P., Baltimore, Md. Can end. No. 960,109; May 31; Sp. p. 7990; Gaz. vol. 154; p. 1342.
Robinson, Daniel P., assignor to Continental Can Company, Baltimore, Md. Can-soldering machine. No. 959,388; May 24; Sp. p. 6408; Gaz. vol. 154; p. 1072.
Robinson, Edwin L. (See Snyder, Ward H., assignor.)
Robinson, Harry, Sheffield, Ala. Nut-lock. No. 957,576; May 10; Sp. p. 2294; Gaz. vol. 154; p. 396.
Robinson, Harry E., New York, N. Y. Cigarette-former. No. 960,110; May 31; Sp. p. 7991; Gaz. vol. 154; p. 1343.
Robinson, Henry J., Cleveland, Ohio. Floor and ceiling plate. No. 957,000; May 3; Sp. p. 1089; Gaz. vol. 154; p. 171.
Robinson, James R., Mount Lebanon, Pa. Rotary fan. No. 956,781; May 3; Sp. p. 600; Gaz. vol. 154; p. 96.
Robinson, Lewis T., and R. Miller, Jr., Schenectady, N. Y., assignors to General Electric Company. Film-holder for oscillographs. No. 957,257; May 10; Sp p. 1637; Gaz. vol. 154; p. 289.
Robinson, Roy P., Brilliant, Ohio. Water-wheel. No. 957,099; May 3; Sp. p. 1286; Gaz. vol. 154; p. 204.
Robinson, Seymour. (See Schneider, Gottlieb, assignor.)
Robinson, Sterling P., Galena, Kans. Grate for concentrator-jigs. No. 960,111; May 31; Sp. p. 7992; Gaz. vol. 154; p. 1343.
Robinsteen, Charles H. (See Koogler, John B., assignor.)
Rocheleau, Louis T. (See Metcalf and Rocheleau.)
Rocheleau, Walter C. (See Metcalf and Rocheleau.)
Rochester Stamping Company. (See Cross, Frederick J., assignor.)
Rockford Lathe & Drill Company. (See Johnson, William B., assignor.)
Rockwell, Byrd C., Malvern, Ark. Screen-door. No. 957,100; May 3; Sp. p. 1287; Gaz. vol. 154; p. 204.
Rockwood, George I., Worcester, Mass. Strut for automatic sprinklers. No. 956,738; May 3; Sp. p. 502; Gaz. vol. 154; p. 81.
Roderick Lean Manufacturing Company. (See Warne and McLean, assignors.)
Rodger Ballast Car Company. (See Hart, Harry S., assignor.)
Rodgers, Thomas E., assignor of one-half to W. Goodman, Memphis, Tenn. Surgical appliance. No. 959,389; May 24; Sp. p. 6410; Gaz. vol. 154; p. 1072.
Rodman, Earl C., West Point, Iowa. Telephone system. No. 958,315; May 17; Sp. p. 4192; Gaz. vol. 154; p. 684.
Rodrigues, Manuel R., New York, N. Y. Cot-holder. No. 958,895; May 24; Sp. p. 5428; Gaz. vol. 154; p. 909.
Roehm, Joseph P., Philadelphia, Pa. Lap-board. No. 960,112; May 31; Sp. p. 7993; Gaz. vol. 154; p. 1343.
Roehrich, Frank N., Jersey City, N. J., assignor to G. P. Carroll, Bridgeport, Conn. Electric valve. No. 959,609; May 31; Sp. p. 6887; Gaz. vol. 154; p. 1172.
Roenitz, Louis T. (See Shackleton, Alfred, assignor.)
Roesen, Oscar, assignor, by mesne assignments, to R. Hoe and Co., New York, N. Y. Printing-machine. No. 958,771; May 24; Sp. p. 5111; Gaz. vol. 154; p. 863.
Roessler and Hasslacher Chemical Company. (See McNitt, Robert J., assignor.)
Roever, Julius, New York, N. Y. Record-holder. No. 959,610; May 31; Sp. p. 6890; Gaz. vol. 154; p. 1172.
Rogers, Charles T., and F. E. Lee, Cardington, Ohio. Fertilizer-discharging attachment for corn-planters. No. 958,772; May 24; Sp. p. 5115; Gaz. vol. 154; p. 864.
Rogers, Frank R., and C. Vallone, assignors to Barcalo Manufacturing Company, Buffalo, N. Y. Miter-joint for tubes. No. 958,316; May 17; Sp. p. 4194; Gaz. vol. 154; p. 684.

Rogers, James H., Hyattsville, Md. Method and apparatus for producing high-frequency oscillating currents. No. 958,329; May 24; Sp. p. 5254; Gaz. vol. 154; p. 886.

Rogers, John R., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Line-casting machine. No. 957,802; May 10; Sp. p. 2763; Gaz. vol. 154; p. 478.

Rogers, John R., Brooklyn, N. Y., assignee to Mergenthaler Linotype Company. Line-casting machine. No. 958,317; May 17; Sp. p. 4196; Gaz. vol. 154; p. 685.

Rogers Verybest Manufacturing Company. (See Bloch, Pauline S., assignor.)

Rogge, John H., Smishek, N. D. Breaking-plow. No. 959,390; May 24; Sp. p. 6412; Gaz. vol. 154; p. 1072.

Rohrbacher, Charles A., assignor of one-half to A. F. Scherfenberg, Bellingham, Wash. Automatic musical instrument. No. 958,318; May 17; Sp. p. 4198; Gaz. vol. 154; p. 685.

Rohrer, Daniel. (See Baab, Jacob A., assignor.)

Rolfe, Eben B., Spokane, Wash. Horse-hitching device. No. 957,380; May 10; Sp. p. 1904; Gaz. vol. 154; p. 331.

Rolfes, George H., assignor to Handian-Buck Manufacturing Company, St. Louis, Mo. Railway-lantern. No. 958,319; May 17; Sp. p. 4203; Gaz. vol. 154; p. 686.

Roller, Frank W., East Orange, N. J., assignor to Roller-Smith Company. Electrical measuring instrument. No. 958,320; May 17; Sp. p. 4205; Gaz. vol. 154; p. 687.

Roller-Smith Company. (See Roller, Frank W., assignor.)

Rood, Lloyd V., Marietta, Ohio. Mail-box. No. 959,885; May 31; Sp. p. 7483; Gaz. vol. 154; p. 1264.

Roos, Herman, Berlin, Germany, assignor to General Electric Company. Means for cooling dynamo-electric machines. No. 957,102; May 3; Sp. p. 1291; Gaz. vol. 154; p. 205.

Roos, Hermad, Berlin, Germany, assignor to General Electric Company. Means for cooling dynamo-electric machines. No. 957,103; May 3; Sp. p. 1293; Gaz. vol. 154; p. 205.

Roose, Gustave E., assignor of one-half to W. J. McNamara, Wetaskiwin, Alberta, Canada. Machine for cutting brush. No. 957,101; May 3; Sp. p. 1288; Gaz. vol. 154; p. 205.

Roseback, Frederick P., Benton Harbor, Mich. Perforating-machine. No. 959,966; May 31; Sp. p. 7668; Gaz. vol. 154; p. 1294.

Rose, Charley B., Canistota, S. D. Door-fitting vise. No. 959,264; May 24; Sp. p. 6165; Gaz. vol. 154; p. 1031.

Rose, James A., Hastings, Nebr. Washer and gasket cutter. No. 958,941; May 24; Sp. p. 5502; Gaz. vol. 154; p. 923.

Rose, John. (See Henretta, Thomas J., assignor.)

Rosemajer, Julius, Berlin, Germany. Spring arrangement for vehicles. No. 958,544; May 17; Sp. p. 4044; Gaz. vol. 154; p. 763.

Rosen, Bernard, Cincinnati, Ohio. Shirt. No. 959,611; May 31; Sp. p. 6892; Gaz. vol. 154; p. 1173.

Rosenberger, Arthur, Berlin, Germany. Apparatus for producing kefir powder. No. 957,104; May 3; Sp. p. 1294; Gaz. vol. 154; p. 206.

Rosenblatt, Girard B. (See Kintner and Rosenblatt.)

Rosendale Spreader Company. (See Siebenhaar, Otto W., assignor.)

Rosenshine, Morris W., San Francisco, Cal. Vehicle-wheel. No. 958,439; May 17; Sp. p. 4452; Gaz. vol. 154; p. 727.

Rosenthal, August, West Allis, Wis. Straw stacker and elevator. No. 957,907; May 17; Sp. p. 2996; Gaz. vol. 154; p. 540.

Rosenthal, James H., and A. Spyer, London, England, assignors to The Babcock & Wilcox Company, Bayonne, N. J. Water-tube steam-generator. No. 959,612; May 31; Sp. p. 6892; Gaz. vol. 154; p. 1173.

Ross, Charles H. A. F. L., Ross-Shire, Scotland. Automatic firearm. No. 958,545; May 17; Sp. p. 4645; Gaz. vol. 154; p. 763.

Ross, Herold H., assignor to Theo. A. Kochs Company, Chicago, Ill. Hydraulic barber's chair. No. 957,258; May 10; Sp. p. 1643; Gaz. vol. 154; p. 289.

Ross, Paul, Halberstadt, Germany. Apparatus for measuring and registering the oscillations of vibrating bodies, such as marine vessels, airships, railway-vehicles, and the like. No. 957,908; May 17; Sp. p. 3000; Gaz. vol. 154; p. 540.

Rossbach, Paul. (See Benz and Rossbach.)

Rossmeisl, Richard A., Whittingham, Vt. Railway-spike. No. 958,546; May 17; Sp. p. 4652; Gaz. vol. 154; p. 764.

Rotary Ring Spinning Company. (See Brigham, Edward A., assignor.)

Rotary Ring Spinning Company. (See Hall, Bicknell, assignor.)

Roth, Charles E., trustee. (See Vierengel and Sofge, assignors.)

Rothberg, Aime, Philadelphia, Pa. Apparatus for making leather-covered cushioned seats for chairs. No. 958,011; May 17; Sp. p. 3311; Gaz. vol. 154; p. 577.

Rowell, Theodore B., Beaver Dam, Wis. Force-feed seeder. No. 956,545; May 3; Sp. p. 84; Gaz. vol. 154; p. 15.

Rowland, Charles M., Mansfield, Ohio. Corn-crib. No. 957,381; May 10; Sp. p. 1905; Gaz. vol. 154; p. 331.

Roy, William O., Montreal, Quebec, Canada. Crate and show-bench. No. 960,199; May 31; Sp. p. 6162; Gaz. vol. 154; p. 1273.

Royal Equipment Company, The. (See Vanderbeek, Herbert, assignor.)

Royal Typewriter Company. (See Hess, Edward B., assignor.)

Royce, William D. (See Snyder, Mell K., assignor.)

Rozar, Charles B., Empire, Ga. Harrow. No. 960,200; May 31; Sp. p. 8163; Gaz. vol. 154; p. 1373.

Rubrecht, Emil J., and P. C. Dean, Pittsburg, Pa. Attachment for horseshoes. No. 958,547; May 17; Sp. p. 4653; Gaz. vol. 154; p. 764.

Rubsamen, George. (See Hall, George F., assignor.)

Ruby, Frederick W., assignor to Ruby Manufacturing Company, Jackson, Mich. Sign. No. 957,259; May 10; Sp. p. 1649; Gaz. vol. 154; p. 290.

Ruby Manufacturing Company. (See Ruby, Frederick W., assignor.)

Rudy, Daniel, Jr., Nashville, Tenn. Belt-stretcher. No. 960,201; May 31; Sp. p. 8165; Gaz. vol. 154; p. 1374.

Rugh, Harry O., assignor to Sandwich Electric Company, Sandwich, Ill. Signaling system. No. 956,782; May 3; Sp. p. 602; Gaz. vol. 154; p. 96.

Ruhlin, Otto, North Andover, Mass. Cloth-measuring machine. No. 950,074; May 24; Sp. p. 5783; Gaz. vol. 154; p. 969.

Rumble, Alexander C., assignor of one-half to E. H. Wuhrmann, San Jose, Cal. Transplanter. No. 960,113; May 31; Sp. p. 7995; Gaz. vol. 154; p. 1343.

Rumely Company. (See Higgins, William H. C., Jr., assignor.)

Rumenapp, Carl, Augsburg, Germany. Metal-filament lamp. No. 959,075; May 24; Sp. p. 5785; Gaz. vol. 154; p. 969.

Runkel, Friedrich, and M. Hersberg, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Dye. No. 958,830; May 24; Sp. p. 5256; Gaz. vol. 154; p. 886.

Ruppenthal, August R., Brillion, Wis. Milk-can closure. No. 958,012; May 17; Sp. p. 3313; Gaz. vol. 154; p. 577.

Russell, Archibald F. (See Linquest, Oscar B., assignor.)

Russell, Charles A., New York, N. Y. Tire-case. No. 959,301; May 24; Sp. p. 6414; Gaz. vol. 154; p. 1073.

Russell, Charles D., St. Paul, Minn. Rail-joint. No. 956,828; May 3; Sp. p. 719; Gaz. vol. 154; p. 113.

Russell, Charles D., St. Paul, Minn. Nut-lock. No. 960,040; May 31; Sp. p. 7866; Gaz. vol. 154; p. 1321.

Russell & Erwin Manufacturing Company. (See Voight and Hurd, assignors.)

Russell, Hezekiah, Marion, Ohio. Water-softening apparatus. No. 958,831; May 24; Sp. p. 5257; Gaz. vol. 154; p. 886.

Russell, Hezekiah, Dayton, Ohio. Water-softening apparatus. No. 958,832; May 24; Sp. p. 5262; Gaz. vol. 154; p. 887.

Russell, Joseph F. (See Kirkpatrick, Peter T., assignor.)

Russell, Mary N. (See Russell, Willis W., assignor.)

Russell, Samuel G. (See Shakespeare and Russell.)

Russell, Willis W., Highland Park, assignor to M. N. Russell, Milltown, N. J. Playing or game card. No. 957,105; May 3; Sp. p. 1296; Gaz. vol. 154; p. 206.

Ruth, Edward C., Mount Vernon, N. Y. Electric-fixture fitting. No. 956,603; May 3; Sp. p. 211; Gaz. vol. 154; p. 36.

Ruthenberg, Hermann, Villen Colonie Grunewald, near Berlin, Germany. Rotary fan or propeller. No. 959,392; May 24; Sp. p. 6416; Gaz. vol. 154; p. 1073.

Rutledge, James R., *et al.* (See Misner, Edgar D., assignor.)

Ryan, Lural S. (See Paton, Walter J., assignor.)

Ryan, Thomas J., Roxbury, assignor to T. G. Plant, Boston, Mass. Insole for boots and shoes. No. 958,013; May 17; Sp. p. 3314; Gaz. vol. 154; p. 577.

Ryan, William S., Viola, Ill. Lamp. No. 957,627; May 10; Sp. p. 2395; Gaz. vol. 154; p. 415.

Ryave, Samuel, McKees Rocks, Pa. Stool. No. 959,393; May 24; Sp. p. 6418; Gaz. vol. 154; p. 1073.

Rydell, John S., Minneapolis, Minn. Surgical instrument. No. 958,179; May 17; Sp. p. 3770; Gaz. vol. 154; p. 637.

Ryther, Frank A., Chicago, Ill., assignor to International Harvester Company. Baling-press. No. 958,821; May 17; Sp. p. 4208; Gaz. vol. 154; p. 687.

S. Karpen & Bros. (See Karpen, Solomon, assignor.)

S. H. Wetmore Company, The. (See Blackman, Charles M., assignor.)

Sabatier, Paul, Toulouse, France. Manufacturing methane or mixtures of methane and hydrogen. No. 956,734; May 3; Sp. p. 503; Gaz. vol. 154; p. 81.

Sachs Company, The. (See Sachs and Reynolds, assignors.)

Sachs, Joseph, and F. D. Reynolds, assignors to The Sachs Company, Hartford, Conn. Safety-fuse. No. 959,807; May 31; Sp. p. 7809; Gaz. vol. 154; p. 1238.

Sackett, Charles E., Danbury, Conn. Hat-brim edging, setting, and rounding machine. No. 957,519; May 10; Sp. p. 2183; Gaz. vol. 154; p. 377.

Sackett, Hiram B., Chicago, Ill. Sack-holder. No. 957,260; May 10; Sp. p. 1652; Gaz. vol. 154; p. 290.

Sackman, William H., assignor to Pennsylvania Specialty Manufacturing Co., Cochranton, Pa. Detachable and portable light-holder. No. 958,440; May 17; Sp. p. 4454; Gaz. vol. 154; p. 728.

Saddlemire, Ambrose L., Knox, N. Y. Hame-tug. No. 960,114; May 31; Sp. p. 7997; Gaz. vol. 154; p. 1344.

Sado, Solomon, Philadelphia, Pa. Rope net. No. 958,773; May 24; Sp. p. 5118; Gaz. vol. 154; p. 864.

Safety Car Heating & Lighting Company, The. (See Dixon, Robert M., assignor.)

Safety Car Heating & Lighting Company. (See Garland, William L., assignor.)

Safety Car Heating & Lighting Company, The. (See Hulse, George E., assignor.)

Safety Car Heating & Lighting Company, The. (See Thomson, William L., assignor.)

Sainsbury, James T. (See Colhower and Sainsbury.)

Salls, Henry H., and M. Wool, Burlington, Vt. Snow-guard. No. 956,647; May 3; Sp. p. 305; Gaz. vol. 154; p. 50.

Salom, Pedro G., Philadelphia, Pa. Negative plate for storage batteries and manufacture thereof. No. 960,115; May 31; Sp. p. 7999; Gaz. vol. 154; p. 1344.

Salomo, Henry A. H., Melbourne, Victoria, Australia. Differential gearing. No. 959,394; May 24; Sp. p. 6420; Gaz. vol. 154; p. 1074.

Salstrom, David E., assignor of one-half to E. Kopriwa, Chicago, Ill. Carving-machine. No. 957,716; May 10; Sp. p. 2574; Gaz. vol. 154; p. 446.

Salstrom, David B., assignor of one-half to E. Kopriwa, Chicago, Ill. Carving-machine. No. 957,717; May 10; Sp. p. 2578; Gaz. vol. 154; p. 446.

Salway, William S. (See Kaufmann, Lou B., assignor.)

Sanders, David P., Lancaster, Pa. Mold-sander. No. 956,829; May 3; Sp. p. 721; Gaz. vol. 154; p. 114.

Sanders, Joseph, Washington, D. C. Sound-record tablet. No. 956,904; May 3; Sp. p. 882; Gaz. vol. 154; p. 140.

Sanders, Joseph, Washington, D. C. Making sound-record tablets. No. 956,905; May 3; Sp. p. 888; Gaz. vol. 154; p. 140.

Sanderson, Cyrus B., Lincoln, Nebr. Manufacture of boot and shoe soles. No. 960,202; May 31; Sp. p. 8167; Gaz. vol. 154; p. 1374.

Sanderson, Edward S., Waterbury, Conn., assignor, by mesne assignments, to Dressel Railway Lamp Works, New York, N. Y. Wick-stop lamp-burner. No. 957,106; May 3; Sp. p. 1297; Gaz. vol. 154; p. 206.

Sands, Harry Z. (See Sweet, Burton W., assignor.)

Sandwich Electric Company. (See Rugh, Harry O., assignor.)

Sangamo Electric Company. (See Lanphier, Robert C., assignor.)

Sapp, James E., Bainbridge, Ga. Bearing. No. 958,548; May 17; Sp. p. 4654; Gaz. vol. 154; p. 764.

Sargent, Frederick G., Graniteville, Mass. Wireless telegraphy. No. 957,001; May 3; Sp. p. 1090; Gaz. vol. 154; p. 171.

Sargent, Frederick G., Westford, Mass. Wave-receiving device. No. 959,967; May 31; Sp. p. 7678; Gaz. vol. 154; p. 1294.

Sargent, Howard R., Schenectady, N. Y., assignor to General Electric Company. Attaching-plug. No. 957,261; May 10; Sp. p. 1653; Gaz. vol. 154; p. 291.

Sault, Zephaniah L., Somerville, Mass. Stop-cock. No. 956,866; May 3; Sp. p. 799; Gaz. vol. 154; p. 127.

Savage, Arthur C., Schenectady, N. Y., assignor to General Electric Company. Interlocking switch. No. 957,262; May 10; Sp. p. 1655; Gaz. vol. 154; p. 291.

Savoy, George F., Pewaukee, Wis. Ice-severing device. No. 956,604; May 3; Sp. p. 212; Gaz. vol. 154; p. 37.

Sawitske, Richard F., E. J. Yates, and J. M. Adams, assignors to F. W. Adams, Chicago, Ill. Metal bedstead. No. 958,322; May 17; Sp. p. 4210; Gaz. vol. 154; p. 687.

Scanlin, John. (See Naulty and Scanlin.)

Scanlon, John T., Hartford, Conn. Trolley-wire hanger. No. 959,076; May 24; Sp. p. 5785; Gaz. vol. 154; p. 969.

Scaramuzzi, Antony T., Paterson, N. J. Vehicle-wheel tire. No. 956,735; May 3; Sp. p. 505; Gaz. vol. 154; p. 81.

Schaake, William, Pittsburg, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburg, Pa. Trolley-conductor clamp. No. 958,833; May 24; Sp. p. 5265; Gaz. vol. 154; p. 887.

Schaake, William, Pittsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Hanger for electrical conductors. No. 958,834; May 24; Sp. p. 5266; Gaz. vol. 154; p. 884.

Schaefer, Herman L., *et al.* (See Rapp, Louis P., assignor.)

Schaefer, John. (See Schaefer, Joseph A., assignor.)

Schaefer, Joseph A., assignor to J. Schaefer, Chicago, Ill. Electrical switchboard. No. 959,886; May 31; Sp. p. 7485; Gaz. vol. 154; p. 1265.

Schaefer, Joseph A., assignor to J. Schaefer, Chicago, Ill. Speed and circuit controlling apparatus for electric motors. No. 959,887; May 31; Sp. p. 7487; Gaz. vol. 154; p. 1265.

Schaefer, Pauline, Oakland, Cal. Tooth-crown. No. 959,395; May 24; Sp. p. 6422; Gaz. vol. 154; p. 1074.

Schalkenbach, Robert N., Jersey City, N. J. Self-closing bottom-dumping bucket. No. 958,323; May 17; Sp. p. 4213; Gaz. vol. 154; p. 688.

Schanse, Henry C., Sr., Camden, N. J. Device for aerial navigation. No. 956,648; May 3; Sp. p. 307; Gaz. vol. 154; p. 50.

Schanslin, William F., Lima, Ohio. Combined hay tedder and mower. No. 957,028; May 10; Sp. p. 2397; Gaz. vol. 154; p. 418.

Schaper, Jesse H., *et al.* (See Gregory, Joseph, assignor.)

Scheele, Albert C., Butte, Mont. Thill-coupling. No. 957,002; May 3; Sp. p. 1094; Gaz. vol. 154; p. 171.

Scheibe, Harold M. (See Jackson and Scheibe.)

Scheibe, Harold M., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Relay-switch. No. 959,613; May 31; Sp. p. 6895; Gaz. vol. 154; p. 1173.

Schemmel, Robert C., assignor to Backstay Machine and Leather Company, Union City, Ind. Leather-working die. No. 958,824; May 17; Sp. p. 4216; Gaz. vol. 154; p. 688.

Scherfenberg, Albert F. (See Rohrbacher, Charles A., assignor.)

Scheri Monorail Company. (See Scheri, Richard, assignor.)

Scheri, Richard, Berlin, Germany, assignor to Scheri Monorail Company, Jersey City, N. J. Single-track vehicle. No. 959,077; May 24; Sp. p. 5786; Gaz. vol. 154; p. 970.

Schlen, Andrew E. (See Keithley and Schlen.)

Schilling, George. (See Nawn, John P., assignor.)

Schilling, Johannes, Halensee, near Berlin, assignor to Siemens & Halske, Aktiengesellschaft, Berlin, Germany. Producing tantalum. No. 958,180; May 17; Sp. p. 3771; Gaz. vol. 154; p. 637.

Schimmel, Fridolin, Faribault, Minn. Sandpapering-machine. No. 959,614; May 31; Sp. p. 6897; Gaz. vol. 154; p. 1174.

Schirrmacher, Theodor J. C., Oakland, Cal. Door-opening device. No. 959,615; May 31; Sp. p. 6899; Gaz. vol. 154; p. 1174.

Schitka, Ferdinand, assignor of one-half to W. Kollacher, Vienna, Austria-Hungary. Apparatus for beating fattrons. No. 959,616; May 31; Sp. p. 6900; Gaz. vol. 154; p. 1174.

Schlarmann, Theodore H., Breese, Ill. Thill-iron. No. 957,107; May 3; Sp. p. 1298; Gaz. vol. 154; p. 207.

Schleicher, William A., Cleveland, Ohio. Snap-hook. No. 960,041; May 31; Sp. p. 7867; Gaz. vol. 154; p. 1321.

Schlitz, John. Chicago, Ill. Transmission system. No. 957,263; May 10; Sp. p. 1657; Gaz. vol. 154; p. 292.

Schloemilch, Wilhelm, assignor to Gesellschaft für Drahtlose Telegraphie M. B. H., Berlin, Germany. Receiver for wireless telegraphy. No. 958,181; May 17; Sp. p. 3773; Gaz. vol. 154; p. 638.

Schlosser, Philip. (See Cook, George E., assignor.)

Schluns, Frederick A., Revere, Mass. Locking device for rotative parts. No. 956,605; May 3; Sp. p. 213; Gaz. vol. 154; p. 37.

Schluss, Max, Bredeney, near Essen-on-the-Ruhr, Germany. Producing a caoutchouc-like elastic substance. No. 960,116; May 31; Sp. p. 8001; Gaz. vol. 154; p. 1345.

Schmid, Gustav. (See Meyer-Zimmerli, Ernst, assignor.)

Schmid, Jacob, Detroit, Mich. Level. No. 956,850; May 3; Sp. p. 722; Gaz. vol. 154; p. 114.

Schmidt, Albrecht, and G. Krämalein, assignors to Farbwerke vorm. Meister, Lucius & Brüning, Höchst-on-the-Main, Germany. Urea of the anthraquinone series and making same. No. 958,325; May 17; Sp. p. 4218; Gaz. vol. 154; p. 689.

Schmidt, Albrecht, and E. Bryk, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Vat dye and making. No. 959,617; May 31; Sp. p. 6901; Gaz. vol. 154; p. 1174.

Schmidt, Charles, assignor to The Peerless Motor Car Company, Cleveland, Ohio. Wire bar for ignition systems. No. 958,835; May 24; Sp. p. 5267; Gaz. vol. 154; p. 888.

Schmidt, Ferdinand L., New York, N. Y. Discharging device for envelop-machines. No. 956,786; May 3; Sp. p. 507; Gaz. vol. 154; p. 82.

Schmidt, John G., Passaic, N. J. Flush-hinge door. No. 960,203; May 31; Sp. p. 8168; Gaz. vol. 154; p. 1374.

Schmidt, Leo H., Vale, Oreg. Show-case lock. No. 957,808; May 10; Sp. p. 2764; Gaz. vol. 154; p. 474.

Schmidt, Louis M., New Britain, assignor to G. P. Carroll, Bridgeport, Conn. Electric valve. No. 959,618; May 31; Sp. p. 6902; Gaz. vol. 154; p. 1175.

Schmidt, Morris, New York, N. Y. Cord-retainer for packages. No. 959,396; May 24; Sp. p. 6423; Gaz. vol. 154; p. 1074.

Schneider, Frederick, Velva, N. D. Wrench. No. 959,029; May 24; Sp. p. 5669; Gaz. vol. 154; p. 953.

Schneider, Gottlieb, assignor of one-half to S. Robinson, Bluffton, Ind. Clothes-drier. No. 959,888; May 31; Sp. p. 7489; Gaz. vol. 154; p. 1265.

Schneider, Henry, New York, N. Y. Nail-holder for hammers. No. 957,108; May 3; Sp. p. 1299; Gaz. vol. 154; p. 207.

Schneider, Joseph A., Lakeport, assignor of two-thirds to A. A. Brown, San Francisco, Cal. Internal-combustion-engine timer. No. 957,109; May 3; Sp. p. 1300; Gaz. vol. 154; p. 207.

Schneider, Louis C., Mittweida, Germany. Apparatus for hardening the teeth of card-clothing, &c. No. 958,326; May 17; Sp. p. 4220; Gaz. vol. 154; p. 689.

Schnitzspahn, Karl, Offenbach-on-the-Main, Germany, assignor to Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany. Orange azo dye. No. 959,078; May 24; Sp. p. 5788; Gaz. vol. 154; p. 970.

Schnoor, Peter J. A., Holstein, Iowa. Safety-pulley. No. 958,182; May 17; Sp. p. 3775; Gaz. vol. 154; p. 638.

Schnurr, Alfred, Sandusky, Ohio. Metal-reinforced concrete veneer for building construction. No. 957,382; May 10; Sp. p. 1907; Gaz. vol. 154; p. 332.

Schoenewolf, Christian F., *et al.* (See Weigand, Alfred, assignor.)

Schoenius, Daniel, Bergedorf, Germany. Flexible shafting. No. 956,737; May 3; Sp. p. 509; Gaz. vol. 154; p. 82.

Schofield, Joseph A. (See Oldfield and Schofield.)

Scholl, Franz, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Black mono-azo dye and making. No. 958,774; May 24; Sp. p. 5119; Gaz. vol. 154; p. 865.
Schönner, Rudolf, Berlin, Germany. Seed-sower. No. 957,577; May 10; Sp. p. 2294; Gaz. vol. 154; p. 398.
Schoonmaker, Leon M., Long Island City, N. Y. Dumping-barrow. No. 959,265; May 24; Sp. p. 6166; Gaz. vol. 154; p. 1081.
Schott & Gen. (See Hahn, Konrad, assignor.)
Schou, Ejnar, London, England. Cooling apparatus for fluid or semi-fluid substances. No. 957,629; May 10; Sp. p. 2329; Gaz. vol. 154; p. 416.
Schreiber, Albin, and O. Meister, Untermhaus, near Gera, Germany. Automobile-covering. No. 958,183; May 17; Sp. p. 3777; Gaz. vol. 154; p. 638.
Schreiber, Rudolph C., Harvey, Ill. Current-motor. No. 958,014; May 17; Sp. p. 3516; Gaz. vol. 154; p. 578.
Schroeder, Florence F., Berkeley, Cal., assignor to Vaco Manufacturing Co. Vacuum-supporting device. No. 957,804; May 10; Sp. p. 2766; Gaz. vol. 154; p. 474.
Schroeder, Frederick W., Kennington, London, England. Aerial ship. No. 959,266; May 24; Sp. p. 6168; Gaz. vol. 154; p. 1031.
Schull, John, Philadelphia, Pa. Jacquard-card-punching machine. No. 960,117; May 31; Sp. p. 8002; Gaz. vol. 154; p. 1345.
Schull, John, Philadelphia, Pa. Jacquard-card-cutting machine. No. 960,118; May 31; Sp. p. 8007; Gaz. vol. 154; p. 1345.
Schulman, Joseph. (See Schulman, Louis and J.)
Schulman, Louis and J., assignors to American Fire Cracker Manufacturing Company, New York, N. Y. Pyrotechnics. No. 956,546; May 3; Sp. p. 86; Gaz. vol. 154; p. 16.
Schulte, Eduard, New York, N. Y., assignor to The United Coke and Gas Company. Quenching coke. No. 958,184; May 17; Sp. p. 3777; Gaz. vol. 154; p. 638.
Schulte, Eduard, New York, N. Y., assignor to The United Coke and Gas Company. Regulator for gas-pumping systems. No. 958,185; May 17; Sp. p. 3780; Gaz. vol. 154; p. 639.
Schulte and Koerting Company. (See Knauf, Paul W., assignor.)
Schuls, Albert, Barmen, Germany. Keyboard for keyed musical instruments. No. 958,186; May 17; Sp. p. 3783; Gaz. vol. 154; p. 639.
Schuls, Otto, Schlachtensee, near Berlin, Germany. Turbo-unipolar generator. No. 958,681; May 17; Sp. p. 4911; Gaz. vol. 154; p. 806.
Schumacher, Frederick C., assignor to Perfect Foot-Arch Supporter Co., New York, N. Y. Device for the correction of flat foot, weak foot, or fallen arch of the foot. No. 957,718; May 10; Sp. p. 2581; Gaz. vol. 154; p. 446.
Schumann, Frank J., Bethlehem, Pa. Stamp-vending machine. No. 957,112; May 3; Sp. p. 1304; Gaz. vol. 154; p. 208.
Schutt, Theodore H. (See Champ and Schutt.)
Schuyler, Edward, Syracuse, and W. A. Hyle, assignors of one-third to L. R. Pratt, Buffalo, N. Y. Spring-wheel. No. 957,383; May 10; Sp. p. 1909; Gaz. vol. 154; p. 332.
Schwartz, Frederick, and L. Kleinmann, New York, assignors to Shapiro & Aronson, Brooklyn, N. Y. Shock-absorber for tungsten-lamps. No. 957,110; May 3; Sp. p. 1302; Gaz. vol. 154; p. 208.
Schwarz, Conrad S., Philadelphia, Pa. Machine for cleaning hats. No. 958,327; May 17; Sp. p. 4223; Gaz. vol. 154; p. 680.
Schwarz, Frank, Chicago, Ill. Door-hinge. No. 956,738; May 3; Sp. p. 500; Gaz. vol. 154; p. 82.
Schwarzschild & Sulzberger Co. (See Dyck, George E., assignor.)
Scopes, Alfred G., Ipswich, England. Embossing photographs or other pictures. No. 957,630; May 10; Sp. p. 2400; Gaz. vol. 154; p. 415.
Scott, David A. (See Best and Scott.)
Scott, Grace M., assignor of one-half to L. Helbeno, Washington, D. C. Diaper-cleaner. No. 956,831; May 3; Sp. p. 723; Gaz. vol. 154; p. 114.
Scott, John H., assignor of one-half to J. B. Dyer, Winston Salem, N. C. Tobacco-shield. No. 958,015; May 17; Sp. p. 3520; Gaz. vol. 154; p. 578.
Scott, John R., Daleville, Ind. Rodent-trap. No. 958,016; May 17; Sp. p. 3521; Gaz. vol. 154; p. 578.
Scott, Robert P., Cadiz, Ohio. Machine for hulling green peas on the vines. No. 957,442; May 10; Sp. p. 2032; Gaz. vol. 154; p. 352.
Scott, Robert P., Cadiz, Ohio. Green-pea-vine-hulling machine. No. 957,443; May 10; Sp. p. 2034; Gaz. vol. 154; p. 353.
Scott, Robert W., London, England. Apparatus for reducing tin. No. 957,111; May 3; Sp. p. 1303; Gaz. vol. 154; p. 208.
Scott, Thomas A., Cadiz, Ohio. Green-pea-vine-hulling machine. No. 957,444; May 10; Sp. p. 2036; Gaz. vol. 154; p. 353.
Scott, Thomas S. (See Pallander and Scott.)
Scott, William H., Norwich, England. Electric-circuit breaker. No. 960,171; May 24; Sp. p. 5965; Gaz. vol. 154; p. 1000.
Scovill, James R., Chicago, Ill. Circuit make-and-break device. No. 957,578; May 10; Sp. p. 2295; Gaz. vol. 154; p. 398.
Scovill Manufacturing Company. (See Goss and Leggett, assignors.)
Scullen, John, *et al.* (See Misner, Edgar D., assignor.)
Scully, Alexander E., *et al.* (See Patterson, Franklin M., assignor).
Seals, Charles, Lovilia, Iowa. Coal and rock drilling machine. No. 959,079; May 24; Sp. p. 5790; Gaz. vol. 154; p. 970.
Searing, Eugene P. (See Porter, Alonzo E.)
Searle, Elbert H., Springfield, Mass. Air-gun. No. 959,889; May 31; Sp. p. 7491; Gaz. vol. 154; p. 1206.
Searles, Arthur, Philadelphia, Pa. Chair. No. 959,619; May 31; Sp. p. 6905; Gaz. vol. 154; p. 1175.
Sears, Roebuck & Company. (See Christensen, Carl, assignor.)
Sears, Willard T., Philadelphia, Pa. assignor to Niles-Bement-Pond Company, Jersey City, N. J. Gapped wheel. No. 957,364; May 10; Sp. p. 1912; Gaz. vol. 154; p. 333.
Seaver, John W. (See Moore, James E. A., assignor.)
Seckendorff, Hermann, Hanover, Germany. Combined bootjack and foot-rest. No. 960,042; May 31; Sp. p. 7867; Gaz. vol. 154; p. 1321.
Seeberger, Charles D., Yonkers, N. Y. Conveyer. No. 956,606; May 3; Sp. p. 215; Gaz. vol. 154; p. 37.
Seeley, Frank E., assignor to The Bryant Electric Company, Bridgeport, Conn. Electric-lamp socket. No. 957,719; May 10; Sp. p. 2561; Gaz. vol. 154; p. 447.
Seelig, John G. (See Wyman, William H., assignor.)
Seely, Thomas H., assignee to T. G. Plant, Boston, Mass. Placer mechanism for lasting-machines. No. 958,017; May 17; Sp. p. 3522; Gaz. vol. 154; p. 579.
Seely, Thomas H., assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Pincer or gripper mechanism for lasting-machines. No. 958,187; May 17; Sp. p. 3783; Gaz. vol. 154; p. 639.
Sefton Manufacturing Company, The. (See Reber, John G., assignor.)
Seguin, Louis L. A., assignor to Societe des Moteurs Gnome, Paris, France. Rotary engine. No. 959,172; May 24; Sp. p. 5989; Gaz. vol. 154; p. 1001.
Sehnert, Fred L., and G. J. McManus, Houston, Tex., assignors of ninety-five one-hundredths to said McManus and five one-hundredths to said Sehnert. Pipe connection. No. 960,204; May 31; Sp. p. 8170; Gaz. vol. 154; p. 1375.
Seigle, William R., Nashua, N. H. Making insulating material. No. 959,620; May 31; Sp. p. 6906; Gaz. vol. 154; p. 1175.
Seitz, Frederick, Bensselaer, N. Y., assignor of one-third to V. Dickhaut and one-third to H. Dickhaut. Can-capping machine. No. 958,549; May 17; Sp. p. 4657; Gaz. vol. 154; p. 765.
Seitz, Theobald F., Kreusnach, Germany. Filter. No. 956,832; May 3; Sp. p. 724; Gaz. vol. 154; p. 114.
Selden, Lewis H., Minneapolis, Minn. Wall-tie. No. 960,043; May 31; Sp. p. 7868; Gaz. vol. 154; p. 1321.
Sell, Conrad, Arcadia, Nebr. Cultivator attachment. No. 957,579; May 10; Sp. p. 2297; Gaz. vol. 154; p. 398.
Sellers, Edgar E., *et al.* (See Balcom, William D., assignor.)
Sellers, William F., Wilmington, Del. Boiler-header. No. 960,044; May 31; Sp. p. 7869; Gaz. vol. 154; p. 1321.
Selmer, Fredrik, Christiania, Norway. Steel bar for reinforcement of slabs, beams, or similar constructions of concrete. No. 959,808; May 31; Sp. p. 7311; Gaz. vol. 154; p. 1238.
Sencenbaugh, Samuel S., Aurora, Ill. Draping-machine. No. 959,809; May 31; Sp. p. 7312; Gaz. vol. 154; p. 1238.
Senge, Liborius, Crescent Springs, Ky., assignor to The Globe-Wernicke Company, Cincinnati, Ohio. Filing-cabinet. No. 958,018; May 17; Sp. p. 3326; Gaz. vol. 154; p. 579.
Senn, Carl, Oakland, and D. C. Demarest, San Francisco, Cal. Lubricating-valve. No. 957,003; May 3; Sp. p. 1095; Gaz. vol. 154; p. 172.
Serwer, Samuel J., New York, N. Y. Button. No. 958,328; May 17; Sp. p. 4228; Gaz. vol. 154; p. 690.
Sessions, Frank L., Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company. Cable-reeling mechanism for electric locomotives. No. 959,621; May 31; Sp. p. 6908; Gaz. vol. 154; p. 1176.
Sester, Charles P., and H. Oelkers, Peoria, Ill. Gearing. No. 959,622; May 31; Sp. p. 6910; Gaz. vol. 154; p. 1176.
Severson, Andrew N., Maple Park, Ill. Sod-cutting attachment for spades. No. 958,188; May 17; Sp. p. 3785; Gaz. vol. 154; p. 640.
Severson, Harry A., *et al.* (See Peterson, Burt A., assignor.)
Sévigné, Henri A., *et al.* (See Peck, Ira F., assignor.)
Seymour, Charles E., Placerville, Cal. Apparatus for segregating solids from liquids. No. 958,942; May 24; Sp. p. 5505; Gaz. vol. 154; p. 924.
Shackleton, Alfred, assignor to L. T. Roenitz, Chicago, Ill. Machine for forming articles from pulp and analogous materials. No. 958,019; May 17; Sp. p. 3328; Gaz. vol. 154; p. 579.
Shafer, Howard S., Nazareth, Pa. Automobile-tire. No. 960,119; May 31; Sp. p. 8010; Gaz. vol. 154; p. 1345.
Shafer, John W., assignor of one-half to F. Young, Chicago, Ill. Automatic lubricator. No. 959,267; May 24; Sp. p. 6170; Gaz. vol. 154; p. 1031.
Shakespeare, William, Jr., Kalamazoo, Mich. Playing-cards. No. 960,205; May 31; Sp. p. 8173; Gaz. vol. 154; p. 1375.

Shakespeare, William, Jr., assignor to William Shakespeare, Jr., Company, Kalamazoo, Mich. Line-guide for fishing-rods. No. 958,775; May 24; Sp. p. 5120; Gaz. vol. 154; p. 865.
Shakespeare, William, Jr., and S. G. Russell, assignors to William Shakespeare, Jr., Company, Kalamazoo, Mich. Fishing-reel. No. 959,623; May 31; Sp. p. 6911; Gaz. vol. 154; p. 1176.
Shampou, Peter, and I. Donahue, assignors of one-third to J. Bedard, Webberville, Vt. Adjusting means for feed-screws. No. 959,810; May 31; Sp. p. 7313; Gaz. vol. 154; p. 1239.
Shand, William, assignor of one-half to Joseph Presner, Montreal, Quebec, Canada. Nut burring and facing machine. No. 959,624; May 31; Sp. p. 6913; Gaz. vol. 154; p. 1177.
Shapiro & Aronson. (See Schwartz and Kleinmann, assignors.)
Shapiro, Samuel, Philadelphia, Pa. Milk-heating apparatus. No. 960,045; May 31; Sp. p. 7871; Gaz. vol. 154; p. 1322.
Shapiro, Samuel, Philadelphia, Pa. Refrigerating attachment for milk-cans. No. 960,046; May 31; Sp. p. 7874; Gaz. vol. 154; p. 1322.
Shapley, Cooper, Guanajuato, Mexico. Centrifugal filter for cyanid plants. No. 959,173; May 24; Sp. p. 5990; Gaz. vol. 154; p. 1001.
Sharp, Lee C., Omaha, Nebr., assignor to American Can Company, New York, N. Y. Machine for soldering vent-cleats to can-caps. No. 958,776; May 24; Sp. p. 5122; Gaz. vol. 154; p. 865.
Shaw, Arthur E., assignor to The Pennsylvania Glass Globe Light Company of Philadelphia, Philadelphia, Pa. Inverted incandescent gas-light. No. 957,445; May 10; Sp. p. 2033; Gaz. vol. 154; p. 353.
Shaw, Charles H., Milwaukee, Wis., assignor to Standard Separator Company. Hollow shaft for centrifugal separators. No. 959,030; May 24; Sp. p. 5670; Gaz. vol. 154; p. 953.
Shaw, Charles H., Milwaukee, Wis., assignor to Standard Separator Company. Float for centrifugal separators. No. 959,625; May 31; Sp. p. 6916; Gaz. vol. 154; p. 1177.
Shaw, Edward, London, England. Apparatus for the treatment or preparation of sugar. No. 957,113; May 3; Sp. p. 1308; Gaz. vol. 154; p. 209.
Shaw, Eugene W., Weir, Kans. Air-hose coupling. No. 957,385; May 10; Sp. p. 1914; Gaz. vol. 154; p. 333.
Shaw, Henry D. (See Ramage and Shaw.)
Shaw, Linus H., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Making rands. No. 958,896; May 24; Sp. p. 5429; Gaz. vol. 154; p. 909.
Shea, John R., Oshkosh, Wis. Ellipsograph. No. 957,114; May 3; Sp. p. 1310; Gaz. vol. 154; p. 209.
Sheble, Horace, and T. Kraemer, assignors to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa. Talking-machine. No. 957,004; May 3; Sp. p. 1097; Gaz. vol. 154; p. 172.
Sheehan, William E., Albany, N. Y. Paper-making machinery. No. 959,626; May 31; Sp. p. 6917; Gaz. vol. 154; p. 1178.
Sheldon, Samuel B., Buffalo, N. Y. Coking coal. No. 959,080; May 24; Sp. p. 5792; Gaz. vol. 154; p. 971.
Shepard, William C., Pittsfield, Mass. Closing device for cellar fire-holes. No. 958,550; May 17; Sp. p. 4659; Gaz. vol. 154; p. 765.
Shepherd, Clarke W., Spring Hill, W. Va. Riding-saddle. No. 956,649; May 3; Sp. p. 309; Gaz. vol. 154; p. 51.
Shepherd, Oswald M. (See Martin and Shepherd.)
Sherman, Alvin G., Detroit, Mich. Measuring and dispensing can or tank. No. 957,005; May 3; Sp. p. 1098; Gaz. vol. 154; p. 172.
Sherwood, Harry B., Kansas City, Mo., assignor to Kansas City Scale & Supply Company. Scale. No. 958,441; May 17; Sp. p. 4455; Gaz. vol. 154; p. 728.
Sherwood, Warren A., and E. L. Gardner, Lancaster, Pa. Illuminated sign. No. 958,836; May 24; Sp. p. 5269; Gaz. vol. 154; p. 888.
Sherwood, Warren A., and E. L. Gardner, Lancaster, Pa. Illuminated sign. No. 958,837; May 24; Sp. p. 5272; Gaz. vol. 154; p. 889.
Sherwood, Warren A., and E. L. Gardner, Lancaster, Pa. Illuminated sign. No. 958,838; May 24; Sp. p. 5274; Gaz. vol. 154; p. 889.
Sherwood, William, New York, N. Y. Stand-boiler. No. 958,551; May 17; Sp. p. 4660; Gaz. vol. 154; p. 765.
Shillin, Frank, Sundby, assignor of one-half to E. G. Hilliard, Duluth, Minn. Sleigh-knee. No. 958,552; May 17; Sp. p. 4661; Gaz. vol. 154; p. 766.
Shimp, George, and I. H. Wilton, Patoka, Ill. Railway-switch. No. 957,115; May 3; Sp. p. 1313; Gaz. vol. 154; p. 209.
Shipman, James L., Mounds, Okla. Load-binder, wire-tightener, and lifting-jack. No. 958,777; May 24; Sp. p. 5128; Gaz. vol. 154; p. 865.
Shirey, John W. (See Hyre and Shirey.)
Shirley, John L., Mexico, Mexico. Elastic-fluid motor. No. 958,553; May 17; Sp. p. 4663; Gaz. vol. 154; p. 766.
Shoaf, Richard R. (See Walton, William D., assignor.)
Shockley, Richard W., San Angelo, Tex. Embroidery attachment. No. 959,890; May 31; Sp. p. 7495; Gaz. vol. 154; p. 1206.
Sholes, Zalmon G., New York, N. Y., assignor to West Disinfecting Company. Soap-cutting machine. No. 957,446; May 10; Sp. p. 2039; Gaz. vol. 154; p. 354.
Sholl, Max, Chicago, Ill. Collapsible drinking-cup. No. 957,264; May 10; Sp. p. 1662; Gaz. vol. 154; p. 292.
Shotland, Paul, New York, N. Y. Coat. No. 958,977; May 24; Sp. p. 5575; Gaz. vol. 154; p. 937.
Shue, Edward F., New York, N. Y. Fender. No. 960,120; May 31; Sp. p. 8011; Gaz. vol. 154; p. 1346.
Shuler, Edward. (See Burns, Anthony J., assignor.)
Sluman, Frank, Philadelphia, Pa., assignor to The Continuous Glass Press Company. Method of and means for annealing glass. No. 957,477; May 10; Sp. p. 2096; Gaz. vol. 154; p. 363.
Sibold, Charles T., Dorr, W. Va. Folding egg-crate. No. 959,627; May 31; Sp. p. 6918; Gaz. vol. 154; p. 1178.
Sicilian Asphalt Paving Company, The. (See Williamson and Brennan, assignors.)
Sidney, John. (See Wright, Samuel, assignor.)
Sidway, Henry T. (See Spengler and Sidway.)
Siebenbaar, Otto W., assignor to Rosendale Spreader Company, Rosendale, Wis. Fertilizer-distributer. No. 959,628; May 31; Sp. p. 6919; Gaz. vol. 154; p. 1178.
Sieber & Trussell Manufacturing Company. (See Dawson, James C., assignor.)
Siegel, June V., New York, N. Y. Automobile-veil. No. 958,329; May 17; Sp. p. 4230; Gaz. vol. 154; p. 690.
Siegfried, Robert, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Brush-holder. No. 956,739; May 3; Sp. p. 511; Gaz. vol. 154; p. 82.
Siemens & Halske, A. G. (See Kreusler, Hans, assignor.)
Siemens & Halske, Aktiengesellschaft. (See Schilling, Johannes, assignor.)
Sievert, Albert H. (See Sievert, Charles W., assignor.)
Sievert, Charles W., assignor of one-half to A. H. Sievert, Los Angeles, Cal. Oil-burner. No. 958,330; May 17; Sp. p. 4231; Gaz. vol. 154; p. 690.
Sigurdsson, Oddur V., assignor to Oddur Manufacturing Company, New York, N. Y. Type-casting machine. No. 960,047; May 31; Sp. p. 7876; Gaz. vol. 154; p. 1323.
Silva, William P., Chattanooga, Tenn. Artist's sketching outfit. No. 957,805; May 10; Sp. p. 2767; Gaz. vol. 154; p. 474.
Silverstein, Isidor, New York, N. Y. Tag-attaching apparatus. No. 960,206; May 31; Sp. p. 8175; Gaz. vol. 154; p. 1376.
Simmons, Bert G., assignor to Johnson & Johnson, New Brunswick, N. J. Dentist's cotton-holder and waste-receptacle. No. 960,236; May 31; Sp. p. 8236; Gaz. vol. 154; p. 1386.
Simmons, Francis, Chicago, Ill. Combination sash fastener and lifter. No. 959,081; May 24; Sp. p. 5794; Gaz. vol. 154; p. 971.
Simmons, George D., Clarksdale, Miss. Swingletree attachment. No. 959,082; May 24; Sp. p. 5795; Gaz. vol. 154; p. 971.
Simmons Manufacturing Company, The. (See Gail, John F., assignor.)
Simmons Manufacturing Company, The. (See Wilson, John C., assignor.)
Simmons, Robert T., Wynne, Ark. Cotton-chopper. No. 959,031; May 24; Sp. p. 5671; Gaz. vol. 154; p. 954.
Simmons, Walter C., Gassaway, W. Va. Gas-controlling device. No. 959,397; May 24; Sp. p. 6424; Gaz. vol. 154; p. 1074.
Simonds, Royal H., Southbridge, Mass. Eyeglasses. No. 958,839; May 24; Sp. p. 5276; Gaz. vol. 154; p. 890.
Simpson, John T., assignor of one-half to J. B. Wright, Newark, N. J. Safety-tread. No. 960,048; May 31; Sp. p. 7880; Gaz. vol. 154; p. 1323.
Simpson, Richard M., Wellington, New Zealand. Apparatus for separating metals and the like from extraneous matter. No. 957,478; May 10; Sp. p. 2098; Gaz. vol. 154; p. 364.
Sinčić, Josef, Bakar, Austria-Hungary. Propelling means for vessels. No. 958,020; May 17; Sp. p. 3333; Gaz. vol. 154; p. 580.
Singer Manufacturing Company, The. (See Horton, Charles M., assignor.)
Single Service Package Corporation of America. (See Jenkins, Charles F., assignor.)
Sisson, Jasper A., assignor of one-third to J. W. Barker, Joplin, Mo. Elevator safety device. No. 958,943; May 24; Sp. p. 5506; Gaz. vol. 154; p. 924.
Sizer, Edward D., Sizerville, Pa. Muffler. No. 956,906; May 3; Sp. p. 891; Gaz. vol. 154; p. 141.
Sjaastrand, Johan, Steamboat Springs, Colo. Smoking-pipe. No. 957,116; May 3; Sp. p. 1314; Gaz. vol. 154; p. 209.
Sladv, Frank W., assignor to The Bryant Electric Company, Bridgeport, Conn. Pull-socket. No. 958,554; May 17; Sp. p. 4664; Gaz. vol. 154; p. 766.
Slapo, Isaac, New York, N. Y. Baker's oven. No. 957,479; May 10; Sp. p. 2100; Gaz. vol. 154; p. 364.
Slater, Dwight C., Essex Junction, Vt. Portable house. No. 960,207; May 31; Sp. p. 8179; Gaz. vol. 154; p. 1376.
Slater, Harris W., Lake Mahopac, assignor to The National Machine Company, Mamaroneck, N. Y. Thread-trimming mechanism. No. 957,265; May 10; Sp. p. 1963; Gaz. vol. 154; p. 292.
Sleeper, Joseph J., Moore, Pa. Concrete block and wall construction. No. 959,629; May 31; Sp. p. 6924; Gaz. vol. 154; p. 1179.
Slick, Edwin E., Pittsburg, Pa. Method of and apparatus for producing gas. No. 957,006; May 3; Sp. p. 1099; Gaz. vol. 154; p. 173.
Slick, Edwin E., Pittsburg, Pa. Gas-producer. No. 957,007; May 3; Sp. p. 1102; Gaz. vol. 154; p. 173.

Slingluff, Harry G., Allegheny, Pa., assignor to Pittsburgh Plate Glass Company. Manufacture of glass articles. No. 958,840; May 24: Sp. p. 5278; Gaz. vol. 154; p. 890.

Sloan, D. L. (See Christensen, Christian H., assignor.)

Small, Isadore. (See Walter, William L., assignor.)

Smith, Abram E., Brooklyn, N. Y., Car structure. No. 956,740; May 3; Sp. p. 512; Gaz. vol. 154; p. 83.

Smith, Adam M., Minneapolis, Minn. Horse-power hoist. No. 959,630; May 31; Sp. p. 6927; Gaz. vol. 154; p. 1179.

Smith, Arthur W., New York, N. Y., assignor to Yost Writing Machine Company, Ilion, N. Y. Type-writing machine. No. 958,778; May 24; Sp. p. 5130; Gaz. vol. 154; p. 866.

Smith, Charles F., assignor to Landers, Frary and Clark, New Britain, Conn. Safety-razor. No. 957,008; May 3; Sp. p. 1106; Gaz. vol. 154; p. 173.

Smith, Charles P. (See Underwood and Smith.)

Smith, Daniel W., Chicago, Ill., assignor to International Harvester Company. Grain-harvester. No. 958,331; May 17; Sp. p. 4232; Gaz. vol. 154; p. 690.

Smith, De Wane B., Deerfield, N. Y. Nursing bottle and nipple. No. 956,741; May 3; Sp. p. 514; Gaz. vol. 154; p. 83.

Smith, Edward H., Aberdeen, assignor of one-half to T. Evenson, Seattle, Wash. Regulating incandescent-lamp socket for reducing the light. No. 957,806; May 10; Sp. p. 2768; Gaz. vol. 154; p. 474.

Smith, Elbert C. (See Murphy, James, assignor.)

Smith, George H., assignor to Beaman & Smith Company, Providence, R. I. Boring-machine. No. 959,083; May 24; Sp. p. 5796; Gaz. vol. 154; p. 971.

Smith, Goodwin B., Philadelphia, Pa. Cake-beater. No. 759,811; May 31; Sp. p. 7315; Gaz. vol. 154; p. 1239.

Smith, Harry M., and D. Keneven, Denver, Colo. Flushing device. No. 958,841; May 24; Sp. p. 5281; Gaz. vol. 154; p. 890.

Smith, Hasor J., assignor to Automatic Letter Machine Company, Chicago, Ill. Printing-type. No. 959,968; May 31; Sp. p. 7660; Gaz. vol. 154; p. 1294.

Smith, Henry L., Pittsfield, Mass., assignor, by mesne assignments, to General Electric Company. Hanger-board switch. No. 959,891; May 31; Sp. p. 7496; Gaz. vol. 154; p. 1266.

Smith, Henry W., Canton, Ohio. Vehicle-spring. No. 959,892; May 31; Sp. p. 7499; Gaz. vol. 154; p. 1267.

Smith, Irving B., assignor, by mesne assignments, to Electrelle Company, Philadelphia, Pa. Electrical self-playing attachment for pianos. No. 959,032; May 24; Sp. p. 5673; Gaz. vol. 154; p. 964.

Smith, James M. (See Carvin, Edward O., assignor.)

Smith, Jasper M. (See Brown, Charles, assignor.)

Smith, Jesse T. (See Preston, Lyman L., assignor.)

Smith, John, Bingham Canyon, Utah. Rocking-chair. No. 956,547; May 3; Sp. p. 38; Gaz. vol. 154; p. 16.

Smith, John R. Bradford, assignor to R. A. Jordan, trustee, Brookline, Mass. Tank-indicator. No. 956,907; May 3; Sp. p. 894; Gaz. vol. 154; p. 141.

Smith, John S., Fort Wayne, Ind. Railway-crossing. No. 959,893; May 31; Sp. p. 7499; Gaz. vol. 154; p. 1267.

Smith, Josiah H., assignor to W. H. Tigerman, Philadelphia, Pa. Lawn-mower. No. 957,009; May 3; Sp. p. 1108; Gaz. vol. 154; p. 174.

Smith, Katherine G. (See Wood, James M., assignor.)

Smith, Leslie E. and W., Tupelo, Miss. Automatic hose-valve. No. 958,779; May 24; Sp. p. 5141; Gaz. vol. 154; p. 866.

Smith Manufacturing Company. (See Fitzgerald, Jeremiah C., assignor.)

Smith, Mervyn P. T., Slaidburn, Clitheroe, England. Sextant. No. 957,386; May 10; Sp. p. 1916; Gaz. vol. 154; p. 333.

Smith, Nathan J., Halstead, Kans. Adjustable pattern for tongue-hounds. No. 959,398; May 24; Sp. p. 6425; Gaz. vol. 154; p. 1075.

Smith, Robert E. (See Adams, Oscar B., assignor.)

Smith, Robert F. (See Goodmundson and Smith.)

Smith, Robert P., Winchester, assignor to American Moistening Company, Boston, Mass. Humidifier. No. 958,555; May 17; Sp. p. 4666; Gaz. vol. 154; p. 767.

Smith, Royal A., et al. (See Wegman, George, assignor.)

Smith, Sidney R., Littleton, Colo. Cherry-seeder. No. 958,780; May 24; Sp. p. 5143; Gaz. vol. 154; p. 867.

Smith, Simon P. (See Galland, Joshua H., assignor.)

Smith, Thomas E. (See Bown and Smith.)

Smith, Thomas J. (See Narance, George, assignor.)

Smith, William. (See Smith, Leslie E. and W.)

Smithdeal, William F., Salisbury, N. C. Churn. No. 956,823; May 3; Sp. p. 726; Gaz. vol. 154; p. 115.

Smyth Manufacturing Company, The. (See White, Samuel K., assignor.)

Smythe, Edwin H., Chicago, Ill., assignor, by mesne assignments, to General Electric Company. Circuit-breaker. No. 960,049; May 31; Sp. p. 7882; Gaz. vol. 154; p. 1322.

Snedeker, James W., Adrian, Mich. Carbureter. No. 958,897; May 24; Sp. p. 5431; Gaz. vol. 154; p. 909.

Snow, Frederick, assignor, by mesne assignments, to Conkling Company, Chicago, Ill. Valve. No. 958,021; May 17; Sp. p. 3335; Gaz. vol. 154; p. 580.

Snow, George H., Walpole, Mass. Garment-supporter. No. 957,117; May 3; Sp. p. 1310; Gaz. vol. 154; p. 210.

Snow, John R., Philadelphia, Pa. Game apparatus. No. 957,266; May 10; Sp. p. 1667; Gaz. vol. 154; p. 293.

Snow, Rensselaer C., assignor to Ware Machine & Loom Company, Ware, Mass. Loom. No. 959,174; May 24; Sp. p. 5991; Gaz. vol. 154; p. 1002.

Snyder, Bradley A., Hyattsville, Md., and M. A. Custis, Washington, D. C., assignors to said M. A. Custis. Door attachment for elevator freight-compartments. No. 957,807; May 10; Sp. p. 2770; Gaz. vol. 154; p. 475.

Snyder, George A., Montgomery, assignor of one-half to A. C. Overly, Camden, Mich. Self-oiling pulley. No. 956,607; May 3; Sp. p. 220; Gaz. vol. 154; p. 37.

Snyder, Jerome, Barberton, Ohio. Potato-cutter. No. 957,118; May 3; Sp. p. 1317; Gaz. vol. 154; p. 210.

Snyder, Mell K., Detroit, Mich., assignor of one-half to W. D. Royce, Cleveland, Ohio. Door-closer. No. 959,175; May 24; Sp. p. 5993; Gaz. vol. 154; p. 1002.

Snyder, Monroe S., et al. (See Warfield, Earl P., assignor.)

Snyder, Ward H., Cincinnati, Ohio, assignor to E. L. Robinson, North Attleboro, Mass. Firearm. No. 958,332; May 17; Sp. p. 4234; Gaz. vol. 154; p. 691.

Snyder, William A., Los Angeles, Cal. Furniture. No. 959,631; May 31; Sp. p. 6930; Gaz. vol. 154; p. 1180.

Societe Alsacienne de Constructions Mecaniques. (See Wenning, Jean C. A., assignor.)

Société Anonyme "Astra." (See Kapferer, Marcel, assignor.)

Societe des Moteurs Gnome. (See Seguin, Louis L. A., assignor.)

Society of Chemical Industry in Basle. (See Kraft, Hermann, assignor.)

Society of Chemical Industry in Basle. (See Posternak, Swigel, assignor.)

Soderstrom, John A., Chicago, Ill. Sample-card book. No. 959,632; May 31; Sp. p. 6931; Gaz. vol. 154; p. 1180.

Sofge, John. (See Vlierengal and Sofge.)

Sokolov, Jacob, assignor to Underwood Typewriter Company, New York, N. Y. Stencilling-machine. No. 959,268; May 24; Sp. p. 6171; Gaz. vol. 154; p. 1032.

Soltmann, Edward G. (See Bassist, Ellis, assignor.)

Solvay Process Company, The. (See Decker, William H., assignor.)

Sommer, Albert, New York, N. Y. Obtaining specific gravity. No. 959,633; May 31; Sp. p. 6933; Gaz. vol. 154; p. 1181.

Sommer, John J., North Attleboro, Mass. Bracelet, belt, &c. No. 960,050; May 31; Sp. p. 7885; Gaz. vol. 154; p. 1324.

Southern Manufacturing Company. (See Pope, Frederick, assignor.)

Southern Stemming Machine and Manufacturing Co. (See Morris, John O., assignor.)

Southwick, George W., Noroton, Conn. Device for fastening belts. No. 960,121; May 31; Sp. p. 8014; Gaz. vol. 154; p. 1346.

Sowell, James L., Jasper, Ala. Prophylactic drinking vessel. No. 957,267; May 10; Sp. p. 1668; Gaz. vol. 154; p. 293.

Sower, James H., and J. T. Richards, Louisville, Ky. Box-cover fastener. No. 958,022; May 17; Sp. p. 3337; Gaz. vol. 154; p. 581.

Spaeth, Gustave A., Columbus, Ohio. Resilient wheel. No. 959,176; May 24; Sp. p. 5994; Gaz. vol. 154; p. 1002.

Sparrow, Simon, assignor to Wagner Electric Manufacturing Company, St. Louis, Mo. Brush or collector for electrical machines. No. 959,634; May 31; Sp. p. 6934; Gaz. vol. 154; p. 1181.

Spaulding, Charles F., Waltham, Mass. Acetylene-generator. No. 960,051; May 31; Sp. p. 7886; Gaz. vol. 154; p. 1324.

Spaulding, Frederick S., Denver, Colo., assignor to The Spaulding Manufacturing Company, Boston, Mass. Gliding swing. No. 957,855; May 10; Sp. p. 2865; Gaz. vol. 154; p. 491.

Spaulding Manufacturing Company, The. (See Spaulding, Frederick S., assignor.)

Spaulding, Thomas W., San Francisco, Cal. Game-board. No. 958,556; May 17; Sp. p. 4667; Gaz. vol. 154; p. 767.

Spear, Furman D., Brooklyn, assignor to Armspear Manufacturing Company, New York, N. Y. Lantern. No. 959,635; May 31; Sp. p. 6935; Gaz. vol. 154; p. 1181.

Speer, Edward D. (See Richards, Francis H., assignor.)

Spencer, Jervis, Garrison, assignor to S. S. Janney, Baltimore county, Md. Educational appliance. No. 958,781; May 24; Sp. p. 5144; Gaz. vol. 154; p. 867.

Spencer, Major V., Deer River, Minn. Trip grab-hook. No. 958,978; May 24; Sp. p. 5576; Gaz. vol. 154; p. 937.

Spengler, Charles C., Rockford, and H. T. Sidway, assignors to Henry T. Sidway & Company, Chicago, Ill. Heating appliance. No. 956,742; May 3; Sp. p. 516; Gaz. vol. 154; p. 83.

Spengler, Charles C., Rockford, and H. T. Sidway, assignors to Henry T. Sidway & Company, Chicago, Ill. Heating appliance. No. 956,783; May 3; Sp. p. 605; Gaz. vol. 154; p. 96.

Spicer, Clarence W., Plainfield, N. J. Incased universal joint. No. 958,023; May 17; Sp. p. 3338; Gaz. vol. 154; p. 581.

Spicer, George. (See Rankin, Eugene, assignor.)

Spiegel, Alexander S., assignor to The Attractograph Company, Chicago, Ill. Display device. No. 957,119; May 3; Sp. p. 1320; Gaz. vol. 154; p. 211.

Spiegel, Alexander S., assignor to The Attractograph Company, Chicago, Ill. Advertising apparatus. No. 957,120; May 3; Sp. p. 1324; Gaz. vol. 154; p. 211.

Spiegel, Alexander S., assignor to The Attractograph Company, Chicago, Ill. Advertising apparatus. (Reissue.) No. 13,109; May 3; Sp. p. 1440; Gaz. vol. 154; p. 231.

Spiker, James H. (See Jackson, Charles E., assignor.)

Spillane, Thomas. (See Temple, William S., assignor.)

Spirella Company, The. (See Gilbert and Martin, assignors.)

Springer, William H., et al. (See Hachmann, Frederick, assignor.)

Sprechule, Frank J., Philadelphia, Pa. Rotary engine. No. 959,812; May 31; Sp. p. 7316; Gaz. vol. 154; p. 1239.

Spyer, Arthur. (See Rosenthal and Spyer.)

Square Deal Machine Co. (See Asbury, William, assignor.)

Squires, Charles E., Cleveland, Ohio. Steam-trap. No. 959,636; May 31; Sp. p. 6936; Gaz. vol. 154; p. 1181.

Stacy, William, Devers, Tex. Colter. No. 959,637; May 31; Sp. p. 6938; Gaz. vol. 154; p. 1182.

Stafford, Charles S., assignor to Mone R. Isaacs, Philadelphia, Pa. Box. No. 958,707; May 17; Sp. p. 4959; Gaz. vol. 154; p. 815.

Stafford, James T., New York, N. Y. Toy. No. 959,638; May 31; Sp. p. 6939; Gaz. vol. 154; p. 1182.

Stagg, Thomas H., assignor to The Kilbourne and Jacobs Manufacturing Company, Columbus, Ohio. Wheeled scraper. No. 960,052; May 31; Sp. p. 7888; Gaz. vol. 154; p. 1324.

Staley, Harrison L., assignor to Staley Manufacturing Company, Martinsville, Ind. Washing-machine gearing. No. 958,189; May 17; Sp. p. 3787; Gaz. vol. 154; p. 640.

Staley Manufacturing Company. (See Staley, Harrison L., assignor.)

Stall, Walter T., et al. (See Hartman, Joseph, assignor.)

Stanbon, Charles P., Lynn, assignor to T. G. Plant, Boston, Mass. Sole-rounding machine. No. 958,024; May 17; Sp. p. 3341; Gaz. vol. 154; p. 582.

Standard Auto Accessory Mfg. Company. (See Bertram and Lamoreaux, assignors.)

Standard Elevator Interlock Company. (See Muckle, John S., assignor.)

Standard Oil Company of New York. (See Ellis, Clifford A., assignor.)

Standard Separator Company. (See Shaw, Charles H., assignor.)

Stanford, Arthur L., Chicago, Ill., assignor to The Rail Joint Company, New York, N. Y. Rail-joint. No. 957,121; May 3; Sp. p. 1325; Gaz. vol. 154; p. 211.

Stanley, Roy G., Clyde, Ohio. Means for automatically controlling lamps on vehicles. No. 957,010; May 3; Sp. p. 1111; Gaz. vol. 154; p. 174.

Stanley Rule & Level Company, The. (See Bodmer, Christian, assignor.)

Stanley Works, The. (See Holtzhouser, Jacob P., assignor.)

Stanton, Gay A., Union City, Mich. Checkrein-holder. No. 957,580; May 10; Sp. p. 2208; Gaz. vol. 154; p. 399.

Stanton, Mary L., Newton, Mass. Buttonhole-guide. No. 959,639; May 31; Sp. p. 6940; Gaz. vol. 154; p. 1182.

Stapley, William S., assignor to The Coe-Stapley Manufacturing Company, Bridgeport, Conn. Tire-pump. No. 959,894; May 31; Sp. p. 7502; Gaz. vol. 154; p. 1267.

Star Carburetor and Supply Company. (See Howarth, Albert, assignor.)

Staren, Joseph, Chicago, Ill. Sign. No. 959,895; May 31; Sp. p. 7504; Gaz. vol. 154; p. 1268.

Staren, Joseph, Chicago, Ill. Portable sign. No. 959,896; May 31; Sp. p. 7505; Gaz. vol. 154; p. 1268.

Stark, John M., and T. L. Turner, assignors to Bottlers' Seal Company, New York, N. Y. Machine for applying caps to bottles. No. 958,333; May 17; Sp. p. 4236; Gaz. vol. 154; p. 691.

Starr, Joseph, New London, Conn. Coin-operated vending-machine. No. 957,720; May 10; Sp. p. 2583; Gaz. vol. 154; p. 447.

Starr, William H., Denver, Colo. Tile-marker. No. 959,269; May 24; Sp. p. 6181; Gaz. vol. 154; p. 1032.

Staymates, Samuel G., Wall, Pa. Mail-catcher. No. 957,581; May 10; Sp. p. 2209; Gaz. vol. 154; p. 399.

Stead, Isaac. (See Miles, Samuel A., assignor.)

Stearns & Co., E. C. (See Potter, William M., assignor.)

Stearns, Edward C., Syracuse, N. Y. Vise. No. 957,520; May 10; Sp. p. 2190; Gaz. vol. 154; p. 378.

Stedman, James H., Braintree, Mass. Artificial playing-bed for open-air games. No. 957,387; May 10; Sp. p. 1917; Gaz. vol. 154; p. 333.

Steel Fireproofing Company. (See Hill, Hermann, assignor.)

Steel, Leonard R., Milwaukee, Wis. Heat-insulated receptacle. No. 957,808; May 10; Sp. p. 2773; Gaz. vol. 154; p. 475.

Steel, Leonard R., Milwaukee, Wis. Bottle. No. 957,809; May 10; Sp. p. 2774; Gaz. vol. 154; p. 476.

Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 957,268; May 10; Sp. p. 1669; Gaz. vol. 154; p. 293.

Steele, James B., Pentwater, Mich. Lawn-sprinkler. No. 959,270; May 24; Sp. p. 6183; Gaz. vol. 154; p. 1032.

Steele, Thomas J., Citra, Fla. Current-motor. No. 957,388; May 10; Sp. p. 1919; Gaz. vol. 154; p. 334.

Stein, David, New York, N. Y., Washboard. No. 957,122; May 3; Sp. p. 1327; Gaz. vol. 154; p. 212.

Stein, Eugine. (See McGuigan, Joseph, assignor.)

Steinbart, Alfred, Pittsburg, Pa. Condenser. No. 959,640; May 31; Sp. p. 6941; Gaz. vol. 154; p. 1182.

Steinberger, George S. (See Miller, Steinberger, and Hargraves.)

Steinmann, Otto, and X. Pfrunder, Wohlen, Aargau, Switzerland. Braiding-machine. No. 960,122; May 31; Sp. p. 8017; Gaz. vol. 154; p. 1346.

Steinmetz, Joseph A., Philadelphia, Pa. Mail-collecting apparatus. No. 956,743; May 3; Sp. p. 518; Gaz. vol. 154; p. 84.

Steinmetz, Joseph A., Philadelphia, Pa. Liquid-fuel tank. No. 958,025; May 17; Sp. p. 3351; Gaz. vol. 154; p. 582.

Steller, Theodore A., Houghton, Mich. Water-heater. No. 960,123; May 31; Sp. p. 8020; Gaz. vol. 154; p. 1347.

Stephens, Augustus W., Waltham, Mass. Stopper-extractor. No. 959,897; May 31; Sp. p. 7507; Gaz. vol. 154; p. 1268.

Stephens, David J. (See Armitage and Stephens.)

Stephens, John C. (See Aubuchon, Gertrude, assignor.)

Stephenson, Edward, San Francisco, Cal. Cleaning attachment for water-tube boilers. No. 958,842; May 24; Sp. p. 5282; Gaz. vol. 154; p. 891.

Sterilac Company. (See Horne, Irving N., assignor.)

Sterling Oil Engine Company. (See Hayes, Garfield H., assignor.)

Stern, David, Cincinnati, Ohio. Switchboard for dental, medical, or surgical purposes. No. 959,641; May 31; Sp. p. 6942; Gaz. vol. 154; p. 1183.

Sternad, John, Jersey City, N. J. Washboard. No. 957,011; May 3; Sp. p. 1112; Gaz. vol. 154; p. 175.

Stevens, Alton E., Fall River, assignor of three-fifths to S. H. Couch, Wollaston, Mass. Autophone system. No. 957,909; May 17; Sp. p. 3002; Gaz. vol. 154; p. 540.

Stevens, Andrew E., Madison, Wis., assignor to Northern Electrical Manufacturing Company. Motor-control apparatus. No. 958,442; May 17; Sp. p. 4457; Gaz. vol. 154; p. 728.

Stevens, Breese, New Hartford, N. Y. Head-rest for burial-caskets. No. 957,910; May 17; Sp. p. 3017; Gaz. vol. 154; p. 541.

Stevens, Clayton S., New Britain, Conn. Saw-clamp. No. 960,208; May 31; Sp. p. 8181; Gaz. vol. 154; p. 1377.

Stevens, George E., Lynn, Mass., assignor to General Electric Company. Electric heater. No. 959,899; May 24; Sp. p. 6427; Gaz. vol. 154; p. 1075.

Stevens, Richard H., Munhall, Pa. Drag-out for hotbeds. No. 959,813; May 31; Sp. p. 7319; Gaz. vol. 154; p. 1240.

Stevens, Theodore R., Cleveland, Ohio. Lock-strike. No. 958,443; May 17; Sp. p. 4459; Gaz. vol. 154; p. 729.

Stevens, Truman E., et al. (See Vesey, Richard H., assignor.)

Steward, Alden A., Rutland, Vt. Fire-check. No. 958,944; May 24; Sp. p. 5508; Gaz. vol. 154; p. 925.

Stewart, Annie. (See Stewart, James S., assignor.)

Stewart, George F., Swampscott, assignor to T. G. Plant, Boston, Mass. Shoe-sole-edge setter. No. 958,026; May 17; Sp. p. 3352; Gaz. vol. 154; p. 582.

Stewart, George F., Swampscott, assignor to T. G. Plant, Boston, Mass. Boot and shoe channeling machine. No. 958,027; May 17; Sp. p. 3355; Gaz. vol. 154; p. 583.

Stewart, Horace P., Armstrong Creek, Wis. Pipe-cleaner. No. 957,389; May 10; Sp. p. 1920; Gaz. vol. 154; p. 334.

Stewart, James S., Diamondville, Wyo. Rotary internal-combustion engine. No. 957,631; May 10; Sp. p. 2402; Gaz. vol. 154; p. 416.

Stewart, James S., assignor to A. Stewart, New York, N. Y. Branch block for suspended cables. No. 959,969; May 31; Sp. p. 7681; Gaz. vol. 154; p. 1295.

Stewart, John G., Monmouth, Ill. Grain-shocker. No. 958,190; May 17; Sp. p. 3790; Gaz. vol. 154; p. 640.

Stewart, Richard C., Covington, Ky. Construction of posts. No. 958,334; May 17; Sp. p. 4241; Gaz. vol. 154; p. 691.

Stewart, William C., Lynn, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Sole-marking machine. No. 958,028; May 17; Sp. p. 3363; Gaz. vol. 154; p. 583.

Stewart, William C., Lynn, assignor to T. G. Plant, Boston, Mass. Machine for slashing soles of boots and shoes. No. 958,029; May 17; Sp. p. 3376; Gaz. vol. 154; p. 584.

Stewart, William C., Lynn, assignor to T. G. Plant, Boston, Mass. Knife-grinding machine. No. 958,030; May 17; Sp. p. 3384; Gaz. vol. 154; p. 584.

Stewart, William C., Lynn, assignor to T. G. Plant, Boston, Mass. Jack for slugging and other machines. No. 958,031; May 17; Sp. p. 3386; Gaz. vol. 154; p. 585.

Stewart, William C., Lynn, assignor to T. G. Plant, Boston, Mass. Knife grinding and sharpening machine. No. 958,032; May 17; Sp. p. 3389; Gaz. vol. 154; p. 585.

Stewart, William C., Lynn., assignor to T. G. Plant, Boston, Mass. Outsole-marker. No. 958,033; May 17; Sp. p. 3391; Gaz. vol. 154; p. 585.

Stewart, William C., Lynn., assignor to T. G. Plant, Boston, Mass. Rotary jack. No. 958,034; May 17; Sp. p. 3398; Gaz. vol. 154; p. 586.

Stewart, William C., Lynn., assignor to T. G. Plant, Boston, Mass. Tack-pounder. No. 958,035; May 17; Sp. p. 3403; Gaz. vol. 154; p. 586.

Stewart, William C., Lynn., assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Horn-controlling mechanism for fastener-inserting machines. No. 958,036; May 17; Sp. p. 3404; Gaz. vol. 154; p. 587.

Stewart, William C., Lynn, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Nail assorting and delivering mechanism. No. 958,037; May 17; Sp. p. 3415; Gaz. vol. 154; p. 587.

Stewart, William C., Lynn., assignor to T. G. Plant, Boston, Mass. Work-holder for heeling-machines. No. 958,038; May 17; Sp. p. 3427; Gaz. vol. 154; p. 588.

Stewart, William C., Lynn., assignor to T. G. Plant, Boston, Mass. Nail assorting and delivering mechanism. No. 958,039; May 17; Sp. p. 3430; Gaz. vol. 154; p. 588.

Stewart, William C., Lynn, assignor to T. G. Plant, Boston, Mass. Fastener-inserting machine. No. 958,040; May 17; Sp. p. 3438; Gaz. vol. 154; p. 589.

Stewart, William C., Lynn, assignor to T. G. Plant, Boston, Mass. Toe-lift holder for beeling-machines. No. 958,041; May 17; Sp. p. 3444; Gaz. vol. 154; p. 589.

Stewart, William C., Lynn, assignor to T. G. Plant, Boston, Mass. Work-support for boot and shoe machines. No. 958,042; May 17; Sp. p. 3447; Gaz. vol. 154; p. 590.

Stiggleman, James H., Wabash, assignor of one-fourth to F. T. Edenbarter, Indianapolis, Ind. Sectional metallic flooring. No. 958,557; May 17; Sp. p. 4669; Gaz. vol. 154; p. 767.

Stiggleman, James H., Wabash, assignor of one-fourth to F. T. Edenbarter, Indianapolis, Ind. Metallic receptacle. No. 958,558; May 17; Sp. p. 4670; Gaz. vol. 154; p. 767.

Stiles, Noel B., London, England. Device for automatically delivering articles. No. 958,559; May 17; Sp. p. 4671; Gaz. vol. 154; p. 768.

Stillwell, Joseph W., New York, N. Y. Steam-nozzle. No. 958,444; May 17; Sp. p. 4460; Gaz. vol. 154; p. 729.

Stimpson, Edwin B., New York, N. Y., assignor to Edwin B. Stimpson Company. Rivet. No. 959,177; May 24; Sp. p. 5095; Gaz. vol. 154; p. 1002.

Stiner, Bavenious C. (See Lamp and Stiner.)

Stinson, James H., Cooke Mont. Gun-muffler. No. 959,400; May 24; Sp. p. 6428; Gaz. vol. 154; p. 1075.

Stitzel, Arthur P., Louisville, Ky. Freeing fermented mash and the like from noxious odors and flavors. No. 956,650; May 3; Sp. p. 310; Gaz. vol. 154; p. 51.

Stiver, William J., Grove, Okla. Bench-dog. No. 960,083; May 31; Sp. p. 7800; Gaz. vol. 154; p. 1325.

Stockley, Frederick A., Montour Falls, N. Y. Concrete pipe. No. 958,043; May 17; Sp. p. 3451; Gaz. vol. 154; p. 590.

Stoetzel, Joseph J., assignor of one-half to H. J. Cohn, Chicago, Ill. Pneumatic transmission system. No. 959,642; May 31; Sp. p. 6945; Gaz. vol. 154; p. 1183.

Stoffer, Jacob L., Homeworth, assignor of one-half to R. R. Greenelsen, Columbiana county, Ohio. Tool-holder. No. 956,945; May 24; Sp. p. 5509; Gaz. vol. 154; p. 925.

Stolp, Samuel S., Glencoe, assignor of one-half to W. J. C. Kenyon, Chicago, Ill. Elevator safety device. No. 957,123; May 3; Sp. p. 1328; Gaz. vol. 154; p. 212.

Stone, James, Cleveland, Ohio. Valve. No. 957,012; May 3; Sp. p. 1113; Gaz. vol. 154; p. 175.

Stone, Lewis S. (See Hartford, Taylor, and Stone.)

Stoner, Christian F., and F. B. Trout, Lancaster, Pa. Fly-paper holder. No. 950,808; May 31; Sp. p. 7508; Gaz. vol. 154; p. 1268.

Stonder, Herman R., Newton, Iowa. Cigar-vending machine. No. 958,191; May 17; Sp. p. 3793; Gaz. vol 154; p. 641.

Stragiotti, Pietro, Hurley, Wis. Telephone-transmitter. No. 958,581; May 17; Sp. p. 4678; Gaz. vol. 154; p. 769.

Stragiotti, Pietro, Hurley, Wis. Structural-metal shape for reinforced concrete construction. No. 960,054; May 31; Sp. p. 7802; Gaz. vol. 154; p. 1325.

Stragiotti, Pietro, assignor of one-fourth to G. Thomas, one-fourth to J. Vercellini, and one-fourth to F. Marta, Hurley, Wis. Telephone-repeater. No. 958,560; May 17; Sp. p. 4675; Gaz. vol. 154; p. 768.

Straker, Tooks G., New York, N. Y. Power-transmission apparatus. No. 959,814; May 31; Sp. p. 7323; Gaz. vol. 154; p. 1240.

Stranahan, Olin A., New York, N. Y. Internal-combustion engine. No. 959,084; May 24; Sp. p. 5798; Gaz. vol. 154; p. 972.

Strang, William B. (See Nilson, Lars G., assignor.)

Strasburger, Frank C. H., assignor to Bottlers Machinery Manufacturing Company, Chicago, Ill. Filling-machine. No. 958,867; May 3; Sp. p. 501; Gaz. vol. 154; p. 127.

Straten, Theodore G., West Tisbury, Mass. Water-bottle. No. 957,013; May 3; Sp. p. 1115; Gaz. vol. 154; p. 175.

Stratton, Herman J., Kalamazoo, Mich. Post. No. 958,946; May 24; Sp. p. 5511; Gaz. vol. 154; p. 925.

Stratton, Vernon J., Cloverdale, Cal. Fly-screen. No. 958,562; May 17; Sp. p. 4681; Gaz. vol. 154; p. 769.

Straub, Elmer E. (See Beaver, Isaac K., assignor.)

Straus, Annie, Danville, Ill. Hat-fastener. No. 957,810; May 10; Sp. p. 2776; Gaz. vol. 154; p. 476.

Streat, George, New York, N. Y. Waterproof fabric. No. 959,178; May 24; Sp. p. 5997; Gaz. vol. 154; p. 1002.

Streich, Frank, assignor to American Bakers Machinery Company, St. Louis, Mo. Dough-molding machine. No. 957,890; May 10; Sp. p. 1021; Gaz. vol. 154; p. 334.

Strock, Joseph G., Trindle Spring, Pa. Toothpick. No. 958,335; May 17; Sp. p. 4243; Gaz. vol. 154; p. 692.

Stroh, Sigmund, London, England. Metal seal. No. 959,401; May 24; Sp. p. 6429; Gaz. vol. 154; p. 1075.

Strohm, Edith W., administratrix. (See Strohm, Erhard J.)

Strohm, Erhard J., deceased, Livingston, Mont.; E. W. Strohm, Newton township, Calhoun county, Mich., administratrix. Eyeglasses. No. 959,815; May 31; Sp. p. 7324; Gaz. vol. 154; p. 1240.

Strohm, Erhard J., deceased, Livingston, Mont.; E. W. Strohm, Newton township, Calhoun county, Mich., administratrix. Eyeglass-mounting. No. 959,816; May 31; Sp. p. 7326; Gaz. vol. 154; p. 1241.

Strom, Eugene N., Chicago, Ill., assignor to Pettibone, Mulliken & Company. Switch-stand. No. 956,834; May 3; Sp. p. 727; Gaz. vol. 154; p. 116.

Stromberg-Carlson Telephone Manufacturing Company. (See Williams, Lynn A., assignor.)

Strong, Carlisle & Hammond Company, The. (See Weints, Jacob, assignor.)

Strong, Charles E., Amityville, N. Y. Valve. No. 957,811; May 10; Sp. p. 2777; Gaz. vol. 154; p. 476.

Strong, Leslie P., assignor to The Clark Manufacturing Company, Cleveland, Ohio. Vacuum-trap. No. 957,269; May 10; Sp. p. 1675; Gaz. vol. 154; p. 294.

Strong, William H. S., Chicago, Ill., and F. V. Bartlett, assignors to The Winkley Company, Detroit, Mich. Oil-cup. No. 959,642; May 31; Sp. p. 6948; Gaz. vol. 154; p. 1184.

Strother, Sam B., administrator. (See Wood, James M.)

Stuart, Joseph, assignor to Lobdell Car Wheel Company, Wilmington, Del. Attachment for calender-machines. No. 957,812; May 10; Sp. p. 2778; Gaz. vol. 154; p. 476.

Studnicka, Albert J., and C. W. Campbell, Minneapolis, Minn. Combined magneto and battery switch for electric igniters. No. 957,270; May 10; Sp. p. 1681; Gaz. vol. 154; p. 294.

Sturdevant, Charles R., assignor to The American Steel and Wire Company of New Jersey, Worcester, Mass. Rail-bond. No. 957,911; May 17; Sp. p. 3018; Gaz. vol. 154; p. 541.

Suddick, Louise F., De Soto, Mo. Page-marker and music-leaf turner. No. 957,447; May 10; Sp. p. 2041; Gaz. vol. 154; p. 354.

Sullivan, Eugene J., Roaring Spring, Pa. Bookbinding. No. 956,608; May 3; Sp. p. 221; Gaz. vol. 154; p. 38.

Sullivan, William A., New York, N. Y. Game apparatus. No. 959,402; May 24; Sp. p. 6430; Gaz. vol. 154; p. 1076.

Sullivan, William T., Cincinnati, Ohio. Compiling-machine. No. 959,644; May 31; Sp. p. 6949; Gaz. vol. 154; p. 1184.

Sulphur Dioxide Co., The. (See Grimm, Paul H., assignor.)

Summa, Victor M., assignor to American Car and Foundry Company, St. Louis, Mo. Tank-car. No. 959,817; May 31; Sp. p. 7327; Gaz. vol. 154; p. 1241.

Summers, George T., Russellville, Ky. Engraving-machine. No. 957,912; May 17; Sp. p. 3019; Gaz. vol. 154; p. 541.

Summers, Silas J., Wheeling, W. Va., assignor to H. N. White, Cleveland, Ohio. Slide-bearing for trombones. No. 959,033; May 24; Sp. p. 5681; Gaz. vol. 154; p. 954.

Summers, Silas J., Wheeling, W. Va. Trombone. No. 959,034; May 24; Sp. p. 5683; Gaz. vol. 154; p. 955.

Sumter Telephone Mfg. Co. (See Mason, Charles T., assignor.)

Sundberg, Johan G. E. (See Anderson, Gustaf E., assignor.)

Sunderman, Henry, Madison, Nebr. Road-grader. No. 956,744; May 3; Sp. p. 519; Gaz. vol. 154; p. 84.

Sundh, August, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Mechanically-controlled automatic elevator. No. 959,645; May 31; Sp. p. 6953; Gaz. vol. 154; p. 1185.

Sundh, August, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Electromagnetic brake apparatus. No. 960,055; May 31; Sp. p. 7894; Gaz. vol. 154; p. 1325.

Supplee, Samuel G., New York, N. Y. Denture. No. 957,913; May 17; Sp. p. 3020; Gaz. vol. 154; p. 542.

Sutton, Robert J., *et al.* (See Wegman, George, assignor.)

Svenvig, Nikolai, assignor of one-fourth to W. T. Kirke and one-fourth to J. W. Mason, St. Paul, Minn. Caster. No. 957,480; May 10; Sp. p. 2101; Gaz. vol. 154; p. 364.

Swart, Walter G., Denver, Colo., assignor to The Blake Mining and Milling Company. Electrostatic separating process. No. 959,646; May 31; Sp. p. 6959; Gaz. vol. 154; p. 1185.

Swasey, Ambrose, assignor to The Warner & Swasey Co., Cleveland, Ohio. Telescope. No. 959,179; May 24; Sp. p. 5998; Gaz. vol. 154; p. 1003.

Sweeney, James. (See Chippendale, Harry A., assignor.)

Sweeney, Vardiman T., Anchorage, Ky. Vehicle-brake. No. 957,632; May 10; Sp. p. 2404; Gaz. vol. 154; p. 416.

Sweeny, Jared S., and W. W. Grindle, Decatur, Ill. Feed-water heater. No. 960,209; May 31; Sp. p. 8184; Gaz. vol. 154; p. 1377.

Sweet, Burton W., assignor to H. Z. Sands, Cleveland, Ohio. Telephone switch-hook. No. 958,979; May 24; Sp. p. 5577; Gaz. vol. 154; p. 937.

Sweet, Charles E., Fort Madison, Iowa. Mill-carriage attachment. No. 950,899; May 31; Sp. p. 7509; Gaz. vol. 154; p. 1269.

Sweet, Ernest E., assignor to Cadillac Motor Car Company, Detroit, Mich. Valve. No. 957,391; May 10; Sp. p. 1926; Gaz. vol. 154; p. 334.

Sweet, Walter A. (See Bickford and Sweet.)

Swoger, James W. (See Burns and Swoger.)

Sword, William P., Pawtucket, R. I., assignor to E. S. Cameron, Beverly, Mass. Transmission-gearing. No. 959,900; May 31; Sp. p. 7510; Gaz. vol. 154; p. 1269.

Sydow, John F., Gatesville, Tex. Window-lock. No. 957,124; May 3; Sp. p. 1330; Gaz. vol. 154; p. 212.

Sykes, George A., *et al.* (See Rapp, Louis P., assignor.)

Sylvester, William, assignor to Four Utensil Manufacturing Company, Pittsburg, Pa. Cooking vessel. No. 959,647; May 31; Sp. p. 6964; Gaz. vol. 154; p. 1185.

T. C. Pronty Company. (See Hamilton, Low L., assignor.)

Tabler, Harry C. (See Dougherty and Tabler.)

Tache, Simon, Cleveland, Ohio. Instantaneous water-heater. No. 958,563; May 17; Sp. p. 4682; Gaz. vol. 154; p. 769.

Taintor, Charles C., Elizabeth, N. J. Tool. No. 957,271; May 10; Sp. p. 1683; Gaz. vol. 154; p. 295.

Talbot, Frank M., Glen Ridge, N. J. Apparatus for building retaining-walls. No. 957,521; May 10; Sp. p. 2190; Gaz. vol. 154; p. 378.

Tandy, John L., Kansas City, Mo. Folding bed. No. 958,682; May 17; Sp. p. 4013; Gaz. vol. 154; p. 807.

Tate, Edwin, and J. M. Goodall, London, England. Device for determining the metacentric height of vessels. No. 958,192; May 17; Sp. p. 3797; Gaz. vol. 154; p. 642.

Taub, Ludwig, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Ester from chaulmoogra-oil. No. 957,633; May 10; Sp. p. 2406; Gaz. vol. 154; p. 417.

Taulman, Francis L., Barnes, Kans. Can-carrier. No. 956,835; May 3; Sp. p. 720; Gaz. vol. 154; p. 115.

Taylor, Arthur C., Brooklyn, N. Y. Stereotype-block. No. 959,271; May 24; Sp. p. 6184; Gaz. vol. 154; p. 1033.

Taylor, Carleton M. (See Hartford, Taylor, and Stone.)

Taylor, George W., Denver, Colo. Brickmaking-machine. No. 957,174; May 3; Sp. p. 1434; Gaz. vol. 154; p. 230.

Taylor, Harry, Vancouver, British Columbia, Canada. Metal-shear. No. 959,035; May 24; Sp. p. 5684; Gaz. vol. 154; p. 955.

Taylor, John, Liverpool, England. Vehicle and locomotive sanding apparatus. No. 956,651; May 3; Sp. p. 311; Gaz. vol. 154; p. 51.

Taylor, John A., Greeley, Colo. Head-gate. No. 957,448; May 10; Sp. p. 2042; Gaz. vol. 154; p. 354.

Taylor, Stiles & Company. (See Bonnett, John C., assignor.)

Taylor, William R. (See Burch and Taylor.)

Telch, Ernest L. (See Arens and Telch.)

Telecheff, Michael, St. Petersburg, Russia. Gun. No. 959,648; May 31; Sp. p. 6964; Gaz. vol. 154; p. 1185.

Temple, William S., assignor of one-half to T. Spillane, New Bethlehem, Pa. Apparatus for making wire-glass. No. 959,434; May 24; Sp. p. 6481; Gaz. vol. 154; p. 1086.

Templin, Joseph H. (See Wiedemann and Templin.)

Templin, Joseph H., Philadelphia, Pa. Porinble vacuum-pump. No. 956,784; May 3; Sp. p. 606; Gaz. vol. 154; p. 97.

Tennant, Palmer, Hagerstown, Md. Lamp-chimney. No. 956,600; May 3; Sp. p. 223; Gaz. vol. 154; p. 38.

Terry, George O., Good Thunder, Minn. Flue-stopper. No. 956,610; May 3; Sp. p. 224; Gaz. vol. 154; p. 38.

Terry, William L., Jr., Little Rock, Ark. Starting mechanism. No. 957,813; May 10; Sp. p. 2780; Gaz. vol. 154; p. 477.

Thatcher, William C., assignor to K. T. Eaton, Chattanooga, Tenn. Combination garment-hanger. No. 959,180; May 24; Sp. p. 6001; Gaz. vol. 154; p. 1003.

Thatcher, William C., assignor to K. T. Eaton, Chattanooga, Tenn. Trousers-hanger. No. 959,181; May 24; Sp. p. 6003; Gaz. vol. 154; p. 1003.

Thatford, Joseph G., Sharon Hill, Pa. Trowel. No. 960,210; May 31; Sp. p. 8186; Gaz. vol. 154; p. 1378.

Theband, John E., assignor of one-half to H. C. Nash, Buffalo, N. Y. Lubricant-retainer. No. 958,103; May 17; Sp. p. 3799; Gaz. vol. 154; p. 642.

Theo. A. Kochs Company. (See Ross, Herold H., assignor.)

Thiel, Martin A., Wilkinsburg, Pa., assignor to The Westinghouse Machine Company. Machine for grinding cams. No. 957,392; May 10; Sp. p. 1927; Gaz. vol. 154; p. 335.

Thoits, Alvin T., and J. G. Gronberg, assignors to Caloric Fireless Cookstove Company, Grand Rapids, Mich. Fireless baker. (Reissue.) No. 13,110; May 3; Sp. p. 1443; Gaz. vol. 154; p. 232.

Thoma, Andrew, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y. Shoe-filler apparatus. No. 957,393; May 10; Sp. p. 1928; Gaz. vol. 154; p. 335.

Thoma, Andrew, Cambridge, Mass., assignor to Thoma Corporation, Portland, Me. Plastic sheet composition. No. 957,394; May 10; Sp. p. 1931; Gaz. vol. 154; p. 336.

Thoma Corporation. (See Thoma, Andrew, assignor.)

Thomas, Augustus O., Kearney, Nebr. Molding artificial-stone building-blocks. No. 958,194; May 17; Sp. p. 3800; Gaz. vol. 154; p. 642.

Thomas, Edward, Worcester, Mass. Cement and concrete work. No. 958,336; May 17; Sp. p. 4244; Gaz. vol. 154; p. 692.

Thomas, Edward G. (See Cowley and Thomas.)

Thomas, Edward G., Brookline, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Conveying apparatus. No. 958,044; May 17; Sp. p. 3452; Gaz. vol. 154; p. 590.

Thomas, Edward J., Elphinstone, Manitoba, Canada. Cattle-guard. No. 956,745; May 3; Sp. p. 523; Gaz. vol. 154; p. 85.

Thomas, Edwin L., assignor to E. R. Thomas Motor Company, Buffalo, N. Y. Filler for automobile-radiators. No. 957,814; May 10; Sp. p. 2782; Gaz. vol. 154; p. 477.

Thomas, George B., assignor to The Perkins Electric Switch Manufacturing Company, Bridgeport, Conn. Push-button switch. No. 960,124; May 31; Sp. p. 8022; Gaz. vol. 154; p. 1347.

Thomas, George J., Watertown, assignor to C. E. Chester, Boston, Mass. Chuck. No. 958,980; May 24; Sp. p. 5579; Gaz. vol. 154; p. 937.

Thomas, Griffith, *et al.* (See Stragiotti, Pietro, assignor.)

Thomas, John, New York, N. Y. Lever-check for electric controllers. No. 958,564; May 17; Sp. p. 4684; Gaz. vol. 154; p. 769.

Thomas P. Taylor Co., The. (See Jameson, George P., assignor.)

Thomas, Percy H., Montclair, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y. Controlling device for vapor apparatus. No. 958,195; May 17; Sp. p. 3801; Gaz. vol. 154; p. 642.

Thomas, Percy H., East Orange, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y. Starting device for vapor apparatus. No. 958,445; May 17; Sp. p. 4461; Gaz. vol. 154; p. 729.

Thomas, William F., Chanute, Kans. Can-filler. No. 956,652; May 3; Sp. p. 313; Gaz. vol. 154; p. 51.

Thomas, Willie O., assignor to Owen Thomas Motor Car Company, Janesville, Wis. Muffler. No. 956,785; May 3; Sp. p. 608; Gaz. vol. 154; p. 97.

Thomaschewski, Paul, Vohwinkel, near Elberfeld, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Vat dye. No. 957,126; May 3; Sp. p. 1332; Gaz. vol. 154; p. 213.

Thomasen, Olaus, New York, N. Y. Window-blind holder. No. 959,403; May 24; Sp. p. 6432; Gaz. vol. 154; p. 1076.

Thompson, Calvin H., Mounds, Okla. Nose-bag holder. No. 957,815; May 10; Sp. p. 2783; Gaz. vol. 154; p. 477.

Thompson, Charles L. (See Peterson, Nils, assignor.)

Thompson, Charles P., Patoka, Ind. Weed-hook. No. 956,653; May 3; Sp. p. 320; Gaz. vol. 154; p. 52.

Thompson, Clement E., Chicago, Ill., assignor to Air-Line Carrier Company. Store-service wireway. No. 958,782; May 24; Sp. p. 5149; Gaz. vol. 154; p. 868.

Thompson, James E., assignor of one-half to W. R. White, Troy, Ala. Plow. No. 957,272; May 10; Sp. p. 1686; Gaz. vol. 154; p. 295.

Thompson, John H., Cheswick, assignor to American Bridge Company, Pittsburg, Pa. Punching-machine. No. 957,914; May 17; Sp. p. 3021; Gaz. vol. 154; p. 542.

Thompson, John W., Hinchcliff, Miss. Fire-escape. No. 959,404; May 24; Sp. p. 6433; Gaz. vol. 154; p. 1076.

Thompson, William, *et al.* (See Bogenschutz, William C., assignor.)

Thomson, Elihu, Swampscott, Mass., assignor to General Electric Company. Elastic-fluid turbine. No. 957,915; May 17; Sp. p. 3023; Gaz. vol. 154; p. 542.

Thomson, Henry C., Boston, Mass., assignor to Electric Goods Manufacturing Company. Circuit-closer. No. 959,435; May 24; Sp. p. 6484; Gaz. vol. 154; p. 1086.

Thomson, John, New York, N. Y., assignor to John Thomson Press Company, Jersey City, N. J. Press. No. 957,916; May 17; Sp. p. 3026; Gaz. vol. 154; p. 543.

Thomson, John, New York, N. Y., assignor to John Thomson Press Company, Jersey City, N. J. Printing-press. No. 957,917; May 17; Sp. p. 3027; Gaz. vol. 154; p. 543.

Thomson, Judson L., New York, N. Y. Smoking-pipe, &c. No. 959,649; May 31; Sp. p. 6967; Gaz. vol. 154; p. 1186.

Thomson, Samuel G. (See Thomson, William P. and S. G.)

Thomson-Thomson Company. (See Thomson, William P. and S. G., assignors.)

Thomson, William L., Newark, N. J., assignor to The Safety Car Heating & Lighting Company. Dynamo-driving. No. 957,522; May 10; Sp. p. 2192; Gaz. vol. 154; p. 379.

Thomson, William P. and S. G., assignors to Thomson-Thomson Company, Philadelphia, Pa. Splice-bar for rail-joints. No. 960,237; May 31; Sp. p. 8237; Gaz. vol. 154; p. 1386.

Thomson, William P. and S. G., assignors to Thomson-Thomson Company, Philadelphia, Pa. Splice-bar for rails. No. 960,238; May 31; Sp. p. 8240; Gaz. vol. 154; p. 1387.

Thordarson, Chester H., Chicago, Ill. Spark-coil. No. 958,899; May 24; Sp. p. 5435; Gaz. vol. 154; p. 910.

Thorne, Josiah C., assignor of four-tenths to S. A. Clarke, Napa Junction, Cal. Cigar-clipper attachment for pencils. No. 959,272; May 24; Sp. p. 6185; Gaz. vol. 154; p. 1033.

Thornley, Albert J., Pawtucket, assignor to Consolidated Car Fender Company, Providence, R. I. Car-fender. No. 960,056; May 31; Sp. p. 7896; Gaz. vol. 154; p. 1326.

Thornton, Charles W., Dalhart, Tex. Sanitary cleansing and indicating device for drinking vessels. No. 950,970; May 31; Sp. p. 7564; Gaz. vol. 154; p. 1295.

Thornycroft, John I., Chiswick, England. Spraying apparatus. No. 957,014; May 3; Sp. p. 1116; Gaz. vol. 154; p. 175.

Thorold, William J., London, England. Composition of matter. No. 950,650; May 31; Sp. p. 6960; Gaz. vol. 154; p. 1186.

Thortvedt, Levi, Glyndon, Minn. Bug and worm killing machine. No. 957,634; May 10; Sp. p. 2407; Gaz. vol. 154; p. 417.

Thos. Devlin Manufacturing Co. (See Frick, John J., assignor.)

Thust, George J., assignor to Detroit Seamless Steel Tubes Company, Detroit, Mich. Vehicle-pole. No. 957,582; May 10; Sp. p. 2300; Gaz. vol. 154; p. 399.

Tibbals, Cyrus F. (See Putnam, Theodore A. B., assignor.)

Tiedemann, Henry, Camden, N. J., and J. U. Clarke, assignors of one-third to E. Guenther; said Clarke assignor to J. J. Guenther, Philadelphia, Pa. Convertible chair and couch. No. 956,836; May 3; Sp. p. 730; Gaz. vol. 154; p. 115.

Tiedemann, Henry, Camden, N. J., and J. U. Clarke, assignors of one-third to Emil Guenther; said Clarke assignor to J. J. Guenther, Philadelphia, Pa. Convertible chair and couch. No. 956,837; May 3; Sp. p. 731; Gaz. vol. 154; p. 116.

Tigerman, William H. (See Smith, Josiah H., assignor.)
Tilley, Benjamin F. (See Tilley, Benjamin W. and B. F.)
Tilley, Benjamin W. and B. F., Bearcreek, La. Pneumatic cotton-seed conveyer. No. 957,126; May 3; Sp. p. 1332; Gaz. vol. 154; p. 213.
Tillie, Marshall, Londonderry, Ireland. Guide for collars. No. 957,816; May 10; Sp. p. 2785; Gaz. vol. 154; p. 478.
Tillman, William G., New York, N. Y., assignor of one-half to H. Weinberger, Ansonia, Conn. Burglar-alarm. No. 957,635; May 10; Sp. p. 2412; Gaz. vol. 154; p. 417.
Timm, Clarence J., and J. A. Barnhardt, Duluth, Minn. Locking device for incandescent lamps. No. 959,818; May 31; Sp. p. 7328; Gaz. vol. 154; p. 1241.
Tindall, Ida M., Pontiac, Ill. Desk. No. 957,583; May 10; Sp. p. 2301; Gaz. vol. 154; p. 399.
Tingley, Egbert M., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Brush-holder for dynamo-electric machines. No. 956,548; May 3; Sp. p. 90; Gaz. vol. 154; p. 16.
Tingley, Egbert M., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Dynamo-electric machine. No. 956,549; May 3; Sp. p. 92; Gaz. vol. 154; p. 17.
Tingley, Egbert M., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Dynamo-electric machine. No. 959,651; May 31; Sp. p. 6970; Gaz. vol. 154; p. 1186.
Tischbein, Willy, Hanover, Germany. Automobile-wheel. No. 956,611; May 3; Sp. p. 226; Gaz. vol. 154; p. 39.
Tobey, Fred W., Grand Rapids, Mich. Hinge and lock for box-covers. No. 959,071; May 31; Sp. p. 7686; Gaz. vol. 154; p. 1295.
Todd, George W., Omaha, Nebr. Horse-collar. No. 959,652; May 31; Sp. p. 6971; Gaz. vol. 154; p. 1187.
Todd, Robert T., Lawrence, and R. B. Batty, Methuen, Mass. Finishing process. No. 956,550; May 3; Sp. p. 93; Gaz. vol. 154; p. 17.
Todt, Edward G., Manitowoc, Wis. Metal-cutting machine. No. 958,196; May 17; Sp. p. 3803; Gaz. vol. 154; p. 643.
Todt, Edward G., Manitowoc, Wis. Metal-cutting machine. No. 958,197; May 17; Sp. p. 3804; Gaz. vol. 154; p. 643.
Toledo Electric Welder Company. (See Buchenberg, Alvin E., assignor.)
Tolliver, James C., Ainsworth, Nebr. Stair. No. 957,817; May 10; Sp. p. 2786; Gaz. vol. 154; p. 478.
Tomaselli, Antonio, Cleveland, Ohio. Measuring-rule for tailors. No. 959,972; May 31; Sp. p. 7688; Gaz. vol. 154; p. 1296.
Tomkins, Alfred, Pittsburg, Pa. Cage for games. No. 959,973; May 31; Sp. p. 7690; Gaz. vol. 154; p. 1296.
Tomkinson, Charles C., Plainfield, N. J. Expansion-bolt. No. 958,783; May 24; Sp. p. 5151; Gaz. vol. 154; p. 868.
Toomer, Nancy, Fitzgerald, Ga. Envelop. No. 956,786; May 3; Sp. p. 609; Gaz. vol. 154; p. 98.
Toppino, Charles, Jr. (See De Rochemont, Perkins H., assignor.)
Torcheleuf, Charles, and E. de Lanneau, Paris, France. Carbureting-lamp. No. 958,045; May 17; Sp. p. 3453; Gaz. vol. 154; p. 591.
Torchio, Philip, New York, N. Y. Insulating-covering for cables. No. 958,046; May 17; Sp. p. 3454; Gaz. vol. 154; p. 591.
Torjusen, Carsten E., and W. Idstrom, New Orleans, La. Apparatus for separating gravel from sand, &c. No. 958,565; May 17; Sp. p. 4687; Gaz. vol. 154; p. 770.
Torre, Frank D., Baltimore, Md. Violin-bow. No. 958,784; May 24; Sp. p. 5151; Gaz. vol. 154; p. 868.
Tosco, Agostino, San Francisco, Cal. Hand soldering-machine. No. 957,636; May 10; Sp. p. 2413; Gaz. vol. 154; p. 417.
Toulmin, Harry A. (See Myers and Toulmin.)
Towsignant, Edmund J., Wallace, Idaho. Manifolding device. No. 958,566; May 17; Sp. p. 4689; Gaz. vol. 154; p. 770.
Towner, Reed C., Fairport, Kans. Grain-header. No. 959,810; May 31; Sp. p. 7320; Gaz. vol. 154; p. 1242.
Townsend, Elvin E., Oakland, Cal. Valve-seat grinder. No. 959,653; May 31; Sp. p. 6978; Gaz. vol. 154; p. 1187.
Trachte, Arthur F. (See Trachte, George A. and A. F.)
Trachte, George A. and A. F., Madison, Wis. Galvanized-iron tank. No. 956,908; May 3; Sp. p. 895; Gaz. vol. 154; p. 141.
Traber, Wilfred C., London, Ontario, Canada. Book-holder. No. 959,405; May 24; Sp. p. 6435; Gaz. vol. 154; p. 1077.
Traut, George W. (See Hine, Henry C., assignor.)
Trautmann, Henry J., and J. L. Copping, London, England. Device for varying chimney-draft. No. 957,273; May 10; Sp. p. 1688; Gaz. vol. 154; p. 295.
Traylor, Samuel W., Allentown, Pa. Rotary screen. No. 957,618; May 10; Sp. p. 2787; Gaz. vol. 154; p. 478.
Treanor, James J., New York, N. Y. Amusement device. No. 956,838; May 3; Sp. p. 734; Gaz. vol. 154; p. 116.
Tresidder, John J., New York, assignor to Acme Column Company, Brooklyn, N. Y. Fireproof column. No. 960,125; May 31; Sp. p. 8023; Gaz. vol. 154; p. 1347.
Trevellian, Frederick H., Wellington, New Zealand. Cash-register. No. 957,918; May 17; Sp. p. 3023; Gaz. vol. 154; p. 543.
Tritsch, Julius, Cincinnati, Ohio. Hinge. No. 959,001; May 24; Sp. p. 5620; Gaz. vol. 154; p. 944.
Trombly, William C., Lowell, assignor to Draper Company, Hopedale, Mass. Thin-place-detecting mechanism for looms. No. 959,654; May 31; Sp. p. 7074; Gaz. vol. 154; p. 1187.
Troup, Edward L., assignor of one-half to D. C. Walter, Toledo, Ohio. Self-centering work and die holder for pipe-threading dies. No. 957,721; May 10; Sp. p. 2585; Gaz. vol. 154; p. 447.
Trout, Frank B. (See Stoner and Trout.)
Troxell, Harry L. (See Birchall, Benjamin H., assignor.)
Trumpold, Robert, and A. Koerner, St. Louis, Mo. Folding poultry-coop. No. 957,274; May 10; Sp. p. 1689; Gaz. vol. 154; p. 295.
Trumpold, Robert, and A. Koerner, St. Louis, Mo. Folding coop or crate. No. 957,275; May 10; Sp. p. 1689; Gaz. vol. 154; p. 296.
Trussed Concrete Steel Company. (See Kane, Thomas H., assignor.)
Trussell, Clarence D., assignor to Trussell Manufacturing Company, New York, N. Y. Temporary binder. No. 959,182; May 24; Sp. p. 6005; Gaz. vol. 154; p. 1004.
Trussell, Clarence D. and E. A., assignors to Trussell Manufacturing Company, New York, N. Y. Temporary binder. No. 959,183; May 24; Sp. p. 6006; Gaz. vol. 154; p. 1004.
Trussell, Emory A. (See Trussell, Clarence D. and E. A.)
Trussell Manufacturing Company. (See Trussell, Clarence D., assignor.)
Trussell Manufacturing Company. (See Trussell, Clarence D. and E. A., assignors.)
Tuck, Gustave, Moorfields, London, England. Toy or picture book. No. 950,655; May 31; Sp. p. 6979; Gaz. vol. 154; p. 1188.
Tucker & Dorsey Manufacturing Company. (See Dorsey, Robert L., assignor.)
Tucker, Zechariah B., Providence, R. I. Micrometer-callipers. No. 959,974; May 31; Sp. p. 7692; Gaz. vol. 154; p. 1296.
Turbayne, William A., Lancaster, N. Y., assignor to Gould Storage Battery Company. Electrical system of distribution. No. 957,523; May 10; Sp. p. 2193; Gaz. vol. 154; p. 379.
Turley, Patrick H., Harrisburg, Pa., assignor to Elliott-Fisher Company, New York, N. Y. Key-locking mechanism. No. 957,481; May 10; Sp. p. 2102; Gaz. vol. 154; p. 365.
Turnbull, John. (See Parsons and Turnbull.)
Turnbull, Thomas, Jr., Pittsburg, Pa. Means for feeding fluid fuel. No. 960,057; May 31; Sp. p. 7900; Gaz. vol. 154; p. 1326.
Turner, Elijah V., Johnson City, Tenn. Velocipede. No. 959,656; May 31; Sp. p. 6980; Gaz. vol. 154; p. 1188.
Turner, Floyd. (See Andrews and Turner.)
Turner, James S., Caddo Mills, Tex., and J. L. Campbell, Caddo, Okla. Clothes-pounder. No. 957,010; May 17; Sp. p. 3031; Gaz. vol. 154; p. 544.
Turner, Thomas L. (See Starke and Turner.)
Turner, Walter V. (See Farmer and Turner.)
Turney, William, Hyde Park, Mass. Adjustable reamer. No. 959,273; May 24; Sp. p. 6186; Gaz. vol. 154; p. 1034.
Tuttle, Perry R., Rozel, Kans. Buckle. No. 956,909; May 3; Sp. p. 896; Gaz. vol. 154; p. 142.
Twinplex Manufacturing Company. (See Floyd, George G., assignor.)
Tylska, John W., Meridian, Okla. Envelop. No. 958,981; May 24; Sp. p. 5581; Gaz. vol. 154; p. 938.
Tynes, Minor E., Gloucester, Miss. Sewing-machine attachment. No. 957,276; May 10; Sp. p. 1691; Gaz. vol. 154; p. 296.
Uhl, Daniel B. (See Blanchard, Uhl, and Koch.)
Uhlyarik, Anthony, Ossining, N. Y. Machine for use in cleaning table-cutlery. No. 958,843; May 24; Sp. p. 5284; Gaz. vol. 154; p. 891.
Ulbrich, Gustav H., assignor of one-half to J. S. Balden, Enid, Okla. Toy. No. 957,819; May 10; Sp. p. 2789; Gaz. vol. 154; p. 479.
Ulrich, Peter A., Deer Creek, Ill. Land-marker. No. 958,567; May 17; Sp. p. 4691; Gaz. vol. 154; p. 770.
Unekrich, Ferdinand, Galion, Ohio. Vault-closure. No. 959,406; May 24; Sp. p. 6436; Gaz. vol. 154; p. 1077.
Underwood, Louis E., Lynn, Mass., assignor to General Electric Company. Motor-driving mechanism. No. 957,277; May 10; Sp. p. 1692; Gaz. vol. 154; p. 296.
Underwood, Louis E., and C. P. Smith, Lynn, Mass., assignors to General Electric Company. Dynamo-electric machine. No. 959,901; May 31; Sp. p. 7513; Gaz. vol. 154; p. 1270.
Underwood, Sidney S. (See Pitt, William A., assignor.)
Underwood Typewriter Company. (See Barnard, Walter E., assignor.)
Underwood Typewriter Company. (See Crutchley, Harry, assignor.)
Underwood Typewriter Company. (See McLaughlin, John C., assignor.)
Underwood Typewriter Company. (See Sokolov, Jacob, assignor.)
Underwood Typewriter Company. (See Young, Frank A., assignor.)
Union Typewriter Company. (See Barron, Walter J., assignor.)
Union Typewriter Company. (See Nielsen, Stefanus, assignor.)
United Casting Company. (See Noble, William A. E., assignor.)
United Casting Company. (See Noble and Jay, assignors.)
United Cigarette Machine Company, The. (See Crosthwaite, Walter G., assignor.)

United Coke and Gas Company, The. (See Schulte, Eduard, assignor.)
United Engineering & Foundry Company. (See Biggert, Florence C., Jr., assignor.)
United Engineering & Foundry Company. (See Pennington, Harley D., assignor.)
United Shoe Machinery Company. (See Elliott, Alvin D., assignor.)
United Shoe Machinery Company. (See Flynt, Louis W. G., assignor.)
United Shoe Machinery Company. (See Johnson, Albert E., assignor.)
United Shoe Machinery Company. (See Lund, Thomas, assignor.)
United Shoe Machinery Company. (See McFeely, Ronald F., assignor.)
United Shoe Machinery Company. (See Shaw, Linus H., assignor.)
United Shoe Machinery Company. (See Wheeler, Walter O., assignor.)
United Shoe Machinery Company. (See Whitcher and Randall, assignors.)
United Shoe Machinery Company. (See Winter and Conlon, assignors.)
United States Cotton Seed Oil Company. (See Worth, William E., assignor.)
United States Electrical Manufacturing Company. (See Johnson, Carl E., assignor.)
United States Fibre Stopper Company. (See Ketcheson, John H., assignor.)
United States Gypsum Company. (See Knode, Oliver M., assignor.)
United-Xpedite Finishing Company. (See Pease, Charles, assignor.)
Universal Electric Economy Company. (See Woodley, Alfred, assignor.)
Updegraff, William B., New York, N. Y. Dumb-waiter. No. 957,015; May 3; Sp. p. 1121; Gaz. vol. 154; p. 176.
Upham, George B. (See Wilkinson and Upham.)
Urbans, Jackob, Porter, Wash. Cable-splicer. No. 959,407; May 24; Sp. p. 6440; Gaz. vol. 154; p. 1078.
Usini de Desargentation Société Anonyme. (See Maschmeyer, Hermann, assignor.)
Utica Drop Forge & Tool Company. (See Kellemen, Henry F., assignor.)
V. D. Anderson Company, The. (See Anderson, Frank B., assignor.)
Vaco Manufacturing Co. (See Schroeder, Florence P., assignor.)
Vall, Charles C., Columbus, Ohio. Gas-fire-lighting device. No. 956,868; May 3; Sp. p. 803; Gaz. vol. 154; p. 127.
Vale, Olive, Alameda, Cal. Toilet accessory. No. 957,016; May 3; Sp. p. 1122; Gaz. vol. 154; p. 176.
Vallone, Charles. (See Rogers and Vallone.)
Van Dorn & Dutton Company, The. (See Hafemeister, William C., assignor.)
Van Guelpen, Otto H., assignor to Benziger Brothers, New York, N. Y. Candelabrum. No. 958,568; May 17; Sp. p. 4692; Gaz. vol. 154; p. 771.
Van Matre, Jennings, Paso Robles, Cal. Draft-equalizer. No. 957,821; May 10; Sp. p. 2792; Gaz. vol. 154; p. 479.
Van Matre, Jennings, Paso Robles, Cal. Draft-equalizer. No. 960,126; May 31; Sp. p. 8024; Gaz. vol. 154; p. 1348.
Van Riper, Lewis C., assignor to Bright Manufacturing Company, Chicago, Ill. Envelop. No. 958,785; May 24; Sp. p. 5152; Gaz. vol. 154; p. 868.
Van Ronk, Alice M., New York, N. Y. Liquid-receptacle. No. 959,057; May 31; Sp. p. 6981; Gaz. vol. 154; p. 1188.
Van Wickle, Edward, New York, N. Y. Safety gas-cock. No. 959,090; May 24; Sp. p. 5814; Gaz. vol. 154; p. 974.
Van Wye, Garry P., New York, N. Y. Sewing-clamp. No. 956,869; May 3; Sp. p. 805; Gaz. vol. 154; p. 128.
Vanden Broek, Isaac, New York, N. Y. Making hydrocarbon soap. No. 959,820; May 31; Sp. p. 7332; Gaz. vol. 154; p. 1242.
Vanderbeek, Herbert, assignor, by mesne assignments, to The Royal Equipment Company, Bridgeport, Conn. Brake. No. 958,446; May 17; Sp. p. 4462; Gaz. vol. 154; p. 730.
Vanderlip, Earl, assignor of one-half to A. O. Bickford, Alto, Mich. Gasolene-engine. No. 957,278; May 10; Sp. p. 1694; Gaz. vol. 154; p. 297.
Vanderlip, Louis C., Elkhart, Ind. Gas-engine. No. 957,017; May 3; Sp. p. 1123; Gaz. vol. 154; p. 177.
Vaniman, Harvey W., Cincinnati, Ohio. Boat. No. 957,820; May 10; Sp. p. 2790; Gaz. vol. 154; p. 479.
Vanoni, Edward, Loyalton, Cal. Door-stop. No. 957,584; May 10; Sp. p. 2303; Gaz. vol. 154; p. 400.
Vanosdall, Harry B., and C. E. Enck, Ashland, Ohio. Collapsible toilet-seat. No. 957,822; May 10; Sp. p. 2793; Gaz. vol. 154; p. 480.
Vauclain, Samuel M., assignor, by mesne assignments, to Baldwin Locomotive Works, Philadelphia, Pa. Flexible driving connection. No. 957,279; May 10; Sp. p. 1697; Gaz. vol. 154; p. 297.
Vaughan, Hunter E., *et al.* (See Young, Henry E., assignor.)
Veal, Sydney H. (See Juin, Adolphe, assignor.)
Velox, Frank J., Warner, S. D. Tongs for sheet metal. No. 956,910; May 3; Sp. p. 807; Gaz. vol. 154; p. 142.
Velen, Luther T., Cleburne, Kans. Cutter mechanism for harvesters. No. 957,280; May 10; Sp. p. 1698; Gaz. vol. 154; p. 277.
Velochrone Company, The. (See Blüerle, Tobias, assignor.)
Venn, Isaac H., Yonkers, N. Y., assignor to Otis Elevator Company, East Orange, N. J. Leather cup. No. 956,612; May 3; Sp. p. 227; Gaz. vol. 154; p. 39.
Venner, Richard, Barre, Vt. Respirator and inhaler. No. 958,569; May 17; Sp. p. 4693; Gaz. vol. 154; p. 771.
Vercellini, Joseph, *et al.* (See Stragiotti, Pietro, assignor.)
Verhulst, Noel. (See Vermeistch and Verhulst.)
Vermeistch, Abel, Lawrence, Mass., and N. Verhulst, Pawtucket, R. I. Compound for use in preparing sizing compositions. No. 956,551; May 3; Sp. p. 95; Gaz. vol. 154; p. 17.
Vesey, Richard H., Denver, Colo., assignor to T. E. Stevens, Omaha, Nebr., and C. C. Denny, Chicago Heights, Ill. Post-hole digger. No. 957,127; May 3; Sp. p. 1334; Gaz. vol. 154; p. 213.
Vesey, Richard H., Denver, Colo., assignor to T. E. Stevens, Omaha, Nebr., and C. C. Denny, Chicago Heights, Ill. Post-hole digger. No. 957,128; May 3; Sp. p. 1336; Gaz. vol. 154; p. 214.
Vick, Alfred W., Savannah, Ga. Train-order holder. No. 957,018; May 3; Sp. p. 1126; Gaz. vol. 154; p. 177.
Vick, Rollo M., Detroit, Mich. Telephone-bracket. No. 956,911; May 3; Sp. p. 898; Gaz. vol. 154; p. 142.
Vick, Rollo M., Detroit, Mich., assignor to The American Case & Register Company, Salem, Ohio. Credit-cabinet. No. 959,821; May 31; Sp. p. 7333; Gaz. vol. 154; p. 1242.
Victor Talking Machine Company, (See English, John C., assignor.)
Victor Talking Machine Company. (See Gibson, Robert L., assignor.)
Vierengel, Matthew, Brooklyn, N. Y., and J. Sofge, Cincinnati, Ohio, assignors, by mesne assignments, to C. E. Roth, trustee, Cincinnati, Ohio. Paper-bag machine. No. 958,844; May 24; Sp. p. 5287; Gaz. vol. 154; p. 891.
Vilee, Frank M., Fitchburg, Mass. Guy-wire connection for land-anchors. No. 957,823; May 10; Sp. p. 2795; Gaz. vol. 154; p. 480.
Villiger, Viktor. (See Julius, Villiger, and Nawiasky.)
Villiger, Viktor. (See Barnes and Vincer.)
Vincer, John R. (See Barnes and Vincer.)
Virgin, William H., Clarksburg, W. Va. Swing. No. 959,085; May 24; Sp. p. 5804; Gaz. vol. 154; p. 972.
Vita Electric Sign Company. (See Prindle, Edwin J., assignor.)
Vock, Philip, New York, N. Y., assignor to New York Bottlers' Supplies Manufacturing Company. Siphon-filler. No. 958,982; May 24; Sp. p. 5582; Gaz. vol. 154; p. 938.
Vogell, John J., San Francisco, Cal. Card system. No. 958,337; May 17; Sp. p. 4245; Gaz. vol. 154; p. 692.
Voight, Henry G., and N. B. Hurd, assignors to Russell & Erwin Manufacturing Company, New Britain, Conn. Door-controlling mechanism. No. 958,447; May 17; Sp. p. 4464; Gaz. vol. 154; p. 730.
Voitle, Charles E., *et al.* (See Blair, George W., assignor.)
Volbert, John, Pittsburg, Pa. Ratchet tool-holder. No. 959,408; May 24; Sp. p. 6442; Gaz. vol. 154; p. 1078.
Voll, Jacob, Yankton, S. D., and D. Dringman, Sutherland, Nebr. Hay-rack. No. 959,274; May 24; Sp. p. 6188; Gaz. vol. 154; p. 1034.
Vollen, Joseph T. (See Homme, Vollen, and Isaacson.)
Voss, Hugo P., New York, N. Y. Bracket for telephone-receivers. No. 959,409; May 24; Sp. p. 6443; Gaz. vol. 154; p. 1078.
Vosseler, Gustav, Toledo, Ohio. Swivel-joint for electric-light fixtures. No. 958,448; May 17; Sp. p. 4466; Gaz. vol. 154; p. 730.
W. & E. T. Fitch Co., The. (See Hubbard, George M., assignor.)
W. F. & John Barnes Company. (See Barnes and Vincer, assignors.)
W. V. Bowater & Sons. (See Bellamy, Henry J., assignor.)
Wade, Bernard J. (See Payne and Wade.)
Wade, George H., Atlanta, Ga. Electrically-heated roller. No. 957,824; May 10; Sp. p. 2797; Gaz. vol. 154; p. 480.
Wade, Hezikiah A. (See Hinshaw and Wade.)
Wagener, Clemens, Berlin, Germany, assignor to L. Bichler, Innsbruck, Austria-Hungary. Ice-making machine. No. 958,683; May 17; Sp. p. 4919; Gaz. vol. 154; p. 807.
Wagner Electric Manufacturing Company. (See Sparrow, Simon, assignor.)
Wagner Electric Manufacturing Company. (See Weichsel, Hans, assignor.)
Wagner, Frank B., Cleveland, Ohio. Trolley-guard. No. 957,585; May 10; Sp. p. 2303; Gaz. vol. 154; p. 400.
Walbel, Henry, Cleveland, Ohio. Branding-machine. No. 958,449; May 17; Sp. p. 4467; Gaz. vol. 154; p. 731.
Wait, William O., assignor of one-half to C. H. Patterson, Jackson, Mich. Knitting-machine bed. No. 959,822; May 31; Sp. p. 7335; Gaz. vol. 154; p. 1243.
Waite, Asro H., El Paso, Ill. Vapor-burner. No. 959,410; May 24; Sp. p. 6446; Gaz. vol. 154; p. 1078.
Waite, James F., Cleveland, Ohio. Driving mechanism for vehicles. (Reissue.) No. 13,113; May 10; Sp. p. 2874; Gaz. vol. 154; p. 493.
Wakefield, Charles C., London, England. Gas-burner for flare-lights. No. 960,127; May 31; Sp. p. 8025; Gaz. vol. 154; p. 1348.
Wakefield, Richard A., Midway, Tex. Press-sweep. No. 956,746; May 3; Sp. p. 525; Gaz. vol. 154; p. 86.
Wakefield, William J., Newark, N. J. Locket. No. 958,983; May 24; Sp. p. 5585; Gaz. vol. 154; p. 938.

Walch, Emil, Keokuk, Iowa. Shipping-case. No. 959,823; May 31 Sp. p. 7238; Gaz. vol. 154; p. 1243.
Waldren, H. M., *et al.* (See Bjorklund, Charley, assignor.)
Waldron Clark Manufacturing Company. (See Pullen, Leon W., assignor.)
Waldstein, Charles. Cambridge, England. Attachment for boots or shoes. No. 958,984; May 24; Sp. p. 5586; Gaz. vol. 154; p. 939.
Waldwick, Anthon, Oak Heights Poultry Farm, Wash. Brooder. No. 959,975; May 31; Sp. p. 7604; Gaz. vol. 154; p. 1296.
Wales, Alfred B., Whitman, assignor to B. Fleigel Company, Boston, Mass. Edge-trimmer attachment for sewing-machines. No. 959,275; May 24; Sp. p. 6191; Gaz. vol. 154; p. 1034.
Walford, Hugh C., Berlin, Ontario, Canada. Lightning-arrester. No. 959,658; May 31; Sp. p. 6982; Gaz. vol. 154; p. 1189.
Walker, Frank H. (See Moore, David P., assignor.)
Walker, James E., Pine Ridge, S. D. Steering-gear. No. 960,128; May 31; Sp. p. 8027; Gaz. vol. 154; p. 1348.
Walker Manufacturing Company. (See Rasmussen, Laurits T., assignor.)
Walker, Peter, Dickerson, Miss. Safety attachment for elevators. No. 956,552; May 3; Sp. p. 96; Gaz. vol. 154; p. 18.
Walker, Thomas B., *et al.* (See Wickersham, Benjamin F. assignor.)
Walker, Tupper G. (See Adkins, Joseph H., assignor.)
Walker, Walter F., assignor to The Confectioners' Machinery & Manufacturing Company, Springfield, Mass. Machine for scouring and cleaning candies. No. 958,338; May 17; Sp. p. 4247; Gaz. vol. 154; p. 693.
Walker, Warren H., assignor to Racine Economy Spring Company, Racine, Wis. Harrow attachment for plows. No. 957,722; May 10; Sp. p. 2587; Gaz. vol. 154; p. 448.
Wall, William J. (See Maxwell, Edward, assignor.)
Wallace, Edwin C., East Auburn, Cal. Composite pavement. No. 959,976; May 31; Sp. p. 7696; Gaz. vol. 154; p. 1297.
Wallace, Elmer D. (See Adams and Wallace.)
Wallace, F. G., *et al.* (See Blair, George W., assignor.)
Wallace, Howard F., Los Angeles, Cal. Supply-case. No. 956,613; May 3; Sp. p. 229; Gaz. vol. 154; p. 39.
Wallace, William M. (See Masson and Wallace.)
Walling, John E., and A. Olson, Portland, Oreg. Hydrocarbon-burner. No. 958,947; May 24; Sp. p. 5512; Gaz. vol. 154; p. 926.
Walsh-Baker Corporation. (See Walsh, Thomas P., assignor.)
Walsh, Thomas P., Boston, Mass., assignor to Walsh-Baker Corporation, Portland, Me. Bobbin. No. 957,825; May 10; Sp. p. 2798; Gaz. vol. 154; p. 481.
Walstrom, Axel M., Minneapolis, Minn. Starting device for automobile-engines. No. 958,985; May 24; Sp. p. 5587; Gaz. vol. 154; p. 939.
Walter, David C. (See Troup, Edward L., assignor.)
Walter, Harrison B., assignor, by mesne assignments, to National Fibre Box Company, Danville, Ill. Box. No. 957,395; May 10; Sp. p. 1940; Gaz. vol. 154; p. 336.
Walter, Hugo J. (See Ralston and Briggs, assignors.)
Walter, John W., Canton, Ohio. Trap-rest. No. 959,659; May 31; Sp. p. 6984; Gaz. vol. 154; p. 1189.
Walter, Martin W. Dayton, Ohio. Pencil-sharpener. No. 959,660; May 31; Sp. p. 6985; Gaz. vol. 154; p. 1189.
Walter, William L., Pontiac, Mich., assignor of one-eighth to L. Small, Washington, D. C. Vent attachment for radiators. No. 958,198; May 17; Sp. p. 3806; Gaz. vol. 154; p. 643.
Walters, Julius W., Glens Falls, assignor to Mechanical Devices Company, Albany, N. Y. Flexible shaft-coupling. No. 956,912; May 3; Sp. p. 809; Gaz. vol. 154; p. 142.
Walters, Robert L., Lavonia, Ga. Quick-adjusting wrench. No. 959,488; May 24; Sp. p. 6488; Gaz. vol. 154; p. 1087.
Walther, Anna, Fort Townsend, Wash. Dish-washer. No. 958,948; May 24; Sp. p. 5514; Gaz. vol. 154; p. 926.
Walton, Frederick, London, England. Road-vehicle suspension. No. 959,661; May 31; Sp. p. 6986; Gaz. vol. 154; p. 1189.
Walton, William B., and N. H. Keim, Eveleth, Minn. Rocking crib. No. 956,913; May 3; Sp. p. 900; Gaz. vol. 154; p. 142.
Walton, William D., assignor of one-half to R. B. Sheaf, Covington, Tenn. Harrow. No. 959,276; May 24; Sp. p. 6193; Gaz. vol. 154; p. 1035.
Walz, Charles J., New Haven, Conn., assignor to West Disinfecting Company. Disinfectant-holder. No. 957,449; May 10; Sp. p. 2045; Gaz. vol. 154; p. 355.
Ward, David E., Struthers, Ohio. Upsetting-machine. No. 959,184; May 24; Sp. p. 6007; Gaz. vol. 154; p. 1004.
Ward, Eugene J., New York, N. Y. Corn and bunion plaster. No. 958,100; May 17; Sp. p. 3808; Gaz. vol. 154; p. 644.
Ward, James A., Jr., Fort Smith, Ark. Article of furniture. No. 957,826; May 10; Sp. p. 2800; Gaz. vol. 154; p. 481.
Ward, John E. (See Dennis, Willard W., assignor.)
Ward, Paul B., Covington, Ky., assignor to Lynn-Superior Company, Cincinnati, Ohio. Filter and controlling-valve therefor. No. 956,914; May 3; Sp. p. 902; Gaz. vol. 154; p. 143.
Wardell, Henry E., Philadelphia, Pa. Bituminous structural material. No. 958,450; May 17; Sp. p. 4469; Gaz. vol. 154; p. 731.
Wardle, William W. (See Keith and Wardle.)
Ware, Charles I., assignor of one-half to F. R. Maxfield, Holyoke, Mass. Roll-bar for paper-pulp engines. No. 958,708; May 17; Sp. p. 4961; Gaz. vol. 154; p. 815.
Ware, Charles S. (See Griffin, Hubert C., assignor.)
Ware Machine & Loom Company. (See Côté, Henry, assignor.)
Ware Machine & Loom Company. (See Snow, Renceler C. assignor.)
Warfield, Earl P., assignor of one-third to A. L. Newmyer and one-half to M. S. Snyder, Washington, D. C. Box-fastener. No. 956,747; May 3; Sp. p. 526; Gaz. vol. 154; p. 85.
Warman, William A. (See Keller and Warman.)
Warmholtz, Charles, Chicago, Ill. Drill-brace. No. 959,824; May 31; Sp. p. 7339; Gaz. vol. 154; p. 1244.
Warne, Frederick C., and A. B. McLean, assignors to Roderick Lean Manufacturing Company, Mansfield, Ohio. Harrow. No. 958,200; May 17; Sp. p. 3809; Gaz. vol. 154; p. 644.
Warner & Swasey Co., The. (See Swasey, Ambrose, assignor.)
Warren, Governor D., Denver, Colo. Compressor. No. 957,129; May 3; Sp. p. 1339; Gaz. vol. 154; p. 214.
Warwick, George T., Springfield, Mass. Screw-machine. No. 959,825; May 31; Sp. p. 7340; Gaz. vol. 154; p. 1244.
Washburn, Frank L., and G. E. Lawrence, Los Angeles, Cal. Electrical connector. No. 959,977; May 31; Sp. p. 7697; Gaz. vol. 154; p. 1297.
Washington, Dixon E., assignor of one-half to C. W. Patton, Chicago, Ill. Valve. No. 958,451; May 17; Sp. p. 4471; Gaz. vol. 154; p. 731.
Wassmann, William J., Louisville, Ky. Cross-head. No. 957,920; May 17; Sp. p. 3033; Gaz. vol. 154; p. 544.
Waterbury Clock Company. (See Wehinger, Frederick, assignor.)
Waterbury Farrell Foundry and Machine Company, The. (See Bissell, Percy R., assignor.)
Waterloo Saddlery Co., The. (See Grings, Casper H., assignor.)
Watkins, Edwin D. (See Clark, Bullock, and Watkins.)
Watkins, John H. (See Morris and Watkins.)
Watkins, Orla H., Ames, Iowa. Lawn-trimmer. No. 956,554; May 3; Sp. p. 322; Gaz. vol. 154; p. 52.
Watkins, Orla H., Ames, assignor to Globe Manufacturing Company, Perry, Iowa. Gearing for washing-machines. No. 958,452; May 17; Sp. p. 4473; Gaz. vol. 154; p. 732.
Watson, John B., Bradford, Pa. Nut-lock. No. 959,662; May 31; Sp. p. 6989; Gaz. vol. 154; p. 1190.
Watson, Paris W., Jr., Lowestoft, England. Folding hood-framing for road-vehicles. No. 957,827; May 10; Sp. p. 2801; Gaz. vol. 154; p. 481.
Watson, Philip H., Leominster, Mass. Toilet article. No. 958,339; May 17; Sp. p. 4249; Gaz. vol. 154; p. 693.
Watson, Samuel A., Chester, Vt. Broom-holder. No. 958,570; May 17; Sp. p. 4694; Gaz. vol. 154; p. 771.
Watson-Stillman Company, The. (See Baker, Richard W., assignor.)
Watt, Matthew S., Duluth, Minn. Fireproof paint. No. 959,663; May 31; Sp. p. 6991; Gaz. vol. 154; p. 1190.
Watters, John H., Augusta, Ga. Track-sander. No. 957,019; May 3; Sp. p. 1127; Gaz. vol. 154; p. 178.
Wattles, Cyra B., assignor to Providence Gas Motor Company, Providence, R. I. Steering mechanism for automobiles. No. 959,978; May 31; Sp. p. 7700; Gaz. vol. 154; p. 1297.
Watts, James F., Spokane, Wash. Insect-trap. No. 958,786; May 24; Sp. p. 5154; Gaz. vol. 154; p. 869.
Waugh, Edward H. (See Kyle and Waugh.)
Way, Harry A., Burlington, Vt. Metallic screen. No. 956,614; May 3; Sp. p. 231; Gaz. vol. 154; p. 39.
Waycott, Albert. (See Handiges, Philip T., assignor.)
Wear, Edgar T., Oakland, assignor, by mesne assignments, of one-half to F. F. Wear, San Francisco, Cal. Coffee-chaff extractor. No. 957,130; May 3; Sp. p. 1342; Gaz. vol. 154; p. 215.
Wear, Frank F. (See Wear, Edgar T., assignor.)
Weaver, Vernon A., Three Hills, Alberta, Canada. Oil-can. No. 958,949; May 24; Sp. p. 5516; Gaz. vol. 154; p. 926.
Webb, Benjamin O., Los Angeles, Cal. Cyanid-barrel. No. 956,655; May 3; Sp. p. 323; Gaz. vol. 154; p. 53.
Webb, Emmet F., Cayka, Miss. Apparatus for thinning plants. No. 957,131; May 3; Sp. p. 1344; Gaz. vol. 154; p. 215.
Webb, Jean F., Jr., assignor to The Electric Signagraph and Semaphore Co., New York, N. Y. Train-stopping mechanism. No. 958,047; May 17; Sp. p. 3455; Gaz. vol. 154; p. 591.
Webb, John G., Vigo, Ohio. Scrubbing-machine. No. 957,828; May 10; Sp. p. 2803; Gaz. vol. 154; p. 482.
Webb, William G., Glens Falls, and J. H. Barnard, Sandy Hill, N. Y. Fastening means for screen-plates. No. 959,979; May 31; Sp. p. 7702; Gaz. vol. 154; p. 1298.
Weber Dental Manufacturing Company, The. (See Weber, Henry E., assignor.)
Weber, Gustav, Hagen, Westphalia, Germany. Cutter for wood-screw-cutting machines. No. 956,748; May 3; Sp. p. 527; Gaz. vol. 154; p. 85.
Weber, Henry, assignor to Latham Machinery Company, Chicago, Ill. Wire-feeding mechanism for stapling-machines. No. 958,201; May 17; Sp. p. 3811; Gaz. vol. 154; p. 644.
Weber, Henry E., assignor to The Weber Dental Manufacturing Company, Canton, Ohio. Dental chair. No. 958,048; May 17; Sp. p. 3469; Gaz. vol. 154; p. 591.

Weber, John, Elba, N. Y. Detachable rack for wagons. No. 957,586; May 10; Sp. p. 2305; Gaz. vol. 154; p. 400.
Weber, Josef, Essen-on-the-Ruhr, Germany. Regenerating stannic chlorid solutions. No. 958,966; May 24; Sp. p. 5589; Gaz. vol. 154; p. 939.
Webster, John E., Pittsburg, and F. Duff, Allegheny, Pa., assignors to Westinghouse Electric & Manufacturing Company. Coil-shield for dynamo-electric machines. No. 956,553; May 3; Sp. p. 98; Gaz. vol. 154; p. 18.
Webster, John E., and J. L. Davis, Pittsburg, Pa., assignors, by mesne assignments, to Westinghouse Electric & Manufacturing Company. Dynamo-electric machine. No. 956,554; May 3; Sp. p. 99; Gaz. vol. 154; p. 18.
Webster, Towner K. (See Milton, John L., assignor.)
Wedmark, Paul H., Lindstrom, Minn. Smoke-exhausting device for tunnels. No. 957,396; May 10; Sp. p. 1941; Gaz. vol. 154; p. 336.
Weed, Helen I., Buffalo, N. Y. Edible-nut cracker. No. 956,555; May 3; Sp. p. 101; Gaz. vol. 154; p. 19.
Weeks, John B., assignor to The Long Furniture Company. Hanover, Pa. Extension-table. No. 957,637; May 10; Sp. p. 2414; Gaz. vol. 154; p. 418.
Wege, Peter M., Youngstown, Ohio, assignor to The General Fireproofing Company, New York, N. Y. Metal structure. No. 956,556; May 3; Sp. p. 101; Gaz. vol. 154; p. 19.
Wegman, George, assignor of one-third to R. A. Smith, Beaver Dam, Wis., and one-third to R. J. Sutton, Chicago, Ill. Faucet for drawing liquids. No. 957,524; May 10; Sp. p. 2197; Gaz. vol. 154; p. 379.
Wehinger, Frederick, assignor to Waterbury Clock Company, Waterbury, Conn. Center-friction for watches and clocks. No. 958,987; May 24; Sp. p. 5590; Gaz. vol. 154; p. 939.
Welchsel, Hans, assignor to Wegner Electric Manufacturing Company, St. Louis, Mo. Starting device for electrical motors. No. 957,587; May 10; Sp. p. 2307; Gaz. vol. 154; p. 401.
Weigand, Alfred, Washington, D. C., assignor of one-half to C. F. Schoenewolf, Baltimore, Md., and one-half to J. E. Field, White Plains, N. Y. Lacing-hook. No. 957,281; May 10; Sp. p. 1702; Gaz. vol. 154; p. 298.
Weil, Julius E., Chicago, Ill. Combination trousers-band regulator and belt-retainer. No. 959,090; May 24; Sp. p. 5806; Gaz. vol. 154; p. 972.
Weil, Simon. (See Hauser, Leopold, assignor.)
Weinberg, Joseph, Duluth, Minn. Rail-holder. No. 956,557; May 3; Sp. p. 106; Gaz. vol. 154; p. 19.
Weinberg, Siegfried, Berlin, Germany, assignor to M. Zehden, New York, N. Y. Composition of matter adapted for use in the art of color stamping. No. 959,185; May 24; Sp. p. 6014; Gaz. vol. 154; p. 1005.
Weinberger, Henry. (See Tillman, William G., assignor.)
Weinland, Henry F., assignor to The Lagonda Manufacturing Company, Springfield, Ohio. Boiler-tube cleaner. No. 958,202; May 17; Sp. p. 3815; Gaz. vol. 154; p. 645.
Weinlig, Otto F., Burg Lede, near Beuel, Germany. Protecting means for masts, poles, or the like. No. 956,656; May 3; Sp. p. 326; Gaz. vol. 154; p. 53.
Weinstock, Henry, Marietta, Ohio. Carpet-fastener. No. 959,277; May 24; Sp. p. 6195; Gaz. vol. 154; p. 1035.
Weints, Jacob, assignor to The Strong, Carlisle & Hammond Company, Cleveland, Ohio. Furnace. No. 959,980; May 31; Sp. p. 7705; Gaz. vol. 154; p. 1298.
Weir, William Cathcart, Scotland. Steam-condensing plant and air-pump. No. 957,638; May 10; Sp. p. 2417; Gaz. vol. 154; p. 418.
Weiss, Albert T., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y. Cabinet-drawer. No. 958,203; May 17; Sp. p. 3817; Gaz. vol. 154; p. 645.
Weiss, Cornelius, Brooklyn, N. Y. Cloth-piling machine. No. 957,525; May 10; Sp. p. 2200; Gaz. vol. 154; p. 380.
Weiss, Cornelius, Brooklyn, N. Y. Cloth-piling machine. No. 957,526; May 10; Sp. p. 2201; Gaz. vol. 154; p. 380.
Weiss, Cornelius, Brooklyn, N. Y. Cloth-piling machine. No. 957,588; May 10; Sp. p. 2309; Gaz. vol. 154; p. 401.
Welch, Marion F., Hollis, Kans. Fire-escape. No. 957,589; May 10; Sp. p. 2311; Gaz. vol. 154; p. 401.
Wellin, Axel, London, England, assignor to Wellin Davit and Lane & De Groot Co. Davit for hoisting and lowering boats. No. 958,340; May 17; Sp. p. 4250; Gaz. vol. 154; p. 693.
Wellin Davit and Lane & De Groot Co. (See Wellin, Axel, assignor.)
Wellin, Peter, Newcastle, assignor, by mesne assignments, to The Krell Auto-Grand Piano Co. of America., Connersville, Ind. Automatic player for musical instruments. No. 957,590; May 10; Sp. p. 2312; Gaz. vol. 154; p. 402.
Wellman, Samuel G., Corry, Pa. Sash-lock. No. 959,981; May 31; Sp. p. 7707; Gaz. vol. 154; p. 1299.
Wellman-Seaver-Morgan Company, The. (See Hulett, George H., assignor.)
Wells, Ellis, Shelbyville, Ky. Butter-worker. No. 957,723; May 10; Sp. p. 2500; Gaz. vol. 154; p. 448.
Wells, Myron E., Massillon, Ohio. Extensible connection. No. 959,411; May 24; Sp. p. 6447; Gaz. vol. 154; p. 1079.
Wells, Willie, Lake Charles, La. Scaffolding. No. 959,278; May 24; Sp. p. 6196; Gaz. vol. 154; p. 1035.
Wengelin, Johan V., Gottenborg, Sweden. Controlling device for gas-burners. No. 957,591; May 10; Sp. p. 2314; Gaz. vol. 154; p. 402.
Wenke, Frank. (See Frost, John B., assignor.)
Wenning, Jean C. A., assignor to Societe Alsacienne de Constructions Mecaniques, Mülhausen, Germany. Weft-replenishing mechanism for looms. No. 959,036; May 24; Sp. p. 5685; Gaz. vol. 154; p. 955.
Wente, Hugo O. (See Brinkmann and Wente.)
Wentz, Henry J., Tripp, S. D. Door-closer. No. 957,282; May 10; Sp. p. 1702; Gaz. vol. 154; p. 298.
Werner, John, Rochester, N. Y. Candy-molding machine. No. 959,664; May 31; Sp. p. 6991; Gaz. vol. 154; p. 1190.
Werner, John, Rochester, N. Y. Candy-casting machine. No. 959,665; May 31; Sp. p. 7008; Gaz. vol. 154; p. 1190.
Werner, Thomas O., Bangor, Pa. Hoisting apparatus. No. 958,049; May 17; Sp. p. 3462; Gaz. vol. 154; p. 592.
Wescher, Max. (See Fischer and Wescher.)
Weser, John A., New York, N. Y. Automatic player. No. 956,558; May 3; Sp. p. 106; Gaz. vol. 154; p. 20.
Wesson, Joseph H., Springfield, Mass. Projectile. No. 959,037; May 24; Sp. p. 5689; Gaz. vol. 154; p. 956.
West Disinfecting Company. (See Sholes, Zalmon G., assignor.)
West Disinfecting Company. (See Walz, Charles J., assignor.)
West, John B., Syracuse, N. Y. Bond-tester. No. 957,020; May 3; Sp. p. 1130; Gaz. vol. 154; p. 178.
West, Russell C., Arbuckle, Cal. Combined cartridge-bandoleer, gun-rest, shoulder-strap, and recoil-pad. No. 960,058; May 31; Sp. p. 7902; Gaz. vol. 154; p. 1327.
Westcott, Charles B. (See Dancy and Westcott.)
Western Clock Manufacturing Company, The. (See Kern, George, assignor.)
Western Electric Company. (See Hall, Roderic F., assignor.)
Westinghouse Air Brake Company, The. (See Cloud, John W., assignor.)
Westinghouse Air Brake Company, The. (See Farmer and Turner, assignors.)
Westinghouse Electric & Manufacturing Company. (See Auel, Carl B., assignor.)
Westinghouse Electric & Manufacturing Company. (See Burns and Swoger, assignors.)
Westinghouse Electric & Manufacturing Company. (See Chovan, Gustave, assignor.)
Westinghouse Electric & Manufacturing Company. (See Cooper, William, assignor.) (Reissue.)
Westinghouse Electric & Manufacturing Company. (See Dyott, George M., assignor.)
Westinghouse Electric & Manufacturing Company. (See Forrer, Joseph D., assignor.)
Westinghouse Electric & Manufacturing Company. (See Garrett, Frank W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Hallock, Fletcher D., assignor.)
Westinghouse Electric & Manufacturing Company. (See Hemsley, William T., assignor.)
Westinghouse Electric & Manufacturing Company. (See Jackson and Scheibe, assignors.)
Westinghouse Electric & Manufacturing Company. (See Kingsbury, Albert, assignor.)
Westinghouse Electric & Manufacturing Company. (See Kintner, Samuel M., assignor.)
Westinghouse Electric & Manufacturing Company. (See Kintner and Rosenblatt, assignors.)
Westinghouse Electric & Manufacturing Company. (See MacGahan, Paul, assignor.)
Westinghouse Electric & Manufacturing Company. (See Pallander and Scott, assignors.)
Westinghouse Electric and Manufacturing Company. (See Schaake, William, assignor.)
Westinghouse Electric & Manufacturing Company. (See Scheibe, Harold M., assignor.)
Westinghouse Electric & Manufacturing Company. (See Siegfried, Robert, assignor.)
Westinghouse Electric & Manufacturing Company. (See Tingley, Egbert M., assignor.)
Westinghouse Electric & Manufacturing Company. (See Webster and Davis, assignors.)
Westinghouse Electric & Manufacturing Company. (See Webster and Duff, assignors.)
Westinghouse Machine Company, The. (See Armstead, Frank C., assignor.)
Westinghouse Machine Company, The. (See Hodgkinson, Francis, assignor.)
Westinghouse Machine Company, The. (See Thiel, Martin A., assignor.)
Westphal, Henry, Manitowoc, Wis. Sanding and rubbing machine. No. 957,283; May 10; Sp. p. 1705; Gaz. vol. 154; p. 298.
Wetteroth, Frank, assignor to Zittlosen Manufacturing Company, St. Louis, Mo. Umbrella-runner. No. 956,657; May 3; Sp. p. 327; Gaz. vol. 154; p. 53.
Wetteroth, Frank, assignor to Zittlosen Manufacturing Company, St. Louis, Mo. Umbrella part. No. 957,527; May 10; Sp. p. 2203; Gaz. vol. 154; p. 381.
Wetteroth, Frank, assignor to Zittlosen Manufacturing Company, St. Louis, Mo. Hinge-joint. No. 957,528; May 10; Sp. p. 2204; Gaz. vol. 154; p. 381.
Wetteroth, Frank, assignor to Zittlosen Manufacturing Company, St. Louis, Mo. Umbrella top-notcher. No. 958,341; May 17; Sp. p. 4251; Gaz. vol. 154; p. 693.
Wettstein, Jacob, Greifensee, Switzerland. Metal railway-tie. No. 959,902; May 31; Sp. p. 7515; Gaz. vol. 154; p. 1270.
Wheary, George H., Racine, Wis. Garment-receptacle. No. 956,559; May 3; Sp. p. 102; Gaz. vol. 154; p. 20.

Wheat, William H., Newnan, Ga. Switch apparatus. No. 957,132; May 3; Sp. p. 1346; Gaz. vol. 154; p. 215.
Wheeler, Albert H., Worcester, Mass. Fusile. No. 959,903; May 31; Sp. p. 7516; Gaz. vol. 154; p. 1270.
Wheeler, Percy, Oldbury, England. Sliding-door-operating means. No. 957,284; May 10; Sp. p. 1707; Gaz. vol. 154; p. 295.
Wheeler, Walter O., Worcester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for inserting fastenings. No. 959,666; May 31; Sp. p. 7014; Gaz. vol. 154; p. 1191.
Whelan, William, St. Joseph, Mo. Vacuum-faucet. No. 958,709; May 17; Sp. p. 4962; Gaz. vol. 154; p. 816.
Whipple, Clayton J., Euclid, Ohio. Vertical file-index clasp. No. 958,050; May 17; Sp. p. 3464; Gaz. vol. 154; p. 592.
Whitcher, Frank W., and C. F. Randall, Boston, Mass., assignors to United Shoe Machinery Company, Paterson, N. J. Protector for heels and soles of boots and shoes. No. 959,962; May 31; Sp. p. 7708; Gaz. vol. 154; p. 1299.
Whitcomb, George W., Duff, Nebr. Automatic vehicle-brake. No. 959,279; May 24; Sp. p. 6198; Gaz. vol. 154; p. 1035.
Whitcomb, Lawrence, Brookline, Mass. Controlling mechanism for motor-vehicles. No. 959,087; May 24; Sp. p. 5807; Gaz. vol. 154; p. 973.
White, Albert E., Eau Claire, Wis. Saw-shaper. No. 956,915; May 3; Sp. p. 905; Gaz. vol. 154; p. 143.
White, Charles J., assignor to The C. J. White Manufacturing Company, New Britain, Conn. Garment-supporter. No. 959,088; May 24; Sp. p. 5810; Gaz. vol. 154; p. 973.
White, Charles P., Greensboro, N. C. Track-sander. No. 957,482; May 10; Sp. p. 2104; Gaz. vol. 154; p. 365.
White, Cummins E., *et al.* (See Andrews, Orwen K., assignor.)
White, Henderson N. (See Summers, Silas J., assignor.)
White, Henderson N., Cleveland, Ohio. Slide-trombone. No. 958,061; May 17; Sp. p. 3465; Gaz. vol. 154; p. 598.
White, Henry, Cleveland, assignor of one-third to W. S. Parr, Lakewood, Ohio. Water heater and purifier. No. 958,845; May 24; Sp. p. 5293; Gaz. vol. 154; p. 892.
White, Lacy, Deer Park, Wash. Belt-tightener. No. 959,667; May 31; Sp. p. 7016; Gaz. vol. 154; p. 1191.
White, Percival T., and G. Robertson, Perth, Western Australia, Australia. Tilting appliance for decanting oils and liquids. No. 957,829; May 10; Sp. p. 2804; Gaz. vol. 154; p. 482.
White, Robert, assignor of one-half to E. S. Burns, Beaver Falls, Pa. Valve for gas-engines. No. 957,285; May 10; Sp. p. 1709; Gaz. vol. 154; p. 299.
White, Samuel K., assignor to The Smyth Manufacturing Company, Hartford, Conn. Book-smashing machine. No. 958,787; May 24; Sp. p. 5157; Gaz. vol. 154; p. 869.
White, W. R. (See Thompson, James E., assignor.)
White, William A., Seattle, Wash. Game apparatus. No. 958,342; May 17; Sp. p. 4252; Gaz. vol. 154; p. 694.
White, William W., assignor to Holyoke Machine Company, Worcester, Mass. Apparatus for operating water-wheel gates. No. 959,280; May 24; Sp. p. 6200; Gaz. vol. 154; p. 1036.
Whitehead, Alfred R., Headingley, Leeds, England. Spindle-support for rollers for combing-machines. No. 957,921; May 17; Sp. p. 3034; Gaz. vol. 154; p. 544.
Whitehead and Kales Iron Works, The. (See Kales, William R., assignor.)
Whitehead, Howard R., Lonsdale, R. I. Split-lap preventer for cotton-pickers. No. 957,450; May 10; Sp. p. 2046; Gaz. vol. 154; p. 355.
Whiting, Julius, Jr., trustee. (See Maxwell, Bert C., assignor.)
Whitlock Coil Pipe Company. (See Brinkman, Louis H., assignor.)
Whitman, Harry A., Jermyn, Pa. Slate-picker. No. 958,348; May 17; Sp. p. 4255; Gaz. vol. 154; p. 694.
Whitmore, Fred A., Philadelphia, Pa., assignor to Crompton & Knowles Loom Works. Wire motion for looms. No. 960,211; May 31; Sp. p. 8187; Gaz. vol. 154; p. 1378.
Whitney Manufacturing Company, The. (See Belcher, Warren J., assignor.)
Whitten, George T., Hartford, Conn. Beehive-entrance guard and swarm-controller. No. 956,615; May 3; Sp. p. 232; Gaz. vol. 154; p. 40.
Whitting, Julius, Jr., trustee. (See Maxwell, Bert C., assignor.)
Wichmann, Georg C. H. (See Evans and Wichmann.)
Wicklom, Peter J., Bishop Hill, Ill. Centrifugal pump. No. 959,089; May 24; Sp. p. 5812; Gaz. vol. 154; p. 974.
Wickersham, Benjamin F., Patoka, Ill., assignor of one-third to T. B. Walker and J. Pugh. Rotary engine. No. 958,571; May 17; Sp. p. 4095; Gaz. vol. 154; p. 771.
Wickersham, Enoch G., assignor of one-half to F. M. McLaughlin, Portland, Ind. Hydrocarbon-burner. No. 958,344; May 17; Sp. p. 4266; Gaz. vol. 154; p. 694.
Widmark, Frederick. (See Dufva, Knut O. and A. E., assignors.)
Wiechard, Friedrich, Hanover, Germany. Vehicle-wheel tire. No. 960,212; May 31; Sp. p. 8188; Gaz. vol. 154; p. 1378.
Wiechelman, Henry, Long Pine, Nebr. Road-scraper. No. 959,668; May 31; Sp. p. 7017; Gaz. vol. 154; p. 1192.
Wiedemann, Theodore, and J. H. Templin, Philadelphia, Pa., assignors to Keller Manufacturing Company. Pumping air or other fluid. No. 956,839; May 3; Sp. p. 735; Gaz. vol. 154; p. 116.
Wiederseim, Theodore E., Jr., assignor to Ketterlinus Lithographic Manufacturing Company, Philadelphia, Pa. Display-card. No. 956,916; May 3; Sp. p. 908; Gaz. vol. 154; p. 144.
Wiese, John E., Spearville, Kans. Swingletree-hook. No. 959,983; May 31; Sp. p. 7711; Gaz. vol. 154; p. 1290.
Wiesenfeld, Robert S., Baltimore, Md. Hat-guard. No. 956,917; May 3; Sp. p. 910; Gaz. vol. 154; p. 144.
Wiest, Peter C., York, Pa. Tire-remover. No. 959,669; May 31; Sp. p. 7018; Gaz. vol. 154; p. 1192.
Wiktorin, Heinrich, Vienna, Austria-Hungary. Incandescent lamp for vaporized-liquid combustibles. No. 959,091; May 24; Sp. p. 5815; Gaz. vol. 154; p. 974.
Wilcox, Horace C., Hasleton, Pa. Electric alarm-clock. No. 957,397; May 10; Sp. p. 1942; Gaz. vol. 154; p. 336.
Wilcox, Horace C., Hasleton, Pa. Time-controlling mechanism. No. 957,398; May 10; Sp. p. 1945; Gaz. vol. 154; p. 337.
Wilcox, Joseph, Athol, Mass. Apparatus for making combs, &c. No. 956,560; May 3; Sp. p. 111; Gaz. vol. 154; p. 21.
Wilcox & White Company, The. (See Hosley, Nelson D., assignor.)
Wilde, James E., Chester, Pa. Anchor. No. 957,830; May 10; Sp. p. 2805; Gaz. vol. 154; p. 482.
Wilde, Lewis M., North Walpole, N. H. Sanctuary-lamp. No. 959,412; May 24; Sp. p. 6449; Gaz. vol. 154; p. 1079.
Wilder, Mary E., Tehama county, Cal. Bed-spring appliance. No. 959,670; May 31; Sp. p. 7019; Gaz. vol. 154; p. 1192.
Wileman, Winfred H., Woodruff, Kans. Attachment for hydrants. No. 959,092; May 24; Sp. p. 5817; Gaz. vol. 154; p. 975.
Wiley, Charles W., Winterport, Me., assignor of three-fifths to R. L. Wiley, Springville, N. Y. Floor-surfacing device. No. 959,261; May 24; Sp. p. 6202; Gaz. vol. 154; p. 1036.
Wiley, Ralph L. (See Wiley, Charles W., assignor.)
Wilkin, John T., assignor to The Connersville Blower Co., Connersville, Ind. Vacuum-pump. No. 958,345; May 17; Sp. p. 4257; Gaz. vol. 154; p. 696.
Wilkins, John H., Newark, N. J. Lock. No. 956,561; May 3; Sp. p. 114; Gaz. vol. 154; p. 21.
Wilkinson Plough Company, The, *et al.* (See Miller, Calvin P., assignor.)
Wilkinson, Walter S., Wytheville, Va., and G. B. Upham, Boston, Mass. Life-preserver. No. 960,129; May 31; Sp. p. 8029; Gaz. vol. 154; p. 1349.
Wilks, Chance, Little Elm, Tex. Corn or cotton planter. No. 958,204; May 17; Sp. p. 3818; Gaz. vol. 154; p. 645.
Willet, John G., assignor of eighteen one-hundredths to I. Michael, eighteen one-hundredths to E. Michael, eighteen one-hundredths to C. L. Ingham, and eighteen one-hundredths to E. C. Lufkin, Buffalo, N. Y. Pump. No. 957,451; May 10; Sp. p. 2049; Gaz. vol. 154; p. 355.
Willette, Charles W., Seattle, Wash. Driving mechanism. No. 956,658; May 3; Sp. p. 328; Gaz. vol. 154; p. 54.
Willi, Theodore, assignor of one-half to Edward G. Pease, Dayton, Ohio. Mechanical movement. No. 959,826; May 31; Sp. p. 7353; Gaz. vol. 154; p. 1244.
William, Shakespeare, Jr., Company. (See Shakespeare, William, Jr., assignor.)
William Shakespeare, Jr., Company. (See Shakespeare and Russell, assignors.)
Williams, Austin D., Roseville, Cal. Ironing-board. No. 960,213; May 31; Sp. p. 8189; Gaz. vol. 154; p. 1378.
Williams, Charles H., Jr. (See Porter and Williams.)
Williams, Charles H., Jr., assignor to Chicago Railway Equipment Company, Chicago, Ill. Brake-beam. No. 956,616; May 3; Sp. p. 234; Gaz. vol. 154; p. 40.
Williams, Charles H., Jr., assignor to Chicago Railway Equipment Company, Chicago, Ill. Brake-beam. No. 957,399; May 10; Sp. p. 1946; Gaz. vol. 154; p. 337.
Williams, Charles H., Jr., assignor to Chicago Railway Equipment Company, Chicago, Ill. Brake-beam. No. 957,400; May 10; Sp. p. 1948; Gaz. vol. 154; p. 337.
Williams, David, Greensboro, N. C. Pipe support and clamp. No. 958,052; May 17; Sp. p. 3466; Gaz. vol. 154; p. 593.
Williams, Elzy R., St. Joseph, Mo. Trigger mechanism. No. 959,413; May 24; Sp. p. 6450; Gaz. vol. 154; p. 1080.
Williams, Frederick W., Macon, Ga. Baling-press. No. 958,900; May 24; Sp. p. 5437; Gaz. vol. 154; p. 910.
Williams, Hal S. (See Laverty and Williams.)
Williams, John E., Ceres, Cal. Cosmoscope. No. 957,529; May 10; Sp. p. 2205; Gaz. vol. 154; p. 381.
Williams, John L., Ellsey, Fla. Vehicle traction mechanism. No. 960,059; May 31; Sp. p. 7903; Gaz. vol. 154; p. 1327.
Williams, Lynn A., Evanston, Ill., assignor to The Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Switching-key. No. 958,453; May 17; Sp. p. 4475; Gaz. vol. 154; p. 732.
Williams, Thomas B., assignor to The Leavitt Machine Co., Orange, Mass. Valve-reseating tool. No. 956,918; May 3; Sp. p. 911; Gaz. vol. 154; p. 144.
Williams, Willis D., Chicago, Ill. Rail-tie. No. 960,130; May 31; Sp. p. 8032; Gaz. vol. 154; p. 1349.
Williamson, Frederick P., and D. Brennen, Jr., assignors to The Sicilian Asphalt Paving Company, New York, N. Y. Road-roller. No. 958,346; May 17; Sp. p. 4258; Gaz. vol. 154; p. 695.
Williamson, James F. (See Ekelund, John A., assignor.)
Willis, Harry, Denver, Colo. Tobacco-pipe. No. 957,922; May 17; Sp. p. 3036; Gaz. vol. 154; p. 545.

Wilson, Henry, Chicago, Ill. Changeable sign-board. No. 958,054; May 17; Sp. p. 3469; Gaz. vol. 154; p. 593.
Wilson, William W., Columbus, Ohio, assignor to The Jeffrey Manufacturing Company. Screening mechanism. No. 959,671; May 31; Sp. p. 7021; Gaz. vol. 154; p. 1192.
Wilmes, John, Maquoketa, Iowa. Tire-protector. No. 958,053; May 17; Sp. p. 3468; Gaz. vol. 154; p. 593.
Wilson, Albert D. (See Wilson, Frederic D. and A. D.)
Wilson, Clarence F., and J. H. Harman, Uniontown, Pa. Lock for umbrella-holders. No. 960,131; May 31; Sp. p. 8033; Gaz. vol. 154; p. 1349.
Wilson, Frederic D. and A. D., Ottumwa, Iowa. Corn-harvester. No. 957,331; May 10; Sp. p. 2806; Gaz. vol. 154; p. 482.
Wilson, James G., Larchmont, N. Y. Baffle for fireproof shutters. No. 957,923; May 17; Sp. p. 3038; Gaz. vol. 154; p. 545.
Wilson, John C., assignor to The Simmons Manufacturing Company, Kenosha, Wis. Means for securing bedstead-spindles. No. 959,093; May 24; Sp. p. 5818; Gaz. vol. 154; p. 975.
Wilson, John T., Jersey Shore, Pa. Piston-valve. No. 957,286; May 10; Sp. p. 1710; Gaz. vol. 154; p. 299.
Wilson, Joseph, Christchurch, New Zealand. Document file and holder. No. 959,282; May 24; Sp. p. 6203; Gaz. vol. 154; p. 1036.
Wilson, Thomas G. A., Vancouver, British Columbia, Canada. Manufacturing briquets. No. 958,950; May 24; Sp. p. 5517; Gaz. vol. 154; p. 927.
Wilson, William C., Brooklyn, N. Y. Non-refillable bottle. No. 959,186; May 24; Sp. p. 6015; Gaz. vol. 154; p. 1005.
Wilton, Isaac H. (See Shimp and Wilton.)
Wiltsie, Claude E., *et al.* (See MacDiarmid, Wesley D. E., assignor.)
Wimpfheimer & Bro., A. (See Bense, George, assignor.)
Winchester, James D., Beverly, Mass. Divided last. No. 959,672; May 31; Sp. p. 7023; Gaz. vol. 154; p. 1193.
Winchester Repeating Arms Co. (See Bennett, Winchester, assignor.)
Winchester Repeating Arms Co. (See Johnson, Thomas C., assignor.)
Winkley Company, The. (See Strong and Bartlett, assignors.)
Winne, Earl E. (See Hare and Winne.)
Winship, Walter E., New York, N. Y., assignor to Gould Storage Battery Company. Electrical system of distribution. No. 957,530; May 10; Sp. p. 2207; Gaz. vol. 154; p. 382.
Winslow Bros. Company, The. (See Winslow, Francis A., assignor.)
Winslow, Francis A., assignor to The Winslow Bros. Company, Chicago, Ill. Bracket for structural work. No. 957,531; May 10; Sp. p. 2210; Gaz. vol. 154; p. 382.
Winter, Henry W., and B. J. Conlon, Lawrence, Mass., assignors to United Shoe Machinery Company, Paterson, N. J. Machine for setting heel and sole protectors for boots and shoes. No. 959,984; May 31; Sp. p. 7712; Gaz. vol. 154; p. 1300.
Winton, Alexander, and H. B. Anderson, assignors to The Winton Motor Carriage Company, Cleveland, Ohio. Automobile-engine hood. No. 960,132; May 31; Sp. p. 8035; Gaz. vol. 154; p. 1350.
Winton Motor Carriage Company, The. (See Winton and Anderson, assignors.)
Wirt, Herbert C., Schenectady, N. Y., assignor to General Electric Company. Lightning-arrester. No. 958,454; May 17; Sp. p. 4478; Gaz. vol. 154; p. 733.
Wirtz, Luis, Smethwick, England. Clutch. No. 957,401; May 10; Sp. p. 1951; Gaz. vol. 154; p. 338.
Wise, James E., Butler, Pa. Machine for felling trees. No. 957,832; May 10; Sp. p. 2809; Gaz. vol. 154; p. 483.
Witt, Karl K., Hazelhurst, Wis. Ice-saw. No. 958,684; May 17; Sp. p. 4020; Gaz. vol. 154; p. 807.
Witzenmann, Emil, Pforzheim, Germany. End connection for metallic hose-pipes. No. 959,187; May 24; Sp. p. 6016; Gaz. vol. 154; p. 1005.
Wohl, Maurice J. (See Low, Wohl, and Hertzberg.)
Wohl, Maurice J., *et al.*, trustees. (See Wohl and Hertzberg, assignors.)
Wohl, Maurice J., New York, and H. Hertzberg, Brooklyn, assignors to A. A. Low, Horseshoe, M. J. Wohl, New York, and H. Hertzberg, Brooklyn, N. Y., trustees. Circuit-breaker. No. 959,827; May 31; Sp. p. 7354; Gaz. vol. 154; p. 1245.
Wolf, Charles R. (See Pence, Wolf, and Jarvis.)
Wolf, Michael J. (See Massie, Alcinous, assignor.)
Wolfe, Arthur P., Buffalo, assignor to Huntley Mfg. Co., Silver Creek, N. Y. Roll for corn-husking machines and the like. No. 959,904; May 31; Sp. p. 7519; Gaz. vol. 154; p. 1270.
Wolhaupter, Benjamin, New York, N. Y. Anticreeping device for rails. No. 957,021; May 3; Sp. p. 1134; Gaz. vol. 154; p. 179.
Wolhaupter, Benjamin, New York, N. Y. Rail tie and fastening. No. 957,022; May 3; Sp. p. 1136; Gaz. vol. 154; p. 179.
Wolhaupter, Benjamin, New York, N. Y. Anticreeping device for rails. No. 957,023; May 3; Sp. p. 1138; Gaz. vol. 154; p. 179.
Wollenberg, Charles F., Irby, Wash. Gun-sight. No. 958,951; May 24; Sp. p. 5518; Gaz. vol. 154; p. 927.
Wood, George E., and E. C. Meier, Phoenixville, Pa., assignors to Heine Safety Boiler Company, St. Louis, Mo. Rivet-caiking tool. No. 959,673; May 31; Sp. p. 7025; Gaz. vol. 154; p. 1193.
Wood, Hiram D., Jr., Minneapolis, Minn. Electrical water-heater. No. 958,846; May 24; Sp. p. 5296; Gaz. vol. 154; p. 892.
Wood, James J., Fort Wayne, Ind. Magnetic switch. No. 958,788; May 24; Sp. p. 5163; Gaz. vol. 154; p. 870.
Wood, James M., deceased; S. B. Strother, administrator, assignor to K. G. Smith, Kansas City, Mo. Insulator for railway-trucks. No. 957,133; May 3; Sp. p. 1347; Gaz. vol. 154; p. 216.
Woodin, Harry E., Laurens, Iowa. Sectional weed-hook. No. 958,055; May 17; Sp. p. 3470; Gaz. vol. 154; p. 594.
Woodley, Alfred, assignor to Universal Electric Economy Company, Limited, Montreal, Canada. Resilient lamp-support. No. 957,287; May 10; Sp. p. 1713; Gaz. vol. 154; p. 300.
Woodman, George A., assignor to Kirby Equipment Company, Chicago, Ill. Journal-box. No. 956,659; May 3; Sp. p. 330; Gaz. vol. 154; p. 54.
Woodman, George A., assignor to Kirby Equipment Company, Chicago, Ill. Journal-box. No. 956,660; May 3; Sp. p. 331; Gaz. vol. 154; p. 54.
Woodman, George A., assignor to Kirby Equipment Company, Chicago, Ill. Journal-box. No. 956,661; May 3; Sp. p. 333; Gaz. vol. 154; p. 55.
Woods, Frederick H., Olean, N. Y. Retaining-valve. No. 960,133; May 31; Sp. p. 8037; Gaz. vol. 154; p. 1350.
Woodward, Albert L., assignor to E. F. Rogers & Company, Philadelphia, Pa. Sectional wind-shield for automobiles. No. 959,188; May 24; Sp. p. 6017; Gaz. vol. 154; p. 1005.
Woodward, Erastus, Somerville, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Heeling-machine. No. 958,056; May 17; Sp. p. 3471; Gaz. vol. 154; p. 594.
Woodward, Erastus, Somerville, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Sole laying and leveling machine. No. 958,057; May 17; Sp. p. 3518; Gaz. vol. 154; p. 594.
Woodward, Erastus, Somerville, assignor, by mesne assignments, to T. G. Plant, Boston, Mass. Heel-nailing machine. No. 958,058; May 17; Sp. p. 3529; Gaz. vol. 154; p. 595.
Woodward, Harry S., St. Louis, Mo. Paper cutting and trimming machine. No. 959,674; May 31; Sp. p. 7027; Gaz. vol. 154; p. 1193.
Woodward, Oscar, Montclair, N. J., assignor to Yost Writing Machine Company, Ilion, N. Y. Type-writing machine. No. 957,288; May 10; Sp. p. 1714; Gaz. vol. 154; p. 300.
Woodworth, Dallas C., Chicago, Ill. Motion-picture apparatus. No. 959,675; May 31; Sp. p. 7028; Gaz. vol. 154; p. 1194.
Wool, Morris. (See Sails and Wool.)
Woolf, Ellis J. (See Woolf, Jay F., assignor.)
Woolf, Jay F., assignor of one-half to E. J. Woolf, Minneapolis, Minn. Explosive-engine. No. 959,905; May 31; Sp. p. 7521; Gaz. vol. 154; p. 1271.
Woolley, Claude L., assignor of one-half to R. L. Brooks, Baltimore, Md. Needle-threader. No. 959,676; May 31; Sp. p. 7031; Gaz. vol. 154; p. 1194.
Worcester, Albert, New York, N. Y. Paper-cutting shears. No. 958,455; May 17; Sp. p. 4480; Gaz. vol. 154; p. 733.
Worth, William E., Wilmington, N. C., assignor to United States Cotton Seed Oil Company, Portland, Me. Cotton-seed-delinting machine. No. 958,456; May 17; Sp. p. 4482; Gaz. vol. 154; p. 733.
Worthen, Burt L., Tucson, Ariz., assignor to The Kemp Hydro-Carbon Furnace Company. Hydrocarbon-burner. No. 958,789; May 24; Sp. p. 5165; Gaz. vol. 154; p. 870.
Wouters, Alfred H., Norwood, Ohio, assignor to Allis-Chalmers Company and The Bullock Electric Manufacturing Company. Shaft-oscillator. No. 957,289; May 10; Sp. p. 1719; Gaz. vol. 154; p. 300.
Wray, Edward H., Philadelphia, Pa., assignor to Niles-Bement-Pond Company, Jersey City, N. J. Forging press and hammer. No. 959,094; May 24; Sp. p. 5821; Gaz. vol. 154; p. 975.
Wright, Edwin C., Newport, Ky., assignor to Allis-Chalmers Company and The Bullock Electric Manufacturing Company. Direct-current turbo-generator. No. 957,290; May 10; Sp. p. 1722; Gaz. vol. 154; p. 301.
Wright, Ernest, Pinner, England. Machine for decorticating the fibrous leaves or stems of plants. No. 960,134; May 31; Sp. p. 8039; Gaz. vol. 154; p. 1350.
Wright, Frank A. R., Cleveland, Ohio. Preparation of secondary-battery plates. No. 956,919; May 3; Sp. p. 913; Gaz. vol. 154; p. 144.
Wright, Henry F., Philadelphia, Pa. Game apparatus. No. 959,985; May 31; Sp. p. 7717; Gaz. vol. 154; p. 1300.
Wright, James E. (See Cole and Wright.)
Wright, John A., Brownsville, Pa. Vehicle-tire. No. 960,135; May 31; Sp. p. 8042; Gaz. vol. 154; p. 1351.
Wright, John B. (See Simpson, John T., assignor.)
Wright, Richard H. (See Bracy, Edward L., assignor.)
Wright, Samuel, assignor of two-thirds to J. Sidney Owen, Sound, Ontario, Canada. Hoisting device. No. 959,677; May 31; Sp. p. 7032; Gaz. vol. 154; p. 1194.
Wright, Thomas W., Leith, Scotland. Album for holding disk records. No. 958,059; May 17; Sp. p. 3532; Gaz. vol. 154; p. 595.

Wright, Wilbur L., Washington, D. C. Closing-disk. No. 959,066; May 24; Sp. p. 5823; Gaz. vol. 154; p. 976.
Wright, Will, et al. (See Eaton, Robert H., assignor.)
Wright, William H., and J. Hofman, Schenectady, N. Y., assignors to General Electric Company. Refractory waterproof insulating compound. No. 956,870; May 3; Sp. p. 807; Gaz. vol. 154; p. 128.
Wrinkle, Noah, and R. G. Paddock, San Francisco, Cal., assignors to Natural Soda Products Company. Refining urao. No. 960,676; May 31; Sp. p. 7033; Gaz. vol. 154; p. 1194.
Wuhrmann, Ernest H. (See Rumble, Alexander C., assignor.)
Wunder, George E., Melvin, assignor to Independent Harvester Company, Plano, Ill. Portable elevator. No. 959,679; May 31; Sp. p. 7035; Gaz. vol. 154; p. 1195.
Wunderlich, Alfred, Brussels, Belgium. Motor flying-machine. No. 960,186; May 31; Sp. p. 8043; Gaz. vol. 154; p. 1351.
Worster, Casimir, Berlin, Germany. Machine for kneading and grinding paper-making materials. No. 958,901; May 24; Sp. p. 5439; Gaz. vol. 154; p. 911.
Wyant, Joseph E., Omaha, Nebr. Corer. No. 959,189; May 24; Sp. p. 6021; Gaz. vol. 154; p. 1005.
Wyatt, Frank, assignor to The F. Wyatt Manufacturing Company, Salina, Kans. Stacker. No. 956,840; May 3; Sp. p. 740; Gaz. vol. 154; p. 117.
Wyckoff, Seamans & Benedict. (See Berry, Edgar H., assignor.)
Wyckoff, Seamans & Benedict. (See Yaw, Clio B., assignor.)
Wygant, Lewis B., assignor to The Ohio Cultivator Company, Bellevue, Ohio. Condenser for hay-presses, &c. No. 957,291; May 10; Sp. p. 1724; Gaz. vol. 154; p. 301.
Wyman, Horace, Worcester, Mass., assignor to Crompton & Knowles Loom Works. Cam mechanism. No. 957,724; May 10; Sp. p. 2591; Gaz. vol. 154; p. 448.
Wyman, William H., Oshkosh, assignor to J. G. Seelig, Ripon, Wis. Washing-machine. No. 957,024; May 3; Sp. p. 1140; Gaz. vol. 154; p. 180.
Wynberg, Abraham and S., Amsterdam, Netherlands. Apparatus for treating sugar-cane. No. 958,790; May 24; Sp. p. 5170; Gaz. vol. 154; p. 870.
Wynberg, Simon. (See Wynberg, Abraham and S.)
Wynne, W. B., et al. (See Morris and Watkins, assignors.)
Yale & Towne Manufacturing Company, The. (See Berry, Charles A., assignor.)
Yale & Towne Manufacturing Company, The. (See Bock, Alfred, assignor.)
Yard, David S., Olean, N. Y. Machine for capping milk-bottles. No. 959,038; May 24; Sp. p. 5690; Gaz. vol. 154; p. 956.
Yates, Edwin J. (See Sawitzke, Yates, and Adams.)
Yates, Harry. (See Millington and Yates.)
Yates, Joseph, Lake Point, Utah. Mail-bag catcher and deliverer. No. 958,572; May 17; Sp. p. 4696; Gaz. vol. 154; p. 772.
Yates, Joseph, Leemaster, Va. Automatic fire-alarm. No. 959,828; May 31; Sp. p. 7356; Gaz. vol. 154; p. 1245.
Yates, Thomas, Sunnyhurst, Darwen, England. Vapor-torch. No. 957,292; May 10; Sp. p. 1727; Gaz. vol. 154; p. 302.
Yates, William C., Schenectady, N. Y., assignor to General Electric Company. Rheostat. No. 958,457; May 17; Sp. p. 4487; Gaz. vol. 154; p. 734.
Yates, William C., and W. O. Lum, Schenectady, N. Y., assignors to General Electric Company. Automatic circuit-controlling device. No. 957,452; May 10; Sp. p. 2061; Gaz. vol. 154; p. 356.
Yaw, Clio B., Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 957,402; May 10; Sp. p. 1954; Gaz. vol. 154; p. 338.
Yaw, Clio B., Arlington, N. J., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine. No. 958,573; May 17; Sp. p. 4698; Gaz. vol. 154; p. 772.
Yawman & Erbe Manufacturing Company. (See Weiss, Albert T., assignor.)
Yearsley, Willis J., West Chester, Pa. Potato-planter. No. 957,296; May 10; Sp. p. 1729; Gaz. vol. 154; p. 302.
Yerkey, Marion O., Weston, W. Va. Gun-cleaner. No. 959,680; May 31; Sp. p. 7037; Gaz. vol. 154; p. 1195.
Yonkman, Frederick M. and N., Milwaukee, Wis. Collar-button. No. 956,662; May 3; Sp. p. 335; Gaz. vol. 154; p. 55.
Yonkman, Nicholas. (See Yonkman, Frederick M. and N.)
Yoos, Charles, assignor to Benziger Brothers, New York, N. Y. Candelabrum. No. 957,134; May 3; Sp. p. 1348; Gaz. vol. 154; p. 216.
Yost Writing Machine Company. (See Smith, Arthur W., assignor.)
Yost Writing Machine Company. (See Woodward, Oscar, assignor.)
Young, Frank. (See Shafer, John W., assignor.)
Young, Frank A., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 957,294; May 10; Sp. p. 1732; Gaz. vol. 154; p. 303.
Young, Frank A., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 959,829; May 31; Sp. p. 7357; Gaz. vol. 154; p. 1245.
Young, Henry E., Ogden, Utah, assignor of three-tenths to F. X. Allen, Kansas City, Mo., and six-tenths to H. E. Vaughan, Wolfe City, Tex. Piano-hammer. No. 959,190; May 24; Sp. p. 6022; Gaz. vol. 154; p. 1006.
Young, Jacob H., Chicago, Ill. Adjustable fastening device for suspender-straps. No. 959,681; May 31; Sp. p. 7040; Gaz. vol. 154; p. 1195.
Young, Lorenzo H., assignor of one-half to V. P. Hill, Hagerstown, Md. Fifth-wheel for dump-wagons. No. 959,414; May 24; Sp. p. 6452; Gaz. vol. 154; p. 1060.
Young, Lorin W. (See Evans and Young.)
Young, Samuel L., New Castle, Pa. Tack hammer and puller. No. 957,924; May 17; Sp. p. 3040; Gaz. vol. 154; p. 545.
Young, Timothy, Lakeland, Fla. Brick-molding machine. No. 958,898; May 24; Sp. p. 5434; Gaz. vol. 154; p. 910.
Young, William H. (See Lyon and Young.)
Youngblood, David P., San Antonio, Tex. Interchangeable bottom for fail-cell walls. No. 956,787; May 3; Sp. p. 610; Gaz. vol. 154; p. 98.
Younglove, Thomas J., assignor of one-half to T. B. Hicks, Richmond, Va. Tool-bag. No. 958,347; May 17; Sp. p. 4260; Gaz. vol. 154; p. 695.
Yount, Jesse M., New York, N. Y. Wheel-guard. No. 958,791; May 24; Sp. p. 5172; Gaz. vol. 154; p. 871.
Zabst, William E., Portage, Wis. Party-line-telephone call mechanism. No. 958,847; May 24; Sp. p. 5293; Gaz. vol. 154; p. 892.
Zachry, Walter H., Atlanta, Ga. Mop-head. No. 957,025; May 3; Sp. p. 1142; Gaz. vol. 154; p. 180.
Zander, John L., Newark, N. J. Electrical measuring instrument. No. 958,792; May 24; Sp. p. 5175; Gaz. vol. 154; p. 871.
Zapf, John F., St. Louis, Mo. Gluing-machine. No. 959,986; May 31; Sp. p. 7719; Gaz. vol. 154; p. 1301.
Zarniko, Gerhard, Hildesheim, Germany. Sieve for drum-mills. No. 958,348; May 17; Sp. p. 4261; Gaz. vol. 154; p. 696.
Zehden, Martin. (See Weinberg, Siegfried, assignor.)
Zeier, John, administrator. (See Zeier, Odilo A.)
Zeier, Odilo A., deceased, Madison, Wis.; J. Zeier, administrator. Curve-scriber. No. 956,920; May 3; Sp. p. 916; Gaz. vol. 154; p. 145.
Zeigen, Frederic H., Detroit, Mich. Electric cook-stove. No. 958,458; May 17; Sp. p. 4490; Gaz. vol. 154; p. 734.
Zeiss, Firm of Carl. (See Heckel, Jakob, assignor.)
Zeiss, Firm of Carl. (See Mackensen, Otto, assignor.)
Zeysing, Walter, Stettin, Germany. Brake for disk talking-machines. No. 959,682; May 31; Sp. p. 7041; Gaz. vol. 154; p. 1195.
Zieg, Frank B., Fredericktown, Ohio. Culvert. No. 960,137; May 31; Sp. p. 8044; Gaz. vol. 154; p. 1351.
Ziemss, Henry, Jr., Chicago, Ill. Brake-beam. No. 958,000; May 17; Sp. p. 3532; Gaz. vol. 154; p. 595.
Zittlosen Manufacturing Company. (See Wetteroth, Frank, assignor.)
Zollars, Paul T., Edgerton, Mo. Cultivator. No. 959,683; May 31; Sp. p. 7042; Gaz. vol. 154; p. 1196.
Zoller, John P., Cascade, Iowa. Hoisting and dumping mechanism. No. 959,006; May 24; Sp. p. 5825; Gaz. vol. 154; p. 976.
Zwingli, Arnold, Brooklyn, N. Y. Chimney-top. No. 959,415; May 24; Sp. p. 6453; Gaz. vol. 154; p. 1060.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

A. H. Heisey & Co. (See Sanford, Andrew J., assignor.)
Abramson, Alfred C., assignor to Haddorff Piano Company, Rockford, Ill. Piano-case. No. 40,678; May 3; Gaz. vol. 154; p. 235.
Allen, Francis K., assignor to The Springfield Metallic Casket Company, Springfield, Ohio. Handle-plate for caskets. Nos. 40,715–16; May 31; Gaz. vol. 154; p. 1391.
American Stove Company. (See Harvey, John G., assignor.)
Baker Motor Vehicle Company. (See Gruenfeldt, Emil, assignor.)
Baldwin Jewelry Co., The. (See Clulee, John, assignor.)
Ball, Sidney Y., assignor to The Webb C. Ball Watch Company, Cleveland, Ohio. Bow-socket for watches. No. 40,668; May 3; Gaz. vol. 154; p. 233.
Bessière, Louis. (See Grodelue, Adrien, assignor.)
Bevan, William W., Melrose Highlands, Mass. Lace-paper mat. Nos. 40,707–8; May 24; Gaz. vol. 154; p. 1090.
Bissig, Anna M., City Point, Wis. Watchcase. No. 40,695; May 17; Gaz. vol. 154; p. 820.
Bonner, Douglas E., assignor to The Pantasote Leather Company, New York, N. Y. Textile fabric. No. 40,691; May 10; Gaz. vol. 154; p. 497.
Boston-1915 (Inc.). (See Rollings, Albert S., assignor.)
Bromley & Sons, J. (See Petzold, Adolph, assignor.)
Burgunder, Marie, McKees Rocks, Pa. Olive-spoon. No. 40,696; May 17; Gaz. vol. 154; p. 820.
Clulee, John, Wallingford, Conn., assignor to The Baldwin Jewelry Co., San Francisco, Cal. Spoon. No. 40,703; May 24; Gaz. vol. 154; p. 1090.
Codman, William C., assignor to Gorham Manufacturing Company, Providence, R. I. Handle for spoons, forks, or similar articles. No. 40,685; May 10; Gaz. vol. 154; p. 496.
Coke, George M., assignor to The Fuller-Warren Co., Milwaukee, Wis. Gas-range. No. 40,701; May 17; Gaz. vol. 154; p. 821.
Consolidated Lamp & Glass Co. (See McAfee, Hugh, assignor.)
De Freese, John, Newark, assignor of one-half to C. B. Luton, Lowell, Ohio. Badge. No. 40,683; May 10; Gaz. vol. 154; p. 496.
Didcoct, John J., Streator, Ill. Badge or similar article. No. 40,709; May 31; Gaz. vol. 154; p. 1390.
Edward Koch & Company. (See Meier, Arthur E., assignor.)
Fairbanks Company, The. (See Nelson, William, assignor.)
Fostoria Glass Company. (See Heedy, John J., assignor.)
Fuller-Warren Co., The. (See Coke, George M., assignor.)
Gleason-Tiebout Glass Company, The. (See Perring, Charles E., assignor.)
Golden, Charles D., Chicago, Ill. Toilet-rack. No. 40,687; May 10; Gaz. vol. 154; p. 496.
Golden, Charles D., Chicago, Ill. Clothes-rack. Nos. 40,688–9; May 10; Gaz. vol. 154; pp. 496–7.
Gorham Manufacturing Company. (See Codman, William C., assignor.)
Grodelue, Adrien, New York, N. Y., assignor to L. Bessière, Paris, France. Drinking vessel. Nos. 40,673–6; May 3; Gaz. vol. 154; pp. 234–5.
Gruenfeldt, Emil, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio. Automobile-body. No. 40,681; May 3; Gaz. vol. 154; p. 236.
Haddorff Piano Company. (See Abramson, Alfred C., assignor.)
Harvey, John G., Chicago, Ill., assignor to American Stove Company, St. Louis, Mo. Top-plate and oven for gas-stoves. No. 40,690; May 10; Gaz. vol. 154; p. 497.
Heedy, John J., assignor to Fostoria Glass Company, Moundsville, W. Va. Glass vessel. No. 40,672; May 3; Gaz. vol. 154; p. 234.
Howard, James B., Indianapolis, Ind. Heating-stove. No. 40,680; May 3; Gaz. vol. 154; p. 236.
International Silver Co. (See Kintz, Robert R., assignor.)
International Silver Co. (See Strohhaker, Gustav, assignor.)
Ireland, Alfred, New York, N. Y. Ornament for garments. No. 40,682; May 3; Gaz. vol. 154; p. 236.
John Bromley & Sons. (See Petzold, Adolph, assignor.)
Keen, Morris, Philadelphia, Pa. Cabinet for talking-machines. No. 40,699; May 17; Gaz. vol. 154; p. 821.
Kintz, Robert R., assignor to International Silver Co., Meriden, Conn. Spoon, fork, or similar article. No. 40,704; May 24; Gaz. vol. 154; p. 1090.
Koken, Ernest E., late of St. Louis, Mo.; W. F. Koken, executor. Barber's chair. No. 40,679; May 3; Gaz. vol. 154; p. 236.
Koken, Walter F., executor. (See Koken, Ernest E.)
Kurz, Charles F., Cleveland, Ohio, Prescription-case. No. 40,700; May 17; Gaz. vol. 154; p. 821.
Latham, Anna M., Portland, Me. Fork. No. 40,670; May 3; Gaz. vol. 154; p. 234.
Luton, Charles B. (See De Freese, John, assignor.)
McAfee, Hugh, Pittsburg, assignor to Consolidated Lamp & Glass Co., Coraopolis, Pa. Lamp-shade. No. 40,712; May 31; Gaz. vol. 154; p. 1391.
Meier, Arthur E., assignor to Edward Koch & Company, Chicago, Ill. Cut-glass dish. No. 40,671; May 3; Gaz. vol. 154; p. 234.
Meyer, Max C., New York, N. Y. Jewel-setting for finger-rings or similar articles. No. 40,702; May 24; Gaz. vol. 154; p. 1089.
Mygatt, Otis A., New York, N. Y. Shade, reflector, or similar article. Nos. 40,713–14; May 31; Gaz. vol. 154; p. 1391.
Nelson, William, Binghamton, assignor to The Fairbanks Company, New York, N. Y. Hand-wheel. No. 40,717; May 31; Gaz. vol. 154; p. 1391.
Osborne, Charles, New York, N. Y. Handle for spoons, forks, and similar articles. No. 40,669; May 3; Gaz. vol. 154; p. 233.
Pantasote Leather Company, The. (See Bonner, Douglas E., assignor.)
Pascucci, Vincent, Corona, N. Y. Horn. No. 40,698; May 17; Gaz. vol. 154; p. 821.
Perring, Charles E., New York, N. Y., assignor to The Gleason-Tiebout Glass Company. Artificial-light shade. No. 40,706; May 24; Gaz. vol. 154; p. 1090.
Petzold, Adolph, assignor to J. H. Bromley and E. Bromley, Copartners trading as J. Bromley & Sons, Philadelphia, Pa. Rug. No. 40,692; May 10; Gaz. vol. 154; p. 497.
Petzold, Adolph, assignor to J. Bromley & Sons, Philadelphia, Pa. Rug. No. 40,719; May 31; Gaz. vol. 154; p. 1392.
Pohlmann, Richard A., Jefferson City, Mo. Watch-charm. No. 40,694; May 17; Gaz. vol. 154; p. 820.
Rollings, Albert S., Cambridge, Mass., assignor to Boston-1915 (Inc.). Button. No. 40,705; May 24; Gaz. vol. 154; p. 1090.
Sanford, Andrew J., assignor to A. H. Heisey & Co., Inc., Newark, Ohio. Glass vessel. No. 40,686; May 10; Gaz. vol. 154; p. 496.
Scheuck, Ernest G. H., New York, N. Y. Cut stone. No. 40,693; May 17; Gaz. vol. 154; p. 820.
Schraubstadter, William A., St. Louis, Mo. Font of type. No. 40,718; May 31; Gaz. vol. 154; p. 1392.
Smith, Joseph R., assignor to Waterbury Button Company, Waterbury, Conn. Buckle. No. 40,697; May 17; Gaz. vol. 154; p. 820.
Springfield Metallic Casket Company, The. (See Allen, Francis K., assignor.)
Strohhaker, Gustav, Wallingford, assignor to International Silver Co., Meriden, Conn. Spoon. No. 40,684; May 10; Gaz. vol. 154; p. 496.
Venon, Jules H., New York, N. Y. Goblet or similar article. No. 40,710; May 31; Gaz. vol. 154; p. 1390.
Venon, Jules H., New York, N. Y. Plate or similar article. No. 40,711; May 31; Gaz. vol. 154; p. 1390.
Walsh, Arthur Q., New York, N. Y. Cigar or cigarette holder. No. 40,677; May 3; Gaz. vol. 154; p. 235.
Waterbury Button Company. (See Smith, Joseph R., assignor.)
Webb, C. Ball Watch Company, The. (See Ball, Sidney Y., assignor.)

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. Klipstein & Company, New York, N. Y. Quebracho tanning extract. No. 77,695; May 3; Gaz. vol. 154; p. 247.

A. B. Andrews Company, New York, N. Y. Hosiery. No. 78,057; May 31; Gaz. vol. 154; p. 1403.

Advance Novelty Candy Manufacturing Company, New York, N. Y. Candies. No. 77,890; May 17; Gaz. vol. 154; p. 831.

Aeolian Company, The, Meriden, Conn.; Garwood, N. J., and New York, N. Y. Pianos, piano-players, and music-sheets. No. 77,975; May 24; Gaz. vol. 154; p. 1103.

Aktiebolaget L. M. Ericsson & Co., Stockholm, Sweden. Electric clocks. No. 77,783; May 10; Gaz. vol. 154; p. 509.

Alaska Packers Association, San Francisco, Cal. Canned salmon. No. 77,976; May 24; Gaz. vol. 154; p. 1103.

Albany Perforated Wrapping Paper Company, Albany, N. Y. Toilet-paper. No. 78,034; May 24; Gaz. vol. 154; p. 1104.

Alfred H. Smith Co., New York, N. Y. Brushes. No. 78,210; May 31; Gaz. vol. 154; p. 1407.

Allen & Hanburys, Limited, London, England. Lactic-acid-bacilli tablets. No. 77,784; May 10; Gaz. vol. 154; p. 509.

Alleyn, Henry M., London, England. Metal casters for furniture. No. 77,891; May 17; Gaz. vol. 154; p. 831.

Althouse, Wilson D., Philadelphia, Pa. Coal. No. 78,155; May 31; Gaz. vol. 154; p. 1406.

Amalgamated Paint Company, Jersey City, N. J. Marine paints. No. 77,977; May 24; Gaz. vol. 154; p. 1103.

American Broom Mfg. Co. Ltd., New Orleans, La. Brooms. No. 77,978; May 24; Gaz. vol. 154; p. 1103.

American Fruit Product Co., New York, N. Y. Apple and grape juice. No. 78,052; May 31; Gaz. vol. 154; p. 1403.

American Hominy Company, Indianapolis, Ind. Wheat-flour. No. 77,785; May 10; Gaz. vol. 154; p. 509.

American Hominy Company, Indianapolis, Ind. Wheat-flour. No. 77,892; May 17; Gaz. vol. 154; p. 831.

American Oil Pump & Tank Co., The, Dayton, Ohio. Oil-pumps. No. 78,222; May 31; Gaz. vol. 154; p. 1407.

American Writing Paper Company, Holyoke, Mass. Writing and printing paper. Nos. 78,063–6; May 31; Gaz. vol. 154; p. 1403.

Amshoff, Herman, Louisville, Ky. Soap. No. 77,696; May 3; Gaz. vol. 154; p. 247.

Anhydrous Battery Company, Chicago, Ill. Dry-battery cells. No. 77,697; May 3; Gaz. vol. 154; p. 247.

Appleton Electric Company, Chicago, Ill. Certain electrical supplies. No. 78,058; May 31; Gaz. vol. 154; p. 1403.

Arnold & Aborn, New York, N. Y. Teas and coffees. No. 78,223; May 31; Gaz. vol. 154; p. 1407.

Atuyer, Bianchini, Ferier & Cie., Lyon, France, and New York, N. Y. Silk piece fabrics. No. 77,786; May 10; Gaz. vol. 154; p. 509.

Atuyer, Bianchini, Férier & Co., Lyon, France. Silk piece goods. Nos. 78,224–5; May 31; Gaz. vol. 154; p. 1408.

Austin Nichols & Co., New York, N. Y. Blended coffee. No. 78,035; May 24; Gaz. vol. 154; p. 1104.

Auto Specialties Mfg. Co., Milwaukee, Wis. Spark-plugs. No. 77,893; May 17; Gaz. vol. 154; p. 831.

B. F. Goodrich Company, The, Akron, Ohio. Steam-hose. No. 77,894; May 17; Gaz. vol. 154; p. 831.

Bacon, Charles A., Chicago, Ill. Monthly magazines. No. 77,698; May 3; Gaz. vol. 154; p. 247.

Bailey, Aubrey G., Norfolk, Va. Fresh oysters. No. 78,226; May 31; Gaz. vol. 154; p. 1408.

Barratt, William, Lansing, Mich. Certain foods. No. 77,979; May 24; Gaz. vol. 154; p. 1103.

Bartow Chemical Co., The, Bartow, Fla. Remedy for grippe, colds, fevers, and chills. No. 77,860; May 10; Gaz. vol. 154; p. 511.

Bates & Son, C. J., Chester, Conn. Crochet-hooks. No. 78,060; May 31; Gaz. vol. 154; p. 1403.

Baumann, Albert P., New York, N. Y. Tooth-brushes. No. 77,980; May 24; Gaz. vol. 154; p. 1103.

Bawo & Dotter, East Orange, N. J., and New York, N. Y. Dolls. No. 77,895; May 17; Gaz. vol. 154; p. 831.

Bay State Corset Co., Springfield, Mass., and New York, N. Y. Corsets. No. 77,787; May 10; Gaz. vol. 154; p. 509.

Belding Bros. & Company, Rockville, Conn. Silk piece goods. No. 77,981; May 24; Gaz. vol. 154; p. 1103.

Bellevue Piano Co., Bellevue, Iowa. Pianos. No. 77,896; May 17; Gaz. vol. 154; p. 831.

Ben Strauss Company, New York, N. Y. Artificial flowers and feather trimmings used in millinery. No. 77,788; May 10; Gaz. vol. 154; p. 509.

Ben Strauss Company, New York, N. Y. Table-china. No. 78,048; May 24; Gaz. vol. 154; p. 1105.

Besson and Company Limited, London, England. Wind musical instruments. No. 77,982; May 24; Gaz. vol. 154; p. 1103.

Bird & Co., J. A. & W., Boston, Mass. Prepared roofing. No. 77,897; May 17; Gaz. vol. 154; p. 831.

Birmingham Macaroni Company, Birmingham, Ala. Macaroni-paste foods. No. 77,699; May 3; Gaz. vol. 154; p. 247.

Bonham Cotton Mills, Bonham, Tex. Cotton goods in the piece. No. 77,700; May 3; Gaz. vol. 154; p. 247.

Bonheur Company, The, Marcellus, N. Y. Lotion for the head and face. No. 77,974; May 17; Gaz. vol. 154; p. 833.

Booth, N. E., Brooklyn, N. Y. Washers. No. 78,157; May 31; Gaz. vol. 154; p. 1406.

Bosak, Michael, Scranton, Pa. Wines. No. 78,158; May 31; Gaz. vol. 154; p. 1406.

Bowers, Frank K., Baltimore, Md., and Washington, D. C. Remedy for corns and calli. No. 77,898; May 17; Gaz. vol. 154; p. 831.

Bowers Rubber Works, San Francisco, Cal. Spiral rubber piston-packing. No. 77,789; May 10; Gaz. vol. 154; p. 509.

Brainerd and Armstrong Company, The, New London, Conn. Spool and skein silk. No. 78,159; May 31; Gaz. vol. 154; p. 1406.

Brandon Mills, Greenville, S. C. Cotton piece goods. No. 77,899; May 17; Gaz. vol. 154; p. 831.

Braunstein & Cie., Paris, France. Cigarette-paper. No. 77,900; May 17; Gaz. vol. 154; p. 831.

Bremer Linoleumwerke Delmenhorst, Delmenhorst, Germany. Linoleum. No. 77,790; May 10; Gaz. vol. 154; p. 509.

Brey, William F., Philadelphia, Pa. Wheat-flour. No. 78,160; May 31; Gaz. vol. 154; p. 1406.

Brookes Limited, Lightcliffe, England. Granite manufactures for building, paving, or decoration. No. 78,036; May 24; Gaz. vol. 154; p. 1104.

Brown Company, O. R., Indianapolis, Ind. Carbon-paper and type-writer ribbons. No. 77,901; May 17; Gaz. vol. 154; p. 831.

Brown Milling Company, Minneapolis, Minn. Wheat-flour. No. 78,161; May 31; Gaz. vol. 154; p. 1406.

Burnham, Alfred A., Boston, Mass. Effervescent aperients. No. 78,061; May 31; Gaz. vol. 154; p. 1403.

Burrichter Bros., Galena, Ill. Gin. No. 78,037; May 24; Gaz. vol. 154; p. 1104.

Burrus Mill & Elevator Company, Fort Worth, Tex. Wheat-flour. No. 77,701; May 3; Gaz. vol. 154; p. 247.

Burt Olney Canning Company, The, Oneida, N. Y. Canned fruits and vegetables. No. 77,902; May 17; Gaz. vol. 154; p. 831.

Burwell & Dunn Co., Charlotte, N. C. Remedy for certain diseases. No. 78,062; May 31; Gaz. vol. 154; p. 1403.

Byron Jackson Iron Works, San Francisco, Cal. Hydraulic machinery and fittings. No. 78,183; May 31; Gaz. vol. 154; p. 1406.

C. F. Adams Company, Erie, Pa. Silver-plated tableware. No. 78,051; May 31; Gaz. vol. 154; p. 1403.

California Medicinal Springs Co., Deer Lick Springs, Cal. Natural medicinal water. No. 78,063; May 31; Gaz. vol. 154; p. 1403.

Calvert & Co., F. C., Manchester, England. Soaps. No. 77,702; May 3; Gaz. vol. 154; p. 247.

Cannon Valley Milling Company, Minneapolis, Minn. Wheat-flour. No. 78,227; May 31; Gaz. vol. 154; p. 1408.

Cargill Elevator Co., Minneapolis, Minn. Garden and grass seeds and seed-grains. No. 78,162; May 31; Gaz. vol. 154; p. 1406.

Carl J. Niemann & Bros., Omaha, Nebr. Sole-leather for shoes. No. 78,198; May 31; Gaz. vol. 154; p. 1407.

Carson, Pirie, Scott & Co., Chicago, Ill. Handkerchiefs. No. 77,703; May 3; Gaz. vol. 154; p. 247.

Carton Belting Company, Berwick, Me., and Boston, Mass. Stitched canvas and woven belting. No. 77,704; May 3; Gaz. vol. 154; p. 247.

Caruthers-Terry Preserving Company, The, Akron, Ohio. Certain foods. No. 77,861; May 10; Gaz. vol. 154; p. 511.

Cayey-Caguas Tobacco Company, New York, N. Y. Cigars, cheroots, and cigarettes. No. 77,791; May 10; Gaz. vol. 154; p. 509.

Central Foundry Co., New York, N. Y. Plumbers' fittings. No. 77,862; May 10; Gaz. vol. 154; p. 511.

Chapin & Hollister Company, Providence, R. I. Certain precious-metal ware. No. 78,064; May 31; Gaz. vol. 154; p. 1403.

Charles A. Bennett Company, Taunton, Mass. Certain precious-metal and plated ware. No. 77,903; May 17; Gaz. vol. 154; p. 831.

Chattanooga Medicine Co., Chattanooga, Tenn. Dolls. No. 77,705; May 3; Gaz. vol. 154; p. 247.
Chemische Werke vorm. Dr. Heinrich Byk, Berlin, Germany. Antiseptic mouth-wash. No. 78,065; May 31; Gaz. vol. 154; p. 1403.
Cheswell Cotton Mills Co., Westminster, S. C. Drills. No. 77,983; May 24; Gaz. vol. 154; p. 1103.
Church & Dwight Co., New York, N. Y. Washing-soda. No. 78,163; May 31; Gaz. vol. 154; p. 1406.
Clarke, Callie, Knoxville, Tenn. Liniment for internal and external use. No. 77,706; May 3; Gaz. vol. 154; p. 247.
Coates & Co., Albert, Manchester, England. Iron and steel. No. 77,707; May 3; Gaz. vol. 154; p. 247.
Cohen & Co., Lazrus, New York, N. Y. Ladies' cloaks and outer suits. No. 77,792; May 10; Gaz. vol. 154; p. 509.
Cohn Goodman Company, Cleveland, Ohio. Certain clothing. No. 77,702; May 10; Gaz. vol. 154; p. 509.
Colby Candy Co., Kansas City, Mo. Candies. No. 77,984; May 24; Gaz. vol. 154; p. 1103.
Colgate & Company, Jersey City, N. J., and New York, N. Y. Soaps for toilet use and shaving-soap. No. 78,228; May 31; Gaz. vol. 154; p. 1408.
Collier, Thomas J., Racine, Wis. Incubators and brooders. No. 77,794; May 10; Gaz. vol. 154; p. 509.
Columbia Cotton Oil and Provision Corporation, Relee, Va. Sugar-cured meats and lard. No. 77,795; May 10; Gaz. vol. 154; p. 509.
Commercial Acetylene Company, New York, N. Y. Chemicals for the purification of acetylene gas. No. 78,066; May 31; Gaz. vol. 154; p. 1403.
Connelly Iron Sponge & Governor Company, New York, N. Y. Gas purifying material. No. 77,904; May 17; Gaz. vol. 154; p. 831.
Consolidated Cotton Duck Company, Baltimore, Md. Cotton duck. No. 77,985; May 24; Gaz. vol. 154; p. 1103.
Consumers Service Company, Inc., South Bend, Ind. Remedy for diseases of the kidneys. No. 78,164; May 31; Gaz. vol. 154; p. 1406.
Corn Products Refining Company, Jersey City, N. J. Laundry starch. No. 78,067; May 31; Gaz. vol. 154; p. 1403.
Crocker-McElwain Company, Holyoke, Mass. Writing-paper. Nos. 77,908–9; May 17; Gaz. vol. 154; p. 831.
Crocker-McElwain Company, Holyoke, Mass. Writing-paper. No. 78,068; May 31; Gaz. vol. 154; p. 1403.
Crown-Columbia Pulp and Paper Co., San Francisco, Cal. Paper bags. No. 78,231; May 31; Gaz. vol. 154; p. 1408.
Cusimano & Co., A., New Orleans, La. Tomato-paste. No. 78,165; May 31; Gaz. vol. 154; p. 1406.
D. E. Foote & Company, Inc., Baltimore, Md. Canned fruits, vegetables, &c. Nos. 77,980–90; May 24; Gaz. vol. 154; p. 1103.
Dakota Improved Seed Company, Mitchell, S. D. Seeds, plants, and bulbs. No. 77,986; May 24; Gaz. vol. 154; p. 1103.
Dando Printing & Publishing Company, The, Philadelphia, Pa. Combined letter-head and container for advertising-cuts. No. 77,863; May 10; Gaz. vol. 154; p. 511.
Danker & Marston, Boston, Mass. Certain gums. No. 78,166; May 31; Gaz. vol. 154; p. 1406.
Darling Pump & Man'fg. Co., (Limited.) The, Williamsport, Pa. Oil and Artesian well pumps and parts of same. No. 78,232; May 31; Gaz. vol. 154; p. 1408.
Dausse & Co., P., New York, N. Y. Vermicelli and macaroni. No. 77,708; May 3; Gaz. vol. 154; p. 247.
Davis Milling Company, The, St. Joseph, Mo. Wheat-flour. No. 77,709; May 3; Gaz. vol. 154; p. 247.
De Marco, Antonio, New York, N. Y. Cigars and smoking-tobacco. No. 78,014; May 24; Gaz. vol. 154; p. 1104.
De Vere, Primrose R., Columbus, Ohio. Fire and water proof cement. No. 77,710; May 3; Gaz. vol. 154; p. 247.
Diamond Crystal Salt Co., St. Clair, Mich. Salt. No. 78,167; May 31; Gaz. vol. 154; p. 1406.
Diamond Steel Truck Co., Grand Rapids, Mich. Furniture-casters. No. 78,168; May 31; Gaz. vol. 154; p. 1406.
Didisheim & Bro., Hipp., New York, N. Y. Watches and watch-movements. No. 77,711; May 3; Gaz. vol. 154; p. 247.
Dies, Leon B., New Orleans, La. Remedy for colds, croup, and pain. No. 77,987; May 24; Gaz. vol. 154; p. 1103.
Dinsmore, William S., Los Angeles, Cal. Monthly magazines. No. 78,234; May 31; Gaz. vol. 154; p. 1408.
Donnoyer, Gardner & Co., Peoria, Ill. Wheat-flour. Nos. 78,169–71; May 31; Gaz. vol. 154; p. 1406.
Duff & Sons, P., Pittsburg, Pa. Canned sardines. No. 78,292; May 31; Gaz. vol. 154; p. 1409.
Duplan Silk Co., New York, N. Y. Broad silk piece goods. No. 78,072; May 31; Gaz. vol. 154; p. 1403.
E. C. Harley Co., The, Dayton, Ohio. Coffee. No. 78,001; May 24; Gaz. vol. 154; p. 1103.
E. W. Gates & Son Company, Richmond, Va. Canned fruits and vegetables. No. 77,796; May 10; Gaz. vol. 154; p. 509.
E-Z Opener Bag Company, Taylorville, Ill. Paper bags. No. 77,712; May 3; Gaz. vol. 154; p. 247.
Eagle Pencil Company, New York, N. Y. Lead-pencils. Nos. 77,797–9; May 10; Gaz. vol. 154; p. 509.
Eastman, Geo. P., New Orleans, La. Rice. No. 77,800; May 10; Gaz. vol 154; p. 509.
Ebstein Bros., New York, N. Y. Certain tools. No. 77,909; May 17; Gaz. vol. 154; p. 831.
Edison Manufacturing Company, West Orange, N. J. Moving-picture machines. No. 77,713; May 3; Gaz. vol. 154; p. 247.
Eising & Co., E., New York, N. Y. Whisky. No. 77,864; May 10; Gaz. vol. 154; p. 511.
El Quebracho Sociedad Anonima, Buenos Ayres, Argentina. Tanning compounds. No. 78,075; May 31; Gaz. vol. 154; p. 1403.
Electric Compound Co., Los Angeles, Cal. Cleaning substances and compounds for laundry purposes. No. 77,910; May 17; Gaz. vol. 154; p. 831.
Electric Protection Company, Minneapolis, Minn. Steel shelving and filing-cases. No. 77,801; May 10; Gaz. vol. 154; p. 509.
Electrolytic Purifying Company, The, Denver, Colo. Filtered water. No. 77,714; May 3; Gaz. vol. 154; p. 247.
Elias Bros. & Co., New York, N. Y. Dress and negligée shirts. No. 78,074; May 31; Gaz. vol. 154; p. 1403.
Empire Knife Company, The, Winsted, Conn. Pocket-knives, scissors, shears, table and kitchen knives. Nos. 77,865–6; May 10; Gaz. vol. 154; p. 511.
Estate Stove Co., The, Hamilton, Ohio. Stoves. No. 77,715; May 3; Gaz. vol. 154; p. 247.
Everhart & Company, Laurel, Md. Vaginal capsules. No. 78,076; May 31; Gaz. vol. 154; p. 1403.
Everitt, James A., Indianapolis, Ind. Seeds. No. 77,778; May 3; Gaz. vol. 154; p. 249.
Exposition Cotton Mills, Atlanta, Ga. Sheetings and drillings. No. 78,039; May 24; Gaz. vol. 154; p. 1104.
F. A. Foster & Co. (See Foster & Co., F. A., assignors.)
F. B. Chamberlain Company, St. Louis, Mo. Rolled oats and oatmeal. No. 78,038; May 24; Gaz. vol. 154; p. 1104.
F. E. Atteaux & Co., Boston, Mass., and Jersey City, N. J. Hyposulfite of soda and sulfid of sodium. No. 78,059; May 31; Gaz. vol. 154; p. 1043.
F. H. Strong Company, New York, N. Y. Remedial agents. No. 77,911; May 17; Gaz. vol. 154; p. 831.
Fabbrica Italiana Automobili-Torino Societa Anonima, Turin, Italy. Steam and gasolene motors and engines and parts thereof. No. 77,867; May 10; Gaz. vol. 154; p. 511.
Faber, A. W., Stein, near Nuremberg, and Berlin, Germany. Pencils. No. 78,077; May 31; Gaz. vol. 154; p. 1403.
Fairmount Electric and Manufacturing Company, The, Philadelphia, Pa. Electrical fittings. No. 78,078; May 31; Gaz. vol. 154; p. 1403.
Farbenfabriken of Elberfeld Company, New York, N. Y. Coal-tar dyes. No. 77,717; May 3; Gaz. vol. 154; p. 247.
Farrington & Whitney, New York, N. Y. Olive-oil. No. 77,988; May 24; Gaz. vol. 154; p. 1103.
Faxon, Williams & Faxon, Buffalo, N. Y. Certain foods. No. 78,235; May 31; Gaz. vol. 154; p. 1409.
Fay-Gorman Company, The, Bethel, Conn. Felt hats. No. 78,079; May 31; Gaz. vol. 154; p. 1403.
Feder, Silberberg Company, The, Cincinnati, Ohio. Overcoats, outer suits, and trousers. No. 78,293; May 31; Gaz. vol. 154; p. 1409.
Fillmore Citrus Fruit Association, Fillmore, Cal. Oranges and lemons. No. 78,236; May 31; Gaz. vol. 154; p. 1408.
Florence Wagon Works, Florence, Ala. Farm-wagons. No. 77,868; May 10; Gaz. vol. 154; p. 511.
Florence Wagon Works, Florence, Ala. Wagons. No. 77,912; May 17; Gaz. vol. 154; p. 831.
Flynn & Bro., J. W., Wilkinsburg, Pa. Curtain-fixtures. No. 78,237; May 31; Gaz. vol. 154; p. 1408.
Ford Manufacturing Company, Chicago, Ill. Prepared roofings. No. 77,718; May 3; Gaz. vol. 154; p. 247.
Forster Manufacturing Company, Dixfield, Me. Toothpicks. No. 77,991; May 24; Gaz. vol. 154; p. 1103.
Forsyth Manufacturing Company, Buffalo, N. Y. Certain receptacles. No. 77,913; May 17; Gaz. vol. 154; p. 831.
Foster & Co., F. A., New York, N. Y., assignors to F. A. Foster & Co. Inc. Certain textiles. No. 77,716; May 3; Gaz. vol. 154; p. 247.
Foster-McClellan Co., Buffalo, N. Y. Medicines. No. 78,080; May 31; Gaz. vol. 154; p. 1403.
Foster & Sons, Limited, M. B., London, England. Certain alcoholic beverages. No. 78,040; May 24; Gaz. vol. 154; p. 1104.
Fox Chemical Company, St. Louis, Mo. Remedy for certain diseases. No. 78,172; May 31; Gaz. vol. 154; p. 1406.
Fox, Ernest C., Cleveland, Ohio. Registers. No. 78,081; May 31; Gaz. vol. 154; p. 1404.
Francis, Joseph H., Chicago, Ill. Monthly magazine. No. 78,238; May 31; Gaz. vol. 154; p. 1408.
Frederick Stearns & Co., Detroit, Mich. Perfumes. No. 77,719; May 3; Gaz. vol. 154; p. 247.
Frederick Stearns & Co., Detroit, Mich. Perfumes. No. 77,803; May 10; Gaz. vol. 154; p. 509.
Freedman, Hayman, New York, N. Y. Coats and overcoats. No. 77,804; May 10; Gaz. vol. 154; p. 509.
French & Co., Samuel H., Philadelphia, Pa. Paints and paste colors. No. 77,992; May 24; Gaz. vol. 154; p. 1103.
Fulcrum Oil Company, Franklin, Pa. Lubricating-oil. No. 78,082; May 31; Gaz. vol. 154; p. 1404
Fuld, Herman, New York, N. Y. Pinochle score-cards. No. 77,869; May 10; Gaz. vol. 154; p. 511.
G. A. Stafford & Co., Greenwich, Conn., and New York, N. Y. Sheetings and tickings. No. 77,914; May 17; Gaz. vol. 154; p. 831.
G. B. Farrington Company, The, New York, N. Y. Coffee. No. 77,720; May 3; Gaz. vol. 154; p. 247.
G. & J. Weir Ld., Cathcart, Scotland. Steam condensers, evaporators, and preheaters for boilers. No. 77,805; May 10; Gaz. vol. 154; p. 509.

G. & J. Weir Ld., Cathcart, Scotland. Steam condensers, evaporators, and preheaters for boilers. No. 78,144; May 31; Gaz. vol. 154; p. 1405.
Gardiner, George H., Thomaston, Me. Medicinal remedy. No. 78,083; May 31; Gaz. vol. 154; p. 1404.
Gaumont Co., New York, N. Y. Combined talking and moving-picture machines. No. 77,721; May 3; Gaz. vol. 154; p. 247.
Gauss-Langenberg Hat Company, St Louis, Mo. Men's fur hats. No. 78,084; May 31; Gaz vol. 154; p. 1404.
General Electric Company, Schenectady, N. Y. Electric lamps. No. 77,779; May 3; Gaz. vol. 154; p. 249.
Geo. Borgfeldt & Co., New York, N. Y. Perfumery. No. 77,915; May 17; Gaz. vol. 154; p. 831.
Geo. P. Bent Company, Chicago, Ill. Interior player-pianos. Nos. 77,722–3; May 3; Gaz. vol. 154; p. 247.
Geshlider Bros., New York, N. Y. Leather gloves. No. 78,085; May 31; Gaz. vol. 154; p. 1404.
Gesswein, Paul H., Brooklyn, N. Y. Polishing and cutting wheels. No. 77,993; May 24; Gaz. vol. 154; p. 1103.
Gibbs Preserving Company, Baltimore, Md. Canned oysters. Nos. 77,724–5; May 3; Gaz. vol. 154; p. 248.
Giardon, Edouard C., Hamburg, Germany. Safety-clamps for boxes. No. 77,994; May 24; Gaz. vol. 154; p. 1103.
Golden Gate Packing Company, San Jose, Cal. Canned fruits. No. 77,726; May 3; Gaz. vol. 154; p. 248.
Goldenberg, Moses, Washington, D. C. Certain textiles. No. 77,995; May 24; Gaz. vol. 154; p. 1103.
Goldenberg, Moses, Washington, D. C. Certain clothing. No. 77,996; May 24; Gaz. vol. 154; p. 1103.
Goldenberg, Moses, Baltimore, Md., and Washington, D. C. Pocket-books, card-cases, hand-bags, &c. No. 77,997; May 24; Gaz. vol. 154; p. 1103.
Goldenberg, Moses, Baltimore, Md., and Washington, D. C. Linoleum and oiled cloth. No. 77,998; May 24; Gaz. vol. 154; p. 1103.
Goldenberg, Moses, Baltimore, Md., and Washington, D. C. Certain stationery and paper. No. 78,041; May 24; Gaz. vol. 154; p. 1105.
Goldenberg, Moses, Washington, D. C. Certain clothing. No. 78,086; May 31; Gaz. vol. 154; p. 1404.
Goldenberg, Moses, Washington, D. C. Medicines and toilet preparations. No. 78,087; May 31; Gaz. vol. 154; p. 1404.
Good Health Publishing Co., Battle Creek, Mich. Monthly magazine. No. 77,916; May 17; Gaz. vol. 154; p. 831.
Gramm-Logan Motor Car Company, The. Self-propelled vehicles. No. 77,917; May 17; Gaz. vol. 154; p. 831.
Granulator Soap Company, New York, N. Y. Soap. No. 77,806; May 10; Gaz. vol. 154; p. 509.
Graton & Knight Mfg. Co., Worcester, Mass. Leather for boots and shoes. No. 77,918; May 17; Gaz. vol. 154; p. 831.
Greco, Gaspare, New Orleans, La. Washing and bleaching fluid. No. 77,999; May 24; Gaz. vol. 154; p. 1103.
Griswold, Horace D., Nashua, N. H. Medicinal preparation for the skin and scalp. No. 78,173; May 31; Gaz. vol. 154; p. 1406.
Gudeman, Leo, New York, N. Y. Certain electrical apparatus. No. 78,088; May 31; Gaz. vol. 154; p. 1404.
Gutman Bros., New York, N. Y. Undershirts, drawers, and union suits. No. 78,000; May 24; Gaz. vol. 154; p. 1103.
Guttknecht, J. W., Stein, near Nuremberg, Germany. Pencils and rubber bands and erasers. No. 78,089; May 31; Gaz. vol. 154; p. 1404.
H. A. Johnson Co., Boston, Mass. Prepared flour. No. 78,246; May 31; Gaz. vol. 154; p. 1408.
H. T. Cottam & Co. Ltd., New Orleans, La. Certain foods. No. 78,230; May 31; Gaz. vol. 154; p. 1408.
Halsey, J. Tibbals Chemical Manufacturing Company, Philadelphia, Pa. Washing and cleaning powder. No. 77,807; May 10; Gaz. vol. 154; p. 509.
Hamburger Bros., St. Louis, Mo. Leather boots and shoes. No. 78,090; May 31; Gaz. vol. 154; p. 1404.
Hammel, Riglander & Co., New York, N. Y. Watch, clock, and chronometer oils. No. 78,091; May 31; Gaz. vol. 154; p. 1404.
Hammer, Joseph C., Hartford, Conn. Cigars. No. 78,239; May 31; Gaz. vol. 154; p. 1408.
Hancock Inoculatum Co., The, Salem, Va. Remedy for white diarrhea, roup, and cholera in fowls. No. 77,727; May 3; Gaz. vol. 154; p. 248.
Hanley & Kinsella Coffee & Spice Company, St. Louis, Mo. Coffee. No. 78,174; May 31; Gaz. vol. 154; p. 1406.
Harris-Lipsitz Company, Dallas, Tex. Hosiery. No. 78,092; May 31; Gaz. vol. 154; p. 1404.
Harris-Lipsitz Company, Dallas, Tex. Ginghams. No. 78,093; May 31; Gaz. vol. 154; p. 1404.
Harris, Nathan A., Conway, Mo. Remedy for certain diseases. No. 78,094; May 31; Gaz. vol. 154; p. 1404.
Hartman Mfg. Co., Vincennes, Ind. Cultivators. No. 77,870; May 10; Gaz. vol. 154; p. 511.
Heaton-Peninsular Button Fastener Co., Boston, Mass. Machines for setting metallic fasteners. No. 78,175; May 31; Gaz. vol. 154; p. 1406.
Heidelberg, Wolff & Co., New York, N. Y. Overcoats, ulsters, rain and automobile coats. No. 78,095; May 31; Gaz. vol. 154; p. 1404.
Hemingray Glass Co., Muncie, Ind., and Covington, Ky. Electric apparatus and supplies. No. 78,096; May 31; Gaz. vol. 154; p. 1404.
Henderson, J. A., Colombo, Ceylon. Tea. No. 77,808; May 10; Gaz. vol. 154; p. 509.
Henderson, Thomas J., New Orleans, La. Molasses and corn-syrup compound. No. 78,176; May 31; Gaz. vol. 154; p. 1406.
Henry B. Gilpin Co., The, Baltimore, Md. Sachet-powder. No. 77,728; May 3; Gaz. vol. 154; p. 248.
Henry Rossell & Co. Ltd., Sheffield, England. Certain metals and metal articles. No. 77,729; May 3; Gaz. vol. 154; p. 248.
Henry Rossell & Co. Ltd., Sheffield, England. Machine-tools. No. 77,730; May 3; Gaz. vol. 154; p. 248.
Herren, Robert C., Kenton, Ohio. Certain wooden trays and planks. No. 78,097; May 31; Gaz. vol. 154; p. 1404.
Herrmann, Aukam & Co., New York, N. Y. Handkerchiefs. Nos. 78,002–4; May 24; Gaz. vol. 154; p. 1103.
Hess, Henry G. & J. Adam, Ogden, Utah. Crackers. No. 78,177; May 31; Gaz. vol. 154; p. 1406.
Hewes & Potter, Boston, Mass. Elastic armbands. No. 78,098; May 31; Gaz. vol. 154; p. 1404.
Hogg, Mary, Buffalo, N. Y. Medicinal plasters. No. 78,178; May 31; Gaz. vol. 154; p. 1406.
Holmquist & Co., Chicago, Ill. Curtain-stretchers. No. 77,809; May 10; Gaz. vol. 154; p. 509.
Homophon Company, G. m. b. H., Berlin, Germany. Talking-machines and supplies therefor. No. 78,099; May 31; Gaz. vol. 154; p. 1404.
Hopkins, Wilber S., Chicago, Ill. Olive-oil. No. 77,920; May 17; Gaz. vol. 154; p. 831.
Hubbell, Ray, Northville, N. Y. Brass binding for oiled cloth and linoleum. No. 77,919; May 17; Gaz. vol. 154; p. 831.
Hunt Brothers Company, San Francisco, Cal. Canned fruits. No. 77,731; May 3; Gaz. vol. 154; p. 248.
Hutchens & Potter, Johnstown, N. Y. Gloves. Nos. 78,005–6; May 24; Gaz. vol. 154; p. 1104.
Independent Button and Machine Company, Chicago, Ill. Button molds and rims. No. 77,007; May 24; Gaz. vol. 154; p. 1104.
Indiana Pharmaceutical Company, Fort Wayne and Indianapolis, Ind. Remedy for nerve diseases. No. 77,732; May 3; Gaz. vol. 154; p. 248.
Ingersoll Candy Company, San Diego, Cal. Chocolates. No. 78,179; May 31; Gaz. vol. 154; p. 1406.
International Pulp Company, New York, N. Y. Certain powder. No. 78,180; May 31; Gaz. vol. 154; p. 1406.
International Silver Company, Meriden, Conn. Silver-plated flat and hollow ware. No. 77,810; May 10; Gaz. vol. 154; p. 509.
Iowa Biscuit Co., Burlington, Iowa. Crackers and biscuits. No. 78,240; May 31; Gaz. vol. 154; p. 1408.
Israel, Fred W., Wichita, Kans. Cough remedies and breath purifier. No. 78,008; May 24; Gaz. vol. 154; p. 1104.
Italian Swiss Colony, San Francisco, Cal. Wines. No. 78,181; May 31; Gaz. vol. 154; p. 1406.
Italian Swiss Colony, San Francisco, Cal. Grape brandy. No. 78,182; May 31; Gaz. vol. 154; p. 1406.
Iten Biscuit Co., Omaha, Nebr. Biscuits. No. 78,241; May 31; Gaz. vol. 154; p. 1408.
J. B. Williams Company, The, Glastonbury, Conn. Soap. No. 78,032; May 24; Gaz. vol. 154; p. 1104.
J. C. Hall Company, The, Providence, R. I. Bond-paper. No. 77,811; May 10; Gaz. vol. 154; p. 509.
J. C. Hall Company, The, Providence, R. I. Bond-paper. No. 77,921; May 17; Gaz. vol. 154; p. 832.
J. J. Badenoch Co., Chicago, Ill. Poultry food. No. 78,156; May 31; Gaz. vol. 154; p. 1406.
J. J. Badenoch Co., Chicago, Ill. Horse feed. No. 78,291; May 31; Gaz. vol. 154; p. 1409.
J. J. Gorges & Son, Inc., Washington, D. C. Preparation for eradicating warts. No. 77,733; May 3; Gaz. vol. 154; p. 248.
J. J. Saville & Company, Limited, Sheffield, England. Steel. No. 77,885; May 10; Gaz. vol. 154; p. 512.
J. L. Glauberg Co., New York, N. Y. Ladies' combs, hair-pins, barrettes, and bandeaux. No. 77,922; May 17; Gaz. vol. 154; p. 832.
J. P. Davies Company, The, Dayton, Ohio. Soap. No. 78,009; May 31; Gaz. vol. 154; p. 1403.
Jacobs, Walter C., Newark, N. J. Electrotypes. No. 77,734; May 3; Gaz. vol. 154; p. 248.
Janssen, George, Highlandtown, Md. Certain alcoholic beverages. No. 78,242; May 31; Gaz. vol. 154; p. 1408.
Jennings, Edgerton R., Chicago, Ill. Insecticides. No. 77,814; May 10; Gaz. vol. 154; p. 510.
John E. Diament Company, Cedarville and Tuckahoe, N. J. Certain foods. No. 78,233; May 31; Gaz. vol. 154; p. 1408.
John F. Lalla Company, Chicago, Ill. Canned salmon. Nos. 77,812–13; May 10; Gaz. vol. 154; pp. 509–10.
John S. Lamson and Brother, New York, N. Y. Bitumen or asphaltum. No. 77,735; May 3; Gaz. vol. 154; p. 248.
Johnson, Grafton, Greenwood, Ind. Canned vegetables. Nos. 78,243–5; May 31; Gaz. vol. 154; p. 1408.
Johnson, Marcus, St. Paul, Minn. Lotions. No. 78,100; May 31; Gaz. vol. 154; p. 1404.
Johnston Electric Company, Omaha, Nebr. Electrical apparatus and supplies. No. 77,871; May 10; Gaz. vol. 154; p. 511.
Jones, Anna L., Lynchburg, Va. Combined washstands and screens. No. 77,736; May 3; Gaz. vol. 154; p. 248.
Jones, Virgil, Atlanta, Ga. Non-intoxicating tonic beverages and tablets and powders for making same. No. 78,101; May 31; Gaz. vol. 154; p. 1404.

Jonesville Manufacturing Company, Jonesville, S. C. Hosiery. No. 77,923; May 17; Gaz. vol. 154; p. 832.
Jorge, Tancredo D., Lisbon, Portugal. Cork. Nos. 77,781–2; May 3; Gaz. vol. 154; p. 249.
Joseph N. Eisendrath Company, The, Chicago, Ill. Leather gloves, mittens, and gauntlets No. 78,073; May 31; Gaz. vol. 154; p. 1405.
Kahn & Frank, New York, N. Y. Hosiery. No. 77,815; May 10; Gaz. vol. 154; p. 510.
Kalmus, Otto, Cincinnati, Ohio. Medicinal preparation. No. 77,924; May 17; Gaz. vol. 154; p. 832.
Kampfe Bros., New York, N. Y. Safety-razors. No. 78,247; May 31; Gaz. vol. 154; p. 1408.
Kann Sons & Co., S., Washington, D. C. Cold-cream and talcum powder. No. 78,009; May 24; Gaz. vol. 154; p. 1104.
Kelly-Steinmetz Liquor Co., The, Minneapolis, Minn. Whisky. No. 77,872; May 10; Gaz. vol. 154; p. 511.
Keystone Chemical Manufacturing Company of New Jersey, The, Philadelphia, Pa. Sodium phosphate. No. 78,010; May 24; Gaz. vol. 154; p. 1104.
Keystone Nut Lock Mfg. Co., Pittsburg, Pa. Nut-locks and metal washers. No. 78,184; May 31; Gaz. vol. 154; p. 1406.
Kinsey & Mahler Co., Peoria, Ill. Valves and cocks and parts thereof. No. 78,185; May 31; Gaz. vol. 154; p. 1406.
Klein & Company, H., New York, N. Y. Knitted athletic goods. No. 78,102; May 31; Gaz. vol. 154; p. 1404.
Klewe Bros., Sheboygan, Wis. Whisky. No. 77,925; May 17; Gaz. vol. 154; p. 832.
Klopfer, Friedrich A. V., Leubsitz, Germany. Vegetable protein food. No. 78,042; May 24; Gaz. vol. 154; p. 1105.
Kraft & Cutter, New York, N. Y. Certain textiles. No. 78,103; May 31; Gaz. vol. 154; p. 1404.
Kraft, Ferdinand, San Francisco, Cal. Zwieback. No. 78,248; May 31; Gaz. vol. 154; p. 1408.
Krueger, Fredrik E., London, England. Matches. Nos. 77,926–7; May 17; Gaz. vol. 154; p. 832.
Kripke, Fritz, Berlin, Germany. Medicines. No. 78,104; May 31; Gaz. vol. 154; p. 1404.
Kuhls, H. B. Fred., Brooklyn, N. Y. Plastic composition for filling seams in woodwork, &c. No. 77,737; May 3; Gaz. vol. 154; p. 248.
Kunath, Carlos, Newport, Ky. Remedy for purifying the blood. No. 78,105; May 31; Gaz. vol. 154; p. 1404.
Kuntscher, Louis, Tarpon, Tex. Hair-tonic. No. 78,106; May 31; Gaz. vol. 154; p. 1404.
L. Pickert Fish Co., Boston, Mass. Canned foods. No. 78,273; May 31; Gaz. vol. 154; p. 1409.
La Favorite Rubber Manufacturing Co., Hawthorne, N. J. Rubber packings. No. 77,816; May 10; Gaz. vol. 154; p. 510.
La Salle Varnish Co., Chicago, Ill. Painters' materials. No. 77,873; May 10; Gaz. vol. 154; p. 511.
Langford, William S., Baltimore, Md. Stitched canvas belting. No. 78,249; May 31; Gaz. vol. 154; p. 1408.
Lanman & Kemp, New York, N. Y. Liniments. No. 77,817; May 10; Gaz. vol. 154; p. 510.
Lanman & Kemp, New York, N. Y. Liniments. No. 78,107; May 31; Gaz. vol. 154; p. 1404.
Lasher & Lathrop Inc., New York, N. Y. Writing and printing paper. Nos. 78,108–11; May 31; Gaz. vol. 154; p. 1404.
Leighton-Wright Company, Buffalo, N. Y. Antirheumatic, antipyretic, and analgesic remedies. No. 78,112; May 31; Gaz. vol. 154; p. 1404.
Lester, Jake W., Indianapolis, Ind. Medicine and salves. No. 77,928; May 17; Gaz. vol. 154; p. 832.
Leurent, Edouard, Tourcoing, France. Certain clothing. No. 77,929; May 17; Gaz. vol. 154; p. 832.
Levy & Company, S., New York, N. Y. Cigars. No. 78,250; May 31; Gaz. vol. 154; p. 1408.
Lewis Publishing Co., The, St. Louis, Mo. Plastic molding material. No. 78,251; May 31; Gaz. vol. 154; p. 1408.
Lewis, Samuel, New York, N. Y. Towel-rollers. No. 78,252; May 31; Gaz. vol. 154; p. 1408.
Liberty Stove Company, Philadelphia, Pa. Cooking-stoves and portable ranges. No. 77,788; May 3; Gaz. vol. 154; p. 248.
Lindbeck & Nelson, Kewanee, Ill. Cough-drops. No. 78,186; May 31; Gaz. vol. 154; p. 1406.
Lindsay Thompson & Co., Limited, Belfast, Ireland. Linen thread. Nos. 78,011–12; May 24; Gaz. vol. 154; p. 1104.
Lingner, Karl A., Dresden, Germany. Tooth-powder and antiseptic mouth-wash. No. 77,930; May 17; Gaz. vol. 154; p. 832.
Lippe-Murbach Company of Baltimore City, The, Baltimore, Md. Candy. No. 77,931; May 17; Gaz. vol. 154; p. 832.
Littlehales, William J., New Britain, Conn. Equipment for toothache-relief. No. 78,253; May 31; Gaz. vol. 154; p. 1406.
Lockwood Manufacturing Co., The, Cincinnati, Ohio. Metallic cooking utensils. No. 78,254; May 31; Gaz. vol. 154; p. 1406.
Ledge, Genevra R., Detroit, Mich. Automobiles. No. 77,874; May 10; Gaz. vol. 154; p. 511.
London & Sons, B., New York, N. Y. Mercerised spool and sewing cotton thread. No. 77,739; May 3; Gaz. vol. 154; p. 248.
Lone Star Blacking & Mfg. Co., Dallas, Tex. Shoe and leather dressing. No. 78,255; May 31; Gaz. vol. 154; p. 1408.
Loopuyt & Co., P., Schiedam, Netherlands. Gin. No. 78,043; May 24; Gaz. vol. 154; p. 1105.
Los Angeles Brewing Co., Los Angeles, Cal. Beer. No. 77,932; May 17; Gaz. vol. 154; p. 832.
Louis Sonn & Co., New York, N. Y. Girls' dresses. No. 77,740; May 3; Gaz. vol. 154; p. 248.
Louis Sonn & Co., New York, N. Y. Girls' dresses. No. 78,137; May 31; Gaz. vol. 154; p. 1405.
Lyon, Frank B., Cuba, N. Y. Cream-cheeses. No. 77,933; May 17; Gaz. vol. 154; p. 832.
MacMonnies & Von Elm, New York, N. Y. Canned sardines. No. 77,934; May 17; Gaz. vol. 154; p. 832.
MacMonnies & Von Elm, New York, N. Y. Olive-oil. No. 77,935; May 17; Gaz. vol. 154; p. 832.
MacMonnies & Von Elm, New York, N. Y. Olive-oil. No. 78,013; May 24; Gaz. vol. 154; p. 1104.
Malt-Diastase Co., New York, N. Y. Malt extracts. No. 77,818; May 10; Gaz. vol. 154; p. 510.
Mange Remedy Co., The, Little Rock, Ark. Mange remedy. No. 77,819; May 10; Gaz. vol. 154; p. 510.
Martin Dennis Company, The, Newark, N. J. Chrome-tanning materials. No. 78,070; May 31; Gaz. vol. 154; p. 1403.
Martin Dennis Company, The, Newark, N. J. Oleaginous compounds for curriers' and leather-dressers' use. No. 78,071; May 31; Gaz. vol. 154; p. 1403.
Martinez & Bros., W. J., New Orleans, La. Leather boots and shoes. No. 78,113; May 31; Gaz. vol. 154; p. 1404.
Mason, Sarah, York, Pa. Metal-polish. No. 77,741; May 3; Gaz. vol. 154; p. 248.
Mathewson, Edward C., New York, N. Y. Ham, olives, sausage, tea, and cheese. No. 77,936; May 17; Gaz. vol. 154; p. 832.
Mathewson, Edward C., New York, N. Y. Certain foods. No. 78,015; May 24; Gaz. vol. 154; p. 1104.
Maurer, William A., Council Bluffs, Iowa. Ceramic gold paint. No. 77,937; May 17; Gaz. vol. 154; p. 832.
McClure Newspaper Syndicate, The, New York, N. Y. Comic section of a newspaper. Nos. 78,256–7; May 31; Gaz. vol. 154; p. 1408.
McKesson & Robbins, New York, N. Y. Chamois-skins. No. 78,187; May 31; Gaz. vol. 154; p. 1406.
McKittrick & Co., E., New York, N. Y. Certain textiles. Nos. 78,114–15; May 31; Gaz. vol. 154; p. 1404.
Mead Johnson & Company, Jersey City, N. J. Ferment. Nos. 77,742–4; May 3; Gaz. vol. 154; p. 248.
Means & Thacher, Boston, Mass. Paints, putty, and dry colors. No. 77,938; May 17; Gaz. vol. 154; p. 832.
Mexican Amole Soap Co., Peoria, Ill. Medicines and toilet preparations. No. 78,016; May 24; Gaz. vol. 154; p. 1104.
Meyrowitz Manufacturing Co., The, New York, N. Y. Eyeglasses and spectacles. No. 78,258; May 31; Gaz. vol. 154; p. 1408.
Michaels, Stern & Co., Rochester, N. Y. Certain clothing. No. 77,745; May 3; Gaz. vol. 154; p. 248.
Michigan Bag & Paper Company, The, Jackson, Mich. Paper bags. Nos. 78,188–90; May 31; Gaz. vol. 154; pp. 1406–7.
Midland Publishing Co., St. Louis, Mo. Account-books. No. 78,116; May 31; Gaz. vol. 154; p. 1404.
Mill & Mine Supply Co., Seattle, Wash. Iron and steel chains. No. 78,259; May 31; Gaz. vol. 154; p. 1408.
Miller and Blaks Chemical Co., Adrian, Mich. Local anæsthetics. No. 78,117; May 31; Gaz. vol. 154; p. 1405.
Miller Bros. & Co., Baltimore, Md. Canned oysters. No. 78,017; May 24; Gaz. vol. 154; p. 1104.
Miller, Charles W., San Antonio, Tex. Remedy for rheumatism. No. 78,118; May 31; Gaz. vol. 154; p. 1405.
Miller, John J., Newark, N. J. Chinaware. No. 78,260; May 31; Gaz. vol. 154; p. 1408.
Millstadt Brewery Company, Millstadt, Ill. Bottled beer. No. 77,820; May 10; Gaz. vol. 154; p. 510.
Model Milling & Elevator Company, The, Greeley, Colo. Wheat-flour. No. 78,191; May 31; Gaz. vol. 154; p. 1407.
Model Milling & Elevator Company, The, Greeley, Colo. Wheat-flour. No. 78,261; May 31; Gaz. vol. 154; p. 1409.
Moland's Sons, William, Philadelphia, Pa. Ham, bacon, dried beef, and lard. No. 77,821; May 10; Gaz. vol. 154; p. 510.
Montebello & Co., Alfred de, Mareuil-sur-Ay, Marne, France. Champagne wine. Nos. 77,875–6; May 10; Gaz. vol. 154; p. 511.
Moon, Lillian W., New London, Conn. Remedy for asthma. No. 78,192; May 31; Gaz. vol. 154; p. 1407.
Moore, Robert E., Philadelphia, Pa. Abdominal belts. No. 77,746; May 3; Gaz. vol. 154; p. 248.
Morgan and Maxfield, Holyoke, Mass. Disk mandrels, porte-polishers, and polisher-holders. No. 78,262; May 31; Gaz. vol. 154; p. 1409.
Morgan & Wright, Detroit, Mich. Hoof-pads. Nos. 77,939–41; May 17; Gaz. vol. 154; p. 832.
Morris Pharmacal Company of New York, The, New York, N. Y. Cathartic and laxative tablet or pill. No. 77,822; May 10; Gaz. vol. 154; p. 510.
Morton, Warner G., Albany, N. Y. Anthracite coal. No. 77,780; May 3; Gaz. vol. 154; p. 249.
Muderlak, Ambroz, New York, N. Y. Seasoning for Welsh rabbits. No. 78,193; May 31; Gaz. vol. 154; p. 1407.

Muller, William P., New York, N. Y. Cigarettes. No. 77,942; May 17; Gaz. vol. 154; p. 832.
Munn Company, Arthur H., Detroit, Mich. Remedy for rheumatism. No. 78,119; May 31; Gaz. vol. 154; p. 1405.
Murphy Grant & Co., San Francisco, Cal., and New York, N. Y. Ribbons. No. 77,823; May 10; Gaz. vol. 154; p. 510.
Narrow Fabric Co., The, Wyomissing, near Reading, Pa. Shoe-laces. No. 77,943; May 17; Gaz. vol. 154; p. 832.
National Candy Company, Jersey City, N. J., and St. Louis, Mo. Candy. No. 78,018; May 24; Gaz. vol. 154; p. 1104.
National Carbon Company, Cleveland, Ohio. Electrical brushes and contacts. No. 77,944; May 17; Gaz. vol. 154; p. 832.
National Carbon Company, Cleveland, Ohio. Dry-cell electric batteries. Nos. 78,120–1; May 31; Gaz. vol. 154; p. 1405.
National Coal Company, The, Akron, Ohio. Bituminous coal. No. 78,194; May 31; Gaz. vol. 154; p. 1407.
National Coning Machinery Company, Indianapolis, Ind. Paper bottles and cups. No. 78,195; May 31; Gaz. vol. 154; p. 1407.
National Hay, Grain and Storage Co., Macon, Ga. Stock food. No. 78,196; May 31; Gaz. vol. 154; p. 1407.
National Hay, Grain and Storage Co., Macon, Ga. Stock food. No. 78,263; May 31; Gaz. vol. 154; p. 1409.
National Milling Company, The, Toledo, Ohio. Wheat-flour. No. 78,264; May 31; Gaz. vol. 154; p. 1409.
National Water Main Cleaning Co., Augusta, Me., and New York, N. Y. Tools for cleaning pipes and cylinders. No. 77,945; May 17; Gaz. vol. 154; p. 832.
Nature's Creation Co., The, Columbus, Ohio. Remedy for diseases of the lungs. No. 78,197; May 31; Gaz. vol. 154; p. 1407.
Neenah Paper Co., Neenah, Wis. Writing and printing paper. No. 78,044; May 24; Gaz. vol. 154; p. 1105.
Nessle Packing Company, C. E., New York, N. Y. Sliced beef and bacon. No. 77,824; May 10; Gaz. vol. 154; p. 510.
Neubauer, Richard, Portland, Oreg. Ointment. No. 77,747; May 3; Gaz. vol. 154; p. 248.
Neuss, Hesslein & Co., New York, N. Y. Woven cotton plaids. No. 77,946; May 17; Gaz. vol. 154; p. 832.
New England Enameling Company, The, Middletown, Conn. Percolating coffee-pots. No. 77,748; May 3; Gaz. vol. 154; p. 248.
New Orleans Coffee Company, Limited, New Orleans, La. Syrups, coffee, and a compound of coffee and chicory. No. 77,947; May 17; Gaz. vol. 154; p. 832.
New York Herald Company, The, New York, N. Y. Printed pictures and illustrations. No. 78,265; May 31; Gaz. vol. 154; p. 1409.
New York Leather Belting Co., New York, N. Y. Belt-lap. No. 78,266; May 31; Gaz. vol. 154; p. 1409.
New York Mills, The, New York Mills, N. Y. Certain textiles. No. 77,825; May 10; Gaz. vol. 154; p. 510.
Newman, Abraham, New York, N. Y. Leather shoes and slippers. No. 78,122; May 31; Gaz. vol. 154; p. 1405.
Nitrate Agencies Co., New York, N. Y. Fertilisers. No. 77,877; May 10; Gaz. vol. 154; p. 511.
North & Judd Manufacturing Company, New Britain, Conn. Harness hardware. No. 77,878; May 10; Gaz. vol. 154; p. 511.
North Pacific Trading & Packing Co., San Francisco, Cal. Canned salmon. No. 77,948; May 17; Gaz. vol. 154; p. 832.
Northern Shoe Co., Duluth, Minn. Leather boots and shoes. No. 77,749; May 3; Gaz. vol. 154; p. 248.
Northwestern Chemical Co., The, Marietta, Ohio. Powder for stopping leaks in cooling systems. No. 77,826; May 10; Gaz. vol. 154; p. 510.
Northwestern Elevator & Mill Co., The, Toledo, Mount Vernon, and Londonville, Ohio. Wheat-flour. No. 78,199; May 31; Gaz. vol. 154; p. 1407.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Locks and bolts. No. 77,750; May 3; Gaz. vol. 154; p. 248.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Squares and wing-dividers. No. 77,751; May 3; Gaz. vol. 154; p. 248.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Certain tools. No. 77,752; May 3; Gaz. vol. 154; p. 248.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Certain sporting goods. No. 77,949; May 17; Gaz. vol. 154; p. 832.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Razors, hatchets, and shears. No. 78,019; May 24; Gaz. vol. 154; p. 1104.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Certain horse equipments and supplies. No. 78,200; May 31; Gaz. vol. 154; p. 1407.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Refrigerators. No. 78,201; May 31; Gaz. vol. 154; p. 1407.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Certain horse equipments and supplies. No. 78,202; May 31; Gaz. vol. 154; p. 1407.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Enameled sheet-metal ware. No. 78,267; May 31; Gaz. vol. 154; p. 1409.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Boys' wagons and go-carts. No. 78,268; May 31; Gaz. vol. 154; p. 1409.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Measuring-tapes and scale-beams. No. 78,269; May 31; Gaz. vol. 154; p. 1409.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Inner tubes for tires, hose, and fruit-jar rubbers. No. 78,270; May 31; Gaz. vol. 154; p. 1409.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Files. No. 78,271; May 31; Gaz. vol. 154; p. 1409.
Ohio Brass Company, The, Mansfield, Ohio. Trolley-clamps and suspension devices. No. 77,879; May 10; Gaz. vol. 154; p. 511.
Oliver-Finnie Co., Memphis, Tenn. Baking-powder. No. 77,753; May 3; Gaz. vol. 154; p. 248.
Oppenheimer & Co., S., New York, N. Y., and Chicago, Ill. Sausage-casings. No. 77,880; May 10; Gaz. vol. 154; p. 511.
Ottenheimer & Co., Chicago, Ill. Handkerchiefs. No. 78,123; May 31; Gaz. vol. 154; p. 1405.
Oval Wood Dish Co., The, Delta, Ohio. Clothes-pins. No. 77,950; May 17; Gaz. vol. 154; p. 832.
Overstreet Crate Co., The, Lockhart, Fla. Crates. No. 78,203; May 31; Gaz. vol. 154; p. 1407.
Oyster Planters and Growers Association of Cotuit, Mass., The, Barnstable, Mass. Fresh and canned oysters. No. 77,951; May 17; Gaz. vol. 154; p. 832.
Oziek, Morris, Philadelphia, Pa. Brooms, dust-brushes, and dusters. No. 77,952; May 17; Gaz. vol. 154; p. 832.
Palmer, Henry N., New York, N. Y. Certain clothing. No. 77,827; May 10; Gaz. vol. 154; p. 510.
Park & Pollard Company, The, Boston, Mass. Brooders. No. 78,124; May 31; Gaz. vol. 154; p. 1405.
Park & Tilford, New York, N. Y. Teas. No. 78,020; May 24; Gaz. vol. 154; p. 1104.
Parker-Browne Company, Fort Worth, Tex. Ginger-ale and syrup therefor. No. 77,953; May 17; Gaz. vol. 154; p. 832.
Parsons Paper Co., Holyoke, Mass. Writing and printing paper. No. 78,045; May 24; Gaz. vol. 154; p. 1105.
Partin, Robert N., Petersburg, Va. Remedies for venereal diseases. No. 78,125; May 31; Gaz. vol. 154; p. 1405.
Paul Manufacturing Company, The, Fort Wayne, Ind. Pulleys. No. 78,204; May 31; Gaz. vol. 154; p. 1407.
Peller, M. & S., New York, N. Y. Suspenders and men's garters and belts. No. 77,828; May 10; Gaz. vol. 154; p. 510.
Peltason Company, The, St. Louis, Mo. Cartons. No. 77,881; May 10; Gaz. vol. 154; p. 512.
People's Outfitting Company, Detroit, Mich. Rugs. No 78,021; May 24; Gaz. vol. 154; p. 1104.
Perkins, Alonson D., Los Angeles, Cal. Vehicle wind-shields. No. 78,272; May 31; Gaz. vol. 154; p. 1409.
Pinkham & Smith Company, Boston, Mass. Marine and field glasses. No. 77,754; May 3; Gaz. vol. 154; p. 248.
Pittsburgh Dry Goods Company, The, Pittsburg, Pa. Comforts. No. 77,954; May 17; Gaz. vol. 154; p. 832.
Pittsburgh Dry Goods Company, The, Pittsburg, Pa. Certain piece goods. No. 78,046; May 24; Gaz. vol. 154; p. 1105.
Plant-Butler Co., The, Cincinnati, Ohio. Leather boots and shoes. No. 77,829; May 10; Gaz. vol. 154; p. 510.
Planten, H. Rolff, Brooklyn, N. Y. Remedy for genito-urinary diseases. No. 78,022; May 24; Gaz. vol. 154; p. 1104.
Plum, Matthias, Newark, N. J. Printing-presses and parts thereof. No. 77,882; May 10; Gaz. vol. 154; p. 512.
Poirier & Lindeman, New York, N. Y. Hair-nets. No. 78,126; May 31; Gaz. vol. 154; p. 1405.
Poirier & Lindeman, New York, N. Y. Garter-webs and hair-nets. No. 78,127; May 31; Gaz. vol. 154; p. 1405.
Potter, Jefferson T., Seward, Nebr. Remedy for constipation. No. 78,128; May 31; Gaz. vol. 154; p. 1405.
Pratt, Elias M., Detroit, Mich. Printing-ink reducer and drier combined. No. 78,023; May 24; Gaz. vol. 154; p. 1104.
Pratt-Low Preserving Company, Santa Clara, Cal. Canned fruits and vegetables. No. 77,955; May 17; Gaz. vol. 154; p. 832.
Pratt-Low Preserving Company, Santa Clara, Cal. Canned fruits and vegetables. No. 78,274; May 31; Gaz. vol. 154; p. 1409.
Providence Steam Trap Company, Providence, R. I. Plumbing-traps. No. 78,275; May 31; Gaz. vol. 154; p. 1409.
Quinn-Marshall Co., Lynchburg, Va. Cotton sheetings. No. 77,956; May 17; Gaz. vol. 154; p. 832.
Rawlins, Anne E., St. Louis, Mo. Washing compound. No. 77,755; May 3; Gaz. vol. 154; p. 248.
Rea-Patterson Milling Company, The, Coffeyville, Kans. Wheat-flour. No. 78,276; May 31; Gaz. vol. 154; p. 1409.
Reicks, Clair E., Jacksonville, Fla. Working-gloves. No. 77,756; May 3; Gaz. vol. 154; p. 248.
Relling and Schoen, New York, N. Y. Poplin piece goods. Nos. 78,024–7; May 24; Gaz. vol. 154; p. 1104.
Relling and Schoen, New York, N. Y. Poplin piece goods. No. 78,129; May 31; Gaz. vol. 154; p. 1405.
Relly-Taylor Company, The, New Orleans, La. Compound of coffee and chicory. No. 77,957; May 17; Gaz. vol. 154; p. 833.
Reliance Manufacturing Company, Chicago, Ill. Work-shirts, overalls, and jackets. No. 78,205; May 31; Gaz. vol. 154; p. 1407.

Reynolds, Davis & Company, Fort Smith, Ark. Certain foods. No. 77,757; May 3; Gaz. vol. 154; p. 248.
Rice & Co., Edward F., Millbury, Mass. Mercerized bleached-cotton damask napkins. No. 78,180; May 31; Gaz. vol. 154; p. 1405.
Rice-Stix Dry Goods Company, St. Louis, Mo. Certain clothing. No. 77,758; May 3; Gaz. vol. 154; p. 248.
Richmond Cedar Works, Richmond, Va. Domestic washing-machines. No. 78,206; May 31; Gaz. vol. 154; p. 1407.
Rider, John W., Scottsburg, Ind. Canned foods. No. 77,830; May 10; Gaz. vol. 154; p. 510.
Rider, John W., Scottsburg, Ind. Canned lye-hominy. No. 77,831; May 10; Gaz. vol. 154; p. 510.
Rider, John W., Scottsburg, Ind. Canned sauer-kraut. No. 77,958; May 17; Gaz. vol. 154; p. 833.
Roach Brothers, Fort Wayne, Ind. Soap and soap powders. No. 77,759; May 3; Gaz. vol. 154; p. 248.
Robinson, Herman F., Gloucester, Mass. Glue. No. 77,883; May 10; Gaz. vol. 154; p. 512.
Rodhe, Olof, Stockholm, Sweden. Apparatus for analyzing gases and repair parts therefor. No. 77,884; May 10; Gaz. vol. 154; p. 512.
Roelofs and Company, Henry H., Philadelphia, Pa. Men's hats and caps. No. 78,131; May 31; Gaz. vol. 154; p. 1405.
Rosenberg, Augustus, London, England. Powder for polishing metal surfaces. No. 78,278; May 31; Gaz. vol. 154; p. 1409.
Rowe Patent Calk Company, The, Hartford, Conn. Horse-shoe-calks. No. 78,207; May 31; Gaz. vol. 154; p. 1407.
Rowe Patent Calk Company, The, Hartford, Conn. Horse-shoe-calks. No. 78,279; May 31; Gaz. vol. 154; p. 1409.
Rudolph Wurlitzer Co., The, Cincinnati, Ohio. Banjos. No. 77,760; May 3; Gaz. vol. 154; p. 249.
Rudolph Wurlitzer Co., The, Cincinnati, Ohio. Certain musical instruments. No. 77,761; May 3; Gaz. vol. 154; p. 249.
Rudolph Wurlitzer Co., The, Cincinnati, Ohio. Violins and violin-bows. No. 78,152; May 31; Gaz. vol. 154; p. 1405.
Ruge Bros. Canning Company, Englewood, N. J.; Apalachicola and Cedar Keys, Fla., and Baltimore, Md. Canned oysters. No. 77,832; May 10; Gaz. vol. 154; p. 510.
Ruge Bros. Canning Company, Englewood, N. J.; Apalachicola and Cedar Keys, Fla., and Baltimore, Md. Canned oysters. No. 78,047; May 24; Gaz. vol. 154; p. 1105.
Ruge Bros. Canning Company, Englewood, N. J.; Apalachicola and Cedar Keys, Fla., and Baltimore, Md. Canned oysters. No. 78,208; May 31; Gaz. vol. 154; p. 1407.
Russell, Frank E., Binghamton, N. Y. Medicinal tablets. No. 78,132; May 31; Gaz. vol. 154; p. 1405.
S. A. Woods Machine Co., Boston and South Boston, Mass. Woodworking machinery. No. 77,959; May 17; Gaz. vol. 154; p. 832.
S. F. Hayward & Co., New York, N. Y. Fire-extinguishing apparatus. No. 77,762; May 3; Gaz. vol. 154; p. 249.
Samuels, Louis, New York, N. Y. Ointment, hair-tonic, and salve. No. 77,764; May 3; Gaz. vol. 154; p. 249.
San Telmo Cigar Mfg. Co., Detroit, Mich. Cigars. Nos. 77,765–7; May 3; Gaz. vol. 154; p. 249.
Sanborn, John P., Cleveland, Ohio. Apparatus for treating rectal diseases and constipation. No. 78,280; May 31; Gaz. vol. 154; p. 1409.
Sapa Chemical Co., St. Louis, Mo. Medicinal preparation for external use. No. 77,768; May 3; Gaz. vol. 154; p. 249.
Sayles, A. H. & F. L., Pascoag, R. I. Worsted and cotton piece goods. No. 77,960; May 17; Gaz. vol. 154; p. 833.
Schiller Piano Company, Oregon, Ill. Pianos. No. 77,961; May 17; Gaz. vol. 154; p. 832.
"Schirmherr" Reformschirm-Fabrik Friedlaender & Kaufmann, Frankfort-on-the-Main, Germany. Umbrellas, parasols, walking-sticks, &c. No. 78,133; May 31; Gaz. vol. 154; p. 1405.
Schweinfurter Präcisions-Kugel-Lager-Werke, Fichtel & Sachs, Schweinfurt, Germany. Automobiles, cycles, and certain named parts. No. 77,886; May 10; Gaz. vol. 154; p. 512.
Seaboard Rice Milling Co., Galveston, Tex. Rice. Nos. 77,833–5; May 10; Gaz. vol. 154; p. 510.
Seidman, Arthur, Cleveland, Ohio. Compound for certain purposes. No. 78,134; May 31; Gaz. vol. 154; p. 1405.
Selig Polyscope Co., Chicago, Ill. Telephone apparatus. No. 77,962; May 17; Gaz. vol. 154; p. 833.
Seydoux & Cie., Paris, France. Certain textiles. No. 78,135; May 31; Gaz. vol. 154; p. 1405.
Shapiro, Simon, New York, N. Y. Dress-skirts. No. 78,136; May 31; Gaz. vol. 154; p. 1405.
Sharp, Barrington S., Atlanta, Ga. Hosiery. No. 77,836; May 10; Gaz. vol. 154; p. 510.
Sharp & Dohme, Baltimore, Md. Granular effervescent salt. No. 77,837; May 10; Gaz. vol. 154; p. 510.
Sherman & Bess Co., New York, N. Y. Long-cloth. No. 77,838; May 10; Gaz. vol. 154; p. 510.
Sligar & Bone, G. M., Columbus, Ohio. Remedies for hog cholera. No. 77,839; May 10; Gaz. vol. 154; p. 510.
Snead & Maguire Coal Company, The, Louisville, Ky. Coal. No. 78,211; May 31; Gaz. vol. 154; p. 1407.
Société des Automobiles Brasier, Ivry, France. Automobiles. No. 78,281; May 31; Gaz. vol. 154; p. 1409.
Solomon, Abraham, New York, N. Y. Ladies' outer waists and shirt-waists. No. 77,840; May 10; Gaz. vol. 154; p. 510.
Sommers, David, Shamokin, Pa. Boots and shoes. No. 77,769; May 3; Gaz. vol. 154; p. 249.
Southern Specialty Co., The, Franklin, Ky. Detergent. No. 78,282; May 31; Gaz. vol. 154; p. 1409.
Southwestern Paper Co., Dallas, Tex. Writing-paper. No. 77,841; May 10; Gaz. vol. 154; p. 510.
Spokane Extract & Spice Company, Spokane, Wash. Certain foods. No. 77,963; May 17; Gaz. vol. 154; p. 833.
Sprague Electric Company, New York, N. Y. Electric outlet-boxes. No. 77,887; May 10; Gaz. vol. 154; p. 512.
Spring, Edwin W., London, England. Razors and razor-blades. No. 78,212; May 31; Gaz. vol. 154; p. 1407.
St. Hubert, Jules C. de, Hollister, Cal. Tonic port. No. 77,763; May 3; Gaz. vol. 154; p. 249.
St. Louis Coffee & Spice Mills, St. Louis, Mo. Baking-powder and baking-soda. No. 78,214; May 31; Gaz. vol. 154; p. 1407.
Stalker Manufacturing Company, The, New York, N. Y. Driving-bits. No. 78,213; May 31; Gaz. vol. 154; p. 1407.
Standard Cube Bouillon Co., New York, N. Y. Extract of meats and vegetables for soups. No. 77,842; May 10; Gaz. vol. 154; p. 510.
Standard Improved Elastic Paint Company, The, Marietta, Ohio. Mixed paint. No. 78,138; May 31; Gaz. vol. 154; p. 1405.
Star Brass Manufacturing Company, Boston, Mass. Valves and parts thereof. No. 78,283; May 31; Gaz. vol. 154; p. 1409.
Star Pin Company, The, Shelton, Conn. Toilet-pins. No. 77,964; May 17; Gaz. vol. 154; p. 833.
Steinhardter & Nordlinger, New York, N. Y. Canned mushrooms. No. 77,843; May 10; Gaz. vol. 154; p. 510.
Steinwender-Stoffregen Coffee Co., St. Louis, Mo. Roasted coffee. No. 77,965; May 17; Gaz. vol. 154; p. 833.
Strauss, Daniel, New York, N. Y. Vellings, nettings, mailine, tulle, and chiffons. No. 77,844; May 10; Gaz. vol. 154; p. 510.
Strawsons & Company, London, England. Sulfate of copper. No. 78,139; May 31; Gaz. vol. 154; p. 1405.
Strong, Carlisle & Hammond Co., The, Cleveland, Ohio. Engine-governors, engine-atope, and pump-governors. No. 78,215; May 31; Gaz. vol. 154; p. 1407.
Stuebe Bros. & Noack, New Ulm, Minn. Dressed poultry. No. 77,845; May 10; Gaz. vol. 154; p. 510.
Suchard, S. A., Serrieres, Switzerland. Cocoa. No. 77,966; May 17; Gaz. vol. 154; p. 833.
Summers, Robert L., Brookline, Mass. Leather boots and shoes. No. 78,216; May 31; Gaz. vol. 154; p. 1407.
Susquehanna Silk Mills, New York, N. Y. Certain clothing. No. 78,140; May 31; Gaz. vol. 154; p. 1406.
Susquehanna Silk Mills, New York, N. Y. Certain furnishings. No. 78,141; May 31; Gaz. vol. 154; p. 1406.
Sutton Sons & Co., G. F., London, England. Certain foods. No. 78,284; May 31; Gaz. vol. 154; p. 1409.
T. B. Hall & Company Limited, Liverpool, England. Ale, beer, porter, and stout. No. 77,846; May 10; Gaz. vol. 154; p. 510.
Tanners Cut Sole Company, Portland, Me., and Boston, Mass. Sole-leather. No. 78,285; May 31; Gaz. vol. 154; p. 1409.
Tappan Shoe Manufacturing Company, The, Coldwater, Mich. Shoes. No. 77,847; May 10; Gaz. vol. 154; p. 511.
Tichenor, James E., Louisville, Ky. Butter. No. 78,029; May 24; Gaz. vol. 154; p. 1104.
Tiffany Brothers, Bennington, Vt. Knit shirts and drawers. No. 77,848; May 10; Gaz. vol. 154; p. 511.
Tootal Broadhurst Lee Company Limited, Manchester, England. Cotton handkerchiefs. Nos. 77,770–1; May 3; Gaz. vol. 154; p. 249.
Townsend & Co., E. M., New York, N. Y. Hosiery. Nos. 77,849–50; May 10; Gaz. vol. 154; p. 511.
True W. Jones Brewing Company, Manchester, N. H. Ale. No. 77,851; May 10; Gaz. vol. 154; p. 511.
Trunk, Lisette, New York, N. Y. Pickles. No. 78,049; May 24; Gaz. vol. 154; p. 1106.
Turner, Halsey Co., New York, N. Y. Linen and cotton piece goods. No. 78,142; May 31; Gaz. vol. 154; p. 1405.
Union Fishermen's Co-op. Pack'g Co., Astoria, Oreg. Canned salmon. No. 77,967; May 17; Gaz. vol. 154; p. 833.
Union Special Overall Company, The, Cincinnati, Ohio. Overalls. No. 77,968; May 17; Gaz. vol. 154; p. 833.
United Drug Company, Boston, Mass. Shampoo preparations and hair-tonics. No. 77,852; May 10; Gaz. vol. 154; p. 511.
United Shoe Machinery Company, Paterson, N. J., and Boston, Mass. Adhesive cement. No. 77,969; May 17; Gaz. vol. 154; p. 833.
United States Asbestos Co., Manheim, Pa. Certain asbestos products. No. 78,050; May 24; Gaz. vol. 154; p. 1105.
Unterberg & Helmle, Durlach, Germany. Magnetos. No. 77,970; May 17; Gaz. vol. 154; p. 833.
Van Doesburg, Wed. B., Mijdrecht and Amsterdam, Netherlands. Cakes and biscuits. No. 77,888; May 10; Gaz. vol. 154; p. 512.
Vertriebs-Gesellschaft Prof. Dr. Schleich'scher Präparate G. m. b. H., Berlin, Germany. Medicines and toilet preparations. No. 78,030; May 24; Gaz. vol. 154; p. 1104.

Vivell, E. G. and A. H., Rio Piedras, Porto Rico. Fresh fruits. No. 78,217; May 31; Gaz. vol. 154; p. 1407.
W. Ludwig Schultze Company, New York, N. Y. Certain furniture. No. 77,853; May 10; Gaz. vol. 154; p. 511.
W. and F. Walker Limited, Liverpool, England. Soap. No. 78,031; May 24; Gaz. vol. 154; p. 1104.
W. R. Roach & Co., Hart, Mich. Canned fruits and vegetables. No. 78,028; May 24; Gaz. vol. 154; p. 1104.
W. R. Roach & Co., Hart, Mich. Canned fruits and vegetables. No. 78,277; May 31; Gaz. vol. 154; p. 1409.
Wadhams & Company, Portland, Oreg. Certain foods. No. 77,773; May 3; Gaz. vol. 154; p. 249.
Wagner, Frank, Chicago, Ill. Remedies for certain diseases. No. 77,971; May 17; Gaz. vol. 154; p. 833.
Walker Chemical Company, Des Moines, Iowa. Cold-cream. No. 78,143; May 31; Gaz. vol. 154; p. 1405.
Walker & Sons, John, Limited, Kilmarnock, Scotland, and London, England. Blend of straight Scotch whiskies. No. 78,286; May 31; Gaz. vol. 154; p. 1409.
Walter A. Wood Mowing & Reaping Machine Company, Hoosick Falls, N. Y. Harvesters, binders, reapers, and mowers. No. 78,219; May 31; Gaz. vol. 154; p. 1407.
Walter, Edwin, Norfolk, Va. Monthly magazine. No. 78,287; May 31; Gaz. vol. 154; p. 1409.
Ward, Louis N., Mobile, Ala. Coffee. No. 77,859; May 10; Gaz. vol. 154; p. 511.
Warren Webster & Co., Camden, N. J. Steam-heating apparatus. No. 77,854; May 10; Gaz. vol. 154; p. 511.
Washburn Crosby Company, Minneapolis, Minn. Wheat-flour. No. 78,218; May 31; Gaz. vol. 154; p. 1407.
Washington Cone Manufacturing Company, Seattle, Wash., and San Francisco, Cal. Ice-cream cones. No. 78,288; May 31; Gaz. vol. 154; p. 1409.
Weather-Proofing Nail Co., The, Baltimore, Md. Nails and tacks. No. 77,774; May 3; Gaz. vol. 154; p. 249.
Weiner, Michael, Milwaukee, Wis. Brandy. No. 78,294; May 31; Gaz. vol. 154; p. 1409.
Werner, Paul, Berlin, Germany. Medicinal soaps. No. 78,289; May 31; Gaz. vol. 154; p. 1409.
Wesson, J. E. & W. G., Worcester, Mass. Leather boots and shoes. No. 78,145; May 31; Gaz. vol. 154; p. 1405.
Western Clock Mfg. Co., The, Peru, Ill. Clocks and watches. Nos. 77,855–6; May 10; Gaz. vol. 154; p. 511.
Western Clock Mfg. Co., The, Peru, Ill. Clocks and watches. No. 78,146; May 31; Gaz. vol. 154; p. 1405.
Western Oiled Clothing Co., Kansas City, Mo. Oiled clothing. No. 77,775; May 3; Gaz. vol. 154; p. 249.
White, W. L., Grand Rapids, Mich. Tonics and dyspepsia-tablets. No. 77,880; May 10; Gaz. vol. 154; p. 512.
White, Wilson, Drew Company, Memphis, Tenn. Matches. No. 77,972; May 17; Gaz. vol. 154; p. 833.
Whiting Paper Company, Holyoke, Mass. Writing-papers. No. 78,148; May 31; Gaz. vol. 154; p. 1405.
Whitman-Barnes Manufacturing Company, The, Akron, Ohio, and Chicago, Ill. Wrenches. No. 77,973; May 17; Gaz. vol. 154; p. 833.
Whittall, Matthew J., Worcester, Mass. Rugs and carpets. No. 78,147; May 31; Gaz. vol. 154; p. 1405.
Wilcox, J. Fred, Chicago, Ill. Cigars. No. 78,290; May 31; Gaz. vol. 154; p. 1409.
Will & Baumer Company, The, Syracuse, N. Y. Candles. Nos. 78,140–51; May 31; Gaz. vol. 154; p. 1405.
William Heiser and Sons Company, Buffalo, N. Y. Certain manhole-fittings. No. 77,776; May 3; Gaz. vol. 154; p. 249.
William S. Scull Company, Camden, N. J. Teas. No. 78,209; May 31; Gaz. vol. 154; p. 1407.
Wm. A. Coombs Milling Company, Coldwater, Mich. Wheat-flour. No. 78,229; May 31; Gaz. vol. 154; p. 1408.
Wolf & Co., Louis, Boston, Mass. Dolls. No. 78,033; May 24; Gaz. vol. 154; p. 1104.
Wolterstorff-Haskell Range & Furnace Company, St. Paul, Minn. Certain stoves and heating apparatus. No. 77,857; May 10; Gaz. vol. 154; p. 511.
Wood Products Co., Buffalo, N. Y. Methyl alcohol. No. 77,777; May 3; Gaz. vol. 154; p. 249.
Yankee Shirt Co., New York, N. Y. Shirts. No. 78,153; May 31; Gaz. vol. 154; p. 1406.
Younker Bros., Des Moines, Iowa, and New York, N. Y. Petticoats made of textile fabric. No. 78,220; May 31; Gaz. vol. 154; p. 1407.
Zimmerman & Company, G. F. S., Frederick, Md. Shutter-fasteners. No. 78,221; May 31; Gaz. vol. 154; p. 1407.
Zonol Products Company, New York, N. Y. Disinfectants and insecticides. No. 78,154; May 31; Gaz. vol. 154; p. 1406.
Zymole Company, The, New York, N. Y. Remedies for diseases of the eye. No. 77,858; May 10; Gaz. vol. 154; p. 511.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

Aberth, Walter C., Buffalo, N. Y. "Aberth's Clothes Cleanser." (For a Compound for Cleansing Clothes.) No. 15,187; May 24; Gaz. vol. 154; p. 1106.

Automatic Sliced Ham Co., The, Cincinnati, Ohio. "Dove Brand." (For Sliced Ham.) No. 15,178; May 17; Gaz. vol. 154; p. 834.

Automatic Sliced Ham Co., The, Cincinnati, Ohio. "Friends of The Ham." (For Sliced Ham.) No. 15,195; May 31; Gaz. vol. 154; p. 1410.

Bear, Montague M., Chicago, Ill. "Bear's Exquisite Cold Cream." (For Ointment.) No. 15,170; May 3; Gaz. vol. 154; p. 250.

Biloxi Canning Co., Biloxi, Miss., and New Orleans, La. "New Orleans Creole Cooked Oysters." (For Canned Oysters.) No. 15,169; May 3; Gaz. vol. 154; p. 250.

Continental Chemical Company of Ohio, Covington, Ky. "Ratosin." (For Rat-Exterminators.) No. 15,196; May 31; Gaz. vol. 154; p. 1410.

Dimond, James B., Franklin, N. H. "Dimond's Egg Maker and Chicken Grower." (For Poultry Food.) No. 15,198; May 31; Gaz. vol. 154; p. 1410.

Dr. A. C. Daniels Inc., Boston, Mass. "Daniel's Witch Hazel." (For Witch-Hazel.) No. 15,186; May 24; Gaz. vol. 154; p. 1106.

E. Lichtwitz & Co., Troppau, Austria-Hungary. "Getreide-Kümmel." (For Kümmel.) No. 15,183; May 24; Gaz. vol. 154; p. 1106.

E. A. Kline & Co., Cleveland, Ohio. "Decision." (For Cigars.) No. 15,168; May 3; Gaz. vol. 154; p. 250.

Ettinger, Ora D., Cleveland, Ohio. "Pynetar Hair Tonic." (For Hair-Tonic.) No. 15,197; May 31; Gaz. vol. 154; p. 1410.

Franco-American Food Co., The, Jersey City, N. J. "The Franco-American Food Co.'s Concentrated Tomato Soup." (For Concentrated Tomato Soup.) No. 15,193; May 31; Gaz. vol. 154; p. 1410.

General Service Company, The, Boston, Mass. "Moon Beam." (For Coffee.) No. 15,192; May 31; Gaz. vol. 154; p. 1410.

George Frost Company, Boston, Mass. "Velvet Grip Boston Garter." (For Hose-Supporters.) No. 15,189; May 24; Gaz. vol. 154; p. 1106.

Haller Bread Co., Pittsburg, Pa. "Butter-Krust." (For Bread.) No. 15,172; May 10; Gaz. vol. 154; p. 513.

Halper, Victor, New York, N. Y. "Oxy The Peroxide Cream." (For Toilet Cream.) No. 15,185; May 24; Gaz. vol. 154; p. 1106.

Heckman, William V. R., Independence, Kans. "Do Uwanta E Z Wash?" (For Washing Compound.) No. 15,181; May 17; Gaz. vol. 154; p. 834.

Honeck, Frank F., Oradell, N. J. "Button-Button." (For a Game.) No. 15,190; May 24; Gaz. vol. 154; p. 1106.

Huyler's, New York, N. Y. "Sweet Hearts." (For Candy Hearts.) No. 15,164; May 3; Gaz. vol. 154; p. 250.

Johnson, David D., Chicago, Ill. "Evergreen Brand Flower and Lawn Fertiliser." (For Fertilizer.) No. 15,200; May 31; Gaz. vol. 154; p. 1410.

Karle Lithographic Company, Rochester, N. Y. "Burlington Brew." (For Beer.) No. 15,166; May 3; Gaz. vol. 154; p. 250.

Larkin, Peter C., Toronto, Ontario, Canada, and New York, N. Y. "Salada." (For Coffee.) No. 15,184; May 24; Gaz. vol. 154; p. 1106.

Moehle Lithographic Co., The, New York, N. Y. "La Vista Del Vuelta." (For Cigars.) No. 15,176; May 17; Gaz. vol. 154; p. 834.

Moehle Lithographic Co., The, New York, N. Y. "Banner Oak." (For Cigars.) No. 15,176; May 17; Gaz. vol. 154; p. 834.

Moehle Lithographic Co., The, New York, N. Y. "John Trumbull." (For Cigars.) No. 15,177; May 17; Gaz. vol. 154; p. 834.

Moehle Lithographic Co., The, New York, N. Y. "Banner Rose." (For Cigars.) No. 15,191; May 31; Gaz. vol. 154; p. 1410.

New Orleans Coffee Co., New Orleans, La. "French Market." (For Roasted Coffee and Chicory.) No. 15,171; May 10; Gaz. vol. 154; p. 513.

O'Brian & Co., A. W., Hutchinson, Kans. "Germa Oil." (For a Medicine.) No. 15,196; May 31; Gaz. vol. 154; p. 1410.

Pabst, Geo., San Antonio, Tex. "Velvetone Hair Tonic." (For Hair-Tonic.) No. 15,180; May 17; Gaz. vol. 154; p. 834.

Peter Schroeder Brewing Co., Perham, Minn. "Wonder Brew." (For Bottled Beer.) No. 15,167; May 3; Gaz. vol. 154; p. 250.

Richmond Hosiery Mills, Rossville, Ga., and Chattanooga, Tenn. "Richmond Dye." (For Hosiery.) No. 15,201; May 31; Gaz. vol. 154; p. 1410.

Rommel, Karl H., Rochester, Minn. "Chocolate Nuta." (For Prepared Food.) No. 15,179; May 17; Gaz. vol. 154; p. 834.

Ronemous Sign Company, Inc., The, Baltimore, Md. "Top-N-Och." (For Bread.) No. 15,194; May 31; Gaz. vol. 154; p. 1410.

Schuler, William C., Jr., Cincinnati, Ohio. "Rheumola." (For Medicines for Rheumatic Diseases.) No. 15,173; May 10; Gaz. vol. 154; p. 513.

Sears, Roebuck and Co., Chicago, Ill. "Gossau Madeira Finish Embroidery." (For Embroidery.) No. 15,174; May 10; Gaz. vol. 154; p. 513.

Tetlow, Clara, Philadelphia, Pa. "Helene Varre." (For Toilet Talcum Powder.) No. 15,182; May 17; Gaz. vol. 154; p. 834.

The Star Pin Company, Derby and Shelton, Conn. "Sharps." (For Toilet-Pins.) No. 15,188; May 24; Gaz. vol. 154; p. 1106.

Zuckerman, Joseph, New York, N. Y. "Sole-In." (For Rendering Shoes Waterproof.) No. 15,165; May 3; Gaz. vol. 154; p. 250.

PRINTS.

Alexander Brothers, Philadelphia, Pa. "Long Service Outweighs Price." (For Leather Belting.) No. 2,590; May 3; Gaz. vol. 154; p. 250.

American Steel & Wire Company of New Jersey, Chicago, Ill. "Roadside Scene, American Fence." (For Wire Fences.) No. 2,588; May 3; Gaz. vol. 154; p. 250.

Charles Smith Company, Chicago, Ill. "The Modern Method of Heating and Ventilating a School Room." (For Heating Apparatus.) No. 2,592; May 17; Gaz. vol. 154; p. 834.

Cream of Wheat Co., Minneapolis, Minn. "Children and Clock." (For Wheat Breakfast Food.) No. 2,587; May 3; Gaz. vol. 154; p. 250.

McCarter, W. W., Beaumont, Tex. "Method of Casting Gas Engine Pistons." (For Gas-Engine Pistons.) No. 2,597; May 31; Gaz. vol. 154; p. 1410.

Pratt & Lambert, Inc., Buffalo, N. Y. "You May Dent The Wood But You Can't Crack the Varnish." (For Floor-Varnish.) No. 2,594; May 31; Gaz. vol. 154; p. 1410.

Pratt & Lambert, Inc., Buffalo, N. Y. "Test it With Your Heel." (For Floor-Varnish.) No. 2,595; May 31; Gaz. vol. 154; p. 1410.

Sheppard-Strassheim Co., Chicago, Ill. "Lururie." (For Cigars.) No. 2,589; May 3; Gaz. vol. 154; p. 250.

Standard Folding Typewriter Sales Co., New York, N. Y. "Standard Folding Typewriter." (For Type-Writing Machines.) No. 2,593; May 24; Gaz. vol. 154; p. 1106.

Thompson, Joseph, Sioux City, Iowa. "'Eureka' Cloth-Cleaning Pad." (For Cloth-Cleaning Pads.) No. 2,596; May 31; Gaz. vol. 154; p. 1410.

W. F. Powers Company, The, New York, N. Y. "Ask Her Any Time." (For Pureoxia Ginger-Ale.) No. 2,586; May 3; Gaz. vol. 154; p. 250.

Williams, Bradford L., Camden, N. J., and Philadelphia, Pa. "'Elite' Cloth Cleaning Pad." (For Cleaning-Pads.) No. 2,591; May 17; Gaz. vol. 154; p. 834.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF MAY, 1910.

[Abbreviations: "Sp."—Monthly Volume of Specifications: "Gaz."—Official Gazette.]

Abrading-machine. J. Heinz. No. 957,674; May 10; Sp. p. 2409; Gaz. vol. 154; p. 432.

Accordion. J. J. Neumann. No. 957,514; May 10; Sp. p. 2174; Gaz. vol. 154; p. 376.

Acetylene-generator. C. F. Spaulding. No. 960,051; May 31; Sp. p. 7886; Gaz. vol. 154; p. 1324.

Acetylene-machines, Pipe-frame for. L. B. Lake. No. 959,359; May 24; Sp. p. 6354; Gaz. vol. 154; p. 1062.

Acid, Isobutyl ester of para-amino-benzoic. W. Gruttefien. No. 958,110; May 17; Sp. p. 3629; Gaz. vol. 154; p. 612.

Adding and subtracting machine. C. F. Kettering. No. 959,069; May 24; Sp. p. 5730; Gaz. vol. 154; p. 963.

Adding-machine. C. A. Darr. No. 957,753; May 10; Sp. p. 2655; Gaz. vol. 154; p. 458.

Adhesive compound or sising. M. R. Isaacs. No. 959,348; May 24; Sp. p. 6335; Gaz. vol. 154; p. 1059.

Adjustable wrench. C. P. Johnson. No. 957,214; May 10; Sp. p. 1545; Gaz. vol. 154; p. 273.

Advertisement-holder. R. F. Berkebile. No. 957,539; May 10; Sp. p. 2228; Gaz. vol. 154; p. 386.

Advertising apparatus. A. S. Spiegel. No. 957,120; May 3; Sp. p. 1324; Gaz. vol. 154; p. 211.

Advertising apparatus. A. S. Spiegel. (Reissue.) No. 13,109; May 3; Sp. p. 1440; Gaz. vol. 154; p. 231.

Advertising-chair. A. Biehl. No. 958,798; May 24; Sp. p. 6178; Gaz. vol. 154; p. 871.

Advertising device. H. W. Cadwell. No. 956,937; May 3; Sp. p. 942; Gaz. vol. 154; p. 150.

Aerial navigation, Device for. H. C. Schanse, Sr. No. 956,648; May 3; Sp. p. 807; Gaz. vol. 154; p. 50.

Aerial ship. F. W. Schroeder. No. 959,266; May 24; Sp. p. 6168; Gaz. vol. 154; p. 1031.

Agricultural implement. J. Herman. No. 957,675; May 10; Sp. p. 2501; Gaz. vol. 154; p. 432.

Agricultural-implement seat. C. Christensen. No. 957,411; May 10; Sp. p. 1970; Gaz. vol. 154; p. 341.

Aim-director. J. C. Barnes. No. 957,299; May 10; Sp. p. 1741; Gaz. vol. 154; p. 304.

Air-brake. T. J. Henretta. No. 959,010; May 24; Sp. p. 5633; Gaz. vol. 154; p. 947.

Air-brake pipe-coupling. L. A. Peterson. No. 957,087; May 3; Sp. p. 1264; Gaz. vol. 154; p. 201.

Air-brake signaling device. F. H. Dukesmith. No. 959,122; May 24; Sp. p. 5871; Gaz. vol. 154; p. 984.

Air-brake system, Electropneumatic. G. Maciookie. No. 957,227; May 10; Sp. p. 1581; Gaz. vol. 154; p. 279.

Air-brake-testing apparatus. F. H. Dukesmith. No. 959,123; May 24; Sp. p. 5872; Gaz. vol. 154; p. 984.

Air-brake-testing apparatus. F. H. Dukesmith. No. 959,124; May 24; Sp. p. 5876; Gaz. vol. 154; p. 984.

Air-brake-testing system. F. H. Dukesmith. No. 959,209; May 24; Sp. p. 6056; Gaz. vol. 154; p. 1012.

Air-compressor. A. T. Newell. No. 957,064; May 3; Sp. p. 1258; Gaz. vol. 154; p. 199.

Air, Drying. H. A. Bassett. No. 958,471; May 17; Sp. p. 4511; Gaz. vol. 154; p. 738.

Air, gas, or other gaseous fluids, Compressing. E. F. Osborne. No. 960,233; May 31; Sp. p. 8231; Gaz. vol. 154; p. 1385.

Air-heater. C. G. Bosch. No. 957,862; May 17; Sp. p. 2888; Gaz. vol. 154; p. 524.

Air-heater. W. N. Le Page. No. 959,362; May 24; Sp. p. 6358; Gaz. vol. 154; p. 1063.

Airship. R. Gendts. No. 957,205; May 10; Sp. p. 1528; Gaz. vol. 154; p. 270.

Airship. L. Arabeiter. No. 958,460; May 17; Sp. p. 4494; Gaz. vol. 154; p. 735.

Airships, Device for feeding ballonnets on. M. Kapferer. No. 958,926; May 24; Sp. p. 5482; Gaz. vol. 154; p. 919.

Alarm: *See* Burglar-alarm; Fire-alarm; Glue-heater alarm; Lock-alarm.

Album for holding disk records. T. W. Wright. No. 958,069; May 17; Sp. p. 5532; Gaz. vol. 154; p. 595.

Alfalfa-meal mixer. W. H. Kissel. No. 958,254; May 17; Sp. p. 3925; Gaz. vol. 154; p. 660.

Alloys, Making copper. G. Boericke. No. 959,048; May 24; Sp. p. 5712; Gaz. vol. 154; p. 950.

Aluminum fluorid and other aluminum compounds, Making. P. A. Emanuel. No. 957,754; May 10; Sp. p. 2658; Gaz. vol. 154; p. 458.

Ammonia, Making. C. Bosch. No. 957,843; May 10; Sp. p. 2834; Gaz. vol. 154; p. 486.

Amusement device. J. J. Treanor. No. 956,838; May 3; Sp. p. 754; Gaz. vol. 154; p. 116.

Anchor. J. W. Neal. No. 957,621; May 10; Sp. p. 2384; Gaz. vol. 154; p. 413.

Anchor. J. B. Wilde. No. 957,830; May 10; Sp. p. 2805; Gaz. vol. 154; p. 482.

Anchors, Guy-wire connection for land-. F. M. Viles. No. 957,823; May 10; Sp. p. 2795; Gaz. vol. 154; p. 480.

Aniiin black on fibers and fabrics, Production of. A. G. Green. No. 959,516; May 31; Sp. p. 6701; Gaz. vol. 154; p. 1140.

Animal-trap. P. J. Kottum. No. 958,505; May 17; Sp. p. 4570; Gaz. vol. 154; p. 750.

Animal-trap. D. H. Harman. No. 960,170; May 31; Sp. p. 8100; Gaz. vol. 154; p. 1362.

Annealing and tempering apparatus. W. R. Parsons. No. 957,998; May 17; Sp. p. 3259; Gaz. vol. 154; p. 572.

Annealing-ring. C. G. Overmyer. No. 958,674; May 17; Sp. p. 4898; Gaz. vol. 154; p. 804.

Annunciator. C. Miller. No. 956,815; May 3; Sp. p. 886; Gaz. vol. 154; p. 108.

Annunciator-drop. C. Auth. No. 959,193; May 24; Sp. p. 6026; Gaz. vol. 154; p. 1007.

Annunciator-drop. C. Auth. No. 959,194; May 24; Sp. p. 6028; Gaz. vol. 154; p. 1007.

Antifreezing-closet. N. Peterson. No. 956,729; May 3; Sp. p. 494; Gaz. vol. 154; p. 79.

Antifreezing-tank. L. Heisel. No. 957,557; May 10; Sp. p. 2268; Gaz. vol. 154; p. 392.

Anvils, Calk-welding attachment for. A. F. Beck. No. 956,927; May 3; Sp. p. 927; Gaz. vol. 154; p. 147.

Arch-plate, Removable water-holding. C. H. Feldmann. No. 957,856; May 10; Sp. p. 2866; Gaz. vol. 154; p. 491.

Arm and lever. S. E. Davis. No. 959,475; May 31; Sp. p. 6604; Gaz. vol. 154; p. 1126.

Article-holder. R. L. Pate. No. 958,526; May 17; Sp. p. 4614; Gaz. vol. 154; p. 757.

Artist's sketching outfit. W. P. Silva. No. 957,805; May 10; Sp. p. 2767; Gaz. vol. 154; p. 474.

Ash-pan. T. R. Higdon. No. 960,174; May 31; Sp. p. 8100; Gaz. vol. 154; p. 1364.

Asparagus and kindred plants, Treating. E. C. Kline. No. 958,932; May 24; Sp. p. 5490; Gaz. vol. 154; p. 921.

Atomizer. F. C. Dorment. No. 958,697; May 17; Sp. p. 4942; Gaz. vol. 154; p. 812.

Atomizer and the like. O. D. Lucas. No. 957,976; May 17; Sp. p. 3206; Gaz. vol. 154; p. 565.

Autographic register. H. Konerman. No. 957,567; May 10; Sp. p. 2278; Gaz. vol. 154; p. 394.

Automatic elevator, Mechanically-controlled. A. Sundh. No. 959,645; May 31; Sp. p. 6953; Gaz. vol. 154; p. 1185.

Automatic lubricator. F. F. Ellis. No. 956,604; May 3; Sp. p. 428; Gaz. vol. 154; p. 68.

Automatic lubricator. J. W. Shafer. No. 959,267; May 24; Sp. p. 6170; Gaz. vol. 154; p. 1031.

Automobile-buffer. A. L. McGregor. No. 958,420; May 17; Sp. p. 4404; Gaz. vol. 154; p. 720.

Automobile-covering. A. Schreiber and O. Meister. No. 958,183; May 17; Sp. p. 3777; Gaz. vol. 154; p. 636.

Automobile driving-gear. P. J. Rivers. No. 957,626; May 10; Sp. p. 2393; Gaz. vol. 154; p. 414.

Automobile-engine hood. A. Winton and H. B. Anderson. No. 960,132; May 31; Sp. p. 8035; Gaz. vol. 154; p. 1350.

Automobile-engine starting device. A. M. Walstrom. No. 958,985; May 24; Sp. p. 5587; Gaz. vol. 154; p. 539.

Automobile-fender. R. Jardine. No. 958,182; May 17; Sp. p. 3676; Gaz. vol. 154; p. 620.

Automobile, Gravity-. A. G. Neville. No. 958,160; May 17; Sp. p. 3732; Gaz. vol. 154; p. 631.

Automobile-heating appliance. C. A. Prescott. No. 957,253; May 10; Sp. p. 1630; Gaz. vol. 154; p. 288.

Automobile-license-tag holder. E. E. Hancock. No. 959,735; May 31; Sp. p. 7149; Gaz. vol. 154; p. 1218.

Automobile-radiators, Filler for. E. L. Thomas. No. 957,814; May 10; Sp. p. 2782; Gaz. vol. 154; p. 477.

Automobile-rim. J. Hamilton. No. 957,672; May 10; Sp. p. 2497; Gaz. vol. 154; p. 431.

Automobile steering mechanism. C. B. Wattles. No. 959,978; May 31; Sp. p. 7700; Gaz. vol. 154; p. 1297.

Automobile steering-wheel. R. E. Bowers. No. 959,298; May 24; Sp. p. 6234; Gaz. vol. 154; p. 1043.
Automobile transfer turn-table. M. A. Baker. No. 957,536; May 10; Sp. p. 2224; Gaz. vol. 154; p. 385.
Automobile transmission-gearing. W. C. Falk. No. 958,242; May 17; Sp. p. 3890; Gaz. vol. 154; p. 656.
Automobile turn-table bearing and making the same. W. A. E. Noble. No. 958,162; May 17; Sp. p. 3738; Gaz. vol. 154; p. 632.
Automobile turn-table construction. W. A. E. Noble and S. Jay. No. 958,161; May 17; Sp. p. 3737; Gaz. vol. 154; p. 631.
Automobile-wheel. W. Tischbein. No. 956,611; May 3; Sp. p. 226; Gaz. vol. 154; p. 39.
Automobile wind-shield. J. N. Haus. No. 956,964; May 3; Sp. p. 1018; Gaz. vol. 154; p. 159.
Automobile wind-shield, Sectional. A. L. Woodward. No. 959,188; May 24; Sp. p. 6017; Gaz. vol. 154; p. 1005.
Automobiles, Spare-tireholder for. J. E. Fahlstrom. No. 956,954; May 3; Sp. p. 995; Gaz. vol. 154; p. 156.
Autophone system. A. B. Stevens. No. 957,909; May 17; Sp. p. 3002; Gaz. vol. 154; p. 540.
Axle and bearing for vehicles. H. Houldsworth. No. 956,579; May 3; Sp. p. 156; Gaz. vol. 154; p. 27.
Axle-box dust-guard, Car. W. A. Briggs and I. Millett. No. 958,953; May 24; Sp. p. 5527; Gaz. vol. 154; p. 927.
Axle-box, Vehicle. J. E. McDaniel. No. 958,270; May 17; Sp. p. 3965; Gaz. vol. 154; p. 666.
Axles, stay and other bolts, &c., Rod for. F. M. Patterson. No. 959,159; May 24; Sp. p. 5954; Gaz. vol. 154; p. 996.
Baby-jumper. C. K. Gurley. No. 957,419; May 10; Sp. p. 1991; Gaz. vol. 154; p. 344.
Back-band attachment. E. H. Griffin. No. 957,879; May 17; Sp. p. 2927; Gaz. vol. 154; p. 530.
Back-band hook. T. G. Peeples. No. 957,366; May 10; Sp. p. 1876; Gaz. vol. 154; p. 326.
Bag: *See* Feed-bag; Filter-bag; Paper bag; Tool-bag.
Bag. W. P. Fitzgerald. No. 958,385; May 17; Sp. p. 4341; Gaz. vol. 154; p. 709.
Bag and twine holder. C. E. Hedge. No. 957,507; May 10; Sp. p. 2159; Gaz. vol. 154; p. 373.
Bag-cleaning machine. N. E. Gardner. No. 956,523; May 3; Sp. p. 27; Gaz. vol. 154; p. 8.
Bag-holder. B. Bush. No. 957,652; May 10; Sp. p. 2447; Gaz. vol. 154; p. 423.
Bagging-machine. A. M. Bates. No. 959,447; May 31; Sp. p. 6535; Gaz. vol. 154; p. 1117.
Bailing mechanism. C. J. Fogelmark, Sr. No. 960,221; May 31; Sp. p. 8201; Gaz. vol. 154; p. 1331.
Baling-press. J. Barens. No. 957,026; May 3; Sp. p. 1143; Gaz. vol. 154; p. 180.
Bait Fish-. F. A. Alger. No. 956,872; May 3; Sp. p. 809; Gaz. vol. 154; p. 129.
Baker, Fireless. A. T. Tholin and J. G. Gronberg. (Reissue.) No. 13,110; May 3; Sp. p. 1443; Gaz. vol. 154; p. 232.
Baling-press. F. A. Ryther. No. 958,321; May 17; Sp. p. 4208; Gaz. vol. 154; p. 687.
Baling-press. F. W. Williams. No. 958,900; May 24; Sp. p. 5437; Gaz. vol. 154; p. 910.
Baling-press feeding device. C. J. Johnson. No. 959,144; May 24; Sp. p. 5920; Gaz. vol. 154; p. 991.
Ball-joint, Flexible. C. O'Neill and W. H. Neubeck. No. 959,378; May 24; Sp. p. 6394; Gaz. vol. 154; p. 1069.
Ballast-unloader. C. B. King and H. J. Barnhart. No. 957,348; May 10; Sp. p. 1845; Gaz. vol. 154; p. 321.
Band-cutter and feeder. J. B. Bartholomew. No. 959,445; May 31; Sp. p. 6522; Gaz. vol. 154; p. 1116.
Band-cutter and feeder. J. B. Bartholomew. No. 959,446; May 31; Sp. p. 6530; Gaz. vol. 154; p. 1116.
Bandage. S. Bottomley. No. 950,704; May 31; Sp. p. 7081; Gaz. vol. 154; p. 1202.
Bank-note cutter. H. E. Hoke. No. 959,342; May 24; Sp. p. 6324; Gaz. vol. 154; p. 1057.
Bank, Savings-. R. W. Crary. No. 956,685; May 3; Sp. p. 388; Gaz. vol. 154; p. 64.
Bar: *See* Claw and pinch bar; Grate-bar; Tracker-bar; Truss-bar; Type-bar.
Barber's chair, Hydraulic. H. H. Ross. No. 957,258; May 10; Sp. p. 1643; Gaz. vol. 154; p. 280.
Barge, Header-. W. S. Alley. No. 957,483; May 10; Sp. p. 2107; Gaz. vol. 154; p. 366.
Barrel-bodies, Making bilged. W. H. Decker. No. 957,457; May 10; Sp. p. 2080; Gaz. vol. 154; p. 357.
Barrel-carrying device. S. C. Jensen. No. 958,923; May 24; Sp. p. 5478; Gaz. vol. 154; p. 918.
Barrel, Cyanid-. B. O. Webb. No. 956,655; May 3; Sp. p. 323; Gaz. vol. 154; p. 53.
Barrel-filling machine. H. W. Colby. No. 959,463; May 31; Sp. p. 6575; Gaz. vol. 154; p. 1122.
Barrel filling or tapping device. O. Jahr. No. 958,408; May 17; Sp. p. 4375; Gaz. vol. 154; p. 715.
Barrel-head fastener. J. N. Clouse. No. 956,759; May 3; Sp. p. 558; Gaz. vol. 154; p. 89.
Barrel-scrubbing machine. A. Danner. No. 957,659; May 10; Sp. p. 2463; Gaz. vol. 154; p. 425.
Barrette. A. Burke. No. 956,798; May 3; Sp. p. 629; Gaz. vol. 154; p. 100.
Barrette, Double-tongue. A. Burke. No. 959,712; May 31; Sp. p. 7096; Gaz. vol. 154; p. 1206.
Barrette, Puff-forming. M. B. Nathanson. No. 956,991; May 3; Sp. p. 1069; Gaz. vol. 154; p. 166.
Barrow, Dumping-. L. M. Schoonmaker. No. 959,265; May 24; Sp. p. 6166; Gaz. vol. 154; p. 1031.
Basket closure, Fishing or other. R. E. Eaton. No. 956,801; May 3; Sp. p. 647; Gaz. vol. 154; p. 103.
Basket, Work-. S. Krohnengold and A. Raphael. No. 957,066; May 3; Sp. p. 1220; Gaz. vol. 154; p. 193.
Bath-cabinet. J. C. Hoyt. No. 959,743; May 31; Sp. p. 7162; Gaz. vol. 154; p. 1215.
Batteries and manufacture thereof, Negative plate for storage. P. G. Salom. No. 960,115; May 31; Sp. p. 7999; Gaz. vol. 154; p. 1344.
Batteries, Apparatus for filling dry. J. L. Heller. No. 958,304; May 17; Sp. p. 4359; Gaz. vol. 154; p. 711.
Battery: *See* Electric battery; Storage battery.
Battery cell, Electric-. M. E. Fuld. No. 960,222; May 31; Sp. p. 8203; Gaz. vol. 154; p. 1331.
Battery charging and discharging system. L. Fiedler. No. 957,321; May 10; Sp. p. 1787; Gaz. vol. 154; p. 312.
Battery plates, Preparation of secondary-. F. A. R. Wright. No. 956,919; May 3; Sp. p. 913; Gaz. vol. 154; p. 144.
Beam structure, Composite. W. P. Francis. No. 957,048; May 3; Sp. p. 1181; Gaz. vol. 154; p. 187.
Bearing. J. E. Sapp. No. 958,548; May 17; Sp. p. 4654; Gaz. vol. 154; p. 764.
Bearing. O. G. Cosby. No. 959,469; May 31; Sp. p. 6589; Gaz. vol. 154; p. 1124.
Bearing, Antifriction-. M. Gohlke and B. Eitner. No. 956,700; May 3; Sp. p. 438; Gaz. vol. 154; p. 70.
Bearing, Ball-. H. Hess. No. 959,520; May 31; Sp. p. 6721; Gaz. vol. 154; p. 1144.
Bearing, Combination roller-. C. S. Lockwood. No. 958,963; May 24; Sp. p. 5543; Gaz. vol. 154; p. 931.
Bearing, Combined roll and ball. C. S. Lockwood. No. 956,588; May 3; Sp. p. 176; Gaz. vol. 154; p. 30.
Bearing for conveying-rollers, Ball-. S. L. Goldman. No. 960,009; May 31; Sp. p. 7780; Gaz. vol. 154; p. 1309.
Bearing, Roller-. W. J. Brewer. No. 958,586; May 17; Sp. p. 4729; Gaz. vol. 154; p. 777.
Bearing, Roller-. W. W. Dennis. No. 958,957; May 24; Sp. p. 5535; Gaz. vol. 154; p. 929.
Bearing with angular rolls, Roller-. C. S. Lockwood. No. 956,587; May 3; Sp. p. 174; Gaz. vol. 154; p. 30.
Bearings and the like, Manufacturing ball-. W. Dahlmann. No. 958,477; May 17; Sp. p. 4521; Gaz. vol. 154; p. 740.
Bearings, Lubrication of thrust-. C. A. Parsons and J. Turnbull. No. 957,797; May 10; Sp. p. 2754; Gaz. vol. 154; p. 472.
Bearings, Self-adjusting casing for roller-. C. S. Lockwood. No. 958,143; May 17; Sp. p. 3696; Gaz. vol. 154; p. 624.
Bearings, Separator for antifriction-. F. E. Bright. No. 956,676; May 3; Sp. p. 369; Gaz. vol. 154; p. 61.
Beater and mixer. W. H. Ashby. No. 959,420; May 24; Sp. p. 6460; Gaz. vol. 154; p. 1062.
Beating-engine used in the manufacture of paper. A. Masson and W. M. Wallace. No. 957,894; May 17; Sp. p. 2959; Gaz. vol. 154; p. 535.
Bed. G. W. Bent. No. 958,355; May 17; Sp. p. 4283; Gaz. vol. 154; p. 699.
Bed-bottom. W. A. Manchee. No. 958,266; May 17; Sp. p. 3947; Gaz. vol. 154; p. 644.
Bed-clamp. C. F. Gooding. No. 958,246; May 17; Sp. p. 3909; Gaz. vol. 154; p. 658.
Bed, Folding. J. Naugle. No. 957,240; May 10; Sp. p. 1704; Gaz. vol. 154; p. 283.
Bed, Folding. J. L. Tandy. No. 958,682; May 17; Sp. p. 4915; Gaz. vol. 154; p. 807.
Bed, Frameless spring-. T. A. B. Putnam. No. 950,164; May 24; Sp. p. 5970; Gaz. vol. 154; p. 998.
Bed-pan, Elastic. F. M. Otis. No. 959,379; May 24; Sp. p. 6396; Gaz. vol. 154; p. 1069.
Bed, Screen-. O. O. Richardson. No. 959,163; May 24; Sp. p. 5982; Gaz. vol. 154; p. 1000.
Bed, Sofa-. S. Karpen. No. 956,972; May 3; Sp. p. 1035; Gaz. vol. 154; p. 162.
Bed-spring appliance. M. E. Wilder. No. 959,670; May 31; Sp. p. 7019; Gaz. vol. 154; p. 1192.
Bedclothes-holder. W. J. Lehr. No. 959,763; May 31; Sp. p. 7203; Gaz. vol. 154; p. 1223.
Bedclothing-rest. M. E. L. Bergen. No. 958,718; May 24; Sp. p. 4987; Gaz. vol. 154; p. 844.
Bedstead. D. N. Garber. No. 958,107; May 17; Sp. p. 3624; Gaz. vol. 154; p. 611.
Bedstead attachment. F. W. King. No. 957,422; May 10; Sp. p. 1998; Gaz. vol. 154; p. 345.
Bedstead, Metal. R. F. Sawitzke, F. J. Yates, and J. M. Adams. No. 958,322; May 17; Sp. p. 4210; Gaz. vol. 154; p. 687.
Bedstead-spindles, Means for securing. J. C. Wilson. No. 959,093; May 24; Sp. p. 5818; Gaz. vol. 154; p. 975.
Bedsteads, Shelf for. A. Krejci. No. 957,890; May 17; Sp. p. 2954; Gaz. vol. 154; p. 534.
Beehive-entrance guard and swarm-controller. G. T. Whitten. No. 956,615; May 3; Sp. p. 232; Gaz. vol. 154; p. 40.
Bell-ringing mechanism. G. Boyd. No. 960,067; May 31; Sp. p. 7817; Gaz. vol. 154; p. 1329.
Bell-support. P. C. Arnold. No. 956,664; May 3; Sp. p. 337; Gaz. vol. 154; p. 50.
Bellows-actuating mechanism. E. Lasrich. No. 956,962; May 3; Sp. p. 1057; Gaz. vol. 154; p. 165.
Bellows, Reversible. L. H. Maier. No. 959,771; May 31; Sp. p. 7218; Gaz. vol. 154; p. 1223.
Belt. G. W. Ream and P. R. Green. No. 958,536; May 17; Sp. p. 4634; Gaz. vol. 154; p. 761.

Belt, Conveyer-. M. C. Graney. No. 957,769; May 10; Sp. p. 2690; Gaz. vol. 154; p. 462.
Belt-fastening device. G. W. Southwick. No. 960,121; May 31; Sp. p. 8014; Gaz. vol. 154; p. 1346.
Belt pin or buckle. L. Hauser. No. 959,340; May 24; Sp. p. 6322; Gaz. vol. 154; p. 1057.
Belt-stretcher. D. Rudy, Jr. No. 960,201; May 31; Sp. p. 8165; Gaz. vol. 154 p. 1374.
Belt-tightener. L. White. No. 959,667; May 31; Sp. p. 7016; Gaz. vol. 154; p. 1191.
Bench-dog. W. J. Stiver. No. 960,053; May 31; Sp. p. 7890; Gaz. vol. 154; p. 1325.
Bending-machine. T. H. Kane. No. 957,609; May 10; Sp. p. 2348; Gaz. vol. 154; p. 409.
Bending machinery. J. F. Gall. No. 957,202; May 10; Sp. p. 1518; Gaz. vol. 154; p. 209.
Bicycle. R. M. Franklin. No. 958,618; May 17; Sp. p. 4791; Gaz. vol. 154; p. 737.
Bicycle, Marine. C. F. and R. C. Krause. No. 956,533; May 3; Sp. p. 53; Gaz. vol. 154; p. 11.
Billiard-table registering device. G. C. Pollay. No. 956,599; May 3; Sp. p. 198; Gaz. vol. 154; p. 34.
Binder, Loose-leaf. R. H. Barlow and P. Barton. No. 956,509; May 3; Sp. p. 7; Gaz. vol. 154; p. 4.
Binder, Loose-leaf. T. Brazil-Dineen. No. 957,649; May 10; Sp. p. 2441; Gaz. vol. 154; p. 422.
Binder, Loose-leaf. J. C. Dawson. No. 958,009; May 17; Sp. p. 3610; Gaz. vol. 154; p. 608.
Binder, Loose-leaf. W. S. Proudfit, Jr. No. 958,171; May 17; Sp. p. 3755; Gaz. vol. 154; p. 634.
Binder, Loose-leaf. M. G. Griffin. No. 958,633; May 17; Sp. p. 4820; Gaz. vol. 154; p. 791.
Binder, Temporary. C. D. Trussell. No. 959,182; May 24; Sp. p. 6005; Gaz. vol. 154; p. 1004.
Binder, Temporary. C. D. and E. A. Trussell. No. 959,183; May 24; Sp. p. 6006; Gaz. vol. 154; p. 1004.
Binder, Temporary. C. B. Buck. No. 960,240; May 31; Sp. p. 8246; Gaz. vol. 154; p. 1337.
Binding-post. G. W. Geodridge. No. 960,067; May 31; Sp. p. 7950; Gaz. vol. 154; p. 1335.
Binocular, Prism-. J. Heckel. No. 959,739; May 31; Sp. p. 7155; Gaz. vol. 154; p. 1214.
Bit-brace. E. S. Marks. No. 957,696; May 10; Sp. p. 2537; Gaz. vol. 154; p. 439.
Bituminous structural material. H. R. Wardell. No. 958,450; May 17; Sp. p. 4469; Gaz. vol. 154; p. 731.
Blackener, Shoe-. S. G. H. Glasgow. No. 959,507; May 31; Sp. p. 6686; Gaz. vol. 154; p. 1135.
Blacking stand and bootjack, Combination shoe-. A. Bancroft. No. 960,148; May 31; Sp. p. 8064; Gaz. vol. 154; p. 1355.
Blade-folder. O. A. Clark. No. 959,995; May 31; Sp. p. 7740; Gaz. vol. 154; p. 1304.
Blank-feed mechanism. A. C. Campbell. No. 959,918; May 31; Sp. p. 7556; Gaz. vol. 154; p. 1276.
Blank-trimming machine. A. W. Ainsworth, S. J. Putnam, and K. A. Edstrom. No. 956,871; May 3; Sp. p. 808; Gaz. vol. 154; p. 128.
Blind holder, Window-. O. Thomasen. No. 959,403; May 24; Sp. p. 6432; Gaz. vol. 154; p. 1076.
Blind or awning. S. Mrokowski. No. 960,230; May 31; Sp. p. 8222; Gaz. vol. 154; p. 1334.
Block: *See* Building-block; Concrete block; Crown-block; Fuse-block; Game-block; Miter-block; Stereotype-block; Toy building-block.
Block-molding machine. J. W. Bragstad. No. 959,050; May 24; Sp. p. 5714; Gaz. vol. 154; p. 960.
Blotter for penholders, Rotary. W. L. Hare and E. E. Winne. No. 957,329; May 10; Sp. p. 1804; Gaz. vol. 154; p. 315.
Blower, Fan-. S. Higgins. No. 957,607; May 10; Sp. p. 2345; Gaz. vol. 154; p. 408.
Blower, Positive-pressure. F. P. Boland. No. 950,049; May 24; Sp. p. 5713; Gaz. vol. 154; p. 959.
Blowing-engine or compressor. G. Mestre. No. 958,705; May 17; Sp. p. 4905; Gaz. vol. 154; p. 814.
Board: *See* Distributing-board; Game-board; Ironing-board; Lap-board; Panel-board; Plaster-board; Running-board; Sign-board; Tile-board; Tracker-board; Washboard.
Boat. H. W. Vanlman. No. 957,820; May 10; Sp. p. 2790; Gaz. vol. 154; p. 479.
Boat fender-brake. J. Boydell. No. 959,299; May 24; Sp. p. 6235; Gaz. vol. 154; p. 1043.
Bobbin. T. P. Walsh. No. 957,825; May 10; Sp. p. 2798; Gaz. vol. 154; p. 481.
Boiler: *See* Stand-boiler; Steam-boiler.
Boiler attachment. G. M. Morris and J. H. Watkins. No. 960,220; May 31; Sp. p. 8220; Gaz. vol. 154; p. 1333.
Boiler attachment, Locomotive or other. C. F. Harris. No. 959,134; May 24; Sp. p. 5807; Gaz. vol. 154; p. 988.
Boiler-cleaning attachment, Water-tube-. E. Stephenson. No. 958,642; May 24; Sp. p. 5282; Gaz. vol. 154; p. 891.
Boiler-flue, Detachable. J. F. Drake. No. 958,910; May 24; Sp. p. 5456; Gaz. vol. 154; p. 914.
Boiler-header. W. F. Sellers. No. 960,044; May 31; Sp. p. 7899; Gaz. vol. 154; p. 1321.
Boiler regulator and feeder, Steam-. V. Garbarino. No. 956,635; May 3; Sp. p. 276; Gaz. vol. 154; p. 45.
Boiler-tube cleaner. H. F. Welmland. No. 958,202; May 17; Sp. p. 3815; Gaz. vol. 154; p. 645.
Boiler-tube cleaner. G. H. Ainge. No. 958,205; May 17; Sp. p. 3829; Gaz. vol. 154; p. 646.
Boiler-tube spreader. J. J. Maher. No. 956,985; May 3; Sp. p. 1060; Gaz. vol. 154; p. 166.
Boiler-tube spreader. J. J. Maher. No. 956,986; May 3; Sp. p. 1062; Gaz. vol. 154; p. 166.
Boilers and the like, Furnace of steam-. W. G. Crosthwaite. No. 957,310; May 10; Sp. p. 1756; Gaz. vol. 154; p. 307.
Boilers, Apparatus for cleaning fire-tubes of. M. Domaszewski. No. 958,376; May 17; Sp. p. 4322; Gaz. vol. 154; p. 705.
Boilers, Automatic jack for engine-. C. Kent. No. 958,928; May 24; Sp. p. 5485; Gaz. vol. 154; p. 920.
Bolster, Body-. O. S. Pulliam. No. 956,997; May 3; Sp. p. 1085; Gaz. vol. 154; p. 170.
Bolt: *See* Expansion-bolt; Ribbon-bolt.
Bolt-operating-mechanism controlling device. G. L. Damon. No. 956,889; May 3; Sp. p. 850; Gaz. vol. 154; p. 135.
Bond-tester. J. B. West. No. 957,020; May 3; Sp. p. 1130; Gaz. vol. 154; p. 178.
Book, Blank. H. G. Razall. No. 958,008; May 17; Sp. p. 3305; Gaz. vol. 154; p. 576.
Book, Check-. M. T. Levey. No. 956,861; May 3; Sp. p. 788; Gaz. vol. 154; p. 125.
Book, Combination fashion and sample. H. E. Bodine. No. 958,582; May 17; Sp. p. 4721; Gaz. vol. 154; p. 775.
Book, Conductor's report-. S. E. Creasey. No. 959,470; May 31; Sp. p. 6591; Gaz. vol. 154; p. 1124.
Book-cover, Metallic. S. S. Andrews and F. Turner. No. 959,284; May 24; Sp. p. 6208; Gaz. vol. 154; p. 1037.
Book device, Loose-leaf-. C. Forgerson. No. 959,849; May 31; Sp. p. 7395; Gaz. vol. 154; p. 1252.
Book-holder. W. C. Traher. No. 959,405; May 24; Sp. p. 6435; Gaz. vol. 154; p. 1077.
Book holder, Manifolding-sales-. C. A. Monson. No. 960,030; May 31; Sp. p. 7837; Gaz. vol. 154; p. 1316.
Book holder, Sales-. N. F. Garbo. No. 958,730; May 24; Sp. p. 5044; Gaz. vol. 154; p. 852.
Book, Manifolding-. B. C. Maxwell. No. 959,775; May 31; Sp. p. 7225; Gaz. vol. 154; p. 1226.
Book, Manifolding-. B. C. Maxwell. No. 959,776; May 31; Sp. p. 7227; Gaz. vol. 154; p. 1227.
Book-marker. J. Jackson. No. 957,465; May 10; Sp. p. 2074; Gaz. vol. 154; p. 359.
Book or pad, Manifolding. B. C. Maxwell. No. 957,233; May 10; Sp. p. 1589; Gaz. vol. 154; p. 281.
Book, Sample-card. J. A. Soderstrom. No. 959,632; May 31; Sp. p. 6931; Gaz. vol. 154; p. 1180.
Book-smashing machine. S. K. White. No. 958,787; May 24; Sp. p. 5157; Gaz. vol. 154; p. 869.
Books, papers, &c., Adjustable support for. C. T. Hard. No. 958,637; May 17; Sp. p. 4828; Gaz. vol. 154; p. 793.
Bookbinding. E. J. Sullivan. No. 956,608; May 3; Sp. p. 221; Gaz. vol. 154; p. 38.
Bookbinding. W. S. Proudfit, Jr. No. 958,170; May 17; Sp. p. 3750; Gaz. vol. 154; p. 634.
Boot and shoe buffing machine. T. G. Plant. No. 958,288; May 17; Sp. p. 4042; Gaz. vol. 154; p. 673.
Boot and shoe channeling machine. G. F. Stewart. No. 958,027; May 17; Sp. p. 3355; Gaz. vol. 154; p. 583.
Boot and shoe ironing and dressing jack. T. G. Plant. No. 958,287; May 17; Sp. p. 4035; Gaz. vol. 154; p. 673.
Boot and shoe machine. T. G. Plant. No. 958,289; May 17; Sp. p. 4044; Gaz. vol. 154; p. 674.
Boot and shoe machine work-support. W. C. Stewart. No. 958,042; May 17; Sp. p. 3447; Gaz. vol. 154; p. 590.
Boot or shoe attachment. C. Waldstein. No. 958,984; May 24; Sp. p. 5586; Gaz. vol. 154; p. 939.
Boots and shoes, Machine for operating on the bottoms of. T. G. Plant. No. 958,306; May 17; Sp. p. 4158; Gaz. vol. 154; p. 681.
Boots and shoes, Machine for tampering outsoles of. G. T. McLeod. No. 957,992; May 17; Sp. p. 3246; Gaz. vol. 154; p. 570.
Boots and shoes, Pulling-over machine for. J. J. Heys. No. 957,955; May 17; Sp. p. 3115; Gaz. vol. 154; p. 556.
Boot-lace and necktie clip or fastener. C. J. F. Highfield. No. 960,013; May 31; Sp. p. 7785; Gaz. vol. 154; p. 1310.
Bootjack and foot-rest, Combined. H. Seckendorff. No. 960,042; May 31; Sp. p. 7867; Gaz. vol. 154; p. 1321.
Boring-machine. E. Prescott. No. 957,090; May 3; Sp. p. 1271; Gaz. vol. 154; p. 201.
Boring-machine. G. H. Smith. No. 959,083; May 24; Sp. p. 5796; Gaz. vol. 154; p. 971.
Boring machine, Angle-. L. M. Keithley and A. E. Schlen. No. 960,097; May 31; Sp. p. 7967; Gaz. vol. 154; p. 1338.
Boring-machine, Portable. L. Dailey. No. 960,002; May 31; Sp. p. 7767; Gaz. vol. 154; p. 1307.
Boring-tool. T. S. Halliwell and H. B. Maschmeier. No. 958,112; May 17; Sp. p. 3631; Gaz. vol. 154; p. 612.
Bottle. L. R. Steel. No. 957,809; May 10; Sp. p. 2774; Gaz. vol. 154; p. 476.
Bottle and nipple, Nursing. D. B. Smith. No. 956,741; May 3; Sp. p. 514; Gaz. vol. 154; p. 83.
Bottle and stopper. M. Pilz. No. 958,169; May 17; Sp. p. 3749; Gaz. vol. 154; p. 634.
Bottle attachment, Milk-. T. J. Reynolds. No. 958,312; May 17; Sp. p. 4187; Gaz. vol. 154; p. 683.
Bottle-bodies for the insertion of closures, Device for holding. C. F. Jenkins. No. 958,252; May 17; Sp. p. 3923; Gaz. vol. 154; p. 660.
Bottle-cap-making machine. R. B. Cochran. No. 956,887; May 3; Sp. p. 845; Gaz. vol. 154; p. 134.
Bottle-cap remover and stopper, Combined. A. R. Heeft. No. 959,220; May 24; Sp. p. 6075; Gaz. vol. 154; p. 1016.

Bottle-caps, Machine for applying. J. M. Stark and T. L. Turner. No. 958,833; May 17; Sp. p. 4236; Gaz. vol. 154; p. 991.

Bottle-capping machine, Milk-. D. S. Yard. No. 959,038; May 24; Sp. p. 5690; Gaz. vol. 154; p. 956.

Bottle-capping machines, Compensating device for. L. Bartlett. No. 957,926; May 17; Sp. p. 3044; Gaz. vol. 154; p. 546.

Bottle-capping machines, Compensating device for. L. Bartlett. No. 957,927; May 17; Sp. p. 3045; Gaz. vol. 154; p. 546.

Bottle-capping machines, Compensating device for. L. Bartlett. No. 957,928; May 17; Sp. p. 3046; Gaz. vol. 154; p. 547.

Bottle-cleaning machine, Brush. C. Buchheit. No. 957,301; May 10; Sp. p. 1745; Gaz. vol. 154; p. 305.

Bottle-closure. F. A. Anthony and J. P. Cregg. No. 956,923; May 3; Sp. p. 921; Gaz. vol. 154; p. 146.

Bottle-filling machine. C. F. McEwan. No. 959,577; May 31; Sp. p. 6824; Gaz. vol. 154; p. 1162.

Bottle-holder. A. H. Allen. No. 956,749; May 3; Sp. p. 528; Gaz. vol. 154; p. 86.

Bottle holder and lock, Milk-. M. C. Randolph. No. 957,712; May 10; Sp. p. 2568; Gaz. vol. 154; p. 444.

Bottle, Milk-testing. A. Jensen. No. 956,708; May 3; Sp. p. 450; Gaz. vol. 154; p. 72.

Bottle, Non-refillable. M. Peres. No. 956,597; May 3; Sp. p. 194; Gaz. vol. 154; p. 33.

Bottle, Non-refillable. W. J. Burleigh. No. 958,588; May 17; Sp. p. 4732; Gaz. vol. 154; p. 777.

Bottle, Non-refillable. W. C. Wilson. No. 959,186; May 24; Sp. p. 6015; Gaz. vol. 154; p. 1005.

Bottle- Non-refillable. C. Councell. No. 959,201; May 24; Sp. p. 6041; Gaz. vol. 154; p. 1009.

Bottle, Non-refillable. L. M. Packard. No. 959,792; May 31; Sp. p. 7270; Gaz. vol. 154; p. 1232.

Bottle, Non-refillable. A. W. Partrick. No. 959,794; May 31; Sp. p. 7274; Gaz. vol. 154; p. 1233.

Bottle, Poison-. S. H. Kellogg. No. 959,751; May 31; Sp. p. 7178; Gaz. vol. 154; p. 1218.

Bottle-stopper. G. E. Bolton. No. 958,221; May 17; Sp. p. 3850; Gaz. vol. 154; p. 651.

Bottle-supporting device, Milk-. W. L. Jackson. No. 958,131; May 17; Sp. p. 3674; Gaz. vol. 154; p. 619.

Bottle washing and draining machine. T. D. Kyle and E. H. Waugh. No. 957,220; May 10; Sp. p. 1557; Gaz. vol. 154; p. 276.

Bottle, Water-. T. G. Strater. No. 957,013; May 3; Sp. p. 1115; Gaz. vol. 154; p. 175.

Bottles, Safety device for antirefillable. J. B. Arsac. No. 956,750; May 3; Sp. p. 530; Gaz. vol. 154; p. 86.

Bottling device. E. L. Ziegler. No. 956,704; May 3; Sp. p. 443; Gaz. vol. 154; p. 71.

Box: *See* Axle-box; Cigar-maker's box; Collapsible box; Depositing-box; Display-box; Egg-box; Folding box; Journal-box; Knockdown box; Mail-box; Match-box; Metal box; Miter-box; Paste-box; Sheet-metal box; Suction-box; Switch or outlet box; Type-writer-ribbon box.

Box. J. S. Lauterbach. No. 956,859; May 3; Sp. p. 785; Gaz. vol. 154; p. 124.

Box. H. B. Walter. No. 957,395; May 10; Sp. p. 1940; Gaz. vol. 154; p. 336.

Box. C. S. Stafford. No. 958,707; May 17; Sp. p. 4959; Gaz. vol. 154; p. 815.

Box. C. W. Cohn. No. 959,922; May 31; Sp. p. 7562; Gaz. vol. 154; p. 1277.

Box. G. J. Eichhorn. No. 960,220; May 31; Sp. p. 8200; Gaz. vol. 154; p. 1380.

Box-blank and using the same. J. F. Adams. No. 959,098; May 24; Sp. p. 5828; Gaz. vol. 154; p. 976.

Box-blank-making machine. F. Meisel. No. 958,661; May 17; Sp. p. 4872; Gaz. vol. 154; p. 800.

Box-cover fastener. J. H. Sower and J. T. Richards. No. 958,022; May 17; Sp. p. 3337; Gaz. vol. 154; p. 581.

Box-fastener. E. P. Warfield. No. 956,747; May 3; Sp. p. 526; Gaz. vol. 154; p. 85.

Box-fastener. J. P. Fritz. No. 958,916; May 24; Sp. p. 5466; Gaz. vol. 154; p. 916.

Box-making machine. G. D. Parker. No. 959,158; May 24; Sp. p. 5948; Gaz. vol. 154; p. 996.

Box press, Fruit-. J. Osborn. No. 958,163; May 17; Sp. p. 3739; Gaz. vol. 154; p. 632.

Boxes, Blank for covering shouldered-neck. J. P. Marbert. No. 956,590; May 3; Sp. p. 182; Gaz. vol. 154; p. 31.

Brace: *See* Bit-brace; Cross-arm brace; Drill-brace.

Brace-clamp. J. D. Maddox. No. 959,147; May 24; Sp. p. 5927; Gaz. vol. 154; p. 992.

Bracelet, belt, &c. J. J. Bommer. No. 960,050; May 31; Sp. p. 7895; Gaz. vol. 154; p. 1324.

Bracelet-fastening. A. Emrich. No. 960,079; May 31; Sp. p. 7937; Gaz. vol. 154; p. 1333.

Bracket: *See* Shade and curtain bracket; Staging-bracket; Telephone-bracket; Telephone-receiver bracket.

Bracket. C. F. Laun. No. 956,988; May 3; Sp. p. 1058; Gaz. vol. 154; p. 166.

Bracket for structural work. F. A. Winslow. No. 957,531; May 10; Sp. p. 2210; Gaz. vol. 154; p. 382.

Braiding-machine. E. Rankin. No. 958,175; May 17; Sp. p. 3765; Gaz. vol. 154; p. 636.

Braiding-machine. W. T. Le Blanc. No. 958,512; May 17; Sp. p. 4594; Gaz. vol. 154; p. 753.

Braiding-machine. O. Steigmann and X. Pfrunder. No. 960,122; May 31; Sp. p. 8017; Gaz. vol. 154; p. 1346.

Brake: *See* Air-brake; Boat fender-brake; Car-brake; Coaster-brake; Fluid-pressure brake; Hay-rack brake; Talking-machine brake; Truck-brake; Vehicle-brake.

Brake. H. Vanderbeek. No. 958,446; May 17; Sp. p. 4462; Gaz. vol. 154; p. 730.

Brake apparatus, Electromagnetic. A. Sundh. No. 960,055; May 31; Sp. p. 7694; Gaz. vol. 154; p. 1325.

Brake-beam. C. H. Williams, Jr. No. 956,616; May 3; Sp. p. 234; Gaz. vol. 154; p. 40.

Brake-beam. P. B. Harrison. No. 956,637; May 3; Sp. p. 279; Gaz. vol. 154; p. 46.

Brake-beam. C. H. Williams, Jr. No. 957,399; May 10; Sp. p. 1946; Gaz. vol. 154; p. 337.

Brake-beam. C. H. Williams, Jr. No. 957,400; May 10; Sp. p. 1948; Gaz. vol. 154; p. 337.

Brake-beam. H. Ziemss, Jr. No. 958,060; May 17; Sp. p. 3532; Gaz. vol. 154; p. 595.

Brake-beams, Forged-steel fulcrum for trussed type of. P. T. Handigen. No. 959,524; May 31; Sp. p. 6713; Gaz. vol. 154; p. 1143.

Brake-head, Adjustable. L. Porter. No. 957,251; May 10; Sp. p. 1624; Gaz. vol. 154; p. 287.

Brake-head, Adjustable. F. R. Cornwall. No. 959,466; May 31; Sp. p. 6583; Gaz. vol. 154; p. 1123.

Brake-head, Adjustable. L. Porter and C. H. Williams, Jr. No. 959,600; May 31; Sp. p. 6870; Gaz. vol. 154; p. 1169.

Brake head and shoe. B. F. Hysell and R. M. Cavedo. No. 959,542; May 31; Sp. p. 6754; Gaz. vol. 154; p. 1149.

Branding-machine. H. Waibel. No. 958,449; May 17; Sp. p. 4467; Gaz. vol. 154; p. 731.

Bread-mixer. W. A. Babbitt. No. 959,101; May 24; Sp. p. 5832; Gaz. vol. 154; p. 977.

Bread-wrapping machine. I. F. Peck. No. 956,994; May 3; Sp. p. 1076; Gaz. vol. 154; p. 169.

Breakers, spreaders, &c., Automatic regulating device for. W. H. L. Mellis. No. 959,148; May 24; Sp. p. 5928; Gaz. vol. 154; p. 992.

Brick, Burning. J. Q. Bennett and E. A. Parry. No. 956,620; May 3; Sp. p. 242; Gaz. vol. 154; p. 41.

Brick-handling machine. R. C. Penfield. No. 957,368; May 10; Sp. p. 1880; Gaz. vol. 154; p. 327.

Brick-kilns, Portable blower for. E. H. Callaway. No. 958,223; May 17; Sp. p. 3854; Gaz. vol. 154; p. 651.

Brick-machine. G. W. Bond. No. 957,543; May 10; Sp. p. 2235; Gaz. vol. 154; p. 387.

Brickmaking apparatus. W. Hanley. No. 959,006; May 24; Sp. p. 5628; Gaz. vol. 154; p. 946.

Brickmaking-machine. G. W. Taylor. No. 957,174; May 3; Sp. p. 1434; Gaz. vol. 154; p. 230.

Brick, Manufacturing. J. C. Dunton. No. 958,997; May 24; Sp. p. 5614; Gaz. vol. 154; p. 943.

Brick-molding machine. T. Young. No. 958,898; May 24; Sp. p. 5434; Gaz. vol. 154; p. 910.

Brick-setting frame. R. C. Penfield. No. 958,973; May 24; Sp. p. 5566; Gaz. vol. 154; p. 935.

Briquet-machines, Mixing apparatus for. G. Komarek. No. 959,062; May 24; Sp. p. 5748; Gaz. vol. 154; p. 964.

Briquets, Manufacturing. T. G. A. Wilson. No. 958,950; May 24; Sp. p. 5517; Gaz. vol. 154; p. 927.

Brooder. C. E. Adair. No. 959,097; May 24; Sp. p. 5826; Gaz. vol. 154; p. 976.

Brooder. A. Waldwick. No. 959,975; May 31; Sp. p. 7694; Gaz. vol. 154; p. 1296.

Brooder, Fireless. G. H. Lee. No. 960,009; May 31; Sp. p. 7970; Gaz. vol. 154; p. 1339.

Broom-corn and the like, Machine for bundling or compressing. J. F. Foley. No. 958,866; May 24; Sp. p. 5349; Gaz. vol. 154; p. 898.

Broom-cover. J. G. Cummings and J. Lynch. No. 960,153; May 31; Sp. p. 8077; Gaz. vol. 154; p. 1358.

Broom-head. L. R. Reeder. No. 960,198; May 31; Sp. p. 8161; Gaz. vol. 154; p. 1373.

Broom-holder. S. A. Watson. No. 958,570; May 17; Sp. p. 4694; Gaz. vol. 154; p. 771.

Broom-holder. J. T. Holte. No. 959,139; May 24; Sp. p. 5911; Gaz. vol. 154; p. 990.

Brooch-holding device. H. W. Harrison. No. 957,673; May 10; Sp. p. 2498; Gaz. vol. 154; p. 432.

Brush. C. Miller. No. 957,078; May 3; Sp. p. 1247; Gaz. vol. 154; p. 198.

Brush. H. W. Hascy. No. 957,331; May 10; Sp. p. 1800; Gaz. vol. 154; p. 315.

Brush. J. F. Moore. No. 959,574; May 31; Sp. p. 6821; Gaz. vol. 154; p. 1161.

Brush-cleaner. G. T. McLeod. No. 957,989; May 17; Sp. p. 3239; Gaz. vol. 154; p. 509.

Brush-cutting machine. G. E. Roose. No. 957,101; May 3; Sp. p. 1288; Gaz. vol. 154; p. 205.

Brush-cutting machine. B. Miller and J. Clegg. No. 958,417; May 17; Sp. p. 4309; Gaz. vol. 154; p. 719.

Brush, Dental. J. H. Abbott. No. 959,191; May 24; Sp. p. 6028; Gaz. vol. 154; p. 1006.

Brush, Dental. J. H. Abbott. No. 959,416; May 24; Sp. p. 6454; Gaz. vol. 154; p. 1081.

Brush-holder. R. Siegfried. No. 956,739; May 3; Sp. p. 511; Gaz. vol. 154; p. 82.

Brush-holder. P. T. Flach. No. 959,211; May 24; Sp. p. 6061; Gaz. vol. 154; p. 1013.

Brush, Jeweler's polishing-. W. Dixon. No. 960,216; May 31; Sp. p. 8194; Gaz. vol. 154; p. 1379.

Brush-making apparatus. G. D. Pushee. No. 957,255; May 10; Sp. p. 1633; Gaz. vol. 154; p. 295.

Brush-making machinery. A. B. Payne and B. J. Wade. No. 958,431; May 17; Sp. p. 4437; Gaz. vol. 154; p. 725.

Brush, Tooth-. D. H. Danek. No. 958,371; May 17; Sp. p. 4309; Gaz. vol. 154; p. 703.

Bucket. J. S. Barron. No. 959,695; May 31; Sp. p. 7060; Gaz. vol. 154; p. 1199.

Bucket, Dump-. G. H. Budke. No. 958,222; May 17; Sp. p. 3852; Gaz. vol. 154; p. 651.

Bucket, Fruit-. T. Meirner. No. 956,715; May 3; Sp. p. 464; Gaz. vol. 154; p. 74.

Bucket, Self-closing bottom-dumping. R. N. Schalkenbach. No. 958,323; May 17; Sp. p. 4213; Gaz. vol. 154; p. 688.

Buckle. P. R. Tuttle. No. 956,900; May 3; Sp. p. 896; Gaz. vol. 154; p. 142.

Buckle. E. B. Anderson. No. 958,065; May 17; Sp. p. 3530; Gaz. vol. 154; p. 597.

Buckle. W. A. Holden. No. 958,397; May 17; Sp. p. 4305; Gaz. vol. 154; p. 713.

Buckle. W. A. Holden. No. 959,138; May 24; Sp. p. 5909; Gaz. vol. 154; p. 989.

Buckle-frames, Machine for forming. C. S. Huntington. No. 959,941; May 31; Sp. p. 7612; Gaz. vol. 154; p. 1285.

Buckle, Trace-. W. M. Gilree. No. 957,415; May 10; Sp. p. 1078; Gaz. vol. 154; p. 342.

Buckle, Trace-. E. C. Kimball. No. 959,868; May 31; Sp. p. 7442; Gaz. vol. 154; p. 1259.

Buffing-machine. J. F. Gall. No. 957,198; May 10; Sp. p. 1495; Gaz. vol. 154; p. 267.

Buffing-machine. J. F. Gall. No. 959,502; May 31; Sp. p. 6667; Gaz. vol. 154; p. 1136.

Buffing machinery. J. F. Gall. No. 957,201; May 10; Sp. p. 1510; Gaz. vol. 154; p. 268.

Bug and worm killing machine. L. Thortvedt. No. 957,634; May 10; Sp. p. 2407; Gaz. vol. 154; p. 417.

Buggy-evener. E. A. Kast. No. 956,973; May 3; Sp. p. 1037; Gaz. vol. 154; p. 163.

Building-block, Interlocking cellular. L. Ribereau y Marteaux. No. 958,413; May 17; Sp. p. 4392; Gaz. vol. 154; p. 717.

Building-block. A. D'Elia. No. 959,846; May 31; Sp. p. 7391; Gaz. vol. 154; p. 1251.

Building-block. W. R. Dodds. No. 960,217; May 31; Sp. p. 8195; Gaz. vol. 154; p. 1380.

Building-blocks, Manufacture of. C. Körtling and C. Jaentsch. No. 957,351; May 10; Sp. p. 1850; Gaz. vol. 154; p. 322.

Building-blocks, Molding artificial-stone. A. O. Thomas. No. 958,194; May 17; Sp. p. 3800; Gaz. vol. 154; p. 642.

Buildings, Constructing foundations of. J. Breuchaud. No. 957,944; May 10; Sp. p. 2335; Gaz. vol. 154; p. 486.

Built-up die. J. H. Ames. No. 958,459; May 17; Sp. p. 4492; Gaz. vol. 154; p. 735.

Bundle or package tie. F. S. Chappell. No. 959,810; May 24; Sp. p. 6254; Gaz. vol. 154; p. 1046.

Bundle-tying device. J. Gregory. No. 960,089; May 31; Sp. p. 7952; Gaz. vol. 154; p. 1336.

Bung. J. T. Delaney. No. 956,797; May 3; Sp. p. 636; Gaz. vol. 154; p. 101.

Burglar-alarm. W. G. Tillman. No. 957,635; May 10; Sp. p. 2412; Gaz. vol. 154; p. 417.

Burner: *See* Gas-burner; Hydrocarbon-burner; Lamp-burner; Oil-burner; Stove-burner; Sulfur-burner; Vapor-burner.

Burner. J. J. Riehl. No. 957,098; May 3; Sp. p. 1285; Gaz. vol. 154; p. 204.

Burner. A. C. Butler. No. 957,143; May 3; Sp. p. 1364; Gaz. vol. 154; p. 218.

Burner. O. M. Graves. No. 957,857; May 10; Sp. p. 2868; Gaz. vol. 154; p. 491.

Burnishing-machine. C. Pease. No. 959,880; May 31; Sp. p. 7471; Gaz. vol. 154; p. 1263.

Burnt-wood articles, Apparatus for producing. F. G. McAlpin. No. 959,783; May 31; Sp. p. 7238; Gaz. vol. 154; p. 1229.

Bush-puller. J. G. O'Donnell. No. 959,377; May 24; Sp. p. 6392; Gaz. vol. 154; p. 1068.

Butter-cutter. W. P. Hart. No. 958,639; May 17; Sp. p. 4831; Gaz. vol. 154; p. 794.

Butter or cheese receptacle. E. D. Burton. No. 958,991; May 24; Sp. p. 5597; Gaz. vol. 154; p. 941.

Butter-treating apparatus. C. Glaus. No. 959,508; May 31; Sp. p. 6668; Gaz. vol. 154; p. 1138.

Butter-worker. E. Wells. No. 957,723; May 10; Sp. p. 2500; Gaz. vol. 154; p. 448.

Button. S. J. Serwer. No. 958,328; May 17; Sp. p. 4228; Gaz. vol. 154; p. 690.

Button, Collar-. F. M. and N. Yonkman. No. 956,662; May 3; Sp. p. 335; Gaz. vol. 154; p. 55.

Button, Cuff-. R. N. Brothers. No. 957,864; May 17; Sp. p. 2892; Gaz. vol. 154; p. 524.

Button cutting and drilling machine. B. McCoy. No. 959,151; May 24; Sp. p. 5934; Gaz. vol. 154; p. 993.

Buttonhole-guide. M. L. Stanton. No. 959,630; May 31; Sp. p. 6940; Gaz. vol. 154; p. 1182.

Cabinet, Credit-. R. N. Vick. No. 959,821; May 31; Sp. p. 7333; Gaz. vol. 154; p. 1242.

Cabinet, Extensible. J. Gaynor. No. 957,605; May 10; Sp. p. 2342; Gaz. vol. 154; p. 407.

Cabinet for stationery. F. W. Bliss. No. 957,859; May 10; Sp. p. 2871; Gaz. vol. 154; p. 492.

Cabinet, Hanging. J. J. Gall. No. 957,324; May 10; Sp. p. 1792; Gaz. vol. 154; p. 313.

Cabinet, Information and directory. E. A. Ovenshire. No. 958,673; May 17; Sp. p. 4894; Gaz. vol. 154; p. 804.

Cabinet, Lace-. J. H. Adkins. No. 958,062; May 17; Sp. p. 3535; Gaz. vol. 154; p. 596.

Cabinet, Sanitary cold-air food-. C. A. Buel, Jr. No. 959,709; May 31; Sp. p. 7093; Gaz. vol. 154; p. 1204.

Cabinets or the like, Margin-piece for. D. E. Hunter. No. 959,039; May 31; Sp. p. 7610; Gaz. vol. 154; p. 1284.

Cable-carrier apparatus. G. A. Amsden. No. 958,207; May 17; Sp. p. 3826; Gaz. vol. 154; p. 646.

Cable-clip. T. J. Baugh. No. 957,300; May 10; Sp. p. 1744; Gaz. vol. 154; p. 305.

Cable-hanger. F. D. Ogden. No. 959,064; May 24; Sp. p. 5755; Gaz. vol. 154; p. 965.

Cable-splicer. J. Urbanz. No. 959,407; May 24; Sp. p. 6440; Gaz. vol. 154; p. 1078.

Cables, Branch-block for suspended. J. S. Stewart. No. 959,969; May 31; Sp. p. 7681; Gaz. vol. 154; p. 1295.

Cake-beater. G. B. Smith. No. 959,811; May 31; Sp. p. 7315; Gaz. vol. 154; p. 1239.

Calculating-machine. H. Goldman. No. 956,846; May 3; Sp. p. 755; Gaz. vol. 154; p. 119.

Calculating-machine. E. Jahns. No. 957,062; May 3; Sp. p. 1212; Gaz. vol. 154; p. 192.

Calculating-machine reversing mechanism. R. Rein. No. 957,095; May 3; Sp. p. 1230; Gaz. vol. 154; p. 203.

Calendar. W. G. Fairchild. No. 958,106; May 17; Sp. p. 3621; Gaz. vol. 154; p. 610.

Calendar, Perpetual. E. W. Doolittle. No. 959,479; May 31; Sp. p. 6610; Gaz. vol. 154; p. 1128.

Calender-machine attachment. J. Stuart. No. 957,812; May 10; Sp. p. 2778; Gaz. vol. 154; p. 476.

Calipers and poising-tool, Combination. E. Benson. No. 959,699; May 31; Sp. p. 7073; Gaz. vol. 154; p. 1201.

Calipers, Micrometer-. Z. R. Tucker. No. 959,974; May 31; Sp. p. 7692; Gaz. vol. 154; p. 1296.

Call-distributing switch. P. V. Christensen. No. 959,462; May 31; Sp. p. 6572; Gaz. vol. 154; p. 1122.

Calorimeter-bombs, Charging device for. C. J. Emerson. No. 959,488; May 31; Sp. p. 6638; Gaz. vol. 154; p. 1131.

Cam mechanism. H. Wyman. No. 957,724; May 10; Sp. p. 2591; Gaz. vol. 154; p. 448.

Can: *See* Milk-can; Oil-can.

Can-antibuckling press. J. B. Frost. No. 957,323; May 10; Sp. p. 1790; Gaz. vol. 154; p. 318.

Can-capping machine. F. Seitz. No. 958,549; May 17; Sp. p. 4657; Gaz. vol. 154; p. 765.

Can-caps, Means for applying solder rings to. W. J. Phelps. No. 959,163; May 24; Sp. p. 5962; Gaz. vol. 154; p. 995.

Can-carrier. F. L. Tanlman. No. 956,835; May 3; Sp. p. 729; Gaz. vol. 154; p. 115.

Can closure, Milk-. A. R. Ruppenthal. No. 958,012; May 17; Sp. p. 3313; Gaz. vol. 154; p. 577.

Can end. D. P. Robinson. No. 960,109; May 31; Sp. p. 7990; Gaz. vol. 154; p. 1342.

Can-end-flanging and bead-seaming apparatus. A. Johnson. No. 956,709; May 3; Sp. p. 451; Gaz. vol. 154; p. 72.

Can-filler. W. F. Thomas. No. 956,652; May 3; Sp. p. 313; Gaz. vol. 154; p. 51.

Can-forming apparatus. C. W. Graham. No. 958,741; May 24; Sp. p. 5048; Gaz. vol. 154; p. 853.

Can handle, Oil-. J. Boothby and C. A. Brown. No. 956,883; May 3; Sp. p. 840; Gaz. vol. 154; p. 133.

Can-opener. J. M. Allen. No. 960,060; May 31; Sp. p. 7905; Gaz. vol. 154; p. 1327.

Cans or the like, Closing device for. H. Hintermann. No. 959,012; May 24; Sp. p. 5638; Gaz. vol. 154; p. 947.

Canning apparatus. J. S. Hildebrand. No. 959,861; May 31; Sp. p. 7428; Gaz. vol. 154; p. 1257.

Candelabrum. C. Yoos. No. 957,134; May 3; Sp. p. 1348; Gaz. vol. 154; p. 216.

Candelabrum. O. H. Van Guelpen. No. 958,568; May 17; Sp. p. 4692; Gaz. vol. 154; p. 771.

Candy-casting machine. J. Werner. No. 959,665; May 31; Sp. p. 7005; Gaz. vol. 154; p. 1190.

Candy-cutting machine. J. H. Bennett. No. 958,717; May 24; Sp. p. 4986; Gaz. vol. 154; p. 844.

Candy-molding machine. J. Werner. No. 959,664; May 31; Sp. p. 6991; Gaz. vol. 154; p. 1190.

Candy scouring and cleaning machine. W. F. Walker. No. 958,338; May 17; Sp. p. 4247; Gaz. vol. 154; p. 693.

Cane, Apparatus for treating sugar-. A. and S. Wynberg. No. 958,790; May 24; Sp. p. 5170; Gaz. vol. 154; p. 870.

Cane-stripping mechanism. T. J. Peters. No. 957,441; May 10; Sp. p. 2030; Gaz. vol. 154; p. 352.

Cannon. E. J. Blood. No. 958,220; May 17; Sp. p. 3847; Gaz. vol. 154; p. 650.

Canvas-cementer. T. G. Plant. No. 958,284; May 17; Sp. p. 4025; Gaz. vol. 154; p. 672.

Caoutchouc-like elastic substance, Producing a. M. Schluss. No. 960,116; May 31; Sp. p. 8001; Gaz. vol. 154; p. 1345.

Capping-machines, Clutch for. L. Bartlett. No. 957,929; May 17; Sp. p. 3043; Gaz. vol. 154; p. 547.

Car-brake. G. M. Braham and J. Lill. No. 957,408; May 10; Sp. p. 1967; Gaz. vol. 154; p. 340.

Car-brass mold. G. L. Hoffer. No. 956,638; May 3; Sp. p. 281; Gaz. vol. 154; p. 47.

Car buffer, Mine-. V. E. Lane. No. 959,232; May 24; Sp. p. 6106; Gaz. vol. 154; p. 1020.

Car, Convertible box-. J. A. Ansley. No. 958,575; May 17; Sp. p. 4709; Gaz. vol. 154; p. 773.

Car-coupling. J. Kelso. No. 956,976; May 3; Sp. p. 1044; Gaz. vol. 154; p. 164.

Car-coupling. S. P. Bush. No. 958,359; May 17; Sp. p. 4289; Gaz. vol. 154; p. 700.

Car-coupling. S. P. Bush. No. 958,360; May 17; Sp. p. 4290; Gaz. vol. 154; p. 700.
Car-coupling. D. S. Montgomery. No. 958,884; May 24; Sp. p. 5392; Gaz. vol. 154; p. 904.
Car-coupling. H. J. Daubert. No. 960,077; May 31; Sp. p. 7934; Gaz. vol. 154; p. 1332.
Car-coupling-operating device. S. P. Bush. No. 958,361; May 17; Sp. p. 4292; Gaz. vol. 154; p. 701.
Car-door. G. A. Carlson. No. 956,758; May 3; Sp. p. 557; Gaz. vol. 154; p. 89.
Car-door. F. Horn. No. 958,873; May 24; Sp. p. 5368; Gaz. vol. 154; p. 901.
Car-door lock. P. J. Quinn and G. P. Clifford. No. 957,518; May 10; Sp. p. 2181; Gaz. vol. 154; p. 377.
Car-door-operating mechanism, Dump-. W. A. Caswell. No. 959,459; May 31; Sp. p. 6505; Gaz. vol. 154; p. 1121.
Car, Dump-. J. O. Neikirk. No. 956,819; May 3; Sp. p. 696; Gaz. vol. 154; p. 109.
Car, Dump-. H. S. Hart. No. 956,851; May 3; Sp. p. 708; Gaz. vol. 154; p. 121.
Car, Dump-. A. Lipschutz. No. 957,616; May 10; Sp. p. 2363; Gaz. vol. 154; p. 411.
Car-fender. J. B. Bernier. No. 957,540; May 10; Sp. p. 2230; Gaz. vol. 154; p. 386.
Car-fender. C. P. Bronson. No. 958,478; May 17; Sp. p. 4518; Gaz. vol. 154; p. 739.
Car-fender. A. H. Carter. No. 959,309; May 24; Sp. p. 6252; Gaz. vol. 154; p. 1046.
Car-fender. A. J. Thornley. No. 960,056; May 31; Sp. p. 7898; Gaz. vol. 154; p. 1326.
Car-journal, sponging-shield, and oil-saver. L. E. Keller. No. 958,135; May 17; Sp. p. 3681; Gaz. vol. 154; p. 621.
Car-lines, Apparatus for tabulating the passenger traffic on. J. T. Crabbe. No. 959,313; May 24; Sp. p. 6257; Gaz. vol. 154; p. 1047.
Car leader, Railway-hoz-. H. L. Jackson. No. 957,885; May 17; Sp. p. 2937; Gaz. vol. 154; p. 532.
Car, Mining-. J. Blair. No. 959,294; May 24; Sp. p. 6225; Gaz. vol. 154; p. 1040.
Car, Passenger-. H. C. Heffner. No. 957,057; May 3; Sp. p. 1198; Gaz. vol. 154; p. 190.
Car, Passenger-. H. H. Adams. No. 957,639; May 10; Sp. p. 2420; Gaz. vol. 154; p. 418.
Car, Railway-. E. M. Nisbett. No. 957,863; May 10; Sp. p. 1870; Gaz. vol. 154; p. 325.
Car-replacer. E. Bert and D. A. Scott. No. 957,405; May 10; Sp. p. 1963; Gaz. vol. 154; p. 339.
Car-roof. J. Maroid. No. 959,366; May 24; Sp. p. 6368; Gaz. vol. 154; p. 1065.
Car sliding grain-door. F. C. Lakin. No. 958,140; May 17; Sp. p. 3691; Gaz. vol. 154; p. 623.
Car, Spliced-side gondola. S. Otis. No. 958,426; May 17; Sp. p. 4414; Gaz. vol. 154; p. 722.
Car-step. J. Laverty and H. S. Williams. No. 958,657; May 17; Sp. p. 4863; Gaz. vol. 154; p. 798.
Car steps and doors, Mechanism for operating. J. F. McElroy. No. 959,873; May 31; Sp. p. 7453; Gaz. vol. 154; p. 1260.
Car, Street-. W. Lumley. No. 956,774; May 3; Sp. p. 590; Gaz. vol. 154; p. 94.
Car structure. A. E. Smith. No. 956,740; May 3; Sp. p. 512; Gaz. vol. 154; p. 83.
Car, Tank-. V. M. Summa. No. 959,317; May 31; Sp. p. 7327; Gaz. vol. 154; p. 1241.
Car-underframe. A. Becker. No. 956,841; May 3; Sp. p. 742; Gaz. vol. 154; p. 117.
Car-underframe. W. F. Bettendorf. No. 957,182; May 10; Sp. p. 1467; Gaz. vol. 154; p. 262.
Car-wheel. E. A. Johnson. No. 958,924; May 24; Sp. p. 5479; Gaz. vol. 154; p. 918.
Car-wheel jack-stand. D. Champeon. No. 958,364; May 17; Sp. p. 4296; Gaz. vol. 154; p. 701.
Car-wheel press. G. T. Reiss. No. 959,071; May 24; Sp. p. 5778; Gaz. vol. 154; p. 987.
Cars, Antitelescoping construction for. T. Dunbar. No. 956,799; May 3; Sp. p. 644; Gaz. vol. 154; p. 102.
Cars, Beamless brake mechanism for railway-. W. P. Bettendorf. No. 956,673; May 3; Sp. p. 362; Gaz. vol. 154; p. 60.
Cars, Curtain for vestibule-. E. C. Holmes. No. 956,966; May 3; Sp. p. 1021; Gaz. vol. 154; p. 160.
Cars, Distance-spacing device for freight-. T. Conley. No. 958,369; May 17; Sp. p. 4302; Gaz. vol. 154; p. 702.
Cars, Sewage system for railway-. A. C. Clarke. No. 957,933; May 17; Sp. p. 3053; Gaz. vol. 154; p. 548.
Cars, Trap-door for vestibule-. W. F. Kiesel, Jr. No. 956,978; May 3; Sp. p. 1050; Gaz. vol. 154; p. 165.
Carbureter. W. H. C. Higgins, Jr. (Reissue.) No. 13,111; May 3; Sp. p. 1444; Gaz. vol. 154; p. 232.
Carbureter. F. W. Brady. No. 957,731; May 10; Sp. p. 2306; Gaz. vol. 154; p. 351.
Carbureter. A. Howarth. No. 958,128; May 17; Sp. p. 3662; Gaz. vol. 154; p. 618.
Carbureter. G. R. Cook. No. 958,476; May 17; Sp. p. 4515; Gaz. vol. 154; p. 740.
Carbureter. J. W. Snedeker. No. 958,897; May 24; Sp. p. 5431; Gaz. vol. 154; p. 909.
Carbureter. W. Ottaway. No. 959,066; May 24; Sp. p. 5750; Gaz. vol. 154; p. 965.
Carbureter. T. J. Fay and J. M. Ellsworth. No. 960,080; May 31; Sp. p. 7933; Gaz. vol. 154; p. 1333.
Carbureter, Floatless. M. C. Bright. No. 956,882; May 3; Sp. p. 837; Gaz. vol. 154; p. 832.
Carbureting apparatus. G. Johnson. No. 959,350; May 24; Sp. p. 6338; Gaz. vol. 154; p. 1060.
Card-clothing, &c., Apparatus for hardening the teeth of. L. C. Schneider. No. 958,326; May 17; Sp. p. 4220; Gaz. vol. 154; p. 689.
Card-cutting machine. W. Greaven. No. 957,052; May 3; Sp. p. 1186; Gaz. vol. 154; p. 188.
Card-cutting machine, Jacquard-. J. Schull. No. 960,118; May 31; Sp. p. 8007; Gaz. vol. 154; p. 1345.
Card, Playing or game. W. W. Russell. No. 957,105; May 3; Sp. p. 1296; Gaz. vol. 154; p. 206.
Card-punching machine, Jacquard-. J. Schull. No. 960,117; May 31; Sp. p. 8002; Gaz. vol. 154; p. 1345.
Card system. J. J. Vegell. No. 958,337; May 17; Sp. p. 4245; Gaz. vol. 154; p. 692.
Cards, Device for reflecting the concealed sides of. W. T. Peckham. No. 958,762; May 24; Sp. p. 5090; Gaz. vol. 154; p. 860.
Cards, Head for punching five and six frame brussel-. W. K. Caldwell. No. 959,200; May 24; Sp. p. 6039; Gaz. vol. 154; p. 1009.
Cards, Playing-. W. Shakespeare, Jr. No. 960,205; May 31; Sp. p. 8173; Gaz. vol. 154; p. 1375.
Carpet-fastener. H. Weinstock. No. 959,277; May 24; Sp. p. 6195; Gaz. vol. 154; p. 1135.
Carpet-fastener, Stair-. C. W. Kirsch. No. 958,138; May 17; Sp. p. 3686; Gaz. vol. 154; p. 622.
Carriage, Baby-. E. Plourde. No. 958,307; May 17; Sp. p. 4173; Gaz. vol. 154; p. 681.
Carriage-top rest. R. L. Notman. No. 959,790; May 31; Sp. p. 7268; Gaz. vol. 154; p. 1231.
Carriage-top rest. R. L. Notman. No. 959,791; May 31; Sp. p. 7269; Gaz. vol. 154; p. 1232.
Carrier: *See* Can-carrier; Egg-carrier; Overhead carrier; Parcel-carrier.
Carrier. L. F. Haddon. No. 959,733; May 31; Sp. p. 7144; Gaz. vol. 154; p. 1212.
Cartridge-bandoleer, gun-rest, shoulder-strap, and recoil-pad, Combined. R. C. West. No. 960,058; May 31; Sp. p. 7902; Gaz. vol. 154; p. 1327.
Cartridge-shell. A. Loeb. No. 957,071; May 3; Sp. p. 1430; Gaz. vol. 154; p. 229.
Carving-machine. D. B. Salstrom. No. 957,716; May 10; Sp. p. 2574; Gaz. vol. 154; p. 446.
Carving-machine. D. B. Salstrom. No. 957,717; May 10; Sp. p. 2578; Gaz. vol. 154; p. 446.
Case: *See* Display-case; Prescription-case; Shipping-case; Suit-case; Supply-case; Tire-case; Type-setting case.
Casement-fastener. G. L. Fisher. No. 959,494; May 31; Sp. p. 6648; Gaz. vol. 154; p. 1133.
Cash-register. F. H. Trevellian. No. 957,918; May 17; Sp. p. 3028; Gaz. vol. 154; p. 543.
Cash-register. A. G. Carlson. No. 959,840; May 31; Sp. p. 7379; Gaz. vol. 154; p. 1250.
Casing-elevator. F. S. Barkelew. No. 960,239; May 31; Sp. p. 8242; Gaz. vol. 154; p. 1387.
Casing-wrench, Combination. W. L. Dunn. No. 958,698; May 17; Sp. p. 4944; Gaz. vol. 154; p. 812.
Casket head-rest, Burial-. B. Stevens. No. 957,910; May 17; Sp. p. 3017; Gaz. vol. 154; p. 541.
Caster. N. Svenvig. No. 957,480; May 10; Sp. p. 2101; Gaz. vol. 154; p. 364.
Caster. G. W. Dent. No. 959,108; May 24; Sp. p. 5845; Gaz. vol. 154; p. 979.
Caster, Ball-. D. B. Hussey. No. 956,969; May 3; Sp. p. 1028; Gaz. vol. 154; p. 161.
Caster, Ball-. D. S. Carter. No. 957,303; May 10; Sp. p. 1748; Gaz. vol. 154; p. 306.
Castings, Machine for making. A. Kribe. No. 959,557; May 31; Sp. p. 6788; Gaz. vol. 154; p. 1155.
Cattle-guard. E. J. Thomas. No. 956,745; May 3; Sp. p. 523; Gaz. vol. 154; p. 85.
Cautery, Electric. W. Meyer. No. 958,753; May 24; Sp. p. 5070; Gaz. vol. 154; p. 857.
Cement and concrete work. E. Thomas. No. 958,336; May 17; Sp. p. 4244; Gaz. vol. 154; p. 692.
Centering apparatus. J. T. Rice. No. 959,167; May 24; Sp. p. 5976; Gaz. vol. 154; p. 999.
Centering-machine. W. B. Johnson. No. 959,865; May 31; Sp. p. 7437; Gaz. vol. 154; p. 1258.
Centrifugal machine. E. Roberts and A. H. Gibson. No. 957,715; May 10; Sp. p. 2573; Gaz. vol. 154; p. 445.
Centrifugal-separator float. C. H. Shaw. No. 959,625; May 31; Sp. p. 6916; Gaz. vol. 154; p. 1177.
Centrifugal separators, Hollow shaft for. C. H. Shaw. No. 959,030; May 24; Sp. p. 5670; Gaz. vol. 154; p. 953.
Chain. J. M. Dodge. No. 958,676; May 17; Sp. p. 4902; Gaz. vol. 154; p. 805.
Chain and wheel therefor, Drive-. W. J. Belcher. No. 959,046; May 24; Sp. p. 5708; Gaz. vol. 154; p. 959.
Chain construction, Drive-. W. J. Belcher. No. 958,466; May 17; Sp. p. 4501; Gaz. vol. 154; p. 737.
Chain, Drive-. H. S. Pierce. No. 958,675; May 17; Sp. p. 4901; Gaz. vol. 154; p. 805.
Chain, Drive-. J. M. Dodge. No. 958,677; May 17; Sp. p. 4904; Gaz. vol. 154; p. 805.
Chain, Drive-. W. J. Belcher. No. 959,047; May 24; Sp. p. 5710; Gaz. vol. 154; p. 959.
Chain, Drive-. H. K. Holsman. No. 959,532; May 31; Sp. p. 6723; Gaz. vol. 154; p. 1145.
Chain link, Sprocket-. S. Nye. No. 957,996; May 17; Sp. p. 3265; Gaz. vol. 154; p. 571.
Chair: *See* Advertising-chair; Barber's chair; Dental chair; High chair; Rail-chair; Revolving tiltable chair; Rocking-chair; Tilting chair; Upholstered chair.
Chair. W. R. Gordon. No. 957,552; May 10; Sp. p. 2251; Gaz. vol. 154; p. 389.

Chair. J. Peterson and J. G. Callaway. No. 958,000; May 17; Sp. p. 3264; Gaz. vol. 154; p. 572.
Chair. W. S. Phillips. No. 958,529; May 17; Sp. p. 4617; Gaz. vol. 154; p. 758.
Chair. A. Searles. No. 959,619; May 31; Sp. p. 6905; Gaz. vol. 154; p. 1175.
Chair and couch, Convertible. H. Tiedemann and J. U. Clarke. No. 956,836; May 3; Sp. p. 730; Gaz. vol. 154; p. 116.
Chair and couch, Convertible. H. Tiedemann and J. U. Clarke. No. 956,837; May 3; Sp. p. 731; Gaz. vol. 154; p. 116.
Chair fan attachment, Rocking-. P. Pezzene. No. 959,384; May 24; Sp. p. 6403; Gaz. vol. 154; p. 1070.
Chair seat, Barber-. E. E. Koken. No. 957,970; May 17; Sp. p. 3190; Gaz. vol. 154; p. 562.
Chairs, Actuating foot-rest for rocking-. F. W. C. Leipert. No. 959,949; May 31; Sp. p. 7636; Gaz. vol. 154; p. 1287.
Chairs, Apparatus for making leather-covered cushioned seats for. A. Rothberg. No. 958,011; May 17; Sp. p. 3311; Gaz. vol. 154; p. 577.
Chairs, Blower for rocking-. E. G. Bules. No. 957,739; May 10; Sp. p. 2617; Gaz. vol. 154; p. 453.
Chalk-line reel. R. L. Pickering. No. 956,598; May 3; Sp. p. 196; Gaz. vol. 154; p. 34.
Chalk-sharpening device. A. Brants. No. 957,733; May 10; Sp. p. 2611; Gaz. vol. 154; p. 452.
Charging apparatus. F. H. Daniels. No. 956,890; May 3; Sp. p. 852; Gaz. vol. 154; p. 135.
Check-asserter. C. H. Jones. No. 959,943; May 31; Sp. p. 7622; Gaz. vol. 154; p. 1286.
Check, Baggage-. J. M. Hallhache. No. 957,484; May 10; Sp. p. 2109; Gaz. vol. 154; p. 366.
Check-hook. H. E. Lutz. No. 957,512; May 10; Sp. p. 2171; Gaz. vol. 154; p. 375.
Checkrein-holder. G. A. Stanton. No. 957,580; May 10; Sp. p. 2298; Gaz. vol. 154; p. 399.
Cheese-cover. E. D. Hall. No. 957,053; May 3; Sp. p. 1193; Gaz. vol. 154; p. 189.
Cherry-pitter. C. W. Bridgeman. No. 959,450; May 31; Sp. p. 6541; Gaz. vol. 154; p. 1118.
Cherry-seeder. S. R. Smith. No. 958,780; May 24; Sp. p. 5143; Gaz. vol. 154; p. 867.
Chicken-hovel. J. S. Peironnet. No. 959,161; May 24; Sp. p. 5959; Gaz. vol. 154; p. 997.
Chimney-draft, Device for varying. H. J. Trautmann and J. L. Copping. No. 957,273; May 10; Sp. p. 1688; Gaz. vol. 154; p. 295.
Chimney protector or shield. T. J. Canivan. No. 957,544; May 10; Sp. p. 2239; Gaz. vol. 154; p. 387.
Chimney-thimble guard. J. B. P. Dupont. No. 958,482; May 17; Sp. p. 4530; Gaz. vol. 154; p. 742.
Chimney-top. A. Zwingli. No. 959,415; May 24; Sp. p. 6453; Gaz. vol. 154; p. 1080.
Chimneys, Water-guard for. W. F. Greenlee. No. 960,088; May 31; Sp. p. 7951; Gaz. vol. 154; p. 1336.
China-cabinet and table, Combined. J. H. Bennett. No. 956,619; May 3; Sp. p. 239; Gaz. vol. 154; p. 41.
Chlorid solutions, Regenerating stannic-. J. Weber. No. 958,986; May 24; Sp. p. 5589; Gaz. vol. 154; p. 939.
Chopper: *See* Cotton-chopper; Cotton and beet chopper.
Christmas-tree holder. J. S. Huff. No. 958,644; May 17; Sp. p. 4843; Gaz. vol. 154; p. 795.
Chuck. G. J. Thomas. No. 958,950; May 24; Sp. p. 5579; Gaz. vol. 154; p. 937.
Chuck. P. J. Grebel. No. 959,515; May 31; Sp. p. 6699; Gaz. vol. 154; p. 1140.
Chuck, Automatic pneumatic. N. M. Doen. No. 957,194; May 10; Sp. p. 1485; Gaz. vol. 154; p. 265.
Chuck, Tool-. J. S. Fray. No. 957,760; May 10; Sp. p. 2675; Gaz. vol. 154; p. 460.
Churn. F. O. Homme, J. T. Vollen, and I. L. Isaacson. No. 956,639; May 3; Sp. p. 283; Gaz. vol. 154; p. 47.
Churn. W. F. Smithdeal. No. 956,833; May 3; Sp. p. 726; Gaz. vol. 154; p. 115.
Churn. W. S. Pettit. No. 957,248; May 10; Sp. p. 1619; Gaz. vol. 154; p. 286.
Churn. S. M. Hopkins. No. 957,608; May 10; Sp. p. 2347; Gaz. vol. 154; p. 408.
Churn. J. R. Brady. No. 958,585; May 17; Sp. p. 4728; Gaz. vol. 154; p. 776.
Churn. J. L. Laughlin. No. 958,656; May 17; Sp. p. 4862; Gaz. vol. 154; p. 798.
Churn. A. Massie. No. 959,367; May 24; Sp. p. 6370; Gaz. vol. 154; p. 1065.
Churn. N. B. Usher. No. 959,877; May 31; Sp. p. 7463; Gaz. vol. 154; p. 1261.
Cigar-band. G. Labarre. No. 959,357; May 24; Sp. p. 6352; Gaz. vol. 154; p. 1062.
Cigar-banding machine. J. J. and T. E. Fearon. No. 958,244; May 17; Sp. p. 3890; Gaz. vol. 154; p. 657.
Cigar carrying and displaying receptacle. A. G. Kaufmann. No. 958,878; May 24; Sp. p. 5383; Gaz. vol. 154; p. 902.
Cigar-clipper attachment for pencils. J. C. Thorne. No. 959,272; May 24; Sp. p. 6185; Gaz. vol. 154; p. 1033.
Cigar-cutter. A. Emrich. No. 958,610; May 17; Sp. p. 4779; Gaz. vol. 154; p. 784.
Cigar-cutter forming part of a combination-tool. H. A. Chippendale. No. 958,092; May 17; Sp. p. 3594; Gaz. vol. 154; p. 606.
Cigar-maker's box and rolling-board. J. Kletti, III. No. 959,060; May 24; Sp. p. 5741; Gaz. vol. 154; p. 963.
Cigar-tip cutter. T. F. Pryor, Jr. No. 957,575; May 10; Sp. p. 2290; Gaz. vol. 154; p. 397.
Cigarette-former. H. E. Robinson. No. 960,110; May 31; Sp. p. 7991; Gaz. vol. 154; p. 1343.
Circuit-breaker. C. T. Henderson. No. 957,334; May 10; Sp. p. 1815; Gaz. vol. 154; p. 316.
Circuit-breaker. M. J. Wohl and H. Hertzberg. No. 959,327; May 31; Sp. p. 7354; Gaz. vol. 154; p. 1245.
Circuit-breaker. E. H. Smythe. No. 960,049; May 31; Sp. p. 7882; Gaz. vol. 154; p. 1323.
Circuit-breaker, Automatic. C. T. Hentschel. No. 957,335; May 10; Sp. p. 1817; Gaz. vol. 154; p. 317.
Circuit-breaker-retarding device. C. E. Eveleth. No. 957,319; May 10; Sp. p. 1782; Gaz. vol. 154; p. 311.
Circuit-closer. H. C. Thomson. No. 959,435; May 24; Sp. p. 6484; Gaz. vol. 154; p. 1086.
Circuit closer or timer. W. J. Rapp. No. 957,713; May 10; Sp. p. 2569; Gaz. vol. 154; p. 444.
Circuit-controlling apparatus. L. C. Nicholson. No. 959,787; May 31; Sp. p. 7249; Gaz. vol. 154; p. 1230.
Circuit-controlling apparatus. L. C. Nicholson. No. 959,788; May 31; Sp. p. 7258; Gaz. vol. 154; p. 1231.
Circuit-controlling device, Automatic. W. C. Yates and W. O. Lum. No. 957,452; May 10; Sp. p. 2051; Gaz. vol. 154; p. 356.
Circuit make-and-break device. J. E. Scovill. No. 957,578; May 10; Sp. p. 2295; Gaz. vol. 154; p. 398.
Clamp: *See* Bed-clamp; Brace-clamp; Fence-wire clamp; Rail-clamp; Saw-clamp; Sewing-clamp; Trolley-conductor clamp.
Clamp-press. W. D. Osborn. No. 957,793; May 10; Sp. p. 2748; Gaz. vol. 154; p. 470.
Clasp: *See* Garment-clasp; Index-clasp.
Clasp. W. T. Blasdell. No. 957,488; May 10; Sp. p. 2115; Gaz. vol. 154; p. 367.
Claw and pinch bar, Combination. M. S. Clarke. No. 957,190; May 10; Sp. p. 1480; Gaz. vol. 154; p. 264.
Cleaner: *See* Boiler-tube cleaner; Brush-cleaner; Corn-cleaner; Cuspidor-cleaner; Diaper-cleaner; Flue-cleaner; Gun-cleaner; Knife-cleaner; Main and pipe cleaner; Pipe-cleaner; Plow-cleaner; Pneumatic cleaner; Shoe-cleaner; Tube-cleaner; Vacuum-cleaner.
Cleaning, Apparatus for chemical. H. Resch. No. 959,883; May 31; Sp. p. 7478; Gaz. vol. 154; p. 1264.
Clevis. G. H. Johnson. No. 958,645; May 17; Sp. p. 4844; Gaz. vol. 154; p. 795.
Clevis. R. H. Hammock. No. 959,430; May 24; Sp. p. 6476; Gaz. vol. 154; p. 1085.
Clinometer for well-bores. A. F. L. Bell. No. 959,912; May 31; Sp. p. 7542; Gaz. vol. 154; p. 1274.
Clinometer, Line-. E. H. Holden. No. 957,059; May 3; Sp. p. 1202; Gaz. vol. 154; p. 191.
Clip: *See* Cable-clip; Paper-clip; Ribbon-clip; Spoke and felly clip; Wire-clip.
Clock, Alarm-. W. E. Porter. No. 956,824; May 3; Sp. p. 710; Gaz. vol. 154; p. 112.
Clock, Alarm-. G. Kern. No. 958,930; May 24; Sp. p. 5488; Gaz. vol. 154; p. 921.
Clock, Electric. R. Jaegermann. No. 959,864; May 31; Sp. p. 7433; Gaz. vol. 154; p. 1257.
Clock, Electric alarm-. H. C. Wilcox. No. 957,397; May 10; Sp. p. 1942; Gaz. vol. 154; p. 336.
Clock, Electrically-operated. T. Mungall. No. 960,186; May 31; Sp. p. 8134; Gaz. vol. 154; p. 1368.
Clock-synchronizing attachment. B. F. Merritt. No. 958,148; May 17; Sp. p. 3705; Gaz. vol. 154; p. 626.
Closet: *See* Antifreezing closet; Siphon-closet; Water-closet.
Closing-disk. W. L. Wright. No. 959,095; May 24; Sp. p. 5823; Gaz. vol. 154; p. 976.
Closure. C. D. Love. No. 958,513; May 17; Sp. p. 4591; Gaz. vol. 154; p. 753.
Cloth-cutter. M. Langman. No. 957,070; May 3; Sp. p. 1227; Gaz. vol. 154; p. 195.
Cloth-piling machine. C. Weiss. No. 957,525; May 10; Sp. p. 2200; Gaz. vol. 154; p. 380.
Cloth-piling machine. C. Weiss. No. 957,526; May 10; Sp. p. 2201; Gaz. vol. 154; p. 380.
Cloth-piling machine. C. Weiss. No. 957,588; May 10; Sp. p. 2309; Gaz. vol. 154; p. 401.
Clothes-drier. G. Schneider. No. 959,888; May 31; Sp. p. 7489; Gaz. vol. 154; p. 1265.
Clothes-line holder. A. Heinzinger. No. 958,493; May 17; Sp. p. 4551; Gaz. vol. 154; p. 746.
Clothes-line support. W. L. Anderson. No. 959,419; May 24; Sp. p. 6459; Gaz. vol. 154; p. 1081.
Clothes-pin. G. S. Pollock. No. 958,582; May 17; Sp. p. 4626; Gaz. vol. 154; p. 759.
Clothes-pounder. M. J. Baker and V. M. Pierce. No. 957,298; May 10; Sp. p. 1740; Gaz. vol. 154; p. 304.
Clothes-pounder. J. S. Turner and J. L. Campbell. No. 957,919; May 17; Sp. p. 3031; Gaz. vol. 154; p. 544.
Clover-huller. J. W. Clutter. No. 956,886; May 3; Sp. p. 844; Gaz. vol. 154; p. 134.
Clutch. L. Wirts. No. 957,401; May 10; Sp. p. 1951; Gaz. vol. 154; p. 338.
Clutch, Combined frictional and positively locking. A. Latham. No. 957,651; May 10; Sp. p. 2357; Gaz. vol. 154; p. 480.
Clutch, Friction-. K. Matthias. No. 958,147; May 17; Sp. p. 3704; Gaz. vol. 154; p. 626.
Clutch, Magnetic-. F. R. Martin and O. M. Shepherd. No. 959,569; May 31; Sp. p. 6811; Gaz. vol. 154; p. 1159.
Clutch mechanism. J. F. Duryea and W. M. Remington. No. 957,002; May 10; Sp. p. 2387; Gaz. vol. 154; p. 406.
Clutch mechanism. F. C. Biggert, Jr. No. 958,710; May 17; Sp. p. 4963; Gaz. vol. 154; p. 816.

Coal and rock drilling machine. C. Seals. No. 959,079; May 24; Sp. p. 5790; Gaz. vol. 154; p. 970.
Coal, Coking. S. B. Sheldon. No. 959,080; May 24; Sp. p. 5792; Gaz. vol. 154; p. 971.
Coal-washing apparatus. E. P. Dandridge and J. B. Cessna. No. 959,473; May 31; Sp. p. 6598; Gaz. vol. 154; p. 1136.
Coaster-brake. T. Falkos. No. 958,796; May 24; Sp. p. 5183; Gaz. vol. 154; p. 873.
Coaster-brake. C. Glover. No. 959,509; May 31; Sp. p. 6689; Gaz. vol. 154; p. 1138.
Coat. P. Shotland. No. 958,977; May 24; Sp. p. 5575; Gaz. vol. 154; p. 937.
Coating-machine. J. R. Pulsifer. No. 956,602; May 3; Sp. p. 206; Gaz. vol. 154; p. 36.
Cock and train-pipe connection, Angle-. M. A. Garrett. No. 957,325; May 10; Sp. p. 1793; Gaz. vol. 154; p. 313.
Cock, Basin-. J. F. Kelly. No. 958,927; May 24; Sp. p. 5483; Gaz. vol. 154; p. 920.
Cock, Corporation-. W. J. Barnstead. No. 958,073; May 17; Sp. p. 3560; Gaz. vol. 154; p. 600.
Cock for boilers, Draw-off. W. L. Belknap. No. 959,698; May 31; Sp. p. 7073; Gaz. vol. 154; p. 1200.
Cock, Safety gas-. E. Van Wickle. No. 959,090; May 24; Sp. p. 5814; Gaz. vol. 154; p. 974.
Cock, Stop-. Z. L. Sault. No. 956,866; May 3; Sp. p. 799; Gaz. vol. 154; p. 127.
Coffee-chaff extractor. E. T. Wear. No. 957,130; May 3; Sp. p. 1342; Gaz. vol. 154; p. 215.
Coffee-cleaning apparatus. W. D. Balcom. No. 957,138; May 3; Sp. p. 1353; Gaz. vol. 154; p. 217.
Coffee-condenser. D. B. Fleming. No. 958,616; May 17; Sp. p. 4789; Gaz. vol. 154; p. 786.
Coiling, Attachment for. U. H. Deering. No. 957,941; May 17; Sp. p. 3073; Gaz. vol. 154; p. 551.
Coil-bending machinery. J. A. Burns and J. W. Swoger. No. 959,452; May 31; Sp. p. 6543; Gaz. vol. 154; p. 1118.
Coiling and feed mechanism. F. H. Richards. No. 957,905; May 17; Sp. p. 2992; Gaz. vol. 154; p. 539.
Coiling mechanism. F. H. Richards. No. 958,767; May 24; Sp. p. 5099; Gaz. vol. 154; p. 862.
Coin-actuated mechanism. E. S. Hagen. No. 958,489; May 17; Sp. p. 4542; Gaz. vol. 154; p. 744.
Coin-chute. E. S. Hagen. No. 958,490; May 17; Sp. p. 4545; Gaz. vol. 154; p. 745.
Coin-controlled apparatus. A. Gerstenkorn. No. 958,621; May 17; Sp. p. 4795; Gaz. vol. 154; p. 788.
Coin-controlled lock. S. J. Kelly. No. 959,753; May 31; Sp. p. 7180; Gaz. vol. 154; p. 1219.
Coin-holder or change-maker. J. W. Jones. No. 958,648; May 17; Sp. p. 4547; Gaz. vol. 154; p. 796.
Coin-operated lock. H. F. Chreitaberg. No. 957,743; May 10; Sp. p. 2632; Gaz. vol. 154; p. 454.
Coke-oven. W. J. Kearns. No. 956,974; May 3; Sp. p. 1038; Gaz. vol. 154; p. 163.
Coke-oven. W. Mueller. No. 958,154; May 17; Sp. p. 3716; Gaz. vol. 154; p. 628.
Coke-ovens, Folding coke and coal handling machine for. J. E. A. Moore. No. 959,246; May 24; Sp. p. 6135; Gaz. vol. 154; p. 1025.
Coke, Quenching. E. Schulte. No. 958,184; May 17; Sp. p. 3777; Gaz. vol. 154; p. 638.
Coke, Quenching. H. Koppers. No. 958,651; May 17; Sp. p. 4854; Gaz. vol. 154; p. 797.
Collapsible box. J. M. and D. C. Jones. No. 958,647; May 17; Sp. p. 4846; Gaz. vol. 154; p. 796.
Collar, Coat-. C. Kaufman. No. 956,710; May 3; Sp. p. 457; Gaz. vol. 154; p. 73.
Collar-guide. M. Tillie. No. 957,816; May 10; Sp. p. 2785; Gaz. vol. 154; p. 478.
Collar, Horse-. G. W. Todd. No. 959,652; May 31; Sp. p. 6971; Gaz. vol. 154; p. 1187.
Color, Medium for oil-. W. B. Allen. No. 960,141; May 31; Sp. p. 8051; Gaz. vol. 154; p. 1353.
Color-stamping, Composition of matter adapted for use in the art of. S. Weinberg. No. 959,185; May 24; Sp. p. 6014; Gaz. vol. 154; p. 1005.
Colors and making same, Nitro-ortho-oxy-azo. K. Elbel. No. 958,912; May 24; Sp. p. 5459; Gaz. vol. 154; p. 915.
Colter. W. Stacy. No. 959,637; May 31; Sp. p. 6938; Gaz. vol. 154; p. 1182.
Comb. E. E. Keefe. No. 959,866; May 31; Sp. p. 7438; Gaz. vol. 154; p. 1258.
Comb. E. E. Keefe. No. 959,867; May 31; Sp. p. 7440; Gaz. vol. 154; p. 1259.
Combs, &c., Apparatus for making. J. Wilcox. No. 956,560; May 3; Sp. p. 111; Gaz. vol. 154; p. 21.
Combing-machines, Spindle-support for rollers of. A. R. Whitehead. No. 957,921; May 17; Sp. p. 3034; Gaz. vol. 154; p. 544.
Combination-lock. O. M. Larkin. No. 959,234; May 24; Sp. p. 6110; Gaz. vol. 154; p. 1021.
Commutator. H. T. Johnson. No. 958,405; May 17; Sp. p. 4370; Gaz. vol. 154; p. 715.
Compass. W. L. Murphy. No. 957,238; May 10; Sp. p. 1601; Gaz. vol. 154; p. 282.
Compiling-machine. W. T. Sullivan. No. 959,644; May 31; Sp. p. 6949; Gaz. vol. 154; p. 1184.
Composition of matter. W. J. Thorold. No. 959,650; May 31; Sp. p. 6966; Gaz. vol. 154; p. 1186.
Composition of matter and making same. W. A. Phillips. No. 959,068; May 24; Sp. p. 5772; Gaz. vol. 154; p. 967.
Compressing-machine. T. Lund. No. 959,869; May 31; Sp. p. 7444; Gaz. vol. 154; p. 1259.
Compressing-machine. W. M. Gentle. No. 959,928; May 31; Sp. p. 7572; Gaz. vol. 154; p. 1280.
Compressor. G. D. Warren. No. 957,129; May 3; Sp. p. 1330; Gaz. vol. 154; p. 214.
Comptometer-hand. S. B. Lamkin. No. 957,221; May 10; Sp. p. 1567; Gaz. vol. 154; p. 276.
Computing device. W. J. Rainey. No. 956,998; May 3; Sp. p. 1086; Gaz. vol. 154; p. 170.
Computing-machine. J. M. Daly. No. 956,687; May 3; Sp. p. 591; Gaz. vol. 154; p. 85.
Computing-machine. J. M. Daly. No. 956,689; May 3; Sp. p. 410; Gaz. vol. 154; p. 56.
Concentrator. P. McFarlane. No. 956,777; May 3; Sp. p. 594; Gaz. vol. 154; p. 95.
Concrete block and wall construction. J. J. Sleeper. No. 959,629; May 31; Sp. p. 6924; Gaz. vol. 154; p. 1179.
Concrete building constructions, Form for. G. F. Fisher. No. 957,414; May 10; Sp. p. 1974; Gaz. vol. 154; p. 342.
Concrete construction, Structural-metal shape for reinforced. P. Stragiotti. No. 960,054; May 31; Sp. p. 7892; Gaz. vol. 154; p. 1325.
Concrete-mixing machine. A. E. Goodmundson and R. F. Smith. No. 959,512; May 31; Sp. p. 6694; Gaz. vol. 154; p. 1139.
Concrete-mold. C. H. Jackman. No. 958,402; May 17; Sp. p. 4373; Gaz. vol. 154; p. 714.
Concrete pile, Metal-reinforced. E. Mohun. No. 958,967; May 24; Sp. p. 5551; Gaz. vol. 154; p. 933.
Concrete pipe. F. A. Stockley. No. 958,043; May 17; Sp. p. 3451; Gaz. vol. 154; p. 590.
Concrete pipe, Machine for making reinforced. H. B. McMahon. No. 958,156; May 17; Sp. p. 3724; Gaz. vol. 154; p. 629.
Concrete, Reinforced. P. B. Noyes. No. 957,244; May 10; Sp. p. 1609; Gaz. vol. 154; p. 284.
Concrete roadway, Oiled. E. M. Chadbourne. No. 956,940; May 3; Sp. p. 946; Gaz. vol. 154; p. 151.
Concrete sleeper, Reinforced-. H. Gröger. No. 957,328; May 10; Sp. p. 1802; Gaz. vol. 154; p. 314.
Concrete, Steel bar for reinforcement of slabs, beams, or similar constructions of. P. Selmer. No. 959,808; May 31; Sp. p. 7311; Gaz. vol. 154; p. 1238.
Concrete, Support for. J. P. Hallahan. No. 959,217; May 24; Sp. p. 6070; Gaz. vol. 154; p. 1015.
Concrete veneer for building construction, Metal-reinforced. A. Schnurr. No. 957,382; May 10; Sp. p. 1907; Gaz. vol. 154; p. 332.
Concrete wall construction. L. Lapersonnerie. No. 959,360; May 24; Sp. p. 6356; Gaz. vol. 154; p. 1063.
Condenser. A. Steinbart. No. 959,640; May 31; Sp. p. 6941; Gaz. vol. 154; p. 1182.
Condenser, Surface. L. R. Alberger. No. 957,175; May 10; Sp. p. 1449; Gaz. vol. 154; p. 250.
Condensing fluid substances. A. G. Kalb. No. 957,685; May 10; Sp. p. 2517; Gaz. vol. 154; p. 435.
Condensing fluid substances. A. G. Kalb. No. 957,686; May 10; Sp. p. 2519; Gaz. vol. 154; p. 435.
Condensing plant and air-pump, Steam-. W. Weir. No. 957,638; May 10; Sp. p. 2417; Gaz. vol. 154; p. 418.
Condiment-holder. G. B. Clemmer. No. 956,042; May 3; Sp. p. 949; Gaz. vol. 154; p. 152.
Connection, Flexible. F. W. Baaden. No. 960,061; May 31; Sp. p. 7906; Gaz. vol. 154; p. 1327.
Container. F. B. Davidson. No. 958,372; May 17; Sp. p. 4310; Gaz. vol. 154; p. 704.
Controller. F. D. Hallock. No. 958,803; May 24; Sp. p. 5194; Gaz. vol. 154; p. 875.
Controlling mechanism, Fluid-operated. J. W. Anderson. No. 959,417; May 24; Sp. p. 6455; Gaz. vol. 154; p. 1081.
Conveyer. C. D. Seeberger. No. 956,606; May 3; Sp. p. 215; Gaz. vol. 154; p. 37.
Conveyer-roller. S. L. Goldman. No. 960,010; May 31; Sp. p. 7781; Gaz. vol. 154; p. 1309.
Conveyers, Flight attachment for. A. J. Frase. No. 956,520; May 3; Sp. p. 23; Gaz. vol. 154; p. 7.
Conveying apparatus. E. G. Thomas. No. 958,044; May 17; Sp. p. 3462; Gaz. vol. 154; p. 590.
Cooker. G. G. Fox. No. 956,802; May 3; Sp. p. 648; Gaz. vol. 154; p. 103.
Cooking corn and other food products, Apparatus for. H. C. Baxter. No. 959,448; May 31; Sp. p. 6537; Gaz. vol. 154; p. 1117.
Cooking, &c., Electrically-heated apparatus suitable for. A. F. Berry. No. 959,913; May 31; Sp. p. 7545; Gaz. vol. 154; p. 1274.
Cooking utensils, Device for greasing. F. B. Bradbury. No. 956,929; May 3; Sp. p. 929; Gaz. vol. 154; p. 148.
Cooking vessel. W. Sylvester. No. 959,647; May 31; Sp. p. 6964; Gaz. vol. 154; p. 1185.
Cooking vessel. C. F. Molander. No. 960,105; May 31; Sp. p. 7982; Gaz. vol. 154; p. 1341.
Cooler: *See* Liquid-cooler.
Cooler. O. A. Kersey. No. 958,931; May 24; Sp. p. 5490; Gaz. vol. 154; p. 921.
Cooling apparatus for fluid or semi-fluid substances. E. Schou. No. 957,629; May 10; Sp. p. 2396; Gaz. vol. 154; p. 415.
Coop, Folding poultry-. R. Trumpold and A. Koerner. No. 957,274; May 10; Sp. p. 1630; Gaz. vol 154; p. 295.
Coop, Metal brooding-. H. H. Grant. No. 958,630; May 17; Sp. p. 4813; Gaz. vol. 154; p. 790.
Coop or crate. O. J. La Bauve. No. 957,068; May 3; Sp. p. 1223; Gaz. vol. 154; p. 194.
Coop or crate. O. J. La Bauve. No. 957,069; May 3; Sp. p. 1225; Gaz. vol. 154; p. 194.

Coop or crate, Folding. R. Trumpold and A. Koerner. No. 957,275; May 10; Sp. p. 1689; Gaz. vol. 154; p. 296.
Copper matte and ores, Treating impure. H. Maschmeyer. No. 957,231; May 10; Sp. p. 1587; Gaz. vol. 154; p. 280.
Copy-holder. B. F. Peets. No. 957,798; May 10; Sp. p. 2756; Gaz. vol. 154; p. 472.
Copying device, Press-. H. A. Benner. No. 959,292; May 24; Sp. p. 6222; Gaz. vol. 154; p. 1040.
Copying-machine. M. Drachmann. No. 956,951; May 3; Sp. p. 987; Gaz. vol. 154; p. 155.
Core, Collapsible. C. C. Crossley. No. 957,509; May 10; Sp. p. 2331; Gaz. vol. 154; p. 405.
Corer. J. E. Wyant. No. 959,189; May 24; Sp. p. 6021; Gaz. vol. 154; p. 1006.
Cork-tapering machine. I. T. McCready. No. 958,756; May 24; Sp. p. 5078; Gaz. vol. 154; p. 858.
Corn and bunion plaster. E. J. Ward. No. 958,199; May 17; Sp. p. 3808; Gaz. vol. 154; p. 644.
Corn cleaner and separator, Shelled-. D. B. Raworth. No. 959,260; May 24; Sp. p. 6159; Gaz. vol. 154; p. 1030.
Corn-crib. R. D. Ralston. No. 956,903; May 3; Sp. p. 880; Gaz. vol. 154; p. 140.
Corn-crib. C. M. Rowland. No. 957,381; May 10; Sp. p. 1905; Gaz. vol. 154; p. 331.
Corn-hanger. H. Anderson. No. 958,687; May 17; Sp. p. 4025; Gaz. vol. 154; p. 809.
Corn-husking machines, &c., Roll for. A. P. Wolfe. No. 959,004; May 31; Sp. p. 7519; Gaz. vol. 154; p. 1270.
Corn-picker. B. J. Kauil. No. 958,649; May 17; Sp. p. 4849; Gaz. vol. 154; p. 796.
Corner-joint. D. E. Hunter. No. 959,940; May 31; Sp. p. 7611; Gaz. vol. 154; p. 1284.
Corset. E. W. Gilbert and E. M. Martin. No. 956,957; May 3; Sp. p. 1000; Gaz. vol. 154; p. 157.
Corset-cover and bust-supporter, Combined. J. Marx and E. Maier. No. 957,617; May 10; Sp. p. 2374; Gaz. vol. 154; p. 412.
Cosmoscope. J. E. Williams. No. 957,529; May 10; Sp. p. 2205; Gaz. vol. 154; p. 381.
Cot-holder. M. R. Rodrigues. No. 958,895; May 24; Sp. p. 5428; Gaz. vol. 154; p. 909.
Cotton and beet chopper and cultivator. R. B. Morris and W. Kennedy. No. 958,153; May 17; Sp. p. 3715; Gaz. vol. 154; p. 628.
Cotton-chopper. R. T. Simmons. No. 959,031; May 24; Sp. p. 5671; Gaz. vol. 154; p. 954.
Cotton-chopping machine. J. M. Martin. No. 959,774; May 31; Sp. p. 7223; Gaz. vol. 154; p. 1226.
Cotton-cleaning machine. G. A. Humason. No. 959,746; May 31; Sp. p. 7171; Gaz. vol. 154; p. 1216.
Cotton-pickers, Split-lap preventer for. H. R. Whitehead. No. 957,450; May 10; Sp. p. 2046; Gaz. vol. 154; p. 355.
Cotton-picking machine. F. Prestwich. No. 959,603; May 31; Sp. p. 6875; Gaz. vol. 154; p. 1170.
Couch and bed, Combined. B. C. Poston. No. 960,195; May 31; Sp. p. 8155; Gaz. vol. 154; p. 1372.
Couch, Suspension-. J. B. Patterson. No. 959,795; May 31; Sp. p. 7277; Gaz. vol. 154; p. 1233.
Coupling: *See* Air-brake-pipe coupling; Car-coupling; Fire-hydrant coupling; Hose-coupling; Joint-coupling; Pipe-coupling; Shaft-coupling; Thill-coupling.
Coupling. F. C. Bowles. No. 956,753; May 3; Sp. p. 547; Gaz. vol. 154; p. 87.
Coupling. E. Marek. No. 957,695; May 10; Sp. p. 2536; Gaz. vol. 154; p. 439.
Cover-fastener. F. W. Garrett. No. 956,524; May 3; Sp. p. 29; Gaz. vol. 154; p. 8.
Crane. H. W. Jacobs. No. 956,856; May 3; Sp. p. 781; Gaz. vol. 154; p. 123.
Crane-controller. T. E. Barnum. No. 959,909; May 31; Sp. p. 7533; Gaz. vol. 154; p. 1278.
Crane, Pontoon-. G. H. Hulett. No. 960,224; May 31; Sp. p. 8208; Gaz. vol. 154; p. 1382.
Cranes, Counterweight for pontoon-. G. H. Hulett. No. 960,225; May 31; Sp. p. 8210; Gaz. vol. 154; p. 1382.
Crank. J. Drury. No. 958,104; May 17; Sp. p. 3616; Gaz. vol. 154; p. 610.
Crate and show-bench. W. O. Roy. No. 960,199; May 31; Sp. p. 8162; Gaz. vol. 154; p. 1373.
Crate, Collapsible. L. M. Leibowitz. No. 958,749; May 24; Sp. p. 5064; Gaz. vol. 154; p. 856.
Crate, Folding. A. J. Parmeter. No. 957,796; May 10; Sp. p. 2752; Gaz. vol. 154; p. 471.
Crate, Folding egg-. C. T. Sibold. No. 959,627; May 31; Sp. p. 6915; Gaz. vol. 154; p. 1178.
Crating apparatus, Chicken-. J. De Young. No. 959,121; May 24; Sp. p. 5869; Gaz. vol. 154; p. 983.
Crib, Rocking. W. B. Walton and N. H. Kelm. No. 956,913; May 3; Sp. p. 900; Gaz. vol. 154; p. 142.
Cross-arm brace. J. D. Love. No. 958,933; May 24; Sp. p. 5491; Gaz. vol. 154; p. 921.
Cross-head. W. J. Wassmann. No. 957,920; May 17; Sp. p. 3033; Gaz. vol. 154; p. 544.
Cross-roll trough. H. D. Pennington. No. 959,433; May 24; Sp. p. 6480; Gaz. vol. 154; p. 1086.
Cross-slide-operating mechanism. H. B. Lester. No. 957,224; May 10; Sp. p. 1575; Gaz. vol. 154; p. 278.
Cross-tie, Metallic. W. E. Cole and W. W. Candler. No. 957,497; May 10; Sp. p. 2141; Gaz. vol. 154; p. 370.
Crown-block. F. S. Barkelew. No. 956,926; May 3; Sp. p. 926; Gaz. vol. 154; p. 147.
Crusher. A. Niedermeyer and R. Bernhard. No. 960,231; May 31; Sp. p. 8226; Gaz. vol. 154; p. 1384.
Crusher. A. Niedermeyer and R. Bernhard. No. 960,232; May 31; Sp. p. 8229; Gaz. vol. 154; p. 1385.
Crushing or pulverizing machine. J. L. Hiller. No. 958,921; May 24; Sp. p. 5474; Gaz. vol. 154; p. 917.
Crushing-roll. R. Bernhard. No. 956,878; May 3; Sp. p. 819; Gaz. vol. 154; p. 131.
Cuffs and the like, Machine for folding blanks for. W. L. Dixon. No. 956,950; May 3; Sp. p. 967; Gaz. vol. 154; p. 155.
Culinary implement. T. J. Fischer. No. 959,210; May 24; Sp. p. 6058; Gaz. vol. 154; p. 1013.
Culinary utensils, Alarm device for. P. C. Emslie. No. 957,683; May 10; Sp. p. 2473; Gaz. vol. 154; p. 427.
Cultivator. J. P. Meyers. No. 957,350; May 10; Sp. p. 1862; Gaz. vol. 154; p. 324.
Cultivator. P. T. Zollars. No. 959,683; May 31; Sp. p. 7042; Gaz. vol. 154; p. 1196.
Cultivator attachment. C. Sell. No. 957,579; May 10; Sp. p. 2297; Gaz. vol. 154; p. 398.
Cultivator attachment, Swivel-action. J. T. Foulke. No. 957,322; May 10; Sp. p. 1789; Gaz. vol. 154; p. 312.
Cultivator, Hand-. E. Piggott. No. 957,573; May 10; Sp. p. 2288; Gaz. vol. 154; p. 396.
Cultivator, Pivot-axle. H. W. Elsenhart. No. 958,609; May 17; Sp. p. 4776; Gaz. vol. 154; p. 784.
Cultivator-shovel. W. J. Herscher. No. 959,528; May 31; Sp. p. 6720; Gaz. vol. 154; p. 1144.
Culvert. F. B. Zieg. No. 960,137; May 31; Sp. p. 8044; Gaz. vol. 154; p. 1351.
Cup: *See* Drinking-cup; Grease-cup; Leather cup; Oil-cup.
Current-controller. B. H. Parker. No. 957,516; May 10; Sp. p. 2177; Gaz. vol. 154; p. 376.
Current-motor. T. J. Steele. No. 957,388; May 10; Sp. p. 1919; Gaz. vol. 154; p. 334.
Current-motor. R. C. Schreiber. No. 958,014; May 17; Sp. p. 3516; Gaz. vol. 154; p. 578.
Current-motor. O. M. Butcher. No. 958,590; May 17; Sp. p. 4735; Gaz. vol. 154; p. 778.
Current motor, Alternating-. V. A. Fynn. No. 956,893; May 3; Sp. p. 857; Gaz. vol. 154; p. 136.
Current motor, Alternating-. V. A. Fynn. No. 956,894; May 3; Sp. p. 858; Gaz. vol. 154; p. 137.
Current motor, Alternating-. V. A. Fynn. No. 957,505; May 10; Sp. p. 2156; Gaz. vol. 154; p. 373.
Current motor, Alternating-. V. A. Fynn. No. 957,668; May 10; Sp. p. 2486; Gaz. vol. 154; p. 430.
Current motor and generator, Single-phase alternate-. V. A. Fynn. No. 956,845; May 3; Sp. p. 748; Gaz. vol. 154; p. 119.
Current-reducer. B. L. Haddield and H. A. Hall. No. 958,111; May 17; Sp. p. 3630; Gaz. vol. 154; p. 612.
Currents, Method and apparatus for producing high-frequency oscillating. J. H. Rogers. No. 958,829; May 24; Sp. p. 5254; Gaz. vol. 154; p. 886.
Curtain-fixture. H. E. Keeler. No. 957,345; May 10; Sp. p. 1835; Gaz. vol. 154; p. 320.
Curtain-fixture. H. E. Keeler. No. 957,346; May 10; Sp. p. 1840; Gaz. vol. 154; p. 320.
Curtain-hoisting apparatus. A. M. Coyle. No. 959,999; May 31; Sp. p. 7750; Gaz. vol. 154; p. 1305.
Curtain ring and hook. A. M. Clerk. No. 959,921; May 31; Sp. p. 7561; Gaz. vol. 154; p. 1277.
Curtain-roller, Automatic. E. Döring. No. 958,605; May 17; Sp. p. 4772; Gaz. vol. 154; p. 783.
Curtain-stretcher. J. S. Heeley. No. 960,012; May 31; Sp. p. 7754; Gaz. vol. 154; p. 1310.
Curve-scriber. O. A. Zeier. No. 956,920; May 3; Sp. p. 916; Gaz. vol. 154; p. 145.
Cushion edge. F. H. Hampton. No. 958,115; May 17; Sp. p. 3638; Gaz. vol. 154; p. 613.
Cushion edge. F. H. Hampton. No. 958,116; May 17; Sp. p. 3640; Gaz. vol. 154; p. 614.
Cushion-wheel. R. E. Cole. No. 960,154; May 31; Sp. p. 8071; Gaz. vol. 154; p. 1357.
Cuspidor. H. L. Nier. No. 958,524; May 17; Sp. p. 4612; Gaz. vol. 154; p. 757.
Cuspidor. F. J. Cross. No. 959,117; May 24; Sp. p. 5802; Gaz. vol. 154; p. 982.
Cuspidor-cleaner. E. Huddart. No. 956,641; May 3; Sp. p. 296; Gaz. vol. 154; p. 48.
Cut-off and filter, Automatic. F. J. Crane. No. 959,315; May 24; Sp. p. 6263; Gaz. vol. 154; p. 1048.
Cutlery-cleaning machine, Table-. A. Uhlyarik. No. 958,843; May 24; Sp. p. 5284; Gaz. vol. 154; p. 891.
Cutter: *See* Band-cutter; Bank-note cutter; Butter-cutter; Cigar-cutter; Cigar-tip cutter; Cloth-cutter; Glass-cutter; Grass and ditch-line cutter; Harvester-cutter; Noodle-cutter; Paper-cutter; Potato-cutter; Revolving cutter; Runner-cutter; Stalk-cutter; Tube-cutter.
Cutter. R. L. Dorsey. No. 958,377; May 17; Sp. p. 4323; Gaz. vol. 154; p. 706.
Cutting and pruning tool. P. P. B. Brooks. No. 958,587; May 17; Sp. p. 4731; Gaz. vol. 154; p. 777.
Cutting-machine. J. H. F. Clifton. No. 957,747; May 10; Sp. p. 2642; Gaz. vol. 154; p. 455.
Cutting-machine guard. S. B. Blanchard, D. R. Ubl, and F. W. Koch. No. 956,564; May 3; Sp. p. 118; Gaz. vol. 154; p. 22.
Cycle attachment, Motor-. A. W. Edwards. No. 958,607; May 17; Sp. p. 4774; Gaz. vol. 154; p. 783.
Cylinder lubrication. J. G. Leyner. No. 958,200; May 17; Sp. p. 3938; Gaz. vol. 154; p. 663.
Cylinders, Making toothed. E. J. O'Brien. No. 957,440; May 10; Sp. p. 2029; Gaz. vol. 154; p. 352.

Cylinders, Pressure-equalizing mechanism for. G. W. Nistle. No. 957,241; May 10; Sp. p. 1605; Gaz. vol. 154; p. 283.
Damper control, Automatic. H. Peterson. No. 958,542; May 3; Sp. p. 80; Gaz. vol. 154; p. 14.
Dams, Device for lowering and hoisting head-gates for. N. Isachsen. No. 958,401; May 17; Sp. p. 4371; Gaz. vol. 154; p. 714.
Dashboard, Vehicle-. J. F. Jaquet. No. 957,858; May 10; Sp. p. 2869; Gaz. vol. 154; p. 491.
Davit for hoisting and lowering boats. A. Welin. No. 958,340; May 17; Sp. p. 4250; Gaz. vol. 154; p. 693.
Decanting oils and liquids, Tilting appliance for. P. T. White and G. Robertson. No. 957,829; May 10; Sp. p. 2804; Gaz. vol. 154; p. 482.
Decorticating the fibrous leaves or stems of plants, Machine for. E. Wright. No. 960,134; May 31; Sp. p. 8030; Gaz. vol. 154; p. 1350.
Decoy. C. A. Cunningham. No. 957,750; May 10; Sp. p. 2649; Gaz. vol. 154; p. 456.
Delivering articles, Device for automatically. N. R. Stiles. No. 958,550; May 17; Sp. p. 4671; Gaz. vol. 154; p. 768.
Dental attachment. W. J. Brady. No. 957,032; May 3; Sp. p. 1153; Gaz. vol. 154; p. 182.
Dental-bracket tray, Sanitary. G. Holtz. No. 959,534; May 31; Sp. p. 6732; Gaz. vol. 154; p. 1146.
Dental chair. H. E. Weber. No. 958,048; May 17; Sp. p. 3459; Gaz. vol. 154; p. 501.
Dental chair. F. Ritter. No. 959,608; May 31; Sp. p. 6883; Gaz. vol. 154; p. 1171.
Dental cuspidor. I. M. Hair. No. 957,671; May 10; Sp. p. 2495; Gaz. vol. 154; p. 431.
Dental engines, Hydraulic motor for. O. L. Kellett. No. 959,352; May 24; Sp. p. 6342; Gaz. vol. 154; p. 1060.
Dental forceps. E. C. Lombard. No. 959,365; May 24; Sp. p. 6366; Gaz. vol. 154; p. 1064.
Dental, medical, or surgical purposes, Switchboard for. D. Stern. No. 959,641; May 31; Sp. p. 6942; Gaz. vol. 154; p. 1183.
Dental mouth-prop. W. Adelman. No. 959,684; May 31; Sp. p. 7045; Gaz. vol. 154; p. 1196.
Dentistry, Impression-tray for. M. M. Kerr. No. 957,563; May 10; Sp. p. 2273; Gaz. vol. 154; p. 393.
Dentist's cotton-holder and waste-receptacle. B. G. Simmons. No. 960,236; May 31; Sp. p. 8236; Gaz. vol. 154; p. 1386.
Denture. E. B. Crane. No. 956,843; May 3; Sp. p. 747; Gaz. vol. 154; p. 118.
Denture. S. G. Supplee. No. 957,913; May 17; Sp. p. 3020; Gaz. vol. 154; p. 542.
Depositing-box and time-stamp. C. A. Nauck. No. 957,083; May 3; Sp. p. 1253; Gaz. vol. 154; p. 199.
Derrick. J. McVeigh. No. 957,239; May 10; Sp. p. 1602; Gaz. vol. 154; p. 283.
Desk. I. M. Tindall. No. 957,583; May 10; Sp. p. 2301; Gaz. vol. 154; p. 399.
Desk and seat, Combined school. T. Kundtz. No. 957,426; May 10; Sp. p. 2004; Gaz. vol. 154; p. 346.
Desks, Ink-bottle holder for. V. D. Maney. No. 959,772; May 31; Sp. p. 7221; Gaz. vol. 154; p. 1225.
Detinning process. C. J. Reed. No. 956,177; May 17; Sp. p. 3768; Gaz. vol. 154; p. 637.
Developing-tank. L. N. Chaplin. No. 958,903; May 24; Sp. p. 5600; Gaz. vol. 154; p. 941.
Developing-tank, Adjustable-rack reversible. P. Y. Howe. No. 958,500; May 17; Sp. p. 4561; Gaz. vol. 154; p. 748.
Diaper-cleaner. G. M. Scott. No. 956,831; May 3; Sp. p. 723; Gaz. vol. 154; p. 114.
Die: *See* Built-up die; Leather-working die.
Dies, Machine for engraving or sinking. J. F. Keller and W. A. Warman. No. 956,769; May 3; Sp. p. 577; Gaz. vol. 154; p. 92.
Digester and the like. C. H. Craigue. No. 959,314; May 24; Sp. p. 6260; Gaz. vol. 154; p. 1048.
Digger: *See* Post-hole digger; Potato-digger.
Dish-drainer. M. A. Dennis. No. 958,867; May 24; Sp. p. 5326; Gaz. vol. 154; p. 896.
Dish-washer. A. Walther. No. 958,948; May 24; Sp. p. 5514; Gaz. vol. 154; p. 926.
Dish-washer. M. W. Larson. No. 959,562; May 31; Sp. p. 6799; Gaz. vol. 154; p. 1157.
Dish-washing machine. J. G. Knapp. No. 959,355; May 24; Sp. p. 6348; Gaz. vol. 154; p. 1061.
Disinfectant-holder. C. J. Walz. No. 957,440; May 10; Sp. p. 2045; Gaz. vol. 154; p. 355.
Disinfecting device. F. La Fayuays. No. 958,250; May 17; Sp. p. 3936; Gaz. vol. 154; p. 662.
Disinfecting device. A. B. Buckland. No. 959,111; May 24; Sp. p. 5849; Gaz. vol. 154; p. 980.
Dispensing mobile substances, Apparatus for. C. Christensen. No. 959,717; May 31; Sp. p. 7105; Gaz. vol. 154; p. 1206.
Display apparatus. E. F. Cannon. No. 958,475; May 17; Sp. p. 4517; Gaz. vol. 154; p. 740.
Display-box. C. M. Blackman. No. 959,701; May 31; Sp. p. 7078; Gaz. vol. 154; p. 1201.
Display-card. T. E. Wiedersheim, Jr. No. 956,916; May 3; Sp. p. 908; Gaz. vol. 154; p. 144.
Display-card holder, Adjustable. L. Bland. No. 958,082; May 17; Sp. p. 3574; Gaz. vol. 154; p. 602.
Display-case. D. G. Forchheimer. No. 957,461; May 10; Sp. p. 2069; Gaz. vol. 154; p. 359.
Display device. A. S. Spiegel. No. 957,119; May 3; Sp. p. 1320; Gaz. vol. 154; p. 211.
Display-machine. J. S. Anderson. No. 957,640; May 10; Sp. p. 2422; Gaz. vol. 154; p. 419.
Display or color card. G. Benze. No. 958,080; May 17; Sp. p. 3570; Gaz. vol. 154; p. 603.
Display or color card. G. Benze. No. 958,218; May 17; Sp. p. 3845; Gaz. vol. 154; p. 650.
Distillery-slop, Desiccating. E. H. Brinkmann and H. O. Wente. No. 958,902; May 24; Sp. p. 5440; Gaz. vol. 154; p. 911.
Distilling apparatus. G. LAcsay. No. 957,613; May 10; Sp. p. 2355; Gaz. vol. 154; p. 410.
Distributing-board and cross-connecting rack, Fused. B. G. Hardgrave. No. 958,806; May 24; Sp. p. 5204; Gaz. vol. 154; p. 878.
Distributing system, Automatic. L. D. Kellogg. No. 960,176; May 31; Sp. p. 8112; Gaz. vol. 154; p. 1365.
Doll, Clown-. O. A. Flynn. No. 958,387; May 17; Sp. p. 4343; Gaz. vol. 154; p. 709.
Door. A. Ritter. No. 958,976; May 24; Sp. p. 5573; Gaz. vol. 154; p. 936.
Door and window frame, Metal. S. C. Monberg. No. 958,063; May 17; Sp. p. 4578; Gaz. vol. 154; p. 801.
Door catch or check. G. W. Mallory. No. 959,241; May 24; Sp. p. 6126; Gaz. vol. 154; p. 1023.
Door check and buffer, Combined. L. L. Hamilton. No. 958,959; May 24; Sp. p. 5536; Gaz. vol. 154; p. 929.
Door-closer. H. J. Wentz. No. 957,282; May 10; Sp. p. 1702; Gaz. vol. 154; p. 293.
Door-closer. M. K. Snyder. No. 959,175; May 24; Sp. p. 5093; Gaz. vol. 154; p. 1002.
Door, Collapsible. H. Hedwall. No. 958,961; May 24; Sp. p. 5510; Gaz. vol. 154; p. 930.
Door-controlling mechanism. H. G. Voight and N. B. Hurd. No. 958,447; May 17; Sp. p. 4464; Gaz. vol. 154; p. 730.
Door-fastening device. L. A. Day. No. 959,476; May 31; Sp. p. 6606; Gaz. vol. 154; p. 1127.
Door, Flush-hinge. J. G. Schmidt. No. 960,203; May 31; Sp. p. 8168; Gaz. vol. 154; p. 1374.
Door-frame. E. A. Ekedahl. No. 958,795; May 24; Sp. p. 5182; Gaz. vol. 154; p. 872.
Door, Grain-. A. A. Kramer. No. 957,424; May 10; Sp. p. 2001; Gaz. vol. 154; p. 345.
Door-keeper, Guard. W. C. Myers and T. Alexander. No. 958,667; May 17; Sp. p. 4886; Gaz. vol. 154; p. 802.
Door-lock. J. Johnson. No. 958,406; May 17; Sp. p. 4377; Gaz. vol. 154; p. 715.
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Door, Metal. S. F. Myers. No. 959,782; May 31; Sp. p. 7237; Gaz. vol. 154; p. 1229.
Door-opening device. T. J. C. Schirrmacher. No. 959,615; May 31; Sp. p. 6899; Gaz. vol. 154; p. 1174.
Door-operating device, Jail-. C. M. Finch and F. A. Koetitz. No. 959,329; May 24; Sp. p. 6297; Gaz. vol. 154; p. 1053.
Door-operating means, Sliding-. P. Wheeler. No. 957,284; May 10; Sp. p. 1707; Gaz. vol. 154; p. 293.
Door-operator. P. T. Handiges. No. 959,523; May 31; Sp. p. 6709; Gaz. vol. 154; p. 1142.
Door-operator, Electric. T. Nakahara. No. 957,572; May 10; Sp. p. 2286; Gaz. vol. 154; p. 396.
Door or window guard. E. L. Drinkwater. No. 958,481; May 17; Sp. p. 4529; Gaz. vol. 154; p. 741.
Door, Screen-. B. C. Rockwell. No. 957,100; May 3; Sp. p. 1287; Gaz. vol. 154; p. 204.
Door-stop. E. Vanoni. No. 957,584; May 10; Sp. p. 2303; Gaz. vol. 154; p. 400.
Door, Turning. A. Goebeaut. No. 959,514; May 31; Sp. p. 6697; Gaz. vol. 154; p. 1140.
Double-facer. F. Busald. No. 956,794; May 3; Sp. p. 629; Gaz. vol. 154; p. 100.
Doubling and twisting machines, Stop-motion for. R. S. Reinhardt. No. 959,263; May 24; Sp. p. 6163; Gaz. vol. 154; p. 1030.
Dough and like plastic substances, Machine for mixing and kneading. J. B. and C. B. Pointon. No. 959,963; May 31; Sp. p. 7665; Gaz. vol. 154; p. 1293.
Dough-molding machine. F. Streich. No. 957,390; May 10; Sp. p. 1921; Gaz. vol. 154; p. 334.
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Draft-evener. G. I. Bristol. No. 957,736; May 10; Sp. p. 2614; Gaz. vol. 154; p. 452.
Draft mechanism, Six-horse. H. Meesman. No. 957,076; May 3; Sp. p. 1242; Gaz. vol. 154; p. 197.
Drag, Horse-. W. C. Braun. No. 957,185; May 10; Sp. p. 1473; Gaz. vol. 154; p. 263.
Drainage connection. A. I. Jones. No. 958,876; May 24; Sp. p. 5380; Gaz. vol. 154; p. 902.
Draping-machine. S. S. Sencenbaugh. No. 959,800; May 31; Sp. p. 7312; Gaz. vol. 154; p. 1238.
Drawer, Cabinet-. A. T. Weiss. No. 958,203; May 17; Sp. p. 3817; Gaz. vol. 154; p. 645.
Dredging and other similar purposes, Submarine device for. W. G. Fitzgerald and J. G. Flood. No. 958,615; May 17; Sp. p. 4766; Gaz. vol. 154; p. 786.
Dredging apparatus. W. R. Comfort. No. 959,115; May 24; Sp. p. 5887; Gaz. vol. 154; p. 982.
Drier: *See* Clothes-drier.
Drying-machine. G. A. Cutter. No. 959,722; May 31; Sp. p. 7117; Gaz. vol. 154; p. 1206.

Drying-machine motor, Centrifugal-. J. W. and W. A. Macfarlane. No. 959,567; May 31; Sp. p. 6808; Gaz. vol. 154; p. 1158.
Drying textile and other materials, Apparatus for. A. Bolez. No. 958,469; May 17; Sp. p. 4507; Gaz. vol. 154; p. 738.
Drift-bolt puller. J. A. King. No. 957,565; May 10; Sp. p. 2276; Gaz. vol. 154; p. 394.
Drill: *See* Electric drill; Roller-drill.
Drill. A. Godlewski. No. 959,055; May 24; Sp. p. 5722; Gaz. vol. 154; p. 961.
Drill-brace. C. Warmbeltz. No. 959,824; May 31; Sp. p. 7339; Gaz. vol. 154; p. 1244.
Drill-mounting. C. C. Hansen. No. 956,850; May 3; Sp. p. 767; Gaz. vol. 154; p. 121.
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Drilling-machine. N. D. Levin. No. 958,814; May 24; Sp. p. 5215; Gaz. vol. 154; p. 880.
Drilling-machine. H. J. Harvey. No. 959,007; May 24; Sp. p. 5629; Gaz. vol. 154; p. 946.
Drinking-cup, Collapsible. M. Sholl. No. 957,264; May 10; Sp. p. 1662; Gaz. vol. 154; p. 292.
Drinking vessels, Prophylactic. J. L. Sowell. No. 957,267; May 10; Sp. p. 1668; Gaz. vol. 154; p. 293.
Drinking-vessels, Sanitary cleansing and indicating device for. C. W. Thornton. No. 959,970; May 31; Sp. p. 7684; Gaz. vol. 154; p. 1295.
Driving connection, Flexible. S. M. Vauclain. No. 957,279; May 10; Sp. p. 1697; Gaz. vol. 154; p. 297.
Driving mechanism. C. W. Willette. No. 956,658; May 3; Sp. p. 326; Gaz. vol. 154; p. 54.
Driving mechanism. W. A. McKinney. No. 956,721; May 3; Sp. p. 475; Gaz. vol. 154; p. 76.
Drop-siding and matched material, Apparatus for laying. J. E. Norby. No. 958,671; May 17; Sp. p. 4892; Gaz. vol. 154; p. 803.
Dropper. T. A. De Vilbiss. No. 959,847; May 31; Sp. p. 7352; Gaz. vol. 154; p. 1252.
Dropping mechanism, Differential. F. P. Murphey. No. 960,187; May 31; Sp. p. 8136; Gaz. vol. 154; p. 1369.
Dumb-waiter. W. B. Updegraff. No. 957,015; May 3; Sp. p. 1121; Gaz. vol. 154; p. 176.
Duplicating-machine. J. G. Dailey. No. 958,098; May 17; Sp. p. 3607; Gaz. vol. 154; p. 608.
Dust collection, Apparatus for. O. M. Morse. No. 958,666; May 17; Sp. p. 4883; Gaz. vol. 154; p. 802.
Dust-collector. H. Hill. No. 959,936; May 31; Sp. p. 7604; Gaz. vol. 154; p. 1283.
Dust-pan. F. Hubert. No. 956,968; May 3; Sp. p. 1027; Gaz. vol. 154; p. 161.
Dust-pan. C. W. Koertner. No. 958,255; May 17; Sp. p. 3928; Gaz. vol. 154; p. 661.
Dust-pan. M. Feld and D. Froehlich. No. 959,026; May 31; Sp. p. 7569; Gaz. vol. 154; p. 1279.
Dust-remover, Vacuum. J. G. Meyer. No. 956,862; May 3; Sp. p. 782; Gaz. vol. 154; p. 125.
Dye. F. Runkel and M. Hersberg. No. 958,830; May 24; Sp. p. 5256; Gaz. vol. 154; p. 886.
Dye and making, Black mono-azo. F. Scholl. No. 958,774; May 24; Sp. p. 5119; Gaz. vol. 154; p. 865.
Dye and making, Orange disazo. M. Böniger. No. 959,109; May 24; Sp. p. 5846; Gaz. vol. 154; p. 980.
Dye and making same, Green vat. H. Kraft. No. 960,093; May 31; Sp. p. 7969; Gaz. vol. 154; p. 1339.
Dye and making same, Sulfur. R. Haugwitz. No. 958,640; May 17; Sp. p. 4835; Gaz. vol. 154; p. 794.
Dye and making, Vat. A. Schmidt and E. Bryk. No. 959,617; May 31; Sp. p. 6901; Gaz. vol. 154; p. 1174.
Dye, Blue vat. W. Bauer and A. Herre. No. 958,464; May 17; Sp. p. 4499; Gaz. vol. 154; p. 736.
Dye, Blue vat. W. Bauer and A. Herre. No. 958,465; May 17; Sp. p. 4500; Gaz. vol. 154; p. 737.
Dye, Gray anthraquinone. W. Mieg. No. 960,182; May 31; Sp. p. 8128; Gaz. vol. 154; p. 1367.
Dye, Orange azo. K. Schnitzspahn. No. 959,078; May 24; Sp. p. 5788; Gaz. vol. 154; p. 970.
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Dye, Wool. W. Berchelmann. No. 958,850; May 24; Sp. p. 5307; Gaz. vol. 154; p. 894.
Dyeing-machine. J. Richardson and J. F. Neef. No. 957,301; May 10; Sp. p. 2761; Gaz. vol. 154; p. 473.
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Ear-muff. P. Loewe. No. 958,263; May 17; Sp. p. 3943; Gaz. vol. 154; p. 664.
Educational apparatus. L. Barritt. No. 959,987; May 31; Sp. p. 7721; Gaz. vol. 154; p. 1301.
Educational appliance. J. Spencer. No. 958,781; May 24; Sp. p. 5144; Gaz. vol. 154; p. 867.
Egg-batter, Desiccating. J. M. Hussey. No. 957,061; May 3; Sp. p. 1207; Gaz. vol. 154; p. 192.
Egg-beater. J. W. Horner and G. L. Patterson. No. 959,536; May 31; Sp. p. 6737; Gaz. vol. 154; p. 1147.
Egg-beater. J. N. Ramstad. No. 959,606; May 31; Sp. p. 6880; Gaz. vol. 154; p. 1171.
Egg-beater and cream-whipper. H. K. Gilsmour. No. 959,731; May 31; Sp. p. 7141; Gaz. vol. 154; p. 1212.
Egg-box. C. H. Kletcker. No. 957,218; May 10; Sp. p. 1552; Gaz. vol. 154; p. 275.
Egg-carrier. E. O. Bulman. No. 958,087; May 17; Sp. p. 3585; Gaz. vol. 154; p. 604.
Egg-preserving device. D. A. Callaway. No. 956,568; May 3; Sp. p. 127; Gaz. vol. 154; p. 23.
Egg-separator. M. Burrmeister. No. 956,678; May 3; Sp. p. 372; Gaz. vol. 154; p. 61.
Elastic cellular filling material, Apparatus for use in the manufacture of. R. J. Caldwell and P. Pfleumer. No. 957,034; May 3; Sp. p. 1150; Gaz. vol. 154; p. 183.
Electric apparatus. E. F. Jackson and H. M. Schelbe. No. 959,544; May 31; Sp. p. 6757; Gaz. vol. 154; p. 1150.
Electric arc or resistance and induction furnace, Combined. J. H. Reid. No. 956,544; May 3; Sp. p. 83; Gaz. vol. 154; p. 15.
Electric battery. F. A. Decker. No. 957,192; May 10; Sp. p. 1483; Gaz. vol. 154; p. 265.
Electric cable. R. F. Hall. No. 957,506; May 10; Sp. p. 2158; Gaz. vol. 154; p. 373.
Electric-circuit breaker. W. H. Scott. No. 959,171; May 24; Sp. p. 5985; Gaz. vol. 154; p. 1000.
Electric controllers, Lever-check for. J. Thomas. No. 958,564; May 17; Sp. p. 4684; Gaz. vol. 154; p. 769.
Electric drill, Portable. W. C. Hafemeister. No. 956,849; May 3; Sp. p. 763; Gaz. vol. 154; p. 120.
Electric-fixture fitting. E. C. Ruth. No. 956,603; May 3; Sp. p. 211; Gaz. vol. 154; p. 36.
Electric furnace. H. W. Hixon. No. 957,058; May 3; Sp. p. 1200; Gaz. vol. 154; p. 191.
Electric furnace. H. W. Hixon. No. 957,337; May 10; Sp. p. 1822; Gaz. vol. 154; p. 317.
Electric furnace. H. A. Dunne. No. 958,855; May 24; Sp. p. 5314; Gaz. vol. 154; p. 895.
Electric generator. J. L. Milton. No. 959,954; May 31; Sp. p. 7647; Gaz. vol. 154; p. 1289.
Electric generator and motor. C. T. Hibbard. No. 957,209; May 10; Sp. p. 1535; Gaz. vol. 154; p. 271.
Electric heater. J. C. Logan. No. 957,226; May 10; Sp. p. 1580; Gaz. vol. 154; p. 279.
Electric heater. G. E. Stevens. No. 959,399; May 24; Sp. p. 6427; Gaz. vol. 154; p. 1075.
Electric heater. J. F. McIlroy. No. 959,872; May 31; Sp. p. 7452; Gaz. vol. 154; p. 1260.
Electric-light fixtures, Swivel-joint for. G. Vossberg. No. 958,448; May 17; Sp. p. 4466; Gaz. vol. 154; p. 730.
Electric-light hanger. W. McCance. No. 958,269; May 17; Sp. p. 3952; Gaz. vol. 154; p. 666.
Electric machine, Dynamo-. C. A. Pallander and T. S. Scott. No. 956,543; May 3; Sp. p. 82; Gaz. vol. 154; p. 15.
Electric machine, Dynamo-. E. M. Tingley. No. 956,549; May 3; Sp. p. 92; Gaz. vol. 154; p. 17.
Electric machine, Dynamo-. J. E. Webster and J. L. Davis. No. 956,554; May 3; Sp. p. 99; Gaz. vol. 154; p. 18.
Electric machine, Dynamo-. F. B. Howell. No. 956,855; May 3; Sp. p. 780; Gaz. vol. 154; p. 123.
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Electric machine, Dynamo-. E. M. Tingley. No. 959,651; May 31; Sp. p. 6970; Gaz. vol. 154; p. 1186.
Electric machine, Dynamo-. L. E. Underwood and C. P. Smith. No. 959,901; May 31; Sp. p. 7518; Gaz. vol. 154; p. 1270.
Electric machine, Dynamo-. J. E. Noeggerath. No. 959,959; May 31; Sp. p. 7657; Gaz. vol. 154; p. 1291.
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Electric machines, Armature-winding coil for dynamo-. J. D. Forrer. No. 957,877; May 17; Sp. p. 2922; Gaz. vol. 154; p. 529.
Electric machines, Brush-holder for dynamo-. E. M. Tingley. No. 956,548; May 3; Sp. p. 90; Gaz. vol. 154; p. 16.
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Electric machines, Means for cooling dynamo-. H. Roos. No. 957,102; May 3; Sp. p. 1291; Gaz. vol. 154; p. 205.
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Electric meter. C. E. J. O'Keenan. No. 957,792; May 10; Sp. p. 2746; Gaz. vol. 154; p. 470.

Electric motor. C. B. Avery. No. 958,354; May 17; Sp. p. 4281; Gaz. vol. 154; p. 696.
Electric plug. R. R. Lang. No. 957,891; May 17; Sp. p. 2955; Gaz. vol. 154; p. 534.
Electric rosette. J. E. Crossley. No. 957,547; May 10; Sp. p. 2244; Gaz. vol. 154; p. 388.
Electric switch. J. H. Champ and T. H. Schutt. No. 956,679; May 3; Sp. p. 374; Gaz. vol. 154; p. 62.
Electric switch. E. M. Coffin. (Reissue.) No. 13,114; May 10; Sp. p. 2879; Gaz. vol. 154; p. 495.
Electric switch. F. L. Collins and E. A. Hultz. No. 958,598; May 17; Sp. p. 4752; Gaz. vol. 154; p. 780.
Electric switch. J. F. McElroy. No. 959,248; May 24; Sp. p. 6138; Gaz. vol. 154; p. 1025.
Electric switch. W. D. R. MacDiarmid. No. 959,769; May 31; Sp. p. 7214; Gaz. vol. 154; p. 1224.
Electric switches, Pull-socket for. F. Barr. No. 958,988; May 24; Sp. p. 5891; Gaz. vol. 154; p. 940.
Electrical-conductor hanger. W. Schaake. No. 958,834; May 24; Sp. p. 5266; Gaz. vol. 154; p. 887.
Electrical connector. F. L. Washburn and G. E. Lawrence. No. 959,977; May 31; Sp. p. 7697; Gaz. vol. 154; p. 1297.
Electrical distribution system. W. A. Turbayne. No. 957,523; May 10; Sp. p. 2193; Gaz. vol. 154; p. 379.
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Electrical purposes, Coil for. E. W. Jodrey. No. 957,213; May 10; Sp. p. 1543; Gaz. vol. 154; p. 273.
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Electrical switchboard. J. A. Schaefer. No. 959,886; May 31; Sp. p. 7486; Gaz. vol. 154; p. 1265.
Electrically-actuated switch. F. G. Proutt. No. 959,257; May 24; Sp. p. 6155; Gaz. vol. 154; p. 1029.
Electrically-heated roller. G. H. Wade. No. 957,824; May 10; Sp. p. 2797; Gaz. vol. 154; p. 480.
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Electricity-meter, Prepayment. H. Aron. No. 957,535; May 10; Sp. p. 2221; Gaz. vol. 154; p. 384.
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Electrode for arc-lamps. G. M. Dyott. No. 956,519; May 3; Sp. p. 22; Gaz. vol. 154; p. 7.
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Elevating apparatus, Box and package. A. O. Brigance. No. 956,758; May 3; Sp. p. 561; Gaz. vol. 154; p. 88.
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Elevator. W. Reubold. No. 957,379; May 10; Sp. p. 1903; Gaz. vol. 154; p. 331.
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Elevator apparatus. P. H. Melander. No. 959,778; May 31; Sp. p. 7231; Gaz. vol. 154; p. 1227.
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Elevator freight-compartments, Door attachment for. B. A. Snyder and M. A. Custis. No. 957,807; May 10; Sp. p. 2770; Gaz. vol. 154; p. 475.
Elevator interlocking safety device. R. P. Lumley and H. G. Hillman. No. 956,536; May 3; Sp. p. 57; Gaz. vol. 154; p. 12.
Elevator safety attachment. P. Walker. No. 956,552; May 3; Sp. p. 96; Gaz. vol. 154; p. 18.
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Emery-wheel hood. G. W. Furrow. No. 956,762; May 3; Sp. p. 563; Gaz. vol. 154; p. 90.
Energy storing and using system. G. W. Bulley. No. 958,853; May 24; Sp. p. 5310; Gaz. vol. 154; p. 894.
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Engine. G. L. Borden. No. 958,583; May 17; Sp. p. 4723; Gaz. vol. 154; p. 770.
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Engine primer, Gas-. L. R. Dalrymple. No. 957,500; May 10; Sp. p. 2147; Gaz. vol. 154; p. 371.
Engine-starter. E. N. Rittase. No. 956,646; May 3; Sp. p. 304; Gaz. vol. 154; p. 50.
Engine starter, Explosive-. G. Burson. No. 960,072; May 31; Sp. p. 7926; Gaz. vol. 154; p. 1330.
Engine starter, Gas-. G. C. Hicks, Jr. No. 956,852; May 3; Sp. p. 770; Gaz. vol. 154; p. 122.
Engine starter, Hydrocarbon-. O. Brisbois. No. 959,990; May 31; Sp. p. 7727; Gaz. vol. 154; p. 1302.
Engine starting and stopping mechanism, Internal-combustion-. J. B. Polo. No. 957,372; May 10; Sp. p. 1887; Gaz. vol. 154; p. 328.
Engine-starting device. H. C. Colhower and J. T. Sainsbury. No. 959,997; May 31; Sp. p. 7743; Gaz. vol. 154; p. 1305.
Engine starting device, Internal-combustion-. J. R. Dickey. No. 958,909; May 24; Sp. p. 5454; Gaz. vol. 154; p. 913.
Engine-starting mechanism. F. D. James. No. 959,014; May 24; Sp. p. 5641; Gaz. vol. 154; p. 948.
Engine starting mechanism, Explosive-. C. E. Reddig. No. 959,070; May 24; Sp. p. 5775; Gaz. vol. 154; p. 967.
Engine timer, Internal-combustion-. J. A. Schneider. No. 957,109; May 3; Sp. p. 1300; Gaz. vol. 154; p. 207.
Engines, Operating explosive-. P. L'Orange. No. 959,951; May 31; Sp. p. 7640; Gaz. vol. 154; p. 1288.
Engraving-machine. G. T. Summers. No. 957,912; May 17; Sp. p. 3019; Gaz. vol. 154; p. 541.
Envelop. N. Toomer. No. 956,786; May 3; Sp. p. 609; Gaz. vol. 154; p. 98.
Envelop. H. D. Naum. No. 958,523; May 17; Sp. p. 4611; Gaz vol. 154; p. 756.
Envelop. A. B. Rippetoe. No. 958,543; May 17; Sp. p. 4643; Gaz. vol. 154; p. 763.
Envelop. L. C. Van Riper. No. 958,785; May 24; Sp. p. 5152; Gaz. vol. 154; p. 868.
Envelop. O. J. Olm. No. 958,819; May 24; Sp. p. 5227; Gaz. vol. 154; p. 882.
Envelop. J. W. Tylska. No. 958,981; May 24; Sp. p. 5581; Gaz. vol. 154; p. 938.
Envelop and advertising device. J. G. Patton. No. 958,166; May 17; Sp. p. 3744; Gaz. vol. 154; p. 633.
Envelop-machines, Discharging device for. F. L. Schmidt. No. 956,736; May 3; Sp. p. 507; Gaz. vol. 154; p. 82.
Ester from chaulmoogra-oil. L. Taub. No. 957,635; May 10; Sp. p. 2406; Gaz. vol. 154; p. 417.
Excavating-machine. G. W. King, H. J. Barnhart, and C. B. King. No. 959,756; May 31; Sp. p. 7186; Gaz. vol. 154; p. 1220.
Excavator. H. F. Menck. No. 957,234; May 10; Sp. p. 1591; Gaz. vol. 154; p. 281.
Excavator. C. E. Negley. No. 958,158; May 17; Sp. p. 3729; Gaz. vol. 154; p. 630.
Expansion-bolt. C. C. Tomkinson. No. 958,783; May 24; Sp. p. 5151; Gaz. vol. 154; p. 868.
Explosion or combustion motor or pump. C. A. and O. W. Hult. No. 959,748; May 31; Sp. p. 7174; Gaz. vol. 154; p. 1217.
Explosive. C. P. H. Claessen. No. 957,807; May 10; Sp. p. 1753; Gaz. vol. 154; p. 307.
Explosive-engine. J. F. Woolf. No. 959,905; May 31; Sp. p. 7521; Gaz. vol. 154; p. 1271.
Extensible connection. M. E. Wells. No. 959,411; May 24; Sp. p. 6447; Gaz. vol. 154; p. 1079.
Extension-table. R. M. Miller. No. 957,236; May 10; Sp. p. 1598; Gaz. vol. 154; p. 282.
Extension-table. K. Kral. No. 957,611; May 10; Sp. p. 2352; Gaz. vol. 154; p. 409.
Extension-table. J. B. Weeks. No. 957,637; May 10; Sp. p. 2414; Gaz. vol. 154; p. 418.
Extractor: *See* Coffee-chaff extractor; Stopper-extractor.
Eyeglass-mount. W. G. Fay. No. 956,485; May 17; Sp. p. 4536; Gaz. vol. 154; p. 743.
Eyeglass-mounting. J. T. Laughlin. No. 957,071; May 3; Sp. p. 1230; Gaz. vol. 154; p. 195.
Eyeglass-mounting. T. Rapp. No. 957,374; May 10; Sp. p. 1804; Gaz. vol. 154; p. 329.
Eyeglass-mounting. G. A. Bader. No. 957,925; May 17; Sp. p. 3041; Gaz. vol. 154; p. 546.
Eyeglass-mounting. B. J. Strohm. No. 959,816; May 31; Sp. p. 7326; Gaz. vol. 154; p. 1241.
Eyeglass-spring. A. E. Doble. No. 958,286; May 17; Sp. p. 3879; Gaz. vol. 154; p. 655.
Eyeglasses. E. H. Simonds. No. 958,839; May 24; Sp. p. 5276; Gaz. vol. 154; p. 890.
Eyeglasses. E. J. Strohm. No. 959,815; May 31; Sp. p. 7324; Gaz. vol. 154; p. 1240.
Fabric: *See* Fireproof fabric; Woven fabric.
Fabric-supporting reel. G. T. McLeod. No. 957,991; May 17; Sp. p. 3244; Gaz. vol. 154; p. 570.

Fabrics ornaments interwoven with a brass wire, Machine for applying to. H. Martin. No. 959,242; May 24; Sp. p. 6128; Gaz. vol. 154; p. 1023.
Fan. J. H. Galland. No. 959,503; May 31; Sp. p. 6679; Gaz. vol. 154; p. 1136.
Fan and sunshade, Combined. R. Greenfield. No. 956,959; May 3; Sp. p. 1007; Gaz. vol. 154; p. 158.
Fan or propeller, Rotary. H. Ruthenberg. No. 959,392; May 24; Sp. p. 6418; Gaz. vol. 154; p. 1073.
Fan, Rotary. J. R. Robinson. No. 956,781; May 3; Sp. p. 800; Gaz. vol. 154; p. 96.
Fan, Ventilating-. R. A. Ilg. No. 957,776; May 10; Sp. p. 2714; Gaz. vol. 154; p. 465.
Fanning-mill feeding attachment. H. Dykstra. No. 958,483; May 17; Sp. p. 4532; Gaz. vol. 154; p. 742.
Fastener. F. Hirsh. No. 958,249; May 17; Sp. p. 3918; Gaz. vol. 154; p. 659.
Fastener. C. Joseph. No. 959,545; May 31; Sp. p. 6760; Gaz. vol. 154; p. 1150.
Fastener for gloves and other articles. L. W. Brown. No. 957,651; May 10; Sp. p. 2446; Gaz. vol. 154; p. 423.
Fastener-inserting machine. W. C. Stewart. No. 958,040; May 17; Sp. p. 3438; Gaz. vol. 154; p. 589.
Fastener-inserting machines, Horn-controlling mechanism for. W. C. Stewart. No. 958,036; May 17; Sp. p. 3464; Gaz. vol. 154; p. 587.
Fastener-puller. T. G. Plant. No. 958,279; May 17; Sp. p. 3977; Gaz. vol. 154; p. 669.
Fastener-strips, Machine for making corrugated and saw-toothed metal. E. S. Norton. No. 956,540; May 3; Sp. p. 66; Gaz. vol. 154; p. 14.
Fasteners, Machine for setting and forming metallic. E. B. Lewis. No. 959,020; May 24; Sp. p. 5649; Gaz. vol. 154; p. 950.
Fastening-inserting machine. W. O. Wheeler. No. 959,666; May 31; Sp. p. 7014; Gaz. vol. 154; p. 1191.
Fastening machine, Metallic-. M. D. Phelan. No. 958,003; May 17; Sp. p. 3278; Gaz. vol. 154; p. 574.
Fastening members, Attaching means for. F. S. Carr. No. 959,308; May 24; Sp. p. 6251; Gaz. vol. 154; p. 1046.
Fastenings, Machine for inserting metallic. T. G. Plant. No. 958,293; May 17; Sp. p. 4078; Gaz. vol. 154; p. 675.
Faucet. C. T. Bown-and T. E. Smith. No. 957,647; May 10; Sp. p. 2436; Gaz. vol. 154; p. 421.
Faucet. A. R. Pritchard. No. 956,826; May 24; Sp. p. 5240; Gaz. vol. 154; p. 884.
Faucet for drawing liquids. G. Wegman. No. 957,524; May 10; Sp. p. 2197; Gaz. vol. 154; p. 379.
Faucet, Locking-. J. S. Ericson. No. 958,735; May 24; Sp. p. 5023; Gaz. vol. 154; p. 851.
Faucet, Vacuum-. W. Whelan. No. 958,709; May 17; Sp. p. 4962; Gaz. vol. 154; p. 816.
Feed-bag. G. B. F. Emerick. No. 957,046; May 3; Sp. p. 1178; Gaz. vol. 154; p. 187.
Feed-bag. J. H. Enders. No. 958,611; May 17; Sp. p. 4779; Gaz. vol. 154; p. 784.
Feed-cutters, Knife-adjusting means for. J. J. Gromms. No. 958,743; May 24; Sp. p. 5054; Gaz. vol. 154; p. 854.
Feed-grinder. S. K. Dennis and F. W. Rice. No. 956,892; May 3; Sp. p. 856; Gaz. vol. 154; p. 136.
Feed-regulator. L. C. Roberts. No. 958,314; May 17; Sp. p. 4190; Gaz. vol. 154; p. 683.
Feed-water by exhaust-steam from steam-engines, Apparatus for heating. J. Kerfoot. No. 957,688; May 10; Sp. p. 2524; Gaz. vol. 154; p. 436.
Feed-water heater. J. S. Sweeny and W. W. Grindle. No. 960,209; May 31; Sp. p. 8184; Gaz. vol. 154; p. 1377.
Feed-water regulator. L. E. Fulton. No. 959,334; May 24; Sp. p. 6308; Gaz. vol. 154; p. 1055.
Fence attachment. J. R. Graft. No. 960,164; May 31; Sp. p. 8087; Gaz. vol. 154; p. 1360.
Fence-post. J. M. Campbell. No. 957,410; May 10; Sp. p. 1969; Gaz. vol. 154; p. 341.
Fence-post. C. T. Howell. No. 957,677; May 10; Sp. p. 2506; Gaz. vol. 154; p. 433.
Fence-post. I. F. Frazier. No. 958,619; May 17; Sp. p. 4793; Gaz. vol. 154; p. 787.
Fence-post and anchorage-base. P. T. Bailey. No. 959,286; May 24; Sp. p. 6210; Gaz. vol. 154; p. 1037.
Fence, Wire. B. L. Elwell and W. Grimm. No. 958,238; May 17; Sp. p. 3883; Gaz. vol. 154; p. 656.
Fence-wire clamp. T. M. Cadle. No. 957,302; May 10; Sp. p. 1746; Gaz. vol. 154; p. 305.
Fences to stretcher-jacks, Means for clamping. A. and C. A. Church. No. 959,842; May 31; Sp. p. 7385; Gaz. vol. 154; p. 1250.
Fender: *See* Automobile-fender; Car-fender.
Fender. E. F. Shue. No. 960,120; May 31; Sp. p. 8011; Gaz. vol. 154; p. 1346.
Fertiliser-distributer. O. W. Siebenhaar. No. 959,628; May 31; Sp. p. 6919; Gaz. vol. 154; p. 1178.
Fiber, Making a resilient. S. A. Flower. No. 957,152; May 3; Sp. p. 1333; Gaz. vol. 154; p. 222.
Fifth-wheel for dump-wagons. L. H. Young. No. 959,414; May 24; Sp. p. 6452; Gaz. vol. 154; p. 1080.
Figure, Jointed. G. W. Ferguson. No. 957,666; May 10; Sp. p. 2460; Gaz. vol. 154; p. 429.
File and holder, Document. J. Wilson. No. 959,282; May 24; Sp. p. 6203; Gaz. vol. 154; p. 1036.
File-cabinet, Rotary. C. and W. Liebert. No. 957,784; May 10; Sp. p. 2730; Gaz. vol. 154; p. 467.
File, Emery-cloth. E. Gans. No. 959,218; May 24; Sp. p. 6063; Gaz. vol. 154; p. 1014.
File-handle. T. E. Gill. No. 958,622; May 17; Sp. p. 4797; Gaz. vol. 154; p. 788.
File, Paper-. C. E. Gibbs. No. 958,801; May 24; Sp. p. 5192; Gaz. vol. 154; p. 875.
Files and rasps, Machine for producing. G. Peiseler. No. 957,367; May 10; Sp. p. 1877; Gaz. vol. 154; p. 327.
Filing-cabinet. S. Klepfer. No. 957,423; May 10; Sp. p. 2000; Gaz. vol. 154; p. 345.
Filing-cabinet. L. Senge. No. 958,018; May 17; Sp. p. 3326; Gaz. vol. 154; p. 579.
Filling-machine. F. C. H. Strasburger. No. 956,867; May 3; Sp. p. 801; Gaz. vol. 154; p. 127.
Filling-machine. C. L. Bastian. No. 956,876; May 3; Sp. p. 816; Gaz. vol. 154; p. 130.
Filter. T. F. Belts. No. 956,832; May 3; Sp. p. 724; Gaz. vol. 154; p. 114.
Filter and controlling-valve therefor. P. S. Ward. No. 956,914; May 3; Sp. p. 902; Gaz. vol. 154; p. 143.
Filter-bag. E. P. Dargin. No. 957,191; May 10; Sp. p. 1481; Gaz. vol. 154; p. 265.
Filter for cyanid plants, Centrifugal. C. Shapley. No. 959,173; May 24; Sp. p. 5990; Gaz. vol. 154; p. 1001.
Filter-producing apparatus. C. H. Loew. No. 959,021; May 24; Sp. p. 5654; Gaz. vol. 154; p. 950.
Filter, Vacuum-. M. E. Hiltner. No. 957,558; May 10; Sp. p. 2264; Gaz. vol. 154; p. 392.
Filter, Water-. M. Gessler. No. 956,698; May 3; Sp. p. 435; Gaz. vol. 154; p. 69.
Filtering apparatus. D. J. Kelly. No. 957,467; May 10; Sp. p. 2078; Gaz. vol. 154; p. 360.
Filtering apparatus. C. M. Chamberlain. No. 959,461; May 31; Sp. p. 6569; Gaz. vol. 154; p. 1121.
Filtering apparatus. E. P. Dargin. No. 959,844; May 31; Sp. p. 7387; Gaz. vol. 154; p. 1251.
Finishing process. R. T. Todd and R. B. Batty. No. 956,550; May 3; Sp. p. 93; Gaz. vol. 154; p. 17.
Fire-alarm, Automatic. J. Yates. No. 959,828; May 31; Sp. p. 7356; Gaz. vol. 154; p. 1245.
Fire-alarm systems, Signal-box for. F. S. Bronson. No. 958,710; May 24; Sp. p. 4988; Gaz. vol. 154; p. 844.
Fire-check. A. A. Steward. No. 958,944; May 24; Sp. p. 5508; Gaz. vol. 154; p. 925.
Fire-engine, Chemical. E. M. E. Hansen. No. 957,054; May 3; Sp. p. 1193; Gaz. vol. 154; p. 189.
Fire-engine, Portable. R. H. Rice. No. 957,903; May 17; Sp. p. 2978; Gaz. vol. 154; p. 538.
Fire-escape. M. F. Welch. No. 957,589; May 10; Sp. p. 2311; Gaz. vol. 154; p. 401.
Fire-escape. J. W. Thompson. No. 959,404; May 24; Sp. p. 6433; Gaz. vol. 154; p. 1076.
Fire-escape. A. Brown. No. 960,068; May 31; Sp. p. 7919; Gaz. vol. 154; p. 1329.
Fire-escape apparatus. M. Fischer. No. 958,383; May 17; Sp. p. 4335; Gaz. vol. 154; p. 708.
Fire-holes, Closing device for cellar. W. C. Shepard. No. 958,550; May 17; Sp. p. 4650; Gaz. vol. 154; p. 765.
Fire-hose, Antidrip device for. H. F. Beers and H. C. Bumpus. No. 956,562; May 3; Sp. p. 115; Gaz. vol. 154; p. 21.
Fire-hydrant coupling. E. W. Purves. No. 959,258; May 24; Sp. p. 6157; Gaz. vol. 154; p. 1029.
Firearm. W. H. Snyder. No. 958,332; May 17; Sp. p. 4234; Gaz. vol. 154; p. 691.
Firearm. T. C. Johnson. No. 959,016; May 24; Sp. p. 5643; Gaz. vol. 154; p. 949.
Firearm. H. M. Kolb. No. 959,229; May 24; Sp. p. 6096; Gaz. vol. 154; p. 1019.
Firearm. T. C. Johnson. No. 959,942; May 31; Sp. p. 7619; Gaz. vol. 154; p. 1285.
Firearm, Automatic. C. H. A. F. L. Ross. No. 958,546; May 17; Sp. p. 4645; Gaz. vol. 154; p. 763.
Firearm, Automatic. R. Frommer. No. 959,002; May 24; Sp. p. 5621; Gaz. vol. 154; p. 944.
Firearm, Repeating. T. C. Johnson. No. 958,407; May 17; Sp. p. 4379; Gaz. vol. 154; p. 715.
Firearm-silencer. R. A. Moore. No. 956,717; May 3; Sp. p. 467; Gaz. vol. 154; p. 75.
Firearm, Silent. H. P. Maxim. No. 958,934; May 24; Sp. p. 5492; Gaz. vol. 154; p. 921.
Firearm, Silent. H. P. Maxim. No. 958,935; May 24; Sp. p. 5495; Gaz. vol. 154; p. 922.
Firearms, Firing mechanism for. A. Müller. No. 956,593; May 3; Sp. p. 186; Gaz. vol. 154; p. 32.
Firearms, Offset-adapter for telescopes for. W. Bennett. No. 958,989; May 24; Sp. p. 5594; Gaz. vol. 154; p. 940.
Firearms, Single-trigger mechanism for. W. H. Price. No. 956,525; May 3; Sp. p. 712; Gaz. vol. 154; p. 112.
Fireproof column. J. J. Treskidder. No. 960,125; May 31; Sp. p. 8023; Gaz. vol. 154; p. 1347.
Fireproof construction. A. Priddle. No. 960,197; May 31; Sp. p. 8160; Gaz. vol. 154; p. 1373.
Fireproof door or shutter. E. H. McCloud. No. 959,576; May 31; Sp. p. 6823; Gaz. vol. 154; p. 1161.
Fireproof magazine for film-reels. N. Power. No. 959,601; May 31; Sp. p. 6871; Gaz. vol. 154; p. 1169.
Fireproof partitions, Manufacture of. D. Mowat. No. 958,419; May 17; Sp. p. 4402; Gaz. vol. 154; p. 720.
Fireproof shutters, Baffle for. J. G. Wilson. No. 957,923; May 17; Sp. p. 3038; Gaz. vol. 154; p. 545.
Fish and game hook. S. B. Lee. No. 958,142; May 17; Sp. p. 3694; Gaz. vol. 154; p. 624.
Fish-hook. A. Payson. No. 959,537; May 31; Sp. p. 6845; Gaz. vol. 154; p. 1164.

Fish-net. D. P. Gilstrap. No. 957,766; May 10; Sp. p. 2686; Gaz. vol. 154; p. 462.
Fishing-reel. W. Shakespeare, Jr., and S. G. Russell. No. 959,623; May 31; Sp. p. 6911; Gaz. vol. 154; p. 1176.
Fishing-rod line-guide. W. Shakespeare, Jr. No. 958,775; May 24; Sp. p. 5129; Gaz. vol. 154; p. 865.
Fishing-tackle. J. M. Curtiss. No. 958,233; May 17; Sp. p. 3873; Gaz. vol. 154; p. 654.
Flagstaff. M. Hendricks and J. S. Burnap. No. 957,606; May 10; Sp. p. 2344; Gaz. vol. 154; p. 408.
Flanges on demountable rims, Means for locking. A. Dow. No. 959,426; May 24; Sp. p. 6468; Gaz. vol. 154; p. 1083.
Flanging-machine, Automatic. J. E. Graybill. No. 959,930; May 31; Sp. p. 7579; Gaz. vol. 154; p. 1280.
Flask: *See* Molder's flask.
Flask. W. C. Bogenschutz. No. 956,621; May 3; Sp. p. 243; Gaz. vol. 154; p. 41.
Flat foot, weak foot, or fallen arch of the foot, Device for the correction of. F. C. Schumacher. No. 957,718; May 10; Sp. p. 2581; Gaz. vol. 154; p. 446.
Flat-iron-heating apparatus. F. Schitka. No. 959,616; May 31; Sp. p. 6600; Gaz. vol. 154; p. 1174.
Flies and other insects, Device for catching. J. Nault. No. 959,155; May 24; Sp. p. 5944; Gaz. vol. 154; p. 995.
Float. G. Blank. No. 958,581; May 17; Sp. p. 4720; Gaz. vol. 154; p. 775.
Floor and ceiling plate. H. J. Robinson. No. 957,000; May 3; Sp. p. 1089; Gaz. vol. 154; p. 171.
Floor-dressing machine. G. J. Kepplinger. No. 958,929; May 24; Sp. p. 5436; Gaz. vol. 154; p. 920.
Floor-surfacing device. C. W. Wiley. No. 959,281; May 24; Sp. p. 6202; Gaz. vol. 154; p. 1036.
Floor-surfacing machine. F. L. Cummings and E. Hathaway. No. 959,721; May 31; Sp. p. 7115; Gaz. vol. 154; p. 1206.
Flooring, Sectional metallic. J. H. Stiggleman. No. 958,557; May 17; Sp. p. 4660; Gaz. vol. 154; p. 767.
Flour, C. Herendeen. No. 958,496; May 17; Sp. p. 4555; Gaz. vol. 154; p. 747.
Flour, Making. C. Herendeen. No. 958,494; May 17; Sp. p. 4553; Gaz. vol. 154; p. 746.
Flour, Making. C. Herendeen. No. 958,495; May 17; Sp. p. 4554; Gaz. vol. 154; p. 746.
Flue-blower. G. W. Bernauer. No. 956,670; May 3; Sp. p. 352; Gaz. vol. 154; p. 58.
Flue-cleaner. V. G. Becker. No. 956,668; May 3; Sp. p. 348; Gaz. vol. 154; p. 58.
Flue-stopper. G. O. Terry. No. 956,610; May 3; Sp. p. 224; Gaz. vol. 154; p. 38.
Fluid-compressors, Construction of rotating wheels for rotary. A. Huguenin. No. 958,129; May 17; Sp. p. 3671; Gaz. vol. 154; p. 619.
Fluid-controlling device. A. C. Nelson. No. 959,025; May 24; Sp. p. 5663; Gaz. vol. 154; p. 952.
Fluid motor, Elastic. J. I. Shirley. No. 958,553; May 17; Sp. p. 4663; Gaz. vol. 154; p. 766.
Fluid-operated apparatus. E. Ketterer. No. 959,547; May 31; Sp. p. 6763; Gaz. vol. 154; p. 1151.
Fluid-pressure brake. J. W. Cloud. No. 959,114; May 24; Sp. p. 5854; Gaz. vol. 154; p. 981.
Fluid-pressure brake. F. B. Farmer and W. V. Turner. No. 959,128; May 24; Sp. p. 5887; Gaz. vol. 154; p. 986.
Fluid-pressure motor. H. B. Holt. No. 957,339; May 10; Sp. p. 1828; Gaz. vol. 154; p. 318.
Fluid-regulator. G. J. Leber. No. 956,585; May 3; Sp. p. 169; Gaz. vol. 154; p. 29.
Fluid-regulator, Automatic. J. J. McDonald. No. 960,033; May 31; Sp. p. 7844; Gaz. vol. 154; p. 1318.
Fluid substances, Desiccating. A. G. Kalb. No. 957,849; May 10; Sp. p. 2349; Gaz. vol. 154; p. 488.
Fluid substances, Desiccating. A. G. Kalb. No. 957,850; May 10; Sp. p. 2353; Gaz. vol. 154; p. 489.
Flushing apparatus. P. S. Millice. No. 956,863; May 3; Sp. p. 791; Gaz. vol. 154; p. 126.
Flushing device. F. W. Bassett and W. A. Hunter, Jr. No. 956,875; May 3; Sp. p. 813; Gaz. vol. 154; p. 129.
Flushing device. H. M. Smith and D. Keavers. No. 958,841; May 24; Sp. p. 5231; Gaz. vol. 154; p. 890.
Flushing device, Closet-. C. H. Duncan. No. 958,734; May 24; Sp. p. 5021; Gaz. vol. 154; p. 850.
Flushing-tank. E. Richman. No. 958,105; May 17; Sp. p. 3820; Gaz. vol. 154; p. 610.
Fly-guard. P. Kreuscher. No. 957,425; May 10; Sp. p. 2003; Gaz. vol. 154; p. 346.
Fly-paper holder. C. F. Stoner and F. B. Trout. No. 959,598; May 31; Sp. p. 7508; Gaz. vol. 154; p. 1268.
Fly-screen. V. J. Stratton. No. 958,562; May 17; Sp. p. 4681; Gaz. vol. 154; p. 769.
Fly-trap. E. B. Anderson. No. 958,208; May 17; Sp. p. 3927; Gaz. vol. 154; p. 647.
Fly-trap. F. M. Humphrey. No. 959,747; May 31; Sp. p. 7172; Gaz. vol. 154; p. 1217.
Fly-wheel for warping and balling machines. A. E. Rhoades. No. 958,974; May 24; Sp. p. 5569; Gaz. vol. 154; p. 935.
Flying-machine. W. W. Christmas. No. 957,744; May 10; Sp. p. 2633; Gaz. vol. 154; p. 455.
Flying-machine. J. Koskine. No. 958,747; May 24; Sp. p. 5060; Gaz. vol. 154; p. 856.
Flying-machine. J. Buchanan. No. 959,199; May 24; Sp. p. 6037; Gaz. vol. 154; p. 1009.
Flying-machine, Motor. A. Wunderlich. No. 960,136; May 31; Sp. p. 8043; Gaz. vol. 154; p. 1351.
Folding box. J. G. Reber. No. 959,261; May 24; Sp. p. 6161; Gaz. vol. 154; p. 1030.
Folding device. W. F. Klinck. No. 959,354; May 24; Sp. p. 6347; Gaz. vol. 154; p. 1061.
Folding-machine feed device. J. H. Adams and E. D. Wallace. No. 960,138; May 31; Sp. p. 8046; Gaz. vol. 154; p. 1352.
Food products, Apparatus for dehydrating. G. D. Harris. No. 959,933; May 31; Sp. p. 7588; Gaz. vol. 154; p. 1282.
Food products, Container for. L. H. Backeland. No. 957,137; May 3; Sp. p. 1352; Gaz. vol. 154; p. 216.
Foot-guard. W. S. Newhall. No. 960,035; May 31; Sp. p. 7857; Gaz. vol. 154; p. 1319.
Foot-rest. C. E. Clarke. No. 956,681; May 3; Sp. p. 380; Gaz. vol. 154; p. 63.
Footwear-stretcher. H. A. Halvorsen. No. 959,982; May 31; Sp. p. 7585; Gaz. vol. 154; p. 1281.
Force-feed lubricator. H. L. Davis. No. 958,994; May 24; Sp. p. 5606; Gaz. vol. 154; p. 942.
Forcing frame or inclosure for horticultural or other purposes. W. Cutler. No. 958,956; May 24; Sp. p. 5534; Gaz. vol. 154; p. 929.
Forging press and hammer. E. H. Wray. No. 959,094; May 24; Sp. p. 5821; Gaz. vol. 154; p. 975.
Forming-machine. G. H. Petri. No. 957,247; May 10; Sp. p. 1616; Gaz. vol. 154; p. 285.
Fountain: *See* Ink-fountain.
Frame: *See* Brick-setting frame; Door-frame; Door and window frame; Forcing-frame; Plow-frame; Quilting-frame; Sink-frame; Spinning and twisting frame; Tent-frame; Tool-frame; Truck side frame; Window-frame.
Friction drive mechanism. O. P. Grau. No. 956,958; May 3; Sp. p. 1001; Gaz. vol. 154; p. 157.
Frogless switch. J. J. Newman. No. 956,992; May 3; Sp. p. 1071; Gaz. vol. 154; p. 168.
Front-end arrangement. J. F. and H. M. Brown. No. 958,720; May 24; Sp. p. 4993; Gaz. vol. 154; p. 845.
Fruit-gatherer. E. Fountain. No. 959,332; May 24; Sp. p. 6304; Gaz. vol. 154; p. 1054.
Fruit-mixing machine. B. F. Fish. No. 959,726; May 31; Sp. p. 7125; Gaz. vol. 154; p. 1210.
Fruit-press. T. P. Maddox. No. 960,102; May 31; Sp. p. 7974; Gaz. vol. 154; p. 1340.
Fruit riser and grader. G. D. Parker. No. 958,164; May 17; Sp. p. 3740; Gaz. vol. 154; p. 632.
Fuel. A. B. Hill. No. 958,920; May 24; Sp. p. 5473; Gaz. vol. 154; p. 917.
Fuel-briquet. D. C. McCan. No. 956,901; May 3; Sp. p. 874; Gaz. vol. 154; p. 139.
Fuel-briquet. D. C. McCan. No. 959,870; May 31; Sp. p. 7450; Gaz. vol. 154; p. 1260.
Fuel-economizer. E. R. Phillips. No. 957,173; May 3; Sp. p. 1432; Gaz. vol. 154; p. 229.
Fuel, means for feeding fluid. T. Turnbull, Jr. No. 960,057; May 31; Sp. p. 7900; Gaz. vol. 154; p. 1326.
Fuel-press. D. C. McCan. No. 956,902; May 3; Sp. p. 876; Gaz. vol. 154; p. 139.
Fuel, Production of. T. Parker. No. 958,761; May 24; Sp. p. 5089; Gaz. vol. 154; p. 860.
Furnace: *See* Electric furnace; Glass-drawing furnace; Metal-furnace; Oil-burning furnace; Regenerative furnace; Revolving furnace; Smelting-furnace; Straw-burning furnace; Tipping furnace.
Furnace. J. W. Hays. No. 957,158; May 3; Sp. p. 1396; Gaz. vol. 154; p. 224.
Furnace. A. Fisher. No. 957,873; May 17; Sp. p. 2913; Gaz. vol. 154; p. 527.
Furnace. W. H. Perkins. No. 958,763; May 24; Sp. p. 5091; Gaz. vol. 154; p. 860.
Furnace. J. M. Brooks. No. 958,903; May 24; Sp. p. 5441; Gaz. vol. 154; p. 911.
Furnace. H. J. Hough and J. B. Crowl. No. 959,141; May 24; Sp. p. 5913; Gaz. vol. 154; p. 990.
Furnace. J. A. Penney. No. 959,253; May 24; Sp. p. 6149; Gaz. vol. 154; p. 1027.
Furnace. J. Weintz. No. 959,980; May 31; Sp. p. 7705; Gaz. vol. 154; p. 1298.
Furnace-arch construction. C. Campbell. No. 957,494; May 10; Sp. p. 2135; Gaz. vol. 154; p. 369.
Furnace-arch construction. P. Isles. No. 958,130; May 17; Sp. p. 3673; Gaz. vol. 154; p. 619.
Furnace-feeder. L. P. Bolander. No. 957,184; May 10; Sp. p. 1471; Gaz. vol. 154; p. 262.
Furnace for burning blast-furnace gases. H. E. Parson. No. 958,429; May 17; Sp. p. 4422; Gaz. vol. 154; p. 724.
Furnace-grate. T. Dawson. No. 958,517; May 3; Sp. p. 19; Gaz. vol. 154; p. 6.
Furnace grate, Forced-draft-. W. H. Palmer. No. 958,971; May 24; Sp. p. 5560; Gaz. vol. 154; p. 934.
Furnaces, Crown or cover of electric. P. Girod. No. 956,699; May 3; Sp. p. 437; Gaz. vol. 154; p. 69.
Furnaces, Ignition-arch for. W. M. Duncan. No. 958,379; May 17; Sp. p. 4327; Gaz. vol. 154; p. 706.
Furniture. W. A. Snyder. No. 958,631; May 31; Sp. p. 6930; Gaz. vol. 154; p. 1189.
Furniture, Article of. J. A. Ward, Jr. No. 957,826; May 10; Sp. p. 2300; Gaz. vol. 154; p. 481.
Furniture attachment, Sliding-shoe. W. Dichmann. No. 959,478; May 31; Sp. p. 6940; Gaz. vol. 154; p. 1127.
Furniture, Collapsible. A. B. Holmes. No. 960,015; May 31; Sp. p. 7780; Gaz. vol. 154; p. 1311.
Furniture-support, Adjustable. G. E. Anderson. No. 957,176; May 10; Sp. p. 1455; Gaz. vol. 154; p. 260.
Fuse. A. E. Porter. No. 956,906; May 3; Sp. p. 1063; Gaz. vol. 154; p. 169.
Fuse-block. J. Collins. No. 960,155; May 31; Sp. p. 8072; Gaz. vol. 154; p. 1357.

Fuse for electrical circuits. S. M. Kintner and G. B. Rosenblatt. No. 959,552; May 31; Sp. p. 6779; Gaz. vol. 154; p. 1153.
Fuse-plug. W. F. Duckwitz. No. 959,208; May 24; Sp. p. 6054; Gaz. vol. 154; p. 1012.
Fuse, Safety-. J. Sachs and F. D. Reynolds. No. 959,807; May 31; Sp. p. 7509; Gaz. vol. 154; p. 1238.
Fuses, Tester for electric blasting-. F. Beattie. No. 956,877; May 3; Sp. p. 818; Gaz. vol. 154; p. 131.
Fused terminal. R. H. Conway and H. E. Bisbing. No. 959,719; May 31; Sp. p. 7111; Gaz. vol. 154; p. 1207.
Fusee. W. D. Jackson. No. 960,094; May 31; Sp. p. 7962; Gaz. vol. 154; p. 1337.
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Gage. J. M. Leaver, Jr. No. 957,779; May 10; Sp. p. 2718; Gaz. vol. 154; p. 466.
Gage. J. M. Leaver, Jr. No. 957,780; May 10; Sp. p. 2724; Gaz. vol. 154; p. 466.
Gage. J. M. Leaver, Jr. No. 957,781; May 10; Sp. p. 2726; Gaz. vol. 154; p. 466.
Gage. J. M. Leaver, Jr. No. 957,782; May 10; Sp. p. 2727; Gaz. vol. 154; p. 467.
Gambrel. H. Barrows. No. 959,287; May 24; Sp. p. 6213; Gaz. vol. 154; p. 1038.
Gambrel, Hog-. J. A. Kaiserlik. No. 957,344; May 10; Sp. p. 1835; Gaz. vol. 154; p. 320.
Game. A. F. Leach. No. 958,258; May 17; Sp. p. 3934; Gaz. vol. 154; p. 662.
Game. J. R. Nixon. No. 960,100; May 31; Sp. p. 8146; Gaz. vol. 154; p. 1370.
Game apparatus. A. W. Proctor. No. 957,254; May 10; Sp. p. 1631; Gaz. vol. 154; p. 288.
Game apparatus. J. R. Snow. No. 957,266; May 10; Sp. p. 1667; Gaz. vol. 154; p. 293.
Game apparatus. D. C. Mitchell. No. 957,472; May 10; Sp. p. 2085; Gaz. vol. 154; p. 361.
Game apparatus. E. J. Burke. No. 957,740; May 10; Sp. p. 2619; Gaz. vol. 154; p. 453.
Game apparatus. W. A. White. No. 958,842; May 17; Sp. p. 4252; Gaz. vol. 154; p. 694.
Game apparatus. E. P. Chalmers. No. 958,722; May 24; Sp. p. 5001; Gaz. vol. 154; p. 846.
Game apparatus. W. A. Sullivan. No. 959,402; May 24; Sp. p. 6430; Gaz. vol. 154; p. 1076.
Game apparatus. C. E. Burbank. No. 959,710; May 31; Sp. p. 7094; Gaz. vol. 154; p. 1204.
Game apparatus. H. F. Wright. No. 959,985; May 31; Sp. p. 7717; Gaz. vol. 154; p. 1300.
Game apparatus, Card-. L. A. Ely. No. 957,872; May 17; Sp. p. 2910; Gaz. vol. 154; p. 527.
Game-blocks. Combination. C. H. Rieth. No. 956,827; May 3; Sp. p. 718; Gaz. vol. 154; p. 113.
Game-board. H. A. Richardson. No. 957,800; May 10; Sp. p. 2759; Gaz. vol. 154; p. 473.
Game-board. T. W. Spaulding. No. 958,556; May 17; Sp. p. 4667; Gaz. vol. 154; p. 767.
Games, Artificial playing-bed for open-air. J. H. Stedman. No. 957,387; May 10; Sp. p. 1017; Gaz. vol. 154; p. 333.
Games, Cage for. A. Tomkins. No. 959,973; May 31; Sp. p. 7690; Gaz. vol. 154; p. 1296.
Gang-plank. A. Kelemen and S. Lázár. No. 960,022; May 31; Sp. p. 7816; Gaz. vol. 154; p. 1313.
Gapped wheel. W. T. Sears. No. 957,884; May 10; Sp. p. 1912; Gaz. vol. 154; p. 333.
Garbage and recovery of by-products, Destruction of. W. M. Cross. No. 956,569; May 3; Sp. p. 129; Gaz. vol. 154; p. 23.
Garbage chute and receptacle. N. W. Lowe. No. 958,206; May 17; Sp. p. 3945; Gaz. vol. 154; p. 664.
Garbage-receptacle. S. Moorman. No. 957,237; May 10; Sp. p. 1600; Gaz. vol. 154; p. 282.
Garbage-tank, Sanitary. J. Mast. No. 958,414; May 17; Sp. p. 4294; Gaz. vol. 154; p. 718.
Garden implement. O. H. and W. G. Peeples. No. 959,797; May 31; Sp. p. 7280; Gaz. vol. 154; p. 1234.
Garment. J. H. C. De Forge. No. 957,875; May 17; Sp. p. 2919; Gaz. vol. 154; p. 528.
Garment-clasp. J. Lomay. No. 958,411; May 17; Sp. p. 4289; Gaz. vol. 154; p. 717.
Garment-hanger. E. C. Clausen. No. 958,366; May 17; Sp. p. 4295; Gaz. vol. 154; p. 702.
Garment-hanger. J. F. Altermatt. No. 959,687; May 31; Sp. p. 7048; Gaz. vol. 154; p. 1197.
Garment-hanger. J. F. Altermatt. No. 959,688; May 31; Sp. p. 7049; Gaz. vol. 154; p. 1197.
Garment-hanger, Combination. W. C. Thatcher. No. 959,180; May 24; Sp. p. 6001; Gaz. vol. 154; p. 1003.
Garment-presser. J. Bischof. No. 957,141; May 3; Sp. p. 1362; Gaz. vol. 154; p. 218.
Garment-receptacle. G. H. Wheary. No. 956,559; May 3; Sp. p. 109; Gaz. vol. 154; p. 20.
Garment-supporter. G. H. Snow. No. 957,117; May 3; Sp. p. 1316; Gaz. vol. 154; p. 210.
Garment-supporter. C. J. White. No. 959,088; May 24; Sp. p. 5810; Gaz. vol. 154; p. 973.
Garment-supporter. H. C. Hine. No. 959,937; May 31; Sp. p. 7606; Gaz. vol. 154; p. 1283.
Gas and air mixer for burners. G. A. Peterson and J. L. Lackett. No. 959,593; May 31; Sp. p. 6859; Gaz. vol. 154; p. 1167.
Gas apparatus. J. Fischer. No. 958,245; May 17; Sp. p. 3908; Gaz. vol. 154; p. 658.
Gas-burner. E. Meyer-Zimmerli. No. 957,358; May 10; Sp. p. 1862; Gaz. vol. 154; p. 324.
Gas-burner. L. De Pasquale. No. 958,102; May 17; Sp. p. 3613; Gaz. vol. 154; p. 609.
Gas-burner. B. E. Meacham. No. 959,244; May 24; Sp. p. 6133; Gaz. vol. 154; p. 1024.
Gas-burner, Automatic. R. G. Jamison. No. 957,342; May 10; Sp. p. 1832; Gaz. vol. 154; p. 319.
Gas-burner controlling device. J. V. Wengelin. No. 957,501; May 10; Sp. p. 2314; Gaz. vol. 154; p. 402.
Gas-burner for flare-lights. C. C. Wakefield. No. 960,127; May 31; Sp. p. 8025; Gaz. vol. 154; p. 1348.
Gas-burner for inverted and upright incandescent lights, Incandescent. F. Kratky. No. 959,760; May 31; Sp. p. 7197; Gaz. vol. 154; p. 1221.
Gas burner or heater. C. F. Holtmann. No. 959,343; May 24; Sp. p. 6326; Gaz. vol. 154; p. 1058.
Gas-controlling device. W. C. Simmons. No. 959,397; May 24; Sp. p. 6424; Gaz. vol. 154; p. 1074.
Gas-engine. L. C. Vanderlip. No. 957,017; May 3; Sp. p. 1123; Gaz. vol. 154; p. 177.
Gas-engine. J. A. Baab. No. 958,211; May 17; Sp. p. 3831; Gaz. vol. 154; p. 647.
Gas-engine. R. J. Leach. No. 958,881; May 24; Sp. p. 5337; Gaz. vol. 154; p. 903.
Gas-engine. J. V. Rice, Jr. No. 958,975; May 24; Sp. p. 5571; Gaz. vol. 154; p. 936.
Gas-engine. C. Reckmann. No. 960,063; May 31; Sp. p. 7909; Gaz. vol. 154; p. 1328.
Gas-engine, Reciprocating. W. M. Leedom. No. 959,019; May 24; Sp. p. 5648; Gaz. vol. 154; p. 940.
Gas-fire-lighting device. C. C. Vail. No. 956,868; May 3; Sp. p. 803; Gaz. vol. 154; p. 127.
Gas-fixture, Automatic. E. M. Johnson. No. 956,531; May 3; Sp. p. 50; Gaz. vol. 154; p. 11.
Gas-fixture, Inverted. G. Breck. No. 958,857; May 17; Sp. p. 4286; Gaz. vol. 154; p. 699.
Gas generator, Acetylene-. O. W. Peterson. No. 957,369; May 10; Sp. p. 1883; Gaz. vol. 154; p. 328.
Gas generator, Acetylene-. S. A. Miles. No. 957,608; May 10; Sp. p. 2540; Gaz. vol. 154; p. 440.
Gas generator, Acetylene-. M. W. Carrier. No. 959,994; May 31; Sp. p. 7737; Gaz. vol. 154; p. 1303.
Gas generator and burner, Oil-. G. Drummond. No. 958,861; May 24; Sp. p. 5331; Gaz. vol. 154; p. 896.
Gas-igniter. C. L. Haase, Jr. No. 957,951; May 17; Sp. p. 3105; Gaz. vol. 154; p. 554.
Gas igniting and extinguishing device, Electrically-controlled. E. S. Allen. No. 958,574; May 17; Sp. p. 4707; Gaz. vol. 154; p. 773.
Gas-light, Inverted incandescent. A. E. Shaw. No. 957,445; May 10; Sp. p. 2038; Gaz. vol. 154; p. 353.
Gas-lighting apparatus. R. M. Dixon. No. 958,375; May 17; Sp. p. 4319; Gaz. vol. 154; p. 705.
Gas-lighting apparatus, Electric. D. M. Hartford, C. M. Taylor, and L. S. Stone. No. 959,525; May 31; Sp. p. 6715; Gaz. vol. 154; p. 1143.
Gas-lighting systems, Regulator for. G. E. Hulse. No. 959,745; May 31; Sp. p. 7165; Gaz. vol. 154; p. 1216.
Gas-main, Hydraulic. S. Maunier. No. 958,518; May 17; Sp. p. 4000; Gaz. vol. 154; p. 755.
Gas-main stopper. P. Goodman. No. 960,086; May 31; Sp. p. 7949; Gaz. vol. 154; p. 1335.
Gas-making apparatus. P. A. Emanuel. No. 959,324; May 24; Sp. p. 6286; Gaz. vol. 154; p. 1051.
Gas, Method of and apparatus for producing. E. B. Slick. No. 957,006; May 3; Sp. p. 1099; Gaz. vol. 154; p. 173.
Gas-mixer. C. V. Pollock. No. 959,597; May 31; Sp. p. 6864; Gaz. vol. 154; p. 1163.
Gas-pipe emergency cut-off. M. A. Horan. No. 958,126; May 17; Sp. p. 3659; Gaz. vol. 154; p. 617.
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Gas-producer. E. B. Slick. No. 957,007; May 3; Sp. p. 1102; Gaz. vol. 154; p. 173.
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Gasolene-engine. J. C. Bennett. No. 956,661; May 3; Sp. p. 827; Gaz. vol. 154; p. 832.
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Gate. C. M. Clark, F. J. Bullock, and E. D. Watkins. No. 957,745; May 10; Sp. p. 2640; Gaz. vol. 154; p. 455.
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Gearing. A. N. Adams. No. 958,061; May 17; Sp. p. 3583; Gaz. vol. 154; p. 595.
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Golf-club. D. Myles. No. 956,594; May 3; Sp. p. 188; Gaz. vol. 154; p. 32.
Golf-club. A. C. Fowler. No. 959,053; May 24; Sp. p. 5720; Gaz. vol. 154; p. 961.
Gopher-exterminator. E. C. Duckett and F. B. Lloyd. No. 957,458; May 10; Sp. p. 2062; Gaz. vol. 154; p. 357.
Governing mechanism for explosive-engines. G. H. Hayes. No. 960,173; May 31; Sp. p. 8105; Gaz. vol. 154; p. 1363.
Governor. G. B. Nelson. No. 958,159; May 17; Sp. p. 3730; Gaz. vol. 154; p. 630.
Governor, Centrifugal. F. W. Bentley. No. 957,861; May 17; Sp. p. 2385; Gaz. vol. 154; p. 523.
Governor, Centrifugal. O. Junggren and F. W. Bentley. No. 957,886; May 17; Sp. p. 2930; Gaz. vol. 154; p. 532.
Governor, Engine-. C. Grant. No. 959,353; May 31; Sp. p. 7403; Gaz. vol. 154; p. 1254.
Governor for steam or elastic-fluid engines. C. W. Dake. No. 959,471; May 31; Sp. p. 6593; Gaz. vol. 154; p. 1125.
Grab-hook, Trip. M. V. Spencer. No. 958,978; May 24; Sp. p. 5576; Gaz. vol. 154; p. 937.
Grader. L. N. Morscher. No. 956,817; May 3; Sp. p. 690; Gaz. vol. 154; p. 109.
Grader and scraper, Road. F. L. Reising. No. 958,891; May 24; Sp. p. 5413; Gaz. vol. 154; p. 907.
Grader, Road-. H. Sunderman. No. 956,744; May 3; Sp. p. 519; Gaz. vol. 154; p. 84.
Grader, Road-. T. E. Lyon. No. 957,357; May 10; Sp. p. 1960; Gaz. vol. 154; p. 324.
Gradometer. E. A. Hammett and E. H. Clark. No. 956,962; May 3; Sp. p. 1015; Gaz. vol. 154; p. 150.
Grain-heaters, Agitator for. A. J. Koegler. No. 960,024; May 31; Sp. p. 7820; Gaz. vol. 154; p. 1314.
Grain pickling and cleaning machine. J. A. Cowan. No. 958,097; May 17; Sp. p. 3603; Gaz. vol. 154; p. 607.
Grain-saving device. J. Marshall. No. 956,591; May 3; Sp. p. 183; Gaz. vol. 154; p. 31.
Grain-separator. H. S. Adams. No. 956,617; May 3; Sp. p. 237; Gaz. vol. 154; p. 40.
Grain-separator for attachment to threshing-machines. W. J. McAdams. No. 956,719; May 3; Sp. p. 472; Gaz. vol. 154; p. 76.
Grain-shocker. J. G. Stewart. No. 958,190; May 17; Sp. p. 3790; Gaz. vol. 154; p. 640.
Grain-shocking device, Hand. H. Ferris. No. 959,492; May 31; Sp. p. 6645; Gaz. vol. 154; p. 1133.
Grain spreader and feeder. A. Clark. No. 957,036; May 3; Sp. p. 1163; Gaz. vol. 154; p. 184.
Grappler. P. L. Peterson. No. 956,995; May 3; Sp. p. 1082; Gaz. vol. 154; p. 169.
Grappling-hook, Hopper-closet. E. C. Fraw. No. 958,915; May 24; Sp. p. 5405; Gaz. vol. 154; p. 916.
Grass and ditch-line cutter. C. Dawes. No. 959,845; May 31; Sp. p. 7390; Gaz. vol. 154; p. 1251.
Grass, straw, and the like, Apparatus for separating and combing. G. A. Lowry. No. 959,240; May 24; Sp. p. 6121; Gaz. vol. 154; p. 1023.
Grate. W. E. Marengo. No. 959,568; May 31; Sp. p. 6810; Gaz. vol. 154; p. 1150.
Grate-bar, Rocking. C. R. Kline. No. 957,690; May 10; Sp. p. 2527; Gaz. vol. 154; p. 437.
Grate for concentrator-jigs. S. P. Robinson. No. 960,111; May 31; Sp. p. 7992; Gaz. vol. 154; p. 1343.
Gravel from sand, &c., Apparatus for separating. C. E. Torjusen and W. Idstrom. No. 958,565; May 17; Sp. p. 4687; Gaz. vol. 154; p. 770.
Gravity-jig attachment. F. Richardson. No. 959,607; May 31; Sp. p. 6881; Gaz. vol. 154; p. 1171.
Grease-cup. K. O. and A. E. Dufva. No. 956,761; May 3; Sp. p. 561; Gaz. vol. 154; p. 90.
Grease-cup. J. G. Matheny. No. 959,023; May 24; Sp. p. 5658; Gaz. vol. 154; p. 951.
Greenhouse or the like, Portable. E. C. Kline. No. 956,771; May 3; Sp. p. 584; Gaz. vol. 154; p. 93.
Grinding and crushing mill. F. H. and F. H. Brown. No. 958,085; May 17; Sp. p. 3580; Gaz. vol. 154; p. 603.
Grinding and polishing disk. C. Glover. No. 959,054; May 24; Sp. p. 5721; Gaz. vol. 154; p. 961.
Grinding and sharpening machine, Knife. W. C. Stewart. No. 958,032; May 17; Sp. p. 3589; Gaz. vol. 154; p. 585.
Grinding and surfacing. H. B. Nichols. No. 960,188; May 31; Sp. p. 8139; Gaz. vol. 154; p. 1369.
Grinding cams, Machine for. M. A. Thiel. No. 957,892; May 10; Sp. p. 1927; Gaz. vol. 154; p. 835.
Grinding cocks, Machine for. P. Gerstenkorn. No. 959,506; May 31; Sp. p. 6684; Gaz. vol. 154; p. 1137.
Grinding cutlery-blades and the like, Machine for. T. R. Moore. No. 956,645; May 3; Sp. p. 297; Gaz. vol. 154; p. 49.
Grinding lawn-mowers, Clamping device for. J. F. S. Goble. No. 960,163; May 31; Sp. p. 8087; Gaz. vol. 154; p. 1360.
Grinding-machine feeding mechanism. C. M. Conradson. No. 957,935; May 17; Sp. p. 3057; Gaz. vol. 154; p. 549.
Grinding-machine feeding mechanism. C. M. Conradson. No. 957,936; May 17; Sp. p. 3062; Gaz. vol. 154; p. 550.
Grinding machine, Knife-. W. C. Stewart. No. 958,030; May 17; Sp. p. 3384; Gaz. vol. 154; p. 584.
Grinding-mill. G. Carlson. No. 959,714; May 31; Sp. p. 7098; Gaz. vol. 154; p. 1205.
Grinding-tool. M. F. Parsons. No. 956,822; May 3; Sp. p. 705; Gaz. vol. 154; p. 111.
Grindstone truing or dressing apparatus. S. King. No. 957,689; May 10; Sp. p. 2626; Gaz. vol. 154; p. 437.
Grippers. R. F. McPeely. No. 959,874; May 31; Sp. p. 7455; Gaz. vol. 154; p. 1260.
Grout-mixer. W. McIlvrid. No. 958,421; May 17; Sp. p. 4406; Gaz. vol. 154; p. 721.
Gumming device for envelop, bag, and like making machines. R. E. Fischer and M. Weecher. No. 959,493; May 31; Sp. p. 6647; Gaz. vol. 154; p. 1133.
Gun. M. Telecheff. No. 959,648; May 31; Sp. p. 6964; Gaz. vol. 154; p. 1185.
Gun, Air-. E. H. Searle. No. 959,889; May 31; Sp. p. 7491; Gaz. vol. 154; p. 1266.
Gun-cleaner. M. O. Yerkey. No. 959,680; May 31; Sp. p. 7037; Gaz. vol. 154; p. 1195.
Gun, Differential-recoil. K. Hausener. No. 958,119; May 17; Sp. p. 3645; Gaz. vol. 154; p. 615.
Gun-firing mechanism. J. F. Meigs and S. A. S. Hammar. No. 958,660; May 17; Sp. p. 4869; Gaz. vol. 154; p. 800.
Gun-muffler. J. H. Stimson. No. 959,400; May 24; Sp. p. 6428; Gaz. vol. 154; p. 1075.
Gun-sight. C. F. Wollenberg. No. 958,951; May 24; Sp. p. 5518; Gaz. vol. 154; p. 927.
Gun-sight-adjusting means. D. C. Cleary. No. 960,153; May 31; Sp. p. 8069; Gaz. vol. 154; p. 1356.
Gun-sight protector. W. Langstroth. No. 958,655; May 17; Sp. p. 4861; Gaz. vol. 154; p. 799.
Gun-stock, Adjustable. S. Powers. No. 959,069; May 24; Sp. p. 5774; Gaz. vol. 154; p. 967.
Gun-support. L. V. Benét and H. A. Mercié. No. 959,291; May 24; Sp. p. 6219; Gaz. vol. 154; p. 1039.

Gun training and elevating mechanism. J. F. Meigs and H. G. Jakobsen. No. 958,515; May 17; Sp. p. 4593; Gaz. vol. 154; p. 754.
Gun, Trick-. C. P. Riggs. No. 958,712; May 17; Sp. p. 4968; Gaz. vol. 154; p. 817.
Gun, Trick water-. E. De Moulin. No. 956,760; May 3; Sp. p. 560; Gaz. vol. 154; p. 89.
Gun, Trick water-. E. De Moulin. No. 958,711; May 17; Sp. p. 4966; Gaz. vol. 154; p. 817.
Guns, Feed apparatus for automatic. L. B. Benét. No. 958,078; May 17; Sp. p. 3566; Gaz. vol. 154; p. 601.
Hair, Curing. G. E. Dyck. No. 957,816; May 10; Sp. p. 1775; Gaz. vol. 154; p. 310.
Hair curler and waver. W. F. Freeman. No. 957,462; May 10; Sp. p. 2070; Gaz. vol. 154; p. 359.
Hair-grinding machine. C. P. Bossert. No. 957,729; May 10; Sp. p. 2603; Gaz. vol. 154; p. 450.
Hair-waving apparatus. P. E. Herrmann. No. 959,527; May 31; Sp. p. 6719; Gaz. vol. 154; p. 1144.
Hame-fastener. E. J. Jones. No. 958,253; May 17; Sp. p. 3024; Gaz. vol. 154; p. 660.
Hammer and puller, Tack-. S. L. Young. No. 957,924; May 17; Sp. p. 3040; Gaz. vol. 154; p. 545.
Hammer for tinsmiths, &c. J. O. Charpentier. No. 958,595; May 17; Sp. p. 4746; Gaz. vol. 154; p. 779.
Hammer or the like. F. Baldwin. No. 960,147; May 31; Sp. p. 8062; Gaz. vol. 154; p. 1355.
Hammer, Revolving. W. Boyd. No. 956,515; May 3; Sp. p. 17; Gaz. vol. 154; p. 6.
Hammer-support, Pneumatic. H. Neville. No. 958,669; May 17; Sp. p. 4888; Gaz. vol. 154; p. 803.
Hammers, Nail-holder for. H. Schneider. No. 957,108; May 3; Sp. p. 1299; Gaz. vol. 154; p. 207.
Hammock, Bed-. C. B. Eaton. No. 960,078; May 31; Sp. p. 7936; Gaz. vol. 154; p. 1332.
Hammocks, Foldable stand for canopy-. C. A. Berger. No. 957,644; May 10; Sp. p. 2430; Gaz. vol. 154; p. 420.
Handle: *See* Can-handle; File-handle.
Handle. J. T. Hammond. No. 958,114; May 17; Sp. p. 3636; Gaz. vol. 154; p. 618.
Handle. G. Lemieux. No. 959,235; May 24; Sp. p. 6112; Gaz. vol. 154; p. 1021.
Hanger: *See* Cable-hanger; Corn-hanger; Electric-light hanger; Electrical-conductor hanger; Garment-hanger; Hat and coat hanger; Shade-hanger; Trolley-wire hanger; Trousers-hanger.
Hanger-board switch. H. L. Smith. No. 959,801; May 31; Sp. p. 7406; Gaz. vol. 154; p. 1266.
Harness back-pad and collar-pad. L. P. Overshiner. No. 959,381; May 24; Sp. p. 6399; Gaz. vol. 154; p. 1070.
Harness, Casting-. I. Pasley. No. 957,517; May 10; Sp. p. 2179; Gaz. vol. 154; p. 376.
Harness-pads, Machine for manufacturing. C. H. Gringe. No. 958,519; May 31; Sp. p. 6705; Gaz. vol. 154; p. 1141.
Harness-shield. A. B. Harrell. No. 957,771; May 10; Sp. p. 2693; Gaz. vol. 154; p. 463.
Harrow. F. C. Warne and A. B. McLean. No. 958,200; May 17; Sp. p. 3809; Gaz. vol. 154; p. 644.
Harrow. W. D. Walton. No. 959,276; May 24; Sp. p. 6193; Gaz. vol. 154; p. 1035.
Harrow. C. B. Rozar. No. 960,200; May 31; Sp. p. 8163; Gaz. vol. 154; p. 1373.
Harrow, Adjustable cultivating-. W. S. Morgan. No. 957,701; May 10; Sp. p. 2546; Gaz. vol. 154; p. 440.
Harvester, Corn-. F. D. and A. D. Wilson. No. 957,831; May 10; Sp. p. 2806; Gaz. vol. 154; p. 482.
Harvester-cutter. N. P. Lithander. No. 957,428; May 10; Sp. p. 2010; Gaz. vol. 154; p. 347.
Harvester-cutter mechanism. L. T. Velen. No. 957,280; May 10; Sp. p. 1698; Gaz. vol. 154; p. 297.
Harvester cutting mechanism, Corn-. L. E. Parsons. No. 958,165; May 17; Sp. p. 3744; Gaz. vol. 154; p. 633.
Harvester-elevator. J. Bode. No. 959,703; May 31; Sp. p. 7079; Gaz. vol. 154; p. 1202.
Harvester, Grain-. D. W. Smith. No. 958,831; May 17; Sp. p. 4232; Gaz. vol. 154; p. 690.
Harvesters, Elevator-hood for. E. C. Mottert. No. 957,437; May 10; Sp. p. 2024; Gaz. vol. 154; p. 351.
Harvesting machine, Beet-. J. E. Nix. No. 956,821; May 3; Sp. p. 704; Gaz. vol. 154; p. 110.
Hat and coat hanger. C. H. Pelton. No. 959,589; May 31; Sp. p. 6851; Gaz. vol. 154; p. 1165.
Hat-brim edging, setting, and rounding machine. C. E. Sackett. No. 957,519; May 10; Sp. p. 2183; Gaz. vol. 154; p. 377.
Hat-cleaning machine. C. S. Schwarz. No. 958,327; May 17; Sp. p. 4223; Gaz. vol. 154; p. 689.
Hat-fastener. A. Straus. No. 957,810; May 10; Sp. p. 2776; Gaz. vol. 154; p. 476.
Hat-fastener. W. J. Paton. No. 959,586; May 31; Sp. p. 6844; Gaz. vol. 154; p. 1164.
Hat-fastener. L. Brody. No. 959,991; May 31; Sp. p. 7728; Gaz. vol. 154; p. 1302.
Hat-guard. R. S. Wiesenfeld. No. 956,917; May 3; Sp. p. 910; Gaz. vol. 154; p. 144.
Hat-holder. E. J. Guillard. No. 957,770; May 10; Sp. p. 2691; Gaz. vol. 154; p. 463.
Hat-holder. G. Aubuchon. No. 958,070; May 17; Sp. p. 3556; Gaz. vol. 154; p. 599.
Hat-pin attachment. J. R. Jameson. No. 958,404; May 17; Sp. p. 4376; Gaz. vol. 154; p. 715.
Hat-remodeling tool. I. C. Reily. No. 956,865; May 3; Sp. p. 798; Gaz. vol. 154; p. 126.
Hay-loader. S. K. Dennis. No. 959,477; May 31; Sp. p. 6607; Gaz. vol. 154; p. 1127.
Hay-loaders, Draft connection for. S. K. Dennis. No. 959,724; May 31; Sp. p. 7122; Gaz. vol. 154; p. 1209.
Hay-press. D. S. Beard. No. 957,538; May 10; Sp. p. 2227; Gaz. vol. 154; p. 385.
Hay-presses, &c., Condenser for. L. B. Wygant. No. 957,291; May 10; Sp. p. 1724; Gaz. vol. 154; p. 301.
Hay-rack. J. Voll and D. Dringman. No. 959,274; May 24; Sp. p. 6188; Gaz. vol. 154; p. 1034.
Hay-rack brake. I. R. Reeves. No. 958,766; May 24; Sp. p. 5097; Gaz. vol. 154; p. 862.
Hay-rake. C. Pearson. No. 959,796; May 31; Sp. p. 7278; Gaz. vol. 154; p. 1233.
Hay-sweep, Self-dumping. A. E. Davis. No. 957,456; May 10; Sp. p. 2058; Gaz. vol. 154; p. 357.
Hay-tedder. B. F. Lutz. No. 958,514; May 17; Sp. p. 4592; Gaz. vol. 154; p. 753.
Hay tedder and mower. W. F. Schanzlin. No. 957,628; May 10; Sp. p. 2397; Gaz. vol. 154; p. 415.
Head-gate. J. A. Taylor. No. 957,448; May 10; Sp. p. 2042; Gaz. vol. 154; p. 354.
Header, Grain-. R. C. Towner. No. 959,819; May 31; Sp. p. 7329; Gaz. vol. 154; p. 1242.
Heading-machine feed mechanism. A. C. Campbell and N. W. Cummins. No. 959,456; May 31; Sp. p. 6555; Gaz. vol. 154; p. 1120.
Heading-machines, Reverse feed for. A. C. Campbell. No. 959,453; May 31; Sp. p. 6545; Gaz. vol. 154; p. 1119.
Headlight. C. R. Blackman. No. 959,700; May 31; Sp. p. 7076; Gaz. vol. 154; p. 1201.
Headlight. R. Macdonald. No. 959,770; May 31; Sp. p. 7217; Gaz. vol. 154; p. 1225.
Headlight. W. C. Huebner. No. 960,018; May 31; Sp. p. 7796; Gaz. vol. 154; p. 1312.
Headlight, Adjustable. A. S. Churton. No. 959,920; May 31; Sp. p. 7560; Gaz. vol. 154; p. 1277.
Headlight adjuster, Locomotive-. O. B. McCoy. No. 958,522; May 17; Sp. p. 4610; Gaz. vol. 154; p. 756.
Heat-insulated receptacle. L. R. Steel. No. 957,808; May 10; Sp. p. 2773; Gaz. vol. 154; p. 475.
Heater: *See* Air-heater; Electric heater; Feed-water heater; Orchard-heater; Portable heater; Steam and water heater; Water-heater.
Heating appliance. C. C. Spengler and H. T. Sidway. No. 956,742; May 3; Sp. p. 516; Gaz. vol. 154; p. 83.
Heating appliance. C. C. Spengler and H. T. Sidway. No. 956,783; May 3; Sp. p. 605; Gaz. vol. 154; p. 96.
Heating device, Electric. R. L. Halley. No. 959,215; May 24; Sp. p. 6066; Gaz. vol. 154; p. 1014.
Heating running water, Apparatus for electrically. G. and L. Fuller. No. 957,667; May 10; Sp. p. 2483; Gaz. vol. 154; p. 429.
Heating system. F. C. Goff. No. 957,156; May 3; Sp. p. 1392; Gaz. vol. 154; p. 223.
Heating system, Hot-water. H. L. Bruce. No. 956,677; May 3; Sp. p. 370; Gaz. vol. 154; p. 61.
Heating system, Steam-. W. L. Garland. No. 959,504; May 31; Sp. p. 6681; Gaz. vol. 154; p. 1137.
Heating system, Water-. J. F. Hickerson. No. 958,121; May 17; Sp. p. 3650; Gaz. vol. 154; p. 615.
Heating utensil. E. L. Comes. No. 958,227; May 17; Sp. p. 3863; Gaz. vol. 154; p. 652.
Heel and sole protector, Boot and shoe. F. W. Whitcher and C. F. Randall. No. 959,982; May 31; Sp. p. 7708; Gaz. vol. 154; p. 1299.
Heel and sole protectors for boots and shoes, Machine for setting. H. W. Winter and B. J. Conlon. No. 959,984; May 31; Sp. p. 7712; Gaz. vol. 154; p. 1300.
Heel-breasting machine. G. T. McLeod. No. 957,986; May 17; Sp. p. 3228; Gaz. vol. 154; p. 567.
Heel breasting machine, Boot and shoe. M. D. Phelan. No. 958,005; May 17; Sp. p. 3287; Gaz. vol. 154; p. 575.
Heel-burnishing machine. C. E. Hood. No. 957,958; May 17; Sp. p. 3129; Gaz. vol. 154; p. 557.
Heel-compressor. M. D. Phelan. No. 958,001; May 17; Sp. p. 3267; Gaz. vol. 154; p. 573.
Heel-cushion fastening. W. L. Gordon. No. 959,513; May 31; Sp. p. 6695; Gaz. vol. 154; p. 1139.
Heel-edge liner. G. T. McLeod. No. 957,993; May 17; Sp. p. 3247; Gaz. vol. 154; p. 570.
Heel-nailing machine. E. Woodward. No. 958,058; May 17; Sp. p. 3529; Gaz. vol. 154; p. 595.
Heel-shaver. M. D. Phelan. No. 958,006; May 17; Sp. p. 3300; Gaz. vol. 154; p. 575.
Heel-shaving machines, Counter-guard for. F. F. Eno. No. 957,948; May 17; Sp. p. 3075; Gaz. vol. 154; p. 551.
Heel-support. J. C. Moorefield. No. 959,956; May 31; Sp. p. 7652; Gaz. vol. 154; p. 1290.
Heeling-machine. E. Woodward. No. 958,056; May 17; Sp. p. 3471; Gaz. vol. 154; p. 594.
Heeling-machine. T. G. Plant. No. 958,282; May 17; Sp. p. 3998; Gaz. vol. 154; p. 671.
Heeling-machine. T. G. Plant. No. 958,292; May 17; Sp. p. 4060; Gaz. vol. 154; p. 675.
Heeling-machine. T. G. Plant. No. 958,302; May 17; Sp. p. 4133; Gaz. vol. 154; p. 679.
Heeling-machine attachment. T. G. Plant. No. 958,281; May 17; Sp. p. 3995; Gaz. vol. 154; p. 670.
Heeling-machine top-lift holder. W. C. Stewart. No. 958,041; May 17; Sp. p. 3444; Gaz. vol. 154; p. 589.
Heeling-machine work-holder. W. C. Stewart. No. 958,038; May 17; Sp. p. 3427; Gaz. vol. 154; p. 588.
Heeling-machine work-holder. T. G. Plant. No. 958,305; May 17; Sp. p. 4154; Gaz. vol. 154; p. 680.
Heeling-machine work-support. T. G. Plant. No. 958,300; May 17; Sp. p. 4110; Gaz. vol. 154; p. 678.

Helical rolls, Making. C. S. Lockwood. No. 958,144; May 17; Sp. p. 3696; Gaz. vol. 154; p. 625.
Hide-unhairing machines, Roller for. H. B. Rees. No. 959,262; May 24; Sp. p. 6162; Gaz. vol. 154; p. 1030.
High chair, Adjustable. H. P. Hansen. No. 957,055; May 3; Sp. p. 1196; Gaz. vol. 154; p. 100.
High-voltage switch. W. T. Goddard. No. 959,929; May 31; Sp. p. 7578; Gaz. vol. 154; p. 1280.
Hinge. E. F. Hulbert. No. 957,160; May 3; Sp. p. 1406; Gaz. vol. 154; p. 225.
Hinge. C. Glover. No. 958,740; May 24; Sp. p. 5047; Gaz. vol. 154; p. 853.
Hinge. J. Tritsch. No. 959,001; May 24; Sp. p. 5620; Gaz. vol. 154; p. 944.
Hinge. C. T. J. Giles. No. 960,085; May 31; Sp. p. 7947; Gaz. vol. 154; p. 1334.
Hinge and lock for box-covers. F. W. Tobey. No. 959,971; May 31; Sp. p. 7636; Gaz. vol. 154; p. 1295.
Hinge, Door-. F. Schwarz. No. 956,738; May 3; Sp. p. 509; Gaz. vol. 154; p. 82.
Hinge-joint. F. Wetteroth. No. 957,528; May 10; Sp. p. 2204; Gaz. vol. 154; p. 331.
Hinge, Shutter-. A. B. Landis. No. 959,560; May 31; Sp. p. 6793; Gaz. vol. 154; p. 1156.
Hinge, Spring-. F. H. Ellis. No. 957,603; May 10; Sp. p. 2330; Gaz. vol. 154; p. 406.
Hitching device, Horse-. E. B. Rolfe. No. 957,380; May 10; Sp. p. 1904; Gaz. vol. 154; p. 331.
Hod. G. W. Frost. No. 957,604; May 10; Sp. p. 2341; Gaz. vol. 154; p. 407.
Hog-holder. J. O. Beechdolt. No. 959,422; May 24; Sp. p. 6463; Gaz. vol. 154; p. 1082.
Hog-scraper. M. Dahl. No. 958,101; May 17; Sp. p. 3612; Gaz. vol. 154; p. 609.
Hoist. E. Miller. No. 958,883; May 24; Sp. p. 5390; Gaz. vol. 154; p. 904.
Hoist, Horse-power. A. M. Smith. No. 959,630; May 31; Sp. p. 6927; Gaz. vol. 154; p. 1179.
Hoists, Stop-motion apparatus for. A. M. Ceyle. No. 959,996; May 31; Sp. p. 7744; Gaz. vol. 154; p. 1305.
Hoisting and dumping mechanism. J. P. Zoller. No. 959,006; May 24; Sp. p. 5325; Gaz. vol. 154; p. 976.
Hoisting apparatus. T. O. Werner. No. 958,049; May 17; Sp. p. 3462; Gaz. vol. 154; p. 592.
Hoisting-bucket. V. H. Crites. No. 956,946; May 3; Sp. p. 962; Gaz. vol. 154; p. 154.
Hoisting-buckets, Means for turning. A. C. Johnston. No. 958,646; May 17; Sp. p. 4845; Gaz. vol. 154; p. 796.
Hoisting device. E. O. Carvin. No. 957,965; May 17; Sp. p. 2893; Gaz. vol. 154; p. 525.
Hoisting device. G. F. Koenig. No. 957,969; May 17; Sp. p. 3185; Gaz. vol. 154; p. 562.
Hoisting device. S. Wright. No. 959,677; May 31; Sp. p. 7032; Gaz. vol. 154; p. 1194.
Hoisting-platform. C. M. Armstrong. No. 959,835; May 31; Sp. p. 7368; Gaz. vol. 154; p. 1248.
Hook: *See* Back-band hook; Check-hook; Fish-hook; Fish and game hook; Grab-hook; Grappling-hook; Lacing-hook; Shaft-hook; Snap-hook; Swingletree-hook; Telephone switch-hook; Weed-hook; Whiffletree-hook.
Hook and eye. E. M. Cowles. No. 958,389; May 17; Sp. p. 4304; Gaz. vol. 154; p. 703.
Hoop sizing and clamping device. L. Gibbs. No. 958,390; May 17; Sp. p. 4852; Gaz. vol. 154; p. 710.
Hoops, bands, strips, or bars to rolls, Adjustable mechanism for feeding metal. F. F. Gregg. No. 956,525; May 3; Sp. p. 80; Gaz. vol. 154; p. 5.
Horn and resonator therefor, Diaphragm-actuated. M. R. Hutchison. No. 957,161; May 3; Sp. p. 1409; Gaz. vol. 154; p. 226.
Horn, Reverberatory sound-. W. A. Chapman. No. 957,654; May 10; Sp. p. 2449; Gaz. vol. 154; p. 424.
Horn, &c., Signaling-. M. R. Hutchison. No. 956,908; May 3; Sp. p. 864; Gaz. vol. 154; p. 138.
Horse controlling or hitching device. A. L. Harvey. No. 959,135; May 24; Sp. p. 5909; Gaz. vol. 154; p. 988.
Horse-detacher. S. Molnar. No. 959,373; May 24; Sp. p. 6382; Gaz. vol. 154; p. 1067.
Horse-nostril protector. U. Anctil. No. 960,142; May 31; Sp. p. 8053; Gaz. vol. 154; p. 1353.
Horse-power loader. J. P. and J. A. Lucas. No. 958,882; May 24; Sp. p. 5389; Gaz. vol. 154; p. 904.
Horse-releaser. G. W. Huffman. No. 957,340; May 10; Sp. p. 1829; Gaz. vol. 154; p. 318.
Horseshoe appliance. C. R. Fear. No. 956,955; May 3; Sp. p. 906; Gaz. vol. 154; p. 156.
Horseshoe. J. B. Locker. No. 957,672; May 3; Sp. p. 1231; Gaz. vol. 154; p. 195.
Horseshoe. G. Limbach. No. 957,691; May 10; Sp. p. 2529; Gaz. vol. 154; p. 437.
Horseshoe. S. Orose. No. 957,707; May 10; Sp. p. 2558; Gaz. vol. 154; p. 443.
Horseshoe attachment. H. Huth. No. 957,884; May 17; Sp. p. 2936; Gaz. vol. 154; p. 531.
Horseshoe attachment. E. J. Rubrecht and P. C. Dean. No. 958,547; May 17; Sp. p. 4653; Gaz. vol. 154; p. 764.
Horseshoe-calk. R. Huber. No. 957,212; May 10; Sp. p. 1841; Gaz. vol. 154; p. 273.
Horseshoe, Cushion-pad for. W. N. Gowing. No. 958,629; May 17; Sp. p. 4813; Gaz. vol. 154; p. 790.
Hose. R. H. Brown. No. 957,492; May 10; Sp. p. 2182; Gaz. vol. 154; p. 369.
Hose, Braided. H. Z. Cobb. No. 957,567; May 17; Sp. p. 2997; Gaz. vol. 154; p. 525.
Hose carriage, Garden-. A. Low. No. 957,569; May 10; Sp. p. 2281; Gaz. vol. 154; p. 395.
Hose-coupling. W. W. Keys. No. 959,226; May 24; Sp. p. 6090; Gaz. vol. 154; p. 1018.
Hose coupling, Air-. E. W. Shaw. No. 957,385; May 10; Sp. p. 1914; Gaz. vol. 154; p. 333.
Hose coupling, Automatic train-. J. F. McElroy. No. 959,152; May 24; Sp. p. 5938; Gaz. vol. 154; p. 994.
Hose-coupling lock. H. M. Robertson. No. 958,437; May 17; Sp. p. 4449; Gaz. vol. 154; p. 726.
Hose-coupling lock. H. M. Robertson. No. 958,438; May 17; Sp. p. 4450; Gaz. vol. 154; p. 727.
Hose-holder. T. Boeson. No. 957,590; May 17; Sp. p. 3050; Gaz. vol. 154; p. 546.
Hose-pipes, End connection for metallic. E. Witzenmann. No. 960,187; May 24; Sp. p. 6016; Gaz. vol. 154; p. 1005.
Hose-supporter. B. Ortell. No. 958,425; May 17; Sp. p. 4413; Gaz. vol. 154; p. 722.
Hotbed drag-out. R. H. Stevens. No. 959,813; May 31; Sp. p. 7319; Gaz. vol. 154; p. 1240.
Hotel-lock. A. Arens and E. L. Teich. No. 958,352; May 17; Sp. p. 4271; Gaz. vol. 154; p. 697.
House: *See* Portable house; Smoke-house.
Hub, Wheel-. C. L. Johnson. No. 959,015; May 24; Sp. p. 5642; Gaz. vol. 154; p. 948.
Huller: *See* Clover-huller.
Humidifier. J. W. Fries. No. 957,197; May 10; Sp. p. 1491; Gaz. vol. 154; p. 266.
Humidifier. E. Maxwell. No. 957,480; May 10; Sp. p. 2014; Gaz. vol. 154; p. 348.
Humidifier. R. P. Smith. No. 958,555; May 17; Sp. p. 4666; Gaz. vol. 154; p. 767.
Hydrant. A. A. Bennett. No. 958,079; May 17; Sp. p. 3560; Gaz. vol. 154; p. 601.
Hydrant attachment. W. H. Wileman. No. 959,092; May 24; Sp. p. 5817; Gaz. vol. 154; p. 975.
Hydrated sodium carbonate and sodium tannate, Composition of. W. E. Ridenour. No. 958,895; May 24; Sp. p. 5415; Gaz. vol. 154; p. 908.
Hydraulic jack. R. W. Baker. No. 957,177; May 10; Sp. p. 1458; Gaz. vol. 154; p. 260.
Hydraulic press. H. J. Bellamy. No. 956,752; May 3; Sp. p. 546; Gaz. vol. 154; p. 87.
Hydrocarbon-burner. E. G. Wickersham. No. 958,344; May 17; Sp. p. 4266; Gaz. vol. 154; p. 694.
Hydrocarbon-burner. T. H. Clark and J. H. Nequette. No. 958,693; May 17; Sp. p. 4932; Gaz. vol. 154; p. 810.
Hydrocarbon-burner. B. L. Worthen. No. 958,780; May 24; Sp. p. 5165; Gaz. vol. 154; p. 870.
Hydrocarbon-burner. J. E. Walling and A. Olson. No. 958,947; May 24; Sp. p. 5512; Gaz. vol. 154; p. 926.
Hydrocarbon-burner. O. Pordice. No. 958,999; May 24; Sp. p. 5617; Gaz. vol. 154; p. 943.
Ice-chipping machine. W. Z. and F. P. Dalgety. No. 957,038; May 3; Sp. p. 1166; Gaz. vol. 154; p. 185.
Ice-machine. H. D. Pownall. No. 959,602; May 31; Sp. p. 6873; Gaz. vol. 154; p. 1170.
Ice, Making. A. B. Beals. No. 959,697; May 31; Sp. p. 7070; Gaz. vol. 154; p. 1200.
Ice-making machine. C. Wagener. No. 958,683; May 17; Sp. p. 4919; Gaz. vol. 154; p. 807.
Ice-saw. J. H. Mapes. No. 956,612; May 3; Sp. p. 676; Gaz. vol. 154; p. 107.
Ice-saw. K. K. Witt. No. 958,684; May 17; Sp. p. 4920; Gaz. vol. 154; p. 807.
Ice-severing device. G. F. Savoy. No. 956,604; May 3; Sp. p. 212; Gaz. vol. 154; p. 37.
Ignition systems, Wire bar for. C. Schmidt. No. 958,835; May 24; Sp. p. 5267; Gaz. vol. 154; p. 893.
Illuminating device for burning wax. P. Dautefanl. No. 958,235; May 17; Sp. p. 3976; Gaz. vol. 154; p. 655.
Images on glass, porcelain, ceramic, metallic, or other surfaces, Reproduction of. M. Amthéa. No. 959,693; May 31; Sp. p. 7056; Gaz. vol. 154; p. 1198.
Impact-tool. J. J. Padbury. No. 957,706; May 10; Sp. p. 2559; Gaz. vol. 154; p. 443.
Implement, Combination. C. J. Livering. No. 957,692; May 10; Sp. p. 2530; Gaz. vol. 154; p. 438.
Incandescent light. E. D. Cody. No. 958,094; May 17; Sp. p. 3597; Gaz. vol. 154; p. 606.
Incinerating plant. H. F. Price and T. F. Bennett. No. 958,308; May 17; Sp. p. 4174; Gaz. vol. 154; p. 681.
Incubator. L. N. Porter. No. 956,600; May 3; Sp. p. 201; Gaz. vol. 154; p. 35.
Index clasp, Vertical file-. C. J. Whipple. No. 958,050; May 17; Sp. p. 3464; Gaz. vol. 154; p. 592.
Indicator: *See* Speed and time indicator; Station-indicator; Tank-indicator.
Indicator reducing-motion mechanism. F. O. Ball. No. 959,443; May 31; Sp. p. 6511; Gaz. vol. 154; p. 1115.
Indigo and making same, Dichlor-dibrom-. P. Julius, V. Villiger, and P. Nawiasky. No. 957,683; May 10; Sp. p. 2514; Gaz. vol. 154; p. 435.
Inhaler. W. S. Doane. No. 957,548; May 10; Sp. p. 2245; Gaz. vol. 154; p. 388.
Ink-fountain, Distributing. E. S. Ladd. No. 959,556; May 31; Sp. p. 6790; Gaz. vol. 154; p. 1155.
Ink-well. T. E. McNulty. No. 958,668; May 17; Sp. p. 4887; Gaz. vol. 154; p. 802.
Ink-well. H. B. Parsons. No. 959,332; May 24; Sp. p. 6400; Gaz. vol. 154; p. 1070.
Inking-ribbon. G. T. Newton. No. 960,086; May 31; Sp. p. 7859; Gaz. vol. 154; p. 1319.
Inking-ribbon winding apparatus. O. Blum. No. 957,542; May 10; Sp. p. 2234; Gaz. vol. 154; p. 387.

Inseam-trimming machine. A. E. Johnson. No. 956,971; May 3; Sp. p. 1032; Gaz. vol. 154; p. 162.
Insect-trap. J. F. Watts. No. 958,786; May 24; Sp. p. 5154; Gaz. vol. 154; p. 869.
Insectifuge-holder. P. Pollard. No. 958,678; May 17; Sp. p. 4906; Gaz. vol. 154; p. 806.
Insole-edge trimmer. W. H. Hooper. No. 957,960; May 17; Sp. p. 3139; Gaz. vol. 154; p. 558.
Insole for boots and shoes. T. J. Ryan. No. 958,013; May 17; Sp. p. 3314; Gaz. vol. 154; p. 577.
Insole-reinforcing strips, Machine for cutting and slitting. G. T. McLeod. No. 957,990; May 17; Sp. p. 3241; Gaz. vol. 154; p. 569.
Insole, Spring-. R. W. Morgan. No. 959,575; May 31; Sp. p. 6822; Gaz. vol. 154; p. 1161.
Insole-tempering machine. W. H. Hooper. No. 957,961; May 17; Sp. p. 3142; Gaz. vol. 154; p. 558.
Insoles of boots and shoes, Machine for treating. W. H. Hooper. No. 957,959; May 17; Sp. p. 3135; Gaz. vol. 154; p. 557.
Insulating compound, Refractory waterproof. W. H. Wright and J. Hoffman. No. 956,870; May 3; Sp. p. 807; Gaz. vol. 154; p. 128.
Insulating-covering for cables. P. Torchio. No. 958,046; May 17; Sp. p. 3454; Gaz. vol. 154; p. 591.
Insulating material, Making. W. R. Seigle. No. 959,620; May 31; Sp. p. 6906; Gaz. vol. 154; p. 1175.
Insulator and conductor for electric currents, A Champion. No. 959,052; May 24; Sp. p. 5718; Gaz. vol. 154; p. 960.
Insulator, Battery-plate. C. J. Bristol. No. 959,303; May 24; Sp. p. 6242; Gaz. vol. 154; p. 1044.
Insulator for railway-trucks. J. M. Wood. No. 957,133; May 3; Sp. p. 1347; Gaz. vol. 154; p. 216.
Interlocking switch. A. C. Savage. No. 957,262; May 10; Sp. p. 1655; Gaz. vol. 154; p. 291.
Internal-combustion engine. J. H. Hopkins. No. 956,967; May 3; Sp. p. 1022; Gaz. vol. 154; p. 160.
Internal-combustion engine. C. W. Hines. No. 957,336; May 10; Sp. p. 1821; Gaz. vol. 154; p. 317.
Internal-combustion engine. P. Daniel. No. 957,657; May 10; Sp. p. 2455; Gaz. vol. 154; p. 425.
Internal-combustion engine. N. Metz. No. 957,788; May 10; Sp. p. 2737; Gaz. vol. 154; p. 469.
Internal-combustion engine. O. A. Stranahan. No. 959,084; May 24; Sp. p. 5798; Gaz. vol. 154; p. 972.
Internal-combustion engine. L. T. Rasmussen. No. 959,805; May 31; Sp. p. 7305; Gaz. vol. 154; p. 1237.
Internal-combustion engine, Two-cycle. E. A. Meyer. No. 956,814; May 3; Sp. p. 683; Gaz. vol. 154; p. 107.
Internal-combustion motor. C. A. and O. W. Hult. No. 957,065; May 17; Sp. p. 3174; Gaz. vol. 154; p. 560.
Iron: *See* Sad-iron; Soldering-iron; Thill-iron.
Iron ores, Cleaning. E. F. Goltra. No. 957,187; May 3; Sp. p. 1394; Gaz. vol. 154; p. 224.
Iron tank, Galvanized-. G. A. and A. F. Trachte. No. 956,906; May 3; Sp. p. 895; Gaz. vol. 154; p. 141.
Ironing and dressing machine. T. G. Plant. No. 958,304; May 17; Sp. p. 4148; Gaz. vol. 154; p. 680.
Ironing-board. J. A. Bean. No. 957,537; May 10; Sp. p. 2225; Gaz. vol. 154; p. 385.
Ironing-board. B. M. Bain. No. 958,071; May 17; Sp. p. 3557; Gaz. vol. 154; p. 599.
Ironing-board. J. A. Lowe. No. 960,101; May 31; Sp. p. 7973; Gaz. vol. 154; p. 1339.
Ironing-board. A. D. Williams. No. 960,213; May 31; Sp. p. 8189; Gaz. vol. 154; p. 1378.
Ironing-machine. C. B. Gartrell. No. 959,835; May 24; Sp. p. 6310; Gaz. vol. 154; p. 1055.
Ironing-table. J. McGuigan. No. 957,439; May 10; Sp. p. 2028; Gaz. vol. 154; p. 351.
Irrigating apparatus. C. Bevill. No. 959,914; May 31; Sp. p. 7550; Gaz. vol. 154; p. 1275.
Irrigating-gutter. C. Diehl. No. 958,479; May 17; Sp. p. 4526; Gaz. vol. 154; p. 741.
Irrigation apparatus. E. Olsson. No. 958,937; May 24; Sp. p. 5493; Gaz. vol. 154; p. 922.
Jack: *See* Bootjack; Boot and shoe ironing and dressing jack; Hydraulic jack; Lifting-jack; Rail-jack; Rotary jack; Shoe-jack; Wagon-jack.
Jack, J. Dixon. No. 959,320; May 24; Sp. p. 6278; Gaz. vol. 154; p. 1050.
Jack for slugging and other machines. W. C. Stewart. No. 958,031; May 17; Sp. p. 3336; Gaz. vol. 154; p. 585.
Jail-cell walls, Interchangeable bottom for. D. F. Youngblood. No. 956,787; May 3; Sp. p. 610; Gaz. vol. 154; p. 98.
Jar-cap leveler. W. H. Honiss. No. 956,529; May 3; Sp. p. 42; Gaz. vol. 154; p. 10.
Jar-closure. G. W. Dungan. No. 959,848; May 31; Sp. p. 7393; Gaz. vol. 154; p. 1252.
Jar-filler. M. C. Carson. No. 959,715; May 31; Sp. p. 7102; Gaz. vol. 154; p. 1206.
Jar-top. C. R. Keeran. No. 957,064; May 3; Sp. p. 1217; Gaz. vol. 154; p. 193.
Jaw-trap. J. E. Brock. No. 956,624; May 3; Sp. p. 254; Gaz. vol. 154; p. 43.
Jig. W. A. Bradley. No. 957,648; May 10; Sp. p. 2487; Gaz. vol. 154; p. 422.
Joint: *See* Ball-joint; Corner-joint; Hinge-joint; Leg-joint; Miter-joint; Rail-joint; Railway-rail joint; Root-joint; Tube-joint; Universal joint.
Joint, W. Pence, G. E. Wolf, and V. O. Jarvis. No. 958,276; May 17; Sp. p. 3967; Gaz. vol. 154; p. 668.
Joint coupling, Lock-. J. K. Bulger. No. 958,086; May 17; Sp. p. 3583; Gaz. vol. 154; p. 604.
Joint or miter planer tool. C. R. Ladevese. No. 959,017; May 24; Sp. p. 5645; Gaz. vol. 154; p. 949.
Journal-bearing. B. L. Morrison. No. 957,435; May 10; Sp. p. 2023; Gaz. vol. 154; p. 350.
Journal-box. G. A. Woodman. No. 956,659; May 3; Sp. p. 330; Gaz. vol. 154; p. 54.
Journal-box. G. A. Woodman. No. 956,660; May 3; Sp. p. 331; Gaz. vol. 154; p. 54.
Journal-box. G. A. Woodman. No. 956,661; May 3; Sp. p. 333; Gaz. vol. 154; p. 55.
Journal-box. W. R. Buse and A. J. Fairbanks. No. 957,136; May 10; Sp. p. 1475; Gaz. vol. 154; p. 263.
Journal-box. W. Neuhs. No. 958,758; May 24; Sp. p. 5085; Gaz. vol. 154; p. 859.
Kerr. J. A. Butler and L. Flick. No. 958,501; May 17; Sp. p. 4736; Gaz. vol. 154; p. 778.
Key: *See* Door-key; Switching-key.
Key-guide. F. A. Reffelt. No. 959,965; May 31; Sp. p. 7667; Gaz. vol. 154; p. 1294.
Key-locking mechanism. P. H. Turley. No. 957,481; May 10; Sp. p. 2102; Gaz. vol. 154; p. 366.
Key-seating machine. W. Billing. No. 958,081; May 17; Sp. p. 3572; Gaz. vol. 154; p. 602.
Keyhole-guard. J. W. Benedict. No. 958,849; May 24; Sp. p. 5306; Gaz. vol. 154; p. 893.
Kiln. E. Cole. No. 959,996; May 31; Sp. p. 7741; Gaz. vol. 154; p. 1304.
Kilns, Fuel-feeding means for cement-. A. Neu. No. 958,970; May 24; Sp. p. 5557; Gaz. vol. 154; p. 934.
Kinetoscope. L. Hetz. No. 956,528; May 3; Sp. p. 40; Gaz. vol. 154; p. 10.
Kitchen utensil. J. P. Ibson. No. 958,875; May 24; Sp. p. 5378; Gaz. vol. 154; p. 902.
Knife-cleaner. E. Philipp and J. Aeppli-Meier. No. 959,803; May 31; Sp. p. 7302; Gaz. vol. 154; p. 1237.
Knitted sweater. M. A. Mueller. No. 957,354; May 10; Sp. p. 2863; Gaz. vol. 154; p. 490.
Knitting-machine. G. T. Nicholls. No. 956,820; May 3; Sp. p. 700; Gaz. vol. 154; p. 110.
Knitting-machine bed. W. O. Wait. No. 959,822; May 31; Sp. p. 7335; Gaz. vol. 154; p. 1243.
Knitting-machine yarn-trap. J. Pearson and H. Carter. No. 959,252; May 24; Sp. p. 6146; Gaz. vol. 154; p. 1027.
Knitting or weaving device. Hand. A. Putman. No. 957,711; May 10; Sp. p. 2566; Gaz. vol. 154; p. 444.
Knob and spindle fastening. C. A. Berry. No. 957,387; May 10; Sp. p. 2324; Gaz. vol. 154; p. 484.
Knob-spindle fastener. W. Curlett. No. 956,947; May 3; Sp. p. 964; Gaz. vol. 154; p. 154.
Knockdown box. A. N. Bender. No. 956,512; May 3; Sp. p. 13; Gaz. vol. 154; p. 5.
Knotter. B. A. Peterson. No. 959,592; May 31; Sp. p. 6856; Gaz. vol. 154; p. 1166.
Label cabinet and moistener. C. K. Resh. No. 957,378; May 10; Sp. p. 1901; Gaz. vol. 154; p. 330.
Labeling device, Bread-. J. Limmer. No. 959,767; May 31; Sp. p. 7211; Gaz. vol. 154; p. 1224.
Lacing. A. T. Holt. No. 957,559; May 10; Sp. p. 2267; Gaz. vol. 154; p. 392.
Lacing-hook. A. Weigand. No. 957,281; May 10; Sp. p. 1702; Gaz. vol. 154; p. 296.
Ladder. J. J. Dennis. No. 958,732; May 24; Sp. p. 5018; Gaz. vol. 154; p. 850.
Lamp. C. A. McCune. No. 956,720; May 3; Sp. p. 474; Gaz. vol. 154; p. 76.
Lamp. W. S. Ryan. No. 957,627; May 10; Sp. p. 2395; Gaz. vol. 154; p. 415.
Lamp. O. J. Holt. No. 959,431; May 24; Sp. p. 6477; Gaz. vol. 154; p. 1085.
Lamp. J. H. Purdy. No. 959,804; May 31; Sp. p. 7308; Gaz. vol. 154; p. 1237.
Lamp, Alcohol-vapor. A. Rector. No. 958,310; May 17; Sp. p. 4194; Gaz. vol. 154; p. 682.
Lamp and similar device, Electric tube-. D. M. Mears. No. 957,983; May 17; Sp. p. 3220; Gaz. vol. 154; p. 567.
Lamp, Arc-. L. W. Pullen. No. 958,828; May 24; Sp. p. 5252; Gaz. vol. 154; p. 885.
Lamp-burner. F. Dow. No. 958,378; May 17; Sp. p. 4325; Gaz. vol. 154; p. 706.
Lamp burner, Vapor-. H. Griswold. No. 960,167; May 31; Sp. p. 8095; Gaz. vol. 154; p. 1361.
Lamp burner, Vapor-. H. Griswold. No. 960,168; May 31; Sp. p. 8097; Gaz. vol. 154; p. 1362.
Lamp-burner, Wick-stop. E. S. Sanderson. No. 957,106; May 3; Sp. p. 1297; Gaz. vol. 154; p. 206.
Lamp, Carbureting-. C. Torchebeuf and E. de Lasseau. No. 958,045; May 17; Sp. p. 3453; Gaz. vol. 154; p. 591.
Lamp-casing. J. Lawler. No. 960,179; May 31; Sp. p. 8124; Gaz. vol. 154; p. 1366.
Lamp-chimney. P. Tennant. No. 956,609; May 3; Sp. p. 223; Gaz. vol. 154; p. 38.
Lamp-chimney holder. G. E. Alphin. No. 956,663; May 3; Sp. p. 336; Gaz. vol. 154; p. 56.
Lamp, Electric-arc. L. W. Pullen. No. 958,827; May 24; Sp. p. 5250; Gaz. vol. 154; p. 884.
Lamp, Electric-arc. H. Beck. No. 959,045; May 24; Sp. p. 5707; Gaz. vol. 154; p. 958.
Lamp-filler. G. B. N. Dow and A. W. Cole. No. 959,480; May 31; Sp. p. 6612; Gaz. vol. 154; p. 1128.
Lamp for vaporized-liquid combustibles, Incandescent. H. Wikrorin. No. 959,091; May 24; Sp. p. 5815; Gaz. vol. 154; p. 974.

Lamp, Gas-. R. M. Dixon. No. 956,572; May 3; Sp. p. 2094; Gaz. vol. 154; p. 363.
Lamp, Gas-. A. Rector. No. 957,476; May 10; Sp. p. 2094; Gaz. vol. 154; p. 363.
Lamp, Incandescent. A. Kryywiec. No. 957,612; May 10; Sp. p. 2354; Gaz. vol. 154; p. 410.
Lamp locking device, Incandescent-. C. J. Timm and J. A. Barnhardt. No. 959,818; May 31; Sp. p. 7328; Gaz. vol. 154; p. 1241.
Lamp, Metal-filament. C. Rumenapp. No. 959,075; May 24; Sp. p. 5785; Gaz. vol. 154; p. 960.
Lamp, Sanctuary-. L. M. Wilde. No. 959,412; May 24; Sp. p. 6449; Gaz. vol. 154; p. 1079.
Lamp-shade holder. A. J. Morgan. No. 958,665; May 17; Sp. p. 4882; Gaz. vol. 154; p. 801.
Lamp-socket attachment, Electric-. H. E. Plunkett. No. 957,371; May 10; Sp. p. 1886; Gaz. vol. 154; p. 328.
Lamp-socket cap, Electric-. G. W. Goodridge. No. 958,625; May 17; Sp. p. 4800; Gaz. vol. 154; p. 789.
Lamp-socket cap, Electric-. G. W. Goodridge. No. 958,626; May 17; Sp. p. 4801; Gaz. vol. 154; p. 789.
Lamp-socket, Cluster. J. H. Dale. No. 958,727; May 24; Sp. p. 5010; Gaz. vol. 154; p. 848.
Lamp-socket, Cluster. J. H. Dale. No. 958,728; May 24; Sp. p. 5011; Gaz. vol. 154; p. 848.
Lamp-socket, Cluster. J. H. Dale. No. 958,729; May 24; Sp. p. 5014; Gaz. vol. 154; p. 849.
Lamp socket, Electric-. F. E. Seeley. No. 957,719; May 10; Sp. p. 2581; Gaz. vol. 154; p. 447.
Lamp socket, Electric-. E. B. Benjamin. No. 958,216; May 17; Sp. p. 3840; Gaz. vol. 154; p. 649.
Lamp socket, Electric-. J. G. Peterson. No. 959,594; May 31; Sp. p. 6860; Gaz. vol. 154; p. 1167.
Lamp socket for reducing the light, Regulating incandescent-. E. H. Smith. No. 957,806; May 10; Sp. p. 2768; Gaz. vol. 154; p. 474.
Lamp sockets, Casing for electric-. A. L. Jacobs. No. 956,970; May 3; Sp. p. 1029; Gaz. vol. 154; p. 161.
Lamp support, Adjustable electric-. J. B. Coe. No. 960,076; May 31; Sp. p. 7932; Gaz. vol. 154; p. 1331.
Lamp-support, Resilient. A. Woodley. No. 957,287; May 10; Sp. p. 1713; Gaz. vol. 154; p. 300.
Lamp switch, Incandescent-. J. A. Mebane. No. 959,572; May 31; Sp. p. 6817; Gaz. vol. 154; p. 1160.
Lamp, Vapor-. C. Halstead. No. 960,011; May 31; Sp. p. 7782; Gaz. vol. 154; p. 1310.
Lamps on vehicles, Means for automatically controlling. E. G. Stanley. No. 957,010; May 3; Sp. p. 1111; Gaz. vol. 154; p. 174.
Lamps, Regenerating carbon-filament electric incandescent. E. A. Krüger. No. 958,662; May 17; Sp. p. 4855; Gaz. vol. 154; p. 797.
Lamps, Shock-absorber for tungsten-. F. Schwartz and L. Kleinmann. No. 957,110; May 3; Sp. p. 1302; Gaz. vol. 154; p. 208.
Lantern. F. D. Spear. No. 959,636; May 31; Sp. p. 6935; Gaz. vol. 154; p. 1181.
Lantern and lunch-receptacle. E. Cunningham. No. 959,118; May 24; Sp. p. 5863; Gaz. vol. 154; p. 982.
Lantern, View-dissolver for magic. O. C. Currie. No. 958,870; May 17; Sp. p. 4306; Gaz. vol. 154; p. 703.
Lap-board. J. P. Roehm. No. 960,112; May 31; Sp. p. 7993; Gaz. vol. 154; p. 1343.
Lap-robe. A. G. Frankenhoff. No. 958,617; May 17; Sp. p. 4790; Gaz. vol. 154; p. 787.
Last. H. Keil. No. 956,582; May 3; Sp. p. 161; Gaz. vol. 154; p. 28.
Last, Block-. M. L. Goding. No. 956,576; May 3; Sp. p. 152; Gaz. vol. 154; p. 26.
Last, Divided. J. D. Winchester. No. 959,672; May 31; Sp. p. 7023; Gaz. vol. 154; p. 1193.
Last, Expansible foot-. J. E. Leavitt. No. 957,975; May 17; Sp. p. 3204; Gaz. vol. 154; p. 564.
Lasting device, Auxiliary. T. G. Plant. No. 958,286; May 17; Sp. p. 4034; Gaz. vol. 154; p. 672.
Lasting-machine. P. R. Glass. No. 957,949; May 17; Sp. p. 3093; Gaz. vol. 154; p. 553.
Lasting-machine. T. G. Plant. No. 958,280; May 17; Sp. p. 3982; Gaz. vol. 154; p. 670.
Lasting machine, Bed-. F. Holbrook. No. 957,883; May 17; Sp. p. 2923; Gaz. vol. 154; p. 531.
Lasting machine, Bed-. T. G. Plant. No. 958,291; May 17; Sp. p. 4052; Gaz. vol. 154; p. 674.
Lasting-machines, Hold-down for. N. C. Bohr. No. 958,083; May 17; Sp. p. 3576; Gaz. vol. 154; p. 603.
Lasting-machines, Pincer mechanism for. T. H. Seely. No. 958,017; May 17; Sp. p. 3322; Gaz. vol. 154; p. 579.
Lasting-machines, Pincer or gripper mechanism for. T. H. Seely. No. 958,187; May 17; Sp. p. 3788; Gaz. vol. 154; p. 639.
Latch. A. Bock. No. 959,295; May 24; Sp. p. 6227; Gaz. vol. 154; p. 1041.
Latch for end-gates of mining-cars. I. K. Beaver. No. 958,075; May 17; Sp. p. 3563; Gaz. vol. 154; p. 600.
Latch mechanism for emergency-doors. A. Arens and E. L. Teich. No. 958,263; May 17; Sp. p. 4278; Gaz. vol. 154; p. 696.
Latch mechanism for split stocks and dies. R. H. Leach. No. 958,511; May 17; Sp. p. 4533; Gaz. vol. 154; p. 752.
Lathe. H. B. Greig. No. 958,631; May 17; Sp. p. 4815; Gaz. vol. 154; p. 790.
Lathe and other tool holder for cutting, shaping, and screwing purposes. H. R. Land. No. 958,684; May 17; Sp. p. 4867; Gaz. vol. 154; p. 798.
Lathe-dog. J. W. Fawcett. No. 958,382; May 17; Sp. p. 4332; Gaz. vol. 154; p. 708.
Lathe, Stoneworking-. W. F. Meyers. No. 957,978; May 17; Sp. p. 3210; Gaz. vol. 154; p. 565.
Lathe-tool support. C. L. Libby. No. 957,783; May 10; Sp. p. 2729; Gaz. vol. 154; p. 467.
Lawn-rake. A. J. Platt. No. 957,000; May 17; Sp. p. 2972; Gaz. vol. 154; p. 537.
Lawn-sprinkler. J. B. Steele. No. 959,270; May. 24; Sp. p. 6183; Gaz. vol. 154; p. 1032.
Lawn-trimmer. O. H. Watkins. No. 956,654; May 3; Sp. p. 322; Gaz. vol. 154; p. 52.
Laying and leveling machine. T. G. Plant. No. 958,283; May 17; Sp. p. 4016; Gaz. vol. 154; p. 671.
Leather cup. I. H. Venn. No. 956,612; May 3; Sp. p. 227; Gaz. vol. 154; p. 39.
Leather machine, Composition-. F. Kukkuck. No. 957,219; May 10; Sp. p. 1554; Gaz. vol. 154; p. 275.
Leather-skiving machine. C. A. Hirth. No. 958,124; May 17; Sp. p. 3655; Gaz. vol. 154; p. 616.
Leather-working die. R. C. Schemmel. No. 958,324; May 17; Sp. p. 4216; Gaz. vol. 154; p. 688.
Leg joint, Artificial. D. W. Price. No. 959,881; May 31; Sp. p. 7476; Gaz. vol. 154; p. 1263.
Lens-mount. H. E. Richmond. No. 959,169; May 24; Sp. p. 5983; Gaz. vol. 154; p. 1000.
Lens-mount. H. E. Richmond. No. 959,387; May 24; Sp. p. 6407; Gaz. vol. 154; p. 1071.
Letter-sheet and envelop, Combined. E. Maren-Covick. No. 957,172; May 3; Sp. p. 1431; Gaz. vol. 154; p. 229.
Level. J. Schmid. No. 956,830; May 3; Sp. p. 722; Gaz. vol. 154; p. 114.
Level. C. J. Andersen. No. 958,349; May 17; Sp. p. 4262; Gaz. vol. 154; p. 696.
Level. J. H. Kouns. No. 959,759; May 31; Sp. p. 7195; Gaz. vol. 154; p. 1221.
Level and gradient instrument, Combined. J. J. Bunting. No. 958,088; May 17; Sp. p. 3586; Gaz. vol. 154; p. 604.
Level, Plumb-. A. A. Baumann. No. 957,834; May 10; Sp. p. 2820; Gaz. vol. 154; p. 484.
Level, Spirit-. C. Bodmer. No. 959,296; May 24; Sp. p. 6229; Gaz. vol. 154; p. 1041.
Leveler, Field-. G. M. Brand. No. 957,732; May 10; Sp. p. 2609; Gaz. vol. 154; p. 451.
Lewis. L. Ciardelli. No. 956,938; May 3; Sp. p. 942; Gaz. vol. 154; p. 151.
Life-preserver. W. S. Wilkinson and G. B. Upham. No. 960,129; May 31; Sp. p. 8029; Gaz. vol. 154; p. 1349.
Life-preserver and swimming-machine. O. B. Lyon and W. H. Young. No. 957,513; May 10; Sp. p. 2172; Gaz. vol. 154; p. 375.
Lift, Air-. W. A. Knight. No. 960,023; May 31; Sp. p. 7818; Gaz. vol. 154; p. 1314.
Lifter: *See* Tire-lifter.
Lifter. F. W. Glympe. No. 957,463; May 10; Sp. p. 2072; Gaz. vol. 154; p. 359.
Lifting-jack. A. Halvorson. No. 956,577; May 3; Sp. p. 154; Gaz. vol. 154; p. 26.
Lifting-jack. J. M. Hawkins, S. E. Adkins, and W. C. Call. No. 957,333; May 10; Sp. p. 1813; Gaz. vol. 154; p. 316.
Lifting-jack. A. Neal. No. 958,969; May 24; Sp. p. 5565; Gaz. vol. 154; p. 923.
Lifting-jack. C. H. Noyes. No. 959,157; May 24; Sp. p. 5946; Gaz. vol. 154; p. 995.
Light: *See* Gas-light; Incandescent light.
Light-fixture, Extension. C. M. Pitel. No. 956,823; May 3; Sp. p. 708; Gaz. vol. 154; p. 111.
Light-holder, Detachable and portable. W. H. Sackman. No. 958,440; May 17; Sp. p. 4454; Gaz. vol. 154; p. 726.
Lighting-fixtures, Shade and reflector support for. W. C. Hine. No. 957,956; May 17; Sp. p. 3126; Gaz. vol. 154; p. 556.
Lightning-arrester. H. C. Wirt. No. 958,454; May 17; Sp. p. 4478; Gaz. vol. 154; p. 733.
Lightning-arrester. W. W. Dean. No. 959,120; May 24; Sp. p. 5867; Gaz. vol. 154; p. 983.
Lightning-arrester. H. C. Walford. No. 959,658; May 31; Sp. p. 6982; Gaz. vol. 154; p. 1189.
Lime, Hydrating. W. H. Kemler. No. 956,977; May 3; Sp. p. 1048; Gaz. vol. 154; p. 164.
Line-casting machine. J. R. Rogers. No. 957,802; May 10; Sp. p. 2763; Gaz. vol. 154; p. 478.
Line-casting machine. J. R. Rogers. No. 958,317; May 17; Sp. p. 4196; Gaz. vol. 154; p. 685.
Line-casting machine. D. S. Kennedy. No. 959,755; May 31; Sp. p. 7185; Gaz. vol. 154; p. 1220.
Line-casting machine, &c. W. G. Middleton. No. 957,433; May 10; Sp. p. 2019; Gaz. vol. 154; p. 350.
Line-casting machines, Matrix for. E. M. Bedell. No. 958,076; May 17; Sp. p. 3564; Gaz. vol. 154; p. 601.
Line-holder. T. Petersen. No. 958,168; May 17; Sp. p. 3749; Gaz. vol. 154; p. 634.
Line-spacing mechanism. J. Raber. No. 958,173; May 17; Sp. p. 3761; Gaz. vol. 154; p. 635.
Linen-smoother. C. Ellis. No. 956,698; May 3; Sp. p. 426; Gaz. vol. 154; p. 68.
Link-forming machine. J. F. Gall. No. 957,203; May 10; Sp. p. 1523; Gaz. vol. 154; p. 269.
Link, Lap-. P. H. De Rochemont. No. 959,317; May 24; Sp. p. 6266; Gaz. vol. 154; p. 1049.
Linotype-machine. J. B. Allen. No. 956,790; May 3; Sp. p. 515; Gaz. vol. 154; p. 98.
Linotype-machine attachment. C. G. Pickett. No. 958,530; May 17; Sp. p. 4519; Gaz. vol. 154; p. 759.

Linotype-machines, Automatic pump stop mechanism for. H. Pearce and J. E. Billington. No. 959,961; May 31; Sp. p. 7661; Gaz. vol. 154; p. 1292.
Liquid-concentrating apparatus. P. Kestner. (Reissue.) No. 13,117; May 24; Sp. p. 6505; Gaz. vol. 154; p. 1088.
Liquid-cooler. J. Allan. No. 956,788; May 3; Sp. p. 612; Gaz. vol. 154; p. 98.
Liquid-delivering device. W. B. Haines. No. 959,216; May 24; Sp. p. 6068; Gaz. vol. 154; p. 1015.
Liquid-dispensing apparatus. W. Helmer. No. 958,871; May 24; Sp. p. 5584; Gaz. vol. 154; p. 900.
Liquid-elevating mechanism. M. J. Christensen. No. 957,656; May 10; Sp. p. 2453; Gaz. vol. 154; p. 424.
Liquid-fuel tank. J. A. Steinmetz. No. 958,025; May 17; Sp. p. 3351; Gaz. vol. 154; p. 582.
Liquid-purifying machine, Centrifugal. A. Pontén. No. 957,250; May 10; Sp. p. 1622; Gaz. vol. 154; p. 286.
Liquid-retainer. W. B. Fisk. No. 959,495; May 31; Sp. p. 6650; Gaz. vol. 154; p. 1134.
Liquid-separators, Liner for centrifugal. C. A. F. Ramström. No. 957,092; May 3; Sp. p. 1275; Gaz. vol. 154; p. 202.
Liquids from solids, Separating. H. G. Nichols. No. 958,272; May 17; Sp. p. 3959; Gaz. vol. 154; p. 667.
Liquids, Means for separating comminuted ores or other solid matter from. A. J. Arbuckle. No. 958,068; May 17; Sp. p. 3549; Gaz. vol. 154; p. 598.
Lithographic-printing plates, Producing. W. Gerb. No 956,764; May 3; Sp. p. 570; Gaz. vol. 154; p. 91.
Load-binder, wire-tightener, and lifting-jack. J. L. Shipman. No. 958,777; May 24; Sp. p. 5128; Gaz. vol. 154; p. 865.
Loader, Portable. M. E. Mogg and C. A. Gardner. No. 956,816; May 3; Sp. p. 689; Gaz. vol. 154; p. 108.
Loading and unloading device. O. R. Henke. No. 958,396; May 17; Sp. p. 4363; Gaz. vol. 154; p. 712.
Lock: *See* Car-door lock; Coin-controlled lock; Combination-lock; Door-lock; Hose-coupling lock; Hotel-lock; Night-lock; Nut-lock; Oar-lock; Padlock; Rim and mortise lock; Sash-lock; Show-case lock; Umbrella-holder lock; Whip-socket lock; Window-lock.
Lock. J. H. Wilkins. No. 956,661; May 3; Sp. p. 114; Gaz. vol. 154; p. 21.
Lock. W. Cox. No. 957,938; May 17; Sp. p. 3067; Gaz. vol. 154; p. 550.
Lock. J. A. Chambless. No. 958,706; May 17; Sp. p. 4958; Gaz. vol. 154; p. 815.
Lock. A. Lawson. No. 958,880; May 24; Sp. p. 5385; Gaz. vol. 154; p. 903.
Lock. C. A. Berry. No. 959,298; May 24; Sp. p. 6223; Gaz. vol. 154; p. 1040.
Lock-alarm. J. F. Bowyer. No. 956,580; May 3; Sp. p. 158; Gaz. vol. 154; p. 27.
Lock-corner. E. R. Hall. No. 959,734; May 31; Sp. p. 7148; Gaz. vol. 154; p. 1213.
Lock for windows and analogous devices. W. L. Deming. No. 957,600; May 10; Sp. p. 2332; Gaz. vol. 154; p. 405.
Lock-nut mechanism. J. Perrie. No. 959,162; May 24; Sp. p. 5960; Gaz. vol. 154; p. 997.
Lock-strike. T. B. Stevens. No. 958,443; May 17; Sp. p. 4459; Gaz. vol. 154; p. 729.
Lock-washer. E. D. Heagney. No. 959,857; May 31; Sp. p. 7409; Gaz. vol. 154; p. 1255.
Locking device for rotative parts. F. A. Schluns. No. 956,605; May 3; Sp. p. 213; Gaz. vol. 154; p. 37.
Locking device for windows, transoms, or the like. E. E. Flora. No. 958,386; May 17; Sp. p. 4342; Gaz. vol. 154; p. 700.
Locking device, Hasp. E. A. Lindstrom. No. 957,353; May 10; Sp. p. 1853; Gaz. vol. 154; p. 322.
Locking means, Closure-. C. J. Ljunggren. No. 957,354; May 10; Sp. p. 1854; Gaz. vol. 154; p. 323.
Locking means, Closure-. C. J. Ljunggren. No. 957,355; May 10; Sp. p. 1856; Gaz. vol. 154; p. 323.
Locket. W. J. Wakefield. No. 958,983; May 24; Sp. p. 5585; Gaz. vol. 154; p. 538.
Locomotive, Articulated compound. C. J. Mellin and J. J. Jones. No. 958,516; May 17; Sp. p. 4596; Gaz. vol. 154; p. 754.
Locomotive ash-pan. A. J. Brodhead. No. 957,142; May 3; Sp. p. 1363; Gaz. vol. 154; p. 218.
Locomotive ash-pan. L. R. Battle. No. 959,106; May 24; Sp. p. 5842; Gaz. vol. 154; p. 979.
Locomotive blower and air-pump-exhaust pipe. F. L. Holcomb. No. 956,706; May 3; Sp. p. 446; Gaz. vol. 154; p. 71.
Locomotive, Compressed-air. C. G. Herman. No. 959,219; May 24; Sp. p. 6078; Gaz. vol. 154; p. 1016.
Locomotive-drive-box adjuster. M. F. Brennan. No. 957,735; May 10; Sp. p. 2614; Gaz. vol. 154; p. 452.
Locomotive front ends, Draft-equalizer for. J. Fournia. No. 959,333; May 24; Sp. p. 6305; Gaz. vol. 154; p. 1054.
Locomotive, Rack-rail. C. A. Pratt. No. 956,732; May 3; Sp. p. 499; Gaz. vol. 154; p. 80.
Locomotives, Cable-reeling mechanism for electric. F. L. Sessions. No. 959,621; May 31; Sp. p. 6908; Gaz. vol. 154; p. 1176.
Locomotives, Device for controlling cylinder-cocks of. J. H. De Salis. No. 958,858; May 24; Sp. p. 5326; Gaz. vol. 154; p. 896.
Logs or the like to hauling-tackle, Means for removably attaching. S. Ashdown. No. 957,297; May 10; Sp. p. 1788; Gaz. vol. 154; p. 304.
Loom. H. Cote. No. 957,546; May 10; Sp. p. 2243; Gaz. vol. 154; p. 383.
Loom. J. B. Lemyre. No. 957,615; May 10; Sp. p. 2360; Gaz. vol. 154; p. 411.
Loom. R. H. H. Hunt. No. 958,874; May 24; Sp. p. 5371; Gaz. vol. 154; p. 901.
Loom. R. C. Snow. No. 959,174; May 24; Sp. p. 5991; Gaz. vol. 154; p. 1002.
Loom. R. H. H. Hunt. No. 960,019; May 31; Sp. p. 7797; Gaz. vol. 154; p. 1312.
Loom, Filling-replenishing. J. Northrop. No. 956,726; May 3; Sp. p. 486; Gaz. vol. 154; p. 78.
Loom for weaving pile fabric. L. H. Hartley. No. 960,171; May 31; Sp. p. 8102; Gaz. vol. 154; p. 1363.
Loom, Narrow-ware or ribbon. E. R. Holmes. No. 958,703; May 17; Sp. p. 4952; Gaz. vol. 154; p. 814.
Loom pattern mechanism. J. T. Cyr. No. 960,214; May 31; Sp. p. 8190; Gaz. vol. 154; p. 1379.
Loom picker-stick check. S. D. Eubanks. No. 957,047; May 3; Sp. p. 1179; Gaz. vol. 154; p. 187.
Loom picking-motion, Vertical-. R. Abell. No. 957,725; May 10; Sp. p. 2593; Gaz. vol. 154; p. 449.
Loom shedding mechanism. P. Labonte. No. 956,980; May 3; Sp. p. 1052; Gaz. vol. 154; p. 165.
Loom shuttle-binder. A. A. Gordon. No. 958,487; May 17; Sp. p. 4530; Gaz. vol. 154; p. 744.
Loom take-up motion. W. H. Clegg. No. 958,597; May 17; Sp. p. 4740; Gaz. vol. 154; p. 780.
Loom-temple. J. Northrop. No. 956,725; May 3; Sp. p. 482; Gaz. vol. 154; p. 78.
Loom, Weft-replenishing. A. A. Gordon, Jr. No. 959,132; May 24; Sp. p. 5893; Gaz. vol. 154; p. 967.
Loom weft-replenishing mechanism. C. A. Wenning. No. 959,036; May 24; Sp. p. 5685; Gaz. vol. 154; p. 955.
Looms, Bobbin-stripper for weft-replenishing. F. W. Moore. (Reissue.) No. 13,119; May 31; Sp. p. 8253; Gaz. vol. 154; p. 1389.
Looms, Drop-shuttle-box mechanism of. E. H. Ballou. No. 958,688; May 17; Sp. p. 4926; Gaz. vol. 154; p. 800.
Looms, Lay for narrow-ware. E. R. Holmes. No. 956,854; May 3; Sp. p. 778; Gaz. vol. 154; p. 123.
Looms, Thin-place-detecting mechanism for. S. D. Eubanks. No. 956,574; May 3; Sp. p. 149; Gaz. vol. 154; p. 25.
Looms, Thin-place-detecting mechanism for. W. C. Trombly. No. 959,654; May 31; Sp. p. 6974; Gaz. vol. 154; p. 1187.
Looms, Wire motion for. F. A. Whitmore. No. 960,211; May 31; Sp. p. 8187; Gaz. vol. 154; p. 1378.
Loop-setting machine. W. A. McAllister. No. 958,968; May 24; Sp. p. 5552; Gaz. vol. 154; p. 933.
Lubricant-retainer. J. E. Thebaud. No. 958,193; May 17; Sp. p. 3799; Gaz. vol. 154; p. 642.
Lubricator: *See* Automatic lubricator; Force-feed lubricator; Wheel-lubricator.
Magnetic switch. J. J. Wood. No. 958,788; May 24; Sp. p. 5163; Gaz. vol. 154; p. 870.
Magneto and battery switch for electric igniters, Combined. A. J. Studnicka and C. W. Campbell. No. 957,270; May 10; Sp. p. 1681; Gaz. vol. 154; p. 294.
Magneto-electric generator. F. I. and B. P. Remy. No. 957,714; May 10; Sp. p. 2572; Gaz. vol. 154; p. 445.
Magneto-electric generator. B. P. and F. I. Remy. No. 959,166; May 24; Sp. p. 5975; Gaz. vol. 154; p. 999.
Magneto, High-frequency. T. M. Mueller. No. 958,754; May 24; Sp. p. 5072; Gaz. vol. 154; p. 857.
Mail-bag catcher. J. Rangstad. No. 958,537; May 17; Sp. p. 4632; Gaz. vol. 154; p. 761.
Mail bag catcher and deliverer. J. Yates. No. 958,572; May 17; Sp. p. 4696; Gaz. vol. 154; p. 772.
Mail-bag catcher and delivery apparatus. C. B. Buss. No. 956,935; May 3; Sp. p. 938; Gaz. vol. 154; p. 150.
Mail-box. W. J. Golgert. No. 959,511; May 31; Sp. p. 6693; Gaz. vol. 154; p. 1159.
Mail-box. L. V. Rood. No. 959,885; May 31; Sp. p. 7463; Gaz. vol. 154; p. 1264.
Mail-box. S. C. Cox. No. 960,157; May 31; Sp p. 8075; Gaz. vol. 154; p. 1358.
Mail-catcher. S. G. Staymates. No. 957,581; May 10; Sp. p. 2299; Gaz. vol. 154; p. 399.
Mail-collecting apparatus. J. A. Steinmetz. No. 956,743; May 3; Sp. p. 518; Gaz. vol. 154; p. 84.
Mail-collecting device. W. M. Corthell. No. 959,467; May 31; Sp. p. 6584; Gaz. vol. 154; p. 1123.
Mail-deliverer. W. M. Corthell. No. 959,468; May 31; Sp. p. 6587; Gaz. vol. 154; p. 1124.
Mail-handling apparatus. M. M. Miller, G. S. Steinberger, and W. H. Hargraves. No. 957,235; May 10; Sp. p. 1504; Gaz. vol. 154; p. 281.
Mail-handling apparatus. W. H. Hargraves and M. M. Miller. No. 957,330; May 10; Sp. p. 1805; Gaz. vol. 154; p. 315.
Mail receiving and delivering apparatus. R. W. Lomax. No. 960,180; May 31; Sp. p. 8125; Gaz. vol. 154; p. 1366.
Mailing-tube. H. L. Gray. No. 956,636; May 3; Sp. p. 278; Gaz. vol. 154; p. 46.
Main and pipe cleaner. H. A. Greenan and F. O. Bedford. No. 957,051; May 3; Sp. p. 1185; Gaz. vol. 154; p. 188.
Malting apparatus. C. J. Erdmann. No. 957,664; May 10; Sp. p. 2475; Gaz. vol. 154; p. 428.
Malting apparatus. W. H. Prinz. No. 958,821; May 24; Sp. p. 5233; Gaz. vol. 154; p. 882.
Malting apparatus. W. H. Prinz. No. 958,822; May 24; Sp. p. 5238; Gaz. vol. 154; p. 883.
Malting apparatus. W. H. Prinz. No. 958,823; May 24; Sp. p. 5240; Gaz. vol. 154; p. 883.

Malting apparatus. W. H. Prinz. No. 958,524; May 24; Sp. p. 5243; Gaz. vol. 154; p. 883.
Malting apparatus. W. H. Prinz. No. 958,825; May 24; Sp. p. 5247; Gaz. vol. 154; p. 884.
Manifolding device. E. J. Tousignant. No. 958,566; May 17; Sp. p. 4689; Gaz. vol. 154; p. 770.
Mantle-supporting transportation device. T. J. Litle, Jr. No. 958,261; May 17; Sp. p. 3940; Gaz. vol. 154; p. 663.
Manure-loader. J. Neld. No. 957,085; May 3; Sp. p. 1258; Gaz. vol. 154; p. 200.
Manure-receptacle. J. Harrigan. No. 957,772; May 10; Sp. p. 2063; Gaz. vol. 154; p. 463.
Marble-shooter. M. E. Reilly. No. 959,028; May 24; Sp. p. 5067; Gaz. vol. 154; p. 953.
Marker, Land-. P. A. Ulrich. No. 958,567; May 17; Sp. p. 4691; Gaz. vol. 154; p. 770.
Marking-gage. W. Potter. No. 960,039; May 31; Sp. p. 7564; Gaz. vol. 154; p. 1320.
Marking laundry-tags, clothes, and other articles made of textile fabrics. H. Higgin. No. 959,860; May 31; Sp. p. 7416; Gaz. vol. 154; p. 1254.
Mash and the like from noxious odors and flavors, Freeing fermented. A. P. Stittsel. No. 956,650; May 3; Sp. p. 310; Gaz. vol. 154; p. 51.
Massage apparatus. G. E. Pyper. No. 958,939; May 24; Sp. p. 5500; Gaz. vol. 154; p. 923.
Mast-cap. B. D. Jensen. No. 957,343; May 10; Sp. p. 1834; Gaz. vol. 154; p. 319.
Masts, poles, or the like, Protecting means for. O. F. Weinlig. No. 956,656; May 3; Sp. p. 320; Gaz. vol. 154; p. 53.
Master-controllers, Means for operating. E. G. Deucher. No. 957,662; May 10; Sp. p. 2470; Gaz. vol. 154; p. 427.
Match-box. S. W. Bock. No. 958,468; May 17; Sp. p. 4506; Gaz. vol. 154; p. 738.
Match box and holder. F. O. Kullander. No. 956,809; May 3; Sp. p. 671; Gaz. vol. 154; p. 106.
Match-box, Bingle-delivery. M. Meyerson. No. 958,966; May 24; Sp. p. 5548; Gaz. vol. 154; p. 932.
Match-holder. H. G. Blankenhagen. No. 958,690; May 17; Sp. p. 4930; Gaz. vol. 154; p. 800.
Match-safe. L. Hildreth. No. 958,122; May 17; Sp. p. 3952; Gaz. vol. 154; p. 616.
Match-safe. V. E. Golden. No. 958,802; May 24; Sp. p. 5193; Gaz. vol. 154; p. 875.
Mattress. H. Laurila. No. 957,892; May 17; Sp. p. 2957; Gaz. vol. 154; p. 534.
Measure, Tape-. L. L. Joseph. No. 959,750; May 31; Sp. p. 7177; Gaz. vol. 154; p. 1218.
Measuring and dispensing can or tank. A. G. Sherman. No. 957,003; May 3; Sp. p. 1098; Gaz. vol. 154; p. 172.
Measuring and registering the oscillations of vibrating bodies, such as marine vessels, airships, railway-vehicles, and the like, Apparatus for. P. Koss. No. 957,908; May 17; Sp. p. 3000; Gaz. vol. 154; p. 540.
Measuring instrument, Electrical. P. MacGahan. No. 956,714; May 3; Sp. p. 463; Gaz. vol. 154; p. 74.
Measuring instrument, Electrical. F. W. Roller. No. 958,320; May 17; Sp. p. 4205; Gaz. vol. 154; p. 687.
Measuring instrument, Electrical. J. L. Zander. No. 958,792; May 24; Sp. p. 5175; Gaz. vol. 154; p. 871.
Measuring instrument, Electrical. C. E. Foster. No. 959,497; May 31; Sp. p. 6656; Gaz. vol. 154; p. 1134.
Measuring instrument, Electrical. S. M. Kintner. No. 959,551; May 31; Sp. p. 6776; Gaz. vol. 154; p. 1152.
Measuring machine, Cloth-. O. Ruhlin. No. 959,074; May 24; Sp. p. 5783; Gaz. vol. 154; p. 969.
Measuring or apportioning materials of a granular or other suitable form, Apparatus for. T. H. D. May. No. 958,965; May 24; Sp. p. 5548; Gaz. vol. 154; p. 932.
Measuring-rule for tailors. A. Tomaselli. No. 959,972; May 31; Sp. p. 7688; Gaz. vol. 154; p. 1296.
Meat-rack, Sanitary. W. L. Adlam. No. 959,685; May 31; Sp. p. 7045; Gaz. vol. 154; p. 1196.
Meats, Indelibly marking. J. Hauser. No. 958,960; May 24; Sp. p. 5539; Gaz. vol. 154; p. 930.
Mechanical movement. T. Willi. No. 959,826; May 31; Sp. p. 7355; Gaz. vol. 154; p. 1244.
Medicinal compound, Making. A. Garicsan. No. 957,204; May 10; Sp. p. 1627; Gaz. vol. 154; p. 270.
Megaphone. L. B. Purcell. No. 958,680; May 17; Sp. p. 4911; Gaz. vol. 154; p. 806.
Melting and refining furnace, Electric. H. Nathusius. No. 958,757; May 24; Sp. p. 5063; Gaz. vol. 154; p. 859.
Metal-bending machine. H. E. Parmenter. No. 956,541; May 3; Sp. p. 71; Gaz. vol. 154; p. 14.
Metal-blank-heading machine. A. C. Campbell. No. 959,454; May 31; Sp. p. 6548; Gaz. vol. 154; p. 1119.
Metal box and crate. G. Klenk. No. 959,558; May 31; Sp. p. 6781; Gaz. vol. 154; p. 1153.
Metal Composition. J. Naulty and J. Scanlin. No. 959,150; May 24; Sp. p. 5945; Gaz. vol. 154; p. 995.
Metal-cutting machine. E. G. Todt. No. 958,196; May 17; Sp. p. 3903; Gaz. vol. 154; p. 643.
Metal-cutting machine. E. G. Todt. No. 958,197; May 17; Sp. p. 3904; Gaz. vol. 154; p. 643.
Metal-furnace. A. Fisher. No. 958,384; May 17; Sp. p. 4037; Gaz. vol. 154; p. 706.
Metal heading, punching, and trimming machines, Blank-feeding device for. A. C. Campbell. No. 959,455; May 31; Sp. p. 6552; Gaz. vol. 154; p. 1119.
Metal, Producing hollow articles of. W. Griffith. No. 959,516; May 31; Sp. p. 6704; Gaz. vol. 154; p. 1141.
Metal-sewing machine. W. L. Field. No. 958,614; May 17; Sp. p. 4784; Gaz. vol. 154; p. 785.
Metal-scraping machine. P. R. Bissell. No. 957,031; May 3; Sp. p. 1151; Gaz. vol. 154; p. 182.
Metal-shear. H. Taylor. No. 959,035; May 24; Sp. p. 5684; Gaz. vol. 154; p. 955.
Metal structure. P. M. Wege. No. 956,556; May 3; Sp. p. 101; Gaz. vol. 154; p. 19.
Metals and the like from extraneous matter, Apparatus for separating. E. M. Simpson. No. 957,478; May 10; Sp. p. 2095; Gaz. vol. 154; p. 364.
Metals, Apparatus for removing tarnish from. M. H. Keyt. No. 959,227; May 24; Sp. p. 6092; Gaz. vol. 154; p. 1018.
Metals from cyanid solutions, Precipitation of. S. F. Kirkpatrick. No. 959,757; May 31; Sp. p. 7193; Gaz. vol. 154; p. 1220.
Metals in solution, Separating. W. S. Gates and H. H. Dow. No. 956,763; May 3; Sp. p. 564; Gaz. vol. 154; p. 90.
Metals, Reducing. R. J. McNitt. No. 959,785; May 31; Sp. p. 7239; Gaz. vol. 154; p. 1230.
Metals, Uniting. W. Griffith. No. 959,517; May 31; Sp. p. 6703; Gaz. vol. 154; p. 1140.
Metallic screen. H. A. Way. No. 956,614; May 3; Sp. p. 231; Gaz. vol. 154; p. 39.
Metallic tie. E. Cronin. No. 956,628; May 3; Sp. p. 260; Gaz. vol. 154; p. 43.
Meter: *See* Electric meter; Electricity-meter; Water-meter.
Meter-register. L. H. Nash. No. 957,082; May 3; Sp. p. 1252; Gaz. vol. 154; p. 199.
Meters, Shunt for electric. R. C. Lanphier. No. 958,508; May 17; Sp. p. 4575; Gaz. vol. 154; p. 751.
Methane or mixtures of methane and hydrogen, Manufacturing. P. Sabatier. No. 956,734; May 3; Sp. p. 503; Gaz. vol. 154; p. 81.
Military field-table. A. S. Fleming and J. Curry. No. 958,799; May 24; Sp. p. 5187; Gaz. vol. 154; p. 874.
Milk-can and making the same. R. Bray. No. 956,675; May 3; Sp. p. 368; Gaz. vol. 154; p. 60.
Milk-can, top-rim, cover, and lock. R. Belits. No. 956,511; May 3; Sp. p. 11; Gaz. vol. 154; p. 4.
Milk-condenser. W. and W. Debetre. No. 956,571; May 3; Sp. p. 139; Gaz. vol. 154; p. 24.
Milk-heating apparatus. S. Shapiro. No. 960,045; May 31; Sp. p. 7871; Gaz. vol. 154; p. 1322.
Milking apparatus. G. E. Anderson. No. 959,042; May 24; Sp. p. 5700; Gaz. vol. 154; p. 957.
Milking-machine. K. A. Ahlbom. No. 958,685; May 17; Sp. p. 4922; Gaz. vol. 154; p. 808.
Milking-machine. J. J. Bukolt. No. 958,954; May 24; Sp. p. 5529; Gaz. vol. 154; p. 922.
Milking-receptacle. I. N. Horne. No. 958,309; May 17; Sp. p. 4367; Gaz. vol. 154; p. 713.
Mill: *See* Grinding-mill; Grinding and crushing mill; Mustard-grinding mill; Tube-mill.
Mill-carriage attachment. C. E. Sweet. No. 959,899; May 31; Sp. p. 7509; Gaz. vol. 154; p. 1269.
Mills, Sieve for drum-. G. Zarniko. No. 958,348; May 17; Sp. p. 4201; Gaz. vol. 154; p. 696.
Milling-machine. R. K. Le Blond and W. F. Groene. No. 956,643; May 3; Sp. p. 293; Gaz. vol. 154; p. 48.
Milling-machine. F. O. Farwell. No. 958,243; May 17; Sp. p. 3891; Gaz. vol. 154; p. 657.
Milling-machines, Feeding device for. H. F. Kellemen. No. 957,562; May 10; Sp. p. 2270; Gaz. vol. 154; p. 393.
Milling-tooth. T. Eynon. No. 959,328; May 24; Sp. p. 6294; Gaz. vol. 154; p. 1053.
Mine skips and cages, Safety mechanism for. H. E. Hyde. No. 956,707; May 3; Sp. p. 447; Gaz. vol. 154; p. 71.
Mines, Removing coal from. E. O'Toole and H. N. Eavenson. No. 957,364; May 10; Sp. p. 1871; Gaz. vol. 154; p. 326.
Mining-machine. J. C. Hirst. No. 957,957; May 17; Sp. p. 3127; Gaz. vol. 154; p. 556.
Mining machine, Coal-. J. Kurtz and T. Hochriter. No. 957,510; May 10; Sp. p. 2166; Gaz. vol. 154; p. 374.
Mirror-support, Pivotal. F. O. Anderson. No. 959,099; May 24; Sp. p. 5829; Gaz. vol. 154; p. 977.
Miter-block. E. C. Kellogg. No. 956,711; May 3; Sp. p. 460; Gaz. vol. 154; p. 73.
Miter-box. R. Dunne. No. 957,871; May 17; Sp. p. 2908; Gaz. vol. 154; p. 527.
Miter-joint for tubes. F. R. Rogers and C. Vallone. No. 958,316; May 17; Sp. p. 4194; Gaz. vol. 154; p. 684.
Mitt, Base-ball. J. Hartman. No. 958,117; May 17; Sp. p. 3941; Gaz. vol. 154; p. 614.
Mixer: *See* Alfalfa-meal mixer; Bread-mixer; Gas-mixer; Gas and air mixer; Grout-mixer.
Mixing and blending machine. H. G. Boughton. No. 957,646; May 10; Sp. p. 2432; Gaz. vol. 154; p. 421.
Mixing-machine. G. Elrich. No. 958,008; May 17; Sp. p. 4725; Gaz. vol. 154; p. 783.
Mixing-machine. F. Notz. No. 959,584; May 31; Sp. p. 6841; Gaz. vol. 154; p. 1164.
Mixing machinery. G. H. Petri. No. 957,068; May 3; Sp. p. 1268; Gaz. vol. 154; p. 201.
Moistener. M. A. Metzner. No. 958,140; May 17; Sp. p. 3706; Gaz. vol. 154; p. 626.
Moistener, Envelop-. H. E. Packer. No. 959,793; May 31; Sp. p. 7275; Gaz. vol. 154; p. 1232.
Moistening-machine for adhesive materials. J. D. McLaurin. No. 959,876; May 31; Sp. p. 7460; Gaz. vol. 154; p. 1261.
Mold: *See* Car-beam mold; Concrete-mold; Phonograph-record mold; Sectional mold; Tile-mold.

Mold. W. A. Riddell. No. 958,892; May 24; Sp. p. 5414; Gaz. vol. 154; p. 908.
Mold. W. H. Blose. No. 959,438; May 24; Sp. p. 6490; Gaz. vol. 154; p. 1087.
Mold. R. C. Ricker. No. 959,806; May 31; Sp. p. 7307; Gaz. vol. 154; p. 1237.
Mold-sander. D. P. Sanders. No. 956,829; May 3; Sp. p. 721; Gaz. vol. 154; p. 114.
Mold-venting apparatus. C. B. Moore. No. 959,149; May 24; Sp. p. 5931; Gaz. vol. 154; p. 993.
Molder's flask. G. E. Linn. No. 960,025; May 31; Sp. p. 7821; Gaz. vol. 154; p. 1315.
Molding and transferring apparatus. J. L. Herman. No. 959,011; May 24; Sp. p. 5636; Gaz. vol. 154; p. 947.
Molding apparatus. E. E. Carter. No. 956,930; May 3; Sp. p. 943; Gaz. vol. 154; p. 151.
Molding-machine. W. O'Connor. No. 956,596; May 3; Sp. p. 191; Gaz. vol. 154; p. 33.
Molding-machine. E. Killing. No. 957,564; May 10; Sp. p. 2274; Gaz. vol. 154; p. 393.
Molding-machine. E. D. Misner. No. 958,520; May 17; Sp. p. 4604; Gaz. vol. 154; p. 755.
Molding-machine. H. P. Keyhoe and E. Handley. No. 960,177; May 31; Sp. p. 8121; Gaz. vol. 154; p. 1365.
Mop-head. W. H. Zachry. No. 957,025; May 3; Sp. p. 1142; Gaz. vol. 154; p. 180.
Mop-head. C. Gabel. No. 959,131; May 24; Sp. p. 5892; Gaz. vol. 154; p. 987.
Mop head and wringer, Combined. C. Gabel. No. 959,130; May 24; Sp. p. 5891; Gaz. vol. 154; p. 987.
Mop-wringer. S. T. Atkin. No. 959,285; May 24; Sp. p. 6209; Gaz. vol. 154; p. 1037.
Motor: *See* Current-motor; Drying-machine motor; Electric motor; Fluid-motor; Fluid-pressure motor; Internal-combustion motor; Pneumatic motor; Water-motor; Wave-motor; Ware and current motor.
Motor control. E. F. W. Alexanderson. No. 957,454; May 10; Sp. p. 2055; Gaz. vol. 154; p. 356.
Motor-control apparatus. A. E. Stevens. No. 958,442; May 17; Sp. p. 4457; Gaz. vol. 154; p. 728.
Motor-controller. T. E. Barnum. No. 959,907; May 31; Sp. p. 7524; Gaz. vol. 154; p. 1272.
Motor-controlling device. L. S. Chapman. No. 958,365; May 17; Sp. p. 4297; Gaz. vol. 154; p. 701.
Motor-controlling device. G. T. Eagar. No. 958,380; May 17; Sp. p. 4329; Gaz. vol. 154; p. 707.
Motor-controlling device. T. E. Barnum. No. 959,908; May 31; Sp. p. 7530; Gaz. vol. 154; p. 1272.
Motor-driving mechanism. L. E. Underwood. No. 957,277; May 10; Sp. p. 1692; Gaz. vol. 154; p. 296.
Motor fluid, Apparatus for producing a. H. Maxim. No. 956,813; May 3; Sp. p. 678; Gaz. vol. 154; p. 107.
Motor regulator, Pneumatic-. T. Danquard. No. 957,752; May 10; Sp. p. 2052; Gaz. vol. 154; p. 457.
Motor safety attachment, Hydraulic-. G. J. Henry, Jr. No. 958,120; May 17; Sp. p. 3648; Gaz. vol. 154; p. 615.
Motor-starter. A. J. Burns. No. 957,741; May 10; Sp. p. 2624; Gaz. vol. 154; p. 464.
Motor-starter. F. D. Hallock. No. 958,804; May 24; Sp. p. 5196; Gaz. vol. 154; p. 876.
Motor-starting cranks, Lock for. R. D. Markham. No. 958,815; May 24; Sp. p. 5218; Gaz. vol. 154; p. 880.
Motor starting device, Electrical-. H. Welchsel. No. 957,587; May 10; Sp. p. 2307; Gaz. vol. 154; p. 401.
Motor starting-switch, Electric-. E. Garside. No. 957,945; May 17; Sp. p. 3030; Gaz. vol. 154; p. 552.
Motors, Auxiliary mixer for internal-combustion. R. D. Loose. No. 959,950; May 31; Sp. p. 7637; Gaz. vol. 154; p. 1288.
Motors, Method of and means for reversing. A. S. Cubitt. No. 960,000; May 31; Sp. p. 7754; Gaz. vol. 154; p. 1306.
Motors, Rheostatic controller for electric. F. D. Hallock. No. 958,805; May 24; Sp. p. 5198; Gaz. vol. 154; p. 876.
Motors, Speed and circuit controlling apparatus for electric. J. A. Schaefer. No. 959,887; May 31; Sp. p. 7487; Gaz. vol. 154; p. 1265.
Mower and harvester. H. L. Hopkins. No. 959,535; May 31; Sp. p. 6734; Gaz. vol. 154; p. 1146.
Mower, Lawn-. W. M. Potter. No. 956,601; May 3; Sp. p. 205; Gaz. vol. 154; p. 35.
Mower, Lawn-. J. H. Smith. No. 957,009; May 3; Sp. p. 1108; Gaz. vol. 154; p. 174.
Mower, Lawn-. G. A. Culver. No. 957,145; May 3; Sp. p. 1367; Gaz. vol. 154; p. 219.
Mowers, Cutting mechanism for. J. S. Lynch. No. 957,468; May 10; Sp. p. 2080; Gaz. vol. 154; p. 360.
Mowers, Grass-catching device for lawn-. H. Deck. No. 959,728; May 31; Sp. p. 7119; Gaz. vol. 154; p. 1209.
Mowing-machine. J. A. Pura. No. 959,882; May 31; Sp. p. 7477; Gaz. vol. 154; p. 1263.
Mowing-machine, Automobile. C. G. Delano. No. 957,660; May 10; Sp. p. 2465; Gaz. vol. 154; p. 426.
Mowing-machine beet-topping attachment. R. E. Murphy. No. 957,806; May 17; Sp. p. 2962; Gaz. vol. 154; p. 535.
Muffler. W. O. Thomas. No. 956,785; May 3; Sp. p. 608; Gaz. vol. 154; p. 97.
Muffler. E. D. Biser. No. 956,906; May 3; Sp. p. 891; Gaz. vol. 154; p. 141.
Muffler. W. J. Hewitt. No. 959,742; May 31; Sp. p. 7160; Gaz. vol. 154; p. 1215.
Music binder and carrier. F. H. Duesler. No. 957,459; May 10; Sp. p. 2063; Gaz. vol. 154; p. 358.
Music-playing instruments, Duplex duct-tracker for automatic. C. S. Burton. No. 958,721; May 24; Sp. p. 4995; Gaz. vol. 154; p. 845.
Music-sheets, Spool for. W. F. Bayer. No. 958,214; May 17; Sp. p. 3888; Gaz. vol. 154; p. 648.
Music-stand. J. D. Barnes. No. 959,044; May 24; Sp. p. 5704; Gaz. vol. 154; p. 958.
Music turner, Sheet-. J. O. Phillips. No. 957,870; May 10; Sp. p. 1885; Gaz. vol. 154; p. 328.
Musical instrument. W. H. Dessureau. No. 959,318; May 24; Sp. p. 6247; Gaz. vol. 154; p. 1049.
Musical instrument, Automatic. C. A. Rohrbacher. No. 958,318; May 17; Sp. p. 4198; Gaz. vol. 154; p. 685.
Musical instruments, Automatic player for. P. Welin. No. 957,590; May 10; Sp. p. 2312; Gaz. vol. 154; p. 402.
Musical instruments, Keyboard for keyed. A. Schulz. No. 958,186; May 17; Sp. p. 3783; Gaz. vol. 154; p. 639.
Mustard-grinding mill. P. Oehmig. No. 957,997; May 17; Sp. p. 3257; Gaz. vol. 154; p. 572.
Nail. F. A. Neider. No. 959,876; May 31; Sp. p. 7463; Gaz. vol. 154; p. 1261.
Nail assorting and delivering mechanism. W. C. Stewart. No. 958,037; May 17; Sp. p. 3415; Gaz. vol. 154; p. 587.
Nail assorting and delivering mechanism. W. C. Stewart. No. 958,039; May 17; Sp. p. 3430; Gaz. vol. 154; p. 588.
Necktie, Braided. O. Holshey and O. Dickhaus. No. 958,872; May 24; Sp. p. 5367; Gaz. vol. 154; p. 901.
Needle-threader. C. L. Woolley. No. 959,676; May 31; Sp. p. 7031; Gaz. vol. 154; p. 1194.
Net. J. F. Masek. No. 957,618; May 10; Sp. p. 2375; Gaz. vol. 154; p. 412.
Net, Fish and fruit. J. F. Fromm. No. 956,803; May 3; Sp. p. 650; Gaz. vol. 154; p. 103.
Net, Fly-. J. D. Evans. No. 959,925; May 31; Sp. p. 7568; Gaz. vol. 154; p. 1279.
Net, Landing-. G. J. Koberstein. No. 959,555; May 31; Sp. p. 6786; Gaz. vol. 154; p. 1154.
Night-lock. C. M. Cook. No. 959,312; May 24; Sp. p. 6256; Gaz. vol. 154; p. 1047.
Noodle-cutter. F. L. Hawkins. No. 958,809; May 24; Sp. p. 5205; Gaz. vol. 154; p. 878.
Nose-bag holder. C. H. Thompson. No. 957,815; May 10; Sp. p. 2783; Gaz. vol. 154; p. 477.
Nozzle, Spraying-. H. D. Binks. No. 960,150; May 31; Sp. p. 8066; Gaz. vol. 154; p. 1356.
Nozzle, Steam-. J. W. Stillwell. No. 958,444; May 17; Sp. p. 4460; Gaz. vol. 154; p. 729.
Nut burring and facing machine. W. Shand. No. 959,624; May 31; Sp. p. 6913; Gaz. vol. 154; p. 1177.
Nut cracker, Edible-. H. I. Weed. No. 956,555; May 3; Sp. p. 101; Gaz. vol. 154; p. 19.
Nut-lock. L. D. Frenot. No. 957,504; May 10; Sp. p. 2150; Gaz. vol. 154; p. 373.
Nut-lock. H. Robinson. No. 957,576; May 10; Sp. p. 2294; Gaz. vol. 154; p. 397.
Nut-lock. C. F. Clawson. No. 957,746; May 10; Sp. p. 2641; Gaz. vol. 154; p. 455.
Nut-lock. H. J. Bond. No. 957,931; May 17; Sp. p. 3051; Gaz. vol. 154; p. 548.
Nut-lock. J. B. Watson. No. 959,662; May 31; Sp. p. 6989; Gaz. vol. 154; p. 1190.
Nut-lock. J. A. Rankin. No. 959,964; May 31; Sp. p. 7666; Gaz. vol. 154; p. 1293.
Nut-lock. C. D. Russell. No. 960,040; May 31; Sp. p. 7866; Gaz. vol. 154; p. 1321.
Nut-lock and screw-socket for well-drilling machines. A. G. Martin. No. 957,429; May 10; Sp. p. 2012; Gaz. vol. 154; p. 345.
Nut, Self-locking. M. Jacobs. No. 959,222; May 24; Sp. p. 6082; Gaz. vol. 154; p. 1017.
Nut, Self-locking. E. R. Hibbard. No. 960,090; May 31; Sp. p. 7953; Gaz. vol. 154; p. 1336.
Nut, Wagon-. G. Lochhead. No. 958,262; May 17; Sp. p. 3941; Gaz. vol. 154; p. 664.
Nuts, Making self-locking. E. R. Hibbard. No. 958,810; May 24; Sp. p. 5206; Gaz. vol. 154; p. 878.
Oar-lock, Adjustable. E. E. Matson. No. 958,704; May 17; Sp. p. 4954; Gaz. vol. 154; p. 814.
Oil-burner. H. M. Daggett. No. 956,629; May 3; Sp. p. 261; Gaz. vol. 154; p. 44.
Oil-burner. V. F. Lasse. No. 957,614; May 10; Sp. p. 2357; Gaz. vol. 154; p. 410.
Oil-burner. C. W. Sievert. No. 958,330; May 17; Sp. p. 4231; Gaz. vol. 154; p. 690.
Oil-burner. T. W. Hunter. No. 959,347; May 24; Sp. p. 6334; Gaz. vol. 154; p. 1050.
Oil-burner. A. H. Light. No. 959,363; May 24; Sp. p. 6359; Gaz. vol. 154; p. 1054.
Oil-burner. A. H. Light. No. 959,364; May 24; Sp. p. 6363; Gaz. vol. 154; p. 1054.
Oil burner, Crude-. L. Fetty. No. 956,695; May 3; Sp. p. 430; Gaz. vol. 154; p. 68.
Oil burner, Crude-. C. A. Japhet. No. 957,063; May 3; Sp. p. 1215; Gaz. vol. 154; p. 192.
Oil burner, Crude-. R. E. Bass. No. 959,288; May 24; Sp. p. 6214; Gaz. vol. 154; p. 1038.
Oil-burning furnace. C. C. Phippe. No. 958,433; May 17; Sp. p. 4439; Gaz. vol. 154; p. 725.
Oil-bush and friction device, Combined. W. F. Groene. No. 959,520; May 31; Sp. p. 6700; Gaz. vol. 154; p. 1141.
Oil-can. V. A. Weaver. No. 958,949; May 24; Sp. p. 5516; Gaz. vol. 154; p. 926.
Oil-can. J. G. Burch and W. R. Taylor. No. 959,711; May 31; Sp. p. 7096; Gaz. vol. 154; p. 1205.

Oil-can. W. V. Evans and H. C. Gordon. No. 960,008; May 31; Sp. p. 7779; Gaz. vol. 154; p. 1309.
Oil-cup. W. E. S. Strong and P. V. Bartlett. No. 959,643; May 31; Sp. p. 6948; Gaz. vol. 154; p. 1184.
Oil-cup. J. N. Hawkins. No. 960,172; May 31; Sp. p. 8104; Gaz. vol. 154; p. 1363.
Oil-cup closure. E. J. and W. L. Nahm. No. 957,994; May 17; Sp. p. 3249; Gaz. vol. 154; p. 571.
Oil-distributing apparatus. C. P. Price. No. 958,434; May 17; Sp. p. 4440; Gaz. vol. 154; p. 725.
Oil, Extracting. F. B. Anderson. No. 960,143; May 31; Sp. p. 8054; Gaz. vol. 154; p. 1354.
Oil-extracting apparatus. F. B. Anderson. No. 960,144; May 31; Sp. p. 8056; Gaz. vol. 154; p. 1354.
Oils, Treatment of. J. H. Parker. No. 958,820; May 24; Sp. p. 5228; Gaz. vol. 154; p. 882.
Orchard-heater. R. J. Meyer. No. 958,161; May 17; Sp. p. 3711; Gaz. vol. 154; p. 627.
Ordnance, Firing mechanism for. C. Holmstorm and A. E. Mascall. No. 958,642; May 17; Sp. p. 4838; Gaz. vol. 154; p. 794.
Ore concentrator and classifier. M. P. Boss. No. 959,838; May 31; Sp. p. 7375; Gaz. vol. 154; p. 1249.
Ore, furnace-dust, waste metal, waste iron, &c., Briquetting fines of. M. Glass. No. 958,623; May 17; Sp. p. 4797; Gaz. vol. 154; p. 788.
Ore, furnace-dust, waste metal, waste iron, &c., Briquetting fines of. M. Glass. No. 958,700; May 17; Sp. p. 4947; Gaz. vol. 154; p. 813.
Ore, furnace-dust, waste metal, waste iron, &c., Briquetting fines of. M. Glass. No. 958,701; May 17; Sp. p. 4948; Gaz. vol. 154; p. 813.
Ore products, &c., Means for handling and distributing dewatered crushed. H. C. Behr. No. 956,669; May 3; Sp. p. 349; Gaz. vol. 154; p. 58.
Ores and carboniferous earths, Treating. A. A. Lockwood. No. 956,773; May 3; Sp. p. 589; Gaz. vol. 154; p. 94.
Ores and carboniferous earths, Treating. A. A. Lockwood. No. 959,239; May 24; Sp. p. 6120; Gaz. vol. 154; p. 1022.
Ores containing copper, Treating sulfd. J. McFetridge. No. 959,578; May 31; Sp. p. 6826; Gaz. vol. 154; p. 1162.
Ores, particularly oxide and sulfide, Reducing refractory. G. Boericke. No. 958,851; May 24; Sp. p. 5308; Gaz. vol. 154; p. 894.
Ores, Reducing nickel hydrosilicate. A. Chalas. No. 959,460; May 31; Sp. p. 6568; Gaz. vol. 154; p. 1121.
Ores, Treating. P. A. Emanuel. No. 957,755; May 10; Sp. p. 2661; Gaz. vol. 154; p. 458.
Ores, Treating. P. A. Emanuel. No. 957,756; May 10; Sp. p. 2665; Gaz. vol. 154; p. 459.
Ornamental articles, Producing. W. E. Heeren. No. 958,641; May 17; Sp. p. 4836; Gaz. vol. 154; p. 794.
Oscillographs, Film-holder for. L. T. Robinson and R. Miller, Jr. No. 957,257; May 10; Sp. p. 1637; Gaz. vol. 154; p. 289.
Osteopathic tables, Swing for. W. E. Fogle. No. 957,758; May 10; Sp. p. 2671; Gaz. vol. 154; p. 459.
Outsole-marker. W. C. Stewart. No. 958,083; May 17; Sp. p. 3391; Gaz. vol. 154; p. 585.
Oven, Baker's. I. Siapo. No. 957,479; May 10; Sp. p. 2100; Gaz. vol. 154; p. 364.
Oven for tempering shoe-shanks and other small articles. A. M. Moore. No. 957,853; May 10; Sp. p. 2862; Gaz. vol. 154; p. 490.
Overhead carrier. J. E. Eisenhuth. No. 959,487; May 31; Sp. p. 6636; Gaz. vol. 154; p. 1131.
Oxidation of resistance-conductors, Preventing surface. J. T. H. Dempster. No. 957,193; May 10; Sp. p. 1485; Gaz. vol. 154; p. 265.
Package cord-retainer. M. Schmidt. No. 959,396; May 24; Sp. p. 6423; Gaz. vol. 154; p. 1074.
Package-holder. F. Goble. No. 957,767; May 10; Sp. p. 2687; Gaz. vol. 154; p. 462.
Packing device. T. R. Evans and L. W. Young. No. 959,489; May 31; Sp. p. 6640; Gaz. vol. 154; p. 1132.
Packing for annealing and other like apparatus, Fusible. W. R. Kinnear. No. 958,409; May 17; Sp. p. 4386; Gaz. vol. 154; p. 716.
Packing for cylinder-molds. H. Parker. No. 958,275; May 17; Sp. p. 3966; Gaz. vol. 154; p. 668.
Pad: *See* Harness back-pad.
Pad-holder. L. A. Labey. No. 956,534; May 3; Sp. p. 55; Gaz. vol. 154; p. 12.
Padlock. A. M. H. De Bruycker. No. 957,033; May 3; Sp. p. 1155; Gaz. vol. 154; p. 183.
Padlock. A. Nerhaft. No. 957,705; May 10; Sp. p. 2555; Gaz. vol. 154; p. 442.
Page-marker and music-leaf turner. L. F. Suddick. No. 957,447; May 10; Sp. p. 2041; Gaz. vol. 154; p. 354.
Pail-holder. J. Weinberg. No. 956,557; May 3; Sp. p. 106; Gaz. vol. 154; p. 19.
Pail, Milk-. J. D. Perry. No. 959,590; May 31; Sp. p. 6853; Gaz. vol. 154; p. 1166.
Paint, Fireproof. M. S. Watt. No. 959,663; May 31; Sp. p. 6991; Gaz. vol. 154; p. 1190.
Painting apparatus. H. Du Brau. No. 957,501; May 10; Sp. p. 2149; Gaz. vol. 154; p. 372.
Pallet setting and adjusting tool. L. R. Garnett. No. 956,956; May 3; Sp. p. 998; Gaz. vol. 154; p. 157.
Pan: *See* Ash-pan; Bed-pan; Dust-pan; Locomotive ash-pan; Surgeon's operating-pan; Vacuum-pan.
Panel-board. E. N. Lake and J. Cuthbert. No. 959,762; May 31; Sp. p. 7200; Gaz. vol. 154; p. 1222.
Paper and grooving same. W. E. Ramage and H. D. Shaw. No. 958,174; May 17; Sp. p. 3763; Gaz. vol. 154; p. 636.
Paper-bag machine. M. Vierengel and J. Sofge. No. 958,844; May 24; Sp. p. 5287; Gaz. vol. 154; p. 891.
Paper bag or sack. T. E. Chapman. No. 956,941; May 3; Sp. p. 948; Gaz. vol. 154; p. 151.
Paper bags and for packeting tobacco and other materials, Machine for making. E. L. Bracy. No. 956,628; May 3; Sp. p. 248; Gaz. vol. 154; p. 42.
Paper-bottle-making apparatus. C. F. Jenkins. No. 960,226; May 31; Sp. p. 8213; Gaz. vol. 154; p. 1382.
Paper-clip. D. G. Galbraith. No. 957,764; May 10; Sp. p. 2681; Gaz. vol. 154; p. 461.
Paper-cutter. L. F. Brening. No. 957,409; May 10; Sp. p. 1966; Gaz. vol. 154; p. 341.
Paper cutting and trimming machine. H. S. Woodward. No. 959,674; May 31; Sp. p. 7027; Gaz. vol. 154; p. 1193.
Paper-cutting machine. N. Gray, Jr. No. 957,553; May 10; Sp. p. 2252; Gaz. vol. 154; p. 390.
Paper-cutting machines, Cutting-stick for. B. M. Helm. No. 958,395; May 17; Sp. p. 4362; Gaz. vol. 154; p. 712.
Paper-cutting shears. A. Worcester. No. 958,455; May 17; Sp. p. 4480; Gaz. vol. 154; p. 733.
Paper-feeding machine. T. C. Dexter and V. Garner. No. 959,319; May 24; Sp. p. 6268; Gaz. vol. 154; p. 1049.
Paper-making machine. F. N. Hamlin. No. 958,113; May 17; Sp. p. 3634; Gaz. vol. 154; p. 613.
Paper-making machinery. W. E. Sheehan. No. 959,626; May 31; Sp. p. 6917; Gaz. vol. 154; p. 1178.
Paper-making materials, Machine for kneading and grinding. C. Wurster. No. 958,901; May 24; Sp. p. 5439; Gaz. vol. 154; p. 911.
Paper-plaiting apparatus. C. R. Heiser. No. 957,159; May 3; Sp. p. 1400; Gaz. vol. 154; p. 224.
Paper, &c., pliable, Making. F. Evers. No. 957,196; May 10; Sp. p. 1490; Gaz. vol. 154; p. 266.
Paper-pulp engines, Roll-bar for. C. I. Ware. No. 958,708; May 17; Sp. p. 4961; Gaz. vol. 154; p. 815.
Paper-rack. F. J. Buehler. No. 959,839; May 31; Sp. p. 7378; Gaz. vol. 154; p. 1249.
Paper receptacle, Waste-. A. Low. No. 960,028; May 31; Sp. p. 7826; Gaz. vol. 154; p. 1316.
Paper reducing and packing apparatus, Waste-. A. A. Low. No. 960,026; May 31; Sp. p. 7822; Gaz. vol. 154; p. 1315.
Paper reducing and packing apparatus, Waste-. A. A. Low. No. 960,027; May 31; Sp. p. 7824; Gaz. vol. 154; p. 1315.
Paper sheets one by one from a pile, Apparatus for delivering. E. T. Pollard. No. 958,764; May 24; Sp. p. 5092; Gaz. vol. 154; p. 861.
Parcel-carrier. J. W. Clark. No. 958,728; May 24; Sp. p. 5002; Gaz. vol. 154; p. 846.
Parceling-machine. J. Bardet. No. 957,833; May 10; Sp. p. 2812; Gaz. vol. 154; p. 483.
Parer, Apple-. G. H. Hinchliffe. No. 959,137; May 24; Sp. p. 6007; Gaz. vol. 154; p. 999.
Partition and the like, Office-. H. Klein. No. 956,642; May 3; Sp. p. 287; Gaz. vol. 154; p. 48.
Paste-applying apparatus for can ends. A. Johnson. No. 957,967; May 17; Sp. p. 3178; Gaz. vol. 154; p. 561.
Paste-box. O. Dreher. No. 958,480; May 17; Sp. p. 4527; Gaz. vol. 154; p. 741.
Pasteuriser. H. Christensen. No. 957,035; May 3; Sp. p. 1160; Gaz. vol. 154; p. 183.
Pavement, Composite. E. C. Wallace. No. 959,076; May 31; Sp. p. 7696; Gaz. vol. 154; p. 1297.
Pavements, Making. J Y McClintock. No. 957,985; May 17; Sp. p. 3227; Gaz. vol. 154; p. 567.
Pea-vine-hulling machine, Green-. R. P. Scott. No. 957,443; May 10; Sp. p. 2034; Gaz. vol. 154; p. 353.
Pea-vine-hulling machine, Green-. T. A. Scott. No. 957,444; May 10; Sp. p. 2036; Gaz. vol. 154; p. 353.
Peas on the vines, Machine for hulling green. R. P. Scott. No. 957,442; May 10; Sp. p. 2032; Gaz. vol. 154; p. 352.
Peat and the like, Drying apparatus for. C. A. Matheson. No. 957,232; May 10; Sp. p. 1588; Gaz. vol. 154; p. 280.
Pedal gripper attachment. E. F. and H. Pawsat. No. 959,160; May 24; Sp. p. 5957; Gaz. vol. 154; p. 997.
Pen and pencil holder. J. Dean. No. 960,215; May 31; Sp. p. 8102; Gaz. vol. 154; p. 1379.
Pen, Self-filling fountain-. B. Griesbaber. No. 956,895; May 3; Sp. p. 860; Gaz. vol. 154; p. 137.
Pens and pencils, Safety-clip for. W. O. Hunter. No. 960,092; May 31; Sp. p. 7956; Gaz. vol. 154; p. 1337.
Penholder. A. Beaty. No. 957,835; May 10; Sp. p. 2821; Gaz. vol. 154; p. 484.
Penholder, Fountain-. H. S. Brewington. No. 958,472; May 17; Sp. p. 4512; Gaz. vol. 154; p. 739.
Pencil-holder. W. Henrichs. No. 957,208; May 10; Sp. p. 1534; Gaz. vol. 154; p. 271.
Pencil-holder. L. May. No. 957,787; May 10; Sp. p. 2736; Gaz. vol. 154; p. 468.
Pencil, Magazine-. J. A. Hollenberger. No. 959,581; May 31; Sp. p. 6727; Gaz. vol. 154; p. 1145.
Pencil-sharpener. F. Broetrom. No. 958,904; May 24; Sp. p. 5442; Gaz. vol. 154; p. 911.
Pencil-sharpener. M. W. Walter. No. 959,660; May 31; Sp. p. 6985; Gaz. vol. 154; p. 1189.
Pencil-sharpener. F. Alexander. No. 959,831; May 31; Sp. p. 7361; Gaz. vol. 154; p. 1246.
Pepper-boxes and the like, Top for. E. Crulkshank and U. W. Bock. No. 957,057; May 3; Sp. p. 1165; Gaz. vol. 154; p. 185.

Perambulator, Convertible. J. Ford. No. 957,874; May 17; Sp. p. 2917; Gaz. vol. 154; p. 528.
Perambulator, Folding. F. A. Nauts. No. 958,423; May 17; Sp. p. 4409; Gaz. vol. 154; p. 721.
Percolator. C. U. Buck. No. 959,110; May 24; Sp. p. 5848; Gaz. vol. 154; p. 980.
Percolator. D. P. Moore. No. 959,955; May 31; Sp. p. 7650; Gaz. vol. 154; p. 1290.
Perforating-machine. F. P. Rosback. No. 959,966; May 31; Sp. p. 7668; Gaz. vol. 154; p. 1294.
Periscope. W. N. Howell. No. 959,013; May 24; Sp. p. 5638; Gaz. vol. 154; p. 948.
Phase-splitter. H. H. Cutler. No. 956,686; May 3; Sp. p. 390; Gaz. vol. 154; p. 65.
Phonograph. R. Berndt. No. 956,671; May 3; Sp. p. 354; Gaz. vol. 154; p. 59.
Phonograph-cabinet. E. A. Hall. No. 959,522; May 31; Sp. p. 6708; Gaz. vol. 154; p. 1142.
Phonograph-record mold. E. L. Aiken. No. 956,922; May 3; Sp. p. 919; Gaz. vol. 154; p. 146.
Phonographs, Automatic brake for. W. C. Mills. No. 957,570; May 10; Sp. p. 2282; Gaz. vol. 154; p. 395.
Photographic-printing device. T. A. Patton. No. 960,192; May 31; Sp. p. 8150; Gaz. vol. 154; p. 1371.
Photographic-printing machine, Automatic. G. W. Ferguson. No. 957,665; May 10; Sp. p. 2473; Gaz. vol. 154; p. 428.
Photographic purposes, Sensitized surface or film for. W. H. Caldwell. No. 956,567; May 3; Sp. p. 125; Gaz. vol. 154; p. 23.
Photographs, engravings, or the like in a dry condition, Mounting. J. Neubronner. No. 956,723; May 3; Sp. p. 479; Gaz. vol. 154; p. 77.
Photographs, Means for printing. S. A. Nielson. No. 959,249; May 24; Sp. p. 6139; Gaz. vol. 154; p. 1026.
Photographs or other pictures, Embossing. A. G. Scopes. No. 957,030; May 10; Sp. p. 2400; Gaz. vol. 154; p. 415.
Photometer. H. Brybni. No. 959,051; May 24; Sp. p. 5718; Gaz. vol. 154; p. 960.
Piano-hammer. H. E. Young. No. 959,190; May 24; Sp. p. 6022; Gaz. vol. 154; p. 1006.
Piano, Horizontal grand player-. N. D. Hosley. No. 957,421; May 10; Sp. p. 1996; Gaz. vol. 154; p. 344.
Piano-player and talking-machine, Combined. W. M. Davis. No. 958,731; May 24; Sp. p. 5017; Gaz. vol. 154; p. 849.
Piano-players, Tracker-board for. M. F. Holderman. No. 957,774; May 10; Sp. p. 2700; Gaz. vol. 154; p. 464.
Pianos, Coin-controlled actuating mechanism for autopneumatic. A. J. Hobart. No. 958,125; May 17; Sp. p. 3657; Gaz. vol. 154; p. 617.
Pianos, Electrical self-playing attachment for. I. B. Smith. No. 959,032; May 24; Sp. p. 5673; Gaz. vol. 154; p. 954.
Pianos, Repetition-action for grand. L. Charpiat. No. 959,716; May 31; Sp. p. 7103; Gaz. vol. 154; p. 1206.
Picker: *See* Corn-picker; Slate-picker.
Pickling apparatus. J. T. Au Werter. No. 959,195; May 24; Sp. p. 6031; Gaz. vol. 154; p. 1008.
Picture. A. E. Kennedy. No. 959,754; May 31; Sp. p. 7183; Gaz. vol. 154; p. 1219.
Picture apparatus, Motion-. D. C. Woodworth. No. 959,675; May 31; Sp. p. 7028; Gaz. vol. 154; p. 1194.
Picture film, Motion-. A. L. Clawson. No. 958,367; May 17; Sp. p. 4300; Gaz. vol. 154; p. 702.
Picture machine, Moving-. C. J. Paulson. No. 957,246; May 10; Sp. p. 1615; Gaz. vol. 154; p. 285.
Pie-crust-forming machine. O. Colborne. No. 956,683; May 3; Sp. p. 384; Gaz. vol. 154; p. 64.
Pie-filling machine. O. Colborne. No. 956,684; May 3; Sp. p. 385; Gaz. vol. 154; p. 64.
Piece goods, Apparatus for piling. J. W. Banks. No. 958,579; May 17; Sp. p. 4717; Gaz. vol. 154; p. 774.
Pigment with basis of calcium cyanamid and making same. R. Fuiloul. No. 957,153; May 3; Sp. p. 1384; Gaz. vol. 154; p. 222.
Piling, Metal sheet-. F. N. Kneas. No. 957,169; May 3; Sp. p. 1425; Gaz. vol. 154; p. 228.
Pillow. J. L. Kennedy. No. 958,502; May 17; Sp. p. 4565; Gaz. vol. 154; p. 749.
Pillow-sham holder. J. M. Babcock. No. 957,455; May 10; Sp. p. 2057; Gaz. vol. 154; p. 357.
Pin: *See* Belt-pin; Clothes-pin; Safety-pin.
Pin. J. H. Reed. No. 956,511; May 17; Sp. p. 4185; Gaz. vol. 154; p. 632.
Pin safety-catch. S. J. McMillen. No. 958,422; May 17; Sp. p. 4406; Gaz. vol. 154; p. 721.
Pipe: *See* Concrete pipe; Smoking-pipe; Tobacco-pipe; Tobacco-smoking pipe.
Pipe. C. A. Lord. No. 958,264; May 17; Sp. p. 3944; Gaz. vol. 154; p. 664.
Pipe-cleaner. H. P. Stewart. No. 957,380; May 10; Sp. p. 1920; Gaz. vol. 154; p. 334.
Pipe connection. F. L. Schnert and G. J. McManus. No. 960,204; May 31; Sp. p. 8170; Gaz. vol. 154; p. 1375.
Pipe-coupling. T. C. Grierson. No. 959,554; May 31; Sp. p. 7405; Gaz. vol. 154; p. 1255.
Pipe-coupling. O. E. Oleson. No. 959,960; May 31; Sp. p. 7659; Gaz. vol. 154; p. 1292.
Pipe-end closure. M. W. Pitner. No. 959,385; May 24; Sp. p. 6405; Gaz. vol. 154; p. 1071.
Pipe fitting, Drain-. G. W. Berry. No. 957,487; May 10; Sp. p. 2113; Gaz. vol. 154; p. 367.
Pipe-loading machine. C. Jordan. No. 960,227; May 31; Sp. p. 8214; Gaz. vol. 154; p. 1383.
Pipe support and clamp. D. Williams. No. 958,052; May 17; Sp. p. 3466; Gaz. vol. 154; p. 593.
Pipe-threading dies, Self-centering work and die holder for. E. L. Troup. No. 957,721; May 10; Sp. p. 2585; Gaz. vol. 154; p. 447.
Pipe-unions. F. C. Blanchard and E. B. Crocker. No. 959,702; May 31; Sp. p. 7079; Gaz. vol. 154; p. 1202.
Pipes, Metallic connection for automatic connectors for train-. P. Beahm. No. 959,290; May 24; Sp. p. 6217; Gaz. vol. 154; p. 1039.
Pipes, valves, &c., at fixed intervals, Apparatus for the automatic opening and closing of. H. Jacobi. No. 957,341; May 10; Sp. p. 1830; Gaz. vol. 154; p. 319.
Platon. A. L. Mowry. No. 957,084; May 17; Sp. p. 3225; Gaz. vol. 154; p. 567.
Pitman connection. W. N. Parkes. No. 957,474; May 10; Sp. p. 2090; Gaz. vol. 154; p. 362.
Plaiting and bobbin machine. M. Ebeling and J. Herzog. No. 957,317; May 10; Sp. p. 1778; Gaz. vol. 154; p. 310.
Planetarium. A. Laing. No. 958,139; May 17; Sp. p. 3688; Gaz. vol. 154; p. 623.
Plant-support. L. W. Nied. No. 959,789; May 31; Sp. p. 7266; Gaz. vol. 154; p. 1231.
Plant-thinning apparatus. E. F. Webb. No. 957,131; May 3; Sp. p. 1344; Gaz. vol. 154; p. 215.
Planter. F. M. Gordon. No. 959,852; May 31; Sp. p. 7400; Gaz. vol. 154; p. 1254.
Planter, Corn-. H. F. Lotz. No. 956,713; May 3; Sp. p. 462; Gaz. vol. 154; p. 74.
Planter, Corn or cotton. C. Wilks. No. 958,204; May 17; Sp. p. 3818; Gaz. vol. 154; p. 645.
Planter, Potato-. W. J. Yearley. No. 957,293; May 10; Sp. p. 1720; Gaz. vol. 154; p. 302.
Planter, Potato-. C. Hinman. No. 958,022; May 24; Sp. p. 5475; Gaz. vol. 154; p. 918.
Planter, Potato-. A. McWhorter. No. 959,154; May 24; Sp. p. 5942; Gaz. vol. 154; p. 995.
Planter, Two-row potato-. N. Colgen and O. P. Boysen. No. 957,412; May 10; Sp. p. 1972; Gaz. vol. 154; p. 341.
Planters, Fertilizer-discharging attachment for corn-. C. T. Rogers and F. E. Lee. No. 958,772; May 24; Sp. p. 5115; Gaz. vol. 154; p. 864.
Planting machine, Potato-. T. J. Kelly. No. 956,583; May 3; Sp. p. 164; Gaz. vol. 154; p. 28.
Plaster-board. E. Bye and K. Buer. No. 957,144; May 3; Sp. p. 1366; Gaz. vol. 154; p. 219.
Plastic sheet composition. A. Thoma. No. 957,804; May 10; Sp. p. 1931; Gaz. vol. 154; p. 336.
Plastic substances, Device for regulating delivery of. J. J. and T. E. Fearon. No. 960,081; May 31; Sp. p. 7941; Gaz. vol. 154; p. 1333.
Plate-making machine. M. A. Droitcour. No. 960,006; May 31; Sp. p. 7764; Gaz. vol. 154; p. 1308.
Platter, Lunch-. L. B. Kauffmann. No. 956,858; May 3; Sp. p. 783; Gaz. vol. 154; p. 124.
Player, Automatic. J. A. Weser. No. 956,558; May 3; Sp. p. 106; Gaz. vol. 154; p. 20.
Pliers or pipe-tongs. G. L. Holt. No. 957,560; May 10; Sp. p. 2267; Gaz. vol. 154; p. 392.
Plow. E. M. Edelen, Jr. No. 957,045; May 3; Sp. p. 1176; Gaz. vol. 154; p. 186.
Plow. J. E. Thompson. No. 957,272; May 10; Sp. p. 1686; Gaz. vol. 154; p. 295.
Plow, Breaking-. J. H. Rogge. No. 959,390; May 24; Sp. p. 6412; Gaz. vol. 154; p. 1072.
Plow-cleaner. O. Huffmon. No. 959,538; May 31; Sp. p. 6740; Gaz. vol. 154; p. 1147.
Plow, Cultivator-. G. W. Pobans. No. 960,194; May 31; Sp. p. 8154; Gaz. vol. 154; p. 1371.
Plow, Disk. L. and C. Krebs. No. 959,356; May 24; Sp. p. 6340; Gaz. vol. 154; p. 1062.
Plow disk jointer. J. F. Emmett. No. 959,325; May 24; Sp. p. 6288; Gaz. vol. 154; p. 1052.
Plow-frame. P. T. McDonnold. No. 959,871; May 31; Sp. p. 7451; Gaz. vol. 154; p. 1260.
Plow, Gang-. D. J. Elliott. No. 957,149; May 3; Sp. p. 1376; Gaz. vol. 154; p. 220.
Plow, Gang-. C. P. Miller. No. 959,953; May 31; Sp. p. 7644; Gaz. vol. 154; p. 1289.
Plow, Hand-. A. R. Corrington. No. 959,425; May 24; Sp. p. 6467; Gaz. vol. 154; p. 1083.
Plow harrow attachment. W. H. Walker. No. 957,722; May 10; Sp. p. 2587; Gaz. vol. 154; p. 448.
Plow, Motor-. J. J. Middlebrook. No. 957,979; May 17; Sp. p. 3215; Gaz. vol. 154; p. 566.
Plow, Sulky-. W. L. Paul. (Reissue.) No. 13,112; May 10; Sp. p. 2872; Gaz. vol. 154; p. 492.
Plow, Sulky-. H. P. Curtright. No. 958,606; May 17; Sp. p. 4939; Gaz. vol. 154; p. 811.
Plows, Adjustable beam and frame for sulky and gang. H. S. Busby. No. 958,091; May 17; Sp. p. 3396; Gaz. vol. 154; p. 606.
Plows, Potato-digging attachment for. F. Day. No. 958,603; May 17; Sp. p. 4764; Gaz. vol. 154; p. 782.
Plowshare for grubbing-plows, &c. C. D. Jauer. No. 956,768; May 3; Sp. p. 575; Gaz. vol. 154; p. 92.
Plug, Attaching-. H. R. Sargent. No. 957,261; May 10; Sp. p. 1653; Gaz. vol. 154; p. 291.
Plumbing attachment. H. Phillips. No. 957,700; May 10; Sp. p. 2561; Gaz. vol. 154; p. 443.
Plumbing-fixture. J. L. Donat. No. 959,207; May 24; Sp. p. 6053; Gaz. vol. 154; p. 1012.
Pneumatic cleaner. A. Lotz. No. 956,535; May 3; Sp. p. 56; Gaz. vol. 154; p. 12.

Pneumatic-despatch-tube apparatus, Carrier for. M. L. Emerson. No. 958,240; May 17; Sp. p. 3885; Gaz. vol. 154; p. 656.
Pneumatic motor. T. Dunquard. No. 957,751; May 10; Sp. p. 2650; Gaz. vol. 154; p. 457.
Pneumatic transmission system. J. J. Stoetzel. No. 959,642; May 31; Sp. p. 6945; Gaz. vol. 154; p. 1183.
Pocket for garments. C. B. Morris. No. 959,247; May 24; Sp. p. 6186; Gaz. vol. 154; p. 1025.
Poke, Animal-. W. Brewer. No. 956,755; May 3; Sp. p. 540; Gaz. vol. 154; p. 88.
Poker. W. L. Janwich. No. 957,679; May 10; Sp. p. 2508; Gaz. vol. 154; p. 433.
Pole-anchor. K. T. Hovrud. No. 958,127; May 17; Sp. p. 3661; Gaz. vol. 154; p. 617.
Pole, Vehicle-. G. J. Thust. No. 957,582; May 10; Sp. p. 2300; Gaz. vol. 154; p. 399.
Polishing-wheel. S. A. Cochell. No. 957,496; May 10; Sp. p. 2140; Gaz. vol. 154; p. 370.
Portable elevator. G. E. Wunder. No. 959,679; May 31; Sp. p. 7035; Gaz. vol. 154; p. 1195.
Portable heater. S. Bergstein. No. 960,064; May 31; Sp. p. 7914; Gaz. vol. 154; p. 1328.
Portable house. D. C. Slater. No. 960,207; May 31; Sp. p. 8179; Gaz. vol. 154; p. 1376.
Post: *See* Binding-post; Fence-post.
Post. H. J. Stratton. No. 958,946; May 24; Sp. p. 5511; Gaz. vol. 154; p. 925.
Post-binder. R. E. Murphy. No. 957,895; May 17; Sp. p. 2990; Gaz. vol. 154; p. 535.
Post-hole digger. R. H. Vesey. No. 957,127; May 3; Sp. p. 1334; Gaz. vol. 154; p. 213.
Post-hole digger. R. H. Vesey. No. 957,128; May 3; Sp. p. 1336; Gaz. vol. 154; p. 214.
Post-offices, Assorting and routing case for. C. H. H. Bailey. No. 958,925; May 3; Sp. p. 924; Gaz. vol. 154; p. 147.
Posts, Construction of. R. C. Stewart. No. 958,334; May 17; Sp. p. 4241; Gaz. vol. 154; p. 691.
Potash compounds soluble, Rendering. F. R. Carpenter. No. 959,841; May 31; Sp. p. 7384; Gaz. vol. 154; p. 1250.
Potash salts, Recovering. A. Alberti. No. 957,295; May 10; Sp. p. 1733; Gaz. vol. 154; p. 303.
Potato-cutter. J. Snyder. No. 957,118; May 3; Sp. p. 1317; Gaz. vol. 154; p. 210.
Potato-digger. J. S. Hogeland. No. 958,250; May 17; Sp. p. 3918; Gaz. vol. 154; p. 659.
Pounder. C. Fry. No. 956,697; May 3; Sp. p. 435; Gaz. vol. 154; p. 69.
Powder, Apparatus for producing kefir. A. Rosenberger. No. 957,104; May 3; Sp. p. 1294; Gaz. vol. 154; p. 206.
Power: *See* Wave-power.
Power-generating means. A. Pelletier. No. 957,086; May 3; Sp. p. 1260; Gaz. vol. 154; p. 200.
Power plant, Hydro-electric. F. W. Ballard. No. 958,578; May 17; Sp. p. 4714; Gaz. vol. 154; p. 774.
Power-transmitting apparatus. H. L. Brown. No. 957,650; May 10; Sp. p. 2442; Gaz. vol. 154; p. 423.
Power-transmitting mechanism. O. P. M. Davis. No. 959,119; May 24; Sp. p. 5964; Gaz. vol. 154; p. 983.
Power-transmission apparatus. T. G. Straker. No. 959,814; May 31; Sp. p. 7323; Gaz. vol. 154; p. 1240.
Power-transmission system, Hydraulic. A. V. T. Day. No. 956,570; May 3; Sp. p. 134; Gaz. vol. 154; p. 24.
Precious-metal trap. P. A. Brangier and R. Luckenbach. No. 959,300; May 24; Sp. p. 6238; Gaz. vol. 154; p. 1043.
Precious metals, Apparatus for quick cyaniding of. P. A. Brangier and R. Luckenbach. No. 959,301; May 24; Sp. p. 6239; Gaz. vol. 154; p. 1044.
Prepayment mechanism. J. B. Kaighn. No. 957,684; May 10; Sp. p. 2518; Gaz. vol. 154; p. 435.
Prescription-case, Portable. C. F. Kurz. No. 959,230; May 24; Sp. p. 6101; Gaz. vol. 154; p. 1020.
Press: *See* Bailing-press; Box-press; Can-antibuckling press; Car-wheel press; Clamp-press; Forging-press; Fruit-press; Fuel-press; Hay-press; Hydraulic press; Printing-press; Proof-press.
Press. G. E. Pancoast. No. 956,864; May 3; Sp. p. 793; Gaz. vol. 154; p. 126.
Press. J. Thomson. No. 957,916; May 17; Sp. p. 3026; Gaz. vol. 154; p. 543.
Press. G. Kelly. No. 958,813; May 24; Sp. p. 5212; Gaz. vol. 154; p. 879.
Press-sweep. R. A. Wakefield. No. 956,746; May 3; Sp. p. 525; Gaz. vol. 154; p. 85.
Pressure-gage. C. J. Manning. No. 957,471; May 10; Sp. p. 2084; Gaz. vol. 154; p. 361.
Pressure-regulator. G. C. Davis and W. A. Daley. No. 959,474; May 31; Sp. p. 6600; Gaz. vol. 154; p. 1126.
Pressure-regulator. J. E. Brown. No. 959,706; May 31; Sp. p. 7083; Gaz. vol. 154; p. 1203.
Printing cylinder and plate. M. A. Droitcour. No. 960,005; May 31; Sp. p. 7762; Gaz. vol. 154; p. 1308.
Printing, folding, or similar paper-treating machines. Stacking mechanism for. R. E. Fischer and M. Wescher. No. 958,798; May 24; Sp. p. 5136; Gaz. vol. 154; p. 874.
Printing-machine. O. Mossen. No. 958,771; May 24; Sp. p. 5111; Gaz. vol. 154; p. 863.
Printing-machine. M. H. Mann. No. 959,778; May 31; Sp. p. 7321; Gaz. vol. 154; p. 1226.
Printing machine, Card-. M. H. Mann. No. 957,229; May 10; Sp. p. 1544; Gaz. vol. 154; p. 280.
Printing machine, Plate-. E. H. Kirk. No. 956,807; May 3; Sp. p. 658; Gaz. vol. 154; p. 105.
Printing-machine, Rotary. A. B. Evans and G. C. H. Wichmann. No. 958,484; May 17; Sp. p. 4534; Gaz. vol. 154; p. 742.
Printing or embossing cylinders, Machine for grinding. C. H. Hope. No. 959,140; May 24; Sp. p. 5912; Gaz. vol. 154; p. 990.
Printing-plate. J. S. Duncan. No. 959,725; May 31; Sp. p. 7124; Gaz. vol. 154; p. 1209.
Printing plate and means for securing the same, Flexible. M. A. Droitcour. No. 960,218; May 31; Sp. p. 8196; Gaz. vol. 154; p. 1380.
Printing-plate, Flexible. M. A. Droitcour. No. 960,219; May 31; Sp. p. 8199; Gaz. vol. 154; p. 1380.
Printing-plates, Producing. B. Bamlet. No. 957,596; May 10; Sp. p. 2323; Gaz. vol. 154; p. 404.
Printing-press. J. Thomson. No. 957,917; May 17; Sp. p. 3027; Gaz. vol. 154; p. 543.
Printing-press. F. Meisel. No. 958,268; May 17; Sp. p. 3950; Gaz. vol. 154; p. 665.
Printing-press. F. Meisel. No. 958,662; May 17; Sp. p. 4876; Gaz. vol. 154; p. 900.
Printing-press, Cylinder. J. H. Barr. No. 956,751; May 3; Sp. p. 532; Gaz. vol. 154; p. 86.
Printing-press-inking mechanism. M. A. Droitcour. No. 960,004; May 31; Sp. p. 7760; Gaz. vol. 154; p. 1307.
Printing-press sheet-delivery mechanism. M. A. Droitcour. No. 960,007; May 31; Sp. p. 7775; Gaz. vol. 154; p. 1309.
Printing process. F. Krokert. No. 958,879; May 24; Sp. p. 5383; Gaz. vol. 154; p. 903.
Printing-wheel. I. S. Dement. No. 956,891; May 3; Sp. p. 854; Gaz. vol. 154; p. 135.
Projectile. J. H. Wesson. No. 959,037; May 24; Sp. p. 5689; Gaz. vol. 154; p. 956.
Projection apparatus. C. Dupuis. No. 957,502; May 10; Sp. p. 2151; Gaz. vol. 154; p. 372.
Projection apparatus. W. L. Patterson. No. 957,899; May 17; Sp. p. 2970; Gaz. vol. 154; p. 537.
Proof-press. W. G. Potter. No. 957,373; May 10; Sp. p. 1898; Gaz. vol. 154; p. 329.
Propeller. W. D. Haynes. No. 957,056; May 3; Sp. p. 1197; Gaz. vol. 154; p. 190.
Propeller. G. Gays. No. 958,108; May 17; Sp. p. 3625; Gaz. vol. 154; p. 611.
Propeller. M. Cooksey. No. 958,599; May 17; Sp. p. 4757; Gaz. vol. 154; p. 781.
Propeller, Ship's. S. Labryszewski. No. 959,761; May 31; Sp. p. 7199; Gaz. vol. 154; p. 1222.
Propelling boats, Means for. S. Giovannini. No. 957,550; May 10; Sp. p. 2248; Gaz. vol. 154; p. 389.
Propelling means for vessels. J. Sindic. No. 958,020; May 17; Sp. p. 3333; Gaz. vol. 154; p. 580.
Propelling vessels by hydraulic pressure, Apparatus for. H. A. Duc, Jr. No. 958,996; May 24; Sp. p. 5610; Gaz. vol. 154; p. 942.
Propulsion of vessels, Means for the. R. P. Nielsen. No. 957,622; May 10; Sp. p. 2385; Gaz. vol. 154; p. 413.
Protective device. R. H. Manson. No. 957,077; May 17; Sp. p. 3208; Gaz. vol. 154; p. 565.
Pull-socket. G. W. Goodridge. No. 957,768; May 10; Sp. p. 2688; Gaz. vol. 154; p. 462.
Pull-socket. F. W. Slady. No. 958,554; May 17; Sp. p. 4664; Gaz. vol. 154; p. 766.
Puller: *See* Bush-puller; Drift-bolt puller; Fastener-puller; Stump-puller.
Pulley. J. J. Frick. No. 959,212; May 24; Sp. p. 6062; Gaz. vol. 154; p. 1014.
Pulley. R. H. Bowen. No. 959,424; May 24; Sp. p. 6466; Gaz. vol. 154; p. 1083.
Pulley and attachment therefor. C. A. Brinley and R. H. Bowen. No. 957,845; May 10; Sp. p. 2830; Gaz. vol. 154; p. 487.
Pulley, Power-transmitting. W. A. Owen. No. 958,274; May 17; Sp. p. 3965; Gaz. vol. 154; p. 668.
Pulley, Safety-. P. J. A. Schnoor. No. 958,182; May 17; Sp. p. 3775; Gaz. vol. 154; p. 638.
Pulley, Self-oiling. G. A. Snyder. No. 956,607; May 3; Sp. p. 220; Gaz. vol. 154; p. 37.
Pulleys, Crane for clothes-line. L. F. Becker. No. 958,215; May 17; Sp. p. 3839; Gaz. vol. 154; p. 649.
Pulp and analogous materials, Machine for forming articles from. A. Shackleton. No. 958,019; May 17; Sp. p. 3328; Gaz. vol. 154; p. 579.
Pulp-making machine. W. Burton. No. 959,307; May 24; Sp. p. 6249; Gaz. vol. 154; p. 1045.
Pulp stopper or the like. J. H. Ketcheson. No. 959,225; May 24; Sp. p. 6080; Gaz. vol. 154; p. 1018.
Pump. P. A. Myers and H. A. Toulmin. No. 956,990; May 3; Sp. p. 1067; Gaz. vol. 154; p. 107.
Pump. J. G. Willet. No. 957,451; May 10; Sp. p. 2049; Gaz. vol. 154; p. 355.
Pump. A. A. Parker. No. 957,794; May 10; Sp. p. 2749; Gaz. vol. 154; p. 471.
Pump. J. Holst. No. 959,533; May 31; Sp. p. 6780; Gaz. vol. 154; p. 1145.
Pump attachment. O. Nuernberger. No. 957,791; May 10; Sp. p. 2744; Gaz. vol. 154; p. 470.
Pump, Centrifugal. R. O. Jones. No. 957,682; May 10; Sp. p. 2511; Gaz. vol. 154; p. 434.
Pump, Centrifugal. H. A. Priddle. No. 958,765; May 24; Sp. p. 5094; Gaz. vol. 154; p. 861.
Pump, Centrifugal. W. K. Richardson. No. 958,768; May 24; Sp. p. 5104; Gaz. vol. 154; p. 862.
Pump, Centrifugal. P. J. Wickblom. No. 959,089; May 24; Sp. p. 5812; Gaz. vol. 154; p. 974.

Pump, Double-acting deep-well. J. G. Dorward. No. 959,321; May 24; Sp. p. 6275; Gaz. vol. 154; p. 1050.
Pump, Foot-. H. O. Harrison. No. 956,702; May 3; Sp. p. 442; Gaz. vol. 154; p. 70.
Pump for wells. J. F. Durham. No. 958,862; May 24; Sp. p. 5333; Gaz. vol. 154; p. 897.
Pump, Measuring-. W. B. Haines. No. 958,919; May 24; Sp. p. 5470; Gaz. vol. 154; p. 917.
Pump, Portable vacuum-. J. H. Templin. No. 956,784; May 3; Sp. p. 606; Gaz. vol. 154; p. 97.
Pump, Rotary. J. R. Kinney. No. 958,136; May 17; Sp. p. 3663; Gaz. vol. 154; p. 621.
Pump, Tire-. W. S. Stapley. No. 959,894; May 31; Sp. p. 7502; Gaz. vol. 154; p. 1267.
Pump, Tire-inflating. M. L. Bastian. No. 957,597; May 10; Sp. p. 2325; Gaz. vol. 154; p. 404.
Pump, Vacuum-. J. T. Wilkin. No. 958,345; May 17; Sp. p. 4257; Gaz. vol. 154; p. 695.
Pumps, Windmill-connector for. P. A. Myers. No. 958,886; May 24; Sp. p. 5397; Gaz. vol. 154; p. 905.
Pumping air or other fluid. T. Wiedemann and J. H. Templin. No. 956,839; May 3; Sp. p. 735; Gaz. vol. 154; p. 116.
Pumping apparatus for vacuum-cleaners and the like. W. H. Keller. No. 956,975; May 3; Sp. p. 1040; Gaz. vol. 154; p. 163.
Pumping systems, Regulator for gas-. E. Schulte. No. 958,185; May 17; Sp. p. 3780; Gaz. vol. 154; p. 639.
Punch, Center-. R. A. Hogge. No. 956,765; May 3; Sp. p. 571; Gaz. vol. 154; p. 91.
Punch, Eyelet setting and embossing. P. O. Mieth. No. 960,104; May 31; Sp. p. 7980; Gaz. vol. 154; p. 1341.
Punching-machine. J. H. Thompson. No. 957,914; May 17; Sp. p. 3021; Gaz. vol. 154; p. 542.
Push-button switch. A. S. Muller and L. E. Carrico. No. 958,755; May 24; Sp. p. 5078; Gaz. vol. 154; p. 858.
Push-button switch. O. B. Thomas. No. 960,124; May 31; Sp. p. 8022; Gaz. vol. 154; p. 1347.
Puzzle. A. H. Wheeler. No. 959,903; May 31; Sp. p. 7516; Gaz. vol. 154; p. 1270.
Puzzle. C. Bruderlein. No. 960,071; May 31; Sp. p. 7923; Gaz. vol. 154; p. 1330.
Pyrographic point. L. Quosbarth. No. 957,625; May 10; Sp. p. 2392; Gaz. vol. 154; p. 414.
Pyrotechnics. L. and J. Schulman. No. 956,546; May 3; Sp. p. 56; Gaz. vol. 154; p. 16.
Quick-acting wrench. W. R. Bresee. No. 957,932; May 17; Sp. p. 3051; Gaz. vol. 154; p. 548.
Quick-adjusting wrench. R. L. Walters. No. 959,436; May 24; Sp. p. 6488; Gaz. vol. 154; p. 1087.
Quilting-frame. F. Jakob. No. 957,561; May 10; Sp. p. 2269; Gaz. vol. 154; p. 393.
Rack: *See* Hay-rack; Meat-rack; Paper-rack; Shoe-rack; Shoe-supporting rack; Trousers-rack; Wagon-rack.
Rack-rail. G. E. Lynch. No. 959,565; May 31; Sp. p. 6805; Gaz. vol. 154; p. 1168.
Radiator attachment. W. H. Drake. No. 958,995; May 24; Sp. p. 5608; Gaz. vol. 154; p. 942.
Radiator foot-rest. E. G. Briggs. No. 959,917; May 31; Sp. p. 7554; Gaz. vol. 154; p. 1276.
Radiators, Vent attachment for. W. L. Walter. No. 958,196; May 17; Sp. p. 3806; Gaz. vol. 154; p. 643.
Rail. J. C. Getty. No. 958,486; May 17; Sp. p. 4538; Gaz. vol. 154; p. 743.
Rail anticreeping device. B. Wolhaupter. No. 957,023; May 3; Sp. p. 1138; Gaz. vol. 154; p. 179.
Rail-bond. C. R. Sturdevant. No. 957,911; May 17; Sp. p. 3018; Gaz. vol. 154; p. 541.
Rail-bond. W. B. Cleveland. No. 959,718; May 31; Sp. p. 7109; Gaz. vol. 154; p. 1207.
Rail-chair. C. Mallitch. No. 958,964; May 24; Sp. p. 5546; Gaz. vol. 154; p. 932.
Rail chair and coupling. J. C. Evans and P. G. Hill. No. 958,241; May 17; Sp. p. 3886; Gaz. vol. 154; p. 656.
Rail-clamp. W. Berry. No. 957,838; May 10; Sp. p. 2825; Gaz. vol. 154; p. 485.
Rail-cutting machine. B. Hurd. No. 959,142; May 24; Sp. p. 5915; Gaz. vol. 154; p. 990.
Rail-fastener. D. Ashworth. No. 957,641; May 10; Sp. p. 2424; Gaz. vol. 154; p. 419.
Rail-holder. W. H. Brown. No. 959,451; May 31; Sp. p. 6542; Gaz. vol. 154; p. 1118.
Rail-jack. G. K. Reiley. No. 958,539; May 17; Sp. p. 4636; Gaz. vol. 154; p. 762.
Rail-joint. C. D. Russell. No. 956,828; May 3; Sp. p. 719; Gaz. vol. 154; p. 113.
Rail-joint. A. R. Berryman. No. 957,030; May 3; Sp. p. 1150; Gaz. vol. 154; p. 182.
Rail-joint. A. L. Stanford. No. 957,121; May 3; Sp. p. 1325; Gaz. vol. 154; p. 211.
Rail-joint. C. J. Mills. No. 958,418; May 17; Sp. p. 4400; Gaz. vol. 154; p. 719.
Rail-joint. W. P. Davis. No. 958,602; May 17; Sp. p. 4762; Gaz. vol. 154; p. 782.
Rail-joint. U. R. Hatfield. No. 959,218; May 24; Sp. p. 6072; Gaz. vol. 154; p. 1015.
Rail-joint. W. Barnett. No. 960,062; May 31; Sp. p. 7907; Gaz. vol. 154; p. 1328.
Rail-joints, Splice-bar for. W. P. and S. G. Thomson. No. 960,237; May 31; Sp. p. 8237; Gaz. vol. 154; p. 1386.
Rail-retainer. T. J. Donovan. No. 958,103; May 17; Sp. p. 3615; Gaz. vol. 154; p. 609.
Rail, Third. C. A. Bluhm. No. 960,066; May 31; Sp. p. 7916; Gaz. vol. 154; p. 1329.
Rail-tie. W. D. Williams. No. 960,130; May 31; Sp. p. 8032; Gaz. vol. 154; p. 1340.
Rail tie and fastening. B. Wolhaupter. No. 957,022; May 3; Sp. p. 1136; Gaz. vol. 154; p. 179.
Rails, Anticreeping device for. B. Wolhaupter. No. 957,021; May 3; Sp. p. 1134; Gaz. vol. 154; p. 179.
Rails, Splice-bar for. W. P. and S. G. Thomson. No. 960,238; May 31; Sp. p. 8240; Gaz. vol. 154; p. 1387.
Railway-beds, Method and construction for the prevention of sink-holes in. D. Marconi. No. 956,987; May 3; Sp. p. 1063; Gaz. vol. 154; p. 167.
Railway cattle-guard. A. Fisher. No. 958,865; May 24; Sp. p. 5348; Gaz. vol. 154; p. 898.
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Railway-crossing. J. S. Smith. No. 959,893; May 31; Sp. p. 7499; Gaz. vol. 154; p. 1267.
Railway-frog. J. E. Conley. No. 960,156; May 31; Sp. p. 8073; Gaz. vol. 154; p. 1357.
Railway-gate. J. T. Corrigan. No. 957,868; May 17; Sp. p. 2899; Gaz. vol. 154; p. 525.
Railway-joint. C. A. Bauder. No. 959,289; May 24; Sp. p. 6215; Gaz. vol. 154; p. 1038.
Railway-lantern. G. H. Rolfes. No. 958,319; May 17; Sp. p. 4203; Gaz. vol. 154; p. 686.
Railway-rail and joint therefor. J. Murphy. No. 957,789; May 10; Sp. p. 2740; Gaz. vol. 154; p. 469.
Railway-rail joint. R. C. Dole and E. Ellis. No. 958,783; May 24; Sp. p. 5020; Gaz. vol. 154; p. 850.
Railway, Rope-. R. Pfaffenbach. No. 959,595; May 31; Sp. p. 6861; Gaz. vol. 154; p. 1167.
Railway-spike. R. A. Rossmeisl. No. 958,546; May 17; Sp. p. 4652; Gaz. vol. 154; p. 764.
Railway-switch. J. R. Merritt. No. 956,644; May 3; Sp. p. 295; Gaz. vol. 154; p. 49.
Railway-switch. G. Shimp and I. H. Wilton. No. 957,115; May 3; Sp. p. 1313; Gaz. vol. 154; p. 209.
Railway-switch. F. Bayusz and V. Kovács. No. 959,421; May 24; Sp. p. 6461; Gaz. vol. 154; p. 1082.
Railway-switch. R. P. Kiblinger. No. 959,549; May 31; Sp. p. 6773; Gaz. vol. 154; p. 1152.
Railway-switch, Automatic. A. A. Moore. No. 957,699; May 10; Sp. p. 2541; Gaz. vol. 154; p. 440.
Railway-switch, Automatic. A. L. Pipes. No. 958,531; May 17; Sp. p. 4624; Gaz. vol. 154; p. 759.
Railway-switch, Automatic. E. Howard. No. 960,017; May 31; Sp. p. 7793; Gaz. vol. 154; p. 1311.
Railway-switch machine. H. M. Abernethy. No. 959,039; May 24; Sp. p. 5693; Gaz. vol. 154; p. 956.
Railway switch mechanism, Automatic self-closing. H. B. Noble. No. 959,582; May 31; Sp. p. 6832; Gaz. vol. 154; p. 1163.
Railway system, Electric-. F. E. Case. No. 959,919; May 31; Sp. p. 7558; Gaz. vol. 154; p. 1276.
Railway-tie. F. Matějka. No. 956,537; May 3; Sp. p. 59; Gaz. vol. 154; p. 13.
Railway-tie. J. P. Boogher. No. 956,622; May 3; Sp. p. 246; Gaz. vol. 154; p. 42.
Railway-tie. J. B. McMillan. No. 957,081; May 3; Sp. p. 1250; Gaz. vol. 154; p. 198.
Railway-tie. F. O. Blair. No. 957,841; May 10; Sp. p. 2830; Gaz. vol. 154; p. 486.
Railway-tie. J. M. Cleary. No. 958,226; May 17; Sp. p. 3862; Gaz. vol. 154; p. 652.
Railway-tie. J. A. Byers. No. 958,601; May 17; Sp. p. 4031; Gaz. vol. 154; p. 810.
Railway-tie. C. A. Olson. No. 959,065; May 24; Sp. p. 5737; Gaz. vol. 154; p. 965.
Railway-tie. T. L. Everett. No. 959,490; May 31; Sp. p. 6641; Gaz. vol. 154; p. 1132.
Railway-tie and fastening. W. E. Clark. No. 958,225; May 17; Sp. p. 3861; Gaz. vol. 154; p. 652.
Railway-tie and rail-fastener. H. M. Gaul, Jr. No. 958,389; May 17; Sp. p. 4351; Gaz. vol. 154; p. 710.
Railway-tie, Metal. J. H. Penney. No. 956,779; May 3; Sp. p. 596; Gaz. vol. 154; p. 95.
Railway-tie, Metal. J. Wettstein. No. 959,902; May 31; Sp. p. 7515; Gaz. vol. 154; p. 1270.
Railway-track construction. J. W. Blower. No. 956,514; May 3; Sp. p. 16; Gaz. vol. 154; p. 5.
Railway-track construction. J. W. Blower. No. 956,880; May 3; Sp. p. 826; Gaz. vol. 154; p. 132.
Railway-track construction. J. W. Blower. No. 957,407; May 10; Sp. p. 1966; Gaz. vol. 154; p. 340.
Railway-trains, Smoke-conveying attachment for. A. May. No. 959,777; May 31; Sp. p. 7230; Gaz. vol. 154; p. 1227.
Railway, tramway, and other vehicle. J. E. Anger. No. 960,145; May 31; Sp. p. 8059; Gaz. vol. 154; p. 1354.
Railway water-supply, Stand-pipe for. P. H. Knight. No. 958,504; May 17; Sp. p. 4508; Gaz. vol. 154; p. 749.
Railways, Overhead contact system for electric. J. Belsner, Jr. No. 959,197; May 24; Sp. p. 6033; Gaz. vol. 154; p. 1008.
Rake: *See* Hay-rake; Lawn-rake; Sweep-rake.
Rake, P. Gladhack. No. 957,947; May 17; Sp. p. 3087; Gaz. vol. 154; p. 553.
Rands, Making. L. H. Shaw. No. 958,896; May 24; Sp. p. 5429; Gaz. vol. 154; p. 909.
Range attachment, Gas-. M. F. O'Donohoe. No. 958,525; May 17; Sp. p. 4613; Gaz. vol. 154; p. 757.
Range, Combined solid-fuel and gas. C. H. and C. H. Miller, Jr. No. 960,184; May 31; Sp. p. 8130; Gaz. vol. 154; p. 1367.
Range-finder. G. Griffith. No. 959,338; May 24; Sp. p. 6317; Gaz. vol. 154; p. 1056.
Range, Kitchen-. C. H. Miller. No. 960,183; May 31; Sp. p. 8129; Gaz. vol. 154; p. 1367.

Ratchet-wrench. C. R. Anderson. No. 959,600; May 31; Sp. p. 7061; Gaz. vol. 154; p. 1198.
Razor. G. F. Hollon. No. 957,060; May 3; Sp. p. 1206; Gaz. vol. 154; p. 192.
Razor, Safety-. H. A. Kieselhorst. No. 956,532; May 3; Sp. p. 51; Gaz. vol. 154; p. 11.
Razor, Safety-. C. F. Smith. No. 957,008; May 3; Sp. p. 1100; Gaz. vol. 154; p. 178.
Razor, Safety-. A. F. Durand. No. 958,699; May 17; Sp. p. 4945; Gaz. vol. 154; p. 812.
Razor-stropper. J. G. Bestgen. No. 957,140; May 3; Sp. p. 1360; Gaz. vol. 154; p. 218.
Razor-stropper. D. Millington and H. Yates. No. 957,434; May 10; Sp. p. 2020; Gaz. vol. 154; p. 350.
Reamer, Adjustable. W. Turney. No. 959,273; May 24; Sp. p. 6186; Gaz. vol. 154; p. 1034.
Receptacle, Liquid-. A. M. Van Ronk. No. 959,657; May 31; Sp. p. 6981; Gaz. vol. 154; p. 1188.
Receptacle. Metallic. J. H. Stiggleman. No. 958,558; May 17; Sp. p. 4670; Gaz. vol. 154; p. 767.
Receptacle or container. C. S. Baron and J. F. Haffey. No. 958,713; May 24; Sp. p. 4981; Gaz. vol. 154; p. 843.
Receptacle, Sealed. C. R. Parmele. No. 958,887; May 24; Sp. p. 5399; Gaz. vol. 154; p. 906.
Record-card. D. E. Hunter. No. 959,938; May 31; Sp. p. 7607; Gaz. vol. 154; p. 1264.
Record-holder. J. Roever. No. 959,610; May 31; Sp. p. 6990; Gaz. vol. 154; p. 1172.
Recording mechanism. W. L. Morris. No. 960,032; May 31; Sp. p. 7841; Gaz. vol. 154; p. 1317.
Reel: *See* Chalk-line reel; Fabric-supporting reel; Fishing-reel.
Reflector. W. H. O'Beirne. No. 960,037; May 31; Sp. p. 7860; Gaz. vol. 154; p. 1319.
Reflector and attachment therefor. H. D'Oller, Jr. No. 957,148; May 3; Sp. p. 1374; Gaz. vol. 154; p. 220.
Reflector attachment. H. D'Oller, Jr. No. 959,205; May 24; Sp. p. 6049; Gaz. vol. 154; p. 1011.
Reflector attachment. H. D'Oller, Jr. No. 959,206; May 24; Sp. p. 6051; Gaz. vol. 154; p. 1011.
Reflector for light-rays, Composite. O. A. Mygatt. No. 957,703; May 10; Sp. p. 2552; Gaz. vol. 154; p. 441.
Refrigerating apparatus. L. H. Brinkman. No. 958,852; May 24; Sp. p. 5308; Gaz. vol. 154; p. 894.
Refrigerating apparatus. F. D. Koerkle. No. 959,556; May 31; Sp. p. 6787; Gaz. vol. 154; p. 1154.
Refrigerating attachment for milk-cans. S. Shapiro. No. 960,046; May 31; Sp. p. 7874; Gaz. vol. 154; p. 1322.
Refrigerator. T. G. McElroy. No. 959,376; May 24; Sp. p. 6390; Gaz. vol. 154; p. 1068.
Refrigerator-car-hatch closure. E. Posson. No. 957,252; May 10; Sp. p. 1627; Gaz. vol. 154; p. 287.
Refrigerators and ice-boxes, Drip-cup for. A. May. No. 960,103; May 31; Sp. p. 7977; Gaz. vol. 154; p. 1340.
Refrigerators, Water-cooler for. J. S. Pratt. No. 958,890; May 24; Sp. p. 5412; Gaz. vol. 154; p. 907.
Regenerative control system. W. Cooper. (Reissue.) No. 13,115; May 17; Sp. p. 4971; Gaz. vol. 154; p. 817.
Regenerative furnace. F. Meyer. No. 958,150; May 17; Sp. p. 3708; Gaz. vol. 154; p. 627.
Register: *See* Autographic register; Cash-register; Meter-register; Score-register.
Registering-machines, Electric driving device for. C. F. Kettering. No. 959,548; May 31; Sp. p. 6765; Gaz. vol. 154; p. 1151.
Regulating apparatus. J. M. Dougherty and H. C. Tabler. No. 957,601; May 10; Sp. p. 2335; Gaz. vol. 154; p. 406.
Regulator: *See* Boiler-regulator; Feed-regulator; Feed-water regulator; Fluid-regulator; Pressure-regulator; Temperature-regulator; Volume-regulator.
Rein-holder. J. S. Brough. No. 957,738; May 10; Sp. p. 2616; Gaz. vol. 154; p. 453.
Rein-holder. C. M. Jensen. No. 959,143; May 24; Sp. p. 5918; Gaz. vol. 154; p. 991.
Rein-holder. E. P. Rasmussen. No. 959,259; May 24; Sp. p. 6158; Gaz. vol. 154; p. 1029.
Relay. A. S. Cubitt. No. 957,870; May 17; Sp. p. 2905; Gaz. vol. 154; p. 526.
Relay, Interlocking contact-. W. M. McClintock. No. 959,958; May 31; Sp. p. 7654; Gaz. vol. 154; p. 1291.
Relay-switch. H. M. Scheibe. No. 959,613; May 31; Sp. p. 6895; Gaz. vol. 154; p. 1173.
Rerailing-frog. W. Martley. No. 957,230; May 10; Sp. p. 1585; Gaz. vol. 154; p. 280.
Reservoirs, Apparatus for forcing liquid out of. L. Barbas. No. 960,094; May 31; Sp. p. 7959; Gaz. vol. 154; p. 1199.
Resilient wheel. G. A. Spaeth. No. 959,176; May 24; Sp. p. 5994; Gaz. vol. 154; p. 1002.
Resilient wheel for road-vehicles. T. Oldfield and J. A. Schofield. No. 958,273; May 17; Sp. p. 3963; Gaz. vol. 154; p. 668.
Respirator and inhaler. R. Venner. No. 958,569; May 17; Sp. p. 4693; Gaz. vol. 154; p. 771.
Respirator, (smoke-protector.) M. Panian. No. 958,427; May 17; Sp. p. 4415; Gaz. vol. 154; p. 723.
Revolving cutter. J. H. Barker. No. 959,104; May 24; Sp. p. 5841; Gaz. vol. 154; p. 978.
Revolving furnace for volatilising metals from their ores. H. H. Hughes. (Reissue.) No. 13,118; May 31; Sp. p. 8150; Gaz. vol. 154; p. 1388.
Revolving tiltable chair. M. Dexter. No. 956,949; May 3; Sp. p. 906; Gaz. vol. 154; p. 154.
Rheostat. W. C. Yates. No. 958,457; May 17; Sp. p. 4487; Gaz. vol. 154; p. 734.
Rheostat. F. D. Hallock. No. 958,869; May 24; Sp. p. 5360; Gaz. vol. 154; p. 899.
Rheostat for electric motors, Regulating-. F. D. Hallock. No. 959,005; May 24; Sp. p. 5626; Gaz. vol. 154; p. 945.
Rheostat, Regulating-. F. D. Hallock. No. 958,806; May 24; Sp. p. 5201; Gaz. vol. 154; p. 877.
Rheostat, Starting-. F. D. Hallock. No. 958,870; May 24; Sp. p. 5362; Gaz. vol. 154; p. 900.
Ribbon-bolt. H. S. Moyer. No. 959,781; May 31; Sp. p. 7235; Gaz. vol. 154; p. 1228.
Ribbon-clip. A. L. Kahn. No. 958,877; May 24; Sp. p. 5381; Gaz. vol. 154; p. 902.
Ribbon-holder. A. Morgan. No. 957,700; May 10; Sp. p. 2545; Gaz. vol. 154; p. 440.
Rim and mortise lock, Combined. C. A. Berry. No. 957,139; May 3; Sp. p. 1357; Gaz. vol. 154; p. 217.
Ring: *See* Annealing-ring; Curtain-ring; Embroidery-ring; Spinning-ring.
Ring and hook, Convertible. G. Beer. No. 959,836; May 31; Sp. p. 7373; Gaz. vol. 154; p. 1248.
Rings, Holder for rotary. B. Hall. No. 958,392; May 17; Sp. p. 4356; Gaz. vol. 154; p. 711.
Rivet. E. B. Stimpson. No. 959,177; May 24; Sp. p. 5995; Gaz. vol. 154; p. 1002.
Rivet-calking tool. G. E. Wood and E. C. Meier. No. 959,673; May 31; Sp. p. 7025; Gaz. vol. 154; p. 1193.
Rivet-setting machine, Single-head multiple. A. R. Havener. No. 959,738; May 31; Sp. p. 7152; Gaz. vol. 154; p. 1214.
Road construction. J. H. Amies. No. 958,064; May 17; Sp. p. 3538; Gaz. vol. 154; p. 596.
Road-roller. F. F. Williamson and D. Brennan, Jr. No. 958,346; May 17; Sp. p. 4258; Gaz. vol. 154; p. 695.
Rocket. T. G. Hitt. No. 957,210; May 10; Sp. p. 1536; Gaz. vol. 154; p. 272.
Rocking-chair. J. Smith. No. 956,547; May 3; Sp. p. 88; Gaz. vol. 154; p. 16.
Rod: *See* Stuffing-rod.
Rod-supporting device. C. C. Blake. No. 958,219; May 17; Sp. p. 3846; Gaz. vol. 154; p. 650.
Rodent-trap. J. R. Scott. No. 958,016; May 17; Sp. p. 3321; Gaz. vol. 154; p. 573.
Roller: *See* Conveyer-roller; Curtain-roller; Electrically-heated roller; Road-roller.
Roller-drill. H. R. Hughes. No. 959,539; May 31; Sp. p. 6741; Gaz. vol. 154; p. 1148.
Roller-drill. H. R. Hughes. No. 959,540; May 31; Sp. p. 6740; Gaz. vol. 154; p. 1148.
Rolling mechanism. F. H. Richards. No. 958,010; May 17; Sp. p. 3307; Gaz. vol. 154; p. 576.
Rolling-mill for rolling car-wheels. C. von Philp. No. 956,780; May 3; Sp. p. 597; Gaz. vol. 154; p. 95.
Roof. A. Oesterheld. No. 957,623; May 10; Sp. p. 2386; Gaz. vol. 154; p. 413.
Roof-joint. H. B. Mikesell. No. 957,980; May 17; Sp. p. 3214; Gaz. vol. 154; p. 566.
Roof-shoe. C. W. Phinny. No. 958,277; May 17; Sp. p. 3900; Gaz. vol. 154; p. 669.
Roofing. F. D. Cook. No. 957,937; May 17; Sp. p. 3067; Gaz. vol. 154; p. 550.
Rope for power-transmission purposes. H. K. Holsman and C. H. Bryan. No. 956,578; May 3; Sp. p. 155; Gaz. vol. 154; p. 27.
Rope net. S. Sado. No. 958,773; May 24; Sp. p. 5118; Gaz. vol. 154; p. 864.
Rotary compound steam-engine. C. H. Hilty. No. 957,508; May 10; Sp. p. 2161; Gaz. vol. 154; p. 374.
Rotary engine. A. E. Rasmussen. No. 957,709; May 10; Sp. p. 2758; Gaz. vol. 154; p. 472.
Rotary engine. G. W. Bartlett. No. 957,860; May 17; Sp. p. 2883; Gaz. vol. 154; p. 523.
Rotary engine. B. F. Wickersham. No. 958,571; May 17; Sp. p. 4695; Gaz. vol. 154; p. 771.
Rotary engine. G. F. Moors. No. 958,885; May 24; Sp. p. 5394; Gaz. vol. 154; p. 905.
Rotary engine. L. L. A. Seguin. No. 959,172; May 24; Sp. p. 5989; Gaz. vol. 154; p. 1001.
Rotary engine. F. J. Sprechnie. No. 959,612; May 31; Sp. p. 7316; Gaz. vol. 154; p. 1230.
Rotary engine. G. H. Hardy. No. 959,856; May 31; Sp. p. 7407; Gaz. vol. 154; p. 1255.
Rotary internal-combustion engine. J. S. Stewart. No. 957,631; May 10; Sp. p. 2402; Gaz. vol. 154; p. 416.
Rotary jack. W. C. Stewart. No. 958,034; May 17; Sp. p. 3398; Gaz. vol. 154; p. 586.
Rotary screen. S. W. Traylor. No. 957,818; May 10; Sp. p. 2787; Gaz. vol. 154; p. 478.
Rotary steam-engine. G. A. Metcalf, W. C. and L. T. Rocheleau. No. 958,416; May 17; Sp. p. 4396; Gaz. vol. 154; p. 718.
Rubber-extracting apparatus. L. Guiguet. No. 958,918; May 24; Sp. p. 5468; Gaz. vol. 154; p. 916.
Rubber heel. S. Havens. No. 957,556; May 10; Sp. p. 2262; Gaz. vol. 154; p. 391.
Rubber, Producing. H. O. Chute and F. L. Randel. No. 957,495; May 10; Sp. p. 2137; Gaz. vol. 154; p. 370.
Ruler, Posting-. W. Morris. No. 960,031; May 31; Sp. p. 7840; Gaz. vol. 154; p. 1317.
Runner-cutter and plant-topper. M. E. Garwood. No. 959,003; May 24; Sp. p. 5623; Gaz. vol. 154; p. 945.
Running-boards, Supporting-saddle for. W. F. Cremean. No. 956,945; May 3; Sp. p. 901; Gaz. vol. 154; p. 153.

Running-gear. H. Higgin. No. 959,935; May 31; Sp. p. 7599; Gaz. vol. 154; p. 1283.
Saccharine liquids, Defecation of. F. E. Coombs. No. 958,907; May 24; Sp. p. 5446; Gaz. vol. 154; p. 912.
Sack-holder. H. B. Sackett. No. 957,260; May 10; Sp. p. 1652; Gaz. vol. 154; p. 290.
Sad-iron. C. W. Amick. No. 957,532; May 10; Sp. p. 2212; Gaz. vol. 154; p. 352.
Sad-iron. J. M. Harper. No. 958,638; May 17; Sp. p. 4829; Gaz. vol. 154; p. 793.
Sad-iron holder. F. E. Griffeth. No. 958,634; May 17; Sp. p. 4821; Gaz. vol. 154; p. 791.
Saddle. C. A. Persons. No. 959,591; May 31; Sp. p. 6854; Gaz. vol. 154; p. 1166.
Saddle, Harness-. A. Homann. No. 958,643; May 17; Sp. p. 4842; Gaz. vol. 154; p. 795.
Saddle, Riding-. C. W. Shepherd. No. 956,649; May 3; Sp. p. 309; Gaz. vol. 154; p. 51.
Safe. W. G. Nichols. No. 960,139; May 31; Sp. p. 8142; Gaz. vol. 154; p. 1369.
Safe door, Burglar-proof-. L. G. Glasier. No. 958,624; May 17; Sp. p. 4799; Gaz. vol. 154; p. 788.
Safe, Wall-. C. E. Biechschmidt. No. 957,185; May 10; Sp. p. 1470; Gaz. vol. 154; p. 262.
Safety-gate. E. Kraucher. No. 957,065; May 3; Sp. p. 1219; Gaz. vol. 154; p. 193.
Safety guard or support. L. B. Mellus. No. 959,368; May 24; Sp. p. 6371; Gaz. vol. 154; p. 1065.
Safety-pin. W. R. Dancy and C. B. Westcott. No. 959,472; May 31; Sp. p. 6506; Gaz. vol. 154; p. 1125.
Safety-pin, Three-pronged. A. Frederiksen. No. 959,499; May 31; Sp. p. 6662; Gaz. vol. 154; p. 1135.
Salt and recovering its impurities as by-products, Refining. C. Glaser and G. J. Muller. No. 957,416; May 10; Sp. p. 1979; Gaz. vol. 154; p. 343.
Salt, Refining. C. Glaser and G. J. Muller. No. 957,417; May 10; Sp. p. 1986; Gaz. vol. 154; p. 343.
Sanding and rubbing machine. H. Westphal. No. 957,283; May 10; Sp. p. 1705; Gaz. vol. 154; p. 298.
Sanding-machine. T. Nichols. No. 957,515; May 10; Sp. p. 2174; Gaz. vol. 154; p. 376.
Sandpapering-machine. F. Schimmel. No. 959,614; May 31; Sp. p. 6897; Gaz. vol. 154; p. 1174.
Sash-cord guide. F. C. W. Kuehn. No. 958,653; May 17; Sp. p. 4856; Gaz. vol. 154; p. 797.
Sash-fastener. H. Morris. No. 959,150; May 24; Sp. p. 5932; Gaz. vol. 154; p. 993.
Sash fastener and lifter, Combination. F. Simmons. No. 959,081; May 24; Sp. p. 5794; Gaz. vol. 154; p. 971.
Sash-fastener, Window-. H. Kellem. No. 959,145; May 24; Sp. p. 5922; Gaz. vol. 154; p. 991.
Sash-lock. G. Harmuth. No. 956,963; May 3; Sp. p. 1016; Gaz. vol. 154; p. 169.
Sash-lock. G. J. Engert and R. D. Burnham. No. 958,864; May 24; Sp. p. 5346; Gaz. vol. 154; p. 897.
Sash-lock. A. B. Landis. No. 959,559; May 31; Sp. p. 6793; Gaz. vol. 154; p. 1155.
Sash-lock. S. G. Wellman. No. 959,981; May 31; Sp. p. 7707; Gaz. vol. 154; p. 1299.
Sash, Ventilating-. J. Benn and P. Rossbach. No. 957,836; May 10; Sp. p. 2822; Gaz. vol. 154; p. 484.
Sash-weight, Sectional. J. M. Cornell. No. 957,498; May 10; Sp. p. 2143; Gaz. vol. 154; p. 371.
Sash, Window-. F. Callier. No. 958,992; May 24; Sp. p. 5599; Gaz. vol. 154; p. 941.
Saw-clamp. C. S. Stevens. No. 960,208; May 31; Sp. p. 8181; Gaz. vol. 154; p. 1377.
Saw-setting machine. R. W. Entrekin. No. 959,326; May 24; Sp. p. 6289; Gaz. vol. 154; p. 1052.
Saw-shaper. A. E. White. No. 956,915; May 3; Sp. p. 905; Gaz. vol. 154; p. 143.
Sawing-machine. A. B. and F. L. Ireland. No. 959,221; May 24; Sp. p. 6076; Gaz. vol. 154; p. 1016.
Sawmill-carriage. G. E. Campbell. No. 958,593; May 17; Sp. p. 4743; Gaz. vol. 154; p. 779.
Sawmill-carriages, Wheel-guard and track-cleaner for. G. O. Beasley. No. 958,689; May 17; Sp. p. 4928; Gaz. vol. 154; p. 809.
Scaffold, Elevating-. M. Herrel. No. 959,740; May 31; Sp. p. 7156; Gaz. vol. 154; p. 1214.
Scaffold for flagpoles and the like, Traveling. J. A. Olafson. No. 957,473; May 10; Sp. p. 2088; Gaz. vol. 154; p. 362.
Scaffold-supporting means. E. H. Henderson. No. 959,008; May 24; Sp. p. 5631; Gaz. vol. 154; p. 946.
Scaffolding. W. Wells. No. 959,278; May 24; Sp. p. 6196; Gaz. vol. 154; p. 1035.
Scale. H. B. Sherwood. No. 958,441; May 17; Sp. p. 4455; Gaz. vol. 154; p. 728.
Scale. B. E. Blair. No. 959,837; May 31; Sp. p. 7373; Gaz. vol. 154; p. 1248.
Scale dial, Computing-. J. E. Cochran. No. 956,682; May 3; Sp. p. 381; Gaz. vol. 154; p. 63.
Scale dial, Computing-. J. E. Cochran. No. 957,934; May 17; Sp. p. 3055; Gaz. vol. 154; p. 549.
Scissors. J. W. Dowden. No. 959,481; May 31; Sp. p. 6613; Gaz. vol. 154; p. 1128.
Score-register. M. G. Decies. No. 959,203; May 24; Sp. p. 6045; Gaz. vol. 154; p. 1010.
Scouring-machine. H. F. Marshall and W. F. Clark. No. 957,074; May 3; Sp. p. 1238; Gaz. vol. 154; p. 196.
Scraper. O. and G. Peterson. No. 958,869; May 24; Sp. p. 5410; Gaz. vol. 154; p. 907.
Scraper, Road-. H. Wiechelman. No. 959,668; May 31; Sp. p. 7017; Gaz. vol. 154; p. 1192.
Scraper, Welded. T. H. Stagg. No. 960,052; May 31; Sp. p. 7885; Gaz. vol. 154; p. 1324.
Screen: *See* Fly-screen; Metallic screen; Rotary screen; Window-screen.
Screen. G. Dingman. No. 958,859; May 24; Sp. p. 5329; Gaz. vol. 154; p. 896.
Screen-plate-fastening means. W. G. Webb and J. H. Barnard. No. 959,979; May 31; Sp. p. 7702; Gaz. vol. 154; p. 1298.
Screening mechanism. W. W. Willson. No. 959,671; May 31; Sp. p. 7021; Gaz. vol. 154; p. 1192.
Screw-cutting-machine cutter, Wood-. G. Weber. No. 956,748; May 3; Sp. p. 527; Gaz. vol. 154; p. 85.
Screw-cutting stock and die. F. L. Harker. No. 959,736; May 31; Sp. p. 7150; Gaz. vol. 154; p. 1213.
Screw-machine. G. T. Warwick. No. 959,825; May 31; Sp. p. 7340; Gaz. vol. 154; p. 1244.
Screw-machines, &c., Stock-stop for automatic. C. B. Atwood. No. 956,874; May 3; Sp. p. 811; Gaz. vol. 154; p. 129.
Screw mechanism, Feed-. L. C. Bayles. No. 959,911; May 31; Sp. p. 7541; Gaz. vol. 154; p. 1274.
Screws, Adjusting means for feed-. F. Shampou and L. Donahue. No. 959,810; May 31; Sp. p. 7313; Gaz. vol. 154; p. 1239.
Scrubbing-machine. G. Jaciuk. No. 957,162; May 3; Sp. p. 1414; Gaz. vol. 154; p. 226.
Scrubbing-machine. J. G. Webb. No. 957,828; May 10; Sp. p. 2803; Gaz. vol. 154; p. 482.
Seal, Metal. S. Stroh. No. 959,401; May 24; Sp. p. 6429; Gaz. vol. 154; p. 1075.
Seal, Snap-. E. J. Brooks. No. 956,931; May 3; Sp. p. 932; Gaz. vol. 154; p. 148.
Seal, Water. H. H. Dow. No. 957,314; May 10; Sp. p. 1772; Gaz. vol. 154; p. 309.
Sealer, Fruit-jar. W. G. Hall. No. 957,952; May 17; Sp. p. 3107; Gaz. vol. 154; p. 555.
Sealing and stamping machine, Envelop. E. J. Abbott. No. 959,283; May 24; Sp. p. 6206; Gaz. vol. 154; p. 1037.
Sealing device for electric meters. W. N. Alexander. No. 958,636; May 17; Sp. p. 4924; Gaz. vol. 154; p. 808.
Sealing machine, Envelop-. H. K. Harris. No. 957,555; May 10; Sp. p. 2260; Gaz. vol. 154; p. 391.
Seat: *See* Agricultural-implement seat; Chair-seat; Toilet-seat; Vehicle-seat.
Sectional mold. B. M. Bangs. No. 959,103; May 24; Sp. p. 5838; Gaz. vol. 154; p. 978.
Seed conveyer, Pneumatic cotton-. B. W. and B. F. Tilley. No. 957,126; May 3; Sp. p. 1332; Gaz. vol. 154; p. 213.
Seed-delinting machine, Cotton-. W. E. Worth. No. 958,456; May 17; Sp. p. 4482; Gaz. vol. 154; p. 733.
Seeder, Force-feed. T. B. Rowell. No. 956,545; May 3; Sp. p. 84; Gaz. vol. 154; p. 15.
Self-waiting table. K. J. Olson. No. 958,672; May 17; Sp. p. 4893; Gaz. vol. 154; p. 803.
Separating-bowl, Device for assembling parts of a centrifugal. E. R. Bailey. No. 959,693; May 31; Sp. p. 7057; Gaz. vol. 154; p. 1198.
Separating-machine. H. Hastings. No. 957,332; May 10; Sp. p. 1810; Gaz. vol. 154; p. 315.
Separating process, Electrostatic. W. G. Swart. No. 959,646; May 31; Sp. p. 6959; Gaz. vol. 154; p. 1185.
Separator: *See* Egg-separator; Grain-separator.
Separator. M. McCoy. No. 956,776; May 3; Sp. p. 593; Gaz. vol. 154; p. 94.
Sewage disposal, Apparatus for. B. J. Ashley. No. 956,605; May 3; Sp. p. 338; Gaz. vol. 154; p. 56.
Sewing-clamp. G. P. Van Wye. No. 956,869; May 3; Sp. p. 805; Gaz. vol. 154; p. 128.
Sewing-machine. S. L. Cohen. No. 956,888; May 3; Sp. p. 848; Gaz. vol. 154; p. 134.
Sewing-machine. J. Combest. No. 957,545; May 10; Sp. p. 2240; Gaz. vol. 154; p. 388.
Sewing-machine. F. La Chapelle. No. 957,972; May 17; Sp. p. 3196; Gaz. vol. 154; p. 563.
Sewing-machine. T. G. Plant. No. 958,296; May 17; Sp. p. 4092; Gaz. vol. 154; p. 676.
Sewing-machine. T. G. Plant. No. 958,296; May 17; Sp. p. 4099; Gaz. vol. 154; p. 678.
Sewing-machine. W. F. Lautenschlager. No. 959,948; May 31; Sp. p. 7630; Gaz. vol. 154; p. 1287.
Sewing-machine attachment. H. Holforty. No. 956,965; May 3; Sp. p. 1019; Gaz. vol. 154; p. 160.
Sewing-machine attachment. M. E. Tynes. No. 957,276; May 10; Sp. p. 1691; Gaz. vol. 154; p. 296.
Sewing-machine attachment, Combination. R. Eviston. No. 959,126; May 24; Sp. p. 5883; Gaz. vol. 154; p. 985.
Sewing machine, Broom-. L. P. Rapp. No. 959,439; May 24; Sp. p. 6492; Gaz. vol. 154; p. 1088.
Sewing-machine edge-trimmer attachment. A. B. Wales. No. 959,275; May 24; Sp. p. 6191; Gaz. vol. 154; p. 1034.
Sewing-machine feeding attachment. R. K. Hohmann. No. 957,211; May 10; Sp. p. 1538; Gaz. vol. 154; p. 272.
Sewing-machine guide. B. Fleigel. No. 959,330; May 24; Sp. p. 6300; Gaz. vol. 154; p. 1053.
Sewing machine, Mantle-. S. Cohn. No. 956,943; May 3; Sp. p. 951; Gaz. vol. 154; p. 152.
Sewing-machine, &c., motors, Device for operating. W. Lenhart. No. 957,223; May 10; Sp. p. 1672; Gaz. vol. 154; p. 277.

Sewing machine, Shoe-. J. J. Heys. No. 957,954; May 17; Sp. p. 3110; Gaz. vol. 154; p. 555.
Sewing machine, Shoe-. T. G. Plant. No. 958,294; May 17; Sp. p. 4083; Gaz. vol. 154; p. 676.
Sewing machine, Shoe-. T. G. Plant. No. 958,299; May 17; Sp. p. 4107; Gaz. vol. 154; p. 678.
Sewing-machine table, Adjustable. V. Gibbins. No. 958,800; May 24; Sp. p. 5190; Gaz. vol. 154; p. 874.
Sewing-machine weft-holder. T. G. Plant. No. 958,297; May 17; Sp. p. 4097; Gaz. vol. 154; p. 677.
Sewing-machines, Tabi-fastener attachment for. C. M. Horton. No. 958,251; May 17; Sp. p. 3920; Gaz. vol. 154; p. 659.
Sextant. M. P. T. Smith. No. 957,386; May 10; Sp. p. 1916; Gaz. vol. 154; p. 333.
Shade and curtain bracket. M. Bassett. No. 958,463; May 17; Sp. p. 4498; Gaz. vol. 154; p. 736.
Shade and curtain support. K. Click. No. 959,113; May 24; Sp. p. 5853; Gaz. vol. 154; p. 981.
Shade and roller, Window-. P. E. Lowe and B. De Young. No. 960,228; May 31; Sp. p. 8218; Gaz. vol. 154; p. 1383.
Shade fixture, Window-. A. J. Poteet. No. 956,731; May 3; Sp. p. 496; Gaz. vol. 154; p. 80.
Shade-hanger, Vertically-adjustable. W. B. Caswell. No. 956,842; May 3; Sp. p. 744; Gaz. vol. 154; p. 118.
Shade-holder. L. J. Castonguay. No. 957,305; May 10; Sp. p. 1751; Gaz. vol. 154; p. 306.
Shade, Window-. D. C. Harrison. No. 957,207; May 10; Sp. p. 1532; Gaz. vol. 154; p. 271.
Shaft-aligning device. E. S. Ferris. No. 958,736; May 24; Sp. p. 5026; Gaz. vol. 154; p. 851.
Shaft-collars and the like, Safety connection for. J. H. Kelly. No. 959,752; May 31; Sp. p. 7179; Gaz. vol. 154; p. 1219.
Shaft controlling means, Driving-. T. G. Plant. No. 958,303; May 17; Sp. p. 4143; Gaz. vol. 154; p. 679.
Shaft-coupling. B. F. and F. I. Remy. No. 958,540; May 17; Sp. p. 4637; Gaz. vol. 154; p. 762.
Shaft-coupling, Flexible. J. W. Walters. No. 956,912; May 3; Sp. p. 899; Gaz. vol. 154; p. 142.
Shaft-hook, Safety-holdback. D. N. Hyre and J. W. Shirey. No. 957,678; May 10; Sp. p. 2507; Gaz. vol. 154; p. 433.
Shaft, Leather-driving-machine. L. Muther and G. A. Henderson. No. 958,155; May 17; Sp. p. 3722; Gaz. vol. 154; p. 629.
Shaft or axle crank. C. Fremont. No. 958,956; May 24; Sp. p. 5536; Gaz. vol. 154; p. 929.
Shaft-oscillator. A. H. Wouters. No. 957,289; May 10; Sp. p. 1719; Gaz. vol. 154; p. 300.
Shafting, Flexible. D. Schoening. No. 956,737; May 3; Sp. p. 500; Gaz. vol. 154; p. 82.
Shale-breaker. W. E. Cunningham. No. 959,202; May 24; Sp. p. 6042; Gaz. vol. 154; p. 1010.
Sharpener, Lawn-mower. H. R. Atwater. No. 956,873; May 3; Sp. p. 811; Gaz. vol. 154; p. 129.
Sharpener, Razor-blade. G. G. Floyd. No. 959,496; May 31; Sp. p. 6651; Gaz. vol. 154; p. 1134.
Sharpener, Scissors-. I. O. Day. No. 956,518; May 3; Sp. p. 21; Gaz. vol. 154; p. 7.
Sharpening apparatus, Disk-harrow-. P. Bender. No. 958,077; May 17; Sp. p. 3565; Gaz. vol. 154; p. 601.
Sharpening the rotary knives of skiving and similar machines, Machine for. G. A. Henderson. No. 959,136; May 24; Sp. p. 5903; Gaz. vol. 154; p. 988.
Shears, Gage attachment for. O. B. Cole and J. E. Wright. No. 959,464; May 31; Sp. p. 6579; Gaz. vol. 154; p. 1122.
Shearing-tool. G. E. Pellissier. No. 958,972; May 24; Sp. p. 5565; Gaz. vol. 154; p. 935.
Sheep-shears. E. Ascue. No. 958,069; May 17; Sp. p. 3553; Gaz. vol. 154; p. 599.
Sheet-conveying machine. T. C. Dexter. No. 957,043; May 3; Sp. p. 1170; Gaz. vol. 154; p. 186.
Sheet-feeding machine. F. L. Croes. No. 957,847; May 10; Sp. p. 2843; Gaz. vol. 154; p. 488.
Sheet-metal box. G. Klenk. No. 959,554; May 31; Sp. p. 6783; Gaz. vol. 154; p. 1154.
Sheet-metal-cutting machine. H. Hill. No. 960,014; May 31; Sp. p. 7766; Gaz. vol. 154; p. 1310.
Sheet-metal cutting or trimming machine. F. R. Eden. No. 957,942; May 17; Sp. p. 3074; Gaz. vol. 154; p. 551.
Sheet-metal-elbow machine. A. Dieckmann. No. 959,204; May 24; Sp. p. 6047; Gaz. vol. 154; p. 1011.
Sheet-metal vessel. W. J. Reuter. No. 957,901; May 17; Sp. p. 2973; Gaz. vol. 154; p. 537.
Shepherd's crook. M. L. Burch. No. 956,932; May 3; Sp. p. 934; Gaz. vol. 154; p. 149.
Ship-table. A. M. Gustafson. No. 959,004; May 24; Sp. p. 5625; Gaz. vol. 154; p. 945.
Ships' hulls and the like, Cleaner for. W. R. Macdonald. No. 959,566; May 31; Sp. p. 6806; Gaz. vol. 154; p. 1158.
Ships, Means for unloading. M. J. Furlong. No. 957,878; May 17; Sp. p. 2924; Gaz. vol. 154; p. 529.
Ships, Skylight and ventilating construction for. J. Crates. No. 957,846; May 10; Sp. p. 2842; Gaz. vol. 154; p. 487.
Shipping-case. E. Walch. No. 959,823; May 31; Sp. p. 7333; Gaz. vol. 154; p. 1243.
Shipping-receptacle. F. I. Lamasney and F. H. Pierce. No. 956,810; May 3; Sp. p. 872; Gaz. vol. 154; p. 106.
Shirt. B. Rosen. No. 959,611; May 31; Sp. p. 6892; Gaz. vol. 154; p. 1173.
Shirt, Swimming-. W. T. Anderson. No. 959,441; May 31; Sp. p. 6509; Gaz. vol. 154; p. 1115.
Shock-loader. F. Burk. No. 958,090; May 17; Sp. p. 3590; Gaz. vol. 154; p. 605.
Shoe-cleaner. G. Narance. No. 959,580; May 31; Sp. p. 6828; Gaz. vol. 154; p. 1162.
Shoe, Collapsible. E. Probst. No. 958,534; May 17; Sp. p. 4623; Gaz. vol. 154; p. 760.
Shoe-filler apparatus. A. Thoma. No. 957,393; May 10; Sp. p. 1923; Gaz. vol. 154; p. 335.
Shoe-finishing machines, Leather-compressing mechanism for. H. B. Bornside. No. 956,565; May 3; Sp. p. 119; Gaz. vol. 154; p. 22.
Shoe-jack. T. G. Plant. No. 958,278; May 17; Sp. p. 3970; Gaz. vol. 154; p. 669.
Shoe-jack. T. G. Plant. No. 958,301; May 17; Sp. p. 4122; Gaz. vol. 154; p. 679.
Shoe-jack, Automatic rotary. P. R. Glass. No. 957,950; May 17; Sp. p. 3102; Gaz. vol. 154; p. 554.
Shoe-machine. A. H. Prensel. No. 959,256; May 24; Sp. p. 6153; Gaz. vol. 154; p. 1028.
Shoe parts, Machine for recessing. A. H. Prensel. No. 959,386; May 24; Sp. p. 6406; Gaz. vol. 154; p. 1071.
Shoe-polishing device. F. H. Cooper. No. 958,724; May 24; Sp. p. 5005; Gaz. vol. 154; p. 847.
Shoe-polishing machine. D. L. Hudson. No. 958,400; May 17; Sp. p. 4360; Gaz. vol. 154; p. 713.
Shoe-rack. B. H. Birchall. No. 957,839; May 10; Sp. p. 2827; Gaz. vol. 154; p. 485.
Shoe-supporting rack. G. T. McLeod. No. 957,988; May 17; Sp. p. 3237; Gaz. vol. 154; p. 568.
Shoe-trimming machine. W. B. Keighley. No. 959,224; May 24; Sp. p. 6088; Gaz. vol. 154; p. 1013.
Shoes, Making. A. H. Prensel. No. 960,234; May 31; Sp. p. 8235; Gaz. vol. 154; p. 1336.
Short-weft fabric and making the same. D. F. Lucier. No. 957,356; May 10; Sp. p. 1857; Gaz. vol. 154; p. 323.
Shovel: *See* Cultivator-shovel.
Shovel and scoop, Combined. A. F. Hammerschmidt. No. 956,961; May 3; Sp. p. 1014; Gaz. vol. 154; p. 159.
Show-case lock. L. H. Schmidt. No. 957,808; May 10; Sp. p. 2764; Gaz. vol. 154; p. 474.
Shutter-bower. F. E. Humphrey and F. H. Patrick. No. 958,766; May 3; Sp. p. 574; Gaz. vol. 154; p. 91.
Sifter, Automatic flour-. G. McEachran. No. 957,438; May 10; Sp. p. 2026; Gaz. vol. 154; p. 351.
Sign. G. E. Jennings. No. 956,857; May 3; Sp. p. 782; Gaz. vol. 154; p. 124.
Sign. F. W. Ruby. No. 957,259; May 10; Sp. p. 1649; Gaz. vol. 154; p. 290.
Sign. J. Staren. No. 959,895; May 31; Sp. p. 7504; Gaz. vol. 154; p. 1268.
Sign-board, Changeable. H. Willson. No. 958,054; May 17; Sp. p. 3460; Gaz. vol. 154; p. 593.
Sign, Electric. E. J. Prindle. No. 957,710; May 10; Sp. p. 2562; Gaz. vol. 154; p. 444.
Sign, Electric. L. Miller. No. 959,371; May 24; Sp. p. 6375; Gaz. vol. 154; p. 1066.
Sign, Electrical. H. I. Blitz. No. 959,440; May 24; Sp. p. 6504; Gaz. vol. 154; p. 1088.
Sign, Illuminated. W. A. Sherwood and E. L. Gardner. No. 958,836; May 24; Sp. p. 5269; Gaz. vol. 154; p. 888.
Sign, Illuminated. W. A. Sherwood and E. L. Gardner. No. 958,837; May 24; Sp. p. 5272; Gaz. vol. 154; p. 889.
Sign, Illuminated. W. A. Sherwood and E. L. Gardner. No. 958,838; May 24; Sp. p. 5274; Gaz. vol. 154; p. 889.
Sign, Moving. W. W. Lilles. No. 957,352; May 10; Sp. p. 1851; Gaz. vol. 154; p. 322.
Sign, Portable. J. Staren. No. 959,896; May 31; Sp. p. 7505; Gaz. vol. 154; p. 1268.
Signaling apparatus, Electric. L. W. Carroll. No. 958,224; May 17; Sp. p. 3856; Gaz. vol. 154; p. 652.
Signaling device. J. R. Johnson and G. Michaels. No. 957,164; May 3; Sp. p. 1419; Gaz. vol. 154; p. 227.
Signaling system. H. O. Rugh. No. 956,782; May 3; Sp. p. 602; Gaz. vol. 154; p. 96.
Signaling system. O. T. Lademan. No. 957,973; May 17; Sp. p. 3199; Gaz. vol. 154; p. 563.
Signaling system and apparatus therefor, Call-box. C. C. Johnson. No. 957,968; May 17; Sp. p. 3181; Gaz. vol. 154; p. 561.
Signing machine, Multiple-. J. C. Gardiner. No. 957,765; May 10; Sp. p. 2682; Gaz. vol. 154; p. 461.
Silica bricks, ganister, and other refractory materials, Manufacture of. H. Brearley and F. C. Moorwood. No. 958,084; May 17; Sp. p. 3579; Gaz. vol. 154; p. 603.
Silk-like effects, Compound for producing. L. Lilienfeld. No. 960,100; May 31; Sp. p. 7972; Gaz. vol. 154; p. 1350.
Silo. J. T. Ridgway. No. 958,178; May 17; Sp. p. 3709; Gaz. vol. 154; p. 637.
Sink-frame. B. Martin. No. 959,437; May 24; Sp. p. 6489; Gaz. vol. 154; p. 1087.
Siphon. C. P. Meade. No. 958,415; May 17; Sp. p. 4305; Gaz. vol. 154; p. 713.
Siphon. A. C. Mills. No. 959,779; May 31; Sp. p. 7282; Gaz. vol. 154; p. 1228.
Siphon attachment for bathing purposes, Spraying. B. D. Knickerbocker. No. 957,566; May 10; Sp. p. 2277; Gaz. vol. 154; p. 394.
Siphon-closet. C. H. Christensen. No. 957,306; May 10; Sp. p. 1752; Gaz. vol. 154; p. 306.
Siphon-filler. P. Vock. No. 958,982; May 24; Sp. p. 5582; Gaz. vol. 154; p. 938.
Sising compositions, Compound for use in preparing. A. Vermeistch and N. Verhulst. No. 956,551; May 3; Sp. p. 95; Gaz. vol. 154; p. 17.

Skate, Detachable wagon-. M. Aubertel. No. 958,461; May 17; Sp. p. 4495; Gaz. vol. 154; p. 735.
Skate, Roller-. O. Kirkham. No. 956,684; May 3; Sp. p. 103; Gaz. vol. 154; p. 29.
Skirt-marker. E. David. No. 958,601; May 17; Sp. p. 4761; Gaz. vol. 154; p. 782.
Skiving-machine cutter-guard. A. B. Alden and L. W. Reinhardt. No. 959,330; May 31; Sp. p. 7359; Gaz. vol. 154; p. 1246.
Skylight. W. K. H. Langer. No. 959,018; May 24; Sp. p. 5646; Gaz. vol. 154; p. 940.
Skylight-lift. W. C. Habicht. No. 959,429; May 24; Sp. p. 6475; Gaz. vol. 154; p. 1085.
Slag, Handling. D. T. Croxton. No. 959,720; May 31; Sp. p. 7113; Gaz. vol. 154; p. 1208.
Slate-picker. C. S. Farrer. No. 957,520; May 10; Sp. p. 1784; Gaz. vol. 154; p. 311.
Slate-picker. H. A. Whitman. No. 958,343; May 17; Sp. p. 4255; Gaz. vol. 154; p. 694.
Sleeve-board. F. Hofnacker. No. 956,705; May 3; Sp. p. 445; Gaz. vol. 154; p. 71.
Sleigh-knee. F. Shillin. No. 958,552; May 17; Sp. p. 4661; Gaz. vol. 154; p. 766.
Slimes, Treating metallic. J. Dunstone. No. 956,800; May 3; Sp. p. 645; Gaz. vol. 154; p. 102.
Smelting. E. Dedolph. No. 959,924; May 31; Sp. p. 7566; Gaz. vol. 154; p. 1278.
Smelting-furnace. J. Grogan. No. 957,554; May 10; Sp. p. 2257; Gaz. vol. 154; p. 391.
Smelting ores. A. S. Dwight. No. 959,484; May 31; Sp. p. 6620; Gaz. vol. 154; p. 1129.
Smoke-bell support. D. F. McCarthy. No. 960,106; May 31; Sp. p. 7994; Gaz. vol. 154; p. 1341.
Smoke-consumer. T. Rees. No. 957,377; May 10; Sp. p. 1899; Gaz. vol. 154; p. 330.
Smoke-house. V. Molitor. No. 959,780; May 31; Sp. p. 7234; Gaz. vol. 154; p. 1226.
Smoke-stack. A. Henry. No. 956,897; May 3; Sp. p. 863; Gaz. vol. 154; p. 136.
Smoker's outfit. W. Goss. No. 956,701; May 3; Sp. p. 440; Gaz. vol. 154; p. 70.
Smoking-pipe. J. Sjastram. No. 957,116; May 3; Sp. p. 1314; Gaz. vol. 154; p. 209.
Smoking-pipe. M. A. Barger. No. 959,043; May 24; Sp. p. 5702; Gaz. vol. 154; p. 958.
Smoking-pipe, &c. J. L. Thomson. No. 959,649; May 31; Sp. p. 6967; Gaz. vol. 154; p. 1186
Smoothing and polishing articles and parts, Compound for. W. R. Parsons. No. 957,999; May 17; Sp. p. 3263; Gaz. vol. 154; p. 572.
Snap-hook. G. M. Hubbard. No. 959,744; May 31; Sp. p. 7164; Gaz. vol. 154; p. 1216.
Snap-hook. W. A. Schleicher. No. 960,041; May 31; Sp. p. 7867; Gaz. vol. 154; p. 1321.
Snap-hook, Spring-tongue. J. C. Covert. No. 959,116; May 24; Sp. p. 5860; Gaz. vol. 154; p. 982.
Snow-guard. H. H. Salis and M. Wool. No. 956,647; May 3; Sp. p. 305; Gaz. vol. 154; p. 50.
Snow-plow, Foldable hand. E. H. Gross. No. 956,896; May 3; Sp. p. 861; Gaz. vol. 154; p. 137.
Snow-plow, Rotary. W. H. Ferguson. No. 957,503; May 10; Sp. p. 2153; Gaz. vol. 154; p. 372.
Soap-cutting machine. Z. G. Sholes. No. 957,446; May 10; Sp. p. 2039; Gaz. vol. 154; p. 354.
Soap-dispenser. W. B. Garnett. No. 957,669; May 10; Sp. p. 2492; Gaz. vol. 154; p. 430.
Soaps, Making hydrocarbon. I. Vanden Broek. No. 959,820; May 31; Sp. p. 7332; Gaz. vol. 154; p. 1242.
Socket, Extension-. H. B. Benjamin. No. 958,217; May 17; Sp. p. 3842; Gaz. vol. 154; p. 649.
Sodium aluminate, Making. P. A. Emanuel. No. 957,848; May 10; Sp. p. 2846; Gaz. vol. 154; p. 488.
Sodium sulfite and ammonium chlorid, Making. R. Friedrich and P. Hirsch. No. 957,761; May 10; Sp. p. 2677; Gaz. vol. 154; p. 460.
Soldering and surplus-solder-removing machine, Can-. M. Leitch. No. 958,750; May 24; Sp. p. 5065; Gaz. vol. 154; p. 856.
Soldering implement. H. J. Greene. No. 957,327; May 10; Sp. p. 1901; Gaz. vol. 154; p. 314.
Soldering-iron. W. R. Lanum. No. 959,233; May 24; Sp. p. 6108; Gaz. vol. 154; p. 1020.
Soldering-iron and blow-torch, Combined. H. E. Adams. No. 956,921; May 3; Sp. p. 917; Gaz. vol. 154; p. 145.
Soldering-iron, Electric. E. W. Rice, Jr. No. 957,256; May 10; Sp. p. 1636; Gaz. vol. 154; p. 289.
Soldering-iron, Self-heating. H. Koenig. No. 959,947; May 31; Sp. p. 7629; Gaz. vol. 154; p. 1287.
Soldering machine, Can-. D. P. Robinson. No. 959,388; May 24; Sp. p. 6408; Gaz. vol. 154; p. 1072.
Soldering machine, Can-vent-. H. C. Dickey. No. 957,147; May 3; Sp. p. 1368; Gaz. vol. 154; p. 219.
Soldering-machine, Hand. A. Tosco. No. 957,636; May 10; Sp. p. 2418; Gaz. vol. 154; p. 417.
Soldering-tool. A. A. Bedard. No. 957,180; May 10; Sp. p. 1465; Gaz. vol. 154; p. 261.
Soldering vent-cleats to can-caps, Machine for. L. C. Sharp. No. 958,776; May 24; Sp. p. 5122; Gaz. vol. 154; p. 865.
Sole attachment, Shoe-. T. J. Aldridge. No. 959,442; May 31; Sp. p. 6510; Gaz. vol. 154; p. 1115.
Sole-beveling machine, Shoe-. W. Dennison. No. 958,374; May 17; Sp. p. 4317; Gaz. vol. 154; p. 705.
Sole cutting and marking machine. M. Cook, Jr. No. 957,598; May 10; Sp. p. 2328; Gaz. vol. 154; p. 406.
Sole-edge setter, Shoe-. C. F. Stewart. No. 958,026; May 17; Sp. p. 3352; Gaz. vol. 154; p. 582.
Sole lever, Shoe-. T. G. Plant. No. 958,295; May 17; Sp. p. 4027; Gaz. vol. 154; p. 672.
Sole laying and leveling machine. E. Woodward. No. 958,057; May 17; Sp. p. 3518; Gaz. vol. 154; p. 594.
Sole-marking machine. W. C. Stewart. No. 958,028; May 17; Sp. p. 3363; Gaz. vol. 154; p. 583.
Sole patch, Shoe-. J. W. Britton. No. 959,304; May 24; Sp. p. 6243; Gaz. vol. 154; p. 1045.
Sole-rounding machine. C. P. Stanbon. No. 958,024; May 17; Sp. p. 3341; Gaz. vol. 154; p. 582.
Sole, Slipper-. E. A. Bickford and W. A. Sweet. No. 960,149; May 31; Sp. p. 8064; Gaz. vol. 154; p. 1358.
Soles, Manufacture of boot and shoe. C. E. Sanderson. No. 960,202; May 31; Sp. p. 8167; Gaz. vol. 154; p. 1374.
Soles of boots and shoes, Machine for slashing. W. C. Stewart. No. 958,029; May 17; Sp. p. 3376; Gaz. vol. 154; p. 584.
Soles to boots and shoes by screws, Machine for attaching. M. T. Denne. No. 958,378; May 17; Sp. p. 4312; Gaz. vol. 154; p. 704.
Solids from liquids, Apparatus for segregating. C. E. Seymour. No. 958,942; May 24; Sp. p. 5505; Gaz. vol. 154; p. 924.
Sorting-table. J. T. Cowley and E. G. Thomas. No. 958,280; May 17; Sp. p. 3867; Gaz. vol. 154; p. 653.
Sound-record, Duplicate. J. W. Aylesworth. No. 958,210; May 17; Sp. p. 3829; Gaz. vol. 154; p. 647.
Sound-reproducing machine and record therefor. F. H. Osborn. No. 956,727; May 3; Sp. p. 491; Gaz. vol. 154; p. 78.
Sound-reproducing machine, Disk. T. H. Macdonald. No. 957,694; May 10; Sp. p. 2534; Gaz. vol. 154; p. 438.
Sound-reproducing machines, Stylus for. S. Levin. No. 958,412; May 17; Sp. p. 4391; Gaz. vol. 154; p. 717.
Sounds, Recording and reproducing. J. C. English. No. 957,195; May 10; Sp. p. 1487; Gaz. vol. 154; p. 266.
Sounding apparatus. C. S. Lens. No. 959,764; May 31; Sp. p. 7204; Gaz. vol. 154; p. 1223.
Sower, Seed-. R. Schönner. No. 957,577; May 10; Sp. p. 2294; Gaz. vol. 154; p. 398.
Spades, Sod-cutting attachment for. A. N. Severson. No. 958,188; May 17; Sp. p. 3785; Gaz. vol. 154; p. 640.
Spark-arrester. F. A. Just. No. 958,134; May 17; Sp. p. 3679; Gaz. vol. 154; p. 620.
Spark-arrester. K. M. Colquhoun. No. 959,923; May 31; Sp. p. 7564; Gaz. vol. 154; p. 1278.
Spark-arrester and smoke-consumer. W. T. and J. M. Lupton. No. 956,589; May 3; Sp. p. 178; Gaz. vol. 154; p. 31.
Spark-coil. C. H. Thordarson. No. 958,899; May 24; Sp. p. 5435; Gaz. vol. 154; p. 910.
Spark-plug. F. J. Heasel. No. 958,247; May 17; Sp. p. 3910; Gaz. vol. 154; p. 658.
Spark-plug, Adjustable. J. S. Palmer. No. 956,778; May 3; Sp. p. 595; Gaz. vol. 154; p. 95.
Spark-plug holder. C. M. Holden and H. G. Hendershot. No. 960,091; May 31; Sp. p. 7955; Gaz. vol. 154; p. 1336.
Spark-plug, Oil-proof. E. J. Bushey. No. 957,653; May 10; Sp. p. 2449; Gaz. vol. 154; p. 423.
Specific gravity, Obtaining. A. Sommer. No. 959,633; May 31; Sp. p. 6933; Gaz. vol. 154; p. 1181.
Spectacles. J. W. Donaldson. No. 956,690; May 3; Sp. p. 421; Gaz. vol. 154; p. 66.
Spectacles and the like, Straight-side E. Barnes. No. 959,105; May 24; Sp. p. 5842; Gaz. vol. 154; p. 979.
Speed and time indicator, Combined. T. Bäuerle. No. 958,074; May 17; Sp. p. 3561; Gaz. vol. 154; p. 600.
Speed-changing mechanism. A. A. Page. No. 959,878; May 31; Sp. p. 7465; Gaz. vol. 154; p. 1262.
Speed retarding and reversing device. K. J. A. Isaksson. No. 957,509; May 10; Sp. p. 2163; Gaz. vol. 154; p. 374.
Speedometer. D. M. Bell. No. 957,727; May 10; Sp. p. 2595; Gaz. vol. 154; p. 449.
Speedometer. F. B. Healey and C. S. Homsher. No. 957,773; May 10; Sp. p. 2699; Gaz. vol. 154; p. 464.
Spike. W. S. Crofutt. No. 956,844; May 3; Sp. p. 746; Gaz. vol. 154; p. 119.
Spinning and twisting frame. T. A. and H. A. Boyd. No. 959,109; May 24; Sp. p. 6036; Gaz. vol. 154; p. 1009.
Spinning and twisting frames, Lappet for. J. W. Cook. No. 959,465; May 31; Sp. p. 6580; Gaz. vol. 154; p. 1123.
Spinning and twisting machine. R. Dawes. No. 959,316; May 24; Sp. p. 6264; Gaz. vol. 154; p. 1048.
Spinning-machines, &c., Stop-motion mechanism for. O. Agel and C. F. Isleib. No. 957,453; May 10; Sp. p. 2053; Gaz. vol. 154; p. 356.
Spinning-ring. E. A. Brigham. No. 956,930; May 3; Sp. p. 931; Gaz. vol. 154; p. 148.
Spinning-ring. C. S. Forbes. No. 957,759; May 10; Sp. p. 2675; Gaz. vol. 154; p. 459.
Spinning viscous liquids, Machine for. E. Elsässer. No. 957,450; May 10; Sp. p. 2065; Gaz. vol. 154; p. 358.
Spoke and felly clip. J. Humphreys. No. 956,806; May 3; Sp. p. 657; Gaz. vol. 154; p. 104.
Spraying apparatus. J. I. Thornycroft. No. 957,014; May 3; Sp. p. 1116; Gaz. vol. 154; p. 175.
Spraying attachment. C. H. Rath. No. 958,536; May 17; Sp. p. 4631; Gaz. vol. 154; p. 761.
Spring: *See* Eyeglass-spring; Vehicle-spring.
Spring-trip. C. C. Plumbo. No. 959,727; May 31; Sp. p. 7126; Gaz. vol. 154; p. 1210.

Spring trip mechanism. J. C. Messer. No. 957,432; May 10; Sp. p. 2017; Gaz. vol. 154; p. 349.
Spring-wheel. E. Schuyler and W. A. Hyle. No. 957,383; May 10; Sp. p. 1900; Gaz. vol. 154; p. 332.
Spring-wheel. M. Premmer. No. 957,574; May 10; Sp. p. 2269; Gaz. vol. 154; p. 396.
Sprinkler: *See* Lawn-sprinkler.
Sprinkler. C. C. Corlew. No. 958,229; May 17; Sp. p. 3865; Gaz. vol. 154; p. 653.
Sprinklers, Strut for automatic. G. I. Rockwood. No. 956,733; May 3; Sp. p. 502; Gaz. vol. 154; p. 81.
Sprocket-wheel, Detachable. O. Cullman. No. 958,955; May 24; Sp. p. 5532; Gaz. vol. 154; p. 926.
Square and bevel. F. E. Powell. No. 960,196; May 31; Sp. p. 8158; Gaz. vol. 154; p. 1372.
Square, Try-. C. G. Larson. No. 958,257; May 17; Sp. p. 3983; Gaz. vol. 154; p. 662.
Squeegee, Fountain-. C. Brown. No. 956,566; May 3; Sp. p. 122; Gaz. vol. 154; p. 23.
Stable composition containing hydrogen peroxid. M. A. Queisser. No. 959,605; May 31; Sp. p. 6879; Gaz. vol. 154; p. 1171.
Stacker. F. Wyatt. No. 956,840; May 3; Sp. p. 740; Gaz. vol. 154; p. 117.
Stacker and elevator, Straw. A. Rosenthal. No. 957,907; May 17; Sp. p. 2996; Gaz. vol. 154; p. 540.
Stacker, Hay-. J. Durkee. No. 958,911; May 24; Sp. p. 5457; Gaz. vol. 154; p. 914.
Stacker, Hay-. W. S. Inbody. No. 959,543; May 31; Sp. p. 6755; Gaz. vol. 154; p. 1149.
Stacker, Hay-. H. S. Armitage and D. J. Stephens. No. 959,906; May 31; Sp. p. 7523; Gaz. vol. 154; p. 1271.
Stacker, Pneumatic straw-. P. T. Kirkpatrick. No. 958,137; May 17; Sp. p. 3685; Gaz. vol. 154; p. 622.
Staging-bracket. O. L. Johnson. No. 958,746; May 24; Sp. p. 5059; Gaz. vol. 154; p. 855.
Stair. J. C. Tolliver. No. 957,817; May 10; Sp. p. 2786; Gaz. vol. 154; p. 478.
Stake-holder. A. J. Bostwick. No. 959,915; May 31; Sp. p. 7552; Gaz. vol. 154; p. 1275.
Stake-holder. A. J. Bostwick. No. 959,916; May 31; Sp. p. 7553; Gaz. vol. 154; p. 1275.
Stalk-cutter. J. and F. A. Michalka. No. 957,620; May 10; Sp. p. 2378; Gaz. vol. 154; p. 412.
Stamp-affixer. P. G. E. Daniel and C. A. H. Bullock. No. 957,658; May 10; Sp. p. 2457; Gaz. vol. 154; p. 425.
Stamp, Hand-. M. C. Price. No. 958,533; May 17; Sp. p. 4627; Gaz. vol. 154; p. 760.
Stamps, labels, or the like, and for selling postage-stamps, Apparatus for affixing postage-. E. Hass. No. 956,526; May 3; Sp. p. 33; Gaz. vol. 154; p. 9.
Stamping device, Check-. F. G. Lundeen. No. 959,768; May 31; Sp. p. 7213; Gaz. vol. 154; p. 1224.
Stamping, marking, or numbering machine. F. W. Merrick. No. 960,029; May 31; Sp. p. 7827; Gaz. vol. 154; p. 1316.
Stanchion for wagons, Adjustable live-stock. O. T. Austinson. No. 956,791; May 3; Sp. p. 623; Gaz. vol. 154; p. 90.
Stand: *See* Blacking-stand; Car-wheel jack-stand; Music-stand; Switch-stand.
Stand-boiler. W. Sherwood. No. 958,551; May 17; Sp. p. 4660; Gaz. vol. 154; p. 765.
Staple. H. F. Merrill. No. 959,369; May 24; Sp. p. 6372; Gaz. vol. 154; p. 1065.
Stapling-machines, Wire-feeding mechanism for. H. Weber. No. 958,201; May 17; Sp. p. 3811; Gaz. vol. 154; p. 644.
Starch into derivatives, dextrin, dextrose, &c., Converting. S. M. Lillie. No. 959,237; May 24; Sp. p. 6115; Gaz. vol. 154; p. 1022.
Starting and stopping mechanism. M. D. Phelan. No. 958,004; May 17; Sp. p. 3282; Gaz. vol. 154; p. 574.
Starting and stopping mechanism. T. G. Plant. No 958,290; May 17; Sp. p. 4048; Gaz. vol. 154; p. 674.
Starting device. W. McKissick. No. 959,153; May 24; Sp. p. 5939; Gaz. vol. 154; p. 994.
Starting mechanism. W. L. Terry, Jr. No. 957,813; May 10; Sp. p. 2780; Gaz. vol. 154; p. 477.
Station-indicator. C. Messing. No. 959,370; May 24; Sp. p. 6373; Gaz. vol. 154; p. 1066.
Steam and water heater combined, Exhaust-regenerating. S. H. Hale. No. 958,636; May 17; Sp. p. 4825; Gaz. vol. 154; p. 792.
Steam-boiler. W. M. Gentle. No. 957,155; May 3; Sp. p. 1387; Gaz. vol. 154; p. 223.
Steam-controlling device. G. Restucci. No. 957,097; May 3; Sp. p. 1284; Gaz. vol. 154; p. 204.
Steam-generator. J. Buckley. No. 958,358; May 17; Sp p. 4287; Gaz. vol. 154; p. 690.
Steam-generator. R. Dunkel. No. 958,606; May 17; Sp p. 4773; Gaz. vol. 154; p. 783.
Steam-generator, Water-tube. J. H. Rosenthal and A. Spyer. No. 959,612; May 31; Sp. p. 6892; Gaz. vol. 154; p. 1173.
Steam-superheating apparatus. H. Cruse. No. 957,939; May 17; Sp. p. 3069; Gaz. vol. 154; p. 550.
Steam-trap. G. B. Hulse. No. 959,541; May 31; Sp. p. 6750; Gaz. vol. 154; p. 1148.
Steam-trap. C. H. Squires. No. 959,636; May 31; Sp. p. 6936; Gaz. vol. 154; p. 1181.
Steam-trap attachment. E. J. Flinn. No. 959,927; May 31; Sp. p. 7570; Gaz. vol. 154; p. 1279.
Steel, Making hardened. H. de Nolly. No. 957,706; May 10; Sp. p. 2356; Gaz. vol. 154; p. 442.
Steel-manufacturing apparatus. N. E. Maccallum. No. 959,146; May 24; Sp. p. 5923; Gaz. vol. 154; p. 992.
Steering device. H. S. Mustin. No. 956,713; May 3; Sp. p. 470; Gaz. vol. 154; p. 75.
Steering-gear. J. E. Walker. No. 960,128; May 31; Sp. p. 8027; Gaz. vol. 154; p. 1348.
Stenciling apparatus. A. Pokorny. No. 956,730; May 3; Sp. p. 496; Gaz. vol. 154; p. 79.
Stencilling-machine. J. Sokolov. No. 959,268; May 24; Sp. p. 6171; Gaz. vol. 154; p. 1052.
Steps, Folding. A. F. Divok. No. 960,003; May 31; Sp. p. 7750; Gaz. vol. 154; p. 1307.
Stereoscope. A. E. Foote. No. 959,331; May 24; Sp. p. 6303; Gaz. vol. 154; p. 1054.
Stereotype-block. A. O. Taylor. No. 959,271; May 24; Sp. p. 6184; Gaz. vol. 154; p. 1033.
Sterilizer. W. T. Herndon. No. 959,858; May 31; Sp. p. 7411; Gaz. vol. 154; p. 1256.
Sterilizer and drier. A. Jensen. No. 958,133; May 17; Sp. p. 3677; Gaz. vol. 154; p. 620.
Stiletto, Embroidery-. B. Gallinek. No. 957,154; May 3; Sp. p. 1385; Gaz. vol. 154; p. 222.
Stills, Baffle-plate for column-. E. Guillaume. No. 960,223; May 31; Sp. p. 8206; Gaz. vol. 154; p. 1381.
Stitch machine, Imitation-. L. W. G. Flynt. No. 958,913; May 24; Sp. p. 5490; Gaz. vol. 154; p. 915.
Stitching-machine guard, Shoe-. C. S. Carle. No. 959,713; May 31; Sp. p. 7007; Gaz. vol. 154; p. 1206.
Stitching mechanisms, Presser-foot for shoe-sole-. H. Michelsen. No. 957,607; May 10; Sp. p. 2539; Gaz. vol. 154; p. 430.
Stoker for furnaces, Mechanical. F. C. Armstead. No. 957,206; May 10; Sp. p. 1735; Gaz. vol. 154; p. 303.
Stoking apparatus. G. W. Bulley. No. 956,757; May 3; Sp. p. 555; Gaz. vol. 154; p. 88.
Stone-gatherer. G. H. Ford. No. 956,875; May 3; Sp. p. 150; Gaz. vol. 154; p. 26.
Stool. S. Ryave. No. 959,393; May 24; Sp. p. 6418; Gaz. vol. 154; p. 1078.
Stopper: *See* Bottle-stopper; Flue-stopper; Gas-main stopper; Pulp stopper.
Stopper-extractor. A. W. Stephens. No. 959,897; May 31; Sp. p. 7507; Gaz. vol. 154; p. 1268.
Stopper-retainer. A. C. Boggs, Jr. No. 957,645; May 10; Sp. p. 2431; Gaz. vol. 154; p. 421.
Stopping mechanism. T. G. Plant. No. 958,295; May 17; Sp. p. 4088; Gaz. vol. 154; p. 676.
Storage battery. V. G. Apple. No. 959,192; May 24; Sp. p. 6024; Gaz. vol. 154; p. 1007.
Store-front and show-case construction. H. S. Conrow. No. 958,228; May 17; Sp. p. 3864; Gaz. vol. 154; p. 653.
Store-service wireway. C. E. Thompson. No. 958,782; May 24; Sp. p. 5149; Gaz. vol. 154; p. 866.
Stove. A. L. Piper. No. 959,026; May 24; Sp. p. 5665; Gaz. vol. 154; p. 952.
Stove. G. and W. G. Bauch. No. 959,107; May 24; Sp. p. 5843; Gaz. vol. 154; p. 979.
Stove, Baking-. J. A. Coppridge. No. 957,748; May 10; Sp. p. 2643; Gaz. vol. 154; p. 456.
Stove, Base-burning. W. W. Hoffman. No. 960,175; May 31; Sp. p. 8110; Gaz. vol. 154; p. 1364.
Stove-burner. J. L. Park. No. 957,365; May 10; Sp. p. 1874; Gaz. vol. 154; p. 326.
Stove, Cooking-. E. Barker. No. 957,642; May 10; Sp. p. 2426; Gaz. vol. 154; p. 420.
Stove, Electric cook-. F. H. Zeigin. No. 958,488; May 17; Sp. p. 4490; Gaz. vol. 154; p. 734.
Stovepipe-holder. W. E. McCune. No. 957,571; May 10; Sp. p. 2284; Gaz. vol. 154; p. 396.
Stovepipe-snip. H. G. Millington. No. 959,245; May 24; Sp. p. 6134; Gaz. vol. 154; p. 1025.
Strainer. E. M. Newton. No. 959,581; May 31; Sp. p. 6831; Gaz. vol. 154; p. 1163.
Straw-burning furnace. A. G. Johnson. No. 957,163; May 3; Sp. p. 1416; Gaz. vol. 154; p. 226.
Straw pads, Machine for making. C. M. Frasee. No. 960,083; May 31; Sp. p. 7945; Gaz. vol. 154; p. 1334.
Street and road construction. J. H. Amies. No. 958,063; May 17; Sp. p. 3537; Gaz. vol. 154; p. 596.
Street-sweeper. J. Otis. No. 959,380; May 24; Sp. p. 6307; Gaz. vol. 154; p. 1069.
Street-sweeping machine. J. Fowler. No. 959,000; May 24; Sp. p. 5619; Gaz. vol. 154; p. 943.
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Studding, Composition. O. M. Knode. No. 959,946; May 31; Sp. p. 7628; Gaz. vol. 154; p. 1287.
Stuffing-box, gasket, valve, and spring, Combined. G. L. Kennedy. No. 957,347; May 10; Sp. p. 1843; Gaz. vol. 154; p. 321.
Stuffing-rod. O. Brookman. No. 957,737; May 10; Sp. p. 2615; Gaz. vol. 154; p. 453.
Stump-puller. J. M. Mitchell. No. 959,372; May 24; Sp. p. 6381; Gaz. vol. 154; p. 1066.
Suction-box. J. F. King and J. Neary. No. 957,217; May 10; Sp. p. 1549; Gaz. vol. 154; p. 274.
Suction-slice. W. H. Millspaugh. No. 957,981; May 17; Sp. p. 3214; Gaz. vol. 154; p. 566.
Sugar. Apparatus for the treatment or preparation of. E. Shaw. No. 957,113; May 3; Sp. p. 1308; Gaz. vol. 154; p. 209.
Suit-case. S. Dresner. No. 958,860; May 24; Sp. p. 5330; Gaz. vol. 154; p. 896.
Sulfur-burner. F. H. Grimm. No. 957,418; May 10; Sp. p. 1980; Gaz. vol. 154; p. 342.

Sulfur-burner. G. Oddo. No. 959,250; May 24; Sp. p. 6141; Gaz. vol. 154; p. 1026.
Sunbonnet. M. E. Baldwin. No. 958,715; May 24; Sp. p. 4983; Gaz. vol. 154; p. 843.
Superphosphate out of decomposition-chambers, Device for emptying. K. J. Beskow and M. Ekedahl. No. 956,702; May 3; Sp. p. 625; Gaz. vol. 154; p. 100.
Supply-case. H. F. Wallace. No. 956,618; May 3; Sp. p. 229; Gaz. vol. 154; p. 39.
Surgeon's operating-pan. F. R. Lintleman. No. 959,564; May 31; Sp. p. 6803; Gaz. vol. 154; p. 1157.
Surgical appliance. T. E. Rodgers. No. 959,389; May 24; Sp. p. 6410; Gaz. vol. 154; p. 1072.
Surgical instrument. J. S. Rydell. No. 958,179; May 17; Sp. p. 3770; Gaz. vol. 154; p. 637.
Surveying instrument. M. J. Dikeman. No. 958,794; May 24; Sp. p. 5180; Gaz. vol. 154; p. 872.
Suspender-straps, Adjustable fastening device for. J. H. Young. No. 959,681; May 31; Sp. p. 7040; Gaz. vol. 154; p. 1195.
Sweep-rake. C. Pearson. No. 958,432; May 17; Sp. p. 4438; Gaz. vol. 154; p. 725.
Sweeping compound and making same. J. P. Porteus. No. 958,007; May 17; Sp. p. 3303; Gaz. vol. 154; p. 575.
Swing. W. H. Virgie. No. 959,085; May 24; Sp. p. 5804; Gaz. vol. 154; p. 972.
Swing, Gliding. F. S. Spaulding. No. 957,855; May 10; Sp. p. 2865; Gaz. vol. 154; p. 491.
Swingletree attachment. G. D. Simmons. No. 959,082; May 24; Sp. p. 5795; Gaz. vol. 154; p. 971.
Swingletree-hook. J. E. Wiese. No. 959,983; May 31; Sp. p. 7711; Gaz. vol. 154; p. 1299.
Switch: *See* Call-distributing switch; Electric switch; Electrical switch; Electrically-actuated switch; Frogless switch; Hanger-board switch; High-voltage switch; Interlocking switch; Lamp-switch; Magnetic switch; Motor-starting switch; Push-button switch; Railway-switch; Relay-switch.
Switch. F. Homan. No. 959,344; May 24; Sp. p. 6330; Gaz. vol. 154; p. 1058.
Switch apparatus. W. H. Wheat. No. 957,132; May 3; Sp. p. 1346; Gaz. vol. 154; p. 215.
Switch movement. W. Kaisling. No. 959,944; May 31; Sp. p. 7623; Gaz. vol. 154; p. 1286.
Switch or outlet box. W. A. Bonnell. No. 956,674; May 3; Sp. p. 365; Gaz. vol. 154; p. 60.
Switch safety mechanism. F. C. Anderson. No. 959,691; May 31; Sp. p. 7052; Gaz. vol. 154; p. 1198.
Switch-stand. E. N. Strom. No. 956,834; May 3; Sp. p. 727; Gaz. vol. 154; p. 115.
Switch starter, Multiple-. T. E. Barnum. No. 959,910; May 31; Sp. p. 7538; Gaz. vol. 154; p. 1273.
Switch-throwing device, Automatic. C. J. G. Rickerson. No. 959,884; May 31; Sp. p. 7460; Gaz. vol. 154; p. 1264.
Switching-key. L. A. Williams. No. 958,453; May 17; Sp. p. 4475; Gaz. vol. 154; p. 732.
Table: *See* Automobile turn-table; Billiard-table; Extension-table; Ironing-table; Military field-table; Self-waiting table; Sewing-machine table; Ship-table; Sorting-table.
Table. J. Pfrenzinger. No. 957,089; May 3; Sp. p. 1270; Gaz. vol. 154; p. 201.
Tablet, Sound-record. J. Sanders. No. 956,904; May 3; Sp. p. 882; Gaz. vol. 154; p. 140.
Tablet, Writing-. R. C. Kuhn. No. 958,507; May 17; Sp. p. 4574; Gaz. vol. 154; p. 751.
Tablets, Making sound-record. J. Sanders. No. 956,905; May 3; Sp. p. 883; Gaz. vol. 154; p. 140.
Tachometer, Resonance-. R. Hartmann-Kempf. No. 959,934; May 31; Sp. p. 7595; Gaz. vol. 154; p. 1282.
Tack-pounder. W. C. Stewart. No. 958,035; May 17; Sp. p. 3403; Gaz. vol. 154; p. 586.
Tacker, Automatic hand-. J. Geisenlichter. No. 957,946; May 17; Sp. p. 3061; Gaz. vol. 154; p. 552.
Tacker, Portable power-. M. D. Phelan. No. 958,002; May 17; Sp. p. 3273; Gaz. vol. 154; p. 573.
Tackers, Loading mechanism for hand-. P. R. Glass. No. 957,948; May 17; Sp. p. 3090; Gaz. vol. 154; p. 553.
Tag. B. F. Gardner. No. 958,620; May 17; Sp. p 4794; Gaz. vol. 154; p. 788.
Tag-attaching apparatus. I. Silverstein. No. 960,206; May 31; Sp. p. 8175; Gaz. vol. 154; p. 1376.
Tagging-machine. F. W. Hall. No. 957,420; May 10; Sp. p. 1992; Gaz. vol. 154; p. 344.
Tail-stock. W. A. Greaves. No. 956,804; May 3; Sp. p. 653; Gaz. vol. 154; p. 104.
Tailor's level. A. Erickson. No. 957,150; May 3; Sp. p. 1378; Gaz. vol. 154; p. 221.
Talking-machine. H. Sheble and T. Kraemer. No. 957,004; May 3; Sp. p. 1097; Gaz. vol. 154; p. 172.
Talking-machine. R. L. Gibson. No. 957,206; May 10; Sp. p. 1529; Gaz. vol. 154; p. 270.
Talking-machine and piano recording device. W. M. Davis. No. 958,780; May 24; Sp. p. 5015; Gaz. vol. 154; p. 849.
Talking-machine brake, Disk-. W. Zeysing. No. 959,682; May 31; Sp. p. 7041; Gaz. vol. 154; p. 1195.
Talking-machine diaphragm. F. Kane. No. 960,021; May 31; Sp. p. 7815; Gaz. vol. 154; p. 1313.
Talking-machine mechanism. C. Lindström. No. 959,238; May 24; Sp. p. 6119; Gaz. vol. 154; p. 1022.
Talking-machine records, Case for holding. H. C. Brown. No. 956,516; May 3; Sp. p. 18; Gaz. vol. 154; p. 6.
Talking-machine sound-box. P. J. Packman. No. 960,191; May 31; Sp. p. 8149; Gaz. vol. 154; p. 1370.
Talking-machines, Supporting device for sound-box arms and horns of. R. L. Gibson. No. 958,109; May 17; Sp. p. 3626; Gaz. vol. 154; p. 611.
Tank: *See* Antifreezing tank; Developing-tank; Flushing-tank; Garbage-tank; Iron tank; Liquid-fuel tank.
Tank-indicator. J. R. Smith. No. 956,907; May 3; Sp. p. 894; Gaz. vol. 154; p. 141.
Tanks, Manufacture of wall-. R. E. Crane. No. 958,231; May 17; Sp. p. 3869; Gaz. vol. 154; p. 653.
Tanks, Pneumatic pressure apparatus for water-. R. B. Carter and J. L. Maull. No. 957,304; May 10; Sp. p. 1749; Gaz. vol. 154; p. 306.
Tanning-apparatus. J. B. Koogler. No. 957,350; May 10; Sp. p. 1849; Gaz. vol. 154; p. 321.
Tanning-machine, Automatic. C. J. Glassel. (Reissue.) No. 13,116; May 17; Sp. p. 4976; Gaz. vol. 154; p. 818.
Tantalum, Producing. J. Schilling. No. 958,180; May 17; Sp. p. 3771; Gaz. vol. 154; p. 637.
Tar-displacement system. E. F. Lloyd. No. 956,586; May 3; Sp. p. 171; Gaz. vol. 154; p. 29.
Target, Moving. P. Chiantore. No. 957,742; May 10; Sp. p. 2630; Gaz. vol. 154; p. 454.
Taximeter. J. G. MacPherson. No. 957,078; May 3; Sp. p. 1282; Gaz. vol. 154; p. 196.
Teaching wireless telegraphy, Apparatus for. F. E. Butler. No. 956,936; May 3; Sp. p. 940; Gaz. vol. 154; p. 150.
Telautograph instrument. A. L. Golden. No. 957,050; May 3; Sp. p. 1183; Gaz. vol. 154; p. 188.
Telegraphic keyboard transmitting apparatus. P. B. Delany. No. 957,312; May 10; Sp. p. 1763; Gaz. vol. 154; p. 308.
Telegraphic relay. I. Kitsee. No. 956,808; May 3; Sp. p. 670; Gaz. vol. 154; p. 105.
Telegraphy, Aerial conductor arrangement for wireless. G. von Arco. No. 959,100; May 24; Sp. p. 5830; Gaz. vol. 154; p. 977.
Telegraphy, Portable station for wireless. G. von Arco. No. 958,209; May 17; Sp. p. 3828; Gaz. vol. 154; p. 647.
Telegraphy, Receiver for wireless. W. Schloemilch. No. 958,181; May 17; Sp. p. 3773; Gaz. vol. 154; p. 638.
Telegraphy, Receiving apparatus for wireless. R. R. Goldthorp. No. 959,510; May 31; Sp. p. 6692; Gaz. vol. 154; p. 1138.
Telegraphy, Wireless. F. G. Sargent. No. 957,001; May 3; Sp. p. 1090; Gaz. vol. 154; p. 171.
Telephone apparatus. C. F. Bradburn. No. 957,489; May 10; Sp. p. 2116; Gaz. vol. 154; p. 367.
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Telephone attachment. A. G. Howard. No. 956,530; May 3; Sp. p. 44; Gaz. vol. 154; p. 10.
Telephone attachment. J. Kuhn. No. 957,067; May 3; Sp. p. 1221; Gaz. vol. 154; p. 193.
Telephone-bracket. R. M. Vick. No. 956,911; May 3; Sp. p. 898; Gaz. vol. 154; p. 142.
Telephone call mechanism, Party-line-. W. E. Zabst. No. 958,847; May 24; Sp. p. 5298; Gaz. vol. 154; p. 892.
Telephone, Coin-controlled. R. L. Bowman. No. 956,754; May 3; Sp. p. 548; Gaz. vol. 154; p. 87.
Telephone-exchange system. S. B. Fowler. No. 959,498; May 31; Sp. p. 6658; Gaz. vol. 154; p. 1135.
Telephone-meter system and apparatus. R. H. Manson. No. 958,145; May 17; Sp. p. 3700; Gaz. vol. 154; p. 625.
Telephone-mouthpiece. A. Bebout. No. 957,404; May 10; Sp. p. 1961; Gaz. vol. 154; p. 330.
Telephone-mouthpiece, Antiseptic. W. M. English and H. M. Lichtenstein. No. 956,953; May 3; Sp. p. 994; Gaz. vol. 154; p. 156.
Telephone-receiver. N. Baldwin. No. 957,403; May 10; Sp. p. 1958; Gaz. vol. 154; p. 339.
Telephone-receiver bracket. H. P. Voss. No. 959,409; May 24; Sp. p. 6443; Gaz. vol. 154; p. 1078.
Telephone-repeater. P. Stragiotti. No. 958,560; May 17; Sp. p. 4675; Gaz. vol. 154; p. 768.
Telephone set. W. Kaisling. No. 958,925; May 24; Sp. p. 5480; Gaz. vol. 154; p. 919.
Telephone standard, Desk-. C. T. Mason. No. 959,243; May 24; Sp. p. 6131; Gaz. vol. 154; p. 1024.
Telephone-support. H. Blumenthal. No. 960,151; May 31; Sp. p. 8067; Gaz. vol. 154; p. 1356.
Telephone switch-hook. B. W. Sweet. No. 958,979; May 24; Sp. p. 5577; Gaz. vol. 154; p. 537.
Telephone system. C. F. Bradburn. No. 957,491; May 10; Sp. p. 2125; Gaz. vol. 154; p. 368.
Telephone system. L. E. Hicks. No. 958,248; May 17; Sp. p. 3911; Gaz. vol. 154; p. 658.
Telephone system. E. C. Rodman. No. 958,315; May 17; Sp. p. 4192; Gaz. vol. 154; p. 684.
Telephone system. C. L. Goodrum. No. 958,627; May 17; Sp. p. 4802; Gaz. vol. 154; p. 789.
Telephone system. W. W. Dean. No. 958,856; May 24; Sp. p. 5318; Gaz. vol. 154; p. 895.
Telephone system. W. F. Gradolph and W. C. Hahne. No. 958,865; May 24; Sp. p. 5354; Gaz. vol. 154; p. 899.
Telephone system. A. D. T. Libby. No. 959,765; May 31; Sp. p. 7207; Gaz. vol. 154; p. 1222.
Telephone system and apparatus. A. K. Andriano. No. 958,067; May 17; Sp. p. 3543; Gaz. vol. 154; p. 597.
Telephone system, Automatic. A. H. Dyson. No. 959,485; May 31; Sp. p. 6624; Gaz. vol. 154; p. 1130.
Telephone system, Intercommunicating. E. R. Corwin. No. 957,869; May 17; Sp. p. 2901; Gaz. vol. 154; p. 526.
Telephone system, Party-line. H. J. Roberts. No. 958,804; May 24; Sp. p. 5416; Gaz. vol. 154; p. 908.

Telephone systems, Party-line call-register for automatic. A. H. Dyson. No. 958,863; May 24; Sp. p. 5334; Gaz. vol. 154; p. 897.

Telephonic transmitter. P. Stragiotti. No. 958,561; May 17; Sp. p. 4678; Gaz. vol. 154; p. 760.

Telephony. Transmitting system for space. V. H. Laughter. No. 957,852; May 10; Sp. p. 2859; Gaz. vol. 154; p. 489.

Telescope. A. Swasey. No. 959,179; May 24; Sp. p. 5098; Gaz. vol. 154; p. 1003.

Telescopic tube. O. Mackensen. No. 958,752; May 24; Sp. p. 5069; Gaz. vol. 154; p. 857.

Temperature-regulator, Thermostatic. D. O. Nation. No. 958,157; May 17; Sp. p. 3727; Gaz. vol. 154; p. 630.

Tent-frame. A. Juin. No. 957,215; May 10; Sp. p. 1546; Gaz. vol. 154; p. 274.

Tent, Shelter-. N. D. Anderson. No. 958,066; May 17; Sp. p. 3541; Gaz. vol. 154; p. 597.

Textile-conditioning apparatus. I. E. Palmer. No. 959,067; May 24; Sp. p. 5766; Gaz. vol. 154; p. 966.

Thawing-tool, Steam. G. H. Finnegan. No. 958,737; May 24; Sp. p. 5028; Gaz. vol. 154; p. 852.

Thill-coupling. A. C. Scheele. No. 957,002; May 3; Sp. p. 1094; Gaz. vol. 154; p. 171.

Thill-iron. T. H. Schlarmann. No. 957,107; May 3; Sp. p. 1298; Gaz. vol. 154; p. 207.

Thread-guide. I. E. Palmer. No. 958,760; May 24; Sp. p. 5088; Gaz. vol. 154; p. 860.

Thread-trimming mechanism. H. W. Slater. No. 957,205; May 10; Sp. p. 1663; Gaz. vol. 154; p. 292.

Threshing-machine band-cutter and feeder. E. McReynolds and P. S. Graham. No. 959,432; May 24; Sp. p. 6475; Gaz. vol. 154; p. 1085.

Threshing-machine frame. J. B. Bartholomew. No. 958,213; May 17; Sp. p. 3835; Gaz. vol. 154; p. 648.

Threshing machine, Seed-. D. Hummel. No. 959,346; May 24; Sp. p. 6333; Gaz. vol. 154; p. 1059.

Threshing-machines, Separating-grate for. F. F. Landis. No. 959,561; May 31; Sp. p. 6796; Gaz. vol. 154; p. 1156.

Threshold. Illuminated. C. B. Ricketts. No. 958,542; May 17; Sp. p. 4640; Gaz. vol. 154; p. 763.

Ticket holder, Car-. J. H. Baker and J. A. French. No. 958,577; May 17; Sp. p. 4713; Gaz. vol. 154; p. 774.

Ticket, Railway-. W. S. Parker. No. 959,879; May 31; Sp. p. 7468; Gaz. vol. 154; p. 1262.

Tie: *See* Bundle or package tie; Cross-tie; Metallic tie; Rail-tie; Railway-tie; Wall-tie.

Tie-plate. W. McKee. No. 958,271; May 17; Sp. p. 3958; Gaz. vol. 154; p. 666.

Tile-board. G. P. Chappell. No. 957,189; May 10; Sp. p. 1479; Gaz. vol. 154; p. 264.

Tile-cutting machine. J. Bensing. No. 957,486; May 10; Sp. p. 2111; Gaz. vol. 154; p. 366.

Tile-marker. W. H. Starr. No. 959,269; May 24; Sp. p. 6181; Gaz. vol. 154; p. 1032.

Tile-mold. F. Gorman. No. 958,628; May 17; Sp. p. 4810; Gaz. vol. 154; p. 790.

Tiling, Forming. G. P. Chappell. No. 957,187; May 10; Sp. p. 1476; Gaz. vol. 154; p. 263.

Tiling, Forming ornamental. G. P. Chappell. No. 957,188; May 10; Sp. p. 1477; Gaz. vol. 154; p. 264.

Tilting-chair. J. Flindall. No. 958,998; May 24; Sp. p. 5616; Gaz. vol. 154; p. 943.

Time-computer, Automatic. R. H. Bouslog. No. 958,584; May 17; Sp. p. 4725; Gaz. vol. 154; p. 776.

Time-controlling mechanism. H. C. Wilcox. No. 957,398; May 10; Sp. p. 1945; Gaz. vol. 154; p. 337.

Timer and distributer. C. Cuno. No. 958,908; May 24; Sp. p. 5451; Gaz. vol. 154; p. 913.

Tin-plate, Apparatus for the manufacture of. J. A. Lamp and S. C. Stiner. No. 956,981; May 3; Sp. p. 1054; Gaz. vol. 154; p. 165.

Tin-reducing apparatus. R. W. Scott. No. 957,111; May 3; Sp. p. 1303; Gaz. vol. 154; p. 208.

Tipping furnace, mixer, &c. J. L. Klindworth. No. 958,503; May 17; Sp. p. 4567; Gaz. vol. 154; p. 749.

Tire. I. B. Kempshall. No. 957,167; May 3; Sp. p. 1423; Gaz. vol. 154; p. 228.

Tire. I. B. Kempshall. No. 957,168; May 3; Sp. p. 1424; Gaz. vol. 154; p. 228.

Tire. W. B. Connell. No. 958,693; May 17; Sp. p. 4934; Gaz. vol. 154; p. 810.

Tire. A. Kessler, Jr. No. 959,353; May 24; Sp. p. 6346; Gaz. vol. 154; p. 1061.

Tire, Antiskidding. I. B. Kempshall. No. 957,165; May 3; Sp. p. 1419; Gaz. vol. 154; p. 227.

Tire, Automobile-. H. S. Shafer. No. 960,119; May 31; Sp. p. 3010; Gaz. vol. 154; p. 1345.

Tire-case. C. A. Russell. No. 959,391; May 24; Sp. p. 6414; Gaz. vol. 154; p. 1073.

Tire for vehicles, Elastic. I. S. McGlehan. No. 959,579; May 31; Sp. p. 6827; Gaz. vol. 154; p. 1162.

Tire-grip. A. E. Corrington. No. 957,309; May 10; Sp. p. 1755; Gaz. vol. 154; p. 307.

Tire-inflator for automobiles. H. P. Maxim. No. 956,592; May 3; Sp. p. 184; Gaz. vol. 154; p. 32.

Tire-lifter. J. W. Brown. No. 960,070; May 31; Sp. p. 7922; Gaz. vol. 154; p. 1330.

Tire, Pneumatic. A. Bonnet. No. 956,928; May 3; Sp. p. 928; Gaz. vol. 154; p. 148.

Tire, Pneumatic. H. L. Dasey. No. 956,948; May 3; Sp. p. 965; Gaz. vol. 154; p. 154.

Tire-protector. J. Wilmes. No. 958,053; May 17; Sp. p. 3468; Gaz. vol. 154; p. 592.

Tire protector, Pneumatic-. R. J. Morrison. No. 959,957; May 31; Sp. p. 7653; Gaz. vol. 154; p. 1290.

Tire-remover. P. C. Wiest. No. 959,660; May 31; Sp. p. 7018; Gaz. vol. 154; p. 1192.

Tire-sleeve-fastening apparatus. P. B. Donahoo. No. 957,313; May 10; Sp. p. 1770; Gaz. vol. 154; p. 309.

Tire, Vehicle-. I. B. Kempshall. No. 957,166; May 3; Sp. p. 1421; Gaz. vol. 154; p. 228.

Tire, Vehicle-. J. Allend. No. 959,041; May 24; Sp. p. 5699; Gaz. vol. 154; p. 957.

Tire, Vehicle-. J. W. Carhart. No. 959,457; May 31; Sp. p. 6557; Gaz. vol. 154; p. 1120.

Tire, Vehicle-. J. A. Wright. No. 960,135; May 31; Sp. p. 8042; Gaz. vol. 154; p. 1351.

Tire, Vehicle-wheel. A. T. Scaramuzzi. No. 956,735; May 3; Sp. p. 505; Gaz. vol. 154; p. 81.

Tire, Vehicle-wheel. F. Wiechard. No. 960,212; May 31; Sp. p. 8188; Gaz. vol. 154; p. 1373.

Tire, Wheel-. B. Dahl. No. 960,001; May 31; Sp. p. 7756; Gaz. vol. 154; p. 1306.

Tire wrapping and unwrapping machine. N. E. Raber. No. 958,309; May 17; Sp. p. 4177; Gaz. vol. 154; p. 682.

Tires, Cap for valve-stems for pneumatic. G. F. Foss. No. 959,867; May 24; Sp. p. 5354; Gaz. vol. 154; p. 899.

Tires, External armor for pneumatic. J. L. La Driere. No. 958,748; May 24; Sp. p. 5062; Gaz. vol. 154; p. 855.

Tires, Inner tube for pneumatic. J. H. Brown. No. 956,884; May 3; Sp. p. 841; Gaz. vol. 154; p. 133.

Tires, Joint-tie for cushion-. F. Bucob. No. 958,625; May 3; Sp. p. 255; Gaz. vol. 154; p. 43.

Tires, Protecting-cover for pneumatic. A. Constantin. No. 957,413; May 10; Sp. p. 1973; Gaz. vol. 154; p. 342.

Titanium-nitrogen compounds, Production of. C. Bosch. No. 957,842; May 10; Sp. p. 2833; Gaz. vol. 154; p. 486.

Tobacco-pipe. H. Willis. No. 957,922; May 17; Sp. p. 3036; Gaz. vol. 154; p. 545.

Tobacco-pipe. A. N. Malcomb. No. 960,181; May 31; Sp. p. 8127; Gaz. vol. 154; p. 1367.

Tobacco-shield. J. H. Scott. No. 958,015; May 17; Sp. p. 3320; Gaz. vol. 154; p. 578.

Tobacco-smoking pipe. W. E. Hooker. No. 958,398; May 17; Sp. p. 4368; Gaz. vol. 154; p. 713.

Tobacco-stemming machine. J. O. Morris. No. 959,375; May 24; Sp. p. 6386; Gaz. vol. 154; p. 1067.

Toilet accessory. O. Vale. No. 957,016; May 3; Sp. p. 1122; Gaz. vol. 154; p. 176.

Toilet article. P. H. Watson. No. 958,339; May 17; Sp. p. 4249; Gaz. vol. 154; p. 693.

Toilet-seat, Collapsible. H. B. Vanosdall and C. E. Enck. No. 957,822; May 10; Sp. p. 2793; Gaz. vol. 154; p. 480.

Tonga. V. D. Carroll. No. 958,594; May 17; Sp. p. 4745; Gaz. vol. 154; p. 779.

Tongs, Clothes-. W. J. and A. Ott. No. 958,938; May 24; Sp. p. 5499; Gaz. vol. 154; p. 923.

Tongs for sheet metal. F. J. Velox. No. 956,910; May 3; Sp. p. 897; Gaz. vol. 154; p. 142.

Tongue-hounds, Adjustable pattern for. N. J. Smith. No. 959,398; May 24; Sp. p. 6425; Gaz. vol. 154; p. 1075.

Tongues, Spring-support for vehicle-. W. F. Reschke. No. 957,006; May 3; Sp. p. 1282; Gaz. vol. 154; p. 204.

Tonnage-equating machine. J. M. Daly. No. 956,688; May 3; Sp. p. 395; Gaz. vol. 154; p. 66.

Tool. C. C. Talntor. No. 957,271; May 10; Sp. p. 1683; Gaz. vol. 154; p. 295.

Tool. N. M. Hansen. No. 958,807; May 24; Sp. p. 5203; Gaz. vol. 154; p. 877.

Tool-bag. T. J. Younglove. No. 958,347; May 17; Sp. p. 4260; Gaz. vol. 154; p. 695.

Tool, Combination-. C. Druck. No. 957,044; May 3; Sp. p. 1173; Gaz. vol. 154; p. 186.

Tool, Combination-. P. A. Peterson. No. 960,193; May 31; Sp. p. 8153; Gaz. vol. 154; p. 1371.

Tool-driving mechanism. H. W. Jacobs. No. 959,863; May 31; Sp. p. 7431; Gaz. vol. 154; p. 1257.

Tool-frame. A. Neubert. No. 957,897; May 17; Sp. p. 2964; Gaz. vol. 154; p. 536.

Tool-holder. J. J. McIntyre. No. 958,936; May. 24; Sp. p. 5497; Gaz. vol. 154; p. 922.

Tool-holder. J. L. Stoffer. No. 958,945; May 24; Sp. p. 5509; Gaz. vol. 154; p. 925.

Tool-holder, Ratchet. J. Volbert. No. 959,408; May 24; Sp. p. 6442; Gaz. vol. 154; p. 1078.

Tool-retainer for air, electric, or mechanically-driven implements. M. G. Hilpert. No. 959,530; May 31; Sp. p. 6722; Gaz. vol. 154; p. 1144.

Tools, Shield for. A. D. Elliott. No. 956,573; May 3; Sp. p. 146; Gaz. vol. 154; p. 25.

Tooth-crown. P. Schaefer. No. 959,395; May 24; Sp. p. 6422; Gaz. vol. 154; p. 1074.

Tooth, Replaceable. F. La Chapelle. No. 959,858; May 24; Sp. p. 6353; Gaz. vol. 154; p. 1062.

Toothpick. J. G. Strock. No. 958,335; May 17; Sp. p. 4243; Gaz. vol. 154; p. 692.

Top-prop. F. A. Neider. No. 956,722; May 3; Sp. p. 478; Gaz. vol. 154; p. 77.

Torch, Vapor-. T. Yates. No. 957,292; May 10; Sp. p. 1727; Gaz. vol. 154; p. 302.

Torpedo. M. Glass. No. 957,670; May 10; Sp. p. 2494; Gaz. vol. 154; p. 431.

Torpedo. E. Bourdelles. No. 958,990; May 24; Sp. p. 5595; Gaz. vol. 154; p. 941.

Torpedo-tube attachment. J. Kimbrell. No. 958,650; May 17; Sp. p. 4852; Gaz. vol. 154; p. 797.

Tow-lines, Surge-reliever or safety device for. W. A. Duncanson. No. 957,815; May 10; Sp. p. 1774; Gaz. vol. 154; p. 310.

Toy. G. H. Ulbrich. No. 957,819; May 10; Sp. p. 2789; Gaz. vol. 154; p. 479.

Toy. W. S. Hendron. No. 959,009; May 24; Sp. p. 5632; Gaz. vol. 154; p. 946.

Toy. J. T. Stafford. No. 959,638; May 31; Sp. p. 6939; Gaz. vol. 154; p. 1182.

Toy. F. H. Callahan. No. 960,075; May 31; Sp. p. 7931; Gaz. vol. 154; p. 1331.

Toy base-ball-game apparatus. J. A. Ekelund. No. 959,427; May 24; Sp. p. 6470; Gaz. vol. 154; p. 1084.

Toy building-block. S. W. Finch. No. 956,632; May 3; Sp. p. 267; Gaz. vol. 154; p. 45.

Toy or picture book. G. Tuck. No. 959,655; May 31; Sp. p. 6979; Gaz. vol. 154; p. 1188.

Track, Elevated. J. C. Fitzgerald. No. 957,757; May 10; Sp. p. 2069; Gaz. vol. 154; p. 459.

Track-sander. J. H. Wattera. No. 957,019; May 3; Sp. p. 1127; Gaz. vol. 154; p. 178.

Track-sander. C. P. White. No. 957,482; May 10; Sp. p. 2104; Gaz. vol. 154; p. 365.

Track-sander. W. A. Pitt. No. 959,596; May 31; Sp. p. 6864; Gaz. vol. 154; p. 1167.

Tracker-bar. G. P. Brand. No. 958,470; May 17; Sp. p. 4509; Gaz. vol. 154; p. 738.

Tracker-board, Universally-movable. M. F. Holderman. No. 957,876; May 10; Sp. p. 2503; Gaz. vol. 154; p. 433.

Traction-engine. G. L. Hinshaw and H. A. Wade. No. 958,123; May 17; Sp. p. 3653; Gaz. vol. 154; p. 616.

Traction-engine. L. M. Merkley. No. 958,816; May 24; Sp. p. 5220; Gaz. vol. 154; p. 880.

Traction mechanism, Vehicle. J. L. Williams. No. 960,059; May 31; Sp. p. 7903; Gaz. vol. 154; p. 1327.

Train-order holder. A. W. Vick. No. 957,018; May 3; Sp. p. 1126; Gaz. vol. 154; p. 177.

Train-signaling and brake-releasing mechanism. H. H. Hunt. No. 959,749; May 31; Sp. p. 7175; Gaz. vol. 154; p. 1218.

Train-stopping mechanism. J. F. Webb, Jr. No. 958,047; May 17; Sp. p. 3455; Gaz. vol. 154; p. 591.

Tramways and railways, Brake for. P. J. Pringle. No. 956,826; May 3; Sp. p. 715; Gaz. vol. 154; p. 113.

Transmission apparatus. J. A. Baab. No. 958,212; May 17; Sp. p. 3832; Gaz. vol. 154; p. 648.

Transmission system. J. Schlig. No. 957,263; May 10; Sp. p. 1657; Gaz. vol. 154; p. 292.

Transmitter-mounting. N. Pedersen. No. 958,167; May 17; Sp. p. 3747; Gaz. vol. 154; p. 633.

Transmitting and receiving information, Apparatus for. J. L. Hall. No. 956,960; May 3; Sp. p. 1008; Gaz. vol. 154; p. 158.

Transom-holder. W. Cox and P. R. Peterson. No. 959,843; May 31; Sp. p. 7387; Gaz. vol. 154; p. 1251.

Transplanter. A. C. Rumble. No. 960,113; May 31; Sp. p. 7995; Gaz. vol. 154; p. 1343.

Trap: *See* Animal-trap; Fly-trap; Insect-trap; Jaw-trap; Precious-metal trap; Rodent-trap; Steam-trap; Vacuum-trap.

Trap. M. L. French. No. 957,049; May 3; Sp. p. 1182; Gaz. vol. 154; p. 187.

Trap-rest. J. W. Walter. No. 959,659; May 31; Sp. p. 6984; Gaz. vol. 154; p. 1189.

Tray-raiser. O. B. Adams. No. 960,139; May 31; Sp. p. 8048; Gaz. vol. 154; p. 1352.

Tread-plug, Non-slipping. J. L. Campbell. No. 958,363; May 17; Sp. p. 4294; Gaz. vol. 154; p. 701.

Tread, Safety-. J. T. Simpson. No. 960,048; May 31; Sp. p. 7880; Gaz. vol. 154; p. 1323.

Treadle, Foot-. E. Bourquin. No. 957,863; May 17; Sp. p. 2891; Gaz. vol. 154; p. 524.

Tree-felling machine. J. E. Wise. No. 957,832; May 10; Sp. p. 2809; Gaz. vol. 154; p. 483.

Trees, Reinforcing. W. E. Davey. No. 957,940; May 17; Sp. p. 3070; Gaz. vol. 154; p. 550.

Trees, Reinforcing. W. E. Davey. No. 958,234; May 17; Sp. p. 3874; Gaz. vol. 154; p. 654.

Trees, Reinforcing. W. E. Davey. No. 958,478; May 17; Sp. p. 4522; Gaz. vol. 154; p. 740.

Treeing-machine. W. H. Hooper. No. 957,962; May 17; Sp. p. 3145; Gaz. vol. 154; p. 559.

Treeing-machine. W. H. Hooper. No. 957,963; May 17; Sp. p. 3154; Gaz. vol. 154; p. 559.

Treeing machine, Boot-. W. H. Hooper. No. 957,964; May 17; Sp. p. 3163; Gaz. vol. 154; p. 559.

Trestle, Adjustable. G. H. Ratledge, Sr. No. 957,094; May 3; Sp. p. 1279; Gaz. vol. 154; p. 203.

Trestle, Builder's. O. Knoerzer. No. 959,228; May 24; Sp. p. 6094; Gaz. vol. 154; p. 1019.

Trigger-controller. R. A. Moore. No. 960,185; May 31; Sp. p. 8132; Gaz. vol. 154; p. 1368.

Trigger mechanism. E. R. Williams. No. 959,413; May 24; Sp. p. 6450; Gaz. vol. 154; p. 1080.

Trimmer: *See* Insole-edge trimmer; Lawn-trimmer.

Trocar, Self-cleaning. O. L. Bunn. No. 958,854; May 24; Sp. p. 5313; Gaz. vol. 154; p. 895.

Trolley and box, Aerial mail. T. G., S. C., and E. G. Anderson. No. 959,418; May 24; Sp. p. 6458; Gaz. vol. 154; p. 1081.

Trolley-conductor clamp. W. Schaake. No. 958,833; May 24; Sp. p. 5265; Gaz. vol. 154; p. 887.

Trolley-guard. F. E. Wagner. No. 957,585; May 10; Sp. p. 2303; Gaz. vol. 154; p. 400.

Trolley-pole. C. E. Bradford. No. 960,152; May 31; Sp. p. 8068; Gaz. vol. 154; p. 1356.

Trolley-poles and other articles, Clamp for mending broken. R. W. Lovett. No. 958,751; May 24; Sp. p. 5067; Gaz. vol. 154; p. 856.

Trolley-wheel. O. S. Chew. No. 957,655; May 10; Sp. p. 2452; Gaz. vol. 154; p. 424.

Trolley-wheel holder and guide. W. A. Gunn and L. W. Link. No. 958,744; May 24; Sp. p. 5055; Gaz. vol. 154; p. 854.

Trolley-wire ear. J. H. Callender. No. 958,906; May 24; Sp. p. 5445; Gaz. vol. 154; p. 912.

Trolley-wire hanger. J. T. Scanlon. No. 959,076; May 24; Sp. p. 5785; Gaz. vol. 154; p. 969.

Trolley-wire-suspension means. S. S. Berkley. No. 960,065; May 31; Sp. p. 7915; Gaz. vol. 154; p. 1329.

Trombone. S. J. Summers. No. 959,034; May 24; Sp. p. 5683; Gaz. vol. 154; p. 955.

Trombone, Slide-. H. N. White. No. 958,051; May 17; Sp. p. 3465; Gaz. vol. 154; p. 593.

Trombones, Slide-bearing for. S. J. Summers. No. 959,033; May 24; Sp. p. 5681; Gaz. vol. 154; p. 954.

Trough: *See* Cross-roll trough; Watering-trough.

Trousers, Adjustable. A. P. Melen. No. 959,952; May 31; Sp. p. 7643; Gaz. vol. 154; p. 1289.

Trousers-band regulator and belt-retainer, Combination. J. E. Weil. No. 959,086; May 24; Sp. p. 5806; Gaz. vol. 154; p. 972.

Trousers-hanger. W. C. Thatcher. No. 959,181; May 24; Sp. p. 6003; Gaz. vol. 154; p. 1003.

Trousers-rack. T. A. Cleary. No. 959,112; May 24; Sp. p. 5851; Gaz. vol. 154; p. 981.

Trousers-stretcher. R. P. Baird. No. 958,576; May 17; Sp. p. 4712; Gaz. vol. 154; p. 773.

Trowel. J. G. Thatford. No. 960,210; May 31; Sp. p. 8186; Gaz. vol. 154; p. 1378.

Truck. F. M. Ashley. No. 957,136; May 3; Sp. p. 1350; Gaz. vol. 154; p. 216.

Truck, Barrel. C. Bjorklund. No. 957,840; May 10; Sp. p. 2828; Gaz. vol. 154; p. 485.

Truck brake, Baggage-. H. S. Parker and E. O. Lieb. No. 959,251; May 24; Sp. p. 6142; Gaz. vol. 154; p. 1026.

Truck, Car-. C. H. Knobbs. No. 956,900; May 3; Sp. p. 871; Gaz. vol. 154; p. 139.

Truck construction for cars. S. P. Bush. No. 958,362; May 17; Sp. p. 4203; Gaz. vol. 154; p. 701.

Truck for planters, &c., Front. I. D. Brim. No. 959,302; May 24; Sp. p. 6241; Gaz. vol. 154; p. 1044.

Truck, Lumber-. E. B. Merry. No. 957,431; May 10; Sp. p. 2016; Gaz. vol. 154; p. 349.

Truck, Maximum-traction. W. S. Adams. No. 959,040; May 24; Sp. p. 5695; Gaz. vol. 154; p. 957.

Truck side frame. A. O. Bucklin, Jr. No. 958,474; May 17; Sp. p. 4516; Gaz. vol. 154; p. 739.

Truck side frame. E. M. Richardson. No. 958,541; May 17; Sp. p. 4639; Gaz. vol. 154; p. 762.

Truck side frame and journal-box, Car-. G. G. Floyd. No. 956,633; May 3; Sp. p. 271; Gaz. vol. 154; p. 45.

Truck side frame, Car-. J. H. Baker. No. 958,462; May 17; Sp. p. 4490; Gaz. vol. 154; p. 736.

Truck, Tongue-. C. A. Foell. No. 960,082; May 31; Sp. p. 7943; Gaz. vol. 154; p. 1334.

Trucks, Basket attachment for barrel-. C. Bjorklund. No. 957,406; May 10; Sp. p. 1964; Gaz. vol. 154; p. 339.

Trunk. C. A. McCarthy. No. 957,704; May 10; Sp. p. 2553; Gaz. vol. 154; p. 442.

Truss. T. E. Martin. No. 958,267; May 17; Sp. p. 3948; Gaz. vol. 154; p. 665.

Truss-bar. P. E. and R. L. Bertin. No. 957,181; May 10; Sp. p. 1466; Gaz. vol. 154; p. 261.

Tube: *See* Mailing-tube; Telescopic tube; X-ray tube.

Tube-bending machine. J. F. Gall. No. 957,199; May 10; Sp. p. 1503; Gaz. vol. 154; p. 267.

Tube-bending machine. J. F. Gall. No. 957,200; May 10; Sp. p. 1506; Gaz. vol. 154; p. 268.

Tube-cleaner. E. E. Hauer. No. 958,118; May 17; Sp. p. 3643; Gaz. vol. 154; p. 614.

Tube-cleaning tool. C. F. Overly. No. 959,585; May 31; Sp. p. 6843; Gaz. vol. 154; p. 1164.

Tube-cutter. E. C. Heller and A. J. Emrick. No. 956,805; May 3; Sp. p. 654; Gaz. vol. 154; p. 104.

Tube forming and cutting-off machine. C. F. Jenkins. No. 957,966; May 17; Sp. p. 3175; Gaz. vol. 154; p. 560.

Tube-joint. J. Kenny. No. 960,546; May 31; Sp. p. 6762; Gaz. vol. 154; p. 1150.

Tube-mill. B. L. Morrison. No. 957,486; May 10; Sp. p. 2024; Gaz. vol. 154; p. 351.

Tufting-machine. W. E. Buser. No. 960,073; May 31; Sp. p. 7926; Gaz. vol. 154; p. 1331.

Tufting-machines, Button-support for. W. E. Buser. No. 960,074; May 31; Sp. p. 7928; Gaz. vol. 154; p. 1331.

Tug, Buggy-shaft. W. G. Petree. No. 959,254; May 24; Sp. p. 6150; Gaz. vol. 154; p. 1028.

Tug, Hame-. A. L. Saddlemire. No. 960,114; May 31; Sp. p. 7997; Gaz. vol. 154; p. 1344.

Tungsten, &c., Making a plastic mass from compound of. H. Kreusler. No. 956,970; May 3; Sp. p. 1052; Gaz. vol. 154; p. 165.

Tunnel. W. Butler. No. 958,592; May 17; Sp. p. 4740; Gaz. vol. 154; p. 778.

Tunnel construction. J. P. Conkling. No. 956,627; May 3; Sp. p. 257; Gaz. vol. 154; p. 43.

Tunnels, Smoke-exhausting device for. P. H. Wedmark. No. 957,396; May 10; Sp. p. 1941; Gaz. vol. 154; p. 336.

Tunneling-machine. G. R. Bennett. No. 958,952; May 24; Sp. p. 5519; Gaz. vol. 154; p. 927.
Tunneling-machine structure. J. P. Karns. No. 957,687; May 10; Sp. p. 2521; Gaz. vol. 154; p. 436.
Turbine. E. C. Frohlich. No. 957,944; May 17; Sp. p. 3078; Gaz. vol. 154; p. 552.
Turbine. C. A. Parsons. No. 958,430; May 17; Sp. p. 4426; Gaz. vol. 154; p. 724.
Turbine-blades, Means for securing. P. Emden and W. Fritz. No. 958,239; May 17; Sp. p. 3884; Gaz. vol. 154; p. 656.
Turbine, Combustion-. S. Z. de Ferranti. No. 960,160; May 31; Sp. p. 8079; Gaz. vol. 154; p. 1359.
Turbine, Elastic-fluid. E. Thomson. No. 957,915; May 17; Sp. p. 3023; Gaz. vol. 154; p. 542.
Turbine governing mechanism. R. H. Rice. No. 957,902; May 17; Sp. p. 2974; Gaz. vol. 154; p. 538.
Turbine governing mechanism, Elastic-fluid-. W. Kieser. No. 957,888; May 17; Sp. p. 2944; Gaz. vol. 154; p. 533.
Turbine governing mechanism, Elastic-fluid-. W. Kieser. No. 957,889; May 17; Sp. p. 2949; Gaz. vol. 154; p. 533.
Turbine governing mechanism, Elastic-fluid-. P. Olivier. No. 957,898; May 17; Sp. p. 2966; Gaz. vol. 154; p. 536.
Turbine, Multistage. P. Hodgkinson. No. 957,338; May 10; Sp. p. 1824; Gaz. vol. 154; p. 318.
Turbine shafts, Packing for elastic-fluid-. O. Junggren. No. 957,887; May 17; Sp. p. 2942; Gaz. vol. 154; p. 533.
Turbine, Steam-. T. Falvey. No. 957,151; May 3; Sp. p. 1379; Gaz. vol. 154; p. 221.
Turbine, Water-. E. A. Nilsen. No. 958,670; May 17; Sp. p. 4891; Gaz. vol. 154; p. 803.
Turbines and pumps, Means for balancing. W. H. Eyermann. No. 958,612; May 17; Sp. p. 4781; Gaz. vol. 154; p. 785.
Turbines, turbo-pumps, &c., Manufacture of strip material suitable for the blades of. S. Z. de Ferranti. No. 960,161; May 31; Sp. p. 8081; Gaz. vol. 154; p. 1359.
Turbo-generator, Direct-current. E. C. Wright. No. 957,290; May 10; Sp. p. 1722; Gaz. vol. 154; p. 301.
Turbo-unipolar generator. O. Schuls. No. 958,681; May 17; Sp. p. 4911; Gaz. vol. 154; p. 806.
Twine-dispensing device. L. H. Houston. No. 956,640; May 3; Sp. p. 285; Gaz. vol. 154; p. 47.
Twine-holder. C. E. Layman. No. 957,568; May 10; Sp. p. 2280; Gaz. vol. 154; p. 395.
Twine machine, Grass-. L. J. Monahan. No. 956,539; May 3; Sp. p. 61; Gaz. vol. 154; p. 13.
Two-cycle engine. C. B. Page. No. 956,903; May 3; Sp. p. 1074; Gaz. vol. 154; p. 168.
Type and type-bars, Making. F. H. Richards. No. 958,436; May 17; Sp. p. 4444; Gaz. vol. 154; p. 726.
Type-bar. F. H. Richards. No. 958,435; May 17; Sp. p. 4443; Gaz. vol. 154; p. 726.
Type casting and setting machine, Individual-. J. C. Fowler. No. 958,738; May 24; Sp. p. 5029; Gaz. vol. 154; p. 852.
Type-casting machine. O. V. Sigurdsson. No. 960,047; May 31; Sp. p. 7876; Gaz. vol. 154; p. 1323.
Type-distributing apparatus. R. Dacheux. No. 958,600; May 17; Sp. p. 4758; Gaz. vol. 154; p. 781.
Type-holder. J. S. Duncan. No. 956,692; May 3; Sp. p. 425; Gaz. vol. 154; p. 67.
Type-machines, Mold and operating mechanism for. E. S. Dunavant. No. 959,323; May 24; Sp. p. 6280; Gaz. vol. 154; p. 1051.
Type, Printing-. H. J. Smith. No. 959,968; May 31; Sp. p. 7680; Gaz. vol. 154; p. 1294.
Type-setting apparatus. L. K. Johnson. No. 960,096; May 31; Sp. p. 7966; Gaz. vol. 154; p. 1338.
Type-setting case. J. S. Duncan. No. 956,691; May 3; Sp. p. 422; Gaz. vol. 154; p. 67.
Type-writer attachment. T. M. Morgan. No. 959,024; May 24; Sp. p. 5660; Gaz. vol. 154; p. 951.
Type-writer back-spacing mechanism. H. Raymond. No. 957,376; May 10; Sp. p. 1898; Gaz. vol. 154; p. 330.
Type-writer desk. C. W. Bickel. No. 956,513; May 3; Sp. p. 14; Gaz. vol. 154; p. 5.
Type-writer, Electrically-operated. C. S. Du Belle. No. 956,798; May 3; Sp. p. 637; Gaz. vol. 154; p. 101.
Type-writer-ribbon box. G. M. Crider. No. 958,232; May 17; Sp. p. 3872; Gaz. vol. 154; p. 654.
Type-writers, Column-stop mechanism for. T. L. Knapp and C. C. Harting. No. 959,061; May 24; Sp. p. 5742; Gaz. vol. 154; p. 963.
Type-writers, Sound-absorbing device for. E. Baltzley. No. 956,618; May 3; Sp. p. 238; Gaz. vol. 154; p. 40.
Type-writing machine. E. H. Berry. No. 956,672; May 3; Sp. p. 356; Gaz. vol. 154; p. 59.
Type-writing machine. G. C. Blickensderfer. No. 956,879; May 3; Sp. p. 822; Gaz. vol. 154; p. 131.
Type-writing machine. E. E. Barney. No. 957,178; May 10; Sp. p. 1459; Gaz. vol. 154; p. 261.
Type-writing machine. H. H. Steele. No. 957,268; May 10; Sp. p. 1669; Gaz. vol. 154; p. 293.
Type-writing machine. O. Woodward. No. 957,288; May 10; Sp. p. 1714; Gaz. vol. 154; p. 300.
Type-writing machine. F. A. Young. No. 957,294; May 10; Sp. p. 1732; Gaz. vol. 154; p. 303.
Type-writing machine. C. B. Yaw. No. 957,402; May 10; Sp. p. 1954; Gaz. vol. 154; p. 338.
Type-writing machine. W. C. Paul. No. 957,624; May 10; Sp. p. 2387; Gaz. vol. 154; p. 414.
Type-writing machine. H. Crutchley. No. 957,749; May 10; Sp. p. 2646; Gaz. vol. 154; p. 456.
Type-writing machine. S. Nielsen. No. 957,995; May 17; Sp. p. 3251; Gaz. vol. 154; p. 571.
Type-writing machine. C. B. Yaw. No. 958,573; May 17; Sp. p. 4698; Gaz. vol. 154; p. 772.
Type-writing machine. E. B. Hess. No. 958,702; May 17; Sp. p. 4950; Gaz. vol. 154; p. 813.
Type-writing machine. A. W. Smith. No. 958,778; May 24; Sp. p. 5130; Gaz. vol. 154; p. 860.
Type-writing machine. J. C. McLaughlin. No. 958,817; May 24; Sp. p. 5222; Gaz. vol. 154; p. 881.
Type-writing machine. J. C. McLaughlin. No. 958,818; May 24; Sp. p. 5224; Gaz. vol. 154; p. 881.
Type-writing machine. J. A. Edlund. No. 959,125; May 24; Sp. p. 5880; Gaz. vol. 154; p. 985.
Type-writing machine. W. E. Barnard. No. 959,444; May 31; Sp. p. 6512; Gaz. vol. 154; p. 1116.
Type-writing machine. W. J. Barron. No. 959,696; May 31; Sp. p. 7062; Gaz. vol. 154; p. 1199.
Type-writing machine. F. A. Young. No. 959,829; May 31; Sp. p. 7357; Gaz. vol. 154; p. 1245.
Type-writing-machine carriages, Ball-bearing for. E. B. Hess. No. 958,498; May 17; Sp. p. 4558; Gaz. vol. 154; p. 747.
Type-writing-machine paper-finger. C. Gabrielson. No. 959,850; May 31; Sp. p. 7397; Gaz. vol. 154; p. 1253.
Type-writing-machine ribbon-feeding mechanism. F. Alexander. No. 959,833; May 31; Sp. p. 7364; Gaz. vol. 154; p. 1247.
Type-writing-machine-ribbon mechanism. C. Gabrielson. No. 958,388; May 17; Sp. p. 4345; Gaz. vol. 154; p. 709.
Type-writing-machine ribbon-reversing mechanism, Automatic. G. M. Kitzmiller. No. 959,945; May 31; Sp. p. 7625; Gaz. vol. 154; p. 1286.
Type-writing-machine tabulating device. F. Alexander. No. 959,832; May 31; Sp. p. 7362; Gaz. vol. 154; p. 1246.
Types and type-bars, Machine for making. F. H. Richards. No. 957,904; May 17; Sp. p. 2979; Gaz. vol. 154; p. 538.
Umbrella. W. Edwards. No. 959,127; May 24; Sp. p. 5885; Gaz. vol. 154; p. 986.
Umbrella. A. Peck. No. 960,038; May 31; Sp. p. 7862; Gaz. vol. 154; p. 1320.
Umbrella, Folding. C. F. Miller. No. 956,716; May 3; Sp. p. 465; Gaz. vol. 154; p. 75.
Umbrella, Folding. G. V. Bratzel. No. 957,734; May 10; Sp. p. 2612; Gaz. vol. 154; p. 452.
Umbrella, Folding. O. K. Andrews. No. 958,714; May 24; Sp. p. 4982; Gaz. vol. 154; p. 843.
Umbrella, Folding. P. Pezzene. No. 959,383; May 24; Sp. p. 6401; Gaz. vol. 154; p. 1070.
Umbrella, Folding. J. Peterson and J. G. Callaway. No. 959,962; May 31; Sp. p. 7663; Gaz. vol. 154; p. 1202.
Umbrella-holder. S. A. Reithmiller. No. 959,072; May 24; Sp. p. 5780; Gaz. vol. 154; p. 968.
Umbrella-holder lock. C. F. Wilson and J. H. Harman. No. 960,131; May 31; Sp. p. 8033; Gaz. vol. 154; p. 1349.
Umbrella part. F. Wetteroth. No. 957,527; May 10; Sp. p. 2203; Gaz. vol. 154; p. 381.
Umbrella-receptacle for cars. M. Colonna. No. 958,096; May 17; Sp. p. 3601; Gaz. vol. 154; p. 607.
Umbrella-runner. F. Wetteroth. No. 956,657; May 3; Sp. p. 327; Gaz. vol. 154; p. 53.
Umbrella-runner. G. F. Hall. No. 960,169; May 31; Sp. p. 8099; Gaz. vol. 154; p. 1362.
Umbrella top-notcher. F. Wetteroth. No. 958,341; May 17; Sp. p. 4251; Gaz. vol. 154; p. 693.
Underclothing. C. M. Begley. No. 959,196; May 24; Sp. p. 6032; Gaz. vol. 154; p. 1008.
Undergarment. G. S. Marville. No. 957,893; May 17; Sp. p. 2958; Gaz. vol. 154; p. 535.
Undergarment for women. M. Millard. No. 957,360; May 10; Sp. p. 1866; Gaz. vol. 154; p. 325.
Universal joint. A. H. Fetzer. No. 959,129; May 24; Sp. p. 5890; Gaz. vol. 154; p. 987.
Universal joint, Incased. C. W. Spicer. No. 958,023; May 17; Sp. p. 3338; Gaz. vol. 154; p. 581.
Upholstered chair. P. G. A. Bode. No. 958,356; May 17; Sp. p. 4285; Gaz. vol. 154; p. 699.
Upsetting-machine. D. R. Ward. No. 959,184; May 24; Sp. p. 6007; Gaz. vol. 154; p. 1004.
Urea, Refining. N. Wrinkle and R. G. Paddock. No. 959,678; May 31; Sp. p. 7033; Gaz. vol. 154; p. 1194.
Urea of the anthraquinone series and making same. A. Schmidt and G. Kränslein. No. 958,325; May 17; Sp. p. 4218; Gaz. vol. 154; p. 689.
Vacuum-cleaner. C. B. Foster and W. W. Glidden. No. 959,729; May 31; Sp. p. 7132; Gaz. vol. 154; p. 1211.
Vacuum-pan. G. S. Baker. No. 956,508; May 3; Sp. p. 5; Gaz. vol. 154; p. 3.
Vacuum-supporting device. F. P. Schroeder. No. 957,804; May 10; Sp. p. 2766; Gaz. vol. 154; p. 474.
Vacuum-trap. L. P. Strong. No. 957,269; May 10; Sp. p. 1673; Gaz. vol. 154; p. 294.
Valve. F. Leadbeater. No. 956,811; May 3; Sp. p. 675; Gaz. vol. 154; p. 106.
Valve. J. Stone. No. 957,012; May 3; Sp. p. 1113; Gaz. vol. 154; p. 175.
Valve. C. A. Ellis. No. 957,318; May 10; Sp. p. 1779; Gaz. vol. 154; p. 310.
Valve. E. E. Sweet. No. 957,391; May 10; Sp. p. 1926; Gaz. vol. 154; p. 334.
Valve. E. P. Allen. No. 957,592; May 10; Sp. p. 2315; Gaz. vol. 154; p. 402.
Valve. C. E. Strong. No. 957,811; May 10; Sp. p. 2777; Gaz. vol. 154; p. 476.

Valve. F. Snow. No. 958,021; May 17; Sp. p. 3335; Gaz. vol. 154; p. 580.
Valve. D. E. Washington. No. 958,451; May 17; Sp. p. 4471; Gaz. vol. 154; p. 731.
Valve. J. W. McCown. No. 958,521; May 17; Sp. p. 4603; Gaz. vol. 154; p. 756.
Valve. G. M. Bard. No. 958,716; May 24; Sp. p. 4984; Gaz. vol. 154; p. 844.
Valve. E. D. Jefferson. No. 959,349; May 24; Sp. p. 6336; Gaz. vol. 154; p. 1059.
Valve. S. E. McKnight. No. 959,784; May 31; Sp. p. 7238; Gaz. vol. 154; p. 1229.
Valve and meter, Combination. E. J. Moore. No. 958,664; May 17; Sp. p. 4879; Gaz. vol. 154; p. 801.
Valve and the like, Stop-. J. Fletcher. No. 959,728; May 31; Sp. p. 7128; Gaz. vol. 154; p. 1210.
Valve, Automatic gas-. J. Hrivnák and J. Batos. No. 958,506; May 17; Sp. p. 4572; Gaz. vol. 154; p. 750.
Valve, Automatic hose-. L. E. and W. Smith. No. 958,779; May 24; Sp. p. 5141; Gaz. vol. 154; p. 866.
Valve-brake. W. K. Rankin. No. 958,176; May 17; Sp. p. 3766; Gaz. vol. 154; p. 636.
Valve-chamber for water-columns. F. C. Anderson. No. 957,533; May 10; Sp. p. 2214; Gaz. vol. 154; p. 383.
Valve, Combined automatic throttle and stop. R. A. McKee. No. 956,595; May 3; Sp. p. 189; Gaz. vol. 154; p. 32.
Valve, Distributing and reversing expansion. W. M. Coward. No. 957,409; May 10; Sp. p. 2145; Gaz. vol. 154; p. 371.
Valve, Doubly-actuated expansion-. G. P. Carroll. No. 959,458; May 31; Sp. p. 6558; Gaz. vol. 154; p. 1120.
Valve, Electric. F. N. Roebrich. No. 959,606; May 31; Sp. p. 6887; Gaz. vol. 154; p. 1172.
Valve, Electric. L. M. Schmidt. No. 959,618; May 31; Sp. p. 6902; Gaz. vol. 154; p. 1175.
Valve, Engine-. A. J. Anderson and G. A. Hanson. No. 959,689; May 31; Sp. p. 7050; Gaz. vol. 154; p. 1197.
Valve, Engineer's. W. A. Pendry. No. 959,798; May 31; Sp. p. 7282; Gaz. vol. 154; p. 1234.
Valve, Engineer's. W. A. Pendry. No. 959,799; May 31; Sp. p. 7286; Gaz. vol. 154; p. 1235.
Valve, Engineer's. W. A. Pendry. No. 959,802; May 31; Sp. p. 7298; Gaz. vol. 154; p. 1236.
Valve, Flushing-. F. W. Bassett and W. A. Hunter, Jr. No. 957,027; May 3; Sp. p. 1145; Gaz. vol. 154; p. 181.
Valve, Flushing-. F. W. Bassett and W. A. Hunter, Jr. No. 957,029; May 3; Sp. p. 1140; Gaz. vol. 154; p. 182.
Valve for air-brake systems, Regulating-. J. C. Luna. No. 950,022; May 24; Sp. p. 5657; Gaz. vol. 154; p. 950.
Valve for charge-forming devices, Auxiliary air-. J. H. Friedenwald. No. 960,084; May 31; Sp. p. 7945; Gaz. vol. 154; p. 1334.
Valve for elastic-fluid compressors, Discharge-. J. Allan. No. 956,780; May 3; Sp. p. 613; Gaz. vol. 154; p. 99.
Valve for heat-engines, Puppet-. L. G. Nilson. No. 958,759; May 24; Sp. p. 5086; Gaz. vol. 154; p. 850.
Valve for internal-combustion engines. F. W. Brady. No. 957,730; May 10; Sp. p. 2605; Gaz. vol. 154; p. 450.
Valve for pneumatic sanders, Engineer's. J. H. Hanlon. No. 958,893; May 17; Sp. p. 4357; Gaz. vol. 154; p. 711.
Valve for steam-traps. C. J. Mackerey. No. 957,470; May 10; Sp. p. 2082; Gaz. vol. 154; p. 361.
Valve for steam-traps and the like. C. J. Mackerey. No. 957,469; May 10; Sp. p. 2081; Gaz. vol. 154; p. 361.
Valve, Gas-engine. R. White. No. 957,285; May 10; Sp. p. 1700; Gaz. vol. 154; p. 290.
Valve, Irrigating-. E. E. Izer. No. 957,777; May 10; Sp. p. 2715; Gaz. vol. 154; p. 465.
Valve, Lubricating-. C. Senn and D. C. Demarest. No. 957,003; May 3; Sp. p. 1095; Gaz. vol. 154; p. 172.
Valve mechanism, Flushing-. F. W. Bassett and W. A. Hunter, Jr. No. 957,028; May 3; Sp. p. 1146; Gaz. vol. 154; p. 181.
Valve mechanism for engines. J. W. Guthrie. No. 959,339; May 24; Sp. p. 6320; Gaz. vol. 154; p. 1056.
Valve mechanism for water-columns. F. C. Anderson. No. 958,351; May 17; Sp. p. 4268; Gaz. vol. 154; p. 697.
Valve, Mixing-. J. J. Lawler. No. 956,800; May 3; Sp. p. 787; Gaz. vol. 154; p. 125.
Valve motion for steam-engines, Slide-. E. Frikart. No. 957,762; May 10; Sp. p. 2679; Gaz. vol. 154; p. 460.
Valve-operating mechanism. P. W. Knauf. No. 956,772; May 3; Sp. p. 587; Gaz. vol. 154; p. 93.
Valve-operating mechanism. J. T. Knott. No. 959,758; May 31; Sp. p. 7194; Gaz. vol. 154; p. 1221.
Valve, Piston-. J. T. Wilson. No. 957,286; May 10; Sp. p. 1710; Gaz. vol. 154; p. 299.
Valve, Pressure-controlling. F. A. Lockwood. No. 957,511; May 10; Sp. p. 2168; Gaz. vol. 154; p. 375.
Valve, Radiator-. E. P. Allen. No. 957,593; May 10; Sp. p. 2317; Gaz. vol. 154; p. 403.
Valve, Regulating-. A. M. Allen. No. 958,206; May 17; Sp. p. 3821; Gaz. vol. 154; p. 646.
Valve, Relay air-. H. J. Richardson. No. 959,073; May 24; Sp. p. 5781; Gaz. vol. 154; p. 968.
Valve-reseating tool. T. B. Williams. No. 956,918; May 3; Sp. p. 911; Gaz. vol. 154; p. 144.
Valve, Retaining-. F. H. Woods. No. 960,133; May 31; Sp. p. 8037; Gaz. vol. 154; p. 1350.
Valve, Return check-. J. Collis. No. 956,944; May 3; Sp. p. 955; Gaz. vol. 154; p. 153.
Valve, Rotary. L. A. Frayer and C. O. Howard. (Reissue.) No. 13,108; May 3; Sp. p. 1437; Gaz. vol. 154; p. 230.
Valve, Rotary. R. W. Riordan. No. 958,313; May 17; Sp. p. 4188; Gaz. vol. 154; p. 683.
Valve-seat grinder. E. E. Townsend. No. 950,653; May 31; Sp. p. 6973; Gaz. vol. 154; p. 1187.
Valve, Siphon-. L. T. Burns. No. 958,589; May 17; Sp. p. 4733; Gaz. vol. 154; p. 778.
Valve, Steam, air, and water trap. J. E. Boegen. No. 959,207; May 24; Sp. p. 6230; Gaz. vol. 154; p. 1042.
Valve, Stop and check. G. C. Davis and W. A. Daley. No. 957,311; May 10; Sp. p. 1750; Gaz. vol. 154; p. 308.
Valve timer, Gas-engine-. T. P. Huden. No. 959,345; May 24; Sp. p. 6331; Gaz. vol. 154; p. 1058.
Valve, Triple. W. A. Pendry. No. 959,800; May 31; Sp. p. 7290; Gaz. vol. 154; p. 1235.
Valve, Triple. W. A. Pendry. No. 959,801; May 31; Sp. p. 7294; Gaz. vol. 154; p. 1235.
Valve, Water-cooled. W. C. Mitchell. No. 956,538; May 3; Sp. p. 60; Gaz. vol. 154; p. 13.
Vapor-apparatus controlling device. P. H. Thomas. No. 958,195; May 17; Sp. p. 3801; Gaz. vol. 154; p. 642.
Vapor-apparatus-starting device. P. H. Thomas. No. 958,445; May 17; Sp. p. 4461; Gaz. vol. 154; p. 729.
Vapor-burner. A. H. Waite. No. 959,410; May 24; Sp. p. 6446; Gaz. vol. 154; p. 1078.
Vapor-rectifier system. C. M. Green. No. 958,891; May 17; Sp. p. 4354; Gaz. vol. 154; p. 710.
Vaporizing device. A. A. Low, M. J. Wohl, and H. Hertzberg. No. 957,786; May 10; Sp. p. 2735; Gaz. vol. 154; p. 468.
Vault-closure. F. Unckrich. No. 959,406; May 24; Sp. p. 6436; Gaz. vol. 154; p. 1077.
Vegetable-washer. E. J. Judge. No. 958,812; May 24; Sp. p. 5211; Gaz. vol. 154; p. 879.
Vegetables and partially cooking the same, Washing. E. J. Judge. No. 957,466; May 10; Sp. p. 2075; Gaz. vol. 154; p. 360.
Vehicle and locomotive sanding apparatus. J. Taylor. No. 956,651; May 3; Sp. p. 311; Gaz. vol. 154; p. 51.
Vehicle-body structure. E. H. Remde. No. 958,940; May 24; Sp. p. 5501; Gaz. vol. 154; p. 923.
Vehicle-body structures, Fastening device for. E. Gruenfeldt. No. 958,917; May 24; Sp. p. 5467; Gaz. vol. 154; p. 916.
Vehicle-brake. C. E. Jackson. No. 956,899; May 3; Sp. p. 809; Gaz. vol. 154; p. 138.
Vehicle-brake. V. T. Sweeney. No. 957,632; May 10; Sp. p. 2404; Gaz. vol. 154; p. 416.
Vehicle-brake, Automatic. G. W. Whitcomb. No. 959,270; May 24; Sp. p. 6198; Gaz. vol. 154; p. 1035.
Vehicle, Child's. C. E. Fourman. No. 958,914; May 24; Sp. p. 5462; Gaz. vol. 154; p. 915.
Vehicle controlling mechanism, Motor-. L. Whitcomb. No. 959,087; May 24; Sp. p. 5807; Gaz. vol. 154; p. 973.
Vehicle driving mechanism. J. F. Waite. (Reissue.) No. 13,113; May 10; Sp. p. 2874; Gaz. vol. 154; p. 403.
Vehicle electric driving mechanism. A. Aichele. No. 960,140; May 31; Sp. p. 8040; Gaz. vol. 154; p. 1353.
Vehicle hood, Motor-. W. P. Mays. No. 959,571; May 31; Sp. p. 6815; Gaz. vol. 154; p. 1160.
Vehicle hood, Road-. C. Bertrand. No. 956,563; May 3; Sp. p. 117; Gaz. vol. 154; p. 22.
Vehicle, Motor-. F. H. Johnson. No. 958,501; May 17; Sp. p. 4563; Gaz. vol. 154; p. 748.
Vehicle, Motor-. J. J. Middlebrook. No. 958,519; May 17; Sp. p. 4602; Gaz. vol. 154; p. 755.
Vehicle, Motor-. E. Gerber. No. 959,851; May 31; Sp. p. 7399; Gaz. vol. 154; p. 1253.
Vehicle propelling mechanism, Motor-. E. Lacoste and E. Battmann. No. 959,231; May 24; Sp. p. 6104; Gaz. vol. 154; p. 1020.
Vehicle-rim. A. A. Ley. No. 959,236; May 24; Sp. p. 6113; Gaz. vol. 154; p. 1022.
Vehicle running-gear. D. H. Masters. No. 957,075; May 3; Sp. p. 1240; Gaz. vol. 154; p. 196.
Vehicle-seat. W. B. Bascom. No. 956,667; May 3; Sp. p. 346; Gaz. vol. 154; p. 57.
Vehicle-seat, Adjustable. R. G. Ledig. No. 958,410; May 17; Sp. p. 4388; Gaz. vol. 154; p. 716.
Vehicle shock-absorber. T. Lea. No. 958,510; May 17; Sp. p. 4580; Gaz. vol. 154; p. 752.
Vehicle shock-absorber. J. Riley and R. D. Hunt. No. 959,170; May 24; Sp. p. 5984; Gaz. vol. 154; p. 1000.
Vehicle, Single-track. R. Scherl. No. 959,077; May 24; Sp. p. 5786; Gaz. vol. 154; p. 970.
Vehicle-spring. C. B. Geiger. No. 959,336; May 24; Sp. p. 6311; Gaz. vol. 154; p. 1055.
Vehicle-spring. H. W. Smith. No. 959,892; May 31; Sp. p. 7499; Gaz. vol. 154; p. 1267.
Vehicle-spring. A. M. Kindwall. No. 960,178; May 31; Sp. p. 8123; Gaz. vol. 154; p. 1366.
Vehicle-spring arrangement. J. Rosemeyer. No. 958,544; May 17; Sp. p. 4644; Gaz. vol. 154; p. 763.
Vehicle-step. A. L. Burns. No. 956,933; May 3; Sp. p. 935; Gaz. vol. 154; p. 149.
Vehicle suspension, Road-. F. Walton. No. 959,661; May 31; Sp. p. 6986; Gaz. vol. 154; p. 1189.
Vehicle-wheel. C. B. Nichols. No. 956,724; May 3; Sp. p. 480; Gaz. vol. 154; p. 77.
Vehicle-wheel. C. D. Anderson. No. 958,350; May 17; Sp. p. 4266; Gaz. vol. 154; p. 696.
Vehicle-wheel. M. W. Rosenhine. No. 958,439; May 17; Sp. p. 4452; Gaz. vol. 154; p. 727.
Vehicle-wheel. A. Brisbane. No. 959,705; May 31; Sp. p. 7082; Gaz. vol. 154; p. 1202.

Vehicle-wheel. A. Brisbane. No. 959,706; May 31; Sp. p. 7064; Gaz. vol. 154; p. 1203.
Vehicle-wheel. A. Brisbane. No. 959,707; May 31; Sp. p. 7085; Gaz. vol. 154; p. 1203.
Vehicle wind-shield. H. W. Bertram and F. L. Lamoreaux. No. 957,541; May 10; Sp. p. 2233; Gaz. vol. 154; p. 386.
Vehicles, Automatic stopping device for motor-. V. Emden and F. H. Dearborn. No. 956,052; May 3; Sp. p. 992; Gaz. vol. 154; p. 155.
Vehicles, Folding hood-framing for road-. P. W. Watson, Jr. No. 957,827; May 10; Sp. p. 2801; Gaz. vol. 154; p. 481.
Veil, Automobile-. J. V. Siegel. No. 958,329; May 17; Sp. p. 4230; Gaz. vol. 154; p. 690.
Velocipede. E. V. Turner. No. 959,656; May 31; Sp. p. 6980; Gaz. vol. 154; p. 1188.
Vending-machine. J. F. Krcma. No. 957,971; May 17; Sp. p. 3191; Gaz. vol. 154; p. 563.
Vending-machine. R. F. Downey. No. 958,237; May 17; Sp. p. 3880; Gaz. vol. 154; p. 655.
Vending-machine. C. Manshel. No. 959,063; May 24; Sp. p. 5750; Gaz. vol. 154; p. 964.
Vending-machine. P. S. Bloch. No. 959,449; May 31; Sp. p. 6539; Gaz. vol. 154; p. 1117.
Vending-machine. H. S. Pond. No. 959,598; May 31; Sp. p. 6865; Gaz. vol. 154; p. 1168.
Vending machine, Card-. R. F. Downey. No. 950,482; May 31; Sp. p. 6815; Gaz. vol. 154; p. 1129.
Vending-machine, Centering mechanism for rotary. E. S. Hagen. No. 958,491; May 17; Sp. p. 4548; Gaz. vol. 154; p. 745.
Vending machine, Cigar-. H. R. Stonder. No. 958,191; May 17; Sp. p. 3793; Gaz. vol. 154; p. 641.
Vending-machine, Coin-operated. J. Starr. No. 957,720; May 10; Sp. p. 2583; Gaz. vol. 154; p. 447.
Vending machine, Stamp-. F. J. Schumann. No. 957,112; May 3; Sp. p. 1304; Gaz. vol. 154; p. 208.
Vending-machines, Coin-director for. W. Asbury. No. 957,135; May 3; Sp. p. 1349; Gaz. vol. 154; p. 216.
Ventilator. L. L. Randle. No. 956,999; May 3; Sp. p. 1088; Gaz. vol. 154; p. 170.
Ventilator. L. Johanna. No. 957,680; May 10; Sp. p. 2509; Gaz. vol. 154; p. 434.
Vessel, Submarine. A. J. Griffin. No. 958,742; May 24; Sp. p. 5051; Gaz. vol. 154; p. 853.
Vessels, Apparatus for locating sunken. G. B. Lea Quee. No. 957,222; May 10; Sp. p. 1570; Gaz. vol. 154; p. 277.
Vessels, Device for determining the metacentric height of. E. Tate and J. M. Goodall. No. 958,192; May 17; Sp. p. 3797; Gaz. vol. 154; p. 642.
Vest-corner stiffener. C. D. Clements. No. 958,093; May 17; Sp. p. 3595; Gaz. vol. 154; p. 606.
Vibrator, Electric. S. W. Moon. No. 957,982; May 17; Sp. p. 3217; Gaz. vol. 154; p. 566.
Vibrator for induction-coils. B. L. Lawton. No. 958,509; May 17; Sp. p. 4578; Gaz. vol. 154; p. 751.
Violin. J. A. Martin. No. 958,146; May 17; Sp. p. 3703; Gaz. vol. 154; p. 625.
Violin-bow. F. Della Torre. No. 958,784; May 24; Sp. p. 5151; Gaz. vol. 154; p. 868.
Violins and similar stringed musical instruments, Keyed finger-board for. A. T. John. No. 957,681; May 10; Sp. p. 2510; Gaz. vol. 154; p. 434.
Vise. E. C. Stearns. No. 957,520; May 10; Sp. p. 2190; Gaz. vol. 154; p. 378.
Vise, Bench-. J. R. Long. No. 958,658; May 17; Sp. p. 4866; Gaz. vol. 154; p. 799.
Vise, Bench-. J. R. Long. No. 958,659; May 17; Sp. p. 4867; Gaz. vol. 154; p. 799.
Vise, Door-fitting. C. E. Rose. No. 959,264; May 24; Sp. p. 6165; Gaz. vol. 154; p. 1031.
Vise, Miter-clamp. H. B. Depworth. No. 960,159; May 31; Sp. p. 8077; Gaz. vol. 154; p. 1358.
Volume regulator and indicator. F. L. Cross. No. 958,726; May 24; Sp. p. 5008; Gaz. vol. 154; p. 848.
Voting-machine. W. Glenn. No. 957,326; May 10; Sp. p. 1795; Gaz. vol. 154; p. 314.
Voting-machine. G. Johnson. No. 960,020; May 31; Sp. p. 7809; Gaz. vol. 154; p. 1318.
Voting-machine. J. McTammany. No. 960,034; May 31; Sp. p. 7851; Gaz. vol. 154; p. 1318.
Wagon-body. F. F. Groff. No. 959,855; May 31; Sp. p. 7406; Gaz. vol. 154; p. 1255.
Wagon, Dump-. W. S. Coates. No. 960,241; May 31; Sp. p. 8248; Gaz. vol. 154; p. 1388.
Wagon-jack. F. J. Feldt. No. 956,631; May 3; Sp. p. 263; Gaz. vol. 154; p. 44.
Wagon-jack. M. G. Colby. No. 957,308; May 10; Sp. p. 1754; Gaz. vol. 154; p. 307.
Wagon-jack. S. L. Porn. No. 959,255; May 24; Sp. p. 6151; Gaz. vol. 154; p. 1028.
Wagon jack or elevator. A. T. Adams. No. 956,507; May 3; Sp. p. 1; Gaz. vol. 154; p. 3.
Wagon-rack, Adjustable. J. W. Brown. No. 960,069; May 31; Sp. p. 7920; Gaz. vol. 154; p. 1330.
Wagon-rack, Detachable. J. Weber. No. 957,586; May 10; Sp. p. 2305; Gaz. vol. 154; p. 400.
Wagon-reach adjuster. W. P. Dunlap. No. 959,483; May 31; Sp. p. 6619; Gaz. vol. 154; p. 1129.
Wagon running-gear. E. Buswell and T. Cascaden, Jr. No. 956,798; May 3; Sp. p. 634; Gaz. vol. 154; p. 101.
Wagon-seat fastener. L. M. Lattimore. No. 959,361; May 24; Sp. p. 6357; Gaz. vol. 154; p. 1063.
Wagon, Tank-. W. and A. M. Graver. No. 960,165; May 31; Sp. p. 8083; Gaz. vol. 154; p. 1360.
Wagons, Safety line-hitch for. M. Johnston. No. 956,581; May 3; Sp. p. 160; Gaz. vol. 154; p. 28.
Wall, Heat-insulating. C. J. Coleman. No. 958,095; May 17; Sp. p. 3598; Gaz. vol. 154; p. 607.
Wall-tie. L. H. Selden. No. 960,043; May 31; Sp. p. 7868; Gaz. vol. 154; p. 1321.
Walls, Apparatus for building retaining-. F. M. Talbot. No. 957,521; May 10; Sp. p. 2190; Gaz. vol. 154; p. 378.
Wardrobes, Garment-supporting slide for. C. L. Frost. No. 956,696; May 3; Sp. p. 433; Gaz. vol. 154; p. 68.
Warp drying-machine, Sized-. G. Masurel. No. 959,570; May 31; Sp. p. 6814; Gaz. vol. 154; p. 1160.
Washbench. J. I. Harrington. No. 957,880; May 17; Sp. p. 2928; Gaz. vol. 154; p. 530.
Washboard. J. Sternad. No. 957,011; May 3; Sp. p. 1112; Gaz. vol. 154; p. 175.
Washboard. D. Stein. No. 957,122; May 3; Sp. p. 1327; Gaz. vol. 154; p. 212.
Washer: *See* Dish-washer; Lock-washer; Vegetable-washer.
Washer and gasket cutter. J. A. Rose. No. 958,941; May 24; Sp. p. 5502; Gaz. vol. 154; p. 923.
Washing-machine. W. H. Wyman. No. 957,024; May 3; Sp. p. 1140; Gaz. vol. 154; p. 180.
Washing-machine. W. H. Preston. No. 957,475; May 10; Sp. p. 2093; Gaz. vol. 154; p. 363.
Washing-machine. J. F. and W. P. Burkholder. No. 959,992; May 31; Sp. p. 7730; Gaz. vol. 154; p. 1302.
Washing-machine and boiler, Combined. M. McKnen. No. 957,301; May 10; Sp. p. 1868; Gaz. vol. 154; p. 325.
Washing-machine gearing. H. L. Staley. No. 958,189; May 17; Sp. p. 3787; Gaz. vol. 154; p. 640.
Washing-machine gearing. O. H. Watkins. No. 958,452; May 17; Sp. p. 4473; Gaz. vol. 154; p. 732.
Washing-machines and other containers, Hasp-handle for. J. P. Holtzhouser. No. 958,745; May 24; Sp. p. 5058; Gaz. vol. 154; p. 854.
Watch and clock center-friction. F. Wehinger. No. 958,987; May 24; Sp. p. 5590; Gaz. vol. 154; p. 930.
Watch maker's and repairer's tool. E. N. Mann. No. 957,228; May 10; Sp. p. 1583; Gaz. vol. 154; p. 279.
Watch, Repeating. H. M. and O. Reiner. No. 959,165; May 24; Sp. p. 5972; Gaz. vol. 154; p. 998.
Watch-stem movement. G. W. Grisdale, Jr. No. 960,166; May 31; Sp. p. 8001; Gaz. vol. 154; p. 1361.
Water-closet. W. G. Miller. No. 956,988; May 3; Sp. p. 1065; Gaz. vol. 154; p. 167.
Water-gage. F. Baker. No. 958,072; May 17; Sp. p. 3559; Gaz. vol. 154; p. 599.
Water-heater. H. N. Moody. No. 956,989; May 3; Sp. p. 1066; Gaz. vol. 154; p. 167.
Water-heater. H. T. Raser. No. 957,375; May 10; Sp. p. 1896; Gaz. vol. 154; p. 329.
Water-heater. W. T. Hicks. No. 958,499; May 17; Sp. p. 4559; Gaz. vol. 154; p. 747.
Water-heater. T. A. Steller. No. 960,123; May 31; Sp. p. 8020; Gaz. vol. 154; p. 1347.
Water heater and purifier. H. White. No. 958,845; May 24; Sp. p. 5293; Gaz. vol. 154; p. 892.
Water-heater, Automatic. A. E. Miller. No. 959,573; May 31; Sp. p. 6819; Gaz. vol. 154; p. 1161.
Water-heater, Electrical. H. D. Wood, Jr. No. 958,846; May 24; Sp. p. 5296; Gaz. vol. 154; p. 892.
Water-heater, Instantaneous. S. Tache. No. 958,563; May 17; Sp. p. 4682; Gaz. vol. 154; p. 760.
Water-heater, Stovepipe. J. F. and J. F. Busey, Jr. No. 956,034; May 3; Sp. p. 936; Gaz. vol. 154; p. 149.
Water-meter. O. F. Kadow. No. 958,408; May 17; Sp. p. 4381; Gaz. vol. 154; p. 716.
Water-motor. H. W. Mezger. No. 958,152; May 17; Sp. p. 3712; Gaz. vol. 154; p. 627.
Water-motor. J. N. Hardy. No. 958,492; May 17; Sp. p. 4549; Gaz. vol. 154; p. 746.
Water-motor. H. T. Farnsworth. No. 959,491; May 31; Sp. p. 6642; Gaz. vol. 154; p. 1132.
Water or solution from solids, such as slimy ores, pulp, and the like, Means for separating. W. L. Holme, L. M. Green, and J. S. Pattinson. No. 957,775; May 10; Sp. p. 2705; Gaz. vol. 154; p. 464.
Water-purifier, Centrifugal. W. K. Richardson. No. 958,770; May 24; Sp. p. 5107; Gaz. vol. 154; p. 863.
Water, Purifying and sterilizing. A. Baudry. No. 958,848; May 24; Sp. p. 5303; Gaz. vol. 154; p. 893.
Water, Purifying or clarifying. W. K. Richardson. No. 958,769; May 24; Sp. p. 5105; Gaz. vol. 154; p. 863.
Water-softening apparatus. H. Russell. No. 958,831; May 24; Sp. p. 5257; Gaz. vol. 154; p. 886.
Water-softening apparatus. H. Russell. No. 958,832; May 24; Sp. p. 5262; Gaz. vol. 154; p. 887.
Water-wheel. R. P. Robinson. No. 957,099; May 3; Sp. p. 1286; Gaz. vol. 154; p. 204.
Water-wheel gates, Apparatus for operating. W. W. White. No. 959,280; May 24; Sp. p. 6200; Gaz. vol. 154; p. 1036.
Watering-trough. T. C. Pereboom. No. 958,528; May 17; Sp. p. 4616; Gaz. vol. 154; p. 758.
Waterproof fabric. G. Streat. No. 959,178; May 24; Sp. p. 5997; Gaz. vol. 154; p. 1002.
Wave-motor. J. M. Butler. No. 956,796; May 3; Sp. p. 634; Gaz. vol. 154; p. 101.
Wave or current motor. J. E. Bennett. No. 958,467; May 17; Sp. p. 4502; Gaz. vol. 154; p. 737.
Wave-power. S. B. Goff. No. 959,214; May 24; Sp. p. 6064; Gaz. vol. 154; p. 1014.
Wave-receiving device. F. G. Sargent. No. 959,967; May 31; Sp. p. 7678; Gaz. vol. 154; p. 1294.

Weather-strip. C. H. Faulkner. No. 957,549; May 10; Sp. p. 2247; Gaz. vol. 154; p. 389.
Weather-strip, Metallic. A. E. Gould. No. 956,702; May 3; Sp. p. 441; Gaz. vol. 154; p. 70.
Weaving, Pattern mechanism for. G. Beaumont. No. 956,510; May 3; Sp. p. 9; Gaz. vol. 154; p. 4.
Weaving pile fabrics. J. Buckler. No. 959,306; May 24; Sp. p. 6247; Gaz. vol. 154; p. 1045.
Wedge-expanding device. F. C. Krüger. No. 956,712; May 3; Sp. p. 461; Gaz. vol. 154; p. 74.
Wedge, Handle-fastening. T. Hooker. No. 959,862; May 31; Sp. p. 7430; Gaz. vol. 154; p. 1257.
Weed-hook. C. P. Thompson. No. 956,653; May 3; Sp. p. 320; Gaz. vol. 154; p. 52.
Weed-hook, Sectional. H. E. Woodin. No. 958,055; May 17; Sp. p. 3470; Gaz. vol. 154; p. 594.
Weeder. H. H. Qua. No. 959,604; May 31; Sp. p. 6878; Gaz. vol. 154; p. 1170.
Weighing device, Spring-scale. H. B. Puffenberger. No. 958,172; May 17; Sp. p. 3759; Gaz. vol. 154; p. 635.
Weighing-machine, Automatic. G. Hoepner. No. 956,853; May 3; Sp. p. 772; Gaz. vol. 154; p. 122.
Weighing-machine, Automatic. H. Richardson. No. 960,108; May 31; Sp. p. 7987; Gaz. vol. 154; p. 1342.
Weighing machines, Receptacle for liquid-. H. W. Meyer. No. 956,775; May 3; Sp. p. 591; Gaz. vol. 154; p. 94.
Weighing-scoop. D. J. Clupka. No. 956,626; May 3; Sp. p. 256; Gaz. vol. 154; p. 43.
Welding-machine, Electric. A. E. Buchenberg. No. 959,305; May 24; Sp. p. 6245; Gaz. vol. 154; p. 1045.
Welding thin tubing. H. Lemp. No. 956,984; May 3; Sp. p. 1059; Gaz. vol. 154; p. 166.
Well-casing-repairing tool. J. C. Mettler. No. 958,517; May 17; Sp. p. 4598; Gaz. vol. 154; p. 754.
Well mechanism. M. E. Layne. No. 957,074; May 17; Sp. p. 3201; Gaz. vol. 154; p. 564.
Well strainer, Oil and water. H. R. Decker. No. 958,100; May 17; Sp. p. 3611; Gaz. vol. 154; p. 608.
Well-tools, &c., Joint for. C. M. Hester. No. 959,341; May 24; Sp. p. 6323; Gaz. vol. 154; p. 1057.
Well-tube holder. L. I. Preston. No. 957,091; May 3; Sp. p. 1274; Gaz. vol. 154; p. 202.
Well-tubes, Unscrewing mechanism for. H. G. Johnston. No. 959,351; May 24; Sp. p. 6341; Gaz. vol. 154; p. 1060.
Wells, Electric heater for oil-. O. R. Linquest. No. 957,785; May 10; Sp. p. 2732; Gaz. vol. 154; p. 468.
Welt-beveling machine. W. B. Keighley. No. 959,223; May 24; Sp. p. 6086; Gaz. vol. 154; p. 1017.
Welt laying and attaching machine. G. T. McLeod. No. 957,987; May 17; Sp. p. 3234; Gaz. vol. 154; p. 568.
Wheel: *See* Automobile-wheel; Car-wheel; Cushion-wheel; Fifth-wheel; Fly-wheel; Gapped wheel; Polishing-wheel; Printing-wheel; Resilient wheel; Spring-wheel; Sprocket-wheel; Trolley-wheel; Vehicle-wheel; Water-wheel.
Wheel. J. L. Jackson. No. 959,058; May 24; Sp. p. 5728; Gaz. vol. 154; p. 962.
Wheel-cutting machine. M. Pedersen. No. 959,588; May 31; Sp. p. 6847; Gaz. vol. 154; p. 1165.
Wheel-guard. J. M. Yount. No. 958,791; May 24; Sp. p. 5172; Gaz. vol. 154; p. 871.
Wheel lubricator, Vehicle-. W. Morris. No. 957,079; May 3; Sp. p. 1247; Gaz. vol. 154; p. 198.
Wheel-rim, Demountable. H. J. Mortensen. No. 957,080; May 3; Sp. p. 1248; Gaz. vol. 154; p. 198.
Wheel rim, Vehicle-. W. E. Greer. No. 959,732; May 31; Sp. p. 7143; Gaz. vol. 154; p. 1212.
Wheels in divided metallic molds, Apparatus for producing. C. Grunwald. No. 958,635; May 17; Sp. p. 4822; Gaz. vol. 154; p. 792.
Whiffletree. W. V. Glat. No. 957,551; May 10; Sp. p. 2250; Gaz. vol. 154; p. 389.
Whiffletree. J. J. Bunting. No. 958,089; May 17; Sp. p. 3588; Gaz. vol. 154; p. 605.
Whiffletree-hook. T. E. Ewer. No. 956,630; May 3; Sp. p. 262; Gaz. vol. 154; p. 44.
Whip-label guard. N. F. Alston. No. 959,686; May 31; Sp. p. 7047; Gaz. vol. 154; p. 1197.
Whip-socket lock. G. Gabel. No. 959,501; May 31; Sp. p. 6665; Gaz. vol. 154; p. 1136.
Whistle, siren, or the like. L. A. Delpeuch. No. 957,661; May 10; Sp. p. 2469; Gaz. vol. 154; p. 363.
Willow-stripping machine. G. S. and C. J. Herrick. No. 959,741; May 31; Sp. p. 7157; Gaz. vol. 154; p. 1215.
Wind-shield. E. J. Montigny. No. 959,374; May 24; Sp. p. 6384; Gaz. vol. 154; p. 1067.
Windage losses, Means for decreasing. J. E. Noeggerath. No. 957,248; May 10; Sp. p. 1609; Gaz. vol. 154; p. 284.
Winder, Skein-. V. Lafont. No. 957,427; May 10; Sp. p. 2009; Gaz. vol. 154; p. 347.
Window. W. L. Bliss. No. 957,728; May 10; Sp. p. 2601; Gaz. vol. 154; p. 450.
Window. A. F. Cisek. No. 958,506; May 17; Sp. p. 4747; Gaz. vol. 154; p. 780.
Window. I. A. Boyd. No. 959,980; May 31; Sp. p. 7725; Gaz. vol. 154; p. 1302.
Window construction. E. H. Lunken and C. M. Conklin. No. 957,693; May 10; Sp. p. 2532; Gaz. vol. 154; p. 438.
Window-frame. W. B. Harris. No. 957,881; May 17; Sp. p. 2929; Gaz. vol. 154; p. 530.
Window-lock. J. F. Sydow. No. 957,124; May 3; Sp. p. 1330; Gaz. vol. 154; p. 212.
Window, Pivoted sliding. M. Häberle. No. 956,527; May 3; Sp. p. 37; Gaz. vol. 154; p. 9.
Window, Reversible. D. E. Hipolito. No. 958,962; May 24; Sp. p. 5541; Gaz. vol. 154; p. 931.
Window-screen. P. Ried. No. 957,906; May 17; Sp. p. 2995; Gaz. vol. 154; p. 539.
Window-screen. H. Higgin. No. 959,859; May 31; Sp. p. 7411; Gaz. vol. 154; p. 1256.
Window-wiping device. C. A. Kellogg. No. 956,770; May 3; Sp. p. 581; Gaz. vol. 154; p. 92.
Windows, Dust and air guard for. O. C. Call. No. 957,493; May 10; Sp. p. 2134; Gaz. vol. 154; p. 369.
Wire-bending machine. W. H. Parker. No. 957,245; May 10; Sp. p. 1612; Gaz. vol. 154; p. 285.
Wire-clip. O. A. Belliveau. No. 957,485; May 10; Sp. p. 2111; Gaz. vol. 154; p. 366.
Wire-drawing dies, Cooling attachment for. J. A. Horton. No. 957,464; May 10; Sp. p. 2072; Gaz. vol. 154; p. 359.
Wire-drawing machine. E. H. Carroll. No. 956,885; May 3; Sp. p. 842; Gaz. vol. 154; p. 133.
Wire-drawing machine and uncoiling appliance therefor. J. A. Horton. No. 960,016; May 31; Sp. p. 7791; Gaz. vol. 154; p. 1311.
Wire-drawing machinery. A. Rathbone. No. 957,093; May 3; Sp. p. 1277; Gaz. vol. 154; p. 202.
Wire-fabric-making machine. W. N. Parrish. No. 958,888; May 24; Sp. p. 5401; Gaz. vol. 154; p. 906.
Wire-fastener. J. Life. No. 959,766; May 31; Sp. p. 7210; Gaz. vol. 154; p. 1224.
Wire-netting-weaving machine. C. E. Begg. No. 957,643; May 10; Sp. p. 2426; Gaz. vol. 154; p. 420.
Wire-stretcher. B. B. Bobb. No. 959,988; May 31; Sp. p. 7724; Gaz. vol. 154; p. 1301.
Wire structure. T. G. Mellish and M. W. Gatch. No. 957,619; May 10; Sp. p. 2377; Gaz. vol. 154; p. 412.
Wire-twisting machine. J. F. Foley. No. 960,162; May 31; Sp. p. 8084; Gaz. vol. 154; p. 1359.
Wood-bending machine. J. B. Cameron. No. 959,993; May 31; Sp. p. 7732; Gaz. vol. 154; p. 1303.
Wood, Extracting products from. F. Pope. No. 959,599; May 31; Sp. p. 6868; Gaz. vol. 154; p. 1169.
Wood, Preserving. J. Gerlache. No. 959,505; May 31; Sp. p. 6683; Gaz. vol. 154; p. 1137.
Wood-pulp, Machine to manufacture soda and sulfite. P. B. Palmer. No. 956,728; May 3; Sp. p. 493; Gaz. vol. 154; p. 79.
Woodworking-machine. A. B. Norris. No. 959,583; May 31; Sp. p. 6834; Gaz. vol. 154; p. 1163.
Wrecking apparatus. J. M. W. Hassing and J. V. Fitzsimmons. No. 959,526; May 31; Sp. p. 6717; Gaz. vol. 154; p. 1143.
Wrench: *See* Adjustable wrench; Casing-wrench; Quick-acting wrench; Quick-adjusting wrench; Ratchet-wrench.
Wrench. S. D. and T. F. Ator. No. 956,924; May 3; Sp. p. 922; Gaz. vol. 154; p. 146.
Wrench. R. W. Armstrong. No. 957,726; May 10; Sp. p. 2594; Gaz. vol. 154; p. 449.
Wrench. L. C. Lawrence. No. 957,778; May 10; Sp. p. 2717; Gaz. vol. 154; p. 465.
Wrench. F. Schneider. No. 959,029; May 24; Sp. p. 5669; Gaz. vol. 154; p. 953.
Wrench. W. Ducharme. No. 959,322; May 24; Sp. p. 6278; Gaz. vol. 154; p. 1050.
Wrench. F. Hachmann. No. 959,931; May 31; Sp. p. 7585; Gaz. vol. 154; p. 1281.
Wrench structure. C. B. Grim. No. 959,056; May 24; Sp. p. 5725; Gaz. vol. 154; p. 962.
Wringer: *See* Mop-wringer.
Writing-machine. E. B. Hess. No. 958,497; May 17; Sp. p. 4556; Gaz. vol. 154; p. 747.
Writing machine, Check-. G. M. Barker. No. 957,595; May 10; Sp. p. 2321; Gaz. vol. 154; p. 403.
X-ray tube. H. Green. No. 958,488; May 17; Sp. p. 4541; Gaz. vol. 154; p. 744.
Yarn and the like, Apparatus for opening and separating threads of. J. Keith and W. W. Wardle. No. 957,610; May 10; Sp. p. 2350; Gaz. vol. 154; p. 409.
Yoke center, Neck-. G. A. Lambert. No. 958,141; May 17; Sp. p. 3692; Gaz. vol. 154; p. 624.
Yoke, Detachable neck-. J. Barry, Jr. No. 957,179; May 10; Sp. p. 1463; Gaz. vol. 154; p. 261.
Yoke, Neck-. G. W. Frame. No. 956,634; May 3; Sp. p. 273; Gaz. vol. 154; p. 45.

ALPHABETICAL LIST OF DESIGNS.

Automobile-body. E. Gruenfeldt. No. 40,681; May 3; Gaz. vol. 154; p. 236.
Badge. J. De Freese. No. 40,683; May 10; Gaz. vol. 154; p. 495.
Badge or similar article. J. J. Didcoct. No. 40,709; May 31; Gaz. vol. 154; p. 1390.
Buckle. J. R. Smith. No. 40,697; May 17; Gaz. vol. 154; p. 820.
Button. A. S. Rollings. No. 40,705; May 24; Gaz. vol. 154; p. 1090.
Casket handle-plate. F. K. Allen. Nos 40,715–16; May 31; Gaz. vol. 154; p. 1391.
Chair, Barber's. E. E. Koken. No. 40,679; May 3; Gaz. vol. 154; p. 236.
Cigar or cigarette holder. A. Q. Walsh. No. 40,677; May 3; Gaz. vol. 154; p. 235.
Clothes-rack. C. D. Golden. Nos. 40,688–9; May 10; Gaz. vol. 154; pp. 496–7.
Cut-glass dish. A. E. Meier. No. 40,671; May 3; Gaz. vol. 154; p. 234.
Drinking vessel. A Gredelue. Nos. 40,673–6; May 4; Gaz. vol. 154; pp. 234–5.
Fabric, Textile. D. E. Bonner. No. 40,691; May 10; Gaz. vol. 154; p. 497.
Fork. A. M. Latham. No. 40,670; May 3; Gaz. vol. 154; p. 234.
Garments, Ornament for. A. Ireland. No. 40,682; May 3; Gaz. vol. 154; p. 236.
Glass vessel. J. J. Heedy. No. 40,672; May 3; Gaz. vol. 154; p. 234.
Glass vessel. A. J. Sanford. No. 40,686; May 10; Gaz. vol. 154; p. 496.
Goblet or similar article. J. H. Venon. No. 40,710; May 31; Gaz. vol. 154; p. 1390.
Horn. V. Pascucci. No. 40,698; May 17; Gaz. vol. 154; p. 821.
Jewel-setting for finger-rings or similar articles. M. C. Meyer. No. 40,702; May 24; Gaz. vol. 154; p. 1089.
Lace-paper mat. W. W. Bevan. Nos. 40,707–8; May 24; Gaz. vol. 154; p. 1090.
Lamp-shade. H. McAfee. No. 40,712; May 31; Gaz. vol. 154; p. 1391.
Light shade, Artificial-. C. E. Perring. No. 40,706; May 24; Gaz. vol. 154; p. 1090.
Piano-case. A. C. Abramson. No. 40,678; May 3; Gaz. vol. 154; p. 235.
Plate or similar article. J. H. Venon. No. 40,711; May 31; Gaz. vol. 154; p. 1390.
Prescription-case. C. F. Kurs. No. 40,700; May 17; Gaz. vol. 154; p. 821.
Range, Gas-. G. M. Koke. No. 40,701; May 17; Gaz. vol. 154; p. 821.
Rug. A. Petzold. No. 40,692; May 10; Gaz. vol. 154; p. 497.
Rug. A. Petzold. No. 40,719; May 31; Gaz. vol. 154; p. 1392.
Shade-reflector or similar article. O. A. Mygatt. Nos. 40,713–14; May 31; Gaz. vol. 154; p. 1391.
Spoon. G. Strohbaker. No. 40,684; May 10; Gaz. vol. 154; p. 496.
Spoon. J. Clulee. No. 40,703; May 24; Gaz. vol. 154; p. 1090.
Spoon, fork, or similar article. R. R. Kintz. No. 40,704; May 24; Gaz. vol. 154; p. 1090.
Spoon, Olive-. M. Burgunder. No. 40,696; May 17; Gaz. vol. 154; p. 820.
Spoons, forks, and similar articles, Handle for. C. Osborne. No. 40,660; May 3; Gaz. vol. 154; p. 233.
Spoons, forks, or similar articles, Handle for. W. C. Codman. No. 40,685; May 10; Gaz. vol. 154; p. 496.
Stone, Cut. E. G. H. Schenck. No. 40,693; May 17; Gaz. vol. 154; p. 820.
Stove, Heating-. J. B. Howard. No. 40,680; May 3; Gaz. vol. 154; p. 236.
Stove top-plate and oven, Gas-. J. G. Harvey. No. 40,690; May 10; Gaz. vol. 154; p. 497.
Talking-machine cabinet. M. Keen. No. 40,699; May 17; Gaz. vol. 154; p. 821.
Toilet-rack. C. D. Golden. No. 40,687; May 10; Gaz. vol. 154; p. 496.
Type, Font of. W. A. Schraubstadter. No. 40,718; May 31; Gaz. vol. 154; p. 1392.
Watch bow-socket. S. Y. Ball. No. 40,668; May 3; Gaz. vol. 154; p. 233.
Watch-charm. R. A. Pohlmann. No. 40,694; May 17; Gaz. vol. 154; p. 820.
Watchcase. A. M. Bissig. No. 40,695; May 17; Gaz. vol. 154; p. 820.
Wheel, Hand-. W. Nelson. No. 40,717; May 31; Gaz. vol. 154; p. 1391.

ALPHABETICAL LIST OF TRADE-MARKS.

Ale. True W. Jones Brewing Company. No. 77,851; May 10; Gaz. vol. 154; p. 511.
Ale and syrup therefor, Ginger-. Parker-Browne Company. No. 77,958; May 17; Gaz. vol. 154; p. 832.
Ale, beer, porter, and stout. T. B. Hall & Company. No. 77,846; May 10; Gaz. vol. 154; p. 510.
Anesthetics, Local. Miller and Blake Chemical Co. No. 78,117; May 31; Gaz. vol. 154; p. 1405.
Antiseptic mouth-wash. Chemische Werke vorm. Dr. Heinrich Byk. No. 78,065; May 31; Gaz. vol. 154; p. 1403.
Apple and grape juice. American Fruit Product Co. No. 78,052; May 31; Gaz. vol. 154; p. 1403.
Asbestos products, Certain. United States Asbestos Co. No. 78,050; May 24; Gaz. vol. 154; p. 1105.
Automobiles. G. R. Lodge. No. 77,874; May 10; Gaz. vol. 154; p. 511.
Automobiles. Société des Automobiles Brasier. No. 78,281; May 31; Gaz. vol. 154; p. 1409.
Automobiles, cycles, and certain named parts. Schweinfurter Präcisions-Kugel-Lager-Werke, Fichtel & Sachs. No. 77,886; May 10; Gaz. vol. 154; p. 512.
Baking-powder. Oliver-Finnie Co. No. 77,753; May 3; Gaz. vol. 154; p. 248.
Baking-powder and baking-soda. St. Louis Coffee & Spice Mills. No. 78,214; May 31; Gaz. vol. 154; p. 1407.
Banjos. The Rudolph Wurlitzer Co. No. 77,760; May 3; Gaz. vol. 154; p. 249.
Battery cells, Dry-. Anhydrous Battery Company. No. 77,697; May 3; Gaz. vol. 154; p. 247.
Beef and bacon, Sliced. C. E. Nessle Packing Company. No. 77,824; May 10; Gaz. vol. 154; p. 510.
Beer. Los Angeles Brewing Co. No. 77,932; May 17; Gaz. vol. 154; p. 832.
Beer, Bottled. Millstadt Brewery Company. No. 77,820; May 10; Gaz. vol. 154; p. 510.
Belt-lap. New York Leather Belting Co. No. 78,266; May 31; Gaz. vol. 154; p. 1409.
Belts, Abdominal. R. E. Moore. No. 77,746; May 3; Gaz. vol. 154; p. 248.
Belting, Stitched canvas. W. S. Langford. No. 78,249; May 31; Gaz. vol. 154; p. 1408.
Belting, Stitched canvas and woven. Carton Belting Company. No. 77,704; May 3; Gaz. vol. 154; p. 247.
Beverages, Certain alcoholic. M. B. Foster & Sons. No. 78,040; May 24; Gaz. vol. 154; p. 1104.
Beverages, Certain alcoholic. G. Janssen. No. 78,242; May 31; Gaz. vol. 154; p. 1408.
Biscuits. Iten Biscuit Co. No. 78,241; May 31; Gaz. vol. 154; p. 1408.
Bitumen or asphaltum. John S. Lamson and Brother. No. 77,735; May 3; Gaz. vol. 154; p. 248.
Boiler steam condensers, evaporators, and preheaters. G. & J. Weir. No. 77,805; May 10; Gaz. vol. 154; p. 509.
Boiler steam condensers, evaporators, and preheaters. G. & J. Weir. No. 78,144; May 31; Gaz. vol. 154; p. 1405.
Books, Account-. Midland Publishing Co. No. 78,116; May 31; Gaz. vol. 154; p. 1404.
Boots and shoes. D. Sommers. No. 77,769; May 3; Gaz. vol. 154; p. 249.
Boots and shoes, Leather. Northern Shoe Co. No. 77,749; May 3; Gaz. vol. 154; p. 248.
Boots and shoes, Leather. The Plant-Butler Co. No. 77,820; May 10; Gaz. vol. 154; p. 510.
Boots and shoes, Leather. Hamburger Bros. No. 78,090; May 31; Gaz. vol. 154; p. 1404.
Boots and shoes, Leather. W. J. Martinez & Bros. No. 78,113; May 31; Gaz. vol. 154; p. 1404.
Boots and shoes, Leather. J. E. & W. G. Wesson. No. 78,145; May 31; Gaz. vol. 154; p. 1406.
Boots and shoes, Leather. R. L. Summers. No. 78,216; May 31; Gaz. vol. 154; p. 1407.
Brandy. M. Weiner. No. 78,294; May 31; Gaz. vol. 154; p. 1409.
Brandy, Grape. Italian Swiss Colony. No. 78,182; May 31; Gaz. vol. 154; p. 1406.
Brooders. Park & Pollard Company. No. 78,124; May 31; Gaz. vol. 154; p. 1405.
Brooms. American Broom Mfg. Co. No. 77,978; May 24; Gaz. vol. 154; p. 1103.
Brooms, dust-brushes, and dusters. M. Oslek. No. 77,952; May 17; Gaz. vol. 154; p. 832.
Brushes. Alfred H. Smith Co. No. 78,210; May 31; Gaz. vol. 154; p. 1407.
Brushes, Tooth-. A. P. Baumann. No. 77,980; May 24; Gaz. vol. 154; p. 1103.
Butter. J. R. Tichenor. No. 78,029; May 24; Gaz. vol. 154; p. 1104.
Button molds and rims. Independent Button & Machine Company. No. 78,007; May 24; Gaz. vol. 154; p. 1104.
Cakes and biscuits. W. B. Van Doesburg. No. 77,888; May 10; Gaz. vol. 154; p. 512.
Candies. Advance Novelty Candy Manufacturing Company. No. 77,890; May 17; Gaz. vol. 154; p. 831.
Candies. Colby Candy Co. No. 77,984; May 24; Gaz. vol. 154; p. 1103.
Candy. Lippe-Murbach Company of Baltimore City. No. 77,931; May 17; Gaz. vol. 154; p. 832.
Candy. National Candy Company. No. 78,018; May 24; Gaz. vol. 154; p. 1104.
Candies. The Will & Baumer Company. Nos. 78,149–51; May 31; Gaz. vol. 154; p. 1405.
Canned foods. J. W. Rider. No. 77,830; May 10; Gaz. vol. 154; p. 510.
Canned foods. L. Pickert Fish Co. No. 78,273; May 31; Gaz. vol. 154; p. 1409.
Canned fruits. Golden Gate Packing Company. No. 77,726; May 3; Gaz. vol. 154; p. 248.
Canned fruits. Hunt Brothers Company. No. 77,731; May 3; Gaz. vol. 154; p. 248.
Canned fruits and vegetables. E. W. Gates & Son Company. No. 77,796; May 10; Gaz. vol. 154; p. 509.
Canned fruits and vegetables. The Burt Olney Canning Company. No. 77,902; May 17; Gaz. vol. 154; p. 831.
Canned fruits and vegetables. Pratt-Low Preserving Company. No. 77,955; May 17; Gaz. vol. 154; p. 832.
Canned fruits and vegetables. W. R. Roach & Co. No. 78,028; May 24; Gaz. vol. 154; p. 1104.
Canned fruits and vegetables. Pratt-Low Preserving Company. No. 78,274; May 31; Gaz. vol. 154; p. 1409.
Canned fruits and vegetables. W. R. Roach & Co. No. 78,277; May 31; Gaz. vol. 154; p. 1409.
Canned fruits, vegetables, and oysters. D. E. Foote & Company. No. 77,989; May 24; Gaz. vol. 154; p. 1103.
Canned fruits, vegetables, baked beans, and oysters. D. E. Foote & Company. No. 77,990; May 24; Gaz. vol. 154; p. 1103.
Canned lye-hominy. J. W. Rider. No. 77,831; May 10; Gaz. vol. 154; p. 510.
Canned mushrooms. Steinhardter & Nordlinger. No. 77,843; May 10; Gaz. vol. 154; p. 510.
Canned oysters. Gibbs Preserving Company. Nos. 77,724–5; May 3; Gaz. vol. 154; p. 248.
Canned oysters. Ruge Bros. Canning Company. No. 77,832; May 10; Gaz. vol. 154; p. 510.
Canned oysters. Miller Bros. & Co. No. 78,017; May 24; Gaz. vol. 154; p. 1104.
Canned oysters. Ruge Bros. Canning Company. No. 78,047; May 24; Gaz. vol. 154; p. 1105.
Canned oysters. Ruge Bros. Canning Company. No. 78,208; May 31; Gaz. vol. 154; p. 1407.
Canned salmon. John F. Laila Company. Nos. 77,812–13; May 10; Gaz. vol. 154; pp. 509–10.
Canned salmon. North Pacific Trading & Packing Co. No. 77,948; May 17; Gaz. vol. 154; p. 832.
Canned salmon. Union Fishermen's Co-op. Pack'g Co. No. 77,967; May 17; Gaz. vol. 154; p. 833.
Canned salmon. Alaska Packers Association. No. 77,976; May 24; Gaz. vol. 154; p. 1103.
Canned sardines. MacMonnies & Von Elm. No. 77,934; May 17; Gaz. vol. 154; p. 832.
Canned sardines. P. Duff & Sons. No. 78,292; May 31; Gaz. vol. 154; p. 1409.
Canned sauer-kraut. J. W. Rider. No. 77,958; May 17; Gaz. vol. 154; p. 833.
Canned vegetables. G. Johnson. Nos. 78,243–5; May 31; Gaz. vol. 154; p. 1408.
Capsules, Vaginal. Everhart & Company. No. 78,076; May 31; Gaz. vol. 154; p. 1403.
Cards, Pinochle score-. H. Fuld. No. 77,869; May 10; Gaz. vol. 154; p. 511.
Cartons. The Peltason Company. No. 77,881; May 10; Gaz. vol. 154; p. 512.
Casters, Furniture-. H. M. Alleyn. No. 77,891; May 17; Gaz. vol. 154; p. 831.
Casters, Furniture-. Diamond Steel Truck Co. No. 78,168; May 31; Gaz. vol. 154; p. 1406.
Cement, Adhesive. United Shoe Machinery Company. No. 77,969; May 17; Gaz. vol. 154; p. 833.
Cement, Fire and water proof. P. R. De Vore. No. 77,710; May 3; Gaz. vol. 154; p. 247.
Chains, Iron and steel. Mill & Mine Supply Co. No. 78,259; May 31; Gaz. vol. 154; p. 1408.
Cheese, Cream-. F. B. Lyon. No. 77,933; May 17; Gaz. vol. 154; p. 832.
China, Table-. Ben Strauss Company. No. 78,048; May 24; Gaz. vol. 154; p. 1105.
Chinaware. J. J. Miller. No. 78,260; May 31; Gaz. vol. 154; p. 1408.
Chocolates. Ingersoll Candy Company. No. 78,179; May 31; Gaz. vol. 154; p. 1406.
Cigarette-paper. Braunstein & Cie. No. 77,900; May 17; Gaz. vol. 154; p. 831.

Cigarettes. W. P. Muller. No. 77,942; May 17; Gaz. vol. 154; p. 832.
Cigars. San Telmo Cigar Mfg. Co. Nos 77,765–7; May 3; Gaz. vol. 154; p. 249.
Cigars. J. C. Hammer. No. 78,230; May 31; Gaz. vol. 154; p. 1408.
Cigars. S. Levy & Company. No. 78,250; May 31; Gaz. vol. 154; p. 1408.
Cigars. J. F. Wilcox. No. 78,290; May 31; Gaz. vol. 154; p. 1409.
Cigars and smoking-tobacco. A. De Marco. No. 78,014; May 24; Gaz. vol. 154; p. 1104.
Cigars, cheroots, and cigarettes. Cayey-Caguas Tobacco Company. No. 77,791; May 10; Gaz. vol. 154; p. 509.
Clamps, Box safety-. E. C. Giardon. No. 77,994; May 24; Gaz. vol. 154; p. 1103.
Cleaning substances. Electric Compound Co. No. 77,910; May 17; Gaz. vol. 154; p. 831.
Cloaks and suits, Ladies'. L. Cohen & Co. No. 77,792; May 10; Gaz. vol. 154; p. 509.
Clocks and watches. The Western Clock Mfg. Co. Nos. 77,885–6; May 10; Gaz. vol. 154; p. 511.
Clocks and watches. The Western Clock Mfg. Co. No. 78,146; May 31; Gaz. vol. 154; p. 1405.
Clocks, Electric. Aktiebolaget L. M. Ericsson & Co. No. 77,783; May 10; Gaz. vol. 154; p. 509.
Clothes-pins. Oval Wood Dish Co. No. 77,950; May 17; Gaz. vol. 154; p. 832.
Clothing, Certain. Michaels, Stern & Co. No. 77,745; May 3; Gaz. vol. 154; p. 248.
Clothing, Certain. Rice-Stix Goods Company. No. 77,758; May 3; Gaz. vol. 154; p. 248.
Clothing, Certain. Cohn Goodman Company. No. 77,793; May 10; Gaz. vol. 154; p. 509.
Clothing, Certain. H. N. Palmer. No. 77,827; May 10; Gaz. vol. 154; p. 510.
Clothing, Certain. E. Leurent. No. 77,929; May 17; Gaz. vol. 154; p. 832.
Clothing, Certain. M. Goldenberg. No. 77,996; May 24; Gaz. vol. 154; p. 1103.
Clothing, Certain. M. Goldenberg. No. 78,086; May 31; Gaz. vol. 154; p. 1404.
Clothing, Certain. Susquehanna Silk Mills. No. 78,140; May 31; Gaz. vol. 154; p. 1405.
Clothing, Oiled. Western Oiled Clothing Co. No. 77,775; May 3; Gaz. vol. 154; p. 249.
Coal. W. D. Althouse. No. 78,156; May 31; Gaz. vol. 154; p. 1406.
Coal. The Snead & Meguire Coal Company. No. 78,211; May 31; Gaz. vol. 154; p. 1407.
Coal, Anthracite. W. G. Morton. No. 77,780; May 3; Gaz. vol. 154; p. 249.
Coal, Bituminous. National Coal Company. No. 78,194; May 31; Gaz. vol. 154; p. 1407.
Coats and overcoats. H. Freedman. No. 77,804; May 10; Gaz. vol. 154; p. 509.
Cocoa. Suchard, S. A. No. 77,966; May 17; Gaz. vol. 154; p. 833.
Coffee. The G. B. Farrington Company. No. 77,720; May 3; Gaz. vol. 154; p. 247.
Coffee. L. N. Ward. No. 77,859; May 10; Gaz. vol. 154; p. 511.
Coffee. The E. C. Harley Co. No. 78,001; May 24; Gaz. vol. 154; p. 1103.
Coffee. Hanley & Kinsella Coffee & Spice Company. No. 78,174; May 31; Gaz. vol. 154; p. 1406.
Coffee and chicory, Compound of. The Reily-Taylor Company. No. 77,957; May 17; Gaz. vol. 154; p. 833.
Coffee, Blended. Austin Nichols & Co. No. 78,035; May 24; Gaz. vol. 154; p. 1104.
Coffee-pots, Percolating. The New England Enameling Company. No. 77,748; May 3; Gaz. vol. 154; p. 248.
Coffee, Roasted. Steinwender-Stoffregen Coffee Co. No. 77,965; May 17; Gaz. vol. 154; p. 833.
Combs, hair-pins, barrettes, and bandeaux, Ladies'. J. L. Glauberg Co. No. 77,922; May 17; Gaz. vol. 154; p. 832.
Comforts. The Pittsburgh Dry Goods Company. No. 77,954; May 17; Gaz. vol. 154; p. 832.
Compound for certain purposes. A. Seidman. No. 78,134; May 31; Gaz. vol. 154; p. 1405.
Cooking utensils, Metallic. The Lockwood Manufacturing Co. No. 78,254; May 31; Gaz. vol. 154; p. 1408.
Copper, Sulfate of. Strawsons & Company. No. 78,139; May 31; Gaz. vol. 154; p. 1405.
Cork. T. D. Jorge. Nos. 77,781–2; May 3; Gaz. vol. 154; p. 249.
Corsets. Bay State Corset Co. No. 77,787; May 10; Gaz. vol. 154; p. 509.
Cotton duck. Consolidated Cotton Duck Company. No. 77,985; May 24; Gaz. vol. 154; p. 1103.
Cotton piece goods. Bonham Cotton Mills. No. 77,700; May 3; Gaz. vol. 154; p. 247.
Cotton piece goods. Brandon Mills. No. 77,899; May 17; Gaz. vol. 154; p. 831.
Cotton plaids, Woven. Neuss, Hesslein & Co. No. 77,946; May 17; Gaz. vol. 154; p. 832.
Cough-drops. Lindbeck & Nelson. No. 78,186; May 31; Gaz. vol. 154; p. 1406.
Cough remedies and breath-purifier. F. W. Israel. No. 78,006; May 24; Gaz. vol. 154; p. 1104.
Crackers. H. G. & J. A. Hess. No. 78,177; May 31; Gaz. vol. 154; p. 1406.
Crackers and biscuits. Iowa Biscuit Co. No. 78,240; May 31; Gaz. vol. 154; p. 1408.
Crates. The Overstreet Crate Co. No. 78,203; May 31; Gaz. vol. 154; p. 1407.
Cream and talcum powder, Cold-. S. Kann Sons & Co. No. 78,009; May 24; Gaz. vol. 154; p. 1104.
Cream, Cold-. Walker Chemical Company. No. 78,143; May 31; Gaz. vol. 154; p. 1405.
Crochet-hooks. C. J. Bates & Son. No. 78,060; May 31; Gaz. vol. 154; p. 1403.
Cultivators. Hartman Mfg. Co. No. 77,870; May 10; Gaz. vol. 154; p. 511.
Curriers' and lather-dressers' use, Oleaginous compounds for. The Martin Dennis Company. No. 78,071; May 31; Gaz. vol. 154; p. 1403.
Curtain-fixtures. J. W. Flynn & Bro. No. 78,237; May 31; Gaz. vol. 154; p. 1408.
Curtain-stretchers. Holmquist & Co. No. 77,809; May 10; Gaz. vol. 154; p. 509.
Detergent. The Southern Specialty Co. No. 78,282; May 31; Gaz. vol. 154; p. 1409.
Disinfectants and insecticides. Zonol Products Company. No. 78,154; May 31; Gaz. vol. 154; p. 1406.
Disk mandrels, porte-polishers, &c. Morgan and Maxfield. No. 78,262; May 31; Gaz. vol. 154; p. 1409.
Dolls. Chattanooga Medicine Co. No. 77,705; May 3; Gaz. vol. 154; p. 247.
Dolls. Bawo & Dotter. No. 77,895; May 17; Gaz. vol. 154; p. 831.
Dolls. L. Wolf & Co. No. 78,033; May 24; Gaz. vol. 154; p. 1104.
Dresses, Girls'. Louis Sonn & Co. No. 77,740; May 3; Gaz. vol. 154; p. 248.
Dresses, Girls'. Louis Sonn & Co. No. 78,137; May 31; Gaz. vol. 154; p. 1405.
Drills. Chiswell Cotton Mills Co. No. 77,983; May 24; Gaz. vol. 154; p. 1103.
Driving-bits. The Stalker Manufacturing Company. No. 78,213; May 31; Gaz. vol. 154; p. 1407.
Dyes, Coal-tar. Farbenfabriken of Elberfeld Company. No. 77,717; May 3; Gaz. vol. 154; p. 247.
Effervescent aperients. A. A. Burnham. No. 78,061; May 31; Gaz. vol. 154; p. 1403.
Effervescent salt, Granular. Sharp & Dohme. No. 77,837; May 10; Gaz. vol. 154; p. 510.
Elastic armbands. Hewes & Potter. No. 78,098; May 31; Gaz. vol. 154; p. 1404.
Electric apparatus and supplies. Hemingray Glass Co. No. 78,096; May 31; Gaz. vol. 154; p. 1404.
Electric batteries, Dry-cell. National Carbon Company. Nos. 78,120–1; May 31; Gaz. vol. 154; p. 1405.
Electric outlet-boxes. Sprague Electric Company. No. 77,887; May 10; Gaz. vol. 154; p. 512.
Electrical apparatus and supplies. Johnston Electric Company. No. 77,871; May 10; Gaz. vol. 154; p. 511.
Electrical apparatus, Certain. L. Gudeman. No. 78,088; May 31; Gaz. vol. 154; p. 1404.
Electrical brushes and contacts. National Carbon Company. No. 77,944; May 17; Gaz. vol. 154; p. 832.
Electrical fittings. The Fairmount Electric and Manufacturing Company. No. 78,078; May 31; Gaz. vol. 154; p. 1403.
Electrical supplies, Certain. Appleton Electric Company. No. 78,058; May 31; Gaz. vol. 154; p. 1403.
Electrotypes. W. C. Jacobs. No. 77,734; May 3; Gaz. vol. 154; p. 248.
Enameled sheet-metal ware. Norvell-Shapleigh Hardware Company. No. 78,267; May 31; Gaz. vol. 154; p. 1409.
Engine governors and stops and pump-governors. Strong, Carlisle & Hammond Co. No. 78,215; May 31; Gaz. vol. 154; p. 1407.
Engines and motors and parts thereof, Steam and gasolene. Fabbrica Italiana Automobili-Torino Societa Anonima. No. 77,867; May 10; Gaz. vol. 154; p. 511.
Eyeglasses and spectacles. The Meyrowitz Manufacturing Co. No. 78,258; May 31; Gaz. vol. 154; p. 1408.
Fasteners, Machines for setting metallic. Heaton-Peninsular Button Fastener Co. No. 78,175; May 31; Gaz. vol. 154; p. 1406.
Feed, Horse. J. J. Badenoch Co. No. 78,291; May 31; Gaz. vol. 154; p. 1409.
Ferment. Mead Johnson & Company. Nos. 77,742–4; May 3; Gaz. vol. 154; p. 248.
Fertilizers. Nitrate Agencies Co. No. 77,877; May 10; Gaz. vol. 154; p. 511.
Files. Norvell-Shapleigh Hardware Company. No. 78,271; May 31; Gaz. vol. 154; p. 1409.
Fire-extinguishing apparatus. S. F. Hayward & Co. No. 77,762; May 3; Gaz. vol. 154; p. 249.
Flour, Prepared. H. A. Johnson & Co. No. 78,246; May 31; Gaz. vol. 154; p. 1408.
Flour, Wheat-. Burrus Mill & Elevator Company. No. 77,701; May 3; Gaz. vol. 154; p. 247.
Flour, Wheat-. The Davis Milling Company. No. 77,709; May 3; Gaz. vol. 154; p. 247.
Flour, Wheat-. American Hominy Company. No. 77,785; May 10; Gaz. vol. 154; p. 509.
Flour, Wheat-. American Hominy Company. No. 77,892; May 17; Gaz. vol. 154; p. 831.
Flour, Wheat-. W. F. Brey. No. 78,160; May 31; Gaz. vol. 154; p. 1406.
Flour, Wheat-. Brown Milling Company. No. 78,161; May 31; Gaz. vol. 154; p. 1406.
Flour, Wheat-. Donmeyer, Gardner & Co. Nos. 78,169–71; May 31; Gaz. vol. 154; p. 1406.

Flour, Wheat-. The Model Milling & Elevator Company. No. 78,191; May 31; Gaz. vol. 154; p. 1407.
Flour, Wheat-. The Northwestern Elevator & Mill Co. No. 78,199; May 31; Gaz. vol. 154; p. 1407.
Flour, Wheat-. Washburn Crosby Company. No. 78,218; May 31; Gaz. vol. 154; p. 1407.
Flour, Wheat-. Cannon Valley Milling Company. No. 78,227; May 31; Gaz. vol. 154; p. 1408.
Flour, Wheat-. Wm. A. Coombs Milling Company. No. 78,229; May 31; Gaz. vol. 154; p. 1408.
Flour, Wheat-. The Model Milling & Elevator Company. No. 78,261; May 31; Gaz. vol. 154; p. 1409.
Flour, Wheat-. The National Milling Company. No. 78,264; May 31; Gaz. vol. 154; p. 1409.
Flour, Wheat-. The Rea-Patterson Milling Company. No. 78,276; May 31; Gaz. vol. 154; p. 1409.
Flowers and feather trimmings used in millinery. Ben Strauss Company. No. 77,788; May 10; Gaz. vol. 154; p. 509.
Food, Poultry. J. J. Badenoch Co. No. 78,156; May 31; Gaz. vol. 154; p. 1406.
Food, Stock. National Hay, Grain and Storage Co. No. 78,196; May 31; Gaz. vol. 154; p. 1407.
Food, Stock. National Hay, Grain and Storage Co. No. 78,263; May 31; Gaz. vol. 154; p. 1409.
Food, Vegetable protein. F. A. V. Klopfer. No 78,042; May 24; Gaz. vol. 154; p. 1105.
Foods, Certain. Reynolds, Davis & Company. No. 77,757; May 3; Gaz. vol. 154; p. 248.
Foods, Certain. Wadhams & Company. No. 77,773; May 3; Gaz. vol. 154; p. 249.
Foods, Certain. The Caruthers-Terry Preserving Company. No. 77,861; May 10; Gaz. vol. 154; p. 511.
Foods, Certain. Spokane Extract & Spice Company. No. 77,963; May 17; Gaz. vol. 154; p. 833.
Foods, Certain. W. Barratt. No. 77,979; May 24; Gaz. vol. 154; p. 1103.
Foods, Certain. E. C. Mathewson. No. 78,015; May 24; Gaz. vol. 154; p. 1104.
Foods, Certain. H. T. Cottam & Co. No. 78,230; May 31; Gaz. vol. 154; p. 1408.
Foods, Certain. John E. Diament Company. No. 78,233; May 31; Gaz. vol. 154; p. 1408.
Foods, Certain. Paxon, Williams & Paxon. No. 78,235; May 31; Gaz. vol. 154; p. 1408.
Foods, Certain. G. F. Sutton Sons & Co. No. 78,284; May 31; Gaz. vol. 154; p. 1409.
Fruits, Fresh. E. G. and A. H. Vivell. No. 78,217; May 31; Gaz. vol. 154; p. 1407.
Furnishings, Certain. Susquehanna Silk Mills. No. 78,141; May 31; Gaz. vol. 154; p. 1405.
Furniture, Certain. W. Ludwig Schultze Company. No. 77,853; May 10; Gaz. vol. 154; p. 511.
Garter-webs and hair-nets. Poirier & Lindeman. No. 78,127; May 31; Gaz. vol. 154; p. 1405.
Gas-analysing apparatus and repair parts therefor. O. Rodhe. No. 77,884; May 10; Gaz. vol. 154; p. 512.
Gas, Chemicals used for the purification of acetylene. The Commercial Acetylene Company. No. 78,066; May 31; Gaz. vol. 154; p. 1403.
Gas purifying material. Connelly Iron Sponge & Governor Company. No. 77,904; May 17; Gaz. vol. 154; p. 831.
Gin. Burrichter Bros. No. 78,037; May 24; Gaz. vol. 154; p. 1104.
Gin. P. Loopuyt & Co. No. 78,043; May 24; Gaz. vol. 154; p. 1105.
Ginghams. Harris-Lipsitz Company. No. 78,093; May 31; Gaz. vol. 154; p. 1404.
Gloves. Hutchens & Potter. Nos. 78,005–6; May 24; Gaz. vol. 154; p. 1104.
Gloves, Leather. Geshlider Bros. No. 78,085; May 31; Gaz. vol. 154; p. 1404.
Gloves, mittens, and gauntlets, Leather. The Joseph N. Elsendrath Company. No. 78,073; May 31; Gaz. vol. 154; p. 1403.
Gloves, Working-. C. E. Reicks. No. 77,756; May 3; Gaz. vol. 154; p. 248.
Glue. H. F. Robinson. No. 77,883; May 10; Gaz. vol. 154; p. 512.
Granite manufactures for building, paving, or decoration. Brookes Limited. No. 78,036; May 24; Gaz. vol. 154; p. 1104.
Gums, Certain. Danker & Marston. No. 78,166; May 31; Gaz. vol. 154; p. 1406.
Hair-tonic. L. Kuntscher. No. 78,106; May 31; Gaz. vol. 154; p. 1404.
Ham, bacon, dried beef, and lard. W. Moland's Sons. No. 77,821; May 10; Gaz. vol. 154; p. 510.
Ham, olives, sausage, tea, and cheese. E. C. Mathewson. No. 77,936; May 17; Gaz. vol. 154; p. 832.
Handkerchiefs. Carson, Pirie, Scott & Co. No. 77,703; May 3; Gaz. vol. 154; p. 247.
Handkerchiefs. Herrmann, Ankam & Co. Nos. 78,002–4; May 24; Gaz. vol. 154; p. 1103.
Handkerchiefs. Ottenheimer & Co. No. 78,123; May 31; Gaz. vol. 154; p. 1405.
Handkerchiefs, Cotton. Tootal Broadhurst Lee Company. Nos. 77,770–1; May 3; Gaz. vol. 154; p. 249.
Hardware, Harness. North & Judd Manufacturing Company. No. 77,878; May 10; Gaz. vol. 154; p. 511.
Harvesters, binders, reapers, and mowers. Walter A. Wood Mowing & Reaping Machine Company. No. 78,219; May 31; Gaz. vol. 154; p. 1407.
Hats and caps, Men's. H. H. Roelofs and Company. No. 78,131; May 31; Gaz. vol. 154; p. 1405.
Hats, Felt. The Fay-Gorman Company. No. 78,079; May 31; Gaz. vol. 154; p. 1403.
Hats, Men's fur. Gauss-Langenberg Hat Company. No. 78,084; May 31; Gaz. vol. 154; p. 1404.
Heating apparatus, Steam-. Warren Webster & Co. No. 77,854; May 10; Gaz. vol. 154; p. 511.
Hoof-pads. Morgan & Wright. Nos. 77,939–41; May 17; Gaz. vol. 154; p. 832.
Horse equipments and supplies, Certain. Norvell-Shapleigh Hardware Company. No. 78,200; May 31; Gaz. vol. 154; p. 1407.
Horse equipments and supplies, Certain. Norvell-Shapleigh Hardware Company. No. 78,202; May 31; Gaz. vol. 154; p. 1407.
Horseshoe-calks. The Rowe Patent Calk Company. No. 78,207; May 31; Gaz. vol. 154; p. 1407.
Horseshoe-calks. The Rowe Patent Calk Company. No. 78,279; May 31; Gaz. vol. 154; p. 1409.
Hose, Steam-. The B. F. Goodrich Company. No. 77,894; May 17; Gaz. vol. 154; p. 831.
Hosiery. Kahn & Frank. No. 77,815; May 10; Gaz. vol. 154; p. 510.
Hosiery. E. S. Sharp. No. 77,836; May 10; Gaz. vol. 154; p. 510.
Hosiery. E. M. Townsend & Co. Nos. 77,849–50; May 10; Gaz. vol. 154; p. 511.
Hosiery. Jonesville Manufacturing Company. No. 77,923; May 17; Gaz. vol. 154; p. 832.
Hosiery. A. B. Andrews Company. No. 78,057; May 31; Gaz. vol. 154; p. 1403.
Hosiery. Harris-Lipsitz Company. No. 78,092; May 31; Gaz. vol. 154; p. 1404.
Hydraulic machinery and fittings. Byron Jackson Iron Works. No. 78,183; May 31; Gaz. vol. 154; p. 1406.
Hyposulfite of soda and sulfid of sodium. F. E. Atteaux & Co. No. 78,059; May 31; Gaz. vol. 154; p. 1403.
Ice-cream cones. Washington Cone Manufacturing Company. No. 78,288; May 31; Gaz. vol. 154; p. 1409.
Incubators and brooders. T. J. Collier. No. 77,794; May 10; Gaz. vol. 154; p. 509.
Ink reducer and drier combined, Printing-. E. M. Pratt. No. 78,023; May 24; Gaz. vol. 154; p. 1104.
Inner tubes, hose, and fruit-jar rubbers. Norvell-Shapleigh Hardware Company. No. 78,270; May 31; Gaz. vol. 154; p. 1409.
Insecticides. E. R. Jennings. No. 77,814; May 10; Gaz. vol. 154; p. 510.
Iron and steel. A. Coates & Co. No. 77,707; May 3; Gaz. vol. 154; p. 247.
Knit shirts and drawers. Tiffany Brothers. No. 77,848; May 10; Gaz. vol. 154; p. 511.
Knitted athletic goods. E. Klein & Company. No. 78,102; May 31; Gaz. vol. 154; p. 1404.
Knives, scissors, and shears. Empire Knife Company. Nos. 77,865–6; May 10; Gaz. vol. 154; p. 511.
Laces, Shoe-. The Narrow Fabric Co. No. 77,943; May 17; Gaz. vol. 154; p. 832.
Lactic-acid-bacilli tablets. Allen & Hanburys. No. 77,784; May 10; Gaz. vol. 154; p. 509.
Lamps, Electric. General Electric Company. No. 77,779; May 3; Gaz. vol. 154; p. 249.
Leather for boots and shoes. Graton & Knight Mfg. Co. No. 77,918; May 17; Gaz. vol. 154; p. 831.
Leather, Sole-. Carl J. Niemann & Bros. No. 78,198; May 31; Gaz. vol. 154; p. 1407.
Leather, Sole-. Tanners Cut Sole Company. No. 78,285; May 31; Gaz. vol. 154; p. 1409.
Letter-head and container for advertising-cuts, Combined. Dando Printing & Publishing Company. No. 77,863; May 10; Gaz. vol. 154; p. 511.
Linen and cotton piece goods. Turner, Halsey Co. No. 78,142; May 31; Gaz. vol. 154; p. 1405.
Liniment. C. Clarke. No. 77,706; May 3; Gaz. vol. 154; p. 247.
Liniments. Lanman & Kemp. No. 77,817; May 10; Gaz. vol. 154; p. 510.
Liniments. Lanman & Kemp. No. 78,107; May 31; Gaz. vol. 154; p. 1404.
Linoleum. Bremer Linoleumwerke Delmenhorst. No. 77,790; May 10; Gaz. vol. 154; p. 509.
Linoleum and oiled cloth. M. Goldenberg. No. 77,998; May 24; Gaz. vol. 154; p. 1103.
Locks and bolts. Norvell-Shapleigh Hardware Company. No. 77,750; May 3; Gaz. vol. 154; p. 248.
Long-cloth. Sherman & Sons Co. No. 77,838; May 10; Gaz. vol. 154; p. 510.
Lotion for the head and face. The Bonheur Company. No. 77,974; May 17; Gaz. vol. 154; p. 833.
Lotions. M. Johnson. No. 78,100; May 31; Gaz. vol. 154; p. 1404.
Macaroni-paste foods. Birmingham Macaroni Company. No. 77,699; May 3; Gaz. vol. 154; p. 247.
Machine-tools. Henry Rossell & Co. No. 77,730; May 3; Gaz. vol. 154; p. 248.
Magazine, Monthly. J. H. Francis. No. 78,238; May 31; Gaz. vol. 154; p. 1408.
Magazine, Monthly. E. Walter. No. 78,287; May 31; Gaz. vol. 154; p. 1409.
Magazines, Monthly. C. A. Bacon. No. 77,698; May 3; Gaz. vol. 154; p. 247.
Magazines, Monthly. Good Health Publishing Co. No. 77,916; May 17; Gaz. vol. 154; p. 831.

Magazines, Monthly. W. S. Dinsmore. No. 78,234; May 31; Gaz. vol. 154; p. 1408.
Magnetos. Unterberg & Helmle. No. 77,970; May 17; Gaz. vol. 154; p. 833.
Malt extracts. Malt Diastase Co. No. 77,818; May 10; Gaz. vol. 154; p. 510.
Manhole-fittings. William Heiser and Sons Company. No. 77,776; May 3; Gaz. vol. 154; p. 249.
Marine and field glasses. Pinkham & Smith Company. No. 77,754; May 3; Gaz. vol. 154; p. 248.
Matches. F. E. Kreuger. Nos. 77,926–7; May 17; Gaz. vol. 154; p. 832.
Matches. White, Wilson, Drew Company. No. 77,972; May 17; Gaz. vol. 154; p. 833.
Measuring-tapes and scale-beams. Norvell-Shapleigh Hardware Company. No. 78,260; May 31; Gaz. vol. 154; p. 1409.
Meat and vegetable extract. Standard Cube Bouillon Co. No. 77,842; May 10; Gaz. vol. 154; p. 510.
Meats and lard, Sugar-cured. Columbia Cotton Oil and Provision Corporation. No. 77,795; May 10; Gaz. vol. 154; p. 509.
Medicinal plasters. M. Hogg. No. 78,178; May 31; Gaz. vol. 154; p. 1406.
Medicinal preparation. O. Kalmus. No. 77,924; May 17; Gaz. vol. 154; p. 832.
Medicinal preparation for external use. Sapa Chemical Co. No. 77,768; May 3; Gaz. vol. 154; p. 249.
Medicinal preparation for the skin and scalp. H. D. Griswold. No. 78,173; May 31; Gaz. vol. 154; p. 1406.
Medicinal tablets. F. E. Russell. No. 78,132; May 31; Gaz. vol 154; p. 1405.
Medicine and salves. J. W. Lester. No. 77,928; May 17; Gaz. vol. 154; p. 832.
Medicines. Foster-McClellan Co. No. 78,080; May 31; Gaz. vol. 154; p. 1403.
Medicines. F. Kripke. No. 78,104; May 31; Gaz. vol. 154; p. 1404.
Medicines and toilet preparations. Mexican Amole Soap Co. No. 78,016; May 24; Gaz. vol. 154; p. 1104.
Medicines and toilet preparations. Vertriebs-Gesellschaft Prof. Dr. Schleich'scher Präparate G. m. b. H. No. 78,030; May 24; Gaz. vol. 154; p. 1104.
Medicines and toilet preparations. M. Goldenberg. No. 78,087; May 31; Gaz. vol. 154; p. 1404.
Metal-polish. S. Mason. No. 77,741; May 3; Gaz. vol. 154; p. 248.
Metal-polishing powder. A. Rosenberg. No. 78,278; May 31; Gaz. vol. 154; p. 1409.
Metals and metal articles, Certain. Henry Rossell & Co. No. 77,729; May 3; Gaz. vol. 154; p. 248.
Methyl alcohol. Wood Products Co. No. 77,777; May 3; Gaz. vol. 154; p. 249.
Molasses and corn-syrup compound. T. J. Henderson. No. 78,176; May 31; Gaz. vol. 154; p. 1406.
Molding material, Plastic. The Lewis Publishing Co. No. 78,251; May 31; Gaz. vol. 154; p. 1408.
Musical instruments, Certain. The Rudolph Wurlitzer Co. No. 77,761; May 3; Gaz. vol. 154; p. 249.
Musical instruments, Wind. Besson and Company. No. 77,982; May 24; Gaz. vol. 154; p. 1103.
Nails and tacks. The Weather-Proofing Nail Co. No. 77,774; May 3; Gaz. vol. 154; p. 249.
Napkins, Cotton damask. E. F. Rice & Co. No. 78,130; May 31; Gaz. vol. 154; p. 1405.
Nets, Hair-. Poirier & Lindeman. No. 78,126; May 31; Gaz. vol. 154; p. 1405.
Newspaper comic section. McClure Newspaper Syndicate. Nos. 78,256–7; May 31; Gaz. vol. 154; p. 1408.
Nut-locks and metal washers. Keystone Nut Lock Mfg. Co. No. 78,184; May 31; Gaz. vol. 154; p. 1406.
Oatmeal and rolled oats. F. B. Chamberlain Company. No. 78,038; May 24; Gaz. vol. 154; p. 1104.
Oil, Lubricating-. Fulcrum Oil Company. No. 78,082; May 31; Gaz. vol. 154; p. 1404.
Oil, Olive-. W. S. Hopkins. No. 77,920; May 17; Gaz. vol. 154; p. 831.
Oil, Olive-. MacMonnies & Von Elm. No. 77,935; May 17; Gaz. vol. 154; p. 832.
Oil, Olive-. Farrington & Whitney. No. 77,988; May 24; Gaz. vol. 154; p. 1103.
Oil, Olive-. MacMonnies & Von Elm. No. 78,013; May 24; Gaz. vol. 154; p. 1104.
Oils, Watch, clock, and chronometer. Hammel, Riglander & Co. No. 78,091; May 31; Gaz. vol. 154; p. 1404.
Oiled cloth and linoleum brass binding. R. Hubbell. No. 77,919; May 17; Gaz. vol. 154; p. 831.
Ointment. R. Neubauer. No. 77,747; May 3; Gaz. vol. 154; p. 248.
Ointment, hair-tonic, and salve. L. Samuels. No. 77,764; May 3; Gaz. vol. 154; p. 249.
Oranges and lemons. Fillmore Citrus Fruit Association. No. 78,236; May 31; Gaz. vol. 154; p. 1408.
Overalls. The Union Special Overall Company. No. 77,968; May 17; Gaz. vol. 154; p. 833.
Overcoats, outer suits, and trousers. The Feder, Silberberg Company. No. 78,293; May 31; Gaz. vol. 154; p. 1409.
Overcoats, ulsters, rain and automobile coats. Heidelberg, Wolff & Co. No. 78,095; May 31; Gaz. vol. 154; p. 1404.
Oysters, Fresh. A. G. Bailey. No. 78,226; May 31; Gaz. vol. 154; p. 1408.
Oysters, Fresh and canned. The Oyster Planters and Growers Association of Cotuit, Mass. No. 77,951; May 17; Gaz. vol. 154; p. 832.
Paint, Ceramic gold. W. A. Maurer. No. 77,937; May 17; Gaz. vol. 154; p. 832.
Paint, Mixed. The Standard Improved Elastic Paint Company. No. 78,138; May 31; Gaz. vol. 154; p. 1405.
Paints and paste colors. S. H. French & Co. No. 77,992; May 24; Gaz. vol. 154; p. 1103.
Paints, Marine. Amalgamated Paint Company. No. 77,977; May 24; Gaz. vol. 154; p. 1103.
Paints, putty, and dry colors. Means & Thacher. No. 77,938; May 17; Gaz. vol. 154; p. 832.
Painters' materials. La Salle Varnish Co. No. 77,873; May 10; Gaz. vol. 154; p. 511.
Paper and type-writer ribbons, Carbon-. O. R. Brown Company. No. 77,901; May 17; Gaz. vol. 154; p. 831.
Paper bags. E-Z Opener Bag Company. No. 77,712; May 3; Gaz. vol. 154; p. 247.
Paper bags. The Michigan Bag & Paper Company. Nos. 78,188–90; May 31; Gaz. vol. 154; pp. 1406–7.
Paper bags. Crown-Columbia Pulp and Paper Co. No. 78,231; May 31; Gaz. vol. 154; p. 1408.
Paper, Bond-. The J. C. Hall Company. No. 77,811; May 10; Gaz. vol. 154; p. 509.
Paper, Bond-. The J. C. Hall Company. No. 77,921; May 17; Gaz. vol. 154; p. 832.
Paper bottles and cups. National Coning Machinery Company. No. 78,195; May 31; Gaz. vol. 154; p. 1407.
Paper, Toilet-. Albany Perforated Wrapping Paper Company. No. 78,034; May 24; Gaz. vol. 154; p. 1104.
Paper, Writing-. Southwestern Paper Co. No. 77,841; May 10; Gaz. vol. 154; p. 510.
Paper, Writing-. Crocker-McElwain Company. Nos. 77,905–8; May 17; Gaz. vol. 154; p. 831.
Paper, Writing-. Crocker-McElwain Company. No. 78,068; May 31; Gaz. vol. 154; p. 1403.
Paper, Writing and printing. Neenah Paper Co. No. 78,044; May 24; Gaz. vol. 154; p. 1105.
Paper, Writing and printing. Parsons Paper Co. No. 78,045; May 24; Gaz. vol. 154; p. 1105.
Paper, Writing and printing. American Writing Paper Company. Nos. 78,053–6; May 31; Gaz. vol. 154; p. 1403.
Paper, Writing and printing. Lasher & Lathrop. Nos. 78,108–11; May 31; Gaz. vol. 154; p. 1404.
Papers, Writing-. Whiting Paper Company. No. 78,146; May 31; Gaz. vol. 154; p. 1405.
Pencils. A. W. Faber. No. 78,077; May 31; Gaz. vol. 154; p. 1403.
Pencils and rubber erasers and rubber bands. J. W. Guttknecht. No. 78,089; May 31; Gaz. vol. 154; p. 1404.
Pencils, Lead-. Eagle Pencil Company. Nos. 77,797–9; May 10; Gaz. vol. 154; p. 509.
Perfumery. Geo. Borgfeldt & Co. No. 77,915; May 17; Gaz. vol. 154; p. 831.
Perfumes. Frederick Stearns & Co. No. 77,719; May 3; Gaz. vol. 154; p. 247.
Perfumes. Frederick Stearns & Co. No. 77,803; May 10; Gaz. vol. 154; p. 509.
Petticoats. Younker Bros. No. 78,220; May 31; Gaz. vol. 154; p. 1407.
Pianos. Bellevue Piano Co. No. 77,896; May 17; Gaz. vol. 154; p. 831.
Pianos. Schiller Piano Company. No. 77,961; May 17; Gaz. vol. 154; p. 833.
Pianos, Interior player-. Geo. P. Bent Company. Nos. 77,722–3; May 3; Gaz. vol. 154; p. 247.
Pianos, piano-players, and music-sheets. Aeolian Company. No. 77,975; May 24; Gaz. vol. 154; p. 1103.
Pickles. L. Trunk. No. 78,049; May 24; Gaz. vol. 154; p. 1105.
Picture machines, Moving-. Edison Manufacturing Company. No. 77,713; May 3; Gaz. vol. 154; p. 247.
Pictures and illustrations, Printed. The New York Herald Company. No. 78,265; May 31; Gaz. vol. 154; p. 1409.
Piece goods, Certain. The Pittsburgh Dry Goods Company. No. 78,046; May 24; Gaz. vol. 154; p. 1105.
Pill or tablet, Cathartic and laxative. The Morris Pharmacal Company of New York. No. 77,822; May 10; Gaz. vol. 154; p. 510.
Pins, Toilet-. The Star Pin Company. No. 77,964; May 17; Gaz. vol. 154; p. 833.
Pipes and cylinders, Tools for cleaning. National Water Main Cleaning Co. No. 77,945; May 17; Gaz. vol. 154; p. 832.
Plastic composition for filling seams in woodwork, &c. H. B. F. Kuhls. No. 77,737; May 3; Gaz. vol. 154; p. 248.
Plumbers' fittings. Central Foundry Co. No. 77,862; May 10; Gaz. vol. 154; p. 511.
Plumbing-traps. Providence Steam Trap Company. No. 78,275; May 31; Gaz. vol. 154; p. 1409.
Pocket-books, card-cases, hand-bags, &c. M. Goldenberg. No. 77,997; May 24; Gaz. vol. 154; p. 1103.
Polishing and cutting wheels. P. H. Gesswein. No. 77,993; May 24; Gaz. vol. 154; p. 1103.
Poplin piece goods. Reiling and Schoen. Nos. 78,024–7; May 24; Gaz. vol. 154; p. 1104.
Poplin piece goods. Reiling and Schoen. No. 78,129; May 31; Gaz. vol. 154; p. 1405.
Poultry, Dressed. Stuebe Bros. & Noack. No. 77,845; May 10; Gaz. vol. 154; p. 510.

Powder and antiseptic mouth-wash, Tooth-. K. A. Lingner. No. 77,930; May 17; Gaz. vol. 154; p. 832.
Powder, Certain. International Pulp Company. No. 78,180; May 31; Gaz. vol. 154; p. 1406.
Powder for stopping leaks in cooling systems. The Northwestern Chemical Co. No. 77,826; May 10; Gaz. vol. 154; p. 510.
Powder, Sachet-. The Henry B. Gilpin Co. No. 77,728; May 3; Gaz. vol. 154; p. 248.
Precious-metal and plated ware, Certain. Charles A. Bennett Company. No. 77,903; May 17; Gaz. vol. 154; p. 831.
Precious-metal ware, Certain. Chapin & Hollister Company. No. 78,064; May 31; Gaz. vol. 154; p. 1403.
Preparation for eradicating warts. J. J. Georges & Son. No. 77,733; May 3; Gaz. vol. 154; p. 248.
Printing-presses and parts thereof. M. Plum. No. 77,882; May 10; Gaz. vol. 154; p. 512.
Pulleys. The Paul Manufacturing Company. No. 78,204; May 31; Gaz. vol. 154; p. 1407.
Pumps and parts thereof. The Darling Pump & Man'fg. Co. No. 78,232; May 31; Gaz. vol. 154; p. 1408.
Pumps, Oil-. American Oil Pump & Tank Co. No. 78,222; May 31; Gaz. vol. 154; p. 1407.
Razors and razor-blades. E. W. Spring. No. 78,212; May 31; Gaz. vol. 154; p. 1407.
Razors, hatchets, and shears. Norvell-Shapleigh Hardware Company. No. 78,019; May 24; Gaz. vol. 154; p. 1104.
Razors, Safety-. Kampfe Bros. No. 78,247; May 31; Gaz. vol. 154; p. 1408.
Receptacles, Certain. Forsyth Manufacturing Company. No. 77,913; May 17; Gaz. vol. 154; p. 831.
Rectal diseases and constipation, Apparatus for treating. J. P. Sanborn. No. 78,280; May 31; Gaz. vol. 154; p. 1409.
Refrigerators. Norvell-Shapleigh Hardware Company. No. 78,201; May 31; Gaz. vol. 154; p. 1407.
Registers. E. C. Fox. No. 78,081; May 31; Gaz. vol. 154; p. 1404.
Remedial agents. F. H. Strong Company. No. 77,911; May 17; Gaz. vol. 154; p. 831.
Remedies, Antirheumatic, antipyretic, and analgesic. Leighton-Wright Company. No. 78,112; May 31; Gaz. vol. 154; p. 1404.
Remedies for certain diseases. F. Wagner. No. 77,971; May 17; Gaz. vol. 154; p. 833.
Remedies for diseases of the eye. The Zymole Company. No. 77,858; May 10; Gaz. vol. 154; p. 511.
Remedies for hog-cholera. G. M. Sligar & Sons. No. 77,839; May 10; Gaz. vol. 154; p. 510.
Remedies for venereal diseases. R. N. Partin. No. 78,125; May 31; Gaz. vol. 154; p. 1405.
Remedy for asthma. L. W. Moon. No. 78,192; May 31; Gaz. vol. 154; p. 1407.
Remedy for certain diseases. Burwell & Dunn Co. No. 78,062; May 31; Gaz. vol. 154; p. 1403.
Remedy for certain diseases. N. A. Harris. No. 78,094; May 31; Gaz. vol. 154; p. 1404.
Remedy for certain diseases. Fox Chemical Company. No. 78,172; May 31; Gaz. vol. 154; p. 1406.
Remedy for colds, croup, and pain. L. B. Dies. No. 77,987; May 24; Gaz. vol. 154; p. 1103.
Remedy for constipation. J. T. Potter. No. 78,128; May 31; Gaz. vol. 154; p. 1405.
Remedy for corns and calli. F. K. Bowers. No. 77,898; May 17; Gaz. vol. 154; p. 831.
Remedy for diseases of the lungs. Nature's Creation Co. No. 78,197; May 31; Gaz. vol. 154; p. 1407.
Remedy for genito-urinary diseases. H. R. Planten. No. 78,022; May 24; Gaz. vol. 154; p. 1104.
Remedy for grippe, colds, fever, and chills. The Bartow Chemical Co. No. 77,860; May 10; Gaz. vol. 154; p. 511.
Remedy for kidney diseases. Consumers Service Company. No. 78,164; May 31; Gaz. vol. 154; p. 1406.
Remedy for nerve diseases. Indiana Pharmaceutical Company. No. 77,732; May 3; Gaz. vol. 154; p. 248.
Remedy for purifying the blood. C. Kunath. No. 78,105; May 31; Gaz. vol. 154; p. 1404.
Remedy for rheumatism. C. W. Miller. No. 78,118; May 31; Gaz. vol. 154; p. 1405.
Remedy for rheumatism. The A. H. Munn Company. No. 78,119; May 31; Gaz. vol. 154; p. 1405.
Remedy for white diarrhea, roup, and cholera in fowls. The Hancock Inoculatum Co. No. 77,727; May 3; Gaz. vol. 154; p. 248.
Remedy, Mange. The Mange Remedy Co. No. 77,819; May 10; Gaz. vol. 154; p. 510.
Remedy, Medicinal. G. H. Gardiner. No. 78,083; May 31; Gaz. vol. 154; p. 1404.
Ribbons, Murphy Grant & Co. No. 77,823; May 10; Gaz. vol. 154; p. 510.
Rice. G. P. Eastman. No. 77,800; May 10; Gaz. vol. 154; p. 509.
Rice. Seaboard Rice Milling Co. Nos. 77,833–5; May 10; Gaz. vol. 154; p. 510.
Roofing, Prepared. J. A. & W. Bird & Co. No. 77,897; May 17; Gaz. vol. 154; p. 831.
Roofings, Prepared. Ford Manufacturing Company. No. 77,718; May 3; Gaz. vol. 154; p. 247.
Rubber packings. La Favorite Rubber Manufacturing Co. No. 77,816; May 10; Gaz. vol. 154; p. 510.
Rubber piston-packing. Bowers Rubber Works. No. 77,789; May 10; Gaz. vol. 154; p. 509.
Rugs. People's Outfitting Company. No. 78,021; May 24; Gaz. vol. 154; p. 1104.
Rugs and carpets. M. J. Whittall. No. 78,147; May 31; Gaz. vol. 154; p. 1405.
Salt. Diamond Crystal Salt Co. No. 78,167; May 31; Gaz. vol. 154; p. 1406.
Sausage-casings. S. Oppenheimer & Co. No. 77,880; May 10; Gaz. vol. 154; p. 511.
Seasoning for Welsh rabbits. A. Muderlak. No. 78,193; May 31; Gaz. vol. 154; p. 1407.
Seeds. J. A. Everitt. No. 77,778; May 3; Gaz. vol. 154; p. 249.
Seeds and seed-grains, Garden and grass. Cargill Elevator Co. No. 78,162; May 31; Gaz. vol. 154; p. 1406.
Seeds, plants, and bulbs. Dakota Improved Seed Company. No. 77,986; May 24; Gaz. vol. 154; p. 1103.
Shampoo preparations and hair-tonics. United Drug Company. No. 77,852; May 10; Gaz. vol. 154; p. 511.
Sheetings and drillings. Exposition Cotton Mills. No. 78,039; May 24; Gaz. vol. 154; p. 1104.
Sheetings and tickings. G. A. Stafford & Co. No. 77,914; May 17; Gaz. vol. 154; p. 831.
Sheetings, Cotton. Quinn-Marshall Co. No. 77,956; May 17; Gaz. vol. 154; p. 832.
Shelving and filing-cases, Steel. Electric Protection Company. No. 77,801; May 10; Gaz. vol. 154; p. 509.
Shirts, Dress and negligée. Elias Bros. & Co. No. 78,074; May 31; Gaz. vol. 154; p. 1403.
Shirts, Negligée and work. Yankee Shirt Co. No. 78,153; May 31; Gaz. vol. 154; p. 1406.
Shirts, overalls, and work-jackets, Work-. Reliance Manufacturing Company. No. 78,205; May 31; Gaz. vol. 154; p. 1407.
Shoe and leather dressing. Lone Star Blacking & Mfg. Co. No. 78,255; May 31; Gaz. vol. 154; p. 1408.
Shoes. The Tappan Shoe Manufacturing Company. No. 77,847; May 10; Gaz. vol. 154; p. 511.
Shoes and slippers, Leather. A. Newman. No. 78,122; May 31; Gaz. vol. 154; p. 1405.
Shutter-fasteners. G. F. S. Zimmerman & Company. No. 78,221; May 31; Gaz. vol. 154; p. 1407.
Silk piece fabrics. Atuyer, Bianchini, Férier & Cie. No. 77,786; May 10; Gaz. vol. 154; p. 509.
Silk piece goods. Belding Bros. & Company. No. 77,981; May 24; Gaz. vol. 154; p. 1103.
Silk piece goods. Atuyer, Bianchini, Férier & Co. Nos. 78,224–5; May 31; Gaz. vol. 154; p. 1408.
Silk piece goods, Broad. Duplan Silk Co. No. 78,072; May 31; Gaz. vol. 154; p. 1403.
Silk, Spool and skein. The Brainerd and Armstrong Company. No. 78,150; May 31; Gaz. vol. 154; p. 1406.
Silver-plated flat ware and hollow ware. International Silver Company. No. 77,810; May 10; Gaz. vol. 154; p. 509.
Silver-plated tableware. C. F. Adams Company. No. 78,051; May 31; Gaz. vol. 154; p. 1403.
Skins, Chamois-. McKesson & Robbins. No. 78,187; May 31; Gaz. vol. 154; p. 1406.
Skirts, Dress-. S. Shapiro. No. 78,136; May 31; Gaz. vol. 154; p. 1405.
Soap. H. Amshoff. No. 77,696; May 3; Gaz. vol. 154; p. 247.
Soap. Granulator Soap Company. No. 77,806; May 10; Gaz. vol. 154; p. 509.
Soap. W. and F. Walker Limited. No. 78,031; May 24; Gaz. vol. 154; p. 1104.
Soap. The J. B. Williams Company. No. 78,032; May 24; Gaz. vol. 154; p. 1104.
Soap. The J. P. Davies Company. No. 78,069; May 31; Gaz. vol. 154; p. 1403.
Soaps. F. C. Calvert & Co. No. 77,702; May 3; Gaz. vol. 154; p. 247.
Soaps. Colgate & Company. No. 78,228; May 31; Gaz. vol. 154; p. 1408.
Soap and soap powders. Roach Brothers. No. 77,759; May 3; Gaz. vol. 154; p. 248.
Soaps, Medicinal. P. Werner. No. 78,289; May 31; Gaz. vol. 154; p. 1409.
Soda, Washing-. Church & Dwight Co. No. 78,163; May 31; Gaz. vol. 154; p. 1406.
Sodium phosphate. The Keystone Chemical Manufacturing Company of New Jersey. No. 78,010; May 24; Gaz. vol. 154; p. 1104.
Spark-plugs. Auto Specialties Mfg. Co. No. 77,893; May 17; Gaz. vol. 154; p. 831.
Sporting goods, Certain. Norvell-Shapleigh Hardware Company. No. 77,949; May 17; Gaz. vol. 154; p. 832.
Squares and wing-dividers. Norvell-Shapleigh Hardware Company. No. 77,751; May 3; Gaz. vol. 154; p. 248.
Starch, Laundry. Corn Products Refining Company. No. 78,067; May 31; Gaz. vol. 154; p. 1403.
Stationery and paper, Certain. M. Goldenberg. No. 78,041; May 24; Gaz. vol. 154; p. 1105.
Steel. J. J. Saville & Company. No. 77,885; May 10; Gaz. vol. 154; p. 512.
Stoves. The Estate Stove Co. No. 77,715; May 3; Gaz. vol. 154; p. 247.
Stoves and heating apparatus, Certain. Wolterstorff-Haskell Range & Furnace Company. No. 77,857; May 10; Gaz. vol. 154; p. 511.
Stoves and portable ranges, Cooking-. Liberty Stove Company. No. 77,738; May 3; Gaz. vol. 154; p. 248.
Suspenders and men's garters and belts. M. & S. Peller. No. 77,828; May 10; Gaz. vol. 154; p. 510.

Syrups, coffee, and a compound of coffee and chicory. New Orleans Coffee Company. No. 77,947; May 17; Gaz. vol. 154; p. 832.
Talking and moving-picture machine, Combined. Gaumont Co. No. 77,721; May 3; Gaz. vol. 154; p. 247.
Talking-machines and supplies therefor. Homophon Company, G. m. b. H. No. 78,099; May 31; Gaz. vol. 154; p. 1404.
Tanning compounds. El Quebracho Sociedad Anonima. No. 78,075; May 31; Gaz. vol. 154; p. 1403.
Tanning extract, Quebracho. A. Klipstein & Company. No. 77,695; May 3; Gaz. vol. 154; p. 247.
Tanning materials, Chrome-. The Martin Dennis Company. No. 78,070; May 31; Gaz. vol. 154; p. 1403.
Tea. J. A. Henderson. No. 77,808; May 10; Gaz. vol. 154; p. 509.
Teas. Park & Tilford. No. 78,020; May 24; Gaz. vol. 154; p. 1104.
Teas. William S. Scull Company. No. 78,209; May 31; Gaz. vol. 154; p. 1407.
Teas and coffees. Arnold & Aborn. No. 78,223; May 31; Gaz. vol. 154; p. 1407.
Telephone apparatus. Selig Polyscope Co. No. 77,962; May 17; Gaz. vol. 154; p. 833.
Textiles, Certain. F. A. Foster & Co. No. 77,716; May 3; Gaz. vol. 154; p. 247.
Textiles, Certain. The New York Mills. No. 77,825; May 10; Gaz. vol. 154; p. 510.
Textiles, Certain. M. Goldenberg. No. 77,995; May 24; Gaz. vol. 154; p. 1103.
Textiles, Certain. Kraft & Cutter. No. 78,103; May 31; Gaz. vol. 154; p. 1404.
Textiles, Certain. E. McKittrick & Co. Nos. 78,114–15; May 31; Gaz. vol. 154; p. 1404.
Textiles, Certain. Seydoux & Cie. No. 78,135; May 31; Gaz. vol. 154; p. 1405.
Thread, Linen. Lindsay Thompson & Co. Nos. 78,011–12; May 24; Gaz. vol. 154; p. 1104.
Thread, Mercerised spool and sewing cotton. B. London & Sons. No. 77,759; May 3; Gaz. vol. 154; p. 247.
Tomato paste. A. Cusimano & Co. No. 78,105; May 31; Gaz. vol. 154; p. 1405.
Tonic beverages and tablets and powders for making same. V. Jones. No. 78,101; May 31; Gaz. vol. 154; p. 1404.
Tonic port. J. C. de St. Hubert. No. 77,763; May 3; Gaz. vol. 154; p. 249.
Tonics and dyspepsia-tablets. W. L. White. No. 77,889; May 10; Gaz. vol. 154; p. 512.
Tools, Certain. Norvell-Shapleigh Hardware Company. No. 77,752; May 3; Gaz. vol. 154; p. 248.
Tools, Certain. Ebetsin Bros. No. 77,909; May 17; Gaz. vol. 154; p. 831.
Toothache-relief, Equipment for. W. J. Littlehales. No. 78,253; May 31; Gaz. vol. 154; p. 1408.
Toothpicks. Forster Manufacturing Company. No. 77,991; May 24; Gaz. vol. 154; p. 1103.
Towel-rollers. S. Lewis. No. 78,252; May 31; Gaz. vol. 154; p. 1408.
Trays and planks, Certain wooden. R. C. Herren. No. 78,097; May 31; Gaz. vol. 154; p. 1404.
Trolley-clamps and suspension devices. The Ohio Brass Company. No. 77,879; May 10; Gaz. vol. 154; p. 511.
Umbrellas, parasols, walking-sticks, &c. "Schirmherr" Reformschirm-Fabrik Friedlaender & Kaufmann. No. 78,133; May 31; Gaz. vol. 154; p. 1405.
Undershirts, drawers, and union suits. Gutman Bros. No. 78,000; May 24; Gaz. vol. 154; p. 1103.
Valves and parts thereof. Star Brass Manufacturing Company. No. 78,283; May 31; Gaz. vol. 154; p. 1409.
Valves, cocks, and parts thereof. Kinsey & Mahler Co. No. 78,185; May 31; Gaz. vol. 154; p. 1406.
Vehicle wind-shields. A. D. Perkins. No. 78,272; May 31; Gaz. vol. 154; p. 1409.
Vehicles, Self-propelled. The Gramm-Logan Motor Car Company. No. 77,917; May 17; Gaz. vol. 154; p. 831.
Vellings, nettings, mailne, tulle, and chiffons. D. Strauss. No. 77,844; May 10; Gaz. vol. 154; p. 510.
Vermicelli and macaroni. P. Dausse & Co. No. 77,708; May 3; Gaz. vol. 154; p. 247.
Violins and violin-bows. Rudolph Wurlitzer Co. No. 78,152; May 31; Gaz. vol. 154; p. 1405.
Wagons and go-carts, Boys'. Norvell-Shapleigh Hardware Company. No. 78,268; May 31; Gaz. vol. 154; p. 1409.
Wagons, Farm-. Florence Wagon Works. No. 77,868; May 10; Gaz. vol. 154; p. 511.
Wagons, Farm-. Florence Wagon Works. No. 77,912; May 17; Gaz. vol. 154; p. 831.
Waists and shirt-waists, Ladies' outer. A. Solomon. No. 77,840; May 10; Gaz. vol. 154; p. 510.
Washers. N. E. Booth. No. 78,157; May 31; Gaz. vol. 154; p. 1406.
Washing and bleaching fluid. G. Greco. No. 77,999; May 24; Gaz. vol. 154; p. 1103.
Washing and cleaning powder. Halsey J. Tibbals Chemical Manufacturing Company. No. 77,807; May 10; Gaz. vol. 154; p. 509.
Washing compound. A. E. Rawlins. No. 77,755; May 3; Gaz. vol. 154; p. 248.
Washing-machines, Domestic. Richmond Cedar Works. No. 78,206; May 31; Gaz. vol. 154; p. 1407.
Washstands and screens, Combined. A. L. Jones. No. 77,736; May 3; Gaz. vol. 154; p. 248.
Watches and watch-movements. H. Didisheim & Bro. No. 77,711; May 3; Gaz. vol. 154; p. 247.
Water, Filtered. The Electrolytic Purifying Company. No. 77,714; May 3; Gaz. vol. 154; p. 247.
Water, Natural medicinal. California Medicinal Springs Co. No. 78,063; May 31; Gaz. vol. 154; p. 1403.
Whiskies. John Walker & Sons. No. 78,286; May 31; Gaz. vol. 154; p. 1409.
Whisky. E. Elsing & Co. No. 77,864; May 10; Gaz. vol. 154; p. 511.
Whisky, Blended. The Kelly-Steinmets Liquor Co. No. 77,872; May 10; Gaz. vol. 154; p. 511.
Whisky, Straight rye. Klewe Bros. No. 77,925; May 17; Gaz. vol. 154; p. 832.
Wine, Champagne. A. de Montebello & Co. Nos. 77,875–6; May 10; Gaz. vol. 154; p. 511.
Wines, Italian Swiss Colony. No. 78,181; May 31; Gaz. vol. 154; p. 1406.
Wines, Compound bitter. M. Bosak. No. 78,158; May 31; Gaz. vol. 154; p. 1406.
Woodworking machinery. S. A. Woods Machine Co. No. 77,959; May 17; Gaz. vol. 154; p. 833.
Worsted and cotton piece goods. A. H. & F. L. Sayles. No. 77,960; May 17; Gaz. vol. 154; p. 833.
Wrenches. The Whitman & Barnes Manufacturing Company. No. 77,973; May 17; Gaz. vol. 154; p. 833.
Zwieback. F. Kraft. No. 78,248; May 31; Gaz. vol. 154; p. 1408.

ALPHABETICAL LIST OF LABELS.

"Aberth's Clothes Cleanser." (For a Compound for Cleansing Clothes.) W. C. Aberth. No. 15,187; May 24; Gaz. vol. 154; p. 1106.
"Banner Oak." (For Cigars.) The Moehle Lithographic Co. No. 15,176; May 17; Gaz. vol. 154; p. 834.
"Banner Rose." (For Cigars.) The Moehle Lithographic Co. No. 15,191; May 31; Gaz. vol. 154; p. 1410.
"Bear's Exquisite Cold Cream." (For Ointment.) M. M. Bear. No. 15,170; May 3; Gaz. vol. 154; p. 250.
"Burlington Brew." (For Beer.) Karle Lithographic Company. No. 15,166; May 3; Gaz. vol. 154; p. 250.
"Butter-Krust." (For Bread.) Haller Bread Co. No. 15,172; May 10; Gaz. vol. 154; p. 513.
"Button-Button." (For a Game.) F. F. Honeck. No. 15,190; May 24; Gaz. vol. 154; p. 1106.
"Chocolate Nuts." (For Prepared Food.) K. H. Rommel. No. 15,179; May 17; Gaz. vol. 154; p. 834.
"Daniel's Witch Hazel." (For Witch-Hazel.) Dr. A. C. Daniels. No. 15,186; May 24; Gaz. vol. 154; p. 1106.
"Decision." (For Cigars.) E. A. Kline & Co. No. 15,168; May 3; Gaz. vol. 154; p. 250.
"Dimond's Egg Maker and Chick Grower." (For Poultry Food.) J. S. Dimond. No. 15,198; May 31; Gaz. vol. 154; p. 1410.
"Do Uwanta E Z Wash?" (For Washing Compound.) W. V. R. Heckman. No. 15,181; May 17; Gaz. vol. 154; p. 834.
"Dove Brand." (For Sliced Ham.) The Automatic Sliced Ham Co. No. 15,178; May 17; Gaz. vol. 154; p. 834.
"Evergreen Brand Flower and Lawn Fertilizer." (For Fertilizer.) D. D. Johnson. No. 15,200; May 31; Gaz. vol. 154; p. 1410.
"French Market." (For Roasted Coffee and Chicory.) New Orleans Coffee Co. No. 15,171; May 10; Gaz. vol. 154; p. 513.
"Friends of The Ham." (For Sliced Ham.) The Automatic Sliced Ham Co. No. 15,195; May 31; Gaz. vol. 154; p. 1410.
"Germa Oil." (For a Medicine.) A. W. O'Brian & Co. No. 15,196; May 31; Gaz. vol. 154; p. 1410.
"Getreide-Kümmel." (For Kümmel.) E. Lichtwitz & Co. No. 15,183; May 24; Gaz. vol. 154; p. 1106.
"Goesau Madeira Finish Embroidery." (For Embroidery.) Sears, Roebuck and Co. No. 15,174; May 10; Gaz. vol. 154; p. 513.
"Helene Varre." (For Toilet Talcum Powder.) C. Tetlow. No. 15,182; May 17; Gaz. vol. 154; p. 834.
"John Trumbull." (For Cigars.) The Moehle Lithographic Co. No. 15,177; May 17; Gaz. vol. 154; p. 834.
"La Vista Del Vuelta." (For Cigars.) The Moehle Lithographic Co. No. 15,175; May 17; Gaz. vol. 154; p. 834.
"Moon Beam." (For Coffee.) The General Service Company. No. 15,192; May 31; Gaz. vol. 154; p. 1410.
"New Orleans Creole Cooked Oysters." (For Canned Oysters.) Biloxi Canning Co. No. 15,169; May 3; Gaz. vol. 154; p. 250.
"Oxy The Peroxide Cream." (For Toilet Cream.) V. Halper. No. 15,185; May 24; Gaz. vol. 154; p. 1106.
"Pynetar Hair Tonic." (For Hair-Tonic.) O. D. Ettinger. No. 15,197; May 31; Gaz. vol. 154; p. 1410.
"Ratoxin." (For Rat-Exterminators.) Continental Chemical Company of Ohio. No. 15,199; May 31; Gaz. vol. 154; p. 1410.
"Rheumola." (For Medicines for Rheumatic Diseases.) W. C. Schuler, Jr. No. 15,173; May 10; Gaz. vol. 154; p. 513.
"Richmond Dye." (For Hosiery.) Richmond Hosiery Mills. No. 15,201; May 31; Gaz. vol. 154; p. 1410.
"Salada." (For Coffee.) P. C. Larkin. No. 15,184; May 24; Gaz. vol. 154; p. 1106.
"Sharps." (For Toilet-Pins.) The Star Pin Company. No. 15,188; May 24; Gaz. vol. 154; p. 1106.
"Sole-In." (For Rendering Shoes Waterproof.) J. Zuckerman. No. 15,165; May 3; Gaz. vol. 154; p. 250.
"Sweet Hearts." (For Candy Hearts.) Huyler's. No. 15,164; May 3; Gaz. vol. 154; p. 250.
"The Franco-American Food Co.'s Concentrated Tomato Soup." (For Concentrated Tomato Soup.) The Franco-American Food Co. No. 15,193; May 31; Gaz. vol. 154; p. 1410.
"Top-N-Och." (For Bread.) The Ronemous Sign Company. No. 15,194; May 31; Gaz. vol. 154; p. 1410.
"Velvet Grip Boston Garter." (For Hose-Supporters.) George Frost Company. No. 15,189; May 24; Gaz. vol. 154; p. 1106.
"Velvetone Hair Tonic." (For Hair-Tonic.) G. Pabst. No. 15,180; May 17; Gaz. vol. 154; p. 834.
"Wonder Brew." (For Bottled Beer.) Peter Schroeder Brewing Company. No. 15,167; May 3; Gaz. vol. 154; p. 250.

PRINTS.

"Ask Her Any Time." (For Pureoxia Ginger-Ale.) The W. F. Powers Company. No. 2,586; May 3; Gaz. vol. 154; p. 250.
"Children and Clock." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 2,587; May 3; Gaz. vol. 154; p. 250.
"'Elite' Cloth Cleaning Pad." (For Cleaning-Pads.) B. L. Williams. No. 2,591; May 17; Gaz. vol. 154; p. 834.
"'Eureka' Cloth Cleaning Pad." (For Cloth-Cleaning Pads.) J. Thompson. No. 2,596; May 31; Gaz. vol. 154; p. 1410.
"Long Service Outweighs Price." (For Leather Belting.) Alexander Brothers. No. 2,590; May 3; Gaz. vol. 154; p. 250.
"Luxurie." (For Cigars.) Sheppard-Strassheim Co. No. 2,589; May 3; Gaz. vol. 154; p. 250.
"Method of Casting Gas Engine Pistons." (For Gas-Engine Pistons.) W. W. McCarter. No. 2,597; May 31; Gaz. vol. 154; p. 1410.
"Roadside Scene, American Fence." (For Wire Fences.) The American Steel & Wire Company of New Jersey. No. 2,588; May 3; Gaz. vol. 154; p. 250.
"Standard Folding Typewriter." (For Type-Writing Machines.) Standard Folding Typewriter Sales Co. No. 2,593; May 24; Gaz. vol. 154; p. 1106.
"Test it With Your Heel." (For Floor-Varnish.) Pratt & Lambert. No. 2,595; May 31; Gaz. vol. 154; p. 1410.
"The Modern Method of Heating and Ventilating a School Room." (For Heating Apparatus.) Charles Smith Company. No. 2,592; May 17; Gaz. vol. 154; p. 834.
"You May Dent The Wood But You Can't Crack the Varnish." (For Floor-Varnish.) Pratt & Lambert. No. 2,594; May 31; Gaz. vol. 154; p. 1410.

OFFICIAL GAZETTE

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VOLUME CLV.

JUNE,

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1910.

ERRATA.

961,966, page 509, claim, line 1, for the compound word "pie-plate" read *tie-plate*.
961,845, page 592, claim 1, line 11, for the word "flat" read *flap*.
962,404, page 782, in heading, assignment, name of assignee, for "Edward Ogden" read *J. Edward Ogden*.
962,699, page 898, second claim, line 12, for the word "removing" read *moving*.
963,070, page 1019, in heading, after residence of patentees, insert *said Falding having assigned his interest to said Channing*.

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Total	956	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	5	.....	Ohio	60	17
Arkansas	4	.....	Oklahoma	4	.....
California	28	5	Oregon	7	2
Colorado	18	.....	Pennsylvania	82	7
Connecticut	20	3	Rhode Island	3	.....
Delaware	.....	.....	South Carolina	1	.....
Florida	4	.....	South Dakota	5	.....
Georgia	10	1	Tennessee	4	.....
Idaho	2	.....	Texas	9	.....
Illinois	55	4	Utah	3	1
Indiana	23	1	Vermont	1	.....
Iowa	11	1	Virginia	11	.....
Kansas	7	.....	Washington	12	.....
Kentucky	3	1	West Virginia	3	.....
Louisiana	3	2	Wisconsin	19	.....
Maine	3	.....	Wyoming	.....	.....
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Massachusetts	49	14	Alaska, District of	2	1
Michigan	30	1	Arizona Territory	1	.....
Minnesota	21	6	District of Columbia	4	2
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Missouri	23	5	New Mexico Ter't'y	2	.....
Montana	3	.....	Panama	.....	.....
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North Carolina	3	.....	Total to citizens of the United States	768	100
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TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Netherlands	1	.....
Austria-Hungary	6	.....	Newfoundland	.....	.....
Belgium	.....	.....	New South Wales	.....	.....
Brazil	.....	.....	New Zealand	2	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	20	.....	Persia	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Russia	1	.....
China	.....	.....	Scotland	1	.....
Costa Rica	.....	.....	South Australia	.....	.....
Cuba	.....	.....	Spain	.....	.....
Denmark	1	.....	Sweden	2	.....
England	17	.....	Switzerland	.....	.....
Ecuador	.....	.....	Tasmania	.....	.....
France	11	.....	Transvaal, South Africa	.....	.....
Germany	16	3	Victoria	3	.....
Haiti	.....	.....	Western Australia	.....	.....
Ireland	.....	.....			
Italy	2	.....	Total to citizens of foreign countries	84	3
Japan	.....	.....			
Mexico	1	.....			

Substitute Drawings Inadmissible.

RULE 72. * * * * *

The drawing may be withdrawn only for such corrections as cannot be made by the Office; but a drawing cannot be withdrawn unless a photographic copy has been filed and accepted by the Examiner as a part of the application. Permissible changes in the construction shown in any drawing may be made only within the Office and after an approved photographic copy has been filed. Substitute drawings will not be admitted in any case unless required by the Office.

Complete Applications.

It is hereby ordered that applications shall not be given serial numbers as complete applications and forwarded to the examining divisions for examination (1) when the petition has not been signed by the inventor; (2) when the specification and claims have not been signed by the inventor and the signature attested by two witnesses; (sec. 4888, Rev. Stats.;) (3) when the drawing has not been signed by the inventor or his attorney in fact and the signature attested by two witnesses; (sec. 4889, Rev. Stats.;) and (4) when the oath to the application does not fill the requirements of sections 4887 and 4892, Revised Statutes.

The requirements of section 4896, Revised Statutes, respecting the right of executor or administrator to make application for a patent for the invention of a deceased person must also be observed before the application will be considered as complete and forwarded for examination.

* * * * * * * *

This order, so far as applicable, relates to applications for the registration of trade-marks, labels, and prints, which must in all respects comply with the requirements of the statutes.

[Sections 4887, 4892, and 4896, Revised Statutes, above mentioned, were amended by the act of March 3, 1903.]

APPLICATIONS UNDER EXAMINATION.

Condition at close of business, May 31, 1910.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	May 4	May 2	365
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper, Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Apr. 1	Apr. 18	268
173	3. Annealing and Tempering; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	May 4	May 17	151
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Apr. 23	Apr. 23	405
167	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 6	Apr. 7	446
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilisers; Medicines; Preserving; Sugar and Salt.	Apr. 18	Apr. 13	375
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Mar. 28	Apr. 18	507
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	May 2	May 5	167
142	9. Air and Gas Pumps; Fire-Extinguishers; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Sewerage; Wind-Wheels.	Mar. 3	Apr. 27	421
235	10. Carriages and Wagons.....	Mar. 31	Mar. 21	628
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Apr. 20	Apr. 14	235
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Apr. 18	Apr. 18	610
320	13. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, Etc.	Mar. 31	Apr. 25	535
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Mar. 25	May 2	356
308	15. Bread, Pastry, and Confection Making; Casting; Fuel; Glass; Laminated Sheets and Fabrics; Liquid Coating Compositions; Paper-Making; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Apr. 1	May 9	427
109	16. Telegraphy; Telephony.....	Apr. 1	Mar. 9	244
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	May 3	May 2	155
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Mar. 17	Mar. 18	244
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Apr. 14	May 2	294
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Apr. 30	Apr. 28	200
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Apr. 15	Apr. 27	334
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Jan. 24	Mar. 18	655
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 26	Apr. 25	345

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
144	24. Apparel; Apparel Apparatus; Electricity, Medical and Surgical; Sewing-Machines; Surgery.	Apr. 7	Apr. 13	549
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	May 9	May 16	114
106	26. Electric Heating and Rheostats; Electricity, Generation; Motive Power.	Feb. 2	Mar. 7	340
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	May 2	Apr. 28	371
65	28. Electric Railways; Internal-Combustion Engines.	Mar. 26	Apr. 13	464
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Mar. 26	Apr. 2	412
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Apr. 18	May 2	374
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Mar. 7	Apr. 20	340
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Fine Arts; Packaging Liquids; Refrigeration.	May 4	May 4	342
164	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 24	Apr. 15	443
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Apr. 20	Apr. 27	316
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Apr. 30	May 10	601
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Apr. 22	Mar. 22	503
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 15	Mar. 17	689
378	38. Artesian and Oil Wells; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working.	Mar. 22	Mar. 26	505
321	39. Baths and Closets; Water Distribution.	Feb. 11	Apr. 18	532
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	May 2	May 2	385
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Mar. 5	Mar. 1	617
279	42. Electric Signaling; Railway Signaling; Signals.	Jan. 24	Mar. 30	444

Oldest new case, Jan. 24; oldest amended, Mar. 1.

Total number of applications awaiting action 16,801

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
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	Designs.....	May 4	May 21	183
	Labels and Prints.....	May 27	May 27	12

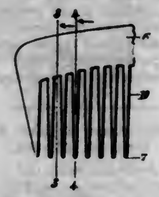
Trade-Marks.

Extra copies of the trade-mark portion of the GAZETTE, which will be sold separately, may be obtained single or in quantities for five cents each. Coupons will be taken in payment thereof.

PATENTS

GRANTED JUNE 7, 1910.

960,243. HAIR-COMB. JOSEPH H. AKER, East Orange, N. J. Filed July 24, 1908. Serial No. 445,107.



A comb comprising a body portion provided with teeth extending therefrom, each tooth having a greater thickness in the general direction of a plane crossing the general plane of the body portion of the comb, each tooth being provided upon one of its edges with a curved surface said curved surface being formed by a centrally disposed bead, and a pair of channels located upon opposite sides of said bead, the curvature of said bead being convex and that of said channels being concave, and the curvature of said bead being continuous with that of said channels so as to form a sinuous surface extending generally from the tooth in a direction crossing the general direction of said body portion.

960,244. MANUFACTURE OF SCREWS. WILLIAM G. ALLEN, West Hartford, Conn., assignor of one-half to Ira Dimock, West Hartford, Conn. Filed Jan. 9, 1909. Serial No. 471,400.

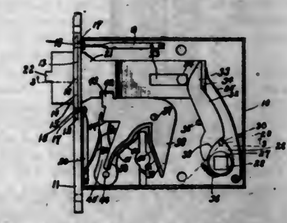


1. The process of making a socketed machine screw, which consists in providing a solid cylindrical blank of metal with an enlargement at one end, forming a socket in the enlarged end, forcing the blank by an angular or non-circular punch through a die opening that is smaller in diameter than the enlarged end of the blank, thereby causing a reduction in the exterior diameter of the enlarged end and compressing that end onto the punch and producing an angular or non-circular socket therein, and forming a thread upon the exterior of the blank.

2. The process of making a socketed machine screw, which consists in providing a solid blank of metal with an enlargement at one end, punching or drilling a circular socket in the enlarged end, forcing the blank by an angular or non-circular punch through a die opening that is smaller in diameter than the enlarged end of the blank, thereby causing a reduction in the exterior diameter of the enlarged end and compressing that end onto the punch and changing the socket from circular to angular or non-circular in cross-section, and forming a screw thread upon the exterior of the blank.

3. The process of making a socketed blank, which consists in providing a solid piece of metal with an enlargement at one end, forming a socket in the enlarged end, and forcing the blank by an angular or non-circular punch through a die opening that is smaller in diameter than the enlarged end of the blank, thereby causing a reduction in the exterior diameter of the enlarged end and compressing that end onto the punch and producing an angular or non-circular socket therein.

960,245. DOOR-LOCK. HENRY J. AMICK, Runa, W. Va., assignor of one-third to James A. Murphy, Runa, W. Va. Filed Apr. 27, 1909. Serial No. 492,441.



1. In a lock, a casing provided with a front plate having a groove extending across its face and having a bolt aperture, a bolt slidable therethrough, a plate slidably mounted on said front plate in said groove and adapted to cover said aperture and retain the bolt within the casing; said plate lying flush with said front plate in combination with a keeper provided with means to move said plate to permit the projection of the bolt when the door is closed.

2. In a lock, a casing provided with a front plate having a groove extending across its face and having a bolt aperture, a bolt slidable therethrough, a plate slidably mounted on said front plate in said groove and adapted to cover said aperture and retain the bolt within the casing; said plate lying flush with said front plate in combination with a keeper provided with means to move said plate to permit the projection of the bolt when the door is closed, and elements to retract said bolt.

3. In a lock, a casing provided with a front plate having a groove extending across its face and having a bolt aperture, a bolt slidable therethrough, a plate slidably mounted on said front plate in said groove and adapted to cover said aperture and retain the bolt within the casing; said plate lying flush with said front plate in combination with a keeper provided with means to move said plate to permit the projection of the bolt when the door is closed, elements to retract said bolt, and key operated mechanism arranged to lock said bolt in projected position.

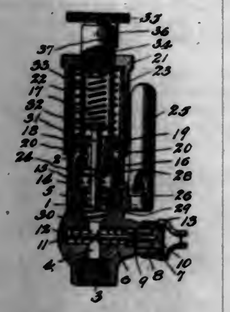
4. In a lock, a casing provided with a front plate having a groove extending across its face and having a bolt aperture, a bolt slidable therethrough, a plate slidably mounted on said front plate in said groove and provided with an aperture adapted to register with the bolt aperture, said plate lying flush with said front plate, springs normally urging said plate to move across the aperture in the front plate; in combination with a keeper provided with means to move said sliding plate against the action of said springs and bring the apertures in the front and sliding plates in registry.

5. In a lock, a casing provided with a front plate having a groove extending across its face and having a bolt aperture, a bolt slidable therethrough, a plate slidably mounted on said front plate in said groove and provided with an aperture adapted to register with the bolt aperture, said plate lying flush with said front plate, springs

normally urging said plate to move across the aperture in the front plate; in combination with a keeper provided with means to move said sliding plate against the action of said springs and bring the apertures in the front and sliding plates in registry, and elements to retract said bolt.

[Claims 6 to 9 not printed in the Gazette.]

960,246. AUTOMATIC-ALARM TIRE-VALVE. FRANK F. ASHMORE, Kansas City, Mo. Filed June 17, 1909. Serial No. 502,794.



1. A tire valve comprising a casing having a main air opening, an alarm device, high and low pressure valves controlling communication between said opening and said alarm device, and a valved air inlet at right angles to, and communicating with, such main opening, between said pressure valves and one end of the said casing, which latter end is formed for engagement with a tire inlet tube, substantially as described.

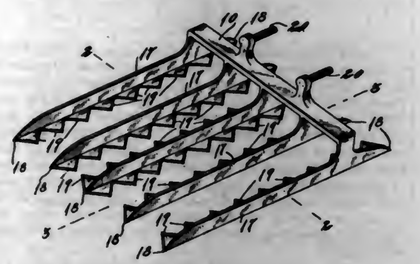
2. A tire valve comprising a casing having a main longitudinal body opening, and a tubular end portion, its opposite end being threaded for engagement with a tire inlet tube, an alarm device, high and low pressure valves mounted within said tubular end, and controlling communication between said body opening and said alarm device, and a valved air inlet tube, the opening in which extends at right angles within the casing and communicates with the body opening thereof, between the said pressure valves and its said threaded end, substantially as described.

3. A tire valve comprising a casing having one end thereof formed for engagement with a tire inlet tube, and having a tubular opposite end and a body opening communicating between said ends, a tubular high pressure valve member having its inner end seated inwardly against the inner end of said tubular casing end, and provided with openings through its wall, an alarm device having communication with the tubular casing end around said valve member, and a low pressure valve member seated outwardly within the inner end of said high pressure valve member, between the inner end and the openings of the latter, substantially as described.

4. A tire valve comprising a casing having one end threaded for engagement with a tire inlet tube, and having a tubular opposite end and a body opening communicating between said ends, a high pressure member having an inner tubular end seated inwardly against the inner end of said tubular casing end, and provided with an annular shoulder, a bushing threaded upon the extremity of said tubular casing end, said valve member having a tubular outer end portion projecting exteriorly through said bushing and provided with openings through its wall, a spring surrounding said tubular portion of said valve member and compressed between its said shoulder and the said bushing, and adjustable by means of the latter, and an alarm device for communication with said tubular casing end around said valve member, a low pressure valve member seated outwardly against the end of the tubular inner end of said high pressure valve member, and provided with an outwardly projecting stem, a plug adjustably threaded within, and closing the outer end of the outer tubular portion of said high pressure valve member, and a spring compressed between said plug and the outer end of the stem of said low pressure valve member, substantially as described.

5. A tire valve comprising a casing, an alarm device associated with said casing, means of communication between the tire and said alarm device including said casing, a high pressure valve arranged within said casing for normally closing communication between said tire and said alarm device, means arranged upon said high pressure valve for normally cutting off communication between said tire and said alarm device, and establishing such communication when the pressure within said tire falls below a predetermined degree, and means arranged upon said casing for admitting of the introduction of air into said tire, substantially as described.

960,247. WEEDER. SARAH E. BALL, Ritchey, Ill. Filed Mar. 31, 1910. Serial No. 552,625.



1. In an implement of the class described a plurality of bars spaced apart and each bar formed with a plurality of V-shaped cutting blades extending laterally therefrom.

2. In an implement of the class described, a head, a plurality of bars spaced apart and extending from said head, and a plurality of V-shaped cutting blades extending laterally from each of said bars.

3. In an implement of the class described, a central bar and a plurality of bars spaced apart at each side of said central bar, a plurality of V-shaped cutting blades extending laterally from each side of the central bar, and V-shaped cutting blades extending laterally from one side of each of the remaining bars and directed toward the central bar.

4. In an implement of the class described, a head, a central bar extending from said head, a plurality of bars spaced apart and extending from said head at each side of the central bar, a plurality of V-shaped cutting blades extending from said central bar at each side thereof, and a plurality of V-shaped cutting blades extending from one side of each of said side bars and directed toward the central bar.

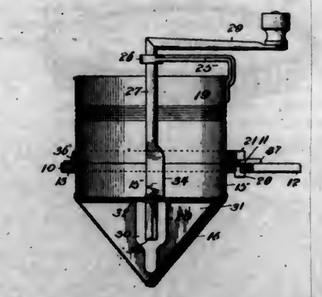
5. In an implement of the class described, a head having threaded studs extending from one side and a plurality of bars spaced apart and extending from the other side, a plurality of V-shaped cutting blades extending laterally from each of said bars, and a T-member engaged by said studs and having a handle extending therefrom.

[Claim 6 not printed in the Gazette.]

960,248. VEGETABLE OR FRUIT STRAINER. EDWARD A. BEACH, Altoona, Pa. Filed Feb. 7, 1910. Serial No. 542,491.

1. In a device of the class described, a receptacle provided with depending lugs, an annular frame having thereon coöperating bayonet slots to receive said lugs, and a sieve supported within said frame.

2. In a device of the class described, a receptacle provided with depending lugs, an annular frame having thereon coöperating bayonet slots to receive said lugs, a sieve supported within said frame, and a latch carried by said receptacle to engage said frame.



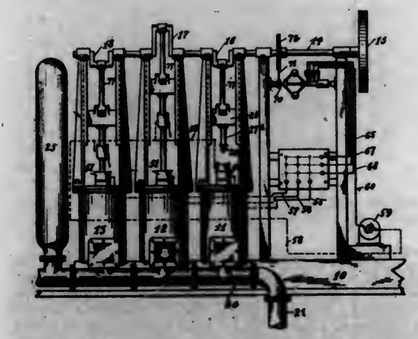
3. In a device of the class described, a receptacle provided with depending lugs, an annular frame having thereon coöperating bayonet slots to receive said lugs, a sieve supported within said frame, and a latch pivotally mounted upon said receptacle to engage one of the bayonet slots in said frame.

4. In a device of the class described, a receptacle provided at its lower portion with a series of depending lugs having inclined upper faces, a handle extended laterally from the lower portion of said receptacle, an annular supporting frame provided with a series of bayonet slots to receive said lugs, a flange within said frame, and a sieve provided at its upper portion with a rib to rest upon said flange.

5. In a device of the class described, a receptacle provided at its lower portion with a series of depending lugs having inclined upper faces, a handle extended laterally from the lower portion of said receptacle, an annular supporting frame provided with a series of bayonet slots to receive said lugs, a flange within said frame, a sieve provided at its upper portion with a rib to rest upon said flange, and a lateral projection from said sieve to enter a coöperating recess in said frame.

[Claims 6 to 9 not printed in the Gazette.]

960,249. PUMP-GOVERNOR. TELESPHORE J. BEAUDETTE. Los Angeles, Cal. Filed June 2, 1909. Serial No. 499,777.



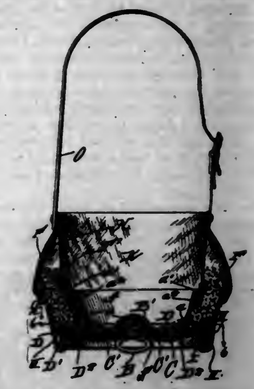
1. A pump governor comprising a divided plunger stem; clutch members carried by one portion of the divided stem adapted to engage the other portion of the stem and lock the two parts together; electrically operated means for bringing the clutches into engagement with the other member of the stem when the circuit of said electrical means is closed; mechanical means for closing or opening the circuit of the electrical means, said mechanical means being operated by the power shaft of the pump.

2. In a pump governor a divided plunger stem; electrically operated means for locking the two parts of the plunger stem together; and mechanical means controlled by the motion of the power shaft of the pump controlling said electrical means, whereby the electrically operated means are rendered active or inert.

3. In a plurality of pumps operated by irregularly applied power, a governor for said pumps, comprising divided plunger stems, one portion of the plunger stems being provided with heads and the other portion of the plunger stems being provided with sockets and carrying pivoted clutches adapted to engage the heads of the other members and lock the parts of the plunger stems together; electrically operated means adapted to cause the clutches to lock the parts of the plunger stems together when said means are energized; mechanical means adapted to disengage the clutches when the electrically operated means are deënergized; mechanically operated means for opening and closing the circuits of the electrically operated means, whereby the plunger stems are locked or unlocked as the circuits are closed or opened.

4. In a plurality of pumps operated by irregularly applied power; a governor for said pumps, comprising divided plunger stems, one portion of the plunger stems being provided with heads and the other portion of the plunger stems being provided with sockets and carrying pivoted clutches adapted to engage the heads of the other members and lock the parts of the plunger stems together; a magnet for each of said stems, operatively connected to said clutches; a source of electrical energy; connections from said source of electrical energy to said magnets; a connection from said source of energy to a stationary contact; other stationary contacts adjacent to said first contact; connections from said last contacts to different magnets on the plunger stems; a sliding contact adapted to connect two or more of said stationary contacts and thereby close the circuit or circuits of one or more of the magnets; and mechanical means operated by the power shaft of the pump to cause said sliding contact to connect or disconnect said stationary contacts.

960,250. NOSE FEEDING-BAG. JOHN N. BEENKEN, Philadelphia, Pa. Filed July 17, 1909. Serial No. 508,118.



1. A feeding bag comprising an inner and an outer receptacle fastened together and having perforated bottoms, apertures in the walls of the two receptacles and out of registration with one another, a disk, a handle having a shank passing through the latter and the bottoms of said

receptacles, said disk provided with openings adapted to register with the openings in the outer of said receptacles, said disk having perforations in the bottom thereof adapted to register with perforations in the bottoms of said receptacles, resilient hooks engaging said disk and cooperating with the shank of the handle to hold the disk in contact with the bottom of the outer receptacle, and collapsible extension walls to said receptacles fastened together at their upper ends and forming a circular outlined pocket for the reception of food.

2. A feeding bag comprising an inner and an outer receptacle fastened together and having perforated bottoms, apertures in the walls of the two receptacles and out of registration with one another, a disk, a handle having a shank passing through the latter and the bottoms of said receptacles, said disk provided with openings adapted to register with the openings in the outer of said receptacles, said disk having perforations in the bottom thereof adapted to register with perforations in the bottoms of said receptacles, resilient hooks engaging said disk and cooperating with the shank of the handle to hold the disk in contact with the bottom of the outer receptacle, collapsible extension walls to said receptacles fastened together at their upper ends and forming a circular outlined pocket for the reception of feed, the central portion of the bottom of said disks being slightly convexed and the wall of the outer receptacle inclined.

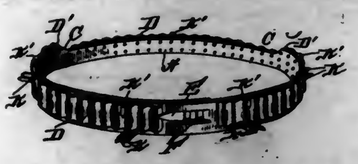
3. A feeding bag comprising an inner and an outer receptacle fastened together and having perforated bottoms, apertures in the walls of the two receptacles and out of registration with one another, a centrally perforated disk dished to conform to the dished shape of the bottom of the receptacles against which it is adapted to contact, said disk having openings adapted to be brought into registration with openings in the bottom of the outer of said receptacles, said disk having a beaded flange, resilient hooks fastened to the wall of the outer receptacle and engaging said beading and allowing the disk to have a swiveled movement against the bottom of the receptacle, extension walls of canvas or other suitable material fastened to the marginal edges of the walls of said receptacles and secured together at their outer ends, thus forming a pocket for the reception of feed.

4. A feeding bag comprising an inner and an outer receptacle fastened together and having perforated bottoms, apertures in the walls of the two receptacles and out of registration with one another, a centrally perforated disk dished to conform to the dished shape of the bottom of the receptacles against which it is adapted to contact, said disk having openings adapted to be brought into registration with openings in the bottom of the outer of said receptacles, said disk having a beaded flange, resilient hooks fastened to the wall of the outer receptacle and engaging said beading and allowing the disk to have a swiveled movement against the bottom of the outer of said receptacles, lugs projecting from said hooks and adapted to engage apertures in said flange of the disk, extension walls of canvas or other suitable material fastened to the marginal edges of the walls of said receptacles and secured together at their outer ends, thus forming a pocket for the reception of feed.

5. A feeding bag comprising an inner and an outer receptacle fastened together and having perforated bottoms, apertures in the walls of the two receptacles and out of registration with one another, a centrally perforated disk dished to conform to the dished shape of the bottom of the receptacles against the outer of which it is adapted to contact, said disk having openings adapted to be brought into registration with openings in the bottom of the outer of said receptacles, said disk having a beaded flange, resilient hooks fastened to the wall of the outer receptacle and engaging said beading and allowing the disk to have a swiveled movement against the bottom of the receptacles, extension walls to the inner and outer receptacles, a ring secured to the lower end of each extension wall and adapted to engage beadings at the marginal edges of the two receptacles.

[Claim 6 not printed in the Gazette.]

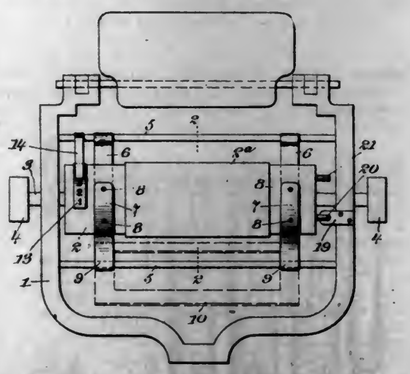
960,251. SWEAT-BAND FOR HATS. JOHN N. BEENKEN, Philadelphia, Pa. Filed July 17, 1909. Serial No. 508,119.



1. A combined sweat and ventilating band for hats, consisting of a perforated celluloid band having a narrow portion a part of its length and a corrugated strip upon the outer face thereof, said corrugated strip being narrower than the width of said band, straps struck up from said band at one end of the latter, a tongue formed at the opposite end of the band and adapted to engage said straps and hold the opposite longitudinal edges of the band flush with each other, fastening means engaging the corrugations of said strip and adapted to hold the band to the crown.

2. A combined sweat and ventilating band for hats, consisting of a perforated celluloid band having a narrow portion a part of its length and a corrugated strip upon the outer face thereof, said corrugated strip being narrower than the width of said band, straps struck up from said band at one end of the latter, a tongue formed at the opposite end of the band and adapted to engage said straps and hold the opposite longitudinal edges of the band flush with each other, a metallic fastening device having flexible fingers, one of which passes between a corrugation and the band and has its end bent over the upper edge of the corrugated strip, the other fingers of the fastening device extending laterally from the band and between the lower edges of the band and the corrugated strip and adapted to be clenched to the crown.

960,252. CARD-TYPE-WRITING MACHINE. FRANK DRAYTON BELKNAP, New York, N. Y. Filed Oct. 5, 1908. Serial No. 456,309.



1. In a typewriting machine, the combination with the platen of a clamping device for holding the paper in a predetermined position on said platen, said clamping device comprising a V-shaped spring, one leg of which is fastened to the platen, together with a guide mounted on the platen supporting carriage, which guide compresses said spring when the paper is in position to be struck by the type.

2. In a typewriting machine, the combination with the platen of a clamping device for holding the paper in a predetermined position on said platen, said clamping device comprising a V-shaped spring, one leg of which is fastened to the platen, together with an approximately tangential guide strip, said strip being mounted on the carriage in line with the V-shaped spring and in contact with the same.

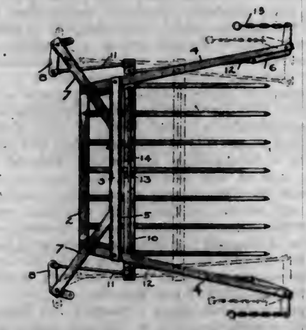
3. In a typewriting machine, the combination with the platen of a clamping device for holding a card in a predetermined position on the platen, said clamp comprising a spring portion curved to the circumference of the platen and a stiffer portion tangential thereto, together with a tangentially arranged guide for said stiffer portion.

4. In a typewriting machine, the combination with the platen of a clamping device for holding a card in a predetermined position on the platen, said clamp comprising a spring portion curved to the circumference of the platen and a stiffer portion tangential thereto, the clamp being attached to the platen only at the outer end of the curved spring portion.

5. In a typewriting machine, the combination with the platen of a clamping device for holding a card in a predetermined position on the platen, said clamp comprising a spring portion curved to the circumference of the platen and a stiffer portion tangential thereto the clamp being attached to the platen only at the outer end of the curved spring portion, together with a tangentially arranged guide for said stiffer portion.

[Claim 6 not printed in the Gazette.]

960,253. HORSE-RAKE. JOSEPH T. BELL, Leola, S. D. Filed Dec. 5, 1908. Serial No. 466,188.

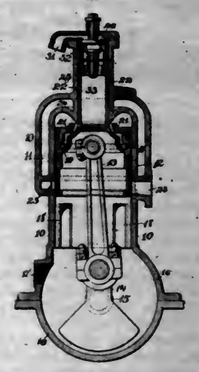


A horse rake comprising cross beams, teeth secured to said cross beams, a cross bar loosely mounted on the teeth, a projection in the middle of the cross-bar, a truss rod secured to the cross-bar and over said projection, forwardly extending arms secured to the cross-beams and extending upwardly and outwardly from the rake, rearwardly extending arms also secured to said cross-beams and extending upwardly and outwardly from the rake, bell crank levers fulcrumed on the ends of said arms, and rods connecting one arm of each of the levers with the ends of the cross-bar, the draft animals being hitched to the free arms of the levers.

960,254. INTERNAL-COMBUSTION ENGINE. CHARLES A. BENNETT, Dover, N. J. Filed May 23, 1908. Serial No. 434,477.

1. An internal combustion engine comprising a cylinder, a piston, a closed crank-case, the crank-case having an air inlet therein, ducts for communicating between the crank-case and the cylinder when the piston finishes its power stroke, a vaporizing chamber on the end of the cylinder, a plunger on the piston and working in the vaporizing chamber, the plunger having a fuel chamber therein and means for causing communication to inject vapor from the fuel chamber to the cylinder only when the piston finishes its power stroke.

2. An internal combustion engine comprising a cylinder, a piston, a closed crank-case, the crank-case having an air inlet therein, ducts for communicating between the crank-case and the cylinder when the piston finishes its power stroke, a vaporizing chamber on the end of the cylinder and opening directly therein, a plunger on the piston and working in the vaporizing chamber and having a fuel chamber therein, and means for causing communication to inject vapor from the fuel chamber to the cylinder only when the piston finishes its power stroke.



3. An internal combustion engine comprising a cylinder a piston and a closed crank-case, the crank-case having an air inlet, a vaporizing chamber on the end of the cylinder opposed to the crank-case, a plunger on the piston and working in the vaporizing chamber, the piston having ports for communicating between the crank-case and the cylinder when the piston finishes its power stroke, an inwardly opening suction valve on the vaporizing chamber for the admission of fuel vapor to the vaporizing chamber, and means for causing communication between the vaporizing chamber and the cylinder.

4. An internal combustion engine comprising a cylinder a piston and a closed crank-case, the crank-case having an air inlet, the crank-case being adapted to receive air devoid of fuel vapor, the piston having ports for passing the free air when compressed from the crank-case to the cylinder, a vaporizing chamber on the cylinder and opening directly therein, a plunger adapted to reciprocate in the vaporizing chamber, the plunger being adapted to contact with the air from the ports in the piston and be cooled thereby, and means for causing communication from the vaporizing chamber to the cylinder.

5. An internal combustion engine comprising a cylinder, a piston, a closed crank-case, the crank-case having an air inlet therein, the cylinder having passages in its inner walls extending part way up from the crank-case, the piston having an annular passage concentric with its center, and having ports adapted to communicate with the passages in the cylinder when the piston finishes its power stroke.

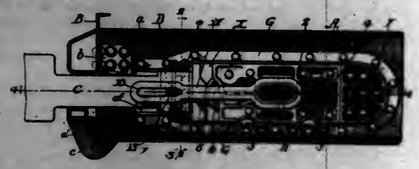
[Claims 6 to 16 not printed in the Gazette.]

960,255. DRAFT-RIGGING. WILLIAM P. BETTENDORF, Davenport, Iowa. Filed June 4, 1908. Serial No. 436,655.

1. In a car the combination with an end-sill and a single center-sill the end of which is bifurcated, of a car-coupler having a draw-bar the shank of which is disposed between said bifurcations and is constructed so as to pass on either side of a portion of the web of said center-sill, and springs normally exerting a forward pressure against said draw-bar.

2. In a car the combination with an end-sill and a single center-sill the end of which is bifurcated and pro-

vided with an opening back of said bifurcation, of a car-coupler having a draw-bar the shank of which is disposed between said bifurcations and is constructed so as to pass on either side of a portion of the web of said center-sill, and springs mounted within the opening in said center-sill and normally exerting a forward pressure against said draw-bar.



3. The combination with the end-sills of a car, and a single rolled metal beam center-sill the ends of which are connected to said end-sills and are bifurcated and provided with a longitudinally elongated opening in alinement with and separated from the bifurcations, of a vertically disposed integral portion or column of the web of said center-sill, of a draw-bar entering the space between said bifurcations, and having a longitudinal slot therein to enable it to pass on either side of said column, longitudinally disposed springs, means supporting said springs that normally engage the rear end of said opening, and longitudinally disposed links connecting said spring supporting means to the draw-bar.

4. The combination with the end-sills of a car, and a single rolled metal center-sill the ends of which are connected to said end-sills and are bifurcated and provided with a longitudinally elongated opening in alinement with and separated from the bifurcations by a vertically disposed integral portion of the web of said center-sill, of a draw-bar entering the space between said bifurcations and having its rear end slotted, a transverse key seated in a suitable opening in the rear portion of the draw-bar and having its rear end projecting laterally beyond the sides of the same, longitudinally disposed springs, means for supporting the same in said longitudinally elongated opening that normally engage the rear end of the latter, and longitudinally disposed links the forward ends of which are provided with longitudinally elongated openings which are fitted over the projecting ends of said key, and engage with said spring supporting means.

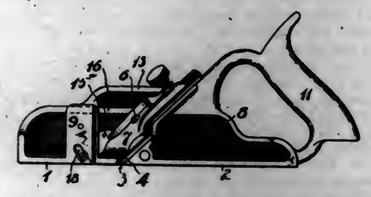
5. In a car the combination with end-sills, and a single rolled metal beam center-sill the ends of which are connected to said end-sills and bifurcated longitudinally, and are provided with a longitudinal opening alining with and separated from said bifurcations by a vertically disposed integral part or column of the web of said center-sill, longitudinally disposed springs and reciprocal means for retaining the same, of a draw-bar movable in the space between said bifurcations and having a vertical slot in its rear end, a buffer-block interposed between said springs and draw-bar, and links connecting the spring retaining means and said draw-bar.

[Claims 6 to 8 not printed in the Gazette.]

960,256. PLANE. CHRISTIAN BODMER, New Britain, Conn., assignor to The Stanley Rule & Level Company, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 31, 1910. Serial No. 540,967.

1. A plane body formed of cast metal including two sole sections separated by a throat, a wall or plate integrally connecting said sections by an arch at one side of the plane body and including a plurality of substantially horizontally disposed and inwardly directed spaced ribs extending laterally across the plane body, a standard at the opposite side of the plane forming a bearing support projecting upwardly from the forward sole section and connected to the last mentioned rib, and still another rib extending across the plane body from the support on one side to the plate on the other side and forming a combined deflector and strengthening rib.

2. A plane body formed of cast metal including two sole sections separated by a throat, a wall or plate integrally connecting said sections by an arch at one side of the plane body and including a plurality of substantially horizontally disposed and inwardly directed spaced ribs extending laterally across said body, a standard at the opposite side of the plane forming a bearing support projecting upwardly from the forward sole section and connected to the last mentioned rib, and still another rib extending across said body from the support on one side to the plate on the other side and forming a combined deflector and strengthening rib, said last mentioned rib being also integrally connected with said bearing support and one of said sole sections.



3. A plane body formed of cast metal including two sole sections separated by a throat, a wall or plate at one side, connecting said sections by an arch at one side of the plane body, a standard at the opposite side of the plane forming a bearing support, the inner side of said standard being integrally connected to the inner side of said wall or plate, the outer or bearing side of said plate where said arch is formed having a relatively raised bearing surface, said bearing surface being machined, the relatively unraised portion being unmachined to balance surface tension on opposite sides of said plate at said arch.

4. A plane body formed of cast metal including two sole sections separated by a throat, a wall or plate connecting said sections at one side of the plane body and including a plurality of substantially horizontally disposed ribs at the inner side of said side plate, the outer or bearing side of said side plate having a relatively raised bearing surface, said bearing surface being machined, said unraised portion being unmachined, said unmachined surfaces being so disposed relatively to the forward and rear sections of the sole portions of the plane as to retain surface tension at the point where buckling would tend to occur between the two sole sections.

5. A plane body comprising a forward sole section and a rear sole section arranged in line and separated by a narrow throat, a wall or plate connecting said two sections at one side of the plane body, all of said parts being formed integrally by casting, the outer bearing surface of said wall or plate including a smoothed machined bearing surface and an unmachined surface arranged in a plane slightly below the plane of the bearing surface, said unmachined portion being so located with relation to the forward and rear sole sections as to retain surface tension at the point between the front and rear sole sections where buckling would tend to occur.

960,257. MANUFACTURE OF MOLDS FOR CASTING METAL. ERNST L. BOHL and ROBERT Y. BARROWS, Rutherford, N. J. Filed Sept. 20, 1909. Serial No. 518,496.

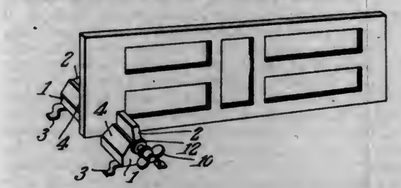
1. The method of making a mold or other article herein described, which consists in forming said mold or other article from a composition of matter containing plaster of paris, and heating and drying said mold or other article in an oven, in the presence of an oleaginous vapor.

2. The method of making a mold or other article herein described, which consists in forming the said mold or other article from a composition of matter containing plaster of paris, and drying said mold or other article in an oven containing an oleaginous vapor.

3. The method of making a mold or other article herein described, which consists in forming the said mold or other article from a composition of matter containing plaster of paris, and heating and drying said mold or other article in an oven containing an oleaginous vapor.

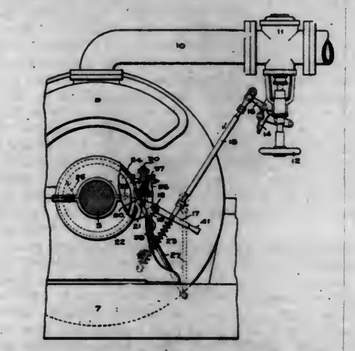
4. The method of making a mold or other article herein described, which consists in forming the said mold or other article from a composition of matter, and drying said mold or other article in an oven in the presence of an oleaginous vapor.

960,258. CLAMP. PETER BOUDREAU, Spokane, Wash., assignor of one-half to Alfred E. Guertin, Spokane, Wash. Filed Aug. 31, 1909. Serial No. 515,398.



A clamp comprising two members each consisting of a base portion having upstanding flanges at its edges, and a working portion secured between the said flanges, a connecting spring having one end secured to the base portion of one member between the flanges of the same and its opposite end provided with a threaded head between the flanges of the opposite member, an adjusting bolt swiveled in a depending lug at the end of said member and engaging the threaded head on the connecting spring.

960,259. EMERGENCY GOVERNING MECHANISM FOR TURBINES. FREDERIC R. C. BOYD, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 6, 1909. Serial No. 521,305.



1. In combination, a prime mover, a valve for controlling the supply of motive fluid to the prime mover, mechanism which normally holds the valve open but can be tripped to close the valve suddenly, and means for tripping said mechanism when the pressure in a given region of the prime mover rises to a predetermined value, said means including a pressure actuated device, and means responsive to the rise in pressure in said region for controlling the admission of pressure to said device to close the valve.

2. In combination, a prime mover, a valve for controlling the supply of motive fluid to the prime mover, means which normally holds the valve open but can be tripped to close the valve suddenly, and mechanism responsive to a predetermined rise in pressure in a given region of the prime mover which effects the tripping of said valve and thereby shuts down the prime mover, said mechanism including a pressure actuated device, a conduit leading from said region to the device, and a valve for controlling the flow through the conduit which opens when the pressure in said region rises to the predetermined value.

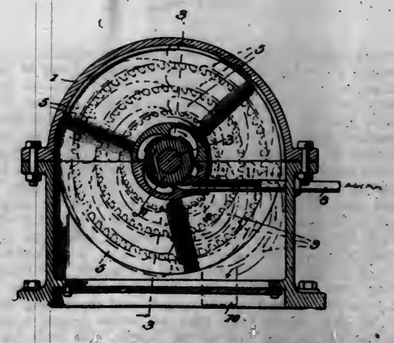
3. In combination, a prime mover, a valve for controlling the supply of motive fluid to the prime mover, means which normally holds the valve open but can be tripped to close the valve suddenly under emergency conditions, and mechanism responsive to a predetermined rise in pressure in a given region of the prime mover which effects the tripping of said valve and thereby shuts down the prime mover, said mechanism including a pressure actuated diaphragm, a conduit leading from said region to said mechanism, and a valve for controlling the flow through the conduit which opens when the pressure rises to the predetermined value and permits said pressure to act on the diaphragm and thereby operate the tripping means.

4. In combination, a prime mover, a valve controlling the supply of motive fluid to the prime mover, mechanism for tripping the valve to close it suddenly under emergency conditions, and means responsive to a predetermined rise in pressure in a given region of the prime mover which effects the tripping of said valve and thereby shuts down the prime mover, said means including a frame or casing, a diaphragm carried thereby, a device for transmitting motion from the diaphragm to said mechanism, a conduit leading from said region to the casing, and a valve controlling the flow through the conduit that opens when the pressure in said region rises to the predetermined value and permits said pressure to act on the diaphragm and thereby operate the tripping mechanism.

5. In combination, a turbine, a valve for controlling the supply of motive fluid to the turbine, mechanism for tripping the valve to close it suddenly under emergency conditions, and means responsive to a predetermined rise in pressure in a given region of the turbine which effects the tripping of said valve and thereby shuts down the turbine, said means including a casing, a diaphragm mounted in the casing, a lever for transmitting motion from the diaphragm to said mechanism, a conduit leading from said region and opening into the casing at one side of the diaphragm, and a valve for controlling the flow through the conduit that opens when the pressure in said region rises to a predetermined value and permits said pressure to act on the diaphragm and thereby cause said lever to actuate the tripping mechanism.

[Claims 6 to 11 not printed in the Gazette.]

960,260. ELASTIC-FLUID TURBINE. GRAM A. BOYER, Harrisburg, Pa. Filed Mar. 13, 1909. Serial No. 483,254.



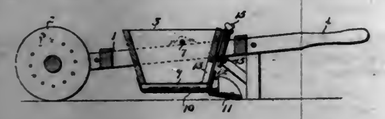
1. An expansion turbine including a cylindrical casing and a rotor therein provided with peripheral pockets to

receive the impact of the fluid, said casing being provided on its interior face with a plurality of separated expansion chambers, each chamber being substantially concentric to the rotor and having an inlet and an outlet opening at opposite ends of the chamber and registering with said pockets, said chamber gradually contracting from its inlet end toward its outlet end, and the outlet opening being smaller than the inlet, the end wall of the outlet end of the chamber being gradually inclined inward and toward the direction of movement of the rotor.

2. An expansion turbine including a cylindrical casing, a plurality of rotors mounted therein, said rotors being of gradually increasing size, the casing for the rotors being formed with a plurality of expansion chambers arranged around the inner face of the casing in registry with each of the rotors, each of said chambers having an inlet and an outlet opening at opposite ends, said chamber gradually contracting in area toward its outlet end, said chambers gradually increasing in area throughout the series of chambers for each rotor, and the chambers of each rotor being of greater area than the corresponding chambers of the rotor preceding.

3. An expansion turbine including a casing having formed therein a series of rotor chambers, each rotor chamber being separated from the adjacent rotor chamber by a solid wall, a shaft passing through the casing, a series of rotors attached to said shaft and gradually increasing in size from one end of the casing to the other, the inner face of each of the rotor chambers in the casing being formed with a primary inlet and an outlet chamber, and a series of expansion chambers, each expansion chamber extending approximately concentrically to the rotor, having an inlet opening at one end and an outlet opening at the other, said expansion chambers gradually increasing in size from the inlet end to the outlet end, and the outlet end having an end wall inclined inward and in the direction of the rotor travel, said casing being further provided with an initial inlet passage leading into the inlet chamber of the smallest rotor chamber, a final exhaust passage leading from the outlet chamber to the largest rotor, and a series of conducting passages leading from the outlet chamber of the rotor chambers to the inlet chamber of the next succeeding rotor chamber, said conducting passages each having a curve only slightly diverging from the path of movement of the rotor.

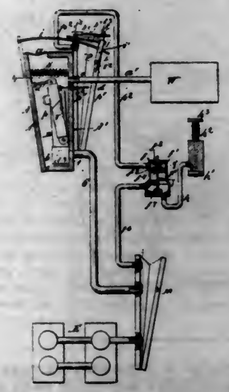
960,261. SEED AND FERTILIZER DISTRIBUTER. JAMES JOSEPH BRADY, Chester, Ga. Filed Nov. 24, 1909. Serial No. 529,702.



1. A grain or fertiliser distributer comprising a supporting frame, a disk carried by the forward end of said frame, a series of pins mounted concentrically on said disk and extending outwardly therefrom, a hopper pivotally mounted on the frame, the sides of said frame being extended rearwardly to form operating handles, an arm secured to the hopper and extending inwardly in front of the hopper and then forwardly for engagement with the pins and adapted to be lifted thereby during rotation of said disk, an arm extended rearwardly from the hopper and positioned for moving said forwardly extended arm when the hopper is tilted, said hopper being also provided with an opening in its rear face, a semicircular trough for the open bottom end of the hopper, said trough being open at its rear end, a spout pivotally secured to the rear end of said bottom trough, said spout being converged at a sharper angle than the bottom trough, a slide carried by the rear end of the hopper, said slide being movable in the slot and means for regulating the position of the slide within the slot.

2. In a grain or fertiliser distributer, the combination with a supporting frame comprising a pair of arms, said arms being converged forwardly, the rear ends of said arms being adapted as operating handles, of a disk journaled at the forward ends of said arms, a plurality of pins concentrically mounted on said disk and extending outwardly from one side thereof, a transverse rod mounted intermediate the ends of said frame, and upon the upper faces thereof, a hopper pivotally carried by the rod and within the frame, said hopper being provided with an open bottom portion and having an opening formed in its rear end terminating short of its top, a semi-circular metallic trough secured to the sides and forward end of said hopper, said trough extending rearwardly therefrom and having its rear end open, a spout pivotally carried by a transverse rod on the rear end of the trough, said spout surrouding the trough and being converged to a sharper angle than the trough, a slideway having a circular lower end, said slideway being movable in the slot in the rear end of the hopper, a projecting lug formed on said slideway, said lug being adapted for engagement with a screw threaded member, an operating screw carried by the hopper at its upper edge and disposed in engagement with said lug to move the slideway vertically, said slide having its under end adapted for snug engagement with the trough to securely close the same, an arm secured to the hopper on one side thereof, said arm being extended inwardly in front of the hopper, then forwardly to engage the pins, the forward end thereof being twisted for such engagement, said arm being positioned above the pivot rod which is positioned to one side of the longitudinal center of the hopper, said hopper being adapted to be vibrated upon rotation of the disk and a controlling lever extending rearwardly from the hopper whereby said hopper may be tilted and said forwardly extending arm moved out of engagement with the pins on the disk.

960,262. ACCENTUATING MECHANISM FOR PNEUMATIC PLAYERS. GEORGE P. BRAND, New York, N. Y. Filed Jan. 16, 1906. Serial No. 296,311.



1. In pneumatic apparatus of the character designated, the combination with the wind chest and exhaust mechanism and ducts leading thereto from a variable tension bellows, of said variable tension bellows, having an internal throttle interposed between a duct leading to the exhaust mechanism and a duct leading to the wind chest, said throttle being controlled by the movable member of said bellows, an auxiliary accentuating pneumatic, means for inflating and deflating the latter, and means for coupling its movable member to the movable member of the said variable tension bellows when said accentuating pneumatic is deflated, for the purpose described.

2. In pneumatic apparatus of the character designated, the combination with the wind chest and exhaust mechanism and ducts leading thereto from a variable tension bellows, of said variable tension bellows, having an internal throttle interposed between a duct leading to the exhaust mechanism and a duct leading to the wind chest, said throttle being controlled by the movable member of said bellows, an auxiliary accentuating pneumatic, means for inflating and deflating the latter, a coupling rod pivotally connected to the movable member of the said variable tension bellows and slidable in a clutch on the movable member of the accentuating pneumatic, and said clutch arranged to automatically pinch and hold the coupling rod rigidly during the deflation of the accentuating pneumatic, for the purpose described.

3. In pneumatic apparatus of the character designated, the combination with the wind chest and exhaust mechanism and ducts leading thereto from a variable tension bellows, of said variable tension bellows, having an internal throttle interposed between a duct leading to the exhaust mechanism and a duct leading to the wind chest, said throttle being controlled by the movable member of said bellows, an auxiliary accentuating pneumatic, means for inflating and deflating the latter, a coupling rod pivotally connected to the movable member of said variable tension bellows and slidable in a clutch on the accentuating pneumatic said clutch pivotally connected to the movable member of the accentuating pneumatic and formed with an aperture for the reception of the coupling rod, said aperture being of approximately the same width as the diameter of the coupling rod, a spring which tends constantly to cause the clutch to pinch the coupling rod, and a stop arranged to disconnect the clutch from the rod when the accentuating pneumatic is inflated, for the purpose described.

4. In pneumatic apparatus of the character designated, the combination with the wind chest and exhaust mechanism and ducts leading thereto from a variable tension bellows, of said variable tension bellows, having an internal throttle interposed between a duct leading to the exhaust mechanism and a duct leading to the wind chest, said throttle being controlled by the movable member of said bellows, an auxiliary accentuating pneumatic, means for inflating and deflating the latter, a coupling rod pivotally connected to the movable member of said variable tension bellows and slidable in a clutch on the accentuating pneumatic, said clutch pivotally connected to the movable member of the accentuating pneumatic and formed with an aperture for the reception of the coupling rod, said aperture being of approximately the same width as the diameter of the coupling rod, a spring which tends constantly to cause the clutch to pinch the coupling rod, and a stop arranged to disconnect the clutch from the rod when the accentuating pneumatic is inflated, and means for adjusting said stop with relation to the stationary member of the accentuating pneumatic for the purpose described.

5. In pneumatic apparatus of the character designated, the combiantion with the wind chest and exhaust mechanism and ducts leading thereto from a variable tension bellows, of said variable tension bellows, having an internal throttle interposed between a duct communicating with the exhaust mechanism and a duct communicating with the wind chest, said throttle being controlled by the movable member of said bellows, a coupling rod pivotally connected to the movable member of said variable tension bellows and slidable in a clutch on an accentuating pneumatic, said accentuating pneumatic, said clutch pivotally connected to the movable member of the accentuating pneumatic and formed with an aperture for the reception of the coupling rod, said aperture being of approximately the same width as the diameter of the coupling rod, a spring which tends constantly to cause the clutch to pinch the coupling rod, a stop arranged to limit the outward movement of the movable member of the accentuating pneumatic when inflated, and a stop arranged to disconnect the clutch from the coupling rod when the movable member of the accentuating pneumatic encounters the said first mentioned stop, for the purpose described.

[Claims 6 to 29 not printed in the Gazette.]

960,263. ORGAN-PIPE. ARTHUR SCOTT BROOK, Rutherford, N. J. Filed Mar. 26, 1909. Serial No. 485,878.

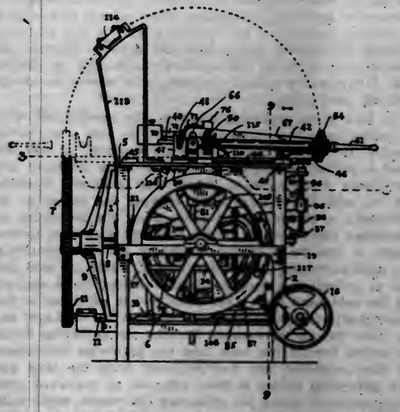


1. An organ pipe comprising a main tube open throughout its length and the ends of which are unobstructed, said pipe being provided in one side thereof with a blow aperture adapted to be placed in communication with the wind chest of an organ.

2. An organ pipe comprising a main tube open throughout its length and the ends of which are unobstructed, said pipe being provided between the ends thereof and in one side thereof with a blow aperture, and means for placing said aperture in communication with the wind chest of an organ.

3. An organ pipe, comprising a main tube open and unobstructed throughout its length, said pipe being provided in one side thereof with a blow aperture and a tube adapted to connect said aperture with the wind chest of an organ.

960,264. GLASS-GATHERING MACHINE. ROSS D. BROWN, Muncie, Ind., assignor of one-half to Robert H. Riffe, Muncie, Ind. Filed Mar. 22, 1909. Serial No. 484,917.



1. In a glass gathering machine, the combination with a gathering device including a sleeve pivotally mounted

and a gathering instrument free to move slidingly and rotatively therein, of a cross head slidingly mounted on the said sleeve and which engages the gathering instrument, a pinion loosely secured on the gathering instrument and in which pinion the said gathering instrument is free to move longitudinally but not rotatively, an oscillatory arm on which the said pinion is journaled, a carrier member adapted to be engaged by the said cross head when the sleeve is oscillated to forward position, means to oscillate the said arm and to move the carrier member whereby the gathering device is moved toward the tank and the gathering instrument is then projected into and retracted from the tank and the gathering device is then returned to rearward position, and a gearing to rotate the gathering instrument while same is at the tank.

2. In a glass gathering machine, the combination with a gathering device including a sleeve pivotally mounted at one end and a gathering instrument free to move slidingly and rotatively therein, of a cross head slidingly mounted on the said sleeve and which engages the gathering instrument, a pinion loosely secured on the gathering instrument and in which pinion the said gathering instrument is free to move longitudinally but not rotatively, an oscillatory arm on the free end of which the said pinion is journaled, a carrier member adapted to be engaged by the said cross head when the sleeve is oscillated to forward position, driving means to oscillate the said arm and to move the carrier member whereby the gathering device is moved toward the tank, and the gathering instrument is then projected into and retracted from the tank and the gathering device is then returned to rearward position, a gearing to rotate the gathering instrument while same is at the tank, devices to render the aforesaid driving means inoperative while the gathering instrument is at the tank and without stopping the rotary movement of the gathering instrument.

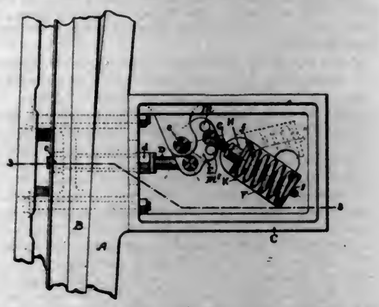
3. In a glass gathering machine, the combination with a gathering device including a sleeve pivotally mounted at one end and a gathering instrument free to move slidingly and rotatively therein, of a cross head slidingly mounted on the said sleeve and which engages the gathering instrument, a pinion loosely secured on the gathering instrument and in which pinion the said gathering instrument is free to move longitudinally but not rotatively, an oscillatory arm on the free end of which the said pinion is journaled, a carrier member adapted to be engaged by the said cross head when the sleeve is oscillated to forward position, means to oscillate the said arm and to move the carrier member whereby the gathering device is moved toward the tank, and the gathering instrument is then projected into and retracted from the tank and the gathering device is then returned to rearward position, means to rotate the gathering instrument while same is at the tank, a driving mechanism for operating both of the aforesaid means, a slidable spring-operated clutch whereby the means that operates the oscillatory arm may be thrown out of operation without stopping the movement of the driving mechanism.

4. In a glass gathering machine, the combination with a gathering device including a sleeve, and a gathering device including a sleeve pivotally mounted at one end and a gathering instrument free to move slidingly and rotatively therein, of a cross head slidingly mounted on the said sleeve and which engages the gathering instrument, a pinion loosely secured on the gathering instrument and in which pinion the said gathering instrument is free to move longitudinally but not rotatively, an oscillatory arm on the free end of which the said pinion is journaled, a carrier member adapted to be engaged by the said cross head when the sleeve is oscillated to forward position, driving means to oscillate the said arm and to move the carrier member whereby the gathering device is moved toward the tank, and the gathering instrument is then projected into and retracted from the tank and the gathering device is then returned to rearward position, means to rotate the gathering instrument while same is at the tank, devices to render the said driving means inoperative while the gathering instrument is at the tank and without stopping the rotary movement of the gathering instrument, means for locking the gathering device against oscillation when the rotary movement of the gathering instrument is stopped.

5. In a glass gathering machine, the combination with a gathering instrument free to move slidingly and rotatively therein, of a vertically movable fork in which one end of said sleeve is pivotally mounted, a cross head slidingly mounted on said sleeve and which engages the gathering instrument, a pinion loosely secured on the gathering instrument and in which pinion the said gathering instrument is free to move longitudinally but not rotatively, an oscillatory arm to the free end of which the said pinion is journaled, a carrier member adapted to be engaged by the said cross head when the gathering instrument has been oscillated to the forward position, driving means to actuate the said arm, carrier member and vertical fork, whereby the gathering mechanism is moved toward the tank, and the gathering instrument is then projected into and retracted from the tank, and the gathering instrument is then returned to rearward position, means to rotate the gathering instrument while same is at the tank, devices to render the said driving means inoperative while the gathering instrument is at the tank without stopping the rotary movement of the gathering instrument.

[Claims 6 to 16 not printed in the Gazette.]

960,265. RETAINING DEVICE FOR SWITCH-POINTS. WILLIAM MILTON BROWN, Johnstown, Pa., assignor to The Lorain Steel Company, a Corporation of Pennsylvania. Filed Sept. 30, 1909. Serial No. 520,292.



1. In a switch point retaining device, a movable switch point, a pivoted bell crank, connections between the switch point and the bell-crank, a pivoted frame having a rearward extension, and a spring bearing against the bell-crank and the rearward extension of the frame beyond its pivot; substantially as described.

2. In a switch point retaining device, a movable switch point, a pivoted lever, connections between the switch point and the lever, a pivoted frame having a rearward extension, a rod carried by the rearward extension of the frame and connected to the lever, a spring engaging the rod and rearward extension of the frame and means to shift the connection between the spring-pressed rod and the lever; substantially as described.

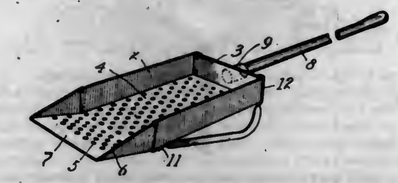
3. In a switch point retaining device, a movable switch point, a pivoted bell-crank to which the point is connected, a pivoted frame having a rearward extension, a spring interposing between the rearward extension of the frame and the bell-crank, and adapted to exert pressure on said bell-crank and means to change the angle of the frame with relation to the bell-crank; substantially as described.

4. A switch point retaining device, a movable switch point, a pivoted lever, connection between the switch point and the lever, a pivoted frame having a rearward extension, a rod carried by the rearward extension of the frame and connected to the lever, a spring engaging the rod and rearward extension of the frame and means to adjust the pressure of said spring; substantially as described.

5. In a switch point retaining device, a movable switch point, a pivoted lever, connections between the switch point and the lever, a pivoted frame having an extension beyond its pivot, and a spring interposed between said extension and the pivoted lever; substantially as described.

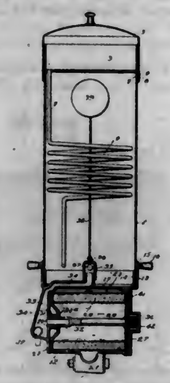
[Claim 6 not printed in the Gazette.]

960,266. ASH-SHOVEL. RALPH BROWNSON, St. Paul, Minn. Filed Feb. 2, 1909. Serial No. 475,629.



In combination a shovel provided with side and rear walls and a perforated bottom, an upwardly inclined free end for said perforated bottom and a shoe portion comprising a pair of bars 10, each connected at its front end underneath said bottom at the rear of said inclined free end and extending rearwardly in alinement with said free end to the rear of said bottom, being then bent upwardly and connected with the rear wall of said shovel to form rocker shoes in the manner set forth.

960,267. FILTER. HANS BRUNNER, Spokane, Wash. Filed Oct. 23, 1908. Serial No. 459,242.



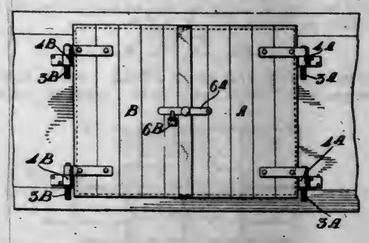
1. In a filter, the combination of a receptacle having a bottom closure, said closure being provided with a depending casing, said casing having formed therewith a partition and a distributing chamber and a filter chamber, the distributing chamber being arranged beneath the partition and provided with a discharge slot in its bottom communicating with the filter chamber, a filter body in the filter chamber, a connection leading from the interior of said filter chamber to said receptacle, and an inlet connection communicating with the former chamber.

2. In a filter, the combination of a receptacle having a removable bottom closure, said closure being provided with a depending casing, said casing being provided with a distributing chamber in the upper portion thereof and a filtering chamber beneath the former chamber and communicating therewith and with an inlet passageway extending from the former chamber to the lower portion of the casing and there communicating with an inlet connection, said casing also having an outlet connection communicating with the interior of the filter chamber and extending upwardly into the receptacle, and a hollow filter body within the filter chamber, said casing having an outlet connection communicating with the filter chamber of said filter body.

3. In a filter, the combination of a receptacle having a bottom closure, said closure having a depending casing, said casing being provided with a distributing chamber and a filter chamber, the latter chamber being provided with heads, a hollow filter body within the filter chamber, the latter chamber being provided with an outlet connection communicating with the central portion of one of its heads and with the receptacle, an inlet connection communicating with the distributing chamber, and a faucet communicating with said filter chamber.

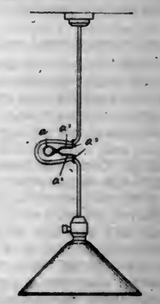
4. In a filter, the combination of a receptacle, a casing having a chamber beneath said receptacle, said casing having an inlet connection at one side and near the bottom thereof and having an outlet connection at the opposite side and near the bottom thereof, a hollow filter body mounted in said chamber, a distributing chamber in said casing above the filter chamber and communicating therewith, a passageway extending from the inlet connection to the distributing chamber, and a passageway in the casing extending from the interior of the filter body to the receptacle.

960,268. HINGE FOR SELF-CLOSING GATES. JOSEPH BUELLESBACH, New York, N. Y. Filed Dec. 2, 1908. Serial No. 465,704.



In combination with a pair of self-closing doors, hinges, and screw thread connections between the parts of the hinges, movable relatively to each other, the screw threads for the hinges of one door being of a different pitch than those for the other door, substantially as described.

960,269. SHOCK-ABSORBING AND CORD-ADJUSTING DEVICE FOR INCANDESCENT ELECTRIC LAMPS. GEORGE A. BURNHAM, Saugus, Mass., assignor to S. B. Condit, Jr., Boston, Mass. Filed Feb. 17, 1910. Serial No. 544,366.



1. As a new article of manufacture, a shock-absorber and cord-adjuster for incandescent electric-lamps, consist-

ing of a piece of wire bent to form a spring-coil, and a pair of spring-arms extended therefrom, the extremities of said arms being bent to form outwardly-extended spring-hooks for engaging the cord at any point throughout its length, substantially as described.

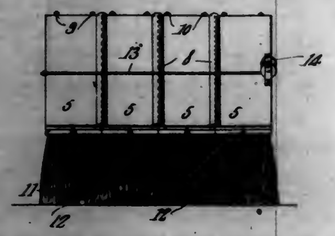
2. As a new article of manufacture, a shock-absorber and cord-adjuster for incandescent electric-lamps consisting of a piece of wire bent to form a spring-coil and a pair of spring-arms extended therefrom, which cross each other, and have cord-engaging means at their extremities, substantially as described.

3. As a new article of manufacture, a shock-absorber and cord-adjuster for incandescent electric lamps, consisting of a piece of wire bent to form a spring-coil, and a pair of spring-arms extended therefrom, which cross each other, and which have friction-clamps at their extremities for engaging the cord at any points throughout its length, substantially as described.

4. As a new article of manufacture, a shock-absorber and cord-adjuster for incandescent-electric-lamps, consisting of a piece of wire bent to form a spring-coil of two or more convolutions, and a pair of spring-arms extended therefrom, which cross each other, and friction-clamps at the extremities of said arms for engaging the cord at any points throughout its length, substantially as described.

5. As a new article of manufacture, a shock-absorber and cord-adjuster for incandescent electric-lamps, consisting of a piece of wire bent to form a spring-coil, and a pair of spring-arms extended therefrom, which cross each other, the extremities of said arms being bent outward and reflexed to form spring-acting friction-clamps for engaging the cord at any points throughout its length, substantially as described.

960,270. STACK AND SHED COVER. ALBERT BUTLER, Mason, Mich. Filed Mar. 4, 1910. Serial No. 547,295.



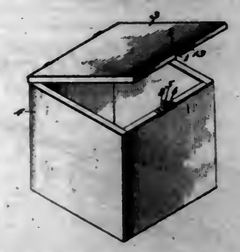
A cover of the class described comprising a pair of members connected at one of their ends in spaced relation to provide a vent opening for the parts to which they are applied, and each member comprising a series of hingedly connected sections folding inwardly, means for drawing the sections together to close up the joints therebetween, and means for securing the members to the parts to be covered.

960,271. SEAL-LOCK. LEON J. CAMPBELL, Chicago, Ill. Filed Feb. 3, 1910. Serial No. 541,884.

1. In a device of the character described; a keeper having a socket with an overhanging flange; a latch having a lug adapted to enter the socket through the internal wall of the flange; and a seal adapted to be inserted into the socket over the lug and to be then forced under the flange to hold the lug and latch in operative position.

2. In a device of the character described; a latch having a lug and a groove; a keeper having a socket adapted to receive the lug and provided with an overhanging flange whose bottom registers with the groove when the lug is in its operative position; and a seal adapted to be inserted into the socket over the lug and to be then forced into the groove and under the flange.

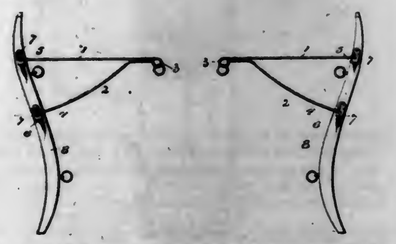
3. In a device of the character described; a latch having a lug, a shank and a groove; a keeper having a socket to receive the lug and provided with an overhanging flange and having a longitudinal slot in the wall of the socket adapted to receive the shank; and a seal adapted to be inserted into the socket over the lug and to be then forced under the flange.



4. In a device of the character described; a latch having a lug, a shank and a groove; a keeper having a socket adapted to receive the lug and provided with an overhanging flange whose bottom registers with the groove when the lug is in its operative position, and having also a longitudinal slot in the wall of the socket adapted to receive the shank; and a seal adapted to be inserted into the socket over the face of the lug and to be then forced into the groove and under the flange.

5. In a device of the character described; a receptacle; a keeper on the receptacle having a socket provided with an overhanging flange; a door on the receptacle having a recess adapted to receive the walls of the socket when the door is closed, and having a latch provided with a lug adapted to enter the socket; and a seal adapted to be inserted into the socket over the lug and to be then forced under the flange.

960,272. HAME ATTACHMENT. ADONIRAM M. CAPRON, Bridgeport, Nebr. Filed Mar. 19, 1909. Serial No. 484,392.

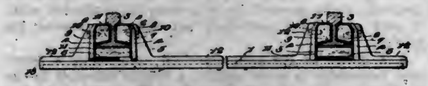


1. A bracket including a pair of sockets arranged in vertical spaced relation, a wire rod bent to form bars carried by said sockets, angled portions formed upon the inner ends of said bars for engagement in said sockets and loops formed at the turned over portion of said rod for the reception of a rein.

2. A bracket including a pair of sockets arranged in spaced relation, a rod bent to form bars secured to said sockets, a loop formed upon the over-turned portion of said rod, and angled portions formed on said bars for engagement in said sockets.

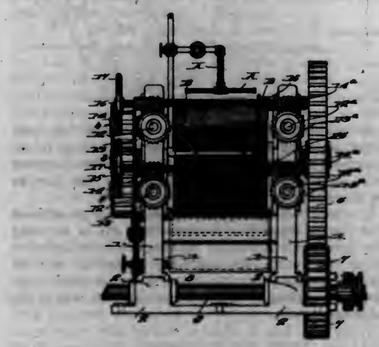
960,273. RAILWAY-TIE. ERASTUS M. CHRISTENSEN and OLE H. JENSEN, Shelley, Idaho. Filed Aug. 7, 1909. Serial No. 511,748.

1. A metallic railway tie including a base, a pair of opposed cheeks upstanding from the base, a cushion block resting upon the base and fitting between the cheeks and supporting the rail, the cheeks projecting upwardly beyond the upper surface of the block and being formed at their upper ends with inwardly directed flanges spaced above the base flanges of the rail, substantially horizontally disposed wedges driven longitudinally between the opposite sides of the rail and the upper portions of the adjacent cheeks and inserted beneath the flanges of the latter, whereby to be held against upward displacement, and set screws working through the upper portions of the cheeks and engaged with the wedges to maintain the same against longitudinal displacement.



2. A metallic railway tie including a base, a pair of opposed cheeks upstanding substantially perpendicularly from the base and extending transversely thereof, the base being formed at its side edges with relatively short upstanding ribs extending longitudinally between the cheeks, a cushion block resting upon the base and fitting between the cheeks and the ribs and of greater height than the latter and of less height than the former, the cushion block supporting the rail, the cheeks being formed at their upper ends with inwardly directed flanges spaced above the base flanges of the rail, horizontally disposed wedges conforming to the contour of the opposite sides of the rail and driven longitudinally between the same and the upper portions of the respective cheeks and inserted beneath the flanges of the latter, whereby to maintain the parts against upward displacement, and members removably inserted through the cheeks and engaged with the wedges to hold the same against longitudinal displacement.

960,274. MACHINE FOR WORKING CRUDE RUBBER. MAURICE C. CLARK, Providence, R. I., assignor to Maurice C. Clark Company, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 11, 1907. Serial No. 361,683.



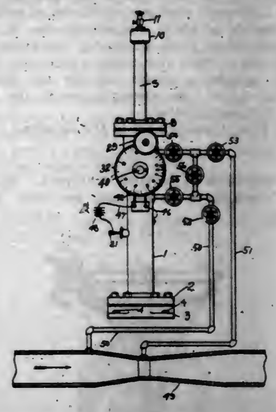
1. In a machine of the character described in combination, a plurality of rolls, shafts on which said rolls are feathered, journal boxes for said shafts, a fixed collar on each shaft against which one end of the corresponding roll abuts, and an adjustable collar on each shaft adapted to bear against the other end of the roll, said journal boxes being bored to cover the collars and extending into recesses on the ends of the roll.

2. In a machine of the character described in combination, a plurality of rolls, shafts on which said rolls are feathered, journal boxes for said shafts, a fixed collar on each shaft against which one end of the corresponding roll abuts, and an adjustable collar on each shaft adapted to bear against the other end of the roll, said journal boxes being bored to cover the collars and formed with grooves adapted to receive packing.

3. In a machine of the character described in combination, drive and side rolls, shafts on which said rolls are feathered, journal boxes for said shafts, a fixed collar on each shaft against which one end of the corresponding roll abuts, an adjustable collar on each shaft adapted to bear against the other end of the roll, said journal boxes being bored to cover the collars and extending into recesses on the ends of the roll, and means for maintaining the side rolls in parallelism with the drive roll.

4. In a machine of the class described a frame, a drive roll mounted in the frame, a plurality of side rolls also mounted in the frame and coöperating therewith, means for adjusting the side rolls relative to the drive roll to bring such rolls into working parallelism, a catch basin located beneath the rolls, a screen in said basin upon which the material coming from the rolls is deposited, and means for supplying a washing fluid to the rolls.

960,275. RATE-INDICATING DEVICE FOR FLUIDS. FREDERICK N. CONNET, Providence, R. I. Filed Dec. 21, 1908. Serial No. 468,525.



1. The combination with a meter tube, of a device provided with two chambers, means for connecting each of said chambers with different pressure points in said meter tube, fluids of two different gravities in one chamber, a connecting tube between said chambers through which the heavier liquid may be forced from one toward the other in proportion to the difference in pressures between said chambers, and manually operated means whereby the rate of flow through said meter tube may be indicated when desired.

2. The combination with a meter tube, of a device provided with two chambers, means for connecting each of said chambers with different pressure points in said meter tube, fluids of two different gravities in one chamber, a connecting tube between said chambers through which the heavier liquid may be forced from one toward the other, in proportion to the difference in pressures between said chambers, a normally open electric circuit in said device, means whereby said circuit may be completed through said heavy fluid when desired, and means for indicating the completion of said circuit.

3. The combination with a meter tube, of a device provided with two chambers, means for connecting each of said chambers with different pressure points in said meter tube, fluids of two different gravities in one chamber, a connecting tube between said chambers through which the heavier liquid may be forced from one toward the other in proportion to the difference in pressures between said chambers, a normally open electric circuit in said device, means whereby said circuit may be completed through said heavy fluid, means for indicating the completion of said circuit, and means operatively related

to the circuit completing means for indicating the rate of flow through the meter tube at the time the circuit is completed.

4. The combination with a meter tube, of a device provided with two chambers, means for connecting each of said chambers with different pressure points in said meter tube, fluids of two different gravities in one chamber, a connecting tube between said chambers through which the heavier liquid may be forced from one toward the other in proportion to the difference in pressures between said chambers, an indicating device, means whereby said device may be manually operated, and electric means cooperating with the manually operated device to indicate the time for taking the reading from said indicating device.

5. The combination with a meter tube, of a device provided with two chambers, means for connecting each of said chambers with different pressure points in said meter tube, fluids of two different gravities in one chamber, a connecting tube between said chambers through which the heavier liquid may be forced from one toward the other in proportion to the difference in pressures between said chambers, a normally open electric circuit in said device, a movable member by which said circuit may be completed through said heavy fluid, means for indicating the completion of said circuit, and means operatively related to the circuit completing means whereby the rate of flow through the meter tube corresponding to the height of said fluid may be indicated.

[Claims 6 to 11 not printed in the Gazette.]

960,276. WINDOW-CLEANING UTENSIL. CHARLES W. COOVER, Chicago, Ill. Filed Aug. 30, 1909. Serial No. 515,240.



1. A cleaner of the kind described, including a longitudinally extending reservoir, a handle projecting therefrom, a longitudinally extending pocket formed on one side of the reservoir and having an upwardly projecting outer wall, the wall of the reservoir having openings extending into the pocket and above the outer wall thereof, an adjustable valve controlling the passage of water through said openings into the pocket, and cleaning material carried within the said pocket and projecting out therefrom.

2. A cleaner of the kind described, including a longitudinally extending reservoir, a pocket formed upon one longitudinal face of the reservoir and having an outer upwardly extending wall, the wall of the reservoir having openings extending into the pocket above the outer wall thereof, a slide mounted on the wall of the reservoir and adapted to close or open the openings therethrough, and cleaning material carried in said pocket.

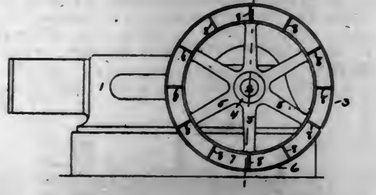
3. A device of the kind described, comprising a longitudinally extending reservoir, a pocket formed upon the exterior of the reservoir and extending longitudinally therewith, the reservoir having passages opening into the pocket, a flange projecting upward from the wall of the reservoir and beyond the same, a slide valve formed of a strip having cut-away portions adapted to aline with the openings of the reservoir, the upper edge of said strip being overturned upon itself to engage with said flange, and cleaning material supported within said pocket.

4. A device of the kind described, comprising a reservoir, triangular in cross section, a handle attached to the apex of the reservoir, a pocket formed upon one corner of the reservoir, extending longitudinally therealong, the reservoir being formed with openings leading into said pocket, a flange projecting from the corner of the reservoir above said openings, a slide plate having an overturned edge engaging with the flange, stops for limiting the movement of the slide plate, said plate being provided with cut-away portions adapted in one position of the plate to register with the openings through the reservoir, and a mass of cleaning material supported within said pocket and projecting out therefrom beyond the pocket.

5. A device of the kind described, comprising a reservoir, triangular in cross section, a handle attached to the apex of the reservoir, one corner of the reservoir having attached thereto an angular strip, a wiping strip supported by said angular strip, a pocket attached to the other corner of the reservoir opposite to the wiping strip and extending longitudinally therealong, said reservoir being formed with openings leading into the pocket, said openings being located beneath the edge of the wall of the pocket, a flange projecting over the reservoir, a sliding plate having cut-away portions upon its face adapted to register with the openings through the reservoir and having an overturned edge engaging with said flange, stops for limiting the sliding movement of the sliding plate, and projections whereby the sliding plate may be actuated.

[Claim 6 not printed in the Gazette.]

960,277. FLY-WHEEL. EDWARD C. CRITCHLOW, Grove City, Pa. Filed Dec. 7, 1908. Serial No. 466,234.



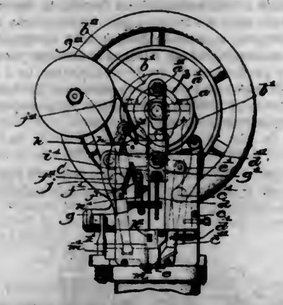
1. A fly wheel having an annular groove in one side of the rim extending beyond the center of the rim in an axial direction; and steps arranged in the groove forming a foothold on which an operator may place his foot to swing on the wheel to turn the same.

2. A fly wheel having an annular groove in one side of the rim extending beyond the center of the rim in an axial direction; and steps arranged in the groove forming a foothold on which the operator may place his foot to swing on the wheel to turn the same, in combination with a reciprocating engine, having a crank shaft on which the fly wheel is mounted.

960,278. WIRE-FEEDING MECHANISM FOR NAILING-MACHINES. SOLOMON M. CUTTER, Reading, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, a Corporation of New Jersey. Filed Apr. 19, 1898. Serial No. 678,149.

1. In a machine of the class described, fastening inserting mechanism, fastening forming mechanism, and means for feeding wire to said last-named mechanism comprising a block carrying wire-engaging pawls, a guide for said block, means for moving said block in the direction to feed the wire to said fastening forming mechanism, and separate means comprising an element of said fastening inserting mechanism for positively restoring said block to its initial position.

2. A machine of the class described, having in combination, fastening inserting mechanism, fastening forming mechanism, and means for feeding wire to said last-named mechanism comprising a block carrying wire-engaging pawls arranged to engage the wire at successive points, a guide for said block, yielding means acting normally to move said block in the direction to feed the wire to said fastening forming mechanism, an adjustable stop for determining the amount of feeding movement of said block and separate means comprising an element of said fastening inserting mechanism for positively restoring said block to its initial position.



3. A machine of the class described, having in combination, reciprocating fastening inserting mechanism, fastening forming mechanism and means for feeding wire to said last-named mechanism comprising a block provided with a wire-guiding opening, a plurality of spring-pressed pawls arranged to engage the wire in said opening at a plurality of successive points and to lock it against one side of said opening, when said block is moving in the wire feeding direction, yielding means acting normally to move said block in said wire feeding direction, adjustable means for determining the amount of wire feeding movement of said block and independent means comprising an element of said inserting mechanism for restoring said block to its initial position.

4. In a nailing machine, a driver bar having a driver, a stationary wire guide, a carrier having a hole to receive the end of the wire from the wire guide, a loosely sustained block having pawls to act on the wire, a guide for said block, means to actuate said driver bar, said driver bar acting on the block to lift it, a spring to move said block downwardly that the pawls engaging the wire may feed the end thereof into the hole in said carrier, and means to actuate said carrier to form a nail and put the same in the path of movement of the driver.

5. In a nailing machine, a driver bar having a driver, a stationary wire guide, a carrier having a hole to receive the end of the wire from the wire guide, a loosely sustained block having pawls to act on the wire, a guide for said block, means to actuate said driver bar, said driver bar acting on the block to lift it, a spring to move said block downwardly that the pawls engaging the wire may feed the end thereof into the hole in said carrier, means to actuate said carrier to form a nail and put the same in the path of movement of the driver, and adjustable means to regulate the extent of downward movement of said block under the action of its spring to thereby regulate the length of the nail to be made.

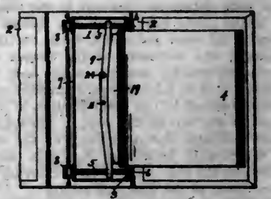
[Claims 6 to 8 not printed in the Gazette.]

960,279. TEMPORARY BINDER. ROY R. DARWIN, Lansing, Mich. Filed June 14, 1909. Serial No. 502,024.

1. A temporary binder, comprising an abutment, a pressure bar movable toward and from said abutment, an adjustable support for the pressure bar, and a lever pivoted to said support and connected with said bar.

2. A temporary binder, comprising an abutment, a pressure bar parallel therewith and movable with respect thereto, an actuating lever having a movable connection with said pressure bar, and a stress bar on which said lever is pivotally mounted.

3. A temporary binder, comprising a case having an abutment at one edge, a stress bar movable transversely of the case, a lever pivoted to said stress bar, a pressure bar mounted on said stress bar, and a movable connection between said lever and pressure bar to enable said bar to be moved toward and from said abutment by an actuation of said lever.



4. A temporary binder, comprising a case, a stress bar movable transversely of the case, adjusting screws engaging the ends of said bar for imparting movement thereto, a lever pivoted to the stress bar, said case having an abutment at one side thereof, a pressure bar parallel with said abutment and movable with respect thereto, and a link connecting said pressure bar with said lever.

5. A temporary binder, comprising a stress bar, adjusting screws passing through the ends of said bar, an abutment, a pressure bar movable with respect to said abutment, an actuating lever carried by the stress bar, and a connection between said lever and said pressure bar.

[Claim 6 not printed in the Gazette.]

960,280. VALVE. JOHN A. DEASY, Detroit, Mich. Filed Feb. 21, 1910. Serial No. 545,009.



1. A valve comprising a substantially cylindrical casing divided internally by a diaphragm having a valve-seat, a lateral nipple on the casing in substantially axial alinement with the seat, a bonnet having a guide aperture and an annular body detachably secured in the nipple, a stem rotatable in the guide aperture in the bonnet having a flange on its inner end bearing against the under side of the bonnet within the body and an axial socket in its lower end, a collar detachably secured on the body for retaining the stem, a post having screwthreaded engagement with the axial socket in the inner portion of the stem, a cup-shaped closure rotatable and oscillatory on the end of the post, and a spring encircling the post between the closure and the collar and interlocking with the collar and the post at its ends.

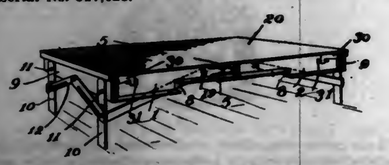
2. A valve comprising a substantially cylindrical casing, a diaphragm dividing the casing and having a valve-seat, a lateral nipple on the casing in substantially axial alinement with the seat, a bonnet having a guide aperture and an annular body in screwthreaded engagement with the nipple, a stem rotatable in the guide aperture in the bonnet having an axial socket in its lower end, a flange on the inner end of the stem, a stop collar in screwthreaded engagement with the body holding the stem flange seated against the underside of the bonnet in the body, a washer interposed between the collar and stem, a post having screwthredded engagement with the axial socket in the inner portion of the stem, a cup-shaped closure ro-

tatable and oscillatory on the end of the post, and spring encircling the post between the closure and the collar and interlocking with the collar and the post at its ends.

3. A valve comprising a substantially cylindrical casing divided internally by a diaphragm having a valve seat, a lateral nipple on the casing in substantially axial alinement with the seat, a bonnet having a guide aperture and an annular body detachably secured in the nipple, a stem rotatable in the guide aperture in the bonnet having an axial socket in its inner end and a flange on its inner end bearing against the underside of the bonnet within the body, a collar detachably secured on the body for retaining the stem, a post having screwthreaded engagement with the axial socket in the inner portion of the stem, a disk secured to the end of the post, a cup-shaped closure for the seat rotatable and oscillatory on the disk, a ring retaining the closure loosely on the disk, and a spiral spring encircling the post with its ends entering recesses in the adjacent faces of the disk and collar.

4. A valve comprising a substantially cylindrical casing, a diaphragm dividing the casing and having a valve-seat, a lateral nipple on the casing in substantially axial alinement with the seat, a bonnet having a guide aperture and an annular body in screwthreaded engagement with the nipple, a stem rotatable in the guide aperture in the bonnet having an axial socket in its inner end, a flange on the inner end of the stem, a stop collar in screwthreaded engagement with the body holding the stem flange seated against the underside of the bonnet in the body, a washer interposed between the collar and stem, a post having screwthreaded engagement with the axial socket in the inner portion of the stem, a disk secured to the end of the post, a cup-shaped closure for the seat rotatable and oscillatory on the disk, a ring retaining the closure loosely on the disk, and a spiral spring encircling the post with its ends entering recesses in the adjacent faces of the disk and collar.

960,281. TOURIST'S BED. GEORGE G. DE MOSS, De Moss Springs, Oreg., assignor of one-half to Henry S. De Moss, De Moss Springs, Oreg. Filed Sept. 14, 1909. Serial No. 517,623.

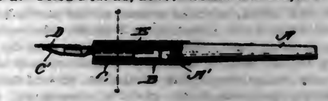


1. A tourist's bed comprising side rails each including movably connected sections adapted to fold inwardly, end members to which the rails are connected, feet connected to the end members for folding upon the latter, braces for said feet, and a top connected to the end members and adapted to be rolled around the parts when folded, the respective side rail being similarly and oppositely formed to permit their folding toward each other without interference.

2. A portable bed comprising side rails made in sections and pivotally mounted together to fold inwardly, clasps for holding the side rails extended, end members to which the side rails are movably connected, legs pivoted to the end members, braces pivotally connected together and pivoted to the end members, said braces having slots therein, studs connected to the legs and extending through said slots, and lock members hinged to the ends of said braces and adapted to engage studs upon the side rail sections.

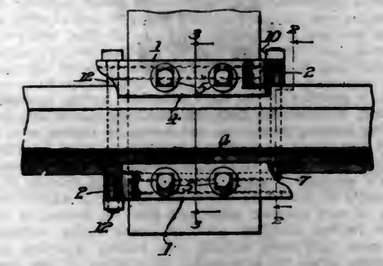
3. A portable bed comprising side rails each including pivotally connected sections, end members to which the rails are connected, folding legs pivoted to the end members, a flexible top or mattress, said side rails being cut away, one upon the underside and the other upon the upper side to permit the same to be folded inward without interference one with the other.

960,282. PENHOLDER. DELTON DE NURE, Gloversville, N. Y. Filed Feb. 18, 1909. Serial No. 478,579.



A device of the kind described comprising a wooden handle having a longitudinal bore formed in the large end provided with split walls, of a split binding tube arranged within said bore, a second binding tube arranged within the first mentioned binding tube, said binding tube having a forwardly projecting reservoir terminating in a nib, and a ferrule slidably mounted upon said handle adapted to compress the split binding tube against a pen point when arranged upon the inner binding tube.

960,283. ANTICREEPER DEVICE FOR RAILS. WILLIAM L. DE REMER, Chicago, Ill. Filed Aug. 12, 1908. Serial No. 448,241.



1. In an anti-creeper device for rails, the combination of a tie plate, a bar interlocked therewith and adapted to engage one side of the rail, and a bolt engaging between said bar and the other side of the rail.

2. In an anti-creeper device for rails, the combination of a tie plate, a bar interlocked therewith and adapted to engage one side of the rail, and a bolt coöperating at one end with the bar and having a hook at its other end to engage the other side of the rail.

3. In an anti-creeper device for rails, the combination of a tie plate, a bar interlocked therewith and adapted to engage one side of the rail, and a bolt engaging between the bar and other side of the rail and having pivotal action in respect thereto.

4. In an anti-creeper device for rails, the combination, with a tie plate, of a bar supported thereon and adapted to bear along its length against the flange of a rail and having a flange portion adapted to overhang and fit against a side of the tie, and means for securing said bar in place.

5. In an anti-creeper device for rails, the combination, with a tie plate, of a bar supported thereon and adapted to bear along its length against the flange of a rail and secured in place on the tie by the same fastening device as the tie plate, said bar having a depending end flange adapted to overhang and fit against a side of the tie, and means for holding the bar to the rail.

[Claims 6 to 20 not printed in the Gazette.]

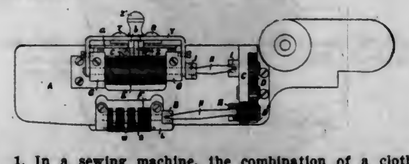
960,284. NUT-LOCK. GEORGE F. DOBBS, Tiltonsville, Ohio. Filed Nov. 11, 1909. Serial No. 527,411.



1. A nut lock comprising a bolt having one of its ends screw-threaded and slotted longitudinally, the opposite longitudinal walls of said slot being provided with corresponding recesses, a nut traveling on the threaded end of said bolts and a locking member adapted to be inserted laterally in said slot, said member comprising a single piece of metal bent upon itself to form a pair of corresponding body sections, the upper longitudinal edges of each of said sections being flanged outwardly, an ear formed on the lower longitudinal edge of each of said sections and adapted to be bent upwardly when said member is secured in place to prevent lateral displacement thereof in one direction, and a plurality of teeth formed on the outer face of each section of the member adapted to enter corresponding recesses in the opposite walls of said slot.

2. A nut lock comprising a bolt having one of its ends screw-threaded and slotted longitudinally, the opposite walls of said slot being provided with corresponding recesses, a nut traveling on the threaded end of said slot and a locking member adapted to be inserted laterally in said slot said member having a wedge shaped body portion provided with teeth on each side adapted to enter corresponding recesses in the opposite walls of said slot, and means carried by said member for locking same against lateral withdrawal.

960,285. SEWING-MACHINE. EDWARD HENRY DODD, Hoylake, England. Filed Dec. 26, 1906. Serial No. 349,533.



1. In a sewing machine, the combination of a cloth plate, a cloth tension producing roller in said cloth plate, and rotatable therein, a feed roller arranged underneath said cloth plate, means for positively actuating said feed roller, means for throwing said feed roller out of action and means whereby the cloth tension producing roller produces a tension on the fabric.

2. In a sewing machine, the combination of a cloth plate, a cloth tension producing roller in said cloth plate, and rotatable therein, a feed roller arranged underneath said cloth plate, means for positively actuating said feed roller and at a higher peripheral speed than said cloth tension producing roller, and means for pressing said feed roller upon the cloth, which has passed the cloth tension producing roller.

3. In a sewing machine the combination of a cloth plate, a cloth tension producing roller rotatable in said cloth plate, means for keeping the cloth which has passed said roller under tension, a feed roller in said cloth plate, means for raising and lowering said feed roller and means for positively actuating said rollers.

4. In a sewing machine, the combination of a cloth plate, a feed roller arranged underneath said cloth plate, a cloth tension producing roller in said cloth plate and rotatable therein, a spur wheel connected to said feed roller, and a driven spur wheel connected to said tension producing roller and geared to the spur wheel of said feed roller.

5. In a sewing machine, the combination of a cloth plate, a feed roller, a cloth tension producing roller, mounted in said cloth plate, means for raising and lowering said feed roller, a driven spur wheel, and means intermediate of said spur wheel and said feed wheel for rotating said feed roller in its raised, lowered, and intermediate positions.

[Claims 6 to 13 not printed in the Gazette.]

960,286. KILN. WILLIAM DRAYTON, Kachelmacher, Ohio. Filed Aug. 6, 1908. Serial No. 447,241.

1. A kiln, including a supporting truck, a furnace carried thereby adjacent one end thereof, passage for delivering the gases of combustion through said supporting surface adjacent the opposite end of the truck from said furnace, and means for admitting outside air adjacent the last-mentioned end of said truck.



2. A kiln, including a truck having a supporting surface, a plurality of passages extending longitudinally of the truck and beneath said surface and opening through said surface at one end thereof, a transverse passage communicating with all of said passages adjacent their opposite ends, and a furnace adjacent each end of said transverse passage.

3. A kiln, including a truck having a supporting surface, a plurality of passages extending longitudinally of the truck and beneath said surface and opening through said surface at one end thereof, a transverse passage communicating with all of said passages adjacent their opposite ends, a furnace adjacent each end of said transverse passage, and air passages beneath said first-mentioned passages and each having one end thereof communicating with the outside atmosphere, and the opposite end thereof communicating with the interior of the kiln.

4. A kiln, including a supporting surface having an opening therethrough adjacent one end thereof, a plurality of passages extending beneath said surface from the opposite end of the kiln, a transverse passage communicating with all of said first-mentioned passages adjacent the opposite end of the kiln, a furnace adjacent each end of said transverse passage, and a detachable dome or hood for inclosing the material upon said supporting surface.

5. A kiln, including a truck having a frame formed of longitudinally-extending beams and transversely-extending beams, wheels journaled within said frame, a plurality of inverted channel-shaped members supported upon said frame and extending longitudinally thereof and forming a supporting surface for the material to be burned, a transverse passage beneath said supporting surface and communicating with the interior of each of said channel-shaped members, and a furnace adjacent each end of said transverse passage.

[Claims 6 to 11 not printed in the Gazette.]

960,287. INSECTICIDE. ISAAC W. DRUMMOND, New York, N. Y. Filed Jan. 18, 1910. Serial No. 538,610.

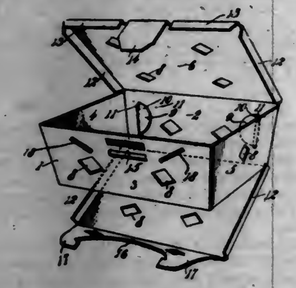
1. An insecticide composed of arsenate of soda, a soluble salt of lead, and a segregating material, all in dry powdered condition.

2. An insecticide composed of arsenate of soda, a soluble salt of lead, and a segregating and adhesive material, all in dry powdered condition.

960,288. FRUIT-SHIPPING BOX. FREDERICK W. DUSTAN, Clarkston, Wash. Filed Apr. 15, 1909. Serial No. 490,070.

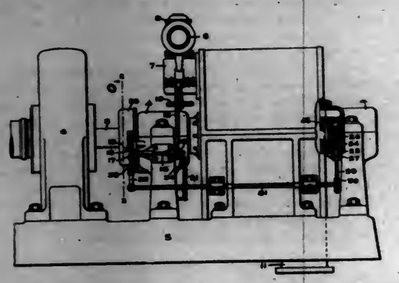
The herein described box for shipping fruit, consisting of two perforated cardboard blanks, one blank comprising the front side and the two ends of the box, the ends being folded at an angle to the front and being formed at their extremities with inwardly bent flaps provided with hook-shaped tongues, said front of the box being formed adjacent the center of its upper edge with spaced parallel slots and adjacent its ends with angularly arranged slots, the other blank comprising the rear, top and bottom of the box, said top and bottom being folded upon the longitudinal edges of the back, and the latter being formed adjacent its ends with upright slots to receive the hook-shaped tongues on the end flaps, said bottom being formed at its ends with upwardly bent flanges or flaps, and on its free edge with an upwardly bent flap having a re-

cessed central portion and two inwardly turned hook-shaped ends to enter the angularly arranged slots in the front of the box, said top of the box having at its ends



downturned flaps or flanges, and at its free edge with two short downturned flaps and a centrally arranged downturned tongue, the latter being adapted to be passed through the spaced parallel slots at the center of the front of the box, as shown and described.

960,289. EMERGENCY GOVERNING MECHANISM FOR TURBINES. EDGAR F. DUTTON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 18, 1909. Serial No. 502,940.



1. In combination, a turbine, a conduit for supplying motive fluid from a suitable source to the turbine, a valve for controlling the flow of motive fluid through the conduit to the turbine, and means responsive to a rise in pressure above a predetermined limit in a given region of said turbine which effects the closing of said valve and thereby shuts down the turbine.

2. In combination, a turbine, a conduit for supplying motive fluid to the turbine, a valve for controlling the flow through the conduit which can be manually opened and closed slowly for normal operation and closed suddenly under emergency conditions, and means responsive to a rise of pressure above a predetermined limit in a given region of the turbine which effects the sudden closing of said valve and thereby shuts down the turbine.

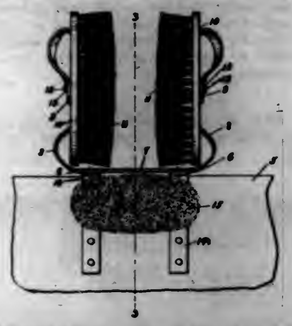
3. In combination, a turbine, a conduit for supplying motive fluid to the turbine, a valve for controlling the flow through the conduit which can be tripped to close suddenly under emergency conditions, a device responsive to a rise in pressure above a predetermined limit in a given region of the turbine which effects the tripping of said valve and thereby shuts down the turbine, and means for manually tripping said valve to shut down the turbine when desired.

4. In combination, a turbine, a valve for controlling the supply of motive fluid to the turbine which can be tripped to close suddenly under emergency conditions, and means responsive to a predetermined rise of pressure in a given region of the turbine which effects the tripping of said valve and thereby shuts down the turbine, said means including a member which tends to move under the influence of the pressure in said region and a device which opposes its movement.

5. In combination, a turbine, a valve for controlling the supply of motive fluid to the turbine, mechanism for tripping the valve to close it suddenly under emergency conditions, a lever pivoted adjacent the tripping mechanism, and a device responsive to a predetermined rise of pressure in a given region of the turbine which moves said lever and causes it to bring said tripping mechanism into action to thereby close the valve.

[Claims 6 to 12 not printed in the Gazette.]

960,290. SHOE-CLEANER. ADAM EDELMAN, Millerton, N. Y. Filed May 6, 1909. Serial No. 494,368.



The combination with a base, of brackets fixed to the base in spaced relation to each other and having vertical portions arising from said base, a strip of material bent to form a vertical scraper and resilient arms at opposite ends of said scraper, said arms being at right angles to the scraper and in alinement with each other, the said scraper being fixed to the vertical portions of the brackets, each arm being bent outwardly and upwardly to provide a terminal at an angle thereto, and containing a series of perforations, brushes having bolt members fixed thereto, each member being detachably engaged in one perforation in each terminal to mount the brush on the latter whereby it may be adjusted at different angles and also toward and away from the said scraper, and a brush superimposed upon the brackets contiguous the scraper.

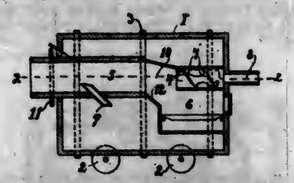
960,291. AERIAL ELECTRIC CABLE. CARL EMIL EGNER, Stockholm, and REINHOLD FRITHIOF FREDRIKSON, Gottenborg, Sweden. Filed Dec. 1, 1908. Serial No. 465,473.



In an electric cable the combination with a sheathing and conducting wires arranged therein, of means for suspending said cable comprising a sheathed carrier, the sheathing of which is integral with the sheathing of the cable.

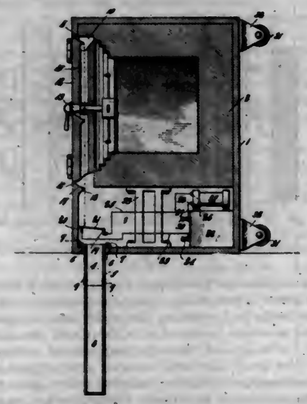
960,292. IGNITING-FURNACE FOR PULVEROUS FUEL. NILS KARL HERMAN EKELUND, Jönköping, Sweden. Filed Sept. 12, 1907. Serial No. 392,605.

1. In igniting furnaces for pulverous fuel, a portable box, a tube in the said box, forming the mixing compartment, means for introducing air and pulverous fuel into the said compartment, an igniting tube in the prolongation of the mixing tube and placed at some distance from the latter so as to form an intermediate space between them, means for supplying air to the igniting tube, and a fireplace located under the mixing tube, substantially as and for the purpose described.



2. In igniting furnaces for pulverous fuel, a box supported by wheels, a mixing tube in the said box, means for supplying air and pulverous fuel to the said mixing tube, means for causing the air and pulverous fuel to rotate within the mixing tube, an igniting tube reaching some distance out of the box and placed in the prolongation of the mixing tube and at some distance from the latter, so as to form an intermediate space between the tubes, means for supplying air to the igniting tube, a fireplace under the mixing tube and a firebridge between the fireplace and the igniting tube, substantially as described.

960,293. SAFE. RODERIC S. ELLIOTT, Laona, and GUSTAVE COOK, Gillett, Wis. Filed July 7, 1909. Serial No. 506,323.



1. A safe comprising an outer casing and an inner casing spaced above the bottom of the outer casing, said casings being provided with a door opening, a door fitting within the opening and having its edges beveled inwardly to form an annular space between said edges and the edges of the door opening, said door having a series of vertical passages therethrough, and a plurality of recesses on its upper edge, said recesses having inclined bottoms leading to the passages, the lower edge of the door opening being beveled inwardly and downwardly, a pair of contact bars arranged in front and behind the series of vertical openings, a plurality of resilient fingers secured to one bar and extending across the space between the bars, the free ends of the fingers being spaced above the other bar, said fingers being directly below the vertical passages, and the inner edge of the beveled edge of the door opening, a spark coil, a battery, and a circuit including the spark coil and the battery, and whose terminals are the bars.

2. A safe comprising inner and outer casings, spaced apart at their bottoms for forming a chamber therebetween, said casings having a door opening, and a door fitting within the opening, and having its edges beveled inwardly, the upper edge being provided with a plurality of recesses having inclined bottoms, said door having a plurality of vertical passages therethrough into which the recesses deliver, a spark coil and a battery in the chamber, a plurality of contact fingers arranged below the vertical passages and in position for engagement by material passing through the passages, a normally open circuit including the spark coil and battery and adapted to be closed by the movement of the fingers.

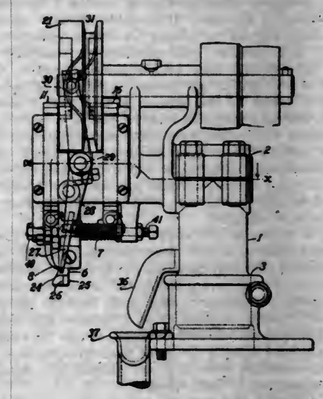
3. A safe comprising inner and outer casings spaced apart at their bottoms to form a chamber therebetween, and provided with a door opening, a door having a plurality of vertical passages therethrough and whose edges are beveled toward the recesses, the lower edge of the door opening being beveled inwardly and downwardly, a spark coil and a battery in the chamber, and a plurality of contact fingers below the passages for engagement by material falling therethrough, and a normally open circuit adapted to be closed by the fingers and including the coil and the battery.

4. A safe provided with an upper and a lower chamber, and with a door opening whose lower edge is beveled inwardly and downwardly, a door fitting within the opening and provided with vertical passages therethrough opening onto the lower chamber, and with recesses on its upper edge having inclined bottoms and delivering to the passages, a sparking device in the lower chamber, and contact fingers arranged below the passages and the inner edge of the door opening for operating the sparking device.

5. A safe provided with an upper and a lower chamber and with a door opening, a door fitting within the opening and provided with vertical passages therethrough into the lower chamber, and with recesses on its upper edge having inclined bottoms and delivering to the passages, a sparking device in the lower chamber, and contact fingers arranged below the passages and the inner edge of the door opening for operating the sparking device.

[Claims 6 to 9 not printed in the Gazette.]

960,294. TACK-PULLING MACHINE. ANDREW EPPLER, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 24, 1907. Serial No. 380,390.



1. A tack pulling machine, having, in combination, a tack pulling jaw, a jaw coöperating therewith, mechanism acting independently of the tacks for relatively actuating the jaws to engage and pull a tack and yielding means to permit the jaws to accommodate themselves to tacks of different diameters.

2. A tack pulling machine, having, in combination, a tack pulling jaw, a yieldingly mounted jaw coöperating

therewith to pull the tacks from the shoe, and mechanism for relatively actuating the jaws.

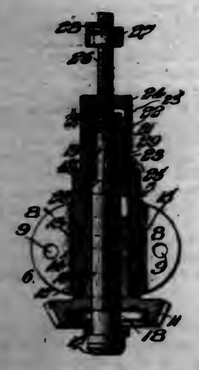
3. A tack pulling machine, having, in combination, a tack pulling jaw, a laterally movable spring controlled jaw coöperating therewith, and mechanism for actuating the tack pulling jaw to grip a tack between the jaws.

4. A tack pulling machine, having, in combination, a jaw provided with a vertical face extending parallel to the line of tacks, a tack pulling jaw vertically movable with relation to said first mentioned jaw and means to actuate the tack pulling jaw.

5. A tack pulling machine, having, in combination, a tack pulling jaw operating transversely to the line of tacks and a jaw coöperating therewith substantially L-shaped at the bottom, having a part extended across and a part extended along the line of tacks.

[Claims 6 to 11 not printed in the Gazette.]

960,295. FEED MECHANISM FOR SPINDLES FOR MACHINE-TOOLS. HENRY O. EVANS, Detroit, Mich. Filed Oct. 23, 1909. Serial No. 524,134.



1. In a device of the character described, a sleeve, a spindle rotatably mounted therein having a reduced portion forming a shoulder, a threaded member splined to said reduced portion for sliding movement, resilient means between said member and shoulder, a relatively fixed thread coöperating with said threaded member, a stop secured to said spindle and means to rotate said spindle.

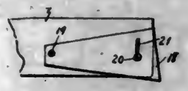
2. In a device of the character described, a sleeve, a spindle rotatably mounted therein having a reduced portion forming a shoulder, a threaded member splined to said reduced portion for sliding movement, a spring between said member and shoulder, a cap fixedly secured to said sleeve, internal threads on said cap coöperating with said threaded member, a stop secured to said spindle and means to rotate said spindle.

3. In a device of the character described, a sleeve, a cap fixedly secured to said sleeve, internal threads on said cap, a spindle rotatably mounted in said sleeve and extending exterior of said cap, a leader nut on said spindle having threaded engagement with said internal threads of said cap, a collar secured to said spindle abutting said leader nut, a stop on said spindle, means between said leader nut and spindle to drive said spindle, and yielding means coacting with said nut whereby the latter may move independent of said spindle.

4. In a facing and reaming apparatus, a bracket having a recessed head and a plurality of openings therein, a chuck rotatably mounted in said head and having a plurality of receptacles therein normally in alinement with respective openings in said head, and means to lock a plurality of members in said chuck.

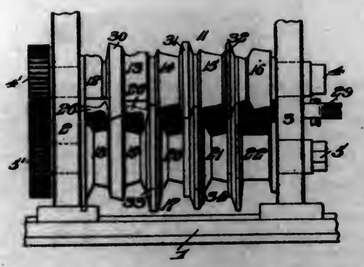
5. In a facing and reaming apparatus, a bracket having a recessed head and a plurality of openings therein, a chuck rotatably mounted in said head and having a plurality of receptacles therein each adapted to hold a member to be machined, means to lock said members in said chuck, and means to turn said chuck relative to said head.

960,296. ROAD-GRADER AND DITCHER. JESSE P. EVANS and JUNIUS B. WEST, Barton, Ark.; said Evans assignor to said West. Filed June 7, 1909. Serial No. 500,605.



In a road grader and ditcher of the class described the combination of a furrow-runner with means to prevent the runner from leaving its course, said means consisting of a slotted plate, pivotally held to one of the faces of the runner at the rear end thereof, said plate extending somewhat in the rear of the runner and terminating in a point, which is adapted to cut the ground, means passing through a vertically disposed slot in said plate whereby the same may be adjusted in whatever vertical position that is desired.

960,297. PROCESS OF ROLLING METAL. WILLIAM D. EYNON, Philadelphia, Pa., assignor of one-fourth to James J. Fisher, Philadelphia, Pa., one-fourth to Pelham Harding, Narberth, Pa., and one-fourth to David Lloyd Eynon, Paterson, N. J. Filed Dec. 21, 1908. Serial No. 468,439.



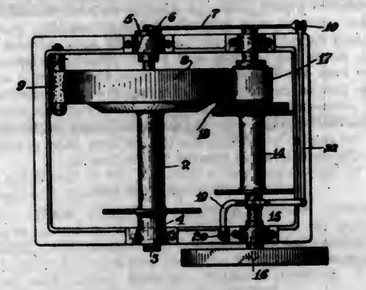
1. The method of forming a tapered switch point from a longitudinally extending blank, of flanged cross-section, which consists in supporting the blank upon a table which conforms in shape to one side of the blank and subjecting the other side of said blank to longitudinal rolling action sufficient to draw the metal on said side of the blank, reduce the flanges, and form a longitudinally tapered article.

2. The method of forming a tapered switch point from a longitudinally extending blank, of flanged cross-section, which consists in supporting the blank upon a table which conforms in shape to one side of the blank and subjecting the other side of said blank to longitudinal rolling action sufficient to draw the metal on said side of the blank, without disturbing the opposite side, reduce the flanges, and form a longitudinally tapered article.

3. The method of forming a tapered switch point from a standard railroad T-rail, which consists in supporting the rail upon a table which conforms in shape to one side of the rail and subjecting the other side of said rail to longitudinal rolling action sufficient to draw the metal on said side of the rail without disturbing the opposite side, reduce the flanges and form a longitudinally tapered article.

960,298. HOISTING MECHANISM. JOHN FARRELL, Newton, N. J. Filed Sept. 28, 1909. Serial No. 519,995.

1. In a hoisting mechanism, the combination with a frame, of a driven shaft therein, a friction pulley on said shaft, a rope drum mounted loosely on the shaft, carrying the friction pulley, an additional rope drum mounted pivotally on the frame, a friction wheel mounted on the pivoted rope drum, opposite the friction pulley on the driven shaft, a brake-shoe fixed on the frame in alinement with the friction pulley on the pivoted shaft and diametrically opposite the friction pulley on the driven shaft and a single lever for engaging either drum with the friction pulley and holding one drum by contact with the fixed brake-shoe, substantially as set forth.



2. In a hoisting mechanism, the combination with a frame and a driven shaft mounted therein, a friction pulley fixed on the driven shaft, a rope drum mounted loosely on said driven shaft, to turn and slide thereon, means for holding one end of said drum in contact with one end of the friction pulley, an additional independent rope drum mounted in the frame, a friction pulley connected therewith, a handle lever and means connected with the handle lever for bringing the periphery of the friction pulley on the rope drum in contact with the periphery of the friction pulley on the driven shaft and means connecting said lever with the means for bringing the drum on the driven shaft in contact with one end of the friction pulley on said shaft, substantially as set forth.

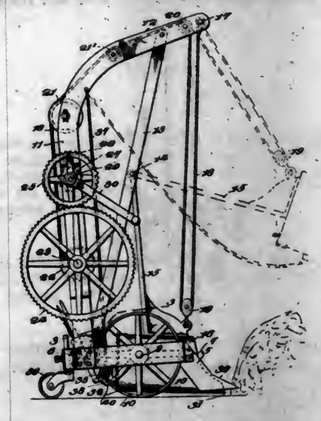
3. In a hoisting mechanism, the combination with a frame and a driven shaft mounted therein, of a friction pulley on the driven shaft, a drum mounted loosely on said shaft to turn and to slide thereon, means for pressing one end of the drum against one end of the friction pulley, an independent drum mounted on the frame, a friction pulley connected therewith, a brake shoe on the frame a handle lever pivoted on the frame, means connected with the said lever and the drum having a friction pulley for moving the friction wheel on the drum into contact with the friction pulley on the driven shaft or in contact with the brake shoe and means connected with the handle lever, for operating the means for shifting the drum on the driven shaft, substantially as set forth.

4. In a hoisting mechanism, the combination with a frame and a driven shaft therein, of a friction pulley fixed on said shaft, two independent rope drums mounted in the frame, one of the rope drums being mounted to slide lengthwise toward and from the pulley and the other pivoted to swing toward and from the periphery of the friction pulley, a lever pivoted on the frame and means connected with the lever for moving one drum lengthwise and for swinging the other drum on its pivot, substantially as set forth.

960,299. LOADING DEVICE. FRANK FIFIELD, Hastings, Mich., assignor of one-half to Elmer E. King, Yankee Springs, Mich. Filed May 25, 1909. Serial No. 498,147.

1. A device of the class described including a truck having terminal spurs, a crane mounted on the truck, a beam pivotally mounted on the crane, a scoop carried by the beam and provided with a cutting edge, and means for raising and lowering the scoop, the cutting edge of the scoop being disposed between the spurs of the truck when said scoop is in lowered position.

2. A device of the class described including a truck comprising spaced side bars terminating in longitudinally disposed spurs, ground wheels mounted for rotation on the truck, a crane carried by the truck, a beam pivotally mounted on the crane, a scoop secured to the beam and provided with an end gate, means for raising and lowering the scoop, and means for opening the gate to permit the discharge of the contents of the scoop.



3. A device of the class described including a truck having spaced side bars, side plates spaced from the side bars of the truck to form intermediate compartments, ground wheels journaled in said compartments, a caster wheel arranged at the rear end of the truck, a crane secured to the truck at said caster wheel, a beam pivotally mounted on the crane, a scoop carried by the beam and provided with an end gate, means for raising and lowering the scoop, and a cable secured to the end gate for moving the latter to open position, thereby to permit the discharge of the contents of the scoop.

4. A machine of the class described including a wheeled truck having spaced side bars, the forward ends of which are bent downwardly and longitudinally to form terminal spurs, a transverse bar connecting the rear ends of the side bars, side plates spaced from said side bars to form intermediate pockets, stub shafts extending transversely through the pockets, ground wheels mounted for rotation within said pockets and on said stub shafts, a vertically adjustable caster wheel carried by the transverse bar of the truck, a crane secured to the truck, a beam pivotally mounted on the crane and provided with a scoop, and means for raising and lowering the scoop, the scoop being movable to a position between the spurs of the truck when the scoop is in lowered position.

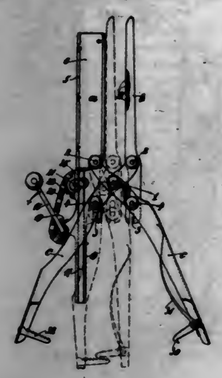
5. A machine of the class described including a wheeled truck having spaced side bars terminating in spurs, a crane secured to the truck and having an overhanging arm, inclined braces forming a connection between the overhanging arm and truck, a transverse pin connecting the inclined braces, a beam pivotally mounted on the transverse pin, a scoop carried by the beam and normally disposed between the side bars of the truck, a winding cable, a roller carried by the overhanging arm, a pulley secured to the scoop, and a cable extending over the pulley and roller for attachment to the winding drum.

[Claim 6 not printed in the Gazette.]

960,300. WIRE-STITCHING INSTRUMENT. VICTOR FISCHER, Budapest, Austria-Hungary. Filed July 16, 1908. Serial No. 443,770.

1. An instrument for wire stitching comprising two jaws, adapted to close on the pieces to be stitched together, a handle for each jaw pivotally connected therewith and connected together by a common pivot, means

for maintaining said jaws in parallel relation during their movement, one of said jaws being formed with a plurality of rows of grooves adapted to receive staples therein, movable slides located in said grooves, means in said jaw for successively moving said slides outward to eject the said staples, the other jaw having indentations arranged opposite said grooves and adapted to bend in the prongs of the staples during their ejection from said grooves.



2. An instrument for wire-stitching comprising a jaw formed with grooves adapted to receive staples therein, movable slides mounted in said grooves and adapted to engage the staples therein, a rack mounted in said jaw alongside of said grooves, a gear wheel engaging with said rack, a star wheel connected with said gear wheel and having arms adapted to coöperate with said slides to successively force them outward thereby ejecting the staples, means for rotating said gear wheel, and a second jaw forming an abutment for the jaw carrying the staples and provided with indentations opposite the staple containing grooves, to bend in the prongs of the staples during their ejection from the grooves.

3. A wire-stitching instrument comprising a jaw having a row of grooves each adapted to receive a staple therein, a movable slide mounted in each of said grooves and adapted to engage the staple therein, a stationary rack bar mounted in said jaw alongside the row of said grooves, a gear wheel engaging with said rack bar, a star wheel connected with said gear wheel and having arms adapted to successively bear against said slides to move them outward from their grooves thereby ejecting the staples, a movable rack-bar forked at its inner end, a shaft rotatably mounted in said forked end and carrying the said gear wheel, a pinion engaging said movable rack-bar and means for rotating said pinion thereby moving said rack bar and rotating said star wheel, and a second jaw pivoted to the staple carrying jaw and forming an abutment therefor and having indentations arranged opposite the staple carrying grooves to bend in the prongs of the staples during their ejection from their grooves.

4. An instrument for wire-stitching comprising two jaws adapted to close on the pieces to be stitched together, a handle for each jaw pivoted thereto and connected with each other by a common pivot, means for maintaining said jaws in parallel relation during their movement, one of said jaws being formed with a plurality of grooves arranged in rows and adapted to receive each a staple, a movable slide located in each groove, means for successively moving said slides outward to thereby eject the staples from said grooves, the other jaw having indentations arranged opposite said grooves and adapted to bend in the prongs of the staples during their ejection from their grooves, and means for locking the handles in position during the ejection of the staples.

5. A wire-stitching instrument comprising a jaw having a plurality of parallel rows of grooves each adapted to receive a staple therein, the said grooves being arranged in a staggered position, partitions between two adjacent rows, a movable slide mounted in each groove and adapted to engage the staple in each groove, a stationary rack bar mounted in said jaw alongside the said rows of grooves, a gear wheel engaging with said rack bar, star wheels connected with said gear wheel and having arms adapted to successively come in contact with said slides to move them outward from their grooves thereby ejecting the staples from said grooves, a movable rack bar forked at its inner end, the said gear wheel being rotatably mounted in said forked end, a pinion engaging said movable rack bar, means for rotating said pinion thereby reciprocating said rack bar and rotating said star wheels and a second jaw pivoted to the staple carrying jaw and constituting an abutment therefor and having indentations arranged opposite the staple carrying grooves to bend in the prongs of the staples while they are ejected from their grooves.

[Claims 6 to 8 not printed in the Gazette.]

960,301. PHOTOGRAPHIC-PRINTING MASK. JOHN FITZ, Jr., Philadelphia, Pa., assignor of one-half to Jacob Zimmerman, Philadelphia, Pa. Filed Jan. 14, 1909. Serial No. 472,243.



1. A photographic printing mask, consisting of a sheet having a border portion capable of preventing entirely the transmission of actinic rays, and a portion surrounding said border portion which permits the passage of actinic rays.

2. A photographic printing mask consisting of a sheet having a border portion and a surrounding portion, said border portion being capable of preventing the passage therethrough of actinic rays to a greater degree than the surrounding portion.

3. A photographic printing mask comprising a sheet having an opening therein for the negative, and an opaque border for said opening, the portion of said sheet outside of said border being capable of transmitting actinic rays.

4. A photographic printing mask comprising a sheet having an opening therein for the negative, and an opaque border for said opening, the portion of said sheet outside of said border being capable of transmitting certain actinic rays and filtering out other actinic rays.

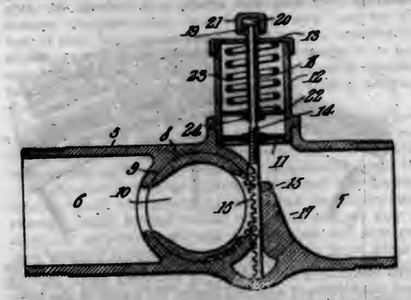
5. A photographic printing mask comprising a sheet having an opening therein for the negative, and an opaque border for said opening, the border of said sheet surrounding said border being capable of transmitting actinic light with diminished intensity.

[Claims 6 and 7 not printed in the Gazette.]

960,302. PRESSURE-RELIEF VALVE. JACKSON W. FOSTER, Jacksonville, Fla., assignor of one-half to Albert Endel and one-fourth to Walter C. Warrington, Jacksonville, Fla. Filed Feb. 11, 1909. Serial No. 477,306.

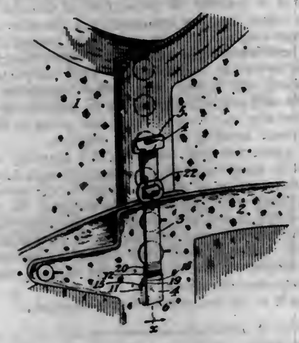
1. In a relief valve a casing, a rotary valve therein having gear teeth, a spring-pressed piston exposed to the pressure, a rack-bar carried by the piston and meshing with the teeth of the valve, and an abutment in the casing behind the rack-bar, engageable thereby for guiding the same.

2. In a relief valve, a casing having a longitudinal bore, one end of which is the inlet, and the other end the outlet, a rotary valve working transversely in the bore between the inlet and the outlet, said valve having a transverse port, a toothed segment extending across one end of the port, a spring-pressed piston exposed to the pressure in



the outlet end of the bore, and a rack bar carried by the piston, and meshing with the toothed segment.

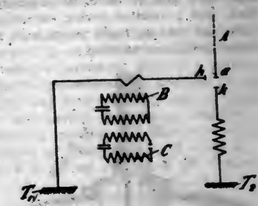
960,303. ATTACHMENT FOR HOLDING DOWN VESTS. RICHARD C. FRITSCHE, Brooklyn, N. Y., assignor to himself and Lillian Steinlein Fritsche, Brooklyn, N. Y. Filed Dec. 1, 1908. Serial No. 465,566.



1. An attachment for holding down vests or other apparel in connection with trousers, comprising a depending body-strip or web having suspending means at its top, means carried at the lower free end of said web for engagement with the trousers by upward tension and release therefrom by downward pressure, and means for locking said lower engagement means against release when the web is free from upward tension, said locking means having a portion projecting over and beyond said engagement means and adapted to engage with the trousers for automatic actuation by bearing against the trousers to automatically release said engagement means when downward pressure is exerted.

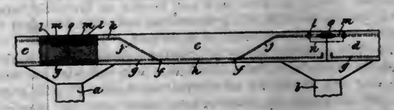
2. An attachment for holding down vests or other apparel in connection with trousers, comprising a depending body-strip or web having suspending means at its top, a plate carried at the lower free end of said web, upwardly-projecting pins carried by said plate at its inner face for engagement with the trousers by upward tension, and a cam-plate mounted upon said pin-carrying plate and projecting at the inner face thereof downwardly over and beyond the top points of said upwardly-projecting pins and constituting locking means for resisting release of said upwardly-projecting pins when the web is free from upward tension and for automatically releasing said pins by engagement of said projecting portion with the trousers when downward pressure is exerted upon said pin-carrying plate.

960,304. WIRELESS TELEGRAPHY. ROBERTO C. GALLETTI, Rome Italy. Filed Dec. 20, 1907. Serial No. 407,298.



A system of wireless telegraphy in which a closed oscillating circuit is used to accumulate energy which is emitted periodically by an antenna, the duration of the emission of the energy by the antenna being continued until the emission reaches the steady condition.

960,305. CONCRETE CONSTRUCTION. FRANK B. GILBRETH, New York, N. Y. Filed Sept. 25, 1906. Serial No. 336,148.



1. A section of a concrete girder constructed to rest at its ends upon suitable supports and having cast longitudinally therein, near its lower surface, a series of rods with upturned ends extending nearly to the ends of the girder, and a series of rods alternating with the others and whose middle portions are parallel thereto and in the same plane through the middle portion of the section and whose end portions are upwardly deflected and terminate near the ends of the section near the upper surface thereof, transverse plates joined to these upturned deflected ends, bolts connected to said plates and turn-buckles connecting the bolts of one section to those of the abutting section whereby the sections may be connected together and constitute a continuous girder.

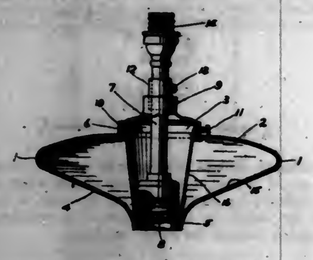
2. A girder made up of reinforced concrete sections, each section constructed to rest at its ends upon suitable supports and having recesses in its upper sides at its ends and having cast therein near its lower surface a series of straight rods with anchors at their ends and another series of rods cast therein alternating with the former ones and whose middle portions are parallel thereto and in the same plane through the middle portion of the section and whose end portions are upwardly deflected and terminate near the upper surface of the section, transverse plates joined to these upturned deflected ends, bolts connected to said plates and lying in said recesses, turnbuckles connecting the bolts of one section to those of the abutting section, and concrete filled into said recesses and into the space between the abutting sections, whereby the sections are connected together and constitute a continuous girder, substantially as set forth.

960,306. REFLECTOR FOR INCANDESCENT LAMPS. EDGAR A. GILLINDER, Philadelphia, Pa. Filed Aug. 24, 1907. Serial No. 390,040.

1. A combined reflector and insulating hood for incandescent lamps consisting of one piece of opaque glass in the form of a hollow body circular in cross section and having a rounded periphery or rim and an arch form centrally perforated top terminating in a grooved tubular neck and an inwardly tapering centrally perforated base, substantially as described.

2. A combined reflector and insulating hood for incandescent lamps consisting of one piece of glass in the form

of a hollow body having a rounded periphery or rim and an arch form centrally perforated top terminating in a grooved tubular neck and an inwardly tapering centrally perforated base, and a tubular casing extending between the perforations and making tight joints with the wall of the hood, substantially as described.



3. A combined reflector and outdoor insulating hood for incandescent lamps consisting of one piece of opaque glass in the form of a hollow body having a rounded periphery or rim and an arch form top terminating in a centrally arranged tubular grooved neck and having an inwardly tapering base terminating in a depending-centrally arranged tubular neck, substantially as described.

4. The combination of a reflector consisting of a hollow opaque one piece glass insulating body circular in cross section and having an arch form top terminating in a centrally arranged grooved tubular neck and an inwardly tapering base terminating in a centrally arranged depending tubular neck, a rod or support penetrating said body and provided with a lamp socket arranged in proximity with the last mentioned neck, and a cap mounted on said rod or support and overlying and engaging the grooved neck, substantially as described.

960,307. BOLT-HOLDER. WILLIAM V. GIST, Sparta, Tenn. Filed Feb. 12, 1910. Serial No. 543,587.

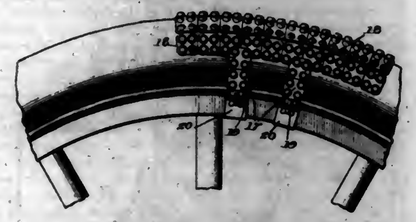


1. A bolt holder comprising a handle bar having one of its ends formed with a squared inner portion and a threaded outer portion, a hook member having its shank provided with a plurality of squared apertures adapted to receive the squared inner portion of the end of the handle bar whereby said hook member may be secured to said handle bar in varying adjustments, a nut mounted on the threaded end of the handle bar for securing the hook member thereto and a spur mounted on the handle bar intermediate its ends.

2. A bolt holder comprising a handle bar having one of its terminals offset and provided with a squared inner portion and a threaded outer portion, a hook member having its shank provided with a series of squared apertures adapted to receive the squared portion of the offset terminal whereby said hook member may be connected to the handle bar in varying adjustments, a nut mounted on the threaded portion of said terminal for locking the hook member thereto, and a spur mounted on the handle bar intermediate one end and said offset terminal.

960,308. ARMOR FOR PNEUMATIC TIRES. ISIDORE GOLDSTEIN, Chicago, Ill. Filed June 24, 1907. Serial No. 380,385.

1. An armor for tires consisting of a plurality of layers each comprising a multitude of relatively small laterally and longitudinally abutting plates breaking joint with each other, said layers being offset relatively to each other and breaking joint with each other.



2. An armor for tires consisting of a plurality of layers each comprising a multitude of relatively small laterally and longitudinally abutting plates, the plates in the different rows breaking joint with each other, combined with means for yieldingly holding said plates adjacent to each other and the layers being offset and breaking joint with each other.

3. An armor for tires composed of a plurality of layers each comprising a multitude of metallic plates, the plates of each layer abutting laterally and longitudinally and the plates of one layer breaking joint with the plates of another layer, said layers being offset and said plates being curved to conform to the surface of the tire.

4. An armor for tires composed of a plurality of layers each comprising a multitude of metallic plates, the plates of each layer abutting laterally and longitudinally and the plates of one layer breaking joint with the plates of another layer, said layers being offset relatively to each other and said plates being curved to conform to the surface of the tire, and rivets through the plates in successive layers loosely holding said plates together.

5. An armor for tires composed of a plurality of layers of regularly shaped plates, the plates of each layer abutting against each other and the plates of successive layers breaking joint with those of the next layer, the plates of the successive layers being so placed that rivets may be passed through the successive layers of plates, each rivet being in a corner of each plate through which it passes and a plurality of rivets so inserted through the plates for the purposes described.

[Claims 6 to 14 not printed in the Gazette.]

960,309. COMBINED PIPE-COUPLING AND VALVE. JOHN N. GOODALL, Portsmouth, N. H., and FRANK S. HEAD, Stoneham, Mass. Filed June 18, 1909. Serial No. 502,870.



1. A pipe coupling comprising an outer member formed with an internal screw thread in two sections of different diameters, each section being of uniform diameter, and an inner member formed with an external screw thread adapted to coöperate with both of said sections.

2. A pipe coupling comprising inner and outer members, an external thread on the inner member, and an internal thread in the outer member comprising a section of relatively large uniform diameter adapted to coöperate freely with said external thread, and a section of relatively small uniform diameter adapted to coöperate tightly with said external thread, said sections being arranged to be engaged at the same time.

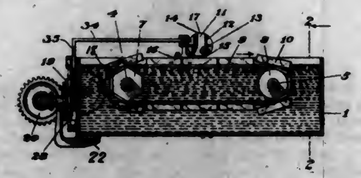
3. A device of the character described, comprising two tubular members having connections to permit collapsing and extending the device, one of said members having a plug-shaped head having an external form corresponding with the internal form of the flow passage of the other member, passages being formed behind said head for the flow of fluid, said head being adapted to have considerable movement within said passage without opening it to permit escape of fluid, whereby the head-carrying member may be manipulated to a material extent without affecting the control of the flow by said head.

4. A device of the character described, comprising two tubular members having screw-thread connections to permit collapsing and extending the device, one of said members having an externally-threaded plug-shaped head, the other member having an internally-threaded flow passage into and from which said threaded head may be screwed, passages being formed behind said head for the flow of fluid, the coöperative threads of said head and flow passage being of a length to permit the head to be given a considerable movement within said passage without opening it to permit escape of fluid.

5. A pipe coupling comprising inner and outer members, the outer member having different portions of its length provided with internal threads of slightly differing diameters, an abrupt threaded shoulder being formed at the junction of said portions of different diameters, the inner member having an external thread to loosely fit said internal thread having the larger diameter, but of a size to permit it to completely pass by the said abrupt threaded shoulder.

[Claim 6 not printed in the Gazette.]

960,310. SOLDERING-MACHINE. CHARLES W. GRAHAM, Rome, N. Y., assignor, by mesne assignments, to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 9, 1905. Serial No. 244,834.



1. In a machine of the class described, in combination, means adapted to support a can body, means adapted to engage the inner surface of a seam of said can body, a movable member having a substantially flat upper surface adapted to apply solder to the outer surface of said seam, said second means being substantially in the path of said movable member, and means adapted to feed can bodies along said first means in a direction transverse to the direction of movement of said member.

2. In a machine of the class described, in combination, means adapted to support can bodies, means adapted to engage the inner surfaces of the seams of said can bodies, a plurality of means having substantially flat upper surfaces adapted to apply solder to the outer surfaces of said seams, and means adapted intermittently to feed can bodies from one to the other of said solder-applying means in a direction transverse to the direction of movement thereof.

3. In a machine of the class described, in combination, means adapted to support a can body, means adapted to propel the body along said first means, a receptacle, and means comprising a plurality of relatively movable blocks adapted alternately to pass downwardly into said receptacle and thence upwardly and into engagement with the can body.

4. In a machine of the class described, in combination, means adapted to support a can body, means adapted to propel the body along said first means, a receptacle, and means comprising a plurality of relatively movable blocks adapted alternately to pass downwardly into said receptacle and thence upwardly and into engagement with the can body, said last means being adapted to move in a direction transverse to the direction of travel of the can body.

5. In a machine of the class described, in combination, means adapted to support an article to be soldered and to permit a relative movement thereof, a receptacle, a flexible member, parts upon which are adapted alternately to pass downwardly into said receptacle and to engage and apply solder to said article and means adapted to drive said solder applying means in a direction transverse of the path of travel of said article to be soldered.

[Claims 6 to 33 not printed in the Gazette.]

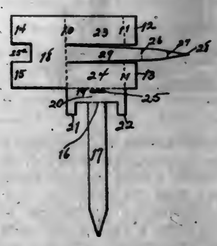
960,311. WRAPPER. JACOB GREENBERG, New York, N. Y., assignor to Neostyle Envelope Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 27, 1908. Serial No. 450,433.



1. A wrapper having an opening therein adjacent to one edge of a size to receive a postage stamp, two parallel lines of cuts extending across the wrapper from said opening to define a tearing strip, and a tab at the end of said lines of cuts, substantially as described.

2. A wrapper having an opening therein adjacent to one edge of a size to receive a postage stamp, two parallel lines of cuts extending across the wrapper from said opening to define a tearing strip, the cuts in said lines being parallel and disposed at an angle to the length of the lines, and a tab at the end of said lines of cuts and projecting into said opening, substantially as described.

960,312. GAGE-PIN FOR TYMPANS OF PRINTING-PRESSES. JACOB R. GROVE, Philipsburg, Pa. Filed Sept. 3, 1909. Serial No. 516,634.



1. A blank for gage pins of generally rectangular form having a notch centrally of one margin and slits centrally of the margin opposite to the notch and also having an attenuated member between the slits and projecting beyond the slitted margin of the blank and also having a rectangular projection at right angles to the longitudinal plane of the attenuated member, said rectangular projection having prongs at its ends and an attenuated member intermediate of the prongs and spaced from them, said rectangular projection also having a slot, said blank being adapted for bending and folding on various lines.

2. A gage pin for tympans, comprising a base portion, back portions connected to said base portion, an end portion at an angle to one of said back portions and having an integral tongue, said integral tongue pointed at one end and adapted to penetrate a tympan and also adapted to extend across and beneath the base portion, a spring tongue formed on said base portion and a stripper adjustably mounted between said back portions and base portion.

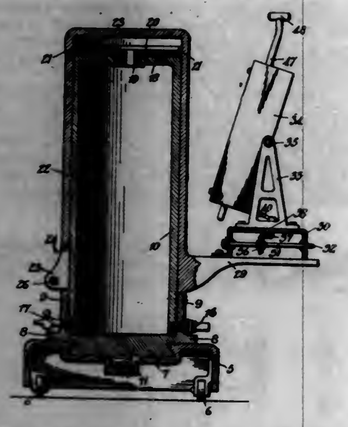
3. A gage pin for tympans, comprising a base member, spaced back members integral with and clamped to the base member, a tongue integral with one of said back members, an anchor spring integral with the base member and between said back members, and an end member integral with and at an angle to one of said back members.

4. A gage pin for tympans, comprising a base member, spaced back members integral with and clamped to the base member, an anchor spring integral with the base member and between said back members, said base member formed with a notch, said anchor spring adapted to be moved through said notch, an end member integral with and at an angle to one of said back members, and a tongue integral with one of said back members.

5. A gage pin for tympans, comprising a base member, spaced back members integral with and clamped to the base member, an anchor spring integral with the base member and between said back members, an end member integral with and at an angle to one of said back members, said end member formed with marginal prongs, and a tongue integral with said end member.

[Claims 6 and 7 not printed in the Gazette.]

960,313. STAY-BOLT HEADER. ASA GUTHRIE, Chicago, Ill. Filed Mar. 27, 1908. Serial No. 423,653.



1. In a stay bolt header, the combination of a rotatable element, means in connection therewith for rotating and oscillating the same, a block mounted within, and radially movable to and from the center of, said rotatable element, means actuated by the rotation of said element for moving said block, a rod provided upon one end with a hammer head, and rotatably connected to said block, and means forming a guide for said rod between its said head and its said connection to said block, adapted to permit of the oscillation thereof, substantially as described.

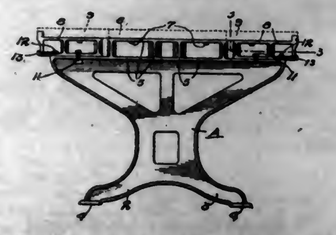
2. In a stay bolt header, the combination of a rotatable element, means in connection therewith for rotating and oscillating the same, a block mounted within, and radially movable to and from the center of, said rotatable element, means actuated by the rotation of said element, for moving said block, a rod provided upon one end with a hammer head, and rotatably connected to said block, and spaced parallel guide rods between which said rod oscillates, arranged between its said head and the said connection thereof to said block, substantially as described.

3. In a stay bolt header, the combination of a rotatable element, oscillatory means in which said rotatable element is mounted, means to rotate said element by its oscillations, a block mounted within, and radially movable to and from the center of, said element, means actuated by the rotation of said element for moving said block, a rod provided upon one end with a hammer head, and rotatably connected to said block, and means forming a guide for said rod between its said head and its said connection to said block, adapted to permit of the oscillation thereof, substantially as described.

4. In a stay bolt header, the combination of a rotatable element, means in connection therewith for rotating and oscillating the same, a rod provided upon one end with a head, a block to which said rod is swivelly connected, said block being mounted within said rotatable element for radial movement from the center thereof, means for moving said block by the rotation of said element whereby to cause travel of the said rod connection in a circular path, and means forming a guide for said rod between its said head and its said connection to said block, adapted to permit of the oscillation thereof, substantially as described.

5. In a device of the character described, the combination of a horizontal roller-mounted supporting base, a supporting stand horizontally slidably mounted upon said base, manually operable connections between said stand and said base for limiting the sliding of the former to a step by step movement, and a bolt heading mechanism carried by the supporting stand, substantially as described.

960,314. TABLE. HARRY J. GUTTMAN, Chicago, Ill. Filed May 25, 1908. Serial No. 434,815.



1. A work-bench having a plurality of parallel transverse pedestals, clamping jaws slidable on the top of each pedestal, and a sectional top for said bench, adapted to be clamped between said jaws to form one rigid structure.

2. A bench pedestal comprising a top receiving channel, a sectional top in said channel, and means comprising adjustable clamps on each side of said channel, and means coöperating therewith, for widening the channel at either side or at both sides thereof.

3. A bench pedestal comprising a top receiving channel, a sectional top in said channel, and means comprising adjustable clamps on both sides of said channel, and means coöperating therewith, for widening one side and narrowing the other side thereof.

4. In a table, an upright pedestal, a center support integral therewith, adjustable supports disposed at opposite sides of said integral support, and a sectional table top secured to said supports, said adjustable supports interposed between the pedestal and table top.

5. In an extensible table or bench, an upright pedestal, a center support integral therewith, adjustable supports disposed at opposite sides of said integral support, and a sectional table top secured to said supports, said adjustable supports provided with means for compressing the table top edgewise without disturbing the integral center support, each section of the top being supported by and secured to one of said supports.

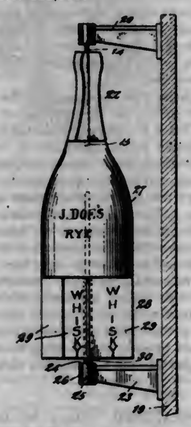
[Claims 6 to 11 not printed in the Gazette.]

960,315. ADJUSTABLE BOX-BIT. FREDERICK ALONZO HANES and WILLIAM STAPLES, Huntsville, Ontario, Canada, assignors to William Moore Duncan, Huntsville, Canada. Filed Aug. 28, 1907. Serial No. 390,535.

A box bit comprising a stock having a reduced lower end having an opening therein, a pin passing through said opening, opposing jaws having openings at their upper ends engaging with said pin, said jaws inclining first outwardly and then inwardly to form nut gripping ends, and said jaws having side flanges, a spring inverted V-shaped bearing against said outwardly inclined jaws and confined against displacement by said inwardly inclined portions and said flanges, a casing having its upper end of rectangular form to engage the stock and having a notch in its upper edge and its lower end having two opposing sides flaring outwardly to engage the outwardly inclined walls of the jaws, a thumb screw passing through the rectangular portion of the casing and adapted to secure the same to the stock, and a pin 2 in the stock adapted to engage the notch and limit the upward movement of the casing thereon.



960,316. ADVERTISING DEVICE. GEORGE WILLIAM HANLON, New York, N. Y., assignor of one-third to Edward Morange, Mount Vernon, N. Y., and one-third to Frederick R. Kalck, New York, N. Y. Filed Jan. 25, 1908. Serial No. 412,559.



1. In an advertising sign, a sign formed of a plurality of rotatable wings and a fixed portion, the wings and fixed portion together representing the article to be advertised, the arbor being mounted in line with the center of the fixed portion.

2. In an advertising sign, a sign formed of a plurality of wings and a fixed portion, the wings and fixed portion together representing a bottle, means to support the fixed portion so that it will not rotate, and means to support the wings so that they will be permitted to rotate.

960,317. STRINGED MUSICAL INSTRUMENT. FRANK L. HARMON, Beverly, Mass. Filed July 7, 1905. Serial No. 268,741.

1. In stringed musical instruments the combination of: a resonant device, a support connected therewith and supporting said resonant device, and allowing the ends of said resonant device to be free to vibrate, means of attachment for strings connected with said support, strings attached to said means of attachment, and a bridge between the strings and the outside of said resonant device.



2. In stringed musical instruments the combination of: a resonant device, a support connected therewith and supporting said resonant device, and allowing the ends of said resonant device to be free to vibrate, said support comprising neck, finger-board, chin-rest, shoulder-pad, and means of attachment for strings, strings attached to said means of attachment, and a bridge between the strings and the outside of said resonant device.

3. In stringed musical instruments the combination of: a hollow resonant device, a support connected with said hollow resonant device and supporting said resonant device, and allowing the ends of said resonant device to be free to vibrate, means of attachment for strings, strings attached to said means of attachment, and a bridge between the strings and the outside of said resonant device.

4. In stringed musical instruments the combination of: a hollow resonant device, a support connected with said hollow resonant device between the ends of said resonant device, and allowing the ends of said resonant device to be free to vibrate, means of attachment for strings connected with said support, strings attached to said means of attachment, and a bridge between the strings and the outside of said resonant device.

5. In stringed musical instruments the combination of: a hollow resonant device, a support connected with said hollow resonant device between the ends of said resonant device and supporting said resonant device, and allowing the ends of said resonant device to be free to vibrate, said support comprising neck, finger-board, chin-rest, shoulder-pad, and means of attachment for strings, strings attached to said means of attachment, and a bridge between said strings and the outside of said resonant device.

960,318. SIZE FOR PAPER-MAKERS. ALEXANDER W. HARRINGTON, Brooklyn, N. Y., assignor, by mesne assignments, to The A. W. Harrington Company, a Corporation of New York. Filed Jan. 5, 1907, Serial No. 350,926. Renewed Oct. 2, 1909. Serial No. 520,679.

1. A size composed of rosin soap, glue, formaldehyde, glycerin, starchy material and oil.

2. A size composed of rosin-soap, glue, formaldehyde, glycerin, cassava and Russian oil.

3. The hereindescribed process of making a size, which consists in boiling together in water rosin and soda ash, allowing to cool to about 180° F., adding glue, boiling starchy material in water and adding the same to the mass containing the rosin, soda ash and glue, allowing the mass to cool and adding thereto glycerin, formaldehyde and Russian oil.

4. The hereindescribed composition for a size, which consists in the following ingredients in substantially the proportions specified, viz., rosin 100 pounds, soda ash, 12 pounds, glue 20 pounds, cassava 2 pounds and formaldehyde, glycerin and Russian oil each in substantially the proportions by weight of from 1½ to 5% of the total of the other ingredients specified.

960,319. COMPOSITION FOR TREATING PAPER. ALEXANDER W. HARRINGTON, Brooklyn, N. Y. Filed June 26, 1906, Serial No. 323,459. Renewed Oct. 15, 1909. Serial No. 522,807.

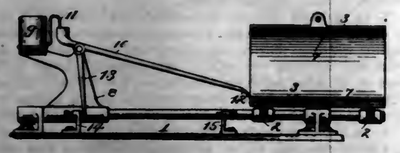
1. The herein described composition, consisting of waxy material, oil, cloves, glue, formaldehyde, glycerin and amylaceous material.

2. The herein described composition, consisting of white leaf wax, Russian oil, cloves, glue, formaldehyde, glycerin, and cassava.

3. The herein described composition in substantially the following proportions, viz: white leaf wax, 200 lbs., Russian oil, 1 gal., cloves, 1 lb., glue, 60 lbs., formaldehyde, 1 oz., glycerin, 1 oz., and cassava, 40 lbs.

4. The herein described process, which consists in heating amylaceous material in water to boiling, cooling, adding glue to the mass, and heating to a temperature of about 180° F., adding to the heated mixture a waxy material, oil and cloves, cooling and adding to the mixture formaldehyde and glycerin.

960,320. MANUFACTURE OF PHONOGRAPH-RECORD BLANKS. VARIAN M. HARRIS, Chicago, Ill., assignor, by mesne assignments, to The United States Phonograph Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 18, 1908. Serial No. 453,634.



1. In the manufacture of phonograph record blanks, the steps which consist in forming a sheet of celluloid with edges at substantially right angles to the surface of the sheet, bringing two such edges together under pressure exerted transversely thereof, and simultaneously effecting the softening and adhesion of such abutting edges.

2. In the manufacture of phonograph record blanks, the steps which consist in forming a sheet of celluloid with edges at substantially right angles to the surface of the sheet, bringing two opposite edges together and causing such edges to abut by pressing exteriorly on the sheet, and simultaneously effecting the softening and adhesion of the abutting edges.

3. In the manufacture of phonograph record blanks, the steps which consist in forming a sheet of celluloid with edges at substantially right angles to the surface of the sheet, bringing two opposite edges together and causing such edges to abut by pressing exteriorly on the sheet, and simultaneously applying a suitable solvent along such abutting edges, whereby their softening and adhesion is effected.

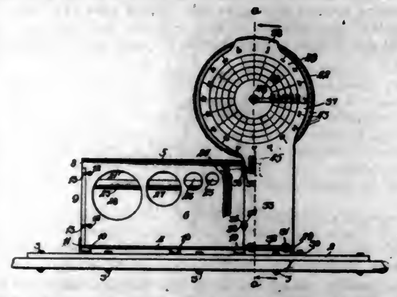
4. In the manufacture of phonograph record blanks, the steps which consist in forming a sheet of celluloid with edges at substantially right angles to the surface of the sheet, bringing two opposite edges together and causing such edges to abut by pressing exteriorly on the sheet, and simultaneously applying a suitable solvent along such edges from within, whereby their softening and adhesion is effected.

5. In the manufacture of phonograph record blanks, the steps which consist in forming a sheet of celluloid with edges at substantially right angles to the surface of the sheet, bringing two opposite edges together and causing such edges to abut by pressing exteriorly on the sheet, said sheet being horizontally disposed with such abutting edges located lowermost, and applying a suitable solvent along such edges from within, whereby their softening and adhesion is effected.

[Claims 6 to 11 not printed in the Gazette.]

960,321. ROPE-MEASURING MECHANISM. HARLEY H. HAYES, St. Paul, Minn., assignor of one-half to Bernard C. Beckman, Naperville, Ill. Filed Jan. 25, 1907. Serial No. 534,070.

1. In a rope measuring mechanism, the combination of a fixed standard and a movable standard, each provided with a series of holes at graduated distances apart, a fixed roller, an adjustable roller mounted in the standards, a pinion for the fixed roller, and a revoluble gear in mesh with the pinion, substantially as described.



2. In a rope measuring mechanism, the combination of a fixed standard and a movable standard, each provided with a series of holes at graduated distances apart, a fixed roller, an adjustable roller mounted in the standards, a pinion for the fixed roller, a revoluble gear in mesh with the pinion, a shaft having the gear fixedly mounted thereon, a pointer carried by the shaft, and a dial having a measuring scale coöperating with the pointer, substantially as described.

3. In a rope measuring mechanism, the combination of a fixed standard and a movable standard, each provided with a series of holes at graduated distances apart, a fixed roller, an adjustable roller mounted in the standards, a pinion for the fixed roller, a revoluble gear in mesh with the pinion, a shaft having the gear fixedly mounted thereon, a pointer carried by the shaft, and a dial having a weight indicating scale coöperating with the pointer, substantially as described.

4. In a rope measuring mechanism, the combination of a fixed standard and a movable standard, each provided with a series of holes at graduated distances apart, a fixed roller, an adjustable roller mounted in the standards, a pinion for the fixed roller, a revoluble gear in mesh with the pinion, a shaft having the gear fixedly mounted thereon, a pointer carried by the shaft, and a dial having a measuring scale, and a weight indicating scale coöperating with the pointer, substantially as described.

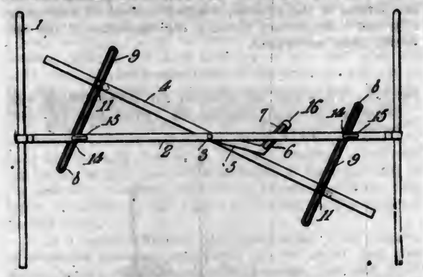
5. In a rope measuring mechanism, the combination of a fixed standard and a movable standard, each provided with a series of holes at graduated distances apart, a fixed roller, an adjustable roller mounted in the standards, a pinion for the fixed roller, a revoluble gear in mesh with the pinion, and a wall with graduated holes for different sizes of ropes, said holes corresponding with the graduated holes of the standards, substantially as described.

960,322. HOSPITAL-BED. ELIAS M. HEATON, Clarksburg, W. Va., assignor of one-half to James E. Wilson, Clarksburg, W. Va. Filed Aug. 23, 1909. Serial No. 514,223.

1. A bedstead comprising side rails; a longitudinally tiltable mattress frame disposed between the side rails; connections between the frame and the rails; arms provided with slots and pivoted between the frame and the side rails upon the connections; a seat arranged to be inserted in the slots to extend across the frame; and means for locking the frame in position.

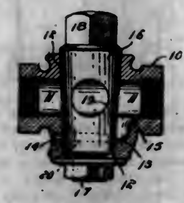
2. A bedstead comprising side rails; a longitudinally tiltable mattress frame disposed between the side rails; connections between the frame and the rails; arms provided with slots and pivoted between the frame and the side rails upon the connections; a seat arranged to be inserted in the slots to extend across the frame; the side rails being arranged to hold the seat within the slots; and means for locking the frame in position.

3. A bedstead comprising side rails; a frame pivoted intermediate its ends to the side rails; a slotted link disposed between the frame and a rail; a retaining member slidably mounted in the slot of the link and arranged to extend through the frame; a retaining member slidably



mounted in the slot of the link and arranged to extend through said rail; a clamping device located within the frame upon the end of the first-named retaining member; and a clamping device located upon the exterior of said rail upon the end of the last-named retaining member.

960,323. STOP AND WASTE COCK. THOMAS B. HENSEY, Adrian, Mich. Filed Feb. 13, 1909. Serial No. 477,500.



A combined stop and waste cock comprising a casing having a transverse valve seat and a main longitudinal water passage extending through the valve seat, said casing having a waste passage communicating with the valve seat at one side and with a waste passage communicating with the valve seat and the longitudinal water passage at the opposite side, and a plug engaging in said valve seat and having a transverse water passage therethrough and with a waste passage extending through the plug at right angles to the water passage thereof and not connected therewith, whereby the water passage of the plug is cut-off from the water passage of the casing when the waste passage of the plug is disposed in registering position with the oppositely disposed waste passages of the casing.

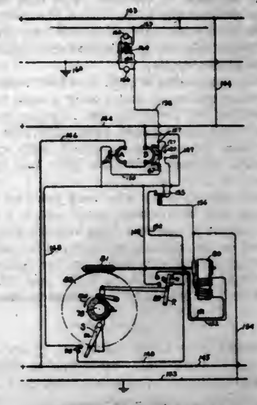
960,324. ELECTRIC SWITCH. EDWARD M. HEWLETT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 2, 1905. Serial No. 276,780.

1. The combination with a plurality of switches, of manually-controlled means for opening one of said switches and automatic mechanism subsequently operative first to open another switch and then close both of said switches.

2. The combination with a plurality of switches, of means manually-controlled for opening one of said switches and automatic mechanism subsequently operative first to open another switch and then close both of said switches one after the other in a definite order.

3. The combination with a plurality of switches, of means for opening one of said switches and additional means operative first to open another of said switches, then close one of said switches and finally close the other with a snap movement.

4. The combination with a circuit breaker and a switch, means for opening said breaker, and automatic setting mechanism operative first to open said switch and then close said breaker and switch.



5. The combination with a circuit breaker and a switch, of an electric circuit, an electroresponsive device in said circuit for opening said breaker, and automatic setting mechanism operative first to open said switch then close said breaker and finally close said switch.

[Claims 6 to 31 not printed in the Gazette.]

960,325. BUCKLE. WALTER A. HOLDEN, Ansonia, Conn., assignor to The Robert N. Bassett Company, Shelton, Conn., a Corporation of Connecticut. Filed Mar. 11, 1909. Serial No. 482,725.



1. A buckle comprising a frame made out of a single piece of wire having its intermediate portion doubled forwardly upon itself to present front and back bars spaced apart to form a vertical passage for the insertion of the end of a webbing, then dropped from said front bar and carried outwardly and upward around the ends of said bars to form sides, the extremities of the wire being then bent inwardly at the top of said sides to form pintles, and a web holding lever, provided with a web deflecting roll carrying spaced web piercing points on its underside, the said roll being arranged to swing over said rear bar and said points to snap over said front bar when the buckle is closed.

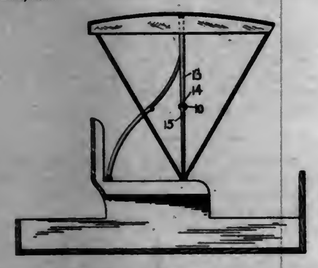
2. A buckle comprising a back provided with a web attaching member and a sheet metal lever hinged to said back above said attaching member, the said lever having

its top portion bent rearwardly and downwardly then inwardly to present an under face portion arranged to swing over the top of said attaching member when the buckle is closed and said under face portion being slit to permit portions thereof adjacent to the slits to be bent downwardly to form web penetrating spurs disposed forwardly of the rearmost side of the face portion, so that the strain on the webbing is in a direction at substantially right angles to the direction of the spurs.

3. A buckle comprising a back provided with front and rear web bars spaced apart, and a lever hinged to said back having a member for deflecting the running portion of a webbing over the top of said bars when the buckle is closed, the said lever being provided with penetrating points arranged to snap over said front bar to hold the buckle closed.

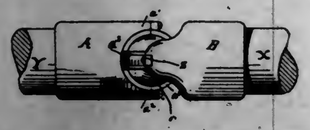
4. A buckle comprising a wire back bent up to present front and rear web bars spaced apart and a lever hinged to said back having a web deflecting member provided with a face portion on its under side carrying laterally spaced web penetrating points, the said rear bar being arranged to lie under said face portion and the said front bar to spring under said points when the buckle is closed.

960,326. BUGGY-TOP CLIP. JOHN C. HORN and JEREMIAH M. HORN, Arba, Ind. Filed Feb. 8, 1909. Serial No. 476,767.



The combination with a supporting structure of less thickness in one direction than the other and increasing in area toward the upper end, of a clip device comprising a stock having at one end a downwardly depending hook and at the other end two oppositely curving rigid arms, the terminals of the arms being spaced apart to correspond to the lesser thickness of the structure and with the space between the intermediate portions of the arms corresponding to the greater thickness of the structure.

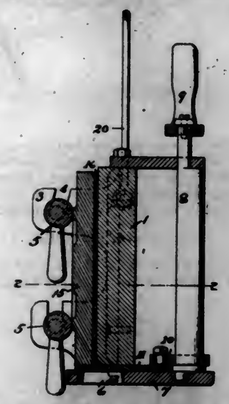
960,327. UNIVERSAL JOINT. LEWIS M. HOSEA, Cincinnati, Ohio. Filed Apr. 13, 1908. Serial No. 426,765.



1. In a universal joint the combination of a central spherical member having two circumferential grooves crossing at right angles; two bearing members or yokes each consisting of a shank for attachment to a shaft, recessed at its front end to a circumferential arc of the spherical member, each of the jaw-terminals at the arc surface thus formed having a segmental tooth of relatively short arc, projecting inwardly, adapted to fit the contour of the groove of the spherical member in a sliding engagement; and two semi-circular detachable straps each fitted to the contour of its groove of the spherical member and connecting the jaw-terminals of a yoke outwardly.

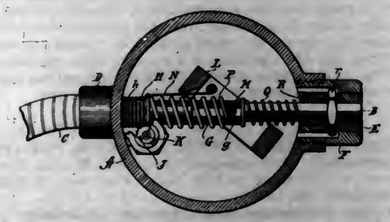
2. In a universal joint of the character indicated, an externally grooved central member constructed as a hollow spherical shell, inclosing a corresponding large chamber for the storage of an oil-supply, said shell being provided with a stoppered filling aperture between the grooves, and a plurality of minute feed apertures opening through the bottom of the grooves, adapted to feed oil automatically and continuously through the operation of the universal joint mechanism.

960,328. PROCESS OF LINING JOURNAL-BEARINGS. FRANK H. HOWARD, Reading, Pa. Filed Aug. 16, 1909. Serial No. 513,101.



The process of lining journal bearings which consists in securing the bearing in a holder in such manner as to allow a space between the inner surface of the bearing and the holder; submerging the holder in a mass of molten metal to a depth less than the length of the bearing; allowing sufficient molten metal to entirely fill said space to enter the bearing only at its lowermost point; retaining the metal so entered by mechanical means and removing the holder from the mass of molten metal.

960,329. SPEED-INDICATOR. ALEXANDER MAY HUDSON, New York, N. Y. Filed July 12, 1909. Serial No. 507,142.

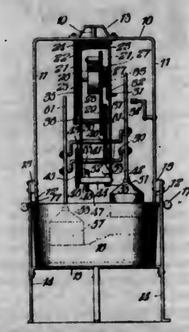


1. In a speed indicator, the combination with a shaft, of a sleeve movable lengthwise upon the shaft, the said sleeve having slots extending lengthwise at one end and upon opposite sides, the said shaft having a pin extending diametrically and engaging the said slots in the sleeve, a body having a central aperture, the shaft and sleeve extending through the said aperture of the body and the body being pivotally supported by the ends of said pin in the shaft, a connecting rod joining the said body and the said sleeve, a spring arranged on one side of the said body and disposed to act against the sleeve and against the ends of the said pin in the shaft whereby the said body is yieldingly held in an inclined position, and means acting upon the sleeve on the other side of the body whereby the yielding pressure upon the said sleeve is adjusted.

2. In a speed indicator, the combination with a shaft, of a sleeve movable lengthwise upon the shaft, the said sleeve having slots extending lengthwise at one end and upon opposite sides, the said shaft having a pin extending diametrically and engaging the said slots in the sleeve, a body having a central aperture, the shaft and sleeve extending through the said aperture of the body and the body being pivotally supported by the ends of said pin in the shaft, a connecting rod joining the said body and the said sleeve, a main spring arranged upon one side of the said body and disposed to act against the sleeve and against the ends of said pin in the shaft whereby the said body is yieldingly held in an inclined position, an adjusting spring acting upon the said sleeve on the other side of the said body whereby the yielding pressure upon the said sleeve is adjusted, and means for adjusting the said adjusting spring.

3. In a speed indicator, the combination with a shaft, of a sleeve movable lengthwise on the shaft, the said sleeve having slots extending lengthwise, the said shaft having a pin extending diametrically and engaging the slots in the sleeve, a body having a central aperture, the shaft and sleeve extending through the said aperture of the body and the body being pivotally supported by the said pin through the shaft, a connecting rod joining the said body and the sleeve, a spring arranged on one side of the body and adapted to act against the sleeve and against the shaft, and another spring located upon the other side of the said body and arranged to act against the said sleeve and against the shaft contrary to the first-mentioned spring.

960,330 WASHING-MACHINE. JACOB HULKENBERG, Columbus, and BALTHASAR J. MATTES, Crooksville, Ohio. Filed June 25, 1908, Serial No. 440,423. Renewed Aug. 11, 1909. Serial No. 512,458.



1. In a washing machine, a main frame, a supplemental frame rotatably mounted therein, dasher actuating mechanism supported on the supplemental frame, and means to continuously rotate the supplemental frame during the operation of the machine.

2. In a washing machine, a main frame, a supplemental frame rotatably mounted therein, dasher actuating mechanisms supported on the supplemental frame, and means actuated from the dasher actuating mechanism to continuously rotate the supplemental frame during the operation of the machine.

3. In a washing machine, a frame, dasher actuating mechanisms supported thereon including a pair of crank shafts, and a dasher provided with a stem having spaced openings to receive the cranks of said crank shafts.

4. In a washing machine, a main frame, a supplemental frame rotatably mounted thereon, dasher actuating mechanisms supported on the supplemental frame including a pair of crank shafts, a dasher provided with a stem having spaced openings to receive the cranks of said crank shafts, and means to continuously rotate the supplemental frame during the operation of the machine.

5. In a washing machine, a main frame, a supplemental frame rotatably mounted thereon, dasher actuating mechanisms supported on the supplemental frame including a pair of crank shafts, a dasher provided with a stem having spaced openings to receive the cranks of said crank shafts, and means actuated from the dasher actuating mechanisms to continuously rotate the supplemental frame during the operation of the machine.

960,331. WEATHER-STRIP. CHARLES R. INGHAM, Mahwah, N. J., assignor to Metal Plated Car & Lumber Company, Mahwah, N. J., a Corporation of New Jersey. Filed Feb. 24, 1910. Serial No. 545,562.

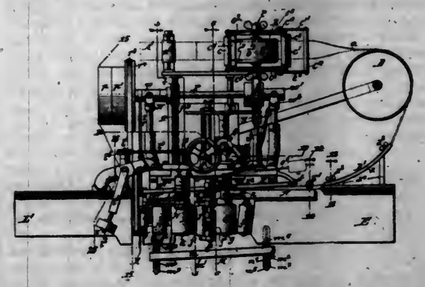


1. A weather strip comprising a side wall and a spring wing substantially parallel thereto, the metal at the upper end of the strip being folded over, whereby to close the space between said wing and wall.

2. A weather strip made of sheet metal and comprising a side wall and a spring wing substantially parallel thereto, said wing being provided with an extended end bent over against the metal of the wall, whereby to close the space between said wing and wall.

3. A weather strip comprising side walls having spring wings formed integral therewith, the metal of which said wings are formed being extended upwardly and bent over and upon the inner faces of said walls.

960,332. BACKING-STRIP-APPLYING MACHINE. WALTER L. JACOBIE, Glens Falls, N. Y., assignor, by mesne assignments, to Charles W. Jacobie, Glens Falls, N. Y. Filed Dec. 27, 1905. Serial No. 293,509.



1. A machine for applying a backing strip comprising a glue delivery wheel over which the strip passes, a glue pot into which the lower part of said wheel dips, front and rear guide rollers for said strip arranged on opposite sides of said wheel, movable arms supporting said rollers at opposite ends and the arms at the corresponding ends of the rollers projecting toward each other and clamping screws whereby said arms are secured to lugs on said pot, substantially as set forth.

2. A machine for applying a backing strip having a guide for the strip which consists of two channels arranged with their open sides facing each other, and means for adjustably connecting the rear flanges of said channels, substantially as set forth.

3. A machine for applying a backing strip having a guide for the strip which consists of two channels arranged with their open sides facing each other, and means for adjustably connecting the rear flanges of said channels, consisting of a clamping bolt arranged on one of said channels and passing through slots in the other channel, substantially as set forth.

4. A machine for applying a backing strip having a guide for the strip which consists of a post, a lug supporting the lower end of said post, a collar adjustably secured to the upper end of the post, and pins arranged on said lug and collar in front of said post and projecting toward each other, substantially as set forth.

5. A machine for applying a backing strip to a blank comprising means for propelling a blank, means for feeding a strip in a flat condition against the back of the blank, means for coating the inner side of the strip with an adhesive before the same reaches the blank, preliminary folding means for turning the edges of the strip from their straight position into an angular position and partway toward opposite sides of the blank, and comprising two rollers having inclined faces which diverge toward the blank and engage with the opposite edges of the strip, and a final folding means independent of the preliminary folding means for completing the turning of the edges of the strip against opposite sides of the blank, substantially as set forth.

[Claims 6 to 32 not printed in the Gazette.]

960,333. ROPE-FASTENER. MILO C. JENNINGS, Chicago, Ill., assignor of one-fifth to Dugald McMillen, one-fifth to Kenneth E. Walsh, and one-fifth to Harry J. Cunningham, Chicago, Ill. Filed Oct. 8, 1908. Serial No. 456,784.



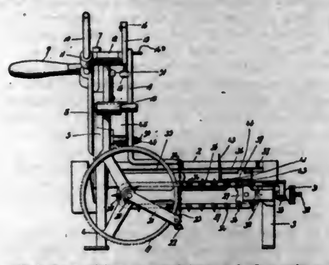
A rope fastener consisting of a straight body member of uniform square cross section and an integral ring upon one end thereof forming an eye, in combination with a U-shaped member, both extremities of said U-shaped member being pivotally secured to said body member in a plane with said ring, the extremity of said body opposite said eye being concave and rounded forming a smooth inwardly curved surface extending from side to side, and said groove extending a short distance upon opposite sides of the body the bight of said U-shaped member being adapted to just pass said inner extremity of said body member, and said bight portion being smooth and substantially circular in cross section, substantially as described.

960,334. SLICING-MACHINE. ARCHER B. JENNINGS, Wallingford, Conn., assignor to The Jennings-Hall-Sperry Co., Wallingford, Conn., a Corporation. Filed Aug. 14, 1909. Serial No. 512,840.

1. In a slicing machine, a bed having a longitudinal groove, a carrier on said bed and adapted to be moved longitudinally thereon, said carrier formed with a notch and with a longitudinal rib on each side of said notch extending into said groove, and a feed chain having upwardly projecting prongs to engage with said carrier through said slot.

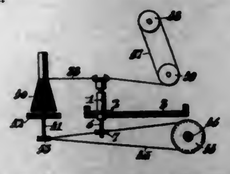
2. In a slicing machine, a bed having longitudinal slots in its side walls and a notch in the upper edge of the side walls at opposite ends of said slots and intersecting the same, a carrier mounted on said bed and formed with arms adapted to pass through said notches into said slots whereby the carrier may be moved from the bed at opposite ends of the slots, and means for moving said carrier forward.

3. A slicing machine comprising a bed formed with a longitudinal slot, an endless feed chain having prongs projecting upward through said slot, means for moving said chain forward, a carrier guided on said bed and formed with a notch adapted to be engaged by the prongs of said chain whereby the said carrier is moved forward and released at a predetermined point.



4. A slicing machine comprising a bed having a centrally arranged longitudinal slot, a feed chain having prongs extending upward through said slot, means for moving said chain, a carrier mounted on said bed and formed with a centrally alined opening and notch at its rear end, the edges of the opening and notch adapted to be engaged by the prongs of the said chain, whereby the said carrier is moved forward, and whereby it is released from said chain at a predetermined point.

960,335. DEVICE FOR WAXING YARN. NATHAN E. KAHN, Woodbine, N. J. Filed June 16, 1909. Serial No. 502,424.



1. In a yarn waxing device, the combination of a block of wax; a holder within which said block of wax is set; means for rotating said holder; and means for leading yarn across the axis of rotation of the block of wax and in contact therewith.

2. In a yarn waxing device, the combination of means for guiding a traveling yarn with means for positively supporting and means for positively rotating a single piece of waxy substance in such relation to the yarn that the yarn is caused to travel across and in contact with said rotating piece without pressure thereon other than its traveling tension.

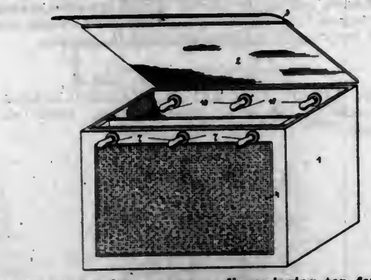
3. In a yarn waxing device, the combination of a cylindrical cup; means for rotating said cup; means for clamping within the cup a cylindrical piece of wax with the exposure of one of its ends; and means for causing yarn to pass over the axis of rotation of the wax and in contact with its exposed rotating surface.

4. In a yarn waxing device, the combination of vertical yarn guiding fingers in pairs; horizontal yarn guiding fingers also in pairs one horizontal pair being correlated to one vertical pair; and means for supporting a piece of wax between said correlated pairs.

5. In a yarn waxing device, a yarn guide comprising two pairs of horizontal fingers; means for permitting adjustment of the vertical relation between the fingers, and means for pressing a waxy substance against the yarn as it passes from one pair of fingers to the other.

960,336. SIGN. PAUL KAMM, Chicago, Ill. Filed Dec. 8, 1909. Serial No. 531,968.

An illuminated sign comprising a casing; a foraminated member in one side of said casing and colored to form a sign; a transparent sign located in the side of said casing behind said foraminated member; electric lights in said casing and on the side opposite to said foraminated member; lights on the exterior of said casing above said foraminated member; an upwardly swinging top for said casing; a reflector on said top and adapted to cover said exterior lights; and means for alternately lighting said exterior and interior lights, substantially as described.



960,337. FOLDING PERAMBULATOR. JOSEPH KANABAY, Elkhart, Ind. Filed June 26, 1909. Serial No. 504,433.

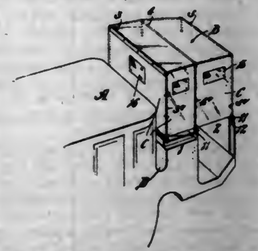


1. In a folding perambulator, the combination of a running gear frame, a folding handle pivoted to the rear of said frame, a seat on said frame, a foldable back for said seat, folding connections between said back and said handle, a side lever pivoted to said frame and extending above and below said frame, a link connection between the upper portion of said lever and said handle, a rearwardly extending operating member pivoted to the lower portion of said side lever, detachable means for locking said operating member in position, collapsible wheels located at either side of said frame, and collapsible bars adapted to hold said wheels in extended positions, the said bars being adapted to be collapsed by said operating member, substantially as described.

2. In a folding perambulator, the combination of a running gear frame, a folding handle pivoted to the rear of said frame, a seat on said frame, a foldable back for said seat, folding connections between said back and said handle, side levers pivoted at either side of said frame and extending above and below said frame, link connections between the upper portions of said levers and said handle, a rearwardly extending U-shaped operating member having its limbs pivoted to the lower portions of said side levers and having notches in the lower sides of its limbs near their ends; a bar suspended from the frame and adapted to engage said notches to lock said operating member in position, a pair of connected wheels foldably connected with said frame at either side, and collapsible bars adapted to hold said pairs of wheels in expanded position, the said bars being located immediately above said operating member, substantially as described.

3. In a folding perambulator, the combination of a running-gear frame having a seat and a foot rest supported thereon, a folding back, a folding handle disposed rearwardly of and connected with said back, pivoted bars forwardly extending from said handle, depending bars pivotally mounted upon said running-gear frame having their upper extremities pivotally connected to said first named bars, rods disposed substantially parallel to said running-gear frame having their forward extremities pivoted to the lower extremities of said depending bars, means for locking said rods to support said handle in operative position, wheel forks swingingly mounted upon the longitudinal bars of said running-gear frame, a rigid connection between forks mounted upon the same frame bar, collapsible means positioned in close proximity to said before named rods adapted normally to interlock to maintain opposing forks in parallelism, said means upon collapsion being adapted to cause the inward folding of said forks, said rods being adapted upon upward rearward movement thereof to cause the collapsion of said collapsible means, and the folding of said back and said handle, substantially as described.

960,338. COLLAPSIBLE HOOD OR CANOPY FOR VEHICLES. JOHN C. KEIL and WALKER B. ALLEN, St. Louis, Mo. Filed Sept. 18, 1909. Serial No. 518,372.



1. A detachable hood or canopy for vehicles provided with a frame which consists of a plurality of top members arranged parallel to each other, collapsible braces arranged transversely between adjacent top members, pivotally mounted devices on said top members to which said braces are connected, and side members which fold inwardly upon said top members.

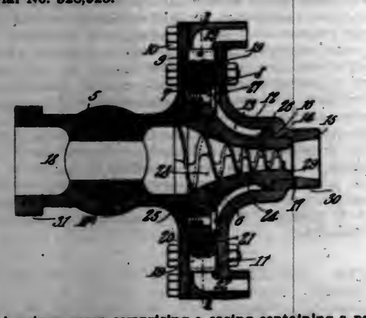
2. A detachable hood or canopy for vehicles having a frame which consists of a plurality of top members arranged parallel to each other, pivotally mounted devices on said members which can be folded over same, jointed braces arranged between said top members and pivotally connected to said devices, side standards pivotally connected to said top members in such a manner that they can be folded parallel to same, an outer covering consisting of a piece of flexible material connected to said top members, and flexible side pieces detachably connected to said standards.

3. A detachable hood or canopy for vehicles having a frame comprising top members that extend parallel to each other, devices arranged adjacent to the ends of said top members and connected thereto by rule-joints, pairs of links arranged between said top members and pivotally connected to said devices in such a manner that they can be folded inwardly upon said top members, and side standards connected to said top members by means of rule-joints.

4. A detachable hood or canopy that is adapted to be used on the driver's seat of a coupé or closed carriage, said canopy having a frame which consists of a plurality of top members arranged parallel to each other, pairs of jointed braces arranged between adjacent top members, pivotally mounted devices on the ends of said top mem-

bers to which said braces are pivotally connected, side standards pivotally connected to said top members by rule-joints which permit said standards to be folded longitudinally of said top members, and means carried by said side standards for detachably connecting same to the dash and to the seat frame of the vehicle so as to retain the canopy in position.

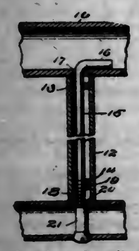
960,339. ROTARY PUMP. GEORGE W. KELLER and EDWARD C. GOETZ, Portsmouth, Ohio. Filed Nov. 19, 1909. Serial No. 528,923.



1. A rotary pump comprising a casing containing a passage one end of which is the pump inlet, and the other end the outlet, and said casing having a chamber intersecting the passage intermediate its ends, with fluid-pressure inlets and outlets to said chamber, a hub mounted in the passage, and having a spiral opening in line therewith, a rotor carried by the hub, and working in the aforesaid chamber, and sliding wings carried by the rotor in constant contact with the wall of said chamber.

2. A rotary pump comprising a casing containing a passage, one end of which is the pump inlet, and the other end the outlet, and said casing having a chamber intersecting the passage intermediate its ends, with fluid-pressure inlets and outlets to said chamber, a hub rotatably mounted in the aforesaid passage, and having a spiral opening in line therewith, said opening being tapered in the direction of the outlet end of the passage, a rotor carried by the hub, and working in the aforesaid chamber, and sliding wings carried by the rotor in constant contact with the wall of the chamber.

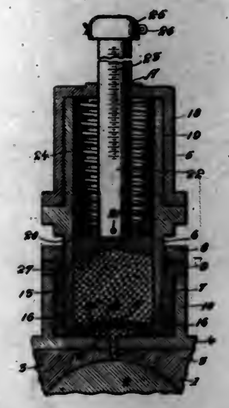
960,340. JOINT-FASTENER. CHARLES H. KIMBALL, Chicago, Ill. Filed Nov. 29, 1909. Serial No. 530,460.



1. In a device of the class described, spaced tubes provided with alined openings, a cross tube extending between the spaced tubes and registering with the openings, collars rigidly secured adjacent the opposite ends of the cross tube, a rod inserted through the cross tube and positioned by the collars and having a hook at one end adapted to engage one of the spaced tubes, a lock nut engaging the rod and bearing against one of the collars, and a screw engaging the extremity of the rod and exerting tension against the other spaced tube.

2. In a device of the class described, a spindle, spaced tubes abutting the opposite ends of the spindle, a rod extending longitudinally through the spindle, a knee joint formed at the end of the rod and hooked into one of the spaced tubes, and means inserted through the other spaced tube adapted to exert tension upon the rod to clamp the spaced tubes rigidly against the ends of the spindles.

960,341. LUBRICATING DEVICE. THOMAS G. KINCAID, Connellsville, Pa. Filed June 30, 1909. Serial No. 505,233.



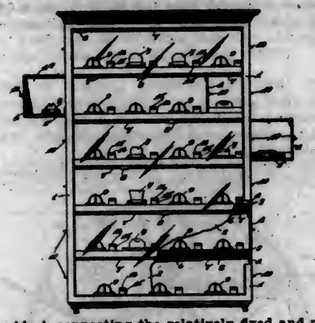
1. A lubricating device, comprising a cylindrical cup having a conical bottom dividing said cup into an upper grease reservoir and lower auxiliary grease chamber, said conical bottom being provided with channels communicating with the upper reservoir through openings in the outer edge of the conical bottom and discharging through an outlet at the apex of the conical bottom into the lower auxiliary chamber, a cap for said cup, and means for automatically discharging grease from the cup, substantially as described.

2. A lubricating device, comprising a cylindrical cup having a conical bottom dividing the cup into an upper grease reservoir and lower auxiliary grease chamber, said conical bottom being provided with channels communicating with the upper reservoir through openings at the outer edge of the conical bottom and discharging through an outlet at the apex of the conical bottom into the lower auxiliary chamber, a cap adjustably secured upon said cup provided with a central opening in its top, a spring-pressed plunger carried in said grease reservoir adapted to bear upon and discharge the grease therefrom, and a graduated stem secured upon said plunger and projecting through the opening in said cap, adapted to indicate the quantity of grease contained in the reservoir substantially as described.

960,342. HAT DISPLAY AND STOCK CABINET. CLINTON J. KLECKNER, Minneapolis, Minn. Filed Jan. 20, 1910. Serial No. 539,011.

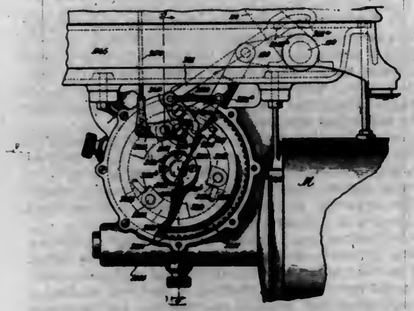
1. In a cabinet of the kind described, the combination with a casing having vertically spaced horizontal partitions, of a multiplicity of drawers slidably mounted between said partitions, guide rods rigidly connecting the end plates of said drawers, overlying guide rods secured at their ends to said horizontal partitions, and coupling blocks connecting and slidably mounted on the coöperating relatively fixed and movable guide rods, substantially as described.

2. In a cabinet of the kind described, the combination with a casing, of a drawer mounted in said casing for sliding movement, a movable guide rod secured to said drawer, a fixed guide rod secured to said casing, and a sliding



coupling block connecting the relatively fixed and movable guide rods, substantially as described.

960,343. POWER-DRIVE FOR ADDING-MACHINES. OSCAR C. KREIS, Jr., Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 6, 1906. Serial No. 329,388.



1. In a power drive of the character described, the combination of a continuously rotating driving member, a peripherally recessed driven member, a spring-pressed strut in the recess thereof having a rounded side to engage the driving member and a straight side engaging the base wall of the recess of the driven member, and means for normally restraining the strut against the spring pressure.

2. In a power drive of the character described, the combination of a continuously rotating driving member, a driven member taperingly recessed in its periphery with a curved base wall for the recess, a spring-pressed strut occupying the latter having a straight side to engage the base wall thereof and a rounded side to engage the driving member, and means for normally restraining the strut against spring pressure.

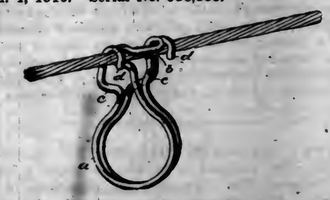
3. In a power drive of the character described, the combination of a continuously rotating driving member, a driven member taperingly recessed in its periphery with a curved base wall for the recess, and a straight end-wall at the deep part thereof, a spring-pressed strut occupying the recess having two straight sides confronting the said straight and curved walls respectively of the recess and a curved side to engage the driving member, and means for normally restraining the strut against spring pressure.

4. In a power drive of the character described, the combination of a continuously rotating driving member, a peripherally recessed driven member, a spring-pressed strut in the recess thereof having a rounded side to engage the driving member and a straight side engaging the base wall of the recess of the driven member, a rotary controlling member loosely mounted on the driven member and engaging the said strut, and a detent for normally restraining the said controlling member.

5. In a power drive of the character described, the combination of a continuously rotating driving member, a driven member taperingly recessed in its periphery with a curved base wall for the recess, a spring-pressed strut occupying the latter having a straight side to engage the base wall thereof and a rounded side to engage the driving member, a rotary controlling member loosely mounted on the driven member and engaging the said strut, and a detent for normally restraining the said controlling member.

[Claims 6 and 7 not printed in the Gazette.]

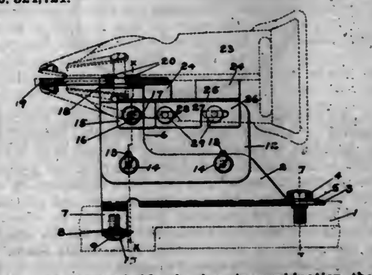
960,344. AERIAL-CABLE SUPPORT. WILLIAM K. KRIPS and GEORGE W. WRIGHT, Philadelphia, Pa. Filed Jan. 4, 1910. Serial No. 536,358.



1. An aerial cable support consisting of a cable carrying loop one element of which has a transversely-ranging hook or stirrup that engages the top, bottom, and one side of the span wire, and whereof the other element has hook-like terminals that engage both sides and the top of the span wire.

2. An aerial cable support consisting of a spring wire doubled upon itself and whereof the medial or doubled part is formed with a transversely ranging hook or gooseneck terminal that engages the span wire and whereof the single members are formed with divergent hook-like terminals that lock the gooseneck upon the span wire.

960,345. ATTACHMENT-HOLDER FOR SEWING-MACHINES. LOUIS KRUG, Nyack, N. Y., assignor to Metropolitan Sewing Machine Company, Nyack, N. Y., a Corporation of New York. Filed July 5, 1906. Serial No. 324,721.



1. An attachment-holder having, in combination therewith, a work-guiding attachment; a work-support coöperating with said attachment; means for supporting said work-support on said attachment-holder; and means whereby the said attachment may be adjusted upon the attachment-holder relative to said support, whereby the work is supported as it passes to the attachment and the line of stitching is caused to pass through two superposed parts of the work nearer to the edge of one of said parts than to the edge of the other.

2. In combination, an attachment-holder comprising a main-plate; means for pivotally securing the main-plate to

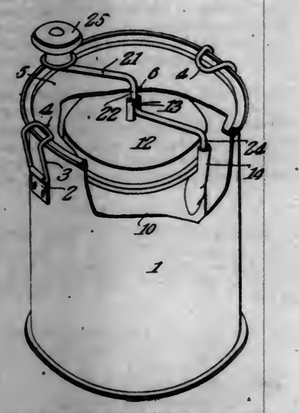
a machine in a plane parallel with the work-plate of the latter; a holding-plate; means for adjustably securing the holding-plate to the main-plate; an attachment secured to the holding-plate; means for adjusting the attachment upon the holding-plate; and an adjustable stop coöperating with the attachment, whereby to determine and maintain its position.

3. In combination, an attachment holder comprising a main-plate; a suitable attachment and means for supporting the latter horizontally on the said main-plate; a work-support and means for securing said support directly to the main-plate in front of said attachment; and means for relatively adjusting the said work-support and attachment whereby the same may be brought into proper operative relation.

4. In combination with an attachment-holding plate having a depending lip, a catch-bar having a spring-catch coöperating with said lip, and means for adjusting said catch-bar at an angle to said lip.

5. In combination with the bed-plate of a machine, an attachment-holding plate pivotally mounted thereon and having a catch-lip extending across the edge of said bed-plate, a catch-bar secured to said bed-plate and having a spring-catch for coöperation with said lip, and means for adjusting said bar on the bed-plate relatively to said lip.

960,346. ICE-CREAM FREEZER. BURCHARD KUHL, Orlando, Fla., assignor of one-half to Smith & Hemenway Company, New York, N. Y., a Corporation of West Virginia. Filed May 20, 1909. Serial No. 497,254.

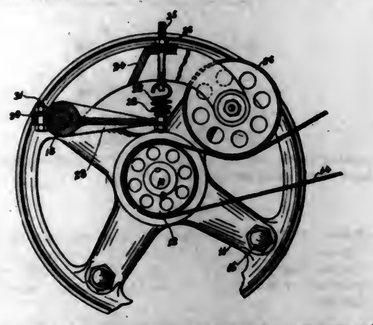


1. An ice-cream freezer including a bucket, a container mounted for rotation therein, fixed scraping means within the container, a closure removably mounted upon the container, spaced projecting devices thereon, an apertured closure upon the bucket and above the container, an operating handle within the apertured closure and detachably seated between the projecting devices upon the closure of the container, and means upon the container for engaging one end portion of the operating handle, said handle and the container being revoluble together.

2. In an ice-cream freezer, the combination of an ice receptacle, a cream can mounted for rotation therein, a cover for said cream can, a relatively fixed element centrally secured to the bottom of the ice receptacle and extending upwardly into the cream can, scraping means within said cream can engaging said element, said means constituting means for holding the cream can against removal from the ice receptacle, and a driving handle engaging said cover and said cream can for rotating the latter.

3. In an ice-cream freezer, the combination of an ice receptacle; a cream can rotatably mounted therein and having a removable closure; spaced projecting devices thereon; an operating handle detachably seated between the projecting devices upon said closure; and means carried by said cream can for engaging one end portion of the operating handle, said handle and cream can being revoluble together.

960,347. BELT-TIGHTENER. ARTHUR F. KWIS, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed June 8, 1906. Serial No. 320,737.



1. In combination, a shaft, an idler-pulley adjacent said shaft, a pivoted supporting arm for said pulley, a normally stationary abutment, a spring between the abutment and the pivoted supporting arm, and means whereby the abutment may be adjusted to any desired position about the fulcrum of the supporting arm so as to adjust the position of the supporting arm and of the idler-pulley.

2. In combination, a shaft, a belt tightener comprising a pivoted arm and an idler pulley, a spring for pressing the pulley yieldingly on the belt, a normally stationary abutment for one end of the spring, and means for adjusting the abutment to any desired angular position about the fulcrum of said pivoted arm.

3. In combination, a shaft, a support, a bolt or stud extending from said support, an arm pivoted on said bolt or stud, an idler pulley on the outer end of said arm, a normally stationary member clamped to said bolt or stud, a spring between said arm and said member, and means for clamping said member in various positions of adjustment.

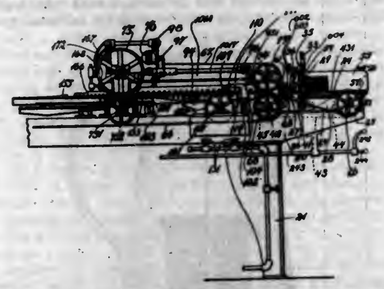
4. In combination, a motor frame, a bolt extending outwardly therefrom, and a belt tightener comprising a normally stationary abutment supported on said bolt and adjustable about the same, an idler pulley, an arm carrying said idler pulley, said arm being pivotally mounted on the bolt and being freely movable about the same relative to the abutment, and a spring between the abutment and arm.

5. In combination, an electric motor, a bolt or stud extending outwardly therefrom, and a belt tightener comprising an abutment, an arm movable with respect thereto and an idler-pulley carried by said arm, said arm and abutment being mounted directly on said bolt or stud.

[Claims 6 to 10 not printed in the Gazette.]

960,348. BOX-MAKING MACHINE. ELIE W. LABOMBARDE, Nashua, N. H. Filed Jan. 26, 1906. Serial No. 297,971.

1. In a machine of the character described, the combination with a lower carrier comprising a pair of lower belts having upper horisontal stretches to engage a blank and means for actuating said belts, of an upper carrier comprising a pair of upper pressers extending partway of the length of the horisontal stretches of the lower belts and directly above the upper stretches of the lower belts, flap-elevating inclines arranged adjacent the outside edges of said belts, folding-belts beyond the upper pressers arranged to overlap the said lower carrier to fold down the flaps of the blanks elevated by said inclines, and shoes for pressing the blanks against the lower belts, said shoes extending from the upper pressers to the folding-belts, said pressers, belts, and shoes being laterally adjustable to accommodate blanks of greatly varying widths.



2. In a machine of the character described, the combination of a lower carrier, flap folding belts, a horizontal pulley for each of said belts lying across said lower carrier, an upstanding pulley for each belt outside the said lower carrier, the belts extending around said pulleys, stud shafts for said upstanding pulleys and universally adjustable supports for said stud shafts whereby the angles of said shafts relatively to the carrier and their distances from the center thereof may be varied.

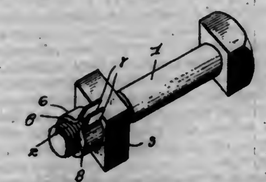
3. In a machine of the character described, the combination of a lower carrier, flap-folding means comprising two belts, a horizontal pulley for each of said belts lying across said lower carrier, an upstanding pulley for each belt outside the said lower carrier, universally adjustable stud shafts for said upstanding pulleys, and other pulleys as at 151 on said shafts bearing against the upper edges of said belts.

4. In a machine of the character described, a blank carrying mechanism comprising a lower endless belt, pulleys for supporting and actuating it, an upper endless belt, pulleys for supporting and actuating said upper belt, one of the last-mentioned pulleys being geared to one of the first-mentioned pulleys to cause said belts to move in unison, another of said pulleys for the upper belt being adjustable about an axis toward and from the lower belt, and relatively to the first-mentioned pulley for the same belt, and a pivoted hanger for said adjustable pulley.

5. In a machine of the character described, the combination with two pairs of contacting endless carriers, instrumentalities for gluing, elevating and folding the flaps of blanks carried by said carriers, of a single pair of contacting endless carriers arranged to engage the folded blanks in line with their overlapping flaps to press the same together, a single power shaft, and mechanism operated by said shaft for actuating all of said carriers.

[Claims 6 to 11 not printed in the Gazette.]

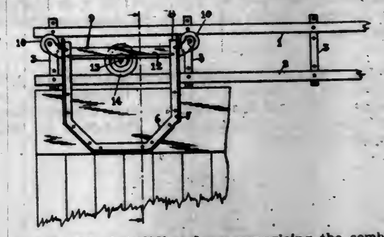
960,349. NUT-LOCK. JEAN SINIA LAFLEUR, Opelousas, La. Filed Sept. 22, 1909. Serial No. 518,894.



1. In a device of the character described, the combination with a bolt, of a nut and a releasable tubular body permanently secured to said nut, and formed with longitudinal teeth on its inner surface adapted to bite into the threads of the nut, and having a pair of laterally projecting ears parallel to and in close proximity to each other and adapted to be forced apart by a tool in order to release the tubular body from the bolt and permit the said body and nut to be removed from the bolt.

2. In a device of the character described, the combination with a bolt, of a nut having a hole extending through the nut transversely, and a releasable tubular body having a pin projecting from its inner edge and extending through said hole in the nut, and permanently secured thereto, said tubular body having longitudinal teeth on its inner surface adapted to bite the threads of the bolt and also having a pair of laterally projecting ears in close proximity to each other and adapted to be forced apart by a tool in order to release the tubular body from the bolt and permit the withdrawal of the nut.

960,350. DOOR-HANGER. CHARLES LAKOSKY, Cooks Mills, Mich. Filed July 31, 1909. Serial No. 510,655.



1. A hanger for sliding doors comprising the combination of a track rail, a guide rail above the track rail in parallel relation thereto, a U-shaped stirrup provided with inturned upper ends and adapted to be secured against the face of a door, a pair of rider bars having outturned flanges on their lower edges secured in parallel spaced relation on the under side of the inturned upper ends of the stirrup, guide wheels journaled between the outer ends of the rider bars and adapted to engage the lower margin of the guide rail, and a bearing roller resting on the track rail provided with trunnions engaging the lower flanges of the rider bars.

2. A hanger for sliding doors comprising the combination of a track rail, a guide rail above the track rail in parallel relation thereto, a U-shaped stirrup provided with inturned upper ends and adapted to be secured against the face of a door, a pair of rider bars having out-turned flanges on their lower edges secured in parallel spaced relation on the under side of the inturned upper ends of the stirrup and having upturned ends, guide wheels journaled between the outer ends of the rider bars with their axes of rotation above the plane of the underside of the inturned ends of the hanger and adapted to engage the lower margin of the guide rail, and a bearing roller resting on the track rail provided with trunnions engaging the lower flanges of the rider bars.

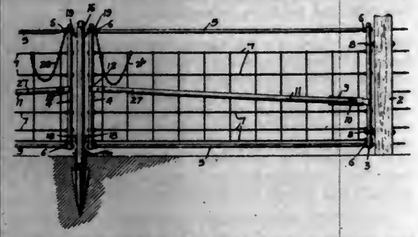
960,351. GATE. WILLIAM A. LAW, St. Paul, Minn. Filed July 12, 1909. Serial No. 507,228.

1. A gate comprising end bars, means connecting said bars with one another at intervals, the connection between said bars at the top of the gate being rigid and inflexible and having swiveled connections at its end with said bars, for the purpose specified.

2. A gate composed of end bars and means connecting them at intervals with one another, a tubular rail nonyielding lengthwise provided between the upper ends of said bars, and swivels connecting the ends of said rail with said bars.

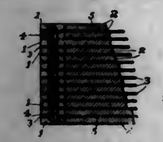
3. A gate comprising end bars, tubular rails between the top and bottom ends of said bars and having swiveled connections therewith, and wires between said bars at

intervals, and also having a swiveled connection therewith, and said tubular rails being visible at a distance and permitting the swaying or oscillation of the gate when pressure is applied to one side thereof.



4. A gate comprising end bars, means connecting said bars with one another at intervals, the connection between said bars at the top of the gate consisting of an inflexible rail having a flexible joint said rail being non-yielding lengthwise.

960,352. METHOD OF MAKING SCRAP-BOOKS AND THE LIKE. THOMAS E. LAYTON, Holyoke, Mass., assignor to National Blank Book Company, Holyoke, Mass., a Corporation of Massachusetts. Filed Mar. 16, 1910. Serial No. 549,710.



1. The method herein described of making scrap books and the like, which consists in confining successive sections of paper between successive guard strips, and then driving through said sections and strips rigid fastening devices whereby said sections and strips will be rigidly fastened together.

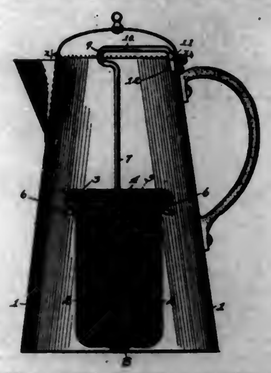
2. The method herein described of making prescription, invoice, or scrap books and the like, which consists in confining successive sections of paper between successive guard strips, nailing said strips and paper rigidly together, and smoothing the rear edges of said strips.

3. The method herein described of making prescription, invoice, or scrap books and the like, which consists in confining successive sections of paper between successive guard strips, and then nailing said strips and paper rigidly together from opposite sides.

960,353. COFFEE OR TEA POT. WILLIAM C. LEIMBACH, Jr., and FREDERICH H. GRIMBERG, Hammond, Ind. Filed Aug. 16, 1909. Serial No. 513,074.

1. In a device of the class described, the combination with a pot, of a retainer comprising a wire netting body portion having its upper edges secured to an annular wire forming an outwardly extending rim for said body portion, and the bottom of said body portion being provided with a central aperture; a cover for said body portion comprising a wire netting disk having an annular wire secured around its periphery, the said wire being bent to form inwardly and downwardly extending spring loops adapted to spring over said rim wire of said body portion and secure said cover in position, and the said disk being provided with a central aperture; a securing rod passing through said cover and bottom apertures, a threaded nut on the bottom of said rod; and means for securing said rod to said pot, substantially as described.

2. In a device of the class described, the combination with a pot, of a retainer comprising a wire netting body portion having its upper edges secured to an annular wire forming an outwardly extending rim for said body portion, and the bottom of said body portion being provided with a central aperture; a cover for said body portion comprising a wire netting disk having an annular wire secured around its periphery; the said wire being bent to form inwardly and downwardly extending spring loops adapted to spring over said rim wire of said body portion and secure said cover in position, and the said disk being



provided with a central aperture; a securing rod passing through said apertures in said cover and bottom, the said rod being provided with a handle loop at its upper end and a horizontally extending arm provided with a downwardly extending end; a threaded nut on the bottom of said rod; and a bracket on the side of said pot near the top, provided with a socket adapted to receive said downwardly extending end, substantially as described.

960,354. SELF-LUBRICATING BEARING FOR TROLLEY-WHEELS. ALBERT M. LEVERING, Philadelphia, Pa. Filed June 15, 1909. Serial No. 502,194.



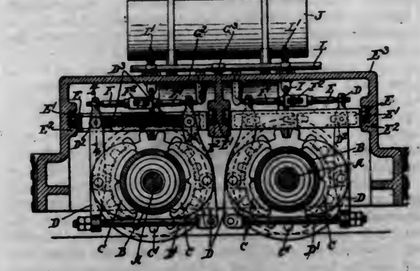
1. In a device of the character described, the combination with a trolley harp, of an oil cup having a screw threaded nipple integral therewith, and adapted to be projected through an opening in the harp, a journal having a screw threaded end screwed into said nipple, devices securing said journal in the harp and holding the cup against the harp, a trolley wheel on said journal, said journal having a spiral groove, and a lubricant feeding wick located in said groove and projecting into the oil cup, substantially as described.

2. In a device of the character described, the combination with a harp, having an opening therein, a journal pin secured in said harp, having a groove therein, a wick in said groove, and a trolley wheel on said pin, of an oil cup removably secured to one end of said journal pin, an offset or pocket on said cup positioned in the opening in the harp, and said wick projecting into said cup.

3. In a device of the character described, the combination with a trolley harp, having journal pin receiving openings therein, and other openings below the journal pin openings, a journal pin in the journal pin openings, said pin and the members of said harp having registering openings, a cotter pin in one set of registering openings, one member of said harp having a counter-bored portion adjacent one of the journal pin openings, an oil cup, an internally screw threaded nipple integral with the oil cup and positioned in the counter-bored portion of the harp, screw threads on the journal pin engaging the threads in the nipple, said pin having a spiral groove therein, and a wick in said groove projecting into the cup.

4. In a device of the character described, the combination with a trolley harp, having journal pin receiving openings therein, and other openings below the journal pin openings, a journal pin in the journal pin openings, said pin and the members of said harp having registering openings, a cotter pin in one set of registering openings, one member of said harp having a counter-bored portion adjacent one of the journal pin openings, an oil cup, an internally screw threaded nipple positioned in the counter-bored portion of the harp, screw threads on the journal pin engaging the threads in the nipple, said pin having a spiral groove therein, and a wick in said groove projecting into the cup, an offset or pocket on the inner face of said cup, projecting into one of the openings in the harp below the journal pin openings.

960,355. RACK-RAIL-BRAKING CAR. NILS DAVID LEVIN, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 17, 1906. Serial No. 348,353.



1. A braking device comprising an axle upon which the track wheels are mounted, a sprocket wheel adapted to engage a rack rail and mounted upon said axle, a detachable brake element connected directly with said sprocket wheel so as to revolve therewith, and a second braking element adapted to coöperate with said first brake element.

2. A braking device comprising a sprocket wheel adapted to engage a rack rail, a brake element connected directly with said sprocket wheel so as to revolve therewith, and a second brake element adapted to coöperate with said first brake element, said sprocket wheel and brake elements having a longitudinal movement with relation to the part upon which they are mounted.

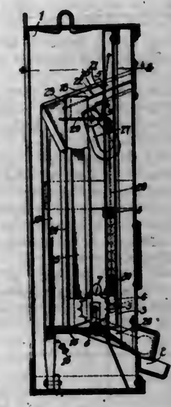
3. A braking car comprising a sprocket wheel fixed to the car axle and adapted to engage a rack rail, a brake element connected with said sprocket wheel so as to revolve therewith, a coacting brake element, a support therefor movably mounted upon the car, and means for moving the two brake elements relatively to produce the braking effect.

4. A braking car comprising an axle, a sprocket wheel mounted thereon, a brake wheel on said axle rigidly connected with said sprocket wheel, a brake shoe opposed to said brake wheel, a support for said brake shoe movably mounted upon the car, an actuating mechanism connected with said brake shoe so as to move it into contact with said brake wheel.

5. A braking device comprising a brake wheel, a brake shoe adapted to coöperate therewith, a cylinder, a piston therein, a connection between said piston and said brake shoe, a receptacle carrying cooling fluid, a pipe leading from said receptacle to the brake wheel, a controlling device in said pipe, means for conducting a power fluid to said cylinder to actuate the brakes, the controlling device for the cooling fluid arranged so that said power fluid acts upon it to permit the flow of the cooling fluid.

[Claims 6 to 9 not printed in the Gazette.]

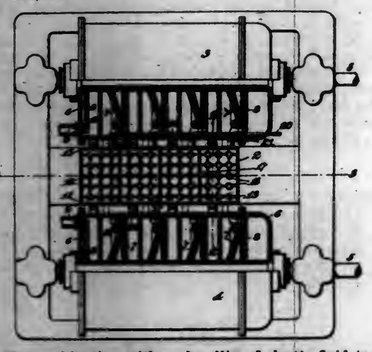
960,356. COIN-CONTROLLED DELIVERY MECHANISM FOR VENDING-MACHINES. CHARLES M. LINDE, Fullersburg, and FREDERICK C. FRANKE, Chicago, Ill., assignors to Hilo Gum Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 15, 1908. Serial No. 427,115.



1. In a vending machine, coin controlled gravity actuated package releasing means, a package chute disposed above the same, a weight traveling in the said chute and resting upon the uppermost package therein, a beveled projection on said weight, a coin chute guiding a deposited coin into actuating relation to said package releasing means, a coin return chute adjacent the same, and a coin deflecting member pivotally secured to said package chute and turning on a vertical axis and having an arm at each end, one of said arms being normally disposed in the path of said projection on said weight, the latter forcing said arm out of its path as the last package is delivered, whereby said other arm of said member is thrown into the path of the coin to deflect the latter into said return chute.

2. In a vending machine, coin controlled gravity actuated package releasing means, a package chute disposed above the same, a weight traveling in the said chute and resting upon the uppermost package therein, a beveled projection on said weight, a coin chute guiding a deposited coin into actuating relation to said package releasing means, a coin return chute adjacent the same, and a coin deflecting member pivotally secured to said package chute and turning on a vertical axis and having an arm at each end, and a spring engaging said member and normally maintaining one of said arms thereof in the path of said projection on said weight, the latter forcing said arm out of its path as the last package is delivered, whereby said other arm of said member is thrown into the path of the coin to deflect the latter into the said return chute.

960,357. ELASTIC-FLUID TURBINE. LOUIS C. LOEWENSTEIN, Lynn, Mass., and LEONARD H. DYER, Greenwich, Conn., assignors to General Electric Company, a Corporation of New York. Filed Sept. 28, 1909. Serial No. 520,003.



1. The combination with a plurality of elastic fluid turbines, on separate shafts, of a reheater arranged between the turbines.

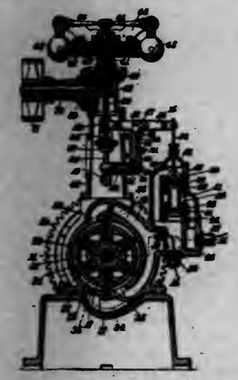
2. The combination with a main fluid generator and a plurality of elastic fluid turbines, on separate shafts, of a reheater between the turbines and having a furnace independent of the main generator.

3. The combination with a plurality of elastic fluid motors, arranged in stages of different pressures, of a common reheater, divided into sections, and connected to corresponding stages, and a means for independent firing.

4. The combination with a plurality of stages of equal pressures in separate motors, of a common reheater section, and a means for independent firing.

5. The combination with a plurality of elastic fluid motors, of a common reheater, fuel controlling means for the reheater, and automatic means for controlling admission of fuel corresponding with temperature of the steam.

960,358. GOVERNOR. NATHANIEL LOMBARD, Winthrop, Mass. Filed Oct. 14, 1909. Serial No. 522,649.



1. In a governor, the combination with a revoluble actuating shaft; of a fluid cylinder provided with an abutment; a member secured to said shaft and provided with a peripheral projection on each side of said abutment; a passage to said cylinder on each side of said abutment; a valve for controlling the admission of fluid to either of said passages; and a valved by-pass between said passages.

2. In a governor, the combination with a revoluble actuating shaft; of a valve for controlling the revolution of said shaft; a pivoted lever; a connector between said valve and one end of said lever; centrifugal mechanism; a connector between the other end of said lever and said centrifugal mechanism; and means actuated by said shaft for raising and lowering said pivot.

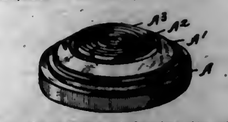
3. In a governor, the combination with a revoluble actuating shaft; of a valve for controlling the revolution of said shaft; a pivoted lever; a connector between said valve and one end of said lever; centrifugal mechanism; a connector between the other end of said lever and said centrifugal mechanism; means including a rocker lever actuated by said shaft for raising and lowering said pivot; and a revoluble threaded member connected to said rocker lever for returning said pivot to its normal position.

4. In a governor, the combination with a revoluble actuating shaft; of a valve for controlling the revolution of said shaft; a pivoted lever; a connector between one end thereof and said valve; centrifugal mechanism adapted to move said lever about its pivot and operate said valve; mechanism actuated by said shaft for causing a less movement in the same direction of the lever pivot; and means included in said mechanism for returning said lever to its normal position.

5. In a governor, the combination with a revoluble actuating shaft; of a valve for controlling the revolution of said shaft; a pivoted lever; a connector between one end thereof and said valve; centrifugal mechanism adapted to move said lever about its pivot and operate said valve; a rocking device for raising and lowering the lever pivot; a revoluble threaded member connected thereto; a slide provided with a nut for said threaded member; means actuated by said shaft for reciprocating said slide to rock said rocking device; and means for revolving said threaded member.

[Claims 6 to 35 not printed in the Gazette.]

960,359. TARGET. HUGH C. LORD, Erie, Pa., assignor to The Tribune Trap & Target Company, Erie, Pa., a Corporation of Pennsylvania. Filed May 18, 1906. Serial No. 317,435.



1. A saucer shaped target having its sides arched or dome shaped and the top part adjacent to the center substantially flat in general contour and provided with the annularly arranged corrugations or ribs said ribs extending above the point of juncture with the sides of the target and the bottom surface of the top being substantially parallel with the general contour of the upper surface of the top.

2. A saucer shaped target having its sides arched or dome shaped and the top part adjacent to the center substantially flat in general contour, and provided with the annularly arranged ribs with the contracted connection a between said top and the sides of the target.

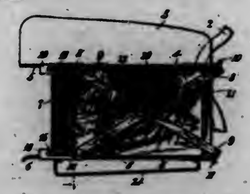
3. A saucer shaped target having its sides arched or dome shaped and the top part adjacent to the center substantially flat in general contour and provided with the annularly arranged ribs with the contracted connection a between said top and sides of the target, said ribs extending above the point of juncture with the sides of the target, and the bottom surface of the top being approximately parallel to the general contour of the top.

4. A saucer shaped target having its sides arched or dome shaped and the top part adjacent to the center substantially flat in general contour and provided with the annularly arranged corrugations or ribs, said top being raised above the point of juncture with the sides of the target.

5. A saucer shaped target having its sides arched or dome shaped and the top part adjacent to the center provided with annularly arranged corrugations or ribs, said corrugations or ribs being of less radial thickness than the space between them, said ribs extending above the arched sides.

[Claim 6 not printed in the Gazette.]

960,360. COLLAPSIBLE RECEPTACLE. GERTRUDE F. LYNCH, New York, N. Y. Filed Oct. 10, 1908. Serial No. 457,066.



1. The combination with a seat, of a collapsible receptacle mounted upon the under side thereof and provided with an opening in one side through which the articles are introduced into and removed from the receptacle, a pair of vertically arranged levers upon each of two opposite sides of said receptacle and each pair having its two levers pivoted together intermediate their respective ends and the ends thereof pivoted to the top and bottom of said receptacle, respectively, with a sliding connection between one end of one lever and said top and one end of the other lever and said bottom, each pair of said levers being provided with a spring acting to snap the levers into open or closed position after the initial movement has been given the same to open or close them.

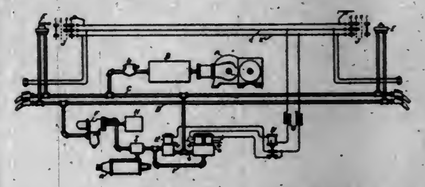
2. The combination with a seat, a collapsible receptacle provided with an opening in one side through which the articles are introduced into and removed from the receptacle, a pair of levers upon each of two opposite sides of said receptacle and each pair having the two levers pivoted to each other and having their ends pivoted to the top and bottom of said receptacle, respectively, the corresponding levers upon the said opposite sides being secured at their rear ends to rigid members hinged, respectively, to said top and bottom of said receptacle, and a spring acting to snap said pivoted levers into open and closed positions, respectively, after the initial movement is given such levers in the operation of opening and closing said receptacle.

3. The combination with a seat, a collapsible receptacle provided with an opening in one side through which the articles are introduced into and removed from the receptacle, spring-actuated mechanism operatively connected between two opposite sides of the receptacle and comprising a set of U-shaped members pivoted by their central parts to said opposite sides of the receptacle, respectively, and having their side parts crossed upon each other and pivoted together at the crossing points, and a spring acting upon said crossed members to snap the same into open and also into closed position.

960,361. ELECTROPNEUMATIC AIR-BRAKE SYSTEM. GEORGE MACLOSKIE, Schenectady, N. Y., assignor to General Electric Company, New York, N. Y. Filed Feb. 1, 1910. Serial No. 541,363.

1. In an air brake system, in combination with the brake cylinder and source of pressure therefor, two independent valves for admitting air from said source to said cylinder, two independent electro-magnets for operating said valves respectively, and means for energizing one only of said magnets for service applications and both of said magnets for emergency applications.

2. In an air brake system, in combination with the brake cylinder and source of pressure therefor, three independent valves, one for releasing air from the brake cylinder and the other two for independently admitting air from said source to the brake cylinder, three independent electro-magnets for operating said valves respectively, and means for energizing one only of the magnets operating the admission valves for service application and both of said magnets for emergency application.



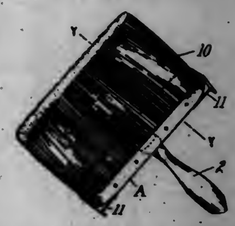
3. In an air brake system, in combination with the brake cylinder and source of pressure therefor, a pair of control wires, electro-magnetically operated valve mechanism for admitting air to, and releasing air from, the brake cylinder when current is supplied to said wires alternately, and means independent of said valve mechanism, operative when current is supplied to both wires simultaneously, for admitting air to the brake cylinder for emergency applications.

4. In an air brake system, in combination with the brake cylinder and source of pressure therefor, a pair of control wires, electro-magnetically operated valve mechanism for admitting air to, and releasing air from, the brake cylinder when current is supplied to said wires alternately, a valve independent of said valve mechanism for admitting air to brake cylinder for emergency applications, a normally deënergized electro-magnet for operating said valve, and means for energizing said magnet when current is supplied to both of said wires simultaneously.

5. In an air brake system, in combination with the brake cylinder and source of pressure therefor, a pair of control wires, electro-magnetically operated valve mechanism for admitting air to, and releasing air from, the brake cylinder when current is supplied to said wires alternately, a valve independent of said valve mechanism for admitting air to brake cylinder for emergency application, a normally deënergized electro-magnet for operating said valve, and a relay for connecting said magnet to one of said control wires when current is supplied to both wires simultaneously.

[Claims 6 and 7 not printed in the Gazette.]

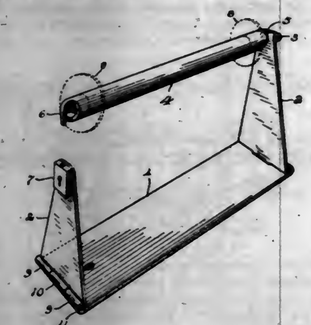
960,362. BRUSH. PETER MAENDLER, St. Paul, Minn. Filed Aug. 5, 1908. Serial No. 447,171.



1. A brush of the class described comprising a series of strips having inwardly inclined outer sides, a backing therefor, bristles held between said strips, a row of bristles surrounding said strips, a binder therefor and a handle.

2. In a brush of the class described comprising a backing, a plurality of rows of bristles supported by said backing, means for holding said rows of bristles with their outer ends pointing inwardly toward each other, a row of surrounding bristles, and means for holding said row of bristles with its outer ends pointing inwardly toward the outer ends of the inner rows of bristles.

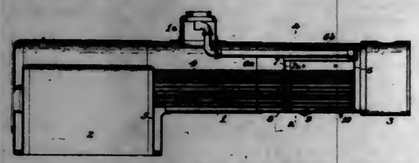
960,363. PAPER-HOLDER. CHARLES P. MARSHALL, Centralia, Ill. Filed Oct. 27, 1909. Serial No. 524,978.



1. A paper holder comprising a substantially rectangular base, a pair of bracket arms each hinged to the ends of the base to fold flat therewith and to extend forward at right angles thereto, a roll arm consisting of a sheet metal strip folded to form a cylinder and provided at one end with an ear forming a hinge member pivoted to mating hinge members on the extremity of one of the arms and provided at the other end with an inturned arm adapted to interlock with the outer extremity of the opposite bracket arm.

2. A paper holder consisting of a base plate having end lugs inrolled as hinge members, a pair of oppositely disposed bracket arms each provided at its inner end with an inrolled lug forming a mating hinge member to the inrolled base lug, a spring lock on the extremity of one arm, a pair of inrolled lugs forming hinge members on the outer extremity of the other arm, and a roll arm consisting of a sheet metal strip bent between its margins into a cylinder and provided at one end with a longitudinally inrolled ear forming a hinge member mating with the bracket arms hinge members and at the other with an inturned arm adapted to engage the spring lock.

960,364. FEED-WATER-HEATING APPLIANCE. CARL J. MELLIN, Schenectady, N. Y., assignor to American Locomotive Company, New York, N. Y., a Corporation of New York. Filed Dec. 3, 1909. Serial No. 531,152.



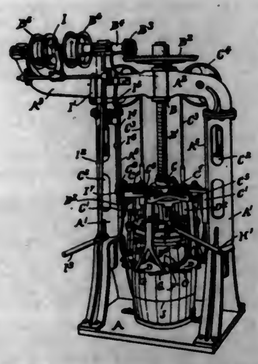
1. The combination, with a tubular steam boiler, of a transverse water retarding partition or diaphragm secured to the inside of the boiler shell and interposed between a feed water heating space adjoining the discharge ends of the tubes and a steam generating space in rear thereof, a plurality of fire tubes passing through perforations of slightly larger diameter in the partition the spaces intervening between the tubes and said perforations being restricted so as to permit only a retarded traverse of water in thin films, and a feed water supply connection opening into the feed water heating space.

2. The combination, with a tubular steam boiler, of a transverse water retarding partition or diaphragm secured to the inside of the boiler shell and interposed between a feed water heating space adjoining the discharge ends of the tubes and a steam generating space in rear thereof, a plurality of fire tubes passing through perforations of slightly larger diameter in the partition, the spaces intervening between the tubes and said perforations being restricted so as to permit only a retarded traverse of water in thin films, heated water supply perforations formed in the partition above the top row of fire tubes, and a feed water supply connection opening into the feed water heating space.

3. The combination, with a tubular steam boiler, of a transverse water retarding partition or diaphragm secured to the inside of the boiler shell and interposed between a feed water heating space adjoining the discharge ends of the tubes and a steam generating space in rear thereof, a plurality of fire tubes passing through perforations of slightly larger diameter in the partition, the spaces intervening between the tubes and said perforations being restricted so as to permit only a retarded traverse of water in thin films, a steam supply pipe passing through the feed water heating water space, a protecting casing inclosing said pipe within said space, and a feed water supply connection opening into the feed water heating space.

4. The combination, with a tubular steam boiler, of a transverse water retarding partition or diaphragm secured to the inside of the boiler shell and interposed between a feed water heating space adjoining the discharge ends of the tubes and a steam generating space in rear thereof, a plurality of fire tubes passing through perforations of slightly larger diameter in the partition, the spaces intervening between the tubes and said perforations being restricted so as to permit only a retarded traverse of water in thin films, short tubes or ferrules fitted in said perforations and supporting said fire tubes, and a feed water supply connection opening into the feed water heating space.

960,365. HOOP-SETTING MACHINE. GROVE R. MERRIMAN and WILLIAM C. STEVENS, Akron, Ohio, assignors to Pittsburgh Spiral Wire Hoop Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Dec. 5, 1907. Serial No. 405,142.



1. In a hoop setting machine, a circularly extending set of driving shoes, a driving head, connections between each shoe and the driving head, said connections being arranged to permit the shoes to adjust themselves to the diameter, and to inequalities in the surface, of the barrel worked upon, and resilient means acting between and tending to draw together each adjacent pair of driving shoes.

2. In a hoop setting machine, a circularly extending set of driving shoes, a driving head, connections between each shoe and the driving head, said connections being arranged to permit the shoes to be adjusted to the diameter, and to inequalities in the surface, of the barrel worked upon, and leaf springs, one for each shoe, each spring having one end secured to the driving head and the other end bearing against the corresponding shoe, and urging it radially inward and at the same time tending to hold the shoe against movement about an axis parallel to the axis of the barrel worked upon.

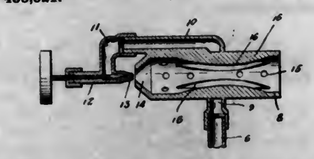
3. In a hoop setting machine, a circularly extending set of driving shoes, a driving head and connections between the driving shoes and the driving head, the connection between each shoe and the driving head including a hinged joint arranged to permit movement of the shoe toward and away from the axis of the barrel worked upon, and a pivotal connection arranged to permit the shoe to adjust itself about an axis substantially parallel to the axis of the barrel, and resilient means tending to move the shoes radially inward and to restrict angular adjustment of the shoes about axes parallel to the barrel axis.

4. In a hoop setting machine, a circularly extending set of driving shoes, a driving head and connections between the driving shoes and the driving head, the connection between each shoe and the driving head including a hinged joint arranged to permit movement of the shoe toward and away from the axis of the barrel worked upon, and a pivotal connection arranged to permit the shoe to adjust itself about an axis substantially parallel to the axis of the barrel, resilient means tending to move the shoes radially inward and to restrict angular adjustment of the shoes about axes parallel to the barrel axis, and a pair of spaced apart and radially adjustable hoop engaging tools carried by each driving shoe.

5. In a hoop setting machine, a driving head C, a circularly arranged set of hinge members D^4 adjustably secured to the driving head, a set of members D^1, one hinge connected to each hinge member D^4, a set of driving shoes D, one journaled on each member D^1, and a set of helical springs F, one connecting each adjacent pair of driving shoes D.

[Claims 6 to 11 not printed in the Gazette.]

960,366. HYDROCARBON-GAS BURNER. LEO F. MILLARD, Whitewater, Wis. Filed May 18, 1908. Serial No. 433,521.

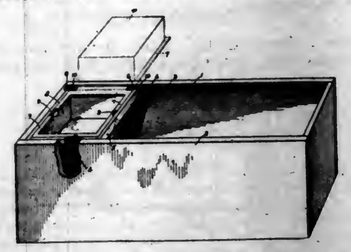


A one-piece hydro-carbon burner comprising a perforated tubular combustion chamber open at both ends, the opening of the rear end being contracted, a plurality of laterally spaced longitudinally extending solid ribs, on the inner face of said combustion chamber and tapering from their centers toward their opposite ends to form a maximum heating surface, said ribs terminating nearer the front than the rear end of said chamber, a retort arranged on the exterior of said chamber around its thickened portion and having means at one side for connection with the source of fuel supply, and a generator tube at its other side, said tube extending longitudinally of the combustion chamber and provided with means at its free end for connection with an injector.

960,367. FEED-TROUGH. BENJAMIN F. MILLER, Dixon, Ill. Filed May 24, 1909. Serial No. 497,940.

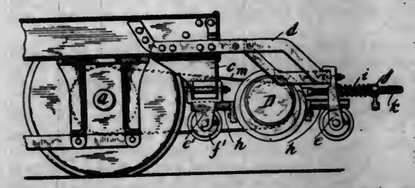
1. The combination, with a manger having permanent sides, of supporting cleats arranged in one end thereof, a frame detachably mounted upon said cleats, a trough mounted in said frame having a peripheral flange engaging the upper surface thereof, and a detachable swinging connection between said frame and said trough, substantially as described.

2. The combination, with a manger having permanent sides, of supporting cleats arranged in one end thereof, a frame having its extremities resting upon said cleats, a trough mounted in said frame having a peripheral flange engaging the upper surface thereof, keepers provided upon the upper surface of said frame, and studs laterally projecting from the upper edge of said trough engaging said keepers whereby a detachable swinging connection between said trough and said frame is effected.



3. The combination, with a manger having permanent sides, of cleats provided upon the inner surface of the front and rear walls of said manger adjacent the upper edges thereof, a rectangular frame having its extremities loosely supported upon said cleats, a rectangular trough arranged in said frame having a peripheral flange at its upper edge engaging the upper surface of said frame, said frame being seated to receive said flange, studs laterally projecting from the rearward extremity of the upper edge of said trough, and forwardly projecting hooked projections provided upon said frame engaging said studs whereby a detachable swinging connection between said trough and said frame is effected, substantially as described.

960,368. SUSPENSION FOR TRAIN-LIGHTING DYNAMOS. JOSEPH A. MISLAND, Bayonne, N. J. Filed Sept. 29, 1909. Serial No. 520,154.



1. A car truck having a bracket device extending outside of the beams thereof, in combination with depending rail-supporting guides supported by the truck and bracket, and a dynamo having carrying-rails extending laterally from its casing slidably supported on the guides; substantially as described.

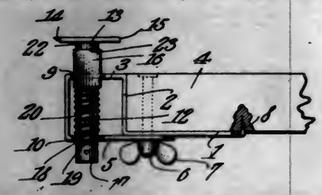
2. A car truck having a bracket device extending outside of the beams thereof, in combination with depending rail-supporting guides supported by the truck and bracket, a dynamo having carrying-rails extending laterally from its casing and slidably supported on the guides, a pulley on the shaft of the dynamo, a driving pulley on the axle of the truck, a driving belt extending between said pulleys, and a belt tightening spring connected to the dynamo to slide it away from the driving axle; substantially as described.

3. A car truck having a bracket device extending outside of the beams thereof, in combination with depending suspension yokes supported from the truck and bracket, rail-supporting guide sheaves journaled in said yokes, and a dynamo having carrying-rails extending laterally from its casing and slidably supported on the guide sheaves; substantially as described.

4. A car truck having a bracket device extending outside of the beams thereof, in combination with depending suspension yokes supported from the truck and bracket, rail-supporting guide sheaves journaled in said yokes, a dynamo having carrying-rails extending laterally from its casing and slidably supported on the guide sheaves, a pulley on the shaft of the dynamo, a driving pulley on the

axle of the truck, a driving belt extending between said pulleys, and a belt-tightening spring connected to the dynamo to slide it away from the driving axle; substantially as described.

960,369. BENCH-HOOK. HARRY B. MITCHELL, North Yakima, Wash. Filed Oct. 9, 1909. Serial No. 521,793.



1. In a bench hook, a bracket formed from a single strap of metal looped upon itself to form a rectangular socket at one end, a yielding dog adjustably mounted in said socket and having an annular bearing formed at one end adapted to rotate in the top plate of said socket, and having an angular neck adjacent said bearing to engage the bottom face of said top plate when said bearing is partially rotated whereby to lock the dog in its lowest limit of movement.

2. In a bench hook, a bracket formed from a single strap of metal looped upon itself to form a rectangular socket at one end, a yielding dog vertically mounted in said socket and having a series of annular openings formed at one end, a pin insertible into said openings and adapted to bear against the bottom face of said socket whereby to adjust the dog longitudinally of the said socket, said dog having an annular neck disposed remote from said openings adapted to be engaged through the top plate of said socket whereby to prevent the rotation of said dog in said socket.

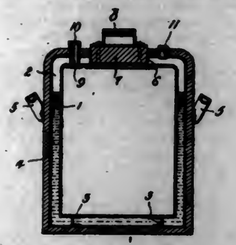
3. In a bench hook, a bracket formed from a single strap of metal looped upon itself to form a longitudinal socket at one end, said socket having a squared opening in its top plate and an annular opening in its bottom plate, a dog having at one end a squared neck adapted to conform to the contour and slidingly fit said squared opening, and at the other end a cylindrical stem adapted to slidingly fit said annular opening, a spring seated on said longitudinal stem below said squared neck to force the dog upward, but yield to a downward pressure upon the same, and means for limiting the upward movement of said dog.

4. In a bench hook, a bracket formed from a single strap of metal looped upon itself to form a rectangular socket at one end, said socket having a pair of alined openings formed in its top and bottom plate, a spring actuated dog slidingly fitted in said alined openings having a squared neck adapted to conform to the contour of the opening in said top plate and having a cylindrical stem remote from said neck adapted to be engaged through the opening in said bottom plate, said stem being provided with a series of transverse openings, a pin insertible into said openings and adapted to bear against said bottom plate whereby to adjust the dog longitudinally in said socket.

5. In a bench hook, a bracket formed from a single strap of metal looped upon itself to form a longitudinal socket at one end, the top plate of said socket being provided with a squared opening and the bottom plate thereof with an annular opening in alinement with said squared opening, a dog engaged through said alined openings having an annular bearing adapted to rotate in said squared opening and a squared neck below said bearing adapted to bear against said top plate when said bearing is partially rotated therein whereby to lock the dog in its lowest limit of motion, said dog terminating in a cylindrical stem remote from said bearing adapted to slidingly fit the opening in the bottom plate, and a spring seated on said cylindrical stem to force the dog upward but yield to a downward pressure upon the same.

[Claim 6 not printed in the Gazette.]

960,370. DYNAMITE-HEATER. OSCAR MOLANDER, Gilbert, Minn. Filed June 25, 1909. Serial No. 504,296.



1. In a heater for explosives, the combination with an outer receptacle, of an outer covering for the receptacle entirely inclosing the same, an inner explosive retaining chamber spaced from said outer receptacle, said inner and outer receptacles having coinciding openings in the tops thereof, a removable closure for said openings, means whereby hot water may be inserted between said receptacles, and means whereby gaseous collections may be permitted to escape from said explosive retaining chamber.

2. In a heater of the class described, the combination with an outer receptacle, of a cork covering entirely inclosing the same for reducing shocks, an inner explosive retaining chamber spaced therefrom, said inner and outer chambers having coinciding openings in the tops thereof, tubular connections between said inner and outer receptacles flanged at their bases to prevent water from being admitted into the inner chamber, a vented closure for one of said openings and a removable closure for the other, and means whereby heated water may be placed in the space between the outer and inner chambers, as and for the purpose set forth.

960,371. MOP-WRINGER. WILLIAM MONAHAN, Duluth, Minn. Filed Feb. 17, 1909. Serial No. 478,401.

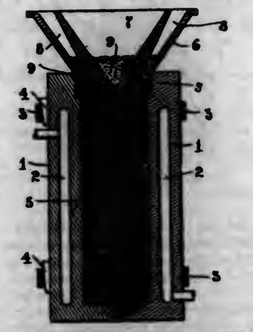


1. The combination with a holder box having a fixed side wall, and a spring-pressed opposite side wall that will yield inwardly, of a pressure plate having lateral wings and slidable with the pressure plate in the holder box, a bracket box on the pressure plate, and means engaging the bracket box, embodying a treadle lever which by depression draws the pressure plate into the holder box.

2. The combination with a holder box, and a foraminated diaphragm plate seated in the holder box and spaced from the back wall thereof, of a pressure plate having lateral wings thereon, a bracket box projected forward from the pressure plate between the wings, a cross bar secured on the wings and engaging the bracket box, a bent lever connected to an end of said cross bar, a prop leg extended from the upper portion of the holder box down to a stable foundation, a bracket arm bent between its ends that are respectively secured on the holder box and on the lower portion of the prop leg, a treadle lever pivoted by one end on the bracket arm and thence extending into slidable engagement with the prop leg, and toggle links connected with the treadle lever and one end of the bent lever.

3. A holder box comprising an open ended casing provided with means whereby it may be supported upon a pail, said holder box having one of its sides hinged and mounted to swing into the box to permit the passage of the mop, a spring normally retaining the said hinged side in normal position, the front wall of the holder being movable toward and from the back wall for the purpose specified, and means for moving the said front wall.

960,372. COMPOUND-METAL OBJECT. JOHN F. MONNOT, New York, N. Y., assignor to Duplex Metals Company, New York, N. Y., a Corporation of New York. Filed July 16, 1908. Serial No. 443,796.



1. A clad metal article comprising a non-ferrous core and an enveloping tubular ferrous metal coating weld-united to each other and in electrical union at all points of abutting surfaces.

2. A clad metal article comprising a core of cupriferous metal and an enveloping tubular coating of ferrous metal weld-united to each other and in electrical union at all points of abutting surfaces.

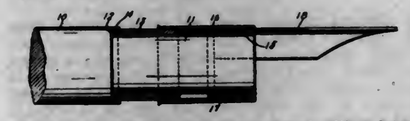
3. A clad metal article comprising a copper core and an enveloping tubular ferrous metal coating weld-united to each other and in electrical union at all points of abutting surfaces.

4. A clad metal article comprising a non-ferrous core and a ferrous metal coating weld-united to each other, and another coating of non-ferrous metal surrounding said ferrous coating.

5. A clad metal article comprising a core of cupriferous metal and a coating of ferrous metal weld-united to each other, and another coating of non-ferrous metal surrounding said ferrous coating.

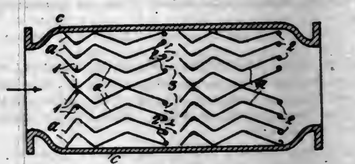
[Claims 6 to 15 not printed in the Gazette.]

960,373. PENHOLDER. OSCAR E. MOYER, Elgin, Ill. Filed Mar. 31, 1910. Serial No. 552,601.



A pen stock having a reduced terminal with a lateral shoulder at the juncture thereof with a body of the stock, an inner sleeve at the inner end of the reduced portion and having a flange at one end and secured upon said reduced portion and bearing at its flanged end against said shoulder, another sleeve secured upon the reduced stock portion at the outer end thereof and formed with a lateral flange at its inner end, and a ferrule slidable over said sleeves and the flange of the outer sleeve, the inner end of said ferrule being spaced from the flange of the inner sleeve when the outer end of the ferrule is even with the outer end of the outer sleeve, a pen point being adapted to be held between the ferrule and the outer sleeve and against the flange of the outer sleeve and releasable by moving the ferrule over the inner sleeve.

960,374. SEPARATOR. JOSEF MUCHKA, Vienna, Austria-Hungary. Filed June 23, 1909. Serial No. 503,881.



1. Apparatus for extracting oil from steam or for extracting water from gases and vapors, comprising in combination with the casing, corner plates running from the inlet end to the outlet end of said casing and having angle faces arranged at an inclination to the direction of current and said plates being arranged so that the angles which they inclose in the direction of flow continually decreases from the inlet end to the outlet end, as and for the purpose set forth.

2. Apparatus for extracting oil from steam or for extracting water from gases and vapors, comprising in combination with the casing, corner plates running from the inlet end to the outlet end of said casing and having angle faces arranged at an inclination to the direction of current and said plates being arranged so that the angles which they inclose in the direction of flow continually decreases from the inlet end to the outlet end, and curved perforated plates arranged in the sharp angles of the inlet end on said corner plates, as and for the purpose set forth.

3. Apparatus for extracting oil from steam or for extracting water from gases and vapors, comprising in combination with the casing, corner plates running from the inlet end to the outlet end of said casing and having angle faces arranged at an inclination to the direction of current and said plates being arranged so that the angles which they inclose in the direction of flow continually decreases from the inlet end to the outlet end, curved perforated plates arranged in the sharp angles of the inlet end on said corner plates and turned in portions on said plates at said outlet end whereby the separate particles may be carried by the current on the convex side of said portions into a zone unaffected by the current as and for the purpose set forth.

4. Apparatus comprising in combination with the casing, corner plates arranged in groups in said casing said groups being arranged with opposite corrugations and running in the direction of the longitudinal axis and said plates being arranged so that the angles which they inclose in the direction of flow continually decreases from the inlet end to the outlet end, as and for the purpose set forth.

5. Apparatus comprising in combination with the casing, corner plates arranged in groups in said casing, said groups being arranged with opposite corrugations and running in the direction of the longitudinal axis and having angle faces separated in the direction of flow into groups said groups being arranged in series, and separated by intermediate spaces and said plates being arranged so that the angles which they inclose in the direction of flow continually decreases from the inlet end to the outlet end, as and for the purpose set forth.

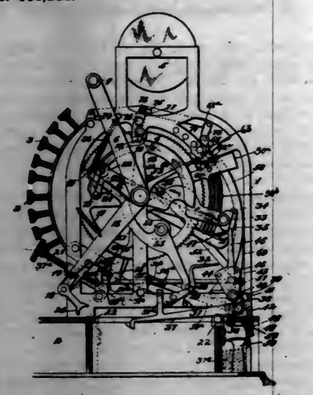
960,375. HIP-STRAP SUPPORTER. WILLIAM S. MUDD, Bloomfield, Iowa. Filed Mar. 16, 1910. Serial No. 549,610.



A hip strap supporter comprising a base portion, an integral narrower upper portion, a loop at one end for attachment of the back strap, a wider loop at the oppo-

site end for connection of the crupper straps, said supporter being provided with transverse slots or openings for the hip straps and a beveled cross bar separating said slots.

960,376. CASH-REGISTER. JOHN H. MCCORMICK, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (Incorporated in 1906.) Filed Dec. 29, 1897. Serial No. 664,284.



1. In a cash register, the combination with a counter, of a cash drawer, a pivoted hand operated member, a pivoted drawer closing lever adapted to be engaged by a projection of said member during a portion of its stroke only and counter operating devices arranged to be operated by said hand lever operated member.

2. In a cash register, the combination with a counter, of an operating mechanism, a counter operating lever and a support for the same comprising a rock shaft and a lever mounted thereon and means for tripping said shaft to allow the same to rock and withdraw the lever from supporting position.

3. In a cash register, the combination with a frame, a plurality of keys, of a register, register operating devices, a rock shaft, means for operating said shaft, a tripping plunger connected to said shaft and adapted to strike a stationary projection and a key locking mechanism adapted to be operated by the said tripping plunger.

4. In a cash register the combination with a registering mechanism, of a series of auxiliary yokes, means for limiting the movements of said yokes, a main yoke for operating the auxiliary yokes, a latch for securing the main yoke in its normal position, and a lever for returning the main yoke to its normal position after it has operated; said lever being movable independently of the main yoke.

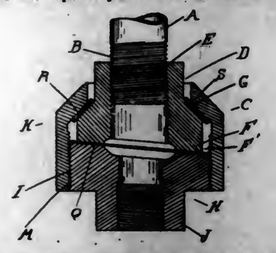
5. In a cash register, the combination with a counter, of a counter operating lever, means for supporting said lever in position, but adapted to release it at will, and a hand operating lever for resetting the counter operating lever but movable independently of the same.

[Claims 6 to 39 not printed in the Gazette.]

960,377. INSULATION-JOINT. ANDREW MCLEAN, Detroit, Mich. Filed June 11, 1909. Serial No. 501,624.

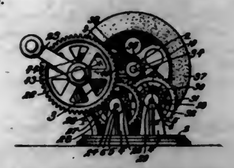
1. An insulation joint for electric fixtures, comprising a headed tubular section adapted to be screwed upon a gas pipe, a similar section in axial alinement with the first-mentioned section, the section heads adjoining and having flat meeting faces oblique to the longitudinal axis of the joint and insulated one from the other, and a coupling uniting the sections and insulated from the section connecting with the gas pipe.

2. An insulation joint or coupling, comprising complementary tubular headed members arranged in axial alinement with the heads adjoining and insulated one from the other, an elongated frusto-conical surface upon one of the members immediately adjacent to its head, a self-centering coupling sleeve having a tapered portion embracing the frusto-conical section, and an internally threaded end screwed upon the head of the adjoining section, and insulating material between the frusto-conical section and the tapered portion of the sleeve.



3. In an insulation joint or coupling for electric fixtures, the combination with a tubular member internally screw-threaded at one end to engage a gas pipe, terminating in a cylindrical head at the other, and formed intermediate its ends with an external frusto-conical section, a second tubular member adjacent to and axially alining with the first, the meeting portions or faces of the members extending in oblique angular relation to the longitudinal axis of the coupling, a flat layer of mica interposed between the meeting faces, insulating the members and sealing the gas pipe, a coupling sleeve having a screw-threaded engagement with said second member, and a tapered portion corresponding in configuration to the frusto-conical section on the first mentioned coupling member, and insulating material interposed between the tapered portion of the sleeve and the adjoining conical portion of the coupling member.

960,378. GRINDING DEVICE. ALVORD M. MCLERAN, Kansas City, Mo., assignor of one-twelfth to J. H. Hughes, Kansas City, Mo. Filed June 1, 1909. Serial No. 499,515.



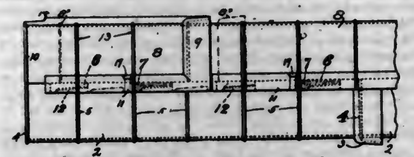
A grinding machine frame cast in one integral piece and comprising a base 2, a pair of cheeks 3, bearing stands 4 and 4' rising from the base adjacent one of the cheeks, said stands being provided with shaft bearings, said cheeks having integral outwardly-projecting lateral shelves 9, 9' and connected at one end by a shelf 18, shaft bearings 10 and 13 integral with one lateral shelf, and a shaft bearing 10' in alinement with said bearing 10 and integral with the other lateral shelf; all of said bearings being provided with set-screws for holding shafts in position.

960,379. CULVERT-PIPE. ROBERT C. MCWANE, Ridgewood, N. J. Filed Apr. 10, 1909. Serial No. 489,129.

1. A pipe-section consisting of a semi-cylinder provided with external circumferential ribs, with a bell at one end thereof, and with hanging longitudinal flanges at each longitudinal edge thereof, and locking devices on said longitudinal flanges.

2. A sectional pipe for drains and culverts consisting of a lower half-section provided with a bell at one end and

with locking-members near the longitudinal edges thereof, combined with an upper half-section provided with a bell at one end thereof and with hanging longitudinal flanges at each longitudinal edge thereof and locking-members on said longitudinal flanges adapted to be engaged with and disengageable from the first named locking-members by relative endwise motion only of said upper and lower sections.



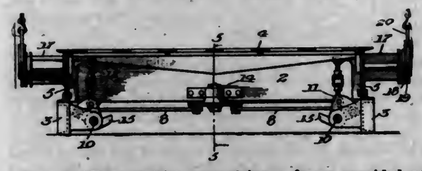
3. A pipe for drains and culverts consisting of a pipe split longitudinally into halves, interlocking devices on said halves for preventing separation thereof by transverse motion of either half, and keys for preventing relative longitudinal movement of said halves.

4. A pipe for drains and culverts consisting of a pipe split longitudinally into sections provided respectively with short external horizontal lugs and internal short horizontal lugs adapted by a relatively short endwise movement of the sections to be engaged one above another and to be disengaged therefrom by endwise movement only of the upper section.

5. A pipe for drains and culverts comprising a lower half-pipe provided near each longitudinal edge thereof with short horizontal flanges ending in vertical stops, combined with an upper half-pipe provided near each longitudinal edge with short horizontal lugs adapted to engage under said horizontal lugs and to abut against said stops thereof.

[Claims 6 to 8 not printed in the Gazette.]

960,380. MOLDING-MACHINE. KNUTE NELSON, Chicago, Ill. Filed Feb. 4, 1907. Serial No. 355,547.



1. A molding machine comprising a frame provided at its base with supporting means upon which it can stand, a table depressible relatively to said frame, means for raising and lowering said table, and means for permitting the inversion of the frame with its table.

2. A molding machine comprising a frame formed by vertically disposed side and end walls, base pieces secured to the lower edges of said walls and forming supporting means for said frame, a depressible table arranged within the walls of said frame, and adapted to be raised and lowered within the same, links 12, 12 pivotally connected with the bottom of said table, rock shafts 10, 10 mounted upon the base pieces supporting said frame, cranks 11, 11 secured to said rock shafts 10, 10 the links 12, 12 being pivotally connected with said cranks 11, 11, rods 8, 8 pivotally connected with said cranks and extended inwardly from the same toward the middle of the table, a rotary member 7 supported below the table, said rods 8, 8 being pivotally connected with said rotary member, and means for turning said rotary member to effect the raising and lowering of the depressible table.

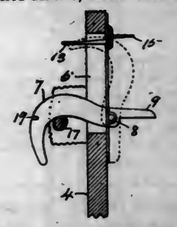
3. A molding machine comprising a frame, a table arranged to work within said frame, and means for raising and lowering said table, comprising rock shafts having concentrically connected links connected with the table, and means for rocking said rock shafts, the machine being provided with means whereby it can be bodily raised and transported, and being so constructed as to permit it to be inverted when raised.

4. A molding machine comprising a frame, a table arranged to work within said frame, and means for raising and lowering said table, comprising rock shafts having eccentrically connected links connected with the table, a rotary disk link-connected with said rock shafts, and a handle for turning said disk, the machine being provided with means whereby it can be bodily raised and transported and being so constructed that it can be inverted when raised.

5. A molding machine comprising a frame consisting of vertically disposed side and end walls, supporting members to which said frame is secured, means for raising and lowering said table comprising a rotary member arranged below the table and having bell crank connection with the same, and means for permitting the frame to be inverted, said means comprising hubs secured to the ends of said frame and hangers adapted to engage said hubs.

[Claims 6 and 7 not printed in the Gazette.]

960,381. DOOR-LATCH. ADAM NEUENSCHWANDER, Berne, Ind. Filed Mar. 6, 1909. Serial No. 481,769.



1. In a door latch a base plate having a longitudinal slot therein; a latch bar pivotally mounted in the said slot and having a curved inner end, and a pendent lower end, the latch being adapted to be temporarily secured in an upright position, and to form a holding engagement when in a horizontal position; and a horizontally arranged catch pivoted on said plate, and provided with means for limiting its vertical play, and adapted to engage the said latch when in its upright position.

2. A door latch comprising the combination of a base plate having a vertical slot therein; a gravity latch pivotally mounted in the said slot, and provided upon its outer end with means for limiting its outward movement; and a pivoted gravity catch pivoted on the base plate in transverse relation with the said slot and at or near its upper end, and adapted to engage the latch when in its elevated position in the slot.

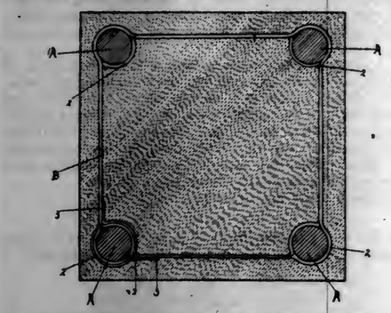
960,382. REINFORCEMENT FOR CONCRETE STRUCTURES. RALPH E. NEWTON, Milwaukee, Wis. Filed Mar. 21, 1907. Serial No. 363,725.

1. In a reinforced concrete structure, the combination with longitudinal bars of transverse spacing straps or bands connecting said bars at intervals and each bent to occupy different planes and to resist strains and stresses in different directions transversely to said bars, the straps or bands being slitted to form strands which are expanded in opposite directions to receive and embrace said bars, substantially as described.

2. In a reinforced concrete structure, the combination of main unweakened tension bars and continuous spacing and auxiliary strengthening straps connecting said bars at intervals and slitted lengthwise at intervals to form strands which are expanded in opposite directions, the strands adjacent to adjoining ends of the bands overlapping one another and the bar passing between the oppositely bent and lapping strands serving as a key to connect such ends, each strap being bent to occupy different planes and to resist strains and stresses in different directions substantially as described.

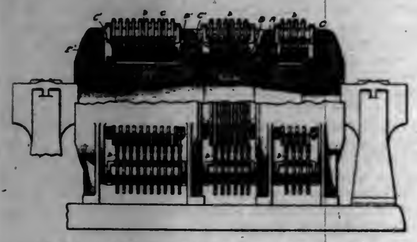
3. A concrete column comprising a plurality of spaced-apart vertical rods, a plurality of metal bands each having

a plurality of angular bends between its ends said angular bends registering with the said vertical rods and at said angular bends each band also having an integrally-formed loop,—the bands being arranged in different horizontal planes with their loops and bends in vertical alinement and the bends and loops at opposite ends of each band encircling the same rod.



4. A concrete column having a plurality of vertical rods embedded therein, flexible metal bands bent around and encircling the group of rods in different horizontal planes and each band having integrally-formed endless loops at each bend through which the vertical rods project and the two endless loops at the end bends of the same band engaging the same vertical rod.

960,383. DYNAMO-ELECTRIC MACHINE. JAKOB E. NORDGERATH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 26, 1909. Serial No. 492,170.

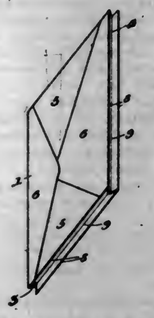


1. A dynamo-electric machine comprising an armature, a plurality of sets of armature conductors carried thereby and axially displaced from, but overlapping, each other, sets of collector rings to which the ends of said conductors are connected, brushes engaging said rings, a field magnet forming a plurality of axially displaced unipolar fields, one surrounding the armature where the sets of conductors overlap so that its flux is cut by both sets and another surrounding a portion of the armature over which only one set of conductors extends, and separate field coils for magnetizing said unipolar fields, whereby the relative induced voltages in said sets of conductors may be varied by varying the currents in said separate field coils.

2. A dynamo-electric machine comprising an armature, a plurality of sets of armature conductors carried thereby and axially displaced from, but overlapping, each other, sets of collector rings to which the ends of said conductors are connected, brushes engaging said rings, a field magnet forming a plurality of axially displaced unipolar fields, one surrounding the armature where the sets of conductors overlap so that its flux is cut by both sets and another surrounding a portion of the armature over which only one set of conductors extends, separate field coils for magnetizing said unipolar fields, whereby the relative induced voltages in said sets of conductors may be varied by varying the currents in said separate field coils, connections for supplying current to one of said sets of armature conductors, and connections for leading current from another of said sets.

3. A dynamo-electric machine comprising an armature, three axially displaced sets of collector rings carried thereby, a set of conductors extending from rings of one outside set to rings of the other outside set, a second set of conductors extending from other rings of one outside set to rings of the central set, a field magnet forming two unipolar fields surrounding the armature on opposite sides of the central set of rings, and separate field coils for magnetizing the two fields, whereby the relative voltages induced in the two sets of armature conductors may be varied by varying the currents in said separate field coils.

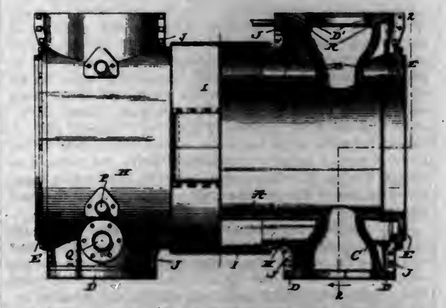
960,384. ENVELOP. FREDERICK L. NORMAN, Baltimore, Md., assignor of one-half to Herman Besimear, Baltimore, Md. Filed Feb. 4, 1910. Serial No. 542,019.



1. A bellows fold envelop having a back, four front flaps, edge portions connecting each flap to the back and creased longitudinally and corner flaps between the front flaps, the corner flaps folded diagonally and when thus folded being again creased to conform to the longitudinal creases of the edge portions.

2. An envelop having a back portion and front flap for each side of the back portion, an edge portion connecting each flap to the back, each edge portion being separated from the adjacent front flap and from the back portion by parallel creases and creased intermediately, the latter crease parallel to the other two and oppositely disposed and infolded corner flaps at the ends of the edge portions, the folds in the corner flaps being diagonal and the corner flaps as thus formed being again folded to conform to the intermediate creases.

960,385. GAS-ENGINE CYLINDER. FRED ELMER NORTON, Youngstown, Ohio. Filed Feb. 11, 1909. Serial No. 477,353.



1. In a cylinder for engines, the combination of an integral casting comprising the inlet chamber, exhaust chamber and cylinder walls; longitudinally divided and separately formed mantles surrounding the end portions of the cylinder and making fluid tight joints with the extremities of the inlet chamber, exhaust chamber and cylinder walls; and a sectional closing ring or sleeve closing the interval between and making fluid tight joints with said mantles.

2. In combination with a cylinder comprising cylinder walls, inlet and exhaust chambers; longitudinally divided and separately formed mantles surrounding the end portions of the cylinder and making fluid tight joints with the extremities of the inlet chamber, exhaust chamber and cylinder walls; bolts for said joints, said joints being arranged in planes substantially perpendicular one to another so that each joint may yield in a direction transverse to its own bolts as the bolts of another are tightened; and a sectional closing ring or sleeve closing the interval between and making fluid tight joints with said mantles.

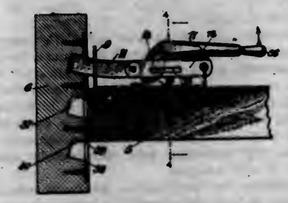
3. In combination with a cylinder comprising cylinder walls, inlet and exhaust chambers; longitudinally divided and separately formed mantles surrounding the end portions of the cylinder and making fluid tight joints with the extremities of the inlet chamber, exhaust chamber and cylinder walls; bolts for said joints, said joints being arranged in planes substantially perpendicular one to another so that each joint may yield in a direction transverse to its own bolts as the bolts of another are tightened; and a closing ring or sleeve closing the interval between and making fluid tight joints with said mantles.

4. In a cylinder for engines, the combination of an integral casting comprising the inlet chamber, exhaust chamber and cylinder walls, having non-interconnected walls and having free extremities throughout; longitudinally divided and separately formed mantles surrounding the end portions of the cylinder and making fluid tight joints with the extremities of the inlet chamber; exhaust chamber and cylinder walls; and a sectional closing ring or sleeve closing the interval between and making fluid tight joints with the said mantles.

5. In a cylinder for engines, the combination of an integral casting comprising the inlet chamber, exhaust chamber and cylinder walls, having non-interconnected walls and having free extremities throughout; longitudinally divided and separately formed mantles surrounding the end portions of the cylinder and making fluid tight joints with the extremities of the inlet chamber, exhaust chamber and cylinder walls; bolts for said joints, the said joints being arranged in planes substantially perpendicular one to another so that each joint will yield in a direction transverse to its own bolts as the bolts of another are tightened; and a sectional closing ring or sleeve closing the interval between and making fluid tight joints with the said mantles.

[Claims 6 to 15 not printed in the Gazette.]

960,386. LOCKING-BOLT. CABIN W. OBERT, New York, N. Y. Filed Jan. 27, 1909. Serial No. 474,454.



1. In a locking bolt the combination of a bolthead, a link pivotally supported and pivoted to the bolthead, and a lever co-acting with the link for moving the latter into substantial axial alinement with the bolthead and then positively holding said link in such position.

2. In a locking bolt, the combination of a bolthead, a link pivotally supported and pivoted to the bolthead, and a lever for positively holding the link against upward or downward movement when substantially in axial alinement with the bolthead.

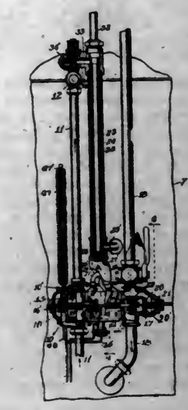
3. In a locking-bolt, the combination of a bell-crank lever, a link pivoted at one end and having a sliding cam connection with said lever, and a sliding-bolt pivoted to the link.

4. In a locking-bolt, the combination of an attaching plate having a bent-up apertured end, a bolthead guided in said end, a link pivoted to the attaching-plate and also to the bolt-head, and means for operating the link.

5. In a locking-bolt, the combination of a bell-crank lever, a link pivoted at one end, and connected with said lever, and a sliding-bolt pivoted to the link.

[Claims 6 to 12 not printed in the Gazette.]

960,387. WATER-HEATER. IRA J. O'MALLEY, Chicago, Ill. Filed Aug. 26, 1908. Serial No. 450,265.



1. In a water heater, the combination of a pilot burner, a gas supply pipe leading thereto, and positively circulating fluid pressure controlled means outside of the pilot burner for automatically shutting off the gas supply from the pilot burner when the pilot light is extinguished.

2. In a water heater, the combination of a pilot burner, a gas supply pipe leading thereto, a circulating fluid pressure controlled means heated by the pilot light for automatically shutting off the gas supply from the pilot burner when the pilot light is extinguished, and means for cooling said pressure fluid.

3. In a water heater, the combination of an intermittently and automatically operated main burner, and a relatively continuously lighted pilot burner, gas supply pipes for said burners, a positively circulating fluid system heated by the pilot light, and means operated by said system for shutting off the gas supply to the burners when the pilot light is extinguished.

4. In a water heater, the combination of an intermittently and automatically operated main burner and a relatively continuously lighted pilot burner, gas supply pipes for the burners, a positively circulating fluid system heated by the pilot light and comprising an expansion chamber, pressure means in said chamber, and means operated by said pressure means for shutting off the gas supply when the pilot light is extinguished.

5. In a water heater, the combination of a pilot burner, a gas supply pipe leading thereto, a valve in said pipe, means for holding said valve open, a positive circulating fluid system heated by the pilot light, and means operated by said system for releasing said holding means when the pilot light is extinguished to permit said valve to close and shut off the gas supply to the pilot burner.

[Claims 6 to 17 not printed in the Gazette.]

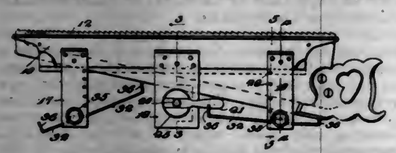
960,388. WINDOW-SCREEN. ALICE E. PADDISON, Salt Lake City, Utah. Filed Dec. 23, 1908. Serial No. 468,926.



1. A window comprising a frame having housings, one at the upper and the other at the lower end of said frame, said housings provided with lower and upper openings respectively, a plate provided with a flange and table secured to the lintel of said frame, a plate, having a flange and table secured to the sill of said frame, upper and lower sashes adapted to run up and down in said frame, a hook secured to the upper rail of the upper sash, a hook secured to the lower rail of the lower sash, roller holders secured to the ends of the said plates and running into said housings, spring actuated rollers revolubly mounted in said roller holders, flexible screens secured to said rollers, binding plates each having a flange and a hook, one secured to the lower end of the upper screen and the other to the upper end of the lower screen, said binding plates and hooks adapted to be attached to the hooks of the sash, said hooks and binding plates of said screens adapted to close the openings in said housings when detached from the hooks of said sash, substantially as shown and described.

2. A window comprising a frame and sash said frame having a housing at its lower end, said housing provided with an upper opening, a plate provided with a flange and table secured to the sill of said frame, a hook secured to the lower rail of said sash, roller holders secured to the ends of said plate and extending down into said housing, a spring actuated roller revolubly mounted in said roller holders, a flexible screen having its lower end secured to said roller, a binding plate provided with a flange and a hook, secured to the upper end of said screen, said last-named hook adapted to hook in the hook on said sash and said binding plate adapted to close the opening of said housing, when said hooks are detached.

960,389. SAW-CLAMP. BENJAMIN F. PADRICK, Portland, Oreg. Filed Apr. 9, 1909. Serial No. 488,906.



1. A clamp as specified comprising a pair of jaws, U-shaped springs disposed on said jaws at equi-distances throughout the lengths of the same, means carried by one of said jaws for securing the same upon a work-table, arms pivotally disposed in the end springs for suitably supporting a saw between said jaws, a bolt engaged through the intermediate spring, a cam carried upon the outer face of said intermediate spring about said bolt, a hand-lever mounted on said bolt and a cam carried by said hand-lever for coöperation with said cam carried by said springs for contracting said springs and clamping said jaws against a saw disposed between the same.

2. A clamp as specified comprising a pair of jaws, U-shaped springs carried by said jaws, means disposed on one of said springs for contracting said jaws, arms carried by the end springs for adjustably supporting a saw between said jaws, and a flange rearwardly extended inwardly from the inner of said jaws for engagement upon the upper face of a work-table, said flange and said inner jaw being provided with a plurality of apertures for the reception of nails therethrough to secure the same upon a work-table.

3. A clamp as specified comprising a pair of jaws, U-shaped springs positioned on said jaws at equi-distances throughout the lengths of the same to resiliently support said jaws adjacent one another, a flange rearwardly projected from the inner of said jaws for engagement upon a work-table, the outer of said jaws being provided with an inner concaved face for engagement with a saw disposed between said jaws, means carried by said springs for adjustably supporting the saw between said jaws and means carried by one of said springs for contracting said jaws and clamping the saw in position.

4. A clamp as specified comprising a pair of jaws, U-shaped springs secured at their opposite ends to said jaws to resiliently support the same in parallel, means carried by one of said jaws for supporting the same upon a work-table, the opposite of said jaws having a concaved inner face, a pair of arms located between the arms of said springs for adjustably supporting the saw between said jaws, a cam mounted upon the outer face of one of said springs, a second cam mounted against the outer face of said first cam, a bolt carried by the inner arm of said spring with said cam, said bolt extended forwardly through the outer arm of said spring and through said cam, and a hand-lever carried upon said bolt and secured to said second cam for effecting the rotation thereof to contract the arms of said springs to clamp said jaws against said saw.

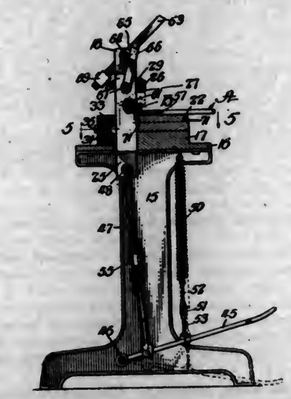
5. A clamp as specified comprising a pair of jaws, U-shaped springs depended at intermediate points from said jaws, means carried by one of said springs for contracting said jaws, spindles disposed through the lower ends of the end springs, hand-wheels mounted on the outer ends of said spindles, helical springs mounted about said spindles between said hand-wheels in the outer faces of the springs which support the same and radially extended arms positioned upon the inner ends of said spindles for engagement against the inverted upper edge of a saw positioned between said jaws, said arms adapted for adjustment by the rotation of said spindles under the friction of said helical springs.

[Claims 6 and 7 not printed in the Gazette.]

960,390. MACHINE FOR MAKING HORSESHOES. WILLIAM PEACOCK, Chicago, Ill. Filed July 6, 1908. Serial No. 442,103.

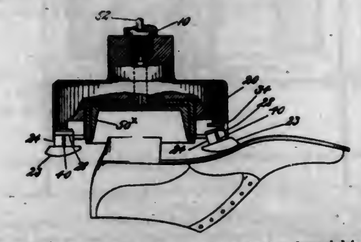
1. A machine for the purpose set forth comprising in combination, a bed plate, an anvil thereon, a reciprocating hammer over the anvil for welding a calk on a shoe supported on the upper face of said anvil, reciprocable slides movable independently of the hammer, a roller carried by said slides, for forming a toe clip on a horse shoe supported on said anvil, means for operating said hammer, and means for operating said reciprocable slides independently of said hammer.

2. A machine for the purpose set forth comprising in combination, a bed plate provided with a vertical guide opening, an anvil supported on the bed plate, slides reciprocable in said guide opening, a welding hammer carried by the upper ends of said slides and movable toward and from the anvil, slides carrying a clip forming roller and located between the welding hammer slides and having guiding engagement with said hammer slides and the bed plate, manually operable means for reciprocating said hammer slides, and manually operable means for reciprocating said clip roller slides independently of said hammer slides.



3. A machine for the purpose set forth comprising, in combination, a bed plate, an anvil removably fixed thereto and arranged to be reversed end to end, a pressure welding hammer located over and movable toward and from the front end of the anvil for welding a calk on a shoe supported on the anvil, a clip forming device located in front of the anvil and vertically movable with respect thereto and independently of the hammer, said anvil being formed on its upper face at one end to provide a protuberance to interfit and support a concave horse shoe, and at its other end with a flat upper face, and the anvil being provided on both ends with inclined clip forming face.

960,391. BOTTOM-FINISHING MACHINE. CHARLES PHASE, Salem, Mass., assignor to United-Xpedite Finishing Company, Berwick, Me., a Corporation of Maine. Filed Mar. 9, 1906. Serial No. 305,093.



1. In a machine of the class described, a burnishing tool comprising a rotary head and a plurality of relatively movable burnishing elements arranged upon the end face of the head in close proximity to form a substantially continuous annular acting face.

2. In a machine of the class described, a rotary burnishing tool comprising a plurality of burnishing elements presenting an acting face in a plane extending transversely of the axis of rotation of the tool and arranged for rocking movement.

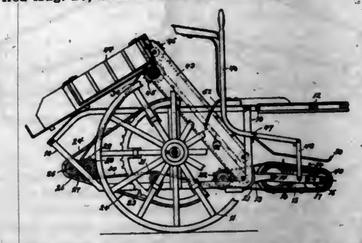
3. In a machine of the class described, a rotary burnishing tool comprising a plurality of yieldingly supported burnishing elements presenting an acting face in a plane extending transversely of the axis of rotation of the tool and arranged for independent rocking movement.

4. In a machine of the class described, a burnishing tool comprising a head and a plurality of burnishing elements mounted on the end of the head to form the acting face of the tool and movable toward and from the edge of said acting face.

5. In a burnishing tool, a head, and a plurality of burnishing elements forming the acting face of the tool and connected to the head for sliding movement toward and from the head and for rocking movement toward and from the edge of the tool.

[Claims 6 to 20 not printed in the Gazette.]

960,392. HARVESTER. ORVILLE L. PERRIGO, Oshkosh, Wis., assignor of one-half to Oshkosh Grass Matting Company, Oshkosh, Wis., a Corporation of Wisconsin. Filed Aug. 27, 1908. Serial No. 450,418.



1. A harvester, comprising a main frame, a gatherer frame pivotally mounted thereon, a conveyer on the gatherer frame, a shaft journaled in the main frame, a hand lever secured thereto, a link connecting the hand lever with the gatherer frame, arms pivotally mounted on the shaft and extending above the conveyer of the gatherer frame, a tubular sleeve fixed on the shaft having slots through which the arms extend, whereby the arms are free to swing upwardly and are limited in their downward movement to a position at a distance from the conveyer and whereby the movements of the hand lever for raising and lowering the gatherer frame serve to correspondingly raise or lower said arms.

2. A harvester, comprising a main frame mounted on wheels, driving sprockets on said wheels, driving mechanism driven from said sprockets, an inclined elevator having conveyer belts driven by the driving mechanism, a binder operated by the driving mechanism, a gatherer frame pivotally mounted on the main frame, a shaft on the gatherer frame on the pivotal axis thereof, a sprocket wheel on said shaft, a chain connecting said sprocket wheel with the said driving mechanism, a second shaft on the gatherer frame, sprocket wheels on said shafts, chains passing around said sprocket wheels, sockets carried by links of the chains, rods loosely mounted in said sockets to turn independently of the chains, guide shoes on the rods, tracks secured to the gatherer frame and extending in the path of the guide shoes by means of which the rods are caused to assume a definite position with relation to their movement during a portion of their cycle of movement, spring fingers on the rods, arms pivotally mounted on the frame and extending above the conveyer formed by the rods, and means for swinging the gatherer frame and the arms to vary their distance from the ground.

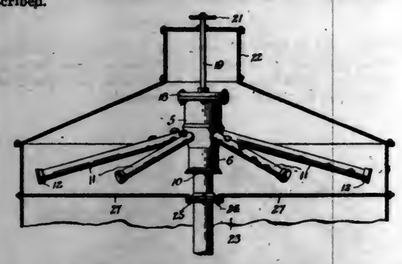
960,393. SPRINKLER. ULRICH A. PETRAS, Pittsburg, Pa. Filed Aug. 7, 1909. Serial No. 511,726.

1. A rotary sprinkler embodying a plurality of outwardly and downwardly inclined sprinkler arms, each having a plurality of discharge openings and a removable end cap upon its outer end forming a sediment pocket beyond the outermost opening.

2. In a rotary sprinkler, a sprinkler arm having a discharge opening, an apertured nipple secured within said opening, a flexible baffle plate having one edge anchored within the material of said nipple adjacent its apertures, and an adjusting screw tapped through a portion of said nipple plate to adjust the same.

3. In a device of the character described, the combination with a casing, of a nozzle pipe centered within the upper portion of said casing, a nozzle head surrounding

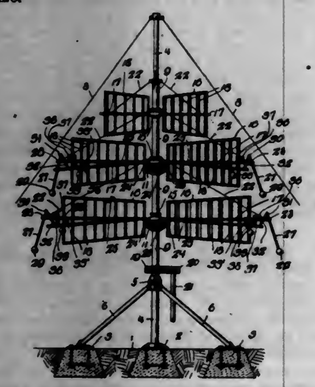
the end of said nozzle pipe, sprinkler arms extending from said head, a rod threaded through said head to rotate therewith, and bearing upon the nozzle pipe end, said rod extending upwardly through said casing, and provided with a hand wheel exteriorly thereof, substantially as described.



4. In a device of the character described, the combination with a casing of a water pipe, a nozzle pipe disposed thereon, said pipes being provided with abutting collars having registering transverse openings, a nozzle head disposed upon said nozzle pipe, sprinkler arms extending from said head, and rods extending radially from said pipe and having angular inner ends locked through the transverse openings of said collars, and having their outer ends secured to the casing, whereby to center the said pipes within the said casing, substantially as described.

5. A sprinkler of the character described, comprising a rotary nozzle head, a sprinkler arm arranged upon said nozzle head and provided with an aperture, a flexible baffle plate arranged upon said sprinkler arm adjacent said aperture whereby the water passing through said aperture may strike against said baffle plate and be sprayed, a screw arranged upon said sprinkler arm in engagement with said flexible baffle plate and adapted to angularly adjust said baffle plate, substantially as described.

960,394. WIND-MOTOR. ABEL W. PICKERING, Joplin, Mo., assignor of one-sixth to Alva A. Russell, one-sixth to Thomas A. Moon, and one-sixth to W. Roscoe Haughawout, Joplin, Mo. Filed Aug. 11, 1909. Serial No. 512,428.



1. A wind motor comprising a revolving frame, a propelling device mounted on the frame and provided with a pivoted vane, a locking device for holding the vane in open position, a brake mechanism for controlling the speed of revolution of the revolving frame, and a centrifugal governor controlling said locking device and said brake mechanism.

2. A wind motor comprising a stationary support, a revolving frame carried by said support, propelling devices mounted on the frame, pivoted vanes mounted on each propelling device, a locking device for holding each set of vanes in open position, a brake mechanism associated with each propelling device for controlling the speed of revolution of the revolving frame, and centrifugal governors carried by the vanes and controlling said locking devices and brake mechanism.

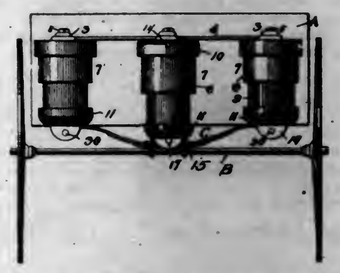
3. A wind motor comprising a stationary support, a revolving frame carried by said support, propelling devices having pivoted vanes mounted on the frame, a friction brake controlling the speed of revolution of the frame, a centrifugal governor for operating said brake, and means controlled by the governor for locking and releasing the vanes.

4. A wind motor comprising a stationary shaft, a revolving shaft turning thereon, propelling frames on the revolving shaft, each having pivoted vanes, a friction drum on the stationary shaft, a band arranged to operate on said drum, a gear for tightening and loosening the band, a rack engaging said gear, a rocking arm for operating the rack, and a centrifugal governor for operating said arm.

5. A wind motor comprising a stationary shaft, a revolving shaft, turning thereon, propelling frames on the revolving shaft, each having pivoted vanes, a friction drum on the stationary shaft, a band arranged to operate on said drum, a gear for tightening and loosening the band, a rack engaging said gear, a rocking arm for operating the rack, and a centrifugal governor for operating said arm, and vane locking and releasing means operated by the governor.

[Claim 6 not printed in the Gazette.]

960,395. VEHICLE-SPRING. ADOLPH ARNOLD POCHYLA, Bartlett, and HENRY ALLEN KING, West, Tex., assignors of one-third to J. D. Pinkard and R. F. Cates, Bartlett, Tex. Filed June 7, 1909. Serial No. 500,601.



1. In combination with a vehicle body, its axle, and a leaf spring secured thereto, brackets secured to the vehicle body, a cross bar connecting said brackets, telescoping casings secured to the leaf spring aforesaid and to the cross-bar and brackets, and coil springs mounted in the casings.

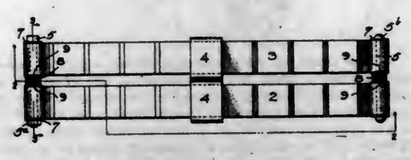
2. In combination with a vehicle body, its axle, and a leaf spring secured thereto, brackets secured to the vehicle body, a cross-bar connecting said brackets, telescoping casings, coil springs mounted in said casings, one end of the casings being secured to the cross-bars and brackets, and links connecting the other ends of the casings with the ends of the leaf spring.

3. In combination with a vehicle body, its axle, and a leaf spring secured thereto, brackets secured to the vehicle body, the ends of the spring having perforated and slotted ears thereon, telescoping casings having one of their ends secured to the brackets aforesaid, the other ends having perforated and slotted ears to inclose the ends of the leaf spring and the ears thereon, and links connecting the ears on spring with the ears on the casings.

4. In combination with a vehicle body, its axle, and a leaf spring secured thereto, brackets secured to the vehicle

body, a cross-rod secured to the brackets and having an ear in its middle, telescoping casings, coil springs mounted in said casings, one of said casings secured at one end to the ear on the rod aforesaid, a plate secured to the middle of the leaf spring and axle and having an ear thereon, the lower end of said casing being secured to the ear on said plate, other casings secured to the ends of said cross-rod, perforated and slotted ears on the ends of the leaf spring, the lower ends of the last mentioned casings provided with perforated and slotted ears to fit over the ends of the leaf spring, and links connecting the ears on the casings with the ears on the leaf spring.

960,396. SEPARATOR FOR ELLIPTIC SPRINGS. WILLIAM GUNN PRICE, New Castle, Pa. Filed June 17, 1908. Serial No. 438,994.



1. The combination of two or more elliptic springs, means for connecting the same, means for separating said springs, and means for automatically taking up the wear between said springs.

2. The combination of two or more elliptic springs, means for connecting the same together, and a resilient separating member interposed between said springs.

3. The combination of two or more elliptic springs, means for connecting the same together and a spring separating member interposed between said springs.

4. The combination of two or more elliptic springs, means for connecting the same together, and a helical spring separating member interposed between said springs.

5. The combination of two or more sets of springs, a bolt connecting said springs, a helical spring surrounding said bolt and interposed between said springs.

[Claims 6 to 10 not printed in the Gazette.]

960,397. FOOT-GUARD FOR RAIL-FROGS. WILLIAM C. PROSSER, Ashley, Ind. Filed Apr. 16, 1909. Serial No. 490,377.

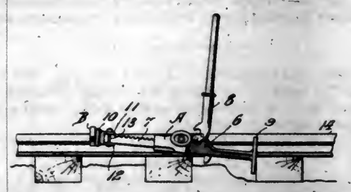


1. A foot-guard for railway frogs consisting of a triangular block whose sides abut the adjacent sides of two converging rails, and whose upper face is provided with a central upright flange flush with the upper faces of the rails, and has opposite facial recesses and whose lower face is provided with an under cut longitudinal recess.

2. A foot-guard for switch frogs, consisting of a pointed block whose converging opposite sides are embraced by the respective webs of two diverging railway rails, and whose upper face projects flush with the upper faces of the balls of the rails.

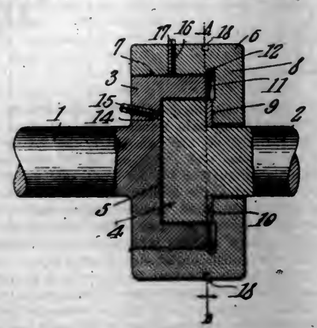
3. A triangular foot-guard block for converging railway rails having its upper face provided with one or more longitudinal grooves and an intermediate upright flange, the said block having an under recess in its lower face, being adapted to close the space between the meeting portions of the rails.

960,398. TIE-SPACING JACK. LAWRENCE P. PUCKETT, Midville, Ga. Filed Jan. 4, 1910. Serial No. 536,253.



A lifting jack having an extension stem, and rail-engaging plates of unequal length mounted upon said extension stem adjacent to the head thereof, in combination with a notched rail-engaging gripping plate affording an abutment for the jack.

960,399. CAR-AXLE. SAMUEL THOMAS PYEATT, Canehill, Ark. Filed Feb. 5, 1910. Serial No. 542,242.



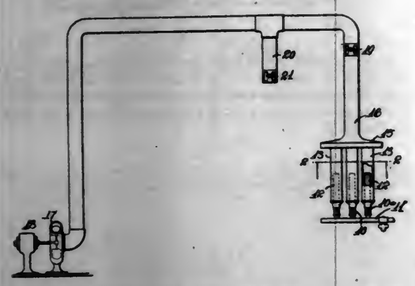
1. An axle for cars, consisting of a primary and a secondary section, each of which is terminally enlarged to form a head, there being an opening in the head of the primary section arranged to inclose entirely, for rotation, the head of the secondary section; a cap adjustably held upon the exterior of the head of the primary section and having a flange to overhang the head of the secondary section, there being an annular, inwardly extending lip upon the flange, of substantially the same diameter as the head of the secondary section.

2. An axle for cars, consisting of axle sections having enlarged heads, one of which is hollow to house the other head entirely, for rotation; a cap threaded to engage the hollow head and having an inwardly extended lip of substantially the same diameter as the housed head; a washer of substantially the same diameter as the lip, interposed between the lip and the housed head and arranged to space the cap from the hollow head to define an oil chamber peripherally extended into the cap beyond the hollow head; there being an oil duct in the lateral face of the hollow head adjacent the axle section thereof.

3. An axle for cars, consisting of a primary and a secondary section, each of which is terminally enlarged to form a head, there being an opening in the head of the primary section arranged to inclose entirely, for rotation, the head of the secondary section; a cap threaded to engage the exterior of the head of the primary section and having a flange to overhang the head of the secondary section, there being an annular, inwardly extending lip upon the flange, of less diameter than the opening; a washer of less diameter than the opening, located between the lip and the head of the secondary section and arranged to engage the head of the secondary section; there being an oil duct in the lateral face of the head of the primary section, communicating with the opening, ad-

jacent the primary section; the engagement between the lip and the washer defining a chamber between the cap and the head of the primary section, the chamber being extended into cap beyond the head of the primary section.

960,400. GAS-HEATER. ALCORN RECTOR, New York, N. Y., assignor to Rector Gas Lamp Company, New York, N. Y., a Corporation of New York. Filed Apr. 10, 1909. Serial No. 489,199.



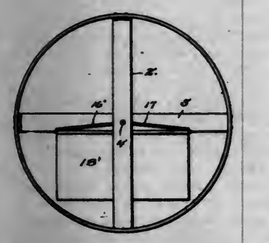
1. In a gas heater, the combination of a Bunsen burner, a heater surrounding said Bunsen burner and so adapted that substantially no air can enter the heater except through the bunsen, and a pipe connected with, and having means for exhausting the air from, said heater.

2. In a gas heater, the combination of a Bunsen burner, a heater surrounding said Bunsen burner, and so adapted that substantially no air can enter the heater except through the bunsen, a pipe connected with said heater, and an exhaust fan at the outlet end of said pipe.

3. In a gas heater, the combination of a main pipe having a regulable air inlet, an exhaust fan located near the discharge end of said pipe, a heater connected with said pipe, and a Bunsen burner extending into said heater.

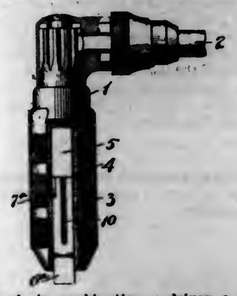
4. The combination with a heating unit comprising a Bunsen burner and a tube encircling the burner but not the air inlet of the Bunsen burner, of an exhaust pipe arranged above the heating unit and rising therefrom, means connected with the pipe and spaced apart from the heating unit for exhausting the pipe, and regulable air inlets for the pipe.

960,401. CRATE. EMILE F. RIBBECK, New Iberia, La. Filed June 21, 1909. Serial No. 503,466.



In a crate, an outer casing, a rod supported centrally of said outer casing, an inner casing formed of side members, and a plurality of connecting strips, a pivotally mounted link secured to each of said side members and pivotally engaging said shaft, whereby said inner casing is pivotally supported in said outer casing, and a plurality of pivotally mounted members connected to said shaft for forming a lid for said inner casing.

960,402. BIT-BRACE CHUCK. HUBERT P. RICHARDS, New Britain, Conn., assignor to The Stanley Rule & Level Company, New Britain, Conn., a Corporation of Connecticut. Filed Feb. 7, 1910. Serial No. 542,517.



1. In a chuck, in combination, a driver, a pair of jaws, two oppositely faced sloping abutments, one of which is movable, both abutments engaging the opposite ends of said jaws to move them toward each other when said abutments approach each other, a pair of toggle links hinged to each other at one end and pivoted to the jaws at their free ends, a laterally projecting bearing stud at the hinged end of said toggles and a guide slot in the side of one of said abutments for said bearing stud, said guide slot being coincident with the axis of said chuck.

2. In a chuck, in combination, a driver, a pair of jaws, two oppositely faced sloping abutments, one of which is movable, both abutments engaging the opposite ends of said jaws to move them toward each other when said abutments approach each other, a pair of toggle links hinged to each other at one end and pivoted to the jaws at their free ends, a laterally projecting bearing stud at the hinged end of said toggles and a guide slot in the side of one of said abutments for said bearing stud, said guide slot being coincident with the axis of said chuck, the free ends of said toggles engaging the rear ends of said jaws at the side of each.

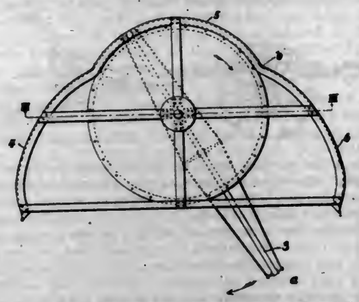
3. In a chuck, in combination, a driver, a pair of jaws, two oppositely faced sloping abutments, one of which is movable, both abutments engaging the opposite ends of said jaws to move them toward each other when said abutments approach each other, a pair of toggle links hinged to each other at one end and pivoted to the jaws at their free ends, a laterally projecting bearing stud at the hinged end of said toggles and a guide slot in the side of one of said abutments for said bearing stud, said guide slot being coincident with the axis of said chuck, and a clearance recess in said abutment block at each side of said guide slot, said toggles standing in said clearance recesses.

4. In a chuck, in combination, a driver, a pair of jaws, two oppositely faced sloping abutments, one of which is movable, both abutments engaging the opposite ends of said jaws to move them toward each other when said abutments approach each other, a pair of toggle links hinged to each other at one end and pivoted to the jaws at their free ends, a laterally projecting bearing stud at the hinged end of said toggles and a guide slot in the side of one of said abutments for said bearing stud, said guide slot being coincident with the axis of said chuck, and a spring cooperating with said jaws and tending to move the same apart.

960,403. PROPELLER. EDWARD A. RICHTER, Pittsburg, Pa. Filed Aug. 21, 1909. Serial No. 513,926.

1. A propeller having in combination a rotating driving member, a blade movably mounted in the driving member, and of a length such that when one end of the blade is in or nearly in the driving member the opposite end will project a substantial distance outside of the driving member, braces on the driving member adapted to form lateral supports for the projecting portion of the blade, and means for reciprocating the blade.

2. A propeller having in combination a rotating driving member, a blade normally mounted in the driving member and of a length such that when one end of the blade is in or nearly in the driving member the opposite end will project a substantial distance outside of the driving member, braces movably mounted on the driving member adapted to form lateral supports for the projecting portion of the blade, and means for reciprocating the blade.



3. A propeller having in combination a diametrically slotted drum, a blade having a length greater than the diameter of the drum, and a curved track for shifting the blade having a portion beginning with a curvature corresponding to the arc described by the outer end of the projecting portion of the blade and continuing with gradually decreasing radius, and a portion formed in a radius slightly greater than the radius of the drum extending from or approximately from the point where the exposed portion of the blade begins to move in a direction opposite to the direction of movement of the vessel.

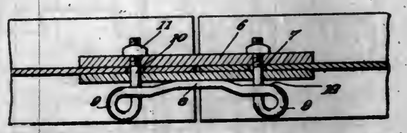
4. A propeller having in combination a rotating drum, having a diametrically slotted periphery, a blade of a length greater than the diameter of the drum, and means for shifting the blade, the drum being provided with buoyancy chambers on opposite sides of the path of movement of the blade.

960,404. SUPPORT FOR NOZZLES OF FOUNTAIN-SYRINGES. NICHOLAS L. RIGBY, Los Angeles, Cal., assignor to Alice Slaughter, Los Angeles, Cal. Filed July 30, 1906. Serial No. 328,462.



The combination, with a reservoir having an open mouth at the top and means for suspending the same, and a flexible tube extending from the bottom, of a support formed from a single piece of wire bent into U-shape at its middle and having a portion of each leg of the U folded downward adjacent to the bent portion to form a clamp for engaging with the mouth of the reservoir, the legs being then curved outwardly and upwardly away from each other and from the reservoir, said legs being at a distance from each other at all points, and a nozzle at the end of said tube adapted to be supported in a vertical position at a distance from the reservoir by and between said curved portions of said legs.

960,405. NUT-LOCK. NATHANIEL J. ROGERS, Tuscaloosa, Ala. Filed July 6, 1909. Serial No. 506,133.



1. The combination with a support, of a bolt having a portion thereof bearing against one side of the support and twisted to form an eye spaced from the same side of the support, and another portion thereof extended through the support and provided with exterior threads, and a clamping nut engaging the threads and bearing against the other side of the support.

2. The combination with a support, of a bolt having a portion thereof bent upon itself to form an eye normally spaced from one side of the support and thence deflected inwardly against the same side of the support, another portion of the bolt being extended through the support to form a shank having terminal threads, and a clamping nut engaging the threads on the shank and bearing against the other side of the support.

3. The combination with a support, of a bolt having a portion thereof bent upon itself to form an eye normally spaced from one side of the support and thence extended transversely across one side of the body of the bolt and bent inwardly for engagement with the same side of the support, another portion of the bolt being extended through said support to form a laterally adjustable shank provided with exterior threads, and a clamping nut engaging the threads and bearing against the other side of the support.

4. The combination with a support, of a bolt having its intermediate portion bowed laterally for engagement with one side of the support and its opposite ends bent to produce spring eyes normally spaced from the same side of the support and terminating in threaded shanks projecting through said support, and nuts engaging the threaded shanks and bearing against the other side of the support, said shanks being adjustable in parallel relation toward and from each other.

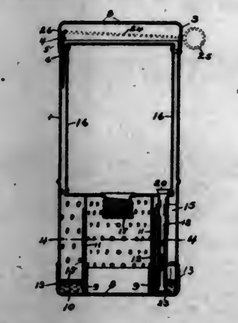
5. The combination with a support, of a bolt having its opposite ends extended transversely through the support to form angularly disposed shanks adjustable laterally in parallel relation to each other and provided with exterior threads, clamping nuts engaging the threaded ends of the shanks and bearing against one side of the support, an intermediate portion of the bolt being bent to produce oppositely disposed eyes normally spaced from the opposite side of the support, that portion of the metal between the eyes being bent laterally to form a curved bearing surface for engagement with the last mentioned side of the support.

[Claims 6 and 7 not printed in the Gazette.]

960,406. DISINFECTING AND DEODORIZING APPARATUS. EDWARD ROOCH, Norwood, Ohio, assignor to The Interstate Sanitation Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Aug. 18, 1909. Serial No. 513,369.

1. A disinfecting apparatus embodying a shell perforated to form an evaporating chamber; a fluid reservoir adapted to be positioned in the shell; a fluid cup positioned at the lower extremity of the shell; a fluid passage adapted to permit a flow of fluid from the reservoir to the cup; a perforated wick-tube mounted in said shell and a wick adapted to take fluid from the cup, the bottom of

said shell and the wall of said wick-tube, above the top of the wick, being provided with one or more openings to permit the passage of air through the wick-tube to the evaporating chamber.



2. A disinfecting apparatus embodying a shell perforated to form an evaporating chamber; a fluid reservoir adapted to be positioned in the shell; a fluid cup positioned at the lower extremity of the shell; a fluid passage adapted to permit flow of the fluid from the reservoir to the cup; a perforated wick-tube mounted in said shell; a wick adapted to take fluid from the cup; and means for controlling the feed of fluid to the cup, the bottom of said shell and the wall of said wick-tube, above the top of the wick, being provided with one or more openings to permit the passage of air through the wick-tube to the evaporating chamber.

3. A disinfecting apparatus embodying a shell, perforated to form an evaporating chamber, and having an annular cap positioned at its lower extremity, the shell being provided with one or more openings in its wall communicating with the space inclosed by the cup; a fluid reservoir adapted to be positioned in the shell; a fluid passage adapted to permit flow of fluid from the reservoir to the cup; a perforated wick tube extending above the cup; and a wick carried thereby, the wick tube having one or more openings at its top communicating with the evaporating chamber.

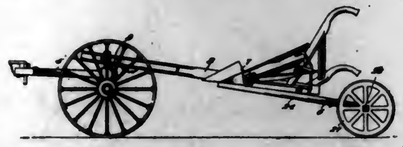
4. A disinfecting apparatus embodying a perforated shell; a fluid cup positioned at the lower extremity of the shell; a closed fluid reservoir adapted to be positioned in the shell; a supply pipe leading from the bottom of the reservoir into the fluid cup; an air tube leading from the bottom of the reservoir into the fluid cup, but terminating above the lower end of the supply pipe; and a valve adapted to close the upper ends of the supply and air tubes from communication with the reservoir, and to open when the reservoir is placed in operative position.

5. A disinfecting apparatus embodying a perforated shell; a fluid cup positioned at the lower extremity of the shell; a closed fluid reservoir adapted to be positioned in the shell; a supply pipe leading from the bottom of the reservoir into the fluid cup; an air tube leading from the bottom of the reservoir into the fluid cup, but terminating above the lower end of the supply pipe, the upper end of the air tube being within and its lower end being outside the supply tube; and a valve adapted to close the upper ends of the supply and air tubes from communication with the reservoir, and to open when the reservoir is placed in operative position.

[Claims 6 to 8 not printed in the Gazette.]

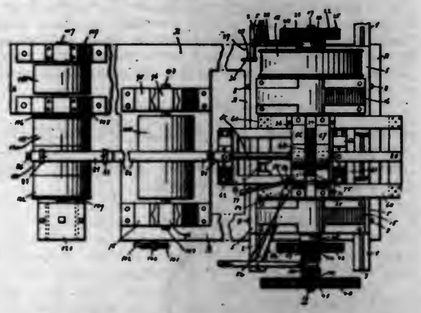
960,407. TRUCK. EDWARD ROSENFELD, Columbus, Ohio. Filed Oct. 14, 1909. Serial No. 522,631.

1. A transporting truck for plows comprising longitudinally extending converging side bars, a traction wheel revolubly mounted on the rear end of each of said bars to support the same, transverse connecting bars between the side bars adapted to provide a seat for the plow beam, a yoke carried by one of the side bars adapted to embrace said beam, said yoke being secured at one of its ends, the free end of said yoke being laterally extended and provided with a longitudinal slot, and a key pivotally secured to the other of the side bars adapted to be positioned through said slot to secure said yoke upon the beam, substantially as and for the purpose set forth.



2. A transporting truck of the character described comprising converging side bars having transversely extending trunnions on their rear ends, traction wheels revolubly mounted on said trunnions, transverse connecting bars between the side bars, each of said transverse bars having a central concavity adapted to provide a seat for the plow beam and prevent the transverse shifting movement thereof, a yoke adapted to embrace the beam and having its ends laterally extended, one end of said yoke being pivotally secured in an eye fastened to one of the side bars, the opposite end of said yoke being provided with a longitudinal slot, and a key pivotally secured to the other of the side bars adapted to extend through said slot and to be turned at right angles thereto to secure the yoke upon the beam, substantially as and for the purpose set forth.

960,408. ABRADING-MACHINE. FRANK C. ROWELL, Ilion, and JAMES L. NOLAN, Mohawk, N. Y. Filed Feb. 23, 1909. Serial No. 479,503.



1. In a device of the character described, the combination with an abrading member a pattern wheel, a pattern and a work-carrier of a plurality of carriages each movable relative to a fixed base whereby work may automatically be fed across the abrading member in each direction and lengthwise to and fro in a given line relative thereto, and be tilted on a fixed center to reproduce inequalities in the surface of the pattern, substantially as described.

2. A device of the character described having an abrading member, a pattern wheel, a pattern, means for supporting the pattern on the pattern wheel and the work against the abrading member, the said means comprising mechanisms whereby the work may be fed through its length and be reduced by the abrading member according to the configuration of that pattern, and means whereby the work may be continuously revolved while being so fed substantially as described.

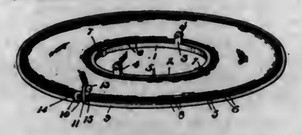
3. A device of the character described having an abrading member, a pattern wheel, a pattern and an automatic reversible actuated carriage, means for supporting the pattern on the pattern wheel and the work against the abrading member, the said means comprising mechanisms whereby the work may be fed transversely across the abrading member and be reduced by the abrading member according to the configuration of that pattern, and means whereby the work and pattern may be continuously revolved in said passage, substantially as described.

4. A device of the character described having an abrading member, a pattern wheel, a pattern, means for supporting the pattern on the pattern wheel and the work against the abrading member, the said means comprising mechanisms whereby the work may be fed through its length to present each part of its surface to and be reduced by the abrading member according to the configuration of that pattern and means whereby the work may be moved across the abrading surface, substantially as described.

5. A machine of the character described consisting of an abrading member, a pattern wheel, a pattern and a fixed base, a carriage movably mounted thereon, means for reciprocating the carriage to and fro across the base, standards on the carriage, a rack pivotally hung on the standards, a feed-carriage slidably mounted on the rack, means for reciprocating the feed-carriage to and fro, a shaft supported on the feed-carriage, means for revolving the shaft independent of the to and fro movement of the shaft-supporting carriage, substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

960,409. ELECTRIC HEATER. JAMES CHARLES ROYCE, Toronto, Ontario, Canada. Filed May 14, 1909. Serial No. 495,923.



1. In an electric heater a ring of suitable metal split laterally and having a terminal secured to or forming part therewith, a heavier coil of suitable metal having one end inserted through the lateral split in said ring and clamped between the ends thereof and electrically contacting with the outer surface of said ring and having its successive windings insulated from each other, and a ring encircling said heater coil and binding the windings thereof and the insulations between said windings securely together.

2. In an electric heater, a heater coil formed of a strip of metal wound in volute form, and a band encircling said coil and clamped thereto and electrically contacting with the outer winding of said coil.

3. In an electric heater, a plurality of stripes of metal wound in volute coils one within the other and having their several windings insulated from each other, and a band encircling said composite coil and clamped thereto.

4. In an electric heater, a plurality of strips of metal wound together in volute form, and strips of insulating material wound between the windings of said coils.

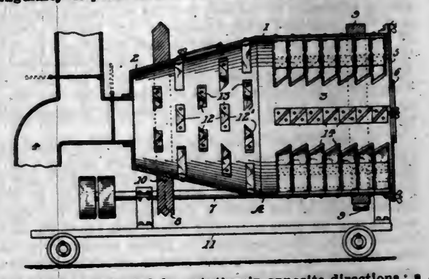
5. In an electric heater a pair of metal strips wound together in volute form and electrically insulated from each other in their several windings, one of said coils being of much thicker metal than the other, and a band encircling said composite coil and clamped therearound.

[Claims 6 to 9 not printed in the Gazette.]

960,410. BITUMINOUS MIXING MACHINE. JOSEPH H. RYAN, Pittsburg, Pa. Filed July 14, 1909. Serial No. 507,525.

1. A drum adapted for rotation in opposite directions; a discharge opening at one end of said drum; means moving the mixture always toward the discharge opening; and means moving the mixture in opposite directions toward or from the discharge opening as the motion of the drum is reversed.

2. A drum adapted for rotation in opposite directions; a discharge opening at one end of said drum; blades, provided with opposed faces, at one end of the drum, and directed toward the discharge opening; and flat blades angularly disposed about the other end of the drum.

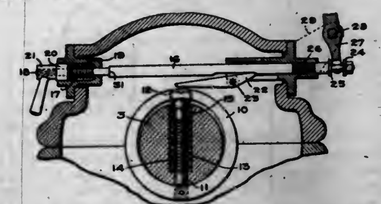


3. A drum adapted for rotation in opposite directions; a discharge opening at one end of said drum; blades, provided with opposed faces, arranged in staggered relation at one end of the drum, and directed toward the discharge opening; and flat blades angularly disposed arranged in series and in alinement with one another about the other end of the drum.

4. A drum adapted for rotation in opposite directions, one portion thereof being conical in form, and the other portion of a cylindrical configuration; a discharge opening at one end of said drum; blades, provided with opposed faces, arranged in staggered relation in the conical chamber of the drum; and flat blades angularly disposed arranged in series, and in alinement with one another, about the cylindrical portion of the drum.

5. A drum, portably mounted and in communication with a heat producing means, adapted for rotation in opposite directions; an admission port at one end of said drum, and a discharge opening at the opposite end thereof; blades, provided with opposed faces suitably arranged at one end of the drum, and directed toward the discharge opening; and flat blades angularly disposed about the other end of the drum.

960,411. EMERGENCY-GOVERNOR. FREDERICK SAMUELSON, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed Oct. 16, 1909. Serial No. 523,006.



1. In combination, a prime mover, a shaft driven thereby, a ring surrounding said shaft and having its mass unequally distributed about the axis of said shaft, a pin or bolt transversely mounted in the shaft for sliding movement therein, said bolt being connected to the ring, a device which opposes the sliding movement of the bolt, and means for regulating the supply of motive energy to the prime mover that is actuated by the movement of the ring when the speed of rotation exceeds a certain limit.

2. In a governing mechanism, the combination of a rotating shaft, an eccentric ring surrounding the shaft, a pin or bolt mounted diametrically of the shaft for sliding movement therein, one end of the bolt being connected to the ring, a spring which opposes the sliding movement of the bolt, and regulating mechanism that is operated by the ring when the speed of the shaft exceeds a predetermined limit.

3. In a governing mechanism, the combination of a rotating shaft having a diametrically arranged bore there

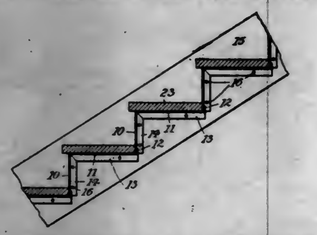
through provided with a chambered portion, an eccentric ring surrounding the shaft, a headed bolt mounted for sliding movement in the bore with its end projecting from said bore, said end being attached to the thicker portion of the ring, a spring arranged in said chambered portion that surrounds the body of the bolt and extends between the bottom of the chamber and the head of the bolt, and a regulating mechanism that is actuated by the ring when the speed of rotation of the shaft exceeds a predetermined limit.

4. In combination, a rotating shaft having a diametrically arranged bore therethrough, said bore having a portion of a given diameter at one side of the shaft and a portion of larger diameter extending therefrom to the opposite side of the shaft, a ring surrounding the shaft and having its mass unequally distributed about the axis of said shaft, a bolt mounted for sliding movement in the first portion of the bore and having its end projecting therefrom into engagement with the heavier portion of the ring, a spring in the larger portion of the bore that is arranged around the body of the bolt between the bottom of said portion and the head of said bolt, and regulating mechanism that is actuated by the ring when the speed of rotation of the shaft exceeds a predetermined limit.

5. In a governing mechanism, the combination of a rotating shaft having a diametrically arranged bore therethrough, said bore having a portion of a given diameter at one side of the shaft and a portion of larger diameter extending therefrom to the opposite side of the shaft, an eccentric ring surrounding the shaft, a bolt mounted for sliding movement in the first portion of the bore and having its end projecting therefrom into threaded engagement with the thicker portion of the ring, a spring arranged around the body of the bolt in the larger portion of the bore with one end in engagement with the shaft at the bottom of said portion, a sleeve or washer on the bolt between the other end of the spring and the head of the bolt, there being an opening in the thinner portion of the ring through which the bolt may be inserted in the bore, and regulating mechanism that is operated by the ring when the speed of rotation of the shaft exceeds a predetermined limit.

[Claims 6 to 8 not printed in the Gazette.]

960,412. METALLIC STAIR. GUSTAV SANDBLOM, New York, N. Y. Filed Dec. 17, 1909. Serial No. 533,710.



Metallic stairs comprising steps each composed of a single piece of bent metal forming a riser, a tread, a top flange at the back of the tread which is slightly shorter than the length of the tread, and end flanges on the tread and riser, and strings to which said end flanges are secured.

960,413. RESERVOIR-PEN. WILLIAM W. SANFORD, Newark, N. J. Filed Aug. 4, 1909. Serial No. 511,211.

1. The combination in a self-filling pen, of a reservoir, an adjustable closure therefor, a cap movable on said reservoir, and a valve in said cap adapted to close on the suction stroke of the cap and open on the reverse stroke thereof.

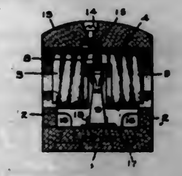
2. The combination in a reservoir pen of a vented reservoir, a cap movable thereon and provided with an opening adapted to be closed on the suction stroke of the cap, and opened on the reverse stroke thereof, and a valve in said reservoir adapted to close and prevent the escape of ink on said suction stroke of the cap.

3. The combination in a self filling pen, of a reservoir, an adjustable closure therefor, a vented cap movable on



said reservoir, and a valve in said cap adapted to be opened and closed as the cap is reciprocated.

960,414. TWIN LAMP-SOCKET. HOWARD B. SARGENT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 21, 1909. Serial No. 513,918.



1. A twin lamp socket comprising a base provided with upright blocks at its ends having their tops cut out on a circular arc, a bracket secured to said base, having a foot provided with a binding screw, a curved portion and a right-angled arm at the top, two screwthreaded metallic shells having a common axis parallel to said base, and provided with bottom flanges abutting against said curved portion and riveted thereto, said shells being cut away on one side to form an opening, a standard secured to said base and extending up through said cutaway opening and having ears in line with the common axis of said shells, insulating jackets on said shells, and a trough-shaped cover fitting over said shells and attached to the arm on the bracket, said cover being notched to admit the line wires.

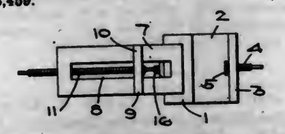
2. A twin lamp socket comprising a base having upright blocks, a bracket secured to said base having a foot provided with a binding screw and having also a curved portion, two screw shells abutting against opposite sides of said curved portion and attached thereto, and having an opening in one side, a standard secured to said base and extending through said opening, and a trough-shaped cover fitting over said shells and attached to the upper end of said bracket.

3. A twin lamp socket comprising a base, a bracket secured thereto and having a foot provided with a binding screw, two screw shells abutting against opposite sides of said bracket and attached thereto, a standard secured to said base and projecting through an opening in said shells, and a trough-shaped cover inclosing said shells.

4. A twin lamp socket comprising a base, a bracket thereon, two screw shells supported by said bracket and having an opening in one side, and a standard projecting through said opening and forming the center contact for the two receptacles.

5. A twin lamp socket comprising a base, two alined screw threaded shells parallel therewith, and a trough-shaped cover fitting over said shells.

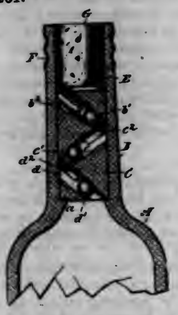
960,415. ADJUSTABLE BENCH-TOOL. FRANK O. SCHALKLE, Redfield, S. D. Filed Aug. 31, 1909. Serial No. 515,459.



1. In a tool of the class described, the combination with a sleeve having a lateral extension, and clamping means carried thereby, of a shank member slidable therein having a lateral extension, and a sliding clamp member carried thereby adapted for coöperation with the side of a table engaged with the sleeve to hold a piece of work.

2. A device of the character described comprising a rectangular sleeve member having an integral L-shaped arm extending from one end thereof, the outer end extending inwardly parallel with the sleeve, a clamping screw engaged through the extension to hold a portion of furniture between the extension and the sleeve, a slidable shank engaged in the sleeve, means for securing the shank adjustably at various points of its movement in the sleeve, said shank having a horizontal extension provided with a longitudinally extending slot, a clamping member slidable in the slot and adapted for engagement against a work piece for the purpose indicated, and means for holding said clamping member adjustably on the shank.

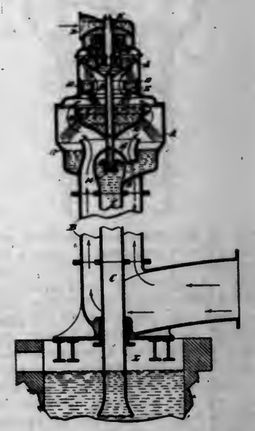
960,416. NON-REFILLABLE BOTTLE. CONRAD SCHICKBELING, East Orange, N. J. Filed Feb. 16, 1909. Serial No. 478,261.



1. The combination with a bottle provided with a neck, of a cylindrical plug fitted in said neck, said plug having three inclined openings each of which extends through the opposite sides of the plug, said bottle neck forming a closure for the inlet ends of said openings and the first of said openings having a portion of its inlet end closed by the side wall of the neck, and having another portion of its inlet end opening through the top of the plug, and each of said openings having channels cut through said sides to form outlets which communicate with succeeding openings when the bottle is tilted, and ball valves loosely mounted in said openings, said channels extending in rear of the balls when the bottle is in its tilted position.

2. An improved non-refillable bottle, having a neck portion, a cylindrical plug fitted in said neck and formed with a passageway therethrough, said passageway consisting of a plurality of oppositely inclined openings both ends of which are exposed through sides of the plug, one end of each opening being of larger diameter than the opposite end of the same opening and adapted to admit a ball valve, the sides of the bottle neck forming closures for the ends of said openings, and the first of said openings having its upper end piercing the plug at the junction of the top and side of the plug whereby a portion of the opening is exposed through the top of the plug and another portion of the opening is closed by the side of the bottle neck, said plug having channels opening through sides of the receiving ends of the openings, and ball valves loosely mounted in the openings, said channels having such length that they extend back of the balls and permit the passage of the liquid from one opening to the other when the bottle is tilted.

960,417. CONDENSER. WILLIAM SCHWANHAUSSER, New York, N. Y., assignor to Henry R. Worthington, New York, N. Y., a Corporation of New Jersey. Filed Oct. 31, 1908. Serial No. 460,409.



1. In a counter current condenser, the combination with the condensing chamber having a water inlet above the chamber, water distributing devices, and the tail pipe, of a vertical exhaust steam pipe inclosing the tail pipe and open at the top into the bottom of the condensing chamber.

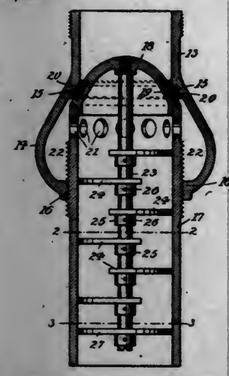
2. In a counter current condenser, the combination with the condensing chamber having a water inlet above the chamber, a series of trays forming water jets through which the steam passes, and the tail pipe, of a vertical exhaust steam pipe inclosing the tail pipe and open at the top to deliver steam below the bottom tray.

3. In a counter current condenser, the combination of a condensing chamber having a water inlet above the chamber, a series of trays forming water jets through which the steam passes, a tail pipe, an air cooler in the upper part of the condenser, a drain pipe extending down from said cooler and discharging into said tail pipe, and a vertical exhaust steam pipe inclosing the tail pipe and open at the top to deliver steam below the bottom tray.

4. In a counter current condenser, the combination of the condensing chamber having a water inlet above the chamber, a series of inner and outer trays E, F, the bottom tray being central of the condenser and arranged to throw the water outward, vertical exhaust steam pipe B open at the top to deliver steam against the bottom tray within the jets, tail pipe C inclosed by the exhaust steam pipe and closed at its upper end, and water receptacle 17 surrounding the steam pipe and connected by passage 16 to the tail pipe.

5. A counter current condenser having its condensing chamber enlarged at its lower portion, a steam inlet pipe opening upward into the bottom of the enlarged portion of the condensing chamber, a tail pipe within the steam pipe, and an open top receiver for the discharge water within the enlarged lower portion of the condensing chamber with which the tail pipe connects.

960,418. NOZZLE FOR FILTERS AND SIMILAR DEVICES. OTTO SELG, New York, N. Y., assignor to The Selg Brewery Apparatus Company, New York, N. Y., a Corporation of New York. Filed Sept. 14, 1909. Serial No. 517,595.

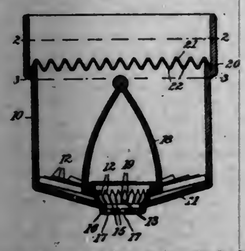


1. A device of the character described, comprising a nipple having a lower expanded section, a pipe projecting upwardly into said expanded section to form an intervening annular chamber that encompasses the incloseed end of the pipe, perforations in the pipe that open into said chamber, and baffle plates within the pipe.

2. A device of the character described, comprising a nipple having a valve seat, an expanded section below the valve seat, and a threaded inwardly extending rim at the lower end of the expanded section, a threaded pipe engaged by said rim and projecting upwardly into the expanded section to form an intervening annular chamber that encompasses the incloseed end of the pipe, perforations in the pipe that open into said chamber, a valve on the pipe adapted to engage the valve seat, and baffle plates within the pipe.

3. A device of the character described, comprising a nipple having a lower expanded section, a pipe engaged by the nipple and communicating therewith, a head on the pipe, a shaft depending from said head into the pipe, and a series of baffle plates and a perforated bottom plate carried by the shaft.

960,419. PERCOLATOR. OTTO SELG, New York, N. Y. Filed Dec. 18, 1909. Serial No. 533,766.

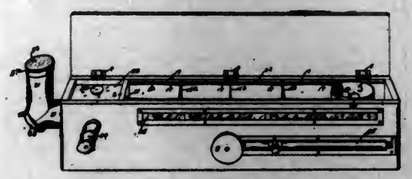


1. A percolator comprising a receptacle having a bottom which is provided with ribs having peaked tops and lower parallel sides to form intervening channels having flaring upper sections and communicating lower contracted ducts.

2. In a percolator, a receptacle having a bottom which is provided with a series of grooves and a communicating apertured well, combined with a bell having a corrugated lower edge which engages the bottom and extends into the upper parts of the grooves while clearing the lower parts thereof.

3. In a percolator, a receptacle having a corrugated shoulder and a bottom provided with a series of grooves and a communicating apertured well, combined with a bell encompassing the well, and with a corrugated and apertured top plate engaging the shoulder.

960,420. PHOTOMETER. CLAYTON H. SHARP, White Plains, and PRESTON S. MILLAR, Brooklyn, N. Y. Filed Dec. 26, 1907. Serial No. 408,070.



1. In a photometer, the combination of a containing box, two prisms for constituting a photometric device, a plurality of apertured opaque screens for protecting said photometric device from any light reflected from the interior of said box, a scale, a lamp, a translucent window in said box, an openable shutter for said window for permitting, when open, said scale to be illuminated from said lamp, a diffusing test plate, adjustable to different angles, and exposed to all kinds of rays of light to be measured, and an eye tube through which said test plate may be viewed.

2. In a photometer, the combination of a case, a rotary elbow receiving tube thereon, a reversible reflector at the bend of the tube, carrying a mirror on one end, and a diffusion reflector on the other end, and means by which said reflector may be attached to said tube.

3. In a photometer, the combination of a box, a rotary elbow receiving tube thereon, a reversible reflector at the bend of the tube, carrying a mirror on one end, a diffusing reflector on the other end, and means by which said reflector may be attached to said tube; screw threads constituting said means.

4. In a photometer, the combination of an elbow light receiving tube, having a threaded hole at the bend thereof, a threaded tube, for screwing either end of the same into said elbow tube, a mirror mounted upon one end of said tube, and a diffusing reflector mounted upon the other end of said tube.

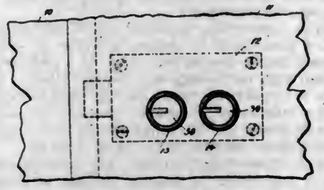
5. In a photometer, the combination of an elbow light receiving tube, having a threaded hole at the bend thereof, a threaded tube for screwing either end of the same into said elbow tube, a mirror mounted upon one end of said tube, a diffusing reflector mounted upon the other end of said tube, and a removable cap at one end of said elbow tube.

[Claims 6 to 16 not printed in the Gazette.]

960,421. INTERCHANGEABLE-KEY LOCK. AUGUSTUS W. SIDLEY, Hamilton, Ohio, assignor to Herring-Hall-Marvin Safe Company, Hamilton, Ohio. Filed Jan. 25, 1908. Serial No. 412,631.

1. In an interchangeable key lock, the combination of a series of adjustable stumps, means for fastening said stumps in adjusted position, a corresponding series of tumblers, and mechanism for permitting the engagement of both said stumps and said tumblers by the same key.

2. In an interchangeable key lock, the combination of a series of stumps, means for directly engaging and operating said stumps by means of the key to which the lock is to be set, and a corresponding series of tumblers.



3. In an interchangeable key lock, the combination of a series of stumps, a series of tumblers, a key cylinder for permitting a key to operate said tumblers, springs adapted to move said stumps in one direction, another key cylinder for permitting a key to move said stumps in the opposite direction, and means for securing said stumps in adjusted position.

4. In an interchangeable key lock, the combination of a series of stumps, springs adapted to move said stumps in one direction, means permitting a key to move them in the opposite direction by direct engagement with the stumps, and means for securing said stumps in adjusted position.

5. In an interchangeable key lock, the combination of a series of adjustable stumps, a corresponding series of tumblers, and two key cylinders, one to permit engagement of said stumps by a key, and the other to permit engagement of said tumblers by the same key.

[Claims 6 to 12 not printed in the Gazette.]

960,422. COMPOSITION OF MATTER. WILLIAM G. F. SIEGMANN, Baltimore, Md., assignor to The Sagax Wood Company, Baltimore, Md., a Corporation of Delaware. Filed June 8, 1909. Serial No. 500,796.

1. A composition of matter for producing articles of manufacture consisting of cut straw, calcined magnesite, asphaltum and chlorid of magnesium and boracic acid in the proportion of 50 pounds of straw, 70 pounds of calcined magnesite, 5 gallons of asphaltum, 6 gallons of chlorid of magnesium and 10 ounces of boracic acid.

2. A composition of matter for building material consisting of straw, calcined magnesite, asphaltum, chlorid of magnesium and boracic acid in combination with a mixture of stone, calcined magnesite and chlorid of magnesium.

3. A composition of matter for building material consisting of a mixture of 50 pounds of straw, 70 pounds of calcined magnesite, 5 gallons of asphaltum, 6 gallons of chlorid of magnesium and 10 ounces of boracic acid in combination with a mixture of 100 pounds of stone, 2 pounds of calcined magnesite and one-half gallon of chlorid of magnesium.

960,423. HAME-FASTENER. ROBERT D. SIMPSON, Columbus, Ohio, assignor to The National Safety Snap Company, Wilmington, Ohio, a Corporation of Ohio. Filed May 24, 1909. Serial No. 497,930.



In a hame fastener, a link open at one end, said open end being provided with eye-extensions, a lever pivotally mounted on said eye-extensions, said lever being provided with an operating handle extending in one direction and an arm extending in the opposite direction, a hook member pivotally connected to said arm, the hook on said hook member being drawn inwardly toward the collar when said hame fastener is in operative position, a chain connected to the closed end of said link and inwardly extending projections formed upon said link at a point near one end thereof, said projections being adapted to prevent said chain connections from swinging forward thereby conflicting with the inner end of the lever and the inner end of the hook that is pivoted to said lever, a suitable hook member being adapted to engage the links of said chain.

960,424. CUTTING-BLADE FOR RAZORS. WALTER J. SMART, New York, N. Y., assignor to The Firm of Simon Zinn, New York, N. Y. Original application filed Jan. 14, 1905, Serial No. 241,129. Divided and this application filed May 23, 1905. Serial No. 261,774.



1. As a new article of manufacture, a thin, flexible, approximately-rectangular blade having a forward cutting edge and end projections located close to said cutting edge, substantially as described.

2. A safety razor having a guard, a clamping member provided with downwardly bent lugs pivotally connected with said guard and a flat blade having end projections abutting against the lugs of said clamping member, substantially as described.

3. A safety razor having a guard, a clamping member provided adjacent the forward edge thereof with downwardly bent lugs pivotally connected with said guard, and a flat blade having end projections extending beyond the ends of said guard and resting against the lugs of said clamping member, said blade being fitted between said guard and said clamping member, substantially as described.

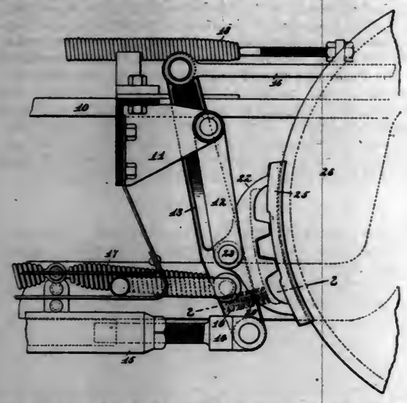
4. A safety razor having a guard, a clamping member having downwardly bent lugs adjacent the forward edge thereof, said lugs being pivotally connected with said guard adjacent the guard teeth thereof, said clamping member having a rearwardly extending finger-piece, a coil spring interposed between said guard and the finger-piece of said clamping member, and a thin flat blade interposed between the clamping member and the guard and having end projections extending beyond the ends of the guard and engaging the downwardly bent lugs of the clamping member.

960,425. BRAKE. WILLIAM JUDSON SMITH, St. Paul, Minn. Filed Nov. 8, 1909. Serial No. 526,706.

1. In a brake of the character described, the combination with a brake lever provided with a recess, of a brake head pivotally secured to said lever and provided with a post, and a spring, one end of which fits in said recess in said brake lever and the opposite end around said post, substantially as described.

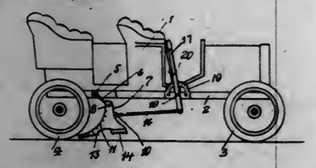
2. In a brake of the character described, the combination with a brake lever provided with a recess, of a brake head pivotally secured to said lever and formed with two

sides, a post located between the sides of said head and having one end threaded into said head, and a spring, one



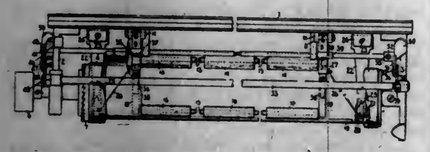
end of which fits in said recess in said lever and the opposite end around said post, substantially as described.

960,426. AUTOMOBILE-BRAKE. JOHN J. STAWARTZ, Homestead, Pa., assignor, by direct and mesne assignments, of one-third to James J. McCague and one-third to John Uhrin, Homestead, Pa. Filed July 20, 1909. Serial No. 508,630.



In an automobile brake, the combination with the supporting frames and rear wheels of an automobile, of a rod arranged in said frames adjacent to said wheels, shoes suspended from said rod in the path of said wheels, each shoe comprising two parallel triangular plates, a cross piece connecting the lower rear edges of said plates, pins connecting said plates and adapted to be engaged by said wheels, gripping blocks detachably mounted between the lower front edges of said plates, teeth carried by the lower edges of said plates adjacent to the cross pieces thereof, and means connected with said shoes for normally supporting said shoes in an elevated position, said means including connecting rods and an operating lever adapted to move said rods, said lever being carried by one of said frames, substantially as described.

960,427. TYPE-WRITING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Feb. 26, 1910. Serial No. 546,186.



1. In a typewriting machine, the combination of a platen, a feed roller, a support therefor, and duplex means for variably controlling said feed roller, said means being operative by a plurality of keys, said keys being mounted independently of said feed roller and its support.

2. In a typewriting machine, the combination of a platen, a feed roller, and duplex means for variably releasing said feed roller and for locking the same in different released positions.

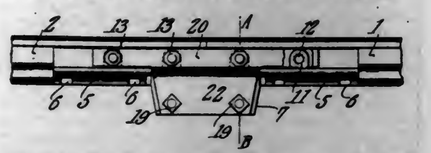
3. In a typewriting machine, the combination of a platen, a feed roller, a member movable to release the same, and duplex devices controlled by a plurality of independent keys for moving said member different extents.

4. In a typewriting machine, the combination of a platen, a feed roller, a member rotatable to release the same, and duplex key controlled devices for rotating said member different extents in the same direction.

5. In a typewriting machine, the combination of a platen, a feed roller, a member movable to release the same, a key operative to move said member one extent, another key operative to move said member a different extent, and connections between said member and said keys.

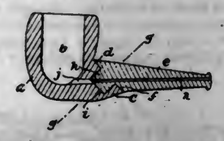
[Claims 6 to 22 not printed in the Gazette.]

960,428. RAILWAY-JOINT. STERLING STEPHENS, Bushnell, Fla. Filed Nov. 19, 1909. Serial No. 528,932.



The combination with the meeting ends of rails, each of which is provided with a longitudinal slot in its web, of a pair of chairs adapted to conform to the contour of the base flanges and webs of said rails, each of said chairs having a down-turned tongue provided with an inturned flange to engage the bottom face of said rail base flange, said chairs having annular openings registering with the slots in the rail webs for the reception of clamping bolts, lugs projecting laterally from the chairs having threaded openings to engage the threaded extremities of said bolts and coöperate with the nuts thereof in securing said bolts against accidental displacement, damper strips disposed between the chairs and the rail webs to prevent the rattling of the joint, said damper strips having longitudinal slots registering with the longitudinal slots of the rail webs to permit of an expansion and contraction of the rail, bolts connecting the free ends of the down-turned tongues of said chairs, and a nut locking plate adapted to conform to the contour of said chair and having openings for the reception of the first named clamping bolts, said plate having a resilient flange provided with openings to receive the second named clamping bolts, said flanges exerting an outer pressure upon the nuts of the second named bolts to hold the same locked in position, substantially as described.

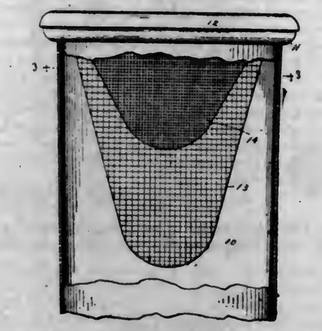
960,429. TOBACCO-PIPE. JOHN W. STEWARD, Paterson, N. J. Filed Sept. 3, 1909. Serial No. 516,094.



1. A tobacco pipe comprising a bowl member and a stem member having a male and female joint connecting them, said members having a draft port communicating with the bowl-space and the axis of said joint extending obliquely to both the vertical axis of the bowl member and the longitudinal axis of the stem member and downwardly and inwardly to the vertical axis of the bowl member, whereby the stem member may be arranged relatively to the bowl member either to project substantially laterally from said bowl member or in substantial parallelism with the vertical axis thereof, substantially as described.

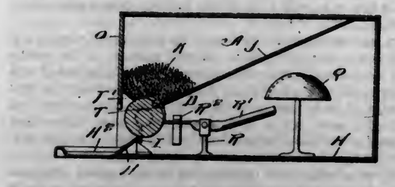
2. A tobacco pipe comprising a bowl member and a stem member having a male and female joint connecting them and located in its entirety adjacent to the base of the bowl, said members having a draft port communicating with the bowl-space and the axis of said joint extending obliquely to both the vertical axis of the bowl member and the longitudinal axis of the stem member and downwardly and inwardly to the vertical axis of the bowl member, whereby the stem member may be arranged relatively to the bowl member either to project substantially laterally from said bowl member or in substantial parallelism with the vertical axis thereof and close to said bowl member, substantially as described.

960,430. SPARK-ARRESTER. GEORGE G. STOUP, Latrobe, Pa. Filed July 16, 1908. Serial No. 443,825.



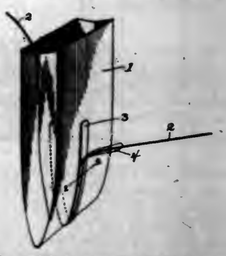
In combination with a smoke stack, the herein described spark arrester comprising a cross-sectionally concavo-convex annulus disposed with its concave side lowermost and on the upper end of the stack so that the outer wall of the annulus is without and the inner wall thereof is within the stack, a pair of inverted conical screens, concentrically disposed, each open at its upper end and otherwise closed from end to end, the inner screen being smaller both diametrically and longitudinally and being also of smaller mesh than the outer screen and having its open, upper end secured to the inner side of the inner wall of said annulus, the said outer, larger screen having its open upper end secured to the outer side of the inner wall of said annulus and spaced by said inner wall from the inner screen.

960,431. SINGLE-DELIVERY MATCH-RECEPTACLE AND CIGAR-CUTTER. MARION R. STOWELL and JOHN E. STOWELL, Pillager, Minn. Filed July 14, 1909. Serial No. 507,595.



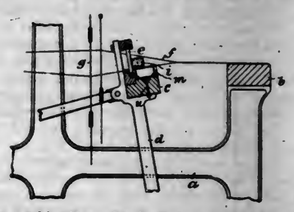
A single delivery match receptacle, comprising a closed casing provided with a delivery opening and an extension platform, the inner marginal wall of which is inclined and projects within the casing, inclined partitions positioned within the latter and having their lower edges notched and spaced apart, a rotatable, spring-actuated cylinder journaled in the opposite walls of the casing and provided with a longitudinal groove, which is held normally in alinement with the upper surface of one of said inclined partitions, cam ribs arranged in pairs in alinement with each other, one of each pair upon either side of the groove in alinement with each other, said cylinder adapted to turn in the space intermediate the partitions and the cam ribs to turn in said notches.

960,432. BAG-TIE. JAMES M. STRYKER, Chicago, Ill. Filed June 28, 1909. Serial No. 504,677.



In combination with a paper bag, a tie comprising a reinforce or backing strip strongly adherent to the outer surface of the bag; a cover or sheath strip less adherent to the reinforce strip, and a cord secured between the two strips against longitudinal displacement.

960,433. SHUTTLE-RACE FOR LOOMS. EDWARD STUTZ, Paterson, N. J. Filed May 3, 1909. Serial No. 493,538.



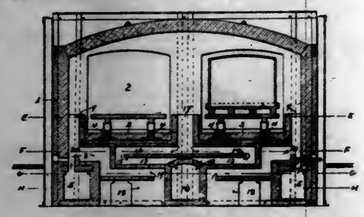
1. The combination of a loom batten, a shuttle-race for the batten comprising a base superposed on the batten and a series of spaced parallel shuttle-supports surmounting the base, vertical stems each having a threaded connection at its upper end with the base and penetrating the batten, each stem having a shoulder near its upper end, and a nut screwed on the lower end of each stem and coöperating with the shoulder thereof to clamp the stem to the batten, substantially as described.

2. The combination of a loom batten having sockets countersunk in its top surface, a shuttle-race for the batten comprising a base superposed on the batten and a series of spaced parallel shuttle-supports surmounting the base, said base having bosses received by said sockets, vertical stems each having a threaded connection at its upper end with a boss of the base and penetrating the batten, each stem having a shoulder received by the corresponding socket, and a nut screwed on the lower end of each stem and coöperating with the shoulder thereof to clamp the stem to the batten, substantially as described.

960,434. ANNEALING-FURNACE. JAMES DAVIS SWINDELL, Pittsburg, Pa. Filed Oct. 26, 1909. Serial No. 524,764.

1. The combination of a furnace structure having a heating or annealing chamber, gas flues located in the furnace structure below the plane of the heating or annealing

chamber, passages communicating with said gas flues and with the heating or annealing chamber at respective sides of the latter, air passages communicating with said gas passages below the discharge ends of the latter thereby forming mixing chambers between the ends of said gas passages, and means for conveying products of combustion from the longitudinal central portion of the heating or annealing chamber and in proximity to the wall of said air passages.



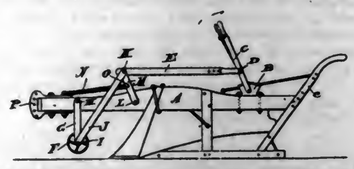
2. The combination of a furnace structure having a heating or annealing chamber, gas flues located at respective sides of the furnace structure below the plane of the heating or annealing chamber, gas passages communicating at their lower ends with said gas flues and at their upper ends with the heating or annealing chamber at respective sides of the latter, air flues located adjacent to the gas flues, passages communicating with said air flues and with said gas passages below the discharge ends of the latter, discharge outlets communicating with the longitudinal central portion of the heating or annealing chamber for the discharge of products of combustion, a stack, and passages adjacent to the air passages connecting the central discharge outlets with said stack.

3. The combination of a furnace structure having a heating or annealing chamber, gas flues located in the base portion of the furnace structure at respective sides of the latter and below the plane of the heating or annealing chamber, gas passages communicating with said gas flues and discharging into the heating or annealing chamber at respective side of the latter, a centrally located stack flue, passages connecting said stack flue with the longitudinal central portion of the heating or annealing chamber, air flues located between the central stack flue and the side gas flues, and air passages communicating with the inner sides of the air flues and with the gas passages below the discharge ends of the latter, said air passages located adjacent to the passages which communicate with the stack flue and the central portion of the furnace chamber.

4. The combination of a furnace structure having a heating or annealing chamber, inlets for air and gas communicating with said chamber at the sides thereof, means for supplying gas to said inlets, a centrally located stack flue in the base portion of the furnace structure, means forming chambers under the floor of the heating or annealing chamber, and baffles or partitions in said chambers forming passages communicating with each other and respectively with the top of the stack flue and with the central portion of the heating or annealing chamber, and air passages adjacent to said last mentioned passages and communicating with said inlets at the sides of the furnace chamber.

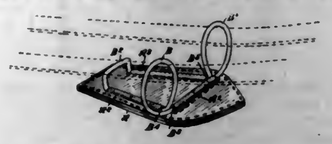
5. The combination of a furnace structure having a heating or annealing chamber, gas flues at respective sides of the furnace structure below the plane of the heating or annealing chamber, gas passages communicating with said gas flues and with the heating or annealing chamber at respective sides of the latter, a centrally located stack flue in the base-portion of the furnace structure, means forming a chamber above the stack flue and under the floor of the heating or annealing chamber, a baffle or partition in said interposed chamber forming passages communicating with each other and communicating respectively with the top of the furnace flue and the central portion of the heating or annealing chamber, air flues interposed between the gas flues and stack flue, and passages between the stack flue and air flues and between the gas and air flues and the bottom and side walls of the interposed chamber, said passages communicating with the air flues at the inner sides thereof and with the gas passages below the discharge ends of the latter.

960,435. GAGE-LEVER MECHANISM FOR PLOWS. JAMES JOHNSTONE TAIT, Meota, Saskatchewan, Canada. Filed Sept. 7, 1909. Serial No. 516,623.



In a plow, the combination with the beam thereof, of a gage-lever mechanism comprising a depending arm pivoted near the forward end of said beam; a gage-wheel journaled in the lower end of said depending arm; a link-bar pivoted to said depending arm; a thrust-bar to which the upper end of said link-bar is pivoted; a second link-bar pivoted to said beam and to which the first-mentioned link-bar and said thrust-bar are pivoted; a quadrant carried by said beam and placed near its rear end; a lever associated with said quadrant and to which said thrust-bar is connected, and a coiled spring connected with said beam near its front end, and also connected with the link-bar to which said thrust-bar is pivoted.

960,436. REIN-HOLDER. KNUTE THARRALDSON, Bloomingdale, Cal. Filed June 23, 1909. Serial No. 503,843.



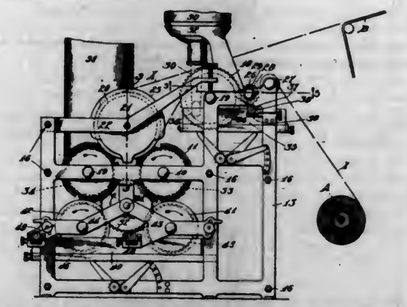
1. A rein holder for attachment to a harness, comprising a base, a rigid keeper on the base at the front thereof and having upwardly extending side members and a transverse member connecting the upper end of the side members, the said keeper being arranged for engagement by the back strap to hold the base against transverse movement, and a pair of spaced loops for the passage of the reins, the said loops being connected with each other at their lower ends by a transversely extending connecting member resting on and secured to the said base at the rear portion thereof, and over which and between the said loops, the crupper strap is adapted to pass, longitudinally extending members secured to the base adjacent to the sides thereof and connecting the loops with the side members of the keeper, the said keeper and said loops being spaced apart by the said longitudinally extending members for the passage of the hip strap to hold the base against longitudinal movement.

2. A rein holder for attachment to a harness, comprising a base plate, a pair of loops for the passage of the reins, and a transversely extending keeper for the passage of the back strap, the said loops and keeper being formed of a single piece of wire having a transverse bar connecting the loops with each other, and longitudinal bars connecting the loops with the side members of the keeper, and means for attaching the said bars to the base plate.

3. A rein holder for attachment to a harness, comprising a base plate, a pair of spaced loops for the passage of the reins, a keeper for the passage of the back strap, a transverse bar connecting the loops with each other at their lower ends, a transverse bearing formed on the base plate and through which the said transverse bar extends, longitudinal bars connecting the loops with the keeper, and longitudinally extending bearings formed on the base plate near the sides thereof and through which extend the said longitudinal bars.

4. A rein holder for attachment to a harness, comprising a base plate, a pair of loops for the passage of the reins, a transversely extending keeper for the passage of the back strap, the said loops and keeper being formed of a single piece of wire having a transverse bar connecting the loops with each other, and longitudinal bars connecting the loops with the side members of the keeper, and bearings formed on the base plate and engaged by the said transverse and longitudinal bars.

960,437. METHOD AND APPARATUS FOR COATING PERFORATED WEBS. FREDRICK B. THOMPSON, Chicago, Ill., assignor to National Waterproof Film Company, a Corporation of Illinois. Filed Aug. 30, 1909. Serial No. 515,202.



1. The method of coating the face of a web having marginal rows of perforations without closing the perforations with the coating material, which consists in first spreading upon the entire face of the web a film of coating material in the fluid state, the said film being of such thickness that the surface tension of that part of the film which bridges the perforations of the web will be sufficient to overcome the cohesion of the particles of the material, and in then making an application of the fluid coating material in greater quantity to that part of the face of the web between the rows of perforations while the material first applied is still fluid.

2. In an apparatus for coating the face of a web having marginal rows of perforations, in combination, a liquid-applying tool substantially equal in width to the entire width of the web, and a liquid-applying tool substantially equal in width to that part of the web between the rows of perforations, arranged to operate successively.

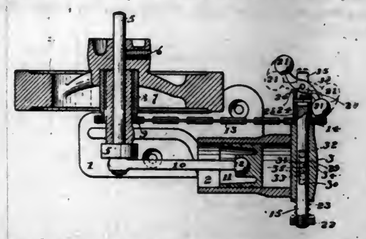
3. In an apparatus for coating the face of a web having marginal rows of perforations, in combination, a liquid-applying roller substantially equal in width to the entire width of the web, and a liquid-applying brush substantially equal in width to that part of the web between the rows of perforations, arranged to engage the face of the web in succession.

4. In an apparatus for coating the face of a web having marginal rows of perforations, in combination, a liquid-applying roller substantially equal in width to the entire width of the web, means for regulating the quantity of liquid delivered by the roller, and a liquid-applying brush substantially equal in width to that part of the web between the rows of perforations, arranged to engage the face of the web in succession.

5. In an apparatus for coating the face of a web having marginal rows of perforations, in combination, a liquid-applying roller substantially equal in width to the entire width of the web, a liquid-applying brush substantially equal in width to that part of the web between the rows of perforations, arranged to engage the face of the web in succession, and means for regulating the quantity of liquid delivered by the roller and by the brush.

[Claim 6 not printed in the Gazette.]

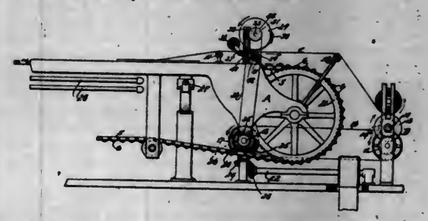
960,438. STEAM-ENGINE. HERBERT L. THOMPSON, Elgin, Ill. Filed Nov. 25, 1908. Serial No. 464,402.



1. In a steam engine a cylinder and cylinder head, in combination with a valve rotatably and slidably mounted in said head, said valve and said head being provided with ports, means for rotating said valve, parallel longitudinal extensions on said valve, a governor lever pivotally mounted between said extensions, and a fulcrum for said lever and means yieldingly opposing the action of said lever, substantially as described.

2. In a steam engine a cylinder and cylinder head, in combination with a valve rotatably and slidably mounted in said head, said valve and said head being provided with ports, said valve extending beyond said head and being bifurcated, a governor lever pivotally mounted in the bifurcated end of said valve, a sleeve surrounding said valve and forming a fulcrum to said lever and means for rotating said valve, substantially as described.

960,439. SELVAGE-PRINTING MECHANISM. CHARLES R. THOMSON, Adams, Mass., assignor to Renfrew Manufacturing Company, a Corporation of Massachusetts. Filed Feb. 9, 1910. Serial No. 542,837.

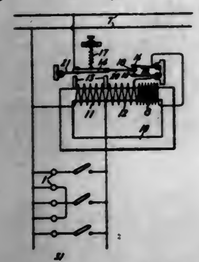


1. A tentering machine having a pair of oppositely disposed side frames, transversely adjustable cloth holding devices, a winding device for the cloth passing from the frame in combination with a printing mechanism located upon one of the side frames at a point after and adjacent to the place where the holding devices let go the cloth.

2. In combination a tentering frame transversely adjustable a winding device, a heating device for the goods passing through the tentering frame and a printing mechanism located upon the frame at that point where the goods are still warm said printing mechanism comprising a standard mounted upon and partaking of the transverse adjustment of the tentering frame, a printing roll carried thereby and driving mechanism operated from the tentering frame shaft for rotating it, an inking device and a platen.

3. A tentering frame transversely adjustable its cloth holding devices, a winding device for the cloth passing from the frame in combination with a printing mechanism located upon the frame at a point after and adjacent to the place where the holding devices let go the cloth said printing mechanism comprising a standard mounted upon and partaking of the transverse adjustment of the tentering frame, a printing roll carried thereby and driving mechanism operated from the tentering frame shaft for rotating it, an inking device and a platen.

960,440. COMPENSATOR. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 10, 1908. Serial No. 415,035.



1. The combination of a current transforming device, a coil of high inductance in series with this device, a source of alternating current, and means for automatically severing the connection of the auxiliary coil with the said source of current and substituting therefor a connection to the aforesaid transforming device.

2. In a system of alternating current distribution, the combination of a current transforming device, a source of alternating current, means for greatly increasing the inductive resistance of said transforming device at no load, and means actuated by leakage flux from said device for automatically reducing the inductive resistance of said device at the instant a part or full load current is taken from said device.

3. The combination of a current transforming device, an auxiliary coil of high inductance in series with the same, a source of alternating current, iron pole pieces magnetically excited by said current, a spring controlled armature actuated by the attractive force of said pole pieces and contacts connected with said armature to enable the auxiliary coil to be cut out of circuit by a movement of the armature.

4. In systems of alternating current distribution by transformers, an auxiliary coil of high inductance in series with the primary circuit of said transformer, a source of alternating current, iron pole pieces magnetically excited by a current in the primary circuit of said transformer, a spring controlled armature magnetically actuated by said pole pieces, and contacts spring connected to said armature to cut said auxiliary coil out of circuit.

5. The combination of a current-transforming device, a coil of high impedance mounted on the core of said device and in series with a winding thereof, at no load, and automatic means for disconnecting the high inductance coil from the circuit when the load comes on.

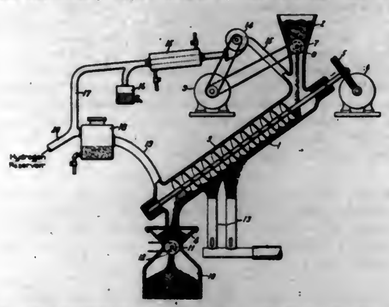
[Claims 6 to 10 not printed in the Gazette.]

960,441. PRODUCTION OF FINE-METAL TUNGSTEN. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 19, 1908. Serial No. 416,689.

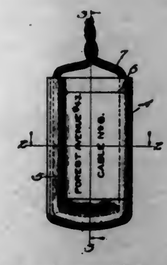
1. The process which consists in reducing metallic oxid with hydrogen, recovering at least a part of the hydrogen from the watery vapor formed in the reaction, adding the recovered hydrogen to the main body of hydrogen, and using the combined body of gas to reduce another portion of oxid.

2. The process of continuously reducing metallic compounds, which consists in continuously feeding the compound to and through a zone of treatment, simultaneously passing hydrogen gas through said zone, removing the watery vapor from the unused hydrogen, and returning the hydrogen to the zone of treatment in a continuous cycle.

3. The process of continuously reducing metallic oxid, which consists in continuously feeding the oxid to and through the zone of treatment, simultaneously passing hydrogen gas through the zone, regenerating hydrogen from the watery vapor formed by the reaction, and adding the regenerated hydrogen to the main current of hydrogen in a continuous cycle.



960,442. IDENTIFYING-TAG. ARTHUR A. THURLBY, Chicago, Ill. Filed June 9, 1908. Serial No. 437,549.



1. An identifying tag comprising a one-piece transparent receptacle, a label with reading matter thereon, so arranged in the receptacle that the reading matter is visible through the latter, the receptacle being filled with a material impervious to moisture and gases, and means for attaching the tag to the article to be identified, said means being embedded in said material and extending from said receptacle.

2. An identifying tag comprising a transparent receptacle open at one end and bent inwardly toward the center so as to form a partially peripheral hollow bead, a label with reading matter thereon, so arranged in the receptacle that the reading matter is visible through the latter, a loop of corresponding shape to the bead of the receptacle and contained within said bead, the receptacle being filled with a material impervious to moisture and gases for protecting the label and retaining the loop in position.

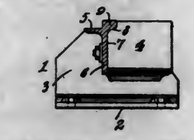
3. An identifying tag comprising a glass receptacle open at one end and bent inwardly toward the center so as to form a partially peripheral hollow bead, a label with reading matter thereon, so arranged in the receptacle that the reading matter is visible through the latter, a loop of corresponding shape to the bead of the receptacle and contained within said bead, the receptacle being filled with gypsum, whereby the label is protected and the loop retained in position.

4. An identifying tag comprising a transparent weatherproof receptacle, a filling for said receptacle, consisting of a material impervious to moisture and gases, and a label arranged in the receptacle between the filling and the wall of the receptacle so as to be visible therethrough, said label being retained in position by said filling.

5. In an identifying tag, a transparent receptacle containing hardened plastic material, attaching means embedded in said material and extending from said receptacle, said receptacle being so formed as to prevent the withdrawal of the body of plastic material, and a label within said receptacle, said label being arranged between the filling and a wall of the receptacle so as to be visible.

[Claims 6 and 7 not printed in the Gazette.]

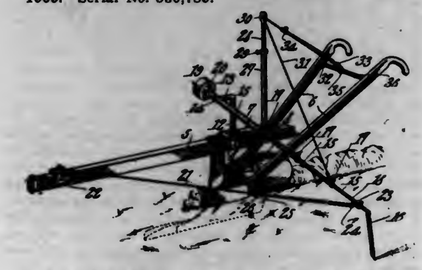
960,443. RAIL-CHAIR. CHARLES A. TILLY, Brooklyn, N. Y. Filed Nov. 20, 1908. Serial No. 463,725.



1. A seat for rails comprising a base having an upright flange on one side of the rail, and cut to conform to the side of the rail, and two upright flanges upon the opposite side of the rail spaced apart to include a chamber, and said chamber having its open face provided with a longitudinally extending member having openings, and securing elements engaging the said openings and the web of the rail.

2. A seat for rails, comprising a base having an upright flange on one side of the rail, and cut to conform to the side of the rail, and two upright flanges on the other side of the rail spaced apart to include a chamber, said chamber having its open face provided with a longitudinally extending member, means for connecting the member and the rail, and a removable top for the chamber.

960,444. MARKING ATTACHMENT FOR PLOWS. JAMES THOMAS TUCKER, Moultrie, Ga. Filed Dec. 1, 1909. Serial No. 530,789.

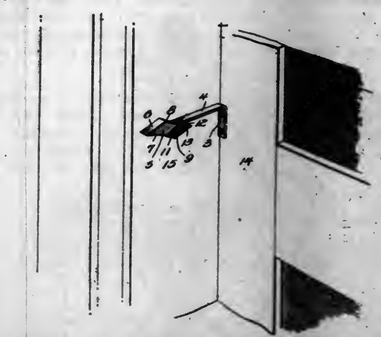


1. In a marking attachment for plows, the combination with a plow beam, of a marker, a support for said marker comprising adjustable sections whereby said support may be lengthened and shortened, the marker being carried on one end of the support, and a counterweight adjustably mounted on the other end of the support.

2. In a marking attachment for plows, the combination with a plow beam, of a marker, a support for the marker carried by the plow beam, and pivoted to swing to either side thereof, a standard rising from the plow beam, and having an eye at its upper end, a hoisting line passing through said eye, and connected at one of its ends to the support of the marker, and holding means for the other end of hoisting line.

3. In a marking attachment for plows, the combination with a plow beam and its handles, the latter being connected by a cross bar, of a marker, a support for the marker carried by the plow beam, and pivoted to swing to either side of the beam, a standard rising from the plow beam, and having an eye, a hoisting line passing through said eye, and connected at one end to the support of the marker, and a hook carried by the other end of the line, and adapted to engage the aforesaid cross bar of the handles.

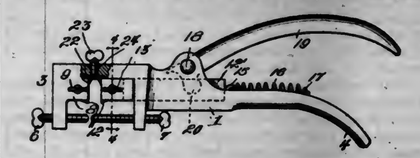
960,445. SCREEN-DOOR FASTENER. RUSSELL E. TUPPER, Sandwich, Mass. Filed Sept. 22, 1909. Serial No. 518,921.



1. A door check and fastener including a catch element and a buffer element, the catch element including a spring strip adapted to be secured at one end to the door and a head secured upon the strip and having its lower edge formed to provide two divergent angularly related surfaces, the buffer element having its upper edge formed with similar surfaces, the respective surfaces of the edge of each element being of different lengths and at different angles to the horizontal.

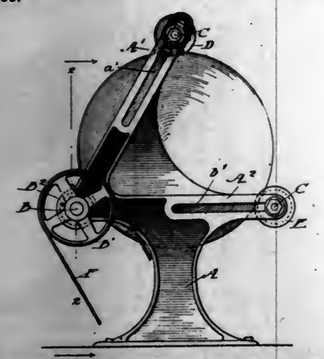
2. A door check and fastener including a catch element having spring connection with the door and a buffer element having fixed connection with the door casing, said catch element and buffer element each comprising approximately diamond shaped bodies having their upper and lower edges presenting two divergent angularly related surfaces, the initial engaging surfaces of the elements being at less inclination to the horizontal than the finally engaging surfaces of the elements.

960,446. SAW-SET. ALBERT OMAR TURNER, Manhattan, Kans., assignor of one-fourth to Fred R. Smith, Manhattan, Kans. Filed May 27, 1908. Serial No. 435,333.



In a device for the purpose set forth, a member provided with a substantially rectangular hollow head and having transversely depending offset arms, and being also provided with a depending handle, the said handle having its upper face provided with a longitudinally extending groove, a movable member within the groove, and projecting within the hollow head of the first member, means for normally forcing the sliding member away from the head of the first member, a handle connected with the first member and adapted to engage the sliding member to force the same within the hollow head of the first member, the depending portions of the first member being provided with threaded openings, threaded members for these openings, a block connected with the end of the sliding member, a block connected with the head of the first member, means for removably securing the blocks to both of the members, each of said blocks being substantially rectangular in formation and having their edges provided with alternating teeth and recesses, the teeth of one of the blocks being adapted to be received within the recess of the opposite block, and means for sustaining the blocks in horizontal alinement with each other.

960,447. TABLE-EDGE-SANDING MACHINE. EMIL TYDEN, Hastings, Mich. Filed Dec. 4, 1908. Serial No. 465,899.



1. A machine for finishing circular table tops and the like, comprising a standard; two pulleys mounted thereon projecting off therefrom, one of said pulleys having its bearing in a fixed position, the other being adjustable toward and from said first-mentioned pulley; a check device also mounted on the standard, substantially in the plane of rotation of the two pulleys, and adjustable toward and from the pulley in the fixed bearing, and means for rotating said last-mentioned pulley.

2. A machine for finishing the edges of circular table tops and the like, comprising a standard having two arms at an angle of substantially sixty degrees to each other; a shaft journaled at the apex or meeting point of said arms transversely to their plane; a friction pulley on the shaft; means for rotating the shaft, the two arms having slots extending transversely to the axis of said shaft; stud axles mounted in the arms for adjustment in said slots, and table-positioning pulleys on the axles at the same side of said arms at which the friction pulley on the rotating shaft is located.

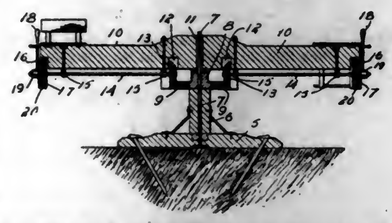
3. A machine for finishing circular table tops and the like comprising a support and two pulleys mounted thereon projecting off therefrom, having their axes relatively adjustable, and a check device substantially in the plane of rotation of the two pulleys, and having its bearing mounted for adjustment toward and from the plane of the axes of said pulleys.

4. A machine for finishing the edges of circular table tops and the like, comprising a standard having two arms at an angle to each other of less than 90°, a pulley having its axis at the apex, or meeting point of said arms, and extending transversely to their plane, the two arms having slots extending transversely to said axis, the two pulleys having their shafts respectively mounted in the arms for adjustment in said slots and means for rotating one of the three pulleys.

5. A machine for finishing the edges of circular table tops and the like, comprising a standard having two arms at an angle to each other of less than 90°, a shaft journaled at the apex of said angle, or meeting point of said arms, and extending through the standard transversely to the plane of the arms; a friction pulley on said shaft at one side of standard and means for rotating shaft at the other side of standard; the two arms for slots extending transversely of the axis of said shaft, stud axles mounted in the arms for adjustment in said slots and table positioning pulleys on said axles substantially in the plane of the friction pulley on the first mentioned shaft.

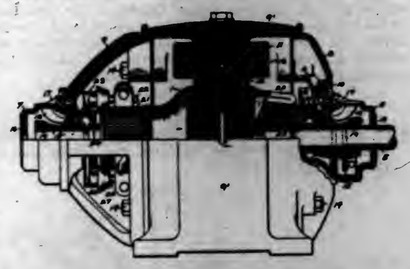
960,448. OPERATING MECHANISM FOR ROUNDABOUTS. JOEL R. SIMMONS and PATRICK J. FORD, Augusta, Ga. Filed Sept. 30, 1907. Serial No. 395,256.

In an operating mechanism for roundabouts, the combination with a transmission shaft provided with a driving ratchet wheel, of a lever having a collar at one end engaging the outer end of the transmission shaft and forming a bearing for said lever, the said lever being further provided with a split sleeve concentric with said collar



and within which the ratchet wheel is disposed, one of the split edges of the said sleeve being in-turned and constituting a pawl engaging said ratchet wheel.

960,449. DYNAMO-ELECTRIC MACHINE. LOUIS B. UNDERWOOD, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 3, 1909. Serial No. 487,683.



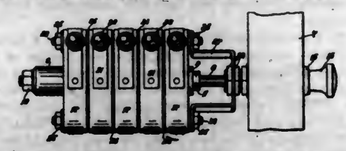
1. In a dynamo electric machine, a frame member, an end member fastened thereto, a shaft, a rotatable member mounted thereon, said end member having a bearing in which said shaft is journaled and openings around the bearing, and a fan member comprising a rotatable disk mounted in close proximity to and covering the openings in said end member, fan blades extending from said disk on the inside thereof and openings in said disk between the fan blades and opposite to the openings in said end member.

2. In a dynamo electric machine, a frame member, an end member fastened thereto, a shaft, a rotatable member mounted thereon, said end member having a bearing in which said shaft is journaled and openings around the bearing, and a fan member comprising a sheet metal disk mounted in close proximity to and covering the openings in said end member, fan blades bent up out of said disk on the inside thereof and openings in said disks between the fan blades and opposite to the openings in said end member.

3. In a dynamo-electric machine, a frame member, an end member fastened thereto, a rotatable member mounted on a shaft and having a flange member, a fan fastened to said flange member comprising a disk having openings therein and fan blades extending therefrom, said end member having a bearing in which said shaft is journaled and over which said flange member projects and openings of substantially the same outside diameter as the diameter of the disk for conducting air to the openings in said disk.

4. In a dynamo-electric machine, a frame member, an end member fastened thereto, a rotatable member mounted on a shaft, a fan member fastened to said rotatable member comprising a sheet metal disk having openings punched therein and fan blades bent up out of said disk, said end member having a bearing in which said shaft is journaled and openings around the bearing for conducting air to the openings in said disk, said disk being in proximity to the openings in said end member.

960,450. SWITCH CONSTRUCTION. HERMON L. VAN VALKENBURG, Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed June 22, 1905. Serial No. 266,521.

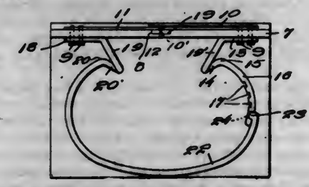


1. In a switch, a plurality of stationary switch units, each comprising a block of insulating material, having an opening extending through the same and a pair of contact members secured to the block, means for supporting said units with the openings of the blocks in alinement, and a movable switch member adapted to be shifted longitudinally in said openings, said switch member having one or more contact members adapted to coöperate with the contact members of the stationary switch units.

2. In a switch, a plurality of stationary switch units each comprising a block of insulating material and a pair of yieldable contact fingers secured to the block, said blocks having openings extending therethrough, means for supporting said units with the openings of the blocks in alinement, and a movable switch member adapted to be shifted longitudinally in said openings, said switch member having spaced insulated bridging contact members adapted to coöperate with said contact fingers.

3. In a switch, a plurality of stationary switch units, each comprising a block of insulating material and a pair of contact fingers secured to the exterior of the block, each block having an opening extending therethrough and the contact fingers carried by the block having portions extending into the opening, means for supporting said units with the openings of the blocks in alinement, and a movable switch member adapted to be shifted longitudinally in said openings, said movable switch member having one or more bridging contacts adapted to coöperate with said contact fingers.

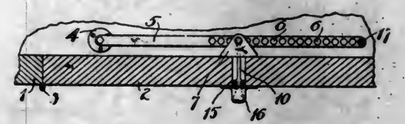
960,451. BAG-HOLDER. EDSEL CLEMENT VICARY, Caron, Saskatchewan, Canada. Filed Oct. 18, 1909. Serial No. 522,365.



1. The combination with a suitable support, of a bag holder comprising a curved resilient member having a securing base from which the bar is obliquely continued and then directed downwardly and rearwardly, and then laterally in a curved main portion ending in a key lug, and a securing member including a base portion from which obliquely extends a stem portion from which said member is continued in a downwardly and obliquely directed portion from which laterally curves a section having seats to receive said lug.

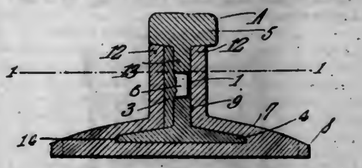
2. The combination with a cross bar of a bag holder comprising a curved resilient bar at one end having a flat latch head with a dove-tailed key lug, and at the remaining end having a bag supporting shoulder portion from which is continued at right angles a supporting stem from which extends obliquely to said shoulder portion a perforated securing base, means to secure said base to one end of said cross bar, a securing member comprising a flat curved blade having its inner edge provided with a series of dovetailed seats, said blade having a bag-receiving shoulder from which is continued a supporting stem ending in a securing base held at right angles to said stem, and means to secure said base to the remaining end of said cross bar.

960,452. CASEMENT-WINDOW-ADJUSTING DEVICE AND LOCK. HENRY G. VOIGHT, New Britain, Conn., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Sept. 21, 1909. Serial No. 518,733.



A casement window adjusting and fastening mechanism comprising a rod arranged to be hinged externally of the window and to swing above the lower part of the window casing, a guide for the rod arranged to be carried by the window externally of and above the lower edge, a locking device coöperating with the said guide for holding said rod against movement therein, said rod having a plurality of cavities toward its free end, said locking device comprising a tilting member having a locking nose arranged to engage in any one of said cavities, a bearing support for said tilting member carried by the window, and a finger-piece on said tilting member projecting from the inner side of said window and accessible for manual engagement.

960,453. RAIL-JOINT. JENKINSON W. WADDELL, Belmont, Ohio. Filed July 2, 1909. Serial No. 505,723.



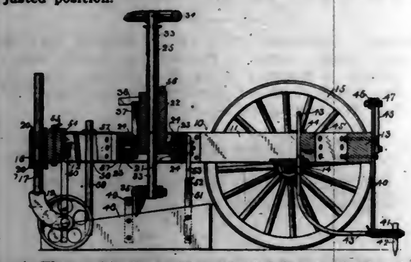
A rail joint comprising a pair of meeting rails having transverse openings through their webs, a straight fish plate fitting snugly against the webs of the said rails between the head and the base of the same and provided on one side with lateral projections adapted to engage the transverse openings in the webs of the rails, the entire outer face of the fish plate lying in a plane parallel with the web and a chair having a base portion fitting around and inclosing the base portion of the meeting rails and engaging the upper sides of the base of the rails and having upwardly extending side portions engaging under the head of the rails, one of said side portions bearing against web of the rail and the other side portion bearing against the outer side of the fish plate and holding the same in engagement with the rails.

960,454. COMBINED LEVELER, MARKER, AND BORDER MACHINE. JAMES P. WALLACE, Colorado Springs, Colo. Filed Nov. 24, 1909. Serial No. 529,744.

1. The combination with a wheeled frame, of a housing trunnioned in the frame to permit swinging movement thereof, a vertically adjustable sleeve supported by the housing, and a leveling device having a stem rotatably mounted in the sleeve.

2. The combination with a wheeled frame, of a housing trunnioned in the frame to permit swinging movement thereof, a vertically adjustable sleeve supported by the housing, a leveling device having a stem rotatably mounted in the sleeve, and stop means limiting the rotation of the leveling device.

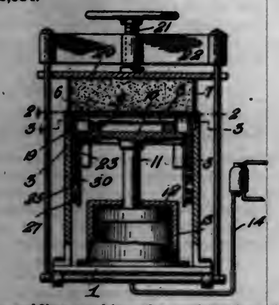
3. The combination with a wheeled frame, of a housing trunnioned in the frame to permit swinging movement thereof, a vertically adjustable sleeve supported by the housing, a leveling device having a stem rotatably mounted in the sleeve, stop means limiting the rotation of the leveling device, and means locking the sleeve in vertically adjusted position.



4. The combination with a wheeled frame, of a housing trunnioned in the frame to permit swinging movement thereof, a vertically adjustable sleeve supported by the housing, a leveling device having a stem rotatably mounted in the sleeve, stop means limiting the rotation of the leveling device, means locking the sleeve in vertically adjusted position, and means for locking the housing in its swung position.

5. The combination with a wheeled frame, of a U-shaped yoke depending therefrom, a clip carried centrally at the forward end of the frame, a border device having outwardly diverging side boards, and hanger means for uniting the side boards and detachably connected to the clip and the yoke for mounting the border device on the frame.

960,455. MOLDING-MACHINE. PETER FREDRICK WALSTROM, Birmingham, Ala. Filed Aug. 31, 1909. Serial No. 515,534.



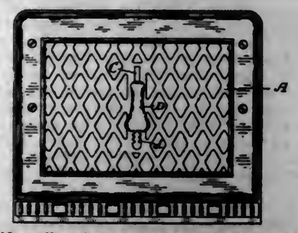
1. In a molding machine, the combination of a stationary platen, a supporting frame, a stripping plate having limited movement in the latter, a pattern table having movement independent of the stripping plate and adapted to elevate the same, means for actuating said pattern table, supporting pins extending from the stripping plate, pivoted latch levers upon said frame and having counterbalanced cam portions adapted to engage and support said pins, and links upon the pattern table and having slot and pin connection with said latch levers.

2. In a molding machine, the combination of a stationary platen, a supporting frame, a stripping plate having limited movement in the latter, a pattern table having movement independent of the stripping plate and adapted to elevate the same, means for actuating said pattern table, adjustable stops carried by the table and adapted to engage said frame to limit the upward movement of the table, supporting pins extending from the stripping plate, pivoted latch levers upon said frame and having counterbalanced cam portions adapted to engage and support said pins, and links upon the pattern table and having slot and pin connection with said latch levers.

3. In a molding machine, the combination of a stationary platen, a supporting frame, a stripping plate having limited movement in the latter, a pattern table having movement independent of the stripping plate and adapted to elevate the same, a fluid pressure cylinder and piston for actuating said pattern table, supporting pins depending from the stripping plate, pivoted latch levers upon said frame and having counterbalanced cam portions adapted to engage and support said pins, and links upon the pattern table and having slot and pin connection with said latch levers.

4. In a molding machine, the combination of a base, upright frame members rising therefrom and having at their upper ends inwardly projecting side flanges, the inner faces of the upper ends of said members being formed with guide recesses, side members uniting the inwardly extending flanges of the upright members, a stripping plate slidably engaged with the guide recesses in said upright members, a pattern table formed at its corners with upright angular guide lugs to slidably engage the inner faces of said upright members and to engage and elevate said stripping plate, said table being formed on its sides with outwardly projecting lugs having vertical screw threaded openings disposed beneath said side members, stop screws in said openings of the lugs and adapted to engage the bottom edges of said side members, means for actuating the pattern table, means for supporting the stripping plate in elevated position, a stationary platen, and means actuated by the movement of the pattern table for moving said stripping plate-supporting means into and out of operative position.

960,456. SIDE-WALL REGISTER. ALBERT WARD, London, Ontario, Canada, assignor to McClary Manufacturing Company, London, Canada. Filed July 27, 1908. Serial No. 445,684.



1. A side wall register provided with a face plate having a vertical slot therein, a gravity catch sliding in said slot, means for forming an engagement between the catch and face plate at different heights, the catch by its weight normally tending to engage the face plate a hinged valve and a connecting rod pivotally connected to the catch and the valve.

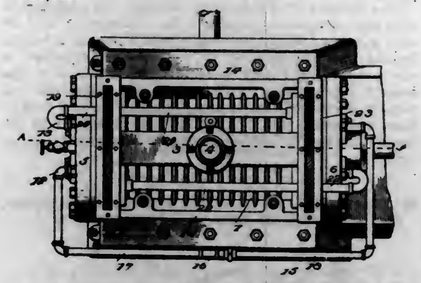
2. A side wall register provided with a face plate having a vertical slot and a series of notches formed therein, a catch sliding in the slot and adapted to rock into and out of engagement with said notches, a hinged-valve and a connecting rod pivotally connected to the catch and the valve.

3. A side wall register provided with a face plate having a vertical slot and a series of notches formed therein, a catch, a lug on said catch near its upper end projecting through said slot from outside, a hinged valve, a connecting rod pivotally connected to said valve and said lug, and a toe on said catch adapted to engage the notches of the face plate.

4. A side wall register provided with a face plate having a vertical slot and a series of notches formed therein, a catch, a lug on each catch near its upper end projecting through said slot from outside, a hinged valve, a connecting rod pivotally connected to said valve and said lug, a transversely bent end on said rod retaining the lug within the slot, and a toe on said catch adapted to engage the notches of the face plate.

5. A side wall register provided with a face plate having a vertical slot therein intermediate its edges, a valve, a gravity catch exterior to the face plate and pivotally supported with relation thereto, connecting means between the catch and the valve for moving the latter passing through the said slot, and means for engaging the catch with the face plate at different heights the catch by its weight normally tending to engage the face plate.

960,457. MEANS FOR COOLING CYLINDERS. GOVERNOR D. WARREN, Denver, Colo. Filed Feb. 25, 1907, Serial No. 359,149. Renewed Nov. 1, 1909. Serial No. 525,812.



1. The combination with a cylinder horizontally arranged, of means for passing water through the heads, and then spraying it upon the periphery of the cylinder on opposite sides in the outside atmosphere.

2. The combination with a cylinder, of a casing surrounding the same, and having an open upper side and a pipe extending across the upper open side of the casing, and discharging water upon the cylinder.

3. The combination with a cylinder, of a casing surrounding the same and having an open upper side, and pipes extending across the upper open side of the casing and discharging water upon opposite sides of the cylinder.

4. The combination with a cylinder, of a casing surrounding the same and having an open upper side, and pipes extending across the upper open side of the casing and discharging water upon opposite sides of the cylinder, and said casing having a discharge opening at its lower side for discharging the water therefrom as fast as it passes from the cylinder.

5. The combination with a cylinder, of a casing surrounding the same and having an open upper side, means for spraying water upon the periphery of the cylinder, and a discharge at the lower side of the casing for discharging the water from the casing as fast as it passes from the cylinder.

[Claims 6 to 12 not printed in the Gazette.]

960,458. TELEPHONE-REPEATER. NATHANIEL G. WARTH, Columbus, Ohio. Filed Dec. 14, 1908. Serial No. 467,238.

1. The combination in a telephone repeater, of two repeaters, each including a pair, at each repeater station, each pair adapted to repeat in a direction opposite to the other, each pair comprising a compound telephone repeater composed of a receiving or primary-relay and a transmitting or secondary-relay; the primary relays consisting of a sensitive receiving telephone and transmitting microphone without a diaphragm, and a non-diaphragmatic magnetic-armature as the vibratory actuating member, the receiving telephone being associated with the incoming line circuit and each microphone adjusted to exert merely a normal microphonic pressure between its contacts or electrodes; the secondary-relays being sensitive and adapted to increase and uniformly magnify currents received by them; a primary circuit, including a battery, in circuit with the microphone of each primary-relay, said primary circuits being associated inductively with a respective secondary local circuit in which the receiver of the secondary relay is connected, the microphones of the secondary relays being adjusted to exert merely a normal microphonic pressure between their contacts or electrodes, and each microphone having a primary circuit, including a battery, associated inductively with its respective outgoing line.



2. The combination in a telephone repeater, of two repeaters, each including a pair, at each repeater station each pair adapted to repeat in a direction opposite to the other, each pair comprising a compound telephone repeater composed of a receiving or primary relay and a transmitting or secondary-relay; the primary relays consisting of a sensitive receiving telephone and transmitting microphone without a diaphragm and a non-diaphragmatic magnetic armature as the vibratory actuating member, the receiving telephones being associated with the incoming line circuit, and each microphone adjusted to exert merely a normal microphonic pressure between its contacts or electrodes; the secondary-relays being sensitive and adapted to increase and uniformly magnify currents received by them; a primary circuit, including a battery, in circuit with the microphone of each primary-relay, said primary circuits being associated inductively with a respective secondary local circuit in which the receiver of the secondary relay is connected, the microphones of the secondary relays being adjusted to exert merely a normal microphonic pressure between their contacts or electrodes, and each microphone having a primary circuit including a battery associated inductively with its respective outgoing line, and circuit means and associated inductive means for preventing self-action of the repeaters.

3. The combination in a telephone repeater of two repeaters each including a pair at each repeater station, each pair adapted to repeat in a direction opposite to the other, each pair comprising a compound telephone repeater composed of a receiving or primary-relay and a transmitting or secondary-relay; the primary relays consisting of a sensitive receiving telephone and transmitting microphone without a diaphragm and a non-diaphragmatic magnetic armature as the vibratory actuating member, the receiving telephone being associated inductively with the incoming line circuit, and each microphone adjusted to exert merely a normal microphonic pressure between its contacts or electrodes; the secondary relays being sensitive and adapted to increase and uniformly magnify currents received by them; a primary circuit, including a battery, in circuit with the microphone of each primary relay, said primary circuits being associated inductively with a respective secondary local circuit in which the receiver of the secondary-relay is connected, the microphones of the secondary relays being adjusted to exert merely a normal microphonic pressure between their contacts or electrodes and each microphone having a primary circuit, including a battery, associated inductively with its respective outgoing line and circuit means and associated inductive means for preventing self-action of the repeater.

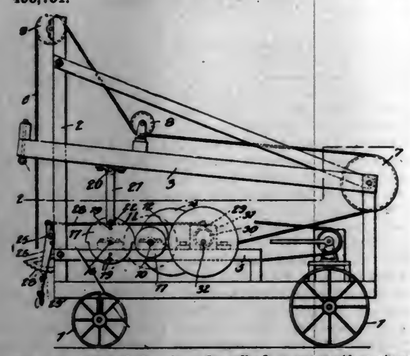
4. In a telephone repeater, the combination of a repeater-circuit adapted to reciprocal retransmission with means therein for balancing the circuit against reaction of the repeater, a relay comprising a receiver and a transmitter in repeater relation and having as its actuating vibratory element or armature a freely oscillatory tongue or reed-like regulable vibrator for electro-mechanically associating the receiver with the transmitter, and dominating means for damping said tongue, substantially as described.

5. In a telephone repeater, the combination of a repeater-circuit adapted to reciprocal retransmission with means therein for balancing the circuit against reaction of the repeater, a relay comprising a receiver and a trans-

mitter in repeater relation and having as its actuating vibratory element or armature a freely oscillatory tongue or reed-like regulable polarized vibrator for electro-mechanically associating the receiver with the transmitter, and dominating means for damping said tongue, substantially as described.

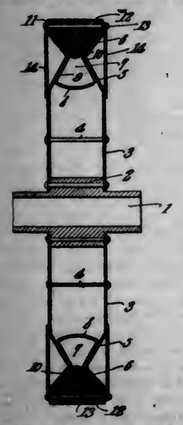
[Claims 6 and 7 not printed in the Gazette.]

960,459. WELL-DRILLING MACHINE. CHARLIE HENRY WATERMAN, Newport, Wash., assignor of one-third to Dennis E. Waterman and one-third to N. O. Hoyer, Newport, Wash. Filed May 13, 1909. Serial No. 495,751.
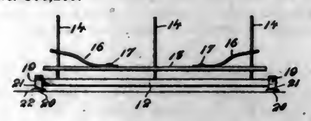


In a machine of the class described, a supporting structure, a pair of friction wheels mounted thereon, circular operating wheels having semicircular cam surfaces to engage the friction wheels during a portion of their revolution, a walking beam pivotally mounted above the operating wheels, links between the walking beam and operating wheels, a reel mounted in rear of the friction wheels, and a drill rope operated by the walking beam, and means for adjustably connecting the lower ends of the links with the cam sides or the opposite sides of the operating wheels.

960,460. VEHICLE-WHEEL. JOHN HENRY WATTERS, Augusta, Ga. Filed July 22, 1909. Serial No. 508,962.



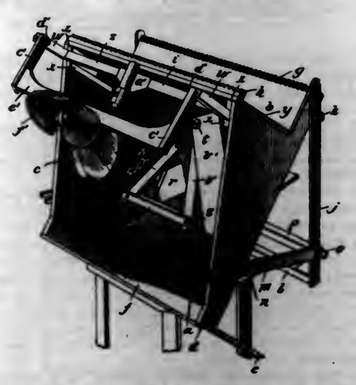
A wheel comprising spaced resilient disks having their outer edges shaped to present converging annular flanges and diverging annular flanges at the edges thereof, and a rim having a substantially hour glass form fitted between the said flanges of the disks.

960,461. NEWSPAPER FILE OR BINDER. CLAUDE E. WATTERSON, Nashville, Tenn. Filed June 4, 1909. Serial No. 500,209.



In a device of the character described, the combination of a base member comprising a bar provided at both its ends with trunnions or pivots, a pair of brackets having bearing openings adapted to receive said trunnions or pivots, means for rigidly securing said brackets to a fixed support, rods or pins projecting laterally from said base member, a clamping bar slidably mounted on said rods or pins, and means for securing said clamping bar in adjusted position on said rods or pins, substantially as described.

960,462. RETOUCHING-DESK. HENRY WEIMER, Tampa, Fla. Filed June 23, 1909. Serial No. 503,871.



1. A retouching easel or desk consisting of a front or main board provided with a light opening, a top wall extending rearwardly therefrom at a point below its upper edge, and coacting toothed racks affixed to the top wall and to the rear face of the front wall, for the purpose set forth.

2. A retouching desk having a front wall provided with a light opening and with side walls combined with an adjustable supporting leg-structure consisting of a pair of slotted uprights connected rigidly together at their lower ends and provided at their upper ends with longitudinal slots, clamp screws for clamping said upper ends to the side walls of the desk, a reflector supported between said uprights, and rearwardly extending bars pivotally connected to the uprights and slidingly connected to the side walls of the desk, for the purpose set forth.

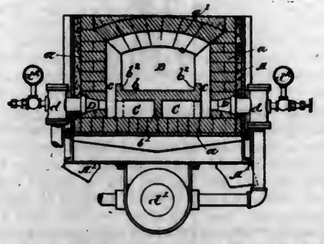
3. In combination with a retouching support provided with a light opening, of a pair of over-lapping plates each provided with an opening adapted to register with the light opening in the support, and means for pivotally clamping said plates to the rear face of the support at a point above the light opening.

4. In combination with a retouching support provided with a light opening, of a negative plate support consisting of a horizontal bar, a pair of supporting links pivotally attached to the ends thereof and slotted at their upper ends, and a clamp screw passing through said slots and into the support, for the purpose set forth.

5. In combination with a retouching desk having a light opening in its upright wall and having a top wall and side walls, a frame mounted in the upper part of the desk and adapted to be slid into and out of the same at a point above the light opening, of a detachable magnifying glass depending from said frame to a point in line with the light opening, for the purpose set forth.

[Claims 6 to 10 not printed in the Gazette.]

960,463. FURNACE. JACOB WEINTZ, Cleveland, Ohio, assignor to The Strong, Carlisle & Hammond Co., Cleveland, Ohio, a Corporation of Ohio. Filed June 28, 1909. Serial No. 504,656. Renewed Feb. 21, 1910. Serial No. 545,239.

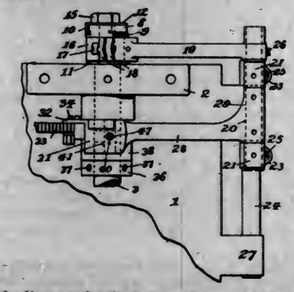


1. In a furnace, the combination of a heating chamber; a combustion chamber below the floor of said heating chamber; a baffle below the floor of said heating chamber; a flue leading from the side of the combustion chamber and into the heating chamber, said flue extending substantially the full dimension of the heating chamber parallel to said baffle; and a horizontal burner entering the combustion chamber on a side opposite to such baffle.

2. In a furnace, the combination of a heating chamber; a combustion chamber below the floor of said heating chamber; a baffle dividing said combustion chamber; a flue leading from either side of the combustion chamber and into the heating chamber, said flue extending substantially the full dimension of the heating chamber parallel to said baffle; and transversely disposed horizontal burners entering the combustion chamber on opposite sides of said baffle.

3. In a furnace, the combination of a heating chamber; a combustion chamber extending beneath the floor of the heating chamber, said combustion chamber being longitudinally divided by a wall projecting downwardly from the floor of the heating chamber; a flue extending the length of the heating chamber and leading from the combustion chamber on either side of the longitudinal division wall into the heating chamber; and transversely disposed horizontal burners entering the combustion chamber on opposite sides of the longitudinal division wall.

960,464. FEEDING MECHANISM FOR SEWING-MACHINES. JOHN P. WEIS, Nyack, N. Y., assignor to Metropolitan Sewing Machine Company, Nyack, N. Y., a Corporation of New York. Filed May 11, 1905. Serial No. 259,858.



1. A feeding mechanism comprising a feed-dog-carrying bar; and means for giving the said bar longitudinal reciprocations, including a driving-shaft, a pin carried by one end thereof eccentrically thereto, a pitman having an end surrounding said pin and connected at its other end to said bar, and means carried by said pin within the first-named end of said pitman for regulating the throw of said feed-bar.

2. A feeding mechanism comprising a feed-dog-carrying bar; means for giving the said bar longitudinal reciprocations, including a driving-shaft having an extended eccentric pin connected thereto; a pitman having an end surrounding said pin and connected at its other end to said bar; an eccentric surrounding said pin within the first-named end of said pitman having means for rotating the same on said pin for regulating the movement of the feed-bar.

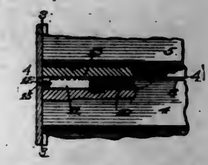
3. A feeding mechanism comprising a feed-dog-carrying bar; means for giving the said bar longitudinal reciprocations, including a driving-shaft having a pin extended therefrom eccentric to its longitudinal axis; an eccentric independent of and carried by said pin beyond the end of said shaft; means connecting said eccentric with said bar; and means for adjusting said eccentric circularly on said pin to regulate the feed movement of said bar.

4. A feeding mechanism comprising a feed-dog-carrying bar; and means for giving the said bar its longitudinal reciprocations, including a driving-shaft, a pin carried eccentrically by and extended from the end thereof, an eccentric-sleeve surrounding said pin, means for adjusting said eccentric sleeve on said pin for varying the feed movements and a pitman engaging the eccentric-sleeve and connected to the said bar.

5. A feeding mechanism comprising a feed-dog-carrying bar; and means for reciprocating the same, including a driving-shaft, the end of which carries a pin in extension thereof and eccentric thereto; an eccentric mounted on said pin beyond the end of said shaft; means for adjusting the eccentric circularly on said pin for regulating the feed movement of said bar; and a connection between said eccentric and said bar.

[Claims 6 to 14 not printed in the Gazette.]

960,465. LOCKING DEVICE FOR SECTIONAL CABINETS. ALBERT T. WEISS, Rochester, N. Y., assignor to Yawman & Erbe Manufacturing Co., Rochester, N. Y., a Corporation of New York. Filed Dec. 5, 1908. Serial No. 466,071.



1. An interchangeable unit for the formation of sectional cabinets comprising a casing having a chamber therein and a recess in one wall thereof, the upper and lower portions of the casing being provided, respectively, with members each adapted to interlock with a member formed in accordance with the other on an adjacent unit of the cabinet, one of said members embodying an engaging projection and the other a locking member unattachedly retained between the walls of the beforementioned recess and movable therein into and out of coöperation with its engaging projection and having an operating portion accessible from within the chamber.

2. In an interchangeable unit for the formation of sectional cabinets, the combination with a casing having a chamber therein and provided with a recess in one wall thereof and with a slot leading from the recess to the chamber, of members arranged upon the upper and lower portions of the casing, respectively, each adapted to interlock with a member formed in accordance with the other on an adjacent unit of the cabinet, one of said members embodying an engaging projection and the other a locking member unattachedly retained between the walls of the

recess of the casing and movable therein into and out of coöperation with its engaging member and having an operating portion projecting through the slot and within the chamber.

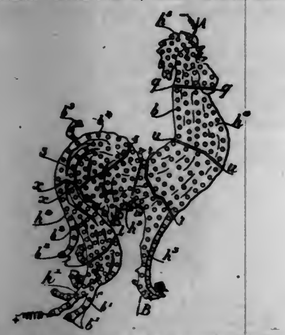
3. In an interchangeable unit for the formation of sectional cabinets, the combination with a casing having a tie piece connecting its end walls, of members arranged upon opposite sides thereof respectively, each adapted to interlock with a member formed in accordance with the other on an adjacent unit of the cabinet, one of said members embodying an engaging projection extending in the plane of one of the end walls and the other a locking member carried by the tie piece and movable toward and from the plane of said end wall, and into and out of coöperation with its engaging member to lock the sections together.

4. The combination with two furniture sections having corresponding walls, arranged in the same plane, of an engaging member arranged in the plane of the wall of one section, a tie piece connecting opposite walls of the other section and a locking member carried by the tie piece and movable toward and from the plane common to the walls of both sections and into and out of coöperation with the engaging member to temporarily lock the sections together.

5. In an interchangeable unit for the formation of sectional cabinets, the combination with a casing having a chamber therein and a tie piece connecting opposite walls thereof and provided with a kerf, of members arranged upon opposite sides thereof, respectively, each adapted to interlock with a member formed in accordance with the other on an adjacent unit of the cabinet, one of said members embodying an engaging projection and the other a sliding bolt arranged in the kerf in the tie piece to move into and out of coöperation with its engaging member and having an engaging portion projecting within the chamber.

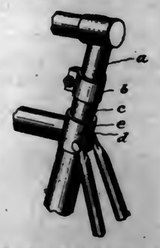
[Claims 6 to 8 not printed in the Gazette.]

960,466. ILLUMINATING-BODY. GUSTAVE WEISSMANN, Paris, France. Filed Jan. 8, 1909. Serial No. 471,330.



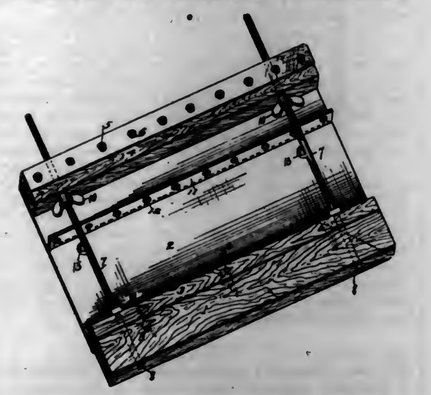
Illuminating body comprising in combination a plate of insulating material which has the shape of the sign to be represented having a certain number of holes enlarged toward the rear end, the lamps fixed with their caps in the holes of said plate of insulating material, plates of conducting material upon the front surface of said plate of insulating material for connecting a certain number of lamps, so that all the lamps are divided into $\frac{E}{e}$ groups, plates of conducting material upon the rear face of the plate of insulating material for connecting the same number of lamps which are connected by the front plates, said rear plates being placed with regard to the front plates so that they connect two groups of lamps which, on the other hand, are connected by means of two adjacent front plates, a metal cup and a metal spring in each of the enlargements of the holes of the plate of insulating material for securely connecting the cup of the corresponding lamp with the rear plate of conducting material, substantially as described and for the purpose set forth.

960,467. MOUNTING OF SADDLES UPON BICYCLES. WILLIAM JAMES WELCH, Hornsey, London, England. Filed June 28, 1909. Serial No. 504,856.



A saddle post retainer for bicycles comprising in combination, a one piece socket split on one side with the split portions normally spaced apart, a saddle post fitting relatively loosely in said socket, means for holding the split portions adjacent one another and in spaced relation, a band clip embracing said post and adapted for engagement with said socket, said clip being provided with a tongue or extension fitting between said split portions, and means for tightening said clip on said post to prevent downward and rotative movement of the post with respect to the socket.

960,468. PAPER-HANGER'S BOARD. FRANK D. WELLER, Toledo, Ohio. Filed Feb. 13, 1909. Serial No. 477,647.

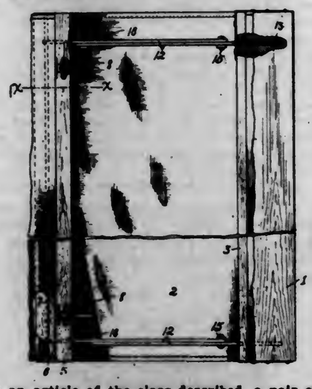


1. An article of the class described consisting of two frame-strips in substantially parallel relation and having alining apertures therethrough, one of said strips being in two parts, a strip of flexible material, one edge of which is securely clamped between the two parts of said frame-strip, and having its opposite edge provided with a series of apertures, a series of hooks on the single piece frame-strip adapted to engage with the apertures at the edge of said material, a depending fold or rib on said flexible strip intermediate its said two edges and substantially parallel therewith, said fold or rib containing a series of apertures for engagement with the hooks on said frame-strip, a plurality of rods having their ends inserted into the apertures in said frame-strips, said rods being threaded at one end and having shoulders near the other end for bearing against one of said frame-strips, winged nuts on the threaded ends of said rods for bearing against the other frame-strip.

2. An article of the class described consisting of two frame-strips in substantially parallel relation and having alining apertures, a strip of flexible material, one edge of which is secured to one of said frame-strips, said material having a series of apertures provided near the free edge thereof, means on the free frame-strip with which said apertures are adapted to removably engage, a depending fold or rib on said flexible strip intermediate its two edges, said fold or rib having a series of apertures for engagement with the engaging means on said strip, rods having their ends inserted into the apertures in said frame-strips, said rods being threaded at one end and having shoulders near the other end for bearing against one of said frame strips, and winged nuts on the threaded ends of said rods for bearing against the other frame-strip.

3. An article of the class described consisting of two frame-strips, one of which is provided with spaced hooks, a strip of flexible material having apertures provided along one edge thereof and also having a dependent tuck provided with apertures, said flexible strip having the edge thereof opposed to its apertured edge secured to one of said strips and its apertured edge or its tuck removably secured to the hooks on the other strip, and means for forcibly separating said frame- strips to stretch said flexible strip.

960,469. PAPER-HANGER'S BOARD OR THE LIKE. FRANK D. WELLER, Toledo, Ohio. Filed July 12, 1909. Serial No. 507,178.



1. In an article of the class described, a pair of frame strips, one of which has sockets therein, a strip of flexible material attached at its opposite edges to said frame strips, and a set of bars, one of the ends of which are inserted into said sockets and the opposite ends thereof engaged to the other frame strip, said bars having their inner ends pivotally connected to form toggles.

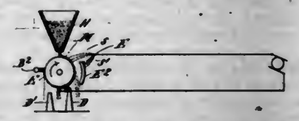
2. In an article of the class described, a pair of frame-strips having sockets therein, a strip of flexible material rigidly attached at one edge to one of said strips and removably attached to the other of said strips at a distance from the first mentioned strip, and sets of bars having their outer ends projecting into the sockets in said frame-strips and being pivotally connected intermediate their outer ends to form toggles.

3. In an article of the class described, a sheet of flexible material, a frame-strip attached thereto, a second frame-strip spaced from said first frame-strip, said two frame-strips having sockets in their inner sides, cam actuated clamping means associated with said second frame-strip for clamping the material thereto, and sets of bars having their outer ends loosely fitting into the sockets in said frame-strips and being pivotally connected intermediate their ends to adapt them to serve as toggles, and means for securing said bars against relative pivotal movements.

4. In an article of the class described, a pair of frame-strips having sockets therein, a strip of flexible material attached at its opposite edges to said frame-strips, and a set of bars having their outer ends projecting into the sockets in said frame-strips and their inner end portions pivotally connected to form toggles.

5. In an article of the class described, a pair of frame-strips having sockets therein, a strip of flexible material attached at its opposite edges to said frame-strips, and sets of bars having their outer ends projecting loosely into the sockets in said frame-strips and having their inner end portions in adjustable pivotal connection to form toggles of predetermined length.

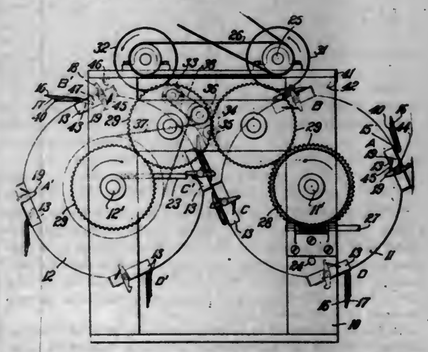
960,470. APPARATUS FOR ELECTRICAL SEPARATION. HENRY AZOR WENTWORTH, Newton, Mass., assignor to Huff Electrostatic Separator Company, Boston, Mass., a Corporation of Maine. Filed May 5, 1909. Serial No. 494,189.



1. In an electrical separator, a material-receiving electrode, means to deliver comminuted material thereto, an opposite spray-discharging electrode, an insulated electro-conductive shield between the spray-discharging electrode and the surface of the material-receiving electrode, to protect the latter from direct action of the spray, the delivering means being so disposed as to expose the material to the direct action of the spray in the passage of said material to the shielded surface of the material-receiving electrode, and the shield being so disposed as to produce in opposition to the shielded surface of the material-receiving electrode, a material-repelling static field, and means to collect separately the separated material.

2. In an electrical separator, a conveyer electrode, means to deliver comminuted material thereto, an adjacent spray discharging electrode, and an insulated electro-conductive shield, so disposed in relation to the two electrodes as to intercept further lodgment of the spray upon material affected by the spray earlier in the conveyance of the material, and so as to produce, in opposition to the surface of the conveyer electrode, a material-repelling static field, and means to collect separately the separated material.

960,471. MACHINE FOR JOINING LEATHER PIECES EDGEWISE AND OTHERWISE OPERATING UPON THE EDGES OF MATERIAL IN SHEET FORM. LAWRENCE GREENMAN WESTON, Brockton, Mass., assignor to Charles A. Browne, Brockton, Mass. Filed Feb. 4, 1909. Serial No. 476,139.



1. In apparatus of the class described, a rotating element and means to hold a sheet of material thereon with an edge exposed at the circumference of its rotation, the holder having a base set at an angle to the radius of the exposed edge; a plate on said base having a recess fitting

said sheet of material and forming a socket therefor; and a cover adapted to fit thereon, embracing the socket plate between itself and the base.

2. The combination of a rotating element and means to hold material thereon, comprising a base having an edge exposed at the circumference of its rotation and set at an angle to the radius of said edge, said edge being parallel to the axis of rotation and said base being adapted to receive a multiplicity of sheets side by side on its face; in combination with a plate fitting on said base having a multiplicity of recesses side by side conforming individually in shape to the shape of sheets of material and adapted to form sockets therefor, and open toward the circumference of rotation whereby material held thereby may project over said exposed edge of the base; and a cylindrical rotating roll adjacent, having its axis parallel to the said axis of rotation and adapted to act upon said exposed edges of material.

3. In apparatus of the class described, a rotating element and means to hold a sheet of material thereon with an edge exposed at the circumference of its rotation, the holder comprising a base set at an angle to the radius of the exposed edge, a cover hinged to the base, and a spring latch adapted to fasten it thereto, in combination with a stationary part of the apparatus adapted to engage and swing the cover about its hinge and a cam adapted to force the cover into latched position.

4. In apparatus of the class described, the combination of two holders each being adapted to hold a sheet of material with its edge exposed; means to move the two holders toward and from approximate contact with each other, and means to guide them, whereby the said exposed edges of sheets thus held register together when the holders are together.

5. In apparatus of the class described, the combination of two rotating elements each having a holder adapted to support a sheet of material with an edge exposed at the circumference of its rotation; the circumferences of the rotation of said edges being approximately tangential; and mechanism connecting the two elements whereby the said holders register together periodically during the rotation.

[Claims 6 to 18 not printed in the Gazette.]

960,472. GANG-SAW MILL. WILLIAM M. WILKIN, Erie, Pa. Filed Dec. 12, 1908. Serial No. 467,243.



1. The combination in a gang-saw mill of a frame, sash guides therein, a saw-sash, horns thereon projecting between said guides, pitmen pivoted on said horns in a vertical line with said guides, laterally extending ears on said pitmen, slides engaging said ears and operating in the guides in the mill frame, and crank mechanism for operating said pitmen, substantially as set forth.

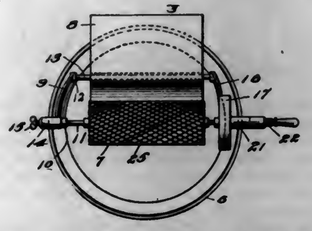
2. The combination in a gang-saw mill, of a mill frame, saw-sash guides in the upright portions thereof, a saw-sash, horns extending therefrom between the guides, a main shaft mounted on the base of the mill frame, crank mechanism thereon in a vertical line with the sash-guides, pitmen mounted thereon and connecting with the lower horns on the saw-sash, extensions on the upper end of the pitmen, lateral ears on said extensions and slides engaging the ears on the pitmen, and operating the sash-guides, substantially as set forth.

3. The combination in a gang-saw mill, of a mill frame, a shaft mounted on the base thereof, band-wheels on said shaft inside of the uprights forming the sides of the mill frame, wrist pins in said band-wheels, guides on the inside faces of the uprights of the frame, a saw-sash, horns on the upper and lower corners thereof extending between the guides on the frame, pitmen pivoted upon the band-wheel wrist-pins extending upward in line with said guides and pivoted upon the lower sash horns between the lower guides on the mill frame, extensions on said pitmen above the horns upon which they are mounted, lateral ears on said extensions, and slides engaging the ears on the pitmen and operating in the lower guides, substantially as set forth.

4. The combination in a gang-saw mill of a frame, sash-guides therein, a saw-sash, a horn thereon, a sash operating pitman engaging said horn in line with the sash-guides, a journal box therein operating on the saw-sash horn, laterally projecting ears on the upper part of the pitman, and slides engaging said ears and operating in the lower saw-sash guides, substantially as set forth.

5. The combination in a gang-saw mill, of a mill-frame, a saw-sash operating therein, pitman and guide mechanism for moving the lower part of the sash forward during its downward movement and backward during its upward movement, a steam cylinder mounted centrally on the base of the mill-frame, a piston rod extending upward therefrom, a yoke on the upper end of the piston rod, a bearing box mounted on a bearing in the lower saw sash-girt operating in the yoke on the piston rod and moving laterally in said yoke, and valve mechanism for admitting steam to said cylinder, substantially as set forth.

960,473. WASHING-MACHINE. GILBERT S. WINANT, Rochester, N. Y., assignor to Saver Manufacturing Co., New York, N. Y., a Corporation of New York. Filed May 15, 1909. Serial No. 496,149.

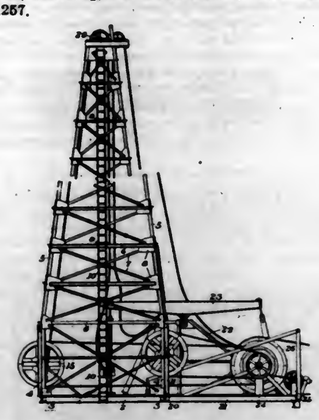


1. A portable washing machine attachment for a tub, comprising, in combination, opposite hangers attachable to the rim of the tub at opposite sides thereof, and when attached depending within the tub, a roller and board supported by and between said hangers, and means to operate the roller.

2. A portable and removable washing machine applicable to a tub, comprising opposite hangers each of which is hooked at the top to engage over the rim of the tub, and has an inner depending part provided with bearings, a board and a roller mounted in said bearings, between the hangers, and a power shaft and gearing mounted on one of said hangers and operatively connected to the roller.

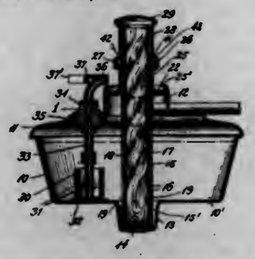
3. A portable and removable washing machine applicable to a tub, comprising opposite hangers each having a triangular frame shaped on one side to fit the side of the tub, means at the upper corner of the frame to attach the same to the rim of the tub, whereby the frame will depend within the tub, each frame having spaced bearings on the side thereof opposite to that which fits against the tub, said bearings being located in substantially horizontal alinement at the lower corners of the frame, and washing devices supported on the said bearings.

960,474. PORTABLE DERRICK. ROBERT B. WOODWORTH, Pittsburg, Pa. Filed Mar. 9, 1909. Serial No. 482,257.



A well drilling derrick including sills, substantially vertical tower members rising from the sills, bracing between the front and rear tower members at one side only of the derrick, the space between the corresponding members at the opposite side of the tower being open for access to the interior of the tower, machinery-supporting posts rising from the sills between the front pair and also between the rear pair of tower members, and lacing between the posts and the adjacent tower members.

960,475. VAPOR-LAMP. HENRY C. WRIGHT, Bristol, Conn., assignor to The Bristol Brass Company, Bristol, Conn., a Corporation of Connecticut. Filed Mar. 25, 1909. Serial No. 485,583.



1. The combination with a font, a wick tube carried thereby, and a jet ring having jet-openings and surrounding the upper portion of said wick tube to leave an annular space for the accumulation of gas, of a tube interposed between said wick tube and said jet ring for controlling the admission of gas from said space to said jet-openings.

2. The combination with a font, a wick tube carried thereby, and a jet ring having jet-openings and surrounding the upper portion of said wick tube to leave an annular space for the accumulation of gas, of a tube having at its top a recess gradually increasing in depth toward the end of said tube for controlling the admission of gas from said space to said jet-openings.

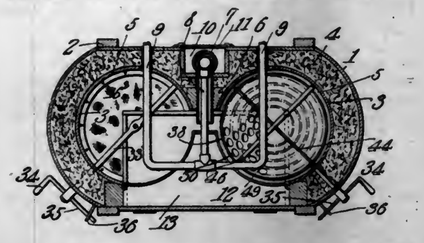
3. The combination with a font, a wick tube carried thereby, and a jet ring having jet-openings and surrounding the upper portion of said wick tube to leave an annular space for the accumulation of gas, of a tube interposed between said wick tube and said jet ring for controlling the admission of gas from said space to said jet-openings, and means for actuating said tube.

4. The combination with a font, a wick tube carried thereby and having an aperture to permit the passage of fuel from the font into said wick tube, and a jet ring having jet-openings and surrounding the upper portion of said wick tube to leave a space for the accumulation of gas, of a valve tube coöperative with said wick tube and the jet ring and for controlling the admission of gas from said space to said jet-openings and also for opening and closing said aperture.

5. The combination with a font, a wick tube carried thereby and having an aperture disposed intermediate its ends to permit the passage of fuel from the font into the interior of the wick tube, and a jet ring having jet-openings and surrounding the upper portion of said wick tube to leave a space for the accumulation of gas, of a valve tube surrounding said wick tube and having near its end a slot for uncovering said aperture, and means for moving said valve tube for shutting off the supply of gas to said jet-openings and simultaneously closing the aperture in the wick tube.

[Claims 6 and 7 not printed in the Gazette.]

960,476. INCUBATOR. GEORGE W. R. ZIMMERMAN, Lime Kiln, Md. Filed Nov. 12, 1909. Serial No. 527,656.



1. An incubator including a body, a rock bar extending thereinto, a tray mounted on and movable with said bar and having an opening, and means for rotating the tray upon the bar, and means for holding eggs in the tray against rotation with the tray.

2. An incubator including a body, a rock bar extending thereinto, means for actuating the bar, a tray detachably mounted upon the bar and tiltable therewith, said tray having an opening means for rotating the tray independently of the bar, and means for holding eggs in the tray against rotation with the tray.

3. An incubator including a body, a tray movably mounted therein, and having a reticulated bottom, there being a slot within said bottom, a closure for the slot, a non-rotatable egg holding device within the tray, and means for rotating the tray to bring the slot at a desired point beneath the holder.

4. An incubator including a body, a tray tiltably mounted therein, said tray having a reticulated bottom, and a holding rod removably mounted upon and extending diametrically across the tray.

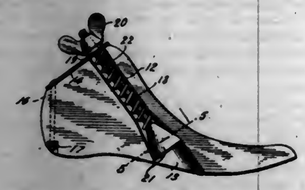
5. An incubator including a body, said body having spaced circular compartments therein, a tray tiltably mounted within each compartment and having an opening, separate means for rotating the trays, means for holding eggs in the tray against rotation with the tray and a receptacle removably mounted in the body and extending under both trays.

[Claims 6 to 11 not printed in the Gazette.]

960,477. SHOE-STRETCHER. THOMAS J. ALDRIDGE and MATTHEW A. REILLY, Rochester, N. Y. Filed Mar. 21, 1910. Serial No. 550,754.

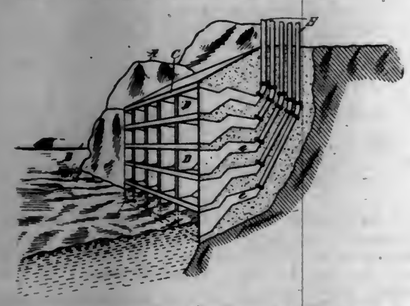
1. A device of the class described formed in halves, each half having a channel formed therein, the lower extremities of said channels being flared, a plate carried by one of said halves, pivotal members passing through said plate

connecting said halves, and a plunger reciprocating in said channel carrying a spreading member, said plunger being operated from above.



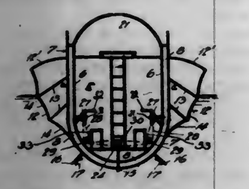
2. A device of the class described formed in halves, each half having a channel formed therein, said channels being flared at their lower extremities, a plate carried by one of said halves, pivotal members carried by said plate connecting said halves, a plunger carried by said plate and reciprocating in said channel, a spreading member carried at the lower extremity of said plunger, and a spring interposed between said spreading member and the plate.

960,478. AIR-COMPRESSOR. DAVID R. ALLARD, Arleta, Oreg. Filed May 6, 1909. Serial No. 494,407.



In an air compressor, a casing provided with a series of cells, each of said cells having an open end directly facing a body of water and being provided with a rear portion above the level of the front portion, all of said cells being arranged to be subjected to the waves of said body of water, air pipes connecting said air cells with a common air tank, valves in said pipe for retaining the air in said air tank, and other valves for permitting the entrance of air into said cells.

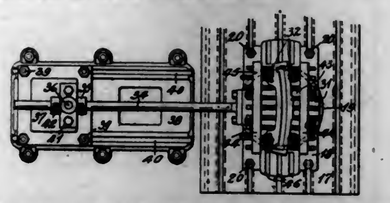
960,479. LIFE-BOAT. JOHN E. ALLEN, Vancouver, British Columbia, Canada. Filed Apr. 9, 1909. Serial No. 488,944.



1. In a marine vessel, the combination with the hull proper, of wing members disposed longitudinally and exteriorly of said hull, and downwardly and outwardly inclined partitions within said wing members to respectively divide the same into a plurality of compartments each of said compartments having the outer wall thereof concavo-convex in contour.

2. A marine vessel comprising a closed hull having water tight compartments at the bottom, sides and top thereof, said hull further provided at its top with a plurality of turrets, one of said turrets being larger than the remaining turrets and provided with an entrance and further provided with an outlet whereby access can be had to the interior of the hull, a keel for the hull and a pair of outwardly inclined bilge-keels, each having on its face a concavo-convex plate, and wings provided at each side of the hull, said wings embodying water tight compartments, each having the outer wall thereof concavo-convex in contour.

960,480. PLANER ATTACHMENT. FREDERICK ALLNER and EDMUND N. BOSWELL, Montreal, Quebec, Canada. Filed Jan. 16, 1909. Serial No. 472,750.



1. In a device of the class described, the combination with a planer table of a bottom plate fixed thereto, a reciprocating disk slidably mounted on said plate, and a setting table revolubly mounted on said disk.

2. In a device of the class described, the combination with a planer table of a bottom plate fixed thereto, a block integral therewith, an apertured disk slidably engaging the block and reciprocating thereon, an eye surrounding the disk, a setting table revoluble with respect to said disk and integral with said eye, a radius bar fixed to the eye, and an adjustable support for said bar.
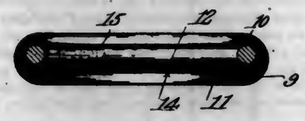
3. In a device of the class described, the combination with a planer table of a bottom plate fixed thereto, a block integral therewith, an apertured disk slidably engaging the block, a flange plate fixed to said block to maintain the disk in engagement with the bottom plate, an eye surrounding the disk, a flange ring fixed to said eye and engaging the disk, a setting table integral with said eye, a radius bar fixed to the eye, and an adjustable support for said bar.

4. In a device of the class described, the combination with a planer table of a bottom plate fixed thereto, a block integral therewith, an apertured disk slidably engaging the block, a flange plate fixed to said block to maintain the disk in engagement with the bottom plate, an eye surrounding the disk, a flange ring fixed to said eye and engaging the disk, a setting table integral with said eye, a radius bar fixed to the eye, a bed plate, a column adjustable thereon, a cap for said column, and a bar guide having trunnions pivoted to the column and cap.

5. In a device of the class described, the combination with a planer table of a bottom plate fixed thereto, a block integral therewith, an apertured disk slidably engaging said block, means for taking up slack motion between the disk and block, a plate fixed to the block for maintaining said disk in place, an eye surrounding the disk, a ring fixed to said eye and circumferentially engaging the disk, a setting table integral with the eye, a radius bar fixed to said eye, an adjustable column, a bar guide pivoted therein, and means for locking said bar guide to the bar at any point, whereby the setting table is forced to travel in a circular arc on the reciprocation of the planer table.

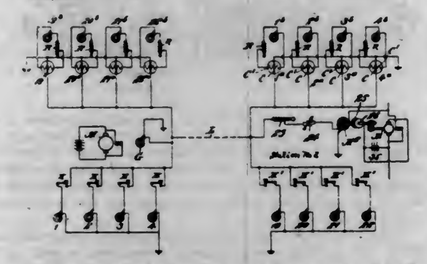
960,481. TRUSS-PAD. GEORGE W. ARNOLD, Girard, Ohio. Filed Sept. 17, 1909. Serial No. 518,229.

1. A truss pad consisting of a rigid annular portion having its inner face inclined toward the center of the pad, the central portion of the pad consisting of a yieldable diaphragm fashioned integrally with the annular portion; and a coiled spring for actuating the pad, the periphery of the annular portion of the pad being overbent to form a flange to extend to the rear of the adjacent convolution of the spring beyond the axis of said convolution.



2. A device of the class described comprising a truss pad; a supporting member; and a coiled spring connecting the truss pad with the supporting member; the supporting member being provided in one of its faces with a threaded aperture, and in the other of its faces with an inclined channel communicating with the aperture and arranged to receive one end of the spring; and a threaded member arranged to be mounted in the aperture to engage the end of the spring, and to serve as a means for assembling the device with a truss.

960,482. MULTIPLE-TELEGRAPH SYSTEM. EUGEN P. BATZEL, Buffalo, N. Y. Filed Mar. 3, 1909. Serial No. 481,031.



1. A multiple telegraph apparatus comprising means for developing alternating currents of different intensities, means for transmitting said currents over the line, means for generating alternating currents of corresponding intensities to the currents sent over the line from the transmitting station, and signal receiving means actuated by alternating currents of corresponding periods of intensity or alternation from the transmitting station and from the receiving station.

2. A multiple system comprising a series of alternating current transmitting generators, a transmitting device connecting each of said generators with the line, a series of alternating current generators at the receiving end of the line, each of said generators developing a current corresponding in its periods of alternation with one of the generators at the transmitting end of the line, a signal-receiving means in circuit with each generator at the receiving end of the line and through which passes the current from the transmitting end of the line, said signal-receiving means being adapted to be operated only by currents corresponding in their periods of alternation and flowing from both a receiving generator and a transmitting generator.

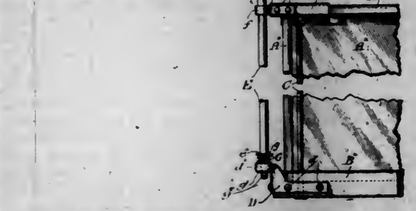
3. A multiple system comprising a series of alternating current transmitting generators, a transmitting device connecting each of said generators with the line, a series of alternating current generators at the receiving end of the line, each of said generators developing a current corresponding in its periods of alternation with one of the generators at the transmitting end of the line, a signal-receiving means in circuit with each generator at the receiving end of the line and through which passes the current from the transmitting end of the line, said signal-receiving means being adapted to be operated only by currents corresponding in their periods of alternation and flowing from both a receiving generator and a transmitting generator, and a variable inductance in circuit with each of the generators at the receiving end of the line.

4. A multiple system comprising a series of alternating current transmitting generators, a transmitting device connecting each of said generators with the line, a series of alternating current generators at the receiving end of the line, each of said generators developing a current corresponding in its periods of alternation with one of the generators at the transmitting end of the line, a signal-receiving means in circuit with each generator at the receiving end of the line and through which passes the current from the transmitting end of the line, said signal-receiving means being adapted to be operated only by currents corresponding in their periods of alternation and flowing from both a receiving generator and a transmitting generator, and means for synchronously operating the alternating generators at the transmitting and receiving ends of the line.

5. A multiple system comprising a series of alternating current transmitting generators, a transmitting device connecting each of said generators with the line, a series of alternating current generators at the receiving end of the line, each of said generators developing a current corresponding in its periods of alternation with one of the generators at the transmitting end of the line, a signal-receiving means in circuit with each generator at the receiving end of the line and through which passes the current from the transmitting end of the line, said signal-receiving means being adapted to be operated only by currents corresponding in their periods of alternation and flowing from both a receiving generator and a transmitting generator, and means for automatically controlling the operation of the generators at both ends of the line to synchronize said generators.

[Claims 6 to 21 not printed in the Gazette.]

960,483. SWINGING CORNER-BRACKET FOR SHOW-CASES. LOUIS A. BECKER, Chicago, Ill., assignor to L. A. Becker Company, Chicago, Ill., a Corporation of New Jersey. Filed May 28, 1908. Serial No. 435,428.



1. A swinging corner bracket comprising upper and lower bearing brackets adapted to be attached to the corner of a show-case, a bracket rod having a horizontal portion provided with a tray and having a vertical portion passing through the upper one of said bearing brackets and having its lower end passing through the lower one of said bearing brackets, the lower portion of said bracket rod being provided with laterally projecting devices above and below said lower bearing bracket, and a coiled spring encircling the lower portion of said bracket rod and arranged to exert a friction thrust between one of the laterally projecting devices of said rod and the lower bearing bracket to check the swinging movement of said rod.

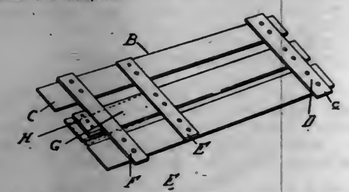
2. A swinging corner bracket comprising upper and lower bearing brackets adapted to be attached to the corner of a show-case, a bracket rod having a vertical portion sustained within said bearing brackets and having a reduced lower end passing through one of said brackets, a washer encircling said reduced lower portion of said

bracket rod and a coil spring encircling said rod and interposed between said washer and the adjacent bearing bracket and arranged to exert a frictional thrust to check the swinging movement of the rod.

3. A swinging corner bracket comprising upper and lower bearing brackets adapted to be attached to the corner of a show-case, a bracket rod having a vertical portion sustained within said bearing brackets and having a reduced lower end portion formed with a shoulder, a washer encircling the reduced portion of bracket rod and arranged adjacent said shoulder, a coil spring interposed between said washer and the lower bearing bracket and arranged to exert pressure upon said parts to check the swinging movement of the bracket rod and means at the lower end of said bracket rod for preventing its withdrawal by the coil spring from the lower bearing bracket.

4. A swinging corner bracket comprising upper and lower bearing brackets adapted to be attached to the corner of a show-case, a bracket rod having a vertical portion sustained within said bearing brackets and having a horizontally projecting portion and a tray provided upon its under side with a depending lug and with a set screw whereby it may be connected with the bracket rod and having upon its under side a seat to receive said bracket rod.

960,484. CRATE. WILLIAM BEEHLER, Owosso, Mich., assignor to Owosso Manufacturing Company, Owosso, Mich., a Corporation of Michigan. Filed June 26, 1909. Serial No. 504,478.

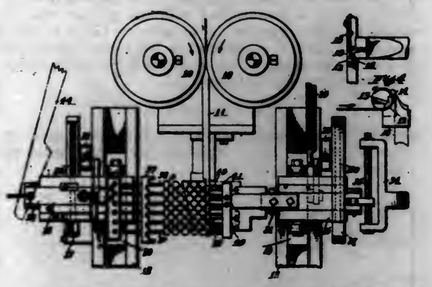


1. In a crate, the combination with end parts provided with top cross bars and with openings therebelow, of a closure therefor comprising a plurality of slats of a length to project into both of said openings, a cleat rigidly secured to all of said slats at one end of the closure and projecting laterally beyond the same, said cleat being adapted to lie in close proximity to one of the cross bars at the end of the crate when the closure is in position, a cleat securing the ends of the outermost slats only at the other end of the closure, whereby the intermediate slat is free to yield, a locking block carried by the yieldable end of the intermediate slat, one edge of said locking block being adapted to lie in close proximity to the adjacent top cross bar at the end of the crate when the closure is in position, and the other edge of said locking block being separated from the adjacent cleat a distance less than the width of said top cross bar at the end of the crate.

2. In a crate, the combination with end parts provided with top cross bars and with openings therebelow, of a closure therefor comprising a plurality of slats of a length to project into both of said openings, an overlying cleat rigidly secured to the ends of all of said slats at one end of the closure, said cleat being adapted to lie against one of the cross bars at the end of the crate when the closure is in position, an overlying cleat securing the ends of the outermost slats only at the other end of the closure whereby the intermediate slat is free to yield, said cleat being spaced from the adjacent top cross bar at the end of the crate when the closure is in position, and a locking block carried by the yieldable end of the intermediate slat and adapted to normally substantially fill the space between the cleat of the closure and the adjacent top bar at the end of the crate.

3. In a crate, a body having openings in its opposite end walls near the upper edges thereof, a closure of a length to project into both of said openings and composed of a series of uniform slats, a cleat rigidly connected to all of said slats at one end of the closure and projecting laterally beyond the same, a cleat at the other end of the closure rigidly connected to the outermost slats of the closure only whereby the intermediate slat is free to yield the ends of said cleat projecting laterally beyond the sides of the closure, an intermediate cleat rigidly secured to all of said slats, and a block secured to the yieldable portion of the intermediate slat of the closure and of a size to normally substantially fill the space between one of the end walls of the crate body and the adjacent end cleat of the closure.

960,485. MACHINE FOR MAKING CHAIN-CLOTH. FRANK BEMENT, Shrewsbury, Mass. Filed June 29, 1908. Serial No. 440,852.



1. A machine of the character described comprising a frame or bed, means for forming circular wire links, and a movably mounted bar supported by the frame or bed, hooks thereon, a second bar movably mounted on said frame and spaced from the first bar, and hooks on the second bar extending toward the hooks on the first for receiving the links.

2. A machine of the character described comprising means for forming closed circular wire links, a pair of oppositely disposed bars, hooks on each bar extending toward the other for receiving the links, and means for constantly pulling one of said bars from the other.

3. In a machine for manufacturing chain cloth, the combination with means for making series of separate closed links, of a pair of bars, hooks on said bars for carrying the chain cloth as it is made, and a tension device for constantly pulling one of said bars from the other as the chain cloth is made and held between the two sets of hooks.

4. In a machine of the character described, the combination with means for making series of separate closed links, of a set of tension hooks for receiving the links, means for keeping said hooks under tension, and two sets of hooks located opposite the tension hooks and adapted to engage the fabric alternately.

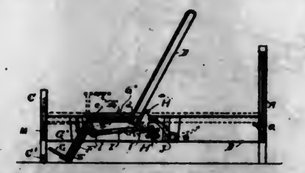
5. In a machine of the character described, the combination with means for making series of separate closed links, of a set of hooks adapted to engage one edge of the product, and two sets of hooks adapted to engage alternately the other edge of the product.

[Claims 6 to 40 not printed in the Gazette.]

960,486. BEDSTEAD. ALVIN BERG and ROBERT BERG, Sparta, Mich., assignors of one-third to August A. Johnson, Sparta, Mich. Filed May 14, 1909. Serial No. 496,043.

1. In combination with a bedstead, a seat portion securely attached to the side rails of the bedstead, said bedstead being open between the foot posts, a head portion pivoted to one end of the seat portion, a foot portion pivoted to the other end of the seat portion, a segment and gear for actuating the head portion, a connecting rod connecting the segment with the sides of the foot portion, a foot rest pivoted to the sides of the foot portion in position

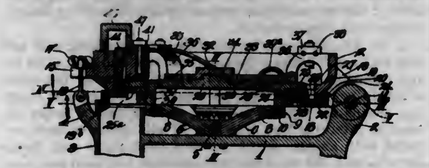
to be adjusted from a horizontal position to a vertical position, a brace to hold said foot rest in vertical position, a latch pivoted in each foot post to hold the foot portion in position when horizontal and a pawl and ratchet to hold the head portion to any desired position above the horizontal.



2. In combination with a bedstead, a seat portion, side rails on said bedstead, lugs on said side rails for securing said seat portion firmly thereto, said bedstead open between the foot rails, means for adjusting the head portion and the foot portion from a horizontal position to a vertical position, a ledge for supporting the head portion, and a latch pivoted in each foot post for supporting the foot portion when the body of the bed is in a horizontal position, and an adjustable foot rest pivotally secured to the foot portion.

3. In combination with a bedstead and its side rails, lugs secured to the side rails, a seat portion having lugs to engage the lugs on the rails, a head portion and a foot portion pivotally secured to the seat portion, a segment and gear to adjust the head portion from a horizontal to a vertical position, a pawl and ratchet to hold the head portion to place, means for adjusting the foot portion from a horizontal position to a vertical position, said bedstead open between the foot rails, a ledge at the head of the bed to support the head portion when in horizontal position, latches pivotally supported in the foot posts in position to catch and support the foot portion when in horizontal position, a foot rest pivotally secured to the sides of the foot portion, supports on the foot portion to hold the foot rest firmly in position, and a pawl and ratchet for holding the adjustable portion of the bedstead to position.

960,487. CORN-PLANTER. ADELBERT S. BEYMER, Kansas City, Mo. Filed Feb. 3, 1909. Serial No. 475,909.



1. In a corn planter, the combination of a circular hopper-base having a diametrically-reduced lower end and a downwardly-tapering portion leading to such reduced end, a circular rotary bottom-plate arranged within and of less diameter than the reduced end of the hopper-base and disposed with its upper side occupying a plane slightly above said reduced end of the hopper-base and constituting the rotatable inner wall of a circular channel of uniform width of which the reduced end of the hopper-base forms the stationary outer wall, a circular seed-plate fitting snugly within the reduced end of the hopper-base and underlying and projecting outwardly beyond the circular bottom-plate and provided with peripheral cells communicating with said channel; and a base-plate underlying the hopper-base and the seed-plate and provided with an exit-opening with which the cells of said seed-plate successively communicate.

2. In a corn planter, the combination of a circular hopper-base having a diametrically-reduced lower end and a downwardly-tapering portion leading to such reduced end, a circular rotary bottom-plate arranged within and of less diameter than the reduced end of the hopper-base and disposed with its upper side occupying a plane slightly above said reduced end of the hopper-base and constituting the rotatable inner wall of a circular channel of uniform width of which the reduced end of the hopper-base forms the stationary outer wall, a circular seed-plate fitting snugly within the reduced end of the hopper-base and underlying and projecting outwardly beyond the circular bottom-plate and provided with peripheral cells communicating with said channel; a base-plate underlying the hopper-base and the seed-plate and provided with an exit-opening with which the cells of said seed-plate successively communicate, and a curved deflector above the rotary bottom-plate for forcing seeds outwardly upon and beyond the periphery of said bottom-plate.

3. In a corn planter, the combination of a circular hopper-base having a diametrically-reduced lower end and a downwardly-tapering portion leading to such reduced end, a circular rotary bottom-plate arranged within and of less diameter than the reduced end of the hopper-base and disposed with its upper side occupying a plane slightly above said reduced end of the hopper-base and constituting the rotatable inner wall of a circular channel of uniform width of which the reduced end of the hopper-base forms the stationary outer wall, a circular seed-plate fitting snugly within the reduced end of the hopper-base and underlying and projecting outwardly beyond the circular bottom-plate and provided with peripheral cells communicating with said channel; a base-plate underlying the hopper-base and the seed-plate and provided with an exit-opening with which the cells of said seed-plate successively communicate, and a vertically and laterally yieldable sweep overlying the path which the cells describe in their rotary movement.

4. In a corn planter, the combination of a circular hopper-base having a diametrically-reduced lower end and a downwardly-tapering portion leading to such reduced end and a circular rotary bottom-plate arranged concentrically within and of less diameter than the reduced end of the hopper-base, with its upper side occupying a horizontal plane slightly above said reduced or concentric end of the hopper-base, a circular seed-plate fitting snugly within the reduced end of the hopper-base and underlying and projecting beyond the circular bottom plate and provided with cells, a deflector bearing a superposed relation to the bottom-plate and rigidly connected to the hopper-base, and a resilient sweep bearing a rigid relation at one end to the hopper-base and having its opposite end free to rest upon the hopper-base and provided with a depressed portion lying above the cells of the seed-plate.

5. In a corn planter, the combination of a circular hopper-base, a base-plate underlying said hopper-base and provided with an exit-opening, a rotary seed-plate fitting upon the base-plate and fitting snugly within the lower end of the hopper-base and provided peripherally with cells for successive communication with said exit-opening, a circular bottom-plate rotatable with the seed-plate and overlying the inner portion of the same and terminating inward of the cells thereof and having a conical upper side, a curved deflector above the rotary bottom-plate and bearing a rigid relation to the hopper-base, and a spring sweep secured at one end in rigid relation to the deflector and extending downwardly and forwardly with respect to the direction of rotation of the bottom-plate and provided at its lower or free end with a depressed portion outward and in the horizontal plane of the bottom-plate.

[Claims 6 to 15 not printed in the Gazette.]

960,488. CARBON-PAPER HOLDER. ALBERT JOHN BOND, London, England. Filed July 19, 1909. Serial No. 508,459.



1. A carbon sheet holder comprising a backing sheet, a flap extending over the same and having its outer edge hinged to the sheet, and a carbon paper securing device

on the under side of the flap having a free edge located substantially at the hinge of the flap to cause the carbon paper to fold at this point.

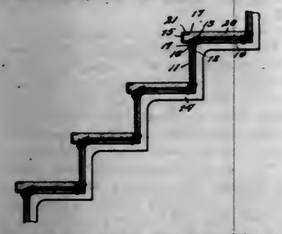
2. A carbon sheet holder comprising a backing sheet, a flap extending over the same and hinged along its outer edge to the sheet, and a hinged flap carried by the under side of the first named flap and having its free edge located substantially at the hinge of said first named flap.

3. A carbon sheet holder comprising a backing sheet, a flap extending over the sheet and hinged along its outer edge to the sheet, and a second flap hinged to the under side of the first named flap away from the free edge of the latter and having its free edge located substantially at the hinge of the first named flap.

4. A carbon sheet holder comprising a backing sheet, a hinged flap extending over the backing sheet, a carbon securing flap carried by the under surface of the first-named flap and having its free edge located substantially at the hinge of the first-named flap, and an introducing member lying on the outer side of the hinge of the flap.

5. A carbon sheet holder comprising a single sheet of material folded upon itself, the portions in proximity to the fold being secured together to provide an introducing member and the portion on one side of the fold beyond the secured portion acting as a backing sheet while that on the other side of the fold beyond the secured portion acts as a hinged flap overlying the backing sheet.

960,489. PROTECTOR-PLATE FOR EDGES OF CONCRETE STEPS. JACOB G. BRAUN, Chicago, Ill. Filed Jan. 29, 1909. Serial No. 474,972.



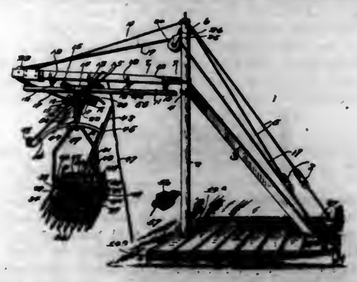
1. The combination with a step comprising a tread, a riser arranged adjacent to the front edge of the tread and spaced therefrom and an angle bar closing the space between said tread and riser, of a protector plate provided with an attaching flange, and means for securing said riser, angle bar and flanged plate rigidly together.

2. The combination with a step comprising a tread, a riser adjacent to but spaced from the front edge of the tread, and an angle bar for closing the space between said tread and riser, of a protector plate provided with an attaching flange, and means rigidly securing together said riser, angle bar and the flange of said protector plate, said means comprising fasteners extending through said members.

960,490. MANURE-LOADER. MAURICE W. BRENNAN, Maskell, Nebr. Filed June 10, 1909. Serial No. 501,300.

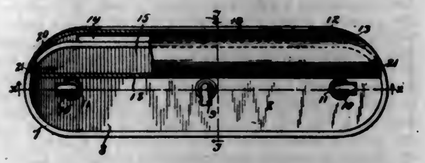
1. In a manure loader, a single upright, a crane mounted at one end thereon for radial movement through practically an entire circle, a track suspended from said crane, a carrier movable on the track, a member suspended from the carrier, pulleys on said member, a rope passed around the said pulleys, a pulley on the outer end of the crane, and a pulley on the upper end of the upright through which said rope passes, a lever pivotally mounted on the carrier, a swinging hanger on the member for engagement with a hook on the lever, and a trip plate depending from said track, and a fork connected with said rope and movable with the carrier through practically an entire circle about the upright.

2. In a manure loader, a single upright, a crane mounted at one end thereon to swing radially throughout substantially an entire circle, a track suspended from the crane and inclined, a carrier movable on said track, a lever pivotally mounted on said carrier, a spring on the carrier acting on the lever, a swinging hanger for engagement with the hook of the lever, a trip plate depending from



said track, and a rope guided on the upright and crane and having one end connected with the carrier, whereby a fork attached to said rope may be moved through practically an entire circle.

960,491. OIL-BURNER. ROBERT A. BRIGHT, Jacksonville, Fla. Filed Dec. 22, 1909. Serial No. 534,424.



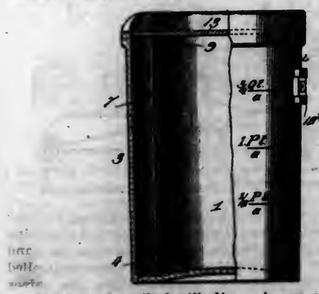
1. An oil burner comprising an oil chamber, an upwardly extending flange on the top of said chamber forming therewith a burner pan, a source of fuel supply leading into said chamber, means for discharging the fuel from said chamber into said pan, and means for directing a current of air into said pan uniformly throughout its length, substantially as described.

2. In an oil burner, an oil chamber comprising side and end walls, a top and a bottom, said side and end walls being extended upwardly above said top forming therewith a burner pan, a source of fuel supply leading to said chamber, means for feeding the fuel to said pan, a flange extending laterally from one side of said chamber and provided with an air aperture, and a hood above said flange for directing the air from said aperture into said pan, substantially as described.

3. In an oil burner, an elongated oil chamber comprising parallel side walls, end walls, a top and a bottom, said side and end walls being extended upwardly forming a peripheral flange which together with said top constitutes a burner pan, a source of fuel supply leading into said chamber, means for feeding the fuel into said pan, a flange extending laterally from one side of said chamber and in a plane with said bottom, said flange being provided with an aperture, and a hood resting on said flange and extending upwardly and over said pan for directing the air from said aperture into said pan, substantially as described.

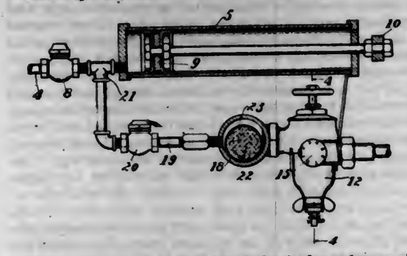
4. In an oil burner a fuel pan and means for supplying fuel thereto, in combination with a laterally projecting flange along one side thereof provided with an air opening, a second flange on the outer edge of the first said flange, and a hood resting on the first said flange and having its ends inturned to engage the walls of said pan, said hood being held snugly between said pan and the second said flange and extending upwardly and over the side of said flange to direct the air into said pan, substantially as described.

960,492. MILK-DISPENSING VESSEL. ELI H. G. BRINSER, Elizabethtown, Pa., assignor of one-tenth to Charles K. Musser, Elizabethtown, Pa. Filed Feb. 6, 1909. Serial No. 476,447.



The herein described milk dispensing vessel comprising a cylindrical body, a transversely V-shaped spout on one side of the body joined thereto, communicating therewith from top to bottom and having vertical grooves in its opposing sides at the point of juncture with the body of the vessel, and a bottom common to the body of the vessel and to the said spout, the vessel being further provided with an interiorly disposed annular shoulder near its upper end, a detachable partition strip inserted in the grooves of the sides of the spout to divide the liquid in the body of the vessel from that in the spout, the length of said strip being such that when said strip is in place its upper end is level with the said shoulder in the vessel, and a cover disk to lie on said shoulder and on the upper end of the partition strip and having an extension on one side to fit in and close the spout.

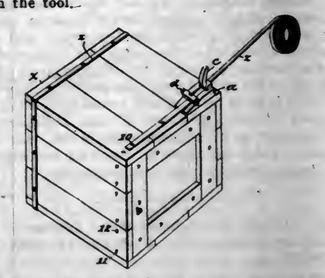
960,493. STARTER FOR HYDROCARBON-ENGINES. ODILON BRISBOIS, Chicago, Ill., assignor to Automatic Starter Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 12, 1908. Serial No. 452,732.



The combination of a multicylinder hydrocarbon engine, a carbureter, a pump having pumping chambers corresponding in number with the engine cylinders and connected respectively with the respective engine cylinders and with the carbureter for charging the engine cylinders with carbureted air, a single operating device for simultaneously operating said pumping chambers, a manifold interposed in the connection between the carbureter and engine cylinders, and means in said manifold adapted to separate from the carbureted air the unvaporized liquid which may be present therein.

960,494. BOX-STRAP PULLER, CUTTER, AND NAIL-GUIDE. WINFRED MUDOR BROOKS, East Orange, N. J., assignor to E. J. Brooks & Co., New York, N. Y., a Corporation of New York. Filed Jan. 5, 1910. Serial No. 536,448.

1. A box-strap tool adapted to be threaded upon a continuous length of strap iron and to remain attached thereto and ready for use until the length of strap iron is used up; such tool including a frame constructed to rest solidly upon a box, and having a longitudinal passageway for strap iron and a detent within said frame constructed and arranged to interact with the strap iron as means for preventing the accidental escape of the end of the strap iron through the tool.



2. The combination, in a box-strap tool, of a frame constructed to rest solidly upon a box and having a longitudinal passageway for strap iron, and a spring-pressed detent within said frame constructed and arranged to interact with the strap iron as means for preventing the accidental escape of the end of the strap iron through the tool.

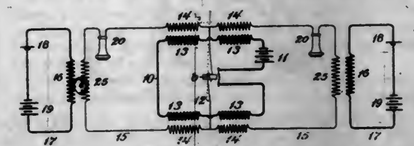
3. The combination, in a box-strap tool, of a frame constructed to rest solidly upon a box and having a longitudinal passageway for strap iron, and a superjacent dog movable by the hand which manipulates the tool to clamp the frame to the strap iron in pulling the strap iron to render it taut on the box.

4. The combination, in a box-strap tool, of a frame constructed to rest solidly upon a box and having a longitudinal passageway for strap iron, a cutting edge transverse to said passageway at midlength and a superjacent portion crossing such passageway, and a movable cutter pivotally supported by said superjacent portion in juxtaposition to said cutting edge and having a protruding end constructed for operation by a hammer or the like.

5. A box-strap tool having a frame constructed to rest solidly upon a box and having a longitudinal passageway for strap iron, a superjacent portion crossing such passageway and provided with a nail groove in its posterior surface, and a nail slot extending from a point in line with and beneath said groove through the posterior end of said frame.

[Claim 6 not printed in the Gazette.]

960,495. CURRENT-REINFORCING MEANS. RALPH C. BROWNE, Salem, Mass., assignor to John Abbott, Winchester, Mass. Filed May 25, 1907. Serial No. 375,573.



1. A current retransmitting and reinforcing apparatus comprising a variable magnet having opposing fixed pole pieces; a receiving or magnetization-varying coil around each pole of said magnet for varying its field; a variable resistance medium; opposing movable pole pieces or armatures in the fields of said fixed pole pieces to impart pressure to both sides or faces of said resistance medium; and electrodes for said resistance medium arranged in a line transverse to the lines of pressure of said movable pole pieces on said resistance medium.

2. A current retransmitting and reinforcing apparatus, comprising a variable magnet having opposing fixed pole pieces; a receiving or magnetization-varying coil around each pole of said magnet for varying its field; a variable

resistance medium; opposing movable pole pieces or armatures in the fields of said fixed pole pieces to impart pressure to both sides or faces of said resistance medium; a receptacle for said resistance medium, and a fixed support for said receptacle.

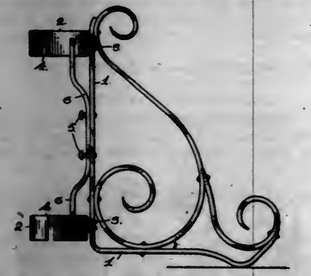
3. A current retransmitting and reinforcing apparatus, comprising a variable magnet having opposing fixed pole pieces; a receiving or magnetization-varying coil around each pole of said magnet for varying its field; a variable resistance medium; opposing movable pole pieces or armatures in the fields of said fixed pole pieces to impart pressure to both sides or faces of said resistance medium; said pole pieces all being arranged in axial alinement; electrodes mounted in a line transverse to the axes of said pole pieces; and a receptacle for receiving and supporting said resistance medium and said electrodes.

960,496. BOILER-TUBE CLEANER. EDWARD J. BUCKMASTER, Laurel Hill, N. Y. Filed Aug. 19, 1908. Serial No. 449,286.



In a boiler tube cleaner, the combination with a shell having lateral openings with cam faces, of a plunger longitudinally movable in the shell and having a slot in its forward end, means for operating the plunger, a spring within said shell for retracting the plunger, spring hammers secured to the outer face of the shell and adjacent to its openings, pivoted blocks in the openings and bearing against the spring hammers, and lugs on the blocks and in contact with said cam faces at the end of the plunger.

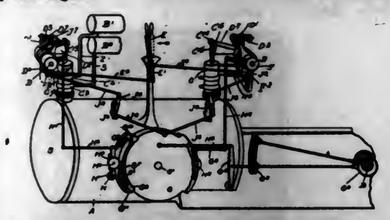
960,497. TREE-HOLDER. MAX F. BURKART, Jr., San Francisco, Cal. Filed Oct. 26, 1908. Serial No. 459,548.



A tree-holder comprising a plurality of counterpart supports, a plurality of centrally-positioned detachable rings connected to said supports and sustaining the same in an upright position, and spring bars slidably secured to said supports and having inwardly bent ends endwise penetrating said rings.

960,498. GAS-ENGINE. ARCHIBALD BURNETT, Phoenix, British Columbia, Canada. Filed Feb. 8, 1908. Serial No. 414,902.

1. A gas engine comprising a cylinder and piston, a supply of gas and air under pressure connected with said cylinder, valves on the engine, a hand lever for operating the valves to supply the air and gas to the cylinder to start the engine, means operated by the engine for automatically controlling the valves to secure a proper feed of the gas and air to the cylinder, and means controlled by the hand lever for regulating the operation of the valves by the engine.



2. An engine comprising a cylinder and piston, an inlet valve at each end of the cylinder, a hand lever for opening the valves to start the engine, means permitting the hand lever to open but one valve at a time, and means controlled by the engine for automatically controlling the valves after the engine has been started.
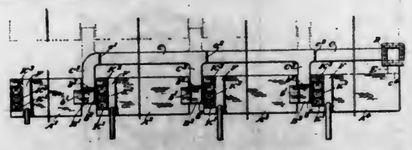
3. An engine comprising a cylinder, a piston therein, an inlet valve at each end of the cylinder, a stem for each valve, a bell crank lever, each lever being mounted on a stationary bearing, a segmental arm connected with said bell crank and engaging the valve stem, a pin carried by one arm of the bell crank lever, a ring journaled on the stationary bearing, a depending arm secured thereto, an upwardly inclined arm on said ring, a crab claw pivotally supported on said upwardly inclined arm and consisting of a horisontal arm having a notch therein adapted to engage with the pin, and a trip arm, a hand lever connected to the depending arm, a float ring having a cam thereon adapted to engage with the trip arm to throw the notch out of engagement with the pin, and means operated by the engine for oscillating said float ring to bring the cam into engagement with the trip arm whereby one valve is kept closed while the other is open.

4. An engine comprising a cylinder, a piston therein, an inlet valve at each end of the cylinder, a stem for each valve, a bell crank lever, each lever being mounted on a stationary bearing, a segmental arm connected with said bell crank and engaging the valve stem, a pin carried by one arm of the bell crank lever, a ring journaled on the stationary bearing, a depending arm secured thereto, an upwardly inclined arm on said ring, a crab claw pivotally supported on said upwardly inclined arm and consisting of a horizontal arm having a notch therein adapted to engage with the pin, and a trip arm, a hand lever connected to the depending arm, a float ring having a cam thereon adapted to engage with the trip arm to throw the notch out of engagement with the pin, and means operated by the engine for oscillating said float ring to bring the cam into engagement with the trip arm whereby one valve is kept closed while the other is open, said means consisting of a wrist plate mounted on the cylinder, means for rocking the wrist plate from the engine, cams on the wrist plate, an arm pivoted at one end to the cylinder, a roller carried by said arm engaging with the cam whereby the arm is given an oscillatory movement, and links connecting said arm with the floating ring.

5. An engine comprising a cylinder, a piston therein, an inlet valve at each end of the piston, a stem for each valve, a bell crank lever, a stationary bearing on which the bell crank lever oscillates, a segmental arm connected with the bell crank lever and with the valve stem, a pin carried by one arm of the bell crank lever, a ring mounted to rotate on the stationary bearing, an upwardly extending arm on the ring, a crab claw pivoted on said arm, said claw consisting of an arm having a notch therein adapted to engage with the pin, and a depending arm, a wrist plate mounted on the cylinder, means for rocking the same from the engine, links connecting said wrist plate with the rotating ring to operate the valve, a cam adapted to engage with the trip arm to release the notch from the pin, and means for adjusting the position of said cam.

[Claims 6 and 7 not printed in the Gazette.]

960,499. REVERBERATORY FURNACE. FRANK A. BURNS, Anaconda, Mont. Filed Mar. 10, 1910. Serial No. 548,383.



1. In a smelting plant, the combination of a plurality of smelting furnaces, an uptake, a flue connecting the outlet of one furnace with the inlet of the next following furnace, a conduit connected with the uptake and with the flues intermediate the furnaces, and dampers or valves whereby the waste gases from one furnace may be directed into the next furnace or through said conduit into another furnace in the series or to the uptake.

2. In a smelting plant, the combination of a series of smelting furnaces, an uptake connected with the outlet of the last furnace in the series, a flue connecting the outlet of each preceding furnace with the inlet of the next, a conduit connected with the uptake and with the said flues, and valves whereby the waste gases from one furnace may be directed into the next furnace or through said conduit into another furnace in the series or to the uptake.

3. In a smelting plant, the combination of a plurality of smelting furnaces, an uptake, a flue connecting the outlet of one furnace with the inlet of the next following furnace, a conduit connected with the uptake and with the flues intermediate the furnaces, and dampers or valves whereby the waste gases from one furnace may be directed into the next furnace or through said conduit into another furnace in the series or to the uptake; and means for reheating and for reoxygenating the waste gases introduced into the following furnaces.

4. In a smelting plant, the combination of a series of smelting furnaces, a flue connecting the outlet of a preceding furnace with the inlet of the next succeeding furnace, an uptake, a conduit connected with said uptake and with each connecting flue between adjacent furnaces, and valves whereby the waste gases from a preceding furnace may be directed to or through any of the following furnaces in the series, the flues between the furnaces being of successively greater capacity to prevent checking of the gases passing from one furnace to the next.

5. In a smelting plant, the combination of a plurality of smelting furnaces arranged in a series, a flue connecting the outlet of a preceding furnace in the series with the inlet of a succeeding furnace, an uptake, a conduit connected with said uptake and with each of the connecting flues between adjacent furnaces, valves whereby the waste gases from a preceding furnace may be directed to or through any one or more of the following furnaces in the series, and means for reheating and for reoxygenating the waste gases introduced into such furnaces, the flues between the furnaces being of successively greater capacity to prevent checking of the gases passing from one furnace to the next.

[Claims 6 to 8 not printed in the Gazette.]

960,500. BURNER AND SUPPORT FOR VAPORIZERS. CORA A. BUTLER, Chicago, Ill. Filed Mar. 3, 1909. Serial No. 481,064.

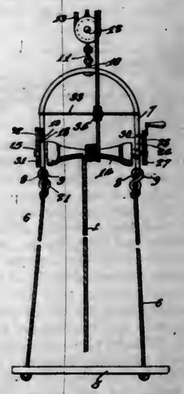
1. In combination with a vaporizer having a laterally extending pipe adapted to support a hood, a heater provided with a plurality of widely distended legs, and a plurality of arms adapted to receive and clamp the vaporizer in position to sustain the hood, substantially as described.

2. In combination with a vaporizer having a laterally extending pipe adapted to support a hood, a heater provided with a plurality of widely distended legs, a plurality of arms adapted to receive and clamp the vaporizer in position to sustain the hood, and a thumb screw entered through one of the arms and adapted to bear against the vaporizer to clamp the same in position, substantially as described.



3. In combination with a vaporizer comprising a tank or receptacle and a laterally extending pipe rigidly secured thereto and adapted to support a hood, a heater provided with a plurality of widely distended legs, a plurality of arms adapted to receive and clamp the vaporizer in position to sustain the hood, each of the arms being notched at its upper end to engage the sides of the vaporizer tank or receptacle, and a thumb screw entered through one of the notched arms and adapted to bear against the tank or receptacle to clamp the same in position, substantially as described.

960,501. SCAFFOLD-CHAIR. CHRISTY CALSON, South Bend, Wash. Filed Feb. 7, 1910. Serial No. 542,541.



1. A device of the character described comprising a frame, a seat suspended from said frame, a rotatable drum pivotally mounted at one end in said frame for swinging movement and means for locking said drum in the frame, substantially as and for the purpose set forth.

2. A device of the character described comprising a frame, a seat suspended from said frame, a drum having a stud shaft in each end thereof mounted in said frame, means for pivotally supporting one of said stud shafts whereby the drum may be swung outwardly into a horizontal plane, movable means carried by said frame adapted to engage the stud on the other end of said drum, locking means adapted to secure the last named means against movement, and means for rotating said drum, substantially as and for the purpose set forth.

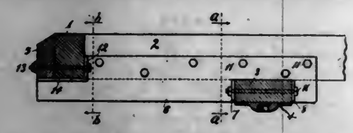
3. A device of the character described comprising a U-shaped frame, a seat suspended from the ends of said frame, a drum having a stud shaft in each end thereof journaled in the frame, one end of said drum being pivotally mounted for transverse swinging movement, the other of said shafts being seated in a groove in the arm of said frame, a locking plate hinged to said frame arm and having a groove therein to receive said shaft, a bolt swiveled in the arm adapted to extend through a slot in said plate,

said pin having lateral extensions on its outer end adapted to be turned at right angles to said slot to secure the plate in locking position, means for rotating said drum, and means for holding the drum against retrograde rotative movement, substantially as and for the purpose set forth.

4. A device of the character described comprising a U-shaped frame, a seat suspended from said frame, a drum having a stud shaft in each end thereof, one of said shafts being removably held in one arm of the frame, means for locking said shaft therein, the other of said arms having a reduced cylindrical portion, a sleeve rotatable on said reduced portion having an arm integrally formed therewith, the other shaft of said drum being journaled in said arm, means for rotating said drum, and means for holding the drum against retrograde rotative movement, substantially as and for the purpose set forth.

5. A device of the character described comprising a U-shaped frame, a seat suspended from the ends of said frame, a drum rotatably mounted in the arms of said frame, one end of said drum being pivotally supported in the frame, the other end of said drum being removable from the frame arm, whereby the drum may be swung in a horizontal plane, a longitudinal rod secured in the frame arms above the drum, a guide wheel longitudinally movable on said rod, and means for rotating said drum, substantially as and for the purpose set forth.

960,502. CAR CONSTRUCTION. JAMES R. CARDWELL, Chicago, Ill. Filed Apr. 14, 1905. Serial No. 255,571.



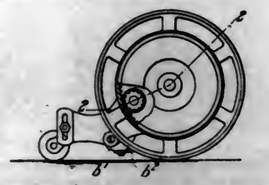
1. An under frame for car bodies including end sills, center sills, body bolsters, and metal plates provided with pockets at their bottom portions for receiving the body bolsters, which plates are also fastened to the center sills, each pocket having wings integral with the plate having this pocket and extending laterally of the plate in which the pocket is formed, and engaging the corresponding body bolster upon its front and rear vertical faces, each plate also having a pocket formed in its upper portion and there provided with wings integral with the plate having this pocket and extending laterally of the plate and engaging the rear vertical face and the bottom face of the corresponding end sill, the said plates extending forwardly and having transversely extending integrally formed wings 14, 14 positioned to receive blows of the coupler horns.

2. An under frame for car bodies including end sills, center sills, body bolsters, and metal plates provided with pockets at their bottom portions for receiving the body bolsters, which plates are also fastened to the center sills, each plate also having a pocket formed in its upper portion and engaging the corresponding end sill, the said plates extending forwardly and having transversely extending wings 14, 14 positioned to receive blows of the coupler horns.

3. An under frame for car bodies including end sills, center sills, body bolsters, and metal plates fastened to the center sills and extending longitudinally thereof, said metal plates having transversely extending wings 14, 14 positioned to receive blows of the coupler horns.

960,503. LAWN-MOWER. ADELBERT B. CASE, Springfield, Mass. Filed Jan. 28, 1909. Serial No. 474,722.

1. A cutter-shaft for lawn mowers and suitable bearings for the ends thereof, each bearing comprising a member having a tapered bearing surface and a member in which said surface is seated, fixed abutments on the cutter-shaft, a spring located between each bearing and one of said abutments to apply constant endwise pressure to each end of said shaft in opposed directions to hold said members of the bearing in operative relation one to the other, and to substantially maintain said shaft in a fixed position and against longitudinal movements.



2. A rotary cutter-shaft for lawn-mowers, and a bearing for each end of the shaft, a frame comprising side-plates in which said bearings are located, said bearings each comprising two members,—one movable toward the other,—fixed abutments on the shaft, and springs under compression and pressing against said abutments and associated with each bearing to hold said bearing members in operative relation one to the other, one of the abutments against which the action of the springs is exerted being on the shaft, whereby the latter is yieldingly maintained always in a fixed position and against longitudinal movements.

3. The combination with the frame of a lawn mower, of a rotary cutter-shaft, bearings for each end thereof comprising a ball-cup and balls seated in the frame, loose cones on the shaft, fixed abutments on the shaft, and a spring located between the end of each cone and one of said abutments to yieldingly hold the cones to their seats against the said balls, whereby endwise pressure is exerted against the shaft from each end longitudinally to position the shaft, substantially as described.

4. An automatic cutter-shaft adjusting device for lawn mowers having in combination with the side frames of the mower, a movable member on each end of said shaft, resilient means for independently moving said movable members in opposite directions, a bearing element located in each of said side frames to receive the ends of the shaft, the movable members engaging said bearing elements, whereby the resilient members will maintain the shaft in substantially a fixed position, as described.

5. The combination with the bearing elements of the opposite ends of the cutter-shaft of a lawn mower, adjustable cone members mounted on said shaft, abutments on said shaft, resilient means for moving said cone members in opposite directions toward said bearing elements and engaging the abutments whereby the longitudinal position of the shaft may be constantly maintained, as described.

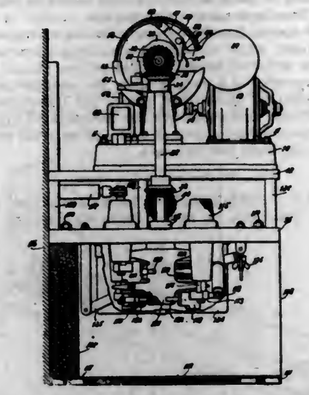
[Claim 6 not printed in the Gazette.]

960,504. POWER-OPERATED SWITCH OR CIRCUIT-BREAKER. HERBERT W. CHENEY, Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Oct. 20, 1905. Serial No. 283,689.

1. In a switch or circuit breaker, movable and stationary contacts, a shaft operatively connected to the movable contact, switch operating means movable about the shaft axis and serving by one movement to close the switch and by a further movement in the same direction to open the switch, said switch operating means having an intermittent driving connection with the shaft, and means for storing potential energy in said switch operating means.

2. In a switch or circuit breaker, movable and stationary contacts, a shaft operatively connected to the movable contact, means for shifting said shaft so as to close and open the switch, said means comprising a gravity actuated member mounted on the shaft and movable about the axis of the same said member serving by successive movements in the same direction to close and open the switch and a motor for storing potential energy in said member.

3. In a switch or circuit breaker, a movable and a stationary contact, a pivotally mounted weight completely revolvable about an axis and acting during a portion of a revolution to quickly separate the contacts to open the switch, and a motor for moving the weight independently of the contacts to an operative position.

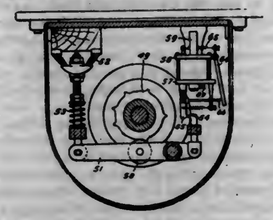


4. In a switch or circuit-breaker, a movable contact and a stationary contact, a weight pivotally mounted in operative relation to said movable contact, a motor for moving the weight through a portion of a revolution to store potential energy in it, and means for releasing the weight to allow it to move through another portion of a revolution to quickly move the contacts out of engagement.

5. In a switch or circuit-breaker, movable and stationary contacts, a weight completely revoluble about an axis and mounted in operative relation to said movable contact, a motor for raising the weight in position for successively moving the movable contact into and out of engagement with the stationary contact to close and open the switch, and means for stopping and holding said weight stationary when the switch is closed.

[Claims 6 to 29 not printed in the Gazette.]

960,505. MULTIPLE-VOLTAGE SYSTEM OF MOTOR CONTROL. HERBERT W. CHENEY, Milwaukee, Wis., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed Oct. 6, 1909. Serial No. 521,371.



1. In combination, a motor, a circuit therefor, a resistance in the circuit, means for effecting changes in the potential on the leads of the armature circuit of the motor, a switch for cutting said resistance into circuit, means for holding said switch in position in which the resistance is in circuit, and an electro-magnetic device for rendering said holding means inoperative.

2. In combination, a motor, multiple voltage means, means for connecting the motor armature across different sets of mains, a resistance, a switch for inserting said resistance in circuit with the motor armature when the latter is changed from one set of mains to another, a latch for holding said switch in position with the resistance in circuit, and electro-magnetic means for releasing said latch.

3. In combination, multiple voltage mains, a motor, means for connecting the motor armature to different sets of the mains, a resistance in the motor armature circuit, a switch normally short-circuiting said resistance, means for opening said switch as the motor armature connections are changed from one set of mains to another, a latch for holding said switch open, and electro-magnetic means rendered operative by the opening of said switch for releasing said latch.

4. In combination, multiple voltage mains, a motor, means for connecting the motor armature to different sets of said mains, a resistance in the motor armature circuit, a switch normally short-circuiting said resistance, means for opening said switch as the motor armature connections are changed from one set of mains to another, a latch for holding said switch open, and electro-magnetic means for releasing said latch.

5. In combination, a controller arranged to connect a motor armature to different sets of multiple voltage mains, a resistance, a switch arranged to be operated to cut said resistance into the motor armature circuit when the armature connections are changed from one set of multiple voltage mains to another, a latch for holding said switch in the position in which said resistance is in circuit, and electro-magnetically operated means for releasing said latch.

[Claims 6 to 15 not printed in the Gazette.]

960,506. SHOE-POLISHING DEVICE. CHAN HILL COCHRAN, Portland, Oreg. Filed July 26, 1909. Serial No. 509,661.



1. A shoe polishing device comprising a shoe shaped base, a cloth guiding member carried by said base, said member comprising a loop portion having inverted U-shaped portions formed adjacent its ends, said loop portion being provided with downwardly projecting portions forming stops.

2. A shoe polishing device comprising a shoe shaped base, provided with means for securing the same to a support, said base being provided with a groove in its front edge, a cloth guiding member comprising a loop formed of wire adapted to be secured within said groove at its forward end by staples, said loop being provided with downwardly projecting portions, and inverted U-shaped portions, the ends of said member being bent inwardly and pointed adapted to be driven into the base member and secured by staples.

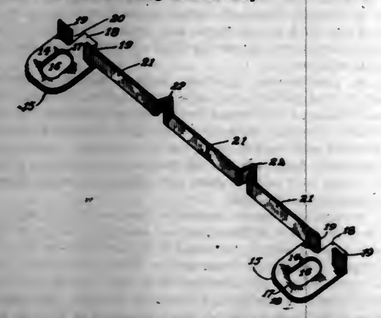
960,507. NUT-LOCK. FRED R. COCHRAN, Windsor, Nova Scotia, Canada. Filed June 16, 1909. Serial No. 502,560.

1. A nut lock comprising a flat body provided with a guide slot, one edge of said body being upturned to form an abutment flange and provided with a central slot, and a lip projecting from said body at the base of said central slot and arranged in the same plane as the body.

2. A nut lock comprising a flat body provided with an intermediate guide slot, one edge of said body being upturned to form a nut engaging flange, said flange being provided with a slot for engagement with a corner of a nut, and said body being provided with an outstanding lip which projects therefrom at the base of the said last mentioned slot in said flange.

3. A nut lock comprising a flat body provided with a slot, one edge of said body being bent at right angles thereto and provided with a slot, said angular portion being

adapted for engagement with the sides of a nut and the slot therein being adapted for engagement with a corner of a nut, and a lip projecting from said body at the base of said edge slot by means of which said body may be moved relative to the nut being held thereby.



4. A nut lock comprising two washers each having a flat slotted body and an angular end flange provided with a slot, a lip projecting from said body at the base of each flange slot, and a coupling member integral with the said flanges and provided with integral crimped holding notches.

960,508. STOCKING-HOLDER FOR USE IN DARNING. ALBERT F. COLLINS, Minneapolis, Minn., assignor, by mesne assignments, to William A. McLeod and Albert F. Collins. Filed May 20, 1909. Serial No. 497,184.



1. A stocking holder for use in darning, comprising a resisting member and a combined clamping member and guard, each constructed of wire, the said clamping member being approximately annular and bent at intervals to form a multiplicity of vertically extended approximately parallel guard arms and inwardly bowed seats formed at the junction of said arms with the base of said combined clamping member and guard, and which combined clamping member and guard is adapted to be sprung inside of said resisting member and arranged to yieldingly hold said resisting member in said seats, substantially as described.

2. A stocking holder for use in darning comprising a resisting member and a combined clamping member and guard, each constructed of wire, the former being bent outward at intervals to form a multiplicity of outwardly extended and substantially horizontal arms and the clamping member being bent at intervals to form a multiplicity of upwardly extended guard arms with outturned finger portions and with inwardly bowed seats at the junction of the base of said clamping member and said arms, and which combined clamping member and guard is adapted to be sprung inside of said resisting member and arranged to yieldingly support the resisting member in said seats, substantially as described.

960,509. MANUFACTURE OF FUEL-BRIQUETS. WILLIAM FREDERICK COLLINS, London, England. Filed July 27, 1908. Serial No. 445,568.

1. The herein described process for the manufacture of fuel briquets, which consists in combining pulverized carbonaceous material and powdered solid sodium silicate both being in a dry condition, thoroughly mixing the ingredients in a dry condition, subjecting the incorporated dry mixture to the action of heat and moisture, and subsequently forming the mass into briquets.

2. The herein described process for the manufacture of fuel briquets, which consists in combining pulverized carbonaceous material, powdered solid sodium silicate, and a small proportion of a metallic oxid, the materials being in a dry condition, thoroughly mixing the ingredients in a dry condition, then subjecting the incorporated dry material to the combined action of heat and moisture and then forming the mass into briquets.

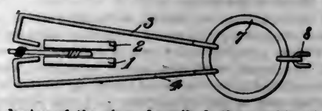
960,510. FIRE-ESCAPE. HARRY L. COOPER, Albany, Oreg. Filed Feb. 28, 1910. Serial No. 546,430.



1. In a fire escape, a reel supporting frame comprising a pair of side bars, a handle bar connected to the upper ends of said side bars, a reel revolubly mounted in the lower end of said frame, a crank handle connected with said reel, a lowering strap secured at its inner end to the reel and having on its outer end a fastening means, braking disks fixedly mounted on said reel, a brake carrying frame comprising side bars hingedly connected at their lower ends to the side bars of said reel frame, a handle bar connected to the outer ends of said side bars, a brake frame connected to said bars adjacent to their inner ends, brake shoes arranged in said frame to engage said disks, supporting plates secured to said reel frame, a body supporting strap, and means to detachably secure the ends of said strap to said supporting plates.

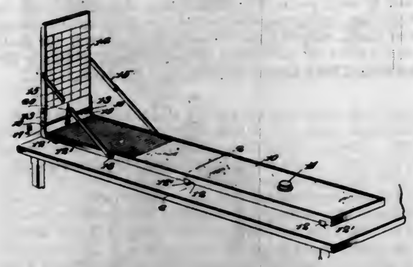
2. In a fire escape, a reel supporting frame, a handle connected therewith, a reel revolubly mounted in the frame, a lowering strap connected with the reel, braking disks fixedly mounted on the reel, a brake-carrying frame hingedly connected to the reel frame, a brake frame, brake shoes arranged in the brake frame to engage said disks, supporting plates secured to said reel frame, a body supporting strap, and means to detachably connect the ends of said strap to said supporting plates.

960,511. WIRE-STRETCHER. LOUIS E. COOPER, Millsaps, Cal. Filed Aug. 9, 1909. Serial No. 511,979.



In a device of the class described, the combination with a pair of independent unconnected fence wire clamping bars, of independent strain hooks adapted to engage said bars on opposite sides, a stretching device, a flexible coupling, and a ring connecting the coupling member and the independent hooks whereby when a strain is put upon the coupling member, the ring will cause the hooks to clamp the fence wire bars upon the wire being stretched.

960,512. GAME APPARATUS. WILLIAM H. DARROW, Traverse City, Mich. Filed Apr. 26, 1909. Serial No. 492,225.



1. A game apparatus including a base, strips disposed upon the under face of said base to support the same, a supporting board mounted at the forward end of said base, hinges carried at the forward end of said base and connected to said supporting board, said hinges having registered apertures formed in the edges thereof, a strip disposed between said hinges, lugs projected from the opposite corners of said strip and engaged in the apertures in said hinges, an indicator arm carried by said strip and extended upwardly therefrom for normal engagement against said supporting board, and braces hingedly disposed between said supporting board and said base for retaining the said supporting board in a vertical position.

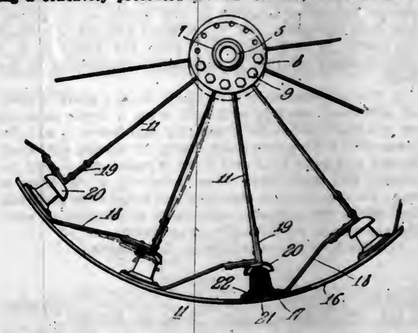
2. A game apparatus including an elongated board having a plurality of lines disposed in spaced relation transversely thereon at the forward end of the same, a supporting board hingedly disposed at the forward end of said first board, braces disposed between said boards for retaining said supporting board in a vertical position and a telltale carried by said supporting board.

3. A game apparatus including an elongated base, strips positioned on the under side of said base at the opposite ends and at the central portion thereof, a supporting board hingedly disposed at the forward end of said base, a metallic strip hingedly disposed across the lower end of said supporting board adjacent said base, and an indicator arm mounted on said strip to move therewith.

4. A game apparatus including a base having a plurality of spaced lines disposed across the upper face of the same at the forward end thereof, a board hingedly disposed at the forward end of said base and extended upwardly therefrom, a strip hingedly mounted across the lower end of said board and pendent immediately over the forward extremity of said base, and an indicator arm carried by said strip for normal engagement against the lower portion of said board.

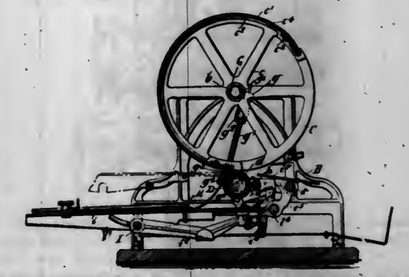
960,513. VEHICLE-WHEEL. JOSEPH L. DAY, Nashville, Okla. Filed Apr. 20, 1909. Serial No. 491,001.

In a vehicle wheel, a hub, a rim, and resilient spokes connecting the hub and rim, each of said spokes comprising a resilient strip secured at its inner end to the hub, a resilient strip secured at one end to the rim and extending at an angle inwardly from the rim and toward the outer end of the first mentioned strip, a two-winged angle-member having one of its wings secured to the said outer end of the first mentioned strip and its other wing secured to the inner end of the second mentioned strip, a cap carried by the last mentioned wing of the angle member and having a concavity presented toward the rim, and an elastic



buffer secured upon the rim and adapted to seat in the concavity of said cap.

960,514. SHEET-FEEDING APPARATUS. ALBERT B. DICK, Lake Forest, Ill., assignor to A. B. Dick Company, Chicago, Ill., a Corporation of Illinois. Filed June 29, 1909. Serial No. 505,014.



1. The combination of a rotatable drum, a shaft, a roller on said shaft coacting with said drum, a feeder mounted on said shaft, means for connecting said feeder to and disconnecting it from said shaft, a paper-stop pivotally mounted opposite the line of coaction of said drum and roller, means for rocking the paper-stop on its pivots in accordance with the rotation of the drum to operative and inoperative position, and means for rendering said paper-stop inoperative, substantially as set forth.

2. The combination of a rotatable drum, a shaft movable toward and away from the drum in accordance with the rotation of the drum, a roller on said shaft, a feeder mounted on said shaft, means for connecting the feeder to and disconnecting it from the shaft, a paper-stop movable to operative and inoperative positions by the movement of said shaft toward and away from the drum, and means for rendering said shaft ineffective to move the paper-stop to operative position, substantially as set forth.

3. The combination of a rotatable drum, a shaft, a roller on said shaft coacting with said drum, a feeder mounted on said shaft, means for connecting said feeder to and disconnecting it from said shaft, a paper-stop movable in accordance with the rotation of the drum to operative and inoperative position, means for rendering said paper-stop inoperative, and means for effecting an adjustment of the range of movement of the paper-stop to vary the position of the stop when the latter is in operative position, substantially as set forth.

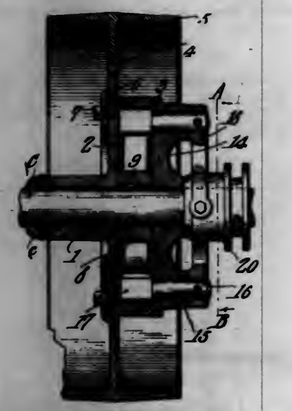
4. The combination of a rotatable drum, a shaft rotatable in accordance therewith, a roller on said shaft, a feeder loosely mounted on said shaft, a clutch having a movable clutch-member for connecting the feeder to said shaft, a

spring for operating the said clutch-member, and a device movable into position for holding said clutch-member against movement actuated by said spring or for permitting such movement, said clutch being adapted to connect the feeder to said shaft only when the feeder is in a predetermined relation to the shaft, substantially as set forth.

5. The combination of a rotatable drum, a shaft, a roller on said shaft coacting with said drum, a feeder mounted on said shaft, means for connecting said feeder to and disconnecting it from said shaft, means for moving said shaft toward and away from said drum, a paper-stop, means for causing said shaft when moved relatively to the drum to move the paper-stop to operative and inoperative positions, and means for rendering said shaft inoperative to move the paper-stop, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

960,515. CLUTCH. JONATHAN A. DICKEY, Columbus, Ind. Filed Oct. 11, 1909. Serial No. 522,075.

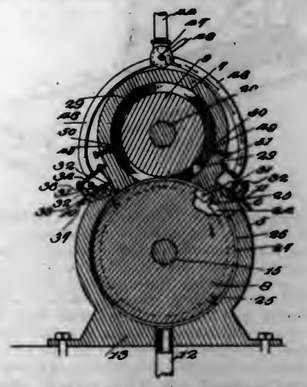


The combination with a shaft, of a cylindrical clutch case loosely mounted thereon, said case having an open face, there being an interior annular groove in the open face of the case, a pulley secured to and concentric with the case, a cap disk loosely mounted on the shaft and having its peripheral portion seated within the annular groove in the clutch case, said cap constituting a closure for the open face of the case, an expansible clutching member secured to and revoluble with the shaft, said member being located within the case, an actuating device slidably mounted on the shaft, and means mounted for rotation within the cap disk and actuated by said device for shifting the expansible member into contact with the clutch case.

960,516. ROTARY ENGINE. BERT DORRIS, Bloomfield, Ind. Filed July 21, 1909. Serial No. 508,828.

1. A rotary engine including a casing having inlet and exhaust ports, a rotor disposed within the casing and provided with spaced circumferential flanges defining independent pockets, there being circumferential grooves formed in the flanges for the reception of a packing, partitions extending across the pockets and constituting fixed pistons, an abutment mounted for rotation in the casing and provided with recesses to permit the passage of the pistons, valves disposed on opposite sides of the casing for controlling the admission of steam to the inlet ports and main supply pipe, and means for directing steam to either valve, thereby to control the direction of rotation of the rotor.

2. A rotary engine including a casing having inlet and exhaust ports and provided with spaced laterally extending bearings, shafts journaled in said bearings, caps engaging the exterior walls of the bearings and constituting glands, a rotor keyed to one of the shafts and having its opposite side walls cut-away and its periphery formed with a plurality of spaced flanges defining independent pockets, transverse partitions extending across said pockets and constituting pistons, an abutment mounted for rotation with the other shaft and bearing against the outer flanges of the rotor, said abutment being provided with a central circumferential groove for the reception of the central flange of the rotor and having recesses formed therein to permit the passage of the pistons, intermeshing gears carried by said shafts for transmitting motion from one to the other, valves mounted for reciprocation on the casing, and means engaging the valves and actuated by the shaft of the rotor for controlling the admission of steam to the pockets at each quarter revolution of the rotor.



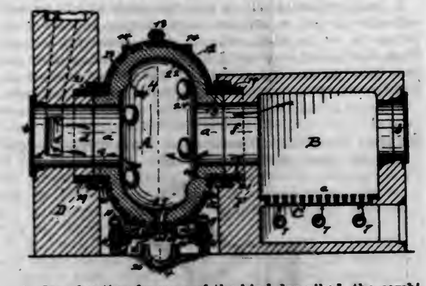
3. A rotary engine including a casing having inlet and exhaust ports, spaced shafts journaled in the casing, a rotor secured to one of the shafts and provided with spaced outer and intermediate circumferential flanges defining independent pockets, partitions extending across the pockets and constituting fixed pistons, an abutment mounted for rotation with the other shaft and having its opposite edges bearing against the inner faces of the outer flanges of the rotor and its intermediate portion provided with a circumferential groove for the reception of the central flange of said rotor, there being transverse recesses formed in the abutment on opposite sides of the central groove and disposed diametrically opposite each other to permit the passage of the pistons, the pistons in one pocket being arranged intermediate the pistons in the other pocket, and a valve for controlling the admission of steam alternately to said pockets at each quarter revolution of the rotor.

4. A rotary engine including a casing having steam chests and provided with inlet and exhaust ports, a rotor provided with spaced pockets, an abutment co-acting with the rotor, rock shafts journaled in the steam chests and provided with terminal crank arms, spring pressed valves operatively connected with the rock shafts, cams carried by the shaft of the rotor, and trip levers pivotally connected with the crank arms of the rock shafts and extended into the path of movement of the cams.

5. A rotary engine including a casing having steam chests and provided with inlet and exhaust ports, a shaft journaled in the casing, a rotor secured to the shaft and provided with spaced pockets, an abutment co-acting with the rotor, rock shafts journaled in the steam chests and having their intermediate portions provided with spaced fingers and their terminals formed with crank arms, spring pressed valves slidably mounted in the steam chests and provided with stems pivotally mounted between the fingers of the adjacent rock shafts, cams secured to the shaft of the rotor, and trip levers connected with the crank arms and extended into the path of movement of the cams.

[Claims 6 and 7 not printed in the Gazette.]

960,517. HEATING-FURNACE. FREDERICK J. DROEGE, Covington, Ky. Filed Sept. 4, 1909. Serial No. 516,248.



1. In a heating-furnace of the kind described, the combination of a rotary heater consisting of a lined shell and having axially alined, circular openings in opposite sides with marginal, outwardly projecting necks, a wall on each side of this heater, each of which has an opening, which openings are opposite the openings in the heater, marginal collars seated in these walls and surrounding the openings therein into which the necks of the heater are fitted, there being annular recesses between each of these collars and the necks fitted into them to permit packing, a fire-box in communication with one of these openings and a stack in communication with the other opening.

2. In a heating-furnace of the kind described, the combination of a rotary, drum-shaped heater having openings in its opposite sides and one in its peripheral side, a fire-box in communication with the opening in one side, a stack in communication with the opening in the other side, a pivotally connected cut-off having a laterally extending arm to control the opening in the peripheral side and spaced stops, one located in the path of this arm so as to cause this cut-off to open every time while passing through the lowest portion of its circular path and the other located in the path of the cut-off after it is open and serving to close the same.

3. In a heating-furnace of the kind described, the combination of a rotary heater having axially alined openings in its opposite sides permitting passage of heat, also inwardly extending projections on each side spaced around the openings therein to agitate this charge and to work it from both sides into the lowest part of the heater.

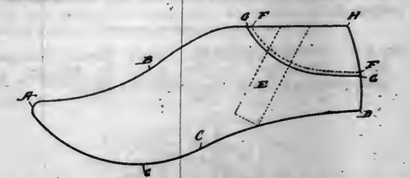
4. In a heating-furnace of the kind described, the combination of a heater having openings permitting passage of heat, said heater consisting of a perforated shell and of an interior, fire-proof lining involving in its application the use of plastic matter, the connection of which is aided by its engagement with the perforations in the shell.

5. In a heating-furnace of the kind described, the combination of a rotary heater consisting of a lined shell and having axially alined, circular openings in opposite sides with marginal, outwardly projecting necks, a wall on each side of this heater, each of which has an opening, which openings are opposite the openings in the heater, marginal collars seated in these walls and surrounding the openings therein into which the necks of the heater are fitted, each of said collars having an outwardly open notch in its lowest part to provide an outlet for abrasions and other matter which may have entered the space between these collars and the necks extending into them, a fire-box in communication with one of these openings and a stack in communication with the other opening.

960,518. SHOE-FORM INSERTER. EDWIN E. DURAND, Beverly, Mass. Filed Mar. 30, 1909. Serial No. 486,845.

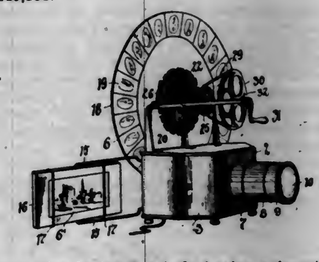
1. As a new article of manufacture for use with a shoe-form, in facilitating insertion thereof within a shoe: an inserter insertible within the shoe-form and comprising, in part, a toe-portion engageable with the interior of the form to contract the width thereof when the form is being inserted within a shoe.

2. As a new article of manufacture for use with a shoe-form, in facilitating insertion thereof within a shoe: an inserter insertible within the shoe-form and comprising, in part, a toe-portion engageable with the interior of the form to contract the width thereof when the form is being inserted within a shoe, and a supporting portion for the instep of the form, while the width of the form is being contracted.



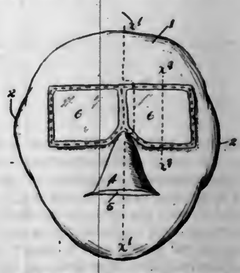
3. For use in facilitating the insertion of a shoe-form within a shoe, an inserter insertible within a shoe form and provided with a heel-portion furnished with a lip engageable with the upper edge of a shoe form.

960,519. PROJECTION-LANTERN. CHARLES F. DUTTON, Jr., Cleveland, Ohio. Filed June 20, 1908. Serial No. 440,888.



In projection lanterns, a body having a lens tube and lamp and a removable rear wall having an opening opposite said lens tube, in combination with alternative picture display means jointly mounted upon said rear wall and removable therewith and comprising a swinging picture support at one point and a rotatable picture support at another.

960,520. FACE-PROTECTING MASK. MARTINIUS DYSTHE, Mayville, N. D. Filed Feb. 3, 1909. Serial No. 475,747.

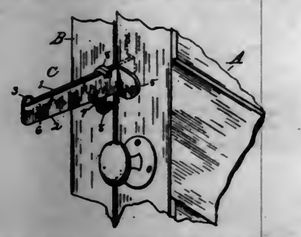


1. A face mask having its body portion constructed of flexible material and formed to cover the face and provided with a nose piece and free air passage, and transparent flexible panes secured to said mask, at the eye openings, and spaced apart, to afford intervening closed air spaces, by means of flexible marginal spacing strips.

2. A face mask having its body portion constructed of flexible material and formed to cover the face, and pro-

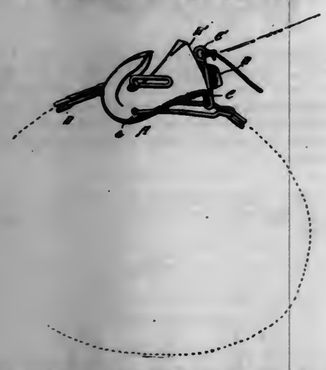
vided with a nose piece and a free air passage, transparent flexible panes secured to said mask at the eye openings, and spaced apart by flexible marginal spacing strips, fluffy material, such as fur, secured to said face mask for engagement with the nose and face below the eyes, but above said nose air passage, and elastic pockets or gathered portions for engagement with the ears to hold the fluffy material engaged with the face, substantially as described.

960,521. DOOR-FASTENER. JOHN EARLY, Tekonsha, Mich. Filed Sept. 5, 1907. Serial No. 391,435. Renewed Nov. 17, 1909. Serial No. 528,480.



In a door fastener, the combination of two hinged sections, one section of which is provided with laterally projecting teeth at its free end, an opposite section being provided with a foot, and a vertically-pivoted hasp secured to the section provided with teeth, said hasp having oppositely-disposed, inwardly-bent arms adapted to inclose said sections and to swing and engage said parts when folded together, substantially as and for the purpose set forth.

960,522. GRAB-HOOK. CHARLES W. EBERT, Merrill, Wis. Filed Feb. 8, 1910. Serial No. 542,753.



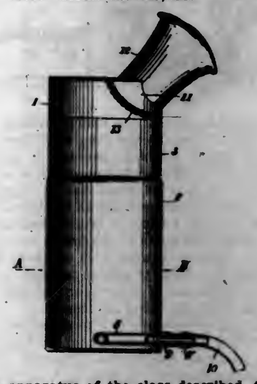
1. In combination with a chain, a trip grab hook connected thereto, one end of said hook having a widened portion with a lug projecting therefrom, a trip link connected to said chain and engaging said lug, and releasing means connected to said trip link, as set forth.

2. In combination with a chain, a trip grab hook connected thereto, one end of said hook having a widened portion with a lug projecting therefrom, a trip link connected to said chain and engaging said lug, one end of said trip link turned to form an eye, and a releasing cord connected to said eye, as set forth.

3. In combination with a chain, a trip grab hook connected thereto, one end of said hook having a widened portion with a lug projecting therefrom, a trip link connected to said chain and adapted to engage over said lug and resting upon the ends of the shank portion of the hook, an eye formed at one end of said trip link, and a cord connected to said eye, as set forth.

4. In combination with a grab trip hook having its butt end widened and an integral lug projecting therefrom adjacent to its marginal edge, a chain connected to said hook, a trip link connected to said chain adapted to engage said lug, one end of the trip link formed into an eye which rests upon the widened end of the hook, as set forth.

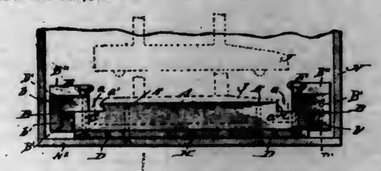
960,523. INHALER. HENRI EDDE, Paris, France. Filed Apr. 12, 1909. Serial No. 489,395.



1. In an apparatus of the class described, the combination with an elongated casing containing a finely divided substance in its lower portion and having an outlet in its upper portion, and an air tube extending into the lower portion of said casing, said tube having independent branches extending horizontally abreast of the bottom of the casing, said branches having discharge openings and curved lip portions at said openings for imparting a whirling movement to the discharging air.

2. In an apparatus of the class described, the combination with an elongated casing containing a finely divided substance in its lower portion and having an outlet in its upper portion, and an air inlet tube having two branches in said casing lying abreast of the bottom thereof and shaped to conform to and lying close to the wall of said casing and extending from one wall portion thereof to points opposite the vertical axis of said casing, the ends of said branches having discharge openings and the discharge openings having curved lip portions for imparting a whirling movement to the discharging air.

960,524. TYPE-WRITER-SHIPPING CASE. JOHN ROBERT ELKIN, Greenville, S. C. Filed Aug. 14, 1908. Serial No. 448,624.

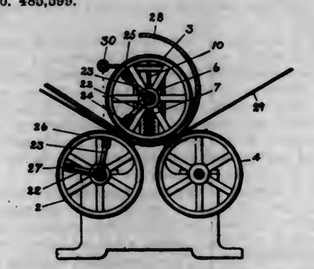


1. A typewriter shipping case comprising a box-like body provided with a closure and a clamp secured in the bottom thereof for holding a typewriter, said clamp comprising the typewriter base board, a pair of side members rigidly secured thereto and a pair of end members slidably mounted thereon, means on said end members adapted to extend over the adjacent portions of the frame of the typewriter and means for securing said members in clamping position, substantially as described.

2. A typewriter shipping case comprising a box like body and a closure for the same, in combination with the typewriter base board secured in the bottom thereof, a pair of side members fixedly secured to the upper face of said base board close to the sides thereof, a pair of transverse members slidably mounted upon the ends of said side members, said side and transverse members being coextensive with the length and breadth of said base board respectively, means on said transverse members adapted to extend over the adjacent portions of the typewriter frame when said members are in clamping position, bolts extending through the ends of said side and transverse members, said transverse members being slotted to receive said bolts, and thumb nuts threaded on said bolts for securing said transverse members in clamping position, substantially as described.

3. A typewriter shipping case comprising a box like body and a closure for the same in combination with the typewriter base board secured in the bottom thereof, a pair of side members secured to the upper face of said board with their outer faces flushed with the edges of said board, said side members being co-extensive in length with said board and adapted to receive the typewriter between them, a pair of transverse clamping members slidably mounted upon the ends of said side members, the under side of the ends of said transverse members being cut away to receive the ends of the side members, and the upper face of the side members being cut away adjacent the ends to receive the overhanging ends of the transverse members and to form shoulders to limit the inward movement thereof, means on said transverse members adapted to extend over the adjacent portions of the frame of the typewriter when in clamping position, and means for manually locking said transverse members in clamping position, substantially as described.

960,525. WOOD-BENDING MACHINE. CHARLES W. ELLIOTT, New Albany, Ind. Filed Mar. 25, 1909. Serial No. 485,599.



1. A machine for bending wood, comprising a series of bending-rolls arranged in triangular relation, and a spring strip which is normally substantially straight, said strip being fed against the face of the wood which forms the periphery of the curve and keeping the peripheral surface of the wood under pressure throughout the bending operation.

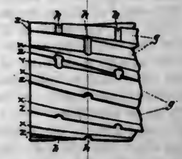
2. A machine for bending wood, comprising a series of bending-rolls adjustably arranged in triangular relation, and means for pressing that surface of the wood which forms the periphery of the curve intermediate the peripheral rolls by constant direct spring pressure.

3. A wood bending machine comprising a roll or former around which the wood is bent and means for feeding and bending the wood around said roll in combination with a strip interposed between the wood and such feeding means of a material which tends to maintain itself in a flat plane.

4. A wood bending machine comprising a roll or former around which the wood is bent and means for feeding and bending the wood around said roll, in combination with a metal strip interposed between the wood and such feeding means of such a quality that it tends to maintain itself in a flat plane, said feeding and bending means being heated and transmitting heat to said metal strip.

5. A wood bending machine comprising a roll or former around which the wood is bent and means for feeding and bending the wood around said roll, in combination with a strip interposed between the wood and such feeding means of a material which tends to maintain itself in a flat plane, means for heating said feeding and bending means, and means for moistening the surface of the wood adjacent the roll or form around which it is bent.

960,526. ROTARY CUTTER. JULIUS ERLANDSEN, New York, N. Y. Filed Dec. 21, 1907. Serial No. 407,475.



1. In a rotary cutter having teeth, faces on the teeth and cutting edges at the intersection of the faces, the cutter being provided with holes intersecting the said faces and nicking the cutting edges.

2. In a rotary cutter having teeth with working faces; cutting edges on said teeth and having holes, extending from the periphery, intersected by the planes or surfaces of the working faces of the teeth, forming apertures in the said faces and nicks in the cutting edges.

3. In a rotary cutter having teeth with apertured working faces, said apertures caused by holes formed in the teeth intersecting the said working faces; such holes, when measured on the circumference of any intersecting cylinder concentric with the axis of the cutter, to widen for a measurable distance from the aperture.

4. A rotary cutter having teeth with faces and cutting edges and provided with holes having their axes approximately parallel to one of the faces; apertures formed by the said holes in the faces to which the axes are parallel; surfaces of the said holes that diverge from the said apertures and nicks in the cutting edges formed by the said holes.

5. A rotary cutter with working faces and cutting edges having an interior passage adapted to supply lubricant and provided with holes which nick the cutting edges, aperture the working faces and extend to the interior passage; the sides, of the holes, which intersect the working faces and limit the apertures therein, diverging from such apertures, substantially as shown and described.

[Claims 6 to 10 not printed in the Gazette.]

960,527. FLY-CATCHER. HARALD VON ESSEN, Hamburg, Germany. Filed Apr. 16, 1909. Serial No. 490,382.



1. A fly-catcher comprising, in combination, an adhesive band folded zigzag-wise, an air- and oil-tight cover enveloping said band and attached to the lower extremity of the latter, a string fast to the upper extremity of the adhesive band, both ends of said string projecting from the side edges of the band and after being cross-wise pasted in the top edge closure of the air- and oil-tight cover issuing from the latter, so as to enable by pulling to open the cover and to subsequently extract the sticky band therefrom and finally to hang up the fly catcher, substantially as set forth.

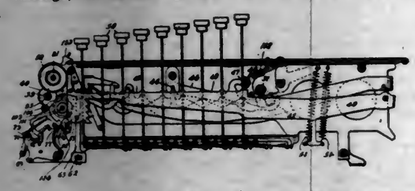
2. A fly catcher comprising, in combination, an adhesive band folded zigzag-wise, a string fast to the upper extremity of said band having both ends projecting from the

side edges thereof, an air- and oil-tight bag enveloping the adhesive band and attached to the lower extremity of the latter, the top portion of said bag being glued together with the two ends of the aforesaid string crossing therein and issuing therefrom, so that by pulling the string ends in opposite directions the top closure of the bag is torn open and lips are produced for catching the liquid glue trickling down the adhesive band, substantially as set forth.

3. A fly-catcher comprising, in combination, an adhesive band folded zigzag-wise, having the lowermost layer or fold extended, a string fast to the upper extremity of said band having both ends projecting from the side edges thereof, an air- and oil-tight bag enveloping the adhesive band and attached to the projecting marginal edge portion produced by the extension of the lowermost layer or fold of the adhesive band, the top portion of said bag being glued together with the two ends of the aforesaid string crossing therein and issuing therefrom, so as to enable by pulling to open the cover and to subsequently extract the sticky band therefrom and finally to hang up the fly catcher, substantially as set forth.

4. A fly-catcher comprising, in combination, an adhesive band folded zigzag-wise, the folding edges of the band being perforated to enable the glue to percolate therethrough, a string fast to the upper extremity of said band having both ends projecting from the side edges thereof, an air- and oil-tight bag enveloping the adhesive band and attached to the lower extremity of the latter, the top portion of said bag being glued together with the two ends of the aforesaid string crossing therein and issuing therefrom, so that by pulling the string ends in opposite directions the top closure of the bag is torn open and lips are produced for catching the liquid glue trickling down the adhesive band, substantially as set forth.

960,528. CALCULATING-MACHINE. DORR E. FELT, Chicago, Ill. Filed Sept. 16, 1908. Serial No. 453,271.



1. In a calculating machine, in combination: multiple-order accumulator mechanism; a series of column-actuators; an independent canceling device adapted to advance a plurality of the orders from diverse positions to a predetermined limit; and cancellation controlling means to operate said canceling device and effect a succeeding adding movement of the series of column actuators; substantially as specified.

2. In a calculating machine, in combination: multiple-order accumulator mechanism; a series of column-actuators; an independent canceling device adapted to advance a plurality of the orders, at one movement, from diverse positions to a predetermined limit; and cancellation controlling means to operate said canceling device and effect a succeeding adding movement of the series of column actuators; substantially as specified.

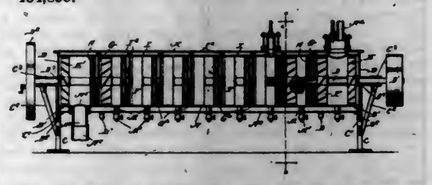
3. In a calculating machine, in combination: multiple-order accumulator mechanism; a series of column-actuators; an independent canceling device adapted to advance a plurality of the orders from diverse positions to a predetermined limit; and cancellation controlling means to operate said canceling device and effect a succeeding one-space adding movement of the series of column actuators; substantially as specified.

4. In a calculating machine, in combination; multiple-order accumulator mechanism; a series of column-actuators; an independent canceling device adapted to advance a plurality of the orders, at one movement, from diverse positions to a predetermined limit; and cancellation controlling means to operate said canceling device and effect a succeeding one-space adding movement of the series of column actuators; substantially as specified.

5. In a calculating machine, in combination: multiple-order accumulator mechanism; a series of column-actuators; an independent canceling device adapted to advance a plurality of the orders from diverse positions to a predetermined limit; and cancellation controlling means to operate said canceling device and effect a prior and a succeeding adding movement of the series of column actuators; substantially as specified.

[Claims 6 to 44 not printed in the Gazette.]

960,529. REFINING-MACHINE. JOHN C. FLEMING, Washington, D. C. Filed Sept. 26, 1908. Serial No. 454,899.



1. In a machine of the kind described, the combination with a receptacle, of a rotary dasher, a stationary screen adjacent the said dasher, and a rotary screen adjacent the stationary screen.

2. In a machine of the kind described, the combination with a receptacle, of a rotary dasher, a fixed screen adjacent thereto, and a rotary screen adjacent the fixed screen, said fixed screen being made in two sections.

3. In a machine of the kind described, the combination with a receptacle, of a rotary dasher arranged therein, a fixed screen adjacent said dasher, and a rotary screen arranged adjacent the fixed screen, said rotary screen being double.

4. In a machine of the kind described, the combination with a receptacle, of a rotary shaft extending through the same, said receptacle having a feed opening near one end, and a discharge opening near the opposite end, a pair of rotary dashers upon opposite sides of said openings, the dasher upon the rear side of the discharge end being inclined reverse to the direction of the other dasher, and a series of dashers and screens arranged between the said dashers at the front and rear, as set forth.

5. In a machine of the kind described, the combination with a receptacle, of a rotary shaft extending therethrough, rotary dashers and screens mounted upon said shaft and a stationary screen arranged between each rotary screen and dasher, and means for securing the said stationary screen, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

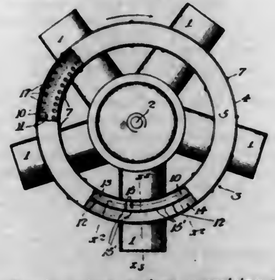
960,530. MUFFLER. THOMAS C. FORBES, Los Angeles, Cal., assignor to Los Angeles Rotary Gas Engine Company, Los Angeles, Cal., a Corporation of California. Filed July 21, 1909. Serial No. 508,855.

1. A muffler for rotary engines comprising a continuous annular chamber rotating with the engine and having a communication with the exhaust port of the cylinder, and having a discharge opening.

2. A muffler for rotary engines comprising an annular chamber rotating with the engine and having a series of openings in communication with the respective exhaust ports of the cylinders, and having a series of discharge openings.

3. A muffler for rotary engines comprising a continuous annular chamber rotating with the engine, means for discharging exhaust gas from a cylinder into the annular chamber in a direction opposed to the direction of rotation of the chamber, the chamber having a series of discharge openings.

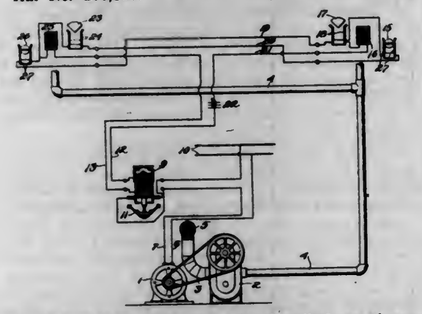
4. A muffler for rotary engines comprising an annular chamber rotating with the engine, the wall between the annular chamber and a cylinder being provided with a curved passage for discharging the exhaust gas into the annular chamber in a direction opposed to the direction of rotation of the chamber, the chamber having a series of discharge openings.



5. A muffler for rotary engines comprising an annular chamber rotating with the engine, the wall between the annular chamber and a cylinder being provided with a pair of curved passages for discharging the exhaust gas into the annular chamber in a direction opposed to the direction of rotation of the chamber, the chamber having a series of discharge openings.

[Claims 6 to 9 not printed in the Gazette.]

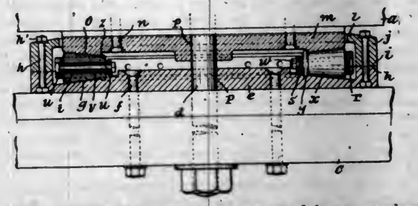
960,531. PNEUMATIC-DESPATCH-TUBE APPARATUS. EDMOND A. FORDICE, Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed Sept. 8, 1905. Serial No. 277,507.



1. In apparatus of the character described, an air-supply pipe, a pump supplying air to said pipe, a motor operating said pump, an electric circuit including said motor, a switch controlling said motor circuit, a secondary circuit separate from said motor circuit, a solenoid in said secondary circuit for actuating the switch controlling the motor circuit, a normally closed switch in said secondary circuit at one terminal of the system, a normally open switch in said secondary circuit at another terminal of the system, and a magnet in said secondary circuit at the terminal having the normally closed switch.

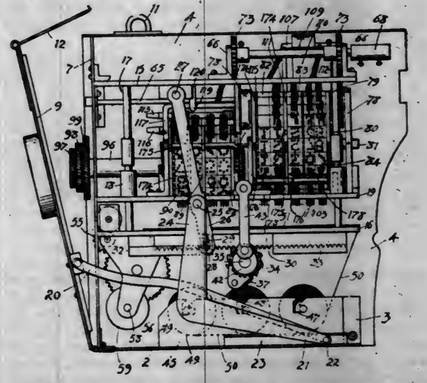
2. In apparatus of the character described, an air-supply pipe, a pump supplying air to said pipe, a motor operating said pump, an electric circuit including said motor, a switch controlling said motor circuit, a secondary circuit separate from said motor circuit, a solenoid in said secondary circuit for actuating the switch controlling the motor circuit, normally closed switches at opposite terminals controlling said secondary circuit, normally open switches at opposite terminals controlling said secondary circuit, and magnets at opposite terminals included in said secondary circuit.

960,532. TRUCK-BEARING. AUGUST FRANZ, Passaic, N. J. Filed Jan. 2, 1909. Serial No. 470,537.



The combination of opposed upper and lower members and a third member interposed between said upper and lower members and comprising concentric rings, bolts connecting said rings and rollers journaled between the rings on radial axes, the lower member comprising a lower or base part affording a bearing for said rollers and having a horizontal annular elevated upper surface surrounding the third member and also comprising a ring-shaped part bolted to the base part and having a horizontal under surface conforming with and bearing upon the annular horizontal surface of said base part, said ring-shaped part having an interior flange projecting inwardly short of the outer ends of the rollers and overhanging the outer ring of the interposed member and the upper member projecting down into said ring-shaped part and having from the lower side thereof upwardly to a plane above that of the flange its diameter less than the inside diameter of the outer ring but approximating the inside diameter of the flange, substantially as described.

960,533. AUTOMATIC BILLING-MACHINE FOR METERS. RICHARD WILLIAM GALLAGHER, Los Angeles, Cal., assignor to Automatic Billing Company, Los Angeles, Cal., a Corporation of California. Filed July 12, 1907. Serial No. 383,508.



1. In an apparatus of the character described, the combination of a meter case, a recording mechanism, a casing therefor, means for attaching said casing to said case, a driving shaft for said mechanism, a meter shaft, a detachable connection for said shafts, marking devices actuated by said driving shaft, means for supplying record sheets to said marking devices, a closure for said mechanism, means actuated by the movement of said closure for operating said marking devices to mark said record sheets, and means for discharging the record sheets so marked, substantially as described.

2. In an apparatus of the character described, the combination of a meter case, a mechanism frame, a casing therefor, means for supporting said casing upon said case, said mechanism frame comprising a suitable guide, a car-

rier adapted to move along said guide, means for marking bills, supported on said carrier, the casing of said mechanism having a movable front door or cover, and means automatically operated by the opening of said door to cause said carrier to reciprocate to mark said bills, said means comprising a link attached to the rear side of said door, a lever, means actuated by the forward movement of the link to swing said lever, a rack actuated by said lever, a pinion engaged by said rack, and a connection between said pinion and the carrier, operative to move said carrier in one direction of said pinion, but inoperative to so move it in the opposite direction thereof, substantially as described.

3. In an apparatus of the character described, the combination of a meter case, a mechanism frame, a casing therefor, means for supporting said casing upon said case, said mechanism frame comprising a suitable guide, a carrier adapted to move along said guide, means for marking bills, supported on said carrier, the casing of said mechanism having a movable front door or cover, and means automatically operated by the opening of said door to cause said carrier to reciprocate to mark said bills, said means comprising a link attached to the rear side of said door, a lever, an operative connection between said lever and the carrier permitting said carrier to be moved by the lever when moving in one direction, the latter being inoperative to move said carrier while moving in the other direction, substantially as described.

4. In an apparatus of the character described, the combination of marking devices, a meter, means for advancing said marking devices from the movement of the meter mechanism, a closure for closing access to said marking devices, means for advancing a record sheet, and means for moving said marking devices to mark said record sheet, comprising a link pivotally connected to said closure, a slidepiece attached to said link, a lever attached to said slidepiece, a rack connected to said lever, a pinion engaged by said rack, a disk, means carried by said pinion for advancing said disk when the pinion rotates in one direction, but inoperative in the other direction of rotation of the pinion, a shaft to which said disk is secured, a crank carried by said shaft, links connected to said cranks, and means for carrying said marking devices connected to said links, substantially as described.

5. In an apparatus of the character described, the combination of a meter mechanism arranged to be actuated by the passage of a fluid, marking devices adapted to be advanced by said meter mechanism, means for advancing a record sheet, a closure for said means, and an operative connection between said closure and the marking devices whereby a complete reciprocation is given to the latter from a movement in one direction only of said closure, its movement in the other direction being inoperative to move said devices, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

960,534. CARRIER. SYLVESTER C. GARDNER, Swansea, and CLARK CHASE, Fall River, Mass., and CHARLES V. KENT, Bangor, Pa. Filed May 12, 1908, Serial No. 432,554. Renewed Mar. 19, 1910. Serial No. 550,515.

1. In a carrier movably mounted upon a support, and provided with gripping mechanism to engage the support, and with a hoisting fall operatively connected to the gripping mechanism, to sustain a load; a seat for the load, operatively connected with the gripping mechanism, the movement of said seat into position to engage and support said load, being controlled by the moving load.

2. In a carrier movably mounted upon a support, and provided with a gripping mechanism to engage the support, and with a hoisting fall to sustain a load; a movable seat for the load, operatively connected with said gripping mechanism and adapted to be moved by the load to cause the gripping mechanism positively to disengage the support.

3. In a carrier movably mounted upon a support, and provided with gripping mechanism to engage the support, with a hoisting fall to sustain a load, and with a fall to haul and hold the carrier; a movable seat for said load, operatively connected with said gripping mechanism, and adapted to be so controlled by the moving load as to move into position to engage and support said load, but also to be moved by the load to cause the gripping mechanism to disengage the support.

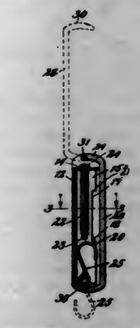


4. In a carrier movably mounted upon a support, and provided with gripping mechanism to grip the support, a hoisting fall to sustain a load and a hauling fall; a movable seat for said load, operatively connected with said gripping mechanism, and so designed as to permit not only the moving load to move by and above said seat, but also the latter to move into position to support the load; and means controlled by the moving load whereby the seat may be caused not to support the load, and permit the load to escape from the carrier.

5. In a carrier movably mounted upon a support, and provided with gripping mechanism to engage the support; a pivoted bar operatively connected to said mechanism; a sheave mounted in said bar; a hoisting fall to sustain a load, engaging said sheave; a movable seat for the load operatively connected with the pivoted bar adapted to be so controlled by the moving load as to move into position to engage and support said load.

[Claims 6 to 8 not printed in the Gazette.]

960,535. POCKET-SCALE. ESSINGTON N. GILFILLAN, Chicago, Ill. Filed May 3, 1909. Serial No. 493,454.



1. A pocket scale, comprising a casing, provided with a removable wall, and a weighing scale housed within the casing, said scale including an article supporting member foldable into and out of the casing, said removable wall being adapted to serve as a handle for the casing.

2. A pocket scale comprising a casing, a weighing scale housed within the casing, said scale including an article supporting member foldable into and out of the casing, and a handle for the casing, said handle being foldable with respect to the casing and serving as a closure for the casing.

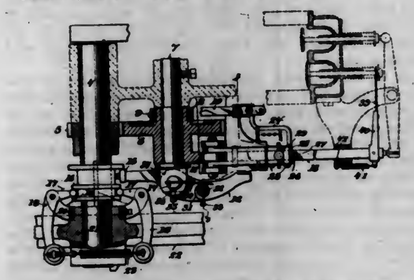
3. A pocket scale comprising a casing having a portion of its wall pivotally mounted, a weighing scale housed within the casing, said scale including an article supporting member foldable into and out of the casing, and a handle for the casing, said handle being formed integrally with said pivotally mounted portion of the casing.

4. A pocket scale comprising a casing, a weighing scale housed within the casing and having graduations, said casing being provided with an aperture through which the graduations are visible, said scale including an article support foldable into and out of the casing, and a closure for the casing, said closure comprising a removable wall of the casing pivotally mounted thereon.

5. A pocket scale comprising a casing, a weighing scale housed within the casing and having graduations, said casing being provided with an aperture through which the graduations are visible, said scale including an article support foldable into and out of the casing, and a closure for the casing, said closure also serving as a handle for supporting the casing.

[Claims 6 to 12 not printed in the Gazette.]

960,536. INTERNAL-COMBUSTION ENGINE. JOHN E. GILSON, Port Washington, Wis., assignor to Gilson Manufacturing Company, Port Washington, Wis. Filed June 14, 1909. Serial No. 501,925.



1. In an internal-combustion engine, the combination of a push-rod provided with fixed stops, a slide adjustable on the rod between the stops, a spark-timing cam, a spring-contact connected to the slide to be in the path of said spark-timing cam, and means for holding the slide in adjusted position against one or the other of said stops.

2. In an internal-combustion engine, the combination of a push-rod provided with a stop-pin, a slide adjustable on the rod between the pin and a shoulder of same, a spark-timing cam, a spring-contact connected to the slide in the path of a spark-timing cam, and means for holding the slide in adjusted position.

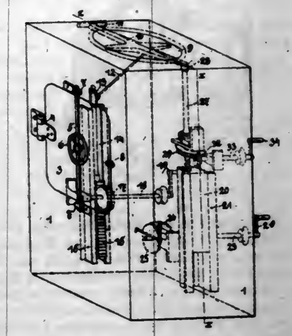
3. In an internal-combustion engine, the combination of a push-rod provided with a stop-pin, a grip-plate on the rod between a shoulder of same and said pin, a slide adjustable on said rod and plate between said shoulder and pin, a thumb-screw carried by the slide in opposition to the grip-plate, a spark-timing cam, and a spring-contact in connection with said slide in the path of the spark-timing cam.

4. In an internal-combustion engine, the combination of a push-rod provided with fixed stops, a slide adjustable on the rod between the stops and provided with an arm, a spark-timing cam, a spring-contact in insulated connection with the slide-arm in the path of the spark-timing cam, and means for holding the slide in adjusted position against one or the other of said stops.

5. In an internal-combustion engine, the combination of a push-rod provided with fixed stops, a slide adjustable on the rod between the stops, means for holding said slide in adjusted position against one or the other of said stops, a spark-timing cam, and a spring-contact connected to the aforesaid slide to be in the path of the spark-timing cam.

[Claims 6 to 13 not printed in the Gazette.]

960,537. SUBMARINE BOAT. LEON E. GOETZ, Monroe, Wis. Filed Dec. 1, 1909. Serial No. 530,837.



1. The combination with a sub-marine boat, of an escape chamber; a door leading from the interior of said boat to said chamber; a door leading from said chamber to the exterior of said boat, the said last mentioned door being arranged to open inwardly; and means for opening and closing the inner door and for closing the outer door, substantially as described.

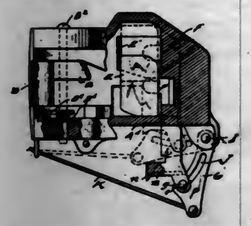
2. The combination with a sub-marine boat, of an escape chamber; a door leading from the interior of said boat to said chamber; a door leading from the top of said chamber to the exterior of said boat; the said last mentioned door being arranged to open inwardly; and means for opening and closing the inner door and for closing the outer door, substantially as described.

3. The combination with a sub-marine boat, of a vertically disposed escape chamber mounted in said boat with its top exposed; a door leading from the interior of said boat into said chamber; a door leading from the top of said chamber into the water, the said last mentioned door being arranged to open inwardly; and means for opening and closing the inner door and for closing the outer door, substantially as described.

4. The combination with a sub-marine boat, of a vertically disposed escape chamber mounted in said boat with its top exposed; a door leading from the interior of said boat into said chamber; a door leading from the top of said chamber into the water, the said last mentioned door being arranged to open inwardly; means for opening and closing said first mentioned door from the interior of said boat and the interior of said chamber; and means for closing said other door from the interior of said boat and permitting it to open from the interior of said chamber, substantially as described.

5. The combination with a sub-marine boat, of a vertically disposed escape chamber mounted in said boat with its top exposed; an entry door leading from the interior of said boat into said chamber; means for opening and closing said entry door from the interior of the boat and said chamber; an escape door leading from the top of said chamber and hinged to open inwardly; a vertically reciprocating rack bar in said chamber; a sleeve slidable on said rack bar through a limited distance; a link connection between said sleeve and said escape door for closing the latter; a gear, shaft and crank arm connection for operating said rack bar from the interior of the boat; a reciprocating rack bar; a locking member threaded in said last mentioned rack bar and adapted to bear against the under side of said escape door opposite to its hinge; a gear, shaft and crank arm for operating said last mentioned rack bar from the interior of the boat; a pawl and ratchet located within said chamber and adapted to hold said door in closed position; a beveled gear slidable on said locking member but arranged to turn the same when the latter is in locking position; and a beveled gear, shaft and crank for operating said first mentioned beveled gear, substantially as described.

960,538. CAR-COUPLING. ALBERT P. GOLDMAN, Chillicothe, Ill. Filed Dec. 12, 1908. Serial No. 467,299.



1. In a car coupler and in combination with the swinging knuckle thereof having an elongated depending portion provided with a laterally extending lug at its lower end and provided with a knuckle tail having vertically disposed lateral flanges thereon, a head recessed to receive the knuckle tail and provided with flanges adapted to engage the flanges on the knuckle tail, a coupler pin vertically movable and a bar vertically movable to raise the pin and laterally movable to facilitate its being lodged in a lock set position when the pin is disengaged from the knuckle tail, substantially as described.

2. In a coupler and in combination with the swinging knuckle, and its tail, a housing having a vertical opening therein, a vertically movable pin contained within said housing, a bar supported upon the coupler head for raising the pin to disengage the knuckle tail and to move the pin into a lock set position, the said bar having a laterally projecting grooved member with an inclined stop at its lower end and recessed above the projection to provide a lock set seat, substantially as described.

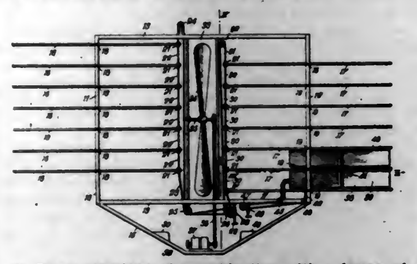
3. In a car coupler, a locking pin and means for operating said locking pin from its lower end, said means comprising a vertically disposed bar having a loose connection with the pin and being formed with a recess therein to provide a lock seat, a slotted swingable arm engageable through its slot with the vertically disposed bar and operable to raise the bar and to lodge it upon a support to hold the pin in lock set position, and means connected with said swingable part and extending to the side of the car adapted to operate said arm, substantially as described.

4. In a coupler, a locking head having a vertical recess therein, a vertically operating locking pin located within said recess, an arm pivoted to the head and provided with an arcuate slot, a bar connected at one end with the pin and at the other with the arcuate slot of the arm, said bar being provided with a grooved lateral projection terminating with an inclined stop at its outer end and also provided with a lock seat, the said bar being adapted to be moved with the swinging of the arm vertically and laterally to cause the pin to release the coupler from the knuckle tail and to lodge the pin in the lock set position and means extending to the side of the car for operating said arm, substantially as described.

5. In a coupler, the combination with a swinging knuckle and a head, the latter being provided with a recess or opening therein having its lower end open, of a vertically operating locking pin working in said opening, an arm pivoted to the head and provided with an arcuate slot and with a lobed portion upon its upper edge, a bar vertically movable in an opening in the head and connected at its upper end with the locking pin and at the lower end in a sliding engagement with the arcuate slot of the arm, said bar being provided with a cut away portion to provide a lock seat and with a laterally extending part grooved in its lower face and terminating with an inclined stop at its outer extremity, and means for operating the arm, whereby as the arm is swung upwardly, the lobed portion thereof will engage the lower face of the lateral projection of the bar, causing said bar to be raised, and with it the locking pin, and when said pin reaches its maximum raised position, the lobed portion of the arm contacting with the inclined stop on the laterally projecting part will shift the bar laterally and cause the locking seat therein to be lodged upon a ledge or support on the head and when the swingable arm is moved in the opposite direction, the locking pin will be released, all substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

960,539. AIRSHIP. ROBERT E. GREEN, New York, N. Y. Filed June 22, 1909. Serial No. 503,654.



1. In an aeroplane, the combination with a frame, of a set of horizontally arranged and superposed sails located at the forward part thereof and pivotally held to the frame, a set of horizontally arranged and superposed sails pivotally held at the rear of the machine and separated from the first-mentioned sails, means for moving the sets of sails in unison, propelling means arranged between the sets of sails so as to force the air under the sails at the rear of the machine, steering means carried by the rear set of sails, and means for laterally moving said steering means.

2. In an aeroplane, the combination with a frame, of a set of superposed and horizontally arranged sails located at the forward part thereof and pivotally held to the frame, a set of horizontally arranged sails pivotally held at the rear of the machine and separate from the first-mentioned sails, means for moving the sets of sails, propelling means arranged between the sets of sails, steering rudders carried by the rear set of sails, and means for laterally moving said rudders.

3. In an aeroplane, the combination with a frame, of a plurality of sails located at the forward and rear parts thereof, means for moving the sails, and rudders carried by the rear sails, and means for laterally moving said rudders.

4. The combination with a plurality of horizontally arranged and pivotally held sails located at the front and rear of the machine, of steering means pivotally supported to move laterally on the rear sails, and means for operating said steering means.

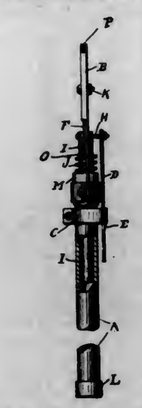
5. In an aeroplane, the combination with a frame, of two sets of sails, means for pivotally holding said sails, means for moving said sails in unison, propelling means, a cage located under the frame substantially centrally of the machine, means located within the cage for operating said propelling means, and steering means pivotally supported to move laterally on said sails.

[Claim 6 not printed in the Gazette.]

960,540. PRUNING IMPLEMENT. ISAAC D. GUNST, Telles, N. Mex. Filed June 8, 1909. Serial No. 500,981.

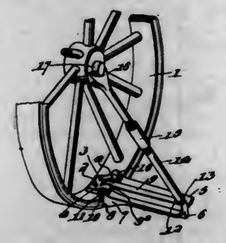
1. A pruning implement, comprising a cylindrical handle and a plunger adapted to reciprocate therein; a pair of blades each provided with a dual cutting-faced portion, and a lateral bolt adapted to travel in cam slots, said blades having pivotal connection at their lower extremities with the plunger; a sleeve rigidly mounted on the cylindrical handle and a spiral coil spring adapted to the interior thereof; a pair of cams vertically secured in said sleeve and provided with longitudinal slots adapted to the lateral bolts of the blades in giving direction thereto, and further provided with grooves on their interior edges, adapted to the movement of the said blades; a handle bar pivotally attached to the plunger and blades and provided with a clutch; and a collar mounted on the cylindrical handle in which the said handle bar vertically moves, all substantially as set forth.

2. The combination of a cylindrical handle with a plunger adapted to reciprocate therein; a pair of blades, each provided with a dual cutting-faced portion and a lateral bolt adapted to travel in cam slots, said blades having pivotal connection at their lower extremities with the plunger, coacting therewith in its reciprocal movement; a sleeve rigidly mounted on the cylindrical handle, and a spiral coil spring mounted therein; a pair of cams adjusted in said sleeve and provided with slots adapted to engage the lateral bolts of the blades, imparting a circular movement thereto in the operation of the mechanism,



and further provided with grooves on their interior edges adapted to the rear of the blades in their movement ascending or descending; a handle bar provided with a clutch and pivotally attached to the plunger and blades at their point of pivotal union and coacting therewith; a collar mounted on the cylindrical handle adapted to retain the handle bar longitudinally therewith; and a transverse pin in the upper end of the plunger, coöperating with the spiral coil spring in the operation of the mechanism, as and for the purposes set forth.

960,541. TRACTION-WHEEL. FRANK HAHN, Doland, S. D. Filed Sept. 10, 1909. Serial No. 517,167.



1. In a traction wheel, a road gripping member, means for hinging said member to the inner side of the wheel rim, and adjustable means engaging the outer free end of said member and at its inner end seating directly on the wheel hub to sustain said member in operative position.

2. In a traction wheel, a part rigidly secured to the inner circumference of the wheel rim and being provided with perforated elements in spaced relation, a road gripping member also having spaced perforated elements which engage between the first named elements, a pin passing through said perforations of said elements whereby to hingedly connect said part and member, ribs formed on the top and bottom faces of said member, one of said ribs being formed with a concave seat and an abutment at the outer side of the seat, and a brace rod having one end to engage in said seat and with said abutment, having its opposite end forked to engage with the wheel hub, and means whereby said rod may be adjusted longitudinally.

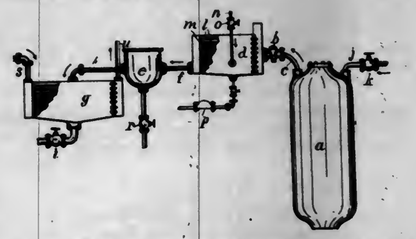
3. In a traction wheel, a road engaging member formed with an inner shoulder adapted to engage with one of the side faces of the wheel rim, means to pivotally relate said member to the wheel rim, and means disposed between the wheel hub and said member to hold the latter in operative position.

4. In a traction wheel, a road engaging member, means for pivoting said member to the wheel rim, and an adjustable rod removably disposed between the wheel and the outer end of said member to hold the latter in operative position, said rod being adjustable to increase its length after being placed in operative position.

5. In a traction wheel, a road engaging member pivoted to the wheel rim, said member being formed with longitudinal ribs on its top and bottom faces, a pair of shoulders at the inner end of the member adapted when the member is in operative position to abut the side of the wheel rim, and a turn-buckle provided rod engaging between the outer end of the member and the wheel hub.

[Claims 6 and 7 not printed in the Gazette.]

960,542. MEANS FOR RECOVERING BY-PRODUCTS. PULASKI M. HAMLIN, Pittston, Pa., assignor of one-half to Charles H. Unverzagt, New York, N. Y. Filed June 11, 1908. Serial No. 437,927.



1. The means for recovering by-products from wood chips and fibrous material in an intermittent process in which the by-products are vaporized, consisting of a digester containing a charge of crude material and having steam supplied thereto at a temperature suitable to distil the volatile elements therefrom, a valve discharging from such digester a limited proportion of the steam with by-products vaporized therein, and operated to maintain a steam pressure in the digester suitable for digesting the fiber, a heater with means for maintaining it at a higher temperature than the digester and operating to further volatilize all of such vaporized by-products, an air-cooled trap receiving such doubly volatilized by-products and provided with perforated baffle-plates to arrest the heavier ingredients, and a water-cooled condenser receiving the lighter by-products from the air-cooled trap and operating to liquefy the same.

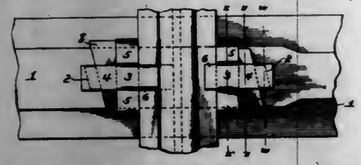
2. The means for recovering by-products from a process in which they are vaporized, consisting of a digester heated by injected steam to a certain temperature, a valve discharging from such digester a limited proportion of such steam with by-products vaporized therein, a tubular heater having the tubes heated by steam to a higher temperature than the digester, the said vaporized by-products being heated by the tubes to fully volatilize the whole of such by-products, an air-cooled trap receiving such doubly volatilized by-products from such heater and provided with perforated baffle-plates to arrest the heavier ingredients and with means for drawing off such ingredients, and a tubular condenser receiving upon the outside of the tubes the remainder of the vaporized products from the trap, the condenser having a cooling fluid circulated through the tubes to chill them, whereby the remainder of the by-products is reduced to a liquid form outside of the tubes, where they cannot clog the tubes.

3. In the manufacture of wood pulp, the combination, with a digester having a charge of wood chips with steam supplied thereto and a valve discharging from such digester a limited proportion of such steam with by-products vaporized from the wood fiber, of a heater with means for heating the same above the boiling temperature of such by-products and operated to fully volatilize all of such by-products, an air-cooled trap receiving such doubly volatilized products and provided with perforated baffle-plates to collect the resin and heavy oils, and a water-cooled condenser receiving the remainder of such by-products and operating to liquefy the same, substantially as herein set forth.

4. In the manufacture of wood pulp, the combination, with a digester having a charge of wood chips and steam supplied thereto and a valve discharging from such digester a limited proportion of such steam with by-products vaporized from the wood fiber, of a trap having a casing e with perforated baffle-plates therein forming a succession of chambers through which the vapor is passed, the baffle-plates conducting heat to the casing and the casing diffusing the heat in the atmosphere, and the baffle-plate thus operating to separate the heavier elements from the vapor.

5. In the manufacture of wood pulp, the combination, with a digester having steam supplied thereto and a valve discharging from such digester a limited proportion of such steam with by-products vaporized from the wood fiber, of an air-cooled trap e having discharge-opening at the bottom, and a horizontal perforated baffle-plate with a vapor-inlet f' connected below the same, a vapor-outlet g' connected above the same, and vertical baffle-plates projected upwardly and downwardly from the horizontal plate, the said baffle-plates being provided with perforated ribs, as and for the purpose set forth.

960,543. FASTENING DEVICE FOR SECURING RAILS TO METAL TIES. CHARLES P. HAMMOND, Americus, Ga. Filed Oct. 1, 1909. Serial No. 520,548.

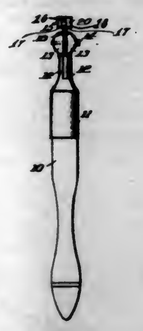


1. As a new article of manufacture, a clip for securing railroad rails to metal ties comprising a body, one end of which is adapted to engage the flange of a rail and the other end to rest over a shoulder on the tie, and laterally projecting wings intermediate the ends of the clip, the said wings being bent downwardly and then outwardly for supporting the body in a plane above the top of the tie and provided with hooked ends adapted to underlap the side edges of the upper flange of the tie.

2. The combination with a tie having a shoulder projecting from the upper face thereof, of a clip having laterally projecting wings intermediate of its ends, the said wings having hooked ends adapted to underlie the side edges of the top flange of the tie and a wedge located under the body of the clip and above the tie and engaging the shoulder on the tie and the adjacent edges of the laterally projecting wings on the clip.

3. The combination with a flanged tie having a shoulder projecting from its upper surface, of a clip comprising a body, one end of which is adapted to engage the lower flange of the rail and the other end to rest over the shoulder on the tie, the said body being provided with laterally projecting wings bent downwardly so as to rest on the top of the tie and each wing provided with a hook shaped end to engage and underlap the side edge of the top flange of the tie and a wedge located above the tie and below the clip and engaging the side wings of the latter and the shoulder on the tie.

960,544. CHECKING DEVICE. CHARLES G. HARRIS, Louisville, Ky. Filed Jan. 7, 1910. Serial No. 536,823.



1. A device of the class described comprising a rigid handle, a sleeve mounted on the outer end thereof, a type holder on the outer end of said sleeve extending transversely of the handle at an oblique angle thereto, and open at the end to expose the face of the type, the holder having resilient walls engaging the type.

2. A device of the class described, comprising a handle, and a type holder mounted thereon, said holder comprising a box open at its end to expose the face of the type, and extending transversely of the handle beyond the extremity thereof, and adjustable to different angles to the longitudinal axis of the handle about an axis transverse of said longitudinal axis.

3. A device of the class described, comprising a handle, clamping jaws carried thereby, a type holder comprising a box open at its ends and having resilient side walls, ears on said walls, said ears being received between the aforesaid jaws, and a clamping screw passing through the jaws and ears.

4. A device of the class described, comprising a handle, clamping jaws thereon, a type holder comprising a box open at its ends, and having resilient side walls which are inturned at one of their ends, spaced ears extending from said inturned portions, said ears being received between the jaws, and a clamping screw passing through the jaws and ears.

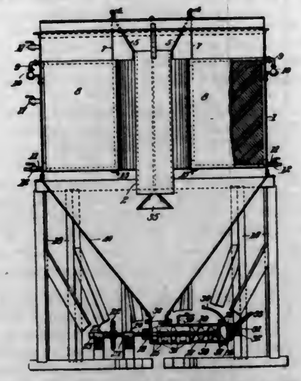
960,545. SHOE-FASTENING DEVICE. WILLIAM H. HARRIS, Gladstone, N. Mex. Filed Mar. 15, 1909. Serial No. 483,432.



1. In a device of the class described, a shoe provided with two flaps having a pair of obliquely disposed links connected with each flap adjacent the edges thereof, a series of alternately arranged loops in said flaps, a lacing tied to said links adapted to be drawn through said loops, whereby said links are forced toward the transverse position and means for securing said lacing, substantially as described.

2. In a device of the class described, a shoe having two obliquely disposed links pivoted on the inner flap thereof and slidably mounted adjacent the edge of the outer flap, a series of loops alternately arranged on said flaps adjacent the edges thereof, a lacing drawn through said loops and secured to said links and means for securing said lacing, substantially as described.

960,546. DEWATERING DEVICE. WILBUR ALSON HENDRYX, Denver, Colo. Filed June 12, 1909. Serial No. 501,879.



1. An apparatus comprising a receptacle, an imperforate delivery tube connected to the bottom thereof, a valve for controlling delivery from said tube, and power actuated means for forcing material through said tube.

2. An apparatus comprising a receptacle, a delivery tube connected to the bottom thereof, a valve for controlling delivery from said tube, a screw conveyer for forcing material through said tube, and means for preventing rotation of the material in said tube.

3. An apparatus comprising a receptacle, a delivery tube connected to the bottom thereof, a conveyer mounted in said tube and comprising spaced propeller blades, and means interposed between the blades for preventing rotation of material in the tube.

4. An apparatus comprising a receptacle, a delivery tube connected to the bottom thereof, a conveyer mounted in said tube and comprising spaced propeller blades, and fixed ribs secured to the tube and interposed between the blades for preventing rotation of material in the tube.

5. The combination of a receptacle, a delivery tube connected with the bottom thereof, a conveyer mounted in said tube, said conveyer comprising a series of spaced propeller blades and a screw mounted on the same shaft, and means secured to the tube and located between the spaced blades for preventing rotation of the material.

[Claims 6 to 22 not printed in the Gazette.]

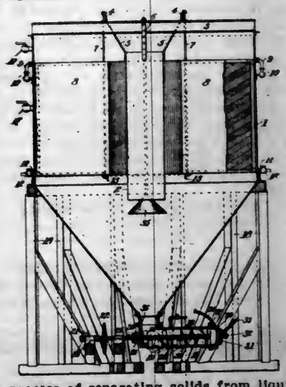
960,547. PROCESS OF SEPARATING SOLIDS FROM LIQUIDS. WILBUR ALSON HENDRYX, Denver, Colo. Filed June 14, 1909. Serial No. 502,168.

1. The process of separating solids from liquids, which consists in permitting the solids to settle beneath the liquid, while so submerged expressing liquid from such settled solids, and returning the expressed liquid to the main body of liquid.

2. The process of separating solids from liquids, which consists in permitting the solids to settle beneath the liquid, while so submerged expressing liquid from such settled solids, returning the expressed liquid to the main body of liquid and simultaneously discharging the solids from which the liquid has been expressed.

3. The process of separating solids from liquids, which consists in collecting the solids beneath a body of liquid, and subjecting the solids while so submerged to continuously applied pressure to express liquid therefrom.

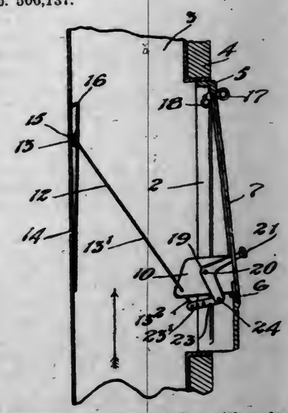
4. The process of separating solids from liquids, which consists in collecting the solids beneath a body of liquid, subjecting the solids while so submerged to continuously applied pressure to express liquid therefrom, and simultaneously discharging the material from which the liquid has been expressed.



5. The process of separating solids from liquids, which consists in collecting the solids beneath a body of liquid, subjecting the solids while so submerged to pressure to express liquid therefrom, and permitting the expressed liquid to flow back through the uncompressed solid.

[Claims 6 to 13 not printed in the Gazette.]

960,548. REGISTER. RICHARD HEWITT, Brandon, Manitoba, Canada, assignor of two-thirds to Hector Colin McMartin, Winnipeg, Canada. Filed July 6, 1909. Serial No. 506,137.



1. In a register, the combination with a frame, a pivotally supported crank rod carried by the frame, a damper pivotally suspended from the crank rod, means for bodily displacing the damper, and means engageable with the upper edge of the damper when the damper is brought to closed position.

2. In a register, the combination with a frame, of a pivotally supported crank rod carried by the frame, a damper pivotally suspended from the crank rod, means for swinging the crank rod on its pivotal points to bodily displace the damper, and means designed to engage with the upper edge of the damper when in its closed position.

3. In a register, the combination with the frame, of a pivotally supported damper carried by the frame, means

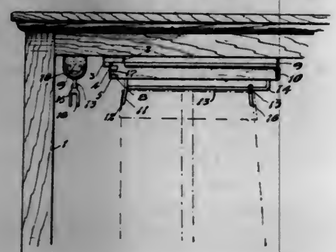
for bodily displacing the damper, and means engageable with the damper and designed to convert the said movement into a swinging movement around a pivotal point, as and for the purpose specified.

4. In a register, the combination with the register frame of a pivotally supported damper, means for bodily displacing the damper, and means carried by the frame and engageable with the damper whereby the said movement is converted into a swinging movement around such engaging means, as and for the purpose specified.

5. In a register, the combination with a suitable frame, of opposing plates carried by the frame, a crank rod mounted in bearings formed in the plates, a damper pivotally suspended from the crank rod, means for swinging the crank rod, and swiveled means secured to the frame and engageable with the upper edge of the damper when the damper is in the closed position, as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

960,549. SKIRT AND TROUSERS HANGER. MAURICE ALEXANDER HOFFMAN, Portage la Prairie, Manitoba, Canada. Filed July 6, 1909. Serial No. 506,258.



1. In a trousers hanger, in combination, a suitably supported slidable block, an arm hingedly secured to the block and slidable therewith, a stop pin adapted to limit the motion of the block in one direction, and means carried by the arm and adapted to receive and suspend the legs of trousers, as and for the purpose specified.

2. In a trousers hanger, in combination, a suitably supported slidable block having a limited longitudinal groove in its upper face, an arm hingedly secured to the block and slidable therewith, a pin adapted to pass within the groove, and adjustable means carried by the arm and adapted to receive and suspend the legs of trousers, as and for the purpose specified.

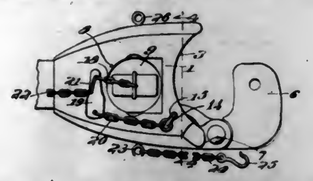
3. In a trousers hanger, in combination, a set of opposing parallel suitably supported channel iron bars, a block slidably received between the aforesaid bars, an arm slidable between the bars and hingedly secured to the block whereby it is free to swing in the horizontal direction when withdrawn from the bars, means for preventing the withdrawal of the block from between the bars, and adjustable means carried by the arm adapted to receive and suspend the legs of trousers, as and for the purpose specified.

4. In a trousers hanger, in combination, an opposing and parallel set of suitably supported interconnected channel iron bars, a T-shaped block slidable between the bars and having a limited longitudinal groove in its upper face, a T-shaped arm slidable between the channel bars and hingedly secured to the block, said arm having a longitudinally extending groove in the upper face thereof, a stop pin adapted to enter the grooves and adjustable means carried by the arm and adapted to receive and suspend the legs of trousers, as and for the purpose specified.

5. In a trousers hanger the combination with a suitably supported slidable block and an arm hingedly secured to the block and slidable therewith, of a permanent bifurcated bracket secured rearwardly to the arm, a rod secured to the bracket and extending forwardly beneath the arm and parallel therewith, the extremity of the rod being secured to the arms, and a forked member longitudinally movable on the rod, as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

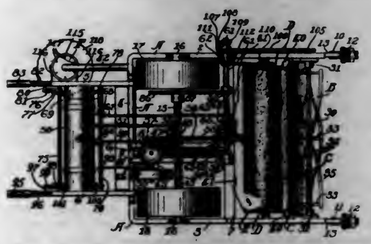
960,550. CAR-COUPLING. GUSSIE ALLEN HOLLAND and WILLIAM FRANK BARRETT, Woodlawn, Ala. Filed Apr. 12, 1909. Serial No. 489,382.



1. In a car coupler, a head, a jaw pivoted to the head, a locking pin for the jaw, a jaw disengaging member, an operating member, flexible members connected to the pin and disengaging member, and a connecting link between the flexible member and the operating members which causes the operation of the pin and disengaging member in sequence.

2. In a car coupler, a head, a jaw pivoted to the head, a locking pin for the jaw, a jaw disengaging member, an operating member, flexible members connected to the pin and disengaging member, and a slotted connecting link having the flexible member carried by the disengaging member connected to one end and the flexible member carried by the pin connected in said slot, and a connection between the operating member which engages and is slidably mounted in the slot.

960,551. MOWER. VENNING P. HOLLIS, Minneapolis, Minn. Filed Oct. 19, 1908. Serial No. 458,335.



1. The combination with a lawn mower, of an elevated receptacle, a suction tube associated with the cutting mechanism to lift the cut grass into said receptacle and a gasolene engine having its exhaust passageway connected with said suction tube to produce an upward draft therein; whereby as grass is cut by said mechanism during the forward movement of said machine waste is lifted from the cutting mechanism into said receptacle by the upward draft which is produced by the exhaust of the engine passing into said tube.

2. The combination with a lawn mower, of a grass receptacle, means for conveying cut grass from the cutting mechanism into said receptacle, a pair of handles for guiding said machine by human aid, said handles being mounted to move, a motor for driving said cutting mechanism, and means mounted upon said handles for controlling the operation of said motor through said handles.

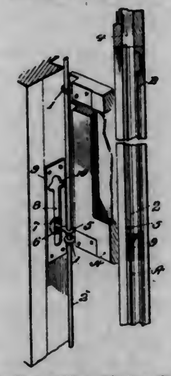
3. A machine of the class set forth, comprising in combination, a frame, cutting mechanism carried by said frame, traction wheels carrying said frame, actuating mechanism for revolving said cutting mechanism and said traction wheels, a suction tube extending upward and associated with and adapted to convey cut grass away from said cutting mechanism and a gasolene engine having its exhaust passageway connected with said tube for producing an upward current of air therein; whereby as grass is cut by said cutting mechanism during the forward movement of said machine waste is carried upward from the cutting mechanism by the current of air passing through said tube.

4. The combination with a lawn mower, of an elevated grass receptacle, means for detachably supporting said receptacle thereon, a suction tube leading upwardly from the cutting mechanism into said receptacle and a gasolene engine having its exhaust passageway connected with said tube for producing an upward draft therein; whereby as the mower advances and cuts the grass the suction tube lifts the waste from the cutting mechanism into said receptacle.

5. The combination with a lawn mower, of an elevated grass receptacle, a suction tube leading upwardly from the cutting mechanism into said receptacle and a gasolene engine having its exhaust passageway connected with said tube for producing an up draft therein; whereby as the mower advances and cuts the grass the suction tube lifts the waste from the cutting mechanism into said receptacle.

[Claims 6 to 9 not printed in the Gazette.]

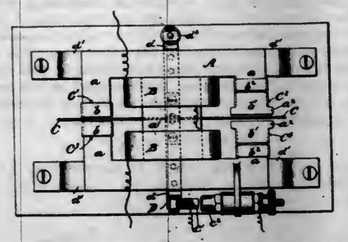
960,552. WINDOW-SASH. JOHN S. HOPPER, Cincinnati, Ohio, assignor of one-half to George W. Howe, Cincinnati, Ohio. Filed July 7, 1908. Serial No. 442,315.



1. The combination with a window frame and the upper and lower sashes thereof of vertically disposed rods mounted in the frame at one side thereof and extending from top to bottom thereof, the frame being provided with a well permitting the upward movement of the lower sash to a point where lower rail thereof will provide a clearance for the upper rail of the upper sash when the latter has been moved downwardly to the lower limit of its vertical sliding movement, the sashes being provided with eyes mounted upon said rods whereby to provide for the laterally swinging movement of the sashes on the rods, a vertically slotted plate secured to the window frame contiguous to the meeting rails of the two sashes, and a bracket slidingly mounted on the rod for the lower sash and having a sliding engagement in the slot of said plate as and for the purpose set forth.

2. The combination with a window frame and the upper and lower sashes thereof, of vertically disposed rods mounted in the frame and extending from top to bottom thereof at one side of the frame, the sashes being provided with eyes mounted to slide and turn on said rods, a jamb plate secured to the window frame at the meeting rails of the sash, said plate being formed with a vertical slot the upper end of which is widened to provide an entrance opening, and a bracket eye mounted to slide on the rod of the lower sash and formed with a head adapted to slip through said entrance opening back into the plate for a vertical movement in the slot thereof.

960,553. ALTERNATING-CURRENT-TRANSLATING DEVICE. LEMUEL FREDERIC HOWARD, Edgewood Park, Pa., assignor to The Union Switch and Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Apr. 25, 1907, Serial No. 370,151. Renewed Nov. 24, 1909. Serial No. 529,813.



1. A relay comprising an energizing coil adapted at times to be traversed by alternating currents of different frequencies, a core having two magnetic paths each of which includes a set of poles and one set of poles has a larger end area than the other set, a vane within the influence of the flux traversing both of said magnetic paths, and means for causing the two fluxes to exert turning efforts on said vane in opposite directions.

2. A relay comprising a core having two sets of poles, an energizing coil wound on the core and adapted at times to be traversed by alternating currents of different frequencies, a magnetic path for each set of poles of which the core forms a part, a vane mounted on an axis located in a line passing through the axial center of the energizing coil, said vane being within the influence of the flux traversing both of said magnetic paths, means in each path for causing the flux to exert a turning effort on said vane, and means for causing the flux in one path to predominate at one frequency and for causing the flux in the other path to predominate at a higher frequency, whereby the vane is caused to turn in one direction when alternating current of one frequency traverses said coil, and in the opposite direction when alternating current of a higher frequency traverses said coil.

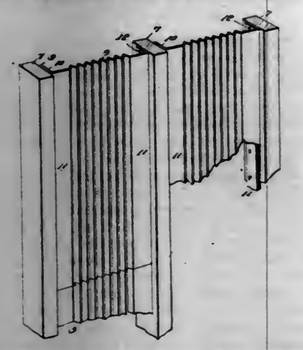
3. A relay comprising an energizing coil adapted at times to be traversed by alternating current of different frequencies; a core having two sets of poles; a magnetic path for each set of poles of which the core forms a part; a vane mounted on an axis located in a line passing through the axial center of the energizing coil, said vane being within the influence of the flux traversing both of said magnetic paths; means in each path for causing the flux to exert a turning effort on said vane, and means for causing the flux in one path to predominate at one frequency and for causing the flux in the other path to predominate at a higher frequency, whereby the vane is caused to turn in one direction, when alternating current of one frequency traverses said coil, contacts opened and closed by said vane in its turning movement; and means carried by the vane to have it open the contacts when no current is flowing in the energizing coil.

4. A relay comprising a core having two sets of poles; an energizing coil wound on the core and adapted at times to be traversed by alternating currents of different frequencies; a magnetic path for each set of poles of which the core forms a part; a vane mounted on an axis located in a line passing through the axial center of the energizing coil, said vane being within the influence of the flux traversing both of said magnetic paths; means for varying the magnetic fluxes in the two magnetic paths at different frequencies, whereby at one frequency the rotative effect on the vane of one set of pole pieces predominates, while at another frequency, the rotative effect on the vane of the other set of pole-pieces predominates.

5. A relay comprising an energizing coil adapted at times to be traversed by alternating currents of different

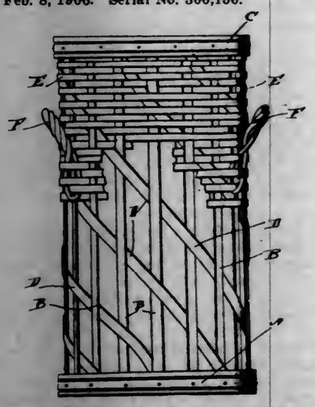
frequencies; a core having two sets of poles; a magnetic path for each set of poles of which the core forms a part; a vane mounted on an axis located in a line passing through the axial center of the energizing coil, said vane being within the influence of the flux traversing both of said magnetic paths; means for varying the magnetic fluxes in the two magnetic paths at different frequencies, whereby at one frequency the rotative effect on the vane of one set of pole pieces predominates, while at another frequency the rotative effect on the vane of the other set of pole pieces predominates, contacts opened and closed by said vane in its turning movements and means carried by the vane to have it open the contacts when no current is flowing in the energising coil.

960,554. LINING OR BACK PLASTER FOR BUILDINGS. CHARLES D. JENNINGS, St. Joseph, Mich. Filed Aug. 17, 1909. Serial No. 513,276.



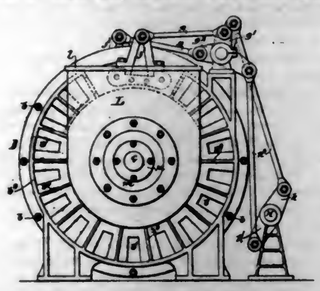
As a new article of manufacture, a slab comprising a longitudinally corrugated body portion having its opposite edges bent laterally to produce angularly disposed attaching flanges, the free edges of which are bent inwardly in contact with the body of the slab to form parallel strips, and reinforcing members interposed between the flanges and parallel strips.

960,555. BASKET. JOSEPH JOHNSON, New Orleans, La. Filed Feb. 8, 1906. Serial No. 300,150.



As a new article of manufacture, a basket formed of vertical and horizontal slivers having spirally arranged slivers interwoven in the vertical and horizontal slivers so as to reinforce said basket.

960,556. BLOWING-ENGINE. PATRICK H. KANE, Buffalo, N. Y. Filed May 6, 1907. Serial No. 372,112.



1. In a blowing engine, the combination of a cylinder having a head provided centrally with an air outlet port and around said port with a row of air inlet ports, a valve controlling said outlet port, an oscillatory inlet valve controlling said inlet-ports, and means for actuating said inlet valve, substantially as set forth.

2. In a blowing engine, the combination of a cylinder having a head provided centrally with an air-outlet port and around said port with a circular row of air-inlet ports, a valve controlling said outlet port, an oscillatory annular inlet-valve surrounding said outlet-port and having a circular row of ports adapted to register with said inlet-ports, and means for actuating said inlet valve.

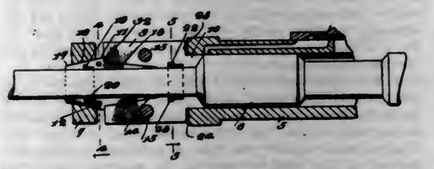
3. In a blowing engine, the combination of a cylinder having a head provided with a row of air inlet ports arranged concentrically with the cylinder, a ported oscillatory valve-ring coöperating with said air inlet ports and applied to the inner side of said head, and a protecting plate covering the inner side of said valve-ring and having air passages, substantially as set forth.

4. In a blowing engine, the combination of a cylinder having a head having an annular recess in its inner side and air inlet ports arranged in the recessed portion of the head, a ported oscillatory valve-ring seated in said recess, a protecting plate covering said valve-ring and having air passages, and means for actuating the valve-ring, substantially as set forth.

5. In a blowing engine, the combination of a cylinder provided in its end with a recess, a head secured to the end of the cylinder and provided in its inner side with an annular groove or recess arranged concentrically with the cylinder and air-inlet ports arranged in the recessed portion of the head, a ported valve-ring seated in the recess of the head, and a protecting plate covering said valve-ring and seated in the recess of the cylinder, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

960,557. FRONT HEAD FOR DRILLING-MACHINES. GRANT KEMMERLING, Douglas Island, Alaska. Filed Sept. 22, 1909. Serial No. 518,907.



1. In a rock drilling machine, the combination with a cylinder having a piston rod operating therein, of gland sections projecting within the cylinder and each provided with an interior seating recess and exterior laterally extending perforated ears, a sectional bushing projecting within the gland sections and provided with a tapered portion, a cylinder head engaging the tapered portion of the bushing, fastening devices extending through the perforations in the ears of the gland sections for clamping the latter in engagement with the bushing, a packing seated in the recesses of the gland sections and bearing against the piston rod, and means connecting the head and cylinder for clamping said head in engagement with the tapered portion of the bushing.

2. In a rock drilling machine, the combination with a cylinder having a piston rod operating therein, of a gland having a tapered socket and provided with an interior circumferential recess and exterior longitudinally disposed ribs, a bushing having a tapered rear portion seated in the socket of the gland section and provided with a relatively short front tapered portion, a cylinder head engaging the forward tapered portion of the bushing, a packing seated in the circumferential recess and bearing against the piston rod, and clamping rods engaging the cylinder head and extending through the longitudinal ribs of the gland.

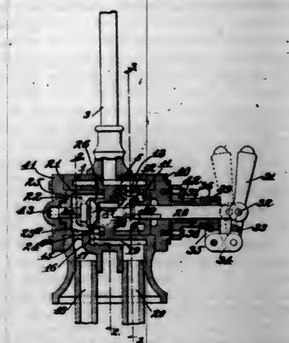
3. In a rock drilling machine, the combination with a cylinder having a piston rod operating therein, of coacting gland sections having reduced portions projecting within the cylinder and provided with an internal tapered socket, a sectional bushing seated within the socket and having one end thereof projected longitudinally beyond the gland sections and provided with tapered exterior walls, a cylinder head having a correspondingly tapered opening engaging the tapered walls of the bushing, means for clamping the gland sections in engagement with the piston rod, and clamping rods extending through said gland sections and engaging the front and rear cylinder heads, there being circumferential recesses formed in the gland and bushing sections to permit the insertion of a packing strip.

4. In a rock drilling machine, the combination with a cylinder having a piston rod operating therein, of coacting gland sections, each having one end thereof reduced to form a shoulder and provided with a reduced extension at said shoulder and projecting within the cylinder, said gland sections being provided with a tapered socket and having laterally extending perforated ears, a sectional bushing having a tapered portion projecting within the socket of the gland sections, one of said bushing sections being provided with spaced pins adapted to enter sockets formed in the mating bushing section, fastening devices extending through the perforations in the ears of the gland sections for clamping the latter in engagement with the bushing sections, a cylinder head engaging the bushing sections, and clamping rods connecting the cylinder heads and extending through the gland sections, there being a shoulder formed on the bushing sections and adapted to bear against the adjacent ends of the gland sections when the clamping rods are adjusted.

960,558. TWO-WAY FAUCET. ERNEST E. KOKEN, deceased, late of St. Louis, Mo.; WALTER F. KOKEN executor. Filed Jan. 24, 1910. Serial No. 539,761.

1. A two-way faucet comprising a valve-casing having two chambers therein and means for establishing communication between said chambers, two discharge nozzles leading from said valve-casing and communicating with one of said chambers therein, two supply pipes communicating with the other chamber in said valve-casing, and connected valves in said valve-casing arranged to alternately establish communication with the respective supply pipes and simultaneously establish communication through either of the respective discharge nozzles, and said valves being also arranged to simultaneously establish communication proportionately through both of said supply pipes when communication is established through either of the discharge nozzles.

2. A two-way faucet comprising a valve-casing having two chambers therein and means for establishing communication between said chambers, a lateral discharge nozzle and an upwardly extending discharge nozzle which is arranged to discharge above said lateral discharge nozzle, said discharge nozzles communicating with one of said chambers through separate port openings, two supply pipes communicating with the other chamber through separate port openings, and a valve arranged to alternately open communication through the port openings which communicate with said discharge nozzles, and another valve connected to said first-mentioned valve and arranged to alternately open communication through the port openings which communicate with said supply pipes when communication is established through either of the port openings which communicate with said discharge nozzles, said valves being also arranged to simultaneously open communication proportionately through both of said port openings which communicate with the supply pipes when communication is established through either of the port openings which communicate with the discharge nozzles.



3. A two-way faucet comprising a valve-casing having two chambers therein and a passage-way connecting said chambers, a valve for controlling said passage-way, two discharge nozzles leading from said valve-casing and communicating with one of the chambers therein through separate port openings, a valve-member in said chamber adapted to alternately open communication through said port openings which communicate with the respective discharge nozzles, two supply pipes communicating with the second chamber in the valve-casing through separate port openings therein, a valve-member in said second chamber adapted to alternately open communication through the respective port openings which communicate with the supply pipes, said valve-member being also adapted to simultaneously open communication proportionately through both of said port openings which communicate with the supply pipes, said valve-member in said second-mentioned chamber being so arranged with respect to the valve-member in the first-mentioned chamber that communication is established through the port openings which communicate with the supply pipes when the valve-member in the first-mentioned chamber establishes communication through either of the port openings which communicate with the respective discharge nozzles, and means for simultaneously actuating the valve-members in said chambers and also for manipulating the valve which controls the passage-way between said chambers.

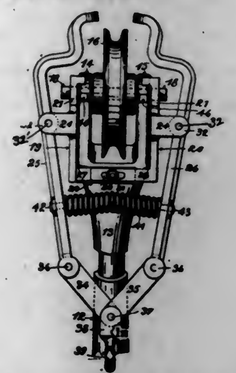
4. A two-way faucet comprising a valve-casing having two chambers therein which are connected by a passage-way, a valve for controlling said passage-way, two discharge nozzles leading from said casing and communicating with one of said chambers through separate port openings therein, a chambered valve-member in said chamber in the valve-casing, said chambered valve-member having a port opening arranged to alternately register with either of said port openings in the valve-casing, the other chamber in said valve-casing having two port openings which communicate with two separate supply pipes, a chambered valve-member in said second mentioned chamber in the valve-casing, said second mentioned chambered valve-member having a pair of port openings therein, one of said pair of port openings being arranged to register with one of the port openings in the valve-casing which commu-

nicates with one of the supply pipes and the other of said pair of port openings being arranged to register with the port opening in the valve-casing which communicates with the other supply pipe, and said pair of port openings in the valve-member being arranged to register simultaneously with both of said port openings in the valve-casing, said pair of port openings in the valve-member being also arranged so that when one of them registers fully with its coöperating port opening in the valve-casing the other one of said pair will not register with its coöperating port opening in the valve-casing, and that when one of said pair of port openings in the valve-member registers partially with its coöperating port opening in the valve-casing the other one of said pair will simultaneously register proportionally with its coöperative port opening in the valve-casing, and said pair of port openings in the second-mentioned valve-member being so arranged with respect to the port opening in the first mentioned chambered valve-member, that the registration of said pair of port openings with their coöperating port openings in the valve-casing occurs when the port opening in the first-mentioned valve-member registers with the port opening in the valve-casing which communicates with one of said discharge nozzles, a second pair of port openings in the second mentioned chambered valve-member corresponding to said first mentioned pair of port openings therein and being so arranged with respect thereto and to the port opening in the first mentioned chambered valve-member, that they register with the port openings in the valve-casing which communicate with the supply pipes when the port opening in the first-mentioned chambered valve-member communicates with the port opening in the valve-casing communicating with the other discharge nozzle, and means for simultaneously manipulating said chambered valve-members and also for manipulating the valve which controls the passage-way between the two chambers in the valve-casing.

5. A two-way faucet comprising a valve-casing having two chambers therein which are connected by a passage-way, a valve for controlling said passageway, a discharge nozzle leading from said valve-casing and communicating with one of said chambers through a port opening therein, and a second discharge nozzle leading from said valve-casing and communicating with said chamber through a second port opening therein, a chambered valve-member in said mentioned chamber in the valve-casing, said valve-member having a port arranged to alternately register with said port openings which communicate with the discharge nozzles, two supply pipes communicating with the second chamber in said valve-casing through separate port openings therein, a chambered valve-member in said second mentioned chamber in the valve-casing, said second mentioned valve-member having a pair of port openings which are arranged to register with the port openings in the valve-casing which communicate with the supply pipes, said pair of port openings in the valve-member being arranged so that when one of them registers fully with its coöperating port opening in the valve-casing the other one of said pair of port openings will not register with its co-operating port opening in the valve-casing and said pair of port openings being also arranged so that when one of them registers partially with its coöperating port opening in the valve-casing the other one of said pair will simultaneously register proportionately with its coöperating port opening in the valve-casing, and said pair of port openings in the second mentioned valve-member being so arranged with respect to the port opening in the first mentioned valve-member that the registration of said pair of ports with the port openings in the valve-casing communicating with the supply pipes occurs when the port opening in the first mentioned valve-member registers with the port opening in the valve-casing communicating with one of said discharge nozzles, a second pair of port openings in the second mentioned valve-member corresponding to the first mentioned pair of port openings therein and being so arranged with respect thereto and to the port opening in the first mentioned valve-member that registration with the port openings in the valve-casing which communicate with the supply pipes occurs when the port opening in the first mentioned valve-member registers with the port opening which communicates with the second discharge nozzle, and a device for simultaneously operating said chambered valve-members and also for operating the valve which controls the passageway between the two chambers in the valve-casing, said device being arranged and adapted for separate actuation for its two functions.

[Claims 6 to 14 not printed in the Gazette.]

960,559. TROLLEY FOR ELECTRICALLY-PROPELLED VEHICLES. JAMES KOLIN, Chicago, Ill., assignor of one-half to William E. Smith, Chicago, Ill. Filed May 24, 1909. Serial No. 497,903.



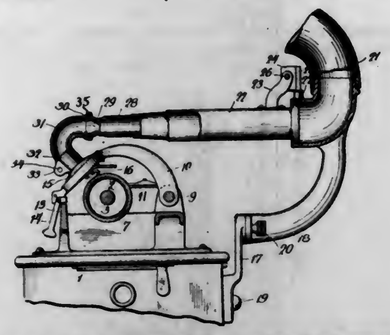
1. In a trolley for electrically propelled vehicles, a pole; a harp at the upper end of said pole; a trolley-wheel pivoted in said harp; cheeks on the outer faces of said harp and pivoted to the pivot of said trolley-wheel, each of said cheeks having outwardly projecting lugs forming double-eyes, and inwardly projecting members, one of said members having ledges, and both members having slotted apertures, and a bolt, adapted to unite said members and levers pivoted to said outwardly-projecting lugs, as described.

2. In an electrically operated vehicle a trolley-pole; a harp at the upper end of said pole; a trolley-wheel pivoted in said harp; cheeks on the outer faces of said harp and pivoted thereto; levers pivoted to said cheeks, the upper ends of said levers being bent and reaching over said trolley-wheel; links at the lower ends of said levers, said links being pivoted to said levers with one end, and to each other with their other ends; inwardly projecting studs on said levers adapted to limit the inward movement of the lower ends of said levers, and a spiral spring upon said studs adapted to force the lower ends of said levers outwardly.

3. In an electrically operated vehicle a trolley-pole; a harp at the upper end of said pole; a trolley-wheel pivoted in said harp; cheeks on the outer faces of said harp and pivoted thereto; levers pivoted to said cheeks, the upper ends of said levers being bent and reaching over said trolley-wheel; links at the lower ends of said levers, said links being pivoted to said levers with one end and to each other with their other ends; inwardly projecting studs on said levers, and a spiral spring upon said studs, said studs being adapted to form stops to prevent the levers from approaching each other beyond a predetermined distance.

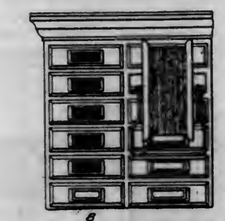
4. In a trolley for electrically operated vehicles, a pole; a harp on the upper end of said pole; a trolley-wheel pivoted in said harp, cheeks on the outer faces of said harp and pivoted thereto, said cheeks having inwardly-projecting members; stops on said harp; levers pivoted to said cheeks, the upper ends of said levers being inwardly bent to form jaws; links connecting the lower ends of said levers; means on said links for pivotally connecting one with the other; a spiral spring between the levers, studs upon which said spiral spring is mounted, said studs affording means for limiting the inward movement of said levers.

960,560. TALKING-MACHINE. THOMAS KRAEMER, Philadelphia, Pa., assignor to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 10, 1909. Serial No. 482,521.



In a talking-machine, the combination of a motor-box, a support for a cylindrical sound-record thereon, means for rotating said support, a reproducer movable in a straight line over the sound-record on said support, a supporting arm extending upwardly from the motor-box, a tone-arm pivotally mounted upon said supporting-arm, a tubular section movable axially in the free end of said tone-arm and adapted to telescope more or less therewith, a tubular member having one end secured to the reproducer and curved intermediate its ends so that its opposite end is directed toward said supporting arm, and a pivotal connection between the last-named end of said tubular member and one end of said tubular section, substantially as set forth.

960,561. DISPLAY-CABINET. CHESTER F. KROM, St. Petersburg, Fla. Filed Oct. 15, 1909. Serial No. 522,791.

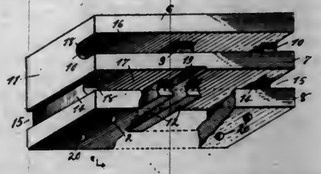


1. A compartment, spaced cleats upon the sides of the compartment, a plate for the open face of the compartment, a substantially rectangular frame constructed of wire secured to the plate and positioned between the cleats in the compartment, a pivoted reel connected with the side arms of the frame, and a handle for the reel adapted to be positioned between the cleats of the compartment when the frame is positioned within the compartment.

2. A cabinet provided with a compartment, longitudinally extending spaced cleats forming ways within the compartment, a plate for the open face of the compartment, a rectangular frame constructed of a pair of sections pivotally connected together and secured to the plate, a reel secured to the pivots of the frame members, an offset handle member for the reel, and the sides of the frame and the handle of the reel adapted to be positioned within the ways of the compartment when the frame is positioned within the compartment.

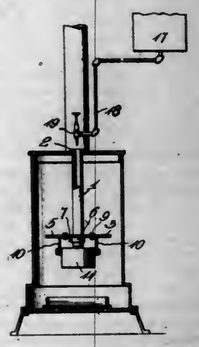
3. A cabinet provided with a compartment having its side walls provided with ways, a plate for the open face of the compartment, a rectangular frame constructed of a resilient member and secured to the plate, said frame comprising a pair of members each offset adjacent their pivotal connections to extend beyond the ways of the compartment, a reel connected with the trunnions of the frame members and one of said trunnions being extended to provide an offset handle portion adapted to be positioned within one of the ways of the compartment when the frame is in position within the compartment substantially as described.

960,562. CEMENT BLOCK. EDWARD C. LANNING, St. Charles, Ill. Filed Aug. 8, 1907. Serial No. 387,598.



A building block composed of an inner face plate, an outer face-plate and a middle plate integrally formed and connected by parallel ribs spaced apart to form vertical air-chambers, the end ribs between the inner face plate and the middle plate being inset to provide inclosed flues in the ends of the blocks when arranged in a wall, and the center ribs between the inner face-plate and the middle plate being spaced apart to form an inclosed flue midway of the block one of said ribs between the middle plate and the outer face plate being arranged opposite the said midway flue, and all of said ribs terminating short of one face of the block to form parallel continuous passages separated from each other by the middle plate.

960,563. CRUDE-OIL BURNER. JULIUS A. J. LATIL, Baton Rouge, La. Filed Jan. 20, 1910. Serial No. 539,006.

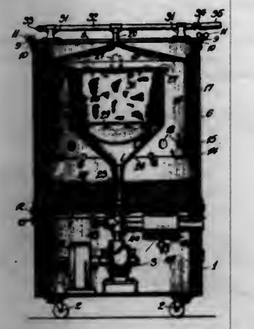


1. In an oil burner, a combined draft and burner supporting tube, means to secure the upper end of said tube in the top of a stove, a flame deflecting plate detachably secured to the lower end of said tube, a combustion chamber supported by said plate, an oil tray arranged in said chamber, and an oil deflecting disk arranged in said tray.

2. In a crude oil burner, a draft tube, a flame deflecting plate, said plate being formed in detachably connected sections, means to detachably secure the plate to the

lower end of said tube, supporting hooks arranged on the lower side of said plate, a combustion chamber supported by said hooks, an oil receiving tray arranged in said chamber, means to support the tray above the bottom of the chamber, and an oil deflecting disk arranged in said tray.

960,564. PNEUMATIC CLEANER. ELMER A. LAUGHLIN, Chicago, Ill. Filed May 13, 1909. Serial No. 495,666.



1. A pneumatic cleaner, comprising a dust receptacle having a centrally disposed air inlet in its top, a deflecting hood in the receptacle beneath the inlet and open at its bottom, a screen in the hood, and supporting means for said screen adapted to direct air upwardly in the hood then downwardly through said screen and supporting means.

2. A pneumatic cleaner, comprising a dust receiving receptacle having an inlet in its top, a seat on the inner side of the walls of the receptacle, a hood open at its bottom and supported on said seat, said hood having side walls parallel with the side walls of the receptacle, and having a conical top with its apex beneath the inlet, a screen supported in the upper portion of said hood and out of contact therewith, a cup shaped support for the screen, and an outlet pipe connected to the bottom of said support.

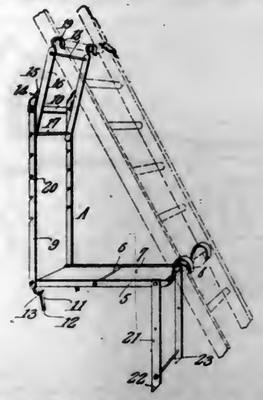
3. A pneumatic cleaner, comprising a dust receiving receptacle, a deflecting hood therein, a screen within said hood, baffling means within said hood supporting said screen and spaced away from the walls of the hood, said receptacle having an air inlet and an air outlet, said air outlet communicating with the space adjacent to said baffling means, and air exhausting means connected with said outlet, said hood and baffling means being arranged for directing a current of air through the interior of said receptacle then through the interior of said hood, and finally through said screen.

4. A pneumatic cleaner, comprising a dust receiving receptacle having a removable top, an inlet pipe opening through said top and affording a handle for the receptacle, a hood concentrically arranged in the receptacle and having a conical top with its apex beneath the inlet, a hollow baffle wall concentrically arranged in the hood, a cup shaped screen supported in and concentric with said baffle wall, an outlet pipe extending downwardly from said baffle wall, and air exhausting means connected with said outlet and adapted to conduct a current of air downwardly between the receptacle and hood, upwardly between the hood and baffle wall, and downwardly through the screen, baffle wall and outlet pipe.

5. A pneumatic cleaner, comprising a receptacle, a pump tending to create a vacuum in said receptacle, a suction pipe opening into the top of said receptacle and adapted to admit a dust laden current of air into the receptacle, a deflecting hood removably supported in said receptacle and spaced away from the walls thereof and provided with a conical top beneath the opening from the suction pipe, an urn shaped support seated in the inlet of said pump and extending up into the hood, and an air filter mounted in said support.

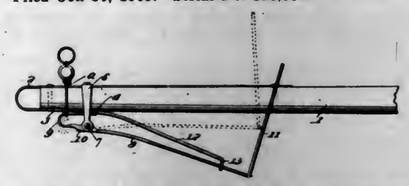
[Claims 6 to 11 not printed in the Gazette.]

960,565. ADJUSTABLE AND REVERSIBLE ROOF AND LADDER SCAFFOLDING-BRACKET. CHARLES W. LEVANDER, Stromsburg, Nebr. Filed Sept. 27, 1909. Serial No. 519,892.



In a device of the class described, a platform section, means at one end of the section for supporting the same from a ladder, a supporting frame connected to the other end of the section and including side bars formed each with a plurality of notches, and a supplemental supporting frame adapted at its upper end for connection with the ladder and having at its lower end a rod engageable in the notches interchangeably.

960,566. NECK-YOKE HOLDER FOR WAGON-TONGUES. CHARLES H. LEWIS, White Earth, N. D. Filed Oct. 30, 1909. Serial No. 525,569.



1. A neck yoke holder, comprising in combination with a tongue, a clip having an offset secured to said tongue, said offset having a longitudinal slot formed therein, a yoke inclosing said tongue and having a depending bearing, an arm having a hook journaled in said bearing, the free end of said hook projecting into said slot, a spring secured between said tongue and said offset and maintaining said hook normally projected into said slot, and a loop formed on the rear end of said arm and inclosing said tongue whereby said arm may be rocked to open said hook.

2. A neck yoke holder, comprising in combination with a tongue, a clip having an offset secured to said tongue, said offset having a longitudinal slot formed therein, a yoke inclosing said tongue and having a depending bearing, an arm having a hook journaled in said bearing, the free end of said hook projecting into said slot, a spring secured between said tongue and said offset and having an end slidably engaging said arm, and a loop formed on the rear end of said arm and inclosing said tongue whereby said arm may be rocked to open said hook.

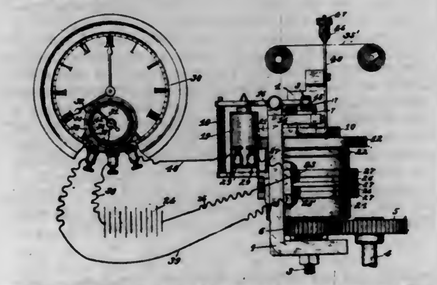
3. A neck yoke holder, comprising in combination with a tongue, a clip overlying the top of the tongue and being turned downwardly and rearwardly to engage the lower side of the tongue, being offset from the tongue at its free lower end and provided adjacent the bend formed by the offset portion with a longitudinal slot, a pivoted arm supported from the tongue and having a hook member the free end of which normally projects in said slot, and a spring having one end engaging between the offset portion of the clip and the under side of the tongue, and having its opposite end engaging the pivoted arm.

960,567. ELECTRIC ACCUMULATOR. LÉON MARSEILLE, Paris, and PAUL GOUIN, Levallois-Perret, France. Filed July 1, 1909. Serial No. 505,458.



The process of treating accumulator supports for holding active material to prevent dropping of said material therefrom, consisting in depositing on the exterior of said support sesquioxid of nickel in the form of a layer of hard adherent porous oxid for retaining said material.

960,568. SPEED INDICATOR AND RECORDER. WILLIAM N. MITCHELL, Chicago, Ill., assignor to The International Text Book Company, Scranton, Pa., a Corporation of Pennsylvania. Filed July 25, 1906. Serial No. 327,650.



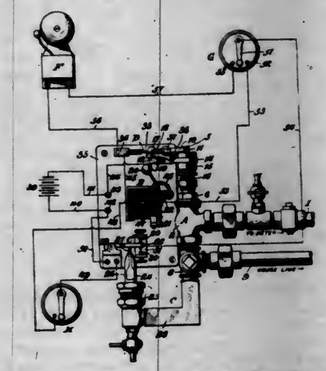
1. In a device of the kind described, a rotatable member, a rotatable part mounted concentrically with said member, means for rotating said member, a stop positioned in the path of said part, means attached to said part tending to normally hold the same against said stop, in combination with means rigidly mounted upon said member for periodically connecting said part and member for a predetermined interval, a slide arranged to move longitudinally at each rotation of said part, and means arranged to engage said slide tending to prevent its movement but releasing the slide at the completion of each partial rotation of said part.

2. In a device of the kind described, a rotatable member, a rotatable part mounted concentrically with said member, means for rotating said member, a stop positioned in the path of said part and means attached to said part tending to normally hold the same against said stop, in combination with means rigidly mounted upon said member for periodically connecting said part and member for a predetermined interval, a slide arranged to move longitudinally a distance corresponding to the arc of rotation of said part, and means arranged to engage said slide to prevent its movement but releasing said slide at the completion of each partial rotation of said part.

3. In a device of the kind described, a rotatable member, a cam concentrically and loosely mounted upon said member, a stop positioned in the path of a portion of said cam, and resilient means tending to normally hold said cam against said stop, in combination with mechanism rigidly mounted upon said member and arranged to periodically connect said cam and member for a predetermined period, a slide adapted to be moved longitudinally by said cam, and a brake arranged to periodically engage said slide and hold the same in position to indicate the extent of movement of said cam during a portion of the next partial rotation of said cam.

4. In a device of the kind described, a rotatable member, a spiral cam mounted loosely and concentrically upon said member, a stop positioned in the path of said cam, means for rotating said member, and resilient means tending to normally hold said cam against said stop, in combination with means for periodically connecting said cam and member for a predetermined interval, a slide adapted by its position to indicate the movement of said cam, resilient means tending to hold said slide in contact with said cam, and a brake arranged to engage said slide and prevent its movement toward said cam until the cam nears the operative limit of its movement.

960,569. AUTOMATIC ALARM AND GAS-PRESSURE CUT-OFF DEVICE. OSCAR CHAS. MOON, Pittsburg, Pa. Filed May 24, 1909. Serial No. 497,962.



1. In an apparatus of the class described, the combination of a casing, a valve therein, a stem connected with the valve, a lever hingedly connected with the stem and disposed in alinement therewith during the opening and closing of the valve and movable out of alinement with the stem for holding the valve open, a latch engaging the lever when in non-alined position, electrical means for releasing the latch, and a circuit closer responsive to the pressure of the fluid passing through the valve casing for closing the circuit of the said electrical means.

2. In an apparatus of the class described, the combination of a gas meter pipe, a service pipe, a valve at the point

of connection of the pipes, means tending to close the valve, a device for holding the valve open in opposition to the said means, electrical means for actuating said device to permit the valve to close, a circuit closer in circuit with the electrical means, and a device for actuating the circuit closer including a container, a member extending out of the container to engage with the circuit closer, and a mobile medium in the container responsive to variations in the pressure in the said pipe to raise and lower the member for opening and closing the said closer.

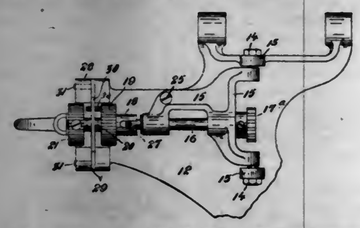
3. In an apparatus of the class described, the combination of a conduit normally containing fluid under pressure, a normally-open valve tensioned to automatically close, electrically-released means for holding the valve open, a circuit closer in circuit with the said means, said closer including a movable element and a device separate from and operatively connected with the circuit closer for actuating the latter including a mobile medium responsive to variations in fluid pressure in the said pipe, and a member moved by the medium for imparting movement to the said element.

4. In an apparatus of the class described, the combination of a cut-off valve, a spring tending to close the valve, a latch arranged to hold the valve open, electrical means for releasing the latch, a circuit closer connected in circuit with the said means, said closer including a movable element, and a pressure-responsive device including a mobile medium and a float on which the element rests to move the latter as the float rises and falls with the medium.

5. In an apparatus of the class described, the combination of a conduit through which fluid under pressure flows, a cut-off valve therein, means for holding the cut-off valve open, an electrical device for disengaging the said means from the valve to permit the latter to close, a circuit for the said device, a closer in the said circuit, a container connected with the said conduit, a mobile medium in the container subjected to the pressure of the fluid in the conduit, and a float moved by the said medium and arranged in coöperative relation with the circuit closer for actuating the same, said medium and float forming together an actuator for the closer.

[Claims 6 to 14 not printed in the Gazette.]

960,570. BLINDSTITCH SEWING-MACHINE. WILLIAM A. MCCOOL, Beaver Falls, Pa., assignor to Acme-Keystone Mfg. Company, a Corporation of Pennsylvania. Filed Nov. 30, 1908. Serial No. 465,198.



1. In a blind stitch sewing machine, the combination with stitch-forming devices comprising a needle, of a yieldingly mounted rotating feeding device, a rotating ridge-former independent of said feeding device, a support, independent of said feeding device, in which said ridge-former is mounted for rotation, and a loose operating connection between the said rotating feeding device and the said ridge-former, whereby said ridge-former will be intermittingly rotated from said feeding device and will occupy a constant position relative to the said needle, but the said feeding device will be left free to yield to accommodate inequalities in the work.

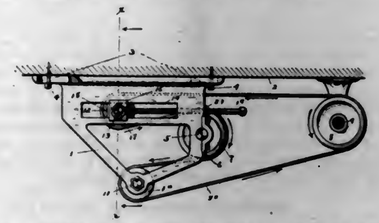
2. In a blind stitch sewing machine, the combination with a yieldingly mounted feed wheel provided with a crank pin, of a rotating ridge-former provided with a slot entered by said crank pin, a plate in which said ridge-former is mounted for rotation and which plate is fixed or rigid relative to said feed wheel, whereby said ridge-former will occupy a constant position relative to its support and be intermittingly rotated from said feed wheel, but the latter will be left free to yield to accommodate inequalities in the work.

3. In a blind stitch sewing machine, the combination with a support, as 12, of a feed wheel yieldingly mounted on said support, a bearing plate, as 29, separate from but rigidly attached to said support, a ridge-former mounted for rotation in said bearing plate, and means for rotating said ridge-former.

4. In a blind stitch sewing machine, the combination with a support, as 12, of two feed wheels both yieldingly mounted on said support, a rotating ridge-former mounted in a bearing fixed to said support and interposed between said feed wheels, and means for rotating said ridge-former.

5. In a blind stitch sewing machine, the combination with stitch-forming devices comprising a needle, of yieldingly mounted and intermittingly rotated feeding wheels, a rotating ridge-former independent of but located between said feeding wheels, a support, separate from or independent of said wheels, in which said ridge-former is mounted for rotation, and a loose operating connection between one of said wheels and the said ridge-former; whereby said ridge-former will be intermittingly rotated from said feeding wheel and will occupy a constant position relative to said needle, but the said wheels will be left free to yield to accommodate inequalities in the work.

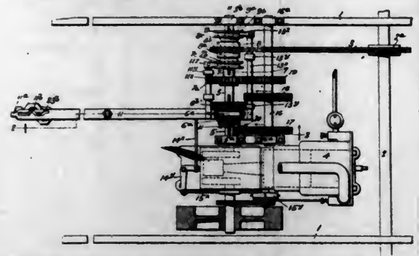
960,571. COMBINATION SHAFT-HANGER AND BELT-TIGHTENER. REDMOND J. MCGRATH, Chicago, Ill., assignor of one-half to Daniel W. Murphy, Chicago, Ill. Filed Sept. 14, 1908. Serial No. 452,937.



In a device of the class described, a pair of similar hanger brackets, each of said brackets comprising a base having slots to receive bolts for securing the device to the ceiling and a depending portion, said depending portion being provided with a horizontally disposed slot adjacent its upper end and parallel with the slots in said base portion, a block slidably mounted in each of said slots, a screw threaded through the end of the bracket and impinging against its respective block, a pulley shaft having its ends mounted in said blocks, a pulley on said shaft having reduced ends, bearings formed on said brackets adjacent said screws and in a plane below the same, a counter-shaft mounted in said bearings and a pulley on said shaft, and an idler pulley and a shaft for the same having bearings in the lower end of said brackets below the plane of said counter-shaft, in combination with a driven pulley and a belt passing about said driven pulley, the first said pulley, said counter-shaft pulley and said idler pulley successively, substantially as described.

960,572. TRANSMISSION-GEARING. CHARLES A. MCKIBARNAN, Carthage, Mo. Filed Aug. 18, 1908. Serial No. 448,282.

1. Variable speed transmission gearing including a plurality of shiftable gear members, a plurality of levers directly engaging said shiftable members to shift the same, combined with a single control lever successively engaging all of said shiftable levers to operate the same, means for pivoting said control lever to be movable in but a single plane, and said plurality of levers each having means to be engaged by said control lever by virtue of which the movement of said control lever will cause said plurality of levers to be actuated.



2. In a transmission gearing, a plurality of shiftable gears, a plurality of shifting levers for shifting said gears, a single control lever engaging all of said shiftable levers, said shiftable levers each having portions to be simultaneously engaged by said control lever to operate all of said shifting levers, and means limiting the movement of said control lever to a single plane.

3. A drive shaft and a driven shaft, gear connections therebetween, said gear connections comprising a double shiftable gear carried by and rotatable with the drive shaft, a countershaft, a pair of gears carried by said countershaft to coöperate with said double shiftable gear member, a shiftable clutch and a gear member therefor, a gear carried by the countershaft to coöperate with said shiftable clutch gear member, a sprocket clutch to cooperate with said shiftable clutch and coöperatively connected with said driven shaft, lever mechanisms for operating said double shiftable gear, and said shiftable clutch and a single control lever for operating said actuating lever mechanisms.

4. A drive shaft and a driven shaft, gear connections therebetween, said gear connections comprising a double shiftable gear carried by and rotatable with the drive shaft, a countershaft, a pair of gears carried by said countershaft to coöperate with said double shiftable gear member, a shiftable clutch and a gear member therefor, a gear carried by the countershaft to coöperate with said shiftable clutch gear member, a sprocket clutch to cooperate with said shiftable clutch and coöperatively connected with said driven shaft, lever mechanisms for operating said double shiftable gear and said shiftable clutch, a single control lever for operating said actuating mechanisms, and an idler pinion coöperating with one of the gears of said double shiftable gear member and one of said countershaft gears.

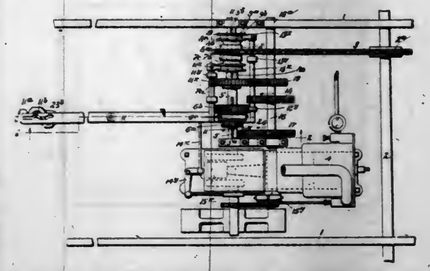
5. A drive shaft and a driven shaft, and variable speed gear connections between said shafts, said connections including shiftable gear members, lever mechanisms for operating said shiftable gear members, each of said lever mechanisms having slots, and a single control lever having a portion projecting into said slots for operating said actuating levers, and means for pivoting said control lever to be pivotally movable in but a single plane.

[Claim 6 not printed in the Gazette.]

960,573. TRANSMISSION-GEAR MECHANISM FOR MOTOR-VEHICLES AND THE LIKE. CHARLES A. MCKIBARNAN, Carthage, Mo. Original application filed Aug. 13, 1908, Serial No. 448,282. Divided and this application filed Mar. 9, 1909. Serial No. 482,377.

1. In an explosion engine having a drive shaft, a driven shaft, variable speed gear connections between said drive and driven shafts, said gear connections including shiftable gear members, lever mechanisms for actuating said shiftable gear members, a timer for said engine, a lever mechanism for actuating said timer, and a single control lever directly and coöperatively engaging all of the aforesaid lever mechanisms for controlling all of said actuating levers.

2. In a motor vehicle, an explosion engine having a drive shaft, a driven shaft and variable speed connections between the drive shaft and the driven shaft, combined with means for actuating said variable speed gears, and means for increasing and decreasing the speed of the engine together with a lever mechanism for actuating said last named means, and a single control lever directly engaging all of the aforesaid lever mechanisms for operating all of said actuating mechanisms.



3. In a motor vehicle, an explosive engine having a drive shaft, a driven shaft and gear connections between the drive and driven shafts, combined with lever operated means for connecting and disconnecting said gears with said engine drive shaft, lever operated means for changing the speed of operation of said engine, lever operated means for shifting the connection between the drive and driven shafts to reverse the direction of rotation of the driven shaft, lever operated means for changing the speed of rotation of the driven shaft without changing the speed of rotation of the drive shaft, and a single control lever directly coöperatively engaging the levers of said lever operated mechanisms for simultaneously coöperatively moving all of the levers of said lever operated mechanisms to simultaneously control all of said means.

4. In a drive mechanism for motor vehicles and the like, a variable speed transmission gear mechanism comprising a series of variable speed gears, a series of actuating lever mechanisms for moving said gears into and out of operation, an explosion engine coöperating with the variable speed gear mechanism, a driven shaft cooperatively connected with said variable speed gear mechanism, means forming part of the explosion engine for changing its speed, an actuating lever for actuating said speed changing means of the engine, and a single control lever directly coöperatively engaging and operating all of the actuating levers to set any of the gear mechanisms into operative relation and simultaneously change the speed of operation of the engine.

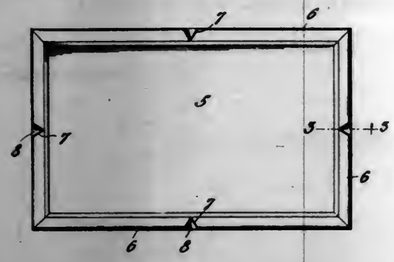
5. In a transmission mechanism for motor vehicles and the like, a driven shaft, a driving engine, a variable speed transmission gear connecting the driving engine and the driven shaft, levers for actuating the variable speed gear mechanism, speed changing mechanism for said driving engine, lever devices for actuating said speed changing mechanism of the engine, and a single control lever directly engaging and operating all of the actuating levers simultaneously.

960,574. BILLIARD-CUE POWDERER. HARRY NAHM, St. Louis, Mo. Filed Oct. 21, 1909. Serial No. 523,844.

1. In a device of the character described, a pool or billiard table having a transversely extending recess in the rail thereof, said recess extending the entire width of the rail and adapted to receive a suitable cue powder, substantially as and for the purpose set forth.

2. In a device of the character described, a pool or billiard table having a transversely extending recess in the side and end rails thereof, said recesses extending the entire width of the rails, and a lining in said recesses adapted to receive a suitable cue powder, substantially as and for the purpose set forth.

3. In a device of the character described, a pool or billiard table having a transversely extending recess in the rail thereof, said recess increasing in width from the inner to the outer edge of the rail and having its base downwardly inclined, and a lining secured in said recess adapted to receive a suitable cue powder, substantially as and for the purpose set forth.

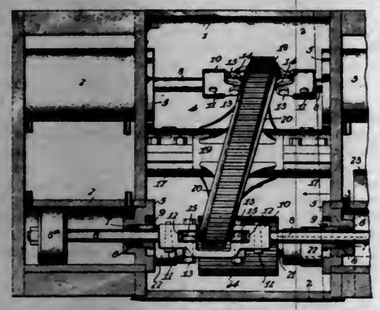


4. In a device of the character described, a pool or billiard table having a transversely extending V-shaped recess centrally provided in the side and end rails thereof, said recesses extending the entire width of said rails, and a lining of fabric secured in said recesses adapted to receive a suitable cue powder, substantially as and for the purpose set forth.

5. In a device of the character described, a pool or billiard table having a transversely extending V-shaped recess in the side and end rails thereof, said recesses being inclined upwardly from the outer edge of the rails and extending the entire width of the same, and a fabric lining for said recesses and adapted to receive a suitable cue powder, substantially as and for the purpose set forth.

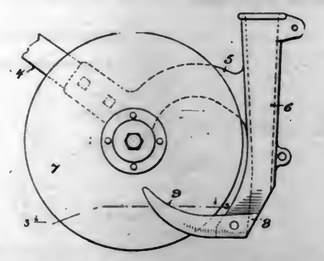
[Claims 6 and 7 not printed in the Gazette.]

960,575. PUMP. FRANK NEGLEY, Alameda, Cal. Filed Apr. 28, 1909. Serial No. 492,721.



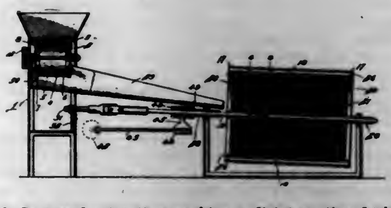
A pump comprising a casing provided with opposing cylinders, pistons and piston rods, each pair of opposed pistons being connected by a link having a central clearance space, and side recesses, an anti-friction roller mounted in each side recess, and having a V-shaped peripheral groove, a gyratory gear wheel mounted on a central shaft, and rotatable through the clearance spaces of the links, and having a laterally projecting V-shaped rim engaging the V-shaped grooves of the anti-friction rollers, and a driving shaft projecting into said casing and having an elongated gear wheel meshing with said gyratory gear wheel.

960,576. DISK SEEDER. CARL J. NELSON, North Milwaukee, Wis. Filed June 14, 1909. Serial No. 501,942.



In a disk-seeder the combination of a furrow-opening disk, a seed-delivery boot having the sides thereof beveled at its lower end, and a furrow-protector in the form of a single upwardly curved blade constituting a scraper for one side of the disk and provided with integral rearwardly divergent plow-branches matching the beveled portions of the boot to which they are fastened, said blade being otherwise free.

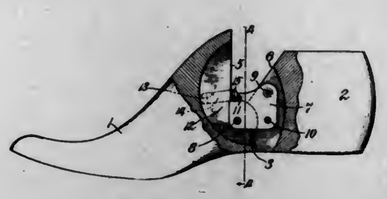
960,577. SEED-EXTRACTING MACHINE. HARVEY NICHOLS, Jackson, Mich. Filed Dec. 30, 1909. Serial No. 535,650.



1. In a seed extracting machine, a disintegrating device, an operating mechanism connected therewith, a rotary separating screen, a chute to conduct the material from said disintegrating mechanism to said screen, a power transmitting shaft operatively connected with the operating mechanism for said disintegrating device, a socket arranged on the inner end of said power transmitting shaft, a squared screen supporting shaft having a sliding engagement with said socket, a screen supporting frame, means whereby said screen shaft is revolubly and slidably mounted in said frame, and a screen reciprocating mechanism connected with said screen shaft and with the operating mechanism of said power transmitting shaft, whereby said screen is reciprocated simultaneously with the rotary movement thereof.

2. In a seed extracting machine, a disintegrating device, an operating mechanism therefor, a rotary separating screen, a trough to connect said disintegrating device with said screen, a screen supporting frame, a power transmitting shaft operatively connected with the operating mechanism of said disintegrating device, a square socket on said power transmitting shaft, a squared screen operating shaft having a sliding engagement with said socket, bearing sleeves arranged on said squared screen shaft whereby said shaft is revolubly mounted in said screen supporting frame, a screen reciprocating mechanism comprising suitable gear operating shafts, a crank disk on one of said shafts, a pitman rod connected to said disk, a connecting arm secured to said pitman rod, inner and outer sleeves arranged on said screen shaft, means to hold said sleeves in position, trunnions arranged on said outer sleeve and bearings formed on the upper end of said connecting arm to receive said trunnions whereby said pitman rod is connected with said sleeve and adapted to impart a reciprocating motion to said screen shaft.

960,578. LOCKING HINGED LAST. ALBERT E. PECKHAM, Grand Rapids, Mich., assignor, by mesne assignments, to Krentler-Arnold Hinge Last Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 5, 1907, Serial No. 400,763. Renewed Mar. 9, 1909. Serial No. 482,403.



1. A hinged last, comprising a forepart and heel-part connected for shortening and lengthening movement, and locking means consisting of a swinging wedge-lock pivoted on one last-part to swing substantially in a transverse plane of the last into wedging position to force the adjacent walls of the last-parts apart and lock them in last-lengthened position.

2. A hinged last, comprising a forepart and heel-part connected for shortening and lengthening movement, and locking means consisting of an axial post set in the last lengthwise of one last-part, carrying at its outer end an eccentric engaging-member to swing transversely of the last into wedging position to force the adjacent walls of the last-parts apart and lock them in last-lengthened position.

3. A hinged last, having its last-parts connected by a vertical hinge-plate, combined with a latch pivoted to swing transversely of said plate into engagement therewith with a wedging action lengthwise of the last.

4. A hinged last, having its last-parts connected by a vertical hinge-plate, combined with a locking device consisting of a pivot post set endwise into the transverse secant end of the wood of one of the said last-parts, and having a transversely extending latch member at its outer end to turn with the post into locking engagement with said hinge-plate.

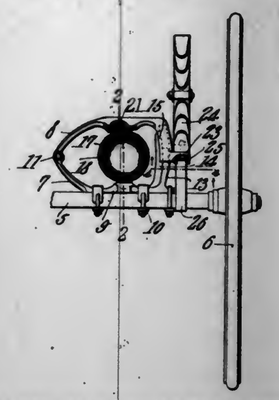
5. A hinged last, having its last-parts connected by a vertical hinge-plate, provided with an upright locking shoulder, combined with a swinging wedge-lock pivoted to swing transversely of said hinge-plate into engagement in a direction lengthwise of the last with the vertical side of said locking shoulder under a tendency to force said hinge-plate back on its pivot into last-lengthened position.

[Claims 6 to 8 not printed in the Gazette.]

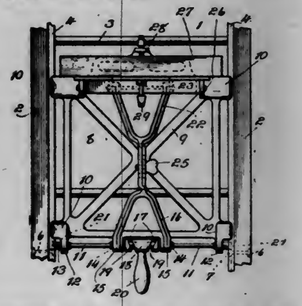
960,579. PNEUMATIC VEHICLE-GEAR. LOUIS J. PERKINS, Lewiston, Idaho. Filed Jan. 12, 1910. Serial No. 537,720.

1. In a device of the class described, connected relatively movable members, one of said members being axle supported and the other member being adapted for the support of a vehicle body, the first mentioned member being formed with an upstanding arcuate member and the second mentioned member being formed with a downwardly projecting arcuate member receiving the upstanding member, whereby to relatively guide the sections when moving, and a pneumatic cushion interposed between said members.

2. In a device of the class described, a fixed member, a member pivoted to the fixed member, the first mentioned member being axle supported, the said first mentioned member having an upstanding arcuate arm, the second mentioned member having a depending arcuate hollow arm receiving the first mentioned arm, a pneumatic cushion arranged between the members, the last mentioned member being formed with a lateral shelf for the support of a vehicle spring, a loop formed beneath the shelf and upon the said second mentioned member, and an axle engaging strap secured through the loop.



960,580. ADJUSTABLE LADDER-BRACKET. FRANCIS T. PETERS, Terre Haute, Ind., assignor of one-half to David T. Whitesell, Terre Haute, Ind. Filed June 4, 1909. Serial No. 500,206.



The combination with a ladder provided with vertical channeled guides, of a ladder bracket comprising a frame, a table and an adjustable arm, a guide at each corner of the bracket frame to embrace the said channeled guides, two transversely slidable rods carried on said bracket frame, the ends of said rods entering the said channeled guides, cam mechanism for separating said rods to cause the ends thereof to engage said channeled guides to lock the bracket against movement, the said table of the bracket being pivoted at the top of the bracket, and the said adjusting arm being extensible and pivoted to the said table.

960,581. COLLAR-STUD OR SIMILAR FASTENING. LOUIS AUGUSTE PICHON, Paris, and CHARLES MARIE VICTOR ALLENOU, Ville d'Avray, France. Filed Mar. 24, 1909. Serial No. 485,400.

1. A stud of the class described comprising in combination a shank, a head piece, pivotally mounted on said shank, a second head piece pivotally connected with said first named head piece and rotatable in a plane parallel to the plane of the first-named head piece, and means for locking the combined head pieces in alinement with the axis of said shank.

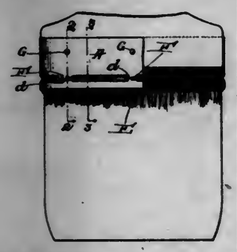
2. A stud of the class described comprising in combination a shank, a head piece pivotally mounted on said shank, a second head piece pivotally connected with said first named head piece and rotatable in a plane parallel to the plane of said first-named head piece, said second head piece being provided with a foot portion to engage the top portion of said shank and to lock the combined head pieces in alinement with the axis of said shank.



3. A stud of the class described comprising in combination a shank, a head piece pivotally mounted on said shank and provided with a plurality of indentations, a second head piece pivotally connected with said first named head piece and rotatable in a plane parallel to that of said first-named head piece, said second head piece being provided with resilient portions and with a plurality of projections thereon, said projections being adapted to register with said indentations when said head pieces are in superposition and in alinement with respect to each other.

4. A stud of the class described comprising in combination a shank, a head piece pivotally mounted on the top portion of said shank, a second head piece pivotally connected with said first named head piece and rotatable in a plane parallel to that of the first-named head piece, said second head piece being provided with a foot portion adapted to engage the top portion of said shank when said head pieces are in alinement with the axis of said shank and preventing rotation of said second head piece with respect to said first named head piece, and said second head piece being adapted to engage the top portion of said shank, when said head pieces are in a position perpendicular to the axis of said shank and in alinement with respect to each other.

960,582. BRUSH. GEORGE D. PUSHEE, Weston, Mass. Filed July 9, 1909. Serial No. 506,683.

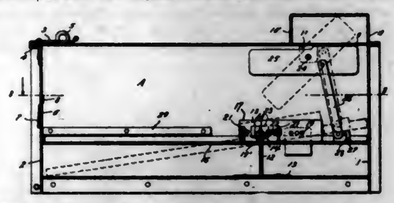


1. A ferrule for brushes having an inwardly projecting perforated rib at one side and having at the opposite side opposite said rib an inwardly projecting rib flattened opposite said perforation.

2. A brush comprising bristles; a handle; a ferrule connecting the handle with the bristles and comprising an inwardly projecting rib at one side and at the opposite side opposite said rib an inwardly projecting rib and a flattened portion; and a nail passing through the first-mentioned rib, between the bristles and through said flattened portion, and clenched on the outside of the ferrule at said flattened portion.

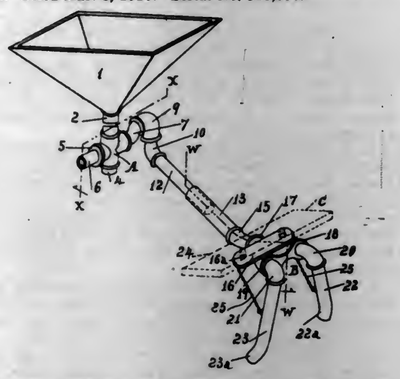
960,583. MAIL-BOX. POSEY REYNOLDS, Level Run, Va. Filed Dec. 30, 1909. Serial No. 535,545.

A mail box comprising a casing having an opening formed in one extremity thereof, a housing surrounding said opening, a signal pivoted on the interior of said casing and adjacent to said opening, a tray pivotally mounted in said casing, a connection between the rear terminal of said tray and said signal, and angle irons secured to the



sides of the casing whereby the upward movement of the tray is limited.

960,584. SANDER. CHARLES H. ROBERTSON, Springfield, Ill. Filed Mar. 8, 1910. Serial No. 548,090.



1. The combination of a sand box; a receiver in communication with the sand box; a distributer in operative relation to the receiver; a flexible connecting device connecting the distributer with the receiver; and two delivery pipes connected with the distributer and adapted to apply sand on the rails of a rail-way track immediately in front of two wheels on the same car truck.

2. The combination of a sand-box, a receiver in communication with the sand-box, means for supplying compressed air within said receiver, a distributer adapted to be connected with a car truck frame, an intake pipe connected with said distributer, delivery pipes connected with said distributer and adapted to discharge sand onto the rails of a rail-way track immediately in front of the car wheels running on said rails, and a supply pipe in communication with said receiver and telescoping in the intake pipe connected with said distributer.

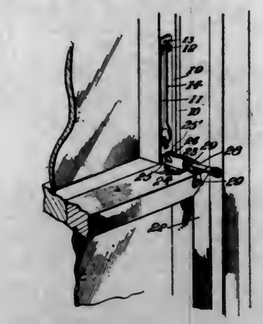
3. The combination of a cross-fitting, a pipe screwing into the cross-fitting and connected with a source of sand supply, a removable plug fitting in the lower end of said cross; a plug screwing into one arm of the cross and supporting a nozzle, a nozzle mounted on said last named plug and communicating with a source of compressed air supply, a bent nipple connected with the other arm of said cross, a first elbow having a swivel connection with said nipple, a second elbow having a swivel connection with said first elbow, a pipe connected with said second elbow, a distributer attachable to a car truck frame, a third elbow having a swivel connection with said distributer, an intake pipe secured on said third elbow, and a supply pipe secured on said second elbow and slidable within said intake pipe.

4. The combination of a distributer, means for supporting the distributer, delivery pipes having a swivel connection with said distributer, an intake pipe having a swivel connection with said distributer, and means for supplying sand within said intake pipe.

5. The combination of a distributer and its support, delivery pipes having a swivel connection with said distributer, means for supporting said delivery pipes in different positions, an intake pipe having a swivel connection with said distributer and means for supplying sand within said intake pipe.

[Claims 6 and 7 not printed in the Gazette.]

960,585. SASH-LOCK. ADOLPH ROSENBERG, Buffalo, N. Y. Filed Mar. 10, 1909. Serial No. 482,503.



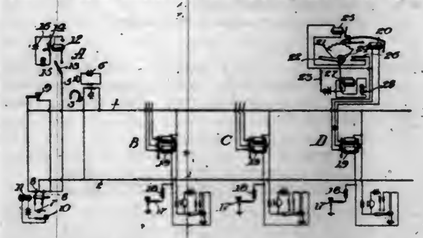
1. A window fastener including a keeper, a housing disposed adjacent said keeper upon a window sash, a bolt disposed through said housing for co-action with said keeper, said bolt being rearwardly extended from said housing, and a brace adjustably carried upon the extension of said bolt for engagement against the inner edge of the sash rail.

2. A window fastener including a housing, flanges laterally extending from said housing for engagement upon the upper face of the rail of a sash, a bolt rotatably and slidably mounted in said housing and extended from the opposite ends thereof, a cam head formed on the outer end of said bolt, said housing having a triangularly formed slot in the side thereof and terminated at its upper apex in a longitudinal slot, a pin carried by said bolt for engagement in the slots to regulate the movement of said bolt, a spring disposed about said bolt between said pin and the inner wall of said housing, a ferrule loosely disposed about the inner ends of said bolt, a brace loosely disposed about said ferrule and depended therefrom for engagement against the inner edge of the rail of the sash, and a thumb screw threadedly engaged in the inner end of said bolt against said ferrule.

3. A window casing including a housing for engagement upon a sash rail, a bolt slidably engaged through said housing, a ferrule loosely disposed about the inner end of said bolt, lugs formed upon the end of said ferrule for engagement with the housing, a thumb screw located upon the inner end of said bolt to retract the same, and a brace adjustably carried by said ferrule for engagement against the inner edge of the sash rail.

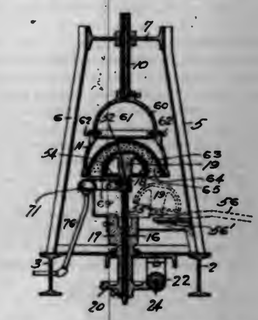
960,586. SIGNALING SYSTEM. HARRY O. RUGH, Sandwich, Ill., assignor to Sandwich Electric Company, Sandwich, Ill., a Corporation of Illinois. Filed Feb. 15, 1909. Serial No. 478,086.

A signaling system comprising line conductors uniting a central station and a plurality of substations, a telephone set at each substation having a switch-hook, a despatcher's telephone set at the central station normally in condition for use and connected with said line conductors, selective signaling devices associated with said line conductors whereby the central station can selectively call any substation, a local signal at the central station, means associated with one line conductor for controlling said signal and switching means associated with the same line conductor operable independently of said switch-hooks at each substation for operating said local signal



when the despatcher's telephone set is temporarily unoccupied.

960,587. METHOD OF FIRE-POLISHING GLASSWARE. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Inc., Newark, Ohio, a Corporation of West Virginia. Filed June 26, 1909. Serial No. 504,552.



1. The method of polishing the outer surface of bowls or like glass articles, consisting in supporting the article within a hollow burner and projecting from the hollow burner multitudinous flame jets distributed substantially evenly over the surface of the article to be fire polished.

2. The method of polishing the outer surface of bowls or like glass articles, consisting in supporting the article within a hollow burner which extends below the edge of the article and projecting from the hollow burner multitudinous flame jets distributed substantially evenly over the surface of the article to be fire polished.

3. The method of fire polishing glass articles, consisting in supporting the article upon a former conforming substantially to the shape thereof but with the edge of the article projecting beyond the former, subjecting the surface of the article to be polished to the action of multitudinous flame jets distributed over the surface thereof while supporting the article close to the surface of the burner and projecting the escaping flame against the exposed edge of the article.

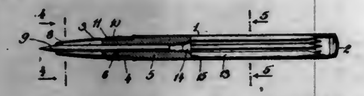
4. The method of fire polishing glass articles, consisting in supporting the article upon a former conforming substantially to the shape thereof but with the edge of the article projecting beyond the former, subjecting the surface of the article to be polished to the action of multitudinous flame jets distributed over the surface thereof while supporting the article close to the surface of the burner, and projecting a flame jet from another burner directly against such exposed edge of the article.

5. The method of polishing glass articles, consisting in supporting the article upon a former conforming to the shape of one surface thereof, fire polishing that surface and then supporting the article upon a former conforming substantially to the opposite face thereof, fire polishing

that surface, and rotating the article at different speeds for the first fire polishing operation and the second fire polishing operation respectively.

[Claims 6 to 8 not printed in the Gazette.]

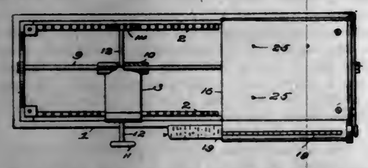
960,588. PENCIL. EGON L. SCHMITZ, New York, N. Y., assignor to Eberhard Faber Pencil Company, Brooklyn, N. Y., a Corporation of New York. Filed Dec. 21, 1909. Serial No. 534,283.



1. A pencil comprising a tubular casing having an inwardly turned flange at one end, an end-piece for the casing tapered at one end, having a thread formed therein at the opposite end and provided with a bead between said taper and thread, said threaded end of the end-piece extending within the casing and said bead and flange coacting to preclude withdrawal of the end-piece, a lead-holder within the casing and secured thereto having a thread coacting with said thread and slotted at one end to provide clamp-jaws engaging the interior walls of the tapered portion of the end-piece, and a stick of lead in a bore in said lead-holder, substantially as set forth.

2. A pencil comprising a tubular casing, a wooden lead-holder extending within the same, a tubular piece secured to the casing and lead-holder and having an inwardly-turned flange at its end, an end-piece tapered at one end, threaded at the other end and having a bead intermediate the taper and thread, said threaded end of the end-piece and said bead extending within said tubular piece and the flange and bead coacting to preclude withdrawal of the end-piece, said lead-holder having a thread formed thereon coacting with said thread on the end-piece and being slotted at one end to provide clamp-jaws engaging the interior walls of the tapered portion of the end-piece, and a stick of lead in a bore in said lead-holder, substantially as set forth.

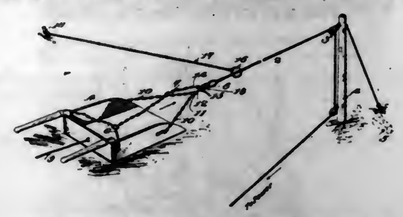
960,589. CHEESE-CUTTING DEVICE. CARLO SEGALE, San Francisco, Cal. Filed Sept. 30, 1909. Serial No. 520,347.



1. In a device of the character described, a base portion, a guiding rod extending longitudinally thereof, a carriage mounted on the base, a member connected to the carriage and arranged to engage the guiding rod, said member comprising a brace extending transversely of the carriage, and a cylindrical guiding device extending longitudinally of the carriage and transversely of said member, a shaft mounted on the carriage, pinions mounted on the shaft, rack bars carried by the base and arranged to be engaged by the pinions, a cutting device mounted on the carriage, a table mounted above the lower portion of the carriage, and means for indicating the distance traveled by the carriage.

2. In a device of the character described, a base portion, a carriage mounted above the same, a guiding bar arranged longitudinally of the base portion, a member mounted on the carriage and arranged to engage the guiding bar, a shaft mounted on the carriage, pinions carried by the shaft, rack bars mounted on the base and arranged to be engaged by the pinions, a frame mounted on the carriage, such frame comprising two U-shaped members parallelly arranged, each provided with a laterally extending arm, a knife pivoted between such arms, and arranged between the parallel portions of such frame, a table mounted above the lower portion of the carriage, and a scale for indicating the distance traveled by the carriage.

960,590. MEANS FOR AUTOMATICALLY DUMPING EXCAVATING-SCRAPERS. ADOLF SKOPINSKI, Jack Wade, Alaska. Filed Oct. 15, 1909. Serial No. 522,825.



1. The combination with an excavating scraper, of a power cable, a normally slack connection from the rear end of the scraper to the power cable, a draft connection attached to the forward end of the scraper, a connecting member detachably engaging the end of the draft connection with the power cable, and a tripping device in the path of movement of the power cable adapted to engage the connecting member between the power cable and the draft connection to disengage the latter from the former.

2. The combination with an excavating scraper, of a power cable, a normally slack connection from the rear end of the scraper to the power cable, a draft connection attached to the forward end of the scraper, a shackle attached to the end of the draft connection and adapted to detachably engage the power cable, and a tripping member in the path of movement of the power cable and adapted to engage the shackle and detach it from its engagement with the power cable.

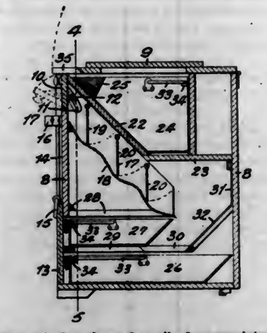
3. The combination with an excavating scraper, of a power cable, a normally slack connection from the rear end of the scraper to the power cable, a draft connection attached to the forward end of the scraper, a shackle on the end of the draft connection, said shackle having a pivoted hook thereon detachably engaging with the power cable, means on the shackle engaging with the hook to hold it closed, and a tripping member in the path of movement of the power cable adapted to engage the shackle to release the hook and disengage the power cable from the draft connections.

4. The combination with an excavating scraper, of a power cable, a normally slack connection from the rear end of the scraper to the power cable, a draft connection attached to the forward end of the scraper, a shackle on the end of the draft connection, said shackle having a pivoted hook adapted to engage with the power cable, a clip on the shackle engaging with the hook to hold it in a closed position, a tripping cable anchored at one end, and a ring on the tripping cable through which the power cable passes, adapted to engage with the clip on the shackle to release the hook and disengage the power cable from the draft connections.

5. The combination with an excavating scraper, of a power cable, a normally slack connection from the rear end of the scraper to the power cable, draft chains attached to the forward end of the scraper, a shackle to which the draft chains are connected, said shackle having at one end a pivoted hook, a pivoted clip on the shackle adapted to be turned over the end of the hook to hold it closed, said clip having a projecting finger thereon, a tripping cable anchored at one end, and a tripping ring on the end of said cable through which passes the power cable, said tripping ring being adapted to engage the finger on the shackle to release the hook thereof and permit the disengagement of the clip from the power cable.

[Claims 6 and 7 not printed in the Gazette.]

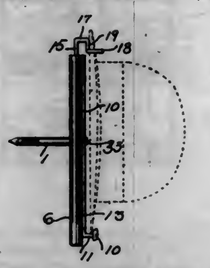
960,591. AUTOMATIC ASH-SIFTER. ADOLPH J. SMITH, Montreal, Quebec, Canada. Filed Oct. 29, 1909. Serial No. 525,264.



1. A device of the class described comprising a casing, a curved inclined screen within the casing, a swinging gate at the top of said screen, a plurality of swinging gates having serrated lower edges at intervals down said screen, an ash receptacle, and a cinder receptacle below said ash receptacle.

2. A device of the class described comprising a casing, a door in the upper front portion of the casing, a reverse curved screen extending downwardly and rearwardly from the bottom of said door, a gate at the top of said screen, a plurality of swinging gates having serrated lower edges at intervals down said screen, an ash receptacle, a cinder receptacle below said ash receptacle, and a sliding door at the lower front portion of the casing giving access to the cinder and ash receptacles.

960,592. HAT-HANGER. GEORGE SMITH, Jr., Thorndike, Mass. Filed July 22, 1909. Serial No. 509,029.

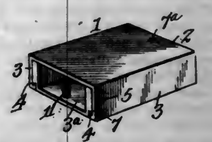


1. In combination, a carrying pin, a rear plate provided with two semicylindrical edge channels, held in parallel spaced relation, each having a bottom forming web and a top web with a centrally positioned seat, a front plate having semicylindrical edge channels with top and bottom webs, said channels registering with said first mentioned channels, a wire clip having two guide stems slidably held within said channels, springs carried by said stem to hold said clip in a protracted position, and a carrying stud secured to said front plate.

2. The combination with a carrying pin, of a rear plate carried by said pin provided with two semicylindrical edge channels held in parallel spaced relation, each having a bottom forming web and a top web with a centrally positioned seat, a front plate having semicylindrical edge channels for coaction with said first mentioned channels, a wire clip having two guide stems slidably held within said channels and said seat, springs carried by said stems to hold said clip in a protracted position, a face plate carried by said pin, and a stud carried by said face plate and held proximal to said clip.

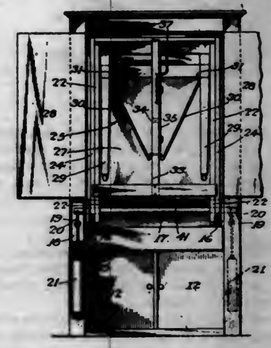
3. A hat hanger having in combination, a carrying pin, a sheet metal rear plate provided with two semicylindrical edge channels held in parallel spaced relation, each having a bottom forming web and a top web with a centrally positioned seat, a sheet metal front plate having semicylindrical edges arranged for coaction with said edge channels, clenching ears carried by said plates to secure the same in juxtaposition, a wire clip having two extending guide stems held within said channels, springs upon said wire stems to hold said clip in a retracted position, and a stud held proximal to said clip all arranged substantially as and for the purpose set forth.

960,593. BUCKLE. JOSEPH E. SMITH, Hot Springs, Ark. Filed May 8, 1909. Serial No. 494,749.



A wedge buckle comprising two sections slidable upon one another and having a device on the opposite end of each section for securing the ends of a strap, each section having longitudinal sides with a longitudinal inclined groove in each side, the sides of one section overlapping the sides of the other section and the grooves in one section interlocking with the grooves in the other section, and means for holding said sections in adjusted position.

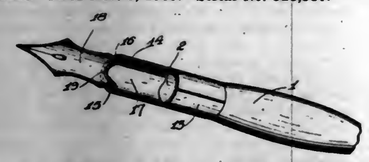
960,594. CABINET-TABLE. WILLIAM ASHLEY SNYDER, Los Angeles, Cal. Filed Feb. 18, 1909. Serial No. 478,708.



1. In a cabinet table, the combination with a cabinet having a shaft journaled therein, of rails mounted on the shaft, a table top slidably mounted on the rails, a flexible top connected to the table top adapted to be received upon the rails when the rails and table are swung to a horizontal position, and means connected to the shaft for holding the table top and rails in a vertical position.

2. In a cabinet table, the combination with a cabinet having a rotatable shaft journaled therein, of rails mounted on the shaft, a table top slidably mounted on the rails, a flexible top connected to the table top, adapted to be received upon the rails when the rails and table are swung to a horizontal position, said table top mounted and supported upon the shaft when in a vertical position, and means connected to the shaft for holding the table and rails in vertical position.

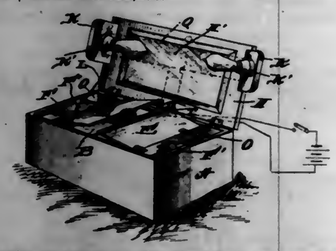
960,595. PENHOLDER. ALBERT O. SPERRY, Thayer, Kans. Filed Nov. 6, 1909. Serial No. 526,580.



1. In a penholder, a pen grip comprising an outer and an under face oppositely disposed with relation to each other and curved in cross section, said under face being positioned closest to the outer face contiguous the center of the arch of said outer face at the lower or open end of said pen grip, said under face in a longitudinal direction being inclined away from the outer face from the lower or open end of said pen grip toward the rear thereof.

2. In a penholder, a pen grip comprising an outer and an under face oppositely disposed with relation to each other and curved in cross section, said under face being positioned closest the outer face contiguous the center of the arch of said outer face at the lower or open end of said pen grip, said under face in a longitudinal direction being inclined away from the outer face from the lower or open end of said pen grip toward the rear thereof, and means for limiting the distance a pen can be thrust in between said faces.

960,596. MAKE-UP CABINET FOR THEATRICAL USE. ANDREW E. SPINNER, Morgan City, La. Filed Dec. 15, 1909. Serial No. 533,270.



A make up apparatus for theatrical use, comprising a box having a hinged lid adapted to hold a mirror, hinged wings upon said lid adapted to fold within the box when the lid is closed, bulb sockets carried by said wings, and electrical connections with said socket, as set forth.

960,597. FENCE-POST. ARTHUR W. SPRAGUE, La Grange, Ill., assignor to American Steel & Wire Company, Chicago, Ill., a Corporation of New Jersey. Filed Aug. 23, 1907. Serial No. 389,890.

1. In fencing, a post formed of a metal rod substantially rigid and unyielding in the direction of the length of the fence and provided near the surface of the ground with a vertical coil disposed to permit free flexing of the post in a direction laterally of the fence only, substantially as described.

2. In fencing, a post formed of a metal rod bent to form a vertical coil from which extend vertically alined ground-entering and fence-strand attaching portions, the plane of the coil being vertically at approximately a right angle to the length of the fence, substantially as described.

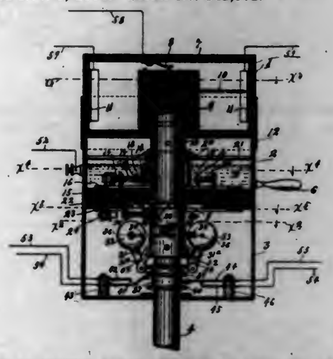
3. In fencing, a post formed of a metal rod bent intermediate of its ends to form a spring coil from which rises a fence strand attaching portion, and from which depends a ground entering portion, and an anchor plate carried by the ground entering portion adjacent the coil, the plane of the anchor being substantially parallel with the plane of the fencing, and the plane of the coil being at substantially right angles to that of the anchor.

4. A fence post formed of a metal rod bent intermediate of its ends to form a spring coil, from which depends a ground entering portion, and from which rises a fence



strand attaching portion, the spring coil being disposed to permit flexing of the strand attaching portion in one vertical plane only.

960,598. IGNITING SYSTEM FOR EXPLOSIVE-ENGINES. FRANK W. SPRINGER, Minneapolis, Minn. Filed Nov. 5, 1906. Serial No. 341,971.



1. In an igniting system for explosive engines, the combination with a main timer and an auxiliary timer coöperating to produce a coincident circuit closing arc of contact, each of said timers comprising a rotary circuit closing contact, of a governor operative to adjust the said contact of said auxiliary timer with respect to the circuit closing contact of said main timer, to thereby vary the circuit closing arc of contact under varying engine speeds, substantially as described.

2. In an igniting system for multi-cylinder explosive engines having primary and secondary circuits, the combination with a distributer in the secondary circuit of said system having a rotatively adjustable case, of a circuit controlling timer in the primary circuit of said system, and an electrical condenser applied to said adjustable case of said distributer and coöperating with the terminals thereof, substantially as described.

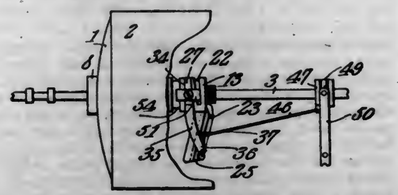
3. In an igniting system for multi-cylinder explosive engines having primary and secondary circuits, the combination with a circuit controlling timer in the primary circuit of said system and a distributer in the secondary circuit, of an adjustable electrical condenser applied to said distributer and coöperating with the terminals thereof, substantially as described.

4. In an igniting system for explosive engines, the combination with a casing and an engine driven shaft extending into said casing, of main and auxiliary circuit controlling timers arranged to produce a coincident circuit closing arc of contact, the said two timers having circuit closing contacts driven by said shaft, and a centrifugal governor driven by said shaft, and operative to adjust the contact of said auxiliary timer with respect to the contact of said main timer, all the said parts being located within said casing, substantially as described.

5. In an igniting system for explosive engines, the combination with a receptacle adapted to contain oil, of a circuit controlling timer comprising a contact brush, a rotary shaft, a sleeve carried by said shaft and having an outwardly spaced depending portion, and a contact carried by the lower portion thereof, the said brush and contact and the lower portion of said sleeve being submerged in the liquid oil contained in the said receptacle, substantially as described.

[Claim 6 not printed in the Gazette.]

960,599. CLUTCH-PULLEY. JAMES MCSTAY and EDWARD F. STEVENS, Cygnet, Ohio. Filed Sept. 20, 1909. Serial No. 518,547.



1. In a clutch pulley, driving and driven members, one member having a hub adapted to receive a shaft and upon which the other member is rotatably mounted, an abutment ring adjustably mounted upon said hub, a cam ring mounted for revoluble movement upon said hub, and having a cam face to engage said abutment ring, means for rocking said cam ring whereby to move said driven member into frictional engagement with the driving member, and means for retracting said members from engagement.

2. In a clutch pulley, driving and driven members one of which is provided with a shaft receiving hub upon which the other is mounted, an abutment ring adjustably mounted upon said hub and having a helical cam face, a cam ring carried by said hub and having a helical face adapted to bear against the cam face of said abutment ring, means for rotating said cam ring whereby to move said members into frictional engagement, and means for retracting said members from engagement.

3. In a clutch pulley, driving and driven members, one of said members having a hub adapted to be rigidly secured to a shaft, and the other of said members being mounted for independent rotation upon said hub, an abutment ring mounted upon said hub and having a spiral groove formed on its periphery, a cam ring mounted for revoluble movement upon said hub and adapted to coöperate with the abutment ring whereby to move the driving and driven members into frictional engagement, and a retracting member carried by said cam ring having one extremity engageable with said spiral groove and the other with said independently rotatable member whereby to release said members from engagement.

4. In a clutch pulley, driving and driven members, one of said members having a hub adapted to be rigidly secured to a shaft, and the other of said members having a bearing hub loosely mounted on said elongated hub, said bearing hub being provided with an annular recess adjacent one end, an abutment ring upon said elongated hub and having a spiral groove formed on its periphery, a cam ring mounted for rotation upon said elongated hub and adapted to coöperate with the abutment ring whereby to move the driving and driven members into frictional engagement, means for limiting the rotary movement of said cam ring, and a retracting member carried by said cam ring having terminal arms one of which is engageable with said spiral groove and the other with said annular recess whereby to retract the driving and driven members from frictional engagement.

5. In a clutch pulley, driving and driven members, one of the said members having a hub adapted to be rigidly secured to a shaft, the other of said members being mounted for independent rotation upon said hub, an abutment ring mounted upon said hub having a helical cam face provided with alternate elevations and depressions that form shoulders at their point of meeting, a cam ring mounted for rotation on said elongated hub and having a helical cam face provided with alternate elevations and depressions that form shoulders at their points of meeting to engage the shoulders of the abutment ring whereby to limit the rotary movement of the cam ring, means for rotating the cam ring whereby to move the driving and driven members into frictional engagement, and a retracting ring carried by the cam member and engageable with the abutment ring and the independently rotatable member whereby to release said members from frictional engagement.

[Claim 6 not printed in the Gazette.]

960,600. SUBSOILER ATTACHMENT FOR PLOWS. WILLIAM A. STEPHENS, Little Rock, Ark. Filed Apr. 2, 1909. Serial No. 487,539.



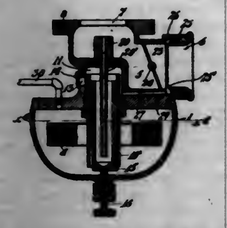
1. A turning plow having a beam and a turning share and also having a sub-soiler comprising a standard pivotally connected to the rear end of the beam and disposed in rear of and extending below the turning share, a brace rod connected to the sub-soiler standard for movement of the latter on said brace rod, means connecting the front end of the brace rod to the beam for adjustment longitudinally of the latter, and a spring on the brace rod in rear of the sub-soiler standard and bearing against the latter.

2. A plow having a beam and a turning share, adjusting plates on the upper and lower sides of the beam slightly in advance of the standard of the turning share, said adjusting plates having notches, and a sub-soiler attachment comprising a standard pivotally connected to the rear end of the beam in rear of the turning share and extending below the turning share, a sub-soiling point at the lower end of the said sub-soiler standard, a link connected to and adjustable on the said plates, a brace rod connected to the said link and also connected to the sub-soiler standard for movement of the latter on said brace rod and angularly with respect to the beam, and a spring between the said sub-soiler standard and the brace rod and allowing said sub-soiler to yield when the same encounters an obstruction.

960,601. CARBURETER. ALFRED C. STEWART, Los Angeles, Cal. Filed Feb. 23, 1909. Serial No. 479,627.

1. A carbureter comprising an oil supply chamber, means for maintaining a definite level of oil in said chamber a well having communication to receive oil from said chamber, an air chamber provided with inlet and outlet means, a throttle valve in said inlet means said outlet means having means for connection to suction applying means, oil communicating means extending into the air

chamber in the path of the suction therethrough and extending downwardly into said well to suck up oil therefrom, and communicating means extending from said well to a point in the air inlet at the outside of the throttle, whereby a condition of suction is produced in said well which is less than the condition of suction at the outlet of the oil communicating means, and means for admitting air to the oil chamber for maintaining in the oil chamber a barometric pressure in excess of that in the well.



2. A carbureter comprising an oil supply chamber, means for maintaining a definite level of oil in said chamber a well communicating with said chamber to receive oil therefrom, an air chamber provided with inlet and outlet means, a throttle valve in said inlet means said outlet means having means for connection to suction applying means, oil communicating means extending into the air chamber in the path of the suction therethrough and extending downwardly into said well to suck up oil therefrom, air communicating means extending from the well to the air inlet at a point where the suction is less than that in the air chamber, to establish in the well a corresponding condition of suction, and means for maintaining in the oil chamber a condition of suction less than that in the well, said means consisting of a connection from the oil chamber to the air communicating means, and means for admitting atmospheric air to the oil chamber.

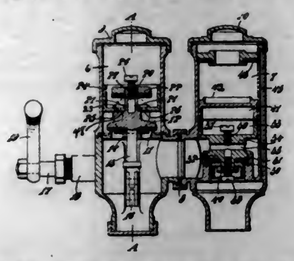
3. A carbureter comprising an oil supply chamber, means for maintaining a definite level of oil in said chamber a well communicating with said chamber to receive oil therefrom, an air chamber provided with inlet and outlet means, a throttle valve in said inlet means said outlet means having means for connection to suction applying means, oil communicating means extending into the air chamber in the path of the suction therethrough and extending downwardly into said well to suck up oil therefrom, and means responsive to the condition of suction through the air chamber for varying the pressure in the oil chamber and simultaneously varying the relation of the pressure in the oil chamber to the pressure of said well, and means establishing communication to the oil chamber from the outer air.

4. A carbureter comprising an oil supply chamber, means for maintaining a definite level of oil in said chamber a well having communication to receive oil from said chamber, an air chamber provided with inlet and outlet means, a throttle valve in said inlet means said outlet means having means for connection to suction applying means, oil communicating means extending into the air chamber in the path of the suction therethrough and extending downwardly into said well to suck up oil therefrom, and means responsive to the condition of suction through the air chamber for varying the pressure in the oil chamber and simultaneously varying the relation of the pressure in the oil chamber to the pressure in said well, and valve controlled means establishing communication to the oil chamber from the outer air.

5. In a carbureter, a casing provided with an inlet chamber having means for attachment thereto of suction applying means, an air inlet to said chamber, a throttle for said air inlet, oil communicating means opening into said chamber, an oil chamber, a member provided with a well into which said oil communicating means extends, means for vertical adjustment of said member, said member formed with a lateral opening communicating with the oil chamber, the size of said opening increasing upwardly, a tube surrounding said well and communicating at its lower end with the oil chamber, means for maintaining a definite level of oil in the oil chamber, and regulatable means for controlling the condition of pressure in the oil chamber.

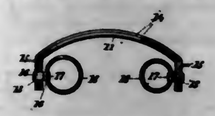
[Claims 6 to 8 not printed in the Gazette.]

960,602. FLUSHER FOR WATER-CLOSETS AND THE LIKE. WILLIAM TURNBULL, Wellington, New Zealand. Filed Aug. 5, 1908. Serial No. 447,179.



In a flusher of the class described a first chamber, a second chamber communicating with the first chamber, a valve and valve seat within the second chamber, a piston above the valve and fitting the second chamber, a neck having a lateral hole and connecting the valve and piston, screws having sawcuts and screwed into holes passing through the piston and valve and communicating with the lateral hole in the neck, a second piston fitting the second chamber and a valve seat at the top of the second chamber, there being a passage for air from the top of the second chamber to the bottom thereof, as set forth.

960,603. BLOTTING DEVICE. HERMAN UEHLINGER, New York, N. Y. Filed Dec. 2, 1907. Serial No. 404,750.



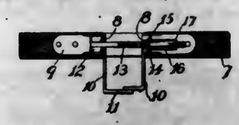
1. A blotting device comprising a flexible support, depending lugs provided at the opposite edges of said support, a covering of absorbent material conformed to said support and lugs thereon, means traversing said lugs and absorbent covering for securing the same together, and rings secured to said securing means for attaching said device to the hand, substantially as specified.

2. A blotting device comprising a support of flexible material, lugs at the opposite edges thereof, a covering of absorbent material disposed upon said support and conformed thereto, fastening devices extending through said lugs, and said absorbent material, and rings secured to the inner ends of said fastening device, one of said rings being adapted for attachment to the little finger of the hand and the other of said rings being of larger diameter and adapted to receive the index finger of the hand, substantially as specified.

960,604. LEAD JOINT-RUNNER. WILLIAM VANDERMAN, Willimantic, Conn. Filed Mar. 16, 1910. Serial No. 549,720.

1. A joint runner including a flexible body part, a shield secured to each end of said body part, a gate including two members each secured to one of said shields, the outer end of each member being bent, said bent ends both lying in a plane substantially parallel with the side of the body part

and lapping one past the other, and means borne by said shield for drawing the ends of the body part toward each other.



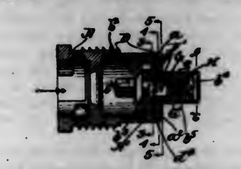
2. A joint runner including a flexible body part, a shield secured to each end of said body part, ears rising from each of said shields, a bolt pivotally mounted on one of said ears and extending through an opening in the opposite ear, means upon the bolt for drawing the ears together, and a gate including two members each integrally formed with one of said shields, the outer end of each member being bent and lying in a straight plane approximately parallel with the bent end of the other part and lapping one past the other.

3. A joint runner including a body part arranged to be bent into circular form and having a shield completely covering the meeting ends, a sectional gate formed one section integral with each of said shields, ears rising from each of said shields, a bolt pivotally secured to the outer end of one of said ears and engaging an opening in the outer end of the other ear, a nut fitted on said bolt and having wings located at the outer end of the nut, said nut having a recess extending from the outer end inward to a point near its inward end.

4. A joint runner including a flexible body part, a shield secured to and covering each end of the body part, each shield having a lip extending backwardly along the edge of the body part, ears rising from said lips in a line substantially parallel with the sides of the body part, a bolt pivoted to the outer end of one of said ears and passing into an opening in the outer end of the opposite ear, the latter having a recess in its face adjacent to said opening, and a nut fitted on said bolt and with its end adapted to rest in said recess whereby accidental disengagement of the bolt from the ear is prevented.

5. A joint runner including a body part arranged to be bent into circular form and having a metallic gate member secured to each end thereof, ears rising from each of said metallic members, a bolt pivotally secured to the outer end of one of said ears and engaging an opening in the outer end of the other ear, and a nut fitted on said bolt and having wings located at the onter end thereof, said nut having a recess extending from the outer end inward to a point near its inner end.

960,605. VALVE. MARION WARREN, Rochester, N. Y. Filed Aug. 5, 1907. Serial No. 387,183.

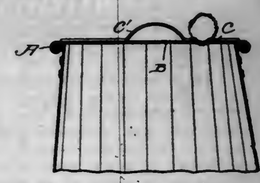


1. A valve comprising a body made with a port therethrough, a stem mounted in said body; a valve plate mounted upon and engaging said stem with provision for partial relative rotation of said stem and valve plate and having a port therethrough; another valve plate mounted upon the stem and secured thereto and means to hold the valve plates in operative position, all organized and operating substantially as described.

2. A valve comprising a body made with a port therethrough; a stem mounted in a cylindrical perforation in said body and having a cylindrical section to fill said perforation and an angular section extending outside the body; a valve plate loosely mounted upon the angular section of the stem and loosely connected to the body by a pin and slot connection; another plate secured to rotate with the stem; and means to hold the valve plates in operative position, all organized and operating substantially as described.

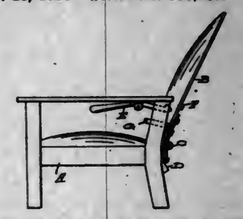
3. A valve comprising a body made with a port therethrough; a stem mounted in a cylindrical perforation in said body and having a cylindrical section to fill said perforation, an angular section extending outside said body and a screw threaded section above the angular section; a valve plate mounted loosely upon the angular section of the stem and loosely connected to the body by a pin and slot connection; another valve plate secured upon the angular portion of the stem to rotate with the stem; a nut upon the screw threaded portion of the stem, a spring surrounding the stem and one end engaging with the nut; a washer above the spring engaging the other end of the spring and means to lock the washer to the stem after it has been rotated to put tension upon the spring all organized and operating substantially as described.

960,606. BARREL-COVER. ALBERT MOORE WEAVER and HOLLIS ELTON TAYLOR, Alligator, Miss. Filed Oct. 9, 1908. Serial No. 457,009.



A barrel cover comprising a continuous flexible ring having a circular piece of cloth stretched over the same and secured thereon by folding the edges of the cloth back upon itself and securing the same by rows of stitching so as to completely inclose said ring in the hem formed annularly around the edge of the cloth and a strip of cloth arranged transversely on said circular piece of cloth having its end portions secured on said piece of cloth by rows of stitching and the central portion left free to form a central upwardly projecting loop handle portion.

960,607. AUTOMATIC RECLINING-CHAIR BACK. FRANK BERNARD WERSEL, Jr., Mount Lookout, Ohio. Filed Apr. 14, 1910. Serial No. 555,469.

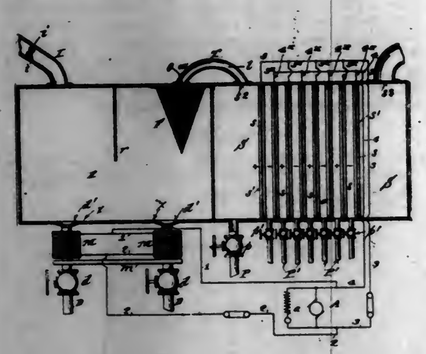


An automatic reclining chair back, hinged to the seat portion, the pressure upon the back determining the inclination of the back, springs attached to the back, the lower end of the springs provided with rollers, the rollers playing against an incline, the position of the roller, on the incline determining the resistance of the back to pressure, all substantially as described.

960,608. PURIFICATION OF LIQUIDS. ALBERT E. WILLIAMS, Jersey City, N. J. Filed Mar. 22, 1909. Serial No. 485,085.

1. In apparatus of the character described, the combination of a receiving chamber, an electromagnet at the bottom of said receiving chamber, means for exciting said

magnet electrically, means for discharging from the bottom of said receiving chamber, a strainer in the upper part of said receiving chamber, means for conducting the liquid passing through said strainer to a supplementary chamber, said supplementary chamber, a series of screens in said supplementary chamber the alternate members of which are respectively connected with electropositive and electronegative terminals of an electric circuit, and means for discharging the liquid and the precipitates separately from said supplementary chamber, substantially in the manner and for the purpose described.

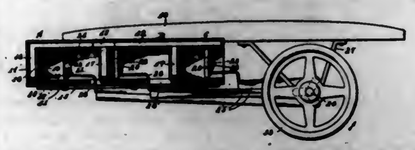


2. In apparatus of the character described, the combination of a receiving chamber, a plurality of electromagnets at the bottom of the receiving chamber, means for exciting said magnets electrically, means for discharging from the bottom of said receiving chamber, a strainer in the upper part of said receiving chamber, means for conducting the liquid passing through said strainer to a supplementary chamber, said supplementary chamber, a series of screens in said supplementary chamber the alternate members of which are respectively connected with electropositive and electronegative terminals of an electric circuit, and means for discharging the liquid and the precipitates separately from said supplementary chamber, substantially in the manner and for the purpose described.

3. In apparatus of the character described, the combination of a receiving chamber, an electromagnet at the bottom of said chamber formed with a hollow pole constituting a discharge pipe, a valve in said discharge pipe, means for exciting said magnet electrically, a strainer in the upper part of said receiving chamber, means for conducting the liquid passing through said strainer to a supplementary chamber, said supplementary chamber, a series of screens in said supplementary chamber, the alternate members of which are respectively connected with electropositive and electronegative terminals of an electric circuit, and means for discharging the liquid and the precipitates separately from said supplementary chamber, substantially in the manner and for the purpose described.

4. In apparatus of the character described, the combination of a receiving chamber, a plurality of electromagnets at the bottom of said chamber formed with hollow poles constituting discharge pipes, valves in said discharge pipes, means for exciting said magnets electrically, a strainer in the upper part of said receiving chamber, means for conducting the liquid passing through said strainer to a supplementary chamber, said supplementary chamber, a series of screens in said supplementary chamber, the alternate members of which are respectively connected with electropositive and electronegative terminals of an electric circuit, and means for discharging the liquid and the precipitates separately from said supplementary chamber, substantially in the manner and for the purpose described.

960,609. VACUUM-PUMP. GEORGE S. WILLIAMS, Norfolk, Va., assignor to American Piano Player Company, Norfolk, Va., a Corporation of Virginia. Filed Mar. 2, 1909. Serial No. 480,885.



1. The combination with a vacuum chamber, of exhausting mechanism therefor, said mechanism comprising a plurality of cylinders arranged in tandem, said cylinders each having a head formed with a conduit in open communication with said chamber, each head having an opening leading to its cylinder, valves carried by said heads for controlling said openings, and valved reciprocating pistons mounted within the cylinders, the reciprocations of the pistons providing intermediate periods of exhanst pressure producing activity within its cylinder, said pistons having relative movements to combinedly provide a constant exhaust-pressure on the chamber of substantially uniform degree.

2. The combination with a vacuum chamber, of exhausting mechanism therefor, said mechanism comprising a plurality of cylinders arranged in tandem, said cylinders each having a head formed with a conduit in open communication with said chamber, each head having an opening leading to its cylinder, valves carried by said heads for controlling said openings, and valved reciprocating pistons mounted within the cylinders, the reciprocations of the pistons providing intermediate periods of exhaust-pressure producing activity within its cylinder, said pistons having movements of uniform length and timed to combinedly provide a constant exhaust-pressure on the chamber of substantially uniform degree.

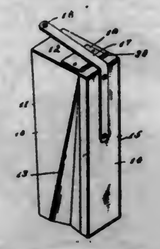
3. In combination, a casing having a conduit, cylinder heads each having a conduit in open communication with the casing conduit, a cylinder for each head and in controlled communication with the conduit in the head, said cylinders being arranged in tandem, and a piston mounted in each cylinder, said pistons providing intermittent periods of exhaust-pressure producing activity in the casing conduit, the combined periods of activity of the pistons providing a constant exhaust pressure on said conduit of substantially uniform degree.

4. An exhaust pump apparatus comprising a casing having a conduit, cylinder heads in said casing and each having a conduit in open communication with the casing conduit, a cylinder for each head, said cylinders being arranged in tandem, said cylinders being free from intercommunication, each cylinder having valve-controlled communication with its head-conduit, and a motor-driven piston for each cylinder, each piston having valve mechanism to provide vacuum pressure within its cylinder, said pistons having movements of equal length and timed to provide substantially non-concurrent intermittent periods of exhaust-pressure producing activity on said casing-conduit.

5. An exhaust pump apparatus comprising a casing having a conduit, cylinder heads in said casing and each having a conduit in open communication with the casing conduit, a cylinder for each head, said cylinders being arranged in tandem, said cylinders being free from intercommunication, each cylinder having valve-controlled communication with its head-conduit, and a motor driven piston for each cylinder, each piston having valve mechanism to provide vacuum pressure within its cylinder, said pistons having movements of equal length and timed to provide substantially non-concurrent intermittent periods of exhaust-pressure producing activity on said casing-conduit, the combined periods of activity providing a constant exhaust-pressure on said conduit of substantially uniform degree.

[Claims 6 to 16 not printed in the Gazette.]

960,610. POWER-PNEUMATIC. GEORGE S. WILLIAMS, Norfolk, Va., assignor to American Piano Player Company, Norfolk, Va., a Corporation of Virginia. Filed Mar. 2, 1909. Serial No. 480,889.



1. A pneumatic comprising two boards hingedly connected at one end, said boards having a fold-forming covering, and an angular fulcrumed actuator supported by the hinged ends of each of said boards.

2. A pneumatic comprising two boards hingedly connected at one end, said boards having a fold-forming covering, and an angular fulcrumed actuator carried by the hinged end of one of said boards and supported by the other board.

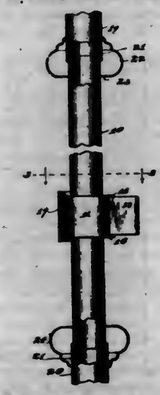
3. A pneumatic comprising two boards hingedly connected at one end, said boards having a fold-forming covering, an angular actuator carried by the hinged end of one of said boards, and a fulcrum carried by the other of said boards.

4. A pneumatic comprising two boards hingedly connected at one end, said boards having a fold-forming covering, an angular actuator carried by the hinged end of one of said boards, and a fulcrum carried by the other of said boards, said fulcrum consisting of a plate having an upturned edge with which said actuator contacts.

5. A pneumatic comprising two boards, one of said boards having its ends of unequal thickness to provide a substantially wedge-shaped board, said boards having a fold-forming covering and being hingedly connected at the thicker end of said wedge-shaped board, and an actuator secured to the hinged end of one of said boards and overhanging and being supported by the other of said boards.

[Claims 6 to 8 not printed in the Gazette.]

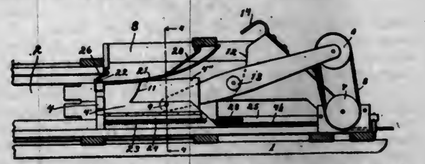
960,611. BED PILLAR OR POST. JOHN C. WILSON, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed Nov. 23, 1908. Serial No. 464,110.



1. In a post for metal furniture, the combination with a pair of outer tubes, an inner tube fitted in said outer tubes and having a block fixed thereto, an angularly disposed rail supporting member fixed to the block and extending partially over the opposed faces of said rail supporting member and hollow mounts on said outer tubes extending over the opposite ends of said block and inclosing said bosses.

2. In a post for metal furniture, the combination of a pair of outer tubes, an inner tube fitted in said outer tubes and having fixed thereto a block adapted to support the end of one or more rails, a covering shell partially encircling said block and having portions of its ends bent over the opposite ends of said block, and hollow mounts on said outer tubes receiving within them the opposite ends of said shell and the ends of said block.

960,612. HAY-PRESS. GEORGE F. WOODARD, Kalamazoo, Mich. Filed May 18, 1908. Serial No. 433,563.



1. In a baling press, the combination of a suitable base; a baling chamber; retainers for the baling chamber consisting of the blocks 15, provided with irregular apertures and notched at 17 in the front thereof, having inwardly-projecting engaging ends and outwardly-projecting hooked ends 17 with a flat spring 16 inserted into said irregular apertures for retaining the same; a bearing block 18 in the notch 17' in the front part thereof; and a removable block 19 back of the block 18, all coacting substantially as described and for the purpose specified.

2. In a hay baling press, the combination with the charging chamber, of a plunger 4 with a body portion 4' and the central guide plates 4'' with inwardly projecting flanges 4''' at the bottom; a guide strip 4⅛ secured to the forwardly extending floor of the baling chamber engaging the flanges 4'''; a lever pivoted at 9 between the said plates and extending upwardly therefrom between the said plates; rollers 13 on the sides of the said lever; cam blocks 12 supported on the baling press frame at each side of the said lever to coact with the said rollers; a tackle and pulley construction consisting of a pulley 6 on the upper end of the said lever and a pulley 7 mounted on the said frame with a rope 8 around the same for actuating the said lever and causing the rollers on the side thereof to coact with the said cam surface, all coacting substantially as described for the purpose specified.

3. A baling press consisting of a suitable baling chamber; a charging chamber; a plunger acting through the said charging chamber to deliver a charge to the baling chamber; means for actuating said plunger consisting of a lever pivoted thereto and extending upwardly therefrom; a removable apron pivotally connected to the top of said plunger and extending forward and resting against the said lever for closing the charging chamber when the plunger is advanced, and a pivoted guard 26 retained in vertical position by a spring when the plunger is withdrawn, all coacting substantially as described and for the purpose specified.

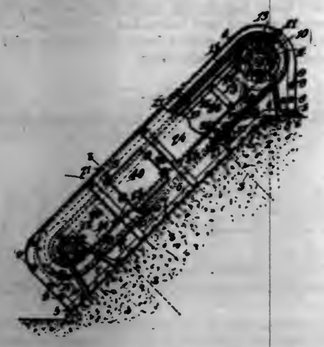
4. In a baling press, the combination of a charging chamber with a plunger suitably guided to pass from the said charging chamber to the baling chamber; a lever pivoted to the plunger; rollers on the sides of said lever; a cam surface for said rollers to travel upon; and a pulley and tackle for actuating the said lever, coacting as specified.

5. In a baling press, the combination of a charging chamber with a plunger suitably guided to pass from said charging chamber to the baling chamber; a lever pivoted to the said plunger; guiding projection on the said lever; a cam surface for receiving the said guiding projection;

means for actuating the said lever whereby the said lever and cam coact to start the plunger rapidly and finish with a powerful, slow movement, coacting as specified.

[Claim 6 not printed in the Gazette.]

960,613. RAKING MECHANISM FOR DAMS OR OTHER WATER-CHANNELS. OTTO WUNDER, Ellicott City, Md. Filed Mar. 22, 1909. Serial No. 485,038.



1. The combination with an abutment having a water channel, of a cage outstanding from and secured to the abutment over the channel thereof, said cage having grating bars extending across the channel and solid side walls for preventing detritus from passing under the bars, and an endless rake mounted in the cage for removing detritus from the grating bars at the exterior of the cage.

2. The combination with an abutment having a water channel, of a cage outstanding from and secured to the abutment over the channel thereof, said cage having grating bars extending across the channel and solid side walls for preventing detritus from passing under the bars, an endless rake mounted in the cage for removing detritus from the grating bars at the exterior of the cage, means for operating the rake, and supports for the rake arranged at the sides of the cage and at points intermediate the sides.

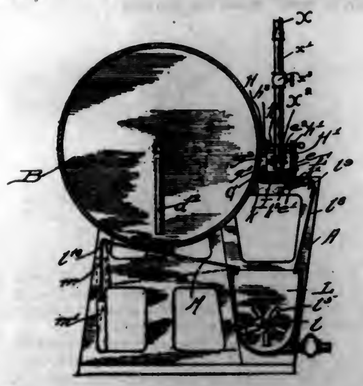
3. The combination with an abutment having a water channel, of a grating or cage secured to the abutment over the entrance end of the channel, an endless rake mounted in the grating for removing detritus from the exterior thereof, supporting and actuating means for the endless rake, endless channels arranged within the grating and supported thereby forming guideways for the rake, and an intermediate guiding and supporting means arranged within the grating at a point between the guideways.

4. The combination with an abutment having a water channel, of a grating or cage secured to the abutment over the entrance end of the channel, an endless rake mounted in the grating for removing detritus from the exterior thereof, supporting and actuating means for the endless rake, endless channels arranged within the grating and supported thereby forming guideways for the rake, transverse trusses in the cage, and guides mounted on the trusses coöperating with the guideways for sustaining the flights of the endless rake.

5. The combination with an abutment having a water channel, of a grating outstanding therefrom and consisting of side walls and parallel grating bars, shafts extending transversely through the grating and out of the side walls thereof, bearings exterior to the grating for the shafts, sprocket wheels on the shafts, endless chains passing around the sprocket wheels, tooth-carrying bars connected with the sprocket chains and movable with their teeth projected between the grating bars, and endless tracks arranged within the grating for supporting the chains between the sprocket wheels.

[Claims 6 to 14 not printed in the Gazette.]

960,614. COOLING APPARATUS. WILLIAM B. ALLBRIGHT, Chicago, Ill. Filed Dec. 12, 1908. Serial No. 467,251.



1. In a device of the class described a rotatable and cylindric drum, a trough, one side of which is formed by the drum, and means yieldingly holding the trough against the drum.

2. In a device of the class described a rotatable and cylindric drum, a trough, one side of which is formed by the drum, means yieldingly holding the trough against the drum, and a downwardly directed scraper on the trough and bearing against the drum.

3. In a device of the class described a hollow rotatable cylindric drum, a horizontally slidable trough, one side of which is formed by the drum, guides secured to, and near the ends of the trough and bearing against the ends of the drum, and means acting to yieldingly press the trough against the drum.

4. In a device of the class described a rotatable cylindric drum, a horizontally slidable trough one side of which is formed by the drum, guides secured to the trough and bearing against the ends of the drum, means yieldingly holding the trough against the drum, and means for rigidly securing the trough in adjusted position.

5. A device of the class described embracing a horizontally rotatable cylinder, a horizontally slidable trough supported in close relation thereto and one side of which is formed by the cylinder, guides secured on the trough and bearing against the ends of the cylinder, packing means in the bottom and ends of the trough to bear against the cylinder, resilient means for adjusting the trough to the cylinder and means for locking the trough in adjusted position.

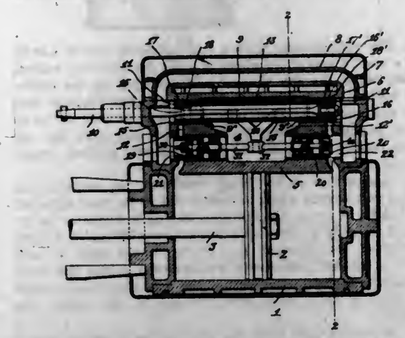
[Claims 6 to 56 not printed in the Gazette.]

960,615. VALVE FOR ENGINES. JAMES B. ALLFREE, Chicago, Ill. Filed Sept. 25, 1907. Serial No. 394,517.

1. A steam engine comprising a cylinder, a steam chest, admission and exhaust ports connecting the steam chest and cylinder, auxiliary exhaust ports, from the cylinder, a main valve in said steam chest controlling the admission and exhaust through the steam ports, a compression regulating valve controlling the auxiliary exhaust ports, and a connection from said main valve to said auxiliary exhaust valve said connection being within the steam chest.

2. A steam engine comprising a cylinder, short admission and exhaust ports leading thereto, a main valve adapted to control said ports, short auxiliary exhaust ports leading from the cylinder, an auxiliary exhaust or compression regulating valve to control said auxiliary ports, and a connection from said main valve to said auxiliary valve said connection being inclosed within the valve casing.

3. A steam engine comprising a cylinder, short admission and exhaust ports leading thereto, a main valve adapted to control said ports, short auxiliary exhaust ports leading from the cylinder, an auxiliary exhaust or compression regulating valve to control said auxiliary ports, and a connection from said main valve to said auxiliary valve, said connection being inclosed within the valve casing and including a lost motion device.

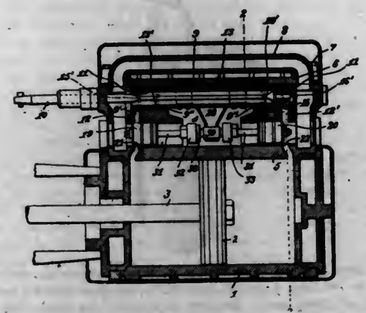


4. A steam engine comprising a cylinder, a steam chest, admission and exhaust ports connecting the steam chest and cylinder, auxiliary exhaust ports connecting the cylinder with the main exhaust, a main valve in said steam chest controlling the admission and exhaust through the steam ports, an auxiliary exhaust compression regulating valve controlling the auxiliary exhaust ports and an adjustable lost motion connection from said main valve to said auxiliary valve, said connection being within the steam chest.

5. A steam engine comprising a cylinder, main admission and exhaust ports leading to the ends thereof, main valves adapted to control said ports, auxiliary exhaust ports leading from the cylinder, auxiliary exhaust or compression regulating valves to control said auxiliary ports and a connection from said main valves and intermediate the same, to said auxiliary exhaust or compression regulating valves and intermediate the same, said connection including a lost motion device.

[Claims 6 to 13 not printed in the Gazette.]

960,616. VALVE FOR ENGINES. JAMES B. ALLFREE, Chicago, Ill. Filed Jan. 9, 1908. Serial No. 409,974.



1. A steam engine comprising a cylinder, a steam chest, admission and exhaust ports connecting the steam chest and cylinder, auxiliary exhaust ports from the cylinder, a main valve in said steam chest controlling the admission and exhaust through the steam ports, a compression regulating valve controlling the auxiliary exhaust ports and an adjustable lost motion connection from said main valve to said auxiliary valve, said connection being within the steam chest.

2. A steam engine comprising a cylinder, short admission and exhaust ports leading thereto, a main valve adapted to control said ports, short auxiliary exhaust ports leading from the cylinder, an auxiliary exhaust or compression regulating valve to control said auxiliary ports, and a dash pot connection from said main valve to said auxiliary valve said connection being within the steam chest.

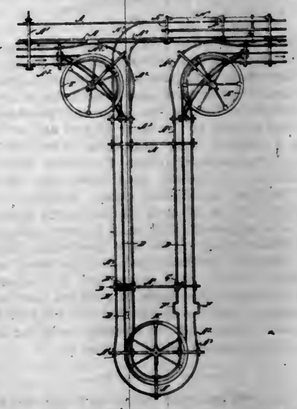
3. A steam engine comprising a cylinder, short admission and exhaust ports leading thereto, a main valve adapted to control said ports, short auxiliary exhaust ports leading from the cylinder, an auxiliary exhaust or compression regulating valve to control said auxiliary ports, and a dash pot connection from said main valve to said auxiliary valve, said connection being inclosed within the valve casing and including a lost motion device.

4. A steam engine comprising a cylinder, a steam chest, admission and exhaust ports connecting the steam chest and cylinder, auxiliary exhaust ports connecting the cylinder with the main exhaust, a main valve in said steam chest controlling the admission and exhaust through the steam ports, an auxiliary exhaust compression regulating valve controlling the auxiliary exhaust ports and an adjustable or variable dash pot and lost motion connection from said main valve to said auxiliary valve, said connection being within the steam chest.

5. A steam engine comprising a cylinder, main admission and exhaust ports leading to the ends thereof, main valves adapted to control said ports, auxiliary exhaust ports leading from the cylinder, auxiliary exhaust or compression regulating valves to control said auxiliary exhaust ports and a connection from said main valves and intermediate the same, to said auxiliary exhaust or compression regulating valves and intermediate the same, said connection including a dash pot and a lost motion device.

[Claims 6 to 14 not printed in the Gazette.]

960,617. CABLE-CARRIER APPARATUS. GEORGE A. AMSDEN, Lowell, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed Aug. 25, 1905, Serial No. 275,820. Renewed Jan. 6, 1910. Serial No. 536,742.



1. In a cable carrier apparatus, a track or way, a carrier adapted to travel upon its side on said track or way, an endless motor cable adapted to propel said carrier along said track or way, and means for engaging and disengaging said carrier with and from said cable.

2. In a cable carrier apparatus, a track or way, a carrier adapted to travel upon its side on said track or way,

an endless motor cable adapted to propel said carrier along said track or way, means for placing said carrier in coöperation with said track or way, automatic means for engaging said carrier with said cable, automatic means for disengaging said carrier from said cable, and means for removing said carrier from said track or way.

3. In a cable carrier apparatus, a track or way, a carrier adapted to travel upon its side on said track or way, an endless motor cable adapted to propel said carrier along said track or way, a drop loop or depression in said track or way forming a drop or way station, means in said drop station for placing said carrier in coöperation with said track or way, and automatic means for engaging said carrier with said cable.

4. In a cable carrier apparatus, a main track or way, a carrier adapted to travel upon its side on said track or way, an endless motor cable adapted to propel said carrier along said track or way, means for placing said carrier in coöperation with said track or way, automatic means for engaging said carrier with said cable, an independent drop receiving track or way, means for diverting said carrier from said main track or way into coöperation with said drop receiving track, and automatic means for disengaging said carrier from said cable.

5. In a cable carrier apparatus, a main track or way, a carrier adapted to travel upon its side on said track or way, an endless motor cable adapted to propel said carrier along said track or way, means for placing said carrier in coöperation with said track or way, automatic means for engaging said carrier with said cable, an independent drop receiving track or way, means for diverting said carrier from said main track or way into coöperation with said drop receiving track, automatic means for disengaging said carrier from said cable, means for checking the drop of said carrier on said drop receiving track.

[Claims 6 to 18 not printed in the Gazette.]

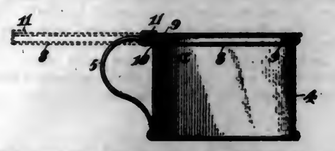
960,618. ELECTRIC-LAMP SUPPORT. SOLON W. BAILHACHE, Vallejo, Cal. Filed June 2, 1909. Serial No. 499,791.



The combination of a clamp composed of members of non-conducting material pivotally connected by a spring intermediate their ends and having finger pieces at one end and jaws at the other, an electric lamp, a lamp socket having a shell to receive the lamp and arranged on the intermediate portion of the outer face of one of the clamp members, a contact strip projecting laterally from the shell and longitudinally along the outer face of said clamp member, a binding post extending transversely through the last mentioned clamp member, a pivoted switch plate on one of said binding posts movable into and out of engagement with said contact strip, a screw arranged transversely in the last mentioned clamp member and forming the inner pole of the lamp socket, a contact plate uniting said screw and the other binding post and secured to the inner face of the last mentioned clamp member, and a reflector for the lamp and having its inner end bifurcated to straddle said contact strip and the clamp member which carries it.

960,619. DRINKING-CUP. MAUD M. BILLINGSLY, Beaver Falls, Pa. Filed Apr. 7, 1910. Serial No. 553,997.

1. In a device of the class described, the combination with a cup having a handle, of a sliding cover for the same, and means for connecting the cover and the cup so as to permit the cover to be slid off the top of the cup and supported at one side thereof by simply tilting the cup, said means being connected to the cup adjacent the handle so that the cover slides across the top of the handle.



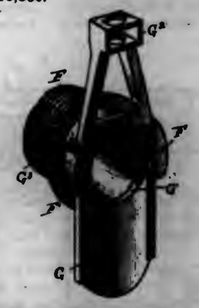
2. The combination with a cup provided with a handle and a slot in one of its walls, a cover for said cup resting loosely upon the top thereof and provided on its underside with a guide, which is adapted to slide through said slot and guide and limit the movement of said cover so as to permit the cover to be slid off and onto the top of the cup by merely tilting the latter and without touching the cover itself.

3. In a device of the class described, the combination with a cup having a handle and a slot in its wall adjacent the handle, a cover for said cup having a diameter in excess of the cup, a guide on said cover consisting of a strip secured at its forward end to the under side of said cover, extending rearwardly diametrically across the cover through said slot in the wall of the cup, then bent around the edge of said cover and fastened to the upper side thereof.

4. In combination with the cup having a handle and a slot in the wall of the cup adjacent the handle, a cover for the top of the cup, a guide strip arranged parallel with the cover and extending diametrically across the same, the ends of the strip being secured to the cover and forming stops to limit the movement of the cover and also serving to retain the cover in place in either its open or closed positions, said strip passing through and working in the slot provided in the wall of the cup.

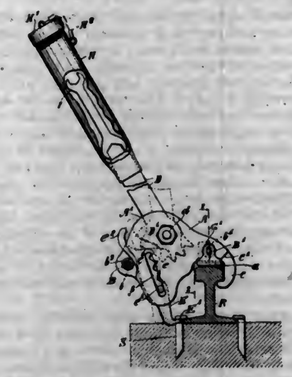
5. The combination with a cup having a handle and a turned upper edge with a slot in the wall of the cup immediately below said edge, a cover consisting of a plain disk having a diameter greater than the cup and adapted to fit loosely upon the upper edge thereof, and a guide strip fastened to the underside of the cover and having its ends forming stops and passing through the slot provided in the wall of the cup, whereby the cover may be slid off and onto the top of the cup by merely tilting the latter.

960,620. DISCHARGE-NOZZLE AND INDEPENDENT CUT-OFF VALVE FOR FIRE-HYDRANTS. AUGUST LEONARD BIXEL, Cleveland, Ohio. Filed Sept. 20, 1907. Serial No. 393,860.



A fire hydrant comprising a casing provided with a boss in its side, a nozzle secured in the boss having oppositely disposed guide grooves formed on its inner end, a valve having guide edges mounted in said guide grooves and being provided with an opening adapted to aline with the opening in the nozzle, the valve having also upwardly extending arms which are thicker than the width of the grooves, and means for connecting said arms and the valve stem.

960,621. SPIKE-PULLER. PER JOHAN BJÖRK, New York, N. Y. Filed Feb. 17, 1910. Serial No. 544,381.



In a spike puller, the combination with a head provided with means for engaging a rail, and a lever fulcrumed to the head and provided with a cam projection, of a claw member guided in the head and provided with a claw, said lever and claw member being provided with means for effecting their engagement;—with an adjustable wedge so arranged as to increase or diminish the distance between the body of the tool and the rail, and a hook C so arranged that the raising or lowering of the body of the tool by means of the wedge, will cause said hook to adjust itself to grip firmly on rails of varying sizes.

960,622. PIN-TRAY. CHARLES FRANCISCO BROWN, St. Louis, Mo. Filed Nov. 30, 1909. Serial No. 530,691.



1. In combination with a receptacle for holding a paper of pins comprising a rear and end walls, of a combined cover and tray having a rear wall and pivoted to the end walls of the receptacle, the rear wall of the cover co-acting with the rear wall of the receptacle to clamp a row of pins in an exposed relation.

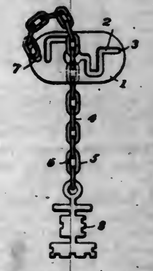
2. In combination with a receptacle for holding a paper of pins, including front, rear and end walls, of a cover having a rear wall and pivoted to the end walls of the receptacle, the said rear wall of the cover co-acting with the rear wall of the receptacle to clamp a row of pins in an exposed relation, the cover also co-acting with the front wall of the receptacle to retain the said cover in the said position.

3. In combination with a receptacle for holding a paper of pins, including front, rear and end walls, ears integral with and upstanding from the end walls and arranged near the rear edge thereof, of a cover having ears and a rear wall, the ears being integral with and upstanding from the cover and arranged at the ends thereof and adjacent to the said rear wall, the said ears of the cover being pivoted to the ears of the receptacle, the rear wall of the cover co-acting with the rear wall of the receptacle to clamp a row of pins in an exposed relation.

4. In combination with a receptacle for holding a paper of pins, including front, rear and end walls, of a cover having ears and a rear wall, the ears being pivoted to the end walls of the receptacle, and the said rear wall of the cover co-acting with the rear wall of the receptacle to clamp a row of pins in exposed relation, the front wall having a cut-out portion, and the cover having an integral and upwardly curved lip extending partway along the front edge thereof and projecting beyond the said front wall, the cover at either side of the lip co-acting with the said front wall to retain the cover in the clamped position.

5. In combination with a receptacle for holding a paper of pins, including front, rear and end walls, ears integral with and upstanding from the end walls and arranged near the rear edge thereof, the upper edges of said end walls being downwardly inclined from the ears to the front walls, and respectively provided with alined cut-out pencil-receiving portions, the front wall having a recess extending partway along the same, and the cover having an integral and upwardly curved lip projecting beyond the said front wall, the cover at either side of the lip co-acting with the said front wall to retain the cover in the clamped position.

960,623. PUZZLE. WILLIAM T. CLERK, Washington, D. C. Filed Mar. 31, 1910. Serial No. 552,604.



1. A puzzle comprising a flat member having an irregular opening therein, a flat irregular body unable to pass through the said irregular opening, a flexible member adapted to pass through the irregular opening and having a link open a distance greater than the thickness of the flat member and less than the thickness of the flexible member, said flexible member having one end connected with the irregular body and its other unable to pass through the irregular opening.

2. A puzzle comprising a flat member having an irregular opening therein, a flat irregular body unable to pass through the said irregular opening, a flexible member adapted to pass through the irregular opening and having a link open a distance a little greater than the thickness of the flat member, and less than the thickness of the flexible member, said flexible member having one end connected with the flat member, and its other end connected with the irregular body.

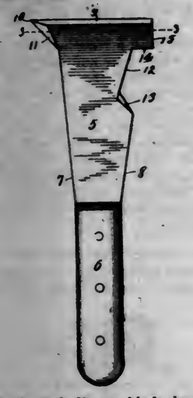
3. A puzzle comprising a member having an opening therein, a body unable to pass through the said opening, a second member adapted to freely pass through the opening and provided with a link open a distance greater than the least thickness of the member having an opening therein, said second member having one of its ends connected with the said body and the other end so constructed and arranged as to be unable to pass through the opening.

4. A puzzle comprising a member having an irregular opening therein, an irregular body unable to pass through the said irregular opening, a flexible member adapted to pass through the irregular opening and having a link open a distance greater than the least thickness of the member having the opening, and less than the thickness of the flexible member, said flexible member having one end connected with the irregular body and its other end unable to be passed through the irregular opening.

960,624. PUTTY-KNIFE. ANDREW J. COMPTON, Trenton, N. J. Filed Aug. 18, 1909. Serial No. 513,487.

1. A putty knife including a blade provided adjacent to its outer edge with a V-shaped lateral extension and

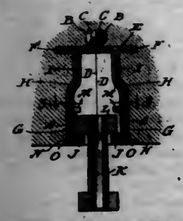
provided at its opposite edge with a recess, the lower edge of which is approximately parallel to the lower edge of the V-shaped extension.



2. A putty knife including a blade having a V-shaped lateral extension adjacent to its outer edge and provided at its opposite side edge with a trapezoidal recess; the portion of the side edge between said recess and the outer edge of the blade being disposed at right angles to the latter.

3. A putty knife including a blade having divergent side edges, an outer edge disposed at right angles to the blade, and a V-shaped lateral extension adjacent to the outer edge; the opposite side edge of the blade being provided with a trapezoidal recess, and the portion of the side edge between said recess and the outer edge of the blade being disposed at right angles to the latter.

960,625. ANCHOR-SOCKET. IRVING COWLES, Chicago, Ill. Filed June 7, 1909. Serial No. 500,727.



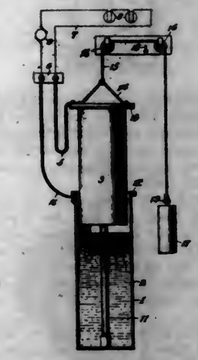
1. An anchor socket of the kind specified, comprising two equal opposed members each provided on one edge with a slot, a hook on said edge of each member opposing and entering the slot of the other whereby said members are engaged and interlocked with each other, said opposed members when assembled constituting a hollow body, parallel flanges on opposed walls of said members between which a slot is formed when said members are assembled, said flanges constituting supports for a nut, the slotted wall of said socket being exposed when the same is embedded.

2. An anchor socket for concrete walls comprising two equal opposed members each provided on one edge with a male and a female interlocking device respectively, each of said respective devices opposing and engaging the other of the opposed member, said members when assembled constituting a hollow body adapted to be embedded in the concrete, one wall thereof being exposed and provided with a longitudinal slot, shoulders bordering said slot and adapted to support a nut, and ribs parallel with said shoulders limiting the movement of said nut inwardly of said member, said ribs being of less length than said member and spaced from said shoulders a distance substantially equal to the thickness of the supported nut.

3. An anchor socket for concrete walls comprising two equal opposed members each provided on one edge with a male and a female interlocking device respectively, each of said respective devices opposing and engaging the other of the opposed member, said members when assembled constituting a hollow body adapted to be embedded in the concrete, one wall thereof being exposed and provided with a longitudinal slot, shoulders bordering said slot and adapted to support a nut, the depth of said hollow body being sufficient to accommodate one end portion of a threaded member engaging said nut, the upper end portion of said body being contracted parallel with the side walls of the slot and opposing the latter, and ribs disposed on opposite sides and ends of the opposing side walls of said body parallel with said shoulders supporting said nut, and adapted to overlap the latter on opposite sides, thereby limiting the movement of said nut inwardly of said member.

4. An anchor socket of the kind specified, comprising a hollow member adapted to be embedded in a concrete wall and provided in its exposed face with a longitudinal slot extending the entire length thereof, shoulders bordering said slot and adapted to support a nut, there being two chambers in said member of different widths, the lower end of said chambers being of greater width and being of greater depth than the diameter of the nut received therein, said upper chamber adapted to receive the free end of the shank of a bolt and allowing free movement of the same therein, and ribs on opposite sides and ends of the side walls of the lower chamber adapted to overlap the nut on opposite sides when the same is disposed substantially midway between the ends of said socket and limiting the upward movement of the nut therein.

960,626. ELECTRIC SWITCH FOR INCANDESCENT-LAMP CIRCUITS. WILLIAM BLACKNELL CROSSLAND, De Soto, Mo. Filed Aug. 9, 1909. Serial No. 511,994.



1. In a switch of the class described, a combined current resistance and device for retarding the opening and closing movement of the switch, such resistance and device consisting of a hollow structure having a restricted opening through which liquid passes into or out of the structure during the closing or opening of the switch.

2. In a switch of the class described, the combination of a circuit, with a resistance-varying device connected therewith, said device including a receptacle adapted to hold liquid, and an element movable into and out of the liquid for gradually decreasing or increasing the resistance of the circuit, said element comprising a buoyant structure adapted to take up the liquid for gradually decreasing the buoyancy and cause submerging of the structure.

3. In a variable resistance switch, the combination of a vessel adapted to hold a current-conducting liquid, a combined movable switch element and retarding device comprising a hollow structure open at its top and having a restricted opening in its bottom to permit liquid to pass into and out of the structure as the same moves into and out of the vessel, and a device for gradually lifting the structure out of the vessel while the liquid passes out of the structure into the vessel through the said opening.

4. In a variable resistance switch, the combination of a liquid-containing vessel, a conductor movable into and out of the liquid for varying the current flow through the circuit to which the switch is connected, said conductor constructed to automatically retard the submerging movement, and a weight which is inactive during the submerging movement of the conductor and is operatively connected with the latter to withdraw it from the liquid automatically to open the switch.

5. A variable resistance switch comprising a liquid-containing vessel, a chambered structure movable into and out of the liquid and having an opening to permit liquid to pass into and out of the chamber, contacts arranged to engage each other when the structure is submerged to its fullest extent to short-circuit the liquid in the vessel, and a weight adapted to exert a pull sufficiently greater than the combined weight of the structure and liquid therein as to gradually remove the structure from the liquid.

[Claims 6 to 14 not printed in the Gazette.]

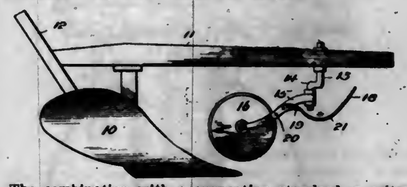
960,627. COMBINED MOP HEAD AND WRINGER. WILLIAM J. CURRY, Victoria, British Columbia, Canada. Filed May 18, 1909. Serial No. 496,778.



1. A mop holding and wringing device comprising an endwise slotted tubular handle member a plug closing one end in which plug is a central bearing, a fixed loop member removably secured to one end of the handle to which loop one end of the mop fabric is secured a movable loop member to which the other end of the mop fabric is secured said loop member having a shank axially passing through the plug in the end of the tubular handle and terminating within the tube in a spiral or coil and means for slidably engaging the coil to rotate the attached loop and a plug inserted in the other end of said handle and having a shallow bearing for the end of said spiral.

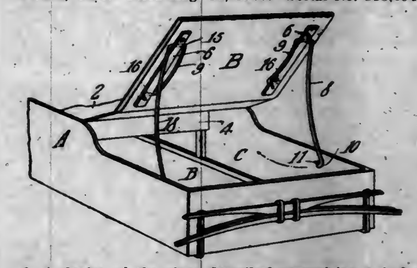
2. A mop holding and wringing device, comprising a tubular handle lengthwise slotted and provided with end plugs, a fixed mop holding member removably secured by a sleeve to the tubular handle, a mop holding member rotatably mounted in one of the end plugs of the tubular handle and terminating within the tube in a spiral or coil, a nut plate slidable in the slot of the tubular handle and through which plate the coil is threaded and an operating handle hinged to the plate in a manner to fold against the tubular handle.

960,628. PLOW-COLTER. JAMES R. DAVIS, Bartow, Fla. Filed Mar. 29, 1910. Serial No. 552,186.



The combination with a supporting standard, a colter frame mounted thereon, a colter carried by said frame, and a colter shoe comprising a curved plate extended downward beneath said standard and upward at the front thereof and having bifurcated arms twisted at an angle to said portion and secured to said frame.

960,629. BUGGY-BOOT. JOSEPH E. CARROLL, Portsmouth, Ohio. Filed Aug. 16, 1909. Serial No. 513,094.



1. A device of the class described comprising a body; a boot hinged to the body; and a resilient member rigidly secured to the boot; there being a projection upon the body frictionally engageable by the resilient member to hold the boot in an open and in a closed position.

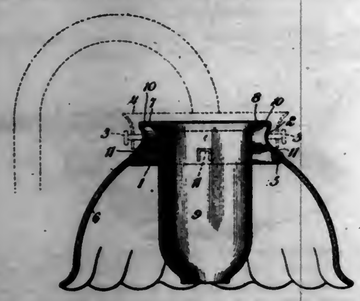
2. A device of the class described comprising a body; a boot hinged to the body; and a resilient member assembled at one end with the boot; there being a projection upon the body frictionally engageable by the resilient member to hold the boot in an open and in a closed position; the free end of the resilient member being revoluble about the projection as a center.

3. A device of the class described comprising a body; a boot hinged to the body; and a resilient member rigidly secured to the boot; there being a projection upon the body frictionally engageable by the resilient member to hold the boot in an open and in a closed position, the free end of the resilient member being arranged to interlock with the projection.

4. A device of the class described comprising a body; a boot hinged to the body; a resilient member comprising diverging arms provided with terminal projections; a cleat arranged to be inserted between the arms to engage one of said projections to hold the resilient member rigidly secured to the boot; a pin projecting from the body, frictionally engageable by one of said arms, and arranged to interlock with the other projection when the boot is in open position.

5. A boot-controlling device fashioned from a single piece of resilient metal bent to form diverging arms, and a straight portion connecting the arms; one of said arms terminating in a rectangular disposed finger parallel to the straight portion; and the other arm terminating in a hook disposed at right angles to the plane of the straight portion and the finger.

960,630. SHADE-HOLDER FOR INVERTED GAS-BURNERS. STEPHEN F. ELKINS, Pittsburg, Pa., assignor to The Manufacturers' Sales Co., Pittsburg, Pa. Filed Nov. 16, 1909. Serial No. 528,383.



1. A shade holder consisting of a supporting ring provided with inner and outer seats spaced apart and arranged to receive the outer shade and an inner chimney or cylinder and spacing the same from each other, said ring being provided in its exterior above the outer seat with an annular groove to receive the clamping means of a burner, and having vent apertures located at the top of the space between the shade and chimney and communicating directly with the exterior for permitting air to pass through the space between the outer shade and the inner chimney or cylinder.

2. A shade holder consisting of a ring provided with exterior means for supporting an outer shade and having an annular groove above the said means to receive the clamping devices of a burner, and having an inwardly extending flange forming a seat and arranged to hold a cylinder or chimney in spaced relation with the outer shade, said flange being also provided with apertures to permit the passage of air through the space between the outer shade and the inner chimney or cylinder.

3. A shade holder consisting of a ring provided with exterior means for supporting an outer shade and having an inwardly extending flange forming a seat and arranged to hold a chimney or cylinder in spaced relation with the outer shade, said flange being also provided with apertures to permit the passage of air through the space between the outer shade and the inner chimney or cylinder.

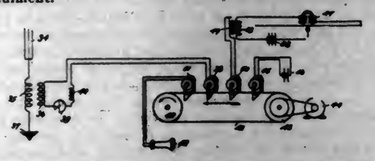
4. A shade holder consisting of a ring provided with exterior means for supporting an outer shade and having an inwardly extending annular flange composed of an outer horizontal portion and an inner inclined portion forming a seat for a chimney or cylinder, the horizontal portion of the flange being provided with apertures to permit the air to pass freely between the outer shade and the inner chimney or cylinder.

5. A shade holder consisting of a supporting ring constructed of a single piece of metal and provided at the lower edge with an outwardly extending shade supporting flange and having an inwardly extending annular flange at the top, the inwardly extending flange being provided with an inner downwardly inclined portion to form a seat for a chimney or cylinder, the top flange being also provided with apertures to permit the passage of air through the ring.

[Claim 6 not printed in the Gazette.]

960,631. WIRELESS SIGNALING. REGINALD A. FESSENDEN, Brant Rock, Mass. Filed Oct. 10, 1907. Serial No. 396,817.

1. In apparatus for transmission of electric energy, the combination with a generator of practically continuous impulses at the sending station and a device to modify them, of a receiving station comprising a generator of continuous impulses and devices by which the combined effects of the locally generated and the received impulses normally annul each other's effects, whereby when the sent impulses are modified in character, an indicating effect is produced by interrupting said normal mutual annulment.



2. Apparatus for wireless telegraphy comprising a generator of continuous electric impulses at the sending station and a device for modifying them, a generator of continuous impulses at the receiving station, and devices operated by the combined effects of the locality generated and the received impulses to produce a musical note only when the impulses are modified in character, substantially as described.

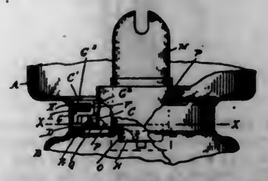
3. Apparatus for wireless signaling, comprising a generator of practically continuous impulses of inaudible frequency at the sending station and a device to alter their normal character, a generator of practically continuous impulses at the receiving station, and devices operated thereby to effect a normal suppression of effect, but permitting an indication by the received waves when the same are altered in character, substantially as described.

4. In apparatus for wireless telegraphy, including a sending station having a generator of sustained oscillations operatively connected to the sending antenna, and a key for controlling the emission of the electromagnetic waves so produced, a receiver operatively connected to a receiving antenna, and devices to produce a musical note corresponding to the signals sent from the sending station, but the pitch of the musical note being determined by the apparatus at the receiving station and being independent of the apparatus at the sending station.

5. Apparatus for wireless signaling comprising means for practically continuous generation of electromagnetic waves, means at the receiving station for producing a continuous flow of impulses and means for normally annulling their effect by impulses received, except when the normal character of the sent impulses is altered, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

960,632. LAMP. WARREN FRENCH, Detroit, Mich., assignor, by mesne assignments, to C. M. Hall Lamp Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 21, 1909. Serial No. 473,476.



1. In a lamp, the combination with a lantern section, and a font section telescopically engaging each other, of a plurality of radially-projecting lugs on the one section, a laterally-projecting flange on the other section having entrance apertures for engagement with said lugs, cams upon said flange with which said lugs may be engaged by a rotative adjustment, a burner having a plain socket engagement with said font, and a bearing on said lantern section for engagement with said burner and yieldingly pressing the same to its seat.

2. In a lamp, a lantern section having a depending flange and a plurality of lugs projecting laterally therefrom, a font having an annular horizontal flange secured to and arranged thereabove, said flange being adapted to receive said depending flange and being apertured for the passage of said laterally-projecting lugs therethrough, and cams on the under side of said horizontal flange with which said lugs may be engaged by a rotary adjustment.

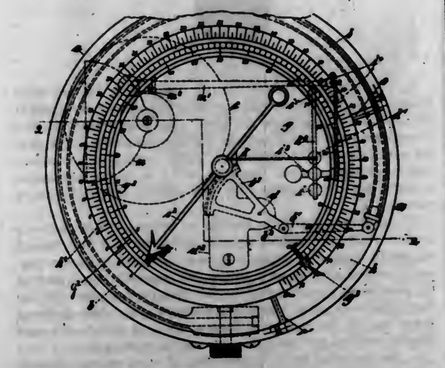
3. In a lamp, the combination with a lantern section and a font section having a telescopic engagement with each other, a laterally-extending flange upon one of said sections, a cam secured to the underside of the flange adapted to be engaged by the other of said sections upon a rotary movement for securing the lantern to the font and separate means for locking said sections in their secured position.

4. In a lamp, the combination with a font provided with an annular vertically-extending flange terminating in a laterally-projecting slotted portion, a burner having an imperforate portion adapted to seat upon said lateral projection and provided with a downwardly-projecting annular flange, and lugs on said last-mentioned flange adapted to register with said slots and having a locking engagement with the under side of said laterally-projecting flange.

5. In a lamp, the combination with a font provided with an annular vertically-extending flange terminating in an inwardly-projecting slotted portion, a burner having an imperforated portion adapted to seat upon said lateral projection and provided with a downwardly-projecting flange and lugs projecting outwardly from said last-mentioned flange positioned substantially midway of the top and bottom edges of the latter and adapted to register with said slots and having a locking engagement with the under side of said laterally-projecting flange.

[Claims 6 to 9 not printed in the Gazette.]

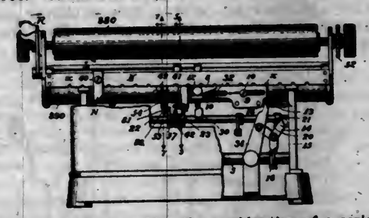
960,633. BAROVACUUMMETER. GUSTAV FREICHS, Hanover, Germany. Filed Nov. 3, 1908. Serial No. 460,963.



1. The combination with a vacuummeter, of a barometer, means adapted to cause the barometer to compensate the influence of changes of the atmospheric pressure upon the indication of the vacuummeter, and a plurality of interchangeable vacuummeter-scales each corresponding to a distinct atmospheric pressure, and being each adapted to be attached to said vacuummeter, for the purpose described.

2. The combination with a vacuummeter having a scale corresponding to a distinct atmospheric pressure, of a barometer, means adapted to cause the barometer to compensate the influence of changes of the atmospheric pressure upon the indication of the vacuummeter, and a plurality of auxiliary interchangeable vacuummeter-scales having their scales correspond to other distinct atmospheric pressures and being each adapted to be attached to said vacuummeter so as to be able to coöperate with the hand of the same, for the purpose as described.

960,634. PERPENDICULAR AND HORIZONTAL ADDING MACHINE. CLYDE E. W. GARDNER, Orange, N. J., assignor to Pike Adding Machine Company, Orange, N. J., a Corporation of New Jersey. Filed May 16, 1908. Serial No. 433,295.



1. In an adding machine the combination of a series of type carriers arranged to print items consisting of a plurality of figures, a platen, means for automatically carrying the platen longitudinally one step after printing each item, and means whereby the platen is rotated one step as an incident to the carriage reaching a defined position in its longitudinal travel.

2. In an adding machine the combination with movable type carriers arranged to print items consisting of a plurality of figures, and with a sliding carriage and rotating platen carried thereby, of means for feeding the carriage longitudinally one step after printing each item, and means whereby the platen is rotated one step as an incident to the carriage reaching a defined position in its longitudinal travel.

3. The combination in an adding machine of a carriage supported to slide transversely, a notched bar connected with the carriage, a reciprocating slide, a dog pivoted thereto to engage the notches of the bar, and means for reciprocating the slide and devices whereby the slide may be locked in an inoperative position.

4. The combination with the frame, sliding carriage and platen of an adding machine, means for imparting a step-by-step longitudinal motion to the carriage, means for imparting a step-by-step rotation to the platen, and a stop connected adjustably with the carriage and operative to cause the platen rotating means to act after the termination of each complete longitudinal movement of the carriage.

5. The combination with the recording devices of an adding machine, including a handle and a sliding platen, of a carriage for said platen, of an operating shaft, a detent holding the carriage, means for shifting the detent on the return movement of the handle, and means for moving the carriage on shifting the detent.

[Claim 6 not printed in the Gazette.]

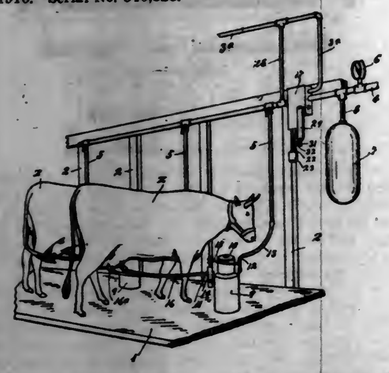
960,635. BORING OR DRILLING BIT. WILLIAM GEDDES, Annan, Ontario, Canada, assignor of one-fourth to H. B. Wilson and one-fourth to John S. Dundon, San Francisco, Cal. Filed Oct. 1, 1909. Serial No. 520,518.



A bore or drill bit having a spiral cut away at its upper edges, the cut away portions forming cutters facing

reversely to the direction of rotation of the bit in forming a bore, to clear the bore upon the rotation of the bit in the opposite direction.

960,636. PULSATING DEVICE FOR MILKING APPARATUS. EZRA E. GOOD, Waterloo, Iowa. Filed Jan. 27, 1910. Serial No. 540,328.



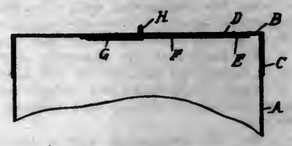
1. In a milking apparatus, a pulsator comprising a casing connected between the service and pump pipes of said apparatus, an air vent leading to said service pipe, a valve normally closing said air vent and opening communication between said service and pump pipes, and which valve is normally subject to the drawing force or partial vacuum in said system, and a controller subject to varying pressure from within said service pipe and provided with connections for moving said valve and for holding the same in its normal position, substantially as described.

2. In a milking apparatus, a pulsator comprising a casing connected between the service and pump pipes of said apparatus, an air vent in said casing leading to said service pipe, a valve normally closing said air vent and opening communication between said service and pump pipes, the said valve at its lower end being subject to suction or partial vacuum in said pump pipe, a toggle-acting connection normally holding said valve in its raised or normal position, and a controller subject to varying pressure from within said service pipe and operative on said toggle connection to effect movements of said valve, substantially as described.

3. A pulsating device, comprising a casing having a piston seat and a plunger valve seat, an air conduit connecting said pump and service pipes through said casing and leading to the upper end of said piston seat and the lower end of said plunger valve seat, an air vent leading into said air conduit through said plunger valve seat, a plunger valve working in said plunger valve seat, normally closing said air vent but connecting said pump and service pipes, which valve is movable into position to open said air vent and cut off communication between said pump and service pipes, and a controller with connections for effecting movements of said valve, subject to varying pressure from within said service pipe, substantially as described.

4. In a milking apparatus, the combination with a pump pipe and a plurality of service pipes, of a pulsating device comprising a casing connected between said pump pipe and service pipes, an air vent in said casing leading to said two service pipes, a valve normally closing said air vent and connecting said pump pipe to said service pipes, which valve is movable in position to open said air vent to both service pipes and to cut off communication between said pump and service pipes, and a controller with connections for effecting movements of said valve; itself subject to varying pressure from within said service pipes, substantially as described.

960,637. CAN-TOP. JERVIS R. HARBECK, Detroit, Mich., assignor, by mesne assignments, to Detroit Can Company, Detroit, Mich., a Corporation of New Jersey. Filed June 18, 1909. Serial No. 502,911.



The combination with a sheet metal can top provided with a discharge opening at one end and an elongated guide opening near the other end having parallel side edges, of guide flanges projecting downwardly and inwardly from the sides of the guide opening, a slide having a head portion underlying the cover and adapted to open and close the discharge opening therein, and a portion supported upon the flanges at the guide opening with the edges of said portion in close proximity to the downwardly extending portions of said flanges, and a transverse fold in the portion of the slide lying within the guide opening, said fold extending entirely across the slide and projecting above the top through the guide opening to form an operating shoulder.

960,638. INVERTED INCANDESCENT MANTLE. CHARLES KNOX HARDING, Chicago, Ill. Filed Jan. 21, 1910. Serial No. 539,383.



1. An inverted fabric mantle consisting of an open topped body portion of tubular fabric having two segment shaped projections from its lower end, said mantle having a semispherical closed bottom portion consisting of a double segment shaped section of fabric united to the aforesaid segment shaped projections by a seam extending around the circumference of the double segment shaped section.

2. An inverted mantle having its upper cylindrical body portion constructed of a tubular fabric having two curved segments depending from its lower end and a double segment shaped section of a single thickness of fabric having its circumference attached to the two curved edges of the depending segments whereby a semispherical shaped closed lower end of the mantle is formed by said double segment shaped section and said two depending segments.

3. An inverted mantle consisting of an open topped body portion of tubular knitted fabric and having two segment shaped projections from its lower end, said lower end being closed by a double segment shaped section of a single thickness of mantle fabric having its circumference attached to the lower end of said body portion by a seam whereby said seam does not interfere with the lower central portion of the semispherical closed end.

960,639. TRUSSED STRUCTURE. PHILIP B. HARRISON, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed July 12, 1909. Serial No. 507,160.

1. In a trussed structure, a compression member, a tension member, there being shoulders formed on said members adjacent their ends, and thrust blocks arranged at the ends of said members, which thrust blocks are provided with shoulders which engage the shoulders on said members.

2. In a trussed structure, a compression member, a tension member, there being shoulders formed on said members adjacent their ends, thrust blocks arranged at the ends of said members, which thrust blocks are provided with shoulders which engage the shoulders on said members, and fastening devices passing through the ends of said members and through the thrust blocks.



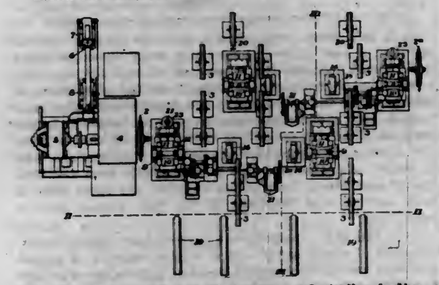
3. The herein-described trussed structure, having a compression member and tension member formed of commercially rolled flanged shapes, and thrust blocks fixed to the ends of said members.

4. The herein-described trussed structure, having a compression member and tension member formed of commercially rolled metal shapes, thrust blocks fixed to the ends of said members, and there being abutting shoulders formed on said thrust blocks and on said compression and tension members near their ends.

5. The herein-described trussed structure, having a compression member and a tension member formed of commercially rolled flanged shapes, thrust blocks fixed to the ends of the members, and lugs integral with and projecting outwardly from the sides of said thrust blocks.

[Claims 6 to 17 not printed in the Gazette.]

960,640. APPARATUS FOR SAWING PIPES AND SIMILAR ANNULAR BODIES. DAVID HEGOIS, Lorain, Ohio, assignor to National Tube Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Aug. 4, 1909. Serial No. 511,192.



1. In apparatus for cutting pipes and similar bodies, a pipe support having a supporting roller, oppositely facing friction rollers adapted to secure the pipes on said supporting roller, means for causing the approach of said friction rollers in securing a pipe on said supporting roller and mechanism arranged to rotate at least one of said friction rollers and thereby rotate pipes held between the rollers; substantially as described.

2. In apparatus for cutting pipes and similar bodies, a pipe support having a supporting roller, oppositely facing friction rollers adapted to secure the pipes on said supporting roller, means for causing the approach of said friction rollers in securing a pipe on said supporting roller and mechanism arranged to rotate at least one of said friction rollers and thereby rotate pipes held between the rollers, said friction roller being vertically adjustable; substantially as described.

3. In apparatus for cutting pipes and similar cylindrical articles, pipe supports having supporting rollers, oppositely facing friction rollers arranged to contact with and secure the pipes on said supporting rollers, means for positively driving at least one of said friction rollers to rotate the pipes on the supporting rollers, and means arranged to cause the approach of the opposite friction rollers and hold the pipes in place during rotation thereof in cutting said pipes; substantially as described.

4. Apparatus for cutting pipes and similar articles comprising a pipe supporting bed, rotary saws at opposite sides of the bed arranged to act on opposite ends of the pipes, a gap in the bed opposite said saws, means located in the gap arranged to raise and lower a pipe in said gap, mechanism having friction rollers adapted to engage with and hold the pipe in place in said gap, and mechanism for moving said saws into cutting engagement with pipes held in the gap; substantially as described.

5. Apparatus for cutting pipes and similar articles comprising a pipe supporting bed, rotary saws at opposite sides of the bed arranged to act on opposite ends of the pipes, the saws being staggered so as to bring their axes into different planes, a gap in the cooling bed opposite said saws, means located in the gap arranged to raise and lower a pipe in said gap, mechanism having friction rollers adapted to engage with and hold the pipe in place in the gap, and mechanism for moving said saws into cutting engagement with pipes held in said gap; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

960,641. DOOR-CHECK. WILLIAM K. HENRY, New Britain, Conn., assignor to P. & F. Corbin, New Britain, Conn., a Corporation of Connecticut. Filed Feb. 18, 1910. Serial No. 544,585.



1. In checking mechanism, a cylinder, a piston therein arranged to move with relative freedom in one direction and against resistance in the opposite direction, a longitudinally arranged slot in said piston, a portion of the opposite side walls of said slot being toothed, a spindle entering said cylinder and standing in said slot, one side of that part of said spindle standing in said slot having teeth arranged to co-act with the teeth on both sides of the slot in said piston, the teeth on said spindle being arranged to leave the teeth on one side of the piston and simultaneously engage the teeth on the opposite side of the piston to reciprocate the latter to and fro by a rotative movement of the spindle in one direction.

2. In a checking apparatus, a cylinder, a piston therein, a longitudinal slot in part of said piston, toothed racks on opposite sides of said slot, clearance spaces at each end of said slot beyond said racks, a rotatable spindle extending into the slotted portion of said piston and between said racks, teeth on one side of said spindle arranged to coöperate with the teeth on opposite walls of the slot, said clearance spaces being sufficiently large to afford room for the spindle at each end of the slotted portion of said piston when the teeth on said spindle shift from engagement with the teeth on one side of the slot in said piston to the teeth on the opposite side thereof.

3. In apparatus of the class described, a rotatable spindle, a mounting therefor, a reciprocating piston coöperating therewith, means to restrain the free movement of the piston in one direction, said piston having a slot into which said spindle extends, toothed racks on opposite sides of said slot, gear teeth on one side of that part of said spindle within said slot arranged for alternate engagement with the racks on opposite sides of said slot, said slotted portion of said piston including spindle clearance spaces at both ends whereby said piston may be moved to and fro in both directions by rotary movement of the spindle in one direction, and a guide for said piston.

960,642. EYEGLASS-MOUNTING. CHARLES A. HOFFMAN, Minneapolis, Minn. Filed Oct. 19, 1907. Serial No. 398,290.

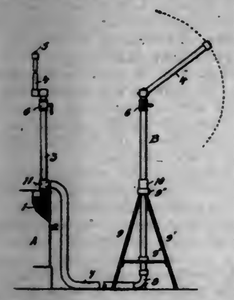
1. An eye glass comprising lenses, said lenses having their mountings provided with boxes, said boxes having eyes formed therein, a nose bridge, said nose bridge having

downwardly extending portions engaged in the said boxes, arms pivotally mounted on said boxes and provided with downwardly extending movable nose guard carrying arms, and springs mounted in said boxes and provided with upwardly extending arms adapted to yieldingly engage the said movable arms so that the nose guards will be forced toward each other to assume their operative or clamping positions.



2. An eye glass comprising lenses, said lenses having their mountings provided with boxes, said boxes having recesses formed therein and provided rearwardly of the recesses with vertical eyes, arms extending forwardly of the boxes to form levers and provided with depending portions mounted in the eyes of the boxes, said arms being provided at their lower ends with guards or nose engaging pieces, a bridge piece connecting the lenses and provided with eyes which are disposed in the recesses formed in the boxes, springs having portions disposed in the recesses formed in the boxes, and arms carried by the spring adapted to be yieldingly engaged with the first named arms so that the nose guards or nose engaging pieces will be normally moved toward each other.

960,643. PORTABLE ACETYLENE GENERATOR AND TORCH. ALEXANDER F. JENKINS, Baltimore, Md., assignor to Alexander Milburn Company, Baltimore, Md., a Corporation of Maryland. Original application filed May 10, 1907, Serial No. 372,972. Divided and this application filed Dec. 15, 1909. Serial No. 533,301.



1. The combination of a water-containing tank, a pipe arranged in the tank, a generator supplying gas to the pipe, a burner pipe removably and rotatably mounted on the first pipe and extending into the tank and held in upright position by the first pipe, and a flexible conduit connected with the burner pipe.

2. An out-door acetylene lighting apparatus comprising a generating device including an outlet pipe, a burner, means for rotatably and detachably supporting the burner on the device, said means comprising a straight pipe loosely fitted over and maintained upright by the outlet pipe and receiving gas therefrom, said straight pipe and burner being integrally removable from the device.

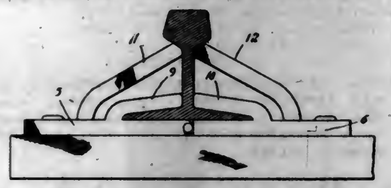
3. An out-door acetylene generating and lighting apparatus comprising a generator tank having an outlet pipe terminating at the top of the tank and surrounded by water, a flexible hose outside the tank, a straight pipe on one end of the hose assembled vertically on and telescoped over the outlet pipe and freely rotatable thereon at all times to form a quickly connected and detachable swivel joint between the hose and outlet pipe, and a burner standard attachment on the outer end of the hose and including a stand having a bearing in which the burner standard is rotatably mounted.

4. An out-door acetylene generating and lighting apparatus comprising a generator tank having an outlet pipe terminating at the top of the tank and surrounded by water, a second pipe loosely assembled over and extending the full length of the outlet pipe, a hose connected with the second pipe at the top of the tank and extending downwardly at the outside thereof and adapted to rest on the ground, a burner standard connected with the outer end of the hose, and a support for portably holding the standard.

5. An outdoor acetylene generating and lighting apparatus comprising a generator tank, an outlet pipe standard supported by and portable with the tank, a burner movably mounted on the standard, said standard including a coupling at a point above the tank, a hose having one end connected with the coupling and extending downwardly at the outside of the tank to rest on the ground, a burner standard connected with the outer end of the hose, and a portable device remote from the tank and supporting the burner standard connected with the outer end of the hose.

[Claims 6 to 9 not printed in the Gazette.]

960,644. RAIL-CHAIR. JAMES L. JENKINS, Garden City, S. D. Filed Sept. 29, 1909. Serial No. 520,218.



1. A rail chair comprising a pair of hingedly united sections, a pair of brace lugs rising from the upper faces and located adjacent the inner ends of said sections, and a second pair of brace lugs rising from the upper faces of said sections and overhanging the first named brace lugs.

2. A rail chair comprising a pair of hingedly united sections, a pair of brace lugs rising from the upper faces and located adjacent the inner ends of said sections, and a second pair of brace lugs of less width than the first named pair rising from points adjacent the outer ends of said sections and overhanging the first named pair of brace lugs.

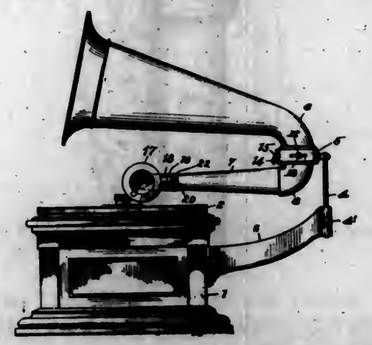
3. A rail chair comprising a pair of base plates the inner ends of which are provided with a plurality of spaced knuckles having alining openings and a plurality of pintles insertible into said openings, a pair of brace lugs rising from points adjacent the connected ends of said base plates and a second pair of brace lugs rising from points adjacent the free ends of said base plates and overhanging the first named brace lugs.

4. A rail chair comprising a pair of base plates the inner ends of which are provided with a plurality of spaced knuckles a plurality of pintles insertible through alining openings in said knuckles, said base plates being provided on their lower faces with a plurality of spaced ribs, a pair of brace lugs rising from points adjacent the connected ends of said base plates and located on the upper face thereof, and a second pair of brace lugs rising from points adjacent the ends of said base plates and overhanging the first named brace lugs.

960,645. TALKING-MACHINE. JULIUS JETTER, Camden, N. J., assignor to Victor Talking Machine Company, Camden, N. J., a Corporation of New Jersey. Filed Apr. 28, 1904. Serial No. 205,278.

1. In a talking machine, the combination with a sound conveying tube, of a support therefor comprising a shoe carried by said support and engaging said tube, said shoe being mounted to oscillate upon an axis fixed and transverse to said tube.

2. In a talking machine, the combination with a sound conveying tube, of a fixed support having an opening in which said tube telescopes, and shoes engaging said tube and carried by said support, said shoes being mounted to oscillate upon an axis fixed and extending diametrically of said opening.



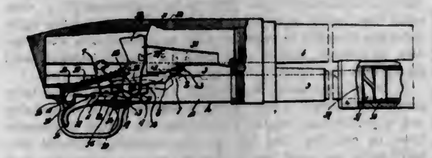
3. In a talking machine, the combination with a sound conveying tube, of a fixed support having an opening in which said tube telescopes, oppositely disposed shoes slidably engaging said tube, and fixed pivots carried by said support and engaging said shoes, said tube being thus mounted upon a universal joint.

4. In a talking machine, the combination with a sound conveying tube having a flange at one end thereof, of a fixed support having an opening therein adapted to receive said flange, said flange being provided with a circumferential groove, shoes carried in said groove, and pivots carried by said support and engaging said shoes.

5. In a talking machine, the combination with a sound conveying tube having a spherical flange at one end thereof, said flange having a circumferential groove, of a fixed support having an opening therein adapted to receive said flange, pivots carried by said support, and shoes carried in said groove, and engaged by said pivots.

[Claims 6 to 40 not printed in the Gazette.]

960,646. REPEATING FIREARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Jan. 29, 1910. Serial No. 540,931.



1. In a repeating firearm, the combination with the breech-closure and hammer thereof, of an operating handle and action-bar, a two-legged spring the legs of which are alternately placed under tension by the hammer, a blocking-arm adapted to be directly engaged with the rear end of the action-bar and raised and lowered by the respective legs of the said two-legged spring, and a spring combined with a handle for normally holding the rear end of the action-bar in engagement with the blocking-lever and superior in power to one leg of the two-legged spring aforesaid.

2. In a repeating firearm, the combination with the breech-closure, hammer and trigger thereof, of an operating-handle and its action-bar, and a combined part hung to swing in a vertical plane, the said part coacting directly with the rear end of the action-bar for locking the gun against rearward draft upon the handle, with the hammer to hold the same in its cocked position irrespective of the trigger, and the said part also being adapted to be manually operated from the outside of the gun-frame.

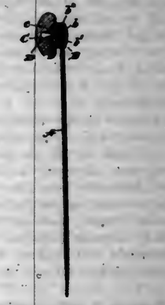
3. In a repeating firearm, the combination with the breech-closure, hammer and trigger thereof, of an operating handle and its action-bar, and a combined part operating as one piece and comprising a blocking-arm coacting directly with the rear end of the action-bar, a hammer-locking hook coacting with the hammer, and a manually operable arm projecting through the frame of the gun.

4. In a repeating firearm, the combination with the breech-closure, hammer and trigger thereof, of an operating handle and its action-bar, the latter being furnished with a clearance cut, and a combined part comprising a blocking-arm coacting with the rear end of the action-bar, a hammer-locking hook coacting with the hammer, and a manually operable arm, the said blocking-arm entering the said clearance cut in the action-bar and being forced out of the same for the coaction of the said hook with the hammer.

5. In a repeating firearm, the combination with the breech-closure thereof, of a hammer provided with a locking-lug upon one of its faces, a trigger, an operating handle, an action-bar carried thereby, and a combined part adapted to be manually operated and provided with a blocking-arm coacting with the action-bar and with a hammer-locking hook coacting with the said lug on the hammer, the said combined part being swung upon its pivot by the action-bar to effect the coaction of its hook with the lug on the hammer.

[Claims 6 to 9 not printed in the Gazette.]

960,647. MEANS FOR SECURING JEWELS OR ORNAMENTS TO STUDS. EDGAR E. KAHN, New York, N. Y. Filed Mar. 12, 1909. Serial No. 483,051.

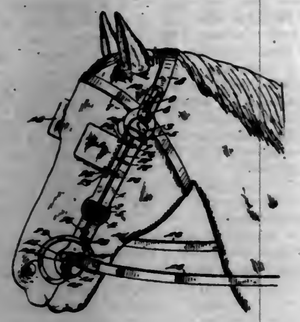


An article of manufacture of the character described comprising a shank, a head on said shank provided with an approximately annular bearing on its face, a decorative member having a dished undersurface corresponding generally to the contour of the bearing edge on the head but somewhat larger in diameter at the entrance of the dished portion, and a connecting pin between the decorative member and the head securing them together with the bearing edge of the head in contact with the wall of the dished portion and within the dished portion so that both the pin and the overhanging portion of the decorative member resist breakage of the decorative member under lateral strain.

960,648. EYE-COVER OR BLINKER FOR BRIDLES. MIHKEL KOPPEL, Philadelphia, Pa. Filed Feb. 21, 1910. Serial No. 545,150.

1. In a mechanism of the character described, the combination of a rotary bit, means supporting the bit, crank arms on opposite ends of the bit disposed at an angle

to each other, reins removably connected to said crank arms, blinkers hinged to said supporting means, springs pressing the blinkers inward, devices normally holding the blinkers in their outward position, and cams on the bit engaging said devices and adapted when the bit is turned to move said devices and permit the blinkers to move inward.



2. In a mechanism of the character described, the combination of a rotary bit, means supporting the bit, crank arms on the bit, cams secured on the crank arms, hinged blinkers, and devices operated by the cams when the bit is revolved, to compel the blinkers to move inwardly and obstruct the vision of the animal, substantially as described.

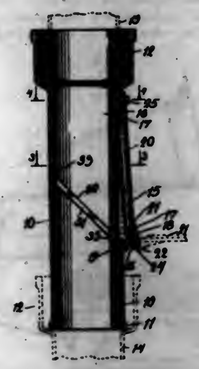
3. In a mechanism of the character described, the combination of a rotary bit, means supporting the bit, crank arms on the bit at an angle to each other, cams secured on said bit, hinged blinkers, springs pressing said blinkers inward, devices holding said blinkers outward, and the position of said devices controlled by said cams, and said cams operated by the rotary movement of the bit, substantially as described.

4. In a mechanism of the character described, the combination of a rotary bit, means supporting the bit, crank arms on opposite ends of the bit disposed at an angle to each other, springs normally holding the bit against turning, reins removably connected to said crank arms, blinkers hinged to said supporting means, springs pressing the blinkers inward, devices normally holding the blinkers in their outward position, and cams on the bit engaging said devices and adapted when the bit is turned to move said devices and permit the blinkers to move inward.

5. In a mechanism of the character described, the combination of a rotary bit, crank arms on the ends of the bit at an angle to each other, reins connected to the crank arms, cams on the rotary bit adjacent the crank arms, hinged blinkers, springs normally pressing said blinkers inwardly, longitudinally movable rods having cam portions, arms on said blinkers engaging said cam portions, whereby when said rods are in their highest position, the blinkers are held in normal position, and loops at the lower ends of said rods engaging said cams, substantially as described.

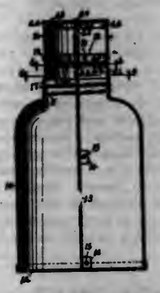
960,649. PIPE-STRAINER. JACOB LEVY, New York, N. Y. Filed July 22, 1908. Serial No. 444,709.

In a pipe strainer, a casing adapted to form a portion of a pipe line, a flat obliquely disposed straining member comprising a plurality of longitudinal ribs, loosely supported within said casing, the casing being provided with an opening opposite the straining member, a cover-plate hinged to the casing near the lower end of the straining member, said cover-plate being arranged to form a watertight closure for the casing when closed and a shelf pro-



jecting from the casing at the bottom of the straining member when open.

960,650. SALT-SHAKER. CHARLES WM. LIND, McKeesport, Pa. Filed June 22, 1907. Serial No. 380,202.



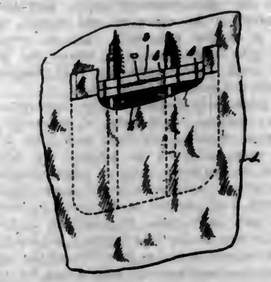
1. The combination of a receptacle provided with two compartments, a cap removably attached to said body, a perforated rotatable cover for said cap, a fixed diaphragm in the cap spaced from the cover and having two apertures placed diametrically one over each compartment, a rotatable disk below said diaphragm and provided with three openings adapted to register with said apertures when the disk is rotated, and a post passing loosely through said diaphragm and fixed at its ends to the cover and disk.

2. In a condiment holder the combination of a body portion provided with two compartments, a removable cap, a perforated rotatable cover for the cap, a diaphragm fixed in the cap and having two apertures placed diametrically one over each compartment, a rotatable disk below and in apposition with said diaphragm and furnished with three openings, adapted to register with said apertures when the disk is rotated, a post passing through said diaphragm and having squared ends engaging sockets in the cover and disk and means for indicating the position of the disk relatively to the diaphragm.

960,651. ATTACHMENT FOR GARMENT-POCKETS. JOSEPH LIPKEY, Chicago, Ill. Filed Mar. 7, 1910. Serial No. 547,714.

The combination with a pocket, of a strip arranged therein adjacent the mouth thereof, said strip being stitched at intervals to one wall of said pocket, the same being formed of two longitudinal sections having their

contiguous edges secured together, a button hole formed in said strip between said sections, and a button provided



upon the opposite wall of said pocket adapted to engage said button hole, substantially as described.

960,652. BROWN SULFUR DYE AND PROCESS OF MAKING SAME. GEORG LIST, Offenbach-on-the-Main, Germany, assignor to Corporation of Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany. Filed Feb. 12, 1910. Serial No. 543,455.

1. The process of making brown sulfur dyestuffs by heating the diphenylmethan derivative, obtained by condensation of orthonitrophenol with formaldehyde, with alkalipolysulfids at temperatures exceeding 100° C.

2. As a new article of manufacture the brown sulfur dyestuffs which can be obtained by heating the diphenylmethan derivative, obtainable by condensation of orthonitrophenol with formaldehyde, with alkalipolysulfids at temperatures exceeding 100° C., which dyestuffs dye unmordanted cotton from reddish- to violet-brown shades, and dissolve in dilute alkalisulfids with violet color, in concentrated sulfuric acid with brown color.

960,653. DEVICE FOR CONTROLLING ENGINES. ROBERT V. LONGTINE, Los Angeles, Cal., assignor of one-half to Fred E. Windsor, Warren, Pa., and one-half to W. R. Guiberson, Coalinga, Cal. Filed Nov. 1, 1909. Serial No. 525,771.



1. In devices for controlling an engine, the combination with a hand lever, of means adapted to connect it with a valve gear, consisting of a socket member directly pivoted to said hand lever, a plunger in said socket member, a spring interposed between the socket member and said plunger adapted to resist the outward movement of said plunger, said plunger being provided with a seat adapted to receive a pin connected with said valve gear, a movable plug mounted in said plunger and a spring for pressing said plug outwardly, said plug and spring being adapted to bear on the side of said pin opposite the side engaging the said seat.

2. In devices for controlling an engine, the combination with a hand lever and means adapted to connect it with the valve gear link consisting of a socket member and a plunger movably mounted in said socket member, a spring resisting the outward movement of said plunger, said plunger having a link pin seat, a movable part forming the upper portion of the link pin seat, a movable plug for engaging the upper portion of said link pin seat and a spring pressing it against said part.

960,654. PUSH-BUTTON. DIMNITT R. LOVEJOY, Irvington, N. Y., assignor to U. S. E. M. Co., New York, N. Y. Filed Mar. 8, 1907. Serial No. 361,372.



1. A push button consisting of the combination of a sheath, a button therein, a circuit closing bar extending from said button and having a slot, an insulating base having a hole for receiving said bar, a pin frictionally held on said base and passing through said slot, said base having other holes, bent contact springs in said holes, pins at the bends thereof and pressing upon said base, one end of each spring being for holding the terminals of circuit wires, and the other end of each spring lying in the path of said bar, and a retractile spring between said button and said base.

2. A push button consisting of the combination of a sheath, a button therein, a circuit closing bar extending from said button, and having a slot, an insulating base having a hole for receiving said bar, a pin frictionally held in said base and passing through said slot, bent contact springs, pins at the bends thereof for holding said springs to said base, one end of each spring being for holding the terminals of circuit wires, and the other end of each spring lying in the path of said bar, and a retractile spring between said button and said base.

3. A push button consisting of the combination of a sheath, a button therein, a circuit closing bar extending from said button, and having a slot, an insulating base having three holes, one for receiving said bar, a pin frictionally held upon said base and passing through said slot, bent contact springs in the other holes, pins at the bends thereof and held tightly to said base, one end of each spring being for holding the terminals of circuit wires, and the other end of each spring lying in the path of said bar, and a retractile spring between said button and said base, each contact spring being of sheet metal bent upon itself, and having enlarged ends with shoulders which are pressed against said base by said pins.

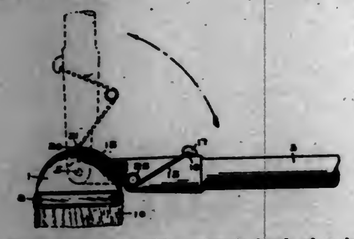
4. A push button consisting of the combination of a sheath, a button therein, a circuit closing bar extending from said button, and having a slot, an insulating base having a hole for receiving said bar, a pin frictionally held in said base and passing through said slot, and free from contact with said sheath, said base having other holes, bent contact springs in said holes, pins at the bends thereof and frictionally held to said base, one end of each spring being for holding the terminals of circuit wires, and the other end of each spring lying in the path of said bar, and a retractile spring between said button and said base.

5. A push button consisting of the combination of a sheath, a button therein, a circuit closing bar extending from said button, and having a slot, an insulating base having a hole for receiving said bar, a pin frictionally held in said base and passing through said slot, said base having other holes, bent contact springs in said holes, pins for holding said springs to said base, said slot being

long enough to permit said bar to not only touch said spring terminals but to push them apart with a scraping action, and said springs being flexible throughout substantially their whole lengths.

[Claims 6 to 11 not printed in the Gazette.]

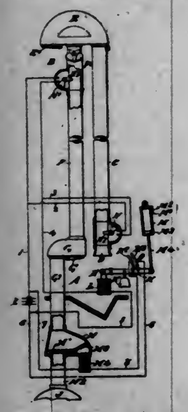
960,655. ADJUSTABLE BRUSH-HANDLE. CHARLES W. MABRY, Indianapolis, Ind. Filed Oct. 27, 1908. Serial No. 459,710.



1. The combination with a brush head of a handle pivotally attached thereto, said brush head being provided with stops to limit the movement of the handle, and a spring attached to the handle and to the brush head adapted to resist a force tending to turn the handle on its pivot when the latter, is in engagement with either of the stops.

2. The combination with a brush head of a handle having a transverse pivot pin pivotally attached thereto, said brush head being provided with stops to limit the movement of the handle in either direction, and also provided with a transverse notch, the side walls of the latter having two oppositely positioned grooves adapted to receive the pivot pin of said handle, and a spring attached to the handle and to the brush head adapted to resist a force tending to turn the handle on its pivot while the latter is in engagement with either of the stops.

960,656. PNEUMATIC-DESPATCH-TUBE APPARATUS. JAMES GAYTON MACLAREN, Weehawken, N. J., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed Sept. 25, 1907. Serial No. 394,543.

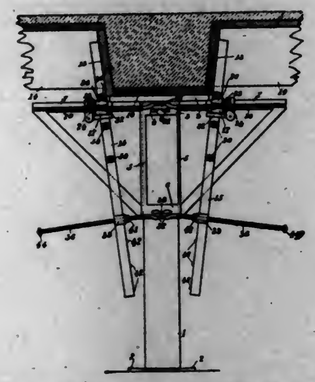


1. In a pneumatic despatch tube apparatus, a tube for the transmission of carriers, a connection through which air may be exhausted from said tube, a normally closed air valve adapted to control the flow of air through said transmission tube, an electro-magnet adapted to be operated to open said valve to establish a flow of air through said transmission tube for driving carriers, and an electro-magnetically operated timing switch adapted to be operated and closed by the insertion of a carrier into said tube to energize said magnet to open said valve, and means for timing the opening of said switch whereby said magnet is deenergized and the said air valve closed.

2. In a pneumatic despatch tube apparatus, a tube for the transmission of carriers, a connection through which air may be exhausted from said tube, a normally closed air valve adapted to control the flow of air through said transmission tube, an electro-magnet adapted to operate said valve, a normally open timing switch in circuit with and adapted to be closed to energize said magnet to open said valve to establish a flow of air through said tubes for driving carriers, an electro-magnet adapted to be operated by the insertion of the carrier into said tube to close said switch, and means for timing the opening of said switch whereby said valve controlling magnet is deenergized and said air valve is closed.

3. In a pneumatic despatch tube apparatus, a tube for the transmission of carriers, a connection through which air may be exhausted from said tube, a normally closed air valve adapted to control the flow of air through said transmission tube, an electro-magnet adapted to operate said valve, a normally open electro-magnetically operated switch in circuit with said magnet and adapted to be operated by the insertion of a carrier into said tube to energize said magnet and open said valve, means normally urging the opening of said switch, and means for timing the opening of said switch whereby said magnet is deenergized and said valve is closed.

960,657. SUPPORT FOR CONCRETE FORMS. CHARLES M. MARKHAM, Chicago, Ill. Filed Jan. 30, 1909. Serial No. 475,245.



1. In an apparatus of the class described, the combination with an upright, of a cap detachably mounted thereon, horizontally disposed alining arms projecting from opposite sides of said cap, vertically slotted members slidably mounted upon said arms, elongate bars slidably mounted in the slots in said members, means whereby said bars will be normally locked against downward movement, means in connection with said slotted members adapted to lock the same against lateral movement upon said arms, and means in connection with the lower end portion of said bars whereby the angular disposition of the latter may be regulated, substantially as and for the purpose specified.

2. In an apparatus of the class described, the combination with an upright, of a cap detachably mounted thereon, horizontally disposed alining arms projecting from opposite sides of said cap, vertically slotted members slidably and detachably mounted upon said arms, elongate bars slidably mounted in slots in said members, obliquely slotted means in detachable connection with said bars adapted normally to lock said bars against downward movement, adjustable means in connection with said vertically slotted members adapted to lock the same against lateral movement, and means in operative connection with the lower end portion of said elongate bars for adjusting the angularity thereof, substantially as and for the purpose specified.

3. In an apparatus of the class described, the combination with an upright, of a cap detachably mounted thereon, horizontally disposed alining arms projecting from opposite sides of said cap, braces for said arms, vertically slotted members slidably and detachably mounted upon said arms, elongate bars slidably mounted in the slots in said members, joist seats formed in the upper end portions of said bars, means adapted for locking said bars in any elevated position against downward movement, elongate rods pivotally secured to said cap, nuts threaded upon said rods adapted to engage said vertically slotted members, and a second pair of rods and nuts threaded thereon adapted to adjust the angularity of said bars, substantially as and for the purpose specified.

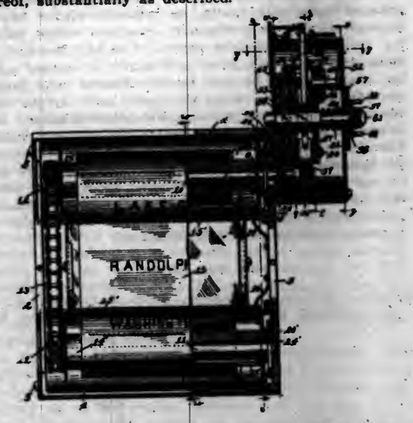
4. In an apparatus of the class described, the combination with an upright, of a rectangular cap detachably mounted thereon, depending bracing means for said cap, horizontally disposed alining bars projecting from and formed integrally with said cap, integral braces for said arms, vertically slotted members slidably and detachably mounted upon said arms, elongate bars slidably mounted in the slots in said members, angular joist-seat forming arms longitudinally adjustable upon the upper end portion of said bars, slotted means in detachable connection with said first mentioned arms adapted for locking said bars in any elevated position, elongate rods pivotally secured to said cap, nuts threaded upon said rods adapted to engage said vertically slotted members, a second pair of rods and nuts threaded thereon in connection with the lower end portion of said bars, substantially as and for the purpose specified.

5. In a device of the class described, the combination with an upright, of horizontally disposed arms projecting from said upright, a pair of members slidably mounted on said arms and provided with vertically disposed slots, pressure arms extending through said slots, locking members slidably mounted on said arms adjacent said slidably mounted members and comprising a portion recessed to receive said horizontal arms and a portion pivotally connected to the first said portion and provided with a slot to receive said pressure arms, and means for adjusting the first said members on said horizontal arms and means for spreading the lower ends of said pressure arms, substantially as described.

[Claim 6 not printed in the Gazette.]

960,658. INDICATOR. JOSEPH F. MAROUSEK, Chicago, Ill. Filed Oct. 4, 1909. Serial No. 520,782.

1. In an indicator, the combination of a casing, a pair of parallelly disposed shafts rotatably mounted therein, a driving connection between said shafts, spools carried upon said shafts, an indicator ribbon having its respective ends coiled upon said shafts, said ribbon having indications equally spaced upon either of its sides, means carried by said shafts whereby rotation of said shafts in one direction causes the operative release of one spool from its shaft and the operative or driving connection of the other spool to its shaft, and whereby rotation in the other direction causes reversal of such results, another shaft mounted adjacent one of said before named shafts and in operative connection therewith, means for rotating said last named shaft to cause coiling of said indicator ribbon from one spool to the other, and means for automatically regulating said last named means to effect a constant extent or length of feeding of the indicator ribbon upon each actuation thereof, substantially as described.



2. In an indicator, the combination of a casing, a pair of parallelly disposed shafts rotatably mounted therein, a driving connection between said shafts, spools carried upon said shafts, an indicator ribbon having its respective ends coiled upon said spools, said ribbon having indications equally spaced upon either of its sides, another shaft mounted adjacent one of said before named shafts and in geared connection therewith, oscillatory projecting arms in operative connection with said last named shaft for oscillating the same to cause the coiling of said indicator ribbon from one spool to the other, and an automatically operated eccentric for governing the extent of oscillation of said arms so as to effect the constant extent of feeding of the indicator ribbon upon each actuation thereof, substantially as described.

3. In an indicator, the combination of a casing, a pair of parallelly disposed shafts rotatably mounted therein, a driving connection between said shafts, spools carried upon said shafts, an indicator ribbon having its respective ends secured to and coiled upon said spools, said ribbon having indications equally spaced upon either of its surfaces, another shaft mounted adjacent one of said before named shafts in geared connection therewith, projecting arms rockingly mounted upon said last named shaft, pawl and ratchet connections between said arms and said shaft whereby said shaft may be rotated in either direction, and an eccentric operatively connected with said last named shaft for automatically governing the extent of oscillation of said arms, whereby the length of indicator ribbon fed upon each operation of the device will be constant, substantially as described.

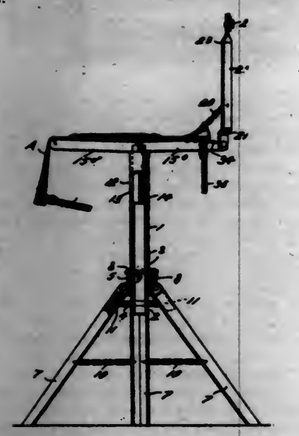
4. In an indicator, the combination of a casing, a pair of parallelly disposed vertically alining shafts rotatably mounted therein, a chain and sprocket connection between said shafts, flanged spools carried upon said shafts, an indicator ribbon having its respective ends detachably secured to and coiled upon said spools, said ribbon having indications equally spaced upon either of its surfaces, another shaft mounted adjacent one of said before named shafts in geared connection therewith, projecting arms rockingly mounted upon said last named shaft, pawl and ratchet connections between said arms and said shaft whereby said shaft may be rotated in either direction, an eccentric interposed between said arms, a worm and gear connection between said eccentric and said last named shaft adapting said eccentric to automatically regulate the extent of oscillation of said arms so as to effect an equal extent of feeding of the indicator ribbon upon each operation thereof, substantially as described.

5. In an indicator, a casing in combination with a

pair of parallel shafts rotatably mounted therein, a driving connection between said shafts, spools rotatably mounted upon said shafts, an indicator ribbon having its ends secured to and wound upon said spools, means for turning one of said shafts in either direction, a flange formed upon each of said shafts, a toothed member fixed to each of said spools adjacent said flanges respectively, means mounted upon said flanges and adapted to coöperate with said toothed members and means on said casing for actuating the last said means whereby rotation of said shafts in one direction causes the operative release of one spool from its shaft and the operative connection of the other spool to the shaft and whereby rotation in the opposite direction causes the reversal of such results, substantially as described.

[Claim 6 not printed in the Gazette.]

960,659. FOLDING CHAIR. FRED MARTINSON, Bingham Canyon, Utah. Filed Dec. 20, 1909. Serial No. 534,022.



1. In a device of the class described, the combination with a tubular central post, of legs pivotally connected to a collar slidable on said post, a disk adjustable vertically on said post adapted to diverge said legs when the collar is adjacent said disk, a pin adapted to limit the vertical movement of said collar, a slotted plug adapted to reciprocate in the upper extremity of said post, said plug being provided with means to limit the movement thereof, a series of arms having one terminal thereof bent at right angles to the body portion and pivoted in the slots of said plug adapted to be retained horizontally when said plug is contained within the post, and a seat permanently secured to one of said arms and adapted to be stretched over the remaining arms, said seat being adapted to entirely incase said chair when the same is folded.

2. In a collapsible chair, including a plurality of pivotal seat supporting elements, a portion of said elements having transverse openings adjacent to the terminals thereof, a seat permanently and pivotally secured to one of the remaining elements, and a button secured to the remaining element, hooks secured to the under surface of said seat adapted to engage said openings, and an eye likewise secured to the seat adapted to engage said button.

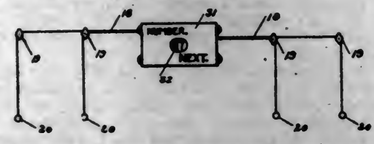
960,660. FOUNTAIN-PEN. GEORGE J. MARTS, Chicago, Ill. Filed Sept. 30, 1909. Serial No. 520,380.

1. In a fountain pen, the combination with a pen holder and pen, of a rubber bulb reservoir secured to said holder and exposed to the finger of the writer; an aperture in the upper portion of said bulb; and a capillary discharge tube secured to the lower end of said bulb and having a discharge end contacting with the back of said pen, substantially as described.



2. In a fountain pen, the combination with a pen holder and pen, of a rubber bulb secured to said holder; an aperture in the upper portion of said bulb; and a capillary discharge tube secured to the lower end of said bulb and having an enlarged discharge end curved to nicely fit the back of said pen, substantially as described.

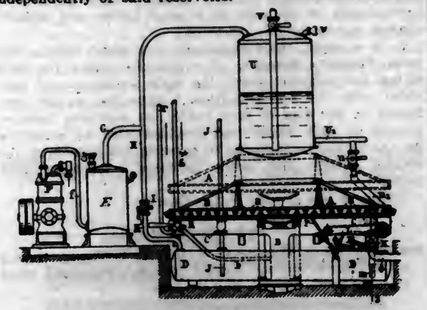
960,661. REGISTERING-INDICATOR FOR BARBER-SHOPS. SUMNER H. MASON, Worcester, Mass. Filed May 5, 1908. Serial No. 430,964.



A signaling or registering mechanism comprising the combination with a supporting plate and the casing therefor provided with a view opening, said casing being composed of metal material having its ends screwed to the plate member, said plate having projecting posts provided with reduced ends, said projecting posts being of different lengths, overlapping number wheels journaled on said reduced end portions, supporting wheels for said number wheels, said supporting wheels being of skeleton form and one of said wheels having an integral finger projecting from its circumference, the other wheel being provided with rearwardly extending teeth arranged around its outer edge adapted to be engaged by the finger, a ratchet wheel carried by the shorter posts, said ratchet wheel being secured to the spokes of the wheel having a finger, said spokes being offset and terminating short of the center of the wheel for securing the same to said ratchet wheel, a lever fulcrumed between its ends and located between the number wheels on the plate, a dog connected to one arm of the lever short of one end thereof, and operating on said ratchet wheel, the extreme end of said lever being in engagement with one of the teeth aforesaid in its normal position, said dog being held from forcive engagement with the ratchet wheel, operating rods connected to opposite ends of the lever, the ends of said rods being provided with eyes, pins disposed on either side of one end of the lever for limiting the movement thereof, a signaling bell supported on the plate below the number wheels, a lever having an integral extension in engagement with the ratchet wheel, said dog limiting the movement of the ratchet wheel, said lever being pivotally mounted and provided with a bell tapping hammer adjacent the pivoted end, and a spring connected to the opposite end of the lever and to the plate to hold said dog in engagement with the ratchet wheel.

960,662. APPARATUS FOR CHARGING DYE-VATS. BARTHELEMY MAYOUX and CHARLES VERCHERE, Isieux, France, assignors to César Corron, St. Chamond, France. Filed June 21, 1907. Serial No. 380,072.

1. In apparatus for the purpose set forth the combination of a dye vat, a plurality of closed dye bath reservoirs, separate means of communication between each reservoir and the bottom of the dye vat, valves in said communications for selectively opening and closing the same, means for varying the air pressure prevailing in the respective reservoirs to cause liquid to pass from the same into the dye vat or from the latter to the respective reservoirs and means for supplying water to the dye vat independently of said reservoirs.



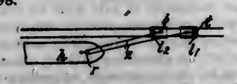
2. In apparatus for the purpose set forth the combination of an open dye vat, means for suspending goods to be dyed therein, said suspending means being capable of vertical movement, a plurality of closed dye bath reservoirs, separate means of communication between each reservoir and the bottom of the dye vat, valves in said communications for selectively opening and closing the same, means for varying the air pressure prevailing in the respective reservoirs to cause liquid to pass from the same into the dye vat or from the latter to the respective reservoirs and means for supplying water to the dye vat independently of said reservoirs.

3. In apparatus for the purpose set forth the combination of a dye vat, a plurality of closed dye bath reservoirs, separate means of communication between each reservoir and the bottom of the dye vat, valves in said communications for selectively opening and closing the same, means for varying the air pressure prevailing in the respective reservoirs to cause liquid to pass from the same into the dye vat or from the latter to the respective reservoirs and means for supplying water to the dye vat independently of said reservoirs, said means being also operative to supply pneumatic pressure for operating the supply and removal of the baths to and from the dye vat.

4. In apparatus for the purpose set forth the combination of a dye vat, a plurality of closed dye bath reservoirs beneath the level of the bottom of said vat, separate means of communication between each reservoir and the bottom of the vat, valves in said communication, a closed air reservoir above the said dye bath reservoirs, valved communications between the upper part of the air reservoir and the dye bath reservoirs, and means for admitting water under pressure into said air reservoir.

5. In apparatus for the purpose set forth the combination of a dye vat, a plurality of closed dye bath reservoirs beneath the level of the bottom of said vat, separate means of communication between each reservoir and the bottom of the vat, valves in said communications, a closed air reservoir above the said dye bath reservoirs, valved communications between the upper part of the air reservoir and the dye bath reservoirs, means for admitting water under pressure into said air reservoir, and valved communication between the lower part of the air reservoir and the dye vat.

960,663. TOWING APPARATUS. EDUARD MECKELBURG, Charlottenburg, Berlin, Germany, assignor to Siemens-Schuckert-Werke G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed July 26, 1906. Serial No. 327,898.



1. In apparatus for towing ships, the combination with a plurality of towing members each having its own driving mechanism; of a tow line directly connecting each of said towing members to the ship to be towed, means for raising and lowering the tow line directly connecting each towing member with the ship, and means for controlling all of the raising and lowering means in unison.

2. In apparatus for towing ships, the combination with a plurality of towing members each having its own driving mechanism; of a tow line directly connecting each of said towing members with the ship to be towed, means carried by each towing member for raising and lowering the tow line directly connecting it with the ship, and means for simultaneously controlling all of said raising and lowering means.

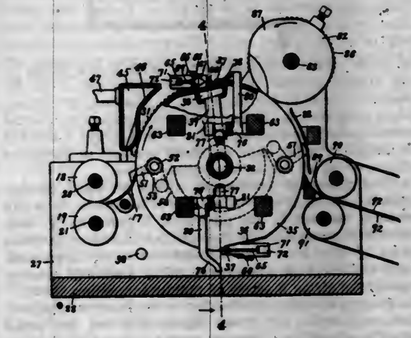
3. In apparatus for towing ships, the combination with a plurality of towing members each having its own driving mechanism; of a tow line directly connecting each towing member with the ship to be towed, means carried by each towing member for raising and lowering the tow line directly connecting it with the ship, means for controlling the driving mechanisms of all the towing members in unison, and means for controlling all of the raising and lowering means in unison.

4. In apparatus for towing ships, the combination with a plurality of towing members each having its own driving mechanism, of a single continuous tow line directly connecting all of the towing members with the ship to be towed, compensating devices for automatically adjusting the operating lengths of the tow line between each towing member and the ship, and means for controlling the driving mechanisms of all the towing members in unison.

5. In apparatus for towing ships, the combination with a plurality of towing members each having its own driving mechanism and a single continuous tow line directly connecting all of the towing members with the ship to be towed, compensating means for automatically adjusting the operating lengths of the tow line between the towing members and boat, means for raising and lowering said tow line, and means for controlling the driving mechanisms of all the towing members in unison.

[Claims 6 to 16 not printed in the Gazette.]

960,664. PAPER-BAG MACHINE. JOSEPH MERRITT, Hartford, Conn., assignor to Union Paper Bag Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 10, 1907. Serial No. 383,042.



1. A rotary sweeper for reversing the tucks of bellows-sided bags provided with means for engaging the inner side of the tuck on each side of the fold line thereof to center the said tucks with the sweeper, and with an adjacent blade portion for pushing the said fold line outwardly between the reversed tucks.

2. A rotary sweeper for reversing the bellows-side tucks of a paper bag blank, having a bifurcated portion for engaging with the inner V-sides of the tuck to center the tuck with the sweeper, and a central blade portion for engaging with the said fold line and pushing it outwardly between the said V-sides.

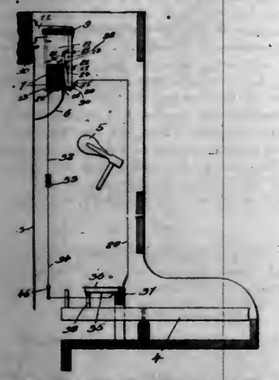
3. Means for forming the described funnel folds in bellows-sided bag blanks, including a bifurcated implement, one arm of which is a tuck distending finger for entering the tuck from its outer side, and the other arm of which is a sweeper for engaging with the inner side of said tuck and reversing it along the central fold line.

4. Means for forming the described funnel folds in bellows bag blanks, including a tuck folder having a distending finger for entering the tuck from its outer side, and a sweeper finger for engaging with the inner side of said tuck and reversing it along the central fold line, and means for moving the said fingers into and out of the blank.

5. Means for forming the described funnel folds in bellows-sided bag blanks, including a tuck folder having a distending finger for entering the tuck from its outer side, a sweeper finger for engaging with the inner side of said tuck and reversing it along the central fold line, means for moving the said fingers into operative relation to the blank, and means for swinging the said fingers while in said operative position.

[Claims 6 to 27 not printed in the Gazette.]

960,665. PIANO ATTACHMENT FOR GIVING MANDOLIN EFFECTS. JOSEPH METZGER, Cambridge, Mass. Filed Nov. 1, 1909. Serial No. 525,617.



1. In a piano, the combination with a pin block, of piano strings secured thereto, piano hammers, a bar detachably secured to the pin block, a plurality of hammer holders sustained by the bar, an auxiliary hammer carried by each holder and situated above said piano hammers, and means to cause each auxiliary hammer to strike its string a series of rapidly-succeeding blows.

2. In a piano, the combination with a pin block, strings, hammers and keys for operating the hammers, of a bar removably secured to the pin block, a plurality of hammer holders sustained by the bar, an auxiliary hammer carried by each holder, means operated by the depression of any key to cause the corresponding auxiliary hammer to strike the string a series of rapidly-succeeding blows.

3. In a piano, the combination with piano strings and hammers therefor, of a bar sustained above the piano strings, a plurality of hammer holders carried by the bar, an auxiliary hammer carried by each holder, said auxiliary hammers being situated above the main hammers, means to cause each auxiliary hammer to strike its string a series of rapidly-succeeding blows, and means to sustain said bar so that it with the hammer holders may be removed bodily from the piano without disturbing the action of the main hammers.

4. In a piano, the combination with piano strings and main hammers therefor, of a plurality of hammer holders supported above the main hammers and each comprising a block 8 with two separated arms or extensions 13, 25, a magnet carried by each arm 13 and situated between the arms, an auxiliary hammer pivoted to the hammer holder and provided with an armature for said magnet, and a make-and-break for each magnet comprising one contact carried by the arm 25 of each holder and another contact carried by the armature.

5. In a piano, the combination with piano strings and main hammers therefor, of a hammer holder for each string and situated above the main hammers and provided with two opposed arms, a thin flat magnet sustained by one arm of each holder, an auxiliary hammer pivoted to each holder and provided with an armature for the magnet, and means to energize and deënergize the magnet rapidly, said means including a make-and-break device.

[Claim 6 not printed in the Gazette.]

960,666. REINFORCED-CONCRETE TOWER. LOUIS F. H. DE MIFFONIS, Aylmer, Quebec, Canada. Filed Dec. 3, 1908. Serial No. 465,896.

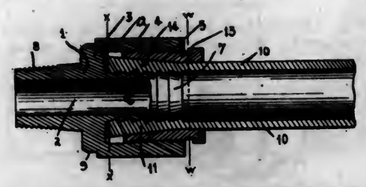


1. A concrete tower or the like, comprising a wall having a prismatic outer periphery, a plurality of reinforcing rings embedded in said wall and extending into each of the corners formed by the meeting exterior prismatic faces of said wall, vertical reinforcing counter-forts extending from the corners of the outer side of said wall, reinforcing bars embedded in said counter-forts, braces joining said counter-forts to the outer corners of said wall at intervals throughout the entire height thereof and reinforcing bars embedded in said braces and connected to the reinforcing bars in said counter-forts and the reinforcing rings in said wall.

2. A concrete tower or the like, comprising a wall having a prismatic outer periphery, a plurality of vertical reinforcing bars embedded in said wall at intervals thereabout adjacent to the inner side thereof, longitudinally-extending reinforcing bars embedded in said wall adjacent to each corner of the exterior prismatic face, reinforcing rings embedded in said wall and extending therearound at intervals throughout the height thereof on the outside of said inner perpendicular reinforcing bars and the outer reinforcing bars at alternate corners, flying counter-forts connected to said wall toward the top thereof at the corners of said outer prismatic face and braces extending from said counter-forts to said wall at intervals throughout the height thereof.

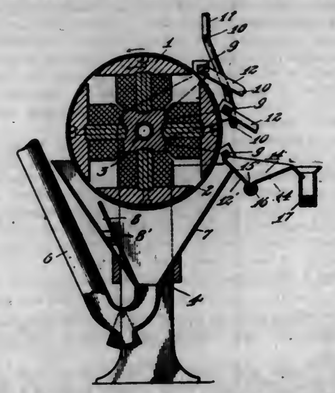
3. A concrete tower or the like, comprising a wall having a prismatic outer periphery, a plurality of vertical reinforcing bars embedded in said wall at intervals thereabout adjacent to the inner side thereof, longitudinally-extending reinforcing bars embedded in said wall adjacent to each corner of the exterior prismatic face, reinforcing rings embedded in said wall and extending therearound at intervals throughout the height thereof on the outside of said inner perpendicular reinforcing bars and the outer reinforcing bars at alternate corners, flying counter-forts connected to said wall toward the top thereof at the corners of said outer prismatic face and braces extending from said counter-forts to the corners of the outer prismatic face of said wall at intervals throughout the height thereof and reinforcing bars embedded in said braces and secured at one end to the reinforcing bars of said counter-forts and at the other end thereof to the reinforcing rings embedded in said wall.

960,667. PIPE-COUPLING. LAWRENCE MILLER, Pittsburg, Pa. Filed Mar. 28, 1910. Serial No. 551,037.



In a pipe coupling, the combination with a lead pipe having a flared and enlarged end, of a coupling member adapted to connect a wrought iron pipe to said lead pipe, said member comprising a body having a bore formed therein extending from one end of said body to the opposite end thereof, an annular flange carried by said body intermediate the ends thereof, a sleeve formed integral with the outer edges of said flange and inclosing the inner end of said member, said sleeve having the inner walls thereof screw threaded, the inclosed inner end of said member having circumferentially arranged ratchet teeth adapted to engage in the end of said lead pipe, radially disposed teeth carried by said flange at the inner end of said sleeve and adapted to engage the end of said lead pipe and prevent a rotation of said pipe upon said ratchet teeth, a gland adapted to be screwed into said member, said gland having the bore thereof tapered to engage the flared end of said lead pipe, and said member having the outer end thereof threaded and adapted to receive a wrought iron pipe, substantially as described.

960,668. MAGNETIC SEPARATOR. WALTER B. MOORE, Seattle, Wash. Filed Aug. 31, 1906. Serial No. 332,870.



1. In a magnetic separator, the combination of a support to which materials are fed, said support having an extension which is inclined upwardly in an outward direction, there being an opening at the base of said extension, a valve for closing said opening, and a magnet movable for presenting poles of opposite polarity to cause the magnetic particles to travel on said support.

2. An apparatus for separating magnetic from non-magnetic particles comprising a rotatable magnet, means for directing the materials into the magnetic field of said magnet beneath the same, means movable about said magnet for conveying the particles attracted thereby, a plurality of permeable members disposed in said field one above the other adjacent said conveying means, supports extending from said members, means for directing water to flow upon said supports, the upper of said supports discharging onto the lower one, for the purpose specified.

3. In a magnetic separator the combination of a magnet supported for movement, a movable shield extending about said magnet for conveying the magnetic particles attracted by said magnet, a chamber embracing the lower portion of said shield, the walls of said chamber being inclined outwardly in an upward direction, means for directing a mixture of water and the materials to be separated for discharge upwardly into said chamber, an upwardly and outwardly inclined partition in said chamber extending in proximity to the under side of said shield, said chamber being provided with an outlet at the outer side of said partition, and a member in the magnetic field of said magnet for attracting the particles conveyed on said shield.

4. An apparatus for separating magnetic from non-magnetic particles comprising a chamber, a rotatable magnet, means for directing materials to be separated for discharge into said chamber, means movable about said magnet and having its lower portion arranged in said chamber for conveying the particles attracted by said magnet, a permeable member arranged above said chamber for attracting the magnetic particles conveyed on said shield, a downwardly inclined support extending outwardly from said member having an upwardly inclined extension at its outer end portion thereby forming a recess, there being an opening at the base of said extension normally closed by a valve, other permeable members arranged above said first named permeable member, and supports leading from said last named permeable members arranged to discharge onto said first named support.

5. A magnetic separator comprising a rotating magnet, means for directing material into the magnetic field thereof, a permeable member in said field at the upwardly moving side of said magnet, conveying means extending about said magnet for transporting materials attracted by said magnet into the field of force of said member, and a support extending outwardly from said member on which the materials attracted by said member are impelled in an outward direction by said magnet.

960,669. SIGNALING DEVICE. GEORGE H. MORGAN, Belleville, Kans. Filed Nov. 10, 1909. Serial No. 527,250.

1. A signaling device comprising a casing having a plurality of compartments, doors respectively hinged to and forming part of the casing for closing the said compartments, and flag holding shafts respectively mounted for rotation in each compartment.

2. A signaling device comprising a casing having a division plate centrally arranged therein to form parallel compartments, doors for the compartments respectively hinged to one edge of the plate, the other edge of the plate forming a common engaging means for the free edges of the doors, and flag holding shafts respectively mounted for rotation in each compartment.

3. A signaling device comprising a casing having a plurality of compartments, doors respectively hinged to and forming part of the casing for closing the said compartments, common means for locking the said doors against movement, flag holding shafts respectively mounted for rotation in each compartment, and a supporting staff depending from said casing.

4. A signaling device comprising a casing having top and bottom plates, a division plate centrally mounted be-

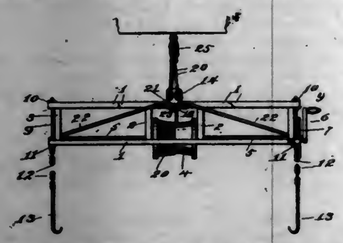
tween the said plates to form compartments, substantially semi-circular doors respectively hinged to one edge of the division plate for closing the compartments, the free ends of the doors coacting with the free edge of the division plate, locking means for the doors carried by the division plate, and flag holding shafts respectively mounted for rotation in each compartment.



5. A signaling device comprising top and bottom plates, a division plate centrally mounted between the said plates to form compartments, said top and bottom plates being respectively provided with alined openings which are arranged centrally with respect to each compartment, doors respectively hinged to one edge of the division plate for closing the compartments, and flag holding shafts respectively arranged in each compartment and journaled in the said alined openings.

[Claims 6 and 7 not printed in the Gazette.]

960,670. WAGON-BED HOIST. ABRAHAM MOYER, Moyers, Okla. Filed Dec. 14, 1909. Serial No. 533,008.



1. The combination, with a hoisting frame comprising longitudinal beams, central cross beams, and end beams, corner bolts connecting the longitudinal beams, a windlass, and means for revolving it between the said central beams, of a plate hanger, and suspending rods having one end secured to the hanger and extending diagonally and downwardly therefrom with the other end of the rods projecting through the end beams and secured to the said bolts.

2. The combination, with a hoisting frame, corner bolts connecting the frame parts, a windlass, a block and tackle device, and a series of rods having one end attached to the bolts and projecting upwardly and diagonally therefrom, of a hanger comprising a central plate having an elongation in which is secured said block, a fender depending from the plate and forming a guide for the windlass rope, a bar projecting from each end of the plate to which bars the other end of the rods are secured for fixing the hanger over the windlass.

960,671. PROCESS OF MAKING INDOXYL, &c. MARTIN MUGDAN and WILLY HERRMANN, Nuremberg, Germany, assignors to The Firm of Consortium für Elektrochemische Industrie, Gesellschaft mit beschränkter Haftung, Nuremberg, Germany. Filed Jan. 25, 1910. Serial No. 540,011.

1. A process for producing indoxyl and derivatives thereof by heating an aryl-glycin body with an alloy of silicon and a metal of the alkaline earths in the presence of anhydrous caustic alkalies.

2. A process for producing indoxyl and derivatives thereof by introducing a mixture of an alloy of silicon and a metal of the alkaline earths and of an aryl-glycin body into melted anhydrous caustic alkalies.

960,672. LOOSE-LEAF BOOK. ARTHUR L. MURPHY, Sr., Independence, Mo. Filed July 3, 1909. Serial No. 505,780.



1. In a loose leaf book, the combination with a supporting plate, of a hook comprising a coil spring secured at one end to said plate and a locking device secured to the free end of said spring and having means for releasably engaging said plate, a member movable to and from a position in which it will release said device from said plate and means for retracting said member from said position.

2. In a loose leaf book, the combination with a supporting plate having a hole, of a hook comprising a coil spring secured at one end to said plate and a locking device secured to the free end of the spring and adapted to enter said hole and engage said plate, a member movable to and from a position in which it will release said device from said plate and a spring for retracting said member from said position.

3. In a loose leaf book, the combination with a supporting plate having a hole, of a hook comprising a coil spring secured at one end to said plate and a locking device secured to the free end of said spring and adapted to enter said hole and engage said plate, and a member slidable to and from a position in which it will disengage said device from said plate.

4. In a loose leaf book, the combination with a supporting plate having a plurality of holes, of a plurality of hooks comprising coil springs secured at one set of ends to said plate and a plurality of devices secured respectively to the free ends of said springs for entering said holes respectively and releasably engaging said plate, and means for simultaneously releasing said devices from said engagement.

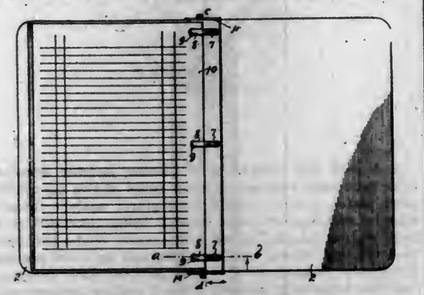
5. In a loose leaf book, the combination with a supporting plate having a plurality of holes, of a plurality of hooks comprising coil springs secured at one set of ends to said plate and devices secured respectively to the free ends of said springs for respectively entering said holes and engaging said plate, and a member slidable on said plate to and from a position in which it will force devices out of engagement with said plate.

[Claim 6 not printed in the Gazette.]

960,673. LOOSE-LEAF BOOK. ARTHUR L. MURPHY, Sr., Independence, Mo. Filed July 3, 1909. Serial No. 505,781.

1. In a loose leaf book, the combination with a supporting member having a fixed tubular hook, of a flexible hook secured at one end to said member and flexible to and from a position in which its free end will abut against the end of the tubular hook, and a device reciprocative in said tubular hook to and from a position in which it will releasably hold the flexible hook in the closed position.

2. In a loose leaf book, the combination with a supporting member having a fixed tubular hook, of a resilient hook secured at one end to said member and flexible to and from a position in which its free end will abut against the fixed hook, and a device reciprocative in said tubular hook to and from a position in which it will engage and hold the flexible hook in the closed position.



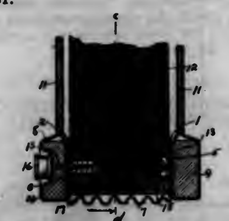
3. In a loose leaf book, the combination with a supporting member having a fixed tubular hook, of a hook comprising a coil spring secured at one end to said member and flexible to and from a position in which its free end will abut against the fixed hook, and a device reciprocative in the fixed hook to and from a position in which it will enter the free end of the coil spring.

4. In a loose leaf book, the combination with a supporting member having a fixed tubular hook, of a hook comprising a wire formed into superimposed coils and flexible to and from a position in which its free end will abut against the fixed hook, and a device reciprocative in the fixed hook to and from a position in which it will enter the free end of the coiled wire hook.

5. In a loose leaf book, the combination with a supporting member having a plurality of tubular fixed hooks, of a plurality of hooks secured at one set of ends to said member and flexible to and from positions in which their free ends will abut against the fixed hooks respectively, and devices reciprocative respectively in said fixed hooks for releasably engaging and holding the flexible hooks in the closed positions.

[Claims 6 to 10 not printed in the Gazette.]

960,674. LOOSE-LEAF BINDER. ARTHUR L. MURPHY, Sr., Independence, Mo. Filed July 10, 1909. Serial No. 506,961.



1. In a loose leaf binder, the combination with two members pivoted to each other, of two leaf supporting flexible pins respectively secured to said members, one pin comprising a coil spring, and the other pin extending into said spring.

2. In a loose leaf binder, the combination with two members pivoted to each other and bodily movable toward and from each other, of two leaf supporting flexible pins respectively secured to said members, one pin comprising a coil spring and the other pin extending into said spring.

3. In a loose leaf binder, the combination with two members bodily movable toward and from each other, of two resilient leaf supporting pins secured respectively to said members, one pin being tubular and the other pin being disposed in the tubular pin.

4. In a loose leaf binder, the combination with two members bodily movable toward and from each other, of two resilient leaf supporting pins secured respectively to said members, one pin being a coil spring having superimposed coils, and the other pin being disposed in said coil spring.

5. In a loose leaf binder, the combination with two members bodily movable toward and from each other, of two leaf supporting pins secured respectively to said members and comprising two coil springs disposed one within the other.

[Claims 6 to 17 not printed in the Gazette.]

960,675. DISPENSING-FAUCET. EDWARD E. MURPHY, Winchester, Mass., assignor to Puffer Manufacturing Company, a Corporation of Maine. Filed Dec. 14, 1908. Serial No. 467,412.



1. In a dispensing faucet, a valve casing provided with a main outlet nozzle; a tubular valve member longitudinally movable in said casing and packed above and below the lateral inlet to said casing and constituting a nozzle; a supplemental nozzle located within said valve member, said valve member being provided with separate ports leading respectively to said supplemental nozzle member and to the space around the same; and means for producing a longitudinal movement of said member to uncover either of said ports.
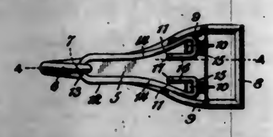
2. The combination with a valve casing provided with a lateral inlet and cup leather packings above and below said inlet; of a tubular valve member passing through said casing and through said cup leather packings, said valve member constituting a nozzle, and being provided with lateral inlet ports, said ports normally being closed by contact with the cup leather packings; a supplemental nozzle within and concentric with said valve member, one of the inlet ports of the valve member communicating with the supplemental nozzle; and means for producing a longitudinal movement of said valve member to uncover either of said ports, as desired.

3. The combination with a valve casing provided with an inlet; of a longitudinally movable tubular valve member extending through said casing, and provided with two sets of ports leading through the wall of said member, said ports being normally closed by packing within the casing; separate nozzles supplied respectively by said ports; means for moving said valve member in either direction to uncover either of said ports to the exclusion of the other; and a spring adapted to be compressed by a movement of said valve member in either direction.

4. The combination with a valve casing provided with a lateral inlet; of a tubular valve extending through said casing and provided with lateral inlets in different vertical planes; cup leather packings at opposite ends of said casing normally covering said inlets respectively; a

supplemental restricted nozzle member consisting of a tube contained in said tubular valve, the upper end of said member separating said inlets, and the member itself being supplied through the upper inlet; and means for producing a longitudinal movement of said tubular valve member to uncover one of said ports or the other according to the direction of movement.

960,676. SNAP-HOOK. ALEXANDER R. MCDONNELL, Patten, Me. Filed July 22, 1909. Serial No. 508,943.



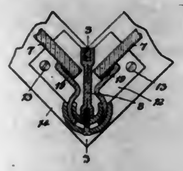
1. A snap hook comprising a body, a bill extending from the body, spaced clamping lugs arranged in pairs upstanding from the face of the body, seats formed in the face of the body between the lugs and the bill, and a spring wire tongue bent to engage the bill to normally close the hook, said tongue having its end portions bent and clamped against the face of the body by the lugs and terminating in forwardly extending portions which bear upon the face of the body, and having their extremities thereof respectively engaging the said seats.

2. A snap hook comprising a body, a bill extending from the body, side flanges formed on the body, a plurality of clamping lugs upstanding from the body and arranged between and spaced from the flanges, and a tongue formed of spring-wire secured to the body by the lugs, said tongue being formed from a single piece of wire and bent at its center to form a bill-engaging loop and side arms, the ends of said arms being respectively arranged between the flanges and the adjacent lugs and terminating in inwardly extending bearing portions adapted to be positioned between and retained by the said lugs, the said portions terminating in forwardly bent and inclined spring arms adapted to normally cause the tongue to engage with the bill to close the said book.

3. A snap-hook comprising a body, a bill extending from the body, a plurality of lugs upstanding from the body, a plurality of openings formed in the body between the lugs and the bill, and a spring tongue secured to the body by the lugs and the openings, and adapted to engage the bill and normally close the said hook, said tongue being formed from a single piece of wire and bent at its center to form a bill-engaging loop and side arms, the ends of said arms being respectively bent to form bearing portions adapted to be positioned between and retained by the said lugs, the said portions terminating in forwardly bent arms having their extreme ends respectively bent downwardly and positioned within the said openings.

4. A snap-hook comprising a body having a bill at one end and a loop at the other, side flanges formed on the body and respectively arranged at opposite sides thereof and adjacent the loop, a plurality of upstanding lugs formed on the body and respectively arranged in pairs, each pair being respectively located near one of the flanges, a plurality of openings formed in the body between the lugs and the bill, and a spring tongue secured to the body by the lugs and the openings, said tongue being formed from a single piece of wire and bent at its center to form a loop which is adapted to engage the bill and normally close the said hook, outwardly curved arms extending from the loop, the loop and the arms being flattened, the ends of said arms being respectively arranged between the flanges and the adjacent pair of lugs and terminating in inwardly extending bearing portions adapted to be positioned between and retained by the said lugs, the said portions terminating in forwardly bent arms having their extreme ends respectively bent downwardly at substantially right-angles, said ends being respectively positioned within the said openings.

960,677. SASH-BAR. THOMAS F. MCGANN, Somerville, Mass., assignor to The T. F. McGann & Sons Company, Boston, Mass., a Corporation of Maine. Filed June 21, 1909. Serial No. 503,318.

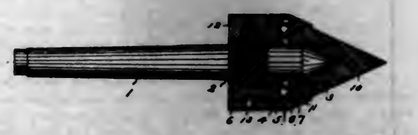


1. A sash bar comprising a parting member adapted to be interposed between adjacent edges of two assembled glass plates and to support said plates against inward sidewise displacement, said member being composed of a body section adapted to be permanently connected with fixed top and bottom sash members, and an outer section detachably secured to the body section, and clamping members adjustably secured to said parting member and adapted to prevent outward sidewise displacement of said plates, said outer section and clamping members being separable as one part from the body section.

2. A sash bar comprising a parting member adapted to be interposed between adjacent edges of two assembled glass plates and to support said plates against inward sidewise displacement, said member being composed of a body section adapted to be permanently connected with fixed top and bottom sash members, and an outer section detachably secured to the body section and having a rounded outer face, clamping members adapted to bear on the outer sides of said plates and having segmental ears movably seated on said outer face, and means for detachably securing said ears and outer section to the body section.

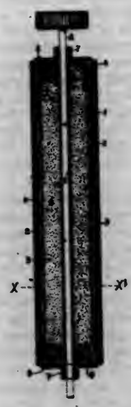
3. A sash bar comprising a parting member adapted to be interposed between adjacent edges of two assembled glass plates and to support said plates against inward sidewise displacement, said member being composed of a body section adapted to be permanently connected with fixed top and bottom sash members, and an outer section detachably secured to the body section and having a rounded outer face, clamping members adapted to bear on the outer sides of said plates and having segmental ears movably seated on said outer face, a segmental shoe adapted to bear on the outer sides of said ears, and screws adapted to engage threaded orifices in the two sections of the parting member, and detachably connect the outer section, clamping members, and clamping shoe to the body section, and to retain the clamping members and shoe in engagement with the outer section when said parts are separated from the body section.

960,678. LATHE-CENTER. WILLIAM J. MCINTYRE, Hartford, Conn. Filed May 18, 1909. Serial No. 496,775.



A lathe center having a shank with a threaded section and a tapering point, a tip having a tapering exterior and a tapering recess, loosely mounted on the pointed end of the shank, a nut turning on the threaded section of the shank, and balls arranged between the extreme rear edge of the tip and said nut, whereby said tip may at any time be adjusted longitudinally with relation to the shank by turning the nut.

960,679. TYPE-WRITING MACHINE. WILLIAM P. MCLAUGHLIN, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed June 30, 1909. Serial No. 505,148.



1. A typewriter platen comprising an outer shell roughened on its inner surface, a tube of cork glued to said inner surface, and a sawdust packing within said tube.

2. A typewriter platen comprising a shell, a tube of cork fitting therein, a sawdust packing within said tube, and fiber heads for said shell.

3. In a typewriter platen, the combination with an impact-receiving shell, of a lining of cork for said shell, a central tube, a sawdust packing between said lining and said tube, and a platen axle extending through said central tube.

4. A typewriter platen comprising an outer shell, plugs in the ends of said shell, a sound-absorbing lining for said shell, a central tube fixed in said plugs, the chamber between the central tube and the lining being filled with sound-deadening material, and an axle extending through said central tube.

5. A typewriter platen comprising an outer shell, plugs in the ends of said shell, a sound-absorbing lining for said shell, a central tube fixed in said plugs, the chamber between the central tube and the lining being filled with sound-deadening material, heads fixed upon said plugs, and an axle extending through said heads and said central tube.

960,680. AUTOMATIC CHURN. JAMES NATHAN NALL, Hornbeck, La. Filed Feb. 13, 1909. Serial No. 477,537.

1. In a churn, a centrally disposed downwardly propelling blade, a plurality of inwardly propelling blades located exterior of the path of the first mentioned blade, and mechanism to operate said blades.

2. In a churn, a centrally disposed downwardly propelling and rotating blade, a plurality of inwardly propelling and rotating blades located exterior of the path of the first mentioned blade, and mechanism to operate said blades.

3. In a churn, a centrally disposed downwardly propelling blade, a plurality of inwardly propelling blades located exterior of the path of the first mentioned blades, and mechanism to operate said blades and cause them to rotate in opposite directions.

4. In a churn, a centrally disposed downwardly propelling and rotating blade, a plurality of inwardly propelling and rotating blades located exterior of the path of the first mentioned blades, and mechanism to operate said blades and cause them to rotate in opposite directions.

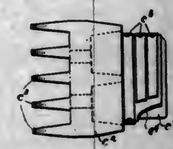
5. In a churn, a churn body, a removable top therefor, a centrally disposed downwardly propelling blade carried on said top, a plurality of inwardly propelling blades located exterior of the path of the first mentioned blades



and supported from said top, and mechanism located on the top to operate said blades.

[Claims 6 to 10 not printed in the Gazette.]

960,681. ELECTRODE FOR WELDING, &c. WILLIAM A. NEFF, Cleveland, Ohio, assignor to The Electric Railway Improvement Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 20, 1907. Serial No. 402,974.



1. In an electrode for electric welding and analogous operations, the combination of a suitable holder, a block of high resistance material secured thereto and projecting therefrom, a coating of relatively incombustible material laterally surrounding the block, and a plurality of independently removable bands for holding such coating in place.

2. In an electrode for electric welding and analogous operations, the combination of a suitable holder, a block of carbon secured thereto and projecting therefrom, a coating of asbestos composition laterally surrounding said block, and a plurality of independently removable bands for holding such coating in place.

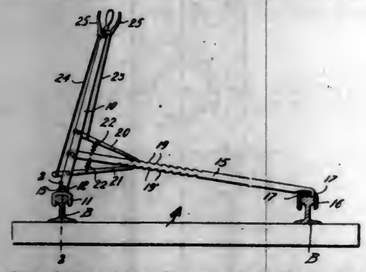
3. In an electrode for electric welding and analogous operations, the combination of a metallic holder formed with a relatively enlarged terminal portion, a block of high resistance material secured thereto and projecting therefrom, a coating of relatively incombustible material laterally surrounding the block, and a plurality of independently removable bands for holding such coating in place.

4. In an electrode for electric welding and analogous operations, the combination of a metallic holder formed with a relatively enlarged terminal portion, a block of carbon secured thereto and projecting therefrom, a coat of asbestos composition laterally surrounding the block, and a plurality of independently removable bands for holding such coating in place.

960,682. RAIL-STRAIGHTENER. BENJAMIN NETAHLA, Jr., Milligan, Nebr. Filed Mar. 18, 1910. Serial No. 550,141.

1. In a device of the class described, the combination with a spanning bar, of a lever pivoted to one extremity

of said spanning bar, shoes carried by the lower extremity of said lever and at the free terminal of said spanning bar, and means whereby said spanning bar may operate in either direction and be retained from springing back.

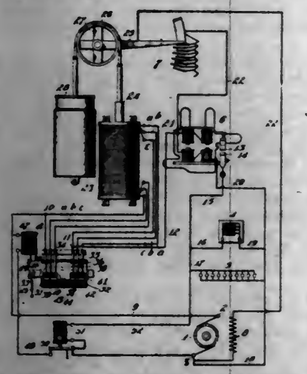


2. In a device of the class described, the combination with a spanning bar, a shoe detachably secured at one terminal of said spanning bar, a lever pivotally connected at the other extremity of said bar, a shoe pivoted to the lower extremity of said lever, and a series of oppositely disposed pawls adapted to coöperate with said spanning bar.

3. In a device of the class described, the combination with a spanning bar, a lever pivoted to one extremity of said rod, means whereby said bar and lever may engage the rails, and pawls above and below said bar and pivoted to said lever adapted to coöperate with said bar in spacing said rails.

4. In a device of the class set forth, the combination with a spanning bar provided with a plurality of teeth, a lever pivoted to one extremity of said spanning bar, means whereby said lever and spanning bar engage the rails, and spring operated pawls above and below said bar adapted to coöperate with said teeth and retain the rails in spaced relation after the same are operated on by the spanning bar.

960,683. SYSTEM FOR THE GENERATION AND DISTRIBUTION OF ELECTRIC CURRENTS. ROGER M. NEWBOLD, Chicago, Ill., assignor to The Adams & Westlake Company, a Corporation of Illinois. Filed July 9, 1908. Serial No. 442,674.



1. In a system for the generation and distribution of electricity, in combination, a self-exciting dynamo, means for regulating the field circuit thereof comprising an electro-magnet in series with the main circuit, the coil of such magnet comprising a plurality of branches, and means for connecting such branches either in series or parallel.

2. In a system for the generation and distribution of electricity, in combination, a self-exciting dynamo, a secondary battery, means for regulating the field circuit thereof comprising an electro-magnet in series with the main circuit, the coil of such magnet comprising a plurality of branches, and means controlled by the voltage of the secondary battery for connecting such branches either in series or parallel.

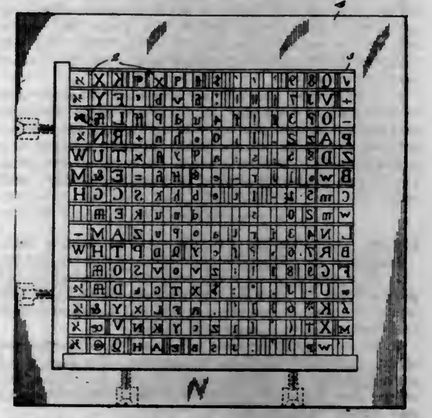
3. In a system for the generation and distribution of electricity, in combination, a self-exciting dynamo, a secondary battery, means for regulating the field circuit of the dynamo comprising an electro-magnet in series with the main circuit, the coil of such magnet comprising a plurality of branches, a switch arranged to connect such branches in series or parallel, an electro-magnet in shunt from the main line for controlling the switch, and a voltage coil in shunt from the battery for controlling the main line shunt.

4. In a system for the generation and distribution of electricity, in combination, a self-exciting dynamo, means for regulating the field circuit of the dynamo comprising an electro-magnet whose coil comprises a plurality of branches of the main dynamo line, a switch adapted to normally connect such branches in series, an electro-magnet for moving the switch to connect said branches in parallel, and means for deënergizing the last-named magnet.

5. In a system for the generation and distribution of electricity, in combination, a self-exciting dynamo, means for regulating the field circuit of the dynamo comprising an electro-magnet whose coil comprises a plurality of branches of the main dynamo line, a switch adapted to normally connect such branches in series, an electro-magnet in shunt from the main line for moving the switch to connect said branches in parallel, and means for deënergizing the last-named magnet.

[Claims 6 to 8 not printed in the Gazette.]

960,684. PROCESS FOR MAKING MATRIX-PLATES FOR MONOTYPE-MACHINES. WILLIAM NICHOLAS, New York, N. Y., assignor to United States Graphotype Company, a Corporation of New York. Filed Feb. 26, 1908. Serial No. 417,984.



1. A process for making matrix plates such as described, consisting in cutting from selected founders' type the shoulder at the base of the characters thereon, assembling such type in a case with means for approximately spacing the type, making a matrix plate from the type so assembled, casting a set of slugs of uniform size, using in the casting operation the matrix plate obtained as above as a means for producing the various character faces for the slugs so cast, repeating the casting after adjusting the position of the matrix plate with respect to the mold so that the slugs obtained will have the characters accurately positioned thereon, assembling the uniform slugs thus obtained in proper position in a case and making a matrix plate therefrom as by means of an electrotyping process.

2. A process for making matrix plates such as described, consisting in cutting from selected founders' type the shoulder at the base of the characters thereon, assembling such type in a case with means for approximately spacing the type, making a matrix plate from the type so assembled, casting a set of slugs of uniform size, using in the casting operation the matrix plate obtained as above as a means for producing the various character faces for the slugs so cast, repeating the casting after adjusting the position of the matrix plate with respect to the mold so that the slugs so obtained will have the characters accurately positioned thereon, assembling the uniform slugs thus obtained in proper position in a case and making a matrix plate from the slugs so assembled.

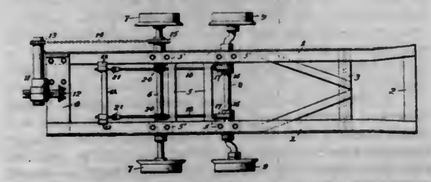
3. A process for making matrix plates such as described, consisting in assembling selected type in a case with means for approximately spacing the type, making a matrix plate from the type so assembled, casting a set of slugs of uniform size, using in the casting operation the matrix plate obtained above as a means for producing the various character faces for the slugs so cast, repeating the casting after adjusting the position of the matrix plate with respect to the mold so that the slugs so obtained will have the characters accurately positioned thereon, assembling the uniform slugs thus obtained in proper position in a case and making a matrix plate from the slugs so assembled.

4. A process for making matrix plates such as described, consisting in assembling selected type in a case with means for approximately spacing the type, making a matrix plate from the type so assembled, casting a set of type slugs, using in this casting operation the matrix plate obtained as above as a means for producing the various character faces for the slugs so cast, repeating the casting after adjusting the position of the matrix plate with respect to the mold so that the slugs so obtained will have the characters accurately positioned thereon, assembling the slugs thus obtained in proper position in a case and making a matrix plate from the slugs so assembled.

5. The process hereinbefore described, consisting in casting a layout of type slugs, each with a distinctive type character thereon, the several characters being differently positioned on the faces of their respective slugs according to the measurements of the characters, and the slugs being of a size to be locked together without intervening spaces or space quads; arranging the slugs with respect to the unit of "set" measurement of the characters thereon; and locking together the slugs so arranged to form the assembled layout.

[Claims 6 to 13 not printed in the Gazette.]

960,685. WHEELED TRUCK. GEORGE B. NORRIS, Columbus, Ohio, assignor to The Jeffrey-Manufacturing Company, a Corporation of Ohio. Filed Sept. 11, 1909. Serial No. 517,276.



1. The combination of a wheeled mining machine truck, devices upon the truck adapted to incline it longitudinally and mounted in position to be engaged and operated by a mining machine as it is moved into position upon the truck irrespective of the position of the center of gravity of the mining machine with respect to the axis about which the truck is inclined.

2. The combination in a truck, of a frame and two supporting axles therefor, wheels on the axles, guides on the frame for receiving an article to be carried by the truck, the frame being tiltable with respect to the plane combon to the two axles so as to incline the said guides to the horizontal, and means adapted to convert the movement of the article along the guides on the truck into a tilting movement of the frame, said means operating independently of the position of the center of gravity of the article.

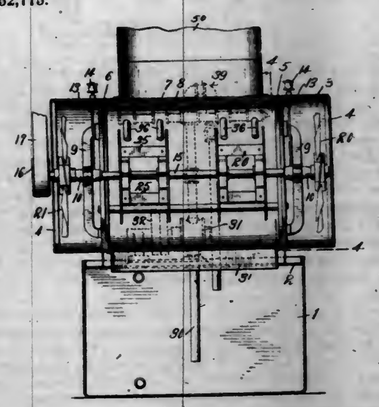
3. The combination of a wheeled truck adapted to carry a mining machine, and power transmitting mechanism carried by the truck operable by the movement of the mining machine with respect to the truck for elevating one end of the truck from a relatively low to a horizontal position.

4. The combination of a truck frame adapted to carry relatively heavy objects, two axles and wheels thereon for supporting the frame, and power transmitting mechanism controllable by the position of the said object with respect to the truck for inclining the truck frame relatively to the plane common to the said axles.

5. The combination of a frame, longitudinally arranged horizontal guides on the frame for receiving a mining machine, a rear axle and wheels thereon bodily immovably mounted in the frame, and a front axle and wheels bodily movably mounted in the frame, and means operable by the moving mining machine for moving the frame with respect to the front axle.

[Claims 6 to 11 not printed in the Gazette.]

960,686. DUST-COLLECTOR. DAVID J. T. OLDHAM, New York, N. Y. Filed Sept. 12, 1908. Serial No. 452,775.



1. A dust collector having a tank, a tubular open-ended spraying chamber above said tank, an elongated narrow passage connecting the lower end of said spraying chamber with the upper end of said tank, a shaft extending longitudinally through the spraying chamber, oppositely-acting suction devices mounted on said shaft at the ends of said spraying chamber, spraying paddles mounted on said shaft between said suction devices, means for drawing liquid from said tank and discharging it on to said spraying paddles, and an exhaust pipe leading from the upper portion of said spraying chamber.

2. A dust collector comprising a tank having an overflow pipe and an exhaust pipe, an open-ended spraying chamber located above said tank, a passage connecting the upper portion of said tank with the lower portion of said spraying chamber, a shaft extending longitudinally of the spraying chamber, oppositely-acting suction fans on the ends of said shaft, spraying paddles mounted on said shaft between said suction fans, means for drawing water from said tank and discharging it on to said paddles, means for supplying water to said tank, and an exhaust pipe communicating with the upper portion of said spraying chamber.

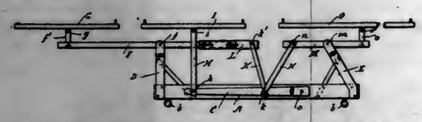
3. A dust collector comprising a spraying chamber, rotary suction devices at the ends of said chamber, rotary spraying devices within said chamber and intermediate said suction devices, operating means for said spraying and suction devices, and a water inlet above said spraying devices, whereby the water is sprayed in the spraying chamber in the presence of the dust-laden air.

4. A dust collector comprising a spraying chamber, rotary suction devices at the ends of said chamber, rotary spraying devices within said chamber and intermediate said suction devices, a driving shaft carrying said spraying and suction devices, and a water inlet above said spraying devices, whereby the water is sprayed in the spraying chamber in the presence of the dust-laden air.

5. A dust collector comprising an elongated spraying chamber, a driving shaft extending through said spraying chamber, oppositely-acting suction devices mounted on said shaft, a spraying device mounted on the same shaft intermediate said suction devices, a water inlet to said spraying chamber located above said spraying device, whereby the water is sprayed in said spraying chamber in the presence of the dust-laden air.

[Claims 6 to 11 not printed in the Gazette.]

960,687. DRAFT-EQUALIZER. ALBERT B. OLSEN, Stearns, Mont. Filed Mar. 22, 1910. Serial No. 550,925.



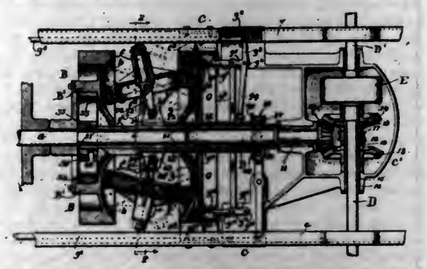
1. In a draft equalizer, the combination, with a main draft beam, of an equalizing lever having one end pivoted to the draft beam, brackets secured to the ends of the draft beam, a long lever having its middle part pivoted to one of the said brackets, a short lever having its middle part pivoted to the other bracket, two links pivoted to the equalizing lever at one end and having their other ends pivoted to the adjacent end portions of the said long lever and short lever respectively, a long link pivoted to the free end portion of the said equalizing lever, and three whiffletrees having their middle portions pivoted respectively to the front end of the said long link and to the outer end portions of the long lever and the short lever.

2. In a draft equalizer, the combination, with a main draft beam, of an equalizing lever having one end pivoted to the draft beam, brackets secured to the ends of the draft beam, a long lever having its middle part pivoted to one of the said brackets, an adjustable extension-piece secured to the inner end portion of the said long lever, a short lever having its middle portion pivoted to the other bracket, two links pivoted to the said equalizing lever at one end and having their other ends pivoted to the adjacent end portions of the said extension-piece and short lever respectively, a long link pivoted to the free end portion of the said equalizing lever, and three whiffletrees having their middle portions pivoted respectively to the front end of the said long link and to the outer end portions of the long lever and the short lever.

960,688. DRIVING MECHANISM FOR MOTOR-VEHICLES. FREEMAN M. OLSON, Chicago, Ill., assignor to Commercial Motor Car and Engine Co., Chicago, Ill., a Corporation of Illinois. Filed June 15, 1908. Serial No. 438,482.

1. In friction driving-mechanism, the combination of a wheel having a friction-surface, a friction-pulley operatively connected to be rotated by said surface and mounted for cycloidal movement, means for causing the pulley to be operated in a circular path when it is rotated by said friction-surface, and means for rendering the pulley inoperative for circular movement.

2. In friction driving-mechanism, the combination of a pair of oppositely disposed elements having friction-surfaces, a friction-pulley mounted between said surfaces for circular movement, a driven element operated by the circular movement of said pulley, and means for shifting one of said surfaces to render the pulley inoperative for circular movement.



3. In friction driving-mechanism, the combination of a pair of oppositely disposed elements having concave friction surfaces, a friction-pulley mounted between said surfaces for circular movement, means for angularly adjusting said pulley to engage said surfaces at relatively different radii, and means for shifting one of said surfaces to render the pulley inoperative for circular movement.

4. In friction driving-mechanism, the combination of a pair of oppositely disposed elements having friction-surfaces, a friction pulley mounted between said surfaces for circular movement, an element driven by the circular movement of the pulley, one of said oppositely disposed elements being longitudinally movable into and out of engagement with said pulley, and means for shifting the latter element to control the operation of the driven element by the pulley.

5. In friction driving-mechanism, the combination of a pair of oppositely disposed elements having friction-surfaces, a pulley mounted between said surfaces for circular movement, one of said elements being slidably mounted, means for adjusting the pulley to engage said surfaces at different radii, and means for shifting said longitudinally movable element to control the operation of the driven element by said pulley.

[Claims 6 to 25 not printed in the Gazette.]

960,689. MATERNITY-SKIRT. WILLIAM PADERNACHT, New York, N. Y., assignor to Anna Padernacht, New York, N. Y. Filed Aug. 16, 1909. Serial No. 513,025.



1. A skirt of the character described, having a back piece and foldable portions adapted to be laid upon and secured to said back piece, in combination with means for independently securing the folded portions in position and other means for securing the folded portions to the back piece, said first mentioned means including free strap extensions on the foldable portions and devices for engaging and fastening said strap extensions in place.

2. A skirt of the character described, having a back piece and separate adjustable portions adapted to be laid upon said back piece and to be secured in position thereover, in combination with means independently of the back piece for preliminarily adjusting said portions.

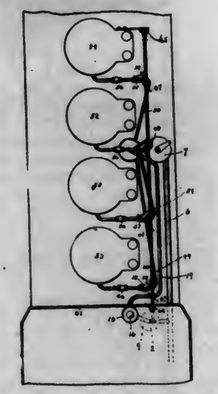
3. A skirt of the character described, having a back piece and separate adjustable portions adapted to be laid upon said back piece and to be secured in position thereover, in combination with means for preliminarily adjusting said portions, and other means for subsequently securing the adjusted portions to the back piece.

4. A skirt of the character described, having oppositely disposed foldable portions, a strap extension carried by each of said portions, and means on each of said portions to operate with its strap extension to secure said portions in folded position.

5. A skirt of the character described, having oppositely disposed foldable portions, a strap extension carried by each of said portions, and means on each of said portions to operate with its strap extension to secure said portions in folded position, in combination with similar indicators associated with each portion showing the extent to which the parts should be folded to get the desired waist measurement.

[Claims 6 to 9 not printed in the Gazette.]

960,690. STARTING DEVICE FOR EXPLOSION-ENGINES. EDWARD N. PAGELSEN, Detroit, Mich. Filed Sept. 23, 1909. Serial No. 519,207.



1. In a starting device for multi-cylinder explosion engines, the combination of a carbureter and pump, a selecting valve controlled by the engine and actuated by the pump, and pipes extending from the selecting valve to the cylinders of the engine.

2. In a starting device for multi-cylinder explosion engines, the combination of a selecting valve comprising a body having a series of ports, a pipe connecting each port to an engine cylinder, a movable member within the body adapted to open the proper port according to the position of the engine, a carbureter, a pump to draw an explosive charge from the carbureter and force it into and through the selecting valve and its movable member to the engine cylinder, said movable member being provided with means to resist the flow of the explosive charge therethrough whereby said movable member is positioned by the pressure of said charge.

3. In a starting device for multi-cylinder explosion engines, the combination of a valve body having a port for each cylinder of the engine, a pipe connecting each port to a cylinder, a hollow piston valve having an inlet and outlet apertures adapted to register with said ports, a spring to normally hold the piston to close the ports, a valve to close the inlet of the piston, a spring to hold said valve on its seat, a carbureter, a pump to cause the flow of explosive mixture from the carbureter to the selecting valve, and through the same to the proper cylinder, and means to properly position the selecting valve piston.

4. In a starting device for explosion engines, the combination of a carbureter and a pump, a cylindrical valve casing having outlet ports, pipes connecting the outlet ports to the cylinders of the engine, a head for the cylindrical casing having an inlet port, a pipe connecting the inlet port and the pump, a hollow cylindrical valve within the casing and having inlet and outlet openings, said outlet openings positioned so as to register with the outlet ports of the casing in succession, and means to limit the movement of said valve.

5. In a starting device for explosion engines, the combination of a source of explosion vapor, a cylindrical valve casing having outlet ports and an inlet port, pipes connecting the outlet ports to the cylinders of the engine and the inlet port and the vapor source, a hollow cylindrical valve within the casing and having inlet and outlet openings, said outlet openings positioned so as to register with the outlet ports of the casing in succession, means to limit the movement of said valve, and means to close the inlet opening of the cylindrical valve.

[Claims 6 to 10 not printed in the Gazette.]

960,691. WRENCH. LOUIS PANZER, Canandaigua, N. Y. Filed Aug. 21, 1909. Serial No. 514,025.



1. In a wrench, a body portion with a stationary jaw, said body portion having a longitudinal cavity and tongues, said cavity being laterally enlarged, a movable jaw with a threaded shank received in said cavity, and a nut with an annular longitudinally-projecting hollow flange received in the enlargement of said cavity and within which said tongues engage, said body having longitudinally extending projections at one end of said enlarged portion of the cavity and the nut being provided at its outer end with notches for coöperation therewith.

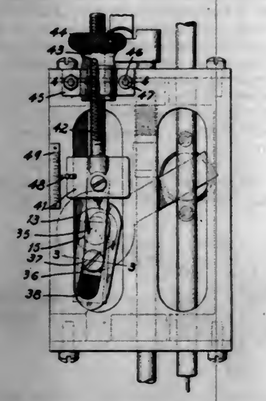
2. In a wrench, a body portion with a longitudinal cavity laterally enlarged, said body portion having at one end of said enlarged portion of the cavity at opposite sides tongues and the wall at the said end of the enlarged cavity being cut away upon curved lines, and the opposite end wall being cut away upon curved lines, and a jaw having a threaded shank received in said cavity and a nut received in the enlarged portion of the cavity and formed at one end with a longitudinally-projecting hollow flange and at the other end with notches.

960,692. AWL-FEED FOR SEWING-MACHINES. CHRISTIAN PEDERSEN, Skörring Pr. Galten, Jutland, Denmark, assignor to Landis Machine Company, St. Louis, Mo., a Corporation of Missouri. Original application filed Apr. 23, 1909, Serial No. 491,667. Divided and this application filed July 19, 1909. Serial No. 508,449.

1. In a wax thread sewing machine, the combination with the movable awl carriage, of means whereby said carriage is reciprocated, an adjustable connection between the awl carriage and the reciprocating means, a link forming part of said adjustable connection, a threaded rod connected to the link, a nut on said threaded rod, a fixed bearing in which said nut rotates, and means connected with said bearing for clamping said nut against rotation.

2. In a wax thread sewing machine, the combination with the movable awl carriage, of means whereby said carriage is reciprocated, an adjustable connection between the awl carriage and the reciprocating means, a link forming part of said adjustable connection, a threaded rod connected to the link, a nut on said threaded rod, a fixed bearing, and means whereby said bearing may be tightened to clamp the nut and hold the same against rotation.

3. In a wax thread sewing machine, the combination with the movable awl carriage, of means whereby said carriage is reciprocated, an adjustable connection between the awl carriage and the reciprocating means, a link forming part of said adjustable connection, a threaded rod connected to the link, a nut on said threaded rod, a split bearing for the nut, which split bearing is mounted on a fixed part of the machine, and means whereby said split bearing is tightened to clamp the nut and hold the same against rotation.



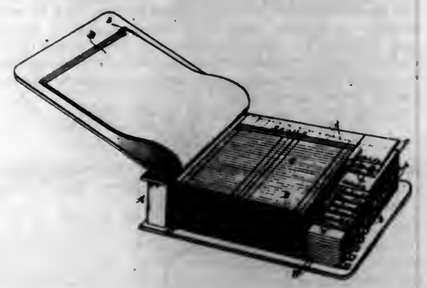
4. In a wax thread sewing machine, the combination with the movable awl carriage, of means whereby said carriage is reciprocated, an adjustable connection between the awl carriage and the reciprocating means, a link forming part of said adjustable connection, a threaded rod connected to the link, a nut on said threaded rod, a fixed bearing, means whereby said bearing may be tightened to clamp the nut and hold the same against rotation, a pointer carried by the threaded rod, and a graduated scale on the machine adjacent the pointer.

5. In a wax thread sewing machine, the combination with the movable awl carriage, of means whereby said carriage is reciprocated, an adjustable connection between the awl carriage and the reciprocating means, a link forming part of said adjustable connection, a threaded rod connected to the link, a nut on said threaded rod, a split bearing for the nut, which split bearing is mounted on a fixed part of the machine, means whereby said split bearing is tightened to clamp the nut and hold the same against rotation, a pointer carried by the threaded rod, and a graduated scale on the machine adjacent the pointer.

960,693. SELF-INDEXING BOOK. JOHN B. PERRINE, Valparaiso, Ind., assignor, by mesne assignments, to Workman Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed June 22, 1908. Serial No. 439,676.

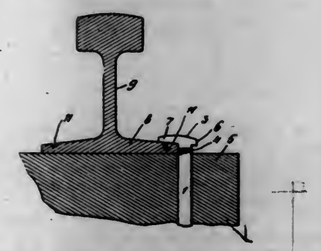
1. In a loose leaf self-indexing book, the combination of a plurality of primary sets of leaves, the leaves of each set having progressively increasing excisions at one margin of the book so that a portion of each of the leaves of one of said sets may be simultaneously exposed for identifying data, identifying markers for distinguishing the primary sets from one another, and a sub-series of leaves interposed between two leaves of one of the primary sets and having progressively increasing excisions at one of the other margins of the book for simultaneously exposing a portion of each of the leaves of the sub-series for identifying data, the leaves of the primary sets being extended to overlie the marginal excisions of the sub-series to conceal the progressively arranged index-portions of the intermediate series of leaves.

2. In a loose-leaf self-indexing book, the combination of a plurality of primary sets of leaves, the leaves of each set having progressively increasing excisions at one margin of the book so that a portion of each of the leaves of a set may be simultaneously exposed for identifying data, a complete divisional leaf between each of the primary sets, progressively exposed projecting markers on the divisional leaves for distinguishing the primary sets of leaves from one another, and a sub-series of leaves interposed between two of the leaves of one of the primary sets and having



progressively increasing excisions at one of the other margins of the book for simultaneously exposing a portion of each of the leaves of the sub-series for identifying data, the leaves of the primary sets being extended to overlie the marginal excisions of the sub-series and to conceal the progressively arranged index portions of the intermediate series of leaves.

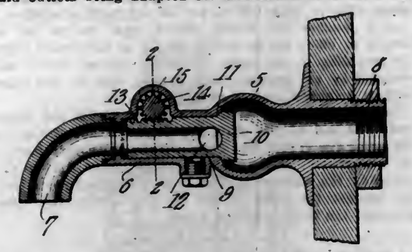
960,694. SPIKE. GEORGE PETECSOLA, Oakview, Colo. Filed Feb. 7, 1910. Serial No. 542,518.



The combination with a rail having the base flanges thereof provided with longitudinal grooves adjacent to the outer edges of said flanges, of a spike, each spike comprising a shank having the lower end thereof pointed, a head carried by the upper end of said shank and providing shoulders at the sides of said shank adapted to limit the inward movement of the spike relatively to a tie, an outwardly projecting flange carried by said head and adapted to provide a gripping surface for an instrument adapted to withdraw said spike, an inwardly projecting flange carried by the head of said spike and adapted to overhang the base flange of said rail, and a depending rib carried by said flange and adapted to engage in the groove of the base flange of said rail, said rib corresponding in width to said flange and of a depth when combined with the depth of said flange to correspond to the depth of said head, substantially as described.

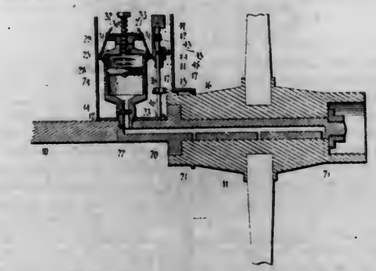
960,695. FAUCET. JOHN A. PETRO, Lorain, Ohio. Filed Mar. 3, 1910. Serial No. 547,104.

A valve outfit comprising a casing having an inlet and a tubular extension, said extension having separate outlets located at the end and side respectively, and each of said outlets being adapted for connection of a discharge



spout thereto, a valve working in the bore of the extension, and a closure for the outlet not in use.

960,696. AUTOMATIC LUBRICATOR. WILLIS PFEIFER, Simpson, Kans. Filed Mar. 2, 1910. Serial No. 546,868.



1. The combination with an axle, a wheel hub mounted thereon, and a force feed grease cup mounted on the axle and including a threaded plunger stem and a nut on said stem; of a gear on said nut, a projection on said hub, and a driving mechanism for said gear including a shaft having a star wheel mounted thereon and adapted to lie in the path of said projection, a cap fitting on said stem and covering said gear; and means to hold said cap removably on the stem, said means comprising spring arms attached to said grease cup and having inwardly directed ends engaging over the cap when the latter is in position.

2. In a device of the kind described, an axle provided with an oil passage, a grease cup mounted on said axle and communicating with the oil passage, a grease cup cap closing the upper end of said grease cup, a plunger in said grease cup, a stem fixed to said plunger and extending through said cap, a nut on said stem above said cap, a gear fixed to said nut and above the same, a cap provided with a central opening mounted on said stem and covering said gear, spring arms attached to the cap of the grease cup and having inwardly directed ends engaging over the cap of the gear when the latter is in position, bearings formed on said cap, a shaft journaled in said bearings, a worm on said shaft engaging with the gear when the cap is in position, a worm wheel on the end of said shaft, a casing surrounding said worm wheel, bearings formed on said casing, a second shaft carried in said bearings and extending downward alongside of said grease cup, said second shaft having its lower end journaled in the axle, a worm on the second shaft meshing with the worm wheel on the first shaft, a star wheel on the second shaft, a wheel hub mounted on said axle, and a projection fixed on the wheel hub and adapted to contact with the star wheel as the hub revolves on the axle.

960,697. CARBURETER. LOUIS PLEIN, Chicago, Ill. Filed July 26, 1909. Serial No. 509,666.

1. In a carbureter, the combination of a fuel duct therefor; a stationary needle valve stem for said duct; a perforated plate adjustable toward and away from said needle valve and arranged to have its perforation receive said needle valve; a tubular member yieldingly mounted over said plate; and means connecting the interior of said tubular member with the intake of an engine, substantially as described.

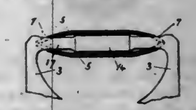


2. In a carbureter, the combination of a fuel duct therefor; a needle valve in said fuel duct; a perforated plate mounted upon screw threads to adjust toward and away from said needle valve and arranged to have its perforation receive said needle valve; a tubular member yieldingly mounted over said plate; a stop limiting the approach of said tubular member so as to prevent actual contact with said plate; and means for connecting the interior of said tubular member with the intake of an engine, substantially as described.

3. In a carbureter, the combination with a casing, of a mixing chamber therein; a threaded fuel pipe leading to said mixing chamber; a stationary needle valve stem in said pipe; a dome shaped perforated plate mounted upon a sleeve threaded in said pipe with its perforation arranged to receive said needle valve; a tubular member yieldingly mounted over said plate; and means for connecting the interior of said tubular member with the intake of an engine, substantially as described.

4. In a carbureter, the combination with a casing, of a mixing chamber therein; a threaded fuel pipe leading to said mixing chamber; a stationary needle valve stem in said pipe; a dome shaped perforated plate mounted upon a sleeve threaded in said pipe; a friction spring imprisoned in said plate around said sleeve; a tubular guide over said plate, a tubular member mounted on said guide and having a rounded lower edge; a spring adapted to press said tubular member toward said plate; a stop on said guide adapted to limit the approach of said tubular member to said plate so as to prevent actual contact therewith; and means for connecting the interior of said tubular guide with the intake of an engine, substantially as described.

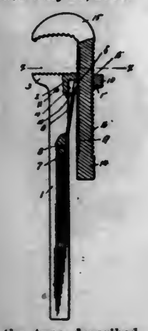
960,698. ROTARY LOCKING COLLAR-BUTTON. GEORGE PONAROUSE, San Francisco, Cal., assignor, by mesne assignments, to C. F. Degner, Los Angeles, Cal. Filed Jan. 10, 1907. Serial No. 351,723. Renewed Dec. 21, 1908. Serial No. 468,589.



A rotary locking collar button, comprising a base, a yoke, having side arms and a cross bar connecting said side arms, said cross bar having a middle portion rectangular in cross section, and reduced rounded terminal portions, and a hollow head formed of two dish-shaped plates of spring sheet metal permanently secured together at one side with their free edges in close proximity to each other, said head being cut away at its edges at diametrically opposite points to form bearings for said reduced terminal portions of the cross bar, the concavity of the

dish-shaped plates being such relatively to the enlarged central portion of the cross bar that opposite sides of said enlarged portion can bear simultaneously against the inner surface of both plates, substantially as described.

960,699. PIPE-WRENCH. WASHINGTON M. POTTER, Freedom, Pa. Filed July 19, 1909. Serial No. 508,478.



1. A wrench of the type described, comprising a handle bar provided with a fixed gripping jaw, a resilient toothed pawl carried by said handle bar, a yoke pivotally supported by said handle bar and having the outer end thereof provided with gripping teeth, a shank movably mounted in said yoke and adapted to be engaged by the teeth of said yoke and by said toothed pawl, and a jaw carried by said shank for confronting the fixed jaw of said handle bar.

2. A wrench of the type described, comprising a handle bar, a fixed serrated jaw carried by said bar, a resilient toothed pawl secured to said handle bar, a lug carried by the side of said pawl and adapted to facilitate the movement of said member, a yoke pivotally supported by the outer end of said handle bar, said yoke having the outer end thereof provided with an enlargement having gripping teeth, a shank movably mounted in said yoke and having one edge thereof provided with teeth corresponding in width to said shank and adapted to be engaged by the teeth of said yoke, and the opposite edge thereof provided with teeth of a less width than said shank and adapted to be engaged by said toothed pawl, and a curved serrated gripping jaw carried by the outer end of said shank and adapted to confront the fixed jaw of said handle bar.

960,700. CRUTCH-TIP. PHILIP W. PRATT, Boston, Mass. Filed Apr. 3, 1909. Serial No. 487,795.



1. The combination with a crutch tip, of a pressure-sustaining member having a central concavity in its bottom face to form a normal open space at the center of that portion of the tip which receives the pressure of the crutch staff.

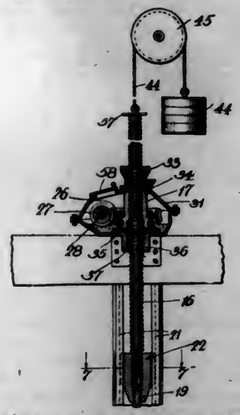
2. In combination with a crutch tip, a plate for sustaining the thrust of the crutch staff, bearing on the bottom of the tip on a zone near its circumference and separated therefrom in its central portion, whereby the tread portion of the tip is enabled to yield in the center and the wear is distributed.

3. In combination with a socket crutch tip, a washer having a depressed annular portion to bear on the bottom of the tip socket, and a raised central portion, forming a cavity on its under side to permit yielding of the center of the tip, and a convex crown on its upper side to take the thrust of the central staff.

4. A washer for socket crutch tips, having an indented or offset center and a turned-up periphery, thereby providing in its under surface a central cavity surrounded by an annular bearing zone, and on the upper surface a central convex crown.

5. In combination with a crutch, a socket tip fitting upon the end of the crutch, a plate for sustaining the thrust of the crutch and having a central rotary bearing for the crutch, and a holder consisting of a ring surrounding the edge of the tip, and resilient fingers bearing against the sides of the tip for holding the latter adjacent the surface of the crutch.

960,701. ELEVATING MACHINERY. ARTHUR T. PRESCOTT, East Orange, N. J., assignor to George H. Frothingham Co., a Corporation of New York. Filed Sept. 14, 1909. Serial No. 517,575.



1. In mechanism of the class described, the combination with an elevating screw, means for moving the screw longitudinally, and a guide for limiting such movements to right line movements, of a swinging connecting element for connecting the elevating screw with the object to be raised, whereby the point of connection with the object may move laterally with respect to the longitudinal movements of the screw.

2. In mechanism of the class described, the combination with a swinging bridge, elevating screws therefor, and means for operating the elevating screws, of guides for limiting the movements of the screws to right line movements, and swinging connections between the bridge and the elevating screws.

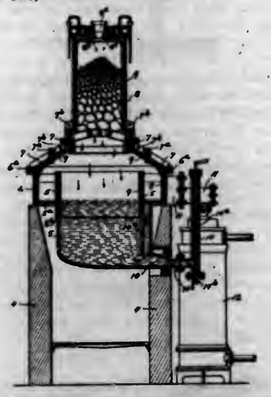
3. In mechanism of the class described, the combination with an elevating screw, means for moving the screw longitudinally, and a guide for limiting such movements to right line movements, of a flexible swinging connecting element for connecting the elevating screw with the object to be raised.

4. In mechanism of the class described, the combination with an elevating screw, means for moving the screw longitudinally, and a guide for limiting such movements to right line movements, of a flexible swinging connecting element for connecting the elevating screw with the object to be raised, the said flexible element including a section of chain.

5. In mechanism of the class described, the combination with a swinging bridge, elevating screws therefor, and means for operating the elevating screws, of a guide for limiting such movements to right line movements, and a flexible connection for connecting the bridge with the screws.

[Claims 6 to 17 not printed in the Gazette.]

960,702. APPARATUS FOR CONCENTRATING SULFURIC ACID. OTTO PROELSS, Kansas City, Mo., and WALTER S. HALL, Argentine, Kans. Filed Jan. 6, 1910. Serial No. 536,702.



1. In an apparatus of the class described, the combination with a fireplace of a central vessel having an opening at its bottom, a concentric outer vessel having an exit opening at its bottom said bottom being arranged at a higher level than said opening of the central vessel, a vertical tubular connection of said outer vessel with said opening of said central vessel, a partition in said outer concentric vessel located between said tubular connection and said exit opening, and a perforated cover for said vessels, as specified.

2. In an apparatus of the class described, the combination with a central vessel having an opening at its bottom communicating with a vertical tube, of a concentric outer vessel communicating at its bottom with the upper end of said vertical tube and having an exit opening near its bottom, means for causing the acid treated to pass over the entire bottom of said outer vessel before reaching said exit opening, and a cover adapted to support an interstitial filling over said central vessel, as specified.

3. In an apparatus of the class described, the combination with a central vessel having a tubular horizontal extension 10 of a detachable tubular part 10^b and a vertical tube 14 provided with a valve and rod for operating the valve, as specified.

4. In an apparatus of the class described, the combination with a fire-place of a boiling pot 5 having an opening at its bottom communicating with a vertical tube 10^a, a concentric flange 5^a at about its midheight and perforated by said tube; a concentric flange 6 having tubular perforations 11, and a perforated cover having parts 7 and 8, as and for the purpose specified.

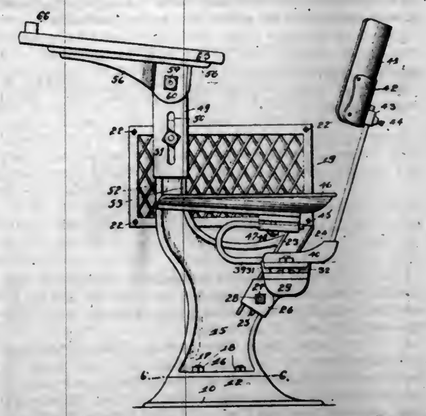
5. In an apparatus of the class described, the combination with a fire-place of a cast metal boiling pot 5 having an opening 10 and vertical tube 10^a, a flange 5^a and rim 6 adapted to form an outer concentric boiling vessel having its bottom perforated by said tube 10^a and its rim perforated at the bottom by a tubular exit opening, a perforated cover having parts 7 and 8, the latter being filled, and the interior acid tile lining 9 of said parts, as specified.

[Claims 6 to 8 not printed in the Gazette.]

960,703. SCHOOL-DESK. FREDERICK E. RAMSDEN, Fort Dodge, Iowa. Filed Sept. 12, 1908. Serial No. 453,065.

1. A school desk comprising a single pedestal, a slideway formed thereon, an arm engaging and extending horizontally from said slideway, a bolt connecting said arm and slideway adjustably, a seat bar carried by the outer end of said arm, a seat on one end of said bar and a back on the opposite end of said bar.

2. A school desk, comprising a single pedestal formed with a slideway, an arm adjustably mounted on said slideway, and secured to said pedestal, said arm formed with a journal bearing, a yoke journaled on said bearing, a seat bar on said yoke, a clamp over said seat bar and secured to the yoke, a seat on one end of said bar, and a back on the opposite end of said bar.



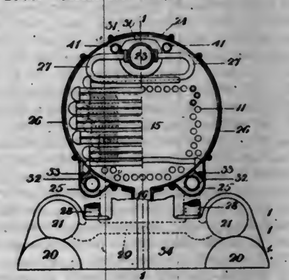
3. In a school desk, a supporting arm formed with a journal and a cup surrounding said journal, a yoke formed with a hub pivoted on said journal and extending within said cup, means for clamping said yoke and journal together, a seat bar carried by said yoke, a seat on one end of said bar and a back on the opposite end of said bar.

4. In a school desk, a supporting arm formed with a conical journal and a cup surrounding said journal, a yoke formed with a conical bore fitted to said journal, clamping devices connecting said journal and yoke, a resilient seat bar carried by said yoke, a clamping member mounted on said yoke and engaging said seat bar, a seat mounted on one end of said bar and a back mounted on opposite end of said bar.

5. In a school desk, a supporting arm formed with a journal and a cup surrounding said journal, a yoke formed with a hub pivoted on said journal, said hub formed with a notch and a lug on the cup entering said notch, a seat bar mounted on said yoke, a seat on one end of said bar and a back on the opposite end of said bar.

[Claims 6 and 7 not printed in the Gazette.]

960,704. FEED HEATING AND SUPERHEATING BOILER. SIDNEY A. REEVE, Worcester, Mass., assignor to Charles F. Brown, trustee, Reading, Mass. Filed Mar. 2, 1906. Serial No. 303,762.



A locomotive-type superheating-boiler comprising a vaporizing-chamber traversed by the furnace gases and

having a steam-outlet, a gas-chamber forward of the vaporizing-chamber having side openings in its opposite walls provided with removable covers, an upper manifold structure connected with the steam-outlet of said vaporizing-chamber, two eduction-manifolds, two sets of superheating-coils occupying said gas-chamber and removable respectively through the opposite side openings of the chamber, and removable fastenings connecting the ends of said coils with the upper and lower manifolds.

960,705. REINFORCED LATHE-CHUCK. HERMAN M. REYNOLDS, Oneida, N. Y. Filed Apr. 29, 1909. Serial No. 492,840.

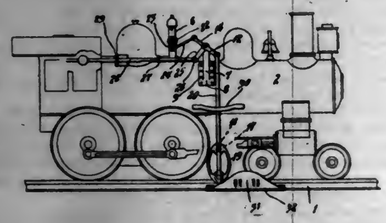


1. A chuck body having a continuous reinforcing ring embedded therein, jaws movably mounted in said body, and jaw adjusting screws engaging directly with said ring, substantially as set forth.

2. A cast metal chuck body having a reinforcing ring of stronger material partially embedded in the metal of the body and partially exposed, substantially as set forth.

3. A cast-iron chuck body having a steel reinforcing ring partially embedded in the metal of the body and partially exposed, substantially as set forth.

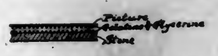
960,706. RAILROAD AUTOMATIC SIGNAL. REINHOLD ROCHOTSCH, Pittsburg, Pa., assignor of one-half to Josef Oucsek, Pittsburg, Pa. Filed Aug. 2, 1909. Serial No. 510,893.



1. A trip actuated signaling mechanism for railways comprising the combination with a trip mechanism, of a rock shaft mounted upon the locomotive and adapted to be automatically actuated by the trip mechanism, an alarm carried by the locomotive, a pair of crank arms carried by said shaft and extending in opposite directions with respect to each other, one of said crank arms connected to the trip mechanism for actuating the shaft, operating means for the alarm connected to the other of said crank arms, a third crank arm projecting from said shaft, and means connected to said third crank arm for maintaining the alarm in an operative position.

2. Trip actuated signaling mechanism for railways comprising the combination with a trip mechanism and a locomotive, of a bracket carried by said locomotive, a rock shaft mounted in said bracket and provided with a pair of crank arms, one of said arms connected with the trip mechanism for actuating the rock shaft, an alarm mechanism mounted upon the locomotive, an operating means for said alarm mechanism connected at one end thereto and at its other end to the other crank arm, a third crank arm carried by said shaft, and means connected to said third crank arm for maintaining the alarm mechanism in operative position.

960,707. PROCESS FOR TRANSFERRING PRINTED AND OTHER PICTURES TO STONES AND THE LIKE. ANTONIUS LAURENTIUS DE ROOY, Haarlem, Netherlands. Filed Jan. 24, 1910. Serial No. 539,799.



A process for transferring printed and other pictures to stone and the like, consisting in the following steps; first, coating the printed picture with molten sulfur; second, soaking the article in water to remove the backing of the picture, leaving the picture adhering to the sulfur slab; third, coating the picture, first with oil or other suitable greasy substance and then with a mixture of gelatin and glycerin dissolved in water; fourth, drying the treated article in a hot temperature to separate the gelatin-glycerin layer, to which the picture firmly adheres, from the sulfur slab; and fifth, coating the stone or other object to which the picture is to be transferred with a very dilute solution of glycerin and gelatin and placing the prepared picture upon it with the two gelatin-glycerin layers together, whereby they unite and fasten the picture to the stone.

960,708. HEEL FOR SHOES. HENRY J. P. ROTTGER, New York, N. Y. Filed Jan. 27, 1910. Serial No. 540,307.



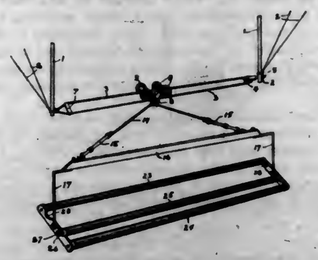
1. A composite heel for shoes, comprising an upper apertured member to be secured to the sole of the shoe and a lower vertically movable member normally spaced apart therefrom and means for connecting the upper and lower parts of the heel and for imparting a partial rotation to the lower movable member by the approaching movement of the same toward the upper member in the act of walking.

2. A composite heel for shoes, comprising an upper member to be securely attached to the sole of the shoe as a fixture and centrally apertured means for connecting the same to the shoe, a lower member vertically movable, devices connected to the upper surface of the lower member and extending up into the aperture of the upper member, means for retaining the parts in such position and a spring actuated revoluble member adapted for progressive engagement with the part of the lower heel member which extends up into said aperture, providing for the progressive and continuous turning of the lower heel member during the walking of the wearer of the shoe.

3. A composite heel for shoes, comprising a centrally apertured upper member, means within the shoe and extending through the sole of the shoe into the upper member for securing it in a fixed relation to the shoe, a lower heel member, hollow, a ratchet body secured to the top of the lower member and extending up into the aperture of the upper member, an apertured plate secured to the upper member surrounding said ratchet body and coming beneath the shoulder thereof to hold the composite members of the heel in a fixed relation, and means actuated by the lower member in the act of walking with the shoe for progressively turning and also for axially moving the lower member of the heel in walking.

4. A composite heel for shoes, comprising a central apertured upper member, means within the shoe and extending through the sole of the shoe into the upper member for securing it in a fixed relation to the shoe, a lower heel member, hollow, a ratchet body secured to the top of the lower member and extending up into the aperture of the upper member, an apertured plate secured to the upper member surrounding said ratchet body and coming beneath the shoulder thereof to hold the composite members of the heel in a fixed relation, a center stem secured to the upper apertured member of the heel and having a pin, a tubular head member surrounding said stem and slotted at an inclination to receive said pin, a helical spring surrounding the tubular part of the head and the stem within the aperture of the upper member of the heel and a spring pawl connected with said head and adapted to engage the teeth of the said ratchet body for turning the same with the movement of the lower member of the heel in walking.

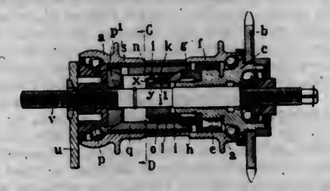
960,709. QUILTING DEVICE. JOHN R. RUSSELL, Sterling, Ill. Filed Jan. 2, 1909. Serial No. 470,355.



1. In a device of the class named, a pair of suitably supported cables; a truck, longitudinally movable thereon; a hanger, secured to said truck; a block, provided with a pulley, operating upon said hanger transversely of the line of movement of said truck; a pair of springs, supported on said hanger on opposite sides of the block; a bar, swingingly supported from said block, and provided at its ends with supporting hangers; and a quilting frame, pivotally supported by said hangers.

2. In a device of the class named, the combination with the wires 3 and cross-bar 8 supported thereon so as to be longitudinally movable thereof; a hanger 10, supported from said cross-bar, and provided with springs 13; a block 11, engaging the hanger 10, and provided with a pulley 12 operating upon said hanger; a wire 14, attached to the block 11, and provided at its ends with straps 15; a bar 16, supported by the wire 14, and provided at its ends with hangers 17; and a quilting frame, pivotally supported by the hangers 17.

960,710. FREE-WHEEL-CYCLE HUB WITH BRAKE MECHANISM. ERNST SACHS, Schweinfurt, Germany. Filed Oct. 2, 1908. Serial No. 455,887.



1. In a free wheel cycle hub the combination with driving means, of a brake for the wheel, and means interposed between said brake and the driving means and operatable to actuate said brake, said interposed means including a rotatable member adapted to engage said brake and operatable to throw it into braking contact with the hub and a clutch interposed between said rotatable member and said brake and adapted to lock the two together when the former actuates the latter.

2. In a free wheel cycle hub, the combination with means for driving the hub, of a brake-member operatable to brake the hub, said member being normally inoperative, a member connected to the driving means to rotate therewith and adapted when rotated backward to engage and throw said brake-member into braking contact with the hub, and a clutch means between said member and the brake-member and adapted to lock them together when the former is rotated backward.

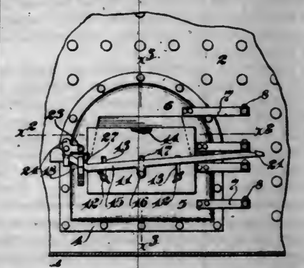
3. In a free wheel cycle hub, the combination with a driving element, of a sleeve connected to said element to rotate therewith, a ring mounted to rotate on said sleeve, rolling means carried by said sleeve and ring and adapted to be forced by said sleeve into locking engagement with the hub on forward rotation of said driving element, a brake-sleeve adapted to be forced into contact with the hub, a member for actuating said brake, said member having clutch-tooth engagement with the sleeve connected to the driving element, and a spring interposed between said brake-sleeve and its actuating member, said spring being adapted to hold back said ring to have the rolling means therein engaged with the hub.

4. In a free-wheel cycle hub, the combination with a driving gear, of a brake mechanism, including fixed parts and a rotatable member which is in engagement with the driving gear, a clutch means provided on the said rotatable member and adapted to clutch it to said fixed part, and means movable with respect to the said rotatable member and engaging the clutch means and being in frictional engagement with fixed parts of the hub, thereby insuring operation of the clutch means.

5. In a free-wheel cycle hub, the combination with a driving gear, of a brake mechanism including a fixed part and a rotatable part, clutching means arranged between the rotatable part and the fixed part of the hub, and means movable with respect to the said fixed and rotatable parts and adapted to dispose said clutching means angularly with reference to the rotatable part.

[Claims 6 to 12 not printed in the Gazette.]

960,711. FIRE-BOX DOOR WITH DRAFT DEVICE. JAMES A. SANDY, Minneapolis, Minn. Filed Dec. 13, 1909. Serial No. 532,763.



1. A fire box door made up of two sections mounted on vertical hinges and located one above the other, the upper section having a deflecting hood extending inward therefrom and an air passage which feeds air beneath said hood, and the lower door section having an adjustable choke plate for varying the size of the air passage beneath said hood.

2. The combination with a fire box, of a door made up of two sections mounted on vertical hinges and located one above the other, the upper section having an inwardly projecting deflecting hood and an air passage which feeds air beneath said hood, and the lower door section having an upwardly extended choke plate arranged to normally close more or less of the air passage beneath said hood.

3. The combination with a fire box, of a door therefor made up of two hinged sections, the upper door section having an intermediately projecting deflecting hood extending downward to the plane of the lower edge thereof and an air passage which feeds air beneath said hood, and the lower door section having a vertically adjustable choke plate extending above the lower portion of said hood.

and normally closing more or less of the air passage beneath said hood.

4. The combination with a fire box, of a door therefor made up of two hinged sections, a latch lug on the fire box structure, and a latch on each door section engageable with said lock lug to lock both door sections in closed positions, and the latch of one of the door sections being engageable with a part on the other door section to lock the two door sections for common swinging movements.

5. The combination with a fire box, of a door therefor made up of two hinged sections, the upper door section having an inwardly projecting deflecting hood and an air passage which feeds air beneath said hood, and the lower door section having an upwardly projecting choke plate normally closing more or less of the air passage beneath said hood, a lock lug on the fire box structure adjacent to the door, a latch lever on the lower door section engageable with the notch of said lug, to lock the said lower door section in a closed position, and a lock on the upper door section engageable with a notch of said lock lug to lock the upper door section in a closed position and adapted when moved to engage said choke plate and lock the two door sections for common swinging movements.

960,712. PROCESS OF PURIFYING ALUMINOUS MATERIALS. LEWIS E. SAUNDERS, Niagara Falls, N. Y., assignor to Norton Company, Worcester, Mass., a Corporation of Massachusetts. Filed Sept. 14, 1909. Serial No. 517,706.

1. The process of purifying aluminous materials which consists in fusing the same in presence of carbon in excess of that required to reduce the associated impurities, thereby reducing the associated impurities and producing a molten bath containing aluminum carbid, separating the reduced impurities, and then oxidising the aluminum carbid by means of an oxidizing gas.

2. The process of purifying aluminous materials which consists in fusing the same in presence of carbon in excess of that required to reduce the associated impurities, thereby reducing the associated impurities and producing a molten bath containing aluminum carbid, separating the reduced impurities, and oxidizing the aluminum carbid while in a molten state.

3. The process of purifying aluminous materials which consists in fusing the same in presence of carbon in excess of that required to reduce the associated impurities, thereby reducing the associated impurities and producing a molten bath containing aluminum carbid, separating the reduced impurities, and oxidizing the aluminum carbid by exposing the same in a molten state to the action of an oxidizing gas.

4. The process of purifying aluminous materials which consists in fusing the same in presence of carbon in excess of that required to reduce the associated impurities, thereby reducing the associated impurities and producing a molten bath containing aluminum carbid, separating the reduced impurities, and oxidizing the aluminum carbid by blowing an oxidizing gas through the molten bath.

5. The process of purifying aluminous materials containing silicon and metals capable of alloying therewith which consists in fusing the same in presence of carbon in excess of that required to reduce the associated impurities, thereby reducing the associated impurities and producing an alloy high in silicon and low in carbon and a molten bath containing aluminum carbid, separating the alloy, and then oxidising the aluminum carbid by means of an oxidizing gas.

[Claims 6 to 10 not printed in the Gazette.]

960,713. RAIL. HOWARD L. SAWDEY, Bingham Canyon, Utah. Filed July 19, 1909. Serial No. 508,404.

1. A rail made up of sections, each formed with a key recess having the upper wall inclined downwardly and outwardly, and a key adapted to be inclosed by and free of connection with the sections, said key being formed with a V-shaped recess to receive the upper walls of the key recesses in the section.



2. A sectional rail, a key inclosed by and free of connection with the sections, and a clamp engaging the base flanges of the sections, said clamp including a clamping section arranged for free passage through one of the spike notches of the base flange.

3. A sectional rail, a key inclosed by and free of connection with the sections, and a clamp engaging the base flanges of the sections, said clamp including a clamping section arranged for free passage through one of the spike notches of the base flange, and an opposing clamp section of greater length than the first mentioned clamping section.

4. A rail including duplicate rail sections each formed with a key-receiving recess, and a key fitting in the combined recesses and free of connection with the sections, the upper walls of the recesses and the upper surface of the key being formed to cause a movement of the upper portions of the sections toward each other under a load strain.

960,714. PROCESS OF MAKING RESILIENT MOLDS. ALVIN A. SCHMIDT, Chicago, Ill. Filed Sept. 2, 1909. Serial No. 515,897.

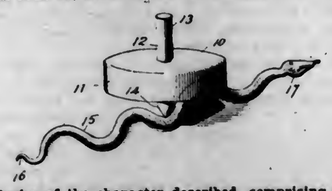
1. A process for making resilient molds which consists in placing a casing about the subject to be cast and filling the intermediate space with a hot mixture of glycerin, turpentine, gelatinous matter and water; then washing the interior of the mold with carbon tetra chlorid; and then applying a composition of carbon tetra chlorid, rubber and chalk to the interior of the mold, substantially as described.

2. A process for making resilient molds which consists in placing a casing about the subject to be cast and filling the intermediate space with a hot mixture of glycerin, turpentine, gelatinous matter and water; then washing the interior of the mold with carbon tetra chlorid; then applying a composition of carbon tetra chlorid, rubber and chalk to the interior of the mold; then applying oil to the inner surface of the mold and allowing to stand until the oil disappears and then applying French chalk, substantially as described.

3. A process for making resilient molds which consists in covering the outer surface of the subject with plastic clay, forming a plaster paris casing about the clay and allowing it to set; removing the casing; removing the clay from the casing; coating the inner surface of the plaster casing with shellac and oil; replacing the plaster casing about the subject; filling the space between the plaster casing and the subject with a hot mixture of glycerin, turpentine, gelatinous matter and water and allowing it to cool; removing the plaster casing; removing the composition mold from the plaster casing; washing the inner surface of the mold with carbon tetra chlorid; applying to the inner surface of the mold a solution of rubber, carbon tetra chlorid and chalk and allowing to stand for a time; applying lard oil and allowing to stand for a time and then dusting the interior of the mold with French chalk, substantially as described.

4. A process for making resilient molds which consists in covering the subject with plastic clay; forming a plaster casing about the clay and allowing it to set; removing the casing from the subject; removing the clay from the casing; coating the inner surface of the casing with shellac and oil; replacing the casing about the subject; filling the space between the casing and the subject with a composition consisting of 20 pounds of glycerin, 10 pounds of Venice turpentine, 100 pounds of gelatinous matter and 10 pounds of water; removing the plaster casing from the subject; removing the mold from the plaster casing; washing the interior of the mold with carbon tetra chlorid; applying a solution to the interior of the mold consisting of one pound of para rubber and 5 pounds of French chalk dissolved in 50 pounds of carbon tetra chlorid; allowing the mold to stand until a rubber-like substance is precipitated upon its inner surface; applying pure lard oil to the inner surface of the mold and allowing the mold to stand until the lard oil disappears and then dusting the interior of the mold with French chalk, substantially as described.

960,715. TOY. CHARLES J. SCHNEIDER, New York, N. Y. Filed June 29, 1908. Serial No. 440,921.



A device of the character described, comprising a spinning element having a magnetized plug portion and a metallic flat serpentine element having one end curved substantially in a semicircular shape and magnetized edges for engagement by said magnetized plug, adapted to be moved back and forth laterally and longitudinally by the rotary motion of the spinning element, the remaining surfaces of said serpentine element being insulated and protected from attraction by said magnetized plug.

960,716. COIN-DETECTOR. FRANK SCHORIK, Chicago, Ill. Filed Mar. 30, 1910. Serial No. 552,311.



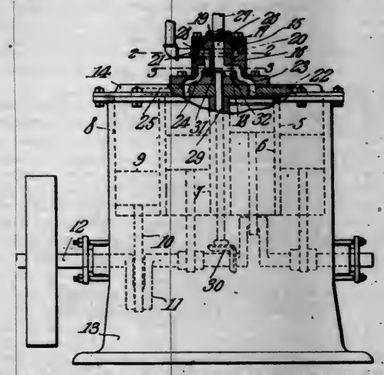
1. In a device of the class described, the combination with a movable member; a coin chute having a handle in one side adapted to admit a dog to contact with a coin therein; a pawl adapted to retain a coin in said chute opposite said notch; a dog adapted to enter said notch to lock said member against movement but to release said member when contacting with a coin held in said chute; means for actuating said pawl to release said coin upon movement of said member; and mechanism adapted to be actuated by said released coin, substantially as described.

2. In a device of the class described, the combination with a rotatable member; a coin chute having a notch in one side adapted to admit a dog to contact with the coin therein; a pawl adapted to retain a coin in said chute opposite said notch; a dog adapted to enter said notch and lock said member against rotation but to release said member when contacting with a coin held in said chute; means for actuating said pawl to release said coin upon rotation of said member; and mechanism adapted to be actuated by said released coin, substantially as described.

3. In a device of the class described, the combination with a rotatable member provided with a coin chute having a notch in one side adapted to admit a dog to contact with a coin therein; an adjustable spring held pawl carried by said member and adapted to retain a coin in said chute opposite said notch; a stop adapted to contact with said pawl to release said coin upon rotation of said member; a spring held dog pivoted to a stationary support and adapted to enter said notch to lock said member against rotation but to release said member when riding on a coin held in said chute; a delivery chute registering with said coin chute when said member is in inoperative position; a retaining chute adapted to receive a coin from said coin chute when released by said pawl; and mechanism adapted to be actuated by said released coin, substantially as described.

4. In a device of the class described, the combination with a rotatable member provided with a coin chute having a notch in one side adapted to admit a dog to contact with a coin therein; an adjustable spring held pawl carried by said member and adapted to retain a coin in said chute opposite said notch; a stop adapted to retain a coin in said chute opposite said notch; a stop adapted to contact with said pawl to release said coin upon rotation of said member; a spring held dog pivoted to a stationary support and adapted to enter said notch, the said dog being provided with a locking surface adapted to engage a side of said notch when no coin is in said chute but to disengage said side when riding on a coin in said chute; a delivery chute registering with said coin chute when said member is in normal position; a retaining chute adapted to receive coins from said coin chute when released by said pawl; and mechanism adapted to be actuated by said released coin, substantially as described.

960,717. ROTARY STEAM-VALVE. THOMAS F. SCOLLARD, Warsaw, Ind. Filed May 6, 1909. Serial No. 494,302.



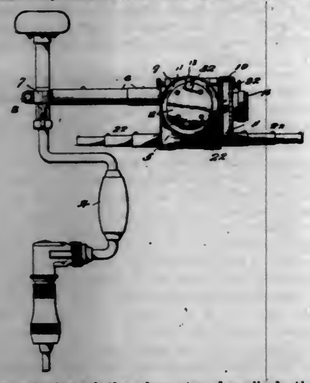
A valve comprising a casing having a cylindrical bore provided with a circumferential groove, said casing having inlet, exhaust and cylinder ports, the exhaust port entering the groove, and the cylinder ports lying in a common plane, a rotary valve plug working in the bore of the casing, and having an axial steam passage communicating with the inlet port, and opening through the side of the plug in the plane of the cylinder ports, and said plug also having a longitudinal groove in its outer surface, one end of which groove is in the plane of the cylinder ports, and the other end of which opens into the aforesaid circumferential groove.

960,718. LEVEL ATTACHMENT FOR DRILLS. FERDINAND SCHTABB, New York, N. Y. Filed Aug. 10, 1909. Serial No. 512,229.

1. In a device of the character described, the combination with a boring brace, of a level casing, adjustable means for supporting the same from said brace, angle indicating means carried by said casing, and adjustable supporting arms carried by said casing, substantially as described.

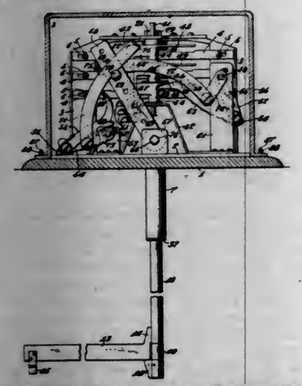
2. In a device of the character described, the combination with a boring brace, of a level casing, means for

supporting said casing from the brace, said means being adjustable to allow of the movement of said casing toward and away from said brace, angle indicating means carried by said casing, and longitudinal telescoping supporting arms carried by said casing for adjustment toward and away from the same, substantially as described.



3. In a device of the character described, the combination with a boring brace, of a level casing, adjustable means for supporting the same from said brace, levels arranged upon said level casing and at right angles to each other, adjustable indicators arranged upon said level casing for coöperating with said levels, and adjustable supporting arms carried by said casing, substantially as described.

960,719. MUSIC-LEAF TURNER. MARTIN SCHWEIBOLD and JACOB SCHWEIBOLD, Philadelphia, Pa. Filed June 16, 1909. Serial No. 502,508.



1. In a music leaf turner, the combination with a supporting frame, of a nested series of longitudinally adjustable shafts, comprising a solid shaft and tubular shafts around the same, a pinion on each of said shafts, the solid shaft keyed in its pinion, sleeves secured to the other pinions and keyed to the tubular shafts, permitting longitudinal adjustments of the latter, leaf turning arms secured to said shafts, brackets connecting said arms to the shafts, and the lowermost bracket secured to the solid shaft, whereby a longitudinal movement of the solid shaft will compel a corresponding movement of the tubular shafts, said solid shaft having a series of annular grooves, a locking device to engage in any of said grooves, thus holding the shafts at various longitudinal adjustments, and means for independently turning said pinions.

2. In a music leaf turner, the combination with a supporting frame, of a nested series of longitudinally adjustable shafts, comprising a solid shaft and tubular shafts around the same, a pinion on each of said shafts, the solid shaft keyed in its pinion, sleeves secured to the other pinions and keyed to the tubular shafts, permitting longitudinal adjustments of the latter, leaf turning arms secured to said shafts, brackets connecting said arms to the shafts, and the lowermost bracket secured to the solid shaft, whereby a longitudinal movement of the solid shaft will compel a corresponding movement of the tubular shafts, said solid shaft having a series of annular grooves, a locking device to engage in any of said grooves, and hold the shafts at various longitudinal adjustments, and comprising a spring held plate, having an opening to receive the solid shaft, and a locking flange in said opening to enter a groove in the solid shaft, and hold the shafts at their longitudinal adjustment, and means for independently turning said pinions.

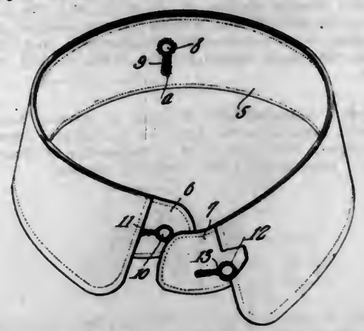
3. In a music leaf turner, the combination with a supporting frame, of a nested series of longitudinally adjustable shafts, comprising a solid shaft and tubular shafts around the same, a pinion on each of said shafts, the solid shaft keyed in its pinion, sleeves secured to the other pinions and keyed to the tubular shafts, permitting longitudinal adjustments of the latter, leaf turning arms secured to said shaft, brackets connecting said arms to the shafts, and the lowermost bracket secured to the solid shaft, whereby a longitudinal movement of the solid shaft will compel a corresponding movement of the tubular shafts, said solid shaft having a series of annular grooves, a locking device to engage in any of said grooves, and hold the shafts at various longitudinal adjustments, and comprising a spring held plate, having an opening to receive the solid shaft, and a locking flange in said opening to enter a groove in the solid shaft, and hold the shafts at their longitudinal adjustment, a plunger on said catch, a spring on said plunger normally holding said catch in locked engagement with the shaft, and means for independently turning said pinions.

4. In a music leaf turner, the combination with a supporting frame, of a nested series of longitudinally adjustable shafts, comprising a solid shaft and tubular shafts around the same, a pinion on each of said shafts, the solid shaft keyed in its pinion, sleeves secured to the other pinions and keyed to the tubular shafts, permitting longitudinal adjustments of the latter, leaf turning arms secured to said shafts, brackets connecting said arms to the shafts, and the lowermost bracket secured to the solid shaft, whereby a longitudinal movement of the solid shaft will compel a corresponding movement of the tubular shafts, said solid shaft having a series of annular grooves, a locking device to engage in any of said grooves, thus holding the shafts at various longitudinal adjustments, means constructed to turn said shafts, one at a time, in one direction, and other means constructed to turn the shafts, one at a time, in the opposite direction.

5. In a music leaf turner, the combination with a supporting frame, of a nested series of longitudinally adjustable shafts, comprising a solid shaft and tubular shafts around the same, a pinion on each of said shafts, the solid shaft keyed in its pinion, sleeves secured to the other pinions and keyed to the tubular shafts, permitting longitudinal adjustments of the latter, leaf turning arms secured to said shafts, brackets connecting said arms to the shafts, and the lowermost bracket secured to the solid shaft, whereby a longitudinal movement of the solid shaft will compel a corresponding movement of the tubular shafts, said solid shaft having a series of annular grooves, a locking device to engage in any of said grooves, and hold the shafts at various longitudinal adjustments, and comprising a spring held plate, having an opening to receive the solid shaft, and a locking flange in said opening to enter a groove in the solid shaft, and hold the shafts at their longitudinal adjustment, means constructed to turn the shafts, one at a time, in one direction, and other means constructed to turn the shafts, one at a time, in the opposite direction.

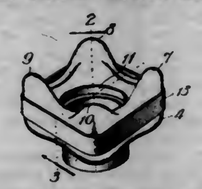
[Claims 6 to 9 not printed in the Gazette.]

960,720. COLLAR. HELLEN Y. SCOTT, Quincy, Fla., assignor to William Augustus Scott, Apalachicola, Fla. Filed May 26, 1909. Serial No. 498,485.



A turn-over collar formed with buttonholes in its front tabs, adapted to register, and having each a portion of such diameter as to permit of the free passage of the head of a button and a slit extending from the said portion, the slits for the two button-holes extending in the same direction, and one of the buttonholes being upwardly displaced with respect to the other, the button head receiving portion of the inner one of the front tabs being located between the end of the tab and the vertical edge of the corresponding end of the turnover portion of the collar and the button head receiving portion of the buttonhole in the other or outer tab being located inwardly of the vertical edge of the turnover portion of the collar at the other end, the button hole of the inner tab having its slit portion extending in a direction away from the end of the tab, and the button hole in the outer tab having its slit portion extending in a direction toward the end of the tab.

960,721. PESSARY. OSBORNE H. SHEPPARD, Chicago, Ill., assignor to Sharp & Smith, Chicago, Ill., a Corporation of Illinois. Filed Nov. 22, 1909. Serial No. 529,218.

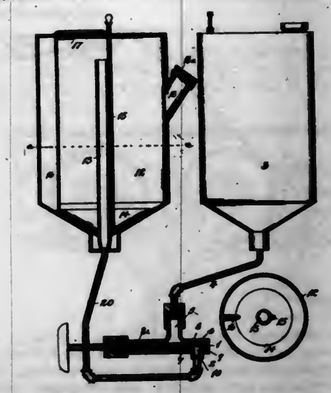


1. In combination, an inflated rubber pessary, and a permanently tensioned elastic band surrounding and secured to its body-portion, for the purpose set forth.

2. In combination, an inflated rubber pessary comprising a hollow body-portion formed with concave outer sides, horn-like corners with the upper ends of the walls extending between them concaved and the inner faces of said corners and walls converging toward the center of the body-portion to a cylindrical section thereof, and a tubular center projecting beyond the body-portion from said section, and a tension elastic band surrounding said body-portion and secured to the corner-portions thereof, for the purpose set forth.

3. In combination, an inflated rubber pessary comprising a hollow body-portion formed with concave outer sides, horn-like corners with the upper ends of the walls extending between them concaved and the inner faces of said corner and walls converging toward the center of the body-portion to a cylindrical section thereof, a convex base, and a tubular center projecting beyond the base from said section, and a tensioned rubber band surrounding said body-portion and secured thereto at its corner-portions, for the purpose set forth.

960,722. HYDROCARBON-BURNER. LOUIS A. SHERMAN, Detroit, Mich. Filed Mar. 17, 1909. Serial No. 483,921.



1. In combination, a pair of tanks, one for the storage of a heavy hydrocarbon and the other for the storage of a lighter hydrocarbon, a stand pipe rising within the tank for the lighter hydrocarbon, means within said last named tank for raising and discharging into the open top of said stand pipe a predetermined quantity of hydrocarbon, a discharge pipe leading from connection with the bottom of said stand pipe, a second discharge pipe leading from the interior of the tank for the heavier hydrocarbon, a valve casing into which each of said discharge pipes leads, the point of entrance of the discharge pipe for the lighter hydrocarbon being nearer the discharge end of the casing than that of the second discharge pipe, and a valve adapted to primarily close both the outlet orifice of the casing and that portion of the chamber into which the lighter hydrocarbon flows from the access of the heavier hydrocarbon, the presence therewithin of the desired quantity of the lighter hydrocarbon serving, when the valve is moved from its seat, to prevent the escape of the heavier hydrocarbon from the casing until after the supply of the lighter hydrocarbon has entirely flowed therethrough, substantially as described.

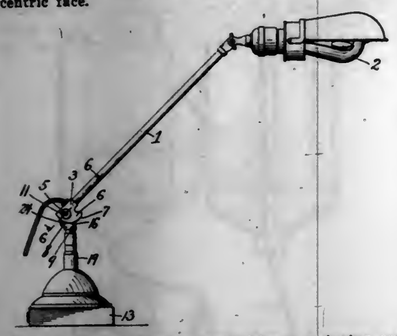
2. In combination, a pair of tanks, one for the storage of a relatively heavy hydrocarbon and the other for the storage of a relatively light hydrocarbon, a discharge pipe leading from each, a stand pipe rising within the tank for the lighter hydrocarbon from connection with the entering end of the discharge pipe therefrom, whereby the flow from the tank is made possible only through the same, means for introducing into the stand pipe and into this discharge pipe a specific quantity of the lighter hydrocarbon, a valve casing into which both of the discharge pipes lead, the point of entry of the discharge pipe from the tank for the lighter hydrocarbon being nearer the outlet orifice of the valve casing than that of the other discharge pipe, and a valve member engaging therein adapted to close the outlet orifice of the casing and to divide the casing into two chambers, at a point intermediate the points of entry of the discharge pipes, while it is in closing position with respect to the outlet orifice of the casing, substantially as described.

960,723. ADJUSTABLE BRACKET. THEODORE SMITH, Chicago, Ill. Filed Sept. 17, 1908. Serial No. 453,404.

1. An adjustable bracket, comprising a swinging arm, an eccentric frictional part fixed to and moving with said arm, a movable part elastically mounted and separate from said arm and having contact with said eccentric frictional part.

2. An adjustable bracket, comprising a swinging arm, a part to which it is pivotally connected, a friction piece connected with said arm, and having an eccentric friction

contact face, a base, a tube projecting therefrom, a movable part elastically mounted thereon and engaging said eccentric face.



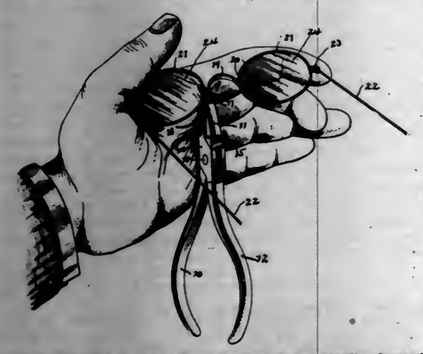
3. An adjustable bracket, comprising a swinging arm, a supporting device therefor, horizontal and vertical frictional surfaces associated with said support, friction parts on the swinging arm engaging said frictional surfaces said frictional surfaces slidably mounted upon said supporting device, and means for adjusting the friction between the parts on the swinging arm and said frictional surfaces.

4. An adjustable bracket, comprising a swinging arm, a frictional part connected therewith, two frictional pieces associated with said part and having eccentric frictional faces, a supporting piece upon which said swinging arm is mounted and located between said frictional pieces, a movable part elastically mounted engaged by said eccentric frictional faces.

5. An adjustable bracket, comprising a base a swinging arm, a frictional part connected therewith, two frictional pieces associated with said part and having eccentric frictional faces, a supporting piece upon which said swinging arm is mounted and located between said frictional pieces, a movable part engaging said eccentric frictional faces, and a spring associated with said movable part and pressing against said faces, said spring mounted upon said base.

[Claims 6 to 17 not printed in the Gazette.]

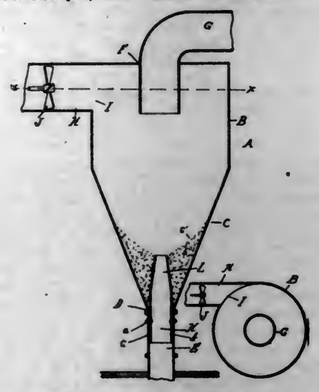
960,724. PLIERS. CHARLES H. SNELL, Los Angeles, Cal. Filed Dec. 2, 1908. Serial No. 465,723.



1. A metal bending pliers having three rigidly formed bending members tapering and approaching one another with the respective jaw members and adapted to come into alinement in the bending operation and be normally freely spaced apart a distance at least equal to the thickness of the metal body to be bent.

2. A metal bending pliers having two rigidly formed circular bending members, the same constituting a U-shaped extremity at the end of one jaw member and a circular bending member at the center and end of the other jaw member, said bending members adapted when the jaws are closed to come into alinement in a spaced apart relation to receive between them the part to be bent.

960,725. SEPARATOR. WILLIAM L. SNYDER, Detroit, Mich., assignor to The American Agricultural Chemical Company, New York, N. Y., a Corporation of Connecticut. Filed May 7, 1909. Serial No. 494,669.



1. In a Cyclone separator, the combination of the casing, provided with a tangential air inlet, an outlet at its upper end, and formed with a lower conical section or portion terminating in a discharge conduit, and an upwardly projecting tubular member within the conical section having a telescopic engagement with the discharge conduit.

2. In a Cyclone separator, the combination with a casing formed with an outlet at one end and a tapering or conical section at the opposite end terminating in a material discharge opening, and means within the tapered section for changing the operative length of the casing to vary the grade of material discharged through the outlet.

3. In a Cyclone separator, the combination of the conical section of the casing terminating in a discharge opening, and a tubular member surrounding said opening adapted to retain a quantity of material between the same and the wall of the tapering section.

4. In a Cyclone separator, the combination of the conical section of a casing terminating in a discharge opening, and an adjustable tubular member surrounding said opening adapted to retain a variable amount of material between the same and the wall of the tapered section.

5. In a Cyclone separator, the combination of the conical section of a casing terminating in a discharge opening and an axially adjustable member fitted within the opening adapted to retain a variable amount of material between the same and the wall of the conical section.

[Claim 6 not printed in the Gazette.]

960,726. INK-WELL. WILLIAM J. SOMERVILLE, Cleveland, Ohio. Filed May 15, 1909. Serial No. 496,121.

1. An ink well comprising a frame, a cap surmounting the frame, a cover pivotally held by the frame and cap, each member named being formed from a single piece of sheet metal, and lugs formed upon the cap bent to engage the frame whereby the members are held together.

2. An ink well comprising a frame formed of a single piece of sheet metal having an annular top piece, and an angular strip connecting opposite parts of the top piece, an ink receptacle within the frame and supported by the said strip, and a closure for the top of the ink receptacle.

3. An ink well comprising a frame made from a single piece of sheet metal, portions of which are cut and bent to form an annular top piece, and a strip formed of side pieces and a bottom piece which connect opposite portions of the top piece, a cap piece formed of a single piece of sheet metal surmounting the top of the frame and secured to it, and a closure member pivotally secured by the top piece of the frame and cap.



4. An ink well comprising a frame having an annular top member and a strip connecting opposite portions of the top of the frame, shield members carried by the frame, an ink receptacle within the frame supported by said strip and retained in place by the shield member, and a cover for the ink receptacle.

5. An ink well comprising a frame having an annular top member, and a strip comprising side members and a connecting bottom member, said strip connecting opposite points upon the top of the frame, shields carried by one of the side members of the connecting strip, said shields being curved to correspond with the top of the frame member, there being lugs dependent from the top member opposite the shield, and a cover for the ink receptacle.

[Claims 6 to 13 not printed in the Gazette.]

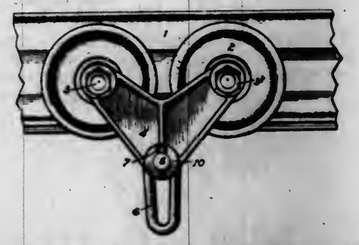
960,727. MANIFOLDING-SALES-BOOK COVER. FREDERICK H. SPENCER, Minneapolis, Minn. Filed Feb. 13, 1909. Serial No. 477,563.



1. In a device of the kind described, the combination with a metal plate having at one end a laterally bent clamping flange and having in its body above said clamping flange bearings formed by slitting said plate and bulging the slit portions, and a clamping ball coöperating with said clamping flange and having inturned trunnions seated in the said bearings of said plate, substantially as described.

2. In a device of the kind described, the combination with a pair of cover members connected by a flexible web, of a thin metallic reinforcing plate secured to and extending from end to end of one of said cover members, said metal plate having at its lower end a clamping flange, a clamping ball pivotally connected to said reinforcing plate and coöperating with the clamping flange thereof to hold the carbon sheet, and a pair of hinged spring-pressed pad clamping plates, one of which is rigidly secured to the upper end of said reinforcing plate, substantially as described.

960,728. TROLLEY. GEORGE F. STEEDMAN, St. Louis, Mo., assignor to Curtis & Co. Mfg. Co., St. Louis, Mo., a Corporation of Missouri. Filed Jan. 21, 1910. Serial No. 539,320.



1. In a trolley the combination of side frames, track wheels carried thereby, a connecting pin on which said side frames are pivotally mounted, an enlargement on said connecting pin interposed between said side frames, washers on said connecting pin adapted to be placed outside of or interposed between said side frames, and means at the two ends of said pin for restraining the axial movement of the washers and side frames on said pin.

2. In a trolley, the combination of side frames, track wheels carried thereby, a connecting pin on which said side frames are pivotally mounted, adjustable spacing means on said pin between the side frames, and adjustable means on the pin outside of the frames to limit the outward movement of the frames on the pin.

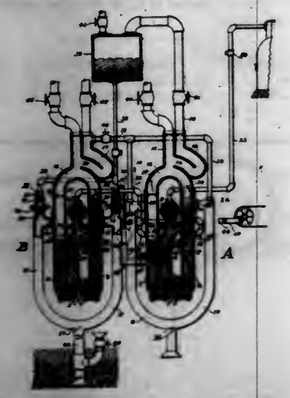
3. In a trolley, the combination of side frames, track wheels carried thereby, a connecting pin on which said side frames are pivotally mounted, and adjustable means on said pin to restrain the side frames from movement in the direction of the axis of said pin.

4. In a trolley, the combination of side frames, track wheels carried thereby, a connecting pin on which said side frames are pivotally mounted and means on said pin to adjust the distance between the frames and means to restrain the frames from movement in the direction of the axis of said pin.

960,729. COMPOUND LIQUID-PISTON AIR COMPRESSING AND PUMPING APPARATUS. JAMES K. SWEENY, Pueblo, Colo. Filed May 27, 1907. Serial No. 376,017.

1. In a liquid piston pump the combination with two pumping units each consisting of an actuating fluid receiving chamber, an air pumping chamber provided with valved inlet and outlet ports at its upper portion, the two chambers being connected at their lower portions by an unobstructed passage, and a liquid piston filling said passage and partly filling said chambers, of a supply passage for actuating fluid connected to one actuating fluid receiving chamber, a passage connecting said actuating fluid receiving chamber with the other actuating fluid receiving chamber, whereby the exhaust passage of the first is made the supply passage of the second, a passage for exhausting the actuating fluid from the second chamber, a series of valves for governing the supply and exhaust of actuating fluid through said passages and means for actuating said valves in proper order, a fluid trap connected with the outlet passage of the pumping chamber for the separation of actuated fluids having different specific gravities, a receiving tank for the storage under pressure of the actuated fluid, valve regulated inlet and outlet passages connecting the same with the pumping unit, whereby a portion of the actuated fluid may be circulated through the connected system of actuating units and pas-

sages, valved air inlet passage into the actuated fluid supply passage, for the purposes as set forth.



2. The combination in a compound liquid piston pump composed of a plurality of pumping units, each pumping unit consisting of a plurality of actuating fluid receiving chambers and a plurality of pumping chambers for the fluid to be actuated with valved inlet and outlet ports in their upper portions, each actuating fluid receiving chamber of each pumping unit being connected at its lower portion by an unobstructed passage with a corresponding pumping chamber and a liquid piston filling each of said connecting passages and partly filling each of the connected vertical chambers, of a control valve casing over the upper ends of the actuating fluid receiving chambers of each pump unit, two ports in the bottom of each of said control valve casings, passages connecting the said ports with the interiors of each of the said actuating fluid receiving chambers at their upper ends, an exhaust port in each side of the valve casing of the first pumping unit connected to a passage leading into the supply port of the control valve of the other pumping unit, a circular valve in each casing with ports through the same, said ports adapted to coincide with the ports in the valve casing, at certain positions of its movements, a recess in the sides of each of said circular valves of sufficient dimensions to overlap the supply ports of each actuating fluid receiving chamber and its corresponding exhaust port, constituting a passage between said ports, a passage connecting each exhaust port of the control valve of the second pumping unit with the interior of its corresponding pumping chamber near its vertical center, a main valve operating rod, supports for the same, a pivoted link to connect said operating rod to any motor or mechanical means that will operate to produce a horizontal reciprocating rectilinear movement of the rod in the bearings of its supports, collars, adjustable longitudinally along said operating rod and provided with lugs, slotted operating levers to connect the control valves with said lugs, adapted to actuate the same in unison to produce a rocker movement to said control valves whereby the ports therein are caused to coincide with those in their respective casings and to open each actuating fluid supply port into each actuating fluid receiving chamber while the opposite chamber is in connection with its corresponding exhaust port, alternately at each reciprocation, substantially as set forth.

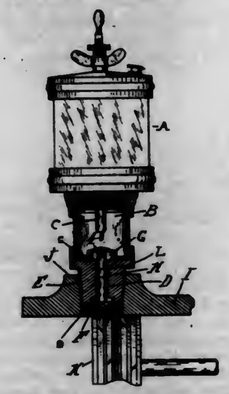
3. The combination in a compound liquid piston pump composed of a plurality of pumping units, each pumping unit consisting of a plurality of actuating fluid receiving chambers and a plurality of pumping chambers for the fluid to be actuated with valved inlet and outlet ports in their upper portions, each actuating fluid receiving chamber of each pumping unit being connected at its lower portion by an unobstructed passage with a corresponding pumping chamber and a liquid piston filling each of said connecting passages and partially filling each of the said connected vertical chambers, a main valve for the control of the actuating fluid and a main valve operating rod, of an auxiliary valve connected to the main operating valve for the further governing of the supply of actuating fluid, ports in the casing of the auxiliary valve for the passage of the actuating fluid into and therefrom into the main control valve, a segment valve in said auxiliary valve casing adapted to overlap and close the outlet port in the casing when in a central position, a stem projecting beyond the casing, an adjustable lever attached to said valve stem, extending upward, adjustable elastic means attached to each side of said lever in the line of its movement adjusted to maintain said valve in a central and closed position, valve operating lugs adjustably attached to the main valve operating rod, trip dogs on the outer ends of said lugs adapted to contact with the valve lever of the auxiliary valve for a regulatable period of time, at each reciprocation, in unison with the main control valves to cause the proper coincidents of the ports of both valves at the proper periods of time to permit the unobstructed flow of the actuating fluid into or from the said actuating fluid receiving chambers, substantially as set forth.

4. The combination in a compound liquid piston pump composed of a plurality of pumping units each pumping unit consisting of a plurality of actuating fluid receiving chambers and a plurality of pumping chambers for the fluid to be actuated, with valved inlet and outlet ports in their upper portion, each actuating fluid receiving chamber of each pumping unit being connected at its lower portion by an unobstructed passage with a corresponding pumping chamber a liquid piston filling each of said connecting passages and partially filling each of the said connected vertical chambers, main and auxiliary valves for the control of the actuating fluid, a valve operating rod and an actuated fluid receiving tank of an auxiliary valve for the regulation of the passage of condensing fluid from the actuated fluid receiving tank into the actuating fluid receiving chambers, a passage connecting the bottom of the receiving tank with the inlet port of the valve, passages leading from separate outlet ports of the valve into the upper portion of each of the actuating fluid receiving chambers of the first pumping unit, check valves in said passages to prevent the backward movement of fluid therein, a circular valve in the chamber of the casing of the said auxiliary valve, ports through the valve adapted to coincide with the ports in the casing at certain positions of its movement, a valve stem projecting from the casing, an adjustable lever attached to said valve stem and extending upward, adjustable elastic means attached to each side of the said lever in the line of its movement adjusted to maintain the valve in a central and closed position, an arm adjustably attached to the main valve operating rod, a trip dog at the outer end of said adjustable arm adapted to contact with the said upright valve lever and to move the same to an open position to permit the passage of a regulatable amount of condensing fluid into each actuating fluid receiving chamber alternately at each reciprocation, substantially as and for the purposes set forth.

5. The combination in a compound liquid piston pump composed of a plurality of pumping units, each pumping unit consisting of a plurality of actuating fluid receiving chambers, and a plurality of pumping chambers for the fluid to be actuated with valved inlet and outlet ports in their upper portions, each actuating fluid receiving chamber of each pumping unit being connected at its lower portion by an unobstructed passage with a corresponding pumping chamber, a liquid piston filling each of said connected passages and partially filling each of the connected vertical chambers, main and auxiliary valves for the control of the actuating fluid, a valve operating rod and an actuated fluid receiving tank, of auxiliary valves for the regulation of the condensing fluid from the actuated fluid receiving tank into the pumping chambers of the second pumping unit through the inlet ports thereto, each of said valves consisting of a casing with inlet and outlet ports therein, pipes from the actuated fluid receiving tank into the inlet ports of each of said valves, a passage from each outlet port into the suction inlet of its corresponding pumping chamber, a valve in each casing with a port through the same, levers adjustably connected to the main valve operating rod and adapted to open each valve for a regulatable period of time when the control valve of its corresponding pumping chamber is in the exhaust position, for the purposes set forth.

[Claims 6 and 7 not printed in the Gazette.]

960,730. LUBRICATOR. PETER J. SWEENEY, Windsor, Ontario, Canada, assignor to Penberthy Injector Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 22, 1909. Serial No. 491,588.



1. In a lubricator, the combination with a reservoir provided with a sight feed chamber and a discharge passage leading therefrom, of a check valve controlling the passage, a movable baffle member within the chamber comprising an inverted and laterally ported cup-shaped member arranged over the passage inlet, and a rigid connection between the baffle member and valve.

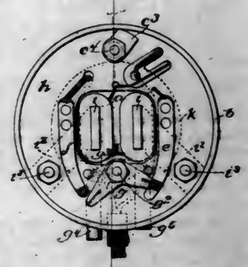
2. In a lubricator, the combination with a reservoir provided with a sight feed chamber and a discharge passage leading therefrom, of a check valve at the lower end of the passage, an inverted and laterally ported cup-shaped baffle arranged within the chamber over the upper end of the passage, and a rigid connection between said baffle and valve extending through the passage.

3. In a lubricator, the combination with a reservoir provided with a sight-feed chamber terminating in a threaded nipple, said nipple having a discharge passage therethrough and the end of said nipple being recessed to form a valve seat, an inverted cup-shaped baffle arranged within the chamber over the upper end of the passage, having a plurality of open-ended recesses formed in its edges, a check-valve engaging the valve seat in said nipple, and a member formed integral with the valve extending through the passage in the nipple and forming a rigid connection between the valve and baffle.

4. In a lubricator, the combination with a reservoir provided with a sight feed chamber, of a member forming a portion of the chamber having an opening or aperture forming a discharge passage, a check valve controlling the passage, a movable baffle member arranged within the chamber over the passage inlet and adapted to seat upon said apertured member, and a connection between said valve and baffle whereby the latter assists in the closing of the valve, there being a communication between said chamber and the discharge passage in the seated position of the baffle.

5. In a lubricator, the combination with a reservoir provided with a sight feed chamber, of a member forming a portion of the chamber having an opening or aperture forming a discharge passage, a check valve controlling the passage, a movable baffle member arranged within the chamber over the passage, a connection between said valve and baffle whereby the latter assists in the closing of the valve, the baffle member being adapted to seat upon the apertured member, and one of said members being provided with a recess forming a means of communication between said chamber and the discharge passage in the seated position of the baffle.

960,731. TELEPHONE-RECEIVER. WALTER F. TAYLOR, Brookline, Mass., assignor to Holtzer-Cabot Electric Company, a Corporation of Massachusetts. Filed Aug. 8, 1908. Serial No. 447,575.



1. In a telephone receiver, a casing provided with a cap and diaphragm adapted to be secured to the open end of the casing; an electro-magnet contained in said casing; a supporting member of insulating material located between the diaphragm and the base of the electro-magnet, thereby affording a space within the casing for the leading-in wires; switch terminals mounted on the outer surface of the said support; a switch also mounted on the outer surface of said support and adapted to bridge the terminals; and an actuating device for said switch extending through the wall of the casing, substantially as described.

2. In a telephone receiver, the combination with the case; of the electro-magnet therein; a support of insulating material surrounding said electro-magnet; switch terminals mounted on the outer surface of said support; a bridging member pivotally connected with said support and located between said terminals; and a push rod connected with said member at one side of the pivotal support thereof projecting outward through an opening in said receiver case.

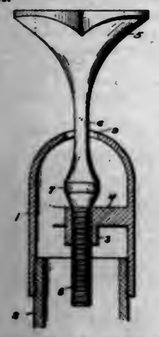
3. The combination with the receiver case; of the screw-threaded cap and the diaphragm secured in said cap; the electro-magnet; a locking member consisting of an arm adapted to be forced against the inner wall of the casing to hold the cap in its adjusted position; and a rotating actuating member from which said arm extends radially, said member being accessible at the outside of the case.

960,732. DISTRIBUTING DEVICE. WILLIAM GAVIN TAYLOR, Waterbury, Conn. Filed Dec. 5, 1908. Serial No. 466,143.

1. A device for distributing matter over the perimeter of a geometrical figure, having a spreader, the angle between the outer surface of which and the axis gradually increases toward the base which is provided with notches, and the length of the longitudinal curve upon said surface varying at different points around the said axis.

2. A device for distributing matter over the perimeter of a geometrical figure, having a spreader, the angle between the outer surface of which and the axis gradually increases toward the base which is provided with notches, the length of the longitudinal curve upon said surface varying at different points around said axis, and

the angle of inclination of the matter as it leaves said spreader being the least where said longitudinally curved surface is shortest.



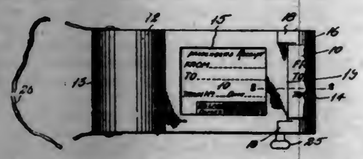
3. A device for distributing matter over the perimeter of a geometrical figure, having a spreader that flares outwardly toward its base edge, which is provided with notches, whereby the said matter leaves the spreader at said notches at a less inclination to the axis thereof than at the other portions.

4. A device for distributing matter over the perimeter of a geometrical figure, having a spreader, wherein the angle between the outer surface and the axis thereof gradually increases toward the base edge, and notches in said base edge substantially parallel with the axis of said spreader, whereby said matter leaves said spreader at a less inclination to said axis at said notches than at any other point.

5. A device for distributing matter over the perimeter of a geometrical figure, having a spreader, wherein the angle between the outer surface and the axis thereof gradually increases toward the base edge, and notches in said base edge corresponding in number with the corners of said figure, whereby said matter leaves said spreader at a less inclination to said axis at said notches than at any other point.

[Claim 6 not printed in the Gazette.]

960,733. CASH-FARE-SLIP HOLDER. HERMAN E. THOMSEN, Houston, Tex. Filed May 23, 1908. Serial No. 434,594.

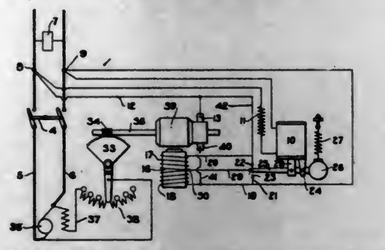


1. In a device of the character described, a frame, rollers mounted in the frame and adapted to receive a receipt strip and a record strip, a metallic casing conforming to the contour of the frame and fitting thereabout, said casing having a hinged top provided with an opening adapted to display the receipt strip, and a hinged flap formed on the casing adapted to engage and hold the top in position and provided with a tongue projecting between the receipt strip and the record strip.

2. In a device of the character described, an elongated frame, rollers removably mounted at opposite ends of the frame, one of said rollers adapted to receive a receipt strip and a record strip coiled therearound, the other roller merely receiving the record strip, a metallic casing receiving the frame, said casing having a hinged top and provided with an opening under which the strips are passed, and a hinged flap provided with a tongue adapted to extend between the receipt strip and the record strip, the casing top having a tearing edge adjacent the flap.

3. In a device of the character described, the combination with a frame consisting of two parallel side bars, having rounded extremities connected by suitable cross pieces, of a roller rotatably mounted at each extremity of the frame, a pawl and ratchet mechanism, whereby one of said rollers is limited to one direction of rotation, removable means normally holding said rollers in place, and a casing, adapted to receive said frame consisting of a sheet of metal, contiguous with the bottom and ends of the frame, and of sheets of metal hinged to said metallic sheet, adapted to cover the top of said frame, means being provided for fastening the last named sheets together and an aperture being provided in one of them.

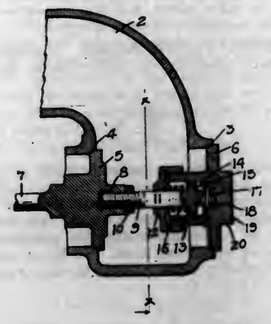
960,734. VOLTAGE-REGULATOR. WILLIAM I. THOMSON, Newark, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Apr. 15, 1905. Serial No. 255,848.



1. In voltage regulating apparatus, in combination, a source of current, a current utilizing device bridged across the mains of said source of current, a voltage-controlled magnet bridged across said mains in parallel with said current utilizing device, a variable resistance device operatively related to said source of current to vary the voltage across said mains, a motor having a rotary armature connected to said variable resistance device to operate the same, said motor being constantly connected across said mains and having a pair of opposing field windings, a movable contact connected to said field between said windings and provided with means controlling its position in accordance with the field strength of said voltage-controlled magnet, and a pair of contacts respectively connected with the outer ends of said windings and normally free from said movable contact and adapted alternatively to make connection therewith whereby said field windings are alternatively short-circuited in accordance with variations in the field strength of said voltage-controlled magnet.

2. In voltage regulating apparatus, in combination, a source of current, a current utilizing device bridged across the mains of said source of current, a voltage-controlled magnet bridged across said mains adjacent said current utilizing device, a variable resistance device operatively related to said source of current to vary the voltage across said mains, a motor having a rotary armature connected to said variable resistance device to operate the same, said motor being constantly connected across said mains and having a pair of opposing field windings, a movable contact connected to said field between said windings and provided with means controlling its position in accordance with the field strength of said voltage-controlled magnet, and a pair of contacts respectively connected with the outer ends of said windings and normally free from said movable contact and adapted alternatively to make connection therewith whereby said field windings are alternatively short-circuited in accordance with variations in the field strength of said voltage-controlled magnet, said movable contact being pivotally mounted and counter-balanced to eliminate the effect of jarring.

960,735. THROTTLE-VALVE. JOHN TONGE, Minneapolis, Minn., assignor of one-half to John I. Dille, Minneapolis, Minn. Filed Dec. 18, 1909. Serial No. 533,952.



1. The combination with a casing having valve seats, of disks fitting said seats, a bolt connected at one end to one of said disks and held against rotation, said other disk having a chamber to receive the opposite end of said bolt, the middle portion of said bolt being polygonal in cross section, a cap having threaded connection with the walls of said chamber and an opening to receive said polygonal portion of said bolt, means within said chamber yieldingly resisting longitudinal movement of said bolt and said chambered disk being capable of rotation to adjust said cap and regulate the tension of said yielding means.

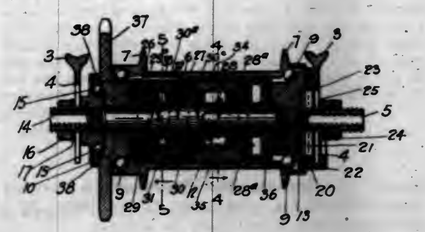
2. The combination with a casing having valve seats, of disks therefor, a bolt having a threaded connection at one end with one of said disks and a head at its other end, said other disk having a chamber to receive said head, a cap having a threaded connection with the walls of said chamber and an opening to receive the middle portion of said bolt, springs provided in said chamber, one of them between the head of said bolt and said cap and the other between said bolt head and the bottom of said chamber and said bolt fitting loosely in said cap whereby a limited rocking movement of one valve disk with respect to the other is permitted.

3. A throttle valve comprising a casing having valve seats, disks for said seats, one of said disks having an operating stem, a bolt interposed between said disks and having a rigid connection with one of them and a sliding, oscillating connection with the other disk, said other disk having a threaded surface and a threaded cap therefor fitting said bolt and rotatable with said bolt but not independently thereof, said other disk having an outer surface adapted to receive a wrench, whereby said cap is rendered adjustable on said disk, and yielding means between said cap and disk.

960,736. COASTER-BRAKE. PATRICK W. TOOHEY, Colorado Springs, Colo., assignor to The Sterling Novelty Company, Colorado Springs, Colo. Filed Nov. 9, 1909. Serial No. 527,040.

1. In a device of the class described, the combination with the fixed axle, of a driving element revolubly mounted thereon and including a surrounding sleeve having oppositely pitched threads, a hub revoluble about the axle and having an internal key seat, a friction element having a spline in the said seat, and nuts mounted upon the respective threads, adapted to frictionally engage the said element during their movement toward each other.

2. In a device of the class described, the combination with the fixed axle, of a driving element revolubly mounted thereon and including a surrounding sleeve having three consecutively arranged screw threads the middle one of which is pitched opposite to the others, a hub revoluble about the axle, nuts mounted upon the respective threads, a friction element connected with the said hub between the middle nut and one of the outer ones to be frictionally engaged thereby during their movement toward each other, and an expansible brake element interposed between the middle nut and the other outer one to frictionally contact with the hub when engaged by the last named nuts during their movement toward each other.



3. In a device of the class described, the combination with the fixed axle, of a driving element revolubly mounted thereon and including a surrounding sleeve having three consecutively arranged screw threads the middle one of which is pitched opposite to the others, a hub revoluble about the axle, nuts mounted upon the respective threads, a friction element connected with the said hub between the middle nut and one of the outer ones to be frictionally engaged thereby during their movement toward each other, an expansible brake-element interposed between the middle nut and the other outer one to frictionally contact with the hub when engaged by the last named nuts during their movement toward each other and means for preventing independent rotation of the three nuts.

4. In a device of the class described, the combination with the fixed axle, of a driving element revolubly mounted thereon and including a surrounding sleeve having three consecutive screw threads the middle one of which is pitched opposite to the others, a hub revoluble about the said axle, nuts mounted upon the respective threads the middle nut having two oppositely beveled faces and the outer nuts being beveled toward the inner one, a beveled friction ring between the middle nut and one of the outer ones to be frictionally engaged thereby during their movement toward each other, and a beveled expansible ring disposed between the middle nut and the outer one and adapted to frictionally contact with the interior surface of the hub when its beveled portion is engaged by the corresponding faces of the last named nuts during their movement toward each other.

5. In a device of the class named, an axle, a hub revoluble thereon, a plate held against rotation on the axle and transversely adjustable with relation thereto, and a nut on said axle, coöperative with said plate to clampingly secure the axle to an interposed object.

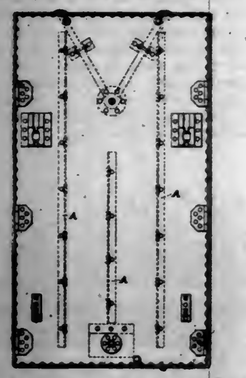
[Claims 6 to 9 not printed in the Gazette.]

960,737. STAY OR SUPPORT FOR WATER-JACKETS. SAMUEL W. TRAYLOR, Allentown, Pa., assignor to M. P. Schantz, trustee for The Traylor Engineering Company, a bankrupt. Filed Feb. 23, 1909. Serial No. 479,431.

1. In combination in a water jacket, an outer and an inner shell, and a metal strip constituting a stay set on edge between the shells, and having a riveted connection at one edge to one of the shells, and having its opposite edge welded to the other shell, substantially as described.

2. In combination in a water jacket, an outer and an in-

ner shell, a metal strip constituting a stay set on edge between the shells, and riveted at one edge to one of the



shells and having its opposite edge welded at intervals to the opposite shell, substantially as described.

960,738. ADJUSTABLE STILETTO FOR EMBROIDERY AND ART CRAFTING. LEO TÜRK, New York, N. Y., assignor, by mesne assignments, to Austin-Walker Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 10, 1909. Serial No. 517,005.



1. A stiletto for embroidery and art crafting composed of two parts, a rod with tapered end portion forming a pin point and having a continuous spiral incision in the lower half of its straight portion, and a stop device surrounding below the pin point and being above in operative connection with the continuous spiral incision to regulate the relative distance between said stop and pin point.

2. A stiletto for embroidery and art crafting consisting of two parts, a rod with tapered end portion forming a pin point and having a spiral groove in the lower half of its straight portion, and a stop surrounding the pin point in operative connection in the groove of the rod to regulate the relative distance between the stop and pin point.

3. A stiletto for embroidery and art crafting consisting of two parts, a rod with tapered end portion forming a pin point and having a spiral groove in the lower half of its straight portion, and a spiral spring forming below a stop around the pin point in operative connection in the groove of the rod to regulate the relative distance between the stop and pin point.

4. A stiletto for embroidery and art crafting comprising a rod with tapered end portion forming a pin point and having a spiral groove in the lower half of its straight portion, a scale on said groove, and a spiral spring with top end as indicator on the scale forming below a stop around the pin point in operative connection in the groove of the rod to regulate the relative distance between the stop and pin point.

5. In a stiletto for embroidery and art crafting, a rod having a pointed end portion and a spiral groove in the lower half of its straight portion, and means in operative connection in said groove of the rod forming below a stop around the pin point.

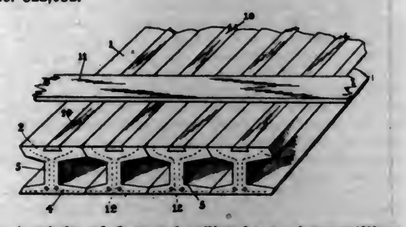
[Claims 6 and 7 not printed in the Gazette.]

960,739. SIGHT FOR FIREARMS. CLAIBORN TYLER, Boley, Okla. Filed Oct. 18, 1909. Serial No. 523,152.



The combination with a double barreled gun provided with a filling block or rib between the two barrels, of a sighting bead comprising a globular polished body of white material provided with a shank, the shank being formed with an arrow-shaped terminal end inserted into the material of the filling block, the filling block being then closed around the shank above the arrow-headed termination.

960,740. FLOOR AND CEILING BEAM. JAY W. VAUGHAN, Chicago, Ill. Filed Oct. 11, 1909. Serial No. 522,052.



1. A reinforced floor and ceiling beam of cementitious material provided with oppositely disposed lateral flanges on the upper and lower margins of a central web, the margins of the flanges on the same side of the web lying in planes that intersect in the horizontal central plane of the web, and are oblique thereto.

2. A reinforced floor and ceiling beam of cementitious material having a central web rectangular in cross-section, a pair of oppositely disposed flanges whose upper faces form with the upper face of the web a plane surface at right angles to the sides of the web and whose under faces are oblique thereto, and a pair of oppositely disposed flanges whose lower faces form with the lower face of the web a plane surface at right angles to the sides of the web and whose upper faces are oblique thereto, the lateral faces of the pair of flanges on one side of the web lying in planes oblique to the web side which planes intersect in a line between the proximate faces of the flanges, and the corresponding faces of the opposite flanges lying in planes parallel to said oblique planes.

3. A reinforced floor and ceiling beam of cementitious material having a central web rectangular in cross-section, a pair of oppositely disposed flanges whose upper faces form with the upper face of the web a plane surface at right angles to the sides of the web and whose under faces are oblique thereto, and a pair of oppositely disposed flanges whose lower faces form with the lower face of the web a plane surface at right angles to the sides of the web and whose upper faces are oblique thereto, the lateral faces of the pair of flanges on one side of the web lying in planes oblique to the web side which planes intersect in a line between the proximate faces of the flanges, the corresponding faces of the opposite flanges lying in planes parallel to said oblique planes, and the upper flanges being thicker than the lower flanges.

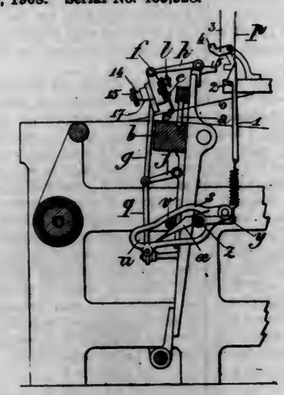
4. A reinforced floor and ceiling beam of cementitious material provided with oppositely disposed lateral flanges on the upper and lower margins of a central web, the

margins of the flanges on the same side of the web lying in planes that intersect in the horizontal central plane of the web, and are oblique thereto, the planes of the margins on one side of the web being parallel with the planes of the corresponding margins on the other side of the web.

5. A reinforced floor and ceiling beam of cementitious material provided with oppositely disposed lateral flanges on the upper and lower margins of a central web, the margins of the flanges on one side of the web lying in planes that intersect in a line between the margins and the web, and the margins of the flanges on the other side of the web lying in planes that intersect in a line beyond the outer edges of the margins.

[Claim 6 not printed in the Gazette.]

960,741. EMBROIDERY ATTACHMENT FOR WEAVING-LOOMS. LOUIS VEYRON, Paris, France. Filed Dec. 30, 1908. Serial No. 469,928.



1. In a loom the combination with the batten thereof and means for disposing a series of threads longitudinally of the loom of an embroidery attachment, comprising a series of hooks each adapted to receive and conduct a loop of such thread into the warp, a series of shuttles each adapted to traverse one of said loops and deposit a binding thread therefor, and means for operating said hooks and shuttles during the rearward movement of the batten.

2. In a loom the combination with the batten thereof and means for disposing a series of threads longitudinally of the loom of an embroidery attachment comprising a series of pivotal hooks, means whereby said hooks are each caused to rotate and simultaneously engage one of said threads and conduct a loop thereof into the shedded warp, a series of shuttles corresponding in number to the hooks and each adapted to traverse one of said loops and deposit a binding thread therefor and means for bringing the attachment into the plane of operation and for effecting the aforesaid operations of the hooks and shuttles during the rearward movement of the batten.

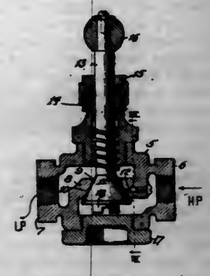
3. In a loom the combination with the batten thereof and means for disposing a series of threads longitudinally of the loom of an embroidery attachment comprising a series of hooks each adapted to receive and conduct a loop of such thread into the warp, a series of shuttles each adapted to traverse one of said loops and deposit a binding thread therefor, means for operating said hooks and shuttles during the rearward movement of the batten and means controlled by the shedding mechanism of the loom for automatically determining the time at which said attachment shall be brought into operation and for arresting such operation.

4. In a loom the combination with the batten thereof and means for disposing a series of threads longitudinally of the loom of an embroidery attachment, comprising a series of hooks each adapted to receive and conduct a loop of such thread into the warp, a series of shuttles each adapted to traverse one of said loops and deposit a binding thread therefor, means for operating said hooks and shuttles during the rearward movement of the batten and means whereby the movement of the main loom shuttle is arrested during the operation of the embroidery attachment.

5. In a loom the combination with the batten thereof and means for disposing a series of threads longitudinally of the loom of an embroidery attachment, comprising a series of hooks each adapted to receive and conduct a loop of such thread into the warp, a series of shuttles each adapted to traverse one of said loops and deposit a binding thread therefor, means for operating said hooks and shuttles during the rearward movement of the batten and means for producing lateral movement of the attachment to determine the transverse spacing of the embroidery patterns.

[Claims 6 and 7 not printed in the Gazette.]

960,742. ALARM-VALVE. HARRY VISSERING, Chicago, Ill. Filed June 17, 1909. Serial No. 502,730.



1. The combination of a valve casing having a valve seat with a high pressure port on one side of the seat and a low pressure port on the other side of the seat and a valve for closing the connection between said two ports, and a secondary port leading to the atmosphere closed when the valve is closed and open when the valve is open, substantially as and for the purposes described.

2. The combination of a valve casing having a valve seat with a high pressure port on one side of the seat and a low pressure port on the other side of the seat and a valve for closing the connection between said two ports, and a secondary port leading to the atmosphere open when the valve is off its seat and closed when the valve is on its seat, substantially as and for the purposes described.

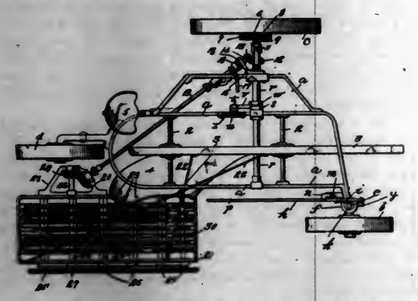
3. The combination of a valve casing having a valve seat with a high pressure port on one side of the valve seat and a low pressure port on the other side of the valve seat and a valve, and a port having connection with the atmosphere and connecting with the high pressure port when the valve is open and closed when the valve is closed, substantially as and for the purposes described.

4. The combination of a valve casing having a valve seat with a high pressure port on one side of the valve seat and a low pressure port on the other side of the valve seat and a valve, and a port having connection with the atmosphere and connecting with the high pressure port when the valve is open and closed when the valve is closed, substantially as and for the purposes described.

5. The combination of a valve casing having a valve seat with a high pressure port on one side of the valve seat and a low pressure port on the other side of the valve seat, and a third port connecting with the valve seat, two of the ports being open when the valve is off its seat and closed when the valve is on its seat.

[Claims 6 to 8 not printed in the Gazette.]

960,743. PLOW. JOHN VOEGELE, Faribault, Minn. Filed Mar. 25, 1909. Serial No. 485,615.



1. In a plow, the combination of a plow-frame; a casing carried by said frame; a plow carried by said frame and arranged to turn the soil into said casing; soil-disintegrating devices mounted in said casing; a bent rock-shaft on which said frame is carried; a wheel in which one end of said rock-shaft is rotatably mounted and is supported; means for swinging said rock-shaft to raise and lower said frame, plow and casing with respect to said wheel; mechanism for actuating said soil-disintegrating devices; and connecting means which connect said mechanism and wheel, whereby said wheel is adapted to drive said mechanism and thereby said soil-disintegrating devices; said connecting means being carried by said frame in line with that portion of said bent rock-shaft upon which said plow-frame is carried.

2. In a plow, the combination of a plow-frame; a casing carried by said frame; a plow carried by said frame and arranged to turn the soil into said casing; a bent rock-shaft on which said frame is carried; a wheel in which one end of said rock-shaft is rotatably mounted and is supported; means for swinging said rock-shaft to raise and lower said frame, plow and casing with respect to said wheel; mechanism for actuating said soil-disintegrating devices; and connecting means which connect said mechanism and wheel, whereby said wheel is adapted to drive said mechanism and thereby said soil-disintegrating devices; said connecting means being carried by said frame and that portion of said bent rock-shaft upon which said plow-frame is carried.

3. In a plow, the combination of a plow-frame; a casing which is attached to said frame and which moves up and down therewith; a plow which is attached to said frame and which moves up and down therewith; a bent rock-shaft on which said frame is carried; a wheel in which one end of said rock-shaft is rotatably mounted and is supported; a lever which is carried by said frame and which is connected with said rock-shaft to swing the same and thereby to raise and lower simultaneously said frame, casing and plow with respect to said wheel; mechanism for actuating said soil-disintegrating devices; and connecting means which are attached to said frame and which connect said wheel and mechanism, whereby said wheel is adapted to drive said mechanism and thereby said soil-disintegrating devices.

960,744. ELECTRIC-CONDUIT FITTING. JOHN C. VOGEL, Philadelphia, Pa., assignor, by mesne assignments, to The Fairmount Electric and Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 17, 1907. Serial No. 352,709.

1. As a new article of manufacture, an electric conduit fitting having a plurality of branches at an angle to each other and outwardly swelled and enlarged at their junction forming a body substantially circular to provide an enlarged opening facing the openings of the branches and a removable closure for said opening adapted to be secured to the body.

2. As a new article of manufacture, an electric conduit fitting having a plurality of branches at angles of 90° to each other and outwardly swelled and enlarged at their junction forming a body substantially circular to provide an enlarged circular opening facing the openings of the branches, and a removable closure for said opening adapted to be secured to the body.



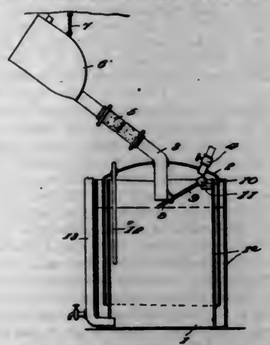
3. As a new article of manufacture, an electric conduit fitting having two branches at an angle of substantially 90° to each other and outwardly swelled and enlarged at their junction and made substantially circular with an enlarged substantially circular opening permitting access to said branches, and rounded contacts for the wires adjacent the junction of the branches and at right angles to each other and readily accessible through said enlarged opening.

4. As a new article of manufacture, an electric conduit fitting having a plurality of branches at an angle to each other and outwardly swelled and enlarged at their juncture forming a body and provided with an opening facing and in line with the openings of the branches and a removable closure for said opening adapted to be secured to the body and the walls of said opening terminating at a suitable point whereby the conductors may be drawn through either of said branches in a substantially straight line.

5. As a new article of manufacture, an electric conduit fitting comprising a hollow body having a substantially circular opening therein, tubular branches integral with said body and angularly disposed relative to each other said opening facing the openings of said branches, a removable closure for said opening, and an inwardly rounded portion on said body between said branches, whereby wires may be drawn through said body without injury.

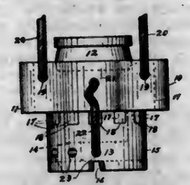
[Claim 6 not printed in the Gazette.]

960,745. GAS-GENERATOR. WILLIAM A. WALLACE, Seymour, Tex. Filed Sept. 16, 1908. Serial No. 453,326.



In a generator the combination with a tank, a bell disposed over said tank and means for introducing water into said tank, of a carbid receptacle suspended over said bell, a feed-tube yieldably connected to said receptacle and extended through said bell, a valve hingedly mounted upon the lower end of said feed-tube within the bell, an arm outwardly extended from said valve to a point adjacent the inner wall of said tank, a weight positioned upon the outer end of said arm, and a second arm rigidly carried in the upper edge of the inner wall of said tank to engage said weight when said bell is moved downwardly.

960,746. CAP FOR SHEET-PILING. WILLIAM H. WARRINGTON, Chicago, Ill. Filed Feb. 7, 1910. Serial No. 542,561.



1. A cap for sheet-piling, consisting of a pile-cap and a follower having in its lower surface one or more grooves and adjustably connected to said cap.

2. A cap for sheet-piling, consisting of a pile-cap and a follower adjustably connected together and having co-acting interlocking means.

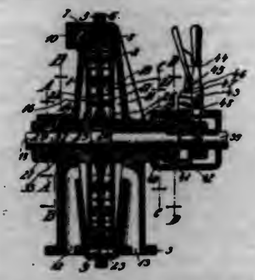
3. A cap for sheet-piling, consisting of a pile-cap and a follower adjustably connected together and having co-acting interlocking means on their adjacent surfaces.

4. A cap for sheet-piling, consisting of a pile-cap and a follower having one or more grooves in its lower surface and adjustably connected to the cap, and means to lock them against rotation.

5. A cap for sheet-piling, consisting of a pile-cap having means of support and guide the same, and a follower having in its lower surface one or more grooves and adjustably connected to said cap below the same.

[Claims 6 to 10 not printed in the Gazette.]

960,747. TURBINE. WILLIAM F. WEGNER, New York, N. Y., assignor to Stephen T. Williams, New York, N. Y. Filed July 10, 1908. Serial No. 442,915.



1. In a turbine engine, vane carrying members fitted to rotate in opposite directions, means for locking either of the members against rotation, a power transmitting shaft and independently operated means for locking the free member to and releasing it from said shaft.

2. In a turbine engine, vane carrying members fitted to rotate in opposite directions, means for simultaneously locking either of the members against rotation and releasing the other member, a power transmitting shaft and independently operated means for locking the free member to and releasing it from said shaft.

3. In a turbine engine, a casing, vane carrying members therein having alternating annular series of vanes arranged in opposite directions, means for locking either of the members against rotation, a power transmitting shaft and independently operated means for locking the free member to and releasing it from said shaft.

4. In a turbine engine, a casing, vane carrying members therein having alternating annular series of vanes arranged in opposite directions, means for simultaneously locking either of the members against rotation and releasing the other member, a power transmitting shaft and independently operated means for locking the free member to and releasing it from said power transmitting shaft.

5. In a turbine engine, a casing having its interior open to exhaust and having an annular motive fluid inlet chamber, vane carrying members fitted to rotate in opposite directions within the casing, one of said members having annular series of vanes arranged in one direction and the other of said members having annular series of vanes arranged in the opposite direction alternating with the series of vanes on the first-named member, an annular ring surrounding said vane carrying members for separating the motive fluid chamber therefrom, nozzles through said ring for feeding the motive fluid to the said vane carrying members, outlets for permitting the escape of the motive fluid from the said members to the interior of the casing, and means for locking either of the members to the casing against rotation.

[Claims 6 to 16 not printed in the Gazette.]

960,748. FOOTWEAR. MANSFIELD M. WEST, Cleveland, Ohio. Filed Jan. 27, 1909. Serial No. 474,466.



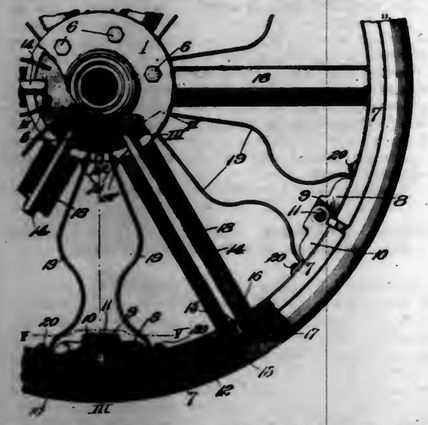
1. In a shoe, the combination with an outer sole, of an inner sole having its lower surface channeled, the sole inside the channel being depressed, filling occupying said depressed part of the inner sole and resting upon the outer sole, the outer edges of the inner sole being cut away so as to form a bead between said cut-away portion and the channel, a sheet of water-proof material covering the upper surface of the inner sole, said sheet passing about the edges of the inner sole and extending substantially to the outer sole, an inner or sock lining, said lining also extending downwardly parallel with the edges of the said sheet, means covering the upper surface of the said sheet and separating the latter from the sock lining, a welt extending about the edges of the upper and resting on the edge of the outer sole, stitches passing through the welt, the upper, the water-proof material and the bead of the inner sole, and means for securing the outer sole to the welt.

2. In a shoe, the combination with the outer sole, the inner sole having its lower surface channeled and the part between the channels depressed, filling occupying said depressed part of the inner sole and resting upon the outer sole, the outer and lower edges of the inner sole being cut away so as to form a bead between the said cut away portion and the channel, a sheet of rubber cemented to the upper surface of the inner sole, said sheet passing about the edges of the inner sole and being cemented to the cutaway portion of the latter, cushioning material resting upon the said sheet, an inner lining covering the said cushioning material, said lining extending downwardly parallel with the edges of the said sheet, an upper, an inner lining for the upper, said upper and its lining extending downwardly alongside the lining for the cushioning material, a welt extending about the edges of the upper and resting upon the edge of the outer sole, stitches passing through the welt, the upper, the linings, the rubber, and the bead of the inner sole, and additional stitches passing through the welt and the outer sole.

960,749. SPRING-WHEEL. FREDERICK WESTERBECK, St. Louis, Mo. Filed Feb. 11, 1909. Serial No. 477,406.

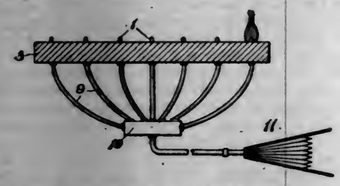
A wheel comprising a hollow hub formed with radial apertures and transverse slots, a rim consisting of jointed

sections, spokes each having free sliding connection in a radial aperture of the hollow hub and rigidly secured to a rim section, springs surrounding the spokes between the hollow hub and the rim sections, and paired auxiliary



springs between the spokes each having compound curves, a T-shaped end engaging in a transverse slot of the hollow hub and an out-bent end secured to a rim section.

960,750. BOWLING-ALLEY. ANSON B. WETHERELL, Pittsburg, Pa. Filed Apr. 8, 1909. Serial No. 488,636.



1. A pin-setting device comprising in combination a supporting platform provided with a plurality of orifices, a plurality of pin-positioning members mounted independently of one another in the orifices and slidable therein, and means for advancing the pin-positioning members to operative position.

2. A pin-setting device comprising in combination, a supporting platform provided with a plurality of orifices, a plurality of pin-positioning members mounted independently of one another in the platform and slidable in the orifices, means for advancing the pin-positioning members to operative position, and means for retracting the said members to inoperative position.

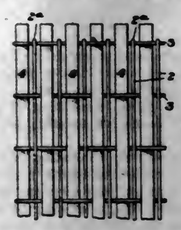
3. A pin-setting device comprising in combination a supporting platform provided with a plurality of orifices, a plurality of pin-positioning members independently mounted of one another in the platform and slidable in the orifices, means for advancing the pin-positioning members to operative position, and spring means for retracting the said members to inoperative position.

4. In combination in a pin-setting device, a supporting platform provided with orifices, stationary members secured to the platform, a positioning members movably mounted in the orifices for positioning bowling pins, expansible connecting members between the stationary members and the positioning members and means for supplying fluid pressure to the positioning members.

5. In combination in a pin-setting device, a supporting platform provided with orifices, stationary members secured to the platform, positioning members movably mounted in the orifices for positioning bowling pins, elastic connecting rings between the stationary members and the positioning members and means for supplying fluid pressure to the positioning members, the said elastic rings permitting the positioning members to advance upon application of pressure and retracting the said members on release of pressure.

[Claims 6 to 13 not printed in the Gazette.]

960,751. LATHING. ALEXANDER P. WHITE, Caldwell, N. J. Filed Nov. 13, 1909. Serial No. 527,819.



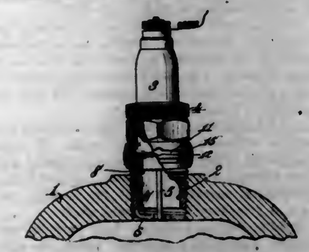
1. Lathing comprising a metallic supporting grid containing wires which cross and intersupport each other, combined with interstitial strips of a lighter non-metallic material which strips are broader than the wires and are interwoven with the metallic supporting grid and extend across some of the wires thereof, substantially as described.

2. Lathing comprising a metallic supporting grid containing wires which cross and intersupport each other, combined with interstitial strips of a lighter non-metallic material which strips are broader than the wires and are interwoven with the metallic supporting grid and extend across some of the wires thereof, said strips being formed of non-metallic fibrous material.

3. Lathing comprising a metallic supporting grid having wires which cross each other and form openings, combined with interstitial strips formed of artificial fibrous material which strips are broader than the wires in the plane of the fabric and are interwoven with the supporting grid and extend across some of its wires, substantially as described.

4. Lathing comprising a metallic supporting grid having wires which cross each other, combined with interstitial paper strips, which are broader than the wires in the plane of the fabric and are interwoven with the supporting grid and extend across some of the wires thereof, substantially as described.

960,752. SPARK-PLUG FOR EXPLOSIVE-ENGINES. JOSEPH P. WHITE, Savannah, Ga., assignor of one-half to Alexander P. Solomon, Savannah, Ga. Filed May 11, 1909. Serial No. 495,291.



1. A spark plug for explosive engines provided with terminals and having a restricted vent passage communicating with the ignition zone of its terminals and a relatively larger gas expanding passage to receive the gas from said vent passage and terminating in a restricted outlet, said passages and outlet being of a size to permit them to remain permanently open to the atmosphere to permit discharge of consumed gases from said zone during the operation of the engine.

2. A spark plug of the class described provided with terminals and having a circumferentially extending gas expanding passage communicating with the ignition zone of its terminals and capable of expanding such gases to cool them below the ignition point before expelling them to the atmosphere.

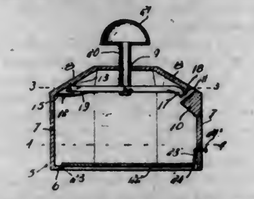
3. A spark plug for explosive engines having a cavity therein and terminals within said cavity, the plug also having a restricted vent passage leading from said cavity, a circumferentially elongated and enlarged passage and a restricted outlet therefor, said passages and outlet being of a size and shape to muffle the escaping gases and reducing their temperature below the ignition point, and a regulating device for varying the obstruction offered to such gases by said passages.

4. A spark plug for explosive engines provided with terminals and having a vent passage communicating with the ignition zone of its terminals, and also having a peripherally extending passage for receiving the gas from said vent passage and reducing its temperature below the ignition point before issuing to the atmosphere.

5. A spark plug of the class described having a portion provided with a cavity and also having a circuitous passage leading from said cavity.

[Claims 6 to 11 not printed in the Gazette.]

960,753. COMBINED PAPER-WEIGHT AND PEN-EXTRACTOR. NATHANIEL O. WICKER, Las Animas, Colo. Filed Aug. 2, 1909. Serial No. 510,733.

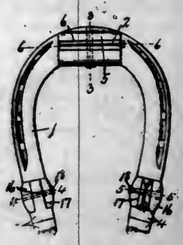


1. A combined paper weight and pen extractor comprising a metallic casing provided at one end with an upwardly inclined top, said top being provided adjacent its outer edge with an opening communicating with the interior of the casing, a ledge on the inner face of the casing and having a serrated surface in a plane with one side of the opening of the top, a lever having one end pivoted within the casing and its opposite end extending to a point adjacent the opening of the top and overhanging said ledge and a push rod extending through the central portion of the top and having its lower end secured to the lever.

2. A combined paper weight and pen extractor comprising a casing provided on its lower end with a pivoted bottom, and at its upper end with an upwardly and inwardly inclined top, the said top having an opening adjacent the outer edge thereof, a ledge disposed in said casing having a serrated surface in a plane with the lower side of the opening of the top, a lever having one end pivoted within the casing and its opposite end extending to a point adjacent the opening of the top and yieldingly held above said ledge, and a push rod extending through the said top and having its lower end secured to said lever.

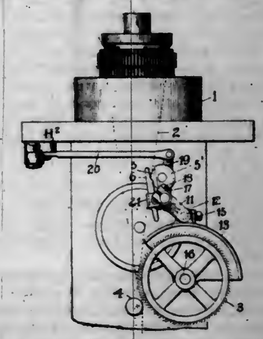
960,754. HORSESHOE. BURT WILBUR, Syracuse, N. Y. Filed Mar. 9, 1909. Serial No. 482,376.

1. A horseshoe comprising a main body having the heel portion thereof provided on its under face with a boss, said boss having a longitudinally-extending dovetailed groove therein, and a heel calk comprising a body portion and having a dove-tailed shank fitting the groove in said boss and being of a vertical height greater than the depth of the groove, said shank being of less thickness and width than the body whereby shoulders are formed at opposite sides of the inner end of the shank and a shoulder is also formed at the upper side of the inner end of the shank, said boss being provided with transverse openings and the shank of said calk having a groove in its upper face registering with said openings, and a pin passing transversely through the openings in the boss and the groove in said shank for securing the calk to the shoe.



2. A horseshoe comprising a body having the heel portion thereof provided on its underneath face with a boss, said boss provided with a longitudinally-extending dovetailed groove, and a heel calk comprising a body provided with a shank dove-tailed to fit within the dove-tailed groove and having a longitudinally-extending spur, the body of said calk having a spur lying at right angles to the spur on the shank and spaced therefrom, the lower face of said spurs being in the same plane, the said shank having a transverse groove, and the boss having transverse openings registering with said grooves, and a pin in said openings and groove for securing the heel calk in position.

960,755. FABRIC-CUTTING DEVICE FOR KNITTING-MACHINES. FRANK B. WILDMAN, Norristown, Pa. Filed June 4, 1907. Serial No. 377,212.



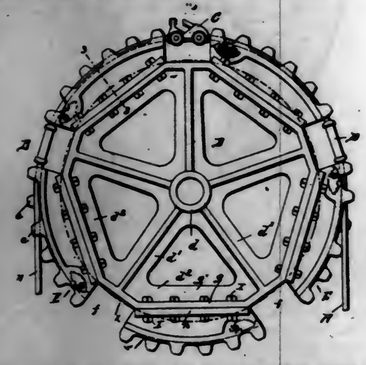
1. In combination with a knitting head, a cutting mechanism comprising a supporting arm, a pin or stud carried thereby, a sleeve on the said stud, an arm on the sleeve carrying a cutter, means for moving the sleeve back and forth, and a fixed cutter supported by the said stud, substantially as described.

2. In combination with the knitting head, a cutter, means for operating said cutter, a fixed cutter, an arm supporting said cutters and means for adjustably holding the said arm, substantially as described.

3. In combination with the knitting head, a measuring wheel, a guard therefor, and cutting means for the fabric supported on the said guard, substantially as described.

4. In combination with a knitting head, an arm having a stud thereon, a boss in which said stud fits, means for adjustably holding the stud, a second stud on the arm, a sleeve movable on said second stud, a cutter on the sleeve, a fixed cutter, an arm supporting the same from the second stud, and means for operating the sleeve to move the cutter, substantially as described.

960,756. SPROCKET-WHEEL. FREEMAN R. WILLSON, Jr., Worthington, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Aug. 30, 1905. Serial No. 276,392.

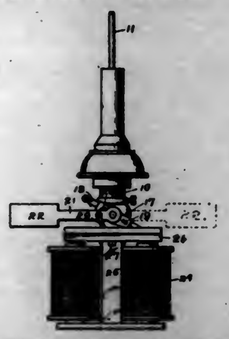


The combination with a power transmission cable having sprocket engaging blocks, of a sprocket wheel comprising a central hub or frame section having a series of regularly arranged bearing surfaces formed by laterally projecting flanges extending respectively in opposite directions from the web portion of the hub or frame section, a series of separable segments separated from each other by gaps and each formed with a groove to be engaged by the cable, each adapted to engage at one end with one of the sprocket engaging blocks of the cable and each being formed with relatively broad bases, extending laterally from the web part of the segment in a direction transverse to the plane of the wheel and adapted to be supported by the bearing faces of the hub or frame section, liners between the bearing surfaces of the central hub and the separable sections, and rows of connecting bolts on each side of the segments and passing through the flanges of the segments and through the flanges of the hub or frame section, substantially as set forth.

960,757. ELECTRIC VALVE-CONTROLLER. ALONZO T. WILSON, Des Moines, Iowa, assignor of one-half to William H. Nicholas, Des Moines, Iowa. Filed June 8, 1908. Serial No. 437,308.

1. In a device of the class described, the combination of a valve, a weighted arm pivoted to the valve stem and capable of movement from a substantially horizontal position at one side to a similar position on the other side, said valve being so arranged with relation to the weighted arm that it will be closed in one of said positions of the weighted arm and open in the other, an electromagnet, an armature for the magnet, a link connecting the armature with the weighted arm, and a spring operatively connected with the armature for holding it in a direction away from its magnet and also for normally holding said weighted arm in a substantially horizontal position at either side of its movement for the purposes stated.

2. In a device of the class described, the combination with a valve, of an arm connected to the valve stem and capable of movement from a substantially horizontal position at one side of the valve to a similar position at the other side, an electromagnet, an armature arranged in operative position relative to the magnet, and means for connecting the armature with said arm, for moving the arm downwardly when at either of its limits of movement, upon a movement of the armature toward the magnet, and a spring arranged for elevating the arm of the valve when the armature is released from the magnet.

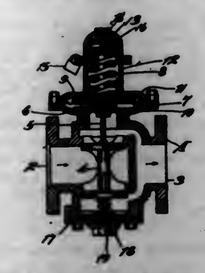


3. In a device of the class described, the combination of a valve, a plate fixed to the valve stem and having lugs on opposite sides thereof, a weighted arm pivoted to the valve stem and designed to engage said lugs, said weighted arm being capable of movement from a substantially horizontal position at one side to a similar position on the other side, an electromagnet, an armature arranged in operative position relative to the magnet, a link connecting the armature with the weighted arm, and a spring connected with the weighted arm for normally elevating it for the purposes stated.

4. In a device of the class described, the combination of a gas burner a valve therefor and a pilot light attachment, a plate fixed to the valve, lugs on the plate, a weighted arm pivoted to the valve and designed to engage the lugs, an electromagnet, an armature arranged in operative position relative to the magnet, a link connecting the armature and the weighted arm, and an adjustable spring for normally elevating the weighted arm.

5. In a device of the class described, the combination of a valve a lever fixed to one end thereof, a bracket comprising a body portion having extensions at its ends bent around said lever for attaching the bracket to the valve, lugs fixed to opposite sides of said bracket, a weighted arm pivoted to the bracket, an electromagnet, an armature arranged in operative position relative to the magnet, and means for connecting the armature with said weighted arm.

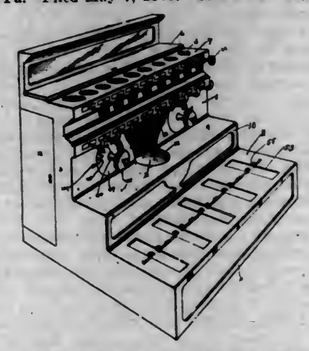
960,758. REDUCING-VALVE. GEORGE E. WITT, San Francisco, Cal. Filed Oct. 6, 1909. Serial No. 521,411.



1. In a reducing valve the combination of a valve casing, a valve therein having a projecting stem, a diaphragm exposed on one side to the fluid pressure in the casing and supported loosely upon the upper end of the valve stem, and disconnected from said stem, a regulating spring acting in opposition to the fluid pressure and located on the opposite side of the diaphragm, said casing having a portion inclosing the spring and internally threaded, an internal nut threaded on its outside to engage the threads of said spring-inclosing portion and adapted to regulate the tension of said spring, and a cap inclosing the nut and having internal threads screwing into engagement with the threads of said nuts whereby the cap incloses and locks the nut in place, and means for locking the cap to a fixed portion of the valve casing.

2. In a reducing valve, the combination of a valve casing and a valve therein, a diaphragm exposed on one side to the fluid pressure in the valve, the valve having a stem bearing loosely against and disconnected from the diaphragm, a regulating spring and presser plate acting on the opposite side of the diaphragm from the valve, and means for adjusting the tension of said spring, said means including a hollow nut against the inside of which one end of said spring seats, said nut externally threaded and screwing into a part carried by the valve casing, and a locking cap screwing on to the nut, with means for locking said cap to the casing.

960,759. CASH-REGISTER. GEORGE H. WOLFF, Pittsburg, Pa. Filed May 7, 1909. Serial No. 494,652.



1. In a cash register, the combination with a casing, and registering mechanisms located in said casing, of slides for depositing and delivering money from said casing, said slides being adapted to actuate said registering mechanism, revoluble paper holding drums located in said casing, circumferentially arranged resilient overlapping blades carried by said drums and providing pockets for paper money, and means for moving said drums.

2. A machine of the type described comprising a casing, coin holders, means for depositing and delivering coins in and from said holders, means for registering the amount of coins deposited and the amount of coins delivered in and from said holders, revoluble drums located in said casing, overlapping resilient blades arranged in operative relation with respect to each other and with respect to the drums to constitute pockets for paper money, retaining means carried at the ends of the drums for said blades and means for revolving said drums.

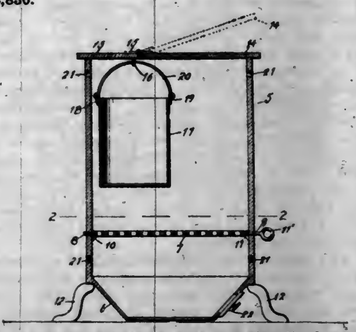
3. A cash register, comprising revoluble paper holding drums, resilient blades carried by said drums for holding paper, means for holding said blades to retain paper placed between said blades, and means for moving said drums.

4. A cash register, comprising revoluble paper holding drums, resilient blades carried by said drums for holding paper, means for holding said blades to retain paper placed between said blades, means for moving said drums, and means for registering a movement of said drums in either direction.

5. A cash register, comprising a casing, revoluble paper holding drums located in said casing, shutters carried by said casing and adapted to move said drums, and means within said casing for registering a movement of said drums.

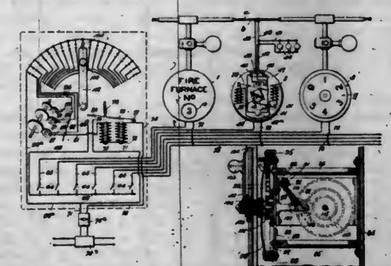
[Claims 6 to 10 not printed in the Gazette.]

960,760. DOMESTIC GARBAGE-FURNACE. ALFRED V. WOOD, Brunswick, Ga. Filed Oct. 21, 1909. Serial No. 523,830.



In a domestic garbage furnace, a casing the lower end of which is closed and bulged downwardly so as to provide an ash-pit, a grate having trunnions journaled in the casing and located directly above the ash-pit, a top consisting of a pair of hingedly united sections arranged on the upper end of said casing, a supporting hook depending from the intermediate portion of one side of one of said top sections, and a receptacle of considerably less diameter and length than the diameter and length of the casing supported by said hook.

960,761. TIME-CONTROLLED AND ELECTRICALLY-OPERATED SIGNALING SYSTEM. FRANK W. WOOD, Newport News, Va., assignor to Charles Cory and John M. Cory, New York, N. Y. Filed Aug. 25, 1905. Serial No. 275,731.



1. In a system of the character described, an electrically operated indicator constructed to indicate successive intelligences, a circuit including said indicator, electrically operated means for closing said circuit, a circuit including said means, a plurality of normally open circuit closers in the last-named circuit, each circuit closer being provided with electrically operated means to close the circuit at definite time intervals different from that of the other closers, and selective means to render any one of said closers effective, to close the circuit through said electrically operated means.

2. In a system of the character described, an electrically operated indicator constructed to indicate successive intelligences, a circuit including said indicator, electrically operated means for closing said circuit, a circuit including said means, a plurality of normally open circuit closers in the last-named circuit, independent operating means for each of said closers to close the circuit at definite

time intervals different from that of the other closers, and means whereby the circuit is completed through only one of said closers.

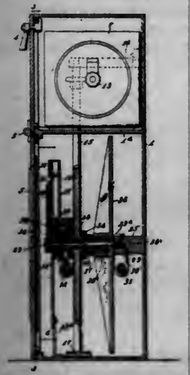
3. In a system of the character described, an electrically operated indicator to indicate successive intelligences, a circuit including said indicator, electrically operated means for closing said circuit, a circuit including said means, a plurality of circuit-controllers any one of which may operate to close the last-named circuit, and time-controlled means to operate said controllers to close the circuit, the period of operation of any one of the controllers being different from all the other controllers.

4. In a system of the character described, an electrically operated indicator to indicate successive intelligences, a circuit including said indicator, electrically operated means for closing said circuit, a circuit including said means, a plurality of circuit-controllers any one of which may operate to close the last-named circuit, time-controlled means to operate said controllers to close the circuit, the period of operation of any one of the controllers being different from all of the other controllers, and means to render any one of the several controllers operative to close the circuit.

5. In a system of the character described, an electrically operated indicator to indicate successive intelligences, a circuit including said indicator, electrically operated means for closing said circuit, a circuit including said means, a plurality of circuit-controllers any one of which may operate to close the last-named circuit, time-controlled means to operate said controllers to close the circuit, the period of operation of any one of the controllers being different from all of the other controllers, and manually operated means to render any one of the several controllers operative to close the circuit.

[Claims 6 to 23 not printed in the Gazette.]

960,762. SPEED-INDICATOR. FRANK W. WOOD, Newport News, Va., assignor to Charles Cory & Son, New York, N. Y. Filed Feb. 5, 1909. Serial No. 476,269.



1. In a speed indicator, a shaft driven at constant speed, and means for driving the same, a pointer mounted thereon, a second shaft driven at variable speed, and means for driving the same connected to a device the speed of which it is desired to determine, a third shaft concentric with the first and a pointer thereon in a plane parallel and adjacent to the plane of the first pointer, indicating means mounted in a plane parallel and adjacent to the planes of the first two pointers, variable speed gearing between the second shaft and the pointer on the third shaft, means for shifting said gearing to vary the speed of the pointer on the third shaft, and connections from said means to said indicating means for indicating the speed of the second shaft.

2. In a speed indicator a shaft driven at constant speed and means for driving the same, a pointer thereon, a disk fraction gear mounted concentric with and adjacent to the pointer, a second pointer in a plane adjacent the plane of the first-named pointer, means connecting said second pointer to said disk, a second shaft driven at variable speed by the device whose speed is to be determined, a friction wheel mounted on and adjustable along said second shaft and in engagement with the face of said disk, an indicating pointer mounted in a plane parallel and adjacent to the planes of the first named pointers, means for moving said friction wheel along the second shaft, and means connecting the indicating pointer with said means for moving the friction wheel along the second shaft for the purpose of indicating the speed of the said second shaft.

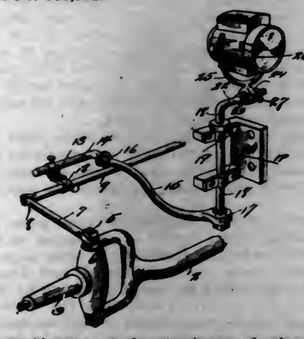
3. In a speed indicator a shaft driven at constant speed and means for driving it, a pointer thereon, a second shaft concentric with the first, a friction disk mounted on said second shaft, a pointer also mounted on said second shaft in a position to be viewed simultaneously with the first pointer, a third shaft revolving at a variable speed, a variable speed gearing between said third shaft and said friction disk, means for changing the said gearing to vary the speed of the said disk, a third pointer mounted on one of the shafts, a dial over which said pointer is adapted to move, and connections between the means for changing the gearing between the third shaft and the friction disk, and the pointer coöperating with the dial, for causing the last-named pointer to indicate the speed of said third shaft.

4. In a speed indicator a shaft driven at constant speed, and means for driving it, a pointer thereon, a second shaft concentric with the first, a friction disk and a pointer mounted thereon in a position to be viewed simultaneously with the first pointer, a third shaft driven at variable speed by the device whose speed is to be determined, a friction wheel carried by and adjustable along said third shaft and engaging the face of said friction disk, means for yieldingly pressing said friction disk against said friction wheel, means for moving said friction wheel along said third shaft, and means for indicating extent of such movement.

5. In a speed indicator, an element driven at constant speed, and means for driving the same, a second element driven at variable speeds, and means for driving the same connected to the device the speed of which it is desired to determine, a third element concentric with the first element, gearing between said second and third elements whereby the speed of said third element may be varied, and means in connection with said elements comprising pointers which move in adjacent planes for indicating the speed of the device the speed of which it is desired to determine.

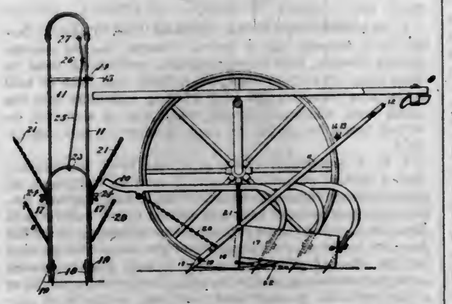
[Claims 6 to 8 not printed in the Gazette.]

960,763. HEADLIGHT-CONTROLLER FOR AUTOMOBILES. EDWARD A. ADAMS, Liberty, Nebr. Filed Aug. 20, 1908, Serial No. 449,457. Renewed Mar. 19, 1910. Serial No. 550,521.



The combination of the steering mechanism of a vehicle, lamps or headlights, connections between the steering mechanism and the headlights, said connections consisting of pivoted vertical supporting shafts having laterally extending arms provided with polygonal shaped portions to which the lamp yokes are detachably and adjustably secured, crank rods connected to the shafts, horizontally extending rods, universal joints connecting the crank arms and rods, and adjustable clamp connections between the rods and the transverse bar of the steering mechanism.

960,764. ATTACHMENT FOR CULTIVATORS. OLIVER E. ADAMSON, Sheldahl, Iowa. Filed Jan. 27, 1908. Serial No. 412,814.



1. In a device of the class described, the combination of two supporting bars, chains connected therewith for holding said bars on a cultivator or the like, in a position inclined upwardly and rearwardly at an angle of about 45 degrees, earth cutting blades adjustably fixed to the lower ends of said bars, and a fender fixed to each bar.

2. In a device of the class described, the combination with a cultivator of two bars, flexible supporting devices connecting said bars with the cultivator frame so that said bars may be manually guided independently of the cultivator frame, and fender members connected to said bars and designed to travel on opposite sides of a row being cultivated.

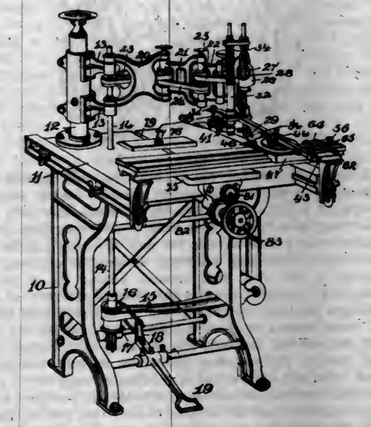
3. In a device of the class described, the combination of a cultivator frame, a number of flexible supporting devices fixed to the cultivator frame and extended downwardly and toward each other, two bars carried by said flexible supports, and a fender carried by said bars to thereby provide for normally holding the said bars in position relative to the cultivator frame and to also provide means by which the operator may easily swing the bars to either side.

4. In a device of the class described, the combination of a cultivator frame, a number of flexible supporting devices fixed to the cultivator frame and extended downwardly and toward each other, two bars carried by said flexible supports, and a fender carried by said bars to thereby provide for normally holding the said bars in position relative to the cultivator frame and to also provide means by which the operator may easily swing the bars to either side, and earth cutting blades adjustably fixed to the forward ends of said bars to be capable of entering the earth at different degrees of inclination.

5. The combination of a cultivator frame, a frame comprising guide bars connected with each other, four chains fixed to said guide bars and extending upwardly and on divergent lines and attached to the cultivator frame for normally supporting the said bars in position beneath the cultivator frame, two fender members fixed to the forward ends of said bars, and a fender member pivotally connected with said bars in the rear of the first mentioned fender members and having its rear end capable of free up and down movement, substantially as and for the purposes stated.

[Claims 6 and 7 not printed in the Gazette.]

960,765. MACHINE FOR CARVING FIGURES IN RELIEF AND INTAGLIO. HONESTUS M. ALBEE, Nutley, N. J. Filed July 24, 1908. Serial No. 445,138.



1. A carving machine comprising a movable support, a shaft mounted in the support, means for operating the shaft, a rod in the support, a connection between the bar and the shaft, a cutter on the end of the shaft, a follower on the rod, and a spring having one end abutting on the support and the other end arranged to exert a pressure little less than the weight of the rod, the shaft and their accessories, and means for limiting the downward movement of the rod.

2. A carving machine comprising a support for supporting a shaft, the shaft being movable horizontally in every direction, a table, a cutter in the shaft, a follower on the supporting means, a block, a handle in the block, the handle being connected with the supporting means for the shaft, thereby providing for its manual manipulation in one direction, and means on the table and connected with the block for causing a step-by-step movement of the block along the table.

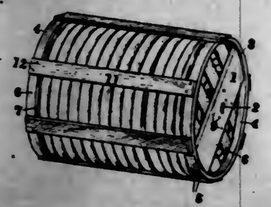
3. A carving machine comprising a frame, a support thereon, a shaft in the support, the support being adapted to permit the movement of the shaft horizontally in every direction, a cutter in the shaft, means for rotating the shaft, means for elevating and depressing the cutter, a handle on the cutter support for moving it in one direction, and means secured to the handle and moving on the table for causing a step-by-step movement of the support and its cutter in a direction transverse to the movement imparted by the handle.

4. A carving machine comprising a support, a shaft mounted in the support, the support permitting the movement of the shaft horizontally, a table, a handle for actuating the support in one direction, means on the table for guiding the handle, means for locking the handle in the guiding means, a casing having manually operated means thereon for causing it to move along the table by a step-by-step movement, and a connection between the handle locking means and the casing.

5. A carving machine comprising a movable support, a shaft journaled in the support, means for rotating the shaft, a cutter in the end of the shaft, a sleeve on the support, a rod in the sleeve, a bar connecting the rod and the shaft, a spring abutting on the sleeve with one end and abutting on the bar with the other end, a block on the rod, a follower, means for adjustably securing the follower on the block, and means for limiting the downward movement of the follower and cutter.

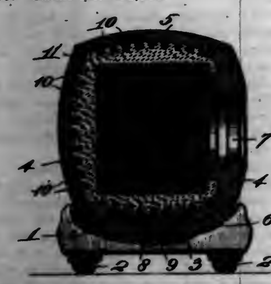
[Claims 6 to 9 not printed in the Gazette.]

960,766. SHIPPING-PACKAGE. JOHN M. ALDERFER, Sharon Center, Ohio. Filed Mar. 15, 1909. Serial No. 483,562.



A shipping package for rubber tires and garden hose embodying a pair of oppositely-disposed heads arranged in spaced relation with respect to each other and each consisting of a ring, a transversely-extending member arranged within and having its ends abutting against the inner face of the ring, hold-fast devices for securing said member to the ring, said member having its inner face flush with the inner edge of the ring, a plurality of slats arranged against the inner edge of the ring and having the ends thereof flush with the outer face of the ring, hold-fast devices for securing the slats to the ring, hold-fast devices for securing the slats to said member, a block arranged against the inner face of each set of slats, hold-fast devices for securing said block in position, a core extending from one set of slats to the other and having its ends inclosing the said blocks, means extending through the ends of the core and engaging in the blocks for fixedly securing the core in position, and a plurality of bars having their ends fixedly secured to the outer faces of said rings.

960,767. SAFE. JAMES M. ALLEN, St. Louis, Mo., assignor of one-half to Christian F. Schneider, Alton, Ill., and one-eighth to D. F. Dirks, St. Louis, Mo. Filed Apr. 21, 1909. Serial No. 491,388.

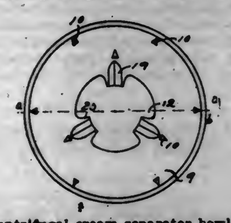


The herein-described safe body, constructed in a single piece, the walls top and bottom of which are segmentally curved in cross-section, cross ribs integral with the inner faces of the walls, top and bottom, and a lining of hardened plastic material covering said ribs and filling the spaces between said ribs.

960,768. CENTRIFUGAL CREAM-SEPARATOR. GUSTAF M. ANDERSON, Waterloo, Iowa. Filed June 16, 1909. Serial No. 502,505.

1. In a centrifugal cream separator bowl, a central hollow body therein, and a hollow frustum located concentrically therein, said frustum having projections from its inner edge adapted to engage said body, and each of said projections being formed into a trough with the cavity of the trough directed toward the cream-outlet of the bowl.

2. In a centrifugal cream separator bowl, a central hollow body therein, and a hollow frustum located concentrically therein, said frustum having projections from its inner edge adapted to engage said body, and each of said projections being formed into a V-shaped trough with the cavity of the trough directed toward the cream-outlet of the bowl and the apex of the trough adapted to stem the current of cream passing toward said cream-outlet.

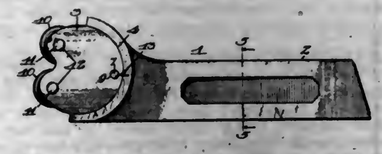


3. In a centrifugal cream separator bowl, a central hollow body therein, and a hollow frustum located concentrically therein, said frustum having projections from its inner edge adapted to engage said body, and each of said projections being formed with a crimp extending into the cream zone whose closed side is adapted to stem the escaping cream in the cream zone adjacent to said central body.

4. In a centrifugal cream separator bowl, in combination, a central hollow body having vertical troughs in its outer surface, and a pile of separating plates disposed concentrically about said body and spaced apart, each of said separating plates having projections extending inwardly from its inner edge to engage said sleeve within the said troughs thereon, the inner edges of said plates between said projections receding outwardly to provide a series of alined channels through said liner next to the outer surface of said sleeve.

5. In a centrifugal cream separator bowl, in combination, a central hollow body having vertical separated ridges on its outer periphery and an orificed flaring base resting on the bottom of the bowl concentrically therewith, a pile of hollow frusta supported by said body and its base, each frustum having projections from its inner edge removably engaging the said body between said vertical ridges, and each projection being constructed in the form of a trough directed toward the cream zone of the bowl and adapted to deliver cream toward the outer surface of said body, the vertices of said trough being directed to stem the current of cream in the cream zone of the bowl.

960,769. NURLING-TOOL. JAMES ARMSTRONG, Maywood, Ill., assignor to The Armstrong Brothers Tool Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 18, 1908. Serial No. 453,620.



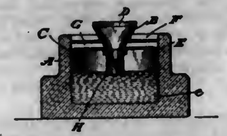
1. A nurling or similar tool comprising a socket having a curved central rib, a die-carrying head mounted in said socket and grooved to receive said rib, said rib having an elongated opening therein, and a pin fixed in said head and extending into said elongated opening.

2. A nurling or similar tool comprising two parts, one of said parts being a member having a socket therein, and the other part being a die-carrying head fitting rotatably in said socket; and means for securing said parts together comprising a pin fixed in one part and extending through an elongated opening in the other part, said elongated opening permitting limited rotation of said head in said socket.

3. A nurling or similar tool comprising a supporting shank having one end curved on the arc of a circle; a die-carrying head having one side curved on the arc of a circle to fit against the curved end of said supporting shank, one of said parts having a semi-circular groove therein and the other part having a semi-circular rib having an elongated opening therein; and a pin fixed in the part having the groove and extending into said elongated opening.

4. A nurling or similar tool comprising a socket, a central rib in said socket, the forward edge of said rib being curved on the arc of a circle concentric with the circle upon which said socket is formed, said rib having an elongated opening therein, a die-carrying head rotatably fitting in said socket and having a curved surface contacting the forward edge of said rib, and a pin fixed in said head and extending into said elongated opening.

960,770. INKSTAND. FRANK M. ASHLEY, New York, N. Y. Filed Nov. 30, 1906. Serial No. 345,668.



1. An inkstand comprising two parts, a base having a cylindrical reservoir entirely open at the top, and a float of nearly the same diameter as the reservoir provided with an annular recess which serves as an overflow chamber, the upper part of the float constituting a cover for the reservoir, and extending nearly to the inner wall thereof.

2. A two-part inkstand comprising a base having a cylindrical reservoir entirely open at the top, and a float carrying a dip cup and cover in fixed relation to said float, a recess to serve as an overflow chamber, the diameter of the float being nearly that of the reservoir, and its length being less than the depth of the well.

3. A two part inkstand comprising a base having a cylindrical reservoir open its full diameter at the top, and a float having a cover of greater diameter than the lower end of the float and adapted to slidingly engage the walls of the reservoir, said float having an annular recess which serves as an overflow chamber as set forth.

4. A two part inkstand comprising a base having a cylindrical reservoir open its full diameter at the top, and a float of less length than the depth of the reservoir, said float having an annular recess which serves as an overflow chamber, and having a cover connected thereto, which extends to the wall of the reservoir to serve as a guide.

5. A two part inkstand comprising a base having a cylindrical reservoir open its full diameter at its top, and a float provided with a cover portion which extends nearly to the inner wall of the reservoir, said float having a recess which serves as an overflow chamber, said float being of less length than the depth of said reservoir and of approximately the same lateral dimensions, and having a dip cup located on the top thereof.

[Claims 6 to 8 not printed in the Gazette.]

960,771. AWNING-FIXTURE. WILLIAM J. O. ASTRUP, Cleveland, Ohio. Filed Jan. 14, 1909. Serial No. 472,239.



1. In an awning-fixture, a wall-plate having an overhanging bracket member and provided with a boss having its threaded opening terminating in an enlarged opening at the rear of said wall-plate, said wall-plate having a pulley-hook having its nose extending forwardly and beneath the horizontal plane of said boss.

2. In an awning-fixture, a wall plate provided with a depending hook and a boss having a pocket-groove on its face and a threaded opening terminating in an enlarged opening, a thumb screw mounted in said boss and terminating in a retaining-stop in said enlarged opening, and a depending rod-clamping member carried by said thumb-screw and provided with a retaining-rib adapted to normally interlock with said pocket-groove on the face of said boss.

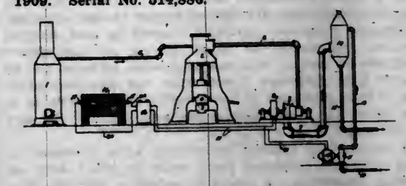
3. In an awning-fixture, the combination with a wall-plate having a depending hook and a boss having a threaded opening terminating in an enlarged opening at the rear of said wall-plate; of a thumb-screw mounted in said threaded opening and terminating in a retaining-stop in said enlarged opening, and a rod-clamping member carried by said thumb-screw and extending downwardly above and in front of the nose portion of said depending hook.

4. An awning-fixture, comprising a wall-plate having depending forwardly-extending pulley-hooks and provided with a threaded boss having an enlarged opening at the rear of said wall-plate, a thumb-screw mounted in said boss and having its end overturned in said opening forming a retaining stop, and a rod-retaining clamping member mounted on said boss by said thumb-screw and depending above and in front of said pulley-hooks.

5. An awning-fixture, comprising a wall-plate provided with a threaded boss and an overhanging attaching bracket member, said wall-plate being provided with a plurality of forwardly extending depending hooks, a depending rod-retaining clamping member mounted on said boss, and a thumb-screw taking through said clamping member and threaded into said boss.

[Claims 6 to 10 not printed in the Gazette.]

960,772. APPARATUS FOR METAL WORKING. THADDEUS F. BAILY, Alliance, Ohio. Filed Aug. 27, 1909. Serial No. 514,886.



1. In apparatus for metal working the combination of a steam boiler, a steam actuated metal forming device, an exhaust steam turbine and direct connected generator, a controller and an electric furnace, means for conducting steam from said boiler to said steam actuated device, means for conducting the exhaust steam from said steam actuated device to said exhaust steam turbine, electrical connection between said electric generator and said controller and electrical connection between said controller and said furnace.

2. In apparatus for metal working the combination of a steam boiler, a steam actuated metal forming device, an exhaust steam turbine, an electric generator operated by said turbine, an electric furnace, means for conducting steam from said boiler, to said steam actuated device, means for conducting the exhaust steam from said steam actuated device to said exhaust steam turbine and electrical connection between said electric generator and said furnace.

960,773. ELECTRIC FURNACE. THADDEUS F. BAILY, Alliance, Ohio. Filed Sept. 7, 1909. Serial No. 516,436.

1. An electric furnace comprising walls of non-conducting, heat resisting material, said walls arranged to

form a heating chamber and provided with an opening constituting a means of access to said heating chamber, spaced electrodes extending across said heating chamber and arranged in a convergent position, the said electrodes being nearer to each other adjacent said opening than at other points in said chamber, and granular resistance material located in the heating chamber and in contact with said electrodes.



2. An electric furnace comprising walls of non-conducting, heat resisting material, said walls arranged to form a heating chamber and provided with an opening constituting a means of access to said heating chamber, spaced electrodes extending across said heating chamber and arranged in a convergent position, the said electrodes being nearer to each other adjacent said opening than at other points in said chamber, and resistance material located in the heating chamber and in contact with said electrodes.

3. An electric furnace comprising walls of non-conducting, heat resisting material, said walls arranged to form a heating chamber and provided with an opening constituting a means of access to said heating chamber, spaced electrodes extending across said heating chamber and arranged in a convergent position, the said electrodes being nearer to each other adjacent said opening than at other points in said chamber, granular resistance material located in the heating chamber and in contact with said electrodes, and the portion of said resistance material adjacent said electrodes of relatively great cross-section and the portion intermediate said electrodes being of relatively small cross-section.

4. An electric furnace comprising walls arranged to form a heating chamber, said walls provided with an opening constituting a means of access to said chamber, a body of resistance material located in said heating chamber and having an upper general surface, spaced electrodes in contact with said resistance material and so located with reference thereto that the electrical pathway of least resistance between said electrodes will lie in that portion of said resistance material adjacent the said top surface.

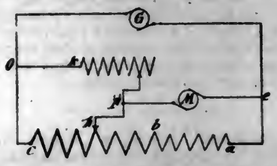
5. An electric furnace comprising walls arranged to form a heating chamber, said walls provided with an opening constituting a means of access to said chamber, a body of resistance material located in said heating chamber, spaced electrodes in contact with said resistance material and extending for a distance across the same, said electrodes so located with reference to each other that the path-way of the electric current from electrode to electrode through said resistance material will be shorter in one portion of the body of material than in another portion thereof.

[Claims 6 to 12 not printed in the Gazette.]

960,774. SPEED-CONTROLLING DEVICE APPLICABLE TO ELECTRIC MOTORS AND GENERATORS. DMITRY BALACHOWSKY, Paris, and PHILIPPE CAIRE, Levallois-Paris, France. Filed May 8, 1907. Serial No. 372,577.

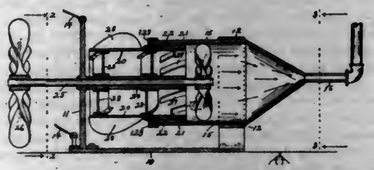
1. In an electrical machine, the combination of an armature, an exciter winding of varied cross-section through which there is a continuous flow of current having a series of contact points, a branch contact to connect one pole of the armature with the exciter winding at any one of said points, and means for regulating the amount of current flowing through the thickest portion of the exciting winding comprising a variable resistance connected in parallel with said winding.

2. In an electrical machine, the combination of a pair of feed-wires, a field exciting winding having a finer winding at one end and a thicker winding of varied cross section at the other end provided with a series of contact points, an armature having one terminal connected to the feed wire to which said fine wire is connected, a con-



ductor of variable resistance connecting the second terminal of the armature to the feed wire to which the thicker winding is connected, and a movable contact connecting said second terminal to any of said contact points of the thicker winding.

960,775. AUTOMATIC WATER-ELEVATING DEVICE. GEORGE BALDWIN, Indianapolis, Ind. Filed June 24, 1909. Serial No. 504,011.



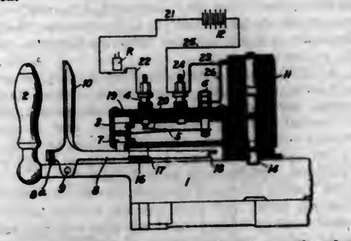
1. An automatic water elevating device consisting of a stationary casing open at one end to receive the current of water and with an upwardly extending discharge tube at the other end thereof and of relatively small diameter as compared with said casing, a propeller shaft projecting longitudinally into said casing, a propeller thereon within said casing, and a propeller on said shaft outside of said casing, said latter propeller being of larger diameter than the inner propeller and adapted through said shaft to drive the inner propeller.

2. An automatic water elevating device consisting of a stationary casing with a tube leading from one end thereof upwardly and being of relatively small diameter as compared with the diameter of said casing, a shell revolubly mounted in the other end of said casing with a portion thereof extending out of the casing, spirally disposed wings on the outside of said shell whereby it is revolved, and spirally disposed wings within said shell for giving the water a forward movement.

3. An automatic water elevating device including a stationary shell with a tube leading from one end thereof upwardly and being of relatively small diameter as compared with the diameter of said casing, a shell revolubly mounted in the other end of said casing with a portion thereof extending out of the casing, spirally disposed wings on the outside of said shell, whereby it is revolved, spirally disposed wings within said shell for giving the water a forward movement, a shaft having bearings centrally located in said revoluble shell and extending beyond each end thereof, a propeller on the end of said shaft within said casing of substantially the same diameter as the casing, and a propeller on the other end of said shaft that is of larger diameter than said casing.

960,776. ELECTRICALLY-OPERATED LOCK. HERBERT S. BALLIET, New York, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Oct. 18, 1909. Serial No. 523,343.

1. The combination of a lever carrying a latch, an electrically operated lock for locking said lever, electric energising means, including a circuit, for operating the same, and a normally open contact in said circuit, operated by the latch.



2. In combination with a lever, a bolt normally adapted to lock said lever from movement, a circuit including magnetic means adapted when energized to move said bolt to unlock said lever, a latch for said lever, and a circuit controller in said circuit adapted to be operated by said latch.

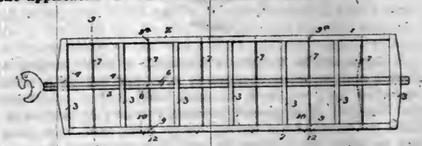
3. The combination, with a manually-operable lever, of a normally operative mechanical lock for locking the lever, a normally operative electric lock for locking the lever, a normally deënergized magnet for releasing the electric lock, a normally open circuit closer adapted to control said magnet, and means manually operable simultaneously with said lever and connected with the mechanical lock and the circuit breaker for releasing both of said locks simultaneously to release the lever.

960,777. GATE-LATCH. JAMES BENNETT BARNWELL, Valdosta, Ga. Filed Mar. 27, 1907. Serial No. 364,760.

A gate latch consisting of a centrally fulcrumed lever having near its forward end, a lateral lug provided with an engaging face 9^a and a curved outer face 9, a resilient member connected to said lever at its inner end, and adapted to hold said lever in a line at right angles to the plane of the supporting post for said latch, said lever beyond the lug being adapted to engage said post so as to limit the movement of said lever or latch, said post having a pocket 10 the mouth of which being closed by said lateral lug, as and for the purpose specified.

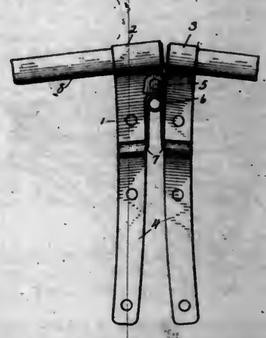
960,778. DRAFT-GEAR FOR RAILWAY-CARS. GEORGE BARR, La Center, Wash. Filed Feb. 3, 1909. Serial No. 475,806.

1. In a railway draft appliance, the combination of a car frame comprising transversely spaced side sills formed in their opposing faces at regular intervals with pairs of transversely alining sockets, and a series of cross beams connecting the side sills and disposed intermediate of each two adjacent sockets and formed at their middle points with longitudinally alining openings, of a longitudinal draw beam extending throughout the entire length of the car frame and slidably mounted in the said openings with its ends projecting beyond the extreme cross beams of the series, the draw beam being formed with a series of transverse apertures arranged in the normal position of the draw beam in alinement with the respective pairs of sockets, and a series of spring bars extending transversely of the car frame with their ends seated in the sockets of the respective pairs and with their middle portions passing through the corresponding apertures in the draw beam, the spring bars being free to bend in both directions and being simultaneously bent in either direction by and upon the application of force to the draw beam.



2. In a railway draft appliance, the combination with a car frame comprising transversely spaced side sills formed in their opposing faces at regular intervals with pairs of transversely alining sockets, and a series of cross beams connecting the side sills and disposed intermediate of each two adjacent sockets and formed at their middle points with alining openings, of a longitudinal draw beam extending throughout the entire length of the car frame and slidably mounted in the said openings with its ends projecting beyond the extreme cross beams of the series, the draw beam being formed with a series of transverse apertures arranged in the normal position of the draw beam in alinement with the respective pairs of sockets, a series of spring bars extending transversely of the car frame with their ends seated in the sockets of the respective pairs and with their middle portions passing through the corresponding apertures in the draw beam, the spring bars being free to bend in both directions and being simultaneously bent in either direction by and upon the application of force to the draw beam, one of the sockets of each pair opening outwardly through the corresponding side sill to admit of the insertion and removal of the spring bars into and from the car frame, and detachable means for closing the outer ends of the last named sockets.

960,779. CARBON-BREAKER. HARRY BERNARD BABIM, Parkersburg, W. Va. Filed Oct. 27, 1908. Serial No. 459,795.



1. An implement for breaking sticks of carbon and the like, comprising two barrel-shaped jaws to receive a stick of carbon or the like, said jaws being pivoted together, and closely disposed to each other when in normal position for receiving the stick of carbon or the like, and handles for separating said jaws.

2. An implement for breaking sticks of carbon and the like, comprising a jaw having means for holding a stick of carbon or the like, a similar jaw comprising means for holding a stick of carbon or the like, said two jaws being normally parallel to receive a stick of carbon or the like and disposed closely to each other, and handles for moving said jaws angularly to each other.

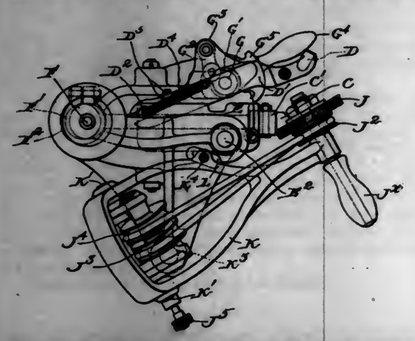
960,780. SEPARABLE BUTTON. WILLIAM LAURIN BATE, Newburgh, N. Y., assignor to Sweet, Orr & Company, Newburgh, N. Y., a Firm. Filed Mar. 25, 1909. Serial No. 485,844.



1. A separable button, comprising a head having a slotted and socketed back-plate, a spring having a post-centering hole arranged in said head, and a cruciform post adapted to be passed through the slot in said back-plate by forcing said spring away from said back-plate and to enter the sockets in said back-plate and leave a space between the arms of said post and said spring, whereby said post is loosely held in the sockets in said back-plate by said spring returning to its normal position over said sockets, to form a flexible and loose connection between said head and post which permits a relative tilting movement of the head and post.

2. A separable button, comprising a face-plate and a back-plate suitably connected to form a button-head, the back-plate having a slot, and sockets arranged on opposite sides of said slot and opening into it, a spring within the button-head, having a post-centering hole of greater dimensions than the part of the post engaging the same, and a post of cruciform construction having a point adapted to enter the post-centering hole, and coss-arms adapted to enter the post-centering hole, and cross-arms by forcing the spring away from the back-plate and to be turned and entered into the sockets in the back-plate with their inner surfaces below the inner surface of the back-plate and loosely retained in said sockets by the spring returning to its normal position over said sockets away from said arms, the post projection remaining in the hole in the spring and permitting the button-head and the post to have relatively loose tilting movement.

960,781. INSEAM-TRIMMING MACHINE. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 11, 1908. Serial No. 437,937.



1. A machine of the class described, having, in combination, a reciprocating knife provided with a transverse cutting edge, and devices coöperating therewith in the cutting operation constructed and arranged for relative movement out of their normal working relation to permit the sharpening of the knife without removal from the machine, substantially as described.

2. A machine of the class described, having, in combination, a reciprocating knife and a shear blade coöperating therewith constructed and arranged for relative movement out of working relation to permit the sharpening of the knife without removal from the machine, substantially as described.

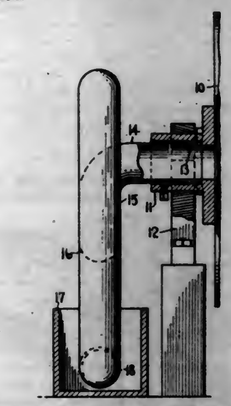
3. A machine of the class described, having, in combination, a reciprocating knife provided with a transverse cutting edge, and a work positioning device coöperating therewith constructed and arranged for relative movement out of working relation to permit the sharpening of the knife without removal from the machine, substantially as described.

4. A machine of the class described, having, in combination, a knife, coöperating devices constructed and arranged to render the knife inaccessible for sharpening when in their normal working relation thereto, and mounted for movement out of working relation with the knife to render the knife accessible for sharpening without removal from the machine, substantially as described.

5. An inseam trimming machine, having, in combination, a trimming knife, and work guiding devices mounted for movement out of their normal working relation with the knife to permit the sharpening of the knife without removal from the machine, substantially as described.

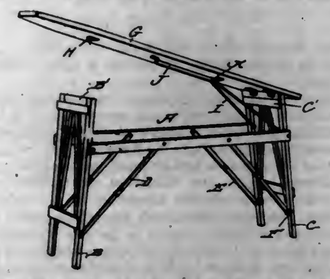
[Claims 6 to 18 not printed in the Gazette.]

960,782. FEEDER FOR TUBE-MILLS. EVEREST A. BAYLIS, Madera, Mexico. Filed Jan. 25, 1909. Serial No. 474,086.



In combination with a tube mill, a hollow stub shaft supporting the same, and a feeder comprising a pipe of uniform cross sectional area throughout its length and having a short section extending in alinement with said shaft and fixedly secured thereto whereby said pipe will revolve with said mill, and a spiral forming a continuation of the short section arranged with its mouth in the direction of rotation of the tube mill.

960,783. IRONING-TABLE. JOHN A. BEACH, Gouverneur, N. Y. Filed Dec. 8, 1908. Serial No. 466,481.



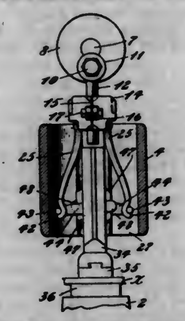
An ironing board comprising two pairs of legs pivotally mounted between a pair of parallel bars, foldable braces connecting said bars to the lower ends of said legs, an ironing board pivotally connected to one pair of legs at their upper ends and provided with means for engaging the other pair of legs, a guide member secured to the underside of the board adjacent its pivoted end and spaced therefrom, said guide member being provided with a hook-spaced locking slot and a bail working over said guide member having its ends connected to the legs to which the table is pivoted, said bail being adapted to fit within the locking slot when the board is raised into an inclined position.

960,784. SWINGLETREE-HOOK. LEWIS J. BEARD, Verna, Miss. Filed June 21, 1909. Serial No. 503,448.



A swingle tree hook comprising a single length of rod bent at the middle to form an eye and having its ends spaced apart to form a pair of oppositely directed spiri-form members, each of said members having a single convolution with its ends spaced from the body to admit the passage of a trace chain ring.

960,785. POWER-HAMMER. ALEXANDER BEAUDRY, East Weymouth, Mass., assignor to Beaudry & Co., Inc., Boston, Mass. Filed Feb. 18, 1909. Serial No. 478,707.



1. A power hammer having a head capable of reciprocatory movement, members having adjacent ends pivotally connected with the head and overlapping one another and having their opposite ends extended beyond the sides of the head, and actuating means having connection with said members for imparting reciprocatory movement to the head.

2. A power hammer having a head capable of reciprocatory movement, pivotally movable supporting members connected with the head, each such supporting member being extended from its pivot point across the point of connection of another supporting member with the head, and actuating means having connection with the extended ends of said supporting members for imparting reciprocatory movement to the head.

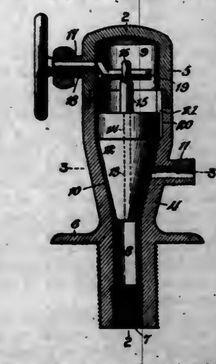
3. A power hammer having a head, overlapping pivotally movable supporting members connected with the head, each such supporting member being extended from its pivot point across the point of connection of another supporting member with the head, and actuating means for imparting reciprocatory movement to the head having connection with the extended extremities of the supporting members in alinement with the pivot points of such supporting members, one of said supporting members having a laterally bent portion at the point where it is lapped over the other supporting member.

4. A power hammer having a head capable of reciprocatory movement, guides engaged at opposite sides thereof, supporting members pivotally connected with the head and extended therefrom in directions at angles to the plane of said guides, and actuating means having connection with the extended ends of said supporting members for imparting reciprocatory movement to the head.

5. A power hammer having an apertured head capable of reciprocatory movement, supporting members each pivoted at one side of the head and extended through an aperture in the head and having an extremity directed beyond the opposite side of the head, and actuating means having connection with the extended extremities of said supporting members for imparting reciprocatory movement to the head.

[Claims 6 to 9 not printed in the Gazette.]

960,786. RECIPROCATING VALVE. JOHN H. BECKER, Mansfield, and GROVER C. BECKER, Crestline, Ohio. Filed Apr. 10, 1909. Serial No. 489,240.



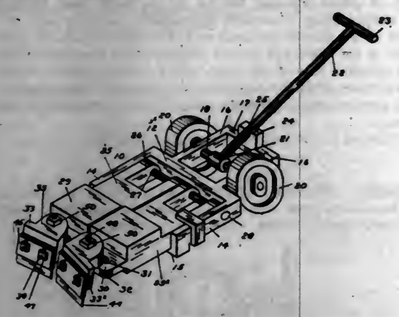
A valve comprising a casing section having an inlet an outlet and a tapered valve seat and also having an interior longitudinal groove extending to its inner end, a casing section detachably connected to the first-named section and having a portion opposed to the end of said groove and also having a lateral stuffing box, a shaft journaled in said stuffing box and having a crank at its inner end and a handle at its outer end, a reciprocating valve having a tapered portion and a portion of even diameter in which latter is a longitudinal groove registered with that of the first-named casing section and also having a stem on which is a yoke receiving the said crank and further having a longitudinal passage branched to straddle the base of the stem, and a longitudinal key removably arranged in the said registered grooves of the first-named casing section and valve and having its outer end opposed to the said portion of the second-named casing section.

960,787. FLOOR-SCRAPER. ABRAHAM T. BEELER, Kansas City, Mo., assignor of one-half to Isaac W. Beeler, Kansas City, Kans. Filed Aug. 30, 1909. Serial No. 515,269.

1. In a floor scraper a wheeled carrier comprising a tilting carrier frame having longitudinal side bars, and parallel weighted bodies in rear of the carrier frame, scraping members carried by the said bodies, and arms connected with said bodies extending parallel in position with the side bars to said frame and pivoted thereto, means supporting the arms on the carriage in rear of the pivotal point of said arms on said side bars and means for clamping one of said arms on one of said weighted bodies with a corresponding side of the carriage frame.

2. In a floor scraper a wheeled carrier comprising a tilting carrier frame having longitudinal side bars an axis intermediate the ends of said frame, and parallel weighted bodies in rear of the said frame, scraping members carried by said bodies, arms on said bodies extending parallel

in position to and within the side bars of said carrier frame and pivoted thereto, a transverse bar secured to the lower surfaces and rear ends of the side bars to said frame, and a clamp on one of the side bars for clamping one of the arms on one of the weighted bodies thereto.

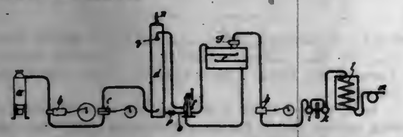


3. In a floor scraper a wheeled carrier comprising a tilting carrier frame having longitudinal side bars, and an axis intermediate the ends of said frame, a handle connected yieldingly with said axis and a fulcrum for said handle on the forward end of the said frame, weighted bodies in rear of said frame, and scraping members carried by said bodies, arms connected with said bodies and extending parallel with the side bars to said frame and pivoted thereto, a transverse supporting bar on the said side bars extending beneath the said arms on said weighted bodies, and a clamp extending over the upper and lower surfaces of one of said side bars and one of said arms on one of the weighted bodies.

4. In a floor scraper a tilting wheeled carrier frame, a handle connected with the axial support to said frame and having a fulcrum at one end of said frame, weighted pivoted bodies within said frame adapted to be raised in position, scraping members carried by said weighted bodies, and securing means for said frame for securing said weighted bodies from movement.

5. In a floor scraper the combination with a movable carrier frame, a transverse rod extending through said frame, weighted bodies having forked extensions pivotally connected with said rod, a support for said weighted bodies at the rear end of said frame, and floor scraping members connected with said weighted bodies.

960,788. PROCESS FOR MANUFACTURING CARBONIC ACID. ERNST AUGUST BEHRENS, Bremen, Germany, assignor to Maschinenfabrik Sürth G. M. B. H., Sürth, near Cologne, Germany. Filed Aug. 22, 1904. Serial No. 222,112.



1. A process for manufacturing carbonic acid, consisting in heating a solution of carbonate of alkali to a temperature adapted to secure dissociation of the bicarbonate, introducing under pressure to said solution while heated, gases containing carbonic acid, said pressure being proportioned to the temperature and strength of the solution, whereby the carbonate is converted into the bicarbonate, then reducing the pressure to effect the separation of the carbonic acid from the resultant liquid.

2. A process for manufacturing carbonic acid, consisting in heating a solution of carbonate of alkali to a temperature of from 95° C. to 105° C., introducing to said hot solution, gases containing carbonic acid with sufficient pressure to convert the carbonate into the bicarbonate, then reducing the pressure on the resultant liquid to release the carbonic acid.

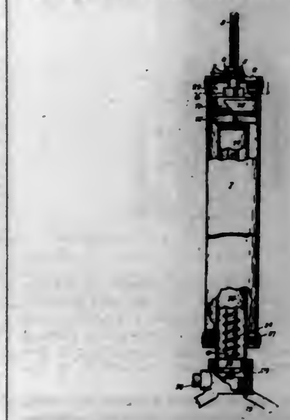
3. The herein described process of manufacturing carbonic acid which consists in introducing under pressure gases containing carbon dioxid into a solution of carbonate of alkali; applying a constant heat to said solution whereby it is held at the temperature of dissociation, thereby converting the carbonate into a bicarbonate, and reducing the pressure upon the resultant liquid whereby carbonic acid is released.

4. The herein described process of manufacturing carbonic acid which consists in introducing under pressure gases containing carbon dioxid into a solution of carbonate of alkali; applying a constant heat to said solution whereby it is held at the temperature of dissociation, thereby converting the carbonate into a bicarbonate; reducing the pressure upon the resultant liquid whereby carbonic acid is released; and returning said solution for a repetition of the aforesaid treatment thereof.

5. The herein described process of manufacturing carbonic acid, which consists in heating solution of carbonate of alkali to a temperature adapted to secure dissociation of the bicarbonate, adding to the solution gases containing carbon dioxid under a pressure proportionate to the temperature and strength of the solution whereby the carbonate is converted into the bicarbonate, then reducing the pressure to effect the separation of the carbonic acid from the resultant liquid.

[Claim 6 not printed in the Gazette.]

960,789. AIR-PUMP. CHARLES H. BELDEN, Clifton Springs, N. Y. Filed June 22, 1909. Serial No. 503,738.



1. In a pump of the class described, the combination with the inner barrel and the plunger rod, of a cage having openings and annular portions of different diameters, a valve within the cage, and a cap on the upper end of the cage, there being a space provided between the cage and barrel and a space between said valve and cage and a space surrounding said rod for the passage of air.

2. In a pump of the character described, the combination with the inner barrel and the plunger rod, of a cage having annular portions of different diameters and openings, a valve, a spring within the same acting on the valve, and a cap at the upper end of the cage having a concaved portion receiving said valve, there being an annular space between said rod and the opposing inner portion of said cap and a space between the valve and cage.

3. In a pump of the character described, the combination with the inner barrel and the plunger rod, of a cage having openings, a valve, a spring within the same acting on the valve, and a cap at the upper end of the cage having a concaved portion receiving said valve, said valve being elastic and having a conical upper end there being an annular space between said rod and the opposing inner portion of said cap, said valve being of less diameter than the interior of the cage.

4. In a pump of the character described, the combination with the inner barrel and the plunger rod, of a cage having openings and annular portions of different diameters, a cap over the upper end of the cage, and a spring-pressed valve within the cage, there being a space between the cage and barrel and a space between the valve and cage and a further space between the rod and the walls of the cap through which it passes, for the passage of air.

960,790. BOLTLESS LOCKING-BODY FOR CONNECTING TRACK-RAIL SECTIONS. ABNER M. BENJAMIN, Dayton, Ohio. Filed May 1, 1908. Serial No. 430,311.



1. The combination in a locking body for retaining in alinement track-rail sections, of a portion of said body formed with a rib; another portion of said body having a groove adapted to engage said rib; said portions when assembled adapted to receive the abutting ends of the sections of track-rails; and keys for retaining said portions together; substantially as described.

2. A means for locking in alinement track-rail sections, consisting of a body having in combination a portion formed with a recess and provided with a rib; an oppositely located portion formed with a recess and adapted to rest partially within said first portion and having a groove which rests over the rib of said first portion; the recesses of said portions when assembled adapted to firmly hold said track-rail sections; and keys for retaining said portions in close relation one with the other; substantially as described.

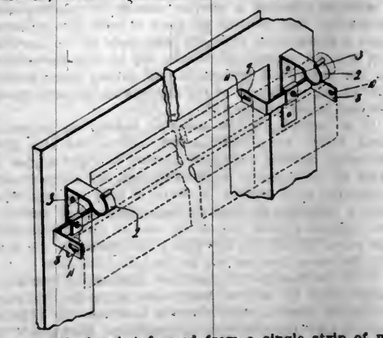
3. The combination in the herein referred to means for securely connecting the joints of track rail sections, a large and lower half having an angular recess and formed with a rib and provided on one side with large eyes or openings; a small and upper half adapted to rest within said first half and formed with an angular opening adapted to receive and hold the supporting flange or base of the rails, and provided with a groove to rest on said rib of the first half, and formed with small eyes; and wedges to pass through and rest in two of said large and small eyes of said halves each provided with an annular staple or retaining ring; all substantially as described.

960,791. MANUFACTURE OF ARTIFICIAL SILK. HENRY BERNSTEIN, Philadelphia, Pa. Filed Jan. 24, 1910. Serial No. 539,738.

1. In the manufacture of artificial silk, the process of washing out the remnant of solvent from the cellulose filaments which have been formed by spinning the cuprammonium solution of cellulose into an acid which consists in winding the filaments on cylinders in suitable vessels and moving the said cylinders in a bath of warm water at 25° to 50° C., whereby the cellulose compound is opened up and lastly washing the same in plain water.

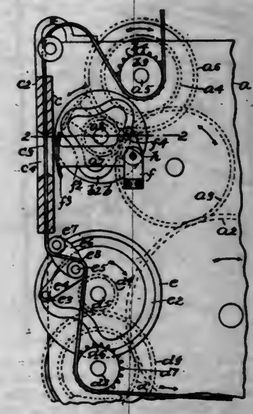
2. In the manufacture of artificial silk, the process of washing out the residue of metallic salt from the cellulose filaments spun from cuprammonium solution of cellulose which consists in winding the cellulose filaments on spools, moving said spools, and then subjecting the said filaments to a vapor or fine spray of water at 25° to 50° C. under pressure.

960,792. CURTAIN-BRACKET. SAMEL BETTIGOLE, New Haven, Conn. Filed Jan. 15, 1910. Serial No. 538,242.



A curtain bracket formed from a single strip of metal and comprising a curtain pole arm and a back, the back formed above its lower end with a loop, two slides adjustably mounted in said loop, a clamping screw extending through said loop and adapted to clamp the said slides against the back, one of said slides formed with an outwardly projecting shade-supporting arm, and the other slide with an inwardly projecting shade supporting arm.

960,793. KINETOSCOPE-SHUTTER. GEORGE W. BINGHAM, Brooklyn, N. Y., assignor to The Bingham Manufacturing Company, a Corporation of Maine. Filed Apr. 22, 1908. Serial No. 428,601.



1. In a moving picture machine having an exposure opening, means for intermittently moving the film past the exposure opening, a shutter pivoted at right angles to the axis of the exposure opening, and means for oscillating said shutter past the exposure opening a plurality of times to each cycle of the machine, one of said movements taking place during the downward movement of the film and substantially at the same speed as the movement of the film.

2. In a moving picture machine having an exposure opening, means for intermittently moving the film past the exposure opening, a shutter, means for continuously operating said shutter to move it past the exposure opening a plurality of times to each cycle of the machine but at unequal speeds, the slower one of said movements taking place during the downward movement of the film and at substantially the same speed as the movement of the film.

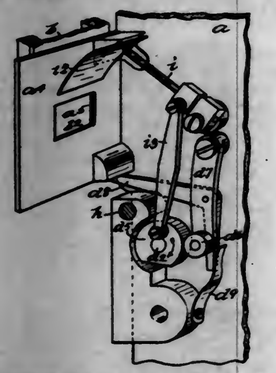
3. In a moving picture machine having an exposure opening, means for intermittently moving the film past the exposure opening, a shutter, means for continuously reciprocating said shutter to move it past the exposure opening a plurality of times to each cycle of the machine but at unequal speeds, the slower one of said movements being the downward movement and taking place during the advancing movement of the film and at the same speed as the movement of the film.

4. In a moving picture machine having an exposure opening, means for intermittently moving the film past the exposure opening, a shutter pivoted at right angles to the axis of the exposure opening, means for continuously reciprocating said shutter to move it past the exposure opening a plurality of times to each cycle of the machine but at unequal speeds, the slower one of said movements taking place during the downward movement of the film and at the same speed as the movement of the film.

5. In a moving picture machine having an exposure opening, means for intermittently advancing the film past the exposure opening and adapted to allow the film to remain at rest between such intermittent movements, a shutter arm pivoted at right angles to the axis of the exposure opening, a shutter blade carried by said arm, and means for moving the shutter blade past the exposure opening once during each exposure of the film and once during each movement of the film.

[Claims 6 to 16 not printed in the Gazette.]

960,794. KINETOSCOPE. GEORGE W. BINGHAM, Brooklyn, N. Y., assignor to The Bingham Manufacturing Company, a Corporation of Maine. Filed May 25, 1908. Serial No. 434,908.



1. In a moving picture machine having an exposure opening, a reciprocating device for intermittently advancing the film, a clamp adapted to clamp the film on the up stroke of the film advancing device and to release it on the down stroke of the film advancing device, a reciprocating shutter, and means for moving said shutter past the exposure opening twice to each cycle of the machine, one of said movements taking place during the downward stroke of the film advancing means.

2. In a moving picture machine, a plate having an exposure opening therein, a movable clamping member associated therewith, a pivoted lever, a hook carried thereby in engagement with the movable clamping member, a tension spring connected with the said hook, a cam roll on the lever, a cam adapted for engagement with said cam roll, a pivoted shutter arm and a shutter carried thereby, and a crank connection between said shutter arm and the cam.

3. In a moving picture machine, a plate having an exposure opening therein, a movable clamping member associated therewith, means for intermittently advancing the film past the exposure opening, a pivoted lever, a hook carried thereby in engagement with the movable clamping member, a tension spring connected with the said hook, a cam roll on the lever, a cam adapted for engagement with said cam roll, a pivoted shutter arm and a shutter carried thereby, and a crank connection between said shutter arm and the cam.

4. In a moving picture machine, a plate having an exposure opening therein, a movable clamping member associated therewith, a pivoted lever, a hook carried thereby engaging the movable clamping member, a spring acting on the hook, a cam roll on the lever, and a cam adapted for engagement with said cam roll to force the hook over to hold the clamping member in clamping engagement with the aforesaid plate.

5. In a moving picture machine provided with an exposure opening, a clamp for holding the film during exposure periods, a cam for operating said clamp, a pivoted shutter arm and a shutter carried thereby, and a crank connection between said shutter arm and the cam.

960,795. FILM-WINDER. EUGENE A. BIRCHER, Rochester, N. Y., assignor to Stephen H. Kendall, Rochester, N. Y. Filed Nov. 20, 1909. Serial No. 529,064.



1. A reel or film winder comprising opposite plates and a central hub interposed therebetween and secured thereto with the outer faces of the plates smooth, said hub provided with an opening and a corresponding tongue, and a spring upon the interior of the hub.

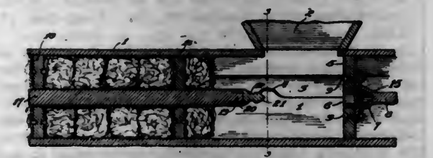
2. A reel or film winder comprising opposite plates, a central hub interposed therebetween and secured thereto with the outer faces of the plates smooth, the hub being formed with a slot and a tongue, and a spring upon the interior of the hub opposite said tongue.

3. A reel or film winder comprising opposite plates and a central hub interposed therebetween and secured thereto with the outer faces of the plates smooth, the hub having slots and being formed with oppositely disposed spring tongues, and a spring ring within the hub having portions opposite said tongues.

4. A reel or film winder comprising opposite plates and a central hub interposed therebetween and secured thereto with the outer faces of the plates smooth, the hub being formed with slots and oppositely disposed spring tongues, and a spring within the hub disposed opposite said tongues.

5. A reel or film winder composed entirely of metal parts and embodying separated plates, a central hub uniting said plates and provided with slots and spring tongues oppositely disposed, a spring within the hub opposite said tongues, and an axial sleeve having a laterally projecting part to engage the spline on a shaft.

960,796. HAY-BALER. WILLIAM T. BISHOP, Mankato, Kans. Filed Aug. 24, 1909. Serial No. 514,397.



1. A baling press comprising a body, a plunger slidable therein, a punch within said body, and means carried by said plunger for engaging said punch on the forward stroke and holding the same while a bale is being formed and releasing said punch on the reverse stroke of the plunger.

2. A baling press comprising a body, a plunger slidable therein, gripping levers carried by said plunger, a punch in said body, and means for actuating said levers to cause the same to engage and hold said punch on the bale-forming stroke of said plunger and release the punch on the reverse stroke of the plunger.

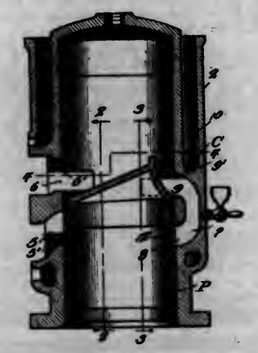
3. A baling press comprising a body, a reciprocating plunger therein provided with a central opening, a pair of pivotally mounted gripping levers disposed on opposite sides of said opening, a punch in said body and in alinement with said opening, and means for rocking said levers to cause the same to engage said punch during the bale-forming movement of said plunger.

4. A baling press comprising a body, a reciprocating plunger therein, said plunger being provided with a central opening, pivotally mounted rocking levers disposed on opposite sides of said opening, a punch in said body and supported in alinement with said opening, said punch being provided with an annular holding groove, and means for actuating said levers to cause the same to engage said holding groove while a bale is being formed.

5. A baling press comprising a body provided with oppositely disposed guiding grooves, said grooves provided with upstanding end portions, a reciprocating plunger in said body and provided with a central opening, gripping levers disposed on opposite sides of said opening, a roller carried by each lever and mounted in said grooves and adapted to rock said levers when passing over said upstanding portions, and a punch in said body and adapted to enter said opening and be engaged by said levers while a bale is being formed.

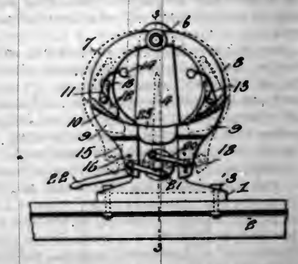
[Claims 6 to 8 not printed in the Gazette.]

960,797. ENGINE. WILLIAM E. BLAIR, Bay City, Mich. Filed Jan. 21, 1908. Serial No. 412,005.



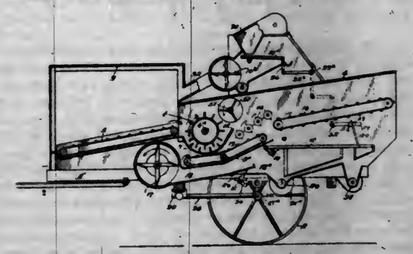
In an internal combustion engine, a cylinder provided at one side with an exhaust port and a fuel inlet port, arranged one above the other, said exhaust port being provided in its upper edge and said fuel inlet port in its lower edge with a V-shaped notch or recess, said cylinder also being provided in its opposite side with a by-pass having inlet and delivery ends of equal widths arranged respectively opposite said fuel inlet and exhaust ports, the said delivery end being provided with a V-shaped notch or recess at its upper edge terminating below the corresponding notch or recess of the exhaust port and the total height of said delivery end, including said notch or recess, being equal to the height of the inlet end, whereby the latter is of greater area than the delivery end, and a hollow piston provided with a port to communicate with the inlet end of the by-pass, the exhaust port and ends of the by-pass being arranged to be uncovered near the end of the down stroke of the piston and the inlet port arranged to be uncovered near the end of the upstroke of the piston.

960,798. TIRE-SHRINKER. GEORGE E. BLAKE, Quincy, Ind. Filed Mar. 17, 1908. Serial No. 421,627.



In a tire shrinking machine, a standard provided with vertically straight faces and having its rear face provided with an offset at its lower end and its front face provided with an integrally formed outwardly projecting member forming an anvil, a pair of oppositely disposed curved arms pivotally connected to the top of the standard, said arms each having their lower portions substantially straightened and their outer faces provided with arcuate integrally formed serrated faced offsets, dogs pivotally connected with the arms directly above the offsets thereof, each of said dogs having a serrated face and an upwardly extending arcuate extension provided with a weight, the straightened portions of the arms being provided with spaced openings, the standard below the anvil being provided with an opening, a shaft extending through this opening, a handle connected with the shaft and positioned adjacent the rear face of the standard, the forwardly projecting portion of the shaft being provided with a disk, link members pivotally connected with the disk at diametrically opposite points, said link members having their free ends provided with removable members whereby they may be positioned in any of the openings provided in the straightened portions of the arms.

960,799. HARVESTER. ARTHUR R. BLEWETT, Spokane, Wash. Filed Feb. 25, 1909. Serial No. 479,876.



1. An improved traveling harvester having in combination a threshing cylinder, a concave operating in conjunction with said cylinder, a cleaning shoe having its front end contiguous to the rear end of the concave, an air chute located beneath the concave having its rear end open to discharge through the screen shoe and its front end connected with the fan case, mechanism by which the rear end of the screen shoe is raised and depressed to level it in unison with the longitudinal tilting of the machine, said air chute having a portion which controls the air discharge, and mechanism between said controlling portion of the chute and the shoe leveling mechanism whereby the air discharge is controlled in unison with the leveling of the shoe.

2. In a traveling harvester, the combination of a threshing cylinder, a concave for the cylinder, means for feeding material to the cylinder, a cleaning screen shoe having its front end pivotally mounted and arranged contiguous to

the concave, a fan case having an air chute extension with a portion which controls the air discharge and means for leveling the screen shoe and at the same time regulating the discharge of air in unison with the longitudinal tilting of the machine.

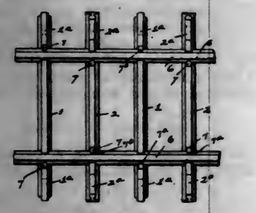
3. In a traveling harvester, the combination of a cylinder and concave, a pivotally mounted cleaning shoe, a fan case having an air-chute extension, means by which the shoe is raised and depressed to level it in unison with the longitudinal tilting of the machine, and connections between the shoe and the air chute for controlling the air discharge in response to the leveling of said shoe.

4. The combination in a traveling harvester, its threshing cylinder and concave, of an air blast fan, an air chute extending from the fan case beneath the concave and having a hinged gate extension, a cleaning screen shoe through which the air blast is directed, a leveling device connected with the screen, and a connection between said leveling device and the gate for operating the latter in unison with the leveling of the screen shoe.

5. The combination in a traveling harvester, of a threshing cylinder, and a cleaning screen upon which the threshed grain is delivered, mechanism by which the rear of the screen is raised and depressed to level it in unison with the longitudinal tilting of the machine, an air blast device, a chute through which air is discharged through the screen, said chute having a controlling gate extension, and connections between the gate and the screen-leveling mechanism, whereby the air discharge is controlled.

[Claims 6 to 9 not printed in the Gazette.]

960,800. RAILWAY-TRACK CONSTRUCTION. JOSEPH W. BLOWER, Columbus, Ohio. Filed Feb. 2, 1910. Serial No. 541,541.



1. In a railway track construction, the combination with a plurality of ties arranged transversely of the road-bed, each alternate tie having its end portions bent upwardly and the remaining ties having their end portions bent downwardly, of track rails mounted upon said ties, and means for retaining the base flanges of said track rails in connection with the ties.

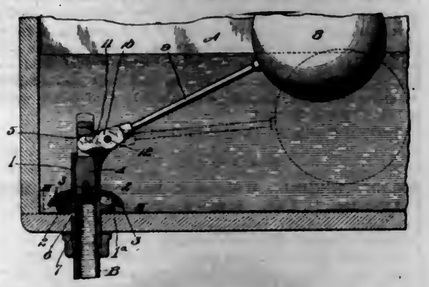
2. In a railway track construction, the combination with a plurality of metallic ties, each alternate tie having its upper side formed with an outwardly extending recess and the remaining ties formed as described with inwardly and downwardly inclined recesses, of track rails mounted on said ties and having their inner and outer base flanges alternately engaging said inner and outer tie recesses.

3. In a railway track construction, the combination with a plurality of ties, each alternate tie having formed in its upper side an outwardly and downwardly inclined recess and the remaining ties having formed therein as described inwardly extending recesses, of track rails having their outer base flanges engaging the recesses of said first mentioned ties and their inner base flanges engaging the recesses of said last mentioned ties, and means opposite each of said recesses for engaging the opposing rail base flange and locking the same in connection with the tie.

4. In a railway track construction, the combination with a plurality of parallel metallic ties each alternate tie having formed in its upper side an outwardly extending recess and at a point on the inner side of said recess a vertical opening through the head of the tie which communicates with a cross opening in the tie below said vertical opening, the remaining ties being formed with inwardly and downwardly inclined recesses as described and outer side vertical openings and communicating cross openings as described for said first mentioned ties, of track rails having their base flanges engaging said recesses, and locking pins having enlarged heads and split stem portions, said locking pins adapted to be driven into said tie openings as described.

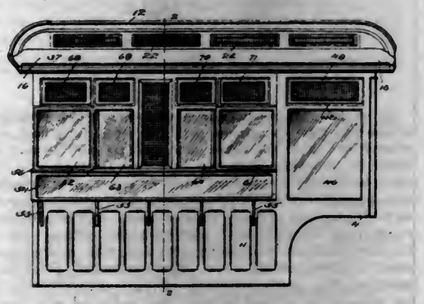
5. In a railway track construction, the combination with a plurality of ties each alternate tie having its end portions bent upward and having an outwardly extending recess formed in its upper side and the remaining ties having their end portions bent downward and having inwardly and downwardly inclined recesses as described, of track rails supported on said ties and having their base flanges alternately engaged by said inner and outer recesses.

960,801. BALL-COCK FOR WATER-CLOSET CISTERNS. THEODORE BONROE, St. Louis, Mo., assignor to N. O. Nelson Manufacturing Company, St. Louis, Mo., a Corporation. Filed Apr. 27, 1908. Serial No. 429,433.



A ball cock comprising a housing with a tube of the same internal diameter from end to end and provided with radial ports, and with an annular downwardly flaring deflector surrounding the tube overhanging the radial ports and extending outwardly therefrom free at its outer edge from adjacent parts of the cock, and a valve stem within the tube provided with a cup valve at its lower end of the same diameter as the stem and the peripheral surface of which controls the radial ports.

960,802. VENDING-WAGON. DAD BOYLE, Amarillo, Tex. Filed Oct. 5, 1909. Serial No. 521,075.

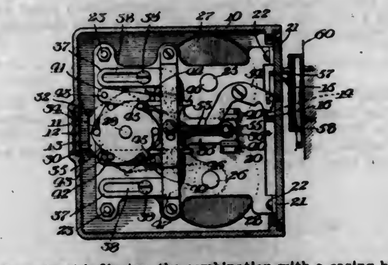


1. In a vending wagon a body formed with a bottom, side and end members, a door connected with one of said side members, a show case connected with one of said side members and extending substantially the full length thereof, a removable auxiliary show case secured in position at each end of said first mentioned show case and a dispensing door arranged substantially midway between said removable show cases.

2. In a caterer's wagon, a body formed with a flooring, sides and ends extending from said flooring, a covering connected to the top of said sides and ends, an entrance door positioned in one of said sides, a combined show case and counter positioned in the opposite side, means for storing merchandise on the interior of said body and a plurality of ventilating and light windows arranged near the top of said sides and ends.

3. In a caterer's wagon, a body formed with a floor, side and end members, a combined show case and counter, an auxiliary show case arranged near each end of said first mentioned show case and a distributing door arranged in the side of said body substantially midway of said first mentioned show case whereby merchandise to be vended may be placed upon said combined show case and counter.

960,803. STREET-INDICATOR. HENRY P. BRACE, Chicago, Ill. Filed Apr. 19, 1909. Serial No. 490,811.



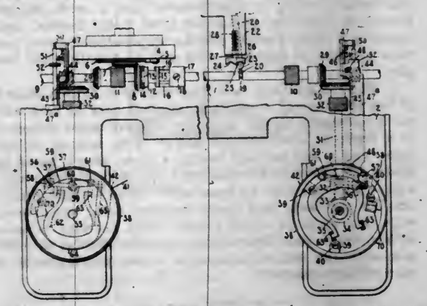
In a street-indicator, the combination with a casing having an opening in its front portion, of a pair of rollers journaled therein one above the other, an exhibiting reel journaled in the casing at the rear of the opening therein, an apron having the names of streets or stations displayed thereon and extended over the exhibiting reel and having its ends connected to said rollers, a pair of ratchet wheels having oppositely disposed teeth mounted on one end of the shaft of the exhibiting reel, a spring-actuated slide movably supported near said wheels and having a part to engage one of the arms of a bell crank lever, an upper and lower spring-pressed pawl pivotally secured at one of their ends to the slide and each having at its other end a projection to engage the teeth of the ratchet wheels, one of said pawls being adapted to operate the inner of said wheels in one direction and the other of said pawls adapted to operate the other of said wheels in the opposite direction, a bell-crank-lever adapted to engage with one of its arms said part on the slide, and means to operate said lever.

960,804. TYPE-WRITING MACHINE. GEORGE B. BRAND, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 15, 1909. Serial No. 483,416.

1. In a typewriting machine, the combination of a ribbon spool, ribbon feed and reversing mechanism comprising two coöperative devices one of which turns at all times with the ribbon spool and the coöperation between which devices ordinarily brings about a reversal in the direction of the feed of the ribbon at a predetermined point in the feed thereof, and a safety device for arresting one of said devices if it should pass beyond the position it ordinarily attains when the reversal is effected, in order to insure an operation of the reversing mechanism.

2. In a typewriting machine, the combination of a ribbon spool, ribbon feed and reversing mechanism comprising two coöperative devices one of which is a cam that turns at all times with the ribbon spool and ordinarily brings about a reversal in the direction of the feed of the ribbon at a predetermined point in the feed thereof, and means for arresting said cam if it should pass beyond the position it ordinarily attains when the reversal is effected, in order to insure an operation of the reversing mechanism.

3. In a typewriting machine, the combination with ribbon feed and reversing mechanism which ordinarily effects a reversal in the direction of the feed of the ribbon at a predetermined point in the feed thereof, said reversing means comprising a controlling device, means whereby said controlling device is moved as the ribbon is fed, and means controlled by the ribbon for maintaining said controlling device in the inoperative position until just before an end of the ribbon is reached and for then affording a movement of said controlling device to the operative position, of a safety device normally out of the path of said controlling device but in the path thereof when the controlling device is in the operative position and adapted to coöperate therewith to arrest said controlling device.

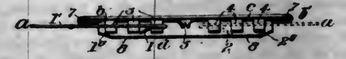


4. In a typewriting machine, the combination with ribbon feed and reversing mechanism which ordinarily effects a reversal in the direction of the feed of the ribbon at a predetermined point in the feed thereof, said reversing means comprising a controlling cam, means whereby said controlling cam is moved as the ribbon is fed, means controlled by the ribbon for maintaining said controlling cam in the inoperative position until just before an end of the ribbon is reached and for then affording a movement of said controlling cam to the operative position, of a safety device normally out of the path of said controlling cam but in the path thereof when the controlling cam is in the operative position and adapted to coöperate therewith to arrest said controlling cam if it should pass when in the operative position beyond the point where the reversing operation ordinarily takes place.

5. In a typewriting machine, the combination of step-by-step ribbon feed mechanism and ribbon reversing mechanism which ordinarily effects a reversal in the direction of the feed of the ribbon at a predetermined point in the feed thereof, said reversing mechanism comprising a controlling device; means whereby said controlling device is moved at each step-by-step feed of the ribbon; two parts which by their coöperation effect the reverse, one of said parts being under control of said controlling device; means whereby one of said parts may yieldingly engage the other; and a safety device adapted to arrest the movement of said controlling device.

[Claims 6 to 22 not printed in the Gazette.]

960,805. SNAP-SEAL. EDWARD J. BROOKS, East Orange, N. J. Filed Apr. 20, 1910. Serial No. 556,576.



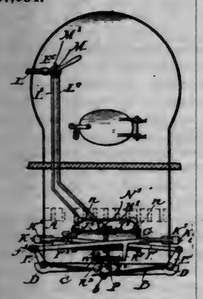
1. A sheet-metal seal part for snap seals having, in combination, a front or label member and a catch member in one doubled piece, the catch member being constructed with staple-shaped catch portions between transverse slits, and a back or cap member constructed with a front crown flange by which the pieces are permanently united and an open-ended tunnel-shaped projection on its back forming hook inlets and inclosing said catch portions of the catch member.

2. A sheet-metal seal part for snap seals having, in combination, a label or front member and a catch member, the catch member being constructed with two series of staple-shaped catch portions between transverse slits and with a stop projection between said series of catch portions, and a back or cap member constructed with a front crown flange by which the pieces are permanently united and an open-ended tunnel-shaped projection forming hook inlets at its ends and of uniform shape and dimensions between such hook inlets.

3. The combination, in a snap seal, of a flexible shackle of flat wire and a substantially flat seal part of sheet metal united at one of the shackle ends; said shackle having at its other end a resilient terminal hook, and said seal part containing a front or label member and a catch member formed in one piece of suitable sheet metal doubled upon itself, said catch member having staple-shaped catch portions adapted to interlock with said hook within the seal part.

4. The combination, in a snap seal, of a flexible shackle of flat wire having a resilient terminal hook at each end, and a substantially flat seal part of sheet metal composed of a front or label member and a catch member in one piece, and a cap member having a front crown flange by which the pieces of the seal part are permanently united with each other and an open-ended tunnel-shaped projection on its back, said catch member being constructed with two series of staple-shaped catch portions inclosed within said tunnel-shaped projection and adapted to interlock with the respective shackle hooks, substantially as hereinbefore specified.

960,806. LOCOMOTIVE-ASH-PAN-DUMPING DEVICE. WILLIAM J. BROWN, Chicago, Ill. Filed Dec. 11, 1908. Serial No. 467,054.



1. In a locomotive ash pan, a drop bottom comprising two leaves hinged at the lower side of the pan and adapted to swing upwardly for closing the same; two pistons and chambers in which they respectively reciprocate; operating connections from the pistons to the leaves respectively for opening and closing them, one of said leaves having an extension which laps under the other leaf at their proximate edges for upholding said other leaf, and a catch for securing the leaf having such extension.

2. In a locomotive ash pan, a drop bottom comprising two leaves hinged to the pan and adapted to swing upwardly for closing same; two pistons and their respective chambers; operating connections from the pistons to the leaves; a depending hook for engaging one of the leaves; a link connecting said hook with the operating connections of one of the leaves, and a stop on the link for operating the hook for disengagement upon the initial movement of the piston for opening the leaf.

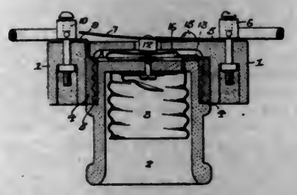
3. In a locomotive ash pan, a drop bottom comprising two leaves hinged to the pan and adapted to swing upwardly for closing same; two pistons and their respective chambers; operating connections from the pistons to the leaves; a depending hook for engaging one of the leaves; a link connecting said hook with the operating connections of one of the leaves, and a spring interposed in such connection for yielding in the closing movement of the leaf and for holding the hook in engaged position at the closed position of the leaf.

4. In a locomotive ash pan, a drop bottom comprising two leaves hinged to the pan and adapted to swing upwardly for closing same; two pistons and their respective chambers; operating connections from the pistons to the leaves; a depending hook for engaging one of the leaves, and a connection from such hook to the operating connections of one of the leaves; a spring interposed in such connection in position to be put under tension by the latter part of the closing movement of the leaf, and a stop on the link for actuating the hook in the commencement of the opening movement.

5. In a locomotive ash pan a drop bottom comprising two leaves hinged at the lower side of the pan and adapted to swing upwardly for closing the pan, means for operating the two leaves independently of each other, one of said leaves having an extension which laps under the other leaf at their proximate edges for upholding said other leaf, and a catch for securing the leaf having such extension.

[Claims 6 to 8 not printed in the Gazette.]

960,807. STREET-LAMP SOCKET. CLIFTON L. BUNDY and ALBERT H. MANWARING, Philadelphia, Pa., assignors to Philadelphia Electrical & Manufacturing Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 16, 1909. Serial No. 513,030.



1. A lamp socket having a base member provided with an internal shell, terminal contacts carried by said base member, one of which is movable, a socket member having an external shell arranged to be entered into the shell of the base member, said socket having a contact for engagement with the movable contact whereby the latter may be pushed out of the way, and a lamp receiving shell or terminal in the socket member.

2. A lamp socket having a base member provided with an internally threaded shell, terminals carried by said base member, one of which terminals has a spring contact, a socket member having an externally threaded shell arranged to be screwed into the base member, said socket having a contact for engagement with the spring contact of the terminal whereby the latter may be pushed out of the way, and lamp receiving shell or terminal in the socket member.

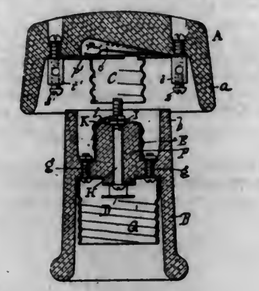
3. A lamp socket consisting of an annular supporting base structure of insulating material provided with an internally threaded metal ring, terminals mounted on said base structure, of which one is provided with a spring contact capable of engaging the other terminal, said second terminal being connected to said metal ring, a socket member having an externally threaded metal ring capable of screwing into the ring of the base structure, lamp receiving terminals on the socket member, of which one is electrically connected to the externally threaded ring thereof, and the other has a portion capable of engaging the spring contact of the base structure to move the same out of engagement with the second terminal thereof.

4. The combination of an annular base structure of insulating material, terminals on opposite sides thereof, a spring contact connected to one terminal and extending across the center of the base structure so as to be capable of engaging the other terminal, an internally threaded metal ring within the base structure electrically connected to the second terminal, and a socket member provided with an externally threaded shell capable of screwing into the metal shell of the base structure, said socket member having a centrally placed contact capable of engaging the spring contact of the base structure so as to move the same out of engagement with the second terminal and being provided with terminals for electrical connection to a lamp, one of said terminals being connected to said central contact, and the other to the shell carried by the socket member.

5. A lamp socket having an apertured base member, in combination with an internal shell, having projections arranged to pass through said apertures and terminal contacts carried by said base member, one of said projections being in electrical contact with one of said terminals.

[Claims 6 to 14 not printed in the Gazette.]

960,808. INCANDESCENT-LAMP RECEPTACLE. HARRY U. BADEAU, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 23, 1909. Serial No. 534,655.



1. In series incandescent lighting, a receptacle having automatic line closing contacts, an independent lamp socket and means to establish the socket circuit upon the parting of said line closing contacts, in combination with means to protect said automatic line closing contacts from the action of the elements.

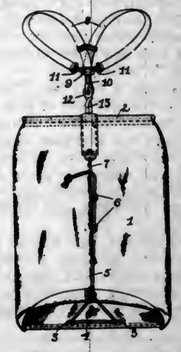
2. In series incandescent lighting, a receptacle having automatic line closing contacts, a lamp socket and means to part said line closing contacts and establish the lamp circuit therefrom, said line closing contacts being inclosed and protected from the action of the elements, substantially as described.

3. In a device of the character described, a receptacle having line closing contacts and an independent lamp receptacle adapted to be secured thereto and brought into the line circuit, said receptacles being shaped to inclose their coöperating contacts when said receptacles are secured together, whereby the device is rendered substantially weather proof, as described.

4. In a device of the character described, a recessed receptacle having automatic line closing contacts located in said recess, in combination with a coöperating independent lamp receptacle having a member in the lamp circuit adapted to enter said recess and engage and displace one of said line contacts, substantially as and for the purpose described.

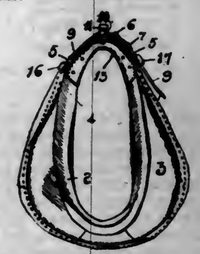
960,809. FRUIT-PICKING BAG. FREDERICK W. BURCH, Pueblo, Colo. Filed Oct. 20, 1909. Serial No. 523,670.

In combination in a fruit picker bag with the bag proper, a frame at the mouth of the bag having its ends twisted together and continued across the said mouth in arched form, with an eye in one of the strands, said end being connected to the opposite side of the frame, and a hook



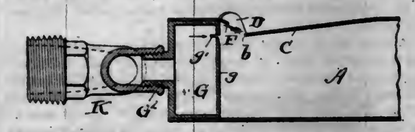
hung from an extension of one of the ends of the frame, substantially as described.

960,810. ADJUSTABLE HORSE-COLLAR. ANSLEM L. BURKE, Galesburg, Ill., assignor to Adams & Johnson Co., a Corporation of Illinois. Filed Sept. 7, 1909. Serial No. 516,423.



In a horse-collar having upper end portions adapted for adjustments toward or from each other, billets stitched to and on the surface of one of said end portions but free therefrom for a slight distance from the extremity thereof, buckles fixed to and on the surface of the other end portion of said collar a slight distance from the extremity thereof, said buckles adapted for selective engagements with said billets, and a spreader loop loosely mounted on said billets and adapted to rest in one position in rear of the billet end of the collar proper, whereby it is removed from between said end portions and whereby they are permitted to abut.

960,811. HORN. JOHN BURKE, Cleveland, Ohio, assignor of one-half to Emanuel Mandelbaum, Cleveland, Ohio. Filed Apr. 4, 1906. Serial No. 309,747.



1. A horn comprising a body, and a hollow cylindrical head secured within the rear end of said body, having an air inlet through its rear end, and a straight slot or windway through its front end, said body having just in front of said head a mouth whose front lip is substantially parallel with and in the plane of said windway.

2. A horn comprising a body, and a hollow cylindrical head secured within the rear end of said body, having an air inlet through its rear end and a straight slot or windway through its front end, said body having, just in front of said head, a mouth whose front lip is straight and substantially parallel with and in the plane of said windway, and whose rear lip is bent inward.

3. A horn comprising a body and a hollow cylindrical head secured within the rear end of said body, having an air inlet through its rear end and a straight slot or windway through its front end, said body having just in front of said head a mouth whose front lip is straight and substantially parallel with and in the plane of said windway, and whose rear lip is bent inward, and which has at its sides the outwardly extending ears which slightly overhang the mouth.

4. A horn comprising a pipe having a mouth, a depressed tongue adjacent the same, a partition across the inlet end of the pipe with a slot opposite the end of the tongue, and a lip projecting from the pipe over the mouth from the side thereof opposite to the tongue.

960,812. DEVICE TO PREVENT FRICTION ON RAILROAD-CURVES. FRANK W. BURR, Monrovia, Cal. Filed Dec. 16, 1909. Serial No. 533,340.



1. A railway curve having a curved rail, in combination, with a plurality of rockers mounted at the sides of said rail adapted to be engaged by the edge of the passing wheel having a limited rocking movement permitting a slip of the passing wheel with respect to the rail.

2. A railway curve having a curved rail, in combination, with a plurality of rockers mounted at the sides of said rail adapted to be engaged by the edge of the passing wheel, having a limited rocking movement permitting a slip of the passing wheel with respect to the rail, said rail having depressions in the upper face thereof permitting contact between the edge of the wheel and the rockers.

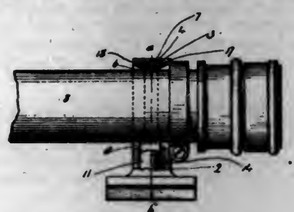
3. A railway curve having a curved rail, in combination, with a plurality of rockers mounted at the side of said rail and adapted to rock in a plane longitudinally of said rail, said rockers being arranged so as to permit a lateral movement thereof away from the plane of the rail, said rockers being adapted to engage the edge of the passing wheel to permit a slipping movement of said wheel with respect to the rail.

4. In a device of the class described, in combination, a rail having a head, a notch formed therein, a rocker mounted at the side of said rail and projecting upwardly into said notch, said rocker having a curved supporting face at the lower edge thereof and having a curved face at the upper side thereof adapted to contact with the passing wheel.

5. In a device of the class described, in combination, a rail having a head, a notch formed therein, a rocker mounted at the side of said rail and projecting upwardly into said notch, said rocker having a curved supporting face at the lower edge thereof and having a curved face at the upper side thereof adapted to contact with the passing wheel, said rocker having a seat on the under side thereof upon which it normally rests, said seat having edges inclined to the axis of said rail and adapted to cause said rocker to move laterally from the rail when moved by the wheel.

[Claims 6 to 9 not printed in the Gazette.]

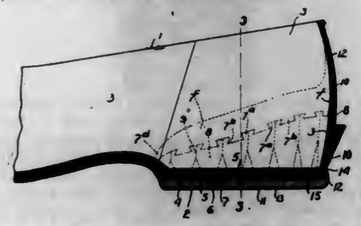
960,813. TELESCOPE-SIGHT MOUNT FOR FIREARMS. FRANK F. BUSTON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Feb. 26, 1910. Serial No. 546,054.



1. The combination with a front telescope mount having an internal groove, the upper and lower portions of which are deepened, of a split ring located in the said groove and receiving the front end of the telescope-tube which is cushioned by the said ring.

2. The combination with a front telescope-mount formed with an internal annular groove the upper and lower portions of which are deepened, of a split ring located in the said groove and receiving the front end of the telescope-tube which is cushioned by the said ring, and a spring-actuated plunger located in the said mount and provided with a nose passing between the ends of the said split ring and entering a longitudinal groove in the said tube, whereby the said ring and tube are held against rotation with respect to the mount.

960,814. RUBBER. JOSEPH S. CAPEN, Stoughton, Mass. Filed Jan. 30, 1909. Serial No. 475,189.



1. As an article of manufacture a rubber overshoe, the heel whereof is flexible and provided with a flexible load-carrying member having its margin upturned, slitted for flexibility and secured to the heel part of the overshoe to receive support therefrom and at the same time permit desired flexibility of said heel and load-carrying member.

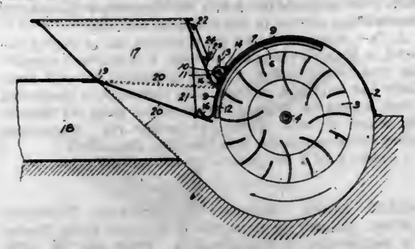
2. As an article of manufacture a rubber overshoe, the heel whereof is flexible and provided with a flexible load-carrying member having its margin upturned slitted and anchored thereby to the heel part of the overshoe to receive support therefrom and at the same time permit desired flexibility of said heel and load carrying member.

960,815. CUT-OFF FOR FANS. THOMAS O. CARLISLE, Monongahela, Pa. Filed Oct. 26, 1909. Serial No. 524,729.

1. In a centrifugal fan, the combination of a suitable casing having exhaust and fresh air flues communicating therewith, a door for closing one or the other of said flues, means for varying the point of cut-off, and said door being adapted to engage said means at the point of cut-off.

2. In a centrifugal fan, the combination of a suitable casing having exhaust and fresh air flues communicating therewith, a door for closing one or the other of said flues, and a movable cut-off plate, said door being adapted to engage said cut-off plate.

3. In a centrifugal fan, the combination of a suitable casing having exhaust and fresh air flues communicating therewith, guides on said casing, a movable cut-off plate engaging said guides, means for moving said plate, and a door for closing one or the other of said flues adapted to engage said movable cut-off plate.

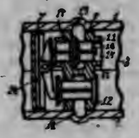


4. In a centrifugal fan, the combination of a suitable casing having exhaust and fresh air flues communicating therewith, guides on said casing, a movable cut-off plate engaging said guides, a toothed wheel engaging said cut-off plate, and a door for closing one or the other of said flues adapted to engage said cut-off plate.

5. In a centrifugal fan, the combination of a suitable casing having exhaust and fresh air flues communicating therewith, guides on said casing, a movable cut-off plate in said guides having a rack face, a toothed wheel adapted to engage said rack face, and a door for closing one or the other of said flues adapted to engage said cut-off plate.

[Claims 6 and 7 not printed in the Gazette.]

960,816. VALVE-OPERATING MECHANISM. ROBERT S. CARR, Oxford, Ohio. Filed Aug. 27, 1908. Serial No. 450,436.



1. A motor comprising conjointly operating inlet and discharge valves, said inlet valve being provided with a port, and a movable device constructed and arranged for obstructing said port and for unseating the discharge valve.

2. The combination with a valve, of a movable device for starting it off its seat to admit behind it a motive fluid and for simultaneously obstructing the port behind the valve to enable said fluid to complete the movement of the valve.

3. A motor comprising conjointly operating inlet and discharge valves, said inlet valve being provided with a port, and a movable device constructed and arranged for obstructing said port and for unseating said valves.

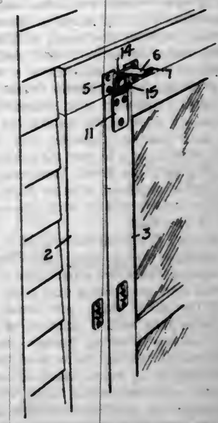
4. A motor comprising an inlet valve provided with a port, a movable device constructed and arranged for unseating said valve and for obstructing the port thereof, and means for supporting said device in registration with said valve.

5. In a hydraulic motor, the combination with an inlet valve, of a movable device constructed and arranged for unseating said valve and for temporarily inclosing the inlet valve stem within the corresponding inlet port.

[Claims 6 to 20 not printed in the Gazette.]

960,817. SASH-HANGER. GEORGE L. CASE, Minneapolis, Minn. Filed July 28, 1909. Serial No. 510,119.

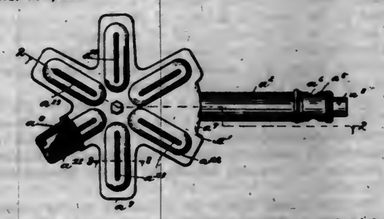
1. A storm sash hanger, comprising a plate having means for securing it to a window casing and provided with an outwardly projecting arm having a bend or depression formed therein at its inner end and provided with an upwardly turned outer end, a second plate adapted to be secured to a sash and having an opening therein to receive said arm, and a horizontal cross bar at the upper end of said opening that is adapted to drop into the depression in said arm and be held therein by the wall of said depression when the storm sash is closed, and said arm projecting outwardly a sufficient distance to allow the storm sash to be hung thereon while held in a substantially vertical position.



2. A sash hanger comprising a plate having means for securing it to a window casing and provided with an outwardly projecting arm having a depression formed therein near said plate, a lug provided below said arm on said plate and projecting outwardly therefrom, a second plate adapted to be secured to a sash and having an opening therein, and a bar at the upper end of said opening, said bar being adapted to enter the depression formed by the bend in said arm and forming therewith a hinge, and said lug entering the lower portion of said rectangular opening and holding the sash against vertical movement when open, substantially as described.

3. A sash hanger comprising a plate having means for attachment to a window casing and provided with an outwardly extending horizontal arm, said arm having a bend formed therein between which bend and said plate a seat is provided, a second plate having means for attachment to a sash and provided with an opening therein, and a bar at its upper end to rest on the seat in said arm, means entering the lower portion of said opening and serving as a guide for the movable portion of the hanger and preventing lateral and vertical movement of the sash when open, substantially as described.

960,818. ACETYLENE-BURNER. FRANK M. CASTO, Cleveland, Ohio, assignor of one-half to Caroline A. Harris, Cleveland, Ohio. Filed Sept. 12, 1907. Serial No. 392,425.



1. In a gas-burner, the combination of a mixing chamber, a horizontally elongated burner chamber opening

therefrom, a partition of gauze separating said burner chamber from said mixing chamber, and a burner tip surmounting said burner chamber and freely communicating therewith, said tip being of flattened tubular form, whereby an elongated discharge orifice is provided.

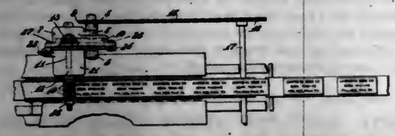
2. In a gas-burner, the combination of a mixing chamber, a plurality of horizontally elongated burner chambers opening therefrom, a partition of wire gauze separating said burner chambers from said mixing chamber and isolating the former from each other, and a burner tip surmounting each of said burner chambers and freely communicating therewith, said tip being of flattened tubular form, whereby an elongated discharge orifice alined with the corresponding burner chamber, is provided.

3. In a gas-burner, the combination of a mixing chamber, a plurality of elongated burner chambers opening therefrom and radially disposed with respect to a common center, a partition of wire gauze separating said burner chambers from said mixing chamber and isolating the former from each other, and a burner tip surmounting each of said burner chambers and freely communicating therewith, said tip being of flattened tubular form, whereby an elongated discharge orifice alined with the corresponding burner chamber, is provided.

4. In a gas burner, the combination of a peripherally flanged bottom plate, a top or cover plate secured to the same to form a mixing chamber, a partition of wire gauze interposed between said two plates and lying close to the under surface of the cover plate, said cover plate being formed on such under face with a plurality of radially disposed elongated recesses forming burner chambers, and burner tips of flattened tubular form mounted upon said cover plate, said tips being respectively alined with said burner chambers and communicating freely with the same.

5. In a gas-burner, the combination of a substantially stellar peripherally flanged bottom plate, a top or cover plate of similar shape secured to the same to form a mixing chamber, an annular layer of heat-insulating material interposed between said two plates, a partition of wire gauze also interposed between said two plates and lying close to the under surface of the cover plate, said cover plate being formed upon such under face with a plurality of recesses forming burner chambers radially disposed with respect to the center of said plate, and burner tips of flattened tubular form mounted upon said cover plate, said tips being respectively alined with said burner chambers and communicating freely with the same.

960,819. STAMPING-MACHINE. CYRUS CHAMBERS, JR., Overbrook, Pa., assignor to Chambers Brothers Company, a Corporation of Pennsylvania. Filed Sept. 26, 1907. Serial No. 394,625.



1. In a stamping device for a moving bar of plastic material, the combination of a pivoted supporting frame, a rotating mandrel carried thereby, a stamping element carried by the mandrel, a train of gears for communicating motion to the mandrel, one of said gears having an axis corresponding to the axis of the supporting frame, a measuring wheel and means for communicating power from said wheel to the train of gears.

2. In a stamping device for a moving bar of plastic material, the combination of a pivoted supporting frame, a rotative stamping element carried thereby, means for communicating motion to the rotative element, and means for securing the vertical adjustment of the pivoted supporting frame.

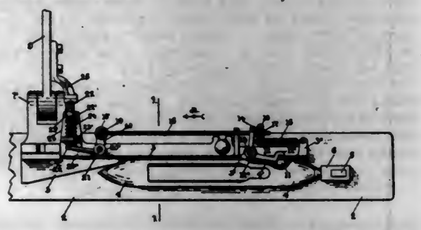
3. In a stamping device for a moving bar of plastic material, the combination of a pivoted supporting frame weighted at its free end, a rotative stamping element carried thereby, means for communicating motion to the rotative element, and means for securing the vertical adjustment of the stamping element.

4. In a stamping device for a moving bar of plastic material, the combination of a pivoted supporting and incasing member, a rotative stamping element carried thereby, a train of gears incased in the supporting member for transmitting motion to the stamping element.

5. In a stamping device for a moving bar of plastic material, a rotating stamping element, a trunnioned supporting structure therefor, a shaft journaled in said trunnions and having a common axis therewith, a measuring wheel, means for communicating power from the measuring wheel to said shaft, and means for transmitting power therefrom to the said stamping element.

[Claims 6 to 9 not printed in the Gazette.]

960,820. LOOM. AUGUSTIN J. CHEVRETTE, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Apr. 30, 1909. Serial No. 493,184.



1. In a shuttle lock mechanism for a loom, a device for entering an opening in the shuttle box and engaging the shuttle, yielding means for moving said device to cause it to engage the shuttle, an arm on the lay crank connector, and means, intermediate said device and said arm, to disengage said device from the shuttle.

2. In a shuttle lock mechanism for a loom, a lever or arm, pivotally mounted at the rear of a shuttle box, and adapted to enter through an opening in the shuttle box and engage the shuttle, a spring for yieldingly moving said arm to cause it to engage the shuttle, a connection from said arm to a second arm, pivotally mounted at the rear of the shuttle box, and said second arm, a longitudinally moving pin intermediate said second mentioned arm and an arm on the lay crank connector, and said last-mentioned arm and crank connector.

3. In a loom, the combination with a shuttle having a recess on the rear surface thereof, and a block or bearing surface secured in said recess, of a lock device for entering said recess and engaging said block, to hold the shuttle in its outer position and prevent the rebound thereof, said device comprising a lever or arm pivotally mounted at the rear of the shuttle box, and adapted to enter through an opening in the shuttle box, and means for yieldingly moving said lever or arm into operative position, and connections intermediate said lever or arm and the lay crank connector, to disengage said lever or arm from the shuttle.

960,821. GRAINING-TOOL. FORD M. CLAPP, Cleveland, Ohio, assignor to The Ohio Varnish Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 26, 1908. Serial No. 469,413.

1. In a graining tool, the combination of a segmental head, a graining member on the curved surface thereof, and two dissimilar graining members on two flat surfaces thereof.

2. In a graining tool, the combination of a head in the form of a quarter-cylinder, a pad formed with concentric ribs on the cylindrical portion of the head, and having parallel projections on one of the adjacent flat faces, and having irregular projections on the other flat face.

3. In a graining tool, the combination of a head in the form of a quarter cylinder, a graining surface having ribs on the cylindrical portion of the head, a graining surface having parallel projections on one of the adjacent flat faces, and a graining surface having irregular projections on the other flat face, there being sockets in the two flat faces respectively, and a handle adapted to seat in either socket.



4. In a graining tool, the combination of a segmental head, a graining pad on the curved surface thereof, a series of parallel projections on an adjacent flat surface thereof and a series of irregular projections on a flat surface thereof.

5. In a graining tool, the combination of a head made in the form of a quarter cylinder, and a rubber graining pad composed of concentric ribs and two sets of projections, one regular and the other irregular, said pad being secured to the head with the rib portion about the curved surface and the projection portions on the two adjacent flat surfaces.

[Claims 6 to 10 not printed in the Gazette.]

960,822. COMBINED REAR LIGHT AND NUMBER-TAG. ABSALOM F. CLARK, Toledo, Ohio, assignor to Morton D. Teal, Toledo, Ohio. Filed July 19, 1909. Serial No. 508,450.

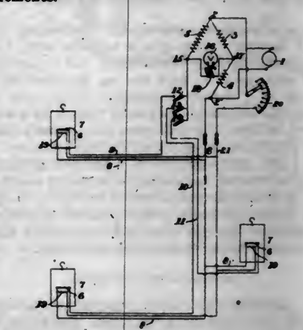


In combination, a number tag having slots and holes formed therein, a bracket having a body portion, legs formed integral with said body portion, and feet formed with the ends of said legs, screws passing through said feet and the holes in the tag for securing said bracket to said tag, and a lamp provided with a white and a red glass, the rays passing through the white glass adapted to shine upon the number tag.

960,823. INDICATING AND MEASURING DEVICE FOR USE IN MINES OR WHEREVER DESIRED TO DETECT PRESENCE OF COMBUSTIBLE GASES. HAROLD H. CLARK, Pittsburg, Pa. Filed Apr. 5, 1910. Serial No. 553,662. (Dedicated to the public.)

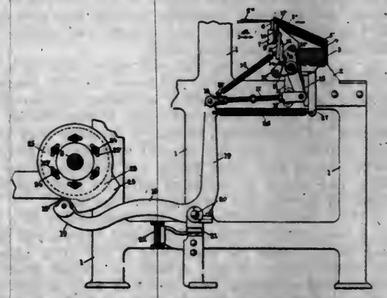
1. In an indicating and measuring device the combination with a source of substantially constant potential of an active element whose resistance changes with its temperature connected to receive current from said source and located at the point to be tested, a heater for said active element adapted to exert a constant heating effect thereon, means for preventing the heater and active element from igniting gas beyond their immediate vicinity, and means to measure changes in resistances of the active element.

2. In an indicating and measuring device, the combination with a source of substantially constant potential of a plurality of active elements having high negative temperature coefficients, a resistance having a substantially zero temperature coefficient, a switch for each active element adapted to connect it in turn across said source in series with said resistance to form one leg of a Wheatstone bridge, other resistances forming the other leg of the bridge, a volt meter connected across the bridge at points of normally equal potential for indicating changes in the resistance of the active elements, electric heaters located adjacent the active elements and connected across said source, means for protecting said heaters and active elements from drafts while permitting a free circulation of the gas to be tested, and means to prevent the ignition of gas beyond the immediate vicinity of the active elements.



3. A detecting instrument for use in gas testing systems comprising an inclosing vessel having a low specific heat and provided with openings at the top and bottom, wire gauze coverings for said openings, an active element having a high negative temperature coefficient suitably supported within the vessel, a heater supported immediately beneath the active element, electrical connections for the heater and active element, means for directing gas against the active element and means inclosing the vessel for protecting it from drafts while permitting a free circulation of the gas to be tested.

960,824. TUFTED-FABRIC LOOM. JOHN A. CLARK, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Jan. 5, 1910. Serial No. 536,486.



1. In a pile fabric loom, a fell positioning device, comprising a bar having a series of teeth or dents thereon, means to move said bar to and fro, and up and down, below the fabric, whereby the teeth or dents may enter the warps, and move the fell to a definite position, and also raise the fabric into a horizontal plane after each insertion of the tuft yarns.

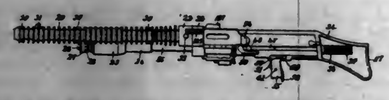
2. In a pile fabric loom, a fell positioning device, comprising a bar having a horizontal plane surface to contact with the under surface of the woven fabric, and having a series of teeth or dents at one side of said horizontal surface, adapted to enter between the warp threads, and means to move said teeth or dents.

3. In a pile fabric loom, a fell positioning device, comprising a bar having a series of teeth or dents thereon to enter the warp threads, and pivotally mounted on arms extending from a rock shaft supported under the breast plate, a downward extension on said arms below said shaft, a connection from said downward extension to a lever and cam, and said lever and cam, to move said bar back and forth, and a second pivoted arm, and a lever having a connection from one of its arms to said bar, and a connection from its other arm to a second lever and cam, and said lever and cam, to move said bar back and forth.

4. In a pile fabric loom, a fell positioning bar, comprising a horizontal bar upon a movable arm, a series of teeth or dents on said bar, a cam, and connections to a movable arm, to move said bar up to place the back of the fabric in a definite horizontal plane, and a second cam, and connections to rock said bar on its pivotal axis, and move the dents in the warp to a definite position at the fell, after each insertion of the tuft yarn.

5. In a pile fabric loom, a fell positioning device, comprising a horizontal bar having a series of dents or teeth thereon, and means to move said bar to carry the dents or teeth in the warps to a fell position or cloth making point, with the tuft yarns around one pick of filling, and another pick of filling behind the tuft yarns.

960,825. AUTOMATIC GUN. GIUSEPPE COLLEONI, New York, N. Y. Filed July 30, 1908. Serial No. 446,076.



1. In a breech-loading gun, the combination with two parallel barrels, a collar inclosing both of said barrels intermediate the ends thereof, a cylinder carried by said collar below said barrels, separate passages connecting said cylinder and barrels and extending through said collar, a piston within said cylinder, and breech mechanism for both of said barrels operated by said piston.

2. In a breech-loading gun, the combination with a barrel, of a feed cylinder mounted adjacent the breech thereof, means for transferring cartridges to said cylinder adjacent the lower portion thereof, means for transferring cartridges from the upper portion of said cylinder to said barrel, and a plunger extending through said feed cylinder and adapted to rotate said cylinder and operate said last-mentioned transferring means.

3. In a breech loading gun, the combination of a barrel, a feed cylinder adjacent the breech thereof, means for rotating said cylinder, a lifter extending transversely of the cylinder and adjacent the upper surface thereof and adapted for engagement beneath a cartridge and above said cylinder, a cam lug on said cylinder for intermittently raising said lifter during the rotation of the cylinder, and means for engaging with the cartridge when lifted, for forcing said cartridge into the barrel.

4. In a breech-loading gun, the combination of a barrel, a feed cylinder adjacent the breech thereof and below said barrel, means for supporting a feed strip adjacent the under surface of said cylinder, a pivoted finger for transferring cartridges from said feed strip to said feed cylinder, a lifter adjacent the upper surface of said cylinder for raising the cartridges from said cylinder, and means for engaging with the cartridges for forcing them from said lifter to said barrel.

5. In a breech-loading gun, the combination of a barrel, a feed cylinder adjacent the breech thereof and below said barrel and having a plurality of lugs extending outwardly therefrom to form receivers for cartridges, means for rotating said cylinder, a lifter pivoted adjacent said cylinder and in engagement with the upper surface thereof beneath said cartridges, and a plurality of lugs on said cylinder for engagement with said lifter to automatically raise the same intermittently during the rotation of the cylinder.

[Claims 6 to 16 not printed in the Gazette.]

960,826. STUBBLE-BURNER. WILLIAM E. CONVERSE, Franktown, Colo., assignor of one-fourth to John R. Campbell, Franktown, Colo. Filed Feb. 13, 1909. Serial No. 477,778.



1. The combination with a wheeled vehicle having a platform, an oil tank upon the platform, valved outlet pipes for the tank, a burner member transversely connected with the outlet pipes, a brush member positioned behind the burner, a water supply connected with the brush member and an adjustable reticulated guard member upon each side of the truck inclosing the burner and brush member.

2. The combination with a wheeled truck having a platform, of an oil tank upon the forward end of the platform, valved outlet pipes for the tank, a burner member transversely connected with the outlet pipes, below the platform, a water tank positioned near the rear of the truck, a brush member below the truck and positioned away from the burner, a pipe connection between the water tank and the brush member, adjustable reticulated members upon each side of the truck inclosing the brush and burner, and a pipe member upon the platform, substantially as described.

3. The combination with a wheeled truck having a platform, of an oil tank upon the platform and adjacent the front thereof, valved outlet pipes connected with the tank, a transverse burner member connected with the outlet pipes, a brush member positioned adjacent the rear of the truck, means for raising or lowering the brush member, a water tank upon the rear of the platform, flexible pipe members leading therefrom communicating with the brush member, valves for the pipes, reticulated guard member upon each side of the truck, means for raising or lowering the guard members.

960,827. HANGER FOR ELECTRIC CONDUCTORS. JAMES P. CONWAY and GEORGE HOFFMAN, Arnold City, Pa. Filed Mar. 12, 1910. Serial No. 548,761.

1. A hanger for conductor wires, comprising an interiorly threaded cup member provided on its closed end with a spike, a plug threaded into said cup member, a slotted bolt carried by said plug, a supporting hook mounted in said slot and having a head on its inner end, and a nut on the bolt upon which said head rests.

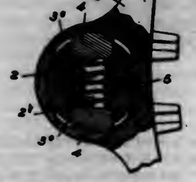
2. A hanger for conductor wires, comprising a cup member provided on its closed end with a spike, a supporting bolt detachably secured to the cup member and being slotted in the portion projecting beyond the cup member, a supporting hook slidable in the slot of said bolt, and a nut on the bolt for supporting said hook and for moving the same toward the inner end of the bolt.

3. A hanger for conductor wires comprising a cup member provided on the closed end thereof with securing means, a plug threaded into said cup member, a bolt carried by said plug and having a slotted outer end, a supporting hook mounted to slide in the slotted portion of the bolt, and means on the bolt for retaining the supporting hook in position and for moving the same toward and away from the cup member.



4. A hanger for electric conductors comprising a cup member interiorly threaded and provided on the closed end with a securing spike, a bolt supported from the cup member and insulated therefrom, said bolt provided with a slotted outer portion, a supporting hook movable in the slot of said bolt, and a nut on the bolt supporting said hook and also constituting means to move the hook longitudinally of the bolt.

960,828. ADJUSTABLE BRAKE-HEAD. FREDERICK R. CORNWALL, St. Louis, Mo., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 10, 1910. Serial No. 537,139.



1. The combination of a brake head, of a part on which the same is mounted, and expanding friction blocks carried by said part.

2. The combination of a brake head, a part on which the same is mounted, blocks carried by said part, and a spring interposed between said blocks for pressing them outwardly.

3. The combination of a brake head having a grooved socket, a part on which said brake head is mounted, and expanding blocks carried by said part and coöperating with the grooves in the socket of the brake head.

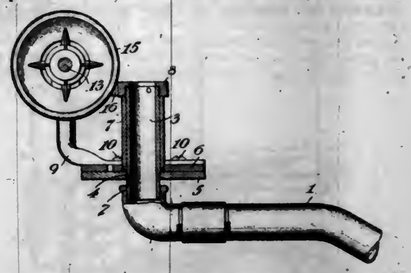
4. The combination of a brake head having a grooved socket, a part on which the same is mounted, friction blocks carried by said part, and a spring interposed between said blocks for forcing the same outwardly into cooperative relation with the grooved socket of the brake head.

5. The combination of a brake head, a part on which the same is mounted, said part being provided with a noncircular transversely disposed opening, blocks mounted in said opening and capable of outward movement, and means for moving said blocks outwardly.

[Claims 6 and 7 not printed in the Gazette.]

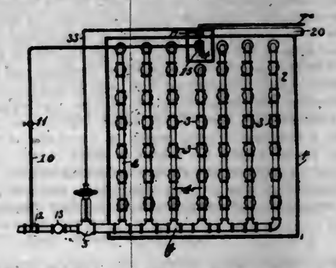
960,829. TROLLEY FOR ELECTRIC RAILWAYS. CLARENCE D. COYLE, Youngstown, Ohio. Filed Nov. 15, 1909. Serial No. 528,154.

1. In a trolley harp mounting, the pole carrying an upright rigid journal post, a stationary bearing plate arranged at the lower end part of said post, a revoluble bearing plate having a slidable bearing on top of the stationary bearing plate, an upstanding bearing sleeve fast to the revoluble bearing plate and journaled on said post, a wheel harp made fast to the revoluble bearing plate, and oppositely arranged centering springs connected with said harp.



2. In a trolley harp mounting, the pole carrying an upright rigid journal post, a stationary bearing plate fitted to the lower end part of said post, a revoluble bearing plate working over the stationary bearing plate, a bearing sleeve fast to the revoluble bearing plate and journaled on said post, a retaining device at the upper end of the post, a wheel harp made fast to the revoluble bearing plate, and oppositely arranged centering springs connected with opposite sides of the harp, and with the upper end part of the journal post.

960,830. AIR-CONDITIONING APPARATUS. STUART W. CRAMER and WILLIAM B. HODGE, Charlotte, N. C.; said Hodge assignor to said Cramer. Filed Dec. 14, 1909. Serial No. 533,037.



1. In a humidifier, a spray chamber, means for intermittently supplying spray to the spray chamber, a humidity controlling device, and means for continuously supplying saturated air to said controlling device.

2. In a humidifier, a main spray chamber, an auxiliary spray chamber, means for intermittently supplying spray to the main spray chamber, a humidity controlling device in the auxiliary spray chamber, and means for continuously supplying saturated air to said controlling device.

3. In a humidifier, a main spray chamber, an auxiliary spray chamber, means for supplying spray to said chambers, a humidity controlling device in the auxiliary chamber and means actuated by said controlling device to intermittently supply spray to a main chamber.

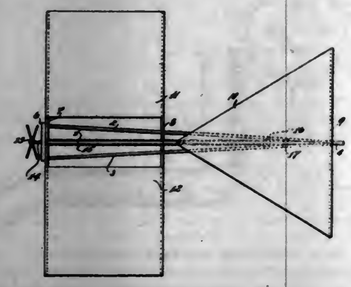
4. In a humidifier, a spray chamber, a humidity controlling device comprising a wet and a dry member, means for supplying saturated air continuously to said wet member, and means actuated by said humidity controlling device arranged to intermittently supply spray to the spray chamber.

5. In a humidifier, a main spray chamber, means for intermittently supplying spray to the spray chamber, an auxiliary spray chamber provided with a humidity controlling device having a wet and a dry member, and means

for supplying saturated air continuously to said controlling device, and means for controlling the air supply to the spray chambers.

[Claims 6 to 8 not printed in the Gazette.]

960,831. FLYING-MACHINE. LOUIS L. CRANE, New York, N. Y. Filed Dec. 21, 1909. Serial No. 534,291.

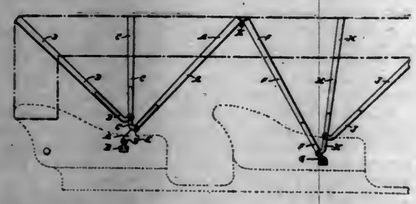


1. The herein described aeroplane, consisting of a rotating shaft, a propeller thereon, a twisted torsional driving means for the propeller, an elongated frame carrying the same, cross bars to the frame, side wings and a tail, the side wings having a slant from the upper bar to a lower bar, the tail being of triangular shape and secured at its apex to the frame, forward of the cross bar therefor.

2. The herein described aeroplane, having an elongated frame of a number of rods spaced apart at the front end and joined together at the rear end, a journal plate at the front end, a shaft therein, a propeller on the shaft in front of the plate, torsional driving means within the frame, tilted side wings on each side of the forward end of the frame, a triangular tail piece having its apex fixed to one of the elongated rods, and a cross bar near the end of the frame to which the other end of the tail is secured.

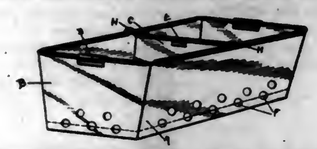
3. The herein described aeroplane consisting of a journal plate, three longitudinal rods, one secured at the upper part of the plate, the other two at the bottom, the free ends of such rods being joined together to form a tripod, a torsional driving means in the shape of twisted rubber bands within the tripod, a shaft in the plate, a propeller in front of the shaft and secured thereto, a pair of tilted wings, one on each side of the forward part of the frame, and a triangular tail at the rear thereof.

960,832. HOOD FOR MOTOR OR OTHER VEHICLES. JAMES SIME CREE, Glasgow, Scotland. Filed Aug. 20, 1909. Serial No. 513,878.



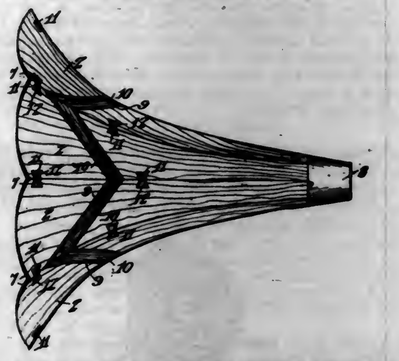
A hood for motor or other vehicles, comprising front and rear series of adjacently pivoted hoops relatively so positioned upon the vehicle that the front hoop of the rear series and the rear hoop of the front series abut at their upper parts when the hood is open and pivotal connection between the abutting parts, the supplemental hoops in each series being carried by said abutting hoops respectively.

960,833. DELIVERY-BASKET. WINFIELD S. CRUM, La Fayette, Ind. Filed Mar. 6, 1908. Serial No. 419,565.



In combination with a basket having a rounded rim, a transverse partition fitting freely within the same and provided at its upper corners with two outwardly projecting downwardly curved flanges which fit over said rim at opposite sides of said basket and guide said partition as it is shifted from point to point within said basket for varying the relative size of the compartments of the latter substantially as set forth.

960,834. HORN FOR SOUND-REPRODUCING MACHINES. ALFRED R. CUNNIUS, Brooklyn, N. Y., assignor of one-half to Lipman Kaiser, East Orange, N. J. Filed Dec. 4, 1908. Serial No. 465,998.



1. A horn for sound-reproducing machines composed of a series of edge contacting staves, the plane of the said staves being at an angle to each other and the adjacent edges of the staves provided with registering recesses open in corresponding faces of the staves and of less depth than the thickness of the latter, and wooden dowels inserted in registering recesses with their grain extending transversely to the joint between the staves, each dowel consisting of two portions disposed at an angle to each other conforming to the angle between the surfaces of two adjacent staves.

2. A horn section comprising a wooden stave tapering in one direction, and a wooden reinforcing strip fastened to the stave and extending transversely to the axis of the stave from one edge to the other, said stave being longitudinally bent into a gradual curve after the said strip is secured thereto whereby the strip conforms to the curvature of the stave.

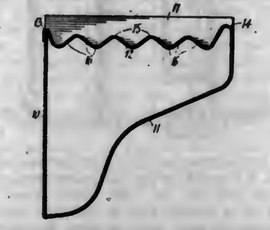
3. A horn section comprising a wooden stave of tapering form having a transverse groove in one surface extending from one longitudinal edge to the other and having a slot in its wider end edge extending from one longitudinal edge to the other, wooden stiffening strips set into the groove and slot and each forming a continuous piece extending from one edge of the stave to the other, said stave being longitudinally bent on a gradual curve after the securing of the strips in place.

4. A horn for sound reproducing machines composed of a series of edge-contacting staves, the plane of said staves being at an angle to each other, the adjacent edges of the staves being provided with registering recesses open in corresponding faces of the staves and of less depth than the thickness of the latter, and wooden dowels inserted in said recesses with their grain extending transversely to the joints between the staves, said dowels being double dovetailed in plan, the two portions of the dowels being at an angle to each other conforming to the angle between the surfaces of two adjacent staves.

5. A horn for sound reproducing machines composed of a series of edge-contacting staves, each stave being wider at one end than at the other and having attached thereto a transverse bracing strip, the transverse strip of one stave being at an angle to the transverse strip of the adjacent stave, but the end of one strip registering with the adjacent end of the next successive strip.

[Claims 6 to 15 not printed in the Gazette.]

960,835. PROTECTOR FOR EAVES-TROUGHS. HARRY R. DANIELS, Dresden, Ontario, Canada. Filed Dec. 8, 1908. Serial No. 466,552.



1. An eaves-trough constructed from sheet metal with a vertical rear side and curved front side and with the upper side formed with a plurality of longitudinally extending corrugations, the corrugations having apertures therethrough.

2. An eaves-trough constructed from sheet metal with a vertical rear side and curved front side extending above the rear side and with the upper side formed with a plurality of longitudinally extending corrugations, the upper line of the corrugations being below the upper line of the rear side and having apertures therethrough.

3. An eaves-trough comprising a sheet metal body and a longitudinal corrugated top having spaced apertures, the rear and front walls of the body extending above the corrugated top, and imperforate ends to the body extending at their upper edges above the corrugated top.

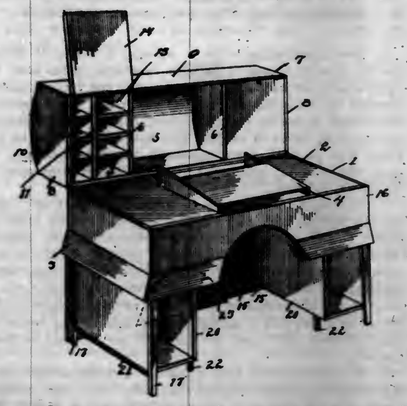
4. An eaves-trough constructed from a single sheet with imperforate bottom front and rear sides and a perforated top, said top being elevated at its juncture with the front to form a longitudinal guard rib.

960,836. FOLDING DESK. LEWIS DANIELS, Philadelphia, Pa. Filed Oct. 19, 1909. Serial No. 523,442.

1. A folding desk comprising a suitable rectangular frame forming a space, receptacles located within the frame thus formed and movably secured thereto, a back hinged to the frame and adapted to form the bottom for the desk when the receptacles are turned in their folded or closed positions, and a top hinged to the upper edge of the desk and adapted to be closed down upon the upper surface of the same when the parts are properly folded forming a trunk or case as and for the purpose described.

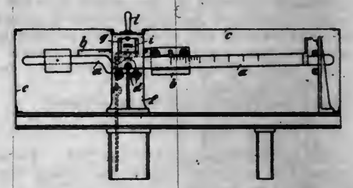
2. A folding desk comprising a rectangular frame forming a suitable receptacle, a top hinged to the said frame and adapted to be received within the walls thus formed, receptacles hinged to the frame and located therein forming supports for the desk when the parts are in an unfolded position, a back hinged to the rectangular frame and adapted to form a bottom below the supporting receptacles when the latter are in their closed position, a cover hinged to the upper edge of the frame and provided with suitable receptacles or other compartments, said cover being adapted to be closed down upon the top of the desk and suitable means for locking the several parts together after they have been closed or folded as and for the purpose described.

3. A folding desk comprising a suitable rectangular shaped frame, a top hinged to the same and adapted to be received thereby, supporting compartments located at either end of the rectangular frame and adapted to be folded or turned within the frame, legs the upper ends of which are hinged to or movably secured to the rectangular frame between the supporting receptacles and frame, the lower ends of which extend a suitable distance below the said supporting receptacles, adjacent feet or posts extending below or from the bottoms of the said supporting receptacles, rods connecting said legs, a back hinged to the



lower portion of the rectangular frame and adapted to form a bottom for the desk when the parts are in a folded position, a door hinged to the lower edge of said bottom and adapted to coöperate with the front wall of the rectangular frame or body of the desk, a suitable lock for securing the several parts together, a cover hinged to the upper edge of the rectangular frame and provided with suitable compartments, and doors hinged to the cover adjacent to the lower edge of the front wall thereof for covering the said compartments as and for the purpose described.

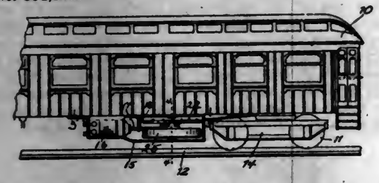
960,837. STEELYARD. GEORG DARMSTÄDTER, Darmstadt, Germany, assignor to The Firm of Carl Schenck, Eisengiesserei & Maschinenfabrik, Gesellschaft mit beschränkter Haftung, Darmstadt, Germany. Filed June 17, 1909. Serial No. 502,681.



1. A device of the character described, comprising a scale beam, a weight slidable thereon, an inclosing casing having an aperture, a gate controlling said aperture, means controlled by the beam for locking the gate when the beam is unbalanced, and means controlled by the beam for liberating the weight and interlocking the weight with the gate when the beam is balanced.

2. A device of the character described, comprising a scale beam, a weight slidable thereon, an inclosing casing having an aperture, a gate controlling said aperture, means controlled by the beam for locking the gate when the beam is unbalanced, and means controlled by the beam for liberating the weight and interlocking the beam and weight with the gate when the beam is balanced.

960,838. BALANCING VEHICLE. CLIFTON L. DAUGHERTY, Indianapolis, Ind. Filed Sept. 5, 1907. Serial No. 391,508.



1. The combination with a vehicle, a series of transporting wheels arranged tandem centrally under said vehicle, means for automatically balancing the vehicle, braces adapted to hold the vehicle upright when the balancing mechanism is not in operation, said braces being mounted in the car so as to be vertically reciprocable, a shoe on the lower end of each brace pivotally mounted between its ends, and yielding means for normally holding the shoe in horizontal position.

2. The combination with a vehicle, a series of transporting wheels arranged tandem centrally under said vehicle, means for automatically balancing the vehicle, braces adapted to hold the vehicle upright when the balancing mechanism is not in operation, said braces being mounted in the car so as to be vertically reciprocable, a shoe on the lower end of each brace pivotally mounted between its ends, and a spring on each side of the brace extending from the brace to the shoe for holding it horizontally.

3. The combination with a vehicle, a series of transporting wheels arranged tandem centrally under said vehicle, means for automatically balancing the vehicle, braces vertically reciprocable in the vehicle for holding the same when the balancing mechanism is not in operation, and means for holding said braces in their elevated and lowered positions.

4. The combination with a vehicle, a series of transporting wheels arranged tandem centrally under said vehicle, means for automatically balancing the vehicle, braces vertically reciprocable in the vehicle for holding the same when the balancing mechanism is not in operation, vertically disposed cylinders in the vehicle in which said braces are reciprocably mounted, and pneumatic means for elevating and lowering said braces.

5. The combination with a vehicle, a series of transporting wheels arranged tandem centrally under said vehicle, means for automatically balancing the vehicle, braces vertically reciprocable in the vehicle for holding the same when the balancing mechanism is not in operation, vertically disposed cylinders in the vehicle in which said braces are reciprocably mounted, pneumatic means for elevating and lowering said braces, spring actuated means for locking the braces in their elevated and lowered positions, and pneumatic means for releasing said locking means.

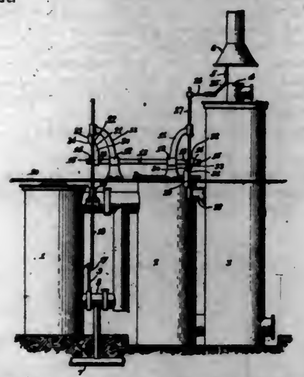
[Claims 6 and 7 not printed in the Gazette.]

960,839. WATER-GAS APPARATUS. FLOYD B. DAUGHERTY, Alexandria county, Va. Filed Jan. 27, 1910. Serial No. 540,431.

1. In a gas apparatus, the combination with an air blast valve, a blow-off valve, operating rods connected to each, and cams on said rods, of an endwise movable interlocking bar mounted in operative relation to said rods and provided with engaging surfaces operating in conjunction with the cams on said rods to reciprocate said bar endwise in such manner that it will engage the air blast valve rod to lock said valve closed when the blow-off valve is closed, and will engage the blow-off valve rod to lock said valve open when the air blast valve is open.

2. In a gas apparatus, the combination with an air blast valve thereon, of means for operating said valve to open and close the same, said operating means having an initial opening movement independent of said valve.

3. In a gas apparatus, the combination with an air blast valve thereon, of a rod for operating said valve to open and close the same, said rod having an elongated slotted connection with said valve to permit an initial independent movement of said rod under the opening movement.



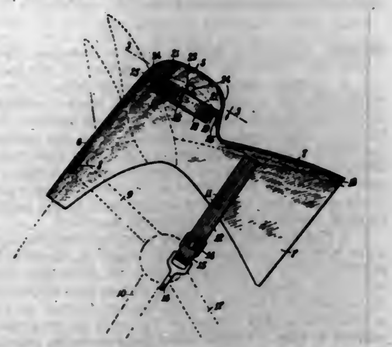
4. In a gas apparatus, the combination with an air blast valve, a blow-off valve, and interlocking mechanism operating to lock the air blast valve closed when the blow-off valve is closed, and to lock the blow-off valve open when the air blast valve is open, the operative connection of said air blast valve having an initial independent movement in its movement to open said air blast valve.

5. In a gas apparatus, the combination with a plurality of air blast valves, and a blow-off valve, of means for locking the air blast valves closed when the blow-off valve is closed, for locking the blow-off valve open when any of the air blast valves are open, and for successively locking and unlocking the air blast valves with respect to each other.

[Claims 6 and 7 not printed in the Gazette.]

960,840. HORSE-BONNET. JOHN M. DAVIES, Plattsburg, N. Y. Filed Jan. 29, 1910. Serial No. 540,844.

1. A horse bonnet comprising a dome-shaped crown; a diaphragm mounted therein; and a weight attached to said diaphragm to cause the same to vibrate with the movement of the head of the animal.



2. A horse bonnet comprising a dome-shaped crown; a diaphragm mounted therein; a weight attached to said diaphragm to cause the same to vibrate with the movement of the head of the animal; and a box-like casing containing said diaphragm and having constricted openings for the passage of air.

3. A horse bonnet comprising a dome-like crown; a bellows box having constricted air passages and a movable air expelling side; means for supporting said bellows box in said crown; and means for vibrating the said movable side, said means being impelled by the movement of the head of the animal.

4. A horse bonnet comprising a dome-like crown of limited dimension adapted to rest between the ears of the animal; extended shield and guard members arranged to extend over in protecting relation the forehead and neck of the animal; a bellows box fixedly mounted in said crown, said box having constricted openings and a movable side opposed to said openings and arranged to expel the air contained in said box therethrough; and means for vibrating said movable side, said means being connected with and moved by the head of the animal.

5. A horse bonnet comprising a dome-like crown of limited dimension adapted to rest between the ears of the animal; extended shield and guard members arranged to extend over in protecting relation the forehead and neck of the animal; a bellows box fixedly mounted in said crown, said box having constricted openings and a movable side opposed to said openings and arranged to expel the air contained in said box therethrough; means for vibrating said movable side, said means being connected with and moved by the head of the animal; and means for connecting said bonnet to the bridle straps, said means arranged to support the guard and shield partly removed from contact with the head of the animal.

[Claim 6 not printed in the Gazette.]

960,841. PREPARATION OF BEVERAGES. GEORGE DEFREN, Brookline, Mass. Filed June 13, 1908. Serial No. 438,377.

1. As a step in the process of producing beverages, the addition of milk sugar to a fermentable sugar to increase the amount of extractive matter.

2. As a step in the process of producing beverages, the addition of milk sugar, to a ferment inactive with respect to milk sugar, and a fermentable sugar, to increase the amount of extractive matter.

3. As a step in a process of producing malt beverages, the addition of milk sugar, to a yeast which does not ferment same, and a fermentable sugar, to increase the amount of extractive matter.

4. As a step in a process for the production of malt beverages, the addition of milk sugar to the wort, to increase the amount of extractive matter.

5. As a step in a process of producing beverages, the addition of caramelized milk sugar inactive with respect to milk sugar to a fermentable sugar to increase the amount of extractive matter.

960,842. SANITARY BOTTLE-LIP-PROTECTING DEVICE. WILLIAM BUTLER DEGAN, New York, N. Y. Filed Nov. 30, 1908, Serial No. 465,347. Renewed Nov. 8, 1909. Serial No. 526,888.



1. A device for maintaining a sanitary condition around the mouth or on the lip of a bottle; said device embracing a bottle-mouth stopper, a flange in engagement therewith only at a point outside of the bottle-mouth and extending outwardly from said stopper to a point near the outer edge of said lip and a series of horizontal corrugations forming part of said flange or lip protector and permitting only a small contact connection between said bottle lip and said flange.

2. A device for maintaining a sanitary condition around the mouth and lip of a bottle; said device embracing a bottle mouth stopper, a flange in engagement therewith outside the bottle-mouth only and extending outwardly and downwardly, from said stopper to a point beyond and below the upper outer edge of said lip, and projections underneath said flange for permitting a very small contact between the said flange and said bottle lip.

960,843. SANITARY BOTTLE-LIP PROTECTOR. WILLIAM BUTLER DEGAN, New York, N. Y. Filed Nov. 30, 1908, Serial No. 465,346. Renewed Nov. 8, 1909. Serial No. 526,889.



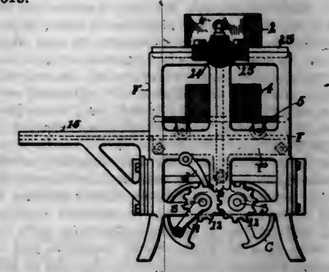
1. A device for maintaining a sanitary condition around the mouth and upon the lip of a bottle; said device embracing a bottle mouth stopper, a flange engaging such stopper outside of the bottle mouth only and extending therefrom to a point near the outer edge of said lip; said flange being raised near the said stopper.

2. A device for maintaining a sanitary condition around the mouth and upon the lip of a bottle; said device consisting of a bottle mouth stopper, a flange engaging such stopper outside of the bottle mouth only and extending therefrom to a point near the outer edge of said lip; the said flange being raised near said stopper and the inner edge of said raised part turned downward and inward to cut and grip the stopper.

3. A device for maintaining a sanitary condition around the mouth and upon the lip of a bottle; said device consisting of a bottle mouth stopper; a flange engaging said stopper outside of the bottle mouth only and extending therefrom to a point beyond the outer edge of said lip and then provided with a downward turn; the inner part of said flange being raised near said stopper, the inner edge of said raised part being turned downward and inward to cut and grip the stopper.

4. A device for maintaining a sanitary condition around the mouth and on the lip of a bottle; said device embracing a slightly tapering bottle-mouth stopper, a flange in engagement therewith and outside of the bottle-mouth only and extending outwardly and downwardly, from said stopper to a point beyond and below the outer edge of said lip.

960,844. SAND-MOLDING MACHINE. JOSEF DEMETER, Cleveland, Ohio. Filed Jan. 22, 1910. Serial No. 539,615.

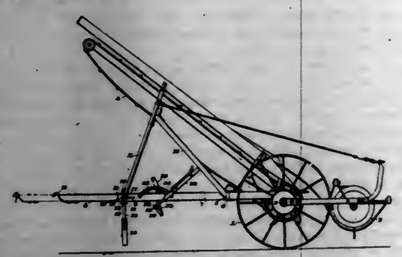


1. A sand molding machine having a main frame, a platform adapted to be moved up and down in said frame and guided thereby, said platform provided with a pivoted lift bar centrally at its bottom, in combination with a pair of oppositely rotatable cams engaging said lift bar on opposite sides of its pivot and separate shafts therefor, and gears operatively connecting said shafts.

2. A sand molding machine having a main frame with vertical guideways in its sides, in combination with a platform having extensions slidable in said channels and a lift bar pivoted at its middle on the middle and bottom of said platform, a pair of cams rotatably mounted beneath said bar on opposite sides of its pivot, separate shafts carrying said cams and gears of the same size mounted on said head and meshing with each other and adapted to operate said cams.

3. In molding machines, a main frame having vertical guideways within its ends and bearings at its top and provided with track extensions at its front, in combination with an invertible open border-frame having trunnions rotatably mounted in said bearings, means to lock said trunnions against rotation, a pattern plate removably seated within said border frame and of the same thickness to provide flush surfaces on opposite sides thereof and having openings through said plate in line with the axis of said trunnions, a vertically movable platform having projecting parts slidably confined within said guideways and provided with tracks adapted to aline with said frame track extensions, and means to raise said platform comprising a lift bar centrally at its bottom, cams rotatably mounted within said main frame to engage said lift bars, means to rotate said cams to different set positions.

960,845. HAY-LOADER. SAMUEL K. DENNIS, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Jan. 27, 1910. Serial No. 540,376.



1. A draft connection for hay loaders including, in combination, fixed tongue members, a loose tongue member adjustable longitudinally relative to said fixed members and having a transverse pivotal connection with said fixed members, and lever mechanism operatively connecting said tongue members in a manner whereby said loose member may be rocked and secured in any desired position relative to said fixed members.

2. A draft connection for hay loaders including, in combination, fixed tongue members, a loose tongue member adjustable longitudinally relative to said fixed members and having a transverse pivotal connection with said fixed members, and a lever mechanism mounted upon the fixed members and operatively connected with said loose member whereby the latter may be rocked about its pivotal connection and secured in any desired position of adjustment.

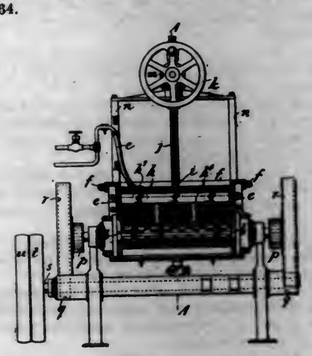
3. A draft connection for hay loaders including, in combination, fixed tongue members having an intervening space between them, a loose tongue member received by said space and adapted to be adjusted longitudinally thereof and having a pivotal connection with the forward ends of said fixed tongue members, and a lever mechanism pivotally connecting the rear end of said loose tongue member with said fixed members in a manner whereby said loose member may be rocked about its pivotal connection and secured in any desired position of adjustment.

4. A draft connection for hay loaders including, in combination, fixed tongue members having an intervening space between them, a yoke having a transverse pivotal connection with the forward ends of said fixed tongue members, and vertical openings in the upper and lower walls thereof, a loose tongue member received by said yoke and extending rearward in said intervening space, a series of vertical openings in said loose tongue member, a pin operatively connecting said member with said yoke in a manner to vary the effective length of said loose tongue member, and a lever mechanism operatively connecting the rear end of said loose tongue member with said fixed members in a manner whereby the former may be rocked about its pivotal connection and secured in any desired position of adjustment.

5. A draft connection for hay loaders including, in combination, fixed tongue members, a loose tongue member adjustable longitudinally relative to said fixed members, said loose tongue member being pivotally connected with the forward ends of said fixed members, a stirrup secured to said fixed members in rear of said pivotal connection, a yoke slidably received by said stirrup and receiving the rear end of said loose tongue member, a hand lever mechanism mounted upon said fixed members and connected with said yoke in a manner whereby the loose member may be rocked about its pivotal connection with the fixed tongue members, and secured in any desired position of adjustment.

[Claims 6 and 7 not printed in the Gazette.]

960,846. APPARATUS FOR REMOVING FOREIGN MATTER FROM INDIA-RUBBER, GUTTA-PERCHA, BALATA, AND THE LIKE. MORLAND MICHOLL DESSAU, London, England. Filed Nov. 23, 1909. Serial No. 529,564.



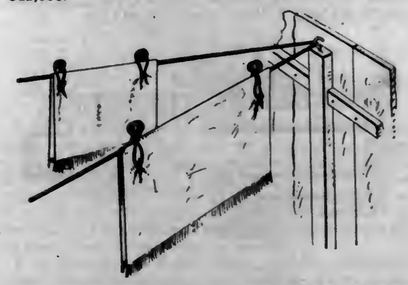
1. A machine for separating foreign matter from india-rubber, comprising a liquid container, a pair of lacerating rolls therein arranged to rotate about parallel axes in a substantially horizontal plane so that the indiarubber being treated can pass vertically downward between their peripheries, and a platen pivotally supported above the rolls so that it can oscillate about an axis transverse to the axes of the rolls, the said platen being adapted to continuously apply pressure to the indiarubber and oscillate about its pivotal support to produce a surging of liquid in the container.

2. A machine for separating foreign matter from india-rubber, comprising a liquid container, a pair of lacerating rolls therein arranged to rotate about parallel axes in a substantially horizontal plane so that the indiarubber being treated can pass vertically downward between their peripheries, a platen adapted to continuously apply pressure to the indiarubber, a support for the platen having a joint with its axis arranged transversely to the rolls for enabling the platen to oscillate and produce a surging of liquid in the container, and means for advancing the platen support toward and withdrawing the same from the rolls.

3. A machine for separating foreign matter from india-rubber comprising a liquid container, screens dividing the container into a central and side compartments, a pair of lacerating rolls in the central compartment arranged to rotate about parallel axes in a substantially horizontal plane so that the indiarubber can pass vertically downward between their peripheries, a platen adapted to continuously apply pressure to the indiarubber, a support for the platen having a joint with its axis arranged transversely to the rolls, enabling the platen to oscillate and produce a surging of liquid through the screens into the side compartments of the container, and overflow gutters for conducting liquid from the said side compartments.

4. A machine for separating foreign matter from india rubber, comprising a trough, screens dividing the trough into a central and side compartments, lacerating rolls having highly roughened surfaces arranged in the said central compartment, overflow gutters for the side compartments, a platen adapted to oscillate and to act upon india rubber placed in the central compartment upon the rolls, and means for rotating the rolls in opposite directions so that the india rubber is caused to repeatedly pass through the rolls and in so doing oscillate the platen to produce a surging of liquid fed into the trough, from the central compartment to the side compartments through the screens for the purpose set forth.

960,847. CLOTHES-PIN. GEORGE ELLSWORTH DEVORE, Morning Sun, Iowa. Filed Feb. 1, 1910. Serial No. 541,386.



1. A clothes pin comprising a piece of wire having an oval loop formed therein intermediate the ends, and terminating in oppositely arranged coils, and the ends of the coils terminating in arms crossing the loop on the outside and curved around and extending within the loop.

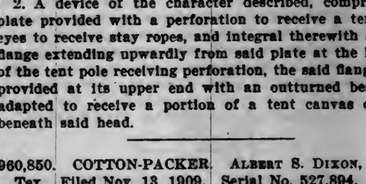
2. A clothes pin comprising a piece of wire having an oval loop formed therein intermediate the end and the wires extending close together and coiled outwardly and said coils arranged opposite, and the ends terminating in curved arms crossing the upper end of the loop and having an intermediate curved portion extending into the loop.

3. A clothes pin comprising a piece of wire having a loop formed therein intermediate its ends and having a compound curve, and the upper ends of the wire terminating in coils, the wire starting from the outside of the coils to form the curved portion 12, and the ends of the wire having the coil from the outside and crossing the upper end of the loop and drawn in toward each other and having an intermediate curved portion extending into the loop and having the ends terminating outside the loop.

960,848. SULKY. JAMES H. DICKSON, Philadelphia, Pa. Filed Aug. 11, 1909. Serial No. 512,311.

1. In a sulky, the combination with a single wheel, of a forked post straddling the wheel, a journal or axle supported in the wheel and secured in said forked post, shafts, a curved member at the rear and connecting said shafts, a seat on the upper end of said post between the shafts and connecting member, and braces connecting said post with the shafts, substantially as set forth.

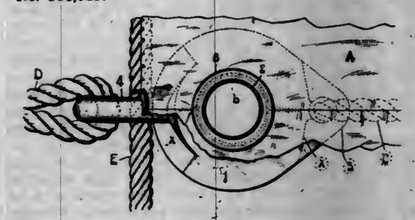
2. In a sulky, the combination with a single wheel, of a forked post straddling the wheel, a journal or axle supported in the wheel, and said forked end of the post having openings in which are secured the ends of said journal, nuts on the ends of said journal, roller bearings around the journal in the wheel hub, a seat on the upper end of the post, shafts, a curved member at the rear and connecting said shafts, and devices connecting said post with the shafts.



3. In a sulky, the combination with a single wheel, of a forked post straddling and supported by said wheel, a seat on said post, shafts, a curved member at the rear and connecting said shafts, and braces connecting said post and shafts.

4. In a sulky, the combination with a single wheel of a forked post straddling and supported by said wheel, shafts, a curved member connecting said shafts and located in rear of the seat, forwardly projecting braces connecting the lower end of the post with the shafts, collars on the post, braces connecting said collars with the shafts and curved connecting member, and stays connecting said shafts and connecting member with said post, substantially as set forth.

960,849. DEVICE FOR ATTACHING STAY-ROPES TO TENT-POLES. JOSEPH E. DILG, St. Louis, Mo., assignor to Dougherty Bros. Tent & Awning Company, St. Louis, Mo., a Corporation. Filed Jan. 3, 1910. Serial No. 536,049.



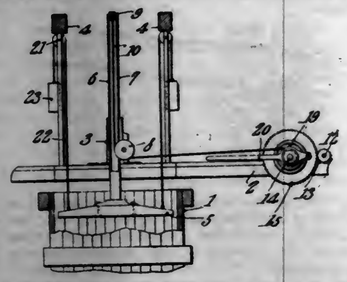
1. A device of the character described, comprising a plate provided with a perforation to receive a tent pole, and eyes to receive stay ropes, the plate having integral therewith a collar flange extending upwardly at the location of the tent pole receiving perforation, around which a portion of a tent canvas may be secured.

2. A device of the character described, comprising a plate provided with a perforation to receive a tent pole, eyes to receive stay ropes, and integral therewith a collar flange extending upwardly from said plate at the location of the tent pole receiving perforation, the said flange being provided at its upper end with an outturned bead, and adapted to receive a portion of a tent canvas confined beneath said head.

960,850. COTTON-PACKER. ALBERT S. DIXON, Austin, Tex. Filed Nov. 13, 1909. Serial No. 527,894.

1. In a cotton packer a guide, a plunger stem passing through the guide and being hollow and having one side provided with an elongated slot, a plunger attached to the stem, a journaled sheave having a portion projecting through the slot in the stem, a cable connected at one end with the upper portion of the stem and passing under the said sheave, means for drawing the cable, and means for raising the plunger.

2. In a packer, a guide, a hollow plunger stem slidably mounted therein and provided with an elongated slot, a plunger attached to the lower end of the stem, a journaled sheave having a portion projecting through the slot in the stem, a cable connected at one end with the stem at a point in alinement with its center and passing under the sheave, means for drawing the cable, and means for raising the plunger.

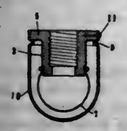


3. In a packer, a guide, a hollow plunger slidably mounted in the guide and having an elongated slot, a journaled sheave having a side portion projecting through said slot, the innermost point of the periphery of the sheave being in alinement with the center of the stem, a plunger attached to the lower end of the stem, a cable connected at one end with the stem at a point in alinement with its center and passing under the said sheave, means for drawing the said cable, and means for raising the plunger.

4. In a packer, a guide, a hollow stem slidably mounted in the guide and having an elongated slot, a plunger attached to the lower end of said stem, a journaled sheave having its side portion projecting through the slot in the stem, a cable connected at one end with the stem and extending along the interior of the same and under the sheave, means for drawing the cable, sheaves supported at the opposite sides of the plunger and above the same, cables passing over said sheaves and connected at their ends to the opposite sides of the plunger, and weights hanging from the other ends of said cables.

5. In a packer a guide, a hollow stem slidably mounted in the guide and having an elongated slot, a plunger attached to the lower end of said stem, a journaled sheave having a side portion projecting through the slot, the innermost point of the periphery of the said sheave being in alinement with the center of the stem, a cable connected at one end with the stem at a point in alinement with its center and passing under the sheave, means for drawing said cable, sheaves supported in elevated position at the opposite side of the stem, cables passing over said sheaves and secured at their inner ends to the opposite sides of the plunger, and weights hanging pendent from the other ends of the last said cables.

960,851. ATTACHMENT FOR INCANDESCENT-LAMP MANTLES. ROBERT M. DIXON, East Orange, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Apr. 19, 1906. Serial No. 312,547.



1. In a device of the class described, in combination, a mantle, a member upon which said mantle is directly supported, and a colloidal shell rigid with relation to said mantle secured upon said member and disposed about and adapted to protect said mantle and arranged to enable said supporting member to be directly attached to a burner.

2. In a device of the class described, in combination, a mantle, means from which said mantle is supported, and translucent combustible means rigid with relation to said mantle supported from said first means and disposed closely about and substantially inclosing said mantle and arranged to enable said supporting means to be directly attached to a burner.

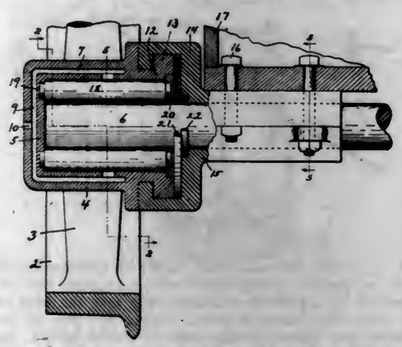
3. In a device of the class described, in combination, a unitary device comprising a supporting member adapted to be mounted adjacent a gas conduit, a mantle secured directly thereto, and a combustible member permanently disposed closely about said mantle and secured to said supporting member and arranged to enable said supporting member to be directly attached to a burner.

4. In a device of the class described, in combination, a mantle, a member provided with a shoulder, and a combustible bulb permanently disposed closely about and adapted to protect said mantle and secured to said first member against said shoulder and arranged to enable said supporting member to be directly attached to a burner.

5. In a device of the class described, in combination, a mantle, a member from which said mantle is supported, and a horny member threaded upon said supporting member and permanently disposed closely about and adapted to protect said mantle and arranged to enable said supporting member to be directly attached to a burner.

[Claims 6 to 21 not printed in the Gazette.]

960,852. MINE-CAR WHEEL. THOMAS DONOHOE, Avella, Pa. Filed Aug. 6, 1909. Serial No. 511,522.



1. A car wheel having an axle-receiving hub formed to inclose the outer end of the hub cavity and at said end provided with bearings for one end of a set of rollers, a member carried by the hub at the opposite end of the hub cavity to provide bearings for the other end of the set of rollers, and rollers mounted in said bearings.

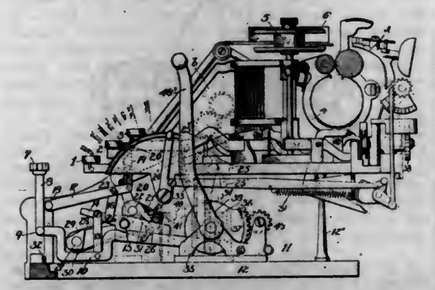
2. A car wheel having an axle-receiving hub formed to inclose the outer end of the hub cavity and at said end provided with bearings for one end of a set of rollers, a peripheral flange at the opposite end of the hub, a member applied to said flanged end to provide bearings for the other end of the set of rollers, rollers mounted in said bearings, and wheel holding means secured to the car and embracing the hub flange.

3. A car wheel having an axle-receiving hub with the hub cavity closed at its outer end, the wall of the cavity constituting the closed end formed with bearings for one end of a set of rollers, an inserted member at the opposite end of the hub cavity formed with bearings for the other end of the set of rollers, and rollers mounted in said bearings.

4. A car wheel having an axle-receiving hub with the outer end of the hub cavity closed by a wall forming an integral portion thereof with cavities in said wall forming bearings for one end of a set of rollers, the opposite end of the hub formed with a depression, a member received in said depression and formed with bearing cavities for the opposite end of the set of rollers, and rollers mounted in said bearings.

5. A car wheel having an axle-receiving hub formed to inclose the outer end of the hub cavity and at said end having bearings for one end of a set of rollers, a peripherally flanged extension at the opposite end of the hub, the end face of said extension formed with a depression, a member fitted in said depression and having bearings for the opposite end of the set of rollers, rollers mounted in said bearings, and wheel holding means secured to the car and embracing the flanged hub extension.

960,853. ADDING AND RECORDING MACHINE. GEORGE WILSON DUDLEY, Staunton, Va., assignor to Numerograph Manufacturing Company, Charleston, W. Va., a Corporation of West Virginia. Filed July 2, 1906. Serial No. 324,450.



1. In an adding and recording machine, the adding keys adding mechanism, a shaft, a series of arms on said shaft arranged in different angular positions about the shaft, the typewriter keys, and connections between them comprising the links 13, 16 and 19, and the levers 10, 14 and 17, a pin and slot connection between the levers 14 and the arms, and connections between the shaft and the adding mechanism, substantially as described.

2. In combination in an adding machine, adding keys, adding mechanism, a rotary shaft, a series of arms thereon occupying different angular positions, a series of levers pivoted intermediate of their length and having their rear arms arranged to operate the angularly positioned arms, a detent and ratchet mechanism and a universal bar 27 under the forward ends of the intermediately pivoted arms, said universal bar being connected with the detent, substantially as described.

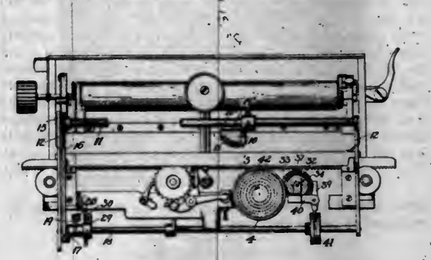
3. In combination in an adding machine, adding mechanism, adding keys, a shaft 22, connections between the same and the adding mechanism, arms on said shaft, a series of levers 14 intermediately pivoted and adapted at their rear ends to operate the said arms, an escapement mechanism for the adding machine and a space frame or universal bar operated by the front portion of said levers, substantially as described.

4. In combination in an adding and recording machine, adding mechanism, printing mechanism, adding keys, figure printing-keys, a member having connections leading to the adding machine, a series of arms on said member, a series of intermediately pivoted levers having their rear ends arranged to operate the said arms, carriage escapement mechanism operated by the front portion of said levers, and connections between said levers and the figure-printing keys of the recording mechanism, substantially as described.

5. In combination in an adding machine, adding disks, carrying mechanism, means for operating the carrying mechanism, a detent for holding the operating means against overthrow, and means for positively releasing the said detent means, substantially as described.

[Claim 6 not printed in the Gazette.]

960,854. TABULATING MECHANISM FOR TYPEWRITERS. GEORGE WILSON DUDLEY, Staunton, Va. Filed July 2, 1906. Serial No. 324,451.



1. In combination with a typewriter carriage, a stop thereon, a rotary shaft, fixed bearings adjacent the path of the carriage in which said shaft is journaled, a rotary tabulator device mounted on the said shaft and having a series of shoulders to contact with the stop on the carriage, means for releasing the carriage from its escapement, and a lever with connections for turning the said shaft to rotate the tabulator device in one direction continuously by one movement of the lever to bring the shoulders thereon in succession in said continuous movement into line with the stop on the carriage and a scale indicating the different denominations and over which the lever moves, substantially as described.

2. In combination with a carriage having a stop thereon, a segment having a series of stop shoulders thereon and having grooves to pass over the stop of the carriage, and means for operating the said tabulator, substantially as described.

3. In combination with a typewriter carriage having a stop, a swinging tabulator having a stop thereon, a rock shaft carrying the tabulator and the gear, the rack, the rock shaft for operating the rack, a disengaging rod for the carriage escapement, an arm on the last mentioned rock shaft having a concentric portion, a lever to be operated thereby for operating the disengaging rod, said lever being maintained in operated position while the tabulator stop is being set, and means at the key-board for operating the rock shaft, substantially as described.

4. In combination with a typewriter carriage, a disengaging rod for controlling the escapement thereof mounted on the carriage, a stop upon the carriage, a rotary shouldered tabulator stop, a lever on the fixed frame, connections between the said lever and the rotary tabulator stop and the disengaging rod, respectively, the said connection for the disengaging rod being arranged to hold the said rod in its operated position while the tabulator continues its rotary movement to present one shoulder after another to the carriage stop, substantially as described.

5. In combination with a carriage and its escapement, an impelling spring, means for releasing the carriage from its escapement, a drum for the impelling spring, a second drum geared to the first drum and having a spring therein, the said second drum with its spring normally rotating freely, and means for causing the second spring to oppose the action of the impelling spring when the carriage is released from its escapement, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

960,855. SPONGE-SHEET. ROBERT A. DUNNING, Yarmouth, Me., assignor to Knuland Shaffer, trustee, Boston, Mass. Filed Oct. 7, 1908. Serial No. 456,654.

1. An article of manufacture, comprising cellular pieces of sponge saturated with a mucilaginous sizing and compressed in the form of a sheet while the sizing is wet or moist.

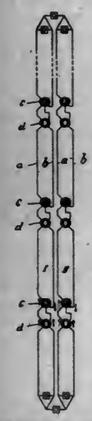
2. An article of manufacture consisting of a sponge

sheet composed of particles of cellular sponge saturated with a mucilaginous sizing soluble in water, the particles



being united with sufficient tenacity to form a sheet by compression while they are wet or moist.

960,856. DIPLEX TELEPHONE CONNECTION. AUGUST WILHELM EBELING, Charlottenburg, Germany, assignor to Siemens & Halske A. G., Berlin, Germany, a Corporation of Germany. Filed July 7, 1909. Serial No. 506,380.

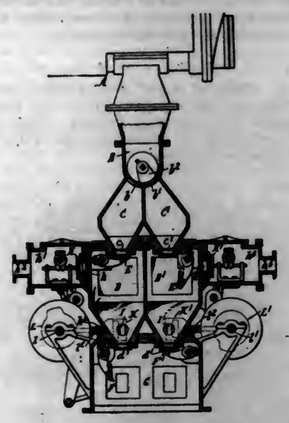


In a diplex telephone connection the combination with the double lines, having a set of double coils forming the self-induction load according to the Pupin system; of an additional set of double coils alternating with the double coils of said first named set along the lines at suitable intervals, the single coils of the two sets of double coils in one of the two lines being all traversed by the current in series and in the same sense and the single coils of the two sets located in the other line being traversed by the current in series but alternately in the opposite sense, for the purpose set forth.

960,857. DISCHARGE MECHANISM FOR VACUUM-TANKS. WILLIAM H. EGGERT, Buffalo, N. Y., assignor to J. P. Devine Company, Buffalo, N. Y. Filed Mar. 2, 1910. Serial No. 546,917.

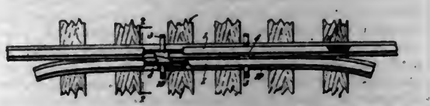
1. In an apparatus for discharging material from a vacuum tank, the combination of a receiving chamber, an inlet valve which controls the delivery of material from the tank to said chamber, an outlet valve which controls the discharge of material from said chamber and is exposed on opposite sides to unequal pressures, means for exhausting air from said chamber when said valves are closed, and means for equalising the pressure on opposite sides of said outlet valve in advance of the opening thereof, substantially as set forth.

2. In an apparatus for discharging material from a vacuum tank, the combination of a receiving chamber, alternately operating inlet and outlet valves which respectively control the delivery of material from the tank to said chamber and the discharge of material from said chamber, said outlet valve being exposed to the atmosphere, means for exhausting air from said chamber when said valves are closed, a relief valve for said chamber, and means for operating said relief valve to admit air to said chamber in advance of the opening of said outlet valve, substantially as set forth.



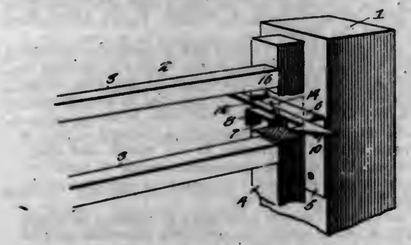
3. In an apparatus for discharging material from a vacuum tank, the combination of a receiving chamber having an exhaust passage, an inlet valve which controls the delivery of material from the tank to said chamber, an outlet valve which controls the discharge of material from said chamber and is exposed to the atmosphere, an exhaust valve which is operated to open said exhaust passage when said inlet and outlet valves are closed, a relief valve controlling an air admission opening in said chamber, and means for opening said relief valve in advance of the opening of said outlet valve and closing said relief valve before said exhaust passage is opened, substantially as set forth.

960,858. ADJUSTABLE GUARD-RAIL CLAMP. ROBERT E. EINSTEIN, St. Louis, Mo., assignor to St. Louis Frog & Switch Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 29, 1909. Serial No. 530,402.



A guard rail clamp comprising a clamping member provided with a pocket for receiving portions of the base flanges of the rails and having a part that bears against the outer side of the web of one rail, a pair of wedge-shaped blocks interposed between the rails, coöperating diagonal ribs on said blocks that extend unbrokenly across the meeting faces of said blocks, said ribs being adapted to interlock with each other, a locking device arranged between the guard rail and the clamping member and comprising a vertically disposed web that bears against the web of the guard rail, a longitudinally extending rib on said wedge that fits in a recess formed in the clamping member, a head on one end of said wedge that is formed integral with the longitudinally extending rib thereon, and a key arranged in an opening in said rib and bearing against one side of said clamping member for retaining said wedge in position.

960,859. GATE-LATCH. HOWARD R. ELLIOTT, Billings, Mont. Filed Nov. 30, 1909. Serial No. 530,619.



1. The combination of a plate having a horizontally extending portion provided with a depending member forming a stop, a latch resting on the horizontal portion and pivotally mounted thereon, said latch being provided with a shoulder spaced from the said stop, a spring connected with the plate and latch, and means on the horizontal portion of the plate for limiting the movement of the latch.

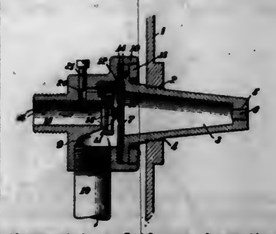
2. The combination of a supporting structure struck from a sheet metal blank and consisting of angularly disposed plate portions, one of the plate portions being slit from opposite sides and bent into depending stops, a latch reversibly and pivotally mounted on the last mentioned portion and provided with a shoulder spaced from the adjacent stop, a spring connected with the lever for holding the same in latching position, and a changeable stop for limiting the movement of the lever.

3. A gate latch comprising a plate adapted to be secured to the fence post, a horizontal portion forming a part of said plate and having depending portions oppositely located and forming stops against which the gate is adapted to come in contact, a catch lever movably secured to said plate at a suitable distance along its length, a stop pin projecting from the upper surface of the plate for limiting the catch lever in one direction, and a spring one end of which is secured to the plate and having its opposite end attached to the catch lever for causing the latter to assume its normal position as and for the purpose described.

4. A gate latch comprising a plate having a horisontal extension properly sheared to form two downwardly projecting abutting surfaces against which the gate is adapted to come in contact, a catch lever movably attached to the horizontal extension of said plate and having an engaging end for coöperating with the gate, a pin secured to the horizontal extension of the plate against which the lever is adapted to come in contact, a spring one end of which is also secured to said portion of the plate and having its opposite end attached to the catch lever at a suitable distance from its pivotal connection, said horizontal portion of the plate thus formed being provided with duplicate holes for causing the parts to be interchangeable as and for the purpose described.

960,860. THERMOSTAT. WILLIAM ENTERLINE, Big Run, Pa. Filed June 19, 1909. Serial No. 503,091.

1. In a thermostat, a liquid case adapted to project through the side of a boiler, there being a threaded orifice in the liquid case, a plunger screw disposed in the threaded orifice, flanges disposed outwardly around an opening in the liquid case, a gas case, a diaphragm, having a nipple, covering the said opening in the liquid case, means for pressing the diaphragm between the flange of the liquid case, and a shoulder on the gas case, a valve disposed in the gas case, mounted on the nipple, a communicating means in the gas case leading to the valve and forming a valve seat, which is commanded by the valve, and a second communicating means leading from the gas case.



3. In a thermostat, a fluid case hermetically sealed at one end, there being a threaded orifice in the fluid case, a plunger screw disposed in the threaded orifice, the fluid case having a threaded surface which is adapted to mesh in a threaded orifice in a boiler, flanges disposed around an opening in the other end of the fluid case, a gas case, a diaphragm covering the said opening in the fluid case, means for pressing the diaphragm between the flanges of the liquid case and a shoulder on the gas case, a valve disposed in the gas case which is mounted on the diaphragm, a communicating means in the gas case leading to the valve and forming a valve seat which is commanded by the valve, and a communicating means leading from the gas case.

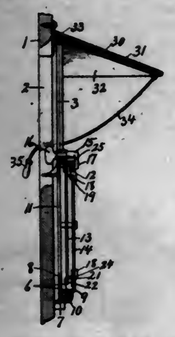
4. In a thermostat, in combination, an elongated fluid case hermetically sealed at one end, which is adapted to be disposed in a boiler, a fluid in the fluid case, flanges disposed around an opening in the other end of the fluid case, a gas case having an annular threaded extension, a diaphragm covering the said opening in the fluid case, a nut engaging the thread in the annular extension of the gas case and adapted to press against the annular flange of the liquid case, thereby forcing the diaphragm against an annular shoulder on the gas case, a valve disposed in the gas case mounted on the diaphragm, communicating means in the gas case leading to the valve and forming a valve seat which is commanded by the valve, and a communicating means leading from the gas case one of the said communicating means being disposed at an angle to the liquid case.

5. In a thermostat, a liquid case, a threaded orifice in the liquid case, a plunger screw disposed in the threaded orifice, an outwardly disposed flange around an opening in the liquid case, a gas case having an annular threaded extension, a diaphragm covering the said opening in the liquid case, a nut engaging the thread on the annular extension of the gas case and adapted to press against the annular flange of the liquid case thereby forcing the diaphragm against an annular shoulder on the gas case, a valve disposed in the gas case mounted on the diaphragm, a communicating means in the gas case leading to the valve and forming a valve seat, which is commanded by the valve, a second communicating means leading from the gas case, a by-pass connecting the first communicating means with the gas case, and means to command the by-pass.

960,861. LOCOMOTIVE-CAB WINDOW. JAMES W. ESTES, Syracuse, N. Y. Filed July 3, 1909. Serial No. 505,835.

1. In combination with the window frame and opening of a locomotive cab, a window sash and glass plates of

unequal area supported in said sash and spaced apart from each other, the greater portion of the marginal edges of both plates being spaced apart from the sash forming intervening air passages.



2. In combination with the window frame and opening of a locomotive cab, a window sash slidable to and from a position across the opening in the window frame, separate parallel glass plates mounted in the sash and spaced apart from each other and having the greater portions of their marginal edges spaced apart from said sash.

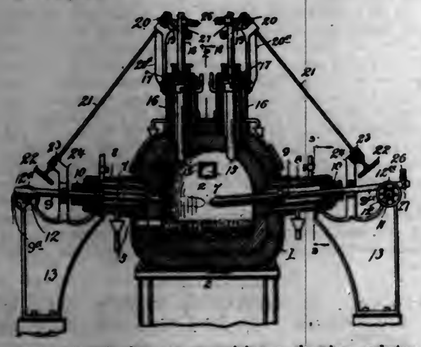
3. In combination with a window frame and opening of a locomotive cab, a window sash movable across said opening, separate glass plates removably mounted in the sash and spaced apart from each other and having the greater portions of their marginal edges spaced apart from the sash leaving intervening air passages, the front glass plate being of less area than the other glass plate.

4. The combination with a window frame and opening, a sash frame, a glass plate removably mounted in the sash frame and having the greater portion of its marginal edges spaced apart therefrom forming intervening air passages across both sides of the plate, and movable retaining means for the plate.

5. In combination with a window frame and opening, a sash mounted on the frame and movable to and from a position across said opening, a glass plate mounted in the sash, said plate having the greater portion of its marginal edge spaced apart from the frame forming intervening air passages, the frame having at least one of its sides movable to permit the removal of the glass plate.

[Claim 6 not printed in the Gazette.]

960,862. ELECTRIC FURNACE. JOHN W. EVANS, Belleville, Ontario, Canada. Filed July 15, 1909. Serial No. 507,680.



1. An electric furnace comprising a chamber, substantially horizontally disposed electrodes therein, a pair of separate electrodes independent of the first named electrodes adapted to enter the material in the chamber, and means for operating said electrodes at will, the horizontal electrodes being arranged to produce an arc above the material in the chamber.

2. An electric furnace comprising a chamber, electrodes therein arranged to produce an arc above the material in the chamber, electrodes independent of the first named electrodes adapted to enter the material in the chamber, and means for operating said electrodes independently.

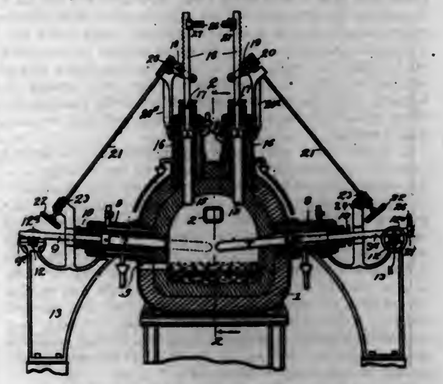
3. An electric furnace comprising a chamber, a pair of electrodes adapted to produce an arc within said chamber, a separate pair of electrodes adapted to enter the material in said chamber, and means for individually operating said electrodes at will.

4. An electric furnace comprising a chamber, electrodes adapted to extend across the same, and electrodes adapted to extend into the chamber at an angle to the first named electrodes, one of the first and second named electrodes being arranged to produce an arc between them, the second named electrodes being arranged to enter the material in said chamber to pass electric current through said material.

5. An electric furnace comprising a chamber, substantially horizontally disposed electrodes adapted to enter said chamber to produce an arc, and a pair of electrodes arranged at opposite sides of the center of the chamber and adapted to cross the path of the first named electrodes, whereby an arc may be produced between one of the first and second named electrodes and the second named electrodes may enter the material to pass electric current through the same.

[Claim 6 not printed in the Gazette.]

960,863. METHOD OF REDUCING REFRACTORY MATERIAL. JOHN W. EVANS, Belleville, Ontario, Canada. Filed July 15, 1909. Serial No. 507,681.



1. The method of reducing refractory material consisting in first applying heat to a body of material by an arc without the material to produce a molten mass, then cutting off such arc, and next heating said molten mass by passing electric current through a portion of the same.

2. The method of reducing refractory material consisting in subjecting the same to the action of an arc at an approximately central portion of the body of material, subjecting said material to an arc at a distance from said central portion, and subjecting said heated mass to electric current passing through a portion of the same.

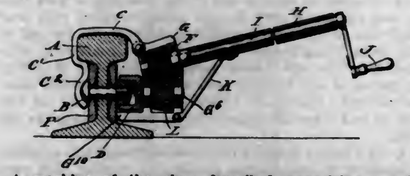
3. The method of reducing ore consisting in first subjecting a suitable ore mixture to the action of an arc to produce slag on the mass, then cutting off said arc, and next heating said mass by passing electric current through a portion of the same.

4. The method of reducing ore consisting in subjecting a suitable ore mixture to the action of an arc at an approximately central portion of said mixture to produce slag on the mass, subjecting said mass to an arc at a distance from said central portion, and subjecting said molten mass to electric current passing through the same.

5. The method of producing steel direct from iron ore consisting in first subjecting a mixture of iron ore, carbon and flux to the action of an arc to produce slag on the mass, then cutting off said arc, and next heating said molten mass by passing electric current through a portion of the same.

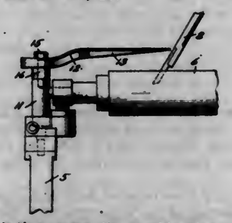
[Claims 6 and 7 not printed in the Gazette.]

960,864. BOLTING-MACHINE. OLE EVANS and CHARLES H. EVANS, Steamboat Springs, Colo. Filed Sept. 10, 1908. Serial No. 452,524.



A machine of the class described comprising a rail clamping member, a frame pivotally supported upon the said clamping member and provided with a fish plate engaging leg, said rail clamping member having a bolt head receiving socket formed therein, a bearing member extending from the said pivoted frame, a shaft revolubly mounted in said bearing member, a gear mounted on the shaft, a gear meshing with the said first named gear, a shaft supporting the second named gear and revolubly mounted in the said pivoted frame, and a nut engaging socket member mounted on the last named shaft and disposed immediately above the said fish plate engaging leg.

960,865. PRINTING-PRESS. WILLIAM EVENSEN, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 13, 1909. Serial No. 512,719.



1. In a printing press, the combination with a folding mechanism, of a shield located in proximity to the run of the paper through the press in advance of the folding mechanism and adapted to strip the paper from its path when the same becomes wrinkled or broken.

2. In a printing press, the combination with a folding mechanism, of a shield located in proximity to the run of the paper in advance of the folding mechanism and positioned at an obtuse angle to the direction of travel of the paper, said shield being adapted to permit the paper when in normal unwrinkled condition to run clear of the shield.

3. In a printing press, the combination with a folding mechanism, a former located in advance of the folding mechanism, and creasing devices coöperating with said former, of a shield projecting to within a short distance of said former and adapted to strip broken or wrinkled paper from said former.

4. In a printing press, the combination with a folding mechanism, a former located in advance of the folding mechanism, and creasing devices coöperating with said former, of a shield projecting toward said former and adjustable relative thereto, being adapted when properly adjusted to strip torn or wrinkled paper from said former.

5. In a printing press, the combination with a folding mechanism, a former located in advance of the folding mechanism, and creasing devices coöperating with said former, of a shield projecting toward said former at an obtuse angle to the initial direction of travel of the web of paper over the former and adapted to strip torn or wrinkled paper from said former.

[Claim 6 not printed in the Gazette.]

960,866. WASHING-MACHINE. SIVER EVENSON, Pelican Rapids, Minn. Filed Oct. 23, 1909. Serial No. 524,257.



1. A washing machine comprising a base, standards carried thereby, a shaft journaled in the upper end of said standards, a tank loosely mounted on said shaft, a drum fastened on said shaft within said tank, and a second drum surrounding and suspended by said first mentioned drum.

2. A washing machine comprising a tank, a drum rotatable therein and provided with a rubbing surface, and a second drum surrounding said drum and having its inner surface provided with an article holding covering, said drums being arranged so that their upper portion will be in contact and their lower portion in spaced relation.

3. A washing machine comprising a tank, a rotatable drum therein provided with an exterior rubbing surface, and a second drum surrounding the first mentioned drum and provided with an internal rubbing and article holding surface, said drums being arranged within said tank so that articles carried by the surrounding drum will be squeezed between the same and the rotatable drum at the upper portion of the tank, and separated from the rotatable drum at the lower portion of the tank.

960,867. GIANT-POWDER-CAP. JAMES HENRY FAHY, Goldfield, Nev. Filed Sept. 24, 1908. Serial No. 454,001.



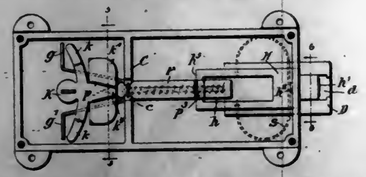
1. A giant powder cap, comprising a thin metallic body closed at one end, and formed with a spiral groove extend-

ing inward from the open end of the cap and an annular groove formed at the termination of said spiral groove.

2. A giant powder cap comprising a thin metallic body closed at one end, and formed with a spiral groove extending inward from the open end of said cap and terminating in an annular groove which latter is located at a point slightly above the explosive charge.

3. A giant powder cap comprising a thin metallic body closed at one end and having the material of the body pressed inward to form a spiral projection extending inwardly from the open end of the body and terminating in an annular projection or shoulder.

960,868. LOCK. MORTIMER HOWARD FARMER, Virden, Ill. Filed Dec. 18, 1908. Serial No. 468,101.

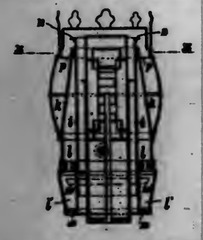


1. The combination with a strike plate provided with an opening, of a spring actuated latch bolt, a slotted guard plate slidably mounted on said latch bolt, a spring actuated latch plate having a stop adapted to project through the slot in said guard plate into the path of the latch bolt.

2. The combination with a strike plate provided with an opening, of a spring actuated latch bolt, a slotted guard plate slidably mounted on said latch bolt, a spring actuated latch plate provided with a cam adapted to engage said guard plate, a stop on said latch plate adapted to project through the slot in said guard plate, said stop being held normally out of the path of said latch bolt by the engagement of the guard plate with the cam on the latch plate and permitted to spring into the path of the bolt through a movement of said guard plate.

3. A lock comprising a casing, a spring-actuated latch bolt adapted to reciprocate in said casing and provided with a slot, a slotted guard plate arranged to reciprocate in the slot in said bolt, a pivoted stop having a cam portion normally in engagement with the rear end of said guard plate but adapted to enter within the slot in said guard plate when the latter is moved, thereby bringing said stop into the path of the latch bolt, a cam member having a central curved portion and laterally extending cam wings arranged to engage the rear end of said pivoted stop to raise the latter out of engagement with said latch bolt, integral curved arms carried by said cam member, a U-shaped sliding plate attached to said bolt, and a spindle adapted to enter a slot in said cam member to force said arms into engagement with said U-shaped sliding piece for retracting the bolt.

960,869. SAFETY-LAMP. HIRSCH FELDMANN, Taganrog, Russia. Filed Sept. 13, 1909. Serial No. 517,411.



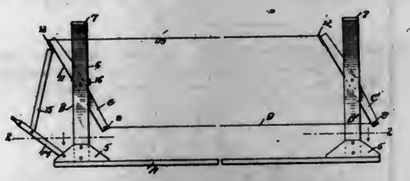
1. In a safety lamp of the character described, in combination, a reservoir, a burner comprising a casing detachably attached to the top end of the reservoir, a wick tube in said casing, a wall in said casing forming with the wick tube upwardly constricted chambers in said casing, and an upwardly-opening valve at the bottom of each chamber; the bottom of said reservoir being of larger diameter than the top end.

2. In a safety lamp of the character described, in combination, a reservoir, a burner comprising a casing detachably attached to the top end of the reservoir, a wick tube in said casing, a wall in said casing forming with said wick tube an upwardly constricted chamber, and an upwardly-movable member normally closing the bottom of said chamber; the bottom of said reservoir being of larger diameter than the top end.

3. In a safety lamp of the character described, in combination, a reservoir, a burner comprising a casing detachably attached to the top end of the reservoir, a wick tube in said casing, a wall in said casing forming with said wick tube an upwardly constricted chamber, the top end of said wall being formed corrugated and contacting with said wick tube and thereby forming a plurality of outlets at the top of said chamber, and an upwardly-movable member normally closing the bottom of said chamber; the bottom of said reservoir being of larger diameter than the top end.

4. In a safety lamp of the character described, a burner comprising in combination a casing, a circular wick tube therein, a wall in said casing forming with the wick tube an upwardly-constricted channel, and an upwardly-movable annular member normally closing the bottom of said channel, for the purpose specified.

960,870. DEVICE FOR RAISING AND LOWERING CLOTHES-LINES. JESSE W. FIELDS, Prosser, Wash. Filed Apr. 5, 1909. Serial No. 488,144.



1. In a device of the character described, a pair of levers supported to swing in an approximately vertical plane, clothes supporting lines connected with the upper ends of the levers, and a member connecting the lower ends of the levers.

2. In a device of the character described, a pair of levers supported to swing in an approximately vertical plane, cross bars at the upper ends of the levers, clothes supporting lines connected with the cross bars, and a member connecting the lower ends of the levers.

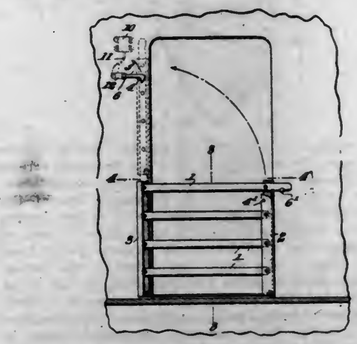
3. In a device of the character described, a pair of levers supported to swing in an approximately vertical plane, cross bars at the upper ends of the levers, clothes supporting lines terminally connected with the cross bars, clevises connected with the lower ends of the levers, and a member terminally connected with the clevises.

4. In a device of the character described, a pair of uprights, levers connected with said uprights to swing in an approximately vertical plane, clothes supporting lines connected with the upper ends of the levers, and a member connecting the lower ends of the levers.

5. In a device of the character described, a base, a pair of uprights supported upon the base, each comprising a pair of suitably spaced and connected bars, levers supported between the bars composing the uprights, cross bars at the upper ends of the levers, clothes supporting lines terminally connected with the cross bars, a member connecting the lower ends of the levers, a hand lever pivoted adjacent to the lower end of one of the uprights, and a link connecting said hand lever with the cross bar of one of the supporting levers.

[Claim 6 not printed in the Gazette.]

960,871. SAFETY-GATE FOR RAILWAY-CARS. FRED T. FILLION, North Platte, Nebr. Filed Nov. 2, 1909. Serial No. 525,971.



1. The combination, with a car, of a gate pivoted to swing vertically across the passageway at the end of the car, a movable device engaging the gate and serving to hold it normally elevated, means attached to the end of the car and operatively connected with said device and adapted to operate the same and release the gate when cars are separated, substantially as described.

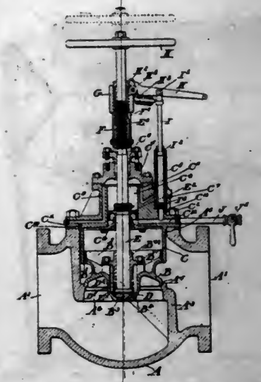
2. The combination, with two cars, of a gate pivoted to one of them and adapted to swing vertically across the passageway at the end of the car, a device for holding the gate normally elevated but adapted to release the same so that it may fall to the horizontal and closing position, and means for automatically operating said device to effect such release, the same consisting of devices attached to opposite car ends and adapted to automatically engage when the cars come together and to release the gate when the cars are parted, substantially as described.

3. The combination, with opposite cars, of a gate pivoted to one of them and adapted to swing vertically so as to close the passageway when adjusted horizontally, a rocking latch for holding the gate normally elevated, and means for operating said latch, the same consisting of a lever pivoted in a fixed support, a rod connecting it with the latch, and means for tilting the lever and thus operating the latch when the cars are parted, substantially as described.

4. The combination, with two cars, of a gate pivoted to one of them and adapted to swing vertically and to close the passageway when in a horizontal position, a latch for holding the gate in the elevated position, and means for operating the latch to release the gate, the same consisting of a lever pivoted in a fixed support, a rod connecting the inner end of the lever with the latch, a trip on the outer end of the lever, and a device on the opposite car adapted to engage said trip and thus tilt the lever when the cars are parted, whereby the gate is simultaneously released, substantially as described.

5. The combination, with opposite cars and a gate for closing the passageway of one of them, of means for releasing the gate from the elevated position, the same consisting of a lever pivoted in a fixed support, a spring tending to hold the lever normally horizontal, a trip supported on the outer end of the lever, and a loop attached to the opposite car and adapted to engage the trip, the latter being pivoted and adapted to swing upward when engaging the loop on the front side and remaining fixed in position when the loop engages the rear side, whereby the trip is caused to slide upward and out of the loop when the cars are parted, whereby the latch is operated simultaneously to release the gate, substantially as described.

960,872. TRIP-VALVE. ADALBERT W. FISCHER, Philadelphia, Pa., assignor to Schutte and Koerting Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 14, 1907. Serial No. 362,431.



1. In combination, a valve casing having chambers separated by a port, a valve controlling said port, a lock for positively holding said valve open, fluid pressure actuated means for closing said valve, including a cylinder, a piston moving in said cylinder and means for normally supplying both ends of said cylinder with fluid under pressure, and a single controlling device for releasing said lock and unbalancing the pressure on said piston to cause the latter to move and close the valve.

2. In combination a valve casing having chambers separated by a port, a valve controlling said port, mechanism which when in operative relation forms a means by which the valve may be slowly moved into and out of the position to close its port, a lock normally holding said mechanism in its operative position and fluid pressure actuating means, including a common controlling device, for releasing said lock and rapidly closing said valve when said controlling device is actuated.

3. In combination a valve casing having chambers separated by a port, a valve controlling said port, a screw and nut valve operating means, a lock normally holding said means in such relation to the valve that the latter may be slowly opened and closed by the operation of the screw and nut, fluid pressure mechanism, including a common controlling device, for releasing said lock and rapidly closing said valve when the controlling device is operated.

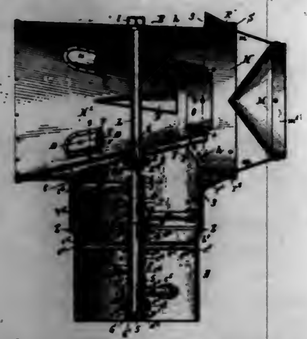
4. In combination, a valve casing having inlet and outlet chambers separated by a port, a valve controlling said port, a lock for positively holding said valve open, fluid pressure actuated means for releasing said lock, fluid pressure actuated means for closing said valve and a single device for controlling the operation of both of said fluid pressure actuated means.

5. In combination a valve casing having high and low pressure chambers separated by a port, a valve controlling the port, a stem connected to said valve, a piston connected to the stem, a cylinder in which said piston moves, a lock for holding said stem in the valve-open position, a piston for operating said lock, a second cylinder in which the last mentioned piston moves, said cylinders having their ends from which the pistons move to unlock the stem and close the valve in relatively free communication with the high pressure chamber and

their opposite ends in restricted communication with the high pressure chamber, and means for connecting said opposite ends of the cylinder to exhaust.

[Claims 6 to 9 not printed in the Gazette.]

960,873. VENTILATOR. JOSEPH E. FISHER and ALBERT A. FISHER, Buffalo, N. Y., assignors to Martin Fisher and Sons, Buffalo, N. Y., a Copartnership. Filed Feb. 15, 1909. Serial No. 477,881.



1. A ventilator comprising an air-shaft, a support within said shaft comprising an axial extended hub and arms connecting said hub at different points in its length with the wall of said air-shaft, anti-friction bearings at the upper and lower ends of said hub, a rotatable sustaining-shaft passed through said hub and said anti-friction bearings and having its lower end threaded, a nut applied to said threaded end of the sustaining-shaft and acting to bear upward on the adjacent anti-friction bearing, and a cowl rotatable with said sustaining-shaft and supported by the anti-friction bearing at the upper end of said hub.

2. A ventilator comprising an air-shaft, a support within said shaft formed of pipes and pipe-fittings and comprising an axial extended hub and arms connecting said hub at different points in its length with the wall of said air-shaft, anti-friction bearings at the upper and lower ends of said support, a rotatable sustaining shaft passed through said hub and bearings and rotatable with the moving parts of said bearings, and a cowl secured to said sustaining-shaft above said support and being supported by the latter.

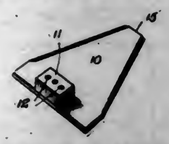
3. A ventilator comprising an air-shaft, a support within said air-shaft, a sustaining-shaft rotatable in said support and extending upward therefrom, a cowl surmounting said air-shaft, and a brace-member within said cowl comprising an extended axial hub and radial arms connecting said hub at different points in its length with the wall of said cowl, said hub being secured to the sustaining-shaft and bearing with its lower end against the upper end of said support.

4. A ventilator comprising an air-shaft, a support within said air-shaft, a sustaining shaft rotatable in said support and extending upward therefrom, a cowl surmounting said air-shaft and having a depending neck, and a brace-member within said neck comprising an extended axial hub and a plurality of pairs of radial arms arranged in different horizontal planes and connecting said hub with the wall of said neck, each pair of said arms being disposed in different directions and the hub of said brace-member being supported by said support.

5. A ventilator comprising an air-shaft, a support within said shaft comprising an axial extended hub and radial arms connecting said hub with the wall of the air-shaft, said hub being formed of + pipe-fittings and nipples or pipes connecting said fittings and said radial arms being formed of pipes secured at their outer ends to the wall of the air-shaft and having their inner ends threaded into the horizontal sockets of said + pipe-fittings, a sustaining-shaft in said hub, and a cowl mounted on said sustaining-shaft and supported by said support.

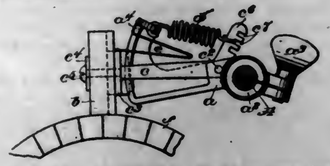
[Claims 6 to 12 not printed in the Gazette.]

960,874. CUTTING APPARATUS. GEORGE W. FLORA, Attica, Ind. Filed Jan. 18, 1910. Serial No. 538,715.



In a cutting apparatus, a finger bar, guard fingers mounted upon the underside of said bar, fastening screws inserted through the bar into the guard fingers and having their heads countersunk in the upper side of the bar, said guard fingers being formed with points having shoulders or offsets, with smooth upper faces in rear of said shoulders and with transverse recesses spaced from the front edge of the finger bar, ledger plates having blunt front ends engaging the shoulders of the finger bars, said ledger plates being provided adjacent to their rear edges with blocks firmly secured upon the undersides thereof to engage the recesses in the guard fingers in advance of the finger bar, fastening screws extending through the ledger plates and blocks into the finger bars and having heads countersunk in the upper sides of the ledger plates, a cutter bar guided between the rear edges of the ledger plates and the front edge of the finger bar, cutters upon said bar contacting with the ledger plates, and springs secured upon the finger bar and engaging the upper faces of the cutters carried by the cutter bar.

960,875. BRUSH-HOLDER. ANTON FREIER, Boston, Mass., assignor to Holtzer-Cabot Electric Company, a Corporation of Massachusetts. Filed July 13, 1908. Serial No. 443,362.



A brush holder comprising a frame member having a clamp at one end for securing it to the machine, and an upwardly projecting arm at the opposite end combined with a brush holding member consisting of an elbow lever pivotally connected with the frame member at a point adjacent to said clamp and having an arm extending forward past the upwardly projecting arm of the frame; means for connecting the brush to said forwardly extending arm, the other arm of said elbow lever projecting upward and being provided with a series of notches; a spring connected at one end of the upwardly projecting arm of the frame and secured at the opposite end in one of said notches; and a flexible conductor connecting the frame member with the brush holding member.

960,876. HYDRAULIC MOTOR. GEORGE B. FRENCH, Fremont, Nebr. Filed May 15, 1908. Serial No. 433,108.

1. In a hydraulic motor of the character described, a water wheel comprising an axle arranged slightly above the surface of a flowing stream, and radial blades having valves therein which strike the surface of the stream in a substantially flat or horizontal position and are opened thereby as each blade becomes successively submerged, said valves being automatically closed by the kinetic energy of the stream as the respective blades are immersed.



2. In a hydraulic motor of the character described, a water wheel comprising an axle arranged slightly above the surface of a flowing stream, and radial concavo-convex blades having valves therein which strike the surface of the stream in a substantially flat or horizontal position and are opened thereby as each blade becomes successively submerged, said valves being automatically closed by the kinetic energy of the stream as the respective blades are immersed.

3. In a hydraulic motor of the character described, a water wheel comprising an axle arranged slightly above the surface of a flowing stream, and radial blades having valves therein which strike the surface of the stream in a substantially flat or horizontal position and are opened thereby as each blade becomes successively submerged, said valves being automatically closed by the kinetic energy of the stream as the respective blades are immersed, and means to hold said valves closed when not in the water.

4. In a hydraulic motor of the character described, a water wheel comprising an axle arranged slightly above the surface of a flowing stream, and radial concavo-convex blades having valves therein which strike the surface of the stream in a substantially flat or horizontal position and are opened thereby as each blade becomes successively submerged, said valves being automatically closed by the kinetic energy of the stream as the respective blades are immersed, and means to hold said valves closed when not in the water.

5. In a hydraulic motor of the character described, a water wheel comprising an axle arranged slightly above the surface of a flowing stream, and radial blades having valves therein which strike the surface of the stream in a substantially flat or horizontal position and are opened thereby as each blade becomes successively submerged, said valves being automatically closed by the kinetic energy of the stream as the respective blades are immersed, and springs applied to said valves for holding them closed when not in the water.

[Claims 6 to 25 not printed in the Gazette.]

960,877. REMOVABLE HANDLE FOR FARE-REGISTER RODS. WILLIAM F. FRENZEL, Indianapolis, Ind., assignor of one-half to John H. Weston, Indianapolis, Ind. Filed Feb. 5, 1909. Serial No. 476,257.

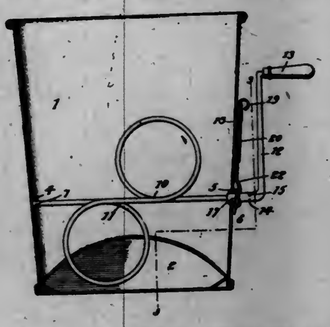
1. A removable handle of the above specified class provided with a transversely extending aperture which is intersected by a diagonally extending slot cut from one side of said handle, and means for securing said handle in operative position.

2. The combination with a rod of a removable handle provided with a transversely extending aperture which is intersected by a diagonally extending slot cut in one side



of said handle, and means for securing said handle to said rod.

960,878. BREAD-MIXER. GOSTE FRIEDMAN, Jamestown, N. Y. Filed May 5, 1909. Serial No. 494,131.



1. In a bread mixer, a dasher formed of one continuous piece of material having pintles at the ends and intermediate double reverse complete closed loops, one of said pintles having a flattened side, combined with a crank having a hollow portion to receive the pintle and a tangent pin to engage said flattened side.

2. In a bread mixer, the combination with a vessel having bearings, of a dasher having its ends received in said bearings, one end projecting through its bearing and having a flattened portion, a crank having a hollow portion and tangent pin to receive said projecting end and engage its flattened portion, and an exterior collar, and a slide mounted on the exterior of the vessel and having bifurcated end to receive said hollow portion and engage said flange.

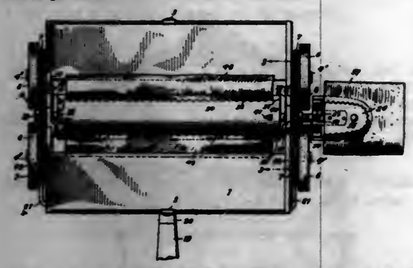
3. In a bread mixer, the combination of a vessel and a dasher having bearings therein with one end projected and flattened, a crank having a tubular portion receiving said projecting end, a tangent pin extending transversely through said tubular portion to coact with said flattened portion, said tubular portion having a hollow bearing at its inner end and an annular flange adjacent thereto.

4. In a bread mixer, the combination with a vessel and a dasher having bearings therein with one end projected and flattened, a crank having a tubular portion receiving said projecting end and an annular flange bearing against the outer face of the adjacent bearing and a hollow bearing received within said bearing, a tangent pin passed through said tubular portion between the inner wall thereof and the flattened portion of the extended bearing of the dasher, and a vertically movable slide having an offset portion near its lower end and branches engaging the tubular portion of the crank and bearing against its annular flange.

960,879. FLOOR-WIPER. GOSTE FRIEDMAN, Jamestown, N. Y. Filed June 8, 1909. Serial No. 500,920.

1. In a device of the kind described, a casing, a shaft mounted therein, a cylinder on the shaft within the casing having movable portions, pads held by said movable portions, said shaft being extended at one end beyond the casing, movably mounted means on said extended end for holding fabric pads so as to project beyond the periphery

of the shaft, spring hinges for said movable portions, and automatic fastening means for holding them in their closed position.

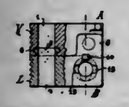


2. In a device of the kind described, a casing, a shaft mounted therein and having one end extended, a head on said extended end, fixed portions of the cylinder on said head, and coöperating movably mounted sections carried by said head to clamp pads between said sections and fixed portions.

3. In a device of the kind described, a casing, a shaft mounted therein and having one end extended, a head on said extended end, fixed portions of a cylinder on said head, and coöperating spring actuated pivotally mounted sections carried by said head, the adjacent edges of the fixed portions and movable sections being serrated to hold pads.

4. In a device of the kind described, a casing having journal bearings in its end walls, with a portion of the walls adjacent said bearings cut away, arms pivotally mounted on the end walls adjacent the cut away portions, complemental portions of journal bearings carried by said arms, and spring arms carried thereby and having means for locking the complemental portions in closed position.

960,880. AUTOMATIC FIREARM. RUDOLF FROMMER, Budapest, Austria-Hungary. Filed Nov. 5, 1907. Serial No. 400,820.



1. Catch-mechanism for the breech-block of automatic fire-arms, comprising a pair of catches and a controlling spring for each of said catches, means on said catches to connect the same with each other and with their controlling springs respectively, for the purpose described and set forth.

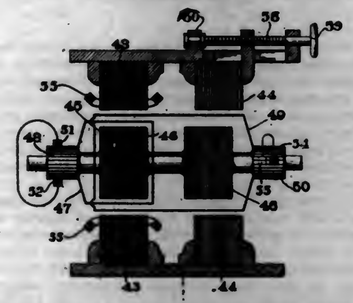
2. Catch-mechanism for the breech-block of automatic fire-arms comprising a pair of catches and a controlling spring for each of said catches, the latter being provided with grooves and corresponding projections respectively, adapted to engage with each other, thereby coupling the said catches together.

3. Catch-mechanism for the breech-block of automatic fire-arms comprising a pair of catches, and a controlling spring for each of said catches, each provided with a bore, one of said catches having an annular groove in its bore, an annular projection on the other catch provided with lugs adapted to engage said annular groove, thereby coupling the two catches together.

4. Catch-mechanism for the breech-block of automatic fire arms comprising a pair of catches, and a controlling spring for each of said catches, the latter being provided with grooves and corresponding projections respectively, adapted to engage with each other, thereby coupling the said catches together, a projection on one of said catches supporting the controlling spring of the other catch, and a casing having lugs in said first catch having the projection to support its controlling spring, and a hook on the other catch adapted to pass through an opening in said first catch to support one of the lugs of the said casing.

5. Catch-mechanism for the breech-block of automatic fire-arms comprising a pair of catches, and a controlling spring for each of said catches, the latter being provided with grooves and corresponding projections respectively, adapted to engage with each other, thereby coupling the said catches together, a projection on one of said catches supporting the controlling spring of the other catch, and a casing having lugs in said first catch having the projection to support its controlling spring, and a hook on the other catch adapted to pass through an opening in said first catch to support one of the lugs of said casing, the spring supported by the said casing being stronger than the spring supported by the said projection, thus holding the lugs of said casing in engagement with the said catch and the said hook.

960,881. ALTERNATING-CURRENT MOTOR. VALÈRE ALFRED FYNN, London, England. Original application filed Dec. 19, 1906, Serial No. 348,659. Divided and this application filed Mar. 6, 1909. Serial No. 481,761.



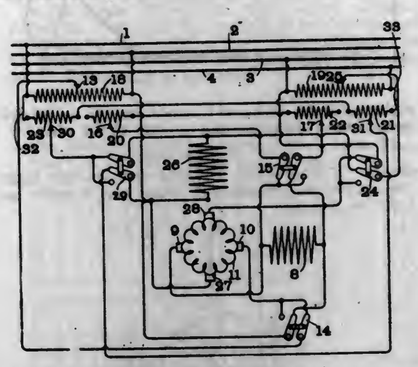
1. In an alternating current motor, the combination with an inducing member producing a transformer field, of an induced member having an exciting circuit producing a motor field and a working circuit, said working circuit being closed by way of brushes along an axis approximately coinciding with that of the transformer field, and means for producing self induction in said exciting circuit only, said means being disposed outside the inductive influence of both the transformer and the motor fields.

2. In an alternating current motor, the combination with an inducing member producing a transformer field, of an induced member having an exciting circuit closed by way of brushes and producing a motor field and a working circuit, said working circuit being closed by way of brushes along an axis approximately coinciding with that of the transformer field, and means for producing self induction in said exciting circuit only, said means being disposed outside the inductive influence of both the transformer and the motor fields.

3. In an alternating current motor, the combination with an inducing member producing a transformer field, of an induced member having an exciting circuit producing a motor field and a working circuit, said working circuit being closed by way of brushes along an axis approximately coinciding with that of the transformer field, means for producing self induction in said exciting circuit only, said means being disposed outside the inductive influence of both the transformer and the motor fields, and means for varying the magnitude of said self induction.

960,882. POLYPHASE COMMUTATOR-MOTOR. VALÈRE ALFRED FYNN, London, England. Filed June 1, 1909. Serial No. 499,464.

1. In a polyphase motor, at least two working circuits each connected to one phase of the supply and containing a neutralizing winding on the stationary member and a commuted winding on the revolving member, said windings being coaxially connected in series relation, and means for impressing a second E. M. F. on a part only of each working circuit.



2. In a polyphase motor, at least two working circuits each connected to one phase of the supply and containing a neutralizing winding on the stationary member and a commuted winding on the revolving member, said windings being coaxially connected in series relation, and means for impressing a second E. M. F. on each neutralizing winding.

3. In a polyphase motor, at least two working circuits each connected to one phase of the supply and containing a neutralizing winding on the stationary member and a commuted winding on the revolving member, said windings being coaxially connected in series relation, and a transformer for each working circuit for impressing a second E. M. F. on a part only of said circuit.

4. In a polyphase motor, a working circuit for each phase connected to the source of supply and containing a neutralizing winding on the stationary member and a commuted winding on the revolving member, said windings being coaxially connected in series relation and in opposition to each other, means for impressing a second E. M. F. on a part only of the working circuit, and means for varying the phase of said second E. M. F.

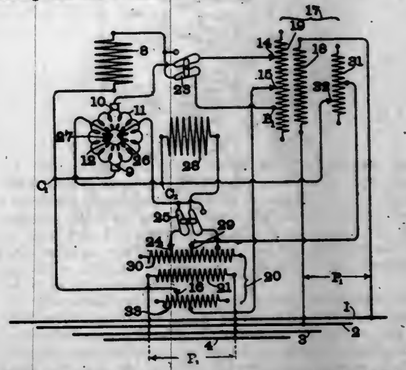
5. In a polyphase motor, a working circuit for each phase connected to the source of supply and containing a neutralizing winding on the stationary member and a commuted winding on the revolving member, said windings being coaxially connected in series relation and in opposition to each other, means for impressing a second E. M. F. on a part only of the working circuit, and means for impressing a third E. M. F. on a part only of the working circuit.

[Claim 6 not printed in the Gazette.]

960,883. POLYPHASE COMMUTATOR-MOTOR. VALÈRE ALFRED FYNN, London, England. Filed June 1, 1909. Serial No. 499,465.

1. In a polyphase motor, at least two working circuits each containing a neutralizing winding on the stationary member and a commuted winding on the revolving member, said windings being coaxially connected in series relation, a separate shunt transformer for connecting each of said working circuits to the source of supply, and a separate conductor for each working circuit connecting the transformer feeding said circuit to a point on that circuit situated between the neutralizing winding and the commuted winding.

2. In a polyphase motor, at least two working circuits each containing a neutralizing winding on the stationary member and a commuted winding on the revolving member, said windings being coaxially connected in series relation, a separate adjustable ratio shunt transformer for connecting each of said working circuits to the source of supply, and a separate conductor for each working circuit connecting the transformer feeding said circuit to a point on that circuit situated between the neutralizing winding and the commuted winding.



3. In a polyphase motor, at least two working circuits each containing a neutralizing winding on the stationary member and a commuted winding on the revolving member, said windings being coaxially connected in series relation, a separate adjustable ratio shunt transformer for connecting each of said working circuits to the source of supply, and a separate conductor for each working circuit provided with a movable contact and connecting the transformer feeding said circuit to a point on that circuit situated between the neutralizing winding and the commuted winding.

4. In a polyphase motor, a working circuit for each phase containing a neutralizing winding on the stationary member and a commuted winding on the revolving member, said windings being coaxially connected in series relation and in opposition to each other, a shunt transformer, the secondary winding of said transformer being provided with movable contacts for connecting it to the working circuit, a conductor connecting a point on the working circuit situated between the neutralizing winding and the commuted winding to one of said movable contacts, and means for impressing on a part of the working circuit an auxiliary E. M. F. differing in phase from the E. M. F. impressed on the working circuit as a whole.

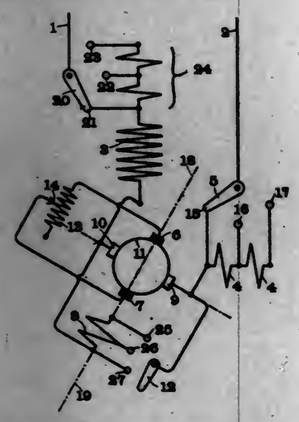
5. In a polyphase motor, a working circuit for each phase containing a neutralizing winding on the stationary member and a commuted winding on the revolving member, said windings being coaxially connected in series relation and in opposition to each other, a shunt transformer, the secondary winding of said transformer being provided with movable contacts for connecting it to the working circuit, a conductor connecting a point on the working circuit situated between the neutralizing winding and the commuted winding to one of said movable contacts, and means for impressing on a part of the working circuit an auxiliary E. M. F. approximately in phase quadrature to the E. M. F. impressed on the working circuit as a whole.

[Claims 6 to 12 not printed in the Gazette.]

960,884. ALTERNATE-CURRENT COMMUTATOR-MOTOR. VALÈRE ALFRED FYNN, London, England. Filed Nov. 26, 1909. Serial No. 529,910.

1. In an alternating current motor, the combination with an inducing member provided with a main inducing winding and an auxiliary winding displaced therefrom and inactive at starting, of an induced member closed by means of working brushes along an axis displaced from that of the main inducing winding, means for closing the circuit of the induced member along a second axis, and

means for connecting the auxiliary winding in series relation with the main inducing winding.



2. In an alternating current motor, the combination with an inducing member provided with a main inducing winding and an auxiliary winding displaced therefrom and inactive at starting, of an induced member closed by means of working brushes along an axis displaced from that of the main inducing winding, means for closing the circuit of the induced member along a second axis, and means for placing a variable number of turns of the auxiliary winding in series with the main inducing winding.

3. In an alternating current motor, the combination with an inducing member provided with a main inducing winding and an auxiliary winding displaced therefrom and inactive at starting, of an induced member closed by means of working brushes along an axis displaced from that of the main inducing winding, means for impressing a compensating E. M. F. on the induced member along a second axis, and means for connecting the auxiliary winding in series relation with the main inducing winding.

4. In an alternating current motor, the combination with an inducing member provided with a main inducing winding and an auxiliary winding displaced therefrom and inactive at starting, of an induced member connected in series relation with the inducing member by means of exciting brushes, working brushes for closing the circuit on the induced member along an axis displaced from that of the main inducing winding, means for short-circuiting the exciting brushes, and means for connecting the auxiliary winding in series relation with the main inducing winding.

5. In an alternating current motor, the combination with an inducing member provided with a main inducing winding and an auxiliary winding displaced therefrom and inactive at starting, of an induced member connected in series relation with the inducing member by means of exciting brushes, working brushes for closing the circuit on the induced member along an axis displaced from that of the main inducing winding, means for impressing a compensating E. M. F. on the exciting brushes, and means for connecting the auxiliary winding in series relation with the main inducing winding.

[Claims 6 to 8 not printed in the Gazette.]

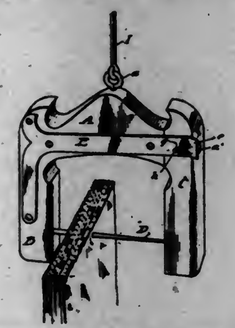
960,885. VETERINARY OBSTETRICAL INSTRUMENT. CHARLES GABEL, Hawkeye, Iowa. Filed Dec. 13, 1907. Serial No. 406,335. Renewed May 9, 1910. Serial No. 560,315.

In an obstetrical instrument, a twisted wire shank having a handle formed upon one end and outwardly and upwardly diverging guides upon the other, a series of guides upon the shank, a wire loop having its diverging ends passed through the respective guides upon the end of the shank, brought together, crossed and passed through the



guides upon the shank and terminating in an integral handle, and a rod connecting the loop to the shank.

960,886. SUSPENDING HOLDER FOR PAPER BAGS. ANDREW GALLI, Peoria, Ill. Filed Mar. 3, 1910. Serial No. 546,982.



1. In suspending bag holders for paper bags, etc., in combination, a framework, an impaling pin suitably secured to an arm of the framework and extending in parallel relation with another arm thereof, the arm of the framework in parallel relation with the impaling pin being provided at its outer end with a pin projection, a detachable frame piece provided with perforations in one face, one adapted to receive the pin projection from the framework and the other to receive the point of the impaling pin, means for interlocking the detachable frame piece with the main framework comprising a flexible plate upon the main framework provided with a perforation and a stud on the detachable frame piece adapted to be engaged by the perforation in the flexible plate, and suitable means for holding the complete frame in suspension for the purpose described.

2. In a device of the class described, the combination with a frame part comprising a top frame piece provided with a pin extending from one end thereof and a depending side frame piece fixed thereto and provided with a pin secured therein extending in parallel relation with the top frame piece, binding strips securing the top and side frame pieces together and extending outwardly beyond the end of the top frame piece and one of said extensions having a slight outward turn at its extreme end and also with a perforation through the body thereof, a detachable side frame piece provided with a perforation therethrough adapted to be carried upon the pin projection from the top frame piece, also with a perforation to receive the point of the pin, and with a stud or pin on the side thereof adapted to be engaged by the perforation in the extension from the binding strip, and an eye in the top frame piece adapted to be engaged by a hooked support.

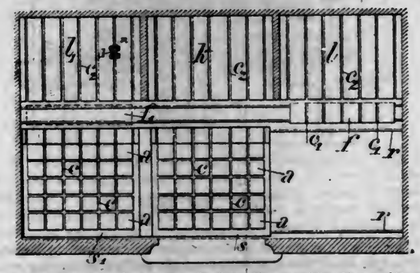
960,887. PROCESS FOR SOFTENING WATER. ROBERT GANS, Pankow, near Berlin, Germany, assignor to J. D. Riedel, Aktiengesellschaft, Berlin, Germany, a Corporation of Germany. Filed Dec. 16, 1909. Serial No. 533,350.

1. The process for softening water, which consists in mixing the water with the hydroxid of an alkaline earth and then filtering it through zeolite, substantially as described.

2. The process for softening water, which consists in mixing the water with hydroxid of lime and filtering it through a sodium-zeolite, substantially as described.

3. The process for softening water, which consists in mixing the water with the hydroxid of an alkaline earth, then filtering it through a layer of sodium-zeolite and finally passing it through a supplemental filter of sodium-zeolite, substantially as described.

960,888. THEATRICAL MACHINERY. GUSTAVE GARNIER (alias GIRRANE) and CÉSAR GROBON, Lyon, France. Filed Jan. 28, 1909. Serial No. 474,846.



1. In theatrical scenery devices the combination with a displaceable double scene set having a floor comprising a series of interspaced sections or panels, of a plurality of supports for scene parts adapted to be traversed through the spaces between said sections.

2. In theatrical scenery devices the combination with a displaceable double scene set having a floor comprising a series of interspaced base sections or panels, of a series of scene docks disposed adjacent said double scene set and a plurality of supports for scene parts adapted to be traversed through the spaces between said base sections and stored in said docks.

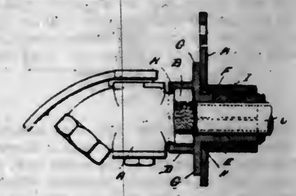
3. In theatrical scenery devices the combination with a displaceable double scene set having a floor comprising a series of interspaced base sections or panels, of trucks carrying said sections, track rails on which said trucks may be moved, a series of scene storage docks disposed adjacent said double scene and provided with a series of ways in alinement with the spaces between the base sections, and a plurality of movable supports for scene parts adapted to be traversed through the spaces between said base sections and through the ways in the docks and vice versa.

4. In theatrical scenery devices the combination with a displaceable double scene set having a floor comprising a series of interspaced base sections or panels, of trucks carrying said sections, track rails on which said trucks may be moved, a series of scene storage docks disposed adjacent said double scene and provided with a series of ways in alinement with the spaces between the base sections, a plurality of movable supports for scene parts adapted to be traversed through the spaces between said base sections and through the ways in the docks and vice versa, and a transporter intermediate the scene set and docks, adapted to convey the supports from one or other of the scene sets to any of the storage docks or vice versa.

5. In theatrical scenery devices the combination with a double scene set adapted to be displaced transversely of the proscenium aperture, a floor for said sets comprising a series of interspaced base sections separately capable of vertical and horizontal movement, trucks carrying said sections, track rails on which said sections may be moved, a series of scene storage docks disposed to the rear of said double scene, track rails disposed below the floor sections and dock floors, a plurality of movable supports for scene parts adapted to be traversed through the spaces between the base sections and stored in said docks, and trucks carrying said supports and adapted to travel on said last mentioned track rails.

[Claim 6 not printed in the Gazette.]

960,889. ANGLE-COCK SUPPORT FOR AIR-BRAKE SYSTEMS. MYERS A. GARRETT, Chicago, Ill. Filed Apr. 1, 1910. Serial No. 552,801.



1. The combination with a car having an element provided with an opening, of an angle cock and a train pipe, a threaded clamp, and a threaded clamping nut; the clamp engaging the angle cock and the clamping nut surrounding the train pipe and engaging the threads of the clamp; the parts being so relatively disposed that the said element of the car is clamped between the clamp and the clamping nut when the nut is seated.

2. The combination with a car having an element provided with an opening, of an angle cock and train pipe, a threaded clamp formed in a plurality of pieces, and a threaded clamping nut; one end of the clamp engaging the angle cock and the opposite threaded end engaged by the threaded clamping nut; the element provided with an opening being clamped between the clamp and clamping nut.

3. The combination with a car having an element with an opening, of an angle cock and train pipe, the said angle cock having a flange at the end adjacent the pipe; a threaded clamp formed in a plurality of pieces; and a threaded clamping nut; one end of the clamp engaging the flange of the angle cock and the threaded end being engaged by the threaded clamping nut; the said element of the car being clamped between the clamp and clamping nut.

4. The combination in an air brake angle cock support, of a car; an angle cock angularly shaped exteriorly at one end; a train pipe secured to the angle cock; a clamp having one end in engagement with the angular end of the angle cock and the other end threaded and bearing against the train pipe; a threaded clamping nut on the pipe engaging the threaded end of the clamp; and means in connection with the car holding the angle cock and pipe in fixed position relative thereto.

5. The combination in an air brake angle cock support, of a car; an angle cock angularly shaped exteriorly at one end; a train pipe secured to the angle cock; a clamp formed in a plurality of pieces having one end in engagement with the angular end of the angle cock and the other end threaded and bearing against the train pipe; a threaded clamping nut on the pipe engaging the threaded end of the clamp; and means in connection with the car holding the angle cock and train pipe in fixed position relative thereto.

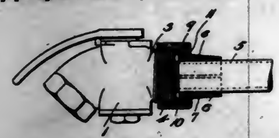
[Claims 6 to 13 not printed in the Gazette.]

960,890. AIR-BRAKE ANGLE-COCK CONNECTION AND SUPPORT. MYERS A. GARRETT, Chicago, Ill. Filed Apr. 1, 1910. Serial No. 552,802.

1. The combination with a car provided with means for supporting an air brake angle cock and train pipe, of an angle cock interiorly and exteriorly threaded at one end, a threaded train pipe engaging the interior threads of the angle cock, a gib on the train pipe, and an interiorly threaded clamping nut with a flange engaging the exterior surface of the gib and said clamping nut screwed upon the angle cock.

2. The combination with an angle cock interiorly and exteriorly threaded at one end, of a threaded train pipe engaging the interior threads of the angle cock, a plurality of gibs each with an inclined exterior surface and an interior surface engaging the train pipe, and an interiorly threaded clamping nut having a flange engaging the exterior inclined surfaces of the gibs and screwed upon the

angle cock; means being provided for supporting the angle cock and pipe upon a car.

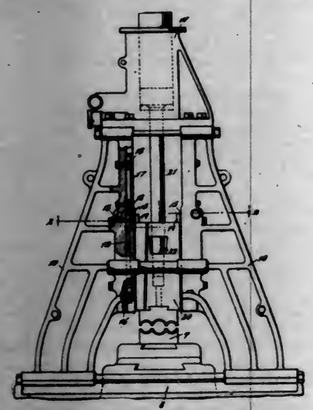


3. The combination with an angle cock exteriorly and interiorly threaded, of a train pipe with a threaded end engaging the interior threads of the angle cock, a gib on the train pipe, and an interiorly threaded clamping nut screwed upon the angle cock and engaging the gib and forcing it upon the train pipe.

4. The combination with an angle cock exteriorly and interiorly threaded, of a train pipe with a threaded end engaging the interior threads of the angle cock, a gib on the train pipe, and an interiorly threaded clamping nut screwed upon the angle cock and engaging the gib; the disposition of the threads on the angle cock and train pipe and clamping nut being such that the nut is screwed onto the angle cock by turning it in the same direction as the angle cock is turned in screwing it onto the train pipe.

5. The combination with a threaded angle cock and threaded train pipe connected by a threaded clamping nut and a gib rearwardly extended from the clamping nut, of a hanger secured at one end to the car and the opposite end engaging the gib.

960,891. STEAM-HAMMER. FERDINAND G. GASCHE, Chicago, Ill. Filed Jan. 2, 1908. Serial No. 408,905.

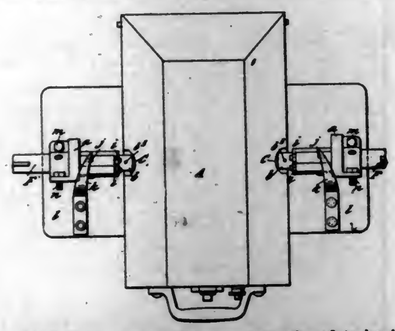


1. In a hammer, the combination with a frame, guides mounted in said frame and having plane bearing surfaces adapted to sustain normal pressures independent of the constraint of surfaces in other planes on said guides, of a hammer head slidingly mounted between said guides and having plane bearing surfaces, and coacting tongues and grooves on said hammer head and guides adapted to prevent lateral movement of the parts.

2. In a hammer, the combination with a frame, guides removably mounted in said frame and supported against downward movement but adapted to be slid upward on said frame, and a hammer-head slidingly mounted between said guides, of blocks removably mounted in said frame and when in position bearing against the tops of said guides to prevent upward movement thereof.

3. In a hammer, the combination with a frame, guides slidingly mounted in said frame and having inclined rear surfaces, coacting shoulders on said guides and frame adapted to support said guides in position against downward movement, wedge-shaped distance blocks adjustably mounted between said frame and said guides, and a hammer-head slidingly carried between said guides, of blocks removably mounted on said frame and adapted when in position to bear upon the upper ends of said guides to prevent upward movement thereof.

960,892. FIELD-FIRING OR SURPRISE TARGET. RICHARD THOMAS GATES, London, England. Filed Nov. 18, 1909. Serial No. 528,752.



1. In an apparatus of the character referred to having a target shaft for carrying a target and an actuating rock shaft, mechanism connecting the two shafts comprising a catch operative when the target is in a raised position and adapted to disengage under the impact of a bullet on the target, whereby the latter is free to fall.

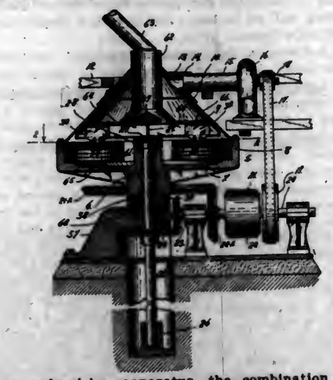
2. In apparatus of the character referred to having a target shaft for carrying a target and an actuating rock shaft, mechanism connecting the two shafts comprising a catch operating to raise the target, means for rendering the catch inoperative in the raised position of the target, and a catch operative when the target is in a raised position and adapted to disengage under the impact of a bullet on the target, whereby the latter is free to fall.

3. In apparatus of the character referred to, an actuating rock shaft, a sleeve removably fixed to the rock shaft, a socket piece rotatably mounted on the sleeve member, a target shaft for carrying a target detachably mounted in the socket piece, a pair of spring urged catches adapted to connect the sleeve member and the socket piece, means for rendering one of the catches inoperative when the socket piece is rotated into a position wherein the target is raised, and adjustable means adapted to retain the second catch in an operative position against wind pressure but to yield under the force due to the impact of a bullet on the target whereby the socket piece is free to rotate and the target to fall.

960,893. PULVERIZING-MILL. ARVIN JAMES GORE, Denver, Colo. Filed July 6, 1909. Serial No. 506,246.

1. In apparatus of the class described, the combination of a mortar and a pulverizing structure mounted to rotate in the mortar, and equipped with a number of horizontally disposed circularly arranged pulverizing members, a frame on which the said members are mounted to travel outwardly under the action of centrifugal force, each pulverizing member being composed of a number of independently movable disks, whereby the various parts of each pulverizing member are allowed movement upon the frame of the structure independently of each other.

2. In pulverizing apparatus, the combination of a mortar, having a vertically disposed circularly arranged pulverizing face, a pulverizing structure mounted to rotate in the mortar and composed of pulverizing members suspended above the bottom of the mortar, and mounted to move outwardly on a track of the frame under the action of centrifugal force, each pulverizing member being composed of a number of horisontally disposed disks, mounted to slide outwardly toward the pulverizing face of the mortar, independently of each other, under the action of centrifugal force, substantially as described.



3. In pulverizing apparatus, the combination with a mortar, of a pulverizing structure mounted to rotate in the mortar, a frame equipped with radially arranged arms, provided with depending stems adapted to travel, movably mounted on the arms, and a horizontally disposed pulverizing member mounted upon each stem, which passes through a relatively large opening formed in the said member, whereby the member is allowed to move bodily outwardly upon its radial frame arm, under the action of centrifugal force, each pulverizing member being composed of a series of disks, independently movable upon the supporting stem, under the action of centrifugal force, for the purpose set forth.

4. In pulverizing apparatus, the combination of a mortar, having a vertically disposed, circularly arranged pulverizing face, and a pulverizing structure, mounted to rotate and having its axis coincident with the axis of the mortar, the said structure consisting of a frame work, composed of arms radiating from the center, a carriage mounted to travel upon each arm and equipped with a depending stem, a pulverizing member mounted upon each stem and composed of a number of disks arranged one above another and in contact, the said disks being independently movable upon their supporting stem, under the action of centrifugal force, substantially as described.

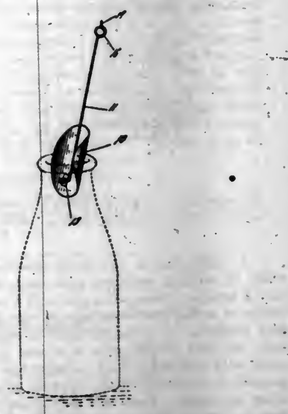
5. In pulverizing apparatus, the combination of a mortar, mounted to rotate, a pulverizing structure mounted to rotate and having its axis coincident with that of the mortar, the pulverizing face of the mortar being circular and vertical, the pulverizing structure consisting of a frame having radially disposed arms, carriages mounted to travel outwardly on the arms, under the action of centrifugal force, each carriage having a depending stem, and pulverizing members, mounted upon the said stems, each member being composed of a number of disks, mounted upon the stem, each disk having an opening through which the stem passes, the opening being sufficiently large in a radial direction to allow the disks to travel outwardly on the stem independently of each other, for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

960,894. BOTTLE-DAM. WILTSHIRE S. GRAY, Indianapolis, Ind., assignor of one-half to George W. Snyder, Indianapolis, Ind. Filed Jan. 29, 1910. Serial No. 540,803.

1. A bottle dam comprising a transversely elastic normally flat plate having a shape adapted to fit an internal diameter of a bottle exceeding the diameter of the bottle mouth, a handle rod pivotally connected to said plate upon an axis substantially parallel with the plate at one side of its center, and means for limiting the swing of said rod on the plate in one direction to a position substantially normal to the plate.

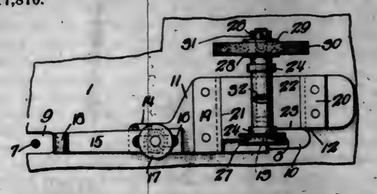
2. A bottle dam comprising a transversely elastic plate having a shape adapted to fit an internal diameter of a bottle exceeding the diameter of the bottle mouth, a handle rod pivotally connected to said plate upon an axis substantially parallel with the plate at one side of its center, and means for limiting the swing of said rod on the plate in one direction to a position substantially normal to the plate.



3. A bottle dam comprising a transversely elastic normally flat plate having a shape adapted to fit an internal diameter of a bottle exceeding the diameter of the bottle mouth, a handle rod pivotally connected to said plate upon an axis substantially parallel with the plate, and means for limiting the swing of said rod on the plate in one direction to a position substantially normal to the plate.

4. A bottle dam comprising a transversely elastic plate having a shape adapted to fit an internal diameter of a bottle exceeding the diameter of the bottle mouth, a handle rod pivotally connected to said plate upon an axis substantially parallel with the plate, and means for limiting the swing of said rod on the plate in one direction to a position substantially normal to the plate.

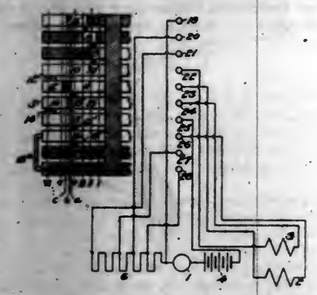
960,895. SEWING-MACHINE ATTACHMENT. PATRICK GRIFFIN, Saron, Tex. Filed Sept. 15, 1909. Serial No. 517,870.



1. An attachment for sewing machines comprising a base plate, composed of two adjustably connected members, each of said members having a clamping arm, the clamping arm of one of the members being disposed at one side thereof and said latter-named member being provided with a transverse dove-tailed guideway, a dove-tailed supporting plate engaging said guideway, and a pulley driving element carried by said supporting plate.

2. A device of the character described comprising two adjustable connecting members provided with clamping elements, one of said members having a dove-tailed guideway, a dove-tailed supporting plate adapted to engage said guideway, and tool supporting and driving means carried by said plate.

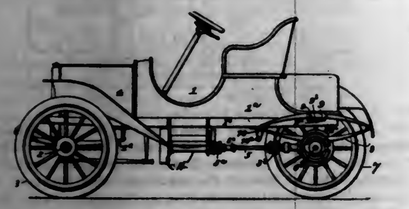
960,896. CONTROLLER FOR ELECTRIC MOTORS. EMIL GRUENFELDT, Cleveland, Ohio, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 26, 1909. Serial No. 509,492.



1. A controller of the class described, having a plurality of running positions and contacts arranged to connect a source of current supply and a motor having a plurality of series field windings in one position with said field windings in series, to place a resistance in parallel with the field windings in a second position, and to remove said resistance and connect the field windings in parallel in a third position, certain of said contacts operating in passing from said second to the third position, first to remove said resistance from the circuit, then to shunt one of said field windings, then to open said shunted field winding, and then to connect said open field winding in parallel with the other field winding, the circuit at all times remaining closed.

2. A controller for effecting variations in connections of a resistance, a motor having two series field windings and a source of current supply, said controller having contacts arranged to connect said field windings in series at one step; at the next step to place said resistance in parallel with the field windings, and at the third step to connect said field windings in parallel, the contacts of the said controller operating in passing from the second to the third step, first to remove said resistance from the circuit, then to shunt one of said field windings, then to open said shunted field winding, and then to connect said open field winding in parallel with the other field winding, the circuit at all times remaining closed.

960,897. RUNNING-GEAR CONSTRUCTION. EMIL GRUENFELDT, Cleveland, Ohio, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 28, 1909. Serial No. 535,229.



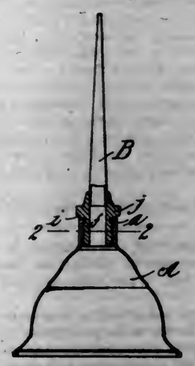
1. In a device of the character described, the combination with a self-propelled vehicle comprising a frame, a front axle, a rear live axle, and a motor driven shaft for driving the live axle sections of said rear axle and journaled in the housing of said rear axle, of full elliptic springs, one at either side of the frame, interposed between the said live axle housing and the said frame, each of said springs having its lower half rigidly secured to the live axle housing, means for pivotally connecting the upper half of each spring to the frame, and links, each pivotally connected at its upper end to the front end of the adjacent spring, and at its lower end having a pivotal connection with said frame.

2. In a device of the character described, the combination in a motor vehicle having a frame, a motor thereon, a front axle, a rear live axle and a propeller shaft arranged longitudinally of said frame and geared at its front end to said motor and at its rear end to said rear live axle, said propeller shaft being journaled in the housing thereof, of full elliptic springs, one at either side of said frame, each of said springs having its lower half rigidly connected to the rear axle housing, means pivotally connecting the upper half of each spring to the frame, and links, each pivotally connected at its upper end to the front end of the adjacent spring and at its lower end having pivotal connection with said frame on an axis at right angles to the axis of the propeller shaft and thereabove.

3. In a device of the character described, the combination with a self-propelled vehicle comprising a frame, a front axle, a rear live axle, and a motor driven shaft for driving the live axle sections of said rear axle and journaled in the housing of said rear axle, of full elliptic springs, one at either side of the frame, interposed between the said live axle housing and the said frame, each of said springs having its lower half rigidly secured to the live axle housing, means for pivotally connecting the upper half of each spring to the frame, and links, each pivotally connected at its upper end to the front end of the adjacent spring, and at its lower end having universal pivotal connection with said frame.

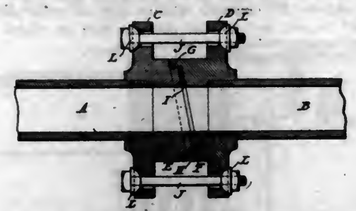
4. In a device of the character described, the combination in a motor vehicle having a frame, a motor thereon, a front axle, a rear live axle and a propeller shaft comprising telescoping members and arranged longitudinally of said frame and geared at its front end to said motor and at its rear end to said rear axle, said propeller shaft being journaled in the rear axle housing, of full elliptic springs, one at either side of said frame, each of said springs having its lower half rigidly connected to the rear axle housing, means pivotally connecting the upper half of each spring to the frame, and links, each pivotally connected at its upper end to the front end of the adjacent spring and at its lower end having pivotal connection with said frame on an axis at right angles to the axis of the propeller shaft and thereabove.

960,898. OIL-CAN. JACOB GULLONG, Holyoke, Mass. Filed Dec. 23, 1907. Serial No. 407,629.



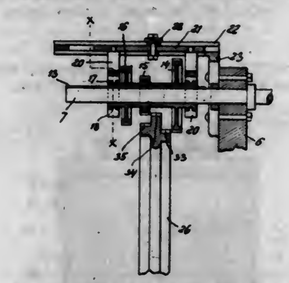
An oil can comprising a body portion, an internally threaded neck, having large and small interrupted portions diametrically disposed, a spout having large and small threaded ribs to fit said interrupted portions.

960,899. PIPE-COUPLING. CLINTON GUYER, Muncy, Pa., assignor of one-half to William C. Crawford, Muncy, Pa. Filed Aug. 12, 1909. Serial No. 512,602.



A pipe-coupling comprising a pair of pipe-flanges, each flange being provided on its outer face with an outstanding boss, the terminating face of each boss being oblique to its axis, the oblique face of one boss being provided with an annular recess, a gasket seated therein, and the oblique face of the other boss having a round projection fitting revolubly in said recess and against said gasket, the rotation of either flange relative to the other constituting an angular adjustment which varies the axes of the pipe-flanges, and means for clamping said pipe-flanges together.

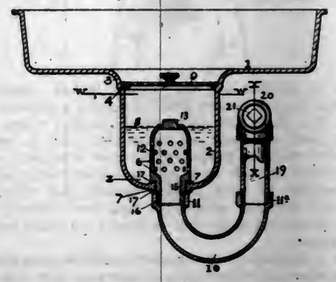
960,900. GEARING. PETER HADNAGY, Dayton, Ohio. Filed Sept. 30, 1909. Serial No. 520,278.



1. A variable speed mechanism for traction engines comprising the combination with a driven shaft, and supporting means for one end of said shaft of gear wheels of different diameters slidably mounted upon and rotating with said shaft, and each having its hub formed with an extension, the extension of each outer gear being grooved, a bracket extending over said gear wheels, a bar slidably-mounted in that portion of the bracket which extends over the gear wheels, a rotatable transmission member arranged in operative relation with respect to said gear wheels and having three toothed portions each of a different diameter with respect to the other, said member being independent of said shaft, a hanger depending from said bracket for supporting the other end of said shaft, yokes depending from the slide bar and straddling said grooved extensions, inwardly extending pins carried by said yokes and engaging in the grooves of the extensions for shifting the gear wheels when the slide bar is moved whereby the transmission member is operatively connected by one of said gear wheels to the driven shaft, a support, and a controlling lever pivoted intermediate its ends to said support and having one end extending over said bracket and connected to said slide bar for shifting the latter when the lever is moved on its pivot, and means engaging with the other end of said lever for locking it in its adjusted position.

2. A variable speed mechanism for traction engines comprising the combination with a driven shaft, and supporting means for one end of said shaft, of gear wheels of different diameters slidably mounted upon and rotating with said shaft, and each having its hub formed with an extension, the extension of each outer gear being grooved, a bracket extending over said gear wheels, a bar slidably mounted in that portion of the bracket which extends over the gear wheels, a rotatable transmission member arranged in operative relation with respect to said gear wheels and having three toothed portions each of a different diameter with respect to the other, said member being independent of said shaft, a hanger depending from said bracket for supporting the other end of said shaft, yokes depending from the slide bar and straddling said grooved extensions, inwardly extending pins carried by said yokes and engaging in the grooves of the extensions for shifting the gear wheels when the slide bar is moved whereby the transmission member is operatively connected by one of said gear wheels to the driven shaft, a support, a controlling lever pivoted intermediate its ends to said support and having one end extending over said bracket and connected to said slide bar for shifting the latter when the lever is moved on its pivot, and means engaging with the other end of said lever for locking it in its adjusted position.

960,901. TRAP FOR KITCHEN-SINKS. THOMAS H. HALL, Worcester, Mass. Filed Oct. 23, 1909. Serial No. 524,149.



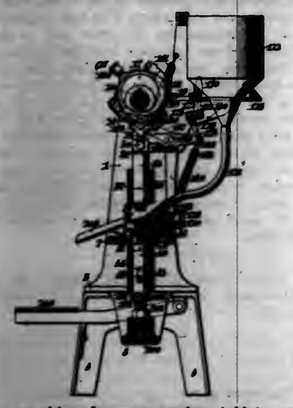
1. A trap for kitchen sinks, comprising a catch-basin attached to the bottom of the sink, a central bolus dome standing up within said catch-basin and having lateral perforations through its sides and closed at its top, a U-shaped tubular member beneath the basin, one end thereof connected with said dome, a vertical up-take tube united with the opposite end of said U-shaped member and provided with a tee-head upon its top end above the level of the perforations in the dome, said tee-head having a removable plug in one end thereof, and its other end adapted for the attachment of a waste-pipe thereto.

2. In a combined kitchen sink and trap, the combination as described, of the sink body having a catch-basin thereon, said catch-basin provided with a non-threaded opening through its bottom, a removable strainer loosely supported within the upper part of the basin, a laterally perforated hollow dome having a closed top with wrench engaging means thereon, and an annular shoulder and tubular downwardly projecting lower end nipple passing through the non-threaded bottom opening of the basin, a semicircular or U-shaped tubular member having one of its ends threaded to the downwardly projecting end of the dome beneath a catch-basin, the up-take tube threaded to the opposite end of said U-shaped member, a waste-connecting tee-head attached to the top end of the up-take, approximately level with the top of the dome, and provided with a removable threaded stop-plug in one end of the tee.

960,902. TABLET-MACHINE. ANTHONY M. HANCE, Philadelphia, Pa., assignor to Hance Brothers & White, Philadelphia, Pa., a Firm. Filed June 12, 1909. Serial No. 501,711.

1. In a machine for compressing tablets, the combination with the die and upper and lower plungers; of means for reciprocating the lower plunger, comprising a pivoted lever, in engagement with both the plunger and a reciprocating member, the pivot hole of said lever being tapered, while the pivot is similarly tapered and

screw threaded at either end with nuts upon both screw threaded ends whereby its endwise position may be accurately adjusted to take up wear of the pivot hole.



2. In a machine for compressing tablets, comprising a die and opposed reciprocating plungers; a slide-way for a feed shoe, flush with the face of the die; plates overhanging said slide-way at either side, and in engagement with the side flanges of the feed shoe, said plates being slotted at both ends, and being removably held in their position by bolts passing through said slots, and which are swiveled within the slide-way whereby they may be swung out of the slot to permit the ready removal of the plates.

3. In a machine for compressing tablets, comprising a die, and opposed reciprocating plungers; a feed shoe sliding over the face of the die; a pivoted lever through which motion is imparted to the feed shoe; a rotating cam engaging one end of said lever and by which the feed shoe is at intervals positively retracted from its position over the die; a spring by the tension of which said lever is moved to again force the feed shoe over the die; and means whereby said lever may be locked against the tension of said spring, whereby it is prevented from returning the feed shoe over the die.

4. In a machine for compressing tablets, comprising a die, and opposed reciprocating plungers; a feed shoe sliding over the face of the die; a pivoted lever through which motion is imparted to the feed shoe; a rotating cam engaging one end of said lever and by which the feed shoe is at intervals positively retracted from its position over the die; springs by the tension of which said lever is moved to again force the feed shoe over the die; and means whereby said lever may be locked against the tension of said springs, and prevented from returning the feed shoe over the die, said means comprising a hand lever 170, a slotted link 175, in engagement therewith, and pivotal connections between the other end of said link and the lever by which the motion of the feed shoe is controlled.

5. In a machine for compressing tablets, comprising a die and opposed reciprocating plungers, a lower plunger case; a cylindrical sleeve surrounding said plunger case; means for positively and vertically reciprocating said plunger case within said sleeves; and an adjustable stop nut on the lower end of the plunger case whereby the upward movement of the same is definitely limited.

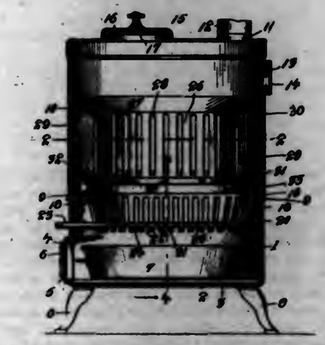
960,903. MULTIPLE-PLUNGER CASE. ANTHONY M. HANCE, Philadelphia, Pa., assignor to Hance Brothers & White, Philadelphia, Pa., a Firm. Filed June 12, 1909. Serial No. 501,712.

1. The combination of a plurality of headed plungers; a plunger case provided with seats within which the heads of the plungers are received; a multiple washer of comparatively soft metal, with apertures permitting the plungers to pass through, but affording shoulders to bear upon the heads of each of the plungers; and a threaded ring whereby the multiple washer may be compressively applied to the end of the plunger case to clamp the plunger heads within their seats.



2. In a multiple plunger case, the combination of a plurality of headed plungers; a plurality of seats adapted to receive the heads of the plungers, with slight projection of their shouldered ends; a multiple washer of soft metal passing around the plungers and bearing against their shouldered ends; and a threaded ring, whereby said soft metal washer is strongly clamped in place to exert pressure to seat the plungers, irrespective of slight variations of the length of their heads.

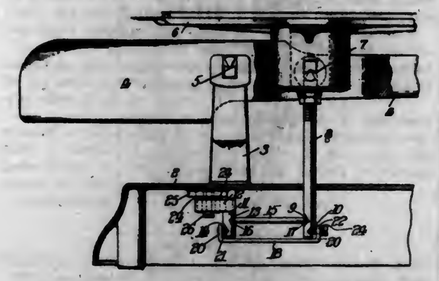
960,904. STOVE. ABRAM OSCAR HANCOCK, Richmond, Va. Filed Feb. 4, 1910. Serial No. 542,056.



1. In a stove, the combination of a casing, a fire-pot, and grate suspended therein, and a hopper resting upon said fire-pot, said hopper comprising a base member and an upper member, legs connecting said members together in spaced relation to each other, each of said members being formed at its upper end with an outwardly flared wall forming between said upper member and said casing a chamber, the vertical walls of said upper member being formed with vertical slots throughout substantially its entire circumference, substantially as described.

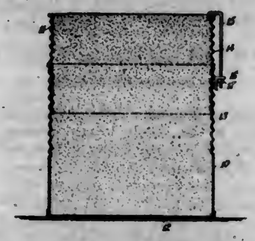
2. In a stove, the combination of a casing, a fire-pot, and grate suspended therein, and a hopper resting upon said fire-pot and removable from the casing, said hopper comprising a base member and an upper member, legs connecting said members together in spaced relation to each other, each of said members being formed at its upper end with an outwardly flared wall forming between said upper member and said casing a chamber, the vertical walls of said upper member being formed with vertical slots throughout substantially its entire circumference.

960,905. WEIGHING-SCALE. NIELS M. HANSEN, Toledo, Ohio, assignor to Toledo Computing Scale Company, Toledo, Ohio, a Corporation of New Jersey. Filed Aug. 30, 1907. Serial No. 390,782.



In weighing scales, the combination of a base having a depending post with socket bearings in opposite sides, their bases being in alinement lengthwise the post; a scale-beam pivoted on the base; a platform pivoted on said beam and having a depending stem with socket bearings in opposite sides, their bases being in alinement lengthwise the stem; a link extending between the stem and the post and having conical ends seating in the confronting sockets of the stem and post; and a link extending below the stem and the post and on the outer sides thereof and having cones seating in the sockets in such outer sides.

960,906. MEASURE. HERBERT C. HARBRIDGE, Margo, Saskatchewan, Canada. Filed Dec. 24, 1909. Serial No. 534,754.

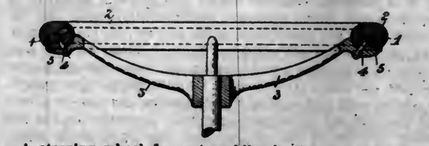


1. The combination in a measure, of a lower measure section having a bottom and an upper measure section screwed into the lower measure section and adapted to stand thereabove any distance within the limits of the length of the upper section and having a graduated portion extended to the top, with the zero of the graduations arranged intermediate the length of the upper section, and with the capacity of the lower section of the measure a common multiple of the capacity of that portion of the upper section of the measure extending above the zero mark.

2. The combination in a measure, of a lower measure section, an upper measure section, the two sections adjustably threaded together, and means to lock the sections in adjusted position, arranged to tend to force the upper measure section within the lower measure section.

3. The combination in a measure, of a lower measure section having a bottom, an upper measure section having a threaded connection with the lower measure section, adapting the height of the measure to be extended and contracted, an ear attached to the lower measure section, a hook engaging over the upper edge of the upper measure section and having a threaded shank extending through said ear, and a nut threaded on the shank of the hook and bearing on the under side of the ear.

960,907. STEERING-WHEEL FOR AUTOMOBILES. EDWARD K. HARDY, Akron, Ohio. Filed Nov. 8, 1906. Serial No. 342,541.



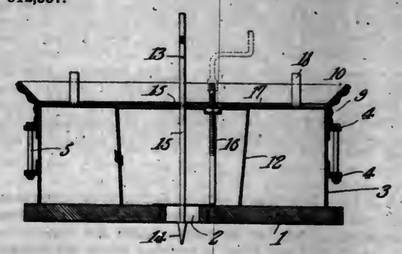
A steering wheel for automobiles having a rigid spider portion, a rim of rubber, a conical-shaped metal ring embedded in said rubber rim, and securing means passing through the arms of the spider and entering said rim.

960,908. ABDOMINAL ADJUSTER, REDUCER, SUPPORTER, AND RETAINER. AGNES HARRIS, Oakland, Cal. Filed Jan. 20, 1908. Serial No. 411,788.



An abdominal support adapted for attachment to the lower edge of a corset and having the directions of length of its opposed edges curved, the radius of the arc of the lower edge being less than that of the upper edge, the upper edge having a shape corresponding to the shape of the lower edge of the corset to which it is to be secured, the support having a central gore and independent gores on each side of the central gore, said gores extending the full width of the support, the material between the gores being substantially imperforate and having its gore edges angular with respect to each other to provide a lower edge of the material between the gore edges of less length than the upper edge, and means for adjustably securing adjacent gore edges together, said edges when in adjusted position being unyieldable in a direction to lengthen the support.

960,909. CONCRETE-MOLD. WILLIAM T. HARRIS, Sr., Harrodsburg, Ky. Filed Aug. 12, 1909. Serial No. 512,557.

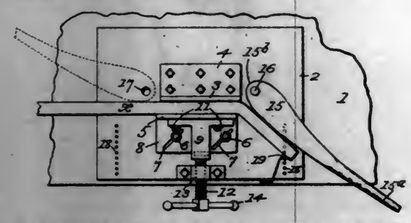


1. The combination of a pallet having a slot, a mold resting on the pallet, a core within the mold covering the slot in the pallet, and a locking pin mounted in the top of the core and provided at its lower end with a head adapted to pass through the slot in the pallet and engage the under side of the pallet, the locking pin being provided

with laterally extending arms above and below the top of the core, and a screw mounted in the top of the core and having its lower end bearing upon the pallet.

2. A mold for concrete blocks comprising a plurality of walls, angle irons arranged longitudinally upon and secured to all but one of said walls and having the upstanding portions thereof cut away at their ends, the end portions of said angle irons lapping and being pivotally connected, an angle iron secured longitudinally upon the remaining wall and having its upstanding portion cut away at one end and lapping and pivotally connected to the cut away portion of one of the first mentioned angle irons, there being a notch within the upstanding portion of said angle iron adjacent its other end, the upstanding portions of said angle irons constituting means for limiting the swinging movement of the walls toward each other, and a latch pivotally mounted on one of the walls and movable into engagement with the notched angle iron to secure all of said irons in a predetermined relation.

960,910. METAL-BENDING TOOL. LEVI P. HAZEN, Cincinnati, Ohio. Filed July 27, 1908. Serial No. 445,463.



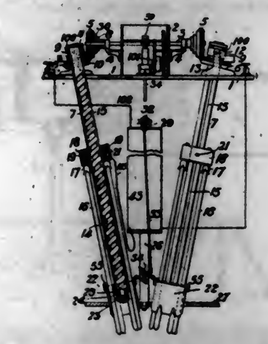
1. A metal bending machine, comprising a bed-plate, a stationary jaw mounted thereon, a jaw parallel to said stationary jaw and movably mounted on said bed-plate, means comprising a hand-screw and a horizontally-movable carrier-block whereby said movable jaw is carried to clamping position in an oblique direction, a lever having pivots projecting perpendicular from its opposite face adjacent its inner end, sockets or holes in said bed-plate adjacent either end of the stationary jaw and adapted to independently receive said pivots on the lever whereby it is interchangeably operated in connection with either of the free, extending ends of a metal-bar clamped between said jaws and means for adjusting said movable jaw to and from clamping position on said metal bar placed between the jaws.

2. A metal bending machine, comprising a bed-plate, a stationary jaw mounted thereon, a jaw movably mounted on said bed-plate with its clamping-face parallel to the clamping-face of the stationary jaw and having oblique slots engaged by loose-inserted bolts or screws in its mounting portion, a carrier-block having slotted arms and screws engaging the slots in said arms for loosely-connecting the clamping portion of said movable-jaw, a handled-screw engaging a threaded block on the bed-plate with its inner end swiveled to said carrier-block, a lever having oppositely-disposed pivot-pins at its inner end for interchangeable engagement with sockets in the bed-plate adjacent either end of the stationary jaw, a series of vertical holes at either end of the bed-plate and pins adapted to be placed in either of said holes in the bed-plate for determining and limiting the angle of bend in the metal bar clamped in said jaws.

960,911. ELECTRIC-ARC LAMP. HENRY WILLIAM HEADLAND, Leyton, and FREDERICK PLUTTE, London, England. Filed Oct. 28, 1907. Serial No. 399,573.

1. An electric arc lamp comprising groups of inclined carbons, supports for said groups, means for rotating the supports to revolve the carbons and means for moving the supports to feed the carbons longitudinally.

2. An electric arc lamp comprising groups of inclined carbons, supports for said groups, means for rotating the supports to revolve the carbons, means for moving the supports to feed the carbons longitudinally, and electromagnetic means controlled by the arc to operate the feeding of the carbons simultaneously with their revolution.



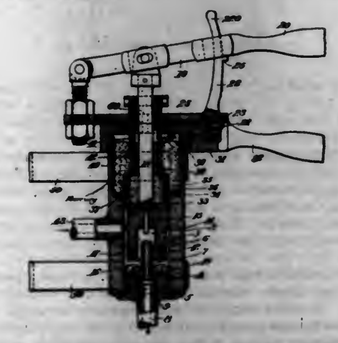
3. An electric arc lamp comprising groups of carbons, blocks carrying said groups, downwardly converging guides for said blocks, means to rotate said blocks to revolve the carbons, and means to downwardly move the blocks simultaneously with their rotation.

4. An electric arc lamp comprising groups of carbons, converging screws, blocks surrounding the screws, a plurality of carbon supports in said blocks, means connecting the screws and blocks to move the latter along the screws, means to rotate the blocks on the screws, and means to control the rotation.

5. An electric arc lamp comprising groups of inclined carbons, a support for each group, means for simultaneously rotating the supports to revolve the carbons, means for moving the supports to feed the carbons longitudinally, and controlling means in connection with the arc to alternately engage and release the last named means.

[Claims 6 to 9 not printed in the Gazette.]

960,912. PISTON-VALVE. JOHN ALLEN HEANY, York, Pa., assignor to The Heany Lamp Company, New York, N. Y., a Corporation of Maine. Filed Apr. 16, 1909. Serial No. 490,269.



1. A valve mechanism comprising a hollow casing having formed therein a chamber provided with inlet and exit openings, a valve seat and a valve engaging therewith, a closure for such chamber provided with a packing device for the valve rod, a cap for the casing through which the valve rod passes and mercury seals in the valve chamber and about the valve-rod.

2. A valve device comprising a hollow casing divided by a stuffing-box into two closed chambers, a valve in the lower chamber, and a valve rod extending through the stuffing-box and upper chamber, said upper chamber being adapted to receive a mercury seal.

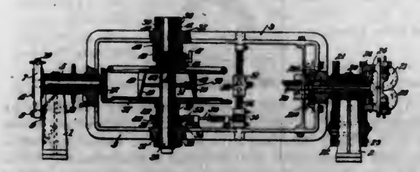
3. A valve device comprising a hollow casing divided by a stuffing-box into two closed chambers, a valve in the lower chamber, a rod extending through the stuffing-box and upper chamber, and a mercury seal in each chamber.

4. A valve mechanism comprising a valve and its cooperating seat, and a supplemental closing device carried by the valve and arranged to effect a closure in advance of that effected by the valve.

5. A casing having a chamber therein, a valve-seat therein, a coöperating valve, an upwardly extending conduit, a closure for said conduit carried by the valve, the parts being so proportioned that the closure is effected before the valve reaches its seat.

[Claims 6 to 8 not printed in the Gazette.]

960,913. WINDING-REEL. JOHN ALLEN HEANY, York, Pa., assignor to Heany Fire-Proof Wire Company, New York, N. Y., a Corporation of Pennsylvania. Filed May 1, 1909. Serial No. 493,308.



1. In a reeling mechanism, a frame, sleeved disks mounted in the sides of the frame, a bolt passing through the sleeves, a drum on said bolt and between the disks, and means for securing the bolt and disks together.

2. In a reeling mechanism, a frame, sleeved disks mounted in the sides of the frame, a bolt passing through the sleeves, a drum having a collapsible rim on said bolt and between the disks, and means for securing the bolt and disks together.

3. In a reeling mechanism, a support, a main frame rotatably mounted thereon, a fixed arbor in the support, a disk on the arbor within the frame and having a spiral rib thereon, a gear-rolls-carrying-frame secured to the main frame, gear rolls on said carrying-frame arranged to be rotated by said spiral rib, a second spiral-ribbed-disk on said arbor, a gear-rolls-carrying-frame rotatably mounted on said arbor, gear-rolls on said carrying-frame arranged to be rotated by the spiral rib, and gearing connecting the second gear-rolls-carrying frame and the main frame.

4. In a winding mechanism, a rotatable frame, a bolt mounted therein, a sleeve surrounding the bolt and having a disk secured thereto, a second sleeve screwed to the bolt and a disk secured thereto, a drum mounted on the bolt between the disks, and means for securing the bolt to the frame.

5. In a winding mechanism, a rotatable frame, a bolt mounted therein, a sleeve surrounding the bolt and having a disk secured thereto, a second sleeve screwed to the bolt and a disk secured thereto, a frusto-conical drum having a collapsible rim mounted on the bolt between the disks, and means for securing the bolt to the frame.

[Claims 6 to 12 not printed in the Gazette.]

960,914. PILLS FOR THE TREATMENT OF DIABETES MELLITUS. ARTHUR HEINEMANN, London, England. Filed Sept. 21, 1909. Serial No. 518,840.

1. Pills for the treatment of diabetes mellitus containing a compressed mixture of oxydases and an alkaline salt provided with a coating consisting of a substance insoluble by the gastric juices of the stomach, substantially as described.

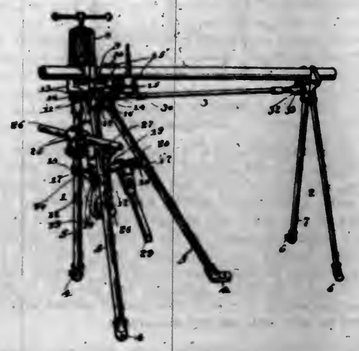
2. Pills for the treatment of diabetes mellitus containing a compressed mixture of oxydases of the genus beta and an alkaline salt provided with a coating of keratin, substantially as described.

960,915. MEDICINAL PREPARATION. CHRISTIAN HEINZINGER, New York, N. Y. Filed Aug. 23, 1909. Serial No. 514,143.

1. A lotion, for external use in affections of the eyes, including a distillate of the expressed juice of leek, and spirits of camphor as a preservative.

2. A lotion, for external use in affections of the eyes, including about 60% of a distillate of the expressed juice of leek, and about 40% of spirits of camphor.

960,916. FOLDING BENCH. EDGAR W. HEISER, Chicago, Ill. Filed July 30, 1909. Serial No. 510,483.



1. In a device of the class described, the combination of a tripod having foldable legs; a pipe vise on said tripod; a supplemental support for a pipe, and a connection between said tripod and said support comprising a rod hinged to said support and detachably connected with said tripod, substantially as described.

2. In a device of the class described, the combination of a tripod having foldable legs; a pipe vise on said tripod; a supplemental support for a pipe comprising two pivoted legs having jaws adapted to receive a pipe; a connection between said tripod and said support comprising a rod hinged to said support and detachably connected with said tripod, substantially as described.

3. In a device of the class described, the combination of a tripod having foldable legs; a pipe vise on said tripod; a supplemental support for a pipe comprising two pivoted legs having jaws adapted to receive a pipe, and a roller hinged to one jaw and detachably connected with the other; and a connection between said tripod and said support comprising a rod hinged to said support and detachably connected with said tripod, substantially as described.

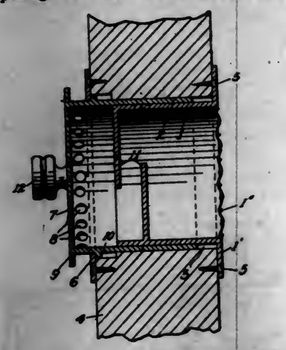
4. A folding supplemental support for pipe vises, comprising two pivoted legs having jaws adapted to receive a pipe; and a roller hinged to one jaw and detachably connected with the other, substantially as described.

5. A folding supplemental support for pipe vises, comprising two pivoted legs having jaws adapted to receive a pipe; a roller hinged to one jaw and detachably connected with the other; and a connecting rod hinged to said supplemental support and adapted to be detachably connected with the main support of the vise, substantially as described.

960,917. VENTILATOR. CLINTON F. HENDERSON, Seattle, Wash. Filed Sept. 7, 1909. Serial No. 516,619.

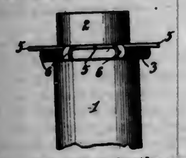
1. A ventilator comprising telescoping sections, means for securing one of said sections against movement, a wall plate through which the other of said sections pro-

jects, said last named section receiving and being slidable on said first named section, and stop means comprising flanges provided on said last named section on opposite sides of said wall plate for limiting the movement of said section, said last named section being formed with air discharge openings between the said flanges thereof.



2. In combination with a wall formed with an opening having one end portion enlarged, a wall plate projecting over the enlarged end portion of the opening of said wall, a ventilator section slidably supported in the opening of said wall and in said wall plate and provided with a flange arranged in the enlarged end portion of said wall opening for engagement with said wall plate, said ventilator section being provided in its outer end portion with air discharge openings, and another ventilator section projecting into said first named section and being secured to said wall against movement.

960,918. BOTTLE AND ATTACHMENT THEREFOR. CHARLES A. HERVEY, Lansing, Mich. Filed July 24, 1909. Serial No. 509,301.



The herein described poison bottle comprising a bottle having a bead at the upper end of the neck thereof, and a sheet metal attachment provided with a series of radially projecting fingers having pointed outer ends and intermediate fingers adapted to be bent around the bead on the bottle to hold the device in place.

960,919. BLUE SULFID COLORS AND PROCESS OF MAKING SAME. RICHARD HERZ and ERICH SAUL, Frankfort-on-the-Main, Germany, assignors to Cassella Color Company, New York, N. Y. Filed July 27, 1909. Serial No. 509,902.

1. The manufacture of dyestuffs, by treating with a halogen the sulfid colors derived from indophenols or leukoindophenols, substantially as described.

2. The manufacture of dyestuffs by treating with a halogen the sulfid colors derived from p-amino-p-oxydiphenylamin, its homologues and derivatives, both those substituted in the nucleus as well as those substituted in the amino-group, substantially as described.

3. As new articles of manufacture the dyestuffs obtained by treating with a halogen the sulfid colors derived from p-amino-p-oxydiphenylamin, its homologues and derivatives, both those substituted in the nucleus, as well as those substituted in the amino-group; being in a dry state dark blue powders, insoluble in water and alcohol, difficultly soluble in hot phenol with a reddish blue to bright blue color, easily soluble in an alkaline sulfid solution and dyeing cotton from such a solution violet blue to blue shades fast to washing, acids, and light, substantially as described.

960,920. PRESSURE-GAGE ALARM. CHARLES D. HILL, Clifton Springs, N. Y. Filed Nov. 10, 1909. Serial No. 527,262.



1. In an alarm signal of the character described, an adjusting nut, a tubular member for coöperation therewith having a flattened extension with contracted opening and a transverse hollow drum communicating therewith and having longitudinal opening, a spring within the bore of said tubular member, a core piece acted upon by the spring, and a disk bearing against the head of the core piece.

2. The combination with a base piece having a threaded tubular extension, of a nut on said extension, a tubular member having threaded engagement with said extension and constructed to form a whistle, and a spring actuated closure for said extension confined within said tubular member and seated against the end thereof.

3. The combination with a base piece having a tubular threaded extension, of a nut adjustable on said extension, a tubular member adjustable on said extension and engaging said nut at one end, the other end having a transverse hollow drum with contracted opening communicating with the interior of said tubular member and a longitudinal outlet, a disk normally seated against the end of the tubular extension, a core piece seated against said disk, and a spring acting on said core piece.

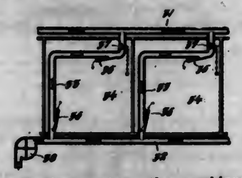
4. The combination with a tubular base piece having a nipple communicating therewith and a tubular vertical exteriorly threaded portion, of a hollow member adjustably mounted on said threaded portion and terminating at its outer end in a transverse hollow drum with a narrow rectangular opening extending substantially the length of the drum and a spring seated disk controlling the escape of air from said base piece through the tubular portion and hollow member to said drum.

960,921. VENTILATING APPARATUS. DAVID HILL, Washington, N. C. Filed July 10, 1908. Serial No. 442,921.

1. In a ventilating system, the combination with a hollow body to be ventilated, of an air conduit having an inlet and discharge outside of said body and having a free and uninterrupted interior passage from the inlet to the outlet, of induction and eduction passages, extending angularly from and externally to the said conduit, and opening at their inner ends into the conduit and at their outer ends into the interior of the hollow body to be ventilated.

2. In a ventilating system, the combination with a hollow body to be ventilated, of an air conduit having an

inlet and discharge outside of said body and having a free and uninterrupted interior passage from the inlet to the outlet, of induction and eduction passages, extending angularly from and externally to the said conduit, and opening at their inner ends into the conduit and at their outer ends into the interior of the hollow body to be ventilated and means for inducing a current of air through said conduit.



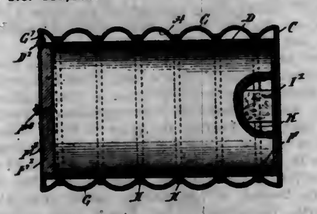
3. In a ventilating system, the combination with a hollow body to be ventilated, of an air conduit having an inlet and discharge outside of said body and having a free and uninterrupted interior passage from the inlet to the outlet, of induction and eduction passages extending angularly from and externally to the said conduit, and opening at their inner ends into the conduit and at their outer ends into the interior of the hollow body to be ventilated, and an air forcing device connected with said conduit adjacent to its discharge end.

4. In a ventilating system, the combination with an air inlet conduit, and an air outlet conduit, of a branch pipe connecting said conduits, and having an uninterrupted interior passage therethrough, said branch pipe being provided with an inclined and exteriorly projecting induction port, and an oppositely inclined exteriorly projecting eduction port, both of said ports being in communication at their inner ends with the branch pipe and at their outer ends with the space to be ventilated.

5. In a ventilating system, the combination with an air inlet conduit, and an air outlet conduit, of a branch pipe connecting said conduits, and having an uninterrupted interior passage therethrough, said branch pipe being provided with an inclined and exteriorly projecting induction port, and an oppositely inclined exteriorly projecting eduction port, both of said ports being in communication at their inner ends with the branch pipe and at their outer ends with the space to be ventilated, and an air forcing device connected with the outlet conduit.

[Claims 6 and 7 not printed in the Gazette.]

960,922. TOY BALE. AARON HIRSCHWITZ and HENRY MAUDERER, New Orleans, La. Filed Mar. 10, 1909. Serial No. 482,468.



1. A toy bale comprising a hollow body portion composed of sheet material having corrugated portions formed in the similitude of a cotton bale, a liner tube fitting in said body portion and open at both ends and spaced at its front end from the end of the body portion and provided at its front end with a rim flange fitting the front end of the body and closing the space between the same and the front end of the liner tube, a back plate fitting and closing the rear end of the body and also closing the rear end of the liner tube, a cover over the body portion and end plate and extending inwardly over the flange at the front end of the liner tube, ties over said cover and conforming the same to the corrugations of the body, and a drawer operating in the liner tube, all substantially as and for the purposes set forth.

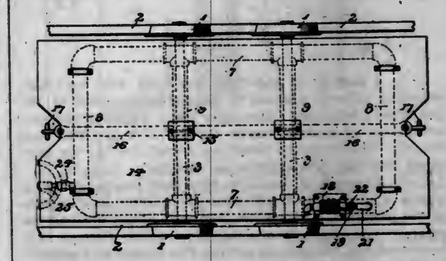
2. A toy bale comprising a transversely corrugated body whose end flares and is of a diameter in excess of the smaller diameter of the body, a liner fitting in the body and having its end closing the flaring end of said body, and a drawer in the liner, substantially as set forth.

3. A toy bale comprising a hollow body having corrugations, a liner tube in the body with a space between its end and that of the body resulting from the corrugation of the body and having a rim flange fitting the front end of the body and closing said space, and a drawer operating in the liner tube.

4. A toy bale substantially as described consisting of a hollow body having corrugated portions whereby it may simulate the appearance of a cotton bale, a liner fitting in said body and open at both ends and spaced at its front end from the corresponding end of the body and provided at said end with a rim flange fitting the front end of the body and closing the space between the same and the front end of the rim, a plate closing the rear end of the body and of the liner tube, a cover for the body having a portion extending inwardly over the front end flange of the liner, and a drawer operating in the liner, substantially as and for the purpose set forth.

5. A toy bale comprising a hollow body composed of sheet material having corrugations, a liner tube fitting in the hollow body and spaced at its end therefrom and having a rim flange fitting the front end of the body between the same and the liner, a cover over the body and having a portion extending inwardly over the rim of the liner tube, ties over the cover and conforming the same to the corrugations of the body, and a drawer operating in the liner, substantially as set forth.

960,923. TRUCK FOR MINING-MACHINES. JOHN C. HIRST, Reynoldsville, Pa. Filed Dec. 1, 1908. Serial No. 465,523.



A truck of the character described, comprising wheels, axles on which said wheels are journaled, a framework secured to said axles, a platform resting upon said framework, the framework embodying transversely extending intermediate portions, clips connecting such portions to the platform, and a longitudinally extending draw bar extending over the framework and underneath the platform and connected thereto by the same clips which secure the platform to the transversely extending portions of the framework.

960,924. EYEGLASS-MOUNTING. CHARLES A. HOFFMAN, Minneapolis, Minn. Filed Mar. 18, 1905. Serial No. 250,739.

1. The eye-glass mounting comprising a clamp for each lens, the metal of which the clamps are formed having a portion thereof extended to bear on the edges of lenses and another portion bent substantially at right angles to the plane of the lenses to form a spring loop next to each lens with a part thereof bent to form a nose-guard and another

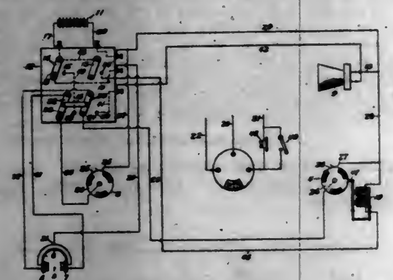
portion to form a bridge connecting the two lens clamps, substantially as described.



2. In a rimless mounting for eyeglasses and spectacles, the combination with the lens strap having a hole therethrough, of a hollow or tubular rivet adapted to extend through said hole to secure the strap to the lens, and having each end enlarged, the material of the rivet where it contacts with the lens having a non-compressing engagement therewith.

3. The combination of a lens, a strap and a hollow rivet having an expanded end for holding said strap to said lens and whereby said end may be easily contracted for removal of said rivet from the lens, said rivet during its attachment retaining its normal size throughout its surface contact with said lens, its expanded part contacting only with said strap whereby breakage of said lens is avoided during the assemblage of the parts.

960,925. COMBINED SYNCHRONIZING AND TELEPHONE SYSTEM. GUSTAV E. HOGLUND, Chicago, Ill., assignor to William N. Selig, Chicago, Ill. Filed Mar. 5, 1910. Serial No. 547,539.



1. In a system of the class described, two machines, electrical circuits adapted to detect synchronism of the machines, a telephone transmitter and a telephone receiver, and means adapted to enable the use of a synchronizing line for connecting the telephone transmitter to the telephone receiver, substantially as described

2. In a system of the class described, two machines, a source of current, a circuit adapted to detect synchronism of the machines, a telephone transmitter and a telephone receiver, and connections adapted to enable the use of a synchronizing line for connecting the telephone transmitter to the telephone receiver, substantially as described.

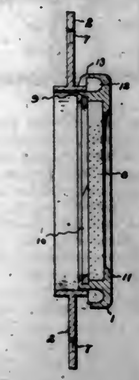
3. In a system of the class described, two machines, an electrical circuit adapted to detect synchronism of the machines, a telephone transmitter and a telephone receiver, and switches adapted to enable the use of a synchronizing line for connecting the telephone transmitter to the telephone receiver, substantially as described.

4. In a system of the class described, two machines, a commutator adapted to be driven by each machine, an electrical circuit adapted to receive electrical impulses from the commutators, means for detecting the relative frequency of the electrical impulses from the two commutators, a telephone transmitter and a telephone receiver, and means adapted to enable the use of a synchronizing line for connecting the telephone transmitter and the telephone receiver, substantially as described.

5. In a system of the class described, two machines, a commutator adapted to be driven by each machine, electrical circuits adapted to receive electrical impulses from the commutators, a telephone receiver in each of said electrical circuits, a telephone transmitter, and means adapted to enable the use of a synchronizing line for connecting the telephone transmitter to the telephone receivers, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

960,926. LIGHT-SECURING MEANS. THOMAS HOOPS, Jr., Middletown, Conn., assignor to Wilcox, Crittenden and Company, Incorporated, Middletown, Conn., a Corporation of Connecticut. Filed Oct. 9, 1909. Serial No. 521,823.



In a device of the character described, the combination with a light of glass; of a holder having an opening therein with a lip projecting over one end thereof, and a recess in said opening, located so that the distance between the inner edge thereof and the inside face of said lip is substantially the same as the thickness of said light of glass; and means for holding said light of glass within said holder and against said lip, said means comprising a split member sprung into said recess with the surface of one side thereof, except such portion as is in said recess, contacting with said light of glass, and thereby producing a water-tight joint.

960,927. METHOD OF MAKING FORMIC ACID. HENRY HOWARD, Boston, Mass. Filed June 23, 1908. Serial No. 440,024.

1. In a method of making formic acid, the step which consists in introducing a formate into a bath of sulfuric acid while maintaining throughout the mass a temperature below that at which substantial decomposition of formic acid occurs.

2. The method of making formic acid which consists in introducing a formate into a bath of sulfuric acid while maintaining throughout the mass a temperature below that at which substantial decomposition of formic acid occurs, and then heating the mass to distil formic acid.

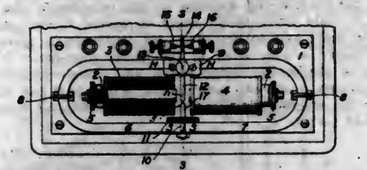
3. In a method of making formic acid, the step which consists in introducing a formate into a bath of sulfuric acid, agitating the mixture, and cooling the same to maintain therein a temperature below that at which substantial decomposition of formic acid occurs.

4. The method of making formic acid which consists in introducing a formate into a bath of sulfuric acid, agitating the mixture, cooling the same to maintain therein a temperature below that at which substantial decomposition of formic acid occurs, and then heating the mass to distil formic acid.

5. The method of making formic acid which consists in introducing a formate into a bath of sulfuric acid while maintaining throughout the mass a temperature below that at which substantial decomposition of formic acid occurs, and distilling formic acid under reduced pressure.

[Claim 6 not printed in the Gazette.]

960,928. POLARIZED RELAY. WINTHROP K. HOWE, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed May 19, 1909. Serial No. 497,126.



1. In a polarized relay, a pair of electromagnets, a pair of permanent horseshoe magnets one around each electromagnet and having their like poles adjacent, a movable armature pivoted to and magnetized by one of the magnetic poles and extending toward the other magnetic poles, and a pole piece attached to the latter magnetic pole and extending toward the armature.

2. In a polarized relay, a permanent magnet, a movable armature magnetized thereby, and two electromagnets arranged upon opposite sides of the armature and independently adjustable toward and from the armature to vary their relative effects thereon.

3. In a polarized relay, a permanent magnet, a movable armature pivoted at one end adjacent to one pole of the permanent magnet and extending toward the other pole thereof, and two electromagnets arranged on opposite sides of the armature and independently adjustable toward and from the armature to vary their relative effects thereon.

4. In a polarized relay, a pair of permanent horse shoe magnets arranged substantially in the same plane and with their like poles adjacent, a movable armature pivoted between one pair of said poles and having an arm extending into the space between the permanent magnets and a contact arm extending in the opposite direction, contact devices arranged to coöperate with said contact arm, and an electromagnet located within the permanent magnets and arranged to control the inner arm of the armature.

5. In a polarized relay, a permanent magnet, a movable armature pivoted adjacent to one pole of the permanent magnet, a pole piece attached to the other pole of the permanent magnet and extending close to the free end of the armature, and two electromagnets arranged on opposite sides of the armature and independently adjustable toward and from the armature.

960,929. TOILET-PAPER HOLDER. ALBERT B. HUBBARD, Fruitvale, and SAMUEL J. BENS, Berkeley, Cal. Filed May 29, 1909. Serial No. 499,201.



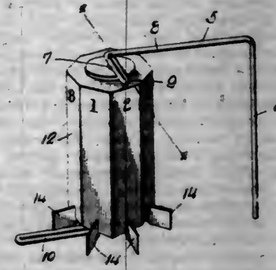
1. In a toilet paper holder, a frame, an arm carrying a roller in a plane with the surface of said frame, resilient means tending to press said roller toward said frame, a needle, said needle mounted on a resilient member, said resilient member having loops therein, said resilient member tending to press the point of said needle toward said frame, and means to rotate said roller in one direction, substantially as described.

2. In a toilet paper holder, a source of paper supply consisting of independent sheets, a frame for supporting the same, a rotatable roller in resilient contact with said paper supply, a needle, said needle mounted on a resilient member, said resilient member having loops therein, said loops being on two sides of said paper supply, said resilient member tending to press the point of said needle in contact with said paper supply, and means to rotate said roller in one direction, substantially as described.

3. In a toilet paper holder, a frame, an arm carrying a roller in a plane with the surface of said frame, an annular member rotatably mounted on said roller, said annular member having an annular groove in its inner circumference, a resilient member secured to said roller and disposed within said groove, and means contained in said annular member to engage said resilient member when turned in one direction, substantially as described.

4. In a toilet paper holder, a frame, an arm carrying a roller in a plane with the surface of said frame, an annular member rotatably mounted on said roller, said annular member having an annular groove in its inner circumference, a resilient member secured to said roller and disposed within said groove, apertures in the periphery of said annular member, and said resilient member adapted to engage in said apertures when said annular member is turned in one direction, substantially as described.

960,930. GAME APPARATUS. GEORGE HUCKSTRA, Shadeland, Ind. Filed Dec. 21, 1909. Serial No. 534,331.



1. A game apparatus comprising a wicket, a bearing plate arranged adjacent the lower end of one limb of the wicket, a barrel rotatably mounted on said limb of the wicket and bearing on the plate and means combined with the barrel and coöperating with a ball when passing through the wicket to rotate the barrel.

2. A game apparatus comprising a wicket, a bearing plate arranged adjacent the lower end of one limb of the wicket, a barrel rotatably mounted on said limb of the wicket and bearing on the plate and means combined with the barrel and coöperating with a ball when passing through the wicket to rotate the barrel, and an indicator located directly above the barrel.

3. A game apparatus comprising a wicket, a bearing plate arranged adjacent the lower end of one limb of the wicket, a barrel provided with a plurality of sides and rotatably mounted on the wicket and bearing on the plate, a plurality of lugs arranged at the lower end of the barrel and an indicator combined with one limb of the wicket and located above the barrel.

4. A game apparatus comprising a wicket, one limb of which is provided adjacent its lower end with a lateral extension constituting the stop, an indicator arranged at the upper end of the said arm and a barrel rotatably mounted on the said arm and arranged between the indicator and lateral extension and a plurality of radial laths extending from the lower end of said barrel.

960,931. MANIFOLDING ACCOUNT-KEEPING APPARATUS. CHARLES F. HUDNALL, Richmond, Va. Filed Apr. 30, 1909. Serial No. 493,085.



1. In an account keeping apparatus the combination with a desk, of loose-leaves each ruled transversely to provide intervening writing spaces of uniform width, and a manifolding ribbon crossing transversely between said leaves said ribbon corresponding in width with the individual writing spaces aforesaid beyond which it projects at one side of the leaves to facilitate registration of the said spaces and ribbon.

2. In an account keeping apparatus the combination with a desk, of loose-leaves each ruled transversely to provide intervening writing spaces of uniform width, a guide for said leaves, and a manifolding ribbon crossing transversely between said leaves said ribbon corresponding in width with the individual writing spaces aforesaid beyond which it projects at one side of the leaves to facilitate registration of the said spaces and ribbon.

3. In an account keeping apparatus the combination with a desk, of loose-leaves each ruled transversely to provide intervening writing spaces of uniform width, a record strip underlying said leaves, and manifolding ribbons crossing said desk transversely between said leaves and record-strip said ribbons corresponding in width with the individual writing spaces aforesaid beyond which they project at one side of the leaves to facilitate registration of the said spaces and ribbons.

4. In an account keeping apparatus the combination with a desk, of loose-leaves each ruled transversely to provide intervening writing spaces of uniform width, a manifolding ribbon crossing transversely between said leaves said ribbon corresponding in width with the individual writing spaces aforesaid beyond which it projects at one side of the leaves, and reels at opposite sides of the desk for carrying said ribbon.

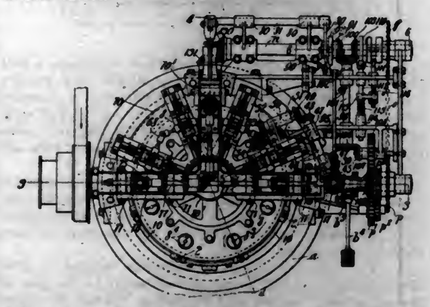
5. In an account keeping apparatus the combination with a desk, of loose-leaves each ruled transversely to provide intervening writing spaces of uniform width, a manifolding ribbon crossing transversely between said leaves said ribbon corresponding in width with the individual writing spaces aforesaid beyond which it projects at one side of the leaves, and reels at opposite sides of the desk for carrying said ribbon mounted in vertically movable frames.

[Claims 6 to 11 not printed in the Gazette.]

960,932. TROLLEY-WHEEL-TURNING MACHINE. FRANCIS HUDSON, Holyoke, Mass. Filed Oct. 20, 1908. Serial No. 458,737.

1. In a turning machine, the combination with a rotatable turret, of substantially parallel spindles journaled thereon and located therein, a shaft rotatable with relation to the turret and located axially therein and substantially parallel to the spindles, a master gear mounted on the shaft within the turret, pinions mounted on the spindles within the turret and meshing with the master gear, mechanism for automatically connecting and disconnecting the pinions and spindles on the rotation of the turret, and means for effecting the intermittent rotation of the said turret.

2. In a turning machine, the combination with a rotatable turret, of spindles journaled thereon and located therein, a shaft rotatable with relation to the turret and located axially therein, a master gear mounted on the shaft within the turret, pinions mounted on the spindles within the turret and meshing with the master gear, mechanism for automatically connecting and disconnecting the pinions and spindles on the rotation of the turret, a main drive shaft, gears connected to the master wheel shaft and driving shaft for continuously operating the latter, a gear fixed to the turret concentric to the gear of the master wheel shaft, and power-transmitting mechanism interposed between the drive shaft and turret gear for effecting an automatic and intermittent rotation of said turret.



3. In a turning machine, the combination with supporting means, of a rotatable turret journaled thereon on an upright axis, a beveled gear fixed to the lower end of the turret, a main drive shaft extending transversely through the supporting means, mechanism connecting the main drive shaft and the beveled gear for effecting an automatic and intermittent rotation of the turret, a vertical shaft journaled axially in the turret, gearing connecting the main drive shaft and the vertical shaft, a master wheel on said shaft, a plurality of work-carrying devices rotatably mounted on the turret, pinions journaled on said devices and in mesh with the master wheel, clutches for connecting and disconnecting the pinions and the devices, and means for effecting the automatic operation of the clutches on the rotation of the turret.

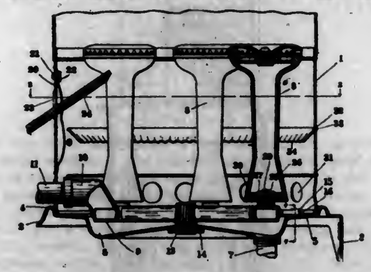
4. In a turning machine, the combination with a rotatable turret, of means for effecting an intermittent rotation of the same, said means including a driven shaft geared to the turret, a driving wheel journaled on the shaft, a key slidable longitudinally of the shaft into and out of engagement with the driving wheel, a wedge device operating transversely of the shaft and engaging the key to move the same, a cam rotatable on the shaft, means for continuously rotating the cam, and a wedge actuating device engaging the cam and operated thereby.

5. In a turning machine, the combination with a base, of a turret rotatable thereon, means for intermittently rotating the turret, a plurality of wheel supports carried by the turret, a plurality of cutters movable into and out of coöperation with the wheel supports, and means for moving the cutters, including an actuating device for each cutter, a shaft comprising angularly disposed sections, each geared to an actuating device, and universal joints connecting the sections.

[Claims 6 to 13 not printed in the Gazette.]

960,933. WATER-HEATER. HERBERT S. HUMPHREY, Kalamazoo, Mich. Filed Mar. 31, 1908. Serial No. 424,323.

1. The combination with a cylindrical casing, of a base plate therefor having a raised annular rib at its outer edge adapted to form a seat for said casing, and having a downwardly inclined ledge-like portion extending inwardly from said rib and a depressed central portion, the bottom of said central portion being convexed, said casing being arranged on said base plate to be adjusted thereon; burners; a gas delivery ring adapted to support said burners; a cross piece for said ring having a central threaded post arranged through a central opening provided therefor in said base plate; a nut for said threaded post arranged on the under side of said base plate; and outwardly projecting supporting arms for said ring adapted to rest on the said ledge-like portion of said base plate, whereby said gas delivery ring is supported on said base plate, to be adjusted with said casing.



2. The combination with a casing, of a base plate therefor having a depressed central portion, the bottom of said central portion being convexed and an inwardly inclined ledge-like portion surrounding said depressed portion, said casing being arranged on said base plate to be adjusted thereon; burners; a gas delivery ring on which said burners are mounted; a cross piece for said ring having a central threaded post arranged through a central opening provided therefor in said base plate; a nut for said threaded post arranged on the under side of said base plate; and supports for said ring adapted to rest on the said ledge-like portion of said base plate, whereby said gas delivery ring is adjustably supported on said base plate.

3. The combination with a casing, of a base plate therefor having a depressed central portion, the bottom of said central portion being convexed and an inwardly inclined ledge-like portion surrounding said depressed portion, said casing being arranged on said base plate to be adjusted thereon; burners; a gas delivery ring on which said burners are mounted; a cross piece for said ring having a central post arranged through a central opening provided therefor in said base plate; and supports for said ring adapted to rest on the said ledge-like portion of said base plate whereby said gas delivery ring is supported on said base plate to be adjusted with said casing.

4. The combination with a casing, of a base plate therefor, said casing being arranged on said base plate; burners; a gas delivery ring on which said burners are mounted adjustably arranged on said base plate; a cross piece for said ring having a post arranged through an opening provided therefor in said base plate; securing means for said post arranged on the under side of said base plate; and supports for said ring adapted to rest on said base plate, whereby said gas delivery ring is supported on said base plate to be adjusted with said casing.

5. The combination with a casing, of a base plate therefor, said casing being arranged on said base plate to be adjusted thereon; burners; a gas delivery ring having a plurality of upwardly projecting nozzles adapted to receive and support said burners; a cross piece for said ring having a post arranged through an opening provided therefor in said base plate; and supports for said ring adapted to rest on said base plate, whereby said gas delivery ring is supported on said base plate to be adjusted with said casing.

[Claims 6 and 7 not printed in the Gazette.]

960,934. JOINT CONSTRUCTION. DAVID E. HUNTER, Cambridge, Mass., assignor to Library Bureau, Boston, Mass., a Corporation of New Jersey. Filed Sept. 7, 1909. Serial No. 516,532.

1. A joint construction comprising two members having abutting joint-making faces, each member provided with a locking recess having an enlarged inner part and a constricted throat part opening through the joint-making face, the throat parts of said recesses registering with each other when the members are juxtaposed, and a locking dog consisting of a concavo-convex sheet of soft metal having enlarged end parts and a constricted middle part conforming in contour with said juxtaposed recesses, adapted to be expanded within said recesses by flattening.



2. A joint construction comprising two members having abutting joint-making faces, each member provided with a locking recess having an enlarged inner part and a constricted throat part opening through the joint-making face, the throat parts of said recesses registering with each other when the members are juxtaposed, and a locking dog consisting of a concavo-convex sheet of soft metal having enlarged end parts and a constricted middle part conforming in contour with said juxtaposed recesses, and having its margin notched or slitted, adapted to be expanded within said recesses by flattening.

3. A joint construction comprising two members having abutting joint-making faces, each member provided with a recess countersunk in one of its exposed faces, said countersunk recesses having enlarged curvilinear inner parts and constricted throat parts opening through said joint-making faces, the said throat parts registering with each other when the two members are juxtaposed, and said recesses undercut to provide an overhanging lip, and a locking dog consisting of a concavo-convex sheet of soft metal having enlarged curvilinear end parts and a constricted middle part conforming in contour with said juxtaposed recesses, and having a beveled edge to engage the overhanging lips of said recesses, said dog adapted to be expanded within said recesses by flattening.

4. A joint construction comprising two members having abutting joint-making faces, each member provided with a locking recess countersunk in one of its exposed faces and undercut to provide an overhanging lip, said locking recesses opening through the joint-making faces and also through said exposed faces, and a locking dog engaging said recesses adapted to be inserted therein by being passed through the openings in the exposed faces of the members, fitting under said retaining lips and held thereby within said recesses.

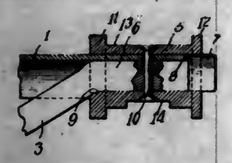
5. In a joint construction, in combination, two members having abutting joint-making faces, each member provided with a locking recess opening both through the joint-making face and through the exposed face, and a locking dog conforming in contour with said recesses, made of soft metal, and adapted to be passed through the openings in the exposed faces of said members and to be expanded therein.

[Claim 6 not printed in the Gazette.]

960,935. BRAKE-BEAM. CHARLES F. HUNTOON, Chicago, Ill., assignor to Henry D. Laughlin, Chicago, Ill. Filed Dec. 17, 1909. Serial No. 533,709.

1. A brake-beam, comprising a compression member, a tension member, a strut, said tension member being bent at its ends so as to lie substantially parallel with said compression member adjacent to its ends, means for preventing relative shifting of said members in a longitudinal direction, and a brake-head member surrounding the adjacent end portions of said compression and tension mem-

bers, said head member being shrunk in position so as to normally exert a pressure for forcing said members into unyielding engagement with each other.



2. A brake-beam, comprising a compression member of U-shaped cross-section, a tension member, a strut, said tension member being bent at its ends so as to lie within and substantially parallel with said compression member adjacent to its ends, means for preventing relative shifting of said members in a longitudinal direction, and a brake-head member surrounding the adjacent end portions of said compression and tension members, said head member being shrunk in position so as to normally exert a pressure for forcing said members into unyielding engagement with each other.

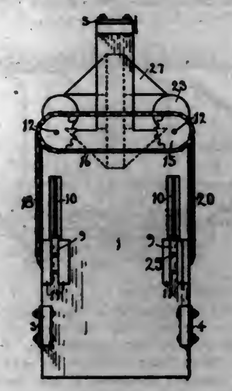
3. A brake-beam, comprising a compression member, a tension member, a strut, said tension member being bent at its ends so as to lie substantially parallel with said compression member adjacent to its ends, an integral shoulder on said tension member adapted to engage the end of said compression member for preventing relative shifting of said members in a longitudinal direction, and a brake-head member surrounding the adjacent end portions of said compression and tension members, said head member being shrunk in position so as to normally exert a pressure for forcing said members into unyielding engagement with each other.

4. A brake-beam, comprising a compression member, a tension member, a strut, said tension member being bent at its ends so as to lie substantially parallel with said compression member adjacent to its ends, means for preventing relative shifting of said members in a longitudinal direction, and a brake-head member surrounding the adjacent end portions of said compression and tension members, said head member having therein an aperture shaped to fit snugly around the adjacent end portions of said compression and tension members and said head member being shrunk in position upon said tension and compression members so as to normally exert a pressure forcing them into unyielding engagement with each other, and said head member having thereon a surface bearing on said tension member and extending throughout the adjacent bend in said tension member so as to prevent yielding of the tension member at said bend when under strain.

5. A brake-beam, comprising a compression member, a tension member, a strut, said tension member being bent at its ends so as to lie substantially parallel with said compression member adjacent to its ends, means for preventing relative shifting of said members in a longitudinal direction, a brake-head member surrounding the adjacent end portions of said compression and tension members, said head member being shrunk in position so as to normally exert a pressure for forcing said members into unyielding engagement with each other, the periphery of said member being substantially a surface of revolution with respect to an axis disposed longitudinally of said compression member, and a brake-head mounted on said head member to have limited rotary movement with respect to said axis.

960,936. MECHANICAL MOVEMENT. BYRON HUBE, Palermo, Cal., assignor of one-half to George M. Sparks, Oroville, Cal. Filed May 4, 1909. Serial No. 493,901.

1. In a mechanical movement, a frame having a rail at each side thereof, a pitman head slidable between the rails, blocks projecting from said pitman head on each side thereof, and a traveling roller on each side of the pitman head, one of said rollers adapted to contact with said blocks on one side of the head to move the same in one direction while the other traveling roller contacts with the blocks on the opposite side of the head to move the head in the opposite direction, as set forth.



2. In a mechanical movement, a frame having a pair of oppositely placed guide rails therein, a pitman head slidable in said guide rails, four pairs of rollers on said head and adapted to reduce the friction of said head and rails, two sets of chains one on each side of the pitman head, drive sprockets which said chains pass over, loose adjustable sprockets which the chains pass over, a roller carried by each set of chains, said rollers adapted to move said pitman head alternately in opposite directions, and means to drive the chains.

3. In a mechanical movement, a frame having a pair of oppositely placed rails, a pitman head slidable on said rails, four sets of rollers adapted to guide said head along said rails whereby the friction is reduced, blocks carried on opposite sides of said head, two sets of chains on opposite sides of the head a roller carried by each set of chains and adapted to move the head in opposite directions by contacting with the blocks carried thereby, and means to drive the chains at the same rate of speed.

960,937. GLOVE-REVERSING DEVICE. AUGUSTUS F. IMBRIE, San Francisco, Cal. Filed Sept. 13, 1909. Serial No. 517,398.



An improved glove turning device, said device consisting of fixed and movable plates, one slidably fitted to the other, each of said plates having an upwardly extending portion and said portions having oppositely projecting rods, the rods being axially in line and being arranged substantially parallel with but separated from the upper surface of the plates, and adapted to abut endwise, and a spring acting upon the movable plate to cause it to be moved outwardly to separate its rod from the rod of the other plate, said spring being compressible to allow the rods to approach and contact, one of said plate extensions serving as a pressure member to permit its plate to be moved against the pressure of said spring.

960,938. BOLT. RAY BOONE INGELS, Caple, Okla. Filed Dec. 28, 1908. Serial No. 469,721.



A nut lock comprising a bolt having an exteriorly threaded portion, a nut engaged with the threaded portion of the bolt, the said threaded portion of the bolt being interrupted by a longitudinally extending recess, the said recess being of substantially V-form in transverse section, and a locking dog mounted in the recess and free to rock therein, the said dog conforming substantially in transverse section with the shape of the said recess and having its reduced end mounted in the recess at the point of intersection of the walls thereof so that the walls serve as a fulcrum for the dog, said dog having an arcuate threaded face adapted for engagement with the threaded portion of the nut, the said dog being formed adjacent to the arcuate surface with a recess which is arranged in opposing relation with respect to one wall of the said recess and adapted to be closed by the said wall when the dog is in its locked position.

960,939. COLORED PHOTOGRAPHIC PRINT AND MAKING SAME. FREDERIC E. IVES, Weehawken, N. J. Filed Sept. 14, 1909. Serial No. 517,619.

1. As an improvement in the process of making colored photographic prints, the mode herein described, which consists in providing the surface of a transparent supporting body with a sensitised coating of cold-water-soluble glue, then exposing this sensitized coating, through the transparent support, to light coming through a negative, and then developing in water to produce a relief print graduated in thickness.

2. As an improvement in the process of making colored photographic prints, the mode herein described, which consists in providing the surface of a transparent supporting body with a sensitised coating of cold-water-soluble glue, then exposing said sensitized coating, through the transparent support, to light coming through a negative, and then developing and dyeing the said exposed coating to produce a colored relief print graduated in thickness.

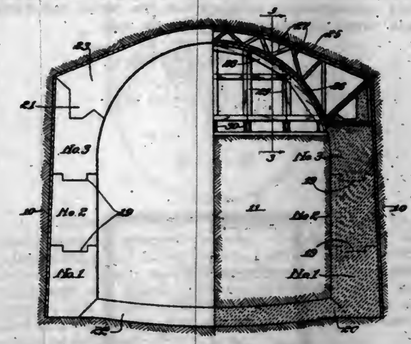
3. As an improvement in the process of making colored photographic prints, the mode herein described, which consists in providing the surface of an amylacetate collodion film with a sensitised coating of fish glue, then exposing said sensitized coating, through the collodion film, to light coming through a negative, and then developing and dyeing the exposed coating to produce a colored relief print graduated in thickness.

4. As an improvement in the process of making colored photographic prints, the mode herein described, which consists in providing the surface of an amylacetate collodion film with a sensitised coating of fish glue soluble in cold water, then exposing said sensitised coating, through the collodion film, to light coming through a negative, and then developing and dyeing the exposed coating to produce a colored relief print graduated in thickness.

5. As an improvement in the process of making colored photographic prints, the mode herein described, which consists in providing the surface of an amylacetate collodion film with a sensitised coating of fish glue, then exposing said sensitised coating, through the collodion film, to light coming through a negative, and then developing and dyeing said coating to produce a colored relief print graduated in thickness.

[Claims 6 to 20 not printed in the Gazette.]

960,940. ART OF CONSTRUCTING TUNNELS IN THE EARTH. GEORGE W. JACKSON, Chicago, Ill. Filed Feb. 18, 1910. Serial No. 544,528.



1. The improvement in the art of constructing tunnels in the earth, which consists in first building the side walls of the tunnel complete without open cut excavations, thereafter excavating the earth at the roof section and between the side walls and constructing the arch and the invert or floor.

2. The improvement in the art of constructing tunnels in the earth, which consists in excavating narrow tunnels wholly beneath the surface of the earth along the lines of the side walls of the proposed tunnel, filling said narrow tunnels with wall forming material from within to constitute the side walls of the tunnel, excavating the earth between the side walls so constructed, and lining the upper and lower walls of the excavation to constitute the roof and floor respectively of the tunnel.

3. The improvement in the art of constructing tunnels in the earth, which consists in first forming the side walls of successively higher courses, beginning at the bottoms thereof, thereafter excavating the earth between the side walls and constructing the arch or roof wall and laying the invert or floor.

4. The improvement in the art of constructing tunnels in the earth, which consists in first building the side walls by excavating successively higher wall section tunnels along the lines of the proposed side walls, beginning at the lower level of the walls, and separately filling each tunnel with concrete or other wall forming material before the next higher wall section tunnel is excavated, thereafter excavating the earth from the roof section and forming the arch or roof wall of the tunnel and finally excavating the earth beneath the roof section and between the side walls and laying the invert or floor.

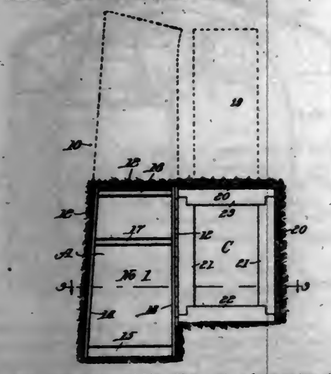
5. The improvement in the art of constructing tunnels in the earth, which consists in first building the side walls of the tunnel complete without open cut excavation, thereafter excavating the earth from the roof section between and above the level of the side walls in short lengths, thereafter placing supporting and form lagging beneath the roof of the excavation as the short lengths are mined and supporting said lagging from the middle or unexcavated earth section between the side walls, thereafter filling the space between the supporting and form lagging with wall forming material to form the arch or roof of the tunnel wall and finally excavating the middle earth section in short lengths and laying the invert.

[Claims 6 to 10 not printed in the Gazette.]

960,941. CONSTRUCTING CONCRETE AND LIKE WALLS IN THE EARTH. GEORGE W. JACKSON, Chicago, Ill. Filed Mar. 19, 1910. Serial No. 550,529.

1. The improvement in the art of constructing concrete and like walls in the earth, which consists in excavating a tunnel along the line of the proposed wall, excavating an inlet and outlet drift laterally alongside of the tunnel,

providing communicating openings between said tunnel and drift at separate points throughout the length of the tunnel and conveying filling material through said drift and said communicating openings into the tunnel and filling said tunnel therewith to complete the wall.



2. The improvement in the art of constructing concrete and like walls in the earth, which consists in excavating a tunnel along the line of the proposed wall, excavating an inlet and outlet drift laterally alongside of the tunnel throughout the length of the latter, bracing and lagging said tunnel and drift, having a single lagging wall arranged to separate the drift and tunnel, removing sections of the latter lagging wall at different points along the tunnel and drift to provide separate communicating openings between the tunnel and drift, and conveying filling material through said drift and said communicating openings into the tunnel and filling said tunnel therewith to complete the wall.

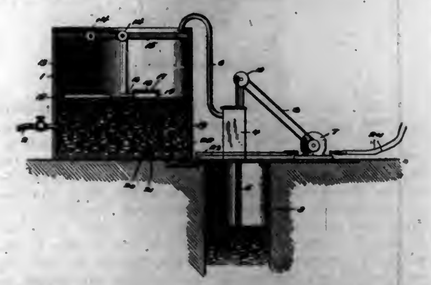
3. The improvement in the art of constructing concrete and like walls in the earth, which consists in excavating successively higher wall section tunnels, beginning at the lower level of the wall, separately filling each wall section tunnel with wall forming material, excavating inlet and outlet drifts laterally alongside the wall section tunnels, and providing communicating openings between the drifts and the tunnels at separate points throughout the length of said tunnels.

4. The improvement in the art of constructing concrete and like walls in the earth, which consists in excavating a wall section tunnel, filling the tunnel at separated points with spaced bodies of wall forming material, supporting the tunnel roof intermediate the spaced filling bodies with temporary supporting means, while the spaced bodies of filling material sets, and finally filling the sections of the tunnel previously occupied by said temporary supporting means with wall forming material to complete the wall.

5. The improvement in the art of constructing concrete and like walls in the earth, which consists in excavating a tunnel along the line of the proposed wall, excavating an inlet and outlet drift laterally alongside of the tunnel, providing communicating openings between said tunnel and drift at separate points throughout the length of the tunnel, filling the tunnel through said drift at points along its length with spaced bodies of filling material, supporting the tunnel roof intermediate the spaced filling bodies with temporary supporting means while the spaced bodies of filling material set and finally filling the tunnel intermediate the spaced bodies to complete the wall.

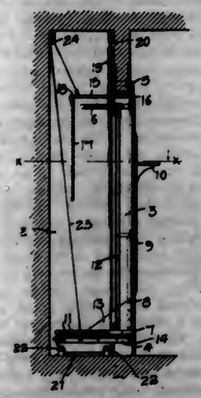
960,942. AUTOMATIC PUMP. SAMUEL J. JACKSON, Pleasanton, Cal. Filed Aug. 17, 1909. Serial No. 513,226.

1. The combination of a water supply, a pump, an electric motor for driving said pump, a tank, a pipe leading from the pump to the tank, a service pipe leading off from the tank, a float and a weight joined by a flexible connection leading over superimposed guides, a pivoted circuit closing lever having one arm arranged in the path of movement of said weight, another lever also arranged in the path of said weight while moving in the opposite direction, and a rod connecting the two levers, whereby the electrical circuit controlling the motor is automatically opened and closed in accordance with the level of water in the tank, substantially as described.



2. The combination of a water supply tank, a pump for supplying water thereto, a motor for driving the pump, a device for throwing the motor into and out of operation, a float actuated element arranged within the tank, and means mounted wholly within the tank for controlling the said device, said means consisting of separate levers spaced apart one above the other and separately mounted in the tank and between which the element moves with the varying level in the tank for raising one lever when the maximum level is reached and for depressing the other lever when the minimum level is reached, a connecting member between the levers for causing the same to move together when either lever is actuated by the element to control the said device, said levers and members being so arranged that they will remain in a position to which they are moved by the element.

960,943. WALL-BED. WILLIAM S. JENSEN, Minneapolis, Minn. Filed Mar. 16, 1909. Serial No. 483,736.



1. A wall having a recess therein and a bed adapted to swing upwardly into said recess, the opening into said recess above the head of the bed being exposed when the bed is lowered to a horizontal position, a door suspended within said opening in the plane substantially of said wall and normally closing the said opening when the bed is lowered to a horizontal position, and means actuated by the movement of the bed when raised for withdrawing said door backwardly into said recess out of the path of the bed.

2. The combination, with a wall having a recess therein, of a bed hinged at one end and adapted to fold upwardly into said recess, a door composed of sections hinged together, the upper section being hinged to the top of said entrance, and means connecting said door with said bed, whereby when the bed is raised, said door will be swung inwardly into said recess; for the purpose specified.

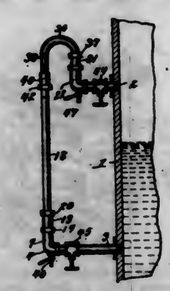
3. The combination, with a wall having a recess therein adapted to receive a bed, a bed capable of swinging to an upright folded position within said recess, a door arranged to close the entrance to said recess when the bed is lowered, said door being composed of lower and upper sections hinged together, and said upper section being pivotally connected with the wall of said recess, and said upper section being of greater width than the depth of the bed, and flexible means connecting said door with said bed, whereby when the bed is raised said door will be drawn inwardly to its folded inoperative position and when the bed is lowered, said door will drop by gravity to its closed or operative position.

4. A wall having a recess therein and a bed adapted to swing to an upright position within said recess, a door suspended at its upper end and adapted to move forward into the opening above the head of the bed when it is lowered to a horizontal position to conceal said recess, and means actuated by the movement of the bed to an upright position for retracting said door within said recess.

5. A wall having a recess therein, a bed adapted to swing upwardly into said recess and a horizontally hinged door suspended at its upper end and arranged to close the opening leading to said recess, said door swinging inwardly when the bed is raised and returning to its normal closing position when the bed is lowered.

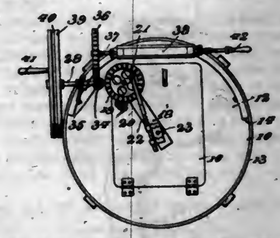
[Claims 6 and 7 not printed in the Gazette.]

960,944. WATER-GAGE. CARL WILHELM JOHNSON, Brockwayville, and CHARLES MERRIDITH RATHER, Pittsburg, Pa. Filed Nov. 4, 1909. Serial No. 526,233.



A water gage for steam boilers comprising upper and lower elbow members, valved pipes for connecting the same to a boiler above and below the water line thereof respectively, said members each having an upwardly extending portion, vertical guides formed in said portions and extending to the upper end thereof, a ball in each of said portions between said guides, lugs on the lower ends of said guides to limit the downward movement of the balls, cap pieces secured to the upper ends of said upwardly extending portions, said cap pieces being provided with passage ways and formed with valve seats at their lower ends against which said balls are adapted to be directed by said guides, a sight glass, a socket for the lower end of said sight glass in the cap piece of said lower elbow member and communicating with the passage way in said cap piece, a socket in the upper end of the cap piece on the upper elbow, a return bend having a ball on one end fitting in said socket and a socket at the other end of the bend to receive the upper end of the sight glass and means for securing said ball in its respective socket, substantially as described.

960,945. GEARING. CHRIS P. JOHNSON, Newcastle, Cal. Filed Sept. 30, 1909. Serial No. 520,233.



1. A device as specified including a support, a drive shaft mounted adjacent the edge of said support and adapted for reciprocation thereon, a pinion carried by said drive shaft, a gear mounted on said support for engagement with said pinion, a vertical shaft disposed on said support, and means connected to said vertical shaft and said gear for reciprocating said vertical shaft upon the rotation of said gear.

2. A system of gears including a drive shaft, a support for said drive shaft, a lever mounted on the support and connected with said drive shaft to longitudinally reciprocate the same, a beveled pinion located upon the inner end of said drive shaft, a gear mounted on said support, adjacent the pinion, a pitman carried by said gear and having rack teeth, a brace mounted on the support, and extended inwardly from the gear, a reciprocating shaft mounted on the support and through the opposite end of the brace, a pinion carried by said reciprocating shaft, and meshing with the teeth of said pitman, a guide mounted upon said reciprocating shaft and engaging said pitman, a spur gear mounted upon the inner end of said shaft adjacent said beveled pinion, a second shaft carried by said support, and a gear mounted on said second shaft adjacent said spur gear, said drive shaft being adapted to reciprocate to alternately engage the spur gear and the pinion with the respective gears.

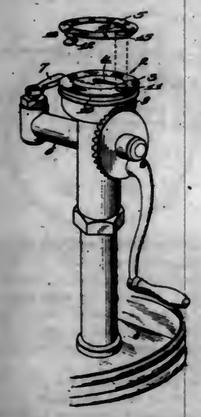
3. The combination with a support of a brace located across the top thereof, said brace being apertured, a vertical shaft carried through one end of said brace, a pinion located upon the upper end of said shaft, a beveled gear mounted upon the outer end of said brace, a pitman carried by said gear and having rack teeth meshed with said pinion, a guide carried by said shaft for engagement with said rack to retain the same against said pinion, a drive shaft mounted on said support, a beveled pinion carried upon the inner end of said drive shaft for intermeshed relation with said beveled gear, and a hand-lever carried by said support and connected to said drive shaft to reciprocate the same to disengage the beveled gear at times.

4. A device as specified including a support, a shaft located on said support, a pinion carried by said shaft, a guide carried by said shaft adjacent said pinion, a gear carried by said support, a pitman carried by said gear for engagement through said guide, said pitman having rack teeth meshing with said pinion, a drive shaft carried by said support and adapted for longitudinal reciprocation, a beveled pinion located on said drive shaft for engagement with said beveled gear, a fly-wheel located upon the outer end of said shaft to impart rotation to the same, and means carried by the support for reciprocating said shaft to throw said beveled pinion out of engagement with said gear at times.

960,946. PRICE-COMPUTING ATTACHMENT FOR MEASURING-FAUCETS. CABELL JONES, Spray, N. C. Filed Oct. 20, 1909. Serial No. 523,637.

1. A computing attachment for measuring implements comprising a graduated ring adapted for superposition upon the dial of the implement, said dial being provided with a centering member, and said ring having a portion thereof elongated to constitute a means for centering the ring with respect to the dial, said elongated portion being

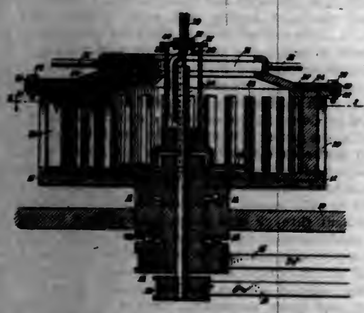
provided with an opening adapted to receive said centering member.



2. A computing attachment for measuring implements comprising a graduated ring adapted for superposition upon the dial of the implement, the graduations on said ring registering with and forming continuations of those on said dial, and retaining clips provided upon said ring for removable engagement with the dial.

3. The combination, with a measuring implement having a dial, an indicator associated with the same, and a centering stud projecting from said dial; of a computing attachment comprising a graduated ring superposed on the dial, and provided with an opening designed to receive the stud and with retaining means adapted to engage the dial, the graduations on said ring registering with and forming continuations of those on said dial.

960,947. SEPARATOR. MARION SLEMONS JONES, Baltimore, Md. Filed Oct. 21, 1909. Serial No. 523,739.



1. A centrifugal separator comprising a revoluble apertured drum and a revoluble apertured casing fitted over the said drum, the said apertures in the said drum being adapted to receive material, and the said apertures in the said casing being adapted to discharge material, a cover for the said drum secured to the said casing and provided with cut-offs extending into the said drum, and distributing means in the said drum adapted to rotate and to reciprocate longitudinally in the drum to distribute the material received therein.

2. A centrifugal separator, comprising a revoluble apertured drum, the said apertures in the drum being adapted to receive material, a revoluble apertured casing fitted over the said drum, the said apertures in the casing being adapted to discharge the material received by the said drum, a cover for the said drum secured to the said casing, and cut-offs secured to the said cover, adjacent the inside periphery of the said drum.

3. A centrifugal separator, comprising a revoluble drum, longitudinally disposed apertures in the said drum adapted to receive material, a revoluble casing fitted over the said drum, longitudinally disposed apertures in the casing adapted to discharge the material received by the said drum, a cover for the said drum secured to the said casing, oppositely-disposed cut-offs on the said cover extending into the said drum and oppositely-disposed outlets in the said cover for disposing of material in the said drum.

4. A centrifugal separator, comprising a revoluble apertured drum, the said apertures in the drum being adapted to receive material, a revoluble apertured casing fitted over the said drum, the said apertures in the casing being adapted to discharge the material received by the said drum, a cover for the said drum secured to the said casing, cut-offs secured to the said cover, adjacent the inside periphery of the said drum, and a revoluble distributer in the said drum adapted to distribute the material received by the said apertures in the said drum.

5. In a centrifugal separator, a revoluble longitudinally-apertured drum secured to a shaft, the said apertures in the said drum being adapted to receive material, a revoluble longitudinally-apertured casing fitted over the said drum, secured to a second shaft, a cover for the said drum secured to the said casing, downwardly extending cut-offs on the said cover, outlets in the said cover for centrifugally disposing of material in the said drum, and driving means for independently rotating the said shaft secured to the said drum and the said shaft secured to the said casing.

[Claims 6 to 9 not printed in the Gazette.]

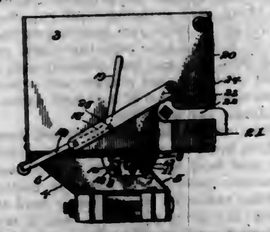
960,948. BUILDING-BLOCK. GEORGE ADAM KAHL, Plainsberg, Cal. Filed Apr. 19, 1907. Serial No. 369,127.



1. In a structure composed of a series of building blocks disposed in break joint order, a block having on one side a centrally disposed longitudinal rib, and on its other side a centrally disposed longitudinal groove, the rib and groove extending the entire length of the block and a second block having on one side adjacent to one end a transverse rib, and on the same side a centrally disposed longitudinal rib that terminates short of the transverse rib a distance equal to one half the width of the first block, the second block being provided on the side opposite that carrying the transverse rib with a transverse groove arranged directly opposite the transverse rib, and a centrally disposed longitudinal groove opposite the centrally disposed longitudinal rib that terminates short of the transverse groove.

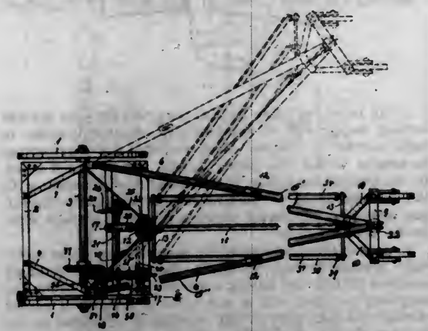
2. A building block having on one side adjacent to one end a transverse rib, and on the same side a centrally disposed longitudinal rib that terminates short of the transverse rib a distance equal to one half the width of said block, said block being provided with grooves on its opposite face, corresponding to each of said ribs.

960,949. DUMPING-CAR. ULYSSES WINFIELD KEECH, Enumclaw, Wash. Filed Mar. 30, 1909. Serial No. 486,784.



A dumping car comprising a base frame provided at one side with latch members, a body pivotally mounted on the frame and having a gravity opening door provided with latch members projecting beyond the ends thereof, a rock shaft on the side of the body provided with latch members to engage the latch members on the frame and having crank arms at its ends arranged at the ends of the body, one of said arms being extended to form an operating lever, locking hooks on the ends of the body to engage the latch members on the door and provided with crank arms, links composed of spaced plates connecting the crank arms of the locking hooks with the crank arms of the rock shaft and between the plates of which the latter are adapted to fold, and stops carried by said link plates to limit the swinging movement of said crank arms.

960,950. HAY-TURNING MACHINE OF THE DRUM TYPE. LEONHARD KESSER, Simmelsdorf, near Schnaittach, Germany. Filed July 31, 1909. Serial No. 510,674.



1. A tedder and rake comprising in combination, a forward truck, a trailing truck, a tooth carrying frame mounted on and between said trucks, and extensible means for holding said trailing truck in an angular position with respect to said forward truck.

2. A tedder and rake comprising in combination, a forward truck, a trailing truck, a tooth carrying frame mounted on and between said trucks, and extensible means for holding said trailing truck in a position angular to or in alinement with the longitudinal axis of the forward truck.

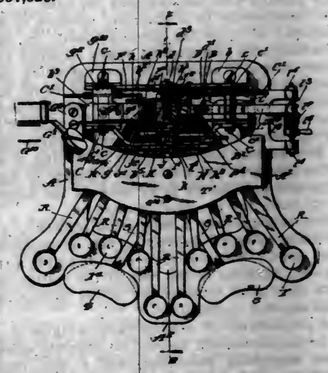
3. A combined tedder and rake comprising in combination, a forward truck, a trailing truck, a tooth carrying frame rotatively mounted on and between said trucks, mechanism for transmitting rotary movement to said frame, and extensible means for holding said trailing truck in an angular position with respect to said forward truck.

4. A combined tedder and rake comprising in combination, a forward truck, a trailing truck, a tooth carrying frame rotatively mounted on and between said trucks, means for holding said trailing truck in alinement with or in positions angular to said forward truck, and mechanism controlled by said means for throwing said frame into operation when in an angular position and out of operation when in an alined position with respect to said forward truck.

5. A combined tedder and rake comprising in combination, a forward truck, a trailing truck, a tooth carrying frame rotatively mounted and between said trucks, means for holding said trailing truck in alinement with or in a position angular to the longitudinal axis of said forward truck, and mechanism controlled by said means for transmitting relatively slow rotation to said frame when in one angular position and relatively rapid rotation thereto when in another position and throwing said frame out of operation when in an alined position with respect to said truck.

[Claims 6 to 20 not printed in the Gazette.]

960,951. STENOGRAPHIC MACHINE. WILLIAM J. KEHOE, Washington, D. C. Filed Jan. 10, 1910. Serial No. 537,328.



1. In a stenographic machine, the combination of the base plate, the front and rear vertically arranged brackets secured thereto, ribbon spools and paper feed rollers arranged between the brackets, and adjustable pivot screws on which the spools and rollers are mounted.

2. In a stenographic machine, the combination of the base plate, the front and rear vertically arranged brackets secured thereto, a bracing rod connecting said brackets, ribbon spools and paper feed rollers arranged between the brackets, and means for pivotally mounting said spools and rollers.

3. In a stenographic machine, the combination of the base plate, the front and rear vertically arranged brackets secured thereto, ribbon spools mounted between said brackets, a paper feed roller and platen pivotally mounted between the brackets, another paper feed roller between the brackets, a spring plate in which it is mounted having a recessed portion provided with a spring tongue, and a bracket to which said spring plate is secured and which extends over one of the ribbon spools and is secured to the bed plate behind the rear bracket.

4. In a stenographic machine, the combination of the base plate, the front and rear vertically arranged brackets secured thereto, ribbon spools and paper feed rollers pivotally mounted between the brackets, a ratchet wheel of relatively soft material connected with one of the paper feed rollers, a vertically moving frame also arranged between the brackets, a pawl of relatively soft material engaging said ratchet wheel, a detent pawl mounted on the front bracket, and means for actuating the feed frame.

5. In a stenographic machine, the combination of a paper feed roller and platen, a vertically moving feed frame, a ratchet wheel connected with the feed roller, a pawl carried by the feed frame and engaging the ratchet wheel, and a tooth carried by the frame and also engaging said ratchet wheel.

[Claims 6 to 13 not printed in the Gazette.]

960,952. INSEAM-TRIMMING MACHINE. WILLIAM B. KNIGHLEY, Vineland, N. J. Filed Feb. 1, 1909. Serial No. 475,425.



1. The combination in a trimming machine of a band knife capable of operating simultaneously on opposite sides of the shoe; with shoe guiding means constructed to engage a shoe at a plurality of points; and capable of limiting the depth of the cut of the knife; said guiding means including a relatively thin elongated plate extending substantially parallel with and engaging the knife.

2. The combination in a trimming machine of a band knife capable of operating simultaneously on opposite sides of a shoe; and shoe guiding means including an elongated plate mounted adjacent to and extending substantially parallel with said knife in position to lie between the knife and the main portion of a shoe being operated on.

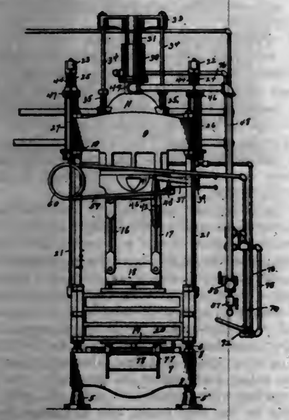
3. The combination with a band knife capable of engaging and operating simultaneously upon opposite sides of a shoe, of a guiding device therefor consisting of a relatively thin elongated plate mounted adjacent to and parallel with said knife so as to lie between the acting portion of the knife and the shoe operated on.

4. The combination of a supporting structure, a band knife mounted to simultaneously operate on opposite sides of a shoe, and an elongated plate carried by the structure with its edge adjacent to the rear of the cutting edge of the knife and lying between the acting portion of the knife and the shoe operated on.

5. The combination of a band knife mounted so as to be free to simultaneously operate on opposite sides of a shoe, two supporting structures, and a thin elongated plate extending between said structures adjacent to and parallel with the knife.

[Claims 6 and 7 not printed in the Gazette.]

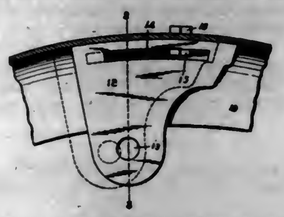
960,953. HYDRAULIC CEMENT-BLOCK-MAKING MACHINE. WILLIAM L. KENY, Marion, Ohio, assignor of one-half to Gebhard Jaeger, Columbus, Ohio. Filed June 3, 1909. Serial No. 499,902.



1. A machine of the character described, comprising a base and a fixed head, supporting members extending from said base to said fixed head, a ram in said fixed head, a vertically movable mold box, a swinging platen member adapted to enter said mold box, a presser head swingingly mounted upon the plunger of said ram, a second ram adapted to swing said swinging head out of alinement with said plunger, a third ram mounted upon said first named ram in vertical alinement therewith, connections between said third ram and said plunger, said third ram being adapted to elevate said plunger, and a pair of rams mounted upon opposite sides of said first named ram and adapted to elevate the mold box.

2. A machine of the character described, comprising a base and a fixed head, supporting members extending from said base to said fixed head, a ram in said fixed head, a vertically movable mold box, a swinging platen member adapted to enter said mold box, a presser head swingingly mounted upon the plunger of said ram, a second ram adapted to swing said swinging head out of alinement with said plunger, a third ram mounted upon said first named ram in vertical alinement therewith, connections between said third ram and said plunger, said third ram being adapted to elevate said plunger, a pair of rams mounted upon opposite sides of said first named ram and adapted to elevate the mold box, and springs which yieldingly support said mold box a short distance above said base.

960,954. PUMP-HANDLE. CLAYTON L. KENYON, Tama, Iowa. Filed Jan. 2, 1909. Serial No. 470,350.



1. An improved pump handle, comprising a body portion formed hollow and of substantially inverted U-shape in cross section, a fulcrum block mounted for longitudinal movement within the hollow handle and extended below it, the sides of the hollow handle being in engagement with the fulcrum block to prevent lateral movement thereof, and means for adjustably securing the fulcrum block within the hollow handle.

2. An improved pump handle comprising a sheet metal body portion formed hollow, a fulcrum block slidingly mounted therein and having a portion projected below the body and provided with a bolt opening, and a bolt passed through the body portion and adjustably connected to the fulcrum block.

3. An improved pump handle comprising a body portion formed complete of a single piece of sheet metal substantially U shaped in cross section, and provided at one end with a bolt opening, a fulcrum block arranged within the body portion and shaped to fit it, and having a part projecting below the body portion, said part being provided with a bolt opening, said fulcrum block also being provided with a longitudinal slot near its upper portion parallel with the adjacent portion of the said body, a nut in said slot and a bolt passed through the body portion of the handle and through the upper portion of the fulcrum block and seated in said nut, substantially as and for the purposes stated.

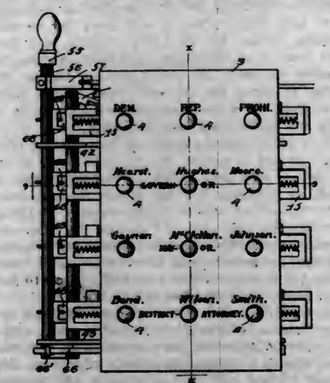
960,955. CHURN. EZRA L. KING, Buchanan, Tenn. Filed Mar. 3, 1908. Serial No. 418,991.

In combination with a churn body, a frame comprising a head, vertical arms depending from the head and upper and lower cross arms connecting said vertical arms, said lower cross arms being disposed at a point above the lower ends of said vertical arms and bearing on the upper side of said churn body, the depending lower ends of said vertical arms bearing on the outer side of said churn body, and said upper and lower cross arms having alining central openings, a gear wheel having its bearings on the outer side of one of the vertical arms, said gear wheel being provided with a crank arm, a shaft mounted in bearings on the head, having a pinion engaging said gear wheel and provided at its central portion with a crank,



operating in a central opening in the head, a dasher shaft mounted for reciprocatory movement in the central openings of the cross arms, a pitman connecting said dasher shaft to the crank, a dasher at the lower end of said dasher shaft, and a set screw in the lower end portions of the said vertical arms and engaging the said churn body.

960,956. VOTING-MACHINE. WILLIAM IRWIN KIRK, Buffalo, N. Y. Filed Nov. 15, 1909. Serial No. 528,009.



1. In a voting machine, a frame having forwardly extending guide sleeves, spring retracting keys voting rods having heads with a tapering shouldered end slidable in said guide sleeves and having stems extending into and connected to said spring-retracted keys, registers for said voting rods, slidable register plates actuated by said rods, apertured guide bars for said heads of the voting rods, apertured locking bars adapted to engage said heads, and means for releasing said heads from said locking bars.

2. In a voting machine, a frame having forwardly extending guide sleeves, voting rods having heads with tapering shouldered ends slidable in said guide sleeves, means to keep the voting rods in depressed position after being depressed, registers for said voting rods consisting of numerical wheels having ratchet teeth, slidable register plates actuated by the voting rods and having at their forward ends actuating pawls to actuate said registers, and means for releasing the voting rods from their depressed position.

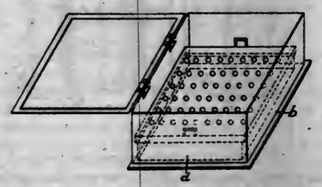
3. In a voting machine, party voting rods, individual voting rods, a register for each individual voting rod, a slidable register plate for each of the party and the individual voting rods, a rock shaft for each party voting rod having spring arms in contact with the register plates of all individual voting rods under the corresponding party to actuate the same and having also a pivoted arm normally out of contact with the register plate of the corresponding party voting rod, a slide plate normally out of operative relation with said rock shaft, and means to cause the pivoted arm of the rock shaft corresponding to the actuated voting rod to be moved in operative relation to said slide rod, thus causing the corresponding rock shaft to be actuated on movement of said slide bar, and move all the slide plates and operate all the registers of the several condidates of one party.

4. In a voting machine, party voting rods, individual voting rods, a register for each individual voting rod, a slidable register plate for each of the party and the individual voting rods, a rock shaft for each party voting rod having spring arms in contact with the register plates of all individual voting rods under the corresponding party to actuate the same and having also a loosely hinged arm normally out of contact with the register plate of the corresponding party voting rod, a slide plate normally out of operative relation with said rock shaft, and means to cause the hinged arm of the rock shaft corresponding to the actuated voting rod to be moved in operative relation to said slide plate, thus causing the corresponding rock shaft to be actuated on movement of said slide plate.

5. In a voting machine, party voting rods, individual voting rods, a register for each individual voting rod, a slidable register plate for each individual voting rod having a lug or projection and a pawl adapted to actuate the corresponding recording device, a rock shaft for each party voting rod having spring arms in contact with the register plates of the individual voting rods of the corresponding party and adapted to engage the lugs or projections thereon to actuate said register bars, a slide bar having depending pins, and a hinged arm on each rock shaft normally out of the path of the pins of said slide bar and adapted to be raised by the lateral arms on the slidable register plates of the party voting rods to lie in the path of said pins.

[Claims 6 to 10 not printed in the Gazette.]

960,957. CIGAR-MAKER'S ROLLING-BOARD. JOHANN KLETTI, III, Sandhausen, Germany. Filed Feb. 11, 1910. Serial No. 543,404.



Cigar-maker's rolling board, comprising a receptacle having a lid adapted to serve as rolling board, a second receptacle movable within the first for the reception of the moistening fluid, provided with a handle and a strainer upon the said receptacle carrying the cover leaves to be moistened, substantially as described.

960,958. COAL-MINING MACHINE. LOTTE KOVATCH, Oliveburg, Pa. Filed Aug. 12, 1909. Serial No. 512,540.

1. The combination with a mining machine having a reciprocating punch, of two pairs of inclined bars, the bars of one pair superposed with respect to and spaced from each other, a truck adapted to travel upon the lower bar of each pair, a rack bar yieldably supported by said bars, a pedestal carried by said truck, a revoluble vertical shaft

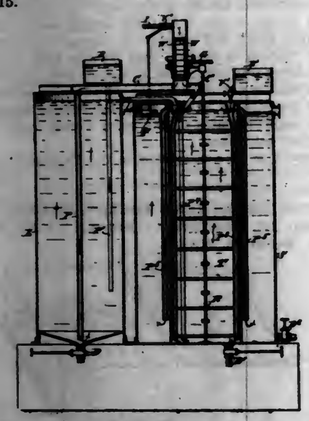
carried by said pedestal and adapted to tiltably support said machine, an extension carried by said pedestal, and means supported by the rear end of said extension for gripping said rack bar to hold said truck fixed relative to said bar.



2. The combination with a mining machine having a reciprocating punch, and an axle adapted to support said machine, of inclined bars, a truck movably mounted upon two of said bars, a pedestal carried by said truck, a revoluble vertical shaft arranged in said pedestal and adapted to support the axle of said machine, an extension carried by said pedestal, an upright carried by said extension, a yieldable rack bar arranged between said bars, and a movable stirrup carried by said upright for gripping said rack bar to hold said truck fixed relative to said bar.

3. The combination with a mining machine, of inclined tracks, a truck adapted to travel upon said tracks and movably support said machine, a toothed element yieldably mounted between said tracks, an upright arranged at the rear end of said truck and movable therewith, and a stirrup movably supported by said upright and adapted to grip said toothed element to fix said truck relative to said element.

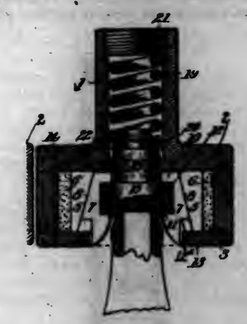
960,959. APPARATUS FOR THE CONTINUOUS PURIFICATION OF WATER. CHARLES HERSCHEL KOYL, New York, N. Y. Filed Jan. 3, 1910. Serial No. 535,915.



In apparatus for the continuous purification of water, a precipitating tank in which the raw water is treated and the precipitates resulting from that treatment are formed, a settling tank, an outlet at the upper end of the precipitating tank communicating with the inlet of the settling tank, and inlets at the lower end of the precipitating tank communicating through separate ducts with the sources of raw water and reagent supplies respectively, substantially as and for the purpose hereinbefore set forth.

960,960. BOTTLE-CAPPING HEAD. LOUIS CHARLES KRUMMEL, Clinton, Conn., and JOHN C. TALIAFERRO, Baltimore, Md. Filed May 15, 1909. Serial No. 496,240.

1. In a bottle capping head, the combination of a chuck, crimping jaws, each of said jaws having spaced projections for corrugating or crimping the cap, means for normally holding the jaws out of contact with the cap and an independently yielding means for each jaw, for positively forcing the same inwardly to crimp the cap, said jaws having their inner faces at their lower ends tapered outwardly so as to guide the cap and bottle head into the chuck.



2. In a bottle capping head, the combination of a chuck, crimping jaws, each of said jaws having spaced projections for corrugating or crimping the cap, means for yieldingly forcing said jaws outwardly and an independently yielding means for each jaw, for positively forcing the same inwardly to crimp the cap, said jaws having their inner faces at their lower ends tapered outwardly so as to guide the cap and bottle head into the chuck.

3. In a bottle capping head, the combination of a chuck having a pocket to receive the cap, a plurality of crimping jaws, each of said jaws having spaced projections for corrugating or crimping the cap, means for connecting the jaws to said chuck, whereby said jaws are movable with the chuck, means for yieldingly forcing said jaws outwardly away from the chuck, and an independently yielding means for each jaw, for positively forcing the same inwardly to crimp the cap, said jaws having their inner faces at their lower ends tapered outwardly so as to guide the cap and bottle head into the chuck.

4. In a bottle capping head, the combination of a chuck having a pocket to receive the cap, a plurality of crimping jaws, each of said jaws having spaced projections for corrugating or crimping the cap, means for connecting said jaws to said chuck, and an independently yielding wedging member for each jaw, for moving the same inwardly, and means for yieldingly holding said jaws in contact with said wedging members, said jaws having their inner faces at their lower ends tapered outwardly so as to guide the cap and bottle head into the chuck.

5. In a bottle capping head, the combination of a supporting stem, a body portion carried thereby, and having radial recesses, crimping jaws mounted in said radial recesses, a chuck located intermediate said jaws, means for yieldingly forcing said jaws outwardly, and independently yielding means for each jaw for forcing the same inwardly to crimp the cap.

[Claims 6 to 12 not printed in the Gazette.]

960,961. FASTENER FOR SECURING DOORS. CARL C. KUSTERER, Grand Rapids, Mich., assignor to Isaac H. Keeler and Miner S. Keeler, Grand Rapids, Mich. Filed Feb. 25, 1910. Serial No. 545,025.



1. A fastener, comprising a pin pivoted at one end, a post having a recess in the side opposite to the pin, a case adjustable on the pin, a yoke extending from the case and embracing the post, and a lever pivoted in the end of the yoke and engaging the recess in the post.

2. A fastener, comprising two plates, a pin pivoted at one end to one plate, a post on the other plate having a recess in the side opposite from the pin, a case slidable on the pin, a spring in the case adapted to move the case toward the pivot of the pin, a yoke fixed at one end to the case and embracing the post, and a lever pivoted in the other end of the yoke and engaging the recess of the post.

3. A fastener, comprising a pin pivoted at one end, a post having a recess in the side opposite to the pin, means for separately attaching the pivoted end of the pin and the post, a yoke movably connected to the pin at one end and embracing the post, a lever pivoted in the other end of the yoke engaging the recess in the post and adapted to swing through the plane of the pivots, and a spring on the pin adapted to yieldingly force the yoke toward the pivot of the pin.

4. A fastener, comprising two plates adapted to be respectively secured to a door and a casing, a pin pivoted at one end to one plate, a post on the other plate having a recess in the side opposite to the pin, a casing movable on the pin, a spring surrounding the pin and engaging the casing at one end and engaging a nut or washer on the pin at the other end, a yoke fixed on the casing at one end and embracing the post, a lever pivoted in the end of the yoke and having a rounded end engaging the recess in the post, said end being adapted to swing through the plane of the said pivots and beyond the same.

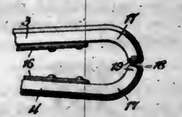
960,962. METALLIC-FILAMENT ELECTRIC GLOW-LAMP. HANS KUŽEL, Baden, near Vienna, Austria-Hungary, assignor to General Electric Company, a Corporation of New York. Filed Mar. 31, 1908. Serial No. 424,330.

1. In an electric glow lamp, the combination of a horseshoe shaped filament, and the supply wires to which the ends of the filament legs are fastened, with supporting means for the filament legs, such supporting means being located at a point intermediate between the fastened ends of the legs and the apex of the filament, the bight portion of the filament projecting beyond the supports being bent on the said supporting means, substantially as and for the purpose described.

2. In an electric glow lamp, the combination of a horseshoe shaped filament and supply wires to which the ends of the filament legs are fastened, with supporting means for the filament legs, such supporting means being located at a point intermediate between the fastened ends of the legs and the apex of the filament, and the bight portion of the filament beyond the said supporting means being bent on the latter, and means for supporting the said bight portion so bent, substantially as and for the purpose described.

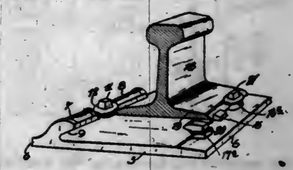
960,963. PRUNING-SHEARS. JAMES G. KYLE, Riverside, Cal. Filed Dec. 21, 1908. Serial No. 438,490.

An instrument of the class described including two pivoted members provided with handles having abutting ends curved inward toward each other and provided with end edges beveled outwardly in a direction longitudinally of the instrument to form diverging faces and rounded transversely of the instrument to form diverging side faces, said ends abutting only at the center of their inner edges to prevent the hand of the operator from being



caught and pinched between the handles of the instrument.

960,964. TIE-PLATE. PATRICK LADEN, Mattoon, Ill., assignor to Railway Specialty & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed July 20, 1909. Serial No. 510,246.



1. A railway tie plate having gripping jaws on one side thereof and spaced apart, for an opening in the plate base, the edges of the gripping jaws adjacent the opening being partially cut away, forming a recessed seat for a spike, the opposite side of the tie plate having a lug for alining the base of a railway rail with the opposite gripping jaws, the base of the tie plate having suitable spike openings for receiving spikes for securing the plate to a railway tie, substantially as described.

2. A railway tie plate having gripping jaws on one side thereof and spaced apart for an opening in the plate base, the jaws being formed so as to wedge upon the rail base when the latter is forced into the jaws, the edges of the gripping jaws adjacent to the opening being partially cut away and forming a recessed seat for a spike, the opposite side of the tie plate having a lug for alining the base of the railway rail with the opposite gripping jaws, the base of the tie plate having spike openings for receiving spikes for securing the plate to a railway tie, substantially as described.

3. A railway tie plate having gripping jaws on one side and spaced apart, for a spike opening between them, the edges of the gripping jaws having recesses formed therein for seating a spike head and retaining the same in position, the opposite side of the plate having spike openings, substantially as described.

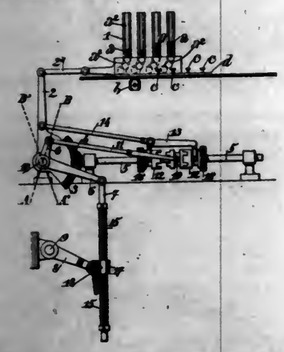
4. A railway tie plate having gripping jaws on one side and spaced apart for a spike opening between them, the edges of the gripping jaws having recesses formed therein for seating a spike head and retaining the same in position, the opposite side of the plate having a spike opening extending partially beneath the rail base so that when a spike is driven therethrough it will cause the rail base to fixedly engage the opposite gripping jaws, substantially as described.

5. A railway tie plate having on one side a gripping jaw, the jaw being formed so as to wedge upon a rail base when the latter is forced thereinto, the opposite side of the tie plate having a spike opening extending partially beneath the rail base so that when a spike is driven therethrough it will cause the rail base to fixedly engage the opposite gripping jaw, substantially as described.

960,965. WEFT-REPLENISHING APPARATUS FOR WEAVING-LOOMS. LUCIEN LANGÉNIEUX, Roanne, France, assignor of one-half to Claudius Beluse, Roanne, France. Filed Apr. 6, 1909. Serial No. 488,282.

1. In weft replenishing mechanism for weaving looms the combination of a plurality of shuttles, a shuttle box, a magazine for containing the weft bobbins and means con-

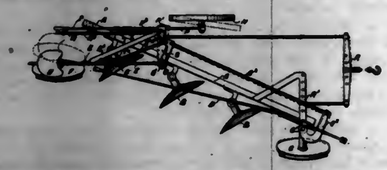
trolled by the movements of the shuttle box for reciprocating said magazine and means operated by the movement of the magazine for automatically stopping same when the magazine arrives at the point corresponding to a given position of the shuttle box.



2. In weft replenishing mechanism for weaving looms, the combination of a shuttle box, a magazine for containing the weft bobbins, rotating clutch members, and means for connecting said clutch members with the magazine to reciprocate the same, said means including a co-acting clutch member in connection with the shuttle box.

3. In weft replenishing mechanism for weaving looms the combination of a shuttle box, a magazine for containing the weft bobbins, two interconnected and rotatable clutch members in connection with said magazine, a clutch member adapted to co-act with either of the aforesaid clutch members, connecting means between said last mentioned clutch member and the shuttle box and means for slipping said connecting means during certain movements of the shuttle box substantially as described.

960,966. DISK PLOW AND CULTIVATOR. JOHN LAVERY, Waubra, Victoria, Australia. Filed Aug. 5, 1908. Serial No. 447,025.



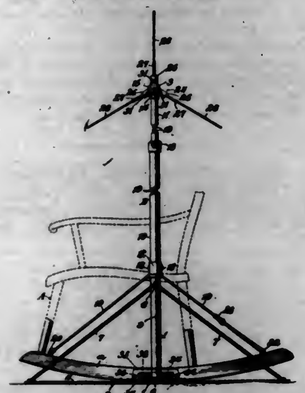
1. In disk plows and cultivators the combination of a framework, a rearwardly extending arm hinged to the framework and carrying the rear wheel and the driver's seat, a cross extension from the hinge-point of the said arm, a spring catch lever on the framework and connected to the outer end of the said cross extension and means for connecting the draft to the said cross-section substantially as described.

2. In disk plows and cultivators, the combination of a framework, a rearwardly extending arm hinged to the framework and carrying the rear wheel and the driver's seat, a cross extension from the hinge-point of the arm, a spring catch lever connected to the outer end of the said cross extension carrying the land-side wheel substantially as described.

3. A disk plow or cultivator comprising a framework, a rearwardly extending arm, hinged to the framework and carrying the rear wheel and the driver's seat, a cross extension from the said arm from the hinge-point, a spring catch lever mounted on the framework connected to the outer end of the said extension for adjusting its position and the lateral position of the said rearwardly extending arm, a spring catch lever mounted on the outer end of the said cross extension carrying the land wheel, a further spring catch lever mounted on the said rearwardly extending arm and connected to the front wheel for guiding the same and a connecting rod attached to the said cross extension at one end and to the draft at the other end, substantially as described and for the purposes indicated.

4. In disk plows and cultivators the combination of a frame-work, a rearwardly extending arm hinged to said frame-work, a rear-wheel shaft fixedly carried by said arm, a rear-wheel on said shaft, a driver's seat located over said wheel and carried by said arm, a cross-extension rigidly secured to said arm near the hinged joint thereof, a spring catch lever mounted on the free end of said cross extension, and a land side wheel carried by said lever.

960,967. AUTOMATIC ROCKING-CHAIR FAN. ALEXANDER LAWSON, East Barre, and ROBERT SAMUEL WILDBUR and BERNICE WILDBUR, Websterville, Vt. Filed Aug. 13, 1908. Serial No. 448,438.



1. In an apparatus of the class described, the combination of a base frame provided with a rail for the rocker of a chair, an extensible standard mounted on the frame, a rotatable fan carried by the standard, operating connections between the fan and rocker including means providing for the lengthening and shortening of the standard, and a spring device operatively connected with the said rocker and independent of the said operating connections to assist in returning the chair from tilted to central or normal position and operating through the said connections to assist in rotating the fan.

2. In an apparatus of the class described, the combination of a base frame including a rail for the rocker of a chair, a device rigidly connected with the frame and said rocker for holding the latter in coöperative relation with the rail and including means for assisting in the movement of the chair, a standard mounted on the frame, a fan carried by the standard, and operating connections between the fan and rocker.

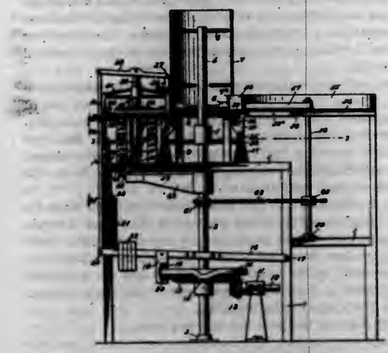
3. In an apparatus of the class described, the combination of a base frame of such height as to receive one rocker of a chair while the other rocker rests on the floor, a spring rocking device mounted on the frame and adapted to be connected with the rocker resting on the base frame for preventing it from leaving the frame during rocking and for assisting in the rocking of the chair, a fan support on the frame, and operating means for connecting the fan with the rocker.

4. In an apparatus of the class described, the combination of a base frame adapted to rest flat on the floor for receiving one rocker of a chair while the other rocker rests on the floor, a plurality of springs mounted thereon, a bracket connected with the springs and adapted to be attached to the rocker, a standard carried by the base frame, a fan-carrying shaft on the standard, and operating connections between the rocker and said shaft for rotating the latter.

5. In an apparatus of the class described, the combination of a rail arranged to receive the rocker of a chair, a plurality of springs disposed at one side of the rail, a bracket carried by the springs and rigidly connected with the rocker for holding the latter in alinement with the rail and assisting in the rocking motion, and a fan-operating device actuated by the rocker.

[Claims 6 to 9 not printed in the Gazette.]

960,968. MACHINE FOR MOLDING PLASTIC MATERIALS. JOHN B. LEAMON, Atlanta, Ga. Filed Apr. 2, 1909. Serial No. 487,544.



1. In a molding machine, the combination with a movable die and means for reciprocating the same, of a rotary mold-table arranged in coöperative relation with said die, a continuously rotating arm disposed adjacent said table, a pawl pivoted to the end of said arm, brackets depending from said table, and a cam slot arranged to guide said pawl into engagement with one of said brackets, and, after the table has been moved thereby a predetermined distance, out of engagement therewith, and a locking device for the table operated by said pawl as it enters and leaves said cam slot.

2. In a molding machine, the combination with a die, and means for operating the same, of a rotary mold table arranged in coöperative relation with said die, a continuously rotating member disposed in proximity to said table and mounted concentrically therewith, means for causing said member to automatically engage and move said table a predetermined distance, and means extending into the path of movement of and actuated by said member for temporarily locking said table after each such movement.

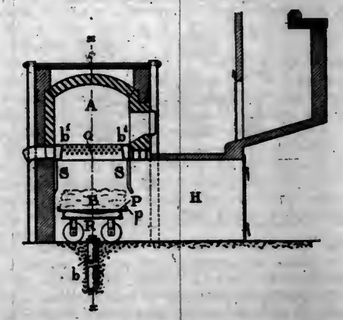
3. In a molding machine, the combination with a die, and means for operating the same, of a rotary mold table disposed beneath said die and coöperating therewith, a bracket depending from said table, a rotating member concentrically arranged with respect to said table, means carried by said member for engaging said bracket, and a cam-guide for moving said last mentioned means into and out of engagement with said bracket.

4. In a molding machine, the combination with a die, and means for operating the same, of a mold-table disposed beneath said die, a shaft concentrically mounted with respect to said table, an arm carried by said shaft, a bracket depending from said table, a pawl pivoted to the end of said arm, said pawl moving normally in a plane below said bracket, and a cam-guide arranged adjacent the path of said pawl, and serving to lift the same into engagement with said bracket during a predetermined part of its movement.

5. In a molding machine, a rotary mold-table, molds carried thereby, a die press coöperating with one after another of said molds as the table is rotated, a smoothing roller and blade arranged above said table and adapted to smooth the upper surface of the freshly molded articles, and means for periodically scraping the waste material from said roller, blade, and die.

[Claim 6 not printed in the Gazette.]

960,969. FURNACE. HENRY NORMAN LEASK, Egremont, England. Filed Sept. 9, 1907. Serial No. 392,003.



1. The combination of a furnace having a combustion chamber provided with a grate having a bodily vertical movement for placement and displacement in relation to operative position thereof, a hollow perforated air box having a fixed position in the furnace against which the grate is placed when in normal position, a carriage located below the normal position of the grate to receive the latter when it is lowered, and means located below the carriage and movable upwardly through the latter to engage the grate for placing and displacing the latter.

2. The combination of a furnace having a grate mounted for rising and falling motion, a cooling chamber opening into the lower part of the furnace and outside of the main furnace structure, a carriage movable into and out of said cooling chamber and also under the place occupied by the grate when the latter is in normal position in the furnace, and means for raising and lowering the grate and permitting said grate to rest on or be elevated from the carriage, said carriage being movable over the means for raising and lowering the grate.

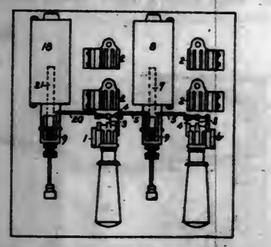
3. The combination of a furnace having a combustion chamber provided with a rising and falling grate, a ram to raise and lower the said grate, and a carriage movable to a position over the ram, the ram being adapted to lower a grate onto said carriage or to elevate a grate from off the carriage into operative relation with the combustion chamber.

4. The combination of a furnace having a combustion chamber provided with a rising and falling grate, a ram to raise and lower the said grate, a carriage movable to a position over the ram, the ram being adapted to lower the grate onto said carriage or to elevate the grate from off the carriage into operative relation with the combustion chamber, and cooling and charging chambers located at opposite sides of the space in which said ram is located.

960,970. AUTOMATIC CIRCUIT-BREAKER. HARRY WARD LEONARD, Bronxville, N. Y. Original application filed Mar. 21, 1901, Serial No. 52,128. Divided and this application filed Feb. 19, 1907. Serial No. 358,280.

1. The combination of a controlling switch, a circuit, means for opening said switch upon occurrence of reverse current in said circuit, said means comprising a series coil having its coöperating magnetic mass and a shunt coil having an additional coöperating magnetic mass, a second independently movable switch protectively functionally related to said first-named switch, and means for causing said second switch to be automatically responsive to overload current.

2. The combination of two independently closable switches, each of said switches having its own respective restraining device, and means for automatically controlling the opening of each of said switches upon the occurrence of overload current upon the closure of the other of said switches and for opening at least one of said switches upon the occurrence of reverse current, said means comprising two electro-magnetic windings each having a corresponding magnetic mass.



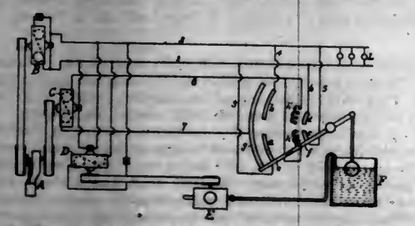
3. The combination of two independently closable switches, means for opening each of said switches upon the occurrence of overload current, and means for automatically opening at least one of said switches upon the occurrence of reverse current, said means comprising two electro-magnetic windings each having its respective magnetic mass.

4. In an electric circuit controller, the combination of a switch for affecting the circuit, means for holding said switch in normal position, a series winding, a core held in normal position by gravity against the magnetism of said winding, a shunt winding, a core affected thereby, means for effecting the release of said holding means arranged to be controlled by the movement of either of said cores, a polarized electro-magnetic switch in the circuit of said shunt winding, and a second independently movable switch in series with the first switch and protectively functionally related thereto.

5. In an electric circuit controller, the combination of a switch for affecting the circuit, means for holding said switch in normal position, a series winding, a core held in normal position by gravity against the magnetism of said winding, a shunt winding, a core affected thereby, means for effecting the release of said holding means controlled by the movement of either of said cores, a polarized electro-magnetic switch in the circuit of said shunt winding affected by a reversal of current through the series winding, and functionally related means for opening the circuit elsewhere upon the occurrence of overload.

[Claims 6 and 7 not printed in the Gazette.]

960,971. MEANS FOR AUTOMATICALLY CONTROLLING ELECTRIC MOTORS. HARRY WARD LEONARD, Bronxville, N. Y. Original application filed Feb. 6, 1897, Serial No. 622,269. Divided and application filed Jan. 28, 1902, Serial No. 91,577. Divided and this application filed Nov. 7, 1907. Serial No. 401,055.



1. The combination of two dynamo electric machines having armatures mechanically connected together, at least one of said machines having a field winding energized by a current different from its armature current, a common driving means for said armatures, an electric motor having a winding connected with both of said armatures, and means for automatically varying the voltage of one of said two armatures relatively to the other for controlling the energy supplied to said motor winding.

2. The combination of two mechanically and electrically connected electromotive force producing windings, an energy absorbing device electrically connected thereto, and means for automatically controlling, independently of the strength of the current through the device, the voltage of the energy supplied by said electromotive force producing windings to said energy absorbing device.

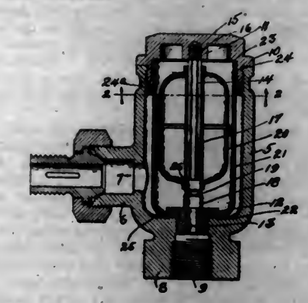
3. The combination of two mechanically connected electromotive force producing windings electrically connected in series with each other, an energy absorbing device electrically connected in series with said first-named windings, and means comprising an automatically adjusted rheostat for automatically varying the resultant electromotive force of said windings for controlling the energy absorbed by the device.

4. The combination of two dynamo electric machines, a common driving means therefor, a field winding of one of said machines being excited independently of its armature current, means for automatically varying the current in said winding for varying the electromotive force, and a translating device supplied with energy from the armatures of said machines.

5. The combination of two mechanically and electrically connected electromotive force producing windings, a counter electromotive force producing winding supplied with energy therefrom and requiring in operation variable voltage impressed at its terminals, and means for automatically controlling the energy supplied to said counter electromotive force producing winding.

[Claims 6 to 34 not printed in the Gazette.]

960,972. STEAM, AIR, AND WATER TRAP VALVE. FRED W. LEUTHESSER, Chicago, Ill. Filed Feb. 4, 1910. Serial No. 542,016.



1. In a valve of the class described, the combination of a casing provided with an inlet passage and a discharge passage, closed float within the casing for governing the discharge passage, a shell surrounding the float open at its upper end for the eduction of air and provided with an inlet for water below the line of flotation of the float, said shell extending beyond the ends of the float and anchored at its lower end, a tube extending through said float and secured to the float, the lower end of said tube surrounding the discharge passage and cutting off communication between the float chamber and the discharge passage when the float is in normal position, a fixed guide member entered into said tube and extending downward to a point beyond midway the length of the float, and said tube having therein a plurality of unimpeded vertically extending air passages formed between the exterior surface of the guide member and the interior surface of the tube, permitting air to pass from the interior of the casing into the discharge passage with a direct flow downward, substantially as described.

2. In a valve of the class described, the combination of a casing provided with an inlet passage and a discharge passage, a closed float within the casing for governing the discharge passage, a shell surrounding the float open at its upper end for the eduction of air and provided with an inlet for water below the line of flotation, said shell extending beyond the ends of the float and anchored at its lower end, a circular tube extending through said float and secured to the float, the lower end of said tube surrounding the discharge passage and cutting off communication between the float chamber and the discharge passage when the float is in normal position, a cover secured to the upper end of the casing, a guide member affixed to said cover, said guide member extending downward to a point beyond midway the length of the float, said guide member being in the form of a polygon in cross-section, and said tube having therein a plurality of unimpeded vertically extending air passages formed between the exterior face of the guide member and the interior face of the tube for permitting air to pass from the interior of the casing into the discharge passage with a direct flow downward, substantially as described.

3. In a valve of the class described, the combination of a casing provided with an inlet passage and a discharge passage, a closed float within the casing for governing the discharge passage, a shell surrounding the float open at its upper end for the eduction of air and provided with an inlet for water below the line of flotation of the float, said shell extending beyond the ends of the float and anchored at its lower end, a tube extending through said float and secured to the float, the lower end of said tube surrounding the discharge passage when the float is in normal position, a fixed guide member entered into said tube, said tube having a plurality of unimpeded vertically extending air passages therein formed between the exterior surface of the guide member and the interior surface of the tube, permitting air to pass from the interior of the casing into the discharge passage with a direct flow downward, and an inwardly extending abutment formed adjacent to the lower end of the tube for insuring the correct insertion of the float into the casing, substantially as described.

4. In a valve of the class described, the combination of a casing having a chamber provided with an inlet passage and a discharge passage, a closed float within said casing for governing the discharge passage, a shell surrounding and inclosing said float and extending underneath the lower end of the float and provided with a water inlet passage in its bottom and an unrestricted air eduction passage at its upper end and having an imperforate body between the air and water passages, a tube extending through and fixed to said float and having its lower end surrounding the discharge passage and cutting off communication between the float chamber and the discharge passage when the float is in normal position, a fixed guide member entering said tube and extending approximately the full length of the float, said tube having therein a passage-way for air located between the exterior surface of the guide member and the interior surface of the tube for permitting air to pass from the interior of the casing into the discharge passage, substantially as described.

5. In a valve of the class described, the combination of a casing having a chamber provided with an inlet passage and a discharge passage, a closed float within said casing for governing the discharge passage, a shell surrounding and inclosing said float and extending underneath the lower end of the float and provided with a water inlet passage in its bottom and an air eduction passage at its upper end, a tube extending through and fixed to said float and having its lower end surrounding the discharge passage and cutting off communication between the float chamber and the discharge passage when the float is in normal position, a cover secured to the upper end of the casing, a guide member affixed to said cover, said guide member being in the form of a polygon in cross-section and extending approximately the full length of the float, said tube having therein a plurality of unimpeded vertically extending air passages between the exterior face of the guide member and the interior face of the tube for permitting air to pass from the interior of the casing into the discharge passage with a direct flow downward, substantially as described.

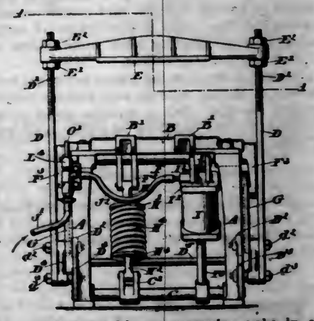
[Claims 6 to 14 not printed in the Gazette.]

960,973. METHOD OF MAKING CORES OF SAND. GEORGE W. LEWIS, Scranton, Pa., assignor to Samuel H. Baird, New York, N. Y. Filed Feb. 17, 1910. Serial No. 544,364.

1. The improved method of making cores which consists in, first, mixing intimately so as to form an emulsion a suitable quantity of oil and water, then mixing the emulsion so formed with sand, next forming the mixture into a core and, finally, baking the core so formed.

2. The method of making cores for molding metals which consists in, first, forming an emulsion of oil and water comprising from fifty to eighty per cent. by volume of water, intimately mixing the emulsion with sand, shaping cores of the mixture and, finally, baking the cores so formed.

960,974. MOLDING-MACHINE. WILFRED LEWIS and JOHN T. RAMSDEN, Philadelphia, Pa., assignors to The Tabor Manufacturing Company, Camden, N. J., a Corporation of New Jersey. Filed Mar. 14, 1905. Serial No. 250,023.

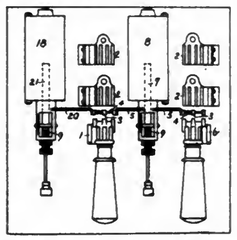


1. In a molding machine, a ramming yoke in combination with means for positively guiding said yoke through a straight path during the act of ramming and through a divergent curved path during a portion of its return stroke, a rock shaft supported on the machine housing, connections from the rock shaft to actuate the ramming yoke, a cylinder and piston connection to actuate the rock shaft, means for admitting and exhausting pressure fluid from said cylinder, and a counterbalancing spring acting through compression to balance some or all of the weight of the yoke and its attachments.

2. In a molding machine, a ramming yoke in combination with means for positively guiding said yoke through a straight path during the act of ramming and through a divergent curved path during a portion of its return stroke, a rock shaft supported on the machine housing, lever arms attached to said shaft and connected to actuate the yoke, lever arms F', and F^2 also attached to the shaft, a cylinder and piston connected to actuate the rock shaft through arm F', and a counterbalance spring connected with the shaft through arm F^2.

3. In a molding machine having a ramming yoke and power cylinder for actuating said yoke, a valve governing the admission and exhaust from said cylinder, in combination with a regulating stop shifted in accordance with the movements of the yoke, said stop acting to prevent the full opening of the valve to admit fluid to the cylinder until the yoke has moved through a portion of its working stroke.

2. The combination of two independently closable switches, each of said switches having its own respective restraining device, and means for automatically controlling the opening of each of said switches upon the occurrence of overload current upon the closure of the other of said switches and for opening at least one of said switches upon the occurrence of reverse current, said means comprising two electro-magnetic windings each having a corresponding magnetic mass.



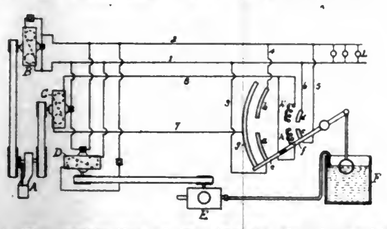
3. The combination of two independently closable switches, means for opening each of said switches upon the occurrence of overload current, and means for automatically opening at least one of said switches upon the occurrence of reverse current, said means comprising two electro-magnetic windings each having its respective magnetic mass.

4. In an electric circuit controller, the combination of a switch for affecting the circuit, means for holding said switch in normal position, a series winding, a core held in normal position by gravity against the magnetism of said winding, a shunt winding, a core affected thereby, means for effecting the release of said holding means arranged to be controlled by the movement of either of said cores, a polarized electro-magnetic switch in the circuit of said shunt winding, and a second independently movable switch in series with the first switch and protectively functionally related thereto.

5. In an electric circuit controller, the combination of a switch for affecting the circuit, means for holding said switch in normal position, a series winding, a core held in normal position by gravity against the magnetism of said winding, a shunt winding, a core affected thereby, means for effecting the release of said holding means controlled by the movement of either of said cores, a polarized electro-magnetic switch in the circuit of said shunt winding affected by a reversal of current through the series winding, and functionally related means for opening the circuit elsewhere upon the occurrence of overload.

[Claims 6 and 7 not printed in the Gazette.]

960,971. MEANS FOR AUTOMATICALLY CONTROLLING ELECTRIC MOTORS. HARRY WARD LEONARD, Bronxville, N. Y. Original application filed Feb. 6, 1897, Serial No. 622,269. Divided and application filed Jan. 28, 1902, Serial No. 91,577. Divided and this application filed Nov. 7, 1907. Serial No. 401,035.



1. The combination of two dynamo electric machines having armatures mechanically connected together, at least one of said machines having a field winding energized by a current different from its armature current, a common driving means for said armatures, an electric motor having a winding connected with both of said armatures, and means for automatically varying the voltage of one of said two armatures relatively to the other for controlling the energy supplied to said motor winding.

2. The combination of two mechanically and electrically connected electromotive force producing windings, an energy absorbing device electrically connected thereto, and means for automatically controlling, independently of the strength of the current through the device, the voltage of the energy supplied by said electromotive force producing windings to said energy absorbing device.

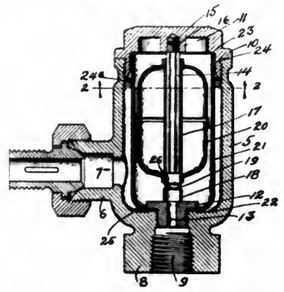
3. The combination of two mechanically connected electromotive force producing windings electrically connected in series with each other, an energy absorbing device electrically connected in series with said first-named windings, and means comprising an automatically adjusted rheostat for automatically varying the resultant electromotive force of said windings for controlling the energy absorbed by the device.

4. The combination of two dynamo electric machines, a common driving means therefor, a field winding of one of said machines being excited independently of its armature current, means for automatically varying the current in said winding for varying the electromotive force, and a translating device supplied with energy from the armatures of said machines.

5. The combination of two mechanically and electrically connected electromotive force producing windings, a counter electromotive force producing winding supplied with energy therefrom and requiring in operation variable voltage impressed at its terminals, and means for automatically controlling the energy supplied to said counter electromotive force producing winding.

[Claims 6 to 34 not printed in the Gazette.]

960,972. STEAM, AIR, AND WATER TRAP VALVE. FRED W. LEUTHESSER, Chicago, Ill. Filed Feb. 4, 1910. Serial No. 542,016.



1. In a valve of the class described, the combination of a casing provided with an inlet passage and a discharge passage, closed float within the casing for governing the discharge passage, a shell surrounding the float open at its upper end for the eduction of air and provided with an inlet for water below the line of flotation of the float, said shell extending beyond the ends of the float and anchored at its lower end, a tube extending through said float and secured to the float, the lower end of said tube surrounding the discharge passage and cutting off communication between the float chamber and the discharge passage when the float is in normal position, a fixed guide member entered into said tube and extending downward to a point beyond midway the length of the float, and said tube having therein a plurality of unimpeded vertically extending air passages formed between the exterior surface of the guide member and the interior surface of the tube, permitting air to pass from the interior of the casing into the discharge passage with a direct flow downward, substantially as described.

2. In a valve of the class described, the combination of a casing provided with an inlet passage and a discharge passage, a closed float within the casing for governing the discharge passage, a shell surrounding the float open at its upper end for the eduction of air and provided with an inlet for water below the line of flotation, said shell extending beyond the ends of the float and anchored at its lower end, a circular tube extending through said float and secured to the float, the lower end of said tube surrounding the discharge passage and cutting off communication between the float chamber and the discharge passage when the float is in normal position, a cover secured to the upper end of the casing, a guide member affixed to said cover, said guide member extending downward to a point beyond midway the length of the float, said guide member being in the form of a polygon in cross-section, and said tube having therein a plurality of unimpeded vertically extending air passages formed between the exterior face of the guide member and the interior face of the tube for permitting air to pass from the interior of the casing into the discharge passage with a direct flow downward, substantially as described.

3. In a valve of the class described, the combination of a casing provided with an inlet passage and a discharge passage, a closed float within the casing for governing the discharge passage, a shell surrounding the float open at its upper end for the eduction of air and provided with an inlet for water below the line of flotation of the float, said shell extending beyond the ends of the float and anchored at its lower end, a tube extending through said float and secured to the float, the lower end of said tube surrounding the discharge passage when the float is in normal position, a fixed guide member entered into said tube, said tube having a plurality of unimpeded vertically extending air passages therein formed between the exterior surface of the guide member and the interior surface of the tube, permitting air to pass from the interior of the casing into the discharge passage with a direct flow downward, and an inwardly extending abutment formed adjacent to the lower end of the tube for insuring the correct insertion of the float into the casing, substantially as described.

4. In a valve of the class described, the combination of a casing having a chamber provided with an inlet passage and a discharge passage, a closed float within said casing for governing the discharge passage, a shell surrounding and inclosing said float and extending underneath the lower end of the float and provided with a water inlet passage in its bottom and an unrestricted air eduction passage at its upper end and having an imperforate body between the air and water passages, a tube extending through and fixed to said float and having its lower end surrounding the discharge passage and cutting off communication between the float chamber and the discharge passage when the float is in normal position, a fixed guide member entering said tube and extending approximately the full length of the float, said tube having therein a passage-way for air located between the exterior surface of the guide member and the interior surface of the tube for permitting air to pass from the interior of the casing into the discharge passage, substantially as described.

5. In a valve of the class described, the combination of a casing having a chamber provided with an inlet passage and a discharge passage, a closed float within said casing for governing the discharge passage, a shell surrounding and inclosing said float and extending underneath the lower end of the float and provided with a water inlet passage in its bottom and an air eduction passage at its upper end, a tube extending through and fixed to said float and having its lower end surrounding the discharge passage and cutting off communication between the float chamber and the discharge passage when the float is in normal position, a cover secured to the upper end of the casing, a guide member affixed to said cover, said guide member being in the form of a polygon in cross-section and extending approximately the full length of the float, said tube having therein a plurality of unimpeded vertically extending air passages between the exterior face of the guide member and the interior face of the tube for permitting air to pass from the interior of the casing into the discharge passage with a direct flow downward, substantially as described.

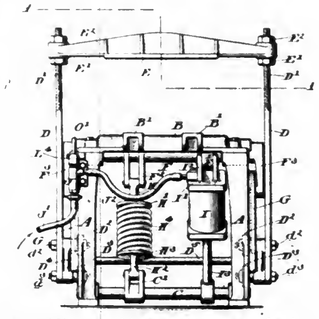
[Claims 6 to 14 not printed in the Gazette.]

960,973. METHOD OF MAKING CORES OF SAND. GEORGE W. LEWIS, Scranton, Pa., assignor to Samuel H. Baird, New York, N. Y. Filed Feb. 17, 1910. Serial No. 544,364.

1. The improved method of making cores which consists in, first, mixing intimately so as to form an emulsion a suitable quantity of oil and water, then mixing the emulsion so formed with sand, next forming the mixture into a core and, finally, baking the core so formed.

2. The method of making cores for molding metals which consists in, first, forming an emulsion of oil and water comprising from fifty to eighty per cent. by volume of water, intimately mixing the emulsion with sand, shaping cores of the mixture and, finally, baking the cores so formed.

960,974. MOLDING-MACHINE. WILFRED LEWIS and JOHN T. RAMSDEN, Philadelphia, Pa., assignors to The Tabor Manufacturing Company, Camden, N. J., a Corporation of New Jersey. Filed Mar. 14, 1905. Serial No. 250,023.



1. In a molding machine, a ramming yoke in combination with means for positively guiding said yoke through a straight path during the act of ramming and through a divergent curved path during a portion of its return stroke, a rock shaft supported on the machine housing, connections from the rock shaft to actuate the ramming yoke, a cylinder and piston connection to actuate the rock shaft, means for admitting and exhausting pressure fluid from said cylinder, and a counterbalancing spring acting through compression to balance some or all of the weight of the yoke and its attachments.

2. In a molding machine, a ramming yoke in combination with means for positively guiding said yoke through a straight path during the act of ramming and through a divergent curved path during a portion of its return stroke, a rock shaft supported on the machine housing, lever arms attached to said shaft and connected to actuate the yoke, lever arms F', and F² also attached to the shaft, a cylinder and piston connected to actuate the rock shaft through arm F', and a counterbalance spring connected with the shaft through arm F².

3. In a molding machine having a ramming yoke and power cylinder for actuating said yoke, a valve governing the admission and exhaust from said cylinder, in combination with a regulating stop shifted in accordance with the movements of the yoke, said stop acting to preven the full opening of the valve to admit fluid to the cylinde until the yoke has moved through a portion of its work ing stroke.

4. In a molding machine having a ramming yoke and a power cylinder for actuating said yoke, a valve J, situated in the conduit for pressure fluid, said valve having in combination a casing K, with seat K^3, and cylindrical extension K^3, and outlet K^4, leading to the cylinder, a valve M', normally seated on seat K^3, a plunger L, moving in cylinder K^2, and formed with an outlet passage, means for normally holding the plunger out of contact with the valve and means for pressing the plunger down on the valve to open it and close the outlet passage.

5. In a molding machine having a ramming yoke and a power cylinder for actuating said yoke, a valve J, situated in the conduit for pressure fluid, said valve having in combination a casing K, with seat K^3, and cylindrical extension K^3, and outlet K^4, leading to the cylinder, a valve M', normally seated on seat K^3, a plunger L, moving in cylinder K^2, and formed with an outlet passage, means for normally holding the plunger out of contact with the valve, a lever O', for pressing the plunger down on the valve, and a movable stop shifting with the movements of the yoke and acting to prevent the full movement of the lever O', until the yoke has moved through a portion of its working stroke.

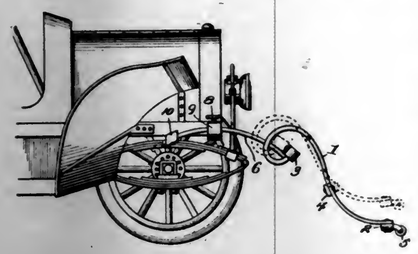
[Claims 6 and 7 not printed in the Gazette.]

960,975. PROCESS OF FIXING SULFID COLORS. LUDWIG LICHTENSTEIN, Königinhof-on-the-Elbe, Austria-Hungary. Filed Aug. 13, 1909. Serial No. 512,754.

1. A process for fixing sulfid colors in dyeing and printing by means of animal colloids, said process consisting in impregnating the fiber with a solution of an animal colloid, and dyeing or printing with sulfid colors together with a fixing agent of the colloid.

2. A process for fixing sulfid colors in dyeing and printing by means of animal colloids, said process consisting in impregnating the fiber with a solution of an animal colloid, precipitating the same on the fiber, and dyeing or printing with sulfid colors.

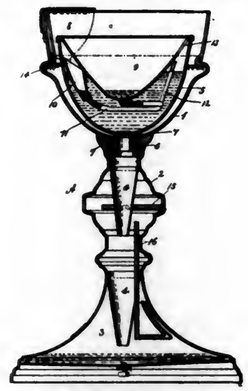
960,976. FENDER. ALBERT LITTMAN and WILLIAM J. LACKIE, Cleveland, Ohio, assignors of one-third to Niels T. Merck, Cleveland, Ohio. Filed Aug. 18, 1909. Serial No. 513,489.



1. A fender for the purpose specified comprising a fender body, parallel arcuate hangers extending backward from the fender body, guides in which said hangers are received and adapted to slide in a curvilinear path, and means connected with said guides for fastening the hangers against sliding movement.

2. A fender for motor cars and like structures comprising a body composed of parallel spring slats, front and rear bars to which the extremities of said slats are connected, the rear portions of said slats curving over in front of the rear connecting bar and at a distance therefrom, a pair of arcuate hangers connected at their forward ends to the rear cross bar of the fender body and provided with a longitudinal series of holes, clips through which said hangers are adapted to slide in the direction of their length to vary the angle and elevation of the fender, and pins connected with said clips and insertible through the holes in the hanger bars to prevent the sliding movement thereof while permitting the fender to be adjusted, in the manner specified.

960,977. CHALICE. CARL J. LJUNGGREN, Providence, R. I. Filed Oct. 26, 1908. Serial No. 459,590.



1. The combination with a chalice, of a reservoir mounted therein from which the liquid is discharged, a waste chamber in the cup or chalice, and a groove formed in the wall of the cup to prevent the waste liquid from returning to the drinking edge.

2. The combination with a chalice, of a reservoir for drawing the liquid to the drinking edge of the chalice, a leg connected to the chalice, a waste chamber formed in the leg, cone-shaped baffling tubes in the leg, and a groove formed in the wall of the cup for preventing the return of liquid to the drinking edge.

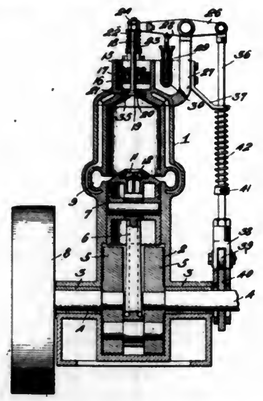
3. The combination with a chalice, of a reservoir mounted therein, a cover mounted upon the reservoir forming an outlet chamber, an inlet chamber in the reservoir for conducting the liquid from the reservoir to the outlet chamber, and means formed in the wall of the cup for preventing the return of waste liquid to the drinking edge.

4. A chalice comprising a cup, a leg connected thereto, a waste chamber formed in the leg, a reservoir mounted in the cup, an outlet chamber, an inlet chamber in communication with the outlet chamber for conducting liquid from the reservoir thereto, cone-shaped baffling tubes in the leg, and an annular groove formed in the cup to prevent the waste liquid returning to the drinking edge of the cup.

960,978. GAS-ENGINE. DAVID WALTER LYON, Alameda, Cal. Filed Nov. 17, 1909. Serial No. 528,548.

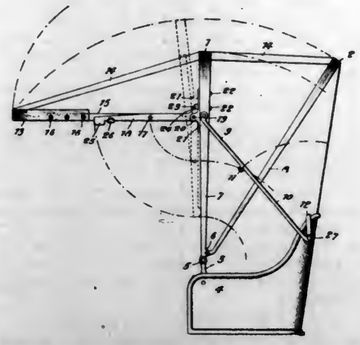
1. In a gas engine, a main cylinder having an exhaust passage, a piston slidably mounted therein, and adapted to open and close said exhaust passage, an air tight crank chamber connected with said main cylinder, a valved piston arranged in said main cylinder and adapted to open and close the exhaust passage therein, an air compressing cylinder arranged on said main cylinder, a fuel inlet valve arranged between said air compressing and said main cylinders, a valved piston in said air compressing cylinder, a fuel injecting pump connected with the main cylinder, and means operated by the crank shaft of the engine to simultaneously operate said fuel pump and said air compressing piston, and timed to open the fuel inlet valve when the piston has closed the exhaust passage.

2. In a gas engine, a main cylinder having formed therein an annular exhaust passage, an air tight crank chamber connected to the lower end of said cylinder, an air inlet valve in said chamber, a piston in said main cylinder adapted to open and close the discharge passage therein, an air inlet valve in said piston whereby the air drawn into said chamber is forced into said main cylinder, and caused to drive the burned gases therefrom, an air compressing cylinder arranged on said main cylinder and communicating therewith, a fuel injecting plug arranged in the opening between said cylinders, a fuel inlet valve to open and close said opening, an air compressing piston in



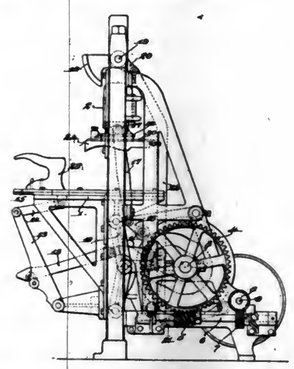
said air cylinder, a fuel pump communicating with said fuel injecting plug, a rocker arm connected with said piston and with said fuel pump, a spring retracted operating rod connected with said rocker arm, and a cam arranged on said crank shaft to project said operating rod at the proper time for simultaneously operating said fuel pump and piston whereby the fuel is admitted to the main cylinder through the fuel valve after the exhaust passage has been closed.

960,979. VEHICLE-TOP. HERBERT C. MARTELL, Flint, Mich. Filed June 22, 1909. Serial No. 503,604.



A vehicle top, comprising a center bow pivoted to the vehicle, a rear bow pivoted to the arms of the center bow near their connection with the vehicle, folding braces connecting the center bow with the vehicle, a front bow, brackets on the center bow near the junction of the arms with the body portion, a lever pivoted to each bracket and having at its free end a lateral lug or finger piece, one of the arms of the front bow being pivoted to each lever intermediate the ends of the said lever, and a catch on the arm between the finger piece and the pivotal connection of the arm with the lever, the end of the lever resting upon the said catch when the top is in upright position, and retaining the lever in alinement with the arm of the bow, said lever having a lateral lug at the end connected with the bracket, and the brackets having an upward extension, and a setscrew threaded through the lug and engaging the extension for limiting the upward movement of the said lever.

960,980. SOLE-PRESSING MACHINE. BENJAMIN F. MAYO, Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 10, 1906. Serial No. 305,232.



1. A sole pressing machine, having, in combination, a shoe supporting jack, a sole pressing form, means for actuating the jack and form to press the sole of a shoe supported upon the jack, and means for supporting the jack and form constructed to permit a relative longitudinal yielding movement of the jack and form while pressing a sole.

2. A sole pressing machine, having, in combination, a shoe supporting jack, a sole pressing form, means for actuating the jack and form to press the sole of a shoe supported upon the jack, and yielding means for supporting the form arranged to permit the form to move longitudinally when brought into engagement with the sole.

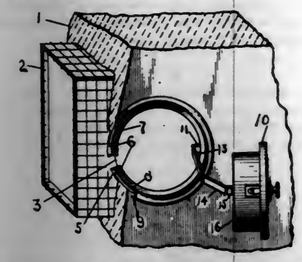
3. A sole pressing machine, having, in combination, a shoe supporting jack, a sole pressing form, means for actuating the jack and form to press the sole of a shoe supported upon the jack and yielding means for holding the form in position to coöperate with the jack, arranged to permit a longitudinal movement of the form in either direction when brought into engagement with the sole.

4. A sole pressing machine, having, in combination, a shoe supporting jack, a sole pressing form, means for actuating the jack and form to press the sole of a shoe supported upon the jack, a form carrier comprising a base and a form carrying slide mounted thereon, yielding means for holding the slide in position on the base arranged to permit the slide to move when the form is brought into engagement with the sole and means for removably securing the form to the slide in a position to move longitudinally with the slide.

5. A sole pressing machine, having, in combination, a shoe supporting jack, a sole pressing form, means for actuating the jack and form to press the sole of a shoe supported upon the jack, a form carrier comprising a base and a form supporting slide mounted thereon, springs interposed between the slide and the base arranged to hold the slide yieldingly in position while permitting it to move in either direction when the form is brought into engagement with the sole, and means for removably securing the form to the slide in a position to move longitudinally with the slide.

[Claims 6 and 7 not printed in the Gazette.]

960,981. WALL-SAFE. CHARLES F. MEILINK, Toledo, Ohio, assignor to The Meilink Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Apr. 23, 1909. Serial No. 491,809.



1. The combination with a wall, of a safe embedded therein, said safe having an opening provided with a door frame making a joint with said wall, a door movable to seat in said frame, and a finish rim extending from between the edge of the door and the door frame when the door is closed and overlapping the joint between the wall and door frame.

2. A wall safe having a collar constructed to make a joint with the wall, a door seating within the collar, and a finish rim extending from between the edge of the closed door and the collar and having a curved portion overlapping the joint between the wall and collar.

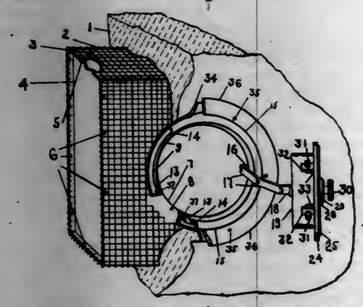
3. A wall safe having an opening, a finish rim for the opening, and a collar mounted on the safe, surrounding the finish rim and forming a joint between the wall and collar, said joint being overlapped by said finish rim.

4. A wall safe having an opening and a member permanently and fixedly disposed about said opening, and a collar carried by the member, and forming a joint flush with the surface of the wall.

5. A wall safe having an opening and a member permanently fixed relatively to said opening, and a collar interlocking with the member to be held by the member against removal, said interlocking being by tongue and groove connection disposed radially as to the opening.

[Claims 6 to 9 not printed in the Gazette.]

960,982. WALL-SAFE. CHARLES F. MEILINK and WILLIAM H. REYNOLDS, Toledo, Ohio, assignors to The Meilink Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Apr. 12, 1909. Serial No. 489,302.



1. A wall safe box having a flange, and a mesh covering surrounding the box and having portions bent over the flange to interlock therewith and thus maintain the mesh in position on the box.

2. A wall safe comprising a sheet metal box provided with a continuous flange, and a mesh covering for the box, said covering terminating in portions bent over said flange to thus lock the covering in position about the box.

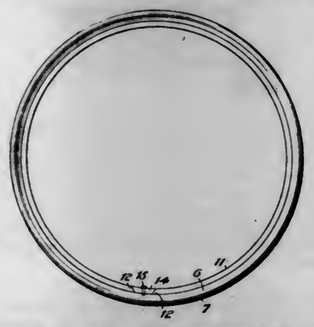
3. The combination with a wall safe provided with a side uniform thickness and having a circular opening, and a collar provided with a flange surrounding said opening and abutting the face of the safe side, said collar secured to said safe side, of an attachable finish rim mountable on said collar at the opening.

4. The combination with a circular door, a frame for the door and an internal extension hinge connecting the door with the frame, said door, frame and connecting hinge comprising a unitary grouping, of a wall safe having an opening and securing means for mounting the grouping at the opening to simultaneously attach the frame, door and connecting hinge in position.

5. A wall safe having a side provided with an opening, in combination with a collar secured to the safe side to surround the opening, said collar forming an outwardly extending sleeve, and a finish rim spaced from the safe side by the collar, said finish rim being mounted on said collar.

[Claims 6 to 11 not printed in the Gazette.]

960,983. SEPARABLE RIM FOR VEHICLE-WHEELS. TOD J. MELL, Youngstown, Ohio, assignor to The Republic Rubber Company, Youngstown, Ohio, a Corporation of Ohio. Filed Dec. 19, 1905. Serial No. 292,451.



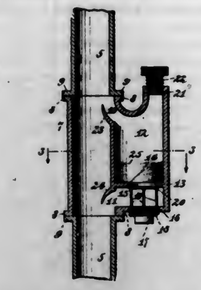
1. In a vehicle wheel, the combination with relatively fixed and detachable rim sections, of a circumferential flange upon each of said sections, a locking ring for embracing and locking said flanges together, and a block for keying said ring in a locking position, substantially as described.

2. In a vehicle wheel, the combination with relatively fixed and detachable rim sections, of a circumferential flange upon each of said sections, a resilient ring for interlocking with said flanges, a block for keying said ring in a locking position, and means for securing said block, substantially as described.

3. In a vehicle wheel, the combination with separable rim sections each having a circumferential locking flange, of an open resilient ring adapted to interlock with said flanges, a key block adapted to expand said ring into its locked position, and a retaining screw for securing together the aforesaid block, flanges, and ring, substantially as described.

960,984. DISINFECTANT-DISTRIBUTER. JOSEPH H. MELVILLE, New York, N. Y. Filed Aug. 12, 1909. Serial No. 512,522.

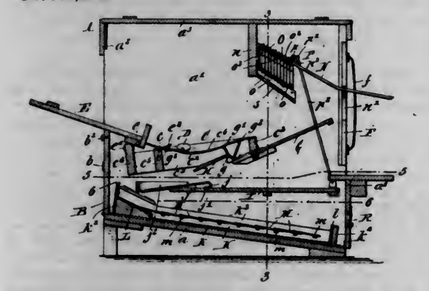
1. In a disinfectant distributer, a pipe having two openings spaced apart, a casing forming a disinfecting chamber, having an opening in communication with one of the openings in the pipe, there being a second opening in the said casing, a communicating means leading from the second opening in the casing to the other opening in the pipe, there being an opening in the communicating means, a plug adapted for closing the opening in the communicating means, a screen adapted to be disposed in the second opening in the said casing, and members connecting the screen with the plug by which it may be removed with the plug.



2. In a disinfectant distributer, a pipe, a casing integral therewith having a disinfecting chamber, there being two communicating means between the pipe and the chamber, one disposed above the other, a deflecting plate in the pipe disposed in close proximity to the upper communicating means, the lower communicating means extending below the chamber and having two openings substantially in alinement, one opening affording communication with the chamber and the other opening affording communication with the exterior of the device, a plug adapted to close the opening affording communication with the exterior of the device, a screen adapted to be disposed in close proximity to the opening affording communication with the chamber, and members connecting the screen with the plug by which it may be removed with the plug.

3. In a disinfectant distributer, a pipe, a casing integral therewith having a disinfecting chamber, there being two communicating means between the pipe and the chamber, one disposed above the other, a deflecting plate in the pipe disposed in close proximity to the upper communicating means, the lower communicating means extending below the chamber and having two openings substantially in alinement, one opening affording communication with the chamber and the other opening affording communication with the exterior of the device, a plug adapted to close the opening affording communication with the exterior of the device, a screen adapted to be disposed in close proximity to the opening affording communication with the chamber, members connecting the screen with the plug by which it may be removed with the plug, there being an opening in the top of the casing, and a plug adapted for closing the said opening.

960,985. HEN'S NEST. STANLEY A. MEAKLEY, Buffalo, FREDERICK H. APEL, Athol Springs, and WILBURN A. MEAKLEY, Buffalo, N. Y. Filed June 15, 1907. Serial No. 379,294.



1. The combination with a casing, of an egg-nest within the casing, and means to tag a hen leaving the casing only after having laid an egg.

2. The combination with a casing, of an egg-nest in said casing, and means to tag a hen controlled by an egg laid by said hen.

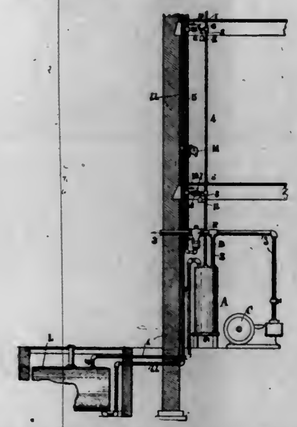
3. The combination with a nest, of means for tagging a hen controlled by an egg laid in said nest.

4. The combination with a nest, of means for tagging a hen as it leaves said nest, said means being actuated only after the hen has laid an egg.

5. The combination with a casing, of a nest within the casing, an egg-receptacle, and means for tagging a hen as it leaves the casing, said means being actuated on delivery of an egg from said nest to the egg-receptacle.

[Claims 6 to 22 not printed in the Gazette.]

960,986. AIR-CONTROLLED FEED SYSTEM FOR LIQUIDS. EDWARD J. MOORE, Cleveland, Ohio, assignor to S. F. Bowser & Company, Inc., Fort Wayne, Ind. Filed Oct. 7, 1908. Serial No. 456,682.



1. A liquid tank and a distributing pipe therefrom having an air vent, means to maintain air pressure in said tank and means to automatically relieve said pressure comprising an exhaust valve for the air, an initial valve normally closed and means adapted to open said exhaust valve when said initial valve has been opened.

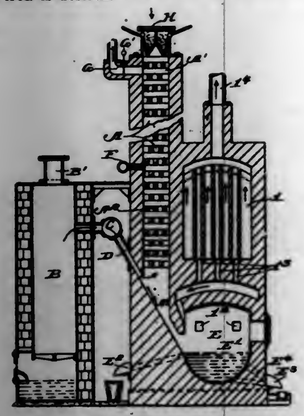
2. A liquid tank and an air pressure connection therefor comprising a storage tank and an exhaust pipe open thereto, an outgoing pipe and a return pipe connected with said exhaust and storage tank respectively, connections between said pipes at intervals and automatically controlled valves in said connections normally closed, in combination with an exhaust valve for the air in said exhaust pipe and a piston operatively engaged therewith and adapted to open said valve when one of said automatically controlled valves has been opened.

960,987. METALLURGICAL PROCESS. MONTAGUE MOORE, Melbourne, and THOMAS JAMES HESKETT, Brunswick, Victoria, Australia. Filed Apr. 17, 1908. Serial No. 427,755.

1. The herein described process which consists in introducing a reducing gas into the lower portion of a mass of ore, forming a molten bath below said ore mass and causing a portion of such gas to pass upwardly through the ore while another portion of such gas passes with reduced ore to the molten bath, said gas protecting the reduced ore from oxidation until delivered beneath said bath.

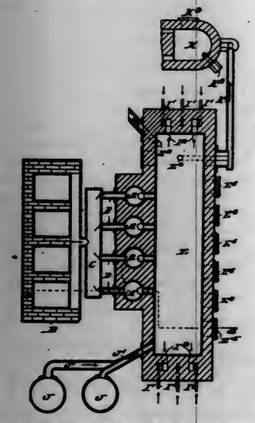
2. A process of the class described which consists in introducing a reducing gas into the lower portion of a mass of ore, forming a molten slag bath in the furnace hearth below said ore mass, causing the reducing gas to pass with the reduced ore to such bath, and melting scrap steel or

wrought iron with solid fuel in a cupola furnace and supplying molten metal therefrom to the slag bath in the hearth of the gas furnace when steel or a steel quality of wrought iron is desired.



3. The herein described process which consists in introducing a reducing gas into the lower portion of a mass of ore to cause reduction thereof, melting the reduced ore to form a bath of molten metal, and causing reducing gas to pass with the reduced ore to such bath, melting scrap steel or wrought iron with solid fuel, and conducting such molten metal to said bath, and withdrawing the molten mass from said bath and refining it.

960,988. METALLURGICAL APPARATUS. MONTAGUE MOORE, Melbourne, and THOMAS JAMES HESKETT, Brunswick, Victoria, Australia. Filed Apr. 17, 1908. Serial No. 427,756.

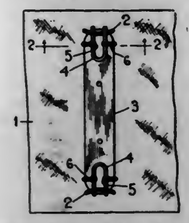


1. In an apparatus of the class described, the combination of a furnace to contain a bath of molten metal, an ore reducing chamber connected therewith, and a cupola furnace also connected to deliver molten metal to the furnace first mentioned.

2. An apparatus of the class described comprising a gas furnace, heating and reducing chambers, the former having an outlet in its upper portion and the latter having an opening in its lower portion to receive air and to discharge reduced metal into the furnace, a gas producer, means for conducting gas from the producer into the lower portion of the reducing chamber and into the furnace, an air inlet arranged in the lower portion of the heating chamber, and a damper in the outlet of the heating chamber for regulating the amount of gas supplied to the heating and reducing chambers.

3. In an apparatus of the class described, the combination of a furnace to contain a bath of molten metal, ore heating and reducing chambers adapted to discharge reduced metal therein, a cupola furnace also connected to deliver molten metal into the furnace first mentioned, and a refining furnace connected to receive metal from the furnace first mentioned.

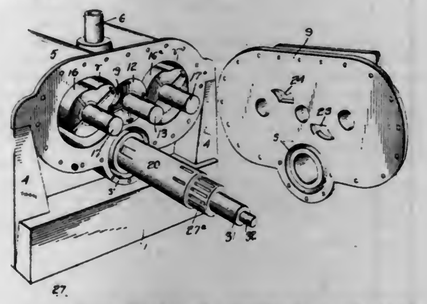
960,989. COLLAR-SUPPORTER. CARRIE C. MORRIS, Philadelphia, Pa. Filed Sept. 15, 1908. Serial No. 453,193.



1. A collar supporter comprising a strip, a hook member at each end thereof, portions of said hook members passing through said strip and embracing the side edges thereof and forming guard members.

2. A collar supporter comprising a strip, a hook member at each end thereof, portions of said hook members passing through said strip and being bent outwardly to form guards and the extreme ends thereof being doubled over to embrace opposite side edges of the strip.

960,990. ROTARY ENGINE. NEWELL H. MOTSINGER, Greensburg, Pa. Filed Feb. 10, 1909. Serial No. 477,225.



1. In a rotary engine, the combination of the casing, three rotors mounted in longitudinal bores therein, the central rotor being grooved longitudinally and the side rotors provided with vanes adapted to mesh with said groove, packing strips mounted on each side of the groove in said central rotor in longitudinal grooves in the periphery thereof, packing strips also mounted in the ends of said rotor intersecting said packing strips in its periphery, a packing strip mounted in a longitudinal groove in the crown of the vane of each side rotor, transverse packing strips in grooves extending across the ends of said side rotors, the heads containing the steam chambers secured to each end of said casing containing the rotors, a steam inlet port leading through the casing to a reversing valve mounted in a chamber on one side of said casing, said reversing valve formed with ports leading into the chambers in the ends, and means for regulating the

supply of steam through the ports leading to the engine, substantially as set forth.

2. A rotary engine comprising a casing containing longitudinal bores for a series of rotors mounted side by side therein, another bore for the reversing valve, the heads mounted on said casing containing the steam chambers, the reversing valve mounted in the bore provided therefor in said casing and extending into each head and formed with ports leading into said steam chambers, said reversing valve being divided and provided with a port communicating with a steam inlet on one side of its partition and with a port communicating with the steam exhaust on the other side, one end of said reversing valve being formed with a series of slots at intervals around its periphery upon which end is mounted a slotted thimble, said thimble provided with a crank-arm on its shaft, a rod connecting said crank-arm to the governor, and means for controlling the feed and exhaust of the steam to the opposite ends of the engine, respectively, substantially as set forth.

3. A rotary engine comprising the casing formed with longitudinal bores to receive a series of rotors, a head mounted on each end thereof containing the steam chambers, head-plates mounted on said heads covering said chambers, a series of rotors mounted in the bores in said casing on shafts journaled in bearings in said heads, a cylindrical reversing valve mounted in a bore extending through said casing and said heads and provided with ports leading to the steam chambers in said heads, said reversing valve being divided by a partition and formed with a port communicating with the steam inlet on one side of the said partition and another port communicating with the steam exhaust on the other side, a governor mounted on the end of said reversing valve comprising a slotted thimble covering the ports in said reversing valve and connected with the governor, for regulating the size of said ports, and means for regulating the feed and exhaust of the steam to the opposite ends of the engine respectively, substantially as set forth.

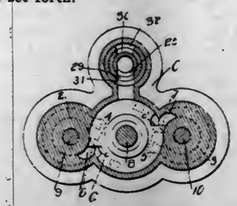
4. A rotary engine comprising the casing, a series of rotors mounted in bores provided therefor in said casing, the heads mounted on each end of said casing and formed with steam ports and chambers for supplying and exhausting the steam to and from the expansion chambers of the engine respectively, a reversing valve mounted in said casing divided into two parts one of which communicates with the steam inlet and the other with the steam exhaust, ports leading from each end of said reversing valve into the steam chambers at the respective ends of the engine and a governor comprising an oscillating thimble mounted over the ports in one end of said reversing valve and connected to the governor mechanism and the other end provided with a throttling valve covering the ports comprising an oscillating thimble connected with means for operating it, substantially as set forth.

5. In a rotary engine, the combination of the casing provided with heads containing the steam ports and chambers, the rotors mounted in appropriate bores in said casing on shafts journaled in said heads, said shafts extending beyond said heads at one end and provided with intermeshing gears which gear each side rotor to the shaft of the central rotor, a driving gear on the shaft of said central rotor, and valves for controlling and governing the inlet and exhaust of the steam to and from the expansion chambers of the engine, respectively, substantially as set forth.

[Claims 6 to 26 not printed in the Gazette.]

960,991. ROTARY ENGINE. NEWELL H. MOTSINGER, Greensburg, Pa. Filed Nov. 8, 1909. Serial No. 526,894.

1. A rotary engine comprising a reversing valve formed to receive the steam through one end and exhaust it through the other and provided with ports leading to the inlet and exhaust ends of the engine respectively, and an automatic governor and cut off comprising an inner and outer sleeve surrounding said reversing valve, said outer sleeve being geared to be driven by the engine and said inner sleeve connected with the governor mechanism, substantially as set forth.



2. In a rotary engine, the combination with the other mechanism, of a reversing valve comprising a hollow cylinder divided to receive the live steam at one end and the exhaust steam at the other and formed with ports communicating with the ports leading to the inlet and exhaust ends of the engine, of a governor and cut off mechanism comprising two independently revoluble sleeves mounted on said reversing valve one within the other, one geared to be rotated by the engine and the other connected with an automatic governor, substantially as set forth.

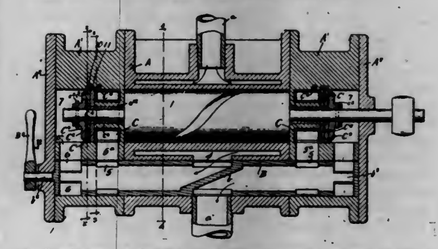
3. In a rotary engine, a reversing valve formed with ports at each end and to receive sleeves for governing and controlling the flow of steam through said ports and means connected with said sleeves for operating them, substantially as set forth.

4. In a rotary engine, the combination of the casing, a series of rotors mounted therein with their sides contiguous to the side rotors being formed and geared to rotate a multiple of the speed of the center rotor, steam inlet and exhaust ports, a reversing valve and governor mechanism arranged to admit the steam at one end to both sides of the engine simultaneously and exhaust it from both sides of the engine at the opposite end simultaneously, substantially as set forth.

5. In a rotary engine the combination of the casing, a series of rotors therein, the side rotors being arranged with their sides contiguous to the sides of the center rotor and to rotate a multiple of the speed of said center rotor, said center rotor being formed with longitudinal grooves and the side rotors with longitudinal vanes, the inlet and exhaust ports, steam controlling mechanism for admitting and exhausting the steam to both sides of the engine simultaneously, gearing connecting the shafts of the several rotors and means for taking the power from the shaft of said center rotor, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

960,992. ROTARY ENGINE. NEWELL H. MOTSINGER, Greensburg, Pa. Filed June 4, 1908, Serial No. 436,707. Renewed Dec. 20, 1909. Serial No. 534,171.



1. In a rotary engine, the combination, of the casing, comprising a part containing bores for the rotary cylinders and parts containing chambers and ports for the valve mechanism, said rotary cylinders mounted in said casing, the valve controlling mechanism comprising a hollow valve casing mounted at each end of the cylinders, each formed with ports in its inner wall leading into the chambers surrounding the driving cylinders and with ports in its outer wall, plates mounted over said ports in the outer

walls containing ports which register with each other and with the ports in said casing, said plates being arranged to rock in reverse directions, a rotary plate on the engine shaft outside of said other plates formed with a port adapted to pass over the ports of said other plates, and a governor connected to said rocking plates for operating them substantially set forth.

2. In a rotary engine, the combination, of the casing, the cylinders, and the steam controlling mechanism comprising a valve mechanism at each end of the engine embodying a main shifting valve connected to operate together with ports in their adjacent walls arranged at one end of the engine to admit the steam to the expansion chambers surrounding the driving cylinders and at the opposite end to exhaust the steam from said chambers, the operating mechanism, plates for controlling the steam inlet ports mounted over ports in the outer walls of said casings and connected to a governor mechanism for operating them, said governor mechanism, and a rotary plate mounted on the engine shaft provided with a port leading from the steam chamber through said plates into said valve when said ports are in position to register, substantially set forth.

3. In a rotary engine, the combination, of the casing, the cylinders comprising a central cylinder with a spiral groove and cylinder mounted on each side thereof formed with a spiral vane to mesh with said groove, the steam chambers at each end of the casing divided by a valve mechanism into live steam and exhaust chambers, a valve mechanism for controlling the steam comprising a rocking casing formed with ports leading to the steam chambers of the casing and also to the steam chambers surrounding the cylinders, the rocking plates formed with ports which register with each other and with the ports in the outer walls of said casings, means operated by governor mechanism for rocking said plates in reverse directions to regulate the size of said ports, said governor mechanism, and a plate mounted to rotate with the engine shaft and formed with a port adapted to pass over the ports leading into said casing as said engine shaft revolves and admit the steam intermittently, substantially set forth.

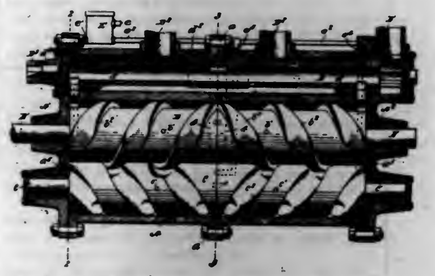
4. In a rotary engine, the combination, of the casing having bores for the cylinders and seats and chambers for the valves, said cylinders, a reversing valve communicating at one end with the inlet and at the other end with the exhaust end of the engine, the valve mechanism for controlling the admission and exhaust of the steam mounted in steam chambers at each end of the casing and comprising a rocking valve casing having ports leading into the expansion chambers of the engine and ports leading to the steam chambers in the ends of the casing, plates for regulating the size of said inlet ports adapted to move in relation to each other, governor mechanism connected with said plates for operating them, and a rotary plate on the engine shaft covering the ports in said regulating plates and provided with a port which is adapted to admit steam to said valve as it passes over said inlet ports, substantially as set forth.

5. In a rotary engine, the combination, of the casing, the rotary cylinders mounted in bores in said casing, a steam inlet pipe communicating with a channel in said casing surrounding said bores, said casing being provided with steam chambers at each end outside the ends of said cylinders with which said channel communicates, valve mechanism for controlling the admission of the steam to said engine through the chamber at one end, and valve mechanism for controlling the exhaust of steam through the chamber at the other end, substantially set forth.

[Claims 6 to 8 not printed in the Gazette.]

960,993. ROTARY ENGINE. NEWELL H. MOTSINGER, Greensburg, Pa. Filed Mar. 5, 1906, Serial No. 304,412. Renewed Dec. 20, 1909. Serial No. 534,172.

1. In a rotary engine, the combination of the casing containing communicating cylindrical chambers of different diameters, a pair of cylinders of uniform diameters mounted in said chambers with their surfaces in longitudinal contact, one of said cylinders being formed with spiral vanes and the other with grooves, said grooves and vanes running from a divisional point toward each end of the respective cylinders in opposite directions and formed to fit snugly and co-act with each other and the face of said vanes being on a line coincident with the interior surface of the chamber containing the cylinder bearing them, substantially as set forth.



2. In a rotary engine, the combination of the casing having cylindrical chambers of different diameters, a pair of rotary cylinders of uniform diameters with co-acting grooves and vanes formed thereon mounted in said casing with their peripheries in contact, said vanes being of a form on their edges to fit snugly in said grooves when in mesh and with their faces on the line where their advancing sides separate during rotation from the advance corner of said grooves, substantially as set forth.

3. In a rotary engine, the combination of the casing containing cylindrical chambers, the circles of the interior of two of which cut into each other forming inwardly projecting points 11 between them, a pair of rotary cylinders in said chambers one of which is formed with spiral grooves and the other with spiral vanes which are adapted to mesh and coact therewith, the outer advance corner of each vane and the outer advance corner of each groove being arranged to separate at the angle 11 in the casing between the cylinders, whereby said groove may be closed by said casing before the steam is admitted behind said vane, substantially as set forth.

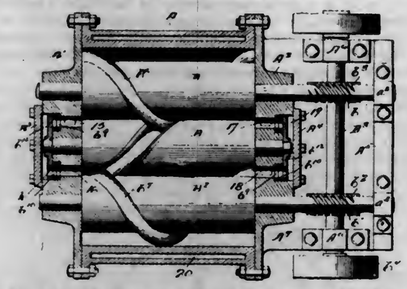
4. In a rotary engine, the combination of the casing having cylindrical chambers formed therein, and formed with multiple inlet ports on one side and exhaust ports on the other, said inlet ports being arranged to discharge into the cylinder chamber at different circumferential points around one side, a rotary valve for controlling said inlet and exhaust ports mounted in the chamber at the top of said casing, and a pair of cylinders with inter-meshing grooves and vanes mounted in chambers in said casing with their surfaces in contact, substantially as set forth.

5. In a rotary engine, the combination of the casing containing a plurality of cylindrical chambers, two of which cut into each other longitudinally, a rotary cylinder mounted in each of said chambers with their peripheries in longitudinal contact, one of said cylinders being formed with spiral vanes and the other with spiral grooves, said vanes and grooves being formed to intermesh, the grooves being formed to fit said vanes snugly at their sides but of greater depth than the height of said vanes, whereby a pocket is formed to receive and hold the crown of said vanes, and the valve for controlling the inlet and exhaust ports, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

960,994. ROTARY ENGINE. NEWELL H. MOTSINGER, Greensburg, Pa. Filed July 12, 1907, Serial No. 383,402. Renewed Dec. 20, 1909. Serial No. 534,173.

1. In a rotary engine, the combination, of the casing, a series of rotary engines coupled together end to end with ports arranged to exhaust from one to the next, each of said engines comprising a central grooved cylinder and a cylinder with vanes to mesh therewith on each side of said grooved cylinder, said cylinders being arranged parallel and with their sides contiguous, suitable ports, and steam controlling valves, substantially as set forth.



2. In a rotary engine, the combination, of the casing, a set of engines provided therein each comprising a series of parallel contiguous cylinders formed with inter-meshing vanes and grooves, a cylinder with a vane being arranged, on each side of the grooved cylinder, the casing being formed with appropriate inlet and exhaust ports, valves for controlling said ports, and means for operating said valves, substantially as set forth.

3. A rotary engine, comprising a casing and several cylinders journaled therein parallel and contiguous, alternate cylinders being provided with vanes and the others with grooves arranged to mesh therewith, each grooved cylinder being arranged between a pair of vaned cylinders, the casing being formed with suitable ports, valves for controlling said ports, and means for operating said valves, substantially as set forth.

4. A rotary engine comprising a series of single engines each composed of parallel cylinders arranged contiguous and having inter-meshing vanes and grooves mounted in a suitable casing containing inlet and exhaust ports, said engines being arranged end to end and with ports leading from one to the next and formed with expansion chambers of increasing areas from the inlet or first engine to the last engine or exhaust end, a reversing valve between the steam chest and the engine casing formed with ports to control the inlet of steam to the casings of said several single engines, other valves for controlling the inlet of steam to between the cylinders, and other valves for controlling the exhaust, substantially as set forth.

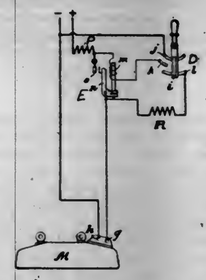
5. In a rotary engine, the combination, of the casing containing the chambers for the cylinders and the several inlet and exhaust ports, the cylinder chambers being arranged in a series arranged end to end with ports leading from one to the next, the cylinders having inter-meshing vanes and grooves mounted in said chambers, a single reversing valve between the steam supply and the inlet to said casing having ports leading to each series of chambers and adapted to control the inlet to all of them, and other valves for controlling the inlet and exhaust of steam to the cylinder chambers, substantially as set forth.

[Claims 6 to 25 not printed in the Gazette.]

960,995. LIFTING-MAGNET CONTROLLER. JACOB F. MOTZ, Pittsburg, Pa., assignor to The Electric Controller and Supply Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 17, 1907. Serial No. 406,851.

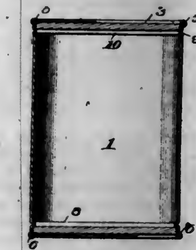
1. The combination of a lifting magnet having therein an energizing winding, a magnetically operated switch for connecting the winding of the lifting magnet to a source of current, a bank of resistance, and a manually operated controlling switch, said controlling switch being provided with contacts whereby, when it is moved from its off-position, the winding of said magnetically operated switch is energized and the circuit closed through the winding of said lifting magnet, and when said controlling switch is moved to its off-position, the said bank of resistance is connected across the terminals of the winding of said lifting magnet through certain of the contacts of said controlling switch.

2. The combination of an electric apparatus having an inductive winding, a magnetically-operated switch connecting a source of electric energy to the said winding, a resistance, and a controlling hand-operated switch having contacts arranged to close a circuit across the line whereby, when it is moved from its off-position, the winding of the magnetically operated switch is energized and circuit closed through the said inductive winding, and when said controlling switch is moved to its off-position, the said resistance is connected across the terminals of the said inductive winding.



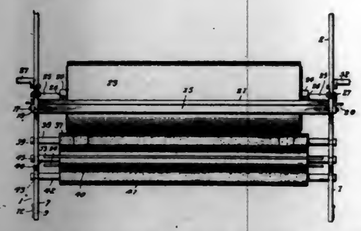
3. The combination of an electric device having an inductive winding, a magnetically-operated switch connecting a source of energy to the said winding, a resistance, a second magnetically-operated switch having contacts arranged to connect the said inductive winding and the resistance in a closed circuit, and a hand-operated switch having contacts for closing the first magnetically-operated switch to energize the said electric device and for closing the second magnetically operated switch to connect the said winding and resistance in said closed circuit when the contacts of the first magnetically operated switch are opened.

960,996. RECEPTACLE. WILLARD A. MOODY, Port Huron, Mich., assignor of one-third to Walter Thorn and one-third to Frank Magee, Port Huron, Mich. Filed June 15, 1909. Serial No. 502,372.



In a receptacle, the combination of a body portion, a closure therefor, and means for snugly holding said closure in place, comprising an internal ridge formed by an external depression, said ridge providing a seat for the closure, the wall of said barrel extending upwardly beyond said ridge and terminating in a hollow annular rim formed by the projecting end of said body portion being bent upon itself, said rim being circular in cross section providing an annular bore, and the wall of the barrel intermediate of said ridge and rim forming a neck portion of a depth substantially the same as the thickness of the closure to snugly receive the latter with said annular rim immediately above said closure, and a wire within said annular bore for contracting said rim and crimping the same inwardly over said closure, substantially as described.

960,997. TYPE-WRITER ATTACHMENT. JOHN L. MURPHY, Covington, Va. Filed Nov. 16, 1909. Serial No. 528,283.



1. A device of the character specified, comprising spaced frames, each having a vertical slot, and each being provided with means whereby it may be detachably connected with the carriage of a typewriter, a roller journaled in the slots and movable vertically therein, yielding means normally pressing said roller downwardly, means whereby the said yielding means may be adjusted vertically of the slots, a pair of superposed bars in front of the roller, said bars having their inner meeting edges beveled, means for rotatably mounting the upper bar, a roller having means for grasping a sheet of paper journaled in the slots, a spacing roller between the last-named roller and the first-named roller, and a spacing roller below the said last-named roller.

2. A device of the character specified, comprising a frame, a roller journaled in the frame and movable vertically thereof, springs normally pressing said roller downwardly, means whereby said springs may be adjusted vertically, a pair of superposed bars supported by the frame in front of and substantially parallel with the roller, the inner meeting edges of the bars being beveled, a roller journaled in the frame below said first-named roller and provided with means for gripping the edge of a strip of paper, a spacing roller journaled in the frame above the last-named roller, and a spacing roller journaled in the frame below the said last-named roller, the said spacing rollers being movable toward and from each other.

3. A device of the character specified, comprising a frame having spaced parallel vertical slots, a roller movable vertically therein, springs normally pressing the roller downwardly, means whereby the springs may be adjusted vertically, a pair of clamping bars supported in front of the roller and parallel therewith, a roller journaled in the slots below said first named roller, means in connection with the roller for gripping the end of a strip of paper, and a spacing roller in the slots above said roller.

4. In a device of the character specified, a clamping device, comprising a pair of parallel superposed bars having their meeting edges on one side beveled, a frame having a square lower opening and a circular upper opening, said lower bar having at each end a reduced square portion for engaging the lower openings, the upper bar having pins at its ends for engaging the upper openings.

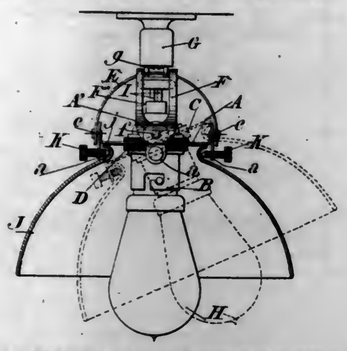
5. In a device of the character specified, a clamping device, comprising a pair of parallel superposed bars having their meeting edges on one side beveled, and means for supporting the bars, said lower bar being fixed and the upper bar being movable for the purpose specified.

[Claims 6 to 11 not allowed in the Gazette.]

960,998. ELECTRIC-LAMP SUPPORT. JOSEPH NÉPLE, Lyon, France. Filed Jan. 3, 1910. Serial No. 536,202.

1. An electric lamp support comprising a base, two pairs of diametrically opposed pivots carried thereby, one pair being in a plane perpendicular to the other, a slotted member rotatable about each pair of pivots, and a union engaged by said slotted members at the intersection thereof.

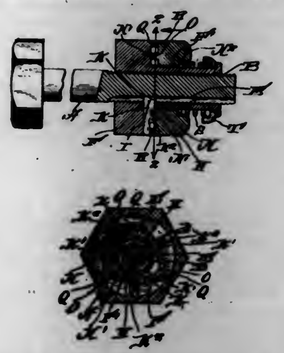
2. An electric lamp support comprising a base, two pairs of diametrically opposed pivots carried thereby, one pair being in a plane perpendicular to the other, a slotted member rotatable about each pair of pivots, a union engaged by said slotted members at the intersection thereof, a lamp holder carried by said base, and a flexible conductive connection between said union and holder.



3. An electric lamp support comprising a base of cruciform shape, two pairs of diametrically opposed pivots carried by the ends of the arms of said base, one pair of pivots being in a plane perpendicular to the other pair, a pair of semi-circular slotted members each rotatable about a pair of said pivots and intersecting each other, and a union engaging and held in the slots of said members at the intersection thereof.

4. An electric lamp support comprising a base of cruciform shape, two pairs of diametrically opposed pivots carried by the ends of the arms of said base, one pair of pivots being in a plane perpendicular to the other pair, a pair of semi-circular slotted members each rotatable about a pair of said pivots and intersecting each other, a union engaging and held in the slots of said members at the intersection thereof, a lamp holder carried by said base and a flexible conductive connection between said union and holder.

960,999. NUT-LOCK. JOHN F. NICHOLSON, Somerset, Pa. Filed Feb. 3, 1910. Serial No. 541,670.



1. A nut lock comprising, in combination with a bolt having a threaded portion with longitudinal channels intersecting the threads, a nut having an integral shell interiorly threaded and provided with radial slots, keys movable in said slots and provided with laterally projecting lugs and adapted to engage the channels of the bolt, a nut fitted over said shell, means for securing the nut upon the latter and provided with a cam outlined rib upon its face adapted to engage with a lug upon each of said keys whereby, as said rib is turned, the keys may be simultaneously moved into or out of locking relation, a coiled spring fastened to said nut provided with the rib and adapted to allow the nut to turn.

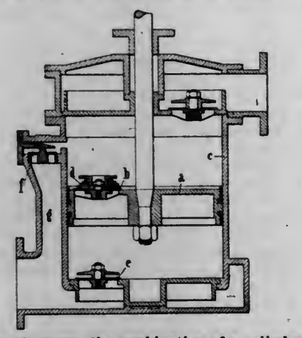
face adapted to engage with a lug upon each of said keys whereby, as said rib is turned, the keys may be simultaneously moved into or out of locking relation.

2. A nut lock comprising, in combination with a bolt having a threaded portion with longitudinal channels intersecting the threads, a nut having an integral shell interiorly threaded and provided with radial slots, keys movable in said slots and provided with laterally projecting lugs and adapted to engage the channels of the bolt, a nut fitted over said shell, means for securing the nut upon the latter and provided with a cam outlined rib upon its face adapted to engage with a lug upon each of said keys whereby, as said rib is turned, the keys may be simultaneously moved into or out of locking relation, a coiled spring fastened to said nut provided with the rib and adapted to allow the nut to turn.

3. A nut lock comprising, in combination with a bolt having a threaded portion with longitudinal channels intersecting the threads, a nut having an integral shell interiorly threaded and provided with radial slots, keys movable in said slots and provided with laterally projecting lugs and adapted to engage the channels of the bolt, a nut fitted over said shell, means for securing the nut upon the latter and provided with a cam outlined rib upon its face adapted to engage with a lug upon each of said keys whereby, as said rib is turned, the keys may be simultaneously moved into or out of locking relation, ribs projecting from the outer face of the slotted nut and adapted to engage grooves in the adjacent face of the nut having said cam outlined rib.

4. A nut lock comprising, in combination with a bolt having a threaded portion with longitudinal channels intersecting the threads, a nut having an integral shell interiorly threaded and provided with radial slots, keys movable in said slots and provided with laterally projecting lugs and adapted to engage the channels of the bolt, a nut fitted over said shell and provided with a cam outlined rib upon its face adapted to engage with a lug upon each of said keys whereby, as said rib is turned, the keys may be moved into or out of locking relation, said nut provided with the cam outlined rib having a recess in its outer face, a coiled spring seated therein and engaging said shell, and a washer engaging said spring.

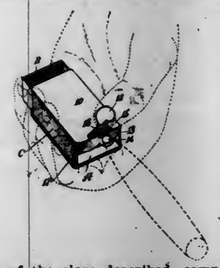
961,000. AIR-PUMP FOR USE WITH CONDENSERS AND THE LIKE. PHILIP FRANCIS ODDIE, London, England. Filed Apr. 19, 1909. Serial No. 490,887.



1. In an air pump, the combination of a cylinder having head valves and foot valves and provided with a channel connecting the upper part of the cylinder with the suction chamber of the pump a suction valve in said channel, and a piston provided with loaded bucket valves arranged to offer a greater resistance to opening than does the suction valve, substantially as described.

2. In an air pump, the combination of a cylinder having head valves and foot valves and provided with a channel connecting the upper part of the cylinder with the suction chamber of the pump, a suction valve in said channel, and a piston provided with spring loaded bucket valves, the load on said bucket valves being such that the suction valve opens with far less resistance than the bucket valves, substantially as described.

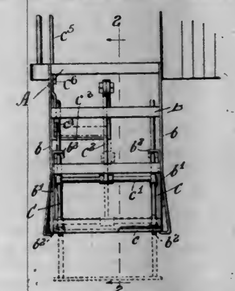
961,001. COMBINED MATCH-BOX HOLDER AND CIGAR-CUTTER. ERNEST OLDENBUSCH, New York, N. Y. Filed Oct. 19, 1909. Serial No. 523,409.



1. A device of the class described, comprising a single sheet of metal bent to form parallel top and bottom walls, a side wall connecting the top and bottom walls, and an end flange depending from the top wall and independent of the bottom wall or side wall, there being a slot extending along the angle of intersection of said top wall and said flange through a portion of the length thereof, and said flange having an opening therein to receive the top of a cigar to be cut, a cutter pivoted to the inner surface of said flange adjacent one end thereof and normally disposed beneath the top wall and covering said opening, said cutter being movable upwardly through said slot to uncover said opening, and a thumb piece integral with said cutter at the end thereof opposite to the pivotal support and normally disposed in engagement with the upper surface of the top wall.

2. A device of the class described, comprising a single sheet of metal bent to form parallel top and bottom walls, a side wall connecting the top and bottom walls, and an end flange depending from the top wall, there being a slot extending along the angle of intersection of said top wall and said flange through a portion of the length thereof, and said flange having an opening therein to receive the top of a cigar to be cut, a cutter pivoted to the inner surface of said flange adjacent one end thereof and normally disposed beneath the top wall and covering said opening, said cutter being movable upwardly through said slot to uncover said opening, and a thumb piece integral with said cutter at the end thereof opposite to the pivotal support and normally disposed in engagement with the upper surface of the top wall, and having a portion thereof extending beyond said flange to facilitate the raising of the cutter.

961,002. EXTENSION CAR-STEP. JOHN J. OLING, Harvey, Ill. Filed June 27, 1908. Serial No. 440,743.

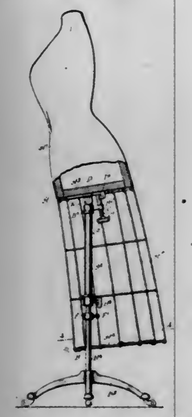


1. In a device of the class described an extensible car step, an actuating lever, levers pivotally connected there-

with and with the step having a longitudinal slot in the ends adjacent the step, links pivotally connected to the ends of the step and pivot bolts secured to the links and extended through the slots in the levers.

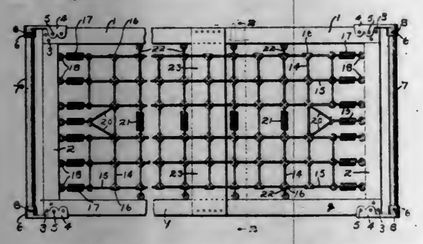
2. In a device of the class described the combination with a car step of an extension step, an actuating lever pivoted to the car step, links pivoted to the car step and to the rear edge of the extension step, a pivot bolt secured to each link, levers pivoted at their ends to the extension step having longitudinal slots therein through which the pivot bolts extend to guide the levers and means connecting the actuating lever and the last named levers.

961,003. GARMENT-FORM. EMIL THEODORE PALMENBERG, New York, N. Y. Filed Feb. 4, 1910. Serial No. 542,047.



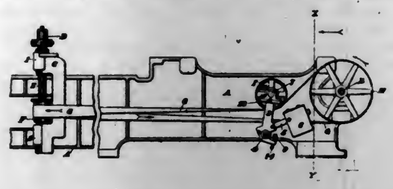
A garment form, comprising a stand, a body, a pivot connecting the said stand and body for the latter to swing transversely, a screw rod, a swing arm pivoted on the said body and in which the free end of the screw rod is mounted to turn, and a nut fixed on the said stand and in which screws the said screw rod.

961,004. SEATING FOR COUCH-HAMMOCKS OR OTHER STRUCTURES. ISAAC E. PALMER, Middletown, Conn., assignor to The I. E. Palmer Co., Middletown, Conn., a Corporation of Connecticut. Original application filed Mar. 28, 1908, Serial No. 423,914. Divided and this application filed Feb. 28, 1910. Serial No. 546,306.



A hammock or other frame comprising side and end members, a flexible wire seating composed of substantially longitudinally and substantially transversely extending substantially non-expansible members, end flexible connections from the seating to the frame, one or more transversely arranged springs intermediate said end connections and also intermediate the substantially non-expansible side longitudinal members of the seating, and substantially non-elastic means in substantial alinement with said transversely arranged spring or springs, connecting the said longitudinal side members of the seating to the side members of the frame.

961,005. BELT-TIGHTENER. HIRAM A. PERKINS, Rochester, N. Y., assignor to American Wood Working Machinery Co., Rochester, N. Y., a Corporation of Pennsylvania. Filed Apr. 20, 1909. Serial No. 491,063.



1. The combination with a belt, of a belt tightener comprising an idler pulley adjusted to bear against the belt, a pulley-supporting arm movable transversely and pivoted to swing in a plane substantially parallel to such belt, side guides movable with said arm and embracing the opposite run of the belt from the idler pulley, whereby the arm and idler pulley are moved transversely with the belt as it changes position in the machine.

2. The combination with a belt, of a belt tightener comprising an idler pulley the axis of which is adjustable horizontally to conform to the position assumed by the belt, a pulley-supporting arm pivoted to swing in a plane substantially parallel to the belt, and which is free to adjust itself transversely to such belt, whereby the idler pulley will follow and tension the belt in any transverse position.

3. The combination with a belt, of a belt tightener comprising a pulley-shaft, an idler pulley, a supporting arm carrying said shaft, and constructed to swing in a plane substantially parallel to the belt, and adapted to adjust itself transversely therewith, means acting on said arm for pressing the idler pulley against the belt to give tension thereto, side guides operatively connected to said arm and embracing the belt, whereby when the belt changes its transverse position the supporting arm and idler are carried along with it for the purpose set forth.

4. The combination with a belt, of an idler pulley, a stud or shaft therefor adjustable to correspond with the angular position of the belt, a pulley-supporting arm movable transversely, and pivoted to swing in a plane substantially parallel with said belt, and means for limiting the swing of the supporting arm whatever its transverse position, as set forth.

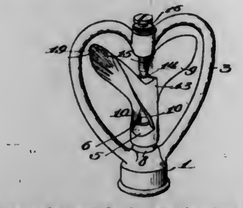
5. The combination with a belt, of a belt tightener comprising an idler pulley the axis of which is adjustable in relation to the belt, a pulley-supporting arm movable in a plane substantially parallel to said belt, a counterweight on a part extending from said supporting arm and having parts adapted to embrace the belt, whereby the supporting arm and idler will be caused to follow transverse movements of the belt.

[Claims 6 to 10 not printed in the Gazette.]

961,006. SPRAYING-NOZZLE. CHARLES H. PERRY, Miami, Fla., assignor of one-half to George D. Ash, Lansing, Mich. Filed Apr. 29, 1909. Serial No. 492,917.

1. In a spraying nozzle, in combination, a frame having an upper needle point bearing and a lower cone-faced base, and a sprinkler having an upper recess receiving the end of the bearing and a lower recess conformably fitting over the base, and having water discharging means below the bearing.

2. In a spraying nozzle, in combination, a frame having an upper needle point bearing and a lower cone-faced base having a central opening and a sprinkler having a base conformably fitting over the base of the frame and having also a central opening, said sprinkler having also water discharging means receiving water from the central openings and having a recess above the water discharging means receiving the needle point bearing.



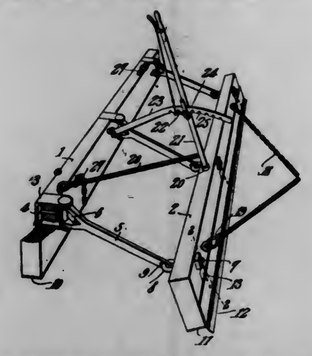
3. In a spraying nozzle, in combination, a frame having an upper needle point bearing and a lower cone-faced base having a central opening and a sprinkler having a base conformably fitting over the base of the frame and having also a central opening, said sprinkler head having also oppositely extending channeled arms receiving water from the openings and provided with a central vertex and having a recess above the wings and receiving the needle point bearing.

4. In a spraying nozzle, in combination, a lower cone-shaped base, a sprinkler, having water discharging means and having also a lower end portion which conformably fits over the base and an upper anti-friction bearing against which the sprinkler is held by the force of the water, the sprinkler being loosely confined between the bearing and the base for rotary movement and limited vertical play.

5. In a spraying nozzle, in combination, a conical centering part, a bearing part, and a sprinkler rotatably held between the centering part and the bearing part, one of the parts being axially adjustable.

[Claims 6 to 9 not printed in the Gazette.]

961,007. ROAD DRAG AND GRADER. ORLANDO F. PHILLIPS and MARTIN H. MCCANLON, Butlerville, Ind. Filed May 13, 1909. Serial No. 495,650.



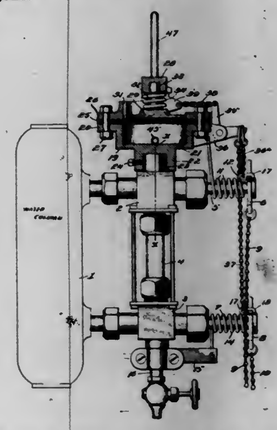
1. An implement as described comprising a plurality of bars, arms pivotally connecting the bars together, a chain attached to the forward bar, and take-up links attached to the rear bar at points in the vicinity of the opposite ends thereof and adapted to receive said chain.

2. An implement as described comprising a forward and a rear bar, arms pivotally connecting the said bars together, a notched arm pivotally attached to the rear bar and having a curved forward portion, a rod fixed to the forward bar and having a pawl mechanism adapted to engage the notches of the said notched bar.

3. An implement as described comprising a forward and a rear bar, arms pivotally connecting the bars together, a stay-chain attached to the forward bar and adjustably connected with the rear bar, an arm pivoted to the rear bar and having a curved notched forward portion, a rod attached to the forward bar and having a pawl for engagement with the notches of the said notched arm.

4. In an implement as described a bar having vertically disposed recesses, a blade having guides located in the said recesses, said guides having inwardly turned flanges, and bolts passing transversely through the bar and having their heads located in the said guides and adapted to bear against the said flanges, and securing devices engaging the said bolts.

961,008. STEAM-BOILER GAGE. WILLIAM T. PIPER, North Andover, Mass. Filed Mar. 31, 1909. Serial No. 486,928.



1. In a water gage for steam boilers comprising a sight tube, and steam and water valves, means coöperating with each of said valves normally tending to effect a closing thereof, restraining means for preventing operation of the valve closing means and holding said valves open, and means utilizing the steam at boiler pressure to hold the said restraining means in operative position under normal conditions and to release said valve closing means when the steam pressure is reduced under abnormal conditions to admit of the automatic closing of the said valves.

2. A steam boiler water gage comprising a sight tube and steam and water controlling valves, the latter adapted to be operated by hand at all times, means coöperating with said valves to automatically close the same and to admit of their free operation by hand, restraining means for preventing operation of the valve closing means and holding said valves open, and means utilizing the steam at boiler pressure to hold the said restraining means in operative position under normal conditions and to release said valve closing means when the steam pressure is reduced under abnormal conditions to admit of the automatic closing of the said valves.

3. In a gage of the character described, the combination of a valve, a spring normally under tension arranged to coöperate with said valve to effect a closing thereof without interfering with the free movement of said valve by hand, restraining means for preventing operation of said spring and the closing of the valve thereby, and means utilizing the steam at boiler pressure to hold the said restraining means in operative position under normal conditions and to release said spring when the steam pressure is reduced under abnormal conditions to admit of the automatic closing of the valve by the action of the spring.

with and with the step having a longitudinal slot in the ends adjacent the step, links pivotally connected to the ends of the step and pivot bolts secured to the links and extended through the slots in the levers.

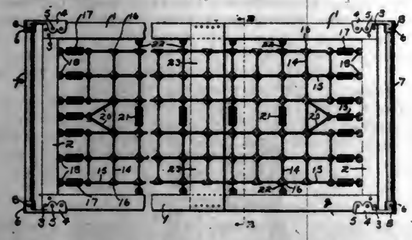
2. In a device of the class described the combination with a car step of an extension step, an actuating lever pivoted to the car step, links pivoted to the car step and to the rear edge of the extension step, a pivot bolt secured to each link, levers pivoted at their ends to the extension step having longitudinal slots therein through which the pivot bolts extend to guide the levers and means connecting the actuating lever and the last named levers.

961,003. GARMENT-FORM. EMIL THEODORE PALMENBERG, New York, N. Y. Filed Feb. 4, 1910. Serial No. 542,047.



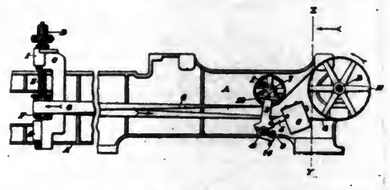
A garment form, comprising a stand, a body, a pivot connecting the said stand and body for the latter to swing transversely, a screw rod, a swing arm pivoted on the said body and in which the free end of the screw rod is mounted to turn, and a nut fixed on the said stand and in which screws the said screw rod.

961,004. SEATING FOR COUCH-HAMMOCKS OR OTHER STRUCTURES. ISAAC E. PALMER, Middletown, Conn., assignor to The I. E. Palmer Co., Middletown, Conn., a Corporation of Connecticut. Original application filed Mar. 28, 1908, Serial No. 423,914. Divided and this application filed Feb. 28, 1910. Serial No. 546,306.



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961,005. BELT-TIGHTENER. HIRAM A. PERKINS, Rochester, N. Y., assignor to American Wood Working Machinery Co., Rochester, N. Y., a Corporation of Pennsylvania. Filed Apr. 20, 1909. Serial No. 491,063.



1. The combination with a belt, of a belt tightener comprising an idler pulley adjusted to bear against the belt, a pulley-supporting arm movable transversely and pivoted to swing in a plane substantially parallel to such belt, side guides movable with said arm and embracing the opposite run of the belt from the idler pulley, whereby the arm and idler pulley are moved transversely with the belt as it changes position in the machine.

2. The combination with a belt, of a belt tightener comprising an idler pulley the axis of which is adjustable horizontally to conform to the position assumed by the belt, a pulley-supporting arm pivoted to swing in a plane substantially parallel to the belt, and which is free to adjust itself transversely to such belt, whereby the idler pulley will follow and tension the belt in any transverse position.

3. The combination with a belt, of a belt tightener comprising a pulley-shaft, an idler pulley, a supporting arm carrying said shaft, and constructed to swing in a plane substantially parallel to the belt, and adapted to adjust itself transversely therewith, means acting on said arm for pressing the idler pulley against the belt to give tension thereto, side guides operatively connected to said arm and embracing the belt, whereby when the belt changes its transverse position the supporting arm and idler are carried along with it for the purpose set forth.

4. The combination with a belt, of an idler pulley, a stud or shaft therefor adjustable to correspond with the angular position of the belt, a pulley-supporting arm movable transversely, and pivoted to swing in a plane substantially parallel with said belt, and means for limiting the swing of the supporting arm whatever its transverse position, as set forth.

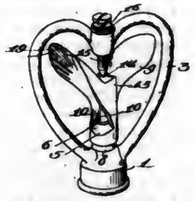
5. The combination with a belt, of a belt tightener comprising an idler pulley the axis of which is adjustable in relation to the belt, a pulley-supporting arm movable in a plane substantially parallel to said belt, a counterweight on a part extending from said supporting arm and having parts adapted to embrace the belt, whereby the supporting arm and idler will be caused to follow transverse movements of the belt.

[Claims 6 to 10 not printed in the Gazette.]

961,006. SPRAYING-NOZZLE. CHARLES H. PERRY, Miami, Fla., assignor of one-half to George D. Ash, Lansing, Mich. Filed Apr. 29, 1909. Serial No. 492,917.

1. In a spraying nozzle, in combination, a frame having an upper needle point bearing and a lower cone-faced base, and a sprinkler having an upper recess receiving the end of the bearing and a lower recess conformably fitting over the base, and having water discharging means below the bearing.

2. In a spraying nozzle, in combination, a frame having an upper needle point bearing and a lower cone-faced base having a central opening, said sprinkler having also water discharging means receiving water from the central openings and having a recess above the water discharging means receiving the needle point bearing.



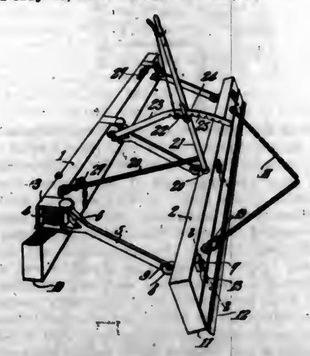
3. In a spraying nozzle, in combination, a frame having an upper needle point bearing and a lower cone-faced base having a central opening and a sprinkler having a base conformably fitting over the base of the frame and having also a central opening, said sprinkler head having also oppositely extending channeled arms receiving water from the openings and provided with a central vertex and having a recess above the wings and receiving the needle point bearing.

4. In a spraying nozzle, in combination, a lower cone-shaped base, a sprinkler, having water discharging means and having also a lower end portion which conformably fits over the base and an upper anti-friction bearing against which the sprinkler is held by the force of the water, the sprinkler being loosely confined between the bearing and the base for rotary movement and limited vertical play.

5. In a spraying nozzle, in combination, a conical centering part, a bearing part, and a sprinkler rotatably held between the centering part and the bearing part, one of the parts being axially adjustable.

[Claims 6 to 9 not printed in the Gazette.]

961,007. ROAD DRAG AND GRADER. ORLANDO F. PHILLIPS and MARTIN H. MCCANLON, Butlerville, Ind. Filed May 13, 1909. Serial No. 495,650.



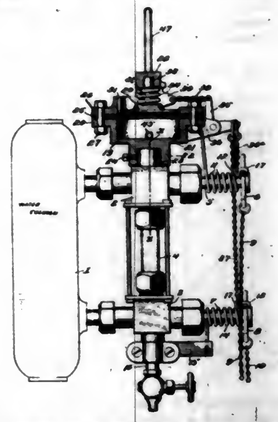
1. An implement as described comprising a plurality of bars, arms pivotally connecting the bars together, a chain attached to the forward bar, and take-up links attached to the rear bar at points in the vicinity of the opposite ends thereof and adapted to receive said chain.

2. An implement as described comprising a forward and a rear bar, arms pivotally connecting the said bars together, a notched arm pivotally attached to the rear bar and having a curved forward portion, a rod fixed to the forward bar and having a pawl mechanism adapted to engage the notches of the said notched bar.

3. An implement as described comprising a forward and a rear bar, arms pivotally connecting the bars together, a stay-chain attached to the forward bar and adjustably connected with the rear bar, an arm pivoted to the rear bar and having a curved notched forward portion, a rod attached to the forward bar and having a pawl for engagement with the notches of the said notched arm.

4. In an implement as described a bar having vertically disposed recesses, a blade having guides located in the said recesses, said guides having inwardly turned flanges, and bolts passing transversely through the bar and having their heads located in the said guides and adapted to bear against the said flanges, and securing devices engaging the said bolts.

961,008. STEAM-BOILER GAGE. WILLIAM T. PIPER, North Andover, Mass. Filed Mar. 31, 1900. Serial No. 486,928.



1. In a water gage for steam boilers comprising a sight tube, and steam and water valves, means coöperating with each of said valves normally tending to effect a closing thereof, restraining means for preventing operation of the valve closing means and holding said valves open, and means utilising the steam at boiler pressure to hold the said restraining means in operative position under normal conditions and to release said valve closing means when the steam pressure is reduced under abnormal conditions to admit of the automatic closing of the said valves.

2. A steam boiler water gage comprising a sight tube and steam and water controlling valves, the latter adapted to be operated by hand at all times, means coöperating with said valves to automatically close the same and to admit of their free operation by hand, restraining means for preventing operation of the valve closing means and holding said valves open, and means utilising the steam at boiler pressure to hold the said restraining means in operative position under normal conditions and to release said valve closing means when the steam pressure is reduced under abnormal conditions to admit of the automatic closing of the said valves.

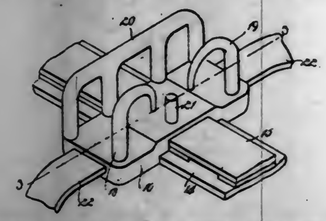
3. In a gage of the character described, the combination of a valve, a spring normally under tension arranged to coöperate with said valve to effect a closing thereof without interfering with the free movement of said valve by hand, restraining means for preventing operation of said spring and the closing of the valve thereby, and means utilising the steam at boiler pressure to hold the said restraining means in operative position under normal conditions and to release said spring when the steam pressure is reduced under abnormal conditions to admit of the automatic closing of the valve by the action of the spring.

4. In a gage of the character described, the combination of a valve fitting, a spring adapted to close the valve of said fitting, restraining means for preventing operation of said valve closing spring, a follower coöperating with said restraining means, and means utilising the steam at boiler pressure to operate said follower to hold said restraining means in operative position under normal conditions and adapted to release the restraining means when the steam pressure is reduced under abnormal conditions to admit of the automatic closing of the valve.

5. In a gage of the character described comprising a chambered valve fitting and a spring normally tending to close the valve of said fitting, a second chamber having communication with the chamber of said valve fitting, a follower, restraining means for preventing operation of said spring normally held in operative position by said follower, and means for supplying steam at boiler pressure to said second chamber to hold the follower in operative position under normal conditions and to permit operation of said follower to release said restraining means when the steam pressure is reduced under abnormal conditions to admit of automatic closing of the valve by means of the spring.

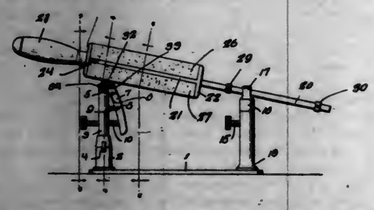
[Claims 6 to 12 not printed in the Gazette.]

961,009. TRACE-CARRIER. ORLO S. PITTENGER, Crab Orchard, Nebr. Filed Apr. 12, 1909. Serial No. 489,331.



A buckle comprising a base formed with a continuous upper face and with a longitudinal opening and a transverse opening communicating with the longitudinal opening, a guard member rising from said base at one side edge, a pin rising from said base intermediate the ends thereof at the other side edge, and inwardly and downwardly directed hooks carried by said base in longitudinal alinement with the pin, the terminals of the hooks being spaced from the pin.

961,010. GRINDING-MACHINE. PIERRE J. POITRAS and WILFRID CARON, Rumford, Me. Filed Sept. 24, 1909. Serial No. 519,491.



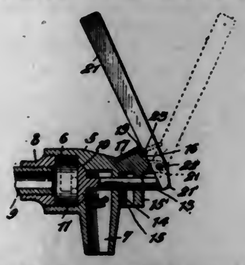
1. A sharpening device of the class specified, comprising a base, a vertically adjustable vise thereon adapted to clamp and hold the blade to be sharpened, a vertically adjustable bearing post arranged at a distance from the vise standard, and a reciprocatory sharpening member provided with a guide rod supported by the bearing post, said sharpening member being adapted to be moved back and forth across the edge of the blade to be sharpened, substantially as described.

2. A sharpening device of the class specified, comprising a base, a vertically adjustable blade holding vise mounted on said base, and a sharpening member comprising a body having a tee-shaped head at one end thereof, a movable clamp head at the opposite end thereof, one or more sharpening stones held between said heads, a handle at one end of said sharpening member, and a guide rod projecting from the opposite end thereof and working through a guide opening in said bearing head.

3. A sharpening device of the class described comprising a base, a vertically adjustable blade holding vise mounted thereon, a vertically adjustable bearing head supported by the base, and a stone holder comprising a flat bolt, a fixed tee-shaped head at one end thereof, a guide rod extending from said head through an opening in said bearing head, a movable clamping head arranged opposite the fixed head, an operating handle constituting a nut for forcing the clamping head against the sharpening stone or stones, and stop collars on said guide rod coöperating with said bearing head.

4. A sharpening device of the class described comprising a base, a vertically adjustable blade holding vise mounted on the base, a vertically adjustable bearing head mounted on the base, a ball shaped guide mounted in a socket in said bearing head and provided with a guide opening, and a stone holder comprising a flat body, a tee-shaped head at one end thereof, a guide rod projecting from said head and working through the opening in the ball shaped guide, a threaded shank at the opposite end of the holder, a clamp head having an opening through which said stone passes, and a combined handle and nut threaded on said shank, substantially as and for the purpose specified.

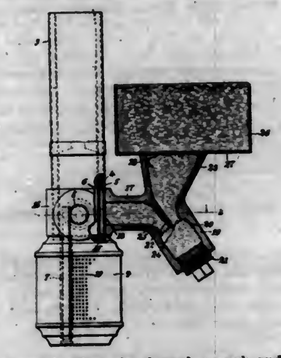
961,011. FAUCET. WILLIAM E. PORTER and OTIS B. THOMAS, Bisbee, Ariz.; said Porter assignor to said Thomas. Filed Feb. 4, 1910. Serial No. 542,128.



A faucet of the character described comprising a casing having an inlet and outlet and a valve seat formed within the casing between the inlet and outlet, a deflecting wall depending from the outer end of said faucet casing in spaced relation to the outlet, a valve normally held upon the valve seat by the pressure of the water thereagainst, a stem formed on the valve, the stem of said valve being movably disposed through the casing wall and said deflecting wall, a lever fulcrumed on the outer end of said casing adjacent to its lower end, said end engaging with said valve stem, said lever being outwardly movable to remove the valve from its seat, a lug integrally formed on the faucet casing in line with the lever, and a dog pivoted on said lug and adapted to be swung upwardly and outwardly, the free end of said dog engaging in a notch in said lever to hold the same in its open position.

961,012. HEADLIGHT-BURNER. CLARENCE E. POWERS, Baltimore, Md., assignor to Schroeder Headlight Company, Evansville, Ind. Filed Sept. 25, 1908. Serial No. 454,688.

1. In a headlight burner, the combination of a funnel, a neck extending therefrom, and a sediment chamber integral with said funnel and with said neck, said sediment chamber being so disposed that its general axis extends intermediate said funnel and said neck, and a web integral with said funnel and with said neck, said web extending in the general direction of the axis of said sediment chamber.



2. The combination of a funnel, a neck and a sediment chamber, these parts being integral with each other, said sediment chamber being provided internally with a rounded shoulder, and a web separating a portion of said funnel from a portion of said neck, said web extending diametrically across said sediment chamber and reaching substantially to said rounded shoulder.

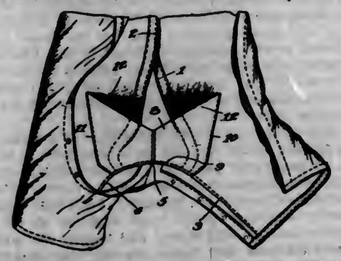
3. The combination of a funnel, a neck and a sediment chamber, these parts being integral, said sediment chamber being so disposed that its general longitudinal axis inclines obliquely downward when said neck is horizontal, and a web integral with said neck and with said funnel and extending in a plane coinciding with the general direction of the axis of said sediment chamber and reaching slightly into said sediment chamber.

4. The combination of a neck and a sediment chamber integral with each other, said sediment chamber being provided with an opening having a rounded shoulder, and a screw plug mounted within said sediment chamber and forming a stop against which sediment may lodge.

5. The combination of a funnel and a neck separated by a web, and a sediment chamber integral with said funnel, said neck and said web, said sediment chamber being so disposed that its general axis extends obliquely from the general axis of said neck, said sediment chamber containing a passage which communicates with the inside of said funnel and also with the inside of said neck, so that the interior of said sediment chamber is always in open communication with two passages to facilitate the cleaning of the device.

[Claim 6 not printed in the Gazette.]

961,013. GARMENT. EDWARD J. QUIGLEY, Newark, N. J. Filed May 3, 1909. Serial No. 493,489.



1. A garment of the character described provided with an opening in the back portion thereof, said opening extending downward in each portion of the lower limb covering, a closure for the opening secured to the inner edges of the front members of the lower limb covering and the outer edges of said closure secured throughout their entire length to the rear portions thereof.

2. A garment of the character described provided with an opening in the front extending downward to the bifurcated portion of the garment, and provided with an opening in the back extending downward from the waist line to a point below the bifurcations, the edges of said opening overlapping each other to a point above the bifurcations, and an additional crotch member providing a closure for the rear opening below the overlapping portion thereof, said crotch member being secured to the inner edges of the front portions of the lower limb covering and the outer edges of said crotch member being secured to the rear portions of the lower limb covering.

3. A garment of the character described provided with an opening in the back extending below the crotch, a closure therefor permanently secured to the back of the lower limb covering and to the crotch seam, having a portion of lesser width at the back of the crotch and free angularly disposed edges extending from each side of the center.

961,014. THERMOSTAT. MARIUS RAMASSOT, Lyon, France. Filed Mar. 19, 1909. Serial No. 484,421.



1. In combination with a conduit and means for passing a heating fluid therethrough, a chamber in said conduit, an expansible liquid in said chamber, a tube connected with said chamber, a gas conduit passing through said tube, a piston in said tube adapted to be moved by action of the liquid so as to control the gas conduit, a second piston in said tube having one end projecting therefrom, said second piston having a curved slot therein, a lug on the tube projecting into the said slot, whereby the second piston may be moved toward and from the first piston so as to control the movement thereof, substantially as described.

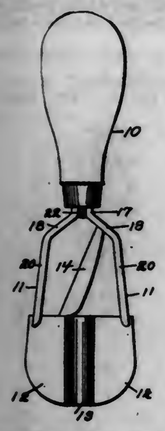
2. In combination with a conduit and means for passing a heated fluid therethrough, of a chamber in said conduit, an expansible liquid in said chamber, a tube connected with said chamber, a gas conduit passing through said tube, a diaphragm in said tube, a piston connected with said diaphragm so as to be moved by the action of the liquid on the diaphragm to control the gas conduit, and manually operated means for controlling the extent of movement of said piston.

3. In combination with a conduit and means for passing a heated fluid therethrough, of a chamber in said conduit, an expansible liquid in said chamber, a tube connected with said chamber, a gas conduit passing through said tube, a diaphragm in said tube, an adjustable pistor

connected with said diaphragm so as to be moved by the action of the liquid on the diaphragm to control the gas conduit, and manually operated means for controlling the extent of movement of said piston.

4. The combination with a conduit and means for passing heated fluid therethrough, of a chamber in said conduit, an expansible liquid in said chamber, a tube connected with said chamber, a gas conduit passing through the tube, a diaphragm in said tube adapted to be acted on by the action of the liquid, a piston connected with said diaphragm and adapted to control the gas conduit, and an upper piston in the tube located above the gas conduit and having one end projecting from the tube so as to be moved by hand, and a stop on said piston adapted to engage with the first mentioned piston to control the extent of movement of the same.

961,015. APPLE CORER AND SLICER. AMOS W. RAND, Mondovi, Wis. Filed Oct. 16, 1908, Serial No. 458,052. Renewed Nov. 5, 1909. Serial No. 526,472.

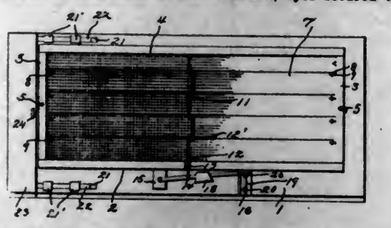


A combined vegetable chopper and apple corer combining a handle portion a plurality of wire arms engaged therein, a circular wedge member concentrically engaged between the arms, said arms being divergent and having their lower end portions disposed in approximately parallel spaced relation, said arms having their lower ends bifurcated, radial blades engaged closely in the bifurcated portions, said blades having their lower side edges curved inwardly to form continuations of their base edges, a tubular blade secured to the inner edges of the radial blades, said tubular blade having an integral upwardly extending guide portion inclined thereover, to deflect a core laterally of the handle.

961,016. AUTOMATIC VENTILATOR. CHARLES E. REITZ, Reitz, Pa. Filed May 28, 1909. Serial No. 498,800.

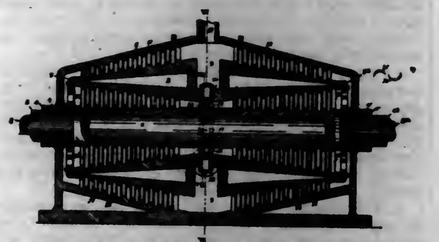
1. In combination, a rectangular ventilator frame, an upper and a lower bar secured to the outer face of said frame in parallel and downwardly inclined relation, a plurality of slats pivotally held within said frame, vertically disposed battens secured to said bars to limit the movement of said slats in one direction, eyes secured to said slats, an operating rod having horizontal off-set portions engaging said eyes, a lever pivotally secured at one end in engagement with said operating rod, a weight slidably secured to said lever, a slotted keeper plate, the end of said lever working in said slot, and a U-shaped locking member pivotally secured to said slotted keeper plate, arranged to lock said lever against the upper or lower end of said slot.

2. The combination with a rectangular ventilator frame, of an upper and lower bar secured to the outer face of said frame in parallel and downwardly inclined relation, a plurality of slats pivotally held within said frame, vertically disposed battens secured to said bars to limit the movement of said slats in one direction, eyes secured to



said slats, an operating rod having horizontal off-set portions engaging said eyes, a lever pivotally held at one end in engagement with said operating rod, a weight slidably secured to said lever, and means to lock said lever to hold said slats in an open or closed position.

961,017. ROTARY MOTOR. GEORGE R. RIGGS, Allegheny, Pa. Filed Oct. 17, 1907. Serial No. 397,782.



1. In rotary motors, the combination of a central revoluble spindle, blades mounted on said spindle, a rotatable drum inclosing said spindle, blades mounted on the interior wall of said drum opposed to said first blades, a stationary power chest surrounding the central portion of said drum and ports leading from said power chamber into the interior of said drum.

2. In rotary motors, the combination of a central rotatable spindle, blades mounted on said spindle, a rotatable drum inclosing said spindle, blades mounted on the interior wall of said drum opposed to said first blades, a casing inclosing said drum, a stationary power chest within said casing and surrounding the central portion of said drum, ports leading from said chamber into the interior of said drum and means for admitting power to said chamber.

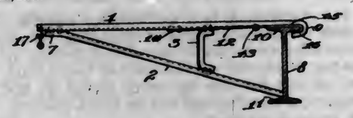
3. In a rotary motor, the combination of a central revoluble spindle, blades mounted on said spindle, a revoluble drum inclosing said spindle, blades mounted on the interior wall of said drum opposed to said first mentioned blades, a stationary power chamber surrounding the intermediate portion of said drum, and means whereby motive fluid is admitted into the interior of said drum and caused to travel between said drum and said spindle from the center toward the ends.

4. In a rotary motor, the combination of a central revoluble spindle, blades mounted on said spindle, a revoluble drum of increasing capacity from its center toward its ends surrounding said spindle, blades mounted on the interior wall of said drum opposed to said first mentioned blades, a stationary power chest adjacent to the longitudinal center of said drum, and means for admitting motive fluid from said power chamber and causing said fluid to travel from the center toward both ends between said drum and said spindle.

5. In a rotary motor, the combination of a central revoluble spindle, blades mounted on said spindle, a revoluble drum inclosing said spindle, blades mounted on both the interior and exterior walls of said drum said interior blades being of opposing pitch to the blades on said spindle, a casing inclosing said drum, blades on the interior wall of said casing opposing the blades on the outer wall of said drum, means for the admission of motive fluid into the interior of said drum adjacent to its longitudinal center, means for the escape of said fluid from the ends of said drum into said casing, and means for the escape of said fluid from said casing at a point adjacent to the longitudinal center of said casing.

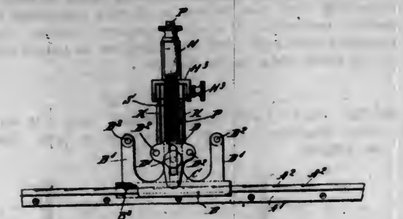
[Claims 6 to 13 not printed in the Gazette.]

961,018. RIGGING OR SCAFFOLD SUPPORT. GEORGE ROBB, Pittsburg, Pa. Filed Dec. 7, 1908. Serial No. 466,431.



A rigging or scaffold support comprising a member adapted to rest upon the top flange of the beam and having a hook thereon to engage the top flange thereof, and a pair of supplemental hooks spaced at the opposite sides of said member and having portions to engage the under side of the top flange of the beam at points in alinement with the hook of the said member.

961,019. APPARATUS FOR DEFIBERING MEATS. HENRY P. ROBERTS, Boston, Mass., assignor to Charles H. McDermott, Revere, Mass. Filed Sept. 11, 1909. Serial No. 517,224.

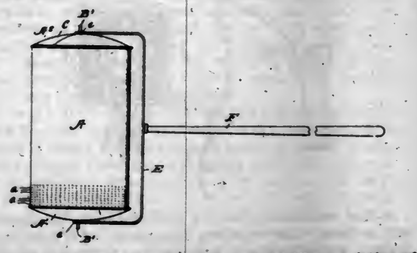


1. In an apparatus of the class described a base having notched ways on its longitudinal edges; sliding base pieces having notches to engage with the notches on said ways; a knife-carrier mounted on said sliding base pieces; a series of pointed knives mounted in said carrier; handles for operating said carrier, and springs for throwing said carrier upward when said carrier is released by the operator, substantially as set forth, and for the purpose specified.

2. In an apparatus for deliberising meat, a base having notched ways on its longitudinal edges; sliding base pieces having notches to engage with the notches on the said ways; a sliding knife-carrier mounted on said sliding base pieces; a series of pointed knives mounted in said carrier, said knives having bifurcated cutting points, whereby four cutting edges are obtained for each knife; handles for operating said knives, and springs for throwing said carrier upward when the said carrier is released by the operator, substantially as set forth, and for the purpose specified.

3. In an apparatus for deliberising meats, a base having notched ways on its longitudinal edges; sliding base pieces having notches to engage with the notches on said ways; a knife-carrier mounted on said sliding base pieces; a gang of pointed knives mounted in said carrier; each series of knives in the gang being hinged together as described, and springs for throwing said carrier upward when the said carrier is released by the operator, substantially as set forth and for the purpose specified.

961,020. TENNIS-COURT MARKER. EARL A. ROBINSON, Emporia, Kans. Filed Feb. 9, 1910. Serial No. 542,871.



1. A marker for tennis courts and the like consisting of a hollow roller having a circumferentially perforated section adjacent to one end and a spiral conveyer within the cylinder for conveying the marking substance to said perforated section.

2. A marker for tennis courts and the like consisting of a hollow cylinder and headed ends, an opening in one end for charging the cylinder with marking material, a section adjacent to the opposite end of the cylinder having circumferential rows of perforations and a spiral conveyer within the cylinder for conveying the marking material from the filling end to the circumferentially perforated section.

3. A marker for tennis courts and the like consisting of a hollow cylindrical roller adapted to travel on the ground, heads at each end of the roller, one head having a filling opening, a closure therefor, a section of the roller adjacent the opposite head of the roll having circumferential rows of perforations, and a spiral conveyer within the cylinder for carrying the marking material from the filling end to the perforated section, and means for propelling the roller.

4. A marker for tennis courts and the like consisting of a hollow cylindrical roller and heads at each end, one end having an opening for charging the roller with marking material, a gate controlling said opening, a section of the roller adjacent the opposite head having circumferential rows of perforations, and a spiral rib or fin secured to the inner circumference of the roller and extending from the charging end of the roller to the perforated section.

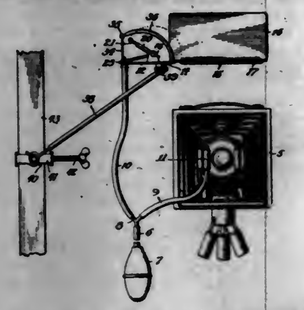
5. A marker for tennis courts and the like consisting of a hollow cylindrical roller, an axle extending therethrough, a handle mounted on the ends of the axle, heads at each end of the roller, one head having an opening through which the cylinder may be charged with marking material, a sliding gate controlling said opening, a section of the cylinder adjacent the opposite end of the same having circumferential rows of perforations, and a spiral rib or fin projecting from the inner circumference of the cylinder and extending from the charging end of the cylinder to the perforated section.

[Claims 6 to 9 not printed in the Gazette.]

961,021. FLASH-LIGHT ATTACHMENT FOR CAMERAS. SIEGMUND ROSENER, Chicago, Ill. Filed May 28, 1909. Serial No. 498,821.

1. The combination with a camera having pneumatically operated shutter-opening mechanism, of a flash-light ignition device having a scratcher-bar, a pivoted spring-actuated match-holder, a detent arm carried by said match-holder, an air cylinder, a plunger in said cylinder having an automatic catch to engage said detent arm, and a spring normally urging said plunger in a direction to engage said catch with said detent arm, a hand bulb, and a

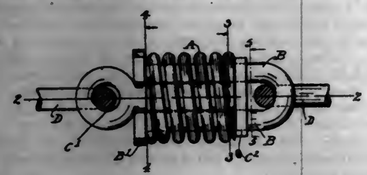
branched tube for transmitting a pneumatic impulse from said bulb to both said shutter-opening mechanism and said air cylinder, substantially as described.



2. The combination with a camera having pneumatically operated shutter-opening mechanism, of a flash-light ignition device having a scratcher-bar, a pivoted spring-actuated match-holder, a detent arm carried by said match-holder, an air cylinder, a plunger in said cylinder having an automatic catch to engage said detent arm, a spring normally urging said plunger in a direction to engage said catch with said detent arm, a hand bulb, a branched tube for transmitting a pneumatic impulse from said bulb to both said shutter-opening mechanism and said air cylinder, and means for adjusting the tension of said spring, substantially as described.

3. The combination with a camera having pneumatically operated shutter-opening mechanism, of a flash-light ignition device comprising a base-plate, a pivoted spring-actuated match-holder, a pivoted scratcher-bar, and a powder-pan all mounted on the said base-plate, an air cylinder carried by said base-plate, a plunger therein, a detent mechanism for said match-holder comprising a detent arm on said match-holder, a hook-shaped catch for said arm carried by said plunger and having a beveled upper edge, and a spring normally urging said plunger in a direction to engage said catch with said detent arm, a hand bulb, a branched tube for transmitting a pneumatic impulse from said bulb to said shutter-opening mechanism and said cylinder, and an adjustable abutment member for said spring, substantially as described.

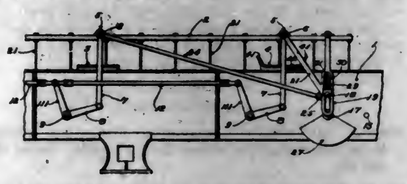
961,022. SPRING-LINK. HUGH W. SANFORD, Knoxville, Tenn. Filed Apr. 22, 1909. Serial No. 491,448.



1. A link comprising a tubular coiled spring adapted for endwise compression, a U-shaped member having a body small enough to pass through said spring and having laterally extended heads on its arms, and two T-shaped members having bodies extending between the arms of the U-shaped member and having laterally directed heads at one end and having their opposite ends small enough to pass through said spring and formed for engaging a draft-transmitting member, substantially as described.

2. A link comprising a tubular coiled spring adapted for endwise compression, a U-shaped member having a body small enough to pass through said spring and having laterally extended heads on its arms, and two T-shaped members having bodies extending between the arms of the U-shaped member and having laterally directed heads at one end and having their opposite ends small enough to pass through said spring and provided with eyes, substantially as described.

961,023. WOOL-WASHING MACHINE AND THE LIKE. FREDERICK G. SARGENT, Graniteville, Mass. Filed Sept. 20, 1906. Serial No. 335,349.



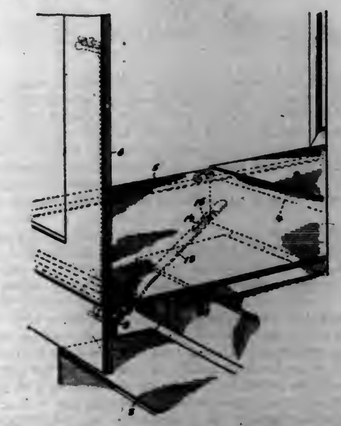
1. The combination, in a wool-washing machine or the like, with the harrow, its slotted connection, the rotating crank working in the slot of the said connection, and the supporting tracks for the harrow, of the movable cap within the said slot, and the spring behind the said cap, whereby shock in lifting the harrow and in lowering it on to the tracks is obviated.

2. The combination, in a wool-washing machine or the like, with the harrow, its slotted connection, and the rotating crank working in the slot of said connection, of the counterbalance rotating in unison with the said crank and operating to prevent strain as the crank lifts the harrow.

3. The combination, in a wool-washing machine or the like, with the harrow, and a rotating crank in operative connection with said harrow by devices permitting lost-motion vertically, of a counterbalance rotating simultaneously with said crank and operating to reduce strain as the crank picks up the harrow.

4. The combination, in a wool-washing machine or the like, with the harrow, means for partially counterbalancing the weight thereof, and a rotating crank in operative connection with said harrow by devices permitting lost-motion vertically, of a counterbalance rotating simultaneously with said crank and operating to reduce strain as the crank picks up the harrow.

961,024. CAR-PLATFORM CLOSURE. ISAAC H. SAUNDERS, Washington, D. C. Filed Nov. 4, 1909. Serial No. 526,293.



1. The combination of a swinging door, a slidingly mounted guard or platform extension provided with a guide way extending transversely thereof, an arm pivoted to the swinging door and provided with means for engaging the guide way, and a guide arm carried by the pivoted arm having its free end slidably secured to the guard or platform extension.

2. The combination of a swinging door, a slidingly mounted guard or platform extension provided with a guide way extending transversely thereof, an arm pivoted to the swinging door and provided with means for engaging the guide way, and a guide arm carried by the pivoted arm having its free end secured to the guard or platform extension by a pin and slot connection.

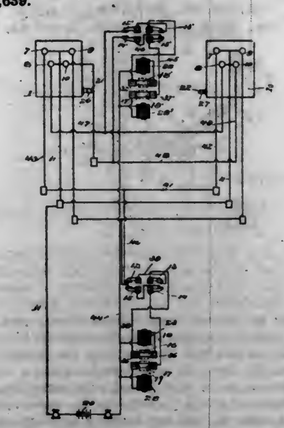
3. The combination of a swinging door, a slidingly mounted guard or platform extension provided with a guide way extending transversely thereof, an arm pivoted to the swinging door and provided with means for engaging the guide way, and a guide arm carried by the pivoted arm having its free end slidably connected with the guard or platform extension on its median line.

4. The combination of a swinging door, a slidably mounted guard or platform extension provided with a guide way extending transversely thereof, an arm pivoted to the swinging door and provided with means for engaging the guide way, and a guide arm carried by the pivoted arm having its free end connected by a pin and slot connection with the guard or platform extension on its median line.

5. The combination with a car platform, of a platform extension adapted to be movable into and out of position over the car steps, a hinged door adapted to swing over the platform extension, a hinged operating member below the level of the platform extension having its hinge in line with the hinge of the door and provided with means for moving the platform extension, and means for connecting and disconnecting the door and operating member.

[Claims 6 to 10 not printed in the Gazette.]

961,025. ELEVATOR-ANNUNCIATOR. WILLIAM W. SAVAGE, Buffalo, N. Y., assignor of one-half to Robert Moderwell, Buffalo, N. Y. Filed Feb. 18, 1909. Serial No. 478,639.

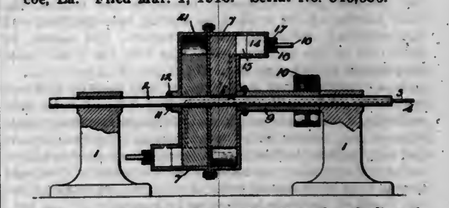


1. In a signaling device for elevators, a plurality of lamps arranged in tiers positioned in the elevators, means for indicating the floor represented by said lamps, a plurality of manually operated switches on each floor of the building on which the elevators arranged with said signaling device are located, electrically controlled means for holding said switches closed, means for automatically opening said switches when said electrically controlled means have been deprived of current, a circuit including said switches and said lamps, a plurality of switches interposed in said circuit and operable by the elevators carrying said lamps whereby upon the opening of said last mentioned switches by said elevators the circuit of the electrically controlled means for holding said manually operated switches is opened for deënergizing and permitting the automatic opening of said switches.

2. In a signaling device for elevators, a plurality of lamps for each floor arranged in said elevator, a source of current, a circuit including said source of current and said lamps, a plurality of switches interposed in said circuit, means projecting from said elevators for opening temporarily said switches, and manually closed switches interposed in said circuit and formed with electrically controlled means for holding said switches closed when once manually closed until the circuit is opened by the means projecting from the elevator temporarily opening one of said first mentioned switches.

3. In a signaling device for elevators, a pair of signal lamps for each floor of building in which the elevator is located, a switch for each of said lamps, a source of current, a circuit including said lamps and said source of current and said switches, means for magnetically holding switches closed after the same have been manually operated, and a spring for each of said switches for the opening of said switches upon deënergizing of said magnetically held means, and a plurality of switches interposed in said circuit and operated by the elevators carrying said lamps, whereby upon the opening of said last mentioned switches by said elevators, the circuit of the magnetically controlled means for holding said manually operated switches is opened for deënergizing and permitting the opening of said switches under the action of said springs.

961,026. ROTARY ENGINE. ANATOLE J. SAVOIE, Glencoe, La. Filed Mar. 1, 1910. Serial No. 546,656.



1. In a rotary engine, the combination of a shaft, a deflector disk, provided with a projection, keyed to said shaft, said projection having inclined faces, a casing having a spring-pressed sliding abutment provided with inclined faces, and means for admitting and discharging a motor fluid to cause relative motion between said casing and said disk, substantially as described.

2. In a rotary engine, the combination of a stationary shaft, a deflector disk fastened thereto and having on its circumference a projecting portion provided with beveled faces, said disk being bored out to provide passages which extend substantially from the center thereof to each of said beveled faces, steam supply and discharge pipes connected with said passages, a rotary cylinder mounted on said shaft, said cylinder having an extension on one side and a counter-balance on the other, a spring-pressed sliding abutment mounted in said extension, said abutment having beveled faces, and a sleeve and pulley connected to said casing, substantially as described.

961,027. RAIL-JOINT. HENRY W. SAWYER, Huron, S. D. Filed July 9, 1909. Serial No. 506,822.



In a rail joint, rail ends having a beveled or mitered joint and having the overlapping portions thereof dove-

tailed into each other and also having the end portions of the webs laterally beveled and overlapping, fish plates arranged at opposite sides of the overlapping portions of the webs and bolted thereto on opposite sides, and shims arranged at opposite sides of the webs and bolted thereto, said shims embodying tapering extremities which fit between the main body of the webs and the extremities of the laterally beveled portions thereof, substantially as described.

961,028. TRANSFER-TICKET. CHARLES M. B. SCHWARTZ, Brooklyn, N. Y. Filed Apr. 4, 1908. Serial No. 425,188.



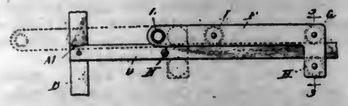
1. A transfer ticket comprising a body portion and a coupon, said body portion and coupon having their obverse and reverse faces provided with hourly time limit indicating means and conventional means to indicate a cardinal point, the two cardinal points indicated one upon each of the two faces of the coupon being identical, the hourly time limit means and cardinal point indicating means being out of registration on the two faces of the coupon, one of said cardinal point indicating means on the body being similar to the said means on the coupon, and another cardinal point indicating means on the body differing from the cardinal point indicating means on the conpon, the body portion of the ticket also having ante-meridian and post-meridian indicating means thereon, and means on each face of the transfer indicating how the latter must be punched in order to be good.

2. A transfer ticket comprising a body portion and two separable coupons, one coupon being connected to each end thereof, said body portion and coupons each bearing on obverse and reverse sides thereof hourly time limit means and conventional indications to constitute an ante-meridian and a post-meridian transfer ticket respectively, the said hourly time limit means being in different positions on the two faces of the body portion and coupons.

3. A transfer ticket comprising a body portion and two coupons, the coupons being individually and separably connected to opposite ends of the body portion, said body portion and coupons each bearing on obverse and reverse faces hourly time limit means and conventional indications to constitute ante-meridian and post-meridian transfer means respectively, the obverse and reverse faces of the coupons and of the body portion of the ticket also having cardinal point indicating means on said faces of each, the cardinal point indicating means of one coupon on one face thereof differing from that on the same face of the other coupon and the cardinal point indicating means on each face of the body portion of the ticket being the same as the two differing cardinal point indicating means on the corresponding faces of the coupons, the body portion of the ticket also carrying cardinal point indicating means differing from the cardinal point indicating means on the coupons, the cardinal point indications and the hourly time limit means on the two faces of each coupon and on the body being in different positions.

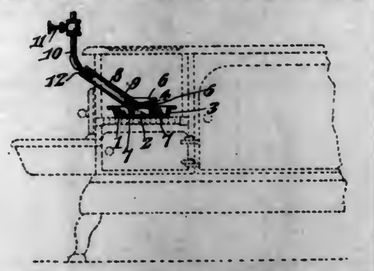
4. A transfer ticket comprising a body portion and two coupons, the latter being separably connected one to each of the opposite ends of the body portion, said body portion and coupons each bearing on obverse and reverse sides thereof hourly time limit means and conventional indications to constitute ante-meridian and post-meridian transfer means, the obverse and reverse faces of the coupons and of the body portion of the ticket also having cardinal point indicating means on the said faces of each, the said hourly time indicating limit means and the cardinal point indicating means being in different positions on the two faces of each coupon, and the body portion of the ticket having the ante-meridian and post-meridian indicating means in different positions on the two faces thereof and the cardinal point indicating means in the same position on the two faces so that in punching anyone of the cardinal point indicating means on either face of the body portion an identical cardinal point indicating means will be likewise punched on the opposite face.

961,029. DISPLAY-RACK FOR SHOW-CASES. JOSEPH H. SERVATIUS and FREDERICK E. MEINEL, Chicago, Ill., assignors to Illinois Show Case Works, Chicago, Ill., a Corporation of Illinois. Filed Mar. 17, 1910. Serial No. 549,829.



In combination, a show case having parallel tracks arranged adjacent to opposed sides thereof, flat L-shaped carriages lying beside said tracks, each of said carriages being provided on its short arm with two wheels one of which lies above and the other below the adjacent track. a wheel on each carriage between the ends of its long arm and overlying the adjacent track, a rod extending across the case and having its ends connected with the free ends of the long arms of said carriages, said tracks having depressions near one end so as to receive certain of the wheels of the carriages, said depressions being so located as to cause said rod to project beyond the show case when the wheels are in the depressions, a stationary stop in position to engage with one of said carriages when it is moved along the adjacent track until its forward wheel engages the depression in the track and said tracks being inclined downwardly from the ends in which the depressions are located toward the opposite ends.

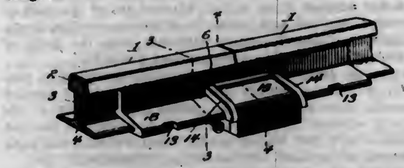
961,030. CRUDE-OIL BURNER. CHARLES SHAEFFER, Paris, Tex. Filed Mar. 22, 1910. Serial No. 550,996.



A crude oil burner comprising a burner pan, a trough provided with depending supports adapted to rest on the bottom of the pan and thereby hold the trough in spaced relation to the pan, the said trough having a longitudinal shallow recess in its top, a feed pipe extending from one side of the trough and provided in its upper side near its lower end with an opening forming a communication between its bore and the recess in the top of the trough, the said trough, supports and feed pipe being formed of one piece, and a fuel pipe entering the outer end of the said pipe and of less diameter than the same, whereby an air space is provided between the two pipes.

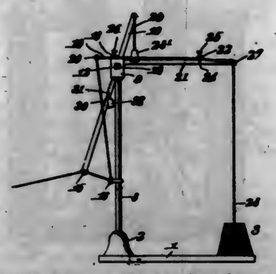
961,031. SPLICE-BAR LOCK. EDWIN S. SHIPMAN, Braddock, Pa. Filed Dec. 10, 1909. Serial No. 532,406.

1. In combination with a pair of rail members, fish plates for the rail members, said fish plates being provided with overlying flange members, spaced ribs upon the flange members, a lock for the plates, said lock comprising a pair of sections, each provided with overlying lips adapted to engage between the ribs of the fish plates, one of said sections being formed with a V-shaped tongue having shoulders, the opposite section being provided with locking jaws also provided with shoulders and adapted to engage with the shoulders of the first section, and resilient means for forcing the locking jaws into engagement with the tongue.



2. In combination with the meeting ends of a pair of rails, of fish plates therefor, said fish plates being provided with overlying flange members, said flange members having spaced ribs, a locking member, said locking member comprising a pair of sections, each provided with overlying lips adapted to engage between the ribs of the fish plates, one of said sections being provided with a substantially V-shaped tongue having shoulders, the opposite section being provided with locking jaws also provided with shoulders and adapted to engage the shoulders of the tongue, resilient means for forcing the locking jaws into engagement with the tongue, and rotatable dogs adapted to contact the locking jaws to secure the same in engagement with the tongue.

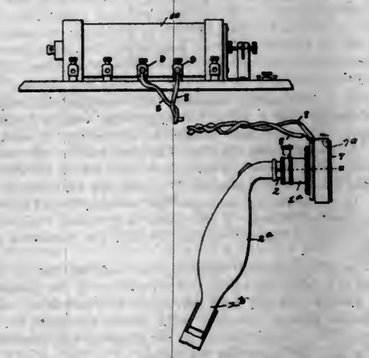
961,032. TWINE-HOLDER. LOWELL B. SHOOK, Riverside, Cal., assignor of one-fourth to Solomon E. Shook, Cuyahoga Falls, Ohio. Filed Jan. 8, 1910. Serial No. 537,068.



1. A twine holder comprising a pivoted arm, a supporting standard for the arm, said arm having its minor portion extended rearwardly of the standard and its major portion extended forwardly of the standard, a weight mounted upon the minor portion of the arm for rocking the arm so that its major portion will extend upwardly and away from the standard, an adjustable weight upon the major portion of the arm, a spool support for the twine, and a plurality of guide eyes arranged to guide the twine, one of the said eyes being located at the outer extremity of the major portion of the pivoted arm so that the free end of the twine will be suspended therefrom and held normally in an elevated position.

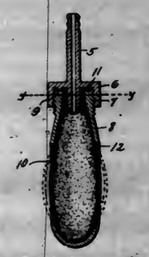
2. A twine holder comprising a standard, an arm pivoted on the standard and adapted for vertical movement, said arm having its minor portion extended rearwardly of the standard and having its major portion extended forwardly of the standard and provided at its outer end with a guide eye, a guide eye located on the standard, an adjustable guide eye-carrying rod at the upper end of the standard, a rearwardly extending arm mounted upon the standard, an adjustable guide eye-carrying rod mounted upon the said arm, a spool support for the twine, the twine being threaded through the said guide eye so that the free end of the twine is suspended from the outer extremity of the major portion of the arm, a weight upon the minor portion of the arm for normally holding the arm in position whereby the guide eye at the outer extremity of the major portion of the arm is disposed upwardly and away from the standard, and an adjustable weight upon the major portion of the arm adapted to coöperate with the major portion to hold the arm in position to cause the guide eye thereof to lie downwardly and adjacent to the standard during removal of the twine.

961,033. CUP OR HEAD FOR MASSAGE DEVICES. CHARLES M. SIEBERT, Jr., Columbus, Ohio, assignor to The Siebert-Welch Company, Columbus, Ohio, a Corporation of Ohio. Filed Aug. 3, 1909. Serial No. 510,959.



In a device of the character described, the combination with a massage cup, comprising a body portion, a clamping member and a flexible diaphragm clamped between said body portion and said clamping member, of a separate insulating ring member which slips down over said clamping member, a pair of segmental contact plates separated from each other and embedded in said insulating ring, and current conducting members leading through said ring from the rear face thereof to said contact plates.

961,034. MASSAGE APPARATUS. LOUIS A. SIEBERT and CHARLES M. SIEBERT, Jr., Columbus, Ohio, assignors to The Siebert-Welch Company, Columbus, Ohio, a Corporation of Ohio. Filed Sept. 2, 1909. Serial No. 515,756.

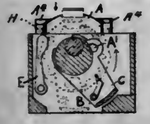


1. In a massage device the combination with a casing adapted to be inserted within the body, of a flexible lining within said casing adapted to protrude through an opening formed in the wall of said casing and means for conducting pressure fluid to the interior of said flexible lining.

2. In a massage device the combination with a casing adapted to be inserted within the body and having openings formed in the side walls thereof, of a flexible bag located within said casing and means for admitting pressure fluid to the interior of said bag.

3. In a massage apparatus the combination with an elongated casing adapted to be inserted within the body, of a flexible bag located within said casing, a cap threaded upon said casing, the edge of said bag being clamped between said cap and said casing and a stem carried by said cap through which fluid pressure is admitted to the interior of said bag, said casing having an elongated opening formed in the side wall thereof.

961,035. NUMBERING-MACHINE. CHARLES BOWTELL SMITH, Dunedin, New Zealand. Filed Sept. 2, 1908. Serial No. 451,390.



1. In a numbering machine, the combination, with a pawl swing and a series of numbering wheels actuated thereby; of a reversible plunger for operating the swing.

2. In a numbering machine, the combination, of a series of numbering wheels; a reversible pawl swing for actuating the same; and a plunger for operating said swing.

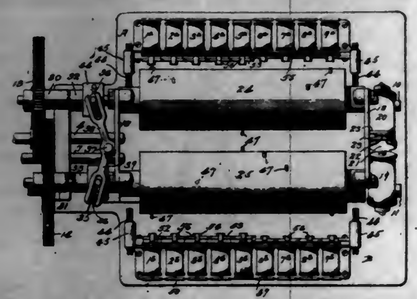
3. In a numbering machine, the combination of a series of numbering wheels; a reversible pawl swing for actuating the same; and a reversible plunger for operating said swing.

4. In a numbering machine, the combination, with a series of numbering wheels; of a pawl swing for actuating said wheels provided with perforated end members; and a reversible plunger provided with means arranged for engagement in the perforation in the adjacent end member of said swing, for operating the latter.

5. In a numbering machine, the combination, with a series of numbering wheels; of a reversible pawl swing for actuating said wheels provided with perforated end members; and a reversible plunger provided with means arranged for engagement in the perforation in the adjacent end member of said swing, for operating the latter.

[Claims 6 to 12 not printed in the Gazette.]

961,036. ELECTRIC SIGNAL-SOUNDING APPARATUS. ALFRED L. SOHM, Whittier, Cal., assignor to National Electric Works, Whittier, Cal., a Corporation of California. Filed Sept. 4, 1908. Serial No. 451,690.



1. In an apparatus of the character described, a plurality of movable contact elements, a plurality of movable contact elements adapted to be moved into the normal path of movement of said first named contact elements, and means for altering the path of movement of said first named contact elements to avoid contact with said second named contact elements.

2. In an apparatus of the character described, a plurality of rotative contact elements, a plurality of movable contact elements, electrically actuated means to advance said last named contact elements into the normal path of movement of the rotative contact elements, and means for moving the rotative contact elements out of contacting relation with said movable contact elements.

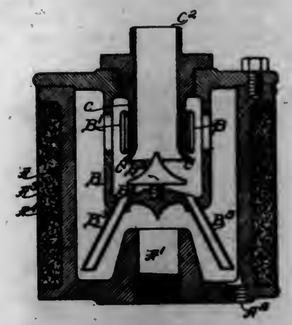
3. In an apparatus of the character described, a plurality of movable contact elements, a plurality of contact elements adapted to be moved into and out of the path of movement thereof, and means to advance a selected group of said last named contact elements into the path of movement of said first named contact elements.

4. In an apparatus of the character described, a plurality of rotative contact elements, a plurality of contact elements each adapted to be moved into and out of the path of movement thereof, and means to advance a selected group of said last named contact elements into the path of movement of said rotative contact elements.

5. In an apparatus of the character described, a plurality of approximately alined contact elements, corresponding to the digits from 1 to 9, a similar number of movable contact elements, means adapted to move a contact element corresponding to a selected digit into the path of movement of one of the said movable contact elements, and means actuated by the movement of said contact elements to simultaneously move all contact elements corresponding to lesser digits into the path of movement of said movable contact elements.

[Claims 6 to 24 not printed in the Gazette.]

961,037. STEAM-SEPARATOR. HENRY W. SPENCER, London, England. Filed Feb. 27, 1909. Serial No. 480,484.



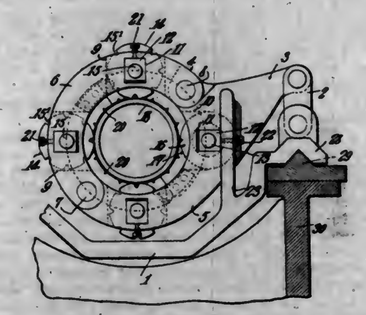
1. A steam separator comprising three concentrically arranged cylindrical chambers, the outer chamber having a closed bottom with a steam inlet, the inner chamber having an outwardly flared open bottom and a steam outlet at its upper end, the intermediate chamber having a closed bottom, a double conical or conoidal abutment centrally arranged thereon and steam admission apertures near its upper end, said intermediate and outer vessels being furnished with water draining pipes; substantially as described.

2. A separator comprising an outer chamber having an opening in its bottom for the admission of steam and another opening therein for the escape of water, an intermediate chamber furnished with openings into said outer chamber for the admission of steam, other openings into said outer chamber for the escape of water and furnished with a conical abutment, and an inner chamber with a flared bottom opening into said intermediate chamber above said conical abutment and having an outlet at its upper end for the escape of steam; substantially as described.

3. A steam separator comprising an outer chamber having a steam inlet and a water outlet, an intermediate chamber in the upper part of said outer chamber and communicating therewith by steam passages; and an inner chamber in the upper part of said intermediate chamber and communicating therewith by steam passages, said inner chamber having a steam outlet and said intermediate and inner chambers, or either of them, having a water outlet; substantially as described.

4. A steam separator comprising an outer chamber having a steam inlet and a water outlet, an intermediate chamber in the upper part of said outer chamber and communicating therewith by steam passages; and an inner chamber in the upper part of said intermediate chamber and communicating therewith by steam passages, said inner chamber having a steam outlet; substantially as described.

961,038. NOTCHING ATTACHMENT FOR WIRE-WINDING MACHINES. GEORGE W. STANCLIFF, Houston, Tex., assignor to Stancliff Well Screen and Mfg. Company, Houston, Tex. Filed Oct. 1, 1907. Serial No. 395,864.



1. In a machine for winding wire upon cylindrical supports, an annular frame for surrounding the cylindrical body, a rotary cutter mounted in said frame, means on said frame for holding the cylindrical body in operative relation to the cutter, and means for supporting the frame for universal movement in the plane of the working edge of the cutter.

2. In a machine for winding wire upon cylindrical bodies having spaced radial ribs projecting therefrom, a means for notching the ribs to receive the wire, comprising a frame for encircling the ribbed cylinder, a cutting roller or wheel on one side of said frame, and means for supporting the frame for universal movement in the plane of the working edge of the cutter.

3. In a machine for winding wire upon cylindrical bodies having spaced radial ribs projecting therefrom, a means for notching the ribs to receive the wire, comprising a frame for encircling the ribbed cylinder, radially adjustable means for holding the frame to the cylindrical body, and a radially adjustable cutter carried by the frame and movable into operative relation to the ribs on the ribbed cylinder.

4. In a machine for winding wire upon cylindrical bodies having spaced radial ribs projecting therefrom, a means for notching the ribs for receiving the wire, comprising a frame for encircling the ribbed cylinder, a radially adjustable rotary cutter mounted in the frame, and a link support for the frame having universal movement in the plane of the working edge of the cutter.

5. In a machine for winding wire upon cylindrical ribbed structures, a rotary cutter, a supporting frame therefor for encircling the ribbed structure, and a support for the frame remote from the end carrying the cutter, said support permitting the frame to move freely in the plane of the cutting edge of the cutter.

[Claims 6 to 18 not printed in the Gazette.]

961,039. PUMP. GEORGE A. STARR, Falls City, Oreg. Filed Sept. 7, 1909. Serial No. 516,488.



1. In a pump, a cylinder having a closed upper head, an inlet port, a lower piston head working in said cylinder and having inlet ports and a valve device controlling the same, a standpipe, a tubular piston rod having means of connection with said head located centrally of the head within said valve device, said rod having communication at its lower end portion with the cylinder and being provided with sliding bearings in the upper head of the cylinder, an upper piston head for the piston rod working in said standpipe and having outlet ports and a valve device controlling the same, and an operating device having means of connection with said upper piston head located centrally of the head and in line with said piston rod within the valve device.

2. In a pump, a cylinder having a closed upper head, an inlet port, a piston head working in said cylinder and having inlet ports and a ring-form valve, a tubular piston rod having means of connection with said head located centrally of the head within said ring-form valve, said rod having communication at its lower end portion with the cylinder, being provided with sliding bearings in the upper head of the cylinder and having an upper outlet port and valve located without said cylinder, and means for operating the piston head and its hollow rod.

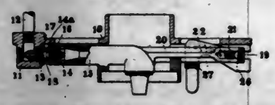
3. In a pump, a cylinder having a closed upper head, an inlet port, a piston head working in said cylinder and having an annular concave valve seat provided with perforations, a loose ring-form valve for engagement with said seat, a loose annular washer above said valve, a tubular piston rod having means of connection with said head located centrally of the head within said ring-form valve, said rod having communication at its lower end portion with the cylinder and being provided with sliding bearings in the upper head of the cylinder and having an upper outlet port and valve located without the cylinder, and means for operating said piston head and its hollow rod.

4. In a balance pump, double cylinders having each a closed upper head, an inlet port, a lower piston head working in the cylinder and having outlet ports and a valve device controlling the same, double standpipes, a tubular piston rod for each cylinder having means of connection with said head located centrally of the head within said valve device, said rod having communication at its lower end portion with the cylinder and being provided with sliding bearings in the upper head of the cylinder, an upper piston head for the piston rod working in the standpipe corresponding thereto and having outlet ports and a valve device controlling the same and vibratory operating means having opposite flexible connections with opposite hollow rods having means of connection with the upper piston heads located centrally of said heads in line with the hollow piston rods and within the valve device of each head.

5. In a pump, a cylinder having a closed upper head, an inlet port, a lower piston head working in said cylinder and having inlet ports and a ring-form valve, a standpipe, a tubular piston rod of the same diameter throughout having means of connection with said head located centrally of the head within said ring-form valve, said rod having communication at its lower end portion with the cylinder and being provided with sliding bearings in the upper head of the piston rod, an upper piston head for the piston rod working in said standpipe and having outlet

ports and a ring-form valve and an operating device having means of connection with the upper piston head located centrally of and in line with said piston rod within said ring form valve.

961,040. INVERTED GAS-BURNER. EDMUND STEIL, Berlin, Germany, assignor to Berlin-Anhaltische Maschinenbau-Actien-Gesellschaft, Abteilung XII, Berlin, Germany, a Firm. Filed July 27, 1909. Serial No. 509,867.



1. In an inverted incandescent gas lamp, the combination with a gas supply conduit, of a gas nozzle movably attached to the gas conduit in a gas tight manner, a mixing tube detachably joined on the nozzle, and spring operated means adapted to press the nozzle and the conduit upon each other.

2. In an inverted incandescent gas lamp, the combination with a gas conduit, of a gas nozzle movably attached to the gas conduit, a mixing tube detachably engaging the nozzle with its admission end, its other end being engaged with supporting means, said means being yielding and adapted to tighten the nozzle and the conduit, thereby securing the same in their proper relative position.

3. In an inverted incandescent gas lamp, the combination with a gas conduit, of a gas nozzle movably attached thereto, a mixing tube detachably attached to the nozzle, and yielding means adapted to tighten the nozzle and the conduit, the said yielding means being rockable, its tension being increased in an operative position and released in the unlocked position.

4. In an inverted incandescent gas lamp, the combination with a gas conduit, of a gas nozzle movably attached thereto, a mixing tube detachably attached to the gas nozzle, and yielding means adapted to tighten the nozzle and the conduit, which means comprise a pressure member engaging with and working on the mixing tube, so as to press it toward the nozzle, a rockable strap, springs connecting the pressure member with the strap in such a manner that their tension is increased in the operative position of the strap and released in the inoperative position of the latter.

5. In combination with a lamp of the character specified, a projection from the frame of the lamp having an opening for receiving a gas supply conduit, said projection having in connection therewith a seat, a nozzle removably engaging the seat, a mixing tube in connection with the nozzle, and spring pressed means engaging the mixing tube for holding the nozzle to the seat.

[Claim 6 not printed in the Gazette.]

961,041. GUN-STOCK. GEORGE A. STEVENS, Centralia, Ill. Filed Oct. 6, 1909. Serial No. 521,241.



1. A stock for guns comprising a separable handle member adapted to be secured to the gun, and said handle member having its rear end provided with an arcuate shoulder abutment member having one of its edges sharpened and a shield for said sharpened edge.

2. The combination with a gun, of a removable stock therefor, said stock comprising a member having its rear end formed in the shape of an ax blade, said blade having its outer end concaved, a shield for the blade pivotally connected with the stock, and said shield being provided with an offset catch portion adapted to engage the outer concaved end of the abutment member.

961,042. PIPE. WILLIAM HENRY STORRS, New York, N. Y. Filed Nov. 27, 1909. Serial No. 530,084.



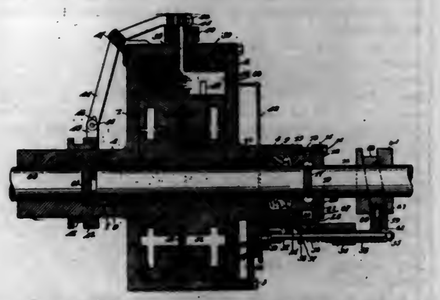
1. A device of the class described, comprising a tobacco-holding member, a barrel communicating interiorly therewith, and a mouth-piece communicating interiorly with said barrel, said barrel having an open-ended flue extending transversely therethrough and closed with respect to the interior of said barrel, and forming a chamber for a smoke cooling and purifying substance.

2. A device of the class described, comprising a tobacco-holding member, a barrel communicating interiorly therewith, and a mouth-piece communicating interiorly with said barrel, said barrel having an open-ended flue extending transversely therethrough and closed with respect to the interior of said barrel, said barrel having a perforate partition therein.

3. A device of the class described, comprising a tobacco-holding member, a barrel communicating interiorly therewith, a mouth-piece communicating interiorly with said barrel, said barrel having an open-ended flue extending transversely therethrough and closed with respect to the interior of said barrel, and a smoke-cooling and purifying substance within said barrel.

4. A device of the class described, comprising a tobacco-holding member having a stem with a passage therein communicating interiorly with said member, a barrel communicating at one end with said stem, a mouth-piece communicating with the other end of said barrel, said barrel having a flue extending transversely therethrough and having ends opening through the sides of said barrel, said barrel having a perforate partition therein, and a smoke purifying and cooling substance between said partition and said mouth-piece within said barrel, said mouth-piece having an extended part forming a pocket having therein a smoke-cooling and purifying substance.

961,043. CLUTCH MECHANISM. FRANK EDWARD SUDDOTH and WILLIAM T. SHERMAN WEAVER, Omaha, Nebr. Filed Apr. 17, 1909. Serial No. 490,654.



1. A mechanism of the class described comprising a casing having a substantially cylindrical bore, a driving shaft journaled in the casing, a cylindrical rotor on the shaft and having its outer surface spaced apart from the inner surface of the casing, to form an annular passage for containing a fluid, said rotor being provided on its periphery with transverse radial recesses, vanes seated in the recesses and mounted to yield inwardly, and normally closing the annular passage, a valve movable radially of the casing, and closing the annular passage when in the innermost position, means for moving the valve, cams on the casing for engaging and depressing the vanes into the recesses, whereby to avoid contact of the valve therewith, a reservoir, means for conducting the leakage of the casing to the reservoir, a pump for withdrawing the fluid from the reservoir and returning it to the casing, a connection between the pump piston and the driving shaft, and a spring interposed in the connection and adapted to yield when the pressure in the pump exceeds a predetermined value.

2. A mechanism of the class described comprising a casing having a substantially cylindrical bore, a driving shaft journaled in the casing, a cylindrical rotor on the shaft and having its outer surface spaced apart from the inner surface of the casing, to form an annular passage for containing a fluid, said rotor being provided on its periphery with transverse radial recesses, vanes seated in the recesses and mounted to yield inwardly, and normally closing the annular passage, a valve movable radially of the casing, and closing the annular passage when in the innermost position, means for moving the valve, cams on the casing for engaging and depressing the vanes into the recesses, whereby to avoid contact of the valve therewith, a reservoir, means for conducting the leakage of the casing to the reservoir, means for withdrawing the fluid from the reservoir and returning it to the casing, a connection between the driving shaft and said means for operating the same, and a spring interposed in the connection and adapted to yield when the pressure in the casing attains a predetermined value.

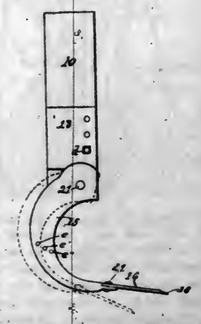
3. In a fluid clutch, a cylindrical casing for containing a fluid and provided with opposite end bearings, a driving shaft journaled in the bearings, vanes radially movable with respect to the shaft, springs for supporting the vanes, manually operated means for restricting the annular passage between the shaft and the inner wall of the casing for the purpose set forth, one of said bearings being closed at its outer end, an annular recess at the other end for receiving leakage from the casing through the open bearing, a reservoir to which the recess delivers, a pump for withdrawing the leakage from the reservoir and returning it to the casing, and means operated by the difference in speed between the shaft and the casing for operating the pump.

4. In a fluid clutch, a cylindrical casing for containing a fluid and provided with opposite end bearings, a driving shaft journaled in the bearings, vanes radially movable with respect to the shaft, springs for supporting the vanes, manually operated means for restricting the annular passage between the shaft and the inner wall of the casing for the purpose set forth, one of said bearings being closed at its outer end, an annular recess at the other end for receiving leakage from the casing through the open bearing, a reservoir to which the recess delivers, a pump for withdrawing the leakage from the reservoir and returning it to the casing, means operated by the difference in speed between the shaft and the casing for operating the pump, and means between the pump and the operating means for permitting the pump to cease acting when the pressure in the casing exceeds a predetermined value.

5. In a fluid clutch, a casing for containing the fluid, and provided with oppositely arranged bearings, a driving shaft journaled in the bearings, a fluid operated means for connecting the shaft with the casing, one of said bearings being closed at its outer end, means at the outer end of the other bearing for receiving the leakage from the casing, a pump for withdrawing said leakage and returning it to the casing, means operated by the difference in speed between the shaft and the casing for operating the pump, and means between the pump and the operating means for permitting the pump to cease acting when the pressure in the casing exceeds a predetermined value.

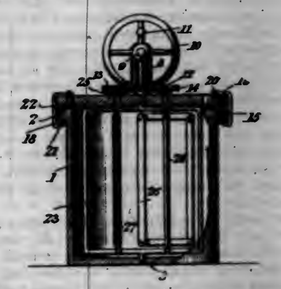
961,044. PLOW ATTACHMENT FOR CULTIVATORS. JAMES A. SUTTON, Packwood, Iowa. Filed Nov. 13, 1908. Serial No. 463,319.

1. A plow attachment for cultivators, comprising a standard adapted to be secured to the beam of a cultivator and formed with a shank circular in cross-section, said shank further formed with transverse notches arranged in a helical row on its periphery, a stem formed with a bore fitting and adapted to receive said shank, said stem also formed with transverse holes registering at times with the transverse grooves of the shank, a prong pivoted to said stem and articulating on a horizontal axis, means extraneous to the pivot for adjustably connecting said prong and stem, said prong curved between its ends, and a plow fixed to the extremity of said prong.



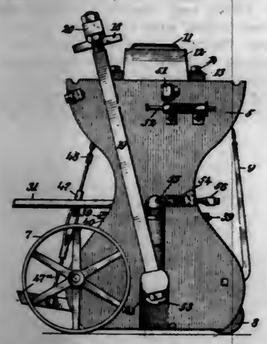
2. A plow attachment for cultivators, comprising a standard adapted to be secured to the beam of a cultivator, an integral shank of circular cross-section depending from the standard and provided with a plurality of helically arranged transverse notches, a stem formed with a bore adapted to receive the said shank, said stem being formed with a plurality of transverse holes adapted to register at times with the notches of the shank, means co-acting with the said holes and slots for securing the stem to the shank, a tongue integral with and centrally depending from the stem, a prong having one end bifurcated to straddle the said tongue, means co-acting with the tongue and the prong for supporting the latter, means for retaining the prong in a fixed position relative to the tongue, and a shovel secured to the extremity of the prong.

961,045. CHURN. JAMES D. TUCKER, Grubbs, Ark., assignor of one-half to Mike Denton, Grubbs, Ark. Filed May 14, 1909. Serial No. 495,946.



In combination with a churn tub having an offset mouth, of an L-shaped split ring engaging said mouth, a securing element for the ring, a cover for the tub, said cover comprising a pair of sections hingedly connected together and one of said sections being larger than the second section, both of said sections being adapted for the reception of dasher operating mechanism, and offset hooks upon both of the cover sections adapted to be swung into engagement with the L-shaped ring to retain the cover upon the tub.

961,046. FLUID-EXPANSION PRESS. LESLIE CHARLES TURLEY, Portsmouth, Ohio. Filed Oct. 21, 1908. Serial No. 458,778.



1. The combination of a die, a die cap for engaging and disengaging said die, side bars connected with said die cap for moving the same relatively to said die, a shaft connected with said side bars, mechanism connected with said shaft for the purpose of causing the latter to turn slightly when said shaft is displaced bodily from its normal position, pressure-operated mechanism connected with said shaft and adapted to displace the same bodily from said normal position, and mechanism provided with a member extending into said die and controllable by pressure for forcing said member against a charge contained within said die and engaging said die cap.

2. The combination of a die, a die cap for engaging and disengaging said die, side bars connected with said die cap for moving the same relatively to said die, a shaft connected with said side bars, mechanism connected with said shaft for the purpose of causing the latter to turn slightly when displaced bodily from its normal position, a cylinder provided with a bearing which engages said shaft for the purpose of displacing said shaft and of turning the same upon its own axis, a piston mounted within said cylinder, and mechanism connected with said cylinder and provided with a member extending into said die, said mechanism being controllable by pressure of said piston for forcing said member against a charge contained within said die and engaging said die cap.

3. The combination of a die, a die cap for closing the same, side bars for supporting said die cap, spring buffers for automatically throwing said side bars into a predetermined normal position in order to remove said die cap from proximity to said die, a piston and cylinder coacting with said die and said die cap for squeezing a charge within said die, springs connected with said piston and with said cylinder for the purpose of normally forcing the same toward each other, means for admitting a fluid intermediate said piston and said cylinder so as to stretch said springs, and mechanism controllable by the pressure of a medium within said cylinder for shifting said side bars to abnormal position in order to cause said die cap to cover said die.

4. In a press, the combination of a framework, a die, a follow block movable relatively to the same, a cap for closing said die, a pair of members movable relatively to each other and fitted loosely together, said members being adapted to move apart by the pressure of a flowing medium between them, one of said members being connected with said follow block, a shaft movable relatively to said framework and connected to the other member, said shaft being provided with a portion serving as a crank, and means controllable by movements of said shaft for actuating said cap relatively to said die.

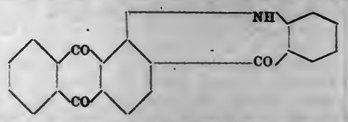
5. The combination of a framework, a die, a die cap for engaging and disengaging said die, a follow block movable relatively to said die, a piston connected with said follow block for actuating the same, a cylinder fitting said piston for the purpose of directing against the same a flowing medium under pressure, in order to actuate said follow block, a shaft operatively connected with said cylinder, said shaft being provided with a crank portion whereby said shaft may be turned by pressure of said cylinder, and mechanism connected with said shaft and with said die cap for moving said die cap relatively to said die.

[Claim 6 not printed in the Gazette.]

961,047. ANTHRAQUINONE ACRIDONES. FRITZ ULLMANN, Berlin, Germany, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed Feb. 23, 1910. Serial No. 545,329.

1. The hereinbefore-described new dyestuffs of the anthraquinone-series being anthraquinone-acridones, which new dyestuffs may be obtained by eliminating water from an alpha-anlilidoanthraquinone-carboxylic acid of the general formula hereinbefore-defined, which new dyestuffs are insoluble in alcohol and ether, but easily soluble in boiling anilin to a violet solution, whereas sulfuric acid dissolves them to a red solution, which new dyestuffs form with a salt of hydrosulfurous acid and an alkali a vat from which cotton is dyed very fast red to violet tints.

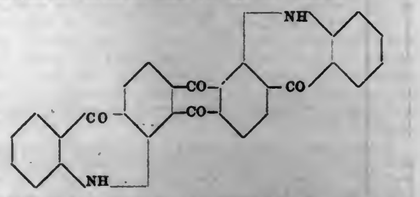
2. As a new article of manufacture the hereinbefore-described new dyestuff of the anthraquinone series being alpha-beta-anthraquinonyl-acridone having the formula:



which new dyestuff when recrystallized from anilin forms violet needles of a metallic luster and is insoluble in alcohol and ether but is easily soluble in boiling anilin to a violet solution, whereas sulfuric acid dissolves it to a red solution, which new dyestuff forms with a salt of hydrosulfurous acid and an alkali a blue vat from which cotton is dyed a very fast bluish red tint.

961,048. ANTHRAQUINONE-DI-ACRIDONES. FRITZ ULLMANN, Berlin, Germany, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed Feb. 23, 1910. Serial No. 545,329.

As a new article of manufacture the hereinbefore-described new dyestuff of the anthraquinone-series being anthraquinone-di-2.1-acridone, having the formula:



which coloring matter may be obtained by the action of a dehydrating agent upon 1.5-dianilido-anthraquinone-dicarboxylic acid and which new dyestuff in the dry state forms a dark blue powder which dissolves in concentrated sulfuric acid to a red-yellow solution and which new coloring matter is insoluble in alcohol and ether but soluble in anilin on heating to a violet colored solution, and which new dyestuff forms with a salt of hydrosulfurous acid and an alkali a blue vat, from which cotton is dyed a very fast blue-violet tint.

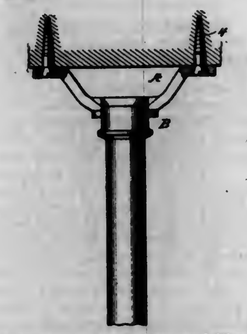
961,049. NUTLOCK. BERT S. VALLE, CoHbran, Colo. Filed Mar. 19, 1909. Serial No. 484,506.

In a device of the class described, a substantially rectangular plate having a central opening and integrally formed ears, said ears being arranged at right angles to each other, a locking member having a body portion provided with a pocket and an opening alining with the opening of the plate, the said locking member having its body substantially squared and the edges of the body provided



with a pair of spaced ears adapted to engage with the ears of the plate, and removable pivot members connecting each series of ears upon the locking member with the right angularly disposed ears upon the plate member.

961,050. HANGER FOR LIGHTING-FIXTURES. ERNEST H. WAKEFIELD, Vermilion, Ohio. Filed Nov. 6, 1909. Serial No. 526,622.



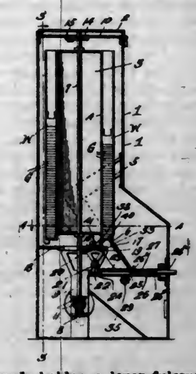
Suspending means for electroliers and like lighting fixtures, the same comprising a hanger and a connector, the hanger comprising a tapered socket portion having oppositely disposed basal flanges formed in their ends with openings, said socket having a portion at one side cut away to provide a passageway and having the edge portions of the socket upon opposite sides of the passageway flared, and a connector comprising a cylindrical body having spaced shoulders extending outwardly, the upper shoulder being tapered and said connector also having a projecting portion to enter the casing of the fixture and centralise the same, the opening of the connector being enlarged at its upper end and having its lower portion internally threaded to make screw thread connection with the stem or pipe of the fixture, said connector having free ingress and egress through the passageway of the hanger leading into the socket thereof.

961,051. VENDING-MACHINE. MATHIAS J. WALTHER, Cleveland, Ohio. Filed Sept. 15, 1909. Serial No. 517,882.

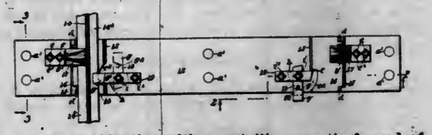
1. In a machine of the character described, the combination of a casing, a goods holder therein, a spring retracted ejector slide provided with a rack, a lever pivoted intermediate its ends and having a segmental gear to mesh with said rack, a spring retracted push rod having a plunger portion to engage and actuate said lever, means for locking said plunger, and a weighted ejector finger pivoted to said ejector slide for limited swinging movement.

2. In a machine of the character described, the combination of a goods supporting means, a spring retracted ejector slide provided with a rack, a lever pivoted intermediate its ends and having a segmental gear to mesh with said rack, a spring retracted push rod having a plunger portion to engage and actuate said lever, means for locking said plunger, and a self-righting ejector finger carried by the ejector slide and mounted for limited movement independent of the ejector slide.

3. In a machine of the character described, the combination of a casing, a spring retracted ejector slide provided with a rack, a weighted ejector finger pivotally mounted on said slide for limited swinging movement, a goods holder rotatably mounted in the casing and having an annular series of upright goods holding sections adapted to be brought into operative relation with respect to the ejector slide and its finger, means for actuating and controlling said goods holder, a lever fulcrumed intermediate its ends and having a segmental gear to mesh with said rack, a slidably mounted tubular plunger to engage and actuate the other end of said lever, said plunger having a transverse opening, a spring retracted push rod to slide in said tubular plunger, and means to enter said transverse opening in the tubular plunger and project into the path of said push rod.



961,052. METALLIC RAILROAD-TIE. ALVA S. WARREN, Batavia, N. Y. Filed Oct. 14, 1909. Serial No. 522,591.



1. The combination with a metallic cross tie formed of two right angular bent plates secured together laterally, and a top plate secured on horizontal members of the right angular bent plates, of a track rail, a cushion plate, a chair seated on the cushion plate, the rail seating on the chair, and means for clamping the rail upon the chair, cushion plate and top plate of the cross tie, said means comprising a fixed block on one side and a pivoted block on the opposite side.

2. The combination with a metallic cross tie, comprising two angle plates laterally secured together, a top plate secured on the horizontal members of the angle plates, and wing plates on one of the angle plates, of a track rail, a cushion plate on the tie formed of resilient material, a flat chair seated on the cushion plate, an abutment block on the tie bearing upon one side of the track rail, a clamping block engaging a base flange on the track rail at its opposite side, a reinforcing clamp engaging said clamping block, and bolts and nuts thereon which secure the clamping blocks on the track rail and cross tie.

3. In a metallic railroad tie, the combination with a T-shaped plate metal tie, of a flat resilient cushion plate seated upon the tie, a flat plate metal chair having upturned flanges on one side edge thereof, a track rail seated on said chair, having the side of one base flange thereof in contact with the upturned flanges, an abutment block on the tie, bearing upon the web and ball of the track rail at one side thereof, a clamping block having a shoulder and

seated on the tie, said block bearing upon the opposite base flange, a reinforcing clamp seated upon the shouldered clamp and upon the tie, having contact at its end with said shoulder, and bolts and nuts for securing the clamping means bearing upon the track rail and cross tie.

4. In a device of the character described, the means for securing a track rail on the cross tie, comprising a clamping block seated on the tie and lapping upon a base flange of the track rail, said block having an offset shoulder on its upper side, and a rib thereon near the shoulder, a reinforcing clamp seated at one end on the cross tie and lapping at the other end on the clamping block, said end engaging the shoulder and having a depression in its lower side that receives the rib, and bolts and nuts adapted for securing the clamping block and reinforcing block respectively together and in enforced engagement with the base flange on the track rail.

5. In a railroad tie, the combination with a tie, of a cushion plate on the tie, a chair in the form of a plate, the cushion plate and chair plate having registering recesses in their sides, and clamping blocks secured to the tie, and adapted to enter the recesses of the cushion plate and chair plate with their ends overlapping the base flange of the track rail.

[Claims 6 and 7 not printed in the Gazette.]

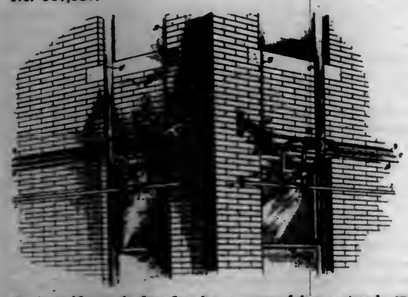
961,053. METAL-FRAME SCREEN. JOHN B. WILLIAMS, Houston, Tex. Filed Jan. 25, 1910. Serial No. 540,090.



1. A metal frame for wire screens, consisting of an approximately rectangular frame having teeth on each side thereof, said teeth being designed to pierce the wire mesh, said frame having oppositely disposed members provided with ribs for shielding said teeth and for preventing the displacement of said wire mesh.

2. A metallic frame for screens, consisting of two sections, one of said sections having teeth adapted to pierce the wire screen, oppositely disposed members adapted to clamp said first-named members, ribs formed in one set of members and adapted to receive said teeth, substantially as described.

961,054. GUIDE-RACK FOR FIRE-HOSE. SAMUEL B. WILLIS, New York, N. Y. Filed Mar. 8, 1910. Serial No. 547,987.

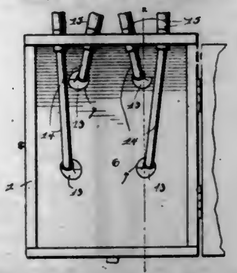


1. A guide rack for fire hose, comprising a track embodying a plurality of rods disposed in extended relation from the sides of a building and in front of the various tiers of window openings thereof; a carriage having a horisontal extension to be supported by said rods; a plate mounted on said carriage, having a holding port for the nozzle of said fire hose; means for closing said port in holding relation upon said nozzle; and cable sections attached to said carriage and extended lengthwise of said track and to an operating station below the same.

2. A guide rack for fire hose, comprising a track embodying a plurality of parallel rods; brackets fixedly secured to the side of a building and supportingly engaged with said rods to form uninterrupted track surfaces thereof; a carriage mounted on said rods having a vertical extension; means for holding in a horizontal position the nozzle of said hose mounted on said vertical extension; cables attached to said carriage and extended in opposite directions therefrom to an operating station from below; and rotary supporting devices mounted on said track structure at the opposite ends thereof to carry said cables.

3. A guide rack for fire hose comprising a track embodying a plurality of parallel rods; brackets fixedly secured to the side of the building and supportingly engaged with said rods to form uninterrupted track surfaces thereof; a carriage mounted on said track surfaces and movable lengthwise thereon; means for holding in operative position on said carriage the nozzle of said fire hose; and cables attached to said carriage and extended in opposite directions therefrom to an operating station below, said cable being guidingly supported on said rods.

961,055. PNEUMATIC ANNUNCIATOR AND INDICATOR. CLARENCE B. WITHROW, Denver, Colo. Filed June 25, 1909. Serial No. 504,294.

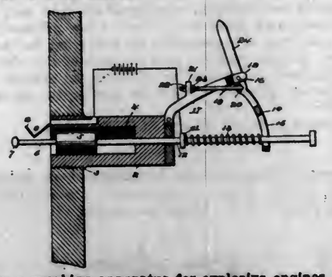


1. A device of the character described, comprising an annunciator board having a number of transverse openings, a number of pneumatically operated whistles mounted in said openings, each of said whistles having a lateral opening in its rear portion, and forming with the opening in the board an air discharge passageway to the front of the partition, annunciator drop plates, each hinged at its lower end to the front of the board beneath a whistle, and having its upper swinging end normally closing said air discharge passage way and means for sending a current of air to each whistle and simultaneously sounding it, and causing the drop plate to drop beneath the whistle.

2. In a device of the character described, an annunciator board having a number of transverse openings, a number of pneumatically operated whistles mounted in said openings, each of said whistles filling a portion of each opening, and having a lateral air discharge opening communicating with an air discharge passage adjacent to and formed by said whistle and the opening in the board, a number of drop indicator plates, each hinged at its lower end to the board beneath a whistle, and having its upper free end normally closing the air discharge opening adjacent to the whistle, means for sending a current of air to each whistle and simultaneously sounding it and causing the drop plate to drop, a vertically slidable rod mounted adjacent to the board, and having lateral arms located below said drop plates and extending across the plates and movable to directly swing said plates backward to closed position over the air discharge openings beneath the whistle.

961,056. SPARK-PLUG. JOSEPH M. WOODS and JOHN S. MAIMONE, Denver, Colo., assignors to The Compression Spark Plug Company, Denver, Colo., a Corporation of Colorado. Filed May 6, 1908. Serial No. 431,282.

1. In a sparking apparatus for an explosive engine, a plug, a reciprocating piston mounted therein and adapted to be moved in one direction by the pressure in the cylinder of said engine, a stationary contact, a movable contact secured to said piston and adapted to be brought in contact with said stationary contact when said piston is forced outward, a spring for normally forcing inward said piston, a lever for varying the tension of said spring, and means for locking said lever in various positions for holding said spring at various tensions.

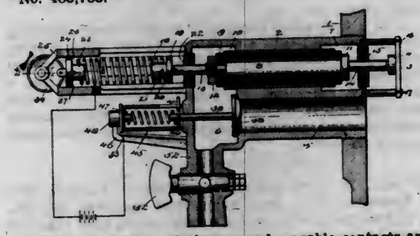


2. In a sparking apparatus for explosive engines, a hollow plug, a pair of contact members, means for operating the contact members by means of explosive mixture in the cylinder; means for varying the operating pressure of said explosive mixture, and means for locking said means consisting of a lever and movable sliding rod working in an orifice and secured by a set screw.

3. In a sparking apparatus for explosive engines, a hollow plug, a stationary contact, a reciprocating contact, means positioned in said hollow plug and connected with said reciprocating contact operable by the explosive mixture in the cylinder for causing said reciprocating contact to move against said stationary contact upon compression of the mixture, a spring acting against said reciprocating means, a pivotally mounted arm for varying the tension of said spring, a movable sliding arm connected to said pivotally mounted arm and means for locking said sliding arm against movement.

4. In a sparking apparatus for an explosive engine, a hollow plug, a reciprocating piston mounted therein and adapted to be moved in one direction by the pressure of the explosive mixture in the cylinder of said engine, a stationary contact point, a movable contact secured to said piston, and adapted to be brought into contact with said stationary contact when said piston is forced outward, means for yieldingly forcing said piston inward, a lever for varying the tension of said yielding means, and an adjustable locking rod for locking said lever in various positions for holding said yielding means at various tensions.

961,057. SPARK-PLUG. JOSEPH M. WOODS and JOHN S. MAIMONE, Denver, Colo. Filed Mar. 16, 1909. Serial No. 483,783.



1. In a spark plug, stationary and movable contacts arranged to be in free communication with the cylinder to which said plug is attached, a reciprocating shaft secured to said movable contact, a spring for normally holding said contacts together, a rotatable cam connected with said spring for varying the action thereof, means for locking said cam in various positions, and means for supplying current to the contacts.

2. In a spark plug, a casing, a stationary contact, a movable contact, means for yieldingly holding the movable contact against the stationary contact, means for varying the pressure of said yielding means, and a cam for controlling said last mentioned means.

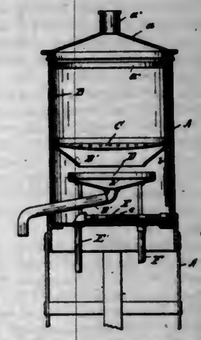
3. In a spark plug, a casing, a stationary contact, a movable contact, a reciprocating shaft carrying said movable contact, an insulating sleeve surrounding said reciprocating shaft, a reciprocating bearing member surrounding said insulating sleeve, resilient and yielding means for normally holding said contacts together, and means for supplying current to said contacts.

4. In a spark plug, a stationary contact member, a movable contact member normally in engagement with said stationary contact member, said movable contact member being in free communication with the cylinder to which the plug is attached for permitting the pressure of the explosive mixture to act thereon for separating the same from said stationary contact member, a reciprocating shaft connected with said movable contact member, a spring for normally holding said contact members together, and a cam for varying the action of said spring.

5. In a spark plug, stationary and movable contacts arranged to be in free communication with the cylinder to which said plug is attached, a movable shaft secured to said contact movable member, a spring for acting on said shaft for normally holding said contact members together, a cam for varying the action of said spring on said shaft, means for holding said cam in various positions for causing the same to act variously upon said spring, and means for supplying current to said contact members.

[Claims 6 and 7 not printed in the Gazette.]

961,058. PROCESS FOR CONVERTING GLUE. CHARLES M. ZIMMERMAN, Cincinnati, Ohio. Filed Nov. 24, 1908. Serial No. 464,208.



1. The process as herein described of converting glue into a liquid form, which consists in soaking the dry glue in a predetermined amount of water to form a jelly and subjecting the jelly to the action of steam.

2. The process as herein described of converting glue into liquid form which consists in soaking the dry glue in water to form a jelly and subjecting the jelly to the action of steam in a closed chamber.

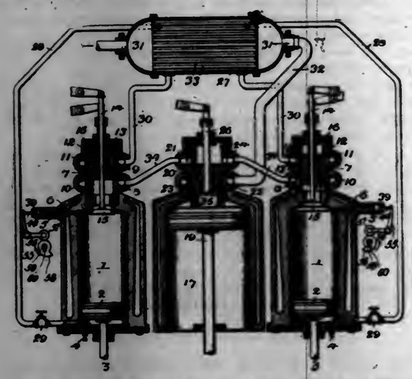
3. The process as herein described of converting glue into liquid form, which consists in soaking the dry glue in a predetermined amount of water to form a jelly, placing the jelly on a perforated support within a closed chamber, passing steam throughout the mass of jelly and collecting the liquid glue as it runs through the perforations of the support.

4. The process as herein described of converting glue into liquid form which consists in soaking the glue in a predetermined amount of water to form a jelly, subjecting the jelly to the action of steam, and catching the water of condensation of the steam to prevent its mixing with the liquid glue.

5. The process as herein described of converting glue into liquid form which consists in soaking the dry glue in a predetermined amount of water to form a jelly, placing the glue on a perforated support within an inclosed chamber so as to attack and melt the glue, catching the water of condensation so as to prevent it from mixing with the liquid glue and collecting the liquid glue as it falls from the support under the action of the steam.

[Claim 6 not printed in the Gazette.]

961,059. GAS-ENGINE. WILLIAM G. ABBOTT, Jr., Philadelphia, Pa. Filed Dec. 30, 1905. Serial No. 293,992.



1. In a compound gas engine, a pair of high pressure cylinders, one side of each operating as an air compressor, an air reservoir connected to said air compressors, means for supplying compressed air from said reservoir to said high pressure cylinders, a low pressure cylinder, and means for supplying said low pressure cylinder with the exhaust gases of the high pressure cylinders.

2. In a compound gas engine, a pair of high pressure cylinders, one side of each operating as an air compressor, an air reservoir connected to said air compressors, means for supplying compressed air from said reservoir to said high pressure cylinders, a low pressure cylinder, means for supplying said low pressure cylinder with exhaust gases of the high pressure cylinders, and means for utilizing the exhaust gases from the low pressure cylinder for heating the air in the said reservoir.

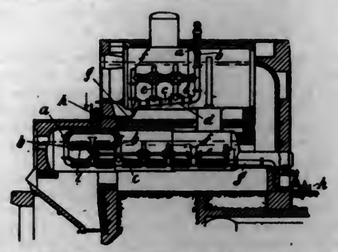
3. In a compound gas engine, a pair of high pressure cylinders having pistons, one side of each cylinder operating as an air compressor, the working strokes of one high pressure piston alternating with those of the other, an air reservoir connected to said air compressors, means for supplying compressed air from said reservoir to said high pressure cylinders, a low pressure cylinder, means for supplying the said low pressure cylinder with the exhaust gases from the high pressure cylinders, and means for utilizing the exhaust gases from the low pressure cylinder for heating the air in the said reservoir.

4. In a compound gas engine, the combination with a pair of high pressure cylinders, one side of each cylinder being adapted to operate as an air compressor, of a vaporiser connected with the working side of each high pressure cylinder, a positively actuated valve for establishing connection between the working side of each high pressure cylinder and its respective vaporizer at predetermined periods, an air reservoir connected to both of said air compressors, means for supplying compressed air from said reservoir to said high pressure cylinders, a low pressure cylinder, means for supplying said low pressure cylinder with the exhaust gases of the high pressure cylinders, and means for utilizing the exhaust gases from the low pressure cylinder for heating the air in the said reservoir.

5. In a compound engine, the combination with a pair of high pressure cylinders, one side of each cylinder being adapted to operate as an air compressor, of a vaporiser connected with the working side of each high pressure cylinder, means for maintaining a constant pressure of the vapor in said vaporisers, and means for heating the vapor in said vaporisers, a positively actuated valve between each cylinder and its respective vaporizer, an air reservoir connected to both of said air compressors, positively actuated valves for supplying compressed air from said reservoir to said high pressure cylinders, a low pressure cylinder, a positively actuated valve for supplying the said low pressure cylinder with the exhaust gases of the high pressure cylinders and means for utilizing the exhaust gases from the low pressure cylinder for heating the air in said reservoir.

[Claims 6 to 20 not printed in the Gazette.]

961,060. FEED-WATER PURIFIER FOR BOILERS. IGNAZ ADLER, Susine-Gjurgjenovac, Austria-Hungary. Filed July 27, 1907. Serial No. 385,880.



1. In a feed water purifier for boilers a mud collecting cylinder consisting of tubular members with rising pipes opening freely into the water or steam space, one or more of the rising pipes also serving as water inlet, the cross sectional area of the said rising pipes and the outlet thereof being so dimensioned that the speed of flow of the feed water introduced is reduced in its passage therethrough thereby assisting the deposition of the mud.

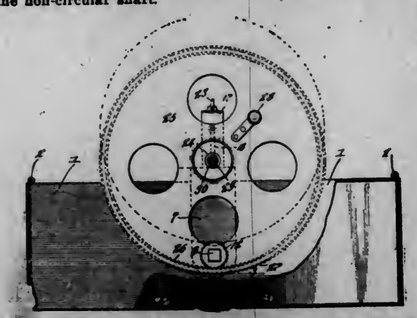
2. In a feed water purifier for boilers a mud collecting cylinder consisting of tubular members with rising pipes opening freely into the water or steam space, one or more of the rising pipes also serving as water inlet, safety pipes arranged in the pipe system of the mud collector and connecting the rising pipes with one another in order to safeguard the flow of water to the rising pipes in the event of clogging of the mud cylinder.

3. In a feed water purifier for boilers a mud collecting cylinder provided with branched rising pipes opening freely into the water or steam space, one or more of the rising pipe branches also serving as water inlet, branched feed pipes projecting into the open upper ends of the rising pipe branches and having a smaller diameter than each single rising pipe.

4. In a feed water purifier for boilers a mud collecting cylinder provided with a plurality of rising pipes opening freely into the water or steam space, rising pipes dividing into two branches, the branches forming two series, a safety pipe connecting the branches of the same series with one another, branched feed pipes of smaller diameter than the rising pipes and projecting into the open upper ends of the latter.

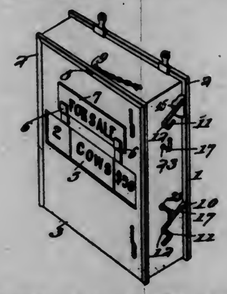
961,061. ROTARY BRUSH. JOHN WILLIAM ADLER, Williamstown, Ohio. Filed May 7, 1909. Serial No. 494,524.

1. The combination with a casing, having open ends and a partly open bottom, doors for the ends, inclined partitions adjacent the opening in the bottom, a cylindrical brush provided with a hub within the casing, the hub of the brush being provided with a non-cylindrical opening, a shaft having a non-cylindrical portion provided with a toothed wheel and a reduced portion within the bore, a U-shaped bail engaging the shaft and the sides of the casing, a resilient member upon the reduced portion of the shaft exerting outward pressure thereon, a flexible element between the top of the casing and the U-shaped bail, means for regulating the tension of this member, an operating wheel provided with inner and outer teeth upon the bail, and means for bringing either the inner or the outer teeth into engagement with the toothed wheel carried by the non-circular shaft.



2. The combination with a substantially rectangular casing having open ends and a partly open bottom, doors for the ends, the casing being provided with inclined aprons alining with the edges of the opening in the bottom therein, a cylindrical brush within the casing having its lower end projecting through the opening, the hub of the brush having a longitudinally extending bore, a substantially U-shaped bail upon the casing, a non-cylindrical shaft carried by the bail and extending through the bore of the hub of the brush, said shaft having one of its ends provided with a toothed wheel and having a reduced extending portion provided with a threaded end, a cap for the end, a resilient element upon the reduced portion of the shaft between one side of the casing and the enlarged portion of the shaft, a resilient member between the bail and the top of the casing, a threaded member secured to the top of the casing and the resilient member and projecting through the bail, a handle for this threaded member, an L-shaped offset member carried by the bail and engaging the threaded extending member, a wing nut for the threaded member, the vertical arm of the L-shaped member being provided with a slot, an axle having a reduced portion engaging the walls provided by this slot, and a removable operating wheel provided with inner and outer teeth secured upon the axle.

961,062. ADVERTISING DEVICE. JAMES ADRIAN, Halfway, Oreg. Filed Mar. 18, 1909. Serial No. 484,162.



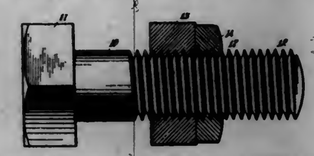
1. An advertising device comprising a casing, a frame removably mounted therein, rollers journaled in said frame and casing, indicating webs wound on said rollers, and a support for the webs mounted on the casing.

2. An advertising device comprising a slotted casing, a frame removably carried therein, a plurality of partitions in said frame, rollers journaled in the slots in said casing, and in the frame and partitions, webs carried by said rollers, means on the casing to support all of the webs in indicating position, and a sight glass in the casing, adjacent the support.

3. An advertising device comprising a casing, a slotted and apertured frame removably mounted therein, rollers journaled in the slots in the frame and casing, certain of said rollers being passed through alined apertures in the frame and casing to hold the frame in the casing, webs carried by said rollers, a support carried by the casing for holding the webs in indicating position, and a removable front for the casing having a sight opening opposite the support.

4. An advertising device comprising a slotted and apertured casing, a removable front therefor, a transparent panel in the front, a removable slotted and apertured frame mounted in the casing, webbing rollers journaled in certain of the slots and apertures in the casing and frame, webs carried by said rollers, and a support for said webs carried by the front and arranged adjacent the transparent panel, certain of said apertures and slots adapted to receive a pair of rollers for use in the casing when the frame is removed.

961,063. NUT-LOCK. JAMES C. AUSTIN, New York, N. Y. Filed Oct. 26, 1909. Serial No. 524,639.



1. A nut lock, having a body provided with a bore having concentric threads of varying diameter, said body being expansible in its own plane and at substantially right angles to the length of said bore.

2. A nut lock having a body fashioned from resilient material and provided with a split, and opposite thereto a kerf to increase the resiliency of said body, said body further having a threaded bore therethrough adapted to receive a bolt, and, in diameter being partly less than and partly approximately equal to, the diameter of the threaded part of the bolt.

3. The combination, with a bolt having a threaded part and a nut thereon, of a nut lock comprising a split body fashioned from resilient material and having opposite to the split a kerf, said body having a threaded bore adapted to receive said threaded part of said bolt, said bolt being partly smaller in diameter than said threaded part of said body, whereby said lock binds upon said threaded part of said bolt.

4. A nut lock, comprising a threaded body adapted to receive the threaded part of a bolt, and substantially smaller in diameter of bore than that of the threaded part of the bolt, the lock having a "taking" thread approximately corresponding in diameter to the threads of the bolt.

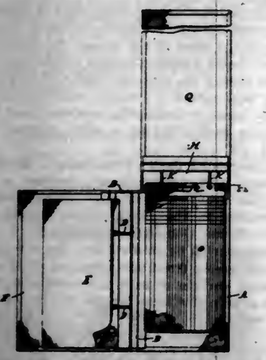
5. An expansible nut lock, having internal, concentric threads of different diameters, and expansible in a plane at substantially right angles to the axis of said threads.

961,064. ONE-PIECE LOOSE-LEAF BINDER. ALBERT WILLIAM BADROW, Brooklyn, N. Y. Filed Feb. 12, 1910. Serial No. 543,514.

1. A loose leaf binder apparatus comprising a back, a side piece hinged to one of the longitudinal edges of the back, a top hinged at one end of said back, binder rings upon the hinged side and top pieces, and a cover hinged to each side piece and top and adapted to fold one over the other.

2. A loose leaf binder apparatus comprising a back, a side piece hinged to one of the longitudinal edges of the back, a top hinged at one end of the back, binder rings

upon said hinged side and top pieces, a cover hinged to each side and top piece and adapted to fold one over the other, and rings in pairs upon each top and side piece,



the rings upon said top piece positioned in planes at right angles to the planes in which the rings upon the side piece are located.

961,065. SPRING-TIRE. VICTOR BAUER, Horton, Kans. Filed Oct. 12, 1909. Serial No. 522,313.

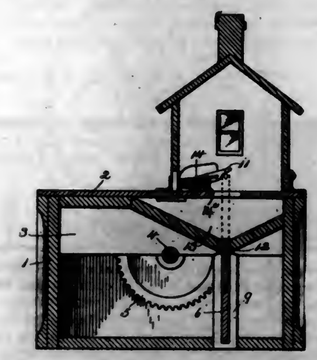


1. In a device of the class described, a rim; a plate surrounding the rim; a compression spring having one end passing through said plate and engaged between the rim and the plate; a tread plate comprising laterally separable sections arranged to engage between them the other end of the spring; a tire mounted upon the tread plate and engaged laterally by the sections thereof; and flexible, decussate retaining members extended through the sections, the tire and the rim.

2. In a device of the class described, a rim; a plate surrounding the rim a compression spring having one end passing through said plate and engaged between the plate and the rim; a band provided with an opening to receive the other end of the spring; a tread plate superposed upon the band and comprising laterally separable sections arranged to engage between them the last named end of the spring; a tire laterally engaged by the sections and superposed thereon; resilient side plates connecting the sections with the rim; and flexible retaining members extended through the side plates, the tire, the band, and the rim.

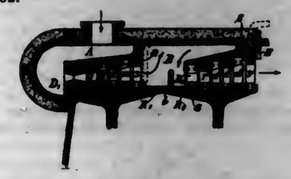
3. In a device of the class described, a rim; a plate surrounding the rim; a compression spring having one end passing through said plate and engaged between the plate and the rim; a band having an opening to receive the other end of the spring; a tread plate comprising laterally separable sections arranged to engage between them the last named end of the spring; a tire laterally engaged by the sections and superposed thereon; resilient side plates uniting the sections with the rim; and flexible, decussate retaining members each extended at one end through one of the side plates, a section of the tread plate, and through the band, and at the other end extended through the rim and the other of the side plates.

961,066. COMBINED MATCH-SAFE AND CIGAR-CUTTER. GEORGE W. BEHLER, Three Oaks, Mich. Filed Feb. 15, 1909. Serial No. 477,953.



A device of the class described, comprising a support, having a match compartment, a reciprocating plate mounted in said support, said plate having inclined arms formed integral therewith and arranged on each side of said support, said arms having teeth, guides mounted on said support on the opposite side of each arm, spur wheels adapted to engage said teeth for raising and lowering said plate, said plate being capable of transmitting a match from said compartment to the top of said device.

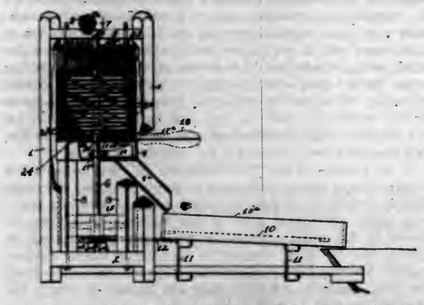
961,067. ELASTIC-FLUID TURBINE. GIUSEPPE BELLUZZO, Milan, Italy. Filed Mar. 18, 1907. Serial No. 363,052.



1. In a turbine of the type set forth, in combination, a casing, two series of alternately arranged guide members and running wheels therein, the casing being provided between the series with a chamber which has an inwardly extending pocket portion and which has a baffle wall in advance of the pocket portion, the guide members of the second series being secured to the inner wall of the pocket portion.

2. In a turbine of the type set forth, in combination, a casing, two spaced series of alternately arranged guide members and running wheels therein, the vanes of the wheels and members of each series varying in radial dimension by successive increments and the vanes of the members and the wheels of the second series being of greater radial dimensions than the vanes of the correspondingly located members and wheels of the first series, the vanes of the first member of the second series being of smaller radial dimension than the vanes of the last wheel of the first series, the casing having a chamber between the series constructed to provide for the compression therein, by impact, of the steam issuing from the first series prior to its passage to the second series.

961,068. APPARATUS FOR TREATING GRAIN. EZEKIEL B. COX, Newtown, Pa. Filed Dec. 23, 1909. Serial No. 534,784.



1. In combination a stationary cylindrical casing having a plurality of alternate grooves and ridges on the interior and a rotary grinding device within the casing comprising a plurality of superimposed disks having serrated edges and other disks alternately arranged with respect to the other disks and having pins projecting from their edges, and an inlet to and discharge from said casing.

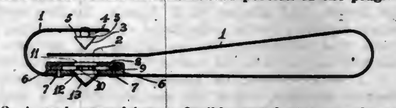
2. In combination a collecting casing or chamber, a casing surmounting said collecting chamber and composed of a plurality of rings having beveled edges and superimposed upon each other, a shaft journaled in the casing, a grinding device consisting of superimposed disks mounted upon said shaft and having alternately teeth and projecting pins coacting with the inner surface of said rings, a cutoff plate controlling the admission of grain to the collecting casing, a discharge from the collecting casing, and a rotary scraper blade carried by the shaft within the collecting chamber, substantially as described.

3. In combination a suitable frame, a collecting casing supported therein above the bottom of the frame and having a suitable discharge outlet at one side, a plurality of rings superimposed above said collecting casing and constituting a grinding casing, a shaft journaled vertically in the frame and passing through said collecting and grinding casing, a scraper plate carried by the shaft within the collecting casing, a plurality of serrated disks carried by the shaft within the grinding casing, a cut-off device for controlling the communication between said casings, and a feed opening for the grain at the upper end of said grinding casing, substantially as described.

4. In combination a suitable frame, a collecting casing supported therein above the bottom of the frame and having a suitable discharge outlet at one side, a plurality of rings superimposed above said collecting casing and constituting a grinding casing, a shaft journaled vertically in the frame and passing through said collecting and grinding casing, a scraper plate carried by the shaft within the collecting casing, a plurality of serrated disks carried by the shaft within the grinding casing, a cut-off device adapted to control the communication between said casings, and a feed opening for the grain at the upper end of said grinding casing, a screen adapted to receive the discharge from the collecting casing, and means whereby said screen receives reciprocating motion from the vertical shaft, substantially as described.

961,069. SEAL. JAMES F. CRUDGINTON, Bridgeport, Conn., assignor to John L. Carpenter, Bridgeport, Conn. Filed Sept. 21, 1909. Serial No. 518,837.

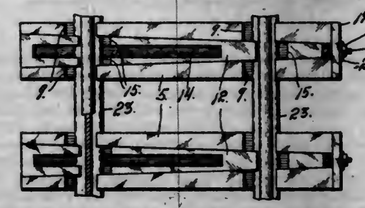
1. A seal comprising a flexible metal strap perforated at one end and carrying at the other end a conical shaped and shouldered plug and having intermediate of its ends a depressed conical shaped socket, a perforated base secured to said strap immediately above said socket, a perforated cap secured directly to said base and having its main central portion slightly raised whereby a recess is provided within said cap and base, and resilient detent wires resting upon said base within said recess and bridging the perforation in the base, whereby when the perforated end of the strap is alined with the perforations in the cap and base the plug may be depressed through said perforations into said socket and be locked by the engagement of the detent wires behind the shouldered portion of the plug.



2. A seal comprising a flexible metal strap perforated at one end and having a conical shaped and shouldered plug secured to the other end, a perforated base portion secured to said strap intermediate of its ends said strap having a conical socket depressed therefrom immediately below the perforation in the base, a cap whose periphery rests upon said base and is secured thereto the main central portion of said cap being raised above the plane of the base and perforated whereby a recess is provided between said base and cap, and a resilient detent element within said recess and resting upon said base, said detent having spaced side wires that bridge the perforation in the base and are of a length slightly less than the diameter of said recess.

3. The combination of the strap perforated at both ends, the body portion of the seal secured to said strap intermediate of its ends and provided with perforations and a recess, the detent wires within said recess and bridging said perforations, the perforated fragile head, and the conical shaped and shouldered plug having a shank which is passed through the perforation in said strap adjacent the body portion of the seal and also through the perforation in the fragile head and then riveted to said head.

961,070. METAL RAILWAY-TIE. GEORGE E. HALL, Denver, Colo., assignor of one-half to George L. Rice, Denver, Colo. Filed July 19, 1909. Serial No. 508,523.



1. A metal railway tie composed of two coöperating members, namely:—a body member having a central wedge-shaped groove and a clamping member of counter-part shape, and adapted to enter the groove of the body member, the clamping member being adjustable in the groove of the body member, the two members having rail-base-receiving recesses, open at the top, the walls of the said recesses of the two members being under-cut on opposite sides, whereby the under-cut walls of one member engage the bases of the rails on one side, while the corresponding walls of the opposite member engage the bases of the rails on the opposite side, and suitable means for securing the tie members in the assembled relation with each other, and in interlocking relation with the track rails, substantially as described.

2. A metal railway tie, composed of two coöperating wedge-shaped members, one member having a wedge-shaped groove adapted to receive its coöperating member, the two members having rail-receiving recesses, formed in the top, the recesses of each member having under-cut walls on one side and vertical walls on the opposite side, the straight and under-cut walls of the two members being arranged in opposing relation for the purpose set forth.

3. A metal railway tie composed of two coöperating wedge-shaped locking members, one member having a wedge-shaped groove to receive its counter-part composed of the other member, the two members being adjustable

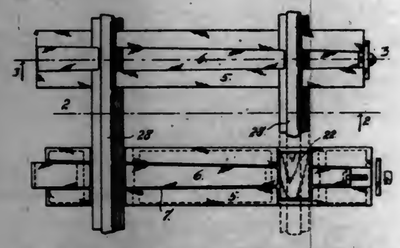
and having rail-base-receiving recesses, and suitable means for connecting the two members, whereby they are caused to clamp the base of the rails, substantially as described.

4. A metal railway tie composed of two coöperating parts, one member having a wedge-shaped groove formed therein, while the other member is the counter-part of the said groove, and adapted to fit therein, the two wedge-shaped members having coöperating rail-base-receiving recesses, and suitable means for locking the members in clamping relation with the rails substantially as described.

5. A metal railway tie composed of two coöperating clamping members, one of the members having a wedge-shaped groove formed therein, while the other member is the counter-part of the said groove, and adapted to enter the same, the two members having rail-base-receiving recesses, the members being adjustable to clamp the rails in place, one member having a bolt protruding beyond its coöperating member, a block applied to said bolt, and a securing nut also applied to the bolt, substantially as described.

[Claim 6 not printed in the Gazette.]

961,071. RAIL-CUSHION METAL RAILWAY-TIE. GEORGE E. HALL, Denver, Colo., assignor of one-half to George L. Rice. Filed Dec. 8, 1909. Serial No. 532,126.



1. A metal railway tie composed of two coöperating members, namely, a body member having a central groove and a clamping member of counterpart shape and adapted to enter the groove of the body member, the clamping member being adjustable in the groove of the body member, the two members having rail-base receiving recesses open at the top and in which are placed cushion blocks whose extremities engage ledges of the body member, the latter having flanges projecting upwardly above the ledges to retain the blocks in place, the latter being in direct engagement with the track rails when the tie is in use.

2. A metal railway tie composed of two coöperating members, namely, a body member having a central groove and a clamping member of counterpart shape and adapted to enter the groove of the body member, the clamping member being adjustable in the groove of the body member, the two members having rail-base receiving recesses open at the top and in which are placed cushion blocks whose extremities engage ledges of the body member, the latter having flanges projecting upwardly above the ledges to retain the blocks in place, the latter being in direct engagement with the track rails when the tie is in use, the walls of the rail-base receiving recesses of the two members above the cushion blocks being under-cut on opposite sides whereby the under-cut walls of one member engage the bases of the walls on one side, while the corresponding walls of the opposite member engage the bases of the rails on the opposite side, and suitable means for securing the tie members in the assembled relation with each other and in interlocking relation with the track rails.

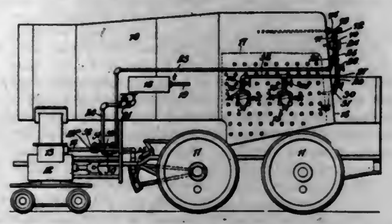
3. A metal railway tie composed of two coöperating members, one member having a groove adapted to receive its coöperating member, the two members having rail-base receiving recesses formed in the top, in the lower portions of which are located cushion blocks upon which the track rails are adapted to rest, one of the members having outer flanges projecting above the bottoms of the blocks to retain the latter in place.

4. A metal railway tie composed of two coöperating members, one member having a groove adapted to receive its coöperating member, the two members having rail-base receiving recesses formed in the top, in the lower portions of which are located cushion blocks upon which the track rails are adapted to rest, one of the members having outer flanges projecting above the bottoms of the blocks to retain the latter in place, the recesses of each member having under-cut walls on one side and vertical walls on the opposite side, the straight and under-cut walls of the two members being arranged in opposing relation.

5. A metal railway tie composed of two coöperating wedge-shaped cored members, one member having a wedge-shaped groove to receive the other member, the two members being adjustable and having rail-base receiving recesses in the lower portions of which are located cushion blocks, the tie being shaped to secure the blocks against lateral displacement, and suitable means for connecting the two members, whereby they are caused to clamp the base of the rail.

[Claims 6 to 8 not printed in the Gazette.]

961,072. SMOKE-CONSUMER. CHARLES F. HARRIS, Altoona, Pa. Filed Jan. 6, 1909. Serial No. 470,986.



1. The combination of a boiler, a furnace for heating the same, an engine including a valve mechanism for admitting and exhausting the steam to and from the engine, and means connected with the valve mechanism and positively actuated thereby for admitting fluid to the furnace.

2. The combination of a boiler, a furnace for heating the same, an engine including a cylinder and a valve mechanism for controlling the supply of steam from the boiler to the cylinder and the exhaust of the steam from the latter, a valve for controlling the admission of fluid to the furnace, and an operating connection between the last-mentioned valve and the said mechanism for admitting fluid to the furnace while steam is admitted to the cylinder.

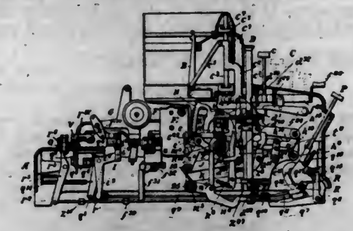
3. The combination of a boiler, a furnace for heating the same, an engine including a cylinder and a valve for controlling the admission of steam from the boiler to the cylinder, a draft appliance for supplying fluid to the furnace, said appliance including a valve operatively connected with the valve of the engine to move simultaneously therewith for maintaining a pulsating draft in the furnace while the engine is consuming steam, separate valves movable simultaneously for controlling the flow of steam to the engine and of air through the said appliance to the furnace independently of the movement of the other valves for reducing or increasing the amount of fluid supplied to the furnace as the demand for steam decreases or increases, and a controller for the last-mentioned valves.

4. The combination of a boiler, a furnace for heating the same, an engine including a cylinder and a valve for controlling the admission of steam from the boiler to the cylinder, means for supplying fluid to the furnace including a controlling valve, a common operating mechanism for the steam and fluid valves, a throttle for controlling the supply of steam from the boiler to the engine, and a valve located in the said means and connected with the throttle to open and close with the opening and closing of the latter to control the supply of fluid to the furnace through the said means.

5. The combination with a boiler, a furnace, a cylinder, a steam valve controlling the supply of steam thereto, of an air reservoir, a conducting pipe connecting the reservoir and the furnace, a valve located in the pipe, and means connected to the steam valve actuating means for periodically opening and closing the valve with each stroke of the steam valve to permit or cut off the passage of air through said pipe.

[Claims 6 to 18 not printed in the Gazette.]

961,073. ADDING TYPE-WRITER. FREDERICK A. HART, Orange, N. J., assignor to New York Adding Typewriter Company, Orange, N. J., a Corporation of Missouri. Filed Apr. 16, 1906. Serial No. 311,964.



1. In an adding and recording machine, the combination of adding mechanism, a recording mechanism, a series of numbered keys for operating the members of the latter, a corresponding series of shifters, a continuously running motor, and devices supported independently of but adjustable from the different shifters to connect the members of the recording mechanism independently with the motor.

2. In an adding and recording machine, the combination of adding mechanism, a recording mechanism including a traveling platen, a series of numbered keys for operating the members of the latter, a corresponding series of shifters, a continuously running motor, devices supported independently of but adjustable from the different shifters to connect the members of the recording mechanism independently with the motor, and means operated from the motor for shifting the platen after each record.

3. The combination with recording mechanism and operating keys therefor, of adding mechanism, a series of shifters, one to each of said recording keys, and devices supported independently of the shifters and arranged to be shifted by said shifters to positions to operatively connect the adding and recording mechanisms.

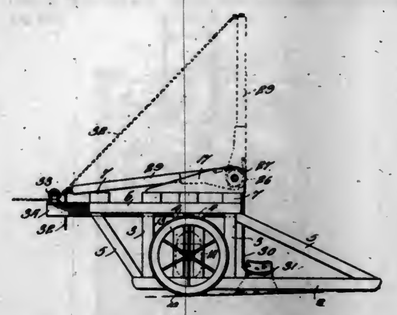
4. The combination with recording mechanism and operating keys therefor, of adding mechanism, a series of shifters, one to each of said recording keys, and devices supported independent of said shifters arranged to be shifted by said shifters to positions to operatively connect the adding and recording mechanisms.

5. The combination with recording mechanism and a movable platen and operating keys therefor, of adding mechanism movable with the platen, a series of shifters, one to each of said recording keys, devices normally independent of said shifters arranged to be shifted by said shifters to positions to operatively connect the adding and recording mechanisms, and means for automatically moving the platen and adding mechanism after shifting any shifter.

[Claims 6 to 78 not printed in the Gazette.]

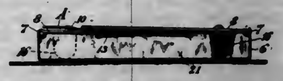
961,074. STUMP-PULLER. SAMUEL R. HART, Andalusia, Ala. Filed Oct. 3, 1908. Serial No. 456,082.

A stump puller comprising a frame, a vertically movable wheeled axle carried by the frame, spaced beams carried by the frame arranged above and below the said axle, cams upon the axle adapted to be engaged with the uppermost beam to hold the wheels of the axle in their lowered



positions, said cams being adapted for engagement with the lowermost beam for holding the axle against rotation, and stump extracting means carried by said frame.

961,075. TICKET-HOLDER. HENRY HIRSCH, New York, N. Y., assignor of one-half to Louis Gelarie. Filed Aug. 4, 1909. Serial No. 511,221.



1. A ticket-holder comprising a box open at one side and having overlapping covers hinged at opposite ends of said side, and having recesses at the upper edge of each side of the box for the reception of said covers.

2. A ticket-holder comprising a box, and spring-pressed covers hinged at opposite ends of one side of the box and over-lapping each other intermediately of said ends, the outer face of each cover being provided with a projection beyond and near the free end of the other cover when the covers are in over-lapping position.

3. A ticket-holder comprising a box open at one side and having over-lapping covers hinged at opposite ends of said side, and having recesses at the upper edge of each side of the box for the reception of said covers and additional recesses in said sides for exposing to view the tickets in the box.

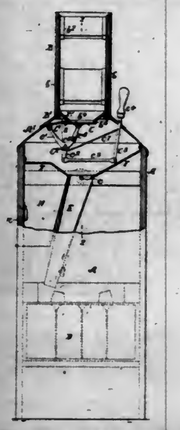
4. A ticket-holder comprising a box open at one side, having covers, one end of each of which is hinged to the box, while the free ends overlap, and projections on said covers near their hinged ends.

961,076. FARE-BOX. GEORGE B. KOHLER, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Original application filed July 27, 1908, Serial No. 445,499. Divided and this application filed Oct. 13, 1909. Serial No. 522,897.

1. The combination, in a fare box, of a fare receiving section having an opening communicating with the body of the box, a sliding plate, an operating lever connected to the said plate, a plate pivoted to said sliding plate, and an arm connected to the pivoted plate and mounted on a fixed pivot so that on the operation of the lever the pivoted plate will be tilted and the sliding plate will close the opening.

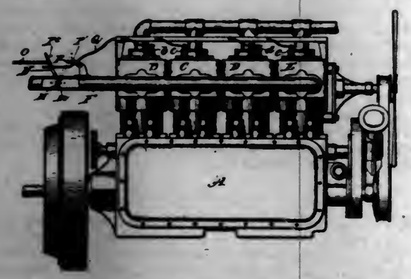
2. The combination, in a fare box, of a body portion, a fare receiving section having a bottom plate, said plate overlapping the top of the box and having an opening therein, the upper surface of the plate being beveled toward the opening, a pivoted plate adapted to close the

opening, a sliding plate connected to the pivoted plate, and means whereby the actuation of the pivoted plate will cause the sliding plate to close the opening.



3. The combination, in a fare box, of a fare receiving section having an opening communicating with the body of the box, a sliding plate, an operating lever connected to the said plate, a plate pivoted to said sliding plate and normally closing said opening, an arm connected to the pivoted plate and mounted on a fixed pivot so that on the operation of the lever the pivoted plate will be tilted and the sliding plate will be moved to close the opening, and an operating handle outside the fare box to operate said lever.

961,077. MEANS FOR FACILITATING THE STARTING OF INTERNAL-COMBUSTION ENGINES. FREDERICK PURDY, Kenosha, Wis., assignor to Thomas B. Jeffery, Kenosha, Wis.; Kate E. Jeffery, Charles T. Jeffery, and Harold W. Jeffery executors of said Thomas B. Jeffery, deceased. Filed Dec. 23, 1908. Serial No. 468,888.



1. In an internal combustion engine, a plurality of engine cylinders, pistons in said cylinders, means for normally exhausting pressure from said cylinders at predetermined points between the ends of the working strokes of said pistons, and means for maintaining the cylinders closed against atmosphere when the pistons reach said predetermined points upon stopping the engine so as to maintain pressure in the cylinders.

2. In an internal combustion engine, a plurality of engine cylinders, pistons in said cylinders, means for normally exhausting pressure from said cylinders at predetermined points between the ends of the working stroke of said piston and manually controlled means for preventing the exhausting of pressure at said predetermined points upon stopping the engine.

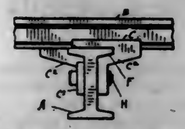
3. In an internal combustion engine, a plurality of cylinders, pistons in said cylinders, exhaust conduits leading from said cylinders, exhaust valves in said conduits, means for opening said exhaust valves at predetermined points during the working strokes of said pistons and valve mechanism in addition to the exhaust valves for closing said conduits upon stopping the engine.

4. In an internal combustion engine, a plurality of engine cylinders, pistons in said cylinders, an exhaust pipe connected to the exhaust ports of said cylinders, exhaust valves, means for opening said exhaust valves at predetermined points during the working strokes of said pistons, and a tightly seating valve in said pipe adapted to be closed upon stopping the engine.

5. In an internal combustion engine, a plurality of engine cylinders, pistons in said cylinders, a firing circuit, means for normally exhausting pressure from said cylinders at predetermined points between the ends of the working strokes of said pistons, and means for preventing the exhausting of pressure at said predetermined points and at the same time rendering said firing circuit inoperative.

[Claim 6 not printed in the Gazette.]

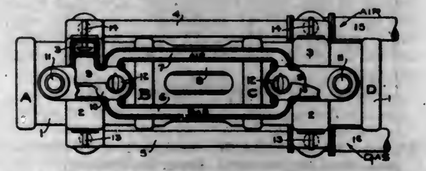
961,078. RAIL-TIE FASTENING. BENJAMAN W. SMITH, Montpelier, Ind., assignor of one-half to Thomas C. Neal, Montpelier, Ind. Filed Mar. 9, 1910. Serial No. 548,124.



1. The combination with a beam provided with a rectangular aperture, of a pair of complemental clamp blocks the meeting faces of the body-portions of which are recessed to engage the edges of the flange of a track rail, the legs of the clamp blocks being turned at an angle to the body-portion of the block and having lugs on their rear sides to occupy the said rectangular aperture and provided with complemental faces so beveled that when the lugs are drawn toward each other the body portions will also approach each other, means to draw the legs toward each other transversely of the beam and to hold the same in locked position.

2. The combination of a beam provided with a rectangular aperture, a pair of complemental clamp blocks the meeting faces of the body portions of which are recessed to engage the edges of the flange of a track rail, the legs of the clamp block being turned at an angle to the body-portion of the block and having lugs on their rear sides to occupy the said rectangular aperture and provided with complemental faces so beveled that when the lugs are drawn toward each other the body portions will also approach each other, bolts to draw together the said clamp blocks, substantially as described.

961,079. GAS-ENGINE. CARL G. SPRADO, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Oct. 18, 1909. Serial No. 523,332.



1. In a gas engine, the combination of a plurality of cylinders, a supply means for conducting fluid to each of the cylinders, a throttle valve in the supply means adjacent each of the cylinders, and an equalising pipe connecting the supply means at a point between one of said throttle valves and its adjacent cylinder and a point between another of said throttle valves and its adjacent cylinder.

2. In a gas engine, a plurality of cylinders, a supply means common to two of said cylinders, and an equalising pipe connecting the supply means adjacent said two cylinders.

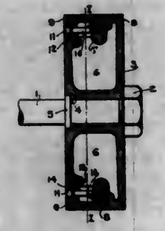
3. In a tandem gas engine, supply means for the cylinders of said engine, throttle valves in said means adjacent said cylinders, and an equalizing conduit connecting said supply means between said throttle valves and their corresponding cylinders.

4. In a gas engine, the combination of a plurality of cylinders, and a plurality of supply means for each of said cylinders, a portion of one of said supply means for one of said cylinders serving also as a portion of one of said supply means for another of said cylinders.

5. In a gas engine, the combination of a plurality of inlets to said engine, piping for supplying fluid to said inlets, and a pipe connecting said supply piping adjacent two of said inlets.

[Claim 6 not printed in the Gazette.]

961,080. PISTON. EDWARD T. ADAMS, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Oct. 18, 1909. Serial No. 523,334.



1. In a piston, a plurality of coacting members, means including a stud coacting with one of said members only, and a nut coacting with another of said members and with said stud, for holding said members in coaction, the elasticity of said studs being sufficient to counteract shifting of the parts due to change in temperature.

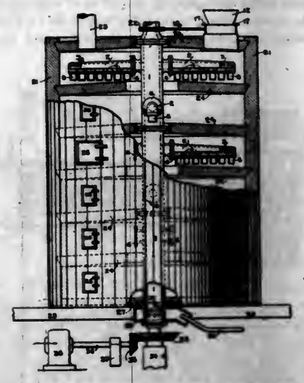
2. In a piston, the combination of a piston body, a ring portion, and a stud coacting with said body only, and a nut coacting with said stud and said ring portion for clamping said ring portion to said body, said stud being of comparatively great length between the points of application of said stud to said body, and said nut to said stud.

3. In a piston, a plurality of coacting members, means including a plurality of studs coacting with one of said members only, and a plurality of nuts coacting with said studs and with another of said members, for holding said members in coaction, the elasticity of said studs being sufficient to counteract shifting of said members due to change in temperature.

4. In a piston, a piston body, a ring, a stud fixed to said body and passing freely through said ring, and a nut on said stud for clamping said ring to said body, said stud being of comparatively great length between its point of attachment to said body and the point of application of said nut to said stud.

5. In a piston, a body member, a ring member, and means including a long stud fixed to one of said members and passing freely through the other of said members, and a nut coacting with said stud and with said other member, for clamping the members together.

961,081. SELF-HEATING HOT-BLAST ROASTING-FURNACE. WILLIAM M. BARKER, McGill, Nev., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Mar. 12, 1909. Serial No. 482,879.



1. In a roasting furnace, a hearth, a hollow rotatable shaft having an air inlet, a hollow arm extending therefrom over said hearth and having perforations to its interior near the outer end only of that portion of the arm extending over said hearth, and a compressed air pipe extending into said inlet whereby said pipe and arm are cooled and a hot blast introduced into said hearth through said perforations.

2. In a roasting furnace, a hearth, an arm extending over said hearth, a rabble holder supported from said arm and having right and left sockets, and a rabble adapted to be supported in either of said sockets, said rabble being locked in its supported position by said arm.

3. In a roasting furnace, a hearth surface, a second hearth surface receiving ore from said first hearth surface, supporting means extending over each of said hearth surfaces, and a plurality of rabbles supported from said means, said rabbles located over said first hearth surface being at less pitch than said rabbles located over said second hearth surface.

4. In a roasting furnace, a hearth surface, means for introducing ore upon said surface, supporting means extending over said hearth surface, and a plurality of rabbles supported from said means, said rabbles adjacent said introducing means being wider than said rabbles more remote therefrom.

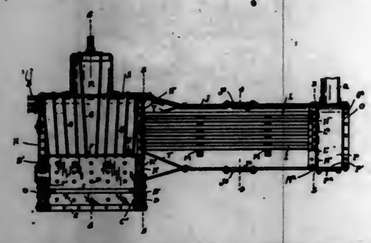
5. In a roasting furnace, a hearth surface, means for introducing ore upon said surface, supporting means extending over said hearth surface, and a plurality of rabbles supported from said means, said rabbles adjacent said introducing means being at less pitch and wider than said rabbles more remote therefrom.

[Claims 6 to 8 not printed in the Gazette.]

961,082. STEAM-BOILER. JAMES BUYERS, Casey, Ill. Filed Feb. 16, 1910. Serial No. 544,247.

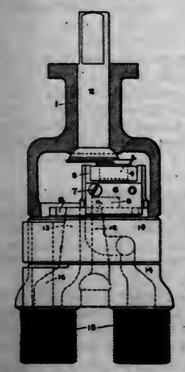
1. In a steam boiler of the kind described, the combination of an arched plate having its sides disposed downwardly and substantially parallel to each other, a frontal plate and a rear plate, a crown sheet riveted to the frontal plate and the rear plate and to the sides of the arched plate there being an opening in the said rear plate below the crown sheet, refractory material to form an interior lining for that portion of the sides and the frontal and rear plates below the crown sheet, tubes having their open ends secured to the rear plate and having their rear ends closed, a shell to form a combustion chamber about the said tubes and being riveted to the rear plate there being an opening in the shell at its rear end for a smoke stack, substantially as described.

2. In a steam boiler of the kind described, the combination of an arched plate having its sides disposed downwardly and substantially parallel to each other, a frontal plate and a rear plate, a crown sheet riveted to the frontal plate and the rear plate and to the sides of the arched plate there being an opening in the said rear plate underneath the crown sheet, refractory material to form an interior lining for that portion of the sides and the frontal



and rear plate below the crown sheet, tubes having their open ends secured to the rear plate and having their rear ends closed, a shell to form a combustion chamber about the said tubes and being riveted to the rear plate there being an opening in the shell at its rear end for a smoke stack, a baffle plate provided with an opening and interposed between the tubes and the opening for the smoke stack.

961,083. ENGINEER'S VALVE. HERBERT W. CHENEY, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Nov. 26, 1909. Serial No. 529,906.



1. In an engineer's valve, a valve, a seat having an upper surface and a side rectangular thereto, means for moving said valve along said seat, and means on said valve and coacting with said side of said seat, for maintaining said valve on said seat.

2. In an engineer's valve, a seat, a valve supported only directly by said seat, means for operating said valve on said seat, guides for maintaining said valve on said seat, said guides being attached to said valve and removable therefrom.

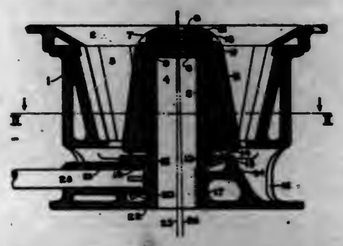
3. In an engineer's valve, a seat, a valve supported only directly by said seat and movable thereon, means for moving said valve, and means on said valve for maintaining same on said seat, said means being attached to said valve and removable therefrom.

4. In an engineer's valve, a seat, a valve supported only directly by said seat and movable thereon, a rotatable stem for operating said valve, and means attached to said valve for maintaining same on said seat, said means being removable from said valve.

5. In an engineer's valve, a seat, a valve supported only directly by said seat, means for operating said valve on said seat, and means attached to said valve and coacting with said seat for maintaining said valve on said seat, said means being removable from said valve.

[Claim 6 not printed in the Gazette.]

961,084. GYRATORY CRUSHER. GEORGE F. DE WEIN, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Apr. 4, 1910. Serial No. 553,185.



1. In a crusher, a shell, a crusher head within said shell, a rotatable eccentric within said head, and a stud within said eccentric, said stud being supported only from underneath said shell, and said eccentric being supported on the upper end of said stud and having a different throw at different points along its length.

2. In a crusher, a shell, a crusher head within said shell, a rotatable eccentric within said head, said eccentric having a different throw at different points along its length, and a stud within said eccentric, said stud being supported only from underneath said shell, said eccentric being supported on the upper end of said stud, and said head being supported on said eccentric.

3. In a crusher, a shell, a crusher head within said shell, a rotatable eccentric within said head, a stud within said eccentric, said eccentric having a different throw at different points along its length, and means for adjusting said head on said eccentric.

4. In a crusher, a shell, a crusher head within said shell, a rotatable eccentric within said head, and a stud within said eccentric, the axes of said stud and said eccentric intersecting at a point beyond said head.

5. In a crusher, a shell, a crusher head within said shell, a rotatable eccentric within said head, and a stud within said eccentric, the axis of said eccentric being inclined to the axis of said stud and the top of said eccentric extending over said stud and having surfaces perpendicular to the axes of said stud and eccentric respectively.

[Claim 6 not printed in the Gazette.]

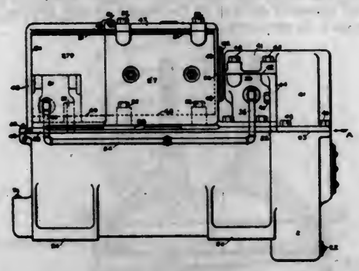
961,085. MOTOR-COMPRESSOR. WILLIAM H. LIEBER, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Nov. 19, 1908. Serial No. 463,401.

1. In a motor compressor, the combination of a crank case and a gear case together forming a pump base, a motor over the crank case, bearings for the motor rotor, a cap and gear case cover coacting with one of said bearings and with said gear case and a second cover coacting with the motor and crank case.

2. In a motor compressor, the combination of a crank case, a motor over the crank case, and a cover plate spaced from the motor and between said motor and the crank case, said cover plate having a port therethrough into said space for venting said crank case.

3. In a motor compressor, the combination of a crank case and a gear case together forming a pump base, a cover plate on the crank case, a motor on the cover plate, a gear case cover and a second cover coacting with said pump base for inclosing working parts.

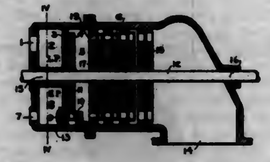
4. In a motor compressor, a motor, an extension on the motor field frame, a second extension on the motor base, and a cover, all coacting to form a casing for the commutator end of the motor.



5. In a motor compressor, a crank case and a gear case together forming a pump base, a motor mounted over said crank case, a crank shaft within said crank case, said motor being geared with said crank shaft, a bearing for said motor said bearing lying over said crank case, and a gear case cover over said gear case said cover extending upwardly from a level at least as low as the bottom of said motor and said cover being separate from said bearing and having an extension over said bearing forming a cap therefor.

[Claims 6 to 13 not printed in the Gazette.]

961,086. LOW-PRESSURE STEAM-TURBINE. JOHANN F. M. PATITZ, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Mar. 1, 1909. Serial No. 480,527.



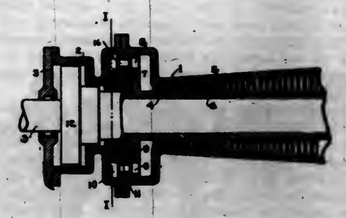
1. In a low pressure turbine, a wheel, means for translating high pressure gas to low pressure gas of high velocity, means for directing said high velocity gas successively to said wheel for fractionally imparting its velocity to said wheel, and means directing other low pressure gas to said wheel.

2. In a low pressure turbine, a wheel, a diverging nozzle for translating high pressure gas to low pressure gas of high velocity, means for directing said high velocity gas successively to said wheel for fractionally imparting its velocity to said wheel, and means directing other low pressure gas to said wheel.

961,087. REACTION-TURBINE. JOHANN F. M. PATITZ, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Mar. 1, 1909. Serial No. 480,528.

1. The combination of a set of reaction blades, a set of action blades delivering to said reaction blades, nozzle means at low loads developing velocity delivering to said action blades, and means for widely opening the nozzle means at high loads to develop only sufficient velocity to cause the fluid to flow through said nozzle means at substantially the same pressure.

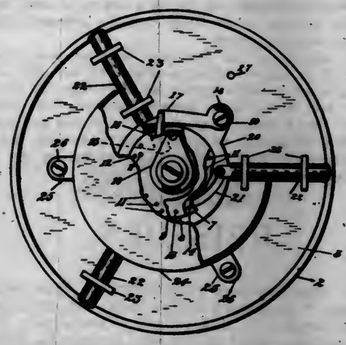
2. The combination of an admission chamber for fluid under initial pressure, means for developing velocity in said fluid at low loads and directing same from said chamber, a wheel on which said fluid is directed, means for adjusting said developing and directing means to vary the quantity of fluid passing therethrough so that at high loads the fluid flows therethrough at substantially the same pressure, and a second wheel for developing work from the pressure remaining during low loads in the fluid after leaving said first wheel.



3. The combination of a shaft, a reaction turbine thereon, an action turbine thereon delivering fluid to said reaction turbine, nozzle means delivering fluid to said action turbine, and means for adjusting the nozzle means in cross-section whereby said nozzle means for high loads develops no substantial velocity and the action wheel becomes idle.

4. The combination of a reaction turbine, an action turbine delivering fluid thereto, nozzle means delivering fluid to said action turbine, and means for varying the capacity of said nozzle means whereby said nozzle means for high loads develops no substantial velocity and the action wheel becomes idle.

961,088. LOCKING DEVICE FOR SAFES, &c. WILLIAM H. REYNOLDS, Toledo, Ohio, assignor to The Mellink Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Apr. 12, 1909. Serial No. 489,349.



1. The combination with a round door of a permutation lock comprising a pawl, a spindle rotatably mounted in said door, radial locking bolts for said door, operatively connecting means for actuating said bolts through said pawl including a mounting member for the pawl concentric with the spindle, and bolt engaging guides holding said door against rotation relatively to the bolts.

2. The combination with a round door, of radial locking bolts for the door, a spindle rotatably mounted in the door, bolt engaging guides holding said door against rotation relatively to the bolts, and means operable to connect the spindle to the bolts including a bolt actuating plate, a pawl, and a mounting member for the pawl movable concentrically with the spindle.

3. The combination with a door, of locking bolts for the door, a spindle rotatably mounted in said door, and means

operable to connect the spindle to the bolts including a cam plate engaging the bolts, tumblers mounted on the spindle and actuable therefrom, and a pawl mounted on said plate and connecting the tumblers to the plate, whereby the spindle may be connected to and disconnected from the bolts.

4. The combination with a door, locking bolts for the door, and bolt engaging guides holding the door against rotation relatively to the bolts, of a spindle rotatably mounted in said door and means for connecting and disconnecting the spindle to the bolts, said means comprising a plate for actuating the bolts, a pawl mounted on said plate, and tumblers connected to the spindle and operable therefrom to move the pawl.

5. The combination with a door, of locking bolts for the door, a spindle rotatably mounted in said door, and means for connecting the spindle to operate the bolts, said means comprising a cam plate rotatable to throw the bolts, tumblers mounted to be gathered up and set by the spindle, and a pawl for connecting the tumblers and plate mounted on one thereof to engage the other and to transmit motion from the spindle to the bolts for their simultaneous movement.

[Claims 6 to 9 not printed in the Gazette.]

961,089. DETACHABLE FASTENER. WILLIAM C. SCHMIDT, Baltimore, Md. Filed Feb. 19, 1910. Serial No. 544,855.



1. A fastener of the character described comprising a base plate having a locking member near one edge and a frame pivoted thereto adjacent the other edge and the free end of said frame being movable over the said locking member, and a pivoted socket carried at the free end of said pivoted frame and having a locking member therein,—said pivoted socket being movable independently of and also with the frame.

2. A fastener of the character described comprising a base plate having a locking member near one edge and a frame pivoted thereto adjacent the other edge and the free end of said frame being movable over the said locking member, and a socket member pivoted to the free end of the frame and having an inclined locking member that extends outwardly from its pivot point to engage the locking member on the base plate.

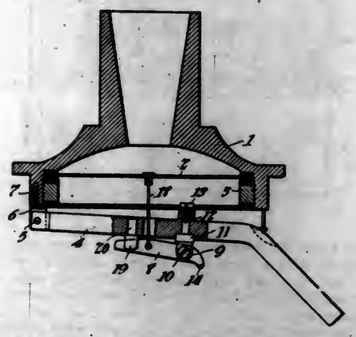
REISSUES.

13,120. PHONOGRAPH-REPRODUCER. PETER WEBER, Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed May 3, 1910. Serial No. 559,428. Original No. 951,496, dated Mar. 8, 1910, Serial No. 456,701.

1. In a phonograph reproducer, a stylus formed with a surface curved upon different radii and adapted to engage a record groove of a maximum width considerably less than .01 inch, and means for supporting the same in such a position that the radius of curvature in a plane parallel to the direction of said groove, is greater than the radius of curvature in a plane at right angles thereto, substantially as set forth.

2. In a phonograph reproducer, a stylus having a rounded engaging surface adapted to track the record groove and a shank, and means for supporting the same in such a position that the shank extends transversely to the tangent to every record groove at the point contacted by the engaging surface of the stylus at any instant, substantially as set forth.

3. In a phonograph reproducer, a stylus having a rounded engaging surface adapted to track the record groove and a shank, and means for supporting the same in such a position that the shank extends substantially at right angles to the tangent to the record groove at the point contacted by the engaging surface of the stylus at any instant, substantially as set forth.



4. In a phonograph reproducer, a stylus having a rounded engaging head adapted to engage the record groove and a shank, and means for supporting the same in such a position that the shank extends transversely to the tangent to every record groove at the point contacted by the engaging surface of the stylus at any instant and is inclined upwardly with respect to the record surface at said point, substantially as set forth.

5. A reproducer stylus having a bearing surface curved in a plane transverse to the record groove on a radius sufficiently small to enable it to engage a record groove of circular cross-section and of a maximum width of not greater than .005 inch and curved on a substantially greater radius in a plane at right angles to said first plane, substantially as set forth.

6. In a phonograph reproducer, a stylus formed with a surface curved upon different radii and adapted to engage the record groove, and means for supporting the same in such a position that the radius of curvature in a plane parallel to the direction of said groove is greater than the radius of curvature in a plane at right angles thereto, a diaphragm, and an amplifying connection between said stylus and diaphragm, substantially as set forth.

7. In a phonograph reproducer, the combination of a stylus comprising a shank having at one end a rounded disk-shaped head at right angles thereto, the periphery of the disk being curved in a direction transverse to its diameter on a curve the radius of which is less than the radius of the disk, and a stylus lever having a boss at right angles to the length thereof provided with a socket for receiving the said shank, substantially as set forth.

8. As an article of manufacture, a stylus lever provided with a socket extending transversely to the plane of the lever and adapted to receive a stylus.

9. As an article of manufacture, a stylus lever having an extension transverse to the plane of said lever and provided with a socket adapted to receive a stylus.

10. As an article of manufacture, a stylus lever having an extension approximately at right angles to the plane thereof provided with a longitudinal socket adapted to receive a stylus.

11. In combination, a diaphragm, a stylus lever provided with means to support a stylus approximately at right angles to the plane thereof, means to support said lever, and means to connect said lever to said diaphragm in such a manner that the movements of the free end of the lever are exaggerated in their transmission to said diaphragm.

12. As an article of manufacture, a stylus lever and a stylus extending therefrom transversely to the plane thereof and having its bearing surface substantially in said plane, substantially as set forth.

DESIGNS.

40,720. BADGE. RALPH C. THOMPSON, Attleboro, Mass. Filed June 10, 1909. Serial No. 501,428. Term of patent 3½ years.



The ornamental design for a badge, as shown.

40,721. LAMP-SHADE. PHILIP J. HANDEL, Meriden, Conn. Filed Mar. 30, 1909. Serial No. 486,828. Term of patent 14 years.



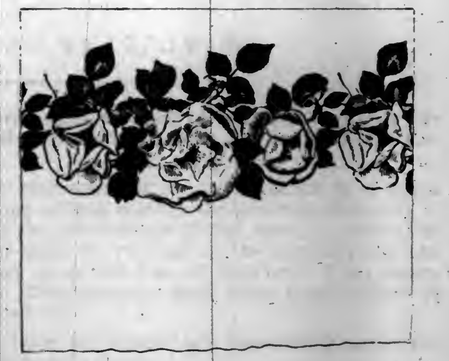
The ornamental design for a lamp shade as shown and described.

40,722. DOLL. FRANK C. A. RICHARDSON, Springfield, Mass. Filed Mar. 25, 1910. Serial No. 551,601. Term of patent 3½ years.



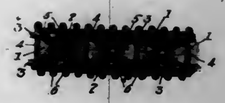
The ornamental design for a doll, as shown.

40,723. WALL-PAPER OR SIMILAR FABRIC. VIRGINIA RUSSELL HASKINS, Philadelphia, Pa. Filed Apr. 29, 1910. Serial No. 558,361. Term of patent 3½ years.



The ornamental design for wall paper or similar fabric as shown.

40,724. GIMP. SPENCER D. WEIGHT, Philadelphia, Pa. Filed Mar. 10, 1910. Serial No. 548,505. Term of patent 7 years.



The ornamental design for gimp as shown and described.

TRADE-MARKS

PUBLISHED JUNE 7, 1910.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 10,406. (CLASS 39. CLOTHING.) NEUSTADTER BROTHERS, San Francisco, Cal. Filed July 15, 1905.



Particular description of goods.—Hosiery.

Ser. No. 36,485. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE RANSOME CONCRETE MACHINERY CO., Dunellen, N. J. Filed Aug. 5, 1908.

RANSOMITE

Particular description of goods.—Preparations for Chemically Treating the Surface of Concrete Preparatory to the Application of a Fresh Concrete Course.

Ser. No. 36,866. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CLEVELAND MACARONI COMPANY, Cleveland, Ohio. Filed Aug. 21, 1908. Used ten years.



Particular description of goods.—Macaronic Paste Foods.

Ser. No. 40,404. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) ENTERPRISE JEWELRY CO., Attleboro, Mass. Filed Feb. 6, 1909.

E.J.Co.

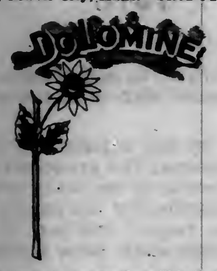
Particular description of goods.—Hat-Pins, Stick-Pins, Beauty-Pins, and Cuff-Links.

Ser. No. 42,721. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) KARL AUGUST LINGNER, Dresden, Germany. Filed May 28, 1909.

Pixosp

Particular description of goods.—Solid Soap, Liquid Soap, and Powdered Soap.

Ser. No. 43,005. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JNO. M. HUTCHISON, Jewell City, Kans. Filed June 14, 1909.



Particular description of goods.—Skin-Lotion.

Ser. No. 44,319. (CLASS 39. CLOTHING.) KALT-ZIMMERS MFG. CO., Milwaukee, Wis. Filed Aug. 23, 1909.



Consisting of a fanciful portrait of a boy.
Particular description of goods.—Leather Shoes.

Ser. No. 44,389. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MINNIA HEBRDT, Newport, Ky. Filed Aug. 28, 1909.



Particular description of goods.—A Composition of Prepared Cereals Used as a Beverage.

Ser. No. 44,695. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN SOLBERGER, Okemah, Okla. Filed Sept. 15, 1909.



The facsimile signature shown being my own.
Particular description of goods.—A Remedy for Tuberculosis.

Ser. No. 45,024. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NEW YORK CHEMICAL COMPANY, Dallas, Tex. Filed Sept. 30, 1909.

NE-SUDE

Particular description of goods.—Medicinal Remedies for Gravel, Ulcerations, Kidney and Bladder Diseases, Dropsy, Liver Diseases, Constipation, Inflammations, Nervousness, Biliousness, and Malaria.

Ser. No. 45,315. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) HEATON-PENINSULAR BUTTON FASTENER CO., Boston, Mass. Filed Oct. 14, 1909. Used ten years.



Particular description of goods.—Staple-Like Metallic Fasteners for Attaching Buttons to Boots and Shoes and for Securing Pieces of Clothing Together.

Ser. No. 45,560. (CLASS 38. PRINTS AND PUBLICATIONS.) THE ARTHUR L. EVANS CO. INCORPORATED, Boston, Mass. Filed Oct. 26, 1909.

THE SHOEMAN

Particular description of goods.—Trade Periodicals.

Ser. No. 45,561. (CLASS 38. PRINTS AND PUBLICATIONS.) THE ARTHUR L. EVANS CO. INCORPORATED, Boston, Mass. Filed Oct. 26, 1909.



Particular description of goods.—Trade Periodicals.

Ser. No. 45,925. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) DEUTSCHE WAFFEN- & FAHRRAD-FABRIKEN H. BURGSMÜLLER & SÖHNE, Kreiensen, Germany. Filed Nov. 16, 1909.

Schointed

Particular description of goods.—Pistols, Revolvers, Rifles, Muskets, Cartridges, and Gunpowder.

Ser. No. 46,072. (CLASS 10. FERTILIZERS.) THE ROGERS & HUBBARD CO., Middletown, Conn. Filed Nov. 23, 1909.

B E

Particular description of goods.—Manurial Compounds.

Ser. No. 46,234. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GEORGE JOHN LOTHIAN NICHOLSON, New York, N. Y. Filed Dec. 1, 1909.

THEROL

Particular description of goods.—Electric Water-Heaters, Cooking-Ovens, and Radiators.

Ser. No. 46,460. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) BELLGRADE LUMBER CO., Memphis, Tenn., and near Belzoni, Miss. Filed Dec. 11, 1909.



Particular description of goods.—Lumber.

Ser. No. 46,592. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JACOB STROHAUER & SONS' CO., Caro, Mich. Filed Dec. 18, 1909. Used ten years.

Peerless

Particular description of goods.—Hoof-Ointment.

Ser. No. 46,594. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JACOB STROHAUER & SONS' CO., Caro, Mich. Filed Dec. 18, 1909.

EXCELSIOR

Particular description of goods.—Liniment.

Ser. No. 46,610. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EVA L. FRYE, Lowell, Mass. Filed Dec. 20, 1909.

CUTI-FLEX

Particular description of goods.—Face-Cream.

Ser. No. 46,654. (CLASS 39. CLOTHING.) MAURICE H. CHASE, New York, N. Y. Filed Dec. 21, 1909.



Consisting of the fanciful representation of a young woman engaged in embroidering with a tambour-frame.
Particular description of goods.—Shirt-Waists.

Ser. No. 46,789. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN H. STEVENS, Newark and South Orange, N. J. Filed Dec. 29, 1909.

FOMA

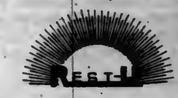
Particular description of goods.—Perfumes, Liquid Dentifrices, Powder Dentifrices, Paste Dentifrices, and Facial Lotion.

Ser. No. 47,232. (CLASS 37. PAPER AND STATIONERY.) W. H. SMITH & SON, London, England. Filed Jan. 18, 1910.



Particular description of goods.—Writing-Paper, Note-Paper, Blotting-Paper, Lead-Pencils, Pens, Rubber Erasers, and Tags.

Ser. No. 47,665. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) L. E. MAYNARD, Montgomery, Ala. Filed Feb. 9, 1910.



Particular description of goods.—Non-Alcoholic Tonic Beverages.

Ser. No. 47,668. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAMES W. PATTERSON, New York, N. Y. Filed Feb. 9, 1910.

ALIBI

Particular description of goods.—Chocolate-Coated Coffee-Beans.

Ser. No. 47,701. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) GEO. L. PAINE CO., North Attleboro, Mass. Filed Feb. 10, 1910.

G. L. P. CO.

Particular description of goods.—Goods Plated with Precious Metal for Personal Adornment, as follows: Hat-Pins, Scarf-Pins, Brooches, Metal Fobs, Link-Buttons, Stock-Pins, Bar-Pins, Crosses, Bracelets, Sash-Pins, Combs, Neck-Chains, La Vallieres, Ladies' Combination Sets, Barrettes, Link Sets, Tie-Clasps, Buckles, Waist-Pin Sets, Collar-Pins, and Link and Stock-Pin Sets.

Ser. No. 47,725. (CLASS 14. METALS AND META CASTINGS AND FORGINGS.) THE DICKELMAN MFG CO., Forest, Ohio. Filed Feb. 10, 1910.

DEX

Particular description of goods.—Galvanized Roofing, Sheet-Metal Shingles, Sheet-Metal Eaves-Troughs, Sheet-Metal Gutters, Sheet-Metal Valleys for Roofing, Sheet-Metal Conductor-Pipes, and Sheet-Metal Fittings Pertaining to Such Pipes.

Ser. No. 47,727. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BEALL BROTHERS, Alton, Ill. Filed Feb. 10, 1910.



The representation of a star being printed in red and the circular background in blue.

Particular description of goods.—Wooden Pick-Handles.

Ser. No. 47,749. (CLASS 39. CLOTHING.) SHULL-DAY CO., Tacoma, Wash. Filed Feb. 11, 1910.



Particular description of goods.—Overalls, Jackets, Jumpers, Khaki Coats, Duck Coats, Mackinaw Coats, Paraffin Coats, Blanket-Coats, Sheep-Lined Coats; Cotton Trousers, Wool Trousers, Duck Trousers, Denim Trousers, Corduroy Trousers, Paraffin Trousers; Work-Shirts, Fancy Shirts, Negligée Shirts and Golf-Shirts, Flannel Shirts, Mackinaw Shirts; Carpenters' Aprons, Teamsters' Aprons, Waiters' Aprons, and Cooks' Aprons.

Ser. No. 47,806. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AMERICAN HOME REMEDY COMPANY, Detroit, Mich. Filed Feb. 14, 1910.



Particular description of goods.—A Medicinal Tablet Used as a Remedy for Blood Diseases.

Ser. No. 47,979. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) CRESCENT BELT FASTENER COMPANY, New York, N. Y. Filed Feb. 23, 1910.

Particular description of goods.—Fasteners, Plates, Clamps, and Rivets Made of Any Metal for Machinery Belting.

Ser. No. 48,005. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JOHN L. BORSCH, Philadelphia, Pa. Filed Feb. 24, 1910.

CHLORAIN

Particular description of goods.—Eyeglass and Spectacle Lenses.

Ser. No. 48,025. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) J. A. & S. W. GRANBERY, Newark, N. J. Filed Feb. 25, 1910.



Particular description of goods.—Gold and Silver Jewelry for Personal Wear.

Ser. No. 48,033. (CLASS 15. OILS AND GREASES.) GENERAL ELECTRIC COMPANY, Schenectady, N. Y. Filed Feb. 26, 1910.

TRANSIL

Particular description of goods.—Insulating-Oil Commonly Used for Filling the Casings of Induction Devices and Electric Switches.

Ser. No. 48,100. (CLASS 12. CONSTRUCTION MATERIALS.) TURNER SUPPLY CO., Mobile, Ala. Filed Mar. 1, 1910.



Particular description of goods.—Ready-to-Lay Asphalt Roofing.

Ser. No. 48,115. (CLASS 37. PAPER AND STATIONERY.) RICHARD E. THIBAUT, INC., New York, N. Y. Filed Mar. 2, 1910. Used ten years.

"PEERLESS"

Particular description of goods.—Wall-Paper.

Ser. No. 48,189. (CLASS 12. CONSTRUCTION MATERIALS.) KNOXVILLE FURNITURE CO., Knoxville, Tenn. Filed Mar. 4, 1910.



No claim being made to the words "Modern Mantels."

Particular description of goods.—Wood Mantels.

Ser. No. 48,190. (CLASS 39. CLOTHING.) S. SHAPINSKY & Co., Louisville, Ky. Filed Mar. 4, 1910.



Particular description of goods.—Hosiery.

Ser. No. 48,245. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) DOVER STAMPING AND MANUFACTURING COMPANY, Cambridge, Mass. Filed Mar. 7, 1910.



Particular description of goods.—Funnels.

Ser. No. 48,299. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE C. STOHN'S SON'S, INC., Jersey City Heights, N. J. Filed Mar. 9, 1910.

STOHNETTE

Particular description of goods.—Shoe-Cloth.

Ser. No. 48,383. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) EDWARD Z. JEFFERSON, Sewickley, Pa. Filed Mar. 14, 1910.

JASEE

Particular description of goods.—Rubber Belting and Hose.

Ser. No. 48,475. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE SECHLER & COMPANY, Cincinnati, Ohio. Filed Mar. 16, 1910.



Particular description of goods.—Carriages, Wagons, Carts, Phaetons and Wagonettes, Buggies, Traps, Victorias, and Surreys.

Ser. No. 48,496. (CLASS 38. PRINTS AND PUBLICATIONS.) U. S. FASHION & SAMPLE BOOK CO., Philadelphia, Pa.; New York, N. Y., and Chicago, Ill. Filed Mar. 17, 1910.

Eureka

Particular description of goods.—Illustrated Sample and Fashion Books.

Ser. No. 48,583. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) THE JOSEPH LAY COMPANY, Ridgeville, Ind. Filed Mar. 21, 1910. Used ten years.



Consists of a yellow band applied to the extreme upper end of the body portion of the broom.

Particular description of goods.—Brooms.

Ser. No. 48,650. (CLASS 17. TOBACCO PRODUCTS.) JOHN E. CONWAY, Philadelphia, Pa. Filed Mar. 25, 1910.



No claim being made to the representation of the cigar.

Particular description of goods.—Cigars.

Ser. No. 48,663. (CLASS 39. CLOTHING.) WERNER & WERNER CLOTHING & FURNISHING GOODS CO., St. Louis, Mo. Filed Mar. 25, 1910.



Particular description of goods.—Hats.

Ser. No. 48,664. (CLASS 39. CLOTHING.) WERNER & WERNER CLOTHING & FURNISHING GOODS CO., St. Louis, Mo. Filed Mar. 25, 1910.



Particular description of goods.—Hats.

Ser. No. 48,667. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRY Y. B. OSGOOD, Chicago, Ill. Filed Mar. 26, 1910.



Particular description of goods.—Compounds for Preventing and Removing Boiler Incrustations.

Ser. No. 48,677. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BURROUGHS TOOL CO., New York, N. Y. Filed Mar. 26, 1910.

"BURRO"

Particular description of goods.—Hacksaw Blades and Frames.

Ser. No. 48,738. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) SELLARS AND PATRICK, South Lawrence, Mass. Filed Mar. 30, 1910.

TRAXO

Particular description of goods.—Syrups for Soda-Water.

Ser. No. 48,778. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPHINE A. MACQUARRIE, Chicago, Ill. Filed Mar. 31, 1910.

LINO-BLEACH

No claim being made to the use of the word "Bleach."

Particular description of goods.—A Preparation for Removing Stains from Fabrics.

Ser. No. 48,862. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FINLAY, DICKS & CO. LTD., New Orleans, La. Filed Apr. 5, 1910.



Consisting of the name La Valliere and a fanciful picture of two persons.

Particular description of goods.—Perfumes and Talcum and Face Powders.

Ser. No. 48,870. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OLIVER D. MILLER, Nevada, Iowa. Filed Apr. 6, 1910.

C·M

Particular description of goods.—A Remedy for Coughs and Colds.

Ser. No. 48,880. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HUGH B. MACK, Joplin, Mo. Filed Apr. 6, 1910.

LI-FO-MASSODS

Particular description of goods.—A Salve.

Ser. No. 48,889. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) GEORGE FROST COMPANY, Boston, Mass. Filed Apr. 7, 1910. Used ten years.

BOSTON GARTER

Particular description of goods.—Garters.

Ser. No. 48,911. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES J. MOUNT, Kansas City, Mo. Filed Apr. 8, 1910.

Tony

Particular description of goods.—Hair and Medicinal Tonics, Laxatives, Salves, Liver-Pills, Worm Remedies, Liniments, Charcoal Lozenges for Diseases of the Stomach, Remedies for Piles, Colic, Catarrh, Headache, Cholera, Coughs, Rheumatism, and Eczema, Remedies for Diseases of the Eyes, Kidneys, and Bladder, and also for Diseases Peculiar to Women and Babies.

Ser. No. 48,917. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HALLER BREAD COMPANY, Pittsburg, Pa. Filed Apr. 8, 1910.



Particular description of goods.—Bread.

Ser. No. 48,944. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC AMERICAN FISHERIES, Chicago, Ill. Filed Apr. 8, 1910.

Blue J

Particular description of goods.—Canned Salmon.

Ser. No. 48,991. (CLASS 38. PRINTS AND PUBLICATIONS.) THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY, Chicago, Ill. Filed Apr. 9, 1910.

The Earth

Particular description of goods.—Periodicals.

Ser. No. 49,000. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. M. NOACK & SONS, Arlington, Minn. Filed Apr. 11, 1910.



Particular description of goods.—Dressed Poultry and Eggs.

Ser. No. 49,058. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE C. A. EDGARTON MFG. CO., Shirley, Mass. Filed Apr. 13, 1910.

Reflex

Particular description of goods.—Suspenders and Garters.

Ser. No. 49,158. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) R. B. HORN COMPANY, Winston Salem, N. C. Filed Apr. 16, 1910.



Particular description of goods.—All Kinds of Candies.

Ser. No. 49,162. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOONVILLE MILLING COMPANY, Boonville, Ind. Filed Apr. 16, 1910.



Particular description of goods.—Wheat-Flour.

Ser. No. 49,163. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. T. FARQUSON COMPANY, Memphis, Tenn. Filed Apr. 16, 1910. Used ten years.

HERRON'S

Particular description of goods.—Wheat-Flour.

Ser. No. 49,172. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. B. MCCRILLIS & SON, INC., Providence, R. I. Filed Apr. 18, 1910.



Particular description of goods.—Wheat-Flour.

Ser. No. 49,173. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. B. MCCRILLIS & SON, INC., Providence, R. I. Filed Apr. 18, 1910.



Particular description of goods.—Wheat-Flour.

Ser. No. 49,174. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. B. MCCRILLIS & SON, INC., Providence, R. I. Filed Apr. 18, 1910.



Particular description of goods.—Wheat-Flour.

Ser. No. 49,175. (CLASS 15. OILS AND GREASES.) INDIAN REFINING COMPANY INC., Augusta, Me. Filed Apr. 18, 1910.

INRECO

Particular description of goods.—Mineral Lubricating-Oil, Benzene, Gasolene, Kerosene, Paraffin-Wax, Road-Oil, and Crude Petroleum.

Ser. No. 49,196. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROCHESTER CANDY WORKS, Rochester, N. Y. Filed Apr. 19, 1910.

DELCARA

Particular description of goods.—Candy.

Ser. No. 49,197. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SCIO CONDENSED MILK CO., Scio, Oreg. Filed Apr. 19, 1910.

COUNTRY CLUB



Particular description of goods.—Condensed Milk.

Ser. No. 49,219. (CLASS 12. CONSTRUCTION MATERIALS.) THOMAS MOULDING COMPANY, Chicago, Ill. Filed Apr. 21, 1910.

TEXVR

Particular description of goods.—Bricks.

Ser. No. 49,221. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) THE GEORGE N. STEBBE COMPANY, Cranston, R. I. Filed Apr. 21, 1910.



Particular description of goods.—Jewelry for Personal Adornment.

Ser. No. 49,233. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) W. A. GAINES & COMPANY, Frankfort, Ky. Filed Apr. 21, 1910.

Hermitage

Consists of the word "Hermitage."

Particular description of goods.—Straight Bourbon and Rye Whisky.

Ser. No. 49,237. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRED F. FREITHOFER, Pittsburg, Pa. Filed Apr. 21, 1910.



Particular description of goods.—A Disinfectant for Exterminating Insects.

Ser. No. 49,249. (CLASS 11. INKS AND INKING MATERIALS.) ADELBERT P. LITTLE, Rochester, N. Y. Filed Apr. 22, 1910.

VELVET

Particular description of goods.—Type-Writer Carbon-Paper.

Ser. No. 49,252. (CLASS 12. CONSTRUCTION MATERIALS.) D. ANDERSON & SON, LIMITED, Belfast, Ireland. Filed Apr. 22, 1910.



Particular description of goods.—Roofing, Sarking, Sheathing, and Lining Felts.

Ser. No. 49,255. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ADAM SCHAEFER, Lebanon, Ill. Filed Apr. 22, 1910.



Particular description of goods.—A Mixture for Promoting the Growth of and for Protecting Seed-Corn from Insects.

Ser. No. 49,257. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WESTERN CONDENSED MILK CO., Newberg, Oreg. Filed Apr. 23, 1910.

MARIGOLD



Particular description of goods.—Condensed Milk.

Ser. No. 49,277. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) H. B. KIRK & CO., Jersey City, N. J. Filed Apr. 25, 1910.

BRIER BUSH

Particular description of goods.—Straight Scotch Malt Whisky.

Ser. No. 49,330. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RICHARD SAMUEL STARKS, Midway, Ky. Filed Apr. 27, 1910. Used ten years.

STARKS'
CORN & BUNION PLASTERS

Particular description of goods.—Corn and Bunion Plasters.

Ser. No. 49,331. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GILPIN, LANGDON & COMPANY INCORPORATED, Baltimore, Md. Filed Apr. 27, 1910.



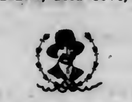
Particular description of goods.—An Insect-Powder.

Ser. No. 49,332. (CLASS 38. PRINTS AND PUBLICATIONS.) THE LAWSON PUBLISHING COMPANY, New York, N. Y. Filed Apr. 27, 1910.

AIRCRAFT

Particular description of goods.—A Monthly Magazine.

Ser. No. 49,335. (CLASS 39. CLOTHING.) ISSACHAR COZZENS, Glen Cove, N. Y. Filed Apr. 27, 1910.



THE WESTON

The picture shown being the portrait of Edward Payson Weston.

Particular description of goods.—Hosiery.

Ser. No. 49,345. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CLARENCE H. BRYAN, Chicago, Ill. Filed Apr. 28, 1910.

HYDRARGOL

Particular description of goods.—Medicinal Agents for the Treatment of Venereal Diseases.

Ser. No. 49,358. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) INDIANA STOVE WORKS, Evansville, Ind. Filed Apr. 28, 1910. Used ten years.

DARLING

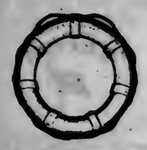
Particular description of goods.—All Kinds of Stoves and Ranges and Parts Thereof.

Ser. No. 49,369. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE CHALMERS MOTOR CO., Detroit, Mich. Filed Apr. 28, 1910.



Particular description of goods.—Automobiles.

Ser. No. 49,384. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CLING-SURFACE COMPANY, Buffalo, N. Y. Filed Apr. 29, 1910.



Particular description of goods.—Preservatives for Transmission Belts and Ropes.

Ser. No. 49,408. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THEODOR SCHISGALL, New York, N. Y. Filed Apr. 30, 1910.



Particular description of goods.—Clocks.

Ser. No. 49,417. (CLASS 2. RECEPTACLES.) ALFRED JOSEPH WARNE-BROWNE, London, England. Filed Apr. 30, 1910.



Particular description of goods.—Packing Boxes and Cases.

Ser. No. 49,490. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MERCK & CO., New York, N. Y. Filed May 4, 1910.

DEKAFA

Particular description of goods.—Coffee Partially Freed from Caffein.

Ser. No. 49,498. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DANKER & MARSTON, Boston, Mass. Filed May 4, 1910.

DM

Particular description of goods.—Starches, Gums, and Softeners for the Treatment of Textile Fabrics.

Ser. No. 49,521. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) MAISON BOULESTIN, Cognac, France. Filed May 5, 1910. Used ten years.



Particular description of goods.—Brandy.

Ser. No. 49,528. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE A. T. NYE AND SON COMPANY, Marietta, Ohio. Filed May 5, 1910.

ADMIRAL

Particular description of goods.—Heating and Cooking Stoves and Ranges.

Ser. No. 49,552. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) EDWARD J. O'BEIRNE & Co., Elgin, Ill. Filed May 6, 1910.

Deflectolier

Particular description of goods.—Electric-Light Reflectors.

Ser. No. 49,586. (CLASS 43. THREAD AND YARN.) GUDEBROD BROS. CO., New York, N. Y. Filed May 7, 1910.

LOXOR

Consists of the word "Loxor."

Particular description of goods.—Silk, Cotton, Mercerized, and Machine Sewing-Threads.

Ser. No. 49,602. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE UNION STOVE WORKS, Peekskill, N. Y. Filed May 9, 1910. Used ten years.

UNION

Particular description of goods.—Stoves and Ranges for Cooking and Heating.

Ser. No. 49,662. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE PRESSED RADIATOR COMPANY OF AMERICA, Pittsburg, Pa. Filed May 12, 1910.

PRESTO

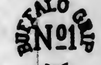
Particular description of goods.—Steam and Hot-Water Boilers and Radiators.

Ser. No. 49,682. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE FARRAND COMPANY, Detroit, Mich. Filed May 13, 1910.

Cecilian

Particular description of goods.—Piano-Players and Player-Pianos.

Ser. No. 49,698. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CLAES A. SVENSSON, Buffalo, N. Y. Filed May 13, 1910. Used ten years.



Particular description of goods.—Linemen's Wire-Grips.

Ser. No. 49,717. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE STANDARD SEWING MACHINE COMPANY, Cleveland, Ohio. Filed May 14, 1910.



Particular description of goods.—Sewing-Machines and Attachments.

TRADE-MARKS

REGISTERED JUNE 7, 1910.

78,295. JEWELRY FOR PERSONAL ADORNMENT. ALLISON MANUFACTURING COMPANY, Attleboro, Mass.
Filed February 25, 1910. Serial No. 48,026. PUBLISHED APRIL 5, 1910.

78,296. PLAYING-CARDS. AMERICAN BANK NOTE COMPANY, New York, N. Y.
Filed February 26, 1910. Serial No. 48,029. PUBLISHED APRIL 5, 1910.

78,297. PLAYING-CARDS. AMERICAN BANK NOTE COMPANY, New York, N. Y.
Filed February 26, 1910. Serial No. 48,031. PUBLISHED APRIL 5, 1910.

78,298. WRITING AND PRINTING PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed July 1, 1907. Serial No. 28,550. PUBLISHED APRIL 5, 1910.

78,299. WRITING AND PRINTING PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed July 1, 1907. Serial No. 28,551. PUBLISHED APRIL 5, 1910.

78,300. DOLLS. BAKER & BENNETT CO., New York, N. Y.
Filed January 21, 1910. Serial No. 47,279. PUBLISHED APRIL 5, 1910.

78,301. RUGS. BIGELOW CARPET COMPANY, Clinton, Lowell, and Boston, Mass.
Filed March 9, 1910. Serial No. 48,286. PUBLISHED APRIL 5, 1910.

78,302. RUGS. BIGELOW CARPET COMPANY, Clinton, Lowell, and Boston, Mass.
Filed March 9, 1910. Serial No. 48,287. PUBLISHED APRIL 5, 1910.

78,303. CARPETS. BIGELOW CARPET COMPANY, Clinton, Lowell, and Boston, Mass.
Filed March 9, 1910. Serial No. 48,289. PUBLISHED APRIL 5, 1910.

78,304. PAPER, ENVELOPS, TABLETS, AND BLANK BOOKS. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 17, 1908. Serial No. 35,558. PUBLISHED APRIL 5, 1910.

78,305. CERTAIN CLOTHING. BONWIT, HARRIS & CO., New York, N. Y.
Filed February 21, 1910. Serial No. 47,935. PUBLISHED APRIL 5, 1910.

78,306. RIVETS. THE BOURNE-FULLER COMPANY, Cleveland, Ohio.
Filed January 14, 1910. Serial No. 47,113. PUBLISHED APRIL 5, 1910.

78,307. RIVETS. THE BOURNE-FULLER COMPANY, Cleveland, Ohio.
Filed January 20, 1910. Serial No. 47,263. PUBLISHED APRIL 5, 1910.

78,308. RUBBER ROOFING. THE BREESE BROTHERS COMPANY, Cincinnati, Ohio.
Filed February 12, 1910. Serial No. 47,799. PUBLISHED APRIL 5, 1910.

78,309. CERTAIN BEVERAGES. THE CANTON CITY BOTTLING COMPANY, Canton, Ohio.
Filed March 10, 1910. Serial No. 48,316. PUBLISHED APRIL 5, 1910.

78,310. CERTAIN HARDWARE. THE CHAMPION SAFETY LOCK COMPANY, Geneva, Ohio.
Filed August 10, 1907. Serial No. 29,333. PUBLISHED MARCH 29, 1910.

78,311. TEA. CLOSSET & DEVERS, Portland, Oreg.
Filed February 23, 1910. Serial No. 47,966. PUBLISHED APRIL 5, 1910.

78,312. INCANDESCENT-ELECTRIC-LIGHT FIXTURES. THE CONNEAUT COMPANY, Conneaut, Ohio.
Filed January 3, 1910. Serial No. 46,866. PUBLISHED APRIL 5, 1910.

78,313. INCANDESCENT-ELECTRIC-LIGHT FIXTURES. THE CONNEAUT COMPANY, Conneaut, Ohio.
Filed January 3, 1910. Serial No. 46,867. PUBLISHED APRIL 5, 1910.

78,314. CORSETS. CORSET H COMPANY, Worcester, Mass.
Filed February 23, 1910. Serial No. 47,961. PUBLISHED APRIL 5, 1910.

78,315. OVERALLS. CROWN OVERALL MANUFACTURING CO., Cincinnati, Ohio.
Filed March 7, 1910. Serial No. 48,248. PUBLISHED APRIL 5, 1910.

78,316. TOILET PREPARATIONS. KATIE E. DUNN, Washington, D. C.
Filed February 4, 1909. Serial No. 40,354. PUBLISHED APRIL 5, 1910.

78,317. LEAD-PENCILS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed March 9, 1910. Serial No. 48,304. PUBLISHED APRIL 5, 1910.

78,318. MEDICINAL VETERINARY REMEDY. ELLEN'S NEW DISCOVERY COMPANY, Newburgh, N. Y.
Filed August 24, 1909. Serial No. 44,328. PUBLISHED APRIL 5, 1910.

78,319. LEAD-PENCILS AND INK-PENCILS. A. W. FABER, Stein, near Nuremberg, and Berlin, Germany.
Filed June 23, 1909. Serial No. 43,218. PUBLISHED APRIL 5, 1910.

78,320. PENCILS. A. W. FABER, Stein, near Nuremberg, and Berlin, Germany.
Filed March 1, 1910. Serial No. 48,102. PUBLISHED APRIL 5, 1910.

78,321. COAT-SWEATERS. HENRY FEUERSTEIN, Malden, Mass.
Filed February 18, 1910. Serial No. 47,901. PUBLISHED APRIL 5, 1910.

78,322. MEN'S OVERCOATS AND COATS. FRANKEL BROS., New York, N. Y.
Filed February 3, 1910. Serial No. 47,561. PUBLISHED APRIL 5, 1910.

78,323. REMEDY FOR CERTAIN DISEASES. HELLEN GARBY, Salt Lake City, Utah.
Filed January 28, 1910. Serial No. 47,443. PUBLISHED APRIL 5, 1910.

78,324. CERTAIN CLOTHING. JULES ANTOINE GUILLAUME, New York, N. Y.
Filed February 24, 1910. Serial No. 48,000. PUBLISHED APRIL 5, 1910.

78,325. CARPET AND RUGS. HARDWICK & MAGEE CO., Philadelphia, Pa.
Filed February 19, 1910. Serial No. 47,915. PUBLISHED APRIL 5, 1910.

78,326. CERTAIN TEXTILES. NEUSS HESSLEIN & Co., New York, N. Y.
Filed February 15, 1910. Serial No. 47,840. PUBLISHED APRIL 5, 1910.

78,327. POTASSIUM GUIACOL SULFONATE. THE HOFFMANN-LA ROCHE CHEMICAL WORKS, New York, N. Y.
Filed December 31, 1909. Serial No. 46,815. PUBLISHED APRIL 5, 1910.

78,328. PHARMACEUTICAL PREPARATIONS. SAMUEL L. HOLMES, Detroit, Mich.
Filed February 7, 1910. Serial No. 47,619. PUBLISHED APRIL 5, 1910.

78,329. BISCUIT. INDEPENDENT BAKING CO., Davenport, Iowa.
Filed February 18, 1910. Serial No. 47,892. PUBLISHED APRIL 5, 1910.

78,330. REMEDIES FOR CERTAIN DISEASES. ISIAH W. JENKINS, Youngstown, Ohio.
Filed February 10, 1910. Serial No. 47,700. PUBLISHED APRIL 5, 1910.

78,331. BICYCLES. MARY ELIZABETH JOHNSON, trustee, Fitchburg, Mass.
Filed May 8, 1909. Serial No. 42,323. PUBLISHED APRIL 5, 1910.

78,332. LADIES' HATS. LIEBSTADTER MILLINERY CO., Kansas City, Mo.
Filed February 19, 1910. Serial No. 47,924. PUBLISHED APRIL 5, 1910.

78,333. CERTAIN CLOTHING. R. H. MACY & Co., New York, N. Y.
Filed May 8, 1909. Serial No. 42,311. PUBLISHED APRIL 5, 1910.

78,334. BAKING-PANS. JOSEPH MATHY, Washington, D. C.
Filed June 9, 1908. Serial No. 35,233. PUBLISHED JULY 21, 1908.

78,335. CANNED TOMATOES. THE MCBRAYER CANNING COMPANY, McBrayer, Ky.
Filed February 23, 1910. Serial No. 47,953. PUBLISHED APRIL 5, 1910.

78,336. RUGS, MATS, AND CARPETS. MCCLEARY, WALLIN & CROUSE, Amsterdam, N. Y.
Filed April 28, 1909. Serial No. 42,082. PUBLISHED APRIL 5, 1910.

78,337. VARNISHES, JAPANS, OIL-STAINS, SHELLACS, AND VARNISH-STAINS. WORDEN MEEKER VARNISH CO., Oakland, Cal.
Filed February 12, 1910. Serial No. 47,795. PUBLISHED APRIL 5, 1910.

78,338. FIRE-HOSE NOZZLES. ANDREW J. MORSE & SON, INC., Boston, Mass.
Filed January 31, 1910. Serial No. 47,486. PUBLISHED APRIL 5, 1910.

78,339. BOXES, CARTONS AND BLANKS THEREFOR. NATIONAL METAL EDGE BOX COMPANY, Philadelphia, Pa.
Filed December 31, 1909. Serial No. 46,827. PUBLISHED MARCH 29, 1910.

78,340. CONFECTIONERY WAFERS, LOZENGES, AND TABLETS. NATIONAL WAFER COMPANY, Boston, Mass.
Filed August 5, 1909. Serial No. 43,975. PUBLISHED APRIL 5, 1910.

78,341. SARDINES. NEW ORLEANS MANUFACTURERS AGENCY CO. LTD., New Orleans, La.
Filed October 23, 1909. Serial No. 45,499. PUBLISHED APRIL 5, 1910.

78,342. RUBBER BOOTS AND SHOES. NORTHERN SHOE CO., Duluth, Minn.
Filed January 20, 1910. Serial No. 47,261. PUBLISHED APRIL 5, 1910.

78,343. CERTAIN EQUIPMENTS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,158. PUBLISHED APRIL 5, 1910.

78,344. CERTAIN LAUNDRY APPLIANCES. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,160. PUBLISHED APRIL 5, 1910.

78,345. SPRING-WIRE. PAGE WOVEN WIRE FENCE CO., Monessen, Pa.
Filed December 30, 1909. Serial No. 46,798. PUBLISHED APRIL 5, 1910.

78,346. SPRING-WIRE. PAGE WOVEN WIRE FENCE CO., Monessen, Pa.
Filed December 30, 1909. Serial No. 46,799. PUBLISHED APRIL 5, 1910.

78,347. SPRING-WIRE. PAGE WOVEN WIRE FENCE CO., Monessen, Pa.
Filed December 30, 1909. Serial No. 46,800. PUBLISHED APRIL 5, 1910.

78,348. MACARONI. THE PFAFFMANN EGG NOODLE CO., Cleveland, Ohio.
Filed August 18, 1909. Serial No. 44,220. PUBLISHED APRIL 5, 1910.

78,349. WHEAT-FLOUR. PHILIP H. POSTEL MILLING COMPANY, Mascoutah, Ill.
Filed November 2, 1908. Serial No. 38,440. PUBLISHED SEPTEMBER 28, 1909.

78,350. CERTAIN MACHINERY. PRATT ENGINEERING & MACHINE CO., Atlanta, Ga.
Filed October 22, 1909. Serial No. 45,475. PUBLISHED APRIL 5, 1910.

78,351. MOVING-PICTURE FILMS. RENÉ PRIEUR, New York, N. Y.
Filed January 31, 1910. Serial No. 47,492. PUBLISHED APRIL 5, 1910.

78,352. CHOLAGOGUE. J. D. RIEDEL AKTIENGESELLSCHAFT, Berlin, Germany, and New York, N. Y.
Filed December 7, 1909. Serial No. 46,315. PUBLISHED APRIL 5, 1910.

78,353. CANDY. THE REINHART & NEWTON COMPANY, Cincinnati, Ohio.
Filed February 23, 1910. Serial No. 47,954. PUBLISHED APRIL 5, 1910.

78,354. PHOTOGRAPHIC INTENSIFIERS AND REDUCERS. JOHN P. REYMOND, Kansas City, Mo.
Filed February 21, 1910. Serial No. 47,934. PUBLISHED APRIL 5, 1910.

78,355. COTTON PIECE GOODS. RICE-STIX DRY GOODS COMPANY, St. Louis, Mo.
Filed February 26, 1910. Serial No. 48,044. PUBLISHED APRIL 5, 1910.

78,356. CANNED CORN. SAMELS BROS. & WHITE CANNING CO., Chaska, Minn.
Filed October 25, 1909. Serial No. 45,508. PUBLISHED APRIL 5, 1910.

78,357. LACES. SHERMAN & SONS CO., New York, N. Y.
Filed February 19, 1910. Serial No. 47,929. PUBLISHED APRIL 5, 1910.

78,358. CERTAIN PRECIOUS-METAL WARE. SHREVE & COMPANY, San Francisco, Cal.
Filed October 13, 1909. Serial No. 45,304. PUBLISHED APRIL 5, 1910.

78,359. EGG EMULSION OF COD-LIVER OIL. SMITH KLINE & FRENCH CO., Philadelphia, Pa.
Filed February 4, 1910. Serial No. 47,590. PUBLISHED APRIL 5, 1910.

78,360. SCREW-DRIVERS. THE STANLEY RULE & LEVEL CO., New Britain, Conn.
Filed February 21, 1910. Serial No. 47,942. PUBLISHED APRIL 5, 1910.

78,361. HOSE-SUPPORTERS. A. STEIN & COMPANY, Chicago, Ill.
Filed March 10, 1910. Serial No. 48,317. PUBLISHED APRIL 5, 1910.

78,362. HOOKS AND EYES FOR GARMENTS. THE STERLING PIN CO., Derby, Conn.
Filed February 8, 1910. Serial No. 47,652. PUBLISHED MARCH 29, 1910.

78,363. CERTAIN FURNISHINGS. SUSQUEHANNA SILK MILLS, New York, N. Y.
Filed August 31, 1909. Serial No. 44,451. PUBLISHED APRIL 5, 1910.

78,364. REMEDY FOR FEMALE COMPLAINTS. BELLE TARSHIS, Brooklyn, N. Y.
Filed March 1, 1910. Serial No. 48,092. PUBLISHED APRIL 5, 1910.

78,365. WIRE ROPE. THE TRENTON IRON COMPANY, Trenton, N. J., and New York, N. Y.
Filed February 4, 1910. Serial No. 47,591. PUBLISHED APRIL 5, 1910.

78,366. WALLETS. EMIL WEISSBROD & SONS, INC., Greenfield, Mass.
Filed March 2, 1910. Serial No. 48,111. PUBLISHED APRIL 5, 1910.

78,367. CALCIUM CARBID. UNION CARBIDE COMPANY, New York, N. Y.
Filed February 23, 1910. Serial No. 47,976. PUBLISHED APRIL 5, 1910.

78,368. BRICKS. WISCONSIN LIME AND CEMENT COMPANY, Chicago, Ill.
Filed January 17, 1910. Serial No. 47,210. PUBLISHED APRIL 5, 1910.

78,369. GUITAR CAPO TASTOS. THE RUDOLPH WURLITZER CO., Cincinnati, Ohio.
Filed September 3, 1908. Serial No. 37,136. PUBLISHED APRIL 5, 1910.

78,370. GUITAR CAPO TASTOS. THE RUDOLPH WURLITZER CO., Cincinnati, Ohio.
Filed September 3, 1908. Serial No. 37,144. PUBLISHED APRIL 5, 1910.

78,371. GUITAR CAPO TASTOS. THE RUDOLPH WURLITZER CO., Cincinnati, Ohio.
Filed September 3, 1908. Serial No. 37,145. PUBLISHED APRIL 5, 1910.

78,372. MUSIC-STANDS. THE RUDOLPH WURLITZER CO., Cincinnati, Ohio.
Filed September 3, 1908. Serial No. 37,159. PUBLISHED APRIL 5, 1910.

78,373. CANNED SALMON. YES BAY CANNING CO., Yes Bay, Alaska, and Portland, Oreg.
Filed November 30, 1908. Serial No. 39,001. PUBLISHED APRIL 5, 1910.

78,374. WRITING AND PRINTING PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed July 1, 1907. Serial No. 28,549. PUBLISHED APRIL 5, 1910.

78,375. POLISHING-CLOTHS. EDWARD J. ARCHINARD, Chicago, Ill.
Filed January 7, 1910. Serial No. 46,975. PUBLISHED APRIL 5, 1910.

78,376. SEED-GRAINS, GRASS-SEEDS, AND GARDEN-SEEDS. CARGILL ELEVATOR CO., Minneapolis, Minn.
Filed February 15, 1910. Serial No. 47,832. PUBLISHED APRIL 5, 1910.

78,377. SEED-GRAINS, GRASS-SEEDS, AND GARDEN-SEEDS. CARGILL ELEVATOR CO., Minneapolis, Minn.
Filed February 15, 1910. Serial No. 47,833. PUBLISHED APRIL 5, 1910.

78,378. PAPER BAGS. CROWN-COLUMBIA PULP AND PAPER CO., San Francisco, Cal.
Filed November 11, 1909. Serial No. 45,833. PUBLISHED APRIL 5, 1910.

78,379. PAPER BAGS. CROWN-COLUMBIA PULP AND PAPER CO., San Francisco, Cal.
Filed November 11, 1909. Serial No. 45,834. PUBLISHED APRIL 5, 1910.

78,380. PAPER BAGS. CROWN-COLUMBIA PULP AND PAPER CO., San Francisco, Cal.
Filed November 11, 1909. Serial No. 45,837. PUBLISHED APRIL 5, 1910.

78,381. STRAIGHT WHISKY. FORT WAYNE DRUG COMPANY, Fort Wayne, Ind.
Filed December 15, 1909. Serial No. 46,523. PUBLISHED APRIL 5, 1910.

78,382. CANNED VEGETABLES. THE HASTINGS CANNING COMPANY, Hastings, Nebr.
Filed October 12, 1909. Serial No. 45,270. PUBLISHED APRIL 5, 1910.

78,383. REVOLVERS. THE HOPKINS & ALLEN ARMS COMPANY, Norwich, Conn.
Filed December 17, 1909. Serial No. 46,571. PUBLISHED APRIL 5, 1910.

78,384. SOAP. LAUTZ BROS. & CO., Buffalo, N. Y.
Filed November 29, 1909. Serial No. 46,169. PUBLISHED MARCH 22, 1910.

78,385. ARTIFICIAL SOLE-LEATHER. W. H. MCELWAIN COMPANY, Boston, Mass.
Filed February 16, 1910. Serial No. 47,847. PUBLISHED APRIL 5, 1910.

78,386. INSTRUMENTS FOR SHARPENING RAZORS. F. ALFRED REICHARDT, Elizabeth, N. J., and New York, N. Y.
Filed October 21, 1909. Serial No. 45,441. PUBLISHED APRIL 5, 1910.

78,387. CHAIRS, DAVENPORTS, AND DAVENPORT-BEDS. THE C. F. STREIT MFG. CO., Cincinnati, Ohio.
Filed June 19, 1908. Serial No. 35,621. PUBLISHED APRIL 5, 1910.

78,388. CANNED SALMON. UNION FISHERMEN'S CO-OP. PACKING CO., Astoria, Oreg.
Filed December 10, 1909. Serial No. 46,437. PUBLISHED MARCH 1, 1910.

78,389. ACCORDIONS. THE RUDOLPH WURLITZER CO., Cincinnati, Ohio.
Filed September 3, 1908. Serial No. 37,155. PUBLISHED APRIL 5, 1910.

LABELS

REGISTERED JUNE 7, 1910.

15,202.—*Title:* "THE ONLY ORIGINAL SWEET PEPPER CATSUP." (For Pepper Catsup.) D. C. Danovr, New Orleans, La. Filed March 17, 1910.

15,203.—*Title:* "RESTORINA." (For Hair-Dye.) Gustav Sattler, New York, N. Y. Filed March 23, 1910.

15,204.—*Title:* "ADAMANT THE PERFECTION OF EXTERIOR PLASTER." (For Exterior Plaster.) The United States Gypsum Company, Jersey City, N. J., and Chicago, Ill. Filed April 13, 1910.

15,205.—*Title:* "ADAMANT THE PERFECTION OF WALL PLASTER." (For Wall-Plaster.) The United States Gypsum Company, Jersey City, N. J., and Chicago, Ill. Filed April 13, 1910.

PRINTS

REGISTERED JUNE 7, 1910.

2,598.—*Title:* "ONE OF THE SIGHTS OF 'THE GREAT WHITE WAY.'" (For Champagne.) The O. J. Guds Co., New York, N. Y. Filed May 25, 1910.

2,599.—*Title:* "BEST FOR BISCUITS ALSO." (For Flour.) Washburn Crosby Company, Minneapolis, Minn. Filed May 28, 1910.

2,600.—*Title:* "WASHBURN-CROSBY MILLS." (For Flour.) Washburn Crosby Company, Minneapolis, Minn. Filed May 28, 1910.

2,601.—*Title:* "HAWK-EYE CAMERAS." (For Cameras.) Blair Camera Division Eastman Kodak Co., Rochester, N. Y. Filed May 14, 1910.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

Ex parte McCullough.

Decided May 14, 1910.

Interference—Request for Interference—Patentability of Claim—Appeal.

Where an applicant copies a claim from a patent for the purpose of interference and the Examiner holds that such claim is not patentable in view of the prior art, *Held* that from this action of the Examiner appeal lies to the Examiners-in-Chief and that the question of the patentability of the claim will not be reviewed on petition.

On petition.

GRAIN-CRUSHER.

Messrs. Barthel & Barthel for the applicant.

Moore, *Commissioner:*

This is a petition that the Examiner be instructed to declare an interference between this application and a certain patent.

The Examiner's reason for refusing to declare the interference is that the claim corresponding to the proposed issue of the interference is under rejection in view of the prior art.

Since the declaration of the interference turns solely upon the patentability of the proposed issue, applicant's only recourse is to appeal from the action of the Examiner in rejecting the claim. Such an appeal lies to the Examiners-in-Chief in the first instance, and the question of patentability cannot be reviewed collaterally upon a petition of this character.

Applicant has mistaken his remedy, and the petition is accordingly dismissed.

Horton v. Leonard.

Decided May 27, 1910.

Interference—Motion to Dissolve—Right to Make the Claims—Affidavits.

Motions to dissolve alleging that the adverse party has no right to make the claims, which allegation is supported by or based upon affidavits, should not be transmitted, nor should affidavits in support of a motion to dissolve be considered by the Primary Examiner at the hearing of the motion.

Appeal on motion.

MOTOR-STARTER.

Messrs. Jones & Addington and *Mr. Edwin B. H. Tower* for Horton.

Messrs. Edwards, Sager & Wooster for Leonard.

Tennant, *Assistant Commissioner:*

This is an appeal by Horton from a decision of the Examiner of Interferences refusing to transmit a motion for dissolution.

The record shows that upon the approval of the preliminary statements an order was issued against Horton to show cause why judgment should not be rendered against him for the reason that the date of conception alleged in his preliminary statement did not overcome the filing date of Leonard, the senior party. In response to this order Horton filed a motion for dissolution, alleging, first:

1. That Leonard is not entitled to make claims corresponding to any of the counts for the reason that each count contains limitations, which, when given a fair interpretation, do not read upon Leonard's application. * * *

2. That Leonard is not entitled to make claims corresponding to any of the counts for the reason that if the obvious and true meaning of said counts is disregarded and said counts are given an interpretation sufficiently broad to read on Leonard's application, then said counts are unpatentable to Leonard in view of the following patents, (citing certain patents.) * * *

3. That there was irregularity in the declaration of this interference. * * *

Under the last ground it is alleged, first, that in order to construe the counts upon Leonard's application it is necessary to read into his specification certain new matter to produce an operative device; second, that Leonard is not entitled to the date of an earlier application involved in this interference, for the reason that the application involved in interference is not a true division of the latter; third, that the counts of the different parties have different meanings upon the structures of the respective parties.

The Examiner of Interferences transmitted the motion as to the first and second grounds, but denied it as to the third, which alleges irregularity in the declaration of the interference, stating that—

the question of new matter is one of merits and cannot therefore be raised under the head of irregularity, which head covers matters of form merely. Whether Leonard's application in interference is a true division of his earlier application, now a patent, raises no question of dissolution.

Subsequently, within the limit of appeal, Horton presented a proposed amendment to his motion for dissolution, alleging, first, that the structure shown and described in Leonard's three applications is not intended to operate in the same manner as the structure covered by the counts; second, that the structure shown and described in Leonard's three applications is inoperative so far as counts of this interference are concerned, in support of which affi-

davits of certain experts were submitted; third, that to construe Leonard's applications to include the invention in issue would involve the introduction of new matter; fourth, that Leonard is estopped from claiming the benefit of his original application by reason of the fact that he did not claim therein the inventions covered by the counts of this interference and, in fact, did not claim or set forth the invention in issue until after learning of the Horton patent.

The Examiner of Interferences refused to transmit this motion, stating that—

motions for dissolution founded upon affidavits are not transmissible. (*Borratt* v. *Swinglehurst*, 144 O. G., 818.)

It is contended in behalf of Horton that the proposed amended motion is merely supplemental to the original motion, which has already been transmitted, and that said amended motion should be transmitted in order that the Examiner may have all necessary facts before him at the hearing upon the motion. It is pointed out that the authority upon which the decision of the Examiner of Interferences is based relates to affidavits presented in support of the allegation that the issue is not patentable and that such affidavits are not for the purpose of contesting the right of an adversary to make the claims, as in the present case.

In support of his contention that affidavits in support of a motion for dissolution of the character herein should be transmitted reliance is placed upon the case of *Dickinson* v. *Thibodeau* v. *Hildreth*, (99 O. G., 2550,) in which the Commissioner said:

In the *ex parte* prosecution of an application affidavits supporting or traversing a rejection on the ground that a device is inoperative may be received under the provisions of Rule 76, and there appears to be no good reason why such affidavits should not be received when the question of operativeness is raised in *inter partes* proceedings.

Attention is also called to the case of *Greenawalt* v. *Mark*, (103 O. G., 1913,) in which the case was remanded to the Primary Examiner for consideration under Rule 126 on the question of the operativeness of Mark's invention and in which the Examiner was authorized to consider certain affidavits, it being held that—

when a case is remanded for consideration under Rule 126, the question is not whether the testimony taken proves one party's case or the other's, but is whether the Office made a mistake in declaring the interference. It is not the interference which is to be decided, but the preliminary question whether there is in fact any proper interference in existence. The testimony already taken may throw light upon the subject and may be used for that purpose; but no reason is seen for confining the consideration to that testimony and ignoring all else which may assist in reaching a proper conclusion. It is the question, not the evidence, which is transmitted for consideration and determination. In passing upon a question so transmitted the Examiner may avail himself of any information which he may obtain throwing light upon the question.

It is urged in behalf of Horton that for the reasons set forth in the decisions above quoted the motion and the affidavits in support of the same should be transmitted to the Primary Examiner. It is further urged that such affidavits should be placed before the Primary Examiner even though they be given no more consideration than would be accredited to a sworn brief.

It is to be noted that the decisions relied upon by the appellant were rendered prior to the date of the decision of the Court of Appeals of the District of Columbia in *Podlesak and Podlesak* v. *McInnerney*, (120 O. G., 2127; 26 App. D. C., 399,) in which it was for the first time stated that the question of the right of one of the parties to an interference to make the claims in issue was ancillary to the question of priority and would be considered on appeal from the final decision in the interference. Prior to that date the holding that one of the parties had no right to make the claims was considered only as an interlocutory matter, which might result merely in a rejection upon the merits of such party's claim, and therefore not as a question of priority, as clearly appears from the decision in the case of *Dickinson* v. *Thibodeau* v. *Hildreth*, *supra*.

Under the present practice, in which the question of the right of one of the parties to an interference to make the claims in issue may be considered as ancillary to and a part of the question of priority, the same reasons do not apply for accepting *ex parte* affidavits in support of the motion alleging that an adverse party has no right to make the claims. This question can be raised under the provisions of Rule 130 at the final hearing of the interference if a motion for dissolution based upon this ground has been denied by the Primary Examiner or upon good showing why a motion for dissolution was not presented within the time allowed by Rule 122. The party may, under proper circumstances, be accorded the right to present testimony to show that his adversary's device is inoperative. (*Browne* v. *Stroud*, 122 O. G., 2688; *Lowry et al.* v. *Spoon*, 124 O. G., 1846; *Clement* v. *Browne* v *Stroud*, 125 O. G., 992; *Pym* v. *Hadaway*, 125 O. G, 1702.)

In view of these facts there is obviously no sufficient reason which would warrant the presentation of either affidavits of fact or expert affidavits before the Examiner upon a motion for dissolution. If the alleged inoperative device or disclosure in the application for patent upon such device is so obvious as to preclude the right of the party to make the claim, there is no need for the presentation of affidavits before the Examiner, who is skilled in that particular art. If, on the other hand, it is necessary to present expert testimony in support of such contention, it should obviously be postponed until the final hearing of the case, when the witness giving such testimony may be subjected to cross-examination. It is true that in some cases which have been recorded motions for dissolution supported by affidavits of this character have been transmitted. In one of such cases, (*Browne* v. *Stroud*, *supra*,) however, the Commissioner said:

Consideration of affidavits upon motion to dissolve is not a right which parties are entitled to demand. The rights of parties upon such motions extend no further than is expressly provided by the rules of practice. * * *

Ex parte affidavits such as have been filed in this case are not the equivalent of testimony, and the Office is not bound to give effect to the same in determining questions of patentability, even though they are received. It is doubtful whether such affidavits serve any useful purpose in contested cases, whereas it is certain that their consideration is a great burden upon the Office and upon the parties when they are filed in such volume as in the present case. It will not be held here that such affidavits should not be accepted and considered when of a proper character and when filed under proper conditions, as neither this petition nor the appeals to which it refers call for decision upon this point. It is pertinent here, however, to state that all proper rules for the exclusion of such affidavits will be applied strictly.

In the later case of *Pym* v. *Hadaway*, *supra*, the moving party sought to take testimony to be used before the Primary Examiner in support of a motion to dissolve on the ground that one of the parties had no right to make the claims in issue. In that case the motion to take testimony for that purpose was denied, it being held that—

if Pym desires to take testimony relative to the matter above referred to, he should proceed in accordance with Rule 130 and the decisions above referred to, (*Lowry and Cowley* v. *Spoon*, 122 O. G., 2687; *Browne* v. *Stroud*, 122 O. G., 2688,) first prosecuting his motion to dissolve before the Primary Examiner and subsequently, if necessary, bringing his motion before the Examiner of Interferences for leave to take testimony.

The decision in the case of *Gibson* v. *Kitsee* (145 O. G., 1249) is to the same effect.

Furthermore, a rejection cannot properly be based upon affidavits, for reasons fully set forth in *ex parte Von Heffner-Alteneck*, (23 O. G., 2223;) *ex parte Van Ausdal*, (91 O. G., 1617;) *McKenzie* v. *Gillespie et al.*, (93 O. G., 2103,) and *Borratt* v. *Swinglehurst*, *supra*.

For the reasons above stated and in view of these rulings I am convinced that motions to dissolve alleging the inoperativeness of an opponent's device, which allegation is supported by or based upon affidavits relating to this question, should not be transmitted, nor should affidavits in support of a motion to dissolve be considered by the Primary Examiner at the hearing of the motion.

It is manifestly unjust that statements of experts who have not been subject to cross-examination by the party against whose construction they testify should be placed before the Primary Examiner upon a motion for dissolution when evidence of this character would not be accepted at the final hearing of the case. The argument that such affidavits are merely in the nature of sworn briefs is believed to be fallacious. If the verification of such arguments confers upon them no greater weight than a statement of counsel not sworn to, there is no reason for the acceptance of such affidavits. If the "sworn briefs" are entitled to greater weight than unverified statements of counsel, it must be because the statements contained therein are, in fact, expert testimony. I am clearly of the opinion that the decision of the Examiner of Interferences refusing to transmit the motion, for the reasons stated by him, is right.

It is urged that the present motion consists merely of an amplification of the original motion. In so far as it appears to be such an amplification no reason appears why the original motion is not sufficient to warrant the presentation of the same arguments as might be presented should the amended motion be transmitted. It is, however, obvious that the amended motion goes much farther than a mere amplification of the original motion, including, as it does, under the allegation that Leonard has no right to make the claims, the points set forth in the previous motion under the allegation of irregularity in the declaration of the interference. No sufficient excuse appears for the failure to properly present such grounds in the original motion. Furthermore, the Examiner of Interferences pointed out in his decision on the original motion good and sufficient reasons why certain of such grounds are immaterial to the determination of the question of priority of invention.

I find no error in the decision of the Examiner of Interferences, and it is accordingly affirmed.

EX PARTE THE AUTO GRAND PIANO CO.

Decided May 11, 1910.

TRADE-MARKS—ANTICIPATION—"PIANO-AUTO," "AUTO-PIANO."

The compound word "Piano-Auto" *Held* not registrable as a trade-mark for piano-players and combination pianos and piano-players in view of the prior registration of the word "Autopiano" for the same merchandise.

ON APPEAL.

TRADE-MARK FOR PIANO-PLAYERS AND COMBINATION PIANOS AND PIANO-PLAYERS.

Messrs. Southgate & Southgate for the applicant.

TENNANT, *Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks refusing to register the compound word "Piano-Auto" as a trade-mark for piano-players and combination pianos and piano-players.

Registration is refused in view of the following trade-marks: "Autopiano," registered by Kohler and Campbell under the act of 1881, No. 42,356, April 12, 1904, for self-playing pianos and piano-players; the same mark, "Autopiano," registered under the act of 1905 by The Autopiano Co., successors to Kohler and Campbell, No. 45,409, August 15, 1905, and "Pianola," registered by The Aeolian Company, No. 45,718, August 29, 1905, for the same merchandise.

The particular mark sought to be registered comprises obviously substantially the reversal of the syllables "auto" and "piano" of the registered mark "Autopiano." The suggestion conveyed by each of these marks is the same, indicating an automatically-operated piano. A mere reversal of syllables or words is clearly insufficient to avoid the likelihood of confusion in the mind of the public.

It is to be observed that the mark sought to be registered is not alleged to have been adopted until June, 1907, which is more than three years after the original date of registration of the word "Autopiano." Under such circumstances the following quotation from the decision of the court of appeals in *Wayne County Preserving Company* v. *Burt Olney Canning Company* (140 O. G., 1003; 32 App. D. C., 279) is particularly applicable to this case:

These marks, when appearing on the canned goods of the respective parties, exposed to the public on the shelves of the retailer, are so similar as to be likely to cause confusion; and where, as in this case, there is no evidence on that subject except the marks themselves, it is the duty of the court to protect the prior registrant and user from the probability of any such occurrence. It is strangely coincident that appellee, engaged in the same business as appellant and located in the adjoining county to where the appellant has used his mark for many years, should select a mark so similar. The property-right in trade-marks is a valuable one, and is entitled to protection from those who would profit by its imitation, and the courts should resolve the doubt, if any exists, in favor of the prior registrant and user in good faith.

In view of the above conclusion it is unneces-

sary to discuss the similarity between the word "Pianola" and the mark sought to be registered.

The decision of the Examiner of Trade-Marks is affirmed.

DECISIONS OF THE U. S. COURTS.

Supreme Court of the United States.

H. C. COOK COMPANY *v.* BEECHER *et al.*

Decided May 16, 1910.

JURISDICTION OF FEDERAL COURTS—FEDERAL QUESTION.

The action by the owner of a judgment recovered against a corporation for infringement of a patent to charge the directors of such corporation with payment of the judgment on the ground that they were joint trespassers with the corporation is not within the jurisdiction of the Federal court as a suit upon a patent nor as an action ancillary to the judgment in the former suit, and unless there is diversity of citizenship such court is without jurisdiction.

Mr. Verenice Munger for the plaintiff in error.

Mr. Talcott H. Russell for the defendants in error.

Mr. Justice HOLMES delivered the opinion of the Court.

This case comes here on the single question of the jurisdiction of the circuit court, certified from the court below. (172 Fed. Rep., 160.) The judge dismissed the complaint of his own motion, and the defendants in error confine themselves to the suggestion that for that reason the judgment should be reversed at the cost of the plaintiff in error, concurring in the argument that the judgment was wrong. As we are of opinion that the judgment was right it will be unnecessary to consider that point.

The suit is brought by a Connecticut corporation against residents of Connecticut. We give an abridgment of the complaint. The plaintiff is the owner of a patent for finger-nail clippers. The defendants during the time of the acts complained of were directors in control of another Connecticut corporation, The Little River Manufacturing Company. This company infringed the patent, and the plaintiff brought a suit in equity against it in the same circuit court, which ended in a decree for an injunction, $12,871 damages and $496.35 costs. The defendants voted to continue the sale of the infringing clipper pending the suit, and also voted and caused to be executed a bond of indemnity from their company to the selling agent against liability for the sale. As directors and as individuals they authorized and brought about such sales, and they directed the defense of the equity suit. In consequence of the expenditures to the foregoing ends their company became and is insolvent, and the defendants knew that that would be the result of a judgment against it, but did the acts alleged for the purpose of increasing the value of their stock in the company, and of receiving the profits and dividends that might be received from the sale.

The plaintiff's argument is that the defendants and their corporation were joint tort-feasors, and that this is a suit against the defendants for their part in infringing its patent, the judgment against their cotrespasser not having been satisfied. It is unnecessary to speculate whether this is an afterthought or whether the complaint was framed with intentional ambiguity, so that if one cause of action failed another might be extracted from the allegations, or what the explanation may be. But the present interpretation is not the natural interpretation of the complaint. The natural interpretation is that which was given to it by the court below; that it is an attempt to make the defendants answerable for the judgment already obtained. There was no other reason for alleging that judgment with such detail, while on the other hand the patent now supposed to be the foundation of the claim is not set forth. The judge was fully warranted in taking this not to be a suit upon a patent. Indeed it would seem from his opinion that one of the grounds of jurisdiction urged before him was that this is an action ancillary to the judgment in the former suit, which of course it is not, any more than *Stillman* v. *Combe*, (197 U. S., 436;) but the argument recognized that the former judgment was the foundation of the present case. Apart from that contention, there can be no question that, as the judge below said, if the directors are under obligations by Connecticut law to pay a judgment against their corporation, that is not a matter that can be litigated between citizens of the same State in the Circuit Court of the United States. The only argument attempted here is that which we have stated and have decided not to be open on the complaint.

Judgment affirmed.

ADJUDICATED PATENTS.

The Wakefield patent, No. 370,108, for a sheet-piling, *Held* valid as against a defense of prior public use. *Wakefield Sheet Piling Co.* v. *City of New Orleans*, (C. C. A.,) 177 Fed. Rep., 214.

The Thalacker patent, No. 502,541, for an electric safety-fuse, construed and *Held* valid and infringed. *General Electric Co.* v. *Chicago Fuse Wire & Mfg. Co.*, (C. C.,) 177 Fed. Rep., 275.

The Berliner patent, No. 534,543, for an improvement in talking-machines, claims 5 and 35 construed and *Held* valid and infringed. *Victor Talking Mach. Co.* v. *Duplex Phonograph Co.*, (C. C.,) 177 Fed. Rep., 248.

The Wagner patents, Nos. 559,345 and 633,672, for type-writing machines, construed and *Held* valid, but not infringed. *Underwood Typewriter Co.* v. *Typewriter Inspection Co.*, (C. C.,) 177 Fed. Rep., 230.

The Thurman patents, No. 634,042, claim 1, and No. 690,084, claims 5 and 6, relating to pneumatic carpet-renovators, construed and *Held* infringed. *General Compressed Air & Vacuum Machinery Co.* v. *American Air Cleaning Co.*, (C. C.,) 177 Fed. Rep., 272.

The Smith patent, No. 665,351, for a heating and ventilating system, claims 5 and 6 construed and *Held* valid and infringed. *Kimball* v. *Waters Metal Const. Co.*, (C. C.,) 177 Fed. Rep., 239.

The Bryan patent, No. 714,140, for a hand-truck, *Held* valid and infringed. *Parker* v. *Stebler*, (C. C. A.,) 177 Fed. Rep., 210.

The Wright patent, No. 821,393, for a flying-machine, construed and *Held* valid and infringed on motion for a preliminary injunction. *Wright Co.* v. *Herring-Curtiss Co.*, (C. C.,) 177 Fed. Rep., 257.

The Wright patent, No. 821,393, for a flying-machine, *Held* valid and infringed on motion for a preliminary injunction. *Wright Co.* v. *Paulhan*, (C. C.,) 177 Fed. Rep., 261.

The Smith patent, No. 868,299, for a heating and ventilating system, construed and *Held* valid and infringed. *Kimball* v. *Waters Metal Const. Co.*, (C. C.,) 177 Fed. Rep., 239.

The Lange patent, No. 893,253, for a process for recovering spirits from internally-charred liquor-casks which have been once used, *Held* not void on its face. *Lange* v. *McGuin*, (C. C. A.,) 177 Fed. Rep., 219.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 1, 1910.

W. N. Richardson & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Sharp & Dohme, of Baltimore, Md., for registration of a trade-mark and a trade-mark registered to W. N. Richardson & Company, of 66 Maiden Lane, New York, N. Y., and the notice of said declaration sent by registered mail to the said W. N. Richardson & Company having been returned undelivered, notice is hereby given to the said W. N. Richardson & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 1, 1910.

Davidson & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the American Coffee Co. of New Orleans, Ltd., of New Orleans, La., for registration of a trade-mark and a trade-mark registered to Davidson & Co., of 1436 Broadway, New York, N. Y., and the notice of said declaration sent by registered mail to the said Davidson & Co. having been returned undelivered, notice is hereby given to the said Davidson & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 21, 1910.

Hamilton & Whittin, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of John Elefrits, of St. Louis, Mo., for registration of a trade-mark and a trade-mark registration to Hamilton & Whittin, of Chicago, Ill., and the notice of such declaration sent by registered mail to the said Hamilton & Whittin at the address given above has been returned by the Post-Office Department as undeliverable.

Notice is therefore hereby given to the said Hamilton & Whittin, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 21, 1910.

Lariat Manufacturing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Fishbeck Soap Company, of San Francisco, Cal., for registration of a trade-mark and trade-mark registrations to the following-named parties: (1) Joseph R. Ford, of New York, N. Y., (2) Joseph Oberndorfer, of Salt Lake City, Utah, (3) Clara C. Day, of St. Louis, Mo., (4) Charles C. Gerhart, of Clarksville, Tenn., and (5) Lariat Manufacturing Company, of Jersey City, N. J., and Boston, Mass.; and the notice of such declaration sent by registered mail to the Lariat Manufacturing Company at Boston, Mass., has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the Lariat Manufacturing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 19, 1910.

The Kenosha Watch Case Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Philadelphia Watch Case Company, of Riverside, N. J.; an application of Hauser, Zivy & Cia., of Mexico City, Mexico, both for registration of certain trade-marks, and a trade-mark registration of The Kenosha Watch Case Company, of Kenosha, Wis., and the notice of such declaration sent by registered mail to The Kenosha Watch Case Company, at the address given above, has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said The Kenosha Watch Case Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 17, 1910.

Albert C. Murphy, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the patent of A. C. Murphy, of East St. Louis, Ill., and an application for patent by Edward C. Meissner, C/o Eagle Generator Co., St. Louis, Mo., and the notice of said declaration sent by registered mail to the said Murphy having been returned undelivered, notice is hereby given to the said Murphy, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 11, 1910.

Radical Remedy Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Barclay & Barclay, of New York, N. Y., for registration of a trade-mark and trade-mark registrations to the following-named parties: (1) Radical Remedy Company, of Hickory, N. C., and (2) Walter M. Carr, of Stoughton, Wis., and the notice of such declaration sent by registered mail to the Radical Remedy Company at the address given above has been returned with the statement that this corporation has been dissolved.

Notice is therefore hereby given to the said Radical Remedy Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

F. A. TENNANT, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 10, 1910.

The St. Paul Roller Mill Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the C. A. Gambrill Mfg. Company, of 100 Commerce street, Baltimore, Md., for registration of a trade-mark and trade-marks registered to the Barber Milling Company, of Minneapolis, Minn., The St. Paul Roller Mill Co., of St. Paul, Minn., and H. Becker & Co., of New York, N. Y., and the notice of said declaration sent by registered mail to The St. Paul Roller Mill Co. having been returned undelivered, notice is hereby given to the said The St. Paul Roller Mill Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 10, 1910.

William Brokhahne, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the Norvell-Shapleigh Hardware Company, of Fourth and Washington avenues, St. Louis, Mo., for registration of a trade-mark and trade-marks registered to Krusius Brothers, 296 Broadway, New York, N. Y., the Challenge Cutlery Corp., of Seymour and Kossuth streets, Bridgeport, Conn., the A. F. Shapleigh Hardware Company, of St. Louis, Mo., and William Brokhahne, of New York, N. Y., and the notice of said declaration sent by registered mail to the said William Brokhahne having been returned undelivered, notice is hereby given to the said William Brokhahne, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 9, 1910.

William Brokhahne, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Norvell-Shapleigh Hardware Company, of Fourth street and Washington avenue, St. Louis, Mo., for registration of a trade-mark and trade-marks registered to Hibbard, Spencer, Bartlett & Company, northeast corner of State and South Water streets, Chicago, Ill., the A. F. Shapleigh Hardware Company, of St. Louis, Mo., and William Brokhahne, New York, N. Y., and the notice of said declaration sent by registered mail to the said William Brokhahne having been returned undelivered, notice is hereby given to the said William Brokhahne, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 23, 1910.

Joseph Parker & Son, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Keith Paper Company, of Turners Falls, Mass., for registration of a trade-mark and a trade-mark registered to Joseph Parker & Son, of 27 Elm street, New Haven, Conn., and the receipt for the registered letter in which notice of this interference was mailed to Parker & Son being signed Joseph Parker & Son Co. instead of Joseph Parker & Son, notice is hereby given to the said Joseph Parker & Son, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 22, 1910.

Julian Alvarez, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Moore & Calvi, of 39 Water street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Julian Alvarez, of 919 Broadway, New York, N. Y., and the notice of said declaration sent by registered mail to the said Julian Alvarez having been returned undelivered, notice is hereby given to the said Julian Alvarez, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 21, 1910.

Strassheim & Jaeger, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Frederick W. Gardner, of 316 East Thirty-fourth street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Strassheim & Jaeger, of 173 and 175 South Water street, Chicago, Ill., and the notice of said declaration sent by registered mail to the said Strassheim & Jaeger having been returned undelivered, notice is hereby given to the said Strassheim & Jaeger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 21, 1910.

Hugo Pfabe, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Sugar Products Company, of Caro, Mich., for registration of a trade-mark and a trade-mark registered to Hugo Pfabe, of Chicago, Ill., and the notice of said declaration sent by registered mail to the said Hugo Pfabe having been returned undelivered, notice is hereby given to the said Hugo Pfabe, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
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OF THE
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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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Designs	9	No. 40,725 to No. 40,733, inclusive.
Trade-Marks	86	No. 78,390 to No. 78,477, inclusive.
Labels	6	No. 15,206 to No. 15,211, inclusive.
Prints	2	No. 2,602 to No. 2,603, inclusive.
Reissues	2	No. 13,121 to No. 13,122, inclusive.
Total	765	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	4	....	Ohio	43	6
Arkansas	2	....	Oklahoma	4	....
California	31	4	Oregon	2	1
Colorado	9	1	Pennsylvania	43	5
Connecticut	14	2	Rhode Island	4	....
Delaware	4	1	South Carolina	....	1
Florida	4	....	South Dakota	3	....
Georgia	4	....	Tennessee	1	2
Idaho	2	....	Texas	11	1
Illinois	58	5	Utah	2	....
Indiana	16	2	Vermont	....	....
Iowa	9	1	Virginia	6	1
Kansas	5	....	Washington	6	....
Kentucky	2	3	West Virginia	6	....
Louisiana	1	....	Wisconsin	11	1
Maine	4	1	Wyoming	....	....
Maryland	6	4			
Massachusetts	43	6	Alaska, District of	....	....
Michigan	20	4	Arizona Territory	....	....
Minnesota	12	1	District of Columbia	10	....
Mississippi	3	....	Hawaii Territory	....	....
Missouri	27	5	New Mexico Ter'ty	....	....
Montana	5	....	Panama	....	....
Nebraska	5	1	Philippine Islands	....	....
Nevada	....	....	Porto Rico	....	....
New Hampshire	6	....	U. S. Army	....	....
New Jersey	40	7	U. S. Navy	....	....
New York	103	21			
North Carolina	2	....	Total to citizens of the United States	598	87
North Dakota	4	....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	....	....	Netherlands	....	....
Austria-Hungary	1	1	Newfoundland	....	....
Belgium	2	....	New South Wales	....	....
Brazil	....	....	New Zealand	1	....
British West Indies	....	....	Norway	....	....
Canada	6	....	Persia	....	....
Cape Colony	....	....	Queensland	....	....
Chile	....	....	Russia	1	....
China	....	....	Scotland	2	1
Costa Rica	....	....	South Australia	....	....
Cuba	....	....	Spain	....	....
Denmark	1	....	Sweden	1	....
England	13	4	Switzerland	....	....
Ecuador	....	....	Tasmania	....	....
France	5	1	Transvaal, South Africa	1	....
Germany	31	....	Victoria	1	....
Haiti	....	....	Western Australia	....	....
Ireland	1	1			
Italy	1	....	Total to citizens of foreign countries	69	8
Japan	....	....			
Mexico	1	....			

Substitute Drawings Inadmissible.

RULE 72. • • • • •

The drawing may be withdrawn only for such corrections as cannot be made by the Office; but a drawing cannot be withdrawn unless a photographic copy has been filed and accepted by the Examiner as a part of the application. Permissible changes in the construction shown in any drawing may be made only within the Office and after an approved photographic copy has been filed. Substitute drawings will not be admitted in any case unless required by the Office.

Complete Applications.

It is hereby ordered that applications shall not be given serial numbers as complete applications and forwarded to the examining divisions for examination (1) when the petition has not been signed by the inventor; (2) when the specification and claims have not been signed by the inventor and the signature attested by two witnesses; (sec. 4888, Rev. Stats.;) (3) when the drawing has not been signed by the inventor or his attorney in fact and the signature attested by two witnesses; (sec. 4889, Rev. Stats.;) and (4) when the oath to the application does not fill the requirements of sections 4887 and 4892, Revised Statutes.

The requirements of section 4896, Revised Statutes, respecting the right of executor or administrator to make application for a patent for the invention of a deceased person must also be observed before the application will be considered as complete and forwarded for examination.

• • • • • • •

This order, so far as applicable, relates to applications for the registration of trade-marks, labels, and prints, which must in all respects comply with the requirements of the statutes.

[Sections 4887, 4892, and 4896, Revised Statutes, above mentioned, were amended by the act of March 3, 1903.]

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business June 7, 1910.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
312	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	May 10	May 11	356
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Apr. 1	Apr. 18	262
178	3. Annealing and Tempering; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	May 3	Apr. 27	177
232	4. Bridges; Conveyors; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	May 2	May 2	383
67	5. Bookbinding; Harvesters; Jewelry; Music.	Apr. 8	Apr. 16	440
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Apr. 19	Apr. 13	391
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Apr. 6	Apr. 30	530
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	May 9	May 16	181
142	9. Air and Gas Pumps; Fire-Extinguishers; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Sewerage; Wind-Wheels.	Mar. 3	May 2	416
235	10. Carriages and Wagons.....	Apr. 11	Mar. 24	638
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Apr. 27	Apr. 14	229
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Apr. 23	Apr. 20	626
320	13. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, Etc.	Apr. 4	May 2	497
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Apr. 1	May 9	333
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Sheets and Fabrics; Liquid Coating Compositions; Paper-Making; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	May 9	May 9	432
109	16. Telegraphy; Telephony.....	Apr. 1	Mar. 9	226
308	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	May 10	May 9	164
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Apr. 4	Apr. 4	206
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Apr. 14	May 11	292
170	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	May 3	May 9	226
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Apr. 16	Apr. 28	360
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Feb. 1	Apr. 1	623
70	23. Accoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 29	May 6	379

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
144	24. Apparel; Apparel Apparatus; Electricity, Medical and Surgical; Sewing-Machines; Surgery.	Apr. 22	Apr. 23	554
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	May 21	May 19	111
106	26. Electric Heating and Rheostats; Electricity, Generation; Motive Power.	Feb. 3	Mar. 14	327
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	May 9	May 9	352
65	28. Electric Railways; Internal-Combustion Engines.	Apr. 12	Apr. 21	452
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	Apr. 9	Apr. 5	309
182	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	May 2	May 2	376
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Mar. 23	Apr. 28	316
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Fine Arts; Packaging Liquids; Refrigeration.	May 11	May 11	345
164	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Mar. 1	Apr. 20	441
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	May 5	May 4	344
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	May 9	May 17	506
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Apr. 2	Apr. 1	637
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Mar. 17	Apr. 2	623
378	38. Artesian and Oil Wells; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working.	Apr. 9	Apr. 2	406
221	39. Baths and Closets; Water Distribution.	Feb. 25	Apr. 18	460
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	May 9	May 11	363
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Mar. 19	Mar. 9	615
279	42. Electric Signaling; Railway Signaling; Signals.	Feb. 14	Apr. 7	476

Oldest new case, Feb. 1; oldest amended, Mar. 9.

Total number of applications awaiting action..... 16,592

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	May 1	May 23	602
	Designs.....	May 10	May 25	141
	Labels and Prints.....	June 3	June 2	14

Trade-Marks.

Extra copies of the trade-mark portion of the GAZETTE, which will be sold separately, may be obtained, single or in quantities for five cents each. Coupons will be taken in payment thereof.

PATENTS

GRANTED JUNE 14, 1910.

961,090. MACHINE FOR DECORATING PASTRY. JOHN ANDERSON, Philadelphia, Pa., assignor of one-third to Frank Hardart and one-third to Joseph V. Horn, Philadelphia, Pa. Filed Feb. 21, 1910. Serial No. 545,040.



1. In a device of the character stated, a container for the material, discharge guides therefor, a follower movable in said container, resiliently controlled means engaging with said follower, a support for the pastry, means for elevating said pastry support and for lowering the engaging means whereby the pastry is brought into position adjacent the discharges of said container and a suitable amount of material is forced therethrough.

2. In a device of the character stated, a container for the material, discharge guides therefor, a follower movable in said container, resiliently controlled means engaging with said follower, a support for the pastry, means for elevating said pastry support and for lowering the engaging means whereby the pastry is brought into position adjacent the discharges of said container, and a suitable amount of material is forced therethrough, and means for controlling the downward movement of said engaging means whereby the amount of the discharge is controlled.

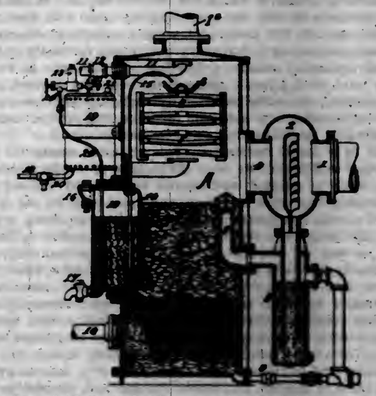
3. In a device of the character stated, a container for the material, a follower movable therein, discharge guides for said container, means for forcing down said follower, a resilient support for said means, a support for the pastry, connections between said pastry support and the support for the forcing means, and means for actuating the parts whereby the pastry support is elevated and the follower is lowered.

4. In a device of the character stated, a container, discharge guides therefor, a support for said container, a follower movably mounted in said container, a shaft for said follower, a spring actuated pawl adapted to engage with said follower shaft, a shaft for supporting said pawl, a spring for normally holding said shaft in its elevated position, a stop for preventing improper downward movement of said shaft, a support for the pastry and a connection between said pastry support and said pawl shaft, whereby when said pastry support is elevated, the pawl shaft is lowered.

5. In a device of the character stated, a container, discharge guides therefor, a follower movably mounted in said container, means for preventing rotation of said follower, means engaging with said follower, a support for said engaging means, a stop for limiting the movement of said engaging means, a spring for normally holding said engaging means in elevated position, a pastry support, a connection between said pastry support and said engaging means, whereby when said pastry support is elevated, the engaging means is lowered, to lower the follower.

[Claims 6 to 12 not printed in the Gazette.]

961,091. WATER PURIFIER AND CLARIFIER. JOHN E. ANGELL, St. Louis, Mo. Filed Apr. 27, 1906, Serial No. 314,068. Renewed Feb. 24, 1908. Serial No. 417,452.



1. In a feed water heater, a tank containing a chemical reagent, said tank being exposed to the heating agent within said heater, and means for conveying the contents of said chemical tank, and discharging same into the incoming water.

2. In a feed water heater, having a tank containing a chemical reagent, said tank being exposed to a heating medium within the heater, and a discharge pipe from said chemical tank, located within the heater and adapted to deliver said reagent into the incoming water.

3. In a feed water heater, having a tank contacted with a heating medium within the heater, a discharge pipe connected with said tank, and means whereby pressure is exerted upon the chemical within the tank to discharge the same therefrom.

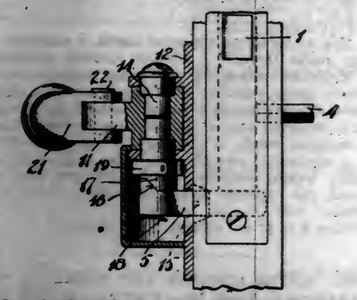
4. In a feed water heater having a tank and a discharge pipe, both exposed to the heating medium within the heater, a source of fluid pressure, and means connecting the source of fluid pressure, and the chemical tank whereby pressure is exerted to discharge the liquid from the last mentioned tank.

5. In a water purifying system, consisting of a feed water heater, a chemical tank attached to said heater exposed to heat, a pipe leading therefrom to deliver a chemical reagent into the incoming water, fluid pressure having

communication with the chemical tank, and means for controlling the admission of fluid pressure to the chemical tank.

[Claims 6 to 13 not printed in the Gazette.]

961,092. PANIC-BOLT. AUGUST ARENS and ERNEST L. TEICH, New Britain, Conn., assignors to P. & F. Corbin, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 4, 1910. Serial No. 536,262.



1. In a latch mechanism, a latch bolt, means attached to said mechanism for operating said latch bolt from the outside of a door to which the latch is applied, and means independent thereof for operating the latch bolt from the inner side of the door, said second mentioned operating means comprising a forwardly projecting vertically tilting latch operating member projecting into the door to which the latch is applied, a cam on the rear end thereof, and a manually operable horizontally swinging lever arranged for coöperation with said cam for imparting motion thereto when said manually operable member is moved.

2. In a latch mechanism, a latch bolt, means for operating said latch bolt from the outside of a door to which the latch is applied, and means independent thereof for operating the latch bolt from the inner side of the door, said second mentioned operating means comprising a forwardly projecting vertically tilting latch operating member, a cam on the rear end thereof, and a manually operable horizontally swinging lever arranged for coöperation with said cam for imparting motion thereto when said manually operable member is moved, said manually operable member including a rotatable hub portion and a cam thereon for engagement with the first mentioned cam.

3. In a latch mechanism, a latch bolt, means for operating said latch bolt from the outside of a door to which the latch is applied, and means independent thereof for operating the latch bolt from the inner side of the door, said second mentioned operating means including a vertically tilting lever, a cam associated therewith, and an oscillating member arranged for coöperation with said cam for imparting motion thereto when oscillated, said oscillating member including a hub portion and a horizontally swinging lever arm and a horizontally extending bar pivotally connected to said lever arm.

4. In a panic door latch, a latch, means for operating the same comprising a vertically tilting lever with connections between said lever and latch, an operating lever arranged to swing in a horizontal plane with means for securing the same to the surface of the door to which the latch is to be applied and a cam connection between the pivoted end of said swinging lever and the rear end of the tilting lever for transmitting the movement of the former to the latter.

5. In a panic door latch, a latch, means for operating the same comprising a vertically tilting lever with connections between said lever and latch, an operating lever arranged to swing in a horizontal plane with means for securing the same to the surface of the door to which the latch is to be applied and a cam connection between the pivoted end of said swinging lever and the rear end of the tilting lever for transmitting the movement of the former to the latter, a vertical pivotal mounting for said operating lever and a horizontal pivotal mounting for said tilting lever, said mountings being connected whereby the parts may be bodily applied to a door.

[Claims 6 and 7 not printed in the Gazette.]

961,093. SECURING DEVICE FOR CHAIRS. JOHN JACOB ASTOR, New York, N. Y. Filed Oct. 14, 1909. Serial No. 522,548.

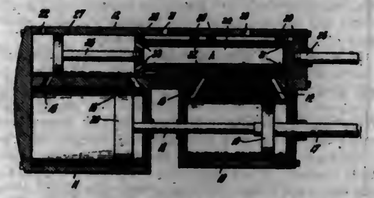


1. A chair having a vacuum cup for engagement with the floor, a vertically-movable rod connected to the upper portion of said cup, and a rack and pinion for raising and lowering said rod and cup.

2. A chair having a seat, a plurality of legs, a plate connecting said legs adjacent the floor and having a central aperture, a vacuum cup mounted within said aperture and adapted to engage with the floor, and means for engagement with the upper portion of said cup for raising and lowering the same, to create a partial vacuum therein.

3. A chair having a seat, a plurality of legs, a plate connecting said legs adjacent the floor and having a central aperture, a vacuum cup mounted within said aperture and adapted to engage with the floor, a rod extending upwardly from said cup and having rack teeth at one side thereof, a pinion in engagement with said teeth, a shaft supporting said pinion, and a handle at the outer end of said pinion for rotating the same.

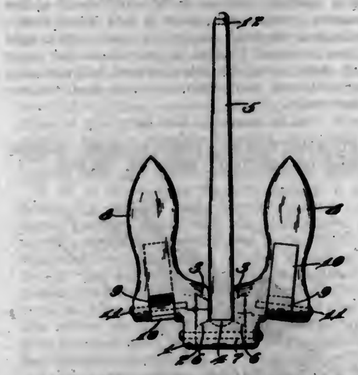
961,094. COMPOUND ENGINE. CHARLES BADEN, Hackensack, N. J. Filed Mar. 27, 1908. Serial No. 423,628.



1. The combination with high and low pressure cylinders and a steam chest, each of said cylinders being provided with a pair of ports leading to said steam chest, of a piston valve provided with a hollow body, a pair of heads located at one end thereof, and a second pair of heads located intermediate the ends of said body, the inner heads of said pairs being spaced apart a distance substantially equivalent to the distance between the ports leading to the high pressure cylinder, said valve having ports leading from between each pair of the heads to the interior thereof, a perforated head formed on said piston valve at the opposite end to the first pair of heads, a stem secured at one end to said perforated head, a head on the other end of said stem, the last mentioned heads being spaced apart a distance substantially equivalent to the distance between the ports leading to the low pressure cylinder, said steam chest being provided with an exhaust port adapted to be closed by the head on the stem, a second exhaust port lying between the perforated head and the intermediate pair of heads, and a steam port lying between the two pairs of heads.

2. The combination with high and low pressure cylinders and a steam chest, each of said cylinders being provided with a pair of ports leading to said steam chest, of a piston valve provided with a hollow body, a pair of heads located at one end thereof, and a second pair of heads located intermediate the ends of said body, the inner heads of said pairs being spaced apart a distance substantially equivalent to the distance between the ports leading to the high pressure cylinder, said valve having ports leading from between each pair of the heads to the interior thereof, a perforated head formed on said piston valve at the opposite end to the first pair of heads, a stem secured at one end to said perforated head, a head on the other end of said stem, the last mentioned heads being spaced apart a distance substantially equivalent to the distance between the ports leading to the low pressure cylinder, said steam chest being provided with an exhaust port adapted to be closed by the head on the stem, a second exhaust port lying between the perforated head and the intermediate pair of heads, and a steam port lying between the two pairs of heads, the ports in said piston valve being all inclined toward the perforated head thereof.

961,095. ANCHOR. WILLIAM M. BATEMAN, Philadelphia, and JAY C. LEWETT, Chester, Pa. Filed Aug. 24, 1909. Serial No. 514,343.



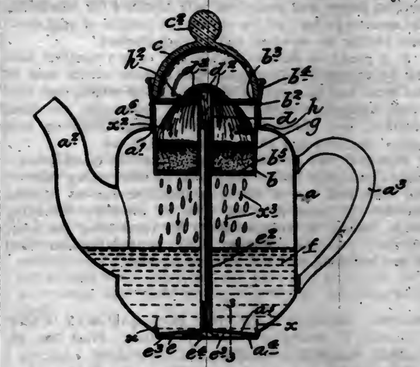
1. An anchor comprising a crown-piece, flukes on the crown piece, and said crown-piece having a recess therein, extending upwardly from the lower end of the crown-piece, and an opening in the top of the crown-piece communicating with said recess, a shank projecting upward through said opening, and rounded enlargements at both sides of the shank, mounted to swing in the recess, a pin across said recess securing the shank therein, and angle floats pivotally supported on said flukes.

2. An anchor comprising a crown piece, flukes on the crown-piece, a shank pivotally secured in the crown-piece, said flukes having recesses in their ends, pins across said recesses, and angle floats pivotally supported on said pins.

3. An anchor comprising a crown-piece, flukes on the crown piece, and said crown piece having a tapering recess therein, extending upward from the lower end of the crown-piece, and said recess forming sockets in the upper portion of the crown-piece, and an opening in the top of the crown-piece communicating with said tapering recess, a shank projecting upward through recess and said opening, conical shaped trunnions at the lower end of the shank, mounted to swing in the sockets in the upper portion of the recess, a pin across said recess securing the shank therein, and angle floats pivotally supported on said flukes.

4. An anchor comprising a crown-piece, integral flukes on the crown-piece, a shank pivotally secured in the crown-piece, said flukes having recesses in their ends, right angle floats pivotally supported in said recesses and oppositely disposed on said flukes.

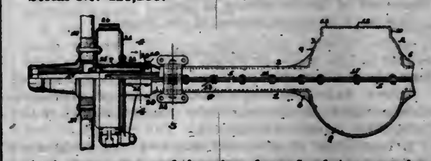
961,096. COFFEE-POT. HENRY E. BIGGINS, Wallingford, Conn. Filed July 31, 1908. Serial No. 446,257.



1. In a coffee pot, a receptacle provided at the top with a neck, a coffee receiver adapted to be inserted into said neck and provided with a removable cap and an openwork bottom and centrally of said bottom with a tube which is secured thereto and which extends upwardly and the top of which is provided with discharge ports or passages, and a feed tube provided at one end with a disk adapted to rest on the bottom of the receptacle, and the other end of which is adapted to enter the tube in the receiver, the bottom of said disk being flat and provided with radially arranged passages which communicate with said tube, the dimension of said passages increasing from the perimeter of said disk inwardly to said tube.

2. A coffee pot, comprising a receptacle, the bottom of which is provided with a circular depression forming therein a corresponding circular depression or chamber, said receptacle being also provided at the top thereof with a neck, and a receiver adapted to be inserted into said neck and provided with an openwork bottom centrally of which is secured an upwardly directed tube having discharge ports or passages at the top thereof, and a tube provided with a disk adapted to rest in the depression or chamber in the bottom of the receptacle, the bottom of said disk being flat and provided with radial passages which communicate with said tube and the dimensions of which increase from the perimeter of said disk inwardly to said tube, and the upper end of said tube being adapted to enter the tube in the receiver when said receiver is inserted into the neck of the receptacle, said receiver being also provided with a removable cap, and the cap and receptacle being provided with vents.

961,097. GEAR CASE AND HOUSING FOR AUTOMOBILES. CHARLES W. BLACKMAN, Cleveland, Ohio, assignor to Parish & Bingham Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Jan. 29, 1908. Serial No. 413,285.



1. A gear case and housing formed of two members having an enlarged hollow gear case portion within each of the same and an opening through one of said hollow portions, and flanges on said members for connecting the same together and the contracted portion of said members having an enlarged end portion thereon.

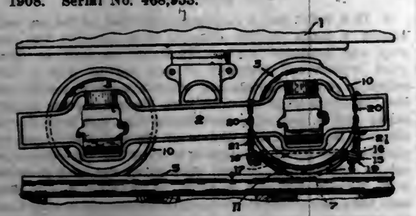
2. A gear case and housing formed of two members having an enlarged hollow gear case portion within each

of the same and one of said hollow portions having an opening through the same provided with an inwardly extending flange, and flanges on said members for connecting the same together and the contracted portion of said members having an enlarged end portion thereon.

3. A gear case and housing formed of two members having an enlarged hollow gear case portion within each of the same and an opening through one of said hollow portions, flanges on said members for connecting the same together, and strengthening web portions between said hollow portions and the contracted portions.

4. A gear case and housing formed of two members having an enlarged hollow gear case portion within each of the same and one of hollow portions having an opening through the same provided with an inwardly extending flange, flanges on said members for connecting the same together, and strengthening web portions between said hollow portions and the contracted portions.

961,098. SKIDDING DEVICE FOR RAILWAY-CARS. SAMUEL P. BRADSHAW, Pittsfield, Mass. Filed Dec. 23, 1908. Serial No. 468,953.



1. An adjustable skidding device to be inserted under the car-body or truck of a car of the class described for the support of the car upon track-rails independently of the car-wheels or axle.

2. An adjustable skidding device to be inserted under the car-body or truck of a car of the class described for the support of the car upon the track-rails independently of the car-wheels or axle and comprising means for preventing downward displacement of the car-wheels or axle.

3. In a device of the class described, the combination of an adjustable frame to be inserted under the car-truck, skidding devices provided on the frame for engaging opposite track-rails, and means for securing the frame in position whereby the device may be moved in a forward or reverse direction with the car riding upon it.

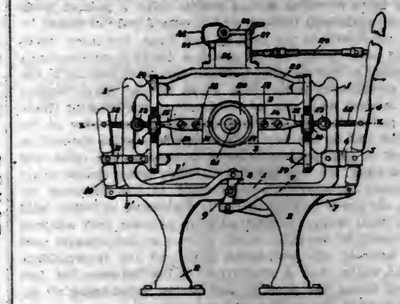
4. In a device of the class described, the combination of a movable frame to be inserted under the car-truck, means for supporting the car independently of the car-wheels or axle, securing means, and skidding devices secured to opposite sides of the frame for engaging separate track-rails.

5. A device of the class described comprising a frame to be inserted under the car-body or truck of the car, skidding devices arranged on the frame for engaging separate track-rails, and means for preventing downward displacement of the car-wheels or axle.

[Claims 6 to 12 not printed in the Gazette.]

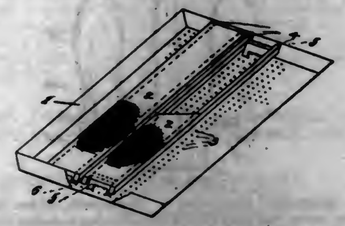
961,099. BRAKE FOR MACHINERY. HERMAN G. BROWN, Salt Lake City, Utah, assignor of one-half to Augustus F. Moody, Salt Lake City, Utah. Filed Oct. 18, 1909. Serial No. 523,351.

1. In a brake of the class described, the combination of a frame, a lever fulcrumed thereto, link straps pivoted to the lower end thereof, the other end of said link straps being pivoted to one end of a rocking lever, other link straps which are pivoted to the upper end of said rocking lever, a short lever likewise fulcrumed to said frame and to the lower end of which lever are pivoted two of said link straps, guides having channels therein secured to said frame, brake-shoes holders adapted to operate in said channels, brake-shoes fitted in said holders and likewise adapted to operate in said channels and means to hold said first mentioned lever, as and for the purposes described.



2. In a machine of the class described, the combination of a frame, a lever pivoted thereto on one end, and means for holding and releasing said lever, a short lever pivoted to the other end of said frame, link straps connecting the lower end of each of said levers to opposite ends of a rocking lever medially fulcrumed to said frame, guides having channels therein and secured to said frame, brake-shoes and holders therefor adapted to move within said channels, one of which holders is pivoted to the upper end of said short lever, the other of said holders being pivoted to said first mentioned lever, as and for the purposes described.

961,100. COOLING-TOWER. EDWIN BURHORN, Hoboken, N. J. Filed Dec. 28, 1907. Serial No. 408,379.



1. In a cooling tower, a shower pan or deck, in combination with a close meshed fabric overlying said pan or deck.

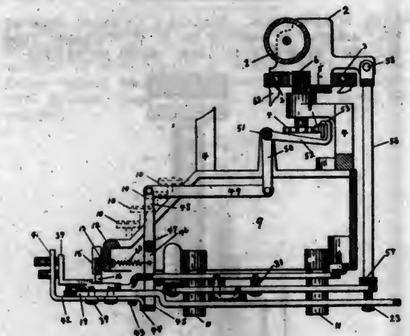
2. In a cooling tower, a frame, close meshed fabric secured to said frame, and means for supporting said frame so as to leave a space between the frame and any adjacent surface.

3. In a cooling tower, a shower pan or deck, in combination with a plurality of frames supporting close meshed fabric, and means for supporting said frames so as to leave a space between the frames and the pan or deck.

4. In a cooling tower, a shower pan or deck, in combination with a plurality of frames covered with close meshed fabric, means for supporting said frames so as to leave a space between said frames and the pan or deck, and a space between the frames.

961,101. TYPE-WRITING MACHINE. LEE S. BURNDEN, New York, N. Y. Filed Sept. 21, 1906. Serial No. 335,616.

1. In a typewriting machine having a keyboard, a framework, and a letter-spacing carriage mounted to travel over the framework, the combination of a denomination-stop mechanism including a carrier mounted upon the framework for movement across the same, and having denomination selecting devices in front of said keyboard, movable devices mounted upon said framework to connect said carriage and said carrier, and a column stop mounted upon the framework to coöperate with said denomination stops.



2. In a typewriting machine having a keyboard, a framework, and a carriage mounted to travel over the framework, the combination of a carrier mounted beneath the framework for movement across the machine, and extending from front to rear of the machine, denomination-selecting devices on said carrier at the keyboard, movement-transmitting connections extending from said carriage to the front and rear ends of said carrier, and including movable members mounted upon said framework, and a column-stop mounted upon the framework to cooperate with said denomination-selecting devices.

3. In a typewriting machine having a keyboard, a framework, and a letter-spacing carriage mounted to travel over the framework, the combination of a carrier movable across the machine near the keyboard and bearing denomination-stop devices, an arm extending down from the carriage and connected with the carrier, a movement-transmitting mechanism having front and rear bearings upon the framework and connected at its rear end to said arm and at its forward end to said carrier, and a column stop mounted upon the framework to coöperate with said denomination-stop devices.

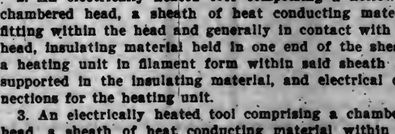
4. In a typewriting machine having a keyboard, a framework, and a letter-spacing carriage mounted to travel over the framework, the combination of a carrier at the keyboard, denomination-selecting devices upon said carrier, mechanism pivoted upon the framework and connected to said carrier to guide the latter across the machine, an arm extending from the carriage to said mechanism, and a column stop.

5. In a typewriting machine having a keyboard, a framework, and a letter-spacing carriage mounted to travel over the framework, the combination of a carrier having denomination selecting devices at said keyboard and extending rearwardly beneath said framework, devices pivoted and mounted upon said framework and connected to the forward and rear portions of said carrier to guide the latter across the machine, means connecting said carrier to said carriage to cause it to move with the latter, and a column stop.

[Claims 6 to 20 not printed in the Gazette.]

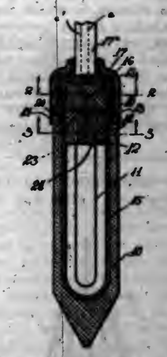
961,102. HAY-PRESS. CHESTER D. CLARK, Maple, Fla. Filed Mar. 14, 1908, Serial No. 421,193. Renewed Nov. 9, 1909. Serial No. 527,073.

1. The combination in a device of the character described having extending base sills, of a baling head, a connecting rod extending from said head, a lever pivotally secured to said base sills, bearing brackets carried by said hay press, a drum shaft within said brackets, a drum on said shaft, a revolubly held bearing disk, a stub shaft eccentrically carried by said disk, a gear on said drum shaft and a strand extending from said drum to said lever, all arranged as set forth.



2. The combination in a device of the character described, of an extending sill, a lever pivoted to said sill, a baling head, a connecting rod extending from said head, and being secured to said lever, a bracket, an eccentrically held stub shaft, a gear carried by said stub shaft, a suitably supported drum shaft, a drum on said shaft, a pliable connection extending from said drum to said lever, a pinion on said drum shaft meshing with said gear, and means to actuate said stub shaft, as and for the purpose set forth.

961,103. ELECTRICALLY-HEATED TOOL. WALTER G. CLARK, New York, N. Y., assignor to Parker-Clark Electric Company, New York, N. Y., a Corporation of New Jersey. Filed June 28, 1909. Serial No. 504,028.



1. In a tool of the kind described, a heating unit in filament form, a sheath of heat conducting material inclosing the heating unit, said sheath being in actual contact for the greater part of its surface with the tool, insulating material closing one end of the sheath and supporting the heating unit, and electric connections for the heating unit.

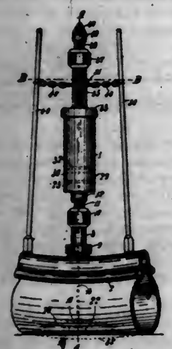
2. An electrically heated tool comprising a hollow or chambered head, a sheath of heat conducting material fitting within the head and generally in contact with the head, insulating material held in one end of the sheath, a heating unit in filament form within said sheath and supported in the insulating material, and electrical connections for the heating unit.

3. An electrically heated tool comprising a chambered head, a sheath of heat conducting material within the head and adapted to lie against the inner wall of the head, a heating unit in filament form extending into the sheath, and electrical connections for the filament.

4. An electrically heated tool, comprising a heating unit in filament form which glows in the air, a chambered structure of heat conducting material inclosing the filament and arranged to receive unobstructed the heat radiated by the filament, and electrical connections for the filament.

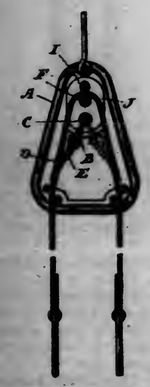
5. In a device of the kind described, a protective sheath which is a good conductor of heat, a heating unit in filament form which glows in the air on the passage of an electric current through it, said filament extending into the sheath, and electrical connections for the filament.

961,104. MEANS FOR AUTOMATICALLY INFLATING PNEUMATIC TIRES. ROGER CONNELL, Westport, New Zealand. Filed July 12, 1906. Serial No. 325,932.



In a tire inflater of the class described, in combination, a tubular union, a flexible piston rod passing slidably through the union, a cap fixed to the top of the piston rod and having perforations, a plunger to which the cap is screwed and having a valve seat, a spring operated valve fitting the valve seat, a hollow seat upon the plunger, nuts screwed upon the neck, cupped leather washers held by the nuts, a pump barrel fitting the cupped leather washers and attached to the union, and a valve casing having a large internal diameter and through which the piston rod passes, and to which the union is attached, as set forth.

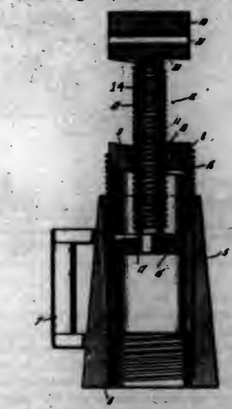
961,105. RAZOR-STROPPING DEVICE. HERBERT E. CRANDALL, Bradford, Pa. Filed Aug. 23, 1909. Serial No. 514,242.



1. In a razor stropping device the combination of opposite end pieces, one of which has an opening therein to permit the insertion and removal of the razor; tie rods connecting the end frames; a rock shaft journaled in the end pieces; a razor clamp journaled in the end pieces; means for imparting the movements of the rock shaft to the razor clamp; a razor strop engaging the rock shaft; a vertically movable tension roller journaled in the frame above the rock shaft; and spring means pressing said roller toward the rock shaft.

2. In a razor stropping device the combination of opposite end pieces, one of which has an opening therein to permit the insertion and removal of the razor; tie rods connecting the end frames; a rock shaft journaled in the end pieces; a razor clamp journaled in the end pieces; gearing between the rock shaft and the razor clamp; a razor strop engaging the rock shaft; a vertically movable tension roller journaled in the frame above the rock shaft; and spring means passing said roller toward the rock shaft.

961,106. SCREW-JACK. MILLARD C. CUMMING, Tigerbay, Fla., assignor of one-half to L. W. Cottman, Tigerbay, Fla. Filed Aug. 16, 1909. Serial No. 513,139.

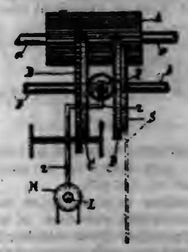


1. In a lifting jack, a plurality of screw threaded telescoping sections, one of which is provided with oppositely disposed clutch surfaces and another of which has similarly formed clutch surfaces to engage with the clutch surfaces of the first-named section to cause the latter to ascend and descend.

2. In a lifting jack, an interiorly threaded tubular base section, a plurality of screw threaded telescoping sections threaded into said base, one of said sections being provided with oppositely disposed clutch surfaces and another of said sections having similarly formed clutch surfaces to engage with the clutch surfaces of the first-named section so as to cause the latter to ascend and descend on the threads of the base section.

3. In a lifting jack, an interiorly threaded tubular base section, a lifting section threaded into said base and provided at its upper end with a head having on its opposite faces a plurality of clutch teeth, a third section threaded into the second section having heads at its opposite ends the inner faces of which are provided with clutch teeth to engage with the teeth on the said second section so as to cause the latter to ascend and descend on the threads of the base section.

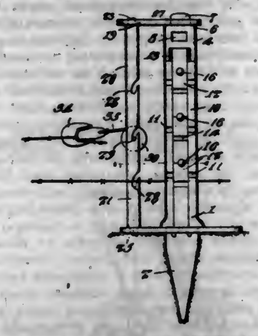
961,107. SIGNALING DEVICE FOR SPEED-INDICATORS. HANS DAHL and MAX MARTIN, Berlin, Germany; said Martin assignor to said Dahl. Filed Oct. 8, 1906. Serial No. 338,069.



A signal apparatus, comprising in combination a gear in frictional connection with a rotating shaft, a signal,

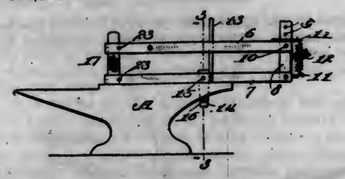
planetary gearing one member of which meshes with said gear and another member of which actuates said signal, means for arresting the motion of a third member of said planetary gearing and means for stopping the rotation of said first gear.

961,108. COMBINED FENCE-POST AND WIRE-STRETCHER. WILLIAM J. DAVIS, Blue Springs, Miss., assignor of three-fourths to William Beley Aldridge, Oliver Benton McNutt, and Francis Lafayette Jones, Blue Springs, Miss. Filed Dec. 20, 1909. Serial No. 534,008.



The combination of a post having at its top a tenon and at its bottom oppositely projecting base portions formed with openings, a stretcher frame comprising an upright member and an upper bar, the latter being formed with an opening to receive the tenon on the post, and the lower end of said upright member being formed with a tenon to enter the opening in either of the projecting base portions of the post whereby the stretcher may be positioned on either side of the post, a wire stretcher means shiftable vertically on the upright member of the stretcher, and a plurality of wire clamping devices on said post.

961,109. ATTACHMENT FOR ANVILS. ABEY H. DE HAAS, Goodnight, Okla. Filed Jan. 28, 1910. Serial No. 540,604.



1. An attachment consisting of a pair of superposed frames, means carried by the lower frame to attach the same upon a support, a bar upstanding from one end of the lower frame, relatively engaging means connecting the rear end of the upper frame to said bar for adjustment toward and from the lower frame, and forming a fulcrum for vertical movement of the former, means to guide the upper frame in its swinging movement, and tools and means to support the same in opposing relation in the opposite ends of said frames.

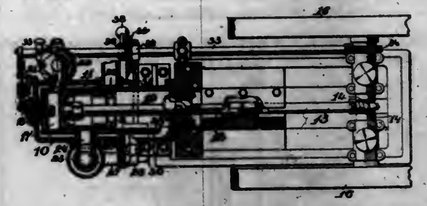
2. An attachment of the character described comprising upper and lower elongated U-shaped frames, a pin locked within the lower frame and depending therefrom, a bar rigidly secured to, and upstanding from one end of said lower frame and having a series of apertures, a member extending through the adjacent end of the upper frame for engagement through a selected opening of said series and forming a fulcrum for said upper bar, said frames having their opposite ends squared and having transverse openings adjacent thereto for the reception of pins, tools having side recesses to be engaged by said pins, and a guide bar projecting vertically from said lower frame through said upper frame to guide the latter in its vertical swinging movement.

961,110. CIGAR-CLIPPER. LLOYD B. DENNIS, Norwalk, Ohio. Filed Oct. 11, 1909. Serial No. 522,047.



A cigar clipper comprising a strip of flat spring metal bent upon itself forming two arms, said arms having substantially parallel portions merging into compound curves, said compound curves abruptly merging into straight end portions, said end portions being parallel to each other and inclined with relation to the parallel portion of said arms, said end portions overlapping each other and having a bevel-edged aperture in the overlapping ends for receiving and clipping the tip of a cigar.

961,111. TWO-CYCLE GAS-ENGINE. OSCAR H. DORER, Irvington, N. J. Filed Oct. 26, 1908. Serial No. 459,439.



1. An internal combustion engine comprising a cylinder having a piston therein, the cylinder having a pair of exhausts arranged so as to be at the ends of the explosion chamber when the piston is at the limit of its power stroke, the piston uncovering one exhaust at the limit of its power stroke, means for opening the second exhaust while the first exhaust is uncovered, an air inlet to the cylinder substantially equi-distant between the exhausts whereby the admission of air through the inlet cleans the explosion chamber from its two ends, and means for supplying fuel to the air inlet after a portion of the air has passed the fuel supplying means.

2. An internal combustion engine comprising a cylinder having a piston therein, the cylinder having a pair of exhausts, the exhausts being arranged at opposite ends of the explosion chamber when the piston is at the limit of its power stroke, a compression chamber formed in the end of the cylinder on the opposite side of the piston from the explosion chamber, means for conducting compressed air from the compression chamber to a point in the explosion chamber substantially equi-distant between the exhausts whereby compressed air is admitted to the explosion chamber to force the exhaust from both ends, and means for supplying fuel to the air inlet after a portion of the air has passed the fuel supplying means.

3. An internal combustion engine comprising a cylinder having a piston therein, a cylinder having a pair of exhausts, one exhaust being opened by the piston, means for opening the second exhaust when the piston is at the limit of its power stroke, a compression chamber formed by the piston and the cylinder at the back of the piston, means for conducting compressed air from the compression chamber to the explosion chamber, means for admitting fuel gas to the conducting means, and means for governing the quantity of gas admitted to the air conducting means.

4. An internal combustion engine comprising a cylinder having a piston therein, the cylinder having a pair of exhausts arranged to be at the opposite ends of the explo-

sion chamber when the piston is at the limit of its power stroke, one of the exhausts being opened by the piston, means for opening the second exhaust when the piston is at the limit of its power stroke, a compression chamber in the cylinder behind the piston, means for conducting air from the compression chamber to the explosion chamber after the exhausts have been opened, a fuel pump, means for conducting fuel gas from the pump to the air conducting means, and means for governing the quantity of gas admitted to the air conducting means.

5. An internal combustion engine comprising a cylinder, a piston in the cylinder, the cylinder having a pair of exhausts, one exhaust being arranged at one end of the cylinder, and the other exhaust being intermediate of the ends of the cylinder, the second exhaust being uncovered by the piston at the limit of its power stroke, mechanically operated means for opening the exhaust at the end of the cylinder when the piston is at the end of its power stroke, the cylinder at the back of the piston forming a compression chamber, means for conducting air from the compression chamber to a point in the explosion chamber substantially equi-distant between the exhausts, a fuel pump, and means for admitting fuel gas to the air conducting means after a portion of the pure air from the compression chamber has passed from the compression chamber to the explosion chamber.

[Claims 6 and 7 not printed in the Gazette.]

961,112. HOSE-SUPPORTER. PETER R. DUCHEMIN, Colfax, Wash. Filed Sept. 7, 1909. Serial No. 516,842.



1. A hose supporter formed of a single length of wire having a portion thereof bent to produce a suspension loop, and another portion thereof bent to form relatively stationary and movable gripping loops, one of which terminates in a longitudinally disposed locking arm, the intermediate portion of the wire being bent to form a plurality of longitudinal strands.

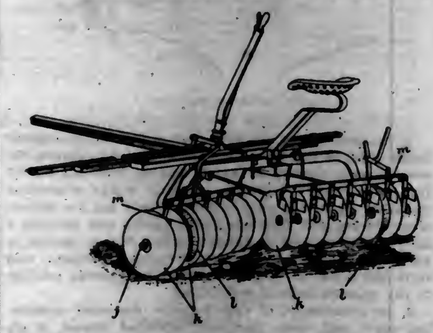
2. A garment supporter formed of a single length of wire having a portion thereof bent to produce a suspension loop, and another portion thereof bent to form relatively stationary and movable gripping loops, one of which terminates in a longitudinally disposed locking arm, that portion of the wire between the suspension loops and gripping loops being twisted to form a plurality of longitudinal strands, one end of the wire being bent to produce a terminal hook for engagement with one of said strands.

3. A garment supporter formed of a single length of wire, one end of which is bent to form a hook and thence extended longitudinally and bent laterally in opposite directions to produce a transversely disposed suspension loop, the wire being thence extended longitudinally to form a relatively stationary gripping loop, the wire after the loop is formed being extended upwardly in engagement with the hook and thence twisted around the adjacent strands of wire and extended downwardly and bent around the adjacent strands to produce a coil, the wire after the coil is formed being bent to produce a relatively movable clamping loop terminating in a longitudinally disposed locking arm.

4. A garment supporter formed of a single length of wire, one end of which is bent to form a hook, the wire being thence bent upwardly to produce a shank and extended laterally in opposite directions to form a transversely disposed suspension loop, the wire after the suspension loop is formed being extended downwardly in engagement with the first mentioned shank to form a second shank and thence continued downwardly and bent to produce a relatively stationary gripping loop, the wire after the gripping loop is formed being extended upwardly over the hook and thence around the adjacent strand of wire and upwardly and around said shanks, the wire being thence extended downwardly and coiled around the strands of wire forming the stationary loop, being thence bent to produce a relatively movable spring loop terminating in a longitudinally disposed locking arm, the free end of the wire forming the locking arm being bent laterally to form a locking lip adapted to embrace said shanks.

5. A hose supporter formed of a single length of wire, one end of which is provided with a terminal hook, the wire being thence extended upwardly to form a longitudinally disposed shank, and thence extended laterally in opposite directions to form a suspension loop, the wire after the loop is formed being extended downwardly in engagement with the first mentioned shank to form a second shank and thence continued downwardly and bent to produce a relatively stationary gripping loop, the wire after the gripping loop is formed being extended upwardly and over the hook and thence passed around the adjacent strand of wire and continued upwardly and passed around said shanks to form a binding loop, the wire being thence extended downwardly in a spiral path and bent to form a coil or convolution embracing the strands constituting the stationary gripping loop, the wire after the coil is formed being bent to produce a relatively movable gripping loop terminating in a longitudinally disposed locking arm, the wire forming the free end of the locking arm being bent upon itself to produce a horizontally disposed locking lip adapted to embrace both shanks for locking the gripping loops in engagement with a garment.

961,113. DISK HARROW. ROBERT EWING, London, Ontario, Canada. Filed Sept. 21, 1908. Serial No. 454,042.



1. The hereinbefore described device comprising two adjustable gangs of disk harrows each gang consisting of a set of concavo convex disk plates mounted to revolve unitedly upon an axle and a shoe mounted to revolve with the disk plates and limit the cutting depth of the gang.

2. The hereinbefore described device comprising two adjustable gangs of disk harrows each gang consisting of a set of concavo convex plates mounted to revolve unitedly upon an axle, and a shoe mounted to revolve with the disk plates and limit the cutting depth of the gang, the shoe being secured to the convex side of one of the disk plates of the gang.

3. The hereinbefore described device comprising two adjustable disk gangs, each disk gang consisting of a set of concavo convex disk plates mounted to revolve upon an axle, and a shoe radially adjustable with relation to the axle to limit the cutting depth of the disk gang.

4. The hereinbefore described device comprising two adjustable disk gangs, each disk gang consisting of a set of concavo convex disk plates mounted to revolve upon an axle, and a shoe for limiting the cutting depth of each disk gang consisting of a set of separable segmental sections, and means for securing the sections to the convex side of one of the disk plates so as to be radially adjustable with relation thereto.

961,114. LIGHT-PROJECTING DEVICE. CARL R. FORSTER, Evanston, Ill. Filed Mar. 25, 1904. Serial No. 200,027.



1. In a device for the purpose described, the combination of a light projecting device, a screen arranged in front of said light projecting device, a source of light arranged between said screen and projecting device, and a spherically formed color medium extending about the source of light and interposed between the said source of light and projecting device and adjustable about the said source of light.

2. In a device for the purpose described, the combination of a light projecting device, a screen arranged in front of said light projecting device, a lamp interposed between said screen and projecting device and a rotative globe inclosing said lamp.

3. In a device for the purpose described, the combination of a light projecting device having a concave, roughened surface, a screen opposed to said surface, a source of light interposed between said screen and surface, and a multicolor medium interposed between said source of light and surface.

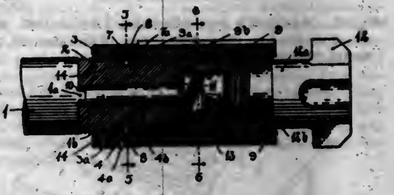
4. The combination with a lamp, of a reflector in rear thereof, having a broken or roughened reflecting surface, a rotative multicolored globe interposed between the lamp and reflector, and a screen inclosing the lamp on the side thereof remote from the reflector.

5. The combination with a lamp, of a reflector in rear thereof, having a broken or roughened reflecting surface, a rotative, multicolored globe interposed between the lamp and reflector, a screen inclosing the lamp on the side thereof remote from the reflector and a movable dimmer interposed between said screen and globe.

[Claims 6 to 12 not printed in the Gazette.]

961,115. EXPANSION-REAMER. WILLIAM P. FOUTS and FRANK B. HORNE, Cleveland, Ohio. Filed May 15, 1909. Serial No. 496,191.

1. A reamer comprising a tapered grooved stock, cutters slidable in the grooves and having outwardly-extending fingers at their rear ends, and a ring-nut screwed on said stock and having an internal annular groove receiving said fingers and also having an external recess, and a detachable piece fitting said recess and having an inwardly extending projection at its front end, substantially as described.



2. A combined reamer and drill comprising a stock with an axial bore extending through the same, and counterbored and threaded at the front end, a drill the shank of which is threaded and screwed into said counterbore and the head of which abuts the front end of the stock, means within said bore to fasten the stock to a shank at the rear end thereof, and cutters on the periphery of said stock.

961,116. WATER-METER. ERNEST E. GAMON, Newark, N. J. Filed May 18, 1909. Serial No. 496,852.



1. A water meter comprising an inclosing case provided with inlet and outlet spuds, an annular boss integral with one of said spuds, a disk chamber provided with inlet and outlet ports located within and circumferentially free from said inclosing case and separated therefrom to form a receiving chamber and a central tubular stem depending from said disk chamber and registering with said annular boss.

2. A water meter comprising an inclosing case provided with inlet and outlet spuds, an annular boss integral with said outlet spud and a disk chamber provided with a central depending stem having a continuous tubular channel therein registering with said boss, said disk chamber provided with inlet and outlet ports and being axially located within said inclosing case and separated therefrom to form a receiving chamber, said inlet port communicating with said receiving chamber and said outlet port communicating with said outlet spud by the annular boss and continuous tubular channel through said central stem.

3. A water meter comprising an inclosing case, and a disk chamber circumferentially free from said inclosing case, provided with a central depending stem having a tubular boss extending therefrom said stem and boss having a continuous tubular channel therein and serving as means for securing said chamber in axial alinement to said inclosing case.

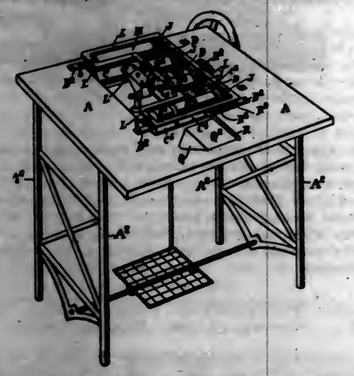
4. A water meter comprising an inclosing case, and a disk chamber circumferentially free from said inclosing case, provided with a central depending stem, a threaded boss integral with and extending therefrom said boss and stem provided with a continuous tubular channel therethrough.

5. A water meter comprising an inclosing case provided with an interiorly located integral annular boss on the bottom thereof, and a disk chamber circumferentially free from said inclosing case, provided with a central

depending stem having a continuous tubular channel therein said stem coacting with said annular boss for securing said disk chamber to said inclosing case.

[Claims 6 to 8 not printed in the Gazette.]

961,117. MACHINE FOR SEALING ENVELOPS. HUGH STANLEY GIBSON, Cincinnati, Ohio. Filed Mar. 16, 1907. Serial No. 362,667.



1. In a machine for sealing envelops, the combination with feed rolls arranged in series to carry the envelop through the machine, and a roll for applying moisture to the gummed flap, of means for compressing the open mouth of the envelop to permit the flap to be properly deflected, and a deflecting device to fold the flap over the compression device.

2. In a machine for sealing envelops, the combination with feed rolls arranged in series to carry the envelop through the machine, and a roll for applying moisture to the gummed flap, of means for compressing the open mouth of the envelop to permit the flap to be properly deflected, and a deflecting device to fold the flap over the compression device, with an adjustable guide arranged parallel with the feed of the rolls and against which the envelop is fed through the machine.

3. In a machine for sealing envelops, the combination with the feed rolls to carry the envelop through the machine, and a roll for applying moisture to the flap, of a rod for compressing the open mouth of the envelop to permit the flap to be properly deflected and a deflecting device to fold the flap over the compression rod.

4. In a machine for sealing envelops, the combination with the feed rolls to carry the envelop through the machine, and a roll for applying moisture to the flap, of a rod for compressing the open mouth of the envelop to permit the flap to be properly deflected, with a presser foot to hold the body of the envelop against the action of the compression rod and a deflecting device to fold the flap over the compression rod.

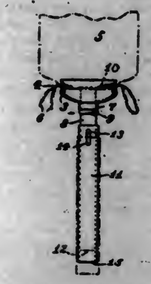
5. In a machine for sealing envelops, the combination with feed rolls to carry the envelop through the machine, of a spring presser foot and a compression rod between which the envelop is passed to compress the same at the mouth to permit the proper deflection of the envelop flap, with a horizontally disposed deflecting plate with vertically curved guide, and a bottom plate curved upwardly both laterally and longitudinally to complete the folding of the flap.

[Claims 6 and 7 not printed in the Gazette.]

961,118. CIGARETTE-FORMER. MOTT G. GILLETTE, New York, N. Y., assignor to David S. De Jongh, New York, N. Y. Filed Nov. 4, 1909. Serial No. 526,167.

1. A cigarette former comprising a cup reciprocally mounted on a tube, and a second tube reciprocally mounted on said tube.

2. A cigarette former comprising a cup provided with an annular groove, and with a central, bottom opening surrounded by a collar, or sleeve; a tube slidably mounted within said collar, or sleeve, and a second tube slidably mounted on said tube.



3. A cigarette former comprising a cup having an annular flange in the sides thereof, and an inclined bottom with a central opening surrounded by a collar, a tube slidably mounted in said collar and having a flanged end adapted to prevent the withdrawal of the tube, said tube having a rib below said collar whereby the reciprocal movement of the cup on the tube is limited, and a second tube reciprocally mounted on said tube.

4. A cigarette former comprising a cup provided with means to secure a receptacle thereto, a tube on which said cup is reciprocally mounted, and a second tube reciprocally mounted on said tube, and means to limit the motion of the second tube on the first.

5. In a cigarette former, a feeding tube, and a second tube reciprocally mounted thereon, and means to limit the reciprocal motion of the second tube on the first whereby the ends will coincide at the innermost, or uppermost limit of reciprocation.

[Claims 6 to 10 not printed in the Gazette.]

961,119. ART OF FORMING BLANKS. WILLIAM JOSEPH GOING, Amsterdam, N. Y. Filed Oct. 10, 1906, Serial No. 338,235. Renewed Nov. 10, 1909. Serial No. 527,305.



1. The process of forming a blank for a button, which consists in breaking a shell into fragments and then removing material from the periphery of one of said fragments until the same is reduced to the proper size.

2. The process of forming blanks for buttons, which consists in breaking a shell into fragments and then forming said fragments into blanks of the desired contour.

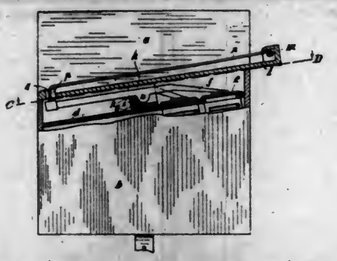
3. The process of forming a blank for a button, which consists in breaking a shell into a plurality of fragments, and then peripherally grinding one of the fragments until the same is reduced to the proper size.

4. The process of forming a blank for a button, which consists in removing material from one of the lateral surfaces of a fragment of a shell and then removing material from the periphery thereof until said fragment is reduced to a blank of the proper size.

5. The process of forming a blank for a button, which consists in removing material from the opposite faces of a fragment of a shell to flatten the same, and then removing material from the periphery of the fragment to reduce the same to a blank of the proper contour.

[Claims 6 and 7 not printed in the Gazette.]

961,120. ACCORDION. KARL GOLIASCH, Berlin, Germany. Filed Sept. 14, 1908. Serial No. 453,028.



1. In a musical instrument of the class described, a bellows, a reed chamber having reeds, valves controlling the air supply from the bellows to said reeds, valve levers coöperating with said valves, means for actuating said valve-levers, comprising a series of parallel and comparatively narrow pivoted rods connected to said valve levers, said rods being spaced to afford interatices therebetween through which the space beneath said rods may be viewed.

2. In a musical instrument of the class described, a bellows, a reed chamber having reeds, valves controlling the air supply from said bellows to said reeds, levers for opening said valves and wire rods pivoted at one end and deflected at the other end into the reed chamber and connected to said levers, said rods being arranged in a parallel series, as and for the purpose set forth.

3. In a musical instrument of the class described, a bellows, a reed chamber having reeds, valves controlling the air supply from the bellows to said reeds, a series of levers coöperating with said valves, a series of spaced, parallel and comparatively narrow rods connected to said levers, and a chart placed beneath said rods to guide the player in depressing them, the chart beneath said rods being clearly visible through the interstices between the same.

961,121. PROCESS FOR CLEANING IRON ORES. EDWARD F. GOLTRA, St. Louis, Mo. Filed Oct. 18, 1909. Serial No. 523,091.

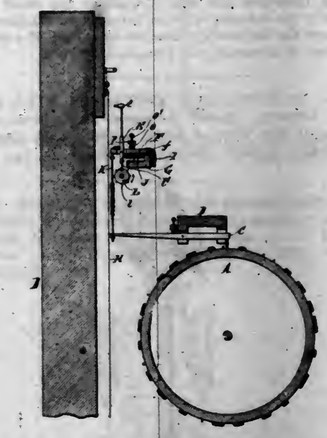


1. The herein described process of treating iron ores containing moist clay, etc., as a gangue, which consists in heating the ore and its gangue at a temperature and for a period sufficient to drive off the moisture and to render the gangue easily separable from the ore, tumbling the ore and its gangue during the heating operation to shake loose the gangue from the ore, and to pulverize the gangue by said tumbling action, and subjecting the ore and its gangue during the heating and tumbling operation to a strong gaseous blast which sweeps, cleans and removes the gangue from the ore.

2. The herein described process of treating iron ores containing moist clay, etc., as a gangue, which consists in subjecting the ore and gangue to a strong hot gaseous blast at a temperature and for a period sufficient to drive off the moisture and render the gangue easily separable from the ore, tumbling the ore and its gangue during the heating operation to shake loose the gangue from the ore and to pulverize the gangue by said tumbling action, and sweeping, cleaning, and removing the gangue from the ore by said blast during the heating and tumbling operation, the blast being applied to strike the drier portions of the ore and gangue before the damper portions to gradually heat the gangue.

3. The herein described process of treating iron ores containing moist clay, etc., as a gangue, which consists in passing the ore and its gangue along a runway, passing a strong hot gaseous blast along said runway from the discharge to the admission end so as to gradually heat and dry the gangue and render it easily separable from the ore, tumbling the ore and its gangue in their passage along the runway to shake loose the gangue from the ore, and to pulverize the gangue by said tumbling action, and sweeping, cleaning, and removing the gangue from the ore by said blast.

961,122. AUTOMATIC PIANO. LORENZO GRISERI, New York, N. Y. Filed Apr. 9, 1906. Serial No. 310,775.



1. In a musical instrument of the character described, the combination of a support, a vertically-swinging carrying lever pivoted to said support, a hammer-lever pivoted to and carried by said carrying lever and extending below the same, a vibrating device arranged below the hammer-lever and having projections adapted to swing said lever in one direction, a spring connected with the hammer-lever to swing the same in the opposite direction, a second spring connecting the carrying lever with said support and tending to hold its rear end in its elevated position, and means connected with the rear portion of said carrying lever for depressing the same, substantially as set forth.

2. In a musical instrument of the character described, the combination of a support, a vertically-swinging carrying lever pivoted to said support, a hammer-lever pivoted to and carried by said carrying lever, a vibrating device arranged below the hammer-lever and having projections adapted to swing said lever in one direction, a spring arranged on the lower side of the carrying lever and connected with the hammer-lever to move the same in the other direction, a second spring connected with said carrying lever and normally holding its rear end in its elevated position, and means connected with the rear portion of the carrying lever for depressing the same, substantially as set forth.

961,123. ART OF COLORING AND FIREPROOFING WOOD. WILLIAM AUGUSTUS HALL, New York, N. Y., assignor to American Mahogany Company, a Corporation of Maine. Filed June 6, 1908. Serial No. 437,078.

1. The herein described fireproofed and artificially colored wood, having harmonious coloring and fireproofing materials distributed and diffused together throughout the wood, and the "grain" of the wood highly developed.

2. The herein described fireproofed and artificially colored wood, having an artificial coloring material and a mixture of acid and alkaline fireproofing salts distributed and diffused throughout the same, and the "grain" of the wood highly developed.

3. The herein described fireproofed and artificially colored wood, having an artificial coloring material and a mixture of sulfate of ammonia and phosphate of soda distributed and diffused throughout the same, and the "grain" of the wood highly developed.

4. The herein described process for coloring and fireproofing wood, consisting in infusing coloring and fireproofing materials into and throughout the wood simultaneously, the coloring solution being of an alkaline character, and the fireproofing material consisting of a mixture of acid and alkaline salts.

5. The herein described process for coloring and fireproofing wood, consisting in infusing coloring and fireproofing materials into and throughout the wood simultaneously, the coloring solution being of an alkaline character, and the fireproofing material consisting of a mixture of sulfate of ammonia and phosphate of soda.

961,124. ELECTROLYTIC APPARATUS WITH ANNULAR ANODE. HENRY HATFIELD, Jena, Germany, assignor to The Firm of Schott & Gen., Jena, Germany. Filed Mar. 7, 1910. Serial No. 547,816.



1. In an electrolytic apparatus an upper anode vessel, a lower cathode vessel, these two communicating with each other by the mouth of the cathode vessel projecting through the bottom of the anode vessel into the central part of the latter, a liquid anode surrounding the mouth, a solid cathode, an electrolyte contained in both vessels, and an annular wall surrounding the mouth and extending from within the anode up to the top of the anode vessel.

2. In an electrolytic electricity meter an anode vessel, a cathode vessel projecting with its upper mouth centrally through the bottom of the anode vessel and forming with its lower part a measuring tube, a liquid anode around the mouth, a solid cathode above the measuring tube, an electrolyte contained in both vessels, and an annular wall extending around the mouth from the anode into the top part of the anode vessel.

961,125. ELECTROLYTIC APPARATUS. HENRY HATFIELD, Jena, Germany, assignor to The Firm of Schott & Gen., Jena, Germany. Filed Mar. 7, 1910. Serial No. 547,817.

1. In an electrolytic apparatus an anode vessel, a plurality of liquid anodes, a conductive connection between the anodes, a cathode vessel inferior to the anode vessel and communicating with it at a place superior to the anodes, a solid cathode and an electrolyte contained in both vessels.

2. In an electrolytic apparatus an upper anode vessel, a lower cathode vessel, these two communicating with each other by the mouth of the cathode vessel projecting through the bottom of the anode vessel into the central part of the latter, a row of liquid anodes arranged to surround the mouth, a conductive connection between the anodes, a solid cathode and an electrolyte contained in vessels.



3. In an electrolytic electricity meter an anode vessel, a cathode vessel projecting with its upper mouth centrally through the bottom of the anode vessel and forming with its lower part a measuring tube, a row of liquid anodes arranged to surround the mouth, a conductive connection between the anodes, a solid cathode arranged above the measuring tube and an electrolyte contained in both vessels.

961,126. RUBBER HEEL. ALTON B. HEIMBACH, Duluth, Minn. Filed Mar. 19, 1910. Serial No. 550,456.



In a rubber heel, the combination with a shoe and a horizontally disposed plate having a body in the nature of an open frame attached to said shoe, said frame plate having forwardly and rearwardly extending base lips, of a rubber heel body having an upper side socket adapted to receive the frame plate and having lateral recesses at the base of said socket.

961,127. BRUSH FOR HAIR-TINTING. EDITH GERRY HELM, New York, N. Y. Filed Mar. 30, 1909. Serial No. 486,771.



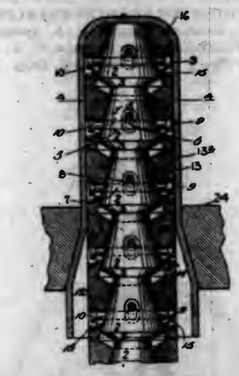
1. A brush provided with a back consisting of a strip of metal bent into a yoke, rows of bristles adapted to be held in said yoke, and an absorbent material in between the bristles.

2. In a brush of the character described in combination, a back consisting of a strip of metal provided on each end with spring clips, rows of bristles held by said back and an absorbent material between the bristles.

961,128. MACHINE FOR FORMING SEAMLESS TUBES. CAMPBELL P. HIGGINS, Roselle, N. J., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Sept. 21, 1906. Serial No. 335,668.

1. A mandrel comprising a continuous core made up of a series of conical sections, segmental sections having faces corresponding to the core sections and surrounding

the core, said segmental sections having openings therein in alinement with openings in the core, and pins passing through said openings whereby the segmental sections are movably connected to the core.



2. A mandrel comprising a continuous core made up of a series of conical sections, segmental sections surrounding said core and having tapered faces coöperating with the tapered surfaces of the core, and cross pins connecting the segmental sections to the core whereby said core and sections are movable relatively to each other in the direction of the taper.

3. A mandrel comprising a continuous core made up of a series of cones arranged longitudinally and successively, surrounding segmental sections having faces inclined to coöperate with the contacting surfaces of the core and forming a substantially continuous outer bearing surface, said cones forming a complete circumferential support for said segments, and means for connecting said sections with the core to permit of longitudinal and lateral movement of the segmental sections.

4. A mandrel comprising a core formed of a plurality of longitudinally arranged tapered members, segmental sections laterally movable relatively thereto mounted upon and surrounding said members and arranged end to end, the front end of said sections being cut away to receive the enlarged end of an adjacent core member.

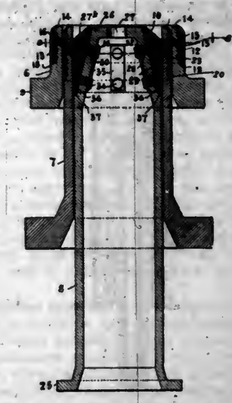
5. A mandrel comprising a continuous core formed of a plurality of cones, the end of one cone abutting the end of an adjacent cone, segmental sections surrounding each of said cones and forming a substantially continuous outer bearing surface, and means for connecting said sections to the adjacent core members to permit the longitudinal movement of the core and the lateral movement of the segmental sections, said cones forming a complete circumferential support for said segments.

[Claims 6 to 10 not printed in the Gazette.]

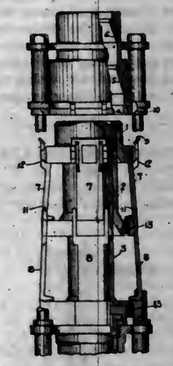
961,129. MACHINE FOR FORMING SEAMLESS TUBES. CAMPBELL P. HIGGINS, Roselle, N. J., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Sept. 21, 1906. Serial No. 335,669.

1. In an apparatus of the class described, the combination of a series of female dies differing in diameter and provided with inclined faces, a series of hollow mandrel or male dies each comprising a main body portion, segmental sections formed with a serrated face adapted to cooperate with the correspondingly serrated face on the body portion, and means for movably connecting the serrated faces to the main body portion.

2. The combination with a series of female dies of decreasing diameter acting consecutively to form a seamless tube progressively from a blank of metal, of a series of annular male dies of corresponding decreasing diameter, each provided with surrounding segmental sections adapted to move longitudinally and to expand and retract on the die, and capable of telescoping one within another.



961,130. MACHINE FOR FORMING SEAMLESS TUBES. CAMPBELL P. HIGGINS, Roselle, N. J., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Sept. 21, 1906. Serial No. 335,670.



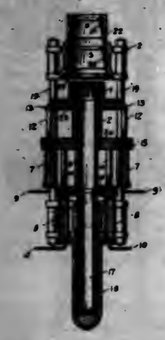
1. A press of the class described, comprising a series of female dies, a series of telescoping male dies, means for successively advancing said male dies and for supporting them during their operation, and means for automatically releasing a given supporting means after the operation of the corresponding male die.

2. A press of the class described, comprising a series of female dies, a series of male dies, supporting pawls between said male dies and supporting each male die during its operation, and trips on the female die case and on the male dies for tripping said pawls after the operation of the corresponding male die.

961,131. MACHINE FOR FORMING SEAMLESS TUBES. CAMPBELL P. HIGGINS, Roselle, N. J., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Sept. 21, 1906. Serial No. 335,671.

1. A multiple drawing machine comprising a series of female dies, a series of telescoping male dies, and independently controlled pressure cylinders for supporting the male dies.

2. A multiple drawing machine comprising a series of female dies graduated in size and having conical interior faces, a series of telescoping male dies graduated in size to correspond to the female dies, and independently controlled pressure cylinders for supporting the male dies.



3. A multiple drawing machine comprising a series of female dies, a series of telescoping male dies, independently controlled pressure cylinders for supporting the male dies below the female dies, and means for successively advancing the male dies and for withdrawing the support of a given male die after its drawing operation by releasing the pressure in the supporting cylinders.

4. A multiple drawing machine comprising a series of female dies, a series of telescoping male dies, independently controlled pressure cylinders for supporting the male dies below the female dies and with the upper ends of said male dies normally in the same plane, and means for successively advancing the male dies and for withdrawing the support of a given male die after its drawing operation.

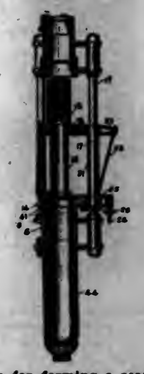
961,132. MACHINE FOR FORMING SEAMLESS TUBES. CAMPBELL P. HIGGINS, Roselle, N. J., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Sept. 21, 1906. Serial No. 335,672.



1. In a machine for reducing the diameter of a tubular blank and increasing its length, the combination with a movable male die of a stationary cage surrounding said die over which a tube blank is placed for centering the blank prior to its reduction by the female die.

2. The combination with a frame, an apertured head member, of a die holder located therebeneath, a female die carried thereby, means for shifting the holder into and out of alinement with the aperture in the head member, a male die, and means for moving the latter longitudinally through the female die.

961,133. MACHINE FOR FORMING SEAMLESS TUBES. CAMPBELL P. HIGGINS, Roselle, N. J., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Sept. 21, 1906. Serial No. 335,673.



1. In a machine for forming a seamless tube progressively from a blank of metal in a continuous pass through a plurality of female dies of decreasing diameter, the combination with stationary female dies and movable male dies, of holders carrying the male dies adapted to swing upon the frame-work of the machine to and from the line of cooperation of the dies and sufficiently clear of the frame-work to place the blank upon the dies.

2. In a machine for forming a seamless tube progressively from a blank of metal in a continuous pass through a plurality of female dies of decreasing diameter, the combination with stationary female dies and movable male dies, of holders carrying the male dies, and means for simultaneously swinging said holders clear of the frame of the machine to place the blank upon the dies.

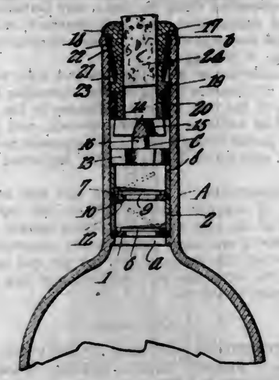
3. In a machine for forming a seamless tube progressively from a blank of metal in a continuous pass the combination of a series of movable male dies and stationary female dies, swinging holders carrying the male dies for locating the blank to be operated upon, a pressure cylinder and means actuated thereby to control the position of the die holders.

4. In a machine for forming a seamless tube progressively from a blank of metal in a continuous pass through a plurality of vertical female dies of decreasing diameter, the combination with male and female dies of centering pawls or arms connected with a stationary die casing carrying the female dies and arranged to bring the blank into line with the center of the operating dies before the said dies start to reduce the said blank.

5. In a machine for forming a seamless tube progressively from a blank of metal in a continuous pass through a plurality of female dies of decreasing diameter, the combination of a plurality of stationary female dies, a plurality of corresponding movable male dies, means for advancing the male dies successively, and auxiliary means for supporting a given male die after it has completed its work and after the main pressure has been removed therefrom.

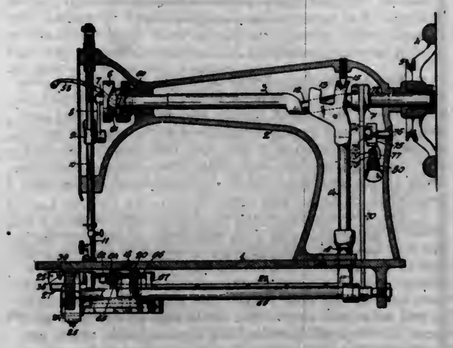
961,134. NON-REFILLABLE BOTTLE. WILLIAM W. HUMES, Youngstown, Ohio. Filed May 14, 1909. Serial No. 495,919.

A non-refillable bottle including a neck, upper and lower tubular castings within the neck, each casing having a groove in the lower end thereof and close to the wall of the neck, rings constituting supports for the respective casings, one of said rings being interposed between the upper and lower casings, a valve normally seated upon each of the rings, a neck extending from each valve, trunnions upon each neck and journaled within the groove in the adjoining casing, said trunnions being held within the



groove by the ring contacted by said casing, the two valves having their stems projecting in opposite directions, a baffle mounted on the upper casing and within the neck, a tubular plug insertible into the neck and onto the baffle to hold said baffle upon the casing thereunder, and means for securing the plug within the neck.

961,135. SEWING-MACHINE. FREDERICK JACOB, Newark, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed July 15, 1908. Serial No. 443,625.



1. In a sewing machine, the combination with the frame comprising a bed-plate and an overhanging bracket-arm and a main-shaft journaled in the bracket-arm, of stitch-forming mechanism comprising a reciprocating needle-bar carrying an eye-pointed needle and operatively connected with the main-shaft, an actuating member upon the main-shaft, a vertical rock-shaft deriving its oscillatory movements from said actuating member, a crank-arm upon said rock-shaft, an oscillatory loop-taker shaft, a loop-taker mounted thereon and coöperating with the needle in the production of stitches, a drum or pulley fixed upon said loop-taker shaft, an oscillatory member intermediate said drum or pulley and said rock-shaft, a flexible band embracing said drum or pulley and connected with said oscillatory member, and an operative connection between said oscillatory member and the crank-arm of said vertical rock-shaft whereby the loop-taker shaft is oscillated.

2. In a sewing machine, the combination with the frame comprising a bed-plate and an overhanging bracket-arm and a main-shaft journaled in the bracket-arm, of stitch-forming mechanism comprising a reciprocating needle-bar carrying an eye-pointed needle and operatively connected with the main-shaft, an actuating member upon the main-shaft, a vertical rock-shaft deriving its oscillatory movements from said actuating member, an oscillatory loop-taker shaft, a loop-taker mounted thereon and coöperating with the needle in the production of stitches, a drum or pulley fixed upon said loop-taker shaft, a drum of larger diameter than said drum or pulley and mounted adjacent thereto, a flexible band embracing and operatively connecting said pulleys and provided with means for maintaining it in fixed relation therewith, cranks connected with the second-named drum and the lower end of said vertical rock-shaft, and a pitman connection intermediate said cranks.

3. In a sewing machine, the combination with the frame comprising a bed-plate and an overhanging bracket-arm and a main-shaft journaled in the bracket-arm, of stitch-forming mechanism comprising a reciprocating needle-bar carrying an eye-pointed needle and operatively connected with the main-shaft, an actuating member upon the main-shaft, a vertical rock-shaft deriving its oscillatory movements from said actuating member, an oscillatory loop-taker shaft, a loop-taker mounted thereon and coöperating with the needle in the production of stitches, a drum or pulley fixed upon said loop-taker shaft, a drum of larger diameter than said drum or pulley and mounted adjacent thereto, flexible bands connecting and extending around said pulleys in opposite directions and each having its opposite ends secured to the respective pulleys, cranks connected with the second-named drum and the lower end of said vertical rock-shaft, and a pitman connection intermediate said cranks.

4. In a sewing machine, the combination with the frame comprising a bed-plate and an overhanging bracket-arm and a main-shaft journaled in the bracket-arm, of stitch-forming mechanism comprising a reciprocating needle-bar carrying a needle and operatively connected with the main-shaft, an actuating member upon the main-shaft, a vertical rock-shaft deriving its oscillatory movements from said actuating member, an oscillatory loop-taker shaft, a loop-taker mounted thereon and having in its upper edge an annularly grooved seat and an adjacent inwardly extending loop-seizing beak, a thread-case provided with a central thread-cavity and a concentric annular bearing flange having upon its lower face a tongue entering the grooved seat of said loop-taker, a removable segmental cap-plate secured to said loop-taker and overhanging its grooved seat to confine the margin of the thread-case flange thereon, means for restraining the thread-case from circular movement with said loop-taker, a drum or pulley fixed upon said loop-taker shaft, and an operative connection comprising a flexible band embracing and having a positive connection with said drum or pulley and connected with said vertical rock-shaft whereby the loop-taker shaft is oscillated.

5. In a sewing machine, the combination with the frame comprising a bed-plate and an overhanging bracket-arm and a main-shaft journaled in the bracket-arm, of stitch-forming mechanism comprising a reciprocating needle-bar carrying a needle and operatively connected with the main-shaft, an oscillatory loop-taker shaft, a loop-taker mounted thereon and having in its upper edge an annularly grooved seat and an adjacent inwardly extending loop-seizing beak, a thread-case provided with a central thread-cavity and a concentric annular bearing flange having upon its lower face a tongue entering the grooved seat of said loop-taker and provided at its rearward side adjacent the needle path with a notch or pocket, means applied to the loop-taker for confining said bearing flange to its seat thereon, a thread-case restraining arm rigidly connected with the bed-plate and entering the circular path of movement of said loop-taker and provided with an upturned finger embraced by the notch or pocket in said thread-case, a drum or pulley fixed upon said loop-taker shaft, and means including a

flexible band embracing and having a positive connection with said drum or pulley and operatively connected with the main-shaft whereby the loop-taker shaft is oscillated.

[Claim 6 not printed in the Gazette.]

961,136. SPARK-PLUG. ROBERT JAKE, Rockyridge, Ohio. Filed June 9, 1909, Serial No. 501,039. Renewed Apr. 21, 1910. Serial No. 556,848.



1. In a spark plug, a body provided with an opening therethrough, an integral yoke on said body provided with a threaded sparking terminal opening, a sparking terminal fixedly held in the body, and a threaded sparking terminal held in the threaded opening and provided with means to engage a tool, one of said terminals being provided with a cup shaped end.

2. In a spark plug, a body provided with an opening therethrough, an integral yoke on said body provided with a threaded sparking terminal opening, a sparking terminal fixedly held in the body, and a threaded sparking terminal held in the threaded opening and provided with means to engage a tool, one of said terminals being provided with a cup shaped end and the other terminal having an end cut at right angles to the body.

3. In a spark plug, a body provided with an opening therethrough, an integral yoke on said body provided with a threaded sparking terminal opening, a sparking terminal fixedly held in the body, and a threaded sparking terminal held in the threaded opening and provided with means to engage a tool, one of said terminals being provided with a cup shaped end and the other terminal having an end cut at right angles to the body, the cup shaped end being of greater diameter than the opposed terminal end.

961,137. SHOW-CASE. CHARLES J. JOHNSON, Chicago, Ill. Filed July 12, 1909. Serial No. 507,167.



1. The combination with the top and the side walls of a show case, of channels fitting on the upper edge of the side walls, with flanges depending on opposite sides of said walls, the flanges on one side being notched, and corner fasteners fitting over the ends of the channels at the corners of the case, between the top of the case and said channel, and having projections engaging in said notches.

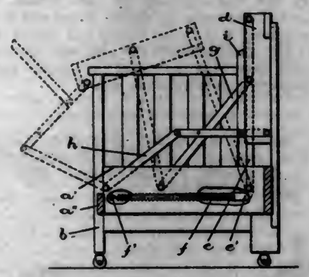
2. The combination with top and the side walls of a show case, of channels fitting on the upper edge of the side walls, with depending flanges on opposite sides of the said walls, said channels having recesses therein, and fasteners located between the channels and the top of the case at the joints between said walls, said fasteners having depending projections engaging in said recesses, to lock the channels together and also having projecting lips engaging the edges of the top.

3. The combination with the top and side walls of a show case, of channels fitting on the upper edges of said walls and extending along the same, and fasteners having interlocking engagement with said channels and located between said channels and the top, and having lips engaging the edge of the top.

4. The combination with the top and side walls of a show case, of channels fitting on and extending along the upper edge of the side walls, the flanges of the channels being notched adjacent the ends thereof, and fasteners comprising plates fitting between the channels and the top of the case, said plates having tongues depending into said notches.

5. The combination with the top and side walls of a show case, of channels located between the top and the upper edge of the side walls and having flanges engaging opposite sides of said edge, and fasteners comprising plates located between the channels and the top and having depending parts embracing said channels and lips engaging the outer edge of the top.

961,138. COMBINED BED AND DAVENPORT. FRANK E. JOSELIN, Toronto, Ontario, Canada. Filed Aug. 7, 1909. Serial No. 511,802.



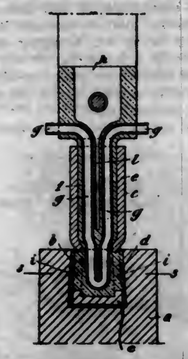
1. The hereinbefore described device comprising a stationary seat part, a movable back part, levers pivoted to the seat and back parts, springs connected to the seat part and to the levers to balance the back part during its movements, links connected to the seat part and to the back part between its ends, and other links connected to the front of the seat part and to the lower end of the back part when in its upright position.

2. The hereinbefore described device comprising a stationary seat part, a movable back part, levers pivoted to the seat and back parts, springs connected to the seat part and to the levers to balance the back part during its movements, links connected to the seat part and to the back part between its ends, other links connected to the front of the seat part and to the lower end of the back part when in its upright position, and legs connected to the last mentioned links supporting the front of the back part in its lowered position.

961,139. ELECTRICAL CONDUCTOR. CHARLES ALBERT KELLER, Paris, France. Filed July 13, 1908. Serial No. 443,267.

1. An electrical connection comprising in combination, an electrode provided with an opening, an electrical conductor provided with a hollow portion adapted for insertion into said opening and having an aperture extending from said hollow portion outwardly to the sides of said conductor and abreast of the wall of said opening, and a conducting fusible element disposed in said aperture and extending therethrough into engagement with the wall of said opening for uniting said conductor and electrode.

2. An electrical connection comprising in combination an electrode provided with a truncated cone shaped opening, an electrical conductor inserted into said opening, said conductor being provided with a plurality of recesses in the inserted portion, and a fusible electrically conducting element filling said recesses and the interspace between said conductor and the walls of said opening.



3. An electrical connection comprising in combination, an electrode provided with an opening, a conductor provided with a longitudinally disposed hollow portion and having one end inserted in said opening, said conductor having apertures in its side walls lying abreast of the wall of said opening, and a fusible element of electrically conducting material disposed in said opening and extending into said apertures for uniting the electrode with said conductor.

4. An electrical connection comprising in combination, an electrode provided with a rectangular truncated cone shaped opening, a conductor provided with a sheet of conducting material having a portion complementally formed with respect to the formation of said opening and reduced in size with respect thereto, said sheet having lateral openings, and a fusible connection of conducting material uniting said electrode and conductor.

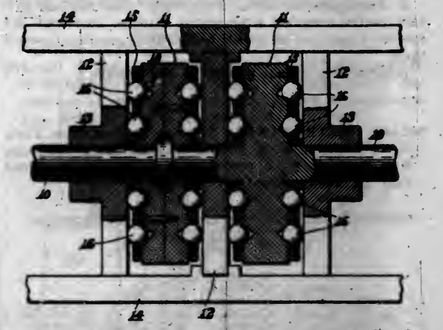
5. An electrical connection comprising in combination, an electrode provided with an opening, a hollow conductor adapted for insertion in said opening and having apertures extending from its hollow interior portion to its exterior and opening abreast of the wall of said opening, means for affording passage of a cooling agent in said conductor, and a fusible element of electrical conducting material disposed in said interior about said means and extending through said apertures into engagement with the wall of said opening for uniting said electrodes with said conductors.

[Claim 6 not printed in the Gazette.]

961,140. THRUST-BEARING. ERNEST C. KETCHUM, Boston, Mass. Filed Apr. 3, 1909. Serial No. 487,812.

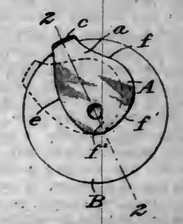
1. In a device of the class described, the combination with a revoluble shaft; of two plates, one of which moves longitudinally with said shaft while the other is prevented from such longitudinal movement and one of which is provided with a plurality of concentric grooves; a cage interposed between said plates comprising two plates secured together, each having a plurality of openings therethrough, and a plurality of semi-spherical depressions on its inner face intermediate said openings, said openings and depressions registering with similar openings and depressions in the other plate; a plurality of balls in said openings extending beyond the outer face of said plates and bearing upon the walls of said grooves of one plate and the flat face of the other plate; and a separator ball in the cavity formed by two opposing depressions when the plates of said cage are assembled.

2. In a device of the class described, the combination with a revoluble shaft; of two plates, one of which moves longitudinally with said shaft while the other is prevented from such horizontal movement and one of which is provided with a plurality of concentric grooves; a cage interposed between said plates comprising two plates secured together, each having a plurality of openings therethrough arranged concentrically to said shaft, and a plurality of semi-spherical depressions on its inner face intermediate



said openings with the centers thereof in a line with the centers of the openings on each side thereof, said openings and depressions registering with similar openings and depressions in the other plate; a plurality of balls in said openings extending beyond the outer face of said plates and bearing upon the walls of said grooves of one plate and the flat face of the other plate; and a separator ball in the cavity formed by two opposing depressions when the plates of said cage are assembled.

961,141. HOLDER FOR ERASING MATERIAL. GEORGE P. KINGSBURY, Scranton, Pa. Filed Nov. 11, 1907. Serial No. 401,615.



1. As a new article of manufacture, an eraser holder composed of a one-piece blank of sheet metal folded upon itself and producing substantially parallel and flat plates, each plate having a substantially spiral edge extending from the inner end thereof toward the connection between said plates, said holder being provided with eraser-supporting means adjacent to the shorter radii of said curved edges of the plates.

2. As a new article of manufacture, an elastic holder for erasers of the class described composed of sheet metal folded upon itself and producing substantially flat plates united at one end by a bridge integral therewith, and pivotal means integral with the respective plates for attaching an eraser thereto near the other ends of the plates, said pivotal means of the plates being insertible into a central aperture of the eraser, whereby said eraser is connected rotatably to the elastic holder.

3. An eraser holder composed of sheet metal doubled upon itself and producing companion plates united at one end by a transverse bridge integral with the plates, said plates being provided near one end with means for rotatably securing an eraser thereto, one edge of each

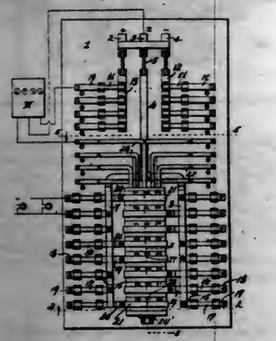
plate being provided with a spiral curve extending from the eraser attaching means toward the bridge which connects the plates.

4. In a device of the class described, a one-piece sheet metal holder comprising substantially flat and parallel plates united at one end by an integral transverse portion, one edge of each plate being curved continuously and on a decreasing radius from said integral portion toward a point of attachment of an eraser to the holder.

5. An expansible holder comprising connected and parallel plates provided with means integral therewith for rotatably securing an eraser in operative position between them.

[Claims 6 to 14 not printed in the Gazette.]

961,142. METER-PANEL. HUBERT KRANTZ, New York, N. Y., assignor to H. Krantz Manufacturing Company, New York, N. Y., a Corporation of New York. Filed July 28, 1909. Serial No. 510,000.



1. In combination with a meter, a panel board, comprising a base, bus bars and cross bars, branch circuits and supply circuits, and grouped meter bars in proximity to one cross bar of a number of branch circuits, a selective contact device rotatively but permanently secured to the panel board, and connections therefor between said cross bar and the selective contact device, whereby the contact device may at will be brought into contact with the meter bar of the grouped meter bars.

2. In combination with a meter, a panel board comprising a base, bus bars and cross bars, branch circuits and a supply circuit, and grouped meter bars in proximity to one cross bar of a number of branch circuits, a movable selective contact device and connections therefor between said cross bar and the movable selective contact device, and means for at will bringing such contact device into contact with a meter bar of the grouped meter bars, and clamping mechanism adapted to hold the selective device in contact position.

3. In combination with a meter, a panel board comprising a base, bus bars and cross bars, branch circuits and a supply circuit, and grouped meter bars in proximity to one cross bar of a number of branch circuits, a movable selective contact device and connections therefor between said cross bar and the movable selective contact device, and means for at will bringing such contact device into contact with a meter bar of the grouped meter bars, and indicator means for determining the relative location of the selective device with the grouped meter bars.

4. In combination with a meter, a panel board comprising a base, bus bars and cross bars, branch circuits and a supply circuit, and grouped meter bars in proximity to one cross bar of a number of branch circuits, a movable selective contact device and connections therefor between said cross bar and the movable selective contact device, and means for at will bringing such contact device into contact with a meter bar of the grouped meter bars, and clamping mechanism adapted to hold the selective device in contact position, and indicator means for determining the relative location of the selective device with the grouped meter bars.

5. In combination with a meter, a panel board comprising a base, bus bars and cross bars, branch circuits and a supply circuit, and grouped meter bars in proximity to one cross bar of a number of branch circuits, a movable selective contact device and connections therefor between said cross bar and the movable selective contact device, and means for at will bringing such contact device into contact with a meter bar of the grouped meter bars, said grouped meter bars being concentrically placed, said movable selective contact device being movable concentrically to the grouped bars.

[Claims 6 to 16 not printed in the Gazette.]

961,143. TORPEDO-SHELL. ERASTUS S. LAFFERTY, Galesburg, Ill. Filed Sept. 21, 1908. Serial No. 453,914.



1. A torpedo shell constructed from a single piece of fibrous material thoroughly saturated with a water-proofing material and embodying three approximately circular members connected by constricted necks, two of which circular members are flat, and one of which is approximately semi-spherical, to constitute an explosive receiving chamber, one of the flat members constituting a closure for the said chamber, and the other a means of connection with the attaching device.

2. A torpedo shell constructed from a single piece of fibrous material thoroughly saturated with water-proofing material and embodying three approximately circular members connected by constricted necks, the two terminal members of which shell are flat, and the intermediate one approximately semi-spherical, to constitute an explosive receiving chamber, one of the flat members being arranged to be cemented to the said chamber, and the third to inclose the intermediate portion of an attaching device.

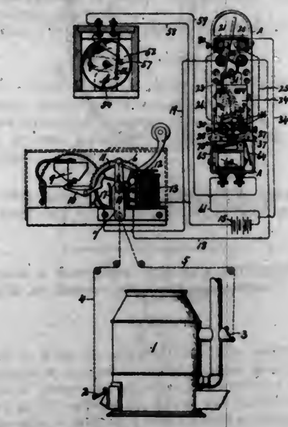
961,144. COMPOSITION OF MATTER FOR REPAIR OF PNEUMATIC TIRES. JOHN H. LEWIS, Joplin, Mo. Filed Aug. 19, 1909. Serial No. 513,668.

1. The hereinbefore described composition of matter consisting of ribbon glue, water, molasses, linseed oil, chrome alum, and bichromate potash, substantially as described and for the purpose specified.

2. The herein-described composition of matter for the treatment of pneumatic tires to prevent the escape of air when punctured consisting of ribbon glue 38 pounds, water 1½ gallons, molasses 1 gallon and 1 pint, linseed oil 5 pints, chrome alum 5 oz. 100 gr., bichromate potash 4 oz. 330 gr., water sufficient to make 25 ounces, substantially as described.

961,145. THERMO-ELECTRIC REGULATOR. WILLIAM E. MACK, Fort Plain, N. Y. Filed Feb. 12, 1908. Serial No. 415,627.

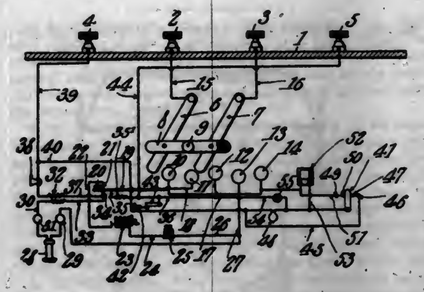
1. In a thermo-electric device for controlling an electrical damper actuating mechanism comprising a supporting frame, a magnet carried thereby and in circuit with a source of electrical energy and in circuit with an electrically-controlled damper actuating mechanism, a magnet carried by the frame and in circuit with a source of electrical energy and in circuit with the electrically-controlled damper actuating mechanism, an oscillatory segment, a contact carried thereby and in circuit with one of said magnets, another contact carried by the segment and in circuit with the other of said magnets, an oscillatory armature extending between said magnets and constituting a pointer, an indicator associating with said armature, a thermostatic bar connected at one end to said frame and extending between said contacts, and when in engagement with one of the contacts closing one of the circuits, a manually-operated means engaging with the segment for adjusting it whereby the contact points are shifted, means engaging with said manually-operated means for maintaining the segment in its adjusted position, an electrical clock controlling means for actuating said holding means to release the segment, means for returning the segment to normal position, a pointer carried by said manually-operated means, and an indicating means associating with said last-mentioned pointer.



2. In a thermo-electric device for controlling an electrical damper actuating mechanism comprising a supporting frame, a magnet carried thereby and in circuit with a source of electrical energy and in circuit with an electrically-controlled damper actuating mechanism, a magnet carried by the frame and in circuit with a source of electrical energy and in circuit with the electrically-controlled damper actuating mechanism, an oscillatory segment, a contact carried thereby and in circuit with one of said magnets, another contact carried by the segment and in circuit with the other of said magnets, an oscillatory armature extending between said magnets and constituting a pointer, an indicator associating with said armature, a corrugated thermostatic bar connected at one end to said frame and extending between said contacts, and when in engagement with one of the contacts closing one of the circuits, a manually-operated means engaging with the segment for adjusting it whereby the contact points are shifted, means engaging with said manually-operated means for maintaining the segment in its adjusted position, an electrical clock controlling means for actuating said holding means to release the segment, means for returning the segment to normal position, a pointer carried by said manually-operated means, and an indicating means associating with said last-mentioned pointer.

3. In a thermo-electric device for controlling an electrical damper actuating mechanism comprising a supporting frame, a magnet carried thereby and in circuit with a source of electrical energy and in circuit with an electrically-controlled damper actuating mechanism, a magnet carried by the frame and in circuit with a source of electrical energy and in circuit with the electrically-controlled damper actuating mechanism, an oscillatory segment, a contact carried thereby and in circuit with one of said magnets, another contact carried by the segment and in circuit with the other of said magnets, an oscillatory armature extending between said magnets and constituting a pointer, an indicator associating with said armature, a corrugated thermostatic bar connected at one end to said frame and extending between said contacts, and when in engagement with one of the contacts closing one of the circuits, a manually-operated means engaging with the segment for adjusting it whereby the contact points are shifted, means engaging with said manually-operated means for maintaining the segment in its adjusted position, an electrical clock controlling means for returning the segment to normal position, a pointer carried by said manually-operated means, and an indicating means associating with said last-mentioned pointer.

961,146. PORTABLE TELEPHONE AND TESTING INSTRUMENT. NICHOLAS MACKING, Wilkes-Barre, Pa., assignor of one-half to Elmer S. Wilcox, Wilkes-Barre, Pa. Filed Feb. 5, 1910. Serial No. 542,238.



1. An electrical testing instrument having a source of direct current, a source of alternating current, a telephone set, means for coupling the source of alternating current or the telephone set to the line at will, signal means responsive to direct current, and means for coupling the telephone set or the signal means to the source of direct current at will.

2. An electrical testing instrument having a telephone set, a source of alternating current, a source of direct current, signal means responsive to alternating current, visual and audible signal means responsive to direct current, means coupling the telephone set or the signal means to the line to be used or tested, and means for establishing a circuit local to the instrument between the source of direct current and either the visual or audible signal responsive to direct current.

3. An electrical testing instrument having a source of direct current, a telephone set, and a reversing switch for establishing a circuit through the source of current in either direction to the line, or to the telephone set at will.

4. An electrical testing instrument having a source of direct current, visual and audible signal means responsive to such direct current, means for coupling the signal means to line, and means for establishing a local circuit between the source of current and the signal means.

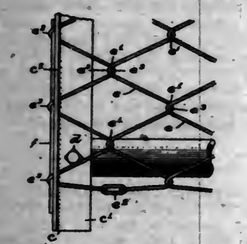
5. In an electrical testing instrument, a source of direct current, visual and audible signal means local to the instrument, and responsive to direct current, and a reversing switch for coupling the source of current in either direction to the line.

[Claim 6 not printed in the Gazette.]

961,147. SPRING BED-BOTTOM. GUY MAYERA, Boston, Mass. Filed Dec. 30, 1907. Serial No. 408,473.

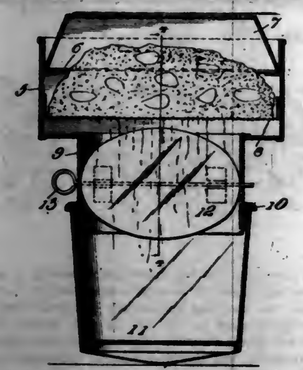
A bed bottom comprising side bars, end bars each consisting of an angle iron having a vertical web with diagonal slots at intervals and an inturned flat side secured to sheet metal blocks fastened to said angle iron and to the side bars, a fabric comprising transverse flat helices, the

coils of which are interlocked, the coils of the transverse end helices extending in the form of loops through said



slots in the end bars, and a locking rod passed through said loops and bearing against the outer face of said web.

961,148. ASH-SIFTER. ACHILLE MARTEL, Fall River, Mass. Filed Mar. 8, 1910. Serial No. 548,011.



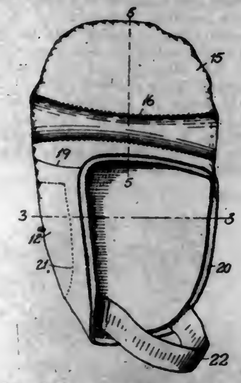
1. In a portable ash sifter, the combination with an ash pan, a dust bucket, a sieve provided near its upper end with an interior flange adapted to receive and support the edge of the ash pan, and having a tubular extension adapted to extend within the ash bucket, and an exterior flange on the extension adapted to take over the upper edge of the dust bucket, whereby closed joints are made between the parts, for the purpose set forth.

2. In an ash sifter, the combination with an ash pan, a dust bucket, and a sieve adapted to be closed at its upper end by the inverted ash pan and provided with an interior flange to receive the edge of said pan, an exterior flange adjacent the lower end of said sieve and adapted to take over the edge of said bucket, and a damper arranged to close the passage to said bucket, for the purpose set forth.

3. In a portable ash sifter, the combination with an ash pan, a dust bucket, and a sieve provided in its upper end with a flange adapted to receive and support the upper edge of the ash pan, a tubular extension on said sieve adapted to enter the dust bucket, semi-circular, reversely-mounted, L-shaped flanges in said extension, and a damper mounted between said flanges whereby said damper seats with one of its side edges upon one of said flanges and the other below the other flange, whereby a dust-proof closure between the sifter and the bucket is secured, for the purposes set forth.

961,149. PUNCHING-BAG MITT. JOHN F. MAYNARD, Plymouth, N. H., assignor to The Draper & Maynard Company, Plymouth, N. H., a Corporation of New Hampshire. Filed Jan. 22, 1910. Serial No. 539,514.

A thumbless mitt comprising a cushioned portion formed to cover the back of the hand including the backs of the fingers, and extended at one edge to form a wing cushion, formed to cover the joint or knuckle at the base of the forefinger, and a grip portion formed to bear on the front sides of the fingers, the outer edge of the wing cushion and



the inner edge of the grip portion forming parts of the margin of a hand-receiving opening in the front of the mitt.

961,150. PRESSING DEVICE. FREDERICK A. MILLS, New York, N. Y. Filed Aug. 26, 1908. Serial No. 450,325.



1. In a device for pressing and creasing garments, the combination of a support, means on said support adapted to engage and hold the garment in the form of a fold, and means slidably engaging said support for pressing and creasing the said fold, said means comprising a pair of elements movably connected to each other and adapted to engage the opposite sides of the fold to press and crease it.

2. In a device for pressing and creasing garments, the combination of a support, means on said support adapted to engage and hold the garment in the form of a fold, means slidably engaging said support for pressing and creasing the said fold, said means comprising a pair of elements movably connected to each other and adapted to engage the opposite sides of the fold to press and crease it, and means for continuously heating one of the elements of the pressing means while in use.

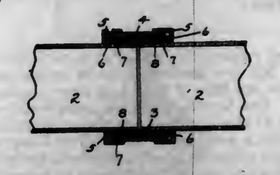
3. In a device for pressing and creasing garments, the combination of a support, means on said support adapted to engage and hold the garment in the form of a fold, and means slidably engaging said support for pressing and creasing the said fold, said means comprising a pair of irons movably connected to each other and having opposing faces adapted to engage the opposite sides of the fold to press and crease it.

4. In a device for pressing and creasing garments, the combination of a support, means on said support adapted to engage and hold the garment in the form of a fold, means slidably engaging said support for pressing and creasing the said fold, said means comprising a pair of irons movably connected to each other and having opposing faces adapted to engage the opposite sides of the fold to press and crease it, and means for continuously heating one of said irons while in use.

5. In a device for pressing and creasing garments, the combination of a support, means on said support adapted to engage and hold the garment in the form of a fold, and means slidably engaging said support for pressing and creasing the said fold, said means comprising a pair of irons pivotally connected to each other and having opposing faces adapted to engage the opposite sides of the fold to press and crease it.

[Claims 6 to 19 not printed in the Gazette.]

961,151. MECHANICAL JOINT FOR VACUUM-TUBES. DANIEL MCFARLAN MOORE, Newark, N. J., assignor to Moore Electrical Company, New York, N. Y., a Corporation of New York. Filed Apr. 16, 1908. Serial No. 427,364.



1. In a joint for glass tubing, the combination of a sealing sleeve applied over the meeting ends of the tubes, masses of absorbent material containing a sealing fluid applied at the ends of the sleeve and means for compressing the same to furnish a sealing fluid at both said ends, as and for the purpose described.

2. In a joint for glass tubing, the combination of a sleeve encircling and wrapping the tube sections at their meeting ends, oil bearing rings of compressible material adjacent to the ends of said sleeve, and means for compressing said rings, as and for the purpose described.

3. In a joint for glass tubing, the combination of a sealing or packing sleeve, spanning the meeting ends of the tube sections, an external shell or tube within which said sleeve is fitted, absorbent, compressible rings containing a sealing liquid fitted within the shell and against the ends of the sleeve and compression devices on the shell, as and for the purpose described.

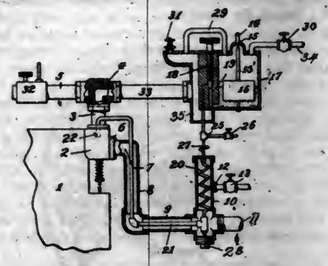
4. In a joint for glass tubing, the combination of a sealing sleeve, rings of compressible liquid-bearing substance at the ends of said sleeve, sealing rings or washers applied over the compressible rings of absorbent material, an external shell or tube within which said parts are fitted, and compression devices mounted on said shell.

5. In a sealed joint for glass tubing, the combination of a closed external shell or tube, a sealing ring or sleeve fitted therein and encircling the tube ends, a pair of sealing rings, rings of absorbent material between the latter and the sleeve, and compression nuts mounted on the shell for applying pressure to the pair of sealing rings and through them to the rings of absorbent material within the shell.

[Claim 6 not printed in the Gazette.]

961,152. INTERNAL-COMBUSTION ENGINE. WILLIAM W. MOASS, Newark, N. J. Filed Apr. 20, 1906. Serial No. 312,778.

1. In combination with a mixing chamber of an explosive engine, a source of supply for liquid fuel, piping from said source to the mixing chamber, means for heating said piping, and an air vent in said piping between the heating means and the supply, an air intake port to said mixing chamber independent of any combustible vapor intake port.



2. In combination with a mixing chamber of an explosive engine, a source of supply for liquid fuel, piping from said source to the mixing chamber, means for heating said piping, and an air vent in said piping, and an air intake port to said mixing chamber independent of any combustible vapor intake port.

3. In combination with a mixing chamber of an explosive engine, a source of supply for liquid fuel, piping from said source to the mixing chamber, means for heating said piping, and an air vent in that portion of the piping through which the liquid fuel normally flows from the source of supply to the heating means, and means for automatically preventing feed of oil except when suction is acting upon the supply, an air intake port to said mixing chamber independent of any combustible vapor intake port.

4. In combination with a mixing chamber of an explosive engine, a source of supply for liquid fuel, piping from said source to the mixing chamber, means for heating said piping, and an air vent in said piping between the heating means and supply, and an adjusting valve controlling said vent, an air intake port to said mixing chamber independent of any combustible vapor intake port.

5. In combination with a mixing chamber of an explosive engine, a source of supply for liquid fuel, piping from said source to the mixing chamber, means for heating said piping, and an air vent in said piping, said means for heating said piping comprising a chamber in communication with the engine's exhaust, and means for regulating the heat of said chamber, said vent being between the chamber and supply source, an air intake port to said mixing chamber independent of any combustible vapor intake port.

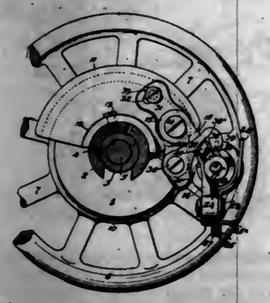
[Claims 6 to 22 not printed in the Gazette.]

961,153. TIRE-PUMP. CHARLES S. MYERS, Columbia, Pa. Filed Sept. 14, 1909. Serial No. 517,726.



In a pump, in combination with a cylinder and a piston mounted within said cylinder and provided with expanding rings; a base secured upon the lower end of said cylinder, an intake ball check valve formed in said base and comprising a boss formed upon the bottom of said base and provided with horizontal air ducts extending through the same, a vertical orifice formed in said base, reduced in diameter near its lower end to form a ball seat and communicating with said air ducts, a plate formed with perforations in the body thereof and radial ribs and secured to said base and over said vertical orifice.

961,154. BOBBIN-WINDING DEVICE FOR SEWING-MACHINES. HUGH MCFARLANE, Scotstoun, near Glasgow, Scotland, assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Jan. 29, 1910. Serial No. 540,780.



1. The combination with a sewing machine frame, a rotary shaft journaled therein, and a balance-wheel thereon comprising a weighted rim, a laterally extending belt-receiving hub and an intermediate peripheral runway, of a belt-guard overhanging the balance-wheel hub, and a bobbin-winder mounted upon and supported by said belt-guard and provided with a rotary spindle, a friction-wheel mounted on said spindle with a rim adapted for rolling contact with the runway of said balance-wheel, and means for maintaining said friction-wheel in operative relation with said runway.

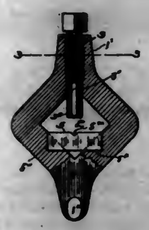
2. The combination with a sewing machine frame, a rotary shaft journaled therein, and a balance-wheel thereon comprising a weighted rim, a laterally extending belt-receiving hub and an intermediate peripheral runway, of a belt-guard overhanging the balance-wheel hub, and a bobbin-winder mounted upon and supported by said belt-guard and provided with a rotary spindle, a friction-wheel mounted on said spindle with a rim formed of yielding material and adapted for rolling contact with the runway of said balance-wheel, and positively acting retaining means for maintaining said friction-wheel in operative relation with said runway.

3. The combination with a sewing machine frame, a rotary shaft journaled therein, and a balance-wheel thereon comprising a weighted rim, a laterally extending belt-receiving hub and an intermediate peripheral runway, of a bobbin-winder provided with a rotary spindle, a friction-wheel mounted on said spindle with a rim formed of yielding material and adapted for rolling contact with the runway of said balance-wheel, positively acting retaining means for maintaining said friction-wheel in operative relation with said runway, and adjusting means whereby the position of said retaining means may be shifted to compensate for wear of the friction-wheel rim.

4. The combination with a sewing machine frame, a rotary shaft journaled therein, and a balance-wheel thereon comprising a weighted rim, a laterally extending belt-receiving hub and an intermediate peripheral runway, of a bobbin-winder supported by said frame and comprising a swinging arm, a spindle carried thereby, a friction-wheel mounted on said spindle with a rim adapted for rolling contact with the runway of said balance-wheel, a spring connected with said swinging arm for maintaining the friction-wheel normally out of contact with said runway, a fulcrum-carrying lever, a fulcrum-pin thereon, a spring-pressed latch-hook mounted on said fulcrum-pin and adapted to engage said swinging arm to hold its friction-wheel in contact with said runway, automatically acting means for disengaging the latch-hook from said arm, and means for adjusting the fulcrum-carrying lever to shift the position of its fulcrum-pin for the latch-hook to compensate for wear of the friction-wheel rim.

5. The combination with a sewing machine frame, a rotary shaft journaled therein, and a balance-wheel thereon comprising a weighted rim, a laterally extending belt-receiving hub, and an intermediate peripheral runway, of a bobbin-winder comprising a swinging arm, a fixed fulcrum-stud supported upon the frame and on which said swinging arm is mounted, a spindle carried by said swinging arm, a friction-wheel mounted on said spindle with a rim adapted for rolling contact with the runway of said balance-wheel, a spring connected with said swinging arm for maintaining the friction-wheel normally out of contact with said runway, a fulcrum-carrying lever mounted upon said fulcrum-stud and having one arm carrying a fulcrum-pin and another arm formed with a transverse slot, a clamp-screw entering the slot in said arm and adapted to adjustably secure the fulcrum-carrying lever in different angular relations upon said fulcrum-stud, a spring-pressed latch-hook mounted on the fulcrum-pin of said lever and adapted to engage said swinging arm to hold its friction-wheel in contact with said runway, and automatically acting means for disengaging the latch-hook from said arm at the completion of a bobbin-winding operation.

961,155. LATHE-DOG. JOHN M. PALMER, Chicago, Ill., assignor to Universal Tool Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 30, 1905. Serial No. 285,001.



1. In a lathe dog, the combination with a loop member, of a clamping screw passing through an opening in the side of said loop member, the inner end of said screw having a plain cylindrical surface fitting closely in a corresponding surface at the inner end of the opening through the side of the loop member.

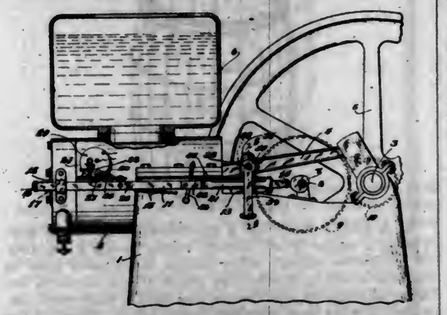
2. In a lathe dog, the combination with a loop member, of a clamping screw passing through an opening in one side of the loop member, the inner end of said screw having a plain cylindrical surface engaging a corresponding smooth cylindrical surface at the inner end of the opening through the loop member, the said clamping screw having threaded engagement with the opening through the loop member at its outer end, and a removable bridge piece adapted to reduce the effective size of the opening in the loop member.

3. In a lathe dog, the combination with a loop member, of a clamping screw passing through said loop member at a point substantially opposite the rectangular junction of two substantially rectilinear sides of the loop member, and a rectilinear bridge piece of T-shaped cross section extending across the loop member and engaging in channels formed in the sides of the loop member, substantially as described.

4. In a lathe dog, the combination with a loop member, of a clamping screw passing through the loop member at a point substantially opposite the rectangular junction of two sides of the loop member, and a rectilinear bridge piece extending across the loop member and leaving an opening between the bridge piece and the clamping screw for the reception of work to be clamped in the dog.

5. In a lathe dog, the combination with a loop member, of a driving tail on said loop member, a head on said loop member, a clamping screw passing through the head of the loop member in the direction of the angular junction of two sides of the loop member, the inner end of the said screw having a plain cylindrical surface fitting closely in a corresponding surface at the inner end of the opening through the head, the opening through the head being screw-threaded at its outer end to engage the threads of the clamping screw, and a removable bridge piece within the opening in the loop member.

961,156. GOVERNING MECHANISM FOR EXPLOSIVE-ENGINES. PETER PAULSON, Marshfield, Wis. Filed May 10, 1909. Serial No. 495,147.



The combination with an explosive engine having a reciprocating engine driven controlling rod and an igniter and an exhaust valve controlled by said rod, of a pivoted latch for intercepting the movement of said controlling rod, a centrifugal governor having a pair of spring-connected weighted levers, a plunger having a collar against which weighted levers are adapted to pull, a trip lever pivotally supported at one end and having at its other end a perforation through which said plunger projects, and an adjusting nut on the projecting end of said plunger and the intermediate portion of said trip lever arranged to operate on said trip lever, substantially as described.

961,157. TELEPHONE ATTACHMENT. JAMES A. PERRY, Bidwell, Iowa. Filed Nov. 9, 1909. Serial No. 527,030.

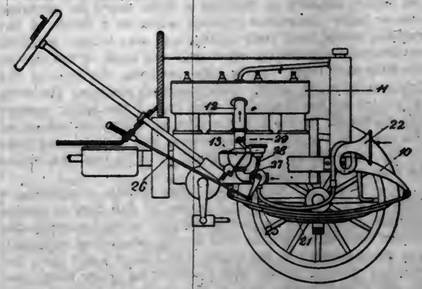


1. An attachment for telephones, comprising a support, a chamber mounted on the support, one end of said chamber being open, a plurality of tubes extending from the other end of the chamber, a ring of yielding material mounted upon the open end of the chamber and adapted to engage with the rim of a telephone receiver, and a receiver holder mounted adjacent to the open end of the chamber and adapted to hold a telephone receiver with its rim in engagement therewith.

2. An attachment for telephones, comprising a base plate, a casing mounted on the base plate and projecting therefrom, said casing having therein a chamber, one end of the chamber being open, a plurality of conducting tubes extending from the other end of the chamber, a ring of yielding material mounted on the open end of the chamber and adapted to engage with the rim of a telephone receiver, and a clamp mounted on the base plate and adapted to engage the barrel of the telephone receiver and hold the receiver with its rim in engagement with said ring.

3. An attachment for telephones, comprising a base plate, a casing mounted on the base plate, said casing being hollow to form a sound chamber open at one end, a plurality of tubes extending from the other end of the sound chamber, a clamp mounted adjacent to the open end of the chamber and adapted to support a telephone receiver with its rim in contact with the open end of said casing, and legs for supporting said casing and base.

961,158. SIGNAL FOR MOTOR-VEHICLES. ROBERT M. PIERSON, Bronxville, N. Y., assignor to Charles F. Brown, trustee, Reading, Mass. Filed July 17, 1909. Serial No. 508,227.



1. The combination with a vehicle driven by an internal-combustion motor, of a warning signal carried by said vehicle and operated by the suction of the motor.

2. The combination, with an internal-combustion motor, of a suction-operated horn applied to the air-inlet pipe thereof, and a valve for opening and closing the connection between said horn and air-inlet pipe.

3. The combination, with an internal-combustion motor, of a horn associated with the air-supply pipe of said motor and having a reed adapted to be sounded by an inflow of air through the horn to the motor.

4. The combination, with an internal-combustion motor and its inlet-pipe, of a suction-operated spray-carbureter associated with said pipe and having a fuel-aspirating chamber, a throttle-valve in the pipe between the aspirating chamber and the motor, and a suction-operated signal connected with said pipe at a point anterior to said throttle-valve.

5. The combination, with an internal-combustion motor and its inlet-pipe, of a suction-operated spray-carbureter associated with said pipe and having a fuel-aspirating chamber, a throttle-valve in the pipe between the aspirating chamber and the motor, and a suction-operated signal connected with said pipe at a point anterior to said throttle-valve and to the aspirating chamber.

[Claims 6 to 9 not printed in the Gazette.]

961,159. KNOCKDOWN BILGE-BARREL AND METHOD OF CONSTRUCTING SAME. FREDERICK A. PRAHL, New York, N. Y., assignor to Babcock Box Company, a Corporation of New York. Filed June 16, 1909. Serial No. 502,561.

1. The method of constructing the body of a bilge barrel which consists in forming a body fabric by securing one or more transverse fulcrum wires to a series of flat flexible staves near their middle and also transverse constricting wires near the ends of the staves, bending said

fabric into a tube, securing the ends of the fulcrum wire or wires, simultaneously bending the ends of all the staves inward at each end of the fabric against the resistance of the fulcrum wire or wires, and securing the ends of the constricting wires in place so as to hold the staves in this constricted position.



2. The method of constructing the body of a bilge barrel which consists in forming a body fabric by securing one or more transverse fulcrum wires to a series of flat flexible staves near their middle and also loosely securing transverse constricting wires near the ends of the staves, bending said fabric into a tube, securing the ends of the fulcrum wire or wires, simultaneously bending the ends of all the staves inward at each end of the fabric against the resistance of the fulcrum wire or wires and taking up the slack in the constricting wires, and securing the ends of the constricting wires in place so as to hold the staves in this constricted position.

3. A fabric for knock-down bilge barrels comprising a body fabric consisting of a series of flat flexible staves having one or more transverse fulcrum wires secured to the staves near their middle, and having transverse constricting wires secured to the staves and spaced apart from the fulcrum wire or wires, said constricting wires being free to move transversely across the staves to take up slack in said wires.

4. A fabric for knock-down bilge barrels comprising a body fabric consisting of a series of flat flexible staves having one or more transverse fulcrum wires secured to the staves near their middle, and having transverse constricting wires stapled to the staves and spaced apart from the fulcrum wire, said constricting wires being free to move transversely across the staves to take up slack in said wires.

5. A fabric for knock-down bilge barrels comprising a body fabric consisting of a series of flat flexible staves having one or more transverse fulcrum wires stapled to the staves near their middle, and having transverse constricting wires stapled to the staves and spaced apart from the fulcrum wire, said constricting wires being free to move transversely across the staves to take up slack in said wires.

[Claims 6 to 19 not printed in the Gazette.]

961,160. KNOCKDOWN BILGE-BARREL. FREDERICK A. PRAHL, New York, N. Y., assignor to Babcock Box Company, a Corporation of New York. Filed June 16, 1909. Serial No. 502,562.

1. A flexible fabric for a knock-down bilge barrel comprising a series of flat, flexible staves having a plurality of transverse fulcrum wires located on opposite sides of the staves and each extending across all the staves on the same side and stapled thereto, and having transverse constricting wires each extending across all the staves on the same side and located near the ends of the staves and stapled thereto, said constricting wires being free to move through their staples to take up slack.

2. A flexible fabric for a knock-down bilge barrel comprising a series of flat, flexible staves having a plurality of transverse fulcrum wires located on opposite sides of the staves and each extending across all the staves on the same side and stapled thereto, and having transverse constricting wires each extending across all the staves on the same side and located near the ends of the staves and stapled thereto, said constricting wires being free to move through their staples to take up slack, said wires having their ends projecting beyond the ends of the fabric for interconnection.



3. A flexible fabric for a knock-down bilge barrel comprising a series of flat, flexible staves having a plurality of transverse fulcrum wires located on opposite sides of the staves and each extending across all the staves on the same side and stapled thereto, and having transverse constricting wires each extending across all the staves on the same side and located near the ends of the staves and stapled thereto, said constricting wires being free to move through their staples to take up slack, said wires having their ends projecting beyond the ends of the fabric for interconnection, and said fulcrum wires being fast in their staples.

4. A flexible fabric for a ventilated knock-down bilge barrel comprising a series of flat, flexible, separated, straight edge staves having a plurality of transverse fulcrum wires located on opposite sides of the staves and each extending across all the staves on the same side and stapled thereto, and having transverse constricting wires each extending across all the staves on the same side and located near the ends of the staves and stapled thereto, said constricting wires being free to move through their staples to take up slack.

5. A flexible fabric for a ventilated knock-down bilge barrel comprising a series of flat, flexible, separated, straight edge staves having a plurality of transverse fulcrum wires located on opposite sides of the staves and each extending across all the staves on the same side and stapled thereto, and having transverse constricting wires each extending across all the staves on the same side and located near the ends of the staves and stapled thereto, said constricting wires being free to move their staples to take up slack, said wires having their ends projecting beyond the ends of the fabric for interconnection.

[Claims 6 to 11 not printed in the Gazette.]

961,161. KNOCKDOWN BILGE-BARREL. FREDERICK A. PRAHL, New York, N. Y., assignor to Babcock Box Company, a Corporation of New York. Filed June 16, 1909. Serial No. 502,563.

1. A fabric for a tight knock-down bilge barrel comprising a series of closely associated tapered flexible staves having a transverse fulcrum wire extending across all the staves on one side thereof near the middle and immovably stapled thereto, and having transverse constricting wires extending across all the staves on the opposite side and spaced apart from the fulcrum wire, said constricting wires being stapled loosely to the staves so as to be free to move transversely across the staves.

2. A fabric for a tight knock-down bilge barrel comprising a series of closely associated tapered flexible staves having a transverse fulcrum wire extending across all the staves on one side thereof near the middle and immovably stapled thereto, and having transverse constricting wires extending across all the staves on the opposite side and spaced apart from the fulcrum wire, said constricting wires being stapled loosely to the staves so as to be free to move transversely across the staves, there being a plurality of said constricting wires on each side of the fulcrum wire.



3. A fabric for a tight knock-down bilge barrel comprising a series of closely associated tapered flexible staves having a transverse fulcrum wire extending across all the staves on one side thereof near the middle and immovably stapled thereto, and having transverse constricting wires extending across all the staves on the opposite side and spaced apart from the fulcrum wire, said constricting wires being stapled loosely to the staves so as to be free to move transversely across the staves, and transverse end wires extending across all the staves on the same side as the fulcrum wire and loosely stapled to the staves.

4. A fabric for a tight knock-down bilge barrel comprising a series of closely associated tapered flexible staves having a transverse fulcrum wire extending across all the staves on one side thereof near the middle and immovably stapled thereto, and having transverse constricting wires extending across all the staves on the opposite side and spaced apart from the fulcrum wire, said constricting wires being stapled loosely to the staves so as to be free to move transversely across the staves, there being a plurality of said constricting wires on each side of the fulcrum wire, and transverse end wires extending across all the staves on the same side as the fulcrum wire and loosely stapled to the staves.

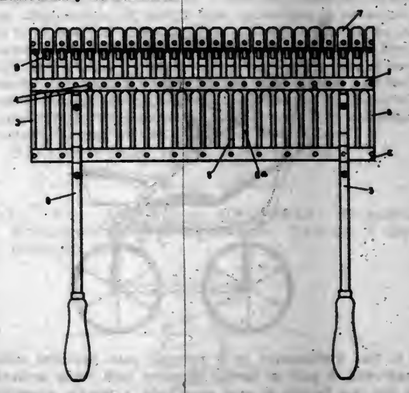
5. A fabric for a tight knock-down bilge barrel comprising a series of closely associated tapered flexible staves having a transverse fulcrum wire extending across all the staves on one side thereof near the middle and immovably stapled thereto, and having transverse constricting wires extending across all the staves on the opposite side and spaced apart from the fulcrum wire, said constricting wires being stapled loosely to the staves so as to be free to move transversely across the staves, and transverse end wires extending across all the staves on the same side as the fulcrum wire and loosely stapled to the staves, the end wires on opposite sides of the staves being in register with each other at both ends and held in place by the same staples.

[Claims 6 to 10 not printed in the Gazette.]

961,162. GIN-SAW CLEANER. GEORGE P. ROBERTS, Dallas, Tex. Filed Mar. 20, 1909. Serial No. 484,673.

1. In a gin saw cleaner, the combination with a rigid frame, consisting of a plurality of parallel fingers, having braces transversely secured thereupon, of a swivel frame, consisting of a plurality of parallel fingers, pivoted at their middle portion to one of said transverse braces, and positioned between the fingers of the rigid frame, another transverse brace being pivotally attached to the inner extremities of the pivoted fingers of the swivel frame, and handles attached to each of said frames, substantially as described.

2. In a gin saw cleaner, the combination with a rigid frame, composed of a plurality of parallel fingers and braces transversely secured thereupon, of a swivel frame composed of a plurality of parallel fingers alternating with the fingers of the rigid frame, and pivoted on said frame, and connected by a transverse bar having pivotal attachment to each finger, means attached to the finger extremities adapted to engage the sides of saws, and operating handles rigidly secured to each of said frames, substantially as described.



3. In a gin saw cleaner, the combination with a rigid frame, consisting of a series of parallel fingers, and transverse bars rigidly secured thereupon, of a swivel frame, consisting of a series of parallel fingers, positioned between the fingers of the rigid frame, and pivoted upon said rigid frame, the pivoted fingers being connected at one extremity by a transverse bar having pivotal attachment to each finger, a plate pivoted to the forward extremity of each finger of both frames, and an operating handle secured to each frame.

4. In a gin saw cleaner, the combination with a rigid frame, composed of a plurality of parallel fingers, having a transverse bar attached to each side thereof near their centers, and a transverse bar attached to their rear extremities, the forward extremities of the fingers being deflected at a uniform angle, of a swivel frame, composed of a plurality of parallel fingers, alternating with the fingers of the rigid frame and similarly deflected at their forward extremities, and pivoted between the oppositely disposed transverse bars of the rigid frame, the rear extremities of the fingers being pivotally connected by a bar, pivotally mounted plates upon the forward extremities of both sets of fingers and an operating handle rigidly secured to each frame.

5. In a gin saw cleaner, the combination with a plurality of parallel fingers, upwardly deflected at their forward extremities, of cross bars forming a rigid frame with said fingers, a plurality of parallel fingers, alternately disposed between the first fingers, pivoted to one of said cross bars, and upwardly deflected at their forward extremities, a cross bar having pivotal attachment with each of the last named fingers, forming a pivotal frame therewith, a swivel plate mounted upon the forward extremity of each finger, means whereby the angular motion of the swivel plates is limited, and a handle attached to each of said frames.

[Claim 6 not printed in the Gazette.]

961,163. GO-CART. RALPH C. ROBINSON, Boise, Idaho. Filed Aug. 25, 1909. Serial No. 514,590.

1. The combination with the running gear, of a spring support secured at one end to said running gear, a handle pivotally supported by the other end of said spring support, stay rods connected to said running gear at one end and pivotally connected to said handle at their other ends, and a body supported by said stay rods, substantially as described.

2. The combination of a running gear provided with gear rails, a spring support adjustably mounted at one

end on said gear rails, a handle pivotally connected at its lower end to the other end of said spring support, stay rods connected at one end to said running gear and at their other ends pivotally connected to said handle, and a body supported by said stay rods, substantially as described.



3. The combination of a running gear provided with gear rails, a pair of spring supports each being secured at one end to one of said gear rails, a handle pivotally supported at its lower ends by the other ends of said spring supports, stay rods secured at one of their ends to said running gear and at their other ends pivotally connected to said handle, and a body portion supported by said stay rods and handle, substantially as described.

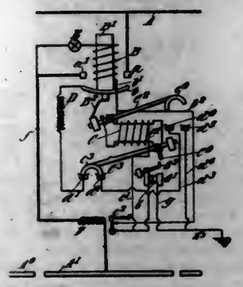
4. In a go-cart the combination of a running gear, provided with gear rails, a pair of elongated springs each adjustably connected at one end to said gear rails, a handle pivotally supported at its lower ends by the other ends of said springs, stay rods connected at one end to said gear rails and at their other ends pivotally connected to said handle, and a body portion supported by said stay rods and said handle, substantially as described.

5. The combination of a running gear provided with gear rails at each side of the top thereof, angle plate members pivotally secured to said gear rails, elongated spring members supported at one end by the horizontal webs of said angle plate members, slots being provided in one set of members coöperating with securing bolts to adjust the relative length of said spring members, and a vertical slot being provided in the vertical web of said angle plate members to permit of their vertical adjustment, a handle pivotally supported at its lower end by the free end of said spring members, stay rods secured at one end to said running gear and at their other ends pivotally connected to said handle, and a body portion supported by said stay rods and said handle, substantially as described.

961,164. CIRCUIT-CONTROLLER. ERNEST ROTHWELL, Manchester, England, assignor to Rothwell's Patents Syndicate, Bury, England. Filed June 25, 1907. Serial No. 380,693.

1. A circuit controller for each rail section of a surface contact railway system involving a current distributer, a car, track rails, rail sections and front and rear skates for contact with said rail sections, comprising a switch for completing the main circuit between the distributer and the corresponding rail section, electrical means operating to close said switch when the front skate of a car arrives on said rail section, mechanical means for retaining the switch closed as long as the car is on the aforesaid rail section, and automatically acting means contained within said circuit controller and acting independently of other circuit controllers for rendering the aforesaid electrical means and mechanical means inoperative as soon as the rear skate of the car has passed beyond the said rail section.

2. A circuit controller for each rail section of a surface contact railway system involving a current distributer, a car, track rails, rail sections, and front and rear skates for contact with said rail sections, comprising a switch for completing the main circuit between the distributer and the corresponding rail section, electrical means operating to close said switch when the front skate of a car arrives on said rail section, mechanical means for retaining the switch closed as long as the car is on the aforesaid rail section, a trip coil adapted when energized to cause the aforesaid electrical means and mechanical means to become inoperative, contact arms for completing the circuit of the said trip coil, and an electromagnetic device for controlling the movements of said contact arms.



3. A circuit controller for each rail section of a surface contact railway system involving a current distributer, a car, track rails, rail sections and front and rear skates for contact with said rail sections, comprising a switch for completing the main circuit between the distributer and the corresponding rail section, electrical means operating to close said switch when the front skate of a car arrives on said rail section, mechanical means for retaining the switch closed as long as the car is on the aforesaid rail section, a trip coil adapted when energized to cause the aforesaid electrical means and mechanical means to become inoperative, an electromagnetic device comprising an iron core and a coil thereon, means for short-circuiting said coil when the rear skate of the car has passed over the aforesaid rail section, a contact arm for bridging a gap in the trip coil circuit, said contact arm being attracted by said electromagnetic device and retained in its operative position by the residual magnetism of said core after the coil thereon is short circuited, and a second contact arm also attracted by said electromagnetic device and adapted to move, when the aforesaid coil is short circuited, into a position to complete the trip coil circuit.

4. A circuit controller for each rail section of a surface contact railway system involving a current distributer, a car, track rails, rail sections and front and rear skates for contact with said rail sections, comprising a shunt coil energized when the front skate of the car passes onto the corresponding rail section, an armature actuated thereby, a switch arm carried thereon and adapted when moved by the energising of the shunt coil to complete the main circuit between the distributer and the corresponding rail section, mechanical means for retaining the switch arm in its closed position, a trip coil adapted when energised to cause the aforesaid shunt coil and mechanical means to become inoperative, an electromagnetic device comprising an iron core and a coil thereon electrically connected in series with said shunt coil, means for short circuiting the coil of the said electromagnetic device after the rear skate of the car has passed over the aforesaid rail section, a contact arm for bridging a gap in the trip coil circuit, said contact arm being attracted by said electromagnetic device and retained in its operative position by the residual magnetism of said core after the coil thereon is short-circuited, a second contact arm also attracted by said electromagnetic device and adapted to move, when the aforesaid coil is short-circuited, into a position to complete the trip coil circuit, and means for releasing said magnetically retained contact arm when the switch arm has moved to open the main circuit.

5. A circuit controller for each rail section of a surface contact railway system involving a current distributer, a car, track rails, rail sections and front and rear skates for contact with said rail sections, comprising a switch for completing the main circuit between the distributer and the corresponding rail section, electrical means operating to close said switch when the front skate of a car arrives on said rail section, mechanical means for retaining the switch closed as long as the car is on the aforesaid rail section, automatically acting means contained within said circuit controller and acting independently of other circuit controllers for rendering the aforesaid electrical means and mechanical means inoperative as soon as the rear skate of the car has passed beyond the said rail section, and means whereby if the main current supply fails and the car stops on the same rail section as that on which it was traveling when the failure occurred, the aforesaid automatically acting means is prevented from rendering the electrical means and mechanical means inoperative.

[Claims 6 to 9 not printed in the Gazette.]

961,165. ARTIFICIAL-LIMB SUSPENDER AND BACK-CHECK. JAMES F. ROWLEY, Chicago, Ill. Filed Oct. 15, 1906. Serial No. 339,010.



1. The combination of a thigh section, a leg section pivotally connected thereto, a pair of suspender guides on the thigh section, a suspender loop passing through said guides and adapted to pass over and be supported on the shoulder of the wearer, an extension for said suspender loop extending from a point intermediate of said guides to the interior of the thigh section and means operatively connecting said extension with said leg section, all arranged to swing the leg section forward on its pivotal connection through an upward tension on said loop.

2. The combination of a thigh section and a leg section pivotally connected together, a member extending upward from the leg section into the interior of the thigh section, and a suspender loop slidingly connected to said thigh section and adapted to pass over and be supported on the shoulder of the wearer, and having a connection to said upwardly extending member at a point inside said thigh section and removed from the axis of said pivotal connection.

3. The combination of a thigh-section and a leg-section connected by a knee-joint, a suspender loop slidingly connected to said thigh-section, having a rotating shifting movement relative thereto, adapted to pass over and be supported on the shoulder of the wearer, and having a flexible extension running to the inside of the thigh-section, and intermediate means connecting said extension with said leg-section and adapted to move the leg-section on its knee-joint through an upward tension on said loop.

4. The combination of a thigh-section and a leg-section connected by a knee-joint, a suspender loop slidingly connected to said thigh-section, having a rotating shifting movement relative thereto, adapted to pass over and be supported on the shoulder of the wearer, a flexible extension slidingly connected to said loop and running to the inside of the thigh-section, and intermediate means connecting said extension with said leg-section and adapted to move the leg-section on its knee-joint through an upward tension on said loop.

5. The combination of a thigh-section and a leg-section pivotally connected together, a knee-bolt extending across the thigh-section at said pivotal connection, a back-check of rigid material extending from the leg-section to the interior of the thigh-section, a sleeve surrounding said knee-bolt and rigidly secured to the back-check, and a suspender-loop slidingly engaging the thigh-section and having a connection to the back-check adapted to move the leg-section forward on its pivotal connection to the thigh-section, through an upward tension on said loop.

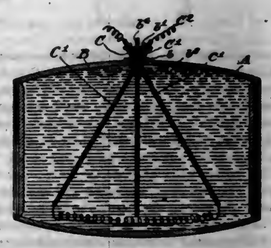
[Claims 6 to 12 not printed in the Gazette.]

961,166. ABDOMINAL SUPPORTER. ELISABETH SCHULTE-UECHTING, Bonn, Germany. Filed Apr. 8, 1908. Serial No. 425,858.



An abdominal bandage made of flexible inelastic material adapted to inclose the body from a point above the waist line to a point below the junction of the thighs with the trunk, said bandage being made in two parts joined together along a line coincident with the depressions between the abdominal and femoral regions, the connecting edges of said parts being so formed as to fit into said depressions, the part below said depressions forming an unbroken extension along the lower front edge of the upper member, for the purpose specified.

961,167. APPARATUS FOR TREATING LIQUORS. JOHN SEITZ, Chicago, Ill. Filed Nov. 2, 1908. Serial No. 460,627.



1. In a liquor treating apparatus a bung, a plurality of sleeves threaded therein, a tube adjustably secured to one of the sleeves, insulated conductors adjustably secured to the other sleeves and said conductors exposed at their inner ends.

2. In a device of the class described, the combination with an electrically non-conducting bung, adapted to fit loosely in the bung aperture of a barrel or cask, of a peripheral projection adapted to station the same upon the cask, obliquely directed apertures opposite one from the other and extending through the bung, non-conducting sleeves in said apertures, non-conducting tubes extending through said sleeves and adjustably engaged therein, electrical conductors therein, at their outer ends adapted for connection with a source of electrical current, at their inner ends projecting into the liquor, and an air pipe opening through said bung to the bottom of the liquor to be treated.

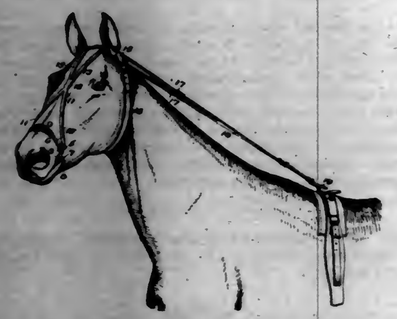
3. In a device of the class described a supporting member, negative and positive conductors adapted to slide through the member to vary the distance they extend into the liquor, an exposed conductor of high resistance connecting the ends of the negative and positive conductors, and means for delivering a gas under pressure into the liquid.

4. In a device of the class described, a bung, sleeves secured thereto, insulated conductors adjustable through the sleeves, said conductors exposed at their inner ends, means securing the conductors in any adjustment, a tube adjustable through a sleeve, and means connected therewith and with a source of gas pressure.

5. In a liquor treating device, a support, sleeves secured thereto, adjustable insulated conductors extending through said sleeves and exposed at their inner ends, means secured to the sleeves for securing the conductors in any adjustment, an exposed conductor of high resistance connected to the exposed inner ends of the aforesaid conductors, a sleeve secured to said support, an adjustable gas tube extending therethrough and means secured to the sleeve for holding the tube in any adjustment.

[Claim 6 not printed in the Gazette.]

961,168. HORSE-CHECKING DEVICE. OBEY DILLMAN SHANK, Philadelphia, Pa. Filed Apr. 30, 1906. Serial No. 314,410.



1. A flat bit comprising an intermediate contracted portion having its extremities broadened and turned upwardly to form cheek portions, said cheek portions having rearwardly extending arms terminating in check lugs, each of said lugs being provided with an oblong slot arranged substantially parallel to the plane of the intermediate portion of the bit.

2. A flat bit comprising an intermediate contracted portion having its extremities broadened and turned upwardly to form cheek portions, the said cheek portions having rearwardly extending arms terminating in check lugs provided with oblong slots arranged substantially parallel to the plane of said bit, and adapted to slidably receive a nose band, and outwardly turned slotted ears depending from said arms in the rear of said bit to engage the extremities of a chin strap.

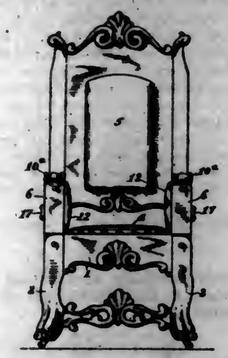
3. In a harness, the combination with a bit having rearwardly extending slotted check lugs, of a nose band having its extremities terminating in check straps passing slidably through said lugs and meeting in a junction piece in the rear of said nose band and checking reins connected with said junction piece.

4. The combination with a bit having rearwardly extending slotted check lugs and ears adapted to engage the extremities of the chin strap mounted forward of said check lugs, of a nose band having its extremities terminating in check straps passing slidably through said lugs and meeting in a junction piece in the rear of said nose band and checking reins connected with said junction piece.

5. The combination with a bit having check lugs, of a nose-band having its extremities passing slidably therethrough, and chin strap lugs connected with said bit and arranged in the rear of said bit.

[Claims 6 to 20 not printed in the Gazette.]

961,169. CONVERTIBLE CHAIR. WILLIAM G. SHEAR, Grand Rapids, Mich. Filed Nov. 22, 1909. Serial No. 529,271.



1. A convertible chair, comprising a main frame, bars each pivoted at one end to the said frame, a leg pivoted to the other end of each bar, a seat on the frame, and side cushions pivoted to the respective sides of the seat and supported by the bars.

2. A convertible chair, comprising a frame, a back having side extensions hinged thereto, bars each pivoted at one end to the frame, a leg pivoted to the other end of each bar, a seat, side cushions pivoted to the respective sides of the seat and supported by the bars, slides carried by the legs, and arms supported by the slides.

3. A convertible chair, comprising a frame, a back adjustable on the frame and detachable therefrom, bars each pivoted to the frame at one end, a leg pivoted to the other end of each bar, slides movable in dove-tail ways in the legs, arms supported by the slides, a seat on the frame, side cushions pivoted to the respective sides of the seat and slidably supported by the bars.

4. A convertible chair, comprising a frame, a seat on the frame, bars each pivoted to the frame at one end, a leg pivoted to each of the bars, brace bars connecting the legs in pairs, a seat on the frame, side cushions pivoted to the respective sides of the seat and slidably supported by the bars, detents on the side cushions, hooks on the brace bars engaging the detents, stops on the frame engaging the legs, and arms supported by the legs.

961,170. SWIVEL HOSE-COUPLING. JAMES SHOTWELL, Watsonville, Cal. Filed Apr. 14, 1909. Serial No. 489,938.



1. A detachable swivel hose coupling comprising a member having a tubular body section and a sleeve section, the body section having an externally screw threaded end, and the sleeve section having a bore with an enlarged portion at one end and a reduced bearing portion at its other end whereby an annular internal shoulder is formed between the two portions of the bore, the large portion of the bore having at its end internal screw threads to receive the threads on the body section whereby the two sections may be detachably connected, the outer end of said sleeve section being formed with a reduced cylindrical bearing portion, a second tubular member arranged within the sleeve section and rotatable in the reduced portion of the bore of the same, the inner end of said second member being formed with an annular radially projecting flange disposed in the large portion of the bore of the sleeve section, the portion of said second member projecting beyond the outer end of the sleeve section being externally screw threaded, annular packing rings arranged in the sleeve member between said flange and said internal shoulder and between said flange and the inner end of the body section of the first mentioned member, and a nut engaged with the external screw threads on the second member and having at its inner end a cylindrical socket to receive and rotate upon the reduced bearing portion of the sleeve section of the first mentioned member.

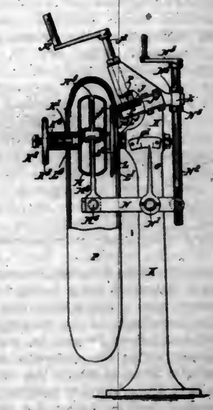
2. The herein described detachable swivel hose coupling comprising a member having body and sleeve sections, said body section being straight and tubular in shape and adapted to receive a hose section at one of its ends, its other end being externally screw threaded and formed adjacent thereto with an annular enlargement, said sleeve section having a cylindrical bore with an enlarged portion at one end to provide an annular stop shoulder, said enlarged portion of the bore having its outer part internally screw threaded to receive the threaded end of the body section, the exterior of said sleeve section being provided with flat faces, and its other extremity being reduced to provide a cylindrical bearing, a second tubular member having a cylindrical end to rotate in the bore of the sleeve section and formed with an annular radially projecting flange arranged in the enlarged portion of the bore of said sleeve section, said second tubular member having its other end reduced for the reception of a hose section and its intermediate portion externally screw threaded, packing rings arranged in the enlarged portion of the sleeve section on opposite sides of the flange on the second tubular member, and a sleeve nut having a flat faced exterior and internal screw threads to engage the threads on the intermediate portion of the second tubular member, said nut having its inner end enlarged and formed with a cylindrical socket to receive and rotate upon the reduced cylindrical bearing end of said sleeve section.

961,171. INK-HOLDER FOR PENS. JOSEPH A. SIMISKI, Worcester, Mass. Filed Sept. 4, 1909. Serial No. 516,254.



As an article of manufacture, a pen holder comprising a longitudinally split pen receiving sleeve and an adjustable ink retaining device formed from a T-shaped blank of sheet metal cut inwardly at the union of its head portion and its stem portion from both sides, said cuts being spaced from each other at their inner ends, said blank being cut again in parallel lines at right angles to the first named cuts and meeting the inner ends thereof, said second named cuts extending into the head of the T-shaped blank to points midway between the edges thereof to form a neck connected with the stem of the blank and with the head of the blank at its ends, said blank having its head portion bent to form a collar and engage around the split sleeve of the pen holder, said neck being bent at an angle at its point of union with the head and extended inwardly through the slot of the sleeve, said stem of the blank being curved forwardly through the sleeve and disposed with its forward end in position to engage a pen located in the sleeve, the end edges of the stem of the blank adjacent to the neck extending laterally beyond the slot of the sleeve within the sleeve.

961,172. MECHANISM FOR MANUFACTURING PNEUMATIC TIRES. THOMAS SLOPER, Devizes, England. Filed Feb. 12, 1910. Serial No. 543,602.



1. In mechanism for treating a tire after its removal from the "former" whereon it has been built up, the combination of, supports that suspend between them the portion of the tire to be operated upon, means for applying pressure to the fabric at the suspended portion of the tire, and means for advancing the tire to bring different parts under the operation of the pressure applying means, substantially as set forth.

2. In mechanism for treating a tire after its removal from the "former" whereon it has been built up, the combination of, supports that suspend between them the portion of the tire to be operated upon, means for applying pressure to the fabric at the edge of the suspended portion of the tire, and means for advancing the tire to bring different portions of the edge in succession under the operation of the pressure applying means, substantially as set forth.

3. In mechanism for treating a tire after its removal from the "former" whereon it has been built up, the combination of, two supporting rollers disposed one in front of the other and at such distance apart that the tire can be hung over both of them simultaneously, means for applying pressure to the fabric at that portion of the tire that is suspended between the two supporting rollers, and means for advancing the tire to bring different parts under the operation of the pressure applying means, substantially as set forth.

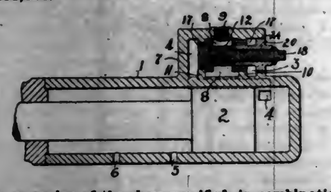
4. In mechanism for treating a tire after its removal from the "former" whereon it has been built up, the combination of, two supports disposed one in front of the other and at such distance apart that the tire can be hung over both of them simultaneously, a pressing roller so situated that it can operate upon the portion of the tire suspended between the supports, a bedding roller opposed to the pressing roller and having a bedding face whereon the suspended portion of the tire may be presented to the pressing roller, and means for causing the pressing roller to traverse the tire, substantially as set forth.

5. In mechanism for treating a tire after its removal from the "former" whereon it has been built up, the combination of, two supporting rollers disposed one in front of the other and at such distance apart that the tire can be hung over both of them simultaneously, a pressing roller so situated as to operate upon the edge of that portion of the tire that is suspended between the two supporting rollers and disposed at a different angle to that of the supporting rollers so as to correspond to the plane in which the edge of the tire lies, a bedding roller opposed to the pressing roller and having a bedding face whereon the suspended

portion of the tire may be presented to the pressing roller, and means for causing the pressing roller to traverse the edge of the tire, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

961,173. VALVE DEVICE. JOHN SLORACH, Cleveland, Johannesburg, Transvaal. Filed Oct. 19, 1908. Serial No. 458,424.



1. In an engine of the class specified, in combination the cylinder 1, piston 2, induction ports 3 and 4 to the cylinder ends, the valve chest 7 comprising the central feed chamber 8 and the terminals of the induction ports, the valve 12 having flat end faces 13 and 14, and the detachable valve seating comprising the perforated seat 15 carrying a threaded spindle 18 upon which the valve is loosely mounted, and the seat 16, said valve seating being held in the walls of the valve chest by means of a threaded collar 20 upon the seating 16, substantially as described.

2. The combination with a working cylinder having admission and exhaust ports, of a valve chest having a centrally arranged supply chamber for the motive fluid, a guiding spindle arranged parallel with the axis of the cylinder and extending through the supply chamber, a valve mounted to slide thereon having flat end faces surrounding the spindle, and valve seats surrounding the spindle having flat faces corresponding with the faces of the valve and apertured to permit the passage of the motive fluid from the supply chamber to the admission ports.

3. The combination of a cylinder provided with exhaust ports, a valve chest having a centrally arranged supply chamber for the motive fluid, ports connecting the respective ends of the cylinder with the valve chest and terminating in the valve seats, a valve in the valve chest adapted to be moved by compression of the fluid in the cylinder ends alternately to cover said valve seats, and means for varying the travel of the valve to accommodate variations of pressure.

4. The combination with a working cylinder having admission and exhaust ports, of a valve chest having a centrally arranged supply chamber for the motive fluid, a spindle arranged parallel with the axis of the cylinder extending through the supply chamber, an apertured valve seat surrounding the spindle at one end of the supply chamber, a sleeve adjustable on the spindle and provided with an apertured valve seat on the opposite side of the valve chamber, means for adjusting the sleeve on the spindle to move one valve seat toward and from the other to alter the travel of the valve, and a valve mounted to slide on the spindle between the valve seats.

5. The combination with a working cylinder and its working piston, of a valve chest having a centrally arranged supply chamber for the motive fluid, a passage for motive fluid leading from the rear end of the valve chamber to the front portion of the cylinder, a passage for conveying the motive fluid leading from the front end of the valve chest to the rear portion of the working cylinder, a valve moving parallel with the piston in the supply chamber admitting the motive fluid alternately to the supply passages at opposite ends of the valve chamber, and a piston reciprocating in the working cylinder which during its forward stroke compresses the motive fluid through the admission passage to the rear end of the valve chest and thus moves the valve to admit the motive fluid to the front portion of the cylinder and which on the rear stroke compresses the motive fluid through the admission passage leading to the front portion of the valve chest and again shifts the controlling valve.

961,174. ARCH-SUPPORT. ALFRED MARSHALL SMITH, Hagerstown, Md. Filed Dec. 3, 1909. Serial No. 531,215.



1. An arch support comprising a one-piece base plate provided with longitudinal slots, a brace plate having downturned tongues loosely to engage the slots, an arch plate secured at its ends to the base plate and operating to retain the brace plate in position, and means for flexing the latter plate whereby to vary the curvature of the arch plate.

2. An arch support comprising a rectangular one-piece base plate provided with longitudinal slots and with an intermediate reinforce, a resilient brace plate having downturned tongues to engage loosely with the slots, an arch plate secured at its ends to the base plate and serving to retain the brace plate in position, and screws threaded through the base plate and reinforce to flex the brace plate.

3. An arch support comprising a base plate provided with longitudinal slots and with an intermediate reinforce, a resilient longitudinally slotted brace plate having tongues loosely to engage the slots, an arch plate secured to the base plate and engaging the bellied portion of the brace plate to retain the latter in position, and screws threaded through the base plate and reinforce to flex the brace plate.

961,175. ELECTRIC FUSE. ANTHONY J. SMITH, New York, N. Y., assignor of one-third to William J. Smith, New York, N. Y. Filed June 15, 1909. Serial No. 502,221.



1. In an electric fuse, the combination of an inner cylindrical shell having a hole therein, caps at each end of the shell, conductors passing through said caps, a fuse connecting the inner ends of said conductors, and an outer cylindrical shell turnable on said inner shell and held against longitudinal movement by the flanges of said caps and having a hole adapted to be moved in and out of register with the hole of said inner shell.

2. In an electric fuse, the combination of an inner shell having a closable opening, caps attached to opposite ends of the shell, fastening strips secured at their ends to said caps and within the ends of said shell, and folded to form spaced portions, conductors passed through said caps and secured to and between said spaced portions, and a fuse connected at each end to said fastening strips respectively.

3. In an electric fuse, the combination of an inner shell having a closable opening, caps attached to the ends of said shell, fastening strips having their ends attached to the flanges of said caps and being bent to form a transverse middle portion and intermediate spaced parallel portions, conductors passing through said caps and secured to and between said spaced portions, holders secured to said transverse portions, and a fuse connecting said holders.

4. In an electric fuse, the combination of an inner shell having a closable opening, caps attached to the ends of said shell, fastening strips having their ends attached to the flanges of said caps and being bent to form a transverse middle portion and intermediate spaced parallel portions, conductors passing through said caps and secured to and between said spaced portions, holders each having a bent-up strip connected to one of said transverse portions and having spaced spring-clamps, and a packing of non-conducting powder in said shell.

961,176. STEP OR TREAD. FRANK H. STANWOOD, Baldwinsville, Mass. Filed Dec. 23, 1909. Serial No. 534,633.

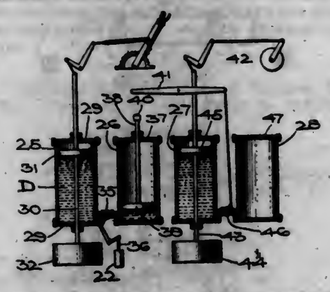


1. The step or tread wherein are combined a series of vertically corrugated metal strips placed on edge, a separate filling strip between each pair of such metal strips, and transverse clamping bolts.

2. The step or tread wherein are combined a series of vertically corrugated metal strips placed on edge, a separate filling strip between each pair of such metal strips, and transverse clamping bolts, the filling strips being grooved vertically to form seats for the corrugations of the metal strips.

3. The step or tread wherein are combined a series of vertically corrugated metal strips placed on edge, a separate filling strip between each pair of such metal strips, and transverse clamping bolts, the metal strips extending slightly above the filling strips.

961,177. ELECTRICAL BLOCK TRAIN-CONTROL SYSTEM. JOHN B. TONNAR, Clayton, Wash. Filed Dec. 11, 1908. Serial No. 467,089.



1. A device of the class described comprising a cylinder, a piston reciprocable therein, means for operating the piston, means for connecting said reciprocating member to a throttle, retarding means engaged with the reciprocating member, a second cylinder, a reciprocating member engaged therewith, a brake operating means connected with said second reciprocating member, means for actuating the second named reciprocating member, means carried by the first named reciprocating member to control said second named means, and retarding means engaged with the second named reciprocating member.

2. A device of the class described comprising a cylinder, a piston member reciprocable therein, throttle operating means connected with the piston, a resistant fluid disposed within the cylinder to retard the movement of the cylinder, a second cylinder, connections between the cylinders for passage of fluid matter from one to the other of the cylinders, a piston in the second cylinder movable by said fluid, and brake operating means adapted to be engaged by the second piston at a predetermined point in its movement.

3. A device of the class described comprising a cylinder, a piston reciprocable therein, means for operating the piston, throttle operating means connected with the piston, a retarding fluid disposed in the piston, a second cylinder, connections between the cylinders to allow passage of fluid from one to the other, a second piston disposed within the second cylinder, a third cylinder, a piston operated therein, means for operating the piston, brake operating means connected with the piston, a retarding fluid disposed in the cylinder, an outlet therefor, an actuating member adapted to be engaged by the second named piston for operation of the third mentioned piston at a predetermined point in the movement of the first named piston.

4. A device of the class described comprising a headed cylinder, a piston reciprocable therein, means for reciprocating the piston, throttle operating means connected with the piston, a retarding fluid disposed in the cylinder, a second similar cylinder, connections between the cylinders for passage of the retarding fluid from one to the other, means for governing the flow of the fluid, a second piston reciprocable in the second cylinder adapted to be operated by said fluid, and brake operating means adapted to be engaged by said second piston at a predetermined point in its movement.

5. A device of the class described comprising a headed cylinder, a piston reciprocable therein, means for operating the piston, throttle operating means connected with the piston, a retarding fluid disposed within the cylinder, a second cylinder, connections between the cylinders for the passage of fluid from one to the other, a second piston carried within the second cylinder, and adapted to be moved by said fluid, a third cylinder, a piston reciprocable therein, means for operating the piston, brake operating means connected with the piston, a retarding fluid in the last named cylinder, a reservoir member disposed adjacent thereto, connections between the reservoir and the last named cylinder for the passage of fluid from one to the other, means for governing the passage of the fluid from the last named cylinder to the reservoir, a controller for the brake operating mechanism, said controller adapted to be engaged by the second named piston for operation of the brake at a predetermined point in the movement of the first named piston.

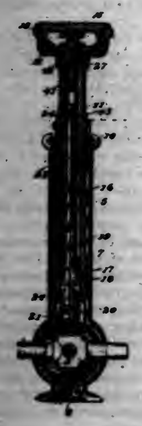
961,178. CURB-BOX. AARON J. TYLER, Rochester, N. Y. Filed Mar. 17, 1909. Serial No. 484,049.

1. In a curb box, a valve casing, a stand-pipe, a surface box permanently secured to the stand-pipe, telescopic members disposed within the stand-pipe, one of which is provided with means for engagement with the valve, and means detachably secured to the surface box and operatively connected with the telescopic members for permitting the withdrawal of said telescopic members from the stand-pipe without changing the position of the surface box or disturbing the valve.

2. In a curb box, a valve casing, a stand-pipe, a surface box permanently secured to the stand-pipe, telescopic members disposed within the stand-pipe, one of which is provided with means for engagement with the valve, a cap-piece secured to the surface box and operatively connected with the telescopic members for permitting the withdrawal of said telescopic members from the stand-pipe without changing the position of the surface box or disturbing the valve, and means for detachably securing the cap-piece in position on the surface box.

3. In a curb box, a valve casing, a stand-pipe, a surface box permanently secured to the stand-pipe, telescopic members disposed within the stand-pipe, one of which is provided with means for engagement with a valve, a cap-

piece detachably secured to the surface box, and a pin rotatably mounted in the cap-piece and operatively connected with one of the telescopic members for permitting the withdrawal of said telescopic members from the stand-pipe without changing the position of the surface box or disturbing the valve.



4. In a curb box, a valve casing, a stand-pipe carried by the casing, a surface box permanently secured to the stand-pipe, telescopic members slidably mounted within the stand-pipe one of which is provided with means for engagement with a valve, a cap-piece detachably secured to the surface box and operatively connected with one of the telescopic members for permitting the withdrawal of said telescopic members from the stand-pipe without changing the position of the surface box or disturbing the valve, and a cover forming a housing for the cap-piece.

5. In a curb box, a valve casing, a stand-pipe slidably mounted for vertical movement within the casing but locked against rotation, a surface box permanently secured to the stand-pipe, telescopic members disposed within the stand-pipe one of which is provided with means for engagement with a valve, a cap-piece housed within the curb box, a fastening device for detachably securing the cap-piece to the surface box, a key seated in the cap-piece and operatively connected with one of the telescopic members for permitting the withdrawal of said telescopic members from the standpipe without changing the position of the surface box or disturbing the valve, and a cover forming a housing for the fastening device of the cap-piece.

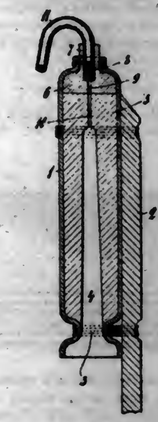
[Claims 6 to 21 not printed in the Gazette.]

961,179. SELF-PROPELLING PROJECTILE. WILHELM THEODOR UNGE, Stockholm, Sweden. Filed Sept. 19, 1908. Serial No. 453,865.

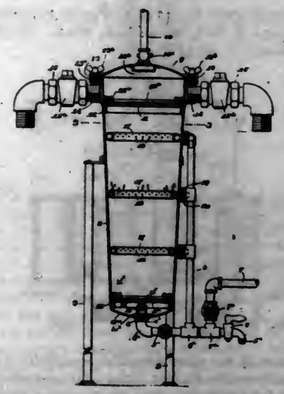
1. A self propelling projectile having a casing, a combustible composition contained therein and arranged to generate a rearwardly directed propelling fluid, and provided with a longitudinal channel forming a combustion surface and extended toward the rear end of the projectile, and an ignition opening at the forward part of the projectile and communicating with said channel.

2. A self propelling projectile having a casing, a combustible composition contained therein and arranged to generate a rearwardly directed propelling fluid, and provided with a longitudinal channel forming a combustion surface and extended toward the rear end of the projectile, a material difficult of combustion arranged at the forward part of the projectile and having a chamber provided with a charge, means for igniting the charge in said chamber, and a passage affording communication from said chamber to said longitudinally extended channel.

3. A self propelling projectile having a casing, a combustible composition contained therein and arranged to generate a rearwardly directed propelling fluid, and provided with a longitudinal channel forming a combustion surface and extended toward the rear end of the projectile, a material difficult of combustion arranged at the forward part of the projectile and provided with a chamber, a passage affording communication from said chamber to said longitudinal channel, and an igniter arranged in said chamber.



961,180. BONE-BLACK FILTER FOR CLARIFYING GELATIN LIQUORS AND THE LIKE. JOHN HENRY UTLEY, Camden, N. J., assignor of one-third to Henry John Webster, Camden, N. J., and one-third to William M. Hardie, Pittsburg, Pa. Filed Aug. 21, 1909. Serial No. 514,005.



1. Apparatus for purifying bone-black and clarifying gelatin liquors and the like, by a continuous operation, comprising in combination a suitable container vessel, filtering devices near its opposite ends, valve-controlled tubular means at its base adapted to discharge steam in an upward direction, a plurality of perforated steam tubes within the container and between the filtering devices thereof, with valve-controlled means to connect the same with a source of steam supply, and tubular means, with valvular devices governing the same, at opposite ends of the container, adapted to lead a volume of hot water and a volume of liquor to be treated, successively, to and from the same, in a downwardly direction.

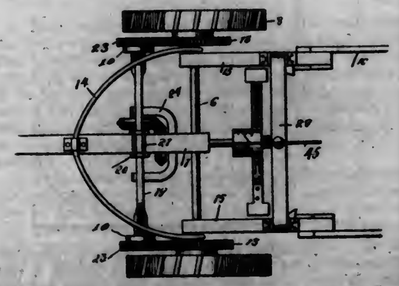
2. In apparatus of the character recited the combination with a suitable container, of filtering devices near its opposite ends, valve-controlled tubular means adapted to discharge hot water and liquor successively, over the upper filtering device, a chambered cap in the base of the container having a series of perforations adapted to diffuse incoming steam against substantially the whole area of the lower filtering device, and also to discharge liquid therethrough, tubular means mounted in the open end of said cap and a plurality of valves governing the same adapted to control the successive ingress of steam and the discharge of hot water and liquor treated.

3. In apparatus of the character recited the combination with a suitable container of inverted frustoconical form, provided with filtering devices near its opposite ends, tubular means to lead a volume of liquor to be treated and to discharge hot water, alternately, in a downward direction through the container, tubular means at the base of the container, with a plurality of valves governing the same adapted to draw off the liquor treated, and to discharge a current of steam in an upwardly direction through the container, alternately, and a plurality of perforated steam tubes within the container, with valve-controlled means to connect the same with a source of steam supply.

4. Apparatus of the character recited comprising a suitable container vessel of inverted frusto-conical form, having interior filtering devices near its opposite ends, tubular means to lead a volume of hot water and a volume of liquor to be treated, to and from said container in a downward direction, and a plurality of perforated tubular rings arranged in series within the container and between the filtering devices, connecting pipes extending from each of the same through the wall of the container, a steam supply pipe common to each of the same, and valvular means governing each of said perforated tubular rings.

5. Apparatus of the character recited comprising a suitable container of inverted frustoconical form having interior filtering devices near its opposite ends, and a centrally-apertured closing cap, with valve-controlled tubular means mounted in said aperture, deflecting means mounted on said cap below said aperture adapted to diffuse an incoming volume of liquid over the contiguous filtering device, tubular means mounted in an aperture in the base of the container, a perforated cap over said aperture and below the contiguous filtering device, and valvular devices in said tubular means to admit steam or discharge liquid at pleasure.

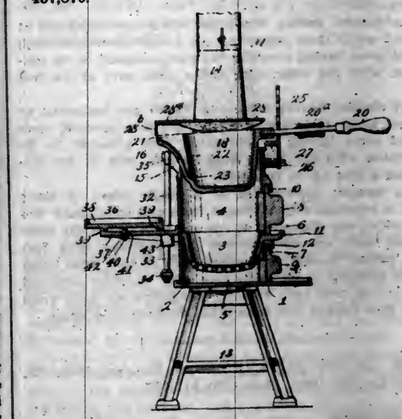
961,181. COTTON-CHOPPER. JOHN J. VICKERS, Leesburg, Tex. Filed Sept. 3, 1909. Serial No. 516,003.



1. A cotton chopping attachment for cultivators including an arched frame member, means for connecting the same with the tongue of a cultivator, a shaft supported for rotation in the arched frame member and adapted to receive motion from the cultivator wheels, a yoke supported upon the shaft, a cross bar hingedly connected with the cultivator beams, a frame depending from the cross bar, and a chopper carrying shaft supported for rotation in the yoke and in a block vertically movable in the depending frame, said shaft being geared to the shaft supported in the arched frame.

2. In a cotton chopping attachment for cultivators, an arched frame adapted to be connected with a cultivator tongue, a cross bar adapted to be supported upon and hingedly connected with a pair of cultivator beams, a shaft journaled in the arched frame, a block connected with the cross bar for vertically sliding movement, a yoke connected with the shaft journaled in the arched frame, a shaft comprising sections universally jointed together and supported for rotation in the yoke and in the vertically movable block, a spring pressed chopper disk mounted upon one of the shaft sections, clutch means connecting the chopper disk with the shaft section, and means for transmitting motion to the jointed shaft from the shaft journaled in the arched frame.

961,182. CASTING APPARATUS. GEORGE H. VINING, Kansas City, Mo. Filed Oct. 15, 1908. Serial No. 457,870.



1. In combination, a furnace open at its upper end, a crucible adjustably mounted on the furnace and adapted to rest in the upper open end thereof, and a table supported by the furnace beneath the spout of said crucible.

2. In combination, a furnace, a crucible adjustably mounted on said furnace, adapted to either close or partly open the upper end thereof, and a lid hinged to the furnace and adapted to rest on the crucible so that it will be lifted to partly open the same when the crucible is adjusted to partly open the furnace.

3. In combination, a furnace open at its upper end, a crucible adjustably mounted on the furnace and adapted to rest in the upper end thereof, a handle on said crucible for adjusting it up or down, and a ratchet-bar secured to the furnace, adapted to be engaged by the handle to support the crucible in any of its adjusted positions.

4. In combination, a furnace, a crucible adjustably mounted on said furnace adapted to either close or partly open the upper end thereof, a handle on said crucible, a ratchet-bar pivoted to the furnace adapted to be engaged by the handle to support the crucible in any of its adjusted positions, a lid hinged to the furnace and adapted to rest on the crucible so it will be lifted thereby to partly open the same when the crucible is adjusted to partly open the furnace, and means adjacent the lid for holding the same upward in an inoperative position.

5. In combination, a furnace open at its upper end, a crucible adjustably and removably mounted on the furnace adapted to either close or partly open the upper end

thereof, a lid hinged to the furnace and adapted to rest on the crucible, so it will be lifted thereby to partly open the same when said crucible is adjusted to partly open the furnace, and a turn-button adjacent the lid for holding the same upward in an inoperative position.

[Claims 6 to 11 not printed in the Gazette.]

961,183. CHAPLET FOR MOLDING. GEORGE L. WAITT, Buffalo, N. Y. Filed Sept. 23, 1909. Serial No. 519,246.



1. A chaplet of V-shaped form having two arms which are connected at one end while their opposite ends are disconnected.

2. A chaplet having two arms which are connected at one end while their opposite ends are disconnected, each of said arms having a contracted part adjacent to its connection with the other arm and a wide part at its free end.

3. A chaplet having two arms which are connected at one end while their opposite ends are disconnected, each of said arms having a contracted part adjacent to its connection with the other arm, a wide part at its free end and a foot at its free end.

4. A chaplet constructed of a single piece of sheet metal in substantially V-shaped form and comprising two arms which are connected at one end by a bow while their opposite ends are disconnected and provided with feet which project toward each other, each of said arms being narrow adjacent to its connection with the other arm and wide at its free end, forming shoulders on said arms which face toward the connection between said arms.

961,184. SCREW-DRIVER. EDWIN WALKER, Erie, Pa. Filed Apr. 26, 1906. Serial No. 313,767.



1. A tool comprising a blade, and a solid handle, said blade having reinforcing ribs which are embedded in the material of the handle and key the parts firmly together.

2. A tool comprising a blade, and a solid handle, said blade having reinforcing ribs which extend longitudinally from a point adjacent to the working end thereof into the material of said handle, said ribs keying the handle and blade solidly together.

3. In a tool, a blade having a longitudinal reinforcing rib or flange, the latter terminating short of an active end of the blade, said rib and blade each having thin edges adapted for engagement with a nick or slot in a screw-head.

4. In a tool, a tool blade of double cruciform cross-section.

961,185. CONTROLLER-SWITCH FOR ELECTRIC MOTORS. SAMUEL M. WARD, Jr., Washington, D. C., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 17, 1909. Serial No. 484,051.

1. The combination of a casing, a handle having two operative positions and an intermediate position, a quick acting movable member on the handle, and a part on the casing coöperating with said movable member, whereby the handle must be thrown in one direction each time before it is thrown in the other direction.



2. The combination of a switch member having two operative positions and an intermediate neutral position, a stationary frame, a part on the frame having a shoulder, and a movable part on the switch member coöperatively related with said shouldered part and movable above and below the same for preventing said switch member from being moved in one direction without first being moved in the other direction.

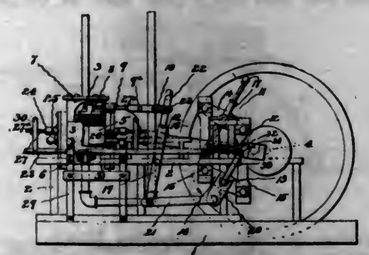
3. In a motor controller, the combination of a casing, a switch having a starting and a running position and an intermediate position, a handle for the switch, a longitudinally movable bolt on the handle, a cam surface on the casing for engaging with said bolt, and a spring for moving the bolt from alinement with said surface, whereby the handle must be thrown to the starting position before it is thrown to the running position.

4. In a motor controller, the combination of a casing, a switch having a starting and a running position and an intermediate position, a handle for the switch, a longitudinally movable bolt on the handle biased to one position, a laterally projecting cam surface on the controller casing having a shoulder coöperating with said bolt, and means for moving the bolt to its biased position when the handle is thrown from the neutral position, whereby the handle must be thrown to the starting position before it is thrown to the running position.

5. The combination of a casing, a handle having a starting and a running position and an intermediate neutral position, a movable member on the handle having a lateral projection, and means on the casing for engaging said lateral projection to prevent the handle being thrown to one of said operative positions before it is thrown to the other position and for engaging said movable member in throwing the handle to the latter position.

[Claims 6 to 12 not printed in the Gazette.]

961,186. STEAM-ENGINE. HENRY W. WEAVER, Hutchinson, Kans. Filed Jan. 19, 1909. Serial No. 473,108.



1. In a reciprocating steam engine having a reciprocating valve actuated by a valve rod, and a pitman, a rock shaft, operative connections between said pitman and rock shaft, arms secured to said shaft, another rock shaft, arms secured to the last mentioned shaft, said arms being operatively connected, an arm secured to the last mentioned shaft, a rocking frame suitably mounted and operatively connected to the valve rod, and a rod connecting said arm and frame.

2. In a reciprocating steam engine having a reciprocating valve actuated by a valve rod, and a pitman, a rock shaft, a rod pivotally secured to the pitman and slidably mounted on the rock shaft, arms secured to said shaft, another rock shaft suitably journaled, arms secured to the last mentioned shaft, said arms being operatively connected, an arm secured to the last mentioned shaft, and operative connections between said arm and valve rod.

3. In a reciprocating steam engine having a reciprocating valve actuated by a valve rod having a longitudinal slot therein, and a pitman, a rock shaft, a tubular guide secured to said shaft, a rod pivotally secured to the pitman and slidably mounted in said guide, arms secured to said shaft, another rock shaft suitably journaled, arms secured to the last mentioned shaft, said arms being operatively connected, an arm secured to the last described shaft, a rocking frame suitably mounted and secured to the valve rod through the slot therein, and a rod pivotally secured to the last mentioned arm and to said frame.

4. In a steam engine, a cylinder, the main exhaust port located opposite the middle of the cylinder, a reciprocating piston in the cylinder slightly less than one half the length of the cylinder, blow-off valves in the ends of the cylinder having sliding valve plungers, a rod slidably mounted, arms secured to said rod and to the plungers, a rod pivotally secured to said sliding rod, a rock shaft suitably journaled and operatively connected to the engine, and operative connections between said rock shaft and the pivoted rod aforesaid.

5. In a steam engine, a cylinder, the main exhaust port located opposite the middle of the cylinder, a reciprocating piston in the cylinder slightly less than one-half the length of the cylinder, blow-off valves in the end of the cylinder having sliding valve plungers, a rod slidably mounted, arms secured to said rod and to the plungers, a rod pivotally secured to said sliding rod, a slotted link secured to said pivoted rod, a rock shaft suitably journaled and operatively connected to the engine, an arm secured to said rock shaft, and a pin secured to said arm and riding in the slotted link aforesaid.

[Claims 6 to 8 not printed in the Gazette.]

961,187. BACK-PEDALING COASTER-BRAKE. RALPH D. WEBSTER, Elmira, N. Y. Filed June 16, 1909. Serial No. 502,624.



1. In an anchoring device for coaster brake mechanism, the combination with a bifurcated fork, of a brake element that is held against rotation by a part that enters the fork from one side; a washer; and a plate that is adapted to lie between and contiguous with the washer and that side of the fork that is farthest from the brake element, said plate having lateral projections that engage shoulders on a contiguous part; substantially as shown and described.

2. In an anchoring device for coaster brake mechanism, the combination with a bifurcated fork, of a brake element that is held against rotation by a part that enters the fork from one side; a washer; and a plate that is adapted to lie between and contiguous with that side of the fork that is farthest from the brake element, said plate having lateral projections on both its sides that engage shoulders on the fork and washer, respectively; substantially as shown and described.

3. In an anchoring device for coaster brake mechanism, the combination with a bifurcated fork, a brake element held against rotation by a part that enters the fork from one side and a washer, of a plate that is adapted to lie between and contiguous with the washer and fork, on the side of the latter opposite said brake element, each plate having lateral projections that engage shoulders on a contiguous part and a part adapted to overhang the fork; substantially as shown and described.

4. In an anchoring device for coaster brake mechanism, the combination with a bifurcated fork having on its outer face ribs parallel with the slot, of a brake element held against rotation by a part that lies within the fork; a washer, having parallel ribs on its inner face; and one or more plates, having parallel ribs on each side, adapted to mesh with those on the fork and washer, respectively; substantially as shown and described.

5. In an anchoring device for coaster brake mechanism, the combination with a bifurcated fork having on its outer face ribs parallel with the slot, of a brake element held against rotation by a part that lies within the fork; a washer, having parallel ribs on its inner face; and a plate for each branch of the fork, each plate having parallel ribs on each side, adapted to mesh with those on the fork and washer, respectively, and a head adapted to overhang the fork; substantially as shown and described.

961,188. SAFETY DEVICE FOR REVOLVERS. JOSEPH H. WESSON, Springfield, Mass. Filed June 18, 1909. Serial No. 503,033.

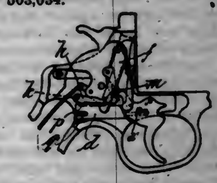


1. The combination with the frame of a revolver of a slide-block having free endwise movement on a part of the frame, a hand to rotate the cylinder, a trigger and hammer, and means to retract the hammer after the fall thereof, a projection on the hand to engage the slide-block to move the latter out of and into position to block the movement of the hammer toward the recoil-plate.

2. In a revolver, a hammer and trigger, and a hand connected with the trigger, together with a slide-block actuated by the movement of the hand into position to block the fall of the hammer, and a hammer-retracting mechanism operable to retract the hammer in advance of the movement of the hand to actuate the slide-block.

3. In a revolver, a hammer and trigger and hammer-retracting mechanism, a hand connected to the trigger, and a slide-block located near the hand and with which the latter has a lost motion connection, whereby limited movement for the hand in either direction is permitted while the slide-block is stationary.

961,189. SAFETY DEVICE FOR REVOLVERS. JOSEPH H. WESSON, Springfield, Mass. Filed June 18, 1909. Serial No. 503,034.



1. The combination with the frame of a revolver, of a slide-block having a free endwise movement on a part of the frame, a trigger and hammer, and means to retract the hammer after the fall thereof, and means of engagement extending between the hammer-retracting device and

said slide-block to move the latter out of, and into position to block the forward movement of the hammer.

2. In a revolver, a hammer, and a retracting mechanism for the latter, a slide-block movable into, and out of, a space between the hammer and the frame when the hammer is in a retracted position, a lever pivoted to the frame of the arm and having a positive connection with the hammer-retracting device and with said slide-block, whereby the latter may be actuated at the proper time by the movement of the hammer-retracting device.

961,190. FOLDING CANDLESTICK. GEORGE WINCHESTER, Black Bear, Idaho. Filed Feb. 12, 1910. Serial No. 543,576.



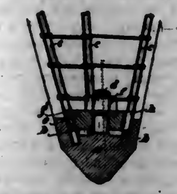
1. In a folding candlestick a frame comprising a handle and a pair of arms, in combination with a clamping bolt extending through the ends of said arms, a spike pivotally mounted on said bolt and adapted to fold between said arms, lugs on said spike at a point removed from said bolt, said arms being provided with recesses to receive said lugs, an extension on said spike and lugs on said extension at the same distance from the bolt as the first said lugs and adapted to enter said recesses when the spike is in extended position, and a candleholder on said frame, substantially as described.

2. In a folding candlestick a handle and a pair of substantially parallel spring arms extending therefrom, in combination with a bolt extending through the outer ends of said arms and a thumb nut on said bolt adapted to draw said arms toward each other, a candleholder on one of said arms, a block pivotally mounted on one of said arms and a hook pivotally mounted on said block and adapted to fold down against said arms and said handle and the point of said hook being twisted to extend into said handle when in folded position, substantially as described.

3. In a folding candlestick a frame comprising a handle and a pair of substantially parallel spring arms in combination with a candleholder on said frame, a block pivotally mounted on one of said arms and a hook pivotally mounted on said block and adapted to fold down on said frame, the point being adapted to extend within said handle and the inner face of the handle on one side being provided with a recess to receive said point and a shoulder formed on said hook and adapted to extend between said arms and impinge against the arm opposite the side containing said recess and a clamping bolt extending through said arms and adapted to draw the same firmly together against said shoulder to maintain said point in said recess, substantially as described.

4. In a folding candlestick a frame comprising a handle and a pair of arms extending therefrom, in combination with a bolt extending through the ends of said arms, a spike pivotally mounted on said bolt and adapted to fold between said arms and into said handle, an extension on said spike adapted to be received between said arms when the spike is in extended position, a block pivotally mounted on said frame, a hook pivotally mounted on said block and adapted to fold down on said frame, an extension on said hook adapted to extend downwardly between said arms when the hook is raised into operative position, the end of the extension on said spike being adapted to engage the extension on the hook to lock said hook in extended position, substantially as described.

961,191. FERROCONCRETE PILE. RUDOLPH WOLLE, Leipsig, Germany. Filed Jan. 31, 1910. Serial No. 541,089.



1. In a concrete pile the combination with the longitudinal truss members of a shoe recessed to receive the ends of said members, a clamping plate having bearing against the faces of the truss members and means for pressing said plate toward the shoe into clamping position.

2. In a concrete pile the combination with the longitudinal truss members of a shoe recessed to receive the ends of said members, a conical clamping plate having bearing against the faces of the truss members and means for pressing said plate toward the shoe into clamping position.

3. In a concrete pile the combination with the longitudinal truss members, of a shoe recessed to receive the ends of said members and having a screw threaded boss thereon, a clamping plate having bearing against the inner faces of the truss members and sliding on said boss, and a nut on said boss for pressing said plate toward the shoe into clamping position.

4. In a concrete pile the combination with the longitudinal truss members of a shoe recessed to receive the ends of said members, a clamping plate having projections with recessed ends bearing respectively against the inner faces of the truss members and means for pressing said plate toward the shoe into clamping position.

961,192. PHOTOGRAPHIC SHUTTER. ANDREW WOLLENSAK, Rochester, N. Y., assignor to Wollensak Optical Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 9, 1909. Serial No. 512,044.



1. In a photographic shutter, a casing; shutter mechanism inclosed therein; a fixed plate within said casing having keyhole slots therein; a scale plate forming the front of said casing and having posts provided with enlarged heads adapted to engage in said keyhole slots; and a locking lever in said casing for holding one of said posts in the narrow portion of its keyhole slot.

2. In a photographic shutter having an exposure opening, a blade movable in either of two directions to open and close said opening; a motor spring acting in one direction only; and mechanism interposed between the motor spring and the blade for operating the blade by the spring in either of two opposite directions to open and close the shutter by movement in each direction.

3. In a photographic shutter having an exposure opening, shutter blades pivoted around said opening; a ring connected to said blades for opening and closing the blades by motion in either of two opposite directions; a motor spring acting in one direction only; and mechanism interposed between the ring and the motor spring for operating said ring by the spring in either of two opposite directions to open and close the shutter by movement in each direction.

4. In a photographic shutter, a casing; shutter mechanism inclosed therein; a fixed plate within said casing having keyhole slots therein; a scale plate forming the front of said casing and having posts provided with enlarged heads adapted to engage in said keyhole slots; a locking lever in said casing for holding one of said posts in the narrow portion of its keyhole slot; and a rotary controlling plate held between said two plates and provided with cams for engaging and controlling parts of the shutter mechanism.

5. In a photographic shutter, a shutter blade; a motor spring acting in one direction only; and automatic reversing mechanism interposed between the motor spring and the shutter blade for operating the blade in opposite directions by successive spring impulses.

[Claims 6 to 21 not printed in the Gazette.]

961,193. ENDLESS CONVEYER. FRED G. WOOD, Yorkville, Mich., assignor to The Price Cereal Food Company, Chicago, Ill., a Corporation of New Jersey. Filed Nov. 13, 1905. Serial No. 287,031.



1. In a conveyer, belts arranged parallel to each other and traveling in opposed directions, in combination with a rotating table between and in connection with said belts, said table being adapted to conduct articles in reverse directions from one belt to the other, substantially as described.

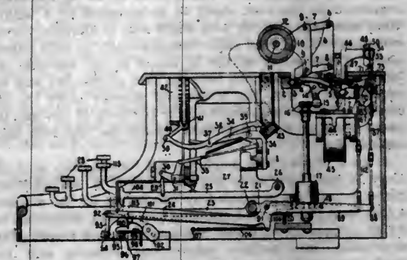
2. In an endless conveyer, the combination of belts, a rotating table connecting said belts and a triangular plate bridging the space between one of said belts and table, said plate being arranged in substantially the same plane as the belt and but slightly above the surface of the table, substantially as described.

3. In an endless conveyer, the combination of endless belts traveling in opposite directions, and guide rails at each side thereof with a rotating table, the outer edge of which is of minimum thickness and the surface of which is composed of a thin steel plate, a plate bridging the space between said table and belt, the surface of which plate is substantially in a plane with the belt, and but slightly above the plane of the table, substantially as described.

4. In an endless conveyer, the combination of endless belt carriers moving in opposite directions, a circular table connecting said carriers and means for rotating said table, a bed plate supporting said table in an elevated position and substantially in a plane with said carriers, a triangular plate spanning the space between said belt and table, the upper surface of which plate is in the same plane as that of the corresponding surface of the belt and in a plane but slightly above the table, whereby cartons or other articles are conducted with gradually increasing frictional contact with the table and by a continuously uniform movement, substantially as described.

5. In a device of the character described, the combination of a frame, a pair of endless belt conveyers moving along approximately in parallel lines but in opposite directions near the plane of said frame, and means adjacent each conveyer adapted to receive objects therefrom and deliver said objects to the other conveyer, substantially as described.

961,194. TYPE-WRITING MACHINE. OSCAR WOODWARD, Montclair, N. J., assignor to Yost Writing Machine Company, Ilion, N. Y., a Corporation of New York. Filed Mar. 24, 1909. Serial No. 485,512.



1. In a typewriting machine, the combination of a carriage, a line lock stop carried thereby, a longitudinally movable rock shaft carried by the frame of the machine, a line lock stop carried thereby, key levers, a locking bar which coöperates with said key levers to lock them against depression, intermediate connections between said rock shaft and said locking bar whereby the latter will be moved to the locking position by a longitudinal movement of said rock shaft, a release key at the keyboard of the machine, intermediate connections between said release key and said rock shaft, to rock the latter and thereby move the line lock stop on the rock shaft out of the path of the line lock stop on the carriage and thus release the line lock mechanism, a final line lock stop coöperative with said line lock stop on the rock shaft, and means for rendering the release key inoperative to release the line lock mechanism when said last mentioned stops are brought into coöperation.

2. In a typewriting machine, the combination of a carriage, margin and line lock stops carried thereby, a cooperative stop on the frame of the machine with which said first mentioned stops directly coöperate, a longitudinally movable rock shaft which carries said coöperative stop, a release key, intermediate connections between said release key and rock shaft for turning the rock shaft to move said coöperative stop out of the path of the margin and line lock stops on the carriage, key levers, a locking bar coöperative therewith to lock the key levers against depression, intermediate connections between said rock shaft and locking bar whereby a longitudinal movement of the rock shaft is effective to move the locking bar to the working position, a final line lock stop on the carriage, and means for rendering said release key inoperative when the final line lock stop and the coöperative stop are brought into coöperation.

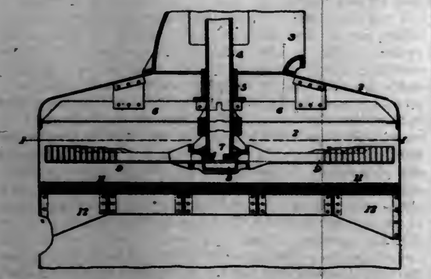
3. In a typewriting machine, the combination of a carriage, a line lock stop carried thereby, a longitudinally movable rock shaft carried by the frame of the machine, a line lock stop carried thereby, key levers, a locking bar which coöperates with said key levers to lock them against depression, intermediate connections between said rock shaft and said locking bar whereby the latter will be moved to the locking position by a longitudinal movement of said rock shaft, said intermediate connections including a connection with said rock shaft that affords a turning of the shaft without affecting the intermediate connections and the locking bar controlled thereby, a release key at the keyboard of the machine, and intermediate connections between said release key and said rock shaft to rock the latter and thereby move the line lock stop on the rock shaft out of the path of the line lock stop on the carriage and thus release the line lock mechanism.

4. In a typewriting machine, the combination of a carriage, a line lock stop carried thereby, a longitudinally movable rock shaft carried by the frame of the machine, a line lock stop carried thereby, key levers, a locking bar which coöperates with said key levers to lock them against depression, intermediate connections between said rock shaft and said locking bar whereby the latter will be moved to the locking position by a longitudinal movement of said rock shaft, said intermediate connections including an angular lever one arm of which is operatively connected to the rock shaft to be actuated by a longitudinal movement of the rock shaft and to afford a turning movement of the rock shaft independently of said angular lever, a release key at the keyboard of the machine, and intermediate connections between said release key and said rock shaft to rock the latter and thereby move the line lock stop on the rock shaft out of the path of the line lock stop on the carriage, and thus release the line lock mechanism.

5. In a typewriting machine, the combination of a carriage, a line lock stop carried thereby, a longitudinally movable rock shaft carried by the frame of the machine, a line lock stop carried thereby, key levers, a locking bar which coöperates with said key levers to lock them against depression, intermediate connections between said rock shaft and said locking bar whereby the latter will be moved to the locking position by a longitudinal movement of said rock shaft, said intermediate connections comprising an angular lever directly connected with said rock shaft, a link connected with said angular lever, a second lever connected with said link, and an operative connection between said last mentioned lever and the locking bar, a release key at the keyboard of the machine, and intermediate connections between said release key and said rock shaft to rock the latter and thereby move the line lock stop on the rock shaft out of the path of the line lock stop on the carriage and thus release the line lock mechanism.

[Claims 6 to 14 not printed in the Gazette.]

961,195. SPRAYING DEVICE. WILLIAM AHLEN, Duquesne, Pa. Filed Mar. 9, 1909. Serial No. 482,278.



1. Apparatus for spraying, comprising a rotary arm having a plurality of fluid-conducting passages and means for distributing the fluid passing therethrough as it enters said passages into streams of varying volumes.

2. Apparatus for spraying, comprising a rotary arm having a series of open fluid-conducting troughs from which the fluid is discharged, said trough having means arranged to vary the volumes of the entering streams of fluid discharged therefrom.

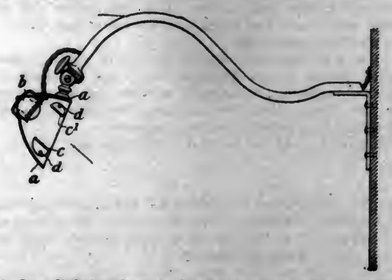
3. Apparatus for spraying, comprising a plurality of radial rotary arms, said arms having separated fluid conducting channels therein and means on the arms arranged to vary the volume of entering streams of fluid flowing through the channels.

4. Apparatus for spraying, comprising a rotary spindle having a plurality of radial horisontally extending arms, means for rotating said spindle and arms, and means for supplying fluid to said arms in streams of varying volume, the arms being arranged to discharge fluid therefrom in a plurality of streams.

5. Apparatus for spraying, comprising a rotary arm having a plurality of separate fluid-conducting channels, through which fluid is discharged, and means for supplying fluid simultaneously to said channels in varying volumes.

[Claims 6 to 9 not printed in the Gazette.]

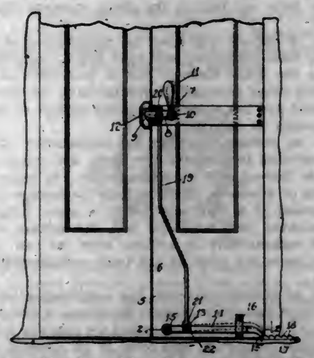
961,196. ELECTRIC-LIGHT REFLECTOR. GILBERT FOX ALLOM, London, England. Filed Apr. 8, 1910. Serial No. 554,287.



1. In a lighting fixture, the combination with a channel-shaped reflector having a tubular lamp or lamps fixed in the back of the channel, of a screen or screens having a plurality of non-reflecting surfaces and located in said channel.

2. The combination with a channel shaped reflector, having tubular lamps fixed in the back of the channel, of non-reflecting screens adjustably secured to the end surface of the reflector, having flat surfaces and adapted to be placed in substantial parallelism with the rays emitted from the lamps or from the reflectors.

961,197. SLIDING-DOOR LATCH. DAVID A. ANDERSON, Chicago, Ill., assignor to Central Architectural Iron Works, Chicago, Ill., a Corporation of Illinois. Filed Sept. 7, 1909. Serial No. 516,393.



1. The combination with a door of two latching means in different positions upon the door interconnected for simultaneous unlatching operation, and arranged to effect their latching function successively in the travel of the door toward closed position.

2. In a door latch, the combination with a door of a primary latch located upon the door at a height free for inspection to operate only when the door is closed, a secondary latch arranged at a relatively remote and visually obscure point, functionally operable in advance of the primary latch.

3. In an elevator door latch, the combination of a latching tongue at the side of the door near its vertical mid area, a handle for said tongue, a gravity pawl near the bottom of the door, a rack for said pawl, a link connection between said gravity pawl and the upper latching tongue, and a catch for said upper latch arranged to receive said latch after the pawl has coöperated with the rack.

4. In an elevator latch, the combination with a door, and a complementary coacting part, of a catch upon said complementary part, a primary latch tongue upon the door coöperating with said catch and arranged near the vertical mid-area of the door at the forward edge thereof, an operating handle for said latch tongue, a gravity latch pawl pivoted near the front edge of the door and extending adjacent the rear edge thereof substantially parallel with the floor, a guide for said pawl arranged to hold the latter above the floor when in lowest position, a rack with which said pawl coöperates before the primary latch functionally operates, and a link connecting the primary latch with said latching pawl having a lost motion connection in one direction whereby the secondary-latch pawl may operate upon its rack without affecting the primary latch, but whereby the elevation of the primary latch raises also the latching pawl.

5. In an elevator door latch, the combination of a side butt-latch and a bottom slide-latch, and means whereby the opening of the butt-latch raises the slide-latch, but whereby the slide-latch may be raised without moving the butt-latch.

[Claim 6 not printed in the Gazette.]

961,198. CUTTER-GUARD. EMANUEL ANDER, Marinette, Wis. Filed Nov. 19, 1909. Serial No. 528,988.



1. A guard mechanism for planer cutters comprising an arm carrying a guard plate to cover the cutter when in one position, a relatively fixed hinge piece secured to the planer, a hinge plate hinged to said hinge piece, said arm being pivotally mounted at one end on said hinge plate, and means preventing said hinge plate from moving when said arm is in position on the planer bed.

2. A planer cutter guard comprising a clamp removably securable to the planer bed, a hinge piece carried by said clamp, a hinge plate connected to said hinge piece, a pivot bolt carried by said hinge plate, a guard carrying arm pivoted on said bolt, means interposed between said arm and said hinge plate for locking said hinge plate from movement on said hinge piece, and yieldable means continuously tending to move said arm in one direction.

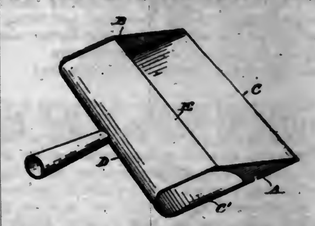
3. A planer cutter guard comprising a clamp removably securable to the planer bed, a hinge piece carried by said clamp, a hinge plate connected to said hinge piece, a pivot bolt carried by said hinge plate, a guard carrying arm pivoted on said bolt, means interposed between said arm and said hinge plate for locking said hinge plate from movement on said hinge piece, yieldable means continuously tending to move said arm in one direction, said hinge plate locking means comprising a catch member connected with said pivot bolt and with said arm to move with said arm and having a projecting portion to ride over said hinge piece when the hinge plate is in one position.

4. A planer cutter guard comprising a clamp removably securable to the planer bed, a hinge piece carried by said clamp, a hinge plate connected to said hinge piece, a pivot bolt carried by said hinge plate, a guard carrying arm pivoted on said bolt, means interposed between said arm and said hinge plate for locking said hinge plate from movement on said hinge piece, yieldable means continuously tending to move said arm in one direction, said hinge plate locking means comprising a catch member connected with said pivot bolt and with said arm to move with said arm and having a projecting portion to ride over said hinge piece when the hinge plate is in one position, and to ride under said hinge piece when the hinge plate is swung in another position.

5. In a device of the character stated, a clamp removably securable to a planer bed, and a hinge piece removably held by said clamp, a hinge plate having lugs pivoted to said hinge piece, a pivot bolt carried by said hinge plate, a guard carrying arm pivoted on said pivot bolt, a brace on said pivot bolt and connected to said arm, and a coil spring on said pivot bolt having its ends engaging said brace and said hinge plate to move said arm in one direction.

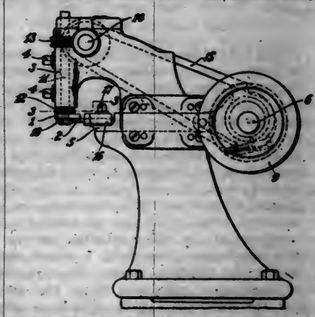
[Claims 6 to 9 not printed in the Gazette.]

961,199. DUST-PAN. ARCHIBALD ARMSTRONG, Waterville, Me. Filed Jan. 15, 1907. Serial No. 352,445.



A dust-pan made of a single piece of sheet metal having a base portion, two side wings turned perpendicular to said base portion, one of said wings being shorter than the other wing, the longer wing having its rear end curved, and an extended portion of the base turned back on itself and having one side edge secured to the curved rear end and the upper edge of the longer of said side wings throughout the length of said extended portion, the opposite side edge of said extended portion being unengaged except at its conjunction with the front edge of said turned back portion where it is secured to the rear end of the shorter of said side wings, said base, turned back portion and side wings forming a receptacle for sweepings open at one side for emptying said receptacle.

961,200. VAMP-TRIMMING MACHINE. ORRELL ASHTON, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 20, 1907. Serial No. 363,495.



1. A vamp trimming machine, having, in combination, vamp trimming means arranged to trim the projecting edges of the vamp and lining of a lasted shoe, and a guiding roll located in close proximity to the trimming means

and arranged to extend inside of the vamp and lining of a lasted shoe and direct the vamp and lining to the trimming means.

2. A vamp trimming machine having, in combination, vamp trimming means arranged to trim the projecting edges of the vamp and lining of a lasted shoe, a guide roll to direct the vamp and lining to the trimming means and means for rotating the roll.

3. A vamp trimming machine having, in combination vamp trimming means, a frusto-conical guide roll to direct the vamp and lining of a lasted shoe to the trimming means and means for securing the roll in the machine with either its base of larger diameter or its base of smaller diameter directed toward the sole of a shoe placed in the machine.

4. A vamp trimming machine having, in combination, a fixed vamp trimming knife arranged to extend inside of the vamp of a lasted shoe, a knife coöperating therewith to trim the projecting edges of the vamp and lining of a lasted shoe, and a guiding roll for the vamp and lining located beneath the fixed trimming knife.

5. A vamp trimming machine having, in combination, a fixed trimming knife arranged to extend inside of the vamp of a lasted shoe, a knife coöperating therewith to trim the projecting edges of the vamp and lining of the shoe, and guide rolls for the vamp and lining located respectively above and below the fixed knife.

[Claims 6 to 8 not printed in the Gazette.]

961,201. SPLICING DEVICE. AUGUST F. ALTHEIDE, Mount Carmel, Ill. Filed Feb. 7, 1910. Serial No. 542,402.



1. A splicing tool comprising a flattened tongue having its forward end reduced transversely to form a point, and having a longitudinally extending eye formed therein, said eye being of uniform width throughout its entire length, a stem carried by the rearward end of the tongue and flattened to occupy a plane at right angles to the tongue to form a wedge portion at the union of the tongue and stem, and a transversely extending handle carried by the stem.

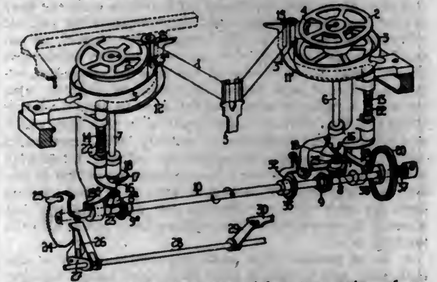
2. A splicing tool comprising a flattened tongue having a longitudinally extending eye formed therein and having its forward end sharpened, a stem carried by the rearward end of the tongue, and a transversely extending handle carried by the stem and projecting oppositely therebeyond.

961,202. TYPE-WRITING MACHINE. WALTER E. BARNARD, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 10, 1909. Serial No. 513,550.

1. A ribbon-reversing mechanism comprising two coöperative reversing members, one of which is connected to rotate during the winding of the ribbon, and one of which is normally out of engagement with the other, and means dependent upon the movement of the ribbon to effect engagement of said reversing members, one of said reversing members being yieldingly mounted to prevent accidental stoppage of the ribbon-winding devices.

2. A ribbon mechanism comprising a wheel connected to rotate during the winding of the ribbon, a dog normally out of engagement with said wheel, and means dependent upon the movement of the ribbon to effect engagement of said dog with said wheel to reverse the travel of the ribbon, said wheel being yieldingly mounted to prevent accidental stoppage of the ribbon-winding devices.

3. A ribbon mechanism comprising two pairs of coöperative reversing members, one of each pair connected to rotate during the winding of the ribbon, one member of each pair normally out of engagement with its mate, means dependent upon the movement of the ribbon to effect engagement of the reversing members of each pair in alternation, one of the four reversing members being yieldingly mounted to prevent accidental stoppage of the ribbon-winding devices, as set forth.

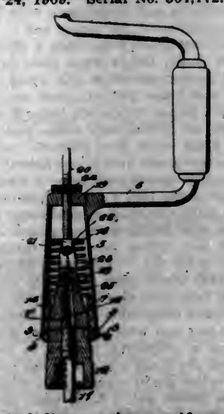


4. A ribbon mechanism comprising two pairs of coöperative reversing members, each pair comprising a wheel connected to revolve during the winding of the ribbon, and a dog normally out of engagement with the wheel, and means dependent upon the movement of the ribbon to effect engagement of the dogs in alternation with their respective wheels, one of said wheels being yieldingly mounted to prevent accidental stoppage of the ribbon-winding devices, as set forth.

5. In a ribbon-reversing mechanism, the combination with a pair of ribbon spools, and a spool-winding shaft movable endwise to reverse the travel of the ribbon, of a pair of feed-reversing wheels upon said shaft, arms normally out of engagement with said feed-reversing wheels, means to cause said arms to swing alternately into engagement with said feed-reversing wheels to coöperate therewith to shift the shaft endwise, one of said wheels being mounted on said shaft to yield when in engagement with its arms to prevent the possibility of locking of the shaft by the simultaneous engagement of both arms with the wheels.

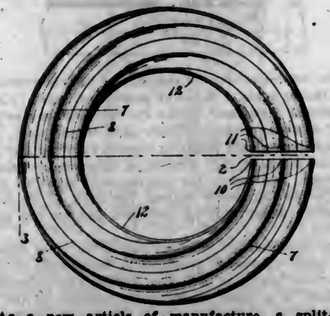
[Claims 6 to 15 not printed in the Gazette.]

961,203. TOOL-HOLDER. HENRY BATCHELOR, Shoals, Ind., assignor of one-fourth to Thomas E. Allbright and one-twelfth to Frank E. Gilkison, Shoals, Ind. Filed June 24, 1909. Serial No. 504,172.



A bit stock including a casing, a guide member arranged within the casing and provided with a tapered seating recess, co-acting jaws having reduced tapered shanks slidably mounted in the seating recess and defining square stop shoulders adapted to bear against the guide member, the upper end of the shanks being pivotally connected and their inner longitudinal edges provided with registering grooves, a threaded rod projecting through one end of the casing and having spaced depending ears provided with perforations for the reception of the pivot pin of the jaws, the metal between the ears being extended laterally to form oppositely disposed horizontal lips, a coil spring surrounding the shanks of the jaws and having one end thereof bearing against the guide member and its other end engaging the horizontal lips, a spring interposed between the jaws at the registering grooves thereof, and a nut engaging the threads on the projecting end of the rod.

961,204. LOCK-WASHER. CHARLES F. BEERS, Newark, N. J. Filed July 29, 1909. Serial No. 510,327.



1. As a new article of manufacture, a split-washer comprising a ring-shaped body, said body being provided upon one of its side faces with raised portions and intermediate depressions, each raised portion and depression forming a complete helix having its end-point opposite its starting point.

2. As a new article of manufacture, a split-washer comprising a spirally formed ring-shaped body, said body being provided upon one of its side faces with raised portions and intermediate depressions, each raised portion and depression forming a complete helix having its end-point opposite its starting point.

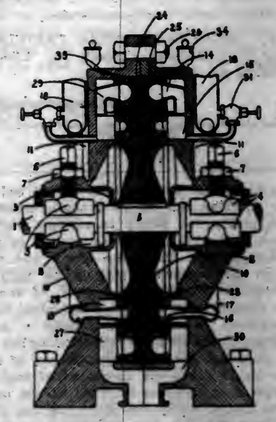
3. As a new article of manufacture, a split-washer comprising a ring-shaped body, said body being provided at its inner peripheral edge with a convex formation extending from one to the other of its side faces, said body being further provided upon one of its side faces with raised portions and intermediate depressions, each raised portion and depression forming a complete helix having its end-point opposite its starting point.

4. As a new article of manufacture, a split-washer comprising a spirally formed ring-shaped body provided with free-end portions, said body being provided at its inner peripheral edge with a convex formation extending from one to the other of its side faces, said body being further provided upon one of its side faces with raised portions and intermediate depressions, each raised portion and depression forming a complete helix having its end-point opposite its starting point.

5. As a new article of manufacture, a split-washer comprising a spirally formed ring-shaped body provided with free end portions, said body being provided at its inner peripheral edge with a convex formation extending from one to the other of its side faces, said body being further provided upon one of its side faces with raised portions and intermediate depressions, each raised portion and depression forming a complete helix having its end point opposite its starting point, said raised portions and depressions forming spurs at the split portion of the washer.

[Claim 6 not printed in the Gazette.]

961,205. REVERSIBLE STEAM-TURBINE. FRANK C. BETHELL, San Diego, Cal., assignor of one-half to R. M. Mobius, San Diego, Cal. Filed Mar. 29, 1910. Serial No. 552,157.



1. In a device of the character described, the combination of a casing, of a power shaft journaled therein, of a rotative element mounted on the power shaft, of steam pockets formed within said rotative element, of annular and radial grooves around said pockets, of packing rings carried in said grooves, the said packing rings comprising annular concentric rings connected in pairs by short radial sections, and inner casings provided with inlet and exhaust ports, substantially as specified.

2. In a device of the character described, the combination of a casing, of a power shaft journaled therein, of a rotative element mounted on the power shaft, of steam pockets formed within and upon opposite sides of the said rotative element, the impact surfaces of the pockets on one side facing in a direction opposite to those on the other side, of packing rings around said pockets, and inner casings provided with inlet and exhaust ports, substantially as specified.

3. In a device of the character described, the combination of a casing, of a power shaft journaled therein, of a rotative element mounted on the power shaft, of steam pockets formed within and upon opposite sides of said rotative element, of grooves around said pockets carrying packing rings, of passages leading from each pocket to the grooves in which the packing rings set, whereby the admission of steam to said pockets, passages, and grooves, will cause the packing rings to bear against the casing, and of a series of inlet and exhaust ports adapted to register with the steam pockets, substantially as specified.

4. In a device of the character described, the combination of a casing, the said casing comprising two sections bolted together, of a power shaft journaled therein, of a rotative element mounted on the power shaft, of two series of steam pockets formed within and upon each side of the rotative element, one series of pockets having smaller capacity than those of the other series, and of a series of inlet and exhaust ports registering with each series of pockets, the exhaust ports of the series of smaller pockets communicating by means of an annular exhaust chamber with the inlet ports of the series of larger pockets, substantially as specified.

5. In a device of the character described, the combination of a casing, of inner casings, having inlet and exhaust ports arranged in two concentric series, the inlet ports of one series alternating with those of the other series, of connecting passages between the series of smaller ports and the main supply of steam of connecting passages between the series of low power ports and the exhaust chamber of the inner series of ports, and a rotative element mounted within said casing, having steam pockets

formed within and upon both sides in series, registering with the corresponding series of ports, substantially as specified.

[Claim 6 not printed in the Gazette.]

961,206. BED-AND-CYLINDER PRINTING-PRESS. ABRAHAM T. H. BROWER, Chicago, Ill. Filed July 20, 1906. Serial No. 326,964.



1. The combination with a reciprocating bed and with devices for checking and reversing the movement of said bed, of mechanism for giving to the bed an initial return impetus, comprising a member carried by the bed, a member carried upon the main frame and means for imparting to the member carried by the main frame a positive thrust in excess of the recoil of the checking mechanism immediately after the movement of the bed has been arrested.

2. The combination with the reciprocating bed and mechanism for operating and reversing said bed, of a dash-pot mechanism for checking the movement of said bed comprising coöperating members mounted on the bed and on the machine frame, and means for operating said frame member to maintain the maximum pressure attained in said dash-pot mechanism and for thrusting said frame member inwardly at the end of the movement of the bed, whereby a positive impetus in excess of the recoil of said dash-pot mechanism is imparted to the bed to start the same on its return movement, substantially as described.

3. The combination with a reciprocating bed and with reversing shoes and studs, of mechanism for checking the movement of the bed and means for giving to said checking mechanism immediately after the movement of the bed has been arrested, an inward thrust in excess of the recoil of the checking mechanism, in order to impart an initial return impetus to the bed.

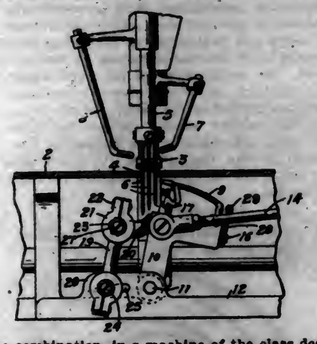
4. The combination with the reciprocating bed and mechanism for operating the same and reversing the movement thereof, of a dash-pot mechanism for checking the movement of said bed comprising coöperating members mounted on the bed and on the machine frame, and means for holding said frame member stationary during the checking operation of said dash-pot mechanism and for thrusting said frame member inwardly immediately after the movement of the bed has been arrested to impart a positive impetus in excess of the recoil of the dash-pot mechanism to the bed to start the same upon its return movement, substantially as described.

5. The combination with the reciprocating bed and mechanism for operating the same and for reversing the movement thereof, of dash-pot mechanism for checking the movement of the bed comprising a member fixed to said bed and a coöperating member movably mounted on the machine frame, and mechanism for positively reciprocating said frame member in opposite directions arranged to hold the same stationary during the checking operation of said dash-pot mechanism and to thrust the same inwardly immediately after the movement of the bed has been arrested, whereby a positive impetus in excess of the recoil of the dash-pot mechanism is imparted to the bed to start the same upon its return movement, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

961,207. SEWING-MACHINE. FRANKLIN CHATFIELD, Minneapolis, Minn., assignor to Northwestern Knitting Co., Minneapolis, Minn., a Corporation. Filed May 25, 1907. Serial No. 375,614.

1. The combination, in a machine of the class described, with a series of needles arranged to reciprocate in a common vertical plane, of a looper, means for reciprocating said looper in a plane substantially parallel to the plane of said needles, a spreader moving with said looper, and means for moving said spreader toward the looper as the looper reaches the limit of its forward movement, substantially as described and for the purpose set forth.



2. The combination, in a machine of the class described, with a throat-plate, a series of needles arranged in a common vertical plane and means for reciprocating said needles, of a looper arranged below said throat-plate, means for reciprocating said looper in a plane substantially parallel to the plane of said needles, a spreader moving with said looper, and means for moving said spreader toward the looper as the looper reaches the limit of its forward movement, substantially as described and for the purpose set forth.

3. The combination, in a machine of the class described, with a series of needles arranged to reciprocate in a common vertical plane, of a looper, means for reciprocating said looper in a plane substantially parallel to the plane of said needles, a spreader moving with said looper, means for moving said spreader toward the looper as the looper reaches the limit of its forward movement, and a pull-off, and means for moving said pull-off with said spreader, substantially as described and for the purpose set forth.

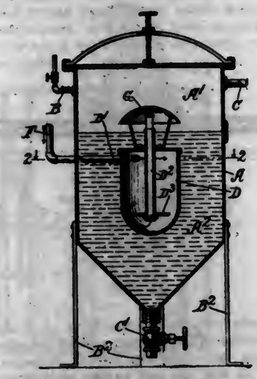
4. In a machine of the class described, the combination with a suitable throat-plate, a series of needles and means for vertically reciprocating the same, of a reciprocating looper arranged beneath said throat-plate and provided with means for reciprocating it in a plane substantially parallel to the plane of said needles, a spreader moving with said looper, means for moving said spreader toward or from said looper and a pull-off and means for moving said pull-off with said spreader, substantially as described.

5. The combination, in a machine of the class described, with the series of needles, of the looper 9 arranged at a slight angle to a vertical plane passing through said needles, a rocker arm 10 upon which said looper is secured, means for operating said rocker arm, a shaft 16 mounted in bearings upon said rocker arm with its axis at right angles to the axis of the pivot of the rocker-arm, a spreader 17 mounted on the shaft 16, and means for rocking said shaft 16, in unison with the movement of the said rocker arm, for the purpose set forth.

961,208. AIR-PURIFYING APPARATUS. GEORGE CLEMENTS and JAMES M. HOSTLER, Chicago, Ill., assignors to Hygenic Renovating Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 17, 1906. Serial No. 348,125.

1. In an air purifying apparatus, the combination of a single compartment mixing chamber with a pipe for introducing impure air and water thereinto at one end, opening tangentially thereinto and another pipe for leading the same therefrom at the other end, and an air and water chamber with which said two pipes are connected, the induction pipe being connected with such water chamber from a point below the water level.

2. In an air purifying apparatus, the combination of a single compartment mixing chamber with a pipe for introducing impure air and water thereinto at one end, opening tangentially thereinto and another pipe for leading the same therefrom at the other end, and a centrally disposed baffle plate in said chamber between the two pipe openings, and an air and water chamber with which said two pipes are connected, the induction pipe being connected with such water chamber from a point below the water level.



3. In an air purifying apparatus, the combination of a single compartment mixing chamber with a pipe for introducing impure air and water thereinto at one end, opening tangentially thereinto and another pipe for leading the same therefrom at the other end, and an air and water chamber with which said two pipes are connected, the induction pipe being connected with such water chamber from a point below the water level, said mixing chamber contained in said air and water chamber.

4. In an air purifying apparatus, the combination of a single compartment mixing chamber with a pipe for introducing impure air and water thereinto at one end, opening tangentially thereinto and another pipe for leading the same therefrom at the other end, and a centrally disposed baffle plate in said chamber between the two pipe openings, and an air and water chamber with which said two pipes are connected, the induction pipe being connected with such water chamber from a point below the water level, said mixing chamber contained in said air and water chamber.

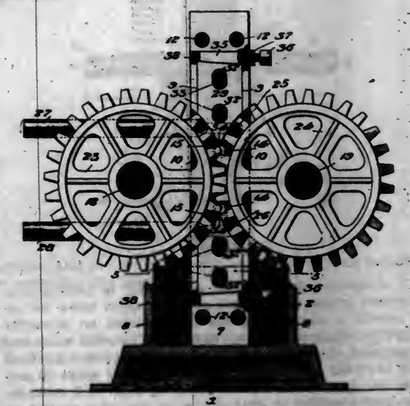
5. An air purifying apparatus comprising a tank partially filled with water and having an air space thereabove a mixing chamber submerged in the water, a suction pipe communicating with the mixing chamber for the flow of the impure air thereinto, said pipe being submerged in the water and provided with inlets for the introduction of water to commingle with the air, a discharge pipe leading from the mixing chamber into the air space above the level of the body of water, and a baffle plate disposed within said mixing tank for forcing the discharging current of air downwardly against the surface of the water.

[Claims 6 to 11 not printed in the Gazette.]

961,209. FLUID-JET MOTOR. CLARENCE C. CLINE, Oakland, Cal. Filed Apr. 29, 1909. Serial No. 492,824.

1. In a motive fluid operated motor, the combination with rotary pistons having intermeshing vanes, of a casing in which the intermeshing vanes turn, means for directing opposing jets of the motive fluid to the intermeshing parts of said pistons in a general transverse direction thereto, whereby friction on the pistons is neutralized, and an exhaust controlling valve movably mounted on the casing in position to regulate the exhaust at a point beyond the intermeshing vanes.

2. In a motive fluid operated motor, the combination with rotary pistons having intermeshing vanes, of a casing in which the intermeshing vanes turn, means for directing opposing jets of the motive fluid to the intermeshing parts of said pistons in a general transverse direction thereto, whereby friction on the pistons is neutralized, a port in the casing for exhausting the motive fluid after it has acted on said pistons, and a valve movably mounted on said casing and having a pointed end located between the said pistons just beyond the intermeshing vanes which is adapted to more or less uncover the exhaust means aforesaid.



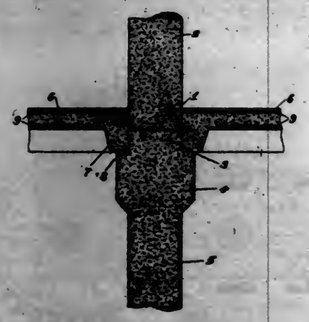
3. In a motive fluid operated motor, the combination with a casing, of rotary pistons whose centers of rotation are fixed in relation to said casing and which have intermeshing vanes, the intermeshed parts of said pistons being received in the casing, means for directing opposing jets of motive fluid to the casing in a general transverse direction to said pistons at their points of intermeshing on opposite sides of their centers of rotation, whereby friction on the pistons is neutralized and they are made adaptable for rotation in either direction, said casing being provided with ports on opposite sides of the centers of rotation of said pistons adapted for exhausting the motive fluid after it has acted on said pistons, and valves movably mounted on said casing on opposite sides of the centers of rotation of said pistons adapted to more or less uncover the respective exhaust ports aforesaid.

4. In a motive fluid operated motor, the combination with a casing, of rotary pistons whose centers of rotation are fixed in relation to said casing and which have intermeshing vanes, the intermeshed vanes being received in the casing, means for directing opposing jets of motive fluid to the casing in a general transverse direction to said pistons at their points of intermeshing on opposite sides of their centers of rotation, whereby friction on the pistons is neutralized and they are made adaptable for rotation in either direction, said casing being provided with exhaust ports on opposite sides of the centers of rotation of said pistons and located beyond the intermeshing parts thereof, valves slidably mounted on the casing and provided with pointed ends having curved edges corresponding to the peripheries of the pistons just beyond their intermeshing vanes which are adapted to more or less uncover the exhaust ports aforesaid, and means for independently adjusting said valves to cause them to more or less uncover the exhaust ports.

961,210. CONCRETE CONSTRUCTION. JOHN E. CONZELMAN, St. Louis, Mo., assignor, by mesne assignments, to Unit Construction Company, a Corporation of Delaware. Original application filed Jan. 9, 1909, Serial No. 471,431. Divided and this application filed Apr. 29, 1909. Serial No. 492,860.

1. A concrete construction comprising, in combination, a column having an enlarged portion formed below its top to provide a surrounding cap and shoulder, an upwardly

projected stud, a column conforming to said stud and superposed thereabove, slabs having the corners resting on said shoulder and abutting said stud and being spaced apart to provide spaces which radiate from said columns, and beams molded in said spaces.



2. A concrete construction, comprising, in combination, a column having an enlarged portion formed below its top to provide a surrounding cap and shoulder, an upwardly projected stud, a column conforming to said stud and superposed thereabove, slabs having corners supported on said shoulder and having their sides spaced apart in parallel relation to form spaces radiating from said columns, and beams molded in said spaces to rest with an end on said shoulder.

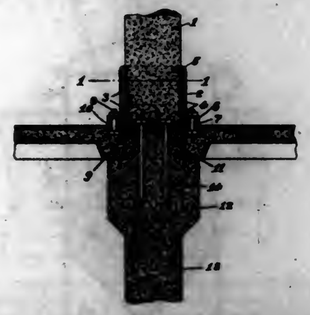
3. A concrete construction, comprising, in combination, a column having an enlarged portion formed below its top to provide a surrounding cap and shoulder, an upwardly projected stud, a column conforming to said stud and superposed thereabove, rectangular slabs each having a corner resting on said shoulder, and being spaced from one another to form recesses between their sides, and beams molded in said recesses to form a monolithic structure with said slabs and to have an end resting on said shoulder.

4. A concrete construction, comprising, in combination, a column having an enlarged portion formed below its top to provide a surrounding cap and shoulder, an upwardly projected stud, a column conforming to said stud and superposed thereabove, rectangular slabs each having a corner resting on said shoulder and projecting above said stud to surround said superposed column, said slabs being spaced apart to form recesses having parallel sides and radiating from said columns, and beams molded between said slabs in said recesses.

961,211. CONCRETE CONSTRUCTION. JOHN E. CONZELMAN, St. Louis, Mo., assignor, by mesne assignments, to Unit Construction Company, a Corporation of Delaware. Original application filed Jan. 9, 1909, Serial No. 471,431. Divided and this application filed Apr. 29, 1909. Serial No. 492,862.

1. A concrete construction, comprising, in combination, a supporting column, a cap formed around the upper portion of the column below the top thereof, slabs seating on said cap and having their upper sides disposed flush with said top of said column, a second column superposed upon said supporting column, a plate seating on top of said supporting column and extending over onto the upper sides of said slabs, means to anchor said plate to the supporting column, and means to secure said second column to said plate.

2. A concrete construction, comprising, in combination, a supporting column, a cap formed around the upper portion of the column below the top thereof, slabs seating on said cap and having their upper sides disposed flush with said top of said column, second column superposed upon said supporting column, a plate seating on top of said supporting column and extending over onto the upper sides of said slabs, a casting inclosing the lower end of said second column, an outstanding peripheral flange carried by said casting, and bolts extending through openings provided therefor in said flange and plate whereby the two columns are rigidly connected.



3. A concrete structure, comprising in combination, a supporting column, a cap formed around the upper portion of said column below the top thereof, slabs having their edges seated on said cap and having their upper sides occurring flush with the upper end of said supporting column, a second column superposed upon said supporting column, a casting surrounding the base of said second column, and forming a part thereof, and means for securing said casting to said supporting column.

4. A concrete structure, comprising in combination, a supporting column, a cap surrounding the upper portion of said column, below the top thereof, a plate resting on said column and extending over the top thereof, slabs having their edges seated on said cap and below said plate, a casting bolted to said plate and a second column having its base molded within said casting.

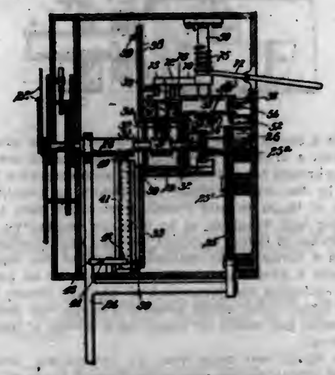
5. A concrete structure, comprising in combination a supporting column, a cap formed on said supporting column below the top thereof, a plate seated on the top of said column and extending over the edges of said top, bolts entered through said plate and extended into said supporting column, slabs having their edges seated on said cap and below said plate, and a casting having internal ribs seated on said plate and having an external flange, bolts entered through said plate and said external flange to secure said casting to said plate, and a column having its base molded within said casting.

961,212. MAIL-BOX. SAMUEL C. COX, Washington, D. C. Filed Mar. 5, 1910. Serial No. 547,518.

1. An indicator of the character described comprising indicating mechanism, a rotatable shaft for operating the same, a spring for rotating said shaft, controlling means secured to said shaft and rotatable therewith, stop mechanism arranged to normally engage said controlling means to prevent rotation of said shaft, trip mechanism for temporarily disengaging said stop mechanism and said controlling means, and means for intermittently increasing the tension on said spring immediately before each operation of the trip mechanism.

2. An indicator of the character described comprising indicating mechanism, a rotatable shaft for operating the same, a spring for rotating said shaft, controlling means secured to said shaft and rotatable therewith, stop mechanism arranged to normally engage said controlling means to prevent rotation of said shaft, trip mechanism for temporarily disengaging said stop mechanism and said controlling means, means for intermittently increasing the tension on said spring immediately before each operation of the trip mechanism, and a single member for operating said trip mechanism and said tension increasing means.

3. An indicator of the character described comprising indicating mechanism, a rotatable shaft for operating the same, a spring for rotating said shaft, controlling means secured to said shaft and rotatable therewith, stop mechanism arranged to normally engage said controlling means to prevent rotation of said shaft, trip mechanism for temporarily disengaging said stop mechanism and said controlling means, means for intermittently increasing the tension on said spring immediately before each operation of the trip mechanism, and a trip lever having arms for respectively operating said tension increasing means and said trip mechanism.



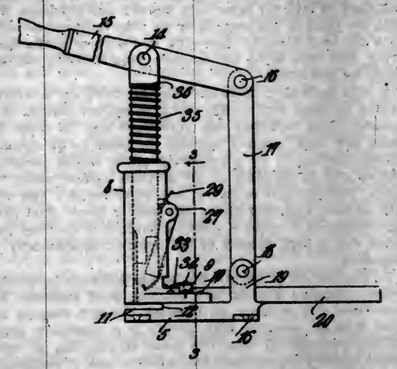
4. An indicator of the character described comprising indicating mechanism, a rotatable shaft for operating the same, a spring for rotating said shaft, a disk secured to said shaft and rotatable therewith, said disk being provided with stops, stop mechanism arranged to normally engage said stops to prevent rotation of said shaft, trip mechanism for temporarily disengaging said stops and stop mechanism, and means for intermittently increasing the tension on said spring immediately before each operation of the trip mechanism.

5. An indicator of the character described comprising indicating mechanism, a rotatable shaft for operating the same, a spring for rotating said shaft, a disk secured to said shaft and rotatable therewith, said disk being provided with a plurality of holes, removable stops secured in said holes, stop mechanism arranged to normally engage said stops to prevent rotation of said shaft, trip mechanism for temporarily disengaging said stops and stop mechanism, and means for intermittently increasing the tension on said spring immediately before each operation of the trip mechanism.

[Claims 6 to 24 not printed in the Gazette.]

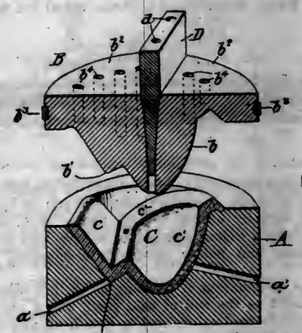
961,213. MACHINE FOR FASTENING PAPER AND THE LIKE. FREDRICK HERBERT CRABTREE and ALEXANDER GRANT MCGREGOR, Anaconda, Mont. Filed Jan. 7, 1908. Serial No. 409,702.

The stapling machine herein described and shown comprising a base plate having an anvil at one end, a tubular casing on the base plate over the anvil provided with a vertical slot in its rear side at its lower end, a guide bar on the base plate extending into the lower end of the casing and having a reduced extremity spaced from the side of the casing, a yoke extending over said guide bar, a spring pawl secured upon said yoke and projecting toward the casing to engage staples supported on the guide bar, a plunger mounted within the casing and provided at its lower end with a reduced extension adapted to sever a staple and drive the same against the anvil, a cam surface being formed on the plunger in rear of and adjacent to the said extension, a feeding lever pivoted on the casing and projecting through the slot therein into the path of the plunger, a spring pawl secured to the lower end of the feeding lever to engage the staples, a leaf spring secured to the inner side of the feeding lever and arranged between



the same and the end of the slot in the casing, and means for operating the plunger.

961,214. MANUFACTURE OF EARTHENWARE LAVATORIES. RAYMOND E. CRANE, Cameron, W. Va. Filed Dec. 7, 1909. Serial No. 531,892.



1. The method of manufacturing earthenware lavatories having integral wall backs, which comprises placing in a suitable mold sufficient clay to form the basin and back, with the junction of the back and basin located in a deepened part of the mold for forming the outside of the lavatory, the latter being placed for this purpose in an inclined position with respect to the mold, and heavily compressing the clay throughout the entire piece by forcing a compressing element against the clay, whereby a high and uniform density is given to the lavatory; substantially as described.

2. The method of manufacturing earthenware lavatories having integral wall backs, which comprises placing in a suitable mold the clay to form the basin and back as an integral whole, with the junction of the back and basin in a deepened part of the mold, to form the outside of the lavatory, the latter being placed for this purpose in a plane at an angle to that of the mold, then giving the piece a slight initial pressure by forcing a compressing element against the clay in the mold, and exerting a separate and heavier pressure on said element and against the clay to give the latter a high and uniform density; substantially as described.

3. The method of manufacturing earthenware lavatories having integral wall backs, which consists in roughly

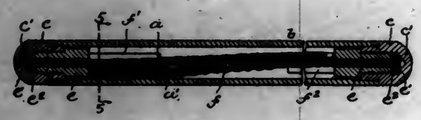
shaping the clay piece as a whole in a suitable mold, then shaping the piece by the application of heavy pressure sufficient to give the same high density and hardness, dipping the piece in the glaze after its removal from the mold, with the back integral therewith, and without preliminary firing, and then firing the lavatory thus formed; substantially as described.

4. The method of manufacturing earthenware lavatories having integral wall backs, which comprises placing in a suitable mold sufficient dry pulverized clay to form the basin and back, roughly shaping the piece as an integral whole, forming it by a relatively slight initial pressure, adding clay to the piece at the portions thereof where the initial pressure has caused a lack of uniformity and density therein, and then giving the piece a heavy final pressure sufficient to cause a strong coherence of the clay particles and a high density of the article; substantially as described.

5. The method of manufacturing earthenware lavatories, which comprises placing in a suitable mold sufficient dry pulverized clay to form the lavatory, roughly shaping the piece into an integral unit, giving it a relatively slight vertical pressure to form the same, adding clay at those points where such pressure has caused a lack of uniformity and density, and then giving the piece a heavy lateral pressure sufficient to cause a strong coherence of the clay particles and a high density throughout the lavatory; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

961,215. PIPE-CLEANER. FRANK R. CUNNINGHAM, Medford, Mass. Filed Feb. 18, 1910. Serial No. 544,568.



1. In combination, a narrow elongated pipe-cleaning implement, a holder means whereby one end of said implement is securely affixed to said holder in a detachable manner, and a casing adapted to receive said implement, said casing and holder having inter-engaging securing means.

2. The combination of a casing or shell, a head detachably secured to the end of said shell, and a pipe cleaner detachably secured at one end to said head and contained within the shell.

3. A pipe-cleaning implement comprising a rod or wire or the like and a holder therefor, said holder consisting of a cap member and a plug threaded into said cap member, said plug having a recess to receive an end of the wire and the cap and plug having coacting means for clamping the end of the wire.

4. The combination of a casing, plugs detachably held on opposite ends of said casing, and cleaning implements of different characters each capable of passing through the stem of a pipe and detachably secured each at one end thereof to one of said plugs.

5. A pipe-cleaning implement comprising an elongated member and a holder therefor, said holder including clamping means by which the said member is detachably secured.

[Claims 6 to 8 not printed in the Gazette.]

961,216. WATER SEAL. HERBERT H. DOW, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a Corporation of Michigan. Filed Nov. 6, 1907. Serial No. 400,996.

1. In a device of the character described, the combination with fixed and rotating members, of means for supplying a stream of liquid to the joint between said members, and engaging means borne by said members, respectively, and adapted to form, in conjunction with such stream of liquid, a closure of such joint.

2. In a device of the character described, the combination with a fixed and a rotating member, of an inwardly opening trough borne by one of said members and a flange borne by the other member, and means for supplying a stream of liquid to said trough, said trough engaging said flange so as to form, in conjunction with said stream of liquid, a closure between said members.



3. In a device of the character described, the combination with a fixed and a rotating member, of an inwardly opening trough borne by one of said members and a flange borne by the other member, and means for supplying a stream of liquid to said trough from above, said trough engaging said flange so as to form, in conjunction with said stream of liquid, a closure between said members.

4. In a device of the character described, the combination with a fixed and a rotating member, of an annular flange encircling the latter and an annular trough borne by the former, said trough opening inwardly and inclosing said flange, and means for supplying a stream of liquid to said trough.

5. A liquid seal comprising an intergaging, inwardly directed trough and an outwardly directed flange of annular form, borne by the two members to be joined, respectively, and means for supplying a stream of liquid to said trough from above.

[Claims 6 to 12 not printed in the Gazette.]

961,217. ALLOY FOR ELECTRICAL RESISTANCES. WILBUR B. DAIVER, East Orange, N. J. Filed Feb. 28, 1906. Serial No. 303,554.

1. An electrical-resistance-element, consisting of an alloy containing a substantial amount of aluminum with at least two other ingredients.

2. An electrical-resistance-element, consisting of a ductile alloy containing a substantial amount of aluminum with at least two other ingredients.

3. An electrical-resistance-element, consisting of an alloy containing from one per cent. to nine per cent. (1% to 9%), by weight, of aluminum, with at least two other ingredients.

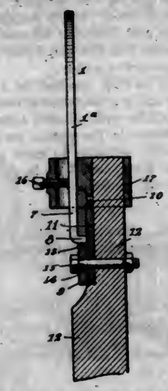
4. An electrical-resistance-element, consisting of an alloy containing from two per cent. to eight per cent. (2% to 8%), by weight, of aluminum, with at least two other ingredients.

5. An electrical-resistance-element, consisting of an alloy containing from three per cent. to seven per cent. (3% to 7%), by weight, of aluminum, with at least two other ingredients.

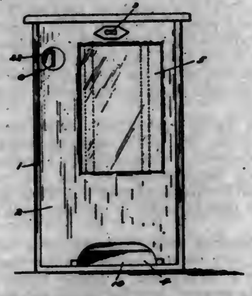
[Claims 6 to 25 not printed in the Gazette.]

961,218. BUSH-HOOK. REUBEN W. DUNN, Waterville, Me., assignor to Dunn Edge Tool Company, Oakland, Me., a Corporation. Filed Feb. 9, 1909. Serial No. 476,996.

A bush hook comprising a handle having a flattened end portion, a blade extending from said end thereof and in line therewith, the inner end of the blade being inturned, a pivoted plate having a slot in one end thereof and an intermediate opening lying on said flattened end portion, a bolt passing through the handle and the slot of said pivoted plate whereby the plate may be locked in a plurality of positions, the inturned end of the blade engaging the intermediate opening in the pivoted plate; a ferrule on the end of the handle, through which the shank of the blade extends, and a bolt passing through the ferrule and normal to the shank of the blade and in engagement therewith for holding the blade in position.



961,219. COIN-CONTROLLED MECHANISM. JAMES A. EVANS, Philadelphia, Pa. Filed Sept. 29, 1909. Serial No. 520,090.



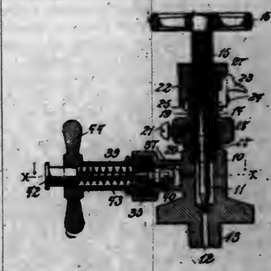
1. In coin-controlled mechanism the combination of a vertically disposed coin chute having two compartments, a horizontally arranged pivotal coin plate located adjacent the top of said chute constructed to deflect bad coins to one compartment and good coins to the other compartment, a second coin plate pivoted within said chute adapted to be operated by good coins, an escapement operated by the last-mentioned plate, a pivotal ejecting medium operatively connected with said escapement and mechanism normally preventing said medium from ejecting a portion of said mechanism being arranged in the path of a coin to be deposited whereby the said medium will be automatically released.

2. In coin-controlled mechanism the combination of a vertically disposed coin chute, having two compartments, a horizontally arranged fixed coin plate adjacent the top thereof, a similarly arranged coin plate pivotally carried within said chute and beneath the fixed plate constructed to deflect bad coins to one of said compartments and good coins to the other of said compartments, a second pivotal coin plate adjacent the bottom of said chute adapted to be operated by good coins, an escapement operated by said plate, counterbalanced pivotal ejecting fingers operatively connected with said escapement and mechanism normally preventing said fingers from ejecting a portion of said mechanism being arranged in the path of a coin to be deposited whereby the ejecting fingers will be automatically released.

3. In coin-controlled mechanism the combination of pivotally arranged coin operated fingers, releasing mechanism for coöperating with said fingers, arranged in the path of a coin to be deposited, a supplemental locking device adapted to be moved in one direction by said releasing mechanism for locking said fingers against movement and means for returning said locking device and releasing mechanism to inactive position the said parts being arranged, connected and constructed to operate automatically upon depositing a coin in said mechanism.

4. In coin controlled mechanism the combination of a releasing device, coin operated means for operating the releasing device, a locking device arranged in the path of the operating means, pivotal finger pieces movable independently of the releasing mechanism, a coin-controlled device for operating the finger pieces, which, when operated, coact with the said locking device for locking the releasing mechanism the said parts being arranged constructed and connected to operate automatically when a coin is deposited within said mechanism.

961,220. VALVE MECHANISM. CHARLES W. EVERSON, Brooklyn, N. Y., and GEORGE F. D. TRASK, Orange, N. J., assignors to said George F. D. Trask. Filed Apr. 8, 1909. Serial No. 488,568.



1. A valve mechanism comprising in combination a movable and a stationary valve member, one of which is provided with a recess, an adjustable catch mounted on the other member adapted to engage with said recess to prevent further movement in either direction when the two members are in a predetermined relative position, and means for fixing said catch upon the member on which it is mounted, substantially as described.

2. A valve mechanism comprising in combination a stationary valve member having a recess, a movable valve member having a screw-thread engagement with said stationary member, a sleeve threaded onto said movable member, and a catch on said sleeve adapted to engage with said recess, substantially as described.

3. A valve mechanism comprising in combination a stationary valve member having a recess, a movable valve member having a screw-thread engagement with said stationary member, a sleeve threaded onto said movable member, a lock-nut also threaded onto said movable member, and a catch on said sleeve adapted to engage with said recess, substantially as described.

4. A valve mechanism comprising in combination a two-part stationary valve member composed of a threaded cylindrical part containing a packing and a cap screwing down upon said packing; a movable valve member screwing into said cap and passing through said packing; an adjustable sleeve threaded onto said movable valve member; means for fixing said sleeve in one position on said valve member; and a catch on said sleeve adapted to engage with a portion of the movable valve member, substantially as described.

5. A valve mechanism comprising in combination a stationary valve member having a recess, a movable valve member having a screw-thread engagement with said stationary member, a sleeve threaded onto said movable member, means for fixing said sleeve on said member and a pivoted spring-pressed latch carried by said sleeve and

adapted to engage with said recess when the two valve members occupy a predetermined relative position, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

961,221. SNAP-HOOK FOR NECK-YOKES. THOMAS E. EWER, Fort Des Moines, Iowa. Filed Jan. 2, 1909. Serial No. 470,512.



1. A snap hook of the class described comprising a hook provided at its bill with spaced inner and outer inwardly extending lugs, and a tongue consisting of a lever pivoted at an intermediate point to the shank and having an inwardly extending arm closing the mouth of the hook and provided with an outwardly projecting lug located at the inner end of the tongue and extending into the space between the said lugs and engaging the outer lug of the bill of the hook, the inner lug thereof being arranged contiguous to the tongue and forming a guard to prevent a ring from contacting with and opening the tongue.

2. A snap hook of the class described including a hook having a shank and provided at its bill with spaced inner and outer inwardly extending lugs, and a tongue pivoted at an intermediate point to the end of the shank and having an inner arm extending across and closing the mouth of the hook and provided with an outwardly projecting lug fitting snugly between the lugs of the bill of the hook and engaging the said outer lug, the inner lug being longer than the outer lug and located contiguous to and extending across the inner end of the tongue and tapered and curved inwardly away from the mouth of the hook to form a guard and to present an inner concave face for preventing a ring from contacting with and opening the tongue.

3. A snap book of the class described including a hook having a shank and provided at its bill with spaced inwardly extending lugs, the inner lug forming a guard, a tongue having a lug at its inner end to coöperate with the outer lug of the bill and provided at an intermediate point with spaced side portions arranged at opposite sides of the end of the shank, said tongue being also bifurcated at its outer end to form terminal ears, and a pivot passing through the spaced side portions and the end of the shank.

4. A snap book of the class described comprising a hook provided at its bill with spaced inner and outer inwardly extending lugs, and an inwardly extending tongue pivoted to the hook and closing the mouth of the same and extending into the space between the lugs and engaging the outer lug of the bill of the hook, the inner lug being arranged contiguous to the tongue and forming a guard to prevent a ring from coming in contact with and opening the tongue.

961,222. METHOD OF LAYING PAVEMENTS UNDER WATER. WILLIAM H. FARRNEY, Chicago, Ill. Filed Oct. 8, 1909. Serial No. 521,708.

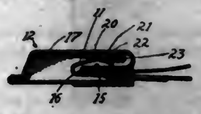


1. The method of paving the bed of a body of water, which consists in carrying loads of paving material in endless series down to said bed and automatically dumping the loads so lowered in succession and laying them in close but disconnected relation to each other along said bed by withdrawing from each load, in order, and thereby recovering its carrying medium.

2. The method of paving the bed of a body of water adjacent to the shore thereof, which consists in building a slope near the shore and lowering successive loads of paving material upon said bed and slope and depositing thereon said loads in successive order.

3. The method of paving the bed of a body of water, which consists in carrying perishable concrete-laden bags in endless series down to said bed and automatically dumping the bags so lowered in succession and laying them in close but disconnected relation to each other along said bed by withdrawing from each bag, in order, and thereby recovering its carrying medium.

961,223. CAR-SEAL. EDWIN E. FAIRCHILD, Los Angeles, and FRANKLIN E. CLARK, Florence, Cal. Filed Aug. 6, 1908. Serial No. 447,346.



1. In a car seal, in combination, a strap having an apertured hook on one end and a chambered hook engaging head on the other, and a tongued locking plate having one of its ends bent on itself to form a pocket for the reception of the strap hook end, whereby to prevent the disengagement of the strap hook from the locking plate.

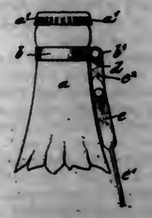
2. In a car seal, in combination, a strap having an apertured hook at one end and a chambered hook engaging head at the other, said chambered head being formed integral with said strap, a locking plate disposed in said head, said plate provided with a tongue adapted to engage the aperture in the hook, and means formed on said locking plate adapted to engage the end of the strap hook, whereby to prevent disengagement of the hook from the locking plate.

3. In a car seal, in combination, a strap having an apertured hook at one end and a hook engaging head at the other, and an apertured tongued locking plate provided with hook engaging means formed on one end thereof, said means adapted to engage the hook end of the strap, whereby to prevent disengagement of the hook from the locking plate.

4. In combination with a car seal, of a locking plate, comprising a body member having one end thereof turned over to form a pocket, and a tongue formed integrally with said body member, both the tongue and the end forming the pocket being on the same face of the body member.

5. In combination with a car seal, of a locking plate, comprising a body member having one end thereof bent upon itself to form a pocket, and a tongue formed integrally with said body member, said tongue extending under and beyond the pocketed end.

961,224. BOTTLE-OPENER. GEORGE FISCHER, New York, N. Y. Filed Oct. 14, 1909. Serial No. 522,506.

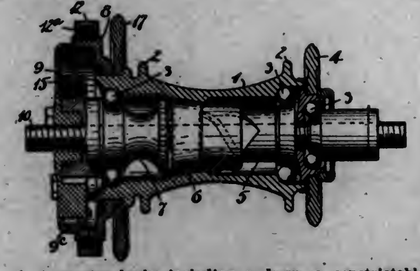


1. A bottle-opener comprising a neck-band, a handle-lever having a hook at its inner end, and a pivot-link connection between the neck-band and handle-lever.

2. A bottle-opener comprising a neck-band provided with perforated ears, a lever provided with a handle at the outer end and a hook at the inner end, and pivot-links connecting the ears of the neck-band and the handle-lever.

3. The combination, with the neck of a bottle, of a bottle-opening attachment comprising a neck-band, a handle-lever provided with a hook at its inner end, and a pivot-link connection between the neck-band and handle-lever.

961,225. COASTER-BRAKE. CHARLES GLOVER, New Britain, Conn. Filed Dec. 24, 1908. Serial No. 469,087.



1. A coaster brake including a drum, a constrictable band operating upon the periphery of said drum, a support outside of the circumference of said drum for supporting one end of said band, and a double toggle for operating said band, and means acting through the interior of said drum for operating said double toggle.

2. A coaster brake including a drum, a constrictable band arranged to operate on the periphery of said drum, a stationary support outside of the periphery of said drum, and means for connecting both ends of said band to said support, said means including two toggle levers, and means for operating said levers and thereby said band, said means acting through the interior of said drum.

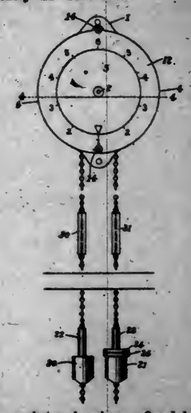
3. A coaster brake including a drum having two laterally projecting arms, a constrictable band arranged to operate upon the periphery of said drum, a link for connecting one end of said band with one of said arms, a lever pivoted intermediate its length concentrically with the connection between said link and said band, a second link connecting one end of said lever with the other end of said band, a brake operating device concentric with said drum and coöperatively engaging the other end of the last mentioned lever, and means for operating said brake operating device through said hub.

4. A coaster brake including a drum having two laterally projecting arms, a constrictable band arranged to operate upon the periphery of the drum, a link connecting one end of said band with one of said arms, a lever hinged at a point intermediate its length to the same end of said band, and a link connecting the outer end of said lever with the opposite end of said band, with means operating through the interior of the drum for swinging said lever.

5. In a coaster brake, a hub, a drum carried thereby, a brake band mounted on said drum but normally free thereof, a support for said brake band arranged externally of said drum, a movable brake actuating device, means for operatively connecting said movable actuating device with both the ends of said band, including a lever extending partially outside of said drum and partially inside of said drum, and operative means of connection between the inner end of said lever and said brake actuating device.

961,226. FURNACE-REGULATOR. ALBERT L. GOODNOW, Utica, N. Y. Filed June 23, 1909. Serial No. 503,784.

1. A furnace regulator comprising a fixed base, a chain-carrying disk revolubly mounted thereon having its edge offset to provide a riding surface for regulating chains or the like, said chains or the like, a cover having a face portion of ring-like form and a peripheral wall vertical to the face, the said face and the opposite base and the peripheral wall and the offset edge of the disk forming a chamber wherein the chains are confined in their travel, the peripheral wall of the cover being cut out to provide an opening for the passage of the chain, the terminal edges of said wall forming bearing and guiding surfaces for the chains, substantially as described.



2. A furnace regulator having a fixed base, a disk revolubly mounted thereon, the disk having ball-cups opening against the base and balls therein bearing on the base, chains carried on the disk, the same having a peripheral wall for the support of the chains, and a cover having a peripheral wall inclosing the disk and the chains thereon, but having a passage therethrough for the chains, the passage being of less extent than the diameter of the disk whereby either chain may be given an extent of movement substantially equal to the circumference of the disk, substantially as described.

3. A device of the character described consisting of a revoluble disk with its edge upset in the form of a peripheral wall, chains carried on the wall of said disk, oppositely disposed abutments having a comparatively small space between them for the passage of the chains whereby the revolution of the disk is effective to shift the chains a distance substantially equal to the circumference of the disk and adjustable weighting members on the chains and forming a part thereof, the same comprising a shank connected to the links of each chain and a base on the shank adapted to support added weights, substantially as described.

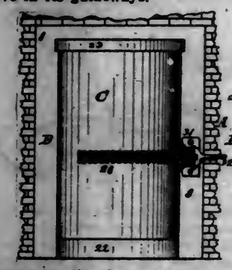
4. A furnace regulator consisting of a plurality of chains or the like carried from the furnace drafts to a series of stations and a revoluble disk at the farthermost of said stations, the chains being attached thereto, means forming part of the chains adapted to receive a given number of weights to effect proper counterbalance according to the weight of the draft to be operated and of the chains and means guiding the chains in comparative proximity to the disk whereby the revolution of the disk shifts the chains an amount substantially equal to the circumference of the disk, substantially as described.

5. A furnace regulator having a fixed base with a central stud, a disk revolubly mounted on the base and having its edge upset in the form of chain supporting walls, antifriction balls and means supporting said antifriction balls between the base and the disk, a cover overlapping the disk and adapted to be secured to the base, the cover having walls resting on the base and cut away for the passage of chains, and chains mounted on the disk adapted by revolution of the disk to operate the furnace members connected therewith, substantially as described.

961,227. VAULT AND STRONG-ROOM DOOR. GEORGE A. HATTERSLEY, Norwood, Ohio, assignor to The Victor Safe & Lock Co., Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 29, 1909. Serial No. 535,528.

1. In door-construction for vaults, the combination of a door in shape of a cylindrical segment, a door-frame

with complementary guide-ways for it, a hinge-frame comprising an upright member parallel to and co-extensive in length with the height of the door and arms extending rearwardly from the ends of this upright member whereby this frame is pivotally connected within the door-frame and means whereby the door at its inside is hingedly connected to the upright member of the hinge-frame and so as to move in its guideways.



2. In door-construction for vaults, the combination of a rectangular door-frame with door-guide-ways in its horizontal members, a hinge-frame consisting of an upright and of two angularly arranged members, pivots seated in opposite sides of the door-frame which engage the ends of the angular members of the hinge-frame, a door in shape of a cylindrical segment fitted to this frame and complementary lugs on the concave side of the door and on the outside of the upright member of the hinge-frame whereby the former is hingedly connected to the latter and supported while moving in its guide-ways.

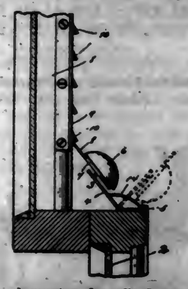
3. In door-construction for vaults, the combination of a rectangular door-frame having circular door-guide-ways in its horizontal members and with bolt-sockets, a door in shape of a cylindrical segment fitted at its horizontal edges to these guide-ways so as to move between them, bolts provided on the inside of the door and locking mechanism carried on the door and adapted to actuate the bolts with reference to the bolt-sockets in the manner and for the purpose described.

4. In door-construction for vaults, the combination of a door in shape of a cylindrical segment, a door-frame having upright members connected by a sill and a lintel to which the door is movably fitted in a manner in which it may occupy positions permitting passage through the door-frame, or preventing it, sill and lintel of the door frame being extended outwardly so as to meet the horizontal edges of the door when the same closes passage through the door-frame so as to complete the closure, a hinge-frame having upper and lower members whereby the door at its inside is connected respectively to sill and lintel and a foldable floor consisting of hinged-sections provided on the sill of the door-frame adapted for adjustment to cover the lower horizontal member of the hinge-frame when the door is open.

961,228. COLLAPSIBLE TRAY. HAROLD M. HAYS, New York, N. Y. Filed Jan. 31, 1910. Serial No. 541,108.

In a collapsible tray, the combination of front and back pieces, side pieces hinged thereto, a bottom piece hinged to said back piece, a catch adapted to secure said front and bottom pieces together, and lugs on said bottom pieces adapted to prevent movement of said side pieces.

961,229. COMBINED SASH-LOCK AND BURGLAR-ALARM. FREDERICK K. HEUPEL and ISAAC B. NORDLINGER, Washington, D. C. Filed June 28, 1909. Serial No. 504,923.



A device of the character described comprising a member adapted to be secured to the lower sash of a window, a hinged member 4, an alarm carried thereon, a plunger on said alarm, an engaging strip adapted to be secured to the upper sash of a window, said engaging strip being provided with means for engaging the said plunger, a leaf spring pivotally connected to the first mentioned member having its free end normally in engagement with the hinged member for holding the said plunger in engagement with the said strip said leaf spring being adapted to be swung on its pivot out of engagement with the hinged member, substantially as described and for the purposes set forth.

961,230. WINDOW-SHADE HANGER. CHARLES N. HINES, Staunton, Va. Filed Feb. 11, 1909. Serial No. 477,267.



1. A window shade hanger including spaced tubular guides, slides operating in the guides, a slidable frame connected with the slides, a spring actuated roller mounted on the slidable frame, flexible strips arranged to be wound around the roller for moving the frame in one direction, and an operating device connected with one of the slides and operating within the tubular guide for the same.

2. A window shade hanger including spaced tubular guides, slides operating in the guides, a frame connected with the slides, means including a spring for actuating the frame to move the same in one direction, and cushions mounted within the tubular guides and arranged in the path of and adapted to be engaged by the slides.

3. A window shade hanger including spaced tubular guides, slides operating in the guides, a frame connected with the slides, means including a spring for actuating the frame to move the same in one direction, plugs fitted within the tubular guides and provided with sockets, and rubber cushions secured within the sockets of the plugs and arranged in the path of and adapted to be engaged by the slides.

4. A window shade hanger including a vertically movable frame, a vertical guide for the same, a bracket for securing the guide to a window frame and provided with spaced headed fastening devices, a spring actuated roller carried by the guide, a flexible strip connected with the roller and having a looped portion embracing a portion of the bracket and engaged at opposite sides by the heads of the said fastening devices.

5. A window shade hanger including a vertically movable frame, a vertical guide for the same, a bracket for securing the guide to a window frame, said bracket being composed of front and back plates, and spaced fastening devices having heads, a spring actuated roller mounted on the frame, and a flexible strip connected with the roller and having a looped portion embracing the front plate of the bracket and engaged by the heads of the fastening devices of the bracket.

[Claims 6 to 15 not printed in the Gazette.]

961,231. AIR MATTRESS, SEAT, AND THE LIKE. NEHEMIAH C. HINSDALE, Marion, Ind., assignor to Hinsdale Pneumatic Cushion and Mattress Company, Marion, Ind., a Corporation of Indiana. Filed Sept. 16, 1909. Serial No. 517,994.



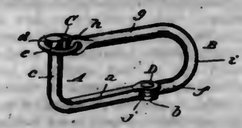
1. An air mattress seat or the like including a frame, a plurality of parallel tubes therein independent of each other, cushions mounted on and in communication with said tubes, a valve closed air inlet port for each tube, a relief valve for closing each tube, a rock shaft mounted on the frame, arms secured thereto for each relief valve, a spring held by said arm against the relief valve, a ratchet on said rock shaft, and a pawl mounted in connection with the frame for engaging said ratchet, whereby the tension of the springs may be maintained.

2. An air mattress seat or the like including a plurality of air tubes, valves for closing said tubes to prevent the escape of air normally, cushions mounted upon and in communication with said tubes, and stationary means for engaging the sides of the lower parts of the cushions for reinforcing and supporting the same.

3. An air mattress seat or the like including a plurality of air tubes, valves for closing said tubes to prevent the escape of air normally, cushions mounted upon and in communication with said tubes, and a plate resting upon said tubes with upwardly curved portions between the rows of cushions for engaging and reinforcing the lower parts of the cushions.

4. An air mattress seat or the like including a plurality of cushions with tapered lowered ends, valve closed tubes upon which they are mounted, a frame surrounding the series of cushions and in which said tubes are mounted, said frame conforming to the sides of the cushions adjacent to it for reinforcing the same, a cover extending over the cushions and secured to said frame, and a plate mounted upon the tubes with upward extensions between the rows of cushions for engaging and reinforcing the lower portions thereof.

961,232. CLEVIS. JACOB HITZERT, Onaway, Mich. Filed Feb. 18, 1910. Serial No. 544,597.



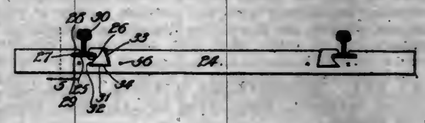
1. The combination in a clevis, of a major member, of general right-angle form, having a horisontal arm the inner portion of which is increased in width and bifurcated, and also having an upstanding arm, of circular form in cross-section, and a swell on the rear side of said arm adjacent the upper end thereof; a major member, of general U-form, having a comparatively short lower arm and a wide terminal thereon interposed between and pivoted to the sides of the said bifurcated portion, and also having a forward bight and an upper arm which terminates at its rear end in a horisontally-disposed eye; and a ring pivoted in said eye and movable on and off the upright arm of the angular member, substantially as specified.

2. The combination in a clevis, of a major member, of general right-angle form, having a horisontal arm and also having a rear upstanding arm and a swell on the rear side of said arm adjacent the upper end thereof; a major member, of general U-form, having a lower arm hinged to the horizontal arm of the first-named member and also having a forward bight and an upper arm, and a ring pivoted to said upper arm and movable on and off the upright arm of the first-named member.

3. The combination in a clevis, of a major member, of general right-angle form, having a horizontal arm and also having a rear upstanding arm on said horisontal arm; a major member, of general U-form, having a lower arm connected by a vertical hinge to the horizontal arm of the first major member, whereby the second major member is enabled to swing horizontally on the first major member, and also having a forward bight and an upper arm; and a ring pivoted to said upper arm and movable vertically on and off the upright arm of the first major member.

4. The combination in a clevis, of a major member having an upstanding arm and also having an arm that reaches forwardly from said upstanding arm; a major member connected by a vertical hinge to the forward end of the forwardly reaching arm of the first major member, whereby the second major member is enabled to swing horisontally on the first major member, and also having a forward bight and an upper arm directed rearwardly from said bight; and detachable connecting means pivoted to said upper arm and movable vertically on and off the upstanding arm of the first major member.

961,233. RAILWAY-ROAD-BED CONSTRUCTION. CHARLES R. HOLDEN, Chicago, Ill. Filed Oct. 12, 1908, Serial No. 457,277. Renewed Nov. 10, 1909. Serial No. 527,307.



1. The combination of a support for a rail, means for keying the rail to the support, and a reinforcing member for said support constructed and arranged to prevent lateral displacement of the rail on said support should the latter give way at the portion thereof at which a side of the rail bears.

2. The combination of a support for a rail provided with an abutment for a side of the rail, means for keying the rail to said support against its abutment, and a reinforcing member for said support constructed and arranged to prevent lateral displacement of the rail on said support should the abutment on the latter give way.

3. The combination of a support for a rail provided with an abutment for a side of the rail, means for keying the rail to said support against its abutment, a reinforcing member for said support provided with an abutment for said side of the rail and constructed and arranged to prevent lateral displacement of the rail on said support should the abutment on the latter give way.

4. The combination of a support for a rail, means for keying the rail to said support, and a plurality of reinforcing plates constructed and arranged to prevent lateral displacement of the rail on said support should the latter give way at the portion thereof against which a side of the rail bears.

5. The combination of a support for a rail provided with an abutment for a side of the rail, means for keying the rail to said support against its abutment, and a plurality of reinforcing plates for said support constructed and arranged to prevent lateral displacement of the rail on said support should the abutment on the latter give way.

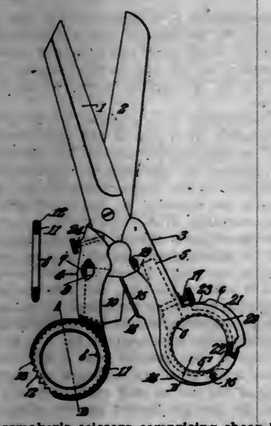
[Claims 6 to 19 not printed in the Gazette.]

961,234. HOSE-NOZZLE SUPPORT. CLAUDE V. HOOVER, North Birmingham, Ala. Filed Nov. 22, 1909. Serial No. 529,281.



A hose nozzle support, comprising a supporting rod having an apertured flattened portion near its upper end, a nozzle rest constructed from a single piece of wire having its central portion bent to form a complete loop, its ends extended in opposite directions in substantially the same plane and its terminals bent inwardly in opposite directions and lying in substantially parallel planes, the looped portion of the rest being adapted to bear against the flattened portion of the support, a screw passing through the loop of the rest and the aperture of the support and a nut screwing on the threaded end of said screw to hold the looped portion of the nozzle rest in frictional engagement with the flattened portion of the support, whereby the rest will be retained in adjusted position.

961,235. DRESSMAKER'S SCISSORS. ANNIE HOPKINS, Lewistown, Mont. Filed Apr. 17, 1909. Serial No. 490,484.



1. A dressmaker's scissors comprising shear blades connected together and each provided with a handle terminating in a finger ring, each handle being recessed on the edge facing the other handle, a blade fixed in the recess in one handle, and a blade pivoted to the other handle and movable into and out of the recess therein and coacting with the first blade to constitute a buttonhole scissors.

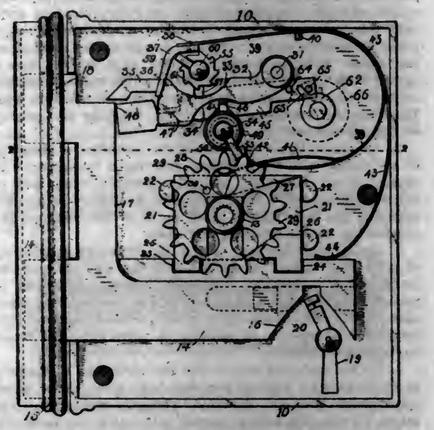
2. A dressmaker's scissors or shears comprising pivoted blades each provided with a handle, and each handle being recessed on the edge facing the other handle, a blade seated in the recess in one handle, and a blade pivoted to the other handle and capable of moving into and out of the recess therein and provided with means for adjusting the last named blade toward the blade in the recess of the other handle.

3. A scissors having two co-acting blades in the handles thereof, one of the blades being adjustable relative to the handle and to the other blade, and provided with a ripping spur.

4. A scissors having a recessed handle, a blade hinged to said handle and adapted to move into and out of the recess and provided with a cutting edge, an adjusting screw co-acting with the blade when in the recess, and a co-acting blade carried by the other handle member.

5. A scissors having two co-acting blades in the handles thereof, one of the blades being pivoted to the handle, and provided with a cutting edge and a ripping spur, and an adjusting screw for the last named blade.

961,236. COMBINATION-LOCK. JAMES W. HUNTER, Foster, W. Va. Filed Nov. 11, 1909. Serial No. 527,412.



1. In a lock, a main bolt operative by a key, a supplemental bolt engaging said main bolt and holding the same distended when in one position, a trigger device operating to hold said supplemental bolt in locked position relative to said main bolt, a movable locking member engaging said main bolt when in one position, a device adapted to actuate said locking member, another key adapted to actuate said locking member actuating device when in one position and to actuate said supplemental bolt when in another position, and another key adapted to actuate said trigger device.

2. In a lock, a casing having spaced apertures in one edge, a main bolt movably arranged in said casing and extending through one of said apertures and provided with an extension projecting through the other aperture, said main bolt being operative by a key, a supplemental bolt engaging the extension of said main bolt and holding the same distended when in one position, a trigger device operating to hold said supplemental bolt in position relative to said main bolt, another key adapted to operate said trigger device, a movable locking member engaging said main bolt when in one position and another key adapted to operate said supplemental bolt.

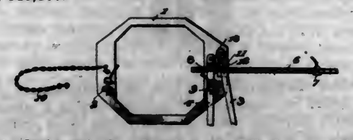
3. A lock casing, a main bolt movable in said casing and operative by a key, a locking member provided with a projection and movable in said casing and engaging said main bolt when in one position, a disk having a predetermined number of teeth in its rim and provided with a pin extending therefrom and adapted to engage said projection and disengage said locking member from said bolt when the disk is disposed in one position, and means for actuating said disk.

4. A lock casing, a main bolt movable in said casing and operative by a key, a locking member provided with a projection and movable in said casing and engaging said main bolt when in one position, a disk having a predetermined number of teeth in its rim and provided with a pin extending therefrom and adapted when the disk is disposed in one position to engage said projection and disengage said locking member from said bolt, and a key adapted to operate said disk.

5. In a lock casing, a main bolt movable in said casing and operative by a key, a supplemental bolt engaging said main bolt and holding the same distended when in one position, a locking member provided with a projection and movable in said casing and adapted to engage said main bolt when in one position, a disk having a predetermined number of teeth in its rim and provided with a projecting pin adapted to engage said projection when in one position and disengage said locking member from said bolt, and a key adapted to actuate said disk when in one position and to actuate said supplemental bolt when in another position.

[Claims 6 to 10 not printed in the Gazette.]

961,237. WIRE STRETCHER AND SPLICER. HENRY C. JACOBS, Glasco, Kans. Filed Aug. 20, 1909. Serial No. 513,807.



1. A device of the character described comprising a frame, wire gripping jaws secured at one side thereof, a main lever pivotally secured to the opposite side of the frame, means carried by said lever for engagement with the wire and an auxiliary lever pivotally secured to the same side of the frame as the main lever and provided with wire gripping jaws.

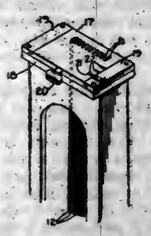
2. A device of the character described comprising a frame, wire gripping jaws secured at one side thereof, a main lever pivotally secured to the opposite side of the frame near the upper end thereof and off-set therefrom near its upper end, an operating chain carried by said lever, wire gripping jaws carried by the chain and an auxiliary lever pivotally secured to the frame alongside of the main lever and off-set near its upper end from the frame and provided with wire gripping jaws.

3. A device of the character described comprising a frame, wire gripping jaws secured at one side thereof, a main lever pivotally secured to the opposite side of the frame near the upper end thereof and off-set therefrom near its upper end, an operating chain, a chain guide carried by said lever, a pawl secured to the guide and arranged to engage the chain, wire gripping jaws carried by the chain, and an auxiliary lever pivotally secured to the frame below the main lever and off-set near its upper end from the frame and provided with wire gripping jaws.

4. A device of the character described comprising a frame, wire gripping jaws secured at one side thereof, a main lever pivotally secured to the opposite side of the frame near the upper end thereof and off-set therefrom near its upper end, a chain guide slidably mounted on said lever, an operating chain carried by the guide and provided with wire gripping jaws and an auxiliary lever pivotally secured to the frame below the main lever and off-set near its upper end from the frame and provided with wire gripping jaws.

5. A device of the character described comprising a frame relatively thicker at the sides than at the ends, a securing chain carried by one of said sides, wire gripping jaws mounted below said chain, a main lever pivotally secured to the opposite side of said frame near the upper end thereof and off-set therefrom near its upper end, means carried by said lever for engagement with the wire and an auxiliary lever pivotally secured to the frame below the main lever and off-set near its upper end from the frame, and provided with wire gripping jaws.

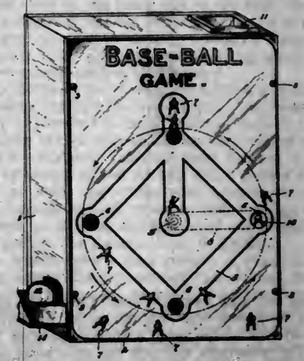
961,238. TYPE-WRITING MACHINE. CARL A. JOERISSEN, Washington, D. C., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 9, 1909. Serial No. 482,221.



1. In a typewriting and tabulating mechanism, the combination with a carriage having a rack, of a series of carriers along the rack, said carriers having column stops at different points along their under edges, so that certain stops are out of line with others, the stops forming a plurality of rows, a series of upstanding denomination-stop rods beneath said column stops, a guide-plate up through which the denomination-stop rods project, means to guide said guide-plate in a forward and backward movement to bring the denomination-stops into line with any selected row of column stops, a finger-piece connected to said guide plate, and a detent to hold said guide-plate where adjusted.

2. In a typewriting and tabulating mechanism, the combination with a carriage having a rack, of a series of carriers along the rack, said carriers having column stops at different points along their under edges, so that certain stops are out of line with others, the stops forming a plurality of rows, a series of upstanding denomination-stop rods beneath said column stops, a guide-plate up through which the denomination-stop rods project, means to guide said guide-plate in a forward and backward movement to bring the denomination stops into line with any selected row of column stops, a finger-piece connected to said guide plate, a detent to hold said guide-plate where adjusted, and key-operated levers to which said denomination-stop rods are loosely connected at their lower ends.

961,239. AMUSEMENT DEVICE. MICHAEL KERN, Chicago, Ill. Filed Aug. 19, 1908. Serial No. 449,288.



1. In a device of the class described, the combination of a face plate having apertures indicative of a base ball

diamond, a rotatable arm behind said face plate and provided with a representation of a ball player adapted to register with said openings, means for rotating said arm, and variable means for interrupting the rotation of said arm, substantially as described.

2. In a device of the class described, the combination of a face plate having apertures indicative of a base ball diamond, a rotatable arm behind said face plate and provided with a representation of a ball player adapted to register with said openings, spring operated means for rotating said arm, a spring catch for locking said arm against rotation, a ball race, trigger mechanism projecting into said race and adapted to release said catch when contacted with by a ball in said race, and variable means for stopping the rotation of said arm, substantially as described.

3. In a device of the class described, in combination with a casing having front and rear portions, four perforations in said front portion equally spaced and arranged equidistant from the axis of an arm suitably mounted and adapted to revolve in the rear of said front portion, means for revolving said arm, a figure on said arm being adapted to register with said apertures in a revolution of said arm about said axis, a ball receptacle provided at one side of said casing, a tubular guide extending from the top of said casing to said ball receptacle, a ball adapted to pass through said guide by gravity, a slot on the side of said guide, an arbor provided in the operating mechanism, a lever adapted to extend through said slot and to be operated by contact with said ball, said lever being fixed to said arbor, a second lever fixed to said arbor extending upwardly and provided with a hook at its upper extremity, said wheel provided with a series of peripheral stops irregularly spaced, a spring adapted to press said hook into frictional engagement with the periphery of said wheel, and said hook being adapted to register with and to engage one of said stops at each operation of the device, whereby said wheel and said arm which is positively connected with said wheel are stopped simultaneously, substantially as described.

961,240. CLOTHES-LINE SUPPORT. HARVEY O. KNICKERBOCKER and CHARLES G. WATSON, Detroit, Mich. Filed Aug. 13, 1908. Serial No. 448,319.



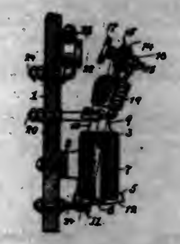
A clothes line prop having a longitudinal slot near one end and a transverse slot communicating therewith and with the exterior of the prop, a spring guarding the entrance to the transverse slot said entrance being substantially at right angles to the portion of the longitudinal slot intersected by the transverse slot.

961,241. DYEING ACETYL CELLULOSE. EMIL KNOEVENAGEL, Heidelberg, Germany. Filed Nov. 23, 1907. Serial No. 403,573. (Specimens.)

1. The improvement in the art of dyeing acetyl-cellulose, which consists in treating the acetyl-cellulose with aqueous solutions of the herein described organic substances which are capable of swelling acetyl-cellulose, then wringing the product, rinsing it with water and then dyeing it in aqueous dyestuff solution, substantially as described.

2. The improvement in the art of dyeing acetyl-cellulose, which consists in treating the acetyl-cellulose with diluted alcohol, then wringing the product, rinsing it with water and dyeing it in aqueous dyestuff-solution, substantially as described.

961,242. ELECTRIC SWITCH. LOUIS LARSEN, New York, N. Y. Filed Jan. 25, 1909. Serial No. 473,948.



1. The combination of a base, an electromagnet, a pivoted frame surrounding said magnet, having a member of inductive material constructed to swing below and across the pole of said magnet, a contact carried by said frame above said pivot, a fixed contact on said base, and a spring secured to said frame and to said base and operating to hold said contacts in circuit closing juxtaposition.

2. The combination of a base, an electromagnet, a pivoted frame surrounding said magnet, having on opposite sides of its pivot a member of inductive material constructed to swing below and across the pole of said magnet and a weighted portion, a contact carried by said frame above said pivot, a fixed contact on said base, and a spring secured to said frame and to said base and operating to hold said contacts in circuit closing juxtaposition.

961,243. STATION OR STREET INDICATOR. GEORGE W. LLOYD, New York, N. Y. Filed Aug. 16, 1909. Serial No. 513,110.



1. A station indicator comprising in combination a band, rollers for moving the same, a driving shaft, shiftable means for transmitting motion from said shaft to said band in one direction or another at will, a swinging lever for controlling the position of said shiftable means, a spring tending to draw said lever in one direction, a second lever, means carried thereby for engaging said first lever to hold it in one position against said spring, a second spring tending to hold said second lever in engaging position, and means for withdrawing said second lever from engaging position, substantially as described.

2. A station indicator comprising in combination a band, rollers for moving the same, driving mechanism for said rollers, a tilting lever operatively connected to said driving mechanism, a bell, means connected with said lever for ringing said bell on a partial movement of said lever, a cord for operating the lever, an additional cord attached thereto and a stop cord attached to said additional cord, substantially as described.

3. A station indicator comprising in combination a casing, a band, storing rollers therefor, a separate pinion for driving each of said rollers, a main driving shaft carrying a main driving gear, a thimble mounted loosely on one end of said shaft and extended outward through said casing, a reversing device carried by said thimble comprising two pinions adapted to mesh with said driving gear and with one or another of said first named pinions, a lever outside of the casing fixed on said thimble, and means for securing said lever in different positions, substantially as described.

4. A station indicator comprising in combination a band, rollers therefor, an operating spring, a drum connected thereto having a hub, a pivoted bar carried by said drum, a disk having a pin adapted to press upon said bar to turn the drum, means for turning said disk, and means connected to said drum whereby the unwinding of said spring actuates said rollers, substantially as described.

5. A station indicator comprising in combination, a band, rollers therefor, a main driving shaft, a drum mounted thereon, a spring wound thereon, a thimble mounted on said shaft, means for rotating said thimble, a disk and pin on said thimble, means on said drum adapted to engage with said pin for winding said spring, and means operated by movement of said drum when said spring unwinds for rotating said shaft, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

961,244. APPARATUS FOR BONING OR LAYING DRAIN-PIPES. JOSEPH MILNER LOCKHART and HERBERT JOHN JENKINSON, Manchester, England. Filed Oct. 30, 1909. Serial No. 525,587.



1. An instrument of the class described, comprising a casing, a swivel block therein, a spirit level carried by the block, a scale within said casing and having one end secured to the block and its other end free, and sliding means on said free end for oscillating the scale, said sliding means being in engagement with said casing.

2. An instrument of the class described, comprising a casing provided with an opening and movable means for closing said opening, a block swiveled in the casing, a level mounted on the block, said casing having a transparent portion above the level, a scale within said casing and having one end secured to the block and its other end free and sliding means on the other end of the scale for oscillating the same, said sliding means being in engagement with said casing.

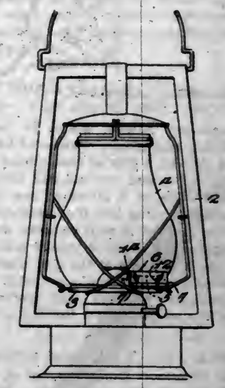
3. An instrument of the class described, comprising a casing, a block swiveled therein, a level mounted on the block, a scale within said casing and having one end secured to the block, a traveling cursor on the scale and engaging said casing, and means for securing the cursor against movement.

4. An instrument of the class described comprising a casing, a block swiveled therein, a level mounted on the block, a scale having one end secured to the block, a traveling cursor on the scale and engaging one of the walls of the casing, means for securing the cursor against movement, and means for minutely adjusting said cursor.

5. An instrument of the class described comprising a casing, a block swiveled therein, a level mounted on the block, a scale having one end secured to the block, a traveling cursor on the scale and engaging one of the walls of the casing, means for securing the cursor against movement, and means for minutely adjusting said cursor, said means comprising a clamp movable on the scale, an adjusting screw carried by the clamp and engaging with the cursor, and a nut for the screw.

[Claim 6 not printed in the Gazette.]

961,245. LAMP-BURNER ATTACHMENT. HILMEN C. LYNG, Fort Benton, Mont. Filed July 26, 1909. Serial No. 509,544.



1. A device of the character described comprising a base adapted to be attached to the chimney supporting plate of a lantern, a roughened plate formed with said base near the inner end thereof, a plate hinged to the other end of the base and adapted to close an opening through the lamp chimney, and a spring holding said plate in its closing position.

2. In a device of the character described a base adapted to be attached to the chimney supporting plate of a lantern and having an angular outer end adapted to fit over the edge of said chimney supporting plate, a roughened plate carried by said base near the inner end thereof, and a spring-pressed closing plate hinged to the outer angular end of the base and adapted to close an opening in a lamp chimney.

3. A device of the character described, comprising a slotted base with bolts whereby it may be adjusted to the chimney support of a lantern, an upwardly extending roughened strip on the inner end of the base, and a closing plate pivotally carried on the outer end of the base and adapted to close an opening through a chimney, said closing plate being provided with a spring normally holding it inward and against the chimney.

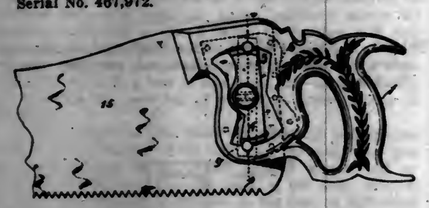
4. In a device of the character described, a slotted strip, bolts passing through the slot of said strip, whereby the base may be attached to the supporting plate of a lantern, an upwardly turned portion on the inner end of the plate carrying a roughened material upon its face, a support for said upwardly turned portion, and a closing plate pivoted to the outer end of the strip adapted to close the opening through a lamp chimney, and a spring attached at one end to the base and the other end of said spring bearing against the plate to force it inward.

5. The combination with a lantern, a chimney-supporting plate and a chimney carried thereon and having an opening in its lower edge, of a base strip attachable to the lamp-supporting plate, the end of said strip being transversely extended, the upwardly turned ends of said extended portion being bent inward, a strip of material having a roughened surface carried between said inwardly bent portion, a plate adapted to close the opening in the lamp chimney, a pintle pivotally securing the lower edge

of the plate to the base, and a spring surrounding the pintle and having one end thereof bearing against the plate to hold it closed.

[Claims 6 and 7 not printed in the Gazette.]

961,246. DETACHABLE SAW-HANDLE. DANIEL A. MARKWITH, San Francisco, Cal. Filed Dec. 17, 1908. Serial No. 467,972.



In a detachable saw handle, means for detachably securing a saw blade comprising a chambered handle, a plate fixed to one side thereof, a pair of bosses fixed to said plate each boss having a slot near one end and being adapted to pass through the holes in a standard saw blade having their slotted ends projecting into the chambered portion of the handle, a cam located in said chamber adapted to engage and disengage said slots, a second plate located on said handle on the side opposite the first plate and having a centrally located aperture; and a centrally located boss on said cam projecting through said aperture having a hole therein for the reception of a turning lever.

961,247. NIPPLE AND CLAMP FOR PIPES. CHARLES E. MAXFIELD, Cleveland, Ohio, assignor of two-fifths to Egbert F. Hammond, Cleveland, Ohio. Filed July 16, 1907. Serial No. 384,019.

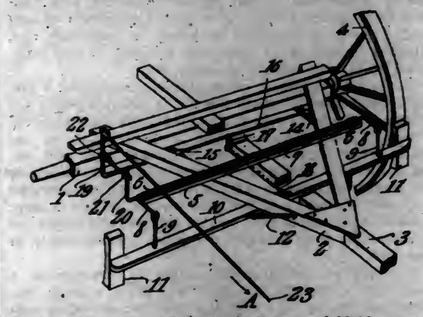


In a device of the character described, a nipple having an exterior shoulder and a tapered portion in front of such shoulder, said tapered portion being adapted to receive a tube or pipe, an internally threaded thimble surrounding the nipple and having a projecting flange adapted to engage with the shoulder upon the nipple and space the body portion of the thimble from the nipple, a ring having tapered sides, the exterior surface of said ring being wider than the interior surface thereof, the exterior surface being provided with screw threads adapted to engage with the threads on the interior of the thimble, the interior surface of said ring being substantially straight, whereby an angular portion is presented to the pipe or tube which engages the tapered portion on the nipple, said ring being adapted to be drawn in against the pipe as the thimble is turned to press against the pipe and form a tight joint substantially as described.

961,248. WAGON-BRAKE. DON MERK, Paonia, Colo. Filed Sept. 16, 1909. Serial No. 518,047.

1. The combination with the frame and wheels of a vehicle, of forward and rearward rock shafts carried by the frame and provided with upstanding arms; a brake beam suspended from the forward rock shaft and arranged to be lowered thereby; resilient means for raising the brake beam and for holding the same away from the wheels; means connecting the rear rock shaft with the brake beam to draw the latter into contact with the wheels when the former is rocked; a foldable connection between the arms of the shafts; and means for rocking the rear shaft.

2. The combination with the frame and wheels of a vehicle, of forward and rearward rock shafts carried by the frame, each provided with upstanding arms, the rear shaft having a depending arm and the forward shaft having forwardly extending arms; a brake beam suspended from the forwardly extending arms; a connection between



the depending arm and the brake beam; a foldable connection between the upstanding arms; a draw rod connected with the upstanding arm of the rear shaft; and resilient means for raising the brake beam and for holding the same away from the wheel.

961,249. LOCK-NUT. SAMUEL G. MEEKER, New York, N. Y., assignor to Meeker Grip Nut Company, a Corporation of New York. Filed Dec. 14, 1907, Serial No. 406,453. Renewed Dec. 26, 1908. Serial No. 469,375.

1. A nut having entirely inside of its outer circumference, a recess which is parallel with its axis, and a detent protruding from a spring supported in said recess, and saliently or convexly formed in both directions on opposite sides of a line radial to the nut, said protuberant portion being adapted to contact with a threaded bolt constructed to engage with the threaded portion of the nut.

2. The combination with a nut, of a spring which is round or approximately round relatively to an axis parallel to the axis of the nut, said spring being fitted into a recess formed in the nut, so that a segmental portion of its rounded surface will protrude beyond the inner surface of the nut and constitute a detent having on opposite sides of a median line similar portions adapted to permit rotation of the nut about a bolt upon the application of sufficient force circumferentially of the nut.

3. A threaded nut having an opening parallel with but wholly at one side of its axis, and a spring supported in said opening and having a protuberant portion rounded in both directions from the center of said protuberant portion, said spring being so constructed and fitted to said opening that the said protuberant portion of the spring may move radially to the axis of the nut.

4. A nut having an opening formed entirely inside the nut, parallel with but wholly at one side of the axis of the nut, and a compressible spring supported in said opening and having a protuberant portion which, in a plane transverse to the axis of the nut, is saliently or convexly bent toward the axis of the nut in both directions from the points of its protrusion, said protuberant portion of the spring being adapted to contact with a threaded bolt constructed to engage with the threaded portion of the nut.

5. A nut having a circular opening parallel with, but wholly at one side of its axis and a circular spring supported in said opening with its axis parallel with the axis of the nut and having a salient or convex portion protruding toward the axis of the nut, said protruding portion of the spring being adapted to contact with a threaded bolt constructed to engage with the threaded portion of the nut and to permit rotation of the nut in either direction about a bolt by the application of sufficient force circumferentially of the nut.

[Claims 6 to 11 not printed in the Gazette.]

961,250. KEYHOLE-LOCK. GEORGE S. NICKUM, Los Angeles, Cal. Filed Sept. 3, 1908. Serial No. 451,611.



1. In a key-hole guard, a round post adapted to fit the upper part of the key-hole, a jaw plate mounted to swing with respect to the post and projecting laterally therefrom and adapted to fit the lower part of the key-hole, said jaw plate being provided with teeth for retaining the guard in the key-hole, and key controlled means connected to the post for moving said jaw plate outwardly with respect to the post to force it into retaining position.

2. A post, a jaw pivoted adjacent the post, a screw rotatable within the post, a wedge bearing against said jaw and having a nut on said screw, and key controlled means for turning said screw.

3. A post adapted to be inserted in a key hole, a lock casing attached to the outer end of said post and adapted to abut against the escutcheon, a jaw pivoted to the lock casing, a screw rotatable in the post, a wedge operated by the screw and bearing against the jaw, and a lock in the lock casing connected with the screw for turning the screw.

4. A post, a jaw mounted to swing with respect to the post, a wedge slidable along the post and bearing against the jaw for swinging down the jaw, a spring for swinging the jaw upward, and key controlled means for sliding said wedge.

5. A key-hole guard comprising a tubular post having a slot along one side, a member slidably mounted in said tubular post and formed with a wedge projecting laterally from the post through said slot, a jaw plate pivotally mounted on the post and having an inclined portion for engaging said wedge portion and provided on its lower face with a series of teeth to retain the guard in place, spring means operating on said jaw plate to press the same toward the post, a screw extending in the tubular post and screwing in said wedge member to move the same longitudinally of the post on rotation of the screw, and key-controlled means for operation of said screw.

[Claim 6 not printed in the Gazette.]

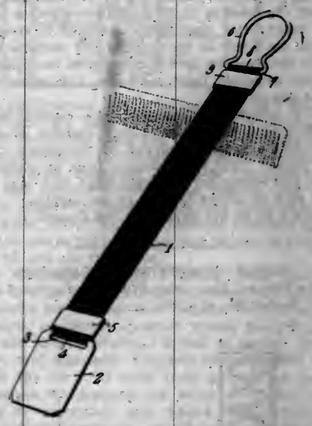
961,251. LAWN-SPRINKLER. FRANK E. OPITZ, Longbeach, Cal., assignor to Barney Brown and Edith H. Sparling, Los Angeles, Cal. Filed Sept. 8, 1908. Serial No. 452,152.

A lawn sprinkler comprising a longitudinally curved tubular member, a support holding said tubular member in position to constitute an arch presenting curvature in a vertical plane of less than half a circle, said tubular member having openings in its upper portion distributed transversely and longitudinally thereof, the openings in different longitudinal portions of the member being presented at different inclinations in a longitudinal plane, and the openings in the different transverse tubular portions being presented at different inclinations in a transverse plane, whereby water issuing from said member through said openings is projected laterally and longitudinally from the openings to cover a rectangular area whose



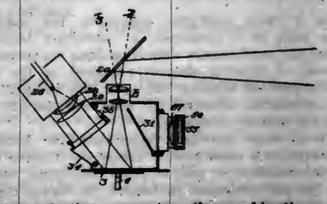
dimensions are greater longitudinally and transversely than the dimensions of the tubular member, closure means at one end of said tubular member and connecting means at the other end of said tubular member for connection of a water supply.

961,252. COMB-CLEANER. JAMES OPPENHEIMER, Omaha, Nebr. Filed May 19, 1909. Serial No. 497,012.



As a new article of manufacture, a comb cleaner consisting of a suspending loop having a straight side, a base plate having a straight side and a transverse slot adjacent to and parallel with the said side, a multiplicity of twisted wire strands extending between the base plate and the suspending loop and having their opposite ends doubled around the straight side of the loop and inserted through the slot of the base plate and doubled around that portion of the plate between the slot and the adjacent edge, and securing plates clamped around the double ends of the strands in juxtaposition to the straight side of the loop and the base plate respectively.

961,253. PROJECTION APPARATUS. WILLIAM L. PATTERSON, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 20, 1909. Serial No. 529,069.



1. In a projection apparatus, the combination with a supporting frame, of a casing having an object opening therein and adjustable on the supporting frame to permit

the opening to lie in different planes at angles to each other, a projector arranged to receive rays from an object at the opening in any position to which the latter may be adjusted, and means for directing light rays into the casing onto an object at the opening.

2. In a projection apparatus, the combination with a supporting frame, of an object holder adjustable on the frame, to hold an object in different planes at angles to each other, a projector arranged to receive rays from an object held by the holder in any position to which the latter may be adjusted, and means for directing light rays onto an object held by the holder.

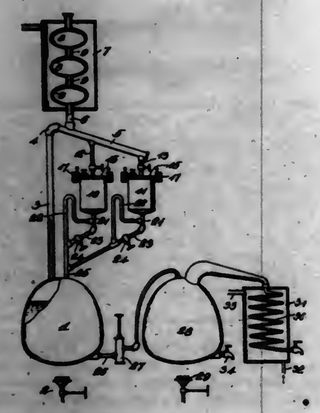
3. In a projection apparatus, the combination of a casing having an object opening therein and mounted to swing to permit the opening to lie in different planes at angles to each other, with a projector arranged to receive rays from an object at the opening, in any position in which the latter may be located, and means for directing light rays into the casing onto an object at the opening.

4. In a projection apparatus, the combination of a casing having an object opening therein and mounted to move to permit the opening to lie in different planes at angles to each other, with a projector arranged to receive light rays from an object at the opening and movable with the casing to maintain its optical relation to the opening, and means for directing light rays into the casing onto an object at the opening.

5. In a projection apparatus, the combination of a rotatable casing having an object opening at one side thereof, with a projector carried by the casing in a position to project light rays received from an object at the opening, and means for directing light rays into the casing and onto an object located at the opening.

[Claims 6 to 38 not printed in the Gazette.]

961,254. ROSIN-PURIFYING APPARATUS. RALPH NEVIUS PERLEE, Long Island City, N. Y. Filed Sept. 16, 1909. Serial No. 518,055.



1. In a rosin purifying apparatus, the combination with a still, of a condenser, a connection between the still and the condenser, a dissolving tank connected to the condenser, a filtering element arranged in the tank, a siphon connected between the tank and the still, and a direct connection between the tank and the still which shunts the siphon connection.

2. In a rosin purifying apparatus, the combination with a still, of a condenser, a connection between the still and the condenser, a pair of rosin dissolving tanks connected to the condenser to receive the liquid therefrom, means for independently controlling the connection from the tanks to the condenser, and independent siphon connections between the tanks and the still.

961,255. TOBACCO-PIPE. JOHN R. PERRY, Chicago, Ill., assignor to Perry Pipe Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 29, 1909. Serial No. 475,052.



1. In a device of the character set forth, the combination of a stem provided with a straight, smooth bore, a mouth-piece provided with a saliva-chamber, a nipple connecting said mouth-piece and stem, a nicotin-collector in said bore having means contacting directly with the walls of said bore and adapted to scrape the same in a simple withdrawing motion and having, also, a shank extending through said nipple and having slip-joint connection therewith, said shank being shouldered to effect withdrawal of the nicotin-collector when the nipple is removed from the stem.

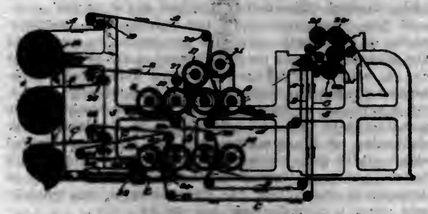
2. In a device of the character set forth, the combination of a stem provided with a straight, smooth bore, a mouth-piece provided with a saliva-chamber, a nipple connecting said mouth-piece and stem, and a nicotin-collector in said bore having perforate disks contacting with the walls of said bore and having a shank extending through said nipple and having slip-joint connection therewith, and a saliva-separator carried by the upper portion of said shank and projecting into said saliva-chamber, said saliva-separator having a smoke-passage adjacent the upper wall of said saliva-chamber and communicating with the bore of said stem.

3. A pipe comprising a bowl, a stem connected therewith having a straight smooth bore, a curved mouth-piece provided with a saliva-chamber, a nipple connecting said mouth-piece and stem, and a nicotin-collector located in said bore and having a shank extending through said nipple and having slip-joint connection therewith, and a curved saliva-separator carried by the upper portion of said shank and having in its upper portion a smoke-passage communicating with the bore of said stem.

4. A pipe comprising a bowl, a stem connected therewith provided with a straight, smooth bore, a mouth-piece, a nipple connecting said mouth-piece and stem, and a device comprising a nicotin-collector located in said bore and provided with a shank extending through said nipple and having slip-joint connection therewith, and a saliva-separator carried by the upper portion of said shank, said saliva-separator and said mouth-piece being shaped to prevent rotation of the nicotin-collector with relation to the mouth-piece in the operation of wiping the nicotin-collector.

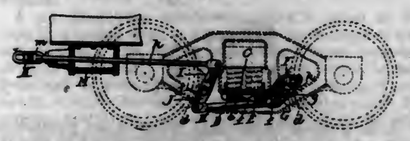
961,256. PRINTING-PRESS. EDWARD PICKERING, Pasadena, Cal., assignor to Goss Printing Press Co., Chicago, Ill., a Corporation of Illinois. Filed Aug. 10, 1908. Serial No. 447,715.

A printing press comprising an upper deck and a lower deck, two sets of printing and blanket cylinders carried by said lower deck, two sets of printing and blanket cylinders carried on the upper deck, a color cylinder, an additional blanket cylinder, means for passing a full width web between the color cylinder and the additional blanket cylinder and between one set of printing and blanket cylinders on the upper deck, means for passing a full width web between the other set of printing and blanket cylinders on the upper deck, means for carrying said web between one set of printing and impression cylinders in the lower deck, means for guiding a one-half width web between half of the other set of printing and impression cylinders in the lower deck and means to reverse the web



and re-pass it between the same set of printing and impression cylinders in the lower deck.

961,257. BRAKE-POWER-LIMITING APPARATUS. WILLARD G. RANSOM, Davenport, Iowa. Filed Sept. 21, 1908. Serial No. 453,997.



1. A brake power limiting mechanism comprising a suitable car-truck having a bolster, springs therefor, trays for said springs, rock-shafts journaled transversely under each end of said trays, rock-bars secured to the ends of said shafts and adapted to vibrate said trays vertically, and means for actuating said rock-bars.

2. A brake power limiting mechanism comprising a suitable car-truck having a bolster, springs therefor, trays for said springs, rock-shafts journaled transversely under each end of said trays, rock-bars secured to the ends of said shafts arranged so that the rock-bars of one shaft project toward and overlap those of the other, and are adapted to vibrate said trays vertically, and means for actuating said rock-bars.

3. A brake power limiting mechanism comprising a suitable car-truck having a bolster, springs therefor, trays for said springs, rock-shafts journaled transversely under each end of said trays, rock-bars secured to the ends of said shafts one of which is substantially L-shaped, a brake-beam, and arm projecting therefrom, link connecting the vertical branch of said L-shaped rock-bar and said arm, and means for moving said brake-beam so as to actuate said rock-bars.

4. In a brake power limiting apparatus, a car-truck comprising side-frames and a truck-bolster, brake-beams and shoes adapted to engage the wheels thereof, power imparting devices for actuating the same, and unyielding means connecting said brake-beams, in combination with mechanism en train after the second brake-beam affected by said power devices and interposed between the same and said truck bolster, to utilize the surplus power of said devices to lift said bolster.

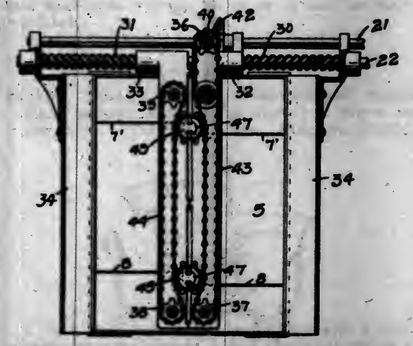
5. In a brake power limiting apparatus, a car-truck, brake-beams and shoes adapted to engage the wheels thereof, brake-power imparting devices, and unyielding means connecting said brake-beams, in combination with rock-bars having their axes arranged parallel to the length of the bolster of the truck and interposed between the second brake-beam affected by said power devices and the bolster, to utilize the surplus power of said devices to lift said bolster.

[Claims 6 to 9 not printed in the Gazette.]

961,258. BALING-TIE. PETER REITHER, Bennettville, Minn. Filed July 24, 1909. Serial No. 509,407.

1. The combination, with a baling press, of hangers mounted thereon and movable toward and from one another transversely with respect to the baling chamber,

segmental sprocket wheels carried by said hangers and having prongs and notches therein to receive the baling wires, the opposite segmental sprockets uniting to form complete sprocket wheels when the hangers are moved together, and means for revolving said sprockets to twist the wires and cut them.



2. The combination, with a baling press, of a shaft having right and left hand threads thereon arranged transversely of the baling chambers, hangers mounted on said shaft and adapted to travel toward and from one another on said threads, segmental sprockets mounted on said hangers and capable of revolving therein and having notches to receive the baling wires, the opposite sprocket sections when moved together forming complete sprocket wheels, and means for revolving said wheels in said hangers to twist and cut the wires.

3. The combination, with a baling press having recesses in its side walls, of hangers fitting within said recesses, means for moving said hangers toward and from one another, segmental sprocket wheels carried by said hangers and having notches adapted to receive the binding wires, said segmental sprockets being adapted to grip and twist the wires to draw them around the bale and having means for severing the wires when the twisting operation is completed, and means for operating said hangers and said segmental sprockets at a predetermined point in the operation of the machine.

4. The combination, with a baling press, of hangers mounted thereon and movable transversely with respect to the baling chamber, segmental sprocket wheels mounted in said hangers and capable of revolving therein, said sprocket wheels having prongs thereon which are adapted to lap by one another when said hangers are moved into coöperating relation with one another, and said prongs having notches to receive the binding wires, and means for revolving said sprocket wheels to twist the wires and draw them around the bale, substantially as described.

5. The combination, with a baling press, of hangers supported thereon and arranged to move transversely with respect to the baling chamber, means for moving said hangers toward and from one another, wire twisting means mounted on said hangers and adapted to receive the binding wires, and means operated at predetermined intervals for actuating said wire twisting means, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

961,259. FISH-HOOK. PETER REITHER, Bennettville, Minn. Filed Dec. 20, 1909. Serial No. 534,081.

1. A fish hook comprising a support, outwardly turned barbed points having their shanks pivoted on said support, a trip rod extending between the pivots of said shanks, links connecting said trip rod with said shanks between the pivots of said shanks and said barbed points, said links when in line with one another locking said shanks in their open position, for the purpose specified.

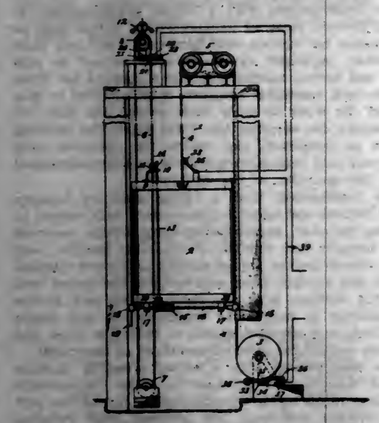
2. A fish hook comprising pivoted shanks having barbed

points adapted to swing toward one another, the shank of one point disengaging the fish from the barb of the other point as the shanks pass one another, and a trip device having a toggle link connection with said shanks, said trip



device including a rod depending between said shanks, said links pivotally connecting the end of said rod with said shanks and in line with one another when the device is open for use.

961,260. MEANS FOR OPERATING ELEVATOR SAFETY DEVICES. GEORGE B. RICE, Ocean Springs, Miss. Filed Nov. 26, 1907. Serial No. 403,944.



1. A safety apparatus for elevator cars comprising a clutch on the car adapted to engage the car guides, means detachably connected to the car adapted to actuate said clutch, an electrically-controlled spring-actuated clutch adapted to detach said means from the car, and a circuit-breaker in circuit with the last-mentioned clutch adapted to be actuated by the hoisting-cable of the car.

2. A safety apparatus for elevator cars comprising a clutch on the car adapted to engage the car guides, means detachably connected to the car adapted to actuate said clutch, an electrically-controlled spring-actuated clutch adapted to detach said means from the car, a pivotally-mounted bell-crank lever carried by the car, a trolley-wheel journaled on said lever and engaging the hoisting-cable of the car, a pivotally-mounted arm on the car adapted to be actuated by the bell-crank lever, a circuit communicating with the electrically-controlled spring-actuated clutch and having one terminal connected with said arm, and a resilient contact normally engaging said arm and connected with another terminal of the circuit.

3. The combination with the hoisting and governor-cables of an elevator, of means for detachably connecting the governor-cable to the elevator car, a clutch carried by the car adapted to engage the elevator guides, means connecting the governor-cable and the clutch whereby the latter is actuated, an electric circuit, a circuit-breaker which is actuated to interrupt said circuit by the breaking or slackening of the hoisting-cable, and a spring-actuated clutch which grips the governor-cable when the circuit is interrupted, said spring-actuated clutch embodying a solenoid in circuit with the circuit-breaker and whereby said clutch is normally held inoperative.

961,261. SWITCH-CHAIR. SAMUEL T. ROBINSON, Walbridge, Ohio. Filed July 17, 1909, Serial No. 508,148. Renewed May 7, 1910. Serial No. 560,065.



1. In a device of the class described the combination with a frogless switch, of a tie block adapted to hold the adjacent ends of the main rails together, said block comprising enlarged ends, an intermediate truss connecting said ends, and integral therewith, said truss positioned below the top of said ends and of less width than said ends, thereby forming shoulders at the junction thereof, said rails provided with notched ends adapted to fit over said truss and engage said shoulders and adapted to be held against lateral movement in one direction.

2. In a device of the class described the combination with a switch, a plurality of main rails, of a tie block adapted to hold the adjacent ends of said rails in a set position, said block comprising enlarged ends provided with an intermediate truss portion reduced in size to said ends, said rails provided with notched ends upon the under surface thereof, said notched ends adapted to straddle said truss, and engage the inner face of said enlarged ends, for holding the rails against displacement in one direction, and a pivoted rail member adapted to be swung so as to engage the respective ends of the main rails.

961,262. DENTAL ADVERTISING DEVICE. MAX R. SLOUGH, Covina, Cal. Filed Jan. 18, 1910. Serial No. 538,712.



1. A device of the class described, comprising a figure in the form of a head presenting a mouth opening, rows of teeth supported within said mouth, and means for moving said rows of teeth so as to present the same in succession at said opening.

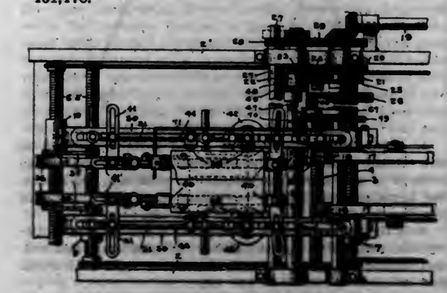
2. A device of the class described, comprising a figure in the form of a head having a partially opened mouth, a drum rotatably mounted within said head adjacent to said mouth, teeth attached to said drum and arranged in rows, and means for rotating said drum with a step by step movement to display said rows of teeth in succession at said mouth.

3. A device of the class described, comprising a figure in the form of a head having a partially opened mouth, a drum rotatably mounted within said head adjacent to said mouth, teeth attached to said drum and arranged in rows, means for rotating said drum with a step by step movement to display said rows of teeth in succession at said mouth, and means for adjusting the heights of said drum and the position of the axis thereof.

4. A device of the class described, comprising a figure in the form of a hollow head having a partly opened mouth, a yoke, means for adjusting said yoke, a drum rotatably mounted in said yoke, means for giving said drum a step by step rotation, and a plurality of teeth arranged in rows and adapted to be presented in succession at said mouth opening.

5. An advertising device, comprising a figure in the form of a hollow head, a yoke, means for supporting and adjusting said yoke within said head, a drum rotatably mounted in said yoke, a plurality of teeth carried by said drum and adapted to be presented in succession at said mouth, a rocker having a fixed pivotal support, means for rotating said drum from said rocker, and an electro-magnet for actuating said rocker.

961,263. STACKING AND COUNTING MECHANISM FOR FLEXIBLE BOX-BLANKS. EDWIN G. STAUDE, Minneapolis, Minn. Filed Nov. 7, 1908. Serial No. 461,478.



1. The combination, with a feeding means, of creasing rollers, a carton receptacle, stacking means having a moving surface and operating transversely in said receptacle, revolving packers, said stacking means and said packers being relatively adjustable, substantially as described.

2. The combination with a carton receptacle, of means for feeding cartons thereto, an arm arranged to move into the path of said cartons, means in the path of said arm for temporarily locking it, the pressure of the cartons against said arm operating the same at a predetermined time to trip said locking means.

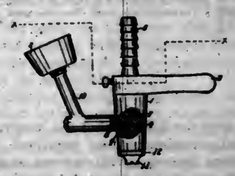
3. The combination with a carton receptacle, and means for feeding cartons thereto, of an arm having a notched forward end arranged to move into the path of the carton, means in the path of said arm for temporarily locking it, the forward ends of the cartons entering said notched end and the entrance of succeeding cartons raising said notched end to trip said locking means, for the purpose specified.

4. The combination, with a carton receptacle and means for delivering the cartons thereto, of a carton arresting arm, a locking device comprising a toothed bar and means for engaging said bar to lock said arm in the path of the cartons and said arm being actuated and having means to engage and trip said bar when a predetermined number of cartons have been arrested.

5. The combination with a carton receptacle and mechanism for delivering cartons thereto, of a carton arresting arm adapted to enter said receptacle, a bar supporting said arm, mechanism actuated by the passage of the cartons toward said receptacle for controlling the movement of said bar, and means adjustably connecting said bar with said mechanism whereby the stroke of said bar may be regulated.

[Claims 6 to 21 not printed in the Gazette.]

961,264. CIGAR-LIGHTER. FRED STOCKER, Saginaw, Mich., assignor of one-half to Gustave M. Meyer, Saginaw, Mich. Filed Nov. 26, 1909. Serial No. 529,962.



1. In a cigar lighter, the combination with a tapered plug having a gas passage, a shell adapted to receive said plug, a cup carried by said shell, and a gas passage connecting said cup and shell, of a handle carried by the shell, a handle carried by the plug, opposing bosses on said handles, a compression spring between said handles, adapted to hold them normally separated, a threaded boss on said shell, an adjusting screw carried by said boss, and a stop on said plug adapted to contact with the end of said adjusting screw.

2. In a cigar lighter, the combination with a tapered plug having a gas passage, a shell adapted to receive said plug, a cup carried by said shell, and a gas passage connecting said cup and shell, of a handle carried by the shell, a handle carried by the plug, opposing bosses on said handles, a compression spring between said handles, adapted to hold them normally separated, and means adapted to adjustably limit the amount of such separation.

3. In a cigar lighter, the combination with a tapered plug having a gas passage, a shell adapted to receive said plug, a cup carried by said shell, and a gas passage connecting said cup and shell, of a handle carried by the shell, a handle carried by the plug, opposing bosses on said handles, means between said handles adapted to hold them normally separated, a threaded boss on said shell, an adjusting screw carried by said boss, and a stop on said plug adapted to contact with the end of said adjusting screw, said plug being formed with a pocket to loosely receive the end of said screw.

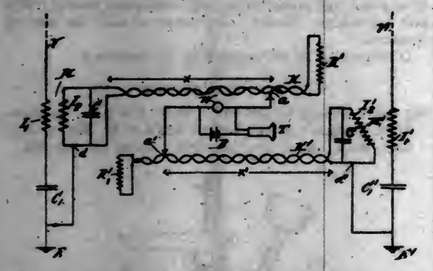
4. In a cigar lighter, the combination with a tapered plug having a gas passage, a shell adapted to receive said plug, a cup carried by said shell, and a gas passage connecting said cup and shell, of a handle carried by the shell, a handle carried by the plug, a stop between said handles to limit their inward movement, means carried by said handles, adapted to hold them normally separated, and means adapted to limit the amount of such separation.

961,265. APPARATUS FOR DETERMINING THE DIRECTION OF SPACE-TELEGRAPH SIGNALS. JOHN STONE STONE, Boston, Mass. Filed Apr. 15, 1909. Serial No. 490,134.

1. An apparatus for determining the direction of space telegraph signals comprising two separated elevated receiving conductors, two receiving circuits each associated with a different one of said elevated receiving conductors, two artificial lines each connected with a different one of said receiving circuits and an oscillation-detector connected with said artificial lines.

2. An apparatus for determining the direction of space telegraph signals comprising two separated elevated receiving conductors, two receiving circuits each associated

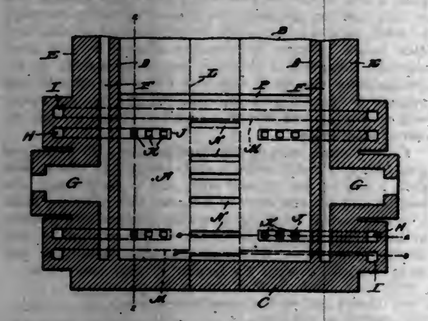
with a different one of said elevated receiving conductors, an artificial line connected with one of said receiving circuits and an oscillation-detector operatively associated with said artificial line and with the other of said receiving circuits.



3. An apparatus for determining the direction of space telegraph signals comprising two separated elevated receiving conductors, two electrical systems each associated with a different one of said elevated receiving conductors, an oscillation-detector operatively associated with said electrical systems, and means for balancing the phases and amplitudes of the currents developed by electromagnetic waves in said systems with respect to said oscillation-detector without changing the positions of said elevated receiving conductors relatively to the direction of motion of said electromagnetic waves.

4. An apparatus for determining the direction of space telegraph signals comprising a plurality of separated elevated receiving conductors, an oscillation detector, means for conveying the oscillations developed by the received waves from said elevated conductors to said oscillation detector and means for so varying the phases and amplitudes, of said oscillations so conveyed to said oscillation detector as to cause them to neutralise each other in their effect upon said detector.

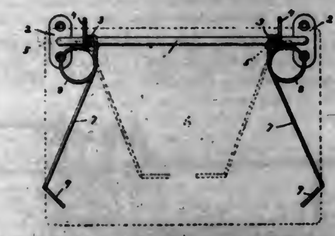
961,266. KILN. MATT F. SWANSON, Reading, Ill. Filed Dec. 8, 1909. Serial No. 532,006.



1. A kiln having a base and a burning chamber arranged above the base and an end wall rising from the base and forming part of said chamber and also having furnaces at its opposite sides, inner and outer walls at opposite sides, spaces between said walls and connecting the furnaces with the upper portion of the burning chamber, pairs of uptakes arranged at opposite sides of each furnace, a large passage extending through the base, at an intermediate point in the height thereof and midway between the furnaces and extending to the exterior of the kiln, vertically disposed openings formed in the floor of the burning chamber and connecting the latter with said passage at intervals in the length of the passage, flues leading horizontally through the base and in opposite directions from said passage to some of the uptakes, flues leading horizontally through the base, at opposite sides of the passage, and to other uptakes at opposite sides of the kiln, and vertically disposed openings formed in the floor of the burning chamber and connecting the latter with the last-named flues; the said kiln being further provided in its base, at the opposite side of the vertically disposed opening with reference to the end wall, with a transverse recess that is open at its upper side and communicates with the burning chamber of the kiln and also with the said large passage and extends at opposite sides of the latter and is adapted to prevent expansion of the base from forcing outward the outer wall of the kiln.

2. A kiln having a base and a burning chamber arranged above the base and also having furnaces at its opposite sides connected with the burning chamber, uptakes, a large passage extending through the base, midway between the furnaces and also extending to the exterior of the kiln, vertically disposed openings formed in the floor of the burning chamber and connecting the latter with the large passage at intervals in the length thereof, horisontal flues connecting the large passage with some of the uptakes, other horisontal flues connected to other uptakes, and vertically disposed openings formed in the floor of the burning chamber and connecting the latter with the last-named flues.

961,267. LICENSE-TAG HOLDER. JOHN J. THOMPSON, Lancaster, Pa. Filed July 23, 1909. Serial No. 509,086.



1. A tag holder, comprising a rod suitably secured to the vehicle, slides movably mounted upon said rod, means secured to said slides for suspending said tag; tag retaining arms secured to and depending from said slides and adapted to engage the sides of said tag.

2. A license tag holder, comprising a rod secured to the vehicle, suspending hooks slidably mounted upon said rod, and elastic tag gripping arms depending from said hooks and adapted to embrace the tag.

3. A license tag holder, comprising a horizontal rod secured to the vehicle, spring tag-holding arms each formed with a slide adjustably mounted upon said rod, and a hooked portion for engaging said tag and a depending spring actuated portion formed with a hooked end for engaging the side of said tag.

4. A tag holder for license-tags, comprising two spring tension arms for gripping the opposite edges of said tag, hooks carried by the upper ends of said arms and adapted to engage the suspending eyes of said tags, and means for adjustably securing said arms to the vehicle.

961,268. ARC-LAMP ELECTRODE. GEORGE A. THOMSON, Somerville, N. J. Filed Sept. 24, 1908. Serial No. 454,571.

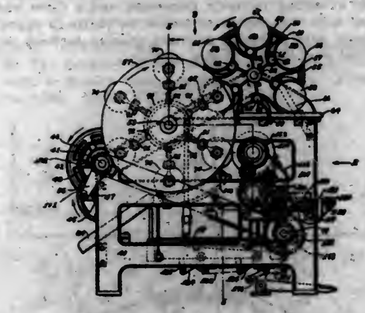
An electrode containing metallic molybdenum mixed with metallic iron.

961,269. ARC-LAMP ELECTRODE. GEORGE A. THOMSON, Somerville, N. J. Filed Sept. 24, 1908. Serial No. 454,572.

1. An electrode containing oxid of molybdenum.

2. An electrode containing oxid of molybdenum and a material having greater electrical conductivity.

961,270. MACHINE FOR APPLYING LABELS AND THE LIKE TO CANS AND OTHER ARTICLES. BENJAMIN W. TUCKER, South Orange, N. J. Filed July 22, 1908. Serial No. 444,714.



1. In a machine for applying labels and the like to cans and other articles, a rotary clamp-frame comprising sides carrying oppositely disposed clamps, the clamps of one set being movable toward and from the clamps of the other set, means for imparting an intermittent motion to said frame, means for causing each pair of clamps in succession to clamp a can fed between them, means for applying a label having paste applied to one side to the can clamped by said frame, means for rotating the can held by said clamp-frame for wrapping the label around it, a brush against which the can is carried, while rotating, by said frame, and means for finally releasing the can, said means for effecting the clamping and release of the cans comprising pivoted radial lever-arms connected with the movable clamps, a grooved cam engaging the inner ends of said arms and thereby controlling the position of the outer ends thereof and the clamps connected with them, and means for causing said cam to rotate with said frame during a portion of its rotary movement and thereafter reversing the movement of said cam when said frame is at rest for effecting the clamping of a can; substantially as set forth.

2. In a machine for applying labels and the like to cans and other articles, a rotary clamp-frame comprising sides carrying oppositely disposed clamps, the clamps of one set being movable toward and from the clamps of the other set, means for imparting an intermittent motion to said frame, means for causing each pair of clamps in succession to clamp a can fed between them, means for applying a label having paste on one side to the can clamped by said frame, and means for effecting the wrapping of the label around the can, said means for effecting the clamping the cans comprising pivoted radial lever-arms connected with the movable clamps, a grooved cam engaging the inner ends of said arms and thereby controlling the position of the outer ends thereof and the clamps connected with them, and means for causing said cam to rotate with said frame during a portion of its rotary movement and thereafter reversing the movement of said cam when said frame is at rest for effecting the clamping of a can; substantially as set forth.

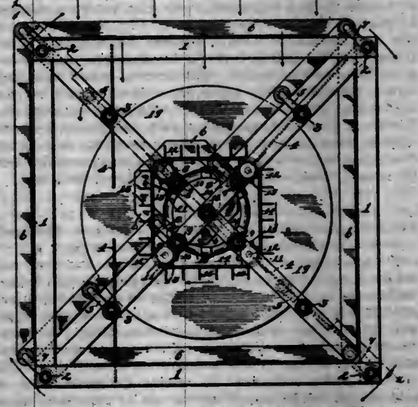
3. In a machine for applying labels and the like to cans and other articles, a rotary clamp-frame comprising sides carrying oppositely disposed clamps, the clamps of one set being movable toward and from the clamps of the other set, means for causing the pairs of clamps in succession to clamp a can fed between them, means for applying labels to the clamped cans, a rotary feed-frame for delivering the cans to the clamp-frame, and means for imparting corresponding intermittent movements to said clamp-frame and feed-frame, said feed-frame having pockets in its periphery formed of pairs of clamping-arms between which the cans are placed and one of each pair of which is yieldingly mounted and which arms with the cans between them are adapted to move between the clamps of said clamp-frame when said clamps are in their open position; substantially as set forth.

4. In a machine for applying labels and the like to cans and other articles, a rotary clamp-frame comprising sides carrying oppositely disposed clamps, the clamps of one set being movable toward and from the clamps of the other set, means for causing the pairs of clamps in succession to clamp a can fed between them, means for applying labels to the clamped cans, a rotary feed-frame for delivering the cans to the clamp-frame, and means for imparting corresponding intermittent movements to said clamp-frame and feed-frame, combined with means for rotating the clamped cans for wrapping the labels around them, and means for releasing the labeled cans, said means for releasing the labeled cans comprising means for moving one set of the clamps outwardly from them, plungers in the other set of clamps and normally inactive, and means for moving said plungers against said cans at their discharge position so as to positively detach them; substantially as set forth.

5. In a machine for applying labels and the like to cans and other articles, a rotary clamp-frame comprising sides carrying oppositely disposed rotary clamps whose spindles are mounted in said sides, the clamps of one set being movable toward and from the clamps of the other set, means for imparting an intermittent motion to said frame, means for causing the pairs of clamps in succession to clamp a can fed between them, means for applying a label against the can held by said frame, means for rotating the clamped can for wrapping the label around it, and means for thereafter effecting the release of the labeled can, the means for rotating and controlling th clamped can comprising pinion wheels (78) and blocks (79) secured on the spindles of one set of said clamps and a stationary wheel (80) having on its periphery a set of gear teeth (108) to engage said pinion wheels and arc flanges at opposite sides thereof to engage said blocks for locking said spindles and their clamps against rotation; substantially as set forth.

[Claims 6 to 22 not printed in the Gazette.]

961,271. WINDMILL. ALFRED M. VOLD, Chicago, Ill. Filed Feb. 14, 1910. Serial No. 543,837.



1. In a wind mill the combination of a rotatable power frame; a series of blades mounted to rotate in said frame on vertical axes; a crank arm fixed to one of said blades; a sprocket chain carrying stops adapted to contact with the inner sides of said blades and control their positions; and an operative connection between said crank arm and said sprocket chain, substantially as described.

2. In a wind mill the combination of a rotatable power frame; a series of blades mounted to rotate in said frame

on vertical axes; a crank arm fixed to one of said blades; a supplemental frame pivotally connected with said crank arm; a series of supplemental crank arms rotatably mounted on said power frame and pivotally supporting said supplemental frame; a sprocket chain carrying stops adapted to contact with the inner sides of said blades and control their positions; and an operative connection between one of said supplemental crank arms and said sprocket chains, substantially as described.

3. In a wind mill the combination of a rotatable power frame; a series of blades mounted to rotate in said frame on vertical axes; a crank arm fixed to one of said blades; a supplemental frame pivotally connected with said crank arm; a series of supplemental crank arms rotatably mounted on said power frame and pivotally supporting said supplemental frame; a sprocket chain carrying stops adapted to contact with the inner sides of said blades and control their positions; a set of vertical shafts in said power frame carrying sprocket wheels for operating said chain; a set of operative vertical shafts geared to said first mentioned vertical shafts; and crank arms fixed to said operative vertical shafts and pivotally connected with said supplemental frame, substantially as described.

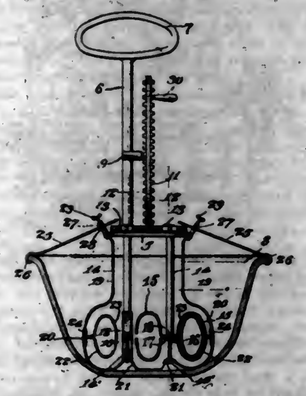
4. In a wind mill the combination of a rotatable power frame; a series of blades mounted to rotate in said frame on vertical axes; a crank arm fixed to one of said blades; a supplemental frame pivotally connected with said crank arm; a series of supplemental crank arms rotatably mounted on said power frame and pivotally supporting said supplemental frame; a sprocket chain carrying stops adapted to contact with the inner sides of said blades and control their positions; a set of vertical shafts in said power frame carrying sprocket wheels for operating said chain; a set of operative vertical shafts geared to said first mentioned vertical shafts; crank arms fixed to said operative vertical shafts and pivotally connected with said supplemental frame; a power drum carrying said power frame and mounted upon ball bearings; and means for taking power from said drum, substantially as described.

5. In a wind mill the combination of a rotatable power frame; a series of blades mounted to rotate in said frame on vertical axes; a crank arm fixed to one of said blades; a supplemental frame pivotally connected with said crank arm; a series of supplemental crank arms rotatably mounted on said power frame and pivotally supporting said supplemental frame; a sprocket chain carrying stops adapted to contact with the inner sides of said blades and control their positions; a set of vertical shafts in said power frame carrying sprocket wheels for operating said chain; a set of operative vertical shafts geared to said first mentioned vertical shafts; crank arms fixed to said vertical shafts and pivotally connected with said supplemental frame; a cable for anchoring said supplemental frame against movement; a power drum carrying said power frame and mounted upon ball bearings; and means for taking power from said drum, substantially as described.

961,272. EGG-BEATER. JAMES N. WARD, Havelock, Nebr. Filed Oct. 14, 1909. Serial No. 522,643.

1. In a beater, the combination with a frame and handle, of vertical shafts positioned through said frame, pinions on said shafts, beater blades secured to the lower ends of said shafts, said blades being disposed upon opposite sides of the shafts and each comprising two strips of sheet metal semi-circularly bent in opposite directions and having a central connecting portion, said connecting portions being perforated to receive the lower ends of said shafts, the blades carried by one of the shafts being at right angles to those on the other shaft, securing nuts threaded on said shaft to prevent longitudinal movement of the blades, and a drive wheel meshing with said pinions to rotate the shafts in opposite directions, said blades passing between each other.

2. In a beater, the combination with a supporting base, of a vertical standard integrally formed therewith having a handle at its upper end, depending shafts extending through said base, pinions on said shafts, a supporting bar secured at its ends to said base, said shafts having their lower ends positioned in said bar, substantially circular agitating members carried by said shafts, the members of one shaft being at right angles to those on the other shaft, circular stationary members secured to said bar and extending inwardly therefrom, and a drive wheel meshing with said pinions to rotate the shafts in opposite directions, said agitating members passing between each other and over the stationary members.



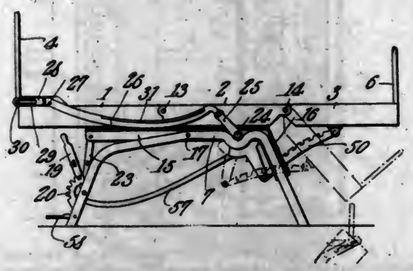
3. In an egg beater, the combination with a supporting frame and operating handle, of shafts mounted in said frame, pinions on said shafts, a bar secured at its ends to said frame and depending therefrom, said bar being laterally extended and having an intermediate connecting portion, said shafts having their lower ends disposed in said connecting portion, a plurality of substantially circular agitating members carried by each of said shafts, the members on one shaft being at right angles to those on the other, a sheet metal strip secured at its ends to the laterally extended portion of said bar and having a substantially circular intermediate portion, and a drive wheel meshing with said pinions to rotate the shafts in opposite directions, said members passing between each other and over the circular intermediate portions of said sheet metal strips.

4. In an egg beater, the combination with a supporting base and a vertical standard integrally formed therewith having a handle at its upper end, of vertical shafts extending through said base and depending therefrom, pinions secured to the upper ends of said shafts, a plurality of circular agitating blades secured to the lower end of each of said shafts, a single length of bar metal having its ends secured to said base, said bar having an intermediate horizontal portion and laterally extending portions, a circular member secured to each of said laterally extending portions and extending inwardly therefrom, the agitating members carried by one of the shafts being at right angles to the members carried by the other shaft, means for supporting the beater in operative position, and a drive wheel journaled on said standard, said drive wheel having teeth on its opposite faces adapted to mesh with said pinions to rotate the shafts in opposite directions, the beater members extending between each other during their rotative movement and passing over said circular members.

5. In an egg beater, the combination with a base and a vertical standard integrally formed therewith having a handle at its upper end, of depending shafts extending through said base, pinions on said shafts, agitating members secured to the lower ends of said shafts, brace rods movably secured at one end to said base, said rods having their outer ends removably engaged with a dish or receptacle and adapted to support the beater in operative position, a drive wheel rotatably mounted on said standard, said wheel meshing with the pinions to rotate the shafts in opposite directions, and a bar positioned upon the bottom of the dish out of the circle of movement of the agitating members, said bar having its ends secured to said base, the lower ends of said shafts being journaled in said bar.

[Claims 6 to 8 not printed in the Gazette.]

961,273. INVALID-BED. LLOYD W. WARD, Buckhannon, W. Va., assignor of one-third to C. E. White and one-third to Robert Lang, Buckhannon, W. Va. Filed Dec. 10, 1909. Serial No. 532,434.



1. In an invalid bed, a bed bottom frame comprising a head section, a foot section and an intermediate section pivotally connected one to the other, means for adjusting the foot section from a horizontal position to an intermediate depressed position, means for adjusting the head section from a horizontal position to an elevated position, means for locking the head and foot sections together for conjoint movement, a support to which the intermediate section is pivotally connected, and means for adjusting the intermediate section on its pivot support without disturbing the adjustment of the head and foot sections with relation to the intermediate section.

2. In an invalid bed, an adjustable head section means for locking the head section in different positions of adjustment, and side members for holding the head section in adjusted positions and movable with relation to the bed bottom to constitute arm rests.

3. In an invalid bed, a pivoted head section, levers connected to each side of the head section near the head end thereof, a rock shaft having rock arms at the end connected to the ends of said levers remote from their connection with the head section, and a locking means coacting with one of the arms of the rock shaft to lock the head section in adjusted positions.

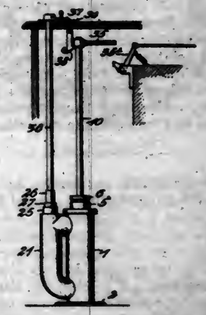
4. In an invalid bed, a pivoted head section, a head board also pivoted to the head section and provided with angle extensions at the lower ends, levers pivoted to the sides of the head section and each engaging at one end the corresponding angle extension of the head board, a rock shaft provided with arms connected to the other ends of the levers, and means for rocking the shaft to move the head section to different positions of adjustment.

5. In an invalid bed, a bed bottom having a bottom section, a head section pivoted to the body section, a rock shaft carried by the body section and provided with rock arms, levers connected to the rock arms at one end and at the other end to the head section near a head end thereof, means for locking the head section in different positions of adjustment, and a head board pivoted to the head section and connected to and moved by the side levers.

[Claims 6 to 9 not printed in the Gazette.]

961,274. VARIABLE-TIME-OPERATING OIL-CONTROLLED VALVE. JAMES F. WARE, Denver, Colo., assignor of one-half to Arnold A. Bowhay, Denver, Colo. Filed Mar. 29, 1909. Serial No. 486,602.

1. In a variable time controlling oil operating valve, a vertical cylinder provided with a vertical valve chest, oil ports extending from said cylinder into said valve chest, a reciprocating piston in said cylinder provided with an oil passage through it to the opposite ends of said cylinder, a spring-controlled movable valve at the lower end of said piston's oil passage arranged and adapted to control the flow of oil from the opposite ends of said cylinder through said piston and through said valve chest and back into said cylinder, a rotary movement variable cut-out valve arranged to control the oil ports between said cylinder and valve chest, a valve stem on said valve, a pointer on said valve stem, an index in the path of said pointer for determining the amount of movement to be given said valve, a vent pipe in the oil passage at the top of said cylinder and valve, a piston rod connected to said piston, and means connected with said piston rod for raising and securing and releasing said piston.



2. In a variable time controlling oil operating valve, the combination of the vertical cylinder and valve chest, provided with ports connecting the opposite ends of said cylinder and valve chest, a piston head and rod reciprocally mounted in said cylinder, means including a projection at the bottom of said cylinder in the path of said piston for limiting the reciprocal movement of the piston between said ports, with a fixed tube within said valve chest, closing the passage to the upper port of said cylinder, a V-shaped port through the shell of said tube registering with the upper port between the upper ends of said cylinder and valve chest, a rotating valve within said fixed tube comprising a stem provided with an open-ended oil entering recess registering with the valve chest and provided with a port registering with the V-shaped port in said fixed tube, a valve stem secured to said valve, a pointer on said valve stem registering with said rotary valve's port, a graduated index plate within the operative movement of said pointer, and means connected with said piston rod for raising and securing and for manually releasing said piston, and an atmospheric air vent pipe extending above said cylinder and connected with the passage between said cylinder and valve chest at the top port of said cylinder.

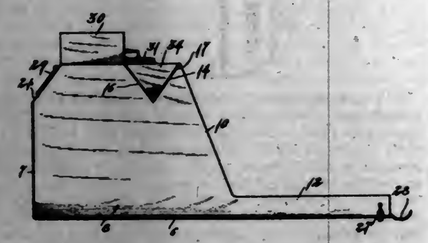
3. In a valve as specified, a vertically disposed main cylinder, a branch cylinder communicating with the main cylinder at its upper and lower ends, said cylinders being filled with a suitable liquid; a piston in the main cylinder, having a port extending through the same; a valve over the lower end of said port; a tube in the upper end of the branch cylinder having a port communicating with the main cylinder; a cut-off in said tube, having a port adapted to register with the port in said tube; a stem extending from the cut-off; a rod connected with the piston and extending through and beyond the upper end of the main cylinder; and means for limiting the movement of the piston in either direction.

4. In a variable time-controlling oil-operating valve, a vertical cylinder provided with a vertical valve-chest, oil ports extending from said cylinder into said valve-chest, a reciprocating piston in said cylinder provided with an oil passage through it to the opposite ends of said cylinder, a movable valve at the lower end of said piston's oil passage arranged and adapted to control the flow of oil from the opposite ends of said cylinder through said piston and through said valve-chest and back into said cylinder, a rotary movement variable cut-out valve arranged to control the oil ports between said cylinder and valve-chest, a valve

stem on said valve, mechanism for indicating the position of the valve, a piston rod connected to said piston, and means connected with said piston rod for raising and securing and releasing said piston.

5. In a variable time-controlling oil-operating valve, the combination of the vertical cylinder and valve-chest, provided with ports connecting the opposite ends of said cylinder and valve-chest, a piston head and rod reciprocally mounted in said cylinder, means for limiting the reciprocal movement of the piston between said ports, with a fixed tube within said valve-chest, closing the passage to the upper port of said cylinder, a V-shaped port through the shell of said tube registering with the upper port between the upper ends of said cylinder and valve-chest, a rotating valve within said fixed tube comprising a stem provided with an open-ended oil entering recess registering with the valve chest and provided with a port registering with the V-shaped port in said fixed tube, a valve stem secured to said valve, mechanism for indicating the position of the valve, and means connected with said piston rod for raising and securing and for manually releasing said piston.

961,275. MILK-COOLER. ANDREW L. WASTEL, Shawano, Wis. Filed Oct. 5, 1909. Serial No. 521,120.

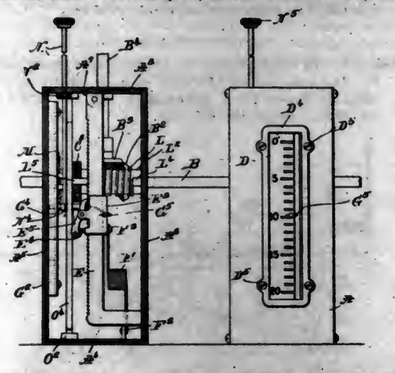


1. A milk cooler comprising a tank for the cooling element formed of a main receptacle having a forwardly extending diminished portion communicating therewith at its base, the top wall of said diminished portion being corrugated, a milk supply receptacle disposed upon the top of the main receptacle of the tank for a cooling element, a discharge element in communication with the interior of said milk supply receptacle, a strainer disposed beneath said discharge element and a spreader supported by said strainer adapted to divert the normal course of the flow of milk from said discharge element into said strainer.

2. A milk cooler comprising a tank for a cooling element formed of a main receptacle having a forwardly extending diminished portion communicating therewith at its base, a milk supply receptacle disposed upon the top of the main portion of the tank for a cooling element, a discharge element in communication with the interior of said milk supply receptacle, a strainer disposed beneath said discharge element, and a spreader supported by said strainer and adapted to divert the normal course of the flow of milk from said discharge element into said strainer; said strainer having a spheroidal formation and provided centrally with an upwardly projecting pin adapted to be disposed in the discharge element of the milk supply receptacle.

3. A milk cooler comprising a tank for a cooling element formed of a main receptacle having a forwardly diminished portion communicating therewith at its base, a milk supply receptacle disposed upon the top of the main portion of the tank for a cooling element, a discharge element in communication with the interior of said milk supply receptacle, a strainer disposed beneath said discharge element, said strainer being formed with downwardly converging sides, one of which is perforated, and a spreader supported by the converging sides of said strainer and adapted to divert the normal course of the flow of milk from said discharge element into said strainer.

961,276. TIME-LIMIT ANNUNCIATOR. MORRIS WELSH, Quincy, Mass., assignor of one-half to Perley R. Glass, Boston, Mass. Filed May 10, 1909. Serial No. 495,034.



1. A time limit annunciator comprising a uniformly driven element, an external source of power for uniformly driving said element, a plate graduated in time units, an indicator adapted to move over said graduations, an independent motive device for moving the indicator backward over the graduations and connections between said driven element and said indicator for governing the backward movement of the indicator from the driven element.

2. A time limit annunciator comprising a uniformly driven element, an external source of power for uniformly driving said element, a plate graduated in time units, an indicator adapted to move over said graduations, an independent motive device for moving the indicator backward over the graduations, connections between said driven element and said indicator for governing the backward movement of the indicator from the driven element and means controlled by said motive device for giving a sensory indication of the return of said indicator to a predetermined point.

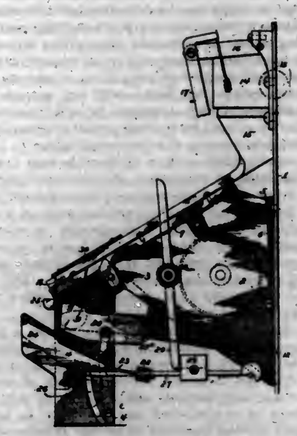
3. A time limit annunciator comprising a uniformly driven element, an external source of power for uniformly driving said element, a plate graduated in time units, two indicators adapted to move over said graduations, means whereby said indicators may be set forward to the desired graduation, an independent motive device for moving one of said indicators backward over the graduations and connections between said driven element and said indicator for governing the backward movement of the indicator from the driven element.

4. A time limit annunciator comprising a uniformly driven element, an external source of power for uniformly driving said element, a plate graduated in time units, two indicators adapted to move over said graduations, means whereby said indicators may be set forward to the desired graduation, an independent motive device for moving one of said indicators backward over the graduations, connections between said driven element and said indicator for governing the backward movement of the indicator from the driven element and means controlled by said motive device for giving a sensory indication of the return of said indicator to a predetermined point.

5. A time limit annunciator comprising a uniformly driven element, an external source of power for uniformly driving said element, a plate graduated in time units, two indicators adapted to move over said graduations, means whereby said indicators may be set forward to the desired graduation, an independent motive device for moving one of said indicators backward over the graduations, connections between said driven element and said indicator for governing the backward movement of the indicator from the driven element and means controlled by said motive device and set into operation upon the return of said indicator to a predetermined point for sounding an alarm.

[Claims 6 to 15 not printed in the Gazette.]

961,277. VENDING-MACHINE. HENRIETTA WERDEN, Mount Vernon, N. Y., assignor of one-half to Sara L. Coe, New York, N. Y. Filed Sept. 1, 1908. Serial No. 451,273.



1. In a coin operated machine, the combination with a coin chute having a part for the reception and discharge of proper coins and a part for the reception and discharge of spurious or light weight coins or tokens, and an inclined trackway disposed over said chute and adapted to discharge coins or tokens thereinto, of a counterweighted rocking trough disposed between the discharge end of said trackway and the two parts of the chute, and means for turning a coin as it leaves the trackway and for discharging said coin edgewise into said rocking trough.

2. In a coin operated machine, the combination with a coin chute having a part for the reception and discharge of a proper coin and a part for the reception and discharge of spurious or light weight coins or tokens, and an inclined trackway over said coin chute and adapted to communicate with the latter, of a rocking counterweighted trough disposed under the lower end of said trackway and adapted to communicate with one or the other part of said chute, means for turning a coin as it leaves the lower end of the trackway and for depositing said coin edgewise into said rocking trough, a flange on the rocking trough to prevent lateral displacement of the coin in one direction and a flange at the end of the trackway to prevent lateral displacement of the coin in the other direction.

3. In a coin operated machine, the combination with a coin chute having parts for the reception and discharge of proper coins and of spurious and light weight coins or tokens, and trackways inclined longitudinally and transversely over said chute and spaced apart from end to end over the parts of the chute and adapted to discharge small sized coins into one part of the chute, of means interposed between said trackway and the two parts of the chute for controlling the passage of coins or tokens into one part or the other of the chute according to the weight of said coins or tokens.

4. In a coin operated machine, the combination with a coin chute having parts to receive and discharge proper coins and spurious or light coins or tokens respectively, and inclined trackways over said coin chute and adapted to communicate therewith, of a curved chute constructed and adapted to receive a coin inserted into the machine, to turn said coin and to discharge it flatwise upon the upper end of said inclined trackways, and means interposed between the lower end of said inclined trackways and the two parts of the first mentioned chute and adapted to detect light weight coins or tokens.

961,278. SPRING-WHEEL. GEORGE H. WILLIAMS, Los Angeles, Cal. Filed Mar. 25, 1908. Serial No. 423,267.



1. In a spring wheel, two concentric rims at a distance apart, a plurality of spring devices therebetween, each spring device comprising a bow spring, rocking seats, a straight compressible spring mounted between the ends of the bow spring and seated with its ends on the rocking seats, and means on the rims pivotally supporting the rocking seats and the ends of the bow springs.

2. In a spring wheel, two concentric rims at a distance apart, a plurality of spring devices therebetween, each spring device comprising a bow spring, rocking seats, a straight spring portion mounted with its ends seated on the respective rocking seats, and means upon the rims having pivotal connection with the rocking seats and the ends of the bow springs.

3. In a spring wheel, two concentric rims at a distance apart, and a plurality of spring devices therebetween, each spring device comprising a bow portion and a straight portion between the arms of the bow portion, said bow portion having a sleeve at each end, a bushing sleeve within the sleeve of the bow portion, clamping means engaging each rim and a fastening bolt passing through said bushing sleeve for securing the bow portion to the clamping means and the clamping means to the rim.

4. In a spring wheel, two concentric rims at a distance apart, a plurality of spring devices therebetween, each spring device comprising a U-shaped portion and a straight portion between the arms of the U-shaped portion, and a set of clamping members for each spring device pivotally secured to the ends of the U-shaped portion, said clamping members adapted to clamp onto said rims, the straight portion of the spring device comprising coil springs between said clamping members, and bars secured to the ends of the coil springs, said bars being each pivoted in one of the said sets of clamping members.

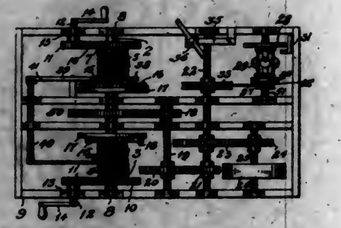
5. In a spring wheel, two concentric rims at a distance apart, a plurality of spring devices therebetween, each spring device formed with a bow portion and with a straight portion between the arms of the bow portion, the bow portion of each spring device being provided with a sleeve at each end, a bolt through said sleeve, clamping members at the ends of said bolt, said clamping members being attached to the rims, the said straight portion comprising bars pivoted at each end to said clamping members, and yielding compression means between said bars.

[Claims 6 to 13 not printed in the Gazette.]

961,279. WEIGHT-MOTOR. JAMES A. WILSON, Mahomet, Tex. Filed Nov. 28, 1908. Serial No. 464,934.

1. In a motor of the character described, a pair of successively operable weight motors including drums provided with cables leading to the weights, and means for preventing rotation of one of the drums until the other has unwound comprising a ratchet on the first mentioned drum, a weighted pivoted pawl 39 engaging therewith, a support-

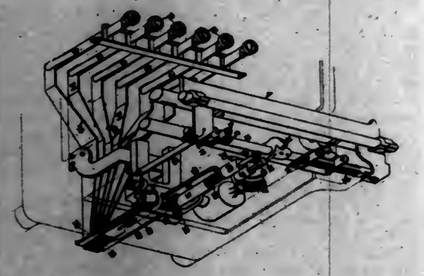
ing device 41 engaging the weighted end of said pawl 39 to normally hold the same in elevated position and in engagement with the ratchet, and means controlled by the unwinding of the cable of the last mentioned drum to release the pawl 39 so that the same will disengage from its ratchet.



2. In a motor of the character described, a pair of successively operable weight motors including drums provided with cables leading to the weights, and means for preventing rotation of one of the drums until the other has unwound comprising a ratchet on the first mentioned drum, a pawl adapted to engage therewith; and means for releasing the pawl including a movable part above the coil of the cable on the last mentioned drum arranged to be actuated by said cable, substantially as described.

3. In a motor of the character described, a pair of successively operable weight motors including drums provided with cables leading to the weights, and means for preventing rotation of one of the drums until the other has unwound comprising a ratchet on the first mentioned drum, a pawl adapted to engage therewith, and means for releasing the pawl including a movable part arranged above the coil of the cable on the last mentioned drum, in combination with a device carried by the cable arranged to engage said movable part.

961,280. TYPE-WRITING MACHINE. FRANK A. YOUNG, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 25, 1909. Serial No. 514,644.



1. The combination with a carriage having a stop device, of a single-piece stop movable upon the framework, and a single-piece interponent mounted upon the framework and shiftable into the path of said stop device to be moved thereby, and having a cam directly engaging said framework stop to move the latter into the path of said stop device.

2. The combination with a carriage having a stop device, of a stop pivoted upon the framework to oscillate into the path of said carriage stop, an interponent pivoted on an axis which is at a right angle to the pivot of the framework stop, and having a cam formed or provided thereon to engage the framework stop, and means to move said interponent into the path of the carriage stop device to be oscillated thereby and caused to turn the framework stop into the path of said carriage stop device.

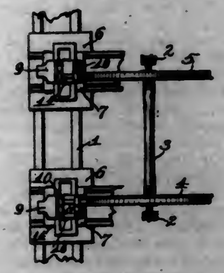
3. The combination with a carriage having a stop device, of a stop pivoted upon the framework to oscillate into the path of said carriage stop device, an interponent variably shiftable in a direction at a right angle to the pivot of said framework stop to move the interponent into the path of any selected carriage stop, said interponent pivoted on an axis parallel with the direction of its shifting motion, and keys having means to shift said interponent into the path of any selected carriage stop device to be oscillated thereby, to cause said framework stop to turn into the path of the selected carriage stop device, said cam extended in the direction of the shifting movement of said interponent, so that oscillation of said interponent at all positions to which it is shifted may operate the framework stop.

4. The combination with a carriage having a series of stop devices disposed in echelon, of a carrier variably movable by a set of keys, an interponent pivoted upon said carrier in a direction to swing across the path of movement of the carriage stop devices, and movable by said carrier into the path of any selected stop device to be oscillated thereby, and a stop mounted upon the framework to be engaged by said interponent at any point to which the latter may be set by the keys, and caused to move into the path of the selected carriage stop.

5. The combination with a carriage having a series of stop devices disposed in echelon, of a carrier variably movable by a set of keys, an interponent pivoted upon said carrier in a direction to swing across the path of movement of the carriage stop devices, and movable by said carrier into the path of any selected stop device to be oscillated thereby, and a stop mounted upon the framework to be engaged by said interponent, and caused to move into the path of the selected carriage stop, said framework stop pivoted to oscillate across the path of travel of the carriage stops, and having a part engageable by a cam on said oscillating stop to be moved thereby, said cam elongated or widened in the direction of the axis about which it turns, to enable it to be effective in all positions to which it may be adjusted by the keys.

[Claims 6 to 9 not printed in the Gazette.]

961,281. INDICATING DEVICE FOR MACHINE-TOOLS. CECIL DANIEL ANDREW, London, England, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Filed Sept. 8, 1909. Serial No. 516,735.



1. An indicating device for machine tools comprising, a tool holder, means for clamping a tool thereto, a support slidably engaged by the tool holder, said tool holder and support being provided with coöperating graduations and an index, and a movable gage carried by the tool holder in position to be brought into engagement with the point of the tool, combined substantially as set forth.

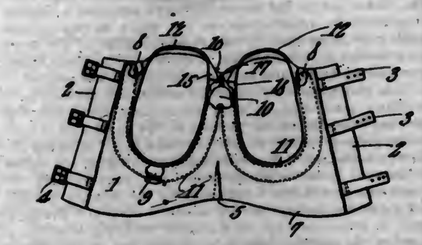
2. An indicating device for machine tools comprising, a tool holder, means for clamping a tool thereto, a support slidably engaged by the tool holder, said tool holder and support being provided with coöperating graduations and an index, and a gage pivoted to the tool holder in position to be brought into engagement with the point of the tool and adapted to be swung to the side of the tool, combined substantially as set forth.

3. An indicating device for machine tools comprising, a saddle, a tool rest slidably mounted thereon, said saddle and tool rest base being provided with coöperating graduations and an index, a tool-rest slide mounted on the tool-rest, a tool holder slidably supported by said tool rest slide, said tool holder and tool rest slide being provided with coöperating graduations and an index, and a movable gage carried by the tool holder in position to engage the point of the tool, combined substantially as set forth.

4. A machine tool comprising, lathe centers for the support of work, a pair of tool rests, a tool-rest slide mounted on each tool-rest, a tool holder slidably mounted on each tool rest slide, said tool holders and tool rest slides being provided with coöperating graduations and an index, and a movable gage carried by each tool holder in position to be brought into engagement with the point of the tool, combined substantially as set forth.

5. A machine tool comprising lathe centers, a pair of saddles, a tool rest mounted to slide in and out on each saddle, said saddles and tool rests being provided with cooperating graduations and indexes, a tool-rest slide mounted on each tool-rest, a tool holder slidably supported by each tool rest slide, said tool rest slides and tool holders being provided with coöperating graduations and indexes, and a movable gage carried by each tool holder in position to be brought into engagement with the point of the tool, combined substantially as set forth.

961,282. LIFE-PRESERVING SWIMMING-JACKET. ALONZO BADGER, Oceanpark, Cal., assignor of one-half to Henretta Tunzat, Oceanpark, Cal. Filed Feb. 21, 1910. Serial No. 545,177.

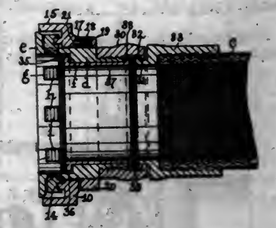


1. A device of the class described comprising a vest having arm-holes, and securing devices upon its end edges; and a buoyant member extended beneath the arm-holes and having its ends prolonged up the front of the vest to points adjacent the upper edges thereof, the buoyant member being bent upon itself intermediate its ends, and having its bent portion secured between the arm-holes upon the back of the vest, adjacent the upper edge thereof.

2. A device of the class described comprising a multi-layer vest having arm-holes; an inflatable tube disposed between the constituent layers of the vest and extended beneath the arm-holes, the tube having its ends prolonged up the front of the vest to points adjacent the upper edge thereof, and having its intermediate portion sharply bent and disposed between the arm-holes upon the back of the vest, adjacent the upper edge thereof; and a valve located in the intermediate portion of the tube and arranged to protrude upon the exterior of the vest.

3. A device of the class described comprising a multi-layer vest having an inflatable element disposed between its constituent layers at the back of the vest and adjacent its upper edge; straps defining the arm-holes in the vest, and secured to the back thereof; a valve protruding from the inflatable element through the outer layer of the vest, the vest being prolonged between the straps to receive the free end of the valve; and a patch secured to the vest and constituting at once a housing for the valve, and a means for securing the strap ends.

961,283. COUPLING DEVICE. JOHN J. BARKER, Arlington, Mass., assignor to Boston Coupling Company, Boston, Mass., a Firm. Filed Jan. 4, 1909. Serial No. 470,580.



1. In a coupling device, in combination, a coupling member provided with external screw-threads, a coöperating coupling member capable of being slipped over the first-mentioned member and provided with a plurality of openings extended through it, locking devices carried by said coöperating coupling member and provided with slots and located in said openings and bodily movable therein, a cam ring rotatably mounted on said coöperating coupling member and having a plurality of sets of cams, one set being extended into said slots to effect bodily movement of the locking devices out of engagement with the external screw-threads of the first-mentioned coupling member by rotary movement of said cam ring, and the other set of cams coöperating with said locking devices to effect their inward movement and to maintain them in engagement with said screw-threads, substantially as described.

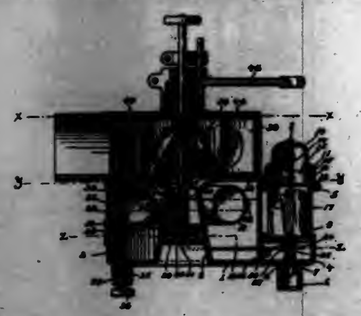
2. In a coupling device, in combination, a female coupling member comprising a sleeve having an enlarged end portion forming a shoulder with the main portion of said sleeve and into which the coöperating male member is inserted, said enlarged portion having a plurality of openings extended through it, locking devices located in said openings and bodily movable therein and provided with slots, a cam ring rotatably mounted on said coupling member and having two sets of cams, one set being in engagement with the slots of said locking devices to effect bodily movement thereof in one direction by rotary movement of said ring, and the other set coöperating with the outer ends of said locking devices to effect bodily movement thereof in the opposite direction, substantially as described.

3. In a coupling device, in combination, a female coupling member comprising a sleeve having an enlarged end portion forming a shoulder with the main portion of said sleeve and into which the coöperating male member is inserted, said enlarged portion having a plurality of openings extended radially through it, locking devices located in said openings and bodily movable therein and provided with slots, and a cam ring provided with a flange and rotatably mounted on said coupling member and having a plurality of cams on the under side of said ring to enter the slots in said locking devices to effect bodily movement of the same in one direction by rotary movement of said ring and having a plurality of cams on the inner surface of said flange to engage the outer ends of said locking devices and move them in the opposite direction, substantially as described.

4. In a coupling device, in combination, a female coupling member comprising a sleeve having an enlarged end portion forming a shoulder with the main portion of said sleeve and into which the coöperating male member is inserted, said enlarged portion having a plurality of openings extended through it, locking devices located in said openings and bodily movable therein and provided with slots, a cam ring rotatably mounted on said coupling member and having two sets of cams, one set being in engagement with the slots of said locking devices to effect bodily movement thereof in one direction by rotary movement of said ring, and the other set coöperating with the outer ends of said locking devices to effect bodily move-

ment thereof in the opposite direction; a ring in threaded engagement with the exterior of said sleeve, and a spring-actuated bolt to detachably connect said cam ring to said ring, substantially as described.

961,284. CARBURETER. ERNEST N. BRODERICK, Detroit, Mich. Filed Mar. 25, 1908. Serial No. 423,108.



1. In a carbureter, an annular float chamber provided with a lateral hollow lug, a valve seat in the lug, a closure therefor, an upright stem secured to the closure longitudinally reciprocable in the lug, a lever pivoted in the lug and adjustably secured at one end to the stem, a float in the chamber, gimbal ring connections between the other end of the lever and the float, and adjusting means secured on the outside of the chamber adapted to vary the relation of the stem and lever.

2. In a carbureter, an annular float chamber provided with lugs, a gage glass therefor secured in said lugs, an apertured valve seat in one of said lugs at the lower end of the glass, a closure for the seat, a longitudinally reciprocable stem secured to said closure extending through the upper end of the glass and other lug, an annular float in the chamber, a lever articulated to the float and adapted to operate the stem and adjusting means on said last named lug exteriorly of the glass adapted to vary the relation of the stem and lever.

3. In a carbureter, an annular float chamber, a gage glass therefor secured on the outer wall, an apertured valve seat removably secured at the lower end of the glass, a closure for the seat, a longitudinally reciprocable stem on the closure extending through the glass, an annular float in the chamber, a lever articulated to the float at one end and adjustably connected at the other to the stem, and a shield having sliding engagement with the stem and non-rotatable engagement with the casing.

4. In a carbureter, an annular float chamber, a hollow lug extending radially from the chamber, an apertured valve seat removably secured in the bottom of the lug, a closure for the seat, an apertured bushing secured on the casing in vertical alinement with the hollow lug, a screw-threaded stem for the closure extending upwardly through the bushing, a gage glass housing the stem, an annular float in the chamber, a lever articulated at one end to the float, a nut longitudinally adjustable on the stem pivoted to the other end of the lever, a dome-shield having non-rotating sliding engagement with the stem non-rotatively and removably secured on the bushing.

5. In a carbureter, an annular float chamber, an annular float therein, a hollow apertured lug extending radially from the base of the chamber, an apertured radial lug extending from the top of the chamber in vertical alinement with the hollow lug, an apertured bushing adjustably screw-threaded into the upper lug, an apertured valve seat in the base of the lower lug, a closure for the seat having a stem extending through the bushing, a hollow shield rotatably adjustable in relation to the bushing and in non-rotative sliding engagement with the upper portion of the stem, a nut adjustably screw-threaded on the lower portion of the stem, a lever pivoted in the casing having one end bifurcated with its arms curved concentric with the float axis, a gimbal ring pivoted by one pair of pintles to the float and by another pair to the arms, the other end of the lever being forked with its extremities slotted, and radial pivot pins on the nut engaging the slotted ends.

[Claims 6 to 9 not printed in the Gazette.]

961,285. REVERSIBLE PROPELLER. ELLSWORTH S. BRYANT, Detroit, Mich. Filed May 25, 1908. Serial No. 434,854.



1. A reversible blade propeller comprising a rotatable main shaft, a hub secured thereto having a solid bearing body, and bearing facets formed in the periphery of the body parallel to the shaft axis, a propeller blade for each facet having a pivot pin extending longitudinally of the blade from the end face of the shank and engaging a socket in the facet, the shanks of the blades and the hub body presenting an unbroken contour of conventional type when the blades are in the normal forward position, a coupler longitudinally reciprocable on the shaft having splines sliding in guide slots in the facets parallel to the shaft each having a stud engaging a groove in the blade transverse to the spline, and means to reciprocate the coupler.

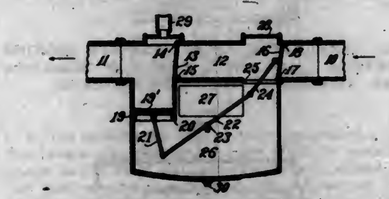
2. A reversible-blade propeller mechanism comprising a rotatable main shaft, a solid hub secured thereto having bearing facets in planes parallel to the shaft axis, a propeller blade pivotally secured on each facet to swing obliquely to the shaft, a coupler adapted to swing the blades in unison, a sleeve non-rotatably and longitudinally reciprocable on the shaft and carrying the coupler, a bushing rotatably secured on the sleeve, a standard having a boss in screw-threaded engagement with the bushing, a gear on the bushing, and a lever swinging on the standard transverse to the shaft provided with a rack in mesh with the gear.

3. A reversible blade propeller mechanism comprising a rotatable main shaft, a solid hub thereon having bearing facets lying in planes parallel to the shaft each provided with a pivot pin socket and a guide slot parallel to the shaft and offset from the socket, a propeller blade for each facet having a shank bearing against the facet with a pivot pin engaging the socket, an annular coupler provided with splines each sliding in a facet guide slot and movably engaging the blade, a sleeve non-rotatably and longitudinally reciprocable on the shaft and carrying the coupler, a bushing rotatably secured on the sleeve, a standard having a boss in screw-threaded engagement with the bushing, a gear on the bushing, and a lever swinging on the standard transverse to the shaft provided with a rack in mesh with the gear.

4. A reversible-blade propeller comprising a rotatable main shaft, a hub secured thereto having a solid bearing body, and bearing facets formed in the periphery of the body parallel to the shaft axis, a propeller blade for each facet having a pivot pin extending longitudinally of the blade from the end face of the shank and engaging a socket in the facet, the shanks of the blades and the hub body presenting an unbroken contour of conventional type when the blades are in the normal forward position, a coupler having splines sliding in guide slots in the facets parallel to the shaft each having a stud engaging a groove in the blade transverse to the spline, and a sleeve nonrotatably and longitudinally reciprocable on the shaft and carrying the coupler, a bushing rotatably secured on the sleeve, a standard having a boss in screw-threaded engagement with the bushing, a gear on the bushing, and a lever swinging on the standard transverse to the shaft provided with a rack in mesh with the gear.

5. The combination with a bearing of a rotatable main shaft passing therethrough, a solid hub secured thereto having bearing facets in planes parallel to the shaft axis, a propeller blade pivotally secured on each facet to swing obliquely to the shaft, a coupler, a sleeve longitudinally reciprocable and rotatable in the bearing and longitudinally reciprocable on the shaft and carrying the coupler, a bushing rotatably secured on the sleeve, a standard having a boss in screw-threaded engagement with the bushing, a gear on the bushing, and a lever swinging on the standard transverse to the shaft and provided with a rack in mesh with the gear.

961,286. CHECK-VALVE FOR SEWERS. CARL J. E. CARLSON, Minneapolis, Minn., assignor of one-half to William Sears, Brookline, Mass. Filed Oct. 29, 1909. Serial No. 525,270.



1. Apparatus comprising a passage having a valve; a chamber, closed to the passage and having a movable wall exposed in the passage; and linkage connecting said movable wall and the valve, whereby recession of the wall closes the valve.

2. Apparatus comprising a passage having a valve; a chamber, closed to the passage and having a movable wall exposed in the passage; and linkage connecting said movable wall and the valve, whereby recession of the wall closes the valve; there being also a check valve in the passage between the place of exposure of said wall and the first mentioned valve.

3. Apparatus comprising a passage having a valve hinged at the bottom; a chamber, closed to the passage and having a movable wall exposed in the passage; and linkage connecting said movable wall and said valve, whereby recession of the wall raises the valve.

4. Apparatus comprising a passage having a valve hinged at the bottom; a chamber, closed to the passage and having a movable wall exposed in the passage; and linkage connecting said movable wall and said valve, whereby recession of the wall raises the valve; there being also a check valve in the passage between the place of exposure of said wall and the first mentioned valve.

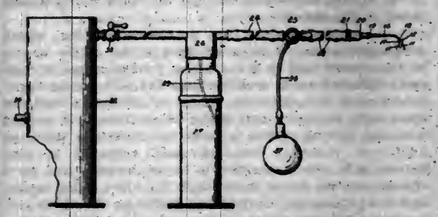
5. Apparatus comprising a passage having two check valves, each controlled by gravity, one being normally open and the other being on the discharge side of the first mentioned valve and normally closed; and there being a chamber, closed to the passage and having a movable wall exposed in the passage on the discharge side of both valves; and means whereby movement of said wall actuates and closes the first mentioned valve against gravity.

[Claims 6 to 8 not printed in the Gazette.]

961,287. PROCESS FOR TREATING ULCERATED TEETH. FRANK M. CRANE, South Orange, N. J. Filed Sept. 28, 1908. Serial No. 455,195.

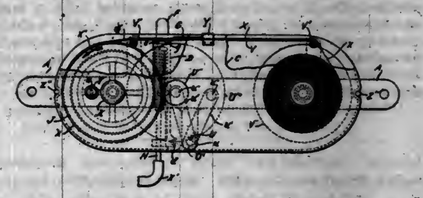
1. The herein described method of treating ulcerated teeth, which consists in making an opening into the nerve canal, inserting a tube air-tight in said opening, exhausting air from said tube, closing said tube while so exhausted, and forcing liquid into said exhausted tube.

2. The herein described method of treating ulcerated teeth, which consists in exhausting air from the nerve



canal, and introducing a liquid into said nerve canal while so exhausted.

961,288. MACHINE FOR OPERATING ROUTE-GUIDES, RIBBON-MAPS, AND THE LIKE. OTTO CULLMAN, Chicago, Ill. Filed Feb. 23, 1909. Serial No. 479,493.



1. An expansible roller, a removable spool, a ribbon, means to yieldingly hold the spool with the outer turn of the ribbon thereon in contact with the roller and a thumb wheel arranged to turn the roller, in combination with a table, a rotatably mounted shaft, arranged to turn loosely, a thumb wheel on said shaft arranged to turn therewith and an additional spool removably mounted on the shaft, the said ribbon attached at its ends to the spools and arranged to lie on the table and move thereover when wound from one to the other of said spools.

2. The combination of a base, an expansible roller rotatably mounted on the base, a thumb wheel arranged to turn the roller, a pin rigidly attached to the base, a hub loosely mounted on the pin, a radially extending arm rigidly attached to one end of the hub, a spool rotatably mounted on the free end of the arm, a spring arranged to hold the spool normally in position so that the outer turn of the ribbon thereon is in contact with the roller, said spring and arm arranged so that the spool can be forced into position to take the outer turn of the ribbon thereon out of contact with the roller, a pin rotatably mounted on the base and a spool on said pin arranged to turn therewith, a thumb wheel on the pin, a ribbon on the spools and arranged to be wound from one thereof onto the other one by rotation of the driven wheel, marks on the ribbon, and movable means to indicate a given one of such marks.

3. A ribbon and a wheeled vehicle, in combination with a frame, a hub pivoted on the frame and an arm on the hub arranged to move with the movement of the hub, spools arranged to wind the ribbon thereon, one of such spools removably and rotatably mounted on the frame to turn loosely and the other of such spools removably and rotatably mounted on the movable arm, and the spools arranged so that a portion of the ribbon between the spools is exposed to view, a roller rotatably mounted on the frame adjacent to the spool which is on the movable arm, driving mechanism arranged to actuate said roller on the rotation of a wheel of the vehicle, means to yieldingly hold the spool on the movable arm with the outer turn of the ribbon thereon against the roller, means whereby disengagement of the driving mechanism may be effected, means to turn said roller and thereby turn the spool adjacent thereto independently of the driving mechanism, means to turn the loosely mounted spool independently of the driving mechanism, marks on the ribbon, and movable

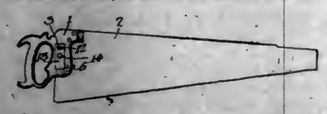
means to indicate a given mark, the ribbon and spools arranged so that said turning of the spools independently of the driving mechanism changes the mark which is indicated on the ribbon.

4. A wheeled vehicle, an expansible driving wheel, mechanism arranged to be actuated by one of the wheels of the vehicle and to actuate the driving wheel, a rotatably mounted spool, a ribbon provided with marks thereon attached to said spool, means to yieldingly hold the spool with the outer turn of the ribbon thereon in contact with the driving wheel, in combination with a table, an additional rotatably mounted spool arranged to turn loosely, said ribbon arranged to lie on the table and move thereover when wound from one to the other of the spools, and means to make the indicated marks on the ribbon correspond with the actual position of said vehicle relative to the objects designated by said marks.

5. The combination of a two part case, one of such parts provided with a base, a sub-base movably mounted on said base, journal bearings on the sub-base, a shaft rotatably mounted in the journal bearings, said sub-base arranged to move the shaft into operative or inoperative position, the other of such parts provided with a base and arranged to be joined to the first named part, a shaft rotatably mounted on the last named base and said shaft arranged to be rotated by the rotation of the first named shaft when the two parts of the case are joined and the shaft on the sub-base is in an operative position.

[Claims 6 to 15 not printed in the Gazette.]

961,289. SAW-OILER. ADOLF P. ECKSTROM, Riverside, Cal. Filed Jan. 10, 1910. Serial No. 537,351.

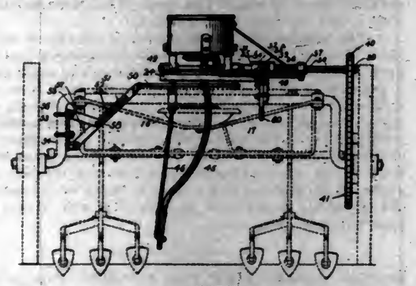


A saw oiler comprising a reservoir adapted to be seated in the handle of the saw, a valve tube in the lower part of the reservoir extending between opposite walls thereof, one wall having an opening at one end of the tube, a delivery pipe projecting into the end of the valve tube and frictionally held therein, said delivery pipe being bifurcated and straddling the rear edge of the saw blade, said valve tube having an orifice in one side wall, a wire 7 within the reservoir and extending across between the walls thereof, a wire 8 within the receptacle pivoted on the wire 7, wire 8 having a valve plug on its lower end normally closing the orifice in the valve tube, the upper end of wire 8 being formed into a coil spring 10 at right angles thereto and bearing against a wall of the reservoir, a button extending from the upper end of wire 8 through the wall of the reservoir, and a removable filling plug in the reservoir.

961,290. REPLANTING ATTACHMENT FOR CULTIVATORS. WILLIAM FAUST, Higgins, Tex. Filed Oct. 30, 1909. Serial No. 525,517.

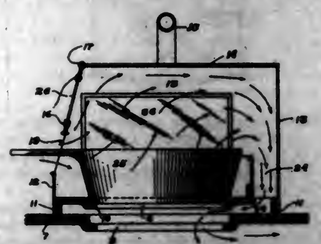
1. The combination with a cultivator having a wheeled axle, of a supporting plate detachably secured to the cultivator, an arm pivotally connected with the plate, brackets connected with the arm, a frame adjustably connected to the brackets, braces connected to the arm to hold the brackets in fixed position, a seed hopper mounted upon the frame, a sprocket detachably connected to one of the wheels, a rotatable shaft supported by the frame, seed distributing mechanism within the hopper and operated by the shaft, a sprocket fixed to the shaft, a sprocket chain trained over the said sprockets.

2. The combination with a cultivator having a wheeled axle, of a supporting plate detachably secured to the cultivator, an arm pivoted to the plate, brackets connected with the arm, a frame adjustably connected to the brackets, braces connected to the arm to hold the brackets in fixed position, a seed hopper mounted upon the frame, a sprocket detachably connected to one of the wheels, a rotatable shaft supported by the frame, seed distributing mechanism within the hopper and operated by the shaft,



a sprocket fixed to the shaft, a sprocket chain trained over the said sprockets, a clutch controlling the shaft, and a manually operable lever actuating the clutch.

961,291. VENTILATED RECEPTACLE FOR COOKING UTENSILS. ALEXANDER E. FOGELQUIST, Minneapolis, Minn. Filed July 23, 1909. Serial No. 509,752.



1. A receptacle for cooking utensils, a base portion detachably secured thereto provided with an opening adapted to register with the griddle opening over which the device may be placed, an upwardly extending flange formed upon said base portion adapted to coöperate with the walls of the receptacle forming a draft passage by which communication is effected from the interior of the receptacle to said griddle opening, substantially for the purposes set forth.

2. A receptacle for cooking utensils, comprising an inclosed chamber adapted to receive cooking utensils, a base portion provided with an opening adapted to register with the griddle opening, and an upwardly extending wall formed on said base portion and coöperating with the walls of the receptacle thereby forming a draft passage extending from the upper portion of said chamber and adapted to communicate with the griddle opening thereunder, substantially for the purposes set forth.

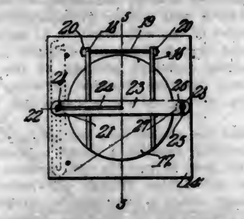
3. In a receptacle for cooking utensils, an inclosed chamber adapted to receive cooking utensils, an upwardly extending wall secured to said base portion and coöperating with the walls of said receptacle thereby forming a draft passage extending from the upper portion of said inclosed chamber and communicating with the open lower portion underneath said chamber, and a ventilator communicating between the lower portion of said inclosed chamber and the exterior atmosphere, substantially for the purposes set forth.

4. In a receptacle for cooking utensils, the combination of a suitable inclosing wall, a base portion detachably secured thereto provided with a suitable opening adapted to receive a cooking utensil and to expose same to the heat of combustion thereunder, an upwardly extending wall secured to said base portion in coöperative spaced relation with said inclosing wall forming a draft passage communicating between the receptacle and the combustion chamber thereunder, and a door provided in said receptacle oppositely disposed to said draft passage, substantially for the purposes set forth.

5. In a receptacle for cooking utensils, the combination of inclosing walls, a base portion detachably secured thereto, and a wall portion extending upwardly from said base portion being suitably spaced from said inclosing walls, thereby forming a draft passage, substantially for the purposes set forth.

[Claim 6 not printed in the Gazette.]

961,292. VALVE FOR DRAINAGE AND IRRIGATING SYSTEMS. EDWARD M. FOWLER, Alexandria, Mo. Filed June 3, 1909. Serial No. 499,887.



1. The combination with a valve comprising a hinged flap, and a seat therefor, of a bar pivotally mounted adjacent to the valve seat, and adjustable to extend across the valve seat between the same and the valve in contact with the inner face of the valve to hold the same partly open, and means for locking said bar in said extended position.

2. The combination with a valve comprising a hinged flap, and a seat therefor, of a bar pivotally mounted adjacent to the valve seat, and adjustable to extend across the valve when seated, and also across the seat between the same and the valve in contact with the inner face of the latter for holding the same partly open, and means for locking said bar in said positions.

3. The combination with a valve comprising a plate having an opening, and a flap valve seating on said opening, of a threaded stem carried by the plate, a bar having a longitudinal slot in which the stem is received, said bar being of a length to be extended across the valve, and a nut screwed on said stem.

4. The combination with a valve comprising a plate having an opening, an annular rim surrounding said opening, the edge of which rim forms a valve seat, and a flap valve engaging said seat, of a threaded stem rising from the plate, a bar having a longitudinal slot in which the stem is received, said bar being of a length to be extended across the valve, and a nut screwed on said stem.

961,293. RAILWAY AND CAR AND APPLIANCES THEREFOR. JAMES B. FOWLER, Columbus, Ohio, assignor to Fowler Automobile Railway Equipment Company. Filed Apr. 5, 1907. Serial No. 366,610.



1. In a railway system, a cylindrical shaped automobile car pointed at both ends and carrying its motive power within said car, in combination with means to throw the weight of the car below the plane of its axle.

2. In a railway system, a cylindrical shaped automobile car, pointed at both ends and carrying its own power within the car, large wheels with means in the inner circumference of the hub to allow the wheel to turn faster than its axle.

3. In a railway system, an automobile car cylindrical in shape and pointed at both ends, carrying its own motive power within said car in combination with an axle passing through apertures in the car body near each end, having wheels of large diameter with means to allow the wheels to turn faster than said axle, said axle having means to receive motive power with means to adjust said car body in relation to the axle, to equalize the motion of the car on grades or curves.

4. In a railway system, an automobile car of cylindrical shape pointed at each end and carrying its own motive power within said car, having one axle passing through said car body near each end, upon which the car body is supported, with large wheels having means within the inner circumference of hub to allow the wheels to turn faster than the axle, in combination with hangers journaled upon said axle to which a table for motive power is attached.

5. In a railway system, a cylindrical shaped automobile car pointed at each end and carrying its own motive power within said car, with single axle upon which the car body is supported, passing through apertures in the car body near each end, having means to receive motive power with shields attached to shaft in position to prevent the inrush of air through the aperture in the car side through which the axle passes.

[Claims 6 to 71 not printed in the Gazette.]

961,294. RAILROAD-TIE. FRANK GODWARD, Bergholz, Ohio. Filed Sept. 17, 1909. Serial No. 518,204.



In combination, a wooden tie, a metallic base plate having its opposite ends recurved to form securing flanges, a part of each flange being incised to form a bevel edge terminal centrally positioned spur lip, said plate proximal to its end flanges having two spike openings and two securing plates having upwardly directed stop flanges and two alining openings, all of said openings being in alinement, and securing spikes passing through said openings to hold said securing plates to said base plate and said base plate to said tie, as and in the manner set forth.

961,295. ATTACHMENT FOR SELF-PLAYING MUSICAL INSTRUMENTS. CARYL D. HASKINS, Schenectady, N. Y., assignor to General Music Supply Company, a Corporation. Filed Oct. 28, 1904. Serial No. 230,301.

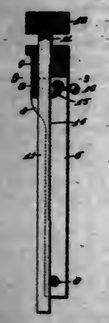


1. A music roll coupling for attachment to a recessed shaft, comprising a shaft-engaging portion recessed to engage the end of the shaft, means for securing said portion on the shaft, and a centering portion for entering the hollow end of a music roll, said centering portion being provided with a pin for bearing against the recessed end of said shaft.

2. A music roll coupling for attachment to a recessed shaft, comprising a centering portion for entering the

hollow end of a music roll, a pin carried by said portion adapted to engage the recessed end of the shaft, and means for supporting the coupling on said shaft when the music roll is removed.

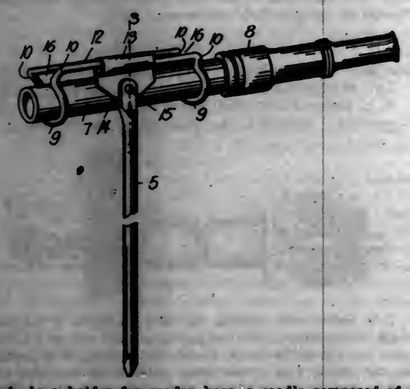
961,296. WRENCH. HENRY HENRICKS, Valley Park, Mo. Filed Mar. 1, 1910. Serial No. 546,758.



1. A wrench comprising a handle member; a sliding member; a pair of parallel grip sections forming part of the handle member a shank uniting the upper ends of said parallel grip sections; a jaw formed on the shank; a shank provided with a plurality of teeth arranged to operate in the handle section between the parallel grip sections; a jaw formed on the shank to correspond with the jaw of the handle member; and a weighted dog located between the grip sections to communicate with the teeth of the shank, substantially as specified.

2. A wrench comprising a handle composed of two parallel flattened grip members connected together at the top end; a trunnion connecting the lower ends; a perforated jaw formed on the upper end of the handle; a sliding member composed of a shank operating through the perforation and located between the parallel grip sections; a jaw formed on the shank and corresponding with the jaw of the handle; teeth formed on one side of the shank and a weighted dog pivoted between the parallel grip sections, its tooth engaging with the teeth of the shank, substantially as specified.

961,297. HOLDER FOR GARDEN-HOSE. JOHN JAEGER, Denver, Colo. Filed Nov. 30, 1909. Serial No. 530,641.



1. In a holder for garden hose, a cradle composed of a single piece of wire bent to provide two arcuate holding members whose extremities diverge outwardly to define a mouth through which a hose may be introduced, the corresponding extremities of the said members at opposite sides being connected by side-rails one of which is composed of the overlapping terminal portions of the said wire, a member firmly securing the said terminal portions and a supporting element pivotally connected with the said member.

2. In a holder for garden hose, a cradle composed of a single piece of wire bent to provide two arcuate holding members whose extremities diverge outwardly to define a mouth through which a hose may be introduced, the corresponding extremities of the said members at opposite sides being connected by side-rails one of which is composed of the overlapping terminal portions of the said wire, a plate having a fold in which the said terminal portions are firmly secured, and a supporting element pivotally connected with the said plate.

3. In a holder for garden hose, a cradle composed of a single piece of wire bent to provide two holding members whose extremities diverge outwardly to define a mouth through which a hose may be introduced, the corresponding extremities of the said members at opposite sides, being connected by side-rails one of which is composed of the overlapping terminal portions of the said wire, a member firmly securing the said terminal portions, and a supporting element pivotally connected with the said member.

4. A holder for garden hose comprising in combination with a supporting element, a cradle composed of a single piece of wire bent to provide two arcuate holding members whose extremities diverge outwardly to define a mouth through which a hose may be introduced, the corresponding extremities of the said members at opposite sides being connected by side-rails one of which is composed of the terminal portions of the said wire, and a member firmly securing the said terminal portions.

5. A holder for garden hose comprising in combination with a supporting element, a cradle composed of a single piece of wire bent to provide two arcuate holding members adapted to receive a hose, the corresponding extremities of said members at opposite sides being connected by side rails, one of which is composed of the terminal portions of the said wire, and a member firmly securing the said terminal portions.

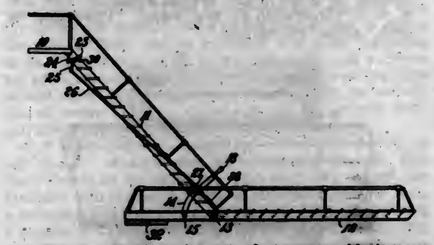
961,298. PROSPECTOR'S NEEDLE. DELL W. JEWELL, Kalamazoo, Mich. Filed Jan. 12, 1910. Serial No. 537,727.



1. An instrument of the class described comprising a portable electric battery having a forwardly extending arm, a stem depending from said arm capable of a free swinging movement, a casing at the free end of said stem, said arm, stem and casing being connected to one pole of said battery, an insulated contact plate in said casing connected to the other pole of the battery, a balanced needle in said casing connected in circuit with the casing and arranged to be normally out of contact with the contact plate but capable of being deflected when in proximity to magnetic minerals to engage the contact plate and close the circuit, and an electric light in the circuit adapted to glow when the circuit is closed.

2. An instrument of the class described consisting of a portable electric battery, a pendulum-like stem assembled with said battery, a casing at the free end of said stem, a balanced magnetic needle in the casing adapted to be deflected from its normal position by magnetic minerals, said stem, casing and needle being connected to one pole of said battery, an insulated contact plate in said casing connected to the other pole of said battery, a brush upon the needle arbor normally out of contact with said plate but adapted to engage the same whereby to close the circuit when the needle is deflected, and an electric light in the circuit adapted to glow when the circuit is closed.

961,299. FIRE-ESCAPE. HANS JOHNSON, South Boston, Mass. Filed Nov. 1, 1909. Serial No. 525,619.



1. The combination of a set of steps movable between a usable position and a raised, out-of-use position; the steps being adapted automatically to assume the usable position; a latch holding them in the out-of-use position; a movable part in the normal way of approach of a person to descend said steps, in a portion of the way before the steps are reached; said part being adapted to be engaged and moved by the weight of one approaching in a normal manner; and linkage connecting said part with the latch, whereby movement of said part releases said latch.

2. The combination of a set of steps movable between a usable position and a raised, out-of-use position; the steps being adapted automatically to assume the usable position; a latch holding them in the out-of-use position; a depressible section in the foot-way in the normal way of approach of a person to descend said steps in a portion of the path before the steps are reached; said section being adapted to be moved by the tread of one approaching in a normal manner; and linkage connecting said section with the latch, whereby movement of said section releases said latch.

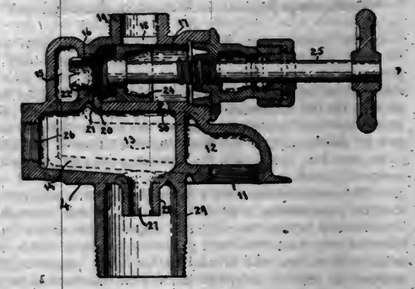
3. The combination of a set of steps movable between a usable position and a raised, out-of-use position; the steps being adapted automatically to assume the usable position; a latch holding them in the out-of-use position; a pivoted step and means normally raising the front thereof; a stop limiting the depression thereof; said pivoted step being in the normal way of approach of a person to descend said steps, in a portion of the way before the steps are reached; said pivoted step being adapted to be moved by the tread of one approaching in a normal manner; and linkage connecting said step with the latch, whereby movement of said step releases said latch.

4. The combination of a set of steps movable between a usable position and a raised, out-of-use position; the steps being adapted automatically to assume the usable position; a fixed member adjacent having a slot; a rod attached to the steps and passing through the slot and having a notch whereby it is adapted to engage the fixed member when the steps are in said raised position constituting a latch; a movable part in the normal way of approach to descend said steps, adapted to be engaged by a person approaching; and linkage connecting said part with the latch, whereby movement of said part releases said latch.

5. The combination of a set of steps movable between a usable position and a raised, out-of-use position; the steps being adapted automatically to assume the usable position; a latch holding them in the out-of-use position; a depressible section in the floor in the normal way of approach to descend said steps, adapted to be engaged by a person approaching; and linkage connecting said section with the latch, whereby movement of said section releases said latch; there being a spring tending to actuate the latch and to lift said depressible section.

[Claim 6 not printed in the Gazette.]

961,300. STEAM-REGULATING VALVE. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed Mar. 17, 1909. Serial No. 483,967.



1. A valve casing having a valve chamber in the upper portion thereof, an exhaust passage below said chamber, pipe connections leading from the valve chamber and back to the exhaust passage, said valve casing having steam supply passages leading along opposite sides of the exhaust passage and upward to the valve chamber from a train pipe connection positioned adjacent the discharge end of the exhaust passage and a constricted drain vent opening downward from the exhaust passage at its discharge end, and a manually operated valve in the valve chamber adapted to regulate the admission of steam from the supply passages to the valve chamber.

2. A valve casing having separate steam supply and exhaust passages, a valve chamber in the supply passage, a regulating valve therein, a short constricted vent pipe projecting downward from the exhaust passage, and a larger and longer discharge pipe extending downward from the casing with its upper end surrounding and spaced away from the vent pipe.

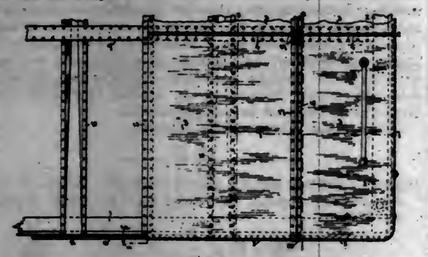
3. A valve casing having separate steam supply and exhaust passages, a valve chamber in the supply passage above the exhaust passage, a regulating valve in said chamber, said valve casing having a duct leading from the valve chamber to the exhaust passage, and means whereby said duct will be opened by the closing of the valve and closed by the opening of the valve.

961,301. CAR-ROOF. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed Nov. 16, 1909. Serial No. 528,294.

1. The combination, with a car body, of a metal roof therefor comprising roof sheets and carlines riveted together in one complete and self supporting whole, the sheets at each end of the car and the carlines along the sides of the car being bent downward to engage the ends and sides of the car respectively and provided with bolt holes for fastening them thereto, the sheets along the sides of the car being carried out and turned downward with a clear space between them and the car sides, and the carlines being so fastened to the car sides as to leave a clear space between the roof sheets and the top of the car sides.

2. The combination, with a car body, of a metal roof therefor comprising a plurality of roof sheets joined together in pairs by upturned flanges at the ridge line, carlines passing across at the center line of each pair of

sheets, means for fastening the edges of the sheet pairs together and means for fastening the end sheets and carlines to the car body.



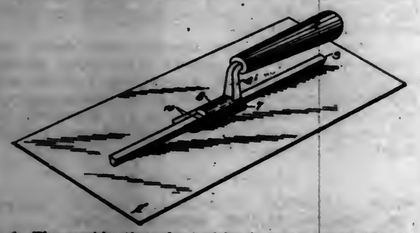
3. The combination, with a car body, of a metal roof therefor comprising a plurality of roof sheets joined together in pairs by upturned flanges at the ridge line, a ridge plate extending from end to end of the roof and riveted to the underside of the sheet pairs across their joints, carlines passing across at the center line of each pair of sheets, means for fastening the edges of the sheet pairs together, and means for fastening the end sheets and carlines to the car body.

4. The combination, with a car body, of a metal roof therefor comprising a plurality of roof sheets extending transversely across the roof, the edges of the sheets being fastened together with butt joints by means of inner and outer butt strips, one of said strips being longitudinally crimped to form a supporting rib, and carlines fastened to the sheets between joints.

5. The combination, with a car body, of a metal roof therefor comprising a plurality of roof sheets fastened together in pairs by upturned flanges at the ridge line, the edges of the sheet pairs being fastened together with butt joints by means of inner butt strips extending in one piece across the roof and outer butt strips extending from eaves to ridge line, said outer butt strips being provided with longitudinal crimps and with upturned flanges at the ridge line riveted in with the sheet flanges.

[Claims 6 to 11 not printed in the Gazette.]

961,302. ADJUSTABLE TROWEL. ROBERT W. LINVILLE, San Francisco, Cal., assignor of forty-nine one-hundredths to John F. Snyder, Richmond, Cal. Filed Mar. 16, 1909. Serial No. 483,711.



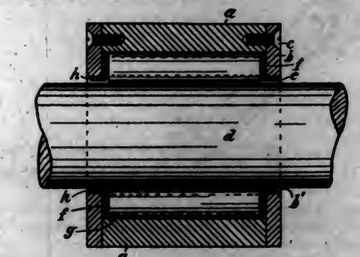
1. The combination of a tool having a dove-tailed flange, a handle having a stem with a dove-tailed slot to receive said flange, said stem having beveled outer walls, and a key slidably mounted on the flange and normally inclined relatively thereto, said key having beveled walls adapted to be forced downwardly into locking engagement with the corresponding walls of said stem.

2. The combination with a trowel blade and a handle therefor, of means for adjustably securing the handle to the blade at different points in the length thereof, said means including a dovetailed flange on the blade, and a sliding key engaging with said flange, said key having means whereby it may be tilted relative to the flange and a handle having means thereon engaging said key and locking it to said flange.

3. The combination with a trowel blade and a handle therefor, of means for adjustably securing the handle to the blade at different points in the length thereof, said means including a dovetailed flange on the blade, and a sliding key engaging with said flange, said key having a combined sliding and pivotal movement on said flange.

4. The combination with a trowel blade and a handle therefor, of means for adjustably securing the handle to the blade at different points in the length thereof, said means including a dovetailed flange on the blade, and a sliding key engaging with said flange, said key having a combined sliding and pivotal movement on said flange, and said key also having a forked end engageable wedge-fashion with the handle portion.

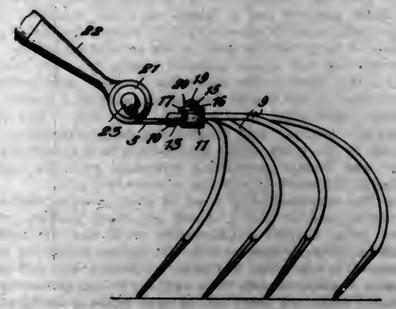
961,303. ANTIFRICTION-CAGE FOR ROLLER-BEARING ROLLS. CHARLES S. LOCKWOOD, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed May 19, 1909. Serial No. 497,091.



1. The combination, with a roller bearing having a casing with bore to support the rolls and a set of rolls to support the shaft, of flanges fixed upon the ends of the casing and inclosing the rolls, and a roll-cage supported movably upon the said flanges and thereby held from contact with the shaft or the bore of the casing.

2. The combination, with the roller bearing having a casing with bore to support the rolls and a set of rolls to support the shaft, of flanges fixed upon the ends of the casing each having an annular recess between the same and the shaft, and a roll-cage having collars at opposite ends fitted to the flanges and supported movably in such annular recesses and thereby held from contact with the shaft and bore of the casing.

961,304. CULTIVATOR. JOHN SHELTOM LUDWIG, Bushnell, Ill. Filed Feb. 7, 1910. Serial No. 542,531.



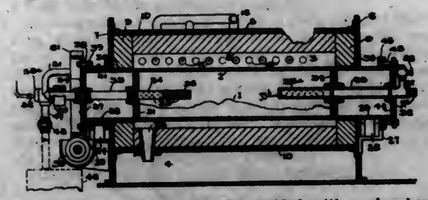
1. A hand cultivator comprising a head plate having its forward edge flanged and provided with a plurality of notches, an odd number of cultivator tines arranged upon said head plate and seated in the notches, a clamping plate secured at its ends to the head plate engaging with the tines on opposite sides of the central one to rigidly secure them in position, and means engaging with the central tine at each edge of the clamping plate, to secure the same whereby it may be removed independently of the remaining tines.

2. A hand cultivator comprising a head plate, an odd number of cultivator tines arranged thereon in spaced relation, ears extending outwardly from the opposite sides of said plate, a clamping plate having its ends disposed upon said ears and secured thereto, said plate engaging with the tines upon opposite sides of the central one to secure them in their relative positions, and a clamping plate engaging with said central tine to secure the same in operative position whereby said tine may be removed without disturbing the arrangement of the others.

3. A hand cultivator comprising a head plate, an odd number of tines arranged thereon, ears extending outwardly from the opposite sides of the head plate, said plate having a recess in alinement with the ears, a clamping plate secured at its end to said ears and engaging with the tines upon opposite sides of the central one to secure the same in their relative positions, said plate depending at its center into a recess in the head plate, and a clamping plate secured upon said first named plate having lugs formed upon its opposite edges engaging with the central tine to secure the same whereby it may be removed without disturbing the arrangement of the others.

4. A hand cultivator comprising a head plate having an odd number of cultivator tines arranged thereon, said plate having an ear extending from each side thereof and provided with a central recess in alinement with the ears, a clamping plate secured upon said ears and formed with a central U shaped portion adapted to be disposed in said recess, said plate securing the tines upon opposite sides of the central one in their relative operative positions, a second clamping plate arranged upon the first named plate, securing bolts extending through the head plate and each of said clamping plates having nuts engaged upon their upper ends to secure the last named clamping plate in position, said plate having depending lugs formed upon its longitudinal edges engaging with the central tine to secure the same between the opposed walls of the U shaped portion of the first named clamping plate whereby said tine is secured in operative position and is adapted to be removed from the head plate without disturbing the arrangement of the remaining tines, spaced ears formed upon the forward edge of the head plate, and an operating handle adjustably disposed between said ears.

961,305. ANNEALING APPARATUS. ADOLPH W. MACHLET, Elizabeth, N. J. Filed May 25, 1906. Serial No. 318,678.



1. In combination, a furnace provided with a chamber in which the flames originate, said chamber having a refractory lining, a closed metallic retort mounted wholly within said lining and closely confined on all sides thereby, numerous burners for mixed air and fuel, means for accurately controlling the heat of the retort, said burners forming a set extending the entire length of the retort in such a manner as to cause the retort to be heated throughout with evenness independent of the heat of said refractory lining; and said burners and lining being constructed to direct the flames all around the retort; means being provided for filling the retort with inert gas during the heating of the retort; and means for effecting rotation of said retort.

2. In combination, a furnace having a single fire chamber provided with a refractory lining, a metallic retort within said fire chamber, means for rotating the retort, and numerous burners for mixed air and fuel; said burners being directed alternately in opposite directions and forming a series extending along said retort and placed at such intervals as to effect substantially uniform heating of the retort throughout its length, and the retort having a lid outside of the furnace and being so sustained in said fire chamber that the flames may play freely around the top, sides and bottom of the retort.
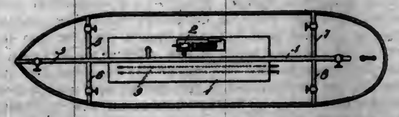
3. In combination, a furnace having a refractory lining which forms a fire chamber, a metallic retort wholly within and closely confined by said fire chamber, supporting means provided upon the exterior of said furnace for enabling said retort to rotate, the latter being removable from said supporting means, numerous burners for mixed air and fuel within said fire chamber, said retort being supported in such a manner that the flames from said burners may play freely all around and beneath said retort between the same and said refractory lining, said retort having a cylindrical extension protruding through said refractory lining and engaging said supporting means, and a lid upon said extension, the retort being removable from the furnace, and having outside of the furnace a removable cover.

4. In combination, a furnace having a flame chamber, a metallic retort wholly within said chamber, and having supporting means extending to and revoluble upon supports which are provided upon the exterior of the furnace, said retort being removably mounted at its ends upon said supports, and having a lid at one of said ends, a set of burners for mixed air and fuel within said flame chamber, the walls of the latter coöperating with said burners to direct the flames with substantial uniformity beneath and all around said retort, and a holder for inert fluid connected to said retort.

5. In combination, a furnace for gas and air having a row of controllable burners, a chamber in which the flames originate, a retort wholly within said flame chamber, supports exterior to said furnace upon which said retort is mounted for movement, a holder for inert fluid connected to said retort so as to supply fluid thereto during the movement of the retort, and means for effecting movement of the retort.

[Claims 6 to 13 not printed in the Gazette.]

961,306. APPARATUS FOR THE PROPULSION OF SHIPS. CHARLES ROBERT MAYHALL, Arroyo Grande, Cal. Filed June 11, 1909. Serial No. 501,635.

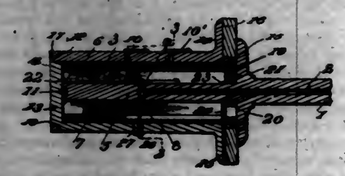


A vessel provided with compressed air tank, a pipe extending longitudinally from end to end of the vessel and discharging through the center of opposite ends thereof below the water line, valves arranged near the ends of said pipe, laterally extending pipes arranged near the front end of the vessel and opening through the opposite side walls thereof at points diametrically opposite, and similar pipes arranged at the rear end of the vessel, said lateral pipes having valves arranged therein, means for communication between the first-mentioned pipe and compressed air tank and steam pipes extending longitudinally through the tank to heat and expand the compressed air therein in order to increase the pressure thereof.

961,307. PNEUMATIC SPINDLE. REUBEN H. MOORE, Jeffersonville, Ind. Filed Sept. 30, 1908. Serial No. 455,419.

1. A pneumatic spindle comprising a hollow cylindrical body portion formed at one end with a vertical slot, an

axle extending through said slot and provided with a flattened end portion transversely bisecting the chamber inclosed by said spindle, said axle being provided with a longitudinally extending compressed air inlet passage opening upon the under side of the end portion, and means whereby when the compression beneath the flattened end of the axle becomes too great, it may be relieved by allowing the surplus air to flow into the upper portion of the chamber.



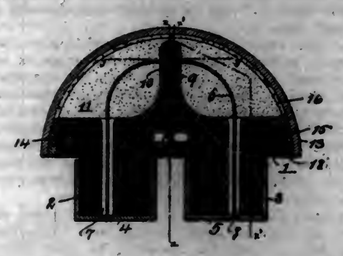
2. A pneumatic spindle comprising a cylindrical body portion inclosing a chamber and formed at one end with a vertical slot, an axle extending through said slot and provided with an expanded end portion bisecting the said chamber, said axle being vertically movable with relation to the chamber, said axle being further provided with a longitudinally extending air inlet passage opening on the under side of the end portion of the axle, means for relieving excessive pressure in the lower portion of the chamber beneath the expanded portion of the axle and carrying the surplus air therefrom into the upper portion of the chamber above the expanded end of the axle, and means for relieving excessive pressure in the upper portion of the chamber.

3. A pneumatic spindle embodying a cylindrical body portion comprising a chamber, said chamber being square sided and formed at one end with a vertical slot, an axle extending through the slot and provided with an expanded end portion bisecting said chamber, said axle being formed with a longitudinally extending passage therethrough opening upon the underside of the end portion, a flange on the axle in front of the body portion and contacting with the end face thereof and closing said slot, a passage extending through the expanded portion of the axle from the underside to the upper side thereof, a valve controlling the passage of air therethrough, but permitting its passage upon an increase of pressure in the lower portion of the chamber, and a valve for controlling the outlet of air from the upper portion of the chamber to the exterior of the body.

4. A pneumatic spindle comprising a cylindrical body portion, provided with an outwardly extending annular flange at one end, said body inclosing a chamber, one end wall of the chamber being formed with a vertical slot, a ring plate surrounding the end of the chamber and disposed beyond the annular flange thereof and spaced from said annular flange at its lower face, an axle extending through said slotted end and into said chamber and formed with an extended end portion bisecting the chamber, said axle having a longitudinal passage opening to the underside of the expanded end and connected with a source of compressed air, an upwardly and downwardly extending flange engaging with the outer face of the ring plate, and a downwardly extending web formed on the axle inward of said last named flange and movable within the space between the said ring plate and the face of the annular flange at the end of the chamber.

5. A pneumatic spindle comprising a body portion provided with a chamber and formed at one end with a slot, an axle provided with a flattened end portion adapted to extend through said slot into said chamber and also provided with an air passage, a valve in said flattened end portion arranged to regulate the relative pressure on both sides of said end portion within said chamber, and a valve in said body portion of the spindle coöperating with the first mentioned valve to regulate the degree of pressure.

961,308. ELECTRIC CUT-OUT. THOMAS E. MURRAY, New York, N. Y. Filed Apr. 1, 1910. Serial No. 552,759.



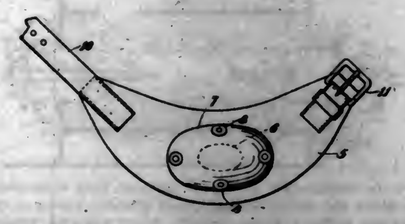
1. The combination of a base of fictile refractory material, a standard of like material thereon, a fuse having a portion of reduced cross sectional area disposed in an opening in said standard and secured at its ends in said base, and a cover secured on said base and inclosing said base and standard.

2. The combination of a base of fictile refractory material, a standard of like material thereon, an arched fuse extending through an opening in said standard and secured at its ends in said base, a cover of metal secured on said base and inclosing said fuse and standard, and a filling of pulverized refractory material within said cover.

3. The combination of a base of fictile refractory material, a standard of like material on one side thereof and integral therewith, integral projections on the opposite side of said base, contact plates on said projections, a fuse connected at its ends to said projections and extending through an opening in said standard, a cover of metal secured on said base and inclosing said fuse and standard, and a filling of pulverized refractory material within said cover.

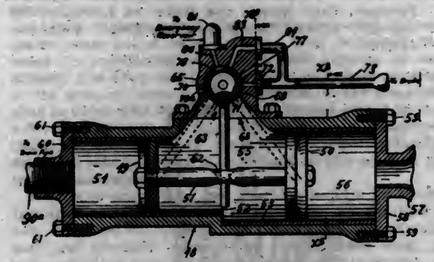
4. The combination of a base of fictile refractory material, a standard of like material thereon, an arched fuse extending through an opening in said standard and secured at its ends in said base, a semi-cylindrical cover formed integrally of metal receiving said base and inclosing said fuse and standard, and a filling of pulverized refractory material within said cover.

961,309. PROTECTING PAD OR SHIELD. WILLIAM H. MCCORMACK, West Allis, Wis. Filed Oct. 5, 1908. Serial No. 456,133.



In a protecting pad or shield, the combination with a main or body portion provided with an opening for the accommodation of the sore or affected part, of a plate of arched or spoon-like form secured to the outside of the main or body portion, and bridging over the opening of said main or body portion, the convexity of the plate being outermost, and said convexity at one end of the plate being greater than at other points thereof, the plate being composed of a material of greater rigidity or stiffness than the material of the main or body portion.

961,310. MEANS FOR OPERATING RAILWAY-BRAKES. SPENCER G. NEAL and JOSEPH M. CHILDRESS, Los Angeles, Cal., assignors to The California Valve and Air Brake Company, Palma, Cal., a Corporation of California. Filed June 12, 1908. Serial No. 438,197.



1. An air brake apparatus comprising a single train pipe, a brake cylinder, an automatic pressure controlled means actuated by an increase of train pipe pressure to admit air to the brake cylinder and also actuated by the brake cylinder pressure alone to close communication between the train pipe and the brake cylinder when the brake cylinder pressure reaches a predetermined point below the train pipe pressure.

2. In combination, a single train pipe, supply means for said pipe, a brake cylinder, a valve to control the supply from said pipe to said cylinder to apply the brakes by an increase in train pipe pressure, and means adapted to automatically open said valve when the pressure in said pipe exceeds a predetermined constant proportion to that in said cylinder.

3. In combination, a train pipe, supply means for said pipe, a brake cylinder, means for supplying said cylinder from said pipe, and automatic means operated by brake cylinder pressure for lessening the pressure in said cylinder during a reduction of pressure in said pipe, said automatic means being adapted to maintain in said cylinder a pressure below the pressure in the train pipe and having a fixed ratio to the pressure in said pipe.

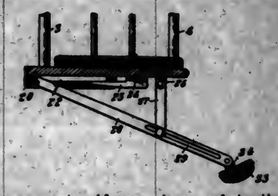
4. In combination, a train pipe, supply means for said pipe, a brake cylinder, means for supplying said cylinder from said pipe, and automatic means for increasing the pressure in said cylinder during an increase of pressure in said pipe, said automatic means being operated by brake cylinder pressure and adapted to maintain in said cylinder a pressure below the pressure in the train pipe and having a fixed ratio to the pressure in said pipe.

5. In combination, a fluid supply, a train pipe fed therefrom, a brake cylinder, valvular means to control the supply of fluid from said pipe to said cylinder, an operating cylinder, a piston therein, means operatively connecting said piston to said valvular means, and means automatically regulating the pressure upon said piston to operate said valvular means, said pressure regulating means being actuated by a difference in pressure between the fluid in the train pipe and in the brake cylinder.

[Claims 6 to 56 not printed in the Gazette.]

961,311. CHILD'S ADJUSTABLE CHAIR. OSCAR G. NELSON, Alliance, Ohio. Filed Mar. 15, 1910. Serial No. 549,464.

In a child's adjustable chair, the combination of a suspended frame, a chair seat, brackets secured to the seat, links pivotally attached to the brackets, foot rest bars provided with elongated slots, and means for slidably and pivotally connecting the links and foot rest bars together, the foot rest pivotally connected to the forward ends of the slotted bars, parallel bars secured to the bottom or underside of the seat, said bars provided with cut out portions, plates secured to the bottom of the chair seat, said plates provided with rearward extending fingers and a bar adapted to connect the foot rest bars together and to limit the outward movement on said foot rest bars, and fingers



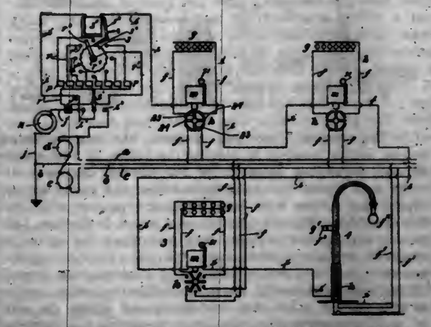
adapted to support said cross bars, substantially as and for the purpose specified.

961,312. RESILIENT CONNECTION DEVICE FOR RELATIVELY MOVABLE PARTS. JAMES G. NOLEN and JOHN SHEPHERD, Chicago, Ill.; said Nolen assignor to John E. Shepherd, Chicago, Ill. Filed Oct. 8, 1906. Serial No. 337,904.



In a vehicle construction, a body, running gear, vibration absorbing cushions interposed between the body and running gear, each of said cushions comprising a stem 5, provided with a head at one end and a parti-spherical foot near the other end; a socket for said foot, providing an apertured seat for the foot wherein it may universally move, said seat being located above the base of the socket, means on the stem on the opposite side of the seat from the foot, for preventing withdrawal of the stem, a shell surrounding the head and a resilient body within the shell, wherein the head is embedded.

961,313. SYSTEM OF ELECTRICAL DISTRIBUTION. GRANVILLE E. PALMER, Boston, Mass. Filed Nov. 23, 1904. Serial No. 234,044.



1. A system of electrical distribution comprising a plurality of lighting circuits, each having a rotary switch, an independent motor for each switch, a motor controller having a detent for controlling said motor whereby said motor imparts a step-by-step rotation to said switch, and a controlling circuit having means for selectively effecting the operation of the detent of any one of said motor-controllers independently of the others.

2. A system of electrical distribution including a plurality of lighting circuits each having an independent

rotary switch, an independent motor for each switch, an independent detent for controlling each switch in consequence of which said switch has an intermittent movement to cut in and cut out its corresponding circuit, an actuator for each detent, a selector for each detent, and a controlling circuit governing said selectors and actuators but independent of said motors, whereby electrical impulses sent through said circuit effect the selective operation of any one of said devices to cut in or cut out the corresponding working circuit.

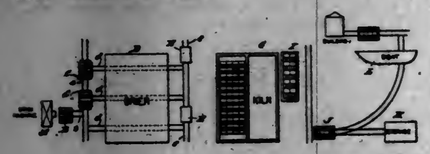
3. A system of the character described, comprising a plurality of lighting circuits, a rotary switch for each said circuit, a motor for each switch, a controller for each motor, a controlling circuit, means for throwing either a direct or an alternating current on said controlling circuit, and mechanisms in said latter circuit operative in response to a direct current to select any controller for actuation, and operative by passage of an alternating current to actuate such selected controller.

4. A system of the character described, comprising a plurality of elements, a plurality of independent devices for acting on said elements, a plurality of selectors for rendering said devices independently operative, a controlling circuit for said devices and selectors, and means for causing alternating and direct currents to pass through said controlling circuit, said selectors being constructed for operation by both alternating and direct currents, and said devices being operable only by alternating currents.

5. A system of the character described, comprising a plurality of working circuits, each having an independent switch, a mechanical motor for operating each switch to cut in or cut out its corresponding working circuit, a detent which is operable to permit an intermittent movement of each switch by its motor, a controlling circuit, means for causing currents of different characteristics to pass through said controlling circuit, electromagnetic controlling mechanisms in series in said circuit, and selecting mechanisms operated thereby, by which a detent is selected for operation by a current of certain characteristics and is operated by a current of different characteristics.

[Claims 6 to 16 not printed in the Gazette.]

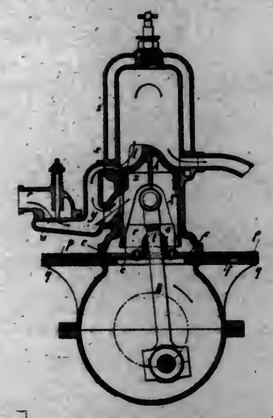
961,314. METHOD FOR HANDLING BRICK AND DELIVERING THE SAME FOR USE OR STORAGE. RAYMOND C. PENFIELD, New York, N. Y. Filed Sept. 15, 1908. Serial No. 453,176.



1. The herein described method of manufacturing bricks, which consists in placing the bricks in unit stacks in open formation suitable for the burning process, carrying said stacks into burning position and removing the supporting means from supporting engagement with the bricks without disturbing their said stack formation, subjecting said bricks to heat, then restacking the bricks in close or shipping formation with the bottom portion spaced apart to receive lifting and transporting means, lifting and transporting the bricks while the lower portion is still spaced apart and the superposed bricks are still in said close formation, and then removing the carrying means without disturbing the mutual relation of the bricks.

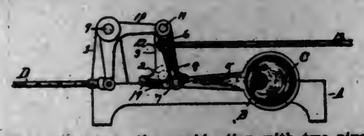
2. The herein described method of manufacturing and delivering bricks, which consists in setting the bricks in open formation suitable for the burning process, subjecting said bricks to heat, restacking all but the bottom portion of the bricks in close or shipping formation, said bottom portion being arranged in open formation with its bricks spaced apart to receive lifting and transporting means, lifting and transporting the bricks while the lower portion is still in said open formation and the superposed bricks are still in said close formation, and then removing the carrying means without disturbing the mutual relation of the bricks.

961,315. TWO-STROKE CYCLE-MOTOR. ARMAND PEUGEOT, TONY HUBER, and HENRI DE LOSTALOT, Billancourt, France. Filed Feb. 19, 1908. Serial No. 415,144.



In a motor of the character described, the combination with a vertical cylinder, of an apertured piston adapted to divide the same into a compression chamber and an explosion chamber, there being a horizontal admission port leading to the explosion chamber and an upwardly inclined port leading to, and serving as an inlet and outlet for, the compression chamber, said inclined port being adapted to direct gases entering the compression chamber through the apertures in the piston against the piston on the suction stroke of the latter, means whereby said ports communicate and are adapted to transfer gases from the compression chamber to the explosion chamber, a pair of superposed supporting plates at the lower end of said cylinder, a pair of filler blocks mounted on the upper supporting plate and projecting into the cylinder, a plate mounted to slide between said supporting plates, a casing fixed to said sliding plate, a boss rotatable in said casing, and a connecting rod pivoted to the piston and passing through the boss.

961,316. REVERSING-GEAR. VICTOR E. RANDALL, Battle Creek, Mich. Filed June 19, 1908. Serial No. 439,269.



1. In a valve gear, the combination with two pivotally supported arms of equal length having their free ends connected together, and means for vibrating said arms on their pivots, of connections from the pivot of one arm to a valve stem, and means for adjusting the position of the pivot of the other arm with respect to the pivot of the first mentioned arm.

2. The combination with an eccentric rod, and a valve stem, of a plurality of pivoted members connecting the two and serving to communicate motion from the rod to the stem, said members being adjustable to a position in which movements of the rod are not communicated to the stem, and means for adjusting said pivoted members.

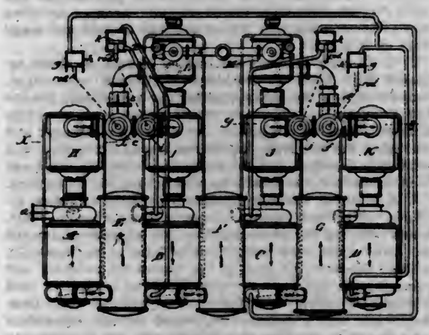
3. In a reversing gear, the combination with an eccentric rod and a valve operating lever, of a rock arm, means for adjusting the position of said rock arm, an oscillatory arm pivoted to the rock arm and having its free end connected to the eccentric rod, and a link having one end pivoted to the free end of the oscillatory arm and having its other end connected to the valve operating lever.

4. In a reversing gear, the combination with an eccentric stem and a valve-operating lever fulcrumed between its extremities, of an adjustable support, an oscillatory arm connected to said support and also connected to the eccentric stem, a pitman pivoted to the eccentric stem in union with said oscillatory arm and hinged to the valve lever opposite the fulcrum from the valve connected therewith, and means to actuate said support whereby the valve may be drawn to or beyond an idle position to reverse an engine.

5. In a reversing gear, the combination with an eccentric stem and valve rod, of a rock arm, an oscillatory arm supported on the rock arm beyond the pivotal support and pivotally connected to the eccentric stem, a valve-operating lever fulcrumed between its extremities, a pitman pivoted to said eccentric stem in union with said oscillatory arm and hinged to the valve lever opposite the fulcrum from the valve connection therewith, and means to actuate said rock arm whereby the valve may be drawn either to or beyond an idle position to reverse an engine.

[Claims 6 to 10 not printed in the Gazette.]

961,317. HIGH-PRESSURE COMPRESSOR OR OTHER POWER-ABSORBING MACHINE. AUGUSTE C. E. RATEAU, Paris, France, assignor to Rateau Turbine Company, Chicago, Ill., a Corporation of West Virginia. Filed May 3, 1906. Serial No. 315,047.



1. The combination with a plurality of power-absorbing machines connected to act in series with respect to the delivery of their output, of a corresponding number of engines connected in parallel and arranged to drive said machines, valves controlling the supply of motive fluid to the individual engines, and regulators, each responsive to the power developed in a corresponding power absorbing machine, for controlling said valves.

2. The combination with a plurality of low pressure engines, of a power absorbing machine driven by each engine, a high pressure engine arranged to supplement the driving of one of said power absorbing machines, means for delivering the exhaust steam from said high pressure engine into a chamber communicating with said low pressure engines in parallel, and means controlled by said power absorbing machines for controlling the distribution of said exhaust steam in said low pressure engines.

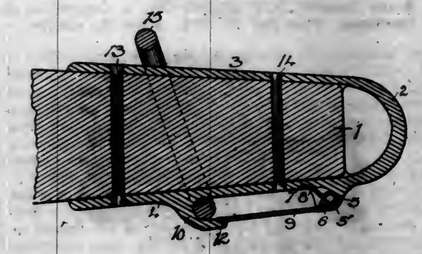
3. The combination with two or more low pressure engines and corresponding power-absorbing machines driven thereby and connected to act together with respect to the delivery of their output, a source of low-pressure motive fluid supplying said engines in parallel, a high pressure engine mechanically coupled to one of said low pressure engines and arranged to deliver its exhaust to the other low pressure engine, an independent source of high pressure motive fluid, and an automatic regulator, responsive to a diminution of said low pressure fluid, adapted to admit high-pressure fluid to said high-pressure engine.

4. The combination with a plurality of low-pressure engines and corresponding power absorbing machines driven thereby, a source of low pressure motive fluid supplying said engines in parallel, a high pressure engine arranged to supplement the driving of one of said power absorbing machines and arranged to deliver its exhaust to the low pressure engines in parallel, an independent source of high pressure motive fluid, an automatic regulator responsive to a diminution of said low pressure fluid for admitting high-pressure fluid to said high-pressure engine, and an automatic regulator responsive to the power developed in said power absorbing machines for controlling the distribution of said exhaust steam to said low-pressure engines.

5. The combination with a number of compressors connected in series, of steam turbines connected in parallel, arranged to drive said compressors, valves controlling the supply of motive fluid to the individual turbines, and a regulator for operating each valve, responsive to the discharge pressure of the corresponding compressor, whereby the power delivered to the several compressors is equalized.

[Claim 6 not printed in the Gazette.]

961,318. POLE-TIP. EDWIN N. ROBINSON, Hot Springs, S. D. Filed Mar. 16, 1909. Serial No. 483,754.



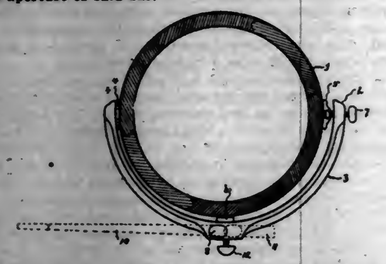
1. A pole tip comprising an upper plate, continued to form a draft loop, from which extends a lower plate, provided near the forward end with a recessed ear, said lower plate near the recess of said ear having a cavity, a forwardly extending hold-back projecting from said lower plate intermediate between its ends, said hold-back having a seat within its tip, and a J-shaped spring having a voluted end, the end of the longest member of said J-shaped spring resting in said seat, the shorter spring end resting in said plate cavity, said voluted spring end being held within the recess of said ear, all arranged as described.

2. A pole tip comprising an upper and lower securing plate united at their forward ends by means of a curved draft loop, said lower plate having a cavity near its forward end, a hook-shaped hold-back extending forward from near the rear end of said lower plate having a seat, an ear with a recess extending from said lower plate in alinement with said hold-back, a J-shaped spring provided with a voluted end held within said recess, the shorter end of said J-shaped spring resting within said cavity, the longest end of said spring normally held within said seat.

961,319. BRACKET. WILLIAM A. SCOTT, Omaha, Nebr. Filed Mar. 28, 1910. Serial No. 551,905.

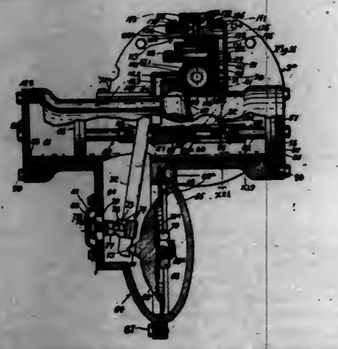
1. A new article of manufacture comprising a transversely apertured, arcuate bar formed midway between its ends with a transversely disposed contact-member projecting inwardly of its concaved wall, said bar having holding devices upon its terminals; and a longitudinally ad-

justable member mounted upon and adapted to pass within the aperture of said bar.



2. A device for the purposes described comprising a curved bar having contact-shoes upon its terminals and provided midway between its ends with an aperture for supporting an object to be seated therein and provided with an inwardly projecting contact-block; adjustable means upon said bar for moving one of the contact-shoes in a direction of the other contact-shoe, and a screw-member mounted in one of the walls of the bar and adapted to pass within said aperture to engage the supported object.

961,320. AIR-BRAKING APPARATUS FOR RAILWAYS. WILLIAM H. SHEASBY and SPENCER G. NEAL, Los Angeles, Cal., assignors to The California Valve and Air Brake Company, Los Angeles, Cal., a Corporation of California. Filed Dec. 10, 1908. Serial No. 466,799.



1. In braking apparatus, a train pipe, means to vary pressure therein, a brake cylinder, means affording communication between said train pipe and brake cylinder, and means operated by reduction of train pipe pressure to open communication between the train pipe and brake cylinder, said means being operated by brake cylinder pressure to close communication between the brake cylinder and the train pipe.

2. In braking apparatus, a train pipe, means to vary pressure therein, a brake cylinder, means affording communication between said train pipe and brake cylinder, and a triple valve operated by reduction of train pipe pressure to open communication between the train pipe and brake cylinder, said means being operated by brake cylinder pressure to close communication between the brake cylinder and the train pipe.

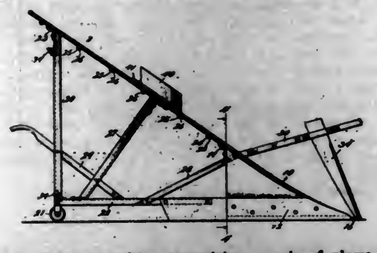
3. In braking apparatus, a train pipe, means to vary pressure therein, a brake cylinder, a piston operated by train pipe pressure, and a valve operatively connected with said piston to open communication between the train pipe and brake cylinder when the train pipe pressure is reduced, said means being operated by brake cylinder pressure to close communication between the brake cylinder and the train pipe.

4. In braking apparatus, a train pipe, means to vary pressure therein, a brake cylinder, means of communication between said train pipe and brake cylinder, and means operated by reduction of train pipe pressure to open communication between the train pipe and brake cylinder, said last mentioned means being regulated by brake cylinder pressure.

5. In braking apparatus, a train pipe, means to vary pressure therein, a brake cylinder, means affording communication between said train pipe and brake cylinder, a valve to control such communication, means for opening said valve by a reduction of train pipe pressure, and yielding means tending to open said valve.

[Claims 6 to 53 not printed in the Gazette.]

961,321. DITCHING-MACHINE. ROBERT SINCLAIR, Chicago, Ill. Filed Mar. 14, 1910. Serial No. 549,296.



1. A ditching machine comprising a pair of plows arranged with their shares disposed toward each other, means coupling the plows together for adjustment toward and away from each other, means forming an upwardly inclined extension of each of the shares for catching and conveying the dirt from the shares and means connecting said extensions together for adjustment toward and away from each other.

2. A ditching machine comprising a pair of plows arranged with their shares disposed toward each other, means coupling the plows together for adjustment toward and away from each other, means forming an upwardly inclined extension of each of the shares for catching and conveying the dirt from the shares, means connecting said extensions together and for adjustment toward and away from each other, and means for supporting said extensions.

3. A ditching machine comprising a pair of plows arranged with their shares disposed toward each other, means coupling the plows together for adjustment toward and away from each other, means forming an upwardly inclined extension of each of the shares for catching and conveying the dirt from the shares, means connecting said extensions together for adjustment toward and away from each other and a deflector supported by said extensions and adapted to be adjusted longitudinally and transversely with respect thereto.

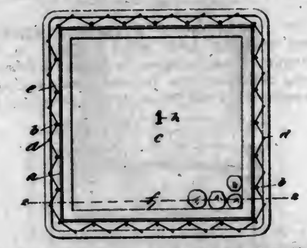
4. A ditching machine comprising a pair of plows arranged with their shares disposed toward and over-lapping each other, means adjustably connecting said shares, and means forming extensions of the shares for catching and conveying the dirt from the shares.

5. A ditching machine comprising a pair of plows arranged with their shares disposed toward and over-lapping each other, means adjustably connecting said shares, means forming extensions of the shares for catching and conveying the dirt from the shares, said extensions overlapping each other, and means adjustably connecting the latter.

[Claims 6 to 19 not printed in the Gazette.]

961,322. APPARATUS FOR EXAMINING MATTER OR OBJECTS IN QUANTITIES. JOHN I. SOLOMON, New York, N. Y. Filed Apr. 24, 1906. Serial No. 313,454.

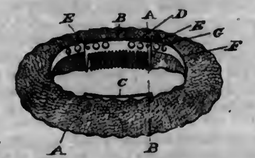
1. An apparatus for examining separated matter or different objects in quantity which comprises a fixed source of rays penetrating matter opaque to light and a radiographic material, there being between the source of rays and the radiographic material a support for a plurality of objects under observation, such support being movable in relation to the source of rays, and being of such a character that the objects may be brought into the path of the rays and examined and removed from such path without changing their relative position, whereby the configuration, identity and contents of the objects may be observed.



2. An apparatus for examining separated matter or different objects in quantity which comprises a fixed source of rays penetrating matter opaque to light and a radiographic material, there being between the source of rays and the radiographic material a support for a plurality of objects under observation, the support comprising a frame with a movable bottom, so that the objects may be left upon the bottom without changing their relative position, such support being movable in relation to the source of rays, and being of such a character that the objects may be brought into the path of the rays and examined and removed from such path without changing their relative position, whereby the configuration, identity and contents of the objects may be observed.

3. An apparatus for examining separated matter or different objects in quantity which comprises a fixed source of rays penetrating matter opaque to light and a radiographic material of such a character that a permanent radiograph may be obtained, there being between the source of rays and the radiographic material a support for a plurality of objects under observation, the said support carrying means made of a material which obstructs the passage of the rays for indicating the identity of the particular support, such support being movable in relation to the source of rays, and being of such a character that the objects may be brought into the path of the rays and examined and removed from such path without changing their relative position, whereby the configuration, identity and contents of the objects may be observed.

961,323. HAIR-ROLL WITH COMB-BAND ATTACHMENT. ELY A. STACY, New York, N. Y. Filed Oct. 20, 1908. Serial No. 458,592.



1. In a hair roll, a body, combs disposed opposite each other upon said body and a semicircular band, said band pivotally connected to said combs whereby it may be adjusted with relation to said combs and said body.

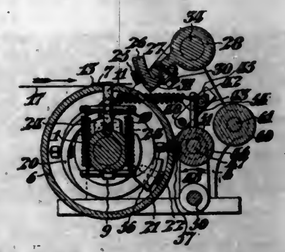
2. In a hair roll, a body in the form of a ring, combs on said ring and means connected to said ring whereby the front and back portions of said roll are rendered independently adjustable with relation to the central portions thereof.

3. In a hair roll, a body of fibrous material in the form of a ring, combs on opposite sides of the ring, and flexible members extending around inside of said ring and pivotally connected to said combs, whereby the flexible members are independently adjustable with relation to each other and to the combs.

4. In a hair roll, a body of fibrous material in the form of a ring, combs on opposite sides of the ring and semicircular flexible members inside of said ring and connected thereto and having their ends pivotally connected to the combs, whereby opposite ends of said roll are rendered independently adjustable with relation to the combs.

5. In a hair roll, a body in the form of a ring, a band formed in sections, combs pivotally connected to the sections whereby the front and back portions of the roll are adjustable with relation to the combs.

961,324. GRIPPING, PASTING, AND FOLDING MECHANISM. GEORGE W. SWIFT, Jr., Bordentown, N. J. Filed Aug. 17, 1908. Serial No. 448,958.



1. The combination with a cylinder; of a gripping lever pivotally supported independently of said cylinder, arranged to normally engage the periphery of said cylinder; a stationary cam arranged to actuate said gripping lever; and, means arranged to adjustably secure the pivotal support of said lever to operatively engage different axial regions of said cam and cylinder.

2. The combination with a hollow rotary cylinder having a slot in its peripheral wall; of a gripping lever pivoted to oscillate in said slot, and having one end arranged to engage the periphery of said cylinder; of a cam, in invariable axial relation with said cylinder, but capable of relative rotary adjustment, arranged to actuate said gripping lever; and, means arranged to adjustably engage said gripping lever with respect to said cam and cylinder; whereby its opposite ends may operatively engage different axial regions of said cam and cylinder.

3. The combination with a hollow cylinder having a slot in its peripheral wall; of a shaft for said cylinder; a collar axially adjustable on said shaft; a gripping lever arranged to oscillate in said slot, and having one end arranged to engage the periphery of said cylinder; means carried by said collar tending to normally shift said lever into engagement with the periphery of said cylinder; a stationary cam arranged to engage said lever to oscillate it away from the periphery of said cylinder; and, means arranged to adjustably secure said collar, at different axial regions on said shaft whereby the opposite ends of said lever may operatively engage different regions of said cam and cylinder.

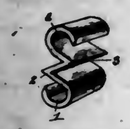
4. The combination with a hollow rotary cylinder having a slot in its peripheral wall; of a shaft for said cylinder; a collar arranged for independent axial adjustment on said shaft; a gripping lever pivoted on said collar and arranged to oscillate in said slot, and having one end exterior to said cylinder, arranged to engage its periphery; means arranged to actuate said lever with respect to said periphery; and, means arranged to adjustably secure said collar at variable regions on said shaft, whereby said gripping lever may engage different regions of said actuating means and said cylinder.

5. The combination with a hollow rotary cylinder having a slot in its peripheral wall; of a gripping lever arranged to oscillate in said slot, and having one end ar-

ranged to engage the periphery of said cylinder; means continually tending to shift said lever to engage said periphery; a stationary cam arranged to intermittently shift said lever to disengage said periphery; and, means arranged to adjustably engage the support of said lever, at variable positions relative to said cam and cylinder; whereby said lever may operatively engage different regions of said cam and cylinder.

[Claims 6 to 15 not printed in the Gazette.]

961,325. WEDGE. JOSEPH LEWIS THOMAS, Chicago, Ill. Filed Aug. 24, 1909. Serial No. 514,379.



1. A wedge of the character described, comprising a Z-shaped body portion provided with extended and oppositely bent ends, said Z-shaped body portion being beveled to cause an expansion of the same when being driven into suitable material, and the bent ends of said Z-shaped body portion being beveled to force material against said Z-shaped body portion, substantially as described.

2. A wedge of the character described, comprising a Z-shaped body portion provided with substantially semi-circular oppositely extending bent ends, as and for the purpose specified.

961,326. INCANDESCENT-LAMP BASE. THOMAS G. TURNER, New York, N. Y. Filed Oct. 12, 1908. Serial No. 457,249.



1. An electric bulb, a filament, end and screw shell terminals, connecting wires leading from said terminals to the filament, and means for destroying the connection between one of said terminals and the filament to render said lamp useless, adapted to come into operation upon and by the removal of the lamp from its socket.

2. An electric lamp comprising a bulb, a filament, end and screw shell terminals, connecting wires leading from said terminals to the filament, and means adapted to break the connecting wires, operable upon and by the removal of the lamp from its socket.

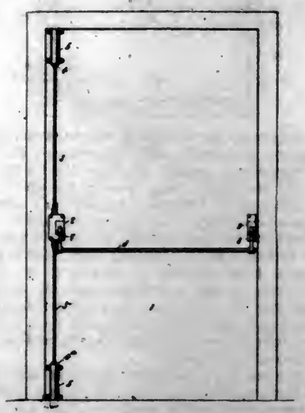
3. An electric lamp comprising a bulb, a filament, end and screw shell terminals, connecting wires leading from said terminals to the filament, means adapted to break the connecting wires, operable upon and by the removal of the lamp from its socket, and means for hindering the removal of the lamp from its socket.

4. An electric lamp comprising a bulb, a filament, end and screw shell terminals, connecting wires leading from said terminals to the filament, said screw shell comprising two parts immovable with relation to one another during the insertion of the lamp in its socket, means to permit movement of the part secured to the bulb independently of the other shell, upon rotating the lamp, in the direction of its removal, the connections adapted to be destroyed between the terminals and filament upon such independent motion.

5. An electric lamp comprising a bulb, a filament, end and screw shell terminals, connecting wires leading from said terminals to the filament, said screw shell comprising two parts immovable with relation to one another during the insertion of the lamp in its socket, means to permit movement of the part secured to the bulb independently of the other shell upon rotating the lamp in the direction of its removal, and means for hindering the removal of the said other shell.

[Claims 6 to 12 not printed in the Gazette.]

961,327. PANIC-BOLT WITH ADJUSTMENT BETWEEN TOGGLE AND BOLT. HENRY G. VOIGHT, New Britain, Conn., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Oct. 8, 1909. Serial No. 521,765.



1. In a panic bolt for doors, a bolt operating mechanism connected therewith and comprising a rack slide, an operating lever connected therewith, a bar extending transversely of the door for operating said lever, a pinion cooperating with said rack and having a toggle connection with said bolt, and means for adjusting said bolt with respect to said toggle connection.

2. In a panic bolt for doors, a bolt, a housing therefor, means in said housing tending to retract the bolt therein, bolt operating mechanism operatively connected with said bolt and comprising a rack slide, an operating lever therefor, an operating bar extending transversely of the door to operate said lever, a toggle connection between said slide and said bolt, means in said mechanism to hold said bolt normally projected, and means for adjusting said bolt relatively to said mechanism.

3. In a panic bolt for doors, a bolt, a housing therefor, a spring in said housing tending normally to retract said bolt, bolt operating mechanism operatively connected with said bolt and comprising a rack slide, an operating lever connected therewith, a bar extending transversely of the door to operate said lever, a pinion engaging said slide, a toggle connection between said pinion and said bolt, and means for adjusting said bolt with respect to said toggle connection.

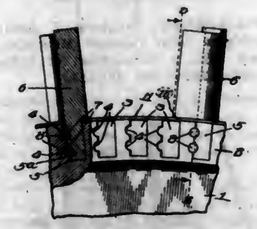
4. In a panic bolt for doors, a bolt, mechanism for operating said bolt comprising a rack slide, an actuating lever therefor, an operating bar extending transversely of the door for operating said lever, an actuating rod having a swivel connection to said bolt and adjustably secured to said mechanism whereby said bolt may be adjusted relatively to said mechanism.

5. In a panic bolt for doors, a bolt member, a lock mechanism to operate said member comprising a rack slide, an actuating lever connected therewith, an operating bar extending transversely of the door to operate said lever, a pinion cooperating with said slide, a toggle connection between said pinion and said bolt comprising a toggle lever

fixed to said pinion and a link connecting said lever and said bolt, and adjusting mechanism between said bolt and said link.

[Claims 6 to 8 not printed in the Gazette.]

961,328. TURBINE-BLADE. HENRY H. WAIT, Chicago, Ill. Filed Mar. 17, 1910. Serial No. 549,868.



1. In a turbine wheel, the combination of a wheel disk having a rim of increased axial thickness, said rim being provided with a series of slots in its periphery, turbine blades each having a body portion of crescent shape in cross-section and a root of approximately rectangular cross-section, said roots fitting in the slots of said rim, pins locking the blade roots to the wheel, and a cover plate overlying the periphery of said rim and projecting upon the opposite sides thereof to the tips of the body portion of said blade.

2. In a turbine wheel, the combination with a wheel disk having a rim of increased axial thickness, said rim having in its periphery a series of channel slots provided with parallel walls, of turbine blades each having a body portion of crescent shape in cross-section and a root of approximately rectangular cross-section, said roots fitting in and approximately filling the slots in said rim, the walls of said slots and said blade roots being each provided with semi-circular grooves, the grooves in said walls registering with the corresponding grooves in said roots, pins fitting in the circular openings formed by said grooves, and a cover plate surrounding the periphery of said rim and projecting between the opposite sides thereof, said cover plate being provided with perforations overlying said slots and of a contour corresponding to the cross-sectional contour of the roots of said blades.

3. In a turbine wheel, the combination with a wheel disk having a rim of increased axial thickness, said rim being provided in its periphery with a series of outwardly opening, transverse slots, and turbine blades having a body portion of crescent shape in cross-section and a root portion of approximately rectangular cross-section, the front surface of said root having a slight concavity forming a prolongation of the concave face of the body portion of the root, said blade roots fitting in and approximately filling said slots in said rim.

4. In a turbine wheel, the combination with a wheel disk having a rim of increased axial thickness, said rim being provided in its periphery with a series of outwardly opening, transverse slots, turbine blades having a body portion of crescent shape in cross-section and a root portion of approximately rectangular cross-section, the front surface of said root having a slight concavity forming a prolongation of the concave face of the body portion of the root, said blade roots fitting in and approximately filling said slots in said rim, and a cover plate surrounding the periphery of said rim and projecting upon the opposite sides thereof, said cover plate being provided with perforations overlying said slots and of a contour corresponding to the cross-sectional contour of the roots of said blades.

5. As an article of manufacture, a stock for turbine blades consisting of a drawn bar of approximately crescent shape in cross-section provided with an angular, longitudinally extending rib.

[Claims 6 to 9 not printed in the Gazette.]

961,329. TURBINE-BLADE. HENRY H. WAIT, Chicago, Ill. Filed Mar. 19, 1910. Serial No. 550,462.



1. In a fluid pressure turbine, the combination with a stationary diaphragm, guide blades secured to the periphery of said diaphragm, said guide blades having each a tang on its outer end, and a supporting ring having a channel for receiving said tangs.

2. In a fluid pressure turbine, the combination with a stationary diaphragm, guide blades secured to the periphery of said diaphragm, said guide blades having each a tang on its outer end, a supporting ring having a channel for receiving said tangs, and a cover plate overlying said channel, said cover plate being provided with perforations through which said tangs extend into said channel.

3. In a fluid pressure turbine, the combination with a stationary diaphragm having a series of radial sockets about its periphery, guide blades having roots secured within said sockets, and a supporting ring having a channel for receiving the outer ends of said blades.

4. In a fluid pressure turbine, the combination with a stationary diaphragm having a series of radial sockets of circular cross-section in its periphery, guide blades having roots of concavo-convex cross-section fitting in said sockets, the convex surface of said roots corresponding to the curvature of the walls of said sockets and fitting therein, and filler pieces fitting in said sockets upon the concave of said root.

5. In a fluid pressure turbine, the combination with a stationary diaphragm having a series of radial sockets of circular cross-section in its periphery, guide blades having roots of concavo-convex cross-section fitting in said sockets, the convex surface of said roots corresponding to the curvature of the walls of said sockets and fitting therein, filler pieces fitting in said sockets upon the concave face of said root, a supporting ring having a channel for receiving the outer ends of said blades, and a cover plate overlying said channel, said cover plate being provided with perforations through which said outer ends of the blades project into said channel.

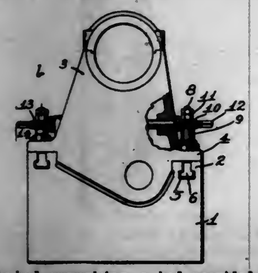
[Claim 6 not printed in the Gazette.]

961,330. LATHE-HEAD CLAMP. AUGUSTUS WOOD, Hamilton, Ohio, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Filed Mar. 4, 1910. Serial No. 547,217.

1. A lathe-head clamp comprising, a bed provided with ways having undercut portions, a head having side-portions engaging said ways, a block disposed under each side-portion of the head and engaging the undercut portions of the ways, vertical studs passing through the side-portions of the head and engaging the blocks, a worm-gear on each stud, a worm-shaft journaled across the head, and worms carried by the shaft and engaging the worm-gears, combined substantially as set forth.

2. A lathe-head clamp comprising a bed provided with ways having undercut portions, a head having side-portions engaging said ways, a block disposed under each

side-portion of the head and engaging the undercut portions of the ways, vertical studs passing through the side-portions of the head and engaging the blocks, a worm-gear on each stud, a worm-shaft journaled across the head, worms carried by the shaft and engaging the worm-gears, and clamping screws engaging the side portions and blocks to serve in clamping the blocks to the ways independent of the studs, combined substantially as set forth.



3. A lathe-bed comprising, a bed provided with ways having undercut portions, a head having side-portions engaging said ways, a block disposed under each side-portion of the head and engaging the undercut portions of the ways, vertical studs passing through the side-portions of the head and engaging the blocks, a worm-gear on each stud, a worm-shaft journaled across the head, worms carried by the shaft and engaging the worm-gears, and means for independently adjusting the worm-gears longitudinally of the studs, combined substantially as set forth.

4. A lathe-head clamp comprising, a bed provided with ways having undercut portions, a head having side-portions engaging said ways, a block disposed under each side-portion of the head and engaging the undercut portions of the ways, vertical studs passing through the side-portions of the head and engaging the blocks, a hub secured on each stud, a worm-gear carried by each hub, a cupped collar engaged by the lower end of each hub, a worm-shaft journaled across the head, and worms carried by the shaft and engaging the worm-gears, combined substantially as set forth.

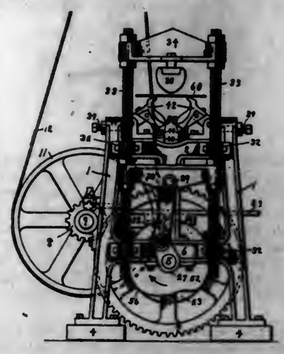
5. A lathe-head clamp comprising, a bed provided with ways having undercut portions, a head having side-portions engaging said ways, a block disposed under each side-portion of the head and engaging the undercut portions of the ways, vertical studs passing through the side-portions of the head and engaging the blocks, a worm-gear splined on each stud, lock-nuts on the studs for adjusting the worm-gears on the studs, a worm-shaft journaled across the head, and worms carried by the shaft and engaging the worm-gears, combined substantially as set forth.

961,331. TOY HANDKERCHIEF-BOX. HENRY A. YOUNG, Providence, R. I. Filed Apr. 4, 1910. Serial No. 553,316.



In combination, the rectangular-shaped box-body *a* adapted to contain a doll and a bundle of handkerchiefs, and said body having a wall a^1 extending parallel with and near each end a^2 thereof, and said body provided with an opening formed through its bottom and extending between each wall a^1 and each end a^2, as at a^3, a^3; the detachable members *c*, c^1 for inserting through either opening in said body and each member having a shoulder formed on each edge thereof, as at *f*, *f*, to limit the downward movement of said body.

961,332. MOLD-PRESS. DIEDRICH C. ADDICKS, Stroh, Ind., assignor to Ideal Concrete Machinery Company, South Bend, Ind., a Corporation of Indiana. Filed Mar. 18, 1909. Serial No. 484,221.



1. In a press for forming sheet metal, the combination of a frame, brackets secured thereto, means to adjust said brackets, pivots carried by said brackets, two die members mounted on said pivots, means to oscillate said die members toward and from each other, a second die, reciprocating means upon which said second die is mounted and means to move said die into and out of the space between the two portions of the other die.

2. In a press for forming sheet metal, the combination of a frame, a driving shaft, an upper die horizontally mounted for vertical movement, connections between the shaft and die to actuate the same, a two-part lower die having laterally extending arms on each part, pivots for the ends of the arms, adjustable brackets to support said pivots, and connections between the shaft and the lower die members to oscillate the same, said connections including cams and connecting rods.

3. In a press for forming sheet metal, the combination of a frame, two vertical guides mounted thereon, a shaft mounted in said frame, two cams and two cranks mounted on said shaft, a block mounted in each guide, a roller mounted on each block and in engagement with the face of one of the cams, two links pivoted to each block, a longitudinally extending die member connected to the upper end of a link from both blocks, two arms on each die member, a pivot for each arm, a cross head at each end of the machine, connecting rods between the cranks and cross heads to reciprocate the same, a longitudinally extending die connecting said cross heads, and means to revolve the shaft to reciprocate the cross heads and the die connected thereto and to oscillate the two-part die.

4. In a press for forming sheet metal, the combination of a frame, a driving shaft, an upper longitudinally extending die mounted for vertical movement, connections between the shaft and die including cranks and connecting rods to actuate the die, a two-part lower die having laterally extending arms on each part, pivots for said arms carried by the frame, a bracket mounted on the frame to support each pivot, connections between the shaft and the lower die members including cams and links to actuate the die members, a driving mechanism for said shaft including a clutch, means to engage the clutch, and means mounted on said shaft to cause the disengagement of the clutch.

961,333. SEAL. JONAS WALTER AYLSWORTH, East Orange, N. J., assignor to E. J. Brooks & Co., New York, N. Y., a Corporation of New York. Filed Mar. 27, 1909. Serial No. 486,193.



1. The combination with a metallic seal member of a thermo-metallic sealing attachment, the latter arranged to interact with said member and adapted to inseparably unite the parts of the seal by a thermo-metallic fastening at the sealing operation.

2. A seal having adjoining metallic shackle ends or like parts and a thermo-metallic sealing attachment, the latter being characterized by an ignitible thermo-metallic mixture in contact with said adjoining metallic parts, and including a suitable combustible element and a readily oxidizable metal which is fused when the mixture is ignited.

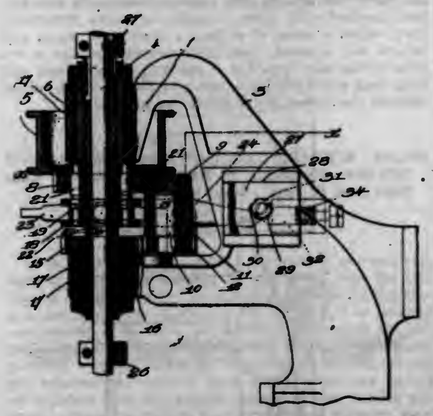
3. A seal having a loop-forming metallic shackle the ends of which are adapted to be united, and a thermo-metallic sealing attachment arranged to interact with said shackle ends and adapted to inseparably unite them by a thermo-metallic fastening at the sealing operation.

4. A seal having a loop-forming metallic shackle, a seal part by which the shackle ends are mechanically connected with each other, and thermo-metallic means for inseparably uniting the shackle ends.

5. A seal having a flexible loop-forming shackle of sheet metal provided with a thermo-metallic coating as means for inseparably uniting the shackle ends.

[Claim 6 not printed in the Gazette.]

961,334. AUTOMATIC REVERSING MECHANISM FOR DRILLS AND THE LIKE. HENRY G. BARR, Worcester, Mass. Filed Jan. 21, 1910. Serial No. 539,409.



1. In an automatic reversing mechanism, the combination with a rotary power conveying spindle or shaft capable of longitudinal movement, of a driving member and a driven member, both loosely surrounding the shaft, means to rotate the driven member from the driving member but in an opposite direction, and means operated by a longitudinal movement of the shaft to clutch the latter either to the driving or driven member.

2. In an automatic reversing mechanism, the combination with a rotary spindle or shaft capable of longitudinal movement, of a sleeve splined to the spindle, two oppositely-rotating members loosely mounted on the sleeve, means to clutch said sleeve to either member by a longitudinal movement thereof, and means to give said sleeve its longitudinal movement by a longitudinal movement of the spindle.

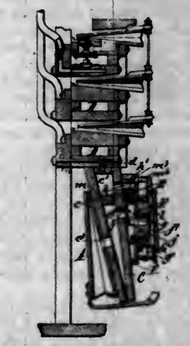
3. In an automatic reversing mechanism, the combination with a rotary spindle or shaft capable of longitudinal movement, of a sleeve splined to the spindle, two oppositely-rotating members loosely mounted on the sleeve, means to clutch said sleeve to either member by a longitudinal movement thereof, and collars on the spindle to engage the sleeve and thereby move the latter longitudinally.

4. In a tapping attachment for drills, the combination with a longitudinally-movable drill shaft adapted to support and operate a drill, of a driving pulley surrounding the same, a driven gear concentric with the drill shaft, means to rotate the driven gear from the driving pulley, but in a reverse direction, and automatic means operated by longitudinal movement of the drill shaft to clutch said shaft either to the driving pulley or to the driven gear.

5. In a tapping attachment for drills, the combination with a drill head, of a longitudinally-movable drill shaft supported thereby, a driving pulley, a driven gear, a bracket carried by said head, and gearing sustained by the bracket and adapted to connect the driving pulley to the driven gear whereby the latter will be rotated from the former but in an opposite direction, and means operated by the longitudinal movement of said drill shaft to connect the latter to either the driven gear or the driving pulley.

[Claim 6 not printed in the Gazette.]

961,335. COMBINED AIR-GOVERNOR AND EXPRESSION DEVICE. WILLIAM F. BAYER, Buffalo, N. Y. Filed Sept. 27, 1909. Serial No. 519,732.

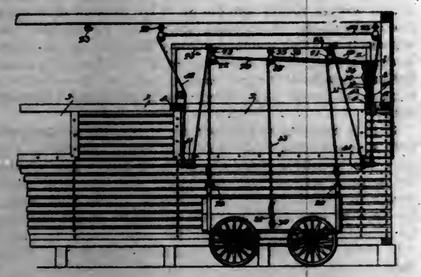


1. In a device of the character described, the combination of a case having an inlet chamber and an outlet chamber separated by a partition containing an accent passage, a valve controlling said passage, a governing pneumatic communicating with said outlet chamber, said pneumatic having an inlet independent of and disconnected from said inlet chamber and accent passage, and a valve-member actuated by said governing pneumatic and controlling the passage of the air therethrough.

2. In a device of the character described, the combination of a main bellows and a wind chest, a case containing an inlet chamber connected with the wind chest and an outlet chamber connected with said main bellows, said inlet and outlet chambers being separated by a partition containing an accent-passage, a valve controlling said accent-passage, a governor-bellows communicating with said outlet chamber and having a valve-member control-

ling the passage of the air through the governing bellows, the latter having an inlet communicating with said wind chest but disconnected from said inlet chamber and said accent-passage.

961,336. UNLOADING APPARATUS. BERNARD BEETKE, Cranberry Prairie, Ohio. Filed July 31, 1909. Serial No. 510,578.



1. An apparatus of the character described comprising a drum, hoisting ropes operated thereby, means for connecting said ropes to the ends of a wagon-bed, cross bars supported normally in an elevated position and adapted to be swung under the wagon-bed to support the same at the point at which it is to be dumped, means for turning said wagon-bed about a longitudinal axis while supported on said cross bars to discharge its contents, and a single means for actuating the hoisting drum and the turning means.

2. An apparatus of the character described comprising a shaft, a hoisting drum mounted thereon, hoisting ropes operated thereby and adapted to be detachably connected to the ends of a wagon-bed, supporting bars arranged to be swung under the wagon-bed to support the same in an elevated position, a second drum mounted on said shaft, a rope connected to said second drum and arranged to be connected to one side of said wagon-bed to turn the same while supported by said cross bars to discharge its contents, and means for actuating said shaft.

3. An apparatus of the character described comprising a shaft, a hoisting drum mounted thereon, hoisting ropes operated thereby and adapted to be detachably connected to the ends of a wagon-bed, supporting bars arranged to be swung under the wagon-bed to support the same in an elevated position, a second drum mounted on said shaft, a rope connected to said second drum and wound about the same in a direction opposite the direction in which the hoisting rope is wound about the hoisting drum, the rope connected to said second drum being adapted to have its other end connected to one side of said wagon-bed to turn the same to discharge its contents, and means for rotating said shaft in opposite directions.

4. An apparatus of the character described comprising a hoisting drum, loosely mounted spools arranged at the opposite ends of said drum, hoisting ropes wound about said spools, then passed about said drum and connected thereto, said hoisting ropes being adapted to be detachably connected to the opposite ends of a wagon-bed, cross bars arranged to support said wagon-bed in an elevated position, and means for turning said wagon-bed while supported by said cross bars to discharge its contents.

5. An apparatus of the character described comprising a frame, a shaft journaled in said frame, a gear secured to said shaft, a hoisting drum mounted on said shaft, hoisting ropes operated by said drum and adapted to be detachably connected to the ends of a wagon-bed, a train of multiplying gearing mounted on said frame for rotating said shaft, cross bars arranged to be swung beneath said wagon-bed to support the same in an elevated position, and means for turning said wagon-bed while so supported to discharge its contents.

[Claims 6 to 9 not printed in the Gazette.]

961,337. NOODLE-CUTTER. GEORGE B. BARTZ, Dayton, Ohio, assignor to W. S. Judy, Dayton, Ohio. Filed Mar. 30, 1910. Serial No. 552,356.



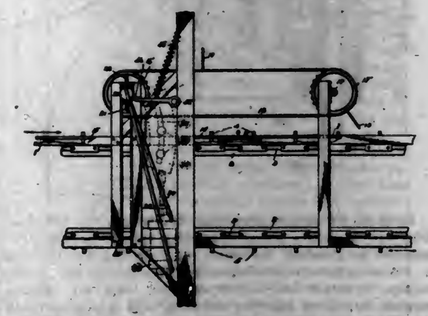
1. In a device of the character specified, a series of cutter disks assembled upon a shaft and uniformly spaced, side frames having slots extending upwardly from their lower edges and receiving the ends of the cutter shaft, said side frames extending inwardly at the rear of the cutters and terminating in an extended handle portion, and a series of stripping fingers extending between the cutters and detachably supported on the side frames, substantially as specified.

2. In a device of the character specified, a series of cutters assembled upon a shaft, side frames having slots extended upwardly from their lower edges to receive the ends of the cutter shaft, said side frames being joined in the rear of the cutters and terminating in a handle, a series of spring fingers lying between the cutters, said fingers being adapted to strip the dough from the cutters when the implement is in operation, and to maintain the cutter shaft in its bearings when the implement is not in operation, and a cross bar to which said fingers are attached, said cross bar being removably connected to the side frames, substantially as described.

3. In a device of the character specified, a series of cutters assembled upon a shaft, side frames having slots extended upwardly from their lower edges to receive the ends of the cutter shaft, said side frames being joined in the rear of the cutters and terminating in a handle, a series of spring fingers lying between the cutters, said fingers being adapted to strip the dough from the cutters when the implement is in operation, and to maintain the cutter shaft in its bearings when the implement is not in operation, and a cross bar to which said fingers are attached, said cross bar having its ends terminating in clamps which engage the side frames and maintain said fingers in position, substantially as described.

4. In a device of the character specified, a frame consisting of two parallel side bars terminating in a handle and provided with slots extending upwardly from their lower edges, a series of cutters, a shaft upon which said cutters are mounted, said shaft having bearings in the slots in the side bars, and a guard attached to said side bars, said guard having a series of fingers which extend between the cutters, substantially as specified.

961,338. SPREADING-SECTION FOR OVERHEAD CONVEYERS. FREDERICK W. BRIGHT, Kansas City, Kans. Filed Sept. 9, 1908. Serial No. 452,307.



1. The combination with a stationary conveyer rail having an interrupted span and a slotted plate at one end of said span, of movable rail members pivotally connected with each other and with the stationary rail at one end of the span, means on one of said members adapted for travel in the slots in said plate, and mechanism whereby the movable rail members may be moved from and to alinement with the stationary parts while retaining their ends in coöperative relation thereto.

2. The combination with a main conveyer rail, of a spreading rail section adapted for coöperation with the main rail and for lateral projection therefrom, trolleys adapted for travel on the main rail and spreading section, means for engaging a trolley on the spreading section when the latter is projected, and mechanism for actuating the spreading section.

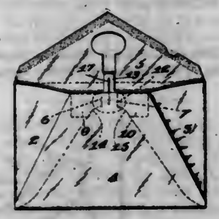
3. The combination with a conveyer rail having a section adapted to spread laterally from alinement with the main rail body, of trolleys adapted for travel on the conveyer rail, mechanism for actuating the spreading rail section, and means adapted for actuation by a conveyer trolley, whereby the motive power for operating the rail section actuating mechanism is controlled.

4. The combination with a conveyer rail having a section adapted to spread laterally from alinement with the main rail body, of means for actuating the spreading section, means for controlling the application of a power medium to said means to induce operation thereof alternately in opposite directions, and trolleys adapted for travel on the conveyer rail and for operative engagement with the power controlling means.

5. The combination with a conveyer rail having a section adapted to spread laterally from alinement with the main rail body, of trolleys adapted for travel on the conveyer rail and means for actuating same, mechanism whereby the spreading section may be moved from and to alinement with the main rail body, means for controlling the application of power to the mechanism for actuating the spreading rail section comprising, in part, an arm adapted for projection into the trolley path, and means for detaining a trolley on the spreading section while said arm is propelled by a preceding trolley, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

961,339. PAPER RECEPTACLE. LUTHER W. CHARLTON, Washington, D. C. Filed Mar. 11, 1910. Serial No. 548,642.

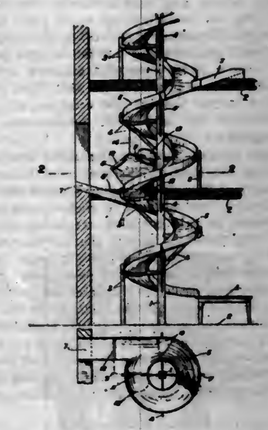


1. In an envelop, a main or front body portion, side flaps, a bottom flap adapted to be secured over the side flaps, a top flap adapted to be sealed over the bottom flap, a tongue struck out of the top flap adapted to be inserted over the top of the side and bottom flaps between the bottom flap and the main or front body portion, said tongue provided with an elongated narrow neck joining the top flap adjacent the main or front body portion and having an enlarged free end portion, said side flaps having cut away portions to receive the narrow neck between them forming shoulders above the enlarged free end portions, and means for securing the tongue in place upon the back flap with the neck between the side flaps and the enlarged portion below the shoulders thereon.

2. In an envelop, a main or front body portion, side flaps, a bottom flap, and top flap, a tongue having an elongated narrow neck and an enlarged free end portion struck out of the top flap, said neck having a longitudinal slot therein, said side flaps provided with cut away portions allowing the entire tongue to engage the inner side of the bottom flap, said cut away portions forming shoulders, means upon the tongue to secure the same to the inner side of the back flap with the enlarged portion below the shoulders and tabs upon the bottom flap adapted to be turned in to engage the inner side of the side flaps for reinforcing the shoulders.

3. In an envelop, a main or front body portion, side flaps, a back flap, and a top flap, a tongue having an enlarged free end struck out of the top flap, said side flaps provided with cut away portions allowing the tongue to engage the inner side of the bottom flap and forming shoulders upon the side flaps, tabs upon the bottom flap adapted to be turned over and secured to the inner upper portions of the side flaps on each side of the cut away portion and reinforcing the shoulders, means upon the tongue to secure the same to the inner side of the back flap with the enlarged portion below the reinforced shoulders.

961,340. MERCHANDISE-CHUTE. CHARLES F. CORMACK, Mill Valley, Cal. Filed Mar. 6, 1909. Serial No. 481,785.



1. A chute in combination with a trap having a flange rigidly fixed thereto transversely to the plane thereof, said flange being adapted for closing said chute, in combination with a floor having an aperture closed by said trap.

2. A merchandise chute having a branch in combination with an apertured floor and a trap having means for closing said floor chute and branch.

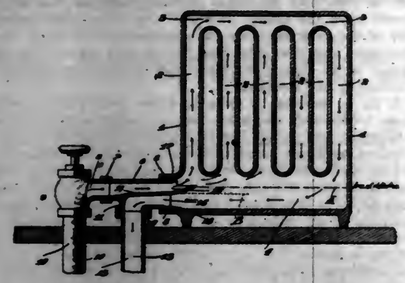
3. A spiral merchandise chute having a branch, in combination with a floor and a trap hinged to said floor, said trap having means for closing said chute and branch.

4. A spiral chute in combination with a floor and a trap hinged to said floor, said trap having a flange fixed thereto for closing said chute and a bridge hinged thereto for carrying materials from said chute onto said trap when the latter is down.

961,341. PIPE CONNECTION FOR FLUID-HEATING SYSTEMS. EDWARD J. DEEGAN, New York, N. Y. Filed Mar. 9, 1910. Serial No. 548,219.

1. A device of the character described comprising a divided pipe connection for fluid heating systems, a radiator provided with a plurality of fluid ducts having formed thereon a boss adapted to receive said connection, said connection having centrally located therein a gland extending diametrically across and longitudinally beyond the end thereof dividing the same into an upper inlet passageway and a lower outlet passageway having the same fluid reception capacity the extended portion of said gland being

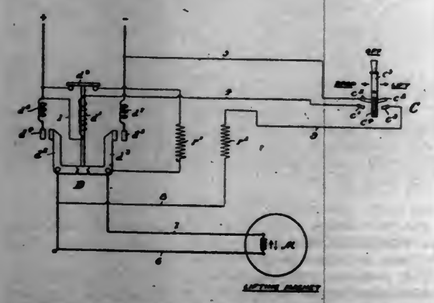
cupped and closed at its sides and adapted to deflect the entering fluid into a plurality of said fluid ducts.



2. A device of the character described comprising a divided coupling for heating systems, a radiator provided with a plurality of fluid ducts having formed thereon a boss adapted to receive said coupling, a partition extending diametrically across and longitudinally beyond the end thereof dividing the same into an upper inlet passageway and a lower outlet passageway having the same fluid reception capacity the extended portion of said gland being cupped and closed at its sides and adapted to deflect the entering fluid into a plurality of said fluid ducts, and bosses formed on the body of said coupling adapted to receive connections for said inlet passageway and said outlet passageway.

3. A device of the character described including a divided coupling for heating systems, a radiator provided with a plurality of fluid ducts having formed thereon an internally threaded boss adapted to receive said coupling, a partition formed in said coupling extending diametrically across and longitudinally beyond the end thereof dividing the same into an uninterrupted upper inlet passageway and an uninterrupted lower outlet passageway having the same fluid reception capacity the extended portion of said gland being cupped and partially closed at its sides and adapted to deflect the entering fluid into a plurality of said fluid ducts, a boss formed on said coupling adapted to receive an independent connection for said inlet passageway, and a boss formed on the body of said coupling adapted to receive an independent connection for said outlet passageway.

961,342. LIFTING-MAGNET CONTROLLER. ARTHUR C. EASTWOOD, Cleveland, Ohio. Filed Jan. 28, 1909. Serial No. 474,731.



1. In a controller for lifting magnets, the combination of a magnetically closed switch for connecting the winding of the magnet to the supply mains, a master switch, said master switch having contacts for energising the winding of said magnetically closed switch, and contacts for closing the circuit of the winding of said magnet to give a reverse direction of current flow through said winding.

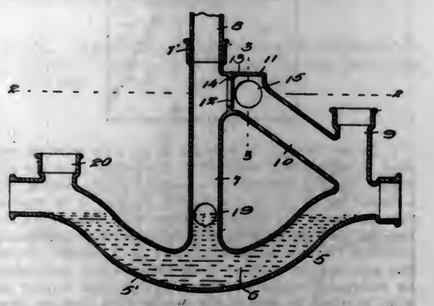
2. In a controller for lifting magnets, the combination of a magnetically closed switch for connecting the winding of the magnet to the supply mains, a master switch, said master switch having contacts for energising the winding of said magnetically closed switch, contacts for closing the circuit of the winding of said magnet to give a reverse direction of current flow through said winding, and means for limiting the current when flowing in the said reverse direction.

3. In a controller for lifting magnets, the combination of a magnetically closed switch for connecting the winding of the magnet to the supply mains, a master switch, said master switch having contacts for energising the winding of said magnetically closed switch, and contacts for closing the circuit of the winding of said magnet to give a reverse direction of current flow through said winding, there being a space or "off-position" between said first and second mentioned contacts of the master controller.

4. In a controller for lifting magnets, the combination of a magnetically closed switch for connecting the winding of the magnet to the supply mains, a master switch, said master switch having contacts for energising the winding of said magnetically closed switch, contacts for closing the circuit of the winding of said magnet to give a reverse direction of current flow through said winding, there being a space or "off-position" between said first and second mentioned contacts of the master controller, and means for limiting the flow of current when flowing in the said reverse direction.

5. In a controller for lifting magnets, a magnetically closed switch having main contacts for connecting the winding of the magnet to the supply mains when it is desired to energize the magnet, an auxiliary switch actuated by said magnetically closed switch said auxiliary switch being open when said magnetically closed switch is closed and closed when said magnetically closed switch is open, said auxiliary switch when closed being adapted to connect one end of the winding of the magnet to the supply main opposite to that to which the same end of the winding was connected by the magnetically closed switch, a resistance, and a master controller having in one position contacts for energizing the winding of said magnetically closed switch and in another direction contacts which, when closed, complete a circuit through said resistance, the winding of the magnet and said auxiliary switch with the current flowing through the magnet in a direction opposite to that in which the current flows when the magnetically closed switch is closed.

961,343. FRESH-AIR-INLET TRAP. GEORGE R. EVANS, Berkeley, Cal. Filed Sept. 28, 1909. Serial No. 519,950.



1. In a fresh air inlet, the combination with a drain trap having a water seal therein, of pipes extending vertically from the trap, an inlet pipe secured in the upper end of one of the vertical pipes, a communicating pipe between the vertical pipes, and a valve pivotally mounted in the communicating pipe out of alinement with the inlet pipe, said valve being outwardly movable upon the entrance of fresh air currents therethrough.

2. In a fresh air inlet, the combination with a drain pipe, a trap located in said drain pipe, said trap being downwardly curved below the drain pipe to provide a water seal, a vertical pipe communicating with the trap at the center thereof, a vertical extension formed on one end of the trap, a cleanout at the upper end of said extension, a communicating pipe between the vertical pipe and the extension, an inlet pipe secured in the upper open end of the vertical pipe above the communicating pipe, said inlet pipe extending to the street surface, a pivoted valve plate located in the communicating pipe adjacent to the inlet pipe, a shoulder adapted to provide a seat for the valve plate, said plate being outwardly movable upon the entrance of fresh air through the inlet and adapted to be engaged with its seat to prevent the admission of foul air to the inlet pipe from the drain pipe, the communicating pipe having an observation opening adjacent to the valve.

3. In a fresh air inlet, the combination with a drain pipe having a trap located therein, said trap being downwardly curved out of longitudinal alinement with the drain pipe, cleanouts communicating with the opposite ends of the trap, a vertically disposed pipe communicating with the center of the trap, an inlet pipe secured in the upper end of the vertical pipe and opening adjacent to the street surface, a cleanout opening provided in the vertical pipe adjacent to the trap, a communicating pipe between the upper end of the vertical pipe and one end of the trap, an interior shoulder provided in the communicating pipe adjacent to the vertical pipe, a valve plate pivoted within the communicating pipe and normally seated against the shoulder, said valve plate being outwardly movable therefrom upon the entrance of fresh air through the inlet pipe and adapted to be seated upon the flow of foul air through the drain pipe, the communicating pipe having an observation opening adjacent to the valve plate.

4. In a fresh air inlet, the combination with a drain pipe having a trap located therein, cleanouts communicating with the trap at each end thereof, a vertically disposed pipe communicating with the center of the trap, a communicating pipe between the upper end of the vertical pipe and one of the cleanouts, said trap and pipes being integrally formed, a cleanout opening provided in the lower end of the pipe, a fresh air inlet pipe secured in the upper end of the vertical pipe, a rectangular housing formed on the communicating pipe adjacent to the inlet pipe and having a shoulder formed therein, an elastic valve plate pivotally mounted in the housing and normally seated against said shoulder, said valve plate being movable outwardly for the admission of the air currents to the communicating pipe, said housing having an observation opening therein adjacent to the valve plate, a glass cover for said opening, and a cap adapted to retain said cover in position.

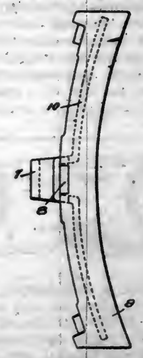
961,344. BRAKE-SHOE. FREDERICK H. GIBBS, New York, N. Y., assignor to American Car & Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Oct. 13, 1909. Serial No. 522,412.

1. In a brake shoe, a cast metal body portion having a longitudinally extending member cast therein substantially throughout the length thereof and extending beyond the material of said body near its middle portion, and a hanger lug independent of confining engagement with the body portion and held in position by said longitudinally extending member.

2. In a brake shoe, a cast metal body portion having longitudinally extending members cast therein substantially throughout the length thereof and extending beyond the material of said body near its middle portion, and a hanger lug having legs resting on the outer face of the body portion and independent of confining engagement therewith and held in position by said longitudinally extending members.

3. In a brake shoe, a cast metal body portion having a pair of rods embedded therein substantially throughout the length thereof, said rods projecting beyond said body portion to form hanger loops, and a hanger lug held between said loops and body outside the body.

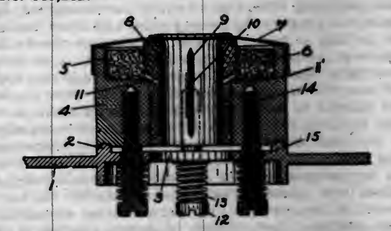
4. In a brake shoe, a cast metal body including a longitudinally disposed reinforcing rod surrounded by said cast metal for the major portion of its length and extending beyond said cast body to form a hanger loop, and a hanger lug held thereby outside the body.



5. In a brake shoe, a pair of reinforcing members extending longitudinally therein and projecting therebeyond and diverging at their projecting portion.

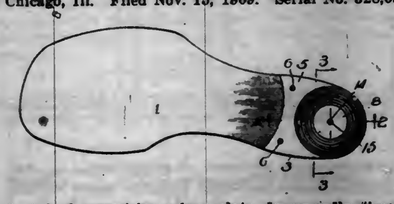
[Claims 6 to 21 not printed in the Gazette.]

961,345. ELASTIC COLLAR-BEARING FOR CENTRIFUGAL MACHINES. CHARLES H. HACKETT 2nd THOMAS W. MORGAN, Waterloo, Iowa, assignors to Wilbur W. Marsh, Waterloo, Iowa. Filed Aug. 19, 1907. Serial No. 389,182.



An elastic collar-bearing comprising a base plate, a bushing resiliently mounted thereon and having a central bore, a peripheral flange on the upper end of said bushing, a bearing loosely mounted in the bore of said bushing and forming a lubricant chamber with said flange, a shoulder therein for supporting said bearing, said bearing having radial ducts and connected elongated grooves on the inner surface of said bearing.

961,346. RUBBER HEEL. GEORGE HADJICH, Chicago, Ill., assignor of one-fourth to Clarence B. Shaffner, Chicago, Ill. Filed Nov. 15, 1909. Serial No. 528,094.



1. A heel comprising a base plate, downwardly directed lateral flanges on said plate, a stationary resilient cushion section secured on said plate and inclosing said flanges, a rotatable cushion section journaled at the rear end of the

base plate, and means for attaching the heel to a shoe or the like without causing the rotatable section to bind on said plate.

2. A heel comprising a base plate, downwardly directed lateral flanges on said plate, inwardly and forwardly directed wings at the rearward ends of said flanges, a stationary resilient cushion section secured on said plate and inclosing said flanges and wings, a rotatable cushion section journaled at the rear end of the base plate, and means for attaching the heel to a shoe or the like without causing the rotatable section to bind on said plate.

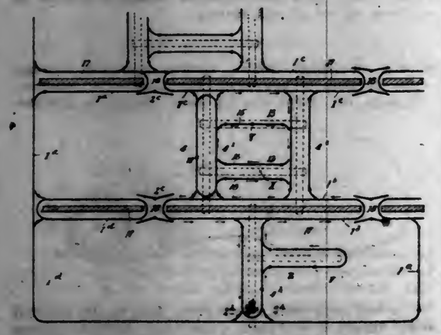
961,347. CROSS-LINE BUCKLE. HARVEY HALL, Paonia, Colo. Filed Mar. 8, 1909. Serial No. 481,879.



1. As a new article of manufacture, a buckle comprising a buckle frame including side and end bars, and a bail pivotally connected to the side bars in proximity to one end bar of the buckle frame and provided at its pivoted end with a buckle tongue movable with the bail and adapted to be supported in operative relation to the said end bar, the side bars being formed in proximity to the other end bar with open crimps, and the free end of the bail being designed to be seated in said crimps to maintain the buckle tongue in an operative position and being arranged, in such position, short of the last named end bar, whereby to permit a strap to be passed through the bail and between the free end thereof and the corresponding end bar to retain the bail against swinging movement.

2. As a new article of manufacture, a buckle comprising a buckle frame consisting of side and end bars, the side bars being formed in proximity to one end bar with transversely registering bearing loops, and a bail mounted on one side of the frame and journaled in the bearing loops and provided at its pivoted end with a cross bar carrying a buckle tongue projecting through the frame and movable on the opposite side thereof from the bail and adapted to be supported in operative relation to the said end bar, the side bars being formed intermediate of the loops and the other end bar with corresponding open crimps opening on the side of the frame at which the bail is mounted, the free end of the bail being designed to be seated in the crimps to maintain the buckle tongue in an operative position, and being arranged, in such position, short of and in spaced relation to the corresponding end bar of the frame.

961,348. OVERHEAD MONORAIL TRACKWAY SYSTEM. HENRY M. HARDING, New York, N. Y. Filed Dec. 6, 1909. Serial No. 531,498.



1. In an overhead railway, the combination with a carrier having a down come a fixed overhead monorail line, a traveling cross track having an overhead monorail cross line adapted to connect with said fixed line in all positions of the cross track, and means for permitting movement of said carrier with its down come to every point of said lines.

2. In an overhead railway, the combination with a carrier having a down come a fixed overhead monorail loop having a pair of opposite parallel side lines, a traveling cross track having an overhead monorail cross line adapted to connect with both of said parallel lines in all positions of the cross track, and means for permitting movement of the carrier with its down come to every point of said lines.

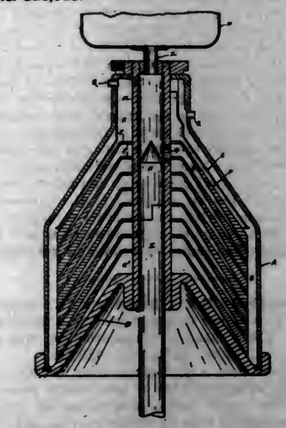
3. In an overhead railway, the combination with a fixed overhead monorail loop having a pair of opposite parallel side lines, of a traveling cross track having an overhead monorail cross line adapted to connect with both of said parallel lines in all positions of the cross track, and switches for opening such connection.

4. In an overhead railway, the combination with a fixed overhead monorail loop having a pair of opposite parallel side lines, of a traveling cross track having an overhead monorail cross line adapted to connect with both of said parallel lines in all positions of the cross track, and a traveling subcross track.

5. In an overhead railway, the combination with a fixed overhead monorail loop having a pair of opposite parallel side lines, of a traveling cross track having lines joining said parallel lines, and a traveling subcross track.

[Claims 6 to 15 not printed in the Gazette.]

961,349. CREAM-SEPARATOR. WILLIAM C. HARTMANN, Milwaukee, Wis., assignor, by direct and mesne assignments, to The Milwaukee Separator Company, a Corporation of Wisconsin. Filed Sept. 20, 1909. Serial No. 518,548.

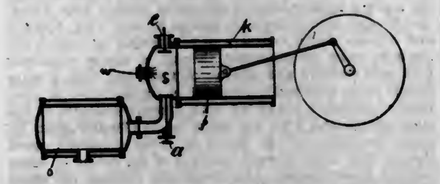


1. In a cream separator, the combination with an inclosing case and a supply reservoir, of a series of separating cones between which fluid from said reservoir is adapted to flow, said cones being provided upon one side with a plain ungrooved surface and upon their opposite sides at their lower edges with a continuous series of radial grooves whereby when the several cones of the series are secured together, the smooth surface of one cone is brought in contact with the grooved surface of the next adjacent cone and whereby each groove of the series forms a separate independent channel by which the fluid is moved laterally with the cones as they revolve, while the lighter and heavier properties of the fluid are being separated.

2. In a cream separator, the combination with an inclosing casing and feed reservoir, of a series of separating cones arranged to receive fluid from said reservoir between them, said separating cones having walls progressively thickened outwardly and downwardly from the receiving point and provided with cream delivering apertures at their upper ends, the walls of said separating cones being arranged to closely approach each other at their outer and lower margins and provided upon one side only with a continuous series of grooves forming downwardly and outwardly extending channels adapted to carry the milk while they permit the flow of the heavier portion of the liquid from the space between the cones.

3. In a cream separator, the combination with an inclosing casing and feed reservoir, of a series of separating cones arranged to receive fluid from said reservoir between them, said separating cones having walls progressively thickened outwardly and downwardly from the receiving point and provided with cream delivering apertures at their upper ends, the walls of said separating cones being arranged to closely approach each other at their outer and lower margins and provided on their lower sides with a continuous series of grooves forming downwardly and outwardly extending channels adapted to carry the milk while they permit the flow of the heavier portion of the liquid from the space between the cones.

961,350. PROCESS OF MAKING NITRIC ACID. FRIEDRICH HÄUSSER, Kaiserslautern, Germany. Filed May 31, 1906. Serial No. 319,606.

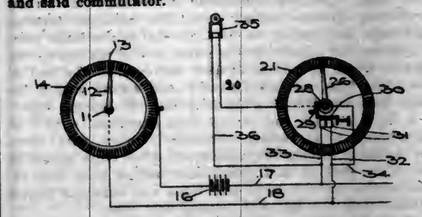


1. Process of making nitric acid, which consists in first forming gaseous oxids of nitrogen by the explosive combustion of a combustible gas mixture, composed of oxygen, nitrogen and a combustible agent, carrying the temperature produced by the explosion to as high a degree as possible and maintaining it constant as long as is necessary for the formation of oxids of nitrogen, then suddenly chilling the gaseous products of combustion to a degree sufficient to prevent the oxids of nitrogen formed by the combustion from decomposing, and allowing the thus chilled gaseous products of combustion to expand for the purpose of utilizing the potential energy stored therein and thereafter further cooling the gaseous products to condense the nitric acid.

2. The process of making nitric acid, which consists in first forming gaseous oxids of nitrogen by the explosive combustion of a combustible gas mixture composed of oxygen, nitrogen and a combustible agent, carrying the temperature produced by the explosion as high as possible, and maintaining it constant as long as is necessary for the formation of oxids of nitrogen, then suddenly chilling the gaseous products of combustion to a degree sufficient to prevent the oxids of nitrogen formed by the combustion from decomposing, allowing the thus chilled gaseous products of combustion to expand for the purpose of utilizing the potential energy stored therein and finally exhausting the gaseous products of combustion into a cooled receptacle to permit the oxids of nitrogen to further oxidise and condense to form nitric acid.

961,351. BELL SYSTEM. HARRY WILLIAM HERWIG, Portsmouth, N. H. Filed June 10, 1909. Serial No. 501,242.

1. A device of the class described comprising a commutator, an arm mounted concentrically of said commutator and adapted for rotative movement thereover, a main line wire extended from said commutator, a main line wire projected from said arm, a dial, a commutator disposed about said dial, a means carried by said dial and connected to said main wires to intermittently rotate said arm, said arm being adapted to slidably engage said commutator, a second arm disposed upon the face of said dial for slidable engagement over the face of said commutator for registration at times with said arm upon the rear face of said dial for closing a circuit and an alarm connected with said main wires through said arms and said commutator.



2. A device of the class described comprising a commutator, a contact member adapted for slidable rotation over said commutator, a second commutator, a second contact member for engagement over said second commutator, magnets disposed in said circuit for actuating said second contact member, series connections between the magnets, first commutator and contact member, an adjustable contact member engageable upon the opposite face of said commutator and an alarm disposed in a circuit passed through said arms and said commutator.

3. A device of the class described comprising a commutator, an arm concentrically mounted in the face of said commutator for engagement over said commutator, a circuit extended upon said arm and said commutator, a dial, a commutator disposed about said dial, a bushing centrally disposed through said dial, an arm, a stud on said arm for engagement in said bushing, a washer disposed about the rear extremity of said bushing, a sliding contact rotatably disposed about said bushing against said washer, a cap mounted in the extremity of said stud for holding said sliding contact in position, a ratchet disposed on said sliding contact concentrically about said cap, a pair of magnets disposed upon the rear face of said dial, an armature pivotally mounted adjacent said magnets, a pawl lever carried by said armature for engagement with said ratchet for actuating said sliding contact and an alarm disposed in juxtaposition to said dial connected to the main circuit through said arms and said commutator.

4. A device of the class described comprising a main intermittent switch, a circuit extended from said switch, a second intermittent switch actuated by said main switch, a contact member for registering engagement with points on said switch and an alarm disposed in circuit with said switches and said contact member.

5. A device of the class described comprising a main circuit, means adapted to be operated to transmit impulses thereover at intervals, a plurality of commutator portions, independently movable contact members engageable with the commutator portions, a signal device in circuit with the contact members, and means operated by impulses in the main circuit to move one of said contact members into successive engagement with the commutator portions.

961,352. CURTAIN-ROD. WILLIAM H. WALTERS, St. Louis, Mo. Filed Jan. 26, 1910. Serial No. 540,205.



1. In a curtain rod of the class described, a pair of telescoping tubes, caps seated upon and inclosing the outer

ends of said tubes, and outwardly projecting prongs pressed from the material forming said caps.

2. In a curtain rod of the class described, a pair of telescoping tubes, filler plugs seated in the outer ends of said tubes, caps seated upon and inclosing the outer ends of said tubes, and outwardly projecting prongs pressed from the material forming said caps.

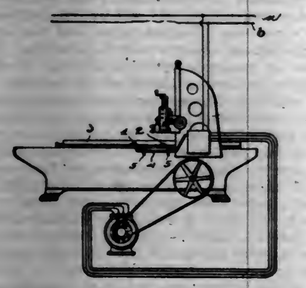
3. In a curtain rod of the class described, a pair of telescoping tubes, filler plugs seated in the outer ends of said tubes, caps on the outer end of said tubes, outwardly projecting prongs pressed from the material forming said caps, ears formed on the inner end of the inner tube, a spacing rod located in the outer one of the tubes, one end of which rod bears against the ears on the end of the inner tube, and an expansive coil spring within the outer tube which spring bears against the spacing rod.

4. In a curtain rod of the class described, a pair of telescoping tubes, means arranged between said tubes for normally forcing the same apart, filler plugs seated in the outer ends of said tubes, caps located upon and inclosing the outer ends of said tubes and engaging points pressed from the material forming said caps.

5. In a curtain rod of the class described, a pair of telescoping tubes, means between said tubes for normally forcing the same apart, filler plugs seated in the outer ends of said tubes, and caps seated upon and inclosing the outer ends of said tubes.

[Claims 6 to 8 not printed in the Gazette.]

961,353. POWER-DRIVEN MACHINERY. DUGALD C. JACKSON, Madison, Wis., assignor to Dugald C. Jackson and William B. Jackson, Madison, Wis., a Copartnership. Filed Sept. 17, 1904. Serial No. 224,774.



1. In electric driven machinery, the combination with a moving member thereof, of switching mechanism controlled by the position of said member whereby the electric motor driving said machinery is controlled to alternate the direction of motion of said moving member, a resistance all included in the field circuit of the motor upon the return stroke of the machine, means forming part of the switching mechanism for shunting part of said resistance from the field circuit upon the forward stroke of the machine, whereby the forward speed is less than the return speed, and means for varying the amount of resistance shunted from circuit.

2. In electric motor driven machinery, the combination with a moving member thereof, of a switch lever actuated by said member, reversing switch terminals adapted for engagement by said lever to cause the motor driving said machinery to be controlled to alternate its direction and the direction of travel of said member, contact terminals adapted to be engaged by said switch lever upon forward stroke of the machine, a resistance connected with one of said terminals and all included in the motor field circuit upon return stroke of the machine, and a switch arm connected with the other terminal and adapted for variable engagement with said resistance, said switch arm upon forward stroke completing a shunt circuit about part of said resistance.

3. In electric motor driven machinery, the combination with a moving member thereof, of a main switching mechanism mechanically and automatically controlled by the position of said moving member, a motor connected with a main circuit and contacts of the main switch mechanism to have its direction of rotation reversed upon operation of the switch mechanism by the moving member, and variable resistance mechanism associated directly with the main switching mechanism and connected with the motor to cause different speeds of the motor in one direction.

4. In electric motor driven machinery, the combination with a moving member thereof, of a main switching mechanism mechanically connected with the moving member and automatically controlled upon movement thereof, forward and reverse contacts for the main switching mechanism, a motor for driving the moving member connected with said forward and reverse contacts and with a main supply circuit to have its direction of rotation alternated during operation of the moving member and switch mechanism connected therewith, a rheostat connected with said motor but with only the forward contacts of the main switch mechanism to be controlled during forward movement of the moving member to cause reduced speed of the motor and member connected therewith, said rheostat being adjustable to produce varying effects on the speed of the motor in a forward direction.

5. In electric motor driven machinery, the combination with a reciprocating member thereof, of main switching mechanism, a switch lever mechanically connected with the moving member to be reciprocated thereby upon operation thereof, switch contacts carried by said lever, forward and reverse switch contacts to be engaged by said lever, contacts upon reciprocation thereof, a motor connected with said forward and reverse contacts and with a main circuit to be alternately reversed in its direction of rotation, a resistance connected with forward contacts of the main switch and with the motor to be effective upon reverse movement of the motor to cause increased speed thereof, and upon forward rotation of the motor to cause reduced speed thereof, and means for varying the effect of said resistance.

[Claims 6 to 15 not printed in the Gazette.]

961,354. GREEN AZO DYE. JOHANNES JANSEN and WILHELM NEELMEIER, Leverkusen, near Cologne, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Feb. 26, 1910. Serial No. 546,041.

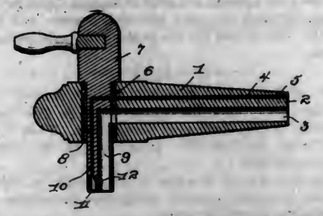
The herein-described new dyestuff, obtainable by combining the diazo compound of 6-chloro-4-nitro-2-aminophenol with 1.8-diaminonaphthalene-4-sulfonic acid and treating the diaminoazo compound thus obtained with nitrous acid which new dye is, after being dried and pulverized, in the shape of its sodium salt a black powder soluble in water with a violet color, soluble in concentrated sulfuric acid with a bluish-green color, yielding by treatment with stannous chlorid and hydrochloric acid 2.4-diamino-6-chlorophenol and 2-amino-1.8-aziminonaphthalene-4-sulfonic acid; and dyeing wool violet shades changing into pure yellowish-green shades when subsequently treated with bichromate, substantially as described.

961,355. RED AZO DYE. JOHANNES JANSEN and WILHELM NEELMEIER, Leverkusen, near Cologne, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Feb. 26, 1910. Serial No. 546,042.

1. The herein-described new azo dyestuffs, obtainable from ortho-aminophenol sulfonic acids and 1.3-dioxyquinolin, which dyestuffs are, after being dried and pulverized, dark powders soluble in water generally with a red to bluish-red color, soluble in concentrated sulfuric acid generally with an orange to red color; yielding upon reduction with stannous chlorid and hydrochloric acid, an ortho-aminophenol sulfonic acid and 1.3-dioxy-2-aminoquinolin; and dyeing wool from yellow to red shades turning red to bordeaux by chroming, substantially as described.

2. The herein-described new azo dyestuff, obtainable from 2-aminophenol-4-sulfonic acid and 1.3-dioxyquinolin, which dyestuff is, after being dried and pulverized, a reddish-brown powder soluble in water with a red color and soluble in concentrated sulfuric acid with an orange color; yielding upon reduction with stannous chlorid and hydrochloric acid 2-aminophenol-4-sulfonic acid and 1.3-dioxy-2-aminoquinolin; and dyeing wool yellowish-brown turning red by chroming, substantially as described.

961,356. SANITARY AUTOMATIC FAUCET. ANDREW J. KETELSEN, Saginaw, Mich. Filed Sept. 9, 1909. Serial No. 516,954.

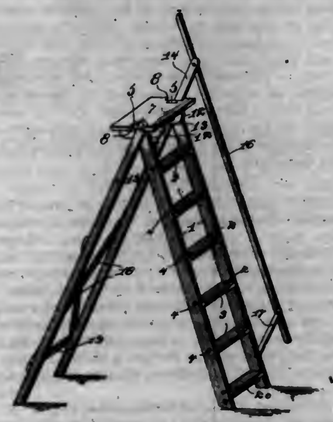


1. A faucet comprising a body provided with an air passage and a liquid passage, and a plug rotatably fitted therein and provided with a liquid passage and an air passage, said air passage having an enlarged chamber at its lower end.

2. In a faucet, the combination with the body provided with an air passage and a liquid passage, of a turning plug therefor provided with an air passage and a liquid passage, said air passage of the plug terminating at its outer end in an enlarged longitudinally arranged chamber.

3. In a faucet, the combination with the body provided with an air passage and a liquid passage, of a turning plug also provided with an air and a liquid passage, said air passage of the plug terminating in an enlarged longitudinally arranged tapering chamber.

961,357. STEP-LADDER. ANDREW J. KETELSEN, Saginaw, Mich. Filed Oct. 16, 1909. Serial No. 522,993.



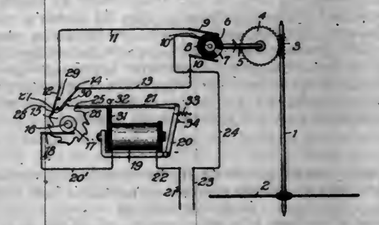
1. A step ladder comprising stationary side members, regularly spaced steps carried thereby, a top platform rigidly connected to the upper end of said members, said platform being provided with end notches, brace legs having a pivotal connection with said side members and platform, said members projecting into and being limited in their movements by said notches, one of said legs projecting beyond said platform, a hand rail having one end portion pivotally connected to the projected end of said leg, and a pivotally mounted link connecting the other end of said rail to one of said side members.

2. A step ladder comprising a step section, a platform for the upper end thereof provided with notches, brace legs pivotally connected to said step section and projecting through said notches and limited in their pivotal movement by said notches, and a guard rail pivotally connected to one of said legs and to said step section.

3. A step ladder comprising a stationary step section, a top platform therefor provided with end notches, brace legs pivotally connected to said step section and said platform, said legs projecting into and limited in their pivotal movement by said notches, and a guard rail pivotally connected to one of said legs and one side of said step section.

4. A step ladder comprising stationary side members, steps carried thereby, the upper end of said members being provided with a tenon, a top platform provided with end mortises for said tenons and notches communicating with said mortises, transverse brace bars arranged on the under side of said platform adjacent each end thereof, a pivot bolt extending through said bars and side members, brace legs pivotally mounted on said pivot bolt and projecting into said notches, one of said legs projecting through and above its notch, a hand rail having one end portion pivotally connected to the projected end of said leg, and a link having one end pivotally connected to the lower portion of one of said side members and its other end pivotally connected to said hand rail.

961,358. REGISTER MECHANISM FOR INDICATING INSTRUMENTS. FRANK F. KINNEY, Chicago, Ill., assignor, by direct and mesne assignments, to Mineralliac Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 5, 1909. Serial No. 488,028.



1. The combination with the rotatable member of a measuring instrument, of a circuit-closer operated by said member, an electromagnet provided with an armature, a disk adapted to be actuated by said armature when the electromagnet is energized, a pair of permanently separated contacts associated with said disk to engage the same and form therewith a second circuit-closer, an energizing circuit for said electromagnet controlled by said circuit-closers, and an indicating device operated by said disk proportionately to the amount of actuation of said rotatable member.

2. The combination with the rotatable member of a measuring instrument, of a circuit-closer operated by said member, an electro-magnet provided with an armature, a rotatable disk adapted to be actuated by said armature when the electro-magnet is energized, a pair of permanently separated contacts associated with said disk to form therewith a second circuit-closer, an energizing circuit for said electro-magnet controlled by said circuit-closers, and numeral-wheels operated by said second circuit-closer proportionately to the amount of actuation of said rotatable member.

3. The combination with the rotatable member of a measuring instrument, of a circuit-closer operated by said member, an electromagnet provided with an armature, a ratchet wheel operated by said armature when the electromagnet is energized, a pair of spring contacts associ-

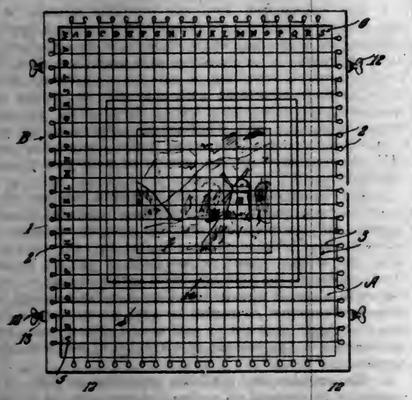
ated with said ratchet wheel and arranged to come into and out of engagement with the teeth thereof as the ratchet wheel is operated, an energizing circuit for the electromagnet controlled by said circuit-closer and said ratchet wheel with its associated contacts, and a series of numeral wheels connected with said ratchet wheel and actuated thereby proportionately to the amount of actuation of said rotatable member.

4. The combination with the rotatable member of a measuring instrument, of a commutator provided with a metallic segment connected with said rotatable member to be operated thereby, a pair of brush-arms engaging said commutator, an electromagnet having an armature, a ratchet wheel operated by said armature when the electromagnet is energized, a pair of spring contacts associated with said ratchet wheel and arranged to come into and out of engagement with the teeth thereof as the ratchet wheel is operated, the teeth of said ratchet wheel being such that said spring contacts engage the same alternately, an electrical connection between each of said spring contacts and said brush-arms, an energizing circuit for said electromagnet, one side of said circuit being permanently connected with said metallic segment while the other side is permanently connected with one end of the winding of said electromagnet, the other end of said winding being connected with said ratchet wheel, whereby the circuit through said electromagnet is closed alternately across said connections, and an indicating device actuated by said ratchet wheel proportionately to the amount of actuation of said rotatable member.

5. The combination with the rotatable member of a measuring instrument, of a circuit-closer operated by said member, an electromagnet provided with an armature, a ratchet wheel operated by said armature when the electromagnet is energized, said ratchet wheel being provided with teeth of which alternate ones have cutaway portions, a pair of spring contacts associated with said teeth so that when one contact engages a tooth to close the circuit the other contact is clear of the ratchet wheel by resting in one of said cutaway portions, whereby the circuit is closed alternately through said contacts, an energizing circuit for said electromagnet controlled by said circuit-closer and said ratchet wheel with its associated contacts, and an indicating device actuated by said ratchet wheel proportionately to the amount of actuation of said rotatable member.

[Claims 6 to 9 not printed in the Gazette.]

961,359. DEVICE FOR REPRODUCING AN OBJECT ON A SCALE. GEORGE F. LATTIER, Baltimore, Md. Filed Mar. 30, 1910. Serial No. 552,344.



1. A device of the character described, comprising a body part, a frame composed of an inturned flange having a plurality of eyelets provided therein and a flange depending therefrom, at right angles thereto, a lacing extended through the said eyelets, longitudinally and transversely to the said flange, and a plurality of thumb screws provided on the said body part, adapted to engage with the said depending flange, whereby the said frame is secured on the said body part, substantially as described.

2. A device of the character described, comprising a body part having a plurality of sockets provided therein, a frame composed of an inturned flange having a plurality of eyelets provided therein, and a flange depending therefrom, at right angles thereto, having a plurality of slots provided in the lower edges thereof, a lacing extended through the said eyelets, longitudinally and transversely of the said flange, and a plurality of thumb screws secured within the said sockets, adapted to engage the said depending flange through the slots provided therein, and thereby secure the said frame on the body part, substantially as described.

961,360. PYROXYLIN COMPOUND. WILLIAM GODSON LINDSAY, New York, N. Y., assignor to The Celluloid Company, a Corporation of New Jersey. Filed June 26, 1909, Serial No. 504,464. Renewed Apr. 25, 1910. Serial No. 557,592.

1. The process of forming a substantially inodorous pyroxylin compound which comprises combining nitrocellulose with benzyl benzoate.

2. The process of forming a substantially inodorous pyroxylin compound comprising treating a substance containing nitro-cellulose with benzyl benzoate.

3. The process of forming a substantially inodorous pyroxylin compound comprising treating nitro-cellulose with a solution of benzyl benzoate.

4. A composition of matter containing nitro-cellulose, and benzyl benzoate.

5. A composition of matter containing nitro-cellulose, benzyl benzoate and a solvent for the same.

961,361. LEUCO DERIVATIVE OF DIETHYLGALLOCYANIN. WILHELM LOMMEL, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Feb. 19, 1910. Serial No. 544,869.

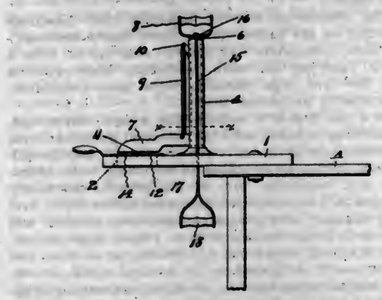
The herein-described new leuco compound being chemically decarboxylated leuco-diethylgallocyanin, which is in the shape of its hydrochlorid a dark powder which after oxidation is insoluble in sodium carbonate solution and dissolves in hydrochloric acid of 20° Bé. with a pure blue color and which new leuco compound is easily soluble in water with a yellowish-brown color, soon turning blue in consequence of oxidation; dissolving in concentrated sulfuric acid with a reddish-yellow color; the free base being separated by the addition of sodium carbonate to the aqueous solution of the hydrochlorid, substantially as hereinbefore described.

961,362. GALLOCYANIN DYE. WILHELM LOMMEL, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Feb. 19, 1910. Serial No. 544,870.

The herein-described new dyestuff obtainable from diethylgallocyanin, which dyestuff is in the shape of its hydrochlorid after drying a dark green powder soluble in water with a violet color, being distinguished from diethylgallocyanin by giving in printing purer shades; being soluble in hydrochloric acid of 20° Bé. with a pure blue color, and being insoluble in sodium carbonate solution, substantially as described.

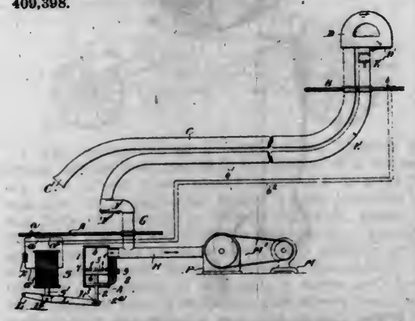
961,363. SEED-POTATO-CUTTING MACHINE. BENTON R. LYSTER and MORTON J. LYSTER, Whitefield, N. H. Filed May 13, 1909. Serial No. 495,688.

A seed-potato slicing machine comprising a base having an opening therein, slicing-blades secured diametrically of said opening, a tubular casing mounted on said base adjacent to said opening, said tubular casing having a longitudinal slot therein, a plunger mounted in the casing, an arm secured to the plunger and extending through the slot in the casing, the end of the arm extended over the opening in the base, a spring secured to the arm and casing to normally raise the arm, a handle secured to the upper end



of the plunger, a rod secured to the handle and extended downwardly through the base, a handle secured to the lower end of the rod under the base, and a knife pivotally secured to the base and adapted to swing over the opening therein.

961,364. BLOWER-UNLOADING DEVICE. JAMES G. MACLAREN, Weehawken, N. J., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 6, 1908. Serial No. 409,398.



1. In an apparatus of the character herein described, a constantly operating pressure producing member normally communicating with the atmosphere, a receptacle or conduit, means for switching said member into communication with said receptacle or conduit, and means for automatically switching said member from communication with said conduit to the atmosphere.

2. In an apparatus of the character herein described, a constantly operating pressure producing member normally communicating with the atmosphere, a receptacle or conduit, means for switching said member into communication with said receptacle or conduit, means for automatically switching said member from communication with said conduit to the atmosphere, and means for timing the communication of said member with said receptacle or conduit.

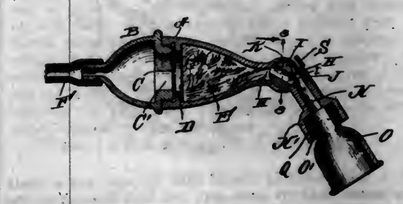
3. In a pneumatic despatch tube apparatus, a constantly operating blower or pump normally communicating with the atmosphere, a tube for the transmission of carriers, and means for switching said blower or pump into communication with said transmission tube to establish a current of air through said tube for the transmission of carriers.

4. In a pneumatic despatch tube apparatus, a tube for the transmission of carriers, a constantly operating blower or pump, means normally connecting said blower with the atmosphere, means for throwing said blower into communication with said transmission tube to establish a current of air through said tube for the transmission of carriers, and means for automatically throwing said blower into communication with the atmosphere.

5. In a pneumatic despatch tube apparatus, a constantly operating blower or pump normally communicating with the atmosphere, a tube for the transmission of carriers, a conduit or connection between said blower or pump and said transmission tube provided with an air inlet, means normally permitting the admission of air through said inlet and conduit to said blower, and means for closing said inlet and for switching said blower into communication with said transmission tube to establish a current of air through said tube for driving carriers therethrough.

[Claims 6 and 7 not printed in the Gazette.]

961,365. HANDLE FOR MASSAGE APPARATUS. THOMAS A. MCCALL and CHARLES M. SIEBERT, Jr., Columbus, Ohio, assignors to The Siebert-Welch Company, Columbus, Ohio. Filed Oct. 4, 1909. Serial No. 520,838.



1. A handle for massage apparatus made up of sections fitted together and provided with suitable filtering means, said handle being adapted to communicate with a vacuum pump, one of the sections of the handle being provided with perforations to regulate the force of the vacuum.

2. A handle for massage apparatus made up of sections fitted together and provided with suitable filtering means, said handle being adapted to communicate with a vacuum pump, one of the sections of the handle being provided with perforations, means mounted within one of the sections of the handle and movable relative to said perforations to regulate the vacuum force.

3. A handle for massage apparatus made up of sections fitted together and provided with suitable filtering means, said handle being adapted to communicate with a vacuum pump, one of the sections of the handle being provided with perforations, a turning plug mounted within one of the sections of the handle and adapted to open or close communication between the interior of the handle and the atmosphere to regulate the vacuum force.

4. A handle for massage apparatus made up of sections fitted together and provided with suitable filtering means, said handle being adapted to communicate with a vacuum pump, one of the sections of the handle being provided with perforations, a turning plug mounted within one of the sections of the handle and adapted to open or close communication between the interior of the handle and the atmosphere to regulate the vacuum force, and means outside the handle for operating said turning plug.

5. A handle for massage apparatus made up of sections fitted together and provided with suitable filtering means, said handle being adapted to communicate with a vacuum pump, one of the sections of the handle being provided with perforations, a turning plug mounted within one of the sections of the handle and adapted to open or close communication between the interior of the handle and the atmosphere to regulate the vacuum force, and stops for regulating the movement of said plug in opposite directions.

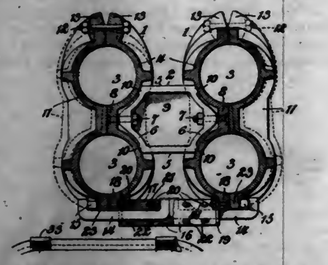
[Claims 6 to 10 not printed in the Gazette.]

961,366. PIN. JOHN A. McGANN, Attleboro, Mass. Filed Dec. 28, 1908. Serial No. 469,553.



A pin-tongue joint member comprising a base plate, ears formed on either side of said plate in which the pin-tongue may be pivotally mounted, the ends of said plate between said ears being elongated and adapted to be bent downward at substantially right angles to said plate to form convenient attaching members.

961,367. PIPE-MOLDING FLASK. JAMES R. McWANE, Birmingham, Ala. Filed June 22, 1909. Serial No. 503,704.



1. A flask including hinged flask sections, and a chain bail connected at its ends with the flask sections at the upper end thereof and adapted to close the sections when the flask is lifted and capable also of dropping below the upper edges of the sections.

2. A flask including hinged sections, a flexible bail connected at its ends with the sections at the top thereof and adapted to drop below the upper edges thereof and capable of automatically closing the sections when the same are lifted, and a base having projecting means adapted to interlock it with the flask sections to retain the same in their closed position.

3. A flask including hinged sections, a flexible bail connected at its ends with the sections at the top thereof and adapted to drop below the upper edges thereof and capable of automatically closing the sections when the same are lifted, and a base provided with upwardly projecting lugs presenting inner inclined edges to the flask sections for centering the same on the base.

4. A flask including relatively fixed inner flask sections connected with each other, outer hinged flask sections, and a flexible bail connected at its ends to the outer hinged flask sections and adapted to close the same when the sections are lifted.

5. A multiple flask including inner flask sections arranged back to back in spaced relation, a combined spacing and connecting member interposed between the inner flask sections, fastening means for detachably securing the inner flask sections and the said member together, and outer flask sections hinged to the inner flask sections.

[Claims 6 to 20 not printed in the Gazette.]

961,368. PROCESS OF DYEING AND PRODUCT THEREOF. RENÉ ORT, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Jan. 6, 1909. Serial No. 470,946.

1. The process of treating vegetable fiber consisting in reacting on the hereinbefore defined dianthraquinonylamin with suitable reducing agents to form a solution, applying the leuco compounds thus produced to the fiber and then oxidising these leuco compounds, thus producing an orange shade.

2. The process of treating vegetable fiber consisting in reacting on the hereinbefore defined dianthraquinonylamin with alkaline hydrosulfites to form a solution, apply the leuco compounds thus produced to the fiber and then oxidising these leuco compounds, thus producing an orange shade.

3. The process of treating vegetable fiber consisting in reacting on the hereinbefore defined dianthraquinonylamin with hydrosulfite and caustic soda lye to form a solution, applying the leuco compounds thus produced to the fiber and then oxidising these leuco compounds, thus producing an orange shade.

4. As a new article of manufacture orange colored vegetable fiber impregnated with the oxidation products of the leuco compounds of the hereinbefore defined dianthraquinonylamin which treated fiber upon boiling with hydrochloric acid containing 10% of HCl remains practically unchanged in color and upon treatment with sulfuric acid of 90% changes from orange to darkbrown to black and which upon being touched with a watery solution containing 0.4% of anhydrous hydrosulfite of sodium and 0.8% of caustic soda changes its color of orange to redbrown which on exposure to air again assumes its original color.

961,369. TELEPHONE-TRANSMITTER DISINFECTOR. FRANK H. PECK, Galveston, Tex. Filed Aug. 18, 1909. Serial No. 513,501.



1. The combination with a mouthpiece, of a cap engaging the mouthpiece and having a circumferential groove formed therein and intersected by a transverse recess, a strip of antiseptic material interposed between the cap and mouthpiece, and a locking member seated in said groove and provided with an angular finger-piece adapted to enter said recess.

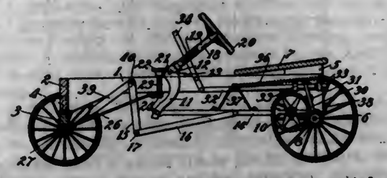
2. The combination with a mouthpiece, of a cap engaging the mouthpiece and having a circumferential groove formed therein and intersected by a transverse recess, a strip of material carried by the cap and saturated with a soluble germicide which will dissolve in the moist spray thrown out in talking and render the same sterile, and a locking member engaging the groove in the cap and provided with an angular finger piece extending through the recess in said cap.

3. The combination with a mouthpiece, of a cap having an opening formed therein and defining an inwardly extending flange, there being a circumferential seating groove formed in the cap and intersected by a transverse recess, a strip of material interposed between the flange and the adjacent edge of the mouthpiece and saturated with a soluble germicide which will dissolve in the moist spray thrown out in talking and render the same sterile, and a spring locking member seated in the groove and provided with a finger piece extending through the recess in said cap.

4. The combination with a mouthpiece, of a cap having an annular flange provided with a circumferential seating groove and having its face formed with an opening defining an inwardly extending flange, the metal forming the cap being inclined in the direction of the mouthpiece between the outer and inner flanges, there being a reces formed in the outer flange and intersecting the seating groove, a locking member seated in the groove and formed of a single length of spring wire, one end of which is bent laterally to form a finger piece adapted to project through the recess in said outer flange, and a strip of material carried by the cap and saturated with a soluble germicide, said strip of material being clamped in engagement with the adjacent end of the mouthpiece by contact with the inclined face of the cap.

5. As a new article of manufacture, a disinfecting cap for telephone transmitter mouthpieces, comprising a rim having an inwardly extending circumferential flange and an outer flange provided with a circumferential seating groove, there being a recess formed in the outer flange and intersecting the groove, a strip of antiseptic material seated in the rim, a reinforcing strip secured to said material, and a resilient locking member seated in the groove in the outer flange and having one end thereof bent laterally to form an angularly disposed finger piece extending through the recess in the rim.

961,370. CHILD'S SPEED-CAR. JOEL NILES WHEELER, Geneva, Ill. Filed June 10, 1909. Serial No. 501,270.



1. The combination of a vehicle frame mounted on wheels, a hand-lever fulcrumed to oscillate on a stationary axis on said frame, pitman mechanism actuated by said lever for propelling the vehicle, a shaft journaled on said lever and adapted to oscillate therewith, means at the upper end of said shaft for rotating it, a globular gear on said shaft having a substantially spherical pitch surface and having its center located substantially in the axis of oscillation of said shaft, a second gear journaled to rotate about a stationary axis on said frame and meshing with said globular gear, and means actuated by said second gear for steering the vehicle.

2. The combination of a vehicle frame mounted on wheels, a hand-lever fulcrumed to oscillate on a stationary axis on said frame, pitman mechanism actuated by said lever for propelling the vehicle, a shaft journaled on said lever and adapted to oscillate therewith, a hand wheel at the upper end of said shaft for rotating it, a globular gear on said shaft having a substantially spherical pitch surface and having its center located substantially in the axis of oscillation of said shaft, a second gear journaled to rotate about a stationary axis on said frame and meshing with said globular gear, and means actuated by said second gear for steering the vehicle.

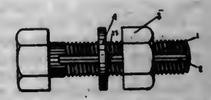
3. The combination of a vehicle frame mounted on wheels, a hand-lever fulcrumed to oscillate on a stationary axis on said frame, pitman mechanism actuated by said lever for propelling the vehicle, a shaft journaled on said lever and adapted to oscillate therewith, means at the upper end of said shaft for rotating it, a globular gear on said shaft having a substantially spherical pitch surface and having its center located substantially in the axis of oscillation of said shaft, a conical gear journaled to rotate about a stationary axis on said frame and meshing with said globular gear, said conical gear being located so as to be at one side of the equatorial plane of said globular gear when the axes of said gears are substantially parallel, and means actuated by said conical gear for steering the vehicle.

4. The combination of a vehicle frame having front and rear axles, an operating lever comprising a shell, horisontally disposed trunnions on said shell journaled to oscillate on a fixed axis on said frame, a depending arm and an upwardly extending tube rigidly connected with said shell, a shaft rotatably mounted in said tube, a steering-wheel on the upper end of said shaft, and a globular gear on said shaft partly housed within said shell, a second gear journaled to rotate on a stationary axis on said frame and meshing with said globular gear, pitman mechanism connection between said depending arm and said rear axle, and means connecting said second gear with the front axle for steering the vehicle.

5. The combination of a vehicle frame mounted on wheels, an oscillating hand-lever fulcrumed on a stationary axis on said frame, pitman mechanism actuated by said lever for propelling the vehicle, a shaft journaled on said lever and adapted to oscillate therewith, means at the upper end of said shaft for rotating it, a globular gear on said shaft having a substantially spherical pitch surface having its center located substantially in the axis of oscillation of said shaft, a second gear journaled on said frame and meshing with said globular gear, and means actuated by said second gear for steering the vehicle, said second gear being adjustable angularly with respect to said last named means for the purpose of shifting the wear to different parts of said gears, and means limiting the adjustment of said second gear to certain predetermined angular positions.

[Claims 6 and 7 not printed in the Gazette.]

961,371. NUT-LOCK. JAMES A. POSEY, Waxahachie, Tex. Filed July 1, 1909. Serial No. 505,329.



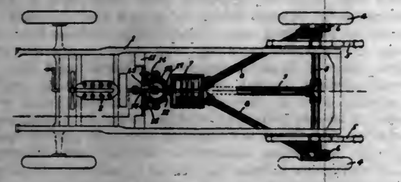
1. In a nut lock, the combination with a bolt, provided with a longitudinal, triangular groove in its threaded portion, of a washer provided with a triangular tongue projecting from its inner face adapted to enter said groove, and having an annular groove in its lateral face, and an aperture extending transversely therethrough communicating with said groove, a spring pawl positioned in said groove, one of whose extremities is socketed in said aperture and the other of whose extremities is slightly upturned, projecting from the groove, and a nut threaded upon the bolt, upon the rear face of which a plurality of indentures is provided, said indentures having an undercut shoulder at one end and a sloping side at the other.

2. In a nut lock, the combination with a bolt provided with a longitudinal groove, of a washer having a tongue adapted to enter said groove, and provided with an annular groove upon its side, a spring wire pawl embedded in the last named groove, and fixed against rotation at one extremity, the other extremity being slightly upturned, and a nut, the inner surface of which is provided with a plurality of indentures forming a circle, each indenture having an undercut shoulder at one end and a sloping side at the other.

961,372. MOTOR-VEHICLE. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Mar. 12, 1910. Serial No. 548,915.

1. In a motor vehicle, the combination with a frame, and an engine supported thereby, of traction wheels having movement toward and away from said frame, a fluid

motor in driving connection with said traction wheels, a pump flexibly connected to said frame, inflexible piping rigidly connecting said pump and said motor, and driving connection between said pump and said engine; substantially as described.

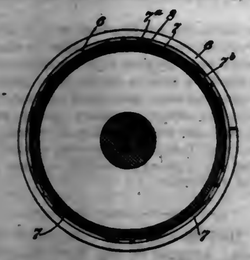


2. In a motor vehicle, the combination with a main frame, and an engine supported thereby, of a rigid wheel-frame composed of inflexible tubing and having movement toward and away from said main frame, wheels carried by said wheel-frame, a fluid motor in driving connection with said wheels and having its casing rigidly connected to the tubes of said wheel-frame and in communication therewith, a pump flexibly connected to said main frame and having its casing rigidly connected to said tubes and in communication therewith, and driving connection between said pump and said engine; substantially as described.

3. In a motor vehicle, the combination with a main frame, and an engine supported thereby, of a wheel-frame comprising a transverse tube, a longitudinal tube in communication therewith, and side tubes, said tubes being rigid and said wheel-frame having movement toward and away from said main-frame, wheels upon said wheel-frame, a fluid motor for each of said wheels, each said motor having its casing rigidly connected with said transverse tube and one of said side tubes and being in communication with said tubes, a pump flexibly connected to said main frame and having its casing rigidly connected with said side tubes and said longitudinal tube and in communication with said tubes, and driving connection between said pump and said engine; substantially as described.

4. In a motor vehicle, the combination with a frame, and an engine supported thereby and provided with a shaft, of traction wheels having movement toward and away from said frame, a fluid motor in driving connection with said traction wheels, a pump flexibly connected to said frame and provided with a shaft, inflexible piping rigidly connecting said pump and said motor, and flexible driving connection between said pump shaft and said engine shaft; substantially as described.

961,373. PISTON-PACKING. CHARLES E. ROSS, Columbus, Ohio. Filed Mar. 21, 1910. Serial No. 550,566.

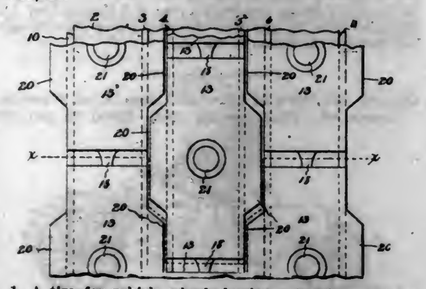


1. In combination with a piston or analogous structure having a circumferential groove, a plurality of followers seated in said groove, each consisting of an arc-shaped piece having notches in and near its end portions and a flat-metal spring subtending said arc-shaped piece and seated in said notches and adapted to be retained by said notches in connection with said sections, and a packing ring superimposed on said arc-shaped pieces.

2. In combination with a piston, or analogous structure having a circumferential groove, a plurality of followers seated in said groove each consisting of an arc-shaped piece beveled at one side and having notches near its end portions and a flat-metal spring subtending said arc-shaped piece and adapted to be retained by its own resilience in said notches in connection with said section and a packing ring having beveled sides superimposed on the beveled sides of the follower pieces.

3. In combination with a piston or analogous structure having a circumferential groove, a plurality of followers seated in said groove each consisting of an arc-shaped piece beveled on its outer side and having notches near its ends on its inner side with a flat-metal spring seated in said notches and adapted by its own resilience to be retained therein and a plurality of packing rings in said grooves superimposed in the beveled sides of said followers.

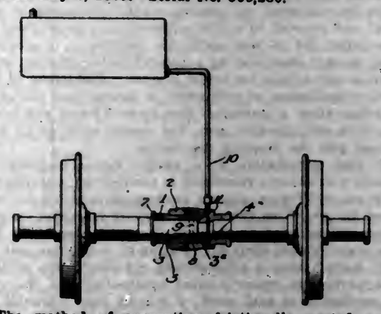
961,374. TIRE FOR VEHICLES. JOHN C. SCHLEICHER, Mount Vernon, N. Y. Filed July 23, 1909. Serial No. 509,244.



1. A tire for vehicle wheels having a tread comprising resiliently supported sections provided with alternate lateral recesses and projections, the tread surfaces of said sections and projections being flush, substantially as described.

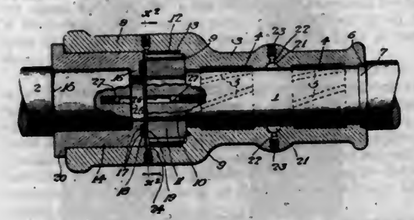
2. A tire for vehicle wheels having a tread comprising a plurality of parallel series of resiliently supported sections provided with alternate lateral recesses and projections, the tread surface of each section and its projections being flush and the projections and recesses of adjacent series engaging when the tread surfaces of the sections of said series are flush, substantially as described.

961,375. METHOD OF SEPARATING AXLE-COUPLINGS. BAGSTER ROADS SHABROOK, Los Angeles, Cal. Filed July 6, 1909. Serial No. 506,230.



The method of separating frictionally nested parts which consists of distending the outer part by the introduction of fluid under pressure and thus reducing the friction and displacing the inner part by continuing the introduction of fluid.

961,376. DIFFERENTIAL AXLE. NORMAN B. SEABROOK, Los Angeles, Cal. Filed July 6, 1909. Serial No. 506,228.



1. A differential axle comprising two axle members, a retaining ring on one axle member, a sleeve with an internally enlarged end to receive the retaining ring and form a shoulder to abut said ring, said end of the sleeve being secured by frictional engagement on the other axle member, the other end of said sleeve having a journal fit on the first specified axle member.

2. A differential axle comprising a sleeve, a bushing secured therein by frictional engagement, an axle member secured in the bushing by frictional engagement, and another axle member journaled in the sleeve.

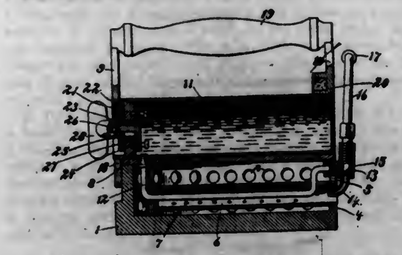
3. A differential axle comprising a sleeve with an internal shoulder, an axle member journaled in the sleeve, a retaining collar on the axle member abutting said shoulder, a bushing frictionally retained in the sleeve, and another axle member frictionally retained in the bushing.

4. A differential axle comprising a sleeve with an enlarged end, a bushing frictionally secured in the enlarged end, an axle member frictionally secured in the bushing, and an axle member journaled in the other end of the sleeve.

5. A differential axle comprising a sleeve with an internal shoulder, an axle member journaled in the sleeve, a retaining collar on the axle member bearing against the shoulder, a bushing frictionally retained in the sleeve, the bushing having a flange which abuts the end of the sleeve, and an axle member frictionally retained in the bushing.

[Claims 6 to 14 not printed in the Gazette.]

961,377. SELF-HEATING SAD-IRON. FREDERICK R. SHAFFER, New York, N. Y., assignor to The New York Flatiron Company, a Corporation of New York. Filed Jan. 26, 1907. Serial No. 354,236.



1. A sad iron having a hollow body part, a fuel chamber thereon, said chamber being located within the zone of radiated heat from said iron body, and above and longitudinal to the iron body, whereby pressure sufficient to feed the fuel will be generated in said chamber, a heating device carried by the iron at the end of said body part, a nozzle and connections therefor to the fuel chamber, in combination with an auxiliary burner independent of said heating device for heating said nozzle and connections.

2. A sad iron having a hollow body part, a fuel chamber thereon, said chamber being located within the zone of radiated heat from said iron body, and above and longitudinal to the iron body, whereby pressure sufficient to feed the fuel will be generated in said chamber, a heating device for the fuel chamber composed of a fuel pan at one end of said fuel chamber, a nozzle and connections therefor to the fuel chamber, in combination with an auxiliary burner, independent of said iron, adapted to heat said nozzle and connections, and upon which the iron is adapted to be stood on its end.

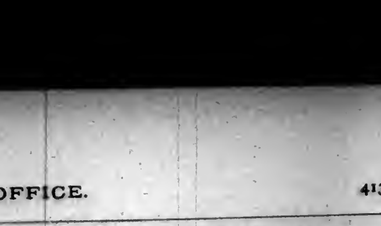
3. A sad iron having a body part, a superposed fuel chamber and a heating device comprising an open cup for preliminarily heating the fuel chamber when in a vertical position, carried by and substantially surrounding the fuel chamber at one end.

4. A sad iron having a body part, a mixing chamber, a feed pipe, a superposed fuel chamber and a heating device adapted to heat the fuel when the iron is in a vertical position, in combination with an auxiliary burner in vertical line with said mixing chamber and feed pipe, whereby the heat from said burner will heat said pipe to vaporize the fuel, said heating device adapted to create pressure in the fuel chamber.

5. A sad iron having a body part, a mixing chamber, a feed pipe, a superposed fuel chamber and a heating device adapted to preliminarily heat the fuel when the iron is in a vertical position, in combination with an auxiliary burner in vertical line with said mixing chamber and feed pipe whereby the heat from said burner will heat said pipe to vaporize the fuel, said heating device adapted to create pressure in the fuel chamber, said auxiliary burner comprising a detachable stand adjacent to said fuel chamber.

[Claims 6 and 7 not printed in the Gazette.]

961,378. SAD-IRON. FREDERICK R. SHAFFER, New York, N. Y., assignor to New York Flatiron Company, a Corporation of New York. Filed Apr. 6, 1908. Serial No. 425,394.



1. A sad iron comprising an iron body, a toe and a heel end therefor, a superposed fuel reservoir immediately above said body, a nozzle to inject vapor into the interior of the iron body, and piping leading from said nozzle to the upper part of the reservoir near the toe of the iron, whereby vapor and not liquid will be fed to the nozzle, said piping leading to one end of the reservoir so that when the iron is stood on the heel end, vapor only will be fed.

2. A sad iron comprising an iron body, a toe and a heel end therefor, a superposed fuel reservoir immediately above said body, a nozzle located to inject vapor into the interior of the iron body, and piping leading from said nozzle to the upper part of the reservoir near the toe of the iron whereby vapor and not liquid will be fed to the nozzle, said piping leading to one end of the reservoir so that when the iron is stood on the heel end vapor only will be fed, and a chamber in the line of piping, and within the iron body.

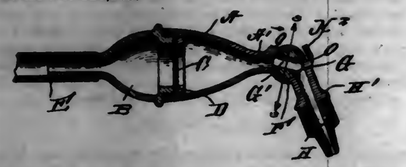
3. A sad iron comprising an iron body, a toe and a heel end therefor, a superposed fuel reservoir immediately above said body, a nozzle located to inject vapor into the interior of the iron body, and piping leading from said nozzle through the iron body in the path of the direct heat from the nozzle to the upper part of the reservoir near the toe of the iron, whereby vapor and not liquid will be fed to the nozzle, said piping leading to one end of the reservoir so that when the iron is stood on the heel end vapor only will be fed.

4. A sad iron comprising a hollow iron body having a heel end, a superposed fuel section, a nozzle and piping therefor, and a starting cup carried at the heel end of the iron, and located so that the flames which arise therefrom will pass upwardly and substantially surround the nozzle and piping when the iron is stood on its heel end, an extension to the cup adapted to heat the reservoir itself, when the iron is on its heel end.

5. A sad iron comprising a hollow iron body, a superposed fuel reservoir, a nozzle and piping therefor, and a starting cup, carried at one end of the iron, the nozzle and piping being in a position where they are surrounded by the heat arising from said cup when the iron is stood on end, said starting cup comprising an open pan shaped as an S.

[Claim 6 not printed in the Gazette.]

961,379. VALVE-OPERATED MECHANISM FOR HANDLES OF VIBRATORY APPARATUS. CHARLES M. SIEBERT, Jr., Columbus, Ohio, assignor to The Siebert-Welch Company, Columbus, Ohio. Filed Oct. 4, 1909. Serial No. 520,905.



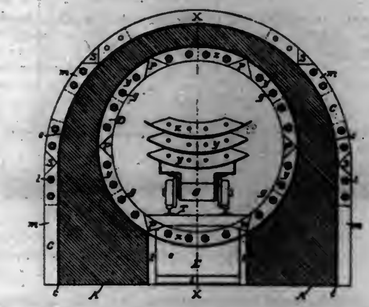
1. A handle for massage apparatus made up of sections fitted together and adapted to be connected to a suction apparatus, an apertured turning valve mounted in one of said sections and adapted to regulate the passageway through the handle, an angled strip fastened to one end of the plug, and means upon the neck coöperating with said strip to limit the rotary movement of the valve.

2. A handle for massage apparatus made up of sections fitted together and adapted to be connected to a suction apparatus, an apertured turning valve mounted in one of said sections and adapted to regulate the passageway through the handle, an angled strip fastened to one end of the plug, shoulders formed upon the outer face of the neck and against which the angled end of said strip is adapted to contact to limit the rotary movement of the valve.

961,380. CONSTRUCTION OF SEWERS AND SIMILAR STRUCTURES. CHARLES F. WILSON, Ottawa, Ill. Filed Feb. 6, 1908. Serial No. 414,578.

1. For constructing sewers and similar structures of concrete, brick and other masonry, an inside form consisting of a series of sections each made up of separable rigid metallic segments having fixed flanges at their ends projecting inwardly, and splice plates detachably bolted to said flanges and breaking joints therewith, said flanges and splice plates forming together internal supporting rings for supporting the segments in a rigid tubular form leaving the interior of the form free.

2. For constructing sewers and similar structures of concrete, brick or other masonry, an inside form consisting of a series of sections, made up of separable segments having flanges at their ends projecting inwardly from the face of the masonry and said segments being detachably joined together in a rigid tubular form by splice plates bolted to said flanges, combined with an end support adapted to rest upon the bottom of the trench and to be temporarily fastened to the end flange of each of the several sections of said inside form as they are successively put in place.



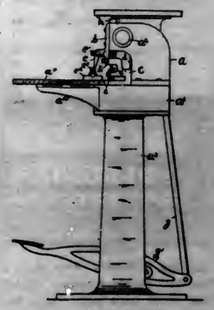
3. A sewer mold consisting of a series of detachable elements comprising an end form conforming to the cross section of the masonry, an outside form and an inside form, each made in separable segments and detachably fastened to said end form, and an end support adapted to rest upon the bottom of the trench and to be temporarily fastened to the end flange of each of the several sections of said inside form as they are successively put in place.

4. A sewer mold consisting of a series of detachable elements comprising an end form having a base flange adapted to rest upon the bottom of the trench and a vertical plate conforming to the cross section of the masonry, an outside form and an inside form, each made up of separable segments having flanges at their ends projecting at right angles from the masonry and adapted to be put in place piece by piece as the work progresses, and to be detachably joined together by splice plates bolted to said flanges and to be detachably fastened to said end form by bolts passing through one of said flanges and through said end form.

5. For constructing sewers and similar structures of concrete, brick or other masonry, an improved support for sustaining the free end of the lower segment of the inside form, consisting of a base flange resting upon the bottom of the trench and a vertical plate rigidly fastened to said base flange and detachably fastened to the free end of said lower segment by bolts passing through said vertical plate and through the inwardly projecting flange on the end of said segment.

[Claim 6 not printed in the Gazette.]

961,381. PUNCHING-MACHINE. EDWARD SOUTHWORTH and EUGENE A. SPAULDING, Portland, Me. Filed June 18, 1909. Serial No. 502,877.



1. In a multiple punching machine, the combination of a self contained punch or gage member adapted to slide on the bed of the machine and having a slot on its upper side, a stationary holding panel having a horizontal flange on its lower edge, adapted to fit in said slot whereby the said member is adapted to slide laterally and to be held in position.

2. In a multiple punching machine, the combination of a self contained punch or gage member adapted to slide on the bed of the machine and having a slot on its upper forward side, a stationary holding panel having a horizontal flange on its lower edge adapted to fit in said slot and a horizontal guide piece adapted to hold down the rear end of said member.

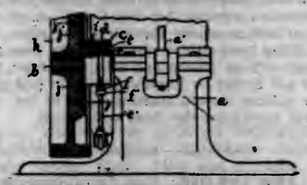
3. In a multiple punching machine, the combination of a self contained punch member adapted to slide on the base of the machine and having a slot in its upper side, and carrying a vertically movable punch holder with a head on its upper end, a holding panel having a horizontal lower edge adapted to fit in said slot and a vertically movable slide having a horizontal lower edge in sliding engagement with said head and adapted to operate said punch holder.

4. In a multiple punching machine, the combination of a self contained punch member adapted to slide on the base of the machine and having a slot in its upper side near its front end and carrying a vertically movable punch holder with a head on its upper end in rear of said slot, a holding panel having a horizontal lower edge adapted to fit in said slot and a vertically movable slide having a horizontal lower edge in sliding engagement with said head and adapted to operate said punch holder.

5. In a multiple punching machine, the combination of a self contained punch member adapted to slide on the bed of the machine and having a slot on its upper side near its front end and carrying a vertically movable punch holder with a head on its upper end in rear of said slot, a holding panel having a horizontal lower edge adapted to fit in said slot, a vertically movable slide having a horizontal lower edge in sliding engagement with said head and a horizontal guide piece adapted to hold down the rear end of said punch member.

[Claims 6 to 9 not printed in the Gazette.]

961,382. CLUTCH MECHANISM FOR PUNCHING-MACHINES. EDWARD SOUTHWORTH, Portland, Me. Filed June 18, 1909. Serial No. 502,883.



1. In a clutch mechanism, the combination of a shaft, a loose clutch member and a fixed clutch member thereon, a longitudinally movable engaging bolt in the fixed clutch member, a pivoted contact block in the loose clutch member adapted to impinge on said bolt, a shoulder being formed on said loose clutch member adjacent to the free end of said contact block and a bearing spring interposed between said contact block and said shoulder.

2. In a clutch mechanism, the combination of a shaft, a loose clutch member and a fixed clutch member thereon, a longitudinally movable engaging bolt in the one clutch member, a pivoted contact block in the other clutch member adapted to impinge on said bolt, a shoulder being formed adjacent to the free end of said contact block and a bearing spring interposed between said contact block and said shoulder.

961,383. ADJUSTABLE WEATHER-STRIP. CHARLES ANDERSON, Clay Center, Kans. Filed July 15, 1909. Serial No. 507,851.

1. An adjustable weather strip, in combination with a door, a bearing, a movably mounted flap, an arm slidably mounted on said bearing and adapted to engage said flap, means adapted to cause said slidably mounted arm to raise said flap when said door is open, and means adapted to depress said flap when said door is closed.



2. An adjustable weather strip, in combination with a door, a bearing, a movably mounted flap, an arm slidably mounted on said bearing and adapted to bear against said flap, elastic means adapted to press against said arm to hold said flap in a raised position when said door is open, and means adapted to depress said flap when said door is closed.

3. An adjustable weather strip, in combination with a door, a longitudinally-extending bearing, a pivotally-supported flap, an arm movably mounted on said longitudinally-extending bearing and adapted to bear against said flap, elastic means mounted on said longitudinally-extending bearing and adapted to bear against said arm to hold said flap in a raised position when said door is open, and means adapted to depress said flap when said door is closed.

4. An adjustable weather-strip, in combination with a door, a bearing, a pivotally mounted flap, an arm pivotally connected at one end with said flap and movably and pivotally mounted on said bearing at its other end, elastic means mounted on said bearing and holding said flap in a raised position when said door is open, and means to depress said flap when said door is closed.

5. An adjustable weather strip, in combination with a door, a molding carried by said door, a bearing arranged longitudinally of said molding, a flap pivotally connected to said molding, an arm connected at one end to said flap and movably connected to said bearing at its other end, elastic means mounted on said bearing and adapted to hold said flap in a raised position when said door is open, and means adapted to depress said flap when said door is closed.

[Claims 6 and 7 not printed in the Gazette.]

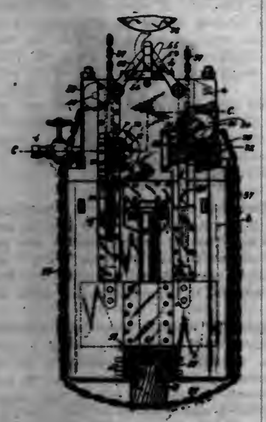
961,384. POWER-OPERATED HAMMER. ROBERT FLEMING ARNOTT, Montclair, N. J. Filed Nov. 4, 1907, Serial No. 400,547. Renewed Nov. 13, 1909. Serial No. 527,901.

1. In a power-operated hammer, the combination with a cylinder; a piston which reciprocates therein; and a ram-head driven by said piston; of a rotative valve which controls the admission and the exhaust of the working fluid to and from said cylinder; and means for giving said valve a step-by-step motion of rotation to produce compression of the working fluid and thereby to cushion the piston at the end of its stroke.

2. In a power-operated hammer, the combination with a cylinder; a piston which reciprocates therein; and a ram-head driven by said piston; of a rotative valve which controls the admission and the exhaust of the working fluid to and from said cylinder; and means controlled by the movement of said ram-head for giving said valve a step-by-step motion of rotation to produce compression of the working fluid and thereby to cushion the piston at the end of its stroke.

3. In a power-operated hammer, the combination with a cylinder; a piston which reciprocates therein; and a ram-head driven by said piston; of a rotative valve which controls the admission and the exhaust of the working fluid to and from said cylinder; a valve-stem upon which is mounted said valve; a valve-lever upon said valve-stem; a valve-rod; and a valve-trip carried by said rod and

reciprocated thereby; said valve-lever projecting into the path of travel of said valve-trip and being given thereby a step-by-step motion of rotation.



4. In a power-operated hammer, the combination with a cylinder; a piston which reciprocates therein; and a ram-head driven by said piston; of a rotative valve which controls the admission and the exhaust of the working fluid to and from said cylinder; a valve-stem upon which is mounted said valve; a valve-lever upon said valve-stem; a valve-rod; and a valve-trip carried and reciprocated by said valve-rod, said valve-trip being formed with a plurality of cam surfaces which contact with said valve-lever and give the same a step-by-step motion of rotation.

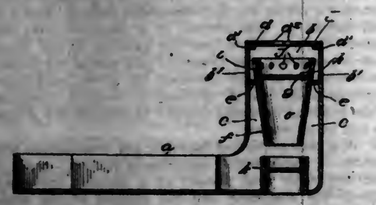
5. In a power-operated hammer, the combination with a ram-head and means for reciprocating the same, of frame-members within which is mounted said ram-head; and valve-operating mechanism carried by said ram-head and inclosed within and protected by said frame-members.

[Claims 6 to 14 not printed in the Gazette.]

961,385. AMID OF BETA-BETA-METHYLPROPYLPROPIONIC ACID. LUDWIG TAUB, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Oct. 21, 1909. Serial No. 523,805. (Specimens.)

The herein described new amid of beta-beta-methylpropylpropionic acid being a white crystalline powder melting at 99° C., soluble in hot alcohol and hot benzene, liberating the free acid when reacted upon by caustic alkali and exhibiting valuable sedative properties, substantially as described.

961,386. OIL-BURNER. JOHN C. BANKS, Chillicothe, Tex. Filed Dec. 2, 1909. Serial No. 531,014.



1. An oil-burner consisting of a pan provided with a combustion chamber and an oil-reservoir at the bottom of the latter in which oil is burned; and a vapor-generator supported in said combustion chamber above said oil-reservoir and exposed to the heat of the burning gases arising therefrom, there being a free space or opening between the walls of said vapor-generator and those of the combustion chamber for the passage of gas from said oil-reservoir; said vapor-generator having a foraminated wall the holes in which communicate with said space or opening.

2. An oil-burner consisting of a pan provided with a combustion chamber and an oil-reservoir at the bottom of the latter in which oil is burned; and a vapor-generator supported in said combustion chamber above said oil-reservoir and exposed to the heat of the burning gases arising therefrom, there being a free space or opening between the walls of said vapor-generator and those of the combustion chamber for the passage of gas from said oil reservoir; said vapor-generator being hollow and being formed with a wall which forms the bottom of one chamber and the top of another of two chambers into which said wall divides said vapor-generator; the last-named chamber having an opening opposed to said oil-reservoir.

3. An oil-burner consisting of a pan provided with a combustion chamber and an oil-reservoir at the bottom of the latter in which oil is burned, the walls of said combustion chamber being provided with lugs spaced apart from each other; and a frusto-conical vapor-generator supported slidably in said combustion chamber by said lugs and above said oil-reservoir, whereby said vapor generator is exposed to the heat of the burning gases arising from said oil-reservoir; said gases having a free passage through the spaces between said lugs and outside of the wall of said vapor-generator.

4. The combination in an oil-burner of a combustion chamber; an oil-reservoir in which oil is burned; and a vapor-generator mounted above said oil-reservoir and in said combustion chamber; said vapor-generator being formed with an oil-cup and with a chamber having an opening opposed to said oil-reservoir the burning gases from which are free to enter the last-named chamber from said oil-reservoir; the opening in said chamber being at the opposite end of said vapor-generator from said oil-cup.

5. The combination in an oil-burner, of a combustion chamber; an oil-reservoir in which oil is burned; and a vapor-generator mounted above said oil-reservoir and in said combustion chamber between a wall of which and the wall of said generator there is a free space for the passage of gas from said oil-reservoir; said generator being formed with an oil-cup and with a chamber beneath the latter and having an opening opposed to said oil-reservoir; the opening in said chamber being at the opposite end of said vapor-generator from said oil-cup.

961,387. NEW VAT DYE. PAUL THOMASCHEWSKI, Vohwinkel, near Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Feb. 19, 1910. Serial No. 544,867.

1. The herein described new dyes obtainable from the hereinbefore defined anthraquinone derivatives, especially anthraquinone mercaptans and anthraquinone derivatives yielding mercaptans with alkali polysulfids, which dyes are after being dried and pulverised from brown to black powders which are insoluble in water, alkalies, alkaline sulfids and organic solvents, giving vats with hydrosulfite and caustic soda lye, which vats dye cotton from olive to gray to brownish-black fast shades, substantially as described.

2. The herein described new dye obtainable from 1-aminoanthraquinone-5-sulfonic acid and alkali polysulfid, which is after being dried and pulverized a black powder soluble in concentrated sulfuric acid containing 20 per cent. of SO_3 with a black-brown color, forming a greenish-black vat with hydrosulfite and NaOH which vat dyes cotton fast greenish-black-brown shades, substantially as described.

961,388. VAT DYE. PAUL THOMASCHEWSKI, Vohwinkel, near Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Feb. 19, 1910. Serial No. 544,868.

1. The herein described new dyes obtainable from anthraquinone mercaptans, which dyes are after being dried and pulverised from brown to black powders, which are insoluble in water, alkalies, alkaline sulfids and organic solvents, giving vats with hydrosulfite and caustic soda lye, which vats dye cotton from olive to gray to brownish-black fast shades, substantially as described.

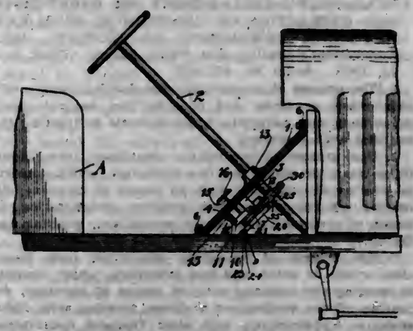
2. The herein described new dye obtainable from anthraquinone-1.5-dimercaptan and sulfur, which is after being dried and pulverized a dark powder soluble in fuming sulfuric acid containing 20 per cent. SO_3 with a dull red color, forming a violet-brown vat with hydrosulfite and NaOH which vat dyes cotton fast olive shades, substantially as described.

961,389. INVALID-CHAIR. CHARLES FRANCIS WALKER, Stockton, Cal. Filed Mar. 16, 1909. Serial No. 483,740.



An invalid chair comprising a horizontally alined platform mounted rigidly on large front wheels, small wheels turnably disposed beneath said platform at the rear thereof, a chair having rockers bearing on said platform, plates on said platform and on said chair, springs interposed between said plates, said rockers bearing the weight of the chair.

961,390. MEANS FOR LOCKING THE STEERING MECHANISM OF MOTOR-VEHICLES. ARTHUR B. WALTERS, Abilene, Kans. Filed Aug. 21, 1909. Serial No. 513,092.



1. In a steering gear for motor vehicles, the combination with a steering shaft, of a locking sector yieldingly carried by said shaft, a pivotally held pawl, a link extending from said pawl, a pivotally secured pawl secured to said link said pawls being held for coaction with said sector, and means to operate said pawls.

2. A steering shaft having in combination, a yieldingly carried sector, a pawl pivotally held for engagement with said sector, a link carried by said pawl, a second pawl arranged for engagement with said sector and secured to said link, and means to actuate said pawls.

3. In combination, a steering shaft, an arm keyed to said shaft, a gear sector loosely carried by said shaft, springs to connect said sector to said arm, a pivotally held pawl, a link carried by said pawl, a second pivotally held pawl carried by said link, said pawls being arranged for co-action with said gear sector, and means for holding said pawls out of engagement with said gear sector.

4. In a steering gear for motor vehicles, the combination with a steering shaft, of a forked arm keyed to said shaft, a gear sector loosely carried upon said shaft between the forks of said arm, springs connecting said gear sector to said arm, two pivotally held pawls arranged for coaction to engage said gear sector, and means to yieldingly hold said pawls out of engagement with said sector.

961,391. HYDROSULFITE COMPOUND AND PROCESS OF MAKING SAME. ANTON WEINDEL, Mülheim-on-the-Rhine, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Dec. 21, 1909. Serial No. 534,350.

1. The herein described process for producing a new solid and stable zinc hydrosulfite sodium sulfite ($2ZnS_2O_4.Na_2SO_3$), which process consists in treating mixing together and crystallising solutions of zinc hydrosulfite with alkali bisulfite, substantially as described.

2. The herein described zinc hydrosulfite sodium sulfite of the formula: $2ZnS_2O_4.Na_2SO_3$ which is a stable white compound of a slight yellow tint soluble in water, insoluble in alcohol, ether and benzene, soluble in caustic soda lye, the sodium salt of hydrosulfurous acid being formed, while zinc is precipitated as $Zn(OH)_2$ being dissolved again by an excess of alkali as zincate, substantially as described.

961,392. PENCIL-SHARPENING MACHINE. ARTHUR S. WHEELER, Boston, Mass., assignor to F. S. Webster Company, Boston, Mass., a Corporation of Maine. Filed Mar. 9, 1909. Serial No. 482,342.



1. In a pencil-sharpening device, a rotatable carrier having a central longitudinal receiving-orifice, and a recess for the cutter intersecting said orifice at an angle oblique to the axis of the carrier, and a journal-portion at one end provided with a center-hole through it longitudinally, arranged in alinement with said orifice, a bar arranged in said hole, the inner end of which is slabbed off at an angle oblique to the axis of the carrier and the reduced portion thus formed projects into said recess beneath the cutter and terminates close to the inner end and extends over the center of said orifice, to be engaged by the lead of the pencil, substantially as described.

2. In a pencil-sharpening device, a rotatable carrier having a central longitudinal receiving-orifice, and a recess for the cutter intersecting said orifice and a journal-portion at one end provided with a center hole through it longitudinally arranged in alinement with said orifice, a bar arranged in said hole in the journal-portion, one end of which is reduced and projects into said recess be-

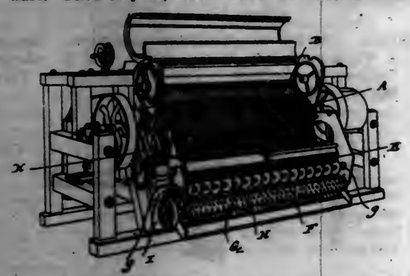
neath the cutter and terminates close to the inner end of said orifice, means for adjusting said bar axially, and means for limiting axial movement of said bar in opposite ways, substantially as described.

3. In a pencil-sharpening device, a rotatable carrier having a central longitudinal receiving-orifice, and a recess for the cutter intersecting said orifice, and a journal-portion at one end provided with a center-hole through it longitudinally, arranged in alinement with said orifice, a bar extending through said center-hole, the inner end of which extends into said recess beneath the cutter and terminates close to and in front of the inner end of said orifice, and rotatable means connected with the outer end of said bar and engaging the journal-portion for adjusting the bar axially, substantially as described.

4. In a pencil-sharpening device, a carrier having a longitudinal receiving-orifice and a recess for the cutter intersecting said orifice, and a journal-portion at one end provided with a hole through it longitudinally arranged in alinement with said orifice, and a bar extending through the hole in said journal-portion, the inner end of which projects into said recess and terminates close to the inner end of said orifice, and a screw-threaded sleeve arranged on said bar, at the outer end thereof, having a knurled head, the screw-threaded portion of said sleeve engaging internal screw-threads formed on the interior of the journal-portion, substantially as described.

5. In a pencil-sharpening device, a carrier having a longitudinal receiving-orifice and a recess for the cutter intersecting said orifice, and a journal-portion at one end provided with a cylindrical hole through it longitudinally, arranged in alinement with said orifice, a cylindrical bar arranged in said hole in the journal-portion, the inner end of which is slabbed off and projects into said recess and terminates close to the inner end of said orifice, and means for adjusting said bar axially, substantially as described.

961,393. COTTON-GINNING MACHINERY. RALPH E. WILSON, Dallas, Tex., assignor to Continental Gin Company, Birmingham, Ala., a Corporation of Delaware. Filed July 15, 1909. Serial No. 507,745.



1. In ginning machinery, the combination of the following instrumentalities, to-wit:—a chamber or breast for the reception of the cotton to be ginned, a saw cylinder for removing the cotton from the chamber, a carrier extending parallel with the saw cylinder within the chamber, cotton engaging members on said carrier having oppositely inclined operative faces extending diagonally across the operative edge of one or more of the saws composing the cylinder, and means for rotating said carrier whereby the cotton, hulls, etc. will be moved toward and reciprocated longitudinally of the cylinder across the edges of the saws.

2. In ginning machinery, the combination of the following instrumentalities, to-wit:—a chamber or breast for the reception of the cotton to be ginned, a saw cylinder for removing the cotton from the chamber, a rotary carrier extending parallel with the saw cylinder within the chamber, and cotton engaging members on said carrier having oppositely inclined operative faces extending diagonally across the plane of one or more of the saws composing the cylinder, whereby the cotton, hulls, etc. will be moved toward and reciprocated longitudinally of the cylinder across the edges of the saws.

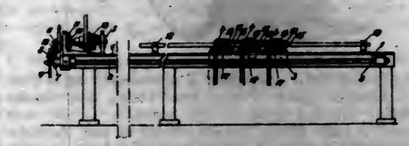
3. In ginning machinery, the combination of the following instrumentalities, to-wit:—a chamber or breast for the reception of the cotton to be ginned, a saw cylinder for removing the cotton from the chamber, a rotary carrier extending parallel with the saw cylinder within the chamber, and a multiplicity of cotton engaging members on said carrier arranged in parallel planes diagonally of the carrier to form oppositely inclined operative faces whereby the cotton, hulls, etc. will be moved toward and back and forth longitudinally of the cylinder.

4. In ginning machinery, the combination of the following instrumentalities, to-wit:—a chamber or breast for the cotton to be ginned, a saw cylinder for removing the cotton from the chamber, a spiked roller at the bottom of the chamber, a rotary carrier in the chamber above the spiked roller and in proximity to the saws, and cotton engaging members on said carrier adapted to travel in paths intersecting the planes of the saws to force the cotton, hulls, etc., into engagement with the saws and to reciprocate the same longitudinally of the cylinder across the edges of the saws.

5. In ginning machinery, the combination of the following instrumentalities, to-wit:—a chamber or breast for the cotton to be ginned, a saw cylinder for removing the cotton from the chamber, a spiked roller at the bottom of the chamber, a carrier in the chamber above the spiked roller in proximity to the saws, and cotton engaging members mounted diagonally on said carrier to intersect the planes of the saws.

[Claims 6 and 7 not printed in the Gazette.]

961,394. APPARATUS FOR MAKING SEAMLESS TUBES. Moïse ALTMAN, Bagnolet, France. Filed Nov. 5, 1907. Serial No. 400,800.



An apparatus for making seamless tubes comprising a bed, a carriage mounted above and on the bed and movable along the same, supports mounted above and on the bed and on opposite sides of the carriage and a blow-pipe heating means carried by the carriage.

961,395. PROCESS FOR REGENERATING AND DEVULCANIZING INDIA-RUBBER OR CAOUTCHOUC AND EXTRACTION OF CAOUTCHOUC FROM RAW MATERIALS CONTAINING CAOUTCHOUC. GÉZA AUSTERWEIL, Neuilly, near Paris, France. Filed Nov. 11, 1908. Serial No. 462,025.

1. The process of regenerating and devulcanizing caoutchouc-waste or scrap, and of extracting natural caoutchouc from raw materials, which consists in treating the material with limonene.

2. The process of recovering caoutchouc from caoutchouc-waste or scrap and raw materials, which consists in treating the material with an excess of limonene, decanting off the undissolved residues, precipitating by means of a suitable caoutchouc precipitant, washing and drying.

3. The process of recovering caoutchouc from caoutchouc-waste or scrap and raw materials, which consists in treating the material with an excess of limonene, decanting off the undissolved residues, treating with light, aromatic hydrocarbons, and after frequent decantation precipitating by means of a suitable caoutchouc precipitant, washing and drying.

961,396. VAT DYE. WILHELM BAUER, Vohwinkel, and ALFRED HERRE, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Sept. 8, 1909. Serial No. 516,686.

1. The herein-described new dyestuffs obtainable from an isatin derivative in which the oxygen of the alpha-keto group is replaced by easily movable or replaceable substituents and a hereinbefore defined 1-anthrol compound, which dyestuffs are in a dry state dark blue crystalline powders with a metallic luster which are soluble in hot nitrobenzene generally with a blue coloration, and which yield with hydrosulfite and caustic soda lye vats dyeing cotton after exposure to air blue shades remarkable for their fastness to chlorin, substantially as described.

2. The herein-described new dyestuff obtainable from dibromoisatin-alpha-chlorid and 1-anthrol, which dyestuff is in a dry state a dark blue crystalline powder with a copper luster, scarcely soluble in hot benzene with a greenish-blue and in concentrated sulfuric acid with an olive color, and which yields with hydrosulfite and caustic soda lye an orange yellow vat from which cotton is dyed orange-yellow changing on exposure to air into a deep greenish-blue remarkable for its fastness to chlorin, substantially as described.

961,397. VAT DYESTUFF. WILHELM BAUER, Vohwinkel, and ALFRED HERRE, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Sept. 8, 1909. Serial No. 516,685.

1. The herein-described new dyestuffs obtainable from a halogen substituted isatin derivative containing the halogen in the benzene nucleus in which the oxygen of the alpha-keto group is replaced by easily movable or replaceable substituents and a hereinbefore defined 1-napthol compound, which dyestuffs are in a dry state dark blue crystalline powders with a metallic luster which are soluble in hot nitrobenzene generally with a blue coloration, and which yield with hydrosulfite and caustic soda lye vats dyeing cotton after exposure to air blue shades remarkable for their fastness to chlorin, substantially as described.

2. The herein-described new dyestuff obtainable from dibromoisatin-alpha-chlorid and 1-naphthol, which dyestuff is in a dry state a dark blue crystalline powder with a copper luster, scarcely soluble in hot benzene with a pure blue and in concentrated sulfuric acid with a greenish-blue coloration, and which yields with hydrosulfite and caustic soda lye a yellow vat from which cotton is dyed yellow changing on exposure to air into a deep reddish-blue remarkable for its fastness to chlorin, substantially as described.

961,398. BLUE DYE. WILHELM BAUER, Vohwinkel, and ALFRED HERRE, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Nov. 4, 1909. Serial No. 526,203.

1. The herein-described new dyestuffs obtainable from an isatin derivative substituted in ortho position to the imino group by the hereinbefore defined substituents in which isatins the oxygen of the alpha-keto group is replaced by easily movable or replaceable substituents and a hereinbefore defined 1-naphthol compound, which dyestuffs are in a dry state dark blue crystalline powders with a metallic luster which are soluble in hot nitrobenzene generally with a blue coloration, and which yield with hydrosulfite and caustic soda lye vats dyeing cotton after exposure to air blue shades remarkable for their fastness to chlorin, substantially as described.

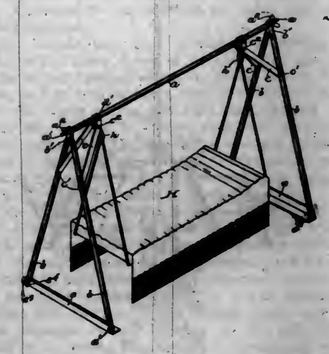
2. The herein described new dyestuff obtainable from ortho-methylisatin-alpha-chlorid and 4-ethoxy-1-naphthol, which dyestuff is in a dry state a dark blue crystalline powder with a copper luster, soluble in hot benzene with a blue and in concentrated sulfuric acid with a greenish-blue coloration, and which yields with hydrosulfite and caustic soda lye a yellow vat from which cotton is dyed yellow changing on exposure to air into a deep reddish-blue remarkable for its fastness to chlorin, substantially as described.

961,399. BLUE DYE. WILHELM BAUER, Vohwinkel, and ALFRED HERRE, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Nov. 23, 1909. Serial No. 529,516.

1. The herein described new dyestuffs obtained from a halogen substituted isatin derivative containing the halogen in the benzene nucleus in which the oxygen of the alpha-keto group is replaced by easily movable or replaceable substituents and 4-ethoxy-1-naphthol, which dyestuffs are in a dry state dark blue crystalline powders with a metallic luster which are soluble in hot nitrobenzene generally with a blue coloration, and which yield with hydrosulfite and caustic soda lye vats dyeing cotton after exposure to air blue shades remarkable for their fastness to chlorin, substantially as described.

2. The herein described new dyestuff obtainable from dibromoisatin-alpha-chlorid and 4-ethoxy-1-naphthol, which dyestuff is in a dry state a dark blue crystalline powder with a copper luster, soluble in hot benzene with a pure blue and in concentrated sulfuric acid with a green coloration, and which yields with hydrosulfite and caustic soda lye a yellow vat from which cotton is dyed yellow changing on exposure to air into a clear blue remarkable for its fastness to chlorin, substantially as described.

961,400. HAMMOCK-SUPPORT. LOUIS I. BRAKOWITZ, Boston, Mass. Filed Jan. 10, 1910. Serial No. 537,129.



1. A hammock support, comprising a top frame member having a screw projecting from each end, a pair of legs at each end adapted to be folded together, a plate secured to the upper end of each leg provided with an aperture adapted to slip over said screws, nuts to hold said plates in place in said screws, and braces between said top frame member and said legs, pivotally connected thereto, whereby the ends of the legs may be disconnected from the top frame member and all the parts of the structure folded one upon another.

2. A hammock support, comprising a top frame member having a screw projecting from each end, a pair of legs at each end adapted to be folded together, a plate secured to the upper end of each leg provided with an aperture, a tubular pivot member or eyelet pivotally connecting the apertures of the two plates of each pair and adapted to slip over said screws, nuts to hold said eyelets and plates in place on said screws, and braces between said top frame member and said legs, pivotally connected thereto, where-

by the ends of the legs may be disconnected from the top frame member and all the parts of the structure folded one upon another.

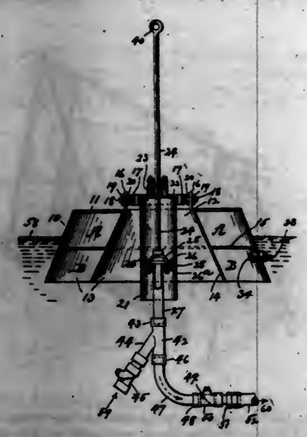
3. In a hammock support, comprising a top frame member, legs and braces therebetween pivotally connected and adapted to fold one upon another, a bracket for the pivotal connection between the braces and the top frame member secured to the top frame member and having a pair of downwardly projecting ears, a pin connecting said ears, on which pin the braces are pivoted, and hammock suspending means supported by said pin.

4. In a hammock support, comprising a top frame member, legs and braces therebetween pivotally connected and adapted to fold one upon another, a bracket for the pivotal connection between the braces and the top frame member secured to the top frame member and having a pair of downwardly projecting ears, a pin connecting said ears, on which pin the braces are pivoted, a hook supported by said pin between said ears, and hammock suspending means supported by said pin.

5. In a hammock support, comprising a top frame member, legs and braces therebetween pivotally connected and adapted to fold one upon another, a bracket for the pivotal connection between the braces and the top frame member secured to the top frame member and having a pair of downwardly projecting ears, a pin connecting said ears, on which pin the braces are pivoted, a sleeve upon said pin serving as a spacer between said braces and on a pivotal support for the hammock suspending means.

[Claims 6 to 8 not printed in the Gazette.]

961,401. WAVE-OPERATED PUMP. CHARLES P. BONNEY, Providence, R. I. Filed May 12, 1909. Serial No. 495,404.



1. The combination of a float adapted to be partially submerged in a body of water which is subject to wave action; a cylinder carried by the float and having a centrally perforated upper end and an open bottom; a piston movable in the cylinder; a piston rod connected at its lower end with the piston and hung at its upper end to a support, and passing slidably through the perforation in the cylinder cover; a reservoir; a pipe connection between the cylinder and reservoir; an intake valve in the pipe adapted to operate by suction as the float and cylinder rise with the wave; and a discharge valve in the pipe adapted to operate by the pressure of the piston as the float and cylinder descend by the subsidence of the wave.

2. The combination of a float adapted to be partially submerged in a body of water which is subject to wave action; a cylinder carried by the float and having a centrally perforated upper end and an open bottom; a piston movable in the cylinder; a piston rod connected at its lower end with the piston and at its upper end hung upon a support, and passing slidably through the perforation of the cylinder cover; an intake valve in the pipe adapted to operate by suction as the float and cylinder rise with the wave; and a discharge valve in the pipe adapted to operate by the pressure of the piston as the float and cylinder descend by the subsidence of the wave.

3. The combination of a ring-shaped float movable by its buoyancy in a body of water which is subject to wave action; a cylinder loosely hung at its upper end in the central opening of the float, which cylinder has a centrally perforated upper end and an open bottom; a piston movable in the cylinder; a piston rod connected at its lower end with the piston and at its upper end hung upon a support, and passing slidably through the perforation of the cylinder cover; a reservoir; a pipe connecting the cylinder and reservoir; an intake valve in the pipe adapted to operate by suction as the float and cylinder rise with the wave; and a discharge valve in the pipe adapted to operate by the pressure of the piston as the float and cylinder descend by the subsidence of the wave.

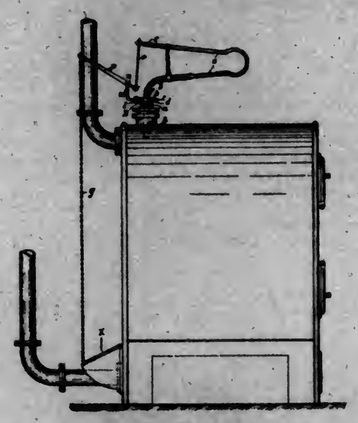
4. The combination of a ring-shaped float having the form of a truncated cone and movable by its buoyancy in a body of water which is subject to wave action; a centrally-located funnel in the float and connecting therewith and which has an open top and an open bottom; two ear pieces extending up from the upper edge of the funnel and located diametrically opposite each other; a cylinder having a centrally perforated upper end and an open bottom and extending down through said funnel axially thereof; a gimbal connecting the upper end of the cylinder and said two ear pieces; a piston movable in the cylinder; a piston rod passing slidably through the perforation in the cylinder cover and connected at its lower end with the piston and hung at its upper end upon a support; a reservoir; a pipe connecting the cylinder and reservoir; an intake valve in the pipe adapted to operate by suction as the float and cylinder rise with the waves; and an outlet valve in the pipe adapted to operate by the pressure of the piston as the float and cylinder descend by the subsidence of the wave.

5. The combination of a ring-shaped float open at the bottom and having an annular air chamber in its upper part parallel to its upper surface, which float is in the form of a truncated cone and is movable by its buoyancy in a body of water where there is wave action; a centrally located funnel in the float and concentric therewith and which has an open top and an open bottom; two ear pieces extending up from the upper edge of the funnel and located diametrically opposite each other; a cylinder having a centrally perforated upper end and an open bottom and extending down through said funnel axially thereof; a gimbal connecting the upper end of the cylinder and said two ear pieces; a piston movable in the cylinder; a piston rod passing slidably through the perforation in the cylinder cover and connected at its lower end with the piston and hung at its upper end upon a support; a reservoir; a pipe connecting the cylinder and reservoir; an intake valve in the pipe adapted to operate by suction as the float and cylinder rise with the wave; and an outlet valve in the pipe adapted to operate by the pressure of the piston as the float and cylinder descend by the subsidence of the wave.

[Claims 6 to 12 not printed in the Gazette.]

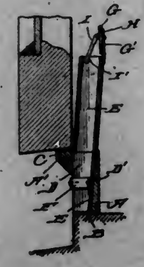
961,402. REGULATING APPARATUS FOR HOT-WATER PIPES AND THE LIKE. ROBERT BRUKENHAUS, Haspe, near Hagen, Germany. Filed Jan. 28, 1908. Serial No. 413,063.

In combination, a steam boiler and a sleeve secured thereto, a U-shaped expansion pipe having its lower end passing through the sleeve and extending into the boiler and formed of circular cross section for rotation within the sleeve, the expansion pipe above the sleeve being of non-circular cross section, an adjustable sleeve nut for clamping the sleeve into gripping engagement with a portion of the expansion pipe passing therethrough, and



means connected with the expansion pipe, for controlling a valve or damper.

961,403. WINDOW-VENTILATOR. HOBBY C. BUNNELL, Westport, N. Y. Filed May 15, 1909. Serial No. 496,159.



1. The combination with a window frame and sash, of a bar adapted to be secured between the sill of the frame and the sash, said bar having a groove formed therein, provided with a beveled bottom, a casing secured within said groove in an inclined position and extending up along side of the lower bar of the sash and spaced therefrom, and a cover for closing the upper end of said casing, said cover being provided with an opening closed by a pivoted lid.

2. A ventilator comprising a bar provided with a flange at its upper edge, and a central groove having a beveled bottom, strips of felt secured upon the bottom of said bar and flange adapted to engage the sill of the frame and the sash, respectively, a casing forming an air passage having an extension on its back secured upon the bottom of said groove so as to throw the casing in an inclined position, and a hinged cover for closing the upper end of said casing.

3. A ventilator comprising a flanged bar adapted to be secured in a window frame by the sash, said flanged bar being provided with a groove, a casing communicating with said groove and extending up alongside of said bar and spaced therefrom, a hinged cover for closing the upper end of said casing provided with an opening, and a lid for closing said opening together with means for holding said cover in different positions.

961,404. IRONING-TABLE. VINYARD O. CRAWFORD, Fort Smith, Ark. Filed Feb. 26, 1910. Serial No. 546,144.



1. The combination with a table having an end rail provided with an opening, of an ironing board slidably supported beneath the table top, and adapted to pass through the opening in the end rail into extended position, and a cleat hinged adjacent to said opening, and adapted to be swung thereinto into engagement with the bottom of the ironing board, for elevating the same to the level of the table top when in extended position.

2. The combination with a table having an end rail provided with an opening, of an ironing board slidably supported beneath the table top, and adapted to pass through the opening in the end rail into extended position, the inner end of the board being reduced in thickness to form a shoulder having a height corresponding to the thickness of the table top, said shoulder engaging the edge of the table top when the board is in extended position, and a cleat hinged adjacent to the opening in the end rail, and adapted to be swung thereinto into engagement with the bottom of the ironing board, for elevating the same to the level of the table top when in extended position.

3. The combination with a table top having cleats secured to the inner faces of its end rails, one of said rails having an opening extending to the top of the cleat thereon, and an ironing board supported beneath the table top on the cleats of the end rails, and adapted to pass through the opening in one of said rails into extended position, and a cleat hinged adjacent to said opening, and adapted to be swung thereinto into engagement with the bottom of the ironing board, for elevating the same to the level of the table top, when in extended position.

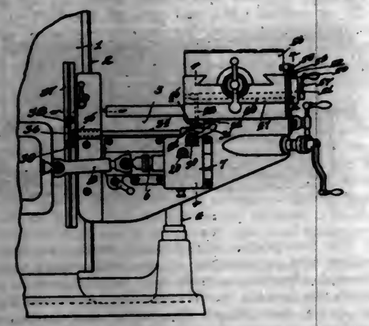
4. The combination with a table having an end rail provided with an opening, and a cross bar connecting the side rails, of an ironing board supported in the opening of the end rail and on the cross bar, and adapted to pass through said opening into extended position, said board having a longitudinal slot, a pin on the cross bar extending into the slot of the ironing board, and a cleat hinged adjacent to the opening in the end rail, and adapted to be swung thereinto into engagement with the bottom of the ironing board, for elevating the same to the level of the table top when in extended position.

961,405. FEED-CONTROLLING MECHANISM. ADOLPH L. DE LEEUW, Hamilton, and SOL EINSTEIN, Cincinnati, Ohio, assignors to The Cincinnati Milling Machine Company, Cincinnati, Ohio, a Corporation. Filed Oct. 23, 1907. Serial No. 398,720.

1. In a device of the class described, a support, a reciprocating element thereon, feed mechanism therefor, a feed controlling clutch, a single trip on the support adapted to operate the clutch, and dogs on the reciprocating element, adapted to actuate the trip from either direction, whereby the clutch is operated whenever either dog is brought to the point on the support represented by the position of the trip.

2. In a machine of the class described, a reciprocating feeding device having adjustable dogs, a clutch, and a single controlling trip plunger having cam formations

disposed in the same plane transverse to the line of travel of the feeding devices, whereby the trip may be automatically operated in either direction of feed movement, substantially as described.



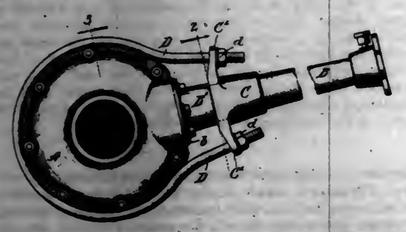
3. In a device of the class described, a reciprocating feed element, a clutch controlled feed shaft, a clutch controller, a tripping plunger having motion transmission connection with the clutch controller, a head on said plunger, having a double cam formation disposed in the same plane transverse to the line of travel of the feed element, and dogs on the feed element adapted to respectively engage the said cam surfaces of the plunger head to automatically move the same in and out, thereby reversing the direction of feed, substantially as described.

4. In a machine of the class described, a reciprocating knee, saddle and table, a main clutch controlled feed shaft, a clutch controller, and trip mechanism for each of the three reciprocating elements, having motion transmission connection with the clutch controller, substantially as described.

5. In a machine of the class described, a reciprocating knee, saddle and table, a main clutch controlled feed shaft, a clutch controller, and dog and plunger trip mechanism for each of the three reciprocating elements, each trip having rack and pinion connection with the clutch controller, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

961,406. REINFORCING-TRUSS FOR MOTOR-CARS. DELAMERE B. GARDNER, Chicago, Ill. Filed Dec. 6, 1909. Serial No. 531,652.



1. The combination in an automobile of a differential-casing and a forwardly extending shaft-bearing, with a separately-formed truss member surrounding the differential-casing and extending forwardly and secured to said shaft-bearing.

2. The combination with the two halfs of a differential-casing meeting in flanges, and a forwardly projecting shaft-bearing, of a grooved truss-rod surrounding said differential-casing and embracing the flanges on the halves thereof and secured at its end to the shaft-bearing.

3. The combination with two halves of a differential-casing meeting in flanges bolted together, of a grooved truss-rod surrounding the differential-casing, embracing the flanges thereon, and contacting with the nuts, the ends of the truss-rod being secured to the forwardly extending shaft-bearing.

4. The combination with a differential-casing and a forwardly projecting shaft-bearing, of an anchor member mounted upon the shaft-bearing and provided with ears, and a truss-rod, having its ends extending through said ears and surrounding the differential-casing.

5. The combination with a differential-casing and a forwardly extending tapered shaft-bearing, of an anchor member in the form of a boss open on one side and mounted upon the shaft-bearing, the opening being of sufficient size to pass over the smaller portions of the shaft-bearing, said anchor member being provided with ears, and a truss-rod surroundingg the differential-casing and passing through said ears.

[Claim 6 not printed in the Gazette.]

961,407. TIMER. DONALD W. HARR, Los Angeles, Cal. Filed Jan. 18, 1909. Serial No. 473,015.



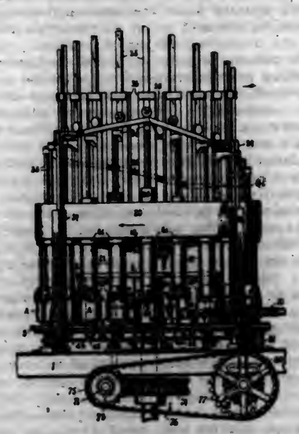
1. In a timer, a stationary casing, terminals thereon, four segments in the casing connected with the respective terminals, said segments being staggered and each embracing more than a quarter circle, an adjusting ring revoluble in the casing, contact blocks in the adjusting ring having contact with the respective segments, a shaft, and means carried by the shaft for making contact with the respective blocks as the shaft rotates.

2. In a timer, a stationary casing, terminals thereon, four segments in the casing, said segments being staggered and each embracing more than a quarter circle, an adjusting ring revoluble in the casing, contact blocks in the adjusting ring, a ball in each contact block, a spring in each contact block pressing the ball against the associated segment, a shaft, and means carried by the shaft for successively contacting with the contact blocks as the shaft rotates.

3. In a timer, a stationary casing, terminals thereon, four segments thereon connected to the respective terminals, said segments being staggered and each embracing more than a quarter circle, an adjusting ring revoluble in the casing, contact blocks in the adjusting ring, a shaft, a crank on the shaft, an arm pivoted to the crank, a contact roller on the arm, and a spring for pressing said arm outwardly to cause the roller to make contact with the respective contact blocks as the shaft rotates.

4. In a timer, a stationary casing comprising a disk having a foot, a shaft journaled in said disk, a casing ring secured to said disk, posts disposed radially in said casing ring, terminals on the outer ends of said posts, curved segments inlaid in the casing ring and connected with the respective posts, an adjusting ring revolubly mounted within the casing ring, a cap on the adjusting ring, an adjusting arm extending from the cap, hollow contact blocks in the adjusting ring, a spring pressed ball in each contact block making contact with the associated segment, a crank on the end of said shaft, an arm on said crank, a roller on said arm for making contact with the inner faces of the respective contact blocks, and a spring for pressing said arm outwardly.

961,408. CAN-FILLING MACHINE. WILLIAM F. HEBRANK, Highland, Ill. Filed Nov. 5, 1909. Serial No. 526,380.



1. In a can filling machine, a rotatable main reservoir, a rotatable auxiliary reservoir connected thereto, cylinders having their upper portions located in the auxiliary reservoir, each of said cylinders having an inlet opening below its upper end, plungers in said cylinders, means for elevating each of said plungers to a point above said inlet opening, and then allowing it to fall by gravity, a discharge nipple secured to the lower end of each of said cylinders, and a can carrier rotatably mounted below said discharge nipples.

2. In a can filling machine, a rotatable main reservoir, a rotatable auxiliary reservoir connected thereto, cylinders having their upper portions located in the auxiliary reservoir, each of said cylinders having an inlet opening below its upper end, plungers in said cylinders, a vertically movable bar connected to each of said plungers, a roller on each of said bars, a cam track arranged below said rollers for lifting the plungers to a point above said inlet opening and allowing them to fall by gravity, a discharge nipple secured to the lower end of each of said cylinders, and a can carrier rotatably mounted below said discharge nipples.

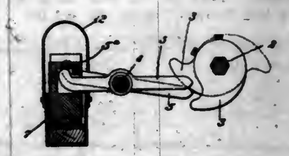
3. In a can filling machine, a rotatable main reservoir, a rotatable auxiliary reservoir connected thereto, cylinders having their upper portions located in the auxiliary reservoir, each of said cylinders having an inlet opening below its upper end, plungers in said cylinders, a cam for elevating each of said plungers to a point above said inlet opening and then allowing it to fall by gravity, a discharge nipple secured to the lower end of each of said cylinders, a can carrier rotatably mounted below said discharge nipples, inclined centering fingers on said cylinders, means for moving the cans into engagement with the inclined faces on said fingers to provide for the nipples entering the cans, each of said centering fingers being provided with a shoulder for spacing the can away from the bottom of said cylinders.

4. In a can filling machine, a movably supported receiver provided with a nipple, means for movement to said nipple for the removal of deposits therefrom, and means coöperable with said receiver for supporting said deposit removing means and moving it to and from said nipple.

5. In a can filling machine, a receiver provided with a nipple, a suction pipe for movement to said nipple for the removal of deposits therefrom, and means coöperable with said receiver whereby said suction pipe is moved toward and away from said nipple.

[Claims 6 and 7 not printed in the Gazette.]

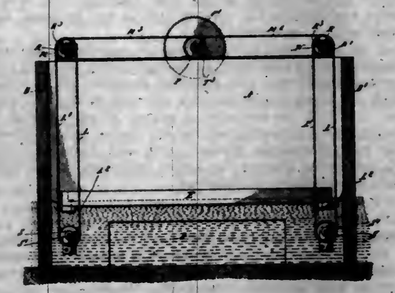
961,409. SAND-PULVERIZING MACHINE. CHARLES W. HERR, Columbus, Ohio. Filed June 22, 1907. Serial No. 380,217.



1. In a sand pulverizing machine, the combination of a shaft having a series of spirally arranged cams fixed thereon, a corresponding series of independently movable levers operative by said cams, a corresponding series of vertically movable hammers or stamps having their sides in close proximity to each other and engaged by said levers, and a straight inclined anvil on which said hammers operate to pulverize the sand, the said hammers having their lower ends inclined correspondingly to the anvil, and the said cams being arranged and adapted successively to lift and release said hammers or stamps through said levers the lifting operation of each stamp or hammer between the end ones of the series being prior to the impact on the anvil of the one first operated next to it, whereby the flow of the pulverized material along the anvil is promoted.

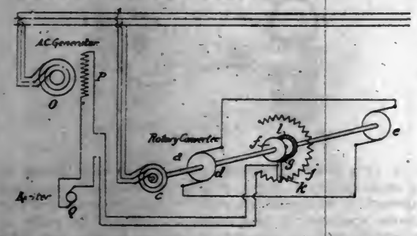
2. In a pulverizing machine, the combination of a shaft having cams fixed thereon, a second shaft supporting independently-movable levers operative by said cams, said levers having rounded ends, hammers or stamps provided with recesses into which the rounded ends of the levers project to directly engage the hammers, and a trough in which said hammers operate to pulverize the material to be treated.

961,410. FLOAT TIDE-MILL. URIAH S. JACKSON, Ossipee, N. H. Filed July 30, 1909. Serial No. 510,457.



A tide float mill comprising a framework; a float constructed to rest upon the surface of tide water and to rise and fall with it; shafts attached to said framework below low-water mark, corresponding shafts attached to said framework above high-water mark; sets of sprocket wheels attached to said shafts; chain belts operating with said sets of sprocket wheels, one member of each of the said chain belts attached to said float; right- and left-hand ratchet wheels and pawls in working connection with said sets of shafts and their sprocket wheels, whereby the motion of said float in either direction will cause the said shafts above high water and their transmission devices to move in one direction only; substantially as and for the purpose set forth.

961,411. VOLTAGE-REGULATOR. CHARLES SUNDERLAND JOHNSON, Chicago, Ill., assignor, by mesne assignments, to The Westinghouse Electric and Manufacturing Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Oct. 20, 1904, Serial No. 229,237. Renewed Nov. 7, 1907. Serial No. 401,163.



1. The combination with a generator, a rotary converter supplied with current therefrom, and a driven motor supplied with current from the rotary converter, of means controlled by the relative speeds of the motor and converter for varying the voltage of the generator circuit.

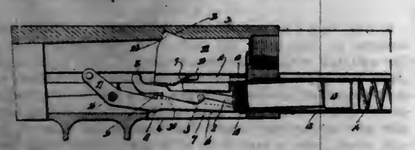
2. The combination with a generator, a rotary converter supplied with current therefrom, and a motor supplied with current from the rotary converter, of a rheostat in the field magnet circuit of the generator, and automatic means controlled by the relative speeds of rotation of the converter and the motor for varying the active resistance of the rheostat.

3. The combination with a generator, a rotary converter supplied with current therefrom, and a motor supplied with current from the rotary converter, of a rheostat in the field magnet circuit of the generator, and a system of gears connected to the shafts of the converter and the motor, and mechanism by which variations of the relative speeds of said two shafts will vary the active resistance of said rheostat.

4. In voltage control apparatus, the combination with a generator, a rotary converter supplied with current therefrom, and a direct current motor supplied with current therefrom, of a rheostat, concentrically mounted gear wheels driven respectively by the shafts of the converter and the motor, an idle gear engaging both of said gears and moving the contact arm of the rheostat, substantially as described.

5. In an automatic voltage control apparatus, the combination with a generator, a rotary converter supplied with current therefrom, and a motor supplied with current from the rotary converter, of a rheostat in the field magnet circuit of the generator, a system of gears driven by the shafts of the converter and the motor, and a differential gear mechanism meshing with said gears and having means for altering the active resistance of the rheostat, substantially as described.

961,412. TUBULAR-MAGAZINE GUN. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Dec. 29, 1909. Serial No. 535,408.



1. In a tubular magazine gun, the combination with the gun-frame or receiver thereof, of a tubular magazine, a sliding handle mounted thereupon, a breech-closure, an action-bar connected at its forward end with the said handle and at its rear end with the said breech-closure and moving back and forth in a groove formed in one of the side walls of the gun-frame or receiver, and a pivotal cartridge cut-off located in a recess formed in the same wall of the gun-frame or receiver as the said groove and situated below the same, said action-bar directly engaging the said cut-off for positively lifting the forward end thereof into its cut-off position.

2. In a tubular magazine gun, the combination with the gun-frame or receiver thereof, of a tubular magazine, a sliding handle mounted thereupon, a breech-closure, an action-bar connected at its forward end with the said handle and at its rear end with the said breech-closure and sliding in a groove formed in one of the side walls of the said gun-frame or receiver, and a pivotal cartridge cut-off located in a recess formed in the same wall of the gun-frame or receiver as the said groove and situated at a point below the same, the forward end of the said cut-off being directly engaged by the said action-bar for positively depressing the cut-off into its retired position in which the cartridges are free to be fed out of the tubular magazine.

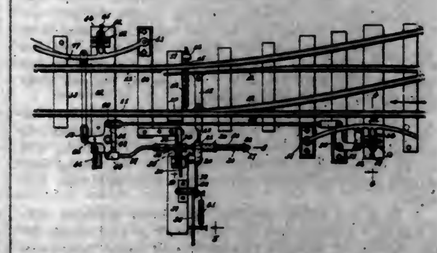
3. In a tubular magazine, the combination with the gun-frame or receiver thereof, of a tubular magazine, a sliding handle mounted thereupon, a breechclosure, an action-bar connected at its forward end with the said handle and at its rear end with the said breech-closure and sliding in a groove formed in one of the side walls of the said gun-frame or receiver, and a pivotal cartridge cut-off located in a recess formed in the same wall of the gun-frame or receiver as the said groove and situated below the same, and the said cut-off having its respective ends directly engaged by the said action-bar for operation thereby, the rearward movement of the bar swinging the cut-off into its cut off position and the forward movement of the bar depressing the cut-off into its retired position.

4. In a magazine gun, the combination with the gun-frame or receiver thereof, of a pivotal cartridge cut-off having a trunnion between its ends and located in a recess formed for it in one of the side walls of the said gun-frame or receiver and having its said ends engaged on its side opposite its said trunnion, by portions of the said frame, whereby the cut off is held in place.

5. In a tubular magazine gun, the combination with the gun-frame or receiver thereof, of a tubular magazine, a sliding handle mounted thereupon, a breech-closure, an action-bar having its forward end connected with the said handle and its rear end with the said breech-closure and sliding in a groove in one of the side walls of the said gun-frame or receiver, and a pivotal cartridge cut-off located in a recess formed in the same wall of the said gun-frame or receiver as the said groove, and having its forward end provided with a retaining flange entering a vertical cut in the said gun-frame or receiver, whereby the forward end of the cut-off is held against lateral displacement.

[Claim 6 not printed in the Gazette.]

961,413. AUTOMATIC SWITCH. CHRISTIAN W. KAUFMAN, Shenandoah, Pa. Filed Aug. 23, 1909. Serial No. 514,113.



1. In an automatic switch, main rails, switch rails, means adapted for moving the switch rails relatively to the main rails, means for preventing said movement of the switch rails adapted to be freed by a projecting member on the locomotive, a projecting member on a locomotive adapted to free the said means, a lock adapted to engage the second-mentioned means after it has been freed, and means in connection with the lock adapted to release the second-mentioned means from the lock.

2. In an automatic switch, rails, a bar secured to and adapted to move the rails in one direction, a trigger bar adapted for engaging the bar to prevent its movement, means adapted for operating the trigger bar, a lock for engaging the trigger bar when it is in a predetermined position, and means adapted for freeing the trigger bar from the lock on the lateral movement of the trigger bar.

3. In an automatic switch, rails, a bar secured to and adapted to move the rails, a guide plate, a trigger bar adapted for holding the bar relatively to the guide plate, means adapted for operating the trigger bar, a lock for engaging the trigger bar when in a predetermined position, and means adapted for freeing the trigger bar from the lock on the movement of the guide plate.

4. In an automatic switch, a bar, a guide plate, a trigger bar adapted for detachably securing the bar relatively to the guide plate, a lock adapted for engaging the trigger bar, and an offset in connection with the lock with which the trigger bar is adapted to engage to free the trigger bar from the lock when it is moved in a predetermined direction relatively thereto.

5. In an automatic switch, a bar, a hand lever, means adapted to connect the hand lever with the bar, a trigger bar, a lock for the trigger bar, and means adapted for freeing the trigger bar from the lock which is adapted to be operated by the movement of the hand lever.

[Claims 6 to 33 not printed in the Gazette.]

961,414. SIEVE-CLOTH CLEANER. CORODEN K. KINSEY, Bucyrus, Ohio. Filed July 9, 1909. Serial No. 506,800.



1. A bolting cloth cleaner for sieves consisting of a piece of cut rubbing felt adapted to be held with the cut surface thereof in operative position to engage said cloth.

2. A bolting cloth cleaner for sieves consisting of a piece of serrated rubbing felt adapted to be held with the serrated surface thereof in operative position to engage said cloth.

3. A bolting cloth cleaner for sieves consisting of a piece of cut rubbing felt and a cut shaped holder to hold the cut surface in contact with the bolting cloth.

4. A bolting cloth cleaner for sieves consisting of a piece of rubbing felt held with the cut surface thereof in operative position to engage said cloth, a ring member having an annular groove formed therein adapted to hold said rubbing felt in place for the purpose described.

5. A bolting cloth cleaner for sieves consisting of a piece of cut rubbing felt, a ring member provided with an annular groove and notches formed in the inner wall whereby the part of the wall between the notches can be expanded inwardly to clench the rubbing felt.

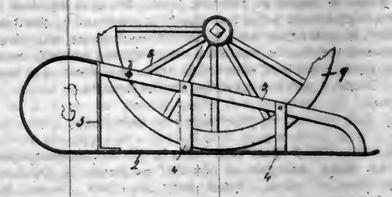
[Claim 6 not printed in the Gazette.]

961,415. SLEIGH-RUNNER. WILLIAM KLAUS, New Haven, Conn. Filed Feb. 7, 1910. Serial No. 542,589.

1. A sleigh-runner comprising a long shoe, posts extending upward from said shoe, and two inclined side pieces secured to said posts and to the shoe and adapted to receive a wheel between them.

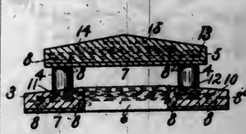
2. A sleigh runner comprising a long shoe, posts extending upward from said shoe, and two inclined side pieces secured to said posts and to the shoe, said sides slightly bowed inward and adapted to receive a wheel between them.

3. A sleigh runner comprising a long shoe turned upward and rearward at its forward end, and downward into engagement with the shoe whereby a front post is



formed, U-shaped posts secured to said runner, and two side pieces secured to said posts and to the runner.

961,416. CHIMNEY-CAP. NACTER LABOCQUE, Fairview, Mass. Filed Oct. 7, 1909. Serial No. 521,547.



1. As an improved article of manufacture, a perforated cement chimney base or top made thicker in the middle than at the outer edges and having molded therein adjacent to the bottom thereof a piece of wire-netting and above this a plurality of hoops arranged at different levels, the area inclosed by each higher hoop being less than that inclosed by the hoop below in order that said hoops may be accommodated to the variation in thickness of said base or top.

2. As an improved article of manufacture, a perforated cement chimney base or top made thicker in the middle than at the outer edges and having molded therein adjacent to the bottom thereof a piece of wire-netting, above this a plurality of hook-ended rods out of contact with each other, and above said rods a plurality of hoops arranged at different levels, the area inclosed by each higher hoop being less than that inclosed by the hoop below in order that said hoops may be accommodated to the variation in thickness of said base or top.

3. As an improved article of manufacture, a cement chimney cover made thicker in the middle than at the edges and having molded therein adjacent to the bottom thereof a piece of wire-netting and above this a plurality of hoops arranged at different levels, the area inclosed by each higher hoop being less than that inclosed by the hoop below in order that said hoops may be accommodated to the variation in thickness of said cover.

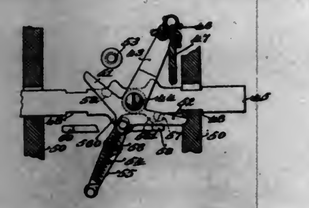
4. As an improved article of manufacture, a cement chimney cover made thicker in the middle than at the edges and having molded therein adjacent to the bottom thereof a piece of wire-netting, above this a plurality of hook-ended rods out of contact with each other, and above said rods a plurality of hoops arranged at different levels, the area inclosed by each higher hoop being less than that inclosed by the hoop below in order that said hoops may be accommodated to the variation in thickness of said cover.

5. The combination, in a chimney cap, of a perforated cement base made thicker in the middle than at their outer edges and having molded therein adjacent to the bottom thereof a piece of wire-netting and above this a plurality of hoops arranged at different levels, the area inclosed by each higher hoop being less than that inclosed by the hoop below in order that said hoops may be accom-

modated to the variation in thickness of said base, a cement cover also made thicker in the middle than at the edges and having molded therein adjacent to the bottom thereof a piece of wire-netting and above this a plurality of hoops arranged at different levels, the area inclosed by each higher hoop being less than that inclosed by the hoop below in order that said last-mentioned hoops may be accommodated to the variation in thickness of said cover, and posts capable of supporting said cover from said base.

[Claims 6 and 7 not printed in the Gazette.]

961,417. BELT-SHIFTER. ISAAC W. LITCHFIELD, Boston, Mass., assignor of one-half to Harry H. De Loss, Bridgeport, Conn. Filed July 26, 1907. Serial No. 385,616.



1. A shifting device, having in combination an oscillating member, an actuator member attached thereto, a shifter actuated by the movement of one of said members when force is applied to the actuator member, and means for shifting the point of connection between the oscillating member and actuator member from one side to the other of the axis of the oscillating member between successive movements of the shifter, substantially as described.

2. A shifting device, having in combination a shifter, an oscillating member mounted thereon, an actuator member connected with the oscillating member, and means for shifting the oscillating member between successive movements of the shifter to reverse the direction in which the force applied to the actuator is transmitted to the shifter, substantially as described.

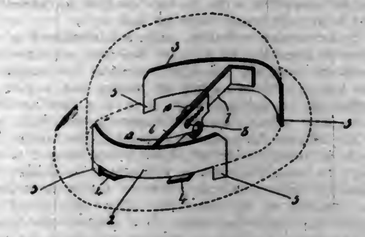
3. A shifting device, having in combination an oscillating member, an actuator member attached thereto, a shifter actuated by the movement of one of said members when the force is applied to the actuator member, shifter locking devices released by the initial movement of the oscillating member, and means for changing the initial position of the oscillating member to reverse the direction in which the force applied to the actuator is transmitted to the shifter, substantially as described.

4. A shifting device, having in combination a shifter provided with locking recesses for locking the same at either end of its throw, coöperating lugs, an oscillating lever mounted on the shifter, an actuator member connected therewith, and means coöperating with the lever to disengage a locking recess from the corresponding lug during the initial movement of the oscillating lever, and means for shifting the lever upon the release of the actuator to reverse the direction in which force applied to the actuator is transmitted to the shifter, substantially as described.

5. A shifting device, having in combination a shifter, an oscillating member mounted thereon, an actuator member connected with the oscillating member, and connections tensioned by the movement of the shifter for shifting the oscillating member when the actuator member is released to reverse the direction in which force applied to the actuator member is transmitted to the shifter, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

961,418. HAT-TREE. HERBERT D. LLOYD, Cheshire, Conn. Filed Aug. 14, 1909. Serial No. 512,887.



1. A hat tree comprising a front and rear band, each formed with outwardly projecting lips and downwardly extending fingers, and each having an inwardly projecting arm, which arms overlap each other and are hinged together.

2. A hat tree comprising a front and rear band, each formed with outwardly projecting lips and downwardly projecting fingers, an arm secured to the inner surface of each band, said arms formed with a series of perforations, and a pin adapted to pass through the perforations whereby the arms are pivotally connected together.

961,419. TESTING DEVICE. JOSEF MUCHKA, Vienna, Austria-Hungary. Filed May 28, 1908. Serial No. 435,578.

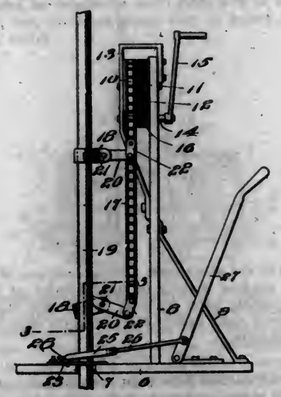


1. In an apparatus of the character described the combination with the exhaust pipe of a separator, of a condensation cylinder of transparent material, an intercepting tube connecting the said cylinder and exhaust pipe, and a color scale for estimating the proportion of oil present substantially as described.

2. In an apparatus of the character described the combination with the exhaust pipe of a separator, of a condensation cylinder of transparent material, an intercepting tube connecting the said cylinder and exhaust pipe, and a color scale for estimating the proportion of oil present, said color scale being of transparent glass and fitted alongside the condensation cylinder.

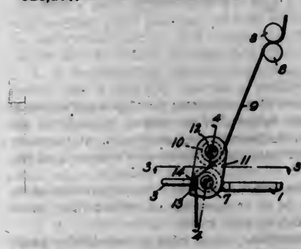
3. In an apparatus of the character described, the combination with the exhaust pipe of a separator, of a condensation cylinder of transparent material, cover plates between which said cylinder is secured, each of said plates carrying a cock-casing, an intercepting tube connecting said cylinder and exhaust pipe, a tube connecting said cock-casings, cocks arranged within said casings, and adapted to connect the interior of the cylinder with the intercepting tube alone or with the atmosphere alone or with the intercepting tube and also the atmosphere, all as described.

961,420. APPARATUS FOR HOISTING TUBING. GEORGE W. OAKES, Alva, Okla., assignor of one-fifth to John W. Thomas, Alva, Okla. Filed Apr. 19, 1909. Serial No. 490,861.



A pipe lift comprising a support, a chain wheel and its shaft mounted at the upper end thereof, a chain passing over the wheel and depending from opposite sides thereof and having a pipe grip at opposite ends, and means to turn the wheel.

961,421. YARN OR THREAD GUIDE FOR SPINNING OR TWISTING MACHINES. ISAAC E. PALMER, Middletown, Conn. Filed Sept. 29, 1909. Serial No. 520,177.



1. A yarn or thread guide for spinning or twisting machines comprising a frame having opposite side members, a disk positioned between and supported by said members and having a yarn or thread guiding and conditioning periphery, a second disk supported by said frame above the first disk and having a yarn or thread guiding and conditioning periphery laterally alined with that of the first disk, and means to permit adjustment of said second disk in an arc about the axis of said first disk as a center.

2. A yarn or thread guide for spinning or twisting machines comprising a frame having a substantially flat part adapted to be secured flatwise upon the thread board of a spinning or twisting machine, a disk supported by said frame and having a guiding periphery and an adjustable member supported by said frame and having a yarn guiding periphery in substantial alinement with that of said disk, and means to permit adjustment of said member in varying relation to said disk, and thereby to vary the extent of peripheral engagement of said disk.

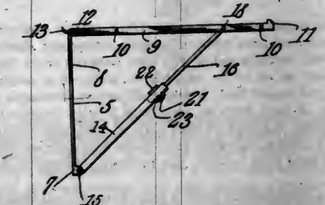
3. A yarn or thread guide for spinning or twisting machines comprising a frame having a substantially flat part adapted to be secured flatwise upon the thread board of a spinning or twisting machine and adjustable thereon, a disk supported by said frame and having a yarn guiding periphery, a second disk also supported by said frame, and means to permit adjustment of the same about said first disk as a center.

4. A yarn or thread guide for spinning or twisting machines comprising a frame having a substantially flat part to be secured between the spindles and drawing rolls, a disk supported by said frame and a member also supported by said frame and adjustable thereon into varying positions between said disk and said drawing rolls.

5. A yarn or thread guide for spinning or twisting machines comprising a frame, a conditioning disk supported thereby and a second disk supported by said frame substantially vertically over said first disk, and means permitting adjustment of said second disk either to the front or the rear of said vertical alinement.

[Claims 6 to 15 not printed in the Gazette.]

961,422. SCAFFOLD-BRACKET. CHARLES F. PINKLEY, Wadsworth, Ohio. Filed Nov. 22, 1909. Serial No. 529,372.

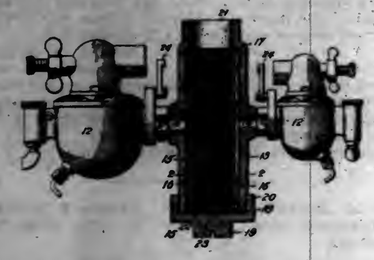


In a device of the class described, a base bar formed at its upper end with a pair of ears and also formed at its lower end with a pair of ears, the said bar being formed adjacent its upper end with a plurality of openings, a supporting member comprising a pair of bars pivotally connected to the ears of the base bar at the upper end thereof, the said bars of the supporting member being connected in spaced relation, and a brace member comprising a channel iron section pivoted at its lower end to the ears at the lower end of the base bar with its valley presented upwardly, and a bar pivoted at its upper end between the bars comprising the supporting member and slidably adjustably received at its lower portion in the channel of the channel iron member, the said bar of the brace member being formed adjacent its lower end with an opening and the web of the channel iron member being formed with a slot, and a bolt secured through the opening in the said bar and the slot in the said channel iron member, the distance between the point of pivotal connection between the base bar and the bars comprising the supporting member and the point of pivotal connection of the channel iron member with the lower end of the base bar being less than the distance between the point of connection of the base and supporting bars and the point of pivotal connection between the bar of the brace member and the said bars comprising the supporting member, the channel iron member being foldable to lie flat upon the base bar and the base bar being foldable to lie wholly between the bars comprising the supporting member and the bar of the brace member being foldable to lie flat against the bottom of the channel member when the said channel member is folded to lie against the base bar.

961,423. CARBURETER. THOMAS LEGGETT STURTEVANT, Quincy, and THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignors to Sturtevant Mill Company, a Corporation of Maine. Filed July 3, 1908. Serial No. 441,858.

1. The combination with one or more carbureters or vaporisers, of a trap or well provided with a fuel discharge opening at its top and one or more openings in its side wall at a considerable distance above its bottom, so that the lower part of the chamber of the said trap or

well is adapted to serve as a catch-basin for surplus fuel, and a fine mesh, vertically-disposed screen arranged in said chamber and opposite said opening or openings, the said trap or well providing a chamber which is independent of or additional to the mixing chamber or chambers of the carbureter or carbureters.



2. The combination with a carbureter or vaporizer, of a trap or well into which the said carbureter discharges, and which extends below the exit passage from the said carbureter, so as to be adapted to serve as a catch-basin for surplus liquid fuel, a fine mesh screen arranged in the chamber of said trap or well, and a wick vertically disposed in the chamber of said trap or well, and serving, by capillary action, to raise the liquid hydrocarbon accumulating in said trap or well into suitable position for vaporization.

3. The combination with a carbureter or vaporizer, of a trap or well into which the said carbureter discharges, and which extends below the exit passage from the said carbureter, so as to be adapted to serve as a catch-basin for surplus liquid fuel, a fine mesh screen arranged in the chamber of said trap or well, a wick vertically disposed in the chamber of said trap or well, and serving, by capillary action, to raise the liquid hydrocarbon accumulating in said trap or well into suitable position for vaporization, and means for securing said wick in said chamber and for supporting said wick vertically.

4. The combination with one or more carbureters or vaporisers, of a trap or well provided with a fuel discharge opening at its top and one or more openings in its side walls at a considerable distance above its bottom, so that the lower part of the chamber of the said trap or well is adapted to serve as a catch-basin for surplus liquid fuel, the said trap or well providing a chamber which is independent of or additional to the mixing chamber or chambers of the carbureter or carbureters, a fine mesh screen vertically disposed in the chamber of said trap or well and extending opposite the said opening or openings, so as to receive the incoming spray, and said trap or well having an open bottom and a removable part normally closing the bottom of said trap or well and which, when removed, permits of the insertion or removal of said screen from below.

5. The combination with a plurality of carbureters or vaporisers for liquid hydrocarbon, of a trap or well into which said carbureters may discharge, and which is adapted to serve as a catch-basin for surplus liquid, and a wick in the chamber of the said trap or well.

[Claims 6 to 10 not printed in the Gazette.]

961,424. PHOTOGRAPHIC COLOR-FILTER. ROBERT JAMES WALLACE and GUSTAV CRAMER, St. Louis, Mo. Filed Nov. 11, 1909. Serial No. 527,368.

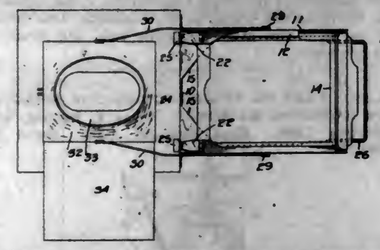
1. A ray-filter comprising two transparent plates; one of said plates having upon one of its faces a colored coating for the correct photographic rendering of color values by the absorption of the shorter wave lengths of light; and the other plate having upon one of its faces a colored shading coating of less area than the coating upon the first plate; said plates being arranged with their coated faces opposite each other and held in assemblage.

2. A ray filter comprising two transparent plates; one of said plates having upon one of its faces a coating of dyed gelatin for the correct photographic rendering of color values by the absorption of the shorter wave lengths



of light; and the other plate having upon one of its faces a colored shading coating of dyed gelatin of less area than the coating upon the first plate; said plates being arranged with their coated faces opposite each other and held in assemblage.

961,425. ATTACHMENT FOR CAMERAS. HENRY G. BAUMAN, Indiana Harbor, Ind. Filed Apr. 30, 1909. Serial No. 493,130.



1. In combination with a camera having a spring-back, a plate-holder guide detachably-secured to one side of the camera in position to permit the entry of a plate-holder from the guide into position between the camera and the spring-back.

2. In combination with a camera, and clips secured to one of the side faces of said camera, a plate-holder guide detachably-connected to said clips.

3. A camera attachment, comprising a plate-holder guide adapted to be detachably-connected to a camera and embodying parallel plate-holder guide-arms adapted to receive a plate-holder, and means at the inner ends of said arms for engagement with the spring-back of the camera to move the latter outwardly as the plate-holder is pushed into the camera.

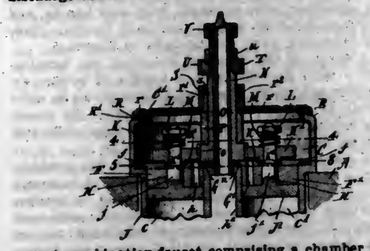
4. A camera attachment comprising a plate-holder guide, and means for detachably-connecting the same to a camera, combined with means carried by said guide and actuated by a plate-holder within the guide for effecting the outward movement of the camera back to permit the entry of the plate-holder into the camera.

5. An attachment for cameras, comprising a plate-holder guide embodying an end-bar, and two parallel guide-arms connected therewith and extending at right angles thereto and adapted to receive a plate-holder, lugs carried by said guide arms at their inner ends, and means carried by the side of the camera to receive said lugs for detachably-connecting said guide to the side of the camera.

[Claims 6 to 19 not printed in the Gazette.]

961,426. COMBINATION-FAUCET. AUGUST BEYER, Buffalo, N. Y. Filed Oct. 18, 1909. Serial No. 523,270.

1. A combination-faucet comprising a chamber having a discharge-outlet, a cold-water inlet and a hot-water inlet, rotary disk-valves adapted to close said inlets and having water-passages therethrough to be brought into registration with said inlets to open the same, and means to rotate said valves simultaneously; the passages in said valves being so related to each other and to said inlets that cold, hot, or warm water may be drawn from said discharge outlet.



2. A combination-faucet comprising a chamber having a discharge outlet, a cold-water inlet and a hot-water inlet, disk-valves mounted for rotation and adapted to close said inlets and having water-passages therethrough to be brought into registration with said inlets to open the same, and a handle operatively connected with said disk-valves; the passages in said valves at certain points in the range of movement of said handle being brought into various positions relative to said inlets so that hot, cold, or warm water may be drawn from said discharge outlet.

3. A combination-faucet comprising a chamber having a discharge-nozzle, a cold-water inlet and a hot-water inlet, disk-valves coöperating with said inlets to open and close the same and having axial stems, a gear-wheel secured to each of said stems, a master gear-wheel between said first-mentioned gear-wheels and in mesh therewith, a rotary element carrying said master gear-wheel and extending out through a wall of said chamber, and a handle on said rotary-element; the passages in said valves being so related to each other and to said inlets that hot, cold, or warm water may be drawn through said discharge nozzle.

4. A combination-faucet comprising two coöperating parts, one a chamber having a discharge-outlet and the other a closure-device comprising two rotary members, one of said parts having two openings, and the other part having four openings, the openings of each part being so related to each other and to the openings of the other part that upon rotation of the valves of one of said parts to different degrees, hot, cold or warm water may be drawn from said discharge opening.

5. A faucet comprising a chamber having a discharge-outlet, a hot-water pipe and a cold-water pipe, a bushing entered in each of said pipes and having two inlets, a valve bearing against each of said bushings and having a passage therethrough, and means for rotating said valves, said inlets being so related to each other and to the passages of said valves that either hot, cold, or warm water may be drawn from said discharge-outlet by rotation of said valves to certain degrees.

[Claims 6 to 8 not printed in the Gazette.]

961,427. PRESSURE-REGULATING DEVICE FOR PNEUMATIC TIRES. CORNELIUS J. BROSNAN, Springfield, Mass., assignor of one-half to Allen Webster, Springfield, Mass. Filed Aug. 31, 1906. Serial No. 332,810.

1. The combination, with a wheel having a pneumatic tire, an inlet valve connected with the tire, a supplementary inlet valve arranged to hold the first inlet valve open while the supplementary inlet valve is in place, an outlet valve, and a spring to hold the outlet valve closed.

2. The combination, with a wheel and pneumatic tire, of a tube connected with said tire having an inlet valve therein, and a case mounted on said tube and having an inlet and an outlet valve therein, the inlet valve stems being contiguous and the inlet and outlet valves in the case being contiguous.

3. The combination, with a wheel having a pneumatic tire, of a suitable case connected with the tire chamber, an outlet valve mounted in said case, an inlet valve mounted on the outlet valve disk, a spring to force the outlet valve upon its seat, means to regulate the pressure on said spring, and a spring to force the inlet valve disk against the outlet valve disk.



4. A safety valve device for pneumatic tires, comprising a suitable case having a valve seat *b* therein provided with an annular channel, a spring-pressed outlet valve disk forming a combination valve and valve seat adapted to rest on said first-mentioned seat and having a hollow stem *e* connected therewith projecting outwardly and having a central opening therethrough, an inlet valve disk *h* mounted on the inner face or seat of the outlet valve disk, a rod connected with the inlet valve disk and movable therewith, and a spring as *j* to force the inlet valve disk normally to its seat, said inlet valve being movable inwardly against the force of its spring by pressure on the outer end of said rod as well as by pressure of air when the same is forced into the stem, substantially as shown.

5. In a safety valve device for pneumatic tires, the combination with a tire, of an outlet valve and a spring therefor, means to vary the pressure of the spring, a conduit leading from the outlet valve to the interior of the tire, an inlet valve mounted to bear against the lower or inner face of the outlet valve disk, a spring arranged to force the inlet valve disk against the outlet valve disk, and a rod connected with the inlet valve disk from which its projects downwardly or inwardly and also passes through the outlet valve disk, said rod being free to move with the inlet valve when opened for the passage of air into the tire and to move also with the inlet valve disk when it and the outlet valve move together to allow the escape of air outwardly.

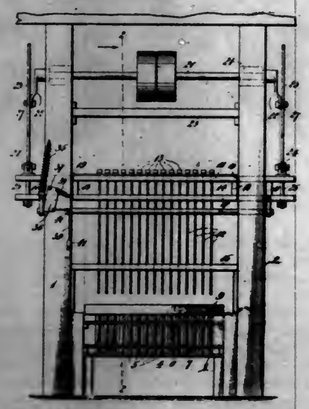
[Claim 6 not printed in the Gazette.]

961,428. TUBE-FILLING MACHINE. ROBERT M. CLARK, Newton, and CADWALLADER J. CLARK, Needham, Mass., assignors to Central Railway Signal Company, Pittsburg, Pa., a Corporation of New Jersey. Filed June 14, 1909. Serial No. 502,086.

1. In a machine of the character specified, the combination with a supporting frame, of a plunger, a carrier for said plunger reciprocable in said frame for intermittently lifting said plunger and with which carrier said plunger is adapted to coöperate in a manner whereby said plunger may fall by gravity from an elevated position when lifted by said carrier during the operation thereof, actuating means for reciprocating said carrier, and means whereby said plunger may be maintained in an elevated position during the continued operation of said actuating means.

2. In a machine of the character specified, the combination with a supporting frame, of a plunger, a carrier for said plunger reciprocable in said frame for intermittently lifting said plunger and with which carrier said plunger

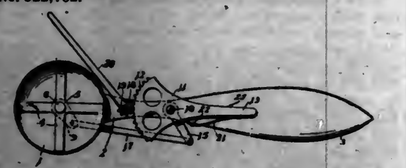
is adapted to coöperate in a manner whereby said plunger may fall by gravity from an elevated position when lifted by said carrier during the operation thereof, actuating means for reciprocating said carrier, the same connecting with said carrier in a manner whereby said actuating means may continue to operate independently of said carrier when said carrier and the plunger carried by it is held in an elevated position, and means for holding said carrier in an elevated position.



3. In a machine of the character specified, the combination with a supporting frame, of a plunger, a carrier for said plunger reciprocable in said frame for intermittently lifting said plunger and with which carrier said plunger is adapted to coöperate in a manner whereby said plunger may fall by gravity from an elevated position when lifted by said carrier during the operation thereof, actuating means for reciprocating said carrier the same comprising a rotary shaft, a crank carried by said shaft and a link-forming connection between said crank and carrier, said link being adapted whereby said crank may operate to rock said link without imparting motion to said carrier when said carrier is held in an elevated position, and means for holding said carrier in an elevated position.

4. In a machine of the character specified, the combination with a supporting frame, of a plunger, a carrier for said plunger reciprocable in said frame for intermittently lifting said plunger and with which carrier said plunger is adapted to coöperate in a manner whereby said plunger may fall by gravity from an elevated position when lifted by said carrier during the operation thereof, actuating means for reciprocating said carrier, the same comprising in part a slotted link pivotally connecting with said carrier and a rotary driving crank loosely coöperating with said link at the point of the slot formed therein, and means whereby the operation of said carrier may be stopped when said carrier and the plunger carried by it are in an elevated position.

961,429. MOLD AND DISHER. SAMUEL J. CLARK, Cornwall-on-the-Hudson, N. Y. Filed Oct. 15, 1909. Serial No. 522,762.



1. A device of the character described, comprising a mold provided with a handle, cutters movably mounted within said mold, a movable member for leveling the contents within said mold, and common means for actuating said cutters and said movable member, substantially as described.

2. In a device of the character described, the combination with a mold provided with a handle, of cutters movably mounted within said mold, a leveling blade mounted near said mold and adapted to move transversely of the same, an operating lever arranged upon said handle, and means connecting said cutters and said leveling blade with said operating lever, substantially as described.

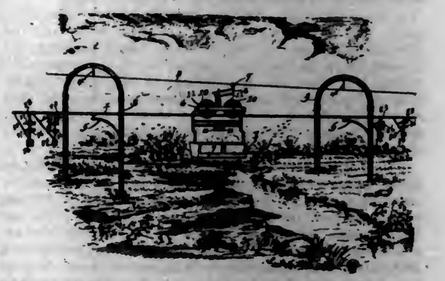
3. In a device of the character described, the combination with a mold provided with a handle, of cutters arranged within said mold, a leveling blade adapted to move transversely of said mold, and common means for simultaneously moving said cutters and said leveling blade, substantially as described.

4. In a device of the character described, the combination with a mold provided with a handle, of rotatably mounted cutters arranged within said mold, a leveling blade rotatably mounted upon said handle near said mold and adapted to travel transversely of said mold, and an actuating device swingingly mounted upon said handle and having means associated therewith, whereby a movement of the same will cause a movement of said cutters and leveling device, substantially as described.

5. In a device of the character described, the combination with a mold provided with a handle, of cutters rotatably mounted within said mold, a pinion provided with a leveling blade rotatably mounted upon said handle, an actuating device swingingly mounted upon said handle, comprising an operating lever and a segmental rack for engagement with said pinion, and connecting means between said actuating device and said cutters, substantially as described.

[Claim 6 not printed in the Gazette.]

961,430. AERIAL ELECTRIC TRANSPORTATION. ORRIN J. DAVY, Washington, D. C., assignor, by mesne assignments, to Industrial Motor Company, a Corporation of South Dakota. Filed Oct. 2, 1906, Serial No. 337,073. Renewed Nov. 13, 1909. Serial No. 527,902.



1. As an improvement in electric transportation, a carrier, a pole changer mounted thereon and formed of a rotatable disk having its opposite sides provided with spaced apart contact segments, and spaced apart stationary means independent of the carrier for imparting a plurality of consecutive rotations to said disk to first shut off the current and subsequently reverse the same, the rotation of said disk being always in the same direction irrespective of the direction of movement of said carrier.

2. As an improvement in electric transportation, a carrier, a pole changer formed of a rotatable disk mounted in said carrier and provided on its opposite sides with spaced apart contact segments, conductors extending from the contacts on one side to those on the other side, and spaced apart stationary means independent of the carrier for imparting a plurality of consecutive partial rotations to said disk to first shut off the current and subsequently reverse the same, the rotation of said disk being always in the same direction irrespective of the direction of movement of said carrier.

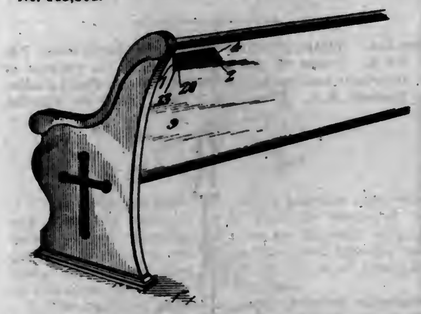
3. As an improvement in electric transportation, a carrier, a pole changer formed of a disk mounted in said carrier and having its opposite sides provided with spaced apart contact segments, conductors extending from the contacts on one side to the contacts on the other side, spaced apart stationary means independent of the carrier for imparting a plurality of consecutive partial rotations to said disk to first shut off the current and subsequently reverse the same, the rotation of said disk being always in the same direction irrespective of the direction of movement of said carrier, and means for normally preventing rotation of said disk.

4. As an improvement in electric transportation, a carrier, a pole changer formed of a rotatable shaft mounted in said carrier, and a disk mounted to rotate with said shaft, said disk having its opposite sides provided with spaced apart contacts, and spaced apart stationary means independent of the carrier for imparting a plurality of consecutive partial rotations to said disk to first shut off the current and subsequently reverse the same, the rotation of said disk being always in the same direction irrespective of the direction of movement of said carrier.

5. As an improvement in electric transportation, a carrier, a pole changer formed of a rotatable shaft mounted in said carrier and having a disk mounted to rotate therewith, said disk having its opposite sides provided with spaced apart contacts, spaced apart stationary means independent of the carrier for imparting a plurality of consecutive partial rotations to said disk to first shut off the current and subsequently reverse the same, the rotation of said disk being always in the same direction irrespective of the direction of movement of said carrier, and means for normally preventing rotation of said shaft.

[Claims 6 to 24 not printed in the Gazette.]

961,431. NAME-HOLDER FOR PEWS. PATRICK FRANCIS DENNING, Cleveland, Ohio. Filed July 25, 1908. Serial No. 445,301.



1. A name holder for pews, etc., including a bracket consisting of a casing and composed of a substantially rectangular supporting portion inclined to the vertical, and constituting the top and front of the casing, a bottom extending rearwardly from the supporting portion, and sides also extending rearwardly from the said supporting portion, a marginal frame fitted on the supporting portion for retaining a name card and a transparent plate thereon, and fixed lugs projecting upwardly from the lower edge of the supporting portion to prevent the name card and the transparent plate from sliding off the bracket when the frame is detached.

2. A name holder of the class described including a supporting bracket provided with an inclined name card receiving plate or member having projecting lugs at the lower edge, a frame fitted on the bracket and concealing the lugs and adapted to retain a name card on the plate or member, and interiorly arranged means for locking the frame on the bracket.

3. A name holder of the class described including a supporting bracket consisting of a casing composed of an oblong top name card supporting portion, a bottom, ends connecting the top portion and the bottom, and an attaching portion arranged at an angle to the top supporting portion, an oblong frame fitted on the upper portion of the casing, and interiorly arranged locking means for retaining the frame on the casing.

4. A name holder of the class described including a bracket consisting of a casing having a top name card receiving portion and provided at the lower edge with upwardly projecting lugs, said top portion being also provided with a depending attaching lug cut from the said top portion and forming an opening to afford access to the said attaching lug, and a frame fitted on the bracket for retaining a name card on the top portion thereof.

5. A name holder of the class described comprising a supporting bracket consisting of a casing having a top name card receiving portion and provided below the same with an opening, a marginal frame fitted on the bracket, and an interiorly arranged locking device mounted on the casing and arranged to project through the opening to engage the frame.

[Claims 6 to 17 not printed in the Gazette.]

961,432. COMPOSITE BOARD. LORENZ A. DEUTHER, Buffalo, N. Y. Filed June 30, 1909. Serial No. 505,184.



1. A board composed of a series of laminæ of wood and paper superimposed in alternate arrangement and having their sides or faces secured in contact and their edges exposed to form the sides of the board.

2. In a composite board an inner core composed of a series of straight laminæ of wood and paper superimposed in alternate arrangement and an outer portion surrounding the inner core and also composed of a series of laminæ of wood and paper superimposed in alternate arrangement.

3. In a composite board an inner core composed of a series of straight laminæ of wood and paper superimposed in alternate arrangement and an outer portion surrounding the inner core and also composed of a series of laminæ of wood and paper superimposed in alternate arrangement; said laminæ having their sides secured together in contact and their edges exposed to constitute the sides of the board.

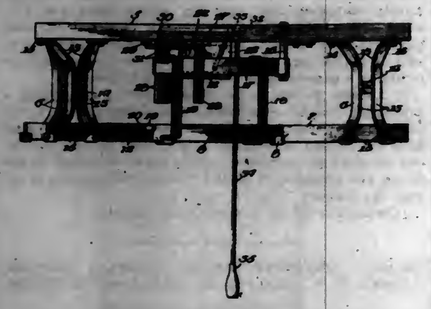
961,433. OVERHEAD SWITCH. JEREMIAH C. FITZGERALD, De Kalb, Ill., assignor to Smith Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 13, 1910. Serial No. 537,918.

1. In an overhead switch, the combination with an elevated support, of a main track section and a plurality of branch track sections suitably supported on the support, and a switch member pivotally mounted for bodily vertical movement on the support and adapted to be swung laterally to aline with the different branch track sections.

2. In an overhead switch, the combination with a portable support adapted to be secured in an elevated position, of a main track section and a plurality of branch track sections suitably supported on the support, and a switch member pivotally suspended from the support for bodily vertical movement and adapted to be swung laterally to aline with the different branch track sections.

3. In an overhead switch, the combination with an elevated support, of a main track section and a plurality of branch track sections suitably supported on said support,

each of said branch track sections having a recess in the upper portion of its end adjacent to the main track section, and a switch member pivotally mounted on the support and having on the upper portion of one of its ends a channeled extension to fit in and engage the recessed parts of the track sections, said switch member adapted to be bodily raised and swung laterally to aline with the different branch track sections.



4. In an overhead switch, the combination with an elevated support, of a main track section having integral therewith at one of its ends a channeled extension flared at its free end, and a plurality of branch track sections suitably supported on the support, and a switch member mounted on the support for pivotal and bodily vertical movement and adapted to rest at one of its ends in the channeled extension of the main track section and to have its other end swung laterally to aline with the different branch track sections.

5. In an overhead switch, the combination with a portable support adapted to be secured in an elevated position, of a main track section having integral therewith at one of its ends a channeled extension flared at its free end and a plurality of branch track sections suitably supported on the support, and a switch member mounted on the support for pivotal and bodily vertical movement and adapted to rest at one of its ends in the channeled extension of the main track section and to have its other end swung laterally to aline with the different branch track sections.

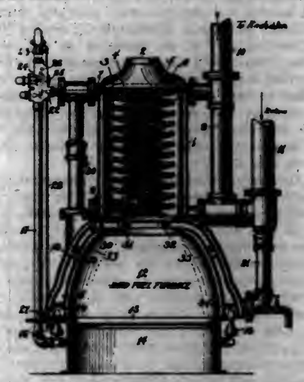
[Claims 6 to 11 not printed in the Gazette.]

961,434. HEATER. REYNOLDS C. FRAMPTON, Pittsburg, Pa., assignor to Pittsburg Water Heater Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Oct. 12, 1908. Serial No. 457,384.

1. In combination in a water heater, a container for water to be heated, and two independent combustion chambers arranged in telescopic relation with an interposed water containing wall in communication with the container, the chambers being positioned so as to supply heat to the container and the inner chamber being provided with a grate for solid fuel and the outer one with gas heating means.

2. In combination in a water heater, a container for water to be heated, and two independent combustion chambers arranged in telescopic relation with an interposed water containing wall, and a second water containing wall outside the outer chamber both in communication with the container, the chambers being positioned so as to supply heat to the container and the inner chamber being provided with a grate for solid fuel and the outer one with gas heating means.

3. In combination in a water heater, a container for water to be heated, two independent combustion chambers, one of which is provided with a gas burner, and the other of which is provided with a grate for burning solid fuel, and thermostatic means governed by the temperature of the water heated for controlling the flow of gas to the burner.

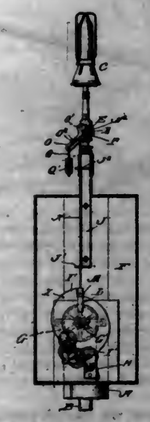


4. In combination in a water heater, a container for water to be heated in its upper portion, a combustion chamber therebeneath provided with a grate for burning solid fuel, a wall inclosing the wall of the combustion chamber spaced away therefrom, a gas burner for supplying heat to the space between the walls, the said space being open to the container.

5. In combination, a casing provided with a coil tube container for water to be heated in its upper portion and having a base consisting of a pair of walls one inside the other with a space between open at its upper end to the interior of the casing, a burner at the lower end of said space, and a grate inside the inner wall.

[Claims 6 to 9 not printed in the Gazette.]

961,435. TIME-CONTROLLED GAS-LIGHTING DEVICE. HIRAM W. GATES, Durham, N. C., assignor of forty-nine and one-half one-hundredths to Floyd Lambe, Durham, N. C. Filed June 1, 1908. Serial No. 436,024.



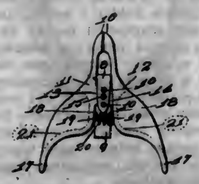
1. In a device of the kind described, the combination with a post, of a supply-pipe extending through said post provided with a burner at its upper end, a valve-casing arranged in said pipe, a turning plug mounted in said valve-casing provided with by-passes for supplying gas to a pilot carried by the burner, a casing secured to the post, a clock-work arranged in said casing, a governor for controlling said clock-work, a disk provided with cam-

lips secured to the winding spindle of the clock-work, a bifurcated head mounted on said disk, and an operating rod carried by the head for operating said turning plug.

2. In a time controlled gas lighting device, the combination with a gas supplying pipe provided with a burner at its upper end, of a valve casing carried by said pipe, a turning plug mounted in said casing provided with a stem, a sleeve secured on said stem by a set-screw provided with ratchet teeth, an operating lever loosely mounted on said stem provided with a series of openings, a pawl carried by said lever engaging the ratchet teeth of said sleeve, an operating rod provided with an angled upper end loosely mounted in one of said openings of said lever, a link carried by the end of said lever provided with a series of detachable weights, and a clock mechanism provided with means for reciprocating said operating rod.

3. In a time controlled gas lighting device, the combination with a gas supplying pipe provided with a burner at its upper end, of a valve casing carried by said pipe, a turning plug mounted in said casing provided with a by-pass and having an outwardly projecting stem, a sleeve fixed on said stem provided with ratchet teeth, an operating lever loosely mounted upon said stem provided with a pawl for engaging said ratchet teeth, a link carrying weights connected to the outer end of said lever, an operating rod adjustably connected to said lever, a bifurcated head secured on the lower end of said operating rod, a roller mounted in said bifurcated head, a clock work carrying a disk provided with cam lips over which said bifurcated head works, and a governor for controlling said clock work.

961,436. PICKER FOR POTATO-PLANTERS. CHARLES H. GERLING, Edwardsville, Ill., assignor to Bernhardt Manufacturing Company, Edwardsville, Ill., a Corporation of Illinois. Filed Sept. 20, 1909. Serial No. 518,703.

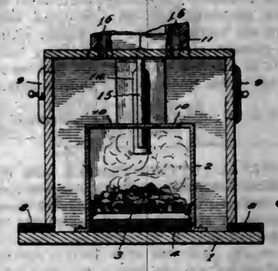


1. The improved picker for potato planters comprising two oppositely mounted arms pivotally connected together; a yoke wherein said arms are pivotally and adjustably mounted; a coil-spring interposed between said arms; and toothed jaws formed at the front extremity of said arms, substantially as described.

2. The improved picker for potato planters comprising arms provided with toothed jaws at their front extremities, handles at their rear ends, and intermediate perforated inwardly-projecting lugs; a yoke having parallel perforated walls wherein said lugs are received and pivotally and adjustably mounted; and a coil-spring interposed between said jaws back of their points of pivotal support, substantially as described.

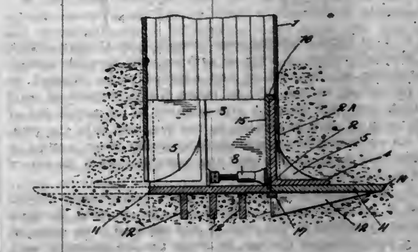
961,437. COOKING AND HEATING APPARATUS. FREDERIC O. GETCHELL, New Rockford, N. D. Filed June 13, 1907. Serial No. 378,818.

A furnace for heating and cooking comprising a base plate, a box-like fire chamber mounted upon the base, a casing inclosing the fire chamber and mounted upon the base and forming a space at the top, in the rear and at the sides of the fire chamber and having air inlet ducts at the lower forward corners and door openings in the sides above the fire chamber, a vertical flue connecting the top of the fire chamber with the top of the casing, a chimney erected upon the rear portion of the casing and having a central smoke passage and air passages in its walls leading into the space inclosed by said casing, and a duct within the rear of the casing extending to the base plate and supporting the chimney and in communication with the



smoke passage thereof, a pipe connecting the fire chamber with said duct and registers set into the chimney at intervals in its length and controlling the outflow of hot air therefrom.

961,438. METHOD AND APPARATUS FOR CONSTRUCTION OF SUPPORTS OF BUILDINGS AND OTHER STRUCTURES. JOHN BYRON GOLDSBOROUGH, Croton, N. Y., assignor to The Underpinning Company, New York, N. Y., a Corporation of New York. Filed Mar. 19, 1909. Serial No. 484,499.



1. The herein-described method of constructing supports for buildings and other structures, which consists in sinking a hollow foundation element, in then projecting extended footings laterally therefrom, and in then bracing said extended footings and fixing them in position relative to the foundation element so as to be held against relative movement when the foundation element is loaded, substantially as described.

2. The herein-described method of constructing supports for buildings and other structures, which consists in sinking a hollow foundation element, in then arranging an extended footing in position to be forced laterally with respect to said foundation element, in then arranging a jack in position to engage said extended footing and to force the same laterally into the earth by resistance of the walls of the said foundation element, and in then bracing the said extended footings in position.

3. A support for a building or other structure, comprising a hollow foundation element, an extended footing therefor composed of separate sections, each section extending from within such foundation element laterally into the earth, and means for fixing the said extended footing in position relative to said foundation element, at or near the base thereof, to hold the said extended footing against vertical displacement.

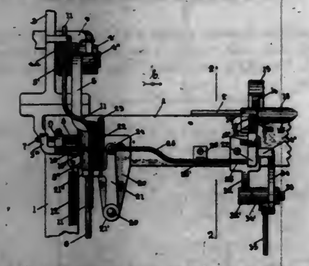
4. A support for a building or other structure, comprising a plurality of hollow foundation elements, separate, oppositely-disposed, sectional extended footings projecting laterally into the earth from within each foundation element adjusted to equalize the supporting power of each foundation element, and means for permanently securing

said extended footings in position relative to said foundation element at or near the base thereof to hold them against vertical displacement.

5. A support for a building or other structure, comprising a hollow foundation element, an extended footing or bearing-plate projecting laterally into the soil from a point within the vertical plane of the side walls of said foundation element, means for permanently holding said bearing-plate in place, a brace for said bearing-plate, and means for anchoring same at both ends, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

961,439. THREAD-CUTTING TEMPLE FOR WEFT-REPLENISHING LOOMS. ALBERT A. GORDON, Jr., Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Dec. 26, 1908. Serial No. 469,208.



1. In a thread cutting loom temple, a stationary cutter, a movable cutter, a lever or arm on said movable cutter, extending in the path of and adapted to be engaged by a projection on the lay, to cause the movement of said cutter, and said lever or arm adapted to be moved out of the path of said projection on the lay, and into the path of an operating lever, and said operating lever, acting to move said lever or arm and the movable cutter, to cut or sever the filling or weft thread.

2. In a thread cutting loom temple, a stationary cutter, and a movable cutter, a lever or arm on said movable cutter extending in the path of and adapted to be engaged by a projection on the lay, to cause the movement of said cutter, and adapted to be moved out of the path of said projection and into the path of an operating lever, and said lever, acting to move said lever or arm and the movable cutter, independently of the lay, to cut or sever the filling or weft thread.

3. In a thread cutting loom temple, a stationary cutter, a movable cutter, and means for moving said cutter at regular intervals, and means for delaying the operation of the cutter preparatory to the transfer of a bobbin, and means, independent of the lay, for operating the cutter on the transfer of a bobbin.

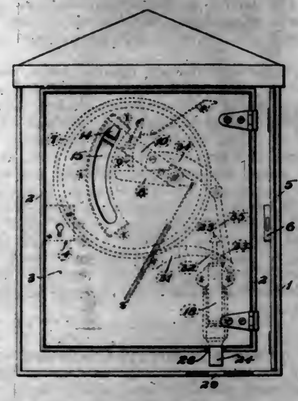
961,440. FIRE-ALARM BOX. THOMAS HAINES, St. Louis, Mo. Filed June 17, 1909. Serial No. 502,693.

1. A fire-alarm box containing telegraphic call mechanism, and a detonating device arranged to be actuated by a part of said telegraphic call mechanism.

2. A fire-alarm box containing a telegraphic call mechanism comprising an operating lever, and a detonating device operatively associated with said operating lever and adapted to be actuated thereby.

3. A fire-alarm box containing a telegraphic call mechanism comprising an operating lever, and a detonating device comprising a barrel adapted to receive an explosive cartridge, a spring-pressed firing-pin, and a trigger device arranged to engage and actuate said firing-pin and operatively connected to said operating lever of the call mechanism so as to be actuated simultaneously therewith.

4. A fire-alarm box containing a telegraphic call mechanism comprising an operating lever, and a detonating device comprising a barrel adapted to receive an explosive cartridge, a spring-pressed firing-pin having an annular shoulder thereon, and a trigger device comprising a lever-arm having a lateral projection thereon adapted to engage said annular shoulder when the lever-arm is raised and thereby raise the firing-pin, said projection having a beveled portion and said lever arm being adapted to yield laterally when the beveled portion of said projection reaches said annular shoulder, whereby the firing-pin is suddenly released and forcibly impacted against the cartridge, and a connection between said lever-arm and said operating lever of the call mechanism whereby the same are actuated simultaneously.



5. A fire-alarm box containing a telegraphic call mechanism comprising an operating lever, a detonating device comprising a firing-pin holder, a barrel hingedly mounted on said holder and adapted to receive an explosive cartridge, a spring-pressed firing-pin slidably mounted in said holder and normally bearing upon the cartridge in said barrel, and a trigger device comprising a lever-arm adapted to engage said firing-pin and retract the same against the tension of its spring, means for suddenly releasing said firing-pin from engagement with said lever-arm, and a connection between said lever-arm and said operating lever of the call mechanism whereby the same are actuated simultaneously.

961,441. YARN AND METHOD OF MAKING SAME. JAMES G. HARRISON, Lawrence, Mass., assignor to American Fibre Matting Company, Lawrence, Mass. Filed Sept. 20, 1909. Serial No. 518,471.

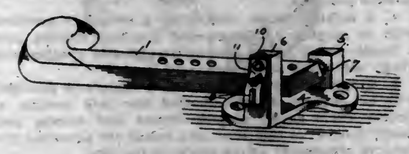


The method of producing a composite strand which consists in twisting one thread about another and previously twisted thread in reversed direction and partially or wholly untwisting said previously twisted thread to expand the same.

961,442. PEDAL-MOUNTING. FORREST H. HARTZELL, Dayton, Ohio. Filed Oct. 9, 1908. Serial No. 456,873.

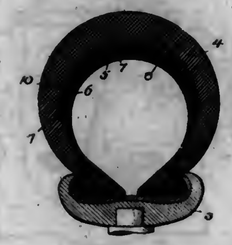
1. A pedal mounting, comprising, in combination, a pedal lever, a bracket comprising a base and upstanding arms on each end of said base trunnions carried in apertures formed in each arm and supporting said pedal lever upon their opposing ends, and a spring member carried by one of said arms and having a loose connection with one of said trunnions to maintain a loose connection between the pedal lever and said trunnions.

2. A pedal mounting, comprising, in combination, a pedal lever, a bracket comprising a base and upstanding arms on each end of said base, trunnions carried in apertures formed in each arm and supporting said pedal lever upon their opposing ends, and a spring member carried by one of said arms and having a slotted connection with one of said trunnions to maintain a resilient connection between the pedal lever and said trunnions.



3. A pedal mounting, comprising, in combination, a pedal lever, a bracket comprising a base and upstanding arms on each end of said base, trunnions carried in apertures formed in each arm and supporting said pedal lever upon their opposing ends, and a spring member carried by one of said arms and having a loose connection with one of said trunnions, said spring having a slot formed in its depending end which embraces a projection formed on said trunnions, whereby said spring exerts a lateral pressure to maintain a resilient connection between said trunnion and said pedal.

961,443. TIRE. REINHOLD HERMAN, Crafton, Pa. Filed July 20, 1907. Serial No. 384,799.



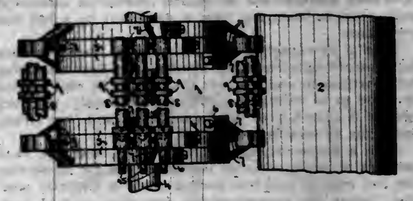
1. In a tire, an outer tube, a plurality of superposed wire layers wound circumferentially of the tube and embedded therein, each strand of a superposed layer being supported against lateral movement by two strands of the layer on which it is superposed.

2. In a tire, an outer tube, and a tire shield therein formed from a single piece of wire wound circumferentially into a plurality of superposed layers, each strand of a superposed layer being supported against lateral movement by two strands of the layer on which it is superposed.

3. In a pneumatic tire, an outer tube having embedded therein a shield formed from a single length of wire wound and crossed upon itself to provide a plurality of superposed layers, the strands of a layer being in abutting engagement and the strands of one layer being in staggered relation with the strands of an adjacent layer.

961,444. NUMBERING-MACHINE. SAMUEL HOLLINGSWORTH, Plainfield, N. J., assignor to American Sales Book Company, Elmira, N. Y., a Corporation of New York. Filed Mar. 28, 1908. Serial No. 423,880.

1. In a numbering machine, the combination, with a shaft, of a plurality of journal bearings mounted thereon in two separated circles, arbors journaled in oppositely disposed bearings in the two circles, said bearings and arbors being divided into sets, the members of each set alternating with those of the other set or sets and being susceptible of simultaneous circumferential adjustment independent of the other set or sets, one or more numbering disks upon each arbor, and mechanism whereby the arbors are actuated to impart a partial rotation to the disks at each revolution of the shaft.



2. In a numbering machine, the combination of a pair of wheels spaced apart upon a shaft, a circumferentially adjustable ring upon the rim of each wheel, one or more arbors journaled between the wheels in oppositely disposed bearings carried upon the rings, one or more numbering disks upon the arbors, and mechanism whereby the arbors are actuated to impart a partial rotation to the disks at each revolution of the wheels.

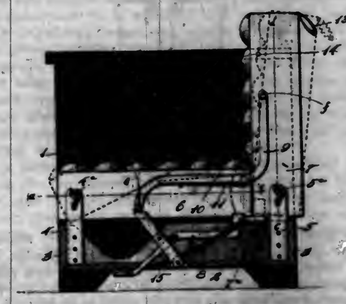
3. In a numbering machine, the combination of a pair of wheels spaced apart upon a shaft, a plurality of independent circumferentially adjustable rings upon the rim of each wheel, arbors journaled between the wheels in oppositely disposed bearings carried upon paired off rings on the two wheels, one or more numbering disks upon the arbors, and mechanism whereby the arbors are actuated to impart a partial rotation to the disks at each revolution of the wheels.

4. In a numbering machine, the combination of a pair of wheels spaced apart upon a shaft, a plurality of independent circumferentially adjustable rings upon the rim of each wheel, a plurality of equidistant journal bearings carried upon each ring, all bearings upon each wheel being in circumferential alinement around the wheel, arbors journaled in oppositely disposed bearings, one or more numbering disks upon the arbors, and mechanism whereby the arbors are actuated to impart a partial rotation to the disks at each revolution of the wheels.

5. In a numbering machine, the combination of a plurality of arbors revolving in a circular path, said arbors being arranged in sets and the arbors in one set alternating with those of the other set or sets, means for circumferentially adjusting the arbors in each set simultaneously and independently of the other set or sets, one or more numbering disks upon the arbors, and mechanism whereby the arbors as they revolve around the circle are actuated to impart consecutive partial rotations to the disks.

[Claims 6 to 10 not printed in the Gazette.]

961,445. DAVENPORT. WILLIAM W. HOPKINS, St. Louis, Mo., assignor of one-half to M. J. Ehrlich, St. Louis, Mo. Filed Oct. 19, 1909. Serial No. 523,509.



1. In a davenport, a supporting frame, seat and back portions pivotally mounted therein, and a link connected

to the back portion in front of its center line, and to said seat portion below its center line, when the parts are in position to form a davenport, whereby said seat and back portions are alternately placed in control of each other in changing from a davenport to a bed and vice versa.

2. In a davenport, a supporting frame, seat and back portions pivotally supported thereby, and a link connecting said portions in such manner that when the seat portion is lifted to be swung upwardly and outwardly, the back portion is caused to be tilted rearwardly, and then swung forwardly by said link.

3. In a davenport, a supporting frame, seat and back portions pivotally mounted therein, means for supporting the free edge of said seat portion when in its outer position, means for supporting the free edge of said back portion when in its horizontal position, and a link pivotally connected to said seat and back portions at relatively fixed pivotal points, the point of attachment of said link to said back portion being below the line of centers of the pivotal points of said seat and back portions when said parts are in horizontal alinement.

4. In a davenport, the combination of the supporting frame, back and seat portions pivotally arranged therein, a link connecting said portions, whereby when the parts are in a position to form a davenport, the rear edge of the seat may be lifted and swung forwardly and outwardly, the pivotal points of connection of said link being so located that the back portion is caused to tilt backwardly before swinging forwardly to a horizontal position, and counterbalancing devices for said parts.

5. In a "one movement" reversible davenport, a supporting frame, seat and back portions pivotally mounted therein, and a link connecting said portions whereby in moving the parts to form a bed, the seat constitutes the operating medium for the back portion, tilting the same rearwardly before moving it forwardly, and when moving said parts to form a davenport, the back portion constitutes the operating medium for the seat.

[Claim 6 not printed in the Gazette.]

961,446. MILKING DEVICE. DAVID E. HOWATT, Willoughby, Ohio. Filed Mar. 16, 1910. Serial No. 549,583.



1. A milking device, comprising a receptacle provided with an opening, a tube directed into said opening, and means closing said opening around said tube, said means being secured to the tube in fixed position but allowing movement of the tube relatively to the receptacle.

2. A milking device, comprising a receptacle provided with an opening, a tube directed into said opening, and means closing said opening around said tube, said means being secured to the tube and to the receptacle in fixed positions but allowing movement of the tube relatively to the receptacle.

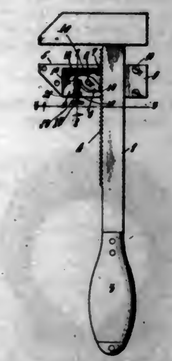
3. A milking device, comprising a receptacle provided with an opening, a tube directed into said opening, and flexible means closing said opening around said tube, said means being secured to the tube and to the receptacle in fixed positions.

4. A milking device, comprising a receptacle provided with an opening, a tube directed into said opening, and a flexible shield fixedly secured around said opening and fixedly secured to said tube.

5. A milking device, comprising a receptacle provided with an opening, a tube directed into said opening, a flexible shield fixedly secured around said opening and fixedly secured to said tube, and means for adjusting the point of attachment of the shield to the tube.

[Claims 6 to 9 not printed in the Gazette.]

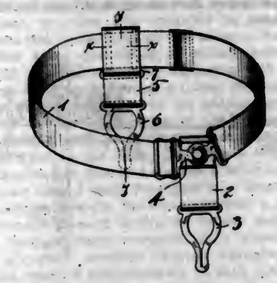
961,447. WRENCH. ARTHUR C. HOWE, Waterville, Wash. Filed June 21, 1909. Serial No. 503,450.



A quick adjusting monkey wrench comprising a shank formed with ratchet teeth, a stationary jaw at one end of the shank, a movable jaw slidable upon the shank and having a body formed with an opening and a communicating recess, a removable cover plate upon one side of the body portion of the jaw to close said opening and recess, a pawl pivoted intermediate its ends in the recess of the movable jaw and adapted to have one end engage said ratchet teeth, a spring for projecting the pawl into engagement with the ratchet teeth, apertured guide arms formed upon the side of the body of the movable jaw, a push pin slidable in said guide arms and having its inner end engaged with one end of the pawl and its outer end provided with a finger piece, a stop collar upon the push pin between said guide arms, and a coil spring upon the push pin between the collar and the innermost guide arm.

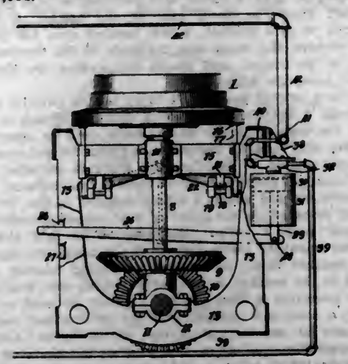
961,448. GARMENT-SUPPORTER. ERNEST N. HUMPHREY, New Britain, Conn., assignor to Traut & Hine Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Dec. 2, 1909. Serial No. 530,894.

In a garment supporter, a bolt, a depending supporting tab, a slide loop comprising a sheet metal body portion, two coöperating vertical slots arranged to slidably receive said belt, a third slot arranged transversely to the direction of the first mentioned slots and wholly below the same and arranged to receive said tab, and an integral web clenching lip arranged between the first mentioned slots and above the last mentioned slot and operating to secure one end of said tab to said frame, the balance



of said tab being carried entirely around said frame and passed through said third slot and depending therefrom.

961,449. WIRE-DRAWING BLOCK. HARRY B. HUMPHREY, Joliet, Ill., assignor to Humphrey & Sons, Joliet, Ill., a Copartnership. Filed June 21, 1907. Serial No. 380,084.



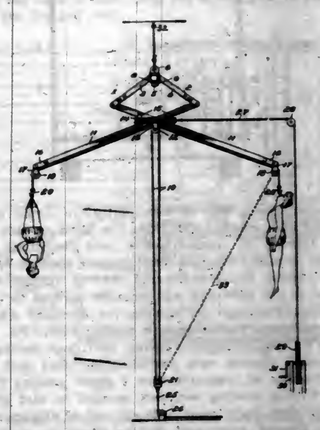
In a wire drawing block, the combination of a revoluble and vertically movable block, a vertically oscillating horizontal cradle located below and in engagement with the block and a kick-off lever located in proximity to the block and having a connection with the cradle for operating the cradle, a stop for one end of the kick-off lever, a motor cylinder in proximity to the other end of the kick-off lever, and a piston in the motor cylinder having a piston stem connected with the last named end of the kick-off lever, for permitting raising the cradle by a movement imparted to either end of the kick-off lever, the stop furnishing a fulcrum when the end of the lever at the piston stem is moved, and the piston stem furnishing a fulcrum when the opposite end of the lever is moved, substantially as described.

961,450. GYMNASTIC APPARATUS. PATRICK B. KELLY, Petersburg, Ill. Filed July 28, 1908. Serial No. 445,822.

1. A gymnastic apparatus comprising a supporting frame, means for continuously revolving the same, performer supporting cables carried by the frame and extending in opposite directions thereon, and means for simultaneously adjusting said cables independently of and with relation to the frame.

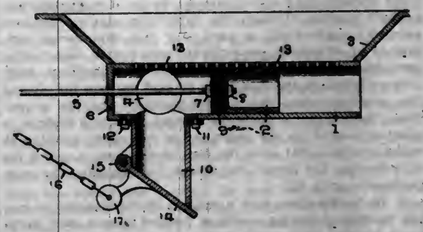
2. A gymnastic apparatus comprising a supporting frame, means for rotating the frame, pulleys carried by the frame in spaced relation, and a cable passed over each of said pulleys, said cables extending to and depending from the central portion of the frame.

3. A gymnastic apparatus comprising a frame including a supporting member, crossed arms projecting from said member, a cable wheel encircling the arms at their point of juncture, a pulley carried by the arms beneath the cable



wheel, pulleys carried by the ends of the arms, and independent performer supporting cables passed over said pulleys.

961,451. TWYER-IRON. JOHN KOLSTROM, Ryder, N. D. Filed July 19, 1909. Serial No. 508,326.

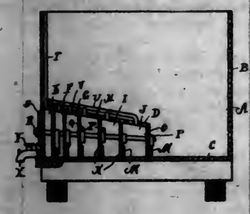


1. A hollow body portion having a piston slidably mounted therein and means to operate said piston, an opening in one end of said hollow body portion, means for supplying air pressure through said opening, an ash receptacle coöperating with said body portion, a closure for said ash receptacle, said closure comprising a lid pivotally secured to said ash receptacle and a counterweight secured to said lid, whereby said lid is normally held in a closed position.

2. A twyer iron comprising a hollow body portion having a piston slidably mounted therein, means to operate said piston, an air receiving opening in the walls of said hollow body portion and at one end thereof, a pipe entering said opening substantially at an angle of forty-five degrees, whereby the draft may be effectively directed to the outer portion of said hollow body portion, and an ash receiving receptacle and a closure therefor.

3. A hollow body portion having air discharging openings in the top thereof, a piston slidably mounted therein and means to move said piston laterally in said body portion, an opening in one end of said body portion, an air supplying pipe entering said opening at substantially an angle of forty-five degrees, whereby the draft may be effectively directed to the outer end of said hollow body portion, an ash receiving receptacle depending from said body portion at a point adjacent the closed end thereof, a closure for said ash receptacle and a means to hold said closure normally in a closed position.

961,452. LIQUID-MEASURE. SAMUEL N. KRAWCHENKO, Wilmington, Del. Filed July 28, 1909. Serial No. 510,115.



1. As a new article of manufacture, a liquid measure composed of a casing, partitions for dividing said casing into a number of compartments, said partitions having openings formed therein, a shaft passing through said partitions, closing members secured thereto, springs secured adjacent to the openings, and stoppers secured to the free ends of said springs for closing the openings when the closing members are brought in contact therewith.

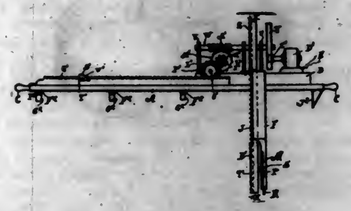
2. In a liquid measure, a casing, partitions having openings formed therein said partitions dividing said casing into a number of compartments, a shaft passing through the partitions, closing members secured to said shaft in such way that their lower ends are out of alinement, projections formed upon said closing members, springs secured adjacent to the openings, stoppers attached to the free ends of said springs for closing the openings when the closing members and the projections thereon are brought in contact with the springs, and means for supplying the compartments with air.

3. In combination with a tank, a liquid measure, a casing, partitions having openings formed therein said partitions dividing said casing into a number of compartments, a shaft passing through the partitions, closing members secured to said shaft in such way that their lower ends are out of alinement, projections formed with said closing members, springs secured adjacent to the openings, stoppers attached to the free ends of said springs for closing the openings when the closing members and the projections thereon are brought in contact with the springs, a pointer secured to the outer end of the shaft adapted to register with a dial upon the face of the tank, a spigot for withdrawing the liquid, and means for supplying the compartments with air.

4. In combination with a tank, a liquid measure, a casing, partitions having openings formed therein said partitions dividing said casing into a number of compartments, a shaft passing through the partitions, closing members secured to said shaft in such way that their lower ends are out of alinement, projections formed upon said closing members, springs secured adjacent to the openings, stoppers attached to the free ends of said springs for closing the openings when the closing members and the projections thereon are brought in contact with the springs, a pointer secured to the outer end of the shaft adapted to register with a dial upon the face of the tank, a spigot for withdrawing the liquid, an air pipe leading from the top of the tank to one of the compartments, a branch pipe, connections leading from said branch pipe to the other compartments, and valves situated in the connection and pipe leading to the compartments, for the purpose set forth.

961,453. SAWING-MACHINE. SAMUEL N. KRAWCHENKO, Wilmington, Del. Filed July 28, 1909. Serial No. 510,116.

1. In a sawing machine, a table having parallel ribbed portions formed therewith and provided with handles at both ends, a sliding block having grooves formed therein with which the ribbed portions are adapted to register, brackets secured to the block, a shaft journaled therein, means for revolving said shaft, a pulley mounted on said shaft, a hanger secured to the block having a pulley mounted on its lower end, a band saw passing over said pulleys, and means for causing said block to move along with the table.



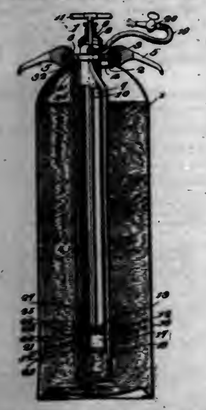
2. In a sawing machine, a table having parallel ribbed portions, a block having grooves therein adapted to slide upon the table, a hanger having arms upon its upper end, another arm upon its lower end, a flange formed upon the vertical portion of said hanger, brackets mounted upon the block, a shaft journaled therein, an internal gear mounted on said shaft, a motor secured to the block, a pinion mounted on the shaft of said motor, engaging the internal gear, a pulley also mounted on said shaft, a bracket upon the lower arm of the hanger, a pulley secured to said bracket, a saw passing over the pulleys and between the flange and the body of the vertical portion of the hanger, and means for causing the block to travel along the table.

3. In a sawing machine, a table having parallel ribbed portions, a block having grooves therein adapted to slide upon the table, a hanger having arms upon its upper end, another arm upon its lower end, a flange formed upon the vertical portion of said hanger, brackets mounted upon the block, a shaft journaled therein, an internal gear mounted on said shaft, a motor secured to the block, a pinion mounted on the shaft of said motor engaging the internal gear, a pulley also mounted on said shaft, a bracket upon the lower arm of the hanger, the edges of said bracket being dove-tailed, a sliding bearing dove-tailed to the bracket, means for adjusting said bearing, a shaft journaled in said bearing, a pulley mounted on said shaft, a band saw passing over the pulleys and between the body of the vertical portion of the hanger and the flange thereon, and means for causing the block to slide along the table.

4. In a sawing machine, a table having parallel ribbed portions, a block having grooves therein adapted to slide upon the table, a hanger having arms upon its upper end, another arm upon its lower end, a flange formed upon the vertical portion of said hanger, brackets mounted upon the block, a shaft journaled therein, an internal gear mounted on said shaft, a motor secured to the block, a pinion mounted on the shaft of said motor engaging the internal gear, a pulley also mounted on said shaft, a bracket upon the lower arm of the hanger, the edges of said bracket being dove-tailed, a sliding bearing dove-tailed to the bracket, means for adjusting said bearing, a shaft journaled in said bearing, a pulley mounted on said shaft, a band saw passing over the pulleys and between the body of the vertical portion of the hanger and the flange thereon, a rack secured to one edge of the table, brackets secured to the block, a shaft journaled in a number of said brackets, a pinion secured to said shaft adapted to engage the rack, a gear secured to said shaft, another shaft, a pinion and a gear mounted thereon, a pinion meshing with the gear on the other shaft, and a worm gear mounted on the shaft on which the first named pulley is mounted meshing with the last named gear thereby causing the block to travel along the table.

5. In a sawing machine, a table having parallel ribbed portions, a block having grooves therein adapted to slide upon the table, a hanger having arms upon its upper end, another arm upon its lower end, a flange formed upon the vertical portion of said hanger, brackets mounted upon the block, a shaft journaled therein, an internal gear mounted on said shaft, a motor secured to the block, a pinion mounted on the shaft of said motor engaging the internal gear, a pulley also mounted on said shaft, a bracket upon the lower arm of the hanger, the edges of said bracket being dove-tailed, a sliding bearing dove-tailed to the bracket, means for adjusting said bearing, a shaft journaled in said bearing, a pulley mounted on said shaft, a band saw passing over the pulleys and between the body of the vertical portion of the hanger and the flange thereon, a rack secured to one edge of the table, brackets secured to the block, a shaft journaled in a number of said brackets, a pinion secured to said shaft adapted to engage the rack, a gear secured to said shaft, another shaft, a pinion and a gear mounted thereon, a pinion meshing with the gear on the other shaft, a worm gear mounted on the shaft on which the first named pulley is mounted meshing with the last named gear thereby causing the block to travel along the table

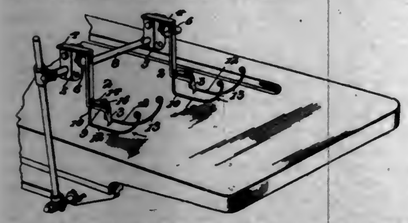
961,456. SPRAYING-MACHINE. JAMES G. MARTIN, Chicago, Ill. Filed Jan. 26, 1909. Serial No. 474,302.



1. In a spraying machine, the combination with a container, of a cap for closing the container, an air pump mounted upon the cap and extending into the container, a U-shaped pipe connected at one end to the bottom of the pump and extending up along side the pump and having its lower end extending substantially to the bottom of the container, the upper portion of said pipe being provided with a small opening, and a liquid delivery pipe extending from within the container to the exterior.

2. In a spraying machine, the combination with a container, of a cover for closing the container, an air pump mounted upon the cover and extending nearly to the bottom of the container, said air pump being provided with a projection on one side of its lower portion, a valve for controlling the flow of air from the pump mounted in the projection, a U-shaped tube connected at one end to the upper end of said projection and extending up along side the pump and having its lower end passing through the projection and extending substantially to the bottom of the container, and a liquid delivery pipe extending from within the container to the exterior.

961,457. GAGE FOR FEED-TABLES. WILLIAM F. MINNICK, Niles, Ohio, assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed May 10, 1909. Serial No. 495,047.



1. In combination with a feed-table, a support extending above and parallel with said feed-table, a plurality of pointers mounted on said support and having their lower ends pointed or reduced, and guides extending on opposite sides of each pointer forward and rearward of the reduced ends thereof.

2. In combination with a feed-table, a support extending above and parallel with said feed-table, a plurality of pointers mounted on said support and having their lower ends pointed or reduced, and a guide mounted on each pointer and extending on opposite sides thereof forward and rearward of its reduced end.

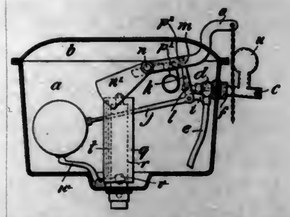
3. In combination with a feed-table, a support extending above and parallel with said feed-table, a plurality of pointers mounted on said support and having their lower ends pointed or reduced, and a guide removably secured to each pointer and extending on opposite sides thereof forward and rearward of its reduced end.

4. In combination with a feed-table, a support extending above and parallel with said feed-table, a plurality of pointers mounted on said support and having their lower ends pointed or reduced, each pointer having an off-set above its reduced end, and a guide secured to the off-set of each pointer and extended on opposite sides thereof forward and rearward of its reduced end.

5. In combination with a feed-table, and a support extending above and parallel with said feed-table, a pointer depending from said support and terminating in a pointed or reduced end, means for adjustably securing the pointer to said support, and a guide carried by the pointer and extending forward and rearward of its reduced end on opposite sides thereof.

[Claim 6 not printed in the Gazette.]

961,458. FLUSHING-TANK. FREDERICK JOHN MORGAN, Maidenhead, England. Filed Aug. 9, 1909. Serial No. 512,010.



1. In a flushing tank, a weighted chain lever, an inlet valve, interengaging means connected respectively with the inlet valve and the weighted chain lever, arranged to inter-engage when the lever is pulled down and to open the inlet valve when the chain is released, and means operated by the water in the tank for closing the valve.

2. In a flushing tank, a weighted chain lever, an inlet valve provided with a spindle, a counterbalanced pawl carried by the weighted lever, a hook carried by the valve spindle in position to be engaged by the pawl when the chain end of the weighted lever is pulled down and to open the valve when the chain is released, and means under the control of the water in the tank for closing the valve.

3. In a flushing tank, a weighted chain lever, a counterbalanced pawl carried by the lever, an inlet valve provided with a spindle, a hook carried by the spindle in position to be engaged by the pawl when the weighted lever is pulled down and to operate the spindle when the chain is released, and a float connected with the hook for releasing the hook from the pawl when the water rises in the tank and to close the inlet valve when the water falls.

961,459. LIFE-RAFT. WILLIAM S. RAY, San Francisco, Cal., assignor to W. S. Ray Manufacturing Co., San Francisco, Cal., a Corporation of California. Filed Nov. 8, 1909. Serial No. 526,779.

1. A life-raft comprising parallel hollow cylinders each formed with parallel horizontal flanges along its inner side, a diaphragm extending horizontally across each of the cylinders and dividing the same into upper and lower compartments, said diaphragm extending through the inner side of the cylinder between the horizontal flanges of the latter, and secured to said flanges, and connections between the cylinders.

2. The combination in a life-raft of air-tight cylinders composed of continuous single sheets with edges flanged and extending outwardly along the inner sides of the cylinders, horizontal diaphragms in the cylinders having side edges extending between said flanges, and secured thereto, decks between opposite cylinders, and bolts passing through the decks and said flanges.



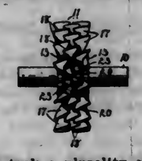
3. The combination in a life-raft of cylinders composed of single sheets of metal bent to form, having contiguous edges with integral flanges projecting parallel with each other, and means engaging the flanges to secure a deck frame between said flanges.

4. The combination in a life-raft, of spaced cylinders each formed of single sheets of metal with the contiguous edges disposed along the inner side of the cylinder and outwardly flanged, the flanges of one cylinder projecting toward those of the opposite cylinder, and an intermediate deck frame bolted to said flanges.

5. The combination in a life raft, of cylindrical floats each formed of continuous sheets with the adjacent edges turned outwardly to form horizontal flanges along the inner sides of the floats, a horizontal diaphragm secured in and dividing each float into upper and lower compartments, said diaphragm having one edge extended through the inner side of the float and between the flanges thereof, and tie plates secured to and uniting the flanges of opposite floats.

[Claims 6 to 10 not printed in the Gazette.]

961,460. EMERY-WHEEL DRESSER. WILBER D. REARWIN, Chicago, Ill., assignor to Frank W. Moser, Chicago, Ill. Filed Mar. 27, 1908. Serial No. 423,630.



1. In a dressing tool, a plurality of cutting members, each consisting of a disk of sheet metal having twisted radial teeth and said disks so arranged that the teeth of one are staggered with the teeth of the next adjacent disk substantially as shown, and means for holding said disk in operative arrangement.

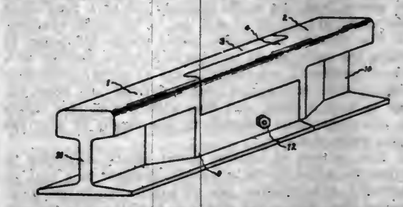
2. In a dressing tool, a plurality of rotatable cutting disks having radial integral teeth arranged so that the plane of the cutting edges of the teeth of one disk intersect with the plane of the cutting edges of the adjacent disk to form a continuous cutting surface across the assembled disks.

3. In a dressing tool, a plurality of rotatably mounted disks, each disk having radial teeth, and each tooth twisted on its axis, and means arranged between said disks and adapted to engage said teeth, to prevent independent rotation of the respective disks.

4. In a dressing tool, a plurality of rotatably mounted disks, each disk having radial teeth and each tooth twisted on its axis, and means for preventing independent rotation of said disks, said means consisting of washers having portions engaging said teeth.

5. In a dressing tool, a plurality of rotatably mounted sheet steel disks cut and bent to form radial teeth having their cutting edges extending transversely of the plane of the disk, and washers arranged between said disks and having radial teeth interlocking with some of the teeth of the cutting disks.

961,461. RAILWAY-RAIL JOINT. ALBERT CLEVELAND RICHEY, Pueblo, Colo., assignor of one-third to J. W. Kennedy and one-third to John La Motte, Pueblo, Colo. Filed Aug. 25, 1908. Serial No. 450,209.

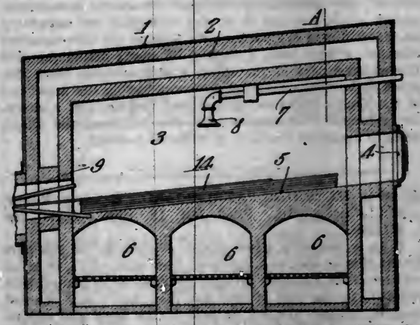


1. In a railway rail joint of the character described, the web of the rails thickened at each end, on one end of a rail a gain in the top and one side of rail, at same end of rail diagonally opposite last named gain and in bottom and side of rail another gain, the remaining portion of top and bottom of rail surrounding said gains connected by remaining portion of solid metal, in end of another rail arms that engage and register in said gains and with the top and bottom of portion of rail adjacent to said gains, a slot between said arm engaging the solid portion between said gains on end of other rail, all substantially as set forth.

2. In a rail joint the combination with a rail having superposed laterally offset tongues, the upper tongue being flush with the upper surface of the rail and said tongues being spaced apart throughout their lengths; of a second rail having laterally offset superposed tongues insertible into position opposite the corresponding tongues of the other rail, there being an integral web connecting the tongues on said second rail and insertible into the space between the tongues of the first mentioned rail.

3. A rail having the web thereof thickened at each end, and superposed laterally offset tongues extending from each end of the rail and having their outer faces flush with the corresponding faces of the adjoining portion of the rail, the corresponding tongues at the two ends of the rail being out of alinement, the tongues at one end of said rail being spaced apart longitudinally, there being a connecting web between the tongues at the other end of the rail, said tongues and their connecting web being of the same area as the spaces at the sides of and between the tongues at the other end of the rail.

961,462. PROCESS OF TREATING METAL SHEETS. AMBROSE RIDD, Newport, Ky. Filed June 14, 1909. Serial No. 502,087.



1. The process of treating metal sheets consisting in heating the metal sheets, while on edge and in separated relation one to the other, in a bath of practically non-oxidising gas, and then withdrawing said sheets one by one from the heating zone while maintaining them in a bath of non-oxidising gas.

2. The process of treating metal sheets consisting in heating the metal sheets in a muffle chamber in a bath of practically non-oxidising gas at super-atmospheric pressure while said sheets are on edge, and then withdrawing said sheets from the muffle chamber one at a time while maintaining the supply of said gas in the muffle chamber.

3. The process of treating metal sheets consisting in heating the metal sheets on edge in a muffle chamber in a bath of practically non-oxidising gas at super-atmospheric pressure, then laying said sheets flatwise one upon another to form a stack, and then withdrawing said sheets one at a time while maintaining the supply of said gas in the muffle chamber.

4. The process of treating metal sheets consisting in heating the metal sheets in a muffle chamber in a bath of practically non-oxidising gas at super-atmospheric pressure and then feeding the sheets to finishing rolls through a bath of hot non-oxidising gas exterior to the muffle chamber to prevent over-oxidation of the sheets and to maintain their temperature as they pass to the rolls.

5. The process of treating metal sheets consisting in heating the sheets in a muffle chamber in the presence of practically non-oxidising gas at super-atmospheric pressure, then passing the sheets from the muffle chamber to the finishing rolls through hot non-oxidising gas, and then cooling the sheets after passing the finishing rolls in an atmosphere of non-oxidising gas.

[Claim 6 not printed in the Gazette.]

961,463. HOOK ATTACHMENT FOR HARNESS AND HEDDLE-FRAMES. LOUIS ROBIDOUX, Providence, R. I., assignor of one-half to Albert J. Berard, Providence, R. I. Filed Aug. 30, 1909. Serial No. 515,135.



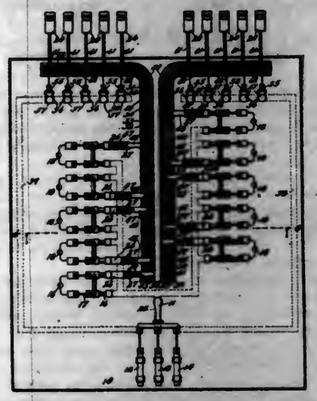
The herein described harness-hook connection for heddle-frames, the same consisting of a metal strap or clip having a tapped head part and a pair of laterally separated parallel side members d^1, integral therewith, each terminating at its free end in an eye or loop, a pin removably mounted in said eye portions for locking the side members together, a wire hook, e, having its shank fitting the said tapped head part of the strap, a non-revoluble block disposed between the said side members having the inner end of the hook's shank swivel-mounted therein, and a check-nut arranged to coöperate with the said head and shank so as to maintain the hook in adjusted position.

961,464. METERING PANEL-BOARD. HARRY A. ROBINSON, Chicago, Ill. Filed Jan. 18, 1908. Serial No. 411,389.

1. In a metering panel board, a plurality of bus bars placed side by side and insulated from each other, an adjacent terminal, a slotted bridge piece adapted to connect said terminal to any one of said bus bars, and a pin adapted to pass through the slot in said bridge piece and adjustably secure said bridge piece to said terminal.

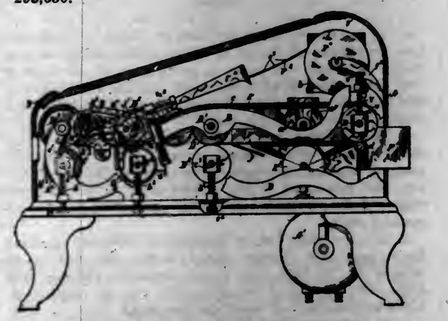
2. In a metering panel board, a plurality of bus bars placed side by side and insulated from each other, an adjacent terminal, a bridge piece slotted in its portion adjacent to said terminal to fit over said terminal, means for detachably connecting said bridge piece to said terminal, and means for detachably securing the opposite end portion of said bridge piece in selected engagement with any desired adjacent bus bar.

3. In a metering panel board, a plurality of bus bars placed side by side, insulating material between the bus bars extending beyond their edges, a bridge piece having one end adapted to go in between two adjacent projecting pieces of insulating material and connect with a selected bus bar, an adjacent terminal, and means for adjustably securing said bridge piece to said terminal.



4. In a metering panel board, a set of parallel bus bars, pieces of insulating material between said bars rising to a greater height than said bus bars, a terminal located at the side of said bus bars, and a rigid conductor bar adjustably secured to said terminal and having its end bent downward so as to pass down between said pieces of insulating material to reach and contact the different bus bars as selected.

961,465. ENVELOP SEALING AND STAMPING MACHINE. JOSEPH J. SCHRAMACK, Chicago, Ill., assignor, by direct and mesne assignments, to Detroit Mailing Machine Company. Filed Jan. 11, 1906. Serial No. 295,630.



1. An envelop sealing and stamping machine, comprising moistening and sealing means at one end of the machine, moistening and stamping mechanism at the opposite end of the machine, said latter mechanism automatically operated by the envelop passing through the machine, substantially as described.

2. In an envelop sealing and stamping machine, comprising moistening and sealing mechanism at one end of the machine, moistening and stamping mechanism at the opposite end of the machine, said stamping mechanism automatically operated by the envelop passing through the machine, and means for locking said stamping mechanism against operation at predetermined intervals, substantially as described.

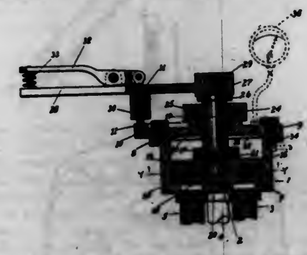
3. In an envelop sealing and stamping machine, the combination of the moistening and sealing mechanism, opening and closing flap guides in proximity to either side of the moistening mechanism, and stamping mechanism at the rear of the sealing mechanism.

4. In an envelop sealing and stamping machine, the combination of the moistening cone, opening and closing flap guides in proximity to either side of said moistening cone, a cone having a corrugated surface supported at right angles to said moistening cone and between the aforesaid flap guides, substantially as described.

5. In an envelop sealing and stamping machine, the combination of the moistening and sealing mechanism, opening and closing flap guides in proximity to either side of the moistening mechanism, sealing rollers mounted in bearings adjacent to said moistening mechanism, and means for stamping said envelops after they have passed through the sealing rollers, substantially as described.

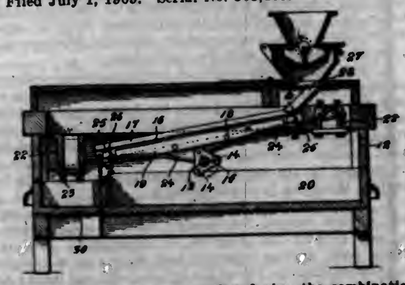
[Claims 6 to 53 not printed in the Gazette.]

961,466. VALVE. THEODORE SHADE, Sacramento, Cal., assignor to Lightning Valve and Dredge Company, Stockton, Cal. Filed Dec. 21, 1908. Serial No. 468,570.



A valve comprising in combination a casing having a removable cap on its upper side and four ports in its lower side, a valve seated in said casing and having ports adapted to communicate said ports in said lower side with each other as desired, said valve having a central orifice in its upper side, an upwardly projecting flange disposed on said valve around said orifice, a valve stem projecting through said cap and into said orifice, a pin projecting through said flange and said stem, and an operating handle on said stem.

961,467. VIBRATING SCREEN OR SEPARATOR. THOMAS LEGGETT STURTEVANT, Quincy, and THOMAS JOSEPH STURTEVANT, Wellesley, Mass., assignors to Sturtevant Mill Company, a Corporation of Maine. Filed July 1, 1909. Serial No. 505,409.



1. In a screening or separating device, the combination with a screening or separating member, of a spring-controlled vibrator for said member consisting of a member normally in a state of equilibrium and one end of which is secured to a fixed support and adapted to act at its free end on said screening or separating member, and rotating means, acting directly on said vibrator, for displacing or flexing and suddenly releasing the same, so that, when suddenly released, after its free end has been flexed or displaced, it will perform a series of short, rapid vibrations due to spring action.

2. In a screening or separating device, the combination with a screening or separating member, and springs for holding the same under elastic tension, of a vibrator for said screening or separating member consisting of a spring-controlled member normally in a state of equilibrium and one end of which is secured to a fixed support and which is adapted to act at its free part on said screening or separating member, and rotating means, acting directly on said vibrator, for displacing or flexing and suddenly releasing the same, so that, when suddenly released after it has been flexed or displaced, it will perform a series of short rapid vibrations due to spring action.

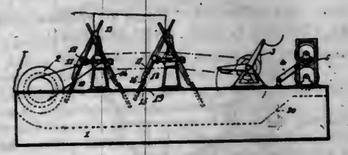
3. In a screening or separating device, the combination with a screen member, of a vibrator for said screen member consisting of a resilient body one end of which is rigidly attached to a fixed support and which body is adapted to act at its free part on said screen member, and rotating means, acting directly on said vibrator, for flexing and suddenly releasing the same to cause it to perform a series of rapid vibrations of small amplitude to agitate said screen member.

4. In a screening or separating device, the combination with a screen member, of a vibrator for said member consisting of a resilient body having fixed and free ends, and which body is provided with an independent contact or impact part to act on said screen member, and rotating means, acting directly on said vibrator, for flexing and suddenly releasing the free end thereof to cause said vibrator to perform a series of rapid vibrations of small amplitude.

5. In a screening or separating device, the combination with a screen member, of a vibrator for said member consisting of a resilient body having fixed and free ends, and which body is provided with an independent contact or impact part to act on said screen member, and rotating means, acting directly on said vibrator, for flexing and suddenly releasing the free end of the same to cause it to perform a series of rapid vibrations of small amplitude, said rotating means comprising a series of spaced rollers acting successively on said resilient body.

[Claims 6 to 24 not printed in the Gazette.]

961,468. APPARATUS FOR REMOVING THE GREASE AND YOLK FROM WOOL. ROBERT VANDATTE and BENONI LAGYE, Antwerp, Belgium. Filed Jan. 14, 1910. Serial No. 538,159.



1. An apparatus for cleaning wool comprising in combination, a vat connected with one pole of an electric circuit and provided with a perforated false bottom and adapted to contain a liquid, means for immersing the wool in said vat, means connected with the other pole of said circuit for engaging the immersed wool and advancing the same in said vat, means for elevating the advanced wool, and means located in receiving relation with said elevating means for conveying the elevated wool, substantially as and for the purpose set forth.

2. An apparatus for cleaning wool comprising in combination, a vat adapted to contain a liquid and connected with one pole of an electric circuit, means for immersing

the wool in said vat, said vat being connected with one pole of the electric circuit, means connected with the other pole of said circuit for engaging the immersed wool and advancing the same in said vat, and means for elevating the advanced wool from said vat, substantially as and for the purpose set forth.

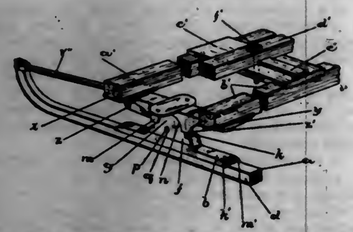
3. An apparatus for cleaning wool comprising in combination, a vat connected with one pole of an electric circuit, means for immersing the wool in said vat, and means connected with the other pole of said circuit for engaging the immersed wool and advancing the same in said vat.

4. An apparatus for cleaning wool, comprising in combination, a vat connected with one pole of a circuit and adapted to contain a liquid, and means connected with the other pole of said circuit and engaging the wool in said vat to advance the same, substantially as and for the purpose set forth.

5. An apparatus for cleaning wool comprising in combination, a vat connected with one pole of an electric circuit and adapted to contain liquid, and a plurality of devices each connected with the other pole of said circuit for successively engaging and advancing the wool in said vat, substantially as and for the purpose set forth.

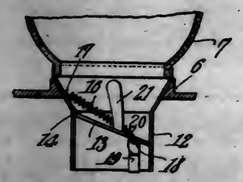
[Claims 6 to 8 not printed in the Gazette.]

961,469. SLEIGH. WILLIAM WALPOLE, Oxenden, Ontario, Canada. Filed Sept. 13, 1909. Serial No. 517,532.



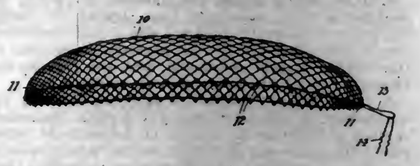
In a sleigh in combination, a runner, a sleigh knee consisting of a base attached lengthwise to the runner and having side flanges engaging the outer surfaces of the side faces of the runner, and two upwardly extending rockers, a bench bed having a downwardly extending rocker to enter the unoccupied space between the rockers of the base, and bench plates attached crosswise of the bench arm, the cross beams being supported on the arms of the bench plate, a hinge member at the front end of the bench arms, and a stay rod pivotally connected to the hinge member and to the runner.

961,470. CRACKER-JAR. HIRAM C. WARREN, Clearfield, Pa. Filed Jan. 5, 1910. Serial No. 536,471.



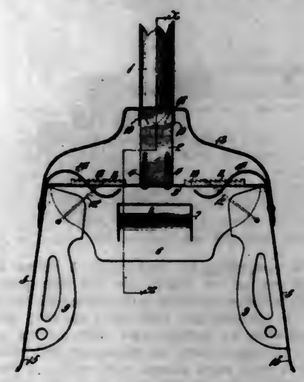
In a device of the class described, a container, a discharge hopper leading from the lower end to the container, a closure hinged within said hopper and of slightly less diameter than the said hopper, a spring connected to the closure and normally holding the same elevated, and a handle comprising a strip secured to the under side of the closure and projecting downwardly therefrom and thence bent to extend beneath and in engagement with the lower end edge of the hopper, the said strip being thence bent to extend upwardly beside the hopper and finally bent to project laterally to afford a finger piece, the engagement of the handle with the lower end edge of the hopper serving to limit the upward movement of the said closure.

961,471. HAIR-NET. PHILIPPE WEILL, New York, N. Y. Filed Feb. 11, 1910. Serial No. 543,238.



A hair net comprising an oblong strip formed of large meshes, a small meshed selvage at each end of said strip, and a draw string passing through the large meshes of the oblong strip and through the small meshes of the selvage.

961,472. BROOM-HOLDER. STEPHEN G. WILSON, Philadelphia, Pa. Filed Jan. 18, 1908. Serial No. 411,541.



1. In a broom body holder, a handle, laterally movable arms, supports connecting the arms with the handle, latches locking said arms in adjusted position and springs bearing against the top of the broom body and connected with said supports, said arms engaging with the broom body to prevent longitudinal movement of the broom body in the holder.

2. In a broom body holder, a handle, a frame engaging said handle and provided with side wings, spring jaws upon said side wings for engagement with the sides of the broom body, movable arms for engagement with the edges of the broom body, and means for normally retaining said arms in engagement with the broom body.

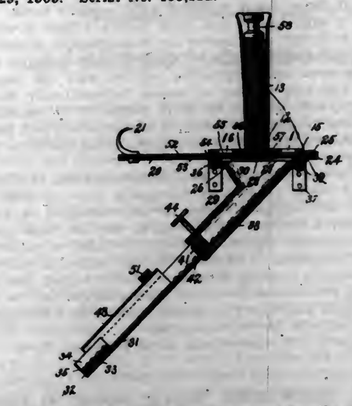
3. In a broom body holder, a handle, a frame mounted on said handle and provided with side wings, springs on said wings for pressing against the broom body, movable arms on said frame for engagement with the body provided with means to prevent longitudinal movement of the body, springs connected with said arms and in position to be engaged by the top of the broom body, and means for holding the arms in closed position.

4. In a broom body holder, a handle, a transverse support secured thereto, transversely movable arms attached to said support and adapted for engagement with the broom body, springs engaging said arms and in position to press against the top of the broom body, and means for retaining the arms against outward movement.

5. In a broom body holder, a handle, a support engaging said handle, movable arms mounted on said support and provided with slots for engagement with projections upon the edges of the broom body, springs for engagement with the top of the broom body, and means for locking the arms in their inner position.

[Claims 6 and 7 not printed in the Gazette.]

961,473. MACHINE FOR COUNTING AND PACKAGING COINS. AUGUSTUS ABBOTT, Seattle, Wash. Filed May 29, 1909. Serial No. 499,112.



1. In a counting and packaging machine, the combination of a magazine to hold coins, a longitudinally movable counter operating beneath such magazine, said counter provided with an elongated opening having projections within said opening which conform to the circumference of a coin, by means of which coins are transferred from the magazine to the trough by the movement of the counter in either direction, means for arresting each coin as transferred and enmassing the bulk, means for releasing said mass of coins and a retaining device for catching and holding said coins enmassed when released.

2. In a counting and packaging machine, the combination of an upwardly extending magazine having elongated openings, a longitudinally movable counter operating beneath such magazine, said counter provided with an elongated opening having projections within said opening which conform to the circumference of a coin, by means of which coins are transferred from the magazine to the trough by the movement of the counter in either direction, means for arresting each coin as transferred and enmassing the bulk, a spring latch to release the mass of coins, and a retaining device for catching and holding said coins enmassed when released.

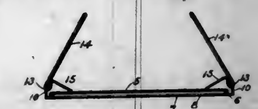
3. In a counting and packaging machine, the combination of an upwardly extending magazine, the lower end of which extends to the counter, a longitudinally movable counter having a series of cavities or apertures which intersect one another, said cavities or apertures being in alinement with the lower end of said magazine, whereby a predetermined number of coins may be transferred from the magazine one after another in succession at each movement of the counter, one or more fingers to arrest the coins so transferred, and means for releasing the mass of coins so arrested, and a retaining device to catch and hold said coins when so released.

4. In a counting and packaging machine, the combination of a magazine for the coin, the lower end of which extends close to the face of the counter, a longitudinally movable counter having a series of cavities or apertures forming an elongated slot, said cavities extending in the direction of the movement of the counter whereby a predetermined number of coins may be discharged by the movement of the counter in either direction, a suitable trough provided to catch coins discharged by either a forward or backward movement of the counter, fingers extending into said trough, means for depressing said fingers, said trough provided at its lower free end with a gage for the wrapper, and a coin retainer for placing the coin in proper position within the same.

5. In a counting and packaging machine the combination of a magazine for the coins, a counter having means for discharging coins on each stroke of the same, a base formed with openings separated by a web which supports the coins whereby the coins as dislodged from said base by the counter are discharged through one or the other of such openings, a trough having a flaring upper end that incloses the said openings, the lower end of said trough having means to properly position a wrapper by means of the projection and the notch, means for securing a coin retainer in position so that the same will position the coins within such wrapper.

[Claims 6 to 8 not printed in the Gazette.]

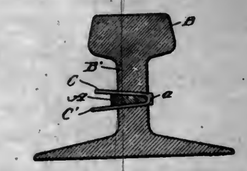
961,474. CULINARY UTENSIL. GEORGE ALLEN ALLSOPP, Brockton, Mass. Filed July 12, 1909. Serial No. 507,050.



1. The combination with a supporting frame having edges forming guides and a stop, and plate holding means pivotally mounted thereon of a foraminous plate adapted to be slidably mounted on said frame and to be engaged by said holding means.

2. The combination with a frame having openings in its bottom and upwardly extending ends, and handles pivotally mounted on said ends and having inwardly extending holding blades, of a flat foraminous plate adapted to be received between said ends as and for the purpose described.

961,475. BONDING-PIN. LEVI S. BACON, Washington, D. C., assignor to The Railroad Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 27, 1905. Serial No. 284,745.



1. A bonding pin having a plurality of longitudinal grooves and a transverse groove across one end thereof and connecting the longitudinal grooves together.

2. A bonding pin having a pair of grooves connected by a transverse groove across one end of the pin.

3. The combination with a relatively large conductor having an opening therein, a bonding pin tightly engaging the surface around the opening in the large conductor and having connected channels extending longitudinally thereof and across one end, and a small conductor partially surrounding said pin and arranged in said channels.

4. The combination with a relatively large conductor having an opening therein, a bonding pin driven into said opening, said bonding pin having channels extending longitudinally on opposite sides thereof and a connecting channel across one end, and a small conductor looped about said bonding pin and lying within said channels.

5. The combination with a relatively large conductor having an opening therein, a tapered bonding pin driven into said opening, said bonding pin having longitudinally extending channels on opposite sides thereof and a con-

necting channel across the smaller end, and a small conductor looped about said pin and lying within said channels.

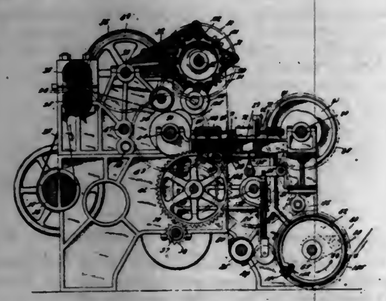
[Claim 6 not printed in the Gazette.]

961,476. HAIR-NET. JULIUS BAER, New York, N. Y. Filed Feb. 8, 1910. Serial No. 542,659.



A hair net made of bag like form and comprising a small meshed cap-like apex, an annular large meshed central section, and a small meshed annular contractile rim.

961,477. WIRE-FENCE MACHINE. WILLIAM M. BIRCH and CHARLES E. BIRCH, Crawfordsville, Ind. Filed Nov. 29, 1909. Serial No. 530,410.



1. In a wire fabric machine, the combination with means for supporting a plurality of running-wires, of a plurality of loop-forming mechanisms each comprising portions adapted to engage a running-wire and form a pair of oppositely extending loops therein, and pulling mechanism arranged to intermittently pull upon the looped running-wires to tighten said loops about a stay-wire extending therethrough.

2. In a wire fabric machine, the combination with means for supporting a plurality of running-wires, of a plurality of loop-forming mechanisms each comprising portions adapted to engage a running-wire and form a pair of oppositely extending loops therein, stay-wire feeding mechanism adapted to deliver the stay-wire through the loops of the running-wires, and pulling mechanism arranged to intermittently pull upon the looped running-wires to tighten said loops about a stay-wire extending therethrough.

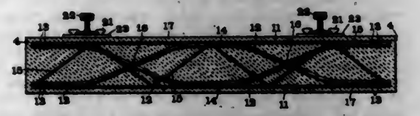
3. In a wire fabric machine, the combination of a plurality of looper heads each provided with members formed to engage a running-wire and form therein a pair of oppositely extending loops, means for intermittently operating said looper heads, means for intermittently bringing the running-wires into coöperative relation with the looper heads, and pulling mechanism to intermittently pull upon the running-wires to draw the loops therein upon the inserted stay-wire.

4. In a wire fabric machine, the combination of a plurality of looper heads provided with members formed to engage a running-wire and form therein a pair of oppositely extending loops, means for intermittently operating said looper heads, means for intermittently bringing the running-wires into coöperative relation with the looper heads, stay-wire feeding mechanism intermittently delivering stay-wire through the loops formed in the running-wires, and pulling mechanism to intermittently pull upon the running-wires to draw the loops therein upon the inserted stay-wire.

5. In a wire fabric machine, the combination of a plurality of looper heads, each comprising a rotary body, a pair of wire-engaging fingers movably mounted on said body, and a plunger for controlling the movement and position of said fingers; means for bringing a running-wire into coöperative relation with said fingers, means for intermittently rotating the looper head to form a loop or loops in the running-wire, and pulling mechanism to intermittently pull upon the running-wires to draw the loops therein upon an inserted stay-wire.

[Claims 6 to 31 not printed in the Gazette.]

961,478. RAILWAY-TIE. JOHN P. BOOGHER, St. Louis, Mo. Filed Aug. 25, 1909. Serial No. 514,477.



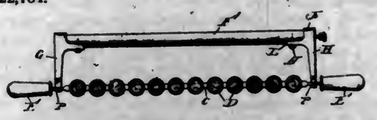
1. In a railway tie, the combination with a perforated metallic casing conforming substantially to the exterior of the tie, of rail-securing devices, a metallic reinforcing bar having its ends in contact with the upper part of said casing and its central part bent down in contact with the lower part of said casing, a second reinforcing bar having its ends in contact with the lower part of said casing and its central part bent up into contact with the upper part of said casing, said reinforcing bars crossing at points between said rail-securing devices, and a bed of concrete embedding said casing and reinforcing bar.

2. In a railway tie, the combination with a perforated metallic casing conforming substantially to the exterior of the tie, of rail-securing devices, a metallic reinforcing bar having its ends in contact with the upper part of said casing and its central part bent down in contact with the lower part of said casing, a second reinforcing bar having its ends in contact with the lower part of said casing and its central part bent up into contact with the upper part of said casing, said reinforcing bars crossing and being connected at points between said rail-securing devices, and a bed of concrete embedding said casing and reinforcing bars.

3. In a railway tie, the combination with a body of concrete, of metallic reinforcements therefor, and a pair of metallic uprights embedded in each end of said tie, each of said uprights being provided with a slightly twisted bore of angular cross section extending from one side of the tie to the other, and spikes adapted to coöperate with either end of said uprights and engaging with the bore thereof.

4. In a railway tie, the combination with a body of concrete of metallic reinforcements therefor, a pair of metallic uprights embedded in each end of said tie, each of said uprights being provided with a slightly twisted bore of angular cross section extending from one side of the tie to the other, the uprights of each pair being connected by integral cross bars, and spikes adapted to coöperate with either end of the uprights and to engage with the bore thereof.

961,479. MASSAGE DEVICE. SYLVANUS F. BOWSER, Fort Wayne, Ind. Filed Aug. 31, 1904. Serial No. 222,784.



1. A massage device including a series of rollers suitably journaled and arranged to form a roller rubbing surface, flexible connections between said rollers, permanent hand-pieces formed at the ends of said device, and a detachable handle connected to said device at the ends thereof.

2. In a massage device, a plurality of rollers arranged in parallel relation, and flexible connections between said rollers, in combination with a hand-bar having angle-arms arranged to engage said device at the ends thereof, one of said angle-arms being adjustable.

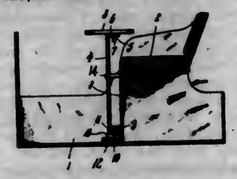
3. In a massage device, a plurality of rollers arranged in parallel relation to form a roller rubbing surface, and link connections between said rollers to secure flexibility of the device, hand-pieces having yokes, suitably connected to the end rollers of the series, a hand-bar having angle-arms, said arms arranged to engage the yokes of said hand-pieces, one of said angle-arms being adjustable, whereby said hand-piece is detachable.

4. In a massage device, a series of rollers arranged in parallel relation, supporting pins therefor, sleeves in which said pins are journaled to freely rotate, links pivotally connecting the sleeves of adjacent rollers, and a hand-bar having detachable devices for connection with the end rollers of the series.

5. A massage apparatus comprising a series of rubbing devices, flexible connections for said rubbing devices, and a detachable handle operatively related to the connections for maintaining a tension thereon, said handle being spaced from the rubbing devices and located in a plane parallel thereto.

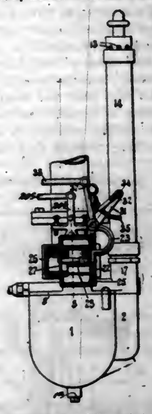
[Claims 6 to 13 not printed in the Gazette.]

961,480. SUPPLEMENTARY VEHICLE-SEAT. FREDERICK F. BERRIHAN, Bartlett, Tex. Filed Apr. 29, 1908. Serial No. 429,969.



The combination with a vehicle body, its seat and front board, of a support mounted at the top of said board provided with an opening therethrough, a block held on the vehicle floor directly beneath the support, said block being provided with an offset portion, a horizontal recess in the base above said offset portion, and a vertical recess in the offset portion in spaced relation to the base, a post provided with a laterally bent lower end adapted to pass through the support and enter the horizontal recess, a seat upon the upper end of said post, and a spring-pressed plunger held in the vertical recess in contact with the post end to hold said post end in the horizontal recess, said plunger being arranged to be pushed down out of contact with the post end and permit the withdrawal thereof from the horizontal recess.

961,481. CARBURETER. WILLIAM C. CARTER, St. Louis, Mo. Filed Aug. 31, 1908. Serial No. 451,017.



1. A carbureter provided with a jet tube having its upper end closed and its lower end communicating with a supply of liquid fuel, said tube being provided intermediate its ends with a number of open eduction ports located at different levels, and means for causing a current of air to pass downwardly adjacent said tube so as to create a partial vacuum therein and thus cause the fuel to rise automatically in said tube and pass laterally through the ports therein, the quantity of fuel that emerges from said jet tube varying automatically.

2. A carbureter having a jet tube that is provided intermediate its ends with a plurality of eduction ports that are always open and which are located at different levels, means for supplying liquid fuel to the lower end of said jet tube, and means for causing air to pass downwardly around said tube and thus vaporize the fuel that rises in said tube and emerges from the ports therein when a suction is created in the mixing chamber of the carbureter, the level of the fuel in said tube varying automatically as the suction in the mixing chamber varies.

3. A carbureter comprising a vertically disposed jet tube having its upper end closed, said tube being provided with a number of fine perforations or holes located in different horizontal levels or in different horizontal planes, means for supplying liquid fuel to the lower end of said tube, a member which surrounds said jet tube to form an air passageway, the upper end of said member being open to the atmosphere, and a mixing chamber communicating with the lower end of said member so that air will be drawn downwardly through said member when a suction is created in the mixing chamber, the air that is drawn down through said member causing the fuel to rise automatically in the jet tube and escape through the ports therein and thus be vaporized by said air.

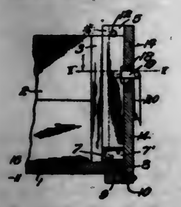
4. A carbureter comprising a mixing chamber, a float chamber adapted to contain liquid fuel, a jet tube communicating with said float chamber and having its upper end closed, said tube being provided with a plurality of eduction ports located at different levels that permit the fuel in said tube to escape laterally in the form of a fine spray or plurality of jets, and a member surrounding said jet tube to form an air passageway, the lower end of said member being in communication with the mixing chamber and the upper end of said member being so constructed that air can enter same and travel downwardly into the mixing chamber when a suction is created in said mixing chamber, said downwardly rushing air causing a partial vacuum to be created in the jet tube and thus causing the liquid fuel to rise and fall in said tube as the suction in the mixing chamber varies.

5. A carbureter comprising a mixing chamber, a float chamber, a vertically disposed jet tube having its upper

end closed and its lower end communicating with the float chamber so as to receive fuel therefrom, said tube being provided intermediate its ends with a number of fine perforations located at different levels, and an approximately tubular-shaped member surrounding said jet tube and having its upper end open to the atmosphere, the lower end of said member communicating with the mixing chamber so that air will flow downwardly around the jet tube when a suction is created in the mixing chamber and thus create a partial vacuum in the jet tube which causes the fuel to rise therein and escape through said perforations.

[Claims 6 to 20 not printed in the Gazette.]

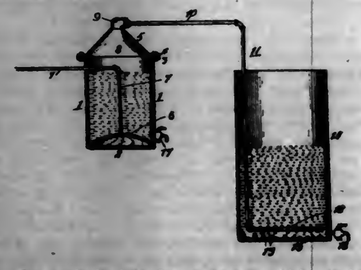
961,482. SHOVELING-BOARD. AMOS B. CLIPPINGER and MAURICE A. CLIPPINGER, Kansas City, Mo. Filed July 19, 1909. Serial No. 508,455.



1. In combination with a wagon body having grooves for the reception of an ordinary end gate; vertical stiles seated in said grooves, and an angle-bar having its ends secured to the lower parts of said stiles and lying upon the rearmost upper surface of the wagon bed, said angle bar having its vertical flange contacting the rear end of the wagon bed, and a crosspiece secured to the depending flange of said angle bar and projecting at both ends beyond the sides of the wagon body.

2. In combination with a wagon body having grooves for the reception of an ordinary end gate; vertical stiles seated in said grooves, and an angle-bar having its ends secured to the lower parts of said stiles and lying upon the rearmost upper surface of the wagon bed, said angle bar having its vertical flange contacting the rear end of the wagon bed, a cross piece secured to the depending flange of said angle bar and projecting at both ends beyond the sides of the wagon body, a movable end board adapted to rest uprightly upon said crosspiece, side pieces secured to said board and adapted to overlap the sides of the wagon body, and downward projections on said side pieces, adapted to set in front of the ends of said crosspiece.

961,483. PROCESS OF MANUFACTURING BUTTER. WALTER COLE, Chicago, Ill. Filed June 17, 1907. Serial No. 379,387.



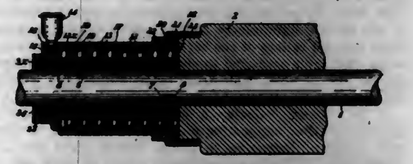
1. The method of producing butter, which consists in treating cream when in a state of lactic fermentation to a current of air at a temperature to produce alcoholic fermentation, and in automatically reducing the temperature of the air during such fermentation, substantially as described.

2. The method of producing butter, which consists in treating cream when in a state of lactic fermentation to a current of air at a temperature to produce alcoholic fermentation, the temperature of said current of air being automatically reduced during such treatment by passage through a body of water which gradually cools, substantially as described.

3. In a device for the manufacture of butter, the combination of a tank for containing water, means for passing a current of air through said water, an air connection from said tank to a fermentation chamber, and means for causing the air to pass up through the liquid in the fermentation chamber, substantially as described.

4. In a device for the manufacture of butter, the combination of a water tank, means for passing a current of air through the water in said tank, thereby raising the temperature of the air to that of the water, an air connection from said water tank to the fermentation chamber, and means for causing the air to pass up through the liquid in the fermentation chamber, substantially as described.

961,484. SHAFT-PACKING. CHESTER COMSTOCK, Ridgewood, N. J. Filed Oct. 14, 1909. Serial No. 522,535.



1. The combination with a shaft and a journal, of a series of blade members carried by the shaft beyond the bearing and having radially projecting blades that extend circumferentially at an angle to a transverse plane, and a shell member having pockets in the bore whose opposite walls engage the opposite ends of the said blades and whose outer wall engages the peripheral edge of the blades, the adjacent pocket walls having a comparatively small port leading from the outer portion of one pocket to the inner portion of the other pocket and all extending in the same general direction, the pocket adjacent the journal communicating with the shaft bearing portion.

2. The combination with a shaft and a journal, of a series of blade members carried by the shaft beyond the bearing, having radially projecting blades that extend circumferentially at an angle to a transverse plane, and a shell member having pockets in the bore whose opposite walls engage the opposite ends of the said blades and whose outer wall engages the peripheral edge of the blades, the adjacent pocket having a comparatively small port leading from the outer portion of one pocket to the inner portion of the other pocket and all extending in the same general direction, the pocket adjacent the journal communicating with the shaft bearing portion, said ports being also deflected at a slight angle to the axial plane at their position.

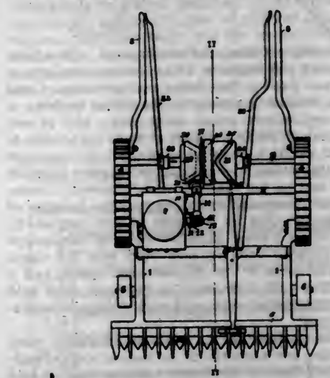
3. The combination with a shaft and a journal therefor, of a series of ring members carried by the shaft, each ring member having on its periphery radially projecting blades that extend at an angle to the transverse plane, the ring members extending axially beyond the blades at one end, a series of collars located on the rings at the said extension and between the ends of the blades of adjacent rings, said collars having annular flange portions extending axially at one end to the adjacent collar and also engaging by their bore the periphery of the said blades, whereby the collars and flanges form annular pockets for the blades, said collars each having a comparatively narrow port leading from the outer portion of one pocket to the inner portion of the adjacent pocket, the pocket adjacent the journal communicating with the shaft bearing portion.

4. The combination with a shaft and journal therefor, of a series of ring members carried by the shaft, each ring member having on its periphery radially projecting blades that extend at an angle to the transverse plane, the ring member extending axially beyond the blades at one end, a series of collars located on the rings at the said extension and located between the ends of the blades of adjacent rings, said collars having annular flange portions extending axially at one end to engage to the adjacent collar and also engaging by their bore the periphery of the said blades, whereby the collars and flanges form annular pockets for the blades, said collars each having a comparatively narrow port leading from the outer portion of one pocket to the inner portion of the adjacent pocket, said ports being also inclined to the axial plane at their position, the pocket adjacent the journal communicating with the shaft bearing portion.

5. The combination with a shaft and a journal, of a series of blade members carried by the shaft beyond the bearing having radially projecting blades that extend circumferentially at an angle to the transverse plane, a shell member having pockets in the bore whose opposite walls engage the opposite ends of the said blades and whose bottom wall engages the peripheral edge of the blades, the adjacent pockets having a comparatively small port leading from the outer portion of one pocket to the inner portion of the other pocket and all extending in the same general direction, the pocket adjacent the journal communicating with the shaft bearing portion, and a receptacle communicating with the pocket most remote from the journal.

[Claims 6 to 15 not printed in the Gazette.]

961,485. GRASS-CUTTING MACHINE. FRANK B. DALE, Richland township, Clarion county, and DAVID A. CRAWFORD, Emlenton borough, Pa. Filed Nov. 13, 1909. Serial No. 527,761.

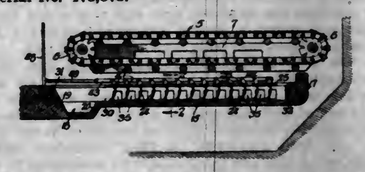


1. In a grass cutting machine, a source of power mounted on the machine, a double clutch member loosely mounted on the machine and rotated by said source of power, a second clutch member adapted to transmit rotary motion to the traction wheels of the machine and to be brought into engagement with said first clutch member, a third clutch member, provided with a zigzag perimetral groove and loosely mounted on said machine, adapted to be brought into engagement with said first clutch member, and a lever actuating the cutting mechanism of said machine and engaging said groove.

2. In a grass cutting machine, a source of power mounted on the machine, a shaft adapted to transmit rotary motion to the traction wheels of the machine, a double clutch member loosely mounted on said shaft and rotated by said source of power, a second clutch member slidably mounted on said shaft but rotating therewith and adapted to be brought into engagement with said first clutch member, and a third clutch member, loosely mounted on said shaft and operatively connected with the cutting mechanism of said machine, adapted to be brought into engagement with said first mentioned clutch member.

3. In a grass cutting machine, a source of power mounted on the machine, a shaft adapted to transmit rotary motion to the traction wheels of the machine, a double clutch member loosely mounted on said shaft and rotated by said source of power, a second clutch member slidably mounted on said shaft but rotating therewith and adapted to be brought into engagement with said first clutch member, a third clutch member, provided with a zigzag perimetral groove and loosely mounted on said shaft, adapted to be brought into engagement with said first clutch member, and a lever actuating the cutting mechanism of said machine and engaging said groove.

961,486. CONVEYING DEVICE. JESSE S. DEWEY, East Chicago, Ind., assignor to Green Engineering Co., Chicago, Ill., a Corporation of Illinois. Filed Jan. 23, 1909. Serial No. 473,873.



1. A conveying device embracing a plurality of scraper blades, an endwise movable supporting frame having longitudinally arranged horizontal frame bars, two longitudinally arranged supporting members on which said longitudinal frame bars rest and with which they have frictional contact for retarding the movement of said frame bars, and a reciprocating actuating member, said blades being provided with supporting arms which have pivotal connection both with the supporting frame and actuating member, and said blades having limited oscillatory movement with respect to said supporting frame and actuating member.

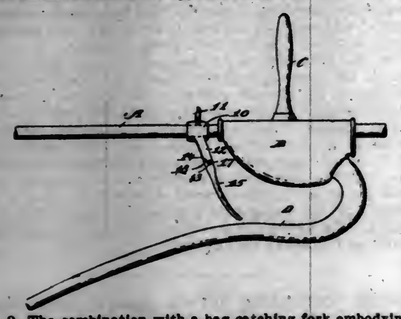
2. A conveying device comprising a plurality of scraper blades provided with rigidly attached supporting arms, a supporting frame comprising longitudinal frame members and transverse rods rigidly connecting the same, two longitudinally arranged supporting members on which said longitudinal frame members rest and with which they have frictional contact to retard the movement of said supporting frame, and an endwise reciprocating actuating bar, said supporting arms having pivotal connection with said transverse rods and with said actuating bar, and said blades having limited oscillatory movement with respect to said supporting frame and actuating bar.

3. A conveying device embracing a plurality of scraper blades, an endwise movable supporting frame having laterally arranged horizontal frame bars each consisting of a horizontal web and a depending flange, two longitudinally arranged supporting members on which said horizontal frame bars rest with their flanges depending at the sides of the same, and a reciprocating actuating member, said blades being provided with supporting arms which have pivotal connection both with the supporting frame and actuating member, and said blades having limited oscillatory movement with respect to said supporting frame and actuating member.

961,487. ATTACHMENT FOR MAIL-BAG FORKS. JOHN A. FALVEY, Detroit, Mich. Filed Nov. 6, 1909. Serial No. 526,521.

1. An attachment of the character described comprising a collar having a set screw, a rigid arm extending from said collar, a movable arm at the end of said rigid arm, a

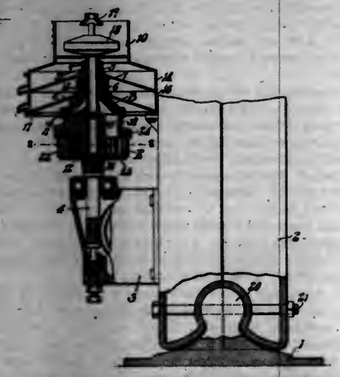
hinged connection between said arms to permit movement of the movable arm in one direction, and means to prevent movement thereof in the opposite direction.



2. The combination with a bag catching fork embodying a supporting rock shaft, of an attachment therefor embodying a collar for engagement upon said shaft, a one-way movable bag retaining arm, and a set-screw for securing said collar in desired adjustment having a head shaped to interfit the staple entrance of a bag lock.

3. The combination with a bag catching fork, of an attachment having means to adjustably secure the same upon said fork, and embodying a rigid arm, a movable arm at the end of said rigid arm for contact with, and rebound from, a portion of said fork, in its movement in one direction, said arms embodying, at their contiguous ends, a hinged connection and being oppositely shouldered to control their movement in the opposite direction.

961,488. CENTRIFUGAL SEPARATOR. FRANK H. FLEMER, St. Louis, Mo., assignor to Robert J. Leacock, trustee, St. Louis, Mo. Filed Feb. 19, 1909. Serial No. 478,767.



1. In a separator, a rotatable bowl for holding a solution, the upper portion of said bowl being imperforate and the lower portion of the bowl being provided with slots, and a closed chamber communicating with said openings for receiving and retaining the constituents of said solution that are of the greatest specific gravity and which are thrown through said openings by centrifugal force.

2. In a separator, a bowl for holding a solution, a plurality of annular chambers arranged in approximately the same horizontal plane, one within the other, and surrounding said bowl, and means for permitting the constituents of said solution in said bowl to be thrown by centrifugal force from said bowl and collected in said chambers.

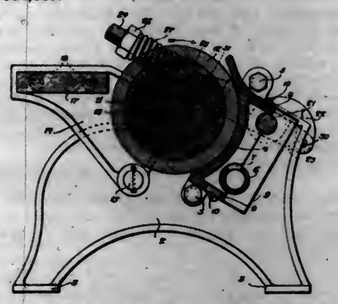
3. In a separator, a rotatable bowl for holding a solution, a chamber surrounding said bowl, and slots in the sides of said bowl above the bottom thereof for permitting the constituents of said solution to be thrown by centrifugal force into said chamber and collect therein, the upper portion of the bowl being imperforate.

4. In a separator, a rotatable bowl for holding a solution, the side walls of said bowl being provided with approximately vertically disposed slots that terminate adjacent the bottom of the bowl, and a continuous annular chamber surrounding said bowl for collecting and retaining the constituents of said solution that are thrown through said slots by centrifugal force.

5. In a centrifugal separator, a bowl for holding a suspended solution, the side walls of said bowl being provided with vertically disposed slots which are of greatest dimensions on the inner side of the bowl, and a hollow member surrounding said bowl to form a chamber which receives and retains the solution that is thrown through said slots by centrifugal force.

[Claims 6 to 17 not printed in the Gazette.]

961,489. IRONING-MACHINE. WALTER FRENCH, Chicago, Ill., assignor to Steel Roll Machine Company, Chicago, Ill., a Corporation. Filed Aug. 25, 1909. Serial No. 514,645.



1. In an ironing machine, the combination with a main frame comprising end supports, of an ironing shoe extending between and fixed to the upper rear portions of said side supports, a shaft journaled in the frame in front of said shoe, a supplemental frame comprising a pair of connected side arms pivotally mounted at their lower ends in line with said shaft, a press-roll journaled in the upper ends of said side arms, intermeshing drive gears mounted on said shaft and on the shaft of said press-roll, a transverse rock shaft journaled in the upper rear portions of said end supports, arms on the ends of said rock shaft, links pivoted to said arms, adjustable spring connections between the forward ends of said links and the upper ends of the side arms of the supplemental frame, and a lever for shifting said rock shaft to yieldingly lock said press-roll in engagement with said ironing shoe, substantially as described.

2. In an ironing machine, the combination with a main frame comprising end supports, of an ironing shoe extending between and fixed to the upper rear portions of said side supports, a shaft journaled in the frame in front of said shoe, a supplemental frame comprising a pair of connected side arms pivotally mounted at their lower ends in line with said shaft, a press-roll journaled in the upper ends of said side arms, intermeshing drive gears mounted on said shaft and on the shaft of said press-roll, a transverse rock shaft journaled in the upper rear portions of said end supports, arms on the ends of said rock shaft, links pivoted to said arms, bolts pivoted to the forward ends of said arms and extending through the upper ends of said roll-supporting side arms, adjusting nuts on said bolts, springs mounted on said bolts between said nuts and said side arms, and a lever for shifting said rock shaft, substantially as described.

3. In an ironing machine, the combination with end supports, of an ironing shoe extending between and fixed

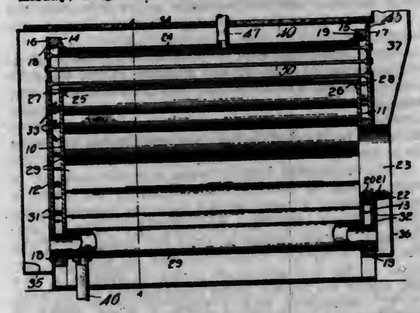
to said end supports, a shaft mounted on one of said end supports, a pair of connected side arms pivoted to said end supports in line with said shaft, a press roll journaled in said side arms, intermeshing gears mounted on said shaft and on the shaft of said press roll, a transverse rock shaft journaled in said end supports, arms on said shaft, links pivoted to said arms, bolts pivoted to said links and extending through the ends of said roll-supporting side arms, adjusting nuts on said bolts, springs extending between said nuts and the ends of said side arms and a lever for shifting said rock shaft, substantially as described.

4. In an ironing machine, the combination with a main frame comprising a pair of end supports, of an ironing shoe extending between and fixed to the upper rear portions of said end supports, a shaft journaled in the frame in front of said shoe, a pair of side arms pivotally mounted at their lower ends in line with said shaft, a press-roll journaled in the upper ends of said side arms, intermeshing drive gears mounted on said shaft and on the shaft of said press-roll, a transverse rock shaft journaled in the upper rear portion of said side supports, a pair of rock arms on the ends of said shaft, toggle links extending between said rock arms and the upper ends of said roll-supporting side arms, said links being pivoted at one end to one of said pair of arms, bolts pivoted to the other ends of said links and extending through openings in the other pair of arms, adjusting nuts and springs on said bolts, and a lever for shifting said rock shaft to yieldingly lock said press-roll in engagement with said ironing shoe, substantially as described.

5. In an ironing machine, the combination with a pair of end supports, of an ironing shoe extending between and fixed to the upper rear portions of said side supports, a pair of triangular side arms pivoted at their lower ends to said end supports in front of said ironing shoe, a press-roll journaled in the upper rear portions of said side arms, a guide board in front of said press-roll and extending between and fixed to said side arms, a shaft arranged in line with the pivots of said side arms, intermeshing drive gears mounted on said shaft and on the shaft of said press-roll, a rock shaft journaled in the upper rear portion of said end supports, a pair of yielding toggles extending between said rock shaft and the upper ends of said side arms, and a lever for shifting said rock shaft to yieldingly lock said press-roll into engagement with said ironing shoe, substantially as described.

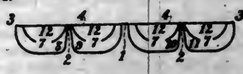
[Claims 6 to 9 not printed in the Gazette.]

961,490. STEAM-GENERATOR. ROBERT J. GALBRAITH, Albany, Oreg. Filed Aug. 7, 1908. Serial No. 447,432.



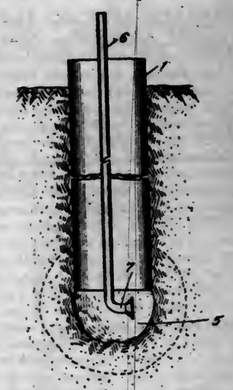
A steam generator comprising inner heads spaced apart and each provided with an upwardly directed extension, outer heads spaced from said inner heads and each provided with an upwardly directed extension, connecting means between each inner head and its extension and the adjacent outer head and its extension and arranging the heads in pairs at each end of the generator, one of said spaced pairs having a fuel opening therethrough, a plurality of relatively small tubes connecting the inner heads near their peripheries and spaced slightly apart with the tubes nearest the extensions spaced a greater distance apart, a plurality of flues connecting the outer heads and extending through the tubes which connect the inner heads, and a relatively large tube connecting the extension of the inner heads and above the large space between the upper tubes.

961,491. CARTON. ESSINGTON N. GILFILLAN, Syracuse, N. Y., assignor to Continental Paper Bag Company, a Corporation of Maine. Filed June 30, 1909. Serial No. 505,134.



A carton, composed of cardboard or other sheet material capable of permanent flection, bent to form two bodies united by a double wall, the two halves of which wall have a hinge like union, and each of which bodies has an outer single wall, and a double partition between its outer wall and the double wall, the carton also having a flap attached by a hinge-like union to each of those outer walls, and adapted to extend therefrom across the nearest double partition, nearly or quite to the central double wall, and each of which flaps is provided with a plurality of half nests, adapted to be located on opposite sides of that double partition; all substantially as described.

961,492. METHOD OF CONSTRUCTING PILES. JOHN BYRON GOLDSBOROUGH, Croton, N. Y., assignor to The Underpinning Company, New York, N. Y., a Corporation of New York. Filed July 6, 1909. Serial No. 506,055.



1. A method of forming piles, which consists in forming an opening in the soil, in then inserting a body of concrete or similar material at the foot thereof, and in then subjecting the said material to a continuing and uninterrupted pressure, determined by the load the pile is expected to carry, until the footing has been enlarged to the desired extent and has the requisite supporting power, substantially as described.

2. A method of forming piles, which consists in introducing a casing into the soil, in then inserting a body of concrete or similar material at the foot thereof, and in then subjecting the said material to a pressure substantially equal to the load the pile is eventually to carry, and continuing such pressure until the said footing presents a resistance to movement equal to such pressure, thereby consolidating the surrounding soil and ascertaining the supporting power of the pile, substantially as described.

3. A method of forming piles having an enlarged footing which consists in introducing a casing into the soil, in

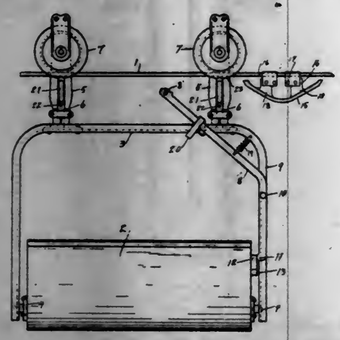
removing the soil from within said casing, in then inserting a body of concrete or similar material at the foot thereof, and in then subjecting the said material to a pressure substantially equal to the load the pile is eventually to carry, until the footing has been enlarged to the desired extent, and continuing such pressure until the said footing presents a resistance to movement equal to such pressure, thereby consolidating the surrounding soil and ascertaining the supporting power of the footing, and in then adding additional material until the requisite length has been attained, and in subjecting the said material to continuous pressure at each addition thereto.

4. A method of forming piles, which consists in introducing a casing into the soil, in then inserting a body of concrete or similar material at the foot thereof and applying continuous and uninterrupted pressure thereto determined by the load the pile is intended to carry, until the footing has been enlarged and compacted so that it will support said load without movement, and in then gradually filling the casing with said material and withdrawing the casing at each addition of said material and applying a continuing pressure to each additional charge of material until the pile is formed whereby the body of the pile is consolidated, substantially as described.

5. A method of forming piles having an enlarged footing, which consists in introducing a casing into the soil, in then introducing grout or similar material at the foot of the casing, in then introducing a flexible bag and filling the same with fluid material and applying continuous pressure thereto until the footing has been enlarged, and maintaining the pressure until the grout has set, and in then filling the said excavation with concrete or similar material, substantially as described.

[Claim 6 not printed in the Gazette.]

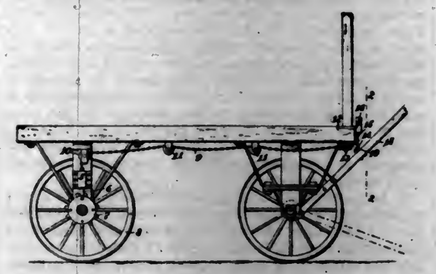
961,493. SINGLE-LEVER LOCK AND TRIP MECHANISM FOR LITTER-CARRIERS. WILLIAM GUTENKUNST, Milwaukee, Wis. Filed Mar. 1, 1909. Serial No. 480,533.



1. In a track supported carrier of the described class, the combination with one arm of the receptacle supporting bail of a rigid angular two armed lever pivotally supported near its center from one of the arms of said bail, a spring attached at one end to said bail and at its opposite end to the upper end of said two-armed lever and adapted by its recoil to yieldingly retain the lower arm of said lever between the retaining bearings of said receptacle, a retaining keeper supported from said bail and adapted to limit the upward movement of said upper arm the upper arm of said lever being adapted to be moved downwardly by contact with a stop supported from said track, whereby the lower arm of said lever is moved laterally and disengaged from a cam affixed to one end of said receptacle.

2. In a carrier comprising a track, a releasing stop affixed to said track, rollers supported on said track, yokes suspended from said rollers, a bail suspended near its respective sides from said yokes, a receptacle pivotally supported from said bail, a locking cam provided with a recess affixed to one end of said receptacle, in combination with an angular two armed locking lever pivoted to one of the arms of said bail a spring attached at one end to said bail and at its opposite end to the upper arm of said two armed lever, whereby its lower arm is caused to engage in the recess of said locking cam, the upper arm of said lever being adapted as the carrier is moved on said track, to be forced downward by contact with said stop and thereby disengage its opposite end from said locking cam.

961,494. TRUCK-BRAKE. ELMON D. HARDING, Montevideo, Minn. Filed June 26, 1909. Serial No. 504,498.



1. In combination with a truck, a wheel mounted to rotate, a sprocket wheel secured thereto, a bolt disposed to engage the teeth in the sprocket wheel, a pulley, a flexible means to which the bolt is secured, the flexible means being disposed over the pulley, a pivoted tongue, and a lever disposed over the tongue, one arm of the lever being in the form of a book adapted to engage the tongue, the other arm of the lever being weighted, the flexible means being secured to the lever.

2. In combination with a truck, a wheel mounted to rotate, a member secured to the wheel having a recess, a guide, a bolt disposed in the guide adapted to be introduced into the recess, a pulley, a flexible means, one end of which is secured to the bolt and is disposed over the pulley, a pivoted hook having a weighted arm to which the other end of the flexible means is secured, and a pivoted tongue, the hook being adapted to engage the tongue.

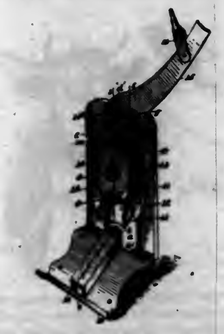
3. In combination with a truck, a wheel mounted to rotate, means to prevent the rotation of the wheel, a pivoted tongue, a lever having one arm formed in the shape of a hook, which is adapted to engage the tongue to support it, and a flexible means, one end of which is connected to the said means to operate them, the other end of the flexible means being secured to the lever.

4. In combination with a truck, a wheel mounted to rotate, means to prevent the rotation of the wheel, a pivoted tongue, a lever pivoted over the tongue having one arm in the shape of a hook, means to hold the arm yieldingly upward, means to limit the movement of the lever, and a flexible means, one end of which is connected to the first-mentioned means to operate it, the other end of the flexible means being secured to the lever.

5. In combination with a truck, a wheel, means to prevent the rotation of the wheel, a pivoted tongue, a lever mounted thereover, one arm of the lever being in the form of a hook adapted to engage an eye in the tongue, the other arm being weighted, a pin at one side of the fulcrum of the lever adapted to limit its movement, and flexible means connected at one end with the said means to operate them, the other end of the flexible means being secured to the hook of the lever.

[Claim 6 not printed in the Gazette.]

961,495. SHEARING-MACHINE. HENRY HAUS, Pope Valley, Cal. Filed Nov. 6, 1909. Serial No. 526,541.



1. In a shearing machine, a base, a vertical standard on the base, guides on the standard, a die block reciprocal in the guides, an anvil on the base, a die on an end of said anvil disposed below the die block for co-action therewith, a lever pivoted on the standard above the die block, said lever having an arcuate slot concentric with the pivot thereof, and a rod loosely connected at its ends with the die block and with the lever in its slot.

2. In a shearing machine, a base, a flat standard erected on one transverse edge of the base and having an opening in its lower end, an anvil on the base, a die on one end of the anvil having a convex contour and extended into the opening, a sliding die block on the standard above the die on the anvil, said die block having a concave face that slidably engages the convex surface of the die below it, a lever pivoted on the standard, and a rod loosely connecting the lever and die block.

3. In a shearing machine, a base, an anvil on the base, a flat standard vertically erected on a transverse edge of the base, said standard having a horizontal slot extended through one vertical edge thereof, a sliding die on the standard, a lever having a head thereon the edge of which is beveled to sharpen it, a rod connecting the die with the lever, said rod being loosely connected with the lever and a pivot bolt rockably securing the lever on the standard near the slot, said pivot bolt being disposed eccentric to the cutting edge on the head, thus adapting said edge to shear cut material inserted in the slot when the lever is rocked toward said slot.

4. In a shearing machine, a base, a flat standard vertically erected on a transverse edge of the base, a sliding die block on the standard, a lever having an enlarged flat head, said head being pivoted upon the standard, and a rod pivoted to the die block and having a sliding and pivotal connection with the lever, said standard and lever having paired perforations that will shear cut wire rods placed therein, upon rocking the lever.

961,496. SHAFT-BEARING. GEORGE C. HICKS, Jr., Connersville, Ind., assignor to The P. H. & F. M. Roots Company, Connersville, Ind. Filed June 21, 1909. Serial No. 503,339.

A shaft bearing comprising a pedestal provided with jaws having the lower portions of their inner surfaces parallel with each other and having the upper portions of their inner surfaces converging downwardly, a bed-box fitting the parallel portion of the inner surfaces of the jaws, means for adjusting the bed-box vertically in the jaws, a cap bridging the top of the pedestal and having members engaging the outer faces of the jaws, means for securing the cap to the jaws, box-sections having shaft-fitting surfaces and disposed between the cap and the bed-box and having outer surfaces engaging the converging surfaces of the jaws, and screws seated in the cap and engaging the box sections and acting vertically to



adjust the box sections independently in relation to the shaft.

961,497. OILING DEVICE. ROBERT T. HORLICK, Chicago, Ill., assignor of one-half to Edward T. Horlick, Chicago, Ill. Filed Dec. 13, 1906. Serial No. 347,718.



1. In a device of the class described the combination with a pair of ring sections hinged together at one end and each having a channel in its inner face extending from near the hinged end to the opposite end thereof, a cup rigidly engaged with the free end of one section and extending beyond the same and adapted to project between the side walls of the other section and a spring clasp projecting from each side wall of one section and adapted to engage the other section therebetween.

2. In a device of the class described the combination with an annular wick holder comprising hinged sections, of a wick extending from the inner side thereof and adapted to engage about a shaft, a cup rigidly engaged to the end of one section and adapted to fit between the side walls of the other section and a spring clasp rigidly engaged on the side wall of one section and adapted to secure the other section in closed position.

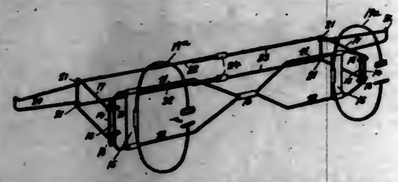
3. In a device of the class described the combination with a sectional wick holder, of a pair of spring clasps on one section adapted to engage the other section therebetween, a wick protruding from the inner side of said holder, an oil cup opening into said holder and attaching brackets slidably engaged on said holder.

4. In a device of the class described the combination with a pair of half ring sections hinged together at one end and having a channel in their inner sides, a cup on the opposite end of one section and outturned, projecting side walls on the other section between which the cup projects when the ring is closed, a clasp on each side of one section adapted to engage the other section and attaching brackets slidably engaged in said channel and projecting radially beyond the sections.

5. In a device of the class described the combination with a pair of hinged sections, each having an outer wall, side walls and an end wall at the hinged end, of a cup opening into said sections, a spring clasp rigidly engaged on each side of one section and projecting beyond the same, the adjacent ends of the side walls of the other section being turned outwardly to engage said clasps, and adjustable brackets adapted to hook over the side walls of said sections.

[Claims 6 and 7 not printed in the Gazette.]

961,498. HAIR-DRIER. FREDERICK N. HONNEWELL, Mamaroneck, N. Y., assignor to Horace W. Merwin, Jr. Filed Oct. 26, 1909. Serial No. 524,650.



1. A hair drier composed of a base, a drying frame, supports hinged to said base and said drying frame and shoulder wires, adapted to secure the device upon the person of the user, all substantially as set forth.

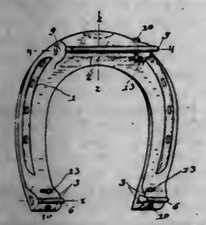
2. A hair-drier composed of a frame, supports extending therefrom, a drying frame supported thereon and composed of two parts, one slidably secured to the other, whereby the ends may be made to approach each other so as to shorten the article or recede from each other so as to furnish a broad support for the hair to be dried and to give ventilating space beneath, together with shoulder wires, all combined, substantially as set forth.

3. A hair drier composed of a base, a drying frame, supports hinged to said base and said drying frame and provided with stops limiting their movement, and shoulder wires adapted to secure the device upon the person of the user, all substantially as set forth.

4. A hair drier composed of a base, a drying frame in two portions, one slidably secured to the other, supports hinged to said base and said drying frame, and shoulder wires adapted to secure the device upon the person of the user, all substantially as set forth.

5. In a hair drier, a wire base with longitudinal wires and cross pieces, supports hinged thereto and adapted, as described, to turn down thereon, and provided with toes arranged as described, whereby they will engage portions of the base, a hair supporting frame in two parts, sleeves on the wires of the frame, projecting portions which extend through said sleeves, hinges uniting the frame to the supports and shoulder wires, all combined substantially as set forth.

961,499. HORSESHOE. HARALD JOHANSEN, Chicago, Ill. Filed Mar. 12, 1910. Serial No. 549,010.



1. In a horseshoe, a body having a downwardly tapering recess therein for the reception of a calk, the said recess being partially closed at one end by a bridge, calks adapted to be inserted laterally in said recess, projections on the ends of said calks arranged to take over and under said bridge; and means for preventing lateral displacement of said calks, substantially as described.

2. In a horseshoe, a body having a downwardly tapering recess therein for the reception of a calk, the said recess being partially closed at one end by a bridge and formed by flanges on both sides; a calk adapted to be inserted laterally in said recess and provided with side grooves arranged to receive said flanges; projections on the ends of said calk arranged to take over and under said bridge; and means for preventing lateral displacement of said calk; substantially as described.

961,500. DEVICE FOR REMOVING OBSTACLES FROM THE THROATS OF CATTLE. ANTHONY H. KOHNE, Coupeville, Wash. Filed Jan. 13, 1910. Serial No. 537,810.



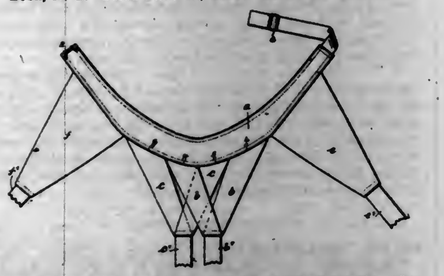
1. In a device for removing obstacles from the throats of cattle, etc., stripping jaws relatively arranged to engage exteriorly at the opposite sides of the animal's throat and compress the esophagus at successive points to force out the obstruction when the jaws are drawn over the throat, and a connection between the jaws, on which one of the jaws is adjustable to and from the other.

2. In a device for removing obstacles from the throats of cattle, etc., stripping jaws relatively arranged to engage exteriorly at the opposite sides of the animal's throat and compress the esophagus at successive points to force out the obstruction when the jaws are drawn over the throat, each jaw having a concave stripping face.

3. In a device for removing obstructions from the throats of cattle, etc., arms pivotally connected together having opposed stripping jaws constructed to engage exteriorly at the opposite sides of the animal's throat and compress the esophagus at successive points to force out the obstruction, and means to lock the arms together in their several positions of adjustment.

4. In a device for removing obstructions from the throats of cattle, arms pivoted together having opposed stripping jaws, each arm having a slot intermediate its length for the insertion of the hand in drawing the device over the animal's throat, to force out the obstruction.

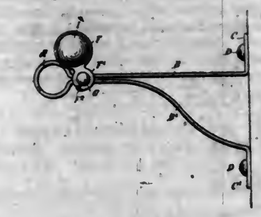
961,501. HOSE-SUPPORTER BELT. DANIEL KOPS, New York, N. Y. Filed June 15, 1909. Serial No. 502,204.



1. A hose supporter belt comprising a belt portion, devices at the free ends thereof for connecting the belt in an adjustable relation and straps depending from the central portion of said belt and arranged to form V-shaped supporters with the inner members crossing, and a hose supporter fixedly secured to the apex of each V-shaped supporter.

2. A hose supporter belt, comprising a two-part belt member, each part having at one end two strap members, the parts being connected together at the center line of the belt members and the strap members extending toward one another from opposite directions, with their free ends connected, and hose supporter devices connected thereto.

961,502. BRACKET. JOHN KRODER, New York, N. Y. Filed Nov. 17, 1909. Serial No. 528,466.



1. A bracket for supporting the end of a curtain rod, comprising a bracket member, a tubular socket formed integrally with the said bracket member and open at both ends, a plate pivoted on the said bracket member to swing down or up in a transverse direction for closing or opening the outer end of the said socket, and a stop lug formed integrally on the pivotal end of the said plate and extending longitudinally in the direction of the length of the socket, the said stop lug engaging the bracket member at the time the plate is in closing position on the said socket.

2. A bracket for supporting one end of a curtain rod, comprising transversely-extending bracket arms, attaching flanges at the rear ends of the said bracket arms, a tubular longitudinal socket formed integrally on the forward ends of the said bracket arms, the socket being open at the ends, a plate pivoted on the said bracket arms to swing down or up in a transverse direction for closing or opening the outer end of the said socket, and a stop lug integral on the pivotal end of the said plate for engagement with one of the bracket arms to limit the swinging motion of the plate.

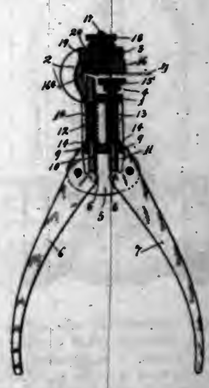
3. A bracket for supporting one end of a curtain rod, comprising transversely-extending bracket arms, attaching flanges at the rear ends of the said bracket arms, a tubular longitudinal socket formed integrally on the forward ends of the said bracket arms, the socket being open at the ends, a longitudinal pivot held between the said bracket arms and projecting beyond the outer side thereof, and a plate fulcrumed on the said pivot to swing down and up in a transverse direction for closing or opening the outer end of the said socket.

4. A bracket for supporting one end of a curtain rod, comprising transversely-extending bracket arms, attaching flanges at the rear ends of the said bracket arms, a tubular, longitudinal socket formed integrally on the forward ends of the said bracket arms, the socket being open at the ends, a longitudinal pivot held between the said bracket arms and projecting beyond the outer side thereof, a plate fulcrumed on the said pivot to swing down and up in a transverse direction for closing or opening the outer end of the said socket, and a stop lug integral on the pivotal end of the said plate for engagement with one of the bracket arms to limit the swinging motion of the said plate.

961,503. SAW-SET. CALEB M. LARSON, Minneapolis, Minn. Filed Apr. 22, 1909. Serial No. 491,423.

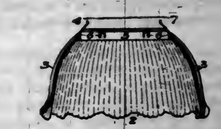
1. In a saw-set, the combination with a frame, of a lever actuated spring retracted setting plunger mounted in said frame, a guide block mounted in a projecting portion of said frame for sliding movement, an anvil block mounted for sliding adjustment on the projecting portion of said frame and rotatively secured to said guide block and said anvil block provided on its working face with a varying bevel for coöperation with said setting plunger, substantially as described.

2. In a saw-set, the combination with a frame, of a clamping plunger and a setting plunger mounted in said frame, levers for actuating said plungers, a relatively strong spring retracting said setting plunger and a relatively weak spring retracting said clamping plunger, a guide block slidably mounted in a recess in a projecting head portion of said frame, a screw swiveled in said head portion and having threaded engagement with said guide block for positively moving the same, an anvil block having its working face formed with a varying bevel for coöperation with said setting plunger, and said anvil block



being rotatively secured to said guide block and arranged for sliding movement therewith, and means for clamping said anvil block to said head portion, substantially as described.

961,504. GLOBE OR SHADE FOR GAS-LAMPS. THOMAS J. LITLE, Jr., Woodbury, N. J., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed Aug. 15, 1908. Serial No. 448,643.



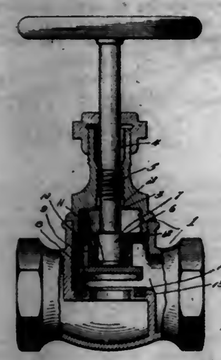
1. As a new article of manufacture, a glass globe or shade having integral projections for acting upon the light rays, and a metal neck secured within the upper hole of the shade and an outwardly extending flange on the upper portion of the neck adapted to be engaged by shade holding members of a burner; substantially as described.

2. As a new article of manufacture, a glass globe or shade having integral projections for acting upon the light rays, and a metal neck secured within the upper hole of the shade, said metal neck having an outwardly projecting circular flange of smaller diameter than the hole in the glass shade; substantially as described.

3. As a new article of manufacture, a neckless glass globe or shade having an upper hole, a metallic neck secured within the hole and projecting above the glass body, the metallic neck having a projecting portion, and locking members projecting from the said neck, the upper edge of the glass body being held between the projecting portion of the neck and its locking members, substantially as described.

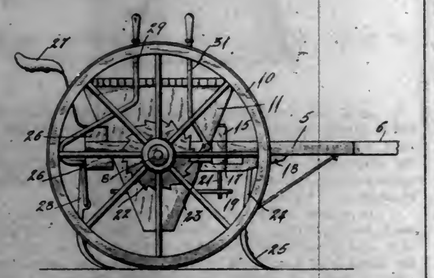
4. As a new article of manufacture, a neckless glass globe or shade having an upper hole, a metallic neck secured within the hole and projecting above the glass body, the metallic neck having a projecting portion, and locking members formed integrally with and projecting from the said neck, the upper edge of the glass body being held between the projecting portion of the neck and its locking members, substantially as described.

961,505. VALVE. GEORGE G. LITTLE, Gulfport, Miss. Filed June 17, 1909. Serial No. 502,820.



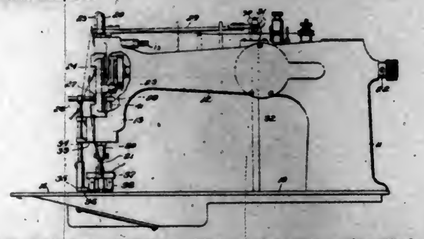
In a valve, the combination of a casing provided with a bore having an enlarged inner portion terminating in an interior tapered seat, a valve stem threaded through such bore and provided with a cylindrical enlargement for closely fitting within such enlarged portion of the bore, said cylindrical enlargement being provided with an inclined shoulder for engaging said tapered seat for guiding and centering said enlargement in such enlarged portion of the bore, a valve, a nut swiveling said valve to said stem and provided with a conical head for engaging said tapered seat upon entrance of said cylindrical enlargement into the enlarged portion of the bore in the open position of the valve, substantially as described.

961,506. MANURE-DISTRIBUTER. ROBERT R. LOKEY, Sparks, Okla. Filed June 21, 1909. Serial No. 503,456.



In a machine of the class described, a hopper having a discharge opening, a wheeled frame supporting the hopper, a ratchet wheel fixed to one of the wheels of the frame, a perforated slide working transversely through the hopper directly above its discharge opening, guide brackets fixed to the frame adjacent the hopper, a cross bar slidable in said brackets and having one end pivoted to the frame, an extension formed on the cross bar and normally engaging the ratchet wheel, a retractile spring connected to the frame and to the cross bar to hold the extension in the path of movement of the ratchet wheel, a detachable pin connecting the slide to the cross bar, a pivotal lever carried by the frame and having one end projected into the path of movement of the cross bar and adapted to normally hold the same inoperative and an agitator within the hopper and actuated by the wheels of the frame.

961,507. BUTTON-SEWING MACHINE. ROBERT L. LYONS, Waltham, Mass. Filed Aug. 27, 1906. Serial No. 332,108.



1. A button sewing machine of the nature described comprising fabric supporting means, button supporting means movably mounted, stitch forming means including a needle, work gripping means, and mechanism for moving the button supporting means laterally after the button has been partially attached to the fabric.

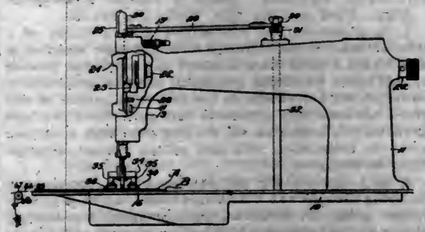
2. A button sewing machine for sewing buttons to an underlying fabric by stitches extending through the button holes of a superposed fabric comprising means for engaging the superposed fabric to prevent its movement, stitch forming means comprising a needle adapted to attach the button to the underlying fabric by stitches extending through the button hole of the superposed fabric, and means for moving the semi attached button laterally to expand said button hole and to position a series of holes in the button above said expanded button hole.

3. A button sewing machine of the nature described comprising a work support for the fabric, fabric engaging means movable toward and from said support, and a button clamp mounted to move toward and from said support in unison with the fabric engaging means and movable laterally independently of said engaging means.

4. A button sewing machine of the nature described comprising a work support adapted to receive a garment having its edges overlapped to effect a tubular formation of the garment, and to permit the feeding of the garment approximately at right angles to the extension of the button holes in the upper of said overlapped edges, means for sewing two holes of a four hole button through an unexpanded button hole to the underlying edge and means for drawing said sewing stitches against one edge of the button hole to expand the button hole beyond the line of the other pair of holes in said button whereby stitches passed through said second pair of holes will pass through the expanded button hole.

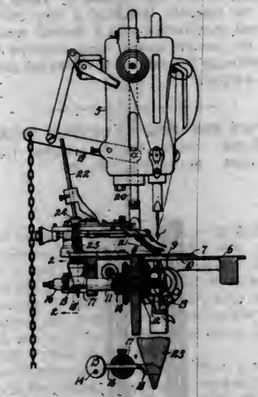
5. A button sewing machine comprising a bed plate having two parallel fixed members disconnected at one end one of which is a work support having depending flanges forming a compartment for the looper mechanism and the other of which is a button clamp supporting arm back of said work support and having a depending flange.

961,508. BUTTON-SEWING MACHINE. ROBERT L. LYONS, Waltham, Mass. Filed Sept. 10, 1906. Serial No. 333,940.



In a button sewing machine the combination with means for supporting two layers of fabric the upper of which has button holes, and yielding means adapted to exert a tension on said layers approximately in line with the button holes, of a button clamp movable toward and from said fabric support, button sewing means, and fabric spreading means carried by the button clamp and acting when engaged with the upper fabric to spread the same and to expand one of the button holes therein over the tensioned lower layer as and for the purpose described.

961,509. THREAD-CUTTING DEVICE FOR SEWING-MACHINES. ROBERT L. LYONS, Boston, Mass. Filed Dec. 23, 1907. Serial No. 407,618.



1. A sewing machine comprising a rotatable bobbin, slidable means for engaging the bobbin to prevent its rotation, the presser foot actuating lever, and means operated by the movement of said lever for moving said slidable means into engagement with the bobbin.

2. In a sewing machine the combination with the bobbin shaft rotatably mounted and having a longitudinal bore, the bobbin on said shaft, and a spring retracted bobbin engaging rod slidable in the said bore of the bobbin shaft, of the presser foot actuator and means operated by the movement of said actuator for moving said bobbin engaging rod into engagement with the bobbin, for the purpose described.

3. A sewing machine comprising a bobbin movably mounted, means for restraining the movement of the bobbin to prevent the paying out of thread, presser foot actuating means, and mechanism operated by or through said presser foot actuated means for operating said restraining means.

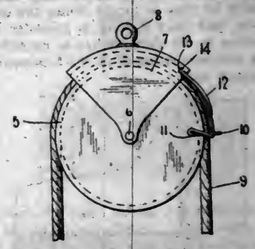
4. A sewing machine comprising a bobbin movably mounted, means for restraining the movement of the bobbin, presser foot operating means, and means for actuating said restraining means simultaneously with the operation of the presser foot operating means.

5. A sewing machine comprising a throat plate having a needle hole and a slot extending from said needle hole, a button clamp for holding a button above said needle hole, a bobbin movably mounted below said needle hole, and operative means for positively holding said bobbin whereby the drawing forward of the work effects the straining of the bobbin thread.

961,510. PULLEY-ROPE GAGE. GORDEN W. MACK, Peeds, Va. Filed Mar. 31, 1910. Serial No. 552,696.

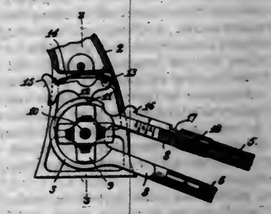
1. In a rope gage the combination with a sheave and casing in which it is designed to run, of a gage comprising a single strand of wire bent to form an arched yoke spanning the pulley and engaging the opposite side faces of the latter and cross arms pivotally connected to the casing to maintain the yoke in proper relation to the pulley.

2. A device of the class described comprising a single strand of wire bent to provide a yoke for straddling a



pulley, and cross arms having hook terminals to pivotally connect them to a casing for the pulley.

961,511. FOLDING STOCK FOR FIREARMS. WEBSTER L. MARBLE, Gladstone, Mich. Filed May 10, 1909. Serial No. 495,153.



1. The combination with a firearm having a grip handle provided with a lengthwise slot extending through said handle from front to rear, of a rigid stock having a circular knuckle pivoted in said slot and having indentations in its periphery, and a spring pawl pivoted in the upper end of said slot and adapted to engage with said indentations.

2. The combination with a firearm having a grip handle provided with a lengthwise slot extending through said handle from front to rear, of a rigid stock having a circular knuckle pivoted in said slot and having indentations in its periphery, a spring washer between the side of said knuckle and one wall of said slot, and a spring pawl pivoted in the upper end of said slot and adapted to engage with said indentations and projecting beyond the frame of said handle.

3. The combination with a firearm having a grip handle, of a rigid stock pivoted in said handle so that said stock may be folded in under the barrel, a stop for determining the angular position of said stock with reference to said handle, and graduations on said stock for enabling it to be returned to a predetermined position after it has been folded.

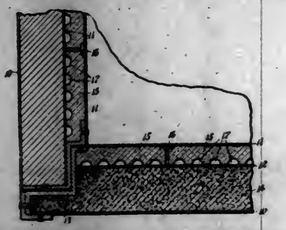
4. The combination with a firearm having a grip handle provided with a lengthwise slot, of a rigid stock pivoted in said slot, a slide on said stock, provided with teeth, and a screw-threaded sleeve revoluble on said stock and meshing with said teeth.

5. The combination with a firearm having a grip handle provided with a lengthwise slot, of a rigid stock having a knuckle pivoted in said slot and provided with legs, a slide resting on the upper leg with one end in said slot, teeth on said slide, and a screw-threaded sleeve revoluble on said leg and meshing with said teeth.

961,512. PORTABLE-REEL GAS-OVEN. GEORGE BEVERIDGE MEEK, New York, N. Y. Filed Jan. 18, 1910. Serial No. 538,607.

1. An oven having the sides thereof formed of an inner sheet metal wall, an outer sheet metal wall, an intermediate sheet metal partition forming with the inner and

the outer walls, two separate compartments, a packing of insulating material within one of said compartments, and a plurality of tiles or bricks filling the other of said compartments, and each having a plurality of corrugations or grooves in the face thereof to constitute vertical air passages communicating with the atmosphere at their upper and lower ends.

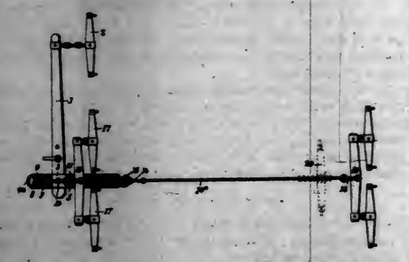


2. An oven having the sides thereof formed of separate sections detachably connected together, each section having a vertically-disposed partition intermediate the inner and outer surfaces thereof and subdividing the wall into separate compartments, a filling of insulating material within one of said compartments, a plurality of tiles fitted within the other of said compartments, to fill the same, each of said tiles having air passages communicating with the outside atmosphere at their lower ends, and a top wall having two separate compartments or chambers, a filling of asbestos in one of said chambers, and a layer of tile within the other of said chambers and spaced from said partition to form an air chamber communicating with said air passages.

3. An oven having the sides thereof formed of an inner sheet metal wall, an outer sheet metal wall, an intermediate sheet metal partition forming with the inner and outer walls two compartments, insulating material filling the outer of said compartments, a plurality of reinforcing members for the inner wall and disposed within the inner compartment, and a plurality of tiles or bricks within the inner compartment and held against lateral displacement by said reinforcing means each of said tiles or bricks having an air passage extending across one surface thereof.

4. An oven having the sides thereof formed of separate sections detachably connected together, each section having oppositely-disposed walls and a partition between said walls and forming therewith two compartments, a filling material within one of said compartments, a plurality of T-irons within the other of said compartments and reinforcing the adjacent wall of the section, and a plurality of tiles or bricks within said last-mentioned compartment and held in place between said T-irons each of said tiles or bricks having an air passage extending across one surface thereof.

961,513. DRAFT-EQUALIZER. EZRA J. D. MILLER, Barlow, N. D. Filed Oct. 26, 1909. Serial No. 524,645.



1. In a draft equalizer, an equalizer bar, means to connect the equalizer bar with a load to be drawn, a frame having two horizontal arms, between which the equalizer bar is secured, the forward terminal of the said arms converging, the free terminal of one of the arms having an eye with a lateral opening, a sheave pivoted to the frame in the rear of the equalizer bar, a doubletree free from the frame and disposed thereacross, a flexible means secured to the doubletree, the flexible means being disposed around the sheave and through the eye, and draft members for the leading draft animals, the flexible means being secured to the said draft members.

2. In a draft equalizer, a frame, means to secure the frame to a load to be drawn, a sheave mounted to rotate in the frame, the forward end of the frame having means for surrounding a portion of the flexible means, there being an opening in the said means by which the flexible means may be removed laterally, a tree free from the frame disposed thereacross, and a flexible means secured to the tree, the flexible means being disposed around the sheave and through the said means adapted for surrounding it for a distance.

961,514. PROCESS FOR TREATING ZINKIFEROUS SUBSTANCES. GUIDO MOJANA, Milan, Italy. Filed Dec. 14, 1906. Serial No. 347,846.



1. In a process for the treatment of zinkiferous substances, subjecting the said substances to the action of chlorin in the presence of porous carbonaceous matter and moisture.

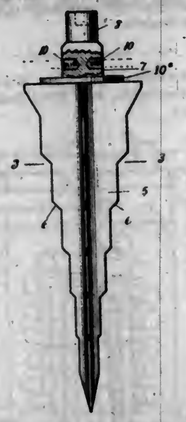
2. In a process for the treatment of zinkiferous substances at a comparatively low temperature, subjecting the same to the action of chlorin in the presence of porous carbon and steam.

3. In a process for the treatment of zinkiferous substances at a comparatively low temperature, subjecting the same to the action of chlorin in the presence of porous carbon and steam, removing the carbon from the mass thus obtained, and lixiviating, filtering, and treating the liquid residuum with oxidising agents and oxid of zinc.

4. A process for the treatment of zinkiferous substances at a comparatively low temperature, consisting in subjecting the same to the action of chlorin in the presence of porous carbon and steam, removing the carbon from the mass thus obtained, lixiviating, filtering, and treating the liquid residuum with oxidising agents and substances containing oxid of zinc, to obtain zinc chlorid, and electrolyzing the zinc chlorid to obtain metallic zinc.

961,515. WRENCH. ROBERT A. MONTGOMERY, Indiana, Pa. Filed Apr. 17, 1909. Serial No. 490,476.

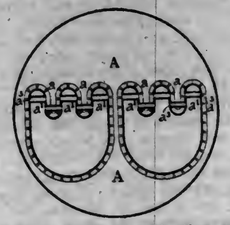
1. A tool comprising a central stem having blades radiating therefrom, the blades having stepped outer cutting edges forming a number of wrenches successively increasing in size from the outer end of the tool toward the inner end or shank of the tool, with each wrench of approximately uniform diameter throughout its length.



2. A tool comprising a central stem having blades radiating therefrom and rigid with the stem substantially their full length, the blades successively decreasing in width from the inner to the outer end of the tool and forming a succession of internal wrenches, said stem being extended beyond the inner end of the blades to provide a shank and having a reinforcing disk rigid therewith and with the inner ends of the blades.

3. A tool having blades radiating from a common longitudinal axis, the blades tapering in cross-section, with the thickest portion of each blade arranged adjacent to said axis, said blades having stepped outer edges forming a succession of internal wrenches successively increasing in size from the outer end of the tool inwardly.

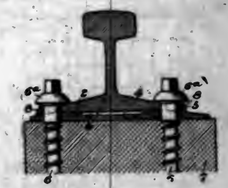
961,516. STEAM-GENERATOR. GEORGE M. L. MOORE-IRVINE, Newry, Ireland. Filed Mar. 1, 1909. Serial No. 480,699.



1. In a steam boiler, the combination with the outer shell, of a flue therein provided on its upper surface with a plurality of longitudinally disposed channels, certain of said channels projecting outwardly into the water space and certain of said channels projecting inwardly into the fire space of the flue, and stay tubes transversely disposed in said channels, certain of said tubes being arranged to open into the water space and other of said tubes opening into the fire space.

2. In a steam boiler, the combination with the boiler shell, of a flue therein provided with a plurality of longitudinally disposed channels, certain of said channels projecting outwardly into the water space and certain of said channels projecting inwardly into the fire space of the flue, tubes transversely arranged across the inwardly projecting channels and opening into the flue, and tubes transversely arranged across the outwardly projecting channels and opening into the water space, said last mentioned tubes being disposed outwardly from and with respect to said first mentioned tubes.

961,517. RAILWAY-TIE PLATE. ANDREW MORRISON, Pittsburg, Pa. Filed Feb. 1, 1910. Serial No. 541,232.



1. A railway tie plate having a transverse rail-bearing projection on its upper surface, and a spike hole in the line of the said projection, said hole having an upwardly projecting rim flange surrounding the rear but not the front portion thereof, said flange being of substantially the same height as the rail-bearing projection, said flange forming a bearing for the shank of the spike to prevent it from backing away from the rail but leaving the head of the spike practically unsupported thereby, substantially as described.

2. A railway tie plate having a transverse rail-bearing projection on its upper surface, and a spike hole in the line of the said projection, said hole having an upwardly projecting rim flange surrounding the rear but not the front portion thereof, said flange being of substantially the same height as the rail-bearing projection, said flange forming a bearing for the shank of the spike to prevent it from backing away from the rail but leaving the head of the spike practically unsupported thereby and having a beveled upper edge portion, substantially as described.

3. A railway tie plate, having a recess in one of its faces, the major portion of said recess being located at the portion of the plate which is centrally underneath the track rail, said recess being at least partially closed at its ends to provide increased rail bearing area where the rail comes upon and leaves the plate; substantially as described.

4. A railway tie plate, having a recess in one of its faces, the major portion of said recess being located at the portion of the plate which is centrally underneath the track rail, and provided with a relatively narrow drainage passage leading to an edge of the plate; substantially as described.

5. A railway tie plate, having a recess in one of its faces, the major portion of said recess being located at the portion of the plate which is centrally underneath the track rail, and provided with a relatively narrow drainage portion leading therefrom to an edge of the plate, said narrow drainage portion being at one side of the web of the rail; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

961,518. FIRE-ESCAPE. ADELBERT OSWALD MÜLLER, Presho, S. D. Filed Apr. 12, 1909. Serial No. 489,315.

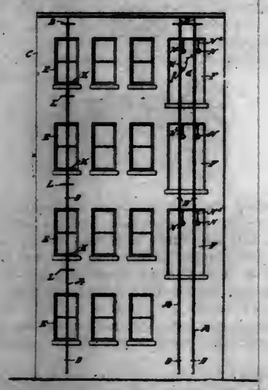
1. A fire escape, comprising a pole spaced from the wall of the building, and a slide having a hook for engagement with the pole, and a support at an angle to the hook and adapted to rest against the pole.

2. A fire escape, comprising a pole spaced from the wall of the building, and a slide having a snap hook for engagement with the pole, and a support at an angle to the said snap hook and having a handle and a foot adapted to rest on the said pole.

3. A fire escape, comprising a pole spaced from the wall of the building, and a slide having a snap hook for engagement with the pole, a support pivotally connected with the said snap hook and having a handle, a foot adapted to engage the pole, and means for adjusting the support relative to the said snap hook.

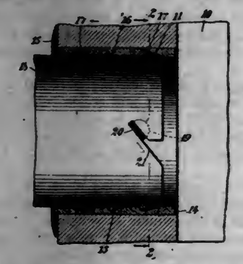
4. In a fire escape, a pole arranged in front of the building and suspended at its upper end, braces pivoted to the face of the building and having forked ends engaging the pole, and a slide for engagement with the pole, the said

braces being adapted to be swung downward out of engagement with the pole when the slide contacts therewith.



5. A fire escape, comprising a pole suspended at its upper end and spaced from the wall of the building, a slide having a hook for engagement with the pole, and a support pivotally connected with the hook and having a member provided with a forked terminal for engaging the pole.

961,519. STOVEPIPE AND THIMBLE. AMBROSE PETER MCGUIAN, Davenport, Iowa. Filed Nov. 30, 1908. Serial No. 465,006.

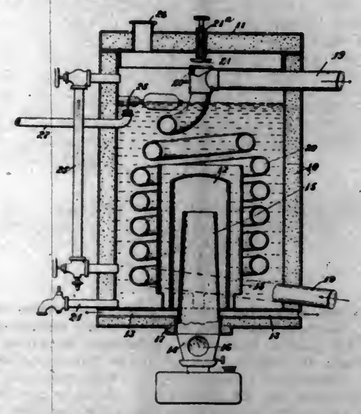


1. A tapered thimble adapted to be located in a flue opening and having at each end an outwardly extending flange, the flange at the inner end of the thimble being of a diameter equal to that of the flue opening and the flange at the outer end being of greater diameter than that of said opening, a layer of cementitious material on the outer surface of the thimble between the flanges thereof and engaging the inner surface of the flue opening and the outer surface of the chimney around said opening, a tapered stove pipe section fitting in the thimble and adapted when forced therein to closely contact therewith to form a tight joint, and means for locking the section in the thimble.

2. A tapered thimble adapted to be inserted in a flue opening and having at its inner end a flange about equal in diameter to the flue opening and at the outer end a flange of greater diameter than said opening, said thimble being provided intermediate of the flanges with outwardly disposed and oppositely projecting tongues, a tapered stove pipe section fitting in the thimble, and interlocking means on the thimble and section for locking the section in the thimble.

3. A tapered thimble adapted to be located in a flue opening and having at each end an outwardly extending flange, the flange at the inner end of the thimble being of a diameter equal to that of the flue opening and the flange at the outer end being of greated diameter than that of the said opening, said thimble being provided intermediate of the flanges with outwardly disposed and oppositely projecting tongues.

961,520. INCUBATOR-HEATER. WILLIAM AUGUSTUS MCMAHON, Philadelphia, Pa. Filed June 19, 1909. Serial No. 503,104.



1. The combination in an incubator heater, of a water tank having an approximately central hood extending upwardly from the bottom thereof, with the top of the hood arranged below the normal water level in the tank, a lamp having a chimney extending through the bottom of the tank into the hood, a hot-air supply pipe for the incubator passing from the outer air through the lower portion of the tank to the upper portion thereof, and a hot water flue to direct the heated water around the hood to the upper portion of the hot-air pipe, arranged between said pipe and hood and open at the bottom and top.

2. The combination in an incubator heater, of a water tank, a burner for heating the water in the tank, and a hot air supply pipe leading to the incubator through the water tank, having a coil in its length below the normal water level and provided with a valve-controlled vapor opening within the tank above said level.

3. The combination in an incubator heater, of a water tank having an opening in the bottom thereof, a hood arranged over said opening, the heater extending through said opening into the hood, a hot-air supply pipe leading to the incubator through the tank from the bottom thereof upwardly and provided with a coil in its length surrounding the hood, and a flue for directing the water heated around the hood against the upper portion of the coil, arranged between and spaced from the coil and hood and open at the bottom and top.

4. The combination in an incubator heater, of a water tank, means for heating the water in the tank, a hot air supply pipe leading to the incubator through the tank and heated by the water in the tank, said supply pipe having a vapor inlet opening therein communicating with the tank and arranged above the normal water level in the tank, and a manually-operated valve controlling the said inlet opening.

961,521. BASE FOR POLES. JAIRUS B. MCMILLAN, North Vernon, Ind. Filed Nov. 10, 1909. Serial No. 527,264.

1. In combination, a base having an angular slot formed longitudinally in the forward face thereof, a pole engaged upon said base, an angular shank depended from said pole for engagement in the slot, a wire wound about the upper end of said base and said shank, a U-shaped bolt extended through said shank and said base, and a band engaged about the upper end of said base and said shank.

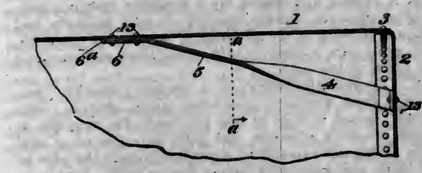


2. A support for a pole including an elongated and flattened base, flanges formed at one side of said base and adjacent the edges thereof for the reception of the pole therebetween, a U-shaped bolt engaged through the pole and through said base, and a length of wire wrapped about said pole and said base.

3. A pole support including a shank formed upon the end of the pole, an elongated base engaged about said shank, a length of wire wrapped about said shank and said base, a U-shaped bolt engaged through said shank and said base and a band carried by said base for engagement about said shank.

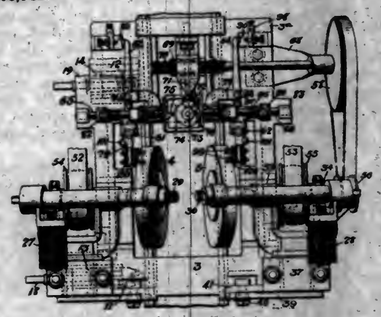
4. In a support as specified the combination with a pole, of a shank formed upon the lower end of said pole, a shoulder formed at the upper end of said shank, a base disposed about said shank and depended therefrom, a U-shaped bolt engaged through said shank and said base, clamping nuts engaged upon the extremities of said bolt for contracting said shank toward said base, a length of wire wound about said shank and said base, a band engaged about the upper end of said base and said shank, lugs formed upon the adjacent ends of said band and a clamping bolt secured to said lug for contracting said band.

961,522. BOILER-BRACE. CHARLES NEBLETT, Bellevue, Ky. Filed May 21, 1908. Serial No. 434,034.



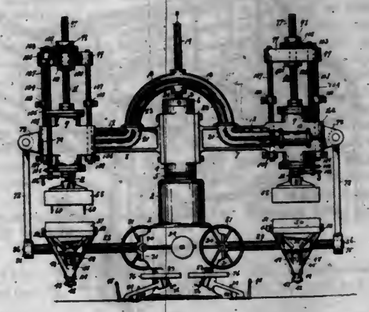
A boiler-brace having a body portion formed from a single piece of sheet-metal doubled over middle length, and having a partial twist intermediate its ends, a head attaching member having laterally extending feet arranged at right angles to a part of the body portion, the laterally bent portion of the feet then being bent back upon themselves and terminating into inwardly arranged projections, said projections being flush with a part of the body portion for a certain distance of its length.

961,523. METHOD OF GRINDING AND SURFACING. HENRY B. NICHOLS, Philadelphia, Pa. Original application filed Sept. 5, 1908, Serial No. 451,875. Divided and this application filed July 22, 1909. Serial No. 508,941.



In metal work, the method of producing a uniform cut unaffected by wear of the cutting tool, which consists in causing variations or changes in the surface of the cutting tool during the process of the cut to immediately react so as to produce a compensating relative adjustment between the tool and work, without interrupting the cut.

961,524. MOLDING-MACHINE. EDWARD E. O'NEILL, Sheffield, Ala. Filed July 14, 1909. Serial No. 507,458.



1. A molding machine comprising a pattern set containing a pattern to be molded, and having means for supporting a flask, a movable support carrying the pattern set, said support being actuatable to revolve the pattern set and to raise the pattern from the sand in the flask, an actuatable foot adapted to compress the sand in the flask, means for permitting said foot to swing in the arc of a horizontal circle, and means for actuating said foot vertically.

2. A molding machine comprising a pattern set containing the pattern to be molded and having means for supporting a flask, means for supporting the pattern set adapted to normally maintain said set uppermost on said support, said pattern set support being actuatable to permit the pattern set and flask to swing downwardly and being also actuatable to permit the pattern to be lifted from the sand in the flask, a pressure foot adapted to compress the sand in the flask, and means for permitting said foot to be swung out of the path of travel of the pattern set to permit the pattern to be swung upwardly.

3. A molding machine comprising a pattern set containing a pattern and having means for supporting a flask, a shaft upon which said pattern set is removably mounted, said shaft being rotatably and also pivotally mounted, a pressure foot adapted to compress the sand

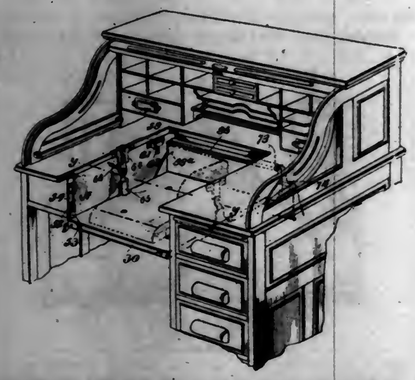
in the flask and around the pattern, means for reciprocating said foot, and means for permitting said foot to be swung from its position over the pattern set and flask.

4. A molding machine comprising a reciprocatory plunger having a pressure foot thereon, means for actuating said plunger, a pattern supported below said foot, means associated with said pattern for supporting a flask, means for actuating the pattern and flask to present the flask downwardly and suspend it from the pattern supporting means, means for supporting the flask in such position independently of the pattern support, means for permitting said pressure foot to be swung from its position over the pattern, and means for actuating the pattern support to lift the pattern from the sand in the flask.

5. A molding machine comprising a pressure foot, means for reciprocating said foot, a pattern set containing a pattern to be molded and having means for yieldingly supporting a flask, means for supporting the flask and pattern under said foot to enable said foot to compress the sand in the flask, means for permitting said pressure foot to be swung from its position over said pattern, and means for withdrawing the pattern from the sand of the flask and reprinting said pattern in the mold.

[Claims 6 to 26 not printed in the Gazette.]

961,525. TYPE-WRITER CABINET. EDWIN BALTZLEY, Glen Echo, Md., assignor, by mesne assignments, to Southern Furniture Company, Washington, D. C., a Corporation of Arizona. Filed Dec. 18, 1906, Serial No. 348,470. Renewed Feb. 19, 1910. Serial No. 544,900.



1. The combination of a desk or table for a typewriting machine, means for holding the machine in each of two positions, one for use and one out of use, means for rotatably supporting said machine, so that it may be moved from one of such positions to the other, the parts being so constructed and arranged that the machine when free to turn will automatically turn from one of said positions to and remain in the other.

2. The combination of a desk or table for a typewriting machine, means for pivotally supporting a machine so that it may be moved from a position at the top of the desk to one beneath the same, said machine normally tending to turn on its pivotal support from one position to the other, means to arrest its movement when it reaches said other position, and a movable holding device to prevent said normal tendency of the machine.

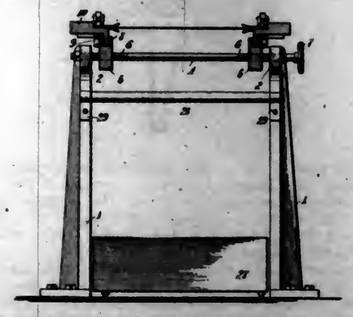
3. The combination of a desk or table for a typewriting machine, a pivoted invertible board, means for attaching a machine to said board, said board in one position being above the machine, and in the other position below the machine, and machine and board normally tending to turn from one of said positions to the other, means to arrest such turning movement when such other position is reached, and a latch to prevent said normal tendency.

4. The combination of a desk or table, a pivoted support for rotatably and reversibly supporting a typewriting machine, counterbalancing means, the parts being so constructed and arranged that the machine when free to turn, will automatically turn from one of its reversed positions to the other and remain in such other position, and means for holding the machine in the position from which it automatically turns.

5. The combination of a desk or table, means for rotatably and reversibly mounting a machine, whereby it may be shifted from a position at the top of the desk to one beneath the same, and means for controlling its speed of movement while passing from one position to the other.

[Claims 6 and 7 not printed in the Gazette.]

961,526. FEEDING DEVICE FOR TENTERING-MACHINES. BENONI PARKINSON, East Greenwich, R. I. Filed July 24, 1909. Serial No. 509,425.



1. A feeding attachment for a tentering machine, comprising a support, guide members carried by said support and extending toward the tentering machine, and tension guides on the guide members to receive the edges of the cloth, the said tension guides having resilient inwardly projecting jaws between which the cloth passes.

2. A feeding attachment for a tentering machine, comprising a support, guide bars on said support and extending toward the tentering machine, resilient jaws on the guide bars between which the cloth passes, and take up devices carried by said guide bars and adapted to take up the slack of the cloth when the tentering frame reciprocates.

3. A feeding attachment for a tentering machine, comprising a pair of standards, guide plates supported by said standards and provided with guide grooves, and guide members mounted at one end to slide in said grooves, and having means for guiding the cloth toward the tentering machine.

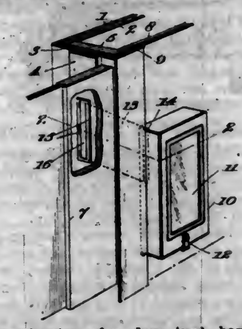
4. A feeding attachment for a tentering machine, comprising supports, blocks mounted on said supports and adapted to slide in the direction of advance of the cloth, and guide bars jointed to said slide blocks and engaging the edges of the cloth.

5. A feeding attachment for a tentering machine, comprising fixed supports presenting guide grooves, slide blocks adapted to slide in said grooves in the direction in which the cloth advances, and guide bars jointed to said slide blocks and extending longitudinally near the edge of the cloth, said guide bars having tension guides for engaging the edges of the cloth.

[Claims 6 to 11 not printed in the Gazette.]

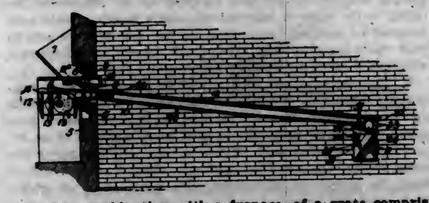
961,527. HOUSE MAIL-RECEPTACLE. STEPHEN D. PIERCE, Ocean City, N. J. Filed Jan. 6, 1910. Serial No. 536,732.

1. A house mail box provided with a chute delivering thereto, said chute extending upwardly above said receptacle and also extending laterally beyond one side of said receptacle, the opening at the inner end of said chute being disposed in a plane at right-angles to the opening in the outer end of said chute, whereby upon instalment the box is arranged on the inside of the house and the outside opening of the chute terminates at the stop face of the door in a protected position, substantially as described.



2. The combination of a door jamb having a downwardly and inwardly inclined slot extending from the stop of the jamb, through the studding, to the interior of the house, the inside opening of said slot being disposed in a plane at right-angles to the outside opening, of a receptacle fitted on the inside of the house adjacent the finishing casing and provided with a chute extending upwardly and laterally beyond one side of same through said slot and terminating at the stop of the door, whereby mail may be delivered therethrough from the stop face of the door frame directly to the interior of the house, substantially as described.

961,528. FURNACE-GRATE. HERMAN A. POPPENHUSEN, Evanston, Ill. Filed Jan. 23, 1909. Serial No. 473,874.



1. The combination with a furnace, of a grate comprising a plurality of grate-bars extending from front to rear of the furnace, each of said grate-bars embracing two longitudinally arranged members pivotally connected with each other at the forward end of the bar, means acting severally on the forward ends of the bars, acting to give endwise reciprocatory and rising and falling motion to the forward ends of both members of each bar, supporting means for the rear ends of the bars affording a supporting surface for each member of each bar, and means operated by the endwise movement of each bar, acting in connection with the supporting surface to give rising and falling vibratory motion to the rear end of one of said members relatively to the rear end of the other member of the bar.

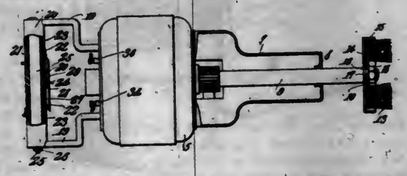
2. The combination with a furnace, of a grate comprising a plurality of grate-bars extending from front to rear of the furnace, each of said grate-bars embracing two longitudinally arranged members pivotally connected with each other at the forward ends of the bar, means acting severally on the forward ends of the bars acting to give endwise reciprocatory and rising and falling motion to the forward ends of both members of each bar, supporting means for the rear ends of the bars affording a rounded supporting surface for each member of each bar, one of the members of each bar being provided with a downwardly facing oblique bearing surface acting on said rounded supporting surface in the endwise movement of said member to produce rising and falling movement of the rear end of said member.

3. The combination with a furnace, of a grate comprising a plurality of grate-bars extending from front to rear of the furnace, each of said grate-bars embracing two longitudinally arranged members pivotally connected with each other at the forward end of the bar, means acting severally on the forward ends of the bars acting to give endwise reciprocatory and rising and falling motion to the forward ends of both members of each bar, supporting means for the rear ends of the bars affording a rounded supporting surface for the rear end of each member of each bar, the members of each bar being provided with downwardly facing, oblique bearing surfaces acting on said rounded supporting surface to produce rising and falling movement on the rear ends of both members, said bearing surfaces on the two members being oppositely inclined.

4. The combination with a furnace, of a grate comprising a plurality of grate-bars extending from front to rear of the furnace, each of said grate-bars embracing two longitudinally arranged members pivotally connected with each other at the forward end of the bar, means acting severally on the forward ends of the bars, acting to give endwise reciprocatory and rising and falling motion to the forward end of each member of each bar, a transversely extending support for the rear ends of said bars, and rollers mounted and rolling on said support, each of said rollers being arranged to sustain the rear ends of the members of each bar, and at least one member of each bar being provided with a downwardly facing, oblique bearing surface acting on its associated supporting roller to give rising and falling movement to the rear end of said member.

5. The combination with a furnace, of a grate comprising a plurality of grate-bars extending from front to rear of the furnace, each of said grate-bars embracing two longitudinal members pivotally connected with each other at the forward end of the bar, means acting severally on the forward ends of the bars for giving endwise reciprocatory and rising and falling motion to the forward end of each member of each bar, a transversely extending support for the rear ends of said grate-bars, rollers resting and rolling on said support, one for each bar, the members of each bar being provided with downwardly facing oblique bearing surfaces acting on their associated roller to produce rising and falling movement in the rear end of said members, said bearing surfaces on the two members being oppositely inclined.

961,529. POLISHING-MACHINE. JOB PURSEHOUSE, Streator, Ill. Filed Feb. 1, 1909. Serial No. 475,399.

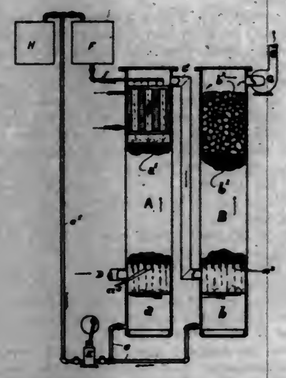


In a brushing machine, a pair of disks having registering central openings, a drive shaft received in said openings, means for securing the disks on said shaft, bristles secured to one of the disks said disks being removably mounted on the shaft, and an outstanding marginal flange on the other disk surrounding the inner ends of the bristles.

961,530. METHOD OF MAKING SULFUR CHLORID. WILLIAM O. QUAYLE, Wilmington, Del., assignor to The Midland Chemical Company, Midland, Mich., a Corporation of Michigan. Filed Sept. 2, 1909. Serial No. 515,787.

1. In the manufacture of sulfur chlorids, the steps which consist in chlorinating sulfur in solution, and ab-

sorbing any escaping chlorin or chlorid vapors with solid sulfur.



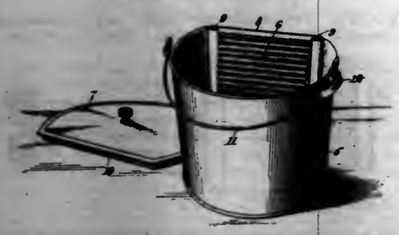
2. In the manufacture of sulfur dichlorid, the steps which consist in chlorinating sulfur in solution to such dichlorid, and absorbing any escaping chlorin or dichlorid vapors with solid sulfur.

3. In the manufacture of sulfur dichlorid, the steps which consist in chlorinating a solution of sulfur monochlorid and sulfur, and absorbing any escaping chlorin or dichlorid vapors with solid sulfur.

4. In the manufacture of sulfur dichlorid, the steps which consist in passing a gaseous body containing chlorin through a solution of sulfur mono-chlorid and sulfur, whereby sulfur dichlorid is produced, and then passing the residual gases, including any unabsorbed chlorin or vaporised dichlorid, over solid sulfur, whereby such chlorin and dichlorid vapors are absorbed.

5. The improvement in the manufacture of sulfur chlorids, which consists in absorbing in solid sulfur any chlorin or chlorid vapors that escape from the principal reactions.

961,531. WASHPAIL. GEORGE HENRY REEVES, New York, N. Y. Filed Feb. 16, 1909. Serial No. 478,167.

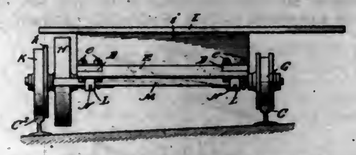


1. The combination of a pail having a flat side inclining downwardly and inwardly, with the side wall of the pail buckled at the opposite edges of the flat side to form ways, and a wash-board arranged over the flat side of the pail and slidable in said ways.

2. The combination of a pail having the side wall thereof buckled at oppositely-disposed points, forming ways, and a wash-board slidably received in the said ways.

3. The combination of a pail having a flat side inclining downwardly and inwardly and provided with ways, the ways converging downwardly, and a wash-board having the opposite edges thereof slidable in said ways, with the body of the board inclining inwardly relatively to the said side.

961,532. VEHICLE. JOHN REINEHR, Savanna, Ill., assignor, by direct and mesne assignments, to Rail Laying Machine Company, a Corporation of Illinois. Filed Jan. 31, 1910. Serial No. 541,005.



1. The combination with a vehicle having wheels on each side thereof normally supporting the same, of a wheel adapted to be removably secured to said vehicle in position to support the same at one side and to hold the other wheels at that side out of operative contact with the surface on which they are designed to run.

2. The combination with a vehicle having flanged supporting wheels on one side thereof and non-flanged supporting wheels on the other side thereof, the aforementioned wheels being adapted to normally support said vehicle, of a wheel adapted to be removably secured to the vehicle in position to support the same at the side provided with the non-flanged wheels and to hold the said non-flanged wheels out of operative contact with the surface on which they normally run.

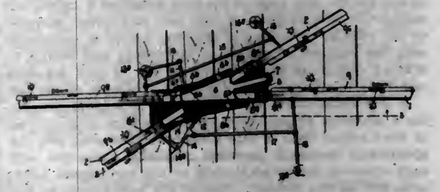
3. The combination with a vehicle having flanged supporting wheels on one side thereof and non-flanged supporting wheels on the other side thereof, the aforementioned wheels being adapted to normally support said vehicle, of a flanged wheel adapted to be removably secured to the car in position to support the same at the side provided with the non-flanged wheels and to hold said non-flanged wheels out of operative contact with the surface on which they normally run.

4. The combination with a vehicle comprising a body and wheels which normally support said body, the wheels on one side being flanged and those on the other non-flanged wheels, of an axle adapted to be removably secured to the body of said vehicle and a wheel on said axle adapted to support the vehicle on one side thereof and to hold the wheels on that side of the vehicle out of contact with the surface on which they normally run.

5. The combination with a vehicle having flanged supporting wheels on one side thereof and non-flanged wheels on the other side thereof, the aforementioned wheels normally supporting said vehicle, of a wheel adapted to be removably secured to said vehicle in position to support the same at the side provided with the flanged wheels and to hold the latter out of contact with the surface on which they normally run.

[Claim 6 not printed in the Gazette.]

961,533. SWITCH-FROG. HARRY F. ROACH, St. Louis, Mo., assignor to Continuous Rail & Safety Switch Co., St. Louis, Mo., a Corporation of New Jersey. Filed Nov. 26, 1907. Serial No. 403,959.



1. In a switch-frog, a base having integral stop projections, a tongue pivotally mounted at one of its terminals to said base and coöperating with said projections, means for moving said tongue, and reciprocating locking devices operating to lock the tongue against movement in its different positions.

2. In a switch-frog, a base having integral overhanging stop projections, a tongue pivotally mounted at one of its terminals to said base and being provided with lateral projections designed to fit under the overhanging stop projections, means for moving said tongue, and reciprocating locking devices for locking said tongue in its different positions.

3. In a switch-frog, a base having integral overhanging stop projections, a tongue pivotally mounted at one of its terminals to said base and coöperating with said stop projections which serve to lock said tongue against upward movement in its different positions, means for moving said tongue, and reciprocating devices for locking the tongue against lateral movement in its different positions.

4. In a switch-frog, main and siding rails, a base-plate, a tongue pivotally mounted on said base plate, depressible bars adjacent the main and siding rails for operating said tongue, and reciprocating locking devices operated by said depressible bars for locking said tongue in its different positions.

5. In a switch-frog, a base plate, a tongue pivotally mounted on said base plate, main and siding rails connected to said base plate, depressible bars adjacent said rails and connected together in pairs on opposite sides of said tongue, whereby when the pair of said bars coöperating with the main rail is depressed the switch tongue will be moved to open the main line, and a pair of bars coöperating with the siding rail will be elevated in readiness to operate the tongue to open the siding when a train enters the siding, and reciprocating locking devices actuated by said depressible bars for engaging the switch tongue to lock the same in its different positions.

[Claim 6 not printed in the Gazette.]

961,534. SWITCH-FROG. HARRY F. ROACH, St. Louis, Mo., assignor to Continuous Rail & Safety Switch Co., St. Louis, Mo., a Corporation of New Jersey. Filed Nov. 26, 1907. Serial No. 403,960.



1. In a switch-frog, a one-piece tongue having a point and heel portion on the same side of its pivotal point, a switch operatively connected to move said tongue, and reciprocating devices operated by said switch for locking said tongue in its different positions; substantially as described.

2. In a switch-frog, a base plate having rail terminals secured thereto, the ends of said rail terminals being obliquely disposed, a tongue pivotally mounted on said base plate and having point and heel portions on the same side of its axis of movement, said tongue and heel portions coöperating with the ends of said rail terminals, and locking devices operable by a passing train and coöperating with the free end of said tongue to block the same in its different positions; substantially as described.

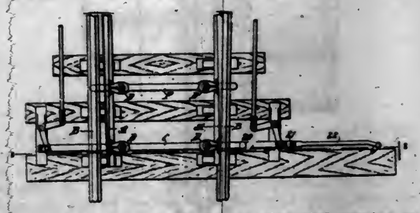
3. In a switch-frog, a base plate to which the terminals of rails are connected, a movable tongue in the form of an arrow head pivotally mounted on said base plate, a switch-operating rod connected to said movable tongue; means for locking said tongue in its different positions, said means being operable by said switch operating means, and train operated means also coöperating with said locking devices; substantially as described.

4. In a switch-frog, a base, a tongue pivotally mounted on said base, means for locking said tongue in position, and a switch-operating means for actuating said tongue and also said locking devices; substantially as described.

5. In a switch-frog, a base plate, a tongue pivotally mounted on said base plate, alternately operable locking devices for coöperating with said tongue, switch-operating mechanism for operating said locking devices and means operable by a passing train for actuating said locking devices; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

961,535. ADJUSTABLE HEAD-ROD. HARRY F. ROACH, St. Louis, Mo., assignor to Continuous Rail & Safety Switch Co., St. Louis, Mo., a Corporation of New Jersey. Filed Mar. 7, 1910. Serial No. 547,855.



1. A head rod provided with an elongated opening or pocket, an adjustable member arranged in said pocket, and coöperating means on said member and on the walls of said pocket for retaining said member in adjusted position.

2. A head rod provided with a pocket or opening that extends longitudinally of the center axis of said rod, a member arranged in said opening and adapted to be adjusted longitudinally thereof, and means for retaining said member in adjusted position.

3. A head rod provided with an oblong-shaped pocket or opening, an adjustable member having a rectangular-shaped portion that is adapted to fit in said opening, and means for locking said member in a number of different positions.

4. A head rod provided with an approximately oblong-shaped pocket, an adjustable member having a square portion that fits in said pocket, and coöperating lugs and recesses on said square portion and on the walls of said pocket for retaining said member in a number of different positions.

5. A head rod provided with an approximately oblong-shaped pocket having notches formed in the walls thereof, an adjustable member having a square portion that fits in said pocket, and lugs on said square portion that coöperate with the notches in the walls of said pocket for retaining said member in adjusted position.

[Claims 6 to 11 not printed in the Gazette.]

961,536. FILM-REELING MECHANISM. ALVAH C. ROEBUCK, Chicago, Ill. Filed Dec. 17, 1908. Serial No. 468,008.

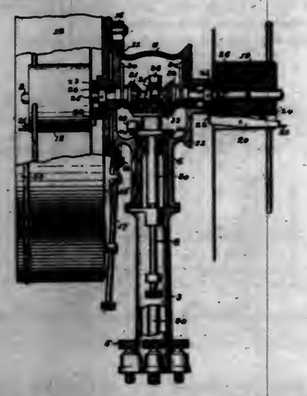
1. The combination in a kinetoscope, of a reel support arranged to one side of the focal axis thereof, and a pair of film reels shiftably connected to the reel support and adapted to be alternately brought into a line with the focal axis of the kinetoscope, substantially as set forth.

2. The combination in a kinetoscope, of a reel support arranged to one side of the focal axis thereof, and a pair of film reels revolubly connected to the reel support and adapted to be alternately brought into a line with the focal axis of the kinetoscope, substantially as set forth.

3. The combination in a kinetoscope, of a reel arm arranged to one side of the focal axis thereof, a revoluble head mounted on said reel arm, and a pair of film reels arranged on opposite sides of the revoluble head and adapted to be alternately brought into a line with the focal axis of the kinetoscope, substantially as set forth.

4. The combination in a kinetoscope, of a pair of reel supports arranged to one side of the focal axis thereof,

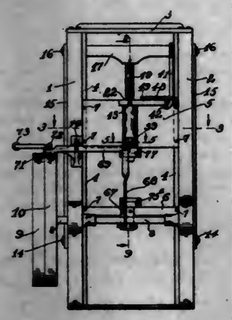
and a pair of film reels shiftably connected to each reel support and adapted to be alternately brought into a line with the focal axis of the kinetoscope, substantially as set forth.



5. The combination in a kinetoscope, of a pair of reel supports arranged to one side of the focal axis thereof, and a pair of film reels revolubly connected to each reel support and adapted to be alternately brought into a line with the focal axis of the kinetoscope, substantially as set forth.

[Claims 6 to 28 not printed in the Gazette.]

961,537. MACHINE FOR CUTTING INTERNAL FLUTES. DAVID E. ROSS, Brookston, Ind., assignor to Ross Gear and Tool Company, La Fayette, Ind., a Corporation of Indiana. Filed Nov. 26, 1907. Serial No. 403,895.



1. In a machine for cutting internal grooves, a main frame, a reciprocating cross-head mounted in said frame, a feed-screw, a feed-wheel connected with said feed-screw, a cutter-bar connected with the cross-head and reciprocating therewith, a cutter-bit carried by the cutter-bar, connections between the cutter-bit and the feed-screw, such that, when the feed-screw is turned, the cutter-bit will be forced outwardly, means for turning the feed-wheel and the feed-screw at a definite time in the stroke of the cutter-bar and means for locking the feed-wheel and the feed-screw against rotation except at the time when the same is to be turned.

2. In a machine for cutting spiral, internal flutes, a main frame, a reciprocating cross-head mounted in said frame, a feed-screw connected with the said cross-head, a feed-wheel feathered to said feed-screw, a cutter-bar connected with the cross-head and reciprocating therewith, a cutter-bit carried by the cutter-bar, connections between the cutter-bit and the feed-screw, such that when the feed-screw is turned in the cutter-bar, the cutter-bit will be forced outwardly, means for turning the feed-wheel and the feed-screw at a definite time in the stroke of the cutter-bar, means supported from the cross-head for locking the feed-wheel and the feed-screw against rotation except at the time when the same is to be turned, and mechanism for turning the cutter bar during its reciprocations.

3. In a machine for cutting internal flutes, a main frame, a cross-head mounted to reciprocate in said main frame, a shank depending from the central part of said cross-head, said shank having a threaded socket in its lower end, a feed-screw threaded in said socket, said screw having a feather-way formed therein, a feed-wheel feathered to said feed-screw, a cutter-bar supported by and surrounding the said feed-screw, a cutter-bit mounted in said cutter-bar, connections between the cutter-bit and the feed-screw whereby, when the feed-screw is screwed out of the shank, the cutter-bit is fed outwardly from the cutter-bar, means for guiding the cutter-bar in its reciprocation, means carried by said guiding means for turning the feed-wheel and means carried by the shank and engaging with the guiding means for locking the feed-wheel and the feed-screw against rotation during the cutting operation.

4. In a machine for cutting internal grooves, a main frame, a cross-head mounted to reciprocate in said frame, a shank depending from the central portion of said cross-head, said shank having a threaded socket in its lower end, a feed-screw threaded into said socket, said feed-screw having a feather-way therein, a feed-wheel feathered on the feed-screw below the shank, a cutter-bar carried by the feed-screw, said cutter-bar having an opening therethrough for the feed-screw, a cutter-bit mounted in the lower end of said cutter-bar, connections between the cutter-bit, and the feed-screw, such that, when the feed-screw is turned, the cutter-bit will be fed outwardly from the cutter-bar, a stationary guide for the cutter-bar, a feed-bar mounted upon the stationary guide and having a tooth for engaging the feed-wheel, means carried by the cross-head for moving the feed-bar to turn the feed-wheel and means carried by the shank for locking the feed-wheel against rotation during the descent of the cutter-bar.

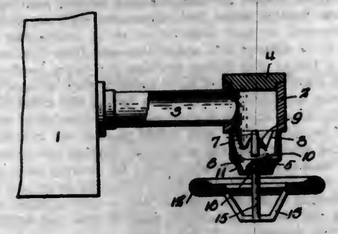
5. In a machine for cutting spiral internal grooves, a main frame, a cross-head mounted to reciprocate in said frame, a shank depending from the central portion of said cross-head, said shank having a threaded socket in its lower end, a feed-screw threaded into said socket, said feed-screw having a feather-way therein, a feed-wheel feathered on the feed-screw below the shank, a cutter-bar carried by the feed-screw, said cutter-bar having an opening therethrough for the feed-screw, a cutter-bit mounted in the lower end of said cutter-bar, connections between the cutter-bit and the feed-screw, such that, when the feed-screw is turned, the cutter-bit will be fed outwardly from the cutter-bar, a stationary guide for the cutter-bar, a feed-bar mounted upon the stationary guide and having a tooth for engaging the feed-wheel, means carried by the cross-head for moving the feed-bar to turn the feed-wheel, means carried by the shank for locking the feed-wheel against rotation during the descent of the cutter-bar, and means for rotating the cutter-bar during the cutting operation.

[Claims 6 to 13 not printed in the Gazette.]

961,538. AUTOMATIC FAUCET. WALTER A. SCHMEYKAL, Goshen, Ind. Filed Aug. 18, 1909. Serial No. 513,465.

1. A valve lifter for faucets comprising a ring, a yoke arranged within the ring and extending below the bottom thereof and including downwardly converging receptacle guiding members, and a stem rising centrally from the yoke and projecting above the ring for connection with the valve.

2. A valve lifter for faucets comprising a ring, a yoke arranged within the ring and extending below the bottom thereof and including downwardly converging receptacle guiding members, a stem rising centrally from the yoke and projecting above the ring for connection with the valve, and additional receptacle guiding members on the ring and converging downwardly therefrom in coöperative relation with the said members of the yoke.

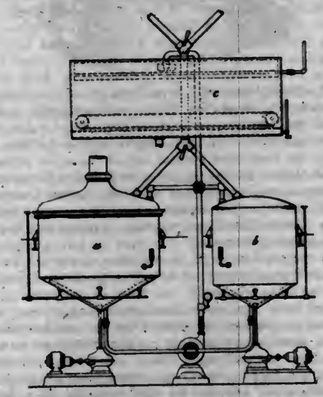


3. A valve lifter for faucets comprising a unitary structure consisting of a yoke having downwardly converging receptacle guiding members connected together at their lower ends, a stem disposed between the members and having its lower end rigidly secured thereto and its upper end terminating above the members for connection with a valve, and means located outwardly from and in fixed relation to the said members to be engaged by a receptacle for raising the lifter.

4. A valve lifting device for faucets comprising a ring having inwardly extending and downwardly converging members, certain of the members being connected together, and a stem disposed axially of the ring and having its lower end secured to the connected members and its upper end extending above the ring and threaded for connection with the valve.

5. An automatic faucet comprising a hollow faucet body terminating at its lower end in the valve seat, a vertically movable valve coöperating with said seat, and a valve lifter located wholly outside the faucet body comprising a valve stem, a yoke carried by said stem, and a valve lifting ring connected with said yoke in concentric relation to the stem and disposed above the bottom of the yoke.

961,539. ART OF BREWING. JOSEPH SCHNEIBLE, Weehawken, N. J. Filed Dec. 6, 1909. Serial No. 531,499.

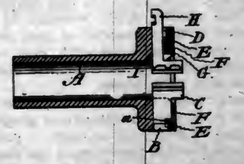


1. The improvement in the art of brewing which consists in cooking hops in a part of the mash and then mixing such part of the mash with the remainder of the mash, before conversion of the starch.

2. The improvement in the art of brewing which consists in cooking hops in the cereal mash, before conversion of the starch.

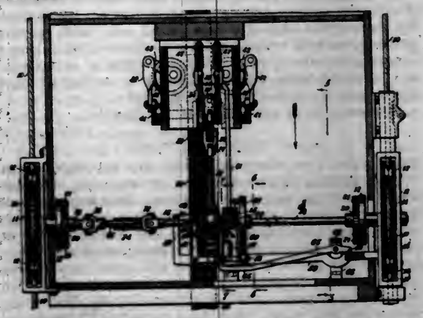
3. The improvement in the art of brewing which consists in cooking hops in the cereal mash and then mixing the same with the malt mash, before conversion of the starch.

961,540. HOLLOW TOOL. ROLAND A. SCHRAG, Toronto, Ontario, Canada. Filed Feb. 1, 1909. Serial No. 475,447.



A hollow cutter head having radial slots formed therein in combination with a plurality of cutters radially movable in said slots and each having a shoulder formed thereon adjacent to its outer end and a second shoulder farther from the axis of the tool separated by a notch from the first shoulder and extending part way only toward the outer end of the first shoulder; a cam ring having a plurality of interrupted cam faces formed on its inner periphery and arranged in close succession, and ribs forming lateral extensions of the cam faces entering the aforesaid notches; and a flat-sided stationary ring secured to the head engaging the outer face of the cam ring and also the outer faces of the radial cutters.

961,541. ELEVATOR-BRAKE. FREDERICK A. J. SCHULZ, Bronxville, N. Y. Filed June 25, 1909. Serial No. 504,256.



1. An elevator brake comprising a triangular shaped stationary member of the elevator structure; three levers having eccentric shaped ends, two of said ends disposed to engage the outer sides of said triangular member, and the third of said ends the inner side thereof; a rotary shaft mounted on the car structure; a stationary member of the elevator structure to engage and rotate said shaft; a loose pulley mounted on said shaft; suitable fixed connections attached to said levers and said loose pulley; and means for fixedly engaging the said shaft and said loose pulley.

2. An elevator brake comprising a stationary member of the elevator structure; a plurality of gripper jaws disposed to engage said stationary member; a plurality of levers connected with said jaws to force the same upon said stationary member; a rotary shaft mounted on the car structure; a stationary member of the elevator structure rotatively engaging said shaft; a loose pulley mounted on said shaft; suitable connections between said levers and said loose pulley; a clutch member slidably mounted on

said shaft; and a cam member mounted on said shaft adapted to move the said clutch member to engage the said loose pulley.

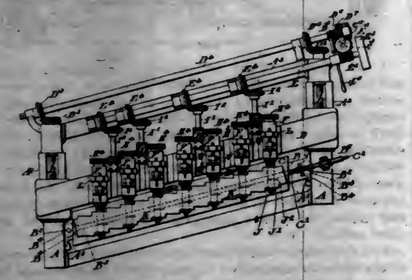
3. An elevator brake comprising a stationary member of the elevator structure; a plurality of gripper jaws disposed to engage said stationary member; a plurality of levers connected with said jaws to force the same upon said stationary member; a rotary shaft mounted on the car structure; a stationary member of the elevator structure rotatively engaging said shaft; a loose pulley mounted on said shaft; suitable connections fixedly attached to said levers and to said loose pulley; a cam member having a plurality of cam surfaces fixedly mounted on said shaft; a clutch member slidably mounted on said shaft; and a transmission member connected with said cam member and said clutch member to move the said clutch member to engage the said loose pulley.

4. An elevator brake comprising a stationary member of the elevator structure; a plurality of gripper jaws disposed to engage said stationary member; a plurality of levers adapted to move said jaws toward one another to impinge upon said stationary member; a rotary shaft mounted on the car structure; a stationary member of the elevator structure rotatively engaging said shaft; a loose pulley mounted on said shaft; suitable connections attached to said levers and said loose pulley; a clutch member slidably mounted on said shaft; a cam member having a plurality of cam surfaces fixedly mounted on said shaft; a transmission member connecting the said clutch member and cam member to move the said clutch toward and from said loose pulley; and a spring to hold the said transmission member against the said cam member.

5. An elevator brake comprising a stationary member of the elevator structure; a plurality of gripper jaws disposed to engage said stationary member; a plurality of levers adapted to move said jaws to impinge upon said stationary member; a rotary shaft mounted on the car structure; a stationary member of the elevator structure rotatively engaging the said shaft; a flexible connection between the power applied ends of said levers; adjustable flexible connections between the said first mentioned flexible connections and said loose pulley; a clutch member slidably mounted on said shaft; a cam member having a plurality of cam surfaces fixedly mounted on said shaft; and a transmission member adapted to engage the said clutch member with the said loose pulley.

[Claims 6 to 10 not printed in the Gazette.]

961,542. BORING AND FACING MACHINE FOR BOILER-HEADERS. WILLIAM F. SELLERS, Wilmington, Del., COLEMAN SELLERS, Jr., Philadelphia, and THOMAS T. COLLINS, Enfield, Pa., assignors to Edge Moor Iron Company, Edge Moor, Del., a Corporation of Delaware. Filed July 1, 1909. Serial No. 505,327.



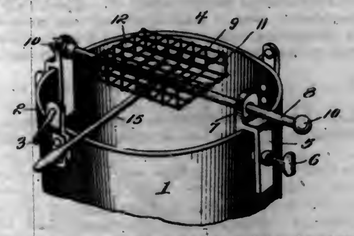
1. A boring and facing machine for boiler headers having in combination a series of spindles each spindle having a boring tool secured to it and a facing tool extending out radially from it, the facing tools of the series of spindles being set parallel to each other; means for rotating and feeding said spindles, a work holding table and means for shifting said table transversely to said spindles so as to enable the facing tools to be entered into and withdrawn from the header.

2. A boring and facing machine for boiler headers having in combination a series of spindles each spindle having a boring tool secured to it near its end and facing tool extending out radially from it, and having its cutting edge set in the direction away from the end of the spindle, the facing tools of the series of spindles being set parallel to each other, means for rotating and feeding said spindles, a work holding table and means for shifting said table transversely to said spindles so as to enable the facing tools to be entered into and withdrawn from the header.

3. A boring and facing machine for boiler headers having in combination a series of spindles each spindle having a boring tool secured to it and a facing tool extending out radially from it, said facing tools of the series of spindles being set parallel to each other, means for rotating the spindles simultaneously, means for feeding the spindles to their work simultaneously, means for feeding each spindle to its work independently, a work holding table and means for shifting said table transversely to said spindles so as to enable the facing tools to be entered into and withdrawn from the header.

4. A boring and facing machine for boiler headers having in combination a series of spindles each having a boring tool secured to it and a facing tool extending radially from it, said facing tools of the series of spindles being set so as to be parallel to each other, means for rotating the spindles simultaneously, means for feeding the spindles to their work simultaneously, means for feeding each spindle to its work independently, a work holding table and means for shifting said table parallel to the direction in which the facing tools extend when said tools are in the same plane so as to enable the facing tools to be entered and withdrawn from the header, and means for shifting the table transversely to said direction, whereby different rows of holes may be brought into line with the spindles.

961,543. FLAT-IRON-HANDLE COOLER. HENRY W. SIDGREAVES, New York, N. Y. Filed Oct. 15, 1909. Serial No. 522,903.

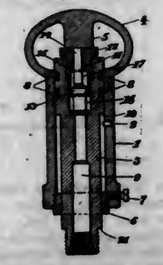


1. In combination with a pail adapted for the reception of a quantity of water, of a basket having trunnions mounted in bearings secured to the sides of the pail, a handle connected with the basket and projecting at an angle to the trunnions beyond one of the sides of the pail, the said basket having an open end and a longitudinally extending opening at its top whereby the flat iron may be inserted within the basket and its handle projected through the longitudinal opening, substantially as and for the purpose described.

2. In combination with a pail adapted for the reception of a quantity of water, of a basket having trunnions engaging bearings secured to the sides of the pail, a handle connected with the basket and projecting at an angle to the trunnions beyond one side of the pail, said basket comprising a rectangular member constructed of wires and being provided with an open front, and having its top provided with a longitudinally extending passage, the body of the basket being adapted for the reception of a flat iron and the longitudinal passage being adapted to provide a space through which the handle of the iron projects.

3. In combination with a pail adapted for the reception of a quantity of water, U-shaped bracket members for the pail, the outer arms of said bracket members being provided with threaded retaining elements, the said brackets being also provided with projecting ears having openings, a cylindrical rod positioned within the openings of the ears, said rod having its ends provided with enlargements and the said rod being also provided with a rectangular basket member, the basket having one of its ends open and its top provided with a longitudinally extending centrally arranged slot, and a handle connected with the rear face of the basket and projecting at an angle beyond one side of the pail.

961,544. BELL-RINGER. FRANK SIMONS, St. Louis, Mo. Filed Sept. 24, 1909. Serial No. 519,304.



1. In a bell ringing device the combination of a bell, a frame, a detachable and adjustable swinging member upon the axle or gudgeon of the bell frame, a rolling member detachably secured to said swinging member, a domed cylinder reciprocatively acting upon a stationary valve-body, said dome of said cylinder acting directly against the outer periphery of said rolling member, a reciprocating valve incased in said valve-body, the reciprocating members of said valve having means to permit the entrance of motive fluid into the dome chamber of said cylinder, means for automatically shutting off the flow of motive fluid into said dome chamber, means for automatically reopening said valve, and adjustable and detachable means for altering the relative position of said rolling member to said dome cylinder.

2. In a bell ringing device the combination of a bell, a frame, an axle or gudgeon connected to said frame, a detachable and adjustable swinging member upon said axle or gudgeon, a rolling member detachably secured to said swinging member, a domed cylinder adapted to reciprocate upon a stationary piston and to engage said rolling member, a reciprocating valve incased in said piston, said reciprocating valve having a stem and an enlarged portion thereon, each of said stem and said enlarged portion being provided with a flattened portion to permit the entrance of the motive fluid into the dome chamber of said cylinder, said stem extending into said dome chamber and actuated by said dome of said cylinder, a valve seat, and said enlarged portion movable into and out of engagement with said seat.

3. A bell ringing device, comprising, in combination, a stationary tubular piston, a reciprocating valve mounted for axial movement in said tubular piston, a stem on said valve adapted to be projected beyond said piston, a cylinder casing having an exteriorly rounded dome closing its upper end slidably mounted on said piston, and adapted to be actuated by said stem when fluid pressure is exerted on said valve.

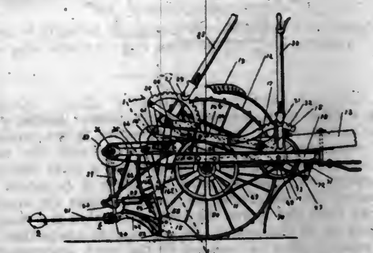
4. A bell ringing device, comprising, in combination, a stationary piston having a passage throughout its length, a cylinder casing slidable on said piston, an enlarged pressure dome surmounting said cylinder casing, and a valve longitudinally reciprocable in said continuous passage, said valve being operatively mounted to control the fluid pressure in said dome by coöperation of the fluid pressure with said cylinder casing.

5. A bell ringing device, comprising, in combination, a stationary tubular piston, a reciprocating valve mounted for axial movement in said tubular piston, a stem on said valve adapted to be projected beyond said piston, a cylinder casing slidable on said piston, and adapted to be actuated by said stem when fluid pressure is exerted on said valve.

[Claims 6 to 9 not printed in the Gazette.]

961,545. POTATO-DIGGER. WILLIAM I. SKINNER, Richfield, N. Y. Filed Apr. 1, 1909. Serial No. 487,209.

1. The combination with a plow of a set of hinged rearwardly projecting breaker fingers, means for vibrating the breaker fingers, a shaker having forwardly projecting fingers interposed between the breaker fingers, and means for vibrating the shaker and shaker fingers in unison with said breaker fingers, substantially as set forth.



2. The combination in a potato digger of a main frame supported and carried by a pair of wheels, a plow frame and means for raising and lowering the plow frame with reference to the main frame at the rear end, a plow carried by the plow frame, a shaker, rearwardly projecting arms mounted on and adjustable with the plow frame and carrying the shaker and shaker operating mechanism, whereby the shaker and plow are simultaneously adjusted by the vertical movement of said plow frame, said arms having means for adjusting them longitudinally and angularly with reference to the plow frame, substantially as set forth.

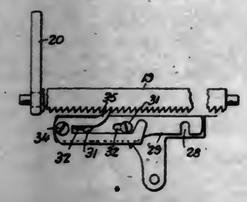
3. The combination in a potato digger of a main frame supported and carried on a pair of wheels, a plow frame of angular form having generally upright parts at its rear end and generally horizontal parts projecting forwardly with reference to the main frame, and hinged at their forward ends with reference to the main frame, means for raising and lowering the hinging points of the plow frame, means for raising and lowering the rear end of the plow frame, plows carried by the generally upright parts of the plow frame, and a shaker and shaker mechanism carried by said plow frame and adjustable therewith to maintain coöperating relation with said plows.

4. The combination in a potato digger of a plow consisting of two separate parts arranged angularly with reference to each other on the transverse line of the plows, a set of hinged rearwardly projecting breaker fingers mounted on the rear end of each plow part, a common shaker for both plow parts having forwardly projecting fingers interposed between the breaker fingers, and means for vibrating the shaker and shaker fingers, and means for vibrating the breaker fingers, substantially as set forth.

5. The combination in a potato digger of a main frame, an independently adjustable plow frame, a plow carried by the plow frame, a rocking bar having a set of rearwardly projecting and curved breaker fingers, means for vibrating the breaker fingers, and a shaker coöperating with the plow and breaker fingers, substantially as set forth.

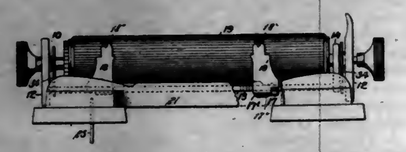
[Claims 6 to 8 not printed in the Gazette.]

961,546. BACK-SPACING DEVICE FOR TYPEWRITERS. GEORGE A. SMITH, New York, N. Y., assignor of sixteen one-hundred-and-fourths to James W. Hennessey, Richmond, N. Y., forty-six one-hundred-and-fourths to Arthur Letts, Los Angeles, Cal., and twenty-one one-hundred-and-fourths to Frederick H. Ward, Brooklyn, N. Y. Filed Dec. 17, 1906. Serial No. 348,294.



In a typewriter, the combination with a sliding carriage having a rack bar movable relative to the carriage and escapement mechanism coöperating with the rack bar, of back-spacing means comprising a pawl adapted to engage with the said rack bar when it is moved to disengage the escapement mechanism, means for operating the pawl and means for moving the rack bar from a position to be engaged by the escapement mechanism to one where it may be engaged by the pawl, substantially as and for the purposes set forth.

961,547. MARGINAL-STOP DEVICE FOR TYPEWRITERS. GEORGE A. SMITH, New York, N. Y., assignor of sixteen one-hundred-and-fourths to James W. Hennessey, Richmond, N. Y., forty-six one-hundred-and-fourths to Arthur Letts, Los Angeles, Cal., and twenty-one one-hundred-and-fourths to Frederick H. Ward, Brooklyn, N. Y. Filed Apr. 22, 1908. Serial No. 428,485.

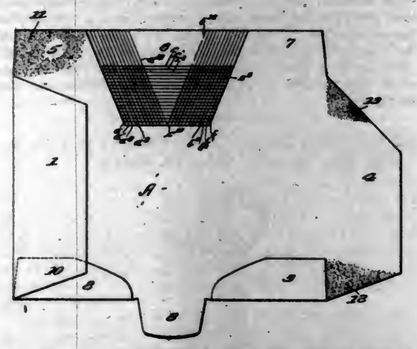


1. In a typewriter, the combination with a carriage, of a pivoted bar carried thereby and extending longitudinally thereof, and being provided with adjustable stops having paper-holding fingers, a tension-spring connected with the bar to force the fingers toward the platen, an arm on the bar to rock the latter and lift the fingers away from the platen, a buffer contacted by the stops to arrest the movement of the carriage in both directions, and manually operated devices for releasing the buffer and hence the stope.

2. In a typewriter, the combination with a buffer-plate, of means for holding the plate, means for releasing the plate, a carriage, a ratchet bar journaled in the frame of the carriage in front of the platen and having a tension spring, one or more carriage stops adjustable on the bar and carrying paper holding and guiding fingers, devices on the stops to engage the bar, and means for holding said devices out of engagement with the ratchet bar.

961,548. BOOK-COVER. GERTRUDE V. D. SOUTHWORTH, Syracuse, N. Y. Filed Jan. 16, 1909. Serial No. 472,586.

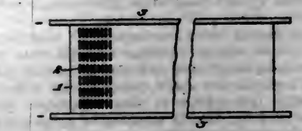
1. As a new article of manufacture a book-cover composed of a single piece of paper and having a central substantially rectangular body portion and integral flaps on the four edges of said body, said flaps being adapted to be folded inwardly, and two converging series of lines inscribed on the upper portion of the inner surface of the cover, the lines of each series being parallel and the two series being arranged respectively on each side of the center.



2. In a one-piece book-cover, the combination with a substantially rectangular body portion, of left and right flaps on the lower edge of the body, said flaps being turned up in alinement against the inner surface of the body, a left edge flap extending substantially from end to end of the left edge of the body, said edge flap being turned in and gummed by its lower end to the outer surface of the left lower flap, forming a pocket for the front cover of the book to be covered, a single, continuous upper flap extending substantially from end to end of the upper edge of the body, a right flap extending substantially from end to end of the right edge of the body, two converging series of parallel lines printed on the upper portion of the inner surface of the book-cover said series being arranged one on each side of the center of the book-cover and a third series of parallel lines printed across the converging lines below the upper edge of the book-cover and parallel to said upper edge.

3. As a new article of manufacture, a book-cover composed of a single piece of paper and having in combination a substantially rectangular central body, separate lower flaps on its lower edge, arranged one toward each side and having a space between their adjacent ends, said flaps being turned upwardly against the inner surface of the cover, a left flap on the left edge turned in and having its lower end lying over and gummed to the left end of the lower left flap, a continuous upper flap on the upper edge of the body and a right flap on the right edge of the body, gum for moistening on the inner surface of the left end portion of the upper flap and on the upper and lower portions of the right flap, two converging series of parallel lines printed on the inner surface of the cover, said series being arranged one on each side of the center and a series of parallel horizontal lines printed across the lower portion of the series of converging lines.

961,549. CATHODE. ELMER A. SPERRY, Brooklyn, N. Y., assignor to Hooker Electrochemical Company, New York, N. Y., a Corporation of New York. Filed Jan. 26, 1909. Serial No. 474,255.

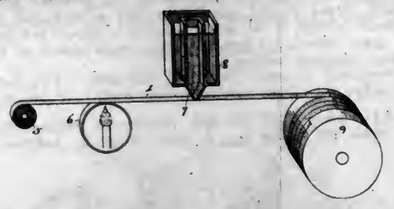


1. A cathode plate comprising a metallic sheet having longitudinally-alined, elongated perforations disposed transversely to the longest dimension of the plate.

2. A cathode plate comprising a metallic sheet having longitudinally-alined, elongated perforations disposed transversely to the longest dimension of the plate, in combination with current conductors in contact with the longer sides of the plate.

3. In combination, a recessed metallic plate, and a cathode plate in metallic contact therewith and overlying the recessed portion thereof, said cathode plate comprising a metallic sheet having longitudinally-alined, elongated perforations disposed transversely of the longest dimension of the plate.

961,550. PROCESS OF ATTACHING METALLIC CHARACTERS TO LEATHER AND THE LIKE. NATHAN M. STANLEY, Dayton, Ohio. Filed Feb. 26, 1910. Serial No. 546,197.



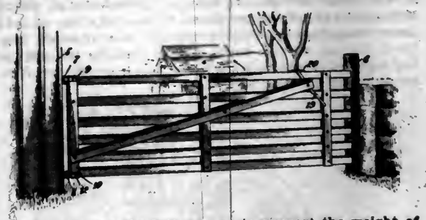
1. The herein described process of attaching metallic letters or characters to material as described, which consists in applying to a metallic ribbon a suitable surface for the application of an adhesive substance, in applying said adhesive substance to one side of the ribbon and in permitting it to dry after applied, in stamping from said ribbon the letters or characters, and in placing said letters or characters with the sides containing the adhesive substance in contact with the material to which they are to be applied, and in applying the necessary pressure to embed said letters or characters in the surface of the material, substantially as specified.

2. The herein described process of attaching metallic letters or characters to material such as described, which consists in subjecting a metallic ribbon to an application which imparts to the surface thereof a suitable porosity for the reception of an adhesive substance, in next applying such adhesive substance to said ribbon under heat, in next stamping from said ribbon so treated, letters or characters, and in pressing said letters or characters into the surface of the material to which they are to be attached, substantially as specified.

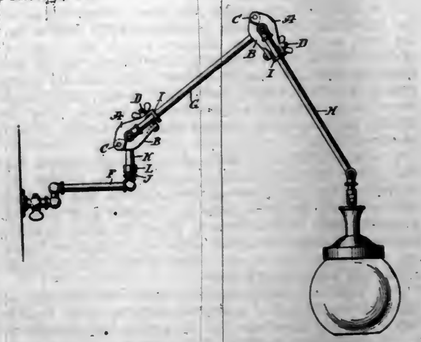
3. The herein described process of applying metallic letters or characters to material such as described, which consists first in passing a metallic ribbon through a bath of solution to impart to the surface thereof a porous nature, in next passing said ribbon through a bath of alkali solution, in next heating said ribbon and applying to one side thereof adhesive substance, in next stamping from said ribbon, after the adhesive substance has dried or become set, the letter or character to be applied, and in finally placing said letter or character upon the material to which it is to be applied, with the adhesive side in contact with said material, and in applying pressure sufficient to embed the metallic letter or character in the surface of the material so that it shall lie flush with said surface, substantially as specified.

961,551. GATE. EUGENE STEBBINGS, Macon, Mo. Filed July 27, 1909. Serial No. 509,765.

In a gate, the combination of a cleat, bars pivotally connected therewith, connections between said bars for the purpose of maintaining them in a predetermined working relation, an additional bar pivotally connected with said cleat and adapted to swing relatively to other parts of the gate, a hand lever pivotally connected with said last-mentioned bar and movable in one direction by the end thrust of said last-mentioned bar, and clamping members pivotally mounted upon said hand lever and disposed upon opposite sides of one of said first-mentioned bars for the purpose of gripping the latter so as to support the weight of the gate whenever said hand lever is thus actuated.



961,552. LOCK FOR SWING-JOINTS. BENJAMIN W. STOUFFER, Pittsburg, Pa. Filed Sept. 2, 1908. Serial No. 451,285.



1. A locking device for swing sections of fixtures, comprising two members hinged together and adapted to be clamped onto one of the sections, one of the members having a lateral bearing at its free end engaging the other section, and a bolt connecting the free ends of the members with each other.

2. A locking device for swing sections of fixtures, comprising two members hinged together and each provided adjacent to the pivot with a half round bearing, one of the members being provided at its free end with a lateral apertured projection, a bolt secured to one member and projecting through the other, and a nut on the bolt.

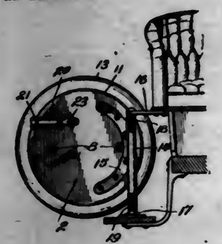
3. A locking device for swing sections of fixtures, comprising two members connected together to swing toward and from each other and provided with means for clamping them on one of the sections of the fixtures, the members having bearings to receive the said section and one of the members having laterally projecting means for engaging the other section.

961,553. TIRE-HOLDER AND TRUNK. FREDERIC S. SUTHERGREEN, Manchester, Mass. Filed Jan. 27, 1909. Serial No. 474,531.

1. A combined tire holder and trunk embodying a cylindrical body, adapted to fit within a detachable tire and provided with circumferential flanges at opposite sides which project beyond the periphery of the body, means adapting one of said flanges to be detached from the body, and a support for said holder fastened to the back thereof and to the vehicle and adapted to maintain the holder in an upright position, substantially as described.

2. A combined tire holder and trunk having the form of a hollow cylinder, a head at one side of said cylinder

extended beyond the periphery of the cylindrical body to form a circumferential flange, a head at the opposite side of the body extended to form a circumferential flange projecting beyond the periphery of the body, one of said heads being removable and a support for said holder fastened to one of the heads thereof and to the vehicle and adapted to maintain the holder in an upright position, substantially as described.



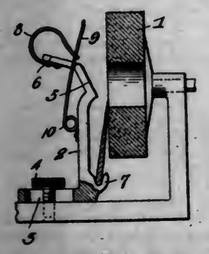
3. A combined tire holder and trunk embodying a hollow cylindrical body, heads at opposite sides thereof having their marginal edges extended beyond the periphery of the body to form tire retaining flanges, one of said heads embodying a hinged section which includes a portion of one of the flanges, said hinged section being adapted to swing outward to admit of the placing of a tire around the body of the holder and the removal of such tire therefrom.

4. A combined tire holder and trunk comprising a hollow cylindrical body, heads at opposite sides thereof projecting beyond the outer periphery of the body to form tire retaining flanges, means for hinging said body on a substantially vertical axis to allow the same to swing in a substantially horizontal plane, and means for shifting a portion of one of said heads to admit of the application and removal of a tire.

5. A combined tire holder and trunk for the purpose specified embodying a hollow cylindrical body approximately of the same size as the internal dimensions of a detachable tire, heads at opposite sides of said body, one of said heads comprising a hinged and swinging section, means for fastening said section closed, a supporting hinge for connecting said body to a wheeled vehicle to permit the body to swing in a substantially horizontal plane, and a fastening device for connecting a portion of said holder to the vehicle to prevent such swinging movement.

[Claim 6 not printed in the Gazette.]

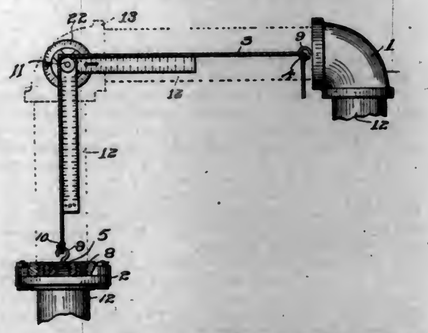
961,554. CUTLERY-GRINDER. HOMER E. SWEET, Portland, Oreg. Filed Sept. 9, 1909. Serial No. 516,866.



1. A tool holder of the class described comprising a supporting standard having portions of its outer end formed to provide a pair of inwardly inclined cutlery supporting surfaces which are disposed at different inclinations and are adapted to support different forms of tool blades in position for grinding, a longitudinally slotted base for the standard and a clamping screw passing through the slot of the base for holding the standard in adjusted position.

2. A tool holder of the class described comprising a supporting standard having portions of its outer end formed to provide a pair of inwardly inclined cutlery supporting surfaces which are disposed at different inclinations and are adapted to support different forms of tool blades in position for grinding, a blade clamping spring having one end attached to the outer end of the standard and its free end disposed over the outer supporting surface, and an approximate U-shaped spring having its terminals attached to the lower portion of the standard and formed with coils and its side pieces straddling the outer end of the standard and clamping spring, the side pieces of said U-shaped spring adapted to engage and hold a plate against the grinding wheel when placed on the outer supporting surface and the central portion of the spring adapted to engage and hold a plate against the grinding wheel when placed on the inner grinding surface.

961,555. PLUG DEVICE. THOMAS G. TEDESCO, Olyphant, Pa. Filed Aug. 3, 1908. Serial No. 446,744.



1. A device of the class described comprising an inner plug and an outer annular plug, said inner plug adapted to be threaded into said outer plug, and said outer plug adapted to be threaded into the end of a pipe, said inner plug provided with a hook adapted to be engaged by a cord.

2. As a new article of manufacture, a plug device, comprising an inner plug screw-threaded upon the outer edge thereof, an intermediate plug provided with a threaded aperture therein and being threaded upon the outer edge thereof, said inner plug threaded into said aperture in said intermediate plug, an outer plug provided with a threaded aperture adapted to receive the intermediate plug, and said outer plug being threaded upon the outer edge thereof and adapted to be threaded into the end of a pipe, said intermediate and outer plugs provided with a plurality of sockets upon the upper face thereof adapted to be engaged by a tool for removing the plug from the end of a pipe or for separating the same from each other, a hook secured to the outer face of the inner plug, and adapted to be engaged by a cord.

961,556. COLLAPSIBLE DRUM. FRANK EUGENE THOMPSON, Lake City, Fla. Filed Dec. 15, 1909. Serial No. 533,227.

1. A collapsible drum comprising a segmental sectional shell, said sections removably connected together, heads mounted upon the shell, rims made in sections and connected to the heads, and means for drawing the rims toward each other for tightening the heads upon the shell.

2. A collapsible drum comprising a segmental sectional shell, foldable heads mounted upon the shell, rims made in sections, said sections being removably connected together, and means for engaging the rims for drawing them toward each other for tightening the heads upon the shell.



961,557. DARNING DEVICE. JOHN R. THOMPSON, Peoria, Ill. Filed July 29, 1908. Serial No. 445,894.



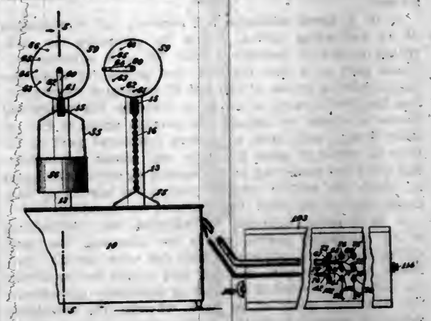
1. A device of the character described, comprising a former having a slotted opening at one end, a spring band having free ends capable of being pressed together, whereby said band may be inserted into said former, a plurality of arms projecting radially from said band, and a plurality of clamps attached to said band and adapted when said band is inserted within the former to depend along side of and lie adjacent to the outside face of said former.

2. In a device of the character described, in combination, a substantially egg-shaped band the reduced end of which is provided with an opening leaving a shallow strip, a spring band, normally larger than said egg-shaped band, the ends of which may be brought together so as to insert said spring band into said egg-shaped band, the ends of said spring band when so inserted being disposed upon the opposite sides of the opening in said egg-shaped band, and arms immovably secured to said spring band and projecting radially therefrom.

961,558. TIME-CONTROLLED ELECTRIC SWITCH. FRED M. TOTTINGHAM, New York, N. Y., assignor of one-half to Elie J. Moneuse, Sheepshead Bay Station, Brooklyn, N. Y. Filed May 18, 1909. Serial No. 496,753.

1. A time-controlled electric switch, comprising a time piece provided with a revoluble member, an arm associated with said revoluble member and normally loose relatively to the same, means controllable at will for securing said arm rigidly in relation to said revoluble member for the purpose of enabling said revoluble member to turn said arm, contact mechanism controllable by movements of said arm means including an electric circuit connected with said contact mechanism and controllable thereby for performing a predetermined mechanical motion, and electric mechanism connected with said contact mechanism and adjustable at will for the purpose of energizing said circuit after a predetermined length of time.

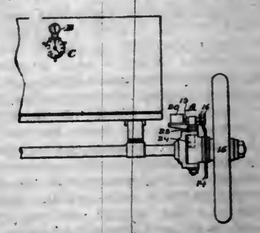
2. A time-controlled electric switch, comprising a time piece provided with a revoluble member, an arm associated with said revoluble member and normally loose relatively to the same, means controllable at will for securing said arm rigidly in relation to said revoluble member for the purpose of enabling said revoluble member to turn said arm, contact mechanism controllable by movements of said arm, an electrically-operated switch included in said circuit and actuated by the same for the purpose of breaking said circuit, mechanism coacting with said electrically-operated switch for executing a predetermined mechanical motion.



3. The combination of a normally open circuit, a time-controlled switch for closing said circuit after a predetermined interval of time, an electrically-operated switch connected with said circuit and adapted to be actuated thereby, said electrically-operated switch having contact mechanism, said contact mechanism being included in said electric circuit for the purpose of opening said electric circuit when said electrically-operated switch is operated, and mechanism for executing a predetermined mechanical motion, said last-mentioned mechanism being provided with means for preventing said electrically-operated switch from closing when said circuit is opened by said contact mechanism.

4. The combination of a normally open electric circuit, a time-controlled switch for closing said electric circuit after a predetermined interval of time, an electrically-operated switch connected with said circuit and adapted to be actuated thereby, said electrically-operated switch including a solenoid, and a movable core and also having contact mechanism included in said circuit for the purpose of opening the latter when said electrically-operated switch is actuated, a sprocket chain movable relatively to said core and disposed adjacent thereto for the purpose of supporting said core and thereby maintaining said contact mechanism open, a weight connected with said sprocket chain for the purpose of actuating the latter, and a receptacle connected with said sprocket chain for the purpose of holding eggs or the like, and means for applying heat to said receptacle and its contents when said receptacle occupies a predetermined position.

961,559. SPEED-INDICATOR. WESLEY TRAFFORD, New York, N. Y. Filed Apr. 8, 1904. Serial No. 202,150.



1. In a speed indicator for vehicles, the combination of an indicating device, means for actuating the indicating device to indicate a mile for each certain fractional part of a mile traveled, means for re-setting the indicating device at the end of a corresponding fractional part

of an hour, whereby the indicating device is caused to indicate the average speed of the vehicle during such fractional part of an hour in terms of miles per hour, and means for indicating after the re-setting of the indicating device the speed at which the vehicle traveled during such fractional part of an hour, substantially as described.

2. In a speed indicator for vehicles, the combination of an indicating device, means for actuating the indicating device to indicate a mile for each certain fractional part of a mile traveled, and means for re-setting the indicating device at the end of successive corresponding fractional parts of an hour, whereby the indicating device is caused to indicate the average speed of the vehicle during each such successive fractional part of an hour in terms of miles per hour, and means for indicating after the re-setting of the indicating device the speed at which the vehicle traveled during the preceding fractional part of an hour, substantially as described.

3. In a speed indicator for vehicles, the combination of an indicating device, means for actuating the indicating device to indicate a mile for each certain fractional part of a mile traveled, and means for re-setting the indicating device at the end of successive corresponding fractional parts of an hour, whereby the indicating device is caused to indicate the average speed of the vehicle during each such successive fractional part of an hour in terms of miles per hour, and an indicator for indicating the highest speed indicated by said indicating device, substantially as described.

4. In a speed indicator for vehicles, the combination of an indicating device, means for actuating the indicating device to indicate a mile for each certain fractional part of a mile traveled, and means for re-setting the indicating device at the end of successive corresponding fractional parts of an hour, whereby the indicating device is caused to indicate the average speed of the vehicle during each such successive fractional part of an hour in terms of miles per hour, and an indicator for indicating the highest speed indicated by said indicating device, and means for re-setting said indicator at will, substantially as described.

5. In a speed indicator for vehicles, the combination of an indicating device, means for actuating the indicating device to indicate a mile for each certain fractional part of a mile traveled, and means for re-setting the indicating device at the end of successive corresponding fractional parts of an hour, whereby the indicating device is caused to indicate the average speed of the vehicle during each such successive fractional part of an hour in terms of miles per hour, and an indicator adapted to be moved by the indicating device during the forward movement of the latter, substantially as described.

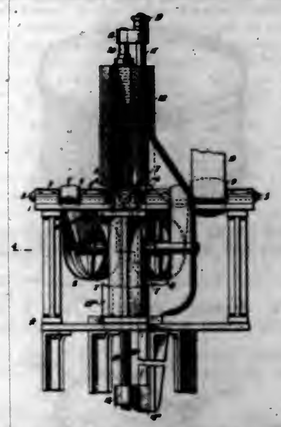
[Claims 6 to 20 not printed in the Gazette.]

961,560. TILE-TRIMMING MACHINE. WILLIAM G. TRAUTVETTER, Paterson, N. J. Filed Aug. 31, 1909. Serial No. 515,379.

1. A tile-trimming machine, comprising means for supporting a stack of tiles, a series of revoluble grinders arranged for engagement with the sides of the said stack of tiles, each grinder having a main grinding disk for trimming the corresponding sides of the stack of tiles, and an auxiliary grinder centrally arranged on the said disk for trimming the recesses in the corresponding side of the stack of tiles, and means for relatively moving the stack of tiles and grinders one past the other.

2. A tile-trimming machine having a series of revoluble grinders arranged for engagement with the edges of a tile, each grinder having a main grinding disk for trimming the edge of a tile, and an auxiliary grinder centrally arranged on the said disk for trimming the recess in the corresponding edge of the tile, and means in connection with the support for engaging the edges of the tiles to retain them in position.

3. A tile-trimming machine, comprising a support for a series of superimposed tiles, and revoluble grinders, the said tiles and grinders being relatively movable one past the other for the grinders to trim the edges of the tiles.

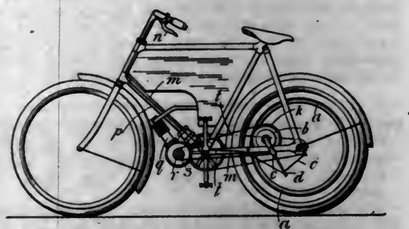


4. A tile-trimming machine, comprising a support for a series of superimposed tiles, and revoluble grinders one for each side of a tile, the said tiles and grinders being relatively movable one past the other for the grinders to simultaneously trim all the edges of a tile, a casing inclosing the superimposed tiles and longitudinal ribs on the inner surface of the casing for engaging the tiles to retain them in proper position.

5. In a machine of the kind described, a series of grinders, a table adapted to receive a series of superposed articles to be treated, and a follower adapted to produce pressure on said articles, said grinders, and the table and follower being relatively movable past each other.

[Claims 6 to 12 not printed in the Gazette.]

961,561. GEARING. JAMES R. TRIGWELL, Mitcham Lane, England. Filed May 18, 1907. Serial No. 374,358.



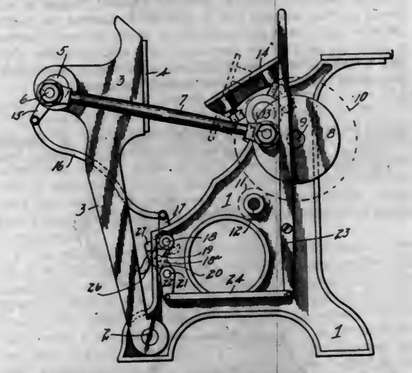
1. In a motor-driven velocipede, the combination of a motor, a transmission-chain actuated thereby, a friction driving-ring, a friction-disk adapted to contact with the internal face of the friction-ring and driven by the chain, and means for bringing the said disk out of and into contact with the internal face of said friction-ring.

2. In a motor driven velocipede, the combination of a friction ring, a sprocket wheel, a friction disk secured to said sprocket wheel and in frictional contact with said ring, said disk together with said sprocket wheel being movable toward and away from said ring, a motor having a sprocket wheel and a sprocket-chain around said sprocket wheel and pulling on the periphery of said first named sprocket wheel substantially in the direction of the motion of said disk toward said ring.

3. In a motor driven velocipede, the combination of a friction ring, a rocking arm, a friction disk and a sprocket wheel secured together and rotatably mounted on one end of said rocking arm, said rocking arm being pivotally mounted to permit said disk to be moved in the plane of said ring into and out of contact with said ring, a motor, and a sprocket chain from said motor pulling on said sprocket wheel in the direction of the movement of said disk toward said ring.

4. In a motor driven velocipede, the combination of a friction ring, a rocking arm, a friction disk and a sprocket wheel secured together and rotatably mounted on one end of said rocking arm, said rocking arm being pivotally mounted to permit said disk to be moved in the plane of said ring into and out of contact with said ring, a motor, a sprocket chain from said motor pulling on said sprocket wheel in the direction of the movement of said disk toward said ring, additional means for holding the disk in contact with said ring and means for moving said disk out of contact with said ring.

961,562. JOB-PRINTING PRESS. JOSEPH C. TRIMBACH and CHARLES G. ALLHOFF, Dayton, Ohio. Filed Feb. 12, 1910. Serial No. 543,565.



In a machine of the type specified, the combination with a platen, a movable type carrying frame in operative relation with said platen, an eccentric pin-carrying shaft mounted in said frame, and means including a segment which is adapted to rock said shaft to adjust the operative relation between the type and the platen, of a bifurcated clamp adapted to engage said segment and to hold said shaft in a set position.

961,563. BRUSH FOR BOTTLE-WASHING MACHINES. CHARLES K. VOLCKENING, New York, N. Y. Filed Jan. 11, 1910. Serial No. 537,394.

1. In a brush for bottle washing machines, the combination of a body portion provided with ears, a bearing plate detachably connected with said body portion and located between said ears, and arms journaled relatively to said body portion and provided with shoulders for resting upon said bearing plate.

2. A brush for bottle washing machines, comprising a body portion provided with ears, a bearing plate disposed intermediate said ears, a fastening for holding said bearing plate detachably in position, a plurality of arms journaled intermediate said ears, and means for moving said arms into such positions that portions of said arms engage said bearing plate.

3. In a brush for bottle washing machines, the combination of a body portion, a plurality of arms journaled relatively to the same and movable in opposite directions, each of said arms being provided with an annular compartment, and a spring connected with both of said arms and mounted within the compartments thereof.

4. In a brush, the combination of a body portion provided with a head, a plurality of arms journaled relatively to said head, and means for restoring each arm independently of the other to a predetermined normal position.



5. In a brush, the combination of a body portion provided with a head, a plurality of arms journaled within said head, and a spring connected at one of its ends with one of said arms and at its other end with another of said arms.

[Claims 6 to 9 not printed in the Gazette.]

961,564. PROCESS FOR THE DETERMINATION OF FAT IN MILK AND OTHER DAIRY PRODUCTS. OSCAR WENDLER, Leipzig, Germany, assignor to Dr. N. Gerbers Co. M. B. H., Leipzig, Germany. Filed Mar. 11, 1910. Serial No. 548,675.

1. The herein described process of determining the quantity of fat in a dairy product, which consists in mixing with said product to be tested one or more salts of an oxybensoic acid and a fat-clarifying agent, and in measuring the quantity of fat separated thereby.

2. The herein described process of determining the quantity of fat in a dairy product, which consists in mixing sodium salicylicate and butylalcohol with said product to be tested, and in measuring the quantity of fat separated thereby.

3. The herein described process of determining the quantity of fat in a dairy product, which consists in mixing one or more salts of an oxybenzoic acid with said product to be tested, in subsequently adding thereto a solution of alcohol in an aqueous solution of one or more salts of an oxybenzoic acid, and in measuring the quantity of separated fat.

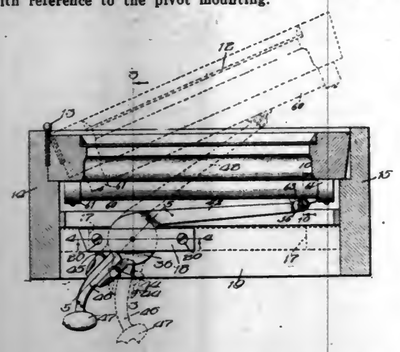
4. The herein described process of determining the quantity of fat in a dairy product, which consists in mixing with said product to be tested a mixture composed of one or more salts of an oxybenzoic acid, a saccharate and a fat-clarifying agent, and in measuring the quantity of fat separated thereby.

961,565. CASEMENT-WINDOW ADJUSTER. GEORGE L. WILKINS, Chicago, Ill. Filed Dec. 14, 1908. Serial No. 467,427.

1. In a casement window adjuster, a lever having one end adapted to be operatively connected to a window and having a pivotally mounted handle at its opposite end, a pivot mounting for said lever, a fixed locking block having gear teeth thereon adapted to be engaged by said pivotally mounted handle, said locking block being housed within said lever so as to be concealed thereby in all positions of adjustment.

2. In a casement window adjuster, a lever having one end adapted to be operatively connected to a window and an operating handle at its opposite end, a pivot mounting for said lever, a fixed locking block, locking mechanism for

detachably securing the lever and locking block together, and means for adjusting the position of the locking block with reference to the pivot mounting.



3. In a casement window adjuster the combination of an operating lever, a split tubular member pivotally secured thereto, another split tubular member within which said first mentioned tubular member slides and means for securing the second mentioned tubular member to the window to be adjusted.

961,566. DISAPPEARING HOOK. OWEN J. WILLIAMS, Buffalo, N. Y. Filed Apr. 24, 1909. Serial No. 491,891.



1. In a device of the class described, the combination with an eyelet adapted to be secured to a shoe or the like, of a stud integral with said eyelet and extending inwardly within said eyelet and below the upper surface of said eyelet, a hook having lugs integral therewith adapted to pivotally engage said stud, and means for yieldingly locking said hook below the upper surface of said eyelet.

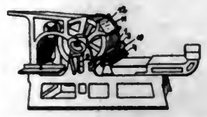
2. In a device of the class described, the combination with an eyelet, of a stud integral with said eyelet, a hook pivoted to said stud, and spring means integral with said hook adapted to secure said hook in either of its adjusted positions on said stud.

3. In a device of the class described, the combination with an eyelet formed of sheet metal, a stud integral with said eyelet and extending within said eyelet and having its upper surface below the upper surface of said eyelet, a hook having lugs integral therewith adapted to pivotally engage said stud, and spring flanges integral with said hook adapted to clamp said stud.

4. In a device of the class described, the combination with an eyelet, of a stud integral with said eyelet, a hook pivoted to said stud, an engaging portion integral with said hook adapted to extend above the upper surface of said eyelet, and a locking portion on said hook adapted to be engaged by the lacing, so as to withdraw said engaging portion from its extended position and a plurality of springs on said hook for locking said hook in its adjusted position on said stud.

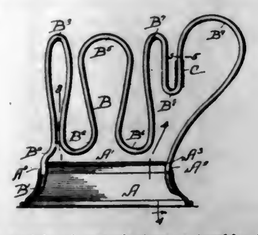
5. In a device of the class described, the combination with an eyelet adapted to be fastened to a shoe or the like, of a stud integral with said eyelet, extending within said eyelet and having its upper surface below the upper surface of said eyelet, said stud having perforations therein, a hook having inwardly-extending lugs adapted to engage the perforations in said stud to pivot said hook to the stud, spring flanges integral with said hook curving inwardly and outwardly and adapted to embrace said stud to hold the hook in its raised position, an engaging portion on said hook adapted to extend above the upper surface of said eyelet, and a locking portion on said hook adapted to be engaged by the lacing, to withdraw said engaging portion from its extended position.

961,567. PRINTING-PRESS. THOMAS WINLACK, Niles, Mich. Filed Jan. 15, 1910. Serial No. 538,260.



The combination with the inking rolls of a printing press having an impression cylinder provided with a driving gear at one end; standards at either side of the press; bearings on said standards located in alinement above said inking rolls, each of said bearings comprising a lower bearing member, an upper bearing member hinged to said lower bearing member and a detachable locking connection between said bearing members; a shaft in said bearing; a gear on said shaft meshing with said cylinder gear; and a fan on said shaft adapted to force a blast of air over said inking rolls, substantially as described.

961,568. TUMBLER-HOLDER. WILLIAM A. YOUNIE, Chelsea, Mass. Filed Dec. 17, 1906. Serial No. 348,170.



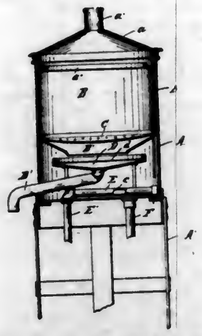
As a new article of manufacture, a tumbler holder comprising an inwardly tapering base ring provided with a flange forming a support for a tumbler, said base being provided with spaced oppositely disposed openings, wires passing through said openings secured to the inside of said ring by solder, said wires being bent upwardly and outwardly and then downwardly and secured together to form a handle adjacent one end and bent to form oppositely disposed open end loops forming spring gripping members adapted to embrace the tumbler when arranged on the flange of the ring.

961,569. GLUE-CONVERTER. CHARLES M. ZIMMERMAN, Cincinnati, Ohio. Filed Oct. 29, 1908. Serial No. 460,144.

1. An apparatus for converting glue, comprising an inclosed chamber, a perforated diaphragm located within said chamber, a funnel below said diaphragm, a collector below said funnel, there being a free passage between the two, and a perforated steam pipe below said collector, with means for supplying steam to the same.

2. An apparatus for converting glue, comprising an inclosed chamber, a perforated diaphragm located within said chamber, a funnel below said diaphragm, a collector below said funnel, there being a free passage between the two, a gauze filter covering said collector and a perforated steam pipe below said collector, with means for supplying steam to the same.

3. An apparatus for converting glue, comprising a vessel, a lid closing the same, said lid being provided with an escape pipe, a perforated diaphragm located within said vessel, a funnel below said diaphragm, a collector below said funnel, there being a free passage between the two, a distributing pipe leading from said collector beyond the limits of said vessel, and a perforated steam pipe below said collector, with means for supplying steam to the same.

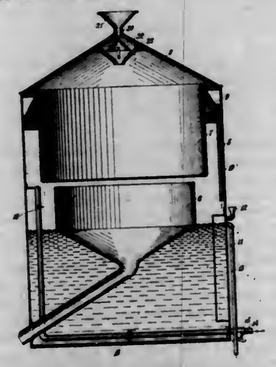


4. An apparatus for converting glue, comprising a vessel, a conical lid inclosing said vessel, a steam escape pipe secured to said lid, a trough about the upper inner edge of said vessel, a pipe leading from said trough to the bottom of the vessel, a perforated diaphragm located within said vessel, a funnel below said diaphragm, a collector below said funnel, there being a free passage between the two, a distributing pipe leading from said collector beyond the limits of said vessel, and a perforated steam pipe below said collector, with means for supplying steam to the same.

5. An apparatus for converting glue, comprising a vessel, a conical lid inclosing said vessel, a steam escape pipe secured to said lid, a trough about the upper inner edge of said vessel, a pipe leading from said trough to the bottom of the vessel, a perforated diaphragm located within said vessel, a funnel below said diaphragm, a collector below said funnel, there being a free passage between the two, a distributing pipe leading from said collector beyond the limits of said vessel, and a perforated steam pipe below said collector, with means for supplying steam to the same, and mechanism for drawing the water of condensation from said vessel.

[Claim 6 not printed in the Gazette.]

961,570. GLUE-MELTING APPARATUS. CHARLES MOSER ZIMMERMAN, Cincinnati, Ohio. Filed Dec. 7, 1909. Serial No. 531,862.



1. The combination of a steam vessel, a glue collector arranged within the vessel and discharging to the outside thereof, a glue converter arranged within the vessel over the top of the collector and discharging thereinto, and means to maintain a head of water in the lower portion of the vessel, with the normal level thereof located below the top of the collector.

2. The combination of a vessel, a glue collector arranged within the vessel, a glue converter arranged within the vessel over the collector and discharging thereinto, means to maintain a head of water within the lower portion of the vessel, and a steam pipe passing into the vessel below the normal water level and discharging at a point intermediate said level and the top of the collector.

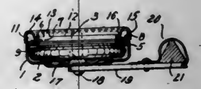
3. The combination of a vessel, a glue collector arranged within the vessel, a glue converter arranged within the vessel over the collector and discharging thereinto, and a steam pipe passing into the lower portion of the vessel and terminating in a vertical portion, with the upper end thereof closed and having a discharge perforation arranged in the side below the top of the collector.

4. The combination of a steam vessel, a glue collector arranged within the vessel, a glue converter arranged within the vessel above the collector and discharging therein, a water overflow pipe leading from the vessel at a point a substantial distance above the bottom thereof and below the top of the collector, and means covering the inlet of the overflow pipe, extending a substantial distance below the normal water level and open at the lower portion thereof.

5. The combination of a steam vessel, a glue collector arranged within the vessel, a glue converter arranged within the vessel over the collector, means to maintain a head of water in the lower portion of the vessel, an inlet pipe discharging into the vessel near the normal water level, and a cover closing the inlet end of the pipe, extending a substantial distance below the water level and open at the lower portion thereof.

[Claims 6 to 9 not printed in the Gazette.]

961,571. WATCH-HOLDER FOR MOTOR-VEHICLES. HENRY T. ADAMS, Chicago, Ill., assignor to Henry T. Adams Co., Chicago, Ill., a Corporation of Illinois. Filed Feb. 16, 1910. Serial No. 544,312.



1. A watch holder, comprising a casing adapted to contain a watch, a rotatable indicator ring in the casing adapted to rest on the watch, and means adapted to force the watch against the ring with a yielding pressure.

2. A watch holder, comprising a casing adapted to contain a watch, a spring in the casing adapted to support the watch, an indicator ring supported on the watch, and a cap on the casing adapted to hold the ring firmly against the watch.

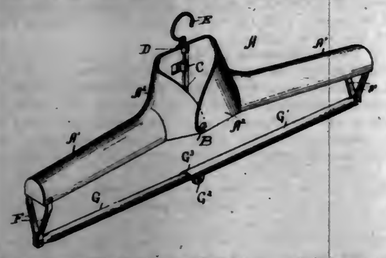
3. A watch holder, comprising a casing adapted to contain a watch, a pair of independently adjustable indicators in the casing, and means acting normally to prevent movement of the indicators.

4. A watch holder, comprising a casing adapted to contain a watch, a spring in the casing adapted to support the watch, independently adjustable indicator rings in the casing, means separating said rings, and a cap on the casing adapted to seat on one of said rings.

5. A watch holder, comprising a casing, a spring in the bottom of the casing adapted to support a watch, independently adjustable indicators in the casing above the watch, a washer immovably supported between said indicators, and a cap on the casing and having an inturned flange thereon adapted to bear on the indicators.

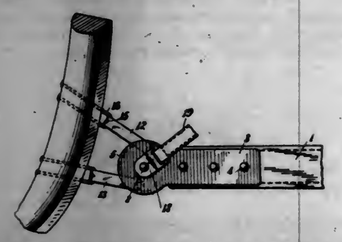
[Claims 6 to 10 not printed in the Gazette.]

961,572. COAT-HANGER. JOHN A. ALBERTONI, Akron, Ohio. Filed Nov. 23, 1908. Serial No. 464,064.



As a new article of manufacture a coat hanger comprising a sectional cross tree formed of two sections, each section comprising a substantially semi-circular portion having a large neck portion overlapped and pivotally connected together, the upper edges of said neck portion being provided with notches adapted to register with each other when said sections are thrown into a horizontal position, guide arms formed on one of said sections, a hook slidably mounted within said guide arms, a slidably mounted locking member carried by said hook adapted to fit in said notches and hold said sections in a horizontal position, arms pivotally connected to the underside of said tree sections adjacent their ends, tubular rods pivotally mounted between said arms, said rods being provided with ears pivotally conected together, one of said rods having an outwardly projecting portion overlapping the end of the other rod for holding said rods in a horizontal position.

961,573. EQUALIZER TUG ATTACHMENT FOR HARNESS. HENRY D. BALCOM, Belfast, N. Y. Filed Aug. 19, 1909. Serial No. 513,546.

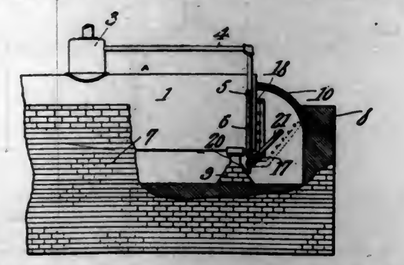


In a hame and tug connector, a plate adapted to be secured to each side of the tug with the ends of the plates extending beyond the tug, each of said ends having a substantially circular head, a disk between the heads, a pivot pin passing centrally through the heads and the disk, and links pivoted at one end to the face of the disk and adapted for connection to the hame at their other end.

961,574. DEVICE FOR CLEANING FLUES. NELSON E. BARTLES and CHARLES O. HAWKINS, Irene, Tex. Filed Dec. 18, 1909. Serial No. 533,848.

1. In a flue cleaner, the combination with tubular bearings in the boiler setting, a steam pipe and an extension thereof journaled and slidable in said bearings, a distributing pipe at right angles to and communicating with said steam pipe and having a series of nozzles, a plug in the extension pipe beyond the other two pipes, and a lever on the outer end of the steam pipe; of flexible connections between the latter and a source of steam supply, and a baffle within one side wall of the setting behind and beneath which the distributing pipe may be disposed when not in use.

2. In a flue cleaner, the combination with a tubular bearing in the boiler setting, a steam pipe journaled and slidable in said bearing, a distributing pipe at right angles to and communicating with said steam pipe and having a series of nozzles, and a T coupling at the outer



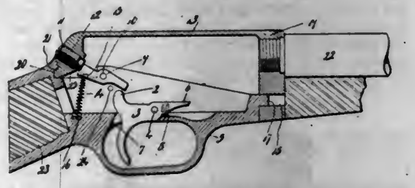
end of the steam pipe; of a plug closing the outer arm of the coupling, a lever secured to the plug, a flexible pipe leading from the stem of the coupling to a source of steam supply, and a drip cock in the coupling opposite said flexible pipe.

961,575. PIPE. JOHN F. BENGERT, Denver, Colo. Filed Sept. 22, 1909. Serial No. 519,019.



In a pipe, a bowl having a stem portion, an auxiliary stem extended therebeyond, and a mouth-piece having a cigar holder at its outer end and a cigarette holder arranged inwardly of the cigar holder, with the cigarette holder slidably fitting over the extended portion of the auxiliary stem and the cigar holder arranged to abut against the outer end of the said stem portion of the bowl.

961,576. TAKE-DOWN FIREARM. WINCHESTER BENNETT, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Apr. 25, 1910. Serial No. 557,316.

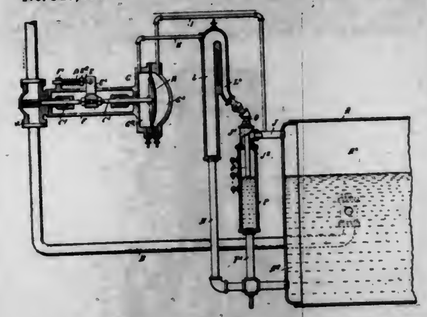


1. In a take-down gun, the combination with the tang and frame thereof, the said tang and frame being provided with tenons and mortises by means of which they are interlocked, of a locking-dog located within the gun, and a trigger adapted by an excess of movement to coact with the dog to move it out of its locking position to permit the gun to be taken down.

2. In a take-down gun, the combination with the frame and tang thereof, the said frame and tang being provided with tenons and mortises by means of which they are interlocked by their longitudinal movement with respect to each other, of an abutment screw mounted in the said frame at the rear end thereof, and a spring-actuated locking-dog mounted in the tang and adapted at its rear end to be engaged with the inner end of the said screw.

3. In a take-down gun, the combination with the frame and tang thereof, the said frame and tang being provided with tenons and mortises by means of which they are interlocked by their longitudinal movement with respect to each other, of an abutment screw mounted in the said frame at the rear end thereof, a spring-actuated locking-dog pivotally mounted in the said tang and adapted at its rear end to be engaged with the inner end of the said screw, and a trigger mounted in the tang and adapted at its rear end to coact with the forward end of the said dog for the operation of the same when the trigger has excess of movement imparted to it, the trigger and dog being normally in spaced relations to each other so that the ordinary operation of the trigger does not disturb the dog.

961,577. FEED-WATER REGULATOR. CHARLES OSKAR BERGMARK, Chicago, Ill. Filed Sept. 15, 1909. Serial No. 517,806.



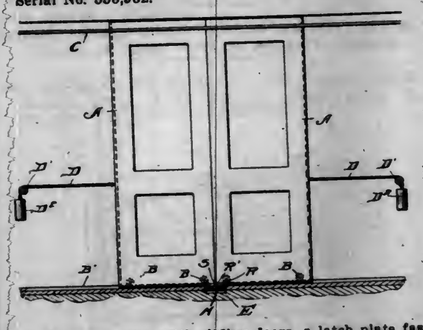
1. A feed water regulator, comprising a feed water supply, a valve in the water supply having a stem, a spring for normally holding the valve open, a diaphragm chamber having a diaphragm connected with the valve stem, the said diaphragm dividing the chamber into compartments, a pipe leading from the steam compartment of the boiler, a pipe connecting said pipe with one of the compartments of the diaphragm chamber, a condensation chamber connected at its upper and with the other compartment of the diaphragm chamber and connected at its lower end with the water compartment of the boiler, a controlling chamber connected at its upper end with the pipe leading from the steam compartment of the boiler, and at its lower end with the water compartment of the boiler, and a pipe extending into the upper end of the controlling chamber and connected with the upper part of the condensation chamber.

2. A feed water regulator, comprising a feed water pipe connected with the boiler, a normally open valve in the feed water pipe, a diaphragm chamber having a diaphragm connected with said valve, the said diaphragm dividing the chamber into compartments, a pipe connected with the steam compartment of the boiler, a pipe leading from said pipe to one of said compartments of the diaphragm chamber, a condensation chamber connected at one end by a pipe with the other compartment of said diaphragm chamber, a pipe connecting the other end of said condensation chamber with the water compartment of the boiler, a controlling chamber connected at one end with the pipe leading from the condensation chamber to the water compartment of the boiler, a tee attached to the pipe leading to the steam compartment of the boiler and connected with the other end of the controlling chamber, and a pipe connected with the condensation chamber and extending through the said tee into the controlling chamber to a point corresponding to the intended level of the water in the boiler.

3. A feed water regulator, comprising a feed supply, a normally open valve in the feed water supply, a diaphragm chamber having a diaphragm connected with said valve, the said diaphragm dividing the chamber into compartments, of which one is directly connected with the steam chamber in the boiler, a condensation chamber connected at its upper end with the other compartment of the said diaphragm chamber, and connected at its lower end with the water compartment of the boiler, the said condensation chamber having a channel leading into the upper end thereof, a controlling chamber connected at the top with the steam compartment of the boiler and at the bottom with the water compartment of the boiler, and a pipe connected with the lower end of said channel of the condensation chamber and extending into the said controlling chamber to a point corresponding to the intended level of the water in the boiler.

4. A feed water regulator comprising a feed water pipe connected with the boiler, a valve in the feed water pipe and provided with a stem, an arm on the stem of said valve, a rod connected with said arm, and mounted to slide, a spring on said arm, means for regulating the tension of said spring, a diaphragm chamber having a diaphragm dividing the chamber into compartments, one of said compartments being directly connected with the steam compartment of the boiler, the said valve stem extending into the other compartment of the diaphragm chamber and connected with the diaphragm, and means controlled by the fall and rise of water in the boiler for connecting and disconnecting the last mentioned compartment of the diaphragm chamber with the steam compartment of the boiler, the said spring permitting the valve to close when the said compartment of the diaphragm chamber is cut off from the steam compartment of the boiler, and holding the valve open when both compartments of the diaphragm chamber are directly connected with the steam compartment of the boiler.

961,578. DOOR-RELEASING APPARATUS. BENJAMIN LEWIS BITTING, Rural Hall, N. C. Filed Apr. 7, 1910. Serial No. 553,932.



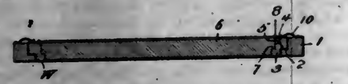
1. In combination with sliding doors, a latch plate fastened to the lower end of each door, a platform, levers pivotally connected thereto and having their inner ends pivoted together, a projection upon one of said levers positioned in the path of said latch plates and adapted to engage and hold the latter when the doors are closed.

2. In combination with sliding doors, a latch plate fastened to the lower end of each door, a platform, levers pivotally connected thereto and having their inner ends pivoted together, and weighted, depressible blocks mounted upon each lever, a notched plate fastened to one end of one of said levers and projecting above the platform and adapted to be engaged by the latches of the door.

961,579. MANUFACTURE OF STENCILS. WILLIAM H. BOONE, Cincinnati, Ohio. Filed Mar. 17, 1910. Serial No. 550,077.

1. The herein described process of preparing stencils, which consists in treating a flat supporting surface with material for preventing the adhesion thereto of sensitis-

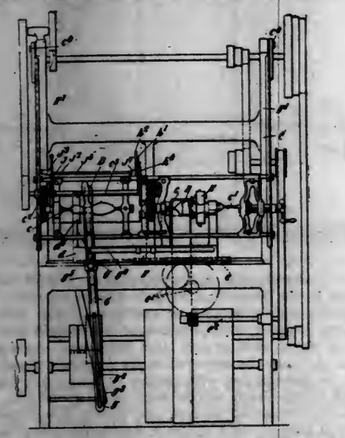
ing material, applying a piece of fabric to said treated supporting surface, coating the fabric with a sensitizing material, photo-printing the sensitized fabric, washing out the soluble portions of the sensitizing material, said operations being performed while the web is supported by but not adhering to said supporting surface and finally drying said web.



2. The herein described process of preparing stencils, which consists in treating a flat supporting surface with material for preventing the adhesion thereto of the sensitizing material, stretching a piece of fabric upon said surface, and securing its marginal portions, treating the portion of the fabric upon said treated surface with a sensitizing material, photo-printing the sensitized fabric, and washing out the soluble portions of the sensitizing material, and exposing both the front and back faces of the fabric to the air, without releasing it from its stretched condition to dry the fabric evenly, and rapidly.

3. The herein described process of preparing stencils, which consists in treating a flat supporting surface with material for preventing the adhesion thereto of sensitizing material, stretching a piece of fabric over said treated surface, and securing the marginal portions of the web independently of said surface, coating the fabric with a sensitizing material, photo-printing the sensitized fabric, washing out the soluble portions of the sensitizing material, said operations being performed while the web is supported by but not adhering to said supporting surface, removing the supporting surface from contact with said fabric without releasing the edges of the fabric, to afford access of the air to both sides of the fabric, and finally drying the fabric while still in a stretched condition.

961,580. COPYING-LATHE. EDWIN BOSTOCK, Stafford, England. Filed Dec. 20, 1909. Serial No. 534,177.



1. A copying lathe or one in which the various cross-sections produced upon the work are governed by like cross-sections of a model, comprising connections which vary during the operation of the lathes so as to vary the effect of the model upon one cross-sectional dimension of the work from that upon another.

2. The combination with a last turning lathe provided with a swinging frame and an oscillatory plate operatively connected therewith, of means for producing a differential motion between the swinging frame and the oscillatory plate.

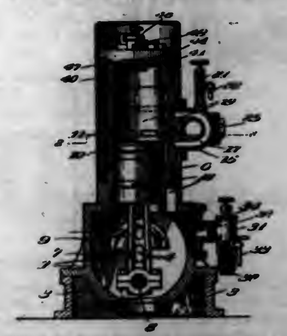
3. The combination with a last turning lathe provided with a swinging frame and an oscillatory plate operatively connected therewith, of means for intermittently producing a differential motion between the swinging frame and the oscillatory plate.

4. The combination with a last turning lathe provided with a swinging frame and an oscillatory plate operatively connected therewith, of means for automatically producing an intermittent differential motion between the swinging frame and the oscillatory plate, and means for regulating the amount of such motion.

5. The combination with a last turning lathe provided with a swinging frame and an oscillatory plate operatively connected therewith, of a cam arranged to impart movement to the oscillatory plate in addition to that which such plate receives from the swinging frame.

[Claims 6 to 9 not printed in the Gazette.]

961,581. EXPLOSIVE-ENGINE. ERNEST S. BOWEN, Geneva, N. Y., assignor of one-half to Walter Lester Fay, Geneva, N. Y. Filed Nov. 16, 1907. Serial No. 402,452.



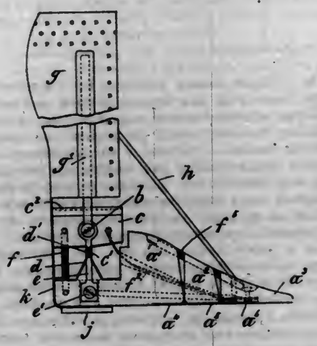
1. In an explosive, or gas engine the combination with the crank-case, the cylinder thereon, the shaft journaled in the crank case, the piston and crank and pitman connecting the piston to the shaft, said cylinder being supplied with intake and exhaust ports, a gasolene vaporising chamber arranged on the crank-case, a pipe from said chamber to the crank-case, a supply pipe to said chamber, a needle-valve in said pipe, an air-inlet pipe to the carbureter, a kerosene vaporizing chamber secured on the cylinder, a supply pipe to said kerosene vaporising chamber, a needle valve in said kerosene supply pipe, means arranged in said kerosene vaporising chamber to heat the kerosene as it enters, a lower by-pass channel from the crank case to the kerosene vaporising chamber and an upper by-pass channel from the kerosene vaporising chamber to the intake ports.

2. In an internal combustion engine adapted to be operated by liquid fuels which are more difficult to vaporize than gasolene, the combination with the piston the crank-case and the cylinder having substantially opposite intake and exhaust ports in its lower portion, of an exterior shell or casting secured to the front of the cylinder to form a vaporizing chamber for the fuel, an exhaust pipe connected to the exhaust ports and arranged to pass through the chamber, a fuel supply pipe connected to the chamber at a point above the exhaust pipe, a needle valve in the supply pipe, a removable screw-plug fitted to the front of the chamber, an air pipe to the crank-case, a channel from the crank-case to said chamber and a channel from said chamber to the intake ports.

3. In an internal combustion engine in which the air is compressed before entering the cylinder, the combination with the cylinder having intake and exhaust ports and the piston operating within the cylinder, said cylinder being formed with a passage for the compressed air to the intake port, of a shell forming a vaporizing chamber in said passage, a pipe from the exhaust port passing through said chamber and means to supply liquid fuel to said chamber to be vaporized by contact with said pipe, and to be introduced in mixture with the compressed air to the cylinder.

4. In an internal combustion engine in which the air is compressed before entering the cylinder, the combination with the crank case, the cylinder having intake and exhaust ports and the piston operating within the cylinder, said cylinder being formed with a passage in its wall from the crank case to the intake port for the compressed air, of a shell forming a vaporising chamber in said passage, a pipe from the exhaust port passing through said chamber and means to supply liquid fuel to said chamber to be vaporized by contact with said pipe and to be introduced in mixture with the compressed air to the cylinder.

961,582. ARTIFICIAL FOOT. JOSEPH HANCOCK BRADLEY, Hunwick, EDWARD NICHOL, Croxdale, and THOMAS LOWERY NICHOL, Sunderland, England. Filed Nov. 12, 1900. Serial No. 527,690.



1. In a device of the character described, the combination of a foot portion composed of a plurality of parts pivotally jointed together, an ankle block pivotally mounted on one of said foot portions, springs operating said foot portions together, and springs connecting the ankle block with the foot portions, substantially as described.

2. In a device of the character described, the combination of a foot portion composed of three parts pivotally jointed together, an ankle block pivotally mounted on one of said foot portions, springs connecting said foot portions together, springs connecting the ankle block with the foot portions, a legging, and an elastic suspender, substantially as described.

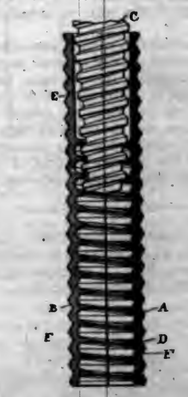
3. In a device of the character described, the combination of a foot portion composed of three sections united together by knuckle joints, springs connecting said three portions together, an elastic pad on the rear portion, an ankle joint pivotally mounted on said rear portion, springs connecting said ankle joint with said foot portions, said ankle joint being padded, a legging, and an elastic strap connecting said foot portion with said legging, substantially as described.

961,583. BOLT-ANCHOR. CHARLES J. CLEMENTS, New York, N. Y. Filed June 16, 1908. Serial No. 438,752.

1. A bolt anchor having outwardly cylindrical walls of uniform thickness, and a tapering screw threaded bore.

2. An anchor bolt having outwardly cylindrical walls of uniform thickness, and an interior tapering bore obtained by screw threads of progressively increasing height toward one end of the anchor.

3. A bolt anchor having outwardly cylindrical walls of uniform thickness, and an interior tapering screw threaded bore, said screw threads progressively varying in height.



4. A bolt anchor having outwardly cylindrical walls of uniform thickness, and a tapering bore formed by screw threads of varying height, one end of said bore being unscrew threaded and the exterior of the anchor being provided with annular projections.

5. A bolt anchor, comprising a plurality of sections, each having outwardly cylindrical walls of uniform thickness, and a tapering bore formed by screw threads of varying height, the exterior of the anchor being provided with annular corrugations.

[Claims 6 to 14 not printed in the Gazette.]

961,584. WALL TIE OR BOND. ALEXANDER C. DECKER, Keokuk, Iowa. Filed Mar. 22, 1909. Serial No. 485,124.



1. A tie of the class described, comprising a plate of metal having one or more prongs extending outwardly from the forward or inner end thereof and adapted to be driven into a component part of the structure with which it is to be used; and means for securing bonding action between said tie and the mortar or cement of the wall in which the body of the tie is embedded.

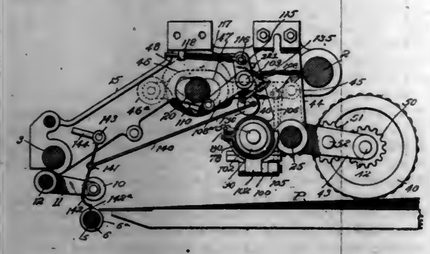
2. A tie of the class described, comprising a body portion formed of sheet metal, having a plurality of openings formed therein, and a plurality of prongs extending outwardly from the forward end thereof and adapted to be driven into a component part of the structure with which it is to be used.

3. A tie of the class described, comprising a flat body of metal having a plurality of securing devices extending outwardly from the forward end thereof; and means carried by the body for effecting bonding action between the tie and the mortar or cement of the wall in which the tie is embedded, said means likewise providing means for the engagement of a driving tool.

4. A tie of the class described, comprising a body portion formed of sheet metal transversely corrugated or ridged and having openings extending through the body; and a plurality of prongs extending outwardly from the forward end of the body and adapted to be driven into a component part of the wall or structure with which it is used.

5. A tie of the class described, comprising a substantially flat body portion formed of sheet metal and having a pair of holes extending therethrough, said holes being employed primarily to drive the tie to position and to thereafter allow the admission of mortar or cement to form a bond between the tie and wall in which it is embedded; and a plurality of prongs extending outwardly from the body of the tie and adapted to be driven into the sheathing or the like arranged adjacent to the wall.

961,585. PAPER-FEEDING MACHINE. TALBOT C. DEXTER, Pearl River, N. Y., assignor to Dexter Folder Company, Pearl River, N. Y., a Corporation of New York. Filed July 9, 1908. Serial No. 442,753.



1. In a paper feeding machine, the combination of a sheet support, a rotary sheet separating instrument, driving mechanism for said separating instrument, a brake for stopping said instrument, a clutch mechanism for coupling said instrument with said driving mechanism or said brake, and a sheet actuated device controlling said clutch mechanism.

2. In a paper feeding machine, the combination of a sheet support, a rotary sheet feeding instrument, driving mechanism for said instrument including a clutch shaft, a brake, a clutch upon said clutch shaft adapted to connect or disconnect said driving mechanism and clutch shaft and said clutch shaft and brake, and a sheet actuated device controlling said clutch.

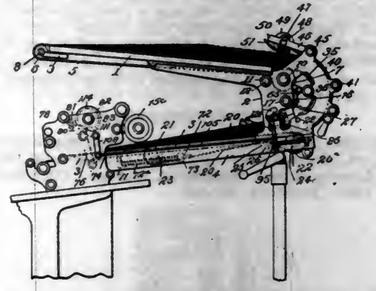
3. In a paper feeding machine, the combination of a sheet moving instrument, with a driving shaft, mechanism driven by said shaft for operating said instrument, a moving frictional surface, a sheet controlled frictional member arranged to be thrown into engagement with said frictional surface by the action of a sheet and to be actuated by said frictional surface, and means actuated by said sheet controlled frictional member adapted to arrest the operation of said instrument without stopping said shaft.

4. In a paper feeding machine, the combination of a sheet support, a sheet feeding instrument, driving mechanism including a shaft, a brake for arresting the operation of said instrument, a rotating friction wheel, a coöperating friction device adapted to be thrown into engagement with said rotating wheel, a sheet actuated device controlling said friction device, and brake operating means rendering inoperative said shaft and connecting said friction device with said brake.

5. In a paper feeding machine, the combination of a sheet support, a sheet moving instrument, a driving shaft, mechanism driven by said shaft for operating said instrument, a brake for arresting the operation of said instrument, a moving frictional surface, a sheet controlled frictional member arranged to be thrown into engagement with said frictional surface by the action of a sheet to be actuated by said frictional surface, and brake operating means rendering inoperative said shaft and connecting said frictional member with said brake for arresting the operation of said instrument without stopping said shaft.

[Claims 6 to 13 not printed in the Gazette.]

961,586. PAPER-FEEDING MACHINE. TALBOT C. DEXTER, Pearl River, N. Y., assignor to Dexter Folder Company, Pearl River, N. Y., a Corporation of New York Filed Sept. 28, 1908. Serial No. 455,145.



1. In a paper feeding machine, the combination with suitable separating and feeding devices, and mechanism for feeding a bank of sheets to said devices, of controlling mechanism normally active to prevent the operation of said bank feeding mechanism, a moving detector arm the arrest of which renders said controlling mechanism inactive and permits the operation of said bank feeding mechanism, and a fixed stop coöperating with said detector arm and so arranged that the engagement of the said arm therewith is normally prevented by a sheet.

2. In a paper feeding machine, the combination with suitable sheet combing devices, and mechanism for feeding a bank of sheets to said devices, of controlling mechanism normally active to prevent the operation of said bank feeding mechanism, a moving detector arm the arrest of which renders said controlling mechanism inactive and permits the operation of said bank feeding mechanism, and a fixed stop coöperating with said detector arm and so arranged that the engagement of the said arm therewith is normally prevented by a sheet.

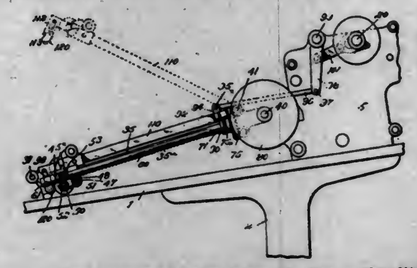
3. In a paper feeding machine, the combination with suitable sheet combing devices, suitable sheet delivery mechanism and mechanism for feeding a bank of sheets to said combing devices, of controlling mechanism normally active to prevent the operation of said bank feeding mechanism, a moving detector arm the arrest of which renders said controlling mechanism inactive and permits the operation of said bank feeding mechanism, and a fixed stop coöperating with said detector arm and so arranged that the engagement of the said arm therewith is normally prevented by a sheet.

4. In a paper feeding machine, the combination with separating and feeding devices, and bank feeding mechanism, of a stop arranged to be covered by a sheet when in proper position, and controlling mechanism for said bank feeding mechanism, including a reciprocating detector arm arranged to be guided over said stop by the sheet and arrested by said stop in the absence of a sheet.

5. In a paper feeding machine, the combination with a sheet support, separating and feeding devices, and bank feeding mechanism, of controlling mechanism adapted to determine the operation of said bank feeding mechanism, said controlling mechanism including a stop upon the sheet support, a detector arm mounted above the sheet support and movable back and forth thereover, and adapted to engage said stop in the absence of a sheet between them and be arrested thereby, and means controlled by said detector arm for permitting or preventing the operation of said bank feeding mechanism.

[Claims 6 to 14 not printed in the Gazette.]

961,587. SHEET-CONVEYING MACHINE. TALBOT C. DEXTER, Pearl River, N. Y., assignor to Dexter Folder Company, Pearl River, N. Y., a Corporation of New York. Filed Feb. 5, 1909. Serial No. 476,296.



1. A sheet conveyer having in combination a plurality of sheet conveying rollers, driving mechanism for said sheet conveying rollers including a friction driving disk, and a frictionally driven wheel in engagement with said disk, and automatic means for periodically shifting said driven wheel radially of said driving disk to regularly vary the speed of said conveying rollers.

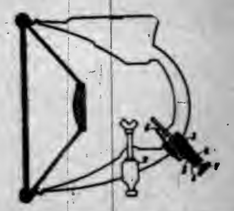
2. In a sheet conveyer, the combination of traveling tapes for conveying sheets from the feeding machine, slow down delivery rollers to which said tapes deliver the sheets, a driving shaft geared to said delivery rollers for operating them, a friction wheel mounted upon said driving shaft, a friction driving disk frictionally engaging said friction wheel, and means for automatically and periodically shifting said friction wheel inwardly and outwardly radially upon the surface of said driving disk for rotating said rollers at the speed of the tapes during the major part of their operation and then retarding said rollers to slow down a sheet just prior to its release from said rollers.

3. In a sheet conveyer, the combination of a plurality of sheet conveying rollers, a driving shaft geared to said rollers to operate them, a friction wheel splined upon said shaft and movable longitudinally of the shaft, a friction driving disk frictionally engaging said friction wheel, means for operating said disk at constant speed, and mechanism adapted to automatically and periodically shift said friction wheel upon the driving shaft to vary the speed of said conveying rollers at regular intervals.

4. In a sheet conveyer, the combination of a conveyer frame, a plurality of slow down conveying rollers mounted in said frame, a driving shaft journaled in and extending longitudinally of said frame, gearing between said shaft and said rollers, a friction wheel splined upon and movable longitudinally of said shaft, a friction driving disk journaled upon an axis at right angles to said shaft and frictionally engaging said friction wheel, a spring engaging said disk to yieldingly hold it in engagement with said friction wheel, means for operating said disk at constant speed, and means for automatically and periodically shifting said friction wheel upon the driving shaft to intermittently vary the speed of said conveying rollers.

961,588. PYROPHORIC IGNITING DEVICE FOR LAMPS OF CYCLES, AUTOMOBILES, AND THE LIKE. CARL FRIEDR. DRÖLL, Heidelberg, Germany. Filed June 1, 1909. Serial No. 499,297.

1. A pyrophoric ignition device for the purposes described, consisting of a tube adapted to fit an opening in the lamp casing and reflector, a pyrophoric piece located near the inner end of said tube, a friction-piece located in said tube and movable therein, arranged to act upon said pyrophoric piece when operated, and means for operating said friction piece from the outer end of the tube, all of said parts being carried by said tube and removable with it and occupying a transverse area less than the area of the opening in the casing or reflector, so that they may be inserted or removed from the outside of said casing or reflector.

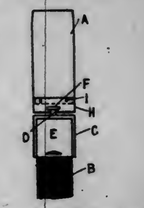


2. In a pyrophoric ignition device, the combination with the lamp casing and its reflector having an opening, a ring fitting said opening, a tube fitting said ring, a pyrophoric piece carried by said tube and located near the inner end thereof, a friction-piece located in said tube and movable therein and having its outer end arranged to act on the pyrophoric piece, and means also supported by said tube for operating said friction piece from the outer end of said tube said pyrophoric piece and friction piece carried by said tube occupying a transverse area less than that of the ring so that said tube and the parts carried by it may be inserted and removed from the outside of the casing or reflector.

3. In a pyrophoric ignition device, the combination with the lamp casing and its reflector having an opening, an internally threaded ring fitting said opening, a tube having an externally threaded sleeve adapted to be screwed into said ring, a pyrophoric piece located near the inner end of said tube, a friction-piece located in said tube and movable therein, arranged to act upon said pyrophoric-piece when operated, and means for operating said friction-piece from the outer end of said tube, said pyrophoric-piece, friction piece and operating means being all carried by said tube and removable with it.

4. A pyrophoric ignition device for the purposes described, consisting of a tube adapted to fit an opening in the lamp casing and reflector, a pyrophoric piece carried by said tube and located near the inner end thereof, a friction piece carried by a spring-bolt located in said tube, and means for operating said spring bolt from the outer end of said tube, said pyrophoric piece, friction piece and operating means being all carried by said tube and removable with it.

961,589. BOW FOR STRINGED INSTRUMENTS. ALFRED HENRY ELSMORE, Eastbourne, England. Filed July 3, 1909. Serial No. 505,866.



1. A bow for stringed instruments comprising a frog, a hank of hair, and a socket holding one end of the hank of hair and pivotally connected to said frog, whereby the transverse inclination of the hair relative to the frog may be varied.

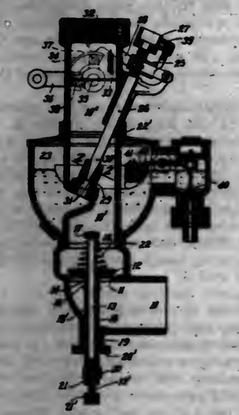
2. A bow for stringed instruments comprising a stick, frog, point, hair and a pivoted socket intermediate between said hair and frog whereby their relative angles may be varied.

3. The combination in a bow of a hank of hair and a socket holding one end of the hank of hair, a metal cap affixed to the bow and a pivot connecting the said socket and the said cap, substantially as described.

4. A bow for stringed instruments comprising a hank of hair, a socket holding one end of the hank of hair, a metal cap affixed to the bow, a pivot connecting the said socket and the said cap, a head on said pivot located within said cap and ball bearings between said head and the interior of said cap, substantially as described.

5. A bow for stringed instruments comprising a frog having a slot therein, a metal cap on said frog, a hank of hair and a socket holding one end of the hank of hair and a pivot and a head therefor connecting said socket and said metal cap, said head having flats thereon whereby it may be placed in position in or withdrawn from said slot in said cap only when turned so as to aline therewith, substantially as described.

961,590. VALVE FOR CARBURETERS AND OTHER APPARATUS. ARTHUR E. ENGLAND, Boston, Mass., assignor of one-half to James A. Yantis, Malden, Mass., and one-half to Frank P. Woodbury and Willis Du Bois Pulver, Salem, N. H. Filed Jan. 29, 1908. Serial No. 413,475.



1. The combination, in a carbureter, of a valve and two springs pressing oppositely thereon; the one spring being relatively weaker and yielding to allow opening of the valve and returning elastically to close it and the other spring being relatively stiffer and constituting a stop for the closing movement of the valve and first described spring; the relation between the springs being such that the stiffer spring is approximately incompressible by the weaker spring, forming a cushion stop for the valve but not substantially participating in the travel of the valve when the valve opens; there being means constituting a complete support for both springs adjustable in position with respect to the valve seat; and said valve being located in a passage in the carbureter, open to the suction of a motor fed by the carbureter, and the opening of the valve being actuated by said suction.

2. In combination, in a carbureter, a throttle valve in the engine supply passage, a fuel valve leading to said passage, connections between the fuel valve and the throttle valve comprising a cam actuated with the throttle, and a pawl engaged by the cam and carrying the fuel valve screw-mounted on the pawl.

961,591. FENDER FOR PLOWS. JOHN PERRY ERTEL, Rushville, Ind. Filed Dec. 17, 1909. Serial No. 533,571.

1. In combination with a plow beam, a rock shaft mounted in suitable bearings thereon, plates clamped to said plow beam, bars pivotally mounted between said plates, one above and the other below the plow beam, a fender, a strip secured toward the rear portion of the fender and provided with loops in which the rear ends of said bars are pivoted, connections between said strip and lever, and means engaging said bars and fastened to the fender and designed to hold the same in a horizontal position adjusted at different heights.



2. In combination with a plow beam, a rock shaft mounted in suitable bearings thereon, plates clamped to said plow beam, bars pivotally mounted between said plates, one above and the other below the plow beam, a fender, a strip secured toward the rear portion of the fender and provided with loops in which the rear ends of said bars are pivoted, connections between said strip and lever, a strip bent upon itself and forming a guide loop fastened to said fender, said bars passing through the guide loop.

3. In combination with a plow beam, a rock shaft mounted in suitable bearings thereon, plates clamped to said plow beam, the inner face of one of said plates having a plurality of recesses, bolts passing through said recesses and plates, bars pivotally mounted upon said bolts one in each of said recesses, a fender, a strip fastened to the latter and having loops formed therein in which the rear ends of said bars are pivoted, suitable connections between said rock shaft and strip, a second strip bent to form loops and fastened to the forward portion of the fender and through which said bar is passed, and a pin passed through said second loop intermediate said bars.

961,592. WATCHMAKER'S LOOP. WILLIAM FAUSTMAN, Brooklyn, N. Y. Filed Feb. 23, 1910. Serial No. 545,351.



1. A watch maker's loop comprising a rim, a lens therein, members lying substantially parallel to one another and adapted to extend over opposite sides of a spectacle glass, one of said members assuming a position on one side of said glass and the other on the opposite side thereof, and means for connecting the said members and rim.

2. A watch maker's loop comprising a rim, a lens therein, rings and means for connecting the said rings and the said rim together.

3. A watch maker's loop comprising a rim, a lens therein, a pair of rings and means for connecting the said pair of rings and the said rim together so that the same assume positions lying in substantially parallel planes.

4. A watch maker's loop comprising a rim, a coupling therein, a lens adapted to be secured in position within the said rim by said coupling, a pair of rings and a pair of bars connected to the said rings and rim in such a manner that the latter assume positions in substantially parallel planes.

5. A watch maker's loop comprising a plurality of rims, a lens secured in each of said rims, a plurality of rings and means for connecting the said rings and rims together in such a manner that the said rings and rims assume positions lying in substantially parallel planes.

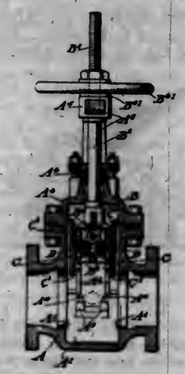
961,593. HOSE-SUPPORTER. MARCUS FINKELSTEIN, New York, N. Y. Filed Nov. 12, 1909. Serial No. 527,637.

1. In a hose supporter, the combination with a pair of drawers, of a strap secured at its upper end permanently to the drawers to hang down alongside of the same and provided at its lower free end with a plurality of tabs arranged one above the other.



2. In a hose supporter, the combination with a pair of drawers, of a strap permanently secured at its upper end to the waistband of the drawers to hang down alongside of the latter, and provided at its lower free end with a plurality of tabs arranged one above the other and formed by doubling up portions of the strap and fastening the upper ends of the doubled up portions to the strap.

961,594. GATE-VALVE. ADALBERT W. FISCHER, Philadelphia, Pa., assignor to Schutte and Koerting Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 14, 1907. Serial No. 362,430.



1. In a gate valve, a casing, a valve stem extending into said casing and movable in the direction of its length, said casing having oppositely disposed valve seats one on each side of the line of movement of the stem, a valve for each seat, one or more links connecting each valve to the stem, guides carried by the stem adjacent its connection to said links, guides connected to the valves, and guides carried by the casing for coöperating with the stem carried guides to hold the stem against lateral movement at all times, and with the guides connected to the valves to cause the valves to move first transversely to the line of movement of the stem and then parallel thereto in opening and reversely in closing.

2. A gate valve casing having oppositely disposed seats, guides for holding the valves in retracted position while moving toward and away from their operative positions, and for preventing lateral movement of the valve stem, and guides for directing the valves toward said seats in combination with a valve stem, arms pivotally secured to said stem and extending on each side thereof, valves pivotally secured to said arms, said valves having guide contacting surfaces arranged to engage the guides in the casing and guide the valves in their determined paths, and said stem having guide contacting surfaces concentric with the pivotal connection between the stem and arms, also engaging the casing guides.

3. In a gate valve, a casing, a valve stem extending into said casing and movable in the direction of its length, said casing having oppositely disposed valve seats one on each side of the line of movement of the stem, a head carried by the stem, guide rolls journaled on said head to turn relatively thereto about an axis transverse to the line of movement of the stem, guide ribs engaging said rolls and carried by the casing one at each side of each guide roll, two sets of arms pivoted to the head, one set extending toward one valve seat and the other toward the other valve seat, valves for the valve seats, one pivoted to each set of arms, guides connected to said valves and engaging the inner sides of said guide ribs when the valves are in the open position, said guide ribs being arranged so that the last mentioned guides clear the sides of the ribs when the valves are closely adjacent their seats, other guide ribs carried by the casing in position to prevent movement of the guides carried by the valve in a direction parallel to the movement of the stem when the valves are closely adjacent their seats, but permitting a transverse movement of said guides at that time.

4. In a gate valve, a casing, a valve stem extending into said casing and movable in the direction of its length, said casing having oppositely disposed valve seats one on each side of the line of movement of the stem, a shaft pivotally supported by said stem within said casing and extending transversely to said stem, a guide roll carried by each end of said shaft, valves, one for each seat, each valve having a shaft extending parallel to the shaft carried by the stem, one or more links connecting each valve shaft with the stem supported shaft, a pair of guide ribs at each side of the valve seats extending parallel to the stem and located one on each side of the corresponding roll, said valve shafts being extended to engage said guide ribs, the latter terminating immediately above the positions of the valve carried shafts when the valves are closely adjacent their seats and being separated by a distance less than the distance between the outer sides of the valve carried shafts when the valves are against their seats and transverse guides carried by the casing against which the underside of the valve shafts engage when the valves are closely adjacent their seats.

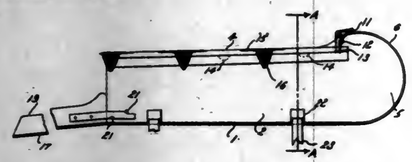
5. In a gate valve, a casing, a valve stem extending into said casing and movable in the direction of its length, said casing having oppositely disposed valve seats one on each side of the line of movement of the valve stem and being provided at the sides of the valve seats with guideways extending transversely to the stem, and with guideways extending parallel to the stem and communicating with the first mentioned guideways, a valve for each valve seat, connections between each valve and the stem, guides carried by the stem adjacent the valve connections, said guides working in the guideway extending parallel to the stem, and guides connected with the valves, the last mentioned guides entering said lateral guideways when the valves are near the closing position whereby the initial opening and final closing movements of the valves are transverse to the line of movement to the stem, the last mentioned guides also entering said longitudinal guideways as the valves move farther away from their seats whereby further movement of the valves is in a direction parallel to the movement of the stem.

[Claims 6 and 7 not printed in the Gazette.]

961,595. AMUSEMENT DEVICE. BENJAMIN F. FITCH, Chicago, Ill., assignor of one-half to Edwin F. Fitch, Chicago, Ill. Filed July 19, 1909. Serial No. 508,281.

1. The combination with a casing having an open forward end, of a table on said casing, means at the rear

end of the casing adapted to deflect balls onto the table, means normally closing the opening between the table and said deflecting means, and means on the table adapted to receive the balls.



2. The combination with a casing having an open forward end, of a table on said casing, a curved deflector at the rear end of the casing extending above the rear end of the table, hinged members on the upper end of said deflector, and pockets in said table.

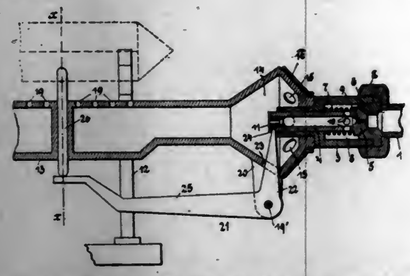
3. The combination with a casing, of a table thereon having sockets in its upper surface, a curved deflector at the rear of the casing and extending above the table, and a plurality of doors hinged on the end of said deflector.

4. The combination with a casing, of a table thereon having sockets in its top, pockets at the edges of the table, an extension adapted to be connected to the forward end of the casing, a deflector at the rear of the casing, and a plurality of doors hinged on said deflector.

5. The combination with a casing, of a table thereon, a curved deflector at the rear of the casing, a plurality of doors hinged at the forward end of the deflector and normally overhanging the rear end of the table, and means adapted to turn the doors to normal position.

[Claim 6 not printed in the Gazette.]

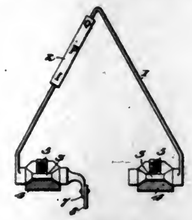
961,596. MECHANIC'S FURNACE. PAUL R. FLAMM, North Chicago, Ill. Filed Dec. 8, 1909. Serial No. 531,985.



1. In a device of the class described, the combination with a burner, of a gas chamber connected therewith; a supply pipe leading to said gas chamber; a tubular valve leading to said burner and operating in said gas chamber, the said valve comprising a tube having a valve head seated to close said supply pipe, there being a minute opening through said head into the interior of the tube and a radial opening in the wall of said tube; a spring normally holding said valve to its seat; a support for a tool in operative relation with said burner; and means, operable by a tool on said support for moving said valve from its seat, substantially as described.

2. In a device of the class described, the combination with a burner, of a gas chamber connected therewith; a supply pipe leading to said gas chamber; a tubular valve leading to said burner and operating in said gas chamber, the said valve comprising a tube having a valve head seated to close said supply pipe, there being a minute opening through said head into the interior of the tube and a radial opening in the wall of said tube; a discharge nozzle at the discharge end of said tube; a spring normally holding said valve to its seat; a support for a tool in operative relation with said burner; and means, operable by a tool on said support, for moving said valve from its seat, substantially as described.

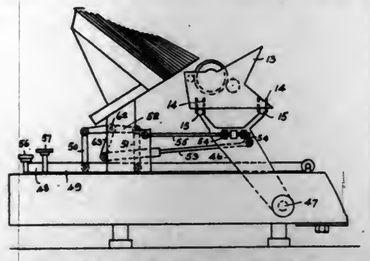
961,597. TYPE-WRITING MACHINE. WILLIAM Y. FORBES and WILLIAM H. ROTHWELL, Huyton, Liverpool, England. Filed Oct. 31, 1908. Serial No. 460,556.



1. In combination a V-shaped type arm, alined journals on the extremities of said arm, the axis of which journals forms, with the sides of the type arm, a substantially triangular figure, a type-block on the arm near the apex opposite the axis of the journals, and a lateral extension on one of said journals for actuating said arm; substantially as described.

2. In combination, a V-shaped type arm, double coned journals on each extremity of said arm, a supporting frame having correspondingly coned recesses therein to receive said journals, and a stud for centering said journals in their sockets; substantially as described.

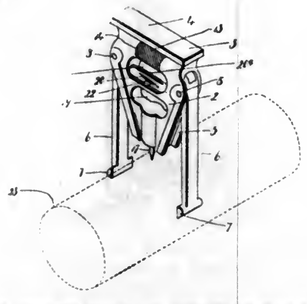
961,598. TYPE-WRITING MACHINE. WILLIAM Y. FORBES and WILLIAM H. ROTHWELL, Huyton, Liverpool, England. Filed Oct. 31, 1908. Serial No. 460,557.



1. In a typewriting machine, in combination, a frame pivoted on the machine base and supporting the platen carriage, two shift-key levers for rocking said frame in either direction about its pivots, a double bell-lever and single lever mounted on the same spindle, and rods connecting the shift-key levers with such double bell-lever and connecting such double bell-lever and single lever with said frame, yoke rods connected to the machine frame and passing through lugs on said rocking frame, and adjustable stop pieces on said yoke rods for limiting the movements of said rocking frame, substantially as described.

2. In a typewriting machine, the combination with shift-key levers for rocking the platen carriage frame so as to produce different case lettering, of key tablets pivoted on the ends of said levers and arranged to rock sidewise thereon, hook-shaped finger pieces depending from said tablets, and notched striking plates standing on the machine base plate, whereby a touch applied on one side of either of said tablets causes it to rock and so enter its hooked finger in the notch of one of said striking plates, so that the shift-key lever is retained in its depressed position and is released therefrom by a touch directed on the opposite side of said tablet, and springs for holding said hooked fingers normally out of engagement with said striking plates, substantially as described.

961,599. CENTERING DEVICE. ALCIDE FRANCHINI, New Haven, Conn. Filed Nov. 27, 1909. Serial No. 530,082.

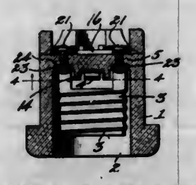


1. In a centering device, the combination with a wedge-shaped frame having a face functioning as a "square" and located at a right angle to the longitudinal axis of the frame, of two centering arms pivotally mounted in the frame, means for operating the said arms, a centering pin mounted in the frame, and a spirit level mounted in the frame at a right angle to the said centering pin and between the same and the said means for operating the said centering arms.

2. In a centering device, the combination with a frame, of centering arms pivotally mounted therein, right and left hand screws connected with the short inner ends of the said arms, an operating nut receiving the inner ends of the said screws and having right and left hand screw threads for coaction therewith, a centering pin mounted in the said frame, and a spirit-level located at a right angle to the said pin and between the same and the said screws and nut.

3. In a centering device, the combination with a frame having a face functioning as a "square" and located at a right angle to the longitudinal axis of the frame, of centering arms pivotally mounted in the frame, right and left hand screws respectively pivoted to the inner ends of the said arms, an operating nut coacting with the said screw, a centering pin located in the said frame at a right angle to the said face, and a spirit level mounted in the said frame between the said pin and screws and nut.

961,600. ELECTRICAL SIGN-RECEPTACLE. EDGAR H. FREEMAN, Trenton, N. J. Filed Apr. 1, 1910. Serial No. 552,708.



1. In an electrical receptacle, the receptacle body having a plug-receiving socket and external seats, a center plug contact, a wire terminal plate arranged in one of said external seats and having a screw-connection with the center plug contact, nut-plates seated within the body, a wire terminal plate arranged in the other of the said external seats and having screw-connections with said nut-plates, and a screw-shell contact arranged in the plug-receiving socket and detachably fitted to said nut plates.

2. In an electrical receptacle, the receptacle body having the plug-receiving socket, the center plug contact, an external wire terminal plate seated on the bottom of the body and having a screw-connection with the center plug contact, interior nut-plates arranged within the body, a screw-shell contact detachably fastened to said plates, and an external wire terminal plate having screw-connections with said interior nut-plates.

3. In an electrical receptacle, a receptacle body having a plug-receiving socket, the center plug contact and its wire terminal connection, a pair of oppositely arranged interior nut-plates mounted within the body, a single external wire-terminal plate having separate arm members respectively connected with the separate nut-plates, and a screw-shell contact detachably fitted to said nut-plates.

4. In an electrical receptacle, the receptacle body having the plug-receiving socket, the center plug contact and its wire terminal connection, a pair of oppositely arranged nut-plates mounted within the body, an external approximately T-shaped wire terminal plate carrying a binding screw and provided with oppositely extending arm-members, combined fastening and conducting screws extending through said opposite arm-members and respectively threaded into the separate nut-plates, a screw-shell contact, and fastening screws detachably holding said screw-shell contact to said nut-plates.

961,601. CONVEYER FOR FEED-CUTTERS. MICHAEL FREEMAN, Racine, Wis. Filed Jan. 13, 1909. Serial No. 472,028.



1. In a conveyer, a longitudinal plank, a semi-circular trough attached to its edges, a reinforcing yoke at the delivery end thereof, a closed head secured to the lower end of said plank with a hemi-spherical end forming a receiving boot, said head being open on its upper side and having upstanding flanges to form a hopper, a driving shaft extending transversely of said head and journaled in bearings therein, said bearings being turned exteriorly to form journals.

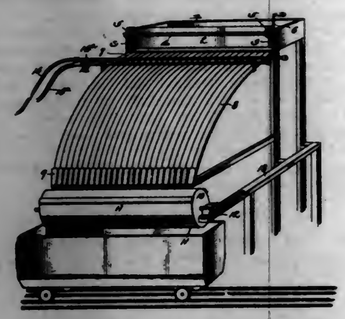
2. In a conveyer, a longitudinal plank, a semi-circular trough attached to its edges, a reinforcing yoke at the delivery end thereof, a closed head secured to the lower end of said plank with a hemi-spherical end forming a receiving boot, said head being open on its upper side and having upstanding flanges to form a hopper, a driving shaft extending transversely of said head and journaled in bearings therein, said bearings being turned exteriorly to form journals, parallel bars secured to the upper end of said plank and extended beyond the end of the latter and provided with bearings for a stationary shaft.

3. In a conveyer, means for nonsplittably mounting a bucket or flight comprising, in combination, a plate of splittable material, a pair of sockets on opposite sides of the center each having a pair of legs flanking opposite sides of the plate, a rivet for each socket at its ends passing through said plate and connecting the two legs thereof, the legs of one socket being longer than those of the other, the rivets passing through the extreme ends of the socket, and a pair of pins passing edgewise through the material of the board transversely of the grain thereof and having one end headed over the base of one of the sockets and the other end headed over the edge of the plate.

4. In a conveyer, a longitudinal plank, a semi-circular trough attached to its edges, a reinforcing yoke at the delivery end thereof, a closed head secured to the lower end of said plank with a hemi-spherical end forming a receiving boot, said head being open on its upper side and having upstanding flanges to form a hopper, a driving shaft extending transversely of said head and journaled in

bearings therein, said bearings being turned exteriorly to form journals, parallel bars secured to the upper end of said plank and extended beyond the end of the latter and provided with bearings for a stationary shaft, holding blocks having longitudinal extensions lying against the sides of said bars and sliding thereon, said blocks supporting the ends of said stationary shaft, and means for adjusting said blocks.

961,602. APPARATUS FOR TREATING SLAG. ROCKY C. GANGEWERE, Selma, Ala. Filed Dec. 2, 1909. Serial No. 531,060.



1. A slag treating apparatus comprising a curved incline, the curvature of the same gradually increasing as the foot of the incline is approached, and means for feeding slag in a liquid form thereto.

2. A device for treating slag consisting of a downwardly extending gradually curved incline, longitudinally fluted, and means for discharging hot slag thereupon, the said incline having its curvature increased as the foot of the incline is approached.

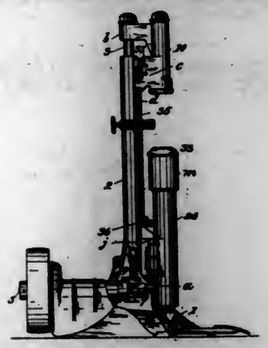
3. A device for treating slag consisting of a gradually and increasingly curved and longitudinally fluted incline, discharge nozzles carried by the foot of the incline, means for discharging hot slag upon the upper portion of the incline, and a perforated water pipe extending transversely across the upper portion of said incline.

4. A device of the kind described comprising a trough, a movable side for said trough, a short incline leading from said trough, a curved incline arranged in position to receive slag from the incline first mentioned, and means for discharging a small amount of water upon the upper portion of the curved incline.

5. A device of the kind described comprising a trough, an incline leading from said trough, the said incline being curved, and being corrugated to form a plurality of parallel longitudinal gutters, sleeves carried by the foot of the incline into which said gutters lead, said sleeves forming discharge nozzles, means for regulating the feed of slag from the trough to the incline, and means for discharging a small quantity of water upon the upper portion of the incline.

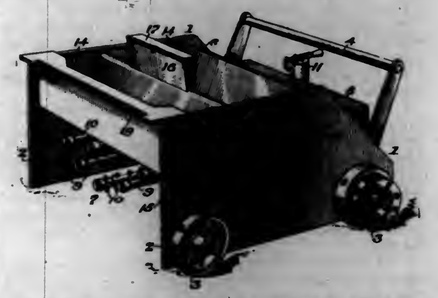
961,603. MACHINE FOR SEALING BOTTLES. EMORY J. GODMAN and WILLIAM H. NIEMEYER, Baltimore, Md., assignors to Horace F. Griffith, Philadelphia, Pa. Filed July 28, 1909. Serial No. 510,042.

In a machine for sealing bottles, a sealing head with means to effect its up-and-down movement, a bottle seat, a spring to support the bottle seat, and a weaker spring to sustain the stronger spring, together with the bottle seat, combined with devices to suspend the compression of the weaker spring at a prearranged part of the downward motion of the sealing head, and appliances actuated by a bottle on the seat, which upon suspension of the compression of the weaker spring will communicate the motion of the sealing head to the bottle seat and thereby cause a compression of the stronger spring without changing the



distance then existing between the sealing head and the bottle seat, substantially as and for the purpose specified.

961,604. SNOW-MELTER. SAMUEL B. GOFF, Camden, N. J. Filed Feb. 3, 1910. Serial No. 541,886.



1. In a snow melting device, a body formed with a combustion chamber throughout a part of its length and open at its bottom, means for supporting such body to be propelled over the ground with the open bottom in close proximity to the same, a tank for liquid fuel mounted on the body, and burner pipes connected to said tank and extending throughout the combustion chamber.

2. In a snow melting device, a body provided with a combustion chamber, a tank for inflammable fluid, a fluid conveying pipe leading from said tank into said chamber, an air pressure device, and an air conveying pipe leading from said air pressure device and adapted to open into said fluid conveying pipe.

3. In a snow melting device, a body formed with a combustion chamber open at its bottom and front end, means for supporting such body to be propelled over the ground with the open bottom in close proximity to the same, means for generating heat within the combustion chamber, and a gate in said front end of the chamber for opening and closing the same.

4. In a snow melting device, a body formed with a combustion chamber throughout the forward portion thereof having a deflecting top and an open bottom, means for supporting such body to be propelled over the ground with the open bottom in close proximity to the same, a tank for liquid fuel supported on the body, and burner pipes connected to said tank and extending throughout the combustion chamber beneath the deflecting top.

5. In a snow melting device, a body formed with a combustion chamber throughout the forward portion thereof having a deflecting top and an open bottom and forward

end, means for supporting such body to be propelled over the ground with the open bottom in close proximity thereto, a closure for the open forward end of the combustion chamber, a tank for liquid fluid and supported on the body, and burner pipes connected to said tank and extending throughout the combustion chamber beneath the deflecting top.

[Claims 6 to 8 not printed in the Gazette.]

961,605. ELECTRIC-LAMP SOCKET. GILBERT W. GOODRIDGE, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Feb. 10, 1910. Serial No. 543,156.



1. A key socket having an insulating body provided with lamp-receiving terminals and wire terminals, horizontal curved chambers in the body near the opposite sides thereof, stationary contacts in the chambers and substantially horizontal spring contact fingers also in the latter to make connection with said stationary contacts and means to press the two spring contacts into connection with the respective stationary contacts.

2. A key socket having an insulating body provided with lamp-receiving terminals, and with binding posts in recesses at opposite sides, two chambers in the body extending in opposite directions from the respective recesses, stationary contacts in connection with the said terminals and two spring contact fingers extending from said binding posts into said chambers and means to press said contact fingers to close the circuit between the binding posts and the respective lamp terminals.

3. A key socket having an insulating body provided with lamp-receiving terminals and with binding posts, chambers in the body, stationary contacts in connection with said terminals and two substantially horizontal spring contact fingers having their inner ends bent inwardly and clamped under the respective posts and means to act on the contact fingers to make or break the circuit at their free ends.

4. A key socket having an insulating body provided with lamp-receiving terminals and wire terminals, chambers in the body, stationary contacts in the chambers and substantially horizontal spring contact fingers to make connection with said stationary contacts and a key spindle and cam means to press the two spring contacts into connection with the respective stationary contacts.

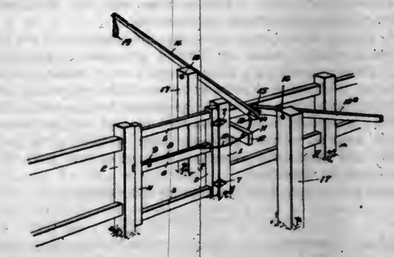
5. A key socket having an insulating body provided with lamp-receiving terminals and wire terminals, stationary contacts and spring contact fingers to make connection with the latter, a cross bar to act on the contact fingers, a key spindle and cam means to act on the cross bar and insulation to prevent short circuit from one finger to the other.

[Claim 6 not printed in the Gazette.]

961,606. GATE. ISAAC N. GRAHAM and JAMES G. DULA, Deerfield, Va. Filed Feb. 26, 1909. Serial No. 480,090.

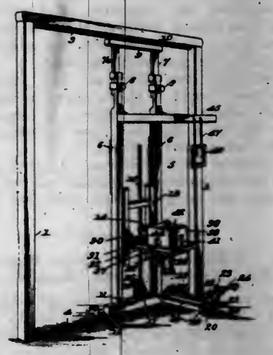
1. A gate opener and closer, comprising a sliding latch bolt on the gate, posts disposed on opposite sides of the gates, operating levers pivoted to the posts and slidably connected at their inner ends, a resilient member connected to one of the operating levers and to the latch bolt, and a guide on the gate post for the resilient member.

2. A gate opener and closer comprising a latch bolt slidably mounted on the gate, posts disposed on opposite sides of the gate, operating levers pivoted on the posts, one of the levers carrying a bolt, and the other of the levers provided with a slot to receive the bolt, an arm on the post of the gate provided with an elongated aperture,



and a resilient curved wire link connected to the latch bolt and to the inner end of one of the operating levers and passing through the elongated slot of said arm.

961,607. X-RAY APPARATUS. AMÉDÉE GRANGER, New Orleans, La. Filed Feb. 13, 1909. Serial No. 477,689.



1. In an X-ray apparatus, the combination of a main frame; a second frame adjustable with relation to said main frame; a third frame adjustable with relation to said second frame; a screw for adjusting said third frame; a crank for operating the screw; an X-ray tube supported by said third frame; and means by which the supports of said tube may be folded up out of the way, when not in use, substantially as described.

2. In an X-ray apparatus, the combination of a main frame; a second frame slidingly adjustable with relation to said main frame; a third frame slidingly adjustable with relation to said second frame; an X-ray tube supported by said third frame; and means comprising a slotted bracket by which the supports of said tube may be folded up out of the way, when not in use, substantially as described.

3. In an X-ray apparatus, the combination of a main frame provided with upper and lower tracks; a second frame slidingly supported on said tracks; means for locking said second frame in position; a third frame slidable in said second frame; means for adjusting said third frame; a box adapted to contain an X-ray tube; and means for supporting said box from said third frame, substantially as described.

4. In an X-ray apparatus, the combination of a main frame provided with upper and lower tracks; a second frame slidingly supported on said tracks; means compris-

ing a cam lever for locking said second frame in position; a third frame slidable in said second frame; means comprising a screw for adjusting said third frame; a box adapted to contain an X-ray tube; and means comprising a bracket and clamp for supporting said box from said third frame, substantially as described.

5. In an X-ray apparatus, the combination of an adjustable frame; means for locking the same in position; means for supporting a screen therefrom; a sliding frame fitted to said adjustable frame; a screw for adjusting said sliding frame; a lever and connections for operating the screw; a support pivotally secured to said sliding frame; a box adapted to hold an X-ray tube carried by the support; and means for angularly adjusting said box, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

961,608. ARTIFICIAL FUEL. PAULINE GRAYSON, Jersey City, N. J. Filed Mar. 8, 1909. Serial No. 482,069.

1. An artificial fuel consisting of pulverized Rhode Island or like graphitic coal, mixed in a pulverized condition with a binding material, and an igniting or readily combustible material, in substantially the proportions specified.

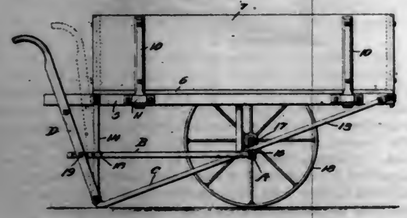
2. An artificial fuel consisting of a pulverized carbonaceous base formed of Rhode Island or like graphitic coal mixed with a binding material with tar, and a salt, in substantially the proportions specified.

3. An artificial fuel consisting of a pulverized carbonaceous base formed of Rhode Island or like graphitic coal mixed with a binding material, tar, a salt and resin in substantially the proportions specified.

4. An artificial fuel consisting of a pulverized carbonaceous base formed of Rhode Island or like graphitic coal, mixed with a binding material of cement or lime, and with tar, oil, a salt, and resin in substantially the proportions hereinbefore specified.

5. An artificial fuel consisting of pulverized Rhode Island or like graphitic coal, cement, tar, oil, plaster of paris, a salt, and resin in substantially the proportions specified.

961,609. WHEELBARROW. JOHN MORGAN HARRIS, Callao, Mo. Filed Aug. 6, 1909. Serial No. 511,609.



1. In a device of the character described, a frame including side sills, angular or V-shaped braces having limbs of unequal length terminally connected with the sills, a wheel-carrying axle supported in bearings upon the undersides of the long limbs of the braces, handles pivoted upon the ground engaging apices of the braces, and braces connecting said handles with the axle.

2. In a device of the character described, a frame including side sills, angular braces having their limbs terminally connected with the sills, a wheel-carrying axle supported in bearings upon the undersides of the long limbs of the angular braces, handles pivoted adjacent to the ground engaging apices of the angular braces, and braces pivoted upon the axle and connected adjustably with the handles.

3. In a device of the character described, a frame including side sills, angular braces having limbs of unequal length terminally secured upon the sills, a box or body including a bed supported upon the sills, a wheel-carrying axle supported in bearings upon the undersides of the long limbs of the angular braces, handles pivoted adjacent to the ground engaging apices of the braces, and braces pivoted upon the axle and connected adjustably with the handles, and an arched brace secured upon the long limbs of the angular braces and supporting the bed of the box or body.

961,610. TICKET-CASE. VERNON D. HITCHINGS and EDWARD W. FACE, Norfolk, Va. Filed Mar. 7, 1908. Serial No. 419,752.



1. A ticket case comprising a ticket compartment, means for advancing the tickets toward one side of the case to facilitate the removal of the same from the case one at a time, and a flexible indicator movable with the ticket advancing means and adapted to indicate the number of tickets contained in the case.

2. A ticket case comprising a ticket compartment provided with a discharge opening, a follower for advancing the tickets into position to be withdrawn through the discharge opening, and a flexible indicator strip movable with and by said follower to indicate the number of tickets remaining in the case.

3. A ticket case comprising a ticket compartment, a spring pressed follower for advancing the tickets toward the discharge point of the case, a flexible indicator strip connected to and carried by the follower, the case being provided with an observation aperture for inspection of said indicating strip, and a magnifying element in said observation aperture.

4. A sheet metal ticket case comprising a ticket compartment and provided in one side with a finger aperture which exposes a portion of one side of the adjacent ticket and also provided in one end with a discharge opening, a spring pressed follower for advancing the tickets toward the apertured side of the case and an internally arranged cut-off lip past which the edges of the tickets are adapted to snap under the influence of the follower, said lip being V-shaped in cross section and formed by pressing the end wall of the case inward to form an offset.

961,611. WIRE HOLDER. HIRAM HOLDEN, Manchester, N. H. Filed Sept. 30, 1909. Serial No. 520,383.



1. A holder for articles consisting of two parts hinged together, and one part having a spring loop formed thereon, a third part hinged on the other part and having a hook to engage with the said loop, and a spring loop jointed to one part and adapted to exert pressure on the pile of articles within the holder.

2. A holder comprising two upright members formed of wire, each member having its lower end bent at right angles and jointed to the bent end of the other member, one member having its upper end bent over toward the other member to form a loop and said member coiled at the bend to form springs, a third member hinged to the upper end of the other member and having its upper end formed into a hook to engage with the loop.

3. A holder comprising two members formed of wire, each member having its lower end bent at right angles and jointed to the bent end of the other member, one member having its upper end bent over toward the other member to form a loop and to form springs at the bend, a third member hinged to the upper end of the other member, and having its upper end formed into a hook to engage with the loop, and a spring loop having its ends secured to the upper ends of the member carrying the third member.

4. A holder comprising two members jointed together at their lower ends, one member having its upper end formed with a spring loop and the other member having its upper ends bent over, a third member having its ends twisted around the said bent ends and with its free ends projecting outwardly to form stops, said third member having a hook formed thereon engaging with the spring loop, and a loop having its ends coiled around the bent over ends of the second member to form a spring hinge, said loop engaging the stops when the holder is empty.

961,612. ANTHRACENE COMPOUND AND PROCESS OF MAKING IT. MAX HENRY ISLER, Mannheim, and HUGO WOLFF, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Feb. 16, 1909. Serial No. 478,313.

1. The process of producing coloring matters of the anthracene series by condensing beta-beta-dihalogen-anthraquinone with a 1-amino-anthraquinone derivative which is substituted in the ring different to that containing the amino group by a substituent which is neutral with respect to the dihalogen-anthraquinone employed substantially as described.

2. The process of producing coloring matters of the anthracene series by condensing 1-amino-6-halogen-anthraquinone with alpha-amino-beta-halogen-anthraquinone substantially as described.

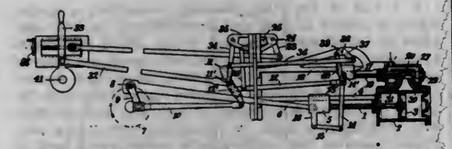
3. The process of producing coloring matters of the anthracene series by condensing 1-amino-6-halogen-anthraquinone with itself substantially as described.

4. The process of producing coloring matters of the anthracene series by condensing beta-beta-dihalogen-anthraquinone with 1-amino-beta-halogen-anthraquinone in which the amino group and the halogen atom are attached to different rings of the anthraquinone residue substantially as described.

5. The process of producing coloring matters of the anthracene series by condensing beta-beta-dichlor-anthraquinone with 1-amino-beta-chlor-anthraquinone in which the amino group and the halogen atom are attached to different rings of the anthraquinone residue substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

961,613. SLIDE-VALVE GEAR FOR STEAM-LOCOMOTIVES. AURELIJUSZ JENDRUSIK, Strzemieszyce, Russia. Filed Nov. 9, 1908. Serial No. 461,726.



1. In a valve gear, the combination, with the cylinder and slide-valve, of means for holding said slide-valve in abnormal position, channels coöperating with said slide-valve, when in said abnormal position, for establishing communication between both ends of the cylinder, and movable means for abnormally operating said slide-valve.

2. In a valve gear, the combination, with the cylinder and slide-valve, of means for holding said slide-valve in abnormal position, and channels coöperating with said slide-valve, when in said abnormal position, for establishing communication between both ends of the cylinder.

3. In a valve gear, the combination, with the slide-valve of an engine cylinder, of means for moving the slide-valve abnormally beyond the normal limit of movement, whereby one of the cylinder ports is uncovered and the other port registers with the arched cavity of the slide-valve, and a channel establishing communication between said cavity and the steam chest when the slide-valve is in said abnormal position.

4. In a valve gear, the combination, with the slide-valve of an engine cylinder, of means for holding the slide-valve abnormally beyond the normal limit of movement, whereby one of the cylinder ports is uncovered and the other port registers with the arched cavity of the slide-valve, and a channel establishing communication between said cavity and the steam chest when the slide-valve is in said abnormal position.

5. In a valve gear, the combination, with the slide-valve of an engine cylinder, of means for holding the slide-valve abnormally beyond the normal limit of movement, whereby one of the cylinder ports is uncovered and the other port registers with the arched cavity of the slide-valve, a channel establishing communication between said cavity and the steam chest when the slide-valve is in said abnormal position, and a by-pass establishing communication between the ends of the steam chest.

[Claims 6 to 16 not printed in the Gazette.]

961,614. PICTURE-FRAME SUPPORT. CARL E. JOHNSON, Quincy, Mass. Filed Sept. 3, 1909. Serial No. 515,998.



1. A picture frame support comprising a base plate, and a cord clamp pivotally connected to the base plate and provided at one end with a beveled end, a hook at the opposite end adapted to support the picture frame, and a supporting cord secured to the base plate by means of the clamp, said cord being suspended from the picture frame hook.

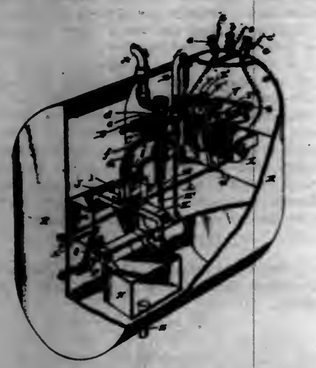
2. A picture frame support comprising a supporting cord, a base member provided with openings for the cord, the opposite end of which is connected to the picture hook, a cord clamp pivotally mounted upon the base member, and a hook on said cord clamp adapted to support a picture frame.

3. A picture frame support comprising a supporting cord, a base plate having openings therein for the supporting cord, said cord being adapted for connection at its upper end to a picture frame hook, a cord clamp pivoted to swing out of alinement with the base member, said cord clamp having a beveled upper end, and a hook at the lower end of the cord clamp to support the picture frame.

961,615. DAMPER OR DRAFT CONTROLLING DEVICE. CARL F. JOHNSON, Milwaukee, Wis. Filed Nov. 25, 1908. Serial No. 464,440.

1. In a temperature-controlling apparatus, the combination of a fluid pressure motor for actuating the draft or damper; a valve for controlling the supply and exhaust of pressure fluid to and from said motor; a hydraulic motor for actuating said valve provided with an oscillating shaft having buckets on opposite sides of its

axis; an intermediate delivery device adapted to deliver water to either bucket at will; an armature connected with and serving to move the delivery device to cause it to deliver to either bucket at will; electro-magnets adapted to move said armature in reverse directions; a thermostatic device adapted to close a gap in the circuit of each magnet in alternation; and a circuit closer carried by the armature and adapted when moved by either magnet to break immediately the circuit of said magnet and close a gap in the circuit of the other magnet.



2. In a temperature-controlling apparatus, the combination of a fluid pressure motor; a valve controlling said motor; an oscillating hydraulic motor having a pair of buckets, for actuating said valve; a water conductor independent of the hydraulic motor for delivering water to one or the other bucket thereof as required; an armature connected with and serving to move said conductor; electro-magnets adapted to move said armature in opposite directions; and circuit closing devices included in circuit with the respective magnets and the armature, and serving to interrupt the circuit of whichever magnet is energized, immediately after such energization.

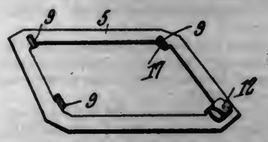
3. In a temperature-controlling apparatus, the combination of a valve, and a hydraulic motor for controlling the same; a water conductor movable to different positions to determine the direction of operation of said hydraulic motor; an electro-magnetic controlling and actuating device for said conductor, comprising a battery or source of electric energy, an armature constantly in electrical circuit with the battery or source of power, and two electro-magnets for moving said armature in opposite directions, electrically connected with said battery; contact springs or fingers in circuit with the respective electro-magnets and battery, positioned substantially as described, so that when the armature is attracted by one magnet said armature shall be carried into electrical contact with the finger of the second magnet, and then out of electrical contact with the finger of the first magnet; and a thermostatic circuit closer included in circuit with the battery or source of energy, and having two contacts through one or the other of which the circuit of one or the other electro-magnet will be closed, when the temperature falls below or rises above predetermined degrees.

4. In a temperature-controlling apparatus of the character described, the combination of an oscillating hydraulic motor, an oscillating feed spout therefor provided with an armature W having conducting surface U and non-conducting surfaces V, V', magnets X, Y, adapted to move the armature in opposite directions, and contact springs or fingers T, T', in circuit with the respective magnets and having overlapping ends, whereby one or the other of said contact springs will rest upon the conducting surface and the other upon a non-conducting surface in whichever extreme position the armature may stand, and the movement of the armature to either position is caused promptly to break the circuit of the magnet by which it is attracted.

5. In a temperature-controlling apparatus of the character described, the combination with the metallic shell or casing R, of an oscillating hydraulic motor, an oscillating supply spout for said motor, provided with a rock-shaft L in electrical connection with the casing, and provided with an armature W having conducting surface U and non-conducting surfaces V, V'; electro-magnets X and Y located on opposite sides of said armature; contact springs T and T' insulated from the shell or casing R, overhanging the conducting and non-conducting faces of the armature, and respectively included in the independent circuits of said magnets; a battery or source of electrical energy; a thermostat; wires or conductors, one extending from a pole of the battery to the shell or casing R and the other to the thermostat; and conductors extending from contact points of the thermostat to the respective magnet windings, the movable member of the thermostat being adapted to make contact with one of the contact points of the thermostat upon a fall of temperature and with the other of said contact points upon a rise of temperature.

[Claims 6 to 9 not printed in the Gazette.]

961,616. PICTURE-HANGER. GUNNAR JOHNSON, New York, N. Y. Filed Jan. 22, 1910. Serial No. 539,457.



1. A picture hanging device consisting of an open, quadrangular frame having integrally formed tubes at three of its corners, inclined in a common direction, and an integrally formed suspension device at the other corner.

2. A blank for the formation of picture hangers, consisting of an open frame having inwardly projecting, integrally formed, T-shaped arms along its inner edge.

3. A blank for the formation of picture hangers, consisting of an open frame having inwardly projecting, integrally formed, T-shaped arms, oppositely disposed upon its inner edge, intermediate its ends; an inwardly projecting, integrally formed, T-shaped arm upon its inner edge at one end; and an inwardly projecting, integrally formed arm at its opposite end.

961,617. TOOL. HENRY E. JORDON and DANIEL A. SULLIVAN, New York, N. Y. Filed June 2, 1909. Serial No. 499,673.

1. A tool of the class described comprising a casing which is oblong in form and provided with parallel side edges in one of which adjacent to one end of the tool is an opening, a main arm pivoted in said casing and ranging longitudinally thereof and comprising longer and shorter end members, a spirit level connected transversely with the end of the longer end member of said arm and provided with a pointer, a scale in connection with which said pointer operates, and another spirit level pivoted back of said opening and provided with an arm which is in operative connection with the shorter end member of the main arm.

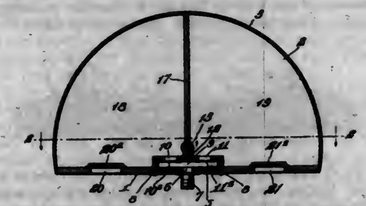
2. A tool of the class described comprising a casing which is oblong in form and provided with parallel side edges in one of which adjacent to one end of the tool is an opening, a main arm pivoted in said casing and ranging longitudinally thereof and comprising longer and shorter end members, a spirit level connected transversely with the end of the longer end member of said arm and provided with a pointer, a scale in connection with which said pointer operates, and another spirit level pivoted back of said opening and provided with an arm which is in operative connection with the shorter end member of the main arm, and means for moving said main arm into any desired position and locking it in such position.



3. A tool of the class described comprising a casing which is oblong in form and provided with parallel side edges in one of which adjacent to one end of the tool is an opening, a main arm pivoted in said casing and ranging longitudinally thereof and comprising longer and shorter end members, a spirit level connected transversely with the end of the longer end member of said arm and provided with a pointer, a scale in connection with which said pointer operates, and another spirit level pivoted back of said opening and provided with an arm which is in operative connection with the shorter end member of the main arm, and means for moving said main arm into any desired position and locking it in such position, consisting of a screw connected with said arm and passed through a transverse slot formed in one side of the casing and a thumb nut mounted on said screw.

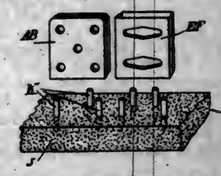
4. In a device of the class described, a casing having parallel side edges, an arm pivoted in said casing and comprising longer and shorter end members, a spirit level connected transversely of the longer end member of said arm and provided with a pointer, a scale at one end of said casing and in connection with which said spirit level operates, another spirit level pivoted adjacent to one side edge of said casing and adjacent to the opposite end thereof and provided with an arm, the shorter end member of the main arm and the arm of the last named spirit level being provided with intermeshing segmental gears.

961,618. OSCILLATING-PISTON PUMP. MICHAEL KELLER, Eureka, Utah. Filed Aug. 6, 1909. Serial No. 511,571.



An oscillating piston pump comprising a semi-cylindrical casing embodying a flat bottom wall and semi-circular side and top walls, said bottom wall being provided on opposite sides of its transverse center with valve-controlled air inlet ports and having an opening therein on a line intermediate of said ports, an exhaust chamber superposed upon said wall above said opening and provided with spaced valve-controlled discharge ports, a cover plate fitting within said opening and lying flush with the underside of the bottom wall, said cover plate having an outlet port communicating with said chamber and a threaded coupling tube communicating with said port, means for detachably holding said cover plate in position, a swinging piston or diaphragm within the casing between the discharge ports of the exhaust chamber and separating said casing into companion compartments, each having a valve-controlled air inlet port and a valve-controlled discharge port, and means for oscillating said piston or diaphragm.

961,619. REINFORCED CONCRETE CONSTRUCTION. JAMES HARMER KNIGHT, Westtown, Pa. Filed Mar. 17, 1909. Serial No. 483,981.



1. A unit section for a hollow core for reinforced concrete construction comprising the body portion having side flanges bent at an angle thereto and spacing projections projecting inwardly from the body portion.

2. A sheet metal unit section for hollow cores for reinforced concrete construction comprising a body portion having side flanges and interior spacing projections.

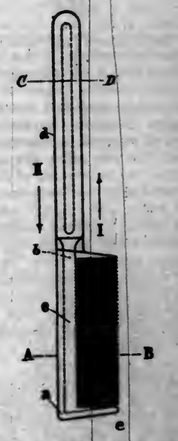
3. A sheet metal unit section for a hollow core for reinforced concrete construction comprising a body portion having side flanges and interior cup-shaped projections formed out of the body of the metal.

4. A hollow reinforcing form or core of box like shape for reinforced concrete construction comprising a plurality of coöperating unit sections, said unit sections being open at at least one end.

5. A hollow reinforcing form or core of box like shape for reinforced concrete construction comprising a plurality of coöperating unit sections, said unit sections being open at at least one end and provided with interior spacing projections.

[Claims 6 to 8 not printed in the Gazette.]

961,620. SINGEING-COMB. ERNST KRAUSE, Steglitz, near Berlin, Germany. Filed Jan. 8, 1909. Serial No. 471,368.



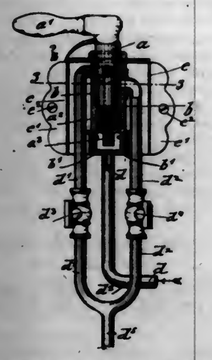
1. A device of the class described comprising in combination a comb, a protecting member for said comb, said

protecting member embracing combs arranged at both sides of said first named comb, a portion connecting the backs of said protector combs, and a heat insulating layer inserted between the back of said first named comb and said protecting combs, said first named comb being slidably disposed with respect to said protector.

2. A device of the class described comprising in combination a comb, a protecting member for said comb, said protecting member embracing combs arranged at both sides of said first named comb, said protecting combs being separated laterally and at the points of their teeth from said first named comb by an air gap, said first named comb being slidably disposed with respect to said protecting member.

3. A device of the class described comprising in combination a comb, a protecting member for said comb, said protecting member embracing combs arranged at both sides of said first named comb and being separated therefrom by an air gap, a handle attached to said comb, another handle in juxtaposition with said first named handle and attached to said protecting member, heat insulating elements secured to said handles, one of said elements being slidable and provided with a groove, and guiding portions attached to the other handle and projecting into said groove.

961,621. LIGHT-REGULATOR FOR AUTOMOBILES. WILLIAM LEUCKERT, New York, N. Y., assignor of one-half to Charles S. Hoffman, New York, N. Y. Filed May 6, 1909. Serial No. 494,466.

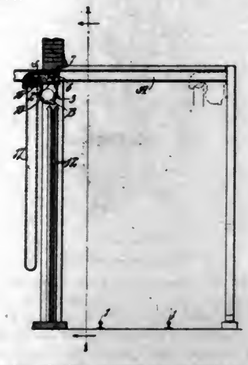


1. In a light-regulator, the combination of a bushing having a pair of outlet-openings, and a spigot rotatable in said bushing and having a central opening and having a larger and a smaller opening connected with the central opening for conducting gas, said spigot being provided with an additional channel communicating with said smaller opening and adapted to register with one of the outlet openings of said pair when the larger opening registers with the other outlet opening of said pair.

2. In a light-regulator, the combination of a bushing having an upper and a lower outlet opening, a spigot in said bushing and having a smaller opening adapted to register with the upper outlet opening and a larger opening adapted to register with the lower outlet opening and having a central opening communicating with the larger and smaller openings, and a gas-conducting passage connecting with said central opening, said spigot being provided with a quadrantal channel adapted to register with the upper outlet opening when said larger opening registers with the lower outlet opening.

3. A light-regulator for automobiles comprising a three-way cock consisting of a spigot provided with a handle and indicator, said spigot being provided with ports for a partial or full supply of gas, and a quadrantal channel extending on the outer surface of the spigot from the smaller port, a bushing for the spigot provided with a smaller and a larger outlet-opening, outlet-pipes, one connected with the smaller outlet-opening and the other with the larger outlet-opening of the bushing, and a delivery-pipe uniting the outlet-pipes.

961,622. DOOR FOR RUNWAY-OPENINGS. JOHN J. LICHTER, St. Louis, Mo. Filed Mar. 4, 1910. Serial No. 547,307.



1. Means for closing a runway opening, comprising a door, and a carriage for supporting said door and adapted to be moved toward and away from the wall in which said opening is formed.

2. A closure for an opening through which elevated tracks pass, comprising a carriage that is adapted to travel on said tracks, and a door mounted on said carriage.

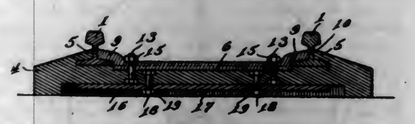
3. A closure for an opening through which elevated rails pass, consisting of a carriage that closes the upper part of said opening and which is adapted to be moved toward and away from the wall in which said opening is formed, and a roller door on said carriage that forms a closure for the remainder of said opening.

4. A closure for an opening through which elevated rails pass, comprising a carriage that is adapted to travel on said rails toward and from the wall in which the opening is formed, means for operating said carriage, and a flexible roller door mounted on said carriage.

5. A closure for a runway opening, comprising a carriage provided with wheels that travel on said runways, and a flexible roller door supported by said carriage.

[Claims 6 to 18 not printed in the Gazette.]

961,623. ANTISPREADING DEVICE FOR RAILWAY-RAILS. THOMAS B. LINDSLEY, Huntington, W. Va., assignor of one-half to Samuel A. Snyder, Huntington, W. Va. Filed Mar. 15, 1910. Serial No. 549,397.

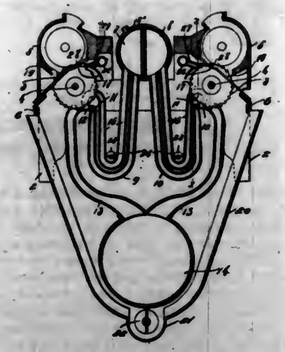


1. In an anti-spreading device for railway rails, a body member having its upper face provided with overlying flanges adjacent its ends and being further provided with a rectangular pocket between the overlying flanges, a resilient rail-engaging member within the pocket, and said rail-engaging member having its sides flared outwardly, and its ends inclined, substantially as and for the purpose set forth.

2. In an anti-spreading device for railway rails, a metallic body member, having its upper face provided with overlying flanges adjacent its ends, the said upper face being further provided with a rectangular depression, a resilient rail engaging member having its body portion positioned within the depression, said member having its sides adjacent its ends flared outwardly and its ends inclined, the body being further provided with a longitudinal depression upon its under face, and means for connecting the rail engaging member with the body.

3. In an anti-spreading device for railway rails, a metallic body member having its upper face provided with overlying flanges adjacent its ends, the said upper face being provided with a rectangular depression between the flanges, the horizontal wall of said depression being provided with spaced openings, the under face of the body having a rectangular pocket, a strip centrally positioned within this pocket, a resilient rail engaging member positioned within the depression within the upper face of the body, said member having its sides adjacent its ends flared outwardly and its ends beveled, the openings within the body being provided with upstanding and downstanding threaded headed elements, the upstanding elements adapted to engage the rail engaging element, the downstanding elements adapted to engage the strip within the lower pocket of the body, and removable nuts for the threaded elements.

961,624. COTTON-GIN. EDGAR LUMPKIN, Dallas, Tex. Filed May 25, 1909. Serial No. 498,296.



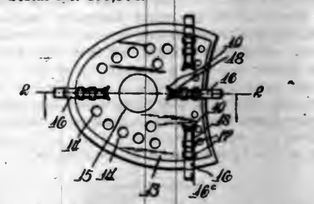
1. In a cotton gin provided with a frame and a gang of saws mounted in each side of said frame and a common lint receiver; line chutes extending from said saws to said receiver, an air-blast chamber, main air-feeding chutes extending from said air-blast chamber to and directing a blast of air upon the peripheries of said saws to drive the lint therefrom into said lint chutes, and auxiliary air feeding chutes extending from said air-blast chamber to said saws and provided with outlet pipes projecting between the saws and discharging blasts radially outwardly between each pair of saws and approximately at the points at which the blast from the main air feeding chutes strike the peripheries of the saws to drive the lint from the saws into said lint chutes.

2. In a cotton gin provided with a frame and a gang of saws mounted in each side of said frame and a common lint receiver; lint chutes extending from the saws to said receiver, an air-blast chamber, main air-feeding chutes extending from said air-blast chamber and directing a blast of air upon the peripheries of said saws, deflecting plates forming connections between said air-feeding chutes and said lint chutes, and auxiliary air-feeding chutes extending from said air-blast chamber to said saws and provided with outlet pipes the extremities of which project radially outward between the saws at the points of said saws at which the blasts from said main air-feeding chutes strike the saws and coöperating with said main air-feeding chutes and said plates to concentrate air-pressure in the paths of the saw teeth.

3. In a cotton gin provided with a frame and a gang of saws mounted in each side thereof; an air blast chamber, a receptacle for trash and motes adjacent to each gang of saws, air-feeding chutes communicating with said air-chamber and terminating in close proximity to said saws to drive the lint therefrom, said air-feeding chutes being arranged to form said receptacle adjacent to and below each gang of saws, and means for removing the trash and motes from said receptacle.

4. In a cotton gin provided with a frame and a gang of saws mounted in each side thereof, an air blast chamber, a receptacle for trash and motes adjacent to each gang of saws, air-feeding chutes communicating with said air-chamber and terminating in close proximity to said saws to drive the lint therefrom, said air-feeding chutes being extended downwardly and then bent upwardly to form said trash and motes receptacles, spiral conveyers mounted in the bends of said air-feeding chutes, and chutes connected with said receptacles to receive trash and motes removed from said receptacles by said conveyers.

961,625. BOOT OR SHOE HEEL. CHESTER E. MACDUFFEE, New York, N. Y., assignor to himself, Walter H. Cooper, New York, N. Y., John L. Gordon, West Hoboken, N. J., and James P. Read, New York, N. Y. Filed May 3, 1909. Serial No. 493,504.



1. As an improved article of manufacture, a heel having a resilient tread portion, a perforated plate embedded in said tread portion, clips supported on the plate having their outer ends formed into hooks and means on the plate and in the path of the clips for deflecting the inner ends of the clips.

2. As an improved article of manufacture, a heel having a resilient tread portion, a perforated plate embedded in said tread portion, clips supported on the plate having their outer ends formed into hooks and means on the plate and in the path of the clips for deflecting a portion of the clip when the latter is driven in.

3. A resilient heel having a plate embedded therein, clips supported on the plate and projecting from the upper portions thereof, said clips having their outer ends formed into up-turned hooks and their inner ends bifurcated, and abutments held on the plate and in the paths of the bifurcated clips.

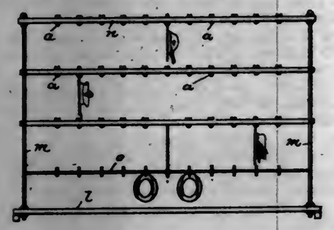
4. A resilient heel, having a plate embedded therein, and clips supported in keepers on said plate, said clips having their inner portions split, and their outer portions formed into upturned hooks.

961,626. HOLDER FOR HEADWEAR AND CLOTHING. JOHN MAITLAND, Swampscott, Mass. Filed Apr. 27, 1909. Serial No. 492,542.

1. A holder of the character described, comprising two grippers, a pivot by which said grippers are connected so that the jaws thereof may be moved together and apart, a spring tending to press such jaws together, and a rigid support to which said pivot is connected and from which said grippers are hung.

2. A holder of the character described, comprising two members having overlapping perforated lugs, a pivot passing through the perforations in said lugs, coöperating gripping jaws on said members, a spring tending to press said jaws together, and a support to which the ends of said pivot are connected on each side of said holder and from which the gripping jaws of the members hang freely.

3. A holder of the character described, comprising two pivotally connected members having overlapping perforated lugs and gripping portions, a pivot passing through said lugs and projecting from said holder, and a support to which the projecting ends of said pivot are connected.

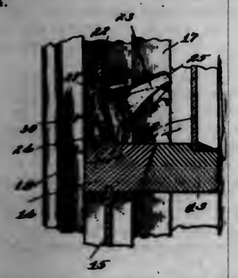


4. A hat holder comprising parallel supporting members, a pin mounted in said members and crossing the space between them, coöperating grippers pivotally mounted on said pin between said supporting members, having gripping jaws and handle portions on opposite sides of said pin, and a spring arranged between the handle portions of said grippers tending to force the jaws thereof together.

5. A holder of the character described, comprising two grippers, a pivot to which said grippers are connected respectively between their ends, so that the jaws thereof may be moved together and apart, a spring tending to press said jaws together, and a rigid support to which said pivot is connected, and from which said grippers are hung, one of said jaws having a hook at its lower end bent away from the coöperating jaw.

[Claims 6 to 11 not printed in the Gazette.]

961,627. FASTENING DEVICE FOR WINDOWS. JAMES L. MALLORY, Evanston, Ill. Filed Nov. 19, 1909. Serial No. 528,904.



1. A window fastening device consisting of a metal body formed with a member rigid therewith which is adapted to bear against the upper sash of a window, and with a wedge member which is adapted to extend between the lower sash and the window frame.

2. A device of the character described, provided with an edge which engages one of the sashes of a window, and with a wedge which is interposed between the other sash and the window frame which forces an engagement between said edge and the sash which it engages when one or the other of said sashes is moved in the direction to open the same.

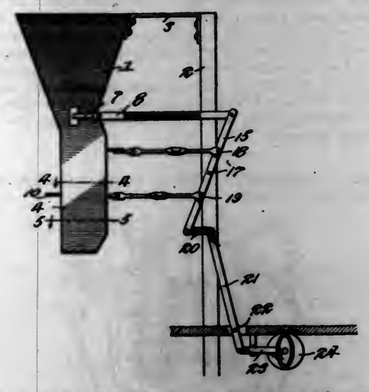
3. A window fastening device consisting of a metal body formed with a member rigid therewith, the end of which has a smooth surface and a biting edge, which is adapted to bear against the upper sash of a window, and with a wedge member which is adapted to extend between the lower sash and the window frame.

4. A window fastening device consisting of a metal body formed with a member rigid therewith which is adapted to bear against the upper sash of a window, with a wedge member which is adapted to extend between the lower sash and the window frame, and with an edge which is adapted to bear against the window frame above the lower sash.

5. A window fastening device consisting of a metal body formed with a member rigid therewith which is adapted to bear against the upper sash of a window, with a wedge member which is adapted to extend between its lower sash and the window frame, and with a channel for the sash cord.

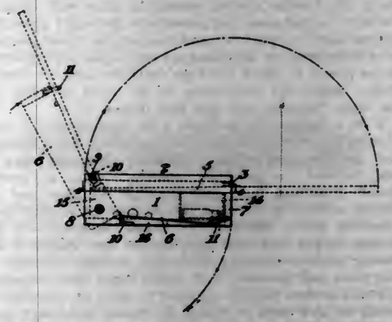
[Claims 6 to 12 not printed in the Gazette.]

961,628. MEASURER. JOHNS B. MARTIN and WALLACE B. MILLNER, Reidsville, N. C. Filed Dec. 23, 1908. Serial No. 468,931.



A measuring device for tobacco comprising a hopper, an agitator in the hopper, a feed chute provided with side extensions, slides mounted to move in the feed chute and spaced from each other to form therebetween a measuring chamber, said extensions forming guides for said slides, rods connected to said slides and provided with turn buckles for adjusting the same, a pivoted operating bar to which said rods are pivotally connected, means for regulating the measuring capacity of the measuring chamber, and means for actuating said operating bar for alternately moving said slides in and out of the feed chute and for rotating said agitator.

961,629. ARTIST'S SKETCH-BOX. RICHARD F. MAYNARD, New York, N. Y. Filed June 8, 1909. Serial No. 500,944.



1. The combination of a box, a hinged lid adapted to form an extension of the upper portion of the box, a movable front pivoted toward the back of the box, and serving when unfolded as a rest for the panel or canvas to be painted upon.

2. The combination of a box, a hinged lid adapted to form an extension of the upper portion of the box, a movable front pivoted toward the back of the box and serving when unfolded as a rest for the panel or canvas to be painted upon, and means for holding the rest in position by the action of the panel or canvas.

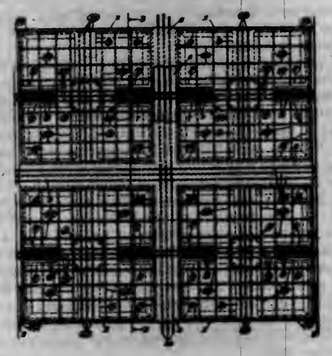
3. In a folding palette-box, a bottom plate, a top plate, a lid which when folded covers the top plate, means for permitting the lid to be opened forward to form a palette, and a hinged front plate adapted to be turned and locked in position to form an easel.

4. In a folding palette-box, a bottom plate, a top plate, a lid which when folded covers the top plate, means for permitting the lid to be opened forward to form a palette, a hinged front plate adapted to be turned and locked in position to form an easel, and a paint tray fitting within the box.

5. In a folding palette-box, a bottom plate, a beveled top plate, a lid which when closed covers, but is separated from, the top plate, and means for permitting the lid to be opened forward to form a palette.

[Claims 6 to 9 not printed in the Gazette.]

961,630. CONCRETE CONSTRUCTION. ALBERT J. MEIER, Glendale, Mo., assignor to Unit Construction Company, Wilmington, Del., a Corporation of Delaware. Filed Nov. 16, 1909. Serial No. 528,273.



1. A concrete structure comprising a pair of slabs, each of said slabs having a pair of beams formed integrally therewith, a beam of one of said slabs alining with a beam of the other said slab, the adjoining ends of said alining beams being each provided with a pocket, there being a space between the adjoining edges of said slabs, reinforcing bars located in said pockets and extending across said space, and a concrete filler for said pockets and space, said slabs constituting a unitary structure when the concrete filler in said pockets and said space has become set.

2. A concrete structure comprising a pair of slabs, each of said slabs having a pair of intersecting beams formed integrally therewith, a beam of one of said slabs alining with a beam of the other said slab, the adjoining ends of said alining beams being each provided with a pocket, there being a space between the adjoining edges of said slabs, reinforcing bars located in said pockets and extending across said space, and a concrete filler for said pockets and said space, said slabs constituting a unitary structure when the concrete filler in said pockets and space has become set.

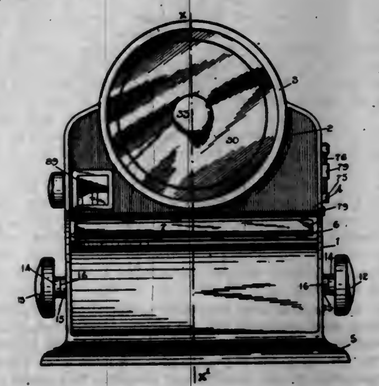
3. A concrete structure comprising a pair of slabs, each of said slabs having a pair of intersecting beams formed integrally therewith, the beams of each of said pairs being disposed at right angles to each other, a beam of one of said slabs alining with a beam of the other said slab, the adjoining ends of said alining beams being each provided with a pocket, there being a space between the adjoining edges of said slabs, reinforcing bars located in said pockets and extending across said space, and a concrete filler for said pockets and space, said slabs constituting a unitary structure when the concrete in said pockets and space has become set.

4. A concrete structure comprising a pair of slabs, each of said slabs having a pair of intersecting beams formed integrally therewith, a pair of columns, the point of intersection of each pair of intersecting beams resting on one of said columns, a beam of one of said slabs alining with a beam of the other said slab, the adjoining ends of said alining beams being each provided with a pocket, there being a space between the adjoining edges of said slabs, reinforcing bars located in said pockets and extending across said space, and a concrete filler for said pockets and said space uniting said slabs integrally together.

5. A concrete structure comprising a plurality of columns, a plurality of slabs, each of said slabs having a pair of intersecting beams formed integrally therewith, the point of intersection of each pair of intersecting beams resting on one of said columns, the beams of each slab alining with a beam of an adjoining slab, each end of one of said beams of each slab being provided with a pocket, there being a space between the adjoining edges of said slabs, reinforcing bars located in each of said pockets and extending across said space, and a concrete filler for said pockets and space to unite said slabs integrally together.

[Claims 6 to 12 not printed in the Gazette.]

961,631. CALCULATING-MACHINE. CARL ARNO MEILICKE, Hanley, Saskatchewan, Canada. Filed July 27, 1908. Serial No. 445,512.



1. In a machine of the class described the combination with the inclosing casing having an open forward face, of a central sleeve secured to the rear side of the casing; a conically shaped wheel rotatably mounted on the sleeve; means for preventing longitudinal displacement of the wheel; an annular plate secured to the rim of the wheel; a card on the plate having numbered divisions thereon; one of said divisions being blank; a rotatable shaft passing into and longitudinally slidable within the sleeve; a rotatable dial fixed on the shaft; a spring interposed between the dial and the conical wheel; a card on the dial, such card having the months of the year and the days of the months notated thereon, successively; a stop pin extending from the inner dial and normally engaging with teeth on the outer plate; and a stationary indicator carried by the casing and coöperating with the cards, as and for the purpose specified.

2. In a machine of the class described the combination with the inclosing casing having a lower longitudinal sight opening and an upper circular opening; a rotatably mounted longitudinally disposed drum within the casing, and a

computed interest chart having a day index thereon on the drum, of an outer vertically disposed dial interconnected with the drum and rotatable therewith; a card on the dial having numbered divisions thereon; an inner independently rotatable dial having thereon a card bearing the months of the year and the days of the respective months, such cards appearing through the circular sight opening; and a stationary indicator carried by the casing adjacent the cards, as and for the purpose specified.

3. In a machine of the class described the combination with the inclosing casing having a lower longitudinal sight opening and an upper circular opening; a rotatably mounted longitudinally disposed drum within the casing, and a computed interest chart having a day index thereon on the drum; of an outer vertically disposed rotatable dial; a card on the dial, said card having numbered divisions corresponding to the day index on the drum; an indicator carried on the casing and coöperating with the dial, said dial and drum being so interconnected that the numbers indicated on the drum denoting the days and the corresponding number on the dial appear simultaneously through the sight opening and beneath the index pointer respectively; and an inner vertically disposed independently rotatable dial registering with the former dial, and having the months of the year and the days of the month notated thereon, as and for the purpose specified.

961,632. WRENCH. GUSTAF E. MILLER, Stratton, Nebr. Filed Aug. 28, 1908. Serial No. 450,692.

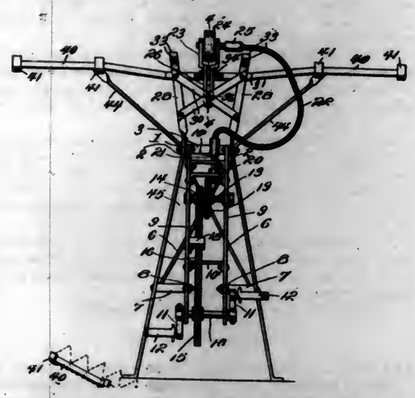


In combination with a wrench having a pair of pivoted handles terminating at one end in jaws; of an oblong stud extending laterally from one of said handles and adjacent to the pivotal point thereof, and a resilient latch pivoted to the other of said handles and rotatable in a plane parallel to the sides of the wrench jaws, and provided with a plurality of spaced oblong openings adapted to independently receive the said stud, whereby the jaws may be locked in open and closed positions and the latch held in engagement with the stud by its own resiliency.

961,633. GRINDING APPARATUS. SAMUEL T. MOORE, Lima, Mont. Filed Jan. 5, 1910. Serial No. 536,446.

1. In a grinding apparatus, a bracket, a notched member upon the bracket, a coupling pin upon the bracket below and in rear of said notched member, a carrier provided with coupling elements to respectively detachably engage said notched member and coupling pin, whereby said carrier may be coupled to and uncoupled therefrom by a tilting action, a grinding roll supported by said carrier, and means for driving said roll.

2. In a grinding apparatus a bracket, a notched member upon the bracket, a coupling pin upon the bracket below and in rear of said notched member, a forked carrier provided with a coupling pin to engage the notched member and a looped portion to engage the coupling pin on the bracket, a grinding roll supported by said carrier, and means for driving said roll.

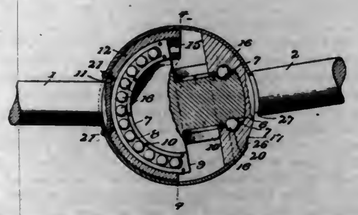


3. A grinding apparatus comprising a frame, a bracket upon the frame provided with spaced holders, a supporting element detachably connected with the frame between said holders, a grinding roll carried by said supporting element, a flexible shaft carried by said roll, and means for driving said shaft.

4. A grinding apparatus comprising a frame, a bracket upon the frame carrying spaced holders, extension arms projecting laterally from the bracket and provided with coöperating holders, a supporting member adapted for detachable connection with the bracket between the first-named holders, a flexible shaft connected with the supporting member, a grinding roll driven by said shaft, and gearing on the frame for driving the shaft.

5. A grinding apparatus comprising a frame, a bracket carried by the frame and including an upper bar, a notched supporting member carried by said bar, a coupling pin on the bracket below and in rear of said bar, a supporting element having a looped shank adapted to engage said coupling pin and a coupling element adapted to engage said notched supporting member, a grinding roll journaled on said supporting element, a flexible shaft for driving said roll, and gearing on the frame for driving the flexible shaft.

961,634. UNIVERSAL JOINT. SAMUEL C. MOORHEAD, Cleveland, Ohio. Filed Mar. 24, 1909. Serial No. 485,459.



1. A universal joint comprising a central connecting member formed of two semi-circular plates having ball races on opposite sides concentric with the periphery thereof, retainers carried by the plates opposite the races, shaft sections having pockets receiving the plates and having ball recesses opposite the retainers.

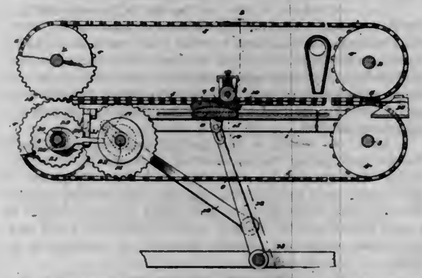
2. A universal joint comprising a central connecting member formed of two semi-circular plates having ball races on opposite sides concentric with the periphery thereof, shaft sections having pockets receiving the plates and having ball recesses opposite the recesses in the plates, balls in said recess, and ball retainers carried by the semi-circular plates.

3. A universal joint comprising a central connecting member formed of two semi-circular plates having ball recesses on opposite sides concentric with the periphery thereof, retainers carried by the plates opposite the recesses, the periphery of said plates being spherical, shaft sections having pockets receiving the plates and having ball recesses opposite the recesses in the plates, balls in said recesses, a spherical oil casing carried by one shaft section, and a spherical portion carried by the other shaft section closely fitting the inner periphery of the oil casing.

4. A universal joint comprising a central connecting member formed of two semi-circular plates secured together at right angles to each other and having ball races on opposite sides concentric with the periphery thereof, ball retainers carried by the said plates opposite the recesses, the periphery of said plates being spherical, shaft sections having pockets receiving the plates and having ball recesses opposite the recess in the plates, balls in said recesses and spherical portions carried by the pockets adjacent the shaft, and a spherical oil casing rigidly carried by the spherical portion of one pocket and snugly fitting the periphery of the spherical portion carried by the other shaft.

5. A universal joint comprising a central connecting member formed of two semi-circular plates secured together at right angles to each other and having ball races on opposite sides concentric with the periphery thereof, semi-circular ball retainers screwed to the sides of said plates and adapted to hold the balls in the grooves in the plates, shaft sections having semi-circular pockets receiving the plates and having ball races to receive the balls carried by the plates and retainers.

961,635. TOBACCO-STEMMING MACHINE. JOHN O. MORRIS, Washington, D. C. Filed Mar. 4, 1908, Serial No. 419,213. Renewed May 10, 1910. Serial No. 560,465.



1. A tobacco stemmer comprising a movable stripping device, and a leaf holder held against movement in any direction during the stripping movement of the stripping device.

2. A tobacco stemmer comprising a leaf holder held against movement in any direction for leaf stripping purposes a movable stripping device, and means for imparting a stripping movement to the stripping device while the leaf holder is held against movement.

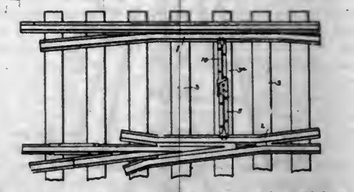
3. A tobacco stemmer comprising a leaf holder adapted to hold the leaf stationary for stripping purposes, and a stripping device composed of a plurality of closely-disposed flexible teeth movable in a direction longitudinal the leaf to be stripped.

4. A tobacco stemmer comprising a leaf holder adapted to hold the leaf stationary for stripping purposes, and a stripping device composed of a plurality of closely-arranged flexible teeth movable only in a direction longitudinal the leaf to be stripped during the stripping operation.

5. A tobacco stemmer comprising an intermittently-movable leaf carrier, and a stripping device having a stripping movement while the carrier is quiet.

[Claims 6 to 11 not printed in the Gazette.]

961,636. RAIL-BRACE. WALTER S. NEWHALL, Cleveland, Ohio, assignor to The Cleveland Railway Supply Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 10, 1909. Serial No. 527,151.



1. In a railway structure, the combination with a pair of rails, of a tie upon which said rails are supported, a pair of overlapping brace sections, one of said sections having a head adapted to fit beneath the head of the rail so as to prevent the latter from tipping, means on said sections whereby a relative longitudinal movement of said sections may be produced for adjusting the length of the brace, said sections being provided with spike apertures through which spikes may be driven into the tie for holding the members in their adjusted position.

2. In a railway structure, the combination with a pair of rails, a tie upon which said rails are supported, a plurality of brace sections, one of said sections having a head adapted to fit beneath the head of the adjacent rail for preventing the latter from tipping, the said sections being provided with coöperating inclined portions whereby by forcing one section of the brace sidewise when in contact with its adjacent section, the length of the brace may be adjusted and means for securing said sections in their adjusted positions.

3. In a railway structure, the combination with a railway tie, of a pair of rails supported by said tie, a plurality of rail brace sections resting on said tie between the rails, one of said sections being provided with inclined grooves, and with a head engaging beneath the head of the adjacent rail inclined ribs on the coöperating section, said ribs being adapted to enter the said grooves in the other section, whereby by forcing one of said sections sidewise the coöperating section is moved lengthwise and the length of the brace is thus regulated, and means for securing said sections to the tie.

4. In a railway brace, the combination with a plurality of brace sections, of a railway tie upon which said sections rest, one of said sections being provided with an inclined groove, an inclined rib on the coöperating section, said rib fitting the groove in the other section whereby, by moving one of said sections sidewise the coöperating section is moved lengthwise, and the length of the brace is thus regulated, and spikes passing through said sections and into the tie for securing the brace in position.

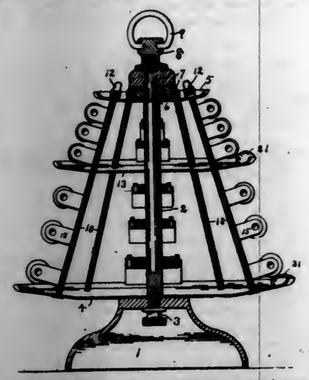
5. In a railway structure, the combination with a pair of rails, of a tie upon which said rails are supported, a brace section having a head engaging one of said rails, said section being provided with inclined ribs on one of its sides, of a second brace section overlapping the first section and having inclined grooves fitting the ribs on the first section whereby, by moving one of said sections sidewise the brace may be lengthened or shortened, and spikes passing through said sections and into the tie for holding the brace in position.

[Claims 6 to 12 not printed in the Gazette.]

961,637. SPOOL-HOLDER. JOHN V. NEWTON, Los Angeles, Cal. Filed Sept. 17, 1909. Serial No. 518,148.

1. In a spool holder, the combination of parallel plates, an upright rod upon which the plates are revoluble, slotted

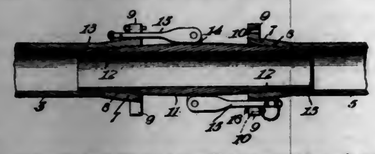
standards extending from one plate to the other, and spool clamps mounted in the slots in the standards.



2. In a spool holder, the combination of a base, an upright rod revolubly mounted thereon, perforated plates mounted on said rod near the ends of the same, and inclined slotted standards extending through said plates, spool-clamps mounted on the standards and comprising sides and backs, the backs having projections to enter the slots in the standards.

3. In a spool holder, the combination of a base, an upright rod, circular plates mounted on the rod and each provided with a circular row of perforations, the holes in the upper plate being a less distance from the rod than those in the lower, tubular rods extending through said holes and having longitudinal slots to receive spool-clamps, means to secure the upper ends of the standards, and spool-clamps, comprising sides and backs, mounted on the standards, the sides being formed with trunnions for the spools, the backs being formed with projections to enter the slots in the standards.

961,638. STEAM AND AIR PIPE COUPLING FOR CARS. RICHARD BENJAMIN PAINTON, Williamsport, Pa. Filed June 11, 1909. Serial No. 501,526.

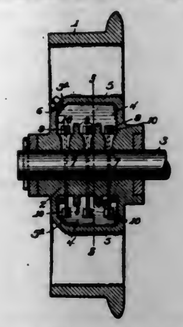


1. A steam and air pipe coupling, comprising pipe terminal members having mouths, and each having oppositely disposed retaining elements, a coupling tube having ends that detachably engage in the mouths, a pair of swinging holding links pivoted to the central portion of the tube on diametrically opposite sides of the same and on axes that are fixed with relation to the tube, each link being capable of swinging in opposite directions and into detachable interlocking relation with one of the retaining elements of each terminal member, and means for retaining the holding links in said interlocking relation with the different retaining elements.

2. A steam and air pipe coupling, comprising pipe terminal members having flared mouths, a coupling tube having tapered end portions that detachably fit into the mouths, said terminal members each having oppositely extending lugs, holding links, each pivotally mounted at one end on a fixed axis on the central portion of the coupling tube and capable of swinging in opposite directions, the other ends of said links having sockets which are engaged by the lugs of either terminal member, and means for securing the lugs in said sockets.

3. In a steam and air pipe coupling, the combination with flexible hose members, of oppositely arranged socket members secured to said hose members and each of which socket members has a flaring receiving mouth provided therein with a tapered joint seat, a removable coupling tube having conical or tapering portions at both sides of its center for wedging engagement with the mouth of the socket members, said tube also being formed with straight necked extensions arranged to extend into the straight portions of the socket members for guiding and air sealing purposes, and holding elements having a connection with said coupling tube and adapted to be connected with either or both of said socket members.

961,639. CAR-WHEEL. JOHN PHILIP PASTRE, Steubenville, Ohio. Filed Dec. 3, 1908. Serial No. 465,816.

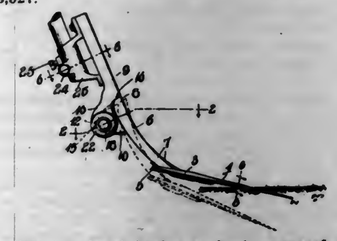


1. In a car wheel, a hub provided with an encircling oil-chamber and having ducts in its periphery, rings loosely encircling said hub and overlying said ducts, said rings being of materially less width than said ducts and carrying laterally directed blades, and means for maintaining said rings in position with relation to said ducts.

2. In a car wheel, a hub having ducts therein and provided with an encircling oil-chamber, rings loosely encircling said hub contiguous to said ducts, said hub having annular ribs formed thereon between said ducts whereby said rings are maintained in position with relation to said ducts, said rings being of materially less width than the space between the ribs and carrying laterally-directed oil-splashing blades.

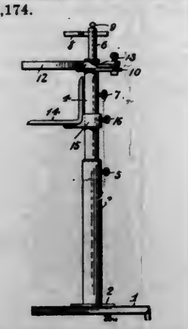
3. In a car wheel, a hub having a plurality of ducts therein and having an oil-chamber surrounding it, a plurality of rings loosely encircling said hub contiguous to said ducts, said hub having annular ribs formed thereon between said ducts whereby said rings are maintained in proper position with relation to said ducts, said rings having blades which are directed laterally in opposite directions.

961,640. CULTIVATOR-SHOVEL. FREDRICK A. PENDARVIS, Villisca, Iowa. Filed June 21, 1909. Serial No. 503,527.



A cultivator shovel having a shank composed of two sections one of said sections having its meeting end bifurcated and provided with registering bolt holes and the other section having a laterally extending lug adapted to extend between the arms of the bifurcated section and having a bolt hole adapted to register with the bolt holes in said arms, a bolt adapted to extend through said holes for adjustably connecting said sections, said arms and lug being provided with registering apertures at the rear of said bolt holes and a pin adapted to extend through said apertures to assist in holding the sections in adjusted position, washers arranged on opposite ends of said bolt and extending over the ends of the pin to prevent accidental disengagement thereof.

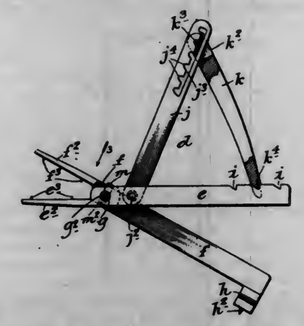
961,641. PHOTOGRAPHER'S STAND. JOHN S. PENNINGTON, New Washington, Ohio. Filed May 29, 1909. Serial No. 499,174.



1. A photographer's stand, comprising a plurality of telescopic sections, a head-rest connected to the uppermost section, a plate having screw-threaded engagement with the intermediate section, said plate having a horizontal slot therein, and waist clamps pivotally mounted upon the plate, and means for adjusting the clamps longitudinal of the plate.

2. A photographer's stand, comprising telescopic sections, one of the sections having an opening therethrough, a head-rest extending through the opening, a plate having screw-threaded engagement with the intermediate section, said plate having a slot formed therein, a clamp pivotally mounted thereon, means for adjusting the clamp longitudinal of the plate, and a seat connected to said intermediate section.

961,642. ROOF-BRACKET. STEPHEN P. PHOENIX, Islip, N. Y. Filed Oct. 28, 1909. Serial No. 525,065.



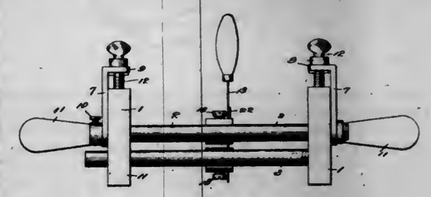
1. A bracket of the class described comprising two main arm members pivoted together at one end and provided with projecting jaws, a supplemental arm pivoted to one of the main arm members adjacent to their pivotal connection and a pawl connected with the supplemental arm member and adapted to operate in connection with one of the main arm members.

2. A bracket of the class described comprising two main arm members pivoted together at one end and provided with projecting jaws, a supplemental arm pivoted to one of the main arm members adjacent to their pivotal connection and a pawl connected with the supplemental arm member and adapted to operate in connection with one of the main arm members, said pawl being adjustable longitudinally of the supplemental arm member.

3. A bracket of the class described comprising two main arm members pivoted together at one end and provided with projecting jaws, a supplemental arm pivoted to one of the main arm members adjacent to their pivotal connection and a pawl connected with the supplemental arm member and adapted to operate in connection with one of the main arm members, said pawl being adjustable longitudinally of the supplemental arm member and the pivotal connection of the main arm members being an adjustable connection.

4. A bracket of the class described composed of two main arm members pivotally connected at one end and provided with projecting jaws having teeth on their adjacent faces, one of said arm members being provided at its free end with a transverse cross head having teeth, a supplemental arm pivoted to one of the main arm members adjacent to their pivotal connection, and a pawl connected with said supplemental arm and adapted to operate in connection with one of the main arm members.

961,643. STRIP-CUTTER. ALFRED J. PIERCE, Conshohocken, Pa. Filed Aug. 10, 1909. Serial No. 512,267.



1. A cutting machine for severing sheet material into strips of required width, the same comprising end-pieces, a pair of rods or bars supported in the end-pieces, means for varying the distance between said rods and to suit the thickness of the material to be cut up into strips, means for securing the end-pieces upon the rods in an adjusted position, and a cutter mounted upon said rods and adapted to be secured thereon in the required position according to the width of the strips to be cut.

2. A cutting machine for severing sheet material into strips of desired width, the same comprising a pair of rods or bars, end-pieces mounted upon said rods and adjustable thereon, means for varying the distance between said rods according to the thickness of the material to be cut into strips, a cutting blade, and holders for the cutting blade each mounted upon a rod and adjustable therewith and in turn adjustable upon the rods to admit of adapting the machine for cutting the material into strips of desired width.

3. In a cutting machine of the character described the combination of spaced rods or bars, end-pieces mounted thereon, means for varying the space between said rods, a cutting blade, like holders mounted upon the rods, each adapted to secure said cutting blade and both holders movable with the rods when adjusting the distance between them, means for securing the holders upon the respective rods in the desired adjusted position, and a

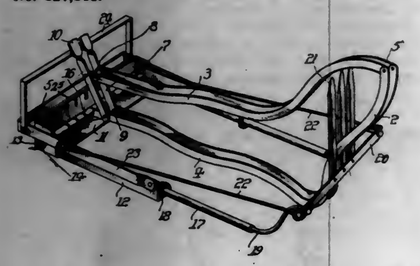
guide located at the outer ends of the holders to maintain the same in given position.

4. In a cutting machine for severing sheet material into strips, the combination of a pair of rods, end-pieces mounted upon the rods and adjustable thereon, means for securing the end-pieces in the required adjusted position, means for varying the distance between the rods, a cutting blade, like holders for the cutting blade adjustably mounted upon said rods, means for securing the holders upon the respective rods in the desired adjusted position, and a guide for holding the outer ends of said holders in given position.

5. A machine of the character described comprising end-pieces provided with corresponding slots, a rod supported in the end-pieces, a coöperating rod arranged in the slots of said end-pieces and adjustable therein toward and from the first mentioned rod, mounts for the adjustable rod, and means for connecting said mounts to the end-pieces and adjusting the same to vary the distance between the two rods.

[Claims 6 to 8 not printed in the Gazette.]

961,644. HOSIERY-DRYING FRAME. FRANK POPE and JOHN ROGGINGER, Kankakee, Ill.; said Roggінger assignor to Paramount Knitting Company, Chicago, Ill., a Corporation of Illinois. Filed July 23, 1906. Serial No. 327,348.



1. A collapsible hosiery form comprising a combined toe, sole and heel piece; a combined leg, instep and toe piece hinged thereto at the toe end of the same; a combined leg and heel piece hinged to the heel end of the first named piece; and a top piece hinged to the leg ends of the other two pieces and projecting beyond one of them to constitute a handle by which to expand the form.

2. The combination of a suitable support, a gang of collapsible hosiery forms mounted thereon, and a member mounted on said support and operating to simultaneously collapse said forms.

3. The combination of a suitable support, a collapsible hosiery form mounted thereon, a member mounted on said support and operating to collapse said form, and means mounted on said support for stripping the hosiery from the collapsed form.

4. The combination with a collapsible hosiery form, of a reciprocating frame having stripper fingers standing on opposite sides of the form.

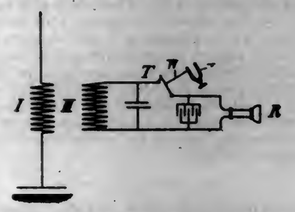
5. The combination with a supporting frame, of one or more collapsible hosiery forms pivotally mounted therein, and a reciprocating frame having stripper fingers standing on opposite sides of the forms.

[Claims 6 to 17 not printed in the Gazette.]

961,645. RECEIVER FOR WIRELESS TRANSMISSION OF SIGNALS. VALDEMAR POULSEN, Copenhagen, Denmark. Filed Oct. 22, 1907. Serial No. 398,619.

1. An arrangement for receiving of signals transmitted by means of rapid electric oscillations comprising an oscillation circuit, an electro-magnetic apparatus, and a device for intermittently connecting and disconnecting the said apparatus to and from the oscillation circuit.

2. An arrangement for receiving of signals transmitted by means of rapid electric oscillations comprising an oscillation circuit, a telephone, and a device for intermittently



connecting and disconnecting the said telephone to and from the oscillation circuit.

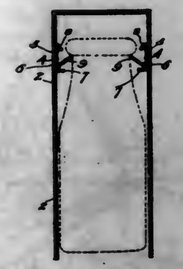
961,646. INSULATOR. WILLIAM LOUIS REUSCH, Yorkton, Saskatchewan, Canada. Filed Apr. 24, 1909. Serial No. 492,014.



1. An insulator comprising, a base having a threaded upper end with a cross channel therein, said channel being enlarged at the bottom throughout the length thereof, a longitudinally split tube adapted to pass snugly within the enlarged portion of the channel and extend beyond the end thereof, and a cap constructed to screw to the threaded end of the base and bear on the extending end of the tube, as and for the purpose specified.

2. An insulator comprising, a base having a contracted upper end with a cross channel therein, said channel being enlarged at the bottom and arched, a longitudinally split tube designed to pass endwise snugly within the enlarged portion of the channel and beyond the ends thereof, the split in the tube being continuous with the upper end of the channel and a cap constructed to screw to the threaded end of the base and engage with the extending end of the tube and close the split when the tube is turned, as and for the purpose specified.

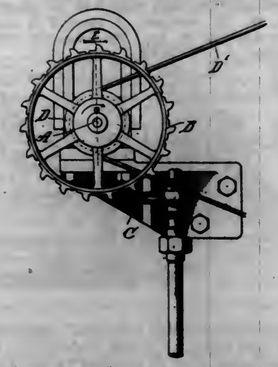
961,647. BOTTLE-HOLDER. WILLIAM P. RIES, Akron, Ohio. Filed Dec. 15, 1909. Serial No. 533,268.



In a bottle holder of the character described, a receptacle open at its rear side and lower end, means whereby the receptacle is secured to a door jamb adjacent to the door, the latter when in closed position covering the open side of the receptacle and preventing the removal thereof

from the door jamb, bottle supporting devices arranged in said receptacle, said devices comprising attaching plates having on their upper ends downwardly and inwardly projecting stops and on their lower ends inwardly projecting lugs, bottle engaging and supporting plates hingedly connected to said attaching plates and adapted to be engaged and lifted by the upper end of a bottle when inserted in the lower open end of the receptacle, said plates after being lifted by the upper end of the bottle automatically drop back into engagement with the bottle neck thereby holding the bottle against removal from the receptacle until the rear open side thereof is uncovered by the opening of the door.

961,648. IGNITION MAGNETO MECHANISM FOR AIR-STARTED INTERNAL-COMBUSTION ENGINES. CHARLES E. SARGENT, Corliss, Wis., assignor to Wisconsin Engine Company, Corliss, Wis., a Corporation of Wisconsin. Filed July 18, 1908. Serial No. 444,181.



1. The combination with an air-started internal-combustion engine and an ignition generator therefor, said generator having a movable part, of means for driving the generator from the engine, means for supplying compressed air, means connected to said supply for driving the generator by compressed air, means also connected to said supply for starting the engine by compressed air, and a single means for controlling the supply of air to the engine and the generator driving means.

2. The combination with an internal-combustion engine and an ignition-generator therefor, said generator having a movable part, of means for driving the generator from the engine, a connection between the driving means and the generator to permit the generator to over-run the driving means but preventing the driving means from overrunning the generator, a rotatable part adapted to be driven by compressed air fast to the movable part of the generator, and means for supplying compressed air to said rotatable part.

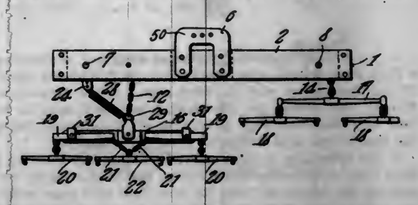
3. The combination with an air-started internal-combustion engine and an ignition generator therefor, said generator having a movable part, of means for driving the generator from the engine, means for driving the generator by compressed air, means for driving the engine by compressed air, a single means for controlling the supply of air to the engine and the generator driving means and means for causing the engine operated driving means of the generator to drive the generator when the engine has attained its speed.

4. The combination with the ignition-generator of an internal-combustion engine of the type started with compressed air, said generator having an armature shaft, of an impact bucket-wheel fast on the armature shaft thereof, a loose pulley having a clutching means for permitting the armature to run faster than the loose pulley but not slower, an air-nozzle directed toward the buckets of the bucket-wheel, means for connection between the loose pulley and the engine, and a pipe connecting the air-nozzle to the compressed air supply.

5. The combination with the ignition-generator of an internal-combustion engine of the type started with compressed air, said generator having an armature shaft, of an impact bucket-wheel on the shaft thereof, a loose pulley having a clutching means for permitting the armature to run faster than the loose pulley but not slower, an air-nozzle directed toward the buckets of the bucket-wheel, means for connection between the loose pulley and the engine, and a pipe connecting the air-nozzle to the compressed air supply between the engine and the valve which turns it on to start the engine.

[Claim 6 not printed in the Gazette.]

961,649. DRAFT-EQUALIZER. HENRY A. SCHAUB, Kearney, Nebr. Filed Sept. 1, 1909. Serial No. 515,594.



1. A draft equalizer including a bar; pulleys mounted upon the bar; a flexible element extended around the pulleys and transversely through the bar; trees carried by the ends of the flexible element; a retractile spring located to the rear of the bar and adjustably uniting the flexible element with the bar and expansible under the efforts of the draft animals at one of said trees; and a retractile spring located to the front of the bar and adjustably connecting the other of said trees with the bar.

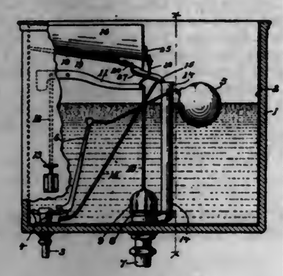
2. A device of the class described comprising a bar; pivot members mounted in the bar adjacent the ends thereof; end pulleys journaled for rotation upon the pivot members; an intermediate pulley mounted upon the bar between the end pulleys and adjacent one of the same; a flexible element extended around the end pulleys and having one of its ends passed around the intermediate pulley; trees carried by the ends of the flexible element; a retractile spring located to the rear of the bar and adjustably uniting the flexible element with the bar and expansible under the efforts of the draft animals at the tree remote from the intermediate pulley; and a forwardly extending arm mounted upon the pivot member adjacent the intermediate pulley; and a retractile spring adjustably connecting the arm with the other of said trees.

3. A device of the class described comprising a bar; pivot members mounted in the bar adjacent the ends thereof; end pulleys journaled for rotation upon the pivot members; an intermediate pulley mounted upon the bar between the end pulleys and adjacent one of the same; a flexible element extended around the end pulleys and having one of its ends passed around the intermediate pulley; trees carried by the end of the flexible element; a retractile spring located to the rear of the bar and adjustably uniting the flexible element with the bar and expansible under the efforts of the draft animals at the tree remote from the intermediate pulley; an arm bifurcated and adapted for mounting upon the pivot member adjacent the intermediate pulley and arranged to inclose the pulley thereon; and a retractile spring adjustably connecting the adjacent tree with the arm.

961,650. DISINFECTOR. HARRY L. SCHELLENBERG, Detroit, Mich. Filed Feb. 1, 1909. Serial No. 475,385.

1. A flush tank having an inlet, a flush pipe leading therefrom, a valve controlling the discharge into the flush pipe, an overflow pipe, a holder for a disinfectant, and

means operated by the operation of said valve to discharge quantities of disinfectant from the holder into the overflow pipe.



2. An apparatus of the character described comprising a flush tank, a flush pipe leading from said tank, an after-fill communicating with the flush pipe, a holder for a disinfectant, and means for discharging in timed relation to said after-fill discharge quantities of disinfectant from the holder into said discharge from the after-fill.

3. An apparatus of the character described comprising a flush tank, a flush pipe leading from said tank, a valve controlling the discharge from the tank into said pipe, means for raising said valve from its seat, a float to retard the closing of said valve, a disinfectant holder, and means for discharging quantities of disinfectant from the holder into the flush pipe operated by the seating of said valve, whereby disinfectant is discharged into the flush pipe after the passage of the discharge from the tank therethrough.

4. The combination with a receptacle for water and a valve to control the discharge of water therefrom, of a holder for disinfectant, a movable member adapted to receive and discharge fixed quantities of disinfectant from the holder, and a float within said receptacle connected to said valve to retard the seating of the same and connected to said member to delay the moving of the same to discharge position until the seating of said valve.

5. The combination with a flush tank and its discharge valve, of a holder for disinfectant, a lever to operate the valve, means for discharging disinfectant from said holder operated in one direction by the movement of said lever, and a float connected to said discharge valve to retard the seating of the same and to retard the movement of said means in the opposite direction to discharge the disinfectant.

[Claims 6 to 11 not printed in the Gazette.]

961,651. METHOD OF PRODUCING ACID AND FIRE PROOF BODIES. ISRAEL SCHLOSSBERG, Charlottenburg, Germany. Filed Apr. 23, 1909. Serial No. 491,725.

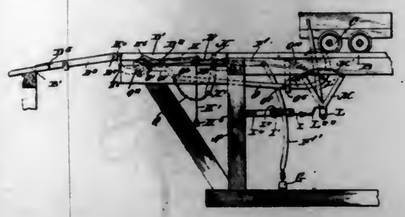
1. The herein described method of producing acid- and fire-proof bodies of pure silicic acid anhydrid, which consists in soaking masses of silicic acid (silica, quartz, sand) with solutions of water-glass, forming bodies therefrom, impregnating these bodies with silicofluoric acid, and burning the bodies until the silicofluorid of sodium is driven off.

2. The herein described method of producing acid- and fire-proof bodies of pure silicic acid anhydrid, which consists in soaking masses of silicic acid (silica, quartz, sand) with solutions of water-glass, forming bodies therefrom, impregnating these bodies with silicofluoric acid, heating the bodies up to such a temperature that only the fluorid of silicon formed from the silicofluorid of sodium then produced is driven off and can be collected in water for turning into silicofluoric acid which can be used over again, whereupon the temperature is so much increased as to drive off also the fluorid of sodium formed.

3. The herein described method of producing acid- and fire-proof bodies of pure silicic acid anhydrid, which consists in mixing masses of silicic acid (silica, quarts, sand) with alkali silicates, soaking the mixture with water, forming bodies from the soaked mixture, impregnating these bodies with silicofluoric acid, and burning the bodies until the silicofluorid of sodium is driven off.

4. The herein described method of producing acid- and fire-proof bodies of pure silicic acid anhydrid, which consists in mixing masses of silicic acid (silica, quarts, sand) with alkali silicates, soaking the mixture with water, forming bodies from the soaked mixture, impregnating these bodies with silicofluoric acid, heating the bodies up to such a temperature that only the fluorid of silicon formed from the silicofluorid of sodium then produced is driven off and can be collected in water for turning into silicofluoric acid which can be used over again, whereupon the temperature is so much increased as to drive off also the fluorid of sodium formed.

961,652. SELF-DUMPING APPARATUS. JASPER SCOTT, Arbutus, W. Va., assignor of one-half to B. H. Newcomer, Spring Hill, W. Va. Filed Feb. 16, 1909. Serial No. 478,276.



1. An automatic dumping apparatus, comprising a trestle, a fixed track thereon, a pivotal track section, a movable release lever adapted to be actuated by the moving car, pivotal hooked bars adapted to be thrown into the path of the wheels of a car to be dumped, pivotal connections between said bars and releasing levers, lever-actuated means for allowing a car to dump upon said tilting track section, a pivotal hook normally holding said tilting section in a fixed position and actuated by the movement of said releasing lever, and counter-balanced mechanism for returning the track section to its normal position, as set forth.

2. An automatic dumping apparatus, comprising a trestle, a fixed track thereon, a pivotal track section, a movable release lever adapted to be actuated by the moving car, pivotal counter-balanced bars having curved portions adapted to be thrown into the path of the wheels of the car to be dumped, pivotal link and lever connections between said bars and releasing lever, a pivotal hook adapted to normally hold said track section in a fixed position, and means for releasing said hook as said releasing lever is actuated in one direction, as set forth.

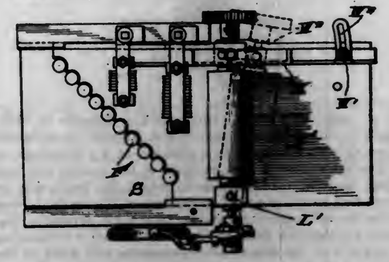
3. An automatic dumping apparatus, comprising a trestle, a fixed track thereon, a pivotal track section, a movable release lever adapted to be actuated by the moving car, pivotal counter-balanced bars having curved portions adapted to be thrown into the path of the wheels of the car to be dumped, pivotal link and lever connections between said bars and releasing lever, a pivotal hook adapted to normally hold said track section in a fixed position, and a chain connecting said hook and pivotal lever, as set forth.

4. An automatic dumping apparatus, comprising a trestle, a fixed track thereon, a pivotal track section, a movable release lever adapted to be actuated by the moving car, pivotal counter-balanced bars having curved portions adapted to be thrown into the path of the wheels of the car to be dumped, pivotal link and lever connections between said bars and releasing lever, a pivotal hook adapted to normally hold said track section in a fixed position, a chain connecting said hook and pivotal lever, a counter-balanced bar connected to the pivotal track section, a lock for engaging said weighted bar, and lever for releasing said lock, as set forth.

5. An automatic dumping apparatus, comprising a trestle, a fixed track thereon, a pivotal track section, a movable release lever adapted to be actuated by the moving car, pivotal counter-balanced bars having curved portions adapted to be thrown into the path of the wheels of the car to be dumped, pivotal link and lever connections between said bars and releasing lever, a pivotal hook adapted to normally hold said track section in a fixed position, a chain connecting said hook and pivotal lever, a counter-balanced bar connected to the pivotal track section, a pivotal lever, a bar connected thereto and provided with jaws, and fingers upon said jaws adapted to engage apertures in said counter-balanced bar which is pivotally connected to the tilting track section, as set forth.

[Claims 6 and 7 not printed in the Gazette.]

961,653. PUNCHING APPARATUS. ANTONE J. SETTER, Cattaraugus, N. Y. Filed Sept. 3, 1909. Serial No. 516,084.



1. A punching apparatus comprising a frame, a driving shaft journaled therein, a vertically movable crosshead, pitman connections between the same and said shaft, a series of punches mounted upon a laterally projecting portion of said crosshead, a head block positioned over said punches, a table having an inclined edge which is scalloped and positioned adjacent to said punches, feed rollers, and means for imparting an intermittent rotary motion thereto.

2. A punching apparatus comprising a frame, a driving shaft journaled therein, a vertically movable crosshead, pitman connections between the same and said shaft, a series of punches mounted upon a laterally projecting portion of said crosshead, a head block positioned over said punches, a table, an adjustable guide upon the table, feed rollers, said table having an inclined edge which is scalloped and positioned adjacent to the punches.

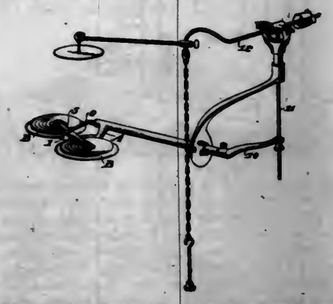
3. A punching apparatus comprising a frame, a driving shaft journaled therein, a vertically movable crosshead, pitman connections between the same and said shaft, said crosshead having a laterally projecting arm with recesses therein, a set screw mounted in a threaded aperture in the bottom of each recess and having its head resting upon the wall of an opening in said laterally projecting part, a punch having a shank portion mounted in each of said recesses and against which said screw is adapted to bear, recessed head blocks positioned above the punches, a table, an adjustable guide upon the table, and feed rollers.

4. A punching apparatus comprising a frame, a driving shaft journaled therein, a vertically movable crosshead, pitman connections between the same and said shaft, said crosshead having a laterally projecting arm with recesses therein, a set screw mounted in a threaded aperture in the bottom of each recess and having its head resting upon the wall of an opening in said laterally projecting part, a hollow punch having a shank portion positioned in one of said recesses against which said screw is adapted to bear, said punch having a circumferential exit opening in the wall thereof, a recessed head block positioned above each punch, a table, an adjustable guide upon the table, and feed block rollers.

5. A punching apparatus comprising a frame, a driving shaft journaled therein, a vertically movable crosshead, pitman connections between the same and said shaft, said crosshead having a laterally projecting arm with recesses therein, a set screw mounted in a threaded aperture in the bottom of each recess and having its head resting upon the wall of an opening in said laterally projecting part, a hollow punch having a shank portion positioned in one of said recesses against which said screw is adapted to bear, said punch having a circumferential exit opening in the wall thereof, aprons fastened to the laterally projecting portion of the crosshead, a recessed head block positioned above each punch, a table, an adjustable guide upon the table, and feed rollers.

[Claims 6 and 7 not printed in the Gazette.]

961,654. THERMOSTATIC REGULATOR FOR INCUBATORS. HENRY M. SHEER, Quincy, Ill. Filed May 13, 1908. Serial No. 432,707.



1. The combination with a regulator, of a bracket, a cross-bar mounted upon the bracket, thermostatic wafers mounted upon the cross-bar at each end thereof, a bar mounted upon the cross-bar adapted to engage the thermostatic wafers, and means connected to the regulator and in engagement with the bar, adapted to be actuated by the movement of the bar for operating the regulator.

2. The combination with a regulator, of a bracket having openings in either end, thermostatic wafers mounted thereon in tandem and having shanks on both sides, a bar provided with openings at either end connecting the wafers, the shanks of the wafers adapted to enter the openings in the bracket and bar, and means operated by the bar for controlling the regulator.

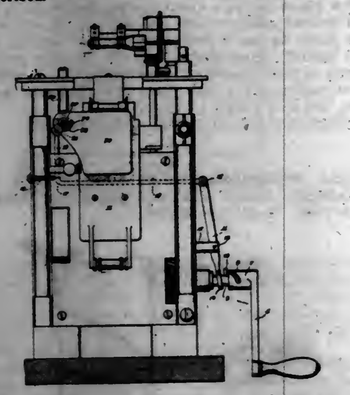
3. The combination with a regulator, of a bracket, thermostatic wafers mounted thereon in tandem, a bar connecting the wafers and adapted to be operated thereby, a hollow bearing extending from the bracket, a lever journaled in said bearing and in contact with the bar connecting the wafers and means for connecting the lever with the regulator.

961,655. MOVING-PICTURE MACHINE. EDWARD H. SPERBERG, Chicago, Ill., assignor to The Selig Polyscope Company, Chicago, Ill., a Corporation. Original application filed Apr. 17, 1909, Serial No. 490,465. Divided and this application filed Dec. 11, 1909. Serial No. 532,676.

1. The combination of a machine driving shaft, a pin mounted on said shaft, a driving sleeve for insertion on the shaft and having therein a slot for coöperating with the pin, a collar surrounding the shaft and pivoted to the machine frame and adapted to be contacted by the driving sleeve, a rotary fire door, and a link mechanism for transmitting motion from the collar to the rotary fire door, substantially as described.

2. The combination of a machine driving shaft, a pin mounted on the shaft, a driving sleeve for engaging the driving shaft and having therein a slot for engaging the pin, a collar surrounding the driving shaft and pivoted to

the machine frame and adapted to be contacted by the driving sleeve, said collar connected with a link mechanism, a spring for retracting the link mechanism, a rotary fire door, and means connecting the link mechanism with the fire door, said means adapted to rotate the fire door when the driving sleeve engages the collar, substantially as described.



3. The combination of a machine driving shaft, a pin mounted on the shaft, a driving sleeve for engaging the driving shaft and having therein a slot for engaging the pin, a collar surrounding the driving shaft and adapted to be contacted by the driving sleeve, said collar connected with a link mechanism, a spring for retracting the link mechanism, a rotary fire door loosely mounted on a shaft and having therein a circular slot, said shaft connected with the link mechanism by means of a crank, and a pin attached to the shaft and engaging the slot in the fire door, substantially as described.

4. The combination of a shaft, a crank pin attached to said shaft, a collar on said shaft, a fire door rotatably mounted on said collar, there being a segmental slot in said fire door, the crank pin being adapted to engage said slot, and means for rotating said shaft and crank pin when the machine driving mechanism is inserted or retracted, said crank pin adapted to maintain the fire door in open position when the machine driving mechanism is inserted, and adapted to close said fire door when the machine driving mechanism is retracted, said segmental slot adapted to permit the fire door to be rotated away from the aperture door when the machine driving mechanism is inserted, substantially as described.

961,656. POST-HOLE DIGGER. WALTER L. STRICKLIN, Memphis, Tenn., assignor of one-half to Moses Plough, Memphis, Tenn. Filed Mar. 11, 1910. Serial No. 548,555.

1. A post hole digger comprising a handle, a curved blade hinged to the lower end thereof with its center directly in line therewith, and adapted to be turned to one side on its hinge to a position at a right angle to the handle, a bracket arm secured to the handle and projecting therefrom on the side to which the blade may be turned and in the plane of movement of the blade, a hand lever of the second order fulcrumed at the outer end of said bracket arm and bent at an obtuse angle at a short distance from the end of the bracket, and a bar connecting the lever between its hand-hold and fulcrum with the blade at a distance from its hinge.

2. A post hole digger comprising a handle, a blade hinged to the lower end thereof, a hand lever of the second order comprising two arms pivotally connected to the handle, and a bar connecting the hand lever with the blade, the upper end of said connecting bar being pivoted between the arms of the hand lever, whereby the two bars of the hand lever will embrace and lie on opposite sides of the connecting bar, close to the handle, when the blade is in its normal digging position.



3. A post hole digger comprising a handle, a blade hinged to the lower end thereof and adapted to be turned to one side on its hinge to a position at a right angle to the handle, a bracket arm secured to the handle and projecting therefrom on the side to which the blade may be turned and in the plane of movement of the blade, a lever of the second order comprising two arms pivotally connected on opposite sides of the bracket, and a connecting bar pivoted at its upper end between the two arms of the hand lever, and connected at its lower end with the blade, whereby the two bars of the hand lever will embrace and lie on opposite sides of the connecting bar, close to the handle, when the blade is in its normal digging position.

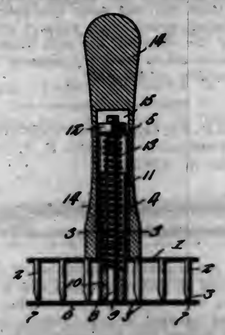
4. A post hole digger comprising a handle, a blade hinged to the lower end thereof, a bracket arm secured to the handle and projecting therefrom, a lever of the second order comprising two arms pivotally connected on opposite sides of the bracket, and a connecting bar located at its upper end between the two arms of the hand lever and pivoted thereto and connected at its lower end with the blade, the hand lever being constructed of elastic material whereby the two arms thereof will tightly clasp the connecting bar when forced thereon.

5. A post hole digger comprising a handle, a blade hinged to the lower end thereof and adapted to be turned to one side on its hinge to a position at a right angle to the handle, a bracket arm secured to the handle and projecting therefrom on the side to which the blade may be turned and in the plane of movement of the blade, a hand lever of the second order comprising two arms pivotally connected on opposite sides of the bracket at the outer end thereof and bent at an obtuse angle at a short distance from the end of the bracket, and a bar pivotally connected at its upper end between the two arms of the hand lever at the apex of said angle and at its lower end to the blade.

[Claims 6 and 7 not printed in the Gazette.]

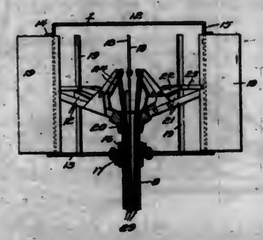
961,657. MEAT-TENDERER. OLIVER SUMMERFIELD, Hot Springs, Ark. Filed Aug. 17, 1909. Serial No. 513,229.

In a meat tenderer, a pair of relatively movable concentrically disposed spaced disks, the upper of which is provided with a plurality of depending prongs and the lower having a plurality of openings to receive said prongs, a rod rising from the center of the lower disk and extending through a central opening in the upper disk and having its upper end portion screw-threaded, a bushing surrounding and fixedly secured to the lower end of the rod and extending to a point adjacent to the upper disk, a tube surrounding said bushing being frictionally secured thereto and extending through the center of the upper disk to a point adjacent to the upper end of the rod, a second tube rising from the center of the upper disk and receiving the first-named tube, the second tube extending to a point considerably above the upper end of the first tube and provided at its upper end with a cap having a central opening for the reception of the upper



end of said rod, a helical compression spring encircling said rod having its opposite terminals bearing on the lower face of said cap and upper end of the bushing, a nut screwed onto the threaded end of the rod and bearing on said cap, and a handle having an axial bore of greater depth than the portion of the second tube extending above the upper disk and of a size to snugly receive the second-named tube.

961,658. WINDMILL. JOHN A. SWANSON, Canton, S. D. Filed Feb. 1, 1910. Serial No. 541,317.



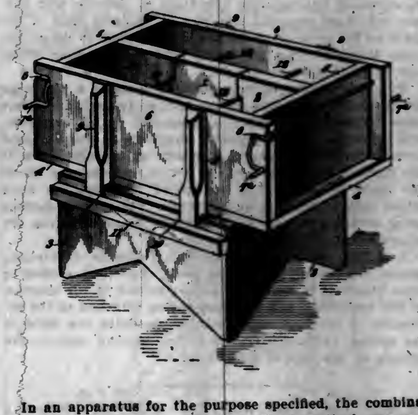
1. In a wind mill, the combination with a supporting frame, and a vertically disposed tubular shaft journaled in said frame; of a hollow cylindrical head keyed to said shaft and provided with a plurality of longitudinal openings, a plurality of blades slidingly fitted in said openings, an operating lever connected with the frame, and connections between said lever and blades for moving the said blades through the openings.

2. In a wind mill, the combination with a supporting frame, and a vertically disposed tubular shaft journaled in said frame; of a hollow cylindrical head keyed to said shaft and rotatable in a horizontal plane, and provided with a plurality of longitudinal openings, a plurality of blades slidingly fitted in said openings, an operating lever connected with the frame, and connections between said operating lever and blades for simultaneously moving the blades through the openings.

3. In a wind mill, the combination with a supporting frame, and a vertically disposed tubular shaft journaled in said frame; of a hollow cylindrical head keyed to said shaft and rotatable in a horizontal plane and provided with a plurality of longitudinal openings, a plurality of blades slidingly fitted in said openings, an operating lever connected with the frame, connecting rods swiveled to the operating lever, and connections between said rods and blades whereby the latter may be moved through the openings.

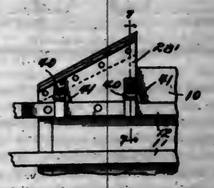
4. In a wind mill, the combination with a supporting frame, and a vertically disposed tubular shaft journaled in said frame; of a hollow cylindrical head keyed to said shaft and rotatable in a horizontal plane and provided with a plurality of longitudinal openings, a plurality of blades slidingly fitted in said openings, a plurality of connecting rods slidingly fitted in said tubular shaft, link and lever connections between the upper ends of said rods and the inner sides of said blades, an operating lever connected with the frame, and a swiveled connection between the lower ends of said connecting rods, and the operating lever whereby said blades may during the rotation of the head be projected and retracted through the said openings.

961,659. CEMENT-BLOCK-MOLDING APPARATUS. JAMES I. TAYLOR, Rock Rapids, Iowa. Filed Jan. 18, 1910. Serial No. 538,593.



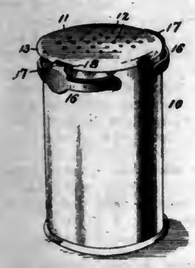
In an apparatus for the purpose specified, the combination with a suitable base having a fixed vertical core constructed for support of block bonds, and a mold-box comprising removable sides and ends, the latter having removable core sections whose inner ends are inclined corresponding to the fixed core section and adapted to assist in holding the block bonds in place during the molding operation, substantially as described.

961,660. CORN-HARVESTER. THOMAS O. THURSTON, Manchester, Va., assignor of one-half to E. C. Bellwood, Manchester, Va. Filed Aug. 17, 1909. Serial No. 513,209.



In a corn harvester of the character described, a platform, longitudinal supporting beams for said platform, pintles connected with one of the beams, and a cutting apparatus including a base and a knife supported thereon, said base being provided with hinge lugs engaging the pintles and having flanges that extend beneath the beam with which the pintles are connected.

961,661. RECEPTACLE FOR POWDER AND THE LIKE. CHARLES A. TURNER, Norfolk, Va. Filed Mar. 18, 1909. Serial No. 484,093.

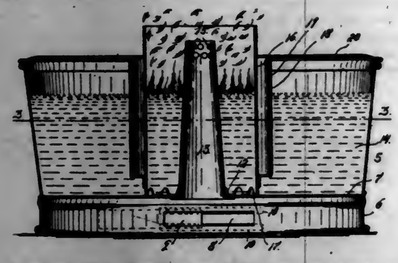


1. A box or receptacle perforated to form a discharge outlet, and a perforated reciprocable spring actuated plate normally held in position to close said outlet, and movable in either of two opposite directions to uncover said outlet, and finger-engaging members at opposite sides of the plate on the exterior of the box or receptacle by which the plate is moved from its spring held position from either side of the box or receptacle.

2. A box or receptacle perforated to form a discharge outlet, and a perforated reciprocable spring actuated plate normally held in position to close said outlet, and movable in either of two opposite directions to uncover said outlet, and finger-engaging members at opposite sides of the plate on the exterior of the box or receptacle by which the plate is moved from its spring held position from either side of the box or receptacle, one of said springs being attached to each of said members and engaging the exterior of the box or receptacle.

3. A box or receptacle having discharge controlling means, comprising a slidable plate, oppositely extending arms attached to the plate, and extending to the exterior of the receptacle, and a curved spring attached to the extremity of each of said arms, intermediate the ends of the spring, said ends of the spring bearing against the outside of the box or receptacle.

961,662. ORCHARD-HEATING DEVICE. PERCIVAL HAMMER TROUTMAN, Canon City, Colo. Filed Jan. 2, 1909. Serial No. 470,522.



1. An orchard heater comprising a fuel containing reservoir having an opening in the bottom thereof, a centrally located open-ended chimney communicating with the said opening, said chimney extending upwardly through said reservoir, a vertically disposed partition located in the reservoir and forming a combustion chamber around the chimney, the said partition having openings in the bottom through which fuel is fed to the combustion chamber, a second partition vertically disposed around said combustion chamber and forming an insulating chamber between the combustion chamber and the fuel in the reservoir, and a support for the reservoir, the said support constructed to allow air to enter the chimney, substantially as described.

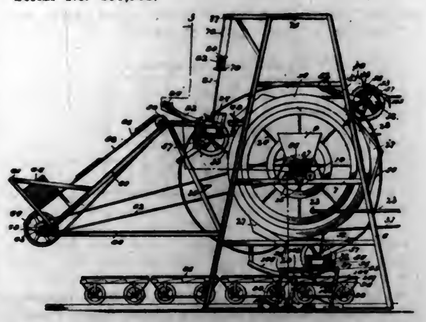
2. An orchard heater comprising a fuel containing reservoir having an opening in the bottom thereof, a centrally located open-ended chimney communicating with the said opening and extending upwardly therefrom, a vertical partition surrounding the chimney and forming a combustion chamber, a second partition inclosing an insulating space between the combustion chamber and the fuel containing reservoir, a cover for the reservoir carried by the said partition, the said cover also forming a closure for the insulating space, and a support extending below the bottom of the reservoir, the said support being constructed to allow air to enter the chimney for draft purposes, substantially as described.

961,663. SELF-FILLING FOUNTAIN-PEN. JOSEPH ANTHONY VOGELMANN, Brooklyn, N. Y. Filed Nov. 22, 1909. Serial No. 529,229.



A fountain pen comprising an ink barrel, a suction tube slidably mounted on said barrel, said tube and barrel having registering vent apertures, and a plug comprising a threaded shank adapted to pass through the aperture in the tube and thread into the aperture in the barrel to close the latter and lock the parts together, and a rubber stud on the opposite end of the plug to enter and close the aperture in the tube independent of the aperture in the barrel.

961,664. AUTOMATIC CEMENT-BLOCK MACHINE. WILLIAM D. WISE, Detroit, Minn., assignor of one-half to Charles R. Stone, Fargo, N. D. Filed May 28, 1909. Serial No. 498,901.



1. In a molding machine, a container, a mold carried by and movable with the container, means for charging the mold, means for delivering a pallet to the mold after the latter is charged, and means for releasing the pallet to permit the discharge of the molded product.

2. In a molding machine, a rotary container, a mold carried by and mounted for rotation with the container, means for automatically charging the mold at predetermined intervals, means for automatically delivering a pallet to the mold, and means for releasing the pallet to permit the discharge of the molded product.

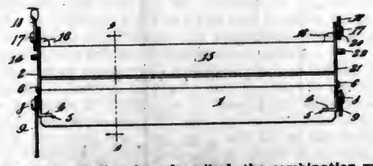
3. In a molding machine, a rotary container, a mold carried by and movable with the container, means for charging the mold at predetermined intervals, means for delivering a pallet to the mold, means for clamping the pallet on the mold, and means for releasing the pallet clamping means to permit the discharge of the molded product.

4. In a molding machine, a rotary container, a mold carried by and movable with the container, means for charging the mold at predetermined intervals, means for compressing the material within the mold, means for delivering a pallet to the mold, means for clamping the pallet in position on said mold, and means for releasing the pallet clamping means to permit the discharge of the molded product.

5. In a molding machine, a rotary container, a mold carried by and movable with the container, means for charging the mold, means for delivering a pallet to the mold, means for reversing the mold, and means for releasing the pallet to permit the discharge of the molded product.

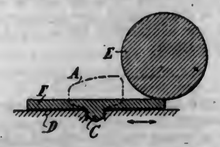
[Claims 6 to 44 not printed in the Gazette.]

961,665. SAW-CLAMP. FREDERICK A. WUEST, Lawrenceburg, Ind., assignor to George H. Bishop & Co., Lawrenceburg, Ind. Filed Aug. 9, 1909. Serial No. 511,990.



In a device of the class described, the combination with a pair of vertically slotted frames, an anvil member arranged intermediate the frames and secured thereto on one side of the slot, a clamping member slidably mounted within the frames, a supporting table upon each frame for the clamping member, means carried by the frame for securing the device from vertical movement on a support, said frames being horizontally slotted, pins on said clamping member projecting through said horizontal slots, and cam levers to engage said pins to force the clamping member into engagement with the anvil member.

961,666. MANUFACTURE OF TIE-PLATES OR THE LIKE. JAMES E. YORK, New York, N. Y., assignor to York Rolling Process Company, a Corporation of New York. Filed Oct. 27, 1904. Serial No. 230,277.

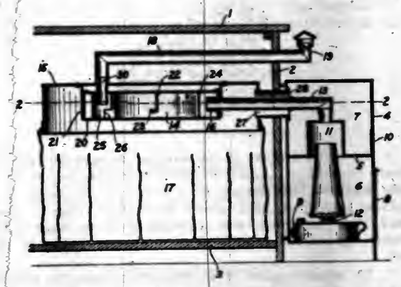


In manufacturing a pie plate from a narrow elongated shape having a projecting rib, the process which consists in rolling it laterally and in a plane transverse to said rib, with said rib located in a groove in one of the members between which the shape is rolled.

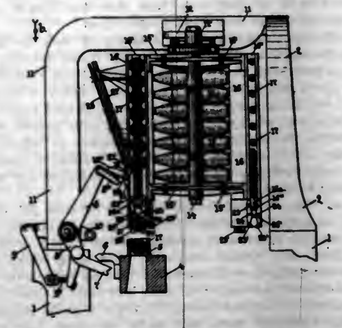
961,667. HEATER FOR BROODERS AND INCUBATORS. CHARLES E. ADAIR, Buffalo, N. Y., assignor to Cyphers Incubator Company, Buffalo, N. Y. Filed Aug. 28, 1908. Serial No. 450,757.

1. In a heater for brooders and incubators, a radiator drum, a flue entering the drum near one side for introducing heated air, baffle plates in the drum formed and arranged to divide the incoming air and conduct it about the periphery of the drum toward the opposite side from said flue, a chimney entering the top of the drum near the opposite side from the flue, and a baffle surrounding the chimney and extending from top to bottom of the drum, the baffle being entirely closed in the upper portion of the drum but having an opening adjacent to the bottom of the drum in the side of the baffle toward the center of the drum.

2. In a heater for brooders and incubators, a radiator drum comprising two cylindrical members fitting together telescopically, said members having co-acting parts adapted to form a bayonet joint, and said members having also openings registering when the members are secured together by said joint, means for supplying heated air to the radiator drum, and a connection between said means and the drum consisting in a flue entering said openings and normally preventing relative rotation of the drum members.



961,668. WEFT-REPLENISHING LOOM. FRANCIS E. ASHTON, Exeter, N. H., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Nov. 18, 1909. Serial No. 528,673.



1. In a weft replenishing loom, a magazine for a plurality of sets of bobbins or filling carriers, having a rotary movement in a substantially horizontal plane, and means for rotating the magazine about a substantially vertical axis.

2. In a weft replenishing loom, a magazine for a plurality of sets of bobbins or filling carriers, having its axis of rotary movement in a substantially vertical plane, and means for rotating the magazine about its axis.

3. In a weft replenishing loom, a magazine for a plurality of sets of bobbins or filling carriers, which extend in a substantially horizontal plane, said magazine having a rotary movement in a substantially horizontal plane, and means for rotating said magazine about a substantially vertical axis.

4. In a weft replenishing loom, a magazine for a plurality of sets of bobbins or filling carriers, having vertically extending compartments or guide-ways, adapted to be moved on a substantially vertical axis.

5. In a weft replenishing loom, a magazine for a plurality of sets of bobbins or filling carriers, having vertically extending compartments or guide-ways, adapted to be moved on a substantially vertical axis, and a transferrer adapted to transfer the lowest bobbin in anyone of the compartments into the running shuttle.

[Claim 6 not printed in the Gazette.]

961,669. COT FOR ATTACHMENT TO BEDS. HENRY AUGUST ATKINSON, Fitzroy, Victoria, Australia. Filed Apr. 8, 1910. Serial No. 554,129.



1. In improvements in or relating to cots for attachment to beds, a sliding foundation frame, a cot outer side and cot ends hinged to said foundation frame and folding thereupon, guide pieces protruding inwardly from said ends, an inner side accommodated by said guide pieces, means for holding said foundation frame to the bed.

2. In improvements in or relating to cots for attachment to beds, a sliding foundation frame, a cot outer side and cot ends hinged to said frame, guide pieces protruding inwardly from said ends, an inner side accommodated by said guide pieces, means upstanding above each of said ends for accommodating a swinging holder within said sides and ends.

3. In improvements in or relating to cots for attachment to beds, a sliding foundation frame having guide bars, a guide and bearer accommodating each of said bars, each guide and bearer consisting of a metal strap above which are bridges with means for holding said metal strap to the side of the bed, a cot side and ends hinged to said foundation frame and folding thereupon.

4. In improvements in or relating to cots for attachment to beds, a sliding foundation frame having guide bars, a guide and bearer accommodating each of said bars, each guide and bearer consisting of a metal strap above which are bridges with means for holding said metal strap to the side of the bed, a cot side and ends hinged to said foundation frame and folding thereupon, an adapter upstanding above each of said ends, each adapter consisting of a neck having a gullet therein, a swinging cot accommodated by said adapters.

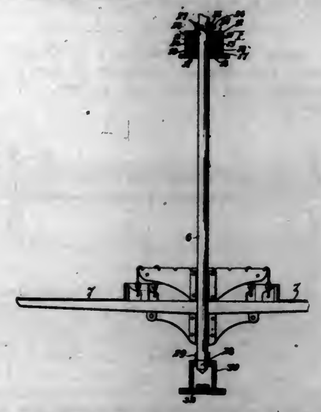
5. In improvements in or relating to cots for attachment to beds, a sliding foundation frame having guide bars, a guide and bearer accommodating each of said bars, each guide and bearer consisting of a metal strap above which are bridges with means for holding said metal strap to the side of the bed, a cot side and ends hinged to said foundation frame and folding thereupon, guide pieces protruding inwardly from said ends, an inner side accommodated by said guide pieces, an adapter upstanding above each of said ends, each adapter consisting of a neck having a gullet therein, a swinging cot accommodated by said adapters.

[Claims 6 to 9 not printed in the Gazette.]

961,670. ROTARY BEARING FOR SUSPENDED SHAFTS. FREDERICK R. BARNHEISEL, Chicago, Ill. Original application filed Oct. 17, 1905, Serial No. 283,121. Divided and this application filed Jan. 22, 1907. Serial No. 353,484.

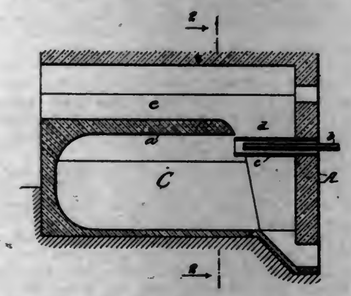
1. In a bearing for suspended shafts, the combination of a rotatable vertical shaft, a casing having an annular channel and surrounding the shaft, a series of rotatable members located within the annular channel of the casing, bearing rings within the channel one above and one below the rotatable members, a plate rigidly secured to the shaft and resting on the upper bearing ring and suspending the shaft, a plane horisontally extending from and carried by and rotatable with the shaft, and a step bearing below the lower end of the suspended shaft serving as an emergency bearing for suspending the shaft, substantially as described.

2. In a bearing for suspended shafts, the combination of a rotatable vertical shaft, a casing having an annular channel and surrounding the shaft, a series of rotatable members located within the annular channel of the casing, bearing rings within the channel one above and one below the rotatable members, a plate rigidly secured to the shaft and resting on the upper bearing ring and suspending the shaft, a plane horisontally extending from and carried by and revoluble with the shaft, a cone at the lower end of the shaft, and a step bearing below the cone for supporting the shaft from below when lowered. substantially as described.



3. In a rotary bearing for suspended shafts, the combination of a rotatable vertical shaft, a casing having an annular channel dished at its bottom and surrounding the shaft, a leveling washer shaped to conform to the dish of the bottom of the annular channel, a plurality of balls within the annular channel, bearing rings one above and one below the balls, a flange rigidly secured to the shaft and resting on the upper bearing ring and suspending the shaft, a plane horizontally extending from and carried by and revoluble with the shaft, a cone at the lower end of the shaft, and a step bearing below the cone for supporting the shaft from below when lowered, substantially as described.

961,671. APPARATUS FOR BURNING POWDERED FUEL. HENRY R. BARNHURST, Allentown, Pa., assignor of one-half to Henry Gregory Barnhurst, Catasauqua, Pa. Filed Jan. 21, 1910. Serial No. 539,401.



1. Apparatus for burning powdered fuel, consisting of a combustion chamber having an exit flue for the passage of the products of combustion on leaving the combustion chamber, and having a wall common to the combustion chamber and said exit flue, said wall being sufficiently thin to transmit therethrough to the point of discharge of the fuel, along the inner surface of the wall, the amount of heat necessary to maintain ignition thereat, and means for projecting into the combustion chamber and along the inner surface of said wall a body of air mixed with fuel; substantially as described.

2. Apparatus for burning powdered fuel, consisting of a combustion chamber having an exit flue for the passage of the products of combustion on leaving the combustion chamber, and having a wall common to the combustion chamber and said exit flue, said wall being sufficiently thin to transmit therethrough to the point of discharge of the fuel, along the inner surface of the wall, the amount of heat necessary to maintain ignition thereat, and an injector for projecting into the combustion chamber along the inner surface of said wall, a body of air mixed with fuel powder, said injector being located in proximity to the port leading from the combustion chamber into the exit flue for the products of combustion, whereby the mixture of air and fuel and products of combustion thereof will traverse the combustion chamber in the form of a loop; substantially as described.

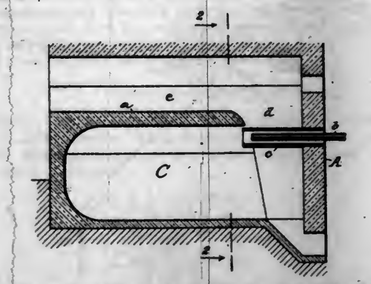
3. Apparatus for burning powdered fuel, consisting of a combustion chamber having an exit flue for the passage of the products of combustion on leaving the combustion chamber, and having a wall common to the combustion chamber and said exit flue, said wall being sufficiently thin to transmit therethrough to the point of discharge of the fuel, along the inner surface of the wall, the amount of heat necessary to maintain ignition thereat, and an injector for injecting into the combustion chamber along the inner surface of said wall a body of air mixed with fuel powder, said injector being located in proximity to the port leading from the combustion chamber into the exit flue for the products of combustion, and extending across said port so as to lie in the path of the outgoing products of combustion, whereby the mixture of air and fuel, and products of combustion thereof, will traverse the combustion chamber in the form of a loop, and whereby the incoming body of air and fuel will be preheated by heat from the products of combustion and a portion of the products of combustion will be entrained with the said entering mixture; substantially as described.

4. Apparatus for burning powdered fuel, comprising a combustion chamber provided at its top with a thin arch constituting one of the walls of said chamber, a second arch above the first and forming therewith a wide and spacious flue into which the products of combustion enter from the combustion chamber, and an injector for injecting into the combustion chamber along the inner surface of the thin arch from front to rear thereof a body of air mixed with powdered fuel, said injector being located in proximity to the port leading from the combustion chamber into said exit flue for the products of combustion; substantially as described.

5. Apparatus for burning powdered fuel, comprising a combustion chamber provided at its top with a thin arch constituting one of the walls of said chamber, a second arch above the first and forming therewith a wide and spacious flue into which the products of combustion enter from the combustion chamber, and an injector for injecting into the combustion chamber along the inner surface of the thin arch from front to rear thereof a body of air mixed with powdered fuel, said injector being located in proximity to the port leading from the combustion chamber into said exit flue for the products of combustion, and extending across said port so as to lie in the path of the outgoing products of combustion; substantially as described.

961,672. METHOD OF BURNING POWDERED FUEL. HENRY R. BARNHURST, Allentown, Pa., assignor of one-half to Henry Gregory Barnhurst, Catasauqua, Pa. Filed Jan. 21, 1910. Serial No. 539,402.

1. The method of burning anthracite culm and similar materials, which consists in raising the temperature of a combustion chamber up to the ignition point of a body of air mixed with such material in powdered form, projecting the mixture into, and along a wall of, the combustion chamber and igniting it therein, causing the products of combustion to return upon themselves within the combustion chamber, the return current radiating heat upon the incoming current, and causing the products of combustion, after taking their exit from the combustion chamber, to maintain said wall at an ignition temperature at the point of discharge of the fuel; substantially as described.



2. The method of burning anthracite culm and similar materials, which consists in projecting into a combustion chamber and along a highly heated ignition surface thereof a body of air mixed with such material in powdered form, thereby igniting the mixture, causing the products of combustion to return upon themselves within the combustion chamber, the return current radiating its heat upon one side of the incoming current, and further heating the incoming current so as to assist in its deflagration by causing the products of combustion after they leave the combustion chamber to pass along the reverse side of the highly heated ignition surface and maintaining said surface thereby at an ignition temperature at the point of discharge of the fuel; substantially as described.

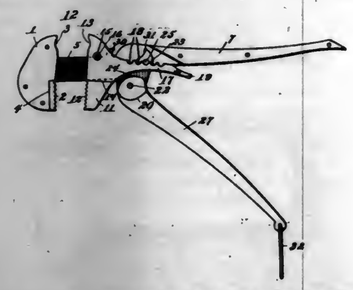
3. The method of burning anthracite culm and similar materials, which consists in projecting into a combustion chamber and along a wall thereof a body of air mixed with such material in powdered form, preheating said wall up to the ignition temperature of said mixture, whereby, as the incoming current enters, it will be ignited, causing the products of combustion to return upon themselves within the combustion chamber, the return current radiating heat upon the incoming current, entraining into the incoming current a portion of the products of combustion from the return current, and continuously maintaining the preheated wall at the point of discharge of the fuel at the ignition temperature for the mixture by passing the outgoing products of combustion along its reverse side after they leave the combustion chamber; substantially as described.

4. The method of burning anthracite culm and similar materials, which consists in projecting into a combustion chamber, and along a wall thereof a body of air mixed with such material in powdered form, preheating said wall up to the ignition temperature of said mixture, whereby as the incoming current enters it will be ignited, causing the products of combustion to return upon themselves within the combustion chamber, the return current radiating heat upon the incoming current, entraining into the incoming current a portion of the products of combustion from the return current, preheating the incoming mixture of air and fuel powder by heat from the outgoing products of combustion, and continuously maintaining the preheated wall at the point of discharge of the fuel at the ignition temperature for the mixture by passing the outgoing products of combustion along its reverse side after they leave the combustion chamber; substantially as described.

961,673. WRENCH. IZADORE J. BASKEN, Pembina, N. D. Filed Mar. 21, 1910. Serial No. 550,753.

1. A wrench comprising a fixed jaw and handle constituting a body; a movable jaw guided along said body and having a stem of half thickness projecting rearwardly.

notched in its upper edge, and having a thumb piece at its rear end; a movable handle having an upbent inner end of half thickness to complement that of the stem, a pin adapted to engage said notches, and a cam shaped to raise said stem as the handles are closed; and a pivot between the movable handle and body.



2. A wrench comprising a fixed jaw and handle connected by spaced face plates and constituting a body; a movable jaw between said plates and having side shoulders beneath their lower edges, rollers carried by this jaw and engaging the upper edges of said plates whereby it is guided along said body, and a stem projecting rearwardly from this jaw, notched in its upper edge, and having a thumb piece at its rear end; a movable handle having an upbent inner end, a pin therein adapted to engage said notches, and a cam shaped to raise said stem as the handles are closed; and a pivot between the movable handle and body.

3. A wrench comprising a fixed jaw and handle connected by spaced face plates constituting a body; a movable jaw guided along said body and having a stem projecting rearwardly between said plates and notched in its upper edge; a movable handle having an upbent inner end, a pin therein adapted to engage said notches, and a cam shaped to raise said stem as the handles are closed; ears depending from the face plates astride said cam, and a pivot pin through the ears and the movable handle eccentric to its cam face.

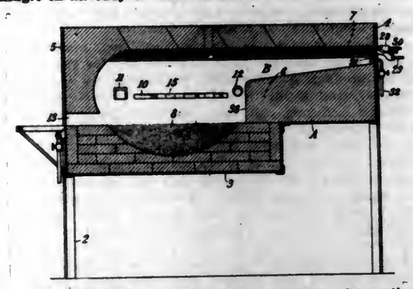
4. A wrench comprising a fixed jaw and fixed handle connected by spaced face plates constituting a body; a movable jaw between said plates and having side shoulders beneath their lower edges, rollers carried by this jaw and movable along the upper edges of said plates whereby it is guided along said body, and a stem of half thickness projecting rearwardly from this jaw between said plates, notched in its upper edge, and having a laterally projecting thumb piece at its rear end; a movable handle having an upbent inner end of half thickness to complement that of the stem, a pin in said end adapted to engage said notches, and a cam shaped to raise said stem as the handles are closed; ears depending from the face plates, and a pivot pin through the ears and movable handle eccentric to its cam face.

961,674. METHOD OF HEATING AND MELTING METALS. WILLIAM NEWTON BEST, New York, N. Y., assignor to John H. Best and Ezra Best, Quincy, Ill. Filed July 19, 1906. Serial No. 326,830.

1. The method of heating and melting metals, which consists in producing around the same a whirl or eddy of heat, and directing an air blast to support combustion inside of said eddy.

2. The method of heating and melting metals which consists in directing a laterally extended sheet of flame in an eddy around the same, and in delivering combustion-supporting air in a similarly extended sheet into said eddy.

3. The method of securing perfect combustion and maximum heat at a predetermined point, consisting in directing a plunging sheet of flame toward such point, and directing against the under side thereof an intercepting, laterally extended air blast, whereby the two commingle in an eddy of flame around such point.



4. In fluid fuel combustion in a furnace, the method of controlling such combustion to determine the point of highest heat and to protect the arch of the furnace from destructive heat, consisting in delivering an ignited film of vaporized fuel into the combustion chamber filling its entire width, and directed toward the point where greatest heat is required, and delivering underneath and against said film at such point, a blast of air to support combustion and produce an eddy of flame around such point.

5. The method of heating metal bars in a vapor burning furnace, consisting in supporting such bars in mid position therein, directing a horizontally disposed film of vapor over, downward, back, underneath and again upward and over said bars, and directing a film of combustion supporting air underneath said film of vapor and between it and said bars.

[Claims 6 and 7 not printed in the Gazette.]

961,675. TOY BOOK. JAMES W. BEVANS, Washington, D. C. Filed Jan. 20, 1910. Serial No. 539,077.



1. A toy book having leaves pivoted at one edge in book-fashion and carrying at their side-edges, pivoted sections adapted to be swung out at right-angles thereto, each leaf and its side-sections when the latter are unfolded, forming with the adjacent leaf, a compartment or inclosure having a bottom, end-walls and side-wall.

2. A toy book having covers and leaves pivoted therein in book-fashion, one of said covers having pivoted side sections adapted to be swung out at right-angles thereto when said cover is raised at right-angles to the other cover, said leaves carrying representations adapted to be successively displayed in the compartment or inclosure thus formed.

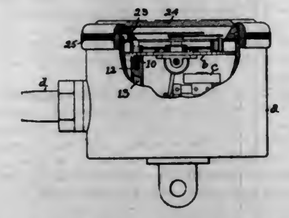
3. A toy book having covers, leaves pivoted therein in book-fashion having pivoted side-sections adapted to be swung out at right-angles thereto, one of said covers having pivoted side-sections adapted to be swung out at right angles thereto when said cover is raised at right-angles to the other cover, said leaves and sections carried thereby carrying representations adapted to be successively displayed in the compartment or inclosure thus formed.

4. A toy book having covers, and leaves pivoted therein in book-fashion, one of said covers having side-sections pivoted thereto adapted to be swung out at right-angles thereto when said cover is raised at right-angles to the other cover, said cover and side-sections having on the outer sides thereof, the representation of the exterior of a building, and said leaves carrying representations adapted to be successively displayed in the inclosure or compartment thus formed.

5. A toy book having covers, and leaves pivoted therein in book-fashion, said leaves and one of said covers having pivoted side-sections adapted to be swung out at right-angles thereto, the side-sections of the cover projecting beyond those of the leaves.

[Claims 6 to 13 not printed in the Gazette.]

961,676. SPEEDOMETER. LEON E. BLANCHARD, Boston, Mass., assignor to Reliance Speed-Meter Company, Boston, Mass., a Corporation of Maine. Filed Nov. 24, 1909. Serial No. 529,729.



1. In an instrument of the class described, in combination, an inclosing case open at its top and provided with a removable cover therefor, a speedometer movement provided with a supporting frame located in said case, a support within the case for said frame, and a pin and socket connection between said frame and said support for centering said frame within said case, substantially as described.

2. In an instrument of the class described, in combination, an inclosing case open at its top and provided with a removable cover therefor, a speedometer movement provided with a supporting frame located in said case, a support within the case for said frame, a pin and socket connection between said frame and said support for centering said frame within said case, devices erected upon said frame, and means carried by said cover and coöperating with said devices for holding the said frame against upward movement, substantially as described.

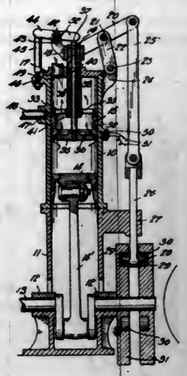
3. In an instrument of the class described, in combination, an inclosing case open at its top and provided with a removable cover therefor, a speedometer movement provided with a supporting frame located in said case, a support within the case for said frame, a pin and socket connection between said frame and said support for centering said frame within said case, posts erected upon said frame, a dial supported by said posts, and holding devices for said dial carried by said posts and automatically retained in their operative position by said case, substantially as described.

4. In an instrument of the class described, in combination, an inclosing case open at its top and provided with a removable cover therefor, a speedometer movement provided with a supporting frame located in said case, means to support said frame within the case, a dial, posts erected upon said frame, and holding devices for said dial carried by said posts and automatically retained in their operative position by said case, substantially as described.

5. In an instrument of the class described, in combination, a case provided with a removable top, a speedometer movement provided with a supporting plate, centering pins depending from said plate, supports for said plate within the case having sockets into which said pins enter, uprights erected upon said plate and coöperating with the said cover to hold the said plate down on its supports, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

961,677. INTERNAL-COMBUSTION ENGINE. JOHN W. BRADLEY, Seattle, Wash., assignor of one-half to Jacob E. Zickrick, Seattle, Wash. Filed June 21, 1909. Serial No. 503,548.



1. In a gas engine, a piston, a follower having movement independent of the piston, a by-pass extending through said follower, a spring-closed valve for said by-pass, means operative from the engine shaft for reciprocating the follower, and means operative subsequent to the initial movement of the follower toward said piston for opening said valve for the escape of the spent gases through said by-pass.

2. In a gas engine, the combination of the piston, the follower, means actuated by an explosion intermediate the piston and follower causing the follower to accompany the piston, a by-pass in the follower, a valve for the by-pass, and means operative by the motions of said follower for opening the valve for the escape of spent gases therethrough during the later portions of the downward stroke and the early portions of the upward stroke of the follower, and a spring for restoring said valve to its closed position during the remaining portions of the follower stroke.

3. In a gas engine, the combination of a cylinder, a piston, a crank-shaft, a connecting rod, a follower, connections between said shaft and the follower whereby the latter is given corresponding motions with the piston at different speed, an inlet port for the admission of the explosive charge between the piston and the follower, an exhaust opening in the end of the cylinder, a passageway through the follower, a valve for said passageway, and automatic means for opening said valve subsequent to the explosion of said charge.

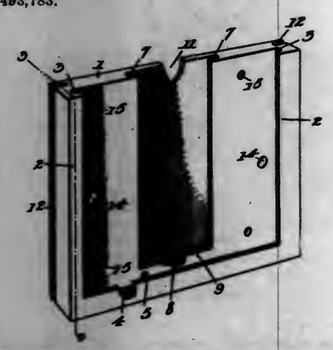
4. In a gas engine, the combination with the cylinder provided intermediate of its length with an inlet port and an exhaust port at an end of the cylinder, of a piston, a follower, a by-pass in the follower, a valve in said by-pass, connections between the piston and the follower adapted to cause their traveling at different speeds so as to effect during one stroke of the piston the expulsion of spent gases, the intake of an explosive charge and the compression of the same, and in the following stroke the mainte-

nance of the compression during the early part of the stroke, and the opening of said by-pass valve during the latter portion of the stroke and subsequent to the explosion of said charge.

5. In a gas engine, the combination of the cylinder provided with an inlet port intermediate its length and an exhaust port at one end, a crank-shaft, a piston, a connecting rod between the piston and said shaft, a follower having a by-pass therethrough, a piston-rod for the follower and extending through the cylinder end, a valve for said by-pass, a stem for the valve and extending through said piston rod, means operated from said shaft and connected with said piston rod for actuating the follower, and means engageable with said stem for retaining said valve open when said follower is in proximity to the lower end of its strokes.

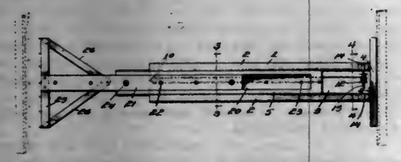
[Claims 6 to 9 not printed in the Gazette.]

961,678. SHIPPING-CARD HOLDER. WILLIAM S. BROWN, Enterprise, W. Va. Filed May 4, 1909. Serial No. 493,783.



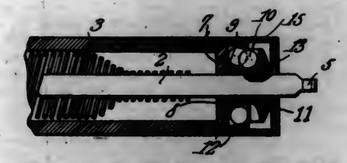
A card holder comprising a main body member having a reduced intermediate portion and enlarged side portions whose inner edges extend over portions of the intermediate reduced portion to form spaced vertical guideways, the said enlarged side portions being formed to provide vertical guideways, the said main body member having its side edges formed to provide vertical recesses, supporting straps operatively associated in the said recesses and having offset upper and lower edge portions for holding the said main body member against vertical sliding movement, a stop at the bottom of the intermediate reduced portion of the said main body member, and a stop extending approximately the entire length of the said main body member and disposed outwardly and beneath the first named stop.

961,679. CARPET-STRETCHER. WILLIAM C. BURKE, Scalp Level, Pa. Filed July 16, 1909. Serial No. 508,052.



A carpet stretcher comprising a relatively fixed section, a traveler slidably mounted thereon, a winding drum on said fixed section, a cord connected with the traveler and said winding drum, ratchet mechanism for turning said drum to intermittently propel said travel forwardly, and a carpet engaging section adjustably connected with said traveler.

961,680. SHADE-ROLLER ATTACHMENT. HARRY COLE, Tyrrell, Ohio. Filed Oct. 7, 1909. Serial No. 521,520.



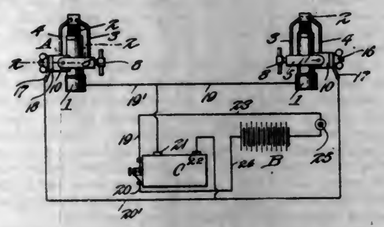
1. A device of the class described comprising a fixed spindle; a casing rotatably mounted thereon; a head secured to the spindle adjacent the end of the casing; and a rolling element normally housed in the casing and movable longitudinally of the spindle to engage the head to hold the casing against rotation.

2. A device of the class described comprising a fixed spindle, a casing rotatably mounted upon the spindle and terminally provided with a chamber inclined longitudinally of the spindle toward the axis of the spindle; a head secured to the spindle adjacent the end of the casing; and a ball housed in the chamber and engageable by the head to limit the rotation of the casing.

3. A device of the class described comprising a fixed spindle; a casing rotatably mounted upon the spindle and terminally provided with a chamber inclined longitudinally of the spindle toward the axis of the spindle; a ball normally housed within the contour of the chamber; a head secured to the spindle adjacent the end of the casing and arranged to receive the ball to limit the rotation of the casing upon the spindle; the ball being movable longitudinally of the spindle to project beyond the end face of the casing.

4. A device of the class described comprising a fixed spindle; a ball-receiving member rotatably mounted upon the spindle; a head secured to the spindle adjacent the end of the ball-receiving member; and balls carried by the ball-receiving member and arranged to be projected from the end of the ball-receiving member to engage the head to limit the rotation of the ball-receiving member.

961,681. GAS-LIGHTER FOR AUTOMOBILE-LAMPS. HERMAN V. COLE, Monte Vista, Colo. Filed Sept. 23, 1908. Serial No. 454,701.

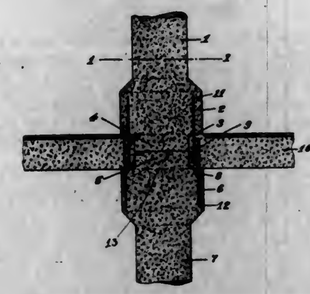


1. The combination of a burner including a tip, with an ignition device comprising a frame arranged to straddle the burner, a block of insulation on the frame and adapted to bear against the burner at one side, a clamping screw on the frame adapted to bear on the burner at the opposite side, electrodes mounted on the block and frame, and means for connecting the electrodes in circuit with the source of high tension intermittent current.

2. The combination of a burner including a tip, with an ignition device comprising a frame embracing the burner, a block of insulation secured to the frame, a fastening on the frame coöperating with the said block to adjustably secure the device to the burner, an electrode mounted on the frame, an electrode mounted on the block, and a binding post electrically connected with the last-mentioned electrode and insulated from the frame.

3. A device of the class described comprising a frame having spaced members adapted to straddle the burner and provided with apertures, a block of insulation disposed between the members, fastenings on the block and engaging in the apertures of the members for connecting the block with the frame, a clamping screw on the frame and disposed opposite the block, an electrode on the frame, a screw set into the block and projecting therefrom to form a binding post, an electrode on the block and arranged to prevent the last-mentioned screw from turning, and means on the binding post for securing a conductor thereto.

961,682. CONCRETE CONSTRUCTION. JOHN E. CONZELMAN, St. Louis, Mo., assignor, by mesne assignments, to Unit Construction Company, a Corporation of Delaware. Original application filed Jan. 9, 1909, Serial No. 471,431. Divided and this application filed Apr. 29, 1909. Serial No. 492,861.
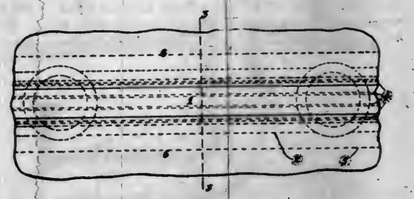


1. A concrete construction, comprising, in combination, alined rows of supporting columns, caps located around the bodies of said columns, and studs projecting thereabove, similarly but opposingly formed columns superposed above said first columns, so as to have downwardly projected studs resting on said upwardly projecting studs, beams extended between the columns of said alined rows and formed to have their ends inserted between the opposing caps, and in abutment with both of said studs thereby forming sockets around said abutments, and quadrangular slabs fitting between said beams and having their corners inserted between said caps and fitting in said sockets.

2. A concrete structure comprising, in combination, alined rows of supporting columns, caps located around the bodies of said columns, and studs projecting thereabove, similarly but opposingly formed columns superposed above said first columns, so as to have downwardly projected studs resting on said upwardly projecting studs, beams extended between the columns of said alined rows and formed to have their ends inserted between the opposing caps and in abutment with both of said studs, thereby forming sockets around said abutments, vertical rods projected from said caps into said beams to secure the latter in angular relation, and quadrangular slabs fitting between said beams and having their corners inserted between said caps and fitting in said sockets.

3. A concrete construction, comprising, in combination, alined rows of supporting columns, caps located around the bodies of said columns, and studs projecting thereabove, similarly but opposingly formed columns superposed above said first columns, so as to have downwardly projected studs resting on said upwardly projecting studs, beams extended between the columns of said alined rows and formed to have their ends inserted at right angles to one another between the opposing caps, and in abutment with both of said studs thereby forming sockets around said abutments, and rectangular slabs fitting between said beams and having their corners inserted between said caps and fitting in said sockets.

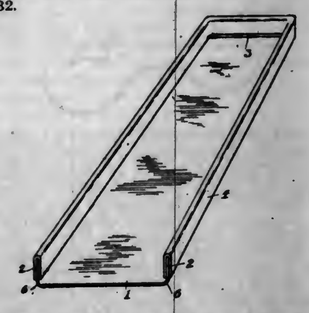
961,683. CONCRETE CONSTRUCTION. JOHN E. CONZELMAN, St. Louis, Mo., assignor, by mesne assignments, to Unit Construction Company, a Corporation of Delaware. Original application filed Jan. 9, 1909, Serial No. 471,431. Divided and this application filed Apr. 29, 1909. Serial No. 492,865.



1. A concrete construction, comprising, in combination, alined rows of supporting columns, preformed slabs extending between and resting directly on the columns of adjacent rows and maintained in spaced relation, a filling conforming to the space therebetween and constituting a beam extending continuously over a row of supporting columns, and laterally extended flanges formed on said continuously extending beam and underlying the lower edges of said slabs to continuously support the latter.

2. A concrete construction, comprising, in combination, alined rows of supporting columns, preformed slabs extending between and resting directly on the columns of adjacent rows and maintained in spaced relation, the opposing faces of said slabs being upwardly and inwardly beveled to form a wedge-shaped space, a filling conforming to the space between said slabs and constituting a beam extending continuously over a row of supporting columns, and assuming said wedge-shaped form, and longitudinal flanges extended laterally from the lower edges of said beam and underlying said slabs.

961,684. PRINTER'S GALLEY. MICHAEL CORRIGAN, Notre Dame, Ind. Filed Sept. 9, 1909. Serial No. 516,932.

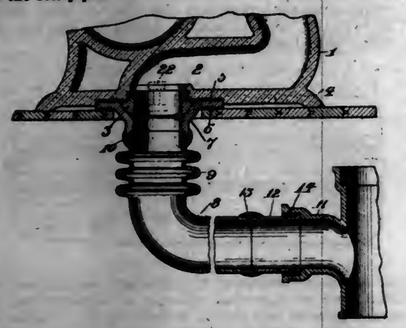


A printer's galley comprising a body including a bottom, sides and a closed end, and a U-shaped metallic strip resting upon said sides and end and embracing the sides and closed end, to strengthen the same and insure alinement of the bank of type deposited in the galley and also to permit the bank of type being freely removed therefrom the free edge of the inner fold of the U-shaped strip terminating close to the bottom of the galley.

961,685. WATER-CLOSET CONNECTION. JOSEPH J. COSGROVE, Philadelphia, Pa. Filed Sept. 10, 1909. Serial No. 517,133.

1. The combination with a water-closet and soil pipe, of a longitudinally flexible, ope piece, soft metal pipe or conduit, located below the floor line of the closet and con-

nected by means of a floor flange and soldered joint to the closet bowl and by means of a soldered joint and a nipple to the soil pipe.



2. The combination with a water-closet and a soil pipe of a longitudinally and laterally flexible pipe or conduit connected to the water-closet and to the soil pipe.

3. The combination with a water-closet and a soil pipe of a longitudinally and laterally flexible soft metal pipe or conduit connected to the water-closet and to the soil pipe.

4. The combination with a water-closet and a soil pipe of a longitudinally and laterally flexible pipe or conduit having circumferential corrugations, said pipe being connected to the water-closet and to the soil pipe.

5. The combination with a water-closet and a soil pipe of a longitudinally and laterally flexible soft metal pipe or conduit having circumferential corrugations, said pipe being connected to the water-closet and to the soil pipe.

[Claims 6 and 7 not printed in the Gazette.]

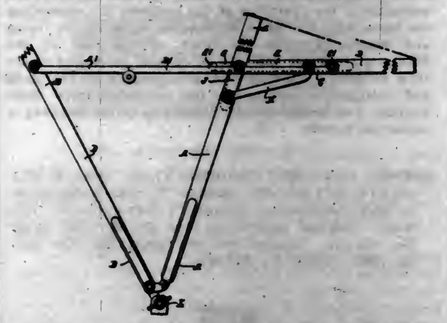
961,686. BOLT SNAP-HOOK. FRED W. COVERT, Watervliet, N. Y., assignor to Covert Manufacturing Company, Watervliet, N. Y., a Corporation of New York. Filed Sept. 7, 1909. Serial No. 516,554.



In a snap hook, the combination with a casting having a bolt chamber provided with a narrow slotted portion and a spring operated bolt, of an elongated correspondingly thin web fitting for a substantial portion of its length within the slot and extending from the bolt outwardly through the slot and in normal position beyond the end of the bolt chamber, the edge of the projecting portion of the web terminating a substantial distance from the end of the bolt and inclining upwardly and rearwardly, the outer end of the bolt being substantially elongated, and the juncture between the upper surface thereof and the inclined edge of the web being abrupt so that said elongated portion of the bolt constitutes a substantial barrier across the hook opening relative to both the outside and inside of the hook, and laterally extending enlargements on the web overhanging the bolt chamber, the upper surfaces of which enlargements are rounded in a forward direction coincident with the upper end of the inclined edge of the web, substantially as and for the purpose described.

961,687. MOTOR-VEHICLE AND LIKE HOOD. JAMES SIME CREE, Glasgow, Scotland. Filed Oct. 19, 1909. Serial No. 523,523.

1. In hoods of the character described, a pair of hinged struts pivoted one on either side to the upstanding front hoop and to the hoop rearwardly adjacent to it, forward extensions of the front halves of these struts beyond their points of pivoting, a horizontal hoop pivoted thereto, and means constraining upward folding of the horizontal hoop to cause upward folding of the struts and vice versa.



2. In hoods of the character described, a pair of hinged struts, pivoted one on either side to the upstanding front hoop and to the hoop rearwardly adjacent to it, forward extensions of the front halves of these struts beyond their points of pivoting, a horizontal hoop pivoted thereto, and links pivoted upon the front upstanding hoop and the horizontal hoop for constraining the struts to move correspondingly to the latter hoop.

3. In hoods of the character described, a pair of hinged struts pivoted one on either side to the upstanding front hoop and to the hoop rearwardly adjacent to it, forward extensions of the front halves of these struts beyond their points of pivoting, a horizontal hoop pivoted thereto, handled rear ends upon the horizontal hoop and extending rearwardly of the upstanding front hoop and catch devices adapted to engage the handled ends when in horizontal position, and means constraining upward folding of the horizontal hoop to cause upward folding of the struts and vice versa.

4. In hoods of the character described, a pair of hinged struts, pivoted one on either side to the upstanding front hoop and to the hoop rearwardly adjacent to it, forward extensions of the front halves of these struts beyond their points of pivoting, a horizontal hoop pivoted thereto, handled rear ends upon the horizontal hoop and extending rearwardly of the upstanding front hoop and catch devices adapted to engage the handled ends when in horizontal position, and links pivoted upon the front upstanding hoop and the horizontal hoop for constraining the struts to move correspondingly to the latter hoop.

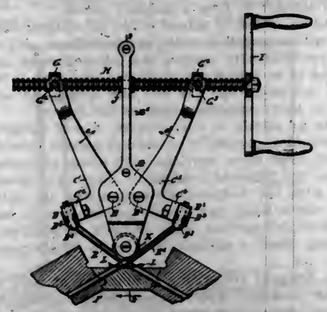
5. In hoods of the character described, a pair of hinged struts, pivoted one on either side to the upstanding front hoop and to the hoop rearwardly adjacent to it, forward extensions of the front halves of these struts beyond their points of pivoting, a horizontal hoop pivoted thereto, resilient bars upon the rear ends of the horizontal hoop and extending rearwardly of the upstanding front hoop, handles on the ends of these bars, projecting catch pieces on the inner sides of the upstanding front hoop which when the hood is erect lock the bars, and means constraining upward folding of the horizontal hoop to cause upward folding of the struts and vice versa.

[Claim 6 not printed in the Gazette.]

961,688. TIGHTENING DEVICE. CALVIN THEO CUNNIUS, Long Branch, N. J. Filed Jan. 26, 1909. Serial No. 474,264.

1. A tightening device, comprising a support, levers fulcrumed on the said support, clamps on one end of the said levers, nuts journaled on the other ends of the said levers, and a right and left hand screw rod screwing in the said nuts and having vertical guided movement in the support.

2. A tightening device, comprising a support, levers fulcrumed on the said support, clamps on one end of the said levers, nuts journaled on the other ends of the said levers, a right and left hand screw rod screwing in the said nuts, and a guide wheel journaled on the said support for holding the wire in close contact with the object around which it is passed and guiding the ends of the wire to the said clamps.



3. A tightening device, comprising a support, levers fulcrumed on the said support, clamps on one end of the said levers for clamping the crossed ends of a wire, nuts journaled on the other ends of the said levers, and a right and left hand screw rod screwing in the said nuts, and provided with a collar straddling the said support and mounted to slide thereon.

4. A tightening device, comprising a support, having a guideway, a wheel journaled on the said support for engagement by the wire, bell crank levers journaled on the said support, clamps held on one end of the said levers, nuts journaled on the other ends of the said levers, and a right and left screw rod screwing in the said nuts and provided with a collar held to slide in the guideway of the said support.

5. A wire tightening device, comprising a support, bell crank levers fulcrumed at the junction of their members on independent pivots at opposite sides of the support, clamps on the shorter members of the levers for engaging the crossed ends of the wire, means engaging the longer members of the levers for drawing them together and moving the shorter members apart, and means on the support for engaging the wire at the crossing of its ends to hold it in close contact with the object around which it is passed.

[Claim 6 not printed in the Gazette.]

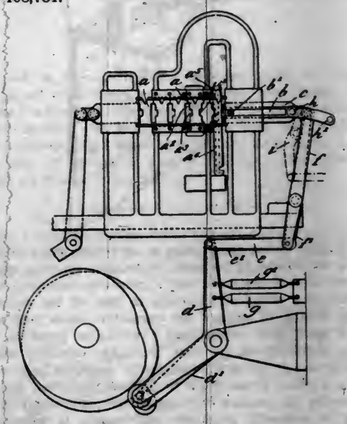
961,689. PROCESS OF MAKING MEDICATED TAMPONS. JAMES C. DORR, Dansville, N. Y. Filed Jan. 30, 1909. Serial No. 475,190.



1. The process of making tampons which consists in forming a bundle of wool fibers in longitudinal lengths, compressing the same centrally between its ends by means of a cord wound tightly and tied about the central portion of the bundle to compress the same, said cord having a looped portion extending therefrom, saturating the bundle in a hot medicament, and then pressing the bundle into a cup-shaped form with the ends of the fibers forming the rim of the cup-shaped form.

2. The process of making tampons which consists in forming a bundle of absorbent fibers in lengths, compressing the bundle centrally by a cord tied about the same, and having an extended looped end, saturating the bundle in a bath of heated medicament, straightening the fibers, applying more medicament to the bundle of fibers to form a coating thereon, and pressing the bundle in a mold to form a cup-shaped receptacle with the ends of the fibers forming the rim of the receptacle.

961,690. APPARATUS FOR REDUCING THE LENGTH OF CAST SPACES. PERCY WALTER DRUITT, Shepherds Bush, London, England. Filed Dec. 31, 1907. Serial No. 408,781.



1. In a type casting and composing apparatus, in combination with a series of space matrices and a coöperating slide, means for reducing the length of the cast spaces automatically controlled by the coöperation of the slide with one of the said matrices, substantially as described.

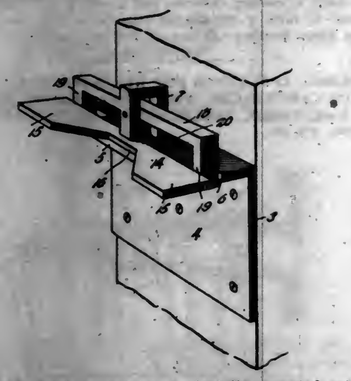
2. In type casting and composing apparatus, a device for producing spaces of reduced length comprising a hammer automatically brought into operation to reduce the length of the cast space and means for preventing tilting of said space under the hammer.

3. In type casting and composing apparatus, in combination with space matrices, a device for reducing the length of the spaces cast therein comprising a pusher slide, a feeler slide mounted on the pusher slide and adapted to coöperate with the space matrices, a guillotine hammer, cam-driven mechanism actuating said hammer to reduce the length of the cast spaces, and means set by the coöperation of the feeler slide and space matrices to effect the coupling of the hammer with its actuating mechanism on the withdrawal of the pusher and feeler slides, substantially as described.

4. In type casting and composing apparatus, in combination with a device for reducing the length of spaces cast therein and comprising a pusher slide, a feeler slide mounted on the pusher slide, a hammer and mechanism adapted to actuate the hammer to reduce the length of the spaces, a space matrix formed with a set notch and with an additional notch opposite the set notch, said additional notch being adapted to coöperate with said feeler slide to set the said mechanism to actuate the hammer on the withdrawal of the feeler slide from the additional notch, substantially as described.

5. In type casting and composing apparatus, in combination with a device for reducing the length of justifying spaces cast therein and comprising a pusher slide, a feeler slide mounted on the pusher slide, a hammer and mechanism adapted to actuate the hammer to reduce the length of said spaces, a justifying space matrix, a carrier part connected with the said matrix and provided with a set notch and with an additional notch opposite the set notch, said additional notch being adapted to coöperate with said feeler slide to set the said mechanism to actuate the hammer on the withdrawal of the feeler slide from the additional notch, substantially as described.

961,691. GATE-LATCH. HOWARD R. ELLIOTT, Billings, Mont. Filed Nov. 30, 1909. Serial No. 530,620.



1. A gate latch comprising a pivotally mounted catch having shoulders at its ends to engage opposite sides of the free end of the gate, and a pivotally mounted keeper movable in a plane at an angle to that of the catch and having means to engage the respective ends thereof.

2. A gate latch comprising a pivotally mounted catch having shoulders at its ends to engage opposite sides of the free end of the gate, a pivotally mounted keeper movable in a plane at an angle to that of the catch and having means to engage the respective ends thereof, and means to normally maintain said keeper in engagement with the ends of the catch.

3. The combination of a base element for attachment to a gate post, a catch mounted on said base element for angular movement in a horizontal plane, and having shoulders at its ends to engage opposite sides of the free end of a gate, a support on the said base, and a keeper pivotally mounted on said support for angular movement in a horizontal plane, and having shoulders at its ends to engage opposite sides of the free end of a gate, a support on the said base, and a keeper pivotally mounted on said support for angular movement in a vertical plane intersecting the plane of movement of the catch, said keeper having means to engage the ends of the catch when the keeper is in horizontal position and lock the catch against pivotal movement, and means to normally maintain such keeper in such position.

961,692. CIGAR-WRAPPER. EGBINGTON N. GILFILLAN, Syracuse, N. Y., assignor of fifty-one one-hundredths to John Hunter, Fulton, N. Y. Filed Aug. 14, 1909. Serial No. 512,794.



1. As an article of manufacture, an integral sheet provided with a plurality of hollows formed therein, said sheet being adapted to be folded along lines extending longitudinally of and between said hollows, whereby any desired number of the hollowed portions may be folded over onto corresponding hollowed portions to provide wrappers for cigars, said sheet being adapted by the construction and arrangement of the hollowed portions to be rolled in a bundle with said hollowed portions nested one within another.

2. As an article of manufacture, an integral sheet provided with a plurality of sections parallelly disposed and separable along lines between adjacent sections, said sections being provided with hollows conforming substantially to the shape of a cigar and foldable along the separating lines to adapt some of the sections to be superposed on other sections for wrapping cigars, said sections being adapted by conformation and arrangement to nest one within another to form a compact bundle.

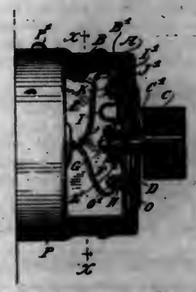
3. As an article of manufacture, an integral sheet provided with a plurality of detachable sections, said sections being provided with hollows and adapted when the sheet is rolled to be nested one within another and to be withdrawn laterally from the roll and folded one upon the other to form complete wrappers for cigars.

4. As an article of manufacture, a stiff integral sheet provided with a plurality of parallel hollows formed therein, said sheet being provided with series of perforations between the adjacent hollows to adapt said sheet to be rolled with the hollowed portions nested one within another, and to adapt portions of said sheet to be detached, said detached portions being adapted to be folded along adjoining edges of adjacent hollows to form wrappers for cigars.

5. A wrapper comprising a plurality of part circular sections parallelly disposed and foldable along dividing lines extending longitudinally of and between adjacent sections to form a plurality of individual compartments for cigars, said wrapper being adapted by the construction and arrangement of said sections to be rolled with said sections nested one within another.

[Claims 6 to 8 not printed in the Gazette.]

961,693. ELECTRIC SWITCH. HARRY C. GRANT, Bayonne, N. J. Filed July 9, 1908. Serial No. 442,640.

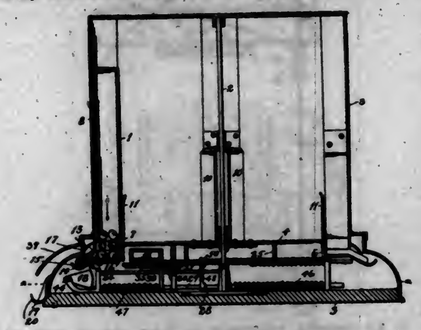


An electric switch having a casing, a spring switch member made of sheet metal and insulated from said casing, a pair of switch members, one of which is a conductor and the other a non-conductor of electricity, connected together and alike in form, and means for rotating said last named members, said means being a conductor of electricity and connected in circuit with said spring member and said casing.

961,694. VENDING-MACHINE. WILLIAM E. HALES, Detroit, Mich., assignor of two-thirds to Arsa Porter and William J. Weaver, Detroit, Mich. Filed July 12, 1909. Serial No. 507,045.

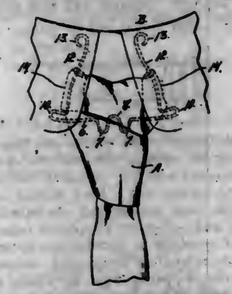
1. In a vending machine, in combination with a storage casing wherein a quantity of articles to be vended may be stored, said casing being apertured for delivery purposes at the bottom, a horizontally movable member normally out of engagement with the casing and its contents, means whereby said member may be actuated against the lowermost of the stored articles to effect their displacement from the storage casing, a holding trough into which the articles fall when first displaced, and a lifting member adapted to be actuated by the return movement of said horizontally movable member, whereby the displaced articles are expelled from said holding trough, substantially as described.

2. A vending machine having in combination with a storage casing, horizontally movable means for forcing a predetermined number of the articles stored therein into the delivery portion thereof, means actuated by the movement of said last-mentioned means for completing the ejection of the articles from the casing, and manually actuatable means for imparting a movement to the delivery mechanism, substantially as described.



3. In combination with a casing wherein various classes of articles may be accessibly stored separate from one another, a horizontally reciprocatory member adapted to force a predetermined number of articles of the class selected from their previous place of storage, a holding trough into which the articles fall when thus displaced, means for preventing the engagement of said reciprocatory member against said articles unless said member and the casing are in proper relative position, and means actuated by the return movement of the reciprocating member for effecting the displacement and delivery of the articles deposited in the holding trough, substantially as described.

961,695. NECKTIE-HOLDER. LEWIS W. HORNE, Denver, Colo. Filed Aug. 17, 1908. Serial No. 448,988.



A necktie holder or fastener comprising an integral piece of resilient wire having a lower transverse portion provided with a centrally located collar-button-engaging loop, the said transverse portion extending laterally in opposite directions from the collar button engaging loop, the lateral parts being bent in a rearward direction before leaving the collar button loop, said laterally extending parts having upwardly extending spring arms, the said arms extending inwardly toward each other from a rearward and inward bend in the said transverse portion, thereby describing an arc in the laterally extending arms when applied to the collar, and the said upwardly extending arms forming frictional engagement with the collar, the said arms terminating into free upper extremities, the said upper extremities being nearer together than the lower extremities as means of creating a tension when the arms are pressed outwardly as the device is applied to the collar, causing them when released to approach each under frictional engagement with the sides of the inner fold of the collar, thereby drawing the collar close together in the front.

961,696. PROCESS FOR THE MANUFACTURE OF SOLES. PAUL HÜHN, Breslau, Germany. Filed Feb. 26, 1908. Serial No. 417,902.



Process of manufacturing felt soles made of turf or peat plates consisting in cutting the compressed dried peat into layers of a thickness as small as can be obtained without causing the peat to crumble into pieces and in further pressing this layer to a plate of only about ¼ inch (2–3 mm.) of thickness and in finishing this layer for the use as felt or inlay sole.

961,697. REINFORCED-CONCRETE RAILWAY CROSS TIE. LAFAYETTE J. JACKSON, East St. Louis, Ill. Filed Mar. 11, 1910. Serial No. 548,689.



1. The herein described tie comprising a concrete body portion, a reinforcing bar mounted therein, rail supporting blocks embedded in said body portion and resting directly upon the reinforcing bar, the reinforcing bar being of a width equal to the width of the blocks, the body portion being formed below the blocks and underneath the reinforcing bar with bottom openings leading to the lower face of the bar, bolts extending through the respective blocks and through the bar into said bottom openings and nuts located in said bottom openings and screwing on the bolts whereby to bind the blocks to the bar.

2. A railroad tie, comprising a concrete body portion, a reinforcing bar embedded therein, and extending throughout the length thereof but stopping short of the ends of the concrete body portion, the ends of the bar being split and turned in opposite directions, for the purpose specified, wooden blocks embedded in the concrete body portion, bolts extending through said blocks, and reinforcing bar, the body portion being formed with bottom openings in which the lower ends of the bolts are countersunk, and nuts working on the lower ends of the bolts substantially as described.

961,698. FASTENING MEANS FOR WALLS. HENRY E. JERAULD, Pensacola, Fla. Filed Mar. 8, 1910. Serial No. 547,991.

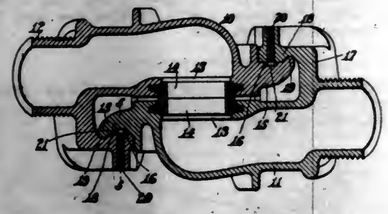


1. In combination with the wall of a tiling and a plaster ground provided with registering apertures and provided each with slits formed in the walls thereof, fas-

teners passed through said apertures and engaging said slits and clenched to the outer faces of said tile and ground.

2. In combination with the wall of a tiling and a plaster ground provided with registering apertures and provided each with slits formed in the walls thereof, headed fasteners adapted to be passed through said openings, the shank portions of the fasteners engaging said slits, the heads thereof bearing against the face of the tile and their ends adapted to be clenched in opposite directions against the inner faces of the ground.

961,699. TRAIN-PIPE COUPLING. ROBERT A. JEWETT, Boston, and ARTHUR L. GREENLAW, Malden, Mass., assignors to The Greenlaw Manufacturing Co., Boston, Mass., a Corporation of Maine. Filed July 26, 1909. Serial No. 509,914.



1. The combination of two interlocking pipe members having side openings each of which is provided with a surface depression the walls of which are radial to said side openings; and a projecting member on each member adapted to engage in the depression upon the other member.

2. The combination of two interlocking pipe members having side openings each of which is provided with a surface depression the walls of which are radial to said side openings; and a projecting bevel-ended member on each member adapted to engage in the depression upon the other member.

3. The combination of two interlocking pipe members having side openings each of which is provided with a plurality of surface depressions the walls of which are radial to said side openings; and a projecting member on each member adapted to engage in one of the depressions upon the other member.

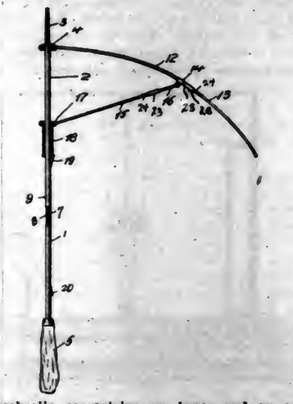
4. The combination of two interlocking pipe members having side openings each of which is provided with a plurality of surface depressions the walls of which are radial to said side openings; and a plurality of projecting members on each member adapted to engage in the depressions upon the other member.

5. The combination of two interlocking pipe members each of which is provided with a plurality of surface depressions; and an adjustable projecting member adapted to engage with one of said depressions in the other member.

[Claims 6 to 11 not printed in the Gazette.]

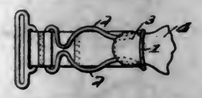
961,700. FOLDING UMBRELLA. THOMAS J. KENNEDY, Pittsburg, Pa. Filed Sept. 24, 1909. Serial No. 519,436.

1. An umbrella comprising an inner end and an outer rib section, a link attached to said sections for pivotally-connecting the opposing ends of said sections together, a housing carried by the inner rib section, a spring-controlled locking sleeve extending within said housing and projecting over said link for normally maintaining the sections in an extended position, a spring surrounding the upper rib section and interposed between one end of the housing and the inner end of said sleeve for normally maintaining said sleeve projected from the housing, and a hook pivotally-mounted upon the housing and adapted to be swung to extend over the outer end of the housing and engage the outer end of the sleeve whereby the sleeve is retained in a retracted position to permit of the folding of the rib sections.



2. An umbrella comprising an inner and an outer rib section each provided with an apertured end, a link attached to said ends for pivotally connecting the sections together, a housing carried by the inner rib section upon the apertured end thereof, a spring-controlled locking sleeve extending within said housing and normally projecting over said link for maintaining the section in an extended position, a spring surrounding the upper rib section and inclosed by said housing and interposed between the upper end of the housing and the inner end of the sleeve for normally maintaining said sleeve projected, and means carried by the housing and adapted to engage the outer end of said sleeve for retaining the latter in a retracted position.

961,701. GARMENT-CLASP. JOSEPH LEMAY, New York, N. Y. Original application filed Apr. 26, 1909, Serial No. 492,102. Divided and this application filed Nov. 15, 1909. Serial No. 528,091.

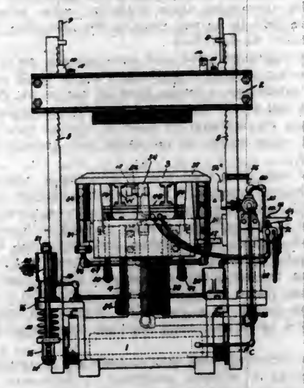


In a garment clasp of the button and loop type, a loop element having an opening for the introduction of the button, a contracted neck for clamping the fabric against the neck of the button, and a head formed on the end of said neck, said head comprising continuations of said neck, diverged and joined by an arched transverse bridge element turned upwardly at right angles to said neck, said bridge element extending above and across the intermediate space to be spaced from the fabric and the button, whereby said fabric is prevented from binding between said button and said loop element except at the sides of the neck of the button.

961,702. MOLDING-MACHINE. WILFRED LEWIS, Philadelphia, Pa., assignor to The Tabor Manufacturing Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Sept. 21, 1901. Serial No. 76,040.

1. The combination in a molding machine of a part to be vibrated, a support for the part to be vibrated, and flexible columns consisting of slender struts interposed between and rigidly connected with said part and support whereby the former is supported and positioned, substantially as described.

2. The combination in a molding machine of a ramming head, a part to be vibrated, flexible columns consisting of slender struts rigidly connected with the ramming head and with said part to support and position the latter, and abutments on the ramming head for receiving thrust, substantially as described.



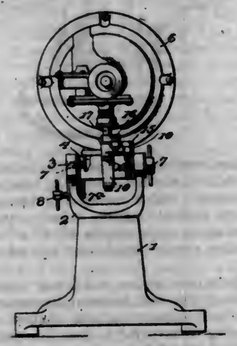
3. The combination in a molding machine of a pattern plate, a ramming head, a vibrator for the pattern plate, and flexible columns consisting of slender struts rigidly connected with the pattern plate and ramming head, substantially as described.

4. In a molding machine the combination of a ramming head and flask support, cylinders attached to the ramming head, pistons attached to the flask support, skirts depending from the flask support around the open ends of the cylinders and constituting dust guards and means for introducing oil to the cylinders, said cylinders and pistons serving to both guide and lift the flask support, substantially as described.

5. In a molding machine the combination of a flask support and a pattern plate movable the one in respect to the other, means for moving the flask support, a rod connected with said support, a spring connected with the rod and adapted to abut upon the head, and means for shifting said spring to adjust the travel of the support, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

961,703. OSCILLATING FAN. EVRAH C. LIPPS, Warren, Ohio, assignor to The Peerless Electric Company, Warren, Ohio, a Corporation of Ohio. Filed July 16, 1909. Serial No. 508,026.



1. In combination, a support, a base pivotally mounted on said support, means for holding said base in different positions relatively to said support, a motor rotatably mounted on said base so as to be capable of movement in a plane at right angles to the plane of adjustment of such base, means for oscillating said motor relatively to said base comprising a crank shaft, a lever fulcrumed on the motor and extended beneath said base, a stud extended from the base with which said lever has a sliding engagement, and means for actuating said crank shaft.

2. In combination, a support, a base pivotally mounted on said support, means for holding said base in different positions relatively to said support, a motor rotatably mounted on said base so as to be capable of movement in a plane at right angles to the plane of adjustment of such base, means for oscillating said motor relatively to said base comprising a crank shaft located in the same vertical plane as the armature shaft of the motor, a lever fulcrumed on the motor in the same vertical plane as the crank shaft and the armature shaft, said lever being extended beneath said base and having a sliding connection therewith at a point in the same vertical plane as the armature shaft, and means actuated by said armature shaft for rotating said crank shaft, which latter is connected to one arm of said lever.

3. In combination, a support, a base pivotally mounted on said support, means for holding said base in different positions relatively to said support, a motor rotatably mounted on said base so as to be capable of movement in a plane at right angles to the plane of adjustment of such base, means for oscillating said motor relatively to said base comprising a crank shaft at right angles to and on the same vertical plane with the armature shaft, reducing mechanism intermediate the two shafts actuated by the armature shaft, a lever fulcrumed on the motor in the same vertical plane as the crank shaft and extended beneath said base, a stop extending from the base in the same vertical plane as the fulcrum of the lever with which the latter has a sliding engagement, and a link connecting said lever to said crank shaft.

4. In combination, a support, a base pivotally mounted on said support, means for holding said base in different positions relatively to said support, a motor rotatably mounted on said base so as to be capable of movement in a plane at right angles to the plane of adjustment of such base, means for oscillating said motor relatively to said base comprising a crank shaft at right angles to the armature shaft, reducing mechanism intermediate the two shafts actuated by said armature shaft, a lever fulcrumed on said motor at one side of the base and in the same vertical plane as the armature shaft and having its long arm pivoted and extended downwardly and beneath said base and formed with a slot, a projection extending from said base through said slot, and a link connecting the other arm of said lever to said crank shaft.

5. The combination with a supporting base, of a motor mounted thereon, and means for oscillating the motor on said base, such means comprising a lever fulcrumed on the motor at one side of the base and on the same vertical plane as the armature shaft of the motor, the long arm of said lever being extended beneath said base and having a slot therein, a stop extending from the base in the same vertical plane as said armature shaft and with which the slotted portion of the lever has a sliding engagement, and means operated by the armature shaft for actuating the said lever.

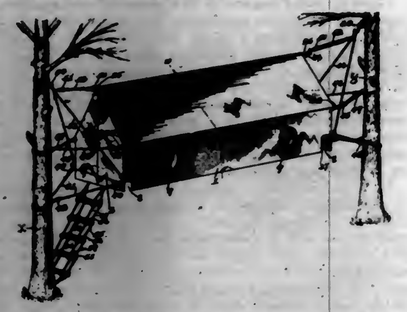
961,704. SUSPENDED TENT. CHARLIE E. MARK, Chicago, Ill. Filed Mar. 7, 1903. Serial No. 146,635.

1. A non-swaying aerial tent comprising a floor, side and roof walls, end frames to which the floor and walls are secured, and cords and pulleys for supporting the tent in an elevated position, and adapted for drawing the floor and walls of the tent taut between two supports, the structure as a whole being essentially adapted to be supported in mid-air by stretching it taut between two suitable supports.

2. A non-swaying aerial tent comprising a floor, side and roof walls of canvas or other like material, end frames to which said floor and walls are secured, each

frame comprising a sill, uprights, and inclined roof-members, the lower ends of the uprights being pivotally connected with the sill, and attaching devices for suspending the tent in an elevated position and adapted for drawing the said floor and walls taut between the two end frames.

3. A non-swaying tent comprising a suitable floor, side and roof walls, end walls, frames to which said floor and walls are suitably secured, ropes extending through the eaves of the tent, another rope extending through the peak or apex of the tent, attaching devices for suspending the tent in an elevated position and drawing said walls taut, and means for tightening said ropes.

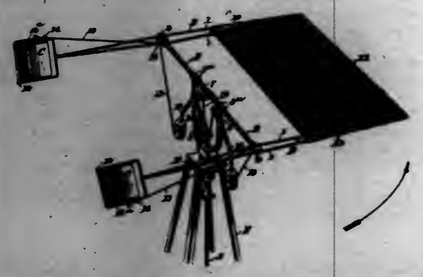


4. A non-swaying aerial tent comprising a pair of end frames, swinging side walls having their ends buttoned to the said end frames, end walls and roof walls also buttoned to said end frames, a floor stretched between said end frames, and cords and pulleys for connecting said end frames with supports, and whereby the floor and walls of the tent may be drawn taut between the said end frames.

5. A non-swaying aerial tent, means for stretching said tent taut between two suitable supports, said tent having inner and outer side flaps separated by mosquito netting and having a floor provided with side portions adapted to be connected with the inner flaps.

[Claims 6 to 13 not printed in the Gazette.]

961,705. WINDMILL. LEE C. MATTHEWS, San Francisco, Cal. Filed Nov. 3, 1906. Serial No. 341,882. Renewed Aug. 13, 1909. Serial No. 512,749.



1. The improved oscillating and rotating wind mill comprising a vertical pivot shaft, a horizontal crank shaft, supports for such crank shaft which are attached to the vertical shaft, a frame comprising an end bar and side bars, the latter being fixed on the ends of the crank shaft, a sail attached to one end of such frame, and vanes arranged at the other end of the same, substantially as described.

2. The improved wind mill comprising a vertical pivot shaft, a horizontal crank shaft, supports for the crank shaft which are attached to the pivot shaft, parallel side bars whose middle portions are secured to the ends of the crank shaft, a bar connecting the side bars at one end, a sail secured to such end bar and the adjacent portions of the side bars, vanes pivoted at the opposite ends of the side bars, weights suspended in the said supports, and means for connecting them with the vanes whereby the latter are held in normal position for operating the mill, substantially as described.

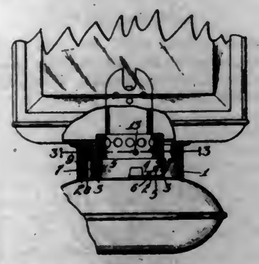
3. The improved wind mill comprising a vertical pivot shaft having vertical extensions, a crank shaft journaled in such extensions, a frame fixed on the crank shaft and having a sail at one end, and a vane at the opposite end, and means for holding the vane in normal position in a plane at right angles to the main sail, substantially as described.

4. The improved wind mill comprising a hollow pivot shaft arranged vertically in a suitable bearing and provided with upward extensions, the horizontal crank shaft journaled in the extended portion of such hollow shaft, a pump rod working in the latter and connected with the crank shaft, an oscillating frame attached to the crank-shaft and having a sail at one end and a vane at the other, such frame being adapted to oscillate in a vertical plane and rotate in a horizontal plane, and means for holding the vanes in normal position, substantially as described.

5. The improved wind mill comprising a vertical pivot shaft having a vertical extension, a horizontal crank-shaft journaled thereon and adapted to rotate therewith, a frame attached to the crank-shaft so as to rotate with it and provided at one end with a main sail and at the other with vanes pivoted and adapted to swing in a plane at right angles to that of the sail, the pivots of said vanes being each provided with a crank, weighted levers pivoted in extensions of the pivot shaft, and cords connecting such levers with the cranks of the vanes and a pull cord connected with the opposite or inner ends of the levers whereby the said weighted levers hold the vanes normally in operating position but may be elevated to allow the vanes to swing free and thus throw the mill out of action, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

961,706. LOCKING MECHANISM FOR LAMPS AND ANALOGOUS STRUCTURES. RICHARD H. WELLES, Kenosha, Wis., assignor to The Badger Brass Mfg. Co., Kenosha, Wis., a Corporation of Wisconsin. Filed Dec. 5, 1908. Serial No. 466,072.



1. A locking mechanism comprising interfitting locking parts movable into and out of locking relation by relative rotative movement, and a spring mounted on one of said parts, moving radially relative thereto, and frictionally engaging the other of said parts when in locked position, to impel further rotative movement thereof in the locking direction.

2. In combination, upper and lower telescoping lamp members radially disposed horizontally extending studs on one member and coöperative cam inclines on the other, said parts being constructed to pass into and out of locking engagement by relative rotation, a spring carried by one of said parts and acting on the other to efficiently impel the supporting studs up the cam incline.

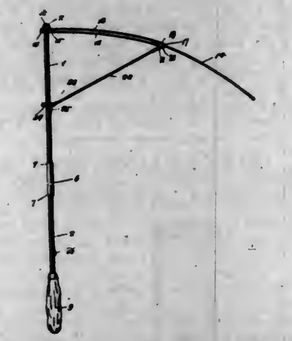
3. In combination an upper lamp member provided with a tubular waist and a base flange, cam-inclines carried by said flange, a lower lamp member provided with radially disposed supporting studs adapted to coöperate with said cam inclines, and a spring acting on said parts to impel the supporting studs up said inclines and hold them in locking position.

4. In combination an upper lamp member provided with a tubular waist and a base flange, cam-inclines carried by said flange, a lower lamp member provided with radially disposed supporting studs adapted to coöperate with said cam inclines, an upright stud rigid with said lower lamp member and a spring carried by the upper member and cooperating with said upright stud to impel axial rotation of the lower member.

5. In combination an upper lamp member provided with a tubular waist, a base flange within said waist, a series of up-standing circumferentially extending cam-inclines carried by the base flange, a lower lamp member provided with a series of radial supporting studs, adapted to said cam-inclines, an upstanding stud rigid with said lower member and a spring mounted in said waist, arranged to flex radially and having a cam projection adapted to act on said upstanding stud to impel rotation of the member carrying said stud.

[Claim 6 not printed in the Gazette.]

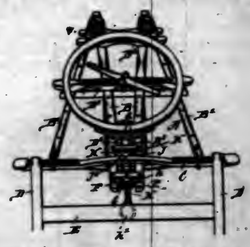
961,707. FOLDING UMBRELLA. FRICK F. WHITE, Ligonier, Pa. Filed June 7, 1909. Serial No. 500,597.



1. In a folding umbrella, an upper tubular rib section provided in its lower portion with a longitudinally-extending slot, an outer rib section extending and shiftable in the upper section and having that end which is arranged within the upper section provided with a roller, a collar carried by the outer rib section and arranged within said upper rib section and formed with an extension projecting through the slot of the upper rib section, a stretcher pivoted at its outer end to said extension, a notched collar carried by the umbrella stick and to which said upper rib section is pivoted, and a runner mounted on the stick and to which said stretcher is pivoted.

2. In a folding umbrella, an upper tubular rib section provided in its lower portion with a longitudinally-extending slot, an outer rib section extending and shiftable in the upper section and having that end which is arranged within the upper section provided with a roller, a collar carried by the outer rib section and arranged within said upper rib section and formed with an extension projecting through the slot of the upper rib section, a stretcher pivoted at its outer end to said extension, a notched collar carried by the umbrella stick and to which said upper rib section is pivoted, and a runner mounted on the stick and to which said stretcher is pivoted, said upper rib section having its outer end provided with means to arrest the outward movement of the said collar carried by the outer rib section.

961,708. SPRING-SUPPORT FOR WAGON-SHAFTS. PAUL W. ZELLER, Buffalo, N. Y. Filed Nov. 1, 1909. Serial No. 525,718.



1. A supporting-device for holding the shafts of a wagon in an elevated position comprising a tubular roller, a spring fulcrumed on said tubular roller and extending in opposite directions from its fulcrum point, one end of said spring being in contact with the under side of a cross-bar secured to said shafts, a yoke bearing against the under side of the hounds of said wagon and having the opposite end of said supporting-device adjustably secured thereto, and a hanger supported on said hounds and sustaining said yoke and supporting-device.

2. A supporting-device for holding the shafts of a wagon in an elevated position, comprising a tubular roller, a spring fulcrumed on said tubular roller, opposing lugs secured to the hounds of said wagon and having their free ends entering into and supporting said tubular roller, said spring extending in opposite directions from its fulcrum point with one end thereof in contact with the under side of a cross-bar secured to the shafts, a yoke bearing against the under side of the hounds of said wagon and having the opposite end of said supporting-device secured thereto, and a hanger supported on said hounds and sustaining said yoke and supporting-device.

3. A supporting-device for holding the shafts of a wagon in an elevated position, comprising a tubular roller, a spring fulcrumed on said tubular roller, opposing lugs secured to the hounds of said wagon with their free ends entering into and supporting said tubular roller, said spring extending in opposite directions from its fulcrum point and having one end thereof in contact with the under side of a cross-bar secured to the wagon shafts, a yoke bearing against the under side of the hounds and having the opposite end of said supporting-device secured thereto in an inclined position, and a hanger supported on said hounds and sustaining said yoke and supporting-device.

4. A spring supporting-device for holding the shaft of a wagon in an elevated position having a yielding front end held in contact with the under side of a cross-bar secured to said shafts, a yoke to which the rear end of said supporting-device is secured and whereby it is held in an inclined position, and a hanger having vertical slots formed therein through which the rear end of said supporting-device is passed and which serves to sustain said yoke and supporting-device.

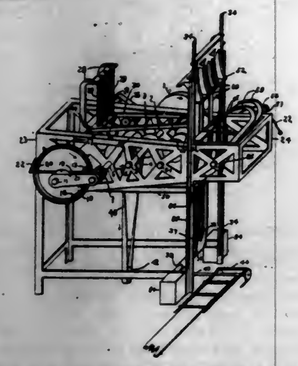
5. The combination with a platform wagon having a bolster, a platform and hounds secured thereto, shafts hinged to said bolster, a spring supporting-device fulcrumed between its ends to said hounds and having its free end in contact with the cross-bar connecting the shafts of said wagon, a yoke bearing against the under side of said hounds, and a hanger suspended between said hounds and having the rear end of said supporting-device passed therethrough.

[Claims 6 and 7 not printed in the Gazette.]

961,709. BUNDLING-MACHINE. HARRY ZIMMERMAN, Fremont, Ohio. Filed Oct. 4, 1907. Serial No. 395,835.

1. A bundling machine having parallel guides, a positive pressing member and a yieldable pressing member reciprocable along the guides.

2. An intermittently operable bundling machine comprising a continuously operable driver, a driven member, and a trip connector engaging the driven member for driving at a predetermined point in the operation of the driven member.



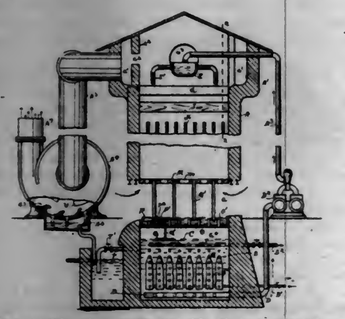
3. An intermittently operable bundling machine comprising a continuously operable driver, a driven member, and a connector automatically releasing the driven member from the driver at a predetermined point in the operation of the driven member.

4. An intermittently operable bundling machine comprising a continuously operable driver, a driven member, and a connector normally releasing the driven member at a predetermined point in the operation of the driven member, said connector being tripable to engage the driven member at such predetermined point.

5. A machine having a cycle of operations, comprising members movable to compress a bundle, a binding means carrier and pay out device swingable about three sides of the bundle, a knotter for the binding means, and a bundle discharger successively performing.

[Claims 6 to 11 not printed in the Gazette.]

961,710. MEANS FOR DRYING AIR. LOUIS BLOCK, Mamaroneck, N. Y. Filed Sept. 20, 1909. Serial No. 518,679.



1. The combination with the blowing mechanism of a blast furnace of air-treating apparatus comprising refrigerating pipes, an inclosing pit, provisions for taking water therefrom in a cold state and presenting it with a motion in one direction to a current of air in the opposite direction so as to attain counter-current heat exchanging, and provisions for returning such water and repeating.

2. Air-treating apparatus comprising refrigerating pipes, an inclosing pit, provisions for taking water therefrom in a cold state and presenting such water with a downward motion to an upward current of air so as to attain a large measure of heat exchanging, provisions for returning such water to the pit to be again cooled therein and delivered in a uniformly cold condition to be again circulated, and provisions for taking away the surplus in the returning water before it reaches the refrigerating-pit.

3. Air-treating apparatus comprising refrigerating pipes arranged in vertical series, an inclosing pit, provisiond for taking water therefrom in a cold state and presenting thereto an upward current of air, provisions for returning such water to the pit to be cooled therein and delivered from a low point in a uniformly cold condition, and provisions for taking away surplus water by a gate P and float Q, the latter means arranged for automatically attaining the removal of a just sufficient amount of the liquid without allowing it to warm the refrigerating-pit.

4. Air-treating apparatus comprising refrigerating pipes arranged in vertical series, an inclosing refrigerating-pit, provisions for taking a liquid therefrom in a cold state and presenting thereto an ascending current of air, provisions for returning such liquid to the pit to be cooled therein and delivered from a low point in a uniformly cold condition, and provisions for taking away surplus liquid by a pipe T and cock T' regulated by hand, and also by a gate P and float Q, the latter means arranged for automatically attaining the removal of a just sufficient amount of the liquid without allowing it to warm the refrigerating-pit.

5. Air-treating apparatus comprising refrigerating pipes, an inclosing pit, provisions for taking water uniformly cold from all parts of the bottom of such refrigerating-pit, provisions for spreading such water, and uniformly delaying its descent by its friction, provisions for presenting an ascending current of air thereto, and delivering such air radially into an annular space at the top and leading it thence to a blower.

[Claims 6 and 7 not printed in the Gazette.]

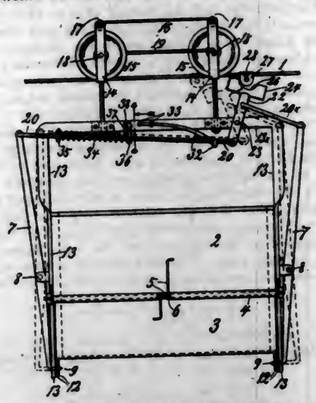
961,711. DEVICE FOR LACING BOOTS. MAXIMILIAN BREDENBERG, Neuwerder, near Radomno, Germany. Filed Dec. 26, 1908. Serial No. 469,218.



A device for lacing boots on the instep and on the shaft of the same, comprising in combination instep laces and a shaft lace, a base plate having the instep laces attached thereto, a buckle on said plate, a strap adapted to be fixed to the sole of the boot and connected with the buckle to adjust the same, a double spring hook laterally attached at one end to the buckle and at its opposite end adapted to be attached to the shaft lace, for the purpose set forth.

961,712. LITTER-CARRIER. CARL F. BROSTROM and FRANK LANG, Eagle Bend, Minn. Filed Mar. 23, 1909. Serial No. 485,155.

1. The combination with an elevated track and a tripping abutment secured thereon and projecting from the lower side thereof, of a frame having wheels adapted to move on the track, a receptacle fixed in the frame and having spring-closed hinged bottom sections, a locking lever fulcrumed on the frame at each end of the receptacle and adapted to engage the bottom sections to hold them closed, a trip lever fulcrumed to the upper part of the frame and having two opposite arms extending one above and the other below its fulcrum, a rod extending from each locking lever and connected with the trip lever, one above and the other below its fulcrum, said trip lever having in its upper end a notch for engagement with the abutment to operate the lever and let it pass in either direction, and a spring arranged to hold the trip-lever inclined with its notch in position to engage the abutment.



2. The combination with an elevated track and a tripping abutment secured thereon and projecting from the lower side thereof, of a frame having wheels adapted to move on the track, a receptacle fixed in the frame and having spring-closed hinged bottom sections, a locking lever fulcrumed on the frame at each end of the receptacle and adapted to engage the bottom sections to hold them closed, a trip lever fulcrumed to the upper part of the frame and having two opposite arms extending one above and the other below its fulcrum, a rod extending from each locking lever and connected with the trip lever, one above and the other below its fulcrum, said trip lever having in its upper end a notch for engagement with the abutment to operate the lever and let it pass in either direction, and a spring arranged to hold the trip-lever inclined with its notch in position to engage the abutment when the frame moves in either direction.

3. The combination with an elevated track and a tripping abutment secured thereon and projecting from the lower side thereof, of a frame having wheels adapted to move on the track, a receptacle fixed in the frame and having spring-closed hinged bottom sections, a locking lever fulcrumed on the frame at each end of the receptacle and adapted to engage the bottom sections to hold them closed, a trip lever fulcrumed to the upper part of the frame and having two opposite arms extending one above and the other below its fulcrum, a rod extending from each locking lever and connected with the trip lever one above and the other below its fulcrum, said trip lever having in its upper end a notch for engagement with the abutment to operate the lever and let it pass in either direction, and a spring arranged to hold the trip-lever inclined with its notch in position to engage the abutment when the frame moves in either direction, a second spring arranged to hold the tripping lever inclined only in one direction, and means for throwing the second spring out of action when so desired.

4. The combination with an elevated track and a tripping abutment secured thereon, and projecting from the lower side thereof, of a frame having wheels adapted to move on the track, a receptacle fixed in the frame and having spring-closed hinged bottom sections, a locking lever fulcrumed on the frame at each end of the receptacle and adapted to engage the bottom sections to hold them closed, a trip lever fulcrumed to the upper part of the frame and having two opposite arms extending one above and the other below its fulcrum, a rod extending from each locking lever and connected with the trip lever, one above and the other below its fulcrum, said trip lever having in its upper end a notch for engagement with the abutment to operate the lever and let it pass in either direction and a spring arranged to hold the trip-lever inclined with its notch in position to engage the abutment when the frame moves in either direction, another spring holding the trip-lever inclined only in one direction, said two springs being each alternately readily thrown out of action while the other is in use.

961,713. PROCESS OF FILTRATION. EDWIN BURT, El Oro, Mexico. Filed Aug. 26, 1909. Serial No. 514,977.

1. A process of filtration in a filter of the type comprising a rotatable shell, a filtering medium therein, and means for rotating said shell, which consists in admitting into the filter shell a sufficient quantity of the material to be treated to only partly fill the same, generating a fluid pressure within said filter shell, whereby the contents of said filter shell will be subjected to pressure, rotating said filter shell during filtration whereby a filter cake will be deposited on the filtering medium consisting of successive layers which will be separately subjected to pressure as formed, thus forming a filter cake of sufficient strength and firmness to retain its position on the surface of the filtering medium unsupported, and treating said filter cake with wash solutions while on said filtering medium, substantially as described.

2. A process of filtration in a filter of the type comprising a rotatable shell, a filtering medium therein, and means for rotating said shell, which consists in admitting into the filter shell a sufficient quantity of the material to be treated to only partly fill the same, generating a fluid pressure within said filter shell, whereby the contents into the filter shell a sufficient quantity of the material gradually increasing the fluid pressure during the filtering operation from a desired initial pressure to a desired maximum pressure, rotating said filter shell during filtration whereby a filter cake will be deposited on the filtering medium consisting of successive layers which will be separately subjected to pressure as formed, thus forming a filter cake of sufficient strength and firmness to retain its position on the surface of the filtering medium unsupported, and treating said filter cake with wash solutions while on said filtering medium, substantially as described.

3. A process of filtration in a filter of the type comprising a rotatable shell, a filtering medium therein, and means for rotating said shell, which consists in introducing into the filter shell a sufficient quantity of the material to be treated to only partly fill the same, generating a fluid pressure within said filter shell, whereby the contents of said filter shell will be subjected to pressure, rotating said filter shell during filtration whereby a filter cake will be deposited on the filtering medium consisting of successive layers which will be separately subjected to pressure as formed, thus forming a filter cake of sufficient strength and firmness to retain its position on the surface of the filtering medium unsupported, treating said filter cake with wash solutions while on said filtering medium, and dislodging said filter cake from said filtering medium by mechanical means and discharging the same, substantially as described.

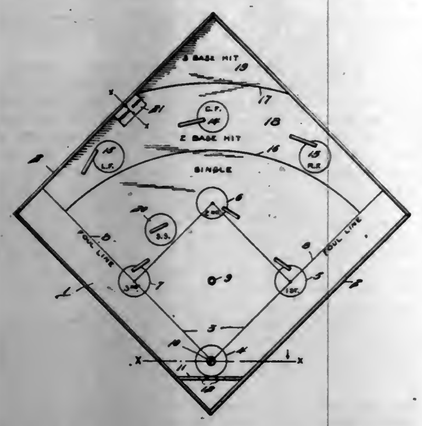
961,714. GAME DEVICE. HENRY M. CHASE, Holyoke, Mass. Filed Mar. 20, 1909. Serial No. 484,813.

1. In a device of the character described, the combination with a field laid out as a diamond, of a flange surrounding the same a deflecting post and deflecting blocks secured thereon, and an incline leading from the surface of the field to the upper edge of the flange of the device.

2. In a device of the character described, the combination with a base board laid out as a diamond, a surrounding rim rim therefor, a back stop secured across one corner of the board and having a pair of recesses or openings formed in its under side, a resilient post mounted on the board therebefore and in line with the pitcher's box and the partition between said recesses, and a series of deflecting blocks located on the field.

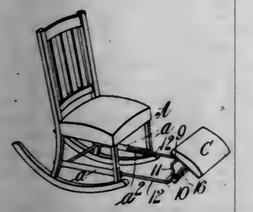
3. A game board, consisting of a base board, a flange or rib surrounding the same, said base board being laid

out as a base ball diamond, the position of the various players in the field being denoted by suitably located configurations, a post, mounted in the batter's position, blocks mounted on the base board in or adjacent to said configurations, a back stop behind said post, having openings therein, the surface of the base board at one side having an incline continued to the top of the flange, and lines drawn on the base board to assist in scoring.



4. In a device of the character described, the combination with a base board laid out as a diamond, a surrounding rim therefor, a back stop secured across one corner of the board and having a pair of recesses or openings formed in its under side, a resilient post mounted on the board therebefore and in line with the pitcher's box and the partition between said recesses, a series of deflecting blocks located on the field, and a block secured to the base adjacent to one side of the surrounding rim and providing an incline plane leading from the base over the edge of the rim.

961,715. FOOT-REST CHAIR. AXEL K. CHRISTIANSEN, Greenfield, Mass. Filed Nov. 5, 1909. Serial No. 526,375.



1. In a foot rest chair, a chair frame having, below its seat, a pair of opposed horizontal parallel ways, a frame composed of wire, the middle portion of which is of an inverted arch form, having eyes at the lower portions of the opposite members of such arch and having the extremities of said wire rearwardly extended as continuations of said eyes horizontally and parallel in opposition and slidably supported in said ways, and a foot rest having opposite depending members, provided with eyes at their lower portions, and arranged forward of the top member of the arch portion of the first named frame, and means for pivotally uniting the two frames through the eye provided portions thereof.

2. In a foot rest chair, a chair frame having below its seat a pair of opposed parallel horizontal ways, a frame composed of spring wire, the middle portion of which is of an inverted arch form, having eyes at the lower portions of the opposite members of such arch and having the extremities of said wire rearwardly extended as continuations of said eyes horizontally and parallel in opposition and slidably supported in said ways, and a foot rest frame composed of a single length of wire comprising a rectangular foot rest supporting top, and members depending from intermediate portions of the opposite sides of said rectangular top and having eyes at their bottoms, such eyes having matching arrangements with the eyes of the first named frame, and means for pivotally uniting the two frames through the eye provided portions thereof.

3. In a foot rest chair, a chair frame having below its seat a pair of opposed parallel horizontal ways, a frame comprising a forward arch shaped portion and a pair of parallel horizontal bar-like members extending rearwardly from the lower parts of the depending members of said arch and slidably engaged in said ways, and a foot rest having at its opposite sides depending members located inside of the depending members of the arch and at their lower extremities pivotally connected to the first named frame, their upper extremities projecting above the transverse member of the arch so that the seat clears the latter and so that such transverse member serves as a stop to the rearward swinging motion of the seat frame.

961,716. CARTRIDGE-FUSE. ALBERT F. DAUM, Pittsburg, Pa. Filed Mar. 5, 1910. Serial No. 547,577.



In a cartridge fuse, the combination with a shell of non-conductive material, insulation filling the shell, resilient washers fitted against the ends of said shell and provided with openings, each washer being provided with a radial slit with a portion of each washer bent out of the plane of the remaining portion of the washer, a plurality of fuses extending through the insulation material in the shell, some of said fuses having the ends thereof extending through the openings of said washers and bent to engage the outer sides of said washers, another fuse extending through the filling of said shell, heads carried by the ends of said fuse, and end caps threaded on the ends of said shell to engage the ends of said fuses, and slitted washers compensating for the expansion and contration of said fuses and said caps and adapted to normally maintain the ends of said fuses in engagement with said caps, substantially as described.

961,717. HOISTING DEVICE. WILLIAM A. DUNMIRE, Ruffs Dale, Pa. Filed Sept. 15, 1909. Serial No. 517,942.

1. A hoisting device comprising a base, a pedestal pivotally connected to said base and adapted to be lowered into a horizontal plane, a rectangular frame secured to the top of said pedestal, a standard secured to the top of said frame, a cross head carried by the top of said standard and adapted to be braced to support said hoisting device in a vertical position, a mast carried by the upper end of said standard and adapted to be braced to assist said cross head in supporting said device in a vertical position, a sheave revolubly supported by the upper end of said standard, and a winding device arranged within said frame and adapted to move a cable over said sheave.

2. In a hoisting device, a base, a pedestal movably connected to said base, a frame carried by the upper end of said pedestal, a standard mounted upon the upper end of said frame, a revoluble sheave carried by the upper end of said standard, a winding device within said frame and adapted to move a cable over said sheave, a mast carried by the upper end of said standard, a sheave revolubly mounted in the upper end of said mast and adapted to coöperate with said winding device, and means connected



to said device and adapted to be suitably anchored for supporting said device in a vertical position.

961,718. OVERALLS-SUSPENDERS LOOP. CHARLES E. HOWE, Summit, N. J., assignor to Sweet, Orr & Company, Newburgh, N. Y., a Firm. Filed Apr. 15, 1909. Serial No. 490,176.



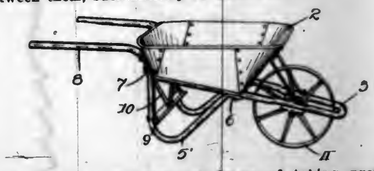
1. A loop for overalls suspenders and other articles, composed of a suspension member having a laterally opening eye terminating in a contracted throat and laterally extending ends, and a button-engaging member made rigid and having a compound curve ending in eyes by which it is pivotally mounted in the lowermost portions of the ends of the suspension member, whereby the two members have relative freedom of movement in opposite directions.

2. A drop loop for overalls and other articles, composed of a suspension-member having a laterally opening eye terminating in a contracted throat and laterally extending eyes, and a curved button-engaging member made rigid and having eyes pivotally mounted upon the lowermost portions of the eyes of the suspension-member whereby the two members have relative freedom of movement in opposite directions.

3. A drop loop for overalls and other articles, comprising a suspension-member having laterally resilient limbs terminating in a contracted throat and laterally extending eyes adjacent to said throat, and a rigid button-engaging member adapted to engage the shank or hub of a button and provided with eyes having a pivotal slip engagement with the lowermost portions of the eyes of the suspension-member, whereby said button-engaging member is adapted to swing freely in opposite directions from the eyes of the suspension-member.

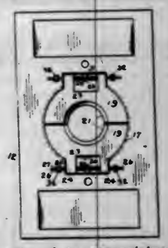
961,719. WHEELBARROW. ARTHUR O. HUBBARD, Minneapolis, Minn. Filed July 31, 1909. Serial No. 510,628.

1. A wheel barrow comprising a frame having side sections with a space between them, and a loop at the forward end of said frame connecting said side sections, a tray seated on said sections and secured to the rear ends thereof, handle bars having U-shaped forward portions, the forward section of each U-shaped portion being secured to said frame under said tray, and the rear section of said U-shaped portions being secured to the rear portion of said tray and to said frame, said U-shaped portions forming legs for the barrow, and a brace bar secured to said U-shaped portions and bridging the space between them, substantially as described.



2. A barrow comprising a frame of tubing provided with a loop at its forward end and a space between the sides of said loop of sufficient width to receive a wheel, the ends of the tubing comprising said frame being upwardly turned, a tray adapted to rest on said frame and secured thereto and to said upwardly turned ends, handle bars, also composed of tubing, having U-shaped forward portions forming legs for the barrow, the forward ends of said U-shaped portions being secured to said frame under the barrow, and the rear sections of said U-shaped portions being bolted to said tray through the upwardly turned ends of said frame, and a bracing means for said U-shaped portions.

961,720. SELF-CLOSING FLUSH-RECEPTACLE PLATE. HARVEY HUBBELL, Bridgeport, Conn. Filed Dec. 13, 1909. Serial No. 532,873.



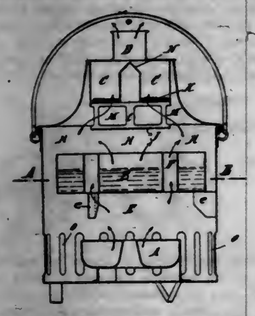
A flush receptacle plate comprising a plate with a central opening having angular enlargements and transverse grooves on opposite sides of the enlargements, cover members in said opening having angular portions corresponding with the enlargements, said angular portions having depressions and bearing portions on opposite sides thereof, hinge rods passing through the bearing portions and lying in the depressions and grooves and springs coiled about the hinge rods, extending through the bearing portions and having central portions bent to form angle arms which bear upon the under sides of the cover members and ends lying parallel with the hinge rods and secured in place, whereby the cover members are retained in the closed position.

961,721. APPARATUS FOR THE PREPARATION OF FORMALDEHYDE. EDOUARD HUWART, Liege, Belgium. Original application filed Dec. 11, 1907, Serial No. 405,995. Divided and this application filed June 25, 1908. Serial No. 440,246.

1. The combination of a vessel having openings at its lower part, a receptacle for a source of heat in the lower part of the vessel, a water receptacle in the vessel above the source of heat and opening into the vessel for delivering vapor into the vessel, and a receptacle for the generative substance in the vessel located above the water vessel, the latter receptacle having minute openings in its bottom through which said vapors from the water will pass.

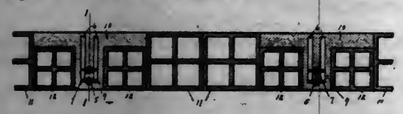
2. The combination of a vessel having openings at its lower part, a receptacle for a source of heat in the lower

part of the vessel, a water receptacle at the intermediate part of the vessel having passages therethrough, a receptacle for the generative substance above the water vessel,



the receptacle having minute openings in its bottom, and a deflector plate immediately below said bottom of the latter receptacle.

961,722. FLOOR CONSTRUCTION. JULIUS KAHN, Detroit, Mich., assignor to Trussed Concrete Steel Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 8, 1909. Serial No. 488,574.



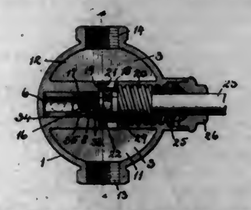
1. A composite floor comprising a body formed of a plurality of parallel rows of prepared blocks, each block rectangular in transverse cross-section, and the blocks of adjacent rows differing in height, the blocks of the outer rows being of less height than the blocks of the interior rows, and reinforced concrete beams, T shaped in cross section, between adjacent outer rows of blocks, the tops of the beams extending over the lower tiles flush with the tops of the higher tiles.

2. A composite floor slab of even thickness throughout comprising groups of parallel rows of terra-cotta tiles, the top of each tile being parallel to its bottom and the tiles of the outer rows being of less height than those of the inner rows, and reinforced concrete beams between adjacent groups of rows, the concrete extending over the tops of the lower tiles flush with the tops of the higher tiles so as to form a flat surface with the same.

3. A composite floor comprising a series of reinforced concrete beams parallel to each other, T shaped in cross section, and reinforced concrete girders intersecting the same, and a plurality of rows of hollow blocks of unequal heights between adjacent beams, the lower surfaces of the floor being flat and formed by the lower faces of all the tiles, girders and beams, the top of the beams, girders and higher tiles being flush to form an upper flat surface.

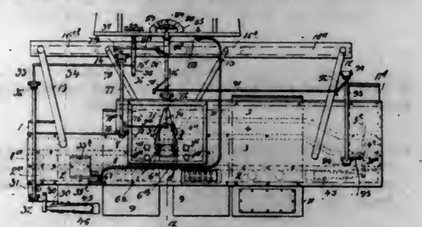
961,723. SHOWER-VALVE FOR BATH APPARATUS. GEORGE T. KENLY, Baltimore, Md., assignor to The Plumbing Specialty Company, a Corporation of Delaware. Filed Dec. 14, 1908. Serial No. 467,340.

A valve having an outer shell with inlets at opposite sides and an outlet in the side at right angles to said inlets and also having spaced apart partitions forming two side chambers, an outlet chamber, and a central circular valve chamber,—the said central valve chamber extending from one side to the other of said shell and having two diameters whereby to form an annular valve seat, and said central chamber having an outlet port in its larger portion at said annular valve seat and two inlet ports in the smaller portion beyond the valve seat, a stem entering the shell at right angles to the inlet and outlet thereof and carrying a circular valve to seat against the annular valve seat and tubular valve at its inner end which tubular valve is open at both ends and is movable longitudi-



nally in the smaller portion of the valve chamber between the two inlet ports.

961,724. SELF-PLAYING MUSICAL INSTRUMENT. LOUIS H. MAIER, New York, N. Y., assignor to John H. Ludwig, New York, N. Y. Filed Mar. 22, 1906. Serial No. 307,342.



1. In a self playing apparatus for musical instruments, the combination of a plurality of operating pneumatics, a plurality of suction chambers each connected with suitable groups of said pneumatics, wind-inducing means, a regulating bellows interposed between said wind-inducing means and said plurality of chambers, and a controlling valve and connections to govern the exhaust from said chambers through said bellows from one or more groups of said pneumatics at will arranged to direct suction through said bellows in one direction for one or more groups of said pneumatics and to direct suction through said bellows in a reverse direction for one or more other groups of said pneumatics.

2. In a self playing apparatus for musical instruments, the combination of a plurality of operating pneumatics, a plurality of suction chambers each connected with suitable groups of said pneumatics, channels connected with said chambers respectively, a regulating bellows connected with a plurality of said channels, wind inducing apparatus in communication with one of said channels, a chamber, and suitable connections between said chamber and channels, including ports, and a valve in said chamber to control said ports, whereby said valve is adapted to connect certain of said ports at will to direct suction through said bellows in one direction for one or more groups of said pneumatics and to direct suction through said bellows in a reverse direction for one or more other groups of said pneumatics.

3. In a self playing apparatus for musical instruments, the combination of a plurality of operating pneumatics, a plurality of suction chambers each connected with suitable groups of pneumatics, channels connected with said chambers respectively, a regulating bellows connected with a plurality of said channels, wind-inducing apparatus in communication with one of said channels, a chamber, and suitable connections between said chamber and channels, including ports, and a valve in said chamber to control said ports, whereby said valve is adapted to connect certain of said ports at will to direct suction through said bellows in one direction for one or more groups of said pneumatics and to direct suction through said bellows in a reverse direction for one or more other groups of said pneumatics, said valve being arranged to open all of said

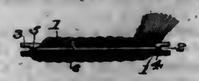
ports to said valve-chamber in a certain position for producing similar suction through all of said chambers for such pneumatics simultaneously.

4. In a self playing apparatus for musical instruments, the combination of a plurality of operating pneumatics, a plurality of suction chambers each connected with suitable groups of pneumatics, channels connected with said chambers respectively, a regulating bellows connected with a plurality of said channels, wind-inducing apparatus in communication with one of said channels, a chamber, and suitable connections between said chamber and channels, including ports, and a valve in said chamber to control said ports, whereby said valve is adapted to connect certain of said ports at will to direct suction through said bellows in one direction for one or more groups of said pneumatics and to direct suction through said bellows in a reverse direction for one or more other groups of said pneumatics, said valve being arranged to open all of said ports to said valve-chamber in a certain position for producing similar suction through all of said chambers for such pneumatics simultaneously, and means to at will vary the degree of suction through said bellows.

5. In a self playing apparatus for musical instruments, the combination of a plurality of operating pneumatics, a plurality of suction chambers each connected with suitable groups of said pneumatics, wind-inducing means, a regulating bellows interposed between said wind-inducing means and said plurality of chambers, and a controlling valve and connections to govern the exhaust from said chambers through said bellows from one or more groups of said pneumatics at will arranged to direct suction through said bellows in one direction for one or more groups of said pneumatics and to direct suction through said bellows in a reverse direction for one or more other groups of said pneumatics, and means to at will control the degree of exhaust through said bellows in either direction.

[Claim 6 not printed in the Gazette.]

961,725. HAIR CURLER AND WAVER. JAMES F. MARTIN, Philadelphia, Pa., assignor, by mesne assignments, to Magic Curler Company, a Corporation of New Jersey. Filed Dec. 15, 1906. Serial No. 347,960.



1. A hair curler consisting of a round strip or bar having recesses at its end and narrowed recesses extending in alinement from said first mentioned recesses longitudinally of the bar, shoulders formed at the inner end of the wider recesses and means disconnected from said strip and adapted to be seated in said narrower recesses to engage with said shoulders after the hair has been wound on said bar whereby the pressure on the hair may be varied.

2. A hair curler consisting of a rounded strip or bar having recesses at its ends, and narrower recesses extending in alinement from said first mentioned recesses longitudinally of the bar, shoulders formed at the inner end of the wider recesses, and a flexible cord disconnected from said strip but adapted to be seated in said narrower recesses or on said shoulders after the hair has been wound on said bar in order to hold the hair in place on said bar.

961,726. DOUBLE-SLIDING-SASH WINDOW. JOHANN MAYR, Drössling, Post Seefeld, Germany. Filed Oct. 9, 1909. Serial No. 521,869.

In a double sliding sash window, the combination with a frame, of an upper and a lower outer sash slidable in the frame, and an upper and a lower inner sash slidable on the outer sashes, the stiles of the outer and inner sashes being provided with interlocking tongue and groove joints on their edges to permit of their sliding upon each other, and the lower rails of the outer sashes being provided on their inner faces with handle-shaped tongues, the lower rails of the inner sashes being provided with grooves to fit over the upper sides of said handle-shaped tongues and the upper rail of the inner sash being provided with a groove to fit upon the lower side of the handle-shaped



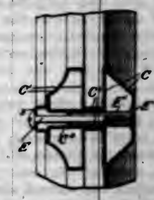
tongue of the upper outer sash, all substantially as described.

961,727. CASE FOR SAFETY-RAZORS. ROBERT MIDDELDORF, Solingen, Germany. Filed June 10, 1909. Serial No. 501,438.



A case for safety-razors, comprising in combination, the case proper a number of partitions within said case forming separate compartments therein: one for the razor, another one for the blades, and another pair for other shaving utensils, a cover of flexible material to close said compartments, and means to keep said cover in closed position over all compartments as well as separately over the compartment for the blades only, all the compartments being entirely closed toward each other and each having the access to its interior from the outside on a different side of the case, for the purpose set forth.

961,728. GLAZING-BAR. CLAUDE A. MCGINNIS, Atlanta, Ga., assignor to Dowman-Dozier Manufacturing Company, Atlanta, Ga., a Corporation of Georgia. Filed Mar. 22, 1909. Serial No. 485,057.



1. The combination with a hollow sheet metal glazing bar having on one side a longitudinal rib and on the opposite side a broad, plane web portion extending from end to end of the same, of a second similar and like turned narrower bar passed transversely through the first and having the outer face of its plane web portion approximately in contact with the inner face of the corresponding part of the first bar; whereby the two webs are brought into approximately the same plane while the first bar is left with strong integral inner and outer connections between its parts upon opposite sides of the transverse bar.

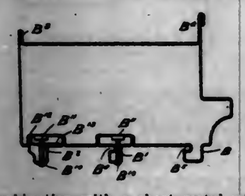
2. A two-part glazing bar consisting of a hollow member having a rib on one side, a second oppositely turned hollow member having a rib adapted to telescope the rib of the companion member and further having the two webs of its rib extended inward to the opposite wall of its own body, and means for rigidly connecting the two members.

3. The combination with two oppositely turned hollow glazing bar members provided on their meeting sides with telescoping ribs, of an analogous transverse hollow member passing through the two between their outer faces, and similar companion members having their ribs telescoping with the rib of said transverse bar and their ends coped over the corresponding member of the primary bar.

4. A sheet metal glazing bar consisting of two hollow sheet metal members, the bodies of which are to meet the glass, each provided upon its inner side with a rib telescoping with a rib of its companion, the inner rib extending to the opposite side of the companion member, and bolts binding the two members together.

5. The combination with a hollow sheet metal member having upon one side a rib with walls at some distance apart and overlapped at the free side of the rib to close the same, of a tubular nut having its head countersunk in the member upon the side opposite the rib and its inner end bridging the space between the rib walls, a second analogous bar member oppositely turned and having its open rib telescoped over the rib first mentioned, and a bolt passing through the second member between the walls of both ribs, and engaging said nut.

961,729. FIREPROOF WINDOW-FRAME. CLAUDE A. MCGINNIS, Atlanta, Ga., assignor to Dowman-Dozier Manufacturing Company, Atlanta, Ga., a Corporation of Georgia. Filed Apr. 17, 1909. Serial No. 490,514.



1. The combination with a sheet metal window frame having in its side members or jambs recesses in position to be partially overlapped, laterally, by the lateral edge faces of a sash in normal position in the frame, of stops each in position to engage the inside face of the corresponding sash and each having a base adapted to extend between the edge face of the sash and the bottom of the corresponding recess.

2. The combination with a sheet metal window frame having its side or jamb members each bent to form an integral outer sash stop and a recess in position to be partially overlapped and covered by the lateral edge face of the sash, of a stop adapted to engage the inside face of the sash and having a broad base portion in position to extend between said edge face and the bottom of the corresponding recess.

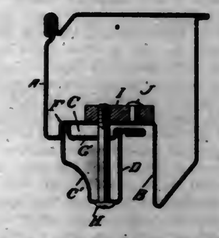
3. The combination with a sheet metal window frame having its side body members provided with integral, laterally grooved sash stops and cut away to form openings to the pockets, of plates, for closing said openings, having one lateral margin entering the body members and in hooked engagement with one of said stops and its other lateral margin overlapped upon the body member in position to be held by an inside removable stop.

4. The combination with a sheet metal window frame having hollow side members cut away to form an opening extending across both sash spaces, of a closing plate for said opening bent into conformity with the jamb wall above and below the opening.

5. A sheet metal window sill having its inclined upper wall bent upwardly and forwardly upon itself and then sharply rearward parallel to its original direction, to form below the place of the lower sash and just within the plane of its outer face an upward offset having an outer face adapted to reverse the current of incoming fluid and direct it against the usual sash lip projecting over the offset against the body of the sill.

[Claims 6 and 7 not printed in the Gazette.]

961,730. METAL WINDOW-SASH. CLAUDE A. MCGINNIS, Atlanta, Ga., assignor to Dowman-Dozier Manufacturing Company, Atlanta, Ga., a Corporation of Georgia. Original application filed Apr. 17, 1909, Serial No. 490,514. Divided and this application filed Aug. 12, 1909. Serial No. 512,473.



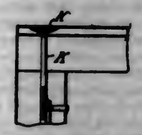
1. A hollow sheet metal glazing strip having at the outer margin of that side which is to rest against the stile a longitudinal rib adapted to hold the body of the base out of contact with the stile, substantially as set forth.

2. A hollow sheet metal glazing strip having upon the face next the stile and at some distance from the glass a portion projecting beyond all parts nearer the glass which might otherwise meet the stile; whereby expansion of the strip, being resisted by the stile tends to rock the strip toward the glass.

3. The combination with a metal sash, of a glass-retaining strip provided upon that side next the body of the sash and at some distance from the margin which is to meet the glass with a projection to rest against said body, and strip securing devices between said projection and margin.

4. The combination with a sheet metal sash provided with a plane offset to support one side of the glass and with a groove parallel to the glass, of a hollow glazing strip lying in said groove fitting closely against its outer side and extending over the edge of the glass, and bolts passing through the glazing strip parallel to the glass and engaging nuts within the stile.

961,731. SHEET-METAL SASH. CLAUDE A. MCGINNIS, Atlanta, Ga., assignor to Dowman-Dozier Manufacturing Company, Atlanta, Ga., a Corporation of Georgia. Filed Aug. 12, 1909. Serial No. 512,474.



1. A sash body member consisting of a metal sheet bent along parallel lines to form a tubular member and having its marginal portions interlocked at one angle of the member in a double lock seam lying within the general planes of the two adjacent faces of the member, said member having a depression in one face alongside said seam, whereby the seam thus within the general planes is without the tube and may be grasped by external compressing dies.

2. In sheet metal sash, a metal sheet bent along parallel lines to form a tubular meeting rail having an inclined face to meet the corresponding face of its companion and having its marginal portions formed into a double lock seam below said inclined face and within the general planes of that and the adjacent face; said sheet being bent inward alongside said seam to permit compressing the seam by external dies alone.

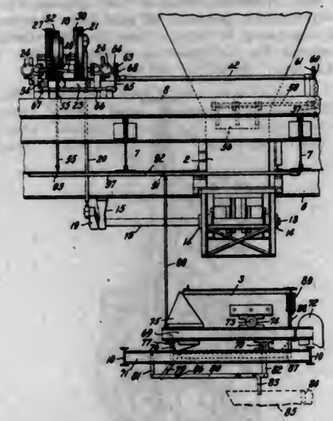
3. A hollow sheet metal sash having its vertical members secured to the horisontal members which they meet by bolts within and fixed to the walls of the vertical members and passing through the horisontal members.

4. A hollow sheet metal sash having one of its main members passing over the end of the companion member at each point of intersection and secured thereto by a bolt lying wholly within the face walls of the members, and an external nut filling a depression in the sheet metal around the outer end of the bolt, substantially as set forth.

5. The combination with a sheet metal sash having at each point of intersection one of its constituent hollow members fitted against the end of the other and having its outer wall bent inward to form a depression, of a threaded bolt lying in the abutting member passing through the companion member in the axis of said depression and provided with a terminal enlargement, or head, fitting and filling said depression.

[Claim 6 not printed in the Gazette.]

961,732. APPARATUS FOR DELIVERING MATERIALS. ALMON E. NORRIS, Cambridge, Mass. Filed Aug. 1, 1908. Serial No. 446,427.



1. In an automatic loading apparatus, the combination with a hopper to receive a supply of material, a chute leading therefrom, an oscillating dumping receptacle to receive the material in measured quantities from the chute, an oscillating frame upon which the dumping receptacle is pivotally mounted, said frame being adapted to tip when the dumper receives a predetermined supply of material, means controlled by a conveyance moving relatively to said dumper to cause the discharge of the material into said conveyance, means automatically to return both said frame and said dumper to their initial position on the discharge of the material to the conveyance, materials-detector means for said hopper responsive to the absence or presence of material, a reciprocating measuring gate for causing the delivery of measured quantities of material from the chute to the dumper, an engine for reciprocating said gate having a crank disk and a connecting rod attachment to said gate, a valve for starting and stopping said engine, a link connected to move said valve, a part connected to one end of said link adapted to be moved by said crank disk in a predetermined position of the gate to move said valve to stop said engine, a second link having its mid-portion connected to the opposite end of said valve-actuating link, a connection between said detector means and one end of said second link and adapted to be actuated by said detector means to move said valve toward a closed position when the supply of materials fails in said hopper, and a connection from the opposite side of said second link to said oscillating frame and adapted to be actuated by the tilting of said frame when said dumper is loaded to move said valve toward a closed position, the said engine being stopped only when the gate arrives at the said predetermined position coincidentally with the tilted condition of the oscillating frame or the absence of material.

2. In an automatic loading apparatus, the combination with a hopper to receive a supply of material, a chute leading therefrom, an oscillating dumping receptacle to receive measured quantities of material from the chute, said receptacle having a tipping movement when a predetermined supply of material is received, means controlled by a conveyance moving toward the receptacle to cause the subsequent discharge of the material into said conveyance, means automatically to restore said receptacle to its initial position on the discharge of material to the conveyance, a movable feeding device for delivering measured quantities of material from the chute to the dumper, a motor for moving said feeding device, and means following the delivery of a predetermined amount of material to the dumping receptacle automatically to stop the motor.

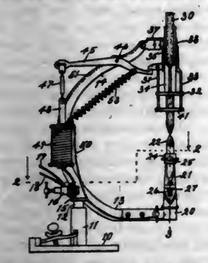
3. In an automatic loading apparatus, the combination with a hopper to receive a supply of material, a chute leading therefrom, an oscillating dumping receptacle to receive measured quantities of material from the chute, said receptacle having a tipping movement when a predetermined supply of material is received, means controlled by a conveyance moving toward the receptacle subsequently to cause the discharge of the material into said conveyance, means automatically to restore said receptacle to its initial position on the discharge of material to the conveyance, a movable feeding device for delivering measured quantities of material from the chute to the dumper, a motor for moving said feeding device, and means following the delivery of a predetermined quantity of material to the dumping receptacle to stop the feeding device always at a predetermined position.

4. In an automatic loading apparatus, the combination with a hopper to receive a supply of material, a chute leading therefrom, an oscillating dumping receptacle to receive measured quantities of material from the chute, said receptacle having a tipping movement when a predetermined supply of material is received, means controlled by a conveyance moving toward the receptacle subsequently to cause the discharge of the material into said conveyance, means automatically to restore said receptacle to its initial position on the discharge of material to the conveyance, a movable feeding device for delivering measured quantities of material from the chute to the dumper, a motor for moving said feeding device, and means for continuing the movement of the feeding device after the dumping receptacle has received a predetermined load, but for stopping it prior to further feeding of material if, meanwhile, the dumping receptacle has not been emptied.

5. In an automatic loading apparatus, the combination with a hopper to receive a supply of material, a chute leading therefrom, an oscillating dumping receptacle to receive measured quantities of material from the chute, said receptacle having a tipping movement when a predetermined supply of material is received, means controlled by a conveyance moving toward the receptacle subsequently to cause the discharge of the material into said conveyance, means automatically to restore said receptacle to its initial position on the discharge of material to the conveyance, a movable feeding device for delivering measured quantities of material from the chute to the dumper, a motor for moving said feeding device, detector means responsive to the absence or presence of material in the hopper, and means for stopping feeding movement of the feeding device after failure of the supply in the hopper.

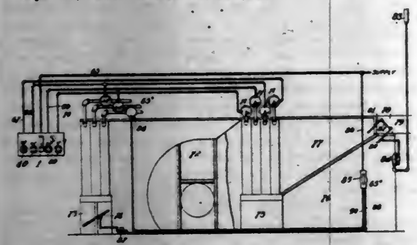
[Claims 6 to 44 not printed in the Gazette.]

961,733. ARC-LAMP. JAMES C. PIPER, Indianapolis, Ind. Filed June 10, 1907. Serial No. 378,267.



In an electric arc lamp, the combination of a guide for the upper carbon, a ring clutch for the carbon located below the guide, a frame vertically slidable on the guide, a rod extending downwardly from said frame and at its lower end pivoted to one side of said clutch ring, a vertical rod pivoted at its lower end to the opposite side of said clutch ring, a lever pivoted at one end to said sliding frame and intermediate its ends to said last mentioned vertical rod, and means controlled by the circuit through the lamp for elevating the outer end of said lever.

961,734. AUTOMATICALLY-REGULATED HEATING SYSTEM. DONALD J. POWERS, New York, N. Y. Filed Sept. 11, 1907. Serial No. 392,266.

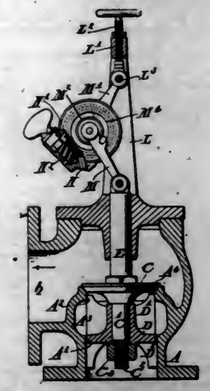


1. In an automatically regulated heating system, the combination of an expansive fluid thermostatic element, motive fluid pressure-varying mechanism controlled by said thermostatic element embodying automatically acting valve mechanism whereby the pressure transmitted therethrough is opposed to, counterbalanced and determined by the variable pressure of the expansive fluid thermostatic element, a series of relays connected in common with the variable pressure side of said pressure varying mechanism and operable at different stages of pressure, valve motors controlled by said several relays, radiators independently and severally controlled by said valve motors, means for circulating air in heat-absorbing proximity to said radiators, a source of unheated air supply leading to the supply of air heated by said radiators, a graduating damper controlling said source of un-heated air, and a thermostat subject to the heat of the air heated by said radiators and arranged to automatically control said graduating damper.

2. In combination with a building to be heated provided with an air heating chamber through which the supply of air enters, a series of radiators arranged in said chamber and corresponding valves controlling the same, a series of valve motors controlling the respective radiator valves and normally tending to open the latter, a series of pneumatically controlled relays operable at different stages of pressure and connected to transmit motive fluid under pressure to said valve motors, an expansive fluid thermostatic element located subject to the outside temperature, a motive fluid pressure-varying mechanism controlled by said thermostatic element to transmit motor fluid under pressure to actuate the several relays, means for impelling and circulating air in heat-absorbing proximity to said radiators, means for admitting un-heated air to the warmed air which has passed the radiators, a thermostat subject to the heat of said warmed air, and automatic damper mechanism controlling the admission of unheated air and itself controlled by said latter thermostat.

3. In combination with a building to be heated provided with an air heating chamber through which the supply of air enters, an air-impeller arranged within said chamber, a plurality of radiators in proximity to which the entering air passes on its way to the impeller, a second series of radiators in proximity to which the air is directed by said impeller, a series of valve motors controlling the several mentioned radiators and normally tending to open the latter, a series of pneumatically controlled relays operable at different stages of pressure and connected to transmit motive fluid under pressure to said valve motors, an expansive fluid thermostatic element located subject to the outside temperature, a motive fluid pressure-varying mechanism controlled by said thermostatic element and itself serving to transmit motor actuating pressures to the several relays, a by-pass for admitting un-heated air past the first set of radiators to said air-impeller, an automatic damper controlling said by-pass, and a thermostat, subject to the heat of the air passing onward from the air-impeller, and operatively connected to control said damper.

961,735. SAFETY-VALVE. LOUIS SCHUTTE, Philadelphia, Pa.; Guarantee Trust & Safe Deposit Co. and Mary D. Schutte, executors of said Louis Schutte, deceased, assignors to Schutte and Koerting Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 18, 1905. Serial No. 241,623.



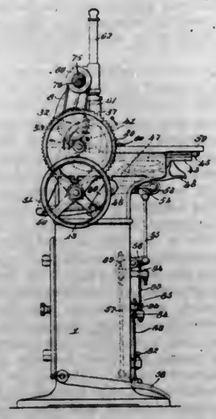
1. A safety valve having in combination, a valve seat having a cylindrical passage situated below it and a laterally expanded chamber between the seat and cylindrical passage, a valve adapted to seat itself on the valve seat, a cylindrical disk dependent from said valve and adapted to make a leaky fit in the cylindrical passage when the valve is seated and to be lifted above and clear of said passage when the valve is open whereby the force tending to hold the valve open increases as the valve moves off its seat and an external loading device for holding the valve closed acting with diminishing force as the valve lifts off its seat.

2. In a safety valve construction, a valve proper, and pressure regulating means for resisting the opening of said valve, said means including an abutment and a pair of links one pivoted at one end to the valve and the other pivoted at one end to said abutment, said links having their adjacent ends pivoted together and their pivotal connections to the valve and abutment separated by a distance substantially greater than the effective length of either link and in a line substantially parallel to the line of movement of the valve and resilient means acting on said links and tending to draw the links into alinement whereby the links act as a toggle tending to hold the valve to its seat.

3. In a safety valve construction, a valve proper, and pressure regulating means for resisting the opening of said valve, said means including an abutment and a pair of links one pivoted at one end to the valve and the other pivoted at one end to said abutment, said links having their adjacent ends pivoted together and their pivotal connections to the valve and abutment separated by a distance substantially greater than the effective length of either link and in a line substantially parallel to the line of movement of the valve and a spring carried by and acting between said links adjacent their common pivotal connection tending to draw the links into alinement whereby the links act as a toggle tending to hold the valve to its seat.

4. In a safety valve construction, a valve proper, and pressure regulating means for resisting the opening of said valve, said means including an abutment and means for adjusting it, and a pair of links, one pivoted at one end to the valve and the other pivoted at one end to said abutment, said links having their adjacent ends pivoted together and their pivotal connections to the valve and abutment separated by a distance substantially greater than the effective length of either link and in a line substantially parallel to the line of movement of the valve and a spring carried by and acting between said links adjacent their common pivotal connection tending to draw the links into alinement whereby the links act as a toggle tending to hold the valve to its seat.

961,736. LEATHER-SKIVING MACHINE. JACOB R. SCOTT, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 5, 1901. Serial No. 77,730.



1. A leather skiving machine, having, in combination, a die roller provided with a die cavity, a pressure device for holding a blank in the die cavity consisting of a plurality of independently yielding members arranged side by side longitudinally of the roller, in close juxtaposition to each other, a skiving knife arranged to act on the blank while held in the die cavity, and feeding means acting continuously on the blank during its entire passage between the die roller and pressure device, substantially as described.

2. A leather skiving machine, having, in combination, a die roller provided with a die cavity, a pressure device for holding a blank in the die cavity consisting of a plurality of independently yielding slides arranged side by side longitudinally of the roller in close juxtaposition to each other, a skiving knife arranged to act on the blank while held in the die cavity, and feeding means acting continuously on the blank during its entire passage between the die roller and pressure device, substantially as described.

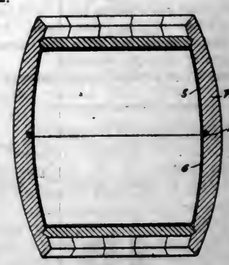
3. A leather skiving machine, having, in combination, a die roller provided with a die cavity, a pressure device for holding a blank in the die cavity, a feed slide acting on the blank during substantially its entire passage between the die roller and pressure device, and means for actuating the feed slide, substantially as described.

4. A leather skiving machine, having, in combination, a die roller provided with a die cavity, a pressure device for holding a blank in the die cavity consisting of a plurality of independently yielding members arranged side by side longitudinally of the roller and coöperating therewith to seat the blank against the bottom of the die cavity, and feeding mechanism acting on the blank during substantially its entire passage between the die roller and pressure device, substantially as described.

5. A leather skiving machine, having, in combination, a die roller provided with a die cavity, a pressure device for holding a blank in the die cavity, a skiving knife, and means for delivering a skived blank from the bite of the die roller and skiving knife, substantially as described.

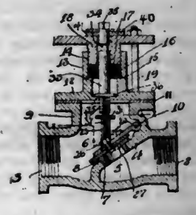
[Claims 6 to 11 not printed in the Gazette.]

961,737. BARREL. GEORGE SHIELDS, Brooklyn, N. Y., assignor, by mesne assignments, to The Glass Enameled Package Co., Westchester county, N. Y., a Corporation of New York. Filed Aug. 26, 1909. Serial No. 514,712.



A receptacle comprising two complemental cup-shaped members provided with outwardly extended flanges, each portion being provided with a vitreous lining extending between the flanges, a flat ring washer of comparatively soft metal interposed and entirely separating the said lined flange portions of the cup members, the outer parts of the flange portions being rolled upon themselves to form a bead and effect a fluid-tight joint of the cup shaped members.

961,738. COMBINED CHECK AND GATE VALVE. JOHN H. STICKEL, Handy Harrisville Station, Pa. Filed Feb. 12, 1910. Serial No. 543,622.



1. A combined check and gate valve comprising a casing provided with a valve seat, a valvular element em-

bodying a hinged plate and a seating disk of a diameter as to project beyond said plate and adapted to engage said valve seat, a valve stem provided with means for locking said valvular element upon its seat, and means cooperating with the valve stem and engaging said seating disk for elevating said valvular element, and means for maintaining the valvular element in an elevated position.

2. A combined check and gate valve comprising a valve casing provided with a valve seat, a valvular element embodying a hinged plate and a seating disk engaging said seat, means for limiting the opening movement of said valvular element, a vertically-movable yoke coöperating with said means for elevating said valvular element, and a lock engaging the said means for maintaining said valvular element in an elevated position.

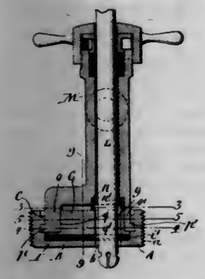
3. A combined check and gate valve comprising a valve casing provided with a valve seat, a valvular element embodying a hinged plate and a seating disk engaging said seat, means for limiting the opening movement of said valvular element, and a vertically-movable yoke coöperating with said means for elevating said valvular element.

4. A combined check and gate valve comprising a valve casing provided with a valve seat, a valvular element embodying a plate and a seating disk connected therewith, means for hinging said plate within said casing, means for locking said valvular element against said seat, and a yoke associating with said means for elevating and retaining said valvular element in an elevated position.

5. A combined check and gate valve comprising a valve casing provided with a valve seat, a valvular element embodying a plate and a seating disk connected therewith, means for hinging said plate within said casing, means for locking said valvular element against said seat, a vertically-movable yoke associating with said means for elevating said valvular element, and means arranged exteriorly of the casing engaging with said means for maintaining the valvular element elevated.

[Claims 6 and 7 not printed in the Gazette.]

961,739. BARREL-TAPPING DEVICE. AUGUSTA M. STOCK, Buffalo, N. Y., assignor to Robert Stock Manufacturing Co., Buffalo, N. Y., a Corporation of New York. Filed Apr. 6, 1909. Serial No. 488,157.



1. A tapping device comprising a valve casing having a head provided with a port on one side of its center, and having circumferential ribs on its bore which are separated at their opposing ends by intervening gaps, and a valve disk rotatable in said casing on the outer side of its head and having a port on one side of its center and provided on its periphery with laterally projecting locking lugs which are adapted to pass through said gaps in assembling the parts and to engage the inner sides of said ribs on one side of said gaps upon turning the disk in one direction and to engage the inner sides of said ribs on the opposite sides of said gaps upon turning the disk in the opposite direction.

2. A tapping device comprising a valve casing having a head provided with a port on one side of its center, and having circumferential ribs on its bore which are separated at their opposing ends by intervening gaps, and a valve disk rotatable in said casing on the outer side of its head and having a port on one side of its center and provided on its periphery with laterally projecting locking lugs which are adapted to pass through said gaps in assembling the parts and to engage the inner sides of said ribs on one side of said gaps upon turning the disk in one direction and to engage the inner sides of said ribs on the opposite sides of said gaps upon turning the disk in the opposite direction, the end portions of the inner sides of said ribs adjacent to said gaps being inclined so that when engaged by said locking lugs the valve disk will be pressed with a wedge action toward said head.

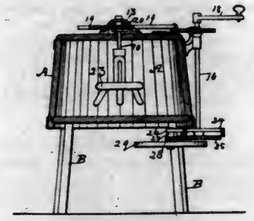
3. A tapping device comprising a valve casing having a head provided with a port on one side of its center, and having circumferential ribs on its bore which are separated at their opposing ends by intervening gaps, and a valve disk rotatable in said casing on the outer side of its head and having a port on one side of its center and provided on its periphery with laterally projecting locking lugs which are adapted to pass through said gaps in assembling the parts and to engage the inner sides of said ribs on one side of said gaps upon turning the disk in one direction and to engage the inner sides of said ribs on the opposite sides of said gaps upon turning the disk in the opposite direction, said casing and disk having coöperating stops for limiting the oscillation of the latter.

4. A tapping device comprising a valve casing having a head provided with a port on one side of its center, and having circumferential ribs on its bore which are separated at their opposing ends by intervening gaps, and a valve disk rotatable in said casing on the outer side of its head and having a port on one side of its center and provided on its periphery with laterally projecting locking lugs which are adapted to pass through said gaps in assembling the parts and to engage the inner sides of said ribs on one side of said gaps upon turning the disk in one direction and to engage the inner sides of said ribs on the opposite sides of said gaps upon turning the disk in the opposite direction, said casing and disk having coöperating stops which arrest the movement of said disk on opposite sides of the position in which its locking lugs register with said gaps.

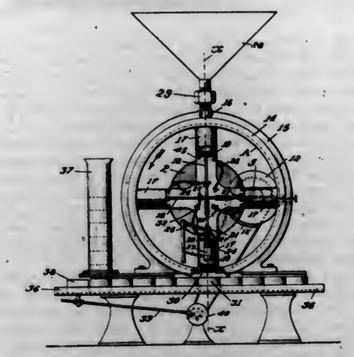
5. A tapping device comprising a valve casing having a head which is provided on one side of its center with a port and having circumferential ribs on its bore which are separated at their opposing ends by intervening gaps, a valve disk rotatable in said casing on the outer side of said head and having a port on one side of its center which is adapted to be moved into and out of register with the port of said head and provided on its periphery with locking lugs adapted to be passed lengthwise through said gaps and engaged with the inner sides of said ribs either on one side or the other of said gaps and also provided on its periphery with coupling recesses which are out of line with the locking lugs of the disk, said casing and disk being provided with coöperating stops which arrest the oscillating movement on opposite sides of the position in which the locking lugs of the disk register with said gaps, and a coupling tube having arms which are adapted to engage with said recesses of the disk and said arms being provided with laterally projecting locking lugs which are adapted to pass through said gaps and engage with the inner sides of said ribs upon turning the disk in the direction for bringing its port into register with the port of said casing head.

961,740. GEARING. VIRGIL A. WHITE, Newton, Iowa; E. C. Ogg, administrator of said White, deceased, assignor to Sarah J. White, Newton, Iowa. Filed July 26, 1909. Serial No. 510,156.

A gearing for a washing machine comprising a central heater shaft, a gear wheel on said shaft, a rack, a second gear wheel to which said rack is eccentrically connected, a second vertical shaft at the side of the machine upon which said second gear wheel is mounted, a third shaft, a pinion on said third shaft and meshing with said second gear wheel, a handle on said third shaft, and a balance wheel geared to said third shaft whereby impetus of the shaft is maintained.



961,741. MEASURING AND FILLING MACHINE. ROBERT J. WORKMAN, San Francisco, Cal., assignor of one-third to Noah W. Workman, San Francisco, Cal. Filed May 18, 1909. Serial No. 496,808.



1. A filling machine comprising an intermittently rotatable carrier having filling chambers therein, plungers in said chambers forming bottoms therefor, means connecting opposed plungers, the outer ends of the chambers open with a fixed segmental closure for said chambers, means for rotating the carrier, and means for operating the opposed plungers synchronously therewith, said plunger operating means being adjustable.

2. A filling machine comprising an intermittently rotatable carrier having filling chambers therein, plungers in said chambers forming bottoms therefor, means connecting opposed plungers, the outer ends of the chambers open with a fixed segmental closure for said chambers, means for rotating the carrier, and means for operating the opposed plungers synchronously therewith, said operating means for the plungers comprising a reciprocating device mounted independently of the carrier, with means on the carrier for positioning said device to engage the plungers to move them.

3. In a filling machine, the combination of an intermittently movable carrier having peripheral pockets, plungers in the pockets, means connecting opposed plungers so that they move in unison, a fixed segmental rim engaging the periphery of the carrier to close the pockets, means for operating the plungers, said last named means including a roller member yieldingly supported independent of the carrier, means carried by the carrier for lifting said roller member, and means for causing it to act on a plunger when released from said lifting means.

4. In a filling machine, the combination of an intermittently movable carrier having peripheral pockets, plungers in the pockets, means connecting opposed plungers so that they move in unison, a fixed segmental rim engaging the periphery of the carrier to close the pockets, means for operating the plungers, said last named means including a yieldingly supported member mounted independent of the carrier, and track members on the carrier engageable with said member.

5. In a filling machine, the combination of an intermittently movable carrier having peripheral pockets, plungers in the pockets, means connecting opposed plungers so that they move in unison, a fixed segmental rim engaging the periphery of the carrier to close the pockets, means for operating the plungers, said last named means including a rockable spring-actuated, reciprocating rod carrying a roller, tracks on the carrier engaging the roller to reciprocate the rod in one direction, and means connected with the plungers engageable by the roller when the latter is released from said tracks.

[Claim 6 not printed in the Gazette.]

961,742. TYPE-SETTING MACHINE FOR VARIOUS SIZES OF TYPE. CHRISTIAN A. ALBRECHT, Baltimore, Md., and LEOPOLD LEIDENBERG, Berlin, Germany. Filed Feb. 6, 1909. Serial No. 476,462.



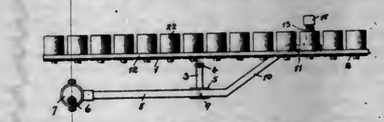
1. A matrix composing mechanism, comprising inclined converging guides having their lower ends arranged in four vertical tiers; in combination with the matrices suspended from the various guides, all of said matrices arranged to pass as to their body portions between two of said tiers.

2. In a matrix assembling mechanism, a series of inclined converging guides arranged at their lower ends in three or more vertical parallel tiers; in combination with matrices having their upper ends mounted to travel on the respective guides and offset in such manner that the bodies of all matrices may pass between two of the parallel tiers.

3. In a machine of the class described, inclined, converging guides, having their lower ends arranged in plural vertical tiers, in combination with matrices having their lower ends adapted for assemblage in a common line and their upper ends offset different distances to embrace guides of the respective tiers, substantially as described and shown.

4. In combination with a series of guides arranged in parallel, vertical tiers, a series of matrices adapted to be assembled in a common line between two of said tiers, their upper ends being offset laterally different distances to embrace guides of the different series.

961,743. MACHINE FOR SOLDERING THE CAP ENDS OF CANS. CHARLES H. AYARS, Salem, N. J., assignor to Ayars Machine Company, Salem, N. J., a Corporation of New Jersey. Filed Oct. 27, 1909. Serial No. 524,781.



1. The combination with means to move the cans, of a soldering iron, a solder support and means for moving the

iron and solder support in one direction with the cans and then reverse the movement of both iron and solder support to meet other cans.

2. The combination with means to move the cans forward, of a soldering iron; a solder guide having a fixed relation to the iron and means for moving both iron and guide forward with the cans during the soldering operation and then moving both the iron and guide backward to meet other cans.

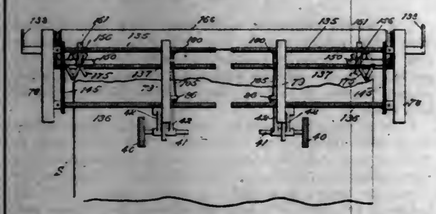
3. The combination with means to move the cans, of a soldering iron; a solder guide adjacent the iron; means for feeding solder to the guide; means for moving the iron and solder guide in one direction with the cans and means for raising the iron and solder guide from the cans and returning them to meet other cans.

4. The combination with means to move cans, of a soldering iron maintained in a pendent position above the can-moving means; a solder guide adjacent the iron and means for moving the pendent iron and solder guide in a straight line with the cans and return them to meet other cans.

5. The combination with means to move the cans in a row, of a soldering iron sustained in a pendent position above the can-moving means; a solder guide tube extending toward the iron; means for feeding the solder through said tube, and means for reciprocating the tube and iron back and forth above the can-moving means.

[Claims 6 to 18 not printed in the Gazette.]

961,744. PAPER-FEEDING MACHINE. TALBOT C. DEXTER, Pearl River, N. Y., assignor to Dexter Folder Company, Pearl River, N. Y., a Corporation of New York. Original application filed July 6, 1908, Serial No. 442,114. Divided and this application filed Sept. 9, 1908. Serial No. 452,311.



1. In a paper feeding machine, the combination of a main frame, a support for sheets, two auxiliary frames or saddles mounted within said main frame above the sheet support, sheet feeding devices mounted upon each of said auxiliary frames or saddles, and independent adjusting screws journaled in the main frame and engaging said auxiliary frames or saddles respectively for adjusting them independently transversely of the machine.

2. In a paper feeding machine, the combination of a main frame, a sheet support, two auxiliary frames or saddles mounted within the main frame above the sheet support, sheet feeding devices carried by each of said auxiliary frames or saddles, two sets of adjusting screws journaled in said main frame and extending transversely and one set engaging each of said auxiliary frames or saddles, and means for operating said screws for adjusting said auxiliary frames or saddles transversely of the machine.

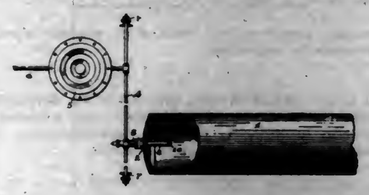
3. In a paper feeding machine, the combination of a main frame, a sheet support, sheet feeding and controlling devices adjustably mounted in said main frame, sheet delivery rollers adjustable transversely of the machine, a plurality of transversely arranged adjusting screws journaled in said main frame, gearing between said screws arranged to operate them in unison, and means engaged by said screws connected with said feeding and controlling devices and delivery rollers, whereby all of said parts may be simultaneously adjusted.

4. In a paper feeding machine, the combination of a plurality of sheet moving instruments, a series of lazy tong levers having independeat connections with said sheet moving instruments, and means for operating said lazy tong levers.

5. In a paper feeding machine, the combination of two series of sheet moving instruments, two series of lazy tong levers having independent connections with said sheet moving instruments, and means for operating said lazy tong levers.

[Claims 6 to 19 not printed in the Gazette.]

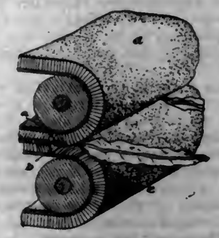
961,745. GAS-SUPPLY SYSTEM. HARRY D. DONNELL, Berkeley, Cal., assignor to The Safety Car Heating and Lighting Co., New York, N. Y., a Corporation of New Jersey. Filed July 13, 1908. Serial No. 443,230.



1. In a gas-supply system, the combination of a holder for gas under pressure, an outlet pipe therefrom; a regulator in connection with said outlet pipe, to reduce the pressure; an outlet from said regulator to the point of gas consumption; a bushing fitted into the holder, and connecting exteriorly with the outlet pipe said bushing extending into the holder; a valve exposed within the holder, coacting with the inner end of the bushing and open under the normal flow of the gas through the regulator, said valve having a stem playing in the bushing; and a resistance shoulder on said stem within the bushing to effect the seating of the valve against the inner end of the bushing in case of a break in the outlet pipe between the holder and regulator.

2. In a gas-supply system, and in combination with the holder containing the gas under pressure, and the outlet connection therefrom, having an extension projecting into the holder with a valve seat at its inner end, a normally-open valve arranged to seat upon and close the inner end of said outlet connection within the holder, said valve having a stem playing in said connection, and a resistance shoulder on said stem within said connection, adapted under the velocity of the escaping gas, in case of a break in said outlet connection, to pull said valve to its seat.

961,746. METHOD OF STEMMING TOBACCO-LEAVES. JOHN O. MORRIS, Washington, D. C., assignor, by mesne assignments, to National Tobacco Stemming Machine Company, Baltimore, Md., a Corporation of Delaware. Original application filed Nov. 5, 1907, Serial No. 400,873. Divided and this application filed June 20, 1908. Serial No. 439,554.



The herein described method of stemming tobacco leaves, which consists in subjecting the leaves to a stripping movement in a stripping plane longitudinally of the leaf stem, and butt end foremost, against a plurality of closely arranged flexible teeth, and preventing any stripping action transversely across the stripping plane, during the stripping movement.

961,747. JACK FOR SHOE-MACHINES. ERASTUS E. WINKLEY, Lynn, Mass. Original application filed Oct. 8, 1896, Serial No. 608,215. Divided and this application filed Jan. 17, 1901. Serial No. 43,592.



1. A shoe supporting jack, having, in combination, a vertically movable toe support means to actuate the same comprising a rack and a pinion engaging said rack mounted upon, and rotating with, a longitudinally sliding shaft, and means actuated by the longitudinal movement of the shaft for locking the pinion from rotation, substantially as described.

2. A shoe supporting jack, having, in combination, a vertically movable toe support, means to actuate the toe support comprising a rack and a pinion, and a clutch for locking the pinion from rotation to prevent vertical movement of the toe support, substantially as described.

3. A shoe supporting jack, having, in combination, a vertically movable toe support, a rack and pinion for actuating said toe support, a clutch for controlling the rotation of said pinion, and means acting normally to actuate said clutch to hold the pinion from rotation and prevent vertical movement of the toe support, substantially as described.

4. A shoe supporting jack, having, in combination, a vertically movable toe support, means to actuate the toe support comprising a rack and pinion, means for locking the toe support in adjusted position, and means for unlocking the toe support and for rotating the pinion, substantially as described.

5. A shoe supporting jack, having in combination, a vertically movable toe support, means to actuate the toe support comprising a rack and pinion, a device for locking the pinion and a common actuating means for actuating said device to unlock the pinion and for rotating the pinion, substantially as described.

REISSUES.

13,121. AZO DYE. OSCAR GÜNTHER and LEOPOLD HESSE, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Dec. 10, 1909. Serial No. 532,506. Original No. 921,105, dated May 11, 1909, Serial No. 477,285.

1. The herein described azo dyestuffs, obtainable from para-nitranilin-ortho-sulfonic acid and naphthalene compounds of the above given formula, which dyestuffs are, after being dried and pulverized in the shape of their alkaline salts dark powders soluble in water generally with a red to violet color; yielding upon reduction with stannous chlorid and hydrochloric acid para-phenylene-diamin-sulfonic acid and diaminonaphthalenes having the above given formula; and dyeing wool from reddish-violet to blue shades, substantially as described.

2. The herein-described new azo dyestuff obtainable from para-nitranilin-ortho-sulfonic acid and beta-ethylnaphthylamin, which dyestuff is, after being dried and pulverized in the shape of its sodium salt a black-brown powder soluble in water with a violet color and soluble in concentrated sulfuric acid with an orange color; yielding upon reduction with stannous chlorid and hydro-chloric acid para-phenylenediamin-sulfonic acid and 1-amino-2-ethylaminonaphthalene; and dyeing wool bluish-violet shades fast to light and to washing, substantially as described.

13,122. AZO DYE. OSCAR GÜNTHER and LEOPOLD HESSE, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Dec. 10, 1909. Serial No. 532,507. Original No. 921,239, dated May 11, 1909, Serial No. 477,284.

1. The herein-described new azo dyestuffs, obtainable from para-nitranilin-ortho-sulfonic acid and naphthalene compounds of the above-given formula in acid solution, which dyestuffs are, after being dried and pulverized in the shape of their alkaline salts dark powders soluble in water generally with a red to violet color; yielding upon reduction with stannous chlorid and hydrochloric acid para-phenylenediamin-sulfonic acid and diamino-naphthols having the above-given formula; and dyeing wool from violet to black shades, substantially as described.

2. The herein-described new azo dyestuff, obtainable from para-nitranilin-ortho-sulfonic acid and 2.8-amino-naphthol-6-sulfonic acid in acid solution, which dyestuff is, after being dried and pulverised in the shape of its sodium salt a reddish-brown powder soluble in water with a reddish-violet color and soluble in concentrated sulfuric acid with an orange color; yielding upon reduction with stannous chlorid and hydrochloric acid para-phenylenediamin-sulfonic acid and 1.2-diamino-8-naphthol-6-sulfonic acid; and dyeing wool reddish-violet shades fast to light and to washing, substantially as described.

DESIGNS.

40,725. TUREEN OR SIMILAR ARTICLE. HENRY CREANGE, New York, N. Y. Filed Apr. 16, 1910. Serial No. 555,978. Term of patent 7 years.



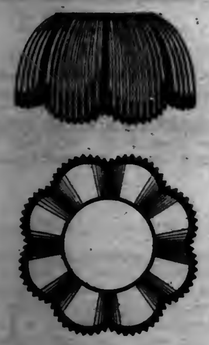
The ornamental design for a tureen or similar article, as shown.

40,726. DISH OR SIMILAR ARTICLE. HENRY CREANGE, New York, N. Y. Filed Apr. 16, 1910. Serial No. 555,980. Term of patent 7 years.



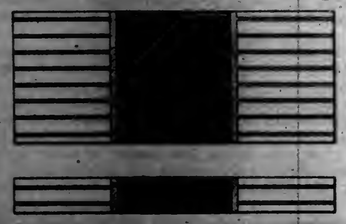
The ornamental design for a dish or similar article, as shown.

40,727. LAMP SHADE OR REFLECTOR. JACOB KAPPLER, Philadelphia, Pa., assignor to Gill and Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 4, 1910. Serial No. 547,275. Term of patent 7 years.



The ornamental design for a lamp shade or reflector, as shown.

40,728. CARTON. LEO HIRSCHFELD, New York, N. Y., assignor to The Firm of Stern & Saalberg Company. Filed Apr. 18, 1910. Serial No. 556,276. Term of patent 7 years.



The ornamental design for a carton, as shown.

40,729. HANDLE-PLATE FOR CASKETS. FRANCIS K. ALLEN, Springfield, Ohio, assignor to The Springfield Metallic Casket Company, Springfield, Ohio, a Corporation of Ohio. Filed Apr. 2, 1910. Serial No. 553,155. Term of patent 7 years.



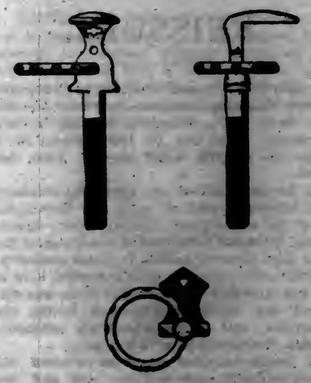
The ornamental design for a handle plate for caskets, as shown.

40,730. NAME-PLATE FOR CASKETS. FRANCIS K. ALLEN, Springfield, Ohio, assignor to The Springfield Metallic Casket Company, Springfield, Ohio, a Corporation of Ohio. Filed Apr. 2, 1910. Serial No. 553,158. Term of patent 7 years.



The ornamental design for a name plate for caskets, as shown.

40,731. WHIFFLETREE-RING SCREW. JACOB S. HIRSCHMAN, Straasstown, Pa. Filed Apr. 18, 1910. Serial No. 556,275. Term of patent 7 years.



The ornamental design for a whiffletree ring screw, as shown.

40,732. STOVE. WILLIAM L. BERTRAM, Detroit, Mich., assignor to Belleville Stove & Range Company, Belleville, Ill., a Corporation of Illinois. Filed Apr. 4, 1910. Serial No. 553,446. Term of patent 7 years.



The ornamental design for a stove, as shown.

40,733. STOVE. WILLIAM L. BERTRAM, Detroit, Mich., assignor to Belleville Stove & Range Company, Belleville, Ill., a Corporation of Illinois. Filed Apr. 4, 1910. Serial No. 553,447. Term of patent 7 years.



The ornamental design for a stove, as shown.

TRADE-MARKS

PUBLISHED JUNE 14, 1910.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 27,168. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PETER C. LARKIN, Toronto, Canada. Filed May 6, 1907.

'SALADA'

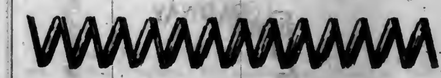
Particular description of goods.—Tea.

Ser. No. 32,521. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHS. CONRADSEN, A/S, Stavanger, Norway. Filed Feb. 1, 1908.



Particular description of goods.—Canned Anchovies and Sardines.

Ser. No. 38,742. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE GIBFORD-WEIFFENBACH COMPANY, Adrian, Mich. Filed Nov. 18, 1908.



Particular description of goods.—Razor-Strops.

Ser. No. 39,532. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE FINSBURY DISTILLERY CO., London, England. Filed Dec. 26, 1908.



The border around the mark and the border around the central panel is gold-colored. The background of the central panel is green, as are also the scrollwork and crest.

Particular description of goods.—Lime-Juice Cordial Free from Spirit.

Ser. No. 39,777. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CALIFORNIA FRUIT CANNERS ASSOCIATION, San Francisco, Cal. Filed Jan. 7, 1909. Used ten years.



Particular description of goods.—Raisins.

Ser. No. 40,904. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JULIUS M. REINHARDT, Larned, Kans. Filed Mar. 3, 1909.



JULIUS REINHARDT.

Consists of my name and portrait.

Particular description of goods.—A Remedy for Diseases of the Blood, and Sprains, Corns, and Warts.

Ser. No. 43,847. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AUSTIN, NICHOLS & CO., New York, N. Y. Filed July 28, 1909.

BROADWAY

Particular description of goods.—Blended Coffee.

Ser. No. 45,760. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE UNIVERSAL TWEEZER CO., Stockton, Cal. Filed Nov. 8, 1909.



Particular description of goods.—Tweezers.

Ser. No. 45,771. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TURTLE CUP LIMITED, London, England. Filed Nov. 8, 1909.



Particular description of goods.—Turtle-Soup.

Ser. No. 45,792. (CLASS 39. CLOTHING.) THE OHIO GARMENT COMPANY, Springfield, Ohio. Filed Nov. 10, 1909.

VICTOR

Particular description of goods.—Work-Shirts, Overalls, Textile Jackets, and Textile Jumpers.

Ser. No. 45,835. (CLASS 37. PAPER AND STATIONERY.) CROWN-COLUMBIA PULP AND PAPER CO., San Francisco, Cal. Filed Nov. 11, 1909.



Particular description of goods.—Wrapping-Paper.

Ser. No. 45,926. (CLASS 38. PRINTS AND PUBLICATIONS.) FREDERICK MARRIOTT, San Francisco, Cal. Filed Nov. 16, 1909.

Overland Monthly

Particular description of goods.—Monthly Magazines.

Ser. No. 46,349. (CLASS 32. FURNITURE AND UPHOLSTERY.) U. S. BEDDING COMPANY, Memphis, Tenn. Filed Dec. 8, 1909.



Particular description of goods.—Mattresses.

Ser. No. 46,511. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JUDSON GROCER COMPANY, Grand Rapids, Mich. Filed Dec. 15, 1909.



Particular description of goods.—Tea, Blended Coffee, and Mince-Meat.

Ser. No. 46,512. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JUDSON GROCER COMPANY, Grand Rapids, Mich. Filed Dec. 15, 1909. Used ten years.

PEERLESS

Particular description of goods.—Tea, Corn-Starch, Mince-Meat, and Lard.

Ser. No. 46,825. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS HEISTER, Cincinnati, Ohio. Filed Dec. 31, 1909.

Hypules

Particular description of goods.—Hypodermic Injections.

Ser. No. 46,959. (CLASS 39. CLOTHING.) L. HERZOG & BROTHERS DRY GOODS COMPANY, St. Louis, Mo. Filed Jan. 7, 1910.



Particular description of goods.—Men's Half-Hose, Infants' Hose, Ladies' Hose, Children's Hose, Undershirts, Union Suits, Drawers, Ladies' Vests, Sweater-Coats, Toques, Hoods, Gloves, and Ladies' Knit Mittens.

Ser. No. 47,039. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FIRST TEXAS CHEMICAL MANUFACTURING CO., Dallas, Tex. Filed Jan. 10, 1910.



In which a portrait of Mr. J. S. Keene is shown.

Particular description of goods.—Syrup of Senna and Pepsin.

Ser. No. 47,269. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) TH. GOLDSCHMIDT, Essen-on-the-Ruhr, Germany. Filed Jan. 20, 1910.

KOSMOS

Particular description of goods.—Tin.

Ser. No. 47,298. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BACORN COMPANY, Elmira, N. Y. Filed Jan. 22, 1910.



Particular description of goods.—Perfumes, Toilet Waters, Sachet-Powders, Bay-Rum, Egg-Shampoo, Cold-Cream, Massage-Cream, Hair-Tonic, Glycerin, Witch-Hazel, Smelling-Salts, Spirits of Camphor, Talcum Powder, Ammonia, and Jamaica Ginger.

Ser. No. 47,349. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MARMITE FOOD EXTRACT CO., LIMITED, London, England. Filed Jan. 25, 1910.



Particular description of goods.—A Concentrated Preparation, Being an Extract of Yeast for Human Food.

Ser. No. 47,481. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) W. H. BUDL MEDICINE COMPANY, St. Louis, Mo. Filed Jan. 31, 1910. Used ten years.

PETERS'

Particular description of goods.—Medicinal Tablets for Headache and Fever.

Ser. No. 47,518. (CLASS 38. PRINTS AND PUBLICATIONS.) THE EPITOMIST PUBLISHING CO., Spencer, Ind. Filed Feb. 1, 1910. Used ten years.

AGRICULTURAL EPITOMIST

Particular description of goods.—Monthly Magazines.

Ser. No. 47,863. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRAND ISLE FRUIT COMPANY, South Hero, Vt. Filed Feb. 17, 1910.

SUNSHINE

Particular description of goods.—Fresh Apples.

Ser. No. 47,928. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WILLIAM B. HOUGH COMPANY, Chicago, Ill. Filed Feb. 19, 1910.

M/B

Particular description of goods.—Concrete-Mixers, Concrete-Hoists, Cableways Consisting of an Overhead Cable and a Carrier Traveling Thereon, Hoisting-Engines, Conveyers of the Endless-Chain and Bucket Type, and Digging-Machines.

Ser. No. 48,097. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN A. BAKER, Fort Worth, Tex. Filed Mar. 1, 1910.



Consisting of a portrait of Leona Burton.

Particular description of goods.—A Medicinal Preparation for Treating the Hair and the Scalp and for a Cream for Treating the Skin.

Ser. No. 48,152. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. D. NICHOLS, Hamilton, Mont. Filed Mar. 3, 1910.



No claim being made to the word "Under-Seal."

Particular description of goods.—Fresh Fruits and Vegetables.

Ser. No. 48,181. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE STANLEY WORKS, New Britain, Conn. Filed Mar. 4, 1910. Used ten years.

823

Particular description of goods.—Wrought-Steel Butt-Hinges.

Ser. No. 48,195. (CLASS 39. CLOTHING.) LESTER SINSHEIMER, New York, N. Y. Filed Mar. 4, 1910.

Steeltex

Particular description of goods.—Knit Underwear, Undershirts, Drawers, Union Suits, and Hosiery.

Ser. No. 48,385. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE ATLANTIC REFINING CO., Cleveland, Ohio. Filed Mar. 14, 1910.

Arco Kid

Particular description of goods.—Metal-Polish.

Ser. No. 48,604. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) AUGUST MOLL MFG. CO., New York, N. Y. Filed Mar. 22, 1910.

BEAVER TAIL

Particular description of goods.—Braid.

Ser. No. 48,657. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE FATHER MORRISCY MEDICINE COMPANY LIMITED, Chatham, Canada. Filed Mar. 25, 1910.



Being a facsimile of the signature and portrait of Father William Morriscy, deceased.

Particular description of goods.—Medicines for Use in the Treatment of Dyspepsia, Heartburn, and All Forms of Stomach Troubles, for Rheumatism, and All Kidney and Bladder Troubles.

Ser. No. 48,883. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DANIEL J. MAHLER, East Providence, R. I. Filed Apr. 7, 1910.



The pictures shown being fanciful.

Particular description of goods.—Shaving-Creams.

Ser. No. 48,984. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RALPH GOLDSMITH, New Orleans, La. Filed Apr. 9, 1910.



Particular description of goods.—Rice.

Ser. No. 48,985. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RALPH GOLDSMITH, New Orleans, La. Filed Apr. 9, 1910.



Particular description of goods.—Rice.

Ser. No. 49,015. (CLASS 27. HOROLOGICAL INSTRUMENTS.) GEORGES DUCOMMUN, Le Locle, Switzerland. Filed Apr. 11, 1910.

DOXA

Particular description of goods.—Watches, Watch-Movements, Watch-Dials, and Watchcases.

Ser. No. 49,230. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE ATLANTIC REFINING CO., Cleveland, Ohio. Filed Apr. 21, 1910.

ARCO

Particular description of goods.—Polishes for Metal and Wood, and Leather-Dressings.

Ser. No. 49,282. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOLT & COMPANY, New York, N. Y. Filed Apr. 25, 1910.

NOBREZA

Particular description of goods.—Wheat-Flour.

Ser. No. 49,290. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATHAN BLAUSTEIN, Baltimore, Md. Filed Apr. 25, 1910.



Particular description of goods.—Tea.

Ser. No. 49,333. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) SHEFFIELD CAR CO., Three Rivers, Mich. Filed Apr. 27, 1910. Used ten years.

SHEFFIELD

Particular description of goods.—Railway Hand-Cars, Railway Dump-Cars, Railway Push-Cars, Railway Logging-Cars, Railway Mining-Cars, Railway Flat-Cars, Tram-Cars, Railway Velocipede-Cars, Railway Passenger-Cars, and Railway Motor-Cars.

Ser. No. 49,346. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) RISLER & CIE., Freiburg, Baden, Germany. Filed Apr. 28, 1910.



Particular description of goods.—Porcelain Buttons and Beads.

Ser. No. 49,354. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. H. FOOTE & CO., Baltimore, Md. Filed Apr. 28, 1910.

XCL

Particular description of goods.—Eggs.

Ser. No. 49,382. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) GUTMANN & COMPANY, Chicago, Ill. Filed Apr. 29, 1910.

"W W P"

Particular description of goods.—Chrome Sole-Leather

Ser. No. 49,391. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE DRY MILK COMPANY, New York, N. Y. Filed Apr. 29, 1910.

KINDOLAC

Particular description of goods.—Desiccated Milk.

Ser. No. 49,394. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ALBERT ROREN, Providence, R. I. Filed Apr. 30, 1910.



Particular description of goods.—A Combination Pipe, Monkey, and Ratchet Wrench.

Ser. No. 49,400. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. L. RUFFE, Grand Rapids, Mich. Filed Apr. 30, 1910.

ZOROLINE

Particular description of goods.—A Remedy for All Germ and Blood Diseases, Catarrh, Rheumatism, Skin Diseases, and All Digestive and Nutritive Derangements.

Ser. No. 49,470. (CLASS 2. RECEPTACLES.) UNITED STATES PAPER BOTTLE COMPANY, INC., Hartford, Conn. Filed May 2, 1910.

HOMOPEL

Particular description of goods.—Paper Bottles, Cups, and Cartons.

Ser. No. 49,491. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALBERT ARTHUR WOHL, Centerville Station, N. Y. Filed May 4, 1910.



Particular description of goods.—Vaginal Suppositories.

Ser. No. 49,498. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DANKER & MARSTON, Boston, Mass. Filed May 4, 1910.

DM

Particular description of goods.—Alkalies, Acids, Bleaching-Powders, Dyestuffs, Anilin Colors, Reducing Agents, Starches, Gums, and Softeners for the Treatment of Textile Fabrics.

Ser. No. 49,512. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) POULTRY DUST BATH COMPANY, Whiting, Ind. Filed May 4, 1910.

DUSTYNE

Particular description of goods.—Germicides, Disinfectants, and Vermin-Exterminators.

Ser. No. 49,514. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) GEORGE B. DEXTER, Brookline, Mass. Filed May 3, 1910.

NAPARISA

Particular description of goods.—Clothes-Brushes.

Ser. No. 49,519. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE NATIONAL CASH REGISTER COMPANY, Dayton, Ohio. Filed May 5, 1910.

UNIVERSAL

Particular description of goods.—Cash-Registers, Autographic Registers, Credit-Registers, and Their Parts.

Ser. No. 49,523. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed May 5, 1910.

ARTURA

Particular description of goods.—Photographic Paper.

Ser. No. 49,524. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed May 5, 1910.



Particular description of goods.—Photographic Paper.

Ser. No. 49,544. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HERMANN BENSMANN, Bremen, Germany. Filed May 6, 1910.

Floridin

Particular description of goods.—A Mineral Powder for Decolorizing Oil.

Ser. No. 49,611. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) AMERICAN PIN CO., Waterbury, Conn. Filed May 9, 1910.

EUREKA

Particular description of goods.—Safety-Pins.

Ser. No. 49,631. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) VALENTINE & COMPANY, New York, N. Y. Filed May 10, 1910.



Particular description of goods.—Varnish.

Ser. No. 49,654. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROLLIE E. HARDIN, Blacksburg, S. C. Filed May 11, 1910.



Particular description of goods.—Remedy for Piles.

Ser. No. 49,687. (CLASS 43. THREAD AND YARN.) BERNHARD ULMANN & Co., New York, N. Y. Filed May 13, 1910.

SOLITAIRE



Particular description of goods.—Mercerized Cotton, Silk, and Artificial-Silk Yarns of Every Description.

Ser. No. 49,859. (CLASS 37. PAPER AND STATIONERY. EAGLE PENCIL COMPANY, New York, N. Y. Filed May 21, 1910.

Arrow

Particular description of goods.—Penholders.

Ser. No. 49,391. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE DRY MILK COMPANY, New York, N. Y. Filed Apr. 29, 1910.

KINDOLAC

Particular description of goods.—Desiccated Milk.

Ser. No. 49,394. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ALBERT ROSEN, Providence, R. I. Filed Apr. 30, 1910.



Particular description of goods.—A Combination Pipe, Monkey, and Ratchet Wrench.

Ser. No. 49,400. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. L. RUFFE, Grand Rapids, Mich. Filed Apr. 30, 1910.

ZOROLINE

Particular description of goods.—A Remedy for All Germ and Blood Diseases, Catarrh, Rheumatism, Skin Diseases, and All Digestive and Nutritive Derangements.

Ser. No. 49,470. (CLASS 2. RECEPTACLES.) UNITED STATES PAPER BOTTLE COMPANY, INC., Hartford, Conn. Filed May 2, 1910.

HOMOPEL

Particular description of goods.—Paper Bottles, Cups, and Cartons.

Ser. No. 49,491. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALBERT ARTHUR WOHL, Centerville Station, N. Y. Filed May 4, 1910.



Particular description of goods.—Vaginal Suppositories.

Ser. No. 49,498. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DANKER & MARSTON, Boston, Mass. Filed May 4, 1910.

D AND M

Particular description of goods.—Alkalies, Acids, Bleaching-Powders, Dyestuffs, Anilin Colors, Reducing Agents, Starches, Gums, and Softeners for the Treatment of Textile Fabrics.

Ser. No. 49,512. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) POULTRY DUST BATH COMPANY, Whiting, Ind. Filed May 4, 1910.

DUSTYNE

Particular description of goods.—Germicides, Disinfectants, and Vermin-Exterminators.

Ser. No. 49,514. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) GEORGE B. DEXTER, Brookline, Mass. Filed May 3, 1910.

NAPARISA

Particular description of goods.—Clothes-Brushes.

Ser. No. 49,519. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE NATIONAL CASH REGISTER COMPANY, Dayton, Ohio. Filed May 5, 1910.

UNIVERSAL

Particular description of goods.—Cash-Registers, Autographic Registers, Credit-Registers, and Their Parts.

Ser. No. 49,523. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed May 5, 1910.

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Particular description of goods.—Photographic Paper.

Ser. No. 49,524. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed May 5, 1910.



Particular description of goods.—Photographic Paper.

Ser. No. 49,544. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HERMANN BENSMANN, Bremen, Germany. Filed May 6, 1910.

Floridin

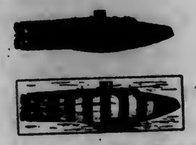
Particular description of goods.—A Mineral Powder for Decolorising Oil.

Ser. No. 49,611. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) AMERICAN PIN CO., Waterbury, Conn. Filed May 9, 1910.

EUREKA

Particular description of goods.—Safety-Pins.

Ser. No. 49,631. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) VALENTINE & COMPANY, New York, N. Y. Filed May 10, 1910.



Particular description of goods.—Varnish.

Ser. No. 49,654. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROLLIE E. HARDIN, Blacksburg, S. C. Filed May 11, 1910.



Particular description of goods.—Remedy for Piles.

Ser. No. 49,687. (CLASS 43. THREAD AND YARN.) BERNHARD ULMANN & Co., New York, N. Y. Filed May 13, 1910.

SOLITAIRE



Particular description of goods.—Mercerised Cotton, Silk, and Artificial-Silk Yarns of Every Description.

Ser. No. 49,859. (CLASS 37. PAPER AND STATIONERY. EAGLE PENCIL COMPANY, New York, N. Y. Filed May 21, 1910.

Arrow

Particular description of goods.—Penholders.

TRADE-MARKS

REGISTERED JUNE 14, 1910.

78,390. DOLLS. Aetna Doll and Toy Company, New York, N. Y.
Filed March 11, 1910. Serial No. 48,347. PUBLISHED APRIL 12, 1910.

78,391. TOILET POWDER. Robert A. Anderson, Fort Worth, Tex.
Filed October 30, 1909. Serial No. 45,630. PUBLISHED APRIL 12, 1910.

78,392. CIGARETTES. Autolite Manufacturing Company, Newark, N. J.
Filed March 16, 1910. Serial No. 48,459. PUBLISHED APRIL 12, 1910.

78,393. BRUSHES OF ALL KINDS. The Baltimore Brush Co., Baltimore, Md.
Filed March 19, 1910. Serial No. 48,553. PUBLISHED APRIL 12, 1910.

78,394. MATTRESSES AND CUSHIONS. G. W. Bent Co., Boston, Mass.
Filed December 24, 1909. Serial No. 46,718. PUBLISHED APRIL 12, 1910.

78,395. PREPARATION OF MALT EXTRACT WITH OTHER INGREDIENTS. The Biomedic Company, New York, N. Y.
Filed January 10, 1910. Serial No. 47,029. PUBLISHED APRIL 12, 1910.

78,396. ROLLED OATS, CORN-STARCH, BEANS, AND RICE. John Blaul's Sons Company, Burlington, Iowa.
Filed June 25, 1907. Serial No. 28,371. PUBLISHED JUNE 23, 1908.

78,397. REMEDY FOR BLOOD-POISONING IN COLTS. T. B. Bowman, Boone, Nebr.
Filed August 18, 1908. Serial No. 36,707. PUBLISHED SEPTEMBER 21, 1909.

78,398. BLENDED WHISKY. Francis W. Bradley, San Diego, Cal.
Filed February 2, 1910. Serial No. 47,538. PUBLISHED APRIL 12, 1910.

78,399. FOUNTAIN-BRUSHES. Cardinet Fountain Brush Co., Oakland, Cal.
Filed March 16, 1910. Serial No. 48,498. PUBLISHED APRIL 12, 1910.

78,400. CERTAIN PRECIOUS OR PLATED METAL ARTICLES. W. G. Clark & Co., North Attleboro, Mass.
Filed February 26, 1910. Serial No. 48,028. PUBLISHED APRIL 12, 1910.

78,401. BAKING-POWDER, AMMONIA, BICARBONATE OF SODA, CREAM OF TARTAR, AND BLUING. Closset & Devers, Portland, Oreg.
Filed December 10, 1909. Serial No. 46,438. PUBLISHED APRIL 12, 1910.

78,402. COTTON SHIRTINGS. Cone Export and Commission Company, New York, N. Y., and Greensboro, N. C.
Filed March 2, 1910. Serial No. 48,123. PUBLISHED APRIL 12, 1910.

78,403. COMPOUND OF CORN AND SORGHUM SYRUP. Corn Products Refining Company, Jersey City, N. J., and New York, N. Y.
Filed December 23, 1909. Serial No. 46,698. PUBLISHED APRIL 12, 1910.

78,404. TOOTH, NAIL, FLESH, BATH, HAND, AND HAIR BRUSHES. The Davis Chemical Company, Denver, Colo.
Filed February 3, 1910. Serial No. 47,575. PUBLISHED APRIL 12, 1910.

78,405. CANNED SARDINES. De Long Seaman Co., Boston, Mass.
Filed January 15, 1910. Serial No. 47,146. PUBLISHED APRIL 12, 1910.

78,406. WHITE LEAD. Eclipse White Lead and Color Company, Brooklyn, N. Y.
Filed February 1, 1910. Serial No. 47,511. PUBLISHED APRIL 12, 1910.

78,407. ENAMEL METAL WARE. The Enterprise Enamel Company, Bellaire, Ohio.
Filed February 28, 1910. Serial No. 48,082. PUBLISHED APRIL 12, 1910.

78,408. REMEDY FOR CERTAIN DISEASES. Anthony Ertel, Hempstead, N. Y.
Filed February 15, 1910. Serial No. 47,839. PUBLISHED APRIL 12, 1910.

78,409. GARTERS, BELTS, SHOULDER-BRACES, AND GARMENT-SUPPORTERS. Faire Bros. & Co., Limited, Leicester, England.
Filed March 30, 1909. Serial No. 41,479. PUBLISHED SEPTEMBER 21, 1909.

78,410. ASPHALT ROOFING. Ford Manufacturing Co., Chicago, Ill.
Filed April 27, 1909. Serial No. 42,056. PUBLISHED JULY 27, 1909.

78,411. COTTON-CLOTH PIECE GOODS. Franklin Manufacturing Co., Baltimore, Md.
Filed March 16, 1910. Serial No. 48,470. PUBLISHED APRIL 12, 1910.

78,412. CANNED PORK AND BEANS, LYE-HOMINY, AND SAUER-KRAUT. The Gibson Canning Company, Gibson, Ill.
Filed January 22, 1910. Serial No. 47,306. PUBLISHED MARCH 22, 1910.

78,413. BLENDED ROASTED COFFEE. Edwin J. Gillies & Co. of Kentucky, Louisville, Ky., and New York, N. Y.
Filed December 14, 1909. Serial No. 46,486. PUBLISHED APRIL 12, 1910.

78,414. COTTON-SEED OIL. John Goggin, New York, N. Y.
Filed February 10, 1910. Serial No. 47,702. PUBLISHED APRIL 12, 1910.

78,415. DRY GIN. Gordon Bitters Co., Jersey City, N. J.
Filed December 9, 1909. Serial No. 46,375. PUBLISHED APRIL 12, 1910.

78,416. LIVER-PILLS. George A. Gottschalk, Louisville, Ky.
Filed March 11, 1910. Serial No. 48,348. PUBLISHED APRIL 12, 1910.

78,417. WHEAT-FLOUR. The Gwinn Milling Company, Columbus, Ohio.
Filed February 12, 1910. Serial No. 47,761. PUBLISHED APRIL 12, 1910.

78,418. WHEAT-FLOUR. THE GWINN MILLING COMPANY, Columbus, Ohio.
Filed February 12, 1910. Serial No. 47,762. PUBLISHED APRIL 12, 1910.

78,419. SWEETENED GRAPE-JUICE. HARRIS GRAPE JUICE CO., Harrisburg, Pa.
Filed January 11, 1910. Serial No. 47,060. PUBLISHED APRIL 12, 1910.

78,420. [WITHDRAWN.]

78,421. CANNED FRUITS. HUNT BROTHERS COMPANY, San Francisco, Cal.
Filed January 3, 1910. Serial No. 46,884. PUBLISHED APRIL 12, 1910.

78,422. BAKING-POWDER AND BAKING-SODA. IDEAL COFFEE AND TEA COMPANY, St. Louis, Mo.
Filed February 18, 1910. Serial No. 47,911. PUBLISHED APRIL 12, 1910.

78,423. RIFLES, SHOTGUNS, PISTOLS, AND REVOLVERS. MARY ELIZABETH JOHNSON, trustee, Fitchburg, Mass.
Filed May 8, 1909. Serial No. 42,322. PUBLISHED APRIL 12, 1910.

78,424. RIFLES, SHOTGUNS, PISTOLS, AND REVOLVERS. MARY ELIZABETH JOHNSON, trustee, Fitchburg, Mass.
Filed May 14, 1909. Serial No. 42,411. PUBLISHED APRIL 12, 1910.

78,425. PREPARATION OF OXYGEN. LEVER BROTHERS COMPANY, Portland, Me., and Cambridge, Mass.
Filed March 15, 1910. Serial No. 48,412. PUBLISHED APRIL 12, 1910.

78,426. CERTAIN CLOTHING. S. J. LEVY & SON, New York, N. Y.
Filed February 10, 1910. Serial No. 47,706. PUBLISHED APRIL 12, 1910.

78,427. BEER. LEXINGTON BREWING COMPANY, Lexington, Ky.
Filed March 5, 1910. Serial No. 48,208. PUBLISHED APRIL 12, 1910.

78,428. TOYS AND PUZZLES. PERCY ALEXANDER MACMAHON, London, England.
Filed February 28, 1910. Serial No. 48,056. PUBLISHED APRIL 12, 1910.

78,429. DAVENPORTS. THOMAS MADDEN SON AND COMPANY, Indianapolis, Ind.
Filed February 23, 1910. Serial No. 47,981. PUBLISHED APRIL 12, 1910.

78,430. SUGAR WAFERS. MARYLAND BISCUIT CO., Baltimore, Md.
Filed February 17, 1910. Serial No. 47,880. PUBLISHED APRIL 12, 1910.

78,431. BLEND OF STRAIGHT SCOTCH WHISKIES. ROBERT MCNISH & CO., Glasgow, Scotland.
Filed June 15, 1906. Serial No. 20,304. PUBLISHED APRIL 12, 1910.

78,432. HOSIERY. MILLER & SONS CO., Philadelphia, Pa.
Filed February 23, 1910. Serial No. 47,963. PUBLISHED APRIL 12, 1910.

78,433. BROWN COTTON SHEETING WITHOUT FINISHING OR COLORING. GRENDEL MILLS, Greenwood, S. C.
Filed April 17, 1909. Serial No. 41,854. PUBLISHED APRIL 12, 1910.

78,434. CERTAIN KNIT GARMENTS. MINNEAPOLIS KNITTING WORKS, Minneapolis, Minn.
Filed October 29, 1909. Serial No. 45,603. PUBLISHED APRIL 12, 1910.

78,435. CIGARS. GUSTAV A. MOEBS & CO., Detroit, Mich.
Filed March 21, 1910. Serial No. 48,586. PUBLISHED APRIL 12, 1910.

78,436. CHAMPAGNE-WINE. ALFRED DE MONTEBELLO & Co., Mareuil-sur-Ay, Marne, France.
Filed December 28, 1909. Serial No. 46,759. PUBLISHED APRIL 12, 1910.

78,437. FRUIT-JAR RUBBERS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,167. PUBLISHED APRIL 12, 1910.

78,438. JUTE-BOARD. NATIONAL METAL EDGE BOX COMPANY, Philadelphia, Pa.
Filed February 28, 1910. Serial No. 48,072. PUBLISHED APRIL 12, 1910.

78,439. MONTHLY PERIODICAL. OSWALD PUBLISHING COMPANY, New York, N. Y.
Filed December 22, 1909. Serial No. 46,660. PUBLISHED APRIL 12, 1910.

78,440. HAIR-PINS AND COMBS MADE OF CELLULOID. PACIFIC NOVELTY COMPANY, New York, N. Y.
Filed March 10, 1910. Serial No. 48,322. PUBLISHED APRIL 12, 1910.

78,441. MOVING-PICTURE FILMS. PANTOGRAPH CORPORATION, Yonkers, N. Y.
Filed January 24, 1910. Serial No. 47,337. PUBLISHED APRIL 12, 1910.

78,442. VERMIN-DESTROYING VIRUS. THE PASTEUR VACCINE COMPANY LIMITED, London, England, and Paris, France.
Filed April 1, 1908. Serial No. 33,802. PUBLISHED APRIL 12, 1910.

78,443. COAL. RAVEN RED ASH COAL CO. INC., Red Ash, Va.
Filed March 12, 1910. Serial No. 48,357. PUBLISHED APRIL 12, 1910.

78,444. CANNED FRUITS AND CANNED VEGETABLES. WM. T. REYNOLDS & CO., Poughkeepsie, N. Y.
Filed June 10, 1909. Serial No. 42,950. PUBLISHED APRIL 12, 1910.

78,445. CERTAIN TEXTILE FABRICS. RHINE & CO., New York, N. Y.
Filed February 8, 1908. Serial No. 32,656. PUBLISHED APRIL 12, 1910.

78,446. HOSIERY. RICHMOND HOSIERY MILLS, Chattanooga, Tenn., and Rossville, Ga.
Filed December 18, 1909. Serial No. 46,599. PUBLISHED APRIL 12, 1910.

78,447. LEATHER BOOTS AND SHOES. THE RICKARD-GREGORY SHOE CO., Lynn, Mass.
Filed March 16, 1910. Serial No. 48,474. PUBLISHED APRIL 12, 1910.

78,448. RUBBER TIRES AND TIRE-SHOES. RUBBER COMPANY OF AMERICA, Dover, Del.; New York, N. Y., and Jersey City, N. J.
Filed February 5, 1910. Serial No. 47,616. PUBLISHED APRIL 12, 1910.

78,449. CERTAIN CLOTHING. J. A. RUHL CLOTHING COMPANY, St. Louis, Mo.
Filed January 7, 1910. Serial No. 46,958. PUBLISHED APRIL 12, 1910.

78,450. TRADING-STAMPS. SALES COMPANY OF AMERICA, Milwaukee, Wis.
Filed February 21, 1910. Serial No. 47,945. PUBLISHED APRIL 12, 1910.

78,451. SAND TOYS. SAND TOY COMPANY, Pittsburg, Pa.
Filed December 16, 1909. Serial No. 46,562. PUBLISHED APRIL 12, 1910.

78,452. CERTAIN CHEMICALS, TOILET PREPARATIONS, AND MEDICINES. C. F. A. SARG, Vienna, Austria-Hungary.
Filed January 6, 1909. Serial No. 39,733. PUBLISHED APRIL 12, 1910.

78,453. MEDICINAL POWDER. ELMER E. SCHOOLCRAFT, Kendall, Mich.
Filed January 23, 1909. Serial No. 40,111. PUBLISHED APRIL 12, 1910.

78,454. CANNED VEGETABLES. THE SCIOTO CANNING COMPANY, Circleville, Ohio.
Filed February 26, 1910. Serial No. 48,064. PUBLISHED APRIL 12, 1910.

78,455. CANNED VEGETABLES. THE SCIOTO CANNING COMPANY, Circleville, Ohio.
Filed February 26, 1910. Serial No. 48,065. PUBLISHED APRIL 12, 1910.

78,456. CANNED VEGETABLES. THE SCIOTO CANNING COMPANY, Circleville, Ohio.
Filed February 26, 1910. Serial No. 48,067. PUBLISHED APRIL 12, 1910.

78,457. AUTOMOBILES. SELDEN MOTOR VEHICLE CO., Rochester, N. Y.
Filed May 11, 1909. Serial No. 42,350. PUBLISHED APRIL 12, 1910.

78,458. FLAVORING EXTRACT. SEMINOLE CHEMICAL COMPANY, St. Louis, Mo.
Filed February 14, 1910. Serial No. 47,802. PUBLISHED APRIL 12, 1910.

78,459. DRY MALT-FLOUR USED IN MAKING BREAD. CHAS. W. SHAW COMPANY, Baltimore, Md.
Filed December 11, 1909. Serial No. 46,446. PUBLISHED APRIL 12, 1910.

78,460. CANNED SARDINES. BENJAMIN M. SHIPMAN, New York, N. Y.
Filed November 27, 1909. Serial No. 46,150. PUBLISHED APRIL 12, 1910.

78,461. WROUGHT-STEEL BACK-FLAP HINGES. THE STANLEY WORKS, New Britain, Conn.
Filed November 17, 1909. Serial No. 45,945. PUBLISHED APRIL 12, 1910.

78,462. CANNED LYE-HOMINY. STOKELY BROS. & CO., Newport, Tenn.
Filed February 14, 1910. Serial No. 47,824. PUBLISHED APRIL 12, 1910.

78,463. BABY-PACIFIERS ADAPTED TO BE HELD IN THE MOUTH. WM. L. STRAUSS & CO., New York, N. Y.
Filed December 10, 1906. Serial No. 23,917. PUBLISHED APRIL 12, 1910.

78,464. STICKY INSECT-BANDING FOR FRUIT-TREES. STRAWSONS & COMPANY, London, England.
Filed January 3, 1910. Serial No. 46,863. PUBLISHED APRIL 12, 1910.

78,465. POULTRY INSECT-DESTROYER. WILLIAM J. STUART, Peru, Ind.
Filed February 8, 1910. Serial No. 47,648. PUBLISHED APRIL 12, 1910.

78,466. JAMS, JELLIES, MARMALADES, AND MINCE-MEAT. SUNLIT FRUITS COMPANY, West Berkeley, Cal.
Filed February 4, 1909. Serial No. 40,352. PUBLISHED APRIL 12, 1910.

78,467. CERTAIN CLOTHING. SUSQUEHANNA SILK MILLS, New York, N. Y.
Filed August 31, 1909. Serial No. 44,450. PUBLISHED MARCH 29, 1910.

78,468. ANHYDROUS HYPERTHERMIC POULTICE. THERMO-CHEMICALS COMPANY, New York, N. Y.
Filed January 12, 1910. Serial No. 47,074. PUBLISHED APRIL 12, 1910.

78,469. CERTAIN COMPOSITION. FRED A. THOMPSON, Trenton, N. J.
Filed March 1, 1910. Serial No. 48,099. PUBLISHED APRIL 12, 1910.

78,470. LINEN THREAD. LINDSAY THOMPSON & CO., LIMITED, Belfast, Ireland.
Filed January 12, 1910. Serial No. 47,086. PUBLISHED APRIL 12, 1910.

78,471. OINTMENT. TROY CHEMICAL CO., Binghamton, N. Y.
Filed March 11, 1910. Serial No. 48,334. PUBLISHED APRIL 12, 1910.

78,472. PREPARED-FLOOR COVERING. UNITED ROOFING AND MANUFACTURING COMPANY, Philadelphia, Pa.
Filed December 24, 1909. Serial No. 46,706. PUBLISHED APRIL 12, 1910.

78,473. GASOLENE. WATERS PIERCE OIL COMPANY, St. Louis, Mo.
Filed December 18, 1909. Serial No. 46,606. PUBLISHED APRIL 12, 1910.

78,474. CLOCKS AND WATCHES. THE WESTERN CLOCK MFG. CO., Peru, Ill.
Filed February 25, 1910. Serial No. 48,018. PUBLISHED APRIL 12, 1910.

78,475. SOAP. THE J. B. WILLIAMS COMPANY, Glastonbury, Conn.
Filed February 24, 1910. Serial No. 48,003. PUBLISHED APRIL 12, 1910.

78,476. COPPER PAINT. C. A. WOOLSEY PAINT & COLOR COMPANY, Jersey City, N. J.
Filed December 15, 1909. Serial No. 46,505. PUBLISHED APRIL 12, 1910.

78,477. GLOVES. JULIUS ERHARD WUNSCH, Jersey City, N. J., and New York, N. Y.
Filed December 31, 1909. Serial No. 46,828. PUBLISHED APRIL 12, 1910.

TRADE-MARKS CANCELED.

51,442. RAZOR-STROPS. EDWARD B. GIFFORD, Adrian, Mich.
Registered April 17, 1906. Canceled May 12, 1910.

76,444. HATS, MOTOR AND OUTING CAPS. CHARLES S. MERTON & CO., New York, N. Y.
Registered January 18, 1910. Canceled May 17, 1910.

LABELS

REGISTERED JUNE 14, 1910.

15,206.—*Title:* "HIGH RANGER." (For Cigars.) THE MOERLE LITHOGRAPHIC CO., New York, N. Y. Filed May 6, 1910.

15,207.—*Title:* "CORVO CASTELDACCIA." (For Wine.) ENRICO ALLIATA DUCA DI SALAPARUTA, New York, N. Y. Filed May 7, 1910.

15,208.—*Title:* "SHARP'S STERILIZED EVAPORATED MILK." (For Evaporated Milk.) BRIDGETON CONDENSED MILK CO., Bridgeton, N. J. Filed April 30, 1910.

15,209.—*Title:* "PEROXO." (For Toothpicks.) THE DARHOL CO., Detroit, Mich. Filed June 2, 1910.

15,210.—*Title:* "PEROXO." (For Toothpicks.) THE DARHOL CO., Detroit, Mich. Filed June 2, 1910.

15,211.—*Title:* "JAPANESE TOILET TISSUE." (For Toilet-Paper.) CORNELL & WARD, New York, N. Y. Filed June 3, 1910.

PRINTS

REGISTERED JUNE 14, 1910.

2,602.—*Title:* "MENDELSOHN'S NEWSPAPER CUT SERVICE FOR BREWERS AND BOTTLERS." (For Beer.) FELIX MENDELSOHN, Chicago, Ill. Filed May 13, 1910.

2,603.—*Title:* "SOMETHING NEW: THE BRAHAMS PHANTOGRAPHS." (For Phantographs.) LEWIS BRAHAM, Chicago, Ill. Filed June 6, 1910.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE FADEM AND BERMAN.

Decided May 24, 1910.

NEW MATTER—AFFECTING REQUIREMENT FOR DIVISION—APPEAL TO THE EXAMINERS-IN-CHIEF.

Where a certain change in the specification held to constitute new matter is involved in a requirement for division, such question will not be reviewed on petition, but is appealable to the Examiners-in-Chief.

ON PETITION.

COMPOSITION OF MATTER TO BE USED FOR REMOVING THE GLOSS OR SHINE FROM CLOTHES.

Messrs. Small & Small for the applicants.

MOORE, *Commissioner:*

This is a petition from the action of the Primary Examiner holding that a certain change in the specification made by amendment constitutes new matter.

The invention disclosed is a composition of matter containing twelve ingredients. The specification as filed stated that four of these were not essential and might be omitted if it were desired to do so. The change which has been held to constitute new matter is the addition to these non-essential elements of one of the other eight. The case now contains two claims, one of which includes and one of which omits the element inserted by amendment in the non-essential list. The Examiner has required division on the ground that the two claims cover essentially different compounds. It is clear, therefore, that the question of new matter affects the merits of the case. Under these circumstances the question will not be reviewed upon petition, but is appealable to the Examiners-in-Chief. (*Ex parte Welch*, 93 O. G., 2105.)

The petition is dismissed.

EX PARTE NEWBOLD.

Decided May 20, 1910.

EXAMINATION OF APPLICATION—ABANDONMENT.

Where the Examiner rejected certain claims a second time on a single reference and rejected other claims on an additional reference cited for the first time and applicant, within a year, canceled one of the two claims against which the new reference was cited, filed an argument as to the allowance of the other, but made no reference to the rejection of the other claims, *Held* that the application was not abandoned, since applicant having once presented his argument as to these claims it was not necessary for him to repeat it.

ON PETITION.

REGULATOR FOR DYNAMO-MACHINES AND ELECTRIC CIRCUITS.

Messrs. Gillson & Gillson for the applicant.

BILLINGS, *First Assistant Commissioner:*

This is a petition from the action of the Examiner holding the above-entitled application abandoned for lack of proper prosecution.

The record shows that on November 28, 1908, the Examiner rejected certain claims a second time on a single reference, but not finally, for the apparent reason that there were two other claims against which it was necessary to cite a new reference.

In addition to the rejection certain criticisms were made to several claims. The applicant on November 26, 1909, (within one year,) filed an amendment replying to the criticisms of the claims, canceling one of the two claims against which the new reference was cited, and filing an argument for the allowance of the other, but did not refer to the first-mentioned rejection.

Inasmuch as the applicant did not again treat of the claims which had been a second time rejected on the single reference, the Examiner held the application to be abandoned, for the reason that, in his opinion, the applicant had not completely responded to the previous Office letter. It appears from the record that the applicant had previously filed an argument for the allowance of the said claims. This being the case, there was nothing more for the applicant to do other than to cancel the previously-rejected claims, except to prosecute those claims against which the new reference had been cited and those against which the objections had been made. The applicant did not wish to cancel the claims rejected, and as he could not appeal these claims until the Examiner entered the final rejection in the case I am of the opinion that the applicant's amendment, which was filed within a year, was as complete as he could have made it without repetition.

Of course if the applicant had seen fit to present further reasons why the rejected claims should be allowed it was his privilege to do so; but it is pre-

sumed that he had no further reasons to present other than those of record, inasmuch as he presented none. Having once presented his argument, it was not incumbent upon him to repeat it.

The application is held not to be abandoned, and the petition is granted.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

WM. A. ROGERS, LIMITED, *v.* INTERNATIONAL SILVER CO.

(No. 586, PATENT APPEALS.)

Decided March 1, 1910.

TRADE-MARKS—SIMILARITY.

A mark consisting of the word "Rogers" preceded by a wreath inclosing the letter "R" and followed by the same combination with the numeral "1881" *Held* deceptively similar to a mark consisting of the word "Rogers" preceded and followed by an anchor.

Mr. C. H. Duell, Mr. F. P. Warfield, and *Mr. H. S. Duell* for the appellant.

Mr. George H. Mitchell for the appellee.

ROBB, *J.:*

This case is between the same parties as case No. 585, (153 O. G., 1085.) The mark of appellant here involved is "Rogers" preceded by a wreath inclosing the letter "R," and followed by the same combination with the numeral "1881." When this mark was adopted by appellant appellee had long used the mark "Rogers" preceded and followed by an anchor, and this appellant knew. Appellant has failed to convince us that these marks are not deceptively similar. As applied to silverware they are greatly reduced in size. In view of this fact the ordinary observer would not be likely to notice the difference between the anchors of appellee and the wreaths of appellant. It is true that appellant's mark contains in addition the numeral "1881," but its position is such that no significance will be likely to be attached to it even if it is noticed. Appellant's reason for adopting this mark, as disclosed by the testimony, is not above suspicion. This fact should be given weight where a doubt exists. (*American Stove Co.* v. *Detroit Stove Works,* 31 App. D. C., 304; *Walter Baker Co.* v. *Harrison,* 32 App. D. C., 272; *Wayne* v. *Burt Olney Canning Co.,* 32 App. D. C., 279; *Phoenix Paint Co.* v. *John T. Lewis Co.,* 32 App. D. C., 285.) Had these wreaths been above and below "Rogers," instead of before and after it, the case would have been different. In other words, appellant has given the same position to the wreaths of its mark that appellee has given to its anchors, without adding anything likely to direct attention to the difference in the marks. There was no necessity for such close simulation of appellee's mark and such a practice ought not to be encouraged. Both parties, as stated in case No. 585, are entitled to the use of the word "Rogers," but we do not think any undue burden is imposed upon appellant when it is required to adopt accessories sufficiently unlike those previously adopted and in use by appellee to enable the public to distinguish between the marks. Such a requirement is all the more essential where a common word, inherently calculated to lead to confusion, is employed.

The decision is therefore affirmed and the clerk will certify this opinion as by law required.

SHEPARD, *C. J.:*

I am compelled to withhold my assent to the judgment ordered in this case. I regard the conclusion as inconsistent with that in the recent case No. 585, between the same parties, in which it was decided that the rival marks are not deceptively similar. The dissimilarity of the two marks consists in the symbols that precede and follow the word "Rogers"—a word which each party has the right to use. When exhibited in any ordinary size the wreath with "R" inclosed of one party is quite different from the anchor of the other. When exhibited on small articles of silverware, the confusion results from the difficulty in distinguishing either symbol. It requires keen eyesight to tell that one is an anchor, and the other a wreath with "R" in it. The same confusion would result from the use of many other wholly different symbols. When used in proportionally larger size upon larger pieces of silverware, the confusion disappears.

Similarity is to be tested by actual resemblance of the distinctive features of marks, and not by indistinctness of each caused by reduction of size in a particular application.

If, as a fact, one may have adopted the mark for use on small articles to obtain the trade of the other, it may be a matter available in a suit for unfair competition, but not in this proceeding.

U. S. Circuit Court of Appeals—Third Circuit.

CASEIN CO. OF AMERICA *v.* A. M. COLLINS MFG. CO.

Decided November 29, 1909.

1. PATENTABILITY—PRIOR PUBLIC USE—ENAMELING COMPOUND FOR PAPER.

   The Hall patent, No. 626,537, for an enameling compound for sizing paper and method of producing the same, *Held* void for prior public use of the enamel for more than two years before the application.

2. REISSUE—MATTER DISCLAIMED IN ORIGINAL SPECIFICATION—INTERVENING RIGHTS.

   A disclaimer having been made for the purpose of avoiding references and securing the grant of a patent and such disclaimer having been acted upon by the public a reissue whereby the effect of such disclaimer is avoided and the patent broadened is void.

Mr. Edmund Wetmore for the appellant.

Mr. Horace Pettit for the appellee.

Before GRAY, BUFFINGTON, and LANNING, Circuit Judges.

BUFFINGTON, *Cir. J.:*

In the court below the appellant, the Casein Company, charged the A. M. Collins Manufacturing Company, the appellee, with infringement of two patents. One of them, No. 626,537, known herein as the "free-acid patent," issued June 6, 1899, to William A. Hall, was for an enameling compound and a method of producing the same. The other, reissue

No. 11,811 of No. 609,200, known herein as the "formaldehyde patent," issued originally August 16, 1898, and reissued March 6, 1900, to said William A. Hall, for a waterproofing compound. On final hearing the court below, in an opinion reported at 172 Fed., 237, found the patents void and dismissed the bill. Thereupon the Casein Company appealed to this court.

These patents concern the use of casein or the common curd of milk. The use of modern separators in creameries has resulted in more thorough extraction, and a corresponding impoverishment of curd, than under old practices. Applied science, however, has developed the possibility of wide use of curd in other spheres, one of which is involved in the present case, namely, as an insoluble coating or sizing of paper.

Turning, first, to the free-acid patent, we find it is for—

the production of a coating or enamel for finishing and surfacing paper and which is of such a character that while it gives a smooth and finished surface to the paper treated with it, and one which is well adapted to receive the printing-ink, it produces a surface which will resist the attacks of moisture and prevent the disintegration of the paper and the disfiguration of the matter printed thereon.

The specification shows that clay was the basis of the coating and casein the adhesive agent in its application. Thus the patentee states:

The composition which I have produced belongs to that class of clay coatings in which a mineral base—such as clay, blanc fixe, or a similar ingredient—is used to give body to the composition. The adhesive ingredient of the enamel, which is necessary to fix it to the paper or article coated, is casein or milk-albumen; the casein being precipitated from the milk by the use of any suitable acid which will throw down the curd, preferably H_2SO_4 or HCl.

Preferably some acid is left in the curd. Thus:

I preferably leave a small portion of the acid in the curd or casein, as I find that the effect of this acid is to render the curd insoluble after the composition has been applied and has become seasoned, and, furthermore, it leaves the curd in a wholesome and clean condition, without imparting to it the "cheesy" odor resulting from rennet curdling or natural souring, which, it is apparent, would be objectionable in a coating or enamel of this kind.

Any suitable acid may be used to precipitate the curd; any suitable alkali to cut the casein and reduce to solution. Thus:

Any suitable acid may be used to precipitate the curd from the milk, such as sulfuric, acetic, or muriatic acid. To cut the casein and reduce it to a solution, a small amount of alkali, about 3 per cent. of the composition, is used, and any suitable alkali, such as borax, ammonia, or carbonate of soda, will be suitable.

In the mixture the mineral clay forms about eighty per cent. and the casein about seventeen per cent. The process is thus described:

In making the composition I preferably take the dry curd, which contains a small amount of free acid, as stated hereinbefore, the curd after precipitation having been slightly washed, so as to remove only a portion of the acid used in precipitating it, and said dry curd is either mixed with an alkali and the mixture then dissolved in water, or an alkaline solution may be made in which the curd is then dissolved. To the casein solution thus obtained the clay or mineral base, worked up smoothly in water, is added until the desired consistency is obtained. If preferred, however, the dry curd, containing the free acid, the alkali, and the clay, may all be worked up in water at the same time. The coating thus produced is, as stated above, water-resisting and practically insoluble, and is well adapted to preserve the paper coated with it from the attacks of moisture, this being due to the fact that the effect of the free acid, which forms an ingredient of the composition, is to render the casein practically insoluble in water.

Upon this composition and process three claims were granted, and the broad monopoly of the use of

curd here involved is seen when we note that curd or casein containing free acid is the only element in the claim, viz.:

An insoluble coating or enamel for paper composed of casein containing free acid, in substantially the proportions specified.

The court below found that, for more than two years prior to the application of the patent, Hall, the patentee, had had on public sale considerable amounts of the composition covered by the patent and produced by its process. An examination of the proofs satisfies us of the correctness of this finding. Without referring in detail to the testimony, it is clear to us that more than two years before Hall had produced and thereafter sold acid-precipitated curd; that the process followed under his instructions produced dry curds containing acid; that the dryness of the curd and the presence of the acid required the use of about fifteen per cent. of borax as a solvent; that these elements, proportions of ingredients, and the use of his process, etc., are all clearly shown to have been in public use more than two years prior to this application. Indeed, this two years' prior practice and its results were embodied by Hall in his patent application filed over two years later, wherein he said:

It is well known that pure casein, or casein from which the acid has been completely removed by washing, does not dry readily, but remains in a soft and friable condition, and possesses but little toughness or tenacity. It is readily dissolved in a very weak alkaline solution, and a coating formed from this solution is weak, and easily attacked and destroyed by moisture. In the course of my experiments I have discovered that, when a percentage of the mineral acid used in precipitating the curd is left in the casein, a greater amount of alkali is required to reduce the acid curd, which is in a hard condition, to a solution, than when no acid is present and the casein has been thoroughly washed, as stated above. For example, if the acid be removed by washing, about 7 per cent. of borax will be sufficient to dissolve the comparatively soft and friable curd; but, when about 1 per cent. of acid is left in the curd, from 10 to 15 per cent. of borax is necessary to properly reduce this hard acid to curd.

We are therefore of opinion the free-acid patent was void.

We next turn to the formaldehyde reissue patent. This was a further improvement on the compound of the free-acid patent, and in a general way consisted of adding formaldehyde thereto. The object of adding the formaldehyde, as stated by the patentee, is:

The effect of the formaldehyde used in this casein composition is to render the same, when fully dried out, insoluble in or insensible to the action of water, either at normal or at high temperatures.

An examination of the file-wrapper shows that, when Hall originally applied for his patent, he made a broad claim for a composition of casein and formaldehyde. This was rejected on Zimmerman's English Patent, No. 23,585. He then narrowed his claims by introducing the element of a mineral base; but the Office held that the use of a filler was a mere mechanical addition to the Zimmerman patent. We may add here that, had the prior public use above referred to of clay as a filler with casein containing free acid, been known to the Office in addition to Zimmerman's use of casein and formaldehyde, there would have been added support to its action. The patentee having failed to get claims by the addition of clay as a base or filler, he then intro-

duced the contention that the use of clay involved two functions in the combination: (1) that it caused porosity to the compound, so as to absorb printing colors and ink; and (2) that it acted as a precipitant retardant. An examination of the proofs shows the very decided burden of proof to be that clay does not act as a retardant. The evidence of Dr. Chandler, complainant's expert, is in effect non-committal; while that of Dr. Sadtler, respondent's expert, and his reasons in support of it, are convincing that it does not. Indeed, it is clear to us that, when Hall applied for his patent, he neither conceived nor disclosed any such retardant action of clay, or, indeed, made clay an element in any claim, and that the subsequent introduction thereof into the patent was suggested as a mere theory to overcome valid objections to the grant of the patent. We are satisfied that this theory was neither based on prior experience nor proved by subsequent development. We therefore think the position of the Office in rejecting the application was well taken.

After Hall's substituted application was rejected, he amended by adding a disclaimer in reference to the use of soda alkali, which was embraced in the specification of his patent as originally granted as follows:

I find that a soda alkali will not serve as an ingredient of the composition, for the reason that, if a soda alkali be used as a solvent for the casein, the introduction of the formaldehyde will cause immediate precipitation, for the reason that CH_2O has an acid reaction and will not work with a soda alkali. In the use of the other class of alkalies, however, such as ammonia, etc., as a solvent, the objectionable precipitation incident to the use of soda alkali is avoided. In fact, a sufficient quantity of CH_2O can be added to throw the casein solution on an acid, and said solution will still remain perfectly smooth and limpid.

This disclaimer of a soda alkali was probably made in view of the use of certain alkalies in Zimmerman's patent; but, for whatever purposes it was made, it became part of his patent, and to that extent narrowed the scope of his claims. Now it seems he subsequently found his process could be used in connection with soda alkali. It was in fact so used by the respondent, and in view of the disclaimer they had a right to use it. Thereupon Hall sought by a reissue to eliminate such disclaimer and correspondingly broaden the monopoly of his patent. It is clear to us that, the presence of this disclaimer having been made for the purpose of avoiding references, and such disclaimer having been acted upon by the public, a reissue whereby the effect of this disclaimer was avoided and his patent broadened was void.

The decree of the court below will therefore be affirmed.

Supreme Court of the United States.

HUTCHINSON, PIERCE & CO. *v.* LOEWY.

Decided May 16, 1910.

TRADE-MARKS—DECISION OF THE CIRCUIT COURT OF APPEALS—CAN BE REVIEWED BY THE SUPREME COURT OF THE UNITED STATES ONLY UPON CERTIORARI.

Section 18 of the Trade-Mark Act of February 20, 1905, places suits brought under that act within the scope of the act of March 3, 1891, establishing the circuit court of appeals, and a final decision of such court can be reviewed in the Supreme Court of the United States only upon certiorari.

Mr. Archibald Cox for the appellant.

Mr. E. T. Fenwick and *Mr. L. L. Morrill* for the appellee.

Mr. Chief Justice FULLER delivered the opinion of the Court.

This was a bill in equity for an injunction and accounting, the complainant alleging the defendant had infringed its technical trade-mark applied to shirts, and also was guilty of unfair competition. As complainant is a corporation of the State of New York and defendant is a citizen of the same State, the Court's jurisdiction extends only to the use of the registered trade-mark in commerce between the States, with foreign nations and the Indian tribes.

There was no attempt to prove that defendant had passed off, or intended to pass off, his goods for complainant's, or had made profits, or that complainant had sustained damage. The cause proceeded solely on complainant's ownership of its technical trade-mark.

The circuit court held that defendant's trademark or brand was clearly distinguishable from that of complainant, and said:

There is no reasonable probability of the ordinary purchaser being deceived into buying the defendant's manufacture as that of complainant. The rule is well established that a trade-mark, word or symbol has the elements of a property-right and may not be unlawfully used by a rival in business either alone or as an accessory to such prior appropriation and in such cases a right to injunctive relief follows without proof of confusion of proprietorship or that buyers have been actually misled by such use. But if a defendant's design or symbol is essentially different and distinguishable in appearance so that by no possibility can his article be taken for complainant's genuine production, a cause of unlawful appropriation is not maintainable. (163 Fed. Rep., 44.)

The bill was thereupon dismissed, and having been taken by appeal to the United States Circuit Court of Appeals for the Second Circuit, the decree below was affirmed. (163 Fed. Rep., 42.)

Appellants thereupon petitioned for an appeal to this Court, which was allowed.

Sections 17 and 18 of the act of Congress approved February 20, 1905, in respect to trade-marks, reads as follows:

Sec. 17. That the circuit and territorial courts of the United States and the Supreme Court of the District of Columbia shall have original jurisdiction, and the circuit courts of appeal of the United States and the Court of Appeals of the District of Columbia shall have appellate jurisdiction of all suits at law or in equity respecting trade-marks registered in accordance with the provisions of this act, arising under the present act, without regard to the amount in controversy.

Sec. 18. That writs of certiorari may be granted by the Supreme Court of the United States for the review of cases arising under this act in the same manner as provided for patent cases by the act creating the circuit court of appeals.

We are of opinion that this appeal will not lie, and that the remedy by certiorari is exclusive. By the sixth section of the Judiciary Act of March 3, 1891, the final decisions of the circuit courts of appeal are made final—

in all cases under the patent laws, under the revenue laws, under the criminal laws and in admiralty cases,

with power in this Court to require any such cases to be certified thereto for its review and determination,

with the same power and authority in the case as if it had been carried by appeal or writ of error to the Supreme Court.

We think that the language of section 18 places

suits brought under the Trade-Mark Act plainly within the scope of the act establishing the court of appeals, and that a final decision of that court can be reviewed in this Court only upon certiorari, and that therefore the pending appeal must be dismissed. And this conclusion is sustained by *Atkins v. Moore*, (212 U. S., 284, 291.)

Appeal dismissed.

ADJUDICATED PATENTS.

The Smith patent, No. 392,973, for an improvement in bicycles, *Held* void. *Pope Mfg. Co. v. Arnold, Schwinn & Co.*, (C. C.,) 177 Fed. Rep., 419.

The McMillan patent, No. 519,267, for a steam-boiler furnace, *Held* not infringed. *McMillan v. Water Arch Furnace Co.*, (C. C. A.,) 177 Fed. Rep., 401.

The De Mott patent, No. 521,018, for a connection for electric wires, *Held* not infringed. *Keepers v. American Electric Fuse Co.*, (C. C.,) 177 Fed. Rep., 442.

The Malignani patent, No. 537,693, for a process for producing a vacuum in the bulbs of incandescent lamps, claim 1 *Held* valid and infringed. *Malignani v. Hill-Wright Electric Co.*, (C. C.,) 177 Fed. Rep., 430.

The Bauer patent, No. 593,410, for a metallic car-truck bolster, claims 1, 2, 4, and 5 *Held* void. Claim 6 *Held* valid and infringed. *Simplex Railway Appliance Co. v. Pressed Steel Car Co.*, (C. C.,) 177 Fed. Rep., 426.

The Semple patent, No. 752,474, for a pipe for use in carrying sand and other spoil from dredgers, *Held* valid, but not infringed. *Lewis Const. Co. v. Semple*, (C. C. A.,) 177 Fed. Rep., 407.

The Nelson, Dawson, and Trussel patent, No. 806,702, for a self-locking loose-leaf binder, *Held* void. *Sieber & Trussel Mfg. Co. v. Chicago Binder & File Co.*, (C. C.,) 177 Fed. Rep., 439.

The Ransome patent, No. 814,803, for a concrete-mixing machine, *Held* void. *Ransome Concrete Machinery Co. v. United Concrete Machinery Co.*, (C. C. A.,) 177 Fed. Rep., 413.

The Conrad patents, No. 822,723, for a ball-bearing, claims 2, 8, and 9, and No. 838,303, for a method of manufacturing and assembling such bearing, claim 1, *Held* valid and infringed. *Hess-Bright Mfg. Co. v. Standard Roller-Bearing Co.*, (C. C.,) 177 Fed. Rep., 435.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 8, 1910.

Francis Brothers, their assigns or legal representatives, take notice:

An interference has been declared by this Office between three applications for registration of trade-marks by the following named parties: (1) Arthur Petrie, of Wanette, Okla.; (2) Charles P. Gieraltowski, of Chicago, Ill.; (3) Knoll & Company, of Oristalstrasse, Liestal, (Canton of Basel-Land,) Switzerland, and a trade-mark registration to Francis Brothers, whose address of record is corner of Main and Third streets, Uhrichsville, Ohio, and the notice of such declaration sent by registered mail to the said Francis Brothers at the address here given has been returned by the Post-Office Department as undeliverable.

Notice is therefore hereby given to the said Francis Brothers, their assigns or legal representatives, that if they or any of them desire to contest the said interference, they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 1, 1910.

W. N. Richardson & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Sharp & Dohme, of Baltimore, Md., for registration of a trade-mark and a trade-mark registered to W. N. Richardson & Company, of 66 Malden Lane, New York, N. Y., and the notice of said declaration sent by registered mail to the said W. N. Richardson & Company having been returned undelivered, notice is hereby given to the said W. N. Richardson & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 1, 1910.

Davidson & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the American Coffee Co. of New Orleans, Ltd., of New Orleans, La., for registration of a trade-mark and a trade-mark registered to Davidson & Co., of 1436 Broadway, New York, N. Y., and the notice of said declaration sent by registered mail to the said Davidson & Co. having been returned undelivered, notice is hereby given to the said Davidson & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 21, 1910.

Hamilton & Whittin, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of John Eiefritz, of St. Louis, Mo., for registration of a trade-mark and a trade-mark registration to Hamilton & Whittin, of Chicago, Ill., and the notice of such declaration sent by registered mail to the said Hamilton & Whittin at the address given above has been returned by the Post-Office Department as undeliverable.

Notice is therefore hereby given to the said Hamilton & Whittin, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 21, 1910.

Lariat Manufacturing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Fishbeck Soap Company, of San Francisco, Cal., for registration of a trade-mark and trade-mark registrations to the following-named parties: (1) Joseph H. Ford, of New York, N. Y., (2) Joseph Obern-dorfer, of Salt Lake City, Utah, (3) Clara C. Day, of St. Louis, Mo., (4) Charles C. Gerhart, of Clarksville, Tenn., and (5) Lariat Manufacturing Company, of Jersey City, N. J., and Boston, Mass., and the notice of such declaration sent by registered mail to the Lariat Manufacturing Company at Boston, Mass., has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the Lariat Manufacturing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 19, 1910.

The Kenosha Watch Case Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Philadelphia Watch Case Company, of Riverside, N. J.; an application of Hauser, Elvy & Cia., of Mexico City, Mexico, both for registration of certain trade-marks, and a trade-mark registration of The Kenosha Watch Case Company, of Kenosha, Wis., and the notice of such declaration sent by registered mail to The Kenosha Watch Case Company, at the address given above, has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said The Kenosha Watch Case Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 17, 1910.

Albert C. Murphy, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the patent of A. C. Murphy, of East St. Louis, Ill., and an application for patent by Edward C. Meissner, C/o Eagle Generator Co., St. Louis, Mo., and the notice of said declaration sent by registered mail to the said Murphy having been returned undelivered, notice is hereby given to the said Murphy, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 11, 1910.

Radical Remedy Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Barclay & Barclay, of New York, N. Y., for registration of a trade-mark and trade-mark registrations to the following-named parties: (1) Radical Remedy Company, of Hickory, N. C., and (2) Walter M. Carr, of Stoughton, Wis., and the notice of such declaration sent by registered mail to the Radical Remedy Company at the address given above has been returned with the statement that this corporation has been dissolved.

Notice is therefore hereby given to the said Radical Remedy Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

F. A. TENNANT, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 10, 1910.

The St. Paul Roller Mill Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the C. A. Gambrill Mfg. Company, of 100 Commerce street, Baltimore, Md., for registration of a trade-mark and trade-marks registered to the Barber Milling Company, of Minneapolis, Minn., The St. Paul Roller Mill Co., of St. Paul, Minn., and H. Becker & Co., of New York, N. Y., and the notice of said declaration sent by registered mail to The St. Paul Roller Mill Co. having been returned undelivered, notice is hereby given to the said The St. Paul Roller Mill Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 10, 1910.

William Brokhahne, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the Norvell-Shapleigh Hardware Company, of Fourth and Washington avenues, St. Louis, Mo., for registration of a trade-mark and trade-marks registered to Krusius Brothers, 296 Broadway, New York, N. Y., the Challenge Cutlery Corp., of Seymour and Kossuth streets, Bridgeport, Conn., the A. F. Shapleigh Hardware Company, of St. Louis, Mo., and William Brokhahne, of New York, N. Y., and the notice of said declaration sent by registered mail to the said William Brokhahne having been returned undelivered, notice is hereby given to the said William Brokhahne, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 9, 1910.

William Brokhahne, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Norvell-Shapleigh Hardware Company, of Fourth street and Washington avenue, St. Louis, Mo., for registration of a trade-mark and trade-marks registered to Hibbard, Spencer, Bartlett & Company, northeast corner of State and South Water streets, Chicago, Ill., the A. F. Shapleigh Hardware Company, of St. Louis, Mo., and William Brokhahne, New York, N. Y., and the notice of said declaration sent by registered mail to the said William Brokhahne having been returned undelivered, notice is hereby given to the said William Brokhahne, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE OFFICIAL GAZETTE OF THE United States Patent Office.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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ISSUE OF JUNE 21, 1910.

Patents	658—	No. 961,748 to No. 962,405, inclusive.
Designs	6—	No. 40,734 to No. 40,741, inclusive.
Trade-Marks	85—	No. 78,478 to No. 78,562, inclusive.
Labels	11—	No. 15,212 to No. 15,222, inclusive.
Prints	5—	No. 2,604 to No. 2,608, inclusive.
Reissues	None.	
Total	767	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	.....	Ohio	33	8
Arkansas	5	.....	Oklahoma	6	.....
California	23	.....	Oregon	2	.....
Colorado	12	.....	Pennsylvania	57	3
Connecticut	41	1	Rhode Island	5	.....
Delaware	1	.....	South Carolina	1	.....
Florida	4	.....	South Dakota	5	.....
Georgia	3	1	Tennessee	7	1
Idaho	1	.....	Texas	11	.....
Illinois	53	10	Utah	2	.....
Indiana	11	3	Vermont	2	.....
Iowa	13	2	Virginia	4	1
Kansas	12	1	Washington	12	.....
Kentucky	6	.....	West Virginia	5	.....
Louisiana	5	1	Wisconsin	12	.....
Maine	4	.....	Wyoming	.....	.....
Maryland	6	2			
Massachusetts	40	12	Alaska, District of	.....	.....
Michigan	20	3	Arizona Territory	1	.....
Minnesota	12	3	District of Columbia	4	.....
Mississippi	3	.....	Hawaii Territory	.....	.....
Missouri	19	7	New Mexico Ter'y	.....	.....
Montana	2	.....	Panama	.....	.....
Nebraska	7	.....	Philippine Islands	.....	.....
Nevada	1	.....	Porto Rico	.....	.....
New Hampshire	2	.....	U. S. Army	.....	.....
New Jersey	26	2	U. S. Navy	.....	.....
New York	85	20			
North Carolina	5	.....	Total to citizens of the United States	601	90
North Dakota	3	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Netherlands	.....	.....
Austria-Hungary	1	.....	Newfoundland	.....	.....
Belgium	2	1	New South Wales	.....	.....
Brazil	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	1	.....
Canada	8	.....	Persia	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Russia	.....	.....
China	.....	.....	Scotland	.....	1
Costa Rica	.....	.....	South Australia	.....	.....
Cuba	.....	1	Spain	.....	.....
Denmark	1	.....	Sweden	4	.....
England	16	4	Switzerland	.....	1
France	3	1	Tasmania	.....	.....
Germany	25	2	Transvaal, South Africa	1	.....
Haiti	.....	.....	Victoria	.....	.....
India	1	.....	Western Australia	.....	.....
Ireland	1	.....			
Italy	1	.....	Total to citizens of foreign countries	65	11
Japan	.....	.....			
Mexico	.....	.....			

Changes in Classification.

(ORDER No. 1,864.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 14, 1910.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In Division XXXIX, class 4, Baths and Closets, abolish subclasses—

29. Couplings, miscellaneous.
37. Water-closet couplings.
15. Water-closet valves.

In same Division, class 137, Water Distribution, establish subclasses—

Cocks and faucets—
93. Water-closet valves.
Pipe-couplings—
94. Base,
Water-closet—
95. Inlet,
96. Outlet.

A new Division in the Patent Office is hereby formed, to be known as Division XLIII, to contain the following classes of inventions, which are hereby ordered transferred to said Division XLIII:

Classes 4, Baths and Closets, from Division XXXIX; 169, Fire Extinguishers, and 182, Sewerage, from Division IX, and 210, Water Purification, from Division XXXI.

EDWARD B. MOORE,
Commissioner.

Briefs in Appealed Cases.

All briefs filed in this Office should have conspicuously printed thereon a statement designating the particular tribunal of the Patent Office to which the brief is addressed.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business June 14, 1910.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	May 18	May 17	361
120	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Apr. 1	Apr. 16	258
173	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	May 17	June 1	210
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	May 4	May 10	377
167	5. Bookbinding; Harvesters; Jewelry; Music.	May 2	Apr. 21	430
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Apr. 18	Apr. 25	417
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	May 3	May 2	506
121	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	May 16	May 20	193
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Mar. 3	May 7	406
295	10. Carriages and Wagons.....	Apr. 25	Mar. 24	638
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	May 4	May 10	226
224	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Apr. 27	Apr. 29	620
339	13. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, Etc.	Apr. 8	May 6	501
207	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	May 11	May 16	266
268	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Sheets and Fabrics; Liquid Coating Compositions; Paper-Making; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	May 16	May 21	374
109	16. Telegraphy; Telephony.....	Apr. 1	Apr. 2	226
208	17. Metric-Making; Paper Manufacture; Printing; Type-Bar Making.	May 16	May 16	162
227	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	May 2	Apr. 19	184
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Apr. 14	May 17	263
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	May 18	May 14	194
112	21. Brakes and Gear Cutting; Cloth-Finishing; Carding; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Apr. 20	Apr. 20	350
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Feb. 12	Apr. 12	598
370	23. Acoustics; Cable-Handling; Horology; Recording; Registers; Time-Controlling Mechanism.	May 10	May 12	336

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
144	24. Apparel; Apparel Apparatus; Electricity, Medical and Surgical; Sewing-Machines; Surgery.	May 2	May 5	520
316	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	May 25	May 27	97
106	26. Electricity, Generation; Motive Power.	Feb. 15	Mar. 26	341
272	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	May 17	May 16	362
65	28. Electric Railways; Internal-Combustion Engines.	Apr. 27	May 5	445
147	29. Coopering; Fire-Escapes; Ladders; Reels; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	Apr. 20	Apr. 28	321
182	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	May 2	May 4	349
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Apr. 1	May 5	302
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Fine Arts; Packaging Liquids; Refrigeration.	May 17	May 17	339
184	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Apr. 8	May 10	426
204	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	May 8	May 4	345
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	May 11	May 17	571
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Apr. 14	Apr. 16	464
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Apr. 12	Apr. 21	530
278	38. Artesian and Oil Wells; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working.	Apr. 8	Apr. 23	409
221	39. Water Distribution.....	Mar. 11	June 1	400
209	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	May 14	May 16	403
125	41. Railway Draft Appliances; Resilient Ties and Wheels.	Apr. 1	Mar. 29	565
270	42. Electric Signaling; Railway Signaling; Signals.	Mar. 1	Apr. 18	468

Oldest new case, Feb. 12; oldest amended, Mar. 24.

Total number of applications awaiting action..... 16,043

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	May 1	June 1	731
	Designs.....	May 18	June 10	125
	Labels and Prints.....	June 6	June 10	28

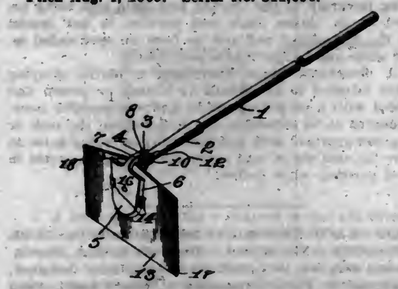
Trade-Marks.

Extra copies of the trade-mark portion of the GAZETTE, which will be sold separately, may be obtained single or in quantities for five cents each. Coupons will be taken in payment thereof.

PATENTS

GRANTED JUNE 21, 1910.

961,748. HOE. WILLIAM J. ALLIN, Clarendon, Ark. Filed Aug. 4, 1909. Serial No. 511,091.

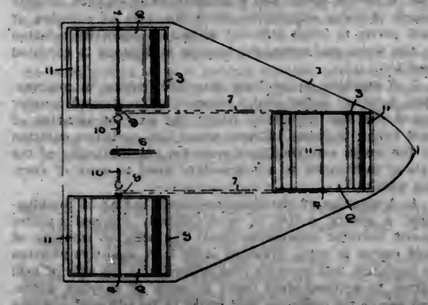


1. In a hoe, a socket formed of a single piece of metal, a head formed integral with said socket, radial teeth formed on said head, a plate, a head on said plate, radial teeth formed on the head of said plate, means for clamping the heads of the plate and socket together, a blade, integral portions struck from the body of the blade to engage the plate and a set screw for detachably securing the blade to said plate.

2. In a hoe, the combination of a socket, a head formed integral with said socket, teeth radially arranged on said head, a plate having a reduced neck and inclined side margins, a head formed integral with said neck, teeth carried by said head arranged to engage said teeth on the head of the socket and a blade having projections struck from its body portion adapted to engage the inclined margins of said plate.

3. In a hoe, the combination of a handle, a head having radial teeth secured to said handle, a plate, a head on said plate, radial teeth formed on the head of said plate, means for clamping the heads together, a blade, integral portions struck from the body of the blade to engage the margins of said plate and a set screw for detachably securing the blade to said plate.

961,749. WATER-MOTOR. JOHN E. BELL, Geddes, S. D. Filed Apr. 6, 1909. Serial No. 488,156.



A device of the character described, comprising a supporting frame, a forward and a rear shaft journaled in said frame, said forward shaft carrying at either end a drum, said rear shaft carrying a centrally located drum, said drums being buoyant and provided with radial propelling blades, means for applying power to said forward shaft and means for transferring said power to the rear shaft, said means consisting of sprockets upon each shaft and endless belts engaging said sprockets, and means whereby either or both of the forward drums may be stopped without stopping the rear drum, said latter means consisting of clutches and levers placed one on each side of the forward shaft between the sprockets and the drums.

961,750. HIGH-SPEED BOAT. JOHN H. BRANTH, New York, N. Y. Filed Mar. 11, 1909. Serial No. 482,804.



1. A boat of the class described comprising a hull the bottom of which is approximately horizontal in cross section and the bow of which is upwardly curved, the bottom of the hull being also provided at the opposite sides thereof with longitudinally ranging and downwardly directed side keel-fins between which are placed longitudinal supplemental keel-fins, said boat being also provided with a cock-pit in the front end portion of which the motor is placed, a propeller shaft connected with said motor and passing downwardly and backwardly through the bottom of the hull and between the supplemental keel-fins and provided at its rear end with a propeller.

2. A boat of the class described comprising a hull the bottom of which is approximately horizontal in cross section and the bow of which is upwardly curved, the bottom of the hull being also provided at the opposite sides thereof with longitudinally ranging and downwardly directed side keel-fins between which are placed longitudinal supplemental keel-fins, said boat being also provided with a cock-pit in the front end portion of which the motor is placed, a propeller shaft connected with said motor and passing downwardly and backwardly through the bottom of the hull and between the supplemental keel-fins and provided at its rear end with a propeller, the side portions of the bottom of the hull being being also provided with air holes, and means for opening and closing the same.

3. A boat of the class described comprising a hull the bottom of which is substantially horizontal in cross section and the bow of which is curved upwardly, the side portions of the hull being provided with longitudinally ranging downwardly directed keel-fins, and means for propelling the boat comprising a motor mounted therein, a propeller shaft connected therewith and passing downwardly and backwardly through the bottom of the hull of the boat and provided at its rear end with a propeller, the opening in the bottom of the hull through which the propeller shaft passes being inclosed by a hood which extends upwardly and forwardly to or approximately to the top of the hull.

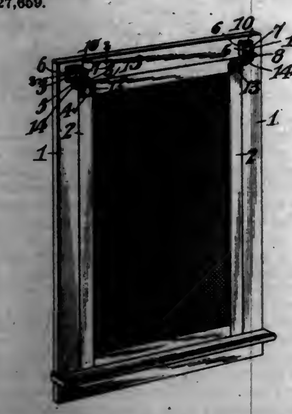
4. A boat of the class described comprising a hull having the usual cock-pit, the bow of the hull being curved upwardly and the bottom thereof being substantially horizontal in cross section, said hull being also provided at

the sides thereof with longitudinally arranged and downwardly directed side keel fins, between which are placed equally spaced supplemental keel-fins, and means for propelling the boat, the bottom of the hull being provided between said fins with air openings which are inclosed by hoods which extend upwardly in the cock-pit.

5. A boat of the class described comprising a hull having the usual cock-pit, the bow of the hull being curved upwardly and the bottom thereof being substantially horizontal in cross section, said hull being also provided at the opposite sides with longitudinally arranged and downwardly directed side keel-fins between which are placed equally spaced supplemental keel-fins, a motor placed between the cock-pit, a propeller shaft connected with said motor and extending downwardly and backwardly through the bottom of the hull between the supplemental keel-fins, the opening in the hull through which the propeller shaft passes being inclosed by a hood or casing which extends upwardly in the cock-pit and opens upwardly, and the bottom of the hull being also provided between the side fins and the supplemental fins with openings closed by hoods which open upwardly in the cock-pit.

[Claim 6 not printed in the Gazette.]

961,751. SEPARABLE HINGE FOR SCREENS. ELMER E. BUMPUS, Seattle, Wash. Filed Mar. 15, 1909. Serial No. 483,463. Renewed Nov. 12, 1909. Serial No. 527,659.



1. A device of the class described, comprising a pair of plates adapted to be secured on either side of a frame, upwardly inclined guides respectively pivoted thereto by a vertical pivot, each guide having an open and a closed end, and pintle-carrying plates respectively arranged on a sash or screen at such positions that the pintles will coact with the closed end of the guides to form a bearing for the said sash or screen.

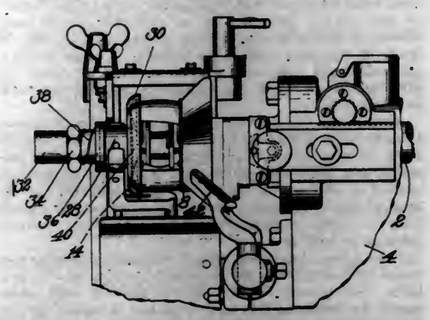
2. A device of the class described, comprising a pair of plates adapted to be secured on either side of a frame, upwardly inclined guides respectively pivoted thereto by a vertical pivot, each guide having an open and a closed end, means for respectively interlocking the guides in an outstanding position, and pintle carrying plates respectively arranged on a sash or screen at such positions that the pintles will co-act with the closed ends of the guides to form a bearing for said sash or screen, said pintles being movable outward toward the open ends of the inclined guides.

3. A detachable hinge comprising a pintle-carrying member, and a supporting member consisting of a plate having a vertical bearing formed therein, a horizontally swinging guide arranged within the bearing and adapted to be interlocked therewith in an outstanding position, said guide having one end open and the other end closed, the closed end forming a bearing and the open end forming an entrance and exit for the pintle of the pintle-carrying member.

4. A detachable hinge comprising a pintle-carrying member and a supporting member consisting of a plate having a vertical bearing formed therein, a horizontally swinging guide arranged within the bearing and adapted to be interlocked therewith in an outstanding position, said guide being formed of wire and having one end bent at an acute angle to the bearing arm to form the bottom arm of the guide, an arm extending from the other end of the bearing arm and arranged in the same plane and directly above the end arm, a depending arm extending from the last-named arm to a point in close proximity to the end of the end arm, and another end arm extending inwardly to the bearing arm, said arm being arranged at an obtuse angle and parallel to but spaced from the first-named end arm to form an open-ended inclined guide and hanger for the said pintle.

5. A detachable hinge comprising a pintle-carrying member adapted to be secured to a sash or screen and provided with a projecting pintle, and a supporting member adapted to be secured to the frame above the sash or screen and provided with a horizontally swinging guide to receive the said pintle, and means for locking the guide in a fixed position when desired.

961,752. MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. JOHN N. BUSBELL, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 3, 1908. Serial No. 441,845.



1. A machine of the class described, having in combination, a rotary cutter and a concentrically stepped counter guard therefor adjustable about the axis of rotation of said cutter to bring different steps into operative relation to the work.

2. A machine of the class described, having in combination, a rotary cutter and a concentrically stepped counter guard therefor adjustable about the axis of rotation of said cutter to bring different steps into operative relation to the work, and means for holding said guard in adjusted position.

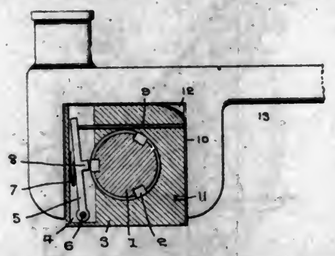
3. A machine of the class described, having in combination, a rotary cutter and a concentrically stepped counter guard therefor adjustable about the axis of rotation of said cutter to bring different steps into operative relation to the work, and yieldingly movable longitudinally of the axis of said cutter to accommodate itself to work of varying width.

4. A machine of the class described, having in combination, a rotary cutter, a concentrically stepped counter guard therefor adjustable about the axis of rotation of said cutter to bring different steps into operative relation to the work, and movable longitudinally of the axis of said cutter to accommodate itself to work of varying width, and means for confining said guard in its adjusted position about the cutter, said means permitting free movement of said guard longitudinally of the axis of said cutter.

5. A machine of the class described, having in combination, a rotary cutter provided with a hub and a concentrically stepped counter guard yieldingly confined upon said hub whereby it may move longitudinally of the axis of rotation of said cutter to accommodate itself to work of varying width.

[Claims 6 to 12 not printed in the Gazette.]

961,753. LOCKING DEVICE. WILLIAM H. CASLOW, Claridge, Pa. Filed Dec. 14, 1909. Serial No. 533,033.



1. A locking nut having a channel in one end thereof, a spring-held locking member mounted in said channel and adapted to have engagement with a bolt, a spring member mounted on the opposite end of said nut and means cooperating with said locking member and spring, whereby said locking member may be moved into and out of effective position.

2. A locking nut having a channel in one end thereof, a spring-held locking member pivoted at one end thereof in said channel and having a pendulum movement therein, said member being adapted normally to have engagement with a bolt, and a spring-held pin encountering a portion of said locking member and adapted to move it out of effective position.

3. In a nut-lock, the combination with a bolt having longitudinal slots therein; of a nut having a channel in one end thereof, a spring-held locking member pivotally mounted in said channel and adapted to have engagement with the slots in said bolt, a pin extending through said nut at right angles to said channel and having one end encountering said locking member, and a spring means encountering the opposite end of said pin, whereby said locking member may be thrown out of effective position.

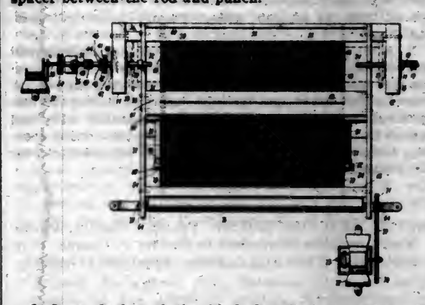
4. In a nut-lock, the combination with a bolt having longitudinal slots therein; of a nut engaging said bolt and having a channel in one end thereof, a spring-held locking member pivotally mounted in said channel and adapted to have engagement with the slots in said bolt, a pin extending through a channel in said nut at right angles to said first referred to channel, one end of said pin engaging a portion of said locking member, and a spring mounted on said nut at the opposite and outer edge and encountering the opposite end of said pin, whereby when said spring is forced inwardly, said locking member is thrown out of effective position.

5. In a locking nut having a channel in one end thereof, the combination with a locking member pivotally mounted in said channel, and a spring operating in said channel and adapted to retain said locking member in engagement with a bolt; of an additional spring-held means for forcing said locking member out of effective position.

[Claim 6 not printed in the Gazette.]

961,754. MUSIC-ROLL PRODUCER FOR SELF-PLAYING PIANOS. DONALD M. CLOAK, Dover, Del. Filed Dec. 22, 1909. Serial No. 534,507.

1. In a device of the kind described, a reciprocable punch, a reciprocable punch actuating rod in alinement therewith, spaced guides for supporting the adjacent ends of said punch and rod, a spacer movable into and out of position between said rod and punch, a spring holding said spacer against the guide for the rod end, means to reciprocate the rod, and electro-magnetic means to move said spacer between the rod and punch.



2. In a device of the kind described, a reciprocable punch, a reciprocable punch actuating rod in alinement therewith, spaced guides for supporting the adjacent ends of said punch and rod, a spacer movable into and out of position between said rod and punch, a spring holding said spacer against the guide for the rod end, means to reciprocate the rod, a normally open electric circuit, electro-magnetic mechanism in said circuit to move said spacer between the rod and punch, and piano key controlled means to close said circuit.

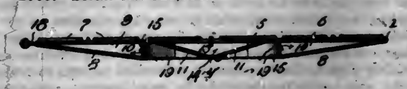
3. In a device of the kind described, a reciprocable punch, a guide for one end thereof, a collar on said punch to limit its movement through said guide, a spring connected to said punch and guide to normally hold the collar against said guide, a reciprocable punch actuating rod in alinement with the punch, a guide for said rod in spaced relation to the first mentioned guide, a reciprocable spacer movable in the space between said guides, means to reciprocate said bar continuously, key controlled elements to reciprocate said spacer, and a spring connected to said spacer and the guide for said rod to hold the spacer against said guide.

4. In a device of the kind described, a series of independently reciprocable punches, a guide bar supporting the juxtaposed ends of said punches, a collar on each punch to limit its movement through the guide, springs each having one end connected to one of said punches and the other end to said guide, said springs normally holding said collars against said guide, a series of reciprocable punch actuating rods equal in number to said punches and each in alinement with one of the punches, means to simultaneously reciprocate all of said rods, said rods being at all times spaced from said punches, a series of spacers equal in number to said rods and movable into and out of the paths of the respective rods, and key controlled elements for so moving said spacers.

5. In a device of the kind described, a series of punches, a series of punch actuating rods each in alinement with one of the punches, a series of springs each yieldingly holding one of said rods away from its respective punch, a shaft adjacent the ends of said rods opposite the punches and lying in the plane of the rods, a cam cylinder eccentrically carried by the shaft and against which the ends of the rods rest, and means to rotate said cam cylinder and simultaneously cause all of said rod to reciprocate.

[Claims 6 to 8 not printed in the Gazette.]

961,755. HEAT-DISTRIBUTING TOP FOR BURNERS. ALBERT B. COLEMAN, Oberlin, Ohio. Filed Sept. 22, 1909. Serial No. 518,930.

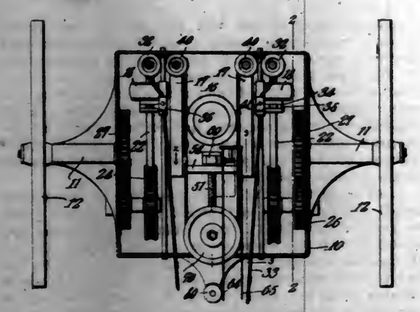


1. A top for gas and other like stoves having a central and side openings, a pair of inclined downwardly converg-

ing deflectors under the central opening having their lower edges spaced apart, and inclined deflectors under the side openings, each disposed substantially parallel with and spaced from the adjacent deflector under the central opening.

2. A top for gas and other like stoves having a central and side openings, a pair of inclined downwardly converging deflectors under the central opening having their lower edges spaced apart, and inclined deflectors under the side openings, each disposed substantially parallel with and spaced from the adjacent deflector under the central opening, and dampers in the space between the deflectors for the purpose set forth.

961,756. TRACTION-MOTOR. FRANK J. CROUCH, Seattle, Wash., assignor of one-half to Charles P. Church, Portland, Oreg. Filed Aug. 5, 1908. Serial No. 447,108.



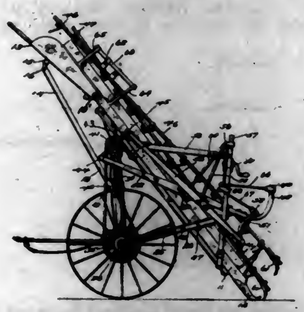
1. In a draft apparatus, a frame, a pair of traction wheels supporting the frame, a prime mover including a pair of friction disks, driving connections for each traction wheel, each connection including a driven disk arranged to engage one of the friction disks, shafts carrying said driven disks, levers having bearings for said shafts, and vibrating laterally with respect to the friction disks, and controlling lines extending from the levers rearward of the frame to permit the said levers to be placed in operative engagement with the friction disks.

2. In a draft apparatus, a frame, a pair of traction wheels supporting the frame, a prime mover including a pair of friction disks, driven disks arranged to engage the friction disks, and through which motion is imparted to the traction wheels, a pair of shafts carrying the driven disk, a pair of levers having bearings for the shaft, a flexible actuating member extending around both levers, and means for adjusting said flexible member, whereby the driven disks may be shifted along the length of their carrying shafts.

3. A wheeled draft apparatus, a prime mover carried thereby, a pair of separate driving connections between the prime mover and the wheels, a sheave, a flexible member extending around said sheave and having its ends extending rearward from the motor for distant control, means connected to said flexible member for controlling the driving connections, a traveling nut carrying the sheave, a screw extending through the nut, and means for turning said screw and nut in a direction to shift the position of the nut.

4. A wheeled draft apparatus including a prime mover, friction driving connections between the prime mover and the carrying wheels, each of said driving connections including a friction disk, a shaft carrying the disk, a pivoted lever having a bearing for the shaft, a sheave mounted at one end of the lever, a shifting fork connected to the friction disk, a flexible member connected to both shifting forks and extending around the two sheaves, a sheave around which the bight of the flexible member extends, a traveling nut carrying said sheave, a screw extending through the nut, a slidable bearing for one end of the screw, a friction disk carried by the screw, and a controlling means for shifting the slide and moving the friction disk into engagement with the prime mover.

961,757. HAY-LOADER. JOSEPH DAIN, Ottumwa, Iowa. Filed June 21, 1902. Serial No. 112,621.



1. In a hay-loader, the combination of an elevator-frame, raking-devices above said elevator-frame, reciprocating rocking-levers for operating said raking-devices, and swinging means supporting said levers from above.

2. In a hay-loader, the combination of an elevator-frame, raking-devices above said elevator-frame, reciprocating rocking-levers for operating said raking-devices, and swinging means yieldingly supporting said levers from above.

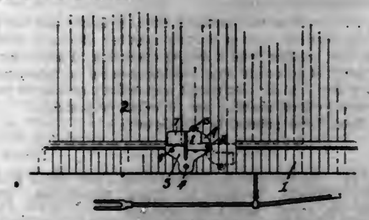
3. In a hay-loader, the combination of a machine frame including an elevator frame, raking devices, and mechanism for operating said raking devices and yieldingly supporting them over the elevator frame including one or more reciprocating rocking levers fulcrumed on the machine frame.

4. In a hay-loader, the combination of a machine frame including an elevator frame, and standards carried by said elevator frame, raking devices and means including one or more reciprocating rocking levers fulcrumed on the machine frame for operating said raking devices, and yieldingly suspending them from said standards.

5. In a hay-loader, the combination of an elevator-frame, raking-devices, means including reciprocating rocking levers for operating said raking-devices and yieldingly supporting them over the elevator frame, and means below the elevator-frame for actuating said levers, substantially as described.

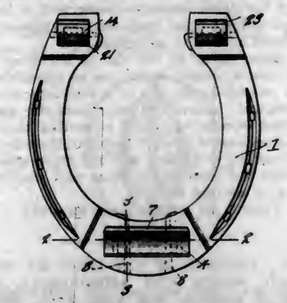
[Claims 6 to 55 not printed in the Gazette.]

961,758. BACK-STOP FOR SLIDING DOORS. ANGUS DARRACH, Sarnia, Ontario, Canada. Filed Feb. 9, 1910. Serial No. 542,948.



The combination with a sliding door of a car, of a bracket secured to the car at the lower rear corner of the door, said bracket having a horizontal ledge immediately beneath the plane of movement of the door which terminates at its outer edge in an upwardly projecting flange and provided at the ends of the ledge with perforated ears, a stop-block capable of being hinged to the ears at either end of the bracket and adapted to rest upon the ledge with its other end adjacent the rear edge of the door to prevent a movement of the door in one direction and adapted to be thrown to inoperative position below the plane of the door, substantially as described.

961,759. HORSESHOE-CALK. CHARLES M. DELANY, Poynette, Wis. Filed July 7, 1909. Serial No. 506,353.



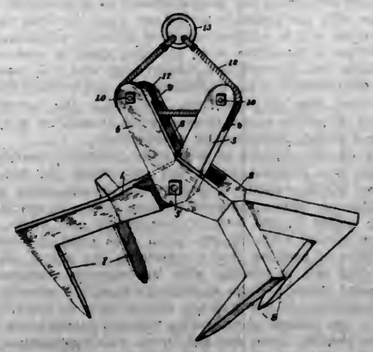
A horseshoe having a slot formed therein, a calk having a shank removably mounted in the slot, said shank having slots formed therein adjacent to the ends of the shank, and means removably engaged with the shoe and adapted for frictional engagement with the walls of the slots to force the end portions of the shank into locking engagement with the walls of the slots, the said calk having its upper surface at points outwardly of the said shank formed with recesses which open directly onto the bottom of the shoe.

961,760. PROCESS OF MAKING ALKALI THIOSULFATES. LOUIS DESTREE, Haren, Belgium. Filed Apr. 10, 1909. Serial No. 489,052.

1. The described process of obtaining alkali thiosulfates by the action of alkali bisulfites upon alkali disulfids.

2. The described process for the conversion of alkali disulfids into alkali thiosulfates by the action thereupon of alkali bisulfites.

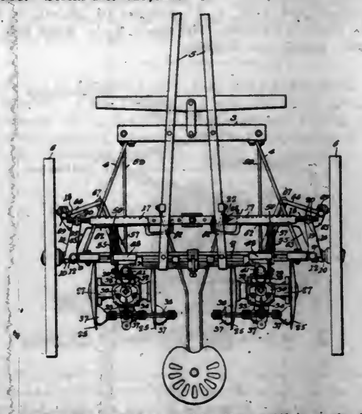
961,761. GRAPPLING DEVICE. HARRY W. ERICKSON, Willow Lake, S. D. Filed Feb. 15, 1909. Serial No. 478,116.



1. A grappling device comprising pivoted tongues 1 and 2; angularly formed arms 3 and 4, said arm 4 being provided with divergent slots 6 adapted to receive arm 3, and each of said arms 3 and 4 being provided with a bifurcation 9; divergent angularly formed hook portions 7 and 8 on arms 1 and 2; pulleys 10 and 11 in bifurcations 9; cable 12 passing over pulleys 11 and 12; and ring 13 secured to both ends of cable 12, substantially as described.

2. A grappling device comprising pivoted tongues 1 and 2; angularly formed arms 3 and 4, the said arm 4 being provided with divergent slots 6 adapted to receive arm 3, and each of said arms 3 and 4 being provided with a bifurcation 9; divergent angularly formed hook portions 7 and 8 on arms 1 and 2; each of said hook portions having a lower pointed member disposed at right angles to the upper portion; pulleys 10 and 11 in bifurcations 9; cable 12 passing over pulleys 10 and 11; and ring 13 secured to both ends of cable 12, substantially as described.

961,762. CULTIVATOR. HENRY N. FAAS and HARRY E. DODSON, Springfield, Ohio, assignors, by mesne assignments, to The American Seeding Machine Company, Springfield, Ohio, a Corporation of Ohio. Filed Mar. 7, 1908. Serial No. 419,617.



1. In a cultivator, the combination, with a main frame, an axle mounted on said main frame, a ground wheel carried by said axle, a cultivating member, and a support for said cultivating member pivotally connected to said main frame near the rear end thereof and movable about a vertical axis, of means for connecting said axle to said support comprising a foot lever mounted on one of said members, and a link connecting said lever to the other of said members.

2. In a cultivator, the combination, with a main frame, an axle mounted on said main frame, a ground wheel carried by said axle, a cultivating member, and a support for said cultivating member pivotally connected to said main frame near the rear end thereof and movable about a vertical axis, of means for connecting said axle to said support, comprising a forwardly extending arm rigidly secured to one of said members, a lever mounted on the other of said members, and a link connected at one end to said arm and at the other end to said lever at a point removed from the point of connection of said lever to its supporting member.

3. In a cultivator, the combination, with a main frame, an axle mounted on said main frame, a ground wheel carried by said axle, a cultivating member, and a support for said cultivating member pivotally connected to said main frame and movable about a vertical axis, of a forwardly extending arm rigidly secured to said support, a second forwardly extending arm supported by said main frame, a lever mounted on one of said arms, and a link connecting said lever to the other of said arms.

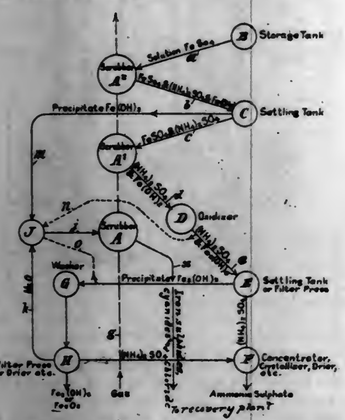
4. In a cultivator, the combination, with a main frame, an axle pivotally mounted thereon, a ground wheel carried

by said axle, a cultivating member, and a support for said cultivating member pivotally connected to said main frame near the rear end thereof and movable about a vertical axis, of an arm rigidly secured to said axle, a second arm rigidly secured to said support, and arranged substantially parallel with the first-mentioned arm, a foot lever, and means for operatively connecting said foot lever to both of said arms.

5. In a cultivator, the combination, with a main frame, an axle pivotally mounted thereon, a ground wheel carried by said axle, a cultivating member, and a support for said cultivating member pivotally connected to said main frame near the rear end thereof and movable about a vertical axis, of an arm rigidly secured to said axle, a second arm rigidly secured to said support and arranged substantially parallel with the first-mentioned arm, a foot lever rigidly secured to the arm carried by said axle, and a link connecting said lever to the arm carried by said support.

[Claims 6 to 11 not printed in the Gazette.]

961,763. PROCESS OF PURIFYING GAS AND RECOVERING AMMONIA, &c., THEREFROM. FREDERIC J. FALDING, New York, N. Y., assignor of one-half to William Richard Cathcart, Maywood, N. J. Filed Feb. 26, 1906. Serial No. 302,914.



1. The improvement in the art of purifying gas and recovering values present in the gas as impurities, which consists in scrubbing the gas with a solution of an iron salt, thereby producing a wash liquor containing an ammonium salt in solution and iron hydrate, and subjecting such wash liquor to the action of an oxidizing agent to convert the soluble iron hydrate into iron hydrate which is insoluble in the presence of ammonium salt and thereby causing all the iron to precipitate.

2. The improvement in the art of purifying gas and recovering values present in the gas as impurities, which consists in first freeing the gas of its sulfur, cyanogen and chlorin, and then scrubbing the gas with a solution of an iron salt, thereby producing a wash liquor containing an ammonium salt in solution and iron hydrate, subjecting the wash liquor to the action of an oxidizing agent to convert the soluble iron hydrate into iron hydrate which is insoluble in the presence of ammonium salt and thereby causing all the iron to precipitate, separating the precipitate from the solution, and recovering the ammonium salt from the solution.

3. The improvement in the art of purifying gas and recovering values present in the gas as impurities, which consists in first scrubbing the gas with a liquid containing iron hydrate to free the gas of its sulfur, cyanogen and chlorin, and then scrubbing the gas with iron pickling liquor, thereby producing a wash liquor containing an ammonium salt in solution and iron hydrate, subjecting the wash liquor to the action of an oxidizing agent to convert the soluble iron hydrate into iron hydrate which is insoluble in the presence of ammonium salt and thereby causing all the iron to precipitate, separating the precipitate from the solution, and recovering the ammonium salt from the solution.

4. The improvement in the art of purifying gas and recovering values present in the gas as impurities, which consists in subjecting the gas successively to a preliminary scrubbing operation and one or more main scrubbing operations, the main scrubbing operation or operations being with a solution of an iron salt, and the preliminary scrubbing operation being with a liquid containing iron hydrate taken from the wash liquor resulting from the main scrubbing operations.

5. The improvement in the art of purifying gas and recovering values present in the gas as impurities, which consists in subjecting the gas to a preliminary scrubbing with a substance adapted to take from the gas sulfur, cyanogen and chlorin, and then subjecting the gas to a plurality of successive scrubbing operations, one of which is with a solution of an iron salt and a preceding one of which is with the wash liquor from said scrubbing with the solution of an iron salt.

[Claims 6 and 7 not printed in the Gazette.]

961,764. PROCESS OF UTILIZING BY-PRODUCT METALLIC SALTS AND AMMONIACAL LIQUOR. FREDERIC J. FALDING, New York, N. Y., assignor of one-half to William Richard Cathcart, Maywood, N. J. Filed Feb. 26, 1906. Serial No. 302,915.

1. The process of recovering valuable constituents from iron pickling liquor and gas liquor, which consists in mixing the pickling liquor with the gas liquor to form an ammonium salt in solution and iron hydrate, subjecting the mixture to the action of an oxidizing agent to convert the soluble iron hydrate into iron hydrate which is insoluble in the presence of the ammonium salt and thereby causing all the iron to precipitate, separating the precipitate from the solution, and recovering the ammonium salt from the solution, substantially as described.

2. In the process of recovering valuable constituents from iron picking liquor and gas liquor, the improvement which consists in first treating the gas liquor to precipitate the sulfids in the form of iron sulfids and sulfur, and then mixing with the gas liquor a volume of the pickling liquor containing the proper amount of iron salt to combine with the ammonia in the gas liquor to form an ammonium salt in solution and a precipitate of iron hydrate substantially as described.

3. The process of recovering valuable constituents from iron pickling liquor and gas liquor, which consists in first treating the gas liquor to free it of its sulfids, then mixing with the gas liquor a volume of the pickling liquor containing the proper amount of iron salt to combine with the ammonia in the gas liquor to form an ammonium salt in solution and iron hydrate, subjecting the mixture to the action of an oxidizing agent to convert the soluble iron hydrate into iron hydrate which is insoluble in the presence of the ammonium salt and thereby causing all the iron to precipitate, separating the precipitate from the solution, and recovering the ammonium salt from the solution, substantially as described.

4. In the process of recovering valuable constituents from iron pickling liquor and gas liquor, the improvement which consists in first freeing the gas liquor of its sulfids by adding sufficient pickling liquor to precipitate the sulfids in the form of iron sulfids and sulfur, and then mixing with the gas liquor thus freed of sulfids a volume of pickling liquor containing the proper amount of iron salt to combine with the ammonia contained in the gas liquor to form an ammonium salt in solution and a precipitate of iron hydrate, substantially as described.

5. The process of recovering valuable constituents from iron pickling liquor and gas liquor, which consists in first freeing the gas liquor of its sulfids by adding sufficient pickling liquor to precipitate the sulfids in the form of iron sulfids and sulfur, then mixing with the gas liquor thus freed of sulfids a volume of pickling liquor containing the proper amount of iron salt to combine with the ammonia contained in the gas liquor to form an ammonium salt in solution and iron hydrate, subjecting the mixture to the action of an oxidizing agent to convert the soluble iron hydrate into iron hydrate which is insoluble in the presence of the ammonium salt and thereby causing all the iron to precipitate, separating the precipitate from the solution, and recovering the ammonium salt from the solution, substantially as described.

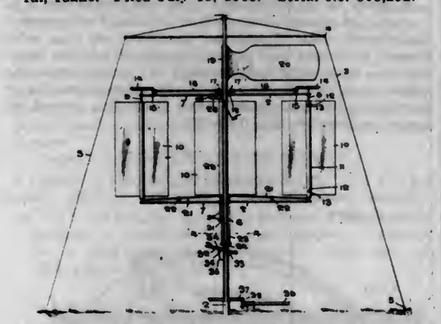
[Claims 6 and 7 not printed in the Gazette.]

961,765. EAR-MUFF. JOHN B. FASSLER, Ward, Pa. Filed Dec. 29, 1909. Serial No. 535,511.



The combination with two ear muffs, comprising wire frames and flexible material on each frame, of spring bands having sliding relation to each other, inwardly bent portions on said wire frames forming journals, metal clips on said journals and pivotally connected to said bands, short bands secured to the inwardly bent portions of the frames, a metal hook shaped fastener secured to one of said short bands and adapted to engage the other frame and hold the ear muffs together, substantially as described.

961,766. WIND-MOTOR. THOMAS H. E. FOLGER, Corral, Idaho. Filed July 19, 1909. Serial No. 508,292.

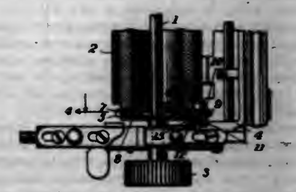


1. In a wind operated motor, the combination of a standard, a sleeve receiving said standard and carrying a vane, a second sleeve also receiving said standard, frames carried by said second sleeve, shafts rotatably mounted in the ends of said frames and provided with lateral pins, blades mounted on said shafts and having angular slots therein, said pins being received by said slots, additional shafts geared to the first referred to shafts, means effecting intergeared connection between the vane carrying sleeve and said additional shafts, means adapted to move said blades longitudinally upon said additional shafts, and manually actuated means adapted to effect connection between one of said frames and said intergeared means of connection between the vane carrying sleeve and said additional shafts.

2. In a wind motor, the combination of a standard, a sleeve receiving said standard and carrying a vane, a second sleeve also receiving said standard, frames carried by said second sleeve, shafts rotatably mounted in the ends of said frames and provided with lateral pins, blades mounted on said shafts and having angular slots therein, said pins being received by said slots, additional shafts geared to the first referred to shafts, means effecting intergeared connection between the vane carrying sleeve and said additional shafts, levers mounted upon said frames and having their outer ends arranged below and adapted to engage the lower ends of said blades, a latch having a pin engaging a pinion of said intergeared connection, means for securing said latch upon said second sleeve, a rack applied to said second sleeve, a manually actuated lever, means effecting engagement between said rack and said manually actuated lever.

3. In a wind motor, the combination with a standard, of a sleeve adapted to receive said standard and carrying a vane, a second sleeve also receiving said standard, frames carried by said sleeve, blades rotatably mounted in the ends of said frames, shafts for supporting said blades and provided with pins, said blades having annular slots therein receiving said pins, gearing effecting connection between said shafts and the sleeve carrying said vane, a spring-pressed locking pin effecting connection between one of said frames and said gearing, and means for actuating said locking pin.

961,767. PLATEN-BRAKE FOR TYPE-WRITING MACHINES. CARL GABRIELSON and FRANK C. STANLEY, Syracuse, N. Y., assignors to L. C. Smith & Bros. Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 15, 1906. Serial No. 339,092.



1. In a typewriting machine, the combination with the platen and platen shaft, and with the usual ratchet wheel connected with the platen, of a disk arranged upon the platen shaft adjacent to the end of the platen and movable relatively to the platen, means for effecting a frictional engagement of the disk with the platen, and means for holding the disk against rotation, whereby the platen may be held in any desired position frictionally.

2. In a typewriting machine, the combination with the platen and platen shaft, and with the usual ratchet wheel connected with the platen, of a disk free upon the platen shaft adjacent to the end of the platen, a spring interposed between and bearing on the disk and the platen, and means movable into and out of holding engagement with said disk, for the purpose set forth.

3. In a typewriting machine, the combination with the platen and platen shaft, of a ratchet wheel connected with the platen, a disk upon the platen shaft adjacent to the ratchet wheel, a brake spring between said disk and platen, holding devices for the ratchet wheel and disk, respectively, and a lever for alternately throwing said holding devices out of operative position.

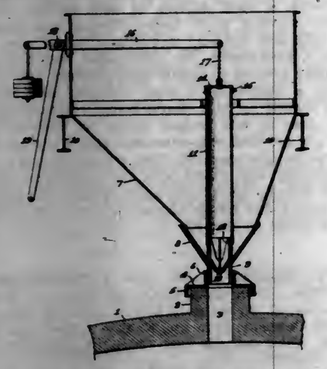
4. In a typewriting machine, the combination with the platen and platen shaft, of a disk freely mounted on the platen shaft adjacent to the end of the platen, said disk having a toothed periphery, a brake spring interposed between the platen and said disk, a tooth adapted to engage the teeth of the disk to hold the said disk stationary, and means for engaging and disengaging said tooth with the disk, for the purpose set forth.

5. In a typewriting machine, the combination with the platen and platen shaft, of a ratchet wheel connected with the platen, a holding device coöperating with said ratchet wheel, a brake device for yieldably holding the platen in any desired position, means for alternately throwing said

holding device and brake device into operation, and means for maintaining said holding device and brake device inoperative simultaneously, whereby the platen may be freely rotated.

[Claim 6 not printed in the Gazette.]

961,768. FEEDING DEVICE FOR REVERBERATORY FURNACES. SAMUEL RICHARD GARR, Garfield, Utah. Filed Mar. 26, 1910. Serial No. 551,680.



1. The combination with a reverberatory furnace, of a feed hopper supported independently thereof, a short chimney on said furnace and a sleeve movable vertically on said hopper and having a flange resting on said chimney and permitting relative lateral movement of said hopper and furnace.

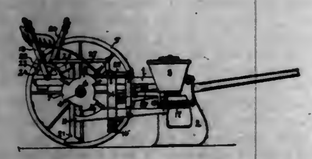
2. The combination with a reverberatory furnace, having a short chimney in its roof, of an upright sleeve having a flange resting on said chimney and provided with a downwardly turned rim of larger diameter than said chimney, and a hopper having a spout entering said sleeve with a sliding fit.

3. A feed hopper for a reverberatory furnace, and a tubular valve therefor having a closed lower end provided with air holes.

4. A feed hopper for a reverberatory furnace, and a valve comprising a tubular plunger having a conical point provided with air holes in its tip.

5. A feed hopper for a reverberatory furnace, and a valve comprising a length of pipe, a cap at its upper end, an air inlet below said cap, and a conical point secured to the lower end of said pipe and provided with air holes in its tip.

961,769. PLANTER. ANDREW R. GILMORE, Mason, Ill. Filed Jan. 7, 1910. Serial No. 536,873.



1. In a corn planter, the combination with a frame having runners thereon, grain receiving hoppers attached to the frame, said hoppers having dropping means therein and a crank; of a shaft, wheels fixed to said shaft, a disk fixed to said shaft and having lugs around the periphery thereof, fingers attached to said lugs, a bar attached at one end to said crank, a latch on the opposite end of said bar adapted to be engaged by said fingers and draw said bar forward, a guiding means for the free end of said bar with means to normally retain the latch in the path of said fingers and additional means to return the bar to its initial position when released from said latch.

2. In a planter, the combination with a frame, runners attached to said frame, hoppers having dropping mechanism therein, a shaft and supporting wheels fixed to said shaft; of a disk fixed to said shaft, fingers adjustably attached to said disk, a bar connected at one end to the dropping mechanism in the hoppers, a latch carried by said bar adapted to be engaged by said fingers to move the bar lengthwise, means to return the bar to its initial position, a spring adapted to normally hold the latch in the path of said fingers, means to raise the wheels from the ground and additional means to move the latch out of the path of said fingers.

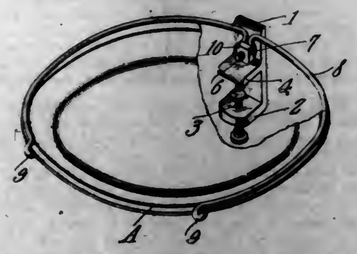
3. In a corn planter, the combination with a frame, hoppers carried by the frame, said hoppers having dropping mechanism therein, an axle and wheels supporting said axle; of a disk fixed to said axle, lugs at predetermined intervals on said disk, fingers adjustably secured to said lugs, a bar connected at one end to said dropping mechanisms, a latch on said bar adapted to be engaged by said fingers, a hanger through which said bar extends, a spring carried by said hanger, adapted to direct upward pressure on the bar and an additional spring at the forward end of the frame adapted to return the bar to its initial position when released by the fingers.

961,770. WOOD-CUTTER OR COUNTERSINK. PAUL M. GRANDPERRIN, Sag Harbor, N. Y. Filed Apr. 29, 1909. Serial No. 493,006.



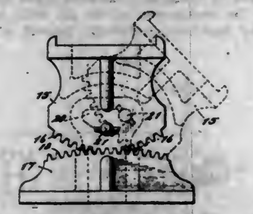
A cutter bar or bit adapted to be fitted transversely to a shaft and oppositely beveled on one face from opposite longitudinal edges of said face from each end to a point beyond the center such oppositely beveled portions meeting on a diagonal line intersecting the center presenting alined or parallel diagonal cutting shoulders decreasing in depth from said longitudinal edges of the face toward the center longitudinal line of the bit.

961,771. TRAY-ATTACHING DEVICE. WARREN C. GREEN, Concordia, Kans. Filed Feb. 8, 1910. Serial No. 542,696.



A device of the class described including a support engaging clamp, an upstanding arm thereon, an eye detachably connected to the arm, oppositely extending bowed spring arms extending from the eye and having terminal plate engaging hooks, said arms constituting means for clamping the plate against the eye and for retaining food upon the plate, said arms bearing throughout their length upon the marginal portion of the plate.

961,772. DUMP-CAR. HARRY D. HAMPER and THOMAS R. MCKNIGHT, Aurora, Ill., assignors to Western Wheeled Scraper Company, Aurora, Ill., a Corporation of Illinois. Filed June 4, 1909. Serial No. 500,104.



1. In a dump-car, the combination of a truck, a car-body, a rocker-bearing for said car-body comprising an upper member and a lower member, said upper member being adapted to rock on said lower member to tilt the car-body, and stationary means loosely connected with the truck and movably connected with the car-body for connecting the car-body and truck.

2. In a dump-car, the combination of a truck, a car-body, a rocker-bearing for said car-body comprising an upper member and a lower member, said upper member being adapted to rock on said lower member to tilt the car-body, and means fitted in a socket in one of said members and movably connected with the other member for holding said members in position.

3. In a dump-car, the combination of a truck, a car-body, a rocker-bearing for said car-body comprising an upper member and a lower member, said upper member being adapted to rock on said lower member to tilt the car-body, and a pin pivotally connected with the car-body and fitted in a vertical socket in the truck.

4. In a dump-car, the combination of a truck, a car-body, a rocker-bearing for said car-body comprising a lower member and an upper member adapted to rock upon said lower member, a pin having an opening in its upper end and detachably connected with said lower member, and a pivot connecting said pin with the upper member.

5. In a dump-car, the combination of a truck, a car-body, a rocker-bearing for said car-body comprising a lower member and an upper member adapted to rock upon said lower member, a pin fitted in a socket in said lower member and having a triangular opening in its upper end portion, and a pivot connecting said pin with said upper member.

[Claims 6 to 8 not printed in the Gazette.]

961,773. BOX-CAR. JOHN M. HANSEN, Pittsburg, Pa., assignor to Standard Steel Car Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Nov. 17, 1909. Serial No. 528,579.



1. A metallic box-car comprising a plurality of side and roof-plates united together, outwardly extending flanges formed on said plates, cover-strips engaging the flanges of adjoining plates, fastening means uniting said flanges and cover-strips, the cover-strips of one set of plates overlapping the cover-strips of another set of plates.

2. A metallic box-car comprising a plurality of plates forming the sides and roof connected together, outwardly extending flanges formed on said plates, cover-strips engaging the flanges of adjoining plates, fastening means uniting said flanges and cover-strips, the ends of the cover-strip of one set of plates being flared and engaging the cover-strips of another set of plates.

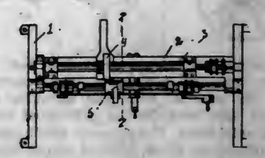
3. A metallic box-car having a doorway formed therein, a Z-bar extending across the top of said doorway and connected to the roof and side-plates.

4. A metallic box-car having a doorway formed therein, a Z-bar extending across the top of said doorway and supported by the side and roof-plates, and a reinforcing bar secured to the inner face of said Z-bar.

5. A metallic box-car having a doorway formed therein, a Z-bar extending across the top of said doorway and supported from the roof and side-plates of said car, and an angle-bar secured to the inner face of said Z-bar.

[Claims 6 to 15 not printed in the Gazette.]

961,774. GRINDING-MACHINE. CHARLES HAYES, Jr., Utica, N. Y. Filed Aug. 5, 1909. Serial No. 511,320.



1. In a grinding machine consisting of an arbor for the support of work and a swingable grinding member, the combination of an adjustable stop mounted independent of the grinding member and positioned to limit the movement of the grinding member whereby to standardize a plurality of rolls, substantially as described as to the diameter thereof.

2. In a grinding device, the combination with a swinging grinding member, of means mounted independent of the grinding member and adjustable to determine the limit of movement of said grinding member against its work, substantially as described.

3. In a grinding machine, the combination with a traversing grinding member, the same being mounted to swing transversely of the line of its travel, of an adjustable stop-member abutting the grinding member in its latter movement the same comprising an arm mounted to travel and swing with the bracket and an adjustable member carried thereby forming a stop for the movement of the bracket, whereby, upon adjustment of the parts, a series of objects may be ground circumferentially to a given standard, substantially as described.

4. In a grinding machine, the combination with a grinding member adapted to travel to and fro lengthwise the machine and to swing transversely, of a stop mechanism for standardizing the extent of such swing in a number of grinding operations, the same comprising an adjustable stop-bar, an arm supporting the same and a scale hung on the bar with reference to which to position the bar, substantially as described.

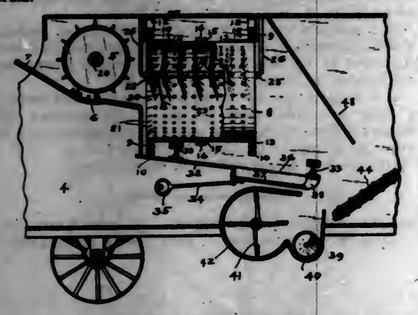
5. In a grinding machine, the combination of a frame, means supporting a roller or the like to be ground, a grinding member swingably mounted, a swingable bracket mounted to pass from end to end of the machine and having means to press the grinding member to the work, an arm mounted to travel and swing with the bracket, an adjustable member carried thereby forming a stop for the movement of the bracket, and index means whereby to standardize the position of said stop for a series of grinding operations, substantially as described.

[Claim 6 not printed in the Gazette.]

961,775. THRESHING-MACHINE. SHIRL HESS, Crawfordsville, Ind. Filed Mar. 25, 1909. Serial No. 485,739.

1. In a machine of the character described, the combination with threshing mechanism, of a separating-drum into which the straw and loose grain from the threshing

mechanism is discharged, said drum having perforated sides, means for rotating said drum, a fixed shaft passing longitudinally through said drum, and tines in a plurality of conical series mounted obliquely and loosely on said shaft to produce a pitch to feed the straw through the drum.



2. In a machine of the character described, the combination with threshing mechanism, of a separating-drum into which the material from said threshing mechanism is discharged, said drum having perforated sides, means for rotating said drum, a stationary shaft passing longitudinally through the drum, hubs in planes oblique to the drum and shaft loosely mounted on said shaft and tines secured to the hubs in a conical series for each hub with the bases of the conically arranged tines toward the discharge end of the drum.

3. In a machine of the character described, the combination with threshing mechanism, of a separating-drum into which the material from said threshing mechanism is discharged, said drum having perforated sides, and inwardly and rearwardly disposed hooks at the receiving end of the drum, means for rotating the drum, and means including a fixed shaft and tines arranged in a plurality of conical series loosely mounted on said shaft for feeding the straw through the drum.

4. In a machine of the character described, the combination with threshing mechanism, of a separating-drum into which the material from said threshing mechanism is discharged, said drum having perforated sides, and inwardly and rearwardly disposed hooks at the receiving end of the drum, means for rotating the drum and means including tines arranged in a plurality of conical series each capable of rotation separate from the other and from the drum for feeding straw through the drum.

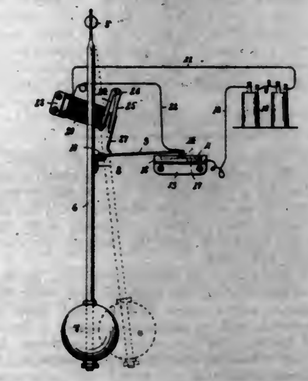
5. In a machine of the character described, the combination with threshing mechanism, of a separating-drum into which the material from said threshing mechanism is discharged, said drum having perforated sides, means for rotating said drum, a shaft passing longitudinally through the drum, tines mounted loosely and obliquely on the shaft to contact with an inner side of the drum, and an arm carrying a brush mounted in a fixed manner on the shaft and extending toward the opposite side of the drum from that closest to said brushes.

[Claims 6 to 8 not printed in the Gazette.]

961,776. ELECTRICAL MEANS FOR OPERATING CLOCK-PENDULUMS. JOHN F. HOLMES, Waterbury, Conn. Filed July 27, 1909. Serial No. 509,780.

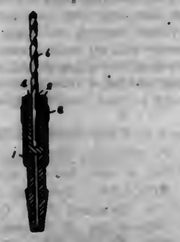
1. In a device for operating clock mechanism the combination with a pendulum of an arm connected to and carried thereby bearing a contact pin, a block of insulating material having an elliptical groove to guide the pin of the arm, a metallic plate set in the groove to contact with the said pin, a magnet having an arm bearing an armature with attached means for engaging and throwing the pendulum rod with each complete forward and backward swing thereof, and batteries having connections with the magnet to operate the latter.

2. In a device for operating clock mechanism the combination with a pendulum, of an arm pivotally connected to the pendulum rod and bearing a contact pin, a block of insulating material having an elliptical groove therein to guide the pin of the arm, a metallic plate set in the said groove for the engagement of the pin with each complete forward and backward movement thereof, a battery con-



nected with the block, a magnet connected with the battery and pin of the arm and having an armature with means for engaging and throwing the pendulum rod at each instant the pin of the arm engages the metallic plate of the block.

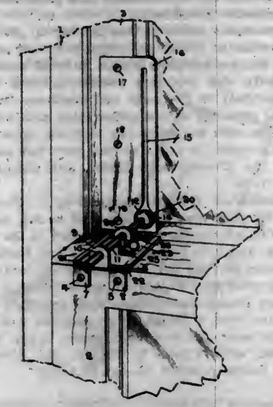
961,777. BRACE-CHUCK. ISAAC C. IMBODEN, Cleona, Pa. Filed July 11, 1906, Serial No. 325,725. Renewed Apr. 13, 1910. Serial No. 555,298.



A brace chuck comprising a chuck body perforated longitudinally at one end and having a socket at its other end communicating with said longitudinal perforation, and a drill-holding sleeve fitting in said socket closed at one end to prevent accidental slipping of the tool during operation.

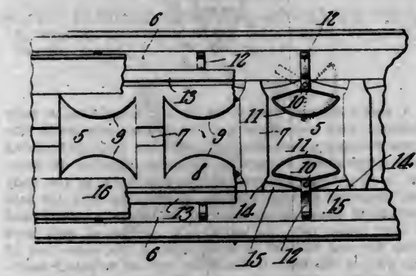
961,778. WINDOW-FASTENER. ALEXANDER JOHN, New York, N. Y. Filed Dec. 22, 1909. Serial No. 534,510.

The combination with an upper and a lower window sash slidably mounted in a window frame, a retaining plate fixedly secured on the upper frame of said lower sash, a keeper formed on the inner end of said retaining plate by upturning a portion of the end of said plate at right angles thereto, a pair of guide-ways formed by upstanding portions of the transverse extending sides of said retaining plate, a plate adapted to enter said guide-ways, a keeper extending perpendicularly to said last mentioned plate and integral therewith in alinement with said first named keeper, a sliding bolt adapted to pass longitudinally through each of said keepers and a means for preventing the casual displacement of said sliding bolt when



it is desired to secure said upper sash with said lower sash.

961,779. STOCK-FEEDER. FRANK W. KELLUM, Peabody, Kans. Filed Feb. 25, 1910. Serial No. 545,879.



1. In a stock feeder, a feed holding compartment, a trough arranged below one end of the compartment, and a horizontally operating valve working in the compartment adjacent to said end, said valve having an operating stem projecting into the trough.

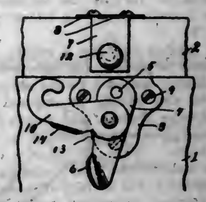
2. A stock feeder comprising a feed holding compartment, a trough arranged below one end of the compartment, a valve working in the compartment adjacent to said end, said valve having an operating stem extending into the trough, a feed hopper mounted above the compartment, and an apron extending across the compartment and spaced from the floor thereof, the aforesaid valve working behind the apron.

3. A stock feeder comprising a platform, troughs arranged along opposite edges of the platform, cross strips on the platform, longitudinal strips mounted on the cross strips, said cross strips and longitudinal strips forming a series of feed holding compartments on the platform, valves working in the compartments, one of said valves being located in each end thereof, and operating stems on the valves extending into the troughs.

4. A stock feeder comprising a platform, troughs mounted on opposite sides thereof, cross strips on the platform, longitudinal strips mounted on the cross strips, the inner edges of said longitudinal strips being spaced apart, aprons extending from said longitudinal strips in the direction of the platform, and spaced from the top thereof, said aprons being located between the cross strips, horizontally operating valves mounted on the platform between the cross strips, and behind the aprons, and operating stems on said valves extending into the troughs.

5. A stock feeder comprising a platform, troughs mounted on opposite sides thereof, cross strips mounted on the platform, longitudinal strips mounted on the cross strips, the inner edges of the longitudinal strips being spaced from each other, and said edges between the cross strips being curved, aprons depending from said curved edges of the longitudinal strips, and spaced at their lower ends from the platform, segmental horizontally operating valves mounted on the platform between the cross strips, and working behind the aprons, and operating stems projecting from the valves into the troughs.

961,780. BOX-COVER FASTENER. CALVIN A. LAUZON, Grand Rapids, Mich. Filed Aug. 24, 1909. Serial No. 514,347.



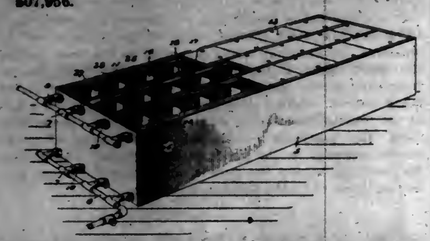
1. In a fastening device, the combination with a keeper, of an attaching plate; a lever-like finger piece pivotally mounted on said plate; a hook-like keeper engaging member pivotally mounted on said finger piece; said finger piece and keeper engaging member being arranged to swing in planes substantially parallel with the face of the said plate; and a stop on said plate for said finger piece, said stop and keeper and the pivots for said finger piece and keeper engaging member being so disposed relative to each other that the pivot for said keeper engaging member is swung past the center of said keeper and the finger piece pivot, whereby a clamping movement is applied to the keeper engaging member and the parts retained in position when the finger piece is swung against said stop.

2. In a fastening device, the combination with a keeper, of an attaching plate; a lever-like finger piece pivotally mounted on said plate; a hook-like keeper engaging member pivotally mounted on said finger piece, said finger piece and keeper engaging member being arranged to swing in planes substantially parallel with the face of the said plate; said hook-like keeper engaging member being provided with a laterally projecting finger piece; and a stop on said plate for said finger piece, said stop being also adapted to serve as a rest for said engaging member.

3. In a fastening device, the combination with a keeper, of an attaching plate; a lever-like finger piece pivotally mounted on said plate; a hook-like keeper engaging member pivotally mounted on said finger piece, said finger piece and keeper engaging member being arranged to swing in planes substantially parallel with the face of the said plate; said hook-like keeper engaging member being provided with a laterally projecting finger piece; and a stop on said plate for said finger piece.

4. In a structure of the class described, the combination with a body and a cover, of a keeper consisting of an angled body portion arranged to engage over the edge of the cover and having a projecting stud-like engaging member thereon; an attaching plate secured to said body; a lever-like finger piece pivotally mounted on said plate; and a hook-like keeper engaging member pivotally mounted on said finger piece the pivots for said finger piece and keeper engaging member being so disposed relative to each other that the pivot for said keeper engaging member is swung past the center of the keeper and the finger piece pivot whereby clamping movement is applied when the parts are swung to their engaging position.

961,781. ICE-HARVESTER. FRANCIS E. LAVERTY, Worcester, Mass. Filed July 16, 1909. Serial No. 507,956.



1. In an ice making machine, a cooling element, a separating member disposed at the surface of said cooling element, and means for varying the thickness of the separating member thereby to exert a lateral pressure on the ice.

2. In an ice making machine, a cooling element having its surface coated to prevent the adhesion of ice thereto, a separating member disposed at the surface of said cooling element and also having its exposed face coated to prevent ice adhering thereto, and means for varying the thickness of said separating member to exert a lateral pressure on the ice.

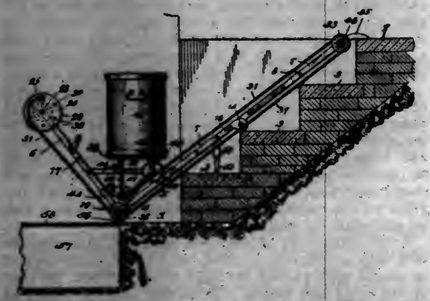
3. In an ice making machine, a cooling element, cross cut devices disposed at the surface of said cooling element, a separating member interposed between the cross cut devices and means for varying the thickness of the separating member, thereby to exert a lateral pressure on the ice.

4. In an ice making machine, a cooling element, cross cut devices disposed at the surface of said cooling element and coated with a compound to prevent ice adhering thereto, and co-acting wedge shaped separating members having a similar coating interposed between the cross cut devices and movable in opposite directions to exert a lateral pressure on the ice.

5. In an ice making machine, a tank, a cooling element disposed within the tank, cross cut devices disposed at the surface of the cooling element, and co-acting wedge shaped separating members interposed between the cross cut devices.

[Claims 6 to 16 not printed in the Gazette.]

961,782. KNOCKDOWN ELEVATOR. CARL O. LILJEROS, Clifton, N. J. Filed Oct. 14, 1909. Serial No. 522,609.



1. A portable knockdown elevator comprising a main adjustable frame, one or more fingers mounted at one end of the main frame, one or more feet mounted at the other end of the main frame, the sides of the main frame adapted to act as rails for the wheels of a car or truck, a car or truck provided with wheels to run on the sides of the main frame, an auxiliary frame pivoted to the main frame, a reel on the auxiliary frame, idlers on the main frame, a rope or cable connected to the car or truck and passing over the idlers and the reel, and pivoted braces connected respectively to the main and auxiliary frames and adapted to hold and lock the auxiliary and main frames apart while in operative position.

2. A knockdown elevator comprising a pivoted main frame, the sides of which are adapted to act as rails for a truck or car, an auxiliary frame, pivoted means to connect the main and auxiliary frames, pivoted braces secured respectively to the main and auxiliary frames, said braces being provided with a coöperating arm and a recess to receive the arm to brace and lock the main and auxiliary frames apart, a truck or car provided with wheels to run on the pivoted main frame, and means to move the car or truck.

3. A knockdown elevator comprising a pivoted main frame the sides of which are adapted to act as rails for a truck or car, an auxiliary frame pivoted to the lower end of the main frame to permit the auxiliary frame and operating means for the car or truck to be located in the areaway, pivoted braces secured respectively to the main and auxiliary frames, said braces being provided with a cooperating arm and a recess to receive the arm to brace and lock the main and auxiliary frames apart, a truck or car provided with wheels to run on the pivoted main frame, and means to move the car or truck.

961,783. POCKET MATCH-BOX. JOHN E. LOWDERMILK and VALLIE J. LOWDERMILK, Scottsburg, Ind. Filed Feb. 28, 1910. Serial No. 546,453.



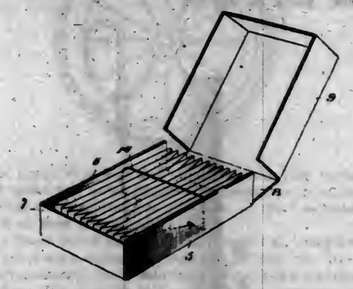
A single delivery pocket match box comprising a body provided with end walls and converging side walls, the latter forming a reduced portion for the body and having their longitudinal edges spaced apart to provide an opening, a pivot rod mounted in the end walls of the body and arranged at said opening, a swinging gate for said opening in the body and having its central portion fixed to said pivot rod, the outer side portion of said gate being flat and adapted to swing against the outer face of one wall of the body to limit the inward swinging movement of the gate, the inner side of said gate being curved or concaved and being adapted to swing against the inner face of the last mentioned side wall of the body to limit the outward swinging movement of the gate, a hand lever fixed at one end of said pivot and arranged at one end of the body, a spring-receiving loop on said lever, and a leaf spring having its free ends slidable in said loop and its other end fixed to the adjacent end wall of the body.

961,784. PAPER BOX AND FASTENER. WALTER S. MATTHEWS, Gulfport, Miss. Filed Oct. 20, 1909. Serial No. 523,664.

1. A receptacle including a cover and having one wall thereof provided with spaced incisions defining a tongue, the walls of which are undercut, and an elastic securing element engaging the tongue and having a portion thereof extended within the receptacle, and another portion thereof adapted to engage the cover.

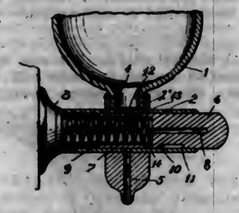
2. A receptacle including a cover having its bottom provided with converging incisions to produce a tongue, the walls of which are undercut, there being a V-shaped recess formed in the free end of the tongue and defining a correspondingly shaped tooth adapted to enter the recess, and an elastic securing element engaging the tongue, and having a portion thereof extending upwardly within the body of the receptacle for engagement with the contents thereof, and another portion thereof adapted to engage the cover when the latter is in closed position.

3. A receptacle including a cover having its bottom portion provided with a tongue free to move upwardly within the box, but held against downward movement, and an elastic securing element engaging the tongue and having a portion thereof extended within the receptacle for engagement with the contents thereof, and another portion thereof adapted to extend across the cover when the latter is in closed position.



4. A receptacle including a cover and having one wall thereof provided with a tongue free to move laterally within the box but held against outward movement, and a securing element engaging the tongue, and having a portion thereof extending within the receptacle for engagement with the contents thereof.

961,785. FLUID-DISTRIBUTING APPARATUS. MARC K. MEMMOD, New York, N. Y. Filed Aug. 4, 1909. Serial No. 511,098.



1. In a fluid distributing apparatus, a fluid supply, a pressure chamber having a normally closed passage adapted to afford communication with said supply, a plunger in said chamber having means adapted, when said plunger is moved, to open said passage, an outlet arranged to communicate with said chamber, and means to afford communication between said chamber and said outlet upon further movement of said plunger.

2. A fluid distributing apparatus comprising a fluid supply, a plunger chamber adjacent thereto having a passage adapted to afford communication between said supply and said chamber, a passage in said plunger arranged to coöperate with said first named passage to effect such communication upon movement of said plunger, an outlet communicating with said plunger chamber, and a passage in said plunger adapted to open communication between said chamber and said outlet upon further movement of said plunger.

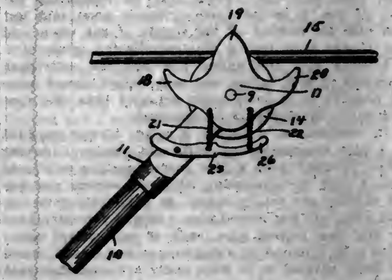
3. A fluid distributing apparatus comprising a fluid supply, a plunger chamber adjacent thereto having a passage communicating with said supply, a plunger in said chamber having a chamber adapted to be placed in communication with said passage upon movement of said plunger, an outlet and means for placing said second named chamber in communication with said outlet upon further movement of said plunger.

4. A fluid distributing apparatus comprising a fluid supply, an outlet passage therefor, a plunger interposed across said outlet and having a chamber adapted to communicate with said outlet upon movement of said plunger, and a second outlet adapted to be placed in communication with said chamber upon further movement of said plunger.

5. A fluid distributing device comprising a fluid supply, a plunger cylinder adjacent said supply and having a passage communicating therewith, a plunger in said cylinder having a chamber normally out of communication with said passage and adapted to be placed in communication with said passage upon outward movement of said plunger, and an outlet adapted to be placed in communication with said chamber upon inward movement of said plunger.

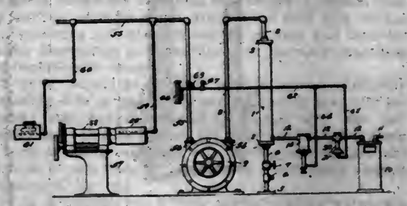
[Claims 6 to 10 not printed in the Gazette.]

961,786. TROLLEY-WHEEL GUARD. HENRY L. MILLER, St. Louis, Mo. Filed Sept. 21, 1909. Serial No. 518,800.



A device of the class described comprising a trolley harp, a pair of plates disposed in parallel upon the opposite sides of the harp concentrically and pivotally mounted with the pulley disposed in said harp, upwardly extended projections disposed in parallel from said plates projected over the edges of the pulley, projections disposed on said plates upon the opposite sides of said upwardly projected projections mounted in parallel and engaged about the edges of the pulley, all of said projections being diverged upwardly and outwardly from the pulley and means for tensionally holding said upwardly extended projections in normal position.

961,787. DEVICE FOR MIXING AIR AND GAS. CLARENCE S. MOORE and JOHN WILLIAM MOORE, Lexington, Ky. Filed Aug. 17, 1909. Serial No. 513,856.



1. In an apparatus of the character described, the combination with a blower mechanism adapted to be operated at a constant speed, and a suitable burner, of a receptacle having communication with said blower mechanism and within which air and gas are mixed before the same are fed to said burner, said receptacle having means associated therewith to admit the entrance of air therein, means of communication associated with said receptacle for supplying gas thereto from a suitable source, means of communication associated with said blower mechanism and said burner for supplying the mixed air and gas under

pressure, to said burner, a valve mechanism associated with said first named means of communication and adapted to regulate the supply of gas into said receptacle, means of communication between said last named means of communication and said valve mechanism for actuating said valve mechanism as the pressure in said second named means of communication varies, a safety valve mechanism associated with said first named means of communication, and having means of communication with said second named means of communication, said safety valve mechanism being adapted to normally remain in open position and to automatically close when the pressure in said second named means of communication falls below a predetermined limit, substantially as described.

2. In combination, a burner, a rotary blower provided with a pipe communicating with said burner, a mixing chamber provided with a pipe communicating with said rotary blower, a pipe communicating with said mixing chamber and a suitable fuel supply source, a valve arranged upon said last named pipe for regulating the supply of gas, a second valve arranged upon said last named pipe for cutting off the supply of gas when said rotary blower is at rest, a pipe establishing communication between said first named pipe and the controlling diaphragms of said valves, and said second named valve being adapted to be more easily actuated than said first named valve, substantially as described.

3. In combination, a burner, a rotary blower provided with a pipe communicating with said burner, a mixing chamber provided with a pipe communicating with said blower, a pipe communicating with said mixing chamber and a suitable gas supply source, an adjustable valve arranged upon said last named pipe, a second valve arranged upon said last named pipe, each of said valves being adapted to be actuated by a diaphragm, said second named valve being adapted to be more easily actuated than said first named valve, and a pipe communicating with said first named pipe and the diaphragm of each of the said valves, substantially as described.

961,788. SINKING SHAFTS OR THE LIKE. DANIEL E. MORAN, Mendham, N. J. Filed May 28, 1909. Serial No. 499,035.



1. In the sinking of shafts or the like, the method which consists in introducing air alongside the shaft to facilitate its descent.

2. In the sinking of shafts or the like, the method which consists in introducing air and water alongside the shaft to facilitate its descent.

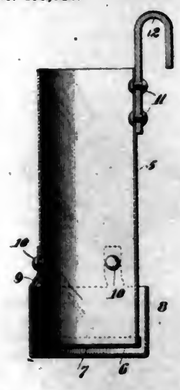
3. In the sinking of shafts, the method which consists in introducing air below its cutting edge in jets distributed around its periphery.

4. In the sinking of shafts, the method which consists in introducing air and water below its cutting edge in jets distributed around its periphery.

5. In the sinking of shafts or the like, the method which consists in introducing air alongside the shaft in jets at different levels simultaneously.

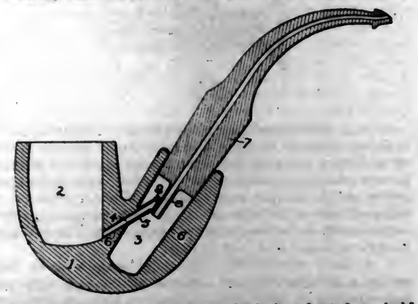
[Claims 6 to 9 not printed in the Gazette.]

961,789. TUBE FOR DISSOLVING SODA-ASH. WILLIAM H. MUSSEY, Richmond Hill, N. Y. Filed June 3, 1909. Serial No. 499,886.



In an apparatus of the class described, the combination of a container open at the top, and having an aperture arranged medially of its bottom, a trough surrounding, and spaced from, the bottom and lower extremity of said container, and provided with upwardly extending projections which are fastened to the side of said container, and a hook carried by said container.

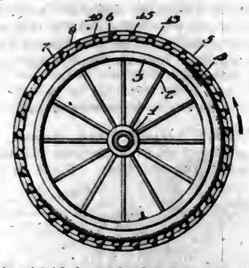
961,790. TOBACCO-PIPE. WILLIAM NEVE, Omaha, Nebr., assignor of one-half to Frederik W. Brodegaard, Omaha, Nebr. Filed Feb. 7, 1910. Serial No. 542,472.



In a smoking-pipe, a bowl, which is adapted to hold smoking material, a chamber, which is adapted to receive liquid waste products, a passage, which leads from said bowl to said chamber, a tubular lining, which covers the interior surface of said passage, and a lining, which is provided with a reëntrant nipple, and is applied to the inner surface of said chamber, both said linings being formed of metal, and united by a flange joint within said chamber, in combination with a mouthpiece, which is seated in the mouth of said chamber, and is provided with a terminal nipple.

961,791. CHAIN SHIELD FOR PNEUMATIC TIRES. LA VERNE W. NOYES, Chicago, Ill. Filed Oct. 26, 1905. Serial No. 284,515.

1. A chain having the links thereof pivotally connected together and provided with arc-shaped flanges having one end of the same outwardly curved on the pivot of the link as a center.



2. A chain shield formed of links, each link having a raised tread and outer hinges constructed to form shoulders raised substantially to the plane of the tread and arranged on each side of said tread.

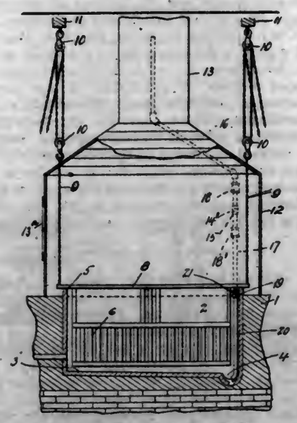
3. A chain shield formed of links, each link being formed with arc-shaped flanges arranged to fit over the tire and a tread extending from said flanges and having vertically extending side portions and a top portion arranged parallel with the axis of the wheel, said links being positively pivotally connected together and said flanges being curved outwardly at one end about the respective pivot whereby the links overlap.

4. A chain shield formed of links, comprising each a tread portion, a pair of substantially parallel side portions extending from said tread portion whereby a raised hollow tread is formed, and a pair of arc-shaped flanges extending from said upright portions and arranged to fit over the tire, said links being pivotally connected together.

5. A chain shield formed of links, comprising each a tread portion, a pair of substantially parallel side portions extending from said tread portions whereby a raised hollow tread is formed, and a pair of arc-shaped flanges extending from said upright portions and arranged to fit over the tire, said links being pivotally connected together and said flanges being curved outwardly at one end about the respective pivot whereby the links overlap.

[Claims 6 to 10 not printed in the Gazette.]

961,792. CLEANSING APPARATUS FOR METALLIC WARE. AUGUST W. OBERMANN, Johnstown, Pa. Filed Oct. 18, 1909. Serial No. 523,254.



1. An apparatus of the type described, comprising a tank having the bottom thereof provided with a gutter, a movable cage suspended in said tank and adapted to contain metallic ware, a hood mounted over said tank, an exhaust stack carried by said hood, hinged doors carried by said hood to permit of easy access being had to said cage, a pipe extending into said hood and into the gutter of said tank for removing the contents of said tank, a steam supply pipe extending into said tank for agitating the contents thereof, and means for elevating said cage.

2. An apparatus of the type described, comprising a tank, a cage movably mounted in said tank, a hood mounted over said tank, an exhaust stack carried by said hood, a pipe extending into said hood and said tank for removing the contents of said tank, a steam supply pipe extending into said tank for agitating the contents thereof, means for elevating said cage, and means whereby easy access can be had to said hood.

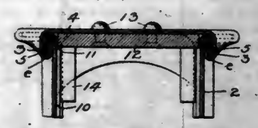
3. An apparatus of the type described, comprising a tank, a cage movably mounted in said tank, a hood mounted over said tank, an exhaust stack carried by said hood, a pipe extending into said hood and said tank for removing the contents of said tank, a steam supply pipe extending into said tank for agitating the contents thereof, and means for elevating said cage.

4. An apparatus of the type described, comprising a tank, a cage adapted to be lowered into said tank, a hood mounted over said tank and having an exhaust stack, a pipe extending into said tank for removing the contents thereof, and a steam supply pipe extending into said tank for agitating the contents thereof.

5. An apparatus of the type described, comprising a tank, a cage adapted to be lowered into said tank, a hood mounted over said tank and having an exhaust stack, means for elevating the cage from the tank to bring it within the hood, doors carried by the hood for affording access to the cage when the latter is within the hood, and a pipe extending into said tank for removing the contents thereof.

[Claims 6 to 9 not printed in the Gazette.]

961,793. JOURNAL-BOX. CHARLES L. OWEN, Avalon, Pa., assignor of fifty-one one-hundredths to William H. Shinn, Carnegie, Pa., and twenty-four and one-half one-hundredths to Charles H. Cochran, Avalon, Pa. Filed May 26, 1908. Serial No. 435,158.



1. In a journal box, a pressed steel body portion having elongated outwardly extending side flanges, a pressed steel top portion extending over and beyond said side flanges and providing an extended bearing surface and bent inwardly thereunder to form therewith laterally extending interlocking side flanges.

2. In a journal box a body portion having outwardly extending side flanges, a top portion having inwardly extending side flanges adapted to engage with the outwardly extending flanges of the body portion of the box to form laterally extending interlocking side flanges, and portions of said flanges being folded downwardly against the sides of the box.

3. In a journal box a body portion having outwardly extending side flanges, a top portion having inwardly extending side flanges adapted to engage with the outwardly extending flanges of the body portion to form laterally projecting interlocking side flanges, said flanges being folded downwardly against the body portion of the box at each end for a portion of their length.

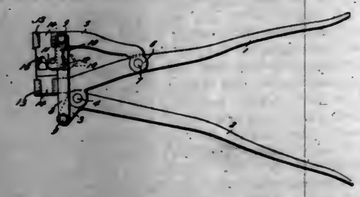
4. In a journal box a body portion having outwardly extending side flanges, a top portion having inwardly extending side flanges adapted to engage with the outwardly extending flanges of the body portion to form laterally projecting interlocking side flanges, said flanges being folded downwardly against the body portion of the

box at each end for a portion of their length, and a reinforcing lug-plate secured to the top of the journal box.

5. In a journal box, a pressed steel body portion having elongated outwardly extending side flanges, a pressed steel top portion extending over and beyond said side flanges and providing an extended bearing surface and bent inwardly thereunder to form therewith laterally extending interlocking side flanges and provided with apertures for the passage of the arch bar bolts.

[Claims 6 and 7 not printed in the Gazette.]

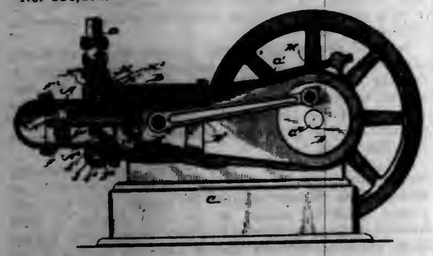
961,794. WIRE-CUTTER. WILLIAM PETERS, Congress, Ariz. Filed Jan. 12, 1910. Serial No. 537,665.



1. In a device of the class described, the combination with two pivotally connected handle sections, a link pivoted to one of said handle sections and connected to the other by a plurality of oppositely disposed straps, a cutter carried by said link, a cutter coöperating therewith, carried by the handle section pivotally connected to the link, said cutters being adapted to sever both galvanized wire rope and tempered steel wire, and means whereby said tempered steel wire may be prevented from being bent, comprising a supporting dog pivoted to the link adjacent to said tempered steel wire cutter.

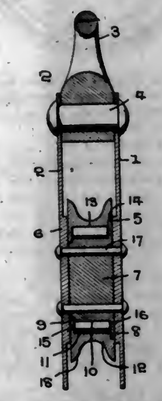
2. In a device of the class described, the combination with two pivotally connected handle sections, a link pivoted to one of said handle sections and connected to the other by a plurality of oppositely disposed straps, a U-formed cutter carried by said link having coinciding semi-circular openings therein and a single semi-circular opening, a single cutter carried on the arm pivotally connected to said link having a sloping cutting edge adapted to cooperate with said coinciding openings in the U-formed cutter, a rectangular cutting edge adapted to coöperate with said single opening, and a dog pivotally connected to said link having a recess formed therein adapted to support tempered steel wire when the same is being cut and prevent it from being bent.

961,795. COMPOUND STEAM-ENGINE. HERBERT H. PILCHER, Mullins, Tenn. Filed Oct. 11, 1906. Serial No. 338,474.



An engine of the kind described comprising high and low pressure cylinders, pistons therein, a piston rod common to both cylinders, a valve casing communicating with each of said cylinders, a semi-cylindrical hollow valve rotatably mounted in said casing, and an exhaust pipe, an end of the valve having constant communication with said exhaust, the said valve being pressed inwardly to form a longitudinal groove upon one side, the said valve controlling communication between the two cylinders bringing them into communication by means of the groove and between the low pressure cylinder and the exhaust pipe, the valve cutting off communication between the two cylinders during communication between the exhaust pipe and the low pressure cylinder.

961,796. PULLEY. HARRY REED, Tenino, Wash., assignor of one-eighth to F. A. Sargent and one-eighth to G. C. Rutledge, Tenino, Wash. Filed July 13, 1909. Serial No. 507,800.



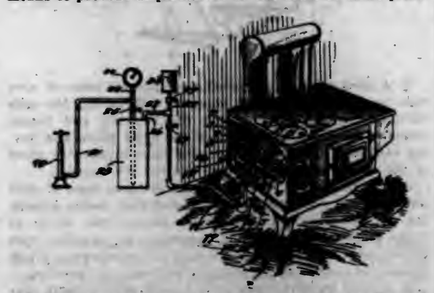
1. In a block of the class described, the combination with a pair of plates each having upon its inner surface inward projections, a spindle secured between said inward projections in offset position from said plates, said spindle having a peripheral flange at one end and a peripheral channel at its opposite end, of a cylindrical sheave having an annular channel at one end adapted to receive the peripheral edge of said flange, said sheave also having an inwardly extending flange, the inner edge of which is adapted to enter the channel of said spindle, said flanges forming a race, the peripheral edge of the flange of said spindle received by the channel of said sheave, breaking joint as it were, with the meeting edges between the flanges of said sheave and the channel of said spindle at the opposite sides of said spindle and said sheave.

2. In a device of the character described, the combination with a pair of plates secured to a hook at their upper ends, the inner faces having projections thereon, a spindle mounted between the projections of said plates, said spindle having a peripheral flange and channel at opposite ends thereof and a bearing surface therebetween; of a sheave revolubly mounted on said spindle, said sheave having a channel and flange at opposite ends with a bearing surface therebetween, said channel and flange registering, respectively, with the flange and channel of said spindle and bearing members mounted in the race formed by the flanges and bearing faces of said spindle and sheave.

961,797. CRUDE-OIL BURNER. RUFUS C. REED, Jacksonville, Tex., assignor of one-half to W. A. Day, M. W. Totty, and R. D. Atkinson, Jacksonville, Tex. Filed Dec. 8, 1909. Serial No. 532,123.

1. The combination with a heating or cooking stove having a fire-box, of a receiving pan or receptacle mounted in said fire-box, a plurality of burners extending partially through the fire-box and into the receiving pan or receptacle, a draft or baffle plate disposed vertically within the receiving pan or receptacle against which a mixture of petroleum, or crude oil, air and water is sprayed and means for adjusting the baffle plate.

2. A receiving pan or receptacle adapted to be disposed within a fire-box of a heating or cooking stove and having a plurality of burners extending partially through the fire-box and into said receiving pan or receptacle, a draft or baffle plate mounted vertically within said receiving pan or receptacle so that a space is formed between the lower edge of the baffle plate and the receptacle and the upper edge of the baffle plate and the stove, and means to prevent displacement of the draft or baffle plate.



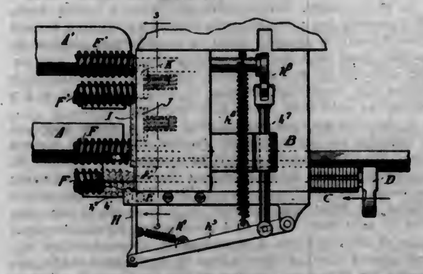
3. A receiving pan or receptacle adapted to be disposed within a fire-box of a heating or cooking stove and having a plurality of burners extending partially through the fire-box and into said receiving pan or receptacle, a draft or baffle plate mounted vertically within said receiving pan or receptacle so that a space is formed between the lower edge of the baffle plate and the receptacle and a space is formed between the upper edge of the baffle plate and the stove, said receiving pan or receptacle having guideways to receive said draft or baffle plate, and means extending into said guideways to hold the draft or baffle plate in adjusted positions.

4. A receiving pan or receptacle adapted to be disposed within a fire-box of a heating or cooking stove and having a plurality of burners extending partially through the fire-box and into said receiving pan or receptacle, and a vertically adjustable draft or baffle plate mounted in said receiving pan or receptacle whereby passages are established above and below the plate.

5. A receiving pan or receptacle adapted to be disposed within a fire-box of a heating or cooking stove and having a plurality of burners extending partially through the fire-box and into said receiving pan or receptacle, a draft or baffle plate mounted vertically within said receiving pan or receptacle whereby passages are formed above and below the plate, means to prevent displacement of the draft or baffle plate, and means for securing the ends of the burners to the receiving pan or receptacle.

[Claims 6 and 7 not printed in the Gazette.]

961,798. LINE-CASTING MACHINE. JOHN R. ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 18, 1909. Serial No. 496,689.



1. In a mechanism for distributing matrices, a movable device for advancing the individual matrices, and means controlled by the matrices and acting in turn to limit the travel of the advancing device.

2. In a matrix distributing mechanism, means for presenting a composed line of matrices, a carrier for delivering the individual matrices from the line, said carrier having a variable length of movement, and means for directly controlling the length of movement of said carrier, said means adapted to be controlled by matrices of certain forms.

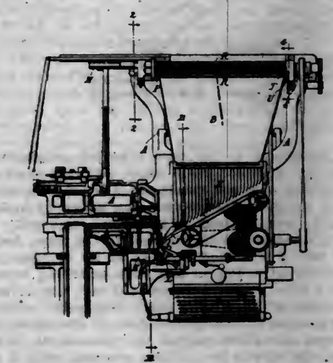
3. In a matrix distributing mechanism, means for advancing the composed line of matrices endwise, a transversely movable carrier to remove the matrices one at a time, and means other than the matrices for automatically arresting the carrier at one point or another according to the form of the matrix presented thereto.

4. In a line casting machine, a reciprocating finger to advance the individual matrices, matrices of different forms, means for presenting such matrices one at a time to the carrier, and means distinct from the matrices for determining the length of movement of the carrier according to the form of the matrix presented thereto.

5. In a matrix distributing mechanism, and in combination, a reciprocating carrier to advance the individual matrices, said carrier movable transversely in relation to its path of reciprocation, means for presenting the matrices individually to said carrier, matrices differing in form and adapted to give the carrier different positions laterally, and means for limiting the movement of the carrier according to its lateral position.

[Claims 6 to 16 not printed in the Gazette.]

961,799. LINE-CASTING MACHINE. JOHN R. ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 25, 1909. Serial No. 498,249.



1. In a line casting machine, two magazines, one overlying the other, two parallel distributers arranged to deliver matrices to the respective magazines, and matrices of two fonts differentiated as to their distributing teeth, in combination with means for delivering all the matrices to the first distributer, and positively acting means adapted to deliver all the matrices not delivered to the first magazine one at a time to the second distributer.

2. In a line casting machine, two parallel distributer bars; two sets of toothed matrices, the teeth of one set being adapted to carry them the entire length of the first distributer; means for causing the individual matrices to traverse the first distributer in one direction; means for delivering the matrices which traverse the entire length of the first distributer, to the second distributer; and means for moving said matrices along the second distributer in a reverse direction.

3. In combination with the two parallel distributer bars N and N¹ at a common level, two fonts of matrices, differentiated as to their distributing teeth; means for de-

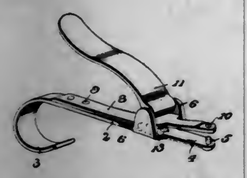
livering all the matrices to the first distributer; and a transverse carrier, located at the delivery end of the first distributer, to transfer the matrices one at a time to the receiving end of the second distributer.

4. In a line casting machine, the combination of the parallel toothed distributer bars N and N¹, the first having more teeth than the second; a font of matrices, toothed for release by the first bar; a second font of matrices, toothed to traverse the entire length of the first bar, and to be distributed by the second; means for delivering all the matrices to and along the first bar; means for transferring the matrices of the second font from the first bar to the second; and means for moving the transferred matrices in a reverse direction along the second bar.

5. In a line casting machine, two fonts of matrices representing like characters, the distributing teeth of the two fonts being arranged in reverse order; in combination with parallel distributer bars, having their teeth arranged in like manner; means for presenting all matrices to the first bar, and the matrices of the second font to the second bar; and means for moving the matrices along the respective bars in a reverse direction; whereby a matrix of one font, bearing a given character, will be discharged from one distributer at a point directly opposite the delivery of the corresponding matrix of the second font, from the other distributer.

[Claims 6 to 12 not printed in the Gazette.]

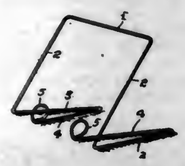
961,800. POULTRY-MARKING PUNCH. THOMAS W. ROGERS, Lamont, Iowa. Filed June 10, 1909. Serial No. 501,333.



1. An implement of the class described, comprising a strip, one end of which has a finger hold, the other end being provided with one member of a punch, the middle portion of the strip, intermediate the extremity and the curved end, being formed with opposed, upwardly projecting ears, a spring strip attached to the upper face of the first named strip and carrying at its extremity the other member of a punch, said strip extending between the ears, a lever pivoted between said ears and having a returned end at its pivotal point engageable with the upper end of the spring strip to force it downward, said spring strip extending beyond the cam-shaped end of the lever, one of said strips being provided with a stop for limiting the movement of the spring strip, said stop being located beneath the cam-like head.

2. An implement of the class described, comprising a strip, one end of which is recurved upon itself to form a circular finger hold said finger hold being in alinement with the body of the strip, the other end of the strip being provided with one member of a punch, the middle portion of the strip being formed with two upwardly projecting spaced ears, a spring strip attached to the upper face of the first named strip at the rear end thereof, carrying at its extremity the other member of a punch, said strip extending between the ears, a lever pivoted between said ears, having a returned cam-shaped end at its pivotal point engageable with the upper face of the spring strip to force it downward, the holding strip being formed upon its upper face with an upwardly projecting boss struck up from the body of the strip constituting a stop with which the spring strip will contact upon its downward movement, thereby limiting said movement, said stop being located beneath said cam-like head.

961,801. CARD-HOLDER. WILLIAM H. ROUSE, Grand Rapids, Mich. Filed Sept. 28, 1909. Serial No. 520,022.

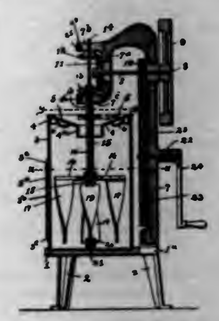


1. A card support, comprising an integral piece of wire bent to form an inclined support and having its ends extended horizontally beneath the support, and thence extended inward and forward in the same plane and having each end bent upward to yieldingly engage the front of the card and hold the same against the support.

2. A card support, comprising an integral piece of wire bent twice at right-angles near the middle thence extending downward at an inclination, thence bent twice at acute angles and extending rearward in parallel lines thence bent inward and forward in converging lines, thence bent upward to engage the front of the card.

3. A card support comprising a piece of wire bent near the middle twice at right angles, extending thence downward in parallel lines, a plate of thin sheet metal attached to said parallel portions, said wire thence extended from the bottom of the plate rearward horizontally and thence returned forward beneath the plate and having its ends bent upward and yieldingly engaging the front of the plate.

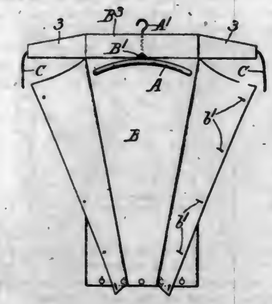
961,802. CHURN. ROBERT C. RUSSELL, Arthur, Ontario, Canada, assignor of fifteen one-hundredths to Gomer T. Griffiths, Columbus, Ohio, and thirty-five one-hundredths to Clarence F. Warner, New Philadelphia, Ohio. Filed Jan. 13, 1909. Serial No. 472,036.



1. In a churn, the combination with a churn body, of a concave top plate therefor having an opening formed therethrough, a rotative shaft of considerably smaller diameter than said opening passing therethrough and being mounted for rotation independently of said top plate, means for imparting rotation to said shaft, and a fan carried by said shaft above said opening.

2. In a churn, the combination with a churn body, of a concave top plate therefor having an opening formed therethrough, a rotative shaft of considerably smaller diameter than said opening passing therethrough and being mounted for rotation independently of said top plate, means for imparting rotation to said shaft, a fan carried by said shaft above said opening but below the upper edge of the top plate, a second shaft disposed within the first named shaft, blades carried by the second shaft, and means for imparting rotation to the said second shaft in a direction opposite to the first named shaft.

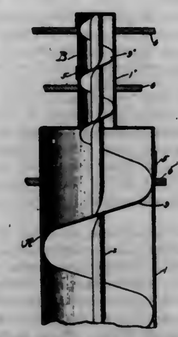
961,803. GARMENT HANGER AND PROTECTOR. ROSE SAHLIN, Chicago, Ill. Filed May 4, 1908. Serial No. 430,753.



1. A clothing hanger and receptacle comprising a fabric bag having a front flap or cape formed by folding said fabric transversely, said fabric being slit at the fold from the opposite lateral edges inward to form wings, said wings being adapted to be reflexed on to the back of the bag, and means for securing them at such reflex position.

2. A clothing hanger and receptacle comprising a fabric bag made of one piece, having a front flap or cape formed by folding said fabric transversely, said fabric being slit at the fold from the opposite lateral edges inward to form wings, said wings being adapted to be reflexed on to the back of the bag, and means for securing them at such reflex position.

961,804. MULTIPLE GRAVITY CONVEYER. MARTIN C. SCHWAB, Chicago, Ill., assignor to Gravity Conveyor Company, a Corporation of New York. Filed Oct. 24, 1907. Serial No. 398,965.



1. The combination of two gravity conveyers of different sizes united to form a single conveyer.

2. In a gravity conveyer, the combination of vertically disposed cylindrical shells of different sizes united to form a single passageway, and means for guiding articles spirally therethrough.

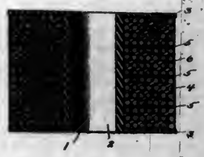
3. The combination of superposed shells of different cross-sectional areas, and a stationary device forming a continuous guide for articles passing therethrough.

4. In a conveyer, the combination of cylindrical shells of different diameters united to form a continuous passage, and stationary means for guiding articles spirally through said passage.

5. In a gravity conveyer, the combination of vertically disposed communicating cylindrical shells of different diameters, and means for guiding articles through the shells.

[Claims 6 to 26 not printed in the Gazette.]

961,805. ELECTROMAGNET. CAMPBELL SCOTT, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed July 30, 1906. Serial No. 328,300.



1. The combination with a coil of conducting material wound in a plurality of layers, means for electrically separating the convolutions and successive layers of said coil, means for holding the convolutions of said coil in close proximity, and insulating material impregnating said holding means, said separating means, and the interstices between the respective convolutions and layers, said insulating material being impervious to moisture and of sufficient strength to hold the convolutions and layers rigidly together.

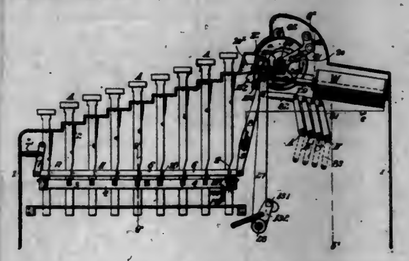
2. The combination with a spool of fibrous material, of a conductor wound thereon, insulation for electrically separating the convolutions and successive layers of said conductor, and a body of insulating material filling the interstices of the said convolutions and layers, and impregnating said fibrous material and the said insulation of the conductor.

3. The combination with a spool of fibrous material, of an electrically conductive coil wound spirally thereon in superimposed layers, fibrous insulation separating such layers, and a body of hard, strong, moisture-proof insulation impregnating the fibrous spool and fibrous insulation and filling the interstices between the successive convolutions and the successive layers of the coil.

4. The combination with a paper spool, of covered wire wound thereon spirally and in superimposed layers, and a moisture-proof, strong, adhesive insulation impregnating said paper spool and filling, substantially, all the interstices between the wire and the spool, and between the successive convolutions and layers of the wire.

5. As an article of manufacture, a fibrous support, an electrically-conductive coil wound thereon, fibrous insulation for said coil, an adhesive, moisture-proof insulation impregnating said fibrous support and fibrous insulation and filling substantially all of the interstices between the support and coil and between the successive convolutions of the coil.

961,806. CALCULATING-MACHINE. GEORGE H. SEARS, Rochester, N. Y., assignor, by direct and mesne assignments, of three-fourths to Angus E. Huther and Warren B. Huther, Rochester, N. Y. Filed Feb. 27, 1903. Serial No. 145,340.



1. In a calculating machine, the combination with a plurality of keys, a setting member operated thereby and a counter, of a stop plate located at the side of the latter and movable independently of the counter and provided

with notches, means for revolving the stop plate, connections between the plate and counter for moving the latter continuously in one direction, and connections between the keys and member for moving said member relatively to the stop plate.

2. In a calculating machine, the combination with a plurality of keys, a setting member operated thereby and a counter, of a stop plate located at the side of the latter and movable independently of the counter and provided with stepped notches corresponding to the several keys, connections between the keys and member to operate the latter into position to arrest the plate in a position corresponding to the key operated, means for operating the stop plate and devices operated by the latter for moving the counter continuously in one direction.

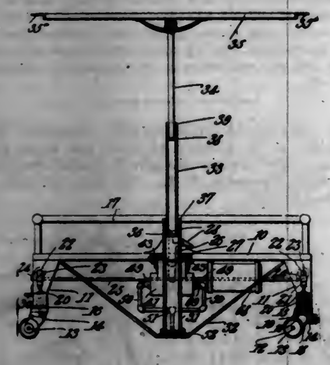
3. In a calculating machine, the combination with a plurality of keys, a setting bar, a cam surface on one of the keys adapted to move the bar through one space and similar surfaces on the other keys adapted to move the bar through a successive number of such spaces, of a counter wheel, a stop plate connected thereto having steps or notches formed spirally thereon, means for revolving the stop plate and a pivoted setting member coöperating with the latter and operated by the setting bar.

4. In a calculating machine, the combination with a plurality of operating keys arranged in rows, a counter and a stop plate connected thereto and provided with notches, of a setting bar operated by the keys, a locking bar coöperating with the latter to retain a key in the operated position, and a member controlled by the bar and coöperating with the stop plate.

5. In a calculating machine, the combination with a plurality of keys arranged in rows, counters for each row and stop plates located at one side of the counters and movable independently of the counters, devices operated by the keys for controlling the movement of the latter and means for oscillating the stop plates, of devices operated by said plates for moving the counters continuously in one direction, and carrying mechanism between adjacent counters.

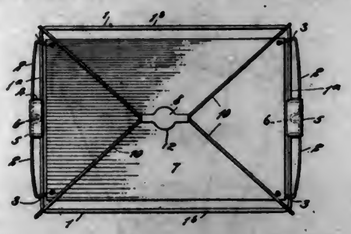
[Claims 6 to 124 not printed in the Gazette.]

961,807. TRUCK. BENNETT F. SHIBERT, Mansfield, Ohio. Filed Oct. 6, 1909. Serial No. 521,234.



The combination of a wheeled platform, a fluid pressure cylinder carried thereby, a plunger working in the cylinder, a platform carried by the plunger, a casing mounted beneath the platform, said casing being open on top, and the platform having an opening over the same, a pump cylinder mounted in the casing for charging the aforesaid cylinder, a lever fulcrumed in the casing, and extending through the open top thereof and through the opening in the platform, a piston working in the pump cylinder, and a connection between the piston and the lever.

961,808. FILM SPREADER AND HOLDER. OLIVER SHERWOOD, New York, N. Y. Filed June 21, 1909. Serial No. 503,318.



1. A film-holder comprising a main frame, a plurality of spring arms connected to opposite sides of said frame, said arms being parallel and formed with inwardly extending film-engaging hooks on the ends thereof.

2. A film-holder comprising a main frame, a series of parallel spring arms connected to opposite sides of said frame, said arms being adapted to be sprung inwardly toward the arms on the opposite side of the frame, and each of said arms being provided with film-engaging means at its free end, whereby a plurality of films may be supported in parallel relation to each other, the spring arms holding said films flat and yielding to the expansion and contraction of said films.

3. A film holder comprising a main rectangular frame, spring arms connected to opposite sides of said frame, film engaging hooks formed on the ends of said arms, one of said hooks being adjacent to each corner of the main frame, said hooks extending within the plane of said frame, whereby the film will be maintained in a yieldingly extended position within said frame, in combination with a holding device formed with four radiating downwardly curved resilient arms, each of said arms being formed with a hook at its end adapted to engage the holding frame at its corners.

4. A film holder comprising a main rectangular frame, spring arms connected to opposite sides of said frame, film engaging hooks formed on the ends of said arms, one of said hooks being adjacent to each corner of the main frame, said hooks extending within the plane of said frame, whereby the film will be maintained in a yieldingly extended position within said frame, in combination with a holding device formed with four radiating downwardly curved, resilient arms, each of said arms being formed with an upwardly and inwardly turned hook adapted to engage the main frame at the corners thereof, whereby a portion of the hook will extend below the main frame and serve as a rest.

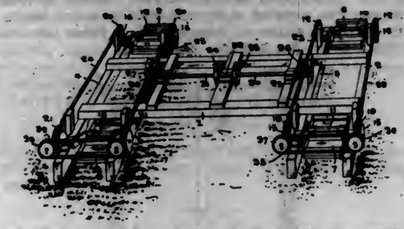
5. A film holder comprising a main rectangular open frame, parallel resilient arms connected to opposite sides of said frame and extending outwardly to the corners thereof, an inwardly extending hook formed on the outer end of each arm, said hook extending into the plane of the main frame and adapted to hold a film within the main frame, and a detachable holding device formed with radiating resilient arms adapted to detachably engage the main frame at the corners thereof.

[Claims 6 to 11 not printed in the Gazette.]

961,809. TRAVELING PLATFORM. WILLIAM M. SHERWOOD, Alexandria, Minn. Filed Oct. 12, 1909. Serial No. 522,286.

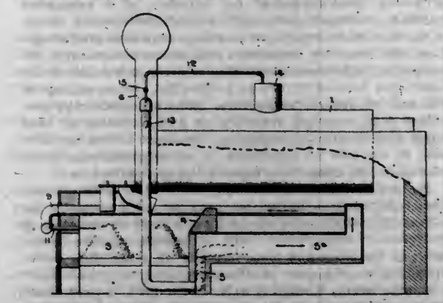
1. In a device of the class described, the combination with a body having rails thereon arranged in pairs, auxiliary platforms at the ends of said rails, cranks rotatably mounted on said rails and pivotally attached to said auxiliary platform, a gear at each end of each crank, worms engaging said gears, shafts carrying said worms and means to operate said shafts in unison whereby the cranks will be rotated and the body and parts attached thereto propelled.

2. In a device of the character described, the combination with a body having rails on the ends thereof; of auxiliary platforms at the ends of said rails, cranks rotatably mounted on said rails and pivotally carrying said platforms, gears on the ends of said cranks, shafts extending the length of each rail and carrying worms on the ends thereof engaging said gears, additional shafts connecting the aforesaid shafts and means to cause said first mentioned shafts to rotate in unison.



3. In a device of the character described, the combination with a body and longitudinal rails arranged in pairs on the ends thereof; of auxiliary platforms between the ends of said pairs of rails, cranks rotatably mounted on said rails and carrying said platforms, gears on the ends of said cranks, shafts extending the length of each rail and carrying worms engaging said gears, means to cause said shafts to rotate in unison, additional shafts connecting the inner pair of the aforesaid shafts, and means to apply power to said last mentioned shafts, for the purpose described.

961,810. COMBINED GAS AND SMOKE CONSUMING ATTACHMENT. FRANK SHMONSKY, Ridgway, Pa. Filed July 19, 1909. Serial No. 508,342.



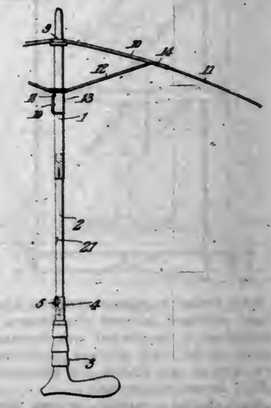
1. In a gas and a smoke consuming device, the combination with a foundation having a fire box and a bridge wall therein, said bridge wall having a cavity and a boiler on said foundation; of a pipe adapted to collect the gases and smoke when discharged from said boiler and convey the same into said cavity, said pipe leading through said fire-box in its course to said cavity, an auxiliary pipe extending from said cavity to the forward end of said foundation and means to convey said gases into the fire box above the fuel.

2. In a gas and smoke consuming device, the combination with a foundation having a fire box therein, a bridge wall in the rear of said fire box, said bridge wall having a cavity, an air-tight chamber adjoining said cavity, a boiler above said bridge wall and fire box and a smoke drum attached to said boiler; of a pipe section extending into said drum, an additional pipe section extending from the pipe section through said fire-box to the cavity in the bridge wall, an auxiliary pipe section extending from the air-tight chamber to the forward end of said foundation and nozzles on said auxiliary pipe section adapted to discharge the gases into the fire box and above the fuel therein.

3. In a combined gas and smoke consumer, the combination with a foundation having a fire box therein, a bridge wall in the rear of the fire box, said bridge wall having a cavity therein, an air-tight chamber adjoining said cavity, a boiler above said bridge wall and fire box and a smoke drum connected to said boiler; of a pipe section communicating with said drum, an additional pipe section extending from the first pipe section through said fire-box to one end of said cavity in the bridge wall, means to cause a suction in said pipe sections, whereby the contents of the smoke drum will be drawn into said pipe section and discharged in said cavity, an auxiliary pipe section communicating at one end with said air-tight chamber and at its opposite end with the fire box, whereby the gases in said auxiliary pipe will be discharged into the fire box and over the fuel therein.

4. In a combined gas and smoke consuming device, the combination with a foundation having a fire-box, a bridge wall to the rear of said fire-box and a cavity within said bridge wall, an air-tight chamber adjoining said cavity, a boiler over said fire-box and bridge wall and a smoke drum on said boiler; of a pipe leading into said drum, an additional pipe section attached to first referred to pipe and leading through said fire-box to one end of said cavity, whereby gases are superheated, an auxiliary pipe leading from the rear of said air-tight chamber through the foundation in close contact with said fire-box to the forward end of said foundation and nozzles on said auxiliary pipe adapted to discharge said gases into the fire-box.

961,811. COLLAPSIBLE UMBRELLA. ERNEST R. SHRECKENGAST, Millheim, Pa. Filed June 12, 1909. Serial No. 501,700.



The combination with an umbrella stick having a locking projection, of a runner slidably mounted on the umbrella stick and provided with an internal groove to receive the said locking projection to hold the runner against rotation upon the stick, and a latch mounted on the side of the runner and having its end projected through the same to engage with the said locking projection.

961,812. FIGURE TOY. SIGMUND M. SIEGEL, New York, N. Y. Filed Feb. 25, 1910. Serial No. 545,965.

1. A figure toy comprising a skull having a jaw pivotally connected therewith, the neck of said skull provided with a finger opening, a strip fastened to the upper surface of said jaw and adapted to form a stop for the end of a finger inserted through said opening, and a spring connecting said strip with the skull.

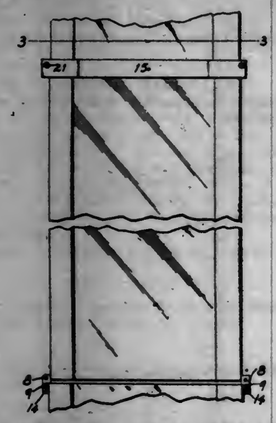
2. A figure toy comprising a skull having a jaw pivotally connected therewith, the neck of said skull provided with a finger opening, a strip fastened to the upper surface of said jaw and having an end disposed at an angle

to the latter and projecting toward the upper portion of the skull and adapted to form a stop to the end of a finger inserted through said opening, a coiled spring fas-



tened at one end to said strip above the jaw and its other end to the rear portion of the skull and serving to normally hold the jaw closed.

961,813. MAIL-CHUTE. ARTHUR K. SMITH, St. Louis, Mo., assignor to Robert B. Galt and Alfred O. Woerner, trustees, St. Louis, Mo. Filed Apr. 9, 1909. Serial No. 488,905.



1. In a mail chute, a support, frames fixed thereon, chute sections arranged between the frames, removable members connected to the frames and arranged between the front walls of the chute sections, and flanges formed on the inner faces of said frames and members, the inner edges of which flanges are beveled.

2. In a mail chute, a support, frames fixed thereon, chute sections arranged between the frames, removable members connected to the frames and arranged between the front walls of the chute sections, projecting flanges formed on the inner faces of the frames and removable members, which flanges occupy positions between the front and rear walls of the chute sections, and serve as supports for the upper one of the chute sections.

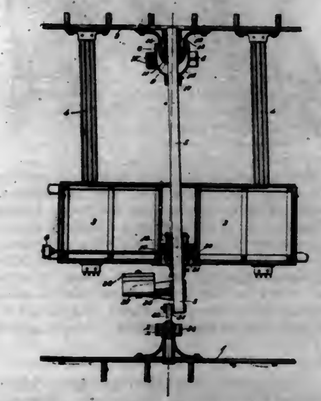
3. In a mail chute, a support, frames fixed thereon, chute sections arranged between the frames, removable members connected to the frames and arranged between the front walls of the chute sections, inwardly projecting flanges formed on the inner faces of the frames and removable members, and which flanges support the chute sections and are provided with beveled faces.

4. In a mail chute, a support, frames fixed thereon, chute sections removably arranged between the frames, there being a pivoted connection between the upper end of each chute section and the corresponding frame, and the upper front corner of each chute section being cut away in order to permit the lower end of said sections to swing outward.

5. In a mail chute, a support, frames fixed thereon, chute sections removably arranged between the frames, there being a pivoted connection between the upper end of each chute section and the corresponding frame, and a removable member secured to each frame between the front walls of the chute sections.

[Claims 6 to 18 not printed in the Gazette.]

961,814. GYRATING SIEVE-BOLTER. SIMON SNYDER, Muncy, Pa., assignor to Sprout, Waldron & Co., Muncy, Pa., a Corporation of Pennsylvania. Filed Mar. 12, 1910. Serial No. 548,948.



1. In a gyrating machine, the combination with a sieve-structure freely-supported for gyration, of a suspended normally inclined drive-shaft rotatably-connected therewith, said shaft capable of a double universal pivotal motion relative to its suspension and the sieve-structure, the aforesaid connections permitting relative movement of the shaft and sieve-structure in a direction corresponding to the axis of the sieve-structure, and an eccentrically-sustained load attached laterally on and revoluble by said shaft and by gravity displacing the shaft to the opposite side of the axis of revolution, so as to produce gyration of and at the same time balance the sieve-structure.

2. In a gyrating machine, the combination with a sieve-structure freely-supported for gyration, of a normally inclined drive-shaft connected with the sieve-structure by a universal-rocking swivel joint permitting relative movement of the shaft and sieve-structure in a direction corresponding to the axis of the sieve-structure, said shaft revoluble about a vertical axis, and a load on said shaft diametrically-opposite the direction in which the shaft is inclined, said load revoluble about the same axis and adapted to sustain the shaft in its inclined position and maintain the sieve-structure in balance.

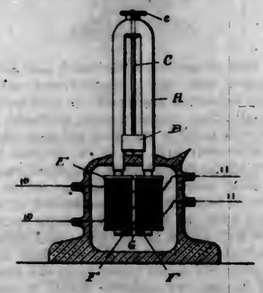
3. In a gyrating machine, the combination with a sieve-structure freely-supported for gyration, of a rotary normally inclined drive-shaft journaled in and suspended from a bearing capable of a universal rocking motion, a bearing in said sieve-structure in which said shaft is journaled with capacity for a universal rocking motion, a drive-pulley on the shaft, and a weight or load supported laterally on the shaft and by gravity throwing it out of plumb and maintaining its inclined position so as to produce gyration and at the same time balance the sieve-structure, the connections between the shaft and sieve-structure permitting relative movement in a direction corresponding to the axis of the sieve-structure.

4. In a gyrating machine, the combination with a sieve-structure freely-supported for gyration, of a drive-shaft suspended for universal pivotal motion, said shaft having a universal rocking journal in the sieve-structure, a load supported eccentrically by said shaft and by gravity throwing the shaft out of plumb so as to cause it to revolve about an axis between the shaft and load, and a crank-arm on the lower end of said shaft sustaining a steadying load at or concentric with said axis of revolution.

5. In a gyrating machine, the combination with a sieve-structure freely-supported for gyration, of a suspended normally inclined drive-shaft rotatably-connected thereto, said shaft capable of a double universal swinging motion relative to its suspension and the sieve-structure, a load supported laterally on and revoluble by said shaft and by gravity displacing said shaft from its axis of revolution which lies between the centers of the shaft and load, and steadying means connected to the lower end of said shaft and adapted to maintain it in fixed relation to its center of revolution.

[Claims 6 to 24 not printed in the Gazette.]

961,815. TELEPHONE RELAY OR REPEATER. LOUIS W. SOUTHGATE, Worcester, Mass. Filed Mar. 3, 1902. Serial No. 96,425.



1. In a telephone relay or repeater comprising a coil or electro-magnet and a microphone, an unattached armature responsive to magnetic variation arranged in the field of said coil or electro-magnet for actuating the microphone.

2. In a telephone relay or repeater comprising a coil or electro-magnet and a microphone, a magnetically suspended armature responsive to magnetic variation for actuating the microphone.

3. In a telephone relay or repeater comprising a coil or electro-magnet and a microphone, a magnetically suspended unattached armature responsive to magnetic variation arranged in the field of said coil or electro-magnet for actuating the microphone.

4. In a telephone relay or repeater comprising a coil or electro-magnet and a microphone, an unattached armature arranged in the field of said coil or electro-magnet and forming the movable electrode of the microphone.

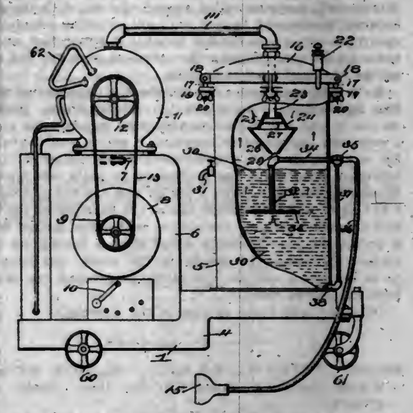
5. In a telephone relay or repeater comprising a coil or electro-magnet and a microphone, having a magnetically suspended electrode otherwise free to move by gravity responsive to magnetic variation arranged in the field of said coil or electro-magnet.

[Claims 6 to 20 not printed in the Gazette.]

961,816. CLEANING APPARATUS. ARTHUR H. SQUIRE, Philadelphia, Pa., assignor of eleven-fifteenths to The Air Cleaner Company, a Corporation of Pennsylvania. Filed May 9, 1908. Serial No. 431,887.

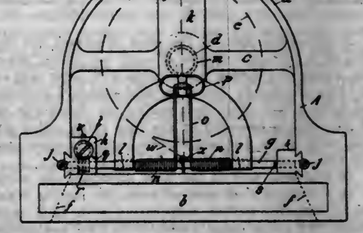
1. A cleaning apparatus comprising a tank arranged to contain a cleaning liquid, a nozzle, means connecting the tank and the nozzle, means for forcing the cleaning liquid from the tank, and means for reversing said liquid forcing means whereby a partial vacuum is created in the tank for drawing said cleaning liquid back into said tank.

2. A cleaning apparatus comprising a rotating pump, means for reversing the same, whereby a blast current will be provided when rotated in one direction and a suction when rotated in the opposite direction, a pipe connection with the pump, a tank in communication with said pipe, a nozzle, in communication with said tank, and



means for preventing any dirt passing through the nozzle from entering said pump.

961,817. SHUTTLE. MERRILL O. STEERE, Pawtucket, R. I. Filed Jan. 25, 1909. Serial No. 473,991.



1. In a shuttle for disk-shaped cops, the combination with a base-piece and an arch surmounting the same, of means on which to pivot the cop, a hinged member adapted to hold the cop in place, a second member adapted to bear against the first member to apply tension on the yarn, guiding means to lead the yarn between the members, and a spring to press the second member against the first member.

2. In a shuttle for disk-shaped cops, the combination with a base-piece and an arch surmounting the same, of a pintle on which to pivot the cop, a hinged member adapted to bear against the end of the pintle to hold the cop in place, a member adapted to bear against the hinged member to apply tension on the yarn, guiding means to lead the yarn between the members, a spring to press the second member against the hinged member, and means to adjust the tension of the spring.

3. In a shuttle for disk-shaped cops, the combination with means to support the cop, of a hinged member adapted to hold the cop in position, a member adapted to bear against the hinged member to apply tension on the yarn, guiding means to lead the yarn between the members, a rod rotatable in bearings in the shuttle, a spring coiled around the rod and formed with an extension to press the second member against the hinged member, and means to rotate the rod to adjust the tension of the spring.

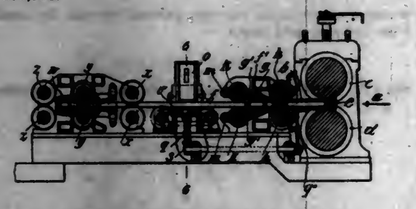
4. In a shuttle, the combination with means for holding the cop, of a tension device comprising a member adapted

to bear against said holding means, a guide to lead the thread between said member and the holding means, a rotatable rod, a spring coiled around the rod with its ends secured thereto and formed with an extension adapted to apply pressure to the tension member, a pinion fast on the rod, and a worm engaging the pinion to turn the rod and adjust the tension of the spring.

5. In a tension device for shuttles the combination with two members between which the thread draws, guiding means to lead the thread between said members, of a rod *g* rotatably supported in bearings, a spring coiled around the rod with its ends secured thereto and formed with an extension adapted to apply pressure to press one tension member against the other, a pinion *r* on the rod *g*, a worm *t* having a bearing adjacent one of the bearings of the rod and adapted to engage the pinion, said worm formed with a peripheral groove, and a screw stud 6 having its end formed to engage the groove in the worm and adapted to be set down against the latter to prevent the worm from accidental turning.

[Claims 6 and 7 not printed in the Gazette.]

961,818. TUBE-ROLLING MILL. HEINRICH STÜTING, Witten, Germany. Filed Feb. 13, 1909. Serial No. 477,513.



1. In a rolling mill of the kind described the combination of a plurality of sets of rolls for rolling seamless tubes, a mandrel section coöperating with each said set of rolls, two abutments for each said mandrel section, located behind each other and behind the respective set of rolls, and means operated by the tube being rolled whereby the tube in its advance throws each abutment successively out of operation, as set forth.

2. In a rolling mill of the kind described the combination of a plurality of sets of rolls for rolling seamless tubes, a mandrel section coöperating with each said set of rolls, two pairs tongs constituting two abutments located behind each other and behind the respective set of rolls, and means whereby each pair of tongs is opened by the tube in its advance through the rolling mill, as set forth.

3. In a rolling mill of the kind described, the combination of a plurality of sets of rolls for rolling seamless tubes, a mandrel section coöperating with each said set of rolls, two abutments for each said mandrel section, located behind each other and behind the respective set of rolls, means operated by the tube being rolled whereby the tube in its advance throws each abutment successively out of operation, and means for rotating the tube on its axis operated by each of said abutments as it is thrown out of operation by the advance of the tube, as set forth.

4. In a rolling mill of the kind described, the combination of a plurality of sets of rolls for rolling seamless tubes, a mandrel section coöperating with each said set of rolls two pairs of tongs constituting two abutments located behind each other and behind the respective sets of rolls, means whereby each pair of tongs is opened by the tube in its advance through the rolling mill, and means for rotating the tube on its axis operated by each of said pairs of tongs as it is opened by the advance of the tube, as set forth.

5. In a rolling mill of the kind described, the combination of a plurality of sets of rolls for rolling seamless tubes, a mandrel section coöperating with each said set of rolls, two pairs of tongs constituting two abutments located behind each other and behind the respective set of rolls, means whereby each pair of tongs is opened by the tube, in its advance through the rolling mill, two plates vertically movable simultaneously in opposite directions, adapted to grip the rolled tube between them and means for operating said plates from the preceding pair of tongs, whereby the said tube is turned partly rotated on its axis on leaving the said tongs, for the purpose of preventing the formation of a fin on the rolled tube as set forth.

[Claims 6 and 7 not printed in the Gazette.]

961,819. NUT-LOCK. LUTHER L. SWENSON, Ottumwa, Iowa. Filed Mar. 17, 1910. Serial No. 549,972.



1. A nut lock comprising a threaded bolt having a nut engaged thereon, said bolt being provided with opposite longitudinally extending grooves in its periphery, said nut having a longitudinal recess therein gradually increasing in depth from its outer to its inner end and adapted to be disposed in alinement with one of the grooves of the bolt, and a locking spring formed from a strip of resilient sheet metal, said sheet metal strip being bent in the form of a compound curve between its ends, one end of said spring being engaged with the base of the groove in the bolt inwardly of the nut, one of the curves of said spring bearing upon the base of the recess in the nut, said spring adjacent to its outer end again engaging in the groove of the bolt thereby having two separate points of contact with the base of said groove, the gradually increasing depth of the recess in the nut which is engaged by said spring preventing the accidental outward movement of the spring, the outer end of said spring being bent upon the face of the nut.

2. A nut lock comprising a threaded bolt having a nut engaged thereon, said bolt being provided with opposite longitudinally extending grooves in its periphery of substantially the same depth as the threads thereon, said nut having a longitudinal recess therein gradually increasing in depth from its outer to its inner end and adapted to be disposed in alinement with one of the grooves of the bolt, a locking spring insertible into the groove and recess of the bolt and nut and yieldingly engaging with the walls thereof to hold the nut against rotation, said spring being bent to form a compound curve, the gradually increasing depth of the recess in the nut preventing the outward movement of the spring, said spring having its outer end bent upon the face of the nut.

961,820. PUMP. CHARLES A. WAITE, Rouseville, Pa. Filed Jan. 15, 1909. Serial No. 472,412.

1. In a pump, the combination of a closure for separating the liquids to be pumped into different levels in a well; and pumping mechanism for pumping said levels separately.

2. In a pump, the combination of a closure for separating the liquids to be pumped into different levels in a well; and pumping mechanism for pumping said levels separately and successively.

3. In a pump, the combination of a closure for separating the liquids to be pumped into different levels in a well; and pumping mechanism for pumping said levels separately, the upper level first and then automatically changing to the lower level.

4. In a pump, the combination of a closure for separating the liquids to be pumped into different levels in a well; and a pumping mechanism for pumping said levels separately, the upper level first and then the lower level.

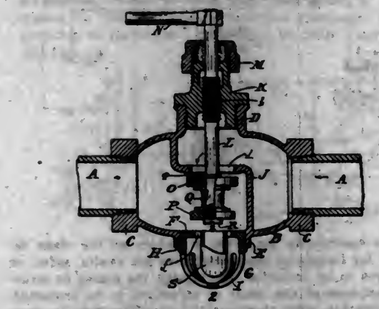
5. In a pump, the combination of a closure separating the liquid to be pumped into different levels; a pumping mechanism; and a connection between the upper level and



the intake of the pumping mechanism, said pump being arranged to pump the liquids from the different levels separately.

[Claims 6 to 12 not printed in the Gazette.]

961,821. VALVE. CHARLES WALKER, Knoxville, Tenn. Filed July 6, 1909. Serial No. 506,007.

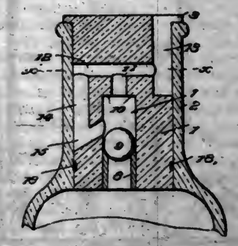


1. In a structure of the nature described, a casing having a drain port and a partition having a port axially in line with said drain port, a pipe terminating in and adapted to discharge through said drain port, and a valve stem bearing a valve adapted to seat alternately upon said partition port and upon said drain port and pipe, substantially as described.

2. In a structure of the nature described, a casing having two openings for the attachment of line pipes and two necks located opposite each other and a partition separating one of said openings and one of said necks from the other of said openings and the other of said necks and having a port in line with said necks, a rose-form member comprising a wall extending across one of said necks and having a port in line with the port of said partition, a valve stem secured in the other of said necks for longitudinal movement therein and extending through the port of said partition, and a valve located upon said stem between said partition and said wall, substantially as described.

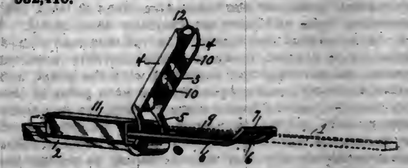
3. In a structure of the nature described, a casing having two openings for the attachment of line pipes and two necks located opposite each other and a partition separating one of said openings and one of said necks from the other of said openings and the other of said necks and having a port in line with said necks, a rose-form member comprising a wall extending across one of said necks and having a port in line with the port of said partition, a pipe extending through said rose-form member and into the port of said member, a valve stem secured in the other of said necks for longitudinal movement therein and extending through the port of said partition, and a valve located upon said stem between said partition and said wall, substantially as described.

961,822. NON-REFILLABLE BOTTLE. WALTER M. WAY, Denver, Colo. Filed June 16, 1908. Serial No. 438,806.



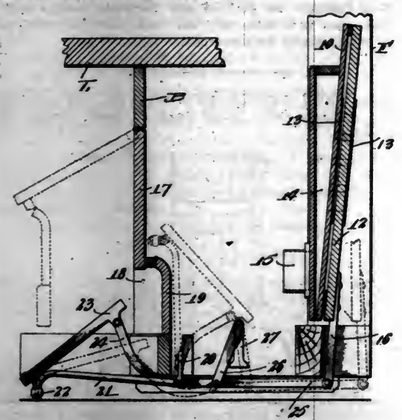
A bottle having a stopper formed with a central opening terminating in the lower end of the stopper, a bushing secured in the lower end of the opening and having an upper beveled edge, a ball-valve disposed in the opening against said bushing, said stopper having a transversely formed passage located upwardly of the upper end of said opening, and a channel forming an extension of the opening for communicating the opening with the transverse passage, said stopper also having an outwardly leading passage formed in its periphery at the upper end thereof and communicating with one end of the transverse passage, said stopper being further provided with a by-pass in the periphery thereof and communicating with the opposite end of the transverse passage, the by-pass being extended inwardly at its lower end and terminating in said opening, and means carried by the stopper for securing the same in the bottle.

961,823. TRACE-BUCKLE. WILLIAM W. WELCH, Jackson, Miss., assignor of one-half to Robert H. McCulloch, Beebe, Ark. Filed Dec. 10, 1909. Serial No. 532,413.



The combination with a trace, and a trace-tug, of a locking member comprising a plate having longitudinal side flanges tapered at their rear ends and formed at their forward ends into an offset loop to receive the trace-tug and trace, pins projecting from the inner face of the plate taking into holes in the trace, and a pinless frame comprising end bars lying above and below the trace respectively and side bars conforming to the contour of the major portion of the side flanges and spread apart at their front ends to embrace the loop portion of the flanges, said side bars each formed with a rabbet along its length, the remaining portion of said flanges resting on the rabbets on the side bars, the height of the flanges being greater than the length of the spread portion of the side bars for the purpose specified.

961,824. PEDAL MECHANISM FOR MUSICAL INSTRUMENTS. PETER WELIN, Newcastle, Ind., assignor, by mesne assignments, to The Krell Auto-Grand Piano Co. of America, Connersville, Ind., a Corporation of Indiana. Original application filed July 20, 1904, Serial No. 217,347. Divided and this application filed May 1, 1906. Serial No. 314,657.



1. The combination of a piano casing and feeding appliances with a pivoted supporting frame, pedals normally extending up therefrom, operating links extending down from the upper ends of the pedals, said operating links having pivotal connections to the feeding appliances at their lower ends substantially in line with the pivots of the frame when the pedals are in one position, whereby the relative position of the pedals and side parts of the frame will not be changed when the pedals are swung back inside of the piano case, the path of the pedal and its support being unobstructed, whereby they may be swung to an upright position without changing their relative positions.

2. The combination of a piano casing, feeders therein, arms extending down therefrom, pedals at the front of the casing, a frame supporting the pedals, operating links extending down from the upper ends of the pedals, and swinging links connected to said arms extending down from the feeders and to the pedal links at opposite ends respectively, together with supporting arms pivoted at intermediate points of the connecting links so that said connecting links will move substantially horizontally.

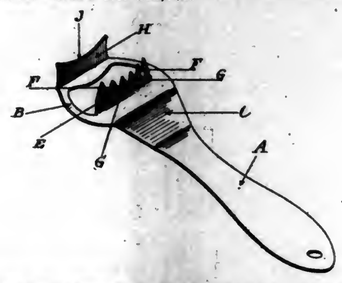
3. In a musical instrument, the combination with a feeder, of a pivoted frame, a pedal movably mounted thereon, an operating link connected with the pedal, and having a pivotal connection at its end at a point in line with the pivot of the frame when the pedal is in normal position, said pivotal connection being connected with the feeder, the path of the pedal and its support being unobstructed whereby they may be swung to an upright position without changing their relative positions.

4. In a musical instrument, the combination with a feeder, of pivoted frame, pedals movably mounted thereon, an operating link for each pedal having a connection with the feeder including a pivot, the axes of said pivots of said links being in alinement with the axes of the pivots of said frame in one position of the pedals the path of the pedal and its support being unobstructed, whereby they may be swung to an upright position without changing their relative positions.

5. In a musical instrument, the combination of a pivoted frame, a pedal movably mounted thereon, an operating link, a swinging link, and a pivotal connection between the operating link and swinging link in line with the pivot of said frame in one position of the pedal.

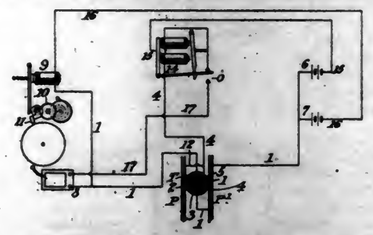
[Claims 6 to 12 not printed in the Gazette.]

961,825. DEVICE FOR REMOVING THE KERNELS OF CORN. ARTHUR WELLS, New York, N. Y. Filed June 17, 1909. Serial No. 502,760.



A device for slitting the grains of green corn on the cob, and separating the kernels from the skins, constructed out of one piece of metal and comprising a body portion provided with an opening and a transverse row of teeth cut out of the body of the metal and arranged at one side of the opening, the end of the body portion being bent at an angle to form a scraper adjacent the teeth, and a handle extending rearwardly from the body portion.

961,826. ELECTRICALLY-PROTECTED PLATE AND LINING FOR VAULTS, SAFES, &c. JOHN P. WILLIAMS, New York, N. Y., assignor to Electric Bank Protection Company, a Corporation of Delaware. Filed Mar. 18, 1909. Serial No. 484,141.



1. An electrically protected structure of the class described, for linings or body structures for vaults, safes, or structures to be protected, comprising the plates or structural members of the vault or structure to be protected, in combination with thermostatic elements directly associated with and comprised in said structural members, said members and theremostatic elements being relatively arranged in alarm circuits operatable either by variation in the circuit conditions of the conductor parts or by the action of heat or flame, substantially as and for the purpose set forth.

2. An electrically protected structure of the class described, for linings or body structures for vaults, safes, or structures to be protected, comprising the plates or structural members of the vault or structure to be protected, in combination with a thermostatic wire directly associated with and comprised in said structural members and arranged over the surface of said plates or members, said members and thermostatic elements being relatively arranged in alarm circuits operatable either by variation in the circuit conditions of the conductor parts or by the action of heat or flame, substantially as and for the purpose set forth.

3. An electrically protected structure of the class described, for linings or body structures for vaults, safes, or structures to be protected, comprising the plates or structural members of the vault or structure to be protected, in combination with thermostatic elements directly associated with and comprised in said structural members and

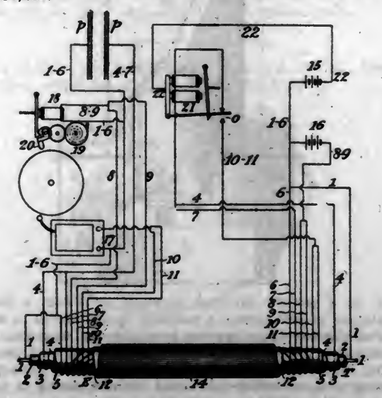
mounted between the plates or members, said members and thermostatic elements being relatively arranged in alarm circuits operatable either by variation in the circuit conditions of the conductor parts or by the action of heat or flame, substantially as and for the purpose set forth.

4. An electrically protected structure of the class described, for linings or body structures for vaults, safes, or structures to be protected, comprising the plates or structural members of the vault or structure to be protected, in combination with a thermostatic wire directly associated with and comprised in said structural members and extending throughout the area between the plates or members, said members and thermostatic elements being relatively arranged in alarm circuits operatable either by variation in the circuit conditions of the conductor parts or by the action of heat or flame, substantially as and for the purpose set forth.

5. An electrically protected structure of the class described, for linings or body structures for vaults, safes, or structures to be protected, comprising inner and outer plates or structural members of the vault or structure to be protected, said structural members being insulated from one another, in combination with thermostatic elements directly associated with and comprised in said structural members, and an alarm circuit having its terminals connected with said plates or members respectively and connected with said thermostatic elements, whereby the alarm circuit is operatable either by variation in the circuit conditions of the conductor parts or by the action of heat or flame, substantially as and for the purpose set forth.

[Claims 6 to 12 not printed in the Gazette.]

961,827. ELECTRIC CABLE FOR BURGLAR-ALARM SYSTEMS. JOHN P. WILLIAMS, New York, N. Y., assignor to Electric Bank Protection Company, a Corporation of Delaware. Filed Mar. 18, 1909. Serial No. 484,142.



1. An electric cable for alarm systems, comprising a thermostatic core portion constituting the thermostatic division of the cable and embodying the circuit conductors which are thermostatically operatable to cause the sounding of the alarm by the action of heat and a main outer portion constituting a division of the cable supplementary to said thermostatic portion and exterior thereof and surrounding the same and embodying the circuit conductors which are operatable to cause the sounding of the alarm by severance of the conductors, the conductors of the thermostatic core portion and the conductors of the supplementary outer portion being relatively arranged in circuits operatable either by variation in the circuit conditions of the conductor parts or by the action of heat or flame, substantially as and for the purpose set forth.

2. An electric cable for alarm systems, comprising a thermostatic core portion constituting the thermostatic division of the cable and embodying the circuit conductors which are thermostatically operatable to cause the sounding of the alarm by the action of heat and a main outer portion constituting a division of the cable supplementary to said thermostatic portion and exterior thereof and surrounding the same and embodying the circuit conductors which are operatable to cause the sounding of the alarm by severance of the conductors, the circuit conductors of said main outer division being wound around and outside of the thermostatic portion constituting the thermostatic division and the conductors of the thermostatic core portion and the conductors of the supplementary outer portion being relatively arranged in circuits operatable either by the cutting of the conductors or the action of heat or flame, substantially as and for the purpose set forth.

3. An electric cable for alarm systems, comprising a thermostatic core portion constituting the thermostatic division of the cable and embodying the circuit conductors which are thermostatically operatable to cause the sounding of the alarm by the action of heat and a main outer portion constituting a division of the cable supplementary to said thermostatic portion and exterior thereof and surrounding the same and embodying the circuit conductors which are operatable to cause the sounding of the alarm by severance of the conductors, the circuit conductors of said main outer division being braided and wound around and outside of the thermostatic portion constituting the thermostatic division and arranged to form an inclosure for said thermostatic division, and the conductors of the thermostatic core portion and the conductors of the supplementary outer portion being relatively arranged in circuits operatable either by the cutting of the conductors or the action of heat or flame, substantially as and for the purpose set forth.

4. An electric cable for alarm systems, comprising a thermostatic core portion constituting the thermostatic division of the cable and embodying the circuit conductors which are thermostatically operatable to cause the sounding of the alarm by the action of heat and electrical conductors exterior of and supplementary to said thermostatic portion constituting the thermostatic division, said exterior supplementary conductors constituting a division of the cable embodying the circuit conductors which are operatable to cause the sounding of the alarm by severance of the conductors and being arranged to form an inclosure for said thermostatic division, and the conductors of the thermostatic core portion and the supplementary exterior conductors of the outside inclosure being relatively arranged in circuits operatable either by the cutting of the conductors or the action of heat or flame, substantially as and for the purpose set forth.

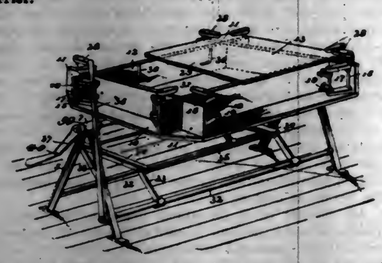
5. An electric cable for alarm systems, comprising a thermostatic core portion constituting the thermostatic division of the cable and embodying the circuit conductors which are thermostatically operatable to cause the sounding of the alarm by the action of heat and a main outer portion constituting a division of the cable supplementary to said thermostatic portion and exterior thereof and surrounding the same and embodying the circuit conductors which are operatable to cause the sounding of the alarm by severance of the conductors, the circuit conductors of said main outer portion being braided and wound around and outside of the thermostatic portion constituting the thermostatic division and arranged to form an inclosure for said thermostatic division, and the conductors of the thermostatic core portion and the conductors of the supplementary outer portion being relatively arranged in circuits operatable either by the cutting of the conductors or the action of heat or flame, substantially as and for the purpose set forth.

[Claims 6 to 14 not printed in the Gazette.]

961,828. COMPRESSION CEMENT-BLOCK MOLD. WILLIAM D. WISE, Detroit, Minn., assignor of one-half to Charles R. Stone, Fargo, N. D. Filed May 12, 1909. Serial No. 495,390.

1. A machine of the class described, including a mold having movable side and end walls, means for simultane-

ously moving said walls inwardly to effect the compression of the concrete in the mold, a carrier, and means for rotating the mold to deliver the molded product to said carrier.



2. A machine of the class described, including a mold having movable side and end walls, means for simultaneously moving said walls inwardly to effect the compression of the concrete in the mold, a carrier, means for rotating the mold to deliver the molded product to the carrier, and means for locking the mold in normal and reversed positions.

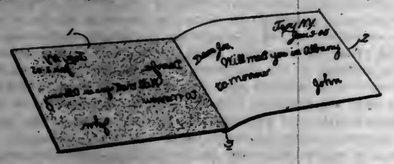
3. A machine of the class described, including a mold having movable side and end walls, means operatively connected with said walls for simultaneously moving said walls inwardly to effect the compression of the material in the molding compartment, means for reversing the mold, and a carrier movable to operative position beneath the mold when the latter is reversed.

4. A machine of the class described, including a mold having movable side and end walls, means operatively connected with said walls for simultaneously moving all of the walls inwardly to effect the compression of the concrete in the molding compartment, means for reversing the mold, a carrier movable to a position beneath the mold when the latter is reversed, means for locking the mold in normal position during the compression of the concrete, and means for locking the mold in reversed position.

5. A machine of the class described, including a mold having movable side and end walls, a pallet forming a closure for the top of the molding compartment, means for successively clamping the pallet in position on the mold and moving said walls inwardly to effect the compression of the concrete in the molding compartment, and means for rotating the mold to permit the discharge of the molded product.

[Claims 6 to 15 not printed in the Gazette.]

961,829. PRIVATE MAILING-CARD. WILLIAM J. WOOLDRIDGE, Schenectady, N. Y. Filed Feb. 16, 1906. Serial No. 301,328.

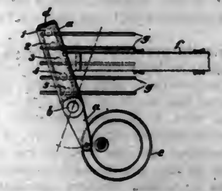


1. The combination with a mailing card having a surface of high ink absorbing power, of a leaf secured thereto having a surface of low ink absorbing power.

2. The combination with a mailing card, of a flexible leaf detachably secured to said card and consisting of wax-filled cloth.

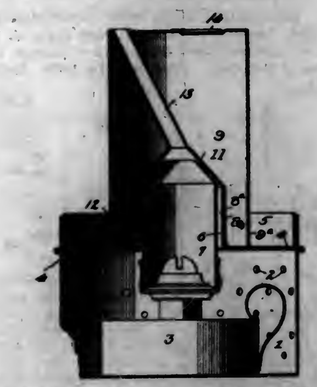
3. The combination with a mailing card, of a flexible leaf secured to said card and consisting of tough material having a surface substantially non-absorbent for ink, said leaf being shorter than said card and arranged to fold against a part thereof.

961,830. MOTION-TRANSMITTING MECHANISM. ROBERT ZAHN, Plauen, Germany. Filed Mar. 18, 1910. Serial No. 550,182.



In motion transmitting mechanisms, the combination of a driving lever, means for actuating the lever, a sliding piece on the driving lever, radially movable relatively to the pivoting point of the lever and having holes at graduated distances from said pivoting point, a rectilinearly guided reciprocating slide to be driven by said lever, coupling bolts carried by this slide, similarly arranged and corresponding in number to the holes of the aforesaid sliding piece, and means for throwing any one of the coupling bolts into its corresponding hole of the sliding piece of the driving lever, so as to allow of the transmission of motion of the lever to the slide at a corresponding length of the lever, substantially as and for the purpose described.

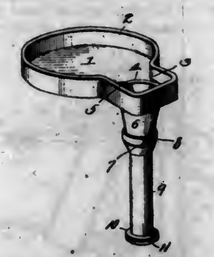
961,831. ANTIFREEZING DRINKING-FOUNTAIN FOR POULTRY. WILLIAM H. ASHCRAFT, Janesville, Wis. Filed Feb. 1, 1910. Serial No. 541,348.



1. In a poultry drinking fountain, a casing, a lamp contained in said casing, a drinking trough seated in said casing and having an opening to receive the lamp flue, an upstanding flange surrounding said opening, said flange being spaced apart from the lamp flue, a supply tank consisting of an inverted open-ended cylinder seated in said trough and having a feed hole in its side, a heating dome secured in said tank and inclosing the flanged opening in the trough, and an outlet duct leading from said dome to the outside of the tank.

2. A poultry drinking fountain comprising a casing having perforated sides, an inwardly extending flange adjacent to the top of the casing, a lamp contained in the casing, a drinking trough seated on said flange and having a central opening therein to receive the lamp flue, an upstanding flange surrounding said opening and spaced apart from the lamp flue, a supply tank consisting of an inverted open-ended cylinder removably secured in the trough and having a feed hole in its side, a heating dome secured in said tank and inclosing the flanged opening in the trough, and an outlet duct leading from said dome to the outside of the tank.

961,832. COIN-WRAPPING DEVICE. LEANDER E. AYRES, Jr., Newark, N. J. Filed Aug. 6, 1909. Serial No. 511,558.

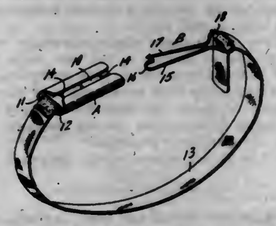


1. A device of the kind described comprising a tray having a continuous encircling flange, the said tray having a lateral extension also inclosed by said flange, said extension being provided with a circular opening, a hopper carried by said extension and in alinement with said opening, a depending tube detachably carried by the hopper and means for temporarily closing the lower end of said tube.

2. A coin wrapper comprising a tray, and a circular opening being formed in said tray, the marginal portions of said opening being recessed, a hopper having a flange seating in said marginal recess, a tube, means for detachably locking said tube to the hopper, and means for closing the lower end of the tube.

3. A device of the kind described comprising a tray having a vertical side wall, the wall and tray being provided with a lateral extension, said extension having an opening formed therein, a hopper adapted to seat in said opening, a coin receiving tube detachably carried by the hopper and adapted to receive a suitable wrapper, and a pivoted closure plate carried by the lower end of said tube, said closure plate swinging in a horizontal plane.

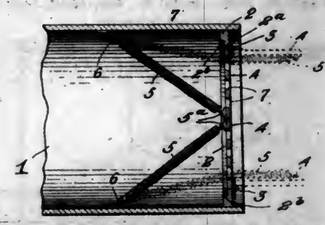
961,833. PACKAGE-TIE. MARTHA A. BAILEY, Lima, Ohio. Filed Feb. 2, 1910. Serial No. 541,562.



An article of manufacture comprising in combination, a sheath approximately elliptical in cross section provided with a longitudinally extending slot in the upper side, and a rearwardly projecting slotted ear on the base thereof, a series of convexed bars secured to said base, a strap secured in said slotted ear, and a hook carried at the opposite extremity of said strap and adapted to be attached at various positions on said strap and also adapted to engage one of said convexed bars.

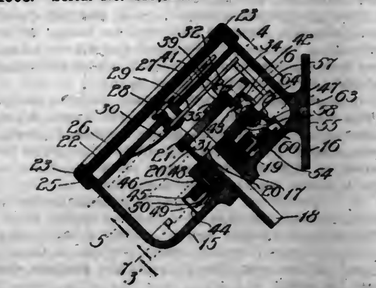
961,834. ANIMAL-GUARD FOR PIPES. JACOB BARLETT, Bryant, Ind. Filed June 21, 1909. Serial No. 503,497.

The herein described device comprising a tubular cylindrical body, an annular supporting and stop ring secured in the open end of said body and having the straight upright side edges 2^a in its opening, and the top and bottom portions of its outer face recessed, a pair of upright swinging gates of substantially semicircular shape and formed with openings, strap hinges secured to the outer edges of said gates and to the straight upright edges of the opening in said ring whereby the gates will swing into the recessed upper and lower portions of the front face of said



ring, apertured brackets adjacent the free edges of said gates and on the interior of said body, and coil springs for closing said gates and having their ends hooked into said apertured brackets.

961,835. SPEEDOMETER. DILLWYN M. BELL, Oak Park, Ill., assignor to The Bastian-Blessing Company, Chicago, Ill., a Corporation of Illinois. Filed June 23, 1908. Serial No. 439,927.



1. In a device of the class described, the combination of a clock driven element adapted to travel at a constant speed in one direction, a variable speed driven element adapted to travel at a variable speed in a counter direction, and means adapted to be actuated by either of said driven elements and when so actuated to be released by the other element for indicating the speed of the variable speed element.

2. In a device of the class described, a dial, a pointer, a clock driven element adapted to move the pointer in one direction, a variable speed element adapted to move the pointer in the opposite direction, and means to release the pointer at a position determined by the meeting of the two said elements.

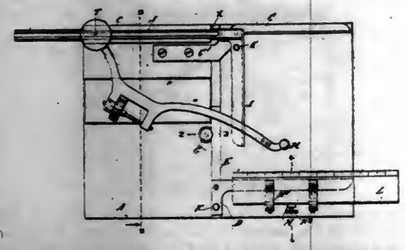
3. In a device of the class described, a dial, a pointer, a clock driven arm adapted to move the pointer in one direction, a variable speed driven arm adapted to move the pointer in an opposite direction, and means to release the pointer when the said arms meet.

4. In a device of the class described, a dial, a pointer, a clock driven arm adapted to move the pointer in one direction, a variable speed driven arm adapted to move the pointer in an opposite direction, means to release the pointer when the said arms meet, and means controlled by the variable speed driven arm to engage the other arm and restore it.

5. In a device of the class described, a dial, a pointer, a clock driven arm adapted to move the pointer in one direction, a variable speed driven arm adapted to move the pointer in an opposite direction, means to release the pointer when the said arms meet, means controlled by the variable speed driven arm to engage the other arm and restore it, and means to release the restored arm at a fixed point.

[Claims 6 to 12 not printed in the Gazette.]

961,836. PLANIMETER. FREDERICK C. BLANCHARD, ERNEST B. CROCKER, and PHILIP G. DARLING, Bridgeport, Conn., assignors to Ashcroft Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Apr. 10, 1909. Serial No. 489,130.



1. In a planimeter, a table, a fixed diagram clamp, a movable diagram clamp, a slide therefor, and a scale mounted to slide on one of the diagram clamps.

2. In a planimeter, a table, a fixed diagram clamp, a movable diagram clamp, a slide therefor, a scale block mounted to slide on the movable diagram clamp, and means to secure a scale to said block.

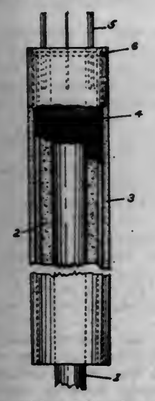
3. In a planimeter, a table, a fixed diagram clamp, a movable diagram clamp, a slide therefor loosely fitted in a slideway, a binder bearing against the slide to cramp it in any desired position in the slideway, and a scale mounted to slide on one of the diagram clamps.

4. In a planimeter, a table, a fixed diagram clamp, a movable diagram clamp, a slide therefor loosely fitted in a slideway, a binder bearing against the slide to cramp it in any desired position in the slideway, a scale block mounted to slide on the movable diagram clamp, and means to secure a scale to said scale block.

5. In a planimeter, a table, a fixed diagram clamp, a movable diagram clamp, a slide therefor loosely fitted in a slideway, and a binder bearing against a lower edge of the slide to cramp it in any desired position in the slideway and at the same time to press the diagram clamp against the table.

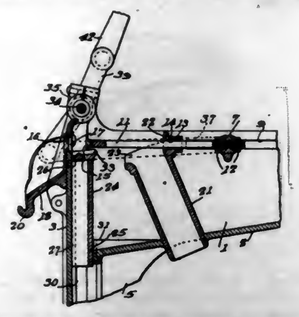
[Claims 6 to 16 not printed in the Gazette.]

961,837. REINFORCED-CONCRETE JACKET FOR PILING. ALPHONSE BAIFFOD, New Orleans, La. Filed Feb. 2, 1910. Serial No. 541,644.



The combination with a pile of a protecting covering comprising an outer reinforced shell and inner concrete filling between the pile and said shell, vertical reinforcing bars in the concrete filling and a ring in the upper part of the shell.

961,838. CHERRY-SEEDER. HENRY BROOME, Springfield, Ohio. Filed Jan. 11, 1909. Serial No. 471,713.



1. A cherry seeder comprising a plunger, a member having an aperture in alinement with said plunger, and a second plunger for moving a cherry into position between said first-mentioned plunger and said apertured member.

2. A cherry seeder comprising a plunger, a member having an aperture in alinement with said plunger, a second plunger for moving a cherry into position between said first-mentioned plunger and said apertured member, and a common means for actuating both of said plungers.

3. A cherry seeder comprising a receptacle adapted to receive a quantity of cherries, a plunger movably mounted in said receptacle, one wall of said receptacle having an aperture arranged in alinement with said plunger, means for moving said plunger toward and away from the aperture in said wall, and positive means for moving a cherry from said receptacle into a position between said plunger and said aperture.

4. A cherry seeder comprising a receptacle, a horizontal reciprocating plunger carried by said receptacle, a guide therefor, an apertured member having its opening arranged in alinement with said reciprocating plunger, means for positively moving a cherry into position between said reciprocating plunger and said opening, and a tubular conduit extending through the bottom of said receptacle and having one end arranged beneath said plunger and in front of said guide.

5. A cherry seeder comprising a receptacle having longitudinal guideways formed in the side walls thereof, a cross head slidably mounted in said guideways, a series of plungers carried by said cross head, and means for actuating said cross head, the front wall of said receptacle having a series of apertures therein arranged in alinement with the respective plungers.

[Claims 6 to 27 not printed in the Gazette.]

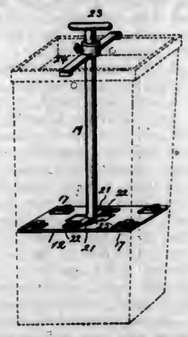
961,839. MANUFACTURE OF ICE. ARTHUR H. BUCKLEY, Cincinnati, Ohio. Filed May 6, 1909. Serial No. 494,208.

1. In the manufacture of artificial ice, the combination of a sheet-metal container adapted to hold water to be frozen, a dividing sheet which serves to sub-divide the ice by being frozen into the same and means at the edges thereof to detachably support the sheet in the container which holds the water to be frozen to produce the ice.

2. In the manufacture of artificial ice, the combination of a container which holds the water out of which the ice is formed, a sheet to divide the ice horizontally adapted to be supported in this can and below the water therein and means at the edges of the same to hold it temporarily in horizontal position within the container.

3. In the manufacture of artificial ice, the combination of a container which holds the water out of which the ice is to be formed, a dividing sheet, means to hold the same in position below the water and an implement adapted to detachably engage this sheet and serving to place the same in position.

4. In the manufacture of artificial ice, the combination of a box-shaped can to hold the water to be frozen, said can having opposite narrow and opposite wider sides, a rectangular sheet to separate the ice horizontally and being of dimensions equal to the interior dimensions of



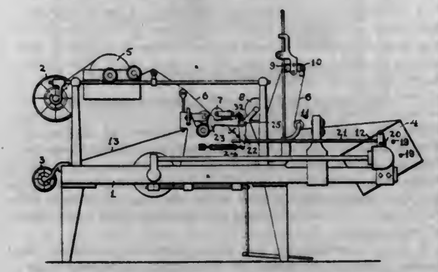
the can at the height where said sheet is located and means to detachably hold this sheet in the particular position within the can where the ice is to be divided, said means being provided exclusively on the long edges of the sheet.

961,840. VEGETABLE HAIR-TONIC. JOHN GRIFFITH BURGESS, San Diego, Cal. Filed Sept. 14, 1909. Serial No. 517,717.

1. A composition consisting of an infusion of *Larrea divaricata*, grain alcohol, and a perfume substantially as described and for the purpose specified.

2. A composition consisting of an infusion of *Larrea divaricata*, prepared from one pound of leaves and 12 pounds of water, 92 parts, grain alcohol, 7 parts, and a perfume 1 part, substantially as described and for the purpose specified.

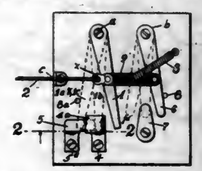
961,841. BOX-COVERING AND CORNER-STAYING MACHINE. WALTER C. CARLSON, Milwaukee, Wis., assignor to Clarence W. Hobbs, Worcester, Mass. Filed July 9, 1904. Serial No. 215,864.



1. In a machine of the class described, the combination with means for feeding an adhesive covering strip to a box, of means for attaching a stay piece to said covering strip, comprising a movable pressing member, a fixed shaft, a rocking arm mounted on said fixed shaft, a presser bar carried by said arm, means for exerting a yielding pressure upon said presser bar, and means for holding said presser bar in a fixed plane against said yielding pressure.

2. In a machine of the class described, the combination with means for feeding an adhesive covering strip to a box, of means for attaching a stay piece to said covering strip, comprising a movable pressing member, a fixed shaft, a rocking arm mounted on said shaft, a presser bar carried by said arm, means for supporting a covering strip in a fixed plane, means for exerting a yielding pressure upon said presser bar, and a stop attached to said shaft in contact with said arm for holding said presser bar in said fixed plane.

961,842. CONTROLLING DEVICE FOR MECHANICAL MOVEMENTS. CHARLES H. CARTER, Brooklyn, N. Y. Filed Apr. 28, 1905. Serial No. 257,882.



1. A switch mechanism having in combination a switch-bar; means pivotally supporting said bar at one end; means whereby said bar may be reciprocated on its pivot; means for limiting the reciprocatory movements of said bar in both directions so as to prescribe the movements of the latter; and means, coöperating with said bar at its free end, located within the limits of action of said bar and in the path of movement thereof, for positively holding the same in a functional position, said means including a fixed catch provided with a movable member having means enabling it to yield under pressure so as to cause the bar to be lifted from said functional position.

2. A switch-mechanism having in combination a switch-bar; means whereby said bar may be reciprocated; and a device, including a yielding catch, coöperating with said bar during, and between the limits of, its reciprocations, for causing it to be moved into a different plane of operation and functional position for each movement of said bar in the same direction.

3. A switch-mechanism having in combination, a reciprocatory switch-bar; means, coöperating with said bar, normally tending to hold the same in and return it to a given position; means for prescribing the functional area of movement of said bar; and means, including a yielding catch, within said functional area and in the path of movement of said bar for positively holding said bar in a functional position, said catch having means whereby, when said switch-bar is moved, the latter will be released from the catch.

4. In combination, an oscillatory switch-bar; means prescribing the functional area of movement of said bar; means within said area for holding said bar in a functional position; a manipulating device connected directly with said bar; said holding means including a yielding catch and a guide by which said bar may be moved through different planes into different functional positions by power applied to said manipulating device successively in the same direction.

5. In combination, a plurality of switch-bars; insulating connecting means for said bars, whereby they may move in unison; means for limiting the movements of said bars; and means located in the path of movement of one of said bars for holding both bars in a functional position within the limits of their movements.

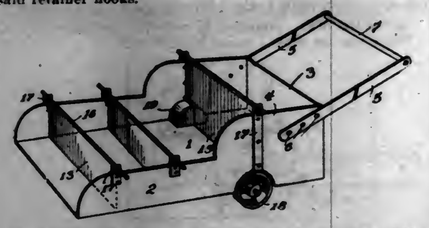
[Claims 6 to 23 not printed in the Gazette.]

961,843. COMBINED SHOVEL AND TRUCK. ANDREW J. COMPTON, Trenton, N. J. Filed Oct. 15, 1909. Serial No. 522,882.

1. A combined shovel and truck comprising a body having a bottom, sides and a back, carrying wheels on which the body is mounted, a handle connected with the body, and a plurality of removable dividers or partitions each comprising a supporting bar extending across the top edges of the sides, and retaining means for said supporting bar.

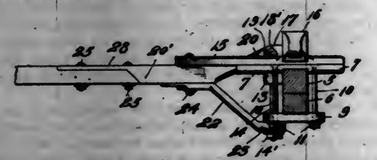
2. A combined shovel and truck comprising a body having a bottom, sides and back, a handle connected to the

body, supporting wheels on which the body is mounted, retainer hooks secured to the sides and extending above the top thereof and a plurality of removable dividers or partitions embodying supporting bars extending along the upper edges thereof and across the top edges of the sides and adapted to be moved into and out of engagement with said retainer hooks.



3. A combined shovel and truck comprising a body having a bottom, sides and back, a handle connected to said body, carrying wheels on which the body is supported, C-shaped retainer hooks secured to the upright sides of the body and extending above the same, and a plurality of partitions having supporting bars secured to their upper edges and of a length to project over and beyond the top edges of the sides and adapted for insertion in said retainer hooks and removal therefrom.

961,844. FIFTH-WHEEL. SANDERS CRAIG, San Diego, Cal. Filed Dec. 27, 1909. Serial No. 534,946.



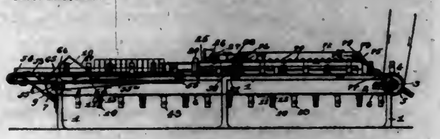
1. In a device of the character described, the combination with a sand board and vehicle axle, a fifth wheel disposed upon said sand board, a transversely disposed head block carried by said wheel, ears extending from said block, supporting bars carried by said wheel and secured to the running gear, a plate secured to the axle having an apertured ear centrally formed thereon, a king bolt having its upper end removably secured between the ears on said sand board, the lower end of said bolt being disposed through the apertured ear of said plate, and means for detachably connecting the ends of the supporting bars to the head block, said means engaging the king bolt to retain the head block on the sand board.

2. In a device of the character described, the combination with a sand board and vehicle axle, of a fifth wheel disposed upon said sand board, a head block carried by said wheel, supporting bars carried by said wheel and secured to the running gear of the vehicle, said head block having a plurality of spaced ears extending rearwardly therefrom, an apertured ear extending rearwardly from the center of the vehicle axle, a king bolt having an eye formed upon its upper end disposed between the ears on said head block, a bearing on the sand board for said bolt, the lower end of said king bolt being disposed through the apertured ear on said axle, means for removably securing the king bolt in said ears, and means connecting the lower end of said king bolt and the supporting bars.

3. In a device of the character described, the combination with a sand board and vehicle axle, of an attaching plate arranged beneath said axle, lateral arms seated in the top of said sand board, and extending forwardly and rearwardly therefrom, bolts rigidly connecting said arms and plate, a fifth wheel movably mounted upon said arms, a transversely positioned head block carried by said wheel, a plurality of ears extending rearwardly from said head block, supporting bars carried by the wheel disposed between adjacent ears, a king bolt having its upper end disposed between the intermediate ears, bearings for said bolt, means connecting the lower end of said bolt and said supporting bars, a transverse bolt removably disposed through said ears, supporting bars, and king bolt, a nut removably threaded upon one end of said bolt, and a nut threaded upon the lower end of the king bolt to removably secure the same in its bearings.

4. In a device of the character described, the combination with a sand board and axle, laterally extending arcuate arms seated in said sand board, an attaching plate disposed beneath the axle having laterally extending ears at each of its ends, attaching bolts connecting said ears and arms, a central bearing integrally formed with said plate and extending rearwardly thereof, a fifth wheel mounted upon said arms, a head block carried thereby, rearwardly and laterally extending ears integrally formed with said head block, rearwardly extending diverging supporting bars having their inner ends disposed between adjacent ears, a bearing carried by the sand board, a king bolt removably disposed in the bearing on said sand board and the bearing on said plate, the upper end of said king bolt having an eye formed thereon disposed between the intermediate ears, an attaching bolt extending through said ears, the ends of said bars and the eye of said king bolt and having a nut threaded upon one end thereof, a V-shaped member having the ends of its diverging arms disposed upon said supporting bars, the connected ends of said arms having an aperture therethrough to receive the king bolt, a nut threaded upon the lower end of said king bolt, said supporting bars being formed intermediate of their ends with a longitudinal channeled portion, and bolts extending through the rear ends of said V-shaped member, the channeled portions of said bars and the fifth wheel.

961,845. CARTON-SEALING MACHINE. GEORGE A. CULLOM, St. Louis, Mo. Filed Apr. 19, 1909. Serial No. 490,910.



1. In a machine of the class described, a frame, an endless chain arranged on said frame, a series of carton holding devices carried by said chain, means for folding and gluing flaps of cartons carried by said chain, means for discharging the cartons folded and glued at one end, a second conveyer arranged on said frame, a second series of carton holding devices on said chain to receive the cartons filled with merchandise and closed at one end, means for discharging the filled cartons from the second conveyer into the second series of carton holding devices carried by said chain, so that the flat folding and gluing means may act upon the remaining flaps of the cartons, and means for discharging the cartons from the machine filled and sealed at both ends.

2. In a machine of the class described, a frame, an endless conveyer mounted on said frame, a series of carton carriers arranged on said conveyer, means on said carton carriers for retaining the carton thereon when in an inverted position, means for folding and gluing the flaps of one end of the cartons, means for discharging the cartons from the machine sealed and folded at one end, a second conveyer arranged on the machine to receive the cartons filled with merchandise and sealed at one end, a second series of carton carriers arranged on the first mentioned conveyer, each of which second series of carton carriers is provided with a discharging device, means for delivering the cartons from the second conveyer into the second mentioned carton carriers, so that the flap holding and sealing means may act on the remaining flaps of the cartons, and a fixed arm on the machine arranged to engage the discharging arms carried by the second mentioned carton carriers.

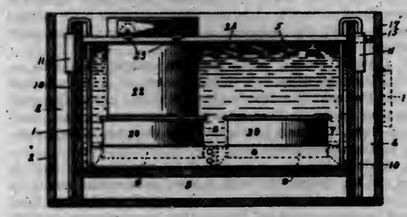
3. In a machine of the class described, a frame, an endless conveyer mounted on said frame, a series of carton carriers on said conveyer, means for folding and sealing the one end portion of the carton, means for holding the flaps after they are glued during a given time in their travel over the machine, means for discharging the cartons sealed at one end from the machine, a second conveyer arranged in a line parallel with the first mentioned conveyer, a second series of carton holding devices on the first conveyer; a plunger acted upon by the carton holding devices to discharge the cartons from the second mentioned conveyer into the second series of carton carriers, so that the flap folding and gluing means may act on the remaining flaps of the cartons and means for discharging the cartons from the machine sealed at both ends.

4. In a machine of the class described, a frame, an endless carrier arranged for rotation on said frame, a series of carton carriers arranged on said conveyer, each of which carton carriers is provided with a discharging device, means mounted upon one end of the frame for engaging discharging devices on a number of the carton carriers and means mounted on the opposite end of the frame for engaging the discharging devices on the remaining carton carriers.

5. In a machine of the class described, a frame, an endless conveyer arranged for operation on said frame, a series of carton carriers on said conveyer, a second conveyer arranged on the machine in line parallel with the first conveyer, a discharging apparatus comprising a rock-shaft adapted to be engaged by the carton carriers, a link connected at its one end with the rock-shaft and at its other end with a lever, the lever and plunger connected with the link, and a spring for actuating the plunger in one direction.

[Claims 6 and 7 not printed in the Gazette.]

961,846. SINK-AND-FLOAT TESTING APPARATUS. GEORGE R. DELAMATER, Strong, Colo. Filed July 3, 1909. Serial No. 505,943.



1. A sink and float testing apparatus, comprising a tank, a collector for the sink and a collector for the float in said tank, and a movably supported float transferrer adapted to be moved into coöperative relation with said collectors to deposit the sink in the sink collector and transfer the float to the float collector.

2. A sink and float testing apparatus, comprising a tank, a collector for the sink and a collector for the float in said tank, and a movably supported float transferrer having an open bottom and adapted to be moved into coöperative relation with said collectors to deposit the sink in the sink collector and transfer the float to the float collector.

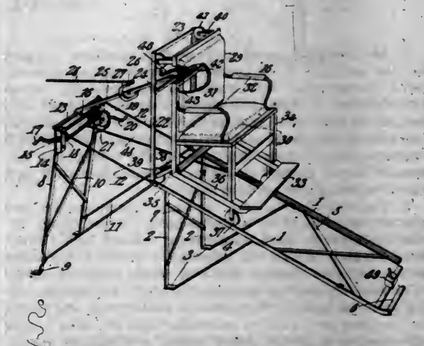
3. A sink and float testing apparatus, comprising a tank to contain a specific gravity solution, a collector for the sink material and a collector for the float material in said tank, a movably supported float transferrer adapted to be moved into coöperative relation with said sink material collector to deposit the sink in said collector and with said float material collector to transfer the float thereto, and means for lifting said collectors and said transferrer out of the specific gravity solution in the tank, substantially as described.

4. A sink and float testing apparatus, comprising a tank adapted to contain a specific gravity solution, a movable frame arranged in said tank, a sink material collector and a float material collector supported by said frame, a float transferrer movably supported and adapted to be moved into coöperative relation with said collectors, and means for raising said collectors and float transferrer out of the specific gravity solution in the tank.

5. A sink and float testing apparatus, comprising a tank, sink material and float material collectors movably supported in said tank and comprising pans having sieve bottoms, a float material transferrer movably supported in said tank above said collectors and adapted to be moved into coöperative relation with either thereof, and means for raising said collectors and said transferrer out of the solution in the tank.

[Claims 6 to 8 not printed in the Gazette.]

961,847. INITIATION APPARATUS. ERASTUS DE MOULIN, Greenville, Ill. Filed Sept. 14, 1909. Serial No. 517,667.



1. In an initiation apparatus, an inclined track or runway, a track section hinged to the upper end thereof and having a range of movement from an upright position to an inclined position, and a carrier for an initiate adapted to said track.

2. In an initiation apparatus, an inclined track or runway, a track section hinged to the upper end thereof and having a range of movement from an upright position to an inclined position, and a wheeled chair or carrier movable along the track in either of two positions.

3. In an initiation apparatus, an inclined track, and a chair or carrier provided with means for supporting it on the track in either an upright or inclined position.

4. In an initiation apparatus, a chair or carrier provided with a set of supporting wheels for carrying the chair in an upright position and other wheels for supporting the chair or carrier in a position at an angle to the upright position.

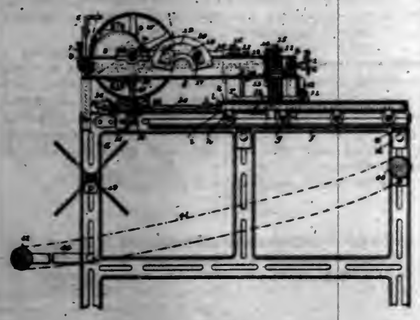
5. In an initiation apparatus a chair or carrier having a set of wheels at the front and at the rear for maintaining it in an upright position and another set of wheels at the back in spaced relation to the rear set of wheels for maintaining the chair with the back lowered, the set of wheels at the rear being at an angle to both the front set of wheels and the set of wheels in spaced relation to the said rear set of wheels.

[Claims 6 to 14 not printed in the Gazette.]

961,848. MACHINE FOR GRANULATING MAGNESIA. UBALDO DI MARCO, Hawthorne, N. J. Filed July 9, 1908. Serial No. 442,719.

1. The combination of a frame, a foraminous support for the material to be operated upon, a fulcrumed device coöperative with said support to force the material

through the same, said frame comprising curved guiding means and the fulcrum of said device being movable in said guiding means, and means for moving said device bodily and also on its fulcrum, substantially as described.



2. The combination of a frame, a foraminous support for the material to be operated upon arranged substantially horizontally, said frame having upwardly curved guiding slots, a fulcrumed device coöperative with said support to force the material through the same, bearings movable in said slots, said device being fulcrumed in said bearings, and a shaft journaled in the frame, said fulcrumed device having an eccentric connection with said shaft, substantially as described.

3. The combination of a frame, a foraminous support for the material to be operated upon, an oscillatory device operative to force the material through said foraminous support, means for effecting a relative movement as between said support and said device while the latter is moving whereby to gradually subject the material being operated upon to the action of said device, and means for checking such relative movement upon the same having advanced to a predetermined extent, substantially as described.

4. The combination of a frame, a foraminous support for the material to be operated upon, an oscillatory device operative to force the material through said support, means for effecting a relative movement as between said support and said device while the latter is moving whereby to gradually subject the material being operated upon to the action of said device, and means, controlled by the support, for checking such relative movement upon the same having advanced to a predetermined extent, substantially as described.

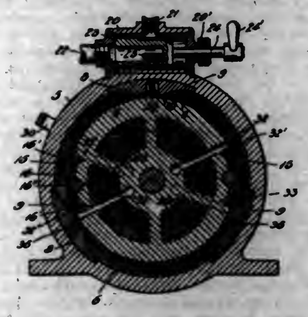
5. The combination of a frame, a foraminous support for the material to be operated upon, means for forcing the material through said support, a driving mechanism, means, disconnectively connecting the driving mechanism with the support, whereby to advance the support relatively to the means for forcing the material through said support, and means, controlling said last-named means, for disestablishing the connection afforded by said last-named means between the support and the driving mechanism, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

961,849. ROTARY ENGINE. ANDREW A. EDWARDS and ADNA OLSON, Stanwood, Wash. Filed July 22, 1908. Serial No. 444,814.

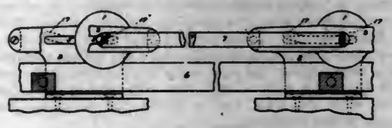
1. A rotary engine comprising a cylinder, spaced abutments, a drum in said cylinder, two-blade piston heads pivoted on said drum, a passage for conducting motive fluid to the rear of either blade, the passages for one set of blades being constructed to serve as exhausts when the other passages serve as inlets.

2. A rotary engine comprising a cylinder, spaced abutments, a drum in said cylinder, two-blade piston heads pivoted on said drum, a main passage for each blade of the piston head, branch passages leading directly to the



under face of said blades, said main passages being open at any position of the blades.

961,850. DOOR-HANGER. FRANCIS K. FASSETT, Dayton, Ohio. Filed Oct. 15, 1908. Serial No. 457,801.



1. A door hanger, comprising in combination two or more rolling members, each having a portion reduced in diameter an equal number of riders adapted to ride, one upon the reduced portion of each rolling member, means for securing the riders to a door, and means, preferably links, for maintaining a fixed distance between the said rolling members, whereby one of the rolling members cannot become displaced with reference to its rider unless there is a like displacement of each rolling member with reference to its respective rider.

2. A door hanger, comprising in combination two or more rolling members, an equal number of riders adapted to ride thereon, the treads of said riders being indirect, means for securing the riders to a door, and means, preferably links, for maintaining a fixed distance between the said rolling members.

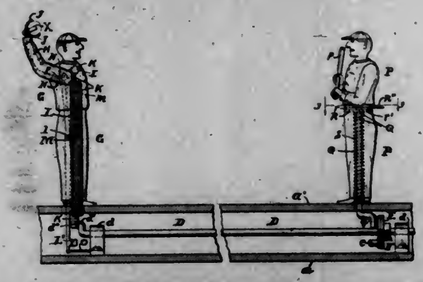
3. A door hanger, comprising in combination two or more rolling members, each having projecting axles, an equal number of riders, each composed of two parallel strips having rectilineal treads, the said sections rigidly united and adapted to ride upon the rolling members, one section of the rider on each axle thereof, means for securing the riders to a door, and means, preferably links, connecting the rolling members, whereby a fixed distance is maintained between the said rolling members.

4. In a door hanger comprising in combination, two or more rolling members adapted to roll on a track, riders, adapted to be attached to a door and ride on the said rolling members, means, preferably elongated and suitably disposed treads, forming the surfaces of the riders which coöperate with and rest on the rolling members, whereby, during portions of its travel the door will move in a line parallel with, and during the other portions of its travel, in a line diverging upward or downward from the track on which it runs, the verticality of the door remaining unchanged throughout.

5. In a door hanger comprising in combination, two or more rolling members adapted to roll on a track, riders, adapted to be attached to a door and ride on the said rolling members, means, preferably elongated and suitably disposed treads, forming the surfaces of the riders which coöperate with and rest on the rolling members, whereby, during portions of its travel the door will move in a line

parallel with, and during the other portions of its travel in a line diverging upward or downward from the track on which it runs, the verticality of the door remaining unchanged throughout, and a member carried by the several rolling members whose movement during the travel of the door will be altogether parallel with the track, the said member being normally disengaged from the track, but adapted to engage the under side of the track in case the door is lifted slightly by any cause.

961,851. BASE-BALL-GAME DEVICE. JAMES J. FITZSIMMONS, Chicago, Ill. Filed May 17, 1909. Serial No. 496,633.



1. A figure provided with a movable arm, an abutment to the arm, means to hold a ball at the end of the arm, a latch, said latch engageable with the abutment, and arranged to hold said arm stationary when in engagement, a spring connected with the arm and means for placing said spring under tension and automatically releasing the latch while the spring is under such tension.

2. A figure provided with a movable arm, an abutment to the arm, means to hold a ball at the end of the arm, a latch, said latch engageable with the abutment and arranged to hold the arm in its initial position when in engagement with said abutment, means to automatically engage the latch on the abutment when said latch and abutment are in a determined relative position, a spring, a connection between said spring and said arm, means to place said spring under tension and said means for placing said spring under tension also arranged to return the spring and arm to their initial positions.

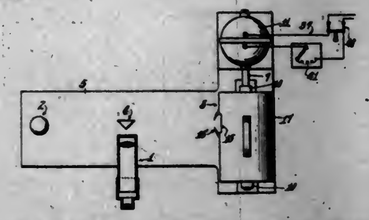
3. A figure provided with a movable arm, an abutment to the arm, spring fingers at one end of the arm, a latch arranged to engage with the abutment and retain the arm in its initial position, a spring arranged to yieldingly hold the latch in an engageable position, in combination with a shaft, means to turn the shaft, a crank on the shaft, an additional spring attached at one end to the crank and at the other end connected with the arm, and one end of said latch positioned in the path of said crank.

4. A figure provided with a movable arm, spring fingers at the end of the movable arm arranged to hold a ball, an abutment to the movable arm, in combination with a base, a shaft rotatably mounted on the base, cranks at the ends of the shaft, a pivoted latch having one end in position to engage the abutment on the arm, and the other end projecting into the path of one of the cranks, a spring having one end connected with the arm and the other end attached to said crank, said crank and latch arranged so that the crank engages with the latch to release the latch from the abutment at a determined time, and the spring arranged to return the arm to its initial position as said spring is moved by the crank to which it is attached subsequent to the release and movement of the arm.

5. A base and a floor, a figure on the floor said figure provided with a movable arm, spring fingers at the end of the arm arranged to hold a ball, an abutment to the movable arm, in combination with a shaft rotatably mounted on the base, cranks at the ends of the shaft, and a pivotally mounted latch having one end arranged to engage with the abutment to hold the arm in a determined position, and the other end projecting into the path of one of said cranks, a spring, a connection between one end of the spring and the movable arm and said spring attached at its other end to one of the cranks, said crank, latch and spring arranged so that turning of the crank produces tension on the spring, and releases the latch from the abutment when the spring is under tension, and continued turning of the crank returns the arm to its initial position.

[Claims 6 to 8 not printed in the Gazette.]

961,852. UNIVERSAL PHOTOMETER. TAMAKI FUJITA, Los Angeles, Cal. Filed Feb. 1, 1909. Serial No. 475,508.



1. In a photometric apparatus, means for producing rays of light of different color, means for separately and independently varying the amount of the differently colored rays, and means for directing the differently colored rays of light onto a comparator producing the effect of a blended light for comparison with light from another source.

2. A photometric apparatus comprising means for producing differently colored rays of light, means for independently adjusting the amount of such differently colored rays of light, a comparator, and means for directing upon said comparator the differently colored rays of light to produce at the comparator the usual effect of a light composed of such different rays.

3. A photometric apparatus comprising means for producing differently colored rays of light, means for independently varying the amount of such differently colored rays of light, means for simultaneously varying the intensity of all of such differently colored rays of light, a comparator, and means for directing the differently colored rays of light onto the comparator to produce at the comparator the blended effect of said rays.

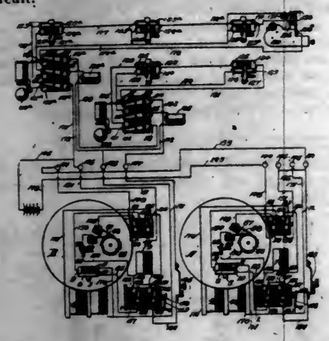
4. A photometric apparatus comprising means for producing differently colored rays of light, means for independently varying the amount of such differently colored rays of light, means for producing white light, means for varying the intensity of such white light, a comparator, and means for directing onto the comparator the differently colored and white lights, as above set forth.

5. In a photometric apparatus, means for producing rays of light of different color, intercepting means for cutting off a variable portion of the light of each color, and means for directing said rays onto a comparator to blend the effects of the differently colored rays of light for production of the effect of a composite light for the purpose stated.

961,853. FIRE-ALARM SYSTEM. JAMES H. GARRATT and WILLIAM J. MCGIVERN, Rochester, N. Y., assignors to J. Geo. Kaelber, Rochester, N. Y. Filed Feb. 2, 1905. Serial No. 243,844.

1. In a signaling system, the combination with a line circuit having a source of current in connection therewith, of a signaling instrument embodying a signaling device adapted to be connected in the line circuit, an actuating train therefor, a device for releasing the train to set the instrument in signaling condition, and a controlling device, responsive to the line current and independent of the train releasing device for setting the signaling device into signaling operation after the expiration of a

period of time sufficient for the transmission of a complete round of signals from another instrument in the line circuit.



2. In an electric signaling system, the combination with the line circuit, and a source of current in connection therewith, of a plurality of signaling instruments connected to the line circuit each embodying a signaling circuit capable of being connected in the line circuit, a signaling device connected in the signaling circuit operating to interrupt the line current at prearranged intervals in transmitting a signal, operating means for the signaling device, and a device responsive to the line current for controlling the mechanical connection between said operating means and the signaling device.

3. In a fire-alarm system, the combination with the line circuit, and a source of current in connection therewith, of a plurality of signaling instruments connected in the line circuit each embodying a signaling circuit having a signaling device connected therein, an actuating train for operating the signaling device, a magnetically controlled releasing device for normally retaining the train inoperative, a controlling circuit capable of being connected in the line circuit and including the releasing device in circuit therewith, a circuit controller under the control of the releasing device for connecting the signaling and line circuits, and a device responsive to the line current for connecting the signaling device and its actuating train.

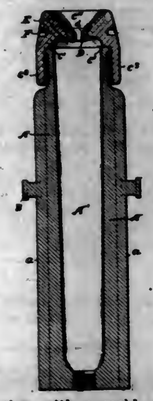
4. In a fire-alarm system, the combination with the line circuit, and a source of current in connection therewith, of a plurality of signaling instruments connected in the line circuit each embodying a signaling circuit having a break wheel connected therein, an actuating train for operating the signaling device, a controlling circuit having a releasing device connected therein for normally retaining the actuating train inoperative, a circuit controller capable of being operated through the controlling circuit for connecting the signaling and main line circuits, and an electro-magnetically operated device responsive to the line current for establishing operative connection between the break wheel and the actuating train.

5. In a fire-alarm system, the combination with the line circuit, and a source of current in connection therewith, of a signaling instrument connected in the line circuit embodying a signaling circuit having a signaling device connected therein, a controlling circuit adapted to receive the line current and having a circuit controller connected therein responsive to a current over the controlling circuit for connecting the signaling and line circuits, and an auxiliary circuit connected in the controlling circuit and having devices for closing the line circuit through the controlling and auxiliary circuits.

[Claims 6 to 34 not printed in the Gazette.]

961,854. INGOT-MOLD. EMIL GATHMANN, New York, N. Y. Filed Feb. 16, 1910. Serial No. 544,263.

1. A removable hood for a mold made of heat insulating material, the top of which is adapted to cover the top of the mold and thus prevent the upward radiation of heat and the sides of which are adapted to inclose the upper portion or neck of the mold and prevent rapid sidewise radiation and thus conserve the heat in the upper part of the fluid ingot.



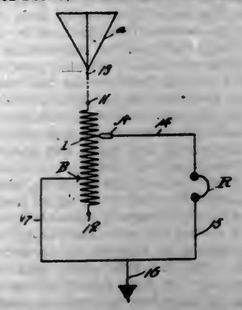
2. The combination with a mold, the lower part of which is constructed to favor heat radiation while the upper part or neck is reduced in thickness to conserve the heat of the ingot, of a removable hood of heat insulating material, the top of which is adapted to cover the top of the mold and thus prevent the upward radiation of heat, and the sides of which inclose the upper part or neck of the mold for the purpose specified.

3. A combined hood and funnel for molds made of heat insulating material having an annular portion adapted to surround the upper part or neck of the mold to conserve the heat therein and a funnel shaped top having a reservoir for containing molten metal and a restricted opening for the passage of the molten metal into the mold.

4. A combined hood and funnel for molds having an annular portion adapted to surround the upper part or neck of the mold to conserve the heat therein, and a top portion provided with a reservoir to contain a supply of metal to feed the mold and which is formed with a restricted opening for permitting the relatively slow passage of the molten metal from the reservoir into the mold.

5. A combined hood and funnel for molds having an annular portion adapted to surround the upper part or neck of the mold to conserve the heat therein, and a funnel-shaped top provided at its inner end with a removable plug having a restricted opening for the passage of the molten metal into the mold.

961,855. DETECTORIUM. HUGO GERNSBACK, New York, N. Y. Filed Feb. 5, 1910. Serial No. 542,207.



1. A wireless telegraph and telephone tuning coil including a movable contact element of such material as to form a detector.

2. A tuning coil including a slider, and a detector element movable with the slider and engaging the coil.

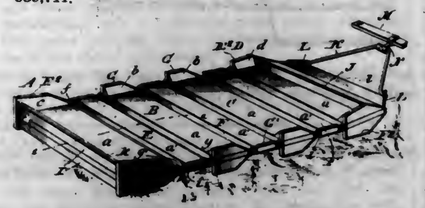
3. The combination of an antenna, a coil connected therewith, and a detector element movable along the coil for tuning the antenna.

4. The combination of an antenna, a tuning coil connected therewith, a detector element movable along the coil for tuning the antenna, and a grounded conductor connected with the detector and including a receiving instrument.

5. A slider for tuning coil tipped with a material cooperating with the coil to form a detector.

[Claim 6 not printed in the Gazette.]

961,856. TRANSPORT. JESSE M. HECKMAN, Alpha, Saskatchewan, Canada. Filed Jan. 24, 1910. Serial No. 539,711.



1. A transport comprising a plurality of transverse members, arranged one behind the other, and flexibly connected with each other, and having combined fenders and runners extending in opposite directions from their sides at their ends.

2. A transport comprising a plurality of large transverse members arranged one behind the other, smaller transverse members arranged between the large members, longitudinally-disposed combined fenders and runners arranged at the ends of the large members and at opposite sides thereof, and means flexibly connecting the members together in series.

3. A transport comprising a plurality of members arranged one behind the other, combined fenders and runners arranged at the ends of said members and on the opposite sides thereof, shoes arranged on the combined fenders and runners and having transversely disposed eyes, and means disposed in said eyes and flexibly connecting the members with each other.

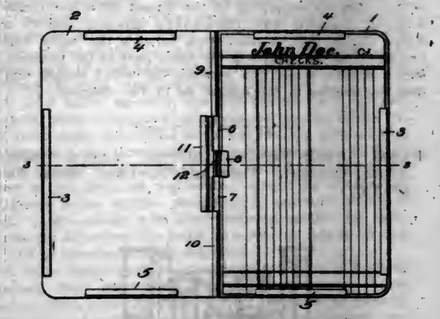
4. A transport comprising a plurality of large transverse members arranged one behind the other, smaller transverse members arranged between the large members, longitudinally-disposed combined fenders and runners arranged at the ends of the large members and on opposite sides thereof, shoes arranged on the combined fenders and runners and having transversely disposed eyes, straps on the small members and having transversely disposed eyes, means disposed in said eyes and flexibly connecting the members together in series, and means on the forward member adapted for the connection of draft means and also adapted when the direction of pull thereon is reversed to cause the transport to turn over in the direction of its length.

5. A transport comprising a plurality of transverse members arranged one behind the other and flexibly connected with each other and having combined fenders and runners at their ends and on their opposite sides; the combined fenders and runners of the rear member being tapered forwardly, and the combined fenders and runners of the forward member being tapered rearwardly, and means on the forward member for the attachment of draft means.

[Claim 6 not printed in the Gazette.]

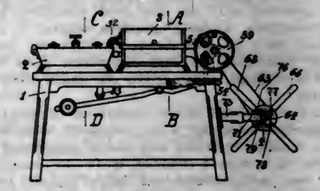
961,857. PASS-BOOK. FRANK J. HICKS, Belding, Mich. Filed Feb. 23, 1910. Serial No. 545,534.

In an account leaf holder, a pair of metallic covers provided with hinged knuckles on their inner edges, a pintle passed through the knuckles adapted to hold the covers together, flanges on the inner edges of the covers adapted to hold leaves away from the knuckles and flanges



on the remaining edges of the covers adapted to removably hold with the other flanges account leaves on the covers.

961,858. HOSE-CLEANING APPARATUS. GEORG HOFMANN, Kaufbeuren, Germany. Filed Mar. 6, 1909. Serial No. 481,654.



1. Hose cleaning apparatus comprising in combination nozzles having their orifices directed toward a common axis, means for connecting said nozzles to a water main, hose squeezing cylinders beyond said nozzles, brushes between said cylinders and nozzles, a hose reel, and means for collectively rotating said cylinders and reel.

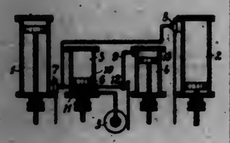
2. Hose cleaning apparatus comprising in combination a spraying chamber having a hinged lid and apertures for the entrance and exit of the hose, nozzles arranged in the lower part of said chamber, and having upwardly directed orifices, nozzles fixed to the inside of the lid and having downwardly directed orifices, means for collectively connecting said nozzles to a water main, an upwardly directed brush arranged in the lower part of said chamber, a downwardly directed brush fixed to the inside of the lid, hose squeezing cylinders, a hose reel, and means for collectively rotating said cylinders and reel.

3. Hose cleaning apparatus comprising in combination a water tank, brushes arranged to form a path for the hose in said tank, nozzles having their orifices directed toward a common axis in continuation of said path, means for connecting said nozzles to a water main, hose squeezing cylinders, brushes between said cylinders and nozzles, a hose reel, and means for collectively rotating said cylinders and reel.

4. Hose cleaning apparatus comprising in combination a water tank, a brush fixed in said tank, brushes hinged to the wall of said tank, means for fixing said hinged brushes in horizontal position so that they form with the first mentioned brush a path for the hose, nozzles having their orifices directed toward a common axis in continuation of said path, means for connecting said nozzles to a water main, hose squeezing cylinders, brushes between said cylinders and nozzles, a hose reel, and means for collectively rotating said cylinders and reel.

5. In a hose cleaning apparatus, a spraying chamber having a hinged lid and apertures for the entrance and exit of the hose nozzle arranged in the lower part of the spraying chamber and provided with upwardly directed orifices, nozzles supported by the hinged lid of the chamber and provided with downwardly directed orifices, a water supply pipe, a connection between the water supply pipe and the nozzles in the lower part of the chamber, and a flexible connection between the water supply pipe and the nozzles in the hinged lid of the chamber.

961,859. CARBONIC-ACID MOTOR. LUDWIG HORST, Altona, Germany. Filed Apr. 20, 1909. Serial No. 491,169.



1. A carbonic acid motor, comprising in combination, a carbonic acid gas reservoir, a coil connected with said reservoir, an air compressor to heat said coil to superheat the gas flowing therethrough, said air compressor being provided with an inlet port communicating with the atmosphere, working cylinders adapted to communicate with said coil, and means to utilize the pressure of the air compressed by said compressor after being deprived of its heat, substantially as, and for the purpose, set forth.

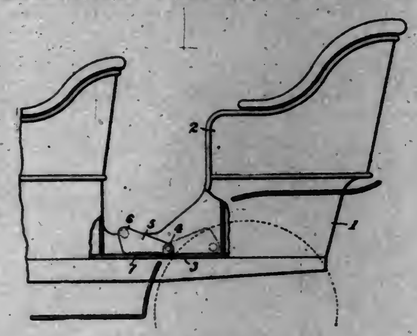
2. A carbonic acid motor, comprising in combination, a carbonic acid reservoir, a coil connected with said reservoir, a chamber inclosing said coil, a compressor adapted to force air into said chamber, means to conduct the air forced into said chamber back to the opposite end of the compressor, and working cylinders adapted to communicate with said coil, substantially as, and for the purpose, set forth.

3. A carbonic acid motor, comprising in combination, a carbonic acid reservoir, a compressor, a coil in connection with said reservoir and arranged in the jacket of the cylinder, a chamber in the end plate of said cylinder, a coil in continuation of said first coil arranged in said chamber, means to allow the air compressed by said compressor to pass into said chamber, and means to conduct said air after being deprived of its heat in the coil contained in said chamber and in said second coil to the opposite end of the compressor, substantially as, and for the purpose, set forth.

4. A carbonic acid motor, comprising in combination, a carbonic acid reservoir, two compressors provided in a line, a chamber between said compressors, a coil provided in said chamber and connected with said reservoir, means to conduct the air compressed by said compressor into said chambers, and means to conduct the air entering said chamber to the opposite ends of the compressor, substantially as, and for the purpose, set forth.

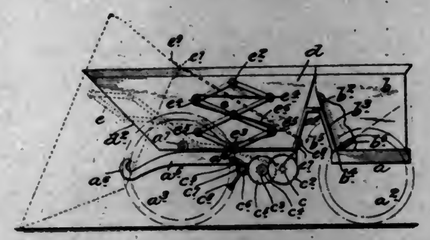
961,860. FOOT-REST FOR MOTOR-VEHICLES. RUSSELL HUFF, Detroit, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 16, 1906. Serial No. 312,028.

In a motor vehicle, the combination with the seat, of brackets connected with the frame of the vehicle forward of the seat, arms pivotally connected with the brackets, and a foot rest connected with and extending between the arms, said arms and foot rest being movable relatively to the seat into operative and inoperative position, the horizontal distance from the seat to the brackets being substantially equal to the length of the arms, whereby



the rest may be brought close to the seat when in inoperative position, for the purpose set forth.

961,861. DUMPING-TRUCK. WILLIAM H. HUNT, New York, N. Y. Filed Mar. 12, 1909. Serial No. 483,069.



In a dump cart or vehicle, a truck frame the sides of which are provided with backwardly and downwardly curved extensions having hook members at their ends, a bed or body mounted thereon and provided with rollers which bear on the sides of the truck frame and are adapted to move downwardly and backwardly on said extensions and to rest in said hook members, lazy-tong devices pivoted to the truck frame at the opposite sides of said bed or body and to the opposite sides of said bed or body, a winding mechanism mounted beneath the bed or body, cables connected with the lazy-tongs and with said winding mechanism, another cable connected with the front end of the bed or body and passed around a roller at the front end of the truck frame and connected with said winding mechanism whereby when said winding mechanism is operated in one direction the front end portion of the bed or body will be raised and said bed or body moved backwardly and downwardly and turned into a dumping position, and when said winding mechanism is operated in the other direction said bed or body will be turned back into its normal position on the truck frame.

961,862. BEARING-FINDER. ROBERT HUNTINGTON, Medford, Mass., assignor, by mesne assignments, of one-half to Arbecam Nautical Instrument Co., Boston, Mass., a Corporation of Massachusetts. Filed Aug. 16, 1909. Serial No. 513,178.

1. In a bearing finder, a sighting device comprising a frame with an eye-piece at one end and a sight wire extending from said eye-piece over and across to the object end thereof.

2. In a bearing finder, a sighting device comprising a frame, an eye-piece at one end thereof, a sight wire extending from said eye-piece in the general form of a vertical arc to the object end of said frame, and a plate forming part of said frame, which plate has radial graduations centering at said object end.



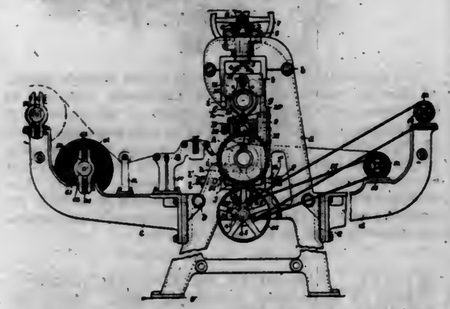
3. In a bearing finder, a graduated disk mounted in suitable bearings, a graduated sector adapted to cooperate with said disk as a variation corrector, sighting vanes adapted to rotate about the center of said disk and parallel to the plane thereof, and an indicator attached to said vanes adapted to indicate bearings on said disk, in combination with a horizontal plate rigidly attached to said vanes carrying radial graduations which center at the object end of said vanes.

4. In a bearing finder, a graduated disk mounted in suitable bearings, sighting vanes adapted to rotate about the center of said disk and parallel to the plane thereof, a graduated sector adapted to rotate about the center of said disk and parallel to the plane thereof, said sector being provided with an indicator adapted to coöperate with said disk to record angles, and an indicator attached to said vanes adapted to coöperate with said disk and with said sector to record bearings, in combination with a horizontal plate attached to said vanes, said plate having radial graduations which center at the object end of said vanes.

5. In a bearing finder, a cross-bar supported upon a universal joint, a graduated disk rotatably mounted in said cross-bar, and sighting vanes adapted to rotate about the axis of said disk and parallel to the plane thereof, in combination with a plate attached to said vanes which is provided with radial graduations that center at the object end of said vanes.

[Claims 6 to 10 not printed in the Gazette.]

961,863. MOIRE-MACHINE. CHARLES B. JOHNSON and PETER VAN VLAANDEREN, Paterson, N. J., assignors to The Johnson Van Vlaanderen Machine Co., Paterson, N. J., a Corporation of New Jersey. Filed Jan. 20, 1910. Serial No. 539,067.



1. In a moire machine, the combination of a suitable supporting structure, a plurality of superposed rolls, a bearing means for the upper roll, another bearing means for the lower roll, one of said bearing means being movable toward and from the other, and means, comprising a micrometer adjuster, for adjusting one of said bearing means in the direction of the feed between the rolls, substantially as described.

2. In a moire machine, the combination of a suitable supporting structure, three superposed rolls, separate bearing means for the three rolls, and means, comprising a micrometer adjuster for each of two of the bearing means, for independently adjusting the latter two bearing means in the direction of the feed between the rolls, substantially as described.

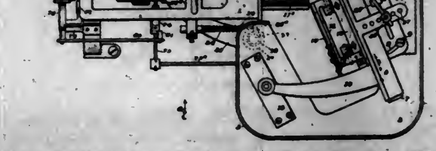
3. In a moire machine, the combination of a suitable supporting structure, three superposed rolls, separate bearing means for the three rolls, and means, comprising micrometer adjusters active against relatively opposite points of two of the bearing means, for independently adjusting said two bearing means in the direction of the feed between the rolls, substantially as described.

4. In a moire machine, the combination of a suitable support, three superposed rolls, separate bearing means for the three rolls, the middle and lower bearing means being adjustable in the direction of the feed through the machine and the upper bearing means being confined against movement in said direction, and means, comprising micrometer adjusters active against substantially opposite points of each of the middle and lower bearing means, for independently adjusting the latter two bearing means in said direction, substantially as described.

5. In a moire machine, the combination of a suitable support, three superposed rolls, separate bearing means for the three rolls, the upper bearing means being movable vertically and confined against horizontal movement, vertically movable brackets carrying the intermediate bearing means, the lower bearing means occupying a relatively constant elevation in said support, means for raising and lowering the upper bearing means, and means, comprising micrometer adjusters active against relatively opposite points of each of the middle and lower bearing means, for independently adjusting the latter two bearing means in said direction, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

961,864. CUTLERY-GRINDING MACHINE. CHARLES L. JOY, New Haven, Conn. Filed May 21, 1909. Serial No. 497,540.



1. In a cutlery grinding machine, the combination with a grinding wheel, a knife holder reciprocating carriage and a track therefor, means for operating the carriage, of an adjustable stop adapted to contact with the carriage and hold said carriage in a fixed position, until all lost motion in the carriage actuating mechanism is taken up.

2. In a cutlery grinding machine, the combination with a grinding wheel, a pivoted plate carrying a knife holder reciprocating carriage, a cam drum, a pivoted lever carrying a roll, of a cam adjustably supported independently of the cam drum and adapted to engage the roll and swing the lever away from the cam drum and thus cause the plate to swing toward the grinding wheel, means for temporarily locking the lever in its outward position, and means for releasing the lever at each revolution of the cam drum to throw the plate away from the grinding wheel.

3. In a cutlery grinding machine, in combination, a grinding wheel, a pivoted plate carrying a knife holder reciprocating carriage, a cam shaft, a cam drum mounted thereon, means on the drum for actuating the carriage, a lever for actuating the plate toward the grinding wheel, means for actuating and means for temporarily locking said lever, means for rotating the cam shaft one or more

revolutions through the medium of a plate having a spiral groove in its face, a traveler for said groove, said traveler connected with the means for rotating the cam shaft, means for releasing the carriage carrying plate actuating lever at every revolution of the cam drum, and means for swinging it toward the grinding wheel.

4. In a cutlery grinding machine, the combination with a cam shaft carrying a cam drum and the mechanism actuated by said drum to grind a knife, and the driving means for rotating said shaft, of a rotating element having a spiral groove therein, a traveler for said groove, means for connecting said traveler with the shaft driving mechanism to stop the same when the traveler is not actuated by the groove, said groove of sufficient length to permit of one or more revolutions of the cam drum shaft, and means for adjusting the traveler with respect to the number of said revolutions required.

5. In a cutlery grinding machine, a driving shaft carrying a grinding wheel, a sliding box in which the shaft is journaled, a support for the box, means connected with the shaft to prevent its longitudinal movement in the box, said box having a hollow threaded extension embracing the shaft, a hand wheel having a threaded bore mounted on said threaded extension, means for rotatively anchoring said wheel against endwise movement so that, when said wheel is rotated, the shaft is longitudinally adjusted, for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

961,865. SPEED-RANGER FOR GOVERNORS. JOHN W. KLEINHAN, Alexander, N. D. Filed Apr. 5, 1909. Serial No. 487,948.

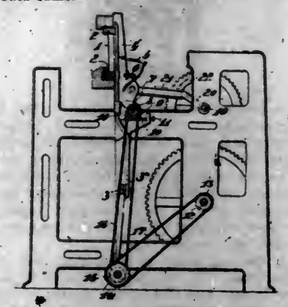


In a governor, a valve-stem constructed in sections, a casing formed with an opening extending therethrough and receiving one of said sections, the casing being rigidly connected to said section, the other section being movable within the said opening of the casing and formed with teeth, a guiding connection between the last named section and the casing arranged to limit the movement of the section relative to the casing, a shaft journaled in said casing and a pinion mounted in the casing and secured to said shaft.

961,866. LOOM FOR MANUFACTURING TERRY FABRICS. GUSTAV KRATKY, Freudenthal, Austria-Hungary. Filed Apr. 5, 1909. Serial No. 488,015.

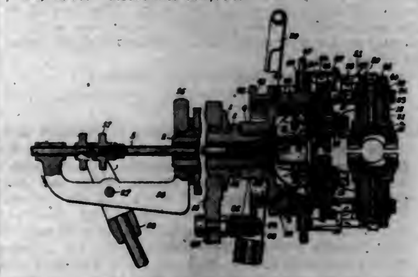
1. A loom comprising in combination, a swinging reed frame provided with a shuttle race, means for swinging said frame, a reed, a structure supporting said reed and pivotally mounted on said frame, a spring connected with said structure and frame for normally holding the former in a retracted position, cams mounted on said frame for forcing said reed toward the fell of the fabric, means for adjusting the position of said cams with respect to said structure, and independent means for operating said cams.

2. A loom comprising in combination, a swinging reed frame provided with a shuttle race, means for swinging said frame, a reed, a structure supporting said reed and pivotally mounted on said frame, springs normally holding said structure in a retracted position, cams for engaging said structure to force the reed toward the fell of the fabric, means for adjusting the position of said cams with respect to said structure, and independent means for operating said cams.



3. A loom comprising in combination, a swinging reed frame provided with a shuttle race, means for swinging said frame, a reed, a structure supporting said reed and pivotally mounted on said frame, adjustable devices mounted on said frame for engaging said structure and forcing the reed toward the fell of the fabric, and independent means for operating said devices.

961,867. CHUCK. PHILIP F. KRUG, New York, N. Y., assignor to Walter L. Abate, New York, N. Y. Filed Oct. 23, 1907. Serial No. 398,793.



The combination of a chuck head, blocks slidably mounted therein, means for adjusting the blocks relatively to each other and relatively to the center of the chuck head, mechanism for moving the blocks to and from the center of the chuck head; brackets and means for removably securing the brackets, one to each of the blocks; jaws, set revolubly, one in each of the aforesaid brackets, and means, substantially as herein shown and described, for revolving each of the jaws simultaneously with the others, equidistantly, and in the same direction.

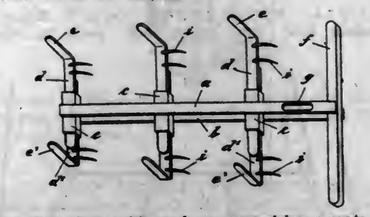
961,868. HARVESTER BUTTING ATTACHMENT. FRANK O. KULLANDER, Kensington, Minn. Filed Jan. 27, 1909. Serial No. 474,514.



1. A device as specified including a bar, spring arms carried by said bar, helical portions formed on said arms and encircled about said bar, loops formed on said helical portions, clamping bolts carried by said bar and engaged through said loops, arcuate plates carried by said bolts provided with inner concaved faces and longitudinal grooves for the reception of said loops and nuts positioned against the upper faces of said plates for clamping said arms in position.

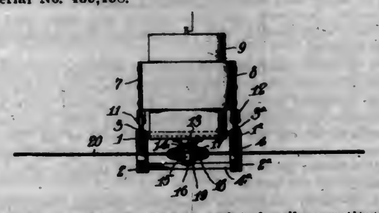
2. A device as specified including a platform for the reception of bundles of grain, ejector arms disposed over said platform and having their outer ends curved laterally and also in a direction opposite to the direction of rotation of said ejector arms while they are ejecting the bundle, thus forming a bearing surface for the bundles, and spring arms mounted above said platform and beneath said ejector arms, and having their outer ends curved upwardly and toward one another to present a sliding surface for engagement with the bundles.

961,869. APPARATUS FOR SMOKING SALMON. HERMANN LINDENBERGER, Berlin, Germany. Filed July 2, 1908. Serial No. 441,611.



Apparatus for smoking salmon, comprising a grate consisting of longitudinal bars, sleeves placed between said bars and extending across the same, bars passing through said sleeves and projecting from either side of the same, tines carried by said bars in the sleeves, means carried by the ends of said cross-bars for holding the fish, and means for adjusting said cross-bars in position, substantially as and for the purpose set forth.

961,870. PORTABLE SAWING-MACHINE. JOHN H. LONGSTREET, Germantown, Pa. Filed June 20, 1908. Serial No. 439,498.



1. In a sawing machine, a pair of rails constituting a track, a movable carriage supported on said track and comprising vertical side members parallel to said track and having bearings at the end of each side member engaging a rail, a motor carried by said carriage, and a horizontal circular saw driven by said motor and rotatably mounted on said carriage below the side members and projecting laterally thereof.

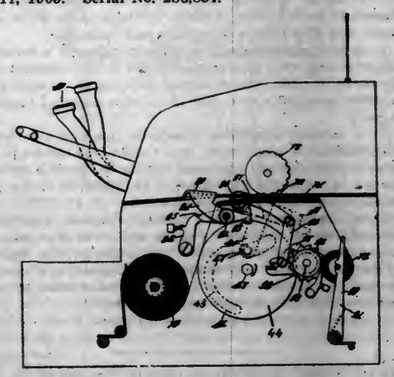
2. In a sawing machine, a pair of rails constituting a track, a movable carriage supported on said track, a motor carried by and connected to said carriage, a horizontal circular saw rotatably mounted on said carriage below the frame and completely exposed on its under side, said saw projecting in an operative position beyond the carriage and operatively connected with said motor.

3. In a sawing machine, a pair of rails constituting a track, a movable carriage supported on such track, a motor carried by and connected to said carriage, a horizontal circular saw rotatably mounted on said carriage below the side members thereof and the plane of their engagement with the track and projecting in an operative position beyond the same and operatively connected with said motor.

4. In a sawing machine, a pair of rails constituting a track, a movable carriage supported on such track, a motor carried by and connected to said carriage, a horizontal circular saw rotatably mounted on said carriage and operatively connected to said motor, said saw lying below the rails and projecting in an operative position beyond the same, and folding legs pivoted to said track for supporting the sawing machine when necessary.

5. A portable sawing machine comprising a frame having spaced parallel side members, track rails secured to such members, a movable carriage supported on said track and comprising a pair of spaced parallel side members, a motor mounted directly between such spaced side members and rigidly fastened thereto, a horizontal circular saw mounted on said carriage and operatively connected with said motor, said saw projecting beyond the sides of said frame between the side members of said carriage and the bottom of the frame members in position to act upon the material to be cut, and adjustable saw guides secured to the carriage adjacent each end embracing said saw.

961,871. CASH-REGISTER. CHARLES A. LUNDGREN, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Nov. 11, 1905. Serial No. 286,854.



1. In a cash register, the combination with printing type carriers, and devices for feeding a record strip past said type carriers, of a writing table over which said strip is led, actuating devices including a key coupler, connections whereby said coupler may, on its return stroke, operate said feeding devices, and a hand rest adjacent said writing table and having connections for locking said actuating devices.

2. In a cash register, the combination with printing type carriers, and devices for feeding a record and autographic strip past said carriers, of a writing table on which said strip is led, an actuating device, connections whereby said actuating device may, on its return stroke, operate said feeding devices, and a hand rest having a connection normally locking said actuating device.

3. In a cash register the combination with an autographic attachment including means for feeding a paper strip past a writing line, of a hand rest mounted in proximity to said writing line; an operating mechanism for the register; a locking disk connected with the operating mechanism; and means connected with the hand rest to engage said locking disk and lock the operating mechanism so long as the hand rest remains raised.

4. In a cash register the combination with an autographic attachment including means for feeding a paper strip past a writing line, of a hand rest mounted in prox-

imity to said writing line; an operating mechanism for the register; a locking disk connected with the operating mechanism; means connected with the hand rest to engage said locking disk and lock the operating mechanism so long as the hand rest remains raised; and a spring member for retaining the hand rest in either its raised or depressed position.

5. In a cash register the combination with a series of keys, of an oscillating main operating member therefor; an operating disk connected with said operating member and formed with a cam slot; a key coupler; and means connecting said key coupler with said slot whereby the movement of said disk will raise and lower said key coupler.

[Claims 6 to 14 not printed in the Gazette.]

961,872. PACKING. WILLIAM FRED JOHN LUTZ and HARRY D. BARTLETT, Chicago, Ill. Filed July 6, 1909. Serial No. 506,091.



1. A packing comprising a metallic ring and a tubular woven fabric covering for a portion thereof having a space above and below said ring filled with compressible material.

2. A packing comprising a metallic ring and a tubular woven fabric covering for a portion, substantially U-shaped in cross section thereof, having a space above and below said ring filled with compressible material.

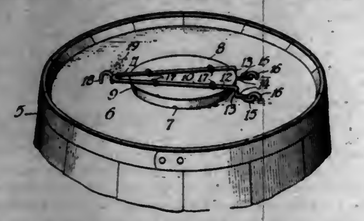
3. A packing comprising a metallic ring and a covering therefor consisting of a tubular woven fabric substantially U-shaped in cross section having the ends of its separated portions enlarged and a filler of suitable material inserted therein.

4. A packing comprising a metallic ring and a covering surrounding the same on its upper and lower sides and its inner circumferential edge, and having the portion thereof above and below the ring enlarged as compared to the portion surrounding the edge of said ring.

5. A packing comprising a metallic ring and a covering surrounding the same on its upper and lower sides and its inner circumferential edge and having the portion thereof on the edge of said ring reduced in thickness, and having the portions thereof on the upper and lower sides of said ring provided with suitable packing material.

[Claims 6 to 9 not printed in the Gazette.]

961,873. MERCHANDISE-PACKAGE. HENRY N. MANN, Chicago, Ill. Filed Oct. 31, 1908. Serial No. 460,401.

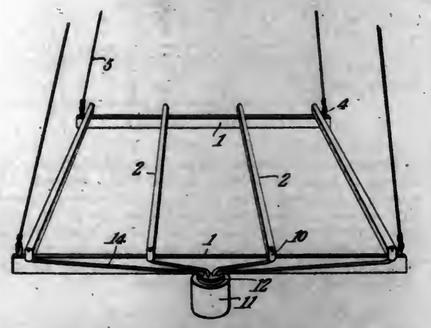


1. In a shipping package, a receptacle proper providing a head, having therein a bung hole, a bung for closing said hole, and a carrier for said bung comprising a single wire bent to provide a folded portion for attachment to the bung, and looped extremities comprising one element of the hinge, means securing said carrier and bung together, and coacting hinged parts for the looped ends of the carrier connected with the head of the package.

2. In a shipping package, a body, a permanent head in said body having a bung hole therein, a bung for closing said hole arranged when in closed position to protrude somewhat above the head, a carrier for said bung comprising a single wire bent to provide two diverging legs, the nose or bent portion projecting beyond one side of the bung, and the legs extending transversely across said bung to project beyond the other side, the extremities of said leg being bent to provide hinged parts, means securing the diverging legs of the carrier to the bung, and coacting hinged parts for the extremities of the carriers secured to the head of the receptacle.

3. The combination with a shipping receptacle providing a bung hole, and a bung for closing said hole, arranged to protrude from the bung hole when in closed position, a carrier for said bung comprising a single wire bent midlength to form a loop or nose, and to provide diverging legs terminating in hinged loops, said carrier being arranged with its nose protruding beyond the side of the bung, and the legs of the loop projecting beyond the other side of the bung, staples securing the diverging legs of the carrier to the bung, and staples connecting the hinged loops at the extremities of the carrier to the receptacle proper.

961,874. POULTRY-ROOST. ISAAC T. MERCHANT, Adams, Nebr. Filed June 2, 1909. Serial No. 499,683.



1. A perch comprising superposed sections, the lower of which is provided with a longitudinally extended opening in its upper face and with laterally extended ducts communicating therewith and intersecting the upper and side faces of said section; and an absorbent element located in the opening.

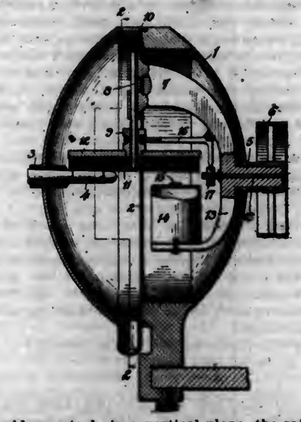
2. A perch comprising superposed sections, the lower of which is provided with a longitudinal opening in its upper face extended across the ends of the perch; there being laterally extended ducts communicating with the opening and intersecting the upper and side faces of the said section; and an absorbent element located in the opening and retained in the extended portions thereof, within the contour of the perch.

3. A perch comprising superposed sections, the lower of which is provided with a longitudinal opening in its upper face, extended across the ends of the perch, there being laterally extended ducts communicating with the opening and intersecting the upper and side faces of said section; an absorbent element located in the opening and prolonged into the extended portions thereof; and movable closures for the extended portions of the opening, arranged to retain the absorbent element within the contour of the perch.

961,875. DEVICE FOR POLISHING BRASS. CARL E. MERRILL, Lowell, Mass. Filed Oct. 13, 1909. Serial No. 522,491.

1. A device of the kind described comprising a holder for an article to be polished, a brush, means for simultaneously rotating said brush and revolving it about said article, and a powder receptacle revolving in a fixed position with respect to the brush.

2. In a polishing device comprising a rotatable and revoluble brush, a powder holding receptacle having an opening in the end adjacent the brush, and means for revolving said receptacle in a vertical plane, the said holder discharging a portion of its contents upon the brush when in an inverted position.



961,876. CONVERTIBLE CAR. JOHN J. METZ and ARTHUR MOSLEY, St. Louis, Mo. Filed Apr. 12, 1909. Serial No. 489,512.



1. A car, having a portion of its sides and ends boxed in, the remaining portion of its sides and ends constructed of open-work, sliding doors independently mounted in passage-ways of varying widths carried by the sides and ends of the car for the closing in of the open-work of the sides and ends, means for holding said doors in an elevated position, and means for locking said doors in a closed position.

2. A car, having a portion of its sides and ends boxed in, the remaining portion of its sides and ends constructed of open-work, sliding doors independently mounted in passage-ways of varying widths arranged along the sides and ends of the car for the closing in of the open-work in the sides and ends, means for holding said doors in an elevated position, and means for locking said doors in a closed position.

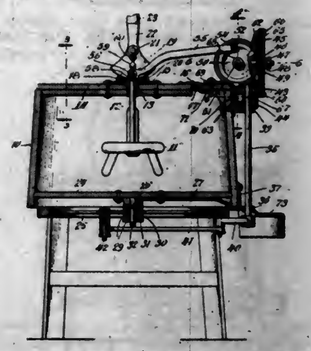
3. A car, having a portion of its sides and ends boxed in, the remaining portion of its sides and ends constructed of open-work, sliding doors independently mounted in passage-ways of varying widths arranged at intervals along the sides and ends of the car for the closing in of the open-work in the sides and ends, a pivoted dog for holding said doors in an elevated position, and a pivoted dog for holding said doors in a closed position.

4. A car of the class described, having a portion of its sides and ends closed in and the remaining portion constructed of open-work, a roof for said car, a floor provided with longitudinal recesses along its sides, guide-ways of varying widths carried by the sides and ends of said car, independent sliding doors positioned in said guide-ways for closing and opening the open portions of said sides and ends, means for holding said sliding doors side by side in an elevated position, and means for locking the said doors in a closed position.

5. A car of the class described, having a portion of its sides and ends closed in and the remaining portion constructed of open-work, a roof for said car, a floor provided with longitudinal recesses along its sides, guide-ways carried by the sides and ends of said car, independent sliding doors positioned in said guide-ways for closing and opening the open portions of said sides and ends, means for holding said sliding doors side by side in an elevated position, means for locking said doors in a closed position, said guide-ways being widest at their upper ends to hold two doors in their elevated positions.

[Claim 6 not printed in the Gazette.]

961,877. OPERATING MECHANISM FOR WASHING-MACHINES. GUSTAV N. MEVES, Davenport, Iowa. Filed Aug. 13, 1909. Serial No. 512,630.



1. Operating mechanism for washing and like machines comprising, in combination with a vertical shaft capable of rotary reciprocatory motion, actuating means for imparting rotary reciprocatory motion to said shaft, a balance wheel arranged below said shaft and speed increasing gear mechanism operatively connected between said actuating means and said balance wheel embracing a vertical rotative shaft operatively connected at its upper and lower ends with said actuating means and balance wheel respectively.

2. Operating mechanism for washing machines comprising, in combination with a shaft capable of rotary reciprocatory motion, actuating means for imparting rotary reciprocatory motion to said shaft, a balance wheel arranged in a plane transverse to the axis of said shaft, and operative connections between said actuating means and the balance wheel embracing a rotative shaft arranged in a plane transverse to that of the balance wheel, speed increasing gear mechanism interposed between one end of said shaft and said actuating means and operative connection between the other end of said shaft and the balance wheel.

3. Operating mechanism for washing machines comprising, in combination with a shaft capable of rotary reciprocatory motion, actuating means for imparting rotary reciprocatory motion to said shaft, a balance wheel arranged in a plane transverse to the axis of said shaft, and operative connections between said actuating means and the balance wheel embracing a rotative shaft arranged in a plane transverse to that of the balance wheel, speed increasing gear mechanism interposed between one and of said shaft and said actuating means, a crank at the other end of the shaft, and a pitman connecting said crank with an eccentric stud on the balance wheel.

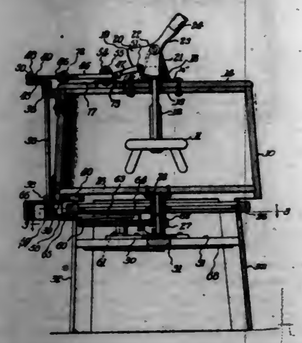
4. Operating mechanism for washing machines comprising, in combination with a shaft capable of rotary reciprocatory motion, actuating means for imparting ro-

tary reciprocatory motion to said shaft, a balance wheel arranged in a plane transverse to the axis of said shaft, and operative connections between said actuating means and the balance wheel embracing a rotative shaft arranged in a plane transverse to that of the balance wheel, speed increasing gear mechanism interposed between one end of said shaft and said actuating means, operative connections between the other end of said shaft and the balance wheel and a housing for said speed increasing gears provided with bearings for the gears.

5. Operating mechanism for washing machines comprising, in combination with a shaft capable of rotary reciprocatory motion, a rocking actuating member for said shaft, a balance wheel, a rotative shaft connected at one end to said balance wheel, a train of speed increasing gears connected between the other end of said latter shaft and said rocking member and a link pivoted to said rocking member and to an eccentric stud on the first gear of said train.

[Claims 6 to 17 not printed in the Gazette.]

961,878. OPERATING MECHANISM FOR WASHING-MACHINES. GUSTAV N. MEYES, Davenport, Iowa. Filed Oct. 27, 1909. Serial No. 524,801.



1. Operating mechanism for washing and like machines comprising, in combination, a shaft capable of rotary reciprocatory motion, actuating means for imparting rotary reciprocatory motion to said shaft, a balance wheel, and speed increasing gear mechanism operatively connected between said actuating means and said balance wheel, embracing a shaft capable of rotating continuously in one direction and provided at both ends with cranks through which it is connected with said balance wheel and said actuating device.

2. Operating mechanism for washing and like machines comprising, in combination, a vertical shaft capable of rotary reciprocatory motion, actuating means for imparting reciprocatory motion to said shaft, a balance wheel arranged below said shaft and speed increasing gear mechanism operatively connected between said actuating means and said balance wheel, embracing a vertical shaft capable of rotating continuously in one direction and provided at both ends with cranks through which said shaft is connected with said balance wheel and said actuating device.

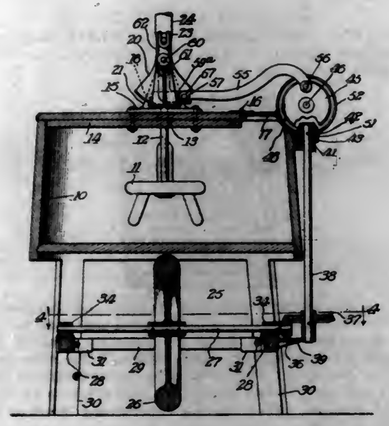
3. Operating mechanism for washing and like machines comprising, in combination, a vertical shaft capable of rotary reciprocatory motion, actuating means for imparting rotary reciprocatory motion to said shaft, a balance wheel arranged below said shaft and speed increasing gear mechanism operatively connected between said actuating means and said balance wheel, embracing a vertical, rotative shaft provided at both ends with cranks and pivoted pitmen connecting said cranks with said balance wheel and with said actuating means.

4. Operating mechanism for washing and like machines comprising, in combination, a vertical shaft capable of rotary reciprocatory motion, actuating means for imparting rotary reciprocatory motion to said shaft, a balance wheel arranged below the shaft and speed increasing gear mechanism operatively connected between said actuating means and said balance wheel, embracing a vertical, rotative shaft provided at its upper end with a crank, a pitman connecting said crank and actuating device, and speed increasing gears arranged between and connecting the lower end of said rotative shaft with said balance wheel.

5. Operating mechanism for washing and like machines comprising, in combination, a vertical shaft capable of rotary reciprocatory motion, actuating means for imparting rotary reciprocatory motion to said shaft, a balance wheel arranged below the shaft and speed increasing gear mechanism operatively connected between said actuating means and said balance wheel, embracing a vertical, rotative shaft operatively connected at its upper end with said actuating means, a crank at the lower end of said rotative shaft and a pitman connecting said crank and balance wheel.

[Claims 6 to 12 not printed in the Gazette.]

961,879. OPERATING MECHANISM FOR WASHING-MACHINES. GUSTAV N. MEYES, Davenport, Iowa. Filed Nov. 4, 1909. Serial No. 526,212.



1. Operating mechanism for washing and like machines comprising, in combination, a vertical shaft capable of rotary reciprocatory motion, actuating means for imparting rotary reciprocatory motion to said shaft, a balance wheel arranged below said shaft to rotate in a vertical plane, and speed increasing gear mechanism operatively connecting said actuating means and balance wheel, embracing a vertical shaft which is rotated continuously in one direction by said actuating means and arranged to impart a continuous high speed rotation to the balance wheel.

2. Operating mechanism for washing and like machines comprising, in combination, a vertical shaft capable of rotary reciprocatory motion, actuating means for imparting rotary reciprocatory motion to said shaft, a vertically arranged balance wheel below said shaft, a horizontal rotative shaft to which said balance wheel is fixed and speed increasing gear mechanism operatively connecting said actuating means and said balance wheel shaft, embracing a vertical rotative shaft operatively connected at its upper end with said actuating means, a bevel gear wheel on the lower end of the shaft and a beveled pinion on the balance wheel shaft meshing with said gear wheel.

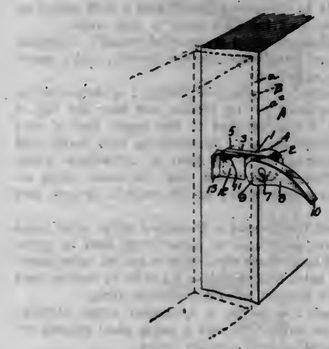
3. Operating mechanism for washing machines comprising, in combination, a vertical shaft capable of rotary reciprocatory motion, actuating means for imparting rotary reciprocatory motion to said shaft, a vertically disposed balance wheel below the shaft, a horizontal, rotative shaft to which said balance wheel is fixed, a vertical, rotative shaft, a gear wheel on the lower end of said latter shaft, a pinion on the balance wheel shaft meshing with said gear wheel, a pinion on the upper end of said vertical, rotative shaft, a gear wheel meshing with said latter pinion and a pitman connected with said latter gear wheel and operatively connected with said actuating means.

4. Mechanism for operating washing machines comprising, in combination, a shaft capable of rotary reciprocatory motion, actuating means for imparting rotary reciprocatory motion to said shaft, a balance wheel and speed increasing gear mechanism connecting said balance wheel and actuating means embracing a rotative shaft operatively connected at one end with the balance wheel and a lever arranged between and connected to the other end of said rotative shaft and said actuating means.

5. Operating mechanism for washing machines comprising, in combination, a vertical shaft capable of rotary reciprocatory motion, rocking actuating means for imparting rotary reciprocatory motion to said shaft, a balance wheel arranged below said shaft, a vertical, rotative shaft operatively connected at its lower end with the balance wheel and operative connections between the upper end of said shaft and said operating means embracing a pitman operatively connected at one end with said upper end of the shaft, and a swinging lever to which the other end of said pitman is pivoted, said lever being connected to said rocking actuating means.

[Claims 6 to 10 not printed in the Gazette.]

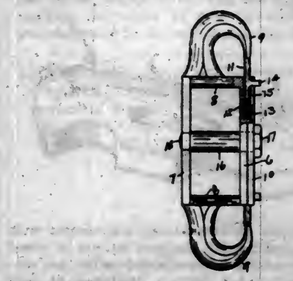
961,880. DOOR-SECURER. HARRY M. MILLER, Champaign, Ill. Filed Apr. 17, 1909. Serial No. 490,442.



In a door-securer, a jamb-member, a lever-member detachably pivoted thereto and having at one end an abutment-portion to engage the closed door, and having at its other end, a wedge-shaped formation, such lever coöperating with the jamb-member to secure the door and, when detached therefrom, constituting a member-displacing element.

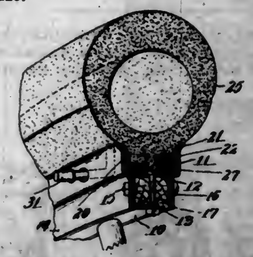
961,881. CLEVIS. THOMAS S. MOFFETT, Spokane, Wash. Filed Nov. 16, 1909. Serial No. 528,364.

A clevis comprising spaced top and bottom plates, webs connecting the ends thereof, said webs projecting at their ends beyond the plates, and having said projecting ends rounded, oppositely presented hooks projecting from the



webs, and fastening means mounted in the plates, and extending therebetween.

961,882. WHEEL AND TIRE THEREFOR. GEORGE D. MOORE, Worcester, Mass. Filed Nov. 15, 1907. Serial No. 402,229.



1. The combination of a wheel, and a felly having a flange extending outwardly from one side of the felly parallel to the plane of the wheel, with a removable plate on the felly opposite said flange, said plate and flange having wide-faced projections on their inner faces extending transverse to the plane of the wheel, and a tire provided with an extension in the plane of the wheel having permanent molded cavities or depressions on opposite sides thereof for receiving said projections.

2. In a tire holding device for a wheel, the combination of two clencher flanges each having wide-faced projections arranged on the inner face thereof and extending toward the other flange, a tire having an inwardly projecting extension fitting between said two flanges and provided with permanent depressions or cavities registering with said projections.

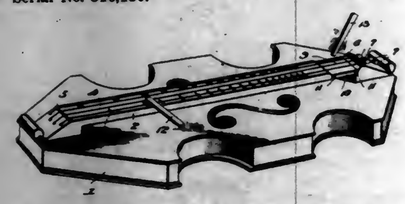
3. The combination with a wheel having a felly, of a flange extending outwardly from the felly near one edge thereof and held rigidly thereon, a ring removably secured to the opposite side of said felly independently of said flange and having an off-set flange opposite the first named flange, wide-faced projections extending from the inner faces of said flanges, means on the felly opposite the removable flange for receiving the heads of bolts for securing the removable flange in position, and means projecting into the felly for holding the last named means on the felly.

4. In a tire holding device for a wheel, the combination of two clencher flanges each having wide-faced projections alternately arranged on the inside surfaces thereof, a tire clenched between said flanges and provided with alternately arranged depressions or cavities and registering with said projections, and sheet metal linings in said cavities.

5. A tire having a circular extension projecting toward the axis thereof and provided on its opposite sides with permanent molded depressions or cavities having wide faces, and provided with sheet metal linings therein.

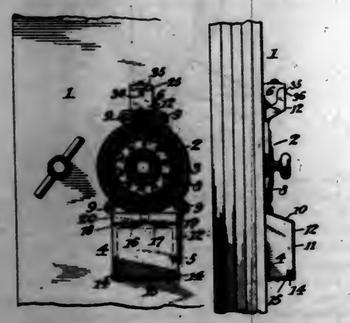
[Claims 6 to 8 not printed in the Gazette.]

961,883. STRINGED MUSICAL INSTRUMENT. PINKNEY L. MORRIS, Grand Ridge, Fla. Filed Sept. 8, 1909. Serial No. 516,150.



In a stringed musical instrument, the combination with a sounding box, of a string bar mounted thereon in raised relation thereto and having feet at its ends which are connected to the sounding box, strings connected at both ends to the feet of said bar and extending above and lengthwise thereof, said string bar having a depressed portion in its upper face adjacent one of the feet aforesaid, a metallic plate secured in said depressed portion and disposed below the upper surface of the string bar, and frets on the string bar.

961,884. ATTACHMENT FOR COMBINATION DIALS ON SAFES, VAULTS, &c. MOSES MOSLER, New York, N. Y. Filed May 17, 1909. Serial No. 496,394.



1. An attachment for combination dials, comprising a framework having means at its lower portion for mounting and retaining a battery, means at its upper portion for mounting an electric lamp above the dial, and an annular or ring-shaped conduit connecting said lower and upper portions and adapted to surround the dial and carry the wires from the battery to the lamp.

2. An attachment for combination dials, comprising a framework having at its lower portion an inclosure for a battery, a closure for said battery inclosure, an inclosure at its upper portion for an electric lamp, a closure for said lamp inclosure, and an annular or ring-shaped conduit extending between said lower battery inclosure and said upper lamp inclosure and adapted to surround the dial and carry the wires from the battery to the lamp.

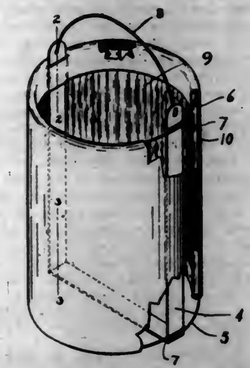
3. An attachment for combination dials, comprising a framework having an annular or ring-shaped conduit adapted to surround the dial and carry circuit wires, means carried by said annular conduit for mounting and retaining a battery, means carried by said annular conduit for mounting and protecting an electric lamp, and means carried by said lamp protector for throwing the lamp into and out of circuit.

4. An attachment for combination dials, comprising an annular or ring-shaped conduit adapted to surround the dial and carry circuit wires, means carried by said annular conduit for mounting and retaining a battery, a housing or inclosure carried by said annular conduit for containing an electric lamp, one portion of said housing or inclosure being open, a closure for said open portion of said lamp housing, and means for throwing the lamp into circuit when said closure is opened and out of circuit when said closure is closed.

5. The combination, with a safe or vault door and lock-dial mechanism thereon, of a framework carried by said door in fixed relation to said dial and having means for carrying a battery and means carrying an electric lamp in projecting position with relation to said dial, an annular conduit for circuit wires comprised in said framework and extending from the battery-carrying means around the dial and to the lamp-carrying means, and means carried by said framework for throwing the lamp into and out of circuit.

[Claim 6 not printed in the Gazette.]

961,885. CONTAINER FOR BOTTLES OR RECEPTACLES. HENRY R. MYERS, New York, N. Y. Filed Apr. 4, 1910. Serial No. 553,351.



1. In a container for receptacles, a frame and a paper shell mounted on said frame and comprising a corrugated paper strip bent to cylindrical form, and a stiff paper secured thereto for securing said shell to said frame.

2. In a container, a metal frame comprising a U-shaped strip and circular wire loops secured thereto, and a paper shell secured to said loops.

3. In a container, a frame comprising a U-shaped strip, circular loops secured to the bottom and near the top of said strip, and a bail secured to the upper end of said strip, and a cylindrical shell surrounding said frame and comprising a corrugated strip, bent to cylindrical form, and located between said loops, and the outer cover secured to the strip and folded at the ends to inclose said loops.

4. A container comprising a U-shaped strip, wire loops mounted thereon, a corrugated paper strip bent to cylindrical form and located between said loops, an outer sheet secured to said strip and folded at its ends to inclose said loops, and a bail secured to said U-shaped strip.

5. A container comprising a U-shaped strip, circular loops mounted on said strip, and a paper shell located between and secured to said circular loops.

961,886. COFFEE-PERCOLATOR. JAMES H. MYERS, Troy, N. Y. Filed Oct. 7, 1909. Serial No. 521,594.

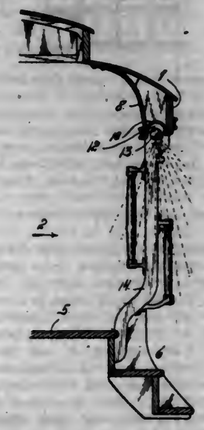
1. A stand for coffee-percolators comprising a supporting base, an upright erected from said base, a pair of arms projecting laterally from the upper end of said upright adapted to receive and support therebetween the top of a percolator-bag, and a loop projecting laterally from an intermediate part of said upright adapted to inclose said bag.

2. A stand for coffee-percolators comprising a supporting base in the form of a wire loop, an upright erected therefrom, and a pair of clamping arms projecting horizontally from the upper end of said upright, all formed of a single piece of wire, and a wire loop projecting in a horizontal plane from said upright at an intermediate point thereof.



3. A stand for coffee-percolators comprising a supporting base in the form of a wire loop, an upright erected therefrom, and a pair of clamping arms projecting horizontally from the upper end of said upright, and having divergent ends, all formed of a single piece of wire, and a wire loop projecting in a horizontal plane from said upright at an intermediate point thereof.

961,887. MEANS FOR ILLUMINATING CAR-STEPS. WILLIAM H. MCALONEY, Denver, Colo., assignor to The Automatic Signal Light Company, Colorado Springs, Colo., a Corporation of Colorado. Filed Aug. 23, 1909. Serial No. 514,272.

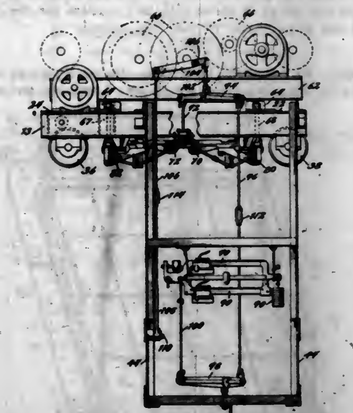


1. The combination with a car whose wall above the entrance is composed of two separated members, of an upwardly-curved reflector inserted between these members and illuminating devices located in the recess between the wall members and below the reflector, substantially as described.

2. The combination with a car having a recess formed in the wall thereof above the entrance, a reflector located in said recess and curved upwardly, in order to throw light rays downwardly upon the steps below the entrance, and an illuminating device located within the recess and below the reflector, substantially as described.

3. The combination with a car having steps and an entrance above the steps, the said car having a longitudinal recess formed in its wall above the entrance and extending the width of said entrance, and incandescent lamps located in the said recess, for the purpose set forth.

961,888. WEIGHING MECHANISM FOR TRAVELING CRANES. ANDREW H. MCDOUGALL, Harvey, Ill., assignor to Whiting Foundry Equipment Company, Harvey, Ill., a Corporation of Illinois. Filed June 7, 1909. Serial No. 500,679.



1. In mechanism of the class described, the combination of a crane trolley proper, a supplemental platform mounted upon the main trolley, mechanism between the supplemental platform and trolley preventing substantial horizontal movement of the supplemental platform with reference to the trolley while permitting limited vertical movement, a weight indicating mechanism movable with the trolley, and means under the control of an operator for connecting and disconnecting said weight indicating mechanism with the supplemental platform whereby weighing operations may be conducted as described.

2. In mechanism of the class described, the combination of a crane trolley proper made with an open center and provided with means on which it may travel along a track, a supplemental platform above said trolley proper normally resting thereon and supported thereby, load lifting machinery upon said supplemental platform adapted to lift loads directly below the crane trolley, scale beam mechanism attached to the crane trolley, capable of supporting said supplemental platform, a weight indicating mechanism, and means connecting and disconnecting at the will of the operator, the scale beam mechanism and the weight indicating mechanism.

3. In mechanism of the class described, the combination of a crane trolley proper, provided with means on which it may travel along a track, a supplemental platform above said trolley proper normally resting thereon and supported thereby, load lifting machinery upon said supplemental platform adapted to lift loads below the crane trolley, scale beam mechanism attached to the crane trolley, capable of supporting said supplemental platform, a weight indicating mechanism, and means connecting and disconnecting at the will of the operator, the scale beam mechanism and the weight indicating mechanism.

961,889. EGG-CARRIER. PETER J. NAGLE, Rochester, N. Y. Filed Dec. 13, 1909. Serial No. 532,957.

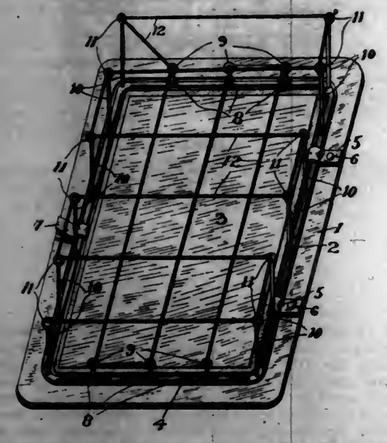
An egg tray having, in combination, partitions, each partition having downward projections and each projection having a lug extending horizontally in the plane of the partition, a false bottom provided with straight slots of a length sufficient to receive said projections and lugs,

and a box inclosing the partitions and the false bottom, the slots and lugs being so located as to cause the lugs to interlock with the false bottom beyond the ends of the



slots when the parts are held in normal relative position by the box, so as to serve both as retainers for the partitions and as supports for the false bottom.

961,890. FLY-PAPER HOLDER. EMMA NICKUM, Philadelphia, Pa. Filed Mar. 10, 1910. Serial No. 548,468.



1. In a device of the character described, the combination with a tray adapted to support fly paper, of a frame removably secured on said tray, and of rectangular form, a plurality of alined posts on the sides and ends of said frame, the side posts and the end posts of appreciably different lengths, and devices connecting the side posts and the end posts, whereby two elevations of connecting devices are provided, substantially as described.

2. In a device of the character described, the combination with a tray, having a rectangular groove or depression therein, a frame located in said groove, hooks on one side of said tray, projecting over the frame, a spring hook on the other side of the tray engaging over said frame, a plurality of alined posts on each side, and each end of said frame, eyes in the upper ends of said posts, said side posts appreciably higher and longer than the end posts, and a flexible connecting device interlaced through said eyes, substantially as described.

961,891. RECHARGEABLE ELECTRIC FUSE. AGOSTINE J. ORELLI, Longbeach, Cal. Filed Feb. 21, 1910. Serial No. 545,219.



1. A rechargeable electric fuse comprising a shell of insulating material provided with a metallic ferrule at each end, a disk resting on said ferrule at each end of the shell, said disk being slotted, a fuse strip provided with longitudinally extending terminal strips at each end thereof, said terminal strips extending within the slots of said disks and being bent over at the ends, and terminal caps screwing on the end ferrules aforesaid and bearing on the bent over portions of said terminal strips of said fuse strip to make contact therewith.

2. A rechargeable electric fuse comprising a shell of insulating material provided with a metallic ferrule at each end, a disk resting on said ferrule at each end of the shell, said disk being radially slotted, a fuse strip provided with longitudinally extending terminal strips at each end thereof, said terminal strips extending within the slots of said disks and being bent over at the ends, and terminal caps screwing on the end ferrules aforesaid and bearing on the bent over portions of said terminal strips of said fuse strip to make contact therewith, said bent over portions of the terminal strips being bowed and being of elastic material to provide spring contact.

3. A rechargeable electric fuse comprising a shell of insulating material provided with a metallic ferrule at each end, a pair of disks resting on said ferrule at each end of the shell, said disks being radially slotted with the slots in the two disks extending in opposite direction, a fuse strip provided with longitudinally extending terminal strips at each end thereof, said terminal strips extending within the slots of said disks and being bent over at the ends, and terminal caps screwing on the end ferrules aforesaid and bearing on the bent over portions of said terminal strips of said fuse strip to make contact therewith.

961,892. PUZZLE. EDWARD M. PECK, deceased; Nellie E. Peck, executrix, New York, N. Y. Filed Sept. 24, 1909. Serial No. 519,472.

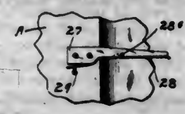


1. A puzzle comprising a square box containing fifteen square blocks which are adapted to be arranged in said box in rows which cross each other in opposite directions and so as to exactly fill said box except for one corner space the size of one of said blocks, said blocks being each designated by a number and being adapted to be arranged in said box so that the sum of said numbers in each of the rows which cross each other in opposite directions and each of the main diagonal rows will be twenty three.

2. A puzzle comprising a square box containing fifteen square blocks, which are adapted to be arranged in said box in rows which cross each other in opposite directions and so as to exactly fill said box except for one corner space, the size of one of said blocks, said blocks being designated by rows as follows,—two by the numeral 3; three by the numeral 4; one by the numeral 5; four by the numeral 7; four by the numeral 8, and one by the numeral 9; and said blocks being adapted to be arranged in said box so that the sum of said numerals in each of the rows which cross each other in opposite directions and each of the main diagonal rows will be twenty three.

961,893. TENSION DEVICE FOR SEWING-MACHINES. CHRISTIAN PEDERSEN, Skörring pr. Galten, Denmark, assignor to Landis Machine Company, St. Louis, Mo., a Corporation of Missouri. Original application filed Apr. 23, 1909, Serial No. 491,667. Divided and this application filed July 19, 1909. Serial No. 508,448.

1. In a tension device for sewing machines, a rigid arm having means for securing it in position, a flat spring tension member having means located at its center for pivotally connecting it to said rigid arm, and an adjusting screw threaded through one end of said flat spring tension member and bearing against the rigid member to regulate the pressure of the free end of said tension member against the rigid arm.



2. In a machine of the class described, a wax thread tension device comprising a pair of members, one of which is resilient and hinged to the other at a point adjacent its center, and a tension adjusting screw carried by said resilient member and bearing against the opposite member.

3. In a machine of the class described, a tension device comprising a rigid member, a resilient member, the main body portion of which lies flat upon the rigid member, said resilient member and rigid member being hinged to one another at a central point, and a tension adjusting screw carried by one end of said resilient member and bearing against the rigid member.

961,894. WRENCH. ROBERT H. PETERS, Buffalo, N. Y. Filed June 10, 1909. Serial No. 501,278.



1. A wrench for the purpose described, comprising a handle, a head pivoted on said handle, and a band fastened at one end on said head while its opposite end is arranged between said head and handle, said handle having jaws on opposite sides of the pivot and adapted to bear against the adjacent parts of the band, substantially as set forth.

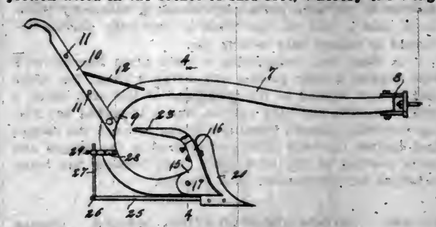
2. A wrench for the purpose described, comprising a handle, a head pivoted on said handle and provided with slots on opposite sides of the pivot, and a band arranged with one end in said slots while its opposite end is arranged between said head and handle, substantially as set forth.

3. A wrench for the purpose described, comprising a handle, a head pivoted on said handle and provided with slots on opposite sides of the pivot, a band arranged with one end in said slots while its opposite end is arranged between said head and handle, and jaws arranged on said handle on opposite sides of the pivotal connection between the same and the head and adapted to bear against said band, substantially as set forth.

4. A wrench for the purpose described, comprising a handle, a U-shaped head having a cross piece arranged opposite the front end of said handle and provided with two parallel transverse slots and two ears which project rearwardly from the ends of the cross piece and are pivoted to opposite sides of the handle, a band arranged with one end in the slots of the cross piece and with its opposite end between said cross piece and the handle, and jaws arranged on the handle on opposite sides of the pivotal connection between the same and the head and adapted to bear against said band, substantially as set forth.

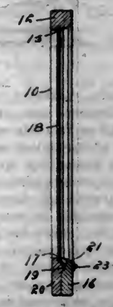
961,895. PLOW. ROSCOE RAYE PRICE, Tallahassee, Fla. Filed Jan. 12, 1909. Serial No. 471,947.

A plow of the class described comprising a plow beam, a foot carried by the beam and having a socket in its upper end, a curved deflector wing provided with a stud projection fitted in the socket of said foot, whereby the wing



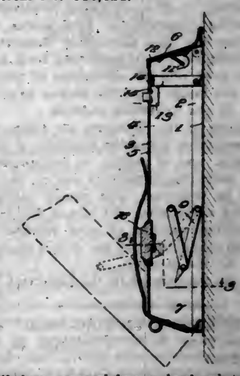
may horizontally swing to either side of the plow, and means holding the wing in its adjusted position.

961,896. WINDOW OR DOOR. ALLEN A. REAVES, Delight, Ark. Filed Oct. 28, 1908. Serial No. 459,912.



In a device of the class described, a frame constructed with one of its members reduced in thickness and with a longitudinal groove in said reduced member and with a seat for the glass between the groove and the inner face of the reduced member, a holding member engaging said reduced and grooved member, a longitudinal rib carried by said holding member and engaging in the groove of the frame member and with a rabbet next to the rib, the glass being adapted to bear upon said seat and within said rabbet, and likewise bearing against said rib and supported thereby.

961,897. MAIL-BOX. ADOLPH ROSENBERG and ELLSWORTH E. CLARK, Buffalo, N. Y., assignors to Climax Lock and Ventilator Co., Buffalo, N. Y. Filed Sept. 9, 1909. Serial No. 516,821.



1. A mail box, comprising a back plate formed with means by which it may be attached to a support, a body

portion embodying a front, top, sides and bottom hinged to the lower end of the back plate, a U-shaped locking bar secured to the back plate and extending forwardly therefrom, and a lock in the front of the body portion arranged to engage said locking bar.

2. A mail box, comprising a back plate formed with side flanges, a body portion embodying a front, top, sides and bottom hinged to the lower end of the back plate, a lock secured to the body portion, and a U-shaped bar having inwardly turned extremities fitting between the flanges and against the back plate and secured to the flanges and main portion of the back plate, said locking bar being arranged for engagement with the lock.

961,898. INDICATOR-OPERATING MEANS. GEORGE N. SAEGMULLER, Rochester, N. Y. Filed Feb. 1, 1910. Serial No. 541,276.



1. In mechanism of the character set forth, the combination with spaced objectives and an eye-piece common thereto, of means having a variable amount of movement for causing the images of the objectives to coincide at the eye-piece, a device for indicating the amount of movement of said means, and means connecting the coinciding means and device for always effecting an even movement of the latter upon the variable movement of the former.

2. In mechanism of the character set forth, the combination with relatively reciprocatory coacting indicating elements, of a device, the movement of which is to be indicated, said movement being variable, and means for effecting an even relative reciprocation between the indicating elements upon the said variable movement of the device.

3. In mechanism of the character set forth, the combination with spaced objectives and an eye-piece, of means having a variable amount of movement for causing the images of the objectives to assume a predetermined relation at the eye piece, measuring means for indicating the amount of movement of said image-adjusting means and comprising relatively reciprocatory indicating elements, and means for effecting an even relative reciprocation between the indicating elements upon the said variable movement of the image-adjusting means.

4. In mechanism of the character set forth, the combination with spaced objectives and an eye-piece common thereto, of means having a variable amount of movement for causing the images of the objectives to assume a predetermined relation at the eye-piece, relatively movable coacting indicating elements for said means, a common actuating member for the indicating elements and the means, and mechanism for transmitting from said actuating member, an even relative movement of the indicating elements when the image-adjusting means is given a variable movement by the actuating member.

5. In mechanism of the character set forth, the combination with a rotatable actuating member, of coacting indicating elements, one of which is reciprocated on the rotation of the actuating member, a device, the movement of which is to be indicated, said device having a reciprocatory variable movement, and means for transmitting from said actuating member an even relative movement of the indicating elements when the device is given a variable movement by the member.

[Claims 6 to 24 not printed in the Gazette.]

961,899. MULTIPLE LIFTING-JACK. ALBERT H. SCHOLLE, New York, N. Y. Filed May 11, 1909. Serial No. 495,268.

1. A multiple lifting jack adapted to be operated from a common central point, comprising a plurality of single jacks with stationary cylinders, a frame composed of horizontal rigid members connecting the stationary cylinders and always retaining its fixed position during operation, an operating device common to all jacks and in connection therewith, means in connection with the operating device for raising and lowering all the jacks simultaneously, and means for making inoperative some of the jacks.



2. A multiple lifting jack adapted to be operated from a common central point, comprising a plurality of single jacks consisting each of a cylinder, a threaded plunger therein having vertical grooves, tapbolts passing through the cylinder one into each groove, a frame composed of horizontal rigid members connecting with the cylinders of the jacks and always retaining its fixed position during operation, an operating device common to all jacks and in connection therewith, means for raising and lowering all the jacks simultaneously, and means for making inoperative some of the jacks.

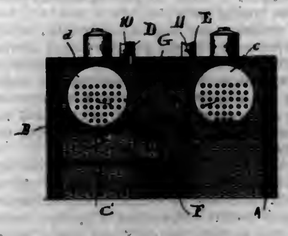
3. A multiple lifting jack adapted to be operated from a common central point, comprising a plurality of single jacks each consisting of a cylinder with caster below, a threaded plunger therein having vertical grooves, tapbolts passing through the cylinder into said grooves, a rigid frame connecting the cylinders, a nut mounted on the top of each cylinder engaging with the thread of the plunger, a flange on the lower face of said nut having upwardly extending teeth, a sprocket wheel concentric with the nut having a hub provided at its lower face with downwardly projecting teeth, the nut and sprocket wheel forming a clutch, bearings on the main frame, a central sprocket wheel therein, an endless chain connecting all the sprocket wheels, and means for operating the central sprocket wheel.

4. A multiple lifting jack adapted to be operated from a common central point, comprising a plurality of single jacks each consisting of a cylinder with caster below, a threaded plunger therein having vertical grooves, tapbolts passing through the cylinder into said grooves, a rigid frame connecting the cylinders, a nut mounted on the top of each cylinder engaging with the thread of the plunger, a flange on the lower face of said nut having upwardly extending teeth, a sprocket wheel concentric with the nut having a hub provided at its lower face with downwardly projecting teeth, the nut and sprocket wheel forming a clutch, bearings on the main frame, a central sprocket wheel therein, an endless chain connecting all the sprocket wheels, means for operating the central sprocket wheel, and means in connection with the clutch to make inoperative some of the jacks.

5. A multiple lifting jack adapted to be operated from a common central point comprising a plurality of single jacks each consisting of a cylinder, a threaded plunger therein having vertical grooves, tapbolts passing through the cylinder into said grooves, a rigid frame connecting the cylinders, a nut mounted on the top of each cylinder engaging the thread of the plunger, a sprocket wheel concentric with the nut forming a clutch therewith, a central sprocket wheel, an endless chain connecting all the sprocket wheels, a double ratchet and pawl with ratchet lever in connection with the central sprocket wheel, and means for operating the clutches.

961,900. COMBINED HEATING SYSTEM FOR A PLURALITY OF BOILERS. JOHN SCHWAB, Winnipeg, Manitoba, Canada. Filed Oct. 11, 1909. Serial No. 522,188.

1. The combination with two steam boiler furnaces disposed adjacent to each other and provided with boilers, of conducting means connecting the rear end of one furnace in one steam boiler furnace with the front end of the furnace of the second steam boiler furnace and conducting means connecting the front end of the second boiler in the steam boiler furnace with the rear end of the boiler in the first steam boiler furnace and means preventing the products of combustion in the furnace of the first steam boiler furnace from passing from the furnace of the same into the flues of its own boiler, whereby the products of combustion will be forced to pass from the front to rear of the first furnace, then from front to rear of the second furnace and then successively through the flues of the boilers.



2. The combination with two steam boiler furnaces disposed adjacent to each other and provided with boilers and having the head of one furnace adjacent to the rear end of the other furnace, of conducting means connecting the rear end of one furnace with the front end of the second furnace, conducting means connecting the front end of the second boiler with the rear end of the first boiler, and means preventing the products of combustion in the first furnace from passing into the flues of the first boiler, whereby the products of combustion will be forced to pass first, beneath the first boiler to the rear end of the same, then pass from the front to the rear of the second boiler, then through the flues of the second boiler and then through the flues of the first boiler.

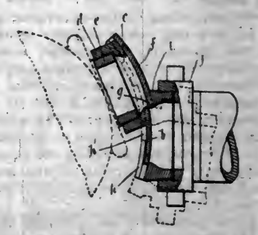
3. The combination with two steam boiler furnaces disposed adjacent to each other and provided with boilers, of conducting means connecting the rear end of one furnace with the front end of the second furnace, conducting means connecting the front end of the second boiler with the rear end of the first boiler, baffling means for preventing the products of combustion in the first furnace from passing into the flues of the first boiler, whereby the products of combustion will be forced to first pass beneath the first boiler to the rear end of the same, then pass from the front to the rear of the second boiler, then through the flues of the second boiler and then through the flues of the first boiler, and means for withdrawing the baffling plates and closing the conducting means to enable the steam boiler furnaces to be used independently.

4. The combination with a pair of steam boiler furnaces boilers therein each having suitable flues therein, of means for conducting products of combustion passing beneath the first boiler to beneath the second boiler, then through the flues of the second boiler and thence through the flues of the first boiler, the second steam boiler furnace adapted to have no fire therein.

5. The combination with a pair of steam boiler furnaces placed side by side and provided with boilers, of means preventing the products of combustion in the first furnace from passing into the flues of the first boiler, conducting means conducting said products of combustion to beneath the second boiler and conducting means permitting the passage of the products of combustion from the second boiler to the flues of the first boiler after they have passed through the second boiler, the said second steam boiler furnace adapted to have no separate fire therein.

[Claims 6 and 7 not printed in the Gazette.]

961,901. HYDRANT AND HOSE CUT-OFF VALVE. FREDERIC SCOTT SEAGRAVE, Detroit, Mich. Filed Oct. 26, 1905. Serial No. 284,837.

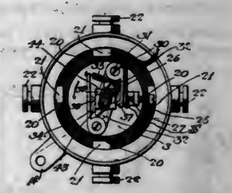


1. The combination of a fire hydrant having an outlet with a vertically arranged seat, of a valve controlling the outlet and consisting of a short curved plate movable in a curved path concentric to the center line of the said hydrant and following the contour of the hydrant body.

2. The combination of a fire hydrant, having an outlet with a vertically arranged seat, of a valve controlling the outlet and consisting of a short curved plate movable in a curved path concentric to the center line of the said hydrant and following the contour of the hydrant body, such valve being carried by the exterior of the hydrant and including means for coupling a hose length thereto.

3. The combination of a fire hydrant having an exteriorly screw-threaded nipple *e* adapted to have a valve carrying plate mounted thereon, a valve carrying plate having an interiorly screw-threaded sleeve adapted to be screwed upon the nipple *e* and such plate presenting a convex side concentric to the center line and following the contour of the hydrant, and a second plate having a concave side conforming to the convex side of the first mentioned plate and having an exteriorly screw-threaded sleeve adapted to have a hose length coupled thereto, the said last mentioned plate having its longitudinal edges flanged to slidably retain the corresponding edges of the first mentioned plate.

961,902. CIRCUIT-INTERRUPTER FOR ELECTRIC SPARKING DEVICES. JAMES E. SEELEY, Los Angeles, Cal., assignor to High Frequency Ignition Coil Company, Los Angeles, Cal., a Corporation of California. Filed July 8, 1909. Serial No. 506,623.



1. A circuit controlling device comprising an operating shaft, movable contact means mounted to rotate with said shaft, a movable actuating member mounted to rotate with said shaft, a member mounted to rotate through a limited angle and having cam faces engaging with the contact means and with the said actuating means to store energy in the actuating means during a portion of the rotation of said shaft and to utilize said energy in the operation of the contact means.

2. A circuit controlling device comprising an operating shaft, a movable contact means mounted to rotate therewith, a movable actuating means mounted to rotate with said shaft, a member mounted to oscillate through a limited angle and having cam portions engaging with the actuating means and with the contact means, and a spring connected to the actuating means, whereby energy is stored in said spring by the action of the said cam por-

tions on said actuating means, and subsequently the energy of the spring operates the said cam portions through the actuating means to cause the operation of the contact means.

3. A circuit controlling device comprising an operating shaft, and an actuating means movably mounted on said shaft to rotate therewith, a stationary member, and a cam member mounted to have a limited oscillatory movement relatively to the stationary member and having portions engaging the actuating means to operate the actuating means by the movement of the actuating means over the cam member during a part of the rotation of the shaft, and to be reversely operated by the actuating means during another part of such rotation, and contact means engaging said cam member to be operated thereby in such reverse motion.

4. In a circuit controller, an operating shaft, contact means and actuating means therefor, both mounted to rotate with the shaft, and provided with spring means, a stationary member and a cam means mounted to have a limited angular motion with respect to the stationary member, and adapted to engage the actuating means, against the action of its spring means, and to be reversely operated by said spring means, through said actuating means, to operate the contact means.

5. A circuit controller comprising an operating shaft, a distributer member mounted on said shaft to rotate therewith, and provided with a contact segment, a contact means mounted movably on the said shaft to rotate therewith and connected to said segment, fixed distributer contacts mounted to engage said segment, a stationary member, and means for operating said contact means by the rotation thereof relatively to said stationary member.

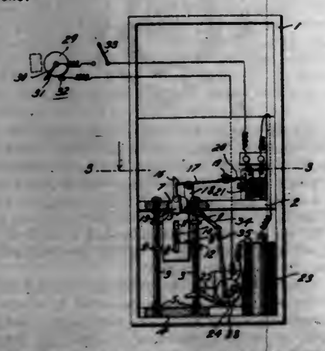
[Claims 6 to 10 not printed in the Gazette.]

961,903. COMPOSITION OF MATTER FOR CLEANING AND SHINING WOOD. PHILIP JOSEPH SHAFFER, Springfield, Ill. Filed Mar. 28, 1910. Serial No. 551,922.

1. The herein described composition of matter, consisting of paraffin oil, benzin, vinegar and turpentine, substantially as described for the purpose specified.

2. The herein described composition of matter for cleaning and polishing wood, oil-cloth, celluloid, rubber and lineoleum consisting of seven hundred sixty eight ounces pure paraffin oil, three hundred and forty-eight ounces benzin, one hundred and ninety two ounces of vinegar and sixty four ounces of turpentine as substantially described.

961,904. AUTOMATIC GAS CUT-OFF. JOHN H. SKILLCORN, Pittsburg, Pa. Filed Dec. 8, 1909. Serial No. 532,089.



1. An automatic gas cut-off comprising, in combination, a casing, a platform formed in said casing, a magnet supported by said platform, a valve coöperating with said casing, an operating lever projecting through said casing, a vertically movable weight mounted below said platform and coöperating with said valve lever, means whereby said weight is supported, a battery coöperating with said magnet, a plurality of thermostats in the circuit with said magnet and battery adapted to close the circuit, and means whereby said weight is released by said magnet and thereby closing the valve.

2. An automatic gas cut-off comprising, in combination with a valve located on the supply pipe having an operating lever projecting therefrom, a vertically movable weight coöperating with said lever, a magnet adapted to retain said weight in an elevated position, a battery connected with one pole of said magnet, a plurality of thermostats connected to the opposite pole of said magnet and to the battery adapted to close the circuit, thereby releasing said weight and closing the valve.

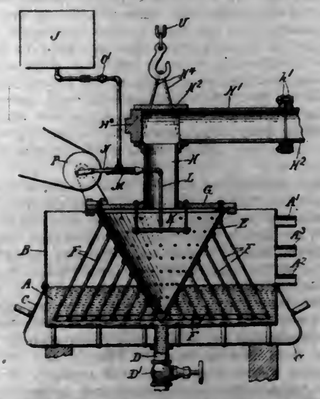
3. An automatic gas cut-off comprising, in combination, with a valve on the supply pipe having an operating lever, a vertically movable weight adapted to operate said lever, a magnet, means whereby said magnet supports said weight, a series of thermostats, and an electrical current including said magnet, and a battery adapted to be closed by any one of said thermostats and release said weight closing the valve.

4. An automatic gas cut-off comprising in combination with a valve on the supply pipe having an operating lever, a vertically reciprocating weight, a magnet, means for supporting said weight coöperating with said magnet, a plurality of thermostats, an electrical circuit including said thermostats, magnet and a battery, said thermostats adapted to close the circuit and cause the magnet to release the weight thereby closing the valve, and means disposed in said circuit adapted to break said circuit upon the closing of the valve.

5. An automatic gas cut-off comprising in combination with a valve, a weight adapted to operate said valve, an electric circuit including a battery, a plurality of thermostats in said circuit adapted to make and break the same, a magnet disposed in said circuit adapted to support said weight when the circuit is broken by said thermostats, and means whereby the circuit is broken upon the downward movement of said weight.

[Claims 6 and 7 not printed in the Gazette.]

961,905. AMALGAMATOR. ALICE J. SMITH and HENRY W. KENT, Milwaukee, Wis., assignors to Kent Ore Reduction Company, Chicago, Ill., a Corporation of Arizona. Filed July 27, 1907. Serial No. 385,915.



1. An amalgamating apparatus comprising a receptacle for the mercury and pulp to be treated; a downwardly feeding discharge head having a multiplicity of relatively small discharge pipes diverging downward and opening for discharge of the pulp within the mercury space near the bottom thereof in the receptacle, and directly acting and pulsating means for supplying agitated pulp under pressure to such discharge head.

2. An amalgamating apparatus comprising a receptacle for the mercury and pulp to be treated; a discharge head intruded into the receptacle said discharge head having downwardly converging sides and provided with a multiplicity of relatively small discharge pipes projecting off divergently from said converging sides and distributed substantially over the entire area of said sides and terminating for discharge near the bottom of the receptacle within the mercury space thereof for conducting the pulp to its discharge within the mercury body the outer tier of said pipes terminating in close proximity to the wall of said receptacle, and means for supplying pulp under pressure to the discharge head.

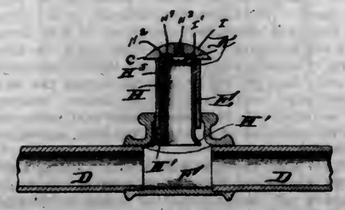
3. An amalgamating apparatus comprising a receptacle for the mercury and pulp to be treated; means for conducting the pulp into the lower part of the receptacle for discharge within the mercury body, said means comprising a multiplicity of pipes disposed above their discharge ends with transverse or lateral trend for screening and obstructing access to the bottom of the receptacle.

4. An amalgamating apparatus comprising a receptacle for the mercury and pulp to be treated; a discharge head having a multiplicity of relatively small discharges opening within the mercury space of the receptacle for conducting the pulp to and delivering it at points below the mercury level; a pulp discharge pipe leading into the top of said discharge head; a baffle plate within the head opposed to the discharge mouth of the pipe; and means for supplying the pulp under pressure through such pipe for discharge against the baffle plate.

5. An amalgamating apparatus comprising a receptacle for the mercury and pulp to be treated; a downwardly feeding inverted conical pulp discharge head having a multiplicity of relatively small discharge pipes opening within the mercury space near the bottom thereof in the receptacle and distributed over substantially the entire area of said bottom, such discharge head being otherwise closed; and a force pump connected proximately with the discharge head for forcing the pulp positively thereinto for discharge therefrom.

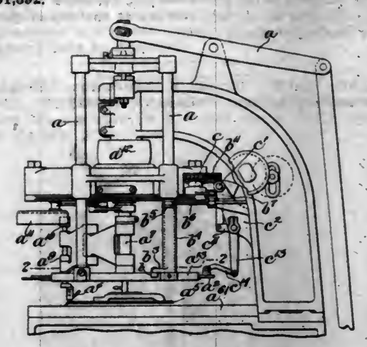
[Claims 6 to 9 not printed in the Gazette.]

961,906. SPRINKLING DEVICE. JOHN FRANKLIN SMITH, Little Rock, Ark. Filed July 10, 1909. Serial No. 506,973.



In combination with an open-ended vertically disposed pipe, a tubular shell telescoping therein and having its lower end flaring and of greater diameter than the pipe within which it telescopes and coöperating therewith to limit the upward throw of the shell, the upper portion of the shell being contracted and provided with an annular shoulder about its contracted portion, the upper portion of the shell being circumferentially perforated, and provided with an annular enlargement in contacting relation with the inner surface of the pipe, a cap having a recess in its under face in which the upper contracted end of the shell is seated, the under surface of the cap about said recess resting upon said annular shoulder and adapted to seat on the upper end of the pipe, and a screw passing through the top of the shell and cap.

961,907. MACHINE FOR CUTTING IRREGULAR FORMS. ALLISON M. STICKNEY, Medford, Mass., assignor to Wellman Company, Medford, Mass., a Corporation of Maine. Filed Mar. 24, 1910. Serial No. 551,392.



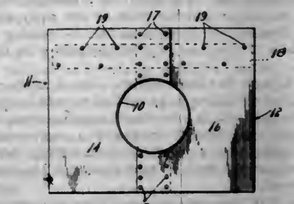
1. A machine for cutting irregular forms comprising a leader; means to operate it; a knife guided by the leader; and means independent of the leader operating means to hold the leader immovable during a part of the travel of the knife.

2. A machine for cutting irregular forms comprising a leader; means to operate it; a knife guided by the leader; and automatic means independent of the leader operating means to hold the leader immovable during a part of the travel of the knife.

3. A machine for cutting irregular forms comprising a frame; a leader mounted on the frame; means to operate the leader; and means to lock the leader to the frame while the leader is held stationary by its operating means.

4. A machine for cutting irregular forms comprising a frame; a leader-carrying slide movably mounted on the frame; a movable locking member mounted on the frame and adapted to directly engage the leader-carrying slide and lock it rigidly to the frame; means to operate the leader-carrying slide; and means to operate the locking member so as to cause it to engage the slide while the latter is held at rest by its operating means.

961,908. CULVERT-HEAD. GEORGE W. STORMS, Louisville, Ky. Filed Feb. 16, 1910. Serial No. 544,307.

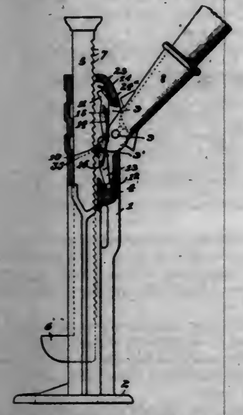


1. A culvert head comprising two sections having recesses in their contiguous edges to engage around the body of the culvert, means for connecting said sections together and a brace member disposed transversely of said sections, on one side thereof, and connected thereto at a point between one end of the said sections and one side of the said culvert engaging recesses.

2. An attachment for culverts comprising two sections each formed of two plates arranged face to face with culvert engaging recesses in their confronting edges, one plate of each section being wider than the other plate with the wider portions of the plates overlapping, and fastening means operating through the overlapping portions of the plates.

3. An attachment for culverts comprising two sections each formed of two plates arranged face to face with culvert engaging recesses in their confronting edges, one plate of each section being wider than the other plate with the wider portions of the plates overlapping, and a brace member connected across said sections at one side of the culvert receiving recesses.

961,909. JACK. WALTER B. TEMPLETON, Chicago, Ill. Filed July 24, 1907. Serial No. 385,348.



1. In a jack, the combination with a casing formed with an integral rigid pawl-guiding surface, and a ratchet-bar, of a lever fulcrumed in said casing, a pawl fulcrumed on the inner end of said lever with its upper free end lying opposite said pawl-guiding surface, and a resilient wearing-plate interposed between the back of the pawl and said pawl-guiding surface and coöperating with the latter in guiding and forcing the nose of the pawl into engagement with the ratchet bar.

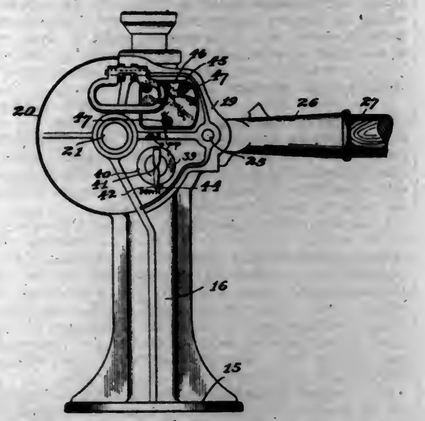
2. In a jack, the combination with a casing formed at its upper end with an integral overhanging wall constituting a rigid pawl-guiding surface, and a ratchet bar, of a lever fulcrumed in said casing, a pawl fulcrumed on the inner end of said lever with its upper free end lying opposite to said pawl-guiding surface, and a resilient wearing plate secured at its lower end to said pawl-guiding surface between the latter and the back of the pawl and coöperating with said pawl-guiding surface in guiding and forcing the nose of the pawl into engagement with the ratchet bar.

3. In a jack, the combination with a ratchet bar and its casing, of a dogging pawl pivoted in said casing, a lever pivoted in said casing above said dogging pawl, the inner end of said lever being formed with a cam surface, and a spring constituting a yieldable pawl-setting device interposed between the back of said pawl and the cam surface of said lever.

4. In a jack, the combination with a ratchet-bar and its casing, of a dogging pawl pivoted in said casing, a lever pivoted in said casing above said dogging pawl, the inner end of said lever being formed with a cam surface, and a leaf spring constituting a yieldable pawl-setting device secured to the back of said pawl and adapted to be slidingly engaged on its outer side by the cam surfaces of said lever as the latter is raised.

5. In a jack, the combination with a ratchet-bar and its casing, of a lever pivoted in said casing, upper and lower pawls pivoted in said lever and casing, respectively, a continuously acting spring adapted to be tensioned so as to urge both of said pawls away from said ratchet-bar when the latter is being lowered, a pawl-guiding surface on said casing for said upper pawl adapted to guide the latter toward the ratchet-bar, a cam surface on the inner end of said lever adapted to force said lower pawl toward the ratchet-bar when the lever is raised, and springs interposed between the backs of said pawls and their respective controlling surfaces and constituting yieldable pawl-setting devices.

961,910. JACK. WALTER B. TEMPLETON, Chicago, Ill. Filed July 24, 1907. Serial No. 385,349.



1. In a jack, the combination with a casing, and a lifting bar slidably mounted therein, of an operating lever pivoted in said casing, a pawl carried by said lever, a ratchet-member adapted to be engaged by said pawl and operatively connected to said lifting bar, a lateral projection on said pawl, and a leaf spring secured at one end to a side wall of said casing and slidably engaged by said lateral projection during the movement of said pawl toward said ratchet-member whereby said pawl is forced into engagement with said ratchet-member upon the actuation of said operating lever, substantially as described.

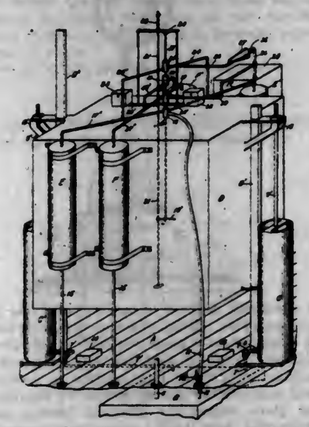
2. In a jack, the combination with a casing having an opening in its side wall and a removable cover plate covering said opening, of a lifting bar slidably mounted in said casing, an operating lever pivoted in said casing, a pawl carried by said lever, a laterally projecting pin carried by said pawl, a ratchet-member adapted to be engaged by said pawl and operatively connected to said lifting bar, and a leaf spring secured at its inner end to the inner side of said removable cover plate and slidably engaged at its free outer end portion by said pin during the movement of said pawl toward said ratchet-member whereby said pawl is forced into engagement with said ratchet-member upon the actuation of said operating lever, substantially as described.

3. In a jack, the combination with a casing and a lifting bar slidably mounted therein, of an operating lever pivoted in said casing, a pair of alternately acting pawls carried by said lever, laterally projecting pins carried by said pawls, a ratchet member adapted to be engaged by both of said pawls and operatively connected to said lifting bar, spring means for normally urging said pawls out of engagement with said ratchet member during the descending movement of the lifting bar, and yieldable resilient guides slidably engaged by said pins during the movement of said pawls toward said ratchet member whereby said pawls are alternately forced into engagement with said ratchet member upon the actuation of said operating lever, substantially as described.

4. In a jack, the combination with a casing and a lifting bar slidably mounted therein, of an operating lever pivoted in said casing, a pair of alternately acting pawls pivoted to said lever on opposite sides of the pivot of the latter, laterally projecting pins carried by said pawls, a ratchet member adapted to be engaged by both of said pawls and operatively connected to said lifting bar, spring means for normally urging said pawls out of engagement with said ratchet member during the descending movement of the lifting bar, and a pair of yieldable spring guides secured at one end in said casing, said spring guides having cam surfaces engaged by said pins, respectively, during the movement of said pawls toward said ratchet member whereby said pawls are alternately forced into engagement with said ratchet member upon the actuation of said operating lever, substantially as described.

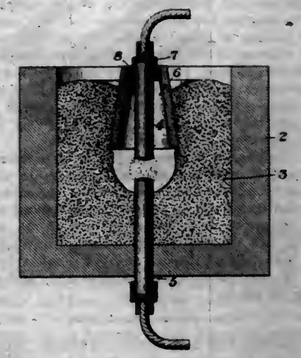
5. In a jack, the combination with a casing having an opening in a side wall thereof, and a removable plate covering said opening, of a lifting bar slidably mounted in said casing, an operating lever pivoted in said casing, a pair of alternately acting pawls pivoted on said lever on opposite sides of the pivot of the latter, laterally projecting pins carried by said pawls, a ratchet member adapted to be engaged by both of said pawls and operatively connected to said lifting bar, spring means for normally urging said pawls out of engagement with said ratchet member during the descending movement of the lifting bar, and a bent spring removably secured at its shank in said removable plate and having a pair of limbs provided with cam surfaces slidably engaged by said pins and operating to alternately force said pawls into engagement with said ratchet member upon the actuation of said operating lever, substantially as described.

961,911. PASSENGER DEVICE FOR EQUALIZING SHIP MOTION. ADOLPH W. THEILSIEFJE, Ridgefield, Wash. Filed Mar. 21, 1910. Serial No. 550,778.



In a passenger device for equalizing ship motion, the combination with a vessel of a pressure reservoir B and means therein to receive power from a power source, vertical pumping cylinders C—C' secured to the vessel deck, having therein pistons, also provided with valved pipes extending into the reservoir B and with foot valves in their lower ends, a passenger car D rigidly secured at the sides to the upper ends of the pumping cylinder pistons, means to retain the car in vertical position, vertical high pressure and low pressure cylinders E—E' and F—F' rigidly secured upon the sides of the car, each containing pistons, the lower ends of which are secured to the vessel deck, a pipe 11 extending from the reservoir B into valves of the high pressure cylinders, inlet valves 18 and 38 and exhaust valves 25 and 41, pipe connections from reservoirs E—E with valves 18 and 25, pipe connections from reservoirs F—F' with valves 38 and 41, a low pressure tank 28, pipe connection from the same to the valve 38, also to the valve 25, the latter pipe being provided with a cut-off valve, also a pressure equalizer in said pipe having means therein to admit the flow of air into the low pressure reservoir and to allow an exhaust when the pressure in the latter reservoir is equalized, a valve stem 19 common to the inlet and exhaust valves, said stem being pivoted at its lower end to a lever pivoted on a vertical guide, a frame 20 secured to the upper end of the common valve stem and a guide to retain the frame in vertical position, means secured to the frame to decrease its specific gravity, all substantially as described.

961,912. METHOD OF HEATING CARBON. FRANK J. TONE, Niagara Falls, N. Y. Filed Feb. 4, 1907. Serial No. 355,745.



1. The method of heating carbon, consisting in forming an electric arc within a charge composed of carbonaceous material, thereby heating such material by transmission of heat from said arc; substantially as described.

2. The method of heating carbon, consisting in forming an electric arc between electrodes and within a charge composed of a mass of carbon, preventing any substantial contact between the carbon and one of the electrodes, and transmitting the heat of the arc into the carbon mass; substantially as described.

3. The method of polymerizing carbon, consisting in establishing an electric arc within a charge composed of carbon, and substantially preventing the charge from contact with one of the electrodes, thereby heating the charge by transmitting the heat from the arc therein into such charge; substantially as described.

4. The process of graphitizing carbon, consisting in establishing an electric arc within a mass of said carbon, and transmitting the heat of said arc to the carbon to a sufficient amount to at least partially convert the same into graphite; substantially as described.

5. The method of purifying graphite, which consists in forming an electric arc within a mass of impure graphite and between electrodes, preventing any substantial contact between the carbon and one of the electrodes, and transmitting the heat of the arc to the graphite mass sufficiently to volatilize the impurities and allowing the volatilized products to escape from the graphite; substantially as described.

[Claim 6 not printed in the Gazette.]

961,913. REDUCTION OF REFRACTORY COMPOUNDS. FRANK J. TONE, Niagara Falls, N. Y. Filed Mar. 21, 1907. Serial No. 363,539.

1. The process of reducing ores, which consists in subjecting a mixture of the ore and aluminum carbid to electrically developed heat sufficient to raise the ore above its point of fusion, and cause the reduction of the ore by the carbon of the carbid, and the combination of the aluminum with the reduced element of the ore and removing the reduced product from the reaction zone.

2. The process of reducing ores of aluminum, which consists in subjecting a mixture of the ore and aluminum

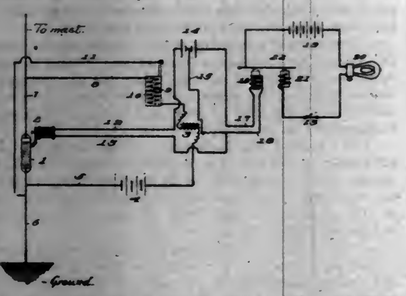
carbid to electrically developed heat sufficient to raise the ore above its point of fusion and cause the reduction of the ore by the carbon of the carbid, and collecting the aluminum resulting jointly from the reduction of the ore and the dissociation of the carbid and removing the reduced product from the reaction zone.

3. The process of reducing ores of aluminum which consists in first reducing an aluminum ore to aluminum carbid and then subjecting a mixture of the carbid and a further quantity of ore to electrically developed heat sufficient to raise the ore above its point of fusion and cause the reduction of the ore by the carbon of the carbid, and collecting the aluminum resulting jointly from the reduction of the ore and the dissociation of the carbid and removing the reduced product from the reaction zone.

4. The process of reducing ores, which consists in subjecting a mixture of the ore and aluminum carbid to electrically developed heat, sufficient to cause the reduction of the ore by the carbon of the carbid and the combination of the aluminum while maintaining the reduction zone at substantially the volatilization temperature by removing the reduced product from the reduction zone.

5. The process of reducing ores of aluminum, which consists in first reducing an aluminum ore to aluminum carbid, and then subjecting a mixture of the carbid and a further quantity of ore to electrically developed heat sufficient to cause the reduction of the ore by the carbon of the carbid, and causing the aluminum resulting jointly from the reduction of the ore and the dissociation of the carbid to be removed from the reaction zone and collected in a receiving space.

961,914. WIRELESS LIGHTING SYSTEM. EDWARD B. TUSTIN, Jr., Bloomsburg, Pa. Filed Apr. 1, 1908. Serial No. 424,608.



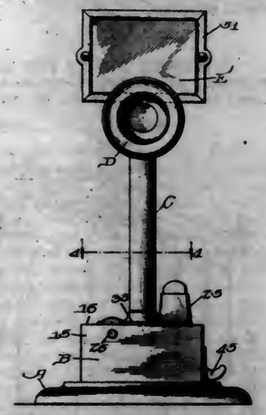
1. In combination, a lighting circuit, lamps therein, and an electrical circuit closer for the lighting circuit included therein, an electro-magnet in said lighting circuit coöperating with said circuit closer to hold the same closed while current is passing in the lighting circuit, an antenna circuit, a local circuit including a relay and having electrical connection with the antenna circuit upon opposite sides of the coherer, a tapper circuit, and a circuit closing circuit having a battery and a closer common to each, said closer adapted to be operated by the relay, and the circuit closing circuit including an electro-magnet for closing the working circuit, the battery common to the tapper and circuit closing circuits having like elements electrically connected with each and having the opposite elements electrically connected with the opposite ends through the circuit closing contact and armature of the aforesaid relay.

2. The combination with an electric lighting circuit, electric lamps therein, and a circuit closer therein, of an antenna circuit, a coherer therein, a local circuit including a relay and having an electric connection with the antenna circuit on opposite sides of the coherer, a tapper circuit, an electro-magnet arranged to close the circuit closer of the lamp circuit, a circuit having therein a source of power and connected to said electro-magnet, a circuit closer in the last named circuit, actuated by said relay magnet, an electro-magnet in the lamp circuit adapted to hold the circuit closer of the lamp circuit closed after it has been initially operated, and means for cutting off current through the lamp circuit, thereby demagnetizing said circuit and releasing the circuit closer.

961,915. REDUCTION PRODUCTS OF COMMERCIAL NITROBENZALDEHYDE. AUGUST VAGT, Mülheim-on-the-Rhine, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Oct. 26, 1909. Serial No. 524,666.

The process of separating the anhydrid of ortho-aminobenzaldehyde from meta-aminobenzaldehyde by adding an acid to the mixture obtained by reducing commercial nitrobenzaldehyde in such quantity that the anhydrid precipitates while the meta-aminobenzaldehyde remains in solution in the form of its corresponding salt substantially as described.

961,916. MACHINE FOR VENDING SLUGS. GEORGE H. VAN COURT and EDWARD I. MARKS, Chicago, Ill.; said Marks assignor to said Van Court. Filed Aug. 17, 1907. Serial No. 388,969.



1. In a vending machine, means for receiving and guiding a coin edgewise, a plate provided with a series of pockets and rotatable in a plane inclined to the direction of movement of the coin in said coin guiding means to bring said pockets successively into position to receive a coin from said coin-guiding means, means for manually rotating said plate, means for normally locking said plate against rotation, said locking means being releasable by a coin and adapted to permit said plate to be rotated only a sufficient distance to carry the next pocket in the series into position to receive a coin, and vending means operated by said plate when the latter is rotated.

2. In a vending machine, means for receiving and guiding a coin, a horizontally disposed plate provided with a series of pockets and made rotatable to cause said pockets to register successively with said coin-guiding means, locking means normally preventing rotation of said plate and adapted to be released by engagement with the edge of a coin, means for effecting the rotation of said plate, vending means operated by said plate when the latter is rotated, and means for preventing further rotation of said plate until another coin has been inserted.

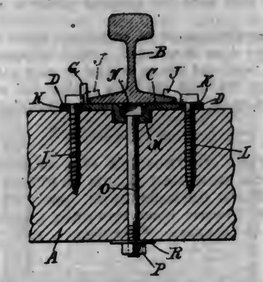
3. In a vending machine, a rotatably mounted plate having a series of pockets, means for receiving and guiding coins, said means registering successively with said pockets as said plate is revolved, a magazine adapted to contain a supply of slugs and to feed said slugs successively to said pockets, means for discharging said coins and said slugs from said pockets, means normally locking said plate against rotation and adapted to be engaged by a coin and thereby caused to release said plate, and means for limiting the movement of said plate.

4. In a vending machine, a revoluble plate having a series of openings therethrough, a stationary plate having openings therethrough, means for guiding coins successively into the openings of the revoluble plate, means for guiding slugs successively into the openings of said revoluble plate, means for manually revolving said plate to cause these openings to register with the openings of said stationary plate and thereby to discharge the coins and slugs through said last-named openings, and means normally locking said plate against rotation and adapted to permit said plate to be moved a limited distance upon the insertion of a coin into said coin-guiding means.

5. In a vending machine, a pair of stationary plates arranged one above the other, a plate revolubly arranged between said stationary plates and provided with a series of openings, the lower of said stationary plates being provided with a coin opening registering successively with the openings in the revoluble plate, the upper of said plates being also provided with an opening adapted to register successively with the openings in said revoluble plate, means for revolving said disk with a step by step movement, means for normally locking said revoluble plate in such position that one of its openings registers with the opening in the lower plate and another of its openings registers with the opening in the upper plate, means adapted to receive a coin and to guide the same through the opening in the upper plate into the registering opening in the revoluble plate, a pile of slugs feeding successively into the openings in the revoluble plate, and a slug-chute arranged below said plates, the lower stationary plate having another opening to permit the slugs to fall successively therethrough in said chute upon each forward movement of the revoluble plate.

[Claims 6 to 11 not printed in the Gazette.]

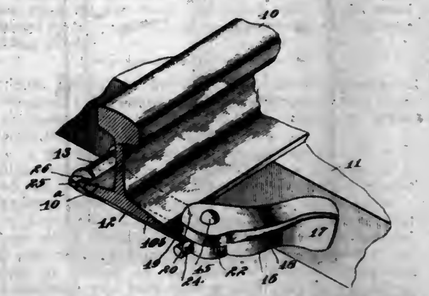
961,917. RAIL-SUPPORT. THOMAS E. VAUGHN, Chicago, Ill. Filed Apr. 9, 1908. Serial No. 426,027.



1. As a new article of manufacture, a rail support comprising a metal plate considerably longer than the width of the rail flange and extending laterally beyond the same, provided with lips, spaced by a distance approximately equal to the width of the flange of the rail, upwardly extending, between which the rail can be inserted from above when the plate is in its final position, and adapted to be forced down onto said flange to hold the rail in position, a central depression in the plate under the rail to take into a corresponding recess in the tie, and a bolt beneath the rail with a head lying in such depression and secured at its other end to the tie.

2. As a new article of manufacture, a rail support comprising a metal plate considerably longer than the width of the rail flange and extending laterally beyond the same, provided on each side of the rail with two or more lips, spaced by a distance approximately equal to the width of the flange of the rail, upwardly extending, between which the rail can be inserted from above when the plate is in its final position, and adapted to be forced down onto said flange to hold the rail in position, a central depression in the plate under the rail to take into a corresponding recess in the tie, and a bolt beneath the rail, with a head lying in such depression and secured at its other end to the tie.

961,918. RAIL-ANCHOR. WILLIAM A. WALKER, Racine, Wis., assignor to Otto R. Barnett, Chicago, Ill. Filed Dec. 26, 1908. Serial No. 469,261.



1. In a rail anchor, the combination of a gripping member adapted to engage a rail, a lever fulcrumed on said gripping member and adapted to bear against an opposite portion of the rail, whereby the rail is gripped between said member and lever, the latter being also adapted to abut against a cross-tie, and means to prevent said lever from turning on its fulcrum in one direction, substantially as described.

2. In a rail anchor, the combination of a gripping member adapted to engage a rail, a lever fulcrumed on said gripping member and adapted to bear against an opposite portion of the rail, whereby the rail is gripped between said member and lever, the latter being also adapted to abut against a cross-tie, and means to prevent said anchor from loosening its grip on the rail when the former is moved away from the cross-tie due to contraction of the latter, substantially as described.

3. In a rail anchor, the combination of a gripping member having a hook portion adapted to engage a rail, a lever fulcrumed on said gripping member and having a cam surface to bear against the rail, whereby the latter is gripped between said member and lever, the latter being also adapted to abut against a cross-tie, and means to prevent said lever from turning on its fulcrum in the direction to loosen the grip of the anchor on the rail, substantially as described.

4. In a rail anchor, the combination of a gripping member adapted to engage a rail, a lever fulcrumed on said gripping member and adapted to bear against an opposite portion of the rail, whereby the rail is gripped between said member and lever, the latter being also adapted to abut against a face of a cross-tie, ratchet teeth on said gripping member, and a pawl on said lever coöperating with said teeth to prevent the lever from turning in the direction to loosen the grip of the anchor on the rail, substantially as described.

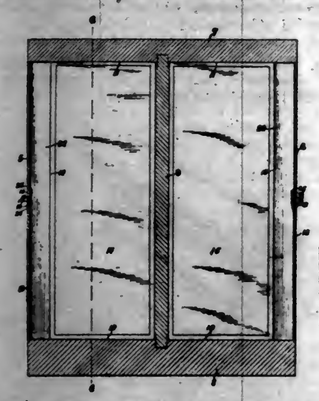
5. In a rail anchor, the combination of a gripping member adapted to engage a rail, a lever fulcrumed on said gripping member and adapted to bear against a face of a cross-tie, and a pressure block interposed between said lever and rail, whereby the rail is gripped between said member and said block and as the rail creeps the pressure of the lever on the block and of the latter on the rail increases, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

961,919. WINDOW-SASH. GEORGE L. WHITEAKER, Steuben, Wis. Filed July 16, 1909. Serial No. 507,977.

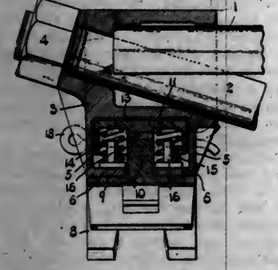
A window frame embodying top, bottom and side rails having grooves to receive a window pane, one side rail having a slot to permit the insertion of a window pane into said grooves, a filling strip in said slot having a cam

surface, and a keeper pivoted upon said side rail and turnable into engagement with the cam surface of the



filling strip to hold the filling strip against the window pane.

961,920. BRAKE-BEAM. CHARLES H. WILLIAMS, JR., Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed July 15, 1909. Serial No. 507,765.



1. The combination with a brake beam, of thrust blocks located on the ends thereof, movable brake heads arranged upon and having a direct locking connection with the thrust blocks, and yielding pressure means located between the heads and thrust blocks.

2. The combination with a brake beam, of thrust blocks located on the ends thereof, movable brake heads arranged upon and having a direct locking connection with the thrust blocks, and means for taking up the clearance and wear between the brake heads and thrust blocks.

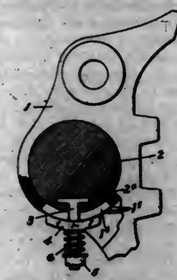
3. The combination with a brake beam, of thrust blocks located on the ends thereof, movable brake heads arranged upon and having a direct locking connection with the thrust blocks, and means whereby the heads are locked to the thrust blocks after automatic adjustment.

4. In a brake beam, the combination with compression and tension members, thrust blocks arranged at the end thereof, said thrust blocks having segmental bearing tracks at their forward side only, brake heads having segmental bearing faces which engage said tracks, the said brake heads also having T-shaped extensions arranged between the tracks.

5. In a brake beam, the combination with thrust blocks having segmental bearing faces, of brake heads having segmental bearing faces which engage the corresponding faces on the thrust blocks, and yielding pressure means interposed between the brake heads and thrust blocks.

[Claims 6 to 20 not printed in the Gazette.]

961,921. ADJUSTABLE BRAKE-HEAD. CHARLES H. WILLIAMS, JR., Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 10, 1910. Serial No. 537,138.



1. The combination of a brake head, a part on which said head is mounted and means for yieldingly and adjustably holding the head on said part, said means being supported by said part and engaging the outer face of the head.

2. The combination of an adjustable brake head, a part on which the same is mounted and an element extending from said part to the brake head and provided with means for yieldingly and adjustably holding said head in position.

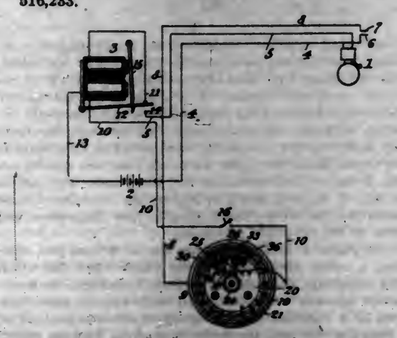
3. The combination of an adjustable brake head, of a part on which the same is mounted, a holding block engaging the outer face of the adjustable head, a guiding means for said block carried by the part on which the head is mounted and yielding means bearing against said block.

4. The combination of an adjustable brake head, of a part on which it is mounted, a holding block engaging the outer face of the brake head, guiding means for said block mounted on said part and extending through said head and said block and yielding means arranged exteriorly of said head for exerting pressure against said block.

5. The combination of an adjustable brake head, a part on which the same is mounted, a block engaging the outer face of the head and means carried by said part for yieldingly forcing the block inwardly against the head.

[Claims 6 to 11 not printed in the Gazette.]

961,922. TIME-CONTROLLER FOR ELECTRIC TIME-LOCKS OR BURGLAR-ALARM SYSTEMS. JOHN P. WILLIAMS and HERMANN HUHN, New York, N. Y., assignors to Electric Bank Protection Company, a Corporation of Delaware. Filed Sept. 4, 1909. Serial No. 516,233.



1. A time-controller of the class described, comprising a clockwork, a clockface insulated therefrom, a hand or indicator carried by said clockwork, contact means carried by the hand for establishing electrical connection between the hand and the clockface, and means actuated by the movement of the hand to cause the making and breaking of the contact between said contact means and the clockface.

2. A time-controller of the class described, comprising a clockwork, a clockface insulated therefrom, a hand or indicator carried by said clockwork, a conductor contact carried by the hand and adapted to bear against the clockface, an insulating contact carried by the hand and adapted to bear against the clockface, and a rocking connection between said conductor contact and insulating contact, whereby one of said contacts is lifted as the other is depressed.

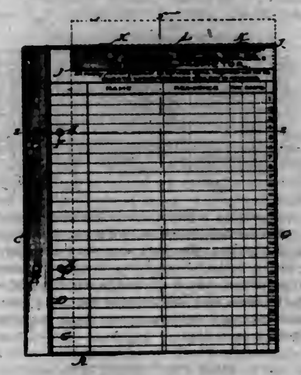
3. A time-controller of the class described, comprising a clockwork, a clockface insulated therefrom, a hand or indicator carried by said clockwork, a frame pivoted transversely upon the hand, a conductor contact carried at one end of said frame, an insulating contact carried at the other end of said frame, and means actuated by the movement of the hand for pivotally moving said frame.

4. A time-controller of the class described, comprising a clockwork, a clockface insulated therefrom, a hand or indicator carried by said clockwork, a frame pivoted transversely upon the hand, a conductor contact carried at one end of said frame, an insulating contact carried at the other end of said frame, and a roller mounted upon the hand and bearing upon the clockface and insulated therefrom and having an operative connection with said frame to pivotally actuate the same.

5. A time-controller of the class described, comprising a clockwork, a clockface insulated therefrom, a hand or indicator carried by said clockwork, a frame pivoted transversely upon the hand, a conductor contact carried at one end of said frame, an insulating contact carried at the other end of said frame, and a roller mounted upon the hand and bearing upon the clockface and insulated therefrom and having a frictional bearing upon said frame to pivotally actuate the same.

[Claims 6 to 23 not printed in the Gazette.]

961,923. LOOSE-LEAF HOLDER. JOHN WILLY, Chicago, Ill. Filed Jan. 15, 1909. Serial No. 472,410.



1. The combination with a table of a plurality of pegs in the surface thereof along the left hand edge, a folding flap attached to said edge and having recesses therein adapted to engage said pegs and a folding flap along the top of the table.

2. The combination with a table of a plurality of pegs in the surface thereof along one edge, a hinged flap attached to said edge, having recesses therein adapted to engage said pegs, said flap adapted to rest upon and be substantially parallel with the table, and a hinged flap attached to the top of the table.

3. The combination with a table of means for removably attaching a leaf thereto, said means comprising a plurality of leaf-engaging flaps hinged to said table, and adapted to rest upon it and engage the leaf and a plurality of pegs in such table adapted to engage the perforations in the leaf and in one of said flaps, said flaps located at the top and one side of said table.

4. A flat table having a plurality of leaf holding devices along the left hand edge, and a plurality of hinged flaps upon the left hand and upper edges of the table adapted to fold over and lie upon the table and the leaf holding device.

961,924. PROCESS OF REFINING GOLD. HEINRICH WOHLWILL, Hamburg, Germany, assignor to The Firm of Norddeutsche Affinerie, Hamburg, Germany. Filed Mar. 10, 1909. Serial No. 482,476.

1. A process of electrolytically refining gold or gold alloys, which consists in electrolyzing a solution of a gold salt by passing an asymmetrical alternating current therethrough, with such gold or gold alloy as the anode.

2. A process of electrolytically refining gold or gold alloys, which consists in electrolyzing a solution containing gold chlorid and another chlorid with an excess of the latter, by passing an asymmetrical alternating current therethrough with such gold or gold alloy as the anode.

3. A process of electrolytically refining gold or gold alloys, which consists in electrolyzing a solution of gold chlorid, containing hydrochloric acid, by passing an asymmetrical alternating current therethrough with such gold or gold alloy as the anode.

961,925. ATTACHMENT FOR AEROPLANES. FREDERICK W. WUERTH, Cincinnati, Ohio. Filed Mar. 15, 1910. Serial No. 549,527.



1. The combination with an aeroplane, of flexible wings connected therewith and adapted to project outwardly therefrom, and means for raising said wings and disposing them upon the aeroplane.

2. The combination with an aeroplane, of flexible wings attached at their upper edges thereto, means for supporting said wings in inclined positions, and means for collapsing said wings and disposing them upon the aeroplane.

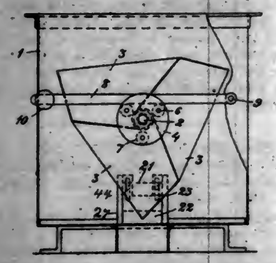
3. The combination with an aeroplane, of flexible wings secured at their upper edges thereto, frames connected with said wings, means for supporting said frames to dispose the wings in inclined positions outwardly from the body of the aeroplane, means operating to manipulate said supporting means to collapse the wings and dispose them upon the aeroplane.

4. The combination with an aeroplane, of a series of wings attached at their upper edges thereto, frames connected with the lower portions of said wings, arms for supporting said frames to dispose the wings in inclined positions outwardly from the body of the machine, gearing connected with said arms, and means for operating said gearing to move said frames for collapsing the wings or for distending them.

5. The combination with an aeroplane, of flexible wings attached at their upper edges thereto, frames connected with the lower portions of said wings, a lever pivoted between its ends between the planes, rods connecting said lever with the frames at respective sides of the machine, and means for applying power to one of said frames to collapse or distend the wings at both sides of the machine.

[Claims 6 and 7 not printed in the Gazette.]

961,926. APPARATUS FOR PURIFICATION OF WATER. ANDERS OLSSON ANDERBERG, Malmö, Sweden, assignor to Aktiebolaget Merkantila Ingenjörsbyrån, Stockholm, Sweden. Filed Sept. 30, 1909. Serial No. 520,363.



1. A rotary shaft provided with a series of buckets for receiving the liquid to be purified and carrying a correspondingly constructed cam-wheel and series of projecting parts, in combination with an outlet valve opened at regular intervals by said cam, a weighted bar in contact with said projecting parts to hold said shaft against turning, means for supplying a purifying solution to said valve, means for supplying liquid to said buckets and thereby turning said shaft, a receiver for said liquid and said solution and an outlet and overflow gate arranged to hold a body of water in position to resist the turning of said shaft, the said gate being adjustable to regulate the degree of such resistance and consequently the amount of water receivable in the bucket before turning the shaft, substantially as set forth.

2. A rotary shaft provided with a series of buckets and corresponding frictional parts and valve operating means, in combination with a bar bearing against said frictional parts, an outlet valve for a purifying solution arranged to be operated by said means, means for adjustably varying the pressure of said bar on said parts, an outlet gate for the liquid from said buckets arranged to regulate the accumulation of water below the shaft and the consequent amount of resistance to its rotation and a receiver permitting the mixture of this liquid and such solution.

961,927. COMBINED MATCH-STAND AND CIGAR-CUTTER. JOHN HENRY ASTRUCK, New York, N. Y. Filed Jan. 12, 1910. Serial No. 537,737.

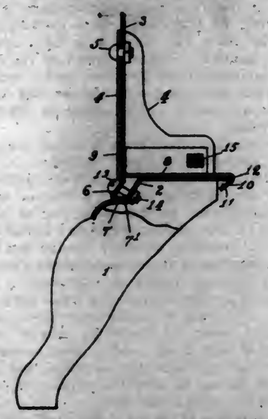


A device of the character described, comprising a U-shaped holder having a lower rest and open ends, an integral casing extending outwardly from one of the sides of the holder and having a flat perforated face plate, and a cutter pivoted to said face plate.

961,928. STOVE-LEG. BERRY A. BAXTER, Mansfield, Ohio. Filed Apr. 2, 1909. Serial No. 487,459.

1. A stove leg pressed from sheet metal combined with a corner plate pressed from sheet metal and adapted to be attached to a stove body and a coupling plate pressed from sheet metal secured to said corner plate and so constructed as to provide means of removing from or replacing the leg in the coupling plate, as and for the purpose described.

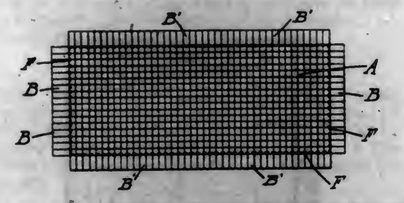
2. The combination of a stove body and leg; said leg having an upwardly extending angular portion, a corner plate provided with a flange to inclose said angular portion, a coupling plate attached to said corner plate and provided with a lipped portion to engage with the end of the leg as described and set forth.



3. A sheet metal stove leg having an upwardly extending portion forming a shouldered portion in combination with a sheet metal corner plate adapted to be secured to a stove body and a coupling plate with flanges and a lipped portion to interlock said stove leg to the corner plate as described.

4. The combination of a stove body and leg, a corner plate secured to said body and to the front side of said leg and a coupling plate secured to said corner plate and adapted to support the rear portion of said leg.

961,929. MAT. EVARISTE BOUCHARD, Providence, R. I. Filed Aug. 16, 1909. Serial No. 512,991.

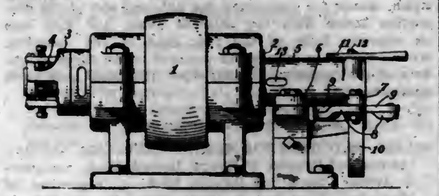


A mat comprising a plurality of sections of water-proof material, each section comprising a strip folded upon itself to form a flat strand, the weft and warp threads being all of water-proof material and the strands interwoven in their flat condition, the weft and warp threads being extended at the ends and sides of the mat to form a fringe, and means securing the same at their marginal edges where crossing each other.

961,930. DOWEL-MACHINE. MICHAEL BROCHU, Grand Rapids, Mich., assignor to Valley City Machine Works, Grand Rapids, Mich., a Corporation of Michigan. Filed Feb. 15, 1910. Serial No. 544,070.

1. A dowel machine, comprising a tubular mandrel carrying a cutter at one end, opposing yieldably movable guide members in the mandrel, and means for positively equalising the movement of said members.

2. A dowel machine, comprising a tubular mandrel carrying a cutter at one end, rigid guide members at opposite sides of the axis of the mandrel internally angular in cross section and longitudinally divided, and means for yieldably and equally moving the parts of the guide toward the axis of the mandrel.



3. A dowel machine, comprising a tubular mandrel carrying a cutter at one end, two rigid guide members in the axis of the mandrel, said guide members having opposing longitudinal angular channels, a spring to yieldingly move the said members toward each other, and connecting means to compel the same to move equally and oppositely toward and from the axis of the mandrel.

4. A dowel machine, comprising a tubular mandrel carrying a cutter at one end, a guide extending within the mandrel at one end and consisting of two opposed members having opposing angular longitudinal channels, each member also being pivoted near the outer end to a fixed support, a spring connected to the outer ends of said guide members to move the inner ends toward each other, and means for causing said members to move equally and simultaneously toward and away from the axis.

5. A dowel machine, comprising a tubular mandrel carrying a cutter at one end, a guide inserted within the mandrel and extending outside the same, said guide consisting of two opposed members having opposing longitudinal angular channels, arms on the said members near the outer end and pivoted to a fixed support, a spring attached to the outer ends of said members to yieldingly move the inner ends toward each other, a longitudinally disposed bar pivoted at the middle, and rods connecting the respective ends of the bar to the respective outer ends of the guide members.

[Claims 6 and 7 not printed in the Gazette.]

961,931. CORDING-SEAL. EDWARD J. BROOKS, East Orange, N. J. Filed May 6, 1910. Serial No. 559,672.



1. A seal part, for press-fastenable cording seals, made of nearly rigid sheet metal, and constructed with substantially parallel lips arranged at opposite sides of an open front and having inturned front extremities, and a second pair of lips substantially at right angles to those first named and constructed with inclined edges adapted to interact with said inturned extremities of the opposing lips in temporarily attaching the seal part to the ends of a cord preparatory to the press fastening operation.

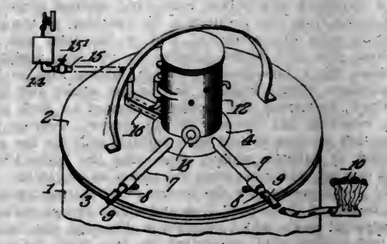
2. A seal part, for press-fastenable cording seals, made of nearly rigid sheet metal, and constructed with substantially parallel lips arranged at opposite sides of an open front, and a second pair of lips substantially at right angles to those first named; both pairs of lips being constructed with inturned front extremities and inclined edges, and adapted to be coiled into the interior of the seal part at the press fastening operation.

3. A cup-shaped seal part, for press-fastenable cording seals, made in one piece of nearly rigid sheet metal and constructed with deep notches in its front edge forming substantially parallel lips at opposite sides of the open front of the seal part, such lips having inturned front extremities and being adapted to be coiled around the respective ends of a sealing cord by the action of a seal press.

4. A cup-shaped seal part, for press-fastenable cording seals, made in one piece of nearly rigid sheet metal, and constructed with deep notches in its front edge forming substantially parallel lips at opposite sides of the open front of the seal part and a second pair of lips substantially at right angles to those first named; both pairs of lips having inturned front extremities and inclined edges, and adapted to be coiled into the interior of the seal part at the press fastening operation.

5. In combination with a soft and flexible sealing cord, a hollow seal part made of nearly rigid sheet metal and constructed with substantially parallel lips at opposite sides of an open front, and with a back adapted to carry distinguishing marks; said lips having inturned front extremities, and being adapted to be coiled around the respective ends of said cord by the action of a seal press, substantially as hereinbefore specified.

961,932. PULSATOR FOR MILKING-MACHINES. DAVID BROWN, Spokane, Wash. Filed Apr. 20, 1909. Serial No. 490,990.

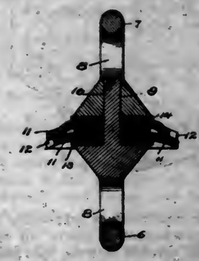


1. In a milking machine, a base having a bore extending therethrough and ports opening into the bore, an engine mounted upon the base and having an interiorly screw threaded piston, and a pulsator extending beyond one end of the piston and having a screw threaded end detachably engaging the thread in one end of said piston, said pulsator being movable within the bore and having exterior means for establishing communication between the ports when the piston is in its lowermost position.

2. A milking machine including an engine piston mounted for reciprocation, and a port controlling pulsator reduced solely at one end and at an intermediate point, the other end of said pulsator being screwed into and detachably engaged by the piston.

3. In a milking machine, a pulsator valve including a cylindrical body having opposed portions of one end cut away and having an intermediate annular groove, there being exterior screw threads upon the other end portion of said body.

961,933. CHAIN-PUMP BUCKET. JACOB H. BURTNER, Keedysville, Md. Filed June 9, 1909. Serial No. 501,169.



A chain-pump bucket comprising two clamping-members each embodying an eye and a frusto-conical body-portion, the opposed faces of the body-portions being flat, the ex-

terior surfaces of the eyes being rounded to prevent impact with the well-tube, and the frusto-conical body-portions serving as guides to direct the bucket into the tube, means for connecting the two body-portions, spaced resilient disks clamped between the body-portions, and protective disks disposed between the opposed faces of the body-portions and the disks, and being of somewhat greater diameter than said faces to protect the disks from cutting action when flexed.

961,934. WET TREATMENT OF MATTES. JAMES TAYLOR CARRICK, Johannesburg, Transvaal, assignor of one-half to Stuart Pattison, Johannesburg, Transvaal. Filed Nov. 13, 1908. Serial No. 462,444.

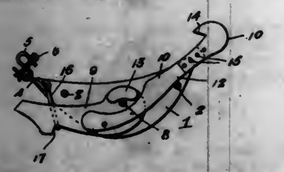
1. A wet process for the treatment of mattes containing metals of the copper, iron and nickel groups, without substantial waste, consisting in digesting the matte with a mineral acid, precipitating any copper dissolved, separating the liquid from the solid residue, treating the iron and nickel solution with large excess of ammonia, aspirating air through this solution for the production of a ferroferric precipitate, recovering residual nickel as a solution from this precipitate by treatment of the precipitate with dilute mineral acid in the cold, and returning this acid nickel solution to the first digesting solution for a subsequent operation, adding lime to the ammoniacal nickel solution, boiling the nickel and lime mixture, recovering the ammonia expelled by such boiling, removing any calcium chlorid present, treating the recovered calcium chlorid with sulfuric acid for the production of calcium sulfate, recovering the hydrochloric acid evolved, and recovering the nickel as set forth.

2. A wet process for the treatment of mattes containing metals of the copper, iron and nickel groups without substantial waste which consists in digesting the mattes in hydrochloric acid, separating the iron from the solution so formed, precipitating the nickel with lime, separating the calcium chlorid solution, treating the same with sulfuric acid whereby hydrochloric acid is set free and calcium sulfate precipitated, and evaporating such hydrochloric acid under conditions of temperature and pressure such as not to dehydrate the calcium sulfate.

3. A wet process for the treatment of mattes containing metals of the copper iron and nickel groups consisting in digesting the matte with a mineral acid, treating the filtrate with a large excess of ammonia and aspirating air through the mixture for the production of a ferro-ferric compound, as set forth.

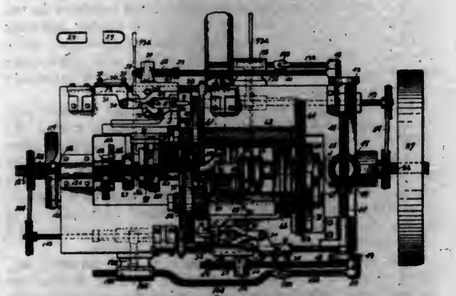
4. A wet process for the treatment of mattes containing metals of the copper iron and nickel groups consisting in digesting the matte with a mineral acid, treating the filtrate with a large excess of ammonia in the cold, aspirating air through the mixture for the production of a ferro-ferric precipitate, treating this precipitate with dilute acid and treating the nickel filtrates for the recovery of nickel as set forth.

961,935. HAME-FASTENER. WILLIAM M. CASWELL and JOSEPH A. SCHOFIELD, Warren, Pa. Filed Nov. 16, 1908. Serial No. 462,939.



A hame fastener comprising a supporting frame consisting of a pair of corresponding plates, an operating lever having a cam head, pivoted between said plates, a fastening member comprising a pair of parallel bars having recessed upper edges pivoted at their inner ends to the cam head of said lever, a hame engaging hook adjustably connected with the outer ends of said fastening bars, a ball pivoted to one end of the frame and adapted to engage and support the free end of the operating lever in operative position, means for connecting the adjacent end of the supporting frame with the adjacent hame, and stop lugs on opposite faces of the cam head of the operating lever adapted to engage the recessed upper edges of the bars of the fastening member when the hame hook is in hame engaging position.

961,936. MACHINE FOR MAKING CAPSULES. ARTHUR COLTON and BURTON W. SCOTT, Detroit, Mich., assignors to Arthur Colton Co., Detroit, Mich., a Corporation of Michigan. Filed Jan. 9, 1909. Serial No. 471,407.



1. A capsule machine comprising means for feeding into said machine the pins carrying the caps and bodies of the capsules, carrier disks having receiving sockets therein, means for stripping the caps and bodies from said pins and placing them in said sockets respectively, means for trimming said caps and bodies while in the sockets of the carrier disks, means for joining the caps and bodies in the registering sockets of said disks, and means for actuating the carrier disks in timed relation with the feeding, stripping, trimming, and joining means.

2. A capsule machine comprising a movable carrier having receiving sockets therein, a pin bar having a row of pins thereon carrying capsule parts, means for feeding said pin bar into the machine to successively present each pin thereon before a socket in said carrier, means for stripping the capsule parts from said pins and placing them in said sockets, means for moving the carrier with the movement of the pin bar to cause the sockets therein to successively register with the pins on said bar, and means for timing the operation of the stripping mechanism with respect to the movement of said carrier and the operation of the pin bar feeding means.

3. A capsule machine comprising a rotary carrier having receiving sockets, means for feeding into the machine a series of pins carrying one part of a capsule thereon, and means for stripping the capsule parts from said pins and placing them successively in the sockets of said rotary carrier, the feeding and stripping means being operated in timed relation with the movement of said carrier.

4. A capsule machine comprising two rotary carriers standing in opposed relation, each having a plurality of sockets therein, the sockets in said disks being caused to register in pairs as the disks revolve, means for feeding caps and bodies of capsules into the receiving sockets of said disks respectively, means for joining the caps and bodies in the registering sockets of said disks when said sockets move into alinement, and means for rotating said disks in unison.

5. A capsule machine comprising two rotary disks standing in opposed relation, each having a plurality of sockets therein, the sockets in said disks being caused to register in pairs as the disks revolve, means for feeding caps and bodies of capsules into the receiving sockets of said disks respectively, means for trimming the caps and bodies in said sockets, means for joining the capsule bodies in the registering sockets of said disks when said sockets move into alinement, and means for rotating said disks in unison.

[Claims 6 to 24 not printed in the Gazette.]

961,937. ELECTRIC WATER-HEATER. WILLIAM F. CUTLER, San Francisco, Cal., assignor to Cutler National Electric Heater Company, San Francisco, Cal., a Corporation of California. Filed July 8, 1909. Serial No. 506,530.



1. In an apparatus of the character described, the combination of a heating chamber, a vertical series of inverted cup-shaped insulators therein, coils in said insulators, electric conductors leading to said coils, and means for admitting liquid into and out of said heating chamber, substantially as described.

2. In an apparatus of the character described, the combination of a heating chamber, a vertical series of inverted cup-shaped insulators therein, each insulator being apertured to permit the liquid to freely circulate therethrough, coils in said insulators, electric conductors leading to said coils, and means for admitting liquid into and out of said heating chamber, substantially as described.

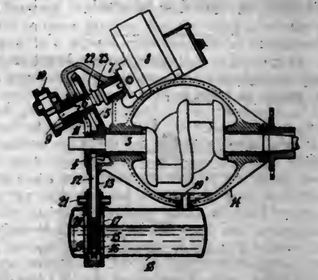
3. In an apparatus of the character described, the combination of a heating chamber, a vertical series of inverted cup-shaped insulators therein, said insulators having apertures alining vertically with each other, a vertical coil extending through said apertures, coils in said insulators, electric conductors leading to said coils, and means for admitting liquid into and out of said heating chamber, substantially as described.

4. In an apparatus of the character described, the combination of a heating chamber, a vertical series of inverted cup-shaped insulators therein, each formed with a central aperture and a depending hub around said aperture, heating coils in said insulators, electric conductors leading to said coils, and means for admitting liquid into and out of said heating chamber, substantially as described.

5. In an apparatus of the character described, the combination of a heating chamber, a vertical series of inverted cup-shaped insulators therein, each apertured to permit the liquid to freely circulate therethrough, coils in said insulators, electric conductors leading to said coils, a discharge pipe for conducting the liquid from said heating chamber, means for admitting the liquid at the opposite end of the heating chamber to that from which said discharge pipe conducts, and an auxiliary supply pipe discharging into said heating chamber at the same end as that from which the discharge pipe conducts, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

961,938. EXPLOSION-ENGINE. PIERRE ALEXANDRE DARRACQ, Suresnes, France, assignor to Société A. Darracq & Cie. (1905) Limited, Suresnes, France. Filed Oct. 8, 1909. Serial No. 521,749.

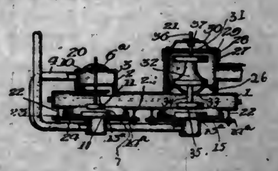


1. In an explosion engine the combination with a cylinder, a piston therein, a crank shaft and a member connecting the piston to the crank shaft, of valve mechanism, ignition mechanism and water circulating mechanism, a spindle, means arranged on said spindle to operate the said three mechanisms, an oil pump arranged with its axis at an angle with the said spindle, and a pinion and cam on the crank shaft adapted to drive respectively the spindle and the oil pump.

2. In an explosion engine the combination with a cylinder, a piston therein, a crank shaft and a member connecting the piston to the crank shaft, of valve mechanism, ignition mechanism and water circulating mechanism, a spindle, means arranged on said spindle to operate the said three mechanisms, an oil pump arranged with its axis at an angle with the said spindle, and means on the crank shaft adapted to drive respectively the spindle and the oil pump.

3. In an explosion engine the combination with a cylinder, a piston therein, a crank shaft, a casing for the crank shaft and a member connecting the piston to the crank shaft, of a valve mechanism, ignition mechanism, and water circulating mechanism, a spindle, means arranged on said spindle to operate the said three mechanisms, an oil pump arranged with its axis at an angle with the said spindle, means on the crank shaft adapted to drive respectively the spindle and the oil pump, an oil tank adapted to hold the oil pump, and a pipe connection between the crank casing and the oil tank for the purpose set forth.

961,939. ADJUSTABLE VALVE FOR PIANO-PLAYER ACTIONS. CHARLES L. DAVIS, Detroit, Mich., assignor, by mesne assignments, to A. Miller Belfield and John P. Mentzer, trustees, Chicago, Ill. Filed Jan. 25, 1907. Serial No. 353,995.

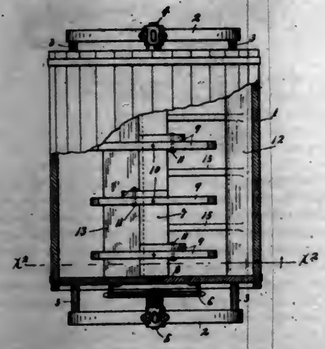


1. The combination of a casing providing a valve chamber and having a port in its top, a bridge mounted upon the top of said casing, a valve confined in the casing and having a spindle which projects out through the top thereof and through said bridge and has its upper end threaded, and a bushing "37" threaded upon the threaded portion of said valve spindle.

2. The combination of a casing providing a pneumatic chamber, a valve spindle extending up through the top of said casing and having its upper end threaded and a valve carried by said spindle, an exposed member at the top of

said casing which is accessible to be held so as to permit rotation of the spindle relatively to said member for the permanent adjustment of the valve, together with a pouch below the valve spindle with reference to which the valve with its spindle is adjusted.

961,940. COMBINED CHURN AND BUTTER-WORKER. REUBEN B. DISBROW, Owatonna, Minn. Filed Oct. 7, 1909. Serial No. 521,564.



1. In a butter worker, the combination with an approximately horizontal rotary drum, of a working roller loosely journaled therein and provided with laterally separated working blades spaced longitudinally of said roller, and which roller is adapted to be rotated by the weight of the butter engaged with the blades thereof on the rising side of the drum.

2. In a butter worker, the combination with a horizontally disposed rotary drum, provided with one or more lifting flights, of a working roller loosely journaled in said drum at the axis thereof and provided with laterally separated working blades spaced longitudinally on said roller, and which roller is adapted to be rotated by the weight of the butter engaged with the blades thereof on the rising side of the drum, substantially as described.

3. In a butter worker, the combination with a horizontally disposed rotary drum provided with one or more lifting flights, of a working roller loosely journaled in said drum, working blades having notches embracing said working roller and arranged in transverse intersecting pairs rigidly secured to said roller and to each other, substantially as described.

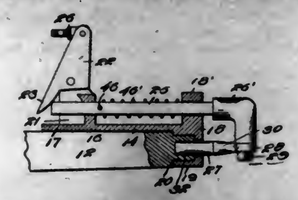
4. In a butter worker, the combination with a horizontally disposed rotary drum, of a working roller having a square cross section journaled in said drum, working blades having notches fitting the said rollers, bolts passing diametrically through said roller and through said blades, and bolts connecting said blades in transverse intersecting pairs, substantially as described.

5. In a butter worker, the combination with a horizontally disposed drum provided with a multiplicity of lifting flights, of a working roller loosely journaled in said drum at the axis thereof, working blades secured to and longitudinally spaced on said working roller, and circumferentially extended segmental dividing webs secured to the interior of the cylindrical shell of said drum between said lifting flights, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

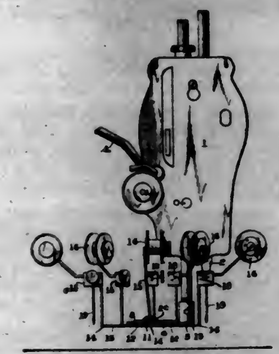
961,941. HORSE-DETACHER. JOSEPH E. DREW, Bradentown, Fla. Filed Apr. 21, 1909. Serial No. 491,282.

In a device of the class described, a trace releasing member comprising a body portion adapted to be engaged with the extremity of a swingletree, and having spaced guide projections thereon, a member longitudinally reciprocable therein and projecting inwardly of the inner projection, resilient means coengaged with the reciprocating member to hold it at the inner limit of its movement, said reciprocating member having its outer extremity turned downwardly, a retaining pin pivoted upon the downward extension of said reciprocating member for movement longitudinally with respect to the direction of draft upon the swingletree, said inner projection of the body member



being bifurcated and having pivoted therein a dog having a portion projecting over the path of the reciprocating member and adapted to engage against the inner extremity to propel it outwardly, said retaining pin being adapted to be seated in a suitable socket at the extremity of a swingletree for the support of a trace against disengagement, and means for operating said dog.

961,942. SEWING-MACHINE ATTACHMENT. VITO E. D'URSO, New York, N. Y. Filed Dec. 6, 1909. Serial No. 531,730.



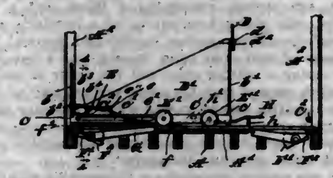
1. A sewing machine attachment in which is comprised a support adapted to be secured to the presser foot of a sewing machine, horizontally rotatable arms carried by said support, and a removable needle-carrier mounted upon each of said arms, substantially as shown and described.

2. The combination with the presser foot and needle bar of a sewing machine, of a horizontally rotatable carrier provided with arms for a plurality of thread holders, a plurality of thread holders, and a plurality of removable needle carriers connected to the arms of the horizontally rotatable carrier, substantially as shown and described.

3. In a sewing machine attachment, the combination with the presser foot of a sewing machine, of a carrier for a plurality of horizontally rotatable arms mounted thereon, spring clasps secured to said arms, removable needle clamps held by said spring clasps, needles carried by the needle clamps, and a plurality of thread carriers mounted on the horizontally rotatable arms, substantially as shown and described.

4. In a device of the character herein specified, the combination with the presser-foot of a plurality of movable arms carried by said presser-foot, spring clasps mounted on said arms, and removable needle-carriers adapted to be held by said spring-clasps, substantially as shown and described.

961,943. MAIL-DISCHARGING APPARATUS. JAMES ROSS ENGLAND, Chicago, Ill. Filed Oct. 20, 1909. Serial No. 523,617.



1. A discharge receptacle comprising a bottom, sides and end pieces detachably secured together, and means for tilting said receptacle into discharge position, substantially as described.

2. A discharge receptacle having a bottom, sides and ends detachably secured together, means for tilting said receptacle into an inclined position and dropping the forward end piece to form an elongation of the bottom of the receptacle, substantially as described.

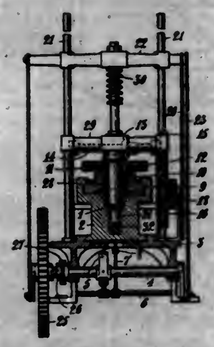
3. A discharge receptacle having the bottom, sides and ends thereof detachably secured together, means for moving it forward and tilting said receptacle into an inclined position, and means for limiting its forward movement, substantially as described.

4. A discharge receptacle having the bottom, sides and ends thereof detachably secured together, means for moving said receptacle forward and tilting it into an inclined discharge position and simultaneously dropping the forward end piece to form an elongation of the bottom of the receptacle, means for limiting the forward movement of the receptacle, and means for moving said receptacle to normal position, substantially as described.

5. A discharge receptacle, having a bottom, side and end members hinged thereto and adapted to be raised and secured in upright position, wheels upon which said receptacle is mounted, mechanism coöperating with said receptacle to simultaneously move it forward into discharge position, means for limiting its forward movement, and means for restoring it to normal horizontal position, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

961,944. MACHINE FOR MOLDING THREADED OBJECTS. FRANS WILHELM ENGSTRÖM, Nybro, Sweden. Filed Apr. 2, 1909. Serial No. 487,424.



1. A machine for molding threaded objects, comprising a mold part adapted to receive the non-threaded part of the object to be produced, a threaded mold part adapted to receive the threaded part of the said object, means for screwing the said mold parts into close contact with each other, a plunger movable through the threaded mold part into and out of the mold, means for causing the said plunger to move in such a manner that, when the mold parts have been screwed together, the plunger moves farther into the mold and presses the mass therein into all parts of the same, and means for automatically imparting to the slide containing the non-threaded mold part a lateral movement in relation to the other mold part, when the latter and the plunger have been entirely retracted.

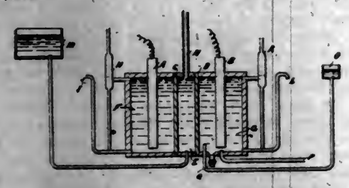
3. A machine for molding threaded objects, comprising a slide containing a mold part adapted to receive the non-threaded part of the object to be produced, a threaded mold part adapted to receive the threaded part of the said object, means for screwing the said mold parts into close contact with each other, a plunger movable through the threaded mold part into and out of the mold, means for causing the said plunger to move in such a manner that, when the mold parts have been screwed together, the plunger moves farther into the mold and presses the mass therein into all parts of the same, means for moving the slide containing the non-threaded mold part laterally in relation to the other mold part when the latter and the plunger have been entirely retracted, a piston placed in the slide, below the mold, and adapted to be moved into and out of the said mold, the end of the piston forming the bottom of the said mold, and means for moving the said piston into the mold and thereby pressing out the molded object when the slide has been moved laterally in relation to the retracted plunger.

4. A machine for molding threaded objects, comprising a mold part adapted to receive the non-threaded part of the object to be produced, a threaded mold part adapted to receive the threaded part of the said object, means for screwing the said mold parts into close contact with each other, a plunger movable through the threaded mold part into and out of the mold, means for causing the said plunger to move in such a manner that, when the mold parts have been screwed together, the plunger moves farther into the mold and presses the mass therein into all parts of the mold, and a pin movably mounted in a passage in the wall of the non-threaded mold part and adapted to project with its inner end into the mold.

5. A machine for molding threaded objects, comprising a slide containing a mold part adapted to receive the non-threaded part of the object to be produced, a threaded mold part adapted to receive the threaded part of the said object, means for screwing the said mold parts into close contact with each other, a plunger movable through the threaded mold part into and out of the mold, means for causing the said plunger to move in such a manner that, when the mold parts have been screwed together, the plunger moves farther into the mold and presses the mass therein into all parts of the same, means for moving the slide containing the non-threaded mold part laterally in relation to the other mold part when the latter and the plunger have been entirely retracted, a piston placed in the slide, below the mold, and adapted to be moved into and out of the said mold, the end of the piston forming the bottom of the said mold, a pin movably mounted in a passage in the wall of the slide and adapted to project with its inner end into the mold, a bar mounted on the slide in such a manner as to be able to move at an angle to the said pin, said bar engaging the pin so as to pull it out of the mold, when the bar is operated, and means for operating the said bar and the bottom piston of the mold, when

the slide has been moved laterally in relation to the retracted plunger, so that the pin is first withdrawn from the mold and the piston is thereupon raised to press the molded object out of the mold.

961,945. METHOD OF MANUFACTURE OF BICARBONATE OF SODA. ROBERT HUGH FORSYTHE FINLAY, Belfast, Ireland. Filed July 17, 1908. Serial No. 444,005.



1. In the manufacture of bicarbonate of soda by the Solvay process, subjecting the mother liquor to electrolysis in the cathode chamber of a cell separated by one or more diaphragms from the anode chamber which is filled with sodium chlorid solution for the purpose of recovering the ammonia and obtaining hydrogen and chlorin.

2. In the manufacture of bicarbonate of soda by the Solvay process, subjecting the mother liquor, after the addition of sodium chlorid, to electrolysis in the cathode chamber of a cell, separated by one or more diaphragms from the anode chamber which is filled with sodium chlorid solution for the purpose of recovering the ammonia and obtaining hydrogen and chlorin.

3. In the manufacture of bicarbonate of soda by the Solvay process, subjecting the mother liquor to electrolysis in the cathode chamber of a cell which is supplied with carbonic anhydrid and which is separated by one or more diaphragms from the anode chamber which is filled with sodium chlorid solution for the purpose of recovering the ammonia and obtaining hydrogen and chlorin.

4. In the manufacture of bicarbonate of soda by the Solvay process, subjecting the mother liquor after the addition of sodium chlorid, to electrolysis in the cathode chamber of a cell, which is supplied with carbonic anhydrid and which is separated by one or more diaphragms from the anode chamber which is filled with sodium chlorid solution for the purpose of recovering the ammonia and obtaining hydrogen and chlorin.

5. In the manufacture of bicarbonate of soda by the Solvay process, subjecting the mother liquor to electrolysis in the cathode chamber of a cell separated by one or more diaphragms from the anode chamber which is filled with a sodium salt solution for the purpose of recovering the ammonia and obtaining hydrogen and chlorin.

[Claims 6 and 7 not printed in the Gazette.]

961,946. CAN-OPENER. ROBERT FRANKEN, Los Angeles, Cal., assignor to G. Edwin Alderson, Delano, Cal. Filed May 20, 1908. Serial No. 433,873.



1. A can opener, comprising a single piece of flat metal terminating at the outer end thereof in a plurality of arms disposed in different vertical planes one above another, the upper arm being formed into a piercing bill and the upper edge of the bill formed into a cutting edge, said bill being offset from the body of the blade at its point of juncture therewith, the bill also being flared or inclined from the vertical inwardly from its lower to its cutting edge, the lower of said arms adapted to form a bearing against the outer vertical wall of the can and to guide the cutting edge of the bill against the inner vertical wall of the can during a cutting operation, and a fulcrum bearing formed at the juncture of the two arms.

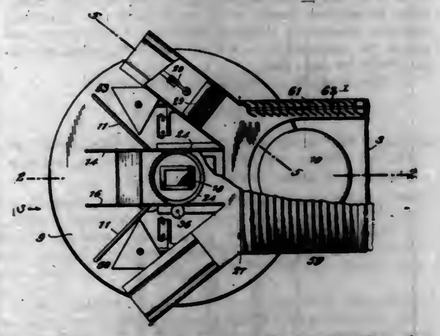
2. A can opener, comprising a shank and a handle therefor, said shank terminating in a plurality of arms disposed one above another in different vertical planes, the upper of said arms being formed into a can-piercing point having a cutting edge, and the lower of said arms adapted to contact with the outer vertical wall of the can during a cutting operation, the upper arm being offset in a direction transverse to the plane of the shank, whereby to provide space for the insertion of the vertical wall of the can when operating the opener.

3. A can opener, comprising a flat metallic shank and a handle therefor, the outer end of the shank terminating in a plurality of arms vertically disposed one above another and lying in different planes, the upper of said arms being formed into a cutting blade and the lower of said arms forming a guide for the upper arm during a cutting operation, and a fulcrum bearing formed at the juncture of the two arms.

4. A can opener, comprising a flat metallic shank and a handle therefor, the outer end of said shank terminating in two arms disposed in vertical planes one above another and lying in different parallel planes, the upper of said arms being formed into a cutting blade and the lower of said arms bearing against the outer wall of the can and guiding the upper arm during a cutting operation.

5. A can opener, comprising a flat metallic shank and a handle therefor, the outer end of said shank terminating in two arms disposed in a vertical plane one above another, the upper of said arms being formed into a cutting blade, and being offset in a parallel plane from the lower of said arms the lower of said arms forming a guide for the upper arm during a cutting operation.

961,947. AMUSEMENT APPARATUS. ROBERT FULGORA, FREDERICK S. MURRAY, and WALTER MURRAY, New York, N. Y. Filed Nov. 10, 1909. Serial No. 527,157.



1. In an amusement apparatus, the combination of a rotatable primary reflector fixed in a position oblique to its axis of rotation; a secondary reflector maintained in coöperative relation with said primary reflector; and a support for the subject arranged to rotate with said primary reflector.

2. In an amusement apparatus, the combination of a rotatable cabinet; a primary reflector carried thereby and mounted oblique to the axis of rotation; and a secondary reflector maintained in coöperative relation with said primary reflector and facing in one and the same general direction.

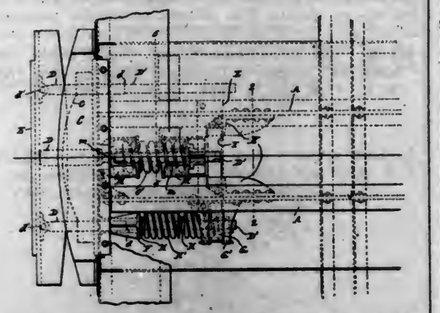
3. In an amusement apparatus, the combination of a rotatable cabinet; a primary reflector carried thereby and mounted oblique to the axis of rotation; a secondary reflector maintained in coöperative relation with said primary reflector and facing in one and the same general direction; and means for artificially lighting said cabinet carried thereby.

4. In an amusement apparatus, the combination of a rotatable cabinet; a primary reflector carried thereby and mounted oblique to the axis of rotation; a secondary reflector maintained in coöperative relation with said primary reflector and facing in one and the same general direction; means for artificially lighting said cabinet carried thereby; and a seat mounted to move with said cabinet.

5. In an amusement apparatus, the combination of a rotatable cabinet; a primary reflector carried thereby and mounted oblique to the axis of rotation; a secondary reflector carried by said cabinet and having a pivotal connection therewith; means for rotating said cabinet; and means for holding the secondary reflector against rotation.

[Claims 6 to 18 not printed in the Gazette.]

961,948. BUFFING MECHANISM FOR PASSENGER-CARS. RICHARD D. GALLAGHER, Jr., New York, N. Y., assignor to Standard Coupler Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 22, 1909. Serial No. 485,044.



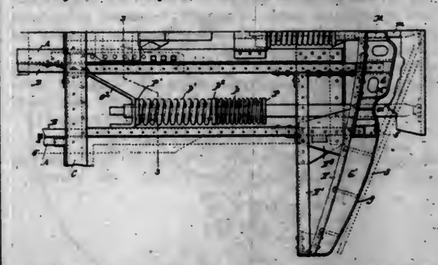
1. In a buffing mechanism, the combination with the car framing embodying longitudinal sills and buffer beam, bearings in the buffer beam for the center and side stems and stops secured to the sills and against which a rear follower rests for resisting inward movement of the center stem springs, said stops having a space between them through which the center stem and its springs may move inwardly, of a buffer, side stems pivotally connected with the buffer for resisting outward movement, a center stem bearing at its forward end against the buffer and at its inner end extending into proximity to the stops, a rear center stem follower removably held by said stops and having a central bearing in which the center stem works, a forward follower for the center stem, a shoulder on the stem coöperating with said follower and springs interposed between said followers, the arrangement being such that the buffer and center stem may be drawn forward to disengage the rear end of the center stem from the rear follower and the latter be removed, permitting the center stem and its springs to be removed inwardly between the stops.

2. In a buffing mechanism, the combination with the car framing, buffer and side stems, of a buffer beam extension having an elongated bearing therein, a center stem extending through said bearing and adapted to be removed therefrom by inward movement, a rear follower removably mounted in the framing and having an aperture for the passage of the inner end of the center stem, spring cups mounted on said center stem between the rear follower and buffer beam extension, a shoulder on the center stem coöperating with the forward spring cup and springs interposed between said cups.

3. In a buffing mechanism, the combination with the car framing, buffer beam and buffer beam extension having the forwardly projecting elongated rectangular bearings for the side and center stems, of the side stems having rectangular outer ends mounted in said bearings and pivotally connected with the buffer, the center stem having a rectangular outer end working in the bearing in the buffer beam extension and adapted to be entirely removed inwardly through said bearing, a shoulder on the center stem, a spring cup coöperating with said shoulder and adapted to have its forward movement limited by the buffer beam, a rear follower removably mounted in the framing and having a bearing for the center stem, a spring cup mounted on the center stem and adapted to seat against said follower, and springs interposed between said spring cups.

4. In a buffing mechanism, the combination with the car framing, buffer, buffer beam, side stems and side stem springs, of a center stem, a rear follower supported in the framing at the inner end of the center stem, a spring surrounding the center stem and oppositely disposed spring cups mounted on the center stem in position to engage the follower and beam, respectively, said cups having flanges on their proximate faces adapted to abut, the space between said flanges being less than the aggregate spaces between the spring coils and between the spring and cups whereby the compression of the spring is limited by the engagement of the flanges.

961,949. CAR CONSTRUCTION. RICHARD D. GALLAGHER, Jr., New York, N. Y., assignor to Standard Coupler Company, New York, N. Y., a Corporation of New Jersey. Filed May 21, 1909. Serial No. 497,489.



1. In car construction, the combination with the main sills extending longitudinally of the car, an end sill against which the longitudinal sills abut, a buffer beam and platform sills intermediate and connected with the buffer beam and end sill, all of said parts being in the same horizontal plane, of supplemental sills extending longitudinally of the car and secured to the sides of the main longitudinal sills on the inner side of the end sill, the ends of said supplemental sills being bent down below the end sill and extended forward in direct contact with and forming the support for the end sill, platform sills and buffer beam.

2. In car construction, the combination with the main sills extending longitudinally of the car, an end sill forming an end abutment for the main sills, and extending transversely beyond the main sills at each side, a buffer beam and platform sills intermediate and rigidly connected with both the end sill and buffer beam, of supplemental sills arranged parallel with the main sills, the inner ends of the supplemental sills being in the plane of and secured to the sides of the main sills and their outer ends being below and directly supporting the end sill, buffer beam, and platform sills, the intermediate portions of the supplemental sills being bent to connect the ends which lie in different horizontal planes and strengthening irons secured to the bent portions of the supplemental sills.

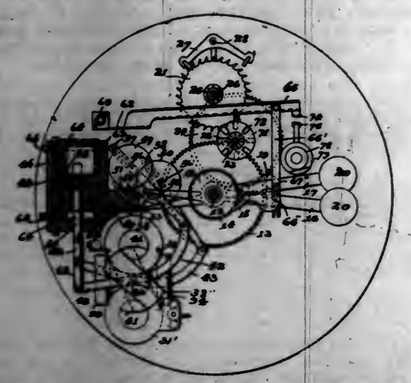
3. In car construction, the combination with the end sill, buffer beam and main longitudinal sills of channel iron section, extending in the plane of the end sill and buffer beam, of the supplemental sills of channel iron section secured to the sides of the main sills and having their ends bent down to underlie and support the end sill and buffer beam and edge strengthening irons of L-section secured to the depressed ends of the center supplemental sills.

4. In car construction, the combination with the end sill, buffer beam and main longitudinal sills extending in the plane of the end sill and buffer beam, of the supplemental sills located in the plane of the main sills and having their ends bent down to underlie and support the end sill and buffer beam strengthening irons secured to the bent portions of the supplemental sills and a truss iron passing from the ends of the end sill under the supplemental sills.

5. In car construction, the combination with the end sill, buffer beam and main longitudinal sills extending in the plane of the end sill and buffer beam, of the supplemental sills located in the plane of the main sills and having their ends bent down to underlie and support the end sill and buffer beam, a truss iron extending from the end sill under the supplemental sills and queen posts interposed between the truss and supplemental sills to form a space for the draft gear.

[Claims 6 to 8 not printed in the Gazette.]

961,950. MASTER-CLOCK. FRED I. GETTY, Jennings, La., assignor to Charles F. Gillmann, New York, N. Y. Filed Jan. 20, 1910. Serial 539,073.



1. In a clock, the combination with the clock movement, and a primary weighted lever arranged to directly actuate said clock movement by gravity, of a secondary weight adapted to over-balance and raise the primary weighted lever, when released and permitted to descend, an electro-magnet operatively engaging the said secondary weight to lift the former to a normally uplifted position, an electric circuit including said magnet, and clock controlled contact devices for closing said circuit at the end of a predetermined interval of time.

2. In a clock, the combination with the clock movement, and a weighted lever arranged to drive said movement, of a secondary weight adapted to act upon said lever to raise the weighted end thereof as said secondary weight descends, an over-balancing weight, lever connections between said secondary and over-balancing weights whereby the descent of one uplifts the other, an electro-magnet, operative connections between said electro-magnet and said over-balancing weight whereby the latter is raised during the closing movement of the armature of the magnet, and the secondary weight thereby caused to descend, an electric-circuit including said magnet, and contact devices controlled by said clock mechanism, whereby said electric circuit is closed at the end of a predetermined interval.

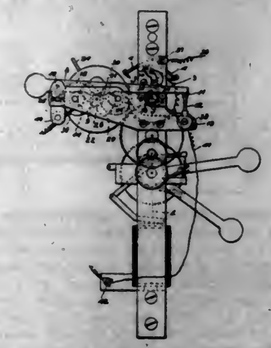
3. In a clock, the combination with the clock movement, and a weighted lever arranged to drive said movement, of a secondary weight pivotally mounted to oscillate in a definite vertical plane, and arranged to act upon said lever to raise the weighted end thereof, an over-balancing weight, link and lever connections between said secondary and over-balancing weights, a rocking support constituting the fulcrum upon which said lever connections are mounted, a magnet having an oscillatory armature operatively connected with said rocking support, an electric circuit including said magnet and contact devices controlled by said clock movement.

4. In a clock, the combination with the clock movement, and a primary weighted lever arranged to drive said movement, of a secondary weight adapted to raise said weighted lever, an over-balancing weight operatively connected to raise said secondary weight, mechanism arranged to raise said over-balancing weight, means arranged to retard the descent of said over-balancing weight under the action of gravity, and a clock controlled trip mechanism controlling the mechanism which lifts the over-balancing weight, substantially as described.

5. In a clock, the combination with the clock movement, a primary actuating weight and an over-balancing weight, of means for retarding the movement of said over-balancing weight comprising a dash-pot cylinder within which said weight is arranged to move, and a restricted passage extending from one end of said dash-pot to the other, whereby the controlling fluid is permitted to pass gradually around the weight.

[Claims 6 to 13 not printed in the Gazette.]

961,951. CIRCUIT-CONTROLLER. FRED I. GETTY, Jennings, La., assignor to Charles F. Gillmann, New York, N. Y. Filed Jan. 20, 1910. Serial No. 539,074.



1. In a circuit controlling mechanism, the combination of an electro-magnet, a contact carrying member having an armature portion movably mounted within the field of said magnet, a contact device upon said contact carrying member, a fixed contact device arranged to coöperate therewith, other circuit connections including said contact devices and magnet, an armature proper coöperating with said magnet, and operative connections between said armature and said contact carrying member, for the purpose set forth.

2. In a circuit controlling mechanism, the combination of an electro-magnet, a contact carrying member having an armature portion movably mounted within the field of said magnet, a contact device upon said contact carrying member, a relatively fixed contact arranged to coöperate therewith, circuit connections including said contact device and said magnet in the same circuit, means for causing the initial movement of said contact carrying member to bring said contact devices into touch, an armature proper movably mounted in the field of said magnet, and operative connections between said armature proper and said contact carrying member whereby the closing movement of the armature operates to positively force the contacts into complete engagement.

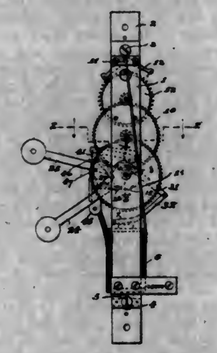
3. In a circuit controlling mechanism, the combination with a clock movement, of fixed and movable contact devices, the initial movement of said movable contact device being controlled by said clock movement, and an electro-magnet operatively connected with said movable contact to force the latter into more positive engagement with the relatively fixed contact, for the purpose set forth.

4. In a circuit controlling mechanism, the combination of an electro-magnet, a member having an armature portion movably mounted within the field of said magnet, a contact device upon said contact member, a relatively fixed contact device arranged to coöperate therewith, circuit connections including said contact device and said magnet, a clock actuated trip mechanism operating to release said contact carrying member at predetermined intervals, said contact carrying member being constructed to move by gravity into closed position when released, and means for restoring said contact carrying member to its normal uplifted position.

5. In a circuit controlling mechanism, the combination with an electro-magnet, a relatively fixed contact device, and a clock controlled contact device, of circuit connections including said contact devices and magnet, an armature portion connected with said movable contact and arranged in a field of said magnet whereby said movable contact is drawn into more positive engagement with the fixed contact by the energizing of the magnet, a second armature proper arranged in the field of said magnet, and operative connections between said movable contact and said second armature whereby the moving of the armature into closed position operates to positively move the contact into open position, said connections embracing lost motion mechanism, for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

961,952. ELECTRIC CLOCK. FRED I. GETTY, Jennings, La., assignor to Charles F. Gillmann, New York, N. Y. Filed Jan. 20, 1910. Serial No. 539,075.



1. In an electric clock, the combination of an arbor of a clock train, a weight arm adapted to swing from an upper to a lower position, means for coupling said weight arm with the arbor during downward movement thereof to cause rotation of the clock train, electro-magnetic means for re-setting the arm from its lower to its upper position, a circuit for said electro-magnetic means, and means for locking said arm against further movement upon failure of the electro-magnetic means to re-set said arm to its upper position.

2. In an electric clock, the combination of an arbor of a clock train, a weight arm adapted to swing from an upper to a lower position, means for coupling said weight arm with the arbor during downward movement thereof to cause rotation of the clock train, electro-magnetic means for re-setting the arm from its lower to its upper position, a circuit for said electro-magnetic means, and means for opening said circuit and retaining it in open condition upon failure of the electro-magnetic means to re-set the arm to its uppermost position.

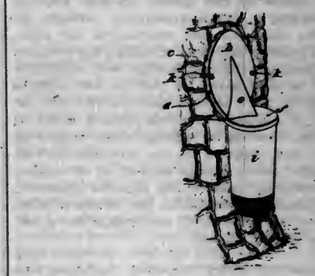
3. In an electric clock, the combination of a clock train, a weight arm adapted to swing from an uppermost to a lowermost position, means for coupling the weight arm with the clock train during its downward travel whereby the clock train is driven, electro-magnetic mechanism for re-setting the arm to its uppermost position, a circuit for said electro-magnetic mechanism, and means for locking said arm against further movement and for permanently opening said circuit upon failure of the electro-magnetic mechanism to fully reset said arm.

4. In an electric clock, the combination of a clock train, a weight arm adapted to swing from an uppermost to a lowermost position, means for coupling the weight arm with the clock train during its downward travel whereby the clock train is driven, electro-magnetic mechanism for re-setting the arm to its uppermost position, a circuit for said electro-magnetic mechanism, contact mechanism for said circuit, means for closing said circuit when the arm reaches its lowermost position to cause operation of electro-magnetic mechanism, and means for permanently opening said circuit at the contact mechanism directly after failure of the electro-magnetic mechanism to properly reset said arm.

5. In an electric clock, the combination of a clock train, a weight arm adapted to swing from an uppermost to a lowermost position, means for coupling the weight arm with the clock train during its downward travel whereby the clock train is driven, electro-magnetic mechanism for re-setting the arm to its uppermost position, a circuit for said electro-magnetic mechanism, contact mechanism for said circuit, means for closing said circuit when the arm reaches its lowermost position to cause operation of electro-magnetic mechanism, and means for positively locking said arm against further movement and for permanently opening said circuit at the contact mechanism directly after failure of the electro-magnetic mechanism to fully re-set said arm.

[Claims 6 to 13 not printed in the Gazette.]

961,953. SAP OR GUM EXTRACTOR. JOHN T. GILMER, Florala, Ala. Filed Aug. 6, 1909. Serial No. 511,619.

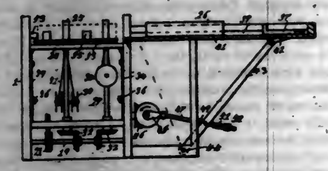


A sap or gum extractor comprising a cap formed of a substantially flat plate provided with a shallow rearwardly extending annular flange, a cover for a collecting vessel disposed at an approximate right angle to the cap and formed of a plate having a downwardly extending flange, the plate of the cover being approximately in contact with the flange of the cap, the plate of the cap having an opening through its lower portion extending approximately to its flange and the plate of the cover being provided with an opening located adjacent said opening of the cap, and a hollow member connected at one end to the cap and inclosing said opening therethrough and connected at the other end to the cover and inclosing said opening therethrough, the hollow member forming a conduit between said openings and also forming a bracket connecting the cap and cover.

961,954. CRATE-MACHINE. MICHAEL GLEASON, Hamilton, Ohio. Filed Aug. 21, 1909. Serial No. 514,010.

1. A crate machine comprising a feeding table formed with a slot, a plunger movable longitudinally in the slot, an arm having one end pivotally secured at a fixed point,

a link connecting the plunger with the other end of the arm, a driven crank shaft, a pitman actuated thereby, and adjustable means for yieldingly connecting the pitman with an intermediate portion of the arm.



2. A crate machine comprising a feeding table, a plunger longitudinally movable thereon, an intermittently driven crank shaft, adjustable yielding connections of the plunger therewith, a series of twisters, means for actuating them alternately with the crank shaft, and a stop for limiting the movement of a picket by the plunger.

3. A crate machine comprising a twister plate secured at fixed points, a series of resilient clamps mounted thereon, a series of twisters journaled in said plate beneath the respective clamps, a gravity spacing plate slidably mounted above the twister plate, a series of slat guides thereon, a plunger for feeding the slats between said guides, an intermittently driven crank shaft, adjustable yielding connections of the plunger therewith, cam actuated lever mechanism for lifting the spacing plate, and means for actuating the twisters during the inaction of the plunger and after the spacing plate is in the elevated position.

4. In a crate machine, the combination with a twister plate secured at fixed points, a series of twisters journaled therein, a series of resilient clamping jaws secured on said plate and projecting above the respective twisters, of a gravity spacing plate slidingly mounted over the twister plate, a series of slat guides thereon, yielding mechanism for feeding a slat longitudinally between the guides, and driven cam and gear mechanism for alternately raising the spacing plate and actuating the twisters.

5. In a crate machine, the combination with a twister plate, a series of twisters journaled therein, and a series of resilient clamping jaws secured thereon over the respective twisters, of a movable spacing plate, a series of slot guides thereon, a series of spacing hooks hinged on the spacing plate and actuated in one direction by contact with the twister plate, springs secured to the respective hooks for actuating them in the opposite direction, driven gear mechanism for actuating the twisters intermittently, and cam actuated lever mechanism for alternately raising the spacing plate.

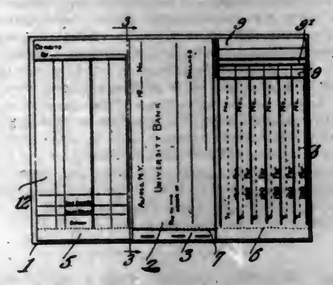
961,955. ELASTIC TIRE FOR VEHICLE-WHEELS. BOLESLAS ANDRÉ GODEK, Paris, France. Filed Nov. 11, 1907, Serial No. 401,711. Renewed Apr. 12, 1910. Serial No. 555,102.



1. An elastic tire for vehicle wheels comprising in combination an air chamber made from metal consisting of the hollow felly and an outer flexible steel band closing the open outer end of said felly, a band of india-rubber placed in the open end of the felly under the steel band so that its edges are tightly pressed against the side walls of the felly through the action of the compressed air contained in the felly, and a tread of suitable elastic material fixed to the outer surface of the steel band, substantially as described and shown and for the purpose set forth.

2. An elastic tire for vehicle wheels comprising in combination with the metallic air-chamber formed by the hollow felly, an outer steel band closing the open end of the felly and an india-rubber band in said open end of the felly under the steel band, a central partition consisting of a T shaped vertical projection of the felly for forming two adjacent but separate air-chambers in the tire, substantially as described and shown and for the purpose set forth.

961,956. CHECK-BOOK. ELWOOD E. HAMILTON, Alfred, N. Y. Filed Sept. 1, 1909. Serial No. 515,595.



1. The combination of a cover, a record sheet placed within said cover and perforated near one margin, a pad of checks placed over the record sheet and provided near one end with a row of perforations registering with the line of perforations in the record sheet, and binding applied to the cover, the record sheet, and the checks between the perforations and the adjacent edge of the sheet.

2. The combination of a cover made in panels, a record sheet within the cover and also made in panels, a pad of checks of the size of one panel placed over a panel of said sheet and provided near one end with a row of perforations, and binding applied to the pad beyond said perforations and to that panel of the sheet and cover.

3. The combination of a cover made in panels, a pad of checks perforated across one end, a backing extending over said end beyond the perforations and beneath the bottom check, a record sheet longer than the width of the checks and located between the bottom check and that portion of the backing beneath it and perforated in line with the perforations of the checks, and binding applied to the pad of checks beyond their perforations, to that panel of the cover, and to the sheet where interposed between them.

4. The combination of a cover made in three panels, a pad of checks of the size of one panel disposed above the intermediate panel of the cover and perforated across one end, a record sheet of the size of the cover and disposed between it and the pad and perforated on a line registering with the perforations of the pad, and binding applied to the pad and to the intermediate panels of the sheet and cover.

961,957. CLOCK AND WATCH. ROBERT B. HANSELL, Baltimore, Md. Filed June 9, 1909. Serial No. 501,108.

1. In combination with the case of a clock or watch, a rotary bezel carrying a chart, the outer edge of which bezel is provided with an annular recess having an upper and a lower surface, in which rests the inwardly projecting edge of the said case, substantially as specified.

2. In combination with the case of a clock or watch having an inwardly projecting rim or flange, a bezel provided with a chart and a recess having an upper and a lower surface in its outer circumference into which the flange of the case projects, substantially as specified.

3. In combination with the case of a clock or watch, a bezel carrying an annular chart, and provided with a removable ring on its underside whereby an annular recess in the bezel is produced in which the edge of the case rests,



and screws to hold the ring in place, substantially as specified.

961,958. GRAIN-CONVEYER. CHARLES J. HARTLEY, Decatur, Ill. Filed Oct. 9, 1909. Serial No. 521,926.



1. In conveyers, a screw conveyer formed in sections, one section thereof being longitudinally movable to and from operative relation with respect to another section thereof.

2. In conveyers, a casing having several discharge openings, means to open and close one of said openings, and a screw conveyer in said casing and formed in sections capable of acting together, one of the sections of said conveyer being movable independently of the other section to an inoperative position with respect thereto.

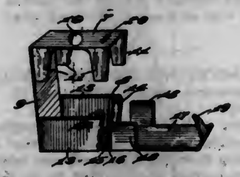
3. In conveyers, a casing having several spaced discharge openings, a screw conveyer in said casing, said conveyer comprising a longitudinally movable section provided with means for closing and opening one of said discharge openings.

4. In conveyers, a sectional screw conveyer, the shaft of one section being extended and telescoping the other section and means for alternately operatively connecting and disconnecting said sections.

5. In conveyers, a screw conveyer comprising separable sections, the shaft of one section being extended and slidably telescoping the other section, means for applying power to one section, and means for operatively connecting and disconnecting said sections.

[Claims 6 to 9 not printed in the Gazette.]

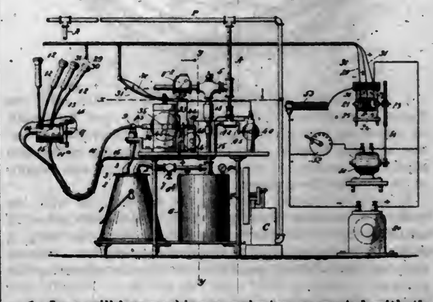
961,959. ATTACHMENT FOR GAS-FIXTURES. URSULA K. HERFURTH, Philadelphia, Pa. Filed Jan. 8, 1910. Serial No. 537,000.



1. An attachment for gas fixtures, comprising top and bottom plates, said top plate having an opening to receive the upwardly projecting screw of a gas fixture, a strip connecting said plates, tongues on the lower plate adapted to be positioned at opposite sides of the turning key, and a strip hinged to said bottom plate and adapted to be removably connected to the top plate.

2. An attachment of the character described, comprising top and bottom plates and a strip connecting them at one end, said top plate having an opening to receive the screw at the upper end of the gas fixture, depending lugs at both edges of the top plate adapted to straddle the gas fixture, upwardly projecting tongues on the lower plate adapted to be positioned beside the turning key of the fixture, a strip hinged at one end to the free end of the bottom plate, the top plate having a slot therein, a locking tongue on the free end of the last mentioned strip adapted to enter said slot, ears on the edges of said strip adapted to be positioned outside of the said tongues, and the ends of said tongues bent inward, substantially as set forth.

961,960. MILKING-MACHINE. MILTON A. HICKS, Weathersfield, Vt., assignor to Vermont Farm Machine Company, Bellows Falls, Vt., a Corporation of Vermont. Filed May 17, 1907. Serial No. 374,264.



1. In a milking machine, a pulsator connected with the teat-cups, a double coil solenoid, a reciprocating core therefor connected with the pulsator valve, a source of electrical supply in circuit with the two solenoid coils, and means to direct the current through the two coils in series and alternately therewith through one and then the other of such coils.

2. In a milking machine provided with teat-cups, and a vacuum producing apparatus, a pulsator through which vacuum is applied to the teat-cups, electrical means to operate the pulsator valve, a junction box to which the vacuum pipe and teat-cups are connected, a compressed air pipe connected with the junction box, a valve in said pipe, and electrical means to operate the compressed air valve immediately after the operation of the pulsator valve.

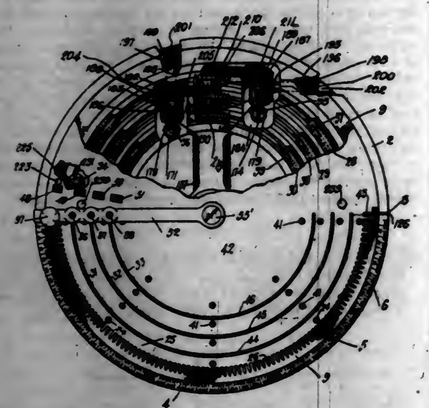
3. In a milking machine provided with teat-cups, and a suction and a compressed air apparatus, a junction box with which the teat-cups, a suction and a compressed air pipe, are connected, a pulsator in the suction pipe connection and a valve in the compressed air pipe, electrical means to operate the pulsator and immediately thereafter to open the said air valve, and means at the junction box, operated by the action of the compressed air, to cause said electrical means to close the compressed air valve.

4. In a milking machine provided with teat-cups, and a suction and a compressed air apparatus, a junction box for said cups and a suction and a compressed air pipe, a flexible diaphragm in said box, an electrical circuit breaking device connected with the diphragm, which opens the circuit when deflected by vacuum in the box, and closes the circuit when vacuum therein is relieved.

5. In combination with a milking machine provided with teat-cups and vacuum and compressed air connections therewith, an electrically operated pulsating valve in the vacuum connection, and an electrically operated valve in the compressed air connection.

[Claims 6 to 13 not printed in the Gazette.]

961,961. CALCULATING-MACHINE. ADAM HOCH, Providence, R. I., assignor to Adding and Subtracting Machine Company, a Corporation of Rhode Island. Filed Feb. 23, 1909. Serial No. 479,382.



1. In a calculating machine, the combination with the frame, of a numeral ring slidably mounted upon the frame, an operating arm pivotally mounted in the frame concentric with the ring, a plunger slidably mounted in the arm adapted to engage the ring, and means in the arm adapted to actuate the plunger.

2. In a calculating machine, the combination with the frame, of a numeral ring upon the frame, an arm pivotally mounted upon the frame concentric with the ring, a plunger slidably mounted in the arm and adapted to engage the ring, and slidable means in the arm for actuating the plunger.

3. In a calculating machine, the combination with the frame, of a numeral ring upon the frame, an arm pivotally mounted upon the frame concentric with the ring, a reciprocating plunger in the arm adapted to engage the ring, and means in the arm for reciprocating the plunger.

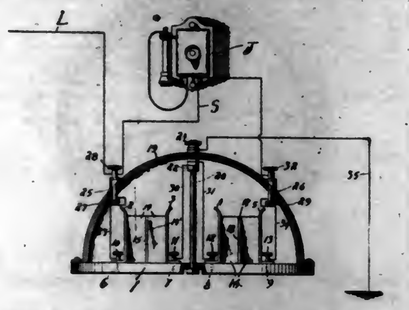
4. In a calculating machine, the combination with the frame, of a numeral ring upon the frame, an arm pivotally mounted upon the frame concentric with the ring, a reciprocating plunger in the arm adapted to engage the ring, and slidable means in the arm for reciprocating the plunger.

5. In a calculating machine, the combination with the frame, of a plurality of numeral rings slidably mounted in the frame, an operating arm pivotally mounted upon the frame, a plurality of plungers slidably mounted in the arm above the rings and adapted to engage the same, and means in the arm for selectively operating the plungers.

[Claims 6 to 26 not printed in the Gazette.]

961,962. PROTECTIVE DEVICE. JESSE D. HOFFMAN, Duke, Okla., assignor of one-half to Nancy L. Burrow, Duke, Okla. Filed Sept. 21, 1909. Serial No. 518,880.

A protective device of the character described, comprising a base plate, a spheroidal cover mounted on said base plate, a plurality of pairs of spaced plates mounted on said base plate beneath said cover, a pair of electrodes inserted between each pair of plates and connected with its adjacent plate, the members of each pair of electrodes being separated by a perforated insulating material, a binding post for each pair of plates mounted on said cover adapted for electrical connection with a line wire and with one plate of its respective pair; a vertical rod disposed between said pairs of plates and having its lower and upper ends threaded and projecting through the base plate and cover respectively, the threaded portion of the upper end of said rod being disposed both above and below the cover, a nut mounted on the threaded lower end of the rod adapted to bear against the end face of the base plate, a nut mounted on the threaded upper portion of the rod disposed above the cover for electrical connection with



a supplemental ground wire and a nut mounted on the threaded portion of the upper end of the rod disposed beneath the cover for electrically connecting the rod with the other plate of each pair.

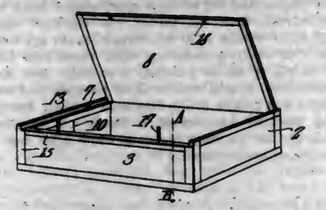
961,963. PERCOLATOR. RAYMOND E. HUGHES, Holbrook, Ontario, Canada, assignor of one-third to Charles H. Harrison, Holbrook, Canada. Filed Nov. 4, 1908. Serial No. 461,047.



A percolator comprising a permeable bottom member, a hinged sleeve carried by the bottom member, a slotted outwardly extending tab carried by the bottom member at a point opposite to the hinged sleeve, a top member removably disposed upon the bottom member, said top member having an outwardly extending flange located above the hinged sleeve and having a second oppositely disposed outwardly extending flange located above the slotted tab, a wire engaged through the hinged sleeve, said wire extending upwardly at opposite sides of the hinged sleeve and through the flange thereabove, said wire being turned inwardly above the flange and then having its portions turned in parallel relation to extend over the top, said portions having convolutions therein upon the top to produce registering upwardly extending loops, said wire having its portions beyond the loop extended downwardly over the second mentioned flange of the top and having the extremities of its portions bent to produce an inwardly directed latch engaged beneath the slotted tab, the portions of the wire adjacent to the latch lying in the slot of the tab.

961,964. KNOCKDOWN CIGAR-BOX. MALCOLM HUTCHINSON, Muskegon, Mich. Filed May 26, 1909. Serial No. 498,442.

A cigar box folded from a single integral blank comprising a rectangular body or bottom, front and rear side flaps extending from the front and rear edges of the bottom or body portion and adapted to be folded up at a right angle to the bottom, semi-end flaps extending from the ends of the side flaps and adapted to be folded inward at right angles thereto to meet over the bottom and rest upon the same, end flaps projecting from the ends of the bottom and adapted to be folded up at right angles thereto outside of and against the semi-end flaps, the said end flaps being slightly wider than the side flaps and semi-end



flaps to project above the same, and a cover formed on the outer edge of the rear side flap and foldable thereon to rest upon the front side flap and the semi-end flaps flush with the upper edges of the end flaps.

961,965. DUST-PAN. JOHN WILSON IVERS, Oklahoma, Okla., assignor of one-third to W. A. Burdick, Oklahoma, Okla., and one-third to John T. Marshall, Perry, Okla. Filed Jan. 10, 1910. Serial No. 537,263.



A dust-pan of the character described comprising a body portion, inwardly curved guard flanges formed on the edges of the outer portion of said body, said flanges having their inner portions recessed or cut away, inwardly curved guard plates having their outer edges overlapping and secured to the edges of the recessed portions of the flanges, a tapered tubular handle having its edges left open to form a tapered space between the same, attaching lugs formed on the inner end of said handle and adapted to be secured to the body portion and guard flanges of the pan, and an apertured extension formed on the handle between said attaching lugs.

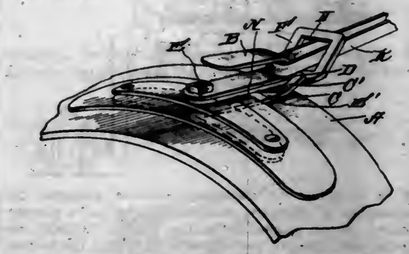
961,966. EXPLOSIVE-DRIVEN ENGINE. ALBERT A. JAHNKE, Oakland, Cal. Filed Aug. 25, 1908. Serial No. 450,134.



1. In an apparatus of the class described, the combination of a cylinder, a piston therein, means for feeding into said cylinder regulated quantities of an explosive, means carried by the piston for severing the part of the explosive so fed from the remainder at each stroke of the piston, said cylinder being formed with an exhaust passage arranged to be uncovered by the piston on its outward movement, and means for detonating the explosive within the cylinder, substantially as described.

2. In an apparatus of the class described, the combination of a cylinder, a piston therein, means for feeding into said cylinder regulated quantities of an explosive, said cylinder being formed with an exhaust passage arranged to be uncovered by the piston on its outward movement, and means for detonating the explosive within the cylinder comprising a spark terminal, the piston having a shoulder arranged to approach within a sparking distance from said terminal to form the other terminal, substantially as described.

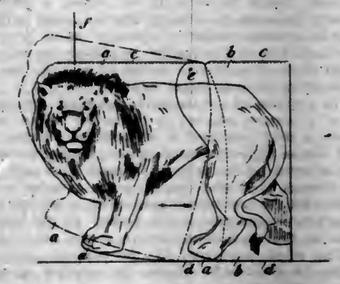
961,967. ATTACHMENT FOR HARNESS. CHARLES J. JOHNSON, Denver, Colo. Filed Mar. 19, 1910. Serial No. 550,321.



1. In combination with the saddle and check hook of a harness, a rein holding loop fastened to the saddle and having an opening adapted for the reception of the check rein engaging said hook, and a pad loop having an opening adapted to engage said rein holding loop.

2. In combination with the saddle of a harness, a check hook fastened thereto, a rein holding loop having an opening therein for the reception of the check rein and which is designed to engage said hook, the shank portion of said loop being contracted, and a pad loop having an opening through which the shank portion of said rein holding loop passes.

961,968. TOY FIGURE. ALBERT ERNEST KENNEDY, Leyton, England. Filed Mar. 26, 1910. Serial No. 551,728.



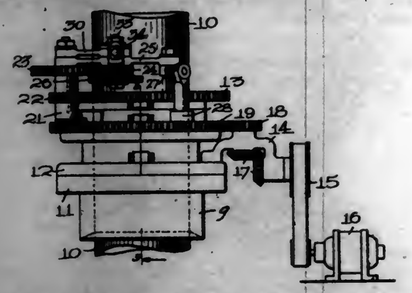
1. A toy figure comprising two parts designed to be supported on their bases in an upright position one behind the other and hinged together in such a manner that when one part is turned on the hinge away from the other part and released its weight will again cause it to assume the upright or normal position and drag or pull the latter part toward it, substantially as described.

2. A toy figure comprising two parts of folded cardboard or the like with the folds uppermost and their lower

edges separated to form supporting bases the said parts being hinged together in such a manner that when one part is turned on the hinge away from the other part and released its weight will again cause it to assume the upright or normal position and drag or pull the latter part toward it, substantially as described.

3. A toy figure comprising the parts *a* and *b* of folded cardboard or the like hinged together at *c* and supported on their bases *d*, *d* and a cord *f* or the like attached to the part *a*, substantially as described.

961,969. DEVICE FOR GRINDING ELEVATOR-PLUNGERS. ANDREW R. KLINGLOFF, Roslindale, Mass. Filed Feb. 11, 1910. Serial No. 543,377.



1. In a device for smoothing elevator plungers, the combination of a rotary element mounted on a plunger cylinder, means supported by the plunger cylinder for rotating said element, and means for grinding the surface of the plunger.

2. In a device of the character described, the combination of a grinding wheel, means rotatably mounted for supporting the grinding wheel, and means for simultaneously rotating said means and rotating the wheel on its axis.

3. In a device of the character described, the combination of a bracket adapted to be carried by an elevator cylinder, a shaft journaled in said bracket, a pinion on the shaft, means for rotating the pinion, a gear wheel rotatably mounted on the cylinder in mesh with said pinion, and means carried by said gear wheel for grinding the surface of the plunger.

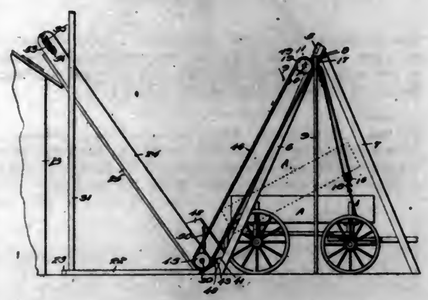
4. In a device of the character described, the combination of a bracket adapted to be carried by an elevator cylinder, a shaft journaled in said bracket, a pinion on the shaft, means for rotating the pinion, a gear wheel rotatably mounted on the cylinder in mesh with said pinion, a bracket carried by the gear wheel, a grinding wheel journaled on the bracket in position to engage the surface of the plunger, and means for rotating the grinding wheel as the gear wheel rotates.

5. In a device of the character described, the combination of a bracket adapted to be carried by an elevator cylinder, a shaft journaled in said bracket, a pinion on the shaft, means for rotating the pinion, a gear wheel rotatably mounted on the cylinder in mesh with said pinion, a gear wheel fixed with respect to the cylinder and concentric with the first named gear wheel, a bracket carried by the first named gear wheel, a shaft on the bracket, a pinion on the shaft engaging the second gear wheel, a grinding wheel supported by the bracket, and means whereby as said shaft rotates, the grinding wheel will rotate on its axis.

[Claims 6 to 10 not printed in the Gazette.]

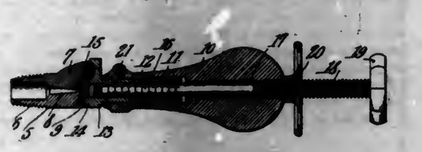
961,970. GRAIN ELEVATOR AND DUMP. FRANK KEAL, Vermillion, Kans. Filed June 16, 1909. Serial No. 502,524.

1. The combination with a beam, of a supporting standard secured to each end, a forwardly extending brace bar pivotally secured to each standard, a lateral brace pivotally secured to the upper end of each standard, a shaft revolubly supported by said standards, a rope having one end secured to said beam and the remaining end to said shaft, a pulley carried by said rope, wagon body engaging means carried upon the pulley, an elevator housing, a driving shaft within said housing, a chain sprocket upon said driving shaft, a chain sprocket upon said first mentioned shaft, a chain passing over said two sprockets, an endless belt within said housing passing over said driving shaft, and means to operate said driving shaft whereby said elevator and standard shaft are synchronously actuated by the driving shaft to wind said rope as and for the purpose set forth.



2. The combination with a beam, of a standard secured to each end, a forwardly extending brace bar pivotally secured to each standard, a lateral brace pivotally secured to the upper end of each standard, a shaft secured to the upper end of said standards, a rope having one end secured to said beam and the remaining end to said shaft, a pulley carried by said rope, an elevator housing, a driving shaft within said housing, a chain sprocket upon said driving shaft, a chain sprocket upon said first mentioned shaft, a chain passing over said two sprockets, an endless elevator belt within said housing passing over said driving shaft, a ratchet wheel carried by said first named shaft, a pawl secured to one of said standards for coaction with said ratchet, means to connect and disconnect said first mentioned sprocket from the driving shaft whereby said elevator belt and standard shaft may be synchronously actuated to wind said rope and move said elevator belt at times, and the elevator may be operated independently at others.

961,971. GAGE-COCK. FRANK WALLACE LEIDECKER, Marietta, Ohio, assignor of one-eighth to Charles Mount, Carmen, Ohio. Filed Jan. 31, 1910. Serial No. 541,140.



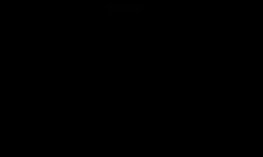
1. In a gage cock, a member having a discharge orifice, a member having a longitudinal bore, a tube seating in one end of said bore, the tube and member being separably connected, a stem mounted in the other end of the bore, and adapted to enter the tube, a closure for the discharge orifice comprising a packing mounted in the tube, and means for operating the stem to advance the packing from the tube into position to seat on the discharge orifice.

2. In a gage cock, a member having a discharge orifice, a weighted member having a longitudinal bore, a tube seating in one end of said bore, and pivotally connected to the first mentioned member, the tube and weighted member being separably connected, a stem mounted in the other end of the bore, in alinement with the bore of the tube, and adapted to enter the same, a closure for the aforesaid discharge orifice comprising a packing mounted in the tube, and means for operating the stem to advance the packing from the tube into position to seat on the discharge orifice.

3. In a gage cock, a nipple, a lug projecting from the nipple, and having a discharge orifice, a tube having a head at one end, and formed with spaced ears between which the lug is received, the bore of the tube opening through the head, a pivot pin passing through the lug and the ears, a handle having a longitudinal bore in one end of which the tube is mounted, said tube and handle being removably connected, a stem mounted in the other end of the bore of the handle, and adapted to enter the bore of the tube, a closure for the discharge orifice comprising a packing mounted in the bore of the tube, and means for operating the stem to advance the packing from the tube into position to seat on the discharge orifice.

4. In a gage cock, a closure for the discharge orifice thereof, said closure comprising a magazine, a facing carried by the magazine, a weight removably connected to the magazine, and means carried by the weight for advancing the facing from the magazine into position to seat on the aforesaid discharge orifice.

961,972. INK-WELL. VICTOR L. LITTIG, Davenport, Iowa. Filed Apr. 2, 1910. Serial No. 553,135.



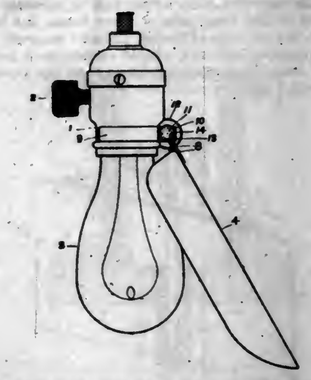
1. An ink well consisting of a body having formed in it an ink receptacle having an opening at its top, a supplemental pocket in its upper face connected with the dipping-opening by a groove in the upper face of the body, and a pen groove in the upper face of the body intersecting said pocket, and a sphere adapted to seat in the pocket.

2. In an ink well, a body having formed in it an ink receptacle whose mouth is in the upper face of the body, said upper face being also provided with a pocket or depression at a point to one side of said mouth and also with a pen-holding groove extending across said pocket or depression, and a closure device adapted to cover said mouth or to rest in said pocket, said closure device being rounded in cross section so as to adapt it to be rolled from the mouth opening into said pocket and vice versa.

3. An ink well consisting of a receptacle having an opening in its top, said opening being adapted to receive a spherical closure device, the top of said block having a lateral run-way extending laterally from the opening and terminating in a pocket also adapted to receive said spherical closure device, said block being also provided with a transverse pen-groove in its upper face which intersects said pocket, and a rolling closure device which when in said pocket will extend across said pen groove.

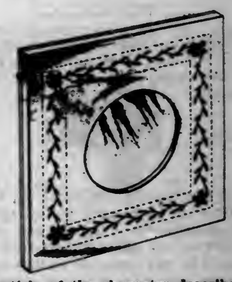
961,973. ADJUSTABLE SHADE FOR ELECTRIC LIGHTS. DAVID D. LOCKWOOD, Bridgeport, Conn. Filed June 5, 1909. Serial No. 500,290.

A shade for an incandescent light bulb, comprising a clip having spring eyes separated by a space, a suitable shade to which said clip is secured, spring arms having a tang which latter extends within said space, a headed bolt



extending through said eyes and tang, and a thumb nut whereby the parts may be secured together and relaxed.

961,974. EMBROIDERY-BACKING. PHILIP LONDON, New York, N. Y. Filed Dec. 12, 1908. Serial No. 467,313.



1. In an article of the character described, the combination of a frame, constructed with a central opening, a sheet of fabric stretched over and attached to the frame, a rigid detachable backing, fitting closely in the opening of the frame and means for holding the backing in its place.

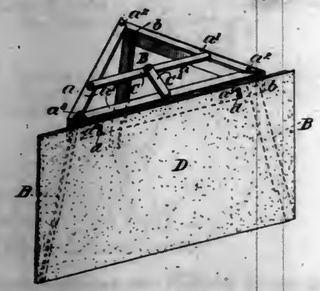
2. In an article of the character described, the combination of a frame, constructed with a central opening, a sheet of embroidery fabric stretched over and attached to the frame, a rigid detachable backing covering up the back of the embroidery and fitting closely in the frame, and means for holding the backing in its place.

961,975. FOLDING CAMP-STOVE. HENRY H. LONG, La Crosse, Wis. Filed Aug. 7, 1909. Serial No. 511,786.

1. A folding camp stove comprising, a triangular folding frame formed of three angle iron sections or bars the horizontal flanges of which are overlapped at their ends and there pivotally connected, one of said connections being separable or removable, and a leg pivoted to the inner side of every frame bar to fold up under the horizontal flange thereof; whereby when the said removable or separable pivotal connection is removed the three frame bars and their attached legs may be folded together side by side, substantially as set forth.

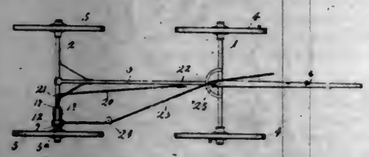
2. A folding camp stove comprising, a triangular folding frame formed of three angle iron sections or bars, the horizontal flanges of which are overlapped at their ends and there pivotally connected; one of said connections be-

ing separable or removable, a cross bar pivoted at one end to the upper side of one of said angle bars to swing over to the upper side of another of the bars or sections, and a leg pivoted to the inner side of every frame bar to fold up under the horizontal flange thereof; whereby when said removable or separable pivotal connection is removed the three frame bars, the cross piece, and the three legs may be folded together as set forth.



3. The combination with the folding triangular frame one of the sections of which is provided with studs or projections and legs pivoted to the frame sections to fold up parallel therewith, of a wind shield having apertures at the upper portion to fit over said studs substantially as set forth.

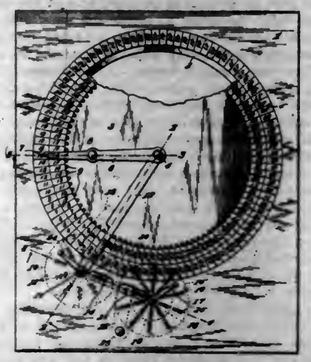
961,976. HITCHING ATTACHMENT FOR WHEELED VEHICLES. WILLIAM D. P. LOWRY and FREDERICK J. WALLING, Minneapolis, Minn. Filed Nov. 7, 1908. Serial No. 461,498.



The combination with a wheeled vehicle, of an annular windlass drum having an externally tapered flange, a casing inclosing said drum and holding the same loosely around an axle thereof with freedom for both rotary and axial movements, a clutch ring carried by the hub of an adjacent wheel and having an internally tapered flange, a pawl and ratchet device, one member of which is carried by said hub and the other by said drum, said pawl and ratchet device serving to rotate said drum in one direction only, and connections for moving said windlass drum axially to and from operative positions, substantially as described.

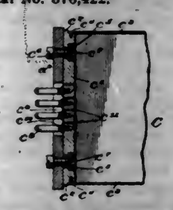
961,977. CALCULATING-MACHINE. JOHN AUGUSTUS LUTZ, St. Petersburg, Fla. Filed June 24, 1909. Serial No. 504,142.

1. A calculating machine comprising a rotatable plate having graduations around its periphery numbered from 1 to 100, means for rotating said plate, a second rotatable plate divided into ten graduated sectors numbered from 100 to 1000, connections between the main plate and the hundred plate for causing the latter to move one step at each complete rotation of the main plate, a third rotatable plate pivotally arranged adjacent to the other plates and divided into ten graduated sectors, each sector being divided by a circle passing through it about midway between its center and its circumference into two parts thus forming two circular series of spaces, the outer series being numbered from 1000 to 10,000 and the inner series from 11,000 to 20,000, an opening in the main plate extending over both series of numbers in the thousands plate, and means for covering one-half of said opening to expose one series only of said numbers.



2. A calculating machine comprising a rotatable plate having graduations around its periphery numbered from 1 to 100, means for rotating said plate, a second rotatable plate divided into ten graduated sectors numbered from 100 to 1000, connections betweep the main plate and the hundred plate for causing the latter to move one step at each complete rotation of the main plate, a third rotatable plate pivotally arranged adjacent to the other plates and divided into ten graduated sectors, each sector being divided by a circle passing through it about midway between its center and its circumference into two parts thus forming two circular series of spaces, the outer series being numbered from 1000 to 10,000 and the inner series from 11,000 to 20,000, an opening in the main plate extending over both series of numbers in the thousands plate, a shutter pivoted to the main plate and extending across the opening over the thousands plate, said shutter being of a width to cover half of the opening and thus expose only one series of numbers.

961,978. ELECTRICAL CONDENSER. RAY H. MANSON, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed May 29, 1907. Serial No. 376,422.

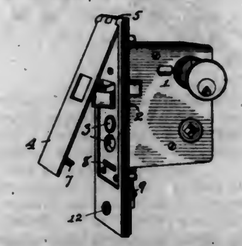


1. The combination of an electrical condenser having a metallic casing, a wooden cover adapted to fit within said casing and being provided with a shoulder engaging the end of said casing, securing nuts disposed in perforations in said cover, a group of condenser terminals secured to the outer side of said cover and being connected with the leading-in wires of the condenser, a perforated mounting strip provided with an opening through which the group of condenser terminals projects, and means operated on the outer side of said mounting strip and extending through the perforations thereof to engage said nuts to firmly secure said condenser to said mounting strip.

2. The combination of an electrical condenser having a metallic casing, a wooden cover adapted to fit within said casing and being provided with a shoulder engaging the end of said casing, retaining screws for attaching said cover firmly to said casing, securing nuts disposed in perforations in said cover, said nuts being flush with the outer and inner surfaces of said cover, a group of condenser terminals secured to the outer side of said cover and being connected with the leading-in wires of the condenser, a perforated mounting strip provided with an opening through which the group of condenser terminals projects thereby providing air insulation for the latter, and screws operated from the outer side of said mounting strip and extending through perforations in said strip and adapted to engage said nuts to securely fasten said condenser to said mounting strip.

3. In an electrical condenser, the combination of an insulated cover therefor, a condenser terminal consisting of a strip of metal split part way down from one of its ends and each split portion bent in opposite directions to positions at angles with the unsplit end, one of said split parts serving as a terminal for an electric circuit, the other split part serving as a terminal for the condenser, and mechanical means associated with the unsplit end attaching it to the cover of the condenser.

961,979. LOCK-STOP PROTECTOR. GEORGE N. MASON, Reading, Pa., assignor to Reading Hardware Company, Reading, Pa., a Corporation of Pennsylvania. Filed Mar. 26, 1910. Serial No. 551,687.



1. A protector for lock stops comprising a plate hinged to the face plate of the lock adapted to cover the stops and means for locking said plate in closed position.

2. A protector for lock stops comprising a plate hinged to the face plate of the lock, adapted to cover the stops a tongue on said plate, and a catch secured to said face plate adapted to engage said tongue when the plate is closed.

3. A lock comprising a casing, a latch bolt, stops for controlling said latch bolt, a plate adapted to cover the exposed ends of said stops and means for locking said plate in closed position.

4. In a lock, a casing, provided with a face plate, a latch bolt, stops for controlling the action of said latch bolt, a locking plate hinged to the face plate and adapted to protect said stops when closed, and a latch secured to the face plate and adapted to engage and lock said locking plate when in closed position.

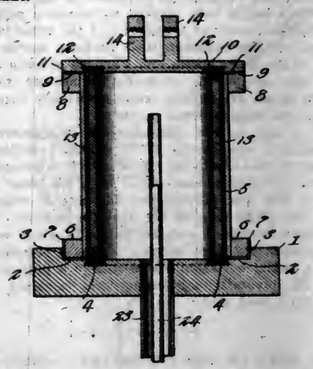
961,980. PHONOGRAM-REPRODUCING APPARATUS. WILLIAM F. MESSER, Chicago, Ill. Filed Aug. 13, 1909. Serial No. 512,718.

1. A phonogram reproducing apparatus, including sealing strips disposed directly above and below the upper and lower edges respectively of the phonogram cylinder.

2. A phonogram reproducing apparatus, including a matrix, means for supporting the matrix, and a sealing strip underlying and bearing directly on the lower edge of the cylinder.

3. A phonogram reproducing apparatus including a base block, a head plate, and a sealing strip inclosed by each of said parts to engage and bear directly on the ends of the record cylinder.

4. A phonogram reproducing apparatus including a base block, a head plate, a matrix supported in the block and engaged by the head plate, the contacting surfaces of the matrix and head plate being formed to provide a series of divergent air escapes disposed in the same horizontal plane.



5. A phonogram reproducing apparatus including a matrix, a record cylinder, a base block, a head plate, said base block and head plate being formed with a plurality of radially-disposed channels to permit escape of air from between the matrix and cylinder.

[Claims 6 to 12 not printed in the Gazette.]

961,981. PIPE OR ROD CONNECTOR. ALBERT F. MILLER, Kansas City, Kans. Filed June 24, 1909. Serial No. 504,131.



1. In a pipe or rod connector, the combination with two members, one having a substantially hemispherical portion, the other having a disk like portion one flat side of which rests against the plane side of the opposite member, each member having a peripheral boss having a radial hole adapted to receive a pipe or rod and fitted to the curved periphery of the opposite member, of means for pivotally connecting the two members on an axis extending centrally through the disk like and hemispherical portions.

2. In a pipe or rod connector, the combination with two members each having a substantially hemispherical portion, of a third member having a disk like portion the flat sides of which respectively rest against the plane sides of the first two members, each member having a peripheral boss having a radial hole adapted to receive a pipe or rod and fitted to the curved peripheries of the other two members, and means for pivotally connecting the three members on an axis which extends centrally through the disk like and hemispherical portions.

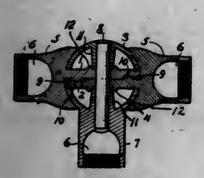
3. In a pipe or rod connector, the combination with two members, one having a substantially hemispherical portion, the other having a disk-like portion, one flat side of which rests against the plane side of the opposite member, each member having a peripheral boss adapted to receive a pipe or rod and fitted to the curved periphery of the opposite member, the member having the hemispherical portion being provided also on said hemispherical portion with a peripheral boss similar to the other bosses and disposed at right angles thereto and in the center of said hemispherical portion, of means for pivotally connecting the two members on an axis extending centrally through the disk-like and hemispherical portions.

4. In a pipe or rod connector, the combination with two members each having a substantially hemispherical

portion, of a third member having a disk-like portion, the flat sides of which rest respectively against the plane sides of the first two members, each member having a peripheral boss with a radial hole adapted to receive a pipe or rod and fitted to the curved peripheries of the other two members, one of said hemispherical portions having a boss similar to the other bosses and disposed radially and centrally, and means for pivotally connecting the three members on an axis which extends centrally through the disk like and hemispherical portions.

5. In a pipe or rod connector, the combination with two members, one having a substantially hollow hemispherical portion the plane side of which is provided with a central cylindrical diametrical stud, the other member having a disk like portion one flat side of which rests against the plane side of the opposite member, the disk like portion having an annular flange in which said stud is rotatively fitted, each member having a peripheral boss having a radial hole adapted to receive a pipe or rod, of means for pivotally connecting said members concentrically with said stud.

961,982. PIPE OR ROD CONNECTOR. ALBERT F. MILLER, Kansas City, Kans. Filed Feb. 12, 1910. Serial No. 543,547.



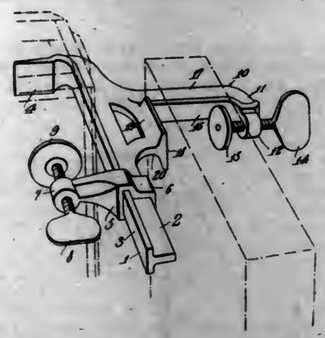
1. In a pipe or rod connector, the combination with two members each having a substantially hemispherical portion, of two other members, each having a disk like portion, said disk like portions being disposed flatwise against each other and against the plane sides of said hemispherical portions respectively, each of said members having a peripheral boss having a radial hole adapted to receive a pipe or rod and fitted to the curved peripheries of the other three members, and means for pivotally supporting said four members on an axis extending centrally through said disk like and hemispherical portions.

2. In a pipe or rod connector, the combination with two members each having a substantially hemispherical portion, of two other members, each having a disk like portion, said disk like portions being disposed flatwise against each other and against the plane sides respectively of said hemispherical portions, each of said members having a peripheral boss having a radial hole adapted to receive a pipe or rod and fitted to the curved peripheries of the other three members, the disk like members having means for locking them against rotation relative to each other, and means for pivotally supporting said four members on an axis which extends centrally through said disk like and hemispherical portions, and upon which the hemispherical members may swing relative to the other members and relative to each other.

3. In a pipe or rod connector, the combination with two members each having a substantially hemispherical portion, of two other members, each having a disk like portion, said disk like portions being disposed flatwise against each other and against the plane sides of said hemispherical portions, each of said members having a peripheral boss having a radial hole adapted to receive a pipe or rod and fitted to the curved peripheries of the other three members, one of said disk like portions having a projection and the other a recess in which the projection is fitted for preventing relative rotation of the disk-like members, and means for pivotally mounting said four members on an axis which extends centrally through said disklike and hemispherical portions.

4. In a pipe or rod connector, the combination with two members each having a substantially hemispherical portion, of two other members each having a disk like portion, said disk like portions being disposed flatwise against each other and against the plane sides of said hemispherical portions respectively, each of said members having a peripheral boss with a radial hole adapted to receive a pipe or rod and fitted to the curved peripheries of the other three members, one of said hemispherical members having another boss similar and disposed radially and centrally at right angles to the other bosses, and means for pivotally mounting said four members on an axis extending centrally through said disklike and hemispherical portions.

961,983. DOOR-SUPPORTING CLAMP. ANCIL B. MORSE, North Freedom, Wis. Filed June 5, 1909. Serial No. 500,280.



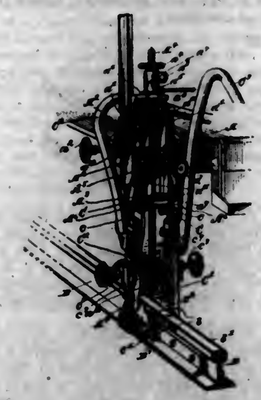
A device adapted to support a door while the edges thereof are being dressed, the said device comprising a body terminally provided with a fixed jaw; a movable jaw inclosing the body and slidably mounted thereon; a clamp adjustably mounted in the movable jaw and operable independently of the fixed jaw to coöperate with the fixed jaw in engaging a support; the body being provided with a rectangularly disposed standard having its end overbent; a clamp adjustably mounted in the overbent end of the standard and operable at right angles to the first named clamp; there being a fixed jaw formed integrally with the standard and the body at their point of union, and arranged to coöperate with the last named clamp in engaging the door to be dressed, the last named fixed jaw being arranged to outstand from the standard, and likewise to outstand from the body beyond the movable jaw.

961,984. APPARATUS FOR BONDING RAILS. WILLIAM A. NEFF, Cleveland, Ohio, assignor to The Electric Railway Improvement Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 22, 1908. Serial No. 439,852.

1. In apparatus of the class described, the combination of a truck movable along a track; a transversely movable supporting member borne thereby; a vertically movable supporting member borne by said transversely movable member; and an electrode-member pivotally connected with said vertically movable member about a substantially vertical axis.

2. In apparatus of the class described, the combination of a truck movable along a track; a transversely movable supporting member borne thereby; a vertically movable supporting member borne by said transversely movable member; a third supporting member pivotally attached to said vertically movable member about a vertical axis; and an electrode-member pivotally attached to said third supporting member about a horizontal axis.

3. In apparatus of the class described, the combination with a suitable support; of a member pivotally secured thereto about a vertical axis; and two electrode-members pivotally secured at their upper ends about horizontal axes to said first member.



4. In apparatus of the class described, the combination with a suitable support; of a member pivotally secured thereto about a vertical axis; and two electrode-members pivotally secured at their upper ends about independent horizontal axes to said first member.

5. In apparatus of the class described, the combination of a truck movable along a track; a transversely movable supporting member borne thereby; a second member pivotally secured to said first member about a vertical axis; and two electrode-members pivotally secured at their upper ends about independent horizontal axes to said second member.

[Claims 6 to 51 not printed in the Gazette.]

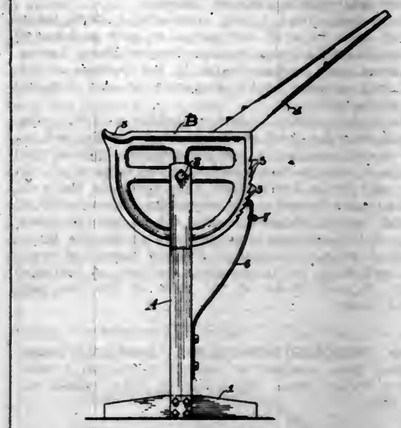
961,985. STOVEPIPE-FASTENER. GEORGE GARFIELD OSWELL, Atkinson, Minn. Filed May 24, 1909. Serial No. 498,029.



In a stove pipe joint, the combination with a stove pipe section having in its exterior a channel which extends inwardly from its end, of a stove pipe section having a longitudinally extending seam projecting inwardly from its interior, said section being adapted to receive the section first-named and the said seam to slide into the channel aforesaid, a split bendable fastener carried by the channeled section with its prongs pointing outwardly, and an apertured fastening strip secured to the seam of the section aforesaid and adapted to be fastened to the other section by the split fastener aforesaid.

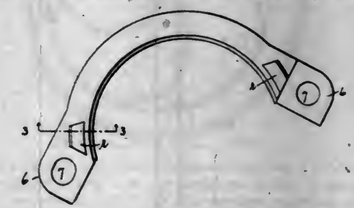
961,986. LIFTING-JACK. CARLTON A. PAISLEY, Winfield, Iowa. Filed Jan. 26, 1907, Serial No. 354,281. Renewed June 17, 1908. Serial No. 439,042.

A lifting jack comprising a standard bifurcated at the top, a head pivoted in said bifurcation comprising a lifting bar having a handle at one end, a parallel brace bar, an arch brace so formed in connection with the lifting bar that power applied to the handle will affect said lifting



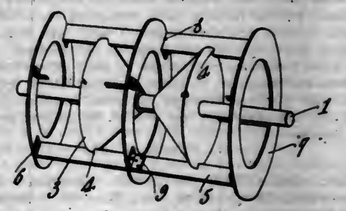
bar directly and through the arch brace, and means for locking said bar in different positions.

961,987. PIPE-COUPLING. ROBERT R. RUST, New York, N. Y. Filed Apr. 16, 1909. Serial No. 490,236.



A sectional bearing ring for coupling pipes, having perforated matching lugs at the ends of the sections for the passage of draw bolts and projecting bearing faces adjacent to said lugs, in combination with a pipe section having a flange with a bearing face adjacent to the ring in a plane substantially at right angles to the axis of the pipe.

961,988. STALK-CUTTER. LEE SANDERS, Belcherville, Tex. Filed Feb. 1, 1910. Serial No. 541,282.



1. In a stalk cutter, a rotor comprising a shaft, conical heads mounted upon the shaft, radially disposed blades supported upon said conical heads, and annular blades supported upon said radially disposed blades.

2. In a stalk cutter, a rotor comprising a shaft, conical heads mounted upon the shaft and having their conical

portions oppositely disposed, radially disposed blades mounted upon the said heads and annular blades supported upon said radially disposed blades.

3. In a stalk cutter, a rotor comprising a shaft, heads mounted upon the shaft and having at their peripheries radially disposed recesses, radially disposed blades having their inner edge portions seated in the recesses of the heads, and annular blades supported by said radially disposed blades.

4. In a stalk cutter, a rotor comprising a shaft, heads mounted upon the shaft and having radially disposed recesses at their peripheries, radially disposed blades having their inner edge portions seated in the recesses of the heads, said blades having their ends angularly disposed, annular blades secured to the angularity disposed ends of the said radially disposed blades, and an annular blade having at its periphery recesses which receive the intermediate portions of the radially disposed blades and angle irons applied to the intermediate portions of the said radially disposed blades at the sides of the last said annular blade.

961,989. BLACKSMITH'S PLIERS. DANIEL N. TANNER, Tupelo, Miss., assignor of one-half to Charles J. Shumaker, Tupelo, Miss. Filed Feb. 11, 1910. Serial No. 543,355.



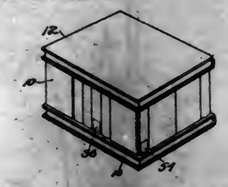
1. A device of the character described comprising a pair of crossed pivoted handles, the ends of said handles forming gripping jaws, the outer edges of said jaws at their extremities being transversely extended upon one side of the pivotal point of said handles and extended downwardly in close relation to each other to form supplementary gripping jaws.

2. A device of the character described comprising a pair of crossed pivoted handles, jaws formed on the outer ends of said handles, the extremities of said jaws being disposed in the same vertical plane, the outer edges of said jaws being transversely extended at their extremities and downwardly disposed to form supplementary gripping jaws, said jaws terminating in close relation to each other and disposed upon one side of the pivotal point of said handles.

961,990. BOX-COVER FASTENER. BENEDICT TUKIS, Cambridge, Mass. Filed Dec. 27, 1909. Serial No. 535,132.

1. A box, having, in combination, a body portion, a closure therefor, a projection on one of said members, means on the other of said members for cooperating with said projection to hold the closure in closed position, and means wholly hidden from view and operated from a plurality of points for controlling the operation of said holding means, substantially as described.

2. A box, having, in combination, a body portion, a closure therefor, a projection on one of said members, a catch on the other of said members cooperating with said projection to hold the closure in closed position, means operated from a plurality of points for controlling the operation of said catch, and a flexible sheet of material arranged to hide said controlling means from view, substantially as described.



3. A box, having, in combination, a body portion, a closure therefor, means for holding the closure in closed position, and means wholly hidden from view within the body portion, but adapted to be operated at a plurality of points from the outside thereof, for controlling the operation of the holding means, substantially as described.

4. A box, having, in combination, a body portion, a closure therefor, a projection on the closure, a catch for engaging the projection, a lever carried by the body portion and adapted to engage said catch to free it from said projection, and means for preventing the operation of said lever to free said catch from said projection, substantially as described.

5. The combination, with a support, of a lock having a projection mounted on the support, a resilient catch adapted to engage the projection, a lever for engaging and moving the catch out of engagement with the projection, means normally preventing the manual operation of the lever to free said catch from said projection, and means for freeing the lever to allow manual operation thereof, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

961,991. DREDGE FOR POWDER-CANS. EMIL H. W. ULLRICH, Chicago, Ill. Filed May 20, 1909. Serial No. 497,277.



1. A can adapted to hold powdered and pulverized substances, comprising a can-body; a top for said can-body; a projection on said top, there being in the top of said projection a filling and dumping opening located on one side of the center line of said projection; a cover for said projecting portion removably located thereon; a central depression in the top of said projecting portion and a corresponding projection on said cover adapted to engage said depression; there being one or more openings in said cover, said openings being so located that when the cover is placed upon the projecting portion in one position it will uncover said dumping opening, and when removed and reversed upon said projecting portion, it will close said dumping opening.

2. A can closed on top with the exception of an opening at one side of a center line and a cover for engaging the can top, said cover being closed with the exception of one or more openings at one side of a center line, said cover being adapted for different applications to said box but only by bodily removal of the cover during change from one position to another, one position of said cover on said top causing the cover and box openings to register and another position of the cover on the top causing all openings to be closed.

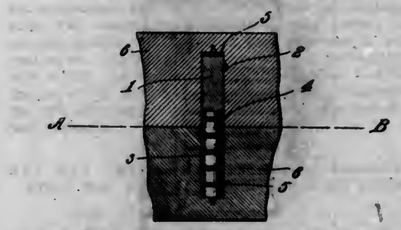
3. A can closed on top with the exception of an opening at one side of a center line and a cover for engaging the can top, said cover being closed with the exception of one or more openings at one side of a center line, said cover being adapted for different applications to said box but only by bodily removal of the cover during change from one position to another, one position of said cover on said top causing the cover and box openings to register and another position of the cover on the top causing all openings to be closed, and means for cutting off communication between the openings in the top end cover when the cover is placed in closed position.

4. A can, having a top, an oblong projection on said top having substantially vertical side walls, there being in the top-surface of said oblong projection an opening located on one side of the transverse center line of said projection, a cover adapted to engage said projection at its side-walls, there being in said cover a series of openings located on one side of the transverse center line of said cover, said cover being bodily removable from, and adapted for reversible application to said projection, one position of said cover upon said projection causing said openings in the top and the cover to register, and the reverse position on said projection of said cover causing said openings to be closed.

5. A can, having a top, an oblong projection on said top having substantially vertical side-walls, there being in the top-surface of said oblong projection an opening located on one side of the transverse center line of said projection, a cover adapted to engage said projection at its side-walls, there being in said cover a series of openings located on one side on the transverse center line of said cover, said cover being bodily removable from, and adapted for reversible application to said projection, one position of said cover upon said projection causing said openings in said top and the cover to register and the reverse position of said top on said projection causing said openings to be closed, there being in said cover and said top sealing-means adapted to cut off communication between the openings in said top and said cover when the cover is in the reverse position and closing the opening in said top.

[Claims 6 to 8 not printed in the Gazette.]

961,992. DOWEL. HORACE A. UNDERWOOD, Kewanee, Ill. Filed Mar. 16, 1910. Serial No. 549,636.

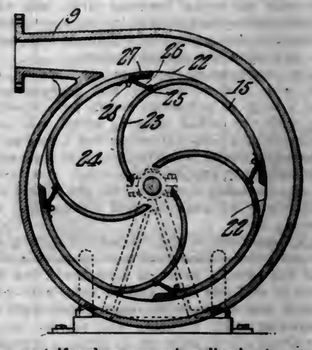


1. A dowel pin having annular cement receiving grooves extended around the pin in spaced planes normal to the axis of the pin and defining in the pin a series of circumscribing ribs, that rib which is located at the end of the opening in which the pin is mounted, constituting an hermetic closure for said opening, thereby to prevent moisture from finding its way into the cement receiving grooves of the pin.

2. The combination with abutting structural elements, provided with alined openings for the reception of a dowel pin, of a dowel pin mounted in said openings, and having annular cement receiving grooves extended around the pin in spaced planes normal to the axis of the pin and defining in the pin, circumscribing ribs, one of said openings being of sufficient depth to position one of the ribs in the pin to extend across the plane of the abutting faces of the structural elements to form an hermetic closure for the adjacent ends of said openings.

3. The combination with abutting structural elements, one of which has an opening extended part way therethrough, the other of which has an opening extended entirely therethrough, of a dowel pin mounted in said openings, and having annular, cement receiving grooves extended around the pin in spaced planes normal to the axis of the pin and defining in the pin, circumscribing ribs, the first named opening being of sufficient depth to position one of said ribs to extend across the plane of the abutting faces of the structural elements, to form an hermetic closure for the adjacent ends of the said openings, and to position another of said ribs to extend across the outer face of the second named structural element to form an hermetic closure for the outer end of the opening in said element.

961,993. CENTRIFUGAL PUMP. JAMES VALK, Topeka, Kans. Filed Mar. 16, 1910. Serial No. 549,655.



1. In a centrifugal pump an impeller having a series of water compartments, each compartment having a central inlet, a peripheral outlet, an intermediate enlarged portion and an air vent in said enlarged portion.

2. In a centrifugal pump, an impeller having a plurality of water compartments extending from a central inlet to peripheral outlets, there being an air vent within a wall of each compartment, and separate means for closing the vents during the priming of the pump.

3. In a centrifugal pump, an impeller having a plurality of water compartments, each having a central inlet, a peripheral outlet and an intermediate enlarged portion, each compartment being provided with means for permitting the escape of air from the enlarged portion thereof.

4. In a centrifugal pump, an impeller having peripheral outlets and a central inlet, webs within the impeller extending in a regular unbroken curve from the inlet to a point in the periphery, which is the rear edge of an outlet, thence coincident with the periphery to the forward edge of the next following outlet, whereby water compartments diminishing in cross sectional area from an intermediate point to the outlet are formed between adjacent webs and the water is delivered from said compartments in the direction of a tangent to the impeller.

5. In a centrifugal pump a casing having a central inlet and a peripheral outlet, an impeller eccentrically mounted within the casing and having a central inlet and peripheral outlets, said impeller having water compartments extending from its inlet to its outlets for directing liquid by centrifugal force into the casing and along lines substantially tangential with the impeller, each compartment having an air vent therein and a valve mounted within each outlet in the impeller and adapted to close the air vent of the next succeeding compartment.

[Claims 6 to 16 not printed in the Gazette.]

961,994. FLOWER-HOLDING AND GRAVE-COVERING DEVICE. JOHN C. VAN AKEN, Ridgway, Pa. Filed July 28, 1909. Serial No. 510,130.



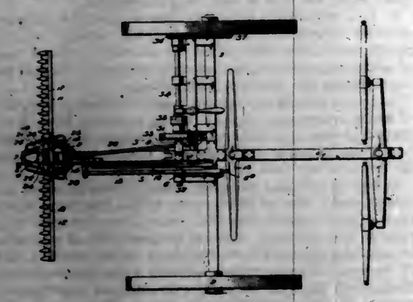
1. In an apparatus of the character described, the combination with a flower-holding and grave-covering carriage, of a strap of adjustable length for connecting said carriage with the casket lowering strap.

2. In an apparatus of the character described, the combination with a flower-holding and grave-covering carriage, of a strap of adjustable length for connecting said carriage with the casket lowering strap, said adjustable strap comprising a body portion having a graduated scale, and a fastening device movable along said scale and adapted to be secured in any desired position.

3. In an apparatus of the character described, the combination with a flower-holding and grave-covering carriage, of a strap of adjustable length for connecting said carriage with the casket lowering strap, said adjustable strap comprising a body portion having a graduated scale, and a fastening device movable along said scale and adapted to be secured in any desired position, and devices carried by said fastening device and the end of said body portion respectively for engaging said carriage and said casket lowering strap.

4. In an apparatus of the character described, a flower-holding and grave-covering carriage comprising adjustable side and end rails, a series of slats projecting inwardly from each of said side rails, and an adjustable center rail constructed and arranged to support said slats intermediate said side rails.

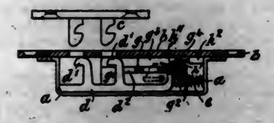
961,995. DITCH-MOWER. JOHN W. YOCUM, Lovelock, Nev. Filed Nov. 20, 1908. Serial No. 463,599.



1. In a ditch mower, the combination with a pivoted frame-piece and a shoe carried thereby which is adapted to travel along the ground, said frame-piece and shoe being free to automatically rise and fall, of a lever adapted for raising the frame-piece and having means for securing the frame-piece in raised position, finger bars pivoted to the shoe, a lever carried by the frame-piece, connections between said lever and the respective finger bars which permit them to independently rise and fall, independently of the rise and fall of the frame-piece, means for locking the lever last-named to initially set the finger-bars, cutting mechanism carried by the finger bars, and means for operating said cutting mechanism.

2. In a ditch mower, the combination with a shoe, of finger bars pivoted to said shoe and adapted to automatically rise and fall independently of each other, means for sustaining said finger bars, cutters carried by the finger bars, a rocker connected to both the said cutters and so pivoted that it will operate them at all times, regardless of the position of the finger bars, and a wrist wheel for oscillating said rocker.

961,996. LOCK. ROBERT ADAMS, London, England. Filed Dec. 2, 1904, Serial No. 235,208. Renewed Sept. 3, 1909. Serial No. 516,123.



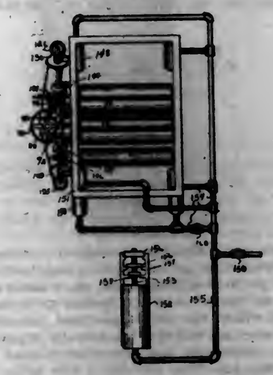
1. A lock comprising a case, a spring actuated bolt, a retractor operative upon the latter, and a resilient lock member normally in engagement with the retractor to hold the same against movement.

2. A lock comprising a case, a spring controlled bolt, a slotted retractor in engagement with said bolt, a plurality of spring metal strips engaging the end walls of the slot and said retractor, and means for disengaging said strips from the retractor and operating said retractor to draw back the bolt.

3. A lock comprising a case, a spring controlled bolt within the latter, a slotted retractor engaging said bolt, resilient means in engagement in the slot in the retractor for locking the same, and means for displacing said resilient means to operate the retractor for drawing back the bolt.

4. A lock comprising a case, a spring actuated bolt, a retractor engaging the bolt and having a slot therein, yieldable locking means normally in the path of movement of the retractor and in engagement with the said slot to hold the said retractor against movement, and means movable through the slot for displacing the yieldable means to free the retractor for actuating the bolt.

961,997. MACHINE FOR COMPRESSING AND ROLLING BATS. SAMUEL M. BALL, BENJAMIN N. MCNIEL, and HARRY PENNINGTON, Houston, Tex. Filed June 7, 1909. Serial No. 500,573.



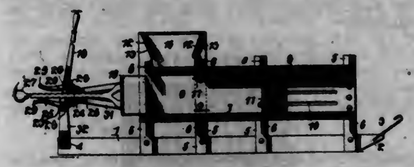
1. In a machine of the character described, a supporting frame, bat compressors carried thereby, a mandrel also carried by said frame and disposed to receive the bat from said compressors, a means for driving said mandrel, said driving means also having operative connection with said bat compressors and driving the same, a plurality of bale compressors surrounding said mandrel and adjustable radially toward and from the same, said bale compressors also having operative connection with said mandrel-driving-means and being driven thereby, compression cylinders radially disposed relative to said mandrel and provided with pistons having connection with said bale compressors, a means for introducing hydraulic pressure in each of said cylinders, behind said pistons simultaneously, and means for gradually increasing the resistance of the bale compressors to the increasing bale.

2. In a machine of the character described a supporting frame, a series of bat compressors carried thereby, a mandrel carried by said frame and disposed to receive the bat and roll the same into a bale, a plurality of bale compressors surrounding said mandrel and adjustable radially toward and from the same, a driving mechanism for operating said mandrel and operatively connected with the bat compressors and the bale compressors for rotating the same, compression cylinders carrying pistons which operate against the bale compressors and tend to hold them against the mandrel, means for introducing hydraulic pressure within the cylinders behind the pistons and a hydraulic device for gradually increasing the resistance of the bale compressors against the bale as the size of said bale increases.

3. In a machine of the character described a supporting frame comprising two opposing side members secured together by suitable connecting members, a series of bat compressors carried thereby, a mandrel carried by said frame and disposed to receive the bat from said compressors and roll the same into a bale, a plurality of bale compressors surrounding the mandrel and adjustable radially toward and from the same, a driving mechanism for operating said mandrel and operatively connected with the bat compressors for rotating the same, compression cylinders carried by said side members, and being provided with pistons which operate against each end of said bale compressors and tend to hold them against the mandrel, means for introducing hydraulic pressure within the cylinders behind the pistons and a graduating device having connection with said last mentioned means whereby the resistance of said pistons against the bale compressors is gradually and automatically increased as the bale increases in size.

4. In a machine of the character described a supporting frame, a series of bat compressors carried thereby, a mandrel carried by said frame and disposed to receive the bat and roll the same into a bale, a plurality of bale compressors surrounding said mandrel and adjustable radially toward and from the same, a driving mechanism for operating said mandrel and operatively connected with the bat compressors and the bale compressors for rotating the same, two compression cylinders carrying pistons which operate against each bale compressor and tend to hold it against the mandrel, means for introducing hydraulic pressure within the cylinders behind the pistons and a hydraulic device for gradually increasing the resistance of the bale compressors against the bale as the size of said bale increases.

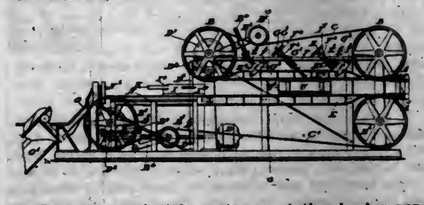
961,998. BALING-PRESS. WILLIAM ROSSEM BALL, Bryan, Tex. Filed Mar. 2, 1910. Serial No. 546,849.



1. In a baling press, the combination with a supporting structure, a press box and a reciprocatory plunger therein, of a double ratchet bar projecting from the plunger, uprights rising from the supporting structure, bracket arms projecting from the press box, a lever having a central slot to receive the ratchet bar and side slots to receive said bracket arms, said lever having its lower end disposed between said uprights, longitudinally alined pivots for the lever supported by said uprights and said bracket arms, and pawls pivoted in the central slot of the lever to co-act with said double ratchet bar.

2. In a baling press, the combination of side runners connected at one end by a cross bar and at the other end by a draft bail, posts rising from said runners, upper and lower cross bars uniting said posts, a press box supported between said posts and said upper and lower cross bars, longitudinal straps uniting said posts, a hopper at one end of the press box, a reciprocatory plunger in the press box, a double ratchet bar projecting from said plunger, uprights at the ends of said cross bar uniting the runners, bracket arms projecting from certain of said posts, an upright lever having a central slot to receive the double ratchet bar, and side slots to receive said bracket arms, longitudinally alined pivots for the lever and supported by said bracket arms and said uprights, and a spring pressed pivotally mounted box in the central slot of the lever to co-act with said double ratchet bar.

961,999. PNEUMATIC-TUBE SYSTEM. BIRNEY C. BATCHELLER, Philadelphia, Pa., assignor to The Batcheller Pneumatic Tube Company, Philadelphia, Pa., a Corporation of West Virginia. Filed May 1, 1905. Serial No. 258,291.



1. In a pneumatic tube system, a station having non-continuous delivery and receiving tubes in combination with a switch situated in the path of the carriers issuing from the delivery tube and adapted when locked to direct the carriers to a point of local delivery, and when unlocked to be deflected by the carriers to permit the latter to pass to the receiving tube, and a lock for the switch adapted to be actuated by selecting devices on the front ends of the carriers.

2. In a pneumatic tube system, a station having non-continuous delivery and receiving tubes, and in which the mouth of the receiving tube is set in the direct path of the carriers issuing from the delivery tube, in combination with a switch situated in the path of the carriers issuing from the delivery tube and adapted when locked to direct the carriers to a point of local delivery, and when unlocked to be deflected by the carriers to permit the latter to pass to the receiving tube, and a lock for the switch adapted to be actuated by selecting devices on the front ends of the carriers.

3. In a pneumatic tube system, a station having non-continuous delivery and receiving tubes, in combination with means situated at the mouth of the delivery tube for checking the velocity of the carriers and propelling them forward at reduced speed, a switch situated outside of the delivery tube and in the path of the slowly moving carriers issuing therefrom and controlling the direction of carriers to the receiving tube or to a point of local delivery, and switch actuating mechanism adapted to be operated by selecting devices on the carriers.

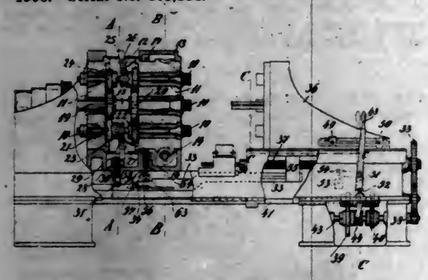
4. In a pneumatic tube system, a station having non-continuous delivery and receiving tubes in combination with means situated at the mouth of the delivery tube for checking the velocity of the carriers and propelling them forward at reduced speed, a switch situated outside of the delivery tube and in the path of the slowly moving carriers issuing therefrom and controlling the direction of carriers to the receiving tube or to a point of local

delivery and switch actuating mechanism also situated in the path of the slowly moving carriers and adapted to be operated by selecting devices on the carriers.

5. In a pneumatic tube system, a station having non-continuous delivery and receiving tubes in combination with friction and propelling belts situated in front of the delivery tube and adapted to check the velocity of issuing carriers and carry them forward at reduced speed, a switch situated in the path of the slowly moving carriers and controlling the direction of carriers to the receiving tube or to a point of local delivery, and switch actuating mechanism adapted to be operated by selecting devices on the carriers.

[Claims 6 and 7 not printed in the Gazette.]

962,000. SEMI-AUTOMATIC TURRET-LATHE. MARTIN H. BLANCKE, Merseburg, Germany. Filed Nov. 30, 1908. Serial No. 465,134.



1. In a turret lathe, the combination with a reciprocating tool head, of an intermittently rotatable turret head, a locking element, normally engaging said turret head, and holding the same against rotation and means carried by the tool head and reciprocable therewith to disengage said locking element from the turret head, whereby the turret head is free to rotate.

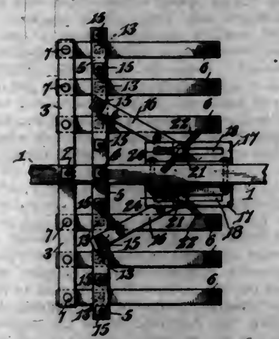
2. In a turret lathe, the combination with a reciprocating tool head and its driving mechanism, and a turret head, of a slidable bar carried by the tool head, means for automatically releasing the turret head, and means for intermittently revolving the turret head, said means being thrown into action by the said slidable bar.

3. In a turret lathe, the combination with a tool head, a sliding bar carried thereby, of a turret head, having a recessed rim, a pawl adapted to engage said recessed rim and lock the turret head against movement, gearing for rotating the turret head, a clutch, and levers, connected to said pawl and clutch, said sliding bar adapted to operate said levers whereby the pawl will be disengaged from the recessed rim, and the clutch coupled to said gear so that the turret head will be revolved.

4. In a turret lathe, the combination with a tool head and a regulating lever, gearing controlled by said lever, for moving the tool head, of adjustable abutments carried by said tool head constructed and arranged to throw the regulating lever, into a neutral position to uncouple the gears, and a weight secured to the regulating lever, to complete the throw of the lever, in one direction, whereby the gears will be coupled and the direction of movement of the tool head reversed, and a locking element adapted to engage the lower end of the regulating lever, whereby it will be held against accidental displacement.

962,001. SPRING-TOOTH CULTIVATOR. ARTHUR BRIGGS, Albertville, Ala. Filed Jan. 31, 1910. Serial No. 541,196.

1. In a cultivator, the combination of a beam, cross bars pivotally secured thereto and arranged in pairs, a cross bar supported by the rear bar of the pair of bars and arranged below the same, and a tooth having a horizontal portion passing under the pair of cross bars and secured to the front cross bar and having a lower portion secured to the cross bar supported by the rear cross bar of the pair of cross bars.



2. In a cultivator, the combination of a beam, a plurality of teeth each having its front end formed into upper and lower branches, cross bars pivotally attached to the beam and extending over the teeth, connections between the front cross bar and the front ends of the teeth, and a supporting bar hung on the rear cross bar and attached to the lower branches of the teeth.

3. The combination of a beam, a pair of cross bars pivotally attached thereto, a plurality of teeth having their front portions formed into two horizontal branches, the rear end of the lower branch being bent upward and extending toward the upper branch to brace the same, connections between the front ends of the said upper branches and the front cross bar, suspending bolts secured in the rear cross bar between the teeth, a supporting bar carried by said suspending bolts, and connections between the said supporting bar and the lower branches of the teeth.

4. The combination of a beam, a guide plate on the side of the beam, a cross bar pivotally attached to the beam, teeth connected with said cross bar, a link pivotally attached to the cross bar, and a binding post rising from and slidably mounted in the guide plate and connected with the said link to move the same along the guide plate and clamp it thereto.

5. The combination of a beam, a guide plate on the side of the same having a longitudinally slotted outwardly projecting portion, a cross bar pivotally attached to the beam, a series of teeth connected with the said cross bar, a link having its front end pivotally attached to the cross bar, a bolt carried by the rear end of the link and projecting up through the longitudinally slotted portion of the guide plate, and a binding post mounted on the upper end of the said bolt and rising from and adapted to bear upon the guide plate to clamp the link thereto.

[Claims 6 to 9 not printed in the Gazette.]

962,002. APPARATUS FOR MOLDING. THOMAS HAROLD BROWN, Lebanon, Pa., assignor to The Buchanan Foundry Company, Lebanon, Pa., a Corporation of Pennsylvania. Filed Sept. 23, 1909. Serial No. 519,250.



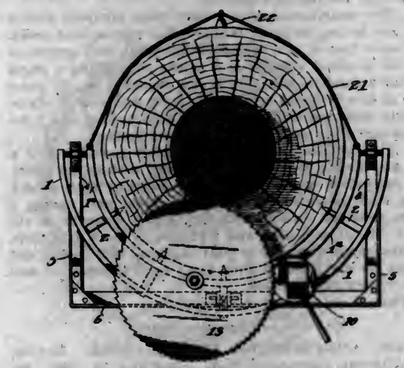
1. In the art of molding, a casting form comprising a head gate having an inclined bottom, several finger gates extending downwardly from points of different elevation along the bottom of said head gate, and a vertically arranged tier of forms connected with each finger gate.

2. In the art of molding, a casting form comprising a horizontally disposed head member having an inclined bottom surface divided by transverse parts, members connected with and extending downwardly from said bottom at points respectively between transverse parts, and one or more sets of superposed members connected with and extending transversely to each of said downwardly extending members.

3. In the art of molding, a casting form comprising a horizontally disposed head gate having a bottom surface inclined upwardly toward its ends from an intermediate point, finger gates extending downwardly from the head gate at intervals along its bottom, and one or more sets of superposed forms communicating with each of said finger gates.

4. In the art of molding, the combination with a molding box, of a cross bar, a set of substantially vertical fingers supported in and adapted to be separately withdrawn from said cross bar, and a set of patterns adapted for engagement with and withdrawal from each of said fingers.

962,003. PORTABLE POWER-SAW. PAUL C. BURDICK and RICHARD JESSOP, Ogden, Utah. Filed June 10, 1909. Serial No. 501,354.



1. In a saw of the character described, a base, a semi-circular track pivoted at its extremities to the base, means for changing the angular relation between the base and track, a carriage mounted to travel upon the track, a rotatable base plate pivotally carried upon the carriage, a saw arm mounted upon the base plate, a circular saw carried by the saw arm, and means upon the base plate operatively connected with the saw to rotate the same.

2. In a saw of the character described, a base having a main portion and angular extensions at each end thereof, a semicircular track above the base pivotally connected at its extremities to the ends of the base extensions, an adjustable connection between the center of the track and main base, a carriage mounted to travel upon the track, a base plate rotatably mounted upon the carriage, a rigid saw arm extending from the base plate, a circular saw horizontally mounted at the extremity of the saw arm, a source of mechanical power mounted upon the base plate, and a mechanical connection between the saw and source of power to rotate the saw.

962,004. INDICATING-BOTTLE. WILLIAM THOMAS CASSIDY, Chicago, Ill., assignor of one-half to Edward C. Beiriger, Chicago, Ill. Filed Oct. 12, 1908. Serial No. 457,443.

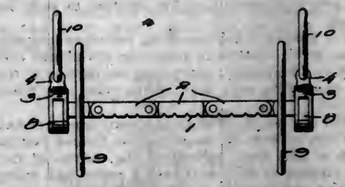
1. In combination with a vessel, containing a liquid having a certain specific gravity, a pair of indicators in said liquid, one of said indicators having a specific gravity slightly less than that of the liquid and the other having a specific gravity slightly greater than that of the liquid, whereby the lighter indicator will occupy a position at the level of said liquid while the heavier indicator will occupy a position at the bottom of said vessel.



2. In combination with a vessel containing a liquid having a certain specific gravity, a pair of indicators in said liquid, each having a different specific gravity so as to cause said indicators to occupy different positions in said liquid, the specific gravity of each being in relation to that of the liquid they are adapted to protect, whereby adulteration or a complete change of the liquid will cause said indicators to change their relative positions, and a guard plate carried by the vessel to prevent the removal of said indicators.

3. In a device of the kind described comprising a liquid containing vessel, a pair of indicators located in said liquid at different points, the specific gravity of said indicators being such as to allow for slight changes in the specific gravity of the liquid, caused by the same being exposed to different temperatures, without changing their relative positions, and a perforated guard plate to prevent the removal of said indicators.

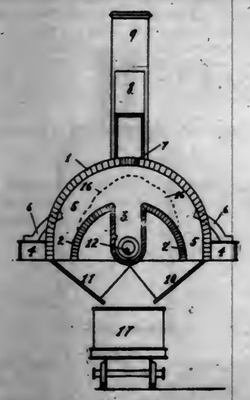
962,005. REVERSIBLE BRIDLE-BIT. EMERY MILES COE, Milford Center, Ohio. Filed Aug. 5, 1909. Serial No. 511,307.



1. A bit of the character described comprising a mouth-bar formed of a plurality of pivoted sections, the ends of said mouth-bar being positioned in suitable casings consisting of spaced parallel plates having an eye formed integral therewith, a plate secured upon each end of said mouth-bar and disposed between said parallel plates, and resilient locking members secured to and positioned between said parallel plates and frictionally engaged with the peripheries of the plates secured to the ends of said bar to normally hold said bar against rotation.

2. A bit of the character described comprising a mouth-bar having a serrated edge, the ends of said bar being disposed within suitable casings and having retaining plates secured thereto, V-shaped recesses being formed in the peripheries of said plates, spring members secured in said casings and formed with projections adapted to engage in said recesses, and cheek plates disposed inwardly of said casings upon either end of the mouth-bar.

962,006. APPARATUS AND PROCESS FOR PREPARING PULVEROUS IRON ORES AND THE LIKE FOR SMELTING IN BLAST-FURNACES AND USE IN OPEN-HEARTH FURNACES. SIDNEY CORNELL, Duquesne, Pa. Filed Feb. 9, 1909. Serial No. 476,891.



1. In apparatus for sintering pulverous iron ores and the like, a heating chamber; means for producing flame in said chamber, and means for conveying into said chamber material to be treated therein, and for breaking and discharging from said chamber the sintered portion of said material.

2. In apparatus for sintering pulverous iron ores and the like, a heating chamber; means for producing flame in said chamber; means for conveying material to be treated into said chamber, fracturing the sintered portion thereof when formed, and discharging it from said chamber, and means whereby said sintered product is arrested and exposed to the air while hot.

3. In apparatus for sintering pulverous iron ores and the like, a heating chamber; means for producing flame in said chamber; means for conveying material to be treated into said chamber, exposing it in bulk to the heat therein, fracturing the sintered crust thereon when formed, and discharging said sintered crust from said chamber, and means for arresting and detaining said sintered product while hot to a current of air directed to said heating chamber.

4. The process of agglomerating pulverous iron ores and the like, which consists in subjecting the treated material in bulk to a high heat; converting the surface of the material exposed to such heat into a crust and fracturing said crust.

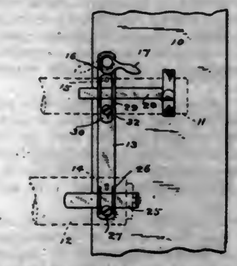
5. The process of treating pulverous iron ores and the like, which consists in subjecting the treated material in bulk to a high heat; converting the surface of the material exposed to such heat into a crust, and fracturing such crust and exposing it to the air while hot.

[Claims 6 to 12 not printed in the Gazette.]

962,007. COMBINED SHADE AND POLE BRACKET. NEHEMIAH B. CROSBY, Bridgeport, Conn. Filed Oct. 25, 1909. Serial No. 524,300.

1. A device of the character described comprising a base plate having its under face provided with a fixed attaching prong, a movable member mounted on the outer face of said base plate and also provided with an attaching prong on its under face, said base plate being provided with a slot through which the last mentioned prong projects, and means mounted on the outer face of said base plate for shifting said movable member.

2. The combination with a base plate having an inwardly-facing prong, guides and a slot, of a slide lying between the guides and having an inwardly-facing prong extending through the slot, a sliding bracket passing through the guides transversely above the slide, a set screw in the slide whereby it may be raised to lock the bracket and a cam acting on the slide when the set screw is loosened to move the slide and lock the base plate.



3. The combination with a base plate provided with a slot and having its under face provided with a fixed prong, the outer face of said base being provided with guides, of a slide mounted between said guides and having a prong extended through said slot, a cam mounted on the outer face of said base and arranged to move said slide, a transversely arranged bracket engaging said guides, and means for locking said bracket.

4. The combination with a base plate provided with a slot and having its under face provided with a fixed prong, the outer face of said base being provided with guides, of a slide mounted between said guides and having a prong extended through said slot, a cam mounted on the outer face of said base and arranged to move said slide, a transversely arranged bracket engaging said guides, and a set screw carried by said slide to lock said bracket.

5. The combination with a base plate provided with a slot and having its under face provided with a fixed prong, the outer face of said base being provided with guides, of a slide mounted between said guides and having a prong extended through said slot, a cam mounted on the outer face of said base and arranged to move said slide, a transversely arranged bracket engaging said guides, and means for moving said slide away from the face of said base to lock said bracket.

[Claim 6 not printed in the Gazette.]

962,008. COMPRESSIBLE PACKING-TUBE. EDWARD M. DALLEY, Larchmont, N. Y. Filed Aug. 14, 1909. Serial No. 512,857.

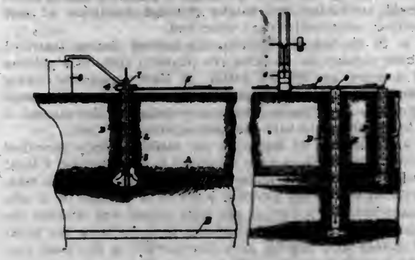


1. A compressible packing tube provided with a rigid screw threaded neck, having an opening therethrough, a screw cap adapted to screw over said neck, and a flat plate swiveled to said screw cap and adapted to project into said opening in the neck, substantially as and for the purposes described.

2. A compressible packing tube provided with a screw threaded neck, with an elongated opening therethrough, a screw cap adapted to screw over said neck, and a flat plate swiveled to said cap and having a tapered end adapted to project into said elongated opening in the neck, substantially as and for the purposes described.

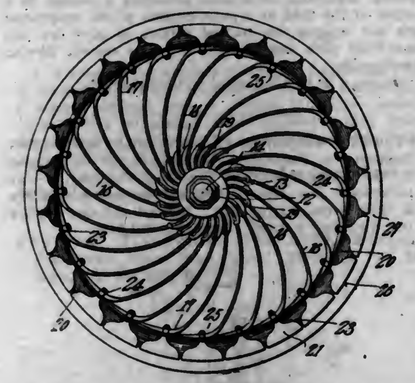
962,009. METHOD AND APPARATUS FOR PUMPING OIL-WELLS. JAMES D. DINSMOOR, St. Marys, W. Va. Filed July 23, 1909. Serial No. 509,089.

The apparatus herein described consisting of a gas or vapor pipe in connection with the oil and gas strata, an oil pipe extending below the end of the gas pipe, a pumping device for the oil, a gas discharging pipe leading to an independent exhausted oil or gas strata, and an intermediate pipe line between the gas pipe of the active well



and the discharge pipe of the abandoned well, with means for forcing the gas into the abandoned well, substantially as described.

962,010. VEHICLE-WHEEL. FRANK R. DUDLEY, Fitchburg, Mass. Filed May 21, 1909. Serial No. 497,408.



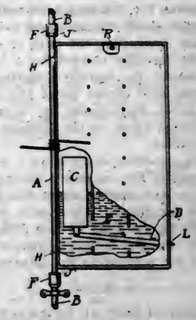
1. In a wheel, a coil spring felly, clips embracing the laminæ of the felly, said clips having inwardly projecting studs, and spokes secured at their inner ends to the hub and provided at their outer ends with lateral ears through which the studs of the clips project, and nuts threaded upon the said studs and securing the spokes at their outer ends to the felly.

2. In a vehicle wheel, a hub, a coil spring felly, and spokes secured at their inner ends to the hub and at their outer ends to the felly, said spokes comprising each a resilient plate having its lateral edges converging in the direction of the outer end, the spokes being secured inwardly of their ends to the said felly and bearing beyond their points of attachment to the felly against the inner surface of the felly, the said end portions of the spokes being terminally decreased in thickness.

962,011. BLIND FOR FIREPROOF BUILDINGS. ALEXANDER T. ELLIS, Boise, Idaho. Filed Jan. 26, 1910. Serial No. 540,255.

1. In a blind or shutter for buildings, the combination with a liquid supply pipe, of a hinge member swivelly connected to the pipe with water tight joints, a hollow shutter secured to the hinge member and having communication with the liquid supply.

2. In a blind or shutter for buildings, the combination with a liquid supply pipe, of a hollow hinge member, swivelly connected to the pipe with packed joints, a hollow shutter secured to the hinge member, and adapted to receive liquid from the supply pipe.



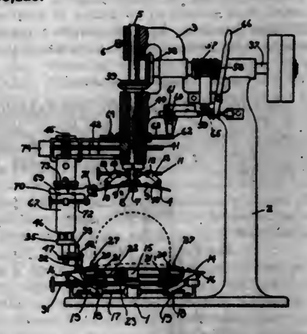
3. In a blind or shutter for buildings, the combination with a liquid supply pipe, of a hollow hinge member, swivelly connected to the pipe with packed joints, a hollow shutter secured to the hinge member, and adapted to receive liquid from the supply pipe, means for latching the shutter in open position, means for releasing the catch, and spring means for closing the shutter.

4. In a blind or shutter for buildings, the combination with a liquid supply pipe, of a hollow hinge member, swivelly connected to the pipe with packed joints, a hollow shutter secured to the hinge member, and adapted to receive liquid from the supply pipe, means for normally retaining the shutter in open position, means utilizing the liquid for releasing the catch and means for closing the shutter.

5. In a blind or shutter for buildings, the combination with a liquid supply pipe, of a hollow hinge member, swivelly connected to the pipe with packed joints, a hollow shutter secured to the hinge member, and adapted to receive liquid from the supply pipe through apertures in the hinge member, a catch and keeper for retaining the shutter in open position, a float for releasing the catch, and mechanical means for closing the shutter.

[Claim 6 not printed in the Gazette.]

962,012. HAT-PLANING MACHINE. SAMUEL H. FAIRCHILD, Fall River, Mass. Filed Apr. 30, 1909. Serial No. 493,125.



1. A hat planing machine comprising a hat supporting table, a cutter, means for revolving said cutter about the hat, and a flexible adjustable guide plate for controlling the path of said cutter.

2. A hat planing machine comprising a hat supporting table, a cutter, means for revolving said cutter about the

hat, a flexible adjustable guide plate, and means for engaging said plate for controlling the elevation and also the circular path of said cutter.

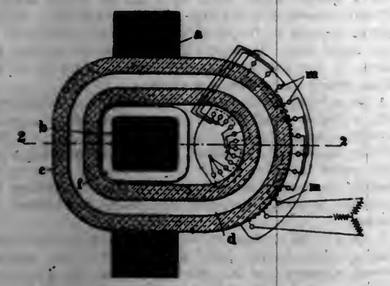
3. A hat planing machine comprising a hat supporting table, a cutter, means for rotating said cutter, means for revolving said cutter about the hat, and a flexible adjustable guide plate for controlling the path of said cutter.

4. A hat planing machine comprising a hat supporting table, a cutter, means for rapidly rotating said cutter, means for revolving said cutter about the hat, a flexible adjustable guide plate, and means for engaging and following the edge of said plate for the purpose of controlling the path of said cutter.

5. A hat planing machine comprising a hat supporting table, a cutter, means for rapidly rotating said cutter, means for revolving said cutter about the hat, a flexible guide plate, means for shaping this plate, and means for engaging and following the edge of said plate for the purpose of controlling the path of said cutter.

[Claims 6 to 19 not printed in the Gazette.]

962,013. METALLURGICAL FURNACE. SEBASTIAN ZIANI DE FERRANTI, Grindleford Bridge, near Sheffield, England. Filed June 10, 1907. Serial No. 378,291.

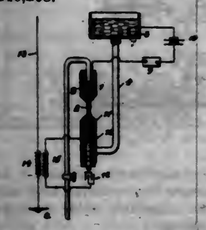


1. A furnace having in combination an upper part provided with heating means for producing metal in the molten state and a lower chamber in which said molten metal collects together with means for inductively mixing the metal in said lower chamber.

2. A furnace having in combination a receptacle for molten metal; iron masses in proximity to said receptacle and multiphase windings having operative portions spaced around said receptacle and normal to the free surface of said metal.

3. A furnace having in combination a receptacle for molten metal; iron masses in proximity to said receptacle and multiphase windings having operative portions disposed outside said molten metal and normal to its free surface.

962,014. METHOD OF ELECTRIC SIGNALING. REGINALD A. FESSENDEN, Washington, D. C., assignor to The National Electric Signaling Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Jan. 9, 1905. Serial No. 240,268.



1. In the art of signaling by electromagnetic waves, the method which consists in changing the physical state of a liquid conductor by passing electromagnetic currents therethrough, moving the changed portion of the liquid by reason of its changed condition, and producing an indication by reason of variation in the resistance of the liquid conductor due to the changed condition of said portion, substantially as described.

2. In the art of signaling the method herein described which consists in changing the physical state of a portion of a substance by the action of electro-magnetic waves causing such changed portion to move away from the point of change and thereby effecting a change in the current of a local current in said changed substance.

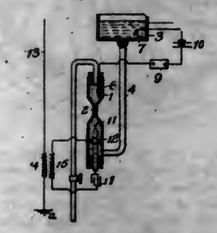
3. In the art of signaling the method herein described which consists in causing a current to flow through a local circuit, producing a change by the action of electro-magnetic waves in the physical state of a portion of a substance forming a part of the local circuit and causing the changed portion of the substance to move from the point of change and thereby vary the current in the local current in said changed substance.

4. In the art of signaling the method herein described which consists in causing a current to flow through a constricted conducting fluid path and producing by the action of electro-magnetic waves an interruption of the flow of current through said path.

5. In the art of signaling the method herein described which consists in causing a current to flow through a constricted conducting fluid path producing a change in a portion of the fluid at a point outside of the constricted path and causing the changed portion to move into the constricted path and thereby vary the current flowing therethrough.

[Claims 6 to 13 not printed in the Gazette.]

962,015. RECEIVER FOR ELECTRIC SIGNALING. REGINALD A. FESSENDEN, Washington, D. C., assignor to The National Electric Signaling Company, a Corporation of New Jersey. Original application filed Jan. 9, 1905, Serial No. 240,268. Divided and this application filed Jan. 6, 1906. Serial No. 294,929.



1. A receiver for electro-magnetic waves having in combination a constricted conducting fluid path, means for producing a bubble and means for causing the bubble to move into the constricted fluid path.

2. A receiver for electro-magnetic waves having in combination a flowing liquid and means operative by electro-magnetic waves for producing a signaling or indicating change of conductivity in a portion of said liquid by changing its physical state and moving it.

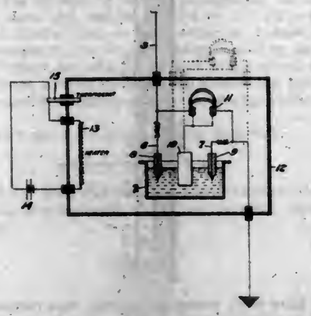
3. A receiver for electro-magnetic waves having in combination a constricted channel connecting two bodies of liquid, means operative by electro-magnetic waves for producing a change in the physical state of a portion of the liquid and means for causing the changed portion to alter the conductivity by traversing the constricted channel.

4. A receiver for electro-magnetic waves having in combination a constricted channel, a liquid, means for causing the liquid to flow through the constricted channel and means operative by electro-magnetic waves for so producing a change in a portion of the liquid that the changed portion will be moved into the said constricted channel.

5. A receiver for signaling comprising a circuit including a substance alterable by electric current placed between two terminals, means for passing electromagnetic waves through the said substance to change its physical state, means to move the altered portion of said substance and means to effect a signal by alteration of conductivity due to such movement in a new position of the changed portion.

[Claims 6 to 10 not printed in the Gazette.]

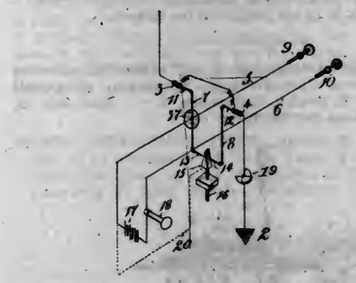
962,016. RECEIVER FOR ELECTROMAGNETIC WAVES. REGINALD A. FESSENDEN, Washington, D. C. Filed Mar. 16, 1906. Serial No. 306,386.



1. A receiver for wireless telegraphy, comprising a body of electrolyte, two fine terminals in contact therewith and a larger terminal also in contact therewith, combined with circuits for passing electromagnetic waves through the electrolyte, and means for indicating resulting changes of conductivity in the electrolyte.

2. A liquid barretter having two fine terminals, a large terminal and an electrolyte.

962,017. ELECTRICAL APPARATUS. REGINALD A. FESSENDEN, Brant Rock, Mass. Filed Apr. 18, 1906. Serial No. 312,520.



1. Electrically actuated means for producing an indication comprising a coil having a large co-efficient of magnetic induction per unit of mass *i. e.*, a ratio of self inductance to mass of more than one hundred thousand.

2. Electrically actuated means for producing an indication comprising a coil of such small dimensions as to give the coil a ratio of magnetic induction per unit of mass of the order of 100,000.

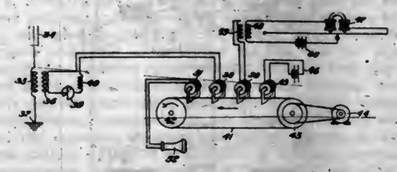
3. Electrically actuated means for producing an indication, comprising a coil having a high magnetic concentration and a co-efficient of magnetic inductance per unit of mass greater than 100,000.

4. Electrically actuated means for producing an indication comprising a movable indicating member and a coil in operative relation to said movable member, having high co-efficient of magnetic inductance per unit of mass *i. e.*, a ratio of self inductance to mass of more than 100,000.

5. Electrically actuated means for producing an indication comprising a coil having a ratio of self-induction to mass, greater than 100,000, a movable element, controlling a local circuit, and means in the local circuit for producing an indication.

[Claims 6 to 9 not printed in the Gazette.]

962,018. METHOD OF SIGNALING. REGINALD A. FESSENDEN, Brant Rock, Mass. Original application filed Oct. 10, 1907, Serial No. 396,817. Divided and this application filed June 24, 1908. Serial No. 412,417.



1. The method of signaling by maintaining a continuous flow of impulses at a receiving station, normally annulling their effect by received impulses sent from another station, and signaling by modifying the sent impulses and thus interrupting said normal annulment.

2. The method of signaling by producing a continuous stream of impulses at a sending station, maintaining a continuous stream of impulses at a receiving station and normally annulling their effect by the agency of the sent impulses, and signaling by modifying the stream of impulses at the sending station.

3. The method of signaling by sending and receiving a continuous stream of electric impulses and normally annulling by their energy a continuous flow of impulses at a receiving station, and signaling by altering the sent impulses so as to allow the impulses at the receiving station to operate an indicating instrument.

4. The method of signaling by maintaining a continuous flow of impulses at each of two intercommunicating stations and modifying the character of impulses at one station by the energy of those from the other, and signaling by altering the character of the sent impulses to thereby omit said modification at the receiving station.

5. The inverted method of signaling which comprises transmitting electro-magnetic waves continuously except for interrupting them to represent the dots and dashes of a code, and reinverting the signals at the receiving station by causing the interruptions only to be sensible.

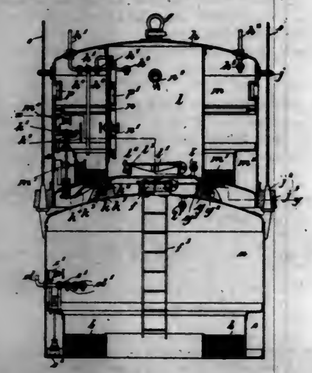
[Claims 6 to 18 not printed in the Gazette.]

962,019. DIVING-BELL APPARATUS FOR SUBMARINE WORK. JOHN GARNAR FLOOD, Westcliffe-on-Sea, and WILLIAM GEORGE FITZGERALD, West Ealing, England. Filed Sept. 30, 1909. Serial No. 520,408.

1. Diving apparatus consisting of two parts adapted to be superposed on one another, the lower part being formed as a diving bell with a closable orifice in its upper portion, means for suspending said lower part from a supporting device at the water surface, the upper part being formed as a closable chamber and provided with means for being guided on to and making a water tight joint with the lower part, and operative means attached to said upper part, adapted to support, raise and lower the said upper part, substantially as described.

2. In a diving apparatus consisting of two parts adapted to be superposed on one another, the lower part being formed as a diving bell with a closable orifice in its upper portion, means for suspending said lower part from a supporting device at the water surface, the upper part being formed as a closable chamber and provided with means for being guided on to and making a water tight joint with the lower part, operative means attached to said upper part, adapted to support, raise and lower the said upper part, a water ballast tank in the upper part of the apparatus and means by which air is made to displace the

water ballast or vice versa in order to vary the buoyancy of said upper part, substantially as described.



3. In a diving apparatus consisting of two parts adapted to be superposed on one another, the lower part being formed as a diving bell with a closable orifice in its upper portion, means for suspending said lower part from a supporting device at the water surface, the upper part being formed as a closable chamber and provided with means for being guided on to and making a water tight joint with the lower part, operative means attached to said upper part, adapted to support, raise and lower the said upper part, a water ballast tank in the lower part of the apparatus, and means by which air is made to displace the water ballast or vice versa in order to vary the buoyancy of said lower part, substantially as described.

4. In a diving apparatus consisting of two parts adapted to be superposed on one another, the lower part being formed as a diving bell with a closable orifice in its upper portion, means for suspending said lower part from a supporting device at the water surface, the upper part being formed as a closable chamber and provided with means for being guided on to and making a water tight joint with the lower part, operative means attached to said upper part, adapted to support, raise and lower the said upper part, means by which the upper chamber is guided by the suspending ropes of the lower chamber on to the same jointing devices on the two chambers co-acting with each other to form a water tight joint and fastening means operable from the upper chamber adapted to firmly clamp the jointing devices together at will, substantially as described.

5. In a diving apparatus consisting of two parts adapted to be superposed on one another, the lower part being formed as a diving bell with a closable orifice in its upper portion, means for suspending said lower part from a supporting device at the water surface, the upper part being formed as a closable chamber and provided with means for being guided on to and making a water tight joint with the lower part, operative means attached to said upper part, adapted to support, raise and lower the said upper part, an atmospheric chamber and a pressure chamber in said upper part, closable means of communication between the two chambers and means for supplying and controlling high pressure air to the pressure chamber, substantially as described.

962,020. DRIVE-SPEAR. SAMUEL S. FRAMPTON and LAWSON J. BAILEY, Whittier, Cal. Filed Mar. 8, 1909. Serial No. 482,192.

1. A drive spear comprising a body adapted to be inserted within the casing, slips slidable on said body, means for automatically sliding said slips upward into engagement with the casing, means for locking said means against movement, and friction means in operative relation thereto to release said locking means.

2. A drive spear comprising a body, slips thereon adapted to have operative relation with the casing, means engaging the casing and capable of relative movement with respect to said body, and means set in operation by the last means for actuating said slips.



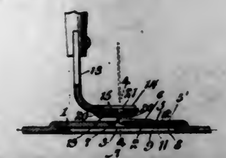
3. A drive spear comprising a body, slips thereon adapted to operatively engage a casing, friction means below the body adapted to engage the casing, and means set in operation by said friction means for actuating said slips.

4. A drive spear comprising a body, slips thereon adapted to engage a casing, a friction bow adapted to grip the wall of the casing and slidable below said body, and means set in operation by the sliding of said friction bow for actuating said slips.

5. A drive spear comprising a body, slips having downwardly directed teeth adapted to grip the casing, means for frictionally engaging the casing, and means having an operative connection with said slips and said friction means for actuating the slips when the body is moved relatively to said friction means.

[Claims 6 to 18 not printed in the Gazette.]

962,021. SEWING-MACHINE ATTACHMENT. GEORGE A. GRAYDON, Gloversville, N. Y., assignor of one-half to Frank E. Bonfey, Gloversville, N. Y. Filed Nov. 12, 1909. Serial No. 527,727.



1. The combination of a throat plate element having a needle opening and a channel in its top surface extending from one edge to the needle opening, a rib-carrying slide element disposed in the channel, and a device carried by one of the elements to automatically interlock with or disengage from the other element by movement of the slide element for releasably locking the latter in the channel.

2. The combination of a throat plate having a needle opening and a channel in its top surface extending from one edge to the needle opening, a rib-carrying slide disposed in the channel, there being a recess in one of the above-mentioned parts, and a spring secured to the other part and arranged to releasably engage in the recess to hold the slide in place.

3. A throat plate having an opening and a channel extending from one edge of the plate to the opening, said channel having undercut side walls, and a slide having beveled side edges for engaging the said walls and formed with a rib having one extremity projecting from the end of the slide and across the opening of the plate.

4. A throat plate having an opening and a channel extending from one edge of the plate to the opening, said channel having undercut side walls, a slide having beveled side edges for engaging the said walls and formed with a rib projecting from the end of the slide and across the opening of the plate, and retaining means in the channel for releasably engaging the slide.

5. A throat plate having an opening and a dove-tail channel in its top surface extending from one edge of the plate to the opening, a spring arranged in the channel with its outer end rigidly secured to the plate and its inner end formed into an upstanding lip, a slide removably positioned in the channel having means on its under side with which the said lip engages, and a rib on the top surface of the slide at the inner end thereof and having its inner extremity projecting across the opening of the throat plate.

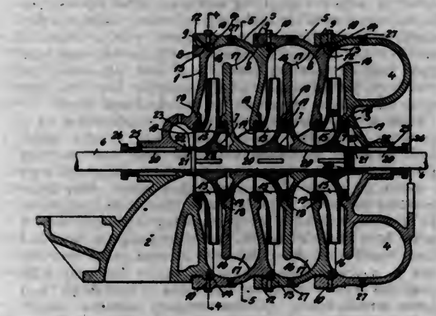
[Claims 6 and 7 not printed in the Gazette.]

962,022. BOTTLE-SEAL. JOHN VERNON GRIFFIN, Toungoo, Burma, India. Filed May 6, 1908. Serial No. 431,280.



The combination with a bottle having an enlarged ring on its neck portion provided with an intermediate annular groove, and an annular recess at the top thereof; of a wad having a cup-shaped portion adapted to fit down into the mouth of the neck and having an integral portion adapted to overlie the lip of the bottle neck and occupy said annular recess, said portion lying within said recess meeting flush with the adjacent surface of the bottle neck; said wad being provided with a plurality of equally spaced depressions on that portion overlying the lip of the neck; a metallic fastener comprising a ring fitting within said annular groove of the bottle neck and having a plurality of laterally disposed strips extending up over the depressions in the wad and down into the cup-shaped cavity; and a sealing medium within said cavity uniting and concealing the ends of said strips.

962,028. CENTRIFUGAL PUMP. ALBERT E. GUY, Trenton, N. J., assignor to De Laval Steam Turbine Company, New York, N. Y., a Corporation of New Jersey. Filed July 20, 1908. Serial No. 444,345.



1. A centrifugal pump casing comprising front and rear head sections and one or more intermediate sections having bell-and-spigot connections with each other, the several spigots projecting a substantial distance into the corresponding bell-mouths of the adjacent sections, and interlocking therewith against longitudinal separation, the several sections being thereby connected into one unitary structure without the necessity of other longitudinal fastenings, each such section formed of a plurality of members separable transversely, means for securing the several members of each section together, and fastening means arranged approximately radially with respect to the casing for securing together corresponding members of different sections, whereby corresponding members of the entire pump casing may be removed as an integral structure.

2. A centrifugal pump casing comprising front and rear head sections and one or more intermediate sections having bell-and-spigot connections with each other, the several spigots projecting a substantial distance into the corresponding bell-mouths of the adjacent sections, such spigots and bell-mouths comprising shoulders interlocking therewith against longitudinal separation, the several sections being thereby connected into one unitary structure without the necessity of other longitudinal fastenings, each such section formed of a plurality of members separable transversely, means for securing the several members of each section together, and fastening means arranged approximately radially with respect to the casing for securing together corresponding members of different sections, whereby corresponding members of the entire pump casing may be removed as an integral structure.

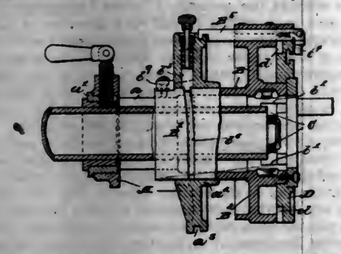
3. A centrifugal pump casing comprising front and rear head sections and one or more intermediate sections having bell-and-spigot connections with each other, the several spigots projecting a substantial distance into the corresponding bell-mouths of the adjacent sections, and interlocking therewith against longitudinal separation, the several sections being thereby connected into one unitary structure without the necessity of other longitudinal fastenings, each such section formed of a plurality of members separable transversely, means for securing the several members of each section together, fastening means arranged approximately radially with respect to the casing for securing together corresponding members of different sections, whereby corresponding members of the entire pump casing may be removed as an integral structure, and packing material in the joints formed by said engaging spigots and bell-mouths.

4. A centrifugal pump casing comprising a plurality of adjacent sections having joints with one another, each such section formed of a plurality of members separable transversely, means for securing the several members of each section together, and fastening means arranged approximately radially with respect to the casing for securing together corresponding members of different sections, whereby corresponding members of such pump-casing-sections may be removed as an integral structure.

5. A centrifugal pump comprising in combination a pump casing and a rotary impeller therein, said pump casing having a chamber in which the impeller may rotate and having a return-bent pressure passage leading therefrom to an outlet, the portion of said chamber between the periphery of the impeller and the return-bend being a substantially straight space of length, radially, greater than the width of the discharge opening of the impeller, and of materially greater width than the width of said discharge opening of the impeller, such straight space increasing progressively in area from the impeller outward and being unobstructed, such passage increasing in width, measured axially of the pump, from about the middle of the return bend to near the end of the return-bend, and thence decreasing in cross-sectional area progressively toward the outlet to which it leads, whereby the velocity of the liquid is permitted to decrease greatly after leaving the impeller and before the return bend is reached, and remains low while passing through the return bend and then gradually increases, the enlargement in said passage, beyond the middle of the return-bend, constituting a space in which the liquid becomes relatively quiescent before its velocity begins to increase, whereby swirling and eddy currents are avoided.

[Claim 6 not printed in the Gazette.]

962,024. SCREW-CUTTING DEVICE. LOUIS F. HART, Cleveland, Ohio, assignor to The Hart Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 28, 1909. Serial No. 492,622.



1. In a screw-cutting device, the combination of a work-holding member, a die-holding member independently longitudinally and rotatably mounted therein, one of said members having an encircling groove, and an element borne by the other member adapted removably to engage such groove.

2. In a screw-cutting device, the combination of a work-holding member, a die-holding member independently longitudinally and rotatably mounted therein, said second member being formed with an encircling groove, and a spring-pressed plunger mounted in said first member and adapted to engage such groove.

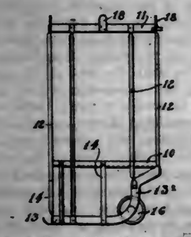
3. In a screw-cutting device, the combination of a work-holding member, a die-holding member independently longitudinally and rotatably mounted therein, and means adapted, upon rotation of said second member to produce a limited longitudinal movement thereof, such means including a cam-groove encircling one of said members and an element borne by the other member adapted removably to engage such groove.

4. In a screw-cutting device, the combination of a work-holding member, a die-holding member independently longitudinally and rotatably mounted therein, and means adapted, upon rotation of said second member, to produce a limited longitudinal movement thereof, such means including a cam-groove formed in the outer cylinder surface of said second member and a spring-pressed plunger mounted in said first member and adapted to engage such groove.

5. In a screw-cutting device, the combination of a work-holding member, a die-holding member independently longitudinally and rotatably mounted therein, and means adapted, upon rotation of said second member, to produce a limited longitudinal movement thereof, such means including a cam-groove formed in the outer cylindrical surface of said second member and a spring-pressed plunger mounted in said first member and adapted to engage such groove, the forward end of the latter being formed on an incline to permit escape of said plunger therefrom.

[Claims 6 to 14 not printed in the Gazette.]

962,025. CARRIER FOR CANS. CHESTER L. HOLLOWAY, Passaic, N. J. Filed Feb. 7, 1910. Serial No. 542,618.



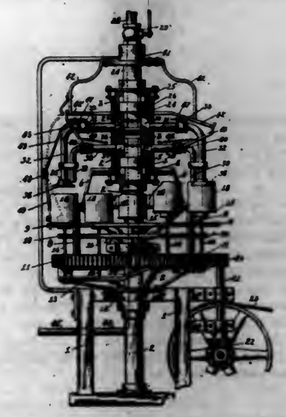
1. As an improved article of manufacture, a carrier for cans comprising a skeleton structure, means for supporting a can within it, means for fastening the can in place, and trucks mounted in the lower part of said carrier so that the lower surface of the trucks is essentially on the same plane as the lower edge of the carrier.

2. A carrier for cans comprising a skeleton structure of generally cylindrical shape adapted to receive and support a can, the lower portion of the carrier being cut away on one side thereof, wheels hung in said cut away portion and within its side lines, so that the lower surface of the wheels is essentially on the same plane as the lower edge of the carrier, and means for securing a can in the carrier.

3. As an improved article of manufacture, a wheeled carrier for cans, the wheels being located at the lower part of the carrier and within the side lines thereof, a can support within the carrier, and means for fastening a can in the carrier.

4. A carrier for cans, comprising a bottom band curved upward to form a truck support, a truck hung in said support, a top piece or band, a supporting hoop or band located between the top and bottom bands, and longitudinal ribs connecting the several hoops or bands.

962,026. CAN-SYRUPING MACHINE. ALFRED JOHN KEAST, San Jose, Cal., assignor to California Fruit Canners Association, San Francisco, Cal., a Corporation of California. Filed Feb. 15, 1910. Serial No. 543,960.



1. In a can syruping-machine, the combination of a traveling can table; can-holders carried by the table; pipes traveling in unison with the table and overlying the cans in the holders, said pipes being connected with a source of syrup for supplying said cans; other pipes traveling in unison with the table, and extending beside the first pipes, said other pipes being connected with a source of suction; and means for timely bringing the cans and pipes together to enter the ends of both pipes into the cans to a predetermined level, to supply the cans with syrup and remove therefrom the excess of said syrup.

2. In a can syruping-machine, the combination of a traveling can table; can-holders carried by the table; pipes traveling in unison with the table and overlying the cans in the holders, said pipes being connected with a source of syrup for supplying said cans; other pipes traveling in unison with the table, and extending beside the first pipes, said other pipes being connected with a source of suction; means for timely bringing the cans and pipes together to enter the ends of both pipes into the cans to a predetermined level, to supply the cans with syrup and remove therefrom the excess of said syrup; and valves automatically operated through suitable connections, by the travel of the table, to control the operation of both pipes.

3. In a can syruping-machine, the combination of a rotatable can table; an annular series of can-holders on said table; a series of pipes traveling in unison with the table and overlying the cans in the holders, said pipes being connected with a source of syrup for supplying said cans; a series of other pipes traveling in unison with the table, and extending beside the first pipes, said other pipes being connected with a source of suction; means for timely bringing the cans and pipes together to enter the ends of both pipes into the cans to a predetermined level, to supply the cans with syrup and remove therefrom the excess of said syrup, and valves automatically operated through suitable connections, by the travel of the table, to control the operation of both pipes.

4. In a can syruping-machine, the combination of a holder for the can; a pipe for supplying the can with syrup, said pipe having on its lower end a presser foot; and means for bringing the can contents and the presser foot in pressing contact, whereby the can contents are held down while the syrup is being supplied.

5. In a can syruping-machine, the combination of a holder for the can; a pipe for supplying the can with syrup, said pipe having on its lower end a presser foot; means for bringing the can contents and the presser foot in pressing contact, whereby the can contents are held down while the syrup is being supplied; a suction pipe entering the can to a predetermined level; and means for effecting suction in said suction pipe while the can is being filled with syrup, to remove the syrup above said predetermined level.

[Claims 6 to 9 not printed in the Gazette.]

962,027. FILLER FOR SIPHON-BOTTLES. GUY L. KENNEDY, San Francisco, Cal., assignor to National Carbonated Liquid Co., San Francisco, Cal., a Corporation of California. Filed Sept. 2, 1909. Serial No. 515,976.

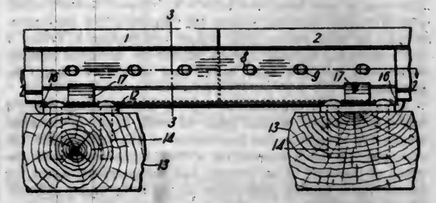


1. An apparatus of the character described, comprising a casing, a supply tube secured to one end thereof, a cap closing the other end thereof, having an inwardly converging mouth, a rubber gland secured between casing and cap, a check valve secured within said casing, having a hollow central conoidal portion slitted through its apex, a filling tube within said casing open at both ends, a disk secured to said tube, and a spring arranged to press said disk against said gland, the other end of said tube extending into said hollow conoidal portion of the valve, substantially as described.

2. An apparatus of the character described, comprising a casing, a supply tube secured to one end thereof, a cap secured to the other end and formed with an inwardly converging mouth, a centrally apertured gland between said cap and casing, a centrally apertured rubber check valve secured within the said casing, a filling tube open at both ends, a disk secured to one end of said filling tube, and a coiled spring around said filling tube and normally pressing said disk against said gland, substantially as described.

3. An apparatus of the character described, comprising a casing, a supply tube secured to one end thereof, an apertured cap secured to the other end, a centrally apertured gland, the flange of which is secured between said cap and casing, a check valve having a flange secured within the said casing and having a hollow central conoidal portion slitted through its apex, a retaining disk on the said valve, a filling tube open at both ends, a disk secured to said filling tube at one end, and a coiled spring around the tube and between the two disks, the other end of the tube normally projecting into the hollow portion of the check valve, substantially as described.

962,028. RAIL-JOINT. SAMUEL KENYERES, Glassport, Pa., assignor of one-half to Julius V. Takacs, Glassport, Pa. Filed Mar. 21, 1910. Serial No. 550,699.

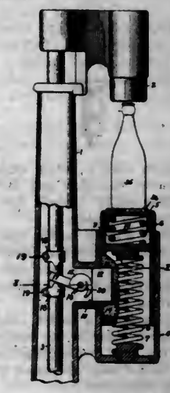


1. In a rail joint, the combination of a pair of fish plates and necked studs arranged to interlock by relative endwise movement of the plates, and tie plates arranged to be secured to the ties and provided with means to engage the fish plates and prevent relative endwise movement thereof.

2. In a rail joint, the combination of a pair of fish plates and necked studs arranged to interlock by relative endwise movement of the plates, tie plates arranged to be secured to the ties and having means engaging the fish plates to prevent relative endwise movement of the latter and having portions overhanging the rail base.

3. In a rail joint, the combination in a pair of fish plates and necked studs arranged to interlock by relative endwise movement of the plates, tie plates provided with upwardly projecting ribs to engage the ends of the fish plates and prevent relative endwise movement of the latter and also having punched therethrough upwardly projecting lips having parts arranged to overhang the rail base and prevent relative vertical movement between the rail and tie plates.

962,029. BOTTLE-CAPPING MACHINE. GEORG KIRKEGAARD, New York, N. Y., assignor to Imperial Stopper Company, a Corporation of Maine. Filed Dec. 16, 1908. Serial No. 467,819.



1. In a bottle capping machine, a cap applying head, a bottle supporting table, means for altering the relative positions of said head and table with respect to each other, and means for impeding the movement of one of

said parts, said means comprising a brake, a force applying member, and a resilient member interposed between said brake and said force applying member.

2. In a bottle capping machine, a cap applying head, a bottle supporting table, means for altering the relative positions of said head and table with respect to each other, and frictional braking means for impeding the movement of one of said parts, said means comprising a brake, an adjustable force applying member and a resilient member interposed between said brake and said adjustable member.

3. In a bottle capping machine, a cap applying head, a bottle supporting table, means for altering the relative positions of said head and table with respect to each other, and frictional braking means for impeding the movement of one of said parts, said means comprising a brake, a force applying member and an adjustably mounted member interposed between said brake and said force applying member.

4. In a bottle capping machine, a cap applying head, a table depressible in the path of said head, mechanical means for arresting the depression of the table when the cap applying head approaches within a predetermined distance of its limit of movement, and independent means for permitting a further depression of the table under extraordinary pressure.

5. In a bottle capping machine, a cap applying head, a table depressible in the path of said head, a spring for resisting depression of the table, a brake for arresting depression of the table, and tappets movable with the cap applying head and operating to apply and to release said brake.

[Claims 6 to 10 not printed in the Gazette.]

962,030. FEEDING MECHANISM FOR BOTTLE-CAPPING MACHINES. GEORG KIRKEGAARD, New York, N. Y., assignor to Imperial Stopper Company, a Corporation of Maine. Filed Dec. 16, 1908. Serial No. 467,820.



1. The combination with a bottle capping machine, of cap feeding mechanism therefor, and independently operating means, automatically thrown into operation, for driving said feeding mechanism.

2. The combination with a bottle capping machine, of a cap feeding mechanism therefor, independently operating means automatically thrown into operation for driving said feeding mechanism, and time element means for controlling said operating means.

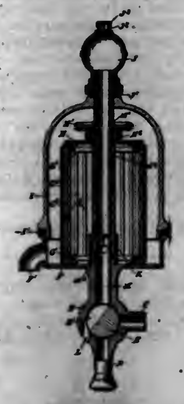
3. The combination with a bottle capping machine, of cap feeding mechanism therefor, an independently operating motor for driving said feeding mechanism, and means for throwing said motor into operation when the capping operation has been completed.

4. The combination with a bottle capping machine, of cap feeding mechanism therefor, an independently operating motor for driving said feeding mechanism, and means for automatically storing up energy in said motor during the capping operation of said machine and for throwing said motor into operation when the capping operation has been completed.

5. The combination with a bottle capping machine, of cap feeding mechanism therefor, a motor for driving said feeding mechanism, means for intermittently throwing said motor into operation, and time element means for regulating the duration or extent of each intermittent operation of said motor.

[Claims 6 to 19 not printed in the Gazette.]

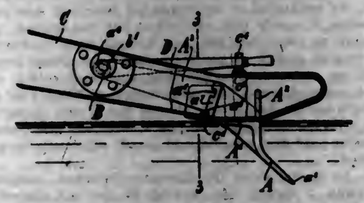
962,031. FILTER. GEORGE M. KNEUPER, New York, N. Y. Filed Nov. 28, 1908. Serial No. 464,872.



1. In a filter, a casing provided with an outlet, an inlet pipe extending through said casing and communicating at the top with an air chamber and provided near the bottom of said casing with apertures, a ring surrounding said inlet pipe at the apertures and spaced therefrom for diffusing the entering liquid, and a filtering material surrounding said stand pipe.

2. In a filter, a casing provided with an outlet, an inlet pipe extending through said casing, an air chamber at the top of said casing in communication with said inlet pipe, said inlet pipe being provided near the bottom of the casing with apertures, a ring surrounding said pipe at the apertures and spaced therefrom for diffusing the entering liquid, a support surrounding said pipe, a filtering material arranged on said support and means on said pipe for maintaining said filtering material and support in operative position.

962,032. SPADE FOR PORTABLE RECOIL-GUNS. NORBERT KOCH, Essen-on-the-Ruhr, Germany, assignor to Fried. Krupp Actiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Sept. 3, 1907. Serial No. 391,195.



1. In a portable barrel recoil gun, the combination with the mount and its trail; of a pivot shiftably mounted on said trail; a spade swinging about said pivot; and means interengaging between the trail and the spade whereby said spade may be secured in any one of a plurality of working positions.

2. In a portable recoil gun, the combination with the mount, of a spade having a supporting arm integral therewith and pivoted eccentrically at one end to the mount, means for moving the pivoted end of said arm eccentrically, and means interacting between the spade arm and the mount, whereby it is held rigid in any one of a plurality of working positions.

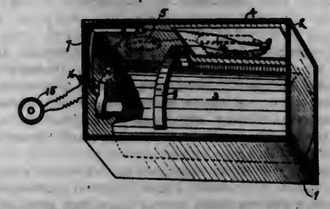
3. In a portable barrel recoil gun, the combination with the mount and its trail, of a pivot eccentrically mounted in the rear end of the trail, a spade mounted to swing about said pivot, means for moving said pivot on the trail, and means acting coöperatively with said moving pivot, for securing the spade in any one of a plurality of working positions to which it may be moved.

4. In a portable barrel-recoil gun, the combination with the mount and its trail, of a spade having a supporting arm pivotally connected to the mount and projecting rearwardly from its pivot when in the position for use, and means for securing the arm and the spade in a plurality of working positions; said arm being capable of being swung about its pivot to a forwardly projecting position of transport.

5. In a portable barrel-recoil gun, the combination with the mount, of a spade capable of vertical adjustment relatively to the mount, means for locking the spade in a plurality of working positions, and means whereby the spade may be shifted longitudinally of the mount to cause said locking means to become effective.

[Claims 6 to 9 not printed in the Gazette.]

962,033. COMBINED BATTERY-RECEPTACLE AND BELL-SUPPORT. JAMES L. KOERBER, Houston, Tex. Filed Jan. 5, 1909. Serial No. 470,856.



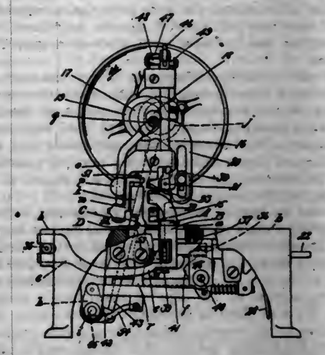
1. In a combined battery, receptacle and bell support, the combination with a receptacle, of a tongue and grip carried thereon, a bell support carried by said receptacle and arranged to form a sounding board; a battery; a metallic guard carried by said bell-support and adapted to contact with and embrace said battery, a carbon carried by said battery and embraced by said grip, a metallic tongue also carried by the bell support and adapted to contact with the tongue carried by the receptacle when the said support is secured thereto, said battery being so disposed as to serve as an electrical connector between said guard and grip.

2. A device of the character described, composed of a receptacle, a metallic tongue connection secured to the wall thereof, a metallic grip connection also secured to said wall, a lid carried by said receptacle, said lid being concaved or hollowed out so as to form a sounding board, a bell carried by said lid, a metallic tongue carried by said lid positioned so as to contact with the metallic tongue carried by said wall; a battery a guard also carried by said lid adapted to closely embrace and contact with said battery carried within said receptacle, said battery being provided with a carbon which is embraced by the grip secured to the wall of the receptacle, and said battery also serving as an electrical connection between said guard and grip.

3. The combination with the bell of the class provided with a controlling mechanism, binding posts, and battery for operating the same; of a receptacle for the battery of a size to closely surround the same; a closely fitting lid for said receptacle; a metallic guard carried by said lid designed to embrace said battery and contact with the metallic wall thereof; a metallic tongue also carried by said lid; a metallic tongue also carried by the wall of said receptacle, said tongues being so positioned as to contact when said lid is on said receptacle; a metallic grip also carried by said wall and adapted to contact with and embrace the carbon of said battery and means for connecting the binding posts of said bell-controlling-mechanism with said tongue and guard carried by said lid.

4. In a combined battery receptacle and bell support, the combination with the receptacle, of a metallic tongue and grip carried by the walls, thereof, a bell support carried by said receptacle, and a bell carried by the support, a metallic guard carried thereby, and a metallic tongue carried by said bell support designed to contact with said tongue carried by said wall, when said support is secured to said receptacle.

962,034. LEATHER-FOLDING MACHINE. RICHARD H. LUFKIN, Medford, Mass. Filed May 9, 1906. Serial No. 315,941.



1. In a machine of the class described, the combination of coöperating feed-feet; a feed-frame for controlling one of said feet; means independent of the feed-frame for elevating and depressing the other feed-foot; and actuating mechanism for said parts.

2. In a machine of the class described, the combination of coöperating feed-feet; an adjustable cam for elevating one of said feet; a spring for depressing said foot; a feed-frame for controlling the other foot and for causing both feed-feet to feed the material; and actuating mechanism for said parts.

3. In a machine of the class described, the combination of coöperating feed-feet; a movable feed-frame for controlling one of said feet; a pivoted carrier for the other foot, arranged to be moved endwise by the feed-frame; means for rocking said carrier on its pivot; and actuating mechanism for said parts.

4. In a machine of the class described, the combination of coöperating feed-feet; a movable feed-frame for controlling one of said feet; a pivoted carrier for the other foot, arranged to be moved endwise by the feed-frame; adjustable means for rocking said carrier on its pivot; and actuating mechanism for said parts.

5. In a machine of the class described, means to feed material to be folded, means to fold the material, means to stretch the material comprising an upper and a lower engaging member, and actuating mechanism to move the lower engaging member independently of the upper engaging member but in unison therewith to stretch the material.

[Claims 6 and 7 not printed in the Gazette.]

962,025. ULLAGE-ROD. EDGAR S. MACKOY, Milford, Tex. Filed Mar. 7, 1910. Serial No. 547,746.



1. A rod for gaging transparent vessels, having a scale reading upwardly along the rod from zero to a unit of volume mark, the scale being sub-divided between its zero point and said mark; the zero point being spaced from the bottom of the rod to allow for the bottom of the vessel when the rod is placed upon a common support with the vessel.

2. A rod for gaging transparent vessels, consisting of a body having a scale reading upwardly along the body from zero to a unit of volume mark, the scale being sub-divided between its zero point and said mark; the zero point being located at the bottom of the rod; and a foot adjustably mounted in the bottom of the body to constitute a means for placing the zero point in alinement with the inner face of the bottom of the vessel.

3. A rod for gaging transparent vessels, consisting of a body having a scale reading upwardly along the body from zero to a unit of volume mark, the scale being sub-divided between its zero point and said mark; the zero point being located at the bottom of the rod; a foot adjustably mounted in the bottom of the body to constitute a means for spacing the zero point in alinement with the inner face of the bottom of the vessel; and a locking device mounted in the body, for holding the foot in a predetermined position.

4. A rod for gaging transparent vessels, consisting of a body having a scale reading upwardly along the body from zero to a unit of volume mark, the scale being sub-divided between its zero point and said mark; the zero point being located at the bottom of the rod; a foot slidably mounted in the bottom of the body to provide for the elevation of the zero point into alinement with the inner face of the bottom of the vessel; and a set screw mounted in the body and arranged to engage the foot.

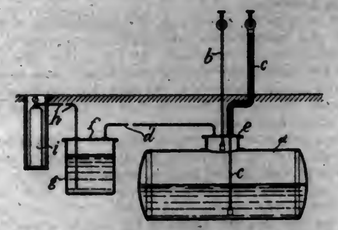
5. A rod for gaging transparent vessels, having a plurality of parallel scales upon one of its faces, reading upwardly along the rod, the scales having a common zero point and terminating in unit of volume marks, spaced from each other longitudinally of the rod, the scales being sub-divided between the zero points and the several unit of volume marks; there being parallel lines disposed longitudinally of the rod to separate the scales, and lines disposed transversely of the rod and extended from a common edge thereof to the tops of the parallel lines, to define the unit of volume marks.

[Claim 6 not printed in the Gazette.]

962,036. PROCESS FOR STORING INFLAMMABLE SOLUTIONS. CARL MARTINI, Berlin, Germany. Filed Sept. 9, 1909. Serial No. 516,975.

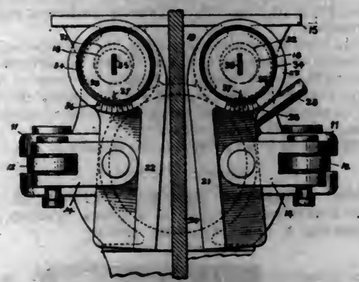
1. The process of protecting inflammable liquids containing a dissolved substance liable to be precipitated, which consists in storing them in the presence of an inert gas impregnated to prevent its absorbing the solvent of said substance.

2. The process of protecting inflammable liquids containing a dissolved substance liable to be precipitated,



which consists in storing them in the presence of an inert gas impregnated with the solvent of said substance.

962,037. SAFETY DEVICE FOR ELEVATORS. ALFRED H. MEECH, Chatham, N. Y. Filed Mar. 30, 1908. Serial No. 424,024.



1. A safety or brake appliance for elevators comprising an air cylinder, a pair of brake shoes pivoted at points above said cylinder to the frame thereof, a piston for said cylinder, a pair of levers fulcrumed to said cylinder on opposite sides thereof, and links connecting the opposite ends of said levers to said brake shoes and piston respectively.

2. A safety or brake appliance for elevators comprising an air cylinder, a base integral therewith provided with two cylindrical chambers having their axes parallel to the axis of the cylinder and one arranged on each side thereof, a pair of brake shoes and pivot studs therefor having their bearings in said chambers respectively, said shoes being adapted to be actuated by the power developed in said air cylinder.

3. A safety or brake appliance for elevators comprising a power cylinder, brake shoes and guiding jaws arranged one above the other, and a single unitary frame upon which said shoes and jaws are directly supported.

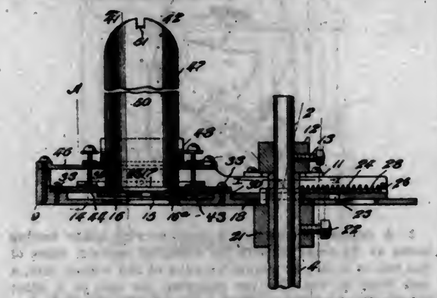
4. A safety or brake appliance for elevators comprising a vertical rail, a power cylinder, a pair of brake shoes and a pair of guiding jaws arranged one above the other and a single unitary frame to which the cylinder shoes and jaws are directly connected.

5. A safety or brake appliance for elevators comprising a frame, a power cylinder formed in or upon said frame, a pair of brake shoes pivoted to the frame at a point above the cylinder, and guiding jaws carried by the frame at a point below the cylinder.

[Claims 6 and 7 not printed in the Gazette]

962,038. CAN-CAPPING MACHINE. LEWIS J. MILLER, Bergen, N. Y., assignor, by direct and mesne assignments, to Lewis J. Miller Company, Bergen, N. Y. Filed Dec. 14, 1907. Serial No. 406,531.

1. In a cap feeding apparatus, the combination of a magazine tube, a support therefor, a member mounted under the tube for reciprocatory movement, a fixed plate under the member and equivalent to the thickness of a cap, a second member disposed under the plate and mounted for reciprocatory movement, and means for simultaneously moving one member inwardly and the other outwardly to discharge the caps successively.



2. In a cap feeding apparatus, the combination of a magazine tube, a support therefor, a member mounted under the tube for reciprocatory movement, a fixed plate under the member and equivalent to the thickness of a cap, a second member disposed under the plate and mounted for reciprocatory movement, means for simultaneously moving one member inwardly and the other member outwardly to discharge the caps successively, said means including a device on the second member which engages the first member to actuate the latter.

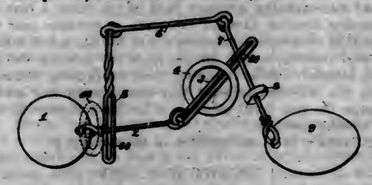
3. In a cap feeding apparatus, the combination of a cap holder having a discharge opening at its bottom, a pair of jaws disposed under the opening, a plate under the jaws, a second pair of jaws disposed immediately under the plate, coöperating means between the under and upper jaws for opening the upper jaws during the closing of the under jaws, and means for actuating the under jaws.

4. In a cap feeding apparatus, the combination of a cap holder having a discharge opening at its bottom, a pair of jaws disposed under the opening, a plate under the jaws, a second pair of jaws disposed immediately under the plate, coöperating means between the under and upper jaws for opening the upper jaws during the closing of the under jaws, a rotary device for simultaneously moving both under jaws open, and springs arranged to close the under jaws.

5. In a cap feeding device, the combination of a vertical magazine tube open at its bottom, two pairs of jaws arranged at the bottom of the tube and spaced apart a distance substantially equal to the thickness of a cap, and means for opening one pair of jaws while closing the other to discharge the lowermost cap in the tube.

[Claims 6 to 25 not printed in the Gazette.]

962,039. PUZZLE. ELDON J. MCFARLAND, Seattle, Wash. Filed Apr. 27, 1909. Serial No. 492,582.



1. In a puzzle, the combination with a ring, of five links connected to make an endless chain, two non-consecutive links being open, through which links the other links extend, stop pieces secured to the outer ends of said other links to prevent the withdrawal of the open links therefrom and the passage of the ring.

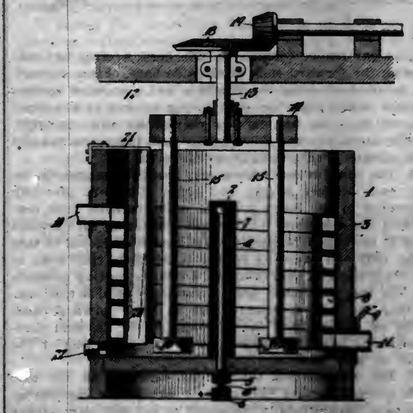
2. In a puzzle, in combination, an endless chain and a ring slidable thereon, said chain containing an open link through which said ring may pass and two connected links consecutive with and adapted to slide within said open link, one of said two connected links carrying two stops upon the end which projects through the said open link, one stop being incapable of passing through the open link but passable through the ring and the other stop being passable through the open link but not passable through the ring.

3. A puzzle comprising an endless chain and a ring, the chain including an open link through which the ring may be passed, two links consecutive with and adapted to slide through said open link, the one of said last named links which is next to the open link carrying two stops, the inner one being slidable upon its link and not passable through the open link, and the outer one being passable through the open link and not passable through the ring.

4. In a puzzle, the combination with a ring, of links connected to form an endless chain, two non-adjacent links being open and the other links being slidable through said openings, a stop secured to the outer end of one of said other or slidable links and of a size forbidding passage through either the ring or the open link adjacent thereto, two stops secured to the outer end of one of the other of said slidable links, one of said stops being of a size and shape forbidding passage through the open link but passable through the ring, and the other stop being passable through the link and not passable through the ring.

5. In a puzzle, the combination with a ring, two sets of connected links, one terminal link of each set being open and the other terminal link of each set slidable within the open link of the other set, whereby an endless chain is formed, stop pieces secured to the outer ends of the links which are embraced by the open links, the openings in said open links being in one case smaller than its associated stop and in the other case being large enough to permit passage of its associated stop, a button associated with said last mentioned stop and slidable upon its link, said button being too large to pass through its open link but passable through the ring, both of said stops being not passable through the ring.

962,040. APPARATUS FOR ELECTRICAL TREATMENT OF ORES. WILLIAM B. MCPHERSON, Los Angeles, Cal., assignor of one-half to Gail Borden, Los Angeles, Cal. Filed Apr. 20, 1909. Serial No. 491,155.



1. An apparatus for electrical treatment of ores comprising a central electrode therein, an outer electrode concentric with the central electrode, said outer electrode being hollow and provided with means for passing heating medium therethrough.

2. An apparatus for electrical treatment of ores comprising a central electrode therein, an outer electrode concentric with the central electrode, said outer electrode being formed of a tube wound in the form of a helix and provided with means for the passage of heating medium therethrough.

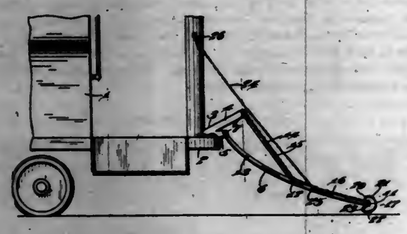
3. An apparatus for electrical treatment of ores comprising a central electrode therein, an outer electrode concentric with the central electrode, said outer electrode being formed of a tube wound in the form of a helix and provided with means for the passage of heating medium therethrough, said tube being rectangular in cross section, the inner face thereof forming a cylindrical surface.

4. An apparatus for electrical treatment of ores comprising a tank, a central electrode therein, an outer electrode concentric with the central electrode, said outer electrode being hollow and provided with means for passing heating medium therethrough, an agitating means comprising a rotatable member having bars extending within the tank, and means for rotating said rotatable member.

5. An apparatus for electrical treatment of ores comprising a tank, a central electrode therein, an outer electrode concentric with the central electrode, said outer electrode being hollow and provided with means for passing heating medium therethrough, an agitating means comprising a rotatable member having bars extending downwardly within the tank, and means for rotating said rotatable member, said bars having obliquely directed enlargements at their lower ends.

[Claim 6 not printed in the Gazette.]

962,041. CAR-FENDER. OWEN MCQUILLAN and EDMUND D. CHAITKEN, Philadelphia, Pa. Filed Jan. 12, 1910. Serial No. 537,714.

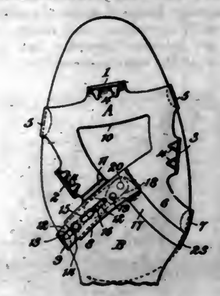


1. A car fender comprising side bars, a cross bar connecting the forward ends of the side bars, object supporting means connecting the side bars and a series of springs secured to the cross bar, each spring secured to the upper face of the cross bar curving rearwardly and upwardly, thence forwardly and downwardly and thence rearwardly and upwardly, substantially as set forth.

2. The combination with a car, brackets secured to the car, each bracket having two arms, side bars pivotally connected to the lower arms of said brackets, rods connecting the side bars, a cross bar connecting the forward ends of the side bars, pivoted bars connected to one of said cross rods and pivotally connected at their rear ends to the other arms of said brackets, a flexible netting connecting the last mentioned bars, interlaced metal strips connecting the first mentioned bars at their forward ends, hooks on the car and chains connected to the first mentioned side bars and adapted to be caught by any of the links on said hooks.

3. The combination with a car, brackets on the car, each bracket having two arms, a car fender comprising side bars, bars pivotally connected to the said bars, object supporting means between said bars, and bolts pivotally connecting said bars with the said arms of the brackets, and each bolt having a head at one end and a groove at its other end, and a pivoted locking key in the groove of said bolt.

962,042. CREEPER. OLOF A. NORLUND, Williamsport, Pa. Filed May 25, 1909. Serial No. 498,222.



1. A creeper comprising a calk-carrying plate having hooks at its front corners for engaging opposite sides of the sole of a shoe at points forward of the widest part, a rear hook at one side for engaging the sole at a point rearwardly from the widest part thereof, the said plate and front and rear hooks being formed of a single piece of metal extending across the sole, a second rear hook disposed to engage the opposite side of the sole behind its widest portion and movable in a direction toward the front hook at the opposite side of the plate, means for slidably mounting the last-mentioned hook on the plate and a device mounted on the plate and connected with the movable hook to draw the plate rearwardly and the movable hook forwardly for clamping the creeper.

2. A creeper comprising a calk-carrying plate, a pair of hooks fixed on the plate at one side adjacent the front and rear and arranged to engage the sole of a shoe at points in front of and behind the widest part of the sole, a hook fixed on the front part of the plate at the side thereof opposite from the first-mentioned hooks, a movable sole-engaging hook mounted in the plate opposite the other rear hook, an actuating means, and connections between the actuating means and plate and movable hook for moving the plate to grip the three fixed hooks on the sole and for moving the last-mentioned hook to grip the sole.

3. A creeper comprising a calk-carrying plate, a plurality of sole-engaging members one of which is movable, and a lever mounted on the plate and operatively connected with the movable member and disposed in the plane of the plate when in locking position and sprung out of the plane of the plate in moving to and from locking position.

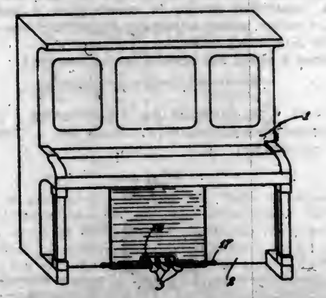
4. A creeper comprising a calk-carrying plate, a plurality of sole-engaging members one of which is movable, and a lever mounted on the plate and operatively connected with the movable member and disposed in the plane of the plate to be flush therewith when in locking position and sprung out of the plane of the plate in moving to and from locking position, said lever having a terminal lug to engage the sole of a shoe for preventing unlocking movement of the lever.

5. A creeper comprising a calk-carrying plate, a pair of front sole-engaging members fixed on the plate, a rear sole-engaging member fixed on the plate, a movable rear sole-engaging member mounted on top of the plate and slidably carried thereby, means on the plate for guiding the movable member, and a clamping lever operatively connected with the movable member and mounted on the plate to engage the rear fixed member to lie flush therewith when in locking position.

[Claims 6 to 11 not printed in the Gazette.]

962,043. PIANO-PANEL PROTECTOR. FREDERICK G. W. PAIGE, Oakland, Cal. Filed June 5, 1909. Serial No. 500,347.

1. The combination with a piano having a slot in the upper part of the panel below the key board, and a guide located below the key board in front of said slot, of a spring-actuated roller mounted beneath the key board in the rear of said slot, and a curtain secured to said roller, and extending through said slot and guide and having means for securing it in lowered position over the front of said panel to the pedals.



2. The combination with a piano having a slot in the upper part of the panel below the key board, and a guide bracket below the key board in front of said slot, of a spring-actuated roller mounted beneath the key board in rear of said slot, and having means for preventing rattling of its spring, and a curtain secured to said roller, and extending through said slot and bracket and having a slot at its lower end for engagement with the pedals of the piano.

3. The combination with a piano having a slot in the upper part of the panel below the key board, and a guide bracket below the key board in front of said slot, of a spring roller mounted beneath the key board in rear of said slot, and a curtain secured to said roller and extending through said slot and bracket, and having a slot at its lower end to engage the pedals, and projections to prevent its end from passing through the bracket.

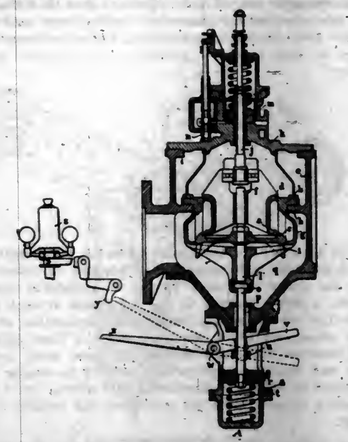
4. The combination with a piano having a slot in the upper part of the panel below the key board, and a guide bracket below the key board, in front of said slot, of a bracket with depending arms secured beneath the key board in the rear of said slot and provided with roller bearings, the roller bearing of one of said arms being cushioned, a spring-roller mounted in said arms, and a curtain secured to said roller and extending through said slot and bracket and having a slot at its lower end adapted to engage the piano pedals.

5. The combination with a piano having a slot in the upper part of the panel below the key board and a guide bracket below the key board in front of said slot, of a bracket with depending arms secured beneath the key board in the rear of said slot, and provided with roller bearings, the roller bearing of one of said arms being cushioned, a spring roller mounted in said arms and lined with felt to prevent rattling of the spring, and a curtain secured to said roller and extending through said slot and bracket and having a slot at its lower end adapted to engage the piano pedals.

962,044. CONTROLLING-VALVE FOR MOTORS. CHARLES ALGERNON PARSONS and ALBERT WILLIAM BOWERBANK, Newcastle-upon-Tyne, England; said Bowerbank assignor to said Parsons. Filed Mar. 22, 1909. Serial No. 485,052.

1. Means for controlling the supply of fluid to fluid operated motors comprising in combination a chamber, a regulating valve and an emergency valve in series within said chamber, said valves being arranged concentric within one another, a valve seating common to both said valves, separate spindles for the purpose of operating said valves, and governor means acting automatically to control said valves independently of each other.

2. Means for controlling the supply of fluid to fluid operated motors comprising in combination a chamber, a regulating valve and an emergency valve in series within said chamber, said valves being arranged concentric within one another, a valve seating common to both of said valves, separate spindles for the purpose of operating said valves, and separate governor means acting automatically to control said valves independently of one another.



3. Means for controlling the supply of fluid to fluid operated motors comprising in combination a chamber, a regulating valve and an emergency valve in series within one casing, said valves being arranged concentric within one another a valve seating common to both of said valves, separate valve operating spindles, means for giving a pulsatory motion to said regulating valve and governing means acting automatically to control said valves independently of one another.

4. Means for controlling the supply of fluid to fluid operated motors comprising in combination a chamber, a regulating valve and an emergency valve in series within said chamber, said valves being arranged concentric within one another a valve seating common to both of said valves, separate spindles extending from opposite sides or ends of said chamber for the purpose of operating said valves, and governor means acting automatically to control said valves independently of each other.

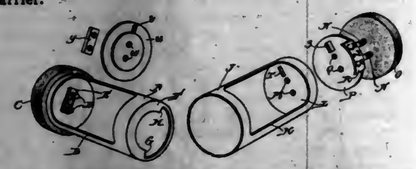
5. Means for controlling the supply of fluid to fluid operated motors comprising in combination a chamber, a regulating valve and an emergency valve in series within said chamber, said valves being arranged concentric within one another, a valve seating common to both of said valves, separate spindles extending from opposite sides or ends of said chamber for the purpose of operating said valves, and separate governor means acting automatically to control said valves independently of one another.

[Claims 6 to 13 not printed in the Gazette.]

962,045. CARRIER FOR PNEUMATIC-DESPATCH TUBES. ALBERT W. PEARSALL, Lowell, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed May 5, 1908, Serial No. 430,959. Renewed May 11, 1910. Serial No. 560,727.

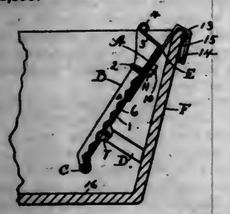
1. In a carrier for pneumatic despatch tube apparatus, two cylindrical telescoping shells adapted to rotate one upon the other, each having a peripheral opening therein, a buffer secured to the outer end of each shell, means for preventing the longitudinal separation of said shells, and a fixed plate located between the outer end of one of said shells and its buffer for limiting the rotation of said shells to the coöperation or non-coöperation of said openings, said plate carrying a fixed segmental flange projecting over the end of the shell for indicating the number of the carrier.

2. In a carrier for pneumatic despatch tube apparatus, two cylindrical telescoping shells adapted to rotate one upon the other, each having a peripheral opening therein, a buffer secured to the outer end of each shell, means for preventing the longitudinal separation of said shells, stops located on the inner shell, a fixed plate located between the outer end of the outer shell and its buffer and carrying a projection adapted to engage with said stops to limit the rotation of said shells, and a fixed segmental flange on said plate for indicating the number of the carrier.



3. In a carrier for pneumatic despatch tube apparatus, two cylindrical telescoping shells adapted to rotate one upon the other and each having a peripheral opening therein, a buffer secured to the outer end of each shell, means for preventing the longitudinal separation of said shells, stops located on the inner shell, a fixed plate located between the outer end of the outer shell and its buffer and carrying a projection adapted to engage with said stops to limit the rotation of said shells, and a fixed projection on said plate for indicating the number of the carrier.

962,046. WASHBOARD. ALFRED PENOVI and HARRY A. BREENE, Port Chester, N. Y. Filed Apr. 26, 1909. Serial No. 492,399.



1. A washboard having a body mounted between side pieces, the said body made of a single strip of metal, generally rectangular, and comprising a bottom edge, the general lower portion above said bottom edge corrugated for a rubbing portion, bent outward above said rubbing portion to form a lower dam, flat above said lower dam, and bent outward at the top to form an upper dam, the said side pieces comprising angle pieces having respectively an upwardly directed member and an inwardly directed member, the said upwardly directed member attached to the edges of the said body, the said inwardly directed member attached to the under face of the said body, and the said bottom edge of said body turned under and back of the said inwardly directed members.

2. A washboard having a body, side pieces and a roller, said body rigidly mounted between said side pieces and having a lower corrugated rubbing portion, the said roller being rotatively mounted between the lower ends of the said side pieces immediately below the said lower corrugated rubbing portion.

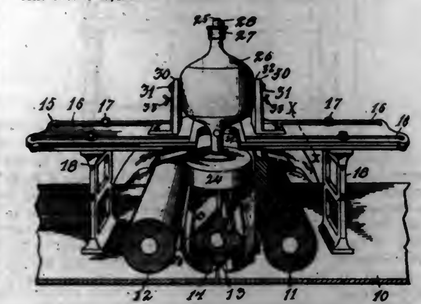
3. A washboard comprising a body member having lateral edges and a rubbing portion and a supporting member provided with means of support from the top edge of the tub, combined with means for rigidly and adjustably securing the said body member on the upper side of said supporting member, the said latter means comprising clamping bolts and nuts, working in slots in said supporting member and holes in said body member.

4. A washboard laterally adjustable as to inclination, supported from the top and side of a tub, and comprising essentially two members, one member composed of a body and side pieces rigidly secured together and provided with pivotally mounted and adjustable lateral supporting legs, and the other member comprising a supporting frame adapted to hook over the top edge of the tub and to adjustably receive the first member on its front face.

5. A washboard having in combination a body, side pieces, a roller, lateral adjustable supporting legs and adjustable supporting frame.

[Claims 6 and 7 not printed in the Gazette.]

962,047. PLANER-KNIFE SHARPENER. CARL O. PETERSON, Jamestown, N. Y. Filed Oct. 4, 1900. Serial No. 520,811.



1. A planer knife sharpener comprising a plate, guide supports attached to said plate to sustain said plate a spaced distance from a planer bed, a grinding wheel adjustably mounted on said plate, and means for turning said grinding wheel.

2. A planer knife sharpener comprising a plate having parallel slots therethrough, guide supports having bolt and washer attachment to said plate through said slots to support said plate a spaced distance from a planer bed, a grinding wheel pivotally supported centrally on said plate, and means for turning said grinding wheel.

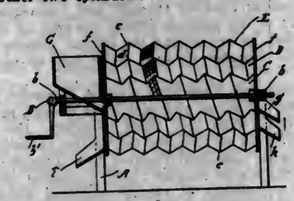
3. A planer knife sharpener comprising a plate having parallel slots therethrough, adjustable guide supports having bolt and washer attachment to said plate through said slots to support said plate a spaced distance from a planer bed, a grinding wheel pivotally supported centrally on said plate, and means for turning said grinding wheel.

4. A planer knife sharpener comprising a plate, parallel slots on the opposite edges of said plate, a motor pivotally supported on said plate midway of its length, said plate having a suitable opening for said motor, a grinding wheel revolubly mounted in said motor to be driven thereby, and guide supports detachably attached to said plate to sustain it a spaced distance from the bed of a planing machine.

5. A planer knife sharpener comprising a plate having a sidewise central opening therein, brackets on said plate each side of said central opening, a motor pivotally mounted in said brackets to be supported thereby, set screws in said brackets to support said motor at any desired angle, a shaft through said motor and adjusting means for said shaft, a grinding wheel attached to the lower end of said shaft, parallel slots running lengthwise of said plate near the opposite edges, guide supports to sustain said plate a spaced distance from the planer bed, said guide supports having suitable bolts and washers for attaching the said plate to said slots, substantially as and for the purpose specified.

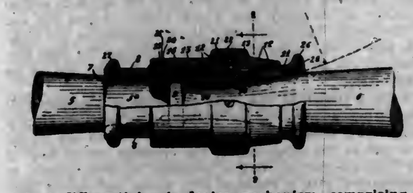
962,048. POTATO-GRADER. HANS PETERSON, Mora, Minn. Filed Sept. 27, 1909. Serial No. 519,819.

1. In a grader, the combination, with a supporting frame, of a shaft journaled in the said frame and provided with supports, and three screening cylinders of different diameter secured to the said supports and having their peripheries corrugated to form spiral screwthreads, one of the said cylinders having its screwthreads arranged in the opposite direction from the screwthreads of the other two cylinders.



2. In a grader, the combination, with a supporting frame, of three revoluble screening cylinders of different diameter mounted in the frame one inside the other and having their peripheries corrugated to form spiral screwthreads, the outer cylinder having its screwthreads arranged in the opposite direction from the screwthreads of the other two cylinders.

962,049. DIFFERENTIAL AXLE DEVICE. FRANK C. PRIESTLY and JAMES M. AUBREY, Los Angeles, Cal. Filed Jan. 17, 1910. Serial No. 538,360.

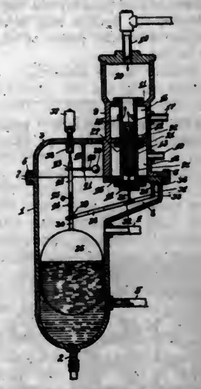


1. A differential axle device mechanism, comprising an axle divided into two sections in alinement, one of said sections having a head and a curved neck; an outer sleeve having an enlarged bore at one end mounted upon the axle section without a head, said axle section entering the smaller bore thereof, and being held rigidly therein and an inner sleeve having an inner configuration to fit upon the head and curved neck of the axle section with a working fit; and adapted to be forced into the enlarged bore of the outer sleeve and held rigidly therein.

2. A differential axle device mechanism comprising an axle divided into two sections in alinement, one of said sections having a head and a curved neck; an outer sleeve having an enlarged bore at one end mounted upon the axle section without a head, provided with channels extending radially and having the outer ends thereof closed with plugs, said axle section entering the smaller bore of said sleeve and being held rigidly therein, and an inner sleeve having an inner configuration to fit upon the head and curved neck of the axle section with a working fit, said inner sleeve being adapted to be forced into the enlarged bore of the outer sleeve and held rigidly therein, and being provided on its outer surface with a plurality of circumferential grooves, said circumferential grooves being connected by longitudinal grooves, and also having radial channels extending from the circumferential to the interior of the sleeve, and provided with grooves in its inner surface adapted to receive graphite and Babbitt metal.

962,050. FEED-WATER CONTROLLER FOR BOILERS. REUBEN M. REYNOLDS, South Bend, Ind. Filed July 30, 1909. Serial No. 510,421.

1. In a feed water controller for steam boilers, a column, a casing secured to the column and provided with upper and lower internal flanges, a valve casing engaging said flanges and coöperating therewith and with the sides of the first mentioned casing to provide a steam chamber and an exhaust chamber, each chamber having an outlet, the valve casing having upper and lower sets of ports, a valve slidably mounted in the valve casing to open and close said sets of ports, the valve having a central longitudinal bore and radially directed ports to convey steam through the valve and into the valve casing at the lower end of the latter, a float in the column, and a connection between the valve and the float whereby the former may be moved upon operation of the float.



2. In a feed water controller for steam boilers, a column, a casing secured to the column and provided with upper and lower internal flanges, a valve casing engaging said flanges and coöperating therewith and with the sides of the first mentioned casing to provide a steam chamber and an exhaust chamber, each chamber having an outlet, the valve casing having upper and lower sets of ports, a valve slidably mounted in the valve casing to open and close said sets of ports, the valve having a central longitudinal bore and radially directed ports to convey steam through the valve and into the valve casing at the lower end of the latter, a float in the column, a connection between the valve and the float whereby the former may be moved upon operation of the float, an alarm, and connections between the alarm and float.

3. In a feed water controller for steam boilers, a column, a casing secured to the column, a valve casing disposed within the aforesaid casing with the casings constructed to provide a steam chamber and an exhaust chamber, each chamber having an outlet, the valve casing having upper and lower sets of ports, a valve slidably mounted in the valve casing to open and close said sets of ports, the valve having a central longitudinal bore and apertures at one end thereof forming ports having communication with said bore to convey steam through the valve and into the valve casing at the lower end of the latter, a float in the column, and means between the valve and float whereby the former may be moved upon operation of the float.

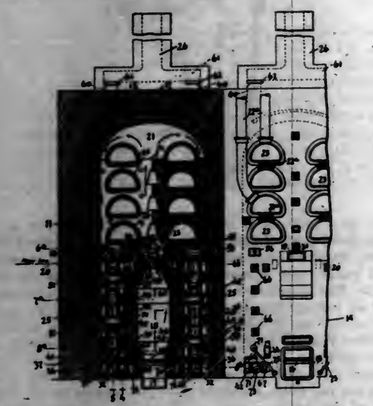
4. In a feed water controller for steam boilers, a column, a casing secured to the column, a valve casing disposed within the aforesaid casing and coöperating therewith to provide a steam chamber and an exhaust chamber, each chamber having an outlet, the valve casing having upper and lower sets of ports, a valve slidably mounted in the valve casing to open and close said sets of ports, the valve having a longitudinal bore and radially directed ports to convey steam through the valve and into the valve casing at the lower end of the latter, a float in the column, and means between the valve and the float whereby the former may be moved upon operation of the float.

5. In a feed water controller for steam boilers, a column, a float in the column, a casing secured to the column and provided with internal flanges, a valve casing disposed in the first mentioned casing and coöperating with said valves and walls of the first named casing to

provide a steam chamber and an exhaust chamber, each chamber having an outlet and the valve casing having ports establishing communication between the interior of the valve casing and said chambers, a valve slidably mounted in the valve chamber and provided with a central bore communicating and with ports to provide for the passage of steam into the lower end of the valve casing to balance the valve, the valve also having a by-pass to permit steam to flow from the steam chamber to the exhaust chamber, and connections between the valve and the float whereby the by-pass may be shifted into and out of registration with the ports of the valve casing upon movement of the float.

[Claim 6 not printed in the Gazette.]

962,051. GAS-RETORT FURNACE. EDWARD L. RIEHA, Milwaukee, Wis. Filed Dec. 4, 1908. Serial No. 465,978.



1. In a recuperator, the combination of a set of passages for the combustion-gases in the form of a flattened sheet, flanked by a set of passages for air in two flattened sheets on opposite sides of and completely covering said first flattened sheet; said last-named set of passages consisting in a plurality of air chambers communicating from side to side by transverse passages across said first set of passages in a direction at right angles thereto.

2. In a recuperator, a set of passages for combustion-gases in the form of a flattened sheet, and a second set of passages for air in the form of two flattened sheets flanking and completely covering the opposite sides of said first flattened sheet; said second set of passages comprising and completely covering the opposite sides of said first set of passages, a plurality of passageways passing transversely across said first set of passages and connecting air-chambers on opposite sides of said first set of passages, and other passageways around the end of said first set of passages connecting air-chambers on opposite sides thereof; the air passing from one chamber to the next by one or more of said transverse passageways, and from that to the next succeeding by one of said passageways around the end, and so on indefinitely.

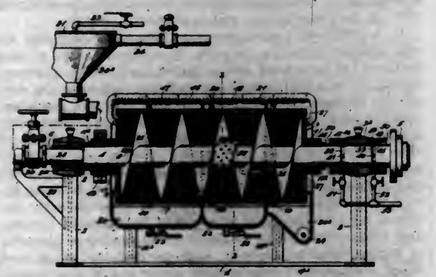
3. A recuperator comprising a series of stories divided by horizontal partitions and each story divided by a pair of longitudinal walls into three chambers; the middle chamber being cut off from the two lateral chambers, and the latter being connected together by a passage around the end of the middle chamber; said horizontal partitions comprising a plurality of tubular members which have tubes opening at one end into the lateral chamber on one side of the story below and at the other end into the lateral chamber at the other side of the story above, said tubular members leaving apertures between them which form passageways between the central chambers on the different stories, and each of said lateral chambers being completely closed to those immediately above and below it; means for the passing of hot gases through the central set of chambers and means for passing air through the lateral sets of chambers, said air passing successively from one lateral chamber through said transverse tubular members to the opposite lateral chamber on the next adjacent story, thence around the central chamber to the other lateral chamber on said story, and so on indefinitely.

4. A recuperator comprising a series of stories divided by horizontal partitions and each story divided by a pair of longitudinal walls into three chambers; the middle chamber being cut off from the two lateral chambers, and the latter being connected together by a passage around the end of the middle chamber; said horizontal partitions comprising a plurality of tubular members which have tubes opening at one end into the lateral chamber on one side of the story below and at the other end into the lateral chamber at the other side of the story above, said tubular members leaving apertures between them which form passageways between the central chambers on the different stories and each of said lateral chambers being completely closed to those immediately above and below it; means for passing hot gases downwardly through said central chambers from top to bottom, and means for passing air upwardly through said lateral chambers and transverse passageways from bottom to top, said air passing from one chamber into and through said transverse tubular members into the opposite lateral chamber on the story next above, thence around one end of the central chamber to the lateral chamber on the opposite side of the same story, thence through the next succeeding tubular member in the same manner and so on indefinitely.

5. In a device of the class described, a partition-wall comprising a plurality of hollow tiles each having a longitudinal passageway opening at one end on one lateral face and at the other end on the opposite lateral face of the tile, alternating with a plurality of solid blocks, in combination with a chamber into which one end of each of the tiles opens and a second chamber into which the other end of each tile opens.

[Claims 6 to 13 not printed in the Gazette.]

962,052. CONTINUOUS CENTRIFUGAL MACHINE. FRED H. ROBERTS, Sterling, Colo. Filed May 1, 1909. Serial No. 493,293.



1. A continuous feeding, washing, liquid separating and pulp drying and discharging centrifugal separator, comprising a shaft rotatably mounted, a screening cylinder rotatably mounted on said shaft, means for feeding any fluid material containing suspended solids to said cylindrical screen, means including a hopper and a pipe, provided with a supply of compressed air, for feeding such material through said cylindrical screen, means for discharging semi-dry material from said screen, means including a perforated drum surrounding said shaft for supplying wash water to a predetermined part of said cylindrical screen, and means for rotating said shaft and screen.

2. A continuously feeding, washing, and discharging separator for sugar, other crystalline, non-crystalline, and amorphous materials, comprising a rotatably journaled shaft, a cylindrical screen comprising a perforated cylinder lined with screening material mounted rotatably on said shaft, means including a feed hopper and a pipe attached to said hopper and leading to a supply of compressed air for forcing material into said screen, means including a perforated drum surrounding said shaft for conveying water to the discharging end portion of said screen, a circumferential row of overlapping discharge apertures at the discharge end of said screen, a flange shaped screw conveyer mounted on said shaft and arranged to convey the material to be separated through said cylindrical screen, and means for rotating said shaft and screen independently of each other.

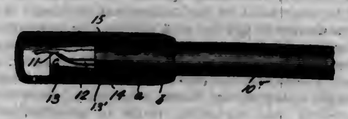
3. In a continuously feeding separator for separating solids from liquids, the combination of the base plate, the standards and the screens, with the shaft rotatably mounted in said standards, a feed chamber in one end of said shaft opening into said cylinder, a valve controlled feed pipe supported by one of said standards, extending loosely into said shaft's feed aperture, a hopper secured to said feed pipe provided with a cover, a feeding supply pipe connected to said hopper at one end, and a valve controlled pipe connected to said cover at one end and extending to a supply of compressed air.

4. In a continuously feeding centrifugal separator for separating solids from liquids, the combination of the rotatably journaled shaft, the cylindrical screen rotatably mounted on said shaft, means including a hopper and a feed pipe for feeding material to be separated to said cylindrical screen, means for discharging the solid material from said cylindrical screen, with the casing surrounding said cylindrical screen provided with three compartments, a valve controlled discharge aperture in two of said compartments, and a conveyer in the third compartment.

5. In a continuously feeding centrifugal separator for separating solids from liquids, the combination of the multiple compartment casing, the cylindrical screen, and means including a hopper for feeding the material to be separated to said cylindrical screen, with journal bearings adjacent to said cylindrical screen, a shaft journaled in said journal bearings and supporting said cylindrical screen, water supply passages in said shaft opening into said screen at a predetermined part of its length, radial apertures in said shaft connecting with said water passages, circumferential grooves in said shaft connecting with said radial apertures, stuffing boxes arranged in the opposite ends of one of said journal boxes, arranged to inclose said grooves, and valve controlled water supply pipes connected to said journal bearings and registering with said grooves.

[Claims 6 and 7 not printed in the Gazette.]

962,053. FOUNTAIN-PEN ATTACHMENT. OTTO VON ROTTENBURG, Frankfort-on-the-Main, Germany. Filed Jan. 31, 1910. Serial No. 541,133.



1. In a fountain pen, the combination with a pen barrel and a pen point carried thereby, of a cap to inclose said pen point and adjacent end of the barrel, and an absorbent hollow cylindrical thimble within the cap and conforming to the inclosed end of the barrel, the grip of the cap upon the pen barrel operating solely through the said thimble.

2. In a fountain pen, the combination with a pen barrel and a pen point carried thereby, of a cap to inclose and protect the pen point, and an absorbent thimble snugly fitted into and carried by the cap and adapted to extend between the cap and the adjacent end of the barrel, said thimble being formed of laminæ of varying densities.

3. In a fountain pen, the combination with a pen barrel and a pen point carried thereby, of a cap to inclose and protect said pen point, and a thimble of absorbent material fitted within the cap and constituting the gripping surface to retain the cap upon the barrel, said cap and thimble being provided with a rib and coöperating groove to strengthen the connection between them.

962,054. METHOD OF MAKING SHOES FOR AUTOMOBILE AND OTHER VEHICLE TIRES. ROBERT ROWLEY, New York, N. Y., and JAMES J. COOMBER, Jersey City, N. J., assignors, by mesne assignments, to Rubber Company of America, a Corporation of Delaware. Filed Aug. 4, 1909. Serial No. 511,188.

1. The method of making vulcanized tire shoes having marginal beads and adjacent clencher grooves, consisting in securing and supporting the shoe, in form, interiorly upon a mandrel, and, exteriorly, between the toe and heel of each bead, upon bead-supports, leaving the tread, sides, grooves and bead heels exposed; in compressively wrapping a fibrous binder tubularly about and circumferentially around the exposed tread, side and heel surfaces of the shoe, across the mouths of the clencher grooves, and the exposed walls of the bead supports to hold the shoe, the mandrel and the bead supports in place and to hold the binder across the mouths of the clencher grooves; in compressively straining the binder over the tread and side walls of the shoe and pressing it into and upon the walls of the clencher grooves; and in subjecting the shoe so supported, bound and compressed to vulcanising heat.

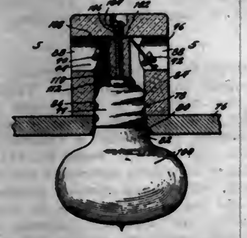
2. The method of making vulcanized tire shoes having marginal beads and adjacent clencher grooves, consisting in mounting upon the outer wall of a carcass, in form, a rubber covering extending, in contact with the carcass, from toe to toe; in mounting the so assembled carcass and rubber covering upon an interior mandrel and exteriorly upon bead supports, leaving the heel, groove, sides and tread portion of the rubber covering exposed; in compressively wrapping a fibrous binder tubularly and circumferentially around and in contact with the exposed portion of the rubber covering from heel to heel of the shoe and across the mouths of the clencher grooves also inclosing the bead supports to hold the shoe, the mandrel and the bead supports together and to hold the binder across the mouths of said grooves; in compressively straining the binder over the tread and sides of the rubber covering and pressing it into and upon the walls of the grooves; and in subjecting the shoe so supported, bound and compressed to vulcanizing heat.

3. The method of making vulcanized tire shoes consisting in mechanically holding a shoe non-compressively by its marginal portions that are adapted for use in holding the shoe on a rim, leaving all the shoe thereoutward exposed; in wrapping the shoe and the holding means with a fibrous wrapper tubularly and circumferentially, in direct opposition to the exposed portion of the shoe, from marginal portion to marginal portion thereof, and in inclosing contact with the holding means; in compressively tightening said wrapper over the holding means and simultaneously over the exposed tread and sides of the shoe to strain its rubber portions uniformly and inwardly toward the margins; and in subjecting the so wrapped and inwardly strained shoe to open cure vulcanization.

4. The method of making vulcanized tire shoes consisting in supporting a pre-shaped, unvulcanized shoe around its circumference, sides and marginal portions, on a rigid form, shaped to maintain the shaped marginal portions of the shoes; with the outer wall of the shoe exposed from marginal portion to marginal portion; in tubularly and circumferentially wrapping the rigid form and the exposed portion of the shoe with a fibrous binder in direct contact with the exposed portion of the shoe from marginal portion to marginal portion thereof; in straining the binder on a purchase and thereby simulta-

neously condensing the exposed portion of the shoe from marginal portion to marginal portion thereof; and in subjecting the so assembled shoe and form to vulcanizing heat for curing the shoe while in its so condensed state.

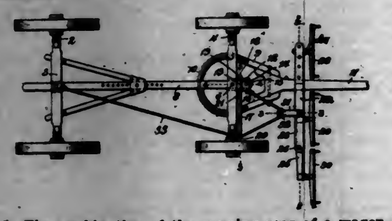
962,055. ELECTRIC FIXTURE. GEORGE FREDERICK RUSH, Chicago, Ill. Filed Sept. 15, 1909. Serial No. 517,871.



1. In a device of the class described, the combination of a front member of insulating material adapted to be exposed to the room having an opening therethrough for an electric lamp, a lining member of corresponding shape inserted in said opening, there being an enlargement upon the outer end of said lining member which prevents its passing entirely through the front member, and a dome of insulating material held upon the rear of the front member by locking engagement with the lining member, there being space within the dome for electric connections for a lamp which may be inserted through the opening in the front plate member.

2. In a device of the character described, a front member adapted to be exposed to the room having an opening therethrough for an electric lamp, said opening flaring toward the room side of the first mentioned member, a lining member of corresponding shape inserted in said opening, a dome of insulating material upon the rear of the first mentioned member screw threaded upon the lining member to lock it in position and means within the dome for conveying electric current to and from a lamp inserted in the opening in the first mentioned member.

962,056. DRAFT-EQUALIZER. WILLIAM SCHLUTER, Parkersburg, Iowa. Filed Apr. 13, 1909. Serial No. 489,629.



1. The combination of the running gear of a wagon including front and rear axles and a reach, of a draft device disposed in front of the running gear, a bar extending laterally from the reach, a flexible element connected with the outer end of the bar and having its end also anchored at the inner end of the latter, the said flexible element extending forwardly from the bar in triangular relation thereto, means for connecting the draft device with the flexible element, and a bracing means between the outer extremity of the bar and rear portion of the running gear to oppose the forward draft on the said bar.

2. The combination with the front and rear wheels of a wagon and a reach connecting the same, of a flexible connection attached at one end to the front axle and at the rear end to the hind axle, a fixed spreader bar supported adjacent to the point of attachment of the connection to the front axle and extending out laterally, the end of said spreader bar engaging with the connection, and a draft appliance located ahead of the forward wheels and operatively attached to the said connection.

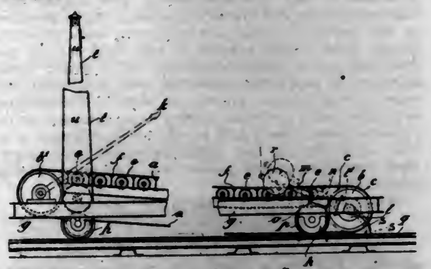
3. The combination with the front and rear wheels of a wagon, of a flexible connection attached at one end to the front axle and at the rear end to the rear axle, a spreader bar supported at one end adjacent to the point of attachment of the flexible connection and projecting out laterally, the end of said spreader bar having a clamping engagement with the flexible connection, and a draft appliance located ahead of the forward axle and spreader bar, having a pulley through which said connection passes.

4. The combination with the front and rear wheels of a wagon, of a flexible connection attached at one end to the front axle and at the rear end to the hind axle, a tubular spreader bar supported at one end adjacent to the point of attachment of the connection and at the other end having a clamping engagement with said connection, an evener attachment having a pulley through which said connection freely passes, and a series of swingletrees connected to said evener.

5. The combination with the front and rear wheels of a wagon, a reach connecting the two and a king bolt passing through the reach and the front axle, of an attaching plate through which said king bolt passes, said plate projecting beyond the axle and having an eye, a flexible connection attached to said eye at one end, the other end of said flexible connection being attached to the rear axle, a spreader bar extending laterally from the reach at a point in front of the front axle and secured to the connection at an intermediate point of the latter, and a draft appliance having a pulley through which said connection passes, the draft appliance being located forward of the front axle.

[Claims 6 to 9 not printed in the Gazette.]

962,057. RACING APPARATUS. ALBERT SCHUMANN, Berlin, Germany. Filed May 7, 1909. Serial No. 494,583.



1. In a device of the character described, the combination with a wheeled frame, of an endless race course supported thereon, operating gearing for imparting movement to the wheels of the frame from said race course, and means controlled by said gearing for automatically locking said frame against forward movement, when the gearing is disconnected.

2. In a device of the character described, the combination with a supporting frame, of a track, track wheels upon which said supporting frame is mounted, a rack extending along said track, an endless race course supported in said frame, a toothed wheel engaging said rack, gearing between said toothed wheel and said endless race course, and means for throwing said gearing out of action and simultaneously positively locking said frame against forward movement.

3. In a device of the character described, the combination with a supporting frame, of a track, track wheels upon which said supporting frame is mounted, a rack extending along said track, an endless race course supported in said frame, a toothed wheel engaging said rack, gearing between said toothed wheel and said endless course, means for throwing said gearing out of action, and a detent member carried by said frame and which is brought automatically into engagement with said rack when said gearing is thrown out of action.

4. In a device of the character described, the combination with track rails, of a rack extending longitudinally of said rails, a frame, track wheels upon which said frame is mounted, a pair of drums mounted upon said frame, an endless race course, passing thereover, a worm wheel fixedly mounted with relation to one of the track wheels, a toothed wheel also fixedly mounted with relation to one of said track wheels, said toothed wheel meshing with said rack, a swinging shaft mounted upon the shaft of one of said drums, bevel gear connections between said shaft and the shaft of said drum, and a worm carried by said shaft and meshing with said worm wheel.

5. In a device of the character described, the combination with track rails, of a rack extending longitudinally of said rails, a frame, track wheels upon which said frame is mounted, a pair of drums mounted upon said frame, an endless race course passing thereover, a worm wheel fixedly mounted with relation to one of the track wheels, a toothed wheel also fixedly mounted with relation to one of said track wheels, said toothed wheel meshing with said rack, a swinging shaft mounted upon the shaft of one of said drums, bevel gear connections between said swinging shaft and the shaft of said drum, a worm carried by said shaft and meshing with said worm wheel, and a detent member carried by said swinging shaft and adapted to move into engagement with said rack when said worm is thrown out of engagement with said worm wheel.

962,058. MANUFACTURE OF PLATES OF SHEET METAL AND BANDS. ARNOLD SCHWIEGER, Berlin, Germany. Filed Oct. 15, 1907. Serial No. 397,578.



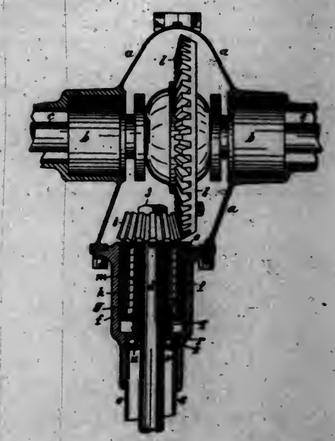
Apparatus for producing slitted tubes comprising, a cylinder, a press piston operable therein, a matrix disposed adjacent one end of the cylinder, said matrix being provided with a restricted opening therethrough, and a mandrel within the cylinder provided with a tapered end lying within the restricted opening of the matrix, said mandrel having a cutting member mounted thereon adjacent its tapered end adapted to slit the tube as it is expressed through the cylinder by the piston.

962,059. ADJUSTABLE SLEEVE FOR JOURNAL-BEARINGS. CEPHAS I. SHIRLEY, Newark, N. J., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed May 25, 1909. Serial No. 498,161.

1. The combination, with a suitable bearing, of a shaft fitted to revolve in the said bearing and having a wearing-sleeve fitted to the shaft and revolving therewith in the bearing, means for holding the sleeve from rotation and end movement upon the shaft, an abutment adjacent to the bearing at one end of the sleeve, and means applied to the sleeve and to the abutment for adjusting the shaft longitudinally.

2. The combination, with a suitable bearing, of a shaft fitted to revolve in the said bearing and having a driving-gear as the bevel-pinion *i*, upon the shaft requiring longitudinal adjustment, a wearing-sleeve fitted to the shaft and revolving therewith in the bearing, means for holding the sleeve from rotation and end movement upon the shaft, an abutment adjacent to the bearing at the end opposite to the said driving-gear, and means applied to the sleeve and the abutment for adjusting the shaft and its attached part longitudinally.

3. In a roller bearing, the combination, with the shaft, the casing and the anti-friction rolls, of a wearing-sleeve fitted to the shaft and provided with a screw-thread at one end, means for preventing end movement of the sleeve upon the shaft, an abutment adjacent to the roller bearing, and a nut fitted adjustably to the thread upon the sleeve and contacting with the abutment for adjusting the shaft longitudinally.

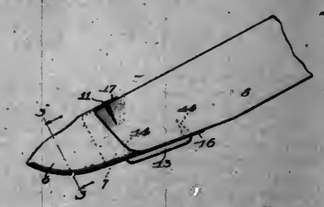


4. In a roller bearing, the combination, with the shaft, the casing and the anti-friction rolls, of a wearing-sleeve fitted to the shaft and provided with a screw-thread at one end, means for preventing end movement of the sleeve upon the shaft, an abutment at one end of the roller bearing provided with an anti-friction thrust-collar, and a nut fitted to the thread upon the sleeve and contacting with the thrust-collar to adjust the shaft longitudinally.

5. In a roller bearing, the combination, with a casing and anti-friction rolls, of a shaft fitted therein, a gear pinion fitted movably upon the end of the shaft, a feather for holding the pinion adjustably upon the shaft, a wearing-sleeve fitted to the shaft contiguous to the said member and engaging at one end with the feather projected from the said member, and provided at the opposite end with a screw-thread, an abutment at such end of the roller bearing provided with an anti-friction thrust-collar, a nut fitted to the thread upon the sleeve and contacting with the thrust-collar, and means for locking the nut upon the sleeve when the shaft is suitably adjusted.

[Claim 6 not printed in the Gazette.]

962,060. RAKE-TOOTH POINT. HENRY ADALBERT SMITH, Elgin, Ill., assignor to Star Manufacturing Company, Carpentersville, Ill. Filed Dec. 30, 1908. Serial No. 470,053.



1. A rake tooth point formed from an integral pressed-steel blank and provided with a semi-polished or smooth wearing surface formed from a portion of said blank folded over on itself.

2. A rake tooth point formed from an integral grooved pressed-steel blank and provided with a semi-polished wearing surface upon the outer portion of said blank when folded over on itself.

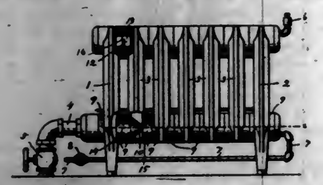
3. A rake tooth point formed from an integral blank of pressed steel and provided with a wearing wing forming a double fold at the bottom in suitable position to resist collapsible pressure against said point.

4. A rake tooth point formed from an integral grooved pressed-steel blank and provided with a wearing wing folded over and fitting closely within said groove against the bottom of said point, the edge of said wing being protected by said groove or channel.

5. A rake tooth point formed from an integral blank of cold metal provided with a wearing wing folded over and fitting closely against the bottom of said point, providing a double fold of metal at the point subjected to the greatest wear, and a wearing shoe fitting upon the under side of said point.

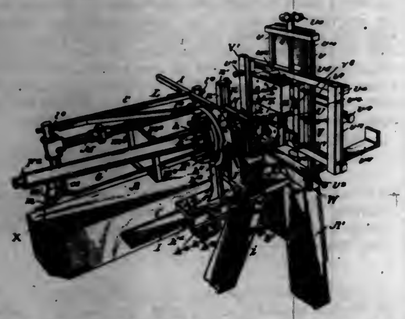
[Claims 6 to 9 not printed in the Gazette.]

962,061. RADIATOR. SAMUEL D. STAUFFER, Lancaster, Pa. Filed Apr. 2, 1909. Serial No. 487,517.



In a combined steam and water radiator, a steam section and an adjacent water section, a nipple formed with a closed conical end and adapted to be placed between said sections with the conical end of said nipple extending into the water section to increase the heating surface thereof.

962,062. ENGRAVING-MACHINE. JOSIAH PERCIVAL STEVENS, Atlanta, Ga. Filed Feb. 25, 1901, Serial No. 48,800. Renewed May 31, 1904. Serial No. 210,578.



1. In an engraving machine, the following instrumentalities, viz.: a pattern holder, a work holder, a rotatable spindle carrying on one end a tracing point, a pivoted support for said spindle, a graver, and rotating means forming a positive connection between said spindles and said graver, said rotating connection composed of two coöperating members rotating with said spindle and graver, and forming means by which the said graver receives rotary motion by the actual rotation of said tracing point and spindle.

2. In an engraving machine, the following instrumentalities, viz.; a pattern holder, and a work holder, a rotatable spindle carrying at one end a tracing point, a pivoted support for said spindle, a graver, a rotatable tool post in which said graver is mounted, a spur and a fork rotatable with said spindle and tool post and forming connecting means therebetween.

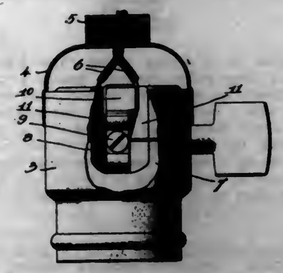
3. In an engraving machine, the following instrumentalities, viz.; a pattern holder, and a work holder, a tracer rod and a pivotal support therefor, a rotatable spindle carried by said tracer rod and provided at one end with a tracing point, a revoluble tool post, a graver carried thereby, means composed of two coöperating members rotating with and forming a direct positive connection between said tool post and one end of said spindle for rotating said tool post by the axial rotation of said tracing point and spindle.

4. In an engraving machine, the following instrumentalities, viz.; a pattern holder and a work holder, a tracer rod and a pivotal support therefor, a rotatable spindle carried by said tracer rod and provided at one end with a tracing point, a pin carried by said tracing point for imparting axial rotation to said point and spindle, a rotatable tool post, a cutting tool or graver carried thereby, a bifurcated spur carried by said tool post, a finger carried by said spindle and engaging said spur whereby the axial rotation of said spindle and tracing point is imparted to the said tool post.

5. In an engraving machine, the following instrumentalities, viz.; means for supporting a pattern, and means for holding the work in said machine, a tracer rod and a pivotal support therefor, a bracket carried by one end of said rod and a compensating bar carried by said bracket, a pivoted frame, operative connection between said compensating bar and said frame, a swinging tool holder carried by said frame, a graver, a rotating tool post upon which said graver is mounted, and means for imparting the rotary motion of the tracer rod to the said tool post.

[Claims 6 to 66 not printed in the Gazette.]

962,063. STRAIN-RELIEF FOR LAMP-SOCKETS. FREDERICK A. SWAN, Cliftondale, Mass. Filed May 4, 1908. Serial No. 430,632.



1. In a lamp socket, the combination with a shell and cap, of a body of insulating material within the shell, and terminals secured thereto, said body having a projection which has a free end and about which the conducting wires may be wrapped thereby to relieve the terminals from strain.

2. In a lamp socket, the combination with a shell, of a body of insulating material within the shell, and terminals supported thereby, said body having integral therewith a strain-relief projection about which the conducting wire may be wrapped.

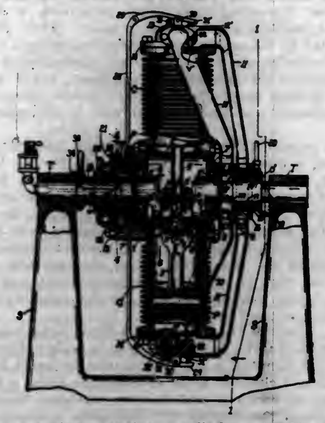
3. In a lamp socket, the combination with a body of insulating material, of terminals secured thereto, said body having a portion about which the conducting wires may be wrapped thereby to relieve the terminals from strain and a shell inclosing said body and covering said portion thereof.

4. An electric fitting, having an insulating body with open grooves in the side wall thereof, forming abutments to receive and hold a wire in a U-shaped bend, a terminal to which the wire is connected and an inclosing shell fitting over the insulation to close the otherwise open grooves, as and for the purpose set forth.

5. An electric fitting, having an insulating body with open grooves in the side walls thereof, forming abutments to receive and hold the wires, each in a U-shaped bend, terminals to which the wires are connected and an inclosing shell fitting over the insulation to close the otherwise open grooves, as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

962,064. ROTARY EXPLOSIVE-ENGINE. ELMER A. THOMAS and WILLIAM V. RITTER, St. Louis, Mo. Filed June 3, 1909. Serial No. 499,924.



1. In an explosive engine, a cylinder rotatable about a transverse axis, a mixing valve disposed about said axis on one side of the cylinder, a piston for said cylinder, a pipe conducting the mixture from the mixing valve to the outer end of the cylinder behind the piston, an exhaust pipe leading from said cylinder end to a point contiguous to the walls of the mixing valve, valves for controlling the passages from the aforesaid pipes into the cylinder, a member having a cam-track disposed about the axis of rotation of the cylinder on the opposite side of the cylinder, a dog traversing the cam-track, intermediate connections carried by the engine between the dog and valves for actuating the latter with the rotation of the cylinder, and electric spark-devices controlled by the dog in the travel of the latter along the cam-track.

2. An explosive engine comprising a pair of cylinders with adjacent ends spaced apart, a transversely disposed crank-shaft about the axis of which the cylinders rotate, a crank on said shaft located in the space between the cylinders and eccentric to the axis of rotation of the cylinders, pistons operating in the cylinders and revolving about the crank aforesaid, a mixing valve disposed about the crank-shaft, a pipe for conducting the explosive mixture from the mixing valve to the outer end of each cylinder, an annular exhaust chamber located adjacent to the mixing valve, exhaust pipes connecting said chamber with the outer ends of the respective cylinders, valves in the cylinders for controlling the passage of the explosive mixture into, and the spent gases out of the cylinders, a cam-plate provided with a cam-track disposed about the axis of rotation of the cylinders on the side opposite from the mixing valve, dogs traversing the cam-track, intermediate link connections between each dog and the valves of its respective cylinder for actuating the valves, spark-plugs, and means for electrifying the plugs by the rotation of the cylinders and exploding the mixture, the parts operating substantially as set forth.

3. In an explosive engine, a cylinder rotatable about a transverse axis, a stationary mixing valve disposed about said axis on one side of the cylinder, a piston for said cylinder, a pipe arranged to conduct the mixture from the mixing valve to the outer end of the cylinder behind the piston, an exhaust pipe leading from said cylinder end to a point contiguous to the walls of the mixing valve, valves for controlling the passages from the aforesaid pipes into the cylinder, a cam-plate provided with a cam-track disposed about the axis of rotation of the cylinder on the opposite side of the cylinder, a dog traversing the cam-track, intermediate connections carried by the engine between the dog and valves for actuating the latter with the rotation of the cylinder, a spark-plug, and an electric circuit adapted to be closed by the dog at a predetermined point of its travel and electrify the spark-plug, substantially as set forth.

962,065. EYEGLASS-HOLDER. MARY NOMA THOMPSON, Rockville, Md. Filed Feb. 9, 1910. Serial No. 542,945.



1. An eye-glass holder composed of a single piece of wire provided with a pin; a hook under which said pin fits; a front bar portion; a loop to hold the eye-glasses extending in a plane at right angles to the plane containing said pin and front bar portion; and a further portion of said wire extending at right angles to said loop and parallel to said front bar portion, adapted to close said loop, substantially as described.

2. An eye-glass holder composed of a single piece of wire provided with a pin; a hook under which said pin fits; a front bar portion; a portion extending from said hook and passing along said front bar portion and then at an angle thereto to form a loop to hold the eye-glasses extending in a plane at right angles to the plane containing said pin and front bar portion; and a further portion of said wire extending at right angles to said loop and parallel to said front bar portion adapted to close said loop, substantially as described.

3. An eye-glass holder composed of a single piece of wire comprising a pin portion; a front bar portion; the latter bent upwardly downwardly and back on itself to form a hook under which said pin fits; a portion extending along said bar and bent downwardly and upwardly to form a loop and finally bent to form a portion for closing said loop, substantially as described.

4. An eye-glass holder composed of a single piece of wire provided with a pin; a hook under which said pin engages; a front bar portion provided with a protecting curved part near one end; a loop to hold the eye-glasses extending at an angle to the plane containing said pin, front bar portion and curved protecting part; and the extreme end portion of said wire extending at an angle to said loop, parallel to said front bar and terminating near said curved protecting part, substantially as described.

962,066. VEHICLE-WHEEL. FRANKLIN TOMPKINS, New Dorp, N. Y. Filed Jan. 16, 1909. Serial No. 472,607.

1. A wheel of the class described comprising a central hub member, an outer hub member encircling the central hub member and provided with spokes to which the rim of the wheel is secured, side plates secured to the central hub member and inclosing the outer hub member, tension and compression springs placed between said hub members and secured thereto, the said side plates being provided at their perimeters with inwardly directed flanges, and elastic devices placed between the outer hub member and said flanges.

2. A wheel of the class described comprising a central hub member and an outer hub member encircling said central hub member, side plates secured to the central hub member and inclosing the outer hub member, said hub

members being provided, one with inwardly directed and the other with outwardly directed headed projections, and spiral springs placed between said hub members and provided at their opposite ends with loops which engage the necks of said projections, said springs operating as both tension and compression springs, and said outer hub member being provided with spokes to which the rim of the wheel is secured, and said side plates being provided at their perimeters with inwardly directed flanges, and elastic devices placed between said flanges and the outer hub member.

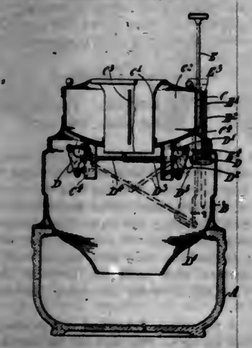


3. A wheel of the class described comprising a central hub member and an outer hub member encircling said central hub member, side plates secured to the central hub member and inclosing the outer hub member and between which the outer hub member is radially movable, said outer hub member being provided with spokes to which the rim of the wheel is secured, and said hub members being provided, one with outwardly directed and the other with inwardly directed headed projections which are oblong in cross section and spiral springs placed between said hub members and provided at their opposite ends with U-shaped loops which engage the necks of said projections, said springs operating both as tension and compression springs.

4. A wheel of the class described, comprising a central hub member and an outer hub member encircling said central hub member, said hub members being movable toward and from each other, and spiral springs placed between said hub members and provided at their ends with U-shaped loops adapted to engage corresponding projections on said hub members.

5. In a device of the class described, a helical spiral spring the ends of which are provided with U-shaped loops in planes at right angles to the axis of the spring.

962,067. RECEPTACLE HAVING APPARATUS FOR PROJECTING DISINFECTING MATERIAL, &c., INTO IT. CHARLES WALDSTEIN, Cambridge, England. Filed Jan. 19, 1909. Serial No. 473,071.



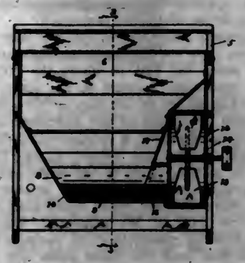
1. A utensil of the character described, comprising a receptacle, a central tubular spout leading to the interior thereof, an annular chamber around the spout for containing neutralizing material, a discharge tube projected downward from the annular chamber toward the receptacle, a rocking member centrally pivoted to each spout, valves pivotally connected to the ends of the rocking member and projecting into the spouts, a horizontal rod connecting the rocking members for simultaneous operation, and a vertical rod projecting above the top of the utensil connected to the horizontal rod and normally held in its upper position.

2. A utensil of the character described, comprising a receptacle, a central tubular spout leading to the interior thereof, an annular chamber around the spout for containing neutralizing material and having discharge tubes projected downward toward the receptacle, a rocking member centrally pivoted to each spout, valves pivotally connected to the ends of the rocking member and projecting into the spouts, a horizontal rod connecting the rocking members for simultaneous operation, and a vertical rod projecting above the top of the utensil connected to the horizontal rod and normally held in its upper position.

3. A utensil of the character described, comprising a receptacle, a central tubular spout leading to the interior thereof, an annular chamber around the spout for containing neutralizing material, a discharge tube projected downward from the annular chamber toward the receptacle, two parallel valves pivotally mounted upon and arranged to project into the tube, a horizontal slidable rod attached at one end to the valves, and provided at the other end with an elongated horizontal loop, and a normally spring elevated vertical handle rod having its lower end engaged in said loop.

4. A utensil of the character described, comprising a receptacle having its upper end open, a substantially conical guide mounted in the opening and projected into the receptacle, a chamber mounted above the guide, a tubular spout in the center of said chamber, discharge spouts projecting from the chamber into the guide, a rocking member centrally pivoted to each spout, valves pivotally connected to the ends of the rocking member and projecting into the spouts, a horizontal rod connecting the rocking members for simultaneous operation, and a vertical rod projecting above the top of the utensil connected to the horizontal rod and normally held in its upper position.

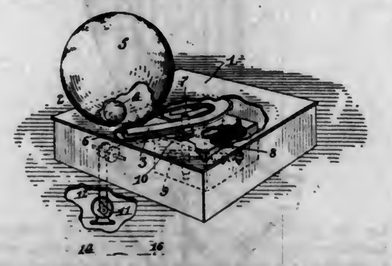
962,068. PNEUMATIC STACKER. JAMES A. WALSH, Indianapolis, Ind., assignor to The Indiana Manufacturing Company, Indianapolis, Ind., a Corporation of West Virginia. Filed Oct. 22, 1909. Serial No. 524,004.



1. In a pneumatic stacker, the combination of a downwardly-convergent hopper having an air inlet opening in one of its side walls and a material discharge outlet in the lower portion of its opposite side wall, a vertically arranged fan adjacent to said hopper having an opening in its casing, and a horizontally arranged material conductor leading from said material discharge outlet across to said fan opening for conveying material to the said fan.

2. In a pneumatic stacker, the combination of a downwardly convergent hopper having a material discharge outlet in one of its side walls, a vertically arranged fan adjacent to the said hopper having a material inlet in its casing coincident with said material discharge outlet, and a horizontally arranged conductor communicating with and spanning the space between said outlet and said inlet through which material is conveyed from said hopper across to said fan.

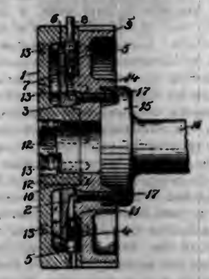
962,069. ADVERTISING DEVICE. WARREN E. WALTERS and HARRY S. FITZGERRELL, Los Angeles, Cal. Filed Dec. 22, 1909. Serial No. 534,472.



1. An advertising mechanism comprising a rotating magnet, a supporting floor above the same, a traveling indicator made in hollow form, and a magnet follower mounted in said hollow indicator for moving the same in accordance with the movement of the magnet.

2. An advertising mechanism comprising a rotating magnet, a supporting floor having a guide way formed thereon arranged to spell descriptive words, and a follower adapted to travel upon the guide way in accordance with the control of the magnet, to draw the attention of observers to said words.

962,070. SCROLL-CHUCK. LUCIUS E. WHITON, New London, Conn. Filed June 2, 1905. Serial No. 263,419.



1. In a scroll chuck, the combination of a chuck body having a hub, a scroll member mounted in a recess at the rear thereof, a pinion-carrying ring mounted wholly within said chuck body, a driving member in contact with the inner face of the hub, a series of bolts passing entirely through the ring for clamping said chuck body and ring to said driving member, and a series of bolts arranged around the axis of said chuck inside the scroll member for clamping said chuck body directly to the driving member.

2. In a scroll chuck, the combination of a chuck body having an annular recess forming a hub, a scroll member mounted in said recess, a pinion-carrying ring mounted within said chuck body, a driving member abutting against the hub of said chuck body and against the rim, and means for clamping said body and driving member together.

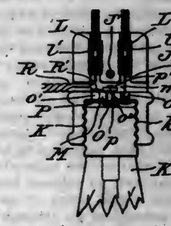
3. In a scroll chuck, the combination of a chuck body, a scroll member, a separate pinion-carrying ring mounted wholly within said chuck body, a driving member and means for clamping said chuck body, ring and driving member together, said driving member having a cylindrical projection upon its front end adapted to engage the inner cylindrical surface of said pinion-carrying ring.

4. In a scroll chuck, the combination of a chuck body, a scroll member, a separate pinion-carrying ring mounted wholly within said chuck body, a driving member, and means for clamping said chuck body, ring, and driving member together, said driving member having an annular projection upon its front end adapted to engage the inner cylindrical surface of said pinion-carrying ring and the outer cylindrical surface of the hub of said chuck body.

5. In a scroll chuck, a body having a rim and a hub with the shoulder 10, a driving member resting against said rim and having a recess centered on said shoulder and having a shoulder 11, a scroll member mounted on the hub of the body and abutting against a portion of the driving member, a pinion-carrying ring centered on the driving member shoulder and forming an abutment for the scroll and having a flange 6 bearing within the rim of the chuck body, and means for removably securing the parts together.

[Claims 6 and 7 not printed in the Gazette.]

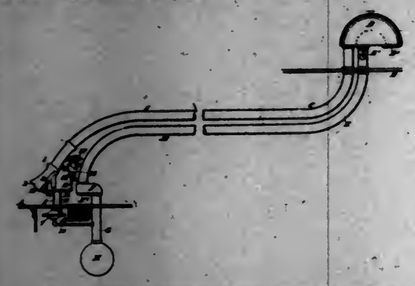
962,071. ELECTRICAL CONNECTION. MAURICE J. WOHL and HARRY HERTZBERG, New York, N. Y., assignors to Economy Electric Company, Brooklyn, N. Y., a Corporation of New York. Filed Nov. 26, 1907. Serial No. 403,869.



1. In an electrical connection, a combined socket and tap comprising a body portion divided lengthwise and producing complemental sections, each section being provided in one end portion with a plurality of parallel recesses, an enlarged recess in the other end portion, a chamber intermediate the aforesaid recesses, and radial recesses opening into said chamber, whereby the sections when matched bring the several recesses and the chamber of one member into register with the corresponding parts of the other section, combined with means for separably clamping the sections, circuit terminals clamped in the parallel sockets at one end portion of the body portion, a sleeve within the enlarged recesses at the other end of the body portion, a binding post extending from the intermediate chamber through the sleeve, and a contact on said post insulated from the sleeve, whereby the radial recesses of the body portion enable connecting wires to pass through the sides of said body portion and intermediate the ends thereof.

2. In an electrical connection, a combined socket and tap comprising a body portion divided lengthwise and producing complemental sections, each section being provided in one end portion with a plurality of parallel recesses, an enlarged recess in the other end portion, a chamber intermediate the aforesaid recesses, and radial recesses opening into said chamber, whereby the sections when matched bring the several recesses and the chamber of one member into register with the corresponding parts of the other section, combined with means for separably clamping the sections, spring post circuit terminals clamped in the parallel sockets at one end portion of the body portion, a sleeve within the enlarged recesses at the other end of the body portion, a binding post extending from the intermediate chamber through the sleeve, and a plurality of connecting wires, at least one of which leads through a lateral opening formed by the radial recesses, whereby the connecting wire may extend through a side of the body portion and at a point intermediate the ends thereof.

962,072. PNEUMATIC-DESPATCH-TUBE APPARATUS. LOUIS G. BARTLETT, Somerville, Mass. Filed Dec. 2, 1907. Serial No. 404,739.



1. In a pneumatic despatch tube apparatus, a tube for the transmission of carriers, a plurality of stations, a normally closed valve or gate adapted to control and time the passage of air through said tube for driving carriers, pneumatically operated means adapted to operate said valve, means for insuring the complete operation of said pneumatically operated means upon the despatching of a carrier from any of said stations, and means for adjusting the timing of said valve.

2. In a pneumatic despatch tube apparatus, a tube for the transmission of carriers, a plurality of stations, a normally closed valve or gate located in said tube and adapted to control and time the passage of air through said tube for driving carriers, pneumatically operated means adapted to operate said valve, and automatic means for insuring the complete operation of said pneumatically operated means upon the despatching of a carrier from any of said stations whereby said valve is completely opened.

3. In a pneumatic despatch tube apparatus, a tube for the transmission of carriers, an exhaust tube, a plurality of stations, a normally closed valve or gate adapted to control and time the passage of air through said tube for driving carriers, pneumatically operated mechanism adapted to operate said valve, and means for controlling said mechanism from any of said stations to insure the complete operation thereof and the complete opening of said valve.

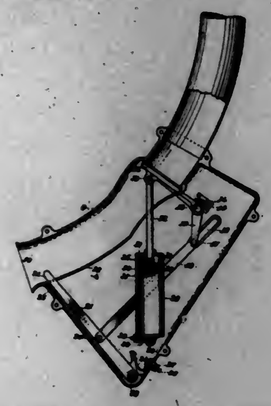
4. In a pneumatic despatch tube apparatus, a tube for the transmission of carriers, means for exhausting the air from said tube, a normally closed valve or gate located in said tube and adapted to control and time the passage of air through said tube for driving carriers, means adapted to be operated to open said valve, means for locking said valve open to permit the passage of a carrier, and means for automatically releasing said locking means after the passage of the carrier by said valve to permit the closure of the same.

5. In a pneumatic despatch tube apparatus, a tube for the transmission of carriers, an exhaust tube, a plurality of stations located along said transmission tube, a normally closed valve or gate adapted to control and time the flow of air through said tube for driving carriers, mechanism adapted to operate said valve, and means adapted to be operated upon the despatching of a carrier from any of said stations to insure the complete operation of said mechanism to open said valve to permit a maximum flow of air through said tube, and to permit the operation of said mechanism to close said valve after the same has been opened to the position whereby said maximum flow of air has been established.

[Claims 6 to 9 not printed in the Gazette.]

962,073. PNEUMATIC-DESPATCH-TUBE APPARATUS. LOUIS G. BARTLETT, Somerville, Mass. Filed Apr. 16, 1908. Serial No. 427,347.

1. In a pneumatic despatch tube apparatus, a normally closed tube for the transmission of carriers, means for maintaining a vacuum in said tube, a valve located in the path of the carriers, adapted to control the admission of air to said tube for driving carriers and held normally closed by atmospheric pressure, said valve adapted to open upon a fluctuation of the vacuum in said tube and to be directly actuated and closed automatically by the current of air flowing into said tube, and means for timing the closure of said valve.



2. In a pneumatic despatch tube apparatus, a normally closed tube for the transmission of carriers, means for maintaining a vacuum in said tube, a normally closed valve adapted to control the admission of air to said tube for driving carriers, and mechanism connected to said valve and adapted to be actuated by and transmit the pressure of a carrier inserted into said tube to manually open said valve.

3. In a pneumatic despatch tube apparatus, a normally closed tube for the transmission of carriers, means for maintaining a vacuum in said tube, a normally closed valve adapted to control the admission of air to said tube for driving carriers, mechanism connected to said valve and adapted to be actuated by and transmit the pressure of a carrier inserted into said tube to manually open said valve, and means for timing the closure of said valve.

4. In a pneumatic despatch tube apparatus, a normally closed tube for the transmission of carriers, means for maintaining a vacuum in said tube, a valve located in said tube in the path of traveling carriers and adapted to control the admission of air to said tube for driving carriers, and mechanism connected to said valve and adapted to be actuated by and transmit the pressure of a carrier inserted into said tube to manually open said valve and to prevent said carrier from impinging upon said valve before said valve has moved out of the path of said carrier.

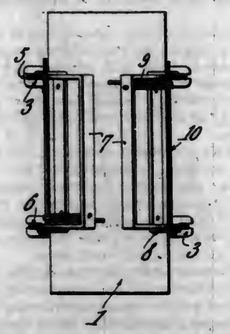
5. In a pneumatic despatch tube apparatus a normally closed tube for the transmission of carriers, means for normally maintaining a vacuum in said tube, a valve located in said tube in the path of the carriers and adapted to control the admission of air to said tube for driving carriers and held normally closed by atmospheric pressure, said valve adapted to be manually actuated to open by the insertion of a carrier into said tube and to be directly actuated and closed automatically by the current of air flowing through said tube, and means for timing the closure of said valve.

[Claims 6 to 11 not printed in the Gazette.]

962,074. CASING FOR CONCRETE TILE. CLIFFORD R. BURLINGAME, Coe, Mich. Filed Jan. 19, 1910. Serial No. 538,878.

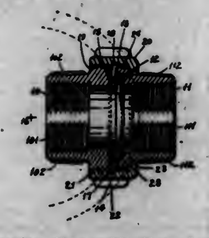
In a mold of the class described, a pair of mold members, one of said members being provided with notched lugs at its edges, bails pivoted upon the other member and

having cross bars in juxtaposition and affording handle members, the sides of the said bails at their ends being formed with hooks to engage in the notches of the lugs upon the first mentioned member, and a wire spring se-



cured about the pivot for each bail and having one end bearing against the outer surface of the second mentioned member and its other end bearing against the cross bar of the related bail.

962,075. PIPE-UNION. ARTHUR W. CASH, Newark, N. J., and CLAUDE ROBABECK, New York, N. Y. Filed June 14, 1909. Serial No. 501,946.



1. In a pipe union, the combination of male and female members having their opposite ends adapted to engage pipe sections, one of the inner adjacent ends of said members having a convex spherical seat, a ring upon the other inner adjacent end of softer metal than said spherical seat and presenting thereto an annular portion of convexly curved cross-section adapted to engage the seat in line contact, means for holding said ring in a fixed plane on its member with its outer side exposed to said convex spherical seat of the other member and its inner annular surface exposed to the flow passage of its member, and means for clamping said male and female members together.

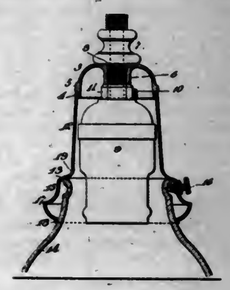
2. In a pipe union, the combination of male and female members having their opposite ends adapted to engage pipe sections, the adjacent ends of said members having one a convex spherical seat and the other a flange having at its front side an annular bearing of convexly-curved cross-section exposed at its front to said convex spherical seat of the other member and at its inner annular surface to the flow passage of its member and said flange having at its other or rear side a spherical bearing concentric with said seat, and a sleeve having a flanged end adapted to engage said spherical bearing, said sleeve adapted at its other end to engage the member having said spherical seat.

3. In a pipe union, the combination of male and female members having their opposite ends adapted to engage pipe sections, the adjacent ends of said members having one a spherical seat and the other a flange with a spherical bearing concentric with said seat at the side of said flange away from said seat, a ring upon the other side of said flange having an annular portion of convexly curved cross-section adapted to engage the spherical seat, the inner annular surface of said ring being adjacent to the flow passage of the flanged member and exposed thereto, and a sleeve having a flanged end adapted to engage said spherical bearing, said sleeve adapted at its other end to engage the member having said spherical seat.

4. In a pipe union, the combination of male and female members having their opposite ends adapted to engage pipe sections, the adjacent ends of said members having one a spherical seat and the other a flange with a spherical bearing concentric with said seat at the side of said flange away from said seat, a ring upon the other side of said flange having an annular portion of convexly curved cross-section projecting therefrom and adapted to engage the spherical seat, means for holding said ring in a fixed plane on said flange with its outer side exposed to said convex spherical seat of the other member and its inner annular surface exposed to the flow passage of its member, and a sleeve having a flanged end adapted to engage said spherical bearing, said sleeve adapted at its other end to engage the member having said spherical seat.

5. In a pipe union, the combination of male and female members having their opposite ends adapted to engage pipe sections, the adjacent ends of said members having one a convex spherical seat and the other a flange with a circular line contact at one side adapted to engage said seat and a spherical bearing at the other side concentric with said seat, and a sleeve having a flanged end with a circular line contact adapted to engage said spherical bearing, said sleeve adapted at its other end to engage the member having said spherical seat.

962,076. ELECTRIC-LAMP SOCKET-COVER AND SHADE-HOLDER. GEORGE W. CASSIDY, East Orange, N. J. Filed Feb. 16, 1910. Serial No. 544,190.



1. An electric lamp socket cover and shade holder wherein are combined a top adapted to be secured to the fixture and to receive a lamp socket centrally therein, a depending shell covering the socket and removably secured to the top, the joint being located so as to give access to the socket holding devices, substantially as set forth.

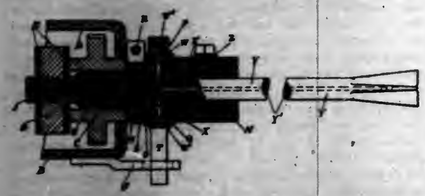
2. An electric lamp socket cover and shade holder, wherein are combined a top 3 having a centrally depending sleeve 6 and a shell 12 adapted to cover the socket, and removably secured to the top so as to give access to the socket holding set screw, substantially as set forth.

3. An electric lamp socket cover and shade holder, comprising a depending shell provided with a shoulder 13 for seating the lip of the shade, an approximately vertical band 15 below the shoulder 13 for carrying the set screws 16 and an inwardly extending lower end to support the sides of the shade below the set screws, substantially as set forth.

4. An electric lamp socket cover and shade holder wherein are combined a top 3 having a centrally depending sleeve 6 and a screw threaded lower end, a shell 12

screw threaded to the top and provided with a shoulder 13 and approximately vertical band 15 and an inwardly turned lower edge and the set screws 16 passing through the band 15, substantially as set forth.

962,077. POWER-DRILL. GEORGE HERBERT CONDICT, Plainfield, N. J., assignor to William Dulles, New York, N. Y. Filed Sept. 29, 1908. Serial No. 455,301.

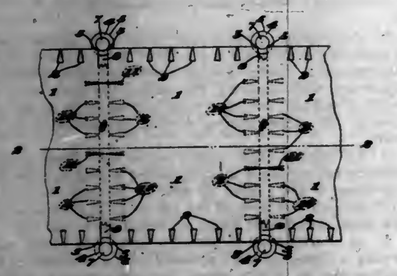


1. In combination in a drill, a drill-steel holder mounted to allow longitudinal play and having a recess for receiving the drill and a transverse duct leading to said recess, means for rotating the holder, means for securing the drill-steel in said recess, packing for surrounding the drill steel in the recess, a sleeve mounted on and movable with the holder but free to turn thereupon and having ducts in continuous connection with said transverse duct, means for confining the said sleeve upon the holder, and means for limiting the rotatory motion of the sleeve.

2. In combination in a drill, a drill-steel holder mounted to allow longitudinal play and having means for rotating it, a recess for receiving the drill steel, and a transverse duct leading to said recess, means for securing the drill-steel therein, packing for surrounding the drill steel in the recess and a sleeve mounted on and movable with the tool holder but free to turn thereupon and having ducts in continuous connection with said transverse duct.

3. In combination in a drill, a tool holder having a recess or socket for the drill steel, and a transverse duct leading thereto, a sleeve which is carried by and mounted on the tool holder and has an annular duct in continuous connection with said transverse duct, and a duct leading to said annular duct, means for securing a drill-steel within the recess or socket, and packing within the recess for surrounding the drill-steel.

962,078. CONCRETE CONSTRUCTION. JOHN E. CONZELMAN, St. Louis, Mo., assignor, by mesne assignments, to Unit Construction Company, a Corporation of Delaware. Filed Jan. 9, 1909. Serial No. 471,431.



1. A concrete structure, comprising, in combination, a plurality of columns, rectangular slabs supported at their corners upon said columns and arranged to have intervening spaces between adjacent slabs, and continuous beams molded centrally of said columns and between said slabs to form a bond between adjacent slabs and between slabs and columns.

2. A concrete structure, comprising, in combination, a plurality of columns, rectangular slabs supported at their corners to radiate from said columns and having spaces between adjacent slabs, and intersecting beams formed in said spaces to cross centrally of said columns and unite said slabs.

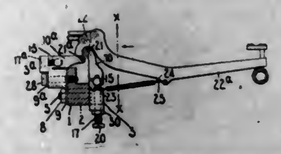
3. A concrete structure, comprising, in combination, a plurality of columns, rectangular slabs supported at their corners to radiate from said columns and having spaces between adjacent slabs, overhanging edges formed on said slabs, and intersecting beams formed in said spaces to cross centrally of said columns, and rest below said overhanging edges.

4. A concrete structure, comprising, in combination, a plurality of columns, a plurality of slabs supported by said columns, and having recesses extending inwardly along their horizontal edges, and beams formed between said slabs and interlocking with said recesses, and extending centrally over said columns, whereby said beams become a part of and support said slabs.

5. A concrete structure, comprising, in combination, a plurality of columns, slabs supported by said columns, and having undercut edges and recesses extending inwardly along their longitudinal sides, and beams formed between said undercut edges and projecting into said recesses and extending over said columns, whereby said beams form a part of and support said slabs.

[Claims 6 and 7 not printed in the Gazette.]

962,079. TYPE-WRITING MACHINE. TOBIE DE PRINS, Anvars, and DIEUDONNÉ RIGA, Hoboken, Belgium, assignors to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 7, 1909. Serial No. 521,617.



1. In a typewriting machine, the combination of a hanger having bearing arms and a tapped opening, a slide coöperative with the hanger arms and arranged to be moved longitudinally of said arms to force them toward each other, and a screw received in the tapped opening in the hanger and coöperative with said slide to adjust it.

2. In a typewriting machine, the combination of a hanger having longitudinally slotted bearing arms, a slide arranged in said slots and adapted to force said bearing arms toward each other, and means for moving said slide lengthwise of said slots and for holding it in its adjusted position.

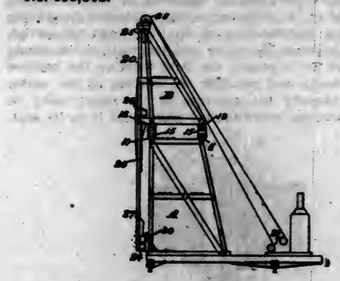
3. In a typewriting machine, the combination of a hanger having slotted bearing arms, a slide received in the slots in the bearing arms and having heads at the ends thereof which coöperate with the bearing arms of the hanger to effect a relative adjustment between them, and a screw for adjusting said slide.

4. In a typewriting machine, the combination of a hanger having slotted bearing arms, a slide having headed ends, said slide being received in the slots in said bearing arms, cam faces between the bearing arms and the heads of said slide, and means for adjusting the slide in said slots and for retaining the slide in its adjusted position.

5. In a typewriting machine, the combination of a hanger having slotted bearing arms bent to provide cam faces thereon, a slide provided with heads on the ends thereof, said slide being received in the slots in the bearing arms and the heads of the slides coöperating with said cam faces to effect a relative adjustment of the bearing arms toward and away from each other, and means for adjusting the slide in said slots and for holding the slide in its adjusted position.

[Claims 6 to 13 not printed in the Gazette.]

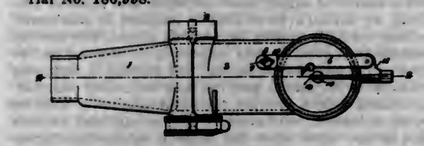
962,080. PILE-DRIVING MACHINE. EDWARD DE VOE TOMPKINS, Pelham, N. Y. Filed Sept. 19, 1908. Serial No. 453,802.



1. In a pile driving machine, the combination of a supporting frame for the leaders or guides for the hammer formed of two parts, the upper part being mounted to rock on the lower part about a horizontal axis and the opposing faces of the upper and lower parts of the supporting frame being in planes extending through the axis on which the upper part rocks and at an angle equal when the leaders or guides are in vertical position to the maximum angle of inclination to be given to the leaders or guides, leaders or guides for the hammer secured to the upper part of the frame, means for securing the lower ends of the leaders or guides in the desired position, and blocks or wedges inserted between the opposing faces of the upper and lower parts of the supporting frame for holding the upper part of the frame rigidly in position.

2. In a pile driving machine, the combination of an upwardly extending support for the leaders or guides formed of an upper and a lower part, one or more centrally recessed transverse chock pieces on the top of the lower part of the support, one or more centrally recessed transverse chock pieces on the bottom of the upper part of the support, and flanged bearing collars between the recessed parts of the chock pieces of the lower part of the support and the recessed parts of the chock pieces of the upper part of the support, said chock pieces being beveled off at each end to make the angle between the opposing faces of the chock pieces when the leaders or guides are in vertical position equal to the maximum angle of inclination to be given to the guides or leaders.

962,081. APPARATUS FOR RECORDING SOUNDS. THOMAS A. EDISON, Llewellyn Park, Orange, N. J., assignor to New Jersey Patent Company, Orange, N. J., a Corporation of New Jersey. Filed Nov. 13, 1903. Serial No. 180,998.



1. In a device for recording sound waves, a vibratory plate or disk connected to a frame by a permanently liquid material which is characterized by great internal friction or viscosity, substantially as set forth.

2. In a device for recording sound waves, a vibratory plate or disk connected to a frame by burnt rubber, substantially as set forth.

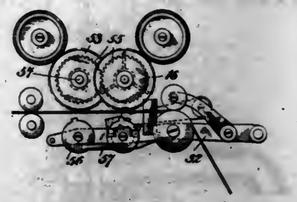
3. In a device for recording sound waves, a vibratory plate or disk, the edges of which are connected to a frame by a permanently liquid material which is characterized by great internal friction or viscosity, substantially as set forth.

4. In a device for recording sound waves, a vibratory plate or disk supported at or near its center and connected to a frame by a permanently liquid material which is characterized by great internal friction or viscosity, substantially as set forth.

5. In a device for recording sound waves, a vibratory plate or disk supported at or near its center and connected to a frame by burnt rubber, substantially as set forth.

[Claims 6 to 24 not printed in the Gazette.]

962,082. PRINTING-TELEGRAPH. THEODORE M. FOOTE, Allston, Mass. Filed July 23, 1908. Serial No. 444,893.



1. A printing telegraph comprising three printing wheels arranged to produce printing impressions upon a traveling record strip in three different lines thereon, two of such printing wheels having co-incident axes, and the third printing wheel having its axis arranged parallel thereto, at a point in advance thereof in the direction of movement of the said record strip, the two said printing wheels containing respectively the letters of the alphabet and a full set of numerals, whereby the one is adapted for printing stock titles, and the other stock quotations, and the third said printing wheel also containing a full set of numerals whereby it is also adapted for printing stock quotations; and electrically controlled selecting means for determining which printing wheel is to be employed at any given time.

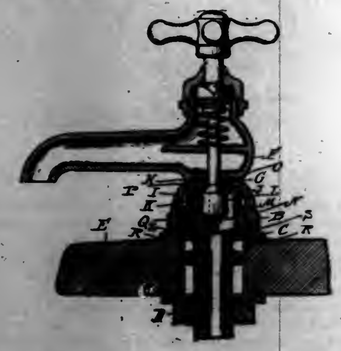
2. In a printing telegraph the combination with a plurality of printing wheels mounted to rotate together, means for rotating the same, a platen pivotally mounted in proximity to the printing wheels and having projections thereon out of line with each other, one for each printing wheel employed, selecting levers mounted in proximity to the said printing wheels, and projections carried by the said printing wheels for engagement successively with the said selecting levers, the said selecting levers having forked portions for engaging parts carried by the said platen upon either side of its pivotal center, whereby to move the said platen in one direction or the other about its pivotal support when the said platen and wheels are moved toward and away from each other, and means for so moving the said platen and printing wheels toward and away from each other.

962,083. BASIN-COCK. WILLIAM SYDNEY GRAHAM, Chicago, Ill., assignor to Federal-Huber Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 28, 1908. Serial No. 455,176.

1. In a basin cock, a service-pipe connecting member passing through and secured to the basin-slab and projecting above the same, the projecting end portion being annularly enlarged and externally threaded, a cock or body-portion having a removable member secured thereto, said removable member being equipped with an annular shoulder between its ends, the lower end portion of said removable member and the projecting end portion of the service-pipe connecting member having tapering walls so as to permit the one to take within the other to a predetermined point, and a cap-nut freely rotatable relatively to and engaging said removable member and the projecting end portion of said service-pipe connecting member whereby the end of one member is wedged within the end of the other to form a fluid tight joint and secure said cock onto the service-pipe connecting member.

2. In a basin, a cock provided in its body portion with a threaded opening through which the valve stem passes,

a member having a central externally threaded hollow projection entering and engaging said threaded opening, the said member being equipped with an annular shoulder between its ends, the lower end of said member portion being externally tapered, a service pipe connecting member passing through and secured to the slab, an annular externally threaded internally tapered flange at the delivery end of said connecting member, and a union member engaging the thread of said flange and engaging said annularly shouldered member to secure the latter to the former, the tapered portions thereof interfitting and co-acting to form a fluid tight joint.



3. A basin cock comprising a service pipe connecting member having an annularly enlarged externally threaded internally tapered mouth portion, an externally tapered member fitting said mouth portion, said last-named member being reduced between its ends to provide an annular shoulder thereon, and terminating at its other end in an externally threaded flange secured within a threaded opening in the body of the cock, and a union nut freely rotatable relatively to and engaging the annular shoulder of said last-named member and engaging said flange of said first-named member to couple said members.

4. A basin-cock provided with a valve and a downwardly projecting flaring member within which the valve seats, a union member adapted to take over said downwardly projecting member and loosely engage therewith, in combination with a service-pipe connecting member with which the flared end of the downwardly projecting member engages, the upper end of said connecting member taking within the union member and engaging therewith.

5. A basin-cock provided with a valve and having a downwardly projecting angular member tapering at its lower end, within which the valve seats, a union member adapted to take over the angular member and engage thereon, in combination with a service-pipe connecting member having an internally tapered upper end within which the angular member takes, said connecting member being removably connected to the lower end of the union member.

[Claims 6 to 8 not printed in the Gazette.]

962,084. FAUCET. WILLIAM SYDNEY GRAHAM, Chicago, Ill., assignor to Federal-Huber Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 19, 1909. Serial No. 490,805.

1. A faucet comprising a chamber communicating with a source of water-supply and having an outlet, a valve reciprocally mounted in said chamber, the chamber and valve being so formed as to provide a water-space intermediate of the valve and the outlet when the valve approaches its seat, means whereby the water in said space is temporarily retained but allowed to exhaust slowly, mechanism for forcing the valve to its seat, and means whereby the pressure of the supply may be utilized to hold the valve to its seat.

2. A faucet comprising a chamber communicating with a source of supply and provided with an outlet, a spring-controlled valve reciprocally mounted in said chamber, the outlet end of the chamber being contracted to provide a fluid-cushion intermediate of the valve and the outlet, the relation between the valve and the wall of the chamber being such as to permit the fluid forming the cushion to exhaust slowly and regulate the seating of the valve, and means whereby the pressure of the supply may be utilized to force the valve toward and retain it on its seat.



3. In a faucet, a chamber communicating with a source of supply of fluid under pressure and having an outlet, the portion of the chamber adjacent to the outlet being stepped, a valve reciprocally movable in said valve-chamber and controlling said outlet, the end of the valve adjacent to the outlet being correspondingly stepped to form an annular fluid chamber between the valve and the walls of said valve-chamber which is longitudinally contracted as the valve approaches its seat, mechanism intermediate of the valve and one end of the chamber to force the valve toward its seat, and means whereby the pressure of the fluid flowing into the chamber will retain said valve on its seat.

4. A faucet provided with a chamber having communication with a source of supply and provided with an outlet, a valve mounted in said chamber and adapted to control said outlet, means whereby the pressure of the supply is utilized to maintain the valve on its seat, and means whereby this pressure may be equalized on both sides of the valve when the latter is to be opened.

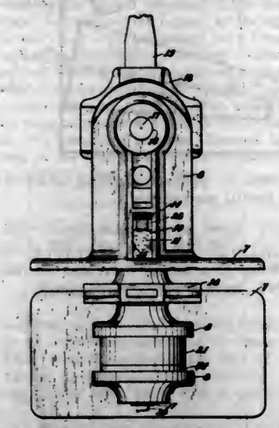
5. A faucet provided with a chamber communicating with a source of supply under pressure, said chamber also having an outlet, a valve slidably mounted in said chamber and normally closing said outlet, means whereby the pressure of the supply may constantly be directed on the valve in the direction of its seat and utilized in returning the valve to its normal position, and means for establishing communication between the upper and lower sides of the valve whereby said pressure may be equalized on both sides of the valve when the latter is being forced from its normal position.

[Claims 6 to 13 not printed in the Gazette.]

962,085. MACHINE FOR CUTTING METAL BARS. HANS H. JENSEN, Milwaukee, Wis. Filed Mar. 22, 1909. Serial No. 484,855.

A machine for cutting metal bars, comprising a frame having upwardly extending standards spaced apart and provided with alined openings and with a knife recess, spacing and guide lugs positioned between the two standards, a stationary knife positioned in the recess and fastened to one of the standards and having its upper cutting edge extending slightly above the lower edge of

the opening, a reciprocating block carrying a knife and positioned between the standards and the guide lugs and guided thereby, said block provided with an upper circular recess extending through the block, a shaft extending through and having bearings in both standards and provided with an eccentric positioned between the stand-



ards and rigidly fastened to said shaft, a ring surrounding said eccentric and having a depending rounded lug shaped to closely and pivotally fit within the circular recess of the block and to support and reciprocate said block, and a disk-like member fastened to the shaft and having an operating handle extending therefrom.

962,086. FASTENING FOR LOOPS AND THE LIKE. WILLIAM M. JONES and HARLAND STEWART, San Francisco, Cal. Filed Mar. 18, 1909. Serial No. 484,270.

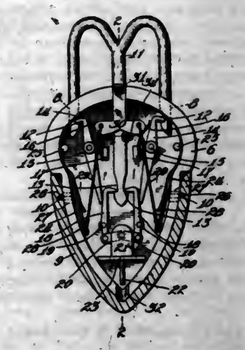


In a device of the character described, the combination of a casing of uniform dimensions throughout its length in the interior, and open at one end, a device having a stem and a cross head on said stem adapted to enter said open end, the casing having openings in its sides to receive the ends of said cross head when turned at right angles to the end opening, a follower within the casing abutting against said cross head, a pin extending transversely through the follower and projecting into said side openings to limit the movement thereof, said side openings having rearward extensions to receive the ends of said pin, and springs between the follower and the closed end of the casing, substantially as described.

962,087. PADLOCK. JOCHAN KUCZYŃSKI, Chicago, Ill., assignor of one-half to Martin J. Pociosk, Chicago, Ill. Filed Feb. 6, 1909, Serial No. 476,351. Renewed Nov. 10, 1909. Serial No. 527,809.

1. In a padlock, in combination, a casing, a sliding shackle having lateral notched prongs and a centrally disposed longer prong oppositely notched, and a plurality of sets of pivoted tumblers adapted to engage the prongs to prevent withdrawal of the same.

2. The combination, in a padlock, of a casing, a sliding shackle having a plurality of notched prongs, a long tumbler and a short tumbler in contact with and for movement of the long tumbler in one direction, means to urge the long tumbler into engagement with the shackle, and means to swing the tumblers out of engagement with the shackle for unlocking purposes.



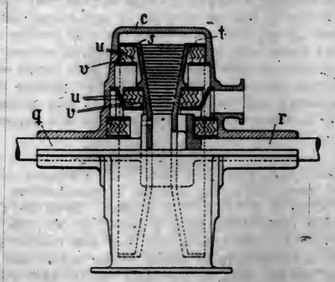
3. The combination, in a padlock, of a casing having a removable shell, means for securing the shell in position, a sliding shackle having a plurality of notched prongs, and a plurality of sets of tumblers adapted to automatically engage with the prongs to prevent withdrawal of the same.

4. The combination, in a padlock, of a casing, a sliding shackle having a plurality of prongs, a double set of pivoted tumblers to engage the prongs to prevent withdrawal of the same, one set of the tumblers being spring actuated, means to impart movement to the tumblers, and a bitless key to operate said means.

5. The combination, in a padlock, of a casing having a removable shell, means for securing the shell in position on the casing, means for releasing the shell for removal, a sliding shackle having a plurality of notched prongs, a plurality of spring-actuated long tumblers and a plurality of pivoted short tumblers each for engagement with the shackle, means to give movement to the short tumblers, and means to operate said means.

[Claim 6 not printed in the Gazette.]

962,088. TURBINE. BIRGER LJUNGSTRÖM, Stockholm, Sweden. Filed Apr. 9, 1907. Serial No. 367,149.



1. In fluid pressure turbines, the combination of a vane-carrying rotating part, a concentric annular pressure chamber between it and a fixed part, and baffling devices at the outer and inner periphery of said chamber, the distances in the said inner baffling device being varied to correspond with the axial movements of the vane-carrying rotating part.

2. In fluid pressure turbines, the combination of a vane-carrying rotating part, a concentric annular pressure

chamber between it and a fixed part, and baffling devices at the outer and inner periphery of said chamber, the distances of the said outer and inner baffling devices being varied to correspond reversely to the axial movements of the vane-carrying rotating part.

3. In fluid pressure turbines, the combination of a rotating part, a concentric annular pressure chamber between it and a fixed part and baffling devices at the outer and inner periphery of said chamber, varying differently to correspond with the axial movements of the rotating parts, said baffling devices being partly arranged on rings.

4. In fluid pressure turbines, the combination of a rotating part, a concentric annular pressure chamber between it and a fixed part and baffling devices at the outer and inner periphery of said chamber varying differently upon the axial movements of the rotating parts, said baffling devices partly projecting from rings, loosely arranged in the turbine casing.

5. In fluid pressure turbines, the combination of a rotating part, a concentric annular pressure chamber between it and a fixed part and baffling devices at the outer and inner periphery of said chamber varying differently upon the axial movements of the rotating parts, said baffling devices partly projecting from rings, loosely arranged in the turbine casing and adjustably secured thereto.

[Claims 6 and 7 not printed in the Gazette.]

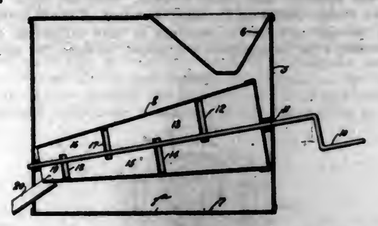
962,089. STOCKING. EMMA M. NEWTON, New Brighton, N. Y. Filed Nov. 16, 1909. Serial No. 528,315.



In a stocking, reinforcing strips secured near the upper edge thereof at the end portions of said strips, one above the other in the form of a cross, the edge portion of said stocking above said strips folded over and secured to the body portion of said stocking below said strips whereby said strips are concealed, and an eyelet passing through said stocking and reinforcing members, said eyelet being adapted to receive the fastening element of a supporter.

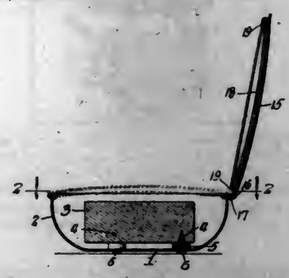
962,090. SIFTING APPARATUS. FERNAND D'ORBESSAN, Ozone Park, and DESIRE VICTOR LOUVET, Brooklyn Hills, N. Y. Filed Feb. 5, 1909. Serial No. 476,322.

An ash sifter comprising a casing or box, the top of which is provided adjacent to one end thereof with a hopper and the opposite end of which is provided at the bottom thereof with a discharge spout, and a conical screen mounted in said casing or box, the larger end of which is adapted to receive the discharge from said hopper and provided with a door or opening and the smaller end of which is over said discharge spout, the larger end of said screen being also higher than the smaller end thereof, said screen being mounted on a shaft or axle, the ends of which are provided with bearings in the opposite ends of the casing or box and that end of the axle which passes through the larger end of the screen being projected and provided with a crank, and the opposite side portions of said screen being provided with alternately



arranged baffles or partial partitions which divide said screen into partial compartments.

962,091. SHAVING-SOAP RECEPTACLE. OLIVER E. PAGAN, Washington, D. C. Filed May 19, 1900. Serial No. 496,901.



The combination with a cup-shaped receptacle; of a plurality of spaced lugs rising a considerable distance above the inner surface of the bottom of the receptacle, each lug being provided with a broad flat upper bearing face, and spurs rising centrally from the upper bearing faces of said lugs whereby a cake of soap will be maintained fixed in superposed position on the lugs at a considerable elevation above the plane of the bottom of the receptacle for free circulation of air beneath said soap cake.

962,092. BABY-HAMMOCK. ISAAC E. PALMER, Middletown, Conn., assignor to The I. E. Palmer Company, Middletown, Conn., a Corporation of Connecticut. Filed Nov. 20, 1907. Serial No. 402,953.



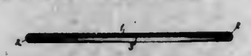
1. The combination with the body of a hammock, of side rails at the top of the body, end rails superimposed thereon, suspension cords attached to said end rails, said end rails being connected with the side rails by means of a flexible connection, whereby the rails will assume a position edgewise toward one another when in use and may assume a position flatwise toward one another when not in use.

2. The combination with a hammock body composed of woven material having pockets formed at the upper edges of its sides and ends, of a distending frame composed of side and end rails individually inclosed within the said pockets, the end rails being superimposed upon the side

rails, suspension cords attached to the said end rails, the side rails being connected with the end rails by means of a flexible connection, whereby the rails will assume a position edgewise toward one another when in use and may assume a position flatwise toward one another when not in use.

3. The combination with a hammock body composed of woven material having pockets formed at the upper edges of its sides and ends, of a distending frame composed of side and end rails individually inclosed within the said pockets, the end rails being superimposed upon the side rails, suspension cords attached to the said end rails, a distending bottom frame, the side rails being connected with the end rails by means of a flexible connection, whereby the rails will assume a position edgewise toward one another when in use and may assume a position flatwise toward one another when not in use.

962,093. STOVE-BOARD. GRACE PFEIL. Chicago, Ill. Filed July 2, 1909. Serial No. 505,767.



A stove board, comprising a wire edging frame, an upper sheet having its edges wrapped around the frame, and a reinforcing sheet secured to the under face of the upper sheet and having its edges abutted against the outer face of the portion of the upper sheet that is wrapped around the frame.

962,094. STOVE-BOARD. GRACE PFEIL, Chicago, Ill. Filed July 2, 1909. Serial No. 505,768.



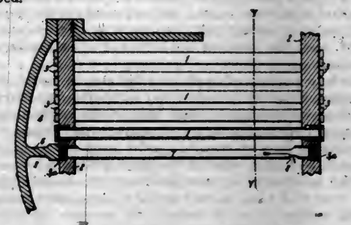
1. A stove board, comprising an edging, a center strip connecting opposite sides of the edging and having its face flush with the same, said edging and strip having grooves in their inner sides, two sets of transversely disposed strips, the strips of each set being located side by side between the center strip and one of the opposite sides of the edging, said transverse strips having their upper faces flush with the edging and center strip and having terminal tongues engaged in the grooves, and a covering extending over the upper face of the board and having its edge set in flush with the marginal face of the edging and terminating short of the outer edge thereof, leaving said outer edge of the edging exposed.

2. A stove board, comprising a base having its upper margins and edges rounded, said rounded margins being also recessed, the recesses terminating short of the outermost edges of the base, and a protective sheet covering the upper face of the base and having its margins curved downwardly and fitted upon the rounded margins of the base with its edges seated in the recesses thereof and substantially flush with the face of the base edges outside the recesses, said edges of the base below the protective sheet being exposed and thereby constituting protective means for the edges of the sheet.

962,095. APPARATUS FOR CONDENSING STEAM. DANIEL ARTHUR QUIGGIN, Liverpool, England. Filed Mar. 24, 1910. Serial No. 551,311.

1. In heat transferring apparatus of the surface condenser type, in combination with the heat transmitting tubes and the tube plates thereof, a series of inclined drainage tubes extending between the tube plates and arranged at intervals in each vertical row of tubes, each of the said drainage tubes being in the form of an open topped duct into which the water from the heat transmitting tubes above drips and is carried away to one of the tube plates; substantially as described.

2. In heat transferring apparatus of the surface condenser type, in combination with the heat transmitting tubes and the tube plates thereof, a series of inclined drainage tubes extending between the tube plates and arranged at intervals in each vertical row of tubes, each of the said drainage tubes being in the form of an ordinary tube the upper portion of which is cut away except at the parts where the tube fits the tube plates; substantially as described.



3. In heat transferring apparatus of the surface condenser type, in combination with the heat transmitting tubes and the tube plates thereof, a series of inclined drainage tubes extending between the tube plates and arranged at intervals in each vertical row of tubes, each of the said drainage tubes being in the form of an open topped duct, and having a drainage hole at the bottom adjacent to one of the tube plates; substantially as described.

4. In heat transferring apparatus of the surface condenser type, in combination with the heat transmitting tubes and the tube plates thereof, a series of inclined drainage tubes extending between the tube plates and arranged at intervals in each vertical row of tubes, each of the said drainage tubes being in the form of an open topped duct and bent so as to have alternately reversely inclined slopes with the bottoms of the slopes adjacent to the tube plates; substantially as described.

5. In heat transferring apparatus of the surface condenser type, in combination with the heat transmitting tubes and the tube plates thereof, a series of inclined drainage tubes extending between the tube plates and arranged at intervals in each vertical row of tubes, each of the said drainage tubes being in the form of an ordinary tube the upper portion of which is cut away except at the parts where the tube fits the tube plates; holes in the tube plates through which the drainage tubes pass, and means for closing the holes and securing the tubes therein; substantially as described.

962,096. PROCESS OF ENGRAVING. HENRY L. RECKARD, Hartford, Conn. Filed Oct. 5, 1909. Serial No. 521,144.



1. In a process of photo-mechanically engraving of metal rollers, the improvement which consists in producing a photographic negative of the design to be engraved, producing therefrom a photograph the opaque portions of which correspond in form and dimensions to the parts of the metal surface to be removed from the roller, producing a photo-lithograph therefrom, producing a transfer from said photolithograph, transferring the ink from such transfer to a thin metal sheet, etching said sheet so as to remove the surface of the portions uncovered by said ink, applying ink to the raised portions of said etched metal sheet, printing said ink upon a metal roller and etching said metal roller so as to remove the surface of the portions uncovered by the ink printed thereon.

2. In a process of engraving designs on metal, the improvement which consists in producing a lithograph upon a plain surface, producing a transfer from said lithograph, transferring ink from said transfer to a plain metallic surface, etching said metallic surface so as to remove the portions thereof uncovered by ink, building up with ink one of said plain surfaces when the design has first appeared thereon, and applying thereto a yielding body having closely adjacent inked projections so as to print upon the uninked portions not closely adjacent to the built up portions.

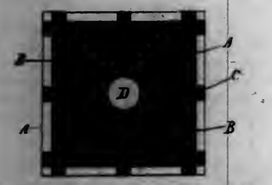
3. In a process of engraving designs on metal, the improvement which consists in producing a lithograph, building up the ink on said lithograph, applying to said lithograph a flexible sheet having closely adjacent inked projections thereon so as to print upon the uninked portions not closely adjacent to the built up portions, producing a transfer from said lithograph, transferring the ink from said transfer to a metal surface and etching said metal surface so as to remove the portions uncovered by ink.

4. In a process of photo-mechanically engraving of designs on metal, the improvement which consists in producing a photograph the opaque portions of which correspond in form and dimensions to the metal surface to be removed, producing a photo-lithograph therefrom upon a plain surface, producing a transfer from said photo-lithograph, transferring ink from said transfer to a plain metallic surface, etching said metallic surface so as to remove the portions thereof uncovered by ink, building up with ink one of said plain surfaces when the design has first appeared thereon, and applying thereto a yielding body having closely adjacent inked projections so as to print upon the uninked portions not closely adjacent to the built up portions.

5. In a process of photo-mechanically engraving of metal, the improvement which consists in producing a photograph the opaque portions of which correspond in form and dimensions to the metal surface to be removed, producing a photo-lithograph therefrom, building up ink on said photo-lithograph and applying thereto a yielding body having closely adjacent inked projections so as to print upon the uninked portions not closely adjacent to the built up portions, producing a transfer from said photo-lithograph, transferring the ink of said transfer to a metal surface and etching said metal surface so as to remove the portions thereof uncovered by ink.

[Claims 6 to 14 not printed in the Gazette.]

962,097. PHOTOMECHANICAL PROCESS OF ENGRAVING. HENRY L. RECKARD, Hartford, Conn. Filed Oct. 5, 1909. Serial No. 521,145.



1. In a process of photo-mechanically engraving rollers for mosaic printing, the improvement which consists in producing a plurality of photo-lithographs whose uninked areas are reduced on all sides so as to be less than the corresponding areas of the resultant mosaic print to be made, the number of photo-lithographs corresponding to the number of colors to be printed, the uninked area on each of the several photo-lithographs being different and corresponding respectively to the colors to be printed, producing transfers from said photo-lithographs, transferring the ink of said transfers to thin sheets of metal, etching said sheets, inking said sheets when etched, applying the rollers to be engraved to said sheets under pressure, and etching said rollers.

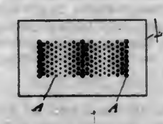
2. In a process of photo-mechanically engraving metal for mosaic printing of a design in a plurality of colors, the improvement which consists in producing an outline drawing of the areas covered by the respective colors, producing a photographic negative of said outline drawing, producing a photo-lithograph from said negative, producing a plurality of photo-lithographic prints from said photo-lithograph corresponding in number to the different colors to be printed, blotting out on the several photo-lithographic prints all surface corresponding to the design except the area corresponding to one of the colors to be printed, a different area being left upon each print thus blotted out, producing photographic negatives of each of the blotted out prints, producing inked photo-lithographs from each of these negatives whose uninked areas correspond to and are reduced on all sides so as to be less than the corresponding areas of the resultant print to be made, the uninked area on each of the several photo-lithographs being different, producing transfers from said photo-lithographs, transferring the ink of said transfers to metal surfaces and etching said metal surfaces.

3. In a process of photo-mechanically engraving metal for mosaic printing, the improvement which consists in producing a heavy outline drawing of the areas covered by the respective colors, the width of the line being proportionate to the space to be left for color flow in the engraving, producing a photographic negative of said outline drawing, producing a photo-lithograph from said negative, producing a plurality of photo-lithographic prints from said photo-lithograph corresponding in number to the different colors to be printed, blotting out on the several photo-lithographic prints all the surface except the area corresponding to one of the colors to be printed, a different area being left upon each print thus blotted out, producing photographic negatives of each of the blotted out prints of the size of the engravings to be made, producing lithographs from each of these negatives, transferring the ink from each of these negatives to metallic surfaces and etching the metallic surface so as to eat away the portions uncovered by the ink thus transferred.

4. In a process of photo-mechanically engraving metal for mosaic printing, the improvement which consists in producing an outline drawing of the areas covered by the respective colors, producing a photographic negative of said outline drawing, the lines in the drawing being such as to make the lines in the negative of a width corresponding to the space to be allowed for color flow upon the engraved surfaces, producing a photo-lithograph from said negative, producing a plurality of photo-lithographic prints from said photo-lithograph corresponding in number to the different colors to be printed, blotting out on the several photo-lithographic prints all the surface except the area corresponding to one of the colors to be printed, a different area being left upon each print thus blotted out, producing photographic negatives of each of the blotted out prints of the size of the engravings to be made, producing lithographs from each of these negatives, transferring the ink from each of these lithographs to metallic surfaces and etching the metallic surface so as to eat away the portions uncovered by the ink thus transferred.

5. In a process of photo-mechanically engraving rollers for mosaic printing, the improvement which consists in producing an outline drawing of the areas covered by the respective colors, producing a photographic negative of said outline drawing, the lines in the drawing being such as to make the lines in the negative of a width corresponding to the space necessary to be allowed for color flow in the goods printed, producing a photo-lithograph from said negative, producing a plurality of photo-lithographic prints from said photo-lithograph corresponding in number to the different colors to be printed, blotting out on the several photo-lithographic prints all the surface except the area corresponding to one of the colors to be printed, a different area being left upon each print thus blotted out, producing photographic negatives of each of the blotted out prints, producing lithographs from each of these negatives, transferring the ink from each of these lithographs to metallic surfaces and etching the metallic surface so as to eat away the portions uncovered by the ink thus transferred, inking the metallic surfaces thus etched and transferring the ink therefrom to rollers to be engraved and etching said rollers so as to eat away the portions uncovered by ink.

962,098. PHOTOMECHANICAL PROCESS OF ENGRAVING. HENRY L. RECKARD, Hartford, Conn. Filed Oct. 5, 1909. Serial No. 521,147.

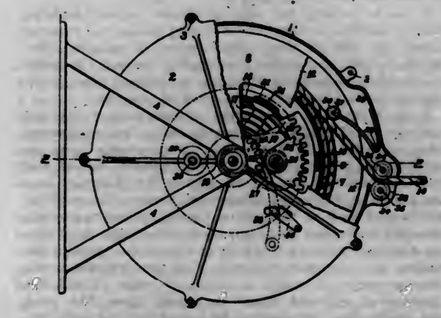


1. In a photo-mechanical process of engraving metal, the improvement which consists in photographing a design having modulations of light and shade by means of a dry plate, photographing the design carried by said dry plate through a screen and obtaining thereby a dotted positive of the original, producing a photo-lithograph from said dotted positive, producing a transfer from said photo-lithograph, transferring the ink from said transfer to a metal surface and etching said metal surface, inking said metal surface and transferring the ink therefrom to a metal roller and etching said metal roller.

2. In a photo-mechanical process of engraving metal, the improvement which consists in photographing a design having modulations of light and shade by means of a dry plate, photographing the design carried by said dry plate through a screen upon a wet plate, and obtaining thereby a dotted positive of the original, producing a photo-lithograph from said dotted positive, producing a transfer from said photo-lithograph, transferring the ink from said transfer to a metal surface and etching said metal surface, inking said metal surface and transferring the ink therefrom to a metal roller and etching said metal roller.

3. In a photo-mechanical process of engraving metal, the improvement which consists in photographing a design having superimposed colors and modulations of light and shade through color filters and by means of dry plates, photographing the designs carried by the several dry plates through a screen upon wet plates, and obtaining thereby dotted positives thereof, producing a plurality of photo-lithographs one from each of said dotted positives, producing a transfer from each of said photo-lithographs, transferring the ink from said transfers to metal surfaces and etching said metal surfaces, inking said metal surfaces, transferring the ink therefrom to metal rollers and etching said rollers.

962,099. CLOTHES-LINE REEL. HEISTER H. REINHART and IRVIN REINHART, Moselem, and EMANUEL G. LESHER, Reading, Pa. Filed Jan. 28, 1909. Serial No. 474,842.

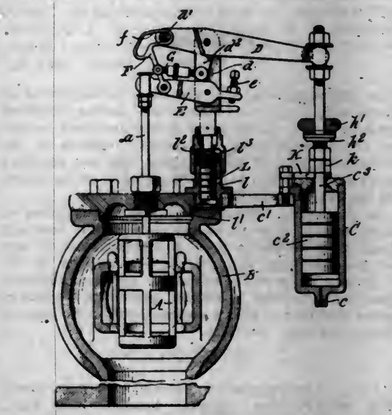


1. In a clothes line reel the combination with an inclosing casing having an opening therein, and a winding drum within said casing, of a spring pressed rod bearing against said drum and a guide roller slidably mounted on said rod.

2. In a clothes line reel the combination with a winding drum having an inclosing casing therefor, of an opening in said casing, posts mounted in said opening and having guide rollers slidably mounted thereon and adapted to ride across the width of the drum, and an additional guide roller within said casing spring pressed against the drum and slidable across the width of the same.

3. In a clothes line reel, an inclosing casing secured upon brackets, an axle fixed thereto, a winding drum within said casing mounted on said axle and carrying a pinion, a spring casing within said drum having an internally toothed gear wheel thereon, an idler gear meshing with said pinion and internally toothed gear carried by an arm fixed to said axle, a spring within said spring casing one end being secured to the same and the other end to the fixed axle, substantially as set forth.

962,100. PRESSURE-GOVERNOR. GEORGE M. RICHARDS, Erie, Pa. Filed Dec. 18, 1907. Serial No. 407,018.



1. In a pressure governor, the combination of a valve, a part operated by fluid pressure, mechanism connecting said fluid-operated part and said valve and including a device which is shifted in position by the movement of said fluid-operated part and by its position causes said valve to move with or in opposition to said fluid-operated part, and means for adjusting the position of said device relative to said fluid-operated part, substantially as set forth.

2. In a pressure governor, the combination of a valve, a motor operated by fluid pressure, levers connected to said motor and to said valve, and a connecting device between said levers which is shifted by said motor and by its position causes said valve to move with or in opposition to said lever connected to the motor, substantially as set forth.

3. In a pressure governor, the combination of a valve, a motor having a part moved in one direction by fluid pressure, levers connected to said movable part of the motor and to said valve, and a connecting device between said levers including a cam connected to one lever and a part connected to the other lever and bearing on said cam and connected with said movable part of the motor for changing the relation of said cam and bearing part of the connecting device, whereby said valve is moved first in one direction and then in the opposite direction by the movement of said motor part in one direction, substantially as set forth.

4. In a pressure governor, the combination of a valve, a motor operated by fluid pressure, levers connected to said motor and to said valve, a connecting device between

said levers consisting of a cam connected to one lever and a part connected to the other lever and bearing on said cam, a connection between one part of said connecting device and the lever connected to said motor for moving said part, and means for adjusting said cam relative to the part bearing thereon, substantially as set forth.

5. In a pressure governor, the combination of a valve, a motor operated by fluid pressure, connecting mechanism between said motor and valve for moving said valve first in one direction and then allowing said valve to be moved by the pressure thereon in the opposite direction during the movement in one direction of the movable part of said motor, and means for adjusting said connections to vary the movement of the valve relative to the motor, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

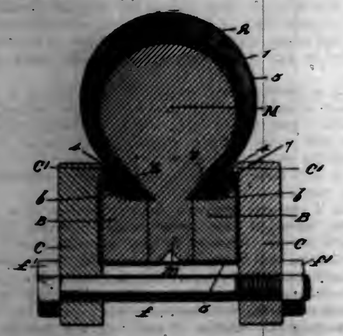
962,101. ALTERNATE-CURRENT COMMUTATOR-MOTOR. RUDOLF RICHTER, Charlottenburg, Germany, assignor to Siemens-Schuckertwerke G. M. B. H., Berlin, Germany, a German Corporation. Filed Jan. 15, 1907. Serial No. 352,390.



1. An alternating current commutator motor having an armature and a grooved stator, and having auxiliary windings in series and in shunt to the armature to neutralize the reactance and transformer tensions in the short circuited coils of the armature, said two auxiliary windings being disposed in different grooves of the stator, one of the auxiliary windings within the other.

2. An alternating current commutator motor having an armature and a grooved stator, and having auxiliary windings in series and in shunt to the armature to neutralize the reactance and transformer tensions in the short circuited coils of the armature, said two auxiliary windings being disposed in different grooves of the stator, the series auxiliary windings disposed within the coils of the shunt auxiliary windings.

962,102. COMPRESSION APPARATUS FOR TIRE-SHOE WRAPPINGS. ROBERT ROWLEY, New York, N. Y., and JAMES J. COOMBER, Jersey City, N. J., assignors, by mesne assignments, to Rubber Company of America, a Corporation of Delaware. Filed Aug. 4, 1909. Serial No. 511,189.

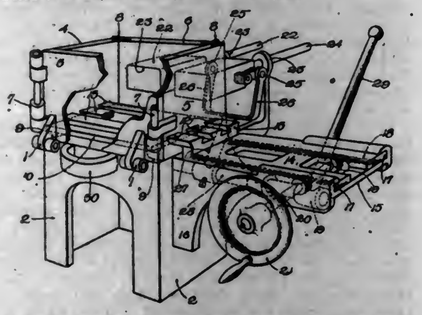


In tire-shoe holding and open cure apparatus, the combination with a tubular, annular wrapping; a rigid purchase therefor; exterior wrapping-tension means operable to strain the wrapping on its purchase, to constrict the wrapping on a contained pre-shaped shoe, and thereby to compact the shoe both circumferentially and transversely from marginal portion to marginal portion; within the wrapping, a rigid, annular, shoe-supporting mandrel and also rigid bead supports, one at one side and the other at the other side of the mandrel, and having an outer peripheral corner portion to support a corner portion of a pre-shaped shoe margin or bead; said exterior tensioning means being mounted to engage the wrapping oppositely and also outwardly of the outer peripheral corners of the bead supports; and means for directing the wrapping, when tension is applied to it, past the corners of the beads or shoe marginal portions to prevent deformation of the marginal portions; said tubular wrapping passing between said exterior tension means and said outer peripheral portions of the bead supports within the wrapping.

962,103. PROCESS OF MAKING PURE ORTHO- AND PARA-GUAIACOL SULFONIC SALTS. BRUNO RICHARD SEIFERT and HERMANN HÄHLE, Radebeul, near Dresden, Germany, assignors to Chemische Fabrik von Heyden, Aktiengesellschaft, Radebeul, near Dresden, Germany. Filed Aug. 1, 1905. Serial No. 272,176.

Process for the separation of ortho- and para-guaiacol sulfoacids and their salts consisting in transforming a mixture of these two acids into their basic salts of the alkaline earths, and filtering off the solution of the ortho salts from the precipitated para salts, substantially as described.

962,104. APPARATUS FOR MAKING CEMENT BUILDING-BLOCKS. MARCUS E. SMITH, Watertown, Mass. Filed Jan. 31, 1910. Serial No. 540,950.



1. A machine for making molded cement building blocks, comprising a substantially rectangular mold, a face-plate for the face of the block, means coöperating with said face-plate to form in the face of the block an undercut mortar-holding groove extending lengthwise of the block, and means for forming transverse openings through said block parallel to the face thereof in a direction transverse to said mortar-holding groove.

2. In a machine for making molded cement building blocks, molding mechanism, including means for forming across the face of the blocks a series of parallel dovetailed grooves, and means for forming through the midst of the block parallel to said face a dead-air passage extending transversely of said dovetailed grooves.

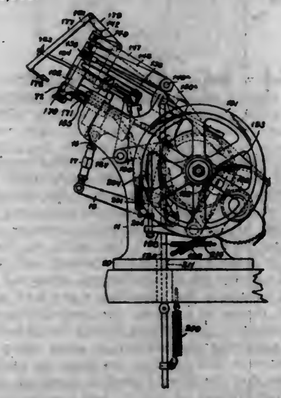
3. In a machine for making molded cement building blocks, a substantially rectangular mold, one end thereof being provided with a plurality of transverse openings adjacent its bottom edge, a frame movable toward and from said mold, provided with a plurality of fingers having a sliding fit in said transverse openings for entering within said mold at the bottom thereof, means to reciprocate said frame and its fingers, one side of said mold having a plurality of relatively large transverse openings extending in a direction transversely of the openings in the adjacent end of the mold, a plunger for each of said side openings of sufficient length to extend across the mold, and mechanism for moving said plungers through said side openings into position across the mold above and transverse to said fingers.

4. In a machine for making molded cement building blocks, a base, a table supported thereby at one end thereof, a mold mounted on said base adjacent said table, a frame carried by said table and provided with a series of straight dovetail-shaped fingers movable through the adjacent end of the mold into position across the bottom of the mold, a plurality of plungers mounted in a plane parallel to the bottom of the mold and above said fingers and movable through the adjacent side of the mold into position across the mold transversely of said fingers, means for moving said fingers inwardly in one direction, and means for moving said plungers inwardly in a direction transverse thereto.

5. In a machine for making molded cement building blocks, a base, a table supported thereby at one end thereof, a mold mounted on said base adjacent said table, a frame carried by said table and provided with a series of straight dovetail-shaped fingers movable through the adjacent end of the mold into position across the bottom of the mold, a plurality of plungers mounted in a plane parallel to the bottom of the mold and above said fingers and movable through the adjacent side of the mold into position across the mold transversely of said fingers, a rack formed on said frame, a pinion mounted in said table to engage said rack, means to rotate said pinion for reciprocating said frame and its fingers into and out of said mold, and means for moving said plungers in a direction transverse to the movement of said fingers.

[Claims 6 and 7 not printed in the Gazette.]

962,105. FASTENING-MACHINE. WILLARD A. SMITH, Melrose, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 16, 1906. Serial No. 296,388.



1. A machine for lacing shoe uppers, having, in combination, a plurality of needles each of which is provided with an eye opening on the side of the needle to receive a lacing cord, means for engaging the lacing cord in the eyes of the needles while the needles are out of engagement with the work and means coöperating with the needles to form a series of loops in the cord and retain the loops in position to be passed by the needles through the eyelet holes of an upper.

2. A machine for lacing shoe uppers, having, in combination, a plurality of needles arranged to pass a series of loops of lacing cord through the eyelet holes of an upper, each of said needles being provided with an eye opening on the side of the needle to receive the lacing cord, means for feeding a lacing cord at one side of the needles, and means for moving the needles laterally to engage the cord.

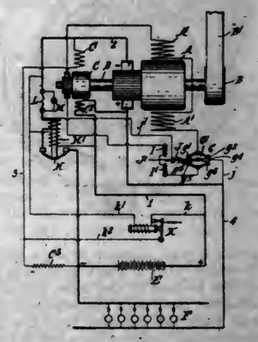
3. A machine for lacing shoe uppers, having, in combination, a plurality of needles arranged to pass a series of loops of lacing cord through the eyelet holes of an upper, each of said needles being provided with an eye opening on the side of the needle to receive the lacing cord, and means for relatively moving the cord and needles to engage the lacing cord in the eyes of the needles while the needles are out of engagement with the work.

4. A machine for lacing shoe uppers, having, in combination, means for passing loops of lacing cord through the eyelet holes of an upper, means for presenting the lacing cord to said means, means for holding the free end of the cord, and means acting on the cord adjacent said holding means to draw cord from the supply prior to the formation of the loops.

5. A machine for lacing shoe uppers, having, in combination, a plurality of needles, means coöperating therewith to form a series of loops in a lacing cord and retain the loops in position to be passed by the needles through the eyelet holes of an upper, means for feeding the lacing cord to the needles, and means acting on the cord at one side of the needles to draw cord from the supply prior to the formation of the loops.

[Claims 6 to 40 not printed in the Gazette.]

962,106. ELECTRICAL SYSTEM OF DISTRIBUTION. WILLIAM A. TURBAYNE, Lancaster, N. Y., assignor to Gould Coupler Company, New York, N. Y. Filed Apr. 10, 1909. Serial No. 489,057.



1. In an electrical system of distribution, the combination of a main generator, a main circuit therefor, a battery in operative relation to said generator and said circuit, an auxiliary generator for exciting the main generator, switching means for connecting the auxiliary generator in proper exciting relation to the main generator, a safety device for breaking said circuit, and means which maintain a circuit including said switching means when said main circuit is broken, substantially as set forth.

2. In an electrical system of distribution, the combination of a main generator, a main circuit therefor, a battery in operative relation to said generator and said circuit, an auxiliary generator for exciting the main generator, switching means for connecting the auxiliary generator in proper exciting relation to the main generator, a safety device for breaking said circuit, and a resistance shunted around said circuit breaking device, substantially as set forth.

3. In an electrical system of distribution, the combination of a main generator, a main circuit therefor, a battery in operative relation to said generator and said circuit, an auxiliary generator for exciting the main generator, switching means for connecting the auxiliary generator in proper exciting relation to the main generator, a switch for connecting the main generator in said circuit, a safety device for breaking said circuit, and means which maintain a circuit including said switching means when said main circuit is broken, substantially as set forth.

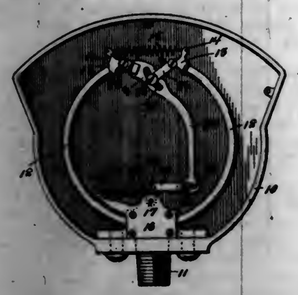
4. In an electrical system of distribution, the combination of a main generator, a main circuit therefor, a battery

in operative relation to said generator and said circuit, an auxiliary generator for exciting the main generator, switching means for connecting the auxiliary generator in proper exciting relation to the main generator, a fuse in said circuit, a switch for connecting the main generator in said circuit, and a resistance shunted around said fuse, substantially as set forth.

5. In an electrical system of distribution, the combination of a main generator, a main circuit therefor, a battery in operative relation to said generator and said circuit, an auxiliary generator, means for connecting the auxiliary generator to excite the main generator, means dependent upon the current flow from the main generator for connecting the two generators in series to excite the main generator, a safety device for breaking said circuit, and means which maintain a circuit including said switching means when said main circuit is broken, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

962,107. PRESSURE-GAGE. LESLIE J. WATSON, Upton Works, Mich. Filed June 11, 1909. Serial No. 501,527.



1. In a pressure gage, opposite tubes, a pivoted indicating finger provided with a crank arm upon its shaft, a slotted lever arm pivoted to the upper end of one of said tubes and extended downward opposite said crank arm, a link extending from the opposite tube and connected to said slot substantially midway between the ends of said tubes, and a horisontally disposed link connection between the lower end of said lever and said crank arm.

2. In a pressure gage, opposite tubes, a pivoted indicating finger provided with a crank arm upon its shaft, a slotted lever arm pivoted to the upper end of one of said tubes and extended downward opposite said crank arm, a link extending from the opposite tube and connected to said slot substantially midway between the ends of said tubes, a horisontally disposed link connection between the lower end of said lever and said crank arm, and a retracting spring extending from said crank arm to a fixed support.

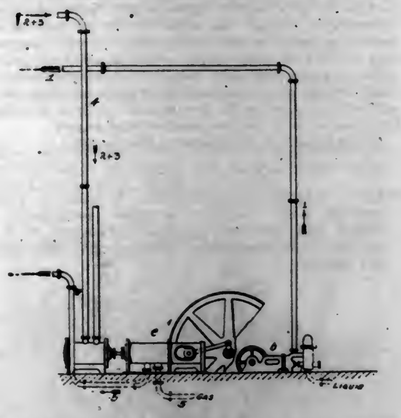
3. In a pressure gage, opposite tubes, a pivoted indicating finger provided with a crank arm upon its shaft, a slotted lever arm pivoted to the upper end of one of said tubes and extended downward opposite said crank arm, a link extending from the opposite tube and connected to said slot substantially midway between the ends of said tubes, a horisontally disposed link connection between the lower end of said lever and said crank arm, a retracting spring extending from said crank arm to a fixed support, and a tension spring extending between the free ends of said tubes.

4. In a pressure gage, opposite tubes, a lever arm pivoted upon one of said tubes and provided with a curved slot at its upper portion and a horisontal slot at its lower portion, a link extending from said curved slot to the opposite tube, a pivoted indicating finger provided with a crank arm, a link carried by said arm and extended to said horisontal slot, a clamping nut having an angular flange slidably mounted in each of said slots, and a bolt threaded into each nut and provided with a pivotal bearing for its connecting link.

5. In a pressure gage, opposite tubes, a lever arm pivoted upon one of said tubes and provided with a curved slot at its upper portion and a horisontal slot disposed at its lower portion, an indicating finger connected at the horisontal slot of said arm, a link connection between said curved slot and opposite tube, and means for holding said link in adjusted position in said curved slot.

[Claims 6 to 11 not printed in the Gazette.]

962,108. PROCESS AND APPARATUS FOR UTILIZING THE ENERGY OF WASTE GASES. JULIUS WEISE and FRIEDRICH RIECHE, Oestrich-on-the-Rhine, Germany, assignors to The Firm of Rudolph Koepp & Co., Oestrich-on-the-Rhine, Germany. Filed Apr. 8, 1909. Serial No. 488,670.



1. In an apparatus for absorbing a gas from a mixture of gases by means of a liquid, the combination with the reaction receptacle, of a liquid supply for the receptacle, means for supplying heat, means for supplying the mixture of gases to the receptacle under pressure and passing the same in contact with the liquid so that one of said gases is absorbed, and steam formed, and means for utilising the energy of the discharged gases and steam.

2. In an apparatus for absorbing a gas from a mixture of gases by means of a liquid, the combination with the reaction receptacle, of a liquid supply for the receptacle, means for supplying the mixture of gases under pressure to the receptacle and passing the same in contact with the liquid so that one of said gases is absorbed, and steam formed, a transformer of energy, and means for utilising the energy of the discharged gases and steam in the transformer of energy.

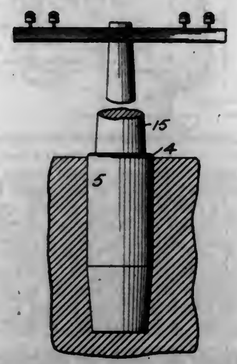
3. In an apparatus for absorbing a gas from a mixture of gases by means of a liquid, the combination with the reaction receptacle, of a liquid supply for the receptacle, a compressor for supplying the mixture of gases under pressure to the receptacle and passing the same in contact with the liquid, so that one of said gases is absorbed and steam formed, a transformer of energy connected to the compressor, and means for utilising the energy of the discharged gases and steam in the transformer of energy.

4. In an apparatus for absorbing a gas from a mixture of gases by means of heated liquids, the combination with a reaction receptacle, of a steam supply for said receptacle, a liquid supply for the receptacle, and a compressor for compressing a gaseous mixture and supplying the same to the reaction receptacle, of a connection between the reaction receptacle, and the driving cylinder of said compressor whereby the gaseous mixture discharged from the reaction receptacle after giving off part of its components and being saturated with steam is used to drive the compressor.

5. In an apparatus for absorbing a gas from a mixture of gases, the combination with a reaction receptacle, adapted to receive the absorbing material, of a compressor for supplying the mixture of gases under pressure to the receptacle and passing the same in contact with the absorbing material so that one of said gases is absorbed, a pressure engine connected to said compressor and means for utilising the energy of the discharged gases in said pressure engine.

[Claims 6 and 7 not printed in the Gazette.]

962,109. TELEPHONE, FENCE, AND TELEGRAPH POLE. HENRY M. ADAMS, Oxford, Nebr. Filed Nov. 1, 1909. Serial No. 525,783.



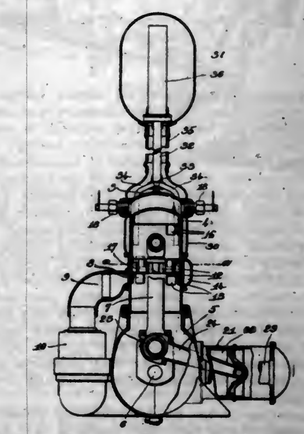
1. The combination with a post having a tapering end, of a cylindrical retainer forming a base having a conical bore entering each end, one of said bores being considerably shorter than the other, a metal reinforcing conical collar positioned within the inner upper end of said longer conical bore, the tapered end of said post being removably held within said conical bore of largest diameter, and a cross bar transversely extending through said base at the point of union of said two conical bores.

2. A retainer of the character described, comprising a cylindrical member having a conical bore entering from each end, one of said bores being considerably longer than the other, a metal annulus suspended within the upper end of said longer conical bore, and a transversely positioned lifting bar embedded within said base at the point of union of said two cylindrical bores, said bar being provided with an upwardly extending annulus lying flush with the face of the upper bore.

3. The combination with a post, of a retainer therefor, said retainer comprising a base having a bore therethrough, a reinforcing collar positioned within the upper end of the base and lying flush with the bore thereof, a cross bar of less width than the bore and positioned transversely of the base intermediate its ends said bar being provided with an upwardly extending annulus received within the bore and enlarged wing portions formed on opposite ends of the bar and seated within said base portion.

962,110. INTERNAL-COMBUSTION ENGINE. GEORGE JOHN ALTHAM, Fall River, Mass. Filed Mar. 28, 1907. Serial No. 364,980.

1. In a two-cycle internal combustion engine, the combination with a cylinder having an air inlet port for the admission of air and a separate inlet port for an explosive charge situated below the air inlet port, of a piston in the cylinder which by its movement opens said ports simultaneously to admit both air and an explosive charge to the cylinder below the piston, said cylinder having another port and the piston also having a port which registers with said other port when the piston is at the end of its power stroke whereby first the air and then the explosive charge are transferred to the working end of the cylinder.



2. In a two-cycle internal combustion engine, the combination with a cylinder having separate ports for the admission of air and an explosive charge, of a piston in the cylinder which by its movement opens said ports simultaneously to admit both air and an explosive charge to the cylinder below the piston, a deflector to deflect the air into a separate part of the cylinder from that in which the explosive charge is admitted, and means to transfer first the air and then the explosive charge to the working end of the cylinder at the end of the power stroke.

3. In an internal combustion engine, the combination with a cylinder and piston therein, of a crank case having a variable volume connected to one end of the cylinder, means to admit an explosive charge to the crank case while the piston is at one end of its stroke, and other means to increase materially the volume of said crank case while the charge is being admitted thereto.

4. In an internal combustion engine, the combination with a cylinder and a piston therein, of a crank case communicating with the cylinder, an expansible and contractible chamber communicating with said crank case, said cylinder having a port to admit an explosive charge to the crank case, which port is positioned to be opened by the piston when the latter is at the end of its return stroke, and means to increase the volume of said chamber during the entire time that the inlet port is uncovered.

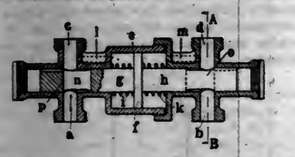
5. In an internal combustion engine, the combination with a cylinder and a piston therein, of a crank case connected with the cylinder, said cylinder having an inlet port leading to the crank case to admit an explosive charge thereto, which inlet port is controlled by the piston, and means other than the piston to produce a suction in the crank case while the inlet port is uncovered by the piston whereby an explosive charge is drawn into the crank case chamber.

[Claims 6 to 15 not printed in the Gazette.]

962,111. REGULATING APPARATUS FOR MIXING-VALVES. CARL ASSMANN, Charlottenburg, Germany. Filed Nov. 29, 1907. Serial No. 404,391.

1. A regulating device for liquid-mixing valves, comprising a casing having passages for two liquids, means for automatically restricting either passage without affecting the other passage, and means whereby the fluid pres-

sures in said passages are exerted oppositely on the said restricted means for the passages.



2. A regulating device for liquid mixing valves, comprising a casing having two liquid passages, and common controlling means for said passages movable in opposite directions and adapted to automatically restrict either passage under the actuating influence of an excess of pressure in either passage, the restriction of one passage being accomplished without affecting the other passage, and the arrangement being such that the fluid pressures in said passages act oppositely upon said controlling means.

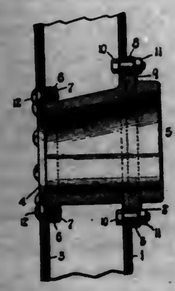
3. A regulating device for liquid-mixing valves, comprising a casing having two liquid-passages, each passage having an inlet branch and an outlet branch, and a plunger-rod intersecting the inlet and outlet branches and adapted to control the flow of liquid through each passage, the restriction of the flow through one passage being accomplished without affecting the flow through the other passage, and means whereby the fluid pressures in said passages act oppositely on said plunger-rod and form the actuating means therefor.

4. A regulating device for liquid-mixing valves, comprising a casing having two liquid passages, each passage having an inlet branch and an outlet branch, and a plunger-rod chamber with which the inlet and outlet branches connect, a plunger-rod mounted to move in said chamber and adapted to restrict the openings of the inlet and outlet branches into the plunger-rod chamber, and means whereby the fluid pressures in said passages operate oppositely on said plunger-rod and form the actuating means therefor.

5. The combination with a mixing valve of a regulating valve, comprising a cylinder, a piston movable therein, a distributing slide connected with the said piston and provided with slots, the cylinder being provided with separate inlet- and discharge-ports for the liquids to be mixed, the passages from the inlet to the outlet ports being controlled by the slide and the slots therein, and channels connecting the said passages with the ends of the cylinder.

[Claims 6 to 11 not printed in the Gazette.]

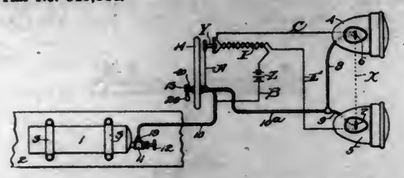
962,112. TWYER-RECEIVER FOR SMELTING-FURNACES. JOHN O. BARDILL, Herculaneum, Mo. Filed Mar. 23, 1910. Serial No. 551,102.



1. The combination with the shell and lining of a furnace, of a twyer receiver comprising a hollow body having an external annular flange at or near each of its ends, one of said flanges being seated against the outer face of said lining and the other flange being seated against the outer face of said shell, and means for securing said flanges to said lining and shell.

2. The combination with the shell and lining of a furnace, each provided with an opening, the opening in the shell being larger than that in the lining, of a twyer receiver comprising a hollow body having an external annular flange at or near each of its ends, one of said flanges being smaller than the other and being seated against the outer face of said lining and the other flange being seated against the outer face of said shell, and means for securing said flanges to said lining and shell.

962,113. AUTOMATIC GAS IGNITION AND CONTROL. LOUIS G. BARTLETT, Somerville, Mass., assignor to Auto-Lighter & Equipment Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 24, 1909. Serial No. 519,344.



1. In an ignition attachment for gas burners, a divided clamp adapted to be secured to the burner, a grounded electrode positionally gripped by said clamp, an insulated electrode positionally gripped by said clamp in relation to said burner and said grounded electrode, and means for preventing the turning or displacement of said electrodes.

2. In an ignition attachment for gas burners, a divided clamp adapted to be clamped to the burner, a grounded electrode adapted to be gripped to said burner by said clamp, an insulated electrode adapted to be positionally gripped by said clamp in relation to said burner and said grounded electrode, and means for securing said clamp together.

3. In an ignition attachment for gas burners, a divided clamp adapted to be clamped to the burner, a grounded electrode adapted to be gripped to said burner by said clamp, an insulated electrode adapted to be positionally gripped by said clamp in relation to said burner and said grounded electrode, means for securing said clamp together, and means for preventing the turning or displacement of said electrodes.

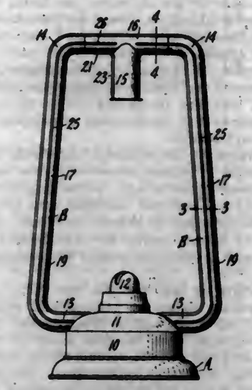
4. In an ignition attachment for gas burners, a divided clamp adapted to be secured to the burner and provided with an angular recess located in said clamp, a grounded electrode adapted to be positionally gripped within said recess to said burner by said clamp, an insulating support having a peripheral recess on the exterior thereof for positioning the same within said clamp, an electrode secured within said insulating support, and projecting means for preventing the turning of said electrode within said support.

5. In an ignition attachment for gas burners, a separable clamp comprised of two opposite members each of said members having a semi-circular recess at each end thereof, one end of said members adapted to clamp the gas burner and the other end of said members adapted to clamp an insulating support, a grounded electrode adapted to be positionally gripped by said members, an electrode mounted within said insulating support, and projecting means for holding said insulated electrode in positional relation to said grounded electrode and said burner.

[Claims 6 to 20 not printed in the Gazette.]

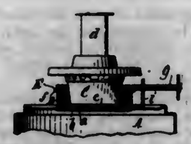
962,114. TUBULAR LANTERN. CHARLES BERGENER, Rochester, N. Y., assignor to C. T. Ham Manufacturing Company, Rochester, N. Y. Filed Mar. 30, 1909. Serial No. 486,807.

1. A tubular lantern having tubes which are each composed of two substantially half-round half-tubes, stamped of sheet metal and secured together by seams on the inner and outer sides of the tubes, and each half-tube being formed between said seams with a hollow longitudinal rib thrown out on the half-round surface of the half-tube, substantially as set forth.



2. In a tubular lantern frame, the combination of side tubes, each composed of two substantially half-round stamped half-tubes of sheet metal secured together by seams on the inner and outer sides of the tube, each half-tube being provided between the seams with a hollow longitudinal rib thrown out on the half-round surface of the half-tube, and a T-piece interposed between the upper ends of the tubes, said piece comprising a horizontal and a vertical tube and being composed of two halves stamped of sheet metal and secured together by seams on opposite sides, each half having its horizontal portion formed with a hollow longitudinal rib thrown out on each side in line with the upper end of the corresponding rib on the side tube, substantially as set forth.

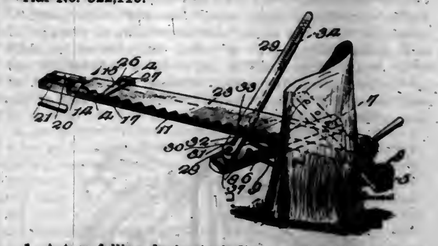
962,115. BURNER-FASTENING FOR LAMPS AND LANTERNS. CHARLES L. BETTS, New York, N. Y., assignor to R. E. Dietz Company, New York, N. Y. Filed Sept. 6, 1907. Serial No. 391,614.



1. The combination of an oil pot provided with a fixed internally-threaded burner socket having at its bottom a seat for the burner, a burner adapted to rest upon said seat and provided with an external bottom flange, and an externally-threaded attaching collar which is screwed into said socket and provided at the bottom with an internal flange which bears upon the flange of the burner, substantially as set forth.

2. The combination of an oil pot provided with a fixed internally-threaded burner socket having at its bottom a seat for the burner, a burner adapted to rest upon said seat and provided with an external bottom flange, an externally-threaded attaching collar which is screwed into said socket and provided at its bottom with an internal flange which bears upon the flange of the burner, and a wick raiser shaft which extends over said attaching collar and limits the upward movement thereof on the burner, substantially as set forth.

962,116. TREE-FELLING DEVICE. SAMUEL JULIN BLACK, Meadowdale, Wash. Filed Oct. 11, 1909. Serial No. 522,119.



1. A tree felling device including an attaching member, a saw support pivotally connected with the attaching member, a brace extending beneath the saw support, a saw mounted for reciprocation on the support, and a connection between the brace and saw support for yieldably supporting the teeth of the saw against the side of a tree.

2. A tree felling device including an attaching member, a saw support pivotally connected with the attaching member, a saw mounted for reciprocation on the support, a brace carried by the attaching member and extending beneath the saw support, and means forming a connection between the brace and saw support for feeding the saw transversely through a tree.

3. A tree felling device including pivotally connected attaching arms, a saw support pivotally connected with one of the arms, a brace pivotally connected with the other arm and extending beneath the saw support, a saw mounted for reciprocation on the support, and a flexible connection between the brace and saw support for yieldably supporting the teeth of the saw in contact with a tree.

4. A tree felling device including pivotally connected attaching arms, a saw support pivotally connected with one of the arms, a brace extending beneath the saw support, a saw carrier mounted for reciprocation on the saw support, and means forming a connection between the saw support and carrier for automatically returning the saw to normal position after each working stroke.

5. A tree felling device including an attaching member, a saw support pivotally connected with the attaching member, a brace extending laterally from the attaching member and disposed beneath the saw support, a saw carrier mounted for reciprocation on the saw support, a flexible connection between the brace and saw support for yieldably supporting the teeth of the saw against the side of a tree, and a spring operatively connected with the saw support and carrier for returning the saw to normal position after each working stroke.

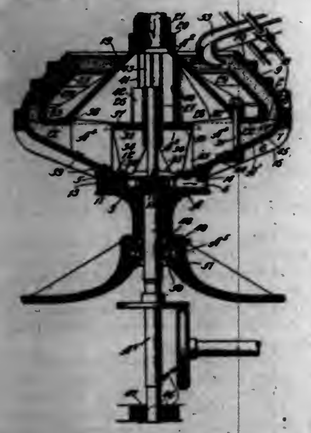
[Claims 6 to 10 not printed in the Gazette.]

962,117. SEPARATOR. WILLIAM H. BRADLEY, Chicago, Ill. Filed Sept. 14, 1908. Serial No. 452,964.

1. A centrifugal machine for the purpose set forth, comprising a rotary casing equipped with an inlet conduit for the fluid to be separated and equipped with a water outlet, a peripheral conduit adapted to be sealed by the issuing solid, a compacting zone inside said peripheral conduit and communicating therewith, and a separating zone inside said compacting zone having closely-related division walls crossing it and adapted to prevent the solid material from being washed from said compacting zone.

2. A centrifugal machine for the purpose set forth, comprising a rotary casing equipped with an inlet conduit for the fluid to be separated and equipped with an outlet water conduit, a peripheral conduit of bent or curved contour adapted to cause the issuing solid to maintain a seal therein, and closely related division walls encircled by said peripheral outlet and protecting the same from washing action of the liquid.

3. A centrifugal machine for the purpose set forth, comprising a rotary casing having an outwardly and upwardly converging lower wall and a downwardly and outwardly converging upper wall, inlet and outlet conduits connected with the upper and lower central portions of said casing and adapted to permit entrance of the fluid to be separated and exit of the water of suspension, and an annular peripheral outlet between the perimeters of said converging walls adapted to maintain a seal of the issuing solid therein.

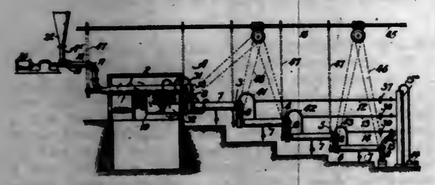


4. A centrifugal machine for the purpose set forth, comprising a rotary casing having therein an annular separating zone, and an outlet conduit leading from said separating zone and having an upturned orifice and inner inlet and outlet conduits connected with said casing and adapted to permit entrance of the fluid to be separated and exit of the water of suspension.

5. A centrifugal machine for the purpose set forth, comprising a rotary casing having converging upper and lower walls and a peripheral channel between the perimeters thereof, a central inlet conduit connected with the upper wall, an outlet conduit connected with the lower wall, and a spreader interposed between the inlet and outlet conduits.

[Claims 6 to 22 not printed in the Gazette.]

962,118. DRYING APPARATUS. WILLIAM H. BRADLEY, Chicago, Ill. Filed Sept. 14, 1908. Serial No. 452,965.



1. In apparatus for the purpose set forth, the combination of a series of boilers, means for maintaining different pressures in said boilers, and means for transferring solid material from one boiler to another.

2. In apparatus of the character set forth, the combination of a furnace, a boiler contained therein, a series of boilers adapted to receive the material in succession after it passes from the first boiler, means for transferring solid material from one boiler to the next boiler throughout the series, said means adapted to prevent the flow of pressure from boiler to boiler, means for heating each boiler succeeding the first boiler, said means receiving, as a heating fluid, the steam generated in the preceding boiler, and means for maintaining different pressures in the several boilers.

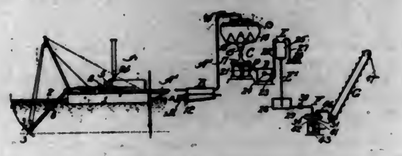
3. In apparatus of the character set forth, the combination of a series of boilers, means for mechanically moving material through said boilers and transferring the same, out of atmospheric contact, from boiler to boiler, means for feeding a wet solid under pressure into the first boiler, means for employing the steam generated in one boiler to heat the succeeding boiler throughout the series, and means for maintaining successively reduced pressures in said boilers.

4. In apparatus of the character set forth, the combination of a series of boilers, screw-conveyers operating to feed the material therethrough, connecting devices joining the boilers in series and equipped with rotary transferring devices adapted to prevent the flow of pressure from boiler to boiler, means for maintaining different pressures in said boilers, and means for heating the several boilers.

5. In apparatus of the character set forth, the combination of a boiler, means for heating said boiler, a succeeding boiler equipped with a steam-jacket, means for transferring material from the first boiler to the second boiler, a steam-jacket for the second boiler, and a superheater receiving its steam supply from the first boiler and discharging it into the jacket of the second boiler.

[Claims 6 to 21 not printed in the Gazette.]

962,119. PEAT-PREPARING PROCESS. WILLIAM H. BRADLEY, Chicago, Ill. Filed Sept. 14, 1908. Serial No. 452,966.



1. In the preparation of peat, the process of treatment, which consists in macerating the peat to a state of finely divided particles suspended in water and then separating the peat from the water of suspension by centrifugal action.

2. In the preparation of peat, the process of treatment, which consists in macerating the peat, subjecting the fluid to vacuum treatment to remove air and occluded gases, and then, by centrifugal action, separating the peat from the water of suspension.

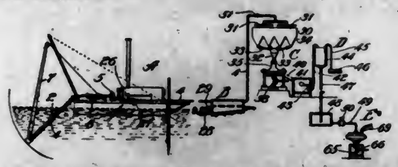
3. In the preparation of peat, the process of treatment, which consists in macerating the peat, to a state of finely-divided particles suspended in water then separating the peat from the water of suspension by centrifugal action, and finally subjecting the wet peat mass thus obtained to heat action while out of atmospheric contact to remove the water of absorption.

4. In the preparation of peat, the process of treatment, which consists in first macerating the peat, to a state of finely-divided particles suspended in water then subjecting the resulting fluid to centrifugal action to remove the water of suspension, and finally mechanically moving the separated peat across a source of heat while out of atmospheric contact to remove the water of absorption.

5. In the preparation of peat, the process of treatment, which consists in breaking up the peat and mixing it with water, conveying the fluid thus obtained hydraulically and subjecting to action to complete the maceration to a state of suspension in water in finely-divided particles, separating by gravitation the impurities during the course of flow, and then subjecting the macerated peat to centrifugal action to remove the water of suspension.

[Claims 6 to 18 not printed in the Gazette.]

962,120. PEAT-PREPARING APPARATUS. WILLIAM H. BRADLEY, Chicago, Ill. Filed Oct. 3, 1908. Serial No. 456,045.



1. In apparatus for preparing peat, the combination of mechanism for excavating peat from the bed and mixing sufficient water therewith to suspend the peat therein, mechanism for comminuting the peat in water and accomplishing its complete maceration therein and producing uniformity of consistency and quality, and a centrifugal machine operative to separate the comminuted peat from the water and to expel the peat through a peripheral opening and the water of suspension through a more central outlet.

2. In apparatus for preparing peat, the combination of means for breaking up and mixing the peat with water, means for separating mineral substances therefrom, mechanism for continuing the maceration of the peat in water till a uniform state of suspension of particles is reached, and a centrifugal machine operative to separate the water of suspension from the peat and to expel the peat through one outlet and the water of suspension through another outlet.

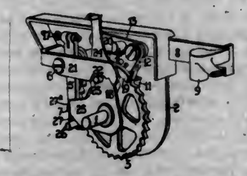
3. In apparatus for preparing peat, the combination of mechanism for breaking up and suspending in water the peat in fine particles, means for conveying the resulting fluid hydraulically, and a centrifugal separator receiving said fluid and serving to separate the peat from the water of suspension.

4. In apparatus for preparing peat, the combination with means for reducing the peat to a state of thorough maceration in water, of a centrifugal separator serving to separate the comminuted peat from the water of suspension and cause the peat to issue through a peripheral outlet and the water of suspension to issue through a more central outlet.

5. In apparatus for preparing peat, the combination of peat-excavating and water-mixing mechanism, means for separating foreign solids, vacuum apparatus serving to remove air and occluded gases, and mechanism for separating the peat from water of suspension.

[Claims 6 to 18 not printed in the Gazette.]

962,121. TYPE-WRITING MACHINE. LYMAN DAVID BROUGHTON, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 19, 1909. Serial No. 513,549.



1. In a typewriting machine, the combination with a platen and a line-spacing wheel for actuating the platen, of a line-spacing mechanism including a pawl to drive the wheel, a regulating lever having a trip to engage a part on said pawl to control the duration of engagement of the pawl and spacing wheel, a pivotally supported detent for the spacing wheel, a pivotally supported notched member, a spring for yieldingly retaining both the detent and notched member in operative positions, and a part on the regulating lever engaged by the notched member to retain the lever in adjusted position.

2. In a typewriting machine, the combination with a platen and a line-space wheel connected thereto, of a line-spacing mechanism including a lever-operated slide, a link connected thereto, an arm connected to said link and pivoted upon the platen axle, a driving pawl pivoted upon said arm, a stud upon said link, and a detent lever for said spacing wheel, said lever lying in the path of said stud to be engaged thereby at the completion of the line-spacing operation to force the detent more firmly against the spacing wheel to prevent overthrow of the platen.

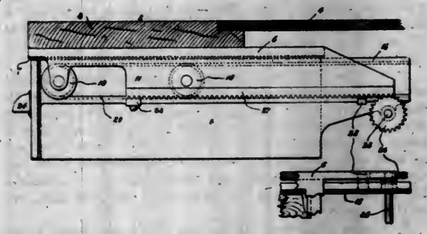
3. In a typewriting machine, the combination with a platen and a line-space wheel connected thereto, of a line-spacing mechanism including a lever-operated slide, a link connected thereto, an arm connected to said link and pivoted upon the platen axle, a driving pawl pivoted upon said arm, a stud upon said link, and a detent lever for said spacing wheel, said lever lying in the path of said stud to be engaged thereby at the completion of the line-spacing operation to force the detent more firmly against the spacing wheel to prevent overthrow of the platen, means being provided for effecting fine adjustments between said lever and said stud, to determine the point of arrest of the line-spacing devices.

4. In a typewriting machine, the combination with a platen and a line-spacing wheel for actuating the platen, of a line-spacing mechanism including a lever operated slide, a swinging arm, a driving pawl actuated thereby for engagement with the wheel, a connection between the slide and arm, an abutment carried by the connection for engagement with a stop, means being provided for effecting fine adjustments to determine the point of arrest of the line-spacing mechanism.

5. In a typewriting machine, the combination with a platen and a line-space wheel for actuating the platen, of a spacing wheel actuating mechanism including a swinging member, a driving pawl actuated thereby for engagement with the wheel, means for operating the swinging member, an abutment carried by said means, and a detent normally engaging the line-space wheel, the detent lying in the path of movement of the operating means to be engaged thereby at the completion of the line-spacing stroke, means being provided for effecting fine adjustments between the detent and the abutment to determine the point of arrest of the line-spacing mechanism.

[Claims 6 to 13 not printed in the Gazette.]

962,122. STOCK-DRAWER. ROBERT S. BROWN, New Britain, Conn., assignor to The New Britain Machine Company, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 24, 1909. Serial No. 485,552.



1. A drawer provided with bearings on its opposite sides combined with anti-friction rollers supported independently of the drawer at opposite sides thereof and adapted to turn respectively on said side bearings on the back and forth motion of said drawer one set of rollers and the bearing at one side of the drawer being positively cooperative to prevent lateral motion of the drawer and the other set of rollers and bearing being adapted to permit free expansion and contraction of the drawer.

2. The combination of a drawer, and means for supporting and guiding said drawer for backward and forward movement said means comprising bearings and rollers at

opposite sides of the drawer, one set of rollers and the bearing therefor at one side of the drawer being positively coöperative to prevent lateral motion of the drawer and the other set of rollers and bearing being adapted to permit free expansion and contraction of said drawer.

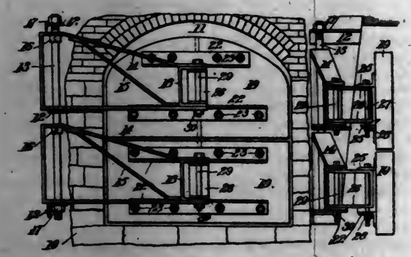
3. A drawer having side bearings combined with anti-friction rollers at opposite sides of the drawer and supported independently thereof the rollers bearing against said side bearings at longitudinally separated points and those on one side being plain and those on the other side being flanged and the flanges of the said flanged rollers being coöperative with the bearing on which said flanged rollers run to prevent lateral motion bodily of said drawer.

4. The combination of a sliding drawer, stationary racks supported independently of the drawer, and two rotatively connected pinions situated between the planes of the upper and lower surfaces of said drawer, below and in mesh with said racks, said drawer having means behind its compartment portion for supporting said pinions.

5. The combination of a sliding drawer, wings at opposite sides of the drawer and stationary with respect thereto, racks fastened to said wings, rotatively connected pinions in mesh at all times with the respective racks, and anti-friction rollers supported by said wings, the drawer having tracks to receive said rollers.

[Claims 6 to 8 not printed in the Gazette.]

962,123. COKE-OVEN DOOR. FREDERICK D. BUFFUM, HOWARD N. EAVENSON, and EDWARD O'TOOLE, Gary, W. Va., assignors to United States Coal & Coke Company, Pittsburg, Pa., and Gary, W. Va. Filed Jan. 20, 1909. Serial No. 473,311.



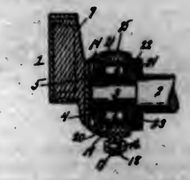
1. A coke oven door having a substantially straight swinging arm, said arm comprising a substantially U-shaped metal strip having its ends pivotally connected with the outside of the door and having a brace, and a hinge rod passing through the upper and lower members of said strip and having means for supporting it at one side of the oven opening.

2. A coke oven door having a substantially straight swinging arm, said arm comprising a substantially U-shaped metal strip having its ends pivotally connected with the outside of the door and having a brace, and a hinge rod passing through the upper and lower members of said strip and having means for supporting it at one side of the oven opening, said supporting means comprising angle irons set into the masonry of the oven and projecting therefrom.

3. A coke oven door comprising upper and lower members, a substantially straight swinging arm pivotally connected with the outside of each member, a hinge rod or pintle for both of said arms, and means for vertically adjusting the rod or pintle and with it both arms and their door members.

4. A coke oven door comprising upper and lower members, a substantially straight swinging arm pivotally connected with the outside of each member, a hinge rod or pintle for both of said arms, means for vertically adjusting the rod or pintle and with it both arms and their door, and means whereby each door member may be independently adjusted on its arm.

962,124. ADJUSTABLE JOURNAL-BEARING. BYRON J. CARTER, Detroit, Mich., assignor to Motor Car Co., Detroit, Mich., a Corporation of Michigan. Filed Sept. 4, 1906. Serial No. 333,235.

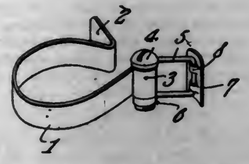


1. The combination with the fixed parallel supports, of globular bearing cases mounted on said supports, means for adjusting said bearing cases laterally, a shaft having journals on its opposite ends, said journals lying in said cases, spherical bearing members rotatable within the cases and embracing said journals, bearing rollers interposed between the journals and bearing members, the bearing cases having movable inner sections to permit of the introduction of the spherical bearing members.

2. The combination with the side bars of a frame, of brackets secured thereto, slidable bearing blocks adjustably mounted on said brackets, said bearing blocks having globular bearing shells, a spherical bearing member in each of said bearing shells, a transverse shaft having journals at each end thereof, said journals lying in said bearing members respectively, and bearing rollers interposed between said bearing members and said journals.

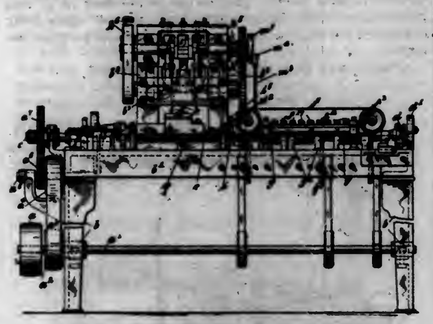
3. The combination of a globular bearing case formed of separable parts, a spherical bearing member rotatable in said case having an aperture therein, a journal within the bearing member, bearing rollers interposed between the bearing member and journal and a dust cap fitted into the bearing member and embracing the shaft of the journal.

962,125. FASTENER FOR HORSE-COLLAR PADS. JOSEPH E. CHANTLER, La Junta, Colo. Filed June 28, 1909. Serial No. 504,841.



A device of the class described comprising an arcuate body fashioned from resilient material and arranged to inclose closely the hame roll of a collar, the body being bent at one end to form a laterally extending foot insertible between a collar and a hame, the other end of the body being bent upon itself to form a bearing; a staple having terminally apertured arms arranged to inclose the bearing closely, one of said arms terminating in an enlargement thicker than the remaining portion of said arm, in which enlargement the aperture of said arm is located, said aperture being threaded; a retaining element arranged to be inserted through the apertures in the arms of the staple and through the bearing, the retaining element being threaded at one end to engage the opening in the enlargement of the first named arm, said retaining element having at the other end, a head adapted to receive means for rotating the retaining element, said head being arranged to bear against the other arm of the staple; and a plate having its longitudinal edges arranged to bear against a collar-pad, the intermediate portion of the plate being convexed to stand away from the collar-pad, and being provided in said intermediate portion, with means whereby the plate may be connected with the intermediate portion of the staple for free pivotal movement.

962,126. MACHINE FOR MAKING SAFETY-PINS. HERBERT B. CHURCH, Bloomfield, N. J., assignor to Consolidated Safety Pin Company, Bloomfield, N. J., a Corporation of New Jersey. Filed May 16, 1908. Serial No. 433,181.



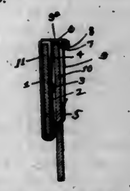
1. In a machine for making safety pins, a reciprocating blanking punch having a longitudinally extending passage; means for operating said blanking punch; a forming punch located within said passage and capable of reciprocating movement therein and relatively to said blanking punch; means for operating said forming punch; dies with which said punches coöperate to cut out and bend sheet metal heads for the pins; a rotary carrier located beneath said dies and adapted to receive heads formed by said blanking and forming punches and comprising a body portion and a plurality of head receiving fingers carried by and movable in a radial direction with reference to said body portion; means for rotating said carrier in a series of step by step movements; means for locking said carrier against movement during the intervals between said step by step movements; means for conveying pin wires past said rotary carrier and for causing them to pause as they arrive at a position opposite said carrier; means engaging said receiving fingers in succession as they come into a position adjacent the pin wires for moving each successive finger radially with reference to said carrier to thereby carry the head which it holds to and place it upon the pin wire; a reciprocating punch adapted to engage the head and to close it about and upon the pin wire; and means for operating said several elements in proper sequence.

2. In a machine for making safety pins, a reciprocating blanking punch having a longitudinally extending passage; means for operating said blanking punch; a forming punch located within said passage and capable of reciprocating movement therein and relatively to said blanking punch; means for operating said forming punch; dies with which said punches coöperate to cut out and bend sheet metal heads for the pins; a rotary carrier located beneath said dies and adapted to receive heads formed by said blanking and forming punches and comprising a body portion and a plurality of head receiving fingers carried by and movable in a radial direction with reference to said body portion; means for rotating said carrier in a series of step by step movements; a toothed wheel carried by and rotatable with said carrier; a latch adapted to engage said toothed wheel during the intervals between said step by step movements; means for operating said latch to release said toothed wheel when said carrier is to be moved; means for conveying pin wires past said rotary carrier and for causing them to pause as they arrive at a position opposite said carrier; means engaging said receiving fingers in succession as they come into a position adjacent the pin wires for moving each successive finger radially with reference to said carrier to thereby carry the head which it holds to and place it upon the pin wire; a reciprocating punch adapted to engage the head and to close it about and upon the pin wire; and means for operating said several elements in proper sequence.

3. In a machine for making safety pins &c., the combination of a press frame, two shafts mounted in the upper part thereof, blanking and forming punches operatively connected to one of said shafts, a closing down punch and a presser operatively connected to the other of said shafts and standing in front of the blanking and forming punches, and guide supports for the closing down punch and presser secured to the press frame, whereby, upon disconnecting said guide supports from the press frame the closing down punch and presser may be turned up about their operating shaft to permit access to the blanking and forming punches.

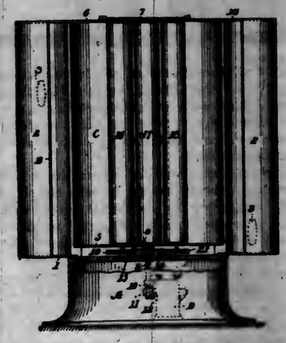
4. In a machine for making safety pins &c., the combination of conveying means for the pin wires, means for presenting the sheet metal heads to the pin wires, means for closing down the heads upon the pin wires, and a shutter and means to move the same into the line of each pin wire to prevent longitudinal movement thereof during the application of the head thereto.

962,127. BELT-KEEPER FOR TROUSERS-BANDS. OMAR E. CLARK, Columbus, Ohio. Filed July 19, 1909. Serial No. 508,403.



In a belt keeper, the combination with a strip of metal bent to an elongated loop form, the lower rear portion being provided with a rearwardly and upwardly extending hook, and the upper portion being provided with a rearward extension, of a retaining member having a swinging connection with said rearward extension and having terminal spurs, the outer end of said retaining member being adapted to be sprung beneath said lower hook member, after said lower hook member has been passed through the cloth of a garment.

962,128. PRINT-MACHINE. FREMONT J. CLEAVER, Sr., Baldwin township, Allegheny county, Pa., assignor of one-third to J. B. Collins and one-third to Samuel L. H. Morris, Allegheny county, Pa. Filed Jan. 29, 1909. Serial No. 474,899.



1. In a print machine of the character described, a stationary outer casing, a rotary print support adapted to expose its outer surface within said casing, means for feeding the original and the sensitized fabric across the surface of said print support within said casing, and means mounted within said casing for illuminating the

original and sensitized fabric as the same are fed across said print support within said casing, for the purposes described.

2. In a print machine of the character described, a stationary outer casing, a cylindrical print support adapted to expose its outer surface within said casing, means for feeding the original and the sensitized fabric across the surface of said print support within said casing, means mounted within said casing for illuminating the original and sensitized fabric as the same are fed across said print support within said casing, and means for rotating said print support, for the purposes described.

3. In a print machine of the character described, a stationary outer casing, a cylindrical print support adapted to expose its outer surface within said casing, means for rotating said print support, means for feeding the original and the sensitized fabric across the surface of said support within said casing from the interior of said support into the interior of said support again, and means for illuminating the interior of said casing, for the purposes described.

4. In a print machine of the character described, a stationary outer casing, a cylindrical print support adapted to expose its outer surface within said casing, means for rotating said print support, means for feeding the original and the sensitized fabric across the surface of said support within said casing from the interior of said support into the interior of said support again, and means mounted in said casing for illuminating the interior thereof, for the purposes described.

5. In a print machine of the character described, a stationary outer casing, a cylindrical print support adapted to expose its outer surface within said casing, means for rotating said print support, means for feeding the original and the sensitized fabric across the surface of said print support within said casing from the interior of said support to the interior of said support again, and means for exposing the interior of said casing to illumination by natural light, for the purposes described.

[Claims 6 and 7 not printed in the Gazette.]

962,129. ELECTROMAGNETIC DEVICE. WALTER A. CROWDUS, Chicago, Ill. Filed Feb. 1, 1909. Serial No. 475,523. Renewed Dec. 11, 1909. Serial No. 532,680.



1. A device of the character set forth, comprising an electric circuit, a circuit-breaker in said circuit, a movable magnet coöperating with said circuit-breaker, and a magnetic body supported to move through the magnetic field of the movable magnet and thereby actuate said magnet, for the purpose set forth.

2. A device of the character set forth, comprising an electric circuit, a circuit-breaker in said circuit, a magnet oscillatorily supported to coöperate with said circuit-breaker, and a magnetic body supported to move through the magnetic field of the movable magnet and thereby actuate said magnet, for the purpose set forth.

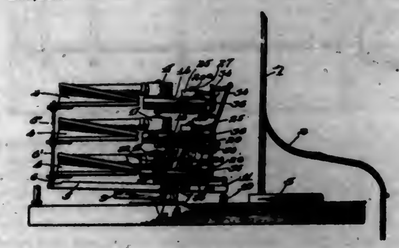
3. A device of the character set forth, comprising a case, an electric circuit in said case, a circuit-breaker in said circuit, a movable magnet coöperating with said circuit-breaker, a support on said case for a movable body, and a magnetic body movable on said support through the magnetic field of the movable magnet to actuate said magnet, for the purpose set forth.

4. A device of the character set forth, comprising an electric circuit, means in said circuit for transmitting power therefrom, a circuit-breaker in said circuit, a movable magnet coöperating with said circuit-breaker, and a magnetic body supported to move through the magnetic field of the movable magnet and thereby actuate said magnet, for the purpose set forth.

5. A device of the character set forth, comprising a propellable magnetic body, an electric circuit, an electromagnet in said circuit adapted to propel said body, and magnet-controlled circuit-controlling means operatively influenced by said body in moving, for the purpose set forth.

[Claims 6 to 14 not printed in the Gazette.]

962,130. AUTOMATIC MUSICAL INSTRUMENT. CHARLES L. DAVIS, Detroit, Mich., assignor, by mesne assignments, to A. Miller Belfield and John P. Mentzer, trustees, Chicago, Ill. Filed Nov. 27, 1905. Serial No. 289,148.



1. The combination with a piano key, of a pneumatic collapsing upwardly, and a lever interposed between the pneumatic and key and arranged to strike the latter downwardly.

2. The combination with a piano key, of a pneumatic arranged above the key and having its hinged end in front, and a lever located between the pneumatic and key and arranged to strike the latter.

3. The combination with a piano key, of a pneumatic arranged above the key and collapsing upwardly, and a lever located between the pneumatic and key and pivoted between its ends and having its forward end located above the piano key and arranged to strike the same downwardly at a point forward of its point of pivotal support.

4. The combination with a piano key, of a lever positioned directly above said key and lengthwise thereof, said lever being pivotally supported between its ends and having one end thereof arranged to directly strike the key at a point forward of its point of pivotal support, and a motor operatively connected to the other end of said lever.

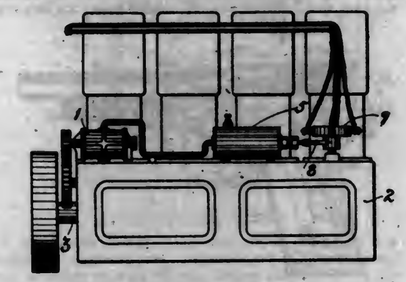
5. The combination with a piano key, of a lever pivotally supported intermediate its ends and arranged directly above the key and lengthwise of the same, one end of said lever being arranged to directly strike the key at a point forward of its point of pivotal support, an upwardly collapsing pneumatic positioned above said lever and a connection between said pneumatic and the other end of said lever.

[Claims 6 and 7 not printed in the Gazette.]

962,131. INTERNAL-COMBUSTION ENGINE. FREDERICK E. DAYES, Brooklyn, N. Y. Filed May 28, 1909. Serial No. 498,983.

1. An automatic adjusting means for timers of internal combustion engines, comprising a fluid pressure driven member having positive connections through which it is adapted to effect the adjustment, a fluid pressure developing member actuated by and proportionally to the speed of the engine to be timed, supplying pressure medium to said driven member, and means for wholly relieving the pressure supplied to said driven member, during the initial speed and progressively enlarging such pressure relief as the adjustment develops.

2. In combination with the timer of an internal combustion engine, an adjusting means for determining the adjustment thereof, comprising a fluid pressure driven member having direct connections through which it is adapted to effect the adjustment, a fluid pressure developing member supplying pressure medium to said driven member, and means for relieving the pressure supplied to said driven member, initially relieving the pressure sufficient to prevent adjustment and thereafter progressively enlarged by said driven member, as adjustment develops, and gradually reducing the amplitude of adjustment.



3. An adjusting means for timing an internal combustion engine, comprising a fluid pressure driven member adapted to effect the adjustment, a fluid pressure developing member supplying pressure medium to said driven member, an initial pressure-medium relief preventing actuation of the fluid pressure driven member until after a predetermined engine speed is developed, and an additional means for relieving the pressure supplied to said driven member, progressively enlarging as the adjustment develops.

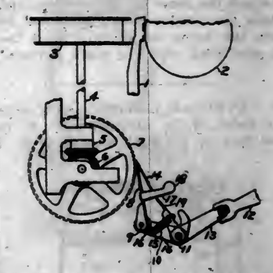
4. A device for adjusting the timer of an internal combustion engine, comprising a pressure chamber for fluid pressure, a piston adapted to be moved by fluid pressure in said chamber and a fluid pressure developing means adapted to be actuated by the engine to be controlled, supplying the fluid medium under pressure to said chamber; said chamber being provided with a constantly open but restricted initial escape opening for the pressure medium, means resisting movement of the piston under pressures that are within the relieving capacity of said initial escape opening, but yielding under pressures in excess thereof and progressively enlarging escape passage for the pressure fluid, gradually uncovered by the movement of the piston.

962,132. SHADE AND CURTAIN HANGER. HENRY J. DEMPSEY, Knoxville, Tenn. Filed Sept. 2, 1909. Serial No. 515,796.



In a shade and curtain hanger, a bracket comprising an elongated base offset transversely intermediate of its ends to form substantially parallel plates and an intermediate connecting portion, a shade-supporting arm extended from the connecting portion in substantially the plane thereof and adapted to receive the gudgeon of a shade roller, a curtain-supporting arm extended angularly from one of the plates and slidably connected thereto, and means for holding the curtain-supporting arm in different adjusted positions relative to the last named plate.

962,133. RATCHET MECHANISM FOR RIBBONS OF TYPE-WRITING MACHINES. JOHN C. DOANE, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 12, 1908. Serial No. 420,709.



1. The combination with a ratchet wheel, of a pawl reciprocating to drive said wheel, a holding pawl for said wheel, the driving pawl being movable away from the wheel, and the holding pawl being movable by such movement of the driving pawl, and a latch upon the driving pawl to engage a catch upon the holding pawl to hold both pawls away from the wheel.

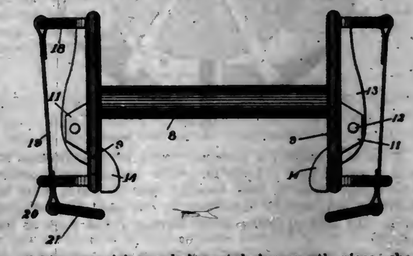
2. The combination with a ratchet wheel, of a pawl reciprocating to drive said wheel, a holding pawl for said wheel, the driving pawl being movable away from the wheel, and the holding pawl being movable by such movement of the driving pawl, a latch upon the driving pawl to engage a catch upon the holding pawl to hold both pawls away from the wheel, and a spring connecting said pawls and tensioned to swing both of them against the ratchet wheel when said latch is released.

3. The combination with a ratchet wheel, of driving and holding pawls for said wheel, both movable away from the wheel, and one mounted to impart such movement to the other, so that both move away together from the wheel, and a latch on one of said pawls to engage the other thereof to hold both pawls away from the wheel.

4. The combination with a ratchet wheel, of driving and holding pawls for said wheel, both movable away from the wheel, and one mounted to impart such movement to the other, and a latch on one of said pawls to engage the other thereof to hold both pawls away from the wheel; said latch in the form of a yielding arm to engage a catch provided upon the other pawl.

5. The combination with a ratchet-wheel, of spring-pressed driving and holding pawls for said wheel, and a spring latch having a finger-piece and extending from one of said pawls to enable the operator to move such pawl away from the wheel, and thereby throw the second pawl also away from the wheel, a catch being provided upon the second pawl over which said spring latch may be sprung to lock both pawls away from the ratchet wheel.

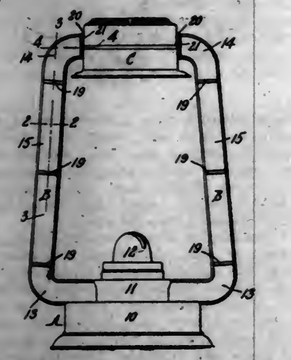
962,134. BIT. WASHINGTON J. ENGLE, Bloomingdale, Ind. Filed May 1, 1909. Serial No. 493,315.



A bit comprising a hollow tubular mouth piece, cheek sections rigidly fixed to opposite ends of said mouth piece,

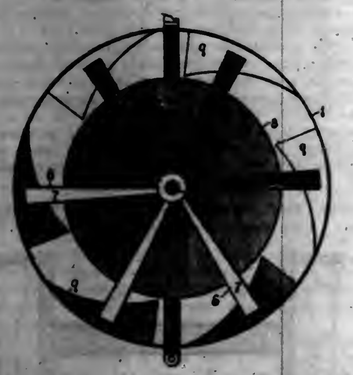
gripping levers pivoted at the outer sides of the cheek sections and being normally substantially parallel with the latter, guide loops rigid with said cheek sections, flexible pull members connected to the levers and working through the loops to move the free ends of said levers inwardly beyond the plane of the sections, and a spring located within the tubular mouth piece and having connection with the levers to normally hold the same in substantial parallelism with the cheek sections.

962,135. TUBULAR LANTERN. CHARLES F. ERB, Rockaway Point, N. Y., assignor to R. E. Dietz Company, New York, N. Y. Filed Mar. 24, 1909. Serial No. 485,380.



A tubular lantern having tubes composed of stamped half-tubes of sheet metal which extend in a continuous piece from end to end and are provided between their ends at intervals with hollow transverse stiffening beads, said half-tubes being joined on opposite sides by overlapped seams, substantially as set forth.

962,136. PROPELLER. ELLIOTT E. FURNEY, St. Louis, Mo., assignor of one-half to John F. O'Neil, St. Louis, Mo. Filed Oct. 18, 1909. Serial No. 523,273.

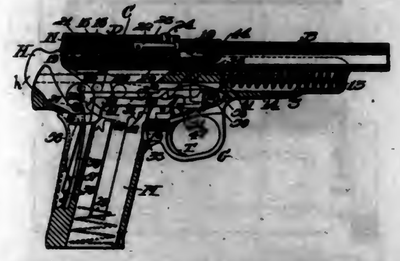


1. In a propeller, a housing, vanes at the interior of said housing, and a propeller wheel operable to produce centrifugal force in said housing and by which fluid is delivered tangentially therefrom to the rear sides of said vanes, the said propeller wheel having a disk back of its wings.

2. In a propeller, a housing, turbinate vanes within said housing, and a propeller operable to produce centrifugal force in said housing to deliver fluid tangentially therefrom to the rear sides of said turbinate vanes, the propeller wheel having a disk located back of its wings.

3. In a propeller, a housing, turbinate vanes within said housing, and a propeller in said housing to produce centrifugal force therein and having wings provided with front vanes, the wings being adapted to deliver fluid tangentially to the rear sides of said turbinate vanes, the said propeller wheel having a disk located back of its wings.

962,137. AUTOMATIC FIREARM. WILLIAM H. GATES, Norwich, Conn. Filed July 22, 1909. Serial No. 508,973.



1. In an automatic firearm, the combination of a frame having a housing, a barrel rigidly supported by said housing, a slide fitted to the frame and having a housing fitting the housing on the frame, and an operating spring contained in said housings, the housing on the slide engaging the frame to limit the rearward movement of the slide.

2. In an automatic firearm, the combination of a frame having a tubular housing, a barrel rigidly supported by said housing, a slide fitted to the frame and having a housing arranged under the barrel, the top of the slide being cut away so as not to cover the barrel, and an operating spring contained in said housings.

3. In an automatic firearm, the combination of a frame, a slide, a barrel, a bolt fitted into the end of the slide, and a nut swiveled to the bolt, the rear end of the slide being screw-threaded to receive the nut.

4. In an automatic firearm, the combination of a frame, a slide, a barrel, a bolt fitted into the end of the slide and carrying a firing-pin, and a nut detachably swiveled to the bolt, the rear end of the slide being screw-threaded to receive the nut.

5. In an automatic firearm, the combination of a frame having slots, a slide having ways to engage said slots, a barrel, a bolt, and a nut screwed into the end of the slide for holding the bolt in the slide, the nut having extensions of the ways on the slide.

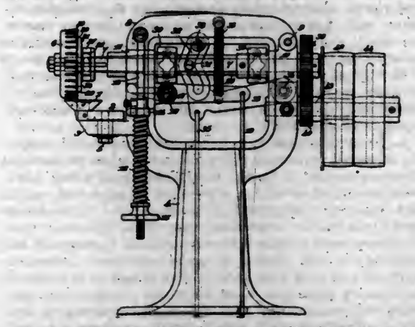
[Claims 6 to 21 not printed in the Gazette.]

962,138. MACHINE FOR OPERATING ON WELTS. JOHN B. HADAWAY, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 29, 1902. Serial No. 109,505.

1. A machine for operating on welts, having, in combination, means for supporting the welt, means for beating out the welt, means under the control of the operator for increasing the pressure of the beating out means during the continued operation of the machine, substantially as described.

2. A machine for operating on welts, having, in combination, means for supporting the welt, means for beating out the welt, means for slitting the welt, and means for throwing the welt slitting means into and out of operation during the continued operation of the welt beating means, having provision for increasing the pressure of the beating out means upon the welt when the welt slitting means are in operation, substantially as described.

3. A machine for operating on welts, having, in combination, feeding means, welt slitting means, means for throwing the welt slitting means into and out of operation during the continued operation of the feeding means, having provision for increasing the pressure of the feeding means upon the welt when the welt slitting means are in operation, substantially as described.

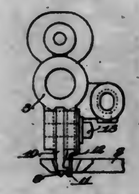


4. A machine for operating upon welts, having, in combination, a work support, a feeding wheel provided with slots, a series of welt slitting knives adapted to be projected into said slots and withdrawn therefrom and means for moving the welt slitting knives to project them into and withdraw them from the slots, substantially as described.

5. A machine for operating upon welts, having, in combination, a main shaft, a beating out and feeding wheel secured to the end of said shaft, a stationary work support located adjacent to the surface of the beating out and feeding wheel, and a plurality of welt slitting knives acting to slit the welt, substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

962,139. STITCH SEPARATING AND INDENTING TOOL. JOHN B. HADAWAY, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 3, 1907, Serial No. 391,013. Renewed Nov. 15, 1909. Serial No. 528,143.

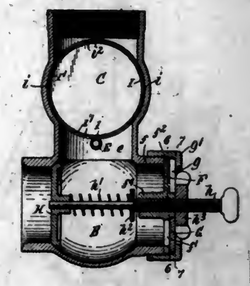


1. A stitch separating and indenting tool provided with indenting blades arranged to enter adjacent stitch intervals and movable with relation to each other to compensate for stitches of varying lengths, and also provided with overlapping surfaces forming an unbroken groove in all positions of said blades to shape the crown of a stitch.

2. A stitch separating and indenting tool consisting of a rigid stitch separating blade and a stitch separating blade movable laterally with relation thereto, said blades being provided with overlapping surfaces forming an unbroken groove in all positions of said movable blade to shape the crown of a stitch, and said movable blade being provided with a shoulder engaging the surface of the rigid blade.

3. A stitch separating and indenting tool provided with a laterally movable indenting blade having a shoulder and a thin shank above the shoulder and also provided with a surface engaging said shoulder and supporting the blade against the thrust of the work.

962,140. CARBURETER. CHARLES E. HALL and WILLIAM DICKS, Buffalo, N. Y., assignors to Charles E. Hall Company, Buffalo, N. Y. Filed Oct. 18, 1907. Serial No. 398,067.



1. In a carbureter, the combination of a casing having an air passage, a spray pipe arranged transversely in said passage and having a plurality of discharge orifices in one side thereof, a throttle valve comprising inner and outer shells arranged transversely in said passage to turn on an axis parallel with said spray pipe and having holes in the sides thereof adjacent to said nozzle, and means for turning said shells in opposite directions to increase and decrease the area of the opening provided by said holes, whereby the discharge orifices of said pipe are covered and uncovered successively and said opening is kept concentric with respect to said pipe, substantially as set forth.

2. In a carbureter, the combination of a casing having an air passage, a spray pipe extending transversely in said passage and having a plurality of discharge openings arranged on one side thereof, a throttle valve comprising inner and outer cylindrical shells arranged transversely in said passage to turn on an axis parallel with said spray pipe and having holes in the sides thereof adjacent to said nozzle, and means for turning said shells in opposite directions to increase and decrease the area of the passage provided by said holes, one of said shells bearing against the side of the pipe having the discharge orifices, whereby the discharge orifices in said pipe are opened and closed by said shell and said opening is kept concentric with respect to said pipe, substantially as set forth.

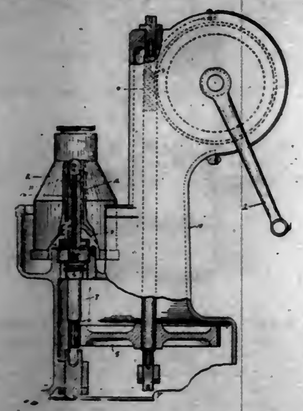
3. In a carbureter, the combination of a casing having an air chamber, a plate at one end of said chamber provided with air admission ports and with peripheral parts which interlock with said end of the chamber to hold said plate from turning, a rotatable valve bearing against said end plate and having ports to register with said ports in the end plate, a coupling ring screwed on said end of the chamber for holding said end plate and valve in place, and means for supplying liquid hydrocarbon into said casing, substantially as set forth.

4. In a carbureter, the combination of a casing having an air chamber provided with air admission openings at its opposite ends, an air valve controlling one end of said chamber, a valve controlling the other end of said chamber, an adjusting screw and guide for said latter valve bearing in the first mentioned end of said chamber, and means for supplying liquid hydro-carbon into said casing, substantially as set forth.

962,141. CREAM-SEPARATOR. FREDERICK W. HARTMANN and WILLIAM C. HARTMANN, Milwaukee, Wis., assignors, by direct and mesne assignments, to The Milwaukee Separator Company, a Corporation of Wisconsin. Filed Nov. 11, 1909. Serial No. 527,445.

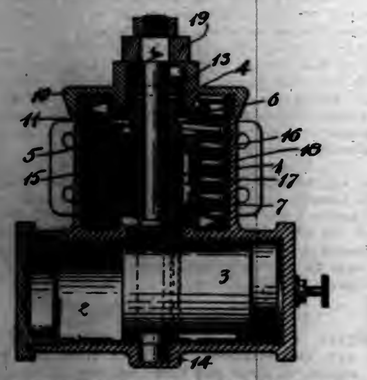
1. In a cream separator of the class described, the combination with the bowl supporting spindle, of a latch carried by said spindle, a stationary stop located near the periphery of said spindle, means adapted to be actuated by the weight of the separating bowl when supported from said spindle for normally retaining said latch out of en-

gagement with said stop, and means carried by said spindle for throwing said latch into engagement with said stop when relieved from the weight of said separating bowl.



2. In a cream separator of the class described, the combination of a bowl supporting spindle provided with a longitudinal central aperture and a horizontal side aperture, a trip rod slidably supported in said central aperture, a latch pivotally supported in said side aperture in connection with said trip rod, a stationary stop located in close proximity to the periphery of said spindle, means for yielding supporting said trip rod and the inner end of said latch in their raised position, whereby when relieved from the weight of said bowl, said latch will be brought into contact with said stop and the bowl supporting spindle thereby locked; and whereby when said bowl is in position on said spindle, said latch will be disengaged from said stop, all substantially as and for the purpose specified.

962,142. DOOR-CLOSER MECHANISM. WILLIAM K. HENRY, New Britain, Conn., assignor to P. & F. Corbin, New Britain, Conn., a Corporation of Connecticut. Filed Feb. 18, 1910. Serial No. 544,583.



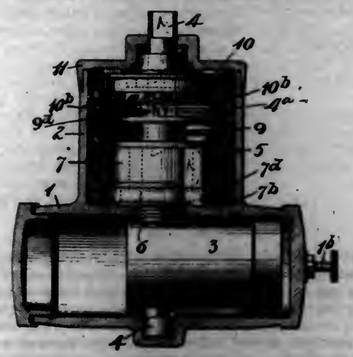
1. In combination, in a door closing mechanism, a spindle arranged to turn in either direction, a clutch mounted thereon capable of limited rotary and longitudinal movement relatively thereto, a connection between said spindle and clutch whereby rotary movement of the former in the latter will impart longitudinal movement thereto, two independent dogs arranged for independent engagement and rotation by said clutch, a spring operatively connected with both of said dogs and exerting a pull in opposite directions on said dogs, and a back-stop for checking the rearward movement of each of said dogs.

2. In combination, in a door closing mechanism, a spindle arranged to turn in either direction, a clutch mounted thereon capable of limited rotary and longitudinal movement relatively thereto, a connection between said spindle and clutch whereby rotary movement of the former in the latter will impart longitudinal movement thereto, two independent dogs arranged for independent engagement and rotation by said clutch, a spring operatively connected with both of said dogs and exerting a pull in opposite directions on said dogs, and a back-stop for checking the rearward movement of each of said dogs, one of said back-stops being adjustable.

3. In combination, in a door closing mechanism, a spindle arranged to turn in either direction, a clutch mounted thereon capable of limited rotary and longitudinal movement relatively thereto, a connection between said spindle and clutch whereby rotary movement of the former in the latter will impart longitudinal movement thereto, two independent dogs arranged for independent engagement and rotation by said clutch, a spring operatively connected with both of said dogs and exerting a pull in opposite directions on said dogs, a back-stop for checking the rearward movement of each of said dogs, one of said back-stops being adjustable, said clutch being arranged to make driving engagement with either of said dogs in any position of adjustment of the latter.

4. In a door closing apparatus, a device rotatable in either direction, two spring-controlled independently rotatable dogs mounted concentrically with said device, and means for holding the same in spaced relation, a clutch arranged to make driving engagement with either one of said dogs, said clutch being concentrically mounted relatively to said device, and a spiral connection between the clutch and said device, whereby movement of the latter will shift said clutch longitudinally to move the same into driving engagement with the desired dog.

962,143. DOOR-CONTROLLING MECHANISM. WILLIAM K. HENRY, New Britain, Conn., assignor to P. & F. Corbin, New Britain, Conn., a Corporation of Connecticut. Filed Feb. 18, 1910. Serial No. 544,584.



1. In combination in a door closing mechanism, a spindle arranged to turn in either direction, a clutch mounted thereon and arranged to be turned thereby and capable of longitudinal movement thereon, two coacting but independently rotatable dogs mounted concentrically with said spindle and above and below said clutch, a spring operatively connected with said dogs to rotate the same in opposite directions, stop mechanism to check the backward rotation of each of said dogs, and means to operatively connect said clutch with one or the other of said dogs at will, depending upon the direction of rotation of said spindle.

2. In combination in a door closing mechanism, a spindle arranged to turn in either direction, a clutch mounted to turn simultaneously therewith, two coacting but independently rotatable dogs mounted above and below said clutch, a spring operatively connected with said dogs to rotate the same in opposite directions, stop mechanism to check the backward rotation of each of said dogs, means to shift the clutch longitudinally to disengage the same from one dog and engage it with the other, depending upon the direction of rotation of said spindle.

3. In combination in a door closing mechanism, a spindle arranged to turn in either direction, a clutch mounted to turn simultaneously therewith, two coacting but independently rotatable dogs above and below said clutch, a spring operatively connected with said dogs to rotate the same in opposite directions, stop mechanism to check the backward rotation of each of said dogs, means to shift the clutch longitudinally to disengage the same from one dog and engage it with the other, depending upon the direction of rotation of said spindle, oppositely faced ratchet teeth on the upper and lower sides of said clutch, and coacting parts on said dogs whereby said teeth may interlock with said dogs alternately in driving engagement, said dogs being so spaced that an upper tooth does not operatively engage the upper dog when a lower tooth is in driving engagement with the lower dog, and vice versa.

4. In combination in a door closing mechanism, a spindle, two spring-controlled independently rotatable dogs mounted concentrically with said spindle, a clutch between said dogs with means for alternately engaging said clutch with one or the other of said dogs for driving the same, said dogs being so spaced that when said clutch is in one position it will engage for driving purposes the lower dog, and when in another position it will engage for driving purposes said upper dog, and means for positively shifting said clutch into either of said positions, depending upon the direction of rotation of said spindle.

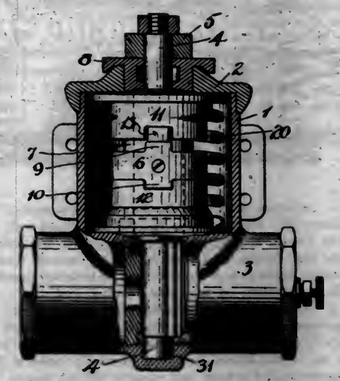
5. In combination in a door closing mechanism, a spindle arranged to turn in either direction, a clutch mounted thereon and arranged to be turned thereby and capable of longitudinal movement thereon, two coacting but independently rotatable dogs mounted concentrically with said spindle and above and below said clutch, a spring operatively connected with said dogs to rotate the same in opposite directions, stop mechanism to check the backward rotation of each of said dogs, and means to operatively connect said clutch with one or the other of said dogs at will, depending upon the direction of rotation of said spindle, the stop mechanism for one of said dogs being adjustable angularly with respect to the said spindle to vary the operative tension of the spring.

[Claims 6 to 9 not printed in the Gazette.]

962,144. DOOR-CLOSER. WILLIAM K. HENRY, New Britain, Conn., assignor to P. & F. Corbin, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 21, 1910. Serial No. 550,600.

1. In a door closer, a housing a rotatable spindle, a lever arm connected thereto, a double-acting spring, a rotatable clutch, means for operatively connecting said clutch with said arm including a sleeve, one end of which projects outside of the closer housing and a spiral connection between said sleeve and said clutch whereby said last mentioned parts may partake of limited rotary and longitudinal movement relatively to each other, and means standing at opposite ends of said clutch for alternating driving engagement by the latter, the ends of said spring being respectively connected with said clutch through the medium of said means.

2. In a door closer, a housing a rotatable spindle, a lever arm connected thereto, a double-acting closer spring, a rotatable clutch, means for operatively connecting said clutch with said arm including a sleeve within said housing and projecting partly outside thereof, a connection between said sleeve and clutch whereby rotary movement of the former will first impart a limited longitudinal movement to said clutch thereon and then rotate the same therewith, and means standing at opposite ends of the clutch and arranged for alternate driving engagement therewith, the ends of said spring being respectively connected with said clutch through the medium of said means.



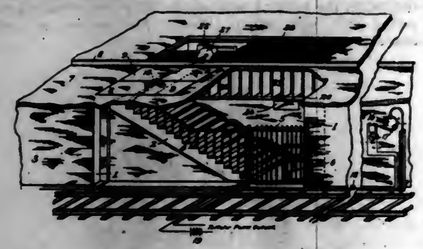
3. In a door closer, a housing, a rotatable spindle, a lever arm connected thereto, a double-acting closer spring, a clutch, a sleeve for operatively connecting said clutch with said arm, dogs at opposite ends of said clutch arranged for alternate driving engagement therewith, said spring being operatively connected with said dogs, the ends of said spring being alternately connected to said clutch by said dogs depending upon the position of said clutch, a back stop for each of said dogs, a single support in common to all of said parts, and separating the spindle from the balance of said parts, all of said parts being capable of rotation relatively to said sleeve, said clutch being capable of limited longitudinal movement on said sleeve, and means for shifting said clutch on said sleeve longitudinally and in a direction depending upon the direction of rotation of the sleeve relatively to the associated parts.

4. In a door closer, a housing, a central sleeve-like support mounted therein, a spindle rotatable in said sleeve-like support, a lever arm on said spindle, a sleeve rotatably mounted on the outside of said central support, and a connection between said lever arm and said sleeve, two dogs concentrically mounted relatively to said sleeve, one of said dogs being mounted directly on said sleeve, means for holding said dogs in spaced relation and for normally turning said dogs in opposite directions, a back stop for each of said dogs to limit the backward turning movement of the same respectively, a clutch mounted upon said sleeve between said dogs and capable of limited longitudinal movement thereon and means of connection between said sleeve and said clutch whereby said clutch may be shifted longitudinally on the sleeve from driving engagement with one dog into driving engagement with the other dog and vice versa depending upon the relative direction of rotation between the sleeve and clutch.

5. In a door closer, a closer housing, a central tubular support, a spindle passing through the same and rotatable therein, a sleeve mounted for rotation on the outer side of said tubular support, a clutch mounted on said sleeve, and a spiral connection between said clutch and sleeve, a dog mounted on said sleeve above said clutch, another dog mounted below said clutch, said dogs being held apart sufficiently to permit said clutch to be shifted longitudinally on its sleeve support to make driving engagement with either of said dogs, a back stop for each of said dogs, a coil spring surrounding said parts, the ends of said spring being operatively connected with both of said dogs, a lever on said spindle, means for adjustably connecting said lever to said clutch bearing sleeve.

[Claim 6 not printed in the Gazette.]

962,145. SUBWAY CONSTRUCTION. EDWARD B. HESS, New York, N. Y. Filed Apr. 12, 1910. Serial No. 554,986.



1. A railroad subway comprising an emergency outlet for passengers leading from the subway to an exit at the surface above, a closure normally closing the exit from ingress and egress, and closure locking means located on the inside thereof and adapted to be readily operated to unlock the closure by any one seeking exit.

2. A railroad subway comprising an emergency outlet for passengers leading from the subway to an exit at the surface above, a closure disposed horizontally, or substantially so, at the street level and normally closing the exit from ingress and egress, and closure locking means located on the inside thereof and adapted to be readily operated to unlock the closure by any one seeking exit.

3. A railroad subway comprising an emergency outlet for passengers leading from the subway to an exit at the surface above, a counterbalanced closure disposed horizontally, or substantially so, at the street level and normally closing the exit from ingress and egress, and closure locking means located on the inside thereof and adapted to be readily operated to unlock the closure by any one seeking exit.

4. A railroad subway comprising an emergency outlet for passengers leading from the subway to an exit at the surface above, a closure disposed horizontally, or substantially so, at the street level and normally closing the exit from ingress and egress, closure locking means located on the inside thereof and adapted to be readily operated to unlock the closure by any one seeking exit and means located adjacent the outlet for passengers for admitting daylight thereto.

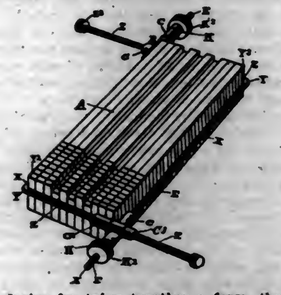
5. A railroad subway comprising an emergency outlet for passengers leading from the subway to an exit at the surface above, a closure normally closing the exit from ingress and egress, closure locking means located on the inside thereof and adapted to be readily operated to unlock the closure by any one seeking exit and signal devices automatically set when the emergency exit is in use.

[Claims 6 to 23 not printed in the Gazette.]

962,146. TYPE-HOLDER. HENRY HIGGIN, Newport, Ky., assignor to The Higgin Manufacturing Company, Newport, Ky., a Corporation of West Virginia. Filed June 10, 1908. Serial No. 437,786.

1. In a device for tying together a form, the combination of a tie strap whose end is provided with a screw thread and a corner piece having main portion provided with two arms between which is a right angled recess adapted to receive the form of type, each of the arms and the main portion respectively perforated for the passage therethrough of the screw threaded portion of the said tie strap, and screw threaded heads or nuts adapted to engage with that end of the tie strap which extends beyond the corner piece and to be screwed forward against the adjacent end of the corner piece, substantially as and for the purposes specified.

2. In a device for tying together a form, the combination of a tie strap whose end is provided with a screw thread and a corner piece having main portion provided with two arms between which is a right angled recess adapted to receive the form of type, each of the arms and the main portion respectively perforated for the passage therethrough of the screw threaded portion of the said tie strap, and devices adapted to engage the protruding ends of the tie strap and to hold them in connection with the corner pieces tightly against the form, substantially as and for the purposes specified.

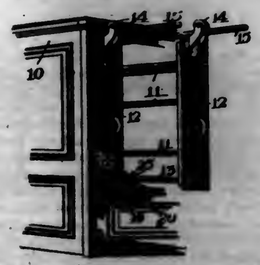


3. In a device for tying together a form, the combination of a tie strap whose end is provided with a screw thread and a corner piece provided with two arms between which is a right angled recess adapted to receive the form of type, each of the arms and the main portion respectively perforated for the passage therethrough of the screw threaded portion of said tie strap, and a device adapted to engage the end of the tie strap and to hold it in connection with the corner pieces tightly against the form, substantially as and for the purposes specified.

4. In a device for tying together a form, the combination of two tie straps, each tie strap bent in two branches, right angled to one another, and the two corner pieces located diagonally opposite the corners of the form, the adjacent ends of the tie straps respectively passing through perforations in the corner pieces in alinement with them, and nuts engaging the screw threaded portion of the tie straps, substantially as and for the purposes specified.

5. In a device for holding together a type-form, a corner piece having two arms, each arm perforated for the passage therethrough of the appropriate tie connection, the arm formed flat on the side next the form of type, and open at the perforation to allow of the tie connection coming into contact with the type-form, and means for tightening the tie connection, substantially as and for the purposes specified.

962,147. CLOTHES-DRIER. JOSEPH P. HILL, Worcester, Mass. Filed Feb. 5, 1909. Serial No. 476,336.



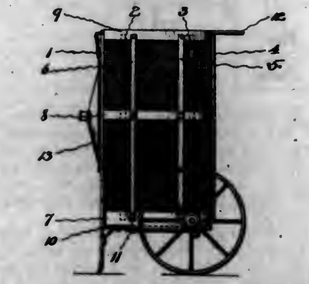
1. In a clothes drier, the combination with a drying chamber, of racks slidable in and out of the chamber, rack fronts on the ends of the racks adapted to close one wall of the chamber, a guide rod for each rack connected with the rack front, a frame mounted on the drying chamber adjustable transversely with respect to the guide rods, and two rollers carried by said frame for engaging the opposite sides of, and guiding, said guide rod, said rollers being each individually adjustable on the plate transversely with respect to the guide rods.

2. In a clothes drier, the combination of a drying chamber, a series of racks therein each having a rack front, and a guide rod, a plurality of plates mounted on the drying chamber and adjustable transversely with respect to the guide rods, a pair of frames supported by each plate and adjustable therealong, and a roller carried by each frame in contact with the guide rod.

3. In a clothes drier, the combination of a drying chamber, a longitudinally reciprocable rack guide rod, a sheet metal frame supported by the drying chamber and adjustable along the wall of the same, said frame having ways on the top thereof, a pair of sheet metal frames having grooves fitting said ways and resting thereon, means for securing said frames in adjusted position along said ways, and rollers carried by said frames for engaging the opposite sides of, and guiding, the rod.

4. In a clothes drier, the combination of a drying chamber, a longitudinally reciprocable rack guide rod, a sheet metal frame supported by the drying chamber and adjustable along the wall of the same, said frame having ways on the top thereof, a sheet metal frame fitting said ways and resting thereon, means for securing said frame in adjusted position along said ways, and a roller carried by said frame for engaging and guiding the rod.

962,148. SAFETY PORTABLE RUBBISH-BURNER. WILLIAM M. JACKSON, Middlebury, Vt. Filed Mar. 7, 1910. Serial No. 547,821.



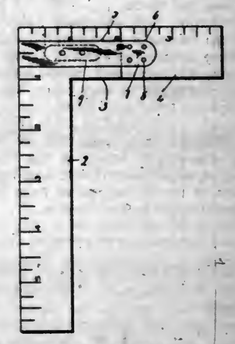
1. In a rubbish burner, a framework formed of bands and uprights, to which is attached perforated material, one of said uprights extending below the body of said framework, a U-shaped extension attached to the top band of said framework on the opposite side to said extended upright, an axle which passes through the lower band of the framework, and wheels mounted on said axle, substantially as described.

2. In a rubbish burner, a frame work formed of bands and uprights, to which is attached perforated material, one of said uprights extending below the body of said framework, an axle passing through the lowermost of said bands having wheels thereon, a U-shaped extension attached to the topmost of said bands, said axle and U-shaped extension being on the opposite side of the framework from said extended upright, and a slidable bottom, substantially as described.

3. In a rubbish burner, a framework formed of horizontally disposed bands and vertically disposed uprights, one of said uprights extending below the body of the said framework, material which will allow of complete combustion of rubbish fastened to said framework, wheels attached to each end of an axle which passes through the lowermost band, a U-shaped extension fixed to the topmost band, said wheels and U-shaped extension being upon the opposite side of the framework to said extended upright, a slidable bottom, and a detachable top, substantially as described.

4. In a rubbish burner, a framework formed of horizontally disposed metal bands and vertically disposed uprights, to which is attached fine wire mesh, one of said vertical uprights extending below the body of said framework, a pair of wheels at the opposite side of the framework from said extended upright which are attached to an axle passing through the lowermost metal band and which wheels in connection with said extended upright sustain the burner in a vertical position, a U-shaped extension attached to the topmost metal band upon the same side of the framework as said wheels, said U-shaped extension and wheels acting together to sustain the burner in a horizontal position, a slidable bottom, and a removable top attached to said framework by a chain, substantially as described.

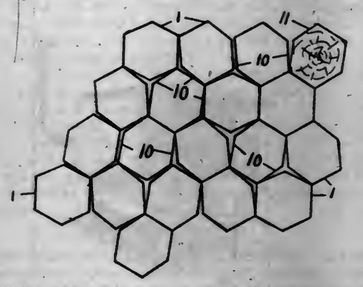
962,149. SQUARE. ARCHER B. JENNINGS, Wallingford, Conn. Filed Aug. 14, 1909. Serial No. 512,839.



1. A square comprising a body and a tongue, an undercut groove extending across the upper end of the body and into the tongue, and a beveled edge plate corresponding in length and width to the length and width of said groove into which it is passed, one end of the plate being rigidly secured in position and the other end held by frictional engagement.

2. A square comprising a body formed at its upper end with a head and a tongue, an undercut groove extending transversely across said head and into said tongue in which it forms a recess, a beveled edge plate corresponding in length and width to the length and width of said groove and recess, and rigidly secured at one end in said recess, and held by frictional engagement at the other end.

962,150. PAVEMENT. HARRY G. JENNISON, Toledo, Ohio. Filed June 29, 1909. Serial No. 505,012.



1. The combination in a pavement comprising similar polyhedral blocks providing corners, each block having a minimum diameter, of a first block thereof having a corner spaced from the additional blocks on such diameter and on each side of said corner an abutting corner, two additional blocks having corners to abut one of said abutting corners, and a third additional block to abut the other of said abutting corners.

2. The combination in a pavement comprising similar polyhedral blocks providing corners, each block having a pair of maximum diameters of a first block thereof having a corner spaced from the other blocks and on each side of said corner an abutting corner from which extend said maximum diameters, and a pair of blocks at each of said abutting corners, each block having a corner to abut the abutting corners of the first block.

3. The combination in a pavement comprising similar polyhedral blocks providing corners, each block of uniform cross section throughout its height, of three similar polyhedral blocks in abutting relation at some of the corners, intermediate corners on the blocks between the abutting corners thereof, such corners being adjacent to each other and spaced apart whereby expansion can be taken up between the blocks.

4. The combination in a pavement comprising similar polyhedral blocks having a pavement face provided with corners, of three similar polyhedral blocks in abutting relation at some of the corners, intermediate corners of the blocks being adjacent to each other, one corner of a block being spaced from the other two which are in abutting relation.

5. The combination in a pavement of three similar blocks having corners, a corner of one block abutting with a corner of an adjacent block, and adjacent intermediate corners of the blocks spaced from each other.

[Claim 6 not printed in the Gazette.]

962,151. FASTENING DEVICE FOR BUTTONS. BENJAMIN JOACHIM, Newark, N. J. Filed Aug. 5, 1909. Serial No. 511,323.



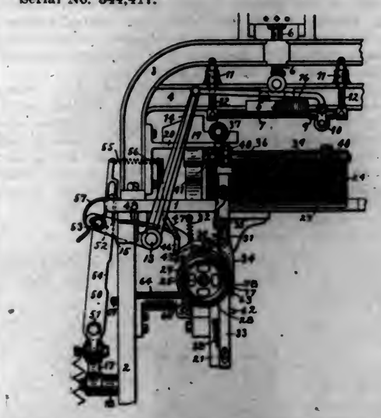
A device of the kind described comprising a head having a wire secured thereto, the wire having ends of equal length which are bent into substantially flat curved portions which are approximately parallel with the back of the head and spaced therefrom, each of the curved portions then being formed into oppositely arranged helices, the end of each helix being pointed.

962,152. FURNACE ATTACHMENT. CHARLES R. KLINE, Beechwood, Pa. Filed May 17, 1909. Serial No. 496,484.



In a device of the character described, a boiler casing having an opening in the side thereof, an arm pivotally mounted on said casing on one side of said opening, a shelf secured to said arm adapted to support an ash receptacle, a cover for said opening pivoted above the same for vertical swinging movement and means by which the cover may be held at different elevations with respect to the support, said arm being adapted for lateral movement to variant positions beneath said cover when in its extended position whereby the receptacle is placed in adjusted position with respect to said cover.

962,153. GUM-ROLL GOVERNOR FOR ENVELOP-MACHINES. AUGUST LAUBSCHER, Springfield, Mass., assignor to United States Envelope Company, Springfield, Mass., a Body Corporate of Maine. Filed Nov. 21, 1906. Serial No. 344,417.



1. In an envelop-machine, the combination, with a paste-roll and means for imparting reciprocating motion to the same, of a mechanism for interrupting the motion of the roll-operating mechanism, and an elevator-platform provided with means for actuating said interrupting mechanism during the descending and ascending motion of the platform.

2. In an envelop-machine, the combination, with a gum-roll and mechanism for reciprocating the same, of a member arranged for interrupting or restoring the motion of the reciprocating mechanism, and an elevator provided with means for releasing the member from or relocking the same with said reciprocating mechanism.

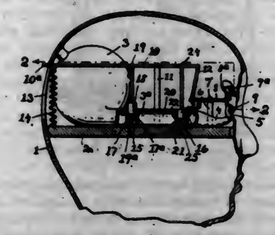
3. In an envelop-machine, the combination, with a gum-roll, mechanism for operating the same, such mechanism consisting in part of a link adapted to change position in its travel, and further consisting in part of connecting means between said link and other members of said mechanism, said link having changeable engaging means for such connecting means, which engaging means is operative or inoperative according to the aforesaid position of the link, and means to impart motion to the link, of an elevator, and mechanism controlled by said elevator for determining said position of said link.

4. In an envelop machine, the combination, with a gum-roll, mechanism for operating the same, such mechanism consisting in part of a link adapted to change position in its travel, and further consisting in part of connecting means between said link and other members of said mechanism, said link having changeable engaging means for such connecting means, which engaging means is operative or inoperative according to the aforesaid position on the link, and means to impart motion to the link, of an elevator, and mechanism, in the path of said elevator, adapted to throw the link out of active engagement with said connecting means when said elevator descends and to release the link to the performance of its ordinary or active functions when said elevator ascends.

5. The combination, in an envelop machine, with a gum-roll, mechanism for operating the same, such mechanism consisting in part of a link adapted to change position in its travel and having operative and inoperative engaging means according to the aforesaid position of the link, and further consisting in part of connecting means between said engaging means and said gum-roll, and means to impart motion to the link, of an elevator, a thrust-rod arranged to force the link out of active engagement with said connecting means when said elevator descends and to release the link when the elevator ascends, and means controlled by said elevator for so operating said thrust-rod.

[Claims 6 to 24 not printed in the Gazette.]

962,154. TOY. DON M. LEMON, Boston, Mass., assignor of one-half to Ernest V. Page, Boston, Mass. Filed Dec. 31, 1909. Serial No. 535,855.



1. In a toy having the form of an animated creature, means for causing the representation of a tear to fall from the eye of the toy.

2. In a toy having the form of an animated creature, hand operated means for causing the representation of a tear to fall from the eye of the toy.

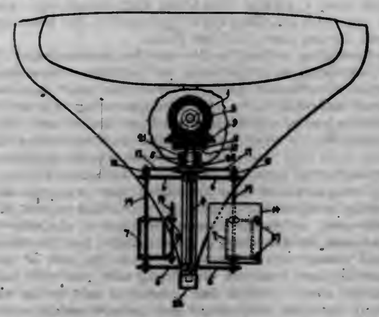
3. In a toy having the form of an animated creature, means for causing the representation of a tear to fall from the eye of the toy, and means for simultaneously changing the expression of the eyes of the toy.

4. In a toy, having the form of an animated creature, means for causing the representation of a tear to fall from the eye of the toy, and means for simultaneously changing the expression of the eyes and mouth of the toy.

5. In a toy, having the form of an animated creature, means for causing the representation of a tear to fall from the eye of the toy, a carrier having the representation of normal eyes and weeping eyes, and means for moving said carrier to cause one set of eyes to pass out of sight and the other set to come into view at the eye openings.

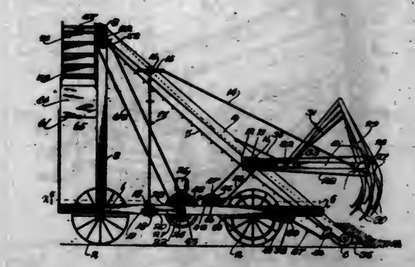
[Claims 6 to 14 not printed in the Gazette.]

962,155. PROPELLING DEVICE. ERIK EMANUEL LINDKVIST, Stockholm, Sweden. Filed July 15, 1907. Serial No. 383,905.



In a propelling device, the combination of a driving shaft journaled in the boat, vessel, airship, or the like, and furnished with arms, frames journaled in said arms, shafts supported by said frames and parallel with the driving shaft, said shafts bearing paddles arranged so as to turn freely in certain positions, and a shell turnable about the driving shaft and in rotary connection with the shafts of the frames, for the purpose shown.

962,156. EXCAVATING-MACHINE. ARTHUR F. D. LOUDEN, Fargo, N. D., assignor of one-third to Valentine S. Sobieck and one-third to James F. Crisp, Fargo, N. D. Filed Apr. 17, 1909. Serial No. 490,532.



1. In a machine of the kind described, the combination with a portable support, of an elevator mounted on said support, supporting arms pivotally mounted and carried by said support, a crank shaft carried by said supporting arms, a tedder-acting hoe-equipped arm driven by said crank shaft, means for driving said crank shaft, and means for vertically adjusting said supporting arm, substantially as described.

2. In a machine of the kind described, the combination with a portable support, of an elevator mounted on said support, a shovel projecting in front of the receiving end of said elevator, supporting arms pivotally mounted and carried by said support, a crank shaft carried by said supporting arms, a tedder-acting hoe-equipped arm driven by said crank shaft, means for driving said crank shaft, and means for vertically adjusting said supporting arm, substantially as described.

3. In a machine of the kind described, the combination with a portable support, of an elevator mounted on said support, a shovel projecting in front of the receiving end of said elevator, supporting arms pivotally connected to said elevator, means for vertically adjusting said supporting arms, a crank shaft carried by said supporting arms, means for driving said crank shaft, a tedder-acting hoe-equipped arm intermediately connected to said crank shaft, a link connected at one of its ends to the upper end of said hoe-equipped arm and having its other end slidably mounted on said supporting arms, and means for holding the sliding end of said link in respect to said supporting elevator, substantially as described.

4. In a machine of the kind described, the combination with a portable support, of an elevator mounted on said support, a shovel working under and in front of the lower end portion of said elevator, the forward projecting edge of said shovel extending in an approximately horizontal direction and the body thereof extending upward and rearward and being slidably mounted in bearings on said support, and means for vibrating said shovel, substantially as described.

962,157. DEVICE FOR BOARDING LEATHER. ARTHUR MIHTIL MARX, Frankfort-on-the-Main, Germany. Filed Sept. 23, 1908. Serial No. 454,412.

1. A device for boarding leather comprising in combination, two rounded members between which the folded leather can be placed by hand, both of said members comprising segments of cylinders and one being concave and the other convex, the convex segment being of sufficient size to receive and contain an entire hide, the convex segment being sufficiently reduced in size with respect to said

concave segment to lie wholly outside thereof in one position of said convex segment thereby leaving said concave segment free and unobstructed for insertion of the next hide, means for revolving said convex segment abreast of said concave segment to board the hide, and a device for automatically arresting movement of said convex segment upon arrival thereof to an outside position with respect to said concave segment.



2. A device for boarding leather comprising in combination, two rounded members between which the folded leather can be placed by hand, both of said members comprising segments of cylinders and one being concave and the other convex, the convex segment being sufficiently reduced in size with respect to said concave segment to lie wholly outside thereof in one position of the convex segment thereby leaving the concave segment free and unobstructed by insertion of the next hide, means for revolving said convex segment abreast of said concave segment to board the hide, and a gravity acting device automatically arresting movement of said convex segment upon arrival thereof to an outside position with respect to said concave segment.

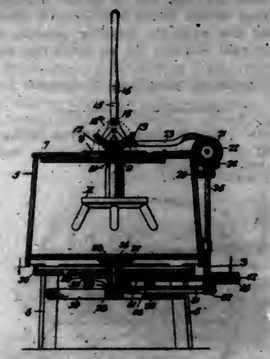
3. A device for boarding leather comprising in combination, two rounded members between which the folded leather can be placed by hand, both of said members comprising segments of cylinders and one being concave and the other convex, the convex segment being sufficiently reduced in size with respect to the concave segment to lie wholly outside thereof in one position of the convex segment thereby leaving the concave segment free and unobstructed for insertion of the next hide, means for revolving said convex segment abreast of said concave segment to board the hide, and mechanism including a cam and a gravity acting device for automatically arresting movement of said convex segment upon arrival thereof to an outside position with respect to said concave segment.

4. A device for boarding leather comprising in combination, two coacting rounded members between which the leather is boarded, means for rotating one member abreast of the other, a cam rotated by said rotating member and provided with concentric and eccentric portions, a foot operated device for connecting said rotating member in driven relation with said means, and an element controlled by said cam and connected with said device for maintaining said member in driven relation with said means until said member has reached a predetermined point in its travel, said cam thereupon serving to cause disconnection of said member from said means.

5. A device for boarding leather comprising in combination, two coacting rounded members between which the leather is supported, means for rotating one member abreast of the other, a cam rotated by said rotating member and provided with concentric and eccentric portions, a weighted foot operated device for connecting said rotating member in driven relation with said means, and an element controlled by said cam and connected with said device for maintaining said member in driven relation with means until said member has reached a predetermined point in its travel, said cam thereupon serving to release said elements and permit said device to disconnect said member from said means.

[Claims 6 and 7 not printed in the Gazette.]

962,158. OPERATING MECHANISM FOR WASHING-MACHINES. GUSTAV N. MEYER, Davenport, Iowa. Filed Aug. 2, 1909. Serial No. 510,780.



1. Operating mechanism for washing machines and the like comprising in combination with a body, an operating shaft, an operating gear secured to said operating shaft, a segmental gear in mesh with said operating gear, a rocking hand lever attached to said segmental gear, a horizontally arranged fly-wheel located beneath said body, a vertical driving shaft, means for translating the rocking movement of the hand lever into continuous rotary movement of said driving shaft, and gearing between said driving shaft and said fly-wheel.

2. Operating mechanism for washing machines and the like comprising in combination with a body, an operating shaft, a bevel gear secured to said operating shaft, a segmental gear in mesh with said bevel gear, a rocking hand lever secured to said segmental gear, a horizontally arranged fly-wheel located beneath said body, a vertically arranged driving shaft mounted at one side of said body, a gear mounted upon the upper end of said driving shaft, a second gear in mesh with said first named gear, a pitman connecting said second gear with said segmental gear, and gears connecting the lower end of said driving shaft with the fly-wheel.

3. Operating mechanism for washing machines and the like comprising in combination with a body, an operating shaft, an operating gear secured to said operating shaft, a segmental gear in mesh with said operating gear, a rocking hand lever attached to said segmental gear, a horizontally arranged fly-wheel located beneath said body, a pinion formed on the hub of said fly-wheel, a vertically arranged driving shaft, a gear upon the upper end of said driving shaft, a second gear in mesh with the said first named gear, a pitman connecting said second gear with said segmental gear, and gears intermediate the lower end of said driving shaft and said pinion.

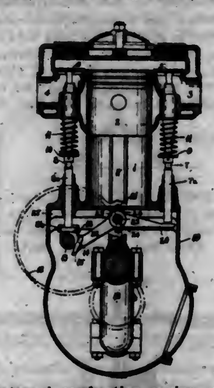
4. Operating mechanism for washing machines and the like comprising in combination with a body, a base plate thereon, a vertically arranged operating shaft mounted thereon and capable of rotary reciprocating motion, an operating gear mounted upon the upper end of said shaft, a supporting bracket formed upon and extending upwardly from said base plate, a horizontally arranged stub shaft supported upon said bracket, a segmental gear pivotally supported on said stub-shaft and engaging said operating gear, a rocking hand-lever attached to said segmental gear, an angular bracket secured to the edge of the washing machine body, a gear casing, a gear journaled in said casing with its axis parallel to the axis of said segmental gear, a pitman connecting said gear with said segmental gear, a second gear located in said casing and meshing with the first named gear in said casing, a vertically arranged driving shaft upon the upper end of which the said second gear in said casing is keyed, a second base plate located beneath said body, a bearing cup upon the outer end of said second base plate in which

the lower end of the vertical driving shaft bears, a driving gear upon the lower end of said driving shaft, a gear casing inclosing said driving gear, a horizontally arranged fly-wheel located beneath said supporting body, a pinion formed upon the hub of the fly-wheel, a gear wheel supported upon said second named base plate and engaging said pinion and said driving gear upon the lower end of the vertically arranged driving shaft, a vertically arranged shaft upon which said fly-wheel is carried, ball bearings for the lower end of said fly-wheel shaft carried upon the inner end of said second base plate, and ball bearings for the upper end of said fly-wheel shaft supported upon the lower central portion of said supporting body.

5. The combination of an operating shaft capable of rotary reciprocating motion, an operating gear thereon, a rocking segmental gear in mesh with said operating gear, an outwardly extending stud on said segmental gear, a fly-wheel, a driving shaft for said fly-wheel, gearing intermediate said driving shaft and said fly wheel adapted to continuously rotate said fly wheel, a gear keyed to said driving shaft, a driving gear meshing with said driving shaft gear, a pitman connected at one end to said driving gear, said pitman being curved upwardly at its outer end and provided at its inner end with a downwardly opening notch engaging said outwardly extending stud on the segmental gear, and a swingingly supported weight attached to said segmental gear and adapted to engage said pitman to hold same in place during the operation thereof.

[Claim 6 not printed in the Gazette.]

962,159. VALVE-CONTROLLING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. FRANK J. MILLER, Cleveland, Ohio. Filed Oct. 4, 1909. Serial No. 520,787.



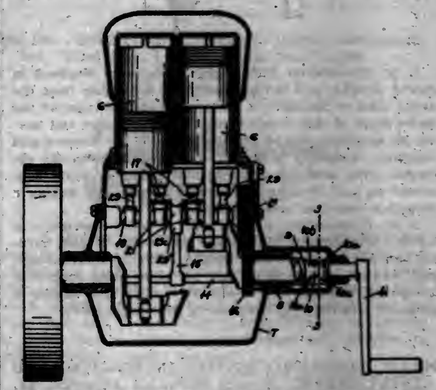
1. In an internal combustion engine, a valve gear including in combination, a bearing pin having a hole therethrough, the said hole diverging from the middle to its ends, a support for said pin, a rocker fulcrumed on said pin and operatively connected to the valve, a pin rigid with the rocker and extending through the said hole, and means to operate the rocker.

2. The combination with a cylinder having inlet and exhaust valves at opposite sides thereof, and a crank casing having guides at opposite sides thereof, of push rods working in said guides, to open the valves respectively a shaft located within the casing adjacent the inner end of one of the push rods and having a cam bearing thereon, and a rocker extending across the open end of the cylinder and within the casing and bearing at one end on the cam and at the other end on the other push rod.

3. The combination with parallel cylinders having inlet and exhaust valves at opposite sides thereof, and a crank casing to which the cylinders are joined, of push rods working through the casing at opposite sides thereof, to open the valves respectively, a shaft extending across the casing and provided with cams bearing on the push rods at one side of the cylinders, and rockers mounted on bearings in the crank shaft and extending across the open ends of the cylinders and bearing at one end on the cams at the other end on the push rods at the other side of the cylinders.

4. In a valve gear for an internal combustion engine, the combination with a cylinder having inlet and exhaust valves on opposite sides thereof, push rods arranged on opposite sides of the cylinder to open the valves respectively, a shaft adjacent the end of one of the push rods and having a cam bearing on said rod to operate same, and a rocker extending across the open end of the cylinder and bearing at one end on the cam and at the other end on the other push rod.

962,160. COMPRESSION-RELEASE FOR INTERNAL-COMBUSTION ENGINES. FRANK J. MILLER, Cleveland, Ohio. Filed Jan. 29, 1910. Serial No. 540,771.



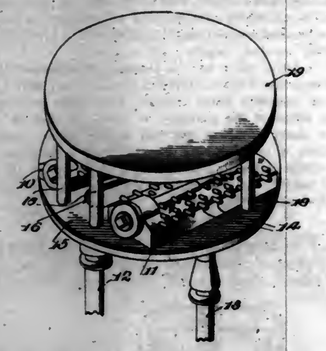
1. The combination with an explosive engine having an exhaust valve and its stem, and a shaft having thereon a cam for operating said valve, of a pressure-relieving cam on said shaft, a starting device for the engine, a member supported and mounted to turn on said shaft and movable into and out of position between said pressure-relieving cam and the valve stem, and means automatically operated by the starting device to so move said member.

2. The combination with an explosive engine having an exhaust valve and its stem, and a cam shaft for operating said valve, of an auxiliary cam on the said shaft, a ring piece mounted to turn on said shaft, a roller carried by the said piece and movable therewith into and out of position between the auxiliary cam and the valve stem, and means to turn the said piece.

3. The combination with an explosive engine having a cam shaft, of a starting crank movable into and out of operative engagement with the crank shaft of the engine, a double cone on the shaft of said starting crank, a rock shaft, a fork projecting from the rock shaft and embracing said cone, whereby the fork is swung and the rock shaft is turned when the crank is pushed in or out, and means actuated by the rock shaft and coöperating with the cam shaft to relieve compression in the engine cylinder when the starting crank is operated.

4. The combination with an explosive engine having an exhaust valve and its stem, and a shaft having thereon a cam for operating said valve, of a pressure relieving cam on said shaft, a ring piece hung upon said shaft and arranged to be turned around the same, a roller carried by said ring piece, in the line of movement of the pressure relieving cam, and movable to position between said cam and the valve stem when the ring is turned in one direction, and a lever connected to the ring, for turning the same, when the engine is started.

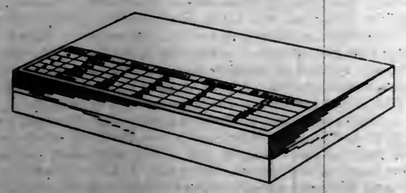
962,161. BURNER ATTACHMENT. THOMAS MOWCOMBER, Elkland, Pa. Filed Sept. 14, 1909. Serial No. 517,685.



1. In combination with a pair of burners disposed in spaced relation and having feed pipes depending from the under sides of the same, a lower plate engaged against the under faces of said burners about said feed pipes and having an aperture formed longitudinally of the burners and centrally therein, a plurality of standards upwardly extended from said lower plate, and an upper plate supported on said standards over said burners and having a diameter less than said lower plate.

2. In combination with a pair of spaced burners, a lower plate engaged against the under side of said burners and having an air duct formed centrally therethrough and between said burners, and an upper plate supported in spaced relation above said first plate and having a diameter less than the diameter of said lower plate.

962,162. COMBINED COUNTING, INTEGRATING, AND TALLY DEVICE. DONALD MCDONALD, Louisville, Ky. Filed Nov. 30, 1908. Serial No. 465,231.



1. A game device comprising a receptacle for counters, and counters representing different denominations of value, there being a plurality of counters of each denomination; all of said counters having a dimension adapting them to fit the receptacle in one direction, and having another dimension varying according to the denomination of value which the counter represents; said varying dimensions being multiples of a common unit representing the unit of value in the computation to be made; and said receptacle having a dimension that is also a multiple of said unit of measurement, whereby it is adapted to integrate the total value representation of counters filling its said dimension; said receptacle being provided with a scale divided into said units of measurement, whereby the total value of counters partially filling said receptacle may be read.

2. A game device comprising a receptacle for counters, and counters representing different denominations of value, there being a plurality of counters of each denomination; all of said counters having a dimension adapting them to fit the receptacle in one direction, and having another dimension varying according to the denomination or value which the counter represents; said varying dimensions being multiples of a common unit representing the unit of value in the computation to be made; and said receptacle having a dimension that is also a multiple of said unit of measurement, whereby it is adapted to integrate the total value representation of counters filling its said dimension; said receptacle being provided with a scale divided into said units of measurement, whereby the total value of counters partially filling said receptacle may be read.

3. A game device, comprising a receptacle having a plurality of pockets and a plurality of groups of counters, the counters in one group being made to represent different denominations of value and having a common diameter with thicknesses varying in the same ratio as their denominations of value, and the counters in the second group representing an increased denomination of value in definite relation to the counters of the group first-named; one of the pockets of the receptacle having a transverse dimension adapted to fit the counters of the group first-named, and a longitudinal dimension that is a multiple of the unit of measurement of the thickness of the counters, and the other pocket of the receptacle having a transverse dimension corresponding to the diameter of the second group of counters.

4. In a game device, the combination of a receptacle having a pocket, and a series of counters adapted to fit in said pocket; the counters representing definite values in the count to be made and having dimensions bearing a definite ratio to their values, and the pocket having a transverse dimension adapted to fit the counters and a longitudinal dimension adapted to measure said counters up to the number of points constituting the count to be attained; said pocket being provided with an offset receiving space that is also adapted to receive said counters and hold them in a distinguishing position relatively to those in the main portion of the pocket.

5. A game device, comprising a series of counters representing different denominations of value and having dimensions corresponding to the denominations of value which they represent, and a receptacle having a series of pockets constructed to receive and hold said counters and to aggregate the value thereof by measuring their combined dimensions; said pockets being of different length to indicate different aggregated values and being located in different positions to indicate different stages in the count.

[Claim 6 not printed in the Gazette.]

962,163. GOVERNOR. FRANK L. NICHOLS, Stamford, Conn., assignor to Nichols Quadruple-Traction Vehicle and Power Company, Stamford, Conn., a Corporation of New York. Filed Nov. 5, 1908. Serial No. 461,149.



1. The combination with an engine shaft and a governor shaft driven thereby, of pumps surrounding the governor shaft, a tilting sleeve pivoted to the governor shaft and spring-actuated pump plungers for actuating the pumps, the said pump plungers resting on a bearing on the tilting sleeve for operating them.

2. The combination with a governor shaft arranged to be driven by the engine shaft, of a group of pumps arranged concentrically about the governor shaft, a tilting sleeve on which the pump plungers rest and a counterbalance weight for rocking the sleeve as the shaft rotates to vary the throw of the plungers.

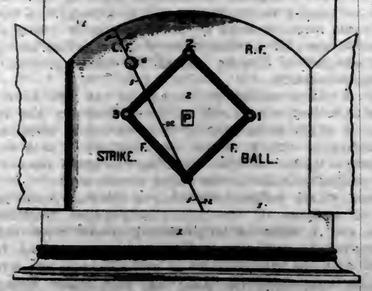
3. The combination with a governor shaft driven by an engine shaft, of a group of pumps arranged concentric with the axis of the governor shaft, a tilting sleeve controlled in its tilt by a counterbalance weight, the sleeve forming a primary support for the plungers of the pumps and means for limiting the throw of the counterbalance weight to determine the maximum action of the pumps.

4. The combination with a governor shaft driven by an engine shaft, of a group of pumps surrounding the governor shaft, a tilting sleeve pivoted to the governor shaft and provided with a weight for tilting it, the said tilting sleeve forming a primary support for the plungers of the pumps, a sliding sleeve on the shaft for limiting the throw of the weight and a lever for manually controlling the movement of the sliding sleeve and hence the throw of the weight.

5. The combination with a governor shaft, of a group of pumps arranged around the shaft, a common inlet for admitting the fluid to the pumps, separate outlets one for each pump, a tilting sleeve pivoted to the governor shaft, a ring seated on the sleeve and forming an immediate bearing for the pump plungers, a counterbalance weight for tilting the sleeve and means for limiting the maximum throw of the counterbalance weight.

[Claim 6 not printed in the Gazette.]

962,164. BULLETIN-BOARD. GEORGE HENRY PARKER, Newark, N. J., assignor to John W. Baker, Stamford, Conn. Filed Apr. 9, 1909. Serial No. 488,862.



1. In a ball bulletin board, the combination of a field representation at the front of the board, a field representation at the rear of the board, an indicator adapted to move to any part of the front field representation, a cord connected to the indicator, an element adapted to bodily move to any part of the rear field representation and having associated means directly engaging the cord, for differentially moving the element and indicator.

2. In an apparatus of the character described, the combination of a board having at the front thereof a representation, an indicator to move thereover, a lengthwise movable flexible member connected to the indicator, a bodily movable device arranged at a point removed from said representation and having associated means engaging the flexible member for moving the indicator in the same direction as the movable device at a different speed.

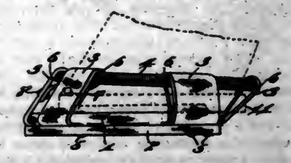
3. In an apparatus of the character described, the combination of a board having a field representation, a frame and an actuating element carried thereby arranged at the rear of the field, an indicator to move over the field surface, a cord connected to the indicator and extending beyond the field to the rear thereof and connected directly to said frame, and said cord engaging the element whereby said element and indicator move different distances at the same time.

4. In an apparatus of the character described, the combination of a field representation, an indicator, a flexible support for the indicator, bodily movable actuating means at the rear of the field for moving said flexible support, and associated means whereby the indicator moves an increased distance over the field relative to said means.

5. In an apparatus of the character described, the combination of a field representation, an indicator, a flexible support for the indicator extending in one direction beyond the bounds of the field, an auxiliary flexible support for the indicator extending in an opposite direction beyond the bounds of the field, bodily movable actuating means at the rear of the field for moving said flexible supports, and associated mechanism whereby the indicator moves an increased distance over the field relative to said means.

[Claims 6 to 27 not printed in the Gazette.]

962,165. HORSESHOE. HIRAM H. PEIRCE, Indianapolis, Ind. Filed Sept. 4, 1909. Serial No. 516,222.



1. A shoe of the character described, comprising heavy pads or plates, of fabric disposed one above the other, and conforming in outline to the general outline of a hoof, tabs secured between said pads and folded between their ends, forming loops, the front tabs being longer than the rear tabs and a continuous elastic member comprising a coiled spring located in said loops and adapted to extend entirely around the hoof.

2. A shoe of the character described, comprising heavy pads or plates of fabric disposed one above the other, and conforming in outline to the general outline of a hoof, tabs secured between said pads and folded between their ends, forming loops, the front tabs being longer than the rear tabs and a coiled spring located in said loops and adapted to clamp around the hoof, and a coupling having screw threaded ends projecting into the ends of said coiled spring.

962,166. JOURNAL-BOX BRASS. JOHN M. ROHLFING, St. Louis, Mo., assignor of one-half to Robert E. Frame, St. Louis, Mo. Filed Aug. 2, 1909. Serial No. 510,782.



1. A journal bearing consisting of a shell or body portion having inclined ribs formed on the underside of the top wall thereof, said top wall having openings which said ribs cross or intersect, and a filling of alloy arranged between said ribs and extending over the ribs that extend across the openings in the top wall of the shell.

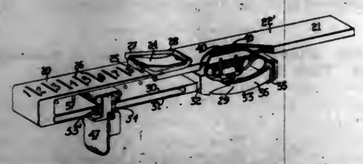
2. A journal bearing consisting of an outer shell provided with an opening, ribs on the interior of said shell that form part of the journal-engaging surface of the bearing, some of said ribs extending across the opening in the shell, and an inner lining for said shell consisting of an alloy that fills the spaces between said ribs and also extends up into said opening and across the ribs that intersect the same.

3. A journal bearing consisting of an outer shell provided with recesses or openings, parallel ribs on the inner

face of said shell that extend diagonally across the face thereof, some of said ribs extending across the openings or recesses in the shell, and an alloy filling the spaces between said ribs and also extending over the ribs that intersect the recesses or openings in the shell.

4. A journal bearing consisting of a cast metal shell having top and side walls in which openings are formed, a plurality of diagonally arranged ribs that extend continuously across the under side of the bearing, said ribs extending parallel to each other and some of said ribs being so arranged that they intersect some of said openings, and an alloy filling the spaces between said ribs and also the openings in said shell which the ribs intersect, thereby producing a structure in which the alloy is supported directly by the ribs.

962,167. CHECK-PERFORATOR. SIGMUND SCHIFF, New York, N. Y. Filed Jan. 19, 1910. Serial No. 538,857.



1. A male perforating die comprising a casing having a perforated bottom portion, a cover slidably arranged in said casing, and a plurality of springs arranged upon said cover in said casing contacting with each other and having one of their respective ends formed as perforating pins which are slidably arranged in said perforations.

2. In a perforating male die comprising a casing having a perforated bottom portion, a cover slidably arranged in said casing, and a plurality of springs arranged upon said cover in said casing contacting with each other and having one of their respective ends bent at right angles to said bottom portion, said bent portions being in engagement with said perforations and being weakened in cross section at their lower ends.

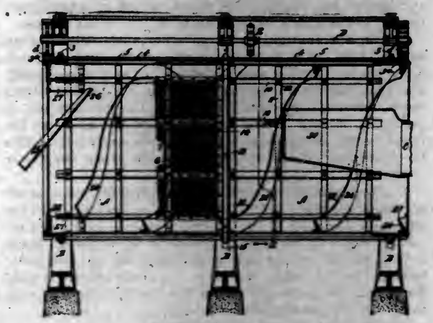
3. In a check perforator, the combination with a base plate, of a die plate slidably mounted thereon having perforations arranged conforming to the required numerals or other characters desired to be perforated, and a single perforating die comprising a casing having a perforated bottom portion, a cover slidably arranged in said casing, and a plurality of perforating pins engaging the cover and protruding through the perforations of said casing and arranged in such a manner that predetermined groups of the same are adapted to enter all perforations of said die plate forming an individual numeral or character brought into operative position with respect to said perforating die.

4. In a check perforator, the combination with a base plate, of a die plate slidably mounted thereon having perforations arranged conforming to the required numerals or other characters desired to be perforated, and a single perforating die comprising a casing having a perforated bottom portion, a cover slidably arranged in said casing, and a plurality of springs arranged upon said cover in said casing contacting with each other and having one of their respective ends formed as perforating pins in engagement with the perforations of said bottom portion and arranged in such a manner that the predetermined groups of the same are adapted to enter all perforations of said die plate forming an individual numeral or character brought into operative position with respect to said perforating die.

5. In a check perforator, the combination with a base plate, of a die plate slidably mounted thereon having perforations arranged conforming to the required numerals or other characters desired to be perforated, and a single perforating die comprising a casing having a perforated bottom portion, a cover slidably arranged in said casing, and a plurality of springs arranged upon said cover in said casing contacting with each other and having one of their respective ends formed as perforating pins which are slidably arranged in the perforations of said bottom portion and in such a manner that the predetermined groups of the same are adapted to enter all perforations of said die plate forming an individual numeral or other character brought into operative position with respect to said perforating die.

[Claim 6 not printed in the Gazette.]

962,168. ROTARY SCREEN MECHANISM. PETER L. SCHOLL, Reading, Pa., assignor to Oliver M. Weand, Reading, Pa. Filed June 4, 1909. Serial No. 500,194.



1. A rotary screen for sewage or the like having a helical conveyer vane on its inner periphery, the inner edge of said vane being elevated in the direction of rotation above the radial line to form a carrier trough.

2. A rotary screen for sewage or the like having an open exit end with a baffle flange, a helical conveyer vane on its inner periphery terminating short of said flange, and a dumping receptacle fixed to said flange and having its inner edge elevated in the direction of rotation, in combination with a fixed delivery chute having its upper end adapted to directly receive the discharge from the rising receptacle.

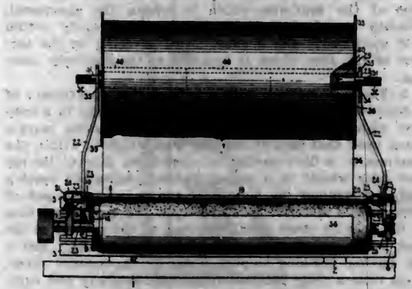
3. A rotary screen for sewage or the like having a helical conveyer vane on its inner periphery the inner edge of which is elevated in the direction of rotation, in combination with a central inlet conduit to said screen having a lateral overfall extending therefrom toward the descending portion of the vaned screen wall.

4. A rotary screen comprising a skeleton frame made up of a series of circumferentially-spaced longitudinal ribs, and a series of longitudinally-spaced rings rigidly connected to said ribs and having their exterior faces flush with the exterior faces of said ribs, separate screening sections exteriorly laid upon said frame with the marginal portions thereof bearing upon said rings and ribs, and exterior clamping ring-sections and rib-sections separately bolted to said frame-rings and ribs to removably secure said netting sections.

962,169. TYPE-WRITING MACHINE. FRANK L. SHOLES, Chicago, Ill., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Nov. 21, 1908. Serial No. 344,456.

1. In a typewriting machine, the combination of a platen frame supporting a platen and comprising side bars connected by a detachable rod or bar; supporting brackets each comprising two downwardly extending arms, one of said arms being detachably secured in a fixed relation with the associate side bar of the platen frame and the other of said arms being perforated to coöperate with said detachable rod or bar; and a roll holder mounted on said supporting brackets.

2. In a typewriting machine, the combination of a platen frame supporting a platen and comprising side bars connected by a detachable rod or bar; supporting brackets each comprising a pair of downwardly extending arms, one of said arms being screwed to the associate side bar of the platen frame and the other of said arms terminating in a collar which receives said detachable rod or bar; and a roll holder supported on said brackets.



3. In a typewriting machine, the combination of a U-shaped platen frame comprising forwardly extending horizontally disposed side bars on which the platen is journaled, said side bars being connected by a detachable rod or bar; supporting brackets removably secured to the side bars of the platen frame and rising in a substantially vertical direction therefrom, said supporting brackets having arms screwed to the side bar of the platen frame and having other arms perforated to coöperate with said detachable rod or bar; and a roll holder supported on said brackets and arranged over the platen and in proximity thereto.

4. In a typewriting machine, the combination of a platen frame or carrier on which the platen is journaled; supporting brackets detachably secured to said platen frame; and a roll holder carried by said brackets, said roll holder comprising a tubular shaft, plugs in said shaft having bearing portions coöperating with said brackets and flanges removably mounted on said bearing portions.

5. In a typewriting machine, the combination of a platen frame or carrier; supporting brackets or plates removably secured to said platen frame and slotted at their upper ends; and a roll holder mounted in the slots of said brackets, said roll holder comprising a tubular shaft, end plugs in said shaft, said end plugs having reduced bearing portions coöperating with the slots in said brackets, and detachable flanges mounted on the bearing portions of said plugs.

[Claims 6 and 7 not printed in the Gazette.]

962,170. PROCESS OF MAKING SILICON NITRID. ALF SINDING-LARSEN, Christiania, Norway. Filed Feb. 10, 1909. Serial No. 477,198.

1. The process of manufacturing silicon nitrid which comprises heating a compound or alloy of a metal and silicon to a temperature sufficient to react on nitrogen and introducing a current of nitrogen in contact therewith, said compound being liquid at the temperature at which the reaction takes place.

2. The process of manufacturing silicon nitrid which comprises heating a compound or alloy of a metal and silicon that becomes liquid at the reacting temperature of nitrogen and silicon, and conducting nitrogen in contact with said liquid compound or alloy and evaporating the metal.

3. The process of manufacturing silicon nitrid which comprises conducting heated nitrogen into contact with a melt of a compound or alloy of a metal and silicon.

4. The process of manufacturing silicon nitrid which comprises conducting nitrogen into contact with a melt of aluminium silicid and distilling the aluminium therefrom.

5. The process of manufacturing silicon nitrid which comprises conducting heated nitrogen into contact with a melt of aluminium silicid and distilling the aluminium therefrom.

962,171. TEMPLET OR GAGE. ERNST JOHANNES PAUL SLOTTA, Coswig, near Dresden, Germany. Filed Apr. 8, 1909. Serial No. 488,607.



1. As a new article of manufacture, a templet-bolt consisting of a cylindrical main gage portion and a conical auxiliary gage portion, the conical auxiliary gage portion being connected with the main gage portion without any line or ring of demarcation, the said main gage portion and the said conical auxiliary portion being visibly distinguishable, the one from the other, by their respective surfaces being differently finished.

2. As a new article of manufacture, a templet bolt consisting of a cylindrical main gage portion and a conical auxiliary gage portion, the said auxiliary gage portion being connected with the main gage portion without any line or ring of demarcation, the said main gage portion and the said auxiliary gage portion being visibly distinguishable, the one from the other by different finishes, such as by grinding the surface of the said auxiliary gage portion and polishing the surface of the said main gage portion, or vice versa.

3. As a new article of manufacture, a templet-bolt consisting of a cylindrical main gage portion and two conical auxiliary gage portions, the first auxiliary gage portion being connected with the second auxiliary gage portion and the second auxiliary gage portion with the main gage portion without any line or ring of demarcation, the said second auxiliary gage portion and the said main gage portion and first auxiliary gage portion being visibly distinguishable, the one from the other, by grinding or polishing the surface of the said second auxiliary gage portion and leaving unground or unpolished the surfaces of the said main gage and first gage portions.

962,172. TOY AEROPLANE. EDWARD WANTON SMITH, Philadelphia, Pa., assignor of one-third to Edward G. Steinmetz, Jenkintown, Pa. Filed Jan. 20, 1909. Serial No. 473,260.



1. A toy aeroplane comprising a frame, propellers provided with shafts journaled in the ends of said frame, a torsional spring connecting the inner ends of said shafts, and means for temporarily preventing said propellers from rotating.

2. A toy aeroplane comprising a frame, propellers provided with shafts journaled in the ends of said frame, a torsional spring connecting the inner ends of said shafts, means for temporarily preventing said propellers from rotating, and means for automatically releasing said propellers.

3. A toy aeroplane comprising a frame, propellers rotatively mounted thereon, means for rotating said propellers in opposite directions, means for locking said propellers against movement, and means for normally holding said locking means in inoperative position.

4. A toy aeroplane comprising a frame, a propeller rotatively mounted thereon, means for rotating said pro-

peller, a pivoted brake lever, means secured to one end of said lever for yieldingly holding said lever normally in inoperative position, and means at the other end of said lever for holding said lever in operative position.

5. A toy aeroplane comprising a frame, a pair of propellers rotatively mounted thereon, means for rotating said propellers, means for locking said propellers against movement, means for normally holding said locking means in inoperative position, and a single means for actuating said locking means to hold the same in operative position.

[Claims 6 to 10 not printed in the Gazette.]

962,173. PROCESS OF TREATING BRITTLE VEGETABLE FIBERS. EMIL GUSTAV STARK, Chemnitz, Germany. Filed Dec. 20, 1909. Serial No. 534,197.

1. A process of treating brittle vegetable fibers, such as those of capoke, akone, *Calotropis procera*, and the like, for dyeing and spinning, consisting in treating the fibers with organic dissolvents, washing with water, and drying at a moderate temperature, for working up the fibers to yarns and twines by a special process on machines especially adapted therefor.

2. A process of treating brittle vegetable fibers as mentioned, consisting in extracting the incrusting substances of the fibers by a weak alkaline solution of Turkey-red, or soapy liquors, or suds, or tannins, at a respective degree of heating, washing with water, and drying at a moderate temperature, for working up the fibers thus treated to yarns and twines by a special process on machines especially adapted therefor.

962,174. DOOR AND DOORWAY FOR REFRIGERATING-APARTMENTS AND SIMILAR STRUCTURES. SAMUEL PRICE STEVENSON, Chester, Pa. Filed Mar. 9, 1905. Serial No. 249,232.



1. The combination, with a door-way having its contacting margin wholly in a common plane at the top and sides; of a door having an internal cavity, whose area is greater than the area of the door-way opening, said door having a contacting margin at its top and sides, wholly in a common plane, adapted to overlap and abut against the margin of the door-way; a non-conducting filling arranged within said cavity; and hinges adapted to support the door in such relation to the door-way that the internal cavity of the door shall overlap the edge of the door-way opening.

2. The combination, with a door-way having its contacting margin wholly in a plane surface at the top and sides; of a door having its contacting face at its top and sides wholly in a common plane adapted to overlap the face of said plane margin; and a coating of grease maintained between the contacting surfaces of the door and the door-way margin for retarding the deposit of ice and frost and facilitating the liberation of the door from the door frame, substantially as set forth.

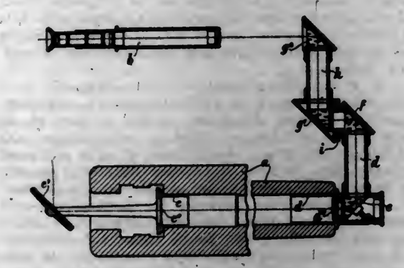
3. The combination with a door-way having its contacting margin wholly in a plane surface at the top and sides; of a door having its contacting face at its top and sides wholly in a common plane adapted to overlap the face of said plane margin; a pad of compressible material mounted upon said face of the door, and a coating of grease upon said pad for retarding the deposit of ice and frost and facilitating the liberation of the door from the door frame, substantially as set forth.

4. The combination, with a refrigerator apartment; of a door-way having its contacting margin wholly in a common plane at the top and sides, said contacting margin being upon that face of the door-way which is within the apartment; a door having an internal cavity whose area is greater than the area of the door-way opening, said door having a contacting face at its top and sides wholly in a common plane adapted to overlay and abut against the margin of the door-way; hinges arranged upon that face of the door-way which is within the apartment, whereby the door is adapted to open inwardly within said apartment; and a sheet metal covering on the surface of the door which is adjacent to the door-way opening.

5. The combination, with a refrigerator apartment; of a door-way having its contacting margin wholly in a common plane at its top and sides, said contacting margin being upon that face of the door-way which is within the apartment; a door having its contacting face at its top and sides wholly in a common plane adapted to overlap and abut against the margin of the door-way; a pad of compressible material mounted upon the contacting face of the door; a sheet metal covering on the surface of the door which is adjacent to the door-way opening; and a sill having portions sloping inwardly in opposite directions from a ridge located within the door-way and overhung by the outer face of the door at the lower extremity thereof.

[Claims 6 and 7 not printed in the Gazette.]

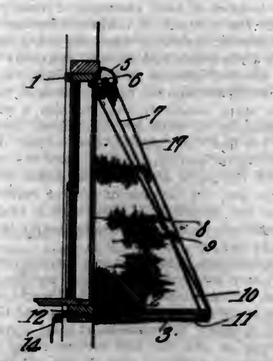
962,175. TESTING APPLIANCE. RUDOLF STRAUBEL, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed Feb. 3, 1910. Serial No. 541,928.



1. An appliance for testing the sighting device of a gun, consisting of a collimator, which comprises a collective lens and a mark placed in the focal plane of the lens this collimator being adapted to be inserted in the gun with the collective lens directed toward the barrel mouth and with the collimator axis parallel to the bore axis, and a mirror system composed of two partial systems having separate entrance and exit openings and being rotatably jointed together with the exit opening of one partial system and the entrance opening of the other facing each other, the angle of deflection of one partial system being 180° and that of the other partial system being zero.

2. An appliance for testing the sighting device of a gun, consisting of a collimator, which comprises a collective lens and a mark placed in the focal plane of the lens this collimator being adapted to be inserted in the gun with the collective lens directed toward the barrel mouth and with the collimator axis parallel to the bore axis, and a mirror system composed of two partial systems having separate entrance and exit openings and being rotatably jointed together with the exit opening of one partial system and the entrance opening of the other facing each other, one partial system comprising an isosceles right-angled ridge prism and an isosceles right-angled simple reflecting prism, which prisms are so combined that the angle of deflection of the partial system is 180°, and the other partial system comprising two isosceles right-angled simple reflecting prisms, which are so combined that the angle of deflection of the partial system is zero.

962,176. AWNING. WILLIAM G. TEMPLETON, Colorado Springs, Colo. Filed Oct. 5, 1909. Serial No. 521,028.



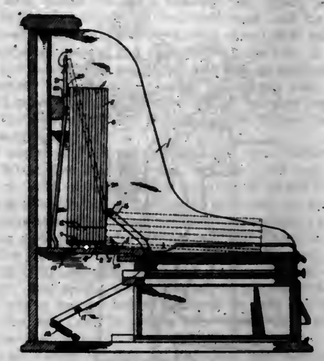
1. A device of the class described comprising a window-frame; a platform extending from the lower portion of the frame; spaced braces uniting the outer end of the platform with the frame; a roller journaled for rotation upon the frame above the platform; a curtain wound about the roller; and guides located upon the free end of the curtain and arranged to reciprocate upon the braces.

2. A device of the class described comprising a window-frame; a platform extending from the lower portion of the frame; spaced braces uniting the outer end of the platform with the frame; a roller journaled for rotation upon the frame above the platform; a curtain wound upon the roller; guides located upon the free end of the curtain and arranged to reciprocate upon the braces; a pulley mounted upon the platform; a flexible element connected at one end with the lower end of the curtain and passed about the pulley, the free end of the flexible element being extended through the lower portion of the frame; and a retaining device mounted upon the inner face of the lower portion of the frame and arranged to receive the free end of the flexible element.

3. A device of the class described comprising a window-frame; a platform extending from the lower portion of the frame; spaced braces uniting the outer end of the platform with the frame; a roller journaled for rotation upon the frame above the platform; a curtain wound about the roller; guides located upon the free end of the curtain and arranged to reciprocate upon the braces; a housing mounted upon the upper portion of the frame arranged to inclose the roller; and a screen connected at its upper end with the housing and at its lower end connected with the platform to inclose the platform completely.

4. A device of the class described comprising a window-frame; a platform extending from the lower portion of the frame; spaced braces uniting the outer end of the platform with the frame; a roller journaled for rotation upon the frame above the platform; a curtain wound about the roller; guides located upon the free end of the curtain and arranged to reciprocate upon the braces; a pulley carried by the platform; a flexible element connected with the lower end of the curtain and having its intermediate portion passed about the pulley, the free end of the flexible element being extended through the lower portion of the window frame; a jamb pulley mounted upon the inner face of the lower portion of the window frame and arranged to receive the free end of the flexible element; a housing mounted upon the upper portion of the window frame and arranged to inclose the roller; and a screen connected at its upper end with the housing and at its lower end connected with the platform to inclose the platform completely.

962,177. CREDIT-CABINET. ANDREW J. TICE, Salem, Ohio, assignor to The American Case & Register Company, Salem, Ohio, a Corporation of Ohio. Filed Aug. 21, 1909. Serial No. 513,912.



1. In a credit cabinet of the class described, a casing or frame provided with a shelf, a series of leaves provided with base bars, hinge plates secured to said bars and pivotally connected together between the meeting faces of the bars, and a retaining plate hinged to the base bar of the front leaf and removably secured to the shelf.

2. In a credit cabinet of the class described, a casing or frame, a post secured to said casing and notched at its upper end, and a series of leaves hinged together and removably secured to the casing, the rearmost leaf of the series provided with a loop adapted for engagement with the post.

3. In a credit cabinet of the class described, a casing or frame, said casing or frame provided with a shelf, a post secured to said casing and notched at its upper end, a series of leaves hinged together, the rearmost leaf of the series provided with a loop adapted for engagement with the post, a plate hinged to the front leaf of the series and means for holding said plate in position upon the shelf.

4. In a credit cabinet of the class described, a casing or frame, a series of leaves detachably hinged together, one of the leaves of the series provided with a hinged retaining plate, means for detachably connecting said retaining plate to the casing or frame, one of said leaves of the series provided with a loop, and a post with which the loop engages.

5. In a credit cabinet of the class described, a casing or frame, a post secured to said casing, and a series of leaves hinged together and removably secured to the casing, the rear-most leaf of the series provided with a loop for engagement with the post.

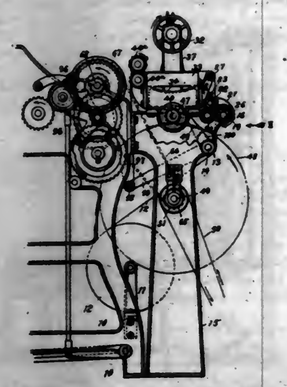
[Claim 6 not printed in the Gazette.]

962,178. MACHINE FOR MAKING WINDOW-SHADES. BENJAMIN W. TUCKER, Newark, N. J., assignor to John Beecher Patton, Kent, Ohio. Filed Aug. 21, 1906. Serial No. 331,486.

1. In a machine for making window shades, the combination with means for supporting shade material, of feeding mechanism, means for forming a loop for the shade slat, means for forming a side hem at each edge of the material lengthwise thereof, sewing mechanism, together with a take-up device arranged to operate on the material between the loop-forming mechanism and the sewing mechanism.

2. In a machine for making window shades, the combination with means for supporting shade material, of feeding mechanism, means for forming a loop for the shade slat, knives for cutting the material lengthwise thereof, means for forming a side hem at each edge of the material, sewing mechanism, together with a tension

and take-up device arranged to operate on the material between the loop-forming mechanism and the sewing mechanism.



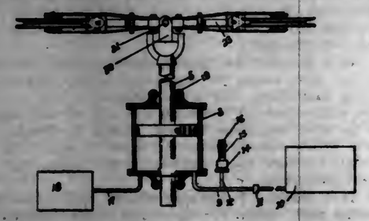
3. The combination with means for supporting the shade material, of feeding mechanism, means for forming a loop for the shade slat, means for forming a side hem at each edge of the material lengthwise thereof, a take-up device acting upon the material between the hem-forming means and the loop-forming means, means for operating the sewing mechanism, sewing mechanism, together with means operated by the take-up device adapted to stop the means for operating the sewing mechanism.

4. The combination with means for supporting shade material, of feeding means, edge-trimming knives cutting the material lengthwise, mechanism for forming a loop for the shade slat, a transverse cutting knife, means for forming a side hem at each edge of the material lengthwise thereof, a take-up device acting upon the material between the hem-forming means and the loop-forming mechanism, means for operating the sewing mechanism, sewing mechanism, together with means operated by the take-up device adapted to stop the means for operating the sewing mechanism.

5. The combination with means for supporting a web of material, of two sets of feed rolls, a tension device acting on the material between said feed rolls, sewing and hem-forming means for forming a hem at each edge lengthwise of the material, means for operating the sewing means, and connections between the tension device and the operating means whereby the latter may be stopped when the sewing speed is too great.

[Claims 6 to 11 not printed in the Gazette.]

962,179. ELASTIC OVERHEAD TRUCK FOR RAILWAYS. HOWARD H. TUNIS, Baltimore county, Md., assignor to American Monorail Company, a Corporation of South Dakota. Filed Sept. 19, 1908. Serial No. 453,860.



1. In a monorail system, in combination, for balancing a car, a guide, a follower mounted on the car to move relatively thereto, and a plurality of yielding members of different tension interposed between the car and the follower.

2. In a monorail system, in combination, for balancing a car, a guide, a follower mounted on the car to move relatively thereto, and a plurality of yielding members of different resistances interposed between the car and the follower, the member of least resistance normally operating to maintain the follower in contact with the guide, the member of greater resistance operating when the follower is moved to a predetermined position relatively to the car.

3. In a monorail system, in combination, for balancing a car, an overhead balance rail, a follower mounted on the car to move relatively thereto, and a plurality of yielding members of different resistances interposed between the car and the follower, the member of least resistance normally operating to maintain the follower in contact with the guide and to resist minor lateral tendencies of the car, the member of greater resistance operating when the follower has moved to a predetermined position relatively to the car to resist major lateral tendencies of the car.

4. In combination, a track, a car thereon, an overhead rail, a follower coöperating with the overhead rail and mounted on the car to move relatively thereto, a plurality of members of different resistances interposed between the car and the follower, the member of least resistance normally bearing on the car and follower, the member of greater resistance normally free of one of said members and brought into tension when the other is flexed to a predetermined degree.

5. In combination, a track, a car thereon, an overhead rail, a follower coöperating with the overhead rail and mounted on the car to move relatively thereto, a plurality of members of different resistances interposed between the car and the follower, the member of least resistance normally bearing on the car and the follower, the member of greater resistance normally resting against one of said members, and means for maintaining it normally free of the other of said members.

[Claims 6 to 16 not printed in the Gazette.]

962,180. ATTACHMENT FOR HORSE-COLLARS. WILLIAM B. WALKER, Gustine, Cal. Filed Mar. 9, 1910. Serial No. 548,151.



1. A device of the class described including a flexible body, a transversely extending flexible element secured to opposite portions of the body and spaced therefrom at intermediate points for the reception of a tug between said element and the body, and a strap extending from said element.

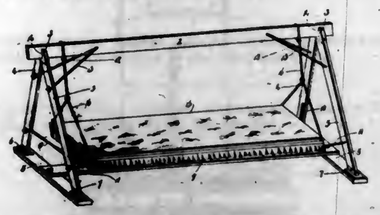
2. The combination with a hame, of a flexible base folded thereon and secured thereto, a transversely extending device secured upon the body, said device being spaced at intermediate points from the body to receive a tug hook, and a strap extending from said device for engaging said hook.

3. The combination with a hame, of a flexible body secured thereto and folded thereon, a band secured to and extending transversely of the body, there being a space between the body and band for the reception of a tug hook and tug, and means extending from the band for engaging said hook and tug to hold the same against disengagement.

4. The combination with a hame, of an attachment including a body secured to and folded on the hame, means connected to the body for holding a tug hook in contact therewith, and flexible means connected to the body for engaging the hook to prevent the disengagement of a tug therefrom.

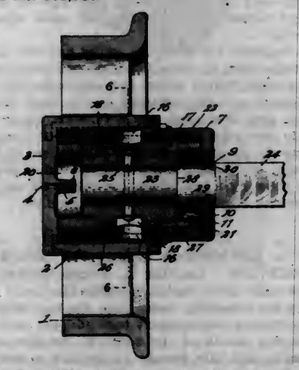
5. The combination with a hame, of a body secured thereto and folded thereon, means on the body for holding a tug hook in contact with the body, and a strap extending from said means for engaging said hook and the tug engaged by it.

962,181. HAMMOCK-SUPPORT. ORLO P. WARD, New Haven, Conn., assignor to The New Haven Upholstering Co., New Haven, Conn., a Corporation. Filed Feb. 7, 1910. Serial No. 542,652.



A hammock support comprising two bases, a longitudinal brace connecting the same, a pocket located at each end of the said bases, a post entered into each pocket, said posts extending upwardly and inclined toward each other, socket-pieces into which the upper ends of the posts extend, said socket-pieces formed with a notch, a top bar formed near its opposite ends with notches adapted to engage with notches in the socket-pieces and stay-rods connecting the top bar with the posts and the posts with the said longitudinal brace.

962,182. CENTRIFUGAL OILING-BEARING. FREDERIC A. WARREN, Canon City, Colo. Filed Dec. 11, 1909. Serial No. 532,565.



1. In an oiling bearing as specified, the combination with a wheel hub closed at one end and having an inlet aperture in the closed end, of a bearing box secured within said hub having its inner end open, and an axial hole in its opposite end, a sleeve in said box, an axle spindle extending through the axial hole in the box and secured within the sleeve, said sleeve having a chamber in each end, an annular groove in its periphery and passages connecting said groove and chambers.

2. In an oiling bearing as specified, the combination with a wheel hub closed at one end and having an oil inlet hole in said closed end, of a bearing box rigidly secured within said hub having its inner end open and its outer end closed, and an axial hole in said closed end, said box being projected beyond the open end of the hub, a sleeve in said box having a chamber in each end, an annular, circumferential groove, and passages connecting said chambers and groove, and an axle extending through the axial hole in the bearing box and rigidly secured within the bore of the said sleeve.

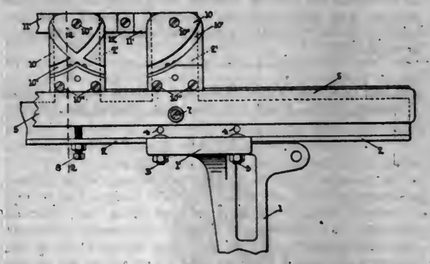
3. In an oiling bearing as specified, the combination with a wheel hub closed at one end, an inlet hole being formed in said closed end, of an axle, a sleeve secured upon said axle having a chamber in each end, an annular, circumferential groove, and passages connecting the said chambers and groove; a boxing rotatably mounted upon said sleeve having an axial hole at one end for the passage of the axle, its opposite end being flush with the end of the sleeve, said boxing being inserted in the wheel hub, an annular collar on the boxing adapted to rest against the end of the hub, and securing bolts which pass through said collar and hub.

4. In an oiling bearing as specified, the combination with a wheel hub having a closed end, a lug projecting centrally from the inner face of said end and terminating in an annular rim, an oil inlet being formed through said lug and closed end, of an axle, a sleeve rigidly secured upon the axle having an annular, circumferential groove, a circular chamber in each end and passages connecting the chambers with the groove, and a boxing rotatably mounted on the sleeve and secured within the hub against rotation, said boxing being extended beyond the open end of the hub and provided with an axial hole through which the axle passes.

5. In an oiling bearing as specified, the combination of a wheel hub closed at one end, a boxing rigidly secured in the hub and closed at its outer end, which is formed with an axial hole, while the closed end of the hub has an oil inlet passage, a sleeve in the boxing, its ends abutting respectively against the ends of the boxing and hub, said sleeve being provided with an annular, circumferential groove, a chamber in each end, and inclined passages connecting the chambers with the annular groove, an axle extending through the axial hole of the boxing and into the bore of the sleeve, and means for securing said sleeve upon the axle.

[Claims 6 to 12 not printed in the Gazette.]

962,183. LAY FOR NARROW-WARE LOOMS. WILLIAM WATTIE, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Jan. 22, 1908. Serial No. 412,170.

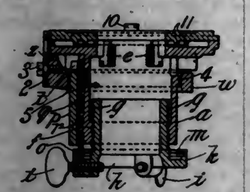


1. In a narrow ware loom, the combination with a bracket or extension on the lay sword, of an angle metal bar secured to said bracket or extension, and having a horizontal portion and a vertical portion, the vertical portion having individual, integral and separated upwardly extending parts, forming supports for the guide

blocks for the shuttles, and said guide blocks, secured to said upwardly extending parts, and a bar secured to the upper ends of said upwardly extending parts, to hold the upper ends of the reeds, and a bar or bars secured to the lower part of said upwardly extending parts, to hold the lower ends of the reeds.

2. In a narrow ware loom, the combination with a bracket or extension on the lay sword, of an angle metal bar secured to said bracket or extension, and having a horizontal portion and a vertical portion, the vertical portion having individual integral and separated upwardly extending parts, forming supports for the guide blocks for the shuttles, and said guide blocks secured to said upwardly extending parts, and a bar also secured to the upper ends of said upwardly extending parts, said bar having offsets therein for the reeds, and bars secured to the lower part of said upwardly extending parts to form pockets for the lower ends of the reeds.

962,184. DIE-STOCK. FREDERIC E. WELLS, Greenfield, Mass. Filed Nov. 13, 1909. Serial No. 527,773.



1. In a die-stock, the combination with a body member having threads formed therein, a pipe-clamping member having threads for engaging the threaded portion of said body member, a grooved annular portion integral with the clamping member, a wedge member provided with tongues for engaging the grooved portion of the annular member, a ring member rotatively mounted on the body member and having a recess formed therein for receiving the inclined surface of the wedge member during the relative axial movement of the wedge and ring members, chasers provided with teeth, a scroll member engaging the grooves of the chasers, and connecting means between the ring and scroll member, whereby the chasers may be operated during the thread-cutting operations, as described.

2. In a die-stock, the combination with a pipe-clamping member, a body member provided with a rib, a rotative ring member mounted on the body member, a member interposed between the said clamping member and the ring member and having an inclined end portion for engaging the ring member, and a groove for receiving the rib whereby when the body portion is rotated, the ring member will be advanced toward the inclined surface of the interposed member and simultaneously operated, chasers, and connecting means between the ring and chasers, substantially as described.

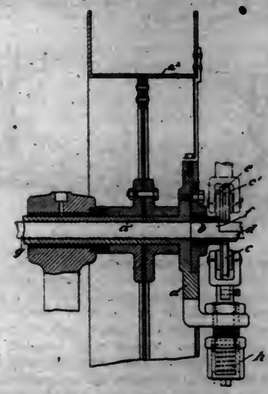
962,185. DISPLAY-RACK. JOHN EDWIN WHITE, Grand Rapids, Mich. Filed Nov. 22, 1909. Serial No. 529,270.



1. In a display rack, a main standard, a head thereon having a plurality of plane marginal surfaces, a series of spring sockets in the margin of the head, an arm having a plane surface at the end to engage a surface of the head, a pin in the end of the arm adapted to be inserted in any one of said sockets and frictionally held therein, and means for preventing the arm from turning about the axis of the pin.

2. A display rack, comprising a standard, a head on the standard having a hexagon head provided with a plurality of substantially square marginal surfaces, arms having substantially square ends to fit against the surfaces of the heads, spring sockets in the respective surfaces of the head, pins in the arms to insert in the sockets, and a clip on each arm adapted to engage the front or rear surface of the head and hold the arms from turning about the axis of the pins.

962,186. WINDING-HEAD FOR ARMORING CABLES AND THE LIKE. EMIL WITZENMANN, Pforzheim, Germany. Filed Mar. 30, 1909. Serial No. 486,759.



1. In combination a winding head with winding rollers thereon for spirally winding metal bands on cables, a hollow shaft in the winding head, one or more rigid supporting members directly in front of the hollow shaft and introduced between the cable and the winding rollers for supporting the rollers as the metal bands are wound on to the cable and thereby relieving the cable of the pressure of the rollers and preventing the cable being damaged thereby.

2. In a machine for armoring cables and the like with spiral metallic hose, a centrally perforated rotatable winding-head, a tape-guiding roller, and supplementary rollers each presenting a cheek, mounted on the head and rotating also on their own axes, and a tubular member fitting the hole in the head and presenting a bent tongue projecting into the plane of motion of said rollers and adapted to receive the pressure of the tape-guiding roller and also presenting a part on which the cheeks of the supplementary rollers bear, substantially as described.

962,187. DEVICE FOR REMOVING CREAM FROM MILK-BOTTLES. LEONARD A. YOUNG, Detroit, Mich. Filed Dec. 26, 1908. Serial No. 469,471.

A device for removing cream from the top of milk bottles, comprising a displacement tube adapted to be introduced into the mouth of the bottle to displace the contents therein, said tube having an opening in the bottom thereof, a flat valve seat surrounding said opening, a disk valve adapted to engage said seat to close said opening, a spring valve rod attached to said valve, the wall of the tube at its upper end having a vertical slot therein, and a lateral slot extending from the bottom of said vertical slot, the upper end of said valve rod having a right angled portion extending through and normally lying in said vertical slot and movable into said lateral slot, and a handle upon the portion of the valve rod extending



through the slot in said tube for lifting the valve rod vertically and for moving it into said lateral slot.

962,188. BROOM. JOHN M. ZIMMERLEE, Bethany, Mo. Filed Oct. 4, 1909. Serial No. 520,800.

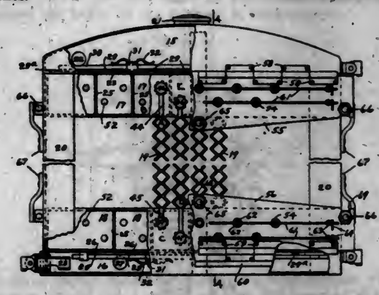


A broom protector comprising a body and a tubular neck rising therefrom, the neck, at its upper edge, being provided with an integrally formed, upstanding lip, and with a flexible ring formed integrally with the lip, the periphery of the ring being intersected by the lip, and the lip being apertured within the periphery of the ring, to receive a nail, the ring being arranged to be bent into alinement with the neck and the lip.

962,189. RADIATOR. EMIL BEHRINGER and HERMAN BEHRINGER, Brooklyn, N. Y. Filed Aug. 7, 1909. Serial No. 511,713.

1. A frameless radiator comprising a water-tank, a water recipient below the same, a series of compartments under said tank adapted to communicate therewith, a second series of compartments on the said recipient adapted to discharge therein, a plurality of cooling elements intermediate said two series of compartments, and supports separating the said water-tank from the said recipient.

2. A radiator comprising a tank, a series of compartments thereunder, one of said compartments being adapted to receive the water from said tank through a suitable aperture, a lower series of compartments including one similarly apertured, a recipient receiving the water from the apertured compartment in said lower series, and cooling elements conveying the water up and down alternately to and from the several upper and lower compartments.



3. A radiator comprising a tank provided with discharge apertures, a series of compartments adapted to receive the water each from one of said apertures, cooling elements connected up with said compartments and conveying the water downwardly therefrom, a second series of apertured compartments connected with the lower ends of said cooling elements and receiving the water from the latter, and a lower recipient adapted to receive the water flowing through said other series of apertured compartments simultaneously.

4. A radiator comprising a tank having a suitable number of discharge apertures and valves therefor, a series of compartments adapted to receive the water each from one of said apertures, cooling elements conveying the water flowing out of said compartments, a second series of compartments receiving the water from said cooling elements, a recipient thereunder, said second series of compartments being also provided with apertures adapted to discharge into said recipient and with valves for the latter, and means of controlling said two series of valves whereby one or more can be opened in each series to produce either a successive or a simultaneous flow of the water from the tank to the recipient through the intervening compartments and thereto connected cooling elements.

5. A radiator comprising a plurality of compartments, a cooling element therebetween having tubular members, said members entering said compartments through suitable orifices in one wall thereof, and retaining guides for said members on the opposite wall of said compartments.

[Claims 6 to 12 not printed in the Gazette.]

962,190. RAZOR-STROPPING DEVICE. CHARLES FREDERICK BENEDICT, Brooklyn, N. Y., assignor to Samuel Kanner, New York, N. Y. Filed Feb. 8, 1909. Serial No. 476,776.

1. In a stropping device the combination of a holder, a blade carriage to support an object to be stropped movably supported therein, a strop guided in the holder and bearing on the carriage and a presser plate bearing on the strop, an adjusting bar located within the blade carriage with its ends extending without the same, a pair of adjusting screws in threaded engagement with the blade carriage and connected with the adjusting bar.

2. In a stropping device the combination of a holder having guide openings, a blade carriage to support an object to be stropped, a cross-head on the carriage extending through the guide openings of the holder, screws in threaded engagement with the cross-head, an adjusting bar in the carriage connected with said screws and bearing on the object in the carriage, and a strop in frictional engagement with the carriage.

3. In a stropping device the combination of a holder, a blade carriage movably supported therein, adjusting screws carried by the carriage, an adjusting bar connected with said screws, a pair of columns extending from said blade carriage, a spring connecting the columns, an ad-

justing screw in threaded engagement with said spring, a presser plate below the spring and bearing up against the latter screw, and a strop between the roof of the carriage and presser plate.

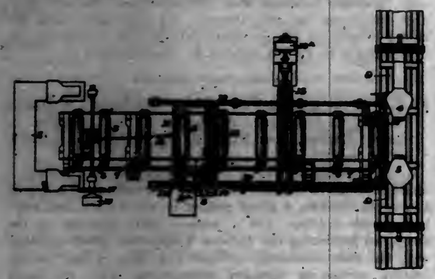


4. In a stropping device the combination of a holder, a blade carriage to support an object to be stropped movably supported therein, a strop guided in the holder and in frictional engagement with the carriage and a strop adjuster connected with the holder.

5. In a stropping device the combination of a holder, a blade carriage to support a blade movably supported therein, a strop guided in the holder to reciprocate the carriage, a pair of guide rods connected to opposite sides of the holder, a pair of rollers movably connected with the said guide rods, one of said rollers in the path of one leg of the strop and the other roller in the path of the other leg thereof and a flexible medium between the rollers.

[Claims 6 to 13 not printed in the Gazette.]

962,191. GUIDING APPARATUS FOR PLATE-TRIMMING SHEARS. EDWARD R. BIERMAN, Lorain, and GEORGE H. KRAST, Elyria, Ohio, assignors to National Tube Company, Pittsburg, Pa., a Corporation of New Jersey. Filed May 26, 1909. Serial No. 498,494.



1. In apparatus for cutting metal plates, the combination with a shear and means on which plates are delivered to said shear, of guiding means engaging with and controlling the plate in its forward movement to the shear and mechanism on which said guiding means is transversely movable; substantially as described.

2. In apparatus for cutting metal plates, the combination with opposing shears and means on which plates are delivered endwise to said shears, of guiding means engaging with and controlling the plate in its forward movement to the shears said guiding means being transversely adjustable; substantially as described.

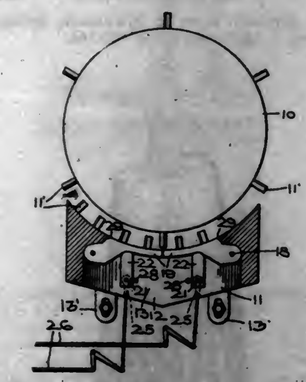
3. In apparatus for shearing plates, plate guiding mechanism comprising a magnet arranged to engage with the plate being sheared a transversely adjustable support on which the magnet is movably mounted, said magnet being adapted to move forwardly with and control the movement of the plate during said shearing operation and means for transversely adjusting said support; substantially as described.

4. In apparatus for shearing metal plates, plate delivering mechanism comprising means on which the plates are fed forwardly to the shearing mechanism, guiding mechanism detachably engaging with the plates adapted to move with and guide the plates moving forwardly during the shearing operation and means for adjusting the guiding mechanism transversely relative to said shear; substantially as described.

5. In apparatus for shearing plates, plate delivering mechanism comprising means on which the plate is fed forwardly to the shear, mechanism detachably engaged with the plate adapted to move forwardly with and guide the plate during the shearing operation and means on which said guiding mechanism is mounted, said means being movable sidewise; substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

962,192. ADJUSTABLE CONCAVE. FRANK O. BLIXT, Worthington, Minn. Filed Jan. 23, 1909. Serial No. 473,922.

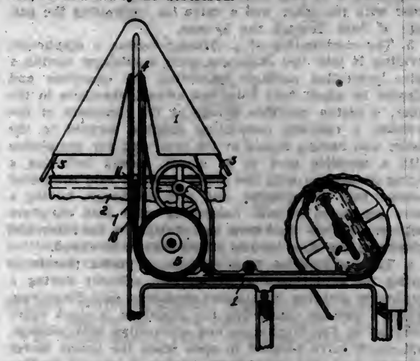


A concave for threshing machines comprising a base casting having a plurality of spaced teeth, said casting having a plurality of slots formed therein in line with respective teeth, concave sections pivoted in the slots, said sections carrying teeth and being movable to lie at times flush with the upper face of the concave and being movable out of operative position, cam members mounted beneath the sections, and means for rocking the cam members for vertical movement of the concave sections.

962,193. ATTACHMENT FOR CLOTH DOUBLING AND FOLDING MACHINES. ANDREW JOSEF BOHNENGEL, Toledo, Ohio. Filed Nov. 8, 1909. Serial No. 526,764.

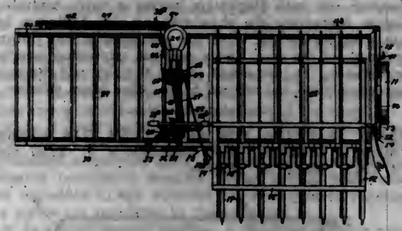
1. In a machine of the class described, an arm adapted to project between the folds of the goods being doubled and having its top edge channeled and its free end projected to adjacent the fold line of the goods and provided with a tape passage which extends lengthwise of the goods and communicates with said channel, a removable cap strip for said channel, and tape carrying means associated with the outer end of the arm, substantially as described.

2. In a machine of the class described, an arm adapted to project between the folds of the goods being doubled and having a channel in its top and a passage in its free end which registers with said channel and is adapted to guide a tape to feed lengthwise between the folds of the goods adjacent to the fold line thereof, a strip hinged to said arm and adapted to close the open side of said channel, and a tape-case disposed adjacent the outer end of said arm in position to feed a tape strip to said channel, substantially as described.



3. A device of the class described, comprising an arm adapted to project between the folds of goods being rolled, said arm having a tape feeding channel therein and its inner or free end angled and the channel continuing therethrough, removable means coöperating with the arm to form such channel, and means at the outer end of the arm for carrying a tape for feeding through the channel.

962,194. GRAIN-LOADING MACHINE. JOHN R. BRADEN, Rowan, Iowa. Filed Feb. 8, 1908. Serial No. 415,237.



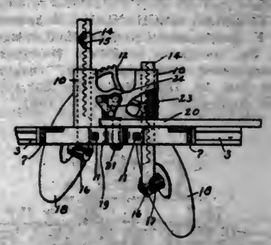
1. A grain loader, comprising, in combination, a wheeled frame, a longitudinal rake carried by said frame, said rake comprising a plurality of teeth fixedly secured to a rotatable shaft, a crank shaft journaled parallel to said rotatable shaft, and having sliding connections between its cranks and said teeth, means for rotating said crank shaft, to raise or lower said teeth, a reel located above said rake, and means to revolve said reel.

2. A grain loader, comprising, in combination, a wheeled frame, a longitudinal rake carried by said frame, a horizontal conveyer and an inclined conveyer in communication with said rake, a plurality of cranks slidably connected to the teeth of said rake, whereby to adjust their elevation, a reel mounted for vertical and longitudinal adjustment above said rake, and means to regulate such adjustment.

962,195. PLOW. JUDSON BUCHANAN, Chattanooga, Tenn. Filed Jan. 11, 1909. Serial No. 471,589.

1. In a rotary mold-board plow, the combination with carrying wheels and a frame adapted for two-way draft, of two disks directed oppositely and movable up and down, a reversible tongue, and means intermediate said tongue and said disks for alternately raising and lowering the latter by the reversal of said tongue.

2. In a rotary mold-board plow, the combination with carrying wheels and a frame adapted for two-way draft, of two disks in a line parallel to the draft line and directed oppositely and movable up and down, a reversible tongue having one end hinged to said frame for horizontal movement through half a circle, and means intermediate said tongue and said disks for alternately raising and lowering the latter by the reversal of said tongue.



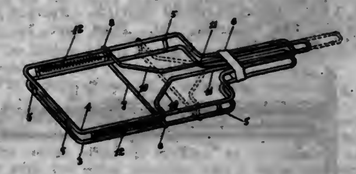
3. In a rotary mold-board plow, the combination with carrying wheels and a frame adapted for two-way draft, of two disks directed oppositely, vertically slidable posts supporting said disks, a reversible tongue, and means intermediate said tongue and said posts for alternately raising and lowering the latter by the reversal of said tongue.

4. In a rotary mold-board plow, the combination with carrying wheels and a frame adapted for two-way draft, of two disks directed oppositely, vertically slidable posts supporting said disks, an oscillatory member engaging said posts, a reversible tongue, and means intermediate said tongue and said oscillatory member for oscillating said oscillatory member.

5. In a rotary mold-board plow, the combination with carrying wheels and a frame adapted for two-way draft, of two disks directed oppositely, vertically slidable posts supporting said disks, an oscillatory gear engaging said posts, a reversible tongue, and means intermediate said tongue and said oscillatory gear for oscillating said oscillatory gear.

[Claims 6 to 17 not printed in the Gazette.]

962,196. PLATE-LIFTER. GIUSEPPE CELLI, Leominster, Mass. Filed Nov. 9, 1909. Serial No. 527,028.



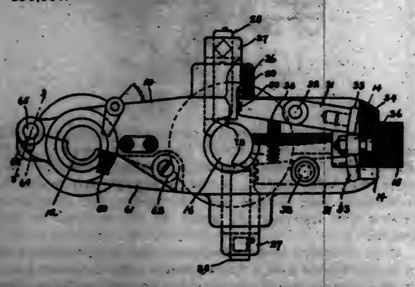
1. In an article lifting implement, frames having extensions forming handles, posts for connecting the frames a securing band encircling a portion of the extensions, a clamping member slidable on the frames and having parallel portions slidable in the band and between the extensions of the frame and springs for exerting pull on the said clamping member.

2. In an article lifting device, parallel frames posts connecting the frames, a clamping member having a bar slidable under one of the frames and having side portions embracing the said frames with extensions of the side portions forming an operating handle, and springs secured to the posts and to the clamping member for exerting a pull on the latter.

3. In an article lifting device, frames approximately rectangular in plan and extensions therefor, posts connecting said frames, a band encircling the said extensions, a clamping member formed with a bar slidable under the frames and acting as a support for the article to be lifted, the said clamping member having sides embracing the said frames and having converging portions terminating in parallel extensions, the said extensions being slidable

between the extensions of the frames, and springs having ends anchored to posts and their opposite ends connected to the sides of the clamping member and adapted to exert a pull on said clamping member.

962,197. TURNING MECHANISM. ZORESTER B. COBB, ROBERT F. SCOTT, and CHARLES H. THUMLERT, Philadelphia, Pa., assignors to Edwin Harrington, Son & Co., Incorporated, Philadelphia, Pa. Original application filed Jan. 16, 1907, Serial No. 352,499. Divided and this application filed Oct. 8, 1907. Serial No. 396,867.



1. A machine comprising a head having jaws and an aperture for a blank, a cutting tool reciprocating in said head transversely to the direction of and into said aperture, an oscillating lever fulcrumed on said head and connected with said tool, a guiding device engaged by said jaws, and a former directly connected with said guiding device between said jaws and acting through said lever on said tool.

2. A machine comprising a head having an aperture for a blank, tool holders movable in said head transversely to the direction of said aperture, said holders having teeth thereon, levers fulcrumed on said head, said levers having teeth thereon engaging the respective teeth on said holders, a spring disposed between said levers to cause them to retract said holders, and a former connected with said levers to cause them to move said holders inwardly.

962,198. DOOR-CLOSING DEVICE. PHILLIP JOHN DECKER, San Francisco, Cal. Filed Sept. 13, 1909. Serial No. 517,369.



1. In a spring hinge, the combination of a cylinder carried by one leaf of the hinge, said cylinder having a diaphragm dividing it into two chambers and said diaphragm having a valve controlled passage directly connecting the chambers and adapted to admit fluid from one chamber to the other, a piston operable in one of said chambers, a resilient member connecting the piston with the other leaf of the hinge, and means including a compression spring acting on the piston to draw the resilient member into the casing, said diaphragm having a valve controlled by-pass for slowly returning the fluid from one chamber to the other and thereby permitting the slow closing of the door.

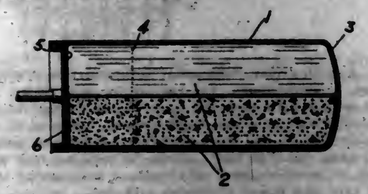
2. The combination of a cylinder having a diaphragm dividing it into two chambers, said diaphragm having a valve controlled passage connecting said chambers, a piston operable in one of the chambers, a resilient connecting member secured to the piston and having means at its outer end for connection with a movable part to be closed, means including a compression spring acting on the piston to draw said connecting member into the cylinder, and means for producing a slow cushioning return movement of said rod into the cylinder, said last-named means comprising a by-pass connecting one chamber of the cylinder with the other, and a valve for controlling the passage of fluid through the by-pass.

3. The combination of a cylinder having a diaphragm dividing it into two chambers, said diaphragm having a valve controlled passage connecting the chambers and adapted to admit fluid from one of said chambers to the other, a piston operable in one of the chambers of the cylinder, a resilient connecting member secured to the piston and having means at its outer end for connection with a movable part to be closed, means including a spring connecting with the piston to draw said connected member into the cylinder, and said diaphragm having a valve controlled by-pass connecting with said chambers and returning the fluid from one chamber to the other and permitting the slow closing of the part to be closed.

4. The combination of a cylinder, a piston therein, a spring for actuating the piston, said cylinder having a diaphragm dividing it into two chambers, said diaphragm having a passage connecting the chambers, a check valve mounted on the diaphragm and controlling said passage, said check valve adapted to open when the piston moves outward, and said diaphragm having a by-pass leading from one chamber of the cylinder to the other and provided with a valve, said by-pass producing a slow-cushion movement of the piston when the latter moves inwardly.

5. A spring hinge comprising two leaf members hingedly connected by a diagonal connecting plate whereby a door may open in either direction when the hinge is applied to it, a cylinder secured to one of said hinge members, a piston in the cylinder, means acting normally to press the piston inwardly within the cylinder and away from the hinge member to which the cylinder is connected, said cylinder having a diaphragm dividing it into two chambers and said diaphragm having a valve controlled passage connecting the chambers and also having a by-pass with controlling valve for producing a slow return movement of the door, and a resilient connecting member connected to the piston and passed through said diagonal connecting plate and secured to the other hinge member.

962,199. PACKING FOR ACETYLENE-GAS TANKS. STEWART DICKSON, Upper Montclair, N. J. Filed Apr. 4, 1910. Serial No. 553,345.

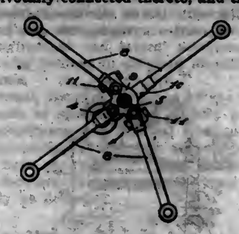


1. A packing or filling for acetylene gas tanks comprising sections adapted to be fitted together to fill the tank and each having a hard, strong skin and consisting throughout a portion of its length of a mixture of asbestos and cotton fiber and throughout the rest of its length of asbestos fiber, substantially as described.

2. A packing or filling for acetylene gas tanks consisting throughout a portion of its length of a mixture of cotton and asbestos fiber and throughout the rest of its length with asbestos fiber which resist heat incident to welding the tank, substantially as described.

962,200. CRANK CONNECTION FOR MULTICYLINDER-ENGINES. FRANK A. EDMUNDS and NIELS G. WARMING, St. Paul, Minn. Filed Feb. 13, 1909. Serial No. 477,507.

The combination with a plurality of radially movable members and means for guiding the same, of a shaft having a crank, a crank sleeve mounted on said crank, and crank rods connected to said radially movable members and to said sleeve, one of the said crank rods being rigidly connected to said crank sleeve and the other crank rods being pivotally connected thereto, and the said sleeve



being divided on a line that intersects the pivotal connections between said sleeve and two of said pivotally connected crank rods, substantially as described.

962,201. RAISIN-SEEDER. THOMAS H. ELLIOTT, Selma, Cal., assignor to Selma Fruit Company, Inc., Selma, Cal. Filed Sept. 4, 1907. Serial No. 391,326.

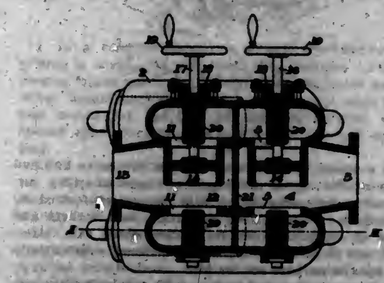


1. In a fruit seeding machine, a revoluble cylinder formed of a series of rings placed side by side, each of said rings being composed of a plurality of metallic segments, and plates embedded in the body of metal which forms the segments said plates having teeth formed upon one edge, the teeth of the plates forming one set of channels which circumscribes the ring and a second set of channels which are arranged transverse of the first channels and parallel longitudinally of the ring, the bottom of the two channels being substantially coincident with each other and with the outer circumference of the ring.

2. In a fruit seeding machine, a cylinder comprising rings having cast metal segments with members of an interlockable connection upon opposite sides, and impaling elements comprising serrated plates having bases cast and embedded in the material of the segments whereby the plates are supported in the segments.

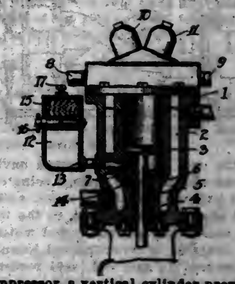
3. In a fruit seeding machine, a revoluble cylinder composed of a series of annular rings placed side by side, said rings consisting of a plurality of cast metal segments having spaced serrated plates extending transversely of the segments, and said plates having the inner ends cast and made substantially integral with the substance of the rings.

962,202. TWIN STRAINER. WILLIAM S. ELLIOTT, Pittsburg, Pa. Filed Oct. 12, 1907. Serial No. 397,132.



In a twin strainer, a casing divided internally into two valve chambers at opposite sides of a division wall, and a strainer chamber at each side of the valve chambers, one of the valve chambers having an entrance opening, and the other an outlet opening, and each chamber having alined ports communicating with the respective strainer chambers, and a double valve in each chamber, each valve being arranged to alternately close the port leading to one strainer chamber and close the port leading to the other strainer chamber, substantially as described.

962,203. GAS-COMPRESSOR. RALPH W. EMERSON and FRANK BISHOP, South Bend, Ind. Filed Oct. 28, 1908. Serial No. 459,850.



1. In a compressor, a vertical cylinder providing a clearance space at its bottom, a piston, a piston rod entering said cylinder through its bottom, a relief chamber, a constantly open communication between the relief chamber and the clearance space in the cylinder, and an oil-supply chamber associated with the relief chamber for supplying oil to the bottom of the cylinder through the constantly open communication.

2. In a compressor, a vertical cylinder, a relief chamber, an open communication between the cylinder and the relief chamber, near the bottom thereof, and means associated with the relief chamber for supplying oil through the open communication to the bottom of the cylinder, said bottom being cupped for the reception thereof.

3. In a compressor, a vertical cylinder having its dead end at its bottom, a piston for vertical movement in the cylinder to leave a clearance space at its dead end, a piston rod for the piston passing through the bottom of the cylinder, a relief chamber, 12, and an open communication between the clearance space of the cylinder slightly above the bottom of the cylinder and the relief chamber in alinement with the bottom thereof.

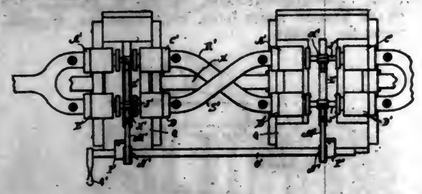
4. The combination with a compressor involving a cylinder, a piston in said cylinder and a piston rod extending through the dead end of said cylinder, of a relief chamber extraneous to the cylinder in open communication adjacent its bottom with the cylinder, an oil chamber associated with the relief chamber, and a valve controlling communication between said chambers.

5. The combination with a compressor involving a cylinder, a piston in said cylinder and a piston rod extending through the dead end of said cylinder, of a relief chamber extraneous to the cylinder in open communication adjacent its bottom with the cylinder, an oil chamber above the relief chamber, a closable filling opening to the oil chamber and a valve-controlled passage from the oil chamber to the relief chamber.

962,204. COMPOUND REVERSIBLE ROTARY ENGINE. HERMAN ENTKEMP, Philadelphia, Pa. Filed July 28, 1909. Serial No. 510,024.

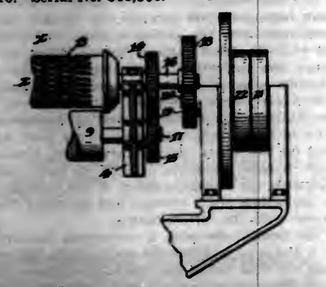
In a rotary engine, the combination of a high pressure and low pressure cylinder having grooves formed in their inner faces, a wheel mounted in each of said cylinders having openings therein, blades mounted in said openings, springs for normally holding said blades outward, trunnions formed with said blades, shoes mounted on said trunnions, cylinder heads each of which is provided with

a cam track, a central opening, screw receiving openings, and another opening entering the cam track, the shoes working in the track for drawing the blades inward, a cap secured over the opening in the line of the cam track, a shaft passing through the wheels in the casings, a cap having inlet and exhaust openings and grooves formed therein, a spring actuated gate valve mounted in one of said grooves for preventing the flow of steam in more than one direction through the cylinders, two inlet valves and two exhaust valves mounted upon the cap composed of outer casings having openings therein in line with the



openings in the cap, and inner casings having openings therein, one end of said inner casings being closed, shafts connecting an exhaust and inlet valve, rocker arms secured to said shafts, links pivoted to the lower ends of said shafts, a connecting rod, one end of which is attached to said links, brackets, a revolving rod journaled therein, rocker arms secured to said rod, said rocker arms being pivoted to the opposite ends of the connecting rods, a handle for operating the revolving rod, and pipes for connecting each of the exhaust valves of the high pressure cylinder with the inlet valves of the low pressure cylinder.

962,205. MACHINE FOR TREATING HIDES OR SKINS. WILLIAM EVANS, Philadelphia, Pa. Filed Feb. 12, 1910. Serial No. 543,560.

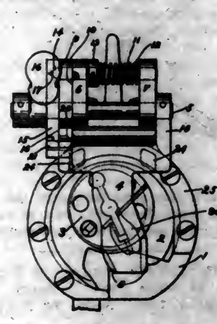


1. In a machine provided with a conveyer-apron and drive-roller, a grip-roller in diameter corresponding to that of said drive-roller, and said grip-roller provided with certain grooved formations broken by certain grooved formations in spaced relationship, oppositely arranged in respect to each other, to insure thereby, more smooth or even surface conditions being given to the hide or skin, substantially as described.

2. In a machine provided with a conveyer-apron and drive-roller, a grip-roller in diameter corresponding to that of said drive-roller, and said grip-roller provided with helical grooves broken by circular grooves in spaced relationship, arranged transversely to said helical grooves, substantially as and for the purposes described.

962,206. SHUTTLE-LOCKING DEVICE FOR SHOE-SEWING MACHINES. HENRY O. FLETCHER, Hyde Park, Mass. Original application filed Dec. 10, 1907, Serial No. 405,939. Divided and this application filed June 25, 1908. Serial No. 440,215.

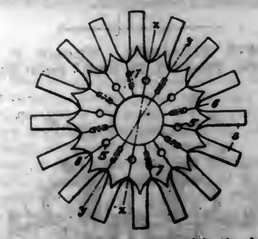
1. The herein described locking device for a shuttle box and its shuttle and bobbin case, consisting of a pivoted locking arm normally depending in position to retain the bobbin case in place, a spring actuated locking bolt extending transversely of the plane of pivotal movement of said locking arm eccentrically of its pivot, and an operating handle provided with means for automatically releasing said bolt and thereafter swinging the arm into unlocked position.



2. The combination with a shuttle box and its shuttle and bobbin case, of a pivoted locking arm normally depending in position to retain the bobbin case in place, a spring actuated locking bolt extending transversely of the plane of pivotal movement on said locking arm eccentrically of its pivot, and an operating handle provided with means for automatically releasing said bolt and swinging the arm into unlocking position, and thereafter permitting the bolt to spring into locking position to lock the arm raised.

3. The combination with a shuttle box, of a locking arm pivoted to swing adjacent the end of said box, said arm having a wide forked upper end, one of the forks thereof having a plate-like extension provided with separated beveled holes, and projecting lugs, and a coöperating plate and handle mounted coaxially of said arm next to said plate-like extension and provided with beveled apertures slightly farther apart than said openings and adapted at times to aline therewith, said handle plate having a lug in position to engage said lugs, one at a time according to the direction of movement of the handle, and a spring impelled locking bolt mounted in position to coöperate with said holes in locking and unlocking their respective parts according to the position into which said handle and locking arm are moved.

962,207. WHEEL CONSTRUCTION. ORLANDO A. FRICK, Defiance, Ohio, assignor to The Turnbull Wagon Company, Defiance, Ohio, a Corporation of Ohio. Filed Oct. 23, 1909. Serial No. 524,267.



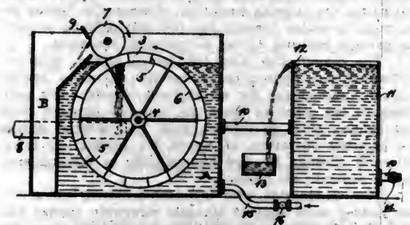
1. In a wheel the combination with the inner hub end portions of the spokes having flat lateral abutting surfaces and sockets provided within the seams formed by such surfaces, of keys inserted within said sockets and disposed at an incline relative to the wheel axis, alternate of said keys being oppositely inclined substantially as and for the purpose set forth.

2. In a wheel, the combination with the laterally abutting hub ends of spokes, of keys inserted on an incline between the abutting faces of such spokes and rigidly secured therein.

3. In a wheel, the combination with the laterally abutting hub ends of spokes, of keys inserted between the abutting ends of such spokes to lock the same against relative longitudinal and lateral movements, the alternate keys being inclined in different directions relative to the wheel axis.

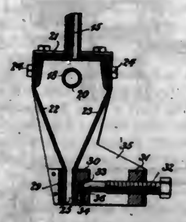
4. In a wheel, the combination with the laterally abutting hub ends of spokes having sockets provided transversely therebetween and inclined relative to the wheel axis, the inclination of alternate sockets being reversed, of wooden keys secured within such sockets and having their ends countersunk relative to the faces of the spokes, substantially as described.

962,208. CYLINDER-MACHINE. HALVOR GAARA, New York, N. Y. Filed Nov. 15, 1907. Serial No. 402,251.



In a cylinder machine the combination with a tank divided into two compartments, and a cylinder rotatably mounted in one of said compartments and provided on its inner periphery with conduits for the water passing through the upper portion of said cylinder, of a water supply conduit terminating in said tank and a second tank disposed in said supply conduit on a level with the said first tank, and provided with an overflow for the purpose specified, and a second water supply conduit connected with the cylinder containing tank, independently of said first supply conduit, and a shut-off valve in each of said supply conduits.

962,209. ROAD-OILER. WILLIAM H. GAILOR, Saratoga Springs, N. Y. Filed July 24, 1909. Serial No. 509,458.

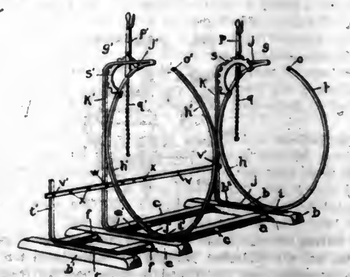


1. In a road oiling device, a delivery reservoir, comprising a cover, end members, side members having converging upper parts and straight parallel lower parts, the latter terminating in spaced apart parallel edge portions and means for varying the distance between the said spaced apart parallel edge portions of the said side members.

2. In a road oiling device, a delivery reservoir comprising a top member, end members, a fixed side member, a movable side member, said side members converging downwardly and terminating in parallel sided edge portions which are spaced apart to provide a delivery slot, and means for adjusting the position of the said movable side member relatively to that of the said fixed side member to vary the size of the slot between the said parallel sided edge portions thereof.

3. In a road oiling device, a delivery reservoir comprising a top member, end members, a fixed side member, a movable side member, the said side members converging downwardly to parallel sided edge portions which are spaced apart to provide a delivery slot, a bar fixed in the said end members, a bar secured to the lower portion of the said movable side member, adjusting bolts operating in the said bar which is fixed in the said end members and passing through the said bar secured to the said movable side member and means engaging the ends of the said adjusting bolts within the last aforesaid bar, whereby the same is moved by turning the said adjusting bolts to vary the position of the said movable side member relatively to that of the said fixed side member to determine the width of the slot between the said parallel sided portions of the said side members.

962,210. MACHINE FOR MAKING CASKS. JOHN GILMOUR, Owensboro, Ky., assignor to Gilmour Hogshead Machine Company, a Corporation of Kentucky. Filed Oct. 9, 1909. Serial No. 521,942.



1. In a machine for making casks, a base having two end cross bars and longitudinal bars connecting the same, an intermediate movable cross bar having adjustment along said longitudinal bars, outside supporting means for the staves having duplicate parts carried by one of said end cross bars and said intermediate cross bar, means for fixing such adjustment comprising an upright carried by the other of said end cross bars, and a longitudinal brace bar having connection with said upright and the outside stave supporting means at the opposite end of the base, and an adjustable connection with the outside stave supporting means carried by the intermediate cross bar.

2. In a machine for making casks, a base having two end cross bars and longitudinal bars connecting the same, an intermediate slidable cross bar having adjustment along said longitudinal bars, outside supporting means for the staves having standards and semi-circular members one of which is hinged to the other member carried by one of said end cross bars and said intermediate cross bar, means for fixing the adjustment of the intermediate cross bar, comprising an upright carried by the other of said end cross bars, and a longitudinal brace bar having connection with said upright and the standard of the outside stave supporting means at the opposite end of the base, and an adjustable bolt connection with the standard of the outside stave supporting means of the intermediate cross bar.

962,211. OFFAL-BAG FOR HORSES AND THE LIKE. ELIJAH B. GILPIN, Philadelphia, Pa. Filed Nov. 3, 1909. Serial No. 526,009.

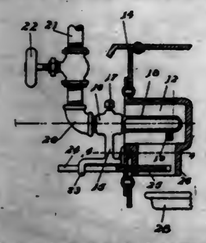
In a device of the character described, a bag frame, a covering placed over said frame, thus forming a bag, one end thereof being open to form a mouth, hooks secured to the closed end of said bag for detachably securing said end to the axle of a vehicle, a cord fastened to the mouth end of said bag for attaching it to the cross piece of the

vehicle shafts, a conveying tube having an open work portion, one end thereof resting in the bag, eyelets, a cord passing through said eyelets for securing said tube to the cross piece of the vehicle shafts, a scoop fastened in one



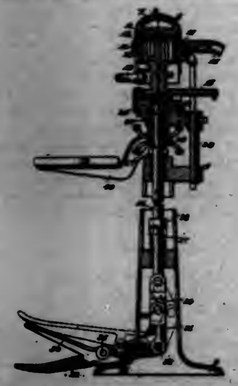
end of said conveying tube, a back member having an opening therein secured to said scoop, and a snap hook fastened to the forward end of said back member for attaching the same to the harness of a horse.

962,212. OIL-BURNER. HENRY R. GREEN, Spokane, Wash. Filed Sept. 20, 1909. Serial No. 518,519.



A burner of the class described comprising a casting having an air chamber therein in communication with the atmosphere, an air discharge tube leading from said chamber at right angles to the communication with the atmosphere, a receptacle disposed beneath said air discharge tube, a bracket fixed to said casting, an oil feed nozzle extending within said air chamber and having a discharge tube in alinement with the air discharge tube, a guide eye formed on said bracket, and a cut-off slide working in said eye and adapted to open and close said air discharge tube.

962,213. CUFF-PRESSING MACHINE. ARTHUR T. HAGEN and DANIEL M. COOPER, Rochester, N. Y., assignors, by mesne assignments, to American Laundry Machinery Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 27, 1904. Serial No. 238,360.



1. In an ironing machine, the combination with a heated platen, a hollow bed coöperating therewith having a padded covering and means for moving one of said parts relatively to the other to press the material between them and holding them in contact with the material during the pressing operation, of a pump for varying the air pressure, as distinguished from a constant air pressure, beneath the padded covering of the bed.

2. The combination with the heated platen, a perforated bed coöperating therewith having a padded covering and means for moving one of said parts relatively to the other to press the material between them and holding them in contact with the material during the pressing operation, of means for intermittently varying the air pressure beneath the padded covering.

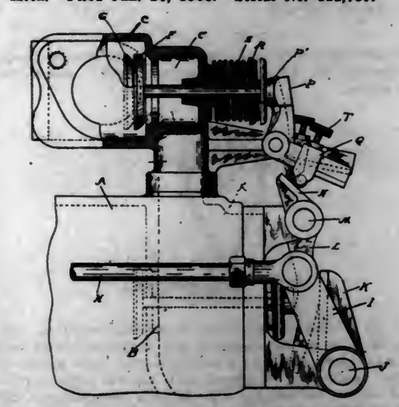
3. The combination with a perforated bed having a padded covering, a heated platen adapted to coöperate with the entire perforated portion of the bed at the same time during the pressing operation and means for moving one of said parts relatively to the other to press the material between them and holding them in contact with the material during the pressing operation, of means for forcing the air under pressure through the bed and padding beneath the pressed material during the pressing operation.

4. The combination with the heated platen, a hollow perforated bed coöperating therewith having a padded covering, and means for moving one of said parts relatively to the other to press the material between them and holding them in contact with the material during the pressing operation, of means for forcing air intermittently through the bed and padding as distinguished from a constant air pressure.

5. The combination with the heated platen, and a hollow padded work support movable relatively toward and from the platen to press the material between them, the platen being adapted to coöperate with substantially the entire working surface of the bed at the same time during the pressing operation, of means for passing air through the padding to remove the moisture therefrom during the pressing operation.

[Claims 6 to 24 not printed in the Gazette.]

962,214. VALVE-CONTROL MECHANISM FOR EXPLOSION-ENGINES. NORMAN T. HARRINGTON, Lansing, Mich. Filed Jan. 20, 1908. Serial No. 411,739.



1. In an explosion engine, the combination with a mixing chamber, of a plurality of valves for separately and independently controlling the admission of the gaseous ingredients for the explosive mixture to said chamber, and timed operating mechanism for simultaneously seating and unseating said valves adjustable to vary the relative amplitude of movement thereof.

2. In an explosion engine, the combination with a mixing chamber, of a plurality of valves for separately and independently controlling the admission of the gaseous ingredients for the explosive mixture to said chamber, and timed mechanism for simultaneously seating said valves intermediate suction strokes, said mechanism being adjustable to vary the relative degree of movement of said valves.

3. In a gas engine, the combination with a plurality of valves for separately controlling the gaseous ingredients forming the explosive mixture, a main admission valve for the explosive mixture, a chamber intermediate said main valve and the valves for the separate ingredients, timed mechanism for simultaneously seating and unseating all of said valves, and means for varying the amplitude of movement of the ingredient controlling valves.

4. In an explosion engine, the combination with a mixing chamber having separate air and gas admission ports thereto, valves respectively controlling said admission ports, a common timed actuating mechanism for simultaneously unseating and seating said valves at the beginning and ending of each suction stroke, and means for relatively varying the amplitude of movement of said valves.

5. In an explosion engine, the combination with a mixing chamber having separate admission ports for air and gas respectively controlling said ports, a common timed actuating mechanism for simultaneously unseating and seating said valves at the beginning and ending of the suction stroke, and intermediate connections between said common actuating mechanism and the respective valves whereby their relative degrees of movement may be adjusted without changing the timing.

[Claims 6 to 9 not printed in the Gazette.]

962,215. UMBRELLA STRETCHER AND RIB-JOINT. MORRIS H. HARTZELL, Philadelphia, Pa., assignor to Samuel S. Fretz, Jr., Philadelphia, Pa. Filed Nov. 8, 1909. Serial No. 526,687.



1. In an umbrella stretcher and rib joint, a geat embracing the rib and having a tongue on the side thereof, a stretcher and a yoke pivotally mounted on said stretcher and received within said geat, said yoke being provided on its side with a leg engageable with said tongue to prevent outward movement of the leg from the geat.

2. In an umbrella stretcher, a stretcher and rib joint, a geat embracing a rib and provided with a tongue and shoulder on a side thereof, and a yoke pivotally mounted on a stretcher and inserted in said geat, said yoke having on its side a leg which is engaged by said tongue and shoulder, preventing outward and endwise movement of the same in the leg.

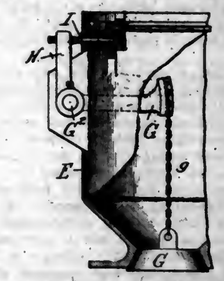
3. In an umbrella stretcher and rib joint, a geat embracing a rib and provided with a shoulder, and a yoke pivotally mounted on a stretcher and inserted in said geat, said yoke having on its side a leg engaged by said tongue, preventing endwise movement of the leg.

4. In an umbrella stretcher and rib joint, a geat embracing a rib and provided with a shoulder, and a yoke pivotally mounted on a stretcher and inserted in said geat, said yoke having on its side a leg engaged by said tongue, the base of said leg having an outward flange which abuts the adjacent portion of the rib and held tightly in contact therewith.

5. A channeled rib, a geat embracing the same and having a portion inturned within the channel, a yoke having lateral portions confined between the rib and inturned portions of the geat, and a stretcher to which said yoke is pivotally connected.

[Claims 6 and 7 not printed in the Gazette.]

962,216. FEEDING DEVICE FOR PRODUCERS. CHARLES A. HARVEY, Chicago, Ill., assignor, by direct and mesne assignments, to Producer Gas Utilities Co., Chicago, Ill., a Corporation of Illinois. Filed Jan. 6, 1908. Serial No. 409,450.

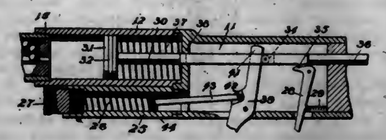


1. In a device of the class described a feeding chamber having a pivoted cover for its top and a vertically movable plug for its lower end, a rock-shaft having means of connection with the plug to operate the same and means on the cover for preventing the operation of the rock-shaft except when the cover is closed and for preventing the operation of the cover when the rock-shaft is turned to lower the plug.

2. In a device of the class described a feeding device having a plug for its lower end and a pivoted cover, a rock-shaft having a radial arm connected with said plug, a radial arm projecting from the shaft, and a pin movable with said arm and adapted to engage a portion on the cover, the pin and cover being so arranged that said rock-shaft can be rotated only when the cover is lowered and the cover can be raised only when the rock-shaft is rotated to raise the plug and withdraw the pin.

3. In a device of the class described the combination with a feeding device a plug for the lower end thereof, a cover for the upper end thereof and a rock-shaft having means of connection with the plug for raising the same, of a radially projecting arm on the rock-shaft, a longitudinally movable pin guided on the feeding device and engaging said arm and an ear on the cover having an opening through which said pin can be passed to permit the rotation of the rock-shaft when the cover is closed and having a plain surface preventing the rotation of the rock-shaft to lower the plug when the cover is open.

962,217. AIR-GUN. GEORGE E. HECKMAN, Brice, Tex. Filed June 10, 1909. Serial No. 501,294.



1. In an air gun, a stock provided with a recess in the forward part thereof, a trigger pivoted in and extending below said recess, a barrel attached to the stock and communicating with said recess, a plunger fitted within the barrel and movable longitudinally therein, a stem on said plunger provided with a slotted portion, a roller mounted in the slotted portion, a discharging spring surrounding the forward portion of the stem and normally urging said plunger forward, a shoulder on said stem adapted to be engaged by the trigger when the plunger is retracted and the discharging spring compressed, a charging lever pivoted in the recess and provided with a reduced end extending into the slotted portion of the stem to bear against the roller, an operating handle on said lever normally held beneath the stock, a trigger

spring, a supplementary barrel beneath the first mentioned barrel, a spring in said supplementary barrel, a tension screw at the forward end of said barrel against which said spring bears, and a plunger in said barrel bearing against said spring and provided with a stem pivoted to the charging lever, the pivot point of the stem shifting above and below the pivot point of the lever according as said lever is moved to charging or discharging positions.

2. In an air gun, a stock provided with a recess in the forward part thereof, a trigger, a barrel attached to the stock and communicating with the recess, a plunger in said barrel, a stem on the plunger and extending within the recess, a discharging spring to actuate said plunger, means on the stem engageable by the trigger when the plunger is retracted, a pivoted charging lever operatively connected to the stem and provided with an operating handle, a supplementary barrel beneath the first mentioned barrel, a spring in said supplementary barrel, a tension screw at the forward end of said barrel against which said spring bears, and a plunger in said barrel bearing against the spring and provided with a stem pivoted to the charging lever, the pivot point of the stem shifting above and below the pivot point of the lever according as said lever is moved to charging or discharging positions.

3. In an air gun, a discharging plunger, a trigger arranged to releasably hold said plunger in charged position, a barrel wherein said plunger moves, a pivoted charging lever operatively connected to said plunger, a second barrel beneath the first, a spring held therein, means to vary the tension of said spring, a plunger forced rearwardly by the spring, and a stem on said plunger pivoted to the charging lever, the pivot point of the stem shifting above and below the pivot point of the lever according as said lever is moved to charging or discharging positions.

962,218. ASEPTIC NEEDLE-THREAD HOLDER FOR SURGICAL USE. MAURICE GEORGES HEITZ-BOYER, Paris, France. Filed Oct. 25, 1907. Serial No. 399,081.



1. In a surgical needle, the combination of a spool-holding body provided with an extension having a guide groove, a cap-member fitting over said body and inclosing said groove, a needle inserted into the end of said extension, and means carried by said cap-member and adapted to bear upon the thread in said groove and arrest the movement of the same.

2. In a surgical needle, the combination of a body having a bracket-shaped extension with a thread-guiding groove, a cap fitting over said body and having an extension overlying said groove, a needle inserted in said overlying extension, and manually operated means carried by said overlying extension and projecting into said groove and adapted to bear upon said thread and arrest its movement through the groove.

3. In a surgical needle, the combination of a tubular body provided with a longitudinal grooved extension, a spool in said body from which the thread is conducted through the groove in said extension, a cap fitting over said body and provided with a needle-carrying extension overlying said groove, and a cam pivoted in a recess in said last-named extension and coacting with said groove.

962,219. NUMBER-PLATE SUPPORT FOR VEHICLES. WILLIAM B. HUGHES, Cleveland, Ohio. Filed Feb. 17, 1909. Serial No. 478,390.



1. In a device of the character set forth, the combination of a bracket having means whereby it may be attached to a vehicle, a horizontal socket carried by said bracket, a rod supported in said socket, a number plate, and means for supporting the same from said rod, said means comprising a pair of socket members connected to said plate, and set screws securing said members to said rod.

2. A device of the character described comprising a bracket having a pair of angularly arranged members, an upwardly projecting lamp support at the end of one of the members, an attaching device at the end of the other member provided with intersecting horizontal and vertical bores, a set screw adjustable transversely of both of said bores, a horizontally arranged socket above the attaching device, a rod adjustably mounted in said socket, and a number plate on said rod.

3. A device of the character set forth comprising a base having at one end thereof a vertically extending socket and at its other end a lamp-supporting post, said post being offset with respect to said socket, a horizontal socket above the first-mentioned socket, a rod mounted in the second socket, a number plate, and means for rigidly and adjustably securing said plate to said rod.

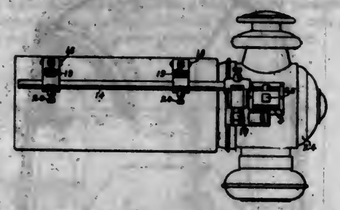
4. In a device of the character set forth, the combination of a bracket having a base, said base having a lamp support and a number-plate support, and means whereby said bracket may be secured to a vehicle, the number-plate support comprising a rod, one or more sockets on said rod, means whereby said sockets may be rigidly secured to said rod, a number plate, and a connection between each socket and the plate, said connection allowing a longitudinal movement between the socket and the plate.

962,220. NUMBER-PLATE SUPPORT FOR VEHICLES. WILLIAM B. HUGHES, Cleveland, Ohio. Filed June 19, 1909. Serial No. 503,066.

1. A device of the character set forth comprising a base having a vertical socket, said socket being provided with an elongated slot and with a transverse enlargement of said slot, a set screw carried by the socket and adapted to be adjusted thereacross at said enlargement, a lamp-supporting member carried by said base, and a number-plate supporting member also carried by said base.

2. A device of the character set forth comprising a base having a vertical socket, said socket being provided with an elongated slot having intermediate of its ends oppositely located notches, one of said notches being angular in shape, and a set screw in said socket on the side opposite the last-mentioned notch and adjustable across said slot, a lamp-supporting member carried by said base, and a plate supporting member also carried by said base.

3. A device of the character set forth comprising a base having at one end a lamp-supporting member and at the other end a vertical socket, said socket having an elongated slot therein provided with a central enlargement, a set screw carried by said enlargement, and a horizontal socket above the former socket.

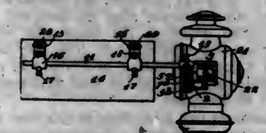


4. A device of the character set forth comprising a base having a lamp-supporting member and a vertical socket, said socket having an elongated slot therein and a central enlargement and a set screw common to said slot and said enlargement.

5. A device of the character set forth comprising a base having at one end a lamp support and having at its opposite end a horizontal socket, said socket being provided at the end adjacent to the lamp-support with a stop, a rod for said socket, and clamping means carried by said socket.

[Claim 6 not printed in the Gazette.]

962,221. NUMBER-PLATE SUPPORT FOR VEHICLES. WILLIAM B. HUGHES, Cleveland, Ohio. Filed July 10, 1909. Serial No. 506,885.



1. A device of the character set forth comprising a base having at one end thereof a vertically extending socket and a horizontal socket above the first-mentioned socket and having at its opposite end a lamp-supporting post having a face inclined with respect to the axis of the horizontal socket.

2. A device of the character set forth comprising a base having a number-plate support and having a lamp-supporting post provided with a face inclined with respect to the number plate support.

3. A device of the character set forth comprising a base having at one end thereof a lamp-supporting post and at its other end a rod-supporting socket, said post being offset with respect to said socket and having a face converging toward the axis of said socket, a lamp having a socket for said post, and a set screw securing said lamp to said post and bearing against said face.

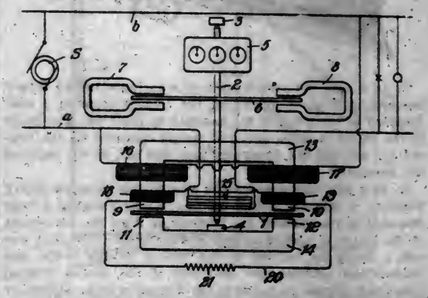
4. A device of the character set forth comprising a base having a lamp-supporting member and a socket having a recess, a rod mounted in said socket, and a pin extending across said recess and through said rod.

5. A device of the character set forth comprising a base having a lamp-supporting member and a socket, a rod mounted in said socket, said socket having an opening in the body thereof, and a pin extending through said rod and said opening.

[Claims 6 and 7 not printed in the Gazette.]

962,222. ELECTRICITY-METER. DUGALD C. JACKSON, Madison, Wis., assignor to Dugald C. Jackson and William B. Jackson, Madison, Wis., a Copartnership. Filed Feb. 12, 1906, Serial No. 300,688. Renewed May 11, 1910. Serial No. 560,780.

1. In an electricity meter, the combination with a movable element, of torque producing circuits associated therewith, restraining means for controlling the movement of the movable element, variations in temperature of the meter causing variations in the restraining effort and in the speed of the movable element, and additional circuit means associated with the torque producing circuits, the temperature coefficient of said additional circuit means being such that the currents in the torque producing circuits are modified and the torque varied in accordance with variations of the restraining effort by the variations in temperature whereby said movable element may operate independently of temperature variations.



2. In an electricity meter, the combination with a movable element, of a torque producing winding therefor, changes in temperature tending to cause variation in the speed of the movable element, and an additional circuit in inductive relation to the torque producing winding having a temperature coefficient adjusted to influence the current flow through the torque producing winding in accordance with said temperature variations whereby the tendencies to speed variation will be counteracted.

3. In an electricity meter, the combination with a movable element, of shunt and series torque producing circuits therefor, variations in temperature tending to cause variations in speed of the movable element, and an additional circuit associated with the torque producing circuits having a temperature coefficient adjusted to influence the current through the torque producing circuits in accordance with said temperature variations whereby tendencies to variation in speed of the movable element will be counteracted by corresponding variations in the torque produced by the circuits.

4. In an electricity meter, the combination with a movable element, of pressure and current torque producing circuits therefor, variation in temperature tending to cause variation in speed of the movable element, and an additional circuit associated with the pressure circuit having its temperature coefficient adjusted to modify the current flow through the pressure winding whereby the torque is varied to counterbalance tendencies to variations in speed of the movable element.

5. In an electricity meter, the combination with a movable element, a magnetic circuit for said element, windings cooperating with the magnetic circuit to produce torque for driving the movable element, variations in temperature tending to vary the speed of the movable element, a closed secondary circuit associated with the windings and magnetic circuit, and a heat responsive element in said secondary circuit for changing the current flow therethrough in accordance with changes in temperature whereby the speed is maintained constant.

962,223. FIREARM. RICHARD E. JEFFERY, Piedmont, Cal. Filed Apr. 24, 1909. Serial No. 491,897.

1. In a gun having a stock, the combination of a rotary hammer, spring mechanism for operating the hammer including a shaft extending lengthwise of the stock, a spiral spring around the shaft and having suitable connections with the hammer to impel the hammer, and means for controlling the movements of the hammer.

spring, a supplementary barrel beneath the first mentioned barrel, a spring in said supplementary barrel, a tension screw at the forward end of said barrel against which said spring bears, and a plunger in said barrel bearing against said spring and provided with a stem pivoted to the charging lever, the pivot point of the stem shifting above and below the pivot point of the lever according as said lever is moved to charging or discharging positions.

2. In an air gun, a stock provided with a recess in the forward part thereof, a trigger, a barrel attached to the stock and communicating with the recess, a plunger in said barrel, a stem on the plunger and extending within the recess, a discharging spring to actuate said plunger, means on the stem engageable by the trigger when the plunger is retracted, a pivoted charging lever operatively connected to the stem and provided with an operating handle, a supplementary barrel beneath the first mentioned barrel, a spring in said supplementary barrel, a tension screw at the forward end of said barrel against which said spring bears, and a plunger in said barrel bearing against the spring and provided with a stem pivoted to the charging lever, the pivot point of the stem shifting above and below the pivot point of the lever according as said lever is moved to charging or discharging positions.

3. In an air gun, a discharging plunger, a trigger arranged to releasably hold said plunger in charged position, a barrel wherein said plunger moves, a pivoted charging lever operatively connected to said plunger, a second barrel beneath the first, a spring held therein, means to vary the tension of said spring, a plunger forced rearwardly by the spring, and a stem on said plunger pivoted to the charging lever, the pivot point of the stem shifting above and below the pivot point of the lever according as said lever is moved to charging or discharging positions.

962,218. ASEPTIC NEEDLE-THREAD HOLDER FOR SURGICAL USE. MAURICE GEORGES HEITZ-BOYER, Paris, France. Filed Oct. 25, 1907. Serial No. 399,081.

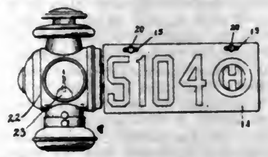


1. In a surgical needle, the combination of a spool-holding body provided with an extension having a guide groove, a cap-member fitting over said body and inclosing said groove, a needle inserted into the end of said extension, and means carried by said cap-member and adapted to bear upon the thread in said groove and arrest the movement of the same.

2. In a surgical needle, the combination of a body having a bracket-shaped extension with a thread-guiding groove, a cap fitting over said body and having an extension overlying said groove, a needle inserted in said overlying extension, and manually operated means carried by said overlying extension and projecting into said groove and adapted to bear upon said thread and arrest its movement through the groove.

3. In a surgical needle, the combination of a tubular body provided with a longitudinal grooved extension, a spool in said body from which the thread is conducted through the groove in said extension, a cap fitting over said body and provided with a needle-carrying extension overlying said groove, and a cam pivoted in a recess in said last-named extension and coacting with said groove.

962,219. NUMBER-PLATE SUPPORT FOR VEHICLES. WILLIAM B. HUGHES, Cleveland, Ohio. Filed Feb. 17, 1909. Serial No. 478,390.



1. In a device of the character set forth, the combination of a bracket having means whereby it may be attached to a vehicle, a horizontal socket carried by said bracket, a rod supported in said socket, a number plate, and means for supporting the same from said rod, said means comprising a pair of socket members connected to said plate, and set screws securing said members to said rod.

2. A device of the character described comprising a bracket having a pair of angularly arranged members, an upwardly projecting lamp support at the end of one of the members, an attaching device at the end of the other member provided with intersecting horizontal and vertical bores, a set screw adjustable transversely of both of said bores, a horizontally arranged socket above the attaching device, a rod adjustably mounted in said socket, and a number plate on said rod.

3. A device of the character set forth comprising a base having at one end thereof a vertically extending socket and at its other end a lamp-supporting post, said post being offset with respect to said socket, a horizontal socket above the first-mentioned socket, a rod mounted in the second socket, a number plate, and means for rigidly and adjustably securing said plate to said rod.

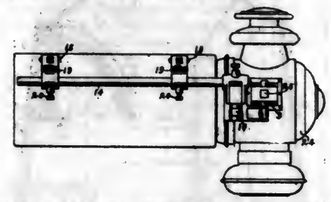
4. In a device of the character set forth, the combination of a bracket having a base, said base having a lamp support and a number-plate support, and means whereby said bracket may be secured to a vehicle, the number-plate support comprising a rod, one or more sockets on said rod, means whereby said sockets may be rigidly secured to said rod, a number plate, and a connection between each socket and the plate, said connection allowing a longitudinal movement between the socket and the plate.

962,220. NUMBER-PLATE SUPPORT FOR VEHICLES. WILLIAM B. HUGHES, Cleveland, Ohio. Filed June 19, 1909. Serial No. 503,066.

1. A device of the character set forth comprising a base having a vertical socket, said socket being provided with an elongated slot and with a transverse enlargement of said slot, a set screw carried by the socket and adapted to be adjusted thereacross at said enlargement, a lamp-supporting member carried by said base, and a number-plate supporting member also carried by said base.

2. A device of the character set forth comprising a base having a vertical socket, said socket being provided with an elongated slot having intermediate of its ends oppositely located notches, one of said notches being angular in shape, and a set screw in said socket on the side opposite the last-mentioned notch and adjustable across said slot, a lamp-supporting member carried by said base, and a plate supporting member also carried by said base.

3. A device of the character set forth comprising a base having at one end a lamp-supporting member and at the other end a vertical socket, said socket having an elongated slot therein provided with a central enlargement, a set screw carried by said enlargement, and a horizontal socket above the former socket.

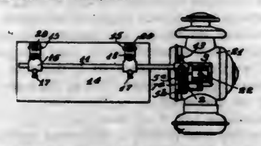


4. A device of the character set forth comprising a base having a lamp-supporting member and a vertical socket, said socket having an elongated slot therein and a central enlargement and a set screw common to said slot and said enlargement.

5. A device of the character set forth comprising a base having at one end a lamp support and having at its opposite end a horizontal socket, said socket being provided at the end adjacent to the lamp-support with a stop, a rod for said socket, and clamping means carried by said socket.

[Claim 6 not printed in the Gazette.]

962,221. NUMBER-PLATE SUPPORT FOR VEHICLES. WILLIAM B. HUGHES, Cleveland, Ohio. Filed July 10, 1909. Serial No. 506,885.



1. A device of the character set forth comprising a base having at one end thereof a vertically extending socket and a horizontal socket above the first-mentioned socket and having at its opposite end a lamp-supporting post having a face inclined with respect to the axis of the horizontal socket.

2. A device of the character set forth comprising a base having a number-plate support and having a lamp-supporting post provided with a face inclined with respect to the number plate support.

3. A device of the character set forth comprising a base having at one end thereof a lamp-supporting post and at its other end a rod-supporting socket, said post being offset with respect to said socket and having a face converging toward the axis of said socket, a lamp having a socket for said post, and a set screw securing said lamp to said post and bearing against said face.

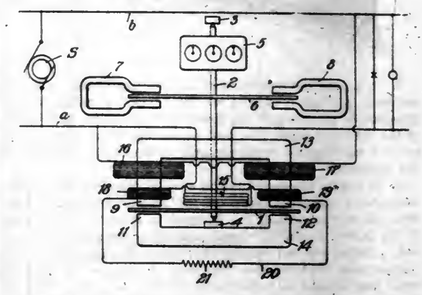
4. A device of the character set forth comprising a base having a lamp-supporting member and a socket having a recess, a rod mounted in said socket, and a pin extending across said recess and through said rod.

5. A device of the character set forth comprising a base having a lamp-supporting member and a socket, a rod mounted in said socket, said socket having an opening in the body thereof, and a pin extending through said rod and said opening.

[Claims 6 and 7 not printed in the Gazette.]

962,222. ELECTRICITY-METER. DUGALD C. JACKSON, Madison, Wis., assignor to Dugald C. Jackson and William B. Jackson, Madison, Wis., a Copartnership. Filed Feb. 12, 1906, Serial No. 300,688. Renewed May 11, 1910. Serial No. 560,780.

1. In an electricity meter, the combination with a movable element, of torque producing circuits associated therewith, restraining means for controlling the movement of the movable element, variations in temperature of the meter causing variations in the restraining effort and in the speed of the movable element, and additional circuit means associated with the torque producing circuits, the temperature coefficient of said additional circuit means being such that the currents in the torque producing circuits are modified and the torque varied in accordance with variations of the restraining effort by the variations in temperature whereby said movable element may operate independently of temperature variations.



2. In an electricity meter, the combination with a movable element, of a torque producing winding therefor, changes in temperature tending to cause variation in the speed of the movable element, and an additional circuit in inductive relation to the torque producing winding having a temperature coefficient adjusted to influence the current flow through the torque producing winding in accordance with said temperature variations whereby the tendencies to speed variation will be counteracted.

3. In an electricity meter, the combination with a movable element, of shunt and series torque producing circuits therefor, variations in temperature tending to cause variations in speed of the movable element, and an additional circuit associated with the torque producing circuits having a temperature coefficient adjusted to influence the current through the torque producing circuits in accordance with said temperature variations whereby tendencies to variation in speed of the movable element will be counteracted by corresponding variations in the torque produced by the circuits.

4. In an electricity meter, the combination with a movable element, of pressure and current torque producing circuits therefor, variation in temperature tending to cause variation in speed of the movable element, and an additional circuit associated with the pressure circuit having its temperature coefficient adjusted to modify the current flow through the pressure winding whereby the torque is varied to counterbalance tendencies to variations in speed of the movable element.

5. In an electricity meter, the combination with a movable element, a magnetic circuit for said element, windings coöperating with the magnetic circuit to produce torque for driving the movable element, variations in temperature tending to vary the speed of the movable element, a closed secondary circuit associated with the windings and magnetic circuit, and a heat responsive element in said secondary circuit for changing the current flow therethrough in accordance with changes in temperature whereby the speed is maintained constant.

962,223. FIREARM. RICHARD E. JEFFERY, Piedmont, Cal. Filed Apr. 24, 1909. Serial No. 491,897.

1. In a gun having a stock, the combination of a rotary hammer, spring mechanism for operating the hammer including a shaft extending lengthwise of the stock, a spiral spring around the shaft and having suitable connections with the hammer to impel the hammer, and means for controlling the movements of the hammer.

2. In a gun, the combination of a spring-actuated rotary hammer, a trigger, means on the trigger forming a sear disposed in the path of the hammer to limit the movement of the latter, a pivoted breech locking brace carrying a firing-pin, and connections between the free end of the breech locking brace and the trigger to place the firing-pin in the path of the hammer.



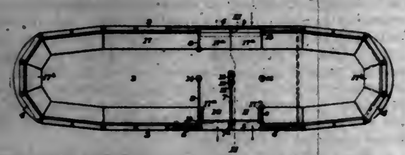
3. In a gun, the combination of a spring-actuated rotary hammer, a trigger, means on the trigger forming a sear disposed in the path of the hammer to limit the movement of the latter, a firing-pin, and means operated by the trigger for moving the firing-pin into and out of the path of the hammer.

4. In a gun, the combination of a spring-actuated rotary hammer, a trigger, means on the trigger forming a sear disposed in the path of the hammer to limit the movement of the latter, a sliding breech locking brace pivoted at one end, a firing-pin carried by the breech locking brace, and connections between the free end of the breech locking brace and trigger to position the firing-pin to be struck by the hammer when the latter is released by the trigger.

5. In a gun, the combination of a hammer, a sear and a trigger, and spring mechanism for operating the hammer, said spring mechanism including a shaft having gear connections with the hammer, and a coiled spring around the shaft operative to rotate the latter.

[Claims 6 to 35 not printed in the Gazette.]

962,224. PASSENGER-CAR. PEARL N. JONES, Pittsburg, Pa. Filed Jan. 26, 1910. Serial No. 540,135.

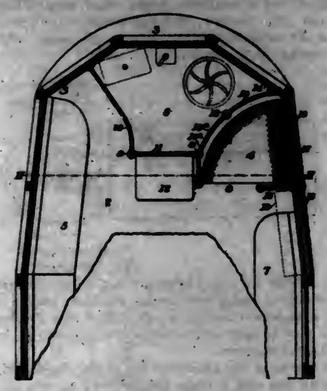


1. A passenger car having at each side, at its central portion, an entrance and an exit opening, said openings being arranged side by side, the end portions of the car being closed and the car having a continuous floor level from end to end, seats extending continuously along the car from the exit to the entrance, a transversely arranged guard extending partially across the car and separating the entrance from the exit, said guard being arranged to be moved so as to extend from either side of the car toward the center thereof, sliding doors for closing the entrance and exit openings, and movable seats arranged to be placed at the entrance and exit openings at one side of the car; substantially as described.

2. A passenger car having a continuous floor level from end to end and without interior partitions or bulk heads, and having side entrance and exit openings at its central portion, fixed steps at the said openings within the side lines of the car, and doors over the outer edge portions of the steps and mounted to slide back into the side walls of the car; substantially as described.

962,225. PASSENGER-CAR. PEARL N. JONES, Pittsburg, Pa. Filed Feb. 17, 1910. Serial No. 544,342.

1. In a passenger car, a car floor extending at the same level to the extreme front end of the car, and having at one side a depressed portion forming an exit step, the inner side of said depressed portion extending backwardly and inwardly at an angle to the longitudinal axis of the car; substantially as described.



2. In a passenger car, a car floor having near one end of the car and at the side thereof a depressed portion forming an exit step and platform, and leading at its outer edge to a second and lower step, and an inwardly and rearwardly extending guard at the inner side of said depressed portion and separating it from the motorman's station; substantially as described.

3. In a passenger car, a car floor having near one end of the car and at the side thereof a depressed portion forming an exit step and platform, and leading at its outer edge to a second and lower step, an inwardly and rearwardly extending guard at the inner side of said depressed portion and separating it from the motorman's station, and a guard extending from the side of the car partially across the inner side of said depressed portion; substantially as described.

4. In a passenger car, a car floor having near one end of the car and at the side thereof a depressed portion forming an exit step and platform, and leading at its outer edge to a second and lower step, and an inwardly and rearwardly extending guard at the inner side of said depressed portion and separating it from the motorman's station, and the car having a central seat immediately in rear of the motorman's station and separated from the said depressed portion by the rear portion of said guard; substantially as described.

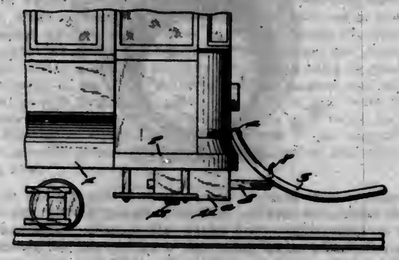
5. A passenger car having rearwardly converging guards at the front end of its interior and inclosing a space or station for the motorman, an exit passage at one side of said station, said passage having a depressed floor portion, the inner edge of which extends backwardly and inwardly at an angle to the longitudinal axis of the car, and there being an open space at the other side of the station into which the car seats extend; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

962,226. CAR-FENDER. GEORGE KOROS, Philadelphia, Pa. Filed Apr. 4, 1910. Serial No. 553,267.

1. In a mechanism of the character described, the combination with a car, a fender pivotally connected to the car, and a casing secured to the car, of a longitudinally movable bar mounted in the casing and connected at one end to the fender, said bar having a plurality of notches in its lower face, a vertically movable foot plunger supported on the car, and adapted to engage in any of the notches in the bar to hold it against movement, ratchet teeth on the upper face of said bar, and a pawl engaging said ratchet teeth, substantially as described.

2. In a mechanism of the character described, the combination with a car, a fender pivotally connected to the car, and a casing secured to the car, of a longitudinally movable bar mounted in the casing, and connected at one end to the fender, said bar having a plurality of notches in its lower face, a vertically movable foot plunger supported on the car, and adapted to engage in any of the notches in the bar to hold it against movement, ratchet teeth on the upper face of said bar, a pawl pivoted in said casing and engaging said teeth, a rod secured to said pawl and projecting above the platform of the car, and a rod connected to said bar, substantially as described.



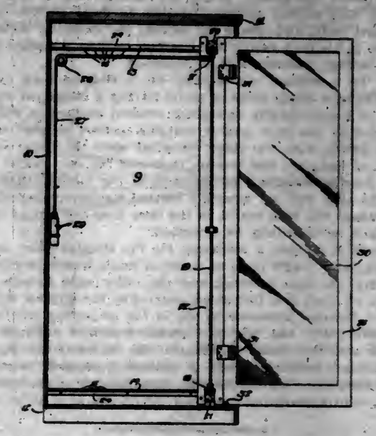
3. In a mechanism of the character described, the combination with a car platform, of a fender pivotally secured to the platform and having a slot therein, of a casing secured in the car platform and having slots in its upper plate, a longitudinally movable bar mounted in the casing, said bar having notches in its lower face and ratchet teeth in its upper face, a hook on the forward end of said bar, engaging in the slot in the fender, a vertically movable plunger, a spring pressing said plunger into one of the notches in the bar, said bar having an opening therein, a rod located in said opening, and projecting through one of the slots in the casing, a pawl engaging the ratchet teeth on the bar, and an upwardly projecting rod on said pawl, extending through another of the slots in said casing, substantially as described.

962,227. GARMENT-RACK. HUGO R. KUEBSTEN, Chicago, Ill. Filed Nov. 27, 1909. Serial No. 530,158.



In a device of the class described, the combination of an outer, intermediate, and inner telescoping section each nesting within the other, the outer section composed of companion members of angle iron formation fixedly held within brackets, rollers journaled within the side walls of said members, the intermediate section being composed of companion members of channel iron formation, the flanged portions of which extend in opposite directions to one another, the rollers carried by the outer section lying within the channel portions of the intermediate section, and traveling upon the inner face of the upper flange when the section is tilted downward and upon the inner face of the lower flange when the section is tilted upward, rollers journaled within the side walls of the members forming the intermediate section, the inner section being composed of companion members of channel iron formation, the flanged portions of which extend in opposite directions from one another, the rollers carried by the intermediate section lying within the channel portions of the inner section and traveling upon the inner face of the upper flange when the section is tilted upward and upon the inner face of the lower flange when the section is tilted downward, means attached to the inner section for supporting a rack member, and stop members located on each of the movable sections to limit their outward movements, substantially as described.

962,228. CABINET-DOOR. HUGO R. KUEBSTEN, Chicago, Ill. Filed Nov. 30, 1909. Serial No. 530,558.



1. In a device of the class described, the combination of a cabinet body, a door for said body, comprising a sliding section and a swinging section hinged together, rack bars secured to one of the side walls of said cabinet body at points adjacent to the top and bottom thereof, trackways located adjacent to said rack bars, pinions carried by said sliding section traveling upon said rack bars, a rod extending longitudinally of the sliding section upon which said pinions are mounted, rollers carried by said sliding section traveling upon said trackways, the roller and trackway coöperating with one another to form a mounting for the slidable section, and to prevent the movement of the pinions away from the rack bars, means for exerting a tension upon the sliding section, tending to draw it into the interior of the cabinet body, means for preventing such inward movement of the sliding section until the swinging section has been swung into parallel alinement with the sliding section, means for preventing any swinging movement of the swinging section until the sliding section has reached its limit of movement toward the front of the cabinet body, and means for locking the swinging section when it is swung into position to form a closure for the cabinet, substantially as described.

2. In a device of the class described, the combination of a cabinet body, a door for said body, comprising a sliding section and a swinging section hinged together, companion plates of angle-iron formation secured to one of the side walls of the cabinet body at points adjacent to the upper and lower edges thereof, each of the plates having gear teeth formed on one of its projecting portions, the other projecting portion forming a trackway, pinions carried by the sliding section traveling upon said gear teeth, rollers carried by said sliding section traveling upon said trackways, means for maintaining a tension upon said sliding section, tending to draw it into the cabinet body, and means for locking the swinging section when it has been swung into position to form a closure for the cabinet, substantially as described.

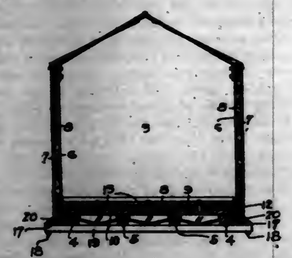
3. In a device of the class described, the combination of a cabinet body, a door for said body, comprising a sliding section and a swinging section hinged together, companion plates of angle-iron formation secured to one of the side walls of the cabinet body at points adjacent to the upper and lower edges thereof, each of the plates having gear teeth formed on one of its projecting portions, the other projecting portion forming a trackway, companion plates of angle-iron formation carried by the sliding section, a rod journaled in one of the projecting portions of each of said plates, pinions mounted upon said rod and traveling upon the above mentioned gear teeth, rollers

journaled in the other projecting portion of said plates carried by the sliding section and traveling upon the above mentioned trackways, means for maintaining a tension upon said sliding section, tending to draw it into the cabinet body, and means for locking the swinging section when it has been swung into position to form a closure for the cabinet, substantially as described.

4. In a cabinet, a trackway for a slidable door, consisting of a single piece of metal having a flat upper edge and a longitudinally extending toothed surface, a roller carried by the door, and a rotatable toothed member carried by the door, the roller traveling upon the upper surface of the plate and serving to insure the easy travel of the door into and out of the cabinet, the toothed surface of the plate and the rotatable toothed member cooperating to insure the even travel of the door into and out of the cabinet, substantially as described.

5. In a cabinet, a trackway for the slidable door, consisting of a single piece of metal of angle iron formation, having one edge serrated and the other edge smooth, a plate of angle iron formation, carried by the slidable door, and a member journaled in one of the projecting portions of said plate, and having a serrated surface adapted to mesh with the serrated surface of the trackway, the other projecting portion having a member journaled therein, and adapted to travel upon the smooth edge of the trackway, substantially as described.

962,229. VEHICLE. ELIAS LANGE, Pittsburg, Pa., assignor to H. Lange Wagon Co., Pittsburg, Pa., a Corporation of Pennsylvania. Filed Dec. 18, 1909. Serial No. 533,776.



1. A vehicle comprising a compartment for the material to be transported, longitudinal sills, sheet-metal extending over the sills and forming a pan between same below the bottom of said compartment, said compartment having an outlet communicating with said pan.

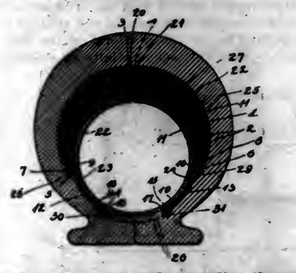
2. A vehicle comprising a compartment to receive the material to be transported, longitudinal sills, sheet-metal secured to the side panels of said compartment and passing over the sills, and forming a pan between said sills below the bottom of said compartment, said compartment having an outlet communicating with said pan.

3. A vehicle comprising a compartment for receiving the material to be transported, sills, sheet metal extending over the sills and forming a pan between the same below the bottom of said compartment, angle-bars extending along the side-sills and secured thereto, and means for securing said angle-bars to the running gear.

4. A vehicle comprising a compartment for receiving the material to be transported, sills, sheet-metal extending over the sills and forming a pan between the same below the bottom of said compartment, angle-bars extending along the outer face of the side-sills and secured thereto, and means for securing said angle-bars to the running-gear.

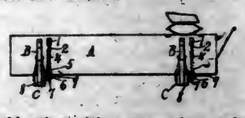
962,230. PNEUMATIC TIRE. WILLIAM A. LURIE, Chicago, Ill. Filed June 14, 1909. Serial No. 501,913.

In a pneumatic tire, an outer casing and an inner inflatable tube forming between them a chamber adjacent the tread section of the casing, a pad comprising a strip of felt disposed in said chamber, an inner canvas wrapping for said strip having its lateral edges looped to form pockets, cords extending through said pockets, an outer canvas wrapping for said strip having its lateral edges



looped to form pockets, and cords extending through said last mentioned pockets, said outer casing having grooves in its inner surface into which said cords are compressed upon inflation of the inner tube to anchor the pad against displacement.

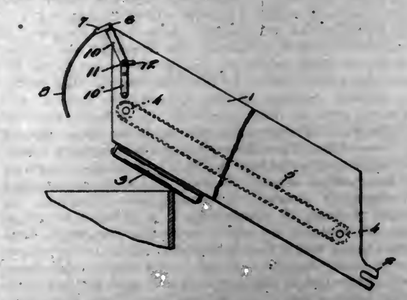
962,231. WAGON-BOX FASTENER. HENRY E. MACY, Chapman township, Clay county, Kans. Filed Apr. 21, 1909. Serial No. 491,239.



1. The combination with a wagon box and a bolster of a fastening device consisting of a tensioning spring, means for attaching one end of the spring to the wagon box, and means for attaching the other end of the spring to the bolster and comprising a projecting plate secured on the bolster, a clevis carried at the lower end of the spring and a lever pivoted to the clevis and engaged under the plate, the lever having a projecting lug for engagement with the plate as and for the purpose set forth.

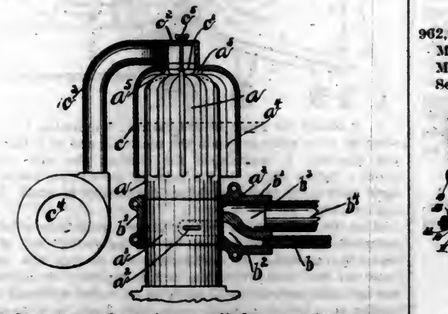
2. The combination with a wagon box and a bolster of a fastening device comprising a tensioning spring having an eye bolt pivoted at each end thereof, means for attaching one of the eye bolts to the wagon box and means for attaching the other eye bolt to the bolster.

962,232. ELEVATOR-HOOD FOR HARVESTER-HEADERS. THOMAS O. MARSTON, Claflin, Kans. Filed May 17, 1909. Serial No. 496,464.



A hood frame of the character described, comprising an angle bar, a brace bar spaced therefrom, said brace bar having rearwardly turned ends, said rearwardly turned portions being bent inwardly and secured to one flange of said angle bar, said angle bar and brace bar being disposed in parallel relation and provided with spaced openings in alinement with each other, a plurality of rods extending through the brace bar, one end of each of said rods being bent at right angles through the other flange of the angle bar, securing nuts disposed upon said bent ends upon either side of the flange, the free ends of said rods being curved downwardly therefrom, links rigidly secured to the ends of said angle bar, a stationary supporting member having side walls, plates carried thereby, said links being offset from the side walls of said supporting member, bolts immovably mounted in said side walls and passing through said plates, said links being pivotally mounted on said bolts outside of said plates and being offset where connected so as to dispose the same in close proximity to the sides of the supporting member and adjusting nuts disposed on the outer ends of said bolts in frictional contact with the links whereby said frame may be disposed at different relative positions to the supporting member without independent movement of the securing nuts.

962,233. AIR-COOLED ENGINE. WILLIAM J. MILLER, Springfield, Ohio, assignor, by mesne assignments, to The Kelly Motor Truck Company, Springfield, Ohio, a Corporation of Ohio. Filed May 11, 1908. Serial No. 432,142.



1. In a two-cycle engine, a cylinder, an exhaust port, a supply port or passage, an air jacket for said cylinder forming an air passage about the same, and means for forcing a current of air through said air passage, said exhaust port being located intermediate the air outlet from said jacket and said supply port or passage and in proximity to the latter, as and for the purpose specified.

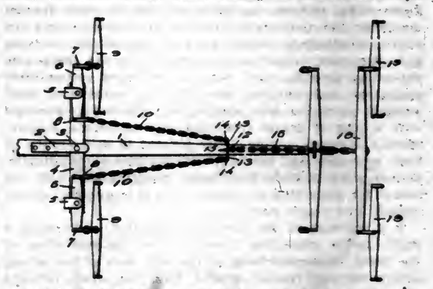
2. In a two-cycle air cooled engine, a cylinder, an eccentrically arranged casing around said cylinder, an exhaust port leading from said cylinder below said casing, and means for supplying air to the upper portion of said casing whereby a larger supply of air is directed along the cylinder on the side immediately above the exhaust port, as and for the purpose specified.

3. In combination with the cylinder of a two-cycle engine, an eccentrically arranged casing fitting over said cylinder, projections on said cylinder extending into the air space, an exhaust and supply for said cylinder both arranged below the eccentrically arranged casing, the exhaust port being intermediate the casing and the supply port, as and for the purpose specified.

4. In a two-cycle air cooled engine, a cylinder having ribs of radially arranged projections at the top of said cylinder concentric with said cylinder, a casing having an eccentric opening and recessed to fit said projections, and means for removably connecting said casing to said cylinder, as and for the purpose specified.

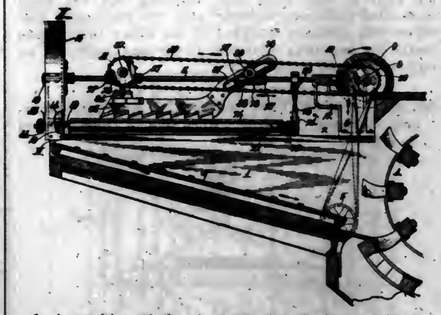
962,234. FOUR-HORSE EQUALIZER. WILLIAM MITCHELL, Fairmount, N. D. Filed Aug. 21, 1909. Serial No. 513,994.

The combination with a wagon tongue, of a cross bar pivotally secured thereto, a stub tree secured to each end of said cross bar, a swingletree secured to the outer end of each stub tree, a chain section extending from the inner end of each stub tree, a shackle comprising a centrally positioned draw ear from which extend two oppositely directed arms, each ending in a terminal eye



curved in a direction opposite to said ear and carrying the forward end of one of said chain sections, a drag chain secured to said ear, a doubletree secured to the forward end of said drag chain, and two swingletrees carried by said doubletree.

962,235. BAND-CUTTER AND FEEDER. GARNETT E. MORRISS and HORACE F. BEARD, Mounds, Okla.; said Morriss assignor to said Beard. Filed Mar. 15, 1909. Serial No. 483,613.



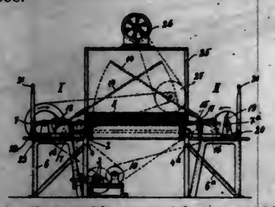
1. A machine of the character described, comprising a chute, a conveyer at one side of and adapted to discharge into the chute, a shaft above and extending transversely of the conveyer and parallel with the longitudinal center of the chute, a rotary cutter mounted upon said shaft at the rear side of the conveyer, a suitably-supported rod extending at right angles to said shaft, a shaft paralleling said rod and provided with a crank above the conveyer, a longitudinally-arranged cutting blade above the conveyer and pivotally suspended at its rear end from said crank and pivotally and slidably supported at its front end on said rod, and means for imparting movement to the conveyer, the rotary cutter and the shaft provided with the crank.

2. A machine of the character described, comprising a chute, a pair of lateral conveyers at opposite side of and adapted to discharge into the chute, longitudinal shafts overlying and geared to the conveyers, rotary cutters mounted upon said shafts rearward of the conveyers, a transverse rod bridging the chute and suitably supported, a transverse shaft bridging the chute and suitably supported and provided over each conveyer with a crank, longitudinally-arranged cutting-blades overlying the conveyers and pivotally suspended at their rear ends from said cranks and pivotally and slidably supported at their front ends on said rod, and means for imparting movement to the conveyers, the rotary cutters and the crank-shafts.

3. A machine of the character described, comprising a chute, tables projecting laterally from opposite sides of the chute, transverse bars on the rear ends of the tables, endless-conveyer-frames secured upon the tables forward of said bars and forming in conjunction therewith transverse slots, endless conveyers carried by said frames, overlying the tables and adapted to discharge into the chute, longitudinal shafts suitably supported, overlying said conveyers, rotary cutters secured on the shafts and depending into the said slots, a transverse rod suitably supported and bridging the chute, a transverse shaft suitably journaled and bridging the chute and provided with a pair of cranks overlying said conveyers, longitudinally-arranged cutting-blades pivoted to said cranks at their rear ends and provided with inclined longitudinally-slotted arms at their front ends, engaging said rod, and means for imparting movement to said conveyers, rotary cutters, and crank shaft.

4. A machine of the character described, comprising a chute, tables projecting laterally from opposite sides of the chute, transverse bars on the rear ends of the tables, endless-conveyer-frames secured upon the tables forward of said bars and forming in conjunction therewith transverse slots, endless conveyers carried by said frames, overlying the tables and adapted to discharge into the chute, longitudinal shafts suitably supported, overlying said conveyers, rotary cutters secured on the shafts, and depending into the said slots, a transverse rod suitably supported and bridging the chute, a transverse shaft suitably journaled and bridging the chute, and provided with a pair of cranks overlying said conveyers, longitudinally-arranged cutting-blades pivoted to said cranks at their rear ends and provided with inclined longitudinally-slotted arms at their front ends, engaging said rod, short transverse conveyers movable with the first-named conveyers and arranged rearward of the rotary cutters, and means for imparting movement to the said conveyers, rotary cutters and crank shaft.

962,236. FUR-BEATING MACHINE. REINHOLD MUELLER, Stuttgart, Germany. Filed Jan. 6, 1909. Serial No. 470,958.



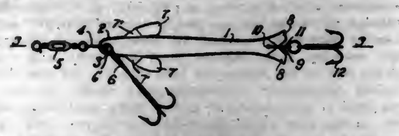
1. A fur beating machine comprising a movable feeding band, beater bars arranged at right angles to the band, means for oscillating said bars, a series of parallel rollers arranged over the band and between which the beater bars strike, and means for simultaneously adjusting the beater bars.

2. A fur beating machine comprising a movable feeding band, a series of parallel rollers covered with bristles located above the band, beater bars arranged at right angles to the band and adapted to strike between the rollers, means for oscillating said bars, a bracket supporting a series of bars, and means for moving the bracket to adjust the position of the bars.

3. A fur beating machine comprising a movable feeding band, rollers located above the band, means for yieldingly supporting said rollers, supporting rollers on the under side of the band, means for moving said lower rollers from the band, and beaters and means for simultaneously moving the upper rollers from the band.

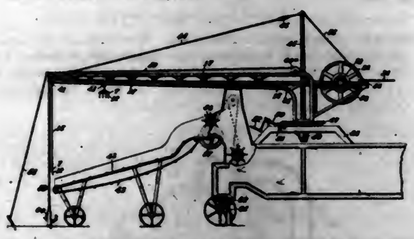
962,237. ARTIFICIAL BAIT. WILLIAM MURRY, Auburn, Me. Filed June 19, 1908. Serial No. 439,420.

1. A device of the class described comprising a channel shaped body having a quadrispherical head at its forward end and oppositely disposed means to impart to it a spinning tendency.



2. A device of the class described comprising a body having a convex surface on one side and a concave surface on its opposite side and terminating at its forward end in a quadrispherical head, and oppositely disposed flanges at the tail end of the minnow to impart to it a spinning tendency.

962,238. FEEDER FOR GRAIN-BEARING STRAW. SAMUEL BERT MCCOMB, Zenith, Kans. Filed June 5, 1909. Serial No. 501,016.



1. A feeder for grain bearing straw, comprising a boom adapted to be mounted upon the receiving end of a threshing machine, a mechanism for moving the said boom about a rotary center, and a hoisting mechanism mounted upon said boom and embodying a plurality of straw lifting members.

2. A feeder for grain bearing straw, comprising a boom mounted upon a turn-table at the receiving end of a threshing machine, a mechanism for moving the said boom on the said turn-table, and a plurality of hoisting mechanisms, embodying a plurality of cables guidably extended to various stations upon said boom, and having engaging and carrying members adapted to hold the grain by the lifting strain of said cables.

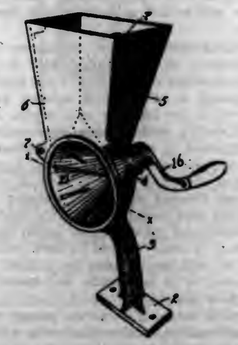
3. A feeder for grain bearing straw, comprising a boom mounted upon a turn-table at the receiving end of a threshing machine, a mechanism for moving said boom on the said turn-table, a plurality of hoisting mechanisms, embodying a plurality of cables and straw engaging devices adapted to engage and hold the straw, suitable guiding means for supporting said cables on the said boom, and tripping means disposed at various stations on said boom, to release the grasp of said engaging devices and to arrest the said hoisting mechanism.

4. A feeder for grain bearing straw, comprising a boom mounted upon a turn-table at the receiving end of a threshing machine, a mechanism for moving the said boom on the said turn-table, anchoring devices for holding the said boom in its adjusted position, a plurality of winding drums mounted upon a common shaft, a plurality of clutch members to engage said drums with said shaft, a manually-operated mechanism for engaging said clutches with said drums, a plurality of hoisting cables adapted to be wound upon said drums and extended therefrom to fixed stations on the said boom, engaging devices mounted upon the ends of said cables, adapted to engage the straw, and automatic means for releasing the said clutches from said drums when raised under said boom.

5. A feeder for grain bearing straw, comprising a boom mounted upon a turn-table at the receiving end of a threshing machine, a large beveled gear wheel concentrically mounted on said turn-table, a small beveled gear wheel rotatively set in said turn-table and engaged with said large wheel, anchoring devices for holding the said boom in its adjusted position, a plurality of winding drums mounted upon a common shaft, a plurality of clutch members to engage said drums with said shaft, a manually operated mechanism for engaging said clutches with said drums, a plurality of hoisting cables adapted to be wound upon said drums and extended therefrom to fixed stations on the said boom, engaging devices mounted upon the ends of said cables to engage the straw, and automatic means for releasing said clutches from said drums when the said engaging devices are raised under said boom.

[Claims 6 to 8 not printed in the Gazette.]

962,239. NUT-SHAVING MACHINE. MICHAEL J. MCFADDEN and CHARLES C. HIBBS, St. Paul, Minn. Filed Aug. 13, 1908. Serial No. 448,284.



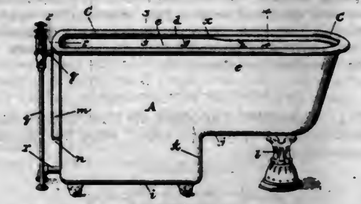
1. In combination with a frame having a conical shell, a cutting cone rotatably mounted within said shell, a squared lug integral with said cone at the apex thereof, said squared lug being formed with a central square hole, a sleeve at the apex of the shell, a sleeve arranged within said first named sleeve, a headed bolt having a square shoulder, said head of the bolt engaging the cutting cone on the interior thereof adjacent the base of said squared lug thereof, said square shoulder of the bolt fitting within said square hole of the squared lug, said bolt having its opposite end passed through said second named sleeve and having an operating handle secured thereto, and a washer surrounding said squared lug and arranged between said sleeve of the shell and the end of the cutting cone at the base of the squared lug.

2. In combination with a frame having a conical shell, a cutting cone rotatably mounted within said shell, a squared lug integral with said cone at the apex thereof, said squared lug being formed with a central square hole, a sleeve on the shell at the apex thereof, a headed bolt having a square shoulder, said head of the bolt engaging the cutting cone on the interior thereof adjacent the base of said lug, said square shoulder of the bolt fitting within said square hole of the squared lug, said bolt having its opposite end passed through said sleeve of the shell and having an operating handle secured thereto.

962,240. BATH-TUB. JOSEPH H. NEAL, Baltimore, Md. Filed Jan. 12, 1910. Serial No. 537,588.

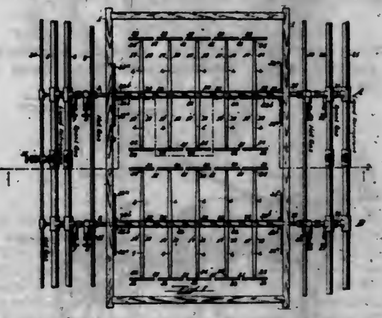
1. A cast-iron bath-tub having a hollow top-roll that contains a water-conduit which has directly over the wall of the tub an edge, *g*, higher than the bottom of said conduit—said higher edge confining the water to the conduit and extending from the front end of the tub to a median line between the said front and rear ends, and which conduit from said median line and extending to the rear end of the tub has a low edge, *h*, which permits the water in the conduit to run down the inner surface of the tub-wall.

2. A cast-metal bath-tub whose bottom is divided into two distinct parts—the front-end part being in a lower horizontal plane than the rear-end part which latter being higher serves as a seat, in combination with a hollow top-roll that contains a water-conduit provided with an open slot along the inward side of the roll—said conduit having a raised edge, *g*, which confines the water to the conduit and extends from the front-end of the tub back to a point above the front of said seat, the conduit from said seat back to the rear-end of the tub having a low edge, *h*, which permits the water to flow from the conduit down the sides of the walls around and onto the seat.



3. A cast-metal bath-tub provided with a seat at the rear-end of the tub—said seat being integral with the metal of the tub, and also provided with a top-roll water-conduit which receives the water-supply at the front end and has means by which it discharges water into the tub only at that part which is at the sides of the seat or around the seat.

962,241. ICE-MAKING MACHINE. THOMAS H. RAY, Somerville, Mass. Filed Dec. 18, 1909. Serial No. 533,805.



1. In an ice machine, two parallel freezing-coils; a third freezing-coil at right angles thereto, but operated independently thereof; and one cross-cut for each parallel freezing-coil; each cross-cut being removably secured, at right angles to its respective freezing-coil; all designed to form within the space inclosed by the three coils and two cross-cuts, a block of ice without a plane of cleavage.

2. In an ice machine, two parallel freezing-coils; a third freezing-coil which intersects said two parallel freezing-coils, at right angles thereto, but which does not communicate therewith; a cross-cup removably secured to and at right angles with each end portion of each of said parallel coils; all designed to hasten the production of a given quantity of block ice.

3. In an ice making machine, two parallel coils; a frame containing each coil; two metal freezing-plates secured to the front and the back of the frame, and confining the coil within the frame; a third coil, designed to intersect at right angles said parallel coils and plates; said plates being provided with holes to permit the pipes of the third coil to pass therethrough and between the loops of the said parallel coils; a metal freezing-plate mounted on each side of the third coil; the vertical edges of said plates abutting

the faces of the plates on the parallel coil plates, and the open space between the bottom edge portions of said plates being closed as by a block of wood; all designed substantially to retain between the freezing-plates, the water warmed in the process of harvesting.

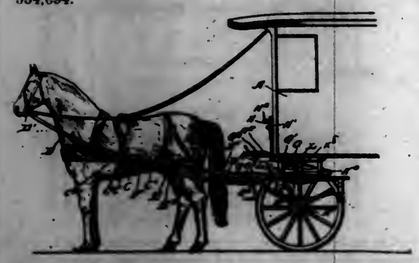
4. In an ice machine, a rectangular wooden frame having a horizontal wooden partition near its bottom to divide the frame into two compartments; a freezing coil mounted in the upper compartment; a hot-gas-coil mounted in the lower compartment, and also between the sides of the frame and the freezing coil in the upper compartment; two metallic freezing-plates secured to the front and rear of the frame to close the compartments, and substantially prevent the escape of water which is within the compartments and surrounds the coils therein; all designed to heat all portions of the freezing-plates substantially uniformly and simultaneously.

962,242. GARMENT AND COLLAR FASTENER. ALEXANDER A. REESIDE, Wichita, Kans. Filed Apr. 24, 1909. Serial No. 492,022.



In a garment and collar fastener, a member formed approximately heart shaped, parallel extensions within the aforesaid heart, an upward turn and an outward turn, thence parallel, then extending parallel and on a plane with the sides of the heart shaped member, to near the upper portion thereof, thence outward and down and contacting at the aforementioned bend, thence diverging therefrom, and the free ends bent outward and then curved together, and slightly overlapping, as shown.

962,243. HITCHING DEVICE. HEINRICH MAX REITER, Asheville, N. C. Filed Apr. 11, 1910. Serial No. 554,694.



1. An automatic hitching device for horses connected to vehicles comprising, in combination with a vehicle and shafts, sliding members mounted upon the shaft, a hitching strap fastened to said sliding member and designed to be connected to the bit ring of a bridle, a rope connected to said sliding member, a spring connected to said rope, a pivotal hook member mounted upon the running gear of the vehicle, means connected to said spring and adapted to engage said pivotal hook member, a cord connected to said means, pulleys about which said cord passes, a pulley about which said cord is adapted to wind, and mechanism for releasing said means from the pivotal hook member.

2. An automatic hitching device for horses connected to vehicles comprising, in combination with a vehicle and shafts, sliding members mounted upon the shaft, a hitching strap fastened to said sliding member and designed to be connected to the bit ring of a bridle, a rope connected to said sliding member, a spring connected to said rope, a ball fastened to said spring, a grooved block fastened to the running gear of the vehicle, a pivotal hook member mounted upon said grooved block, a cord fastened to said ball and forming means for drawing the ball in engagement with said hooks, a rotatable pulley mounted upon the vehicle and about which pulley said cord is adapted to wind, and means for disconnecting the hook from said ball.

3. An automatic hitching device for horses connected to vehicles comprising, in combination with a vehicle and shafts, sliding members mounted upon the shafts, a hitching strap fastened to said sliding member and designed to be connected to the bit ring of a bridle, a rope connected to said sliding member, a spring connected to said rope, a ball fastened to said spring, a grooved block fastened to the running gear of the vehicle, a pivotal hook member mounted upon said grooved block, a cord fastened to said ball and forming means for drawing the ball in engagement with said hooks, a rotatable pulley mounted upon the vehicle and about which pulley said cord is adapted to wind, a pivotal foot lever mounted upon the platform of the vehicle, and a cord connecting said foot lever and hook member.

4. An automatic hitching device for horses connected to vehicles comprising, in combination with a vehicle and shafts, sliding members mounted upon the shafts, a hitching strap fastened to said sliding member and designed to be connected to the bit ring of a bridle, a rope connected to said sliding member, a spring connected to said rope, a ball fastened to said spring, a grooved block fastened to the running gear of the vehicle, a pivotal hook member mounted upon said grooved block, a cord fastened to said ball and forming means for drawing the ball in engagement with said hooks, a rotatable pulley mounted upon the vehicle and about which pulley said cord is adapted to wind, a pawl carried by said pulley, ratchet teeth engaged by said pawl, means for holding the ratchet out of engagement with said teeth, and means for releasing the hook from said ball.

5. An automatic hitching device for horses connected to vehicles comprising, in combination with a vehicle and shafts, sliding members mounted upon the shafts, a hitching strap fastened to said sliding member and designed to be connected to the bit ring of a bridle, a rope connected to said sliding member, a spring connected to said rope, a ball fastened to said spring, a grooved block fastened to the running gear of the vehicle, a pivotal hook member mounted upon said grooved block, a cord fastened to said ball and forming means for drawing the ball in engagement with said hooks, a rotatable pulley mounted upon the vehicle and about which pulley said cord is adapted to wind, a pawl carried by said pulley, ratchet teeth engaged by said pawl, a slide mounted upon the pulley block and adapted to engage and tilt the pawl and hold the latter out of engagement with the ratchet, and means for detaching the hook member from said ball.

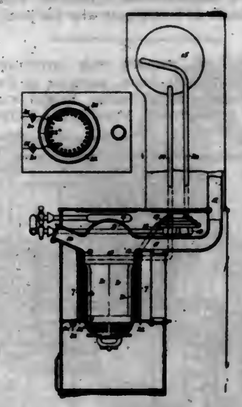
[Claims 6 and 7 not printed in the Gazette.]

962,244. COMBINED GAS AND COAL RANGE. CLARENCE V. ROBERTS and JOHN MANDER, Philadelphia, Pa., assignors to Roberts & Mander Stove Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 11, 1908. Serial No. 467,086.

1. The combination of a gas range having an air and water heating coal fire pot disposed in an air heating chamber which surrounds said fire pot, with a gas-heated water coil separate from but having connection with the water heater of the coal fire pot.

2. The combination of a gas range having a combined air and water heating coal fire pot disposed in an air heating chamber which surrounds said fire pot, a gas-heated water coil separate from but communicating with the water heater of the fire pot, and a reservoir communicating both with said water heater of the fire pot and with the gas-heated water coil.

3. The combination of a gas range, having an air and water heating coal fire pot disposed in an air heating chamber which surrounds said fire pot, and a gas-heated water coil separate from but connected to the water heater of the coal fire pot and disposed beneath the top plate of the range but at a higher level than the water heater of the coal fire pot.



4. The combination of a gas range having a coal fire pot with a smoke outlet, and a gas-heated water coil disposed below the top plate of the range but above the smoke outlet from the coal fire pot, whereby the heat radiated from said smoke outlet acts upon the water coil.

962,245. VARIABLE-SPEED COASTING AND BRAKING HUB. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed May 13, 1904. Serial No. 207,758.



1. The combination with a hub provided with a clutch, and a driver, of a shiftable clutch coöperating with said hub-clutch, shifting connection between said shiftable clutch and said driver, a shiftable controller for said shiftable clutch, a reciprocatory actuator for said controller, and threaded operating connection between said actuator and said controller; substantially as described.

2. The combination with a hub provided with a clutch, and a driver, of a shiftable clutch coöperating with said hub-clutch, shifting connection between said shiftable clutch and said driver, a shiftable controller for said shiftable clutch, a rockable collar provided with teeth and having threaded connection with said controller, and a toothed segment engaging the teeth of said collar; substantially as described.

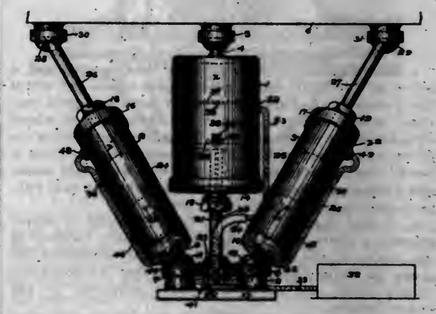
3. The combination with a hub provided with a clutch, a driver, a brake plate, and a brake supported by said plate and coöperating with said hub, of a shiftable clutch coöperating with said hub-clutch, shifting connection between said driver and said shiftable clutch, a shiftable controller for said shiftable clutch, a reciprocatory actuator for said controller and mounted upon said brake plate, and shifting connection between said actuator and said controller; substantially as described.

4. The combination with a hub provided with a clutch, a driver, a brake plate, and a brake supported by said plate and coöperating with said hub, of a shiftable clutch coöperating with said hub-clutch, shifting connection between said driver and said shiftable clutch, a shiftable controller for said shiftable clutch, a collar rockably mounted upon said brake plate and having shifting connection with said controller, and a segment mounted upon said brake plate to reciprocate thereon and having operative connection with said collar; substantially as described.

5. The combination with an axle, a hub about the same and provided with a clutch, a driver, a brake plate, a brake supported thereby and coöperating with said hub, and a hollow brake actuator upon said axle, of a shiftable clutch coöperating with said hub-clutch, shifting connection between said shiftable clutch and said driver, a shiftable controller extending through said hollow brake actuator and having engagement with said shiftable clutch at one side of said brake actuator, and means at the other side of said brake actuator for shifting said controller; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

962,246. PNEUMATIC SPRING. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Mar. 7, 1905. Serial No. 248,916.



1. A vehicle spring comprising a plurality of independently mounted cylinders and pistons arranged for reverse operation with respect to one another, a source of fluid pressure supply for said cylinders and suitable valves for maintaining a uniform pressure in the cylinders and the source of fluid pressure supply, substantially as described.

2. A vehicle spring comprising a plurality of independently mounted cylinders and pistons arranged for reverse operation, one of said cylinders and pistons operating in one direction being of greater power than the combined cylinders and pistons operating in the opposite direction, substantially as described.

3. A vehicle spring comprising a central vertically disposed cylinder, piston, and piston rod, and two cylinders, pistons, and piston rods one upon each side of the central cylinder, piston and piston rod and inclined with relation thereto, substantially as described.

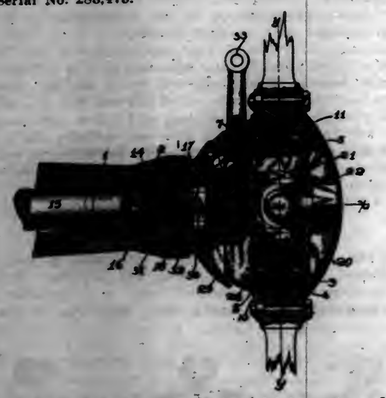
4. A vehicle spring comprising a central vertically disposed cylinder, piston and piston rod, and two cylinders, pistons and piston rods one upon each side of the central cylinder, piston and piston rod and inclined in planes which cross each other, substantially as described.

5. A vehicle spring comprising a central vertically disposed cylinder, piston and piston rod, and two cylinders, pistons and piston rods one upon each side of the central cylinder, piston and piston rod, the piston rods of the pistons of the side cylinders being connected to a support in line with each other upon one side of a plane cutting the axis of the central cylinder, piston and piston rod

and the side cylinders being connected to a support in line with each other upon the opposite side of said plane, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

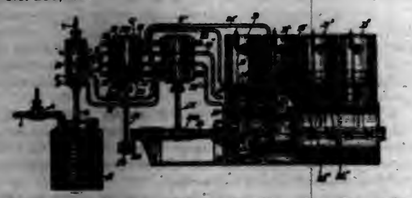
962,247. CONNECTION FOR VEHICLE-WHEELS. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Oct. 19, 1905. Serial No. 283,475.



1. The combination with a hollow driving axle, and a wheel, of a two-part socket member each element of which has a stem received in said axle and has also a head provided with a socket, a two-part connector each of whose elements has a socket and also has a trunnion portion received in the said sockets of said socket member, and a second connector in driving connection with said wheel and having trunnions received in said sockets of said two-part connector; substantially as described.

2. A dust cap, comprising a recessed collar, a socket member, a sleeve on the socket member loosely received in the recess in the collar, yielding means interposed between the collar and the sleeve for forcing the sleeve out of the collar, and a guard movably supported by the socket member.

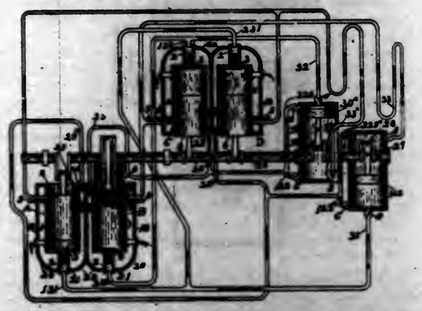
962,248. MECHANISM FOR FEEDING FUEL. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Oct. 19, 1905. Serial No. 283,476.



1. The combination with a plurality of engine cylinders and a charge supply, of a controller connected with the supply and provided with a plurality of ports, a pump, separate connections leading from the ports to the pump, means in the controller for successively covering and uncovering the ports to successively cut off the supply from communication with the pump, and means separately connecting the pump with each of the engine cylinders.

2. The combination with a source of fuel supply and a plurality of fuel-receiving motor elements adapted to communicate therewith, of tubular connections between the source of fuel supply and the motor elements, a pump for supplying the fuel to the motor elements, separate communication between said pump and said respective motor elements, and a controller for cutting off communication between the source of fuel supply and the pump.

962,249. COOLING MEANS FOR MOTORS. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Jan. 11, 1906. Serial No. 295,639.



1. The combination with a cylinder having an exhaust port, a piston, and an inlet port, of a valve closing said inlet port and adapted to be opened by pressure upon its outer side, a casing about said cylinder and provided with inlet and outlet ports, a pump including a reciprocatory piston, connection between said outlet port of said casing and both sides of said pump piston, inwardly opening check valves in said connection, connection between said pump and said outer side of said inlet valve to said cylinder, and an outwardly opening check valve in said latter mentioned connection; substantially as described.

2. In an explosion motor, the combination with a power cylinder having openings in its wall, a jacket around the same, and a piston in the power cylinder and having openings adapted to aline with said first mentioned openings, of means for causing air to pass through the jacket, through the combustion chamber of the power cylinder, and through alining openings in the walls of the power cylinder and the piston; substantially as described.

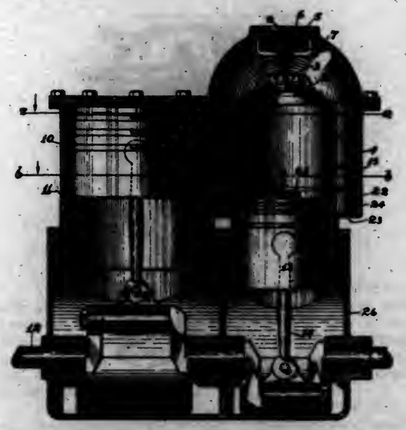
3. In an explosion motor, the combination with a power cylinder having a combustion chamber, a ported piston in said power cylinder, and a cooling jacket surrounding said power cylinder, of means in virtue of which air is caused to pass through the jacket, through the combustion chamber, and through the ported piston; substantially as described.

4. In an explosion motor, the combination with a power cylinder, a ported piston in said power cylinder, and a cooling jacket surrounding said power cylinder, of means in virtue of which air is caused to pass through the jacket and over the power cylinder when the power cylinder is closed, and through the power cylinder and through the piston when the power cylinder is open; substantially as described.

5. The combination with a motor cylinder having a valved air inlet port and an exhaust port, a piston movable in said cylinder and controlling communication between said inlet and exhaust ports, said piston having a valved fuel inlet port, a cooling chamber in the piston surrounding said fuel inlet port, a jacket surrounding the cylinder, and a pump in communication with said jacket to cause air to pass over the exterior of the cylinder and to cause air to pass through the cooling chamber of the piston when the piston is in a position permitting communication between said inlet and exhaust ports, said valved air inlet port being effective to open at this time so as to admit air into the cylinder and permit it to pass out through the exhaust; substantially as described.

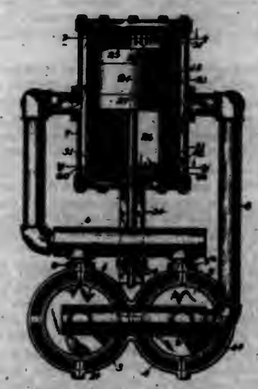
[Claim 6 not printed in the Gazette.]

962,250. COOLING MEANS FOR MOTORS. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Feb. 5, 1906. Serial No. 299,611.



The combination with a motor cylinder, of a casing surrounding the same, a check valve for normally closing a port in the casing, said check valve having a tubular stem, a check valve for closing an opening in the cylinder and having a stem slidable within the tubular stem of the casing valve and means for drawing air into the casing and then introducing it into the cylinder.

962,251. PUMP. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Feb. 5, 1906. Serial No. 299,612.



1. The combination with a pump cylinder, of a partition therein having inlet and outlet ports, and a rocking valve within the pump cylinder and actuated by the pump piston.

2. The combination with a pump cylinder having inlet and outlet ports, of a cylindrical casing within the cylinder and spaced from the inner wall thereof, said casing having inlet and outlet ports, a rocking valve movable within said casing for opening and closing said ports, and means for actuating said valve at about the limit of stroke of the pump piston.

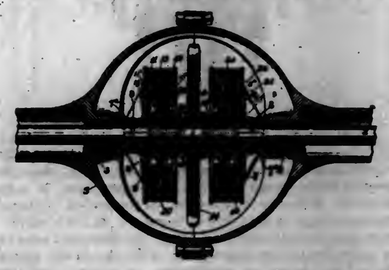
3. The combination with a pump piston and a casing about the same, said casing having a plurality of ports arranged in circular series near its respective ends, a rocking valve adapted to open some of the ports at one end of the cylinder and close those at the opposite end of the cylinder, and means carried by the piston-head for actuating said rocking valve.

4. In a pump, a cylindrical casing having inlet and outlet ports, a cylindrical rocking valve concentric with said casing and controlling said ports, a piston within said casing, and operative connection between said piston and said valve for rocking the latter to control said ports.

5. In a pump, a casing having inlet and discharge openings, a piston movable in said casing, a valve plate controlling said openings and movable across the same at an angle to the line of movement of said piston, and means upon said piston and said valve for moving the latter upon movement of the former.

[Claims 6 and 7 not printed in the Gazette.]

962,252. EQUALIZING DEVICE. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Feb. 23, 1906. Serial No. 302,527.



1. A gearing including a drive member, a plural number of driven members, a clutch member rigid on each of said driven members, movable clutch members on said drive member for automatically engaging the said rigid clutch members during the rotation of the drive member in either a forward or a rearward direction, and means for preventing movement of the said movable clutch members; substantially as described.

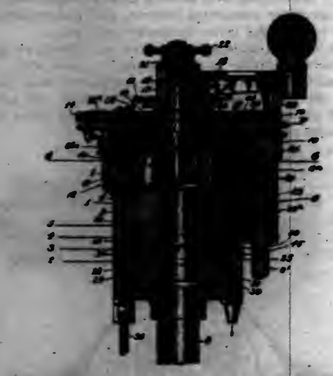
2. A gearing including a plural number of driven members, a clutch member rigidly carried by each of said driven members, a drive member, clutch members carried by the drive member and having sidewise movement and adapted to engage the first-named clutch members at the limit of sidewise movement in either direction, and means for holding said second-named clutch members at an intermediate point between the limits of sidewise movements so as to permit the drive member to run free; substantially as described.

962,253. CONTROLLER. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Mar. 7, 1906. Serial No. 304,763.

1. The combination with a driven part, a motor therefor, and a brake for said driven part, of a source of charge supply for said motor, a generator of charge-exploding energy for said motor, means for operating said generator to render the same active and inactive, means for operating said brake to render the same active and inactive, and a controller provided with means for controlling the supply of charge to said motor, with means for controlling the operating means for said brake and with means for controlling the operating means for said generator; substantially as described.

2. The combination with a driven part, a motor therefor, and a fluid controlled brake for said driven part, of means

for supplying charges to said motor, a generator for supplying charge-exploding energy to said motor, fluid controlled means for controlling said generator, a source of fluid supply, a controller having an inlet port for receiving said fluid and outlet ports leading respectively to the brake-controlling mechanism and the generator-controlling mechanism, and a valve in said controller controlling said ports; substantially as described.



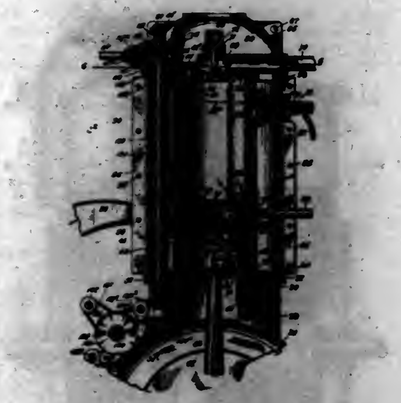
3. The combination with a driven part, a motor therefor, means for supplying charges to said motor, and a fluid operated brake mechanism for said driven part, of a fluid controlled generator mechanism for supplying charge exploding energy to said motor, a source of fluid supply, a controller having a port receiving said fluid and also having ports connected respectively with the brake mechanism and the generator mechanism, an exhaust port from said controller, and a valve in said controller having a receiving chamber adapted to receive fluid from said inlet port and provided with outlets leading to said respective outlet ports, said valve also having passages leading from said respective outlet ports to said exhaust port; substantially as described.

4. The combination with a driven part, a brake therefor, and a motor for said driven part, of a controller for said brake and said motor and movable in a given direction from brake-applying position through a complete cycle to again assume said brake-applying position, and means whereby movement of said controller from brake-applying position serves to release said brake, further movement of said controller in the same direction serves to render said motor active with successively increasing energy, further movement of said controller in the same direction serves to render said motor inactive with successively decreasing energy, and further movement of said controller in the same direction serves to apply said brake; substantially as described.

5. The combination with a driven part, a brake therefor, and a motor for said driven part, of a controller for said brake and motor and movable in the same direction from brake-applying position through a complete cycle to again assume brake-applying position, and means whereby movement of said controller from brake-applying position serves to release said brake without rendering said motor operative with respect to said driven part, further movement of said controller in the same direction serves to render said motor operative with respect to said driven part, further movement of said controller in the same direction serves to render said motor inoperative with respect to said driven part but leaves said brake still unapplied, and further movement of said controller in the same direction serves to apply said brake; substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

962,254. MOTOR. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Mar. 12, 1906. Serial No. 305,664.



1. The combination with an engine cylinder, a gas mixture supply mechanism therefor and means for controlling the operation of said mechanism, of an air pressure reservoir, air admitting and exhausting devices for said cylinder one of said exhausting devices being a check valve, and means for controlling the operation of said devices whereby the check valve may become the admitting device.

2. The combination with a gas engine cylinder, a mechanism for supply gas mixture thereto, a secondary fluid supply reservoir in communication with the explosion chamber of said cylinder, a check valve for normally closing the passage between the reservoir and the cylinder, of means for discontinuing the operation of the gas supply mechanism, and means for actuating said valve to admit the secondary fluid pressure from the reservoir to the cylinder.

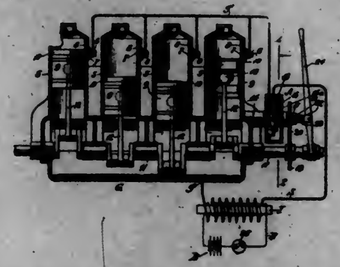
3. The combination with an engine cylinder, of an air admission valve for supplying the cylinder, a gas port in communication with said cylinder, a piston for compressing a mixed charge of air and gas, a reservoir, a communication port between said reservoir and said cylinder, a normally seated check valve for preventing communication between the reservoir and the cylinder, said check valve being adapted to be unseated by each explosion to permit part of the exploded charge to pass into the reservoir, and means for intermittently opening said normally seated check valve to permit pressure from the reservoir to pass into the cylinder.

4. The combination with a motor cylinder and a piston therein, of means for permitting a fuel charge to be introduced into said cylinder, a reservoir, a port in communication with said reservoir and said cylinder, a ported valve in said port and opening in one direction only the port in said valve permitting a part of the exploded gas to pass into said reservoir, a valve for normally preventing the return of said exploded gas into said reservoir, and means for unseating said last named valve.

5. The combination with a cylinder and a piston therein, of a source of fluid supply having a port connected to said cylinder, a valve for normally closing communication between said port and said cylinder, a normally closed exhaust valve having an elongated cylindrical stem, a longitudinal valve unseating member within the stem and adapted to unseat the admission valve, and means for alternately moving the valve unseating member and the cylindrical stem.

[Claims 6 to 15 not printed in the Gazette.]

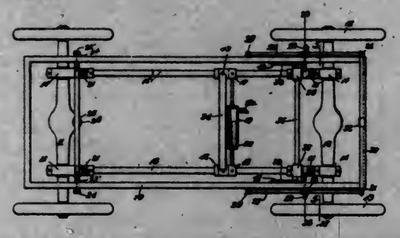
962,255. SPARKING APPARATUS. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Mar. 12, 1906. Serial No. 305,665.



1. In a sparking apparatus, an electrode, a piston movable toward and away from the same, said piston being rotatably mounted and shifting about its center of rotation as it moves toward and away from said electrode, and a sparking ring removably mounted upon said piston and constituting the coöperating electrode; substantially as described.

2. A sparking circuit comprising a plurality of stationary electrodes, a single electrical connection in communication with all of said electrodes, a plurality of rotatably mounted reciprocating pistons constituting coöperating electrodes for the first named electrodes, and a removable sparking ring carried by each piston.

962,256. VEHICLE-BODY SUPPORT. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Mar. 19, 1906. Serial No. 306,836.



1. The combination with a vehicle running gear, of rocking elements carried by the running gear, torsional springs coiled about the rocking elements and having movements independent of the movements of the rocking elements, one part of each torsional spring being fixed to a rocking element, and a body frame spaced from the rocking elements and connected to the torsional springs.

2. The combination with a base frame having rockable elements, of a cushion connected to said rockable elements to resiliently resist movement thereof, torsional springs coiled around said rockable elements, arms projecting from said springs and rigid therewith, a body frame, and connections between said arms and said body frame.

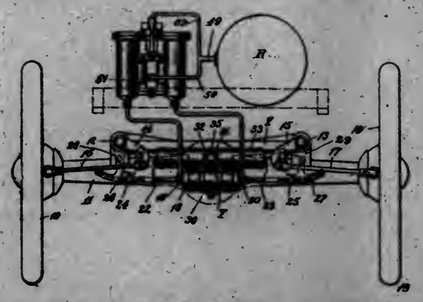
3. The combination of two frames, one of which is provided with rocking elements, a fluid cushion for resisting the movement of said rocking elements, torsional springs coiled on said rocking elements, leaf springs connected to the second frame, and connections between the leaf springs and the torsional springs.

4. The combination with a base frame, of rocking elements on said base frame, a body frame spaced from said rocking elements, and rock arms terminating in coiled springs carried by the rocking elements and connected to the body frame.

5. The combination with a supporting base and a body, of connection between said base and body and including rockable elements, a spring device opposing the movement of said rockable elements, and means whereby said rockable elements can be locked against rocking.

[Claim 6 not printed in the Gazette.]

962,257. STEERING DEVICE. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed May 3, 1906. Serial No. 315,079.



1. A motor for steering mechanism, comprising a receptacle having fluid pressure supply and exhaust ports, valves in the respective ports and arranged for coöperative movement, means for unseating one valve when the other is seated, and a stem on one of the valves for supporting the other valve.

2. In a motor for steering mechanism, the combination with an extensible cylinder or receptacle, of means for resisting the extensibility of the cylinder, said means comprising provision for permitting the extensibility of the cylinder, a steering element, a casing about the same and means for effecting communication between the casing and the cylinder.

3. In a steering mechanism, a motor comprising an extensible cylinder having an outlet port and an inlet port, means for normally preventing the extensibility of the cylinder, said means comprising provision for automatically permitting the extensibility of the cylinder under a predetermined pressure.

4. In a motor for steering mechanism, the combination with a pair of cylinders arranged side by side and in communication with each other, of longitudinally movable floating pistons therein, inlet ports for said cylinders to admit pressure thereinto in front of said piston, and means in rear of the piston for permitting a resisting force to be exerted against each of said pistons.

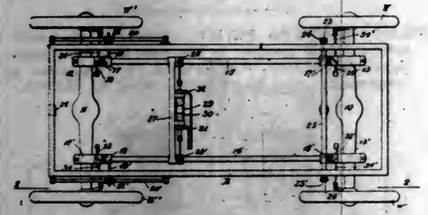
5. A motor for steering mechanism, comprising a receptacle having a non-elastic fluid therein, means for permitting the extensibility of the capacity of said receptacle, and an elastic fluid supply port communicating with said receptacle.

[Claims 6 to 9 not printed in the Gazette.]

962,258. VEHICLE. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Mar. 30, 1906, Serial No. 308,891. Renewed Jan. 4, 1909. Serial No. 470,598.

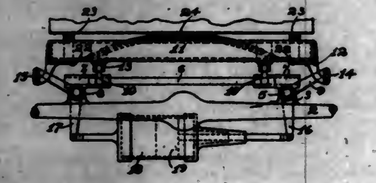
1. The combination with a base frame and a body frame, of rockable elements carried by the base frame, spring arms carried by said rockable elements and connected to the body frame, wheels carried by the base frame, rigid members carried by the rockable elements and connected to the wheels, and means for rocking said rockable elements.

2. The combination with a base and wheels therefor, of rockable elements carried by said base and connected to the wheels, a leaf spring structure carried by the body frame at one end thereof and connected to the rockable elements, and a leaf spring connection at the other end of the body frame and having connection to said rockable elements, and means for imparting movement to said rockable elements.



3. The combination with a base frame comprising axle supports and longitudinally disposed rockable side bars, of torsional springs carried by said rockable side bars and connected to the body frame, and connections between the wheels and the rockable side bars, whereby any movements of said bars will be synchronously communicated to the wheels and the body frame.

962,259. SUPPORT FOR VEHICLE-BODIES. ALBERT F. ROCKWELL, Bristol, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed Feb. 23, 1906, Serial No. 302,526. Renewed Feb. 8, 1909. Serial No. 476,820.



1. In a vehicle, the combination with a running gear, a body frame, and a body, of rock shafts upon said running gear and provided with rock arms, brackets upon said body frame and connected to said rock arms, and springs supported upon said brackets and supporting said body; substantially as described.

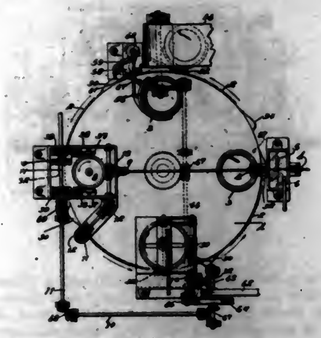
2. In a vehicle, the combination with a running gear, a body frame, and a body, of rock shafts upon said running gear and provided with rock arms, brackets upon said body frame and connected to said rock arms, said brackets having projecting portions at the edges of said body frame, and springs supported upon said projecting portions and supporting said body; substantially as described.

962,260. THREAD-COATING MACHINE. JARROT L. ROLLINS, Colfax, Cal. Filed July 8, 1908. Serial No. 442,569.

1. An apparatus for the coating and coiling of flexible, fibrous strings, a revoluble table, molds carried thereon, means for first applying a coat of wax to the string, means for transferring the coated string, means for coiling said string into a circle, means for applying a further coating to the upper side only, and means for discharging the finished product.

2. In an apparatus of the character described, a revoluble table, molds carried near the periphery thereof, mechanism by which the table is moved intermittently a quarter revolution at each forward turn and mechanism located at the points where the table is arrested for successively coiling, covering and discharging the string.

3. In an apparatus of the character described, an intermittently revoluble table, molds carried near the periphery, adapted to contain a flexible string, means located with relation to one side of the table for coating said string, and delivering it therefrom to a coiling mechanism.



4. In an apparatus of the character described, an intermittently revoluble mold-carrying table, means located with relation to the table whereby a string is coated or saturated with wax, a coiling device to which the string is subsequently delivered, said device consisting of a cylindrical drum, means for gripping the end of the string within the drum, means for rotating the drum whereby the string is coiled thereon, means for subsequently severing the string and forcing it from the drum into the mold beneath.

5. In an apparatus of the character described, an intermittently revoluble table, molds carried near the periphery, to contain a string coating means located with relation to one side of the table at a point of rest, a coiling mechanism to which the coated string is delivered, said mechanism including a cylindrical drum with means for rotating, an opening through which the string is delivered to the interior of the drum, a gripping device by which the end of the string is retained while the drum is rotated and the string coiled upon its exterior, a slot made in the drum through which the latter portion of the coil is carried so as to make an inturned end, a cutter by which the cord is severed, a sleeve or ring slidable upon the exterior of the drum, and means whereby it is moved vertically to force the string from the drum to the mold beneath.

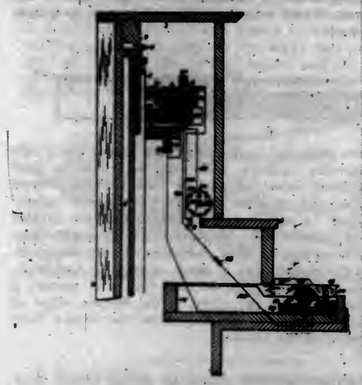
[Claims 6 to 10 not printed in the Gazette.]

962,261. ELECTRICAL PIANO. ROBERT A. ROSE and GEORGE C. HOLBROOK, Santa Rosa, Cal. Filed Mar. 29, 1909. Serial No. 486,894.

1. In an apparatus of the character described, the combination with strings, of hammers therefor, and electromagnets for propelling said hammers against the strings, and for withdrawing the same therefrom, substantially as described.

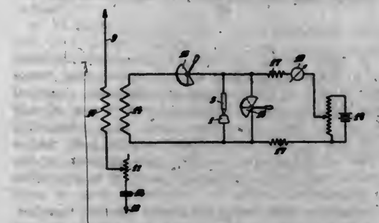
2. In an apparatus of the character described, the combination with strings, of hammers having parts attached thereto, solenoids, cores attached to the hammers and arranged to be attracted by the solenoids, and cores arranged to be attracted by the solenoids in the opposite direction to the first-mentioned cores, and, when so attracted, to impinge upon the parts attached to the hammers, and propel the latter against the strings, substantially as described.

3. In an apparatus of the character described, the combination with strings, of hammers having parts attached thereto, solenoids, cores attached to the hammers and arranged to be attracted by the solenoids, and cores arranged to be attracted by the solenoids in the opposite direction to the first-mentioned cores, and, when so attracted, to impinge upon the parts attached to the hammers, and propel the latter against the strings, and springs for returning the propelling cores to their normal position, substantially as described.



4. In an apparatus of the character described, the combination, with strings, of hammers having parts attached thereto, solenoids arranged at right angles to said strings and immediately behind the hammers, frames carrying said solenoids, and provided with means for guiding the hammers to and from the strings and in a direction at right angles thereto, cores in said solenoids detached from the hammers, said solenoids being arranged to attract said cores to cause them to impinge upon said parts attached to the hammers, and propel the hammers against the strings, and springs for withdrawing the cores, substantially as described.

962,262. WAVE-DETECTOR FOR WIRELESS TELEGRAPHY. WILHELM SCHLOEMILCH, Berlin, and PAUL FERNAND PICHON, Südende, near Berlin, Germany, assignors to Gesellschaft für Drahtlose Telegraphie M. B. H., Berlin, Germany. Filed Apr. 14, 1906. Serial No. 311,678.



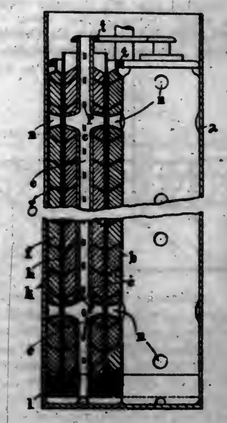
1. A wave detector for wireless telegraphy, consisting of two contact bodies, one of which is formed of one of the naturally found manganese compounds containing moisture.

2. A wave detector for wireless telegraphy, consisting of two contact bodies, one of which is formed of one of the naturally found manganese compounds containing moisture, and the other of a material which oxidises with difficulty.

3. A wave detector for wireless telegraphy, consisting of two contact bodies, one of which is formed of one of the naturally found manganese compounds containing moisture, and the other of a material which oxidises with difficulty, said contacts touching each other with a predetermined pressure.

4. A wave detector for wireless telegraphy consisting of two contacting bodies, one of which is formed of psilomelane.

962,263. SECONDARY BATTERY. HUGO PAUL SCHREIBER, London, England. Filed July 18, 1909. Serial No. 507,291.



1. In secondary electric batteries in combination an external electrode in the form of a cylindrical leaden tube, a layer of active material inside said tube, a cylindrical porous division inside said active material, an internal electrode in the form of a cylindrical leaden tube inside said porous division, a layer of active material surrounding said inner leaden tube, a liquid electrolyte and passages through said layers of active material lined with the metal of the electrodes, as set forth.

2. In secondary electric batteries in combination an external electrode in the form of a cylindrical leaden tube, a layer of active material inside said tube, a cylindrical porous division inside said active material, an internal electrode in the form of a cylindrical leaden tube inside said porous division, a layer of active material surrounding said inner leaden tube, an insulating base in contact with one end of said porous division, a liquid electrolyte and passages through said layers of active material lined with the metal of the electrodes, as set forth.

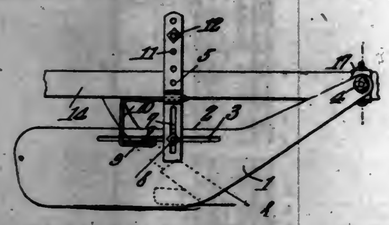
3. In secondary electric batteries in combination an external electrode in the form of a cylindrical leaden tube, a layer of active material inside said tube, a cylindrical porous division inside said active material, an internal electrode in the form of a cylindrical leaden tube inside said porous division, a layer of active material surrounding said inner leaden tube, an insulating base provided with a circular groove receiving one end of said porous division, a liquid electrolyte and passages through said layers of active material lined with the metal of the electrodes, as set forth.

4. In secondary electric batteries in combination an external electrode in the form of a cylindrical leaden tube, a layer of active material inside said tube, a cylindrical porous division inside said active material, an internal electrode in the form of a cylindrical leaden tube inside said porous division, a layer of active material surrounding said inner leaden tube, an insulating base provided with a circular groove receiving one end of said porous division, a liquid electrolyte, passages through said base for the circulation of said electrolyte and passages through said layers of active material lined with the metal of the electrodes, as set forth.

5. In secondary electric batteries in combination an external electrode in the form of a cylindrical leaden tube, a layer of active material inside said tube, a cylindrical porous division inside said active material, an internal electrode in the form of a cylindrical leaden tube inside said porous division, a layer of active material

surrounding said inner leaden tube, both layers of active material being of thickness equal to the diameter of said inner leaden tube and passages through said active material lined with the metal of the electrodes, as set forth.

962,264. PLOW-FENDER. JOHN C. SKIDMORE, Grapeland, Tex. Filed July 8, 1909. Serial No. 506,574.



A fender for application to an agricultural implement comprising a pivot, a fender blade attached to the pivot for pivotal movement and having an elongated slot, a hanger carried by the implement and receiving the upper portion of the fender and having elongated slots lying transversely across the slot in the fender, a bolt passing transversely through the slots in the fender and hanger, and a spring attached to the hanger and projecting laterally and passing through the slot in the fender and having a hooked extremity which lies over the upper edge of the fender.

962,265. PROCESS OF CLEANING MOLDING-SAND. RUSSELL A. SMITH, Titusville, Pa., assignor of one-fourth to John L. Emerson and one-fourth to E. O. Emerson, Jr., Titusville, Pa. Filed Aug. 8, 1906. Serial No. 329,775.

1. The process of cleaning molding sand containing a certain amount of carbon, consisting in heating a mixture of said sand, and of lime and sulfate of soda, allowing water to percolate through the sand and extracting the sal soda from the water, again washing the sand and saving the washings of sulfate of lime and free carbon, washing the lime with hot water to carry off the sulfate from the lime, and finally allowing the lime to dry slowly while exposed to the air and occasionally treated with cold water.

2. The process of cleaning molding sand, consisting in heating the sand, mixed with sodium sulfate and lime, allowing water to percolate through the sand, extracting the sodium carbonate from the water, again washing, and finally recovering the lime.

3. The process herein described, consisting in heating a mixture of sand which contains a percentage of carbon, carbonate of lime, and sodium sulfate, allowing water to percolate through the mixture, extracting the sal soda from the water, washing the sand to free it of carbon, and finally subjecting the remaining sand to repeated washings.

4. The method of heating sand, sodium sulfate and carbonate of lime, washing the mixture a number of times, and recovering the by-products of each washing.

5. The process of cleaning molding sand, consisting in heating sand in combination with lime and sodium sulfate, washing the mixture repeatedly, and recovering the by-products at different steps in the treatment of the sand.

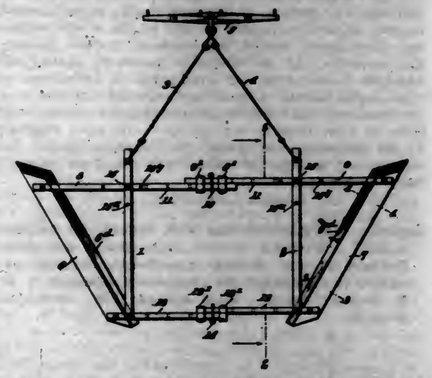
962,266. COMBINED LOW-WHEELED WAGON AND SLED. HENRY S. SOMSEN, Raymond, Idaho. Filed June 16, 1909. Serial No. 502,539.

1. A farm wagon or truck comprising spaced apart side runners having stringers mounted thereon the ends of which project beyond the sides of said runners, flooring planks supported by said stringers, a front bolster having supporting wheels pivotally mounted therein, a bolster carried by the rear portion of said runners, journal brackets carried by said last mentioned bolster, and supporting wheels mounted in said journal brackets and said runners, said wheels being in proximity to said runners and projecting a slight distance below the plane of the bottom edges thereof whereby said runners act as guards for said wheels.



2. A farm wagon or truck comprising spaced apart side members forming runners, a flooring supported by said runners, a front bolster carried by said runners, wheels pivotally mounted in said front bolster, a rear bolster also supported by said runners, journal brackets carried by said rear bolster, said brackets being arranged adjacent to each runner, an axle journaled in each side runner and each bracket, and a wheel carried by each axle, said wheels being arranged so that they will project a slight distance beyond the plane of the bottom edges of the runners, whereby the latter prevent the wheels from unduly sinking in the ground.

962,267. ROAD-GRADER. SPENCER ALLEN STONE, Chillicothe, Mo. Filed Jan. 13, 1910. Serial No. 537,806.



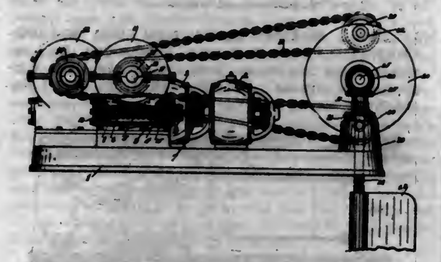
1. In a road grader, a pair of oppositely disposed scrapers, a frame connecting said scrapers, said frame comprising a pair of longitudinal parallel rods, a pair of transverse parallel rods pivotally secured to one of said scrapers, one of said transverse rods being adjustably secured to one of said longitudinal parallel rods, and a second pair of transverse parallel rods secured to the other scraper and being adjustably secured to the other of said longitudinal rods, the respective ends of each pair of transverse rods being adjustably secured together.

2. In a road grader, a pair of scrapers, cutters secured to the bottoms of said scrapers, the forward end of said cutters lying close to the ground so as to form a plowing or cutting member, and the rear end of the cutter being curved upwardly to form a crusher and a shaper.

3. In a road grader, a pair of scrapers, cutters secured to the bottoms of said scrapers, the rear ends of said cutters being curved upwardly, means for adjusting the forward ends of said scrapers toward and away from each other, and means for adjusting the rear ends of said scrapers toward and away from each other.

962,268. CHAIN-GEAR STEERING APPARATUS. AUGUST SUNDH, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 18, 1908. Serial No. 411,481.

1. In a steering device, the combination with a rudder, of a plurality of motors, means for simultaneously driving the motors at a predetermined relative speed, means for varying said relative speed, drive sheaves connected to the motors and having the same peripheral speed when said relative speed of the motors is maintained, a flexible member driven by said sheaves, a driven sheave engaged by said flexible member and moved by a variation in the relative peripheral speed of the drive sheaves, and connections between the driven sheave and the rudder for operating the rudder upon the movement of the driven sheave.



2. In a steering device, the combination with a rudder, of a plurality of motors, drive sheaves geared to the motors, an endless chain or cable engaging the drive sheaves, a direction sheave engaged by the chain or cable and moved by an unequal peripheral speed of the drive sheaves, and driving connections between the direction sheave and rudder.

3. In a steering device, the combination with a rudder, of a pivoted member, a sheave journaled on said member, a chain or cable engaging the sheave, means for operating the two leads of the chain or cable extending from the sheave at different speeds, and thereby causing a rotary movement of said pivoted member, and driving connections between said member and the rudder.

4. In a steering device, the combination with a direction sheave, of drive sheaves each located on the same side of the direction sheave, a flexible member engaging the direction sheave and having its two leads extending to the drive sheaves, means for rotating the drive sheaves at the same or different relative speeds to either rotate or move the direction sheave bodily, a rudder, and driving connections between the direction sheave and the rudder.

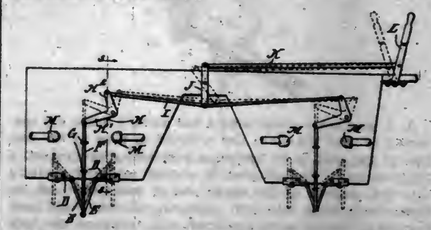
5. In steering apparatus, the combination with a rudder, of a pivoted member, direction sheaves journaled to said member on opposite sides of its pivot, a pair of drive sheaves both located at the same side of the pivoted member, an endless driving member engaging the drive sheaves and direction sheaves, manually controlled means for rotating the drive sheaves either at the same or different peripheral speeds, and a driving connection between the rudder and said pivoted member.

[Claims 6 to 12 not printed in Gazette.]

962,269. LOCOMOTIVE ASH-PAN. WILLIAM WHITE STEBBS, Manchester, Va., assignor of one-third to William H. Owens, Manchester, Va., and one-third to Lawrence Casselman, Richmond, Va. Filed Jan. 17, 1910. Serial No. 538,396.

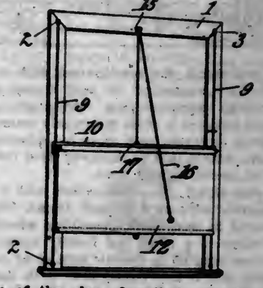
1. A double ash pan having its ash-pans spaced apart and provided with rocking bottom sections, cranks on said bottom sections, slide rods, links connecting the slide rods with the cranks of their respective bottom sections, bell crank levers one for each of said pans and each of said levers having one arm connected with the slide rod of its respective pan, a pivoted lever between the said bell cranks, and rods connecting the levers with the bell cranks whereby to operate the same, substantially as set forth.

2. An ash pan having rocking bottom sections pivoted between their edges whereby they may be elevated at one edge in the open position of the sections, combined with perforated pipes arranged above said sections and extending parallel with the direction of length of the sections, the latter being so related to the perforated pipes that when the bottom sections are tilted to open position the upper edge of the said bottom sections will be moved to a point approximately below and adjacent to the perforated pipes whereby the latter will discharge to the upper edges of the sections when the latter are open, substantially as set forth.



3. The combination of spaced apart ash-pans provided with rocking bottom sections, cranks in connection with said sections, slide rods, links connecting the slide rods with the cranks of their respective bottom sections, bell crank levers, one for each of said pans and each of said levers having one arm connected with the slide rod of its respective pan, and an operating device connected with the bell crank levers.

962,270. WINDOW-SHADE FIXTURE. WILLIAM G. TEMPLETON, Colorado Springs, Colo. Filed Oct. 5, 1909. Serial No. 521,029.



A device of the class described comprising a frame; vertically alined brackets mounted upon opposite sides of the frame; rods mounted in the brackets and having threaded ends arranged to extend above and below the brackets; nuts, each comprising a tubular portion to fit closely within the brackets and threaded to engage the ends of the rods, and a polygonal, laterally extending head to engage the brackets, the head having an upstanding boss provided with a kerf; a rigid bar arranged to extend transversely of the frame; tubular guides depending from the bar and arranged to receive the rods in sliding relation; a curtain carried by the bar; a pulley mounted upon the top of the frame between the guides; and a flexible element passed over the pulley and at one end assembled with the bar between the guides.

962,271. POST-BRACE. ERNEST L. THOMPSON and MAY C. BIRCH, Bluffton, Ind. Filed June 16, 1909. Serial No. 502,598.

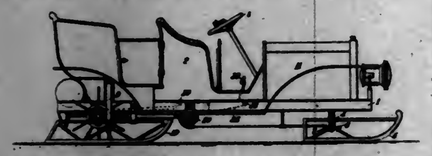
1. A post brace comprising a bed plate, a brace rod connected to said bed plate and adapted to pass to the bottom of the post to be braced, a post engaging element, a diagonal brace rod adapted to engage said bed plate, a threaded element at the upper end of said brace rod for engagement

with said post engaging element, said post engaging element being provided with tangs on one side and a concaved face on the other, a central projection on said concaved face to enter said threaded element, and a rib on said concaved face, the said threaded element being provided with notches to receive said rib to prevent rotation of said threaded element.



2. A post brace comprising a bed plate, a brace rod connected to said bed plate and adapted to pass to the bottom of the post to be braced, a post engaging element, a diagonal brace rod adapted to engage said bed plate, a threaded element at the upper end of said brace rod for engagement with said post engaging element, said post engaging element being provided with tangs on one side and means on the other to receive the said threaded element, and further means on said post engaging element for effecting an interlocking engagement with said threaded element to hold said threaded element against rotation.

962,272. AUTO-SLEIGH. OSCAR JOHN TUBBS, Waterville, Me. Filed Aug. 30, 1909. Serial No. 515,225.



1. In an auto-sleigh, the combination with a frame, of a shaft rotatably supported on said frame, a pair of hangers pivotally supported on said shaft, propelling wheels on said hangers, a cross rod loosely connecting said hangers, a lever engaging said cross rod adapted to force said propelling wheels into engagement with the roadway, and means for operating said lever.

2. In an auto-sleigh, the combination with a frame, of a shaft rotatably supported in said frame, hangers pivotally connected to said shaft, propelling wheels connected to said hangers, a cross rod loosely connecting said hangers, a lever adapted to operate said cross rod to force said propelling wheels into engagement with the roadway, means for resiliently connecting said lever to the frame, and means for operating said lever.

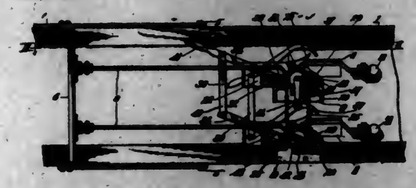
3. In an auto-sleigh, the combination with a frame, of a shaft rotatably supported on said frame, hangers pivotally connected to said shaft, propelling wheels rotatably supported on said hangers, a cross rod loosely connecting said hangers together, a lever adapted to operate said cross rod, to force said propelling wheels into engagement with the roadway, brackets supported on said frame, a cross bar secured to said lever, and tension springs connecting said cross bar with said brackets.

4. In an auto-sleigh, the combination with a frame, of a shaft rotatably supported in said frame, hangers pivotally connected to said shaft, a cross rod adjustably connecting said hangers together, propelling wheels rotatably supported on said hangers, means for rotating said propelling wheels, a lever engaging said cross rod and adapted to force said propelling wheels into engagement with the roadway, means for operating said lever, a cross bar connected to said lever, brackets connected to said frame, and spring connections between said brackets and said cross bar.

5. In an auto-sleigh, the combination with a frame, of a body portion on said frame, a shaft rotatably supported on said frame, hangers pivotally connected to said shaft, propelling wheels rotatably supported in said hangers, driving connections between said shaft and said propelling wheels, a loose connection between said hangers, a lever adapted to operate said loose connection, to force said propelling wheels into engagement with the roadway, a bar connected to said lever, brackets connected to said frame, tension springs connecting said brackets with said bar, and a foot lever for operating said lever.

[Claims 6 and 7 not printed in the Gazette.]

962,273. WIRING MECHANISM FOR BALING-PRESSES. JOSIAH S. TUTTLE, Kansas City, Mo., assignor of one-half to Geo. Ertel Co., Quincy, Ill., a Corporation of Illinois. Filed Mar. 18, 1909. Serial No. 484,079.



1. In a baling press, a pivoted jaw having a cutting edge at its lower inner margin, a second cutting jaw having its cutting edge at its upper outer margin to coöperate with the cutting edge of the pivoted jaw, and a stationary gripping jaw to coöperate with the lower outer margin of the pivoted jaw in gripping the new end of a wire leading from the point of supply as a piece is cut therefrom by the cutting mechanism.

2. In a baling press, a pivoted jaw having a cutting edge at its lower inner margin, a second cutting jaw having its cutting edge at its upper outer margin to coöperate with the cutting edge of the pivoted jaw, a stationary gripping jaw to coöperate with the lower outer margin of the pivoted jaw in gripping the new end of a wire leading from the point of supply as a piece is cut therefrom by the cutting mechanism, and a second gripping jaw to coöperate with said pivoted jaw in gripping said end of the wire when the action of the movable jaw is reversed and the wire is released from between it and the first-named gripping jaw.

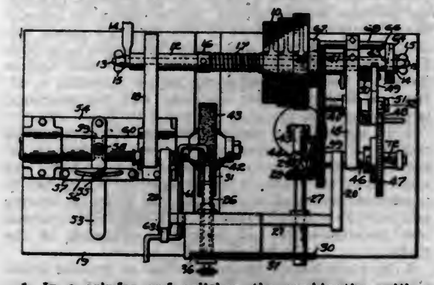
3. In a baling press, a cutting jaw and a gripping jaw spaced apart, a needle for swinging from the same side of the baling case as said jaws through said case to the opposite side and at such side catching and doubling a wire and drawing it transversely through the baling-case and disposing the front portion of such doubled wire over said jaws, a movable jaw to move between said spaced jaws and sever such wire against the said cutting jaw and coöperate with said gripping jaw in gripping the new end of the part of the wire leading from the point of supply, and means whereby the wire leading from the point of supply is pouched forwardly in the baling-case, and drawn inward over the movable jaw after such wire is released from the needle.

4. In a baling press, a cutting jaw and a gripping jaw spaced apart, a needle for swinging from the same side of the baling case as said jaws through said case to the opposite side and at such side catching and doubling a wire and drawing it transversely through the baling-case and disposing the front portion of such doubled wire over said jaws, a movable jaw to move between said spaced jaws and sever such wire and coöperate with said gripping jaw in gripping the new end of that part of the wire leading from the point of supply, means whereby the wire leading from the point of supply is pouched forwardly in the baling-case, and drawn inward over the movable jaw after such wire is released from the needle and a second gripping jaw to coöperate with the movable jaw in gripping the wire as the same is released from the first-named gripping jaw by reverse movement of said movable jaw.

5. In a baling press, a cutting jaw and a gripping jaw spaced apart, a needle for swinging from the same side of the baling case as said jaws through said case to the opposite side and at such side catching and doubling a wire and drawing it transversely through the baling press and disposing the front portion of such doubled wire over said jaws, a movable jaw to move between said spaced jaws and sever such wire and coöperate with said gripping jaws in gripping the new end of that part of the wire leading from the point of supply, means whereby the wire leading from the point of supply is pouched forwardly in the baling case and drawn inward over the movable jaw after such wire is released from the needle, a second gripping jaw to coöperate with the movable jaw in gripping the wire as such wire is released from the first-named gripping jaw by reverse movement of said movable jaw, and means for knotting the two ends of the wire together after the needle has made a second operation and again doubled and drawn such doubled portion of the wire transversely through the baling-case and has disposed the front portion of the doubled part of the wire in the first-named pair of jaws and such portion has been severed by a second operation of the cutting mechanism and the opposite end of the severed portion has been released by said second cutting movement of said movable jaw.

[Claims 6 to 23 not printed in the Gazette.]

962,274. GEM GRINDER AND POLISHER. FRED F. VAN EPS, North Plainfield, N. J. Filed Sept. 14, 1909. Serial No. 517,700.



1. In a grinder and polisher, the combination with a grinding wheel, of a rotating gem holder, a model holder rotating simultaneously with the gem holder, means for rotating the holders separately, means for automatically shifting the angle of the holders so as to present the surface of the stone to the grinding wheel that it may be cut to correspond with the model.

2. In a grinder and polisher, the combination with a rotating grinding and polishing wheel, of a former or model, a rotating carrier for same, a simultaneously rotating gem carrier, means for rotating the carriers separately, and means for presenting the gem to the face of the wheel to correspond with the shape of the former.

3. In a grinder and polisher, the combination with a rotating grinding and polishing wheel, of a frame, a rotating spindle for the gem holder, a rotating spindle for the former, means for simultaneously and separately rotating the two spindles, and means for changing the angle of the spindles.

4. In a grinder and polisher, for gems, the combination with a rotating grinding and polishing wheel, of a spindle to carry the gem, a former, rotating sleeves for the gem and former spindles carrying the gem holder and former and adapted to work in unison, means for rotating the spindles and means for automatically moving the spindles radially.

5. In a gem grinder and polisher, the combination with a grinding and polishing wheel, of a rod supported by brackets, a sleeve on the rod, arms carried by the sleeve, a gem carrier, a former, and means for simultaneously rotating the carrier and former.

[Claims 6 to 11 not printed in the Gazette.]

962,275. CURTAIN-FIXTURE. LILLIAN F. VOOT and WILLIAM G. VOOT, Pinegrove, Mont. Filed Feb. 16, 1909. Serial No. 478,294.



1. A curtain fixture, comprising in combination a longitudinally-slitted hollow pole, a pair of parallel track members disposed upon opposite sides of said slit, said track members being formed of metal rods having their ends bent upon themselves to grip the pole to secure the track members in place, a series of depending hangers having their upper portion located upon the track members and spanning the slit, and their ends slidably engaged with the track members, and a depending member carried by the upper portion of each of the hangers projecting between said track members and through said slit.

2. A curtain fixture comprising in combination, a longitudinally-slitted pole; a longitudinal track located within the pole and comprising a pair of parallel wires disposed upon opposite sides of the slit; a series of hangers having their upper portions projecting through the slit; a pair of cups secured to the upper end of each hanger and disposed directly above the wires; and a roller disposed within each cup and arranged to travel upon the upper face of the adjacent wire.

962,276. LOCK. HENRY G. VOIGHT, New Britain, Conn., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Feb. 16, 1910. Serial No. 544,154.



1. In a cylinder lock, a shutter rotatably mounted at the outer end thereof, a key opening or passage in said shutter at one side of the axis of rotation of said shutter, two independent key-controlled rotatable plugs in said cylinder spaced apart and substantially equidistant from the axis of rotation of the shutter, said distance being substantially equal to the distance of the key passage from the axis of rotation of said shutter, whereby when the latter is rotated it will bring said key passage in front of either one of said key plugs at will while the solid part of the shutter will cover the key hole in the other plug.

2. In a lock of the pin cylinder type, two key-controlled rotatable plugs having key passages therein arranged side by side, a case for holding said plugs, a shutter frictionally mounted for rotation on the outer end of said case to cover the outer ends of the plugs and a key passage in said shutter arranged to expose one or the other of said plugs alternately said key plugs being arranged substantially equidistant from the axis of rotation of said shutter.

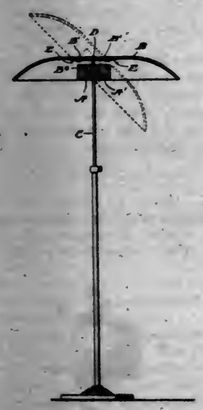
3. In a lock of the pin cylinder type, two key-controlled rotatable plugs having key passages therein arranged side by side, a case for holding said plugs, a shutter frictionally mounted for rotation on the outer end of said case to cover the outer ends of the plugs, a key passage in said

shutter arranged to expose one or the other of said plugs alternately, and means for frictionally holding said shutter against displacement.

4. In a lock of the pin cylinder type, two key-controlled rotatable plugs having key passages therein arranged side by side, a case for holding said plugs, a shutter frictionally mounted for rotation on the outer end of said case to cover the outer ends of the plugs, a key passage in said shutter arranged to expose one or the other of said plugs alternately, and means for frictionally holding said shutter against displacement, said means including a spring carried by one part and frictionally engaging the other part.

5. In a lock of the pin cylinder type, two key-controlled rotatable plugs having key passages therein arranged side by side, a case for holding said plugs, a shutter frictionally mounted for rotation on the outer end of said case to cover the outer ends of the plugs, a key passage in said shutter arranged to expose one or the other of said plugs alternately, and means for frictionally holding said shutter against displacement, said means including a spring carried by one part and frictionally engaging the other part, said last mentioned part having a recess for the reception of the free end of the spring.

962,277. DISPLAY-STAND. JAMES M. WALTERS, Los Angeles, Cal. Filed Mar. 31, 1910. Serial No. 552,496.

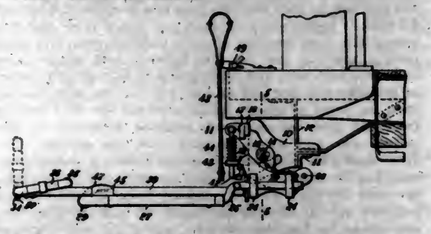


1. In a display apparatus, a display head having a body portion and a cover, the cover being in concavo-convex form and the body portion being arranged therein and extending in bridge form from side to side thereof, a reinforcing plate on the underside of the cover and between the same and the body portion, openings being formed through the underside of the body portion and leading to said reinforcing plate and arranged at different angles and openings being formed through the cover and the reinforcing plate and sockets being provided in the upper side of the block communicating with said openings, said sockets being adapted to receive a stand rod, all substantially as and for the purposes set forth.

2. A display head comprising a concavo-convex cover, a body portion within the same and socketed for the reception of a stand rod and a reinforcing plate between the body portion and the cover, substantially as set forth.

3. A display stand comprising a cover in concavo-convex form, a body portion arranged in said cover and extending in bridge form from side to side thereof and spaced at its upper side from the cover, the said body portion being provided in its underside with sockets and also having sockets in its upper side and openings being formed through the cover in alinement with the sockets in the upper side of the body portion, substantially as set forth.

962,278. CAR-FENDER. WILLIAM THOMAS WATSON, Vancouver, British Columbia, Canada. Filed July 31, 1909. Serial No. 510,598.



1. In a car fender, the combination of depending substantially rigid hangers, fender supports pivotally secured thereto but normally locked against movement, fender carriers pivoted to said fender supports, and a fender carried by said fender carriers.

2. In a car fender, the combination of pivotally-supported fender carriers, a fender having rearwardly-extending members secured thereto, locking means for preventing the upward movement of said fender, a spring normally tending to force said fender downward, and a movable locking means for normally holding said fender against downward movement.

3. In a car fender, the combination of pivotally-supported fender carriers, a fender having rearwardly-extending members secured thereto, locking means for preventing the upward movement of said fender, a spring normally tending to force said fender downward, a movable locking means for normally holding said fender against downward movement, and a trip section extending in advance of said fender for operating said first-mentioned locking means.

4. In a car fender, the combination of pivoted cradle carriers, a cradle secured thereto, two trip dogs in engagement with said carriers for supporting the latter and maintaining the cradle in raised position, a trip bar in engagement with both of said dogs, and means for moving said trip bar out of engagement with said dogs to release both simultaneously and permit the dropping of the cradle.

5. In a car fender, the combination of movable cradle carriers, a cradle secured thereto, two pivoted dogs each having one end normally supporting its corresponding cradle carrier, the opposite ends of said dogs normally tending to swing toward each other, and a trip bar disposed intermediate said dogs and normally preventing said swinging movement.

[Claims 6 to 15 not printed in the Gazette.]

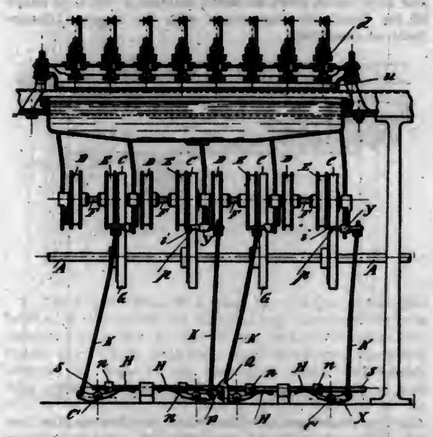
962,279. MACHINE FOR REELING COCOONS. VITTORIO VITALI WEBER, Milan, Italy. Filed Sept. 5, 1906. Serial No. 333,402.

1. In a cocoon reeling apparatus, the combination with groups of end catchers, of mechanism for individually stopping the motion of the end catchers, and mechanism for unitedly stopping the motion of the end catchers.

2. In a cocoon reeling apparatus, the combination with reels and groups of end catchers adapted to coöperate with the reels, of mechanism for stopping the movement of all the groups of catchers pertaining to the same basin.

3. In a cocoon reeling apparatus, the combination with groups of end catchers and winding reels with which said catchers coöperate, of independent shaft sections operatively associated with the individual groups of end catchers, means for actuating the said shafts, mechanism for stopping the movement of a portion of said actuating means of the individual groups of end catchers, and mechanism for simultaneously stopping the movement of a portion of the actuating means of all of the groups of end catchers.

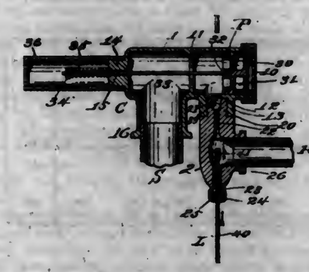
4. A cocoon reeling apparatus comprising end catchers involving two superposed revolving disks provided with notches, a socket having a spindle therein carrying said disks, and operating mechanism for the end catchers.



5. A cocoon reeling apparatus having end catchers consisting of two superposed revolving disks formed with notches and recesses and having a spindle, a socket in which the spindle is removably mounted, and means for supporting the socket.

[Claims 6 and 7 not printed in the Gazette.]

962,280. GAS CUT-OFF. JOSEPH F. WELLS, Pinkstaff, Ill. Filed Dec. 30, 1909. Serial No. 535,722.



1. In an automatic cut-off, the combination with a casing having a horizontal cylinder between the service pipe and house connections, a hole in its bottom, an upright valve seat, and a port leading thence downward in the direction of the flow of gas; of a piston in two connected parts movable in said cylinder across said hole and adapted to stand beyond it under gas pressure, a spring for retracting the piston as said pressure decreases, and a free ball valve in the cylinder between said parts of the piston and of a size to drop into said hole when the piston is sufficiently retracted.

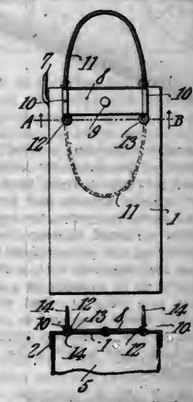
2. In an automatic cut-off, the combination with a casing having a horizontal cylinder with a hole in its bottom, and an upright valve seat and alined port below said hole, connections between the service pipe and the inlet end of the cylinder, and connections between the house pipe and the casing beyond said port; of a piston in two connected parts movable in said cylinder across said hole under pressure, means for retracting the piston as the pressure falls, a free ball valve in the cylinder between said parts of the piston, and a lifting pin slidable upward through the casing in line with said port and seat for restoring the ball to the cylinder, as described.

3. In an automatic cut-off, the combination with a casing having a horizontal cylinder with a hole in its bottom, and an upright valve seat and alined port below said hole, a boss at the end of the cylinder remote from said hole therein, and a depending boss around said valve seat having a hole in line with said port; of a piston in two connected parts movable within the cylinder, a piston rod extending through the hole in the end-boss and having a nut exterior thereof, an expansive spring between this boss and nut, a free ball valve in the cylinder between said parts of the piston, a lifting pin extending through the hole in the depending boss, and a perforated cap and packing around the latter boss and the pin.

4. An automatic cut-off comprising a casing in two members, one being a horizontal cylinder with a hole in its bottom, one end closed, an interior stop, a perforated boss at its other end, and a coupling for the service pipe between said boss and stop, and the other member standing vertically beneath the first and having an upright port and valve seat communicating with said hole, a perforated boss in line with said port, and between them a coupling for the house pipe; combined with a piston movable in the cylinder and having a rod extending through the cylinder-boss, an exterior spring thereon of less strength than the normal gas pressure, a free ball valve within the cylinder and adapted to be moved by the piston until it drops through said hole, and a ball-lifting pin extending slidably through the boss below said port, for the purpose set forth.

5. In an automatic cut-off the combination with a piston and rod, a spring for the rod, and a free ball valve moved by the piston; of a casing in two members, one being a horisontal cylinder with a hole in its bottom, a depending boss surrounding said hole, a removable cap closing one end of the piston, a boss at its other end centrally perforated and externally threaded, and an inlet adjacent this boss, and the other member having a reduced upper end engaging said depending boss and pierced with a valve seat and an alined port adapted to register with said hole, a threaded boss opposite said port centrally perforated and externally threaded, and an outlet between this boss and port, caps closing over said threaded bosses, and a lifting pin through the cap and threaded boss on the second member, for the purpose set forth.

962,281. MAIL-BOX. GOTTFRID WESTELIN, Lincoln, Nebr. Filed Feb. 3, 1910. Serial No. 541,702.



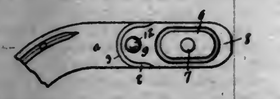
1. A device of the class described including a back plate, said plate having fastener receiving openings, a bail mounted for swinging movement upon said plate and having terminal eyes disposed to register with the openings to receive the fastening means.

2. A mail box including a back plate, and a clip pivotally mounted upon said plate and movable in a plane

parallel with the plate, said clip being shiftable into position beyond one end of the plate to constitute a combined handle and holding device.

3. A mail box including a back plate, a spring bail constituting a clip, a connection between opposed portions of said bail, said connection being pivotally mounted upon the plate, and means for securing said plate to a supporting structure and holding said bail and connection against movement about the pivot.

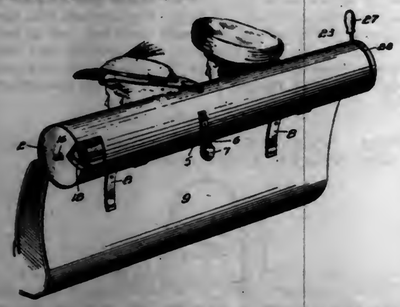
962,282. CALK FOR HORSESHOES. BLOOMFIELD F. WHARTON, Lima, Ohio. Filed June 28, 1909. Serial No. 504,798.



1. A horseshoe having a rabbet and a recess in its lower side and a stud projecting from its outer side, a calk holder on the lower side of the shoe having a base element fitted in the rabbet and having a lug bearing in the outer side of the shoe, and engaging said stud, a calk in said holder, and a shock absorber in said recess, between the base of the calk and the shoe.

2. A horse shoe having a rabbet in its lower side and a stud projecting from its outer side, a calk holder on the lower side of the shoe having a base element fitted in the rabbet and having a lug bearing against the outer side of the shoe and engaging said stud, and a calk in said holder.

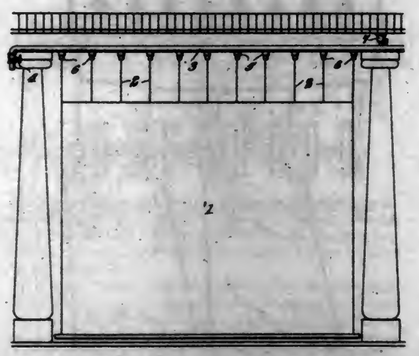
962,283. VENDING APPARATUS. JOHN WHISTLER and RICHARD A. DUDECK, St. Louis, Mo. Filed May 14, 1909. Serial No. 495,944.



A vending apparatus embodying a rotary member provided with a series of stops, means for holding said member from retrograde rotation, a drum fixed to the rotary member in spaced relation thereto and provided with a series of pockets to partially receive the inserted coins, a pivoted locking lever arranged between the rotary member and drum and having one end arranged to engage said stops and its other end provided with a right angularly bent trip arm adapted to be engaged by a coin in the receiving pocket, said arm being provided with a laterally bent tip, an operating device arranged to engage the coin and impart motion to the drum and simultaneously release said locking lever, and a spring for returning the lever to normal position.

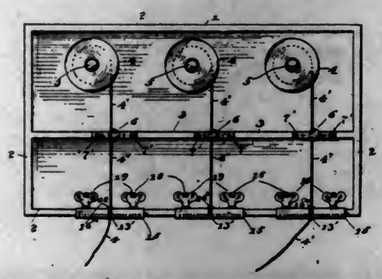
962,284. AIR-COOLING APPARATUS. ROBERT G. WILSON, Alaska, W. Va. Filed Feb. 24, 1910. Serial No. 545,717.

1. The improved apparatus for the purpose specified, comprising a liquid-conducting pipe having pendent nipples which are screw-threaded internally, a fabric, and means for suspending it from the nipples, the same consisting of cords provided with knots at their free ends and short tubes screw-threaded internally and thus adapted for detachable engagement with the nipples, substantially as described.



2. The combination, with a water conducting pipe having discharge orifices provided with pendent nipples whose upper ends are contracted, of a curtain and suspending cords having heads of greater diameter than the contracted orifices of the nipples, and threaded tubes 6 screwed into such nipples and supporting the knotted cords, said tubes being vertically adjustable so that the knots may be compressed more or less as required to regulate the discharge of water, substantially as described.

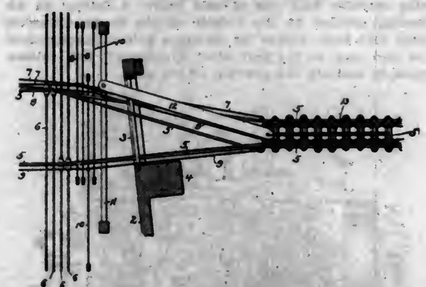
962,285. THREAD-CABINET. JOHN A. WITT, Chicago, Ill. Filed June 12, 1909. Serial No. 501,801.



In a device of the class described, a tray having sides and a bottom, a partition interposed between two of said sides, a plurality of thread friction devices mounted on said partition and each comprising a tubular portion carrying an upwardly extending headed plunger and a retracting spring in said tubular portion, vertical pins in said tray to receive spools of thread, a thread cutter secured to one of said sides, and a frictional thread retainer adjacent said thread cutter and comprising diverging upwardly extending spring arms, substantially as described.

962,286. LOOM FOR WEAVING DOUBLE-PILE FABRICS. GEORGE ZIMMERMANN, Philadelphia, Pa. Filed Dec. 18, 1909. Serial No. 533,954.

1. The combination, in a loom for weaving double pile fabrics, of mechanism for weaving two webs with threads crossing from one to the other, heddle-or-harness-controlled bars which constitute rigid separators interposed between the webs at the beating-up point, and flexible tails extending from said bars into the woven web and serving to maintain said bars in proper relation to the web at the beating up point, said flexible tails being smaller than the space between the webs.



2. The combination, in a loom for weaving double pile fabrics, of mechanism for weaving two webs with threads crossing from one to the other, heddle-or-harness-controlled bars which constitute rigid separators interposed between the webs at the beating-up point, and flexible tails extending from said bars into the woven web and serving to maintain said bars in proper relation to the web at the beating up point, said flexible tails being composed of textile material and being smaller than the space between the webs.

3. The combination, in a loom for weaving double pile fabric, of mechanism for weaving two webs with threads crossing from one to the other, heddle-or-harness-controlled bars which constitute rigid separators interposed between the webs at the beating up point, and flexible tails extending from said bars into the woven web and serving to maintain said bars in proper relation to the web at the beating up point, each of said flexible tails presenting a plurality of ends and being smaller than the space between the webs.

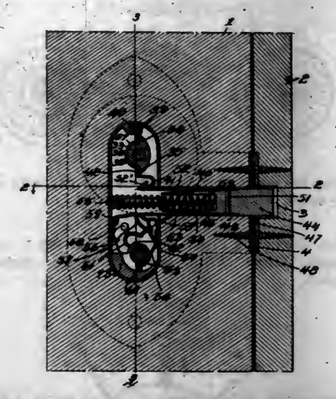
4. The combination, in a loom for weaving double pile fabrics, of mechanism for weaving two webs with threads crossing from one to the other, heddle-or-harness-controlled bars which constitute rigid separators interposed between the webs at the beating up point, and flexible tails extending from said bars into the woven web and serving to maintain said bars in proper relation to the web at the beating up point, said flexible tails being smaller than the space between the webs and being confined to the bars so as to cause the latter to resist the pull upon the tails in the direction in which the woven web moves.

5. The combination, in a loom for weaving double pile fabrics, of mechanism for weaving two webs with threads crossing from one to the other, heddle-or-harness-controlled bars having rounded ends which are interposed between the webs at the beating up point and constitute rigid separators for said webs, and flexible tails projecting from the rounded ends of the bars into the woven web and serving to maintain said bars in proper relation to the web at the beating up point, said flexible tails being smaller than the space between the webs.

962,287. DOOR-LOCK. EDWARD D. ZINNINGER, Portland, Oreg. Filed Sept. 10, 1909. Serial No. 517,129.

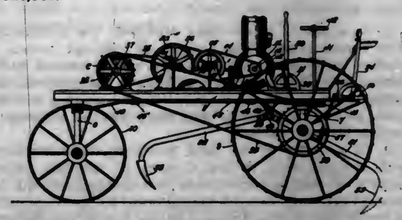
1. In a lock, a casing, a sliding spring projected bolt, hooked spring fingers carried by the bolt, means, including a hooked member, coacting with one of said hooked fingers to retract the bolt, a pivoted tumbler movable to engage the other finger to lock the bolt from inward movement, said tumbler being gravity retracted and having a projection, a locking spring adapted to engage said projection, a key controlled member for operating the tumbler and retracting said locking member, and a second locking member for normally locking said key controlled member in retracted position.

2. In a lock, a casing, a sliding bolt, hooked spring fingers carried by the bolt, means including a hooked member adapted for coaction with one of said fingers for retracting the bolt, a pivoted, gravity retracted tumbler adapted to engage the other finger to hold the bolt projected, said tumbler being provided with a projection, means for limiting the swinging movement of the tumbler,



a key controlled member for operating the tumbler, said member having a locking recess, and spring members adapted to engage the locking projection on the tumbler and locking recess in the key controlled element for normally holding the projected and key controlled element retracted.

962,288. CULTIVATING-MACHINE. DELON H. ABBOTT, Vandemere, N. C. Filed Aug. 19, 1909. Serial No. 518,581.

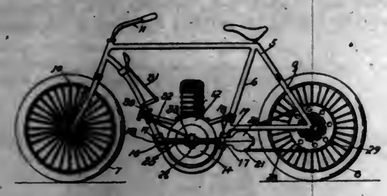


In a machine of the class described, a platform, arched axles supporting the same and having wheel carrying spindles, propulsion means including a motor and reversing gear, oscillatory members supported adjacent to the platform in a plane above the wheel carrying spindles, implement carrying beams connected with the oscillatory members and extending forwardly and rearwardly therefrom, cultivating implements connected with the beams and faced in opposite directions, and means connected with the rearwardly extending beams to vertically adjust the same thereby rocking the oscillatory members and effecting vertical adjustment in an opposite direction of the forwardly extending beams.

962,289. MOTOR-CYCLE. LUTHER H. ALLEN, Gravette, Ark. Filed July 14, 1909. Serial No. 507,534.

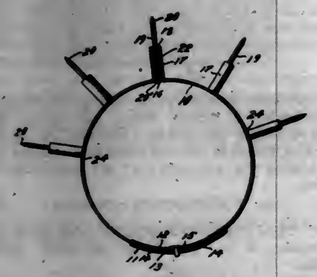
The combination with a wheeled bicycle frame, of brackets detachably connected to the frame, a split casing formed on one of said brackets, a shaft rotatably mounted in said casing, a second shaft journaled in one bracket and said casing, enmeshing pinions connecting the shafts, a friction disk slidably keyed upon the second named shaft, a motor mounted in the bicycle frame and having a driving shaft, a friction disk fixed to said driving shaft and contacting with the first named friction disk, driven

connections between the first named shaft and the rear supporting wheel of the bicycle frame, and means for



changing the position of the first named disk with respect to the other.

962,290. CALF OR COLT WEANER. EDSON L. ALVORD, Weskan, Kans. Filed Nov. 22, 1909. Serial No. 529,347.



1. In a device of the class described, the combination with a nose band having a series of openings therein, of casings surrounding said openings, spring pressed spikes adapted to be projected outwardly from said casings, said spikes being movable to contact with the wearing animal's nose, and means whereby said band may be adjusted to various sizes of animals.

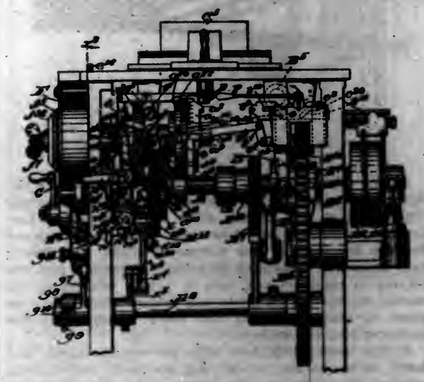
2. In a device of the class described, the combination with a nose band, having a series of openings formed therein, of casings surrounding said openings, having the forward extremity thereof flanged inwardly, spikes adapted to reciprocate in said openings having a centrally disposed circular lug formed thereon and adapted to bear against the inner surface of said flange, a spring interposed between the inner side of said lug and the nose band, said spring retaining the spike normally projected outwardly from said casing, and means whereby said band may be adjusted to various sizes of animals.

962,291. CIRCULAR-FASHIONING KNITTING-MACHINE. ARTHUR N. AMES, Franklin Falls, N. H. Filed Feb. 19, 1906. Serial No. 301,801.

1. In a knitting machine, a pattern shaft; a primary pattern member fixed on said shaft; a second pattern member rotatably mounted on said primary member; means for clamping said members together; a third pattern member rotatable around the shaft; a shoulder formed on the shaft; and means for clamping said members together.

2. In a knitting machine, a pattern shaft; a primary pattern member fixed on said shaft; a second pattern member rotatably mounted on said primary member; means for clamping said members together; a third pattern member rotatable around the shaft; a shoulder formed on the shaft; and means for clamping said third member between said shoulder and the other pattern members.

3. In a knitting machine, a pattern shaft; fast and loose gears coöperating with said shaft; an adjustable stop movable with one of said gears; a frame; an adjusting member at the outside of the frame connected with said stop; means for clamping said adjusting member and stop to the gear after adjustment; and calibrations to indicate the position of the stop.



4. In a knitting machine, a pattern shaft; a gear fast on said shaft; a frame; a similar gear bearing in the frame; a calibrated plate secured to the gear which bears in the frame; a stop member having a bearing in the hub of the said gear; a plate outside the frame adjacent to the calibrated plate aforesaid, said plates having registering teeth corresponding to the calibrations; means for rotatably connecting the outside plate with said stop member; and means for clamping the two plates together after the adjustment has been effected.

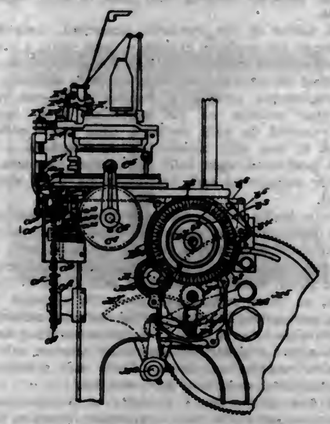
5. In a knitting machine, a pattern shaft; a gear fast on said shaft; a frame; a similar gear bearing in the frame; a calibrated plate secured to the gear which bears in the frame; a stop member having a bearing in the hub of the said gear; a plate outside the frame adjacent to the calibrated plate aforesaid, said plates having registering teeth corresponding to the calibrations; pins projecting from the stop member into openings in the outside plate, whereby said outside plate is separable from said calibrated plate, but rotatably connected with the stop-portion; a spring interposed between the plates; and a thumb screw to clamp the two plates together against the stress of the spring.

[Claims 6 to 15 not printed in the Gazette.]

962,292. CIRCULAR-KNITTING MACHINE. ARTHUR N. AMES, Franklin Falls, N. H. Filed Mar. 12, 1906. Serial No. 305,707.

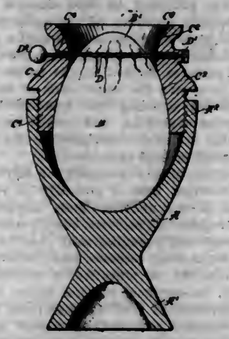
1. In a knitting machine, a plurality of thread-guides; a pattern chain for shifting said thread-guides; a ratchet to produce a movement of said pattern-chain; a pawl coöperating with said ratchet; a movable support for said pawl to hold it out of the path of said ratchet; devices connected with the pattern-chain to move said support; an automatic retaining device for said support; a main pattern controlling mechanism; and means connected with said mechanism for tripping said retaining device.

2. In a knitting machine, a plurality of thread-guides; a pattern chain for shifting said thread-guides; a ratchet to produce a movement of said pattern-chain; a pawl coöperating with said ratchet; a movable support for said pawl to hold it out of the path of said ratchet; devices connected with the pattern chain to move said support; a spring-latch to hold said support; a lever connected with said spring latch to release it from said support; a separate continuously traveling member; and a series of



abutments carried by said member to operate at intervals upon said lever.

962,293. EGG HOLDER AND CUTTER. ABRAHAM ARCHIBALD ANDERSON, New York, N. Y. Filed Nov. 2, 1909. Serial No. 525,845.



1. An egg holder, comprising a cup for the reception of the egg in a vertical position, a head screwing on the said cup and having a central opening into which is adapted to pass the upper end of the egg, and a lateral cutting device on the said head and adapted to pass into the said opening to cut off the top of the egg.

2. An egg holder, comprising a cup having an internal screw thread at the mouth of the cup, a head having a transverse slot leading to a central opening for engagement with the upper portion of the egg seated in the said cup, the head having a threaded lower portion screwing on the said screw thread in the mouth of the cup, and a horizontally-disposed knife fulcrumed on the said head and adapted to pass through the said slot into the said central opening to cut off the top of the egg.

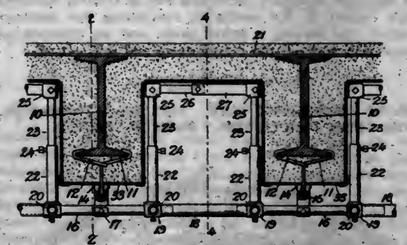
962,294. WATER-HEATER. JOHN R. ARMINGTON, Roanoke, Va. Filed July 9, 1909. Serial No. 506,826.

1. An electric heater comprising a tubular casing, caps at the ends of the casing, a heating element within the casing including a resistance wire having its terminals extending exteriorly through one of said caps, a switch box carried by said cap and provided with contacts connected with said terminals, a switch within said box to engage said contacts, and means for operating the switch.



2. In a water heater, the combination with a support, of a faucet mounted thereon, a water supply pipe arranged below the support and communicating with said faucet, a casing in said pipe, a heating medium within the casing including a double coil having its elements arranged one within the other and a resistance wire insulated from said coil and having its terminals extending to the exterior through the casing, a switch mounted upon the exterior of the casing to engage said terminals, means for normally holding the switch retracted, and a spring retracted switch closing device connected with the switch and extending through said supporting member adjacent the faucet.

962,295. FALSE WORK FOR BUILDING CONSTRUCTION. ALBERT ARNN, Little Ferry, N. J. Filed Mar. 9, 1909. Serial No. 482,816.



1. In false work for building construction, plates having hinges and adapted to conform with the concrete structure carried by the beams of the building, frames made up of pipes and adapted to be adjustable to conform with the position of the plates to support same, and hooks adapted to engage the beams and support the frames.

2. In false work for building construction, the combination with frames made up of pipes telescoping within themselves so as to be adjustable, of hinged plates supported by the frames, bolts in the pipes to secure same when adjusted, coöperating hooks to support the pipes, and connecting means between the hinged plates and the frame.

3. In false work for building construction, of hangers, hooks engaging the flanges of the beams and carrying the hangers, telescopic pipe sections carried by the hangers,

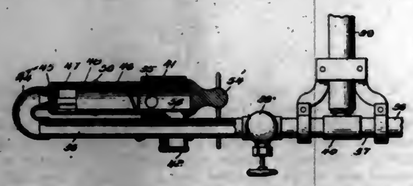
adjusting bolts, angle couplings, and folding metal molding plates supported by the telescopic pipe sections.

4. In false work for building construction, telescopic pipes, telescopic pipes connected with the first named pipes and adapted for vertical adjustment and for adjustment longitudinally of the first named pipes, angularly adjustable plates supported by the second named telescopic pipes, and connections between a plurality of said hinged plates and a plurality of the first named telescopic pipes.

5. In false work for building construction, of hooks attached to the beams of the construction and linked with each other, hangers on the hooks, pipe sections carried by same, larger pipe sections telescoping over the first sections, angle couplings, and sheet metal molding plate sections hinged to each other and adapted to take the shape of the pipe sections.

[Claim 6 not printed in the Gazette.]

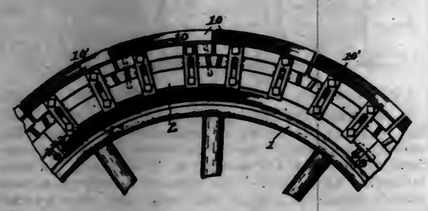
962,296. VAPOR-BURNING LAMP. HOMER A. BARR, Ashland, Pa. Filed Feb. 19, 1909. Serial No. 478,919.



1. In a vapor burner, the combination of a generator, a mixing chamber, a cylindrical casing connected with the generator and having openings, a cylindrical cut off mounted within said casing and having spiral guide-ways, and a rotary valve for the mixing chamber having portions extended into the spiral guide-way of the cut off to effect a reciprocating movement thereof.

2. In combination, a generator, a mixing chamber mounted upon said generator and comprising a main and an auxiliary burner, a valve rotatably mounted in the mixing chamber and provided with two openings to register with the respective burners, a cut off slidably mounted with respect to the casing in controlling the openings thereof, and having a spiral guide, and an interlocking connection between the rotary valve and said cut off.

962,297. RESILIENT TIRE. JOHN BAAR, Philadelphia, Pa. Filed June 17, 1908. Serial No. 439,023.



1. A tire, comprising a plurality of rim-sections, said rim-sections provided with registering recesses positioned in the abutting ends thereof, a plurality of tread-sections supported by said rim-sections, cushion means for normally exerting an outward pressure upon said tread-sections, means for preventing movement of said tread-sections other than that provided by said cushion means, and means for connecting said rim-sections together, said connecting means comprising pins positioned in said registering recesses in the abutting ends of said rim-sections, and bolts having their inner ends engaging said pins for securely holding said pins in said registering recesses.

2. A device of the character described, comprising a felly, inner rim-portions carried by said felly, a plurality of tread-sections surrounding said rim-portions, each two contacting rim-sections provided, at their adjoining edges with registering sockets, a member positioned in said registering sockets, at the adjoining ends, fastening means carried by said sections, near their ends, and adapted to lock said members in said sockets, a tread-section positioned upon said rim-section, and means for yieldably supporting said tread-sections upon said rim-sections.

3. In a device of the class described, the combination with a felly, of a rim section, a tread-section carried by said rim-section, said tread-section provided with a central guide, spring-receiving sockets upon opposite sides of said guide, means for securing said guide in the rim-section, an outer section provided with a socket for receiving said guide, and with spring-receiving sockets upon opposite sides of said guide, and means securing said sections together and springs positioned between said outer and inner sections and having their ends positioned in spring-receiving sockets of said sections.

4. A tire, comprising a plurality of rim-sections, said rim-sections provided with registering recesses, formed in the abutting ends thereof, pins positioned in said recesses, bolts positioned in said rim-sections, and adapted to engage said pins at one end, for normally holding said pins in said registering recesses and thereby holding the rim-sections together, a plurality of tread-sections supported by said rim-sections, cushion means for normally exerting an outward pressure upon said tread-sections, other than that provided by said cushion means, said means comprising a plurality of vertically-extending pins screw-threaded at their lower ends into the upper face of said rim-sections, said tread-sections provided with a plurality of apertures formed in the under face thereof, and adapted to receive the upper ends of said vertically-extending pins for allowing said tread-sections to move longitudinally of said pins, and means secured to said rim-sections and to said tread-sections for limiting the upward movement of said tread-sections.

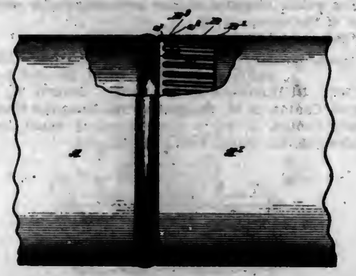
5. A tire, comprising a plurality of rim-sections, said rim-sections provided with a plurality of registering recesses formed in the abutting ends thereof, pins positioned in said registering recesses, bolts positioned through said rim-sections and engaging said pins for holding the same in said registering recesses, and thereby holding the rim-sections together, a plurality of tread-sections supported by said rim-sections, cushion means interposed between said rim-sections and tread-sections for normally exerting an outward pressure upon said tread-sections, said tread-sections provided with a longitudinally extending centrally-located slot with a transversely extending aperture or recess communicating with said longitudinally extending slot, a plurality of vertically extending pins, fixedly secured at their inner ends to said rim-sections and slidably mounted in said transversely extending apertures for allowing said tread-sections to move freely thereon and means securing said rim-sections to the tread-sections for limiting the upward movement of said tread-sections.

[Claim 6 not printed in the Gazette.]

962,298. STOVEPIPE-COUPLING. ELWIN J. BABBITT, Onaway, Mich. Filed Sept. 30, 1909. Serial No. 520,372.
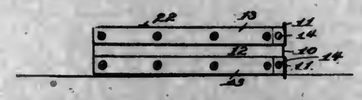
1. In a coupling for pipes, a latch or lock consisting of a plate of resilient material bent at one end to form a clasp to grasp the edge of a pipe section, and a stud projecting upwardly at its opposite end to pass through said pipe section and an adjacent telescoped pipe section.

2. In a coupling for pipes, a latch or lock consisting of a resilient plate having a spring clasp at one end adapted to grasp the edge of one pipe section, and a stud projecting from its opposite end adapted to spring through said section and an overlying end of an adjacent section.



3. The combination with a pipe section having a hole or opening adjacent its end, of a latch or lock plate having at one end a clasp adapted to grasp the edge of said section and a stud at its opposite end adapted to spring through the aforesaid aperture, and an overlying adjacent pipe section having a hole or opening adjacent its end adapted to receive the stud of the lock or latch.

962,299. ROAD GRADER AND SMOOTHER. HENRY C. BARNETT, Jefferson, Ga. Filed Mar. 16, 1910. Serial No. 549,588.



1. A road smoother comprising a longitudinally extending land side or guide beam, a smoothing beam extending angularly and rearwardly at one side of said guide beam and having its forward end lapping the forward end thereof, a brace beam extending angularly between the rear ends of said smoothing beam and guide beam, a roller mounted adjacent the connection of said smoothing and brace beams and projecting slightly above and below the several beams, and blades secured upon the outer surfaces, and along the upper and lower edges of said guide and smoothing beams, all for the purpose of forming a reversible structure.

2. A road smoother comprising a longitudinally extending land side or guide beam, a smoothing beam extending angularly and rearwardly at one side of said guide beam and having its forward end lapping the forward end thereof, a brace beam extending angularly between the rear ends of said smoothing beam and said guide beam, a bolt extending between and through said guide and smoothing beams adjacent their connected ends, braces extending between said guide and smoothing beams rearwardly of said bolt, and a hauling chain having an intermediate clevis and end hooks to adjustably engage upon said bolt and the forward brace.

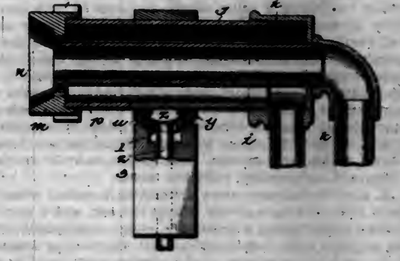
962,300. STRAW-DISPENSER. ABRAHAM BERMAN, Atlanta, Ga. Filed Apr. 12, 1910. Serial No. 554,956.

1. In a dispensing apparatus, an outer cylinder having a perforation in its bottom, a carrier comprising a central rod, a lower plate arranged to fit within said outer cylinder, an upper plate secured to said rod and constituting a cover for said outer cylinder, and an integral handle projecting upwardly from said cover.

2. In a straw dispensing device, an outer cylinder, a carrier comprising a central rod, a lower plate arranged to fit within said cylinder secured to said rod and constituting a support for the straws, an upper plate secured to said rod and constituting a cover for said cylinder, an upwardly projecting handle for said cover, and means carried by said outer cylinder for limiting the movement of the carrier.



962,301. OIL-BURNER. WILLIAM C. BLACKMOND, Tomball, and GUY EVERETT STOT, Teague, Tex. Filed Mar. 25, 1909. Serial No. 485,824.



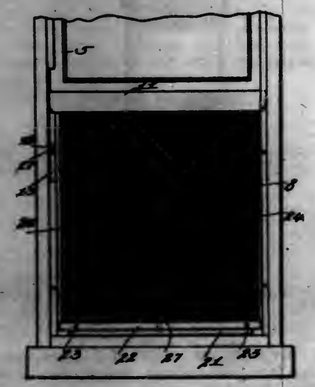
1. A burner composed of a nozzle, steam and oil pipes connected thereto, the steam pipe surrounding the oil pipe, said oil pipe having a non obstructed opening, and said nozzle fitting around said opening, said nozzle being provided with an outwardly flaring opening and a flat face having a perforation in which the end of said oil pipe engages, the flat face of said nozzle being provided with a plurality of rows of holes arranged in circles, the holes in each circle being arranged at an angle to the face of the nozzle, the angle for one circle being different from that of the other circle, substantially as described.

2. The combination of a nozzle having a flat face, a steam pipe connected thereto, and an oil pipe passing through said steam pipe and nozzle, and having its delivery end unobstructed, said nozzle being provided with two circular rows of holes for the discharge of the steam, the holes in each circle being inclined to the face of the nozzle, and the holes in one circle being arranged at reverse angles from the holes in the other row, substantially as described.

3. The combination of a nozzle having a flat face, a steam pipe connected to said nozzle, an oil pipe passing through said steam pipe and said nozzle, and having its delivery end unobstructed, said nozzle having at its discharge end a flaring opening, and the face of said nozzle being provided with two rows of holes arranged in con-

centric circles, the holes in one circle being arranged at an angle to the face of the nozzle, but at a reverse angle to the holes in the other circle, and a swivel joint supporting said steam pipe, substantially as described.

962,302. ROLLER WINDOW-SCREEN. CHRISTOPHER C. BOYKIN, Norfolk, Va., assignor of two-thirds to Tidewater Specialty Company, Norfolk, Va., a Firm. Filed Sept. 9, 1909. Serial No. 516,958.



1. The combination of a window frame having grooves and upper and lower sashes slidable in said grooves, a casing containing a roller screen, the ends of such casing being arranged within the grooves beneath the upper sash and having their lower edges beveled in a direction downwardly and inwardly, a pair of strips having their upper ends beveled to correspond with the beveled portions of the casing and capable of being tilted into the grooves by a movement of their lower ends about their upper ends as approximate centers whereby the casing is supported firmly beneath the upper sash and the strips are firmly locked within the grooves, and guides carried by said strips and coöperative with the screen.

2. A roller window screen comprising a casing containing a roller having a screen wound thereon, and a pair of locking strips having a detachable wedge engagement with the opposite ends of said casing, said strips being adapted to lie within the grooves of the window frame and to be held tightly therein by such wedge engagement with the roller containing casing.

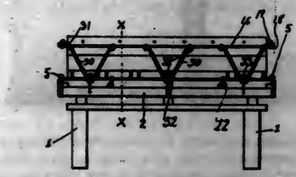
3. The combination of a window frame having grooves and upper and lower sashes slidable in said grooves, a casing containing a spring roller having a screen wound thereon, said casing fitting beneath the upper sash and within the grooves within which the upper sash operates, and a pair of strips fitting into the grooves for the upper sash and coöperative with said casing to support it in position.

4. The combination of a window frame having grooves and upper and lower sashes to operate in said grooves, a casing containing a roller having a screen wound thereon and having beveled edges formed at its ends, said casing fitting against the under side of the upper sash and having its ends engaged in the grooves for the upper sash, and a pair of strips engaged in the grooves for the upper sash and having beveled edges coöperative with similar edges upon the ends of the casing for locking the latter in operative position within the window frame.

5. The combination of a window frame having grooves and a sash to operate in said grooves, and a roller window screen comprising a casing having its ends engaged in said grooves and containing a roller having screen cloth attached thereto, the free end of the screen cloth being provided with a slide, and a pair of locking strips arranged in said grooves of the window frame and coöperative with the ends of said casing to support the latter in operative position with respect to the window frame, said strips having guides attached thereto and coöperative with the slide of the screen cloth.

[Claims 6 to 14 not printed in the Gazette.]

962,303. BUILDING-BLOCK MOLD. JOSEPH W. BRAGSTAD, Canton, S. D., assignor to The Bragstad Bros. Co., Inc., Canton, S. D., a Corporation of South Dakota. Filed Feb. 23, 1910. Serial No. 545,424.



1. A building block mold comprising an upper and a lower section, means for detachably connecting the lower section to the upper section, said lower section comprising a bottom, end and side walls, a series of transverse partitions, a pair of outer plates, and an angle-shaped intermediate plate, said top section comprising a rectangular frame, transversely-extending partitions mounted therein, and a bottom formed of a pair of outer plates and an intermediate angle-shaped plate, one of said outer plates of the top section having an L-shaped depending extension adapted to be engaged by the angle-shaped intermediate plate of the top section, said top section having its bottom provided with clearances for the passage of anchors and said bottom section having its top provided with clearances for the passage of anchors for connecting together the sections of the block formed by the top and bottom sections of the mold.

2. A building block mold comprising an upper and a lower section, means for detachably connecting the upper section to the lower section, each of said sections adapted to mold a section of a block, said bottom section provided with a top and said lower section provided with a bottom opposing the top of the lower section, transversely-extending partitions mounted in each of said sections, and each of said sections provided with openings for the passage of anchors for coupling the sections of the block together.

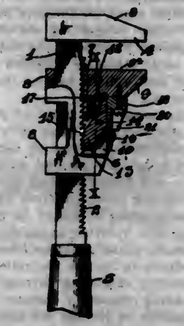
3. A mold for manufacturing a plurality of sectional building blocks simultaneously comprising an upper mold section, a lower mold section, means carried by the upper section and detachably connected to the lower section for supporting the upper section and coupling the sections together, transversely-extending partitions mounted in each of said sections, and each of said sections provided with means for the passage of anchors for coupling the sections of the block together.

4. A mold for manufacturing a plurality of sectional building blocks simultaneously comprising an upper section and a lower section, said upper section having an open top and a closed bottom and said lower section having a closed bottom and a closed top, means for detachably connecting said sections together, transversely-extending partitions arranged in each of said sections and with the partitions of one section disposed in vertical alinement with respect to the partitions in the other section, and said upper section having its bottom and said lower section having its top provided with openings for the passage of anchors for coupling the sections of the blocks together.

5. A mold for manufacturing a plurality of sectional building blocks simultaneously comprising an upper and a lower mold section, each provided with a bottom, transversely-extending partitions mounted in each of said sections, said lower mold section provided with a top, said upper mold section having its bottom and said lower mold section having its top provided with a means for the passage of anchors for coupling the two sections of the block together.

[Claim 6 not printed in the Gazette.]

962,304. WRENCH. WILLIAM B. BROWN, Pittsburg, Pa. Filed Feb. 28, 1910. Serial No. 546,503.



A wrench embodying a shank having the front side thereof provided with teeth, a fixed jaw carried by the upper end of said shank, a handle carried by the lower end of said shank, a jaw adapted to slide upon said shank, straps carried by said jaw and embracing said shank, said jaw having a recess formed therein, the upper wall of said recess having a pocket formed therein, and said jaw having openings in the sides thereof communicating with said pocket, a pawl pivotally mounted in said recess and having the lower end thereof toothed to engage said toothed shank, a U-shaped spring arranged in said pocket and adapted to bear against said pawl and normally hold said pawl in engagement with said shank, outwardly extending arms carried by the upper end of said pawl and adapted to extend through the openings of said jaw to facilitate a movement of said pawl, and a filler block secured to said jaw and adapted to close the front side of said recess, pocket and openings.

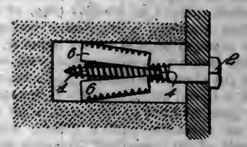
962,305. GEM-MOUNTING. JOSEPH J. BUSER, Freedom, Pa. Filed Apr. 5, 1909. Serial No. 487,872.



In a gem mounting, a series of prongs each having a shoulder formed near the upper end thereof and adapted to support the set, the portion of the prong above said shoulder being tapered on the outer edges to bring the same to a neat and ornamental point which will lie closely against the stone to obviate the danger of said point catching and being bent away from the stone, and a transversely disposed groove extending across the inner face of the prong immediately above the shouldered portion, said groove being of substantially semi-cylindrical shape and being of such size that when the prong is bent upon the stone forming the set the edges of the groove will make tight engagement with each other.

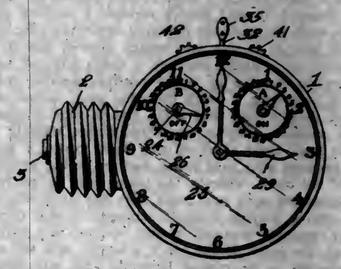
962,306. EXPANSION-BOLT. WILLIAM A. BRYANT, Wetumpka, Ala., assignor of nine-twentieths to John A. Lancaster and John R. Gamble, Wetumpka, Ala. Filed Dec. 30, 1909. Serial No. 535,633.

In an expansion bolt, a socket formed from a single piece of sheet metal bent centrally upon itself to form side plates, having formed therein centrally disposed threaded segmental channels, anchoring flanges formed on the edges of said plates and projecting laterally therefrom, said flanges having tapered corrugated outer edges, flexible connecting strips to secure the inner ends of said plates



together, and a bolt having a tapered threaded portion adapted to screw into the threaded channels in the plates, whereby the latter and the anchoring flanges thereon are expanded to hold the socket in rigid engagement.

962,307. ELECTRIC TIME-SWITCH. CAREY E. BUNKER, Oregon, Mo. Filed Sept. 16, 1909. Serial No. 518,054.



1. In an electric time switch, the combination with a clock works, of a spring retracted switch member having an electrical connection with one terminal of an electric circuit, a pivotally mounted contact plate having an electrical connection with the other terminal of the circuit, a contact block carried by said switch member and adapted to be engaged with said contact plate to complete the electric circuit, a switch operating gear adapted to move said switch member into engagement with said contact plate, thereby closing the electric circuit, a stop arm carried by said switch member, a catch adapted to be engaged by said stop arm to hold the switch member in closed position, a gear adapted to trip said catch and release said switch member, a pinion slidably keyed to the hour hand shaft of the clock works, and adapted to normally engage and operate said gears, means to disengage said pinion from said gears, and means whereby the latter are set to open and close the switch at the desired time.

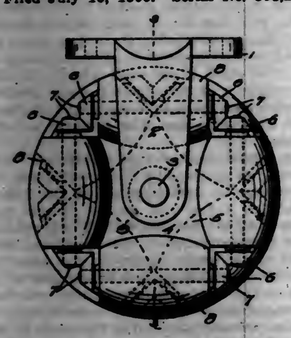
2. In an electric time switch, the combination with a clock works, of a pivotally mounted spring retracted switch member, an operating lug on one end of said switch member, a stop arm carried by said member, a contact block on the free end thereof, a pivotally mounted contact plate arranged in said clock and adapted to be engaged by the contact block on said switch member, an elevating spring adapted to be engaged by the contact block on said switch member and to be elevated to a position for engagement with said contact plate, a switch closing gear revolubly mounted in the clock, an operating pin carried by said wheel and adapted to engage the operating lug on said switch member, whereby the latter is moved to a closed position, a spring retracted catch adapted to be engaged by the stop arm on said switch member and to hold the latter in closed position, a revolubly mounted gear, an operating pin carried by said gear and adapted to trip said catch, thereby releasing said switch member, a spring to retract said member to an inoperative position when released from said catch, an

operating pinion mounted on the hour hand shaft of the clock and operatively engaged with said gears to turn the same in proper direction to open and close the switch.

3. In a time switch, the combination with a clock arranged in and forming part of an electric circuit and having connected thereto an electric plug, of a pivotally mounted switch member, a stationary contact member adapted to be engaged by said switch member, a catch to hold the switch member in engagement with said contact plate to close the electric circuit, a gear adapted to move said switch to a closed position and into engagement with said catch, a gear adapted to trip said catch and release said switch, an operating pinion slidably keyed to the hour hand shaft of the clock, and engaging said gears to operate the latter in the proper direction, a shifting lever adapted to move said pinion out of engagement with said gears whereby the latter may be adjusted without interfering with the operation of the clock, and spring retracted set wheels adapted to be projected into engagement with said gears whereby the latter are turned and set from the outside of the clock.

4. In a time switch, the combination with a clock, of a spring retracted switch member, a contact member comprising a plate having a loose pivotal connection whereby when engaged by said switch member a positive connection is made, a revolubly mounted operating gear, means on said gear to engage said switch member and to move the latter to a closed position, a catch adapted to hold said switch member in closed position against the tension of its spring, a catch releasing gear, means carried by said gear to trip said catch and thereby release said switch member, a spring retracted pinion slidably keyed on the hour hand shaft of the clock works, a shifting lever engaged with said pinion and projecting beyond one side of the clock, whereby the pinion may be shifted out of engagement with said gears from the outer side of the clock, spring bearing brackets arranged in said clock, set wheels revolubly mounted in said brackets and projecting through the sides of the clock whereby said set wheels are adapted to be pushed inwardly and into operative engagement with said gears to turn the same to the desired position when disengaged from said pinion, hour dials arranged on the dial of the clock, and indicating pointers arranged on the shafts of said gears and pointing to the numbers on said dials whereby the position of the operating devices on said gears is indicated.

962,308. CASTER. CHARLES E. BURNETT, Walworth, N. Y. Filed July 19, 1909. Serial No. 508,269.



1. A caster comprising a vertically rotatable frame and rollers rotatably mounted upon said frame and extending beyond the periphery thereof, said rollers being rotatable in planes at an angle to that of the frame.

2. A caster comprising a plurality of rollers of longitudinally convex form rotatably mounted upon either side of a vertically rotatable frame, each of said rollers being disposed at an angle to the next adjacent roller, the axes of the rollers at one side of said frame extending at an angle to the axes of the rollers upon the opposite side of said frame.

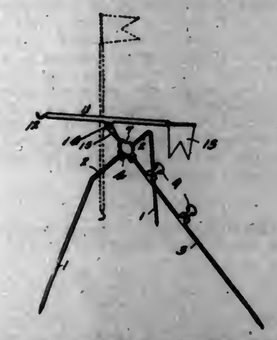
3. A caster comprising a plurality of rollers, said rollers being arranged upon either side of a frame plate, a sleeve carried by said plate and extending beyond the peripheries of said rollers on opposite sides of the plate, a shaft extending through said sleeve and plate, and an attaching yoke connected to the ends of said shaft.

4. A caster comprising a plurality of rollers arranged upon a circular frame plate, said rollers being disposed at an angle to each other, supporting standards carried by said plate and adapted to receive the ends of the roller shafts, said plate being rotatably mounted in a supporting yoke member, and said rollers having independent rotative movement thereof.

5. A caster comprising a plurality of rollers arranged upon either side of a circular frame plate rotatable on a horizontal axis, said rollers being of convex formation, the peripheries of which are parallel with the periphery of the frame plate and extend beyond the same, supporting standards extending laterally from the sides of said plate, said standards being arranged in pairs and intermediately disposed with relation to each other upon opposite sides of the frame plate, openings formed in the outer ends of said standards to receive the roller shafts, a supporting shaft centrally extending through said plate, an attaching plate having oppositely disposed depending ears provided with openings to receive the ends of said shaft, said frame plate and said rollers having independent rotative movement.

[Claims 6 to 16 not printed in the Gazette.]

962,309. FISHING APPLIANCE. HENRY BUTLER, Worcester, Mass. Filed Nov. 18, 1909. Serial No. 528,760.

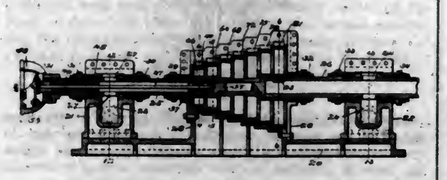


1. The combination with a supporting stand of a pivoted signal arm having a hook at one end for the purpose described, and a flag-staff and flag at the other end movable relatively to the arm to adjust the balance of the same.

2. A fishing device adapted for ready transportation, and comprising a series of supports, a clamping member having recesses formed therein to receive the ends of the various supports and lock them together, a rod engaged in one of the recesses, a tube pivotally secured to the end of the rod, a hook secured in one end of the tube, a suitable signal carried by the other end, and line carrying means carried by one of the supports, the line being adapted to be engaged by the hook, and a pull on the line serving to depress the end of the tube bearing the hook and elevate the signal.

962,310. ROTARY ENGINE. GEORGE ENOCH CALLAWAY, Jonesboro, La. Filed Jan. 18, 1909. Serial No. 472,032.

1. A rotary engine comprising a base provided at its intermediate portion with a casing having a series of chambers, bearing uprights on said base on opposite sides of the intermediate casing and having one an inlet chamber and the other an exhaust chamber, a series of connected pistons operating in the chambers of the intermediate casing, hollow feed and exhaust shafts supported at their outer ends in their respective bearing uprights and having ports communicating with the chambers thereof and the said hollow shafts being connected at their inner adjacent ends with the opposite ends of the series of connected pistons and ported for the passage of feed and exhaust steam respectively, a valve controlling the passage of steam to the pistons and means operated by the revolution of the feed shaft for controlling said valve, substantially as set forth.



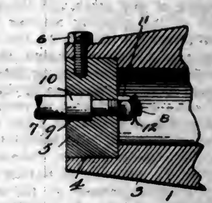
2. A rotary engine comprising a base, a casing on the intermediate portion of the said base, piston devices operating in said casing, bearing uprights on the base on opposite sides of the casing and provided with chambers, the chamber of one upright being an inlet chamber and that of the other an exhaust chamber, hollow feed and exhaust shafts supported at their outer ends in their respective bearing uprights and having ports communicating with the chambers of said uprights, said hollow shafts being connected at their inner adjacent ends with the piston devices in the intermediate casing and ported for the passage of feed and exhaust steam respectively, a valve controlling the feed of steam to the piston devices and means for controlling said valve, substantially as set forth.

3. A rotary engine comprising a piston and its casing, stands on opposite sides of said casing and having bearings alined with the axis of the piston, said stands being provided one with an inlet chamber and the other with an exhaust chamber, feed and exhaust shafts in the bearings of their respective stands and communicating with the chamber thereof and connected at their inner ends with the piston, one of said shafts being extended outwardly beyond its bearing stand, a valve operating in the feed shaft and means carried by the said outer extended end of the shaft for automatically operating said valve, substantially as set forth.

4. A rotary engine comprising a base, a casing on the said base and intermediate the ends thereof, bearing uprights on said base on opposite sides of the intermediate casing, said uprights having one an inlet chamber and the other an exhaust chamber, piston devices in the casing, hollow feed and exhaust shafts supported in their respective bearing uprights and having ports communicating with the chambers thereof, the said shafts being connected at their inner adjacent ends with the piston devices, a feed valve operating in the feed shaft and adapted to deliver steam to the piston devices and automatically operating devices carried by the feed shafts and connected with the valve to operate the same, substantially as set forth.

5. A rotary engine comprising hollow feed and exhaust shafts, piston devices connected with the inner adjacent ends thereof, a casing inclosing said piston devices, bearing stands on opposite sides of the casing and having bearings for the feed and exhaust shafts, and also having feed and exhaust chambers which chambers extend around the shafts whereby to communicate with the shafts in all positions of the shafts, the latter having ports to communicate with the chambers of their respective bearing stands, all substantially as and for the purposes set forth.

962,311. LAND-ROLLER. WILLIAM R. CANADAY, Fairview, Okla., assignor of one-half to George B. Ward, Fairview, Okla. Filed Jan. 7, 1910. Serial No. 536,942.

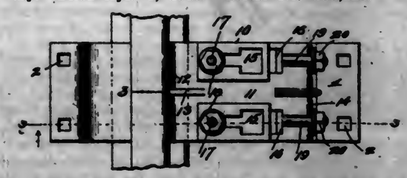


1. In a land roller, the combination with a roller having a recess formed in the end thereof, of a block secured in said recess, a locking bolt carried by the roller for locking the block immovably therein, said block having a central angular recess formed therein, and a spindle having one end journaled and the other of angular conformation and engaged and secured in the recess in the block.

2. In a land roller axle, the combination with a block engaged in the end of a roller having a socket formed therein to receive the inner end of a locking bolt for securing the block immovably in position, said block also having formed therein a central circular opening terminating at one end in a square socket, of a spindle engaged in said opening, said spindle having turned ends and a central square portion, said portion being engaged in the socket in the block, one end of the spindle being threaded to receive a nut for locking the spindle with its square portion in said recess to prevent the independent movement of the spindle.

3. The combination with a roller having a recess in each end, blocks seated in each recess and retaining means therefor, and a spindle having a squared portion seated in a complementary recess in said block and formed with a journal end.

962,312. RAIL-JOINT CHAIR. HUGO CARMAK, Paducah, Ky. Filed Apr. 4, 1910. Serial No. 553,223.



1. In a rail joint chair, a baseplate having formed on one end a stationary rail engaging lug, a bearing block formed on the opposite ends of said plates, said block having formed therein bolt receiving slots, a rail gripping member adapted to slidably engage said bearing block and having formed therein bolt receiving slots adapted to register with the slots in said bearing block, a rail engaging lug formed on the inner end of said member, and fastening and clamping bolts engaged with said base member and rail gripping member whereby the latter is brought into tight engagement with the side of the rail and the latter thereby clamped in engagement with the chair.

2. In a rail chair a base plate having formed on one end a rail engaging lug, a bearing block formed on the opposite portion of said plate, said block having formed therein bolt receiving slots, a shoulder formed on the outer end of said block, a rail gripping member comprising a plate, sddably engaged with the bearing block on said base plate, said gripping member having formed therein bolt receiving slots adapted to aline with the slots in said block, a rail gripping lug formed on the inner end of said member, a stop lug formed on the outer

end of said member, fastening bolts arranged through the slots in said base and gripping member whereby the latter is secured to the base and clamping bolts arranged through the shoulder of said block and through the stop lug on said plate of the gripping member whereby the latter is adjusted to engage the lug on the opposite end thereof with the rail thereby clamping the latter between said lug and the stationary lug on the baseplate.

3. In a rail joint chair a baseplate having formed in its opposite ends spike holes adapted to receive fastening spikes whereby said base is secured to a tie, a rail engaging lug formed on one end of said baseplate, a bearing block formed on the opposite portion thereof, said block having an incline of the surface and having therein both receiving slots, a shoulder formed on the outer end of said block, said shoulder having formed therein bolt receiving slots and notches, a rail gripping member comprising a plate having a sliding engagement with the inclined upper surface of said bearing block, said plate having formed therein bolt receiving slots adapted to coincide with the slots in said block and shoulder, a rail engaging lug formed on the inner edge of said plate, a shoulder engaging stop lug formed on the opposite end of said plate, said stop lug having formed therein bolt receiving slots, fastening bolts arranged in the bearing block and plate of said gripping member and clamping bolts arranged in the slots in said shoulder and stop lug of the bearing block and gripping member whereby the latter is adjusted to clamp the rail ends between the stationary lug on said base plate and the rail engaging lug on said gripping member.

962,313. VAGINAL IRRIGATING-SYRINGE. HENRY W. CHAMPLIN, Walters Park, Pa. Filed Dec. 7, 1909. Serial No. 531,915.



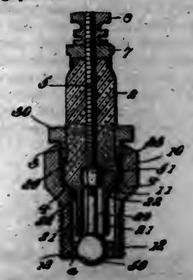
A vaginal syringe, comprising a conical shaped shield concaved longitudinally, and having a solid shank portion, the apex of which is truncated at an inclination and concaved forming a dished drainage receptacle, said shank portion being provided with ducts leading therethrough, and opening through the bottom of the dished receptacle, said ducts being positioned one above the other, and the lower one serving as a drainage duct, the outer end of the solid shank of the shield having a downwardly curved integral nipple through which said drainage duct leads, and adapted to receive the end of a tube, a nozzle tube movably mounted within the upper of said ducts, and held from tilting therein by the length of the duct through which it passes, a portion of the circumference of said tube being flattened, the concaved surface of the shield being provided with a longitudinally disposed channel immediately above said ducts, as shown and described.

962,314. JUMP-SPARK IGNITER-PLUG. LOUIS BOND CHERRY, Aberdeen, S. D., assignor, by direct and mesne assignments, to The Ball Multi-Spark Plug Co., Aberdeen, S. D., a Corporation of South Dakota. Filed Jan. 17, 1910. Serial No. 538,525.

1. An igniting device having opposing curved smooth electric-condenser-surface electrodes arranged one within the other and separated by an annular spark gap.

2. An igniting device comprising an annular rounded surface electrode, and an opposing spherical electrode arranged therein and separated therefrom by an annular spark gap, said electrodes having smooth burnished surfaces.

3. An igniting device comprising an annular electrode rounded in cross section, and an opposing spherical electrode arranged therein and spaced therefrom to form an annular spark gap.

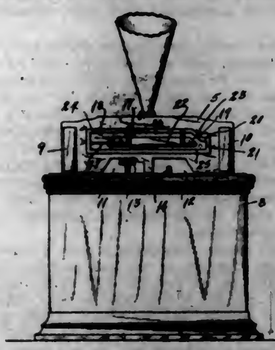


4. A spark plug having its shell formed at its open end with an internal smooth annular bead rounded in cross section and constituting an electrode, and an opposing smooth rounded surface electrode arranged therein and spaced therefrom to form an annular spark gap.

5. A spark plug having an annular electrode, and a spherical electrode arranged therein and spaced therefrom to form an annular spark gap, said annular electrode having a continuous rounded surface opposing said spherical electrode.

[Claims 6 and 7 not printed in the Gazette.]

962,315. REPEATING ATTACHMENT FOR GRAPHOPHONES. CLARENCE W. CLAUD, Nashville, Tenn., assignor of one-half to John H. Claud, one-fourth to Felix W. Claud, and one-fourth to Innis A. Claud, Nashville, Tenn. Filed May 22, 1909. Serial No. 497,580.



1. In a repeating attachment for graphophones, the combination with the carriage, and carriage lever; of a plate having a guide opening for the carriage lever, a stationary member combined with said plate and coöperating with the sides of the opening for operating the lever to raise and lower the carriage, and means for shifting the carriage from one end of the opening to the other end.

2. In a repeating attachment for graphophones, the combination with the carriage, and carriage levers; of a plate having a guide opening for the carriage lever, a stationary member carried by the plate and located in the guide opening for automatically operating the lever to raise and lower the carriage, and means for automatically shifting the carriage from one end of the opening to the otther end.

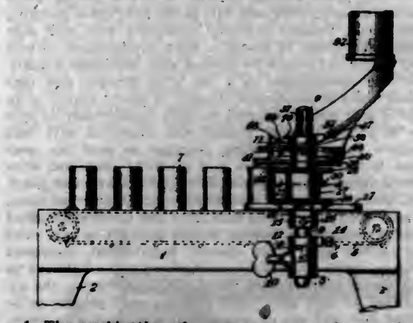
3. In a repeating attachment for graphophones, the combination with the carriage, and carriage lever, of a plate having a guide opening for the carriage lever, means disposed within the opening and coöperating with the sides of the same for operating the lever to automatically raise and lower the carriage and means for shifting the carriage from one end of the opening to the other end.

4. In a repeating attachment for graphophones, the combination with the carriage, and carriage lever, of a plate having a guide opening for the carriage lever, means at one end of the opening to depress the lever and means for shifting the carriage to the opposite end of the opening and a leaf spring at the latter end for lowering the carriage.

5. In a repeating attachment for graphophones, the combination with the carriage, and carriage lever, of a plate having a guide opening for the carriage lever, means combined with said plate for automatically operating the lever to raise and lower the carriage and means embracing the carriage slide bar for automatically shifting the carriage from one end of the opening to the other end.

[Claims 6 to 8 not printed in the Gazette.]

962,316. CAN-CAP DROPPER. ELMER M. COBB, Portland, Me., assignor to Edward M. Lang, Jr., Portland, Me. Filed Sept. 9, 1909. Serial No. 516,982.



1. The combination of a can conveyer and a cap dropper, said cap dropper including a star wheel adapted to be struck by the cans, a separator operated by said star wheel to separate the lowest cap of a row of caps, and a vibrating plate for sweeping said separated cap onto the top of a can as it passes underneath the dropper, substantially as described.

2. The combination of a can conveyer and a cap dropper secured to the frame thereof, said cap dropper including a star wheel adapted to be struck by the cans, a separator adapted to remove the lowest one of a row of caps, a vibrating plate adapted to sweep the separated cap onto the top of the can, and connections whereby the movement of said star wheel operates said separator and said plate, substantially as described.

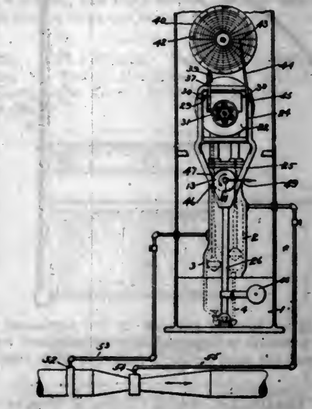
3. The combination of a can conveyer and a cap dropper attached to the frame thereof, and including a star wheel adapted to be struck by the cans, a gear wheel operated by the movement of said star wheel, a pivotally-mounted vibrating separator for separating the lowest cap in a row, a gear wheel for operating said separator, connections between said gear wheels for vibrating said separator, consisting of a ring provided with a rack engaging said second named gear wheel, and connections whereby said first named gear wheel operates said ring, substantially as described.

4. The combination of a can conveyer and a cap dropper fastened to the frame thereof, said cap dropper including a star wheel adapted to be struck by the cans, a vibrating plate adapted to sweep a cap onto the top of a can passing underneath said cap, connections whereby the movement of said star wheel operates said plate, said connections being adjustable, substantially as described.

5. In a cap dropper, the combination of a chute adapted to receive a number of caps, a separator adapted to take off the lowest cap in said row, consisting of a vibrating body provided with overlapping sharp edges forming an interrupted screw, and means for vibrating said separator, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

962,317. INDICATING, INTEGRATING, AND RECORDING MANOMETER. FREDERICK N. CONNETT, Providence, R. I. Filed July 17, 1908. Serial No. 443,968.



1. In a liquid meter, a main pipe, a recording disk, a recording pen, an adjustable member mounted on a knife edge for carrying only its own weight and that of said pen, and means operated by the difference of pressure in said pipe for moving said member to cause said pen to record the flow through said pipe.

2. In a liquid meter, a main pipe, a recording disk, a recording pen, an adjustable member mounted on a knife edge for carrying only its own weight and that of said pen, and a cam operated by the difference of pressure in said pipe for controlling the movement of said member to cause said pen to record the flow through said pipe.

3. In a liquid meter, a main pipe, a recording disk, a recording pen, a counter, an adjustable member mounted on a knife edge for carrying only its own weight, that of said counter and said recording pen, and means operated by the difference of pressures in said pipe for operating said member to record the flow through said pipe.

4. In a liquid meter, a main pipe, a recording disk, a recording pen, a counter, an adjustable member mounted on a knife edge for carrying only its own weight, that of said counter and said recording pen, and a cam for controlling the movement of said member and its instrumentalities to record the flow through said pipe.

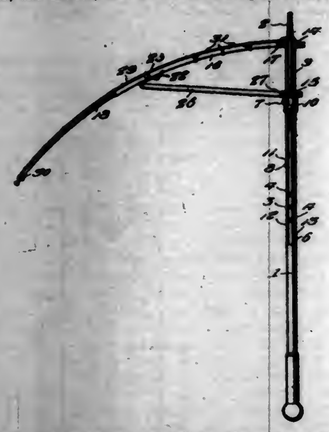
5. In a liquid meter, a main pipe, a recording disk, a recording pen, an adjustable arm mounted on a knife edge for carrying the weight of said arm and that of said pen, a cam for controlling the movement of said arm, and a hand operated in time with said cam for indicating the flow through said pipe.

[Claims 6 to 8 not printed in the Gazette.]

962,318. UMBRELLA. KATHRYN CONNORS, Sioux Falls, S. D. Filed June 18, 1907. Serial No. 379,613.

An umbrella whose staff comprises two members and a link connecting them pivotally with each other, the upper member having two alined spring catches facing away from each other, a tubular element surrounding said staff and slidable thereon from a position covering the link to a position on the upper member wholly above the link, said element having three alined openings of which the lowermost is idle and the others engage said catches when the umbrella is open and the staff members alined with the tubular element, and the lowermost catch engages the

lowermost opening and the link stands across the lower end of said tubular element when the umbrella is closed; the ribs, the braces, and a runner sliding on said element



and having an opening engaged by the uppermost catch when the umbrella is open and by the lowermost when it is closed and the staff members folded on their link.

962,319. ARTIFICIAL BAIT. JAMES K. CROSBY, Glendale, Wash. Filed Feb. 1, 1910. Serial No. 541,321.



1. A trolling spoon reversely hollowed at opposite ends, the rear end being approximately semielliptical in cross-section, and the front end approximately V-shaped in cross-section, said V-shaped portion progressively widening from the front and gradually merging into the portion of semi-elliptical cross-section.

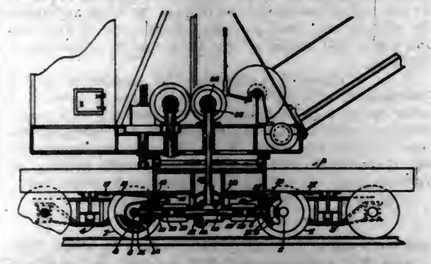
2. A trolling spoon reversely hollowed at opposite ends, one end being approximately semielliptical in cross-section, and the other end approximately V-shaped in cross-section, a hook attached to the elliptical end at one side of the longitudinal center of the spoon, and a line connecting with the other end of the spoon at the opposite side of the longitudinal center thereof.

3. A trolling spoon having one end hollowed out below the plane of the blank from which the spoon is made, and the other end hollowed out above the plane of the blank, the opposite portions of the blank at the last mentioned end being bent on lines extending obliquely to the longitudinal center of the spoon, a fish line attached to one of the bent portions of the spoon, and a hook attached to the opposite end of the spoon at such a point that a line passing through the points of connection of the spoon with the hook and fish line is disposed obliquely to the longitudinal center line of the spoon.

4. A trolling spoon having a longitudinal ridge at its front end and downwardly oppositely bent portions at opposite sides of the ridge, the opposite end of the spoon being concave on the ridged side and convex on the opposite side, means for attaching a line to the ridged end of the spoon, and a hook attached to the opposite end of the spoon.

962,320. FORWARD AND REAR DRIVE FOR CAR-TRUCKS. OLIVER CROSBY, St. Paul, Minn., assignor to American Hoist & Derrick Co., St. Paul, Minn., a Corporation. Filed Nov. 16, 1909. Serial No. 528,388.

1. The combination, with forward and rear truck axles, of gears secured thereto, shafts at right angles to said axles and having gears thereon meshing with the gears on said axles, gear cases for said shaft gears and hangers transversely movable with respect to said shafts and pivotally connected with said gear cases, a shaft intermediate to said gear shafts and having universal joint connections therewith, and a driving means for said intermediate shaft.



2. The combination, with the forward and rear truck axles and gears secured thereto, of shafts having gears thereon meshing with said axle gears, gear cases inclosing said shafts, hangers pivotally connected with said gear cases and slidable in guides, a shaft intermediate to said gear shafts and means for driving said intermediate shaft.

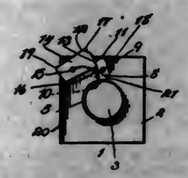
3. The combination in a car with forward and rear trucks and a frame carried thereby, of shafts geared to an axle of said trucks, hangers movable transversely of said car in guides thereon, torsion rods connected with said hangers and having sliding bearings on said car, gear cases inclosing said gears and pivotally connected with said hangers, and means for driving said shafts and gears.

4. The combination, with forward and rear truck axles, of gear cases mounted on said axles and movable a limited distance lengthwise thereon, means mounted on said axles for locking said cases against longitudinal movement thereon, shafts journaled in said gear cases and pinions on said shafts meshing with the gears on said axles, the adjustment of said gear cases allowing said pinions to be moved into and out of engagement with said axle gears, and means for driving said shafts.

5. The combination, with a truck axle having a reduced portion with shoulders at each end thereof, of a gear secured to said reduced portion, a gear case inclosing said gear and slidable on said reduced portion for a limited distance, means arranged to clasp said reduced portion between said case and one of said shoulders and lock said case in contact with the other shoulder, and a shaft journaled in said case and having a pinion meshing with said axle gear, said pinion being moved into and out of engagement with said axle gear by the adjustment of said case.

[Claims 6 to 9 not printed in the Gazette.]

962,321. NUT-LOCK. LAWRENCE B. CROUCH, Marshes, W. Va. Filed Jan. 21, 1910. Serial No. 539,284.

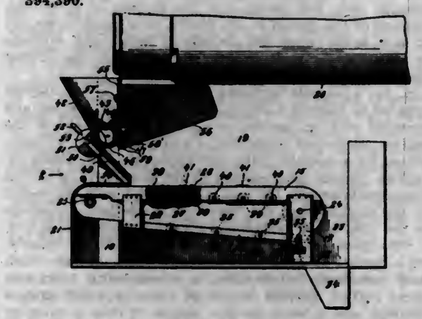


1. A nut lock comprising a bolt, a nut, the bolt being provided with a series of perforations in its threaded end, locking mechanism carried on the face of the nut, said locking mechanism comprising a pawl pivoted on the face of the nut and provided with a point adapted to enter the perforations in the bolt, a pawl operating member pivoted on the face of the nut, a spring carried on the face of the nut and engaging the said pawl to normally hold the point thereof within the perforations on the bolt, the said pawl operating member being provided with two recesses, one of which is adapted to receive the said projection on the pawl to maintain the pawl in an unlocked position, the other of which is adapted to receive the projection on the said pawl when the pawl is in a locked position and to form a stop to hold the pawl against rotation on the bolt.

2. A nut lock comprising a bolt, a nut, locking mechanism carried on the nut, said locking mechanism comprising a pawl pivoted to the nut, a pawl operating member pivoted to the nut, said pawl being provided with a point, the said bolt being provided with means to receive the said point, the said pawl being provided with a projection, the said pawl operating member being provided with two recesses, one of which is adapted to receive the said projection on the pawl to maintain the pawl in an unlocked position, the other of which is adapted to receive the projection on the pawl when the pawl is in a locked position and to form a stop to hold the pawl against rotation.

3. A nut lock comprising a bolt, a nut, locking means carried on the nut, said locking means comprising a pawl pivoted on the nut, a pawl operating member pivoted on the nut and in engagement with the said pawl, the said pawl operating member extending beyond two sides of the nut and in such manner as to be engaged when a wrench is applied to the nut, said pawl operating member carrying the said pawl out of engagement with the bolt when the said pawl operating member is engaged by a wrench, the said pawl operating member maintaining the said pawl in an unlocked position and providing a stop for the said pawl when the said pawl is in a locked position.

962,322. STOKER MECHANISM. PAUL L. CROWE, Jersey City, N. J. Filed Sept. 24, 1907. Serial No. 394,390.



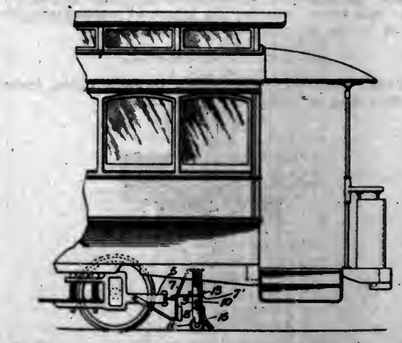
1. The combination with a furnace having a grate surface and ignition arch above the grate surface, of skewbacks mounted at the side of the furnace and extending the depth of the arch, said arch comprising keyed blocks the depth of the arch, all self-supporting upon and between the skewbacks, a member arranged transversely of the outer face of the arch, and retaining means connecting each of the blocks with such transverse member.

2. The combination with a furnace having a grate surface and an ignition arch above the grate surface, of skewbacks mounted at the sides of the furnace and extending the depth of the arch, said arch comprising keyed blocks the depth of the arch, all self-supporting upon and between the skewbacks and forming a continuous plain under surface throughout the transverse extent of the arch, a member arranged transversely of the outer face of the arch, and retaining means connecting each of the blocks with such transverse member.

3. The combination with a furnace having a grate surface and ignition arch above the grate surface, of skewbacks mounted at the sides of the furnace and extending the depth of the arch, said arch comprising keyed blocks the depth of the arch self-supporting upon and between the skewbacks, a hopper, and bolts secured between adjacent keyed blocks and securing the hopper to the arch.

4. The combination with a furnace having a grate surface and ignition arch above the grate surface, of skewbacks mounted at the sides of the furnace and extending the depth of the arch, said arch comprising keyed blocks the depth of the arch all self-supporting upon and between the skewbacks, and forming a continuous plain under surface throughout the transverse extent of the arch, a hopper, and bolts secured between adjacent keyed blocks and securing the hopper to the arch.

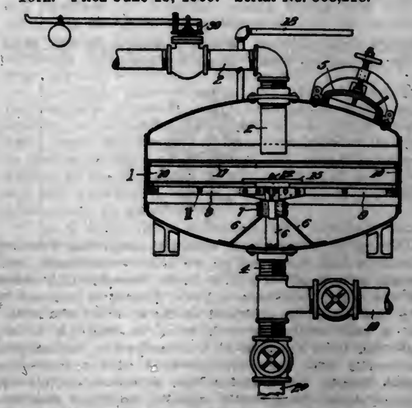
962,323. CAR-FENDER. FRANK E. DEEMER and EDWARD W. KORFF, Brooklyn, N. Y.; said Deemer assignor to said Korff. Filed Nov. 30, 1908. Serial No. 465,033.



1. In a car fender, the combination with a post rigidly attached to the truck of a car, of a tube carrying a wheel and sliding on the post, a shovel, a pin preventing the rotation of the tube, and a second pin to lock the wheel from contact with the rail.

2. In a car fender, the combination with depending posts, of tubes sliding thereon, springs to press the latter downward, wheels at the lower ends of the tube, means for limiting the movements of the tubes, shovels on same, and netting connecting the shovels.

962,324. CLOSED FIBER-STRAINER. EUGENE W. DEMING, New York, N. Y., assignor to Deming Apparatus Company, New York, N. Y., a Corporation of New York. Filed June 19, 1909. Serial No. 503,218.



1. A fiber strainer comprising a closed vessel having an inlet and outlet for liquid, a screen horizontally dis-

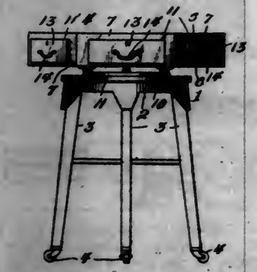
posed between said inlet and outlet and mounted for rotation, and a peripheral retaining ring carried by said screen.

2. A fiber strainer comprising a closed vessel having an inlet and outlet for liquid, a screen horizontally disposed between said inlet and outlet and mounted for rotation, a peripheral retaining ring carried by said screen, and a vacuum connection to said vessel.

3. A fiber strainer comprising a closed vessel having a substantially central inlet for liquid, an outlet therefor, a screen horizontally disposed between said inlet and outlet and mounted for rotation, a peripheral retaining ring carried by said screen, and an impact plate beneath the liquid inlet.

4. A fiber strainer comprising a closed vessel, a screen horizontally disposed therein and mounted for rotation, a peripheral retaining ring carried by said screen, and means for directing a liquid stream radially outward over said screen, whereby the separated matters are conveyed to the periphery of the screen.

962,325. WORK-STAND. SARAH DYMOKE, Gross, Idaho. Filed Sept. 8, 1909. Serial No. 516,648.



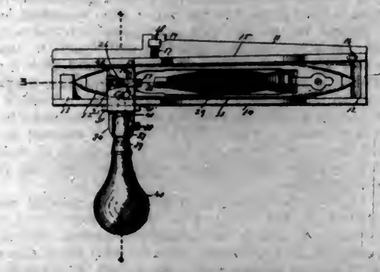
A work stand including a base structure, a case rotatively mounted thereon, said case comprising an upper and a lower wall and a series of side walls angularly disposed with relation to each other, a drawer movably mounted in each side wall, a series of guide partitions projecting inward from each side wall, the partitions of each side wall being at their inner ends connected to the partitions of the adjacent side wall, spaced guide walls mounted in rear of and in alinement with the partitions projecting from one side wall, and a secret drawer movable between said guide walls and concealed by the drawer between said partitions.

962,326. LACE-HOOK. ERICK A. ENGSTROM, Hill, Mont. Filed May 25, 1909. Serial No. 498,182.



A stud of the character described comprising a hollow shank, a hook arranged at one side of the shank, said shank being provided with a flange formed with a recess at the base of the hook, a guard pivoted at one end to the free end of the hook and having a curved arm adapted to seat within the hook when the guard is closed, said arm being provided with a beveled free end adapted to overlie said recess and provided with a transverse notch therein, and a spring fixed at one end within the hollow shank diametrically opposite the recess and having its free end extending into said recess to engage the notch in the guard and provided with a T-shaped or cross portion, said spring being provided adjacent said cross portion with an offset projecting beyond the flanged end of the stud for engagement with the beveled end of the guard, whereby the latter will be held in closed position.

962,327. SHUTTLE-THREADING MECHANISM. JOSEPH FALTUS, Fall River, Mass. Filed July 1, 1909. Serial No. 505,366.

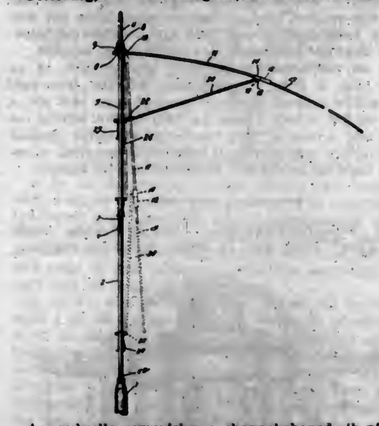


1. In a shuttle-threading mechanism, a shuttle-rest adapted to support a shuttle in a stationary position and provided with an opening opposite the thread-eye of the shuttle, mechanism comprising a suction bulb and a nozzle, means for supporting said mechanism with the nozzle extending through said opening to the shuttle-eye, a trip-frame supported by the shuttle-rest near said opening, and a cover or closure supported by the trip-frame over the socket in the head of the shuttle when the shuttle is in position in the rest whereby as the shuttle is moved into position the trip-frame is raised and as it reaches its stationary position the cover or closure is dropped over said socket, for the purpose of preventing the end of the thread in the socket from being blown out of said socket when the air-bulb is compressed previous to its being allowed to expand and draw the thread through the eye.

2. In a shuttle-threading mechanism, a shuttle-rest adapted to support a shuttle in a stationary position and provided with an opening opposite the thread-eye of the shuttle, mechanism comprising a suction bulb and a nozzle, means for supporting said mechanism with the nozzle extending through said opening to the shuttle-eye, a slotted frame sustained by the rest with its slot over the socket of the shuttle when the shuttle is in stationary position in the rest, a rod extending horizontally across said slot, a wire frame bridging the slot, and a trip-frame comprising a central longitudinally slotted portion through which said horizontal rod extends, a substantially horizontal upper portion adapted to rest on the wire which bridges the slot, and a lower portion shaped to form a cover or closure for the socket in the shuttle-head, whereby as the shuttle is moved into position the trip-frame slips over the nose and head of the shuttle until its lower portion drops over the socket in the shuttle and when the shuttle is withdrawn from the rest the cover or closure slips out of the socket and is held suspended by the trip-frame.

3. In a shuttle-threading mechanism, a shuttle-rest adapted to support a shuttle in a stationary position and provided with an opening opposite the thread-eye of the shuttle, mechanism comprising a suction bulb and a nozzle, means for supporting said mechanism with the nozzle extending through said opening to the shuttle-eye, a slotted frame sustained by the rest with its slot over the socket of the shuttle when the shuttle is in stationary position in the rest, a rod extending horizontally across said slot, a wire frame bridging the slot, and a trip-frame comprising a central longitudinally slotted portion through which said horizontal rod extends, a substantially horizontal upper portion adapted to rest on the wire which bridges the slot, and a lower portion shaped to form a cover or closure for the socket in the shuttle-head, whereby as the shuttle is moved into position the trip-frame slips over the nose and head of the shuttle until its lower portion drops over the socket in the shuttle and when the shuttle is withdrawn from the rest the cover or closure slips out of the socket and is held suspended by the trip-frame, said cover or closure being provided with a guiding or centering rib adapted to extend into the passage between the socket of the shuttle and the interior thereof.

962,328. FOLDING UMBRELLA. BRADY G. FEARNOW, Pittsburg, Pa. Filed Aug. 23, 1909. Serial No. 514,193.



An umbrella comprising a channel-shaped rib pivotally-connected to a notched collar, a sleeve secured to the free end of said rib and constituting an abutment, a shoe slidably mounted upon the rib and having depending flanges, said sleeve limiting the outward movement of said shoe, an extension projecting into said rib, a U-shaped member secured to that end of the extension within the rib and provided with flanges extending in parallelism with respect to the flanges of the shoe, said member secured to the inner face of said extension, a stretcher having its outer end extending between the flanges of said member and the flanges of said shoe, means extending to the outer end of the stretcher and the flanges of said member and shoe for pivotally-connecting the stretcher to the shoe and extension, and a runner to which the inner end of said stretcher is pivoted.

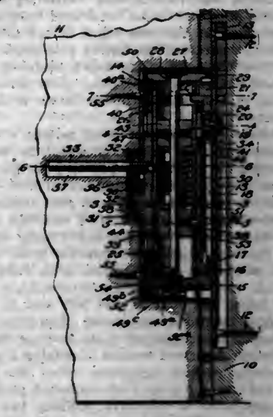
962,329. BURNER. FRANK E. FENDER, Lincoln, Nebr. Filed Nov. 10, 1909. Serial No. 527,286.



1. A lamp burner comprising a gallery, a base, a wick tube and a dome, said gallery having a central opening, the diameter of which exceeds that of the base so that a space is formed around the latter, a cylindrical curtain in the said opening of the gallery, open at its upper and lower ends, perforated, and extending down and around and spaced from the base, and a protecting plate extending across and secured in the dome, said protecting plate providing a central lower portion having an opening clearing and through which the wick tube extends and also providing a pair of upwardly outwardly inclined perforated wings on opposite sides of the upper portion of the wick tube.

2. A lamp burner comprising a gallery, a base, a wick tube and a dome, said gallery having a central opening, the diameter of which exceeds that of the base so that a space is formed around the latter, a cylindrical curtain in the said opening of the gallery, open at its upper and lower ends, perforated, and extending down and around and spaced from the base, and a protecting plate extending across and secured in the dome, said protecting plate providing a central lower portion having an opening clearing and through which the wick tube extends and also providing a pair of upwardly outwardly inclined perforated wings on opposite sides of the upper portion of the wick tube, the said base having a conical cover for the purpose set forth.

962,330. DOUBLE-ACTING SPRING-HINGE. JOHN A. FISCHER, Memphis, Tenn. Filed Mar. 8, 1910. Serial No. 548,002.



1. In a hinge the combination with relatively fixed and movable hinge members, of a tubular pintle within said members, an actuating spring within said pintle operatively connected with said movable hinge member through an opening in said pintle, and an adjustable bolt connecting said pintle and one fixed hinge member, substantially as described.

2. In a hinge the combination with relatively fixed and movable hinge members, of a tubular pintle within said members, an actuating spring within said pintle operatively connected at opposite ends with said movable hinge member through openings in said pintle, and an adjustable bolt connecting said pintle and one fixed hinge member, substantially as described.

3. In a hinge the combination with relatively fixed and movable hinge members, of a tubular pintle within said members, an actuating spring within said pintle operatively connected with said movable hinge member through an opening in the pintle, a center bolt depending from a member at the upper end of said pintle, and a nut for said bolt swiveled in one of the fixed hinge members, substantially as described.

4. In a hinge the combination with relatively fixed and movable hinge members, of a tubular pintle within said members, an actuating spring within said pintle operatively connected with said movable hinge member through an opening in the pintle, a bridge-block crossing the upper end of said pintle, a center bolt depending from said bridge-block, and a nut for said bolt swiveled in one of the fixed hinge members, substantially as described.

5. In a hinge the combination of upper and lower fixed hinge members, of an interposed movable hinge member, a tubular pintle within said members, an actuating spring within said pintle operatively connected at opposite ends with said movable hinge member through

openings in said pintle, a bridge-block removably crossing the upper fixed hinge member and resting upon the upper end of said pintle, a center bolt depending from said bridge-block, and a nut for said bolt swiveled in the lower of said fixed hinge members, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

962,331. METHOD OF MAKING CARTRIDGE-BELTS. WILLIAM C. FISHER, Middletown, Conn. Filed July 29, 1909. Serial No. 510,322.

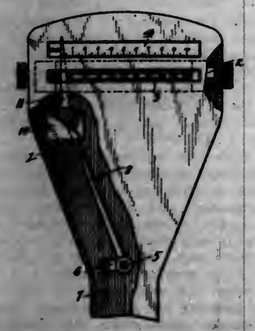


1. The herein described method consisting in weaving four parallel plies of fabric separated intermediate of their edges, weaving the side edges of the plies of each pair together, separating the united side edges of the inside plies from the body of the fabric and then reversing the two inside plies and projecting them below the two outside plies in alinement with the latter to form therewith, a pocket.

2. The herein described method of making a woven fabric belt having pockets depending below the body of the belt, consisting in weaving a plurality of parallel connected plies, weaving said plies separated from each other at intervals, weaving two separated plies intermediate of said first-mentioned separated plies weaving said intermediate plies together at one end and integral at the other end with the first-mentioned separated plies, separating the united side edges of the inside plies from the body of the fabric and reversing said intermediate plies and projecting below the body of the belt and in alinement with the first mentioned separated plies form with the latter, a pocket depending below the body of the belt.

3. The herein described method of making a woven fabric belt having pockets depending below the belt, consisting in weaving a plurality of connected plies, weaving said plies separated at intervals, weaving two separated plies intermediate the first-mentioned separated plies, weaving the side edges of the intermediate plies together and integral with the side portions of the first mentioned plies and integral with the upper edges of the first-mentioned separated plies, severing the connected side portions of the intermediate plies from the first-mentioned plies, and reversing the intermediate plies and projecting them below the body of the belt in alinement with the first mentioned plies to coöperate with the latter to form a pocket.

962,332. COMPUTING-SCALE. ROBERT A. FORBES, Anderson, Ind. Filed Sept. 21, 1909. Serial No. 518,750.



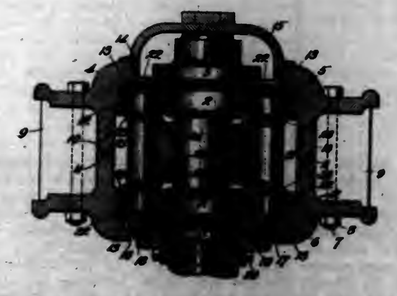
1. In an indicator, an indicator arm movable in an arcuate path, a hollow support pivotally mounted upon said arm, a pointer carried by the support, a fluid pressure controlled means contained within the support for limiting the oscillatory movement thereof.

2. In an indicator, an indicator arm movable in an arcuate path, a hollow support pivotally mounted thereon, a pointer carried by said support, a body of fluid within the support, and means carried by the arm and cooperating with said body of fluid to limit the oscillatory movement of said support.

3. In an indicator, an indicator arm movable in an arcuate path, a hollow support pivotally mounted thereon, a pointer carried by said support, a body of fluid within the support, and a vane or wing upon the arm partially submerged in said fluid and coöperating therewith to limit the oscillatory movement of the support.

4. In an indicator, an indicator arm movable in an arcuate path, a pivot pin projecting laterally from said arm, a hollow support pivotally mounted upon said pin, a pointer carried by said support, a body of fluid within the support and a vane or wing secured to the pivot pin and projecting into said column of fluid for coöperation therewith to limit the oscillatory movement of said support.

962,333. ROLLER-BEARING. JOHN F. FOSTER, Argentine, Kans. Filed Sept. 15, 1908. Serial No. 453,145.

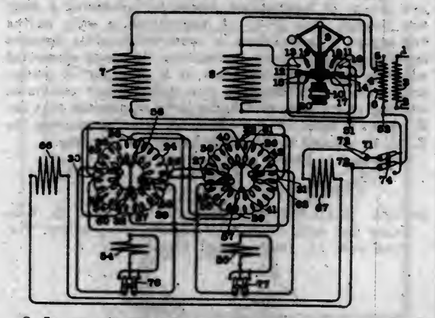


1. A roller-bearing, comprising a shaft provided with a pair of cones, embodying reduced inner and enlarged outer portions, a band or ring concentrically surrounding said shaft and cones, a plurality of spool-shaped rollers interposed between and bearing at their ends against said cones and said band or ring, a floating band concentrically surrounding and spaced from the shaft between said cones, spacing rollers peripherally engaging said floating band and the neck portions of the adjacent spool-shaped rollers to space the latter apart, a cap inclosing one end of the shaft and secured to the adjacent end of the band or ring surrounding the shaft and cones, a collar secured to the shaft and surrounding the enlarged end of the adjacent cone thereof, and a gasket secured to said collar and frictionally engaging the opposing end of the surrounding band or ring.

2. A roller-bearing, comprising a shaft provided with a pair of cones embodying reduced inner and enlarged outer portions, a band or ring concentrically surrounding said shaft and cones, and provided with peripheral sockets, a plurality of spool-shaped rollers interposed between and bearing at their ends against said cones and said band or ring, a floating band concentrically surrounding and spaced from the shaft between said cones, and spacing rollers peripherally engaging said floating band and the neck portions of the adjacent spool-shaped rollers to space the latter apart.

962,334. ALTERNATING-CURRENT MOTOR. VALÈRE ALFRED FYNN, London, England. Filed July 3, 1909. Serial No. 505,779.

1. In an alternating current motor, the combination with a stator, of a laminated rotor provided with a permanently short-circuited winding and two commuted windings, said short-circuited winding extending over all the rotor laminations and each of said commuted windings extending over a part only of the rotor laminations.



2. In an alternating current motor, the combination with a stator provided with a plurality of windings, of a laminated rotor provided with a permanently short-circuited winding and two commuted windings, said short-circuited winding extending over all the rotor laminations and each of said commuted windings extending over a part only of the rotor laminations.

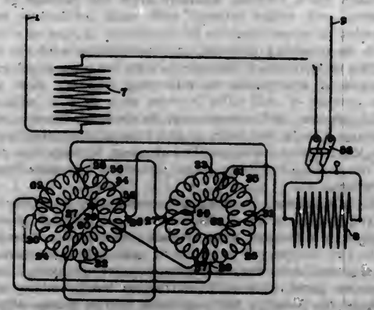
3. In an alternating current motor, the combination with a stator provided with a plurality of windings, of a rotor containing two longitudinally displaced groups of laminations and provided with a permanently short-circuited winding and two commuted windings, said short-circuited winding extending over both groups of rotor laminations and each of said commuted windings extending over only one group of rotor laminations.

4. In an alternating current motor, a stator containing two longitudinally displaced groups of laminations, means for producing a main flux through each group of laminations, a laminated rotor provided with a permanently short-circuited winding and two commuted windings, said short-circuited winding extending over all the rotor laminations and each of said commuted windings extending over a part only of the rotor laminations.

5. In an alternating current motor, a stator containing two longitudinally displaced groups of laminations, each group being provided with a main winding, a laminated rotor provided with a permanently short-circuited winding and two commuted windings, said short-circuited winding extending over all the rotor laminations and each of said commuted windings extending over a part only of the rotor laminations.

[Claims 6 to 24 not printed in the Gazette.]

962,335. ALTERNATING-CURRENT MOTOR. VALÈRE ALFRED FYNN, London, England. Filed July 9, 1909. Serial No. 506,728.



1. In an alternating current motor, the combination with a stator, of a rotor having two longitudinally displaced groups of laminations and provided with a short-circuited winding and a commuted winding, the conductors of these two windings which lie adjacent to each other on one group of rotor laminations being displaced from each other on the other group of rotor laminations.

2. In an alternating current motor, the combination with a stator, of a rotor provided with a permanently short-circuited winding and a commuted winding, the conductors of these two windings which lie adjacent to each other on one half of the rotor laminations being displaced from each other on the other half.

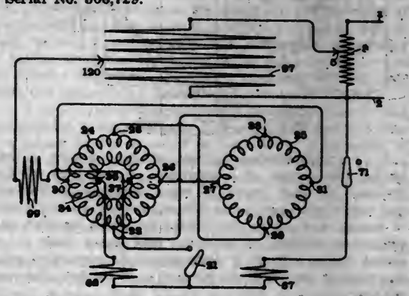
3. In an alternating current motor, the combination with a stator provided with a plurality of windings, of a rotor provided with a permanently short-circuited winding and a commuted winding, the conductors of these two windings which lie adjacent to each other on one half of the rotor laminations being displaced from each other on the other half.

4. In an alternating current motor, the combination with a stator provided with a plurality of windings, of a rotor provided with a permanently short-circuited winding and a commuted winding, the conductors of these two windings which lie adjacent to each other on one half of the rotor laminations being displaced by 360/n degrees on the other half.

5. In an alternating current motor, the combination with a stator, of a rotor having two longitudinally displaced groups of laminations and provided with a short-circuited winding and a commuted winding, the conductors of these two windings which lie adjacent to each other on one group of rotor laminations being displaced from each other on the other group of rotor laminations, and means for permitting a working current to flow in the commuted winding at starting.

[Claims 6 to 10 not printed in the Gazette.]

962,336. ALTERNATING-CURRENT MOTOR. VALÈRE ALFRED FYNN, London, England. Filed July 9, 1909. Serial No. 506,729.



1. In an alternating current motor, the combination with a stator, of a laminated rotor provided with a permanently short-circuited winding and a commuted winding, said short-circuited winding extending over all the rotor laminations and said commuted winding extending over a part only of the rotor laminations, and means disposed on the stator for producing a main flux through each of the rotor windings.

2. In an alternating current motor, the combination with a stator, of a laminated rotor containing two longitudinally displaced groups of laminations and provided with a permanently short-circuited winding and a commuted winding, said short-circuited winding extending over both groups of laminations and said commuted winding extending over only one group of laminations, and means disposed on the stator for producing a main flux through each group of the rotor laminations.

3. In an alternating current motor, a stator containing two longitudinally displaced groups of laminations, means for producing a main flux through each group of laminations, a laminated rotor provided with a permanently

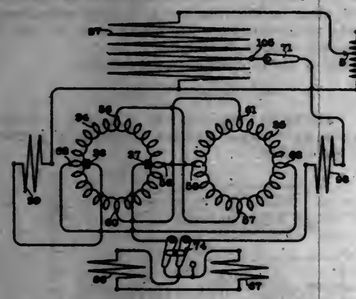
short-circuited winding and a commuted winding, said short-circuited winding extending over all the rotor laminations and said commuted winding extending over a part only of the rotor laminations.

4. In an alternating current motor, a stator containing two longitudinally displaced groups of laminations, means for producing a main flux through each group of laminations, an auxiliary winding on the stator, a laminated rotor provided with a permanently short-circuited winding and a commuted winding, said short-circuited winding extending over all the rotor laminations and said commuted winding extending over a part only of the rotor laminations.

5. In an alternating current motor, a stator containing two longitudinally displaced groups of laminations, means for producing a main flux through each group of laminations, and an auxiliary winding on one group of stator laminations adapted to magnetise along an axis coinciding with that of the main flux through that group, a laminated rotor provided with a permanently short-circuited winding and a commuted winding, said short-circuited winding extending over all the rotor laminations and said commuted winding extending over a part only of the rotor laminations.

[Claims 6 to 24 not printed in the Gazette.]

962,337. ALTERNATING-CURRENT MOTOR. VALER ALFRED FYNN, London, England. Filed July 9, 1909. Serial No. 506,730.



1. In an alternating current motor, a stator, a rotor having two groups of laminations, a commuted winding disposed on each group of rotor laminations, the said commuted windings being interconnected at a plurality of points, and means for producing a flux through each commuted winding at starting, said fluxes being so directed that the E. M. F. induced in one commuted winding opposes the E. M. F. induced in the other commuted winding.

2. In an alternating current motor, a stator, a rotor having two groups of laminations, a commuted winding disposed on each group of rotor laminations the said commuted windings being connected in parallel to the same commutator, and means for producing a flux through each commuted winding at starting, said fluxes being so directed that the E. M. F. induced in one commuted winding opposes the E. M. F. induced in the other commuted winding.

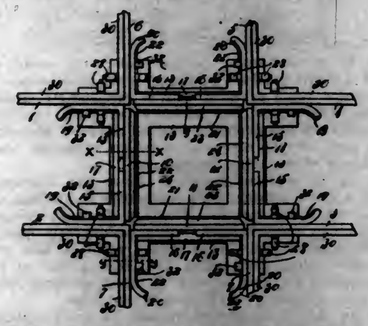
3. In an alternating current motor, a stator, a plurality of windings on the stator, a rotor having two groups of laminations, a commuted winding disposed on each group of rotor laminations, the said commuted windings being interconnected at a plurality of points, and means for reversing the current through one of the stator windings.

4. In an alternating current motor, a stator, a rotor having two groups of laminations, a commuted winding on each group of said rotor laminations, said commuted windings being interconnected at a plurality of points, means for producing a transformer flux through each group of rotor laminations, and means for producing a motor flux through each group of laminations at starting.

5. In an alternating current motor, a stator having two groups of laminations, means for producing a main flux through each group of laminations, a rotor having two groups of laminations, a commuted winding disposed on each group of rotor laminations, the said commuted windings being interconnected at a plurality of points, and means for producing a flux through each commuted winding at starting, said fluxes being so directed that the E. M. F. induced in one commuted winding opposes the E. M. F. induced in the other commuted winding.

[Claims 6 to 18 not printed in the Gazette.]

962,338. RAILWAY-CROSSING. BENJAMIN E. GALLASPY and ALEXANDER H. MCCARTY, Fort Worth, Tex. Filed June 11, 1909. Serial No. 501,541.



1. In a railway-crossing, the combination with the rails of the railway track having cut-outs for passage of wheel flanges, of continuous track forming members flush with the outside of said rails between each pair of rails and movable by passing wheels and normally closing said cut-outs.

2. In a railway crossing, the combination with the rails of the railway track having cut-outs for passage of wheel flanges, of continuous track-forming members flush with the outside of said rails between each pair of rails and yieldable to the flanges of passing wheels and normally closing said cut-outs and means for replacing said continuous track forming members automatically after the passage of the wheels.

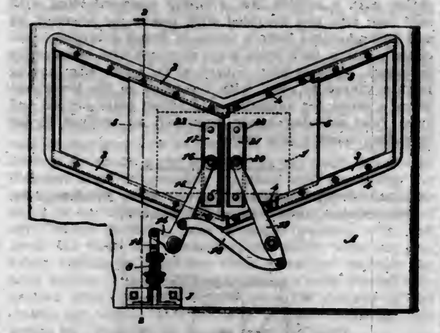
3. In a railway crossing, the combination with the rails of the railway track having cut-outs for the passage of wheel flanges, of continuous track-forming members flush with the outside of said rails between each pair of rails normally closing said cut-outs but yieldable to the flanges of passing wheels, springs operating to replace said continuous track forming members after the passage of the wheels, and wings integral with said continuous track forming members operable by the flanges of passing wheels.

4. In a railway crossing, the combination with the rails of the railway track having cut-outs for passage of wheel flanges, of continuous track-forming members flush with the outside of said rails between each pair of rails normally closing said cut-outs but yieldable to the flanges of passing wheels, the balls of the rails of the track within the intersection being partly cut away whereby the tread of the wheels will bear on said continuous track forming members.

5. In a railway crossing, the combination with the rails of the railway track having cut-outs for passage of wheel flanges, continuous track forming members cooperating with the intersected portions of said rails and normally closing said cut-outs, and spring-pressed wings and guard members rigid with said continuous track-forming members of the crossing track operable by the flanges of passing wheels.
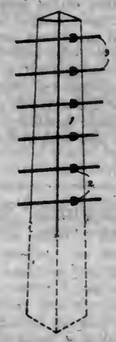
[Claims 6 to 10 not printed in the Gazette.]

962,339. FURNACE-DOOR-OPERATING MECHANISM. GEORGE H. GREGORY, Mount Carmel, Ill. Filed Mar. 31, 1910. Serial No. 552,611.



A furnace having a door opening and downwardly inclined guideways, sliding door sections mounted to travel in the guideways, actuating levers operatively connected with the door sections and pivotally supported upon the furnace and operatively connected with each other, a controlling lever, a pivoted link carried by one of the actuating levers, said link having a passage formed therein, a member mounted for rocking movement and operatively connected with the controlling lever, and a forwardly extending pin supported by the member and extending through the passage in said link and positioned therein so that in movement of the controlling lever the link will be actuated to simultaneously operate the actuating levers.

962,340. CONCRETE POST. GEORGE C. HALE, Kansas City, Mo. Filed Jan. 26, 1909. Serial No. 474,219.



1. A post consisting of an outer shell of concrete, a reinforcing core, and caps of concrete hermetically sealing both ends of said shell and protecting the core from moisture.

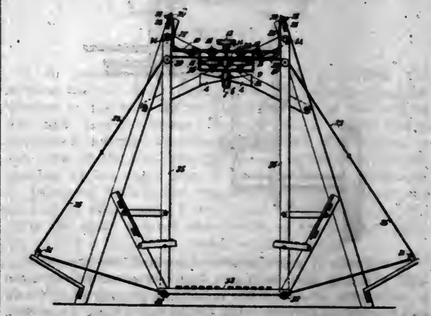
2. A post consisting of an outer shell of concrete, a reinforcing core, a filling of concrete between said core and shell, and caps of concrete hermetically sealing both ends of said shell and protecting the core from moisture.

3. A post consisting of an outer shell of concrete, a reinforcing core, a filling of a different grade of concrete between said core and shell and caps of concrete hermetically sealing both ends of said shell and protecting the core from moisture.

4. A post consisting of an outer shell of concrete, a reinforcing core, a filling of a different grade of concrete between said core and shell, and end closures of concrete of the same grade as the shell hermetically sealing both ends of said shell and protecting the core from moisture.

5. A post consisting of an outer tubular shell of concrete, a reinforcing core of twisted fiber occupying substantially half of the space within said shell, and a filling of a different grade of concrete between said core and shell, and caps hermetically sealing both ends of said shell.

962,341. LAWN-SWING FAN. JAMES ELY HALL, Greenville, Ill. Filed Sept. 11, 1909. Serial No. 517,186.



1. A lawn swing fan comprising a rotary fan having horizontally extended blades and a vertical shaft; a friction pulley fixedly mounted on said shaft; a plurality of rotary driving devices disposed on opposite sides of said pulley and adapted to operatively engage the same; a swinging frame; and a plurality of flexible transmission devices connecting the frame and the driving devices for alternately engaging with the said shaft the said driving devices on opposite sides thereof.

2. A lawn swing fan comprising a rotary fan having horizontally extended blades and a vertical shaft; a friction pulley fixedly mounted on said shaft; a plurality of friction driving disks loosely mounted to engage and release the said pulley; a swinging frame; and a plurality of flexible transmission devices connecting the frame and the driving devices for alternately engaging with the said shaft the said driving disks on opposite sides thereof.

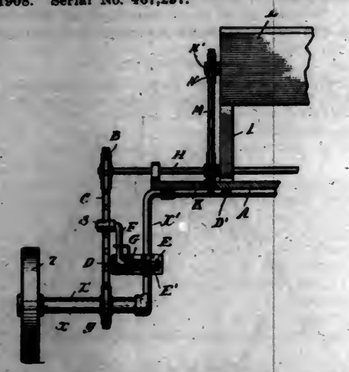
3. A lawn swing fan comprising a rotary fan having horizontally extended blades and a vertical shaft; a friction pulley fixedly mounted on said shaft; a plurality of friction driving disks loosely mounted to engage and release the said shaft; a swinging frame; and a plurality of flexible transmission devices connecting the frame and the driving devices for alternately engaging with the said pulley the said friction disks on opposite sides theerof.

4. A lawn swing fan comprising a rotary fan having horizontally extended blades and a vertical shaft; a friction pulley fixedly mounted on said shaft; a plurality of friction driving disks loosely mounted to engage and release the said shaft; a swinging frame; a plurality of flexible transmission devices connecting the frame and the driving devices for alternately engaging with the said pulley the said friction disks on opposite sides thereof; and a rotary balance weight fixedly mounted on said shaft.

5. A lawn swing fan comprising a stationary standing structure; a swing pivotally mounted in said structure; a frame consisting of two narrow bars joined in separated relation to form bearings for a fan operating mechanism, one of said bars having vertical extensions provided to secure the said frame upon the said stationary structure; a shaft vertically mounted in bearings in the said bars; a plurality of rotary driving members loosely mounted in said bars to engage and release alternately and from opposite sides the said shaft; and a plurality of flexible transmission devices each fixedly anchored to the said swing and rotatively engaging the one of said rotary driving members on the side of the said shaft removed from the anchorage of said devices.

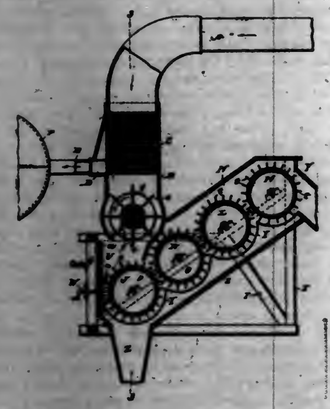
[Claims 6 and 7 not printed in the Gazette.]

962,342. ATTACHMENT FOR RIDING BREAKING-PLOWS. JOAB B. HARRELL, Chappel, Tex. Filed Dec. 12, 1908. Serial No. 467,297.



In a device of the character described, the combination with a riding plow having a land wheel supported upon a crank axle, of a seed box mounted upon the plow frame and having a shaft carrying a sprocket wheel, a sprocket wheel upon the hub of the land wheel, a shaft supported upon the plow frame, sprocket wheels upon said shaft, and chains connecting said sprocket wheels with the sprocket wheel upon the operating shaft and with that upon the land wheel.

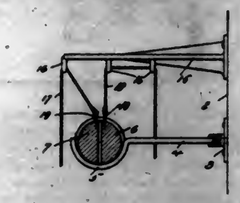
962,343. COTTON HULLER AND CLEANER. JOSEPH L. HART, Chickasha, Okla. Filed Apr. 12, 1909. Serial No. 489,306.



1. In a cotton huller, a vertically arranged feed pipe, a feed drum in the bottom thereof, a vertical screen arranged above said feed drum in the walls of said pipe, a suction box surrounding said screen and communicating with a suction fan, a casing communicating with said vertical feed pipe, and provided with means for breaking up and hulling cotton bolls, a series of drums arranged in inclined relation, each drum provided with teeth on its periphery, a breast plate having teeth arranged to coact with the teeth on the lowermost drum, means for adjusting said breast plate toward and from said lowermost drum, an inclined screen extending underneath said drums, a discharge passage for refuse at the lower end of said casing, and a discharge passage for cotton at the upper end of said casing.

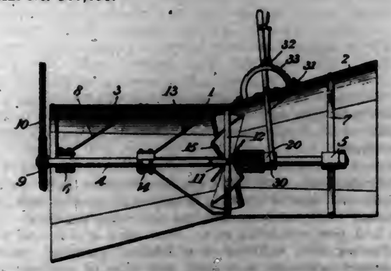
2. In a cotton huller, a feed pipe, a feed drum therein, a screen arranged above said feed drum in the walls of said pipe, a suction box surrounding said screen and communicating with a suction fan, a casing communicating with said feed pipe and provided with means for breaking up and hulling cotton bolls, a series of drums arranged in inclined relation, each drum being provided with teeth on its periphery, a breast plate hinged at its upper edge having teeth arranged to coact with the teeth on the lowermost drum, a screw for adjusting said breast plate toward and away from said lowermost drum and an inclined screen extending beneath said drum.

962,344. CURTAIN-POLE. LEWIS HAY, Pittsburg, Pa. Filed Nov. 9, 1908. Serial No. 461,639.



In combination with a pair of brackets for supporting a sectional curtain pole, of a pair of hangers of a length greater than the length of the brackets, said hangers arranged above said brackets and to one side of the plane of the brackets, each of said hangers provided at its free end with a depending lug and at a point removed from its free end with an intermediate depending lug and at a point removed from said intermediate depending lug with an inner depending lug, said lugs extending in planes transverse to the brackets, each of said lugs provided with an eye, the walls of the eyes of the lugs of each hanger extending in the direction of the length of their respective hangers, said outer lugs arranged in planes forwardly of the curtain pole, said inner lugs arranged in planes rearwardly of the curtain pole, said intermediate lugs arranged over the rear section of the curtain pole, flexible members extending through the eyes of the inner and the intermediate lugs and connected to the rear section of the curtain pole and flexible members extending through the eyes of the outer lugs and connected to the forward section of the curtain pole.

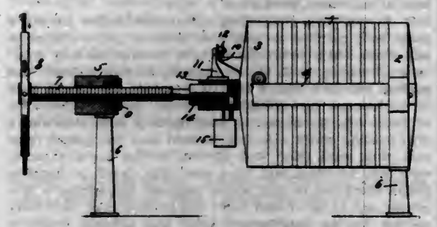
962,345. WATER-WHEEL. FRANK H. HAYNER and DAVID O. BAER, Boise, Idaho. Filed June 4, 1909. Serial No. 500,095.



1. A water wheel or motor comprising a casing having flaring inlet and discharge portions of elliptical form in cross section and arranged in apposition, a shaft disposed longitudinally within said casing, a propeller wheel mounted on the shaft at the point of intersection of said casing portions and embodying a series of blades adjustable to set at different angles, a sleeve slidable on the shaft and having a cam engagement therewith for longitudinal and rotary adjustment, a set of links extending parallel with and around the shaft and connecting said sleeve with the propeller blades, means for adjusting the sleeve, and means for transmitting power from the shaft.

2. A water wheel or motor comprising a casing embodying reversely flaring inlet and discharge portions arranged in apposition, bearing brackets upon the casing sections, a shaft disposed longitudinally within said casing and journaled in said brackets and having a spiral groove, a sleeve slidable on the shaft and having a projection movable in said groove, a hub fixed to the shaft, a collar also fixed to the shaft, a rim surrounding the shaft, a series of diagonal arms surrounding the shaft and connecting the collar and rim, angularly adjustable propeller blades journaled in the hub and rim at the point of intersection of said casing portions, links arranged parallel with and about the shaft and connecting the sleeve with the propeller blades, an adjusting lever extending through the inlet section of the casing and having a loose pivotal connection with the sleeve, means upon the exterior of the casing for locking said lever in adjusted position, and means for transmitting motion from the shaft.

962,346. FILTER-PRESS. EDGAR W. HELLER, Newark, N. J. Filed Feb. 11, 1909. Serial No. 477,380.



1. A filter press comprising a shifting head, filter plates, a jack screw for rapidly adjusting the shifting head to the plates, a laterally movable pressure device arranged between the jack screw and the shifting head for applying final pressure to said head, said pressure device being adapted to be brought into and out of alinement with the jack screw and consisting of a part longitudinally movable independently of the jack screw and a part adapted to engage the shifting head.

2. A filter press comprising a shifting head, filter plates, a longitudinally movable abutment for rapidly adjusting the shifting head to the plates, a laterally movable pressure device arranged between the movable abutment and the shifting head for applying final pressure to the shifting head, said pressure device being adapted to be brought into and out of alinement with the abutment and consisting of a part longitudinally movable independently of the abutment and a part adapted to engage the shifting head.

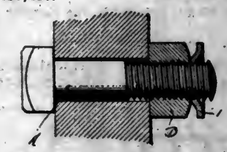
3. A filter press comprising filter plates, a shifting head, a movable abutment, a pressure device carried by the shifting head and between said head and the movable abutment and adapted to apply final pressure to the shifting head, the abutment being movable longitudinally independently of the pressure device.

4. A filter press comprising a shifting head, filter plates, a movable abutment and a laterally movable pressure device carried by the shifting head and adapted to be brought between the movable abutment and said head for applying final pressure to the shifting head.

5. A filtor press comprising a shifting head, filter plates, a jack screw for rapidly adjusting the shifting head, a pressure device carried by the shifting head and movable thereon to adapt it to be brought between the jack screw and the shifting head to apply final pressure to the shifting head.

[Claims 6 to 9 not printed in the Gazette.]

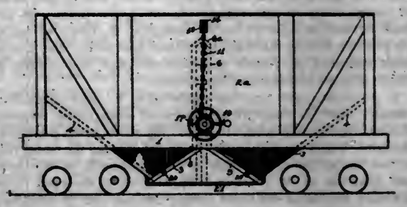
962,347. NUT-LOCK. EDWARD A. HEMSTEGER, Chicago, Ill., assignor to Weisell Nut Lock Company, Chicago, Ill., a Corporation of South Dakota. Filed Apr. 2, 1909. Serial No. 487,437.



1. In combination, a threaded bolt, a holding nut screwed thereon, and a lock nut screwed upon the threaded portion of the bolt against the outer side of the holding nut, said lock-nut being provided with a central flange projecting laterally therefrom and off-set with respect to the body of the nut, and the thread of the lock nut beginning at the outer edge of said flange and increasing in thickness toward the opposite direction, whereby the pointed or sharp end of the thread at its beginning will enter the space between the threads of the bolt and holding nut by a circular or rotary wedging action.

2. In combination, a threaded bolt, a holding nut screwed thereon, and a lock nut consisting of a flat piece of metal having its central portion pressed outwardly to form a circular flange off-set with respect to the body of the nut, the middle portion of the latter nut being provided with an opening tapped with a thread beginning at the outermost edge of the said flange and increasing in thickness toward the opposite direction, the sharp pointed portion of the thread of the lock nut at its beginning being forced between the threads of the bolt and holding nut by rotary movement of the lock nut and thereby affording a circular wedging or locking action.

962,348. RAILWAY DUMPING-CAR. MAURICE P. HENVIS, Norfolk, Va., assignor, by direct and mesne assignments, to Patrick J. Harrigan, McKeesport, Pa. Filed Feb 19, 1908, Serial No. 416,695. Renewed Mar. 16, 1909. Serial No. 483,868.



1. The combination with a car having an inclined bottom, of a casing therein, a pivoted door forming a portion of said bottom, and means for raising the pivot of said door into said casing.

2. The combination with a car having an inclined bottom, of a casing therein, a pivoted door forming a portion of said bottom, and a slidingly mounted carrier within said casing upon which said door is pivoted.

3. The combination with a car having an inclined bottom, of a casing therein, a pivoted door forming a portion of said bottom, a slidingly mounted carrier within said casing upon which said door is pivoted, and means for raising said carrier disposed within said casing.

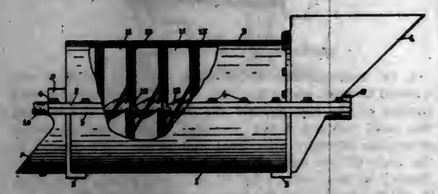
4. The combination with a car having an inclined bottom, of a casing therein, a pivoted door forming a portion of said bottom, a slidingly mounted carrier within said casing upon which said door is pivoted, and a cable connection from said carrier extending to a winding drum upon said car.

5. The combination with a car having an inclined bottom, of a casing therein, a pivoted door forming a portion of said bottom, a slidingly mounted carrier within said

casing upon which said door is pivoted, a cable connection from said carrier extending to a winding drum on said car, a ratchet upon said drum, and a pawl mounted to engage said ratchet.

[Claims 6 to 16 not printed in the Gazette.]

962,349. PEAT-MACHINE. PHILIP HEBELTINE, Detroit, Mich. Filed Sept. 1, 1909. Serial No. 515,559.



1. A crude peat crusher comprising a cylindrical casing with inlet at one end and outlet at the other, divided by apertured diaphragms at intervals throughout its length and rotatable obliquely disposed blades adapted to rub material introduced into the casing over the faces and through the apertures of the diaphragms successively, the area of the surface of each diaphragm exceeding the area of the apertures.

2. A crude peat crusher comprising a cylindrical casing with inlet at one end and outlet at the other, transverse apertured diaphragms disposed at intervals throughout its length, a shaft journaled in the casing concentrically therewith, and pallet blades on the shaft between each pair of plates with their blades oblique thereto and at an interval therefrom, the diaphragm forming pallet plates coacting with the blades upon material introduced into the casing.

3. A crude peat crusher comprising a semi-cylindrical concave base, a semi-cylindrical shell detachably secured thereon, both base and shell having apertured cross-diaphragms which together form pallet plates at intervals across the crusher, bearings in the end walls of the base and shell, a shaft journaled therein concentrically with the base and shell, an inlet hopper at one end of the base, an outlet chute at the other end, and pallet blades on the shaft whose oblique faces are adapted to force material toward the chute through the plate apertures, the plates being adapted to retard the material and the blades to rub it around the faces of the plates.

4. A crude peat crusher comprising a semi-cylindrical concave base, a semi-cylindrical shell detachably secured therein, both base and shell having apertured cross-diaphragms which together form pallet plates at intervals across the crusher, bearings in the end walls of the base and shell, a shaft journaled therein concentrically with the base and shell, an inlet hopper at one end of the base, an outlet chute at the other end, and pallet blades on the shaft whose oblique faces are adapted to force material toward the chute through the plate apertures, the plates being adapted to retard the material and the blades to rub it around the faces of the plates, and the apertures of the plates having margins beveled back from the coacting blades.

962,350. ROCK-DRILL. HERMAN J. HIBSCHLE, Victor, Colo., assignor to The MacCormick Drill and Manufacturing Company, Incorporated, Denver, Colo. Filed Aug. 10, 1908. Serial No. 447,695.

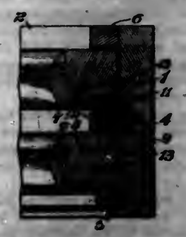


1. A rock drill comprising a hammer casing having a main body portion and a front end portion, said main body portion having a piston chamber opening through the rear end of said main body portion, said front end portion having a bore merging with said chamber, a hammer piston operating in said piston chamber, a back head plug threaded into said open end of said main body portion and having a countersunk chamber portion, said back head plug having an annular groove, and a fluid passing bore, said plug having radial bores connecting said fluid passing bore with said annular groove, said main body portion having a fluid passage registering with said groove to convey fluid into the interior of said piston chamber to actuate said piston, all being arranged substantially as shown and described.

2. A rock drill comprising a hammer casing having a main body portion and a front end portion, said main body portion having a piston chamber opening through the rear end of said main body portion, said front end portion having a bore merging with said chamber, a hammer piston operating in said piston chamber, a back head plug threaded into said open end of said main body portion and having a countersunk chamber portion said back head plug having an annular groove, a fluid passing bore, said plug having radial bores connecting said fluid passing bore with said annular groove, said main body portion having a fluid passage registering with said groove to convey fluid into the interior of said piston chamber to actuate said piston, and a throttle valve in said back head plug to control fluid passage through said fluid passing bore of said back head plug.

3. A rock drill comprising a hammer casing having a main body portion inclosing a hammer piston chamber, said main body portion being open at one end and internally threaded, said hammer casing having a front end portion provided with a bore of lesser diameter than that of the hammer piston casing, said bore having a plurality of diameters, an impacting plug held in said bore and a drill holding chuck also held in said bore but spaced from said plug, said front end portion having ports entering said bore between said plug and said chuck, a hammer piston operating in said piston chamber and having a projecting end to enter said front end portion bore, said body portion having longitudinal inlet and exhaust channels parallel to the axis of said casing and communicating with the interior of said piston chamber, a back head plug threaded into the rear end of said hammer casing and having a countersunk chamber portion and an outer annular groove, said back head plug having a flange to abut the rear end of said hammer casing, said flange having a port registering with said exhaust passage of said hammer casing, said back head plug having an inlet, and radial bores connecting said inlet bore with said annular groove, said inlet passage of said hammer casing communicating with said annular groove, all being arranged substantially as shown and described.

962,351. WEATHER-STRIP. OSCAR W. HOOPPAW, St. Louis, Mo., assignor to Monarch Metal Weather Strip Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 31, 1908. Serial No. 470,156.



1. A weather strip comprising a frame, a sash slidably mounted therein and having rabbets in its vertical edges, and counterpart metal bead and groove strips, said groove strips being mounted on the sash with their grooved portions in the rabbets and with the mouths of the grooves opening toward the face of the sash.

2. A weather strip comprising a frame, a sash whose outer vertical edges are rabbeted, and counterpart metal bead and groove strips, said groove strips being mounted on the outer faces of the sash with their grooved portions in the rabbets and with the mouths of the grooves opening toward the outer face of said sash and the bead strips being mounted on a stationary part to coöperate with said groove strips.

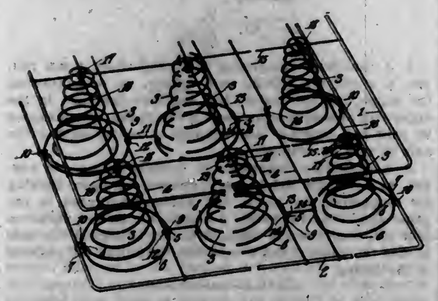
3. A weather strip comprising a frame, parting strips detachably mounted therein, upper and lower sashes, and counterpart metal bead and groove strips, the lower sash having rabbets in its outer edges and having the groove strips mounted on its outer face with their grooved portions in said rabbets and with the mouths of the grooves opening outwardly, and the coöperating bead strips being mounted on the inner face of said parting strips.

4. A weather strip comprising a frame, a parting strip detachably mounted therein, upper and lower sashes whose outer edges are rabbeted, and counterpart metal bead and groove strips, said groove strips being mounted on the outer faces of the sashes with their grooved portions in the rabbets and with the mouths of said grooves opening outwardly, and the bead strips being mounted on stationary parts to coöperate therewith.

5. A weather strip comprising a frame, parting strips detachably mounted therein, upper and lower sashes whose outer vertical edges are rabbeted, outer and inner stops for said sashes, and counterpart metal groove and bead strips, the groove strips being mounted on the outer faces of the sashes with their grooved portions in the rabbets and with the mouths of the grooves opening outwardly, and the bead strips being mounted on the parting strip and the outer stops respectively.

[Claims 6 and 7 not printed in the Gazette.]

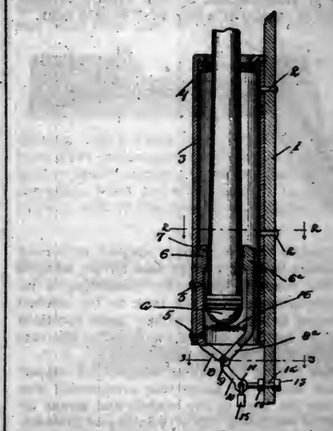
962,352. BED-SPRING. JOSEPH R. HOOKER, Carthage, Mo. Filed Apr. 19, 1909. Serial No. 490,789.



A bed spring including a frame, spaced helices each having an unbroken base ring integral therewith, a stem extending radially from each ring and having a laterally extending terminal hook, each ring being provided, at a point diametrically opposed to the stem, with an off-set portion, a tie wire extending over the base ring of each helix, each tie wire having a U-shaped extension straddling the off-set portion of the base ring, one of the stems being extended through said U-shaped extension and under the off-set portion of the base ring, the hook of the stem engaging one side of the said U-shaped portion of the tie wire.

962,353. WHIP-SOCKET. HEZEKIAH INGRAM, Wabbaseka, Ark. Filed Oct. 30, 1909. Serial No. 525,460.

A whip socket comprising a tubular socket member, a jaw rigidly secured within the member, a jaw pivoted to said rigid jaw, a spring for normally forcing said jaws together to permit the whip to rest upon the upper ends thereof, a locking member connected to the pivoted jaw,



and means for engaging said locking member with an eye bolt for locking the whip within the socket.

962,354. ROAD-GRADING MACHINE. PARLEY J. JEWETT, Butler, Mo. Filed Mar. 1, 1909. Serial No. 480,688.



1. In a road grader, a frame, a mold board carried at the forward end of the frame, steering means carried at the rear of the frame, caster wheels carried at the sides of the frame, and means adapted to manipulate the caster wheels to raise the mold board.

2. In a device of the class described, a frame-work converging toward the rear end, a cutter blade carried transversely of the frame at the forward end, levers pivoted to the frame at opposite sides adjacent the forward end, and earth-engaging means carried by the levers whereby the forward end of the frame may be raised from the ground.

3. In a device of the class described, a frame-work converging toward the rear end, a cutter blade extending transversely of the forward end, elevating means carried by the frame-work at opposite sides and adjacent the forward end, and guiding means carried by the frame-work at the rear end.

4. In a device of the class described, a frame converging toward the rear end, a cutter carried at the forward end and disposed obliquely to the line of travel of the frame, frame elevating means carried at opposite sides of the frame adjacent the forward ends, earth-engaging guiding means carried at the rear of the frame, and means to control the guiding means extending above the frame and adjacent the elevating means.

962,355. MEANS FOR CUSHIONING HYDRAULIC PRESSURE IN FEED-PIPES. RAYMOND D. JOHNSON, Albany, N. Y. Filed June 19, 1908. Serial No. 439,319.

1. The combination with an elevated reservoir, a water-wheel, and a conduit connecting the same, of a surge tank having an open connection to the conduit, means for per-

mitting a restricted flow therethrough from the tank to the conduit, and means arranged to permit a relatively rapid variation of pressure-head in such conduit as compared to the rate of change of water level in such tank.



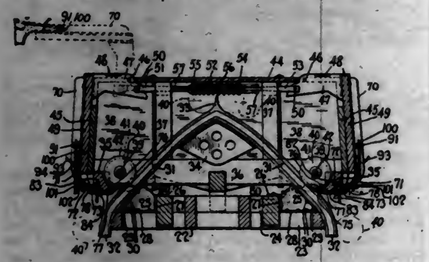
2. The combination with a conduit adapted to convey fluids under pressure-head, of a surge tank having an open connection to the conduit, means for permitting a restricted flow therethrough from the tank to the conduit and means arranged to permit a relatively rapid variation of pressure-head in such conduit as compared to the rate of change of water level in such tank.

3. A surge tank having an opening adapted for connection to a conduit, means for permitting a restricted flow therethrough from the tank to the conduit and means arranged to permit a relatively rapid variation of pressure-head in such conduit as compared to the rate of change of water level in such tank.

4. The combination with a conduit of a stand-pipe connected thereto and a surge tank connected to the stand-pipe.

5. The combination with a conduit, of a stand-pipe connected thereto, and a surge tank surrounding the stand-pipe, said stand-pipe having ports connecting it with the surge-tank.

962,356. AUTOMATIC DUMP-CAR. JOHN KARHU, Calumet, Mich. Filed Feb. 5, 1909. Serial No. 476,317.



1. In a dump car of the class described, a car frame, pairs of anticlinally arranged tracks supported transverse said frame adjacent each end thereof, a car body, wheels rolling on said tracks and supporting said car body, the apex of each pair of tracks having the outer face thereof curved upward in circular arcs to form a cusp, said arcs being arcs of circles of equal diameter to the rolling surface of said wheels.

2. In a dump car of the class described, a car frame, pairs of anticlinally arranged tracks supported transverse said frame adjacent each end thereof, a car body, wheels rolling on said tracks and supporting said car body, the apex of each pair of tracks having the outer face thereof curved upward in circular arcs to form a cusp, said arcs being arcs of circles of equal diameter to the rolling surface of said wheels, and coacting locking elements on said frame and body to hold the body from movement relative to the frame.

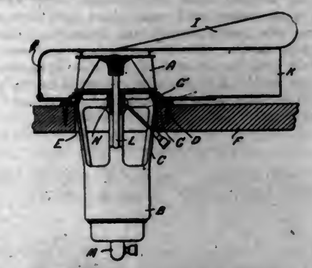
3. In a dump car of the class described, a car frame, a car body tiltable transversely of said frame, side doors for said body, hinges at the upper edges of said side doors to connect the doors to said body, downwardly projecting inner ends formed on said hinges, presser bars connected to said hinge ends, collars on said bars, a compression spring held between said collars, and releasable locking elements on said doors and body to hold the doors closed against the action of said spring.

4. In a dump car of the class described, a car body, a door hinged to the side of said body, a latch pivoted to the car body, a member on said door engageable by said latch, a spring normally holding said latch engaged with said member, a bar slidably mounted beneath said latch on said body, a cam on said bar engageable with said latch to release the same from said member, and a lever to move said bar.

5. In a dump car of the class described, a car body, a door hinged to the side of said body, a latch pivoted to the car body, a member on said door engageable by said latch, a spring normally holding said latch engaged with said member, a bar slidably mounted beneath said latch on said body, a cam on said bar engageable with said latch to release the same from said member, a lever to move said bar, and releasable means to prevent the release of said latch.

[Claims 6 and 7 not printed in the Gazette.]

962,357. VENTILATOR. JAMES KEITH and CHARLES TUSON, London, England. Filed Mar. 1, 1910. Serial No. 546,723.



1. A ventilator comprising in combination, a fan runner, a motor for driving said runner, an open framing for supporting the motor, ball bearings arranged in the upper end of said framing, and a volute fan case mounted on said ball bearings and adapted to swivel around the axis of said fan runner.

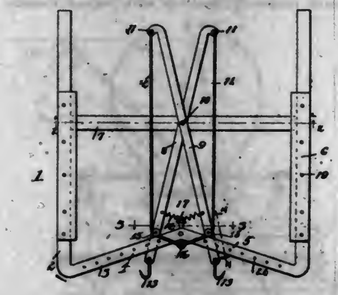
2. A ventilator comprising in combination, a fan runner, a motor for driving said runner, an open framing for supporting the motor, ball bearings arranged in the upper end of said framing, a volute fan case mounted on said ball bearings and adapted to swivel around the axis of said fan runner, and a vane for controlling the position of the casing.

962,358. GAMBREL. FREDERICK KNAUST, Jersey City, N. J. Filed Oct. 12, 1909. Serial No. 522,219.

1. In a gambrel, a U-shaped frame, the connecting member of the frame being inclined from its center in opposite directions toward the arms of the frame, ways upon the arms of the frame, a bar slidably mounted within the ways, a pair of rods pivotally connected with the bar, rollers upon the rods engaging the inclined edges of the connecting member of the frame, pulleys upon the rods, hooks upon the lower extremities of the rods, flexible members connected with the upper portions of the rods adapted to pass over the pulleys and to be connected with the frame, and resilient members connected with the frame, and the rod and adapted to exert an inner pressure to draw the ends of the rods together.

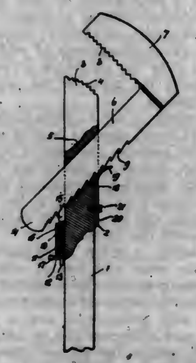
2. In a device for the purpose set forth, a substantially U-shaped frame, the bottom or connecting bar of the frame being centrally diverged downwardly in opposite directions toward the arms of the frame, plates upon the arms of

the frame, said plates being provided with spaced openings, a bar positioned between the plates, a pair of rods pivotally connected with the bar, said rods being provided with rollers bearing upon the inclined member of the



frame, the arms of the said inclined member being provided with spaced openings, a pintle for these openings, hooks upon the extremities of the rods, and means for equalizing the weight upon the hooks.

962,359. PIPE-WRENCH. ALEXANDAR KONDÁS and PAUL BAJUSZ, Woodriver, Ill. Filed Jan. 24, 1910. Serial No. 539,740.



A pipe wrench comprising a handle having the one end thereof beveled and provided with transverse teeth, said handle having an angularly disposed opening formed therein adjacent to the toothed end thereof, a shank movably mounted in said opening and having one edge thereof provided with teeth, a toothed jaw carried by said shank and adapted to confront the toothed end of said handle, a casing carried by said handle adjacent to one end of said opening, a spring-pressed dog mounted in said casing and adapted to engage the teeth of said shank, a resilient arm carried by said handle adjacent to the other end of said opening and adapted to frictionally engage said shank, and means in connection with said dog for facilitating the movement thereof, substantially as, and for the purpose herein described.

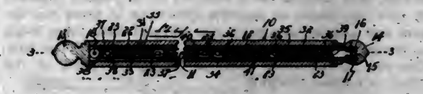
962,360. PIN. CHARLES KUEHNER, Cranston, R. I., assignor to Ottilie Kuehner, Providence, R. I. Filed Nov. 23, 1908. Serial No. 464,153.

A pin comprising a back plate provided with a portion adjacent one end bent to form a loop, the said end of said plate being extended for a distance beyond said loop and being disposed to lie in the same plane as the major portion of said back plate, said loop having one of its walls formed with an opening, a pin tongue having a T-shaped head, the head being pivoted in the loop and the tongue proper extending through said wall opening of the loop and being fulcrumed on said wall of the loop having said



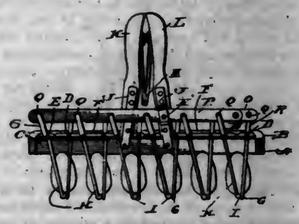
opening, and a front plate rolled over the edges of the back plate, whereby said extended end of the back plate is held to firmly support the loop and prevent the same from spreading when the pin tongue is moved to engage the fulcrum wall of the loop in entering the catch member.

962,361. CURTAIN-POLE. CARL L. KUHL, Wilmington, N. C. Filed Feb. 26, 1909. Serial No. 480,105.



A device of the class described comprising a pole having an open longitudinal slot enlarged laterally at the inner side to form spaced tracks, a guide rod supported within said slot, a plurality of disks movable in said slot and upon said tracks, each disk being provided with a guide element slidably engaging said guide rod, flexible elements arranged to couple said disks, a curtain supporting device depending from each disk, and moving means connected to the said disks.

962,362. EGG-LIFTER. JOSIAH WALLACE LANG, Floris, Iowa. Filed Aug. 18, 1909. Serial No. 513,446.



1. In a device of the character described, the combination with a frame, of rock shafts having their ends journaled therein, lugs formed centrally on and projecting from the shafts, fingers carried by the shafts, and means engaging alternate lugs and rocking adjacent shafts in opposite directions to cause the fingers to approach each other to grasp an egg and a spring interposed between the rocking means for returning the parts to normal position.

2. In a device of the character described, the combination with a frame, of rock shafts having their ends journaled therein, loops depending from alternate shafts, fingers of slightly less length than the loops carried by the other shafts, thore being a pair of fingers opposite each loop, and means for rocking the shafts to cause the fingers and loop to engage an egg therebetween.

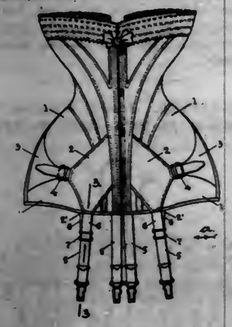
3. In a device of the character described, the combination with a frame, of rock shafts having their ends journaled therein, loops depending from alternate shafts, fingers of slightly less length than the loops carried by the other shafts, there being a pair of fingers opposite each loop, centrally disposed lugs projecting from the shafts, a bar pivotally secured to the upper end of the lug of each loop bearing shaft, a second bar similarly secured to the lugs of the finger bearing shafts, and handles secured to

said bars and adapted when pressed together to rock the shafts in opposite directions to cause the loops and fingers to grasp any articles located therebetween.

4. In an egg lifter, the combination with a frame, of rock shafts having their ends journaled therein, loops depending from alternate shafts, fingers carried by the other shafts, there being a pair of fingers opposite each loop, pivotally secured handles carried by the frame, one of said handles having connection with the loop bearing shafts and the other handle with the finger bearing shafts, said handles being adapted to be pressed together to rock the shafts in opposite directions to cause the fingers and loop to engage an egg therebetween.

5. In an egg lifter, the combination with a frame, of rock shafts having their ends journaled therein, loops depending from alternate shafts, fingers carried by the other shafts, there being a pair of fingers opposite each loop, pivotally secured handles carried by the frame, one of said handles having connection with the loop bearing shafts and the other handle with the finger bearing shafts, said handles being adapted to be pressed together to rock the shafts in opposite directions to cause the fingers and loop to engage an egg therebetween, there being a spring interposed between the upper ends of the handles for forcing them apart to return the parts of the lifter to normal position.

962,363. CORSET. AUGUSTE JEAN LECOUTRE, Worcester, Mass., assignor to Royal Worcester Corset Company, a Corporation of Massachusetts. Filed Dec. 18, 1909. Serial No. 533,910.

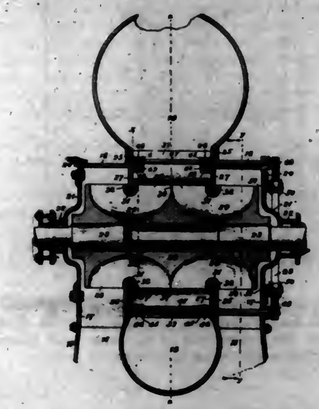


A corset having a front adjusting strap, as 2, in combination with a loop, as 6, of suitable flexible textile material, said loop being permanently secured at one end to the lower edge of said adjusting strap and at its other end to the lower edge of the corset behind said strap, and a hose supporter having at its upper end a metal loop or link, as 7, through which said textile loop loosely passes, so that the latter is free to move in the said metal loop or link.

962,364. WATER-TURBINE. THOMAS B. LEE, Charlotte, N. C. Filed Dec. 22, 1908. Serial No. 468,723.

1. In a fluid-motor, a rotor, guide-blades disposed in secant positions with respect to the rotor and arranged to direct fluid thereto, gates to control passage of fluid between the guide-blades longitudinally movable with respect to the blades toward and from the rotor and arranged to assume secant positions with respect to the rotor when withdrawn therefrom, operating means for the gates, and means operablo to cause the gates in movement toward the rotor to approach tangential position with respect thereto.

2. In a fluid-motor, a rotor, guide-blades disposed in secant positions with respect to the rotor and arranged to direct fluid thereto, gates to control passage of fluid between the guide-blades longitudinally movable with respect to the blades toward and from the rotor and arranged to assume secant positions with respect to the rotor when withdrawn therefrom, operating means for the gates, and means coöperating between the gates and blades to cause the gates in movement toward the rotor to approach tangential position with respect thereto.



3. In a fluid-motor, a rotor, guide-blades arranged to direct fluid to said rotor and each having a protuberance at its inner end, a gate carried by each guide-blade and having a protuberance arranged to engage its guide-blade protuberance, and means operable to move said gates in one direction to cause engagement of said protuberances and the gates to close the entrances between said guide-blades and to move the gates in the opposite direction to open the entrances.

4. In a fluid-motor, a rotor, guide-blades arranged to direct fluid to the rotor, gates to control passage of fluid to the rotor having portions deflected in direction of rotation of the rotor, operating means for the gates, and means causing the deflected portions of the gates to assume secant positions with respect to the rotor when in withdrawn position and to approach tangential position in movement toward the rotor.

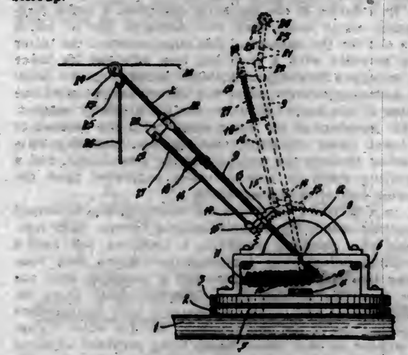
5. In a fluid-motor, a rotor, guide-blades arranged to direct fluid to the rotor and formed with curved outer ends, a longitudinally-movable gate carried by each guide-blade and arranged to be moved inwardly to close the entrances between said guide-blades and to be moved outwardly to open said entrances and to take position with their outer ends behind the curved outer ends of said guide-blades, and means whereby said gates are moved longitudinally.

[Claims 6 to 10 not printed in the Gazette.]

962,365. TROLLEY. GEORGE A. LEFLEY, West View, Pa. Filed Sept. 24, 1909. Serial No. 519,428.

1. In a trolley, the combination with a shiftable frame and a pole section pivotally mounted therein, of a rack carried by said frame, a yoke section pivotally connected to the upper end of said pole section and having an angular extension, a pawl pivotally-connected to said pole section and adapted to engage said rack for limiting the movement of the pole section in one direction, a stirrup pivoted to the pawl, and a spring-controlled rod pivotally connected at one end to the angular end of the yoke section and at its other end attached to the stirrup.

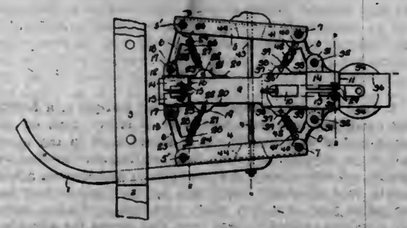
2. In a trolley, the combination with a shiftable frame and a pole section pivotally mounted therein, of a rack carried by said frame, a yoke section pivotally connected to the upper end of said pole section and having an angular extension, a pawl pivotally-connected to said pole section and adapted to engage said rack for limiting the movement of the pole section in one direction, a stirrup pivoted to the pawl, and a spring-controlled rod pivotally connected at one end to the angular end of the yoke section and at its other end adjustably connected to the stirrup.



3. In a trolley, the combination with a shiftable frame and a pole section pivotally mounted therein, of a rack carried by the frame, a yoke section having an angular lower end pivotally connected to the pole section, a pawl pivotally attached to the pole section and adapted to engage said rack for limiting the movement of the pole section in one direction, a spring-controlled rod having a bifurcated upper end pivotally attached to the angular end of said yoke section and having its lower end screw-threaded, and a stirrup carried by the pawl and adjustably connected to the screw-threaded end of said rod.

4. In a trolley, a spring-controlled pole section, a yoke section pivoted to the pole section, a rack and pawl carried by the pole section and adapted to engage said rack for limiting the movement of the pole section in one direction, a spring-controlled rod extending in parallelism with respect to the pole section, and arranged exteriorly of the pole section and pivotally-connected at its upper end to the yoke section, means for adjustably connecting the lower end of said rod to said pawl, said rod having a screw-threaded lower end, and a stirrup pivoted to the pawl and adjustably connected to the threaded end of said rod.

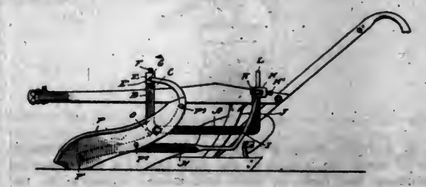
962,366. WAGON-TONGUE. AUGUST LINDBERG, Melvin, Iowa. Filed Nov. 2, 1909. Serial No. 525,958.



In combination with a wagon tongue, a pair of sleeves for the tongue, each of said sleeves comprising a pair of U-shaped members, means for removably securing each of the pair of members together, the said members being provided with projecting plates having their inner faces serrated, tongue hounds, link members connecting the tongue hounds with the sleeve sections, pivoted bolts for the serrated plates, oppositely pivoted bolts for each of the links and turn-buckles for these bolts.

962,367. VINE-CUTTER FOR SWEET POTATOES. DANIEL W. LINDSEY, Poplar Branch, N. C. Filed Feb. 12, 1910. Serial No. 543,460.

1. The vine cutter herein described consisting of a frame having a main bar provided at its front end with an upwardly projecting portion provided with a lateral offset forming a downwardly facing shoulder to rest upon a plow beam and having above said shoulder an upright portion provided with a transverse opening, the said main bar having at its rear end an upwardly projecting portion and a lateral arm extending therefrom and provided with a series of openings, a clamp block applied to said lateral arm and having openings to coincide with those therein, a clamp block applied to the upright portion at the front end of the main bar and having an opening to coincide with that in said upright portion, screws coöperating with said clamp blocks and a blade carrier having a lateral rod operating in the transverse opening of the said upright portion and the clamp block coöperating therewith and also having an upright rod operating in one of the openings of the lateral arm of the main frame and in the openings of the block coöperating therewith, and a clip on the main bar and adapted to embrace a plow standard, all substantially as and for the purpose set forth.



2. The combination in a vine cutter with a blade carrier, of a main frame having at its front portion a shoulder to rest upon a plow beam and having in rear of said shoulder means for connection with a plow standard and devices connecting the blade cutter adjustably with the main frame, substantially as set forth.

3. In a vine cutter, a main frame having at its front end a lateral opening and provided in rear thereof with a lateral arm, a blade cutter having a lateral rod operating in the lateral opening of the main frame, means for securing said rod in different lateral adjustments in said opening, an upright rod at the rear end of the blade carrier and means for securing said rod, in different adjustments, to the lateral arm of the main frame, substantially as set forth.

4. The combination of a plow, a blade carrier having a main bar, an upwardly projecting portion at the front end of the main bar, a laterally projecting rod extending from said upwardly projecting portion, an upright rod at the rear end of the main bar, a blade, and intermediate devices between said lateral rod and rear upright rod and the plow, substantially as set forth.

5. In a vine cutter, a blade carrier having a main bar, an upwardly projecting portion at the front end of the main bar, a laterally projecting rod extending from said upwardly projecting portion, and an upright rod at the rear end of the main bar, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

962,368. VALVE. THOMAS PITTINGER LONG, Barberton, Ohio, assignor of one-half to Willard M. Huffman, Barberton, Ohio. Filed Aug. 20, 1909. Serial No. 513,827.

1. A valve comprising a supporting frame formed upon the bonnet of the said valve; a cam-like member rotatably mounted upon said frame; means connecting the stem of said valve to the cam surface of said member to reciprocate said valve stem; and means for rotating said member.

2. A valve, comprising a yoke-like attachment adapted to fit upon the bonnet of the said valve; a cam-like member rotatably mounted upon said attachment; means for connecting the stem of the said valve to the cam surface of said member; and means for rotating said member.

3. A valve, comprising a yoke-like attachment adapted to fit upon the bonnet of the said valve; a disk rotatably mounted on said attachment; a cam slot formed in said disk; means for connecting the stem of said valve with said slot to slide therein; and means for rotating the said disk.

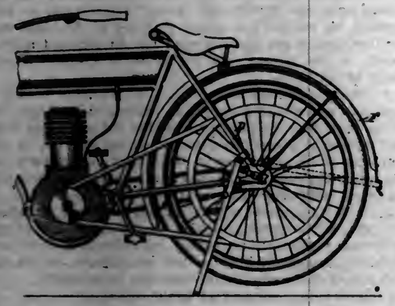
4. A valve, comprising a yoke-like attachment adapted to fit upon the bonnet of the said valve; a disk rotatably mounted between the ends of said attachment; a slot formed in said disk eccentric to the rotary center thereof; means for connecting the stem of said valve with said slot to slide therein; and means for rotating the said disk.



5. A valve, comprising a yoke-like attachment adapted to fit upon the bonnet of the said valve; a disk mounted between the ends of said attachment eccentric to the structural center of said disk; a slot formed in said disk concentric with the structural center of said disk; means for connecting the stem of said valve with said slot to slide therein; and means for rotating the said disk.

[Claims 6 and 7 not printed in the Gazette.]

962,369. STAND FOR MOTOR-CYCLES. ALBERT LUNDSTROM, Omaha, Nebr. Filed Oct. 30, 1909. Serial No. 525,436.



1. A device of the class described comprising a pair of independently operable clamping devices, each including two side members and bolts whereby said side members may be drawn together to clamp an object therebetween, and a pin or bolt whereby said clamping devices are connected together, said pin or bolt extending through one side member of each clamping device so that the said clamping devices are capable of independent movement about a common axis.

2. In a device of the character described, a pair of clamping devices each comprising a pair of clamping members, said clamping devices being pivotally connected together on a common axis, one member of one of said devices being extended between and pivotally connected with the members of the other clamping device.

3. In a device of the character described, and including a pair of clamping devices pivotally connected together on a common axis a fork-engaging clamping device comprising an inner member having a clamping jaw and a slotted-hook extending therefrom, an outer member extending through said slot and having a hook-shaped extension at its lower end, and a connecting bolt.

4. In a device of the character described, a lower fork-engaging clamp comprising two members, one of which has a slot for the passage of the other member, the latter being provided with a receiving loop adjacent its lower end, an upper fork-engaging clamp comprising two members including between them the upward extension of one member of the lower clamp, means for pivotally connecting the members of the upper clamp with the member of the lower clamp extending therebetween, clamping bolts extending through the members of the two clamps, and a supporting stand or yoke pivotally supported upon the clamping bolt of the upper clamp.

5. In a device of the character described, a yoke-shaped supporting stand, upper fork-engaging clamps, each comprising two clamping members, a clamping bolt and a connecting bolt; lower fork-engaging clamps each comprising two clamping members and a clamping bolt, the outer clamping member of each lower clamp being extended between and pivotally connected with the members composing one of the upper clamps, and the outer clamping member of each lower clamp being provided adjacent to its lower end with a stand-receiving loop; the side members of the yoke-shaped stand being pivotally mounted upon the clamping bolts of the upper clamps.

962,370. CUSPIDOR-CLEANER. HENRY MALICK, Belmont, W. Va. Filed Sept. 18, 1909. Serial No. 518,417.

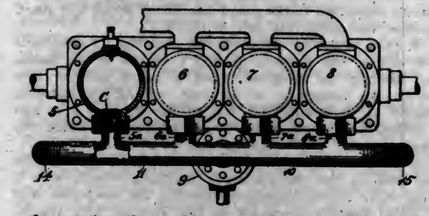


1. In a cuspidor cleaner, a tubular foot-piece, a handle rod extending into said foot piece, a sleeve fixed on the lower end of said handle rod, a sleeve fixed in the upper end of the tubular foot piece, a coil spring surrounding the handle rod and connected at its ends to said sleeves, a telescopic tube revolubly supported by said handle rod and extending over said foot piece, two sets of flexible cleaning members carried by said tube, and means for adjusting one set of said members.

2. In a cuspidor cleaner, a tubular foot piece, a handle rod extending into said foot piece, a sleeve fixed on the lower end of said handle rod, a sleeve fixed in the upper end of the tubular foot piece, a coil spring surrounding the handle rod and connected at its ends to said sleeves, a tube revolubly supported by said handle rod and extending over said foot piece, and flexible cleaning members carried by said tube.

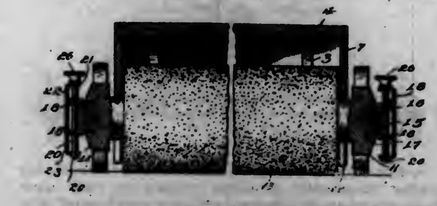
3. In a cuspidor cleaner, a tubular foot piece, a handle rod extending into said foot piece, a sleeve fixed on the lower end of said handle rod, a sleeve fixed in the upper end of the tubular foot piece, a spring surrounding the handle rod and connected at its ends to said sleeves, a tube revolubly supported by the handle rod and extending from said foot piece, collars carried by said tube, flexible cleaning members connected at their ends to said collars, and means for rotating said tube.

962,371. FEEDING MEANS FOR EXPLOSION-MOTORS. WOODFORD R. MACGUYER, Waterbury, Conn., assignor to The New Departure Manufacturing Company, Bristol, Conn., a Corporation of Connecticut. Filed July 29, 1907. Serial No. 385,992.



In a motor, the combination with a plurality of cylinders, and a source of fuel supply, each said cylinder being provided with a fuel inlet, of a feed conduit having said inlets opening thereinto at points between the ends of the conduit, and communication between said source of supply and each end of said conduit; substantially as described.

962,372. CARPET-SWEEPER. GEORGE MANTHEY, Seattle, Wash., assignor of one-half to John N. Waller, Seattle, Wash. Filed June 15, 1909. Serial No. 502,292.

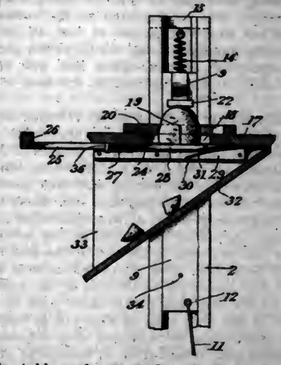


1. A carpet sweeper embodying a machine frame, side yokes connected to the machine frame, adjusting screws journaled at or near both ends in spaced bearing lugs on said yokes, a rotary sweeping brush, and bearings at opposite ends of said brush having extensions threaded on the adjusting screws and movable between the bearing lugs on the yokes, whereby the brush may be adjusted up and down on the adjusting screws relatively to the machine frame by turning said screws.

2. A carpet sweeper comprising a machine frame, carrying wheels therefor, side yokes arranged at opposite sides of the machine frame and connected therewith, a vertically movable sweeping brush, adjusting screws for said brush carried by the side yokes, and bearings for the opposite ends of said brush, each of said bearings embodying a pintle and a concentric flange engaging the brush, and a threaded extension engaged by the adjacent adjusting screw, substantially as described.

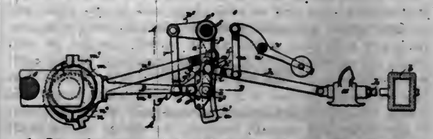
962,373. POTATO-CUTTER. CHESTER G. MARDEN, Brooks, Me. Filed Aug. 18, 1909. Serial No. 513,457.

A potato cutting machine comprising a supporting base, a supporting and guiding standard extending upward therefrom, a foot-operated spring-retracted slide working lengthwise of said standard and having a tongue and groove engagement therewith, a presser foot carried by said slide and projecting laterally therefrom, a table supported by and projecting horizontally from said standard and provided with an aperture therein, intersecting segment cutters extending across the aperture in the table and in the path of movement of the presser foot, a hand-operated spring-retracted reciprocatory cutter working horizontally between parallel guides on the under side of the table, potato-deflecting springs secured to the under



side of the table and arranged to leave a space between them and the bottom of the table in which space the horizontal cutter works, and a potato chute located beneath the table and embodying an inclined bottom.

962,374. VALVE-GEAR FOR FLUID-PRESSURE ENGINES. JAMES THOMPSON MARSHALL, Leeds, England. Filed Jan. 14, 1907. Serial No. 352,224.



1. In valve gear of the kind wherein a radius link connected to a slide valve is bodily moved to and fro by the action of an eccentric and oscillated by the action of a second eccentric through a bell crank lever which occupies a different intermediate position when the center of the first eccentric is in its extreme forward position to that occupied when the said center is in its extreme backward position, the combination with said radius link, eccentrics and bell crank lever, of a stationary shaft for said lever, and an arm journaled to said shaft, journaled to said link at the central portion of its length and to the eccentric rod of the first eccentric, said shaft and point of attachment between said radius link and arm being arranged so that an upward and downward movement will be imparted to the radius link to compensate for said irregular motion of the bell crank lever and produce equal lead of the valve at the ends of the forward and backward strokes whether running forward or backward.

2. In valve gear of the kind herein referred to, the combination with a radius link having an adjustable die connected to a slide valve and a rearwardly extending lever arm, an eccentric for moving said link bodily to and fro, and an eccentric for oscillating said link, of a stationary shaft, an arm jointed to said shaft and also to said radius link at the central portion of its length and connected to the rod of the first mentioned eccentric and a bell crank lever journaled on said shaft and having one arm connected to the rod of the second eccentric and its other arm connected to the lever arm on said radius link.

3. In valve gear of the kind herein referred to, the combination with a radius link having an adjustable die connected to a slide valve and a rearwardly extending lever arm, an eccentric for moving said link bodily to and fro, and an eccentric for oscillating said link, of a stationary shaft, an arm journaled at one end to said shaft and at the other end to the central portion of said radius link and to the rod of the second eccentric, and a bell crank

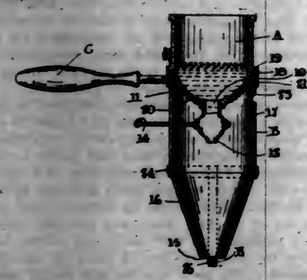
lever journaled on said shaft and having one arm connected to the rod of the second eccentric and its other arm connected to the lever arm on said radius link, said shaft and point of attachment between said radius link and arm being arranged so that an upward and downward movement will be imparted to the radius link to compensate for irregular motion of the bell crank lever and arm to rise and fall during the backward and forward motions respectively of the radius link and render the valve gear self-correcting as regards the lead of the slide valve.

4. In valve gear of the kind herein referred to, the combination of a radius link having a rearwardly extending arm and a lateral pin at the central portion of its length, a die adjustable on said link, a slide valve connected to said die, an eccentric for moving said link bodily to and fro, an eccentric for oscillating said link about a horizontal axis, a stationary shaft, an arm journaled at one end to said shaft, and at the other end to the lateral pin on said radius link and also to the rod of the first mentioned eccentric, a bell crank lever journaled on said shaft and having one arm connected to the rod of the second eccentric, and means connecting the other arm of said bell crank lever to the lever arm on said radius link, the center of the shaft being so arranged with reference to the other elements that irregularity of movement of said bell crank lever, due to angularity of the eccentric rods will be corrected, and the lead will be equal at the ends of the forward and backward strokes of the valve both for forward and backward running.

5. In valve gear of the kind herein referred to, the combination of a radius link, a bracket fixed to one side thereof and provided with a lateral pin and with a rearwardly extending lever arm, a die adjustable on said link, a slide valve connected to said die, a stationary shaft, an arm journaled at one end to said shaft and at the other end to said lateral pin and having at the same end a narrow rearward extension, a bell crank lever journaled on said shaft, an eccentric having its rod connected to the rearward extension of said arm, a second eccentric having its rod connected to one arm of said bell crank lever, and means connecting the second arm of said bell crank lever to the lever arm on said bracket, the center of the shaft being so arranged with reference to the other elements that irregularity of movement of said bell crank lever, due to angularity of the eccentric rods will be corrected, and the lead will be equal at the ends of the forward and backward strokes of the valve both for forward and backward running.

[Claims 6 to 8 not printed in the Gazette.]

962,375. DEVICE FOR MELTING AND APPLYING SEALING-WAX. STEPHEN C. MATTHEWS, St. John, New Brunswick, Canada. Filed May 11, 1909. Serial No. 495,367.



1. In a device of the character described, a receptacle for wax or like material, having a valved outlet, means for heating the receptacle and a guard member connected to and movable with the receptacle, the said guard member surrounding the outlet and having an aperture therein, through which the wax or the like may fall.

2. In a device of the character described, a receptacle for wax or like material, having a valved outlet, means for heating the receptacle and a guard member connected to and movable with the receptacle, the said guard member surrounding the outlet and having an aperture therein through which the wax or the like may fall, and being formed on the interior with walls tapered toward said aperture.

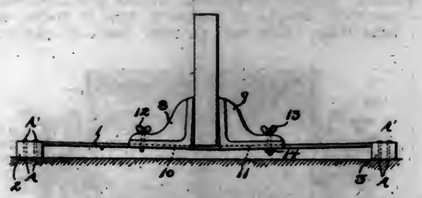
3. In the device of the character described, a receptacle for wax or like material, having a valved outlet, means for heating the receptacle, and a guard member surrounding the outlet and having an aperture therein through which the wax or the like may fall, the said guard member being removably connected to the receptacle and a handle connected to the guard member by which the guard member and receptacle may be lifted.

4. In a device of the character described, a receptacle for wax or like material having a valved outlet, means for heating the receptacle, and a guard member into which the receptacle is socketed, having an aperture therein through which the wax or the like may drop and a handle connected to the guard member by which the guard member and receptacle may be lifted.

5. In a device of the character described, a receptacle for wax or the like having a discharge nozzle with a plug valve therein, means for heating the receptacle, and a guard member connected to and movable with the receptacle, the said guard member surrounding the nozzle having an aperture therein, through which the wax or the like may flow.

[Claim 6 not printed in the Gazette.]

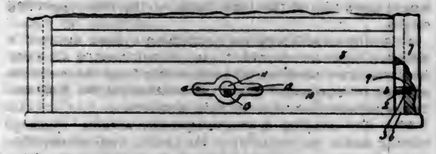
962,376. DOOR-HOLDER. FRANKLIN MILLER, Onaga, Kans. Filed Nov. 13, 1909. Serial No. 527,830.



A door holder comprising a pair of spaced blocks having alining transversely extending recesses in their upper faces, a horizontally disposed resilient plate located with its ends in the recesses of the blocks, screws engaged through the plate and through the blocks, and extending slightly below the under surface of the blocks, said screws having sharpened points for engagement in a surface upon which the blocks are disposed to prevent slipping of the blocks, said plate having a screw threaded opening therein and having a longitudinal slot located in spaced relation to the opening, said slot being at one side of the center of the plate and the opening being at the other side of the center of the plate, two jaws arranged for disposal upon the plate, each of said jaws including a vertically extending face and a horizontally extending face, said horizontally extending faces being of greater width than the plate, and having longitudinally extending recesses therein, and resultant side flanges, said jaws being disposed upon the plate with the plate in their recesses and with their side flanges against the side edges of the plates, a screw engaged through one of the jaws and in the screw threaded opening of the plate, a screw engaged through the other jaw and through the longitudinal slot of the plate, and a clamping nut engaged with the lower end of the last named screw and resting against the undersurface of the plate.

962,377. ROLL-TOP-DESK LOCK. JAMES J. MURPHY, Terryville, Conn., assignor to Eagle Lock Co., Terryville, Conn., a Corporation. Filed Mar. 7, 1910. Serial No. 547,672.

1. In a roll-top desk lock, the combination with a bolt, of an anti-friction roller mounted upon the end of the said bolt which is longitudinally movable with respect to it.



2. In a roll-top desk lock, the combination with a bolt provided with a shoulder, of an anti-friction roller mounted upon the said bolt and coacting at its inner end with the shoulder thereof, whereby the roller is retained upon the bolt which is longitudinally movable with respect to the said roller.

3. In a roll-top desk, the combination with the roll thereof, of a side-arm formed upon its inner face with a guide-way, a keeper leading out of the lower end of the said guide-way, a lock mounted upon the roll and having a longitudinally movable bolt adapted to be entered into the said guide-way and keeper, and an anti-friction roller mounted upon the projecting end of the bolt and traveling in the said guide-way in which it remains when the bolt is projected into the keeper, the bolt being longitudinally movable with respect to the said roller.

962,378. SAFETY GAS-COCK. JOHN THOMAS MCDERMOTT, Baltimore, Md. Filed Sept. 14, 1909. Serial No. 517,652.



1. In a fluid controlling cock embodying a plug valve and casing, said plug having a longitudinal opening and other openings for the passage of the fluid intersected by said longitudinal opening, a cut-off slidably mounted in the longitudinal opening of the plug valve, means normally exerting a pressure to move said cut-off inward, and means adapted to hold said cut-off in outward position when the valve is open and adapted to move inward with said cut-off, the instant the valve is closed, thereby automatically closing the fluid passage of said valve.

2. In a fluid controlling cock embodying a casing and a turn plug, the latter having a longitudinal opening and a transverse fluid passage intersected by the longitudinal opening, a cut-off mounted to slide in the longitudinal opening of the turn plug, a spring normally exerting a pressure upon the cut-off to move the same inward, a longitudinal arm for holding the cut-off in withdrawn position, and a member having a portion cutaway to provide a clearance for said arm when in register therewith to admit of the cut-off moving within the longitudinal opening of the turn plug.

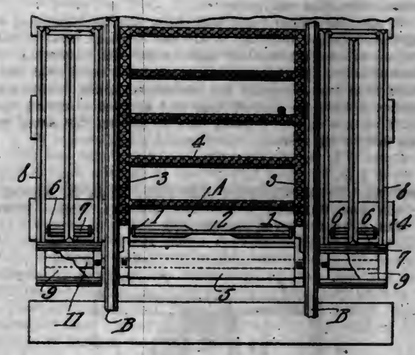
3. In a cock of the type described comprising a casing and a turn plug, the latter having a longitudinal opening, and an intersecting fluid passage, a cut-off mounted to slide in the longitudinal opening of the turn plug, and held against rotation, a spring normally tending to press the cut-off within the longitudinal opening of the turn plug, and an arm carried by said cut-off and adapted to engage a part of the casing to hold the cut-off in withdrawn position, said arm coöperating with a part having a groove into which the arm is adapted to move to admit of the cut-off closing when the turn plug reaches a given position in its movement.

4. In combination, a valve casing, a turn plug mounted in said casing and having a longitudinal opening, and a fluid passage intersecting the longitudinal opening, a nut fitted to the projecting end of the turn plug to hold the same in place, and having a groove in a side, a cut-off mounted to slide within the longitudinal opening of the turn plug and held against rotary movement, a spring normally exerting a pressure upon the cut-off to move the same within the longitudinal opening of the turn plug, and an arm carried by said cut-off to ride upon the said nut and hold the cut-off in withdrawn position and adapted to enter the groove of said nut to admit of the cut-off automatically closing.

5. In combination, a valve casing, a turn plug mounted therein and having a fluid passage, and a longitudinal opening intersecting said passage, a cut-off slidably mounted in the longitudinal opening of the turn plug, a spring normally exerting a pressure upon the cut-off to move the same within the longitudinal opening of the turn plug, a frame embodying a bar having an opening through which the outer end of the cut-off is adapted to move, and a slide mounted upon said bar and having an opening to aline with the cut-off to admit of outward movement thereof, said slide serving to prevent outward movement of the cut-off when moved to a position to throw the opening thereof out of line with said cut-off.

[Claim 6 not printed in the Gazette.]

962,379. CATTLE-GUARD FOR RAILWAYS. CLABORN P. MCKINNEY, Sklatook, Okla. Filed Feb. 23, 1910. Serial No. 545,384.



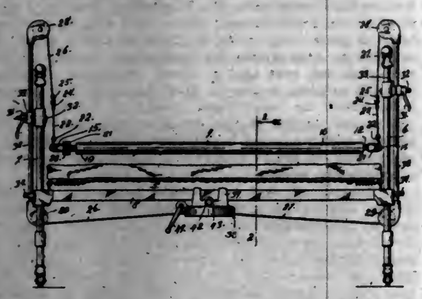
1. A cattle guard including separate tiltably supported sections, each section including a tread board, and means operated by each section when tilted to more than a predetermined angle, for elevating the remaining sections.

2. A cattle guard including separate tiltably supported sections, said sections being independently movable to predetermined angles, and means operated by each section when shifted to more than a predetermined angle, for tilting the remaining sections.

3. A cattle guard including separate tiltably supported sections, a connecting bar extending thereunder, and loose connections between said bar and the respective sections, said sections being independently movable to predetermined angles, each section when moved more than a predetermined distance, being adapted to contact with the bar and elevate the remaining sections.

4. A cattle guard including alining brackets, alining pivot rods supported thereby, a frame tiltably mounted upon each of said rods, each frame having a tread board, a connecting bar extending transversely below the frames and under the tread boards, and rods connecting said bar with each of the frames, said rods being loosely mounted within the frames and bar.

962,380. SURGICAL ATTACHMENT FOR COTS OR BEDS. EDDIE E. MCMAHAN, Denver, Colo. Filed Nov. 6, 1909. Serial No. 526,621.

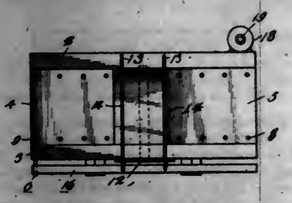


1. In combination with a bed, cot or the like, a stretcher frame, operating means for effecting a raising or a lowering of said stretcher frame and including cables, a pulley adapted to have said cables wind thereon, a casing supporting said pulley and provided with fixed jaws, a movable jaw, and a set screw for clamping said casing to the frame of the bed by means of the said jaws.

2. In an attachment for beds, cots and the like comprising a stretcher frame and hoisting tackle including cables, a pulley having its periphery grooved to receive said cables and having a portion formed with worm thread, and a shaft having a worm intermeshing with the worm thread of said pulley.

3. An attachment for a bed, cot or the like including a stretcher frame, hoisting tackle and vertical bars, means for securing said vertical bars to the bed consisting of hooked-bolts, split clamp collars mounted upon said vertical bars and receiving the hooked-bolts, and hand-nuts mounted upon the hooked-bolts and adapted to clamp the split collars to the vertical bars to secure the latter to the bed or the like.

962,381. FILM-MENDING DEVICE. HUGH N. NICKERSON and WILLIAM J. COUSINS, Pontiac, Mich. Filed Jan. 5, 1910. Serial No. 536,470.



1. A film mending device including relatively movable tables, means carried by each of the tables for fixedly positioning the film ends thereon, and means for limiting the movement of the tables toward each other to arrange the film ends in such relative positions as to insure a uniform continuity of the perforations across the break in the film.

2. A film-mending device comprising a table, a stationary member mounted on the table, a movable member mounted upon the table, a knife carrier having a pair of knives adapted to be moved transversely of the table and between the inner edge portions of the said members, pins extending from the members for receiving the perforations of the film, and a pressing head carried by the table and adapted to be pressed against the said members.

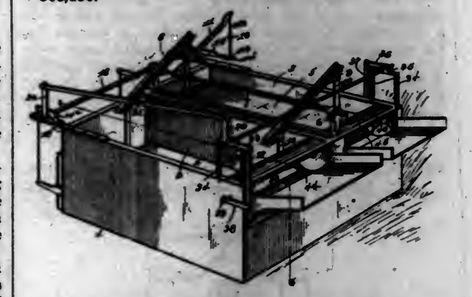
3. A film-mending device comprising a table, film-supporting means upon the table, a pressing head adapted to be moved against the supporting means, and movable knives adapted for movement transversely of the table at points inwardly of the inner ends of the film-supporting means.

4. A film-mending device comprising a fixed member, a movable member adapted to be moved toward or away from the fixed member, pins extending from the members adapted to be engaged in the perforations of the film, and knives movable between the said members.

5. A film-mending device comprising a table, film-supporting means for supporting the broken ends of the film, trimming knives movable transversely of the table, and a pressing head adapted to be pressed against the said film-supporting means.

[Claim 6 not printed in the Gazette.]

962,382. HYDRAULIC WATER-MOTOR. LEMON L. OSBORN, Portland, Oreg. Filed July 17, 1909. Serial No. 508,150.



1. In a hydraulic motor the combination with a pair of tanks provided with water inlet and outlet means, means positioned in said inlet and adapted to alternately open and close the same, of a rocking frame, floats mounted in said tanks and connected to said frame, gates hinged to said tanks and adapted to close the outlet openings, means adapted to engage said gates and lock the same in a closed position, and means coöperating with said frame and said locking means for said gates and adapted to alternately lock and unlock said gates for allowing said tanks to be alternately filled and emptied of their contents thereby causing the raising and lowering of said floats.

2. In a hydraulic motor the combination with a pair of tanks, of floats positioned therein, an operating shaft supported by said tanks, a beam fixedly secured to said shaft, means connecting said floats to said beam and adapted to oscillate the same when said floats are raised and lowered, an arm fixedly secured to said shaft, said tanks provided with outlet openings, doors adapted to normally close said openings, a shaft supported by said frame, and means coöperating with said arm and shaft and adapted to control said doors for alternately opening and closing the same when said floats are raised and lowered.

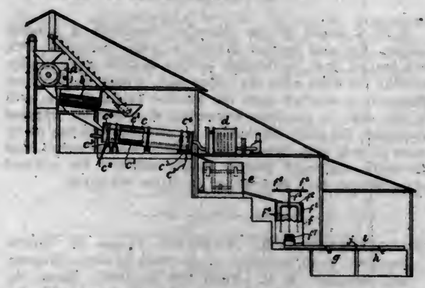
3. In an apparatus of the class described the combination with a plurality of tanks, a shaft supported thereby, means adapted to impart oscillatory movement thereto, an arm fixedly secured thereto, of a link member, a rod fixedly secured to the outer end of said arm and coöperating with said link member and adapted to raise and lower one end of the same, a shaft carried by said tanks, said link member secured at its outer end to said shafts, said tanks provided with outlet openings, doors hinged to said tanks and adapted to normally close said outlet openings, locking levers pivotally secured to the tanks, and means coöperating with said shaft and locking levers and adapted to alternately lock and unlock the doors for allowing the same to open and close.

4. In an apparatus of the class described the combination with a plurality of tanks, of a partition separating said tanks, a shaft supported above said partition, valve casings carried by said tanks and extending from said partition to the sides of said tanks, a shutter rotatably mounted within each of said casings, and means coöperating with said shutters and shaft for alternately opening and closing the shutters.

5. In an apparatus of the class described the combination with a plurality of tanks, floats carried thereby, valve casings carried by said tanks and provided with open sides, a shutter carried within said casing and adapted to rotate therein, and means coöperating with said shutters and floats for rotating said shutters when said floats are raised and lowered.

[Claim 6 not printed in the Gazette.]

962,383. PROCESS OF TREATING ORES. ELIZABETH BARNSTON PARNELL, Carshalton, England. Filed Nov. 26, 1909. Serial No. 529,977.



1. The herein described process of treating ores containing iron, and other metals which consists in first removing the iron therefrom then bringing a metal contained therein into the form of a solution by boiling same in water and a suitable acid by means of a hot air blast and then recovering such metal.

2. The herein described process of treating ores containing iron, and other metals which consists in roasting same, then removing iron therefrom then boiling same in water and a suitable acid by means of a hot air blast to form a solution of a metal therein and then recovering such metal.

3. The herein described process of treating ores containing iron, arsenic, and other metals which consists in roasting same condensing arsenic fumes then removing iron therefrom in the state of iron sand, then boiling same in water and sulfuric acid by means of a hot air blast to form a solution of a metal therein and then recovering such metal.

4. The herein described process of treating ores containing iron copper and other metals which consists in roasting same treating them during such roasting with sulfuric acid and water to bring the copper into the condition of a sulfate, then removing the iron therefrom in the state of iron sand then boiling same in water and sulfuric acid by means of a hot air blast to form a solution of a metal therein and then recovering such metal.

5. The herein described process of treating sulfid ores containing iron, precious and other metals which consists in roasting same and at the same time converting certain metal contents into sulfates, then removing the iron therefrom in the state of iron sand, then boiling the ore so separated with water and sulfuric acid and a hot air blast to form a solution of a metal therein then removing such solution, treating same for the recovery of the metal and then treating the ore residue to extract the precious metal.

[Claims 6 to 8 not printed in the Gazette.]

962,384. CONTAINER FOR INCANDESCENT MANTLES. HARRY C. PLIMPTON, New York, N. Y., assignor to Single Service Package Corporation of America, New York, N. Y., a Corporation of New Jersey. Filed Sept. 22, 1909. Serial No. 519,081.

1. In a package for incandescent mantles provided with supporting lugs, the combination of a body portion having a plurality of notches in its top edge which said lugs are adapted to fit; a label extending to said edge and covering said notches and the ends of said lugs; and a slip cover provided with a flange adapted to encircle the said label and the outer ends of said lugs, substantially as described.

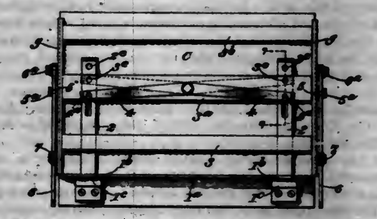


2. In a package for incandescent mantles provided with a ring and supporting lugs the combination of a tubular body portion adapted to receive said ring and of a diameter sufficiently great to leave a space between said ring and the inner surface of said body portion; said body portion also provided with open notches extending from its extreme upper edge and adapted to fit said lugs; and a slip cover provided with a flange and a disk portion, the flange adapted to surround the outer ends of said lugs and to frictionally engage the outer surface of said body portion, substantially as described.

3. In a package for incandescent mantles provided with a ring and supporting lugs, the combination of a tubular body portion adapted to receive said ring and of a diameter sufficiently great to leave a space between said ring and the inner surface of said body portion; said body portion also provided at its top end with open notches extending from its extreme upper edge and adapted to fit said lugs; a label covering said body portion and said notches; a slip cover provided with a flange and a disk portion, the flange adapted to surround the outer ends of said lugs and to frictionally engage the outer surface of said body portion and the bottom end of said body portion provided with a flanged disk closure fitting inside said end, substantially as described.

4. In a package for incandescent mantles provided with a ring and supporting lugs, the combination of a tubular body portion adapted to receive said ring, and of a diameter sufficiently great to leave a space between said ring and the inner surface of said body portion; said body portion also provided with open notches extending from its extreme upper edge deeper than but adapted to fit said lugs; a cover provided with a disk and a flange the flange adapted to surround the outer ends of said lugs and to frictionally engage the outer surface of said body portion; a packing between said disk portion and said lugs, and a flanged disk closure for and flush with the bottom of said body portion substantially as described.

962,385. END-GATE FOR WAGONS. WILLIAM PLOGMANN, Davenport, Iowa. Filed Dec. 11, 1909. Serial No. 532,589.



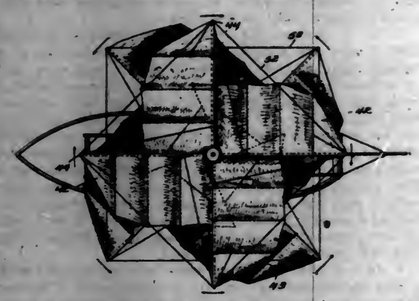
1. The combination with a wagon body, of an end gate, hinge straps slidably connected with said gate and provided with slots and perforations above the slots; and catches attached to the gate and adapted to be engaged with the slots or with the perforations, substantially as and for the purpose described.

2. The combination with a wagon body; an end gate, hinge straps slidably connected with said gate and provided with slots and perforations above the slots, spring catches attached to the gate and adapted to be engaged with the slots or with the perforations; and means for supporting the gate in open position and for locking the gate in closed position.

3. In combination, a wagon body, an end gate, hinge straps slidably connected with said gate and provided with slots and perforations above the slots, and spring catches attached to the gate and adapted to be engaged with the slots or with the perforations; with slotted levers pivoted to the sides of the wagon at their upper ends, pins on the sides of the gate engaging the said levers to hold the gate in open position, and catches on the sides of the gate adapted to engage the levers to lock the gate in closed position.

4. In combination with a wagon body, an angle iron bar attached to the rear end thereof, an end gate, hinge straps detachably connected with said bar and slidably connected with said gate, spring catches attached to the gate and adapted to be engaged with the straps, and means for locking the gate in closed position.

962,386. AIRSHIP. GEORGE D. S. REECE, St. Louis, Mo. Filed June 10, 1908. Serial No. 437,739.



1. An airship including a set of wings, a shaft therefor, and means for operating the shaft, each of said wings comprising a frame including a rod radiating from the shaft and a series of arms projecting from the rod, and a covering for the frame, the arm depending from the rod adjacent the shaft inclining toward and beyond the shaft in opposition to the direction of projection of the rod, whereby the wing covering extends in both directions beyond the shaft.

2. An airship including a shaft, and a plurality of wings arranged in the same horizontal plane thereon, each of said wings including a rod projected at right angles from the shaft and a series of arms depending from the rod, a covering for the frame including the rod and arms, and connections between the arms and shaft below the rod, the arm of each frame immediately adjacent the shaft inclining rearwardly toward the free end of the rod of the diametrically opposed wings, whereby the rear portion of the wing covering vertically underlies the next adjacent wing.

962,387. SASH-BALANCE. EDWARD J. REILLY, Eganville, Ontario, Canada. Filed July 24, 1909. Serial No. 509,430.

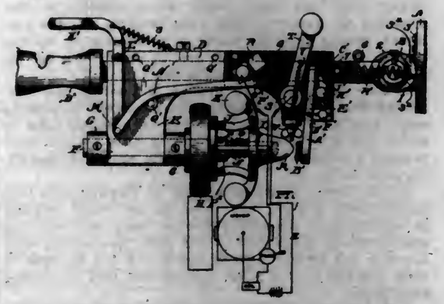
1. A window casing, sashes slidable therein, a slide connected with the lower sash and having an overhanging lip, a suitably guided flexible element connecting the slide with the upper sash, a stop member secured upon the window casing in the path of the slide, a pivotally supporting catch adapted to engage the overhanging lip of the slide, and a lever connected with the pivoted stop and carrying a weight adapted to engage either side edge of the stop.

2. In a device of the character described, top and bottom sashes, a slide connected with the lower sash, a flexible element suitably guided and connecting the slide with the upper sash, a stop member permanently supported in the path of the slide, a pivotally supported stop member adapted to engage the slide and pivotally supported gravity means adapted to engage either side edge of the pivoted stop to tilt the latter in either direction.



3. In a device of the character described, a window casing, top and bottom sashes, a slide connected with the bottom sash, a suitably guided flexible element connecting the slide with the upper sash, a stop member permanently supported upon the window casing in the path of the slide, a pivotally supported stop member adapted to engage the slide and having an arm whereby the movement of said stop member in one direction is limited, and pivotally supported gravity means whereby the pivoted stop member may be impelled in either direction.

962,388. AUTOMATIC SWITCH. JAMES M. RHETT, Beaufort, S. C., assignor of one-third to Niels Christensen, Beaufort, S. C. Filed Oct. 3, 1907. Serial No. 395,788.



1. In a motor, the combination of an electric circuit controlling the rotation of the same, a switch for controlling said motor, a governor mechanism for controlling said switch, and means comprising a pivoted lever by which said governor mechanism may be swung into and out of contact with a moving part of said motor, substantially as described.

2. In a motor, the combination of an electric circuit controlling the rotation of the same, a switch for controlling said motor, a governor mechanism provided with reciprocating means for controlling said switch, and means comprising a pivoted lever by which said governor mechanism may be swung into and out of contact with a moving part of said motor, substantially as described.

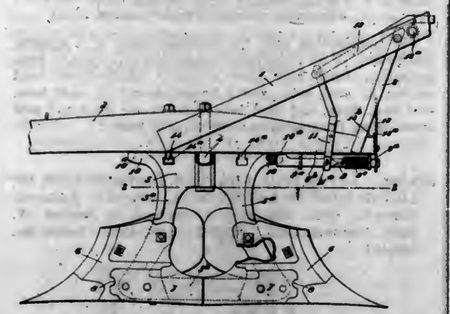
3. In a motor provided with a fly wheel, the combination of an electric circuit for controlling the rotations of the same, a pivoted switch for controlling said circuit, a governor mechanism provided with a reciprocating part for controlling said switch, and with a part adapted to contact with said fly wheel, and a pivoted lever on which said governor mechanism is mounted, substantially as described.

4. In a motor provided with a fly wheel, the combination of an electric circuit for controlling the rotations of the same, a pivoted switch for controlling said circuit, a governor mechanism provided with a reciprocating part for controlling said switch, and with a part adapted to contact with said fly wheel, a pivoted lever on which said governor mechanism is mounted, and means on said lever adapted to be connected to means on the engine for advancing the points of ignition in said engine, substantially as described.

5. In a motor provided with a fly wheel, the combination of an electric circuit for controlling the rotations of the same, a pivoted switch for controlling said circuit, a lever for opening said switch, a governor mechanism provided with a reciprocating part for controlling said switch, and with a part adapted to contact with said fly wheel, and a pivoted lever on which said governor mechanism is mounted, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

962,389. REVERSIBLE PLOW. JAMES R. ROSSETTER, Knoxville, Tenn., assignor to The Wm. J. Oliver Manufacturing Company, Knoxville, Tenn., a Corporation of Tennessee. Filed Nov. 10, 1909. Serial No. 527,339.



1. A reversible moldboard plow having, in combination with a swinging beam and locking means therefor, a yoke-like double standard upon which the beam is rotatably mounted for reversal, said standard having a horizontal bridge-piece joining the lower ends of its legs, and independent right and left hand plows arranged back to back and attached to the respective legs of said standard, each plow having a detachable landside fitted and secured thereto and to said bridge-piece, the two landsides mating to form a continuous landside between the plows; whereby the proper rigidity of the double implement is obtained while each plow retains its own individuality and the curvature of its landside face and bottom necessary for its gather and suck or dip.

2. In a reversible plow, the combination with the standard and beam rotatably mounted thereon for reversal, of a locking instrumentality carried by the beam for engaging and making a rigid connection with the standard, and adjusting means carried by the beam adapted to force said locking instrumentality laterally as required to increase or diminish the "land" of the ongoing plow, whereby the plow can be landed while it is locked.

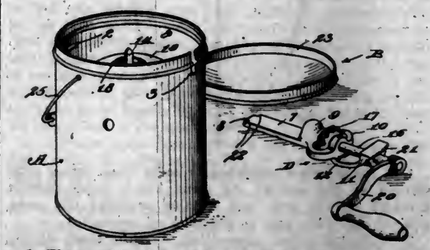
3. In a reversible plow, the combination with the standard and swinging beam thereon, of a lock-bolt carried by the beam, the standard having its front and rear sides formed for engagement thereby, and a landing device on the beam engaging the lock-bolt and coöperating therewith to make a rigid connection between the beam and standard, said landing device adapted for shifting said lock-bolt laterally when engaged with the standard, for the purpose of landing the ongoing plow.

4. In a reversible plow, the combination of the beam and standard having a swivel connection, the upper portion of the standard having rounded front and rear ends provided with wedge-shaped notches, a lock-bolt slidably-mounted under the rear end of the beam and having a wedge-shaped head for engaging said notches, guides for said lock-bolt permitting lateral play of the rear end thereof, a landing lever fulcrumed on the beam and engaging said lock-bolt for shifting it laterally, and means on the beam for locking said landing lever and thereby holding it and the lock-bolt rigid.

5. In a reversible plow, the combination with the standard and swinging beam thereon, of a lock-bolt slidably-mounted on the under side of the beam and adapted to engage the rear side of the standard, guides for the lock-bolt permitting lateral play of the rear end thereof, a landing lever fulcrumed on the plow and engaging said lever for shifting it laterally, and a rack on the beam for locking said landing lever and thereby holding it and the lock-bolt rigid.

[Claims 6 and 7 not printed in the Gazette.]

962,390. FREEZER. EATON D. SARGENT, Winchendon, Mass. Filed Jan. 10, 1910. Serial No. 537,280.



1. The combination, with a yieldable outer receptacle provided with a pair of supports; of an inner receptacle arranged within the outer receptacle; and a gearing frame extending across said outer receptacle and associated with the inner receptacle, said frame having its ends removably engaged with said supports and held in such engagement by the resilience of said outer receptacle.

2. The combination, with a yieldable outer receptacle provided with a pair of supports; of an inner receptacle arranged within the outer receptacle; and a gearing frame extending across said outer receptacle and associated with the inner receptacle, said frame having its ends removably engaged with said supports, the distance between said ends being greater than that between said supports, to expand said outer receptacle incidental to such engagement and to hold said frame against displacement by the tension exerted thereon.

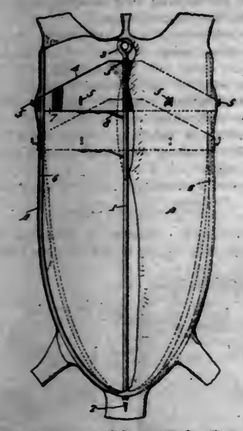
3. The combination, with a yieldable outer receptacle provided with a seat and an opening; of an inner receptacle arranged within the outer receptacle; and a gearing frame extending across said outer receptacle and associated with said inner receptacle, said frame being provided at one end with a lug arranged for insertion within said opening and at the other end with a shoulder arranged for reception in said seat, said lug and shoulder being maintained in engagement in said opening and seat, respectively, by the resilience of said outer receptacle.

4. The combination, with a yieldable metal receptacle provided with an opening and a seat; of a gearing frame provided at one end with a lug arranged for engagement in said opening, and at the other end with a shoulder arranged for engagement in said seat, said shoulder being arranged to expand said receptacle in one direction during its movement into such engagement; and a receptacle arranged within the first-named receptacle and associated with said frame.

5. The combination, with a receptacle provided with a pair of supports, and with a slot intersecting one support and extending above and below the same; of a gearing frame extending across said receptacle and having its ends removably engaged with said supports, one of said ends being arranged to close the lower portion of said slot; a dasher mechanism associated with said frame; and a cover fitted on said receptacle and arranged to close the upper portion of said slot.

[Claims 6 to 9 not printed in the Gazette.]

962,391. FUR-STRETCHER. WILSON A. SCOTT, Murray, Nebr. Filed Aug. 11, 1909. Serial No. 512,452.

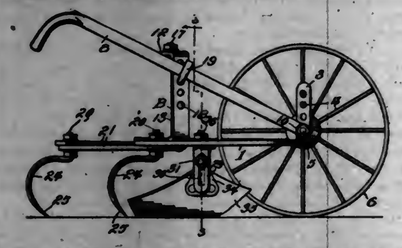


1. A fur stretcher comprising a main stem, spring arms secured at one end to the stem, and a head slidably mounted on the stem and slidably engaging the arms, whereby the latter may be expanded or contracted.

2. A fur stretcher comprising a main stem, spring arms connected at one end with the stem, and having their free ends relatively diverging therefrom, and a head slidable on the stem and having openings for the passage of the arms, whereby through the sliding movements of the head the arms may be adjusted toward and from the stem.

3. A fur stretcher comprising a main stem, spring arm secured at one end to the stem, a head slidably mounted on the stem and having openings for the passage of the arms, and locking means for securing the head in adjusted position on the stem.

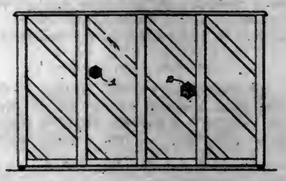
962,392. GARDEN-HOE. ANGUS SHELDON, Kenton, Ohio. Filed Feb. 1, 1910. Serial No. 541,315.



1. In an implement of the character described, a frame including side members consisting of flat bars provided throughout with apertures and having inwardly offset front ends provided with upstanding brackets, each having a series of apertures, an axle extending through two apertures in the vertical brackets, a guiding wheel mounted for rotation upon said shaft, handles supported at their forward ends upon the shaft, a spacing member consisting of an arch comprising two adjustably connected members mounted upon and rising from the side members of the frame and each having a plurality of apertures, and hook bolts adjustably connecting the handles with the members of the arch.

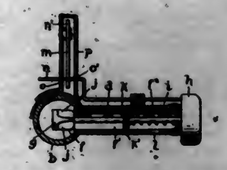
2. In an implement of the character described, a frame including side members provided adjacent to their front ends with upstanding brackets, a wheel-carrying shaft supported adjustably in said brackets, an arch member comprising adjustably connected side members supported upon the side members of the frame, rearwardly extending arms supported upon the side members of the frame and overlapping one another, bolts connecting said arms together and with the side members of the frame, and tool carrying shanks supported upon said bolts.

962,393. ATTACHMENT FOR THE SOUNDING-BOARDS OF STRINGED INSTRUMENTS. JESSE SHELDON, Vineland, N. J. Filed July 30, 1909. Serial No. 510,411.



The combination with the sounding-board of a musical instrument, of an attachment consisting of a base, a stem projecting from said base, a heavy symmetrical head carried by said stem, and a screw carried by said base, said base, stem, and head being cast in one piece and said screw being immovably secured to said base.

962,394. APPARATUS FOR THE DISTRIBUTION OF LIQUID SOAP IN LAVATORIES. RUFUS N. SHELDON, Norwalk, Ohio, assignor of one-half to Samuel W. Rohn, Norwalk, Ohio. Filed June 10, 1909. Serial No. 501,437.



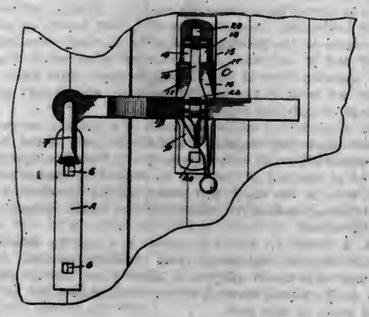
1. In apparatus for the distribution of liquid soap in lavatories, the combination with a supply pipe having a plurality of faucet-casings of less diameter than that of said pipe, of a normally open measuring valve for each casing, said valve being also of less diameter than that of and having normal projection within the bore of the supply pipe, said pipe being constantly open for supply of the liquid soap to all of the faucets at all times, said casings having each an air-inlet opening and a discharge opening, and said valve being capable of movement to close the communication of the casing with the supply pipe and discharge a given regulated quantity of liquid soap.

2. In apparatus for the distribution of liquid soap in lavatories, the combination with a supply pipe having a plurality of faucet-casings of less diameter than that of said pipe, of a plunger working in each casing consisting of a central shaft having a valve-head also of less diameter than that of the supply pipe and a piston-head in front of the valve-head and separated therefrom by an interval to form with the casing a measuring chamber, said valve-head having normal projection within the bore of the supply pipe, said pipe being constantly open for supply of the liquid soap to all of the faucets at all times, said casings having each an air inlet opening and a discharge opening, and the valve-head being capable of outward movement within the valve casing to close the communication thereof with the supply pipe and discharge a given regulated quantity of liquid soap.

3. In apparatus for the purpose described, a source of supply, a distributing pipe leading therefrom, a valve device controlling the distribution and capable of operation to discharge a given regulated quantity of the liquid soap and to close the communication with said pipe, and means for locking the valve against return to normal position after operation comprising a casing having alined openings in opposite walls thereof, a rod having movement with the valve and capable of engagement with said openings when the valve is in normal position and a pivoted stop plate in said casing having movement across the path of said rod between said openings when the valve is operated.

4. In apparatus for the purpose described, a source of supply, a distributing pipe, a valve device controlling the distribution comprising a cylinder, a reciprocatory plunger having a piston head working in the cylinder, and a head having passages normally communicating with said pipe and capable of closing communication with said pipe when the valve is operated, and means for locking the valve against return to normal position after operation comprising a casing having alined openings in opposite walls thereof, a rod having movement with the valve plunger and capable of engagement with said openings when the valve plunger is in normal position, a pivoted stop plate in said casing having movement across the path of said rod between said openings when the valve is operated, and means for moving said stop plate to allow the valve to return to normal position.

962,395. CAR-DOOR LOCK. WILLIAM A. SIEGFRIED, Lehighton, Pa. Filed Oct. 19, 1909. Serial No. 523,387.



1. In a device of the character described, a latch member having a catch and a pivotally supported lock hasp engaging said catch, in combination with a pivotally supported door hasp having projections to engage the side walls of the base of the latch member.

2. In a device of the character described, a latch member comprising a base plate, a boss upon said base plate having upwardly convergent side walls, a catch member, and a pivotally supported latch member engaging said catch member, in combination with a pivotally supported door hasp having a plurality of projections adapted for engagement with one of the convergent side walls of the boss.

3. In a device of the character described, a latch device comprising a base plate, a catch member, and a pivotally supported lock hasp for engagement with said catch member, the latter being provided with a beveled or inclined bottom wall, in combination with a pivotally supported door hasp for engagement with the catch member.

4. In a device of the character described, a latch device comprising a base plate, a catch member and a pivotally supported lock hasp, the latter being provided with a sharp edged projection and with a concavity or recess upon its underside, in combination with a door hasp having projections to engage the base plate, said door hasp being accommodated between the catch member and the projection of the lock hasp.

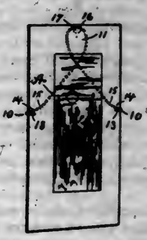
962,396. BOTTLE CLOSURE AND SEAL. ROBERT T. TAYLOR, Gastonville, Pa., assignor of one-half to Joe Niklis, Gastonville, Pa. Filed Oct. 7, 1909. Serial No. 521,558.



1. A bottle closure comprising a cap formed from a flat disk having the marginal portion at one side thereof cut-away to provide a rounded edge and the remaining part of the marginal portion bent downwardly with respect to the said rounded edge, said downwardly bent marginal portion curvilinear in vertical section and adapted to overlap the bead of a bottle neck, and a resilient strip mounted upon and centrally of the upper face of the disk and extending from the upper terminus of said bent marginal portion to beyond said rounded edge, that portion of said strip projecting from said rounded edge curved and depending at right angles with respect to said rounded edge, and detachably engaging the bead of the bottle for securing the cap in position, and means at one side of the center of the cap opposite to the curved downwardly projecting portion of the strip for fixedly securing one end of the strip upon the upper face of the disk.

2. A bottle closure comprising a cap formed from a flat disk having the marginal portion at one side thereof cut-away to provide a rounded edge and the remaining part of the marginal portion bent downwardly with respect to the said rounded edge, said downwardly bent marginal portion curvilinear in vertical section and adapted to overlap the bead of a bottle neck, and a resilient strip mounted upon and centrally of the upper face of the disk and extending from the upper terminus of said bent marginal portion to beyond said rounded edge, that portion of said strip projecting from said rounded edge curved and depending at right angles with respect to said rounded edge, and detachably engaging the bead of the bottle for securing the cap in position, and a plurality of hold-fast devices at one side of the center of the cap opposite to the curved downwardly projecting portion of the strip for fixedly securing one end of the strip upon the upper face of the disk.

962,397. CARD AND PHOTO HOLDER. CHARLES M. WHITMORE, Meriden, Conn. Filed Dec. 11, 1909. Serial No. 532,525.

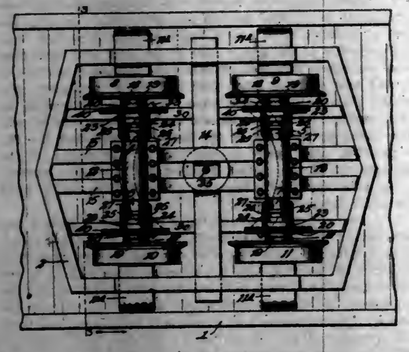


A card and photo holder and hanger comprising a pair of holding arms and a central spring loop connecting the same, the said holding arms having hooked ends consisting of a horizontal front member for the face side of the card, a curved junction and an inclined rear member for the back of the card that extends from the said curved junction obliquely inward at a slight angle to the said horizontal member and in a different plane.

962,398. AXLE CONSTRUCTION FOR CAR-TRUCKS. WILLIAM T. YOUNG, Denver, Colo., assignor of one-half to Charles J. Nelson, Denver, Colo. Filed Nov. 11, 1909. Serial No. 527,500.

1. In an independent rotating axle mechanism for each car wheel of railway cars, the combination with the car and the truck, said truck being provided with car wheels,

each car wheel being provided with an independent axle of its own, and each car wheel and its axle being independently journaled in said truck in transverse alinement of the truck, a clutch surface on the inside of each car wheel, a sliding clutch on each axle, a lever extending from said clutch, a cam lug arranged to engage said lever, and means including a cam plate secured to the bottom of said car and arranged in the path of said truck and of the cam lug for moving said sliding clutch automatically to engage the car wheels of said truck when said wheels are running on a straight track, and to permit the clutches of the outside wheels to become disconnected from said wheels when the car strikes a curve.



2. In a device as specified, the combination with a car and truck, of divided axles on said truck, boxes which receive the inner ends of said divided axles, wheels on the separate axles having clutch hubs, sliding clutches on the separate axles adapted to engage the clutch hubs; levers for sliding said clutches, and means engaging said levers whereby the clutches of the outer wheels are released, and those of the inner wheels are held in engagement therewith, when the car is rounding a curve, and gears on the sliding clutches adapted to be connected with a source of power.

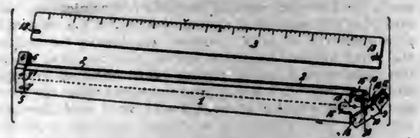
3. In a device as specified, the combination with a car and truck of divided axles on said truck and bearings for the outer and inner ends of said axles, wheels on the parts of said divided axles having clutches formed on their hubs, sliding clutches on said axles adapted to engage the hubs, operating levers for sliding said clutches, gears on said clutches adapted to connect with a source of power, pivoted cams engaging the ends of said levers, and cam plates concentric with the arc described by the cams when the truck turns on its pivot, having faces which hold said cams in engagement with the levers on a straight track, and other faces which permit said cams to release the levers in pairs relatively to the direction of a curved portion of the track.

4. In a device as specified, the combination with a car and truck, of a divided axle on said truck, bearings for the outer end of said axle and a bearing for the abutting ends thereof, wheels on said axle having clutches formed on their hubs, sliding clutches on said axle adapted to engage said hub clutches, operating levers for sliding said clutches, pivoted cams in engagement with the levers, and a cam plate on the car having faces which engage said cams when the truck is parallel with the car and hold them against the levers, and other faces which permit one or the other of said cams to release its lever when the car strikes a curve, and means for connecting the sliding clutches with a source of power.

5. In a device as specified, the combination with a car and truck, of divided axles mounted on said truck, wheels on the separate axles having clutch faces on their hubs, sliding clutches on the axles adapted to engage the said clutch faces on the hubs, levers for sliding said clutches, cams adapted to operate said levers to lock the clutches, curved cam plates secured to the bottom of the car having faces adapted to engage and hold the cams in a locked position relatively to the wheels when the car is running on a straight track and other faces which permit the cams to release the clutches or controlling the two outside wheels when the car is rounding a curve, and gear wheels on the sliding clutches adapted to connect with a source of power.

[Claims 6 to 10 not printed in the Gazette.]

962,399. HOLDER FOR INTERCHANGEABLE SCALES. JOSEPH W. BRIGHAM, Smiths Ferry, Mass., assignor of one-half to William C. McLeod, Holyoke, Mass. Filed Feb. 26, 1909. Serial No. 480,182.



1. A holder for scales composed of a holding member, a scale having a slot in each end thereof, a member secured at one end of the holding member and having a pin to project in one of the slots of the scale, a second member secured to the opposite end of the holding member so as to be movable with respect thereto, said second member carrying a pin to project in the slot at the opposite end of the scale, and means to lock the second member to the holding member.

2. A holder for scales composed of a holding member, a scale removably engaged therewith, and means to secure the scale to the holding member, said means engaging at each end of the scale and including sides which engage the opposite sides of the holding member, ends which engage the ends of the holding member, and fingers which engage on opposite sides of the scale.
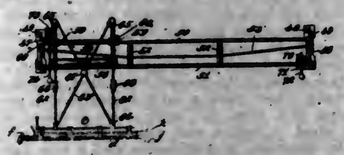
3. A holder for scales composed of a holding member, a scale removably engaged therewith, said scale being formed with a slot at each end thereof, means rigidly secured at one end of the scale to removably engage one of the slots in the scale, and means at the opposite end of the holding member to engage the slot at the opposite end of the scale.

4. A holder for scales composed of a holding member, a scale engaged therewith, said holding member being formed with a slot adapted to receive one side portion of the scale, means carried by the holding member to lock said scale in said slot.

5. The combination with a longitudinally grooved holder, of a flat scale adapted to have its rear edge slipped freely into said groove from the front of the holder and having slots formed in each of its ends, and manually operable locking means mounted upon said holder for engaging said scale, said means being adapted to engage slots formed in the opposite ends of the scale.

[Claims 6 and 7 not printed in the Gazette.]

962,400. WARP-HANDLING APPARATUS. HOWARD D. COLMAN, Rockford, Ill., assignor, by mesne assignments, to Howard D. Colman, Luther L. Miller, and Harry A. Severson, Copartners, doing business as Barber-Colman Company, Rockford, Ill. Filed Mar. 12, 1906. Serial No. 305,537.



1. In a warp handling mechanism, in combination, means for placing warp threads across a thread-clamp; and means for moving said threads into the clamp.

2. In a warp handling mechanism, in combination, means for supporting a thread clamp; and means for placing an insertion bar in said clamp.

3. In a warp handling mechanism, in combination, means for supporting a thread clamp; an insertion bar holder; and means for moving said holder toward and away from said thread clamp.

4. In a warp handling mechanism, in combination, means for supporting a thread clamp; means for supporting an insertion bar, comprising a pivoted lever; and means for pivotally moving said lever.

5. In a warp handling mechanism, in combination, means for supporting a thread clamp; means for supporting an insertion bar, comprising a pivoted lever; a spring for moving said lever in one direction; and a cam for moving said lever in the opposite direction.

[Claims 6 to 40 not printed in the Gazette.]

962,401. TIRE-CARRIER. LEWIS A. DOW, Melrose, Mass. Filed Apr. 10, 1908. Serial No. 426,358.

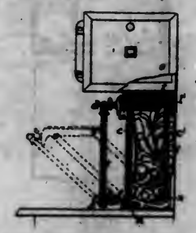


1. A casing adapted to receive and inclose a plurality of tires, and means in the casing to retain the tires in relatively spaced relation.

2. A casing adapted to receive and inclose a plurality of tires, said casing being provided with lateral enlargements and with means adapted to space the tires within the casing.

3. A casing adapted to receive and inclose a plurality of tires, means in the casing to prevent the tires from collapsing, and means in the casing to retain the tires in relatively spaced relation.

962,402. COMBINED STOVE AND GAS HOT-PLATE. EDWARD FINCH HILL, Peekskill, N. Y. Filed July 3, 1909. Serial No. 505,923.



1. The combination with a stove of brackets on the stove, elevated means for using a hot plate supported on the brackets, a hot plate, parallel arms pivoted to the ends of the hot plate and the said brackets on the stove, the parallel arms of equal length, the pivots in the back arms in higher horizontal planes than the pivots in the front arms, a main gas supply pipe, a swing joint on said main gas supply pipe, a gas supply pipe attached to the hot plate, a swing joint on said hot plate supply pipe, a pipe connecting the said swing joints, the pivots of the swing joints parallel with and in the same horizontal planes as the pivots in the front parallel arms.

2. The combination with a stove of brackets on the stove, means for using a hot plate supported on the brackets, a hot plate, parallel arms, pivots uniting one end of the parallel arms with the hot plate and pivots uniting the other end of said arms with the brackets, the pivots in the back arms in higher horizontal planes than the pivots in the front arms, and a supporting stop back of the hot plate in its elevated position to admit of the center of gravity of the hot plate passing back of the pivots connecting the front arms with the brackets.

3. The combination with a stove of brackets on the stove means for using a hot plate supported on said brackets, a hot plate, parallel arms pivoted to the ends of the hot plate and to the said brackets, the parallel arms of equal length, the pivots of the back arms in higher horizontal planes than the pivots in the front arms, a gas supply pipe attached to the hot plate, a main gas supply pipe contiguous to the stove and the hot plate, and means for connecting said hot plate gas supply pipe with said main gas supply pipe.

4. The combination with a stove, of a hot plate, brackets on the stove, parallel arms pivoted to the hot plate and to the said brackets, the parallel arms of equal length, the pivots in the back arms in higher horizontal planes than the pivots in the front arms, a gas supply pipe secured to the hot plate, a main gas supply pipe contiguous to the stove and the hot plate, and swing joint connections between the hot plate supply pipe and the contiguous main supply pipe.

5. The combination with a stove, of brackets on the stove, means for utilizing a hot plate supported on the brackets, a hot plate, arms pivoted at one end to the brackets, the hot plate pivoted to the outer ends of said arms, a gas supply pipe attached to the hot plate, a swing joint on one end of said supply pipe, a fixed supply pipe contiguous to the stove and the hot plate, a swing joint on said fixed supply pipe, and a pipe connecting the said swing joints, the said swing joints bearing such a relation to the pivots of the hot plate supporting arms as to admit of the free raising and lowering of the hot plate.

962,403. COAT-COLLAR. RICHARD T. MATHESON, New York, N. Y., assignor to William E. Wolff, New York, N. Y. Filed Dec. 22, 1909. Serial No. 534,442.



1. A coat provided with a turn-down collar having a substantially crescent-shaped expansible longitudinal fold formed therein intermediate the line of its fold and of its attachment to the coat, whereby said collar may be raised and lowered at the back and sides without changing the line of fold.

2. A coat having a turn-down collar which is secured along its inner edge to the neck of the coat and has an expansible longitudinal fold formed both in the outer and under collar intermediate its line of attachment to the neck of the coat and its line of fold and extending along the sides and around the back of the neck.

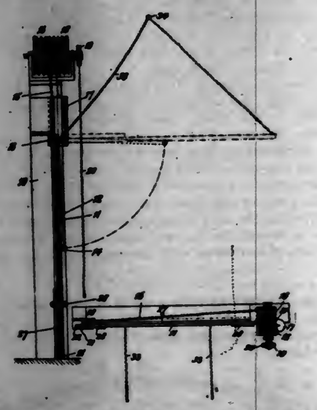
3. A coat provided with a two-ply turn-down collar, the ply which constitutes the outer collar comprising a single piece of material secured at its inner edge to the neck of the coat and having a longitudinal expansible fold formed therein intermediate its line of fold and its inner edge and the ply which constitutes the under collar comprising two pieces divided and loosely connected together on a line which substantially follows and is slightly below the line of fold of the collar and secured at its inner edge to the neck of the coat and around its outer edges to the ply which constitutes the outer collar.

4. A coat provided with a two-ply turn-down collar, the ply which constitutes the outer collar being secured at its inner edge to the neck of the coat and having a longitudinal expansible fold substantially following and normally extending below its inner edge, the ply which constitutes the under collar being divided on substantially the line of fold of the collar into two pieces which are connected by a strip of material with a longitudinal expansible fold therein and having the inner lower piece secured at its lower edge to the neck of the coat and the larger outer piece to the ply which constitutes the outer collar.

5. A coat provided with lapels and a turn-down collar, which collar forms with the lapel on each side a notch extending back to the line of fold of the lapel and on each side is secured to the neck of the coat fixedly at substantially the line of fold of the lapels and yieldingly from near said line of fold back along the sides of the neck by means of expansible folds formed in each of the one or more plies of which said collar is constituted.

[Claims 6 and 7 not printed in the Gazette.]

962,404. DOOR AND MEANS FOR OPERATING THE SAME. FREDRIC D. OGDEN, Bayonne, N. J.; Edward Ogden administrator of said Fredric D. Ogden, deceased. Filed Nov. 12, 1909. Serial No. 527,587.



1. The combination with a doorway framing and a door fitted thereto, of suspension elements constituting swinging supports pivotally connected to a part stationary with the framing and to the door, means for lifting the lower end of the door in substantially right lines, to a position substantially neutral with respect to the said supporting elements, the said elements serving to guide the upper end of the door outward during such lifting movement, and supplemental means for supporting the outer end of the door as it approaches a neutral position with respect to the said supporting elements and thereby loses the support thereof.

2. The combination with a doorway framing having vertical guideways therein, of a door fitted to said doorway and pivotally connected in sliding engagement at its lower end with the said guideways, suspension elements pivoted at their upper ends to parts stationary with the said framing and at points in line with the upper end of the doorway, and at their lower ends to the door at a distance from the bottom thereof substantially equal to the length of the suspension elements, means for raising the lower end of the door to a position substantially in line with the upper pivotal connections of the said suspension elements, the said suspension elements serving at the time of such movement to guide the upper end of the door outward, and means independent of the said suspension elements for supporting the outer end of the door as the door approaches its said position in which the lower end thereof is in line with the upper pivotal connections of the suspension elements, and thereby loses the support of the said suspension elements.

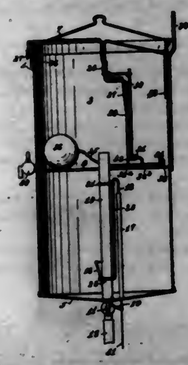
3. The combination with a doorway framing and a door fitted thereto, of swinging links of a length equal to half the height of the door pivoted at their upper end to the doorway framing substantially in line with the upper edge of the door, and at the lower end to the door about midway thereof, means for guiding the lower end of the door and for lifting the same to a position substantially in line with the upper pivotal connections of the links, the said links serving to guide the door outward during such lifting movement, and supplemental means for supporting the door as it approaches the limit of its said lifting movement, and thereby substantially loses the support of the said suspension elements.

4. The combination with a doorway framing and a door fitted to the said doorway and pivotally connected in sliding engagement at its lower end with the said framing, of means for supporting, lifting, and guiding the door while it moves from its vertical closed position to substantially a horizontal position, comprising lifting elements connected to the lower extremity of the door and swinging suspension elements pivotally connected to parts stationary with the framing and to the door intermediate the ends thereof, and supplemental supporting means for supporting the outer end of the door as it reaches substantially its horizontal position, thereby relieving the swinging suspension means from tension so that as the lifting means is operated to lower the inner end of the door, the said inner end will start to move downward by its own weight.

5. The combination with a doorway framing and a door member fitted thereto which is opened by the upward movement of its lower end and outward swinging of its upper end, of lifting means comprising a flexible element connected therewith near the lower end thereof, the said flexible element being rearwardly deflected by a projection upon the said door member intermediate the upper end thereof and the point at which it is connected to the door, whereby the initial pull upon the said flexible element will result in an outward thrust upon the said door.

[Claims 6 and 7 not printed in the Gazette.]

962,405. APPARATUS FOR RAISING TEMPERATURE OF WATER. JAMES W. PARKER and FRANK L. HURTT, Peoria, Ill.; said Hurtt assignor to said Parker. Filed June 21, 1905. Serial No. 266,220.



1. In a device of the character described, the combination of a receptacle divided into two compartments, independent means whereby water may be supplied to both said compartments, a feed pipe extending from one compartment through the other, a thermometer attached to the receptacle for indicating the temperature of water in one compartment, and an indicator for the other compartment adapted to coincide with the thermometer aforesaid.

2. In a device of the character described, the combination of a receptacle divided into two compartments, independent means whereby water may be supplied to both said compartments, a feed pipe extending from the upper compartment through the lower compartment and provided with a discharge orifice communicating with the lower compartment, a valve adapted to control the orifice aforesaid, a thermometer attached to the receptacle for indicating the temperature of water in one compartment, and an indicator for the other compartment adapted to coincide with the thermometer aforesaid.

3. In a device of the character described, the combination of a receptacle divided into two compartments, independent means whereby water may be supplied to both said compartments, a thermometer attached to the receptacle to indicate the temperature of the water in the lower compartment, an indicator attached to the receptacle with characters coinciding with those of the thermometer, a pointer adapted to coact with the indicator, and means for actuating the pointer, as water is poured into the upper compartment.

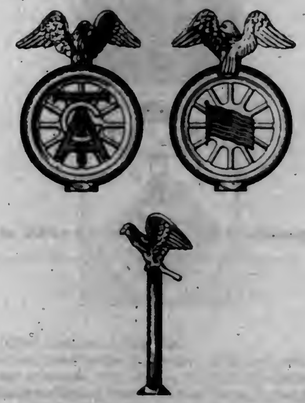
4. In a device of the character described, the combination of a receptacle divided into two compartments, means whereby water may be supplied to both said compartments, a feed pipe from the upper compartment through the lower, the same divided by a partition and having an egress opening above the partition and an ingress opening beneath the partition, a valve controlling the egress opening, a valve attached to the pipe beneath the ingress opening, and means for simultaneously actuating the valves aforesaid.

5. In a device of the character described, the combination of a receptacle divided into two compartments, means whereby water may be supplied to both said compartments, a feed pipe from the upper compartment through the lower, the same divided by a partition and having an egress opening above the partition and an ingress opening beneath the partition, a valve controlling the egress opening, a valve attached to the pipe beneath the ingress opening, means for simultaneously opening or closing both of said valves, a thermometer indicating the temperature of water in the lower compartment, a gage for the upper compartment, and means for actuating the said gage upon the filling of the upper compartment.

[Claims 6 to 15 not printed in the Gazette.]

DESIGNS.

40,734. EMBLEM. ANTHONY L. WESTGARD, New York, N. Y. Filed Apr. 15, 1910. Serial No. 555,744. Term of patent 7 years.



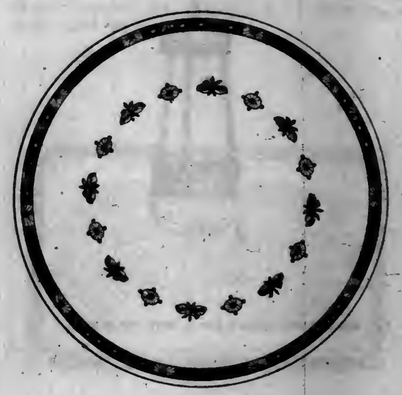
The ornamental design for an emblem, as shown.

40,735. SPOON, FORK, OR SIMILAR ARTICLE. JOHN R. DEAN, New Britain, Conn., assignor to International Silver Co., Meriden, Conn., a Corporation of New Jersey. Filed Apr. 25, 1910. Serial No. 557,615. Term of patent 7 years.



The ornamental design for a spoon, fork or similar article as shown.

40,736. PLATE OR SIMILAR ARTICLE. JOHN EDWARD GOODWIN, Stoke-upon-Trent, England, assignor to Josiah Wedgwood & Sons Ld., Etruria, England, a Corporation of Great Britain. Filed Apr. 11, 1910. Serial No. 554,887. Term of patent 7 years.



The ornamental design for a plate or similar article, as shown.

40,737. STREET-LAMP. BURTON D. MUNHALL, Cleveland, Ohio, assignor to The Union Metal Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Apr. 12, 1910. Serial No. 555,114. Term of patent 7 years.



The ornamental design for street lamp as shown.

40,738. LAMP. PARK Q. WRAY, Chicago, Ill. Filed Mar. 26, 1910. Serial No. 551,811. Term of patent 7 years.



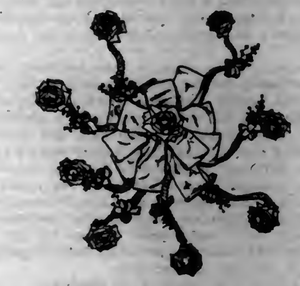
The ornamental design for a lamp, as shown.

40,739. ICE-CREAM CORNUCOPIA. BENEDETTO REA, Boston, Mass. Filed May 27, 1909. Serial No. 498,774. Term of patent 7 years.



The ornamental design for an ice-cream cornucopia, as shown.

40,740. ILLUMINATED ROSETTE. LEO GUDEMAN, New York, N. Y. Filed Apr. 5, 1910. Serial No. 553,672. Term of patent 7 years.



The ornamental design for an illuminated rosette, as shown.

40,741. CHECKREIN-HOLDER. ALANSON F. DIETZ, Altamont, N. Y. Filed Oct. 30, 1909. Serial No. 525,599. Term of patent 14 years.



The ornamental design for a check-rein holder, as shown.

TRADE-MARKS

PUBLISHED JUNE 21, 1910.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

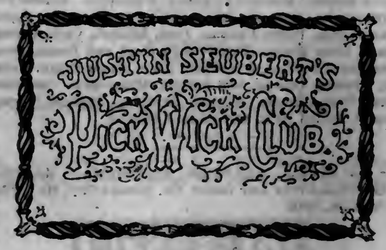
Ser. No. 9,081. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CONRAD E. BIEL, Denver, Colo. Filed June 26, 1905.



The portrait shown being mine.

Particular description of goods.—A Remedy for Catarrh, Catarrhal Deafness, Hay-Fever, Cold in the Head, and All Complications Rising from Chronic Nasal Catarrh.

Ser. No. 36,486. (CLASS 17. TOBACCO PRODUCTS.) JUSTIN SEUBERT, INC., Syracuse, N. Y. Filed Aug. 5, 1908. Used ten years.



Particular description of goods.—Cigars.

Ser. No. 41,946. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ENNIS MANUFACTURING CO., Kansas City, Mo. Filed Apr. 23, 1909. Used ten years.

KANSAS CITY

Particular description of goods.—Baking-Powder.

Ser. No. 42,355. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) HEN-E-TA BONE COMPANY, Flemington, W. Va. Filed May 11, 1909.



Particular description of goods.—Prepared Grit for Fowls.

Ser. No. 42,636. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SCUDDERS-GALE GROCER CO., St. Louis, Mo. Filed May 24, 1909.

BUFFALO BRAND



Particular description of goods.—Hominy, Rice, Spices, Horse-Radish Mustard, Canned Pineapple, Blueberries, Strawberries, Cherries, Raspberries, Gooseberries, Apples, Blackberries, Pears, Peaches, Peas, Spinach, Corn, Kidney-Beans, Lima Beans, String-Beans, Pork and Beans, Sweet Potatoes, Tomatoes, Succotash, Beets, Sauer-Kraut, Pumpkin, Oysters, Lobster, and Shrimp, Mince-Meat, Condensed Milk, Twin Cheese, Canned Sardines, Pickles, Tomato Catsup, Rolled Oats, and Canned Salmon.

Ser. No. 43,045. (CLASS 39. CLOTHING.) MAXWELL-MCCLURE-FITTS DRY GOODS CO., Kansas City, Mo. Filed June 16, 1909.



Particular description of goods.—Stockings.

Ser. No. 43,775. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MINNESOTA MERCANTILE COMPANY, Stillwater, Minn. Filed July 24, 1909.

STATE BRAND

Particular description of goods.—Tea, Flavoring Extracts, and Spices.

Ser. No. 44,714. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE NATIONAL CLEANSER MFG. CO., New York, N. Y. Filed Sept. 16, 1909.

MOTHER'S

Particular description of goods.—Scouring and Polishing Powder Containing a Mineral Filler.

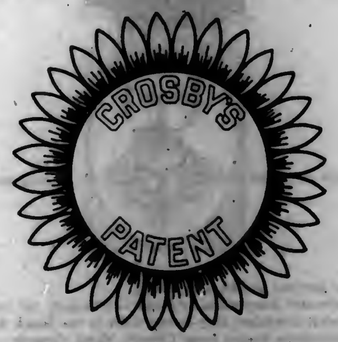
Ser. No. 44,888. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NEW YORK CHEMICAL COMPANY, Dallas, Tex. Filed Sept. 23, 1909.



Consists of the portrait and facsimile-signature of Dr. W. J. Thurmond.

Particular description of goods.—A Medicinal Remedy for Boils, Carbuncles, Cancers, Gangrene, Old Sores, Scrofula, Eczema, Eruptions of Skin, Catarrh, Sciatica Rheumatism, Gout, Bright's Disease, Liver Diseases, Constipation, Nervousness, and Indigestion.

Ser. No. 45,063. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CROSBY ROLLER MILLING COMPANY, Topeka, Kans. Filed Oct. 1, 1909. Used ten years.



Particular description of goods.—Wheat-Flour.

Ser. No. 45,823. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WILLIAM C. HATHAWAY, Kingston, Mass. Filed Nov. 11, 1909. Used ten years.

HATHAWAY'S

Particular description of goods.—Soap.

Ser. No. 45,907. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) WALKER AND PRATT MANUFACTURING COMPANY, Boston, Mass. Filed Nov. 15, 1909. Used ten years.

CRAWFORD

Particular description of goods.—Heating and Cooking Stoves, Ranges, Furnaces, Steam and Hot-Water Heating Boilers, and Parts of the Same.

Ser. No. 45,932. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) ROBERTS, SANFORD & TAYLOR CO., Sherman, Tex. Filed Nov. 16, 1909.

TEXMA

Particular description of goods.—Hinges, Butts, Door-Hangers and Tracks for Same, Tacks, Horseshoe-Nails, and Iron Spoons.

Ser. No. 46,414. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LOUISVILLE PILLOW CO., Louisville, Ky. Filed Dec. 10, 1909.



No claim being made to the words "Solid Comfort."

Particular description of goods.—Bed-Comforts.

Ser. No. 46,520. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) ERNEST C. FOX, Cleveland, Ohio. Filed Dec. 15, 1909.

INDEPENDENT

Particular description of goods.—Heating and Cooking Stoves, Stovepipes, Stove-Thimbles, Radiators, Ventilators, and Registers Used for Ventilation and in Connection with Warm-Air Furnaces.

Ser. No. 46,743. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HUDSON & CO., Mattituck, N. Y. Filed Dec. 27, 1909. Used ten years.

HUDSON



The portrait being that of Henry Hudson.

Particular description of goods.—Canned Fruits and Canned Vegetables.

Ser. No. 47,045. (CLASS 12. CONSTRUCTION MATERIALS.) DURAND CHURCHILL, San Diego, Cal. Filed Jan. 10, 1910.

AGGRI

Particular description of goods.—Portland Natural Rock and Manufactured Building Cement.

Ser. No. 47,049. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM PETERMAN INC., Jersey City, N. J., and New York, N. Y. Filed Jan. 10, 1910. Used ten years.

ROACH FOOD

Particular description of goods.—Insecticides.

Ser. No. 47,265. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) DETROIT-DEARBORN MOTOR CAR CO., Detroit, Mich. Filed Jan. 20, 1910.



Particular description of goods.—Automobiles.

Ser. No. 47,308. (CLASS 39. CLOTHING.) HARRIS LIPSITZ COMPANY, Dallas, Tex. Filed Jan. 22, 1910.

UNCLE JOE

The rectangular panel and the lower portions of the letters "U" and "J" being printed in red.

Particular description of goods.—Work-Shirts.

Ser. No. 47,540. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) FRANCIS W. BRADLEY, San Diego, Cal. Filed Feb. 2, 1910.



Particular description of goods.—Straight Whisky.

Ser. No. 47,602. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) ROBERT A. CARTER, Jr., New York, N. Y. Filed Feb. 5, 1910.

COKETTES

Particular description of goods.—Briquets.

Ser. No. 47,605. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BIG THOMPSON MILLING & ELEVATOR COMPANY, Loveland, Colo. Filed Feb. 5, 1910.

COLUMBINE

Particular description of goods.—Wheat-Flour.

Ser. No. 47,714. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) STRAWSONS & COMPANY, London, England. Filed Feb. 10, 1910.

Fumigen

Particular description of goods.—Fumigating Compound for Destroying Insects and Vermin.

Ser. No. 47,742. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANKLIN FORD, Jackson, Mich. Filed Feb. 11, 1910.



The picture shown being fanciful.
Particular description of goods.—A Remedy for Nervous Debility.

Ser. No. 47,767. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HANLEY & KINSELLA COFFEE & SPICE COMPANY, St. Louis, Mo. Filed Feb. 12, 1910.

H&K

Particular description of goods.—Blended Coffee and Tea, Flavoring Extracts, and Spices.

Ser. No. 47,801. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) ELYEA-AUSTELL CO., Atlanta, Ga. Filed Feb. 12, 1910.



The word "Elco" being printed in red.
Particular description of goods.—Bicycles and Bicycle and Motor-Cycle Repair Crank-Hangers.

Ser. No. 47,907. (CLASS 47. WINES.) SAMUEL FRESHMAN, Dallas, Tex. Filed Feb. 18, 1910.

FRESH

Particular description of goods.—Sherry-Wine, Port-Wine, Tokay Wine, Malaga Wine, Muscatel Wine, Sweet Catawba Wine, Madeira Wine, and Angelica Wine.

Ser. No. 47,930. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) HAMPTON ROADS CUTLERY CORPORATION, Norfolk, Va. Filed Feb. 19, 1910.



Particular description of goods.—Precious-Metal-Plated Knives, Forks, and Spoons.

Ser. No. 47,993. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) LEHMAN & COMPANY, New York, N. Y. Filed Feb. 24, 1910.

EMPIRE

Particular description of goods.—Ladies' Hand-Bags.

Ser. No. 48,126. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUFUS S. FREEMAN, Richmond, Va. Filed Mar. 2, 1910. Used ten years.

"Smithfield"

Particular description of goods.—Hams, Bacon, Sausages, and Smoked Meats.

Ser. No. 48,185. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) AUGUSTUS BOWERS, Fort Wayne, Ind. Filed Mar. 4, 1910.

"GEYSER"

Particular description of goods.—Lubricating Appliances for Machinery.

Ser. No. 48,311. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) B. H. VOSKAMPS SONS, Pittsburg, Pa. Filed Mar. 9, 1910.

DRAWING ROOM

Particular description of goods.—Blended Tea.

Ser. No. 48,462. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CASCO BAY PACKING COMPANY, Freeport, Me. Filed Mar. 16, 1910.

SEARCHLIGHT

Particular description of goods.—Preserved, Canned, Fresh, or Pickled Fish, Mussels, Lobsters, Crabs, and Crab-Meat, and Canned Clam-Chowder, Fish-Chowder, Lobster-Chowder, Lobster Salad, and Clam-Bouillon.

Ser. No. 48,501. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) POSTUM CEREAL CO., LIMITED, Battle Creek, Mich. Filed Mar. 17, 1910.

TOASTIES

Particular description of goods.—Prepared Corn Breakfast Foods.

Ser. No. 48,503. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) POSTUM CEREAL CO., LIMITED, Battle Creek, Mich. Filed Mar. 17, 1910.

GRAPE-NUTS

Particular description of goods.—Prepared Wheat and Barley Breakfast Foods.

Ser. No. 48,538. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CORN PRODUCTS REFINING COMPANY, Jersey City, N. J., and New York, N. Y. Filed Mar. 19, 1910.

EAGLE

Particular description of goods.—Pearl and Powdered Starch.

Ser. No. 48,543. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MINNEAPOLIS CEREAL CO. INC., Minneapolis, Minn. Filed Mar. 19, 1910.



The picture being fanciful.
Particular description of goods.—Cereal Breakfast Food.

Ser. No. 48,554. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) RHODE ISLAND PERKINS HORSE SHOE COMPANY, Providence, R. I. Filed Mar. 21, 1910. Used ten years.

PERKINS

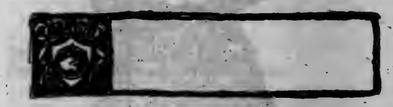
Particular description of goods.—Horseshoes and Horseshoe-Calks.

Ser. No. 48,556. (CLASS 27. HOROLOGICAL INSTRUMENTS.) OLE O. AUNE, Waltham, Mass. Filed Mar. 21, 1910.



Particular description of goods.—The Following Mentioned Parts of Watches—to wit, Timing-Washers, Dial-Washers, Click-Springs, Yoke-Springs, Ratchet-Wheels, and Winding-Wheels.

Ser. No. 48,671. (CLASS 39. CLOTHING.) CHARLES S. MERTON & CO., New York, N. Y. Filed Mar. 26, 1910.



Particular description of goods.—Hats, Motor and Outing Caps.

Ser. No. 48,705. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) CHAMPION IGNITION COMPANY, Flint, Mich. Filed Mar. 28, 1910.



Particular description of goods.—Insulated Ignition-Cables, Spark-Plug Porcelains, Spark-Plugs, and Terminals for Electrical Connections.

Ser. No. 48,724. (CLASS 39. CLOTHING.) MENDELS BROTHERS, Baltimore, Md. Filed Mar. 29, 1910. Used ten years.

Mendels Make

Particular description of goods.—Bath-Robes, Kimonos, Dressing-Sacks, Wrappers, Shirt-Waists, Underskirts and Dress-Skirts, and House and Street Dresses.

Ser. No. 48,783. (CLASS 15. OILS AND GREASES.) CHARLES H. BESLY & COMPANY, Chicago, Ill. Filed Mar. 31, 1910.

HELMET

Particular description of goods.—A Rust-Preventing Compound Consisting Mainly of Vegetable Oils and Mineral-Oil Products.

Ser. No. 48,799. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAMUEL ROLAND HALL, Scranton, Pa. Filed Apr. 1, 1910.

VELEXA

Particular description of goods.—Facial Cream, Remedies for Diseases of the Blood, and Cathartic Tablets.

Ser. No. 48,800. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOUIS D. MARGOLIS, Boston, Mass. Filed Apr. 1, 1910.

MARDI-GRAS

Consists of the words "Mardi-Gras."
Particular description of goods.—Coffee.

Ser. No. 48,975. (CLASS 12. CONSTRUCTION MATERIALS.) THE LEHON COMPANY, Chicago, Ill. Filed Apr. 9, 1910.



Particular description of goods.—Rubber Roofing.

Ser. No. 48,976. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE REA-PATTERSON MILLING COMPANY, Coffeyville, Kans. Filed Apr. 9, 1910.

KING COTTON



Particular description of goods.—Wheat-Flour.

Ser. No. 48,982. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RALPH GOLDSMITH, New Orleans, La. Filed Apr. 9, 1910.

REX

Particular description of goods.—Rice.

Ser. No. 48,997. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GOTTMANN & KRETCHMER, Chicago, Ill. Filed Apr. 9, 1910.

UPON HONOR

Particular description of goods.—All Kinds of Candies.

Ser. No. 49,103. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SENORETTA M. CHAPMAN, New York, N. Y. Filed Apr. 15, 1910.

M & M

Particular description of goods.—Face-Cream.

Ser. No. 49,124. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VOIGT MILLING COMPANY, Grand Rapids, Mich. Filed Apr. 16, 1910.

CRESCENT

Particular description of goods.—All Kinds of Flour.

Ser. No. 49,134. (CLASS 2. RECEPTACLES.) WAYNE PAPER GOODS COMPANY, Fort Wayne, Ind. Filed Apr. 16, 1910.

Clovette

Particular description of goods.—Paper Bags.

Ser. No. 49,161. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE FREMONT CANDY COMPANY, Fremont, Ohio. Filed Apr. 18, 1910.



The picture of the child shown being fanciful.
Particular description of goods.—All Kinds of Candies.

Ser. No. 49,271. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) WILLIAM ROSS, Troy, N. Y. Filed Apr. 23, 1910. Used ten years.

TROJAN

Particular description of goods.—Pressure-Regulating Valves.

Ser. No. 49,279. (CLASS 17. TOBACCO PRODUCTS.) DAVIS BROTHERS, Oskaloosa, Iowa. Filed Apr. 25, 1910.

La Rosa

Particular description of goods.—Cigars and Tobacco.

Ser. No. 49,315. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HUYLER'S, New York, N. Y. Filed Apr. 27, 1910.



Particular description of goods.—Candy.

Ser. No. 49,380. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE VOEGELI BROS. DRUG COMPANY, Minneapolis, Minn. Filed Apr. 29, 1910.

ROXIE

Particular description of goods.—Remedies for Diseases of the Urinary and Urogenital Organs.

Ser. No. 49,404. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) A. J. LINDEMANN & HOVERSON CO., Milwaukee, Wis. Filed Apr. 30, 1910.

BON AMI

Particular description of goods.—Cooking and Heating Stoves and Ranges.

Ser. No. 49,416. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUM SUPPLY CO., Newark, N. J. Filed Apr. 30, 1910.

Mother Goose

Particular description of goods.—Chewing-Gum.

Ser. No. 49,494. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RALPH GOLDSMITH, New Orleans, La. Filed May 4, 1910.

MINER



The picture shown being fanciful.
Particular description of goods.—Rice.

Ser. No. 49,497. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. H. ZEILIN & COMPANY, INC., Philadelphia, Pa. Filed May 4, 1910. Used ten years.

DR. SIMMONS
LIVER REGULATOR
OR
MEDICINE

The facsimile-signature shown being that of A. Q. Simmons, deceased.
Particular description of goods.—A Remedy for Fever and Ague, Dropsy, Jaundice, Restlessness, Diarrhea Cramp, Dysentery, Chills and Fevers, Affections of the Bladder and Kidneys, Female Affections, Headache, Costiveness, Sour Stomach, Heartburn, Depression of Spirits, Nervousness, Malaria, and Indigestion.

Ser. No. 49,517. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE J. B. WILLIAMS COMPANY, Glastonbury, Conn. Filed May 5, 1910.

Matinee
Violets

No claim being made herein to the use of the word "Violet."
Particular description of goods.—Toilet Water.

Ser. No. 49,582. (CLASS 43. THREAD AND YARN.) GUDEBROD BROS. CO., New York, N. Y. Filed May 7, 1910.



Consisting of the word "Safe," the representation of a safe, and of the representation of a dog lying in front of said safe.

Particular description of goods.—Silk, Cotton, Mercerized, and Machine Sewing-Threads.

Ser. No. 49,606. (CLASS 12. CONSTRUCTION MATERIALS.) ELY RICHARD SHIPP, Casper, Wyo. Filed May 9, 1910.

RESISTOCRETE.

Particular description of goods.—Artificial Stone.

Ser. No. 49,615. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE WORTHINGTON BALL COMPANY, Elyria, Ohio. Filed May 9, 1910.

Particular description of goods.—Golf-Balls.

Ser. No. 49,617. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CARLYLE MILLING COMPANY, Carlyle, Ill. Filed May 9, 1910.

Cupid

Particular description of goods.—Wheat-Flour.

Ser. No. 49,625. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SOCIETE ANONYME DES MINES ET FONDERIES DE ZINC DE LA VIEILLE MONTAGNE, Angleur, Belgium. Filed May 10, 1910.

V G M

Particular description of goods.—Spelter.

Ser. No. 49,626. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) SOCIETE ANONYME DES MINES ET FONDERIES DE ZINC DE LA VIEILLE MONTAGNE, Angleur, Belgium. Filed May 10, 1910. Used ten years.

BLANC DE ZINC

Particular description of goods.—Zinc-White.

Ser. No. 49,632. (CLASS 43. THREAD AND YARN.) THE CLARK MILE-END SPOOL COTTON COMPANY, East Newark, N. J. Filed May 10, 1910.

MARTLET

Particular description of goods.—Cotton Thread and Yarn.

Ser. No. 49,633. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SAMUEL REUBENS, New York, N. Y. Filed May 10, 1910.



Particular description of goods.—Ingots of Metal Alloys.

Ser. No. 49,638. (CLASS 27. HOROLOGICAL INSTRUMENTS.) ILLINOIS WATCH CASE CO., Elgin, Ill. Filed May 10, 1910.

GENERAL

Particular description of goods.—Watchcases and Watch-Movements.

Ser. No. 49,661. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) STANDARD PLAYING CARD CO., Chicago, Ill. Filed May 12, 1910.

CHANTECLER

Particular description of goods.—Playing-Cards.

Ser. No. 49,709. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed May 13, 1910.

Glorious

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 49,712. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed May 13, 1910.

I WILL.

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 49,713. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed May 13, 1910.

VALOUR

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 49,715. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed May 13, 1910.



Flambeau

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, and Blank Books.

Ser. No. 49,885. (CLASS 15. OILS AND GREASES.) ROHRBACHER AUTOMATIC AIR PUMP CO., Portland, Oreg. Filed May 24, 1910.

WIND JAMMER

Particular description of goods.—Lubricating-Oil.

Ser. No. 49,981. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BIGELOW CARPET COMPANY, Clinton, Lowell, and Boston, Mass. Filed May 28, 1910.

IMPERIAL

Particular description of goods.—Axminster Carpet.

Ser. No. 49,990. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) BROWN DURRELL CO., Boston, Mass. Filed May 28, 1910.

AZTEC

Particular description of goods.—Corset-Clasps, Steels, and Stiffeners.

TRADE-MARKS

REGISTERED JUNE 21, 1910.

78,478. BUCKLES FOR CLOTHING. ALMA MANUFACTURING COMPANY OF BALTIMORE CITY, Baltimore, Md.
Filed September 30, 1909. Serial No. 45,028. PUBLISHED APRIL 19, 1910.

78,479. WHEAT-FLOUR. AMENDT MILLING COMPANY, Monroe, Mich.
Filed March 4, 1910. Serial No. 48,205. PUBLISHED APRIL 19, 1910.

78,480. BARBED WIRE. THE AMERICAN STEEL & WIRE COMPANY OF NEW JERSEY, Cleveland, Ohio; Chicago, Ill.; Pittsburg, Pa.; New York, N. Y., and Worcester, Mass.
Filed March 5, 1910. Serial No. 48,219. PUBLISHED APRIL 19, 1910.

78,481. WHITE WINE. GIOVANNI AQUINO, New York, N. Y.
Filed February 26, 1910. Serial No. 48,040. PUBLISHED APRIL 19, 1910.

78,482. MEDICINES. BAKER MANUFACTURING CO., Knoxville, Tenn.
Filed November 17, 1909. Serial No. 45,943. PUBLISHED APRIL 19, 1910.

78,483. REMEDY FOR AFFECTIONS OF THE THROAT AND LUNGS. EARLE H. BARNES, Parkers, N. Y.
Filed June 12, 1909. Serial No. 42,978. PUBLISHED APRIL 19, 1910.

78,484. PIANOS AND PLAYER-PIANOS. BENNING PIANO CO., New York, N. Y.
Filed March 15, 1910. Serial No. 48,418. PUBLISHED APRIL 19, 1910.

78,485. POLISHES. BEN-HUR METAL POLISH CO., Crawfordsville, Ind.
Filed March 16, 1910. Serial No. 48,494. PUBLISHED APRIL 19, 1910.

78,486. GRINDING-MACHINES. CHARLES H. BESLY & COMPANY, Chicago, Ill.
Filed March 8, 1910. Serial No. 48,270. PUBLISHED APRIL 19, 1910.

78,487. DRESS-SHIELDS. JACOB BEYERLE, New York, N. Y.
Filed March 15, 1910. Serial No. 48,417. PUBLISHED APRIL 19, 1910.

78,488. RUGS. BIGELOW CARPET COMPANY, Clinton, Lowell, and Boston, Mass.
Filed March 9, 1910. Serial No. 48,288. PUBLISHED APRIL 19, 1910.

78,489. NAILS. THE BISHOP & BABCOCK CO., Cleveland, Ohio.
Filed March 17, 1910. Serial No. 48,507. PUBLISHED APRIL 19, 1910.

78,490. TOBACCO. BLEIL CHAMPAGNE KUNATH CO., Detroit, Mich.
Filed November 26, 1909. Serial No. 46,121. PUBLISHED MARCH 29, 1910.

78,491. SWEEPING COMPOUND. EDWARD K. BERNAAUN, St. Louis, Mo.
Filed March 22, 1910. Serial No. 48,606. PUBLISHED APRIL 19, 1910.

78,492. GOLF-CLUBS. GEO. H. BRYANT, Chicago, Ill.
Filed August 9, 1909. Serial No. 44,034. PUBLISHED MARCH 29, 1910.

78,493. FERTILIZERS. CHICAGO FERTILIZER WORKS, (NOT INCORPORATED), Chicago, Ill.
Filed December 9, 1909. Serial No. 46,871. PUBLISHED APRIL 19, 1910.

78,494. LEATHER BOOTS AND SHOES. JAMES CLARK LEATHER COMPANY, St. Louis, Mo.
Filed January 15, 1910. Serial No. 47,132. PUBLISHED APRIL 19, 1910.

78,495. ELECTRIC-LIGHT FIXTURES. THE CONNEAUT COMPANY, Conneaut, Ohio.
Filed March 18, 1910. Serial No. 48,529. PUBLISHED APRIL 19, 1910.

78,496. SHIRTS. CROWN OVERALL MANUFACTURING CO., Cincinnati, Ohio.
Filed March 7, 1910. Serial No. 48,247. PUBLISHED APRIL 19, 1910.

78,497. OINTMENT. FOSTER DACK CO., Council Bluffs, Iowa, and Chicago, Ill.
Filed September 29, 1909. Serial No. 45,001. PUBLISHED DECEMBER 28, 1909.

78,498. ELECTRIC INSULATING MATERIALS. THE DEAN ELECTRIC COMPANY, Elyria, Ohio.
Filed February 24, 1910. Serial No. 47,999. PUBLISHED APRIL 19, 1910.

78,499. CERTAIN VALVES AND HARDWARE. EDOUARD DUBIED & CO., Couvet and Aux Isles, Couvet, Switzerland.
Filed April 9, 1909. Serial No. 41,688. PUBLISHED APRIL 19, 1910.

78,500. HEAT-NON-CONDUCTING COVERINGS. EHRET MAGNESIA MANUFACTURING COMPANY, Philadelphia, Pa.
Filed February 2, 1910. Serial No. 47,532. PUBLISHED APRIL 19, 1910.

78,501. CIGARETTES. ESTABROOK & EATON, Boston, Mass.
Filed September 21, 1909. Serial No. 44,887. PUBLISHED APRIL 19, 1910.

78,502. PRESERVED VEGETABLES AND FRUITS. FABRIQUE INTERNATIONALE DE CONSERVES ALIMENTAIRES LE SOLEIL, A MALINES, (SOCIÉTÉ ANONYME), Mechlin, Belgium.
Filed January 9, 1907. Serial No. 24,549. PUBLISHED APRIL 6, 1909.

78,503. STOVE POKERS, LID LIFTERS, AND SHAKERS. THE FANNER MFG. CO., Cleveland, Ohio.
Filed December 13, 1906. Serial No. 23,993. PUBLISHED APRIL 19, 1910.

78,504. SIDE LEATHERS. S. B. FOOT, & Co., Red Wing, Minn.
Filed February 26, 1910. Serial No. 48,049. PUBLISHED APRIL 19, 1910.

78,505. SMOKED SHORE-HADDOCK. FREEMAN & COBB CO., Boston, Mass.
Filed February 18, 1910. Serial No. 47,899. PUBLISHED APRIL 19, 1910.

78,506. TALCUM POWDER. GERHARD MENNEN CHEMICAL CO., Newark, N. J.
Filed March 16, 1910. Serial No. 48,469. PUBLISHED APRIL 19, 1910.

78,507. MONTHLY MAGAZINE. HUGO GERNSBACK, New York, N. Y.
Filed August 16, 1909. Serial No. 44,165. PUBLISHED APRIL 19, 1910.

78,508. HOSIERY. GLIDDEN, HYDE & CO., Boston, Mass.
Filed March 4, 1910. Serial No. 48,174. PUBLISHED APRIL 19, 1910.

78,509. HOSIERY. GLIDDEN, HYDE & Co., Boston, Mass.
Filed March 4, 1910. Serial No. 48,175. PUBLISHED APRIL 19, 1910.

78,510. GAS, OIL, ALCOHOL, AND COAL STOVES. GRINBERG BROTHERS, New York, N. Y.
Filed January 26, 1910. Serial No. 47,399. PUBLISHED MARCH 29, 1910.

78,511. CERTAIN STATIONERY. J. W. GUTTENECHT, Stein-Nuremberg, Germany.
Filed July 12, 1909. Serial No. 43,477. PUBLISHED APRIL 19, 1910.

78,512. COTTON CRAPE. HAMILTON MANUFACTURING Co., Lowell and Boston, Mass.
Filed March 25, 1910. Serial No. 48,646. PUBLISHED APRIL 19, 1910.

78,513. LIQUID PAINT. THE HANNA PAINT MANUFACTURING COMPANY, Columbus, Ohio.
Filed April 17, 1909. Serial No. 41,839. PUBLISHED APRIL 19, 1910.

78,514. CIGARS, CHEROOTS, AND LITTLE CIGARS. SAM H. HARRIS, New York, N. Y.
Filed January 18, 1910. Serial No. 47,221. PUBLISHED APRIL 19, 1910.

78,515. BOOTS AND SHOES. HAYDEN & COLLINS, Haverhill, Mass.
Filed March 18, 1910. Serial No. 48,522. PUBLISHED APRIL 19, 1910.

78,516. DRESS, WORK, AND NEGLIGÉE SHIRTS. ABE HAYMAN, Philadelphia, Pa.
Filed December 8, 1909. Serial No. 46,336. PUBLISHED APRIL 19, 1910.

78,517. WHEAT-FLOUR. WILLIAM S. HILLS COMPANY, Boston, Mass.
Filed October 30, 1909. Serial No. 45,622. PUBLISHED DECEMBER 28, 1909.

78,518. SKINS AND FURS. A. HOLLANDER & SON, Newark, N. J.
Filed February 26, 1910. Serial No. 48,039. PUBLISHED APRIL 19, 1910.

78,519. LUBRICANTS CONTAINING GRAPHITE AND GREASE. INTERNATIONAL ACHESON GRAPHITE COMPANY, Niagara Falls, N. Y.
Filed March 2, 1910. Serial No. 48,129. PUBLISHED APRIL 19, 1910.

78,520. CERTAIN FOODS. THE INTER-STATE GROCER COMPANY, Joplin, Mo.
Filed November 18, 1909. Serial No. 45,975. PUBLISHED APRIL 19, 1910.

78,521. ANIMAL OVERSHOES, BOOTS, SOLE-PADS, AND OVERSHOE-SUPPORTS. THE KINNELL MANUFACTURING COMPANY, Pittsfield, Mass.
Filed March 17, 1910. Serial No. 48,511. PUBLISHED APRIL 19, 1910.

78,522. WHEAT-FLOUR. KRUGER, DARBIN & Co., Liverpool, England.
Filed December 31, 1909. Serial No. 46,833. PUBLISHED APRIL 19, 1910.

78,523. SOAP. LAUTZ BROS. & Co., Buffalo, N. Y.
Filed November 29, 1909. Serial No. 46,161. PUBLISHED APRIL 19, 1910.

78,524. SOAP. LAUTZ BROS. & Co., Buffalo, N. Y.
Filed November 29, 1909. Serial No. 46,165. PUBLISHED APRIL 19, 1910.

78,525. SOAP. LAUTZ BROS. & Co., Buffalo, N. Y.
Filed November 29, 1909. Serial No. 46,166. PUBLISHED APRIL 19, 1910.

78,526. SOAP. LAUTZ BROS. & Co., Buffalo, N. Y.
Filed November 29, 1909. Serial No. 46,167. PUBLISHED APRIL 19, 1910.

78,527. SOAP. LAUTZ BROS. & Co., Buffalo, N. Y.
Filed November 29, 1909. Serial No. 46,170. PUBLISHED APRIL 19, 1910.

78,528. REMEDY FOR RHEUMATISM. JOSEPH R. LEFEBVER, Lawrence, Mass.
Filed October 6, 1909. Serial No. 45,158. PUBLISHED APRIL 19, 1910.

78,529. EXPLOSION-MOTORS AND ACCESSORIES. LEON MARIE JOSEPH CLÉMENT LEVAVASSEUR, Puteaux, France.
Filed July 12, 1909. Serial No. 43,468. PUBLISHED APRIL 19, 1910.

78,530. GLASS CHIMNEYS FOR MINERS' LAMPS. W. LIMBERG & Co., Gifhorn, Germany.
Filed December 12, 1908. Serial No. 39,265. PUBLISHED APRIL 19, 1910.

78,531. CERTAIN FURNITURE. CHARLES P. LIMBERT COMPANY, Holland, Mich.
Filed February 14, 1910. Serial No. 47,804. PUBLISHED APRIL 19, 1910.

78,532. OLIVE-OIL. DONATO MADDALONI, New York, N. Y.
Filed November 23, 1909. Serial No. 46,080. PUBLISHED APRIL 19, 1910.

78,533. CIGARS, CIGARETTES, CHEWING-TOBACCO, AND CUT TOBACCO. MARKT & HAMMACHER COMPANY, New York, N. Y.
Filed March 25, 1910. Serial No. 48,658. PUBLISHED APRIL 19, 1910.

78,534. CIGARS, CIGARETTES, CHEWING-TOBACCO, AND CUT TOBACCO. MARKT & HAMMACHER COMPANY, New York, N. Y.
Filed March 25, 1910. Serial No. 48,659. PUBLISHED APRIL 19, 1910.

78,535. PERFUMES. FRÉDÉRIC SILVESTRE MASON, New York, N. Y.
Filed March 2, 1910. Serial No. 48,131. PUBLISHED APRIL 19, 1910.

78,536. COFFEE PARTIALLY FREED FROM CAFFEIN. MERCK & Co., New York, N. Y.
Filed March 28, 1910. Serial No. 48,699. PUBLISHED APRIL 19, 1909.

78,537. CHEMICAL HAND FIRE-EXTINGUISHERS. MISSOURI LAMP & MFG. Co., St. Louis, Mo.
Filed March 7, 1910. Serial No. 48,238. PUBLISHED APRIL 19, 1910.

78,538. CHEMICAL HAND FIRE-EXTINGUISHERS. MISSOURI LAMP & MFG. Co., St. Louis, Mo.
Filed March 9, 1910. Serial No. 48,282. PUBLISHED APRIL 19, 1910.

78,539. CIGARS. C. O. MURIAS Y CIA., Habana, Cuba.
Filed February 7, 1910. Serial No. 47,620. PUBLISHED APRIL 19, 1910.

78,540. SEINE-TWINE. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed August 13, 1909. Serial No. 44,120. PUBLISHED APRIL 19, 1910.

78,541. SPOOL-SILK AND MERCERIZED THREAD. PEERLESS SPOOL SILK Co., New York, N. Y.
Filed March 22, 1910. Serial No. 48,591. PUBLISHED APRIL 19, 1910.

78,542. CANDY. HARRY L. SCHLESINGER, Atlanta, Ga.
Filed March 2, 1910. Serial No. 48,122. PUBLISHED APRIL 19, 1910.

78,543. LEATHER BELTING. SOUTHERN BELTING COMPANY OF NEW ORLEANS, New Orleans, La.
Filed March 16, 1910. Serial No. 48,482. PUBLISHED APRIL 19, 1910.

78,544. PREPARED OSTRICH-PLUMES, OSTRICH-FEATHER FANS, AND FEATHERS. SPIEGEL BROTHERS, Chicago, Ill.
Filed June 5, 1909. Serial No. 42,847. PUBLISHED APRIL 19, 1910.

78,545. REFINED PETROLEUM. STANDARD OIL Co. OF NEW YORK, New York, N. Y.
Filed January 11, 1910. Serial No. 47,055. PUBLISHED APRIL 19, 1910.

78,546. DISTILLED PEPPERMINT CORDIAL. STARK DISTILLERY Co., St. Louis, Mo.
Filed March 4, 1910. Serial No. 48,183. PUBLISHED APRIL 19, 1910.

78,547. HOOKS AND EYES FOR GARMENTS. THE STERLING PIN Co., Derby, Conn.
Filed February 8, 1910. Serial No. 47,658. PUBLISHED APRIL 19, 1910.

78,548. MEDICINES. STOCK & KRAUSE, New York, N. Y.
Filed June 3, 1909. Serial No. 42,817. PUBLISHED APRIL 19, 1910.

78,549. HOLLAND GIN. STRAUSS & Co., London, England.
Filed September 23, 1909. Serial No. 44,912. PUBLISHED APRIL 19, 1910.

78,550. LUBRICATING GREASES AND OILS. ALDEN S. SWAN & Co., New York, N. Y.
Filed March 26, 1910. Serial No. 48,660. PUBLISHED APRIL 19, 1910.

78,551. BAR-STEEL. SWEDISH IRON & STEEL CORPORATION, New York, N. Y.
Filed December 4, 1909. Serial No. 46,285. PUBLISHED APRIL 19, 1910.

78,552. BALATA BELTING. TURNER BROTHERS LIMITED, Rochdale, England.
Filed December 31, 1909. Serial No. 46,829. PUBLISHED APRIL 19, 1910.

78,553. WOVEN-WIRE FABRICS FOR SCREENS. THE W. S. TYLER COMPANY, Cleveland, Ohio.
Filed January 20, 1909. Serial No. 40,083. PUBLISHED APRIL 19, 1910.

78,554. BALL-COCKS. UNION METAL WORKS, Chelsea, Mass.
Filed March 3, 1910. Serial No. 48,143. PUBLISHED APRIL 19, 1910.

78,555. REFRIGERATORS. VIKING REFRIGERATOR & MFG. Co., Kansas City, Kans.
Filed September 16, 1909. Serial No. 44,715. PUBLISHED APRIL 19, 1910.

78,556. BLEND OF STRAIGHT SCOTCH WHISKIES. JOHN WALKER & SONS, LIMITED, Kilmarnock, Scotland, and London, England.
Filed March 14, 1910. Serial No. 48,390. PUBLISHED APRIL 19, 1910.

78,557. CERTAIN FOODS. WALLACE & THOMSON, New York, N. Y.
Filed January 13, 1910. Serial No. 47,095. PUBLISHED APRIL 19, 1910.

78,558. COTTON PIECE GOODS. WARNER-GODFREY Co., New York, N. Y.
Filed December 8, 1909. Serial No. 46,351. PUBLISHED APRIL 19, 1910.

78,559. PAVEMENTS AND PAVING MATERIAL CONTAINING BITUMINOUS MATTER. WARREN BROTHERS COMPANY, Boston, Mass.
Filed September 15, 1909. Serial No. 44,699. PUBLISHED APRIL 19, 1910.

78,560. STOVES AND RANGES. A. WEISKITTEL & SON COMPANY, Baltimore, Md.
Filed March 16, 1910. Serial No. 48,432. PUBLISHED APRIL 19, 1910.

78,561. CLOCKS AND WATCHES. THE WESTERN CLOCK MFG. Co., Peru, Ill.
Filed March 11, 1910. Serial No. 48,344. PUBLISHED APRIL 19, 1910.

78,562. HOOKS AND EYES. THE YEISER HOOK AND EYE COMPANY, Philadelphia, Pa.
Filed March 25, 1910. Serial No. 48,656. PUBLISHED APRIL 19, 1910.

LABELS

REGISTERED JUNE 21, 1910.

15,212.—*Title:* "GOV. JOHNSON." (For Cigars.) MICHAEL MCGUIRK, Minneapolis, Minn. Filed June 8, 1910.

15,213.—*Title:* "7 AND 11." (For Blended Corn Whisky.) J. A. COUCH, Richmond, Va. Filed May 31, 1910.

15,214.—*Title:* "THE DOUBLE Q COMPOSITION BOOK." (For Blank Books.) OSBORN PAPER COMPANY, Marion, Ind. Filed June 8, 1910.

15,215.—*Title:* "KLONDIKE TABLET." (For Writing-Tablets.) OSBORN PAPER COMPANY, Marion, Ind. Filed June 8, 1910.

15,216.—*Title:* "PANSY KID DOLLS." (For Dolls.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed June 8, 1910.

15,217.—*Title:* "VIOLET KID DOLLS." (For Dolls.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed June 8, 1910.

15,218.—*Title:* "AMERICAN BEAUTY KID DOLLS." (For Dolls.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed June 8, 1910.

15,219.—*Title:* "SUNSHINE KID DOLLS." (For Dolls.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed June 8, 1910.

15,220.—*Title:* "THE HIGHLAND." (For Bloomer-Dresses.) A. ROSENBERG & SONS, Chicago, Ill. Filed May 14, 1910.

15,221.—*Title:* "THE HOME WASH BOILER." (For Washboilers.) MYER KAMENSTEIN, New York, N. Y. Filed June 3, 1910.

15,222.—*Title:* "BUSTER BROWN RUBY BRAND SPARKLERS." (For Fireworks.) LLOYD MANUFACTURING CO., New York, N. Y. Filed June 8, 1910.

PRINTS

REGISTERED JUNE 21, 1910.

2,604.—*Title:* "IN JUSTICE TO THE COOK." (For Flour.) WASHBURN CROSBY COMPANY, Minneapolis, Minn. Filed May 28, 1910.

2,605.—*Title:* "THE OUTLOOK HUMAN HAIR NET." (For Hair-Nets.) BURNET AND TEMPLE LIMITED, London, England. Filed April 1, 1910.

2,606.—*Title:* "MUTO CONVERTIBLE." (For Collars for Garments.) MUTO SALES CO., Rochester, N. Y. Filed April 7, 1910.

2,607.—*Title:* "LION BRAND AGRICULTURAL SPRAYS." (For Spraying Materials.) THE JAMES A. BLANCHARD CO., New York, N. Y. Filed May 2, 1910.

2,608.—*Title:* "PIANO EVOLUTION." (For Pianos.) WILLARD F. MAIN, Iowa City, Iowa. Filed May 28, 1910.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

IN RE WETMORE AND JENNER.

Decided May 26, 1910.

ASSIGNMENT—NO REQUEST THAT PATENT ISSUE TO ASSIGNEE—CONTROL OF PROSECUTION.

The administratrix of a deceased applicant *Held* to be entitled to control the prosecution of the application to the exclusion of the assignee where the assignment does not contain a request that the patent issue to the assignee, notwithstanding the fact that the petition accompanying the application contains such a request.

ON PETITION.

Messrs. Wetmore and Jenner pro se.

MOORE, *Commissioner:*

This is a petition presented by the attorneys of record, Messrs. Wetmore and Jenner, requesting that they be allowed to continue the prosecution of the case in behalf of the assignee.

It appears from the record that the petition accompanying the application contained a request that the patent issue to one J. W. Cannon, and the power of attorney to Wetmore & Jenner was concurred in by him. The records of the Assignment Division show a "contract" between the applicant, George W. Maurie, and J. W. Cannon, purporting to convey to the latter the entire interest in an invention in thread-cutters to be attached to looms. This "contract" was executed prior to the filing of the application, and therefore contains no reference to the serial number or filing date of this case, and does not contain a request that the patent issue to the assignee.

Since filing the application the inventor has died, and Ethel L. Maurie has been appointed administratrix of the decedent's estate and desires to intervene in the prosecution of this application.

It is urged by the petitioners that the assignment of record, taken in connection with the petition forming part of this application, is sufficient to give the assignee legal title and to warrant his prosecution of the application to the exclusion of the administratrix. It is well settled that an assignment which does not contain a request that the patent issue to the assignee conveys merely an equitable interest, and not the legal title. On such an assignment the patent issues to the inventor, and not the assignee. Where it is desired to have a patent issue to the assignee, the assignment itself must contain such a request. (Rule 26 of the Rules of Practice.) It is believed, therefore, that applicant's contention that the request to issue to the assignee contained in the petition is sufficient is unsound.

It was held in the case of *ex parte Stanford* (138 O. G., 527) that the assignee of an entire interest in an invention may not revoke a power of attorney given by the applicant and appoint one of his own selection where the assignment does not request that the patent shall issue to the assignee. It is clear, therefore, that the administratrix of the deceased inventor may prosecute the case and be represented by an attorney of her own selection in this case. Furthermore, there seems to be some room for doubt as to whether the assignment of record refers to the invention disclosed in this particular application.

The petition is denied.

IN RE ROLFE.

Decided May 9, 1910.

PUBLIC USE.

Where the testimony taken in an interference which is relied on to establish the statutory bar of public use or sale against the issuance of a patent on the application of the successful party to such interference does not show that certain samples or test devices made by the other party were offered for sale, or that if they were shown to prospective customers more than two years prior to the filing of said application preparation had then been made to manufacture the device or place it on the market, *Held* that a *prima facie* case of public use is not made out.

ON PETITION.

Mr. A. M. Belfield and *Messrs. Bacon & Milans* for Rolfe.

Mr. Frank B. Cook and *Messrs. Jones, Addington & Ames* for Leeper.

BILLINGS, *First Assistant Commissioner:*

This is a renewal of a petition by Rolfe for the institution of a proceeding for the purpose of establishing the existence of a statutory bar against the issuance of a patent on Leeper's application, No. 210,808, filed May 28, 1904.

The former petition of Rolfe was dismissed in view of the report of the Primary Examiner that he was clearly of the opinion that a *prima facie* case of the existence of a statutory bar had not been made out. Rolfe then renewed his petition and pointed out that the Examiner of Interferences in his decision in interference No. 24,726, involving the

applications of Rolfe and Leeper, expressed the opinion that the testimony filed in the interference proceeding indicated that the Rolfe device was offered for sale more than two years prior to the date of filing of the Leeper application. On account of this conflict in the opinions of the Primary Examiner and the Examiner of Interferences the petition was set down for hearing.

Jones, the president of the American Electric Fuse Company, the assignee of the Rolfe invention, testified that the first actual sale of the invention was made in November or December, 1902.

He stated that (Q. 39)—

during the fall of 1902, as I recall it, negotiations were opened with the Citizens' Telephone Company, of Grand Rapids, Mich., for the installation of an equipment of about one thousand pairs (I think it was eight hundred pairs, to be exact) of self-soldering protectors, to be used in the exchange at Holland, Mich. After considerable negotiation the Citizens' Telephone Company, of Grand Rapids, placed with the American Electric Fuse Company an order for this protector equipment for Holland, Mich., and I think it was in November or December of 1902. This, as I recall it, was the first actual sale of self-soldering protectors for actual exchange use, made by the American Electric Fuse Company, although various small samples had been made up and shown to various telephone men six months previous or more. The Grand Rapids order for Holland was begun to be manufactured in November or December, 1902; but I think was not actually delivered until January or February, 1903.

It is contended by petitioner that the testimony shows that more than two years prior to May 28, 1904, the date of the Leeper application, sample devices were made up, exhibited, and orders solicited. This contention is based on the testimony of Jones, (Q. 87,) Kenny, (Qs. 29–31,) and Stein, (Q. 12,) referred to in the decision of the Examiner of Interferences.

From a consideration of the whole record of Rolfe, however, and particularly the testimony of Jones, (Record, pp. 16, 23, 37, 38, and 60,) it appears that certain test sample devices were first made by hand and shown to a number of telephone people to see what the trade thought of them, and possibly with the idea of obtaining future orders. The testimony is indefinite and conflicting as to exactly when this was done.

Rolfe, the inventor, did not testify in the above-mentioned interference, but in interference No. 23,519 (*Rolfe* v. *Hoffmann*) he testified as follows:

Q. 30. During the time you were connected with the American Electric Fuse Company has that company attempted to introduce your protectors, including the self-soldering protectors, on the market?

A. Yes; they commenced to offer our self-soldering heat-coils early in the fall of 1902.

It does not appear that these samples or test devices were offered for sale, nor that, even if they were made and shown to prospective customers prior to May 28, 1902, the company was prepared until after that date to manufacture the device or place it upon the market. Jones states, (Record, p. 60:)

I recall the names given, but would say that in addition there were quite a number of visitors at the office of the American Electric Fuse Company from time to time during the spring of 1902, and these samples were shown to some of them. These samples were first shown, with the statement that the dies were not done, and that protectors could not be furnished for probably six months.

It thus appears that the dies for making the device were not completed until some months after the alleged disclosures and offer for sale. The testimony does not show that any prices at which the device would be furnished were quoted or that the company were at that time prepared to quote prices.

The circumstances of this case do not bring it in the class with *Plimpton* v. *Winslow* (14 Fed. Rep., 921) and *Covert* v. *Covert*, (106 Fed. Rep., 183,) where the actual existing device was offered for sale. If there was any soliciting of orders prior to May 28, 1902, it was for future delivery of devices not yet manufactured, which would bring the case in the class with *Campbell* v. *N. Y.* (36 Fed. Rep., 261) and *Ruddick* v. *Milliken*, (72 O. G., 1651,) where it was held that the device—

built or made to order is not "on sale" till it is completed, delivered, and accepted. (*Walker on Patents*, sec. 96.)

The petition is denied.

EX PARTE CARTER, JR.

Decided May 27, 1910.

TRADE-MARKS—"COKETTES" NOT DESCRIPTIVE OF BRIQUETS FOR FUEL.

The word "Cokettes" *Held* registrable as a trade-mark for briquets, for although this term might serve to indicate a briquet made of coke its suggestiveness is so remote that it does not fall within the class of marks whose registration is prohibited because of their descriptive character.

ON APPEAL.

TRADE-MARK FOR BRIQUETS.

Mr. Alan M. Johnson for the applicant.

TENNANT, *Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks refusing to register the word "Cokettes" as a trade-mark for briquets for fuel and also from his ruling that the class of merchandise should be designated as in "Class 1, Raw or partly-prepared materials."

The Examiner held the word "Cokettes" to be descriptive of the character or quality of the goods, the reasons being set forth in his statement in answer to this appeal as follows:

The word "coke," of course, means the solid product of the carbonization of coal, and one of the common uses of this article is for fuel. The suffix "-ette" is the feminine of "-et," which is diminutive in force. (See the *Century Dictionary and Cyclopedia*.) The applicant's goods, briquets, are defined as "coal-dust molded for fuel into the shape of bricks or balls."

It is believed that the word "Cokettes," as applied to a fuel, has a significance which prevents its registration in view of the ruling in the case of *In re Central Consumers Company*, (140 O. G., 1211.) * * *

The applicant's mark is regarded as having an inherent signification as applied to a fuel. Whether the fuel upon which the applicant uses the mark is or is not made of coke is regarded as immaterial. If it is made of coke, it is descriptive; and if not, it is believed to be deceptive. The ordinary purchaser would, it is submitted, regard the applicant's briquets as some product of the well-known fuel, coke.

I cannot agree with the Examiner of Trade-Marks that the word "Cokettes" is merely descriptive in the sense contemplated by the statute. It is not a word in ordinary use in the English language, and although this term might serve to indicate a briquet made of coke its suggestiveness is so remote that in my opinion it does not fall within the class of marks prohibited registration because of their descriptive character. The decision of the Examiner as to this ground of his decision is therefore reversed.

In respect to the question of classification it is well settled that the decision of the Examiner of

Trade-Marks upon questions of classification will be overruled only in case of obvious error.

As stated in *ex parte Nestlé and Anglo-Swiss Condensed Milk Company*, (129 O. G., 3160:)

The scope of the classes of merchandise established under section 2 of the act of May 4, 1906, is peculiarly within the knowledge of the Examiner of Trade-Marks, and his conclusions upon questions of classification will not be disturbed except in cases of obvious error.

The ruling in the case of *ex parte The American Wringer Co.* (134 O. G., 1803) is to the same effect.

The decision of the Examiner of Trade-Marks is affirmed as to this ground.

NORRIS *v.* JOHNSON.

Decided June 7, 1910.

INTERFERENCE—MOTION TO DISSOLVE—RES ADJUDICATA—MERITS.

A decision of the Primary Examiner dissolving an interference on the ground that the question in issue is *res adjudicata* relates to the merits and is reviewable in the first instance by the Examiners-in-Chief.

APPEAL on motion.

HOISTING AND CONVEYING APPARATUS.

Messrs. Emery & Booth for Norris.

Messrs. Benedict, Morsell & Caldwell for Johnson.

TENNANT, *Assistant Commissioner:*

This is an appeal by Norris from a decision of the Primary Examiner rendered May 14, 1910, dissolving the interference, on a motion by Johnson, on the ground that the question at issue is *res adjudicata*.

The decision of the Examiner shows that the interference was dissolved in view of an award of priority to Johnson in interference No. 28,351, involving the same parties as the present interference, on the ground that the issue of the present interference is upon the same identical subject-matter of invention as the former.

The question involved, therefore, is one of merits and reviewable in the first instance by the Board of Examiners-in-Chief. (*Eschinger* v. *Drummond et al.*, 121 O. G., 1348; *Corey* v. *Eiseman et al.*, 122 O. G., 2063; *Booth et al.* v. *Honan et al.*, 123 O. G., 319.)

The appeal is dismissed.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Second Circuit.

BRADLEY *v.* METAL STAMPING CO.

Decided December 7, 1909.

PATENTABILITY—INVENTION—THILL-COUPLING.

The Bradley patent, No. 609,928, for a thill-coupling having a leather packing between the spherical knuckle and the inclosing draft-eye, *Held* void for lack of invention in view of the prior art.

SUIT in equity by Christopher C. Bradley against the Metal Stamping Company. From an order granting a preliminary injunction defendant appeals. Reversed.

Mr. W. A. Megrath for the appellant.

Mr. H. P. Denison for the appellee.

Before LACOMBE, WARD, and NOYES, Circuit Judges.

LACOMBE, *Cir. J.:*

This patent has been twice before this court. *Bradley* v. *Eccles* (126 Fed., 947; 61 C. C. A., 669) and *Bradley* v. *Eccles* (139 Fed., 447; 71 C. C. A., 201) may be consulted for information as to details of the patent. The device covered by it is a packing, generally of leather, which is inserted in a thill-coupling so as to be interposed between the spherical interior of the draw-eye and the knuckle which is inserted. We found the patent to be a very narrow one, which could be sustained only for the precise device shown, but also found that on the record then before us there was patentable novelty. The device thus sustained we described as—

a hard leather packing—molded before application into such shape as will cover the knuckle completely—integral, but with an open longitudinal joint which permits it to be sprung open so as to slip over the knuckle, whereupon it resumes its spherical shape.

The following excerpts from the prior opinions will indicate the character of the record then before us:

Some six years prior to the patent in suit the same patentee had taken out one for a thill-coupling the iron parts of which, including the spherical knuckle on the thill fitting into a similarly-shaped recess in the draft-eye, are substantially the same as in the patent in suit. * * * There could be no invention in applying a washer between these metal parts. * * * The use of leather washers to relieve friction, prevent rattling, secure even pressure, and avoid wear and tear between metal surfaces, has been the common property, not only of mechanics, but also of all persons possessing ordinary intelligence, for many generations. If the bearing-surfaces are square, or circular, or triangular—cylindrical, conical, or spherical—ordinary common sense would suggest that the scrap of leather to be employed must be of such shape and size as reasonably to conform thereto. If the surfaces are close together, the leather must be thin; if far apart, it should be thicker. * * * If all the patentee had done was to put a flat leather washer of suitable size and shape between those parts, this court would not have found invention in such a contrivance, even though after it was forced into place by the closing of the draft-eye upon the spherical knuckle the leather assumed the shape shown in the patent. The patentee, however, went a step further. He testified that "after repeated experiments [he] devised a way for pressing up a leather packing into the form shown in the drawing," "provided with a longitudinal opening upon one side" so that they "are easily and readily replaced," and one is "always sure of perfect alinement." The specification states that the packing is made of a flat piece of hard oak leather and "bent and molded by pressure to the required spherical form, * * * so that this split packing will retain its shape and can be sprung over the wrist [spherical knuckle]," and "twisting and wringing of the packing in the draft-eye * * * is entirely avoided." * * * The molded and integral packing of the patent appears, from the testimony of complainant, to have prevented rattling to an extent not secured by other forms of packing with which he experimented for five years before he hit upon this device; and it has commended itself to the public, as large and increasing sales indicate. Defendant has introduced no evidence on this branch of the case, except the earlier patents.

Two patents only were relied upon on the earlier appeals. The Temple patent, No. 297,043, June 5, 1883, showed the packing—of rawhide or other suitable flexible material—

but the metallic barrel over which it is slipped is cylindrical and the packing does not cover its ends, the packing is itself cylindrical and to any contact of parts caused by lateral or torsional twists it supplies no non-metallic buffer.

The other reference was a Canadian patent to Murray, September 18, 1888. It shows a thill in the bifurcation of which there is a ball with cylindrical trunnions, which is inserted in a recess in the draft-iron. Upon the top of this ball is located an inverted-cup-shaped packing, preferably of leather; in the bottom, under the ball, is laid a similar cup-shaped packing. Of this patent we said in our earlier opinion:

It closely resembles the device of the Bradley patent, but is not the same, since it is not integral, and therefore does not cover the ball as completely as the packing of [Bradley's] patent; the two cups being separated from each other by the width of the trunnions.

In our later opinion we pointed out the advantage of having the packing in a single piece molded out of leather hard enough to retain its shape, and which could be slipped over the spherical knuckle.

The record now before us contains a much fuller showing of the prior art. It is unfortunate that such a presentation was not made when the patent was first considered. Two only of the new references need be discussed. The object of invention, as stated in the patent to Clapp and Van Patten (No. 179,682, July 11, 1876), is to—

produce a cushion to be interposed between the divided eye, which is secured to the thill, and the bolt, which is rigidly attached to the ears of the clip part of the coupling, which will effectually prevent the eye from striking against the ears of the clip part and thus cause rattling, and which can be easily placed or removed and a new one replaced without removing the bolt of the clip part; and it consists in the cushion having collars or equivalent means for preventing the divided eye from coming in contact with the ears of the clip, and grooved [the context shows that the writer means "split"] to enable it to be readily placed over or removed from the bolt of the clip part without removing the latter.

The drawings show this packing very clearly.

FIG. 2.

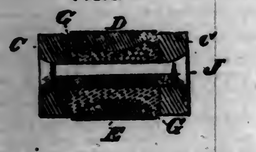


FIG. 3.



FIG. 4.



J is a bolt rigidly secured, by riveting or otherwise, to the ears, C, of the clip part. This bolt is not to be withdrawn, but a divided draft-eye is used, which is slipped around the bolt and fastened to the thill. When the thill is removed, one part of this divided eye is released from the thill, and the eye drawn out from engagement with the bolt. D and E, Fig. 2, represent the two parts of the divided eye. It will be understood that they are hinged together in the rear of the bolt. The patentee says:

Between the divided eye, D, E, and the bolt, J, of the clip part, we interpose a cushion of india-rubber, or other elastic or yielding material. This is made with a depression, F, over which the divided eye, shaped internally to fit the groove, is secured, shoulders, G, on the cushion preventing it from coming in contact with the ears of the clip part. * * * In order to enable the cushion to be readily placed over the bolt, J, we provide it with a groove [he means "a slit"], K, extending from its circumference to the aperture, L, which groove allows the cushion to be spread open and over the bolt, J, in placing, removing, or replacing it. * * * The advantages possessed by our invention are that the cushion can be placed, removed, and replaced upon the bolt, J, without removing the latter.

The other patent now first presented to this court is one for a thill-coupling granted to Elting, October 2, 1883, No. 286,123. Fig. 7 sufficiently indicates the packing therein described.

Fig 7.



The specification states that by means of an improved construction and arrangement of parts the absence of all noise from rattling is secured. The packing—

projects far enough on each side of the thill-iron, so as to prevent all rattling by lateral motion upon surfaces which, in most couplings, are entirely unprotected by packing.

These two patents show that in the art prior to Bradley there were disclosed features which, as that art was disclosed in the former record, were apparently absent. We find a molded packing so arranged as to cover every part of the engaging metal surfaces completely, so that whatever motion there may be, up or down, forward or back, to right or left, or torsional, metal can never run or strike against metal. Moreover this packing device of the prior art was split, so that it could be sprung open and spread over the surface it was designed to protect, without any liability to slip, to get out of place, to wrinkle or buckle.

Had these patents been in the record when this patent was first considered, we could not have found patentable novelty in the spherical-shaped molded packing of Bradley. Now that they are here, we must hold the patent void for lack of invention.

The order is reversed.

ADJUDICATED PATENTS.

The Hovey patent, No. 876,058, for a railway motor-velocipede, *Held* valid, but not infringed. *Sheffield Car Co.* v. *Buda Foundry & Mfg. Co.*, (C. C.,) 177 Fed. Rep., 713.

The Jeffery patents, Nos. 454,115 and 558,956, for pneumatic wheel-tires, *Held* not infringed. *Gormley & Jeffery Tire Co.* v. *United States Agency*, (C. C. A.,) 177 Fed. Rep., 691.

The Bemis patent, No. 696,305, for a station-terminal in a pneumatic-despatch system, claims 8, 33, and 40, *Held* not anticipated, valid, and infringed. *Bemis* v. *Charles A. Stevens & Bros.*, (C. C.,) 177 Fed. Rep., 717.

The McCanna patent, No. 822,900, for a force-feed lubricator, *Held* not anticipated, valid, and infringed. *John F. McCanna Co.* v. *Lavigne Mfg. Co.*, (C. C.,) 177 Fed. Rep., 709.

The Mabley and Franquist patent, No. 883,552, for a clutch mechanism for automobiles, *Held* not infringed. *Continental Automobile Co.* v. *A. G. Spalding & Bros.*, (C. C.,) 177 Fed. Rep., 693.

Disclaimer.

919,999.—*Thomas Allsop* and *Walter W. Sibson*, Philadelphia, Pa. SINGEING-MACHINE. Patent dated April 27, 1909. Disclaimer filed June 10, 1910, by the assignee, *The Philadelphia Drying Machinery Company*.

Enters this disclaimer—

"To that part of the claim of said specification which is included in the numbered claims 1 to 7, inclusive, and in the following words, to wit:

"1. In a machine of the class described, a carrier, article supports arranged upon said carrier and extending perpendicularly thereto, singeing means arranged in juxtaposition to said carrier, and means for causing relative movement between said carrier and said singeing means to subject the articles to the action of the singeing means.

"2. In a machine of the class described, a rotatable carrier, article supports arranged upon said carrier and extending perpendicularly thereto, singeing means arranged in juxtaposition to said carrier, and means for operating said carrier.

"3. In a machine of the class described, a rotatable carrier, article supports arranged upon said carrier and extending perpendicularly thereto, singeing means arranged in parallel relation to said article supports, and means for operating said carrier.

"4. In a machine of the class described, means for supporting the articles to be singed, means for singeing said articles, means for causing a relative movement between said supporting means and the singeing means, whereby the singeing means are caused to act upon the articles in the direction of their width, means for removing the carbonised fiber from the singed articles, and means for removing the articles from said supporting means.

"5. In a machine of the class described, means for singeing, a support for the articles to be singed having movement relatively to said singeing means, whereby the articles to be singed are presented to the singeing means in the direction of the width of said articles, means for removing the carbonized fiber from the singed articles, and means for removing the articles from said support.

"6. In a machine of the class described, means for singeing, a support for the articles to be singed having movement relatively to said singeing means, whereby the articles to be singed are presented to the singeing means in the direction of the width of said articles, means for imparting intermittent movement to said support, means for removing the carbonized fiber from the singed articles, and means for removing the articles from said support.

"7. In a machine of the class described, a rotating carrier, means for supporting thereon the articles to be singed, means for singeing said articles, means for actuating said carrier whereby the latter is caused to present the articles in the direction of their width to the action of the singeing means, means for removing the carbonized fiber from the singed articles, and means for removing the articles from the supporting means."

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 14, 1910.

The Permanoid Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the C. A. Woolsey Paint & Color Company, of Jersey City, N. J., for registration of a trade-mark and trade-mark registrations to the following named parties, (1) M. Ewing Fox & Company, of New York, N. Y., and (2) The Permanoid Company, of New York, N. Y., and the notice of such declaration sent by registered mail to the said The Permanoid Company at its address of record, 64 Fulton street, borough of Manhattan, New York, N. Y., has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said The Permanoid Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner*.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 11, 1910.

Jane A. Shattuck, her assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Charles F. Wagner, of Hotel Savoy, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Jane A. Shattuck, of Utica, N. Y., and the notice of said declaration sent by registered mail to the said Jane A. Shattuck having been returned undelivered, notice is hereby given to the said Jane A. Shattuck, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner*.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 8, 1910.

Francis Brothers, their assigns or legal representatives, take notice:

An interference has been declared by this Office between three applications for registration of trade-marks by the following named parties: (1) Arthur Petrie, of Wanette, Okla.; (2) Charles P. Gleraltowski, of Chicago, Ill.; (3) Knoll & Company, of Oristalstrasse, Liestal, (Canton of Basel-Land,) Switzerland, and a trade-mark registration to Francis Brothers, whose address of record is corner of Main and Third streets, Uhrichsville, Ohio, and the notice of such declaration sent by registered mail to the said Francis Brothers at the address here given has been returned by the Post-Office Department as undeliverable.

Notice is therefore hereby given to the said Francis Brothers, their assigns or legal representatives, that if they or any of them desire to contest the said interference, they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner*.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 1, 1910.

W. N. Richardson & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Sharp & Dohme, of Baltimore, Md., for registration of a trade-mark and a trade-mark registered to W. N. Richardson & Company, of 66 Maiden Lane, New York, N. Y., and the notice of said declaration sent by registered mail to the said W. N. Richardson & Company having been returned undelivered, notice is hereby given to the said W. N. Richardson & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner*.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 1, 1910.

Davidson & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the American Coffee Co. of New Orleans, Ltd., of New Orleans, La., for registration of a trade-mark and a trade-mark registered to Davidson & Co., of 1436 Broadway, New York, N. Y., and the notice of said declaration sent by registered mail to the said Davidson & Co. having been returned undelivered, notice is hereby given to the said Davidson & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner*.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 21, 1910.

Hamilton & Whittin, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of John Elefritz, of St. Louis, Mo., for registration of a trade-mark and a trade-mark registration to Hamilton & Whittin, of Chicago, Ill., and the notice of such declaration sent by registered mail to the said Hamilton & Whittin at the address given above has been returned by the Post-Office Department as undeliverable.

Notice is therefore hereby given to the said Hamilton & Whittin, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 21, 1910.

Lariat Manufacturing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Fishbeck Soap Company, of San Francisco, Cal., for registration of a trade-mark and trade-mark registrations to the following-named parties: (1) Joseph R. Ford, of New York, N. Y., (2) Joseph Obern-dorfer, of Salt Lake City, Utah, (3) Clara C. Day, of St. Louis, Mo., (4) Charles C. Gerhart, of Clarksville, Tenn., and (5) Lariat Manufacturing Company, of Jersey City, N. J., and Boston, Mass., and the notice of such declaration sent by registered mail to the Lariat Manufacturing Company at Boston, Mass., has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the Lariat Manufacturing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 19, 1910.

The Kenosha Watch Case Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Philadelphia Watch Case Company, of Riverside, N. J.; an application of Hauser, Elvy & Cia., of Mexico City, Mexico, both for registration of certain trade-marks, and a trade-mark registration of The Kenosha Watch Case Company, of Kenosha, Wis., and the notice of such declaration sent by registered mail to The Kenosha Watch Case Company, at the address given above, has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said The Kenosha Watch Case Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 17, 1910.

Albert C. Murphy, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the patent of A. C. Murphy, of East St. Louis, Ill., and an application for patent by Edward C. Meissner, C/o Eagle Generator Co., St. Louis, Mo., and the notice of said declaration sent by registered mail to the said Murphy having been returned undelivered, notice is hereby given to the said Murphy, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 11, 1910.

Radical Remedy Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Barclay & Barclay, of New York, N. Y., for registration of a trade-mark and trade-mark registrations to the following-named parties: (1) Radical Remedy Company, of Hickory, N. C., and (2) Walter M. Carr, of Stoughton, Wis., and the notice of such declaration sent by registered mail to the Radical Remedy Company at the address given above has been returned with the statement that this corporation has been dissolved.

Notice is therefore hereby given to the said Radical Remedy Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

F. A. TENNANT, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 10, 1910.

The St. Paul Roller Mill Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the C. A. Gambrill Mfg. Company, of 100 Commerce street, Baltimore, Md., for registration of a trade-mark and trade-marks registered to the Barber Milling Company, of Minneapolis, Minn., The St. Paul Roller Mill Co., of St. Paul, Minn., and H. Becker & Co., of New York, N. Y., and the notice of said declaration sent by registered mail to The St. Paul Roller Mill Co. having been returned undelivered, notice is hereby given to the said The St. Paul Roller Mill Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 10, 1910.

William Brokhahne, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the Norvell-Shapleigh Hardware Company, of Fourth and Washington avenues, St. Louis, Mo., for registration of a trade-mark and trade-marks registered to Krusius Brothers, 296 Broadway, New York, N. Y., the Challenge Cutlery Corp., of Seymour and Kossuth streets, Bridgeport, Conn., the A. F. Shapleigh Hardware Company, of St. Louis, Mo., and William Brokhahne, of New York, N. Y., and the notice of said declaration sent by registered mail to the said William Brokhahne having been returned undelivered, notice is hereby given to the said William Brokhahne, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 9, 1910.

William Brokhahne, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Norvell-Shapleigh Hardware Company, of Fourth street and Washington avenue, St. Louis, Mo., for registration of a trade-mark and trade-marks registered to Hibbard, Spencer, Bartlett & Company, northeast corner of State and South Water streets, Chicago, Ill., the A. F. Shapleigh Hardware Company, of St. Louis, Mo., and William Brokhahne, New York, N. Y., and the notice of said declaration sent by registered mail to the said William Brokhahne having been returned undelivered, notice is hereby given to the said William Brokhahne, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

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Iowa	14	1	Virginia	2	.....
Kansas	6	1	Washington	12	1
Kentucky	1	2	West Virginia	7	.....
Louisiana	3	1	Wisconsin	12	.....
Maine	.....	.....	Wyoming	.....	.....
Maryland	7	.....			
Massachusetts	36	4	Alaska, District of	.....	.....
Michigan	14	3	Arizona Territory	1	.....
Minnesota	9	1	District of Columbia	4	.....
Mississippi	4	.....	Hawaii Territory	.....	.....
Missouri	18	8	New Mexico Terty	1	.....
Montana	4	.....	Panama	.....	.....
Nebraska	9	1	Philippine Islands	.....	.....
Nevada	1	.....	Porto Rico	.....	.....
New Hampshire	2	.....	U. S. Army	.....	.....
New Jersey	30	7	U. S. Navy	.....	.....
New York	57	35			
North Carolina	1	.....	Total to citizens of the United States	571	105
North Dakota	1	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Netherlands	.....	1
Austria-Hungary	1	.....	Newfoundland	.....	.....
Belgium	2	.....	New South Wales	.....	.....
Brazil	.....	.....	New Zealand	1	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	15	.....	Persia	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Russia	.....	.....
China	.....	.....	Scotland	.....	.....
Costa Rica	.....	.....	South Australia	.....	.....
Cuba	.....	.....	Spain	.....	.....
Denmark	.....	.....	Sweden	1	.....
England	13	1	Switzerland	1	.....
France	4	1	Tasmania	.....	.....
Germany	17	4	Transvaal, South Africa	2	.....
Haiti	.....	.....	Victoria	.....	.....
India	1	.....	Western Australia	.....	.....
Ireland	.....	.....			
Italy	.....	.....	Total to citizens of foreign countries	59	7
Japan	1	.....			
Mexico	.....	.....			

Amendment to the Code of Law for the District of Columbia.

(Public—No. 202.)

(H. R. 13468.)

An act to amend an act entitled "An Act to establish a code of law for the District of Columbia."

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the act entitled "An Act to establish a code of law for the District of Columbia," approved March third, nineteen hundred and one, be, and the same is hereby, amended by adding to section one hundred and seventy-seven thereof the following:

"*Provided*, That neither the United States nor the District of Columbia, nor any officer of either, acting in his official capacity, shall be required to give bond or enter into undertaking to perfect any appeal or to obtain any injunction or other writ, process, or order in or of any court in the District of Columbia for which a bond or undertaking is now or may be hereafter required by law or rule of court."

Approved June 9, 1910.

Remittances to the Patent Office.

Checks should be certified. Cash should be registered; if by ordinary mail at risk of sender. Postage stamps not receivable.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business June 21, 1910.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	May 24	May 23	342
129	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Apr. 7	Apr. 21	268
173	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Forming; Metallurgy; Shaping Fluid Metal.	May 23	June 8	205
222	4. Bridges; Conveyors; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	May 14	May 16	374
167	5. Bookbinding; Harvesters; Jewelry; Music.	May 3	May 3	307
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Apr. 18	May 11	410
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	May 10	May 19	491
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	May 27	May 20	211
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Mar. 3	May 7	396
226	10. Carriages and Wagons	May 2	Apr. 7	631
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	May 4	May 21	233
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	May 3	Apr. 30	620
320	13. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, Etc.	Apr. 13	May 11	495
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	May 23	May 23	295
306	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Sheets and Fabrics; Liquid Coating Compositions; Paper-Making; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	May 23	May 25	301
109	16. Telegraphy; Telephony	May 2	May 9	213
308	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	May 25	May 24	157
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers, Steam-Engines; Steam-Engine Valves.	May 11	May 6	197
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Apr. 14	May 23	204
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	May 25	May 21	172
112	21. Brakes and Gins; Carding; Cloth-Finishing; Coverings; Fab and Fur; Knitting and Netting; Silk; Spinning; Weaving.	May 16	May 13	326
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Mar	Apr. 26	583
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	May 10	May 19	234

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
144	24. Apparel; Apparel Apparatus; Electricity, Medical and Surgical; Sewing-Machines; Surgery.	May 13	May 16	402
316	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	June 3	June 10	110
106	26. Electricity, Generation; Motive Power.	Mar. 12	Apr. 11	311
272	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	May 24	May 23	324
60	28. Electric Railways; Internal-Combustion Engines.	Apr. 27	May 16	370
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	May 9	May 17	307
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	May 3	May 7	338
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Apr. 11	May 20	262
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Fine Arts; Packaging Liquids; Refrigeration.	May 25	May 26	326
164	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Apr. 18	May 11	422
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fastenings.	May 11	May 14	354
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	May 16	May 18	607
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	May 2	May 2	634
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	May 5	May 10	442
378	38. Artesian and Oil Wells; Care of Live Stock; Fishing and Trapping; Stationary; Stone-Working.	Apr. 21	May 6	458
221	39. Water Distribution	Mar. 29	June 1	411
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	May 23	May 21	423
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Apr. 2	Apr. 19	583
270	42. Electric Signaling; Railway Signaling; Signals.	Mar. 7	Apr. 30	461
362	43. Baths and Closets; Fire-Extinguishers; Sewerage; Water Purification.	May 16	May 21	51

Oldest new case, Mar. 1; oldest amended, Apr. 7.
Total number of applications awaiting action..... 15,696

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	May 18	June 9	707
	Designs	May 25	June 13	117
	Labels and Prints	June 13	June 13	37

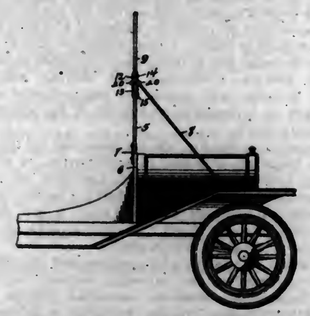
Trade-Marks.

Extra copies of the trade-mark portion of the GAZETTE, which will be sold separately, may be obtained single or in quantities for five cents each. Coupons will be taken in payment thereof.

PATENTS

GRANTED JUNE 28, 1910.

962,406. WIND-SHIELD. EDWARD S. ADAMS, Columbus, Ohio. Filed June 7, 1909. Serial No. 500,668.



A shield for automobiles comprising a fixed lower section and an upper section, a pair of interengaging hinge plates upon the front face of the shield at each side thereof, a pair of interengaging hinge plates upon each side of the shield at the rear face thereof, removable pintles for connecting said hinge plates, and means for preventing the complete withdrawal of said pintles from said hinge plates, said means comprising spring tongues adapted to enter reduced portions of said pintles.

962,407. LAWN-MOWER. JAMES H. AUBLE, Cincinnati, Ohio, assignor of one-third to Jacob H. Bromwell, Wyoming, Ohio, and one-third to James J. McDonald, Cincinnati, Ohio. Original application filed Dec. 28, 1903, Serial No. 186,803. Divided and this application filed May 11, 1904. Serial No. 207,400.



1. In a wheel for a lawn mower, the combination of an external wheel shell having a side E^5 and a peripheral tread E^6, and a flange extending down from that edge of the peripheral tread which is opposite to said side E^5, and a separate cylinder provided with a groove having divisions, forming a zigzag course, said cylinder located in the groove formed by the periphery and the side and the flange of said wheel, substantially as and for the purposes specified.

2. In a mechanism for lawn mowers, the combination of an external wheel shell having a side E^5 and a peripheral tread E^6, and a flange extending down from that edge of the peripheral tread, which is opposite to said side E^5, and a separate cylinder provided with a groove having divisions, forming a zigzag course, the cylinder located in the groove formed by the periphery and the side and the flange of said wheel, and the stationary disk located at the open side of the wheel, substantially as and for the purposes specified.

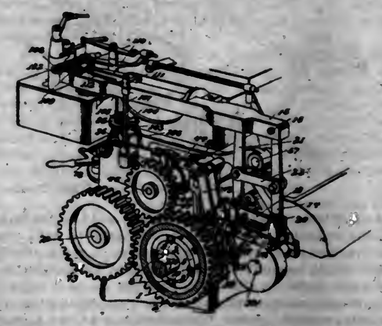
3. In a wheel for a lawn mower, the combination of an external wheel shell having a side E^5 and a peripheral tread E^6 and a flange extending down from that edge of the peripheral tread which is opposite to said side E^5, and a separate cylinder provided with a groove having divisions, forming a zigzag course, said cylinder located in the groove formed by the periphery and the side and the flange of said wheel, the central portion of the side of the wheel being inclined inwardly and then bent out as a flange, substantially as and for the purposes specified.

4. In a lawn mower, the combination of an external wheel shell having side E^5 and a peripheral tread E^6, and a flange extending down from that edge of the peripheral tread which is opposite to said side E^5, and a separate cylinder provided with a groove having divisions, forming a zigzag course, said cylinder located in the groove formed by the periphery and the side and the flange of said wheel, and the disk B located at the open side of the wheel, the wheel having a central flange and the bearing B^7, fixed to the central flange of the wheel, and constituting the rotatory journal upon which said disk rests, substantially as and for the purposes specified.

5. In a lawn mower, the combination of an external wheel having a side E^5, formed with a central flange, and a peripheral tread E^6, and a flange extending down from that edge of the peripheral tread which is opposite to said side E^5, knives, and mechanism for operating the same, a stud Q^4 connected to said mechanism, a separate cylinder provided with a groove having divisions, forming a zigzag path for the stud Q^4 received in said groove, said cylinder located in the groove formed by the periphery and the side and the flange of said wheel, a disk B centrally inclined outwardly and then provided with a horizontal bearing flange, and the journal B^7 fixed within and to the central flange of the side E^5, and rotated within the horizontal bearing flange of the disk B, substantially as and for the purposes specified.

[Claims 6 to 9 not printed in the Gazette.]

962,408. DRIVING OR TRANSMISSION MECHANISM FOR TYPE AND OTHER MACHINES. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Jan. 4, 1909. Serial No. 470,576.



1. A driving or transmitting mechanism for type casting and like machines including, in combination, driving,

driven and coupling members and a timing mechanism controlled by the mold dimensioning devices and acting upon or through the coupling member to produce a dwell in the movement of the driven member.

2. A driving or transmission mechanism for type casting and like machines including, in combination, driving and driven members, intermediate coupling means, an adjustable timing mechanism controlling said coupling means, and means coupled with the mold and acting upon said timing mechanism to adjust the dwell to accord with the capacity of the mold.

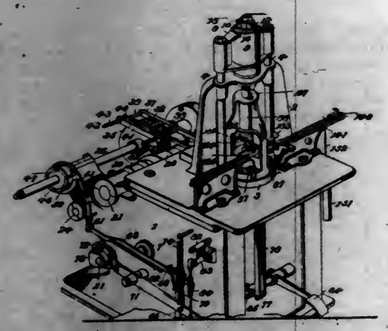
3. In a type casting and similar machines provided with adjustable molds, the combination of the following elements, to wit; a driving member; a driven member, constituting the driver of the casting machine; a coupling means, such as a clutch, intermediate said driving and driven members; a timing mechanism controlling the opening and closing of said coupling means; and adjusting means for said timing mechanism controlled by the mold adjusting devices.

4. In a driving or power transmitting mechanism for type casting machines provided with an adjustable mold, and in combination therewith, the following elements, to wit; a driving member; a driven member; means for detachably coupling said driving and driven members; and a timing mechanism controlling the opening and closing of said coupling means, and provided with means for varying the interval between its opening and closing action to vary the dwell.

5. In a driving or power transmitting mechanism for type casting and like machines equipped with mold adjusting and metal injecting mechanisms and in combination therewith the following elements, to wit; a driving member; a driven member; means for detachably coupling said driving and driven members; a timing mechanism controlling the opening and closing of said coupling means and provided with variable admeasuring means; and means coupled with the mold adjusting devices and acting upon said variable admeasuring means to adjust the period of dwell to correspond with the dimension of the mold cavity.

[Claims 6 and 7 not printed in the Gazette.]

962,409. DRIVING-PRESS FOR TYPE-MATRICES. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Mar. 12, 1909. Serial No. 482,873.



1. A driving press for type matrices and the like including the following elements, in combination, to wit; opposing plungers and actuating mechanism therefor affording longitudinal support for said plungers independently of the press frame; a driving mechanism for said actuating mechanism including driving and driven shafts with intermediate variable speed transmission gearing; a motor, and a one revolution clutch intermediate said motor and driving shaft; and a brake controlled from the driving shaft and automatically applied during a predetermined portion of the rotation of said shaft.

2. A driving press for type matrices and the like including the following elements, in combination, to wit; actuating devices for the compressing members including a driven shaft; a driving mechanism including a motor, a driving shaft and a one revolution clutch; variable speed transmitting gearing connecting said driving and driven shafts; and a braking mechanism actuated from and reacting upon the driving shaft at a point in the revolution of said shaft corresponding with the opening of the clutch.

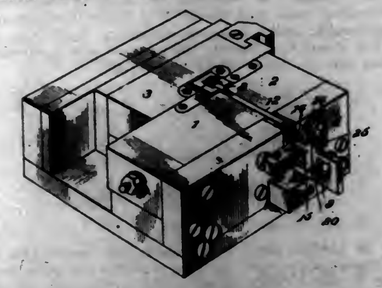
3. A driving press for type matrices and the like including, in combination, the following elements, to wit; compressing members; actuating devices for the movable compressing member or members, including a driven shaft; a motor; a driving shaft; a one revolution clutch intermediate said motor and driving shaft; variable speed transmitting gearing connecting said driving and driven shafts; a brake; and means for automatically applying said brake at a predetermined point in the revolution of the driving shaft.

4. A driving press for type matrices and the like including the following elements, in combination, to wit; compressing devices; actuating mechanism for the compression member including a driven shaft; a motor; a driving shaft coupled with the motor through a one revolution clutch; and variable speed transmitting gearing intermediate said driving and driven shafts.

5. A driving press for type machines and the like including, in combination, the following elements, to wit; opposed compressing members; actuating devices for the movable compressing member including a driven shaft; motor and driving shafts with an intermediate one revolution clutch; a brake; and means for automatically applying the brake at a predetermined point in the rotation of the driving shaft.

[Claims 6 to 45 not printed in the Gazette.]

962,410. LOW-QUAD TYPE-MOLD. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed June 3, 1909. Serial No. 499,950.



1. A low quad mold provided with a divided or sectional mold blade the latter comprising a main section recessed on one side in rear of its casting face and a superimposed cut-off section provided with a dependent web extending into the recess in the main section and furcated at its front end to provide a resilient member for engaging the top bearing.

2. In a low quad type mold provided with a mold blade channel and in combination therewith a sectional mold blade working in said channel and comprising a lower or main section recessed on one side and provided with a bearing surface for the top bearing and a superposed cut-off section provided with a dependent web extending into said recess, the front end of said web being recessed and the lower section thereof forming a resilient bearing engaging the top bearing.

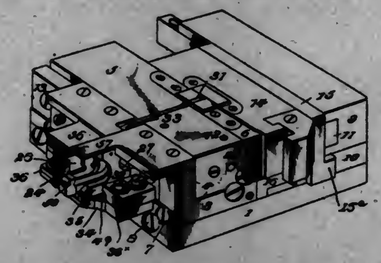
3. In a low quad type mold provided with a mold blade channel and in combination therewith a sectional or divided mold blade the same comprising a lower or main section recessed on one side to a portion of its depth, a superposed cut-off section taking its bearing upon the upper edge of the main section and provided with a longitudinal dependent web extending into said recess and slotted at its front end to form a resilient member, and an adjustable top bearing engaging bearing surfaces on the main section and said resilient member of the cut-off section.

4. A sectional or divided mold blade for type molds the same comprising a main section recessed on one side and provided with a bearing surface to receive a top bearing and a superposed cut-off section provided with a resilient member contained within the recess in the main section in proximity to the bearing surface on said main section and adapted to be engaged and put under tension by the top bearing.

5. In a type mold provided with a mold blade channel and in combination therewith a sectional or longitudinally divided mold blade comprising a main or lower section, a superposed cut-off section equipped with a resilient member, and an adjustable top bearing engaging said resilient member to put the same under tension and also engaging a bearing on the main section to retain the latter upon its seat in the mold blade channel and to retain the cut-off section in contact with the main section under elastic pressure.

[Claims 6 to 11 not printed in the Gazette.]

962,411. LOW-QUAD MOLD FOR TYPE-MACHINES. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed June 3, 1909. Serial No. 499,951.



1. A type mold such as described provided with a base plate; a front abutment; spaced side blocks; and a reciprocating cross-block interposed between said abutment and side blocks and provided with lateral extensions or ribs on opposite sides, the one extending beneath and engaging the side blocks and the other engaging a top bearing on the abutment.

2. A type mold such as described, comprising a base plate; a front abutment secured to the base plate and provided with side and top bearing surfaces; a squaring block secured to the base plate; spaced side blocks secured to the squaring block and overhanging the inner edge of the latter; and a reciprocating cross block interposed between said front abutment and the side blocks and provided with a relatively wide base or gate section engaging beneath the side blocks on one side and the overhanging or top bearing of the front abutment on the other.

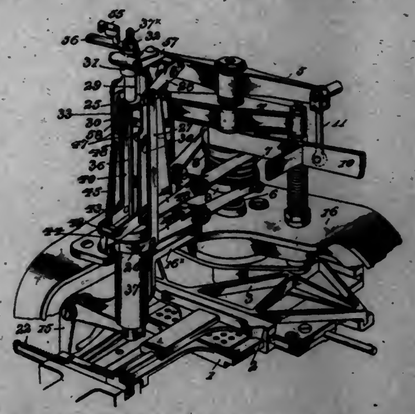
3. A type mold such as described containing a base plate, side blocks, a mold blade and a movable cross block provided with a jet opening and a jet ejector blade forming one wall of said jet opening, and a cam mounted upon the base plate and engaging the ejector blade, said cam being so formed and adjusted relative to the traverse of the cross block that the ejector blade will be advanced to discharge the jet when the jet opening arrives near the edge of the base plate in position to discharge the jet over said edge.

4. A type mold such as described provided with a base plate, side blocks, a mold blade, a cross-block containing a jet opening, a jet ejector carried by the cross block, and a cam for said jet ejector adjusted to advance the latter as the jet opening approaches the edge of the base plate, and in combination therewith a squaring block interposed between the side blocks and base plate and having the corner adjacent the edge of the base plate cut away or removed to facilitate the discharge of the jet over the edge of said base plate.

5. A type mold such as described provided with a base plate one edge whereof is cut away to facilitate the discharge of the jet, a squaring plate having the corner in proximity to the recessed or beveled edge of the base plate cut away, side blocks and a mold blade mounted upon said squaring plate, a cross-block provided with a jet opening and a movable ejector blade, and a cam mounted upon the base plate and engaging the ejector blade to advance the latter and discharge the jet opposite the cut away corner of the squaring plate.

[Claims 6 to 37 not printed in the Gazette.]

962,412. CONTROL MECHANISM FOR LOW-QUAD MOLDS. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed July 8, 1909. Serial No. 506,550.



1. In a control mechanism for low quad molds equipped with floating tongs and transmission devices and in combination therewith an interponent adapted to be entered between one of the tongs members and a member of the transmission devices.

2. In a control mechanism for low quad molds, the combination of the following elements, to-wit; driving and driven members coupled through a compression spring; floating tongs the members whereof are pivotally supported at one end and coupled at the other end with said driving and driven members, respectively; a transmitting member; and an interponent adapted to be interposed between said transmitting member and that one of the tongs members coupled with the driving member.

3. In a control mechanism for low quad molds, the combination of the following elements, to-wit; a centering mechanism including a die case, a movable support therefor, a centering pin, and actuating devices adapted to reciprocate the die case support and centering pin at different rates of speed and provided with a yielding connection between the centering pin and its driving member; a mold provided with a cut-off section; floating tongs having one of its members coupled with the centering pin and the other with the driving member; transmission devices in-

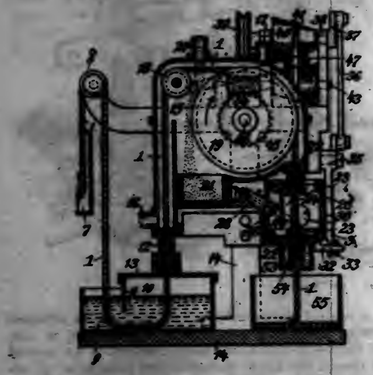
termediate the cut-off section of the mold and that one of the tongs members coupled with the centering pin driving member; and means for intercepting and supporting the floating tongs at an intermediate point in the stroke of the centering pin.

4. A control mechanism for low quad molds including, in combination, the following elements, to-wit; a matrix centering mechanism provided with a centering pin, a driving member therefor and an interposed yielding connection or compression spring; floating tongs the members whereof are coupled at one end to said driving member and centering pin, respectively, and at the opposite end to movable frames or supports; transmission devices intermediate the cut-off section of the mold and the movable frame or support for that one of the tongs members coupled with said driving member; and a bearing in the path traversed by the tongs for arresting the latter and sustaining the pressure on the fulcrums of its members.

5. In type composing machines provided with a low quad mold and matrix centering mechanism, the latter including a centering pin, a driving member therefor and an interposed compression spring, and in combination therewith, a control mechanism for the cut-off section of the mold including a pair of floating tongs the members whereof are connected at one end to said centering pin and driving member, respectively, transmission devices intermediate one member of the tongs and the cut-off section of the mold, and a relatively fixed bearing interposed in the path traversed by the tongs and substantially in line with the pivoted connection between the members comprising said tongs.

[Claims 6 to 21 not printed in the Gazette.]

962,413. METHOD OF SOLDERING CHAINS. GEORGE HILLARD BENJAMIN, New York, N. Y. Filed May 13, 1909. Serial No. 495,617.



1. The method of fusing solder between the abutting ends of interconnected links which consists in passing said links successively through a heating flame, and in oscillating said links during their travel through the flame, whereby the body of each link is exposed to a minimum temperature, and the abutting ends exposed to a maximum temperature.

2. The method of fusing solder between the abutting ends of interconnected links which consists in moving said interconnected links through a heating flame and synchronously oscillating the portion passing through the flame.

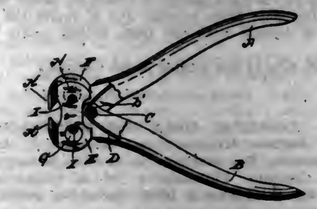
3. The method of uniting solder-filled link-ends of a chain, which consists in passing the chain through a cleansing agent, coating the surface with a non-fluxing powder, passing the chain through a heating flame, guiding said link-ends in the center of the path of travel and oscillating the body of the links partially away from the flame, whereby said link ends are exposed to a greater degree of heat than the other portions of the chain.

4. The method of uniting the abutting ends of interconnected links having cores of solder, which consists in passing said links at a predetermined rate through a heating flame guiding said abutting ends in the center of the path of travel and simultaneously oscillating said links, whereby the body of each link is moved partially away from the flame and the abutting ends travel in range therewith.

5. The method of uniting the abutting ends of interconnected links having cores of solder which consists in passing said links successively through a heating flame, guiding said abutting ends in the center of the path of travel and oscillating the body of each of said links away from the flame in time with the successive travel of said bodies of said links through the flame, whereby said abutting ends are maintained in the path of the flame for a greater time than the body of the link.

[Claims 6 to 9 not printed in the Gazette.]

962,414. PLIERS, NIPPERS, AND SIMILAR TOOL. WILLIAM A. BERNARD, New Haven, Conn., assignor to The William Schollhorn Company, New Haven, Conn., a Corporation of Connecticut. Filed Oct. 30, 1908. Serial No. 460,315.



1. In pliers, punches and similar tools, the combination with operating levers fulcrumed together; of actuating members having a sliding relation with each other and each pivotally connected to a lever on the side of the axis of the tool on which the power is applied to the lever, substantially as described.

2. In pliers, punches and similar tools, the combination with operating levers fulcrumed together; of actuating members having a sliding relation with each other and each pivotally connected to one lever; and a jaw carried by each member on the opposite side of the axis of the tool from the pivot thereof, substantially as described.

3. In pliers, punches and similar tools, the combination with operating levers fulcrumed together, the forward ends carrying parallel plates on the same side of the axis of the tool as the rear ends project; and actuating members having a sliding relation with each other and each pivotally connected to the plates of one lever, substantially as described.

4. In pliers, punches and similar tools, the combination with operating levers fulcrumed together; of actuating members each pivotally connected to a lever and each having a slot for the pivot pin of the other actuating member, substantially as described.

5. In pliers, punches and similar tools, the combination with operating levers fulcrumed together having forward ends projecting on the same side of the longitudinal axis of the tool as the rear ends project; of actuating members each pivotally connected to one lever and having a sliding connection with the other lever, substantially as described.

[Claim 6 not printed in the Gazette.]

962,415. SWIMMING APPARATUS. WILLIAM H. BORGARD, Spokane, Wash. Filed Sept. 2, 1909. Serial No. 515,850.

1. A swimming apparatus comprising a base plate, supporting means therefor, and a fin consisting of a series of rods hinged at one of their ends to the plate, and extending in a common plane therefrom, the rods on opposite sides of the median line of the fin swinging in planes which are divergent and oblique to the axis of the hinge, and an impervious strip mounted on the rods.

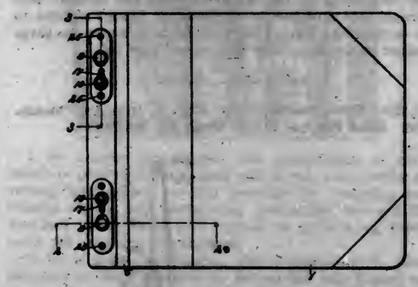


2. The combination with a body garment having a leg portion, of grooved plates secured to the legs, dovetailed plates removably mounted in the grooves of the plates, and foldable propelling devices carried by the dovetailed plates.

3. The combination with a body garment having a leg portion, of grooved metal plates secured to the legs, flexible bands encircling the legs, and connected at their ends to the plates, and foldable propelling devices removably mounted in the grooves of the plates.

4. The combination with a body garment having a leg portion, of grooved plates secured to the legs, propelling devices removably mounted in the grooves of the plates, angular metal strips secured to the legs, one of the branches of said strips extending beneath the soles, and bands fastened at one end to the aforesaid plates, and at their other ends to the strips.

962,416. SECTIONAL POST-BINDER BALL-LOCK. PHILIP A. BOWEN, Newark, N. J., assignor, by direct and mesne assignments, to The Heinn Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 9, 1909. Serial No. 516,921.



1. The combination with the clamping members; posts secured to one of said clamping members, the other being provided with holes adapted to receive said posts; clutch blocks arranged in chambers provided therefor in said clamping member having said holes therethrough, said clutch blocks having holes therethrough, adapted to receive said posts and clutch ball seats therein, said ball seats opening at one side into said holes for said posts, the inner walls of the said seats being outwardly inclined relative to said posts, and blocks also having longitudinal slots therein opening into said clutch ball seats and finger piece cavities in their outer faces; clutch balls arranged in said ball seats to engage said balls and having finger pieces on their outer ends, pivoted in said slots in said blocks; and springs arranged in said slots to engage said levers.

2. The combination with the clamping members comprising inner pieces of metal and outer pieces of wood rigidly secured together, posts secured to the metal piece of one clamping member, the metal piece of the other clamping member being provided with holes adapted to receive said posts and the wood piece thereof being provided with chambers into which said holes open; clutch blocks arranged in said chambers in said clamping member, said clutch blocks having holes therethrough adapted to receive said posts and clutch ball seats therein, said ball seats opening at one side into said holes for said posts; clutch balls arranged in said ball seats to engage said posts; levers carried by said blocks and arranged to engage said balls and having finger pieces thereon, retaining plates having holes therein adapted to receive said posts and the finger pieces of said levers arranged over said chambers in said clamping member; screws for securing said plates threaded into the metal piece of said clamping member, and a covering for said clamping members, said retaining plates being arranged over said covering.

3. The combination with the clamping members comprising inner pieces of metal and outer pieces of wood rigidly secured together, posts secured to the metal piece of one clamping member, the metal piece of the other clamping member being provided with holes adapted to receive said posts and the wood piece thereof being provided with chambers into which said holes open; clutch blocks arranged in said chambers in said clamping member, said clutch blocks having holes therethrough adapted to receive said posts and clutch ball seats therein, said ball seats opening at one side into said holes for said posts; clutch balls arranged in said ball seats to engage said posts; levers carried by said blocks and arranged to engage said balls and having finger pieces thereon, retaining plates having holes therein adapted to receive said posts and the finger pieces of said levers arranged over said chambers in said clamping member; and screws for securing said plates threaded into the metal piece of said clamping member.

4. The combination with the clamping members comprising inner pieces of metal and outer pieces of wood rigidly secured together, posts secured to the metal piece of one clamping member, the metal piece of the other clamping member being provided with holes adapted to receive said posts and the wood piece thereof being provided with chambers into which said holes open; clutch blocks arranged in said chambers in said clamping member, said clutch blocks having holes therethrough adapted to receive said posts and clutch ball seats therein, said ball seats opening at one side into said holes for said posts; clutch balls arranged in said ball seats to engage said posts; levers carried by said blocks and arranged to engage said balls; binder covers; and a covering for said clamping members secured to said binder covers, and forming a hinge connection therefor to said clamping members, said retaining plates being arranged over said covering.

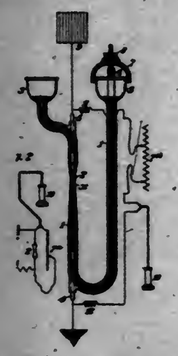
5. The combination with the clamping members; posts secured to one of said clamping members, the other being provided with holes adapted to receive said posts; clutch blocks arranged in chambers provided therefor in said clamping member having holes therethrough, said clutch blocks having holes therethrough adapted to receive said posts, and clutch ball seats therein, said ball seats opening at one side into said holes for said posts; clutch balls arranged in said seats to engage said posts; levers carried by said blocks arranged to engage said balls; springs for said levers; retaining plates having holes therein adapted to receive said posts arranged over said chambers in said clamping member; and a covering for said clamping members, said retaining plates being arranged over said covering.

[Claims 6 to 13 not printed in the Gazette.]

962,417. ELECTRICAL RECEIVING APPARATUS. JAMES MURRAY BOYLE, New York, N. Y. Filed July 28, 1906. Serial No. 271,709.

1. A receiver comprising two bodies of electrolyte of different characteristics, having a minute surface or region of connection, and suitable electrodes in series therewith.

2. A receiver comprising two bodies of electrolyte having a minute region of connection or intermingling and means for adjusting the latter.



3. A receiver comprising two physically different bodies of electrolyte having a minute region of connection and means for modifying said region.

4. A receiver comprising two physically and chemically different electrolytes connected by a passage of non-uniform cross section and means for varying the position of the region of division or connection of said electrolytes along said passage.

5. A receiver comprising a body of liquid having physically different characteristics in different parts thereof, the region of transition of characteristics being of relatively small cross section and electrodes with respect to which said liquid is electrochemically active, said electrodes being serially arranged on opposite sides of said portion of small cross section.

[Claims 6 to 21 not printed in the Gazette.]

962,418. TYPE-WRITING MACHINE. ALEXANDER T. BROWN, Syracuse, N. Y. Filed May 21, 1901. Serial No. 61,206.



1. In a typewriting machine, the combination with a platen, of a curved bar having converging staggered exterior circular bearings, a series of type bars directly hung side by side upon said bearings, and balls placed between the type bars and the bearings.

2. In a typewriting machine, the combination with a platen, of a segment having formed thereon converging offset exterior annular V-grooves, and type bars having interiorly grooved hubs which encircle said segment, and balls placed in said grooves.

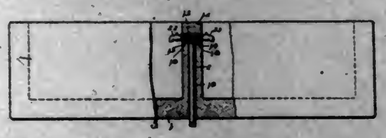
3. In a front strike writing machine, the combination with a platen, of a segment extending downwardly therefrom and having exterior annular converging V-grooves substantially equidistant from the printing center but offset one from another forwardly and rearwardly, forwardly extending type-bars having enlarged interiorly-grooved hubs which encircle said segment, and balls placed in the grooves.

4. In a front strike writing machine, the combination with a platen, of a segment arranged forwardly thereof and hung at its ends upon the framing of the machine, a series of exterior annular converging staggered V-grooves formed upon said segment, type bars having interiorly grooved hubs which encircle said segment, and bearing balls placed in the grooves.

5. In a typewriting machine, the combination with a platen, of a segmental bar having converging exterior annular grooves, and type bars having interiorly grooved hubs of enlarged diameter which encircle said segmental bar, each of said hubs being composed of separate segmental attached sections, and balls placed in the grooves.

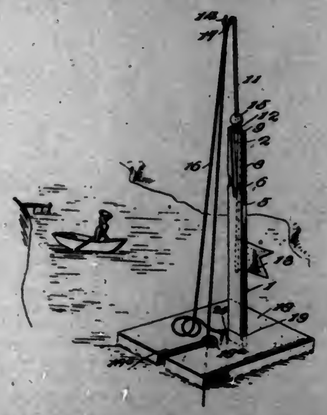
[Claims 6 to 62 not printed in the Gazette.]

962,419. WASHTRAY. LOUIS L. BROWNE, Matteawan, N. Y. Filed Aug. 13, 1909. Serial No. 512,771.



The combination with a structure of the class described, having its wall provided with a vertical bore opening through the bottom thereof and a transverse horisontal bore opening into the interior of same and communicating with the vertical bore, a pipe line connection disposed in said horizontal bore and having a diameter throughout its length equal to the diameter of the bore, whereby said pipe line is held against lateral movement when mounted in said bore, said pipe line being further provided with an eccentric bore to produce an abnormal thickness in its wall and having a transversely disposed threaded aperture through said thickened portion of its wall in alinement with said vertical bore, a second pipe line disposed in said vertical bore having its upper end secured in the threaded aperture of the first named pipe line, said second named pipe line being of less diameter than the vertical bore whereby said pipe line is supported in spaced relation to the surrounding wall of the vertical bore, and a discharge element connected to said first named pipe line.

962,420. FISHING-SIGNAL. JOHN L. DIBBLEE, Chicago, Ill. Filed Feb. 24, 1910. Serial No. 545,719.

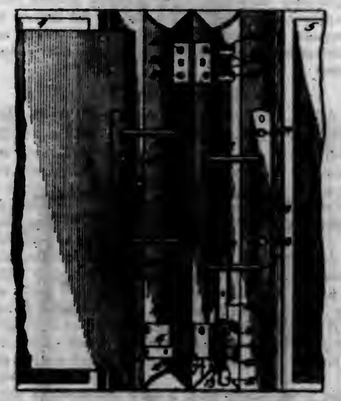


1. A fishing signal comprising a standard formed in its side edges with longitudinal grooves, a frame embodying a cross bar extending across the ends of the standard and side members held in said grooves and a signal arm pivotally mounted intermediate of its ends on said cross bar.

2. A fishing signal, comprising a standard provided at one end with a fork, the standard being formed in its side edges at the forked end with longitudinally extending grooves and with end recesses in which the grooves merge, the standard being further formed at the inner ends of the grooves with sockets, a frame embodying a cross bar adapted to be seated in the end recesses and with side arms adapted to be seated in the grooves, the side arms having inwardly extending ends adapted to extend into the sockets, a signal arm pivotally mounted intermediate of its ends on the cross bar, and a flag connected to one end of said signal arm.

3. A fishing signal, comprising a standard, a frame embodying side members and a cross bar, the standard being formed with grooves receiving said side members, the side members being formed with inturned ends and the standard being formed with sockets adapted to receive said ends, the standard being further formed with cut out portions in proximity to said sockets, for the purpose specified, and a signal arm pivotally mounted intermediate of its ends on the cross bar.

962,421. PERFORATING ATTACHMENT FOR LOOSE-LEAF BINDERS. JOHN J. DIEHL, Chicago, Ill. Filed Sept. 17, 1909. Serial No. 518,143.



1. In a loose leaf binder, the combination of cover members pivoted to be opened and closed, coöperating receiving mechanisms on said members for receiving perforated sheets, and perforating mechanism between the members and forming part thereof for perforating sheets to fit the receiving mechanisms.

2. In a loose leaf binder, the combination of cover members pivoted together to be opened and closed, receiving mechanism carried by the members for receiving perforated sheets and for securing the sheets between the members, and perforating mechanism at the inside of the members adapted when the members are swung open to receive sheets and to perforate the sheets when the members are swung to a closed position.

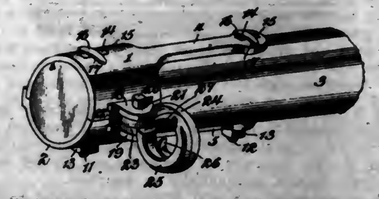
3. In a loose leaf binder, the combination of back members, hinge mechanism serving to pivot the members together, receiving members carried by the back members and coöperating to receive and to lock perforated sheets to the back members, perforating pins carried by the hinge mechanism, and openings for receiving the perforating pins whereby sheets inserted in said hinge mechanism may be perforated upon closure of the back members.

4. In a loose leaf binder, the combination of back members, hinge mechanism for pivoting said back members together to enable the back members to be opened and closed, receiving members for receiving perforated sheets and for locking the sheets to the back members, and perforating pins extending from one part of the hinge mechanism, the other hinge part being provided with openings for receiving the hinge pins upon closure of the back members whereby sheets inserted between the hinge mechanism parts will be perforated upon closure of the back members and hinge mechanism parts, the spacing between said pins being equal to the spacing between the receiving members for receiving the perforated sheets.

5. In a loose leaf binder, the combination of supporting members, a hinge pivoting said supporting members together whereby said supporting members may be brought together and opened, receiving members for engaging in the perforations of perforated sheets to be held to the supporting members, and perforating pins on one hinge part, the other hinge part being provided with openings for receiving the perforating pins when the supporting members are brought together whereby sheets interposed between the hinge parts will be perforated when the supporting parts and the hinge parts are brought together, the spacing between the pins being equal to the distance between receiving members whereby the sheets will be perforated to accurately fit the receiving members.

[Claims 6 and 7 not printed in the Gazette.]

962,422. TRACE-FASTENER. THOMAS E. EWER, Fort Des Moines, Iowa. Filed Mar. 15, 1909. Serial No. 483,484.



1. A trace fastener including separable cuff sections conforming to the configuration of a whiffletree and having front and rear abutting edges fitted together at the front and back of the whiffletree, said sections being provided at their front portions with spaced lugs, one of the lugs having a pivot piercing the other lug, a trace-engaging device mounted between the said lugs and connected with the same by the said pivot, and a fastening device piercing the sections and arranged to pass through the whiffletree and retaining the edges of the cuff sections in abutting relation and securing the lugs and the pivot in engagement with the trace-engaging device.

2. A trace fastener including separable cuff sections conforming to the configuration of a whiffletree and having front and rear edges fitted together at the front and back of the whiffletree, said sections being provided at their front portions with spaced lugs, one of the lugs having a pivot piercing the other lug, a trace-engaging device composed of split ring members provided with ears arranged on the pivot and fitting between and engaged by the lugs of the cuff sections, and a fastening device piercing the cuff sections and arranged to pass through the whiffletree and retaining the edges of the sections in abutting relation and securing the lugs and the pivot in engagement with the trace engaging device.

3. A trace fastener including separable cuff sections arranged to embrace a whiffletree and having front and rear edges fitted together, said sections being also provided with horizontal forwardly projecting front lugs having flat inner faces and spaced from each other by the front edges of the sections, one of the lugs being provided with a pivot, and a trace-engaging device composed of split ring members having ears arranged between the said lugs and mounted on the pivot, and a fastening device piercing the cuff sections beyond the lugs thereof.

4. A trace fastener including cuff sections arranged to embrace a swingletree, one of the sections being pro-

vided at the back with a tapered recess having inclined side walls and the other section having a tapered lug extending into the recess and engaging with the inclined walls thereof and wedging the sections in interlocked relation, a trace-engaging device connected with the sections at the front of the trace fastener, and a fastening device connecting the sections and maintaining the tapered lug in engagement with the inclined edges of the said recess.

5. A trace fastener including cuff sections adapted to embrace a swingletree, one of the sections being provided at the back with a boss located beyond the edge of the section and having a tapered recess forming inclined walls, and the other section being provided beyond its adjacent edge with a projecting tapered lug having inclined side edges arranged to engage the inclined side walls of the recess, means for connecting the sections for holding the lug in engagement with the recess, and a trace-engaging device connected with the sections at the front of the cuff.

[Claims 6 and 7 not printed in the Gazette.]

962,423. THREE-TIE RAIL-SUPPORT. GEORGE G. FLOYD, Granite, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed June 29, 1907. Serial No. 381,498.



1. A cast-metal rail-joint support comprising a plate portion adapted to rest upon a plurality of cross-ties and having an integral depending bellied plate or web apertured for the reception of a cross-tie and flanged along its lower margin, substantially as described.

2. A cast-metal rail-joint support comprising a plate adapted to rest at its ends upon a pair of cross-ties and having a depending bellied vertical web apertured for the accommodation of a cross-tie, said web being flanged along its lower edge and having a plurality of vertical cross webs connecting said flange with the under surface of said plate, substantially as described.

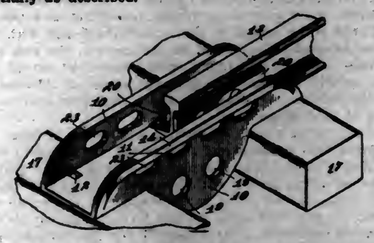
3. A cast-metal rail-joint support comprising a plate adapted to rest at its ends upon a pair of cross-ties and having a longitudinal depending bellied vertical web apertured for the accommodation of a cross-tie, said web being flanged along its lower edge and having a plurality of vertical cross webs connecting said flange with the under surface of said plate, said longitudinal bellied web being apertured between said cross webs for a reduction of weight, substantially as described.

4. A cast-metal rail-joint support comprising a horizontal plate adapted to rest at its ends upon a pair of cross-ties and having a longitudinal depending bellied vertical web centrally apertured for the accommodation of a cross-tie, said web being flanged along its lower edge and having a plurality of vertical cross webs or struts connecting said flange with the under surface of said plate, said horizontal plate being apertured between said cross webs or struts, substantially as described.

962,424. RAIL-JOINT SUPPORT. GEORGE G. FLOYD, Granite, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed June 29, 1907. Serial No. 381,494.

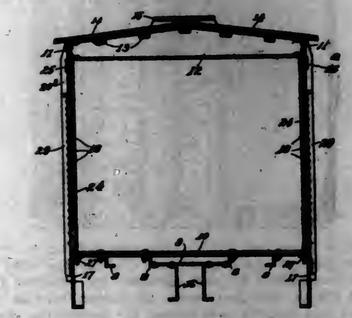
1. A unitary cast-metal rail-joint support or seat having a pair of vertical plates spaced apart, a horizontal rail-supporting plate or web connecting said vertical plates between their top and bottom margins, and a vertical transverse web below said horizontal web and connecting said vertical plates, substantially as described.

2. A single-piece cast-metal rail-joint support comprising a horizontal plate or web adapted to rest at its opposite ends on cross ties and having at its opposite longitudinal edges vertical plates extending both above and below said web, the portions of said plates above said web extending substantially the full length of the support, and the portions of said plates below said web being bellied and located at the central part of the support only, substantially as described.



3. A single-piece cast-metal rail-joint support comprising a horizontal plate or web adapted to rest at its opposite ends on adjacent cross-ties and having at its opposite longitudinal edges vertical plates extending both above and below said web, the portions of said plates above said web extending substantially the full length of the support and being equipped at their upper edges with outstanding strengthening flanges, and the portions of said plates below said web being bellied, located at the central part of the support only, and having along their lower margins inwardly-extended strengthening flanges, substantially as described.

962,425. BOX-CAR. WILLIAM E. FOWLER, Montreal, Quebec, Canada. Filed July 2, 1908. Serial No. 441,550.



1. In a box-car, the combination with a side wall composed of a series of superposed side-planks, of means for tightening said planks upon each other to take up shrinkage, substantially as described.

2. In a box-car, the combination with a side wall composed of a series of superposed side-planks having offset matching joints, of means for tightening said planks upon each other to take up shrinkage, substantially as described.

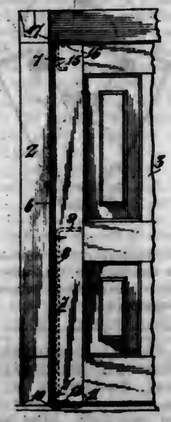
3. In a box-car, the combination with a side wall composed of a series of superposed side-planks having oblique offset matching joints, of means for tightening said planks upon each other to take up shrinkage, substantially as described.

4. In a box-car, the combination with a side wall composed of a series of superposed side-planks, of a tightening-strap disposed transversely of and at its upper end engaging one of said side-planks, and means for drawing said tightening-strap downwardly relatively to the side-planks, substantially as described.

5. In a box-car, the combination with the car-floor, of a side wall composed of a series of superposed horizontal side-planks, and a tightening strap disposed transversely of and at its upper end engaging one of said side-planks, said tightening-strap at its lower end extending through the car-floor and provided with means for drawing it downwardly, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

962,426. SPRING DOOR-HINGE. HEBER K. HANSEN, Logan, Utah, assignor of one-half to Robert Lafount, Logan, Utah. Filed Nov. 5, 1908. Serial No. 461,196.



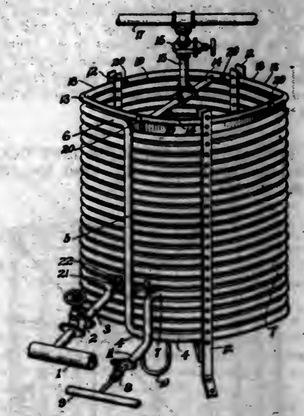
1. The combination with a swinging door having a longitudinal groove in one of its edges and provided with sockets extending transversely of the groove, L-shaped pintle-forming elements having their long members disposed in alinement with the groove and projecting from the ends thereof, and their short members engaging in the said sockets, and a retaining means for holding the elements in the said groove.

2. In combination with a plate having a socket, a rod vertically disposed and secured rigidly to a door and having its lower end projecting beyond the lower end of the door and provided with a head to fit in the socket, a short rod connected to the top of the door and arranged in alinement with the lower rod, said short rod projecting beyond the top of the door, and a perforated plate in which the said projecting end bears.

3. The combination with a door frame, of a swinging door having a longitudinal groove in one side edge and provided with a socket extending transversely of the groove, a vertically-arranged spring rod disposed in the groove and projecting from one end thereof, a strip extending longitudinally of the groove for retaining the rod in place and preventing lateral displacement thereof, the said rod having its inner end bent inward and entered in the said socket, and a non-circular head formed on the projecting lower end, the bent inner end of the rod serving to prevent longitudinal displacement of the rod, and a socket plate secured to the door frame and having a non-circular socket formed in the upper side thereof for receiving the said head, the weight of the door being thereby placed upon the non-circular head of the rod and socket.

962,427. CONDENSER. GEORGE M. HARDEN, Philadelphia, Pa., assignor to The Philadelphia Pipe Bending Company, a Corporation of New Jersey. Filed Feb. 20, 1909. Serial No. 479,198.

1. In a condenser, a preliminary and a main condenser, the preliminary and main condensers being of the same diameter and disposed one above the other and constituted of a continuous jointless helical coil of pipe, means for supporting said preliminary and main condensers in the open atmosphere, and means for directing water upon the uppermost convolutions, whereby water drips from convolution to convolution and also flows along the helical pipe.



2. In a condenser, preliminary and main condensers, said preliminary and main condensers each being of the same diameter and formed of a continuous jointless helical coil of pipe, a connection between said preliminary and main condensers forming said preliminary and main condenser coils into a single continuous jointless pipe, means for supporting said preliminary and main condenser coils in the open atmosphere, and means for directing water upon the uppermost convolutions, whereby water drips from main to preliminary condensers and from convolution to convolution and also flows along the helical pipe.

3. In a condenser, preliminary and main condenser coils open to the atmosphere; said preliminary and main condenser coils being disposed one above the other and formed of a continuous jointless helical coil of pipe, a drip plate for directing the water upon said uppermost convolution, means for directing water upon said drip plate, and a drip plate between the main and preliminary condenser coils.

4. In a condenser, a helically coiled condenser pipe having a downward pitch, means for supporting said pipe in the open atmosphere, a sprinkler comprising a horizontal perforated tube or duct disposed above said coil, and a drip plate conforming to the downward pitch of said condenser pipe disposed between said tube or duct and the top convolution of said coil.

5. In a condenser, a nest of helical coils open to the atmosphere, each coil consisting of main and preliminary jointless condenser coils of the same diameter, gaps between the preliminary and main coils of the outer condenser coils of the nest, connections to the inner condenser coils extending through said gaps, and a sprinkler for each coil of the nest.

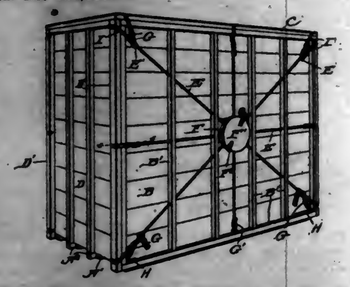
962,428. OVERSHOE-RETAINER. LAWN HARROLD, Ellwood City, and WILLIAM J. THAMSEN, Hazeldell, Pa. Filed Sept. 28, 1908. Serial No. 455,133.



In a retaining device for overshoes, a clutch member consisting of a crescent-shaped body having an inwardly-

extending sharpened flange to project between the heel and the counter portion of a shoe, the body being provided intermediate its ends with a resilient finger having adjacent to its upper end an orifice defining a lip, and a ratchet provided with means for attachment to an overshoe and formed with an outstanding extension forming a finger piece, said extension being normally spaced from the shoe counter to permit ready disconnection of the ratchet from the lip of the finger.

962,429. COLLAPSIBLE SHELL OR LIFT-VAN. FRED FREMONT HEDDEN, Chicago, Ill. Filed Mar. 16, 1909. Serial No. 483,669.



1. A collapsible shell or box comprising top, bottom, sides and ends, links carried by said top, bottom and ends, and rods carried by said sides to engage said links, and means fixed to the sides for adjusting and securing said rods.

2. A collapsible shell or box comprising top, bottom, sides and ends, links carried by said top, bottom and ends, hooked rods arranged upon the sides and adapted to engage said links and rings carried by the sides and in which the inner ends of said rods are adjustably secured.

3. In a collapsible shell or box, the combination with top, bottom, sides and ends, of links carried by said top, bottom and ends, and means carried by the sides for engaging said links together with means also carried by the sides for applying tension to said engaging means.

4. In a collapsible shell or box, the combination with top, bottom, sides and ends, of links carried by said top, bottom and ends, hooked rods carried by said sides, a ring through which the inner ends of said rods are adjustable, and a lockable cover connected to said ring to close the same, as set forth.

5. A collapsible shell or box, comprising top, bottom, sides and ends, a ring carried by each side, rods carried by said sides, and having hooks at one end and threaded at the opposite ends, and adapted to pass through the ring, nuts arranged upon said threaded ends, a hinged cover for said ring, links adapted to engage the hooked ends, and plates connected to the bottom, and ends for carrying said links, substantially as described.

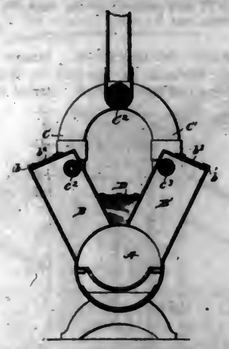
[Claims 6 to 8 not printed in the Gazette.]

962,430. HEATING-STOVE. WILLIAM HEUERMANN, Sedalia, Mo. Filed July 1, 1909. Serial No. 505,470.

1. In a device of the class described, the combination of a combustion chamber, a pair of fuel magazines arranged on either side and communicating with said combustion chamber, and a substantially annular pipe communicating with the upper part of said combustion chamber and the upper ends of said fuel magazines.

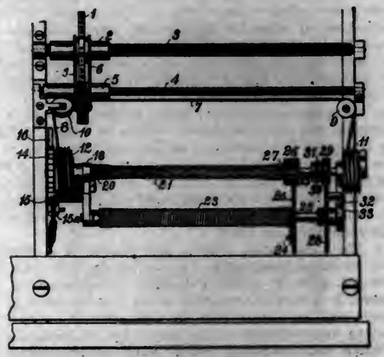
2. In a device of the class described, the combination of a combustion chamber, a pair of fuel magazines arranged on either side and communicating with said combustion chamber, a pair of substantially annular pipes communicating with the upper part of said combustion chamber and upper parts of said fuel magazines and a horizontal pipe adapted to connect said annular pipes with the smoke flue.

3. In a device of the class described, the combination of a combustion chamber, a pair of fuel magazines arranged on either side of said combustion chamber and communicating therewith, a pair of substantially annular pipes communicating with the upper part of said combustion chamber and upper parts of said fuel magazines,



a horizontal pipe connecting said annular pipes with the smoke flue and a damper for the upper portion of said combustion chamber interposed between said annular pipes and fuel magazines.

962,431. TYPE-CARRIAGE-PROPELLING MECHANISM FOR PRINTING-TELEGRAPH RECEIVERS. GEORGE S. HILTZ, Brooklyn, N. Y., assignor to The Stock Quotation Telegraph Company, New York, N. Y., a Corporation of New York. Filed Nov. 16, 1908. Serial No. 462,756.



1. In a printing telegraph receiver, the combination with a type-wheel movable axially to effect the letter spacing, and a pair of traction cords connected with said type-wheel and extending therefrom in opposite directions to advance and retract the type-wheel in its line of travel, of a winding drum on which one of the cords is wound to advance the type-wheel, a winding drum on which the other cord is wound in the opposite direction to retract the type-wheel, said drums being independent of each other save through the said traction cords, releasable means connected with the advancing drum for actuating the same to wind up its traction cord, a spring connected with the retracting drum and constantly exerting its tension thereon, for rotating the said drum to wind up its traction cord and retract the type-wheel upon release of the means for actuating the advancing drum, releasable means associated with the retracting drum serving normally to prevent retraction of the type-wheel, and means operatively connected with one of said drums to arrest the drum and bring the type-wheel to rest when the same has been retracted to a predetermined position, as set forth.

2. In a printing telegraph receiver, the combination with an axially movable type-wheel, and a pair of traction cords connected with the type wheel and extending therefrom in opposite directions to advance and retract the type-wheel; of a winding drum on which one of said cords is wound to advance the type-wheel; a winding drum on which the other cord is wound in the opposite direction to retract the type-wheel; said drums being independent of each other save through the said traction cords; a ratchet operatively connected with the advancing drum for rotating the same to wind up its traction cord; a pair of pawls engaging the ratchet; a spring connected with the retracting drum and constantly exerting its tension thereon, for rotating the said drum to wind up its traction cord when the said pawls are disengaged from the ratchet; and means operatively connected with the advancing drum to arrest the same and bring the type-wheel to rest with the ratchet in predetermined position with respect to the pawls when the type-wheel is retracted; as set forth.

3. In a printing telegraph receiver, the combination with an axially movable type-wheel, and a pair of traction cords operatively connected therewith and extending therefrom in opposite directions to advance and retract the type-wheel; of a spacing shaft; a winding drum fixed thereon, on which one of the traction cords is wound to advance the type-wheel; releasable means connected with the said spacing shaft for rotating the same and the said drum to advance the type-wheel; a winding drum rotatably mounted on the spacing shaft, on which the other traction cord is wound to retract the type-wheel; and a spring connected with the last-named drum and constantly exerting tension thereon, for rotating the said drum to wind up its traction cord and retract the type-wheel upon release of the means for rotating the spacing shaft; as set forth.

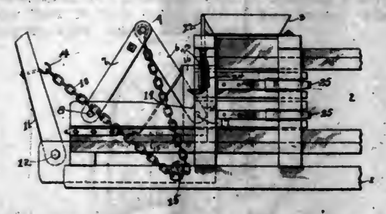
4. In a printing telegraph receiver, the combination with an axially movable type-wheel, and a pair of traction cords connected with the type-wheel and extending in opposite directions therefrom to advance and retract the type-wheel; of a spacing shaft; a winding drum fixed thereon, on which one of said cords is wound to advance the type-wheel; a ratchet fixed on the spacing shaft for rotating the same and the said drum to advance the type-wheel; a pawl engaging the ratchet; a winding drum rotatably mounted on the spacing shaft, on which the other cord is wound to retract the type-wheel; and a spring connected with the retracting drum and constantly exerting its tension thereon, for rotating the said drum to wind up its tension cord when the said pawl is disengaged from the ratchet; as set forth.

5. In a printing telegraph receiver, the combination with an axially movable type-wheel and a pair of traction cords connected therewith and extending in opposite directions therefrom to advance and retract the type-wheel; of a spacing shaft; a winding drum fixed thereon, on which one of said cords is wound to advance the type-wheel; a ratchet fixed on the spacing shaft for rotating the same and the said drum to advance the type-wheel; a pawl engaging the ratchet; a winding drum rotatably mounted on the spacing shaft, on which the outer cord is wound to retract the type-wheel; a spring connected with the retracting drum and constantly exerting its tension thereon, for rotating the said drum to wind up its traction cord when the said pawl is disengaged from the ratchet; and means operatively connected with one of the winding drums to arrest the same and bring the type-wheel to rest with the ratchet in a predetermined position with respect to the pawl, when the type-wheel is retracted; as set forth.

[Claims 6 to 9 not printed in the Gazette.]

962,432. BALING-PRESS. JOSEPH W. HOBSON, Bayonne, N. J., assignor to Hobson & Company, a Corporation of Pennsylvania. Filed Aug. 15, 1908. Serial No. 448,724.

1. A baling press including in combination a frame, a compression chamber, a plunger operating in said chamber, a toggle for actuating said plunger, a lever arranged to swing in a vertical plane downwardly and away from said plunger, and flexible connections between said toggle and said lever, said connections being so disposed that the distance between the fulcrum of the lever and the line of application of force through that part of the flexible connections which is adjacent to said lever decreases during the downward stroke of the lever.



2. A baling press including in combination, a frame, a compression chamber, a plunger operating in said chamber, a toggle for actuating said plunger, a lever arranged to swing in a vertical plane downwardly and away from said plunger, connections between said toggle and said lever, said connections being so disposed that the direction of the force applied to the toggle in actuating the same lies approximately in the path of the movement of that point on the toggle to which the force is applied, and that the distance between the fulcrum of the lever and the line of application of force through that part of said connections which is adjacent to said lever decreases during the downward stroke of the lever.

3. A baling press including in combination, a frame, a compression chamber, a plunger operating in said chamber, means for actuating said plunger, said means comprising a toggle and a lever, and means for retracting said plunger, said means comprising springs acting on the plunger in the direction of its return movement, and springs acting on said toggle at substantially right angles to the movement of the plunger.

4. A baling press including in combination, a frame, a compression chamber, a plunger operating in said chamber, retainers operating within said chamber, means for actuating said plunger, said means comprising a toggle and a vertically swinging lever, and means for retracting said plunger, said means comprising springs acting on the plunger in the direction of its return movement, and springs acting on said toggle at substantially right angles to the movement of the plunger.

5. A baling press including in combination, a frame, a compression chamber, a plunger operating in said chamber, threaded rods and hand nuts for varying the size of the compression chamber, means for actuating said plunger, said means comprising a toggle, a vertically swinging lever, and connections between said toggle and said lever, said connections being so disposed that the distance between the fulcrum of the lever, and the line of application of force through that part of said connections which is adjacent to said lever decreases during the downward stroke of the lever.

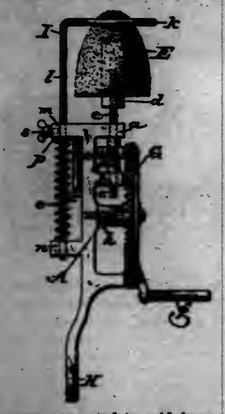
[Claims 6 to 8 not printed in the Gazette.]

962,433. REVOLVING UPHOLSTERER'S BRUSH. DANIEL R. JOHNSON, Dayton, Ohio. Filed Aug. 10, 1908. Serial No. 447,753.

1. In a rotary brush, the combination of an open base, a rod offstanding from said base, a frame slidably mounted on said rod, a spring interposed between the frame and rod, a shaft rotatably mounted in said frame, the axis of the shaft extending approximately through the center of the base, interengaging means on said rod and frame whereby the rod is prevented from turning in said frame, a brush mounted on said shaft and means on said frame to rotate the shaft.

2. In an upholsterer's brush, the combination of the following elements, to wit:—a supporting-frame; a shaft

provided with a small gear-wheel revolubly supported by said frame; a brush at end of said shaft; a master-wheel connected to said frame and adapted to actuate said gear-wheel; a spring actuated base connected by a rod to said



frame; a set-screw connected to said frame for permitting said rod to be adjusted; interengaging means on said rod and frame whereby the rod and base are prevented from turning; all substantially as and for the purposes described.

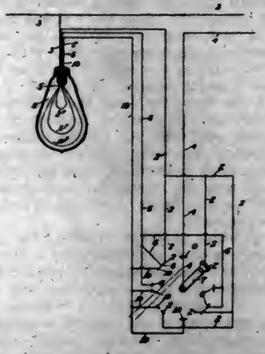
962,434. CULTIVATOR-SHOVEL. DIEDRICH KATT, Oaklawn, Ill. Filed Sept. 30, 1909. Serial No. 520,370.



A cultivator shovel comprising a U-shaped member having blades at the extremities of its arms and a recess at the midlength of its central portion, and a half-round shank integral with said portion and extending to the rear of such recess; a second member having a blade at its front end and a half-round shank at its rear end to complement that of the first-mentioned member, there being a shoulder between the shank and body portion of this member adapted to engage the central portion of the other member; and fastening means through both shanks when the members are assembled.

962,435. INCANDESCENT-LAMP SYSTEM. YASUKE KAWASAKI, Vancouver, British Columbia, Canada. Filed July 28, 1908. Serial No. 445,808.

1. In an incandescent lamp system, the combination with a lamp having a plurality of filaments which have one common terminal, a pair of line wires connected with a source of electric energy, one of said line wires being connected with the common terminal of said filaments, a circuit controller having a movable arm connected to the other line wire, said circuit controller including a plurality of sets of contacts, certain of said sets of contacts consisting of a single contact member, others of said sets of contacts consisting of two contact members and another of said sets of contacts consisting of three contact members, and electrical connections between one of said filaments and one of said single contact sets, electrical connections between said single contact set and one of the contacts of a double contact set, electrical connections between said single contact set and one of the contacts of said triple contact set, substantially as shown and described.



2. In an incandescent lamp, the combination with a lamp having three separate filaments, said filaments having a common terminal directly connectible to a source of electric energy, a switch having a movable arm also directly connectible to a source of electric energy, said switch including a plurality of sets of contacts, certain of said sets of contacts consisting of a single contact member and others of said sets of contacts consisting of a double contact member and still another of said sets of contacts consisting of a triple contact member, the contact members of a set being insulated from one another and said sets of contacts being insulated one set from another, electrical connections between one terminal of one of said filaments and one of the contact members of said triple contact set, electrical connections between the same filament terminal and one of the contact members of one of said double contact sets, and electrical connections between the same filament terminal and one of said single contact member sets, and electrical connections between certain of said other contacts and the respective filaments.

3. The combination with a lamp having a plurality of filaments each having a common terminal and adapted to be connected to one line wire from a source of electric energy, a circuit controller having a movable arm electrically connectible to another line wire from the source of electric energy, said circuit controller also including a plurality of groups of contacts certain of said groups of contacts consisting of a single contact, another of said groups of contacts consisting of a plurality of contacts, the contacts of each group being separated from one another and those of one group being separated from those of the other groups, electrical connections between the free terminals of said filaments and certain of the contacts in certain of said groups, and said controller arm having a contacting portion to simultaneously engage all of the contacts of a group, substantially as shown and described.

962,436. ILLUMINATED SIGN. EDGAR J. KELLNER and WILLIAM F. EDWARDS, New York, N. Y. Filed Feb. 4, 1910. Serial No. 542,042.

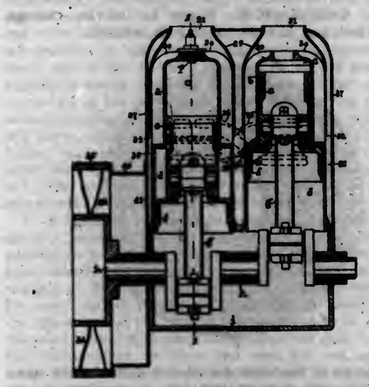
1. In a device of the class described, a rectangular receptacle, a plurality of incandescent bulbs located within said receptacle, hollow cylindrical members located within said receptacle, a cover adapted to display advertising matter, said cover carrying a plurality of rod sections adapted to enter said cylindrical members.

2. A device of the class described, comprising a rectangular member, a plurality of tubes arranged within said member, a cover for said member, said cover consisting of a rectangular metallic frame adapted to support a glass plate, a plurality of rod sections secured to said metallic frame, said rod sections being adapted to enter said tubes and form means for holding the edge portions of said frame in alinement with the edge portions of the receptacle.



3. A device of the class described, comprising a rectangular receptacle adapted to contain illuminating means, a cover for said receptacle consisting of a transparent plate and a rectangular frame L-shaped in cross-section adapted to support said plate, supporting means located within said receptacle and means adapted to coöperate therewith carried by said frame for retaining its edge portions in alinement with the edge portions of said receptacle.

962,437. GAS-ENGINE. FREDERICK O. KILGORE, Minneapolis, Minn. Filed Apr. 7, 1906. Serial No. 310,437.

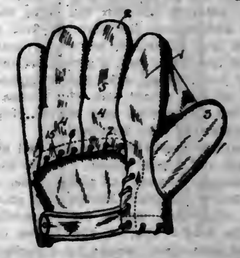


1. In an apparatus of the class described, in combination, an internal combustion engine having a plurality of cylinders, a casing inclosing said cylinders, and provided with a plurality of openings substantially in line with said cylinders, an air jacket for each of said cylinders and communicating with the atmosphere through the opening in the casing in line with the cylinder with which said air jacket coöperates, said air jacket communicating with said casing, and a fan to draw air from the casing and cause cool air to be simultaneously drawn through the air jackets to first make contact with the hottest part of the cylinder, substantially as described.

2. In an apparatus of the class described, in combination, an internal combustion engine having a plurality of cylinders, a crank shaft to which the pistons of said cylinders are connected, a fly wheel fan attached to the crank shaft, air jackets surrounding said cylinders, a casing inclosing all the cylinders, a casing surrounding the crank shaft between the fly wheel and the casing inclosing the cylinders and communicating with the latter, and air jackets for said cylinders surrounding the same and extended through openings in the inclosing casing substantially in line with the cylinders and communicating at their lower ends with the inclosing casing, substantially as described.

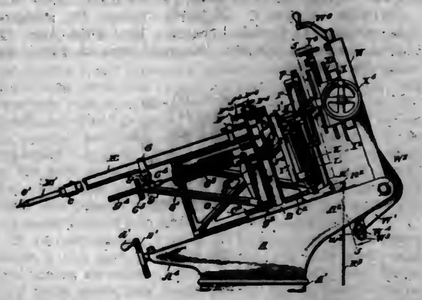
3. In an apparatus of the class described, in combination, an internal combustion engine having a plurality of cylinders, a casing common to all of said cylinders, an air jacket for each cylinder communicating with the atmosphere through said casing to supply cool air to the hottest part of the cylinders, and communicating with the casing to discharge therein the air heated by said cylinders, and means for drawing heated air from said casing, substantially as described.

962,438. BASE-BALL GLOVE. CHARLES M. KING, Washington, D. C., assignor to A. G. Spalding & Bros., New York, N. Y., a Corporation of New Jersey. Filed July 21, 1909. Serial No. 508,787.



In a base ball glove, the combination with a flexible outer form and lining nesting therein, each of which having a row of eyelets adjacent to the outer free edges of the wrist and back portion, of a blank of flexible fabric conforming to the outer contour of said outer form and lining interposed between the face of same, and stitched at the ends of the finger portions to the tips of the finger stalls of the lining, lacing eyelets adjacent to the free edge of the wrist portion of said blank, flexible padding material conforming to the shape of said blank secured upon the face thereof inside the line of said eyelets, and a lacing cord adapted to separably lace said outer form and lining and blank together at their rear edges, whereby the flexible blank and padding structure are separably held extended over the face of the glove, substantially as described.

962,439. ENGRAVING-MACHINE. ROBERT H. KIRK, Cleveland, Ohio, assignor to The "Long-Arm" System Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 25, 1906. Serial No. 318,735.



1. In a machine of the character described, the combination with a plate and plate holder, of a tracer rod pivoted in gimbals near one end thereof and carrying a tracer tool mounted in the opposite end, adjustable means for counterbalancing the weight of the longer arm of the tracer rod, a graver, means for pressing said graver against the plate and for withdrawing same when desired, and mechanism controlled by the movement of said tracer rod for moving said graver over the face of the plate, substantially as described.

2. In a machine of the character described, the combination with a plate and plate holder, of a tracer rod carrying a tracer telescopically mounted in one end, gimbal

bearings supporting said tracer rod near the opposite end, adjustable means for counterbalancing the weight of the longer arm of the tracer rod, a graver, a weight, and mechanism operated thereby for pressing the graver against the plate with a predetermined pressure, means for withdrawing said graver from said plate against the action of said weight, and mechanism controlled by the movement of said tracer rod for moving said graver over the face of the plate, substantially as described.

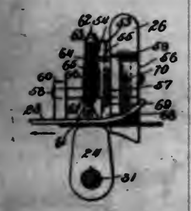
3. An apparatus comprising a plate and plate holder, a type or design, and a type holder, a tracer rod mounted in universal bearings between the plate holder and the type holder and nearer the plate holder, and provided with a tracer tool, adjustable means for counterbalancing the weight of the tracer rod, a graver mounted near said plate, means for pressing said graver against said plate independent of said tracer rod, and means operated by said tracer rod for moving said graver over the face of the plate, substantially as described.

4. An apparatus comprising a plate and plate holder, a type or design, and a type holder, a tracer rod mounted in universal bearings between the plate holder and the type holder and nearer the plate holder, and provided with a tracer tool, adjustable means for counterbalancing the weight of the longer arm of the tracer rod, a graver mounted near said plate, means for pressing said graver against said plate with a predetermined pressure, and means for withdrawing said graver from the face of said plate when desired, with mechanism operated by said tracer rod for moving said graver over the face of said plate, substantially as described.

5. An apparatus comprising a plate and a plate holder, a type or design, and a type holder, a tracer rod mounted in universal bearings between the plate holder and the type holder and nearer the plate holder, and provided with a tracer tool, adjustable means for counterbalancing the weight of the longer arm of the tracer rod, a graver mounted near said plate, a weight with mechanism operated thereby pressing said graver against said plate with a predetermined pressure, independent means for moving said graver away from said plate against the action of said weight, and mechanism controlled by said tracer rod for moving said graver over the face of said plate, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

962,440. CONTROLLER FOR PAPER-HANDLING MACHINES. HOMER C. LA BATT, Chicago, Ill., assignor to William J. Herrick, Chicago, Ill. Filed Aug. 15, 1904, Serial No. 220,762. Renewed Nov. 12, 1909. Serial No. 527,660.



1. The combination with a paper handling machine, of a driving connection therefor, a slidable shoe and an oscillating toe, the slidable shoe being normally stationary and adapted to be moved by the oscillating toe when an abnormal thickness of paper is interposed there between, and means actuated by the slidable shoe for arresting the motion of the machine.

2. The combination with a paper handling machine, of a driving connection therefor, a normally stationary slidable shoe and an oscillating toe, the slidable shoe being adapted to be moved by the oscillating toe when an abnormal thickness of paper is interposed between the slidable shoe and the oscillating toe, and a connection controlled by the normally stationary slidable shoe for throwing the driving connection out of operation.

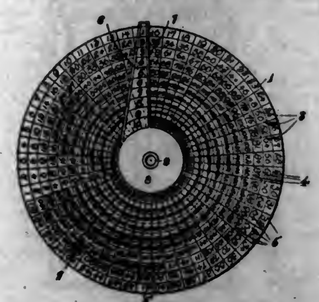
3. The combination with a paper handling machine, of a driving connection therefor, a movable toe, a slidably mounted shoe adapted to be moved by the movable toe when an abnormal thickness of paper is interposed between the shoe and the toe, and means controlled by the slidable shoe for throwing the driving connection out of operation.

4. The combination with a paper handling machine, of a driving connection therefor, a normally stationary slidable shoe, an oscillating toe coöperating with the normally stationary shoe and adapted to move the same when an abnormal thickness of paper is interposed between them, and means actuated by the normally stationary shoe for arresting the motion of the machine.

5. The combination with a paper handling machine, of a driving connection therefor, an oscillating toe, a normally stationary slidable shoe adapted to be moved by the oscillating toe when an abnormal thickness of paper is interposed between them, a clutch in the driving connection, and means controlled by the slidable shoe for uncoupling the clutch.

[Claims 6 to 16 not printed in the Gazette.]

962,441. CALCULATOR. HARRY L. LERNER, Chicago, Ill. Filed Aug. 1, 1908. Serial No. 446,361.

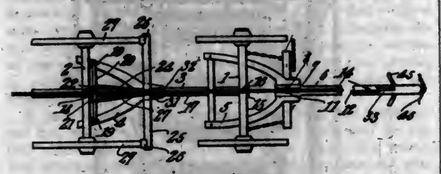


In a device of the class described a dial of sheet material having both faces divided into a plurality of concentric circles and a plurality of radial lines into a large number of spaces in combination with an arm rotatably mounted on said disk, said arm being formed of a single strip of sheet material bent double with the dial between the parts, said strip having a disk at each end forming means for attaching the arm to the dial, one edge of the arm extending radially from the disk and the other edge being substantially tangential thereto, said disk and said arm being provided with series of numbers, the arm bearing numbers corresponding in position to the circular row of spaces, said spaces each being provided with a number, those in the peripheral row being the multiplicands and those in the remaining spaces the products of said multiplicands and the corresponding numbers on said arms, and the numbers on one side of the device being the continuation of the series of numbers on the opposite side, substantially as described.

962,442. WAGON-BRAKE. CURTIS D. LINTON, Paint Bank, Va. Filed Dec. 15, 1909. Serial No. 533,212.

1. In a device of the class described, a vehicle frame; a transverse shaft journaled for rotation on the frame and provided with upper and lower radial arms; a brake beam suspended from the frame; a connection between the brake beam and the lower arm; a rod secured to the frame for longitudinal reciprocation only; a resilient rod rigidly secured at one end to the slidable rod and at the other end pivoted to the upper arm; and means for operating the slidable rod.

2. In a device of the class described, a vehicle frame; a transverse shaft journaled for rotation on the frame and provided with upper and lower radial arms; a brake beam suspended from the frame; a connection between the brake beam and the lower arm; a rod secured to the frame for longitudinal reciprocation only; a resilient rod pivoted at one end to the upper arm and at the other end bent at an acute angle to the upper arm and secured, adjustably, in its bent portion, to the sliding rod; and means for operating the sliding rod.



3. In a device of the class described, a vehicle frame and a tongue attached thereto; a rod jointed beneath the front axle of the frame and slidably mounted beneath the tongue and the frame and comprising a forward part and a rearward part, the rearward part being mounted for longitudinal reciprocation only; a lever pivoted adjacent the extremity of the tongue and connected at its lower end with the forward part of the rod; a lever pivoted intermediate its ends in the tongue and engageable at its lower end by the forward part of the rod; a double-tree slidably mounted upon the tongue and pivoted upon the upper end of the last-named lever; a transverse shaft rotatably mounted upon the frame and provided with upper and lower radial arms; a brake beam suspended from the frame; a connection between the brake beam and the lower arm; and a resilient rod secured, adjustably, at one end to the rear part of the first-named rod, and at its other end pivotally connected with the upper arm.

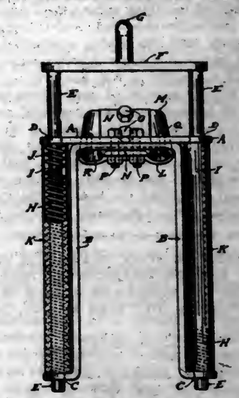
4. In a device of the class described, a tongue; a rod slidably mounted beneath the tongue; brake mechanism adapted to be set by the forward movement of the rod; a lever fulcrumed intermediate its ends in the tongue and engaged at its lower end by the rod; a tree pivoted upon the upper end of the lever; a bar slidably mounted upon the upper face of the tongue and arranged to be retracted thereon; a lever fulcrumd intermediate its ends in the bar, and connected at its lower end with the rod, said lever being slidable in the tongue and arranged at its upper end to receive a harness connection; and a manually operable locking device supported by the tongue and arranged to engage the bar to hold the same in advanced position.

5. In a device of the class described, a tongue; a rod slidably mounted beneath the tongue; brake mechanism adapted to be set by the forward movement of the rod; a lever fulcrumed intermediate its ends in the tongue and engaged at its lower end by the rod; a bar slidably mounted upon the upper face of the tongue and arranged to be retracted thereon; a tree pivoted upon the upper end of the lever, the bar being engageable by the tree to advance the bar; a lever fulcrumed intermediate its ends in the bar and connected at its lower end with the rod, said lever being slidable in the tongue and arranged at its upper end to receive a harness connection; and a manually operable locking device supported by the tongue and arranged to engage the bar to hold the same in advanced position.

[Claims 6 and 7 not printed in the Gazette.]

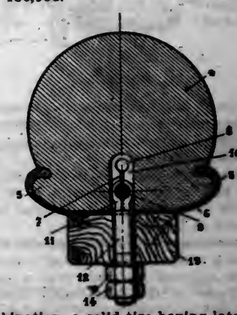
962,443. MOTOR-CYCLE SHOCK-ABSORBER. EDWARD LOUDENCLOS, Pasadena, Cal. Filed Mar. 11, 1910. Serial No. 548,547.

The combination in shock absorbers interposed between the seat of a rider and a vehicle, comprising a yoke B having secured thereto a top-plate A and means whereby it may be secured to the vehicle, a bridge-plate F with plungers E provided with pins I, means to fasten a seat to the said bridge-plate, and recoil springs interposing between ends of the said top-plate A and the bent ends of the said yoke B, the said ends of the top-plate and yoke



having holes D and C adapted to receive the said plungers E, substantially as shown and described.

962,444. SOLID TIRE FOR VEHICLE-WHEELS. ALBERT MANS, Dieghem, Belgium. Filed Mar. 26, 1909. Serial No. 486,053.



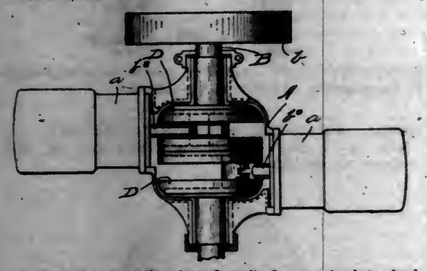
1. In combination, a solid tire having laterally disposed beads, a rim having flanges for engaging said beads, said tire having a slit extending radially from below to a point above said beads and having an outer circumferential rod receiving enlargement above said beads and an inner circumferential rod receiving enlargement between said beads, an annular extensible and contractible rod adapted to be expanded into said outer enlargement to permit insertion of the base of said tire between said flanges, and means for contracting said rod and drawing the same into said inner enlargement to spread the base of the tire and force the beads thereof into engagement with said flanges.

2. In combination, a solid tire having laterally disposed beads, a rim having flanges for engaging said beads, said tire having an annular slit extending radially from below to a point above said beads and having an outer circumferential rod receiving enlargement above said beads and an inner circumferential rod receiving enlargement between said beads, an annular extensible and contractible rod adapted to be expanded into said outer enlargement to permit insertion of said tire between said flanges, the ends of said rod being reduced, a sleeve on the ends of said rod and slidably engaging the same, and means connected with said sleeve for contracting said rod and drawing the same into said inner enlargement to spread the base of the tire and force the beads thereof into engagement with said flanges.

3. In combination, a solid tire having laterally disposed beads, a rim having flanges for engaging said beads, said

tire having an annular slit extending radially from below to a point above said beads and having an outer circumferential rod receiving enlargement above said beads and an inner circumferential rod receiving enlargement between said beads, said tire having a chamber intersecting said slit and outer and inner enlargements, an annular extensible and contractible rod adapted to be expanded into said outer enlargement to permit contraction of the base of the tire between said flanges, said rod having its ends reduced, a sleeve slidably mounted on the reduced ends of said rod, a headed bolt engaging the said sleeve and disposed in one of said chambers, and means connected with said bolt for drawing the rod into said inner enlargement to spread the base of the tire and force the beads thereof into engagement with said flanges.

962,445. FILLER OR JUNK PLATE FOR THE CRANK-CASES OF EXPLOSIVE-ENGINES. GEORGE W. MARBLE, Chicago, Ill., assignor of one-half to William R. Donaldson, Chicago, Ill. Filed May 11, 1907. Serial No. 373,189.



1. In a device of the class described a crank plate, junk or filler plates secured on each side of the crank plate having interlocking flanges adapted to engage around the periphery of the crank plate.

2. In a device of the class described a crank plate, junk or filler plates secured on opposite sides of the crank plate having inwardly directed flanges and means removably securing the plates in position.

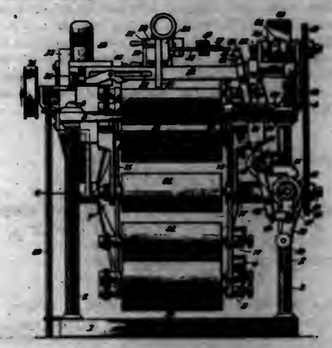
3. The combination with a crank case and a crank shaft therein, of crank arms, a junk or filler plate secured on each crank arm adjacent the crank case, a junk plate secured on each side of the intermediate arm, each junk plate having a flange interfitting the flange on the opposite plate affording locked joints and all of said junk or filler plates filling the crank case except the space required for the connecting rod and affording a long bearing on the wrist pin.

4. A device of the class described comprising a circular crank arm, circular filler plates, one adapted to fit each side of said crank arm and provided with interlocking flanges fitting around the periphery of the crank arm and means extending through the flanges and engaging the periphery of the crank arm to rigidly secure the filler plates to the crank arm.

5. In a device of the class described the combination with a crank shaft, integral concentric crank disks secured thereto, wrist pins integral with the crank disks near the periphery thereof, an intermediate crank disk integral with said wrist pins and concentric with the aforesaid disks, of a junk or filler plate secured to each of the first named crank disks having a rounded flange fitting over the periphery thereof, and a junk or filler plate on each side of the intermediate crank disk provided with interfitting flanges.

962,446. MULTIPLEX GRAPHOPHONE. HYMAN E. MARKLE, Nashville, Tenn. Filed May 16, 1907. Serial No. 374,013.

1. In a sound reproducing machine, the combination with the carriage, of means to elevate the carriage at the end of its forward movement, means to return it to its initial position, means to lower the carriage and cushioning means resisting the sudden descent of the carriage from its elevated position.



2. The combination with a graphophone of a carriage, one end of which is free to be raised, a rod supporting said free end, of means cushioning the descent of the carriage to its supporting rod.

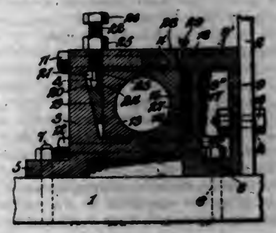
3. The combination with a graphophone having a carriage one end of which is free to be elevated, and a rod to support the free end, of cushioning means to gradually lower the carriage from its elevated position to its position on its supporting rod.

4. The combination with a graphophone, having a carriage one end of which is free to be elevated, and a rod for supporting the free end of the carriage in its normal position, of an air chamber, a piston therein, and means connected with said piston and interposed in the path of the carriage as it is lowered from an elevated position to absorb the shock incident to the descent of the carriage.

5. The combination with a graphophone having a carriage, one end of which is free to be elevated, and a rod for supporting said free end, of a lever interposed in the path of the carriage as it is lowered to its supporting rod, and a cushioning medium controlling the movement of said lever.

[Claims 6 to 20 not printed in the Gazette.]

962,447. ADJUSTABLE JOURNAL-BOX FOR ROCK-SHAFTS. JOSEPH ILLY MENGIS, Vicksburg, Miss. Filed Oct. 27, 1908. Serial No. 459,709.



1. The combination of a journal box composed of two sections separably connected, one of the sections having a recessed internal wall, a bushing mounted on the box and composed of sections, one of the sections of the bushing having a recessed wall disposed opposite the first-mentioned recessed wall, a device disposed in the recesses of the said walls consisting of a liner holder and a plurality of liner plates mounted in the holder, and means acting on the unrecessed section of the bushing for holding the sections of the bushing in place.

2. The combination of a journal box composed of a pair of sections, a bushing mounted therein and composed of sections, a liner device consisting of a holder and plates

mounted between one section of the box and the adjacent section of the bushing, and adjustable means disposed between the other sections of the box and bushing to cooperate with the liners for positioning the bushing sections of the box.

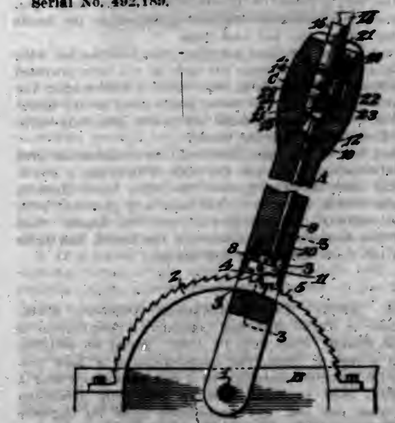
3. The combination of a bearing box, a bushing composed of separable sections mounted therein, there being a chamber between one section of the bushing and the adjacent wall of the box, a liner device mounted in the chamber consisting of a holder having an open body with detachable plates mounted therein and provided with a stem extending out of the chamber, and an adjustable device arranged in the bearing box and acting on the section of the bushing opposite to that adjacent the liner device to coöperate with the said device for positioning the bushing.

4. In a journal box of the class described, two independent box sections having means whereby they may be rigidly connected to each other and to a supporting frame, two laterally shiftable independent bushing sections contained within the box, a wedging block arranged between the outer face of one of said sections and the inner face of the adjacent box section, an adjusting screw passing down through the top of said box section and engaging with the wedging block to raise or lower the same, lock nuts on the adjusting screw, liner plates adapted to be inserted between the outer face of the opposed bushing section and the inner face of the adjacent box section whereby the bushing sections may be adjusted laterally, said last-mentioned faces having alined recesses, and a holder for the plates seated in the recesses.

5. In a journal box of the class described, two independent box sections having attaching flanges, means for clamping said box sections together, bushing sections carried within said box sections, a wedging block arranged between the outside face of one of said bushing sections and the inside face of the adjacent box section, an adjusting screw for raising and lowering said wedging block, the top of the opposed section being provided with a longitudinal slot having an enlarged portion at its middle, the inner face of the said box section and the outer face of the adjacent bushing section being each formed with a vertical groove corresponding to the widened middle portion of said slot, in combination with a liner holder adapted to clasp a plurality of liner plates and to be received within said longitudinal registering grooves in the bushing and box sections.

[Claims 6 and 7 not printed in the Gazette.]

962,448. AUTOMOBILE-CONTROLLER LEVER-LOCK. FRANKLIN C. MILLER, Easton, Pa. Filed Apr. 26, 1909. Serial No. 492,189.



1. An automobile attachment comprising a controller, means for holding the controller in different operating positions, and a key-controlled device permanently carried by and projecting from the controller and adapted to be thrown into and out of coöperative relation with the said holding means.

2. The combination of a controller, a holding means therefor, an actuator for the holding means, a key-controlled device for throwing the actuator into and out of coöperative relation with the holding means.

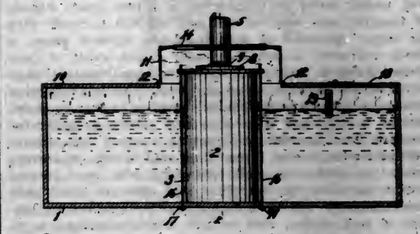
3. The combination of a controller, means for holding the controller in different operative positions, a push-button for releasing the holding means, and a key-operated device for throwing the push-button into and out of coöperative relation with the holding means.

4. The combination of a controller, means for holding the controller in different operative positions, said means including a movable element, a rotatable and depressible push-button on the controller and permanently attached thereto for moving the said element, and a lock device for turning the push button and holding the latter in operative or inoperative position with respect to the said element.

5. The combination of a controlling lever, a toothed member associated therewith, a latch element carried by the lever to engage the said member, an operating device carried by the lever for operating the latch, and a rotatable and longitudinally-movable actuating member attached to and normally protruding from the lever and movable by means of a turn key into and out of coöperative relation with the said device.

[Claims 6 to 23 not printed in the Gazette.]

962,449. TANK-HEATER COVER. HERMAN G. MILLER, Foxlake, Wis. Filed Feb. 5, 1910. Serial No. 542,224.



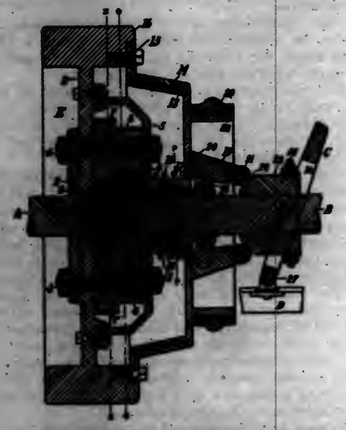
1. A tank heater, comprising a tank provided with a heater having a stovepipe, a cover for said tank provided with a door and with an opening above the heater, said cover positioned to form a heat retaining chamber between the surface of the water within the tank and the cover, a dome covering the opening and positioned above the cover and also above the heater, said dome provided with a cover and with a stovepipe opening.

2. A tank heater, comprising a tank provided with a heater and with a cover having an opening positioned immediately above the heater, a dome connected to the cover and closing the opening thereof and extending above the heater and provided with a covered opening, and means for regulating the admission of air to said tank.

3. A tank heater, comprising a tank provided with a heater and with a cover having an opening positioned immediately above the heater, a dome connected to the cover and closing the opening thereof and extending above the heater and provided with a covered opening, and a damper provided in said dome for controlling the admission of air to the heater.

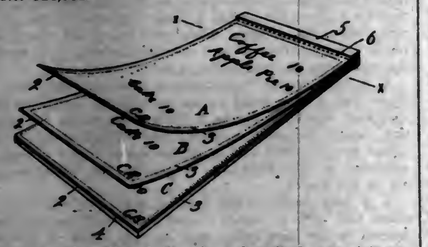
4. A tank heater, comprising a tank provided with a cover and with a heater extending through an opening formed in the said cover, said opening being of greater size than the portion of the heater extending therethrough to form a space between said heater and said cover, a flanged dome connected to the cover and closing the opening thereof and extending above the heater and provided with a covered opening, and means forming part of the dome for regulating the admission of air to the tank and heater.

962,450. SHAFT-REVERSING MECHANISM. JOHN D. MOONEY, St. Paul, Minn. Filed Oct. 5, 1906. Serial No. 337,557.



Transmission mechanism comprising a driving shaft having a circular flange at its end, a balance wheel bolted to said circular flange, integral gears of different sizes mounted on said bolts, a surrounding casing bolted to said balance wheel and having openings within which said first named bolts are supported, a driven shaft having an integral gear near its end and adapted to mesh with the larger members of said integrally formed gears, a sleeve rotatably mounted on said driven shaft, a gear formed integral with said sleeve, a frusto-conical flange bolted to said balance wheel and having an inner friction surface, a complemental conical member having an outer friction surface and splined on said sleeve, a spring for normally forcing said complemental member into contact with said cone, a ring threaded on said sleeve, cam levers pivoted on said ring, and contacting with said conical member, a cone for operating said lever to force said conical member out of clutching position against the tension of said spring, said conical member having an integral circular flange, a split band on said flange, and lever mechanism for shifting said cone to disengage the clutch and simultaneously tightening said band to brake said conical member and thereby hold said sleeve stationary.

962,451. MANIFOLDING ORDER-SLIP. GEORGE E. MORTON, Chicago, Ill., assignor of one-half to Edwin W. Finck, St. Paul, Minn. Filed Aug. 27, 1909. Serial No. 514,952.



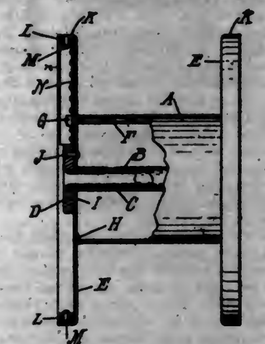
1. An order slip of the class described comprising a memorandum sheet and a carbon sheet connected with said memorandum sheet along its outer edges.

2. Triplicate order slips of the class described comprising three memorandum slips, a carbon connected to the underside of each slip around its outer edges and means connecting adjacent ends of said slips and carbons.

3. Triplicate order slips of the class described comprising three memorandum slips connected together at adjacent ends, a carbon sheet underneath each of the upper memorandum sheets and secured to the same entirely around the edges thereof, and a relatively stiff backing and interposed carbon secured to the underside of the lower sheet entirely around its edges.

4. Triplicate order slips of the class described comprising three memorandum sheets, and carbon sheets secured underneath each memorandum slip by a line of stitching extending entirely around the outer edges, the line of stitching of the three slips being arranged out of alinement.

962,452. REEL. FRANK MOSSBERG, Attleboro, Mass., assignor to Frank Mossberg Company, a Corporation of Rhode Island. Filed June 14, 1909. Serial No. 501,921.



1. In a reel of the class described, the combination with the drum and heads provided with outturned peripheral flanges, of rings fixed to the inner faces of the flanges, plates radially arranged upon the heads abutting against the rings and means whereby the reel may be rotatably mounted.

2. In a reel of the class described, the combination with the heads provided with peripheral outturned flanges, of rings fixed to the flanges, channel plates radially arranged upon the heads abutting against the rings, and means whereby the reel may be rotatably mounted.

3. In a reel of the class described, the combination with an axial tube, of hubs upon the ends of the tube, heads upon the hubs provided with peripheral flanges, rings upon the flanges, and radially disposed plates upon the heads abutting against the hub and rings.

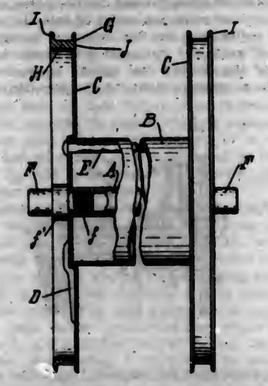
4. In a reel of the class described, the combination with an axial tube, of hubs upon the ends of the tube provided with annular seats in their rear faces, a sleeve upon the tube abutting against the hubs, heads fixed in the annular seats, a drum intermediate the heads, and bolts within the drum connecting the heads.

5. In a reel of the class described, the combination with an axial tube, of hubs upon the ends of the tube, a sleeve upon the tube abutting against the hubs, heads fixed to the hubs within the area of the hubs and provided with flanges, radially disposed plates upon the heads, rings within the flanges, a drum between the heads, and bolts within the drum connecting the heads.

962,453. REEL. FRANK MOSSBERG, Attleboro, Mass., assignor to Frank Mossberg Company, a Corporation of Rhode Island. Filed July 10, 1909. Serial No. 506,889.

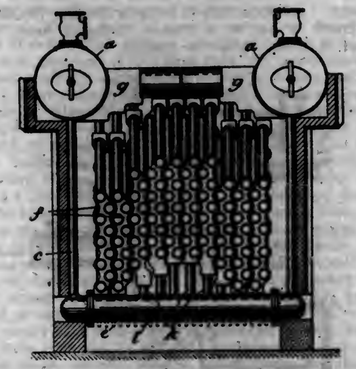
1. In a reel or beam, the combination of a head provided with marginal openings, of a belt race comprising a cylindrical body provided with an outwardly extending flange upon one end, and projections upon its opposite end, said projections entering the openings and adapted to be riveted therein.

2. In a reel or beam, the combination of a head provided with an annular series of openings at a distance



from the periphery of the head, a belt race, and projections upon the belt race fixed in the openings.

962,454. WATER-TUBE BOILER. SIGNORO C. MUNOZ, Montclair, N. J., assignor to The Babcock & Wilcox Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 9, 1905. Serial No. 240,174.

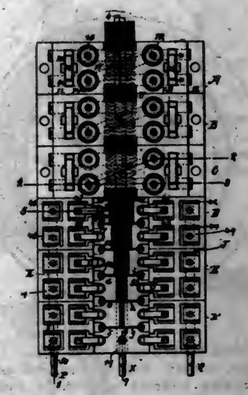


1. In a water tube boiler, the combination with the heating tubes, of means to contain the main body of water, a U-shaped drum near the bottom of the boiler having a middle portion and side extensions, means to feed the heating tubes from the middle portion of the U-shaped drum, a connection between the means to contain the main body of water and the side extensions of the U-shaped drum, a mud drum, means to introduce water into the mud drum, and a connection between the mud drum and the means to contain the main body of water.

2. In a water tube boiler, the combination with inclined heating tubes, of an upper drum on each side of the heating tubes, a mud drum on each side of the heating tubes, a U-shaped drum beneath the lower ends of the heating tubes, headers at said ends of the heating tubes communicating at the bottom with the U-shaped drum, and side tubes exposed to the heat of the furnace on each side of the boiler some of which connect the upper drums and the U-shaped drum and others of which connect the upper drum and the mud drum.

3. In a water tube boiler, the combination with inclined heating tubes, of an upper drum on each side of the heating tubes, a mud drum on each side of the heating tubes, a U-shaped drum beneath the lower ends of the heating tubes, headers at said ends of the heating tubes communicating at the bottom with the U-shaped drum, side tubes exposed to the heat of the furnace on each side of the boiler some of which connect the upper drums and the U-shaped drum and others of which connect the upper drum and the mud drum, and means to introduce water into the mud drums.

962,455. SERVICE CUT-OUT AND METERING APPARATUS. THOMAS E. MURRAY, New York, N. Y. Filed Dec. 21, 1909. Serial No. 534,288.



1. A metering panel comprising blocks of refractory insulating material placed together, circuit members extending across and within the bodies of said blocks, one of said members being composed of a plurality of parallel conductors, a pair of branch conductors in each block, one conductor of each pair being connected within said block to one of said circuit members, and means within said block for detachably connecting the other branch conductor of each of said pairs with any one of said parallel conductors.

2. A metering panel comprising blocks of refractory insulating material placed together, circuit members extending across and within the bodies of said blocks, one of said members being composed of a plurality of parallel conductors, a pair of branch conductors in each block, one conductor of each pair being connected within said block to one of said circuit members, means within said block for detachably connecting the other branch conductor of each of said pairs with any one of said parallel conductors, and fuses seated in said blocks and respectively interposed in each of said branch conductors.

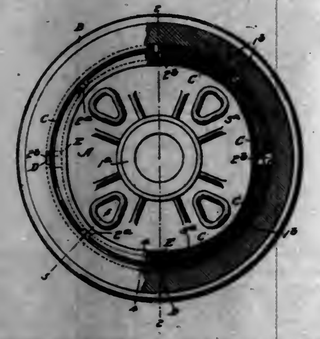
3. A metering panel comprising blocks of refractory insulatiug material placed together, circuit members extending across and within the bodies of said blocks, one of said members being composed of a plurality of parallel conductors, a pair of branch conductors in each block, one conductor of each pair being connected within said block to one of said circuit members, means within said block for detachably connecting the other branch conductor of each of said pairs with any one of said parallel conductors, fuses in said blocks respectively interposed in each of said branch conductors, and circuit breakers interposed between said fuses and the terminals of said branch conductors and seated in said blocks.

4. A metering panel comprising blocks of refractory insulating material placed together, two circuit members within and extending across said blocks, one of said members being composed of a plurality of parallel conductors, circuit terminals on said conductors, circuit terminals on said blocks, and removable cut outs entering recesses in said blocks and detachably connecting each of said block terminals with the other of said circuit members.

5. A metering panel comprising blocks of refractory insulating material placed together, a circuit member within and extending across said blocks, circuit terminals in each of said blocks connected to said member, a second circuit member composed of a plurality of parallel conductors of different lengths, each of said conductors having an end terminal in proximity to one of said block terminals, and meter connections to said terminals.

[Claim 6 not printed in the Gazette.]

962,456. CAR-WHEEL. WILLIAM MCCONWAY, Pittsburg, Pa. Filed Mar. 25, 1910. Serial No. 551,550.



1. A car wheel comprising a wheel center, a tire formed with key-seats therein, locking members interposed between and having socketed engagement with the wheel center and tire, a key engaging the key-seats of the tire and embedded in a metal filler cast between the wheel center, tire and adjacent locking members, and a filler cast in place between the said wheel center, tire and adjacent locking members.

2. A car wheel comprising a wheel center, a tire formed with key-seats therein, locking members cast in place between the wheel center and tire and having socketed engagement with each, a key engaging the key-seats of the tire, said key having cross-sections of different areas, and a filler cast in place and locking said key in said key-seats.

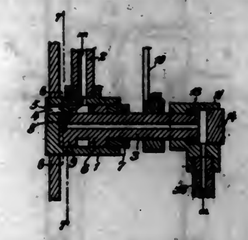
3. A car wheel comprising a wheel center, a tire formed with key-seats, a filling of metal cast in place between the wheel center and tire and having socketed engagement with each, and a key extending into the key-seats of the tire and embedded in metal cast in place between the wheel center and tire.

4. A car wheel comprising a wheel center having a channeled periphery, a tire having a channeled inner circumference and formed with key-seats, a plurality of circumferentially extending wedges interposed between the wheel center and tire and having socketed engagement with each, a key engaging the key-seats of the tire, and a filler cast in place between adjacent wedges and locking said key in place in the key-seats of the tire.

962,457. BURNER FOR LIQUID FUEL. FRANK S. MCKIBBEN, Memphis, Nebr. Filed Aug. 28, 1908. Serial No. 450,785.

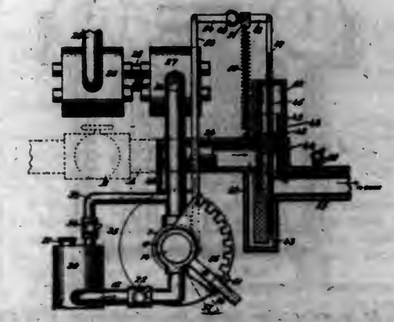
1. In a liquid fuel burner, the combination of two concentric tubes, the outer one, for conveying an atomizing agent, having an outlet in its end, and the inner one, for conveying the fuel, having an outlet near its end and rotatable to a limited extent in said outer tube for the purpose of increasing or diminishing the areas of said outlets.

2. In a liquid fuel burner the combination of an outer air casing having an outlet in its end, a curved projection therein, a fuel tube rotatable to a limited extent in said air casing and bearing upon the inner curve of said projection, a ring on said tube to close one end of said casing, a half ring formed on the end of said fuel tube and moved, by the rotation thereof, in the plane of said projection, to open or close the outlet of said air casing and a transverse outlet from the fuel tube into the air casing in the plane of said half ring and said projection whereby the areas of the air and fuel outlets are increased or diminished in a constant ratio by the rotation of the fuel tube.



3. In an apparatus for burning liquid fuel the combination of an outer air casing having an outlet in its end, a compressed air supply pipe, a fuel supply pipe, a fuel casing fixed on the end thereof, a fuel tube having an outlet near its end and rotatable to a limited extent in said air casing and in said fuel casing, by which rotation the areas of said outlets are made larger or smaller and a lever fixed on said fuel tube by which it can be rotated.

962,458. CONSTRUCTION OF MOTIVE-FLUID GENERATORS. FRANK S. MCKIBBEN, Memphis, Nebr. Filed Mar. 3, 1909. Serial No. 481,179.



1. In an apparatus for generating a motive fluid containing the gases of continuous combustion, the combination of a combustion chamber, a burner having an outlet therein, a conduit conveying said gases of combustion to a principal engine, the operation of which is the object of said apparatus and a valve adapted to close said conduit and automatically open it when the pressure of said gases reaches a predetermined degree.

2. In a generator of a motive fluid, the combination of a boiler, a conduit conveying said fluid therefrom to a principal engine, the operation of which is the object of said generator, a combustion chamber within said boiler, communicating with the steam space thereof through an unvalved opening, a liquid fuel burner, having an outlet in said chamber, and a valve adapted to close said conduit and to be moved to open it by the direct pressure of said fluid thereon, whereby a motive fluid is generated in said combustion chamber and boiler and is retained therein till its pressure reaches a predetermined degree sufficient to move said valve to open a passage for it.

3. In a generator of a motive fluid, the combination of a boiler, a conduit conveying said fluid to a principal engine, a valve casing connected transversely thereto, a valve sliding in said casing, adapted to close said conduit and to be moved by the direct pressure of said fluid, a spring opposing said pressure on said valve, a combustion chamber within said boiler, communicating with the steam space thereof through an unvalved opening, a liquid fuel burner having an outlet into said chamber and having a part that is rotatable for the purpose of changing the area of said outlet, a latch-lever fixed on said part for rotating it and a notched segment loosely fulcrumed on said burner and adapted to be moved by said valve and to engage said latch-lever so that a rise of pressure in said boiler causes a lessening of the area of said burner outlet and vice versa.

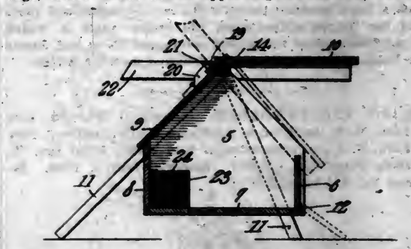
4. In a generator of a motive fluid, the combination of a boiler, a conduit conveying said fluid from said boiler to a principal engine the operation of which is the object for which said generator is intended, a valve casing connected thereto, a valve sliding in said casing and adapted to be moved by the direct pressure of said fluid, a spring opposing said pressure on said valve, a combustion chamber within said boiler communicating with the steam space thereof, a liquid fuel burner having an outlet in said chamber and having a part that is rotatable for the purpose of changing the area of said outlet, a latch-lever fixed on said rotatable part for rotating it, a notched segment loosely fulcrumed on said burner, adapted to be moved by said valve and having a notch adapted to engage loosely said latch-lever and a bracket against which said lever may rest to prevent complete closing of said burner outlet, whereby a fall of pressure in said boiler causes an increase of the area of said burner outlet and a rise of pressure causes a lessening of said area until said lever rests against said bracket, after which any further rise of pressure causes a slight occasional movement of said valve to open a passage for the slight excess of motive fluid without moving said latch-lever.

5. In a generator of a motive fluid, the combination of a boiler, a conduit conveying said fluid to a principal engine, a valve casing connected thereto, a valve sliding in said casing, adapted to close said conduit and to be moved by the direct pressure of said fluid, a spring opposing said pressure on said valve, a combustion chamber within said boiler communicating with the steam space thereof, a liquid fuel burner having an outlet in said chamber and having a part that is rotatable for the purpose of changing the area of said outlet, an air compressor, a pipe conveying air therefrom to said burner, a motor driven directly by said fluid and actuating said compressor but nothing else, a fuel chamber communicating with said air pipe and discharging fuel into said burner, a notched segment loosely fulcrumed on said burner, adapted to be moved by said valve and having a notch adapted to engage loosely said latch-lever and a bracket against which said lever may rest to prevent complete closing of said burner outlet, whereby there is automatically maintained in said generator a predetermined normal pressure when said principal engine is not in operation, a suitable supra-normal working pressure when said principal engine is in operation and a suitable subnormal working pressure when said fluid passes to said principal engine or other apparatus not a part of said generator, through another conduit not controlled by said valve.

962,459. COMBINED NEST AND BROODER. WILLIAM HENDRIX PARKER, North Birmingham, Ala. Filed Apr. 30, 1909. Serial No. 493,195.

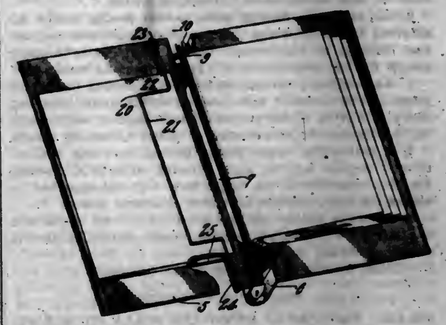
1. In a device of the class described, a box having an open inclined side, a door movable into and hingedly connected to the box serving as a closure for one side of the box, the door being capable of being swung down to afford an inclined entrance into the box, a closure for the open inclined side of the box, cleats upon the under side of the closure, a cleat connecting the first mentioned cleats and lying at an angle with respect to the closure, and means upon the top of the box engaging with the last mentioned cleat to hold the closure in substantially horizontal position above the opening which it is intended to close.

2. In a device of the class described, a box having an open inclined side, a door, cleats secured upon the under side of the door and lying one to each side of the box, each of said cleats being formed with a notch in its under edge, lateral studs at the upper edge of the box, and re-



silient tongues secured one upon each cleat and each covering the notch of the respective cleat, the notches being designed to receive said studs, and the tongues being formed each with an opening to receive the corresponding stud.

962,460. TEMPORARY BINDER. JOHN PATTERSON, Kenton, Ohio. Filed Nov. 15, 1909. Serial No. 528,237.



1. In a device of the class described, a cover member, a plate at the upper end of the member, a plate fixed at the lower end of the member, a plate hinged to the last mentioned plate, the two first-mentioned plates being formed with alined openings, rods inserted through the openings and having headed ends bearing against the under side of the second mentioned plate, and means for holding the hinged plate in folded position against the second mentioned plate.

2. In a device of the class described, a cover member, a plate at the upper end of the member, a plate fixed at the lower end of the member, a plate hinged to the last mentioned plate, the two first mentioned plates being formed with alined openings, rods inserted through the openings and having headed ends bearing against the under side of the second mentioned plate, and means for holding the hinged plate in locked position.

3. In a device of the class described, a cover member, a backing fixed in the member, a plate fixed at the upper end of the backing and formed with a number of openings, a plate fixed at the lower end of the backing and formed also with a number of openings alining with the openings in the plate at the upper end of the backing, a plate hinged to the last mentioned plate, a number of rods inserted through the alined openings of the two first mentioned plates, and means for locking the hinged plate in folded position against the second mentioned plate.

4. In a device of the class described, a cover member, a backing fixed therein, a plate secured at the upper end of the backing and formed with a number of openings, a plate fixed at the lower end of the backing and formed also with a number of openings alining with the openings

in the plate at the upper end of the backing, a plate hinged to the last mentioned plate and adapted to be folded to a position thereagainst, a plurality of rods removably engaged through the alined openings in the two first mentioned plates and having at their lower ends each a head confined between the second mentioned plate and the hinged plate, when the hinged plate is folded to position against the second mentioned plate, and means for holding the hinged plate in locked folded position.

962,461. CASTER-HOLDER. HAROLD D. PENNEY, New York, N. Y., assignor to American Couch Company, New York, N. Y., a Corporation of New York. Filed Jan. 19, 1909. Serial No. 473,088. Renewed Dec. 3, 1909. Serial No. 531,235.



1. A caster socket for an angle iron leg having lapping walls forming a socket for gripping the leg both exteriorly and interiorly thereof across substantially the width of such leg and having caster attaching means.

2. An angularly formed caster socket having means for gripping the exterior and interior of an angle iron leg, and also having at the corner thereof bent walls forming means for the attachment of caster attaching means.
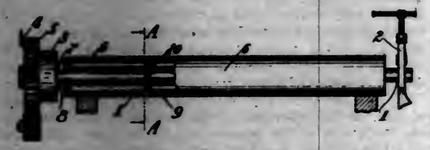
3. An angularly formed caster socket having means for gripping the exterior and interior of an angle iron leg, and also having at the corner thereof angular walls forming means for the attachment of caster attaching means.

4. A detachable caster socket having interiorly and exteriorly located lapping walls forming an angular opening for the reception of an angle iron leg and also having means for the reception of caster attaching means.

5. A caster socket for the reception of an angle iron leg, having an integral, resilient, bent portion to receive caster attaching means.

[Claims 6 to 36 not printed in the Gazette.]

962,462. PROCESS OF REMOVING SCALE FROM PIPE. HERLUF A. F. PETERSEN, Chicago, Ill., assignor to J. H. W. Petersen, Chicago, Ill. Filed Sept. 25, 1908. Serial No. 455,347.



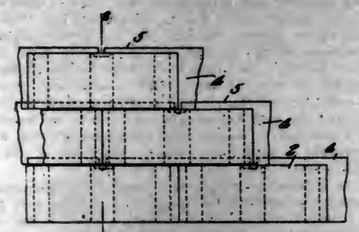
1. The process of removing scale from pipe by twisting of the pipe while supporting its periphery against distortion.

2. The process of removing scale from pipe by rotating one part thereof axially with respect to another part so as to twist the pipe and at the same time supporting the intermediate parts of the pipe against distortion.

3. The process of removing scale from metal pipe which consists in twisting the pipe while it is braced throughout its length against axial distortion.

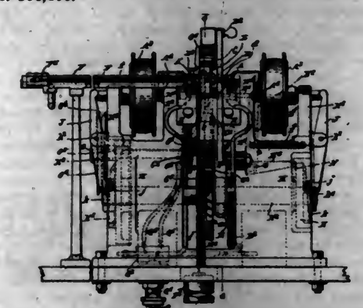
962,463. BUILDING-BLOCK. LEE PHILLIPS, Celoron, N. Y. Filed Mar. 10, 1909. Serial No. 482,438.

A wall composed of superimposed cementitious blocks provided with lateral wings on their opposed faces at their centers and near their ends whereby air spaces will be formed between the blocks and having T-shaped recesses in the upper side of the central wings, a waterproof liner arranged between the blocks co-extensive with the wall and provided with openings registering with the said



T-shaped recesses, and I-shaped keys seated in said recesses and passing through the liner to hold the wings in contact with the opposite faces of the liner.

962,464. AUTOMATIC DRILLING-MACHINE. FRANK HINMAN PIERPONT, Horley, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Mar. 16, 1906. Serial No. 306,406.



1. In a machine such as described, the combination, to form an automatic blank gaging and transfer mechanism, of the following elements, to-wit: a blank carrier including a slide provided with a transverse blank receiving cavity or holder open at opposite ends, gaging members in proximity to the ends of the blank receiving cavity or holder between which the carrier reciprocates; a blank feeding device terminating its motion in one direction at a predetermined distance from the blank carrier; and actuating devices for the carrier and blank feeder adapted to permit the motion of the carrier to be suspended by the action of a defective blank while the feeder continues in action and effects the removal of the obstructing blank.

2. In a drilling machine such as described, the combination of the following elements, to-wit: drilling devices; a blank feeder having a predetermined movement; and a blank gaging and transferring mechanism intermediate the drilling devices and feeder and including a reciprocatory carrier movable between gaging devices and provided with a blank receiving cavity or holder.

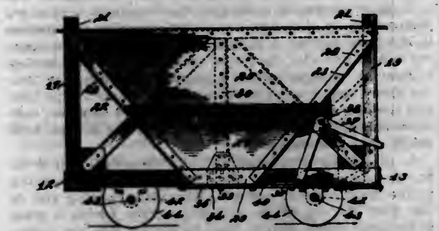
3. In a drilling machine such as described, the combination of the following elements, to-wit: a pair of alined drills; a blank gaging and transfer mechanism including spaced gaging devices and a blank carrier, the latter provided with a blank holding cavity; a blank feeding device including a pusher terminating its motion at a predetermined distance from the carrier, and operating to insert successive blanks into the carrier, and in so doing displace the blank at the time in the carrier; and a pair of burring tools on opposite sides of the line of discharge from the carrier in position to engage successive blanks as delivered therefrom.

4. In a machine such as described, the combination with blank feeding devices, drilling apparatus and a blank carrier intermediate the feeding devices and drill for presenting the blanks and holding them in position for drilling, of means for gaging the position of said carrier relative to the axis of the drill, and means for actuating said carrier.

5. In a machine such as described, provided with drilling and burring devices in parallel relation and in combination therewith means for advancing and retracting the drill, a beveled driving wheel on the drill spindle, a reversed beveled wheel on the bur spindle, a yielding connection between said driven wheel and its spindle, and means for gaging the advance of the bur spindle.

[Claims 6 to 25 not printed in the Gazette.]

962,465. CONCRETE-CAR. JOHN B. QUINN, Chicago, Ill., assignor to Shnable & Quinn, Chicago, Ill., a Copartnership. Filed Apr. 21, 1909. Serial No. 491,283.



1. In a device of the character described, the combination of a hopper-shaped car-body having means for the attachment of a hoisting device, a discharge door in its lower portion, means whereby said door may be opened and closed, and a truck fixedly secured to said car-body whereby the body and truck may be raised together, substantially as described.

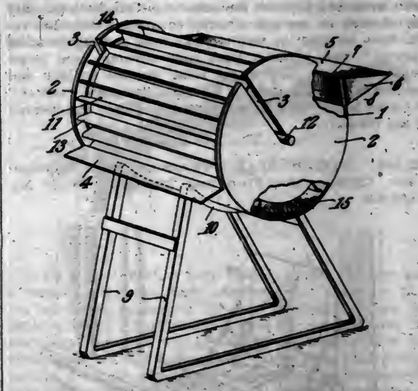
2. In a device of the character described, the combination of a hopper-shaped car-body having means for the attachment of a hoisting device, a sliding discharge door in the bottom of said car-body capable of opening varying amounts, means whereby said door may be slid to open and close the same, and a truck fixedly secured to said car-body whereby the body and truck may be raised together, substantially as described.

3. In a device of the character described, the combination of a hopper-shaped car-body having means for the attachment of a hoisting device, a sliding discharge door in its bottom capable of opening and closing the discharge opening of said car varying amounts, means whereby said door may be opened and closed, including a bell-crank and a link connecting said bell-crank to said door, and a truck fixedly secured to said car-body whereby said truck and body may be raised together, substantially as described.

4. In a device of the character described, the combination of a car-body having means for the attachment of a hoisting device and a discharge opening, a sliding door capable of opening and closing said discharge opening, means whereby said door may be slid, and supports on which said door slides, said supports having holes therethrough for the escape of the grout and covered by the door when the latter is in closed position, substantially as described.

5. In a device of the character described, the combination of a hopper-shaped car-body having means for the attachment of a hoisting device and a discharge opening in its bottom, a truck fixedly secured to said car-body whereby the two may be raised together, a sliding door capable of opening and closing said discharge opening, a door operating mechanism including a bell-crank and a link connecting said bell-crank with said door, and supports with unobstructed ends on which said door slides, said supports having holes therethrough for the escape of the grout and covered by the door when the latter is in closed position, substantially as described.

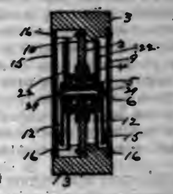
962,466. AMALGAMATING-MACHINE. JOHN S. RAYBURN, Grand Junction, Colo. Filed May 10, 1909. Serial No. 495,027.



1. An amalgamating machine for the recovery of precious metals comprising a substantially semi-cylindrical receptacle, a receiving lip on and projecting from one edge of said receptacle and of substantially the same length as said receptacle, a discharge lip on and extending from the other edge of said receptacle in substantially radial relation thereto and of substantially the same length as said receptacle, a rotatable drum within the receptacle and provided with a circumferential series of substantially radial blades, and a support for the receptacle with relation to which the said receptacle may be moved about its longitudinal axis to different positions of adjustment to be there held frictionally.

2. An amalgamating machine for the recovery of precious metals, comprising a substantially semi-cylindrical receptacle having a lip projecting radially outward from one longitudinal edge and another lip projecting radially outward from the longitudinal edge on the other side of the receptacle, the said last named lip having end walls joined by a strip substantially tangential to the receptacle and spaced therefrom and at its lower edge spaced from the lip.

962,467. UNIVERSAL LEVELING DEVICE. GEORGE A. RHODES, New York, N. Y. Filed Aug. 16, 1909. Serial No. 513,204.

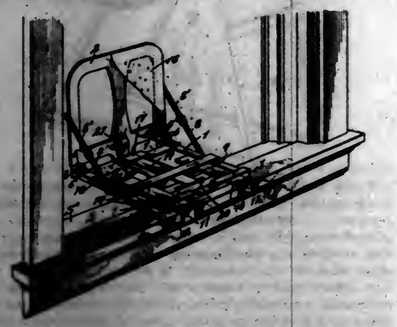


1. In a universal leveling device, a frame having a central opening, a bracket arm supported within said opening, said bracket arm having ball bearing hubs, a shaft passing through said ball bearing hubs and turning in the same, weighted pendulums mounted on said shaft, adjustable index arms slidable on said shaft, and behind said pendulums and dials placed between the said pendulums and index arms and the faces of the hubs of the bracket arm, said dials being supported in the opening in the said frame.

2. In a universal leveling device, a frame having a central opening a bracket arm supported within said opening, said bracket arm having ball bearing hubs, a shaft passing through and turning in the said ball bearing hubs, weighted pendulums mounted on said shaft, adjustable

index arms slidable on said shaft and behind the said pendulums, means for locking said index arms on said shaft, and dials placed between the said pendulums and index arms and faces of the hubs of the bracket arm, said dials having on one side a series of circular lines and radial lines intersecting said circular lines and representing "plumb" and "level" lines said circular lines intersected by marks, said marks being denoted by inch and fraction of an inch signs or marks to designate "batter" or "over hang," said dials being supported in the opening of the frame.

962,468. WINDOW-SEAT. THEODORE SCOTT RICHARDSON, Chicago, Ill. Filed Aug. 28, 1907. Serial No. 390,432.



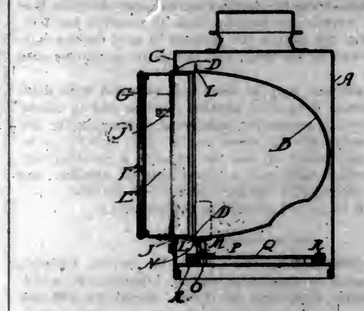
1. In a device of the kind described and in combination, a seat member provided with adjustable sill engaging hooks at the front edge on each side thereof, means for adjustably securing said hooks in position, a slidable adjustable sill clamping member arranged on the lower face of said seat member and provided with an extension to the back edge thereof, said seat member provided with a support on the inside thereof arranged to support the outer edge, a back member pivotally secured to said seat member and arranged to fold thereon said back member provided with an extension arranged to coöperate with said clamping member extension and control the same.

2. In a device of the kind described and in combination, a seat member provided with adjustable sill engaging hooks at the front edge on each side thereof, means for adjustably securing said hooks in position, a slidable adjustable sill clamping member arranged on the lower face of said seat member and provided with an extension to the back edge thereof, a supporting member adjustably secured on the inside of said seat and arranged to support the outer edge thereof, a back member pivotally secured to said seat member at the back edge thereof and arranged to fold thereon, said back member provided with a part extended to and arranged to coöperate with said clamping member extension and means for securing said back and clamping members together at said extensions, and means for limiting the movement of said back member.

962,469. LOCOMOTIVE-HEADLIGHT. MARK A. ROSS, Chicago, Ill. Filed Sept. 7, 1909. Serial No. 516,570.

1. In a locomotive headlight, the combination of a reflector with an inclosing case therefor having an opening in the front thereof, a cylindrical sleeve about said opening and in line with the rim of the reflector, a tube having a glass at its outer end, a stop to limit its motion into the sleeve, and a series of interlocking devices on the tube and the case whereby the parts are secured together.

2. In a locomotive headlight, the combination of a reflector with an inclosing case therefor having an opening in the front thereof, a cylindrical sleeve about said opening and in line with the rim of the reflector, a tube having a glass at its outer end, a stop to limit its motion into the sleeve, and a series of interlocking devices on the tube and the case whereby the parts are secured together, the sleeve projecting inwardly from the front of the case.



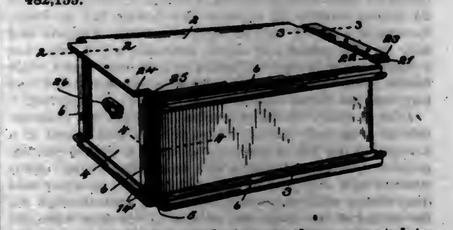
3. In a locomotive headlight, the combination of a reflector with an inclosing case therefor having an opening in the front thereof, a cylindrical sleeve about said opening and in line with the rim of the reflector, a tube having a glass at its outer end, a stop to limit its motion into the sleeve, and a series of interlocking devices on the tube and the case whereby the parts are secured together, said interlocking devices comprising each a spring portion with which the other engages.

4. In a locomotive headlight, the combination of a reflector with an inclosing case therefor having an opening in the front thereof, a sleeve about said opening and in line with the rim of the reflector, a tube having a glass at its outer end, a stop to limit its motion into the sleeve, and a series of interlocking devices on the tube and the case whereby the parts are secured together, said interlocking devices consisting each of a spring grip on the case and a finger on the tube.

5. In a locomotive headlight, the combination of a reflector with an inclosing case therefor having an opening in the front thereof, a sleeve about said opening and in line with the rim of the reflector, a tube having a glass at its outer end, a stop to limit its motion into the sleeve, and a series of interlocking devices on the tube and the case whereby the parts are secured together, such tube and glass being bodily removable from the case.

[Claims 6 to 9 not printed in the Gazette.]

962,470. METALLIC RECEPTACLE. EDMUND RYAN, Lawrenceville, Ill. Filed Mar. 8, 1909. Serial No. 482,155.



1. In a metallic receptacle two members connected together at their edges by a lock seam, the edge of one of said members being turned back upon itself, the edge of the other member being bent at an angle, then bent back upon itself to a point adjacent the surface of the last mentioned member at which point the metal is bent back upon itself and again bent back upon itself to form a channel to receive the said turned edge of the first mentioned member, and a stiffening member interposed in the edge of the last mentioned member on the outside of said channel.

2. In a metallic receptacle two members, one of which is provided with a turned edge, the other of which has its edge bent angularly and then bent back upon itself a plurality of times and then bent to form a channel to receive the said turned edge of the first mentioned member, and a stiffening member interposed in the edge of the last mentioned member on the outside of the said channel.

3. In a metallic receptacle two metallic members, one of which is provided with a turned edge, the other of which has its edge bent back upon itself a plurality of times and then bent to form a channel to receive the turned edge of the first mentioned member, and a stiffening member interposed in the edge of the last mentioned member.

4. In a metallic receptacle two metallic members, one of which is provided with a turned edge, the other of which is provided with a channel to receive said turned edge, the metal adjacent said channel being bent back upon itself a plurality of times to form a stiffening and cushioning means for said channel, and a stiffening member arranged in the edge adjacent said channel.

5. In a metallic receptacle two members, one of which has its edge bent angularly and then bent back upon itself a plurality of times and then bent to form a channel to receive the edge of the other member, and a stiffening member interposed in the angularly bent edge of the first mentioned member.

[Claims 6 and 7 not printed in the Gazette.]

962,471. NON-SLIPPABLE ATTACHMENT FOR HORSE-SHOES. ANDREW J. SANGSTER, Chicago, Ill. Filed Dec. 29, 1909. Serial No. 535,509.

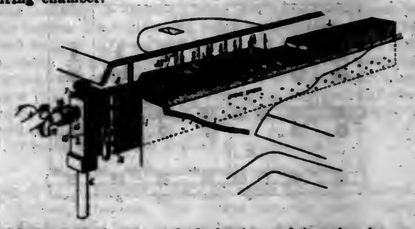


1. A horse shoe attachment comprising two metallic clamping members adapted to embrace the sides of a horse shoe and provided with horizontally disposed overlapping eyes at their front portions, said eyes being provided with registering rivet holes the hole in the lower eye consisting of a smaller upper portion adapted to permit the passage of a rivet and a larger threaded lower portion adapted to receive a rivet head and a threaded calk; a rivet secured through said holes; a threaded calk secured in said threaded portion of the hole; an inwardly extending flange on each of said members, adapted to embrace the bottom of the corresponding side of the shoe; downwardly extending calks on said flanges; and detachable means for securing the rear ends of said members together, substantially as described.

2. A horse shoe attachment comprising two metallic clamping members adapted to embrace the sides of a horse shoe and provided with horizontally disposed overlapping eyes at their front portions, said eyes being provided with registering rivet holes, the hole in the lower eye consisting of a smaller upper portion adapted to permit the passage of a rivet and a larger threaded lower portion adapted to receive a rivet head and a threaded calk, there being openings in the rear ends of said side members for the reception of a securing strap; a threaded calk secured in said threaded portion of the hole; an inwardly extending flange on each of said side members, adapted to embrace the bottom of the corresponding side of the shoe; downwardly extending threaded bosses on said flanges; threaded calks removably secured in said bosses; and a securing strap passed through said openings and adapted to secure said side members in position, substantially as described.

962,472. GASEOUS-FUEL BURNER. HENRY SCHNEIDER and CLARENCE SCHNEIDER, Lima, Ohio. Filed Dec. 16, 1909. Serial No. 533,364.

1. In a gas burner, a body having a firing chamber and a supplemental pilot light chamber, said chambers each having discharge orifices in close proximity to one another in virtue of which the ignited gas issuing from the pilot light chamber will ignite the gas issuing from the firing chamber, said body portion including a head portion having a single fuel infeed passage that communicates with the pilot light chamber and the firing chamber, and a needle valve that controls the passage of fuel to the firing chamber.



2. In a gas burner, a body having a firing chamber and a supplemental pilot light chamber, said chambers each having discharge orifices in close proximity to one another in virtue of which the ignited gas issuing from the pilot light chamber will ignite the gas issuing from the firing chamber, said body portion including a head portion having a single fuel infeed passage that communicates with the pilot light chamber and the firing chamber, a needle valve that controls the passage of fuel to the firing chamber, and a supplemental valve on said head for controlling the passage of fuel to the pilot light chamber.

3. In a gas burner, in combination with a body having a firing chamber and a pilot light chamber, said two chambers being in close proximity, said body having a fuel infeed passage that communicates with the pilot light chamber and the firing chamber, and which decreases in size where it leads to the pilot chamber, a needle valve for closing off the said passage to the firing chamber, and another valve that operates in the reduced portion of the infeed passage for regulating the flow to the pilot light chamber.

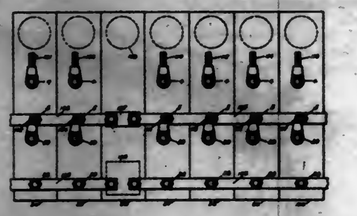
4. A gas burner comprising a body portion and a head-portion, said body portion having a pilot light chamber and a firing chamber, the two chambers having discharge orifices, a discharge orifice in one chamber being in close proximity to a discharge orifice in the other chamber in virtue of which ignition of the gas issuing from one of said orifices will ignite the gas issuing from the other orifice, said head portion being detachably connected to said body portion, said head portion having a fuel infeed passage that has a lateral that communicates with said firing chamber in said body portion and has another lateral that communicates with said pilot light chamber, and a needle valve carried by said head portion for controlling the passage of fuel to the firing chamber.

5. In a gas burner, a body portion and a head portion, said body portion having a plurality of firing chambers in close proximity to one another, means whereby the fuel issuing from one chamber may be ignited by the burning fuel from an adjacent chamber, and a pilot light chamber in close proximity to one of the firing chambers, said head portion being detachably connected with said body portion, said head portion having a fuel infeed passage that has a lateral in communication with one of said firing chambers, a branch from said lateral that communicates with the remaining firing chambers, a valve in said branch for controlling the flow of fuel to the said remaining firing chambers, a needle valve for closing off the flow to all the firing chambers, and another valve for controlling the flow to the pilot light chamber.

962,473. SWITCHBOARD CONSTRUCTION. WILLIAM M. SCOTT, Philadelphia, Pa., assignor to The Cutter Electrical and Manufacturing Company, a Corporation of New Jersey. Original application filed Mar. 1, 1905, Serial No. 247,914. Divided and this application filed Nov. 9, 1909. Serial No. 526,969.

1. In combination, a switchboard, bus bars extending across the same, circuit leads, and a plurality of electric

switches mounted upon said switchboard and disposed one vertically above another, the movable contact member of each switch serving to connect a lead with a bus bar, and an upper terminal of a lower switch disposed below an upper bus bar.



2. In combination, a switchboard, bus bars extending across the same, circuit leads, and a plurality of automatic circuit breakers mounted upon said switchboard and disposed one above another, the movable contact member of each circuit breaker serving to connect a lead with a bus bar, and an upper terminal of a lower circuit breaker disposed below an upper bus bar.

3. In combination, a switchboard, bus bars extending across the same, circuit leads, a plurality of automatic circuit breakers mounted upon said switchboard and disposed one above another, the movable contact member of each circuit breaker serving to connect a lead with a bus bar, an upper terminal of a lower breaker disposed below an upper bus bar, and the movable contact members of said breakers being mechanically interconnected.

4. In combination, a switchboard, bus bars extending across the same one above the other, switches mounted one vertically above the other on said switchboard, the movable contact members of said switches in substantial vertical alinement, one terminal of each switch connected to one of said bus bars, and the other terminal of each switch connected to a circuit lead.

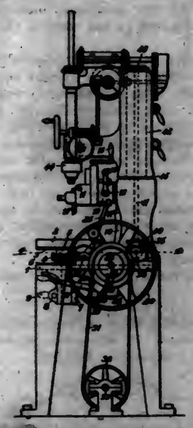
5. In combination, a switchboard, bus bars extending across the same one above the other on one side of said switchboard, switches disposed one vertically above the other on the other side of said switchboard, the movable contact members of said switches in substantial vertical alinement, a connection from a terminal of each switch through said switchboard to a bus bar, and the other terminal of each switch connected to a circuit lead.

[Claims 6 to 16 not printed in the Gazette.]

962,474. COMBINED DRILL-PRESS AND BORING-MACHINE. JOHN T. SHEROD, Kansas City, Kans. Filed Mar. 19, 1909. Serial No. 484,386.

1. In a device of the kind described, a bed plate, a bracket secured to the under side of said bed plate, the said bracket being centrally cut out and vertically slotted, a shaft passing transversely through the slotted portion of the bracket, a handle for operating said shaft, a locking pawl carried by said handle, a rack bar engaged by said pawl, a rotatable shaft parallel to the first mentioned shaft, bearings for the second mentioned shaft, an extension carried by said bearings, the bearings working in the cut-out portion of the bracket and the extension extending into the slot of the bracket and being fixed upon the first mentioned shaft, a gear wheel fixed upon the second mentioned shaft, and gear driven mechanisms arranged upon the bed plate, the drive gears of said mechanisms being arranged upon opposite sides of the gear first mentioned and in position to be engaged by it upon partial rotation of the first mentioned shaft.

2. A device of the kind described comprising a bed plate, a depending split sleeve, a face plate having teeth upon its under side, a depending face plate shaft, a portion of said shaft being journaled in the split sleeve, means for tightening the sleeve, a worm gear upon said shaft, a second shaft at right angles thereto, a gear on the second mentioned shaft, a third shaft parallel to the second mentioned shaft and movable toward and away from it, a gear upon the third shaft meshing with the gear upon the second shaft, a worm upon said second shaft meshing with the worm gear upon the face plate shaft, a tool stand revolubly mounted above the bed plate and swinging in a horisontal plane, a feed rod carried by said tool stand, a tool head working along said feed rod, and means driven by the teeth of the face plate for rotating said feed rods.



3. A device of the kind described comprising a bed plate, a vertically mounted rotatable drill press standard supported from a corner of said plate, drilling press mechanism carried thereby, a face plate supported immediately above the bed plate, a horisontally swinging tool stand supported above the bed plate and adapted to swing above the face plate, a tool head movable along said stand, means operated by rotation of the face plate for sliding the tool head along the tool head stand, a gear wheel driving the drill press mechanism, a gear wheel driving the face plate, shaft bearings swingingly supported between said last mentioned gears, means for swinging said bearings, a drive shaft mounted in said swinging bearings, and a gear wheel fixed upon the drive shaft in position to be swung into engagement upon movement of the bearings with either of the said drive gears, as and for the purpose set forth.

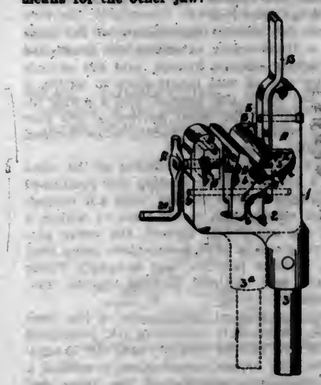
962,475. ROPE-JOCKEY. FRANK SIMON, Minnaar, Transvaal. Filed Mar. 1, 1910. Serial No. 546,726.

1. A rope jockey consisting of a forked frame, a pair of loose jaws mounted between the forks of the frame and adapted to receive the rope from above, an upstanding rotatable releasing lever adapted to be passed behind one of the jaws to support the same and means engaging the second jaw to force it toward the first named jaw.

2. A rope jockey consisting of a forked frame, a pair of loose jaws mounted between the forks of the frame and adapted to receive the rope from above, an upstanding rotatable releasing lever adapted to be passed behind one of the jaws to support the same, and a crank handled screw seating in the frame and engaging the second jaw to force it toward the first named jaw.

3. In a rope jockey, the combination of a frame, a pair of loose jaws mounted thereon and adapted to receive the rope from above, one of said jaws being formed with lugs directed toward the other jaw to prevent the rope from falling out of place between them, and devices for operating the jaws to secure and release the rope.

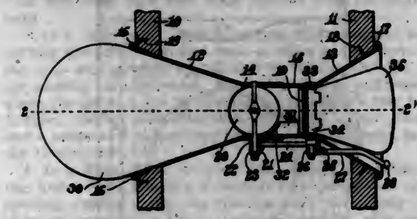
4. In a rope jockey, the combination of a frame, a pair of loose jaws mounted thereon and adapted to receive the rope from above, an upstanding rotatable releasing lever adapted to be passed behind one of the jaws to support the same, means upon said jaw to limit movement of the releasing lever in the releasing direction, and a forcing means for the other jaw.



5. In a rope jockey, the combination of a forked frame, a pair of loose jaws mounted between the forks thereof, said jaws being formed with bifurcated feet engaging the transverse part of the forked frame to resist the pull of the rope, and devices for operating the jaws to secure and release the rope.

[Claims 6 to 8 not printed in the Gazette.]

962,476. CAR-VENTILATOR. FREDERICK W. SIMSON, Winthrop, Mass. Filed Aug. 24, 1909. Serial No. 514,404.



1. A ventilator for cars, consisting of two tubular members adapted to telescope into each other; a screen extending transversely of one of said members; a pivoted damper in said member between said screen and the outer end thereof; an arm on the pivot of said damper; and mechanism pivotally connected to said arm and extending into the car interior for operating said damper.

2. A ventilator for cars, consisting of two tubular members adapted to telescope into each other; a screen extending transversely of one of said members; a pivoted damper in said member between said screen and the outer end thereof; an arm on the pivot of said damper; mechanism connected thereto extending into the car interior for operating said damper; and a deflector plate extending diametrically of the bore of the outer tubular member from the mouth thereof to said damper.

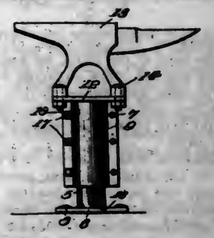
3. A ventilator for cars, consisting of two tubular members adapted to telescope into each other; a screen extending transversely of one of said members; a pivoted damper in said member between said screen and the outer end thereof; an arm on the pivot of said damper; mechanism connected thereto extending into the car interior for operating said damper; and a deflector plate extending diametrically of the bore of the outer tubular member, the inner edge of which is adapted to substantially register with the edge of said damper when in open position.

4. A ventilator for cars, consisting of two tubular members adapted to telescope into each other; a screen in the member nearest the car interior; a pivoted damper in said member between said screen and its outer end; and a radial member from the inner wall thereof normally vertical and extending from the edge of the damper when open to a point slightly removed from said screen.

5. A ventilator for cars, consisting of two tubular members adapted to telescope into each other; a screen in the member nearest the car interior; a pivoted damper in said member between said screen and its outer end; and a radial member from the inner wall thereof normally vertical and extending from the edge of the damper when open to a point slightly removed from said screen and provided with flaring wings on its side at the end adjacent to said damper.

[Claims 6 to 11 not printed in the Gazette.]

962,477. SUPPORTING-BASE FOR ANVILS. ERNEST SPEHEN, Minocqua, Wis. Filed Oct. 19, 1909. Serial No. 523,378.



1. A device of the class described including a stationary member having means for attachment to a support, a sectional movable member mounted on and adjustable vertically of the stationary section and adapted to support an anvil, and means carried by the movable member and engaging the stationary member for locking said movable member in different positions of vertical adjustment.

2. A device of the class described including a stationary member having means for attachment to a support and provided with a series of spaced perforations, a sectional movable member mounted for vertical movement on the stationary section and provided with inwardly extending locking pins adapted to enter the perforations in said stationary member, and a plate extending transversely across the top of the movable member and adapted to support an anvil.

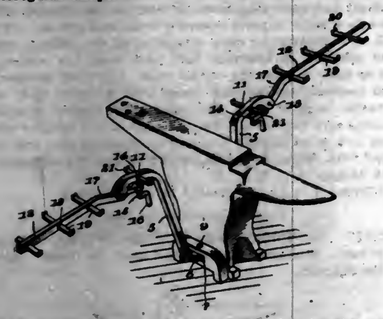
3. A device of the class described including a stationary member having means for attachment to a support and provided with a series of perforations, a movable member mounted on the stationary member and including co-acting sections having laterally extending flanges, pins carried by the sections of the movable member and adapted to enter the openings in the stationary member, a plate carried by the movable member and adapted to support an anvil, and fastening devices extending through the flanges of the sections of the movable member for holding said sections in assembled position.

4. A device of the class described including a stationary member having a base plate for attachment to a support and provided with a series of spaced vertically disposed openings, a movable member mounted on the stationary member and including co-acting sections having laterally extending perforated flanges, a plate secured to each section of the movable member and adapted to support an anvil, pins extending inwardly from the sections of the movable member and adapted to enter the perforations in the stationary member, and fastening devices extending through the perforations in the flanges of said sections for holding the sections in assembled position.

962,478. ATTACHMENT FOR ANVILS. ERNEST SPEHEN, Minocqua, Wis. Filed Oct. 19, 1909. Serial No. 523,379.

1. The combination with an anvil, of an arm connected with the anvil, and a plurality of work supporting devices

slidably mounted on the arm and adjustable transversely of said arm to accommodate either straight work or work of irregular shape.



2. The combination with an anvil, of a bracket connected with the base of the anvil, an arm pivotally connected with the bracket, work engaging members loosely mounted on the arm, and means carried by the pivoted end of the arm and engaging the bracket for adjusting the free end of said arm to different angular positions with respect to the anvil.

3. The combination with an anvil, of a bracket detachably secured to the anvil, an arm pivotally connected with the bracket and having an opening formed in the pivoted end thereof, work engaging members carried by the arm, and an adjusting screw threaded in the opening in said arm and bearing against the bracket for adjusting the arm to different angular positions with respect to the anvil.

4. The combination with an anvil having oppositely disposed sockets formed therein, brackets seated in said sockets, supporting arms pivotally connected with the brackets and provided at their pivoted ends with threaded openings, work engaging members extending transversely of the arms, and adjusting screws threaded in the openings in said arms and bearing against the brackets for supporting the arms in different angular positions with respect to the anvil.

5. The combination with an anvil having oppositely disposed sockets formed therein and intersected by vertical openings, brackets having perforated lips extending in the sockets, pivot pins passing through the vertical openings in the anvil and lips of the adjacent brackets, supporting arms pivotally connected with the brackets and provided with a series of spaced transverse openings, work supporting fingers slidably mounted in said openings, and means carried by the pivoted ends of the arms and bearing against the brackets for adjusting said arms to different angular positions with respect to the anvil.

[Claims 6 to 11 not printed in the Gazette.]

962,479. CORNET-MOUTHPIECE. LEON E. TAYLOR, Chicago, Ill. Filed Feb. 7, 1910. Serial No. 542,635.



1. A mouth-piece for musical instruments of the class described having its contacting surface inclined rearwardly and downwardly, the inclination of said surface commencing well above the axis of the bore and the upper end portion of said surface being disposed at right angles to the direction of the mouth-piece, substantially as described.

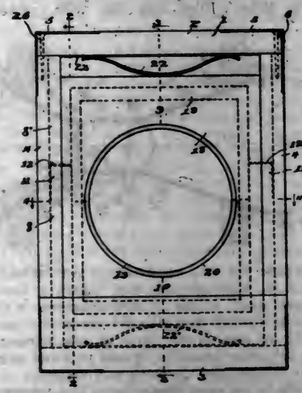
2. A mouth-piece for musical instruments of the class described having its contacting surface inclined rearwardly and downwardly, the inclination of said surface commencing well above the axis of the bore and the upper and lower end portions of said surface being disposed at right angles to the direction of the bore of the mouth-piece, substantially as described.

3. A mouth-piece for musical instruments of the class described having a transversely extending slit positioned adjacent the contacting surface thereof, said slit extending from the under side of said mouth-piece to within a short distance of the upper side thereof, and a wedge inserted in said slit forcing the lower portion of the contacting end of said mouth-piece rearwardly to an inclined position, substantially as described.

4. A mouth-piece for musical instruments of the class described having a transversely extending slit positioned adjacent the contacting surface thereof, said slit extending from the under side of said mouth-piece to within a short distance of the upper side thereof, the lower portion of the contacting end of said mouth-piece being bent rearwardly to an inclined position, and a snugly fitting wedge inserted into said slit and secured therein, substantially as described.

5. A mouth-piece for musical instruments of the class described having a transversely extending slit positioned adjacent the contacting surface thereof, said slit extending from the under side of said mouth-piece to within a short distance of the upper side thereof, the lower portion of the contacting end of said mouth-piece being bent rearwardly to an inclined position, the lower portion of the contacting surface of said inclined contacting end being flattened, and a wedge inserted into said slit and secured therein, substantially as described.

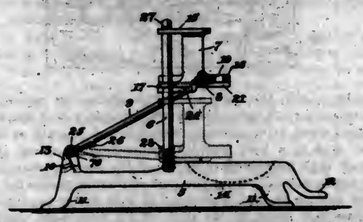
962,480. DUST-GUARD FOR CAR-JOURNALS. JOHN P. THOMAS, Chicago, Ill. Filed June 29, 1905, Serial No. 267,565. Renewed Nov. 17, 1909. Serial No. 528,596.



1. A dust guard for car journals comprising an outer marginal frame, two oppositely disposed inner frame members mounted to reciprocate in said outer frame and provided with a journal aperture formed partly in each, springs yieldably pressing said inner frame members toward each other, and a dust seal of non-abrading material mounted partly on each of the two inner frame members and encircling said journal aperture, the seat within which said seal is mounted being larger in all lateral dimensions than the seal and the seal having unrestricted movement therein.

2. A dust guard for car journals comprising an outer marginal frame, two oppositely disposed inner frame members mounted to reciprocate in said outer frame and provided with a journal aperture formed partly in each, springs yieldably pressing said inner frame members toward each other, said frame members being respectively provided in their journal-encircling portions with parallel sided guide recesses or seats, and a dust seal of resilient fibrous material seated in the guide recess of said frame members and encircling said journal aperture, said seal member being circumferentially uninterrupted and of less external dimensions than the seat within which it is mounted and having unrestricted movement therein laterally in all directions.

962,481. CIGAR-CUTTER. EDWIN WALKER, Erie, Pa., assignor to The Brunhoff Manufacturing Company, Cincinnati, Ohio. Filed May 11, 1904. Serial No. 207,493.



1. In a cigar cutter, a cutter head having a tip opening, and a rest for a cigar-cutter above said tip opening, a guide to which the cutter head is fitted for slidable movement, a cutter movable with the cutter head, and in a rectilinear path relative to the tip opening thereof, and means for operating said cutter upon the depression of the head.

2. In a cigar cutter, a vertical guide, a cutter head provided with a tip opening and fitted to said guide for slidable movement relative thereto, said cutter head being, at all points of its slidable travel, positioned externally to said vertical guide, a cutter slidable with said head and movable in a rectilinear path relative to said tip opening, and an arm for operating said cutter during its travel with said head, said arm being movable with the cutter head.

3. In a cigar cutter, a base, exposed guiding means extending upwardly from said base, a cutter head coöperating with said guiding means, said cutter head having a tip opening and provided, also, with means positioned above the walls of the tip opening for affording a rest for a cigar, cutting means movable with said cutter head, and a single arm coöperating with the cutting means and the cutter head.

4. In a cigar cutter, a cutter head having a tip opening, and a finger rest in a horizontal plane above said tip-opening, guiding means for limiting said cutter head to slidable movement, a single cutter coöperating with the cutter head, and movable in a rectilinear path relative to the tip opening, and a single pivoted arm for giving sliding movement to the cutter and operating to hold the cutter head normally in a raised position.

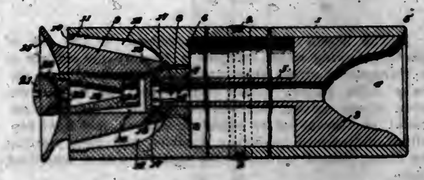
5. In a cigar cutter, a cutter mechanism including a cutter head and a knife mounted for slidable movement in an up and down direction, said cutter head having a tip opening, and the knife having a sliding movement in a rectilinear path with respect to said tip opening, a guide on which the cutter head is adapted to slide, and a single arm operatively related to the cutter for imparting sliding movement thereto on the depression of the cutter head, said arm being pivoted at a point outside of the cutter head guide.

[Claims 6 to 24 not printed in the Gazette.]

962,482. PROJECTILE. GEORGE E. WELLS, National Military Home, Ohio. Filed Jan. 28, 1910. Serial No. 540,653.

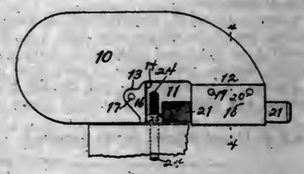
1. In a projectile the combination with a body portion having a recessed front end, a plug closing the rear of the body portion and provided with spirally extending openings, a tube connecting the conical depression with the spirally extending openings, whereby the passage of the projectile through the air will cause the same to revolve, and a projecting flange extending from the rear of the passage to protect the rear end of the openings.

2. In a projectile the combination with a body portion having its front end provided with a conical recess, a conically shaped plug closing the rear of the body portion and fitting into a second conical shaped recess formed in the rear of the body portion, said conical plug being provided with spirally extending openings, and a tube connecting the conical depression in front of the projectile with the spirally extending openings, whereby the passage of the projectile through the air will cause the same to revolve.



3. In a projectile the combination with a body portion having its front end provided with a conically shaped recess, a plug closing the rear of the body portion and provided with a depression in its front end and spirally extending openings from the front end to the rear thereof, and a tube extending from the conical recess to the recess in front of the conical plug, whereby the passage of the projectile through the air will cause the same to revolve.

962,483. NUT-SPLITTING AND BOLT-NIPPING TOOL. JOHN WHISLER, Gibson, Iowa. Filed July 8, 1909. Serial No. 507,027.



1. A tool having a body member formed with a notch in one margin, an anvil block mounted in said notch and formed with wings embracing and fixed to said body member, said body provided with a slideway in line with said anvil block and a chisel adjustably mounted for reciprocation in said slideway.

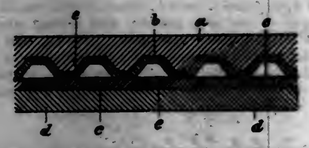
2. A tool having a body member formed with a notch in one margin, an anvil block removably and replaceably mounted in said notch, said body provided with a slideway in line with and spaced from said anvil block, and a chisel adjustably mounted for reciprocation in said slideway.

3. A tool comprising a body member formed with a notch in one margin and also formed with recesses opening to said notch, an anvil block mounted in the notch and formed with wings entering the recesses, said wings fixed to said body member, a keeper of channel form embracing and fixed to the body member and arranged in alinement with said anvil block, a spring mounted in the body member and extending within the keeper, and a chisel mounted adjustably for reciprocation in said keeper and engagement by said spring, the cutting end of said chisel extending within said notch in opposition to the anvil block.

962,484. PROCESS FOR PREPARING PHOTOGRAPHIC PICTURES. RUDOLF WIDMANN, Munich, Germany. Filed May 27, 1909. Serial No. 498,676.

1. The herein described improvement in the art of photo-engraving, which consists in forming one surface of a transparent screen into alternately depressed and elevated units, coating said surface with light sensitive material, photographing an object directly on said light sen-

sitive material to produce a negative and then printing by direct contact between such negative and a sensitized plate.



2. The herein described improvement in the art of photo-engraving which consists in forming one surface of a transparent screen into alternately depressed and elevated units, making certain units thereof less transparent than others, coating said surface with light sensitive material, photographing an object directly on said light sensitive material to produce a negative, and then printing by direct contact between such negative and a sensitized plate.

3. The herein described improvement in the art of photo-engraving which consists in forming one surface of a transparent screen into alternately depressed and elevated units, coloring certain of said units, coating said surface with light sensitive material, photographing an object directly on said light sensitive material to produce a negative, and then printing by direct contact between such negative and a sensitized plate.

4. As a new article of manufacture, a transparent photographic screen having one of its sides coated with a layer of material sensitive to light and adapted to have an object photographed thereon, the surface of said layer presenting adjacent depressed and elevated substantially plane units or elements.

5. As a new article of manufacture, a photographic screen having one of its sides coated with a layer of material sensitive to light and adapted to have an object photographed thereon, the surface of said layer being of different degrees of transparency and divided into adjacent depressed and elevated substantially plane units or elements.

[Claims 6 to 11 not printed in the Gazette.]

962,485. RESERVOIR-PEN. ROBERT YOUNG, Fitchburg, Mass. Filed Apr. 8, 1910. Serial No. 554,087.



A sheet metal reservoir feed attachment for a pen point, comprising a spoon shaped ink container having the ink retaining depression stamped on its upper side and a longitudinally corrugated stem having a central longitudinal depression stamped on its upper side and connecting with said depression of said spoon shaped ink container and a depression near each edge of the shank on its under side and opening at the base of the spoon shaped ink container, the same being formed by the said corrugation of the stem, substantially as shown and described.

962,486. LOCK. PAUL ZIRON, New York, N. Y., assignor to Noris Manufacturing Company, a Corporation of Maine. Filed May 8, 1909. Serial No. 494,753.

1. In a lock, the bolt, a movable device for restraining and releasing the bolt, said device being in a bolt operating position when at an intermediate point of its path of movement and in a bolt restraining position when on either side of said intermediate point of its path of movement, a stop movable by the lock operating means for arresting said device at said intermediate point of its path of movement and means for resiliently pressing the movable device against the stop when the stop is at rest in the bolt releasing position.



2. In a lock, the bolt, a movable device for restraining and releasing the bolt, said device being in a bolt operating position when at an intermediate point of its path of movement, and in a bolt restraining position when on either side of said intermediate point of its path of movement, and a stop movable from the lock operating means for normally preventing the movement of said device beyond said intermediate point of the path of its movement, said device having in the normal operation of the lock movement to and from said stop.

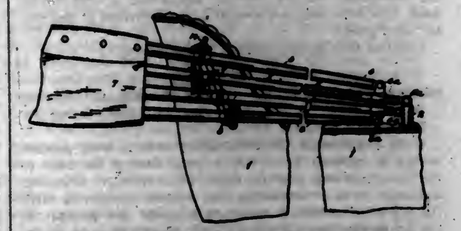
3. In a lock, the bolt, a movable device for restraining and releasing the bolt, said device being in a bolt operating position when at an intermediate point of its path of movement, and in a bolt restraining position when on either side of said intermediate point of its path of movement, and means normally movable independently of said device for controlling the movement of said device to said intermediate bolt operating position, and for preventing the movement of said device beyond said bolt operating position.

4. In a lock, the bolt, a movable device for restraining and releasing the bolt, said device being in a bolt releasing position when at an intermediate point of its path of movement, and in a bolt restraining position when on either side of said intermediate point of its path of movement, a tumbler for controlling the movement of said device to said intermediate bolt operating position and for preventing the movement of said device beyond said intermediate position and means for pressing the movable device against the tumbler when the tumbler is at rest in the bolt releasing position.

5. In a lock, the bolt, a movable device for restraining and releasing the bolt, said device being in a bolt releasing position when at an intermediate point of its path of movement, and in a bolt restraining position when on either side of said intermediate point of its path of movement, and means actuated by the lock operating means controlling the operation of said first named device, releasing said device so that the latter may move to the intermediate bolt releasing position thereof, and preventing movement of said device beyond said intermediate position.

[Claims 6 to 36 not printed in the Gazette.]

962,487. VEHICLE-TOP-BOW HOLDER. SHERMAN T. ALLEN, Detroit, Mich. Filed Aug. 2, 1909. Serial No. 510,716.



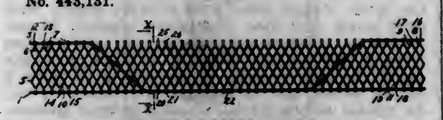
1. In combination with the bows of a vehicle top, laterally projecting members fixed thereto, a receiving bracket into receiving portions of which each of said members is adapted to reach when said bows are lowered, and a holding member adapted to be locked in position over said bracket and said members, substantially as described.

2. In combination with a plurality of vehicle bows, each provided with lateral projections intermediate its ends, a supporting bracket member within correspondingly shaped parts of which said projections are adapted to fit when the bows are lowered, and a securing member hinged to said bracket and adapted to be locked in holding position thereover, substantially as described.

3. A vehicle top bowholder, comprising a supporting bracket having a fixed portion and a hinged portion adapted to engage thereover, means for locking the same in such position, and a plurality of members adapted to be fixed to the bows of the vehicle top, and serving by engagement of a portion of each between the fixed and the hinged portions of the bracket, to hold said bows from unintended movement when lowered, substantially as described.

4. In a vehicle top bow holder, in combination with a plurality of vehicle bows, each having a laterally projecting part intermediate its ends, a holding bracket piece located to one side of the plane of possible travel of said bows, within recessed portions of which said projecting parts engage when the bows are lowered, a coöperating clamping member having a pivotal connection therewith, adapted to engage thereover and to thereby hold said projecting parts of the vehicle bows from movement, and a catch member for holding said members in such position, substantially as described.

962,488. CONCRETE REINFORCEMENT. ROBERT S. ALLYN, New York, N. Y. Filed July 11, 1908. Serial No. 443,131.



1. A reinforcing element for concrete structures comprising a pair of spaced rods and a web of longitudinally expanded metal having lugs along its opposite edges, the alternate lugs at one edge being bent in opposite directions attached to the two rods respectively.

2. A reinforcing element comprising a pair of rods spaced apart from each other and a central web of longitudinally expanded metal having inclined diagonals terminating in lugs at its opposite edges, some of the lugs at one edge being bent laterally and attached to one rod and some of the lugs at the same edge being bent laterally in the opposite direction and attached to the other rod.

3. A reinforcing element for concrete structures comprising a pair of spaced rods and a web of expanded metal having lugs along its opposite edges, the alternate lugs at one edge being bent laterally and attached to the two rods respectively, the lugs at the other edge being bent over laterally to form anchors.

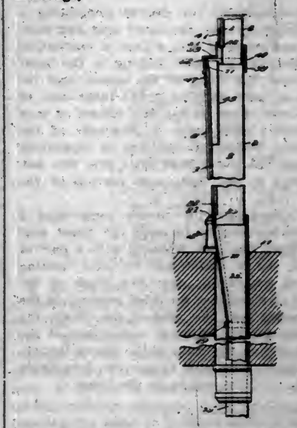
4. A reinforcing element for concrete structures comprising a web of longitudinally expanded metal consisting of strands connected so as to form diamond shaped openings and having lugs along its opposite edges, some of the lugs at each edge being bent laterally in one direction and other lugs at each edge being bent laterally in the opposite direction, forming anchors.

5. A reinforcing element comprising four spaced rods parallel throughout portions of their lengths and a web of longitudinally expanded metal having lugs along the edges attached to said rods throughout a portion of their length.

[Claims 6 to 21 not printed in the Gazette.]

962,489. MAIL-CHUTE. FRANK E. ANDERSON, New York, N. Y., assignor to Cutler Mail Chute Company, New York, N. Y., a Corporation of New York. Filed Jan. 16, 1908. Serial No. 411,101.

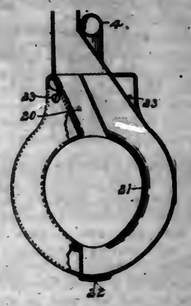
1. In a mail chute, the combination with a rear section embodying the rear and forwardly projecting sides, of the panel embodying side moldings or cornices, a plurality of glass plates with their edges located and held within the moldings and a strip of relatively softer material arranged between the glass plates, narrower than the lower edge of the upper plate and having its ends arranged in the moldings.



2. In a mail chute, a downwardly extending plate immediately below a mailing aperture, having sides contacting with the sides of the chute and outwardly extending flanges and a forwardly extending member engaging the upper edge of a front plate to retain the parts in position.

3. In a mail chute, the combination with the rear chute section having the forwardly extending sides, of the panel embodying glass plates, the side moldings embracing the edges of the glass and the sides of the rear section, and the plate at the lower end of the glass engaging the moldings at its ends having the upwardly extending portion at the front, the shoulder narrower than the glass and the depending flange.

962,490. VENTILATING DEVICE FOR WATER-CLOSETS. ALBERT A. BRUDER and AUGUST J. BRUDER, Detroit, Mich. Filed Feb. 4, 1910. Serial No. 542,076.



1. A ventilating attachment for closets comprising a hollow casing interposed between the closet seat and shelf and the closet rim, and provided with a pair of ventilating passages, one of which has an inlet opening in the inner wall of the casing near the front of the closet, and the other of which has an inlet opening in the inner wall of the casing near the rear of the closet, the outlets of both passages being adjacent each other at the rear of the closet.

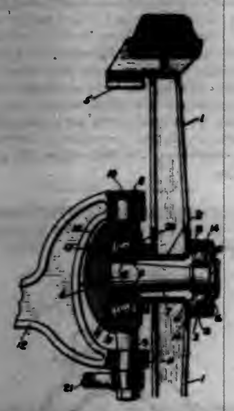
2. A ventilating attachment for closets comprising a hollow casing detachably secured between the closet seat and shelf and the closet rim, and provided with a pair

of vent passages, one of which has an inlet opening in the inner wall of the casing near the front of the closet, and the other of which has an inlet opening in the inner wall of the casing near the rear of the closet, the outlets of both passages being adjacent each other at the rear of the closet.

3. A ventilating attachment for closets comprising a hollow casing interposed between the closet seat and shelf and the closet rim, and provided with a pair of ventilating passages, one of which has an inlet opening in the inner wall of the casing near the front of the closet, and the other of which has an inlet opening in the inner wall of the casing near the rear of the closet, the outlets of both passages being adjacent each other at the rear of the closet, the casing being divided at the line of separation of the closet seat and the closet seat shelf into two sections, each conforming to the contiguous portion of the closet.

4. A ventilating attachment for closets comprising a hollow casing detachably secured between the closet seat and shelf and the closet rim, and provided with a pair of ventilating passages, one of which has an inlet opening in the inner wall of the casing near the front of the closet, and the other of which has an inlet opening in the inner wall of the casing near the rear of the closet, the outlets of both passages being adjacent each other at the rear of the closet, means on the front of the casing detachably engaging the closet rim, and means for detachably fastening the rear part of the casing to the closet.

962,491. STEERING-KNUCKLE. TRACY V. BUCKWALTER, Altoona, Pa. Filed Jan. 20, 1909. Serial No. 473,226.



1. The combination of a knuckle having a spindle thereon, a wheel having a hub sleeved on said spindle, antifriction bearing mechanism disposed between said hub and spindle, and firm anti-friction bearing mechanism disposed between said hub and a part of said knuckle exterior thereto, said bearing mechanism being arranged so that each carries a substantial portion of the load.

2. The combination of a wheel having a hub, a knuckle having a spindle in said hub and an axis transverse to the axis of said spindle, antifriction bearing mechanism between said spindle and hub, and anti-friction bearing mechanism between said knuckle and hub, said knuckle axis passing through said bearing mechanism.

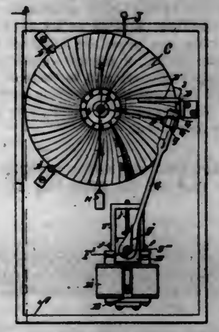
3. The combination of a wheel having a hub, a driving gear fixed to said wheel, a knuckle having a spindle disposed in said hub, antifriction bearing mechanism between said spindle and hub, and anti-friction bearing mechanism between said knuckle and hub, said bearing mechanism between said knuckle and hub and said gear being intersected by a common plane at right angles to their common axis.

4. The combination of a knuckle having a spindle thereon, a wheel having a hub with bearing members at its opposite ends, anti-friction bearings between the outer end of said spindle and one of said hub bearing members, and anti-friction bearings providing firm supporting means between the other of said hub bearing members and a part of said knuckle exterior thereto, the respective anti-friction bearings being arranged so that each carries a substantial portion of the load.

5. The combination of a wheel having a hub, a gear fixed to said wheel, an axle, a knuckle journaled in said axle with the axis of its journal within the faces of said gear and having a spindle within said hub, and anti-friction bearings on opposite sides of said wheel for connecting said hub with said knuckle directly and through said spindle respectively.

[Claim 6 not printed in the Gazette.]

962,492. RECORDING DEVICE. GEORGE F. CARD, Three Rivers, Mich. Filed Sept. 21, 1905. Serial No. 279,443.



1. The combination with a machine, the operation of which it is desired to record, of a clock mechanism; a stop device for said clock mechanism; an hourly revolving shaft driven thereby, having a record sheet thereon ruled to form radial minute spaces and radially arranged hour spaces, said hour spaces being provided with proper designating numerals; a support for the said record sheet, arranged at the rear thereof; guides for said record sheet having slits adapted to receive the edge thereof; an electro-magnet; an armature; a pivoted carrying frame therefor; a spring for holding said armature normally out of contact with said electro-magnet; an arm arranged in contact with said armature carrying frame; a marker carried thereby arranged to contact with the record sheet when the armature carrying frame is actuated; a cord for moving said marker carrying arm laterally, connected thereto by a spring clip, said cord being wrapped about the said shaft; a weight for applying tension to said cord; a spring for holding said marker carrying arm normally outward; and electrical connections for said electro-magnet to said machine whereby said magnet is electrified when said machine is in operation, all coacting for the purpose specified.

2. The combination with a machine, the operation of which it is desired to record, of a clock mechanism; an hourly revolving shaft driven thereby, having a record sheet thereon ruled to form radial minute spaces and radially arranged hour spaces, said hour spaces being provided with proper designating numerals; a support for the said record sheet, arranged at the rear thereof; guides for the said record sheet having slits adapted to receive the edge thereof; an electro-magnet; an armature; a pivoted carrying frame therefor; a spring for holding said armature normally out of contact with said electro-magnet; an arm arranged in contact with said armature carrying frame; a marker carried thereby arranged to contact with the recording sheet when the armature carrying frame is actuated; a cord for moving said marker arm laterally, connected thereto by a spring clip, said cord being wrapped about the said shaft; a weight for applying tension to the said cord; a spring for holding said marker carrying arm normally outward; and electrical connections for said electro-magnet to said machine, whereby said magnet is electrified when said machine is in operation, all coacting for the purpose specified.

3. The combination with a machine, the operation of which it is desired to record, of a clock mechanism; a stop device for said clock mechanism; an hourly revolving shaft driven thereby, having a record sheet thereon ruled to form radial minute spaces and radially arranged hour spaces, said hour spaces being provided with proper designating numerals; an electro-magnet; an armature; a pivoted carrying frame therefor; a spring for holding said armature normally out of contact with said electro-magnet; an arm arranged in contact with said armature carrying frame; a marker carried thereby, arranged to contact with the record sheet when the armature carrying frame is actuated; a cord for moving said marker carrying arm laterally, connected thereto by a spring clip, said cord being wrapped about said shaft; a weight for applying tension to said cord; a spring for holding said marker carrying arm normally outward; and electrical connections for said electro-magnet to said machine, whereby said magnet is electrified when said machine is in operation, all coacting for the purpose specified.

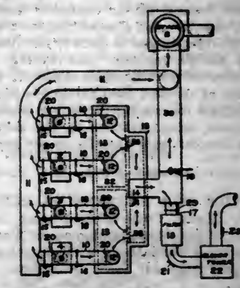
4. The combination with a machine, the operation of which it is desired to record, of a clock mechanism; an hourly revolving shaft driven thereby, having a record sheet thereon ruled to form radial minute spaces and radially arranged hour spaces, said hour spaces being provided with proper designating numerals; an electro-magnet; an armature; a pivoted carrying frame therefor; a spring for holding said armature normally out of contact with said electro-magnet; an arm pivoted on said armature carrying frame; a marker carried thereby, arranged to contact with said record sheet when the armature carrying frame is actuated; a cord for moving said marker arm laterally, connected thereto by a spring clip, said cord being wrapped about the said shaft; a weight for applying tension to the said cord; a spring for holding said marker carrying arm normally outward; and electrical connections for said electro-magnet to said machine, whereby said magnet is electrified when said machine is in operation, all coacting for the purpose specified.

5. The combination with a machine, the operation of which it is desired to record, of a clock mechanism; an hourly revolving shaft driven thereby, having a record sheet thereon ruled to form radial minute spaces, and radially arranged hour spaces, said hour spaces being provided with proper designating numerals; an electro-magnet; an armature; a pivoted carrying frame therefor; an arm arranged to contact with said armature carrying frame; a marker carried thereby arranged to contact with the record sheet when the armature carrying frame is actuated; a cord for moving said marker carrying arm laterally, wrapped about the said shaft; a spring for holding said marker carrying arm normally outward; and electrical connections for said electro-magnet to said machine whereby said magnet is electrified when said machine is operated, for the purpose specified.

[Claims 6 to 14 not printed in the Gazette.]

962,493. METHOD OF MAKING SULFURIC ACID FROM SMELTER-GASES. JOHN PARKE CHANNING and FREDERIC JOHN FALDING, New York, N. Y.; said Falding assignor to said Channing. Filed May 14, 1908, Serial No. 432,781. Renewed Jan. 4, 1910. Serial No. 536,404.

1. The method of controlling and utilizing the furnace gases given off in smelting furnaces during the operation of smelting sulfid ores "pyritically," which consists in keeping the percentage of the carbonaceous material used in the smelting of such ore low proportionately to the percentage of sulfur in the ore, so as to obtain gases having certain relative contents of sulfur dioxid and oxygen, said oxygen being in excess, and treating the same to produce sulfuric acid.



2. In the art of producing sulfuric acid, the method of controlling and utilizing the furnace gases given off in smelting furnaces during the operation of smelting sulfid ores "pyritically," which consists in keeping the percentage of the carbonaceous material in the proportion of about one per cent. of such material to about four per cent. of sulfur in the ore, so as to obtain gases having certain relative contents of sulfur dioxid and oxygen, and treating the same to produce sulfuric acid.

3. The method of controlling and utilizing the furnace gases given off in smelting furnaces during the operation of smelting sulfid ores "pyritically," which consists in maintaining a certain proportion between the sulfur in the ore and the carbonaceous material used in the smelting of such ore so as to obtain gases having certain relative contents of sulfur dioxid and oxygen, collecting such gases from a plurality of such furnaces, in a chamber where they commingle or mix together, and treating the same to produce sulfuric acid.

4. The method of controlling and utilizing the furnace gases given off in smelting furnaces during the operation of smelting sulfid ores "pyritically," which consists in maintaining a certain proportion between the sulfur in the ore and the carbonaceous material used in the smelting of such ore, so as to obtain gases having certain relative contents of sulfur dioxid and oxygen, collecting such gases from a plurality of such furnaces, mixing or commingling them so that the content of sulfur dioxid is from about 5% to 8% of the mixture, maintaining such percentage of sulfur dioxid constant, and treating the same to produce sulfuric acid.

5. In the art of producing surfuric acid, the method of treating furnace gases produced in smelting furnaces during the operation of smelting sulfid ores "pyritically," which consists in collecting such gases in controlled proportions from a plurality of such furnaces in a chamber where they may commingle or mix together, and treating the same to produce sulfuric acid.

[Claims 6 to 10 not printed in the Gazette.]

962,494. BRACKET. FRANK B. COOK, Chicago, Ill. Filed July 3, 1909. Serial No. 505,868.

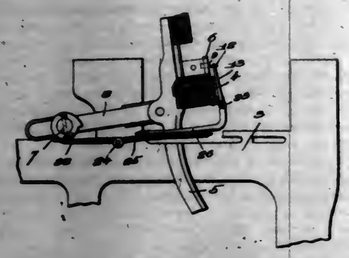


1. A bracket of the character described comprising a vertical metal plate, and a separate horizontal sheet metal portion having a circularly-formed supporting portion thereon, the said horizontal sheet metal portion being centrally parted and having such parted portions formed downwardly to provide rearwardly-extending angularly-

formed arms with an opening therebetween, the said arms extending through the said vertical plate and being formed over to rigidly secure the parts together substantially as described.

2. A two-part bracket of the character described comprising a base member and a mounting member disposed substantially at right-angles to each other, the said base member being parted centrally and having the parted edge portions thereof formed substantially at right-angles to the remainder of the said base portion to provide a pair of angularly-formed rearwardly-extending braces, the ends of the said braces being attached to the said mounting member of the bracket, substantially as set forth.

962,495. DEVICE FOR PREVENTING REBOUND OF SHUTTLES. HENRY COTE, West Warren, and RENCELER C. SNOW, Ware, Mass., assignors to Ware Machine & Loom Company, Ware, Mass., a Corporation of Massachusetts. Filed Sept. 24, 1908. Serial No. 454,594.



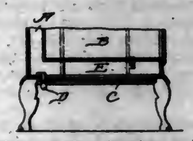
1. In a loom, the combination with a lay, a shuttle box at each end thereof and means associated with each shuttle box and adapted when in normal position to frictionally engage the shuttle as it enters the box, of a shaft journaled on the lay for controlling said means, an arm rigid with said shaft, a lever pivoted to the loom frame and having one end overlying said arm, and a cam on the crank shaft arranged to operate said arm just prior to the time when the shuttle is thrown thereby to remove the frictional pressure on the shuttle and also arranged to release said arm during the flight of the shuttle and before the shuttle enters the opposite shuttle box.

2. In a loom, the combination with a lay, a shuttle box at the end thereof, and means associated with said shuttle box and adapted when in normal position to frictionally engage the shuttle as it enters the box, of a shaft journaled on the lay for controlling said means, an arm rigid with said shaft and extending rearwardly beneath the lay, a lever pivoted to the loom frame and having one end overlapping said arm, a divided cam secured to the crank shaft and provided with a single point arranged to engage said arm just prior to the time when the shuttle is thrown thereby to remove frictional pressure on the shuttle, said point being arranged to release the arm during the flight of the shuttle.

3. In a loom, the combination with a lay, of a shuttle box thereon, a friction device pivoted to the side of the shuttle box, and a spring acting on the friction device and tending to hold it normally in the path of the shuttle, the pivotal point of said device being situated between the open end of the shuttle box and the portion of the device that engages the shuttle, and means to relieve the pressure of the friction device on the shuttle just prior to the time when the shuttle is thrown.

962,496. COOK-STOVE. WILLIAM L. CRUMRINE, Kanopolis, Kans. Filed Mar. 12, 1909. Serial No. 482,926.

A stove having an oven arranged therein and spaced from the outer walls of the stove to form a flue, the rear and bottom walls of said stove having openings formed therein and doors for closing said openings, the door for



closing the bottom opening forming a chute when said door is opened.

962,497. VAPOR ELECTRIC APPARATUS. JOHN T. H. DEMPSTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 4, 1904. Serial No. 201,488.



1. In a vapor electric apparatus, the combination of a vaporizable electrode, a solid electrode, and means for applying to the solid electrode condensed matter given off by vaporization from the vaporizable electrode.

2. In a vapor electric apparatus, the combination of a container, a vaporizable electrode in said container, and a fluid retaining solid electrode also in said container, the fluid retaining portion of said solid electrode communicating with the space in which the vaporizable electrode is located.

3. In a vapor electric apparatus, the combination of a vaporizable electrode, a fluid-retaining solid electrode, and means for conducting products of condensation from the vaporizable electrode to the fluid-retaining chamber of the solid electrode.

4. In a vapor electric apparatus, the combination of a condensing chamber forming a part of the container of the apparatus, a vaporizable electrode, and a fluid-retaining solid electrode located so as to intercept products of condensation in their return from the condensing chamber to the vaporizable electrode of the apparatus.

5. In a vapor electric apparatus, the combination of a vaporizable electrode, and a solid electrode located in the same space as the vaporizable electrode and cooled by contact with fluid of the same character as that of the vaporizable electrode, and which at times forms a part of said vaporizable electrode.

962,498. PAPER COATING AND SIZING COMPOSITION AND PROCESS. HENRY V. DUNHAM, Bainbridge, N. Y., assignor to Casein Company of America, a Corporation of New Jersey. Filed June 18, 1909. Serial No. 502,886.

1. The herein described composition for paper coating and sizing, consisting of an adhesive and a modified and non-acidulous gluten mixed together in about the proportions specified.

2. The herein described composition for paper coating and sizing, consisting of about 25 parts of modified and non-acidulous comminuted wheat gluten and about 75 parts of a comminuted adhesive mixed together in dry condition.

3. The herein described process for preparing a paper coating and sizing composition consisting in modifying gluten by acidulating and then neutralizing the same, then drying and comminuting the gluten and mixing about 25 parts thereof with about 75 parts of a dried comminuted adhesive.

962,499. ELECTRIC HAMMER. BURTON M. DUTTON, Richmond, Va., assignor of one-half to William H. Oxenham, Richmond, Va. Filed Feb. 16, 1909. Serial No. 478,250.



1. An electric reciprocating motor including a reciprocatory plunger of magnetic material, solenoid coils alternately influencing the plunger to effect the reciprocation thereof, means for limiting the reciprocatory movement of the plunger in one direction, switching mechanism for alternately energizing the coils, an arm carried by and reciprocating with the plunger and extending in the direction of reciprocation thereof, and a member mounted for limited sliding movement on the arm and arranged, when the movement of the plunger in said direction is arrested, to slide on the arm in such direction by inertia to actuate the switching mechanism.

2. An electric reciprocating motor including a reciprocatory plunger of magnetic material, solenoid coils alternately influencing the plunger to effect the reciprocation thereof, means for limiting the reciprocatory movement of the plunger in both directions, switching mechanism for alternately energizing the coils, an arm carried by and reciprocating with the plunger and disposed in the direction of the reciprocation thereof, and a member mounted for limited sliding movement on the arm and arranged, when the movement of the plunger in either direction is arrested, to slide on the arm in such direction by inertia to actuate the switching mechanism.

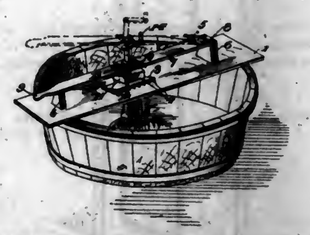
3. An electric reciprocating motor including a reciprocatory plunger of magnetic material, solenoid coils alternately influencing the plunger to effect the reciprocation thereof, switching mechanism adapted to alternately energize the coils and embodying a reciprocatory switch bar movably mounted independently of the plunger, and actuating means carried by and reciprocating with the plunger and coöperating with the switch bar to effect the reciprocation thereof by and upon the reciprocation of the plunger, the actuating means having a limited movement relative to the switch bar.

4. An electric reciprocating motor comprising a reciprocatory plunger of magnetic material, solenoid coils alternately influencing the plunger to effect the reciprocation thereof, switching mechanism adapted to alternately energize the coils and including a reciprocatory switch bar movably mounted independently of the plunger, an arm carried by and reciprocating with the plunger and disposed in the direction of the reciprocation thereof, and a member having a limited sliding movement on the arm by inertia and coöperating with the switch bar to effect the reciprocation thereof by and upon the reciprocation of the plunger.

5. An electric reciprocating motor comprising a reciprocatory plunger of magnetic material, solenoid coils alternately influencing the plunger to effect the reciprocation thereof, switching mechanism adapted to alternately energize the coils and including a reciprocatory switch bar movably mounted independently of the plunger and provided with a rigid collar, an arm carried by and reciprocating with the plunger and disposed in the direction of reciprocation thereof, a member having a limited sliding movement on the arm by inertia and arranged to impact against the collar to move the switch bar in one direction, and means disposed on the switch bar and coöperating with the member for moving the switch bar in the opposite direction.

[Claims 6 to 26 not printed in the Gazette.]

962,500. VEGETABLE-CUTTER. JACOB P. ECKERT, Valley Park, Mo. Filed June 10, 1909. Serial No. 501,309.



1. A vegetable cutter comprising a base, a slicing blade secured to the base, standards projecting upwardly from the base on opposite sides of the slicing blade, a supporting arm extending between the upper ends of the standards and above the cutting blade, a rotatable shaft extending substantially vertically above the cutting blade and carried by and journaled in the supporting arm, and means disposed at the lower end of the shaft for engaging a vegetable to rotate the same over the cutting blade, the supporting arm being pivoted horizontally at one end to one of the standards to swing toward and away from the base, the other end of the supporting arm being adapted to rest upon the upper end of the other standard to limit the swinging movement of the supporting arm toward the base.

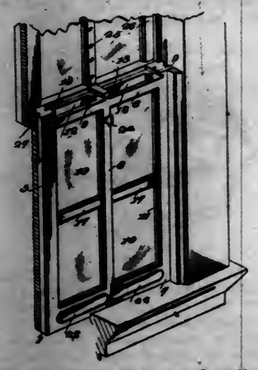
2. A vegetable cutter comprising a base, a cutting blade secured to the base, a supporting arm pivotally supported from the base and movable toward and away from the same and arranged to extend over the cutting blade, a rotatable shaft journaled in the supporting arm in substantially perpendicular relation thereto, a vegetable holder secured to one end of the shaft for rotating a vegetable across the cutting blade, and a collar fixed on the shaft on the opposite side of the supporting arm from the vegetable holder, the vegetable holder and collar abutting against opposite faces of the supporting arm to maintain the shaft against sliding longitudinally therethrough and to steady the shaft against wabbling movement.

3. A vegetable cutter comprising a base, a fixed blade carried by the base, a frame secured to the base and embodying an arm hinged at one end to swing toward and away from the base, a rotatable shaft journaled in the arm, and a vegetable holder secured to the end of the shaft adjacent to the base.

962,501. WINDOW-SASH. JESSIE V. EDWARDS, Clifton, Tex. Filed Aug. 10, 1909. Serial No. 512,149.

1. A window sash including spaced stiles having a seating groove formed therein and extending the entire height of the window sash, a top rail connecting the stiles and having a slot formed therein and registering with the seating grooves, said slot opening through the top and opposite side faces of the top rail and having its end walls undercut, a transverse division bar slidably mounted in said seating grooves, and a strip forming a closure for the slot in the top rail and provided with terminal lips adapted to engage the undercut walls of the slot.

2. A window sash including spaced vertical stiles having seating grooves formed therein and connected by top and bottom rails, one of which is provided with a slot communicating with said seating grooves, and opening through the top and opposite sides of the top rail, said slot having its end walls undercut, a vertically disposed division bar having corresponding seating grooves formed therein, transverse division bars slidably mounted in the sash and provided with oppositely disposed lugs engaging the seating grooves of the vertical division bar and stiles, respectively, and a strip forming a closure for the slot of the top rail of the sash and provided with terminal lips adapted to engage the undercut walls of the slot.



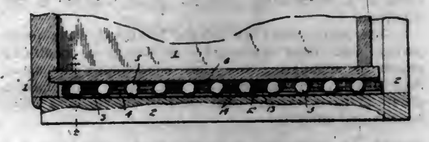
3. A window sash including spaced vertical stiles having seating grooves formed therein and connected by upper and lower rails, one of which is provided with spaced slots opening through the top and opposite side faces thereof and communicating with the seating grooves, said slots having their end walls undercut, a centrally disposed division bar having corresponding seating grooves formed therein, transverse division bars having oppositely disposed lugs slidably mounted in the seating grooves of the central division bar and vertical stiles respectively; and fastening strips having terminal lips engaging the undercut walls of the slots and forming closures for said slots in said top rail.

4. A window sash including spaced vertical stiles having seating grooves formed therein and connected by top and bottom rails, one of which is provided with a slot opening through the top and opposite side faces of the top rail and communicating with the adjacent seating grooves, the opposite end walls of the slots being undercut, a fastening strip having terminal lips adapted to engage the undercut walls of the slot and fastening devices extending through said lips and undercut walls of the slot for locking the strip in position on the top rail.

5. A window sash including spaced vertical stiles having seating grooves formed therein and connected by upper and lower transverse rails also provided with seating grooves, a longitudinal grooved central partition bar connecting the upper and lower rails, transverse division bars slidably mounted in the sash and having oppositely disposed guiding lugs adapted to engage the grooves in the central partition bar and vertical stiles respectively, said transverse partition bars having their opposite longitudinal edges provided with seating grooves, there being segmental depressions formed in the stiles and central partition, respectively, at the transverse bars.

962,502. DRAWER-GUIDE. AXEL ELMBORG, Ottumwa, Iowa. Filed Feb. 17, 1910. Serial No. 544,490.

1. The combination with a support and a slidable object, of a channeled track member secured to the support, a two-part slide having the projecting edges of one of its parts slidably engaged with said channeled track member, the parts of said slide being formed with opposing sockets, bearing balls rotatably arranged in said sockets and adapted to travel on the bottom of said channeled track member, and an upper grooved track member secured to said slidable object and adapted to rest on the tops of said balls.



2. In a device of the character described, the combination with a channeled track member, a slide arranged therein and consisting of superposed parts of unequal width, the side edges of the broader part projecting and being slidably engaged with said channeled track member, the parts of said slide being formed with opposing sockets, and anti-friction bearing balls rotatably retained in said sockets.

962,503. GAS-PRESSURE REGULATOR. WILLIAM A. FENTON, Sioux City, Iowa. Filed Sept. 1, 1909. Serial No. 515,697.

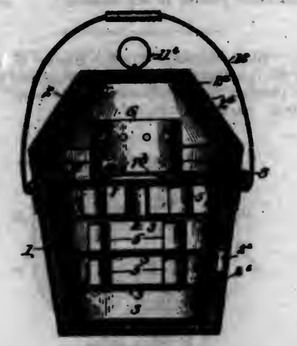


In a gas pressure regulator, the combination of a can J having an extension or gas holder K communicating with the outlet of gas supply, a diaphragm forming the bottom of the gas holder and operated by the pressure of gas therein, the diaphragm separating the can from the extension, a stem tapering at the lower end secured to the diaphragm, a threaded casing for the stem opening outwardly from the can, pipes leading from the port of the casing to the holder K, an adjusting nut on the casing and a coil spring encircling the stem and casing between the diaphragm and the adjusting nut; substantially as described.

962,504. REFRIGERATOR-PAIL. LOUIS I. FLOOD, Shelbyville, Mo. Filed May 5, 1909. Serial No. 494,114.

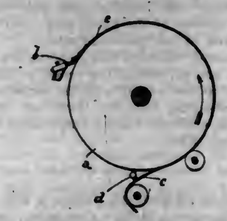
1. In a device of the character described, a pail, in combination with an ice-pan having its bottom extended laterally to form a flange that is radially mutilated adjacent to one side of the body of the pan, and a drain-pipe supported upon the mutilated portion of the flange and being connected with the body of the ice-pan and having the lower portion of its inner surface level with the upper surface of the bottom of the pan, and being extended laterally through the side walls of the pail.

2. In a device of the character described, a pail tapered downwardly, a plurality of trays arranged in said pail and supported upon the inner surface of the downwardly tapered walls of said pail, said trays having cold-air circulation passages through their bottoms and tubular flanges fitted to said passages, an ice-pan supported upon the inclined walls of the pail above and spaced from the uppermost tray, an ice support within said ice-pan and having cleats forming legs resting upon the bottom of the pan, and an upwardly tapered closure for the pail.



3. In a device of the character described, a pail having downwardly tapered side walls, in combination with an ice-pan having its bottom extended laterally to form an annular flange, said flange being radially mutilated adjacent to one side of the body of the pan, and a drain pipe supported upon the mutilated portion of the flange, said drain pipe being connected with the body of the ice-pan with the lower portion of its inner surface level with the upper surface of the bottom of the pan, said drain pipe being extended laterally through the side walls of the pail.

962,505. METHOD OF CRAPING PAPER. ANTON FUNKE and JOSEF FUNKE, New York, N. Y., assignors to The Papyrus Artificial Paper Manufacturing Company, Hoboken, N. J. Filed July 13, 1909. Serial No. 507,227.

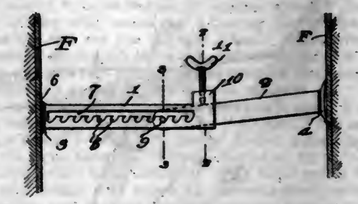


A method of craping or corrugating paper, consisting in conveying the paper over a revolving cylinder, causing an adhesive substance being applied between the surfaces of the paper and cylinder immediately before the passage of the former onto the latter and in causing the paper being crimpled during its detachment from the cylinder.

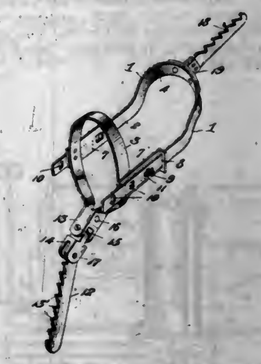
962,506. JACK. OSCAR GREENSTEAN, Granada, Minn. Filed Aug. 24, 1909. Serial No. 514,430.

1. A jack, comprising a channeled member having longitudinally slotted side pieces, the walls of said slots being formed with seats, a second member having a transverse pin movable through the slots in said side pieces and arranged to engage said seats, a cross piece uniting the inner ends of the side pieces of the channeled member, and a stop screw in said cross piece arranged to engage the second member.

2. A jack, comprising a channeled member having longitudinally slotted side pieces, the walls of said slots being formed with seats, a second member having a transverse pin movable through the slots in said side pieces and arranged to engage said seats, an arched cross piece uniting the inner ends of the side pieces of the channeled member, a stop screw in said arched cross piece, a jaw uniting the outer ends of the side pieces of said channeled member, and a jaw at the outer end of the second member.



962,507. ANIMAL-POKE. JOHN W. GUFFIN, Duke, Okla. Filed July 31, 1909. Serial No. 510,609.



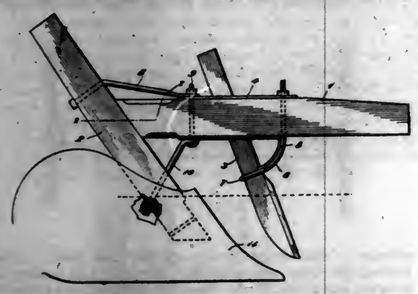
1. An animal poke comprising a frame having spaced side arms, the forward portions of said arms being formed with a longitudinal series of openings, a front loop, plates projecting rearwardly from said loop, guides on said plates to receive said arms, apertured lugs on said plates to enter the openings in said arms, removable pins arranged in the apertures of said lugs, and a hook member depending from said loop.

2. An animal poke comprising a frame having a U-shaped member constructed of rigid material and provided with forwardly and downwardly projecting parallel arms, the curved portion of said member being laterally offset to extend around the upper rear portion of the animal's head, a hook member extending upwardly from the curved upper portion of said U-shaped member, a front loop formed from a single piece of rigid material by bending the same upon itself, an adjustable connection between the side portions of said loop and the parallel arms of the U-shaped member, whereby said loop may be adjusted longitudinally of said arms, a depending hook member, and a swiveled connection for the latter secured between the spaced ends of said loop.

962,508. COLTER-FASTENING. JAMES W. HIETT, Bono, Ark. Filed Sept. 25, 1909. Serial No. 519,521.

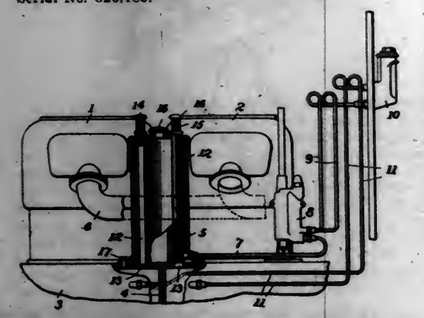
In combination with a plow beam, a guide plate secured to the upper side of the beam, a colter movable on the beam and the plate, a guide plate having its lower end curved rearwardly to engage the shank of the colter positioned against the lower side of the beam, a rod hav-

ing its lower end formed into a loop embracing the colter shank and curved to engage the curved portion of the



lower guide plate, and means for fastening the upper end of the rod to the beam.

962,509. MOTOR-VEHICLE-LUBRICATING MEANS. RUSSELL HUFF, Detroit, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed June 4, 1906. Serial No. 320,189.



1. In a motor vehicle, the combination with an engine base constituting a crank case, of cylinder casings supported on said base, an oil tank supported on said base and contiguous to said casings, and a vent tube passing through and connected with the oil tank, said vent tube communicating with the crank case below the oil tank and with the atmosphere above the oil tank.

2. In a motor vehicle, the combination with the base, crank case, and cylinder casing of a hydrocarbon engine, and with the exhaust pipe thereof, of an oil tank seated on said base and located between said exhaust pipe and said cylinder casing whereby the oil tank is kept warm by the heat of the cylinder and the exhaust pipe, and means for delivering oil from said tank to said crank case.

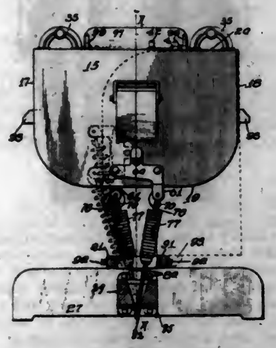
3. In a motor vehicle, the combination with an engine base having two compartments and a cylinder casing arranged above each compartment, an oil tank supported on said base contiguous to said cylinder casing and two vent tubes extending through and connected with said oil tank, the said vent tubes communicating with the atmosphere at their upper ends and with the respective crank case compartments at their lower ends, for the purpose set forth.

4. In a motor vehicle, the combination with a hydrocarbon engine having a plurality of cylinders located side by side, of an oil tank located between two of said cylinders, whereby the oil will be heated by the heat from said cylinders.

5. In a motor vehicle, the combination with a hydrocarbon engine having a plurality of cylinders located side by side and an exhaust pipe for said one of said cylinders, of an oil tank located between two of said cylinders and said exhaust pipe, whereby the oil will be heated by the heat from said cylinders and exhaust pipe.

[Claim 6 not printed in the Gazette.]

962,510. WASHING-MACHINE. HENRY S. JUDD, Chicago, Ill., assignor to H. S. Judd Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed July 28, 1906. Serial No. 328,247.

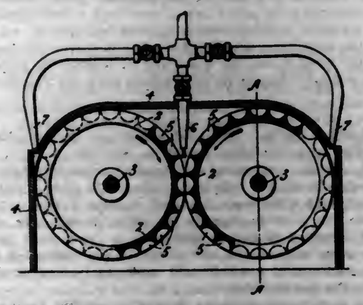


1. In a washing machine, the combination with a supporting-frame and an oscillating vessel pivoted thereto, of a spring having its upper end connected to the oscillating vessel, a rod extending from the lower end of the spring, and a nut upon said rod having knife-edges bearing upon said supporting-frame.

2. In mechanism of the class described, the combination with a washing machine vessel and its supporting frame, of a lug carried by said vessel, a bushing mounted upon said lug, a hook journaled upon said bushing, means for holding said hook and bushing upon said lug while permitting free rotation of the hook, and a spring connected to said hook and to the machine-frame.

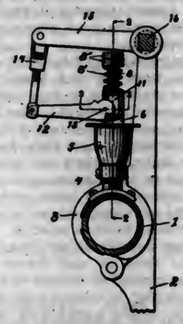
3. In a washing machine the combination with a supporting frame and an oscillating vessel pivoted thereto of a hook pivoted to said vessel, a spring suspended from said hook, a rod extending from the lower end of said spring, and a nut upon said rod having knife edges bearing upon said supporting frame.

962,511. FLUID-PRESSURE IMPACT-ENGINE. JOHN KINCAID, Vancouver, British Columbia, Canada. Filed Dec. 21, 1908. Serial No. 468,597.



In a fluid pressure impact engine, the combination of two equal wheels rotatable in a common plane with their outer circumferences in contact each wheel being provided with hemi-spherical recesses around its circumference, and a nozzle through which a jet of fluid under pressure may be directed at the line of contact between the two wheels.

962,512. SPRAY-HEAD. DANIEL M. LUEHRS, Toledo, Ohio, assignor to McCreery Engineering Company, Toledo, Ohio. Filed Mar. 5, 1908. Serial No. 419,386.



1. In a spray head, the combination of the supply pipe 1; a nipple 4 for said supply pipe with suitable means of securing it thereto; a nozzle 5 with a suitable centrally-located spider 9 therein; a cap or deflector 6 with a flange 7 having an inner parabolically curved surface arranged to deflect and spread the water discharged from said nozzle; a column 8 for supporting the same secured by suitable screw 10 to the spider 9, the said column being slotted at 11; a coiled spring 8' on the said column with means for adjusting the tension between the said cap and the said column; a lever 12 fulcrumed on the pin 13 in the said cap or deflector, the short end of which extends within the said slot 11; a rock shaft 16 with an arm 15; and a turn buckle link 14 between the said rock shaft arm 15 and the long end of the lever 12, coacting substantially as described and for the purpose specified.

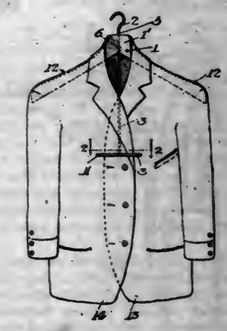
2. In a spray head, the combination of a nozzle 5 with a suitable centrally-located spider 9 therein; a cap or deflector 6 with a flange 7 having an inner parabolically curved surface arranged to deflect and spread the water discharged from said nozzle; a column 8 for supporting the same secured by suitable means to the spider 9, the said column being slotted at 11; a coiled spring 8' on the said column with means for adjusting the tension between the said cap and the said column; a lever 12 fulcrumed on the pin 13 in the said cap or deflector, the short end of which extends within the said slot 11; a rock shaft 16 with an arm 15; and a turn buckle link 14 between the said rock shaft arm 15 and the long end of the lever 12, coacting substantially as described and for the purpose specified.

3. In a spray head, the combination of the supply pipe 1; a nipple 4 for said supply pipe with suitable means of securing it thereto; a nozzle 5 with a suitable centrally-located spider 9 therein; a cap or deflector 6 with a flange 7 having an inner parabolically curved surface arranged to deflect and spread the water discharged from said nozzle; a column 8 for supporting the same secured by suitable means to the spider 9, the said column being slotted at 11; a coiled spring 8' on the said column with means for adjusting the tension between the said cap and the said column; and a lever 12 fulcrumed on the pin 13 in the said cap or deflector, the short end of which extends within the said slot 11, coacting substantially as described and for the purpose specified.

4. In a spray head, the combination of a nozzle 5 with a suitable centrally-located spider 9 therein; a cap or deflector 6 with a flange 7 having an inner parabolically curved surface arranged to deflect and spread the water discharged from said nozzle; a column 8 for supporting the same secured by suitable means to the spider 9, the said column being slotted at 11; a coiled spring 8' on the said column with means for adjusting the tension between the said cap and the said column; a lever 12 fulcrumed on the pin 13 in the said cap or deflector, the short end of which extends within the said slot 11; a rock shaft 16 with an arm 15; and a turn buckle link 14 between the said rock shaft arm 15 and the long end of the lever 12, coacting substantially as described and for the purpose specified.

[Claims 6 to 17 not printed in the Gazette.]

962,513. COAT-HANGER. RICHARD E. MACINTOSH, Los Angeles, Cal., assignor of one-half to Frank G. Kahn, Los Angeles, Cal. Filed Jan. 31, 1910. Serial No. 541,181.



A coat hanger comprising a vertical member formed as a wire having a suspending means at its upper end, a cross member secured to said vertical member and extending outwardly and downwardly at each side thereof for engaging within the shoulders of the coat on said vertical member, and a coat edge retainer at the lower end of said vertical member consisting of a portion of said wire bent reversely to form two loops, the portions of such loop farthest from the bend being close together to act as coat gripping means, and the portions of each loop which are nearer the bend being more widely separated than said gripping portions, to engage with the coat only at their end portions.

962,514. REINFORCING AND SUPPORTING DEVICE FOR FLEXIBLE COLLARS. DAVIS MARINSKY, New York, N. Y., assignor to Wilhelmina Lowrie, New York, N. Y. Filed Jan. 15, 1910. Serial No. 538,223.

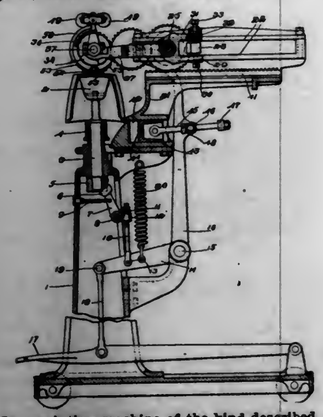
A reinforcing and supporting device of the class described, comprising a flexible strip provided at one end and on one side thereof with a transverse keeper, and at the opposite end and on the same side with a pocket, and a flexible and elastic strip adapted to be passed through

said keeper and provided at one end with a transverse head wider than the body thereof and said keeper and



the opposite end of which is adapted to be inserted into said pocket.

962,515. MACHINE FOR PRINTING ON RUBBER FOOTWEAR. JOSEPH W. MOORE, Newton Highlands, Mass., assignor to The J. W. Moore Machine Company, Boston, Mass., a Corporation of Massachusetts. Filed Aug. 27, 1909. Serial No. 514,904.



1. In a printing machine of the kind described, an overhanging printing mechanism, manually controlled means for moving said printing mechanism freely forward into printing position and quickly backward, a work support having a free space entirely around its upper end permitting said work support to project in position to enter within an article of footwear to support the same in position to receive an impress from said printing mechanism, means holding said work support stationary during the printing, and means for thereafter releasing the work support.

2. In a printing machine of the kind described, an overhanging printing mechanism, manually controlled means for moving said printing mechanism freely forward into printing position and quickly backward, a work support yieldingly projected upward into position to hold an article to be printed, and means to lock said work support stationary during the moment of printing, said printing mechanism including a swinging carrier and adjustable yielding means for supporting said carrier to permit the printing mechanism to yield for varying thicknesses of work.

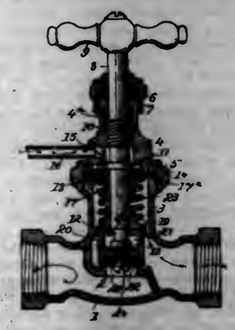
3. In a printing machine of the kind described, upper and lower slideways arranged in opposite pairs, a transverse frame mounted to slide in said ways, a carrier pivotally mounted in said frame, yielding means between said carrier and frame normally holding said carrier in a predetermined overhanging position but permitting the carrier to yield with reference to said frame, a printing head pivoted in the extreme forward overhanging end of said carrier, operating mechanism to rotate said head, actuated by the forward and backward movement of said frame in said ways, and a supporting block and a vertically yielding spindle therefor located to position the work beneath the printing head when the latter is moved to its forward position.

4. In a printing machine of the kind described, a slide frame, horizontal ways for said frame to slide upon, a horizontal carrier pivoted at its rear end in said frame, a printing head mounted to rotate in the front end of said horizontal carrier, means actuated by the back-and-forth movement of said carrier and slide frame for rotating said head, a manually operated bell crank lever pivoted at the lower part of the machine and connected to said slide frame for actuating the latter, and work supporting means to hold the work in position to be printed by said printing head when in forward position.

5. In a printing machine of the kind described, a slide frame, horizontal ways for said frame to slide upon, a horizontal carrier pivoted at its rear end in said frame, a printing head mounted to rotate in the front end of said horizontal carrier, means actuated by the back-and-forth movement of said carrier and slide frame for rotating said head, a manually operated bell crank lever pivoted at the lower part of the machine and connected to said slide frame for actuating the latter, a dash pot and its piston, a rod pivoted to said piston and slidingly pivoted in the adjacent arm of said bell crank, separated stops on said rod to be engaged by said arm to limit the forward and backward movement of said printing head, and work supporting means to hold the work in position to be printed by said printing head when in forward position.

[Claims 6 to 10 not printed in the Gazette.]

962,516. COMPRESSION STOP AND WASTE. PHILIP MUELLER, Decatur, Ill., assignor to The H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Mar. 8, 1906. Serial No. 304,991.



1. In a device of the character described, a body having inlet and outlet with a main valve seat between, a valve for said seat, an exhaust communicating with the interior of the body, and a freely movable waste valve independent of the main valve and having a plurality of seating points for controlling said exhaust.

2. In a device of the character described, a body having inlet and outlet with a main valve seat between, a main valve therefor, an exhaust, and a waste valve loosely connected with a support independent of the main valve and having two seating points for controlling the exhaust, one of them closing communication from it to the support.

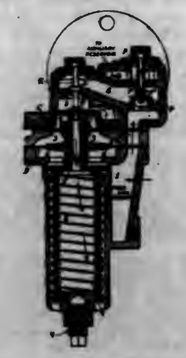
3. In a device of the character described, a body having inlet and outlet with a main valve seat between, a main valve therefor, an exhaust, a waste valve loosely connected with a support independent of the main valve and having two seating points for controlling the exhaust, one of them closing communication from it to the support, and means for holding the waste valve open when the main valve is closed.

4. In a device of the character described, a body having inlet and outlet with a main valve seat between, a positively actuated main valve therefor, an exhaust, a waste valve connected with a support and having two seating points for controlling the exhaust, one of them closing communication from it to the support, and means for actuating this valve independent of the main valve and in opposite directions to open or close the exhaust.

5. In a device of the character described, a body having inlet and outlet with a main valve seat between, a positively actuated valve for said seat, two waste valve seats, an exhaust communicating through the space between them with the interior of the body, and a waste valve independent of the main valve for closing said space.

[Claims 6 to 26 not printed in the Gazette.]

962,517. AIR-BRAKE. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car Heating Company, a Corporation of West Virginia. Filed Feb. 25, 1907. Serial No. 359,215.



1. In a triple valve for air brakes two tandem connected valves serving respectively as the inlet and exhaust valves for the brake cylinder, combined with operating devices therefor controlled by the resultant of the train-line and brake-cylinder pressures acting in opposition to a standard pressure.

2. In a triple valve for air brakes two valves mounted on a common stem and serving respectively as the inlet and exhaust valves of the brake cylinder, combined with operating devices controlled by the resultant of the train-line and brake-cylinder pressures acting in opposition to a standard pressure.

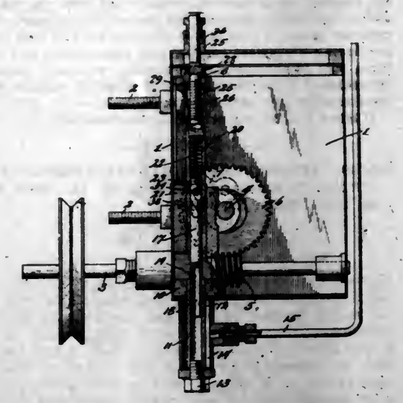
3. In a triple valve for air brakes, two spherical valves mechanically connected and serving respectively as the inlet and exhaust valves of the brake cylinder, combined with operating devices therefor controlled by the train-line and brake-cylinder pressures acting in opposition to a standard pressure.

4. In a triple valve for air brakes, two tandem connected valves serving respectively as the inlet and exhaust valves of the brake cylinder, combined with operating devices therefor controlled by the train-line and brake-cylinder pressures acting in opposition to a standard pressure and operating the two valves in succession, the opening of either valve being preceded by the closing of the other.

5. In a triple valve for air brakes, two mechanically connected valves operating in line, one with the other, and serving respectively as the inlet and exhaust valves of the brake-cylinder, combined with a common operating device therefor controlled by the resultant of the train-line and brake-cylinder pressures acting in opposition to a standard pressure.

[Claims 6 to 34 not printed in the Gazette.]

962,518. PUMP. JAMES E. NAUGHTIN, Chicago, Ill. Filed Aug. 21, 1909. Serial No. 513,934.



1. In a pump, the combination with a cylinder having a discharge opening in its side, of two interfitting and relatively slidable members one of which fits slidingly in said cylinder and has a chamber therein opening into the cylinder and a port opening into said chamber from the side, one of said interfitting members being rotatable and the other being non rotatable, and a cam device operated by one of said interfitting members and operating upon the other of said interfitting members for the purposes described.

2. In a pump, the combination of a cylinder having an inlet opening and a discharge port, a plunger rotatable and longitudinally movable in the cylinder, said plunger having a chamber opening into the cylinder and a port in its side communicating with said chamber, and operating means for reciprocating and rotating said plunger, said operating means comprising a non rotatable sleeve wherein said plunger is rotatable and longitudinally slidable, and cam mechanism operated by said sleeve and operating upon said plunger for rotating the plunger when there is relative sliding movement between said sleeve and plunger.

3. In a pump, the combination of a cylinder having an inlet opening and a discharge port, a plunger rotatable and longitudinally movable in the cylinder, said plunger having a chamber opening into the cylinder and a port in its side communicating with said chamber, and operating means for reciprocating and rotating said plunger, said operating means comprising a non rotatable sleeve wherein said plunger is rotatable and longitudinally slidable, cam mechanism operated by said sleeve and operating upon said plunger, and a yielding connection between said sleeve and plunger.

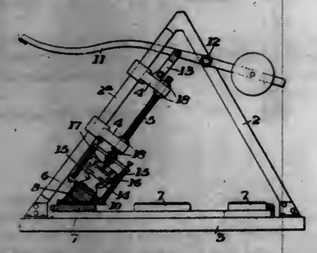
4. In a pump, the combination of a cylinder having an inlet opening and a discharge port, a plunger rotatable and longitudinally movable in the cylinder, said plunger having a chamber opening into the cylinder and a port in its side communicating with said chamber, and operating means for reciprocating and rotating said plunger, said operating means comprising a non rotatable sleeve wherein said plunger is rotatable and longitudinally slidable, said plunger having a helical cam groove, means extend-

ing from said sleeve into said cam groove for rotating said plunger, and a spring acted upon by said sleeve and acting upon said plunger for causing sliding movement of said plunger relatively to said sleeve.

5. In a pump, the combination with the casing and power mechanism of a sleeve reciprocated by said power mechanism, a guide for said sleeve adapted to prevent rotation thereof, a plunger which is rotatable and longitudinally slidable in said sleeve, a spring engaging both the sleeve and the plunger for causing the plunger to slide relatively to the sleeve, and cam mechanism part of which is upon the sleeve and part upon the plunger for causing the plunger to rotate when there is relative sliding movement between the sleeve and plunger, said cylinder having a port in the side thereof and said plunger having a chamber opening into the cylinder and having a port in the side communicating with said chamber and adapted to be brought into and out of register with the discharge port of the cylinder.

[Claims 6 to 10 not printed in the Gazette.]

962,519. APPARATUS FOR MANUFACTURING TILES. WILLIAM T. NICHOLLS, Wellsburg, W. Va. Filed Aug. 23, 1907. Serial No. 389,851.



1. In apparatus for manufacturing tiles, a plunger having a flat working face formed with a plurality of elongated under-cut notches or grooves therein, said plunger being mounted to move in a plane which is inclined to the plane of such working face, substantially as described.

2. In apparatus for forming tiles, the combination with a mold box having a mold cavity therein, of a plunger arranged to enter said box at an angle, said plunger having a working face parallel with the bottom wall of the mold cavity and formed with undercut recesses; substantially as described.

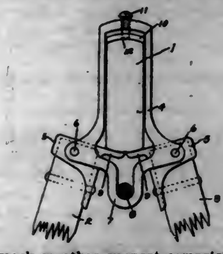
3. In apparatus for forming tiles, a mold box having a horizontal mold cavity therein, a removable top ring having an inclined opening for a plunger, and a plunger arranged to work through said ring in an oblique direction, said plunger having its working face substantially parallel with the bottom wall of the mold cavity formed with a plurality of undercut recesses therein; substantially as described.

962,520. CULTIVATOR. WALDEMAR F. NIELSEN, Junction City, Oreg. Filed Aug. 24, 1909. Serial No. 514,422.



In a cultivator, an axle; a main frame having side members pivoted at their rear ends to the axle; a supplemental frame comprising side bars pivoted at their forward ends to the axle, intermediate bars, frame members connecting the side and intermediate bars, one of said intermediate bars being pivoted to the axle and extending forwardly therebeyond, the other said intermediate bar being pivoted to the axle and extended forwardly therebeyond and thence extended laterally and in advance of the axle and secured at its extremity to the forwardly extended portion of the first mentioned intermediate bar, the said first mentioned intermediate bar having its forwardly extended portion, at its end, projecting upwardly; a lever mounted upon the main frame, a rod connecting the lever and the upstanding end of the forwardly extended portion of the first mentioned intermediate bar; and cultivator mechanism mounted in the supplemental frame, and driven from said axle.

962,521. HAMMOCK-SUPPORT. ISAAC E. PALMER, Middletown, Conn., assignor to The I. E. Palmer Co., Middletown, Conn., a Corporation of Connecticut. Filed Aug. 28, 1909. Serial No. 515,086.



1. A hammock or other support comprising in combination a backbone or ridge pole, supporting legs arranged in pairs, means to connect said legs with the backbone with capacity to open and close, and adjusting means coacting with said backbone to limit the opening movement of said legs.

2. A hammock or other support comprising in combination a backbone or ridge pole, supporting legs arranged in pairs, means to connect said legs with the backbone with capacity to open and close, and adjustable means engaging said backbone to limit the opening movement of said legs.

3. A hammock or other support comprising in combination a backbone or ridge pole, supporting legs arranged in pairs and adapted to be assembled with or detached from said backbone and having capacity to open and close, and means adapted to be positioned prior to assembling said backbone and legs to vary the opening movement of the latter.

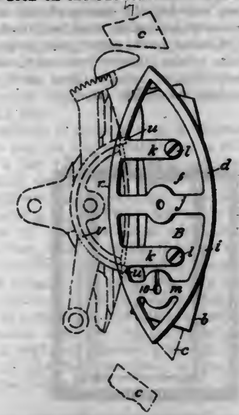
4. A hammock or other support comprising in combination a backbone or ridge pole, supporting legs arranged in pairs and adapted to be assembled with or detached from said backbone with capacity to swing into open or closed position, and means carried by said legs and adapted to be set prior to assembling said legs and backbone, and upon assembling the same to co-act with said backbone to control the amount of opening movement of said legs.

5. A hammock or other support comprising in combination a backbone or ridge pole, a collar to be assembled with or disengaged from said backbone, a pair of legs swingingly connected to said collar, and adjustable means carried by said collar to control the outward swinging movement of said legs.

[Claims 6 to 12 not printed in the Gazette.]

962,522. CARRIER FOR BRAIDING-MACHINES. EDWARD F. PARKS and SIMON W. WARDWELL, Providence, R. I. Original application filed Jan. 3, 1907, Serial No. 350,641. Divided and this application filed Sept. 27, 1907. Serial No. 394,857.

1. In a carrier for a braiding machine, the combination with a runner of arcual form, of a skeleton deck formed of a separate piece and mounted on the runner at an angle to the plane of the runner, and a spindle having a bearing in the deck and extending between the deck and the runner and secured to the latter to provide a strut to brace the deck on the runner.



2. The combination in a braiding machine carrier, of a runner of arcual form adapted to slide on a circular track, a lenticularly shaped deck of skeleton structure having a rim and an intermediate brace extending between the sides of the rim, and a spindle extending through the brace and secured to the runner to serve as a strut between the deck and the runner.

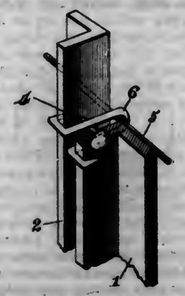
3. In a carrier for braiding machines, the combination with an arcual runner of hollow form, having an upturned ear, of a skeleton deck of lenticular contour secured to the runner, having a tie portion with a hole alining with the ear on the runner, and a spindle having a bearing in said hole and secured to the said ear.

4. In a carrier for braiding machines, the combination with an arcual runner of hollow form, of a lenticularly formed deck secured to said runner, having a down-turned edge with apertures therein, for the purpose specified, and means for holding the yarn supply.

5. In a carrier for braiding machines, the combination with an arcual runner of hollow form, a lenticularly formed deck secured to said runner and inclined thereto, having a down-turned edge with apertures therein for the purpose specified, and means for holding a yarn supply.

[Claims 6 to 23 not printed in the Gazette.]

962,523. FENCE-POST. HENRY S. PERRY, Plattsmouth, Nebr., assignor of one-half to George E. Perry, Plattsmouth, Nebr. Filed Oct. 25, 1909. Serial No. 524,375.



1. A metal fence-post comprising a base, a pair of spaced parallel uprights formed of angle-iron and having rearwardly projecting portions, connecting means for said uprights, and wire supporting staples arranged intermediate the uprights and straddling the said connecting means, the shanks of each staple being reversely bent about the edges of the rearwardly projecting portions of the uprights.

2. A metal fence-post comprising a base, a pair of spaced parallel uprights formed of angle-iron and having rearwardly projecting portions, spaced rivets extending transversely through and connecting said uprights, and wire supporting staples arranged intermediate the uprights and straddling the said rivets, the shanks of each staple being reversely bent about the edges of the rearwardly projecting portions of the uprights.

962,524. SHADE-HOLDER COUPLING. EDWIN F. PIERCE, Milwaukee, Wis. Filed Apr. 12, 1909. Serial No. 489,498.



1. The combination of a lamp socket provided near one end with an annular bead, a detachable coupling collar provided on its lower side with an internal groove engaging with a bead formed on the shade supporting bracket, and a shade supporting bracket provided with a plurality of fingers, said fingers being provided on their inner surfaces with grooves engaging with the annular bead on said socket, and on their exterior surfaces with beads engaging with the groove of the lower side of the coupling collar, the groove on said coupling collar being adapted when said parts are in place to register with, inclose and cover the beads on said socket and shade supporting bracket, whereby all of said parts are interlocked and secured together.

2. The combination of a lamp socket provided near one end with an annular bead, a detachable coupling collar provided on its lower side with an annular bead to facilitate moving the same when coupling the several parts of my device together, and with an internal groove engaging with a bead formed on the shade supporting bracket, a shade supporting bracket provided with a plurality of fingers, said fingers being provided on their inner surfaces with grooves engaging with the annular bead on the lamp socket, and on their exterior surfaces with beads engaging with the internal groove on its lower side of the coupling collar the groove on said coupling collar being adapted when said parts are in place to register with, inclose and cover the beads on said socket and shade supporting bracket, whereby all of said parts are interlocked and secured together.

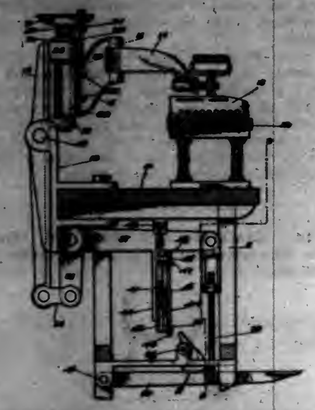
962,525. IRONING-MACHINE. HARRY PRICE, Boston, Mass. Filed July 3, 1909. Serial No. 505,862.

1. In an ironing machine, an iron, supporting means therefor, a slide connected to said means, spring tension means connected to said slide to exert tension tending to elevate the iron, and an adjusting screw connecting said slide and supporting means, for adjusting the slide to vary the spring tension.

2. In an ironing machine, an iron, a carrier therefor, manually operative means for moving the carrier, spring-actuated means for moving the manual means, a stop for the manual means formed with a series of apertures, and a spring follower arranged and constructed to enter either of said apertures and lock the stop in various positions.

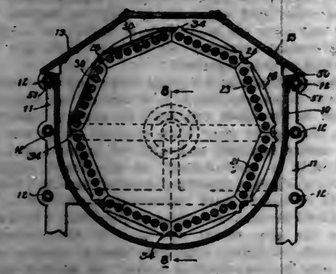
3. In an ironing machine, a jointed carrier for the iron, a support, an adjustable pivot affixed to the carrier and connecting the carrier and support, means for adjust-

ing the pivot with relation to the support, and means for locking the adjusting means with relation to the carrier.



4. In an ironing machine, a jointed carrier for the iron, a support, an axially movable pivot mounted in the support and affixed to the carrier, an adjusting screw cooperating with the support for moving the pivot endwise, and means for locking the screw with relation to the carrier.

962,526. LAUNDRY WASHING-MACHINE. EDWARD PHOBST, Indianapolis, Ind. Filed Mar. 26, 1908. Serial No. 423,880.

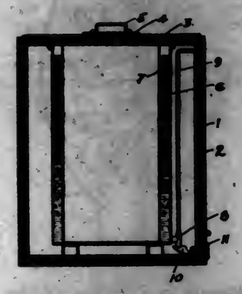


1. A laundry washing machine including a cylinder with end frames, cylinder bars intermediate said end frames, metal pieces removably mounted in connection with the end frames and detachably holding the ends of said cylinder bars in groups and provided with lugs to engage the periphery of the end frames, and tie rods for holding the end frames against the intermediate groups of cylinder bars, substantially as set forth.

2. A laundry washing machine including a cylinder having end frames, intermediate cylinder bars, end pieces in which the ends of the cylinder bars are mounted in groups, said end pieces removably mounted in connection with the end frames, tie-rods between the groups of cylinder bars, metal bars secured to the cylinder bars of one group to form a door thereof, the ends of said metal bars adapted to engage one of the tie-rods, and means in the other ends of said metal bars that are adapted to engage the end frames and hold the door section closed.

962,527. STORAGE-RECEPTACLE FOR FROZEN CONFECTIONS. CLIFFORD W. REYNOLDS, Omaha, Nebr. Filed June 21, 1907. Serial No. 564,558.

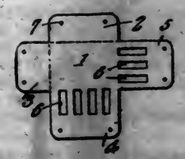
1. In a storage receptacle of the class described, an outer insulating casing, a vessel removably disposed within the casing and having portions thereof spaced from the inner walls of the casing, a second vessel removably disposed within the first so as to form a space between them for receiving a refrigerating mixture, a drain cock connected with the first vessel near the bottom thereof and in the space between the same and the outer casing, an operating element extending from said cock to the top of the space between said vessel and outer casing, a cup arranged to receive liquid from said cock, and an outer cock controlling a passage from said cup to the outside of the outer insulating casing.



2. In a storage receptacle of the class described, a rectangular outer insulating casing, a cylindrical vessel removably disposed within the casing, a second vessel removably disposed within the first and arranged to form a space between them, a drain cock connected with said cylindrical vessel and opening into the space between the same and the outer casing, a means for receiving liquid from said cock, and an outer cock controlling a passage from said receiving means to the outside of the outer casing.

3. In a storage receptacle of the class described, a rectangular outer insulating casing, a vertical cylindrical vessel removably disposed within the casing, a second vessel removably disposed within the first and arranged to form a space between them, a drain cock connected with said cylindrical vessel at the bottom thereof and adjacent to one corner of the casing, said cock opening into the space between said cylindrical vessel and the outer casing, an operating element extending from the cock to the top of said space, a means for receiving liquid from said cock, and an outer cock controlling a passage from said receiving means to the outside of the outer casing.

962,528. CORNER-FASTENING. ROBERT ROMAINE ROCKWELL, Evanston, Ill., assignor of one-half to Charles L. Anderson, Chicago, Ill. Filed Sept. 9, 1909. Serial No. 516,924.



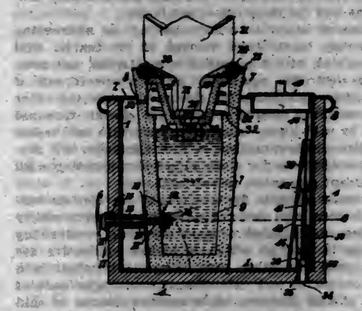
1. As an article of manufacture, a fastening device for frame joints and the like consisting of a stiff metal plate comprising a flat body portion, a rigid arm projecting from one edge thereof and bent into a plane at right angles to said body, and another arm projecting from the opposite edge of the body in the plane thereof and rendered pliable by having a series of slots in it extending across the point where the pliable arm is to be bent.

2. As an article of manufacture, a fastening device for frame joints and the like consisting of a stiff metal plate comprising a body portion, a rigid arm projecting from one edge thereof and bent at an angle to said body, and another arm projecting from the opposite edge of the body and rendered pliable by having a series of slots in it extending across the point where it is to be bent, the pliable arm being longer than the other and both perforated for nails and the like.

3. As an article of manufacture, a fastening device for frame joints and the like consisting of a stiff metal plate comprising a flat rectangular body portion, rigid arms projecting from two adjacent edges thereof and bent into planes at angles to said body, and other arms projecting from the opposite edges of the body in its plane and rendered pliable by having a series of slots through them extending across lines on which they are to be bent.

4. As an article of manufacture, a fastening device for frame joints and the like consisting of a flat metal plate having an upturned rigid projection along one edge and a downturned rigid projection along the adjacent edge, and arms projecting from its remaining edges and in its plane, said arms being rendered pliable by having in them a series of parallel slots extending across lines on which they are to be bent.

962,529. WATER-COOLER. ALONZO M. ROAR, New York, N. Y. Filed July 21, 1906. Serial No. 327,180.



1. A liquid-cooler comprising the combination of a liquid receptacle having an opening in its upper part and provided with means for drawing-off the liquid, a cooling chamber to the action of which said receptacle is exposed, a holder extending into said receptacle and having a valved connection communicating with the interior thereof, an inverted reservoir or bottle projecting downwardly into said holder and having its outlet or mouth resting on said holder and in communication with said valved-connection, the rising of the liquid supplied to said receptacle through the valved connection serving to close said valve and cut off the supply from the reservoir and to determine the level of the water in the receptacle at about the level of the valve.

2. A liquid-cooler comprising the combination of a liquid receptacle having an opening in its upper part and provided with means for drawing-off the liquid, a cooling chamber to the action of which said receptacle is exposed, a yielding or spring-mounted holder extending into said receptacle and having a valved connection communicating with the interior thereof, an inverted reservoir or bottle projecting downwardly into said holder and having its outlet or mouth resting on said holder and in communication with said valved-connection, the rising of the liquid supplied to said receptacle through the valved connection serving to close said valve and cut off the supply from the reservoir and to determine the level of the water in the receptacle at about the level of the valve.

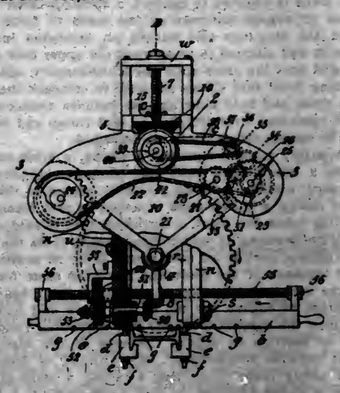
3. A liquid-cooler comprising the combination of a liquid receptacle having an opening in its upper part and provided with means for drawing-off the liquid, a depending holder extending into said receptacle and having a depending pipe connecting it with the interior thereof and provided with an upwardly closing valve, a washer on the bottom of said holder, a cooling chamber to the action of which said receptacle is exposed, a shoulder or fixed part within said receptacle, a spring resting on said shoulder or fixed part and engaging said holder and acting to press it upwardly, an inverted reservoir or bottle projecting into said holder and having its outlet or mouth resting on the bottom of said holder in communication with said pipe-connection and with the said washer interposed between the bottle-mouth and holder.

4. A liquid-cooler comprising the combination of a liquid receptacle having an opening in its upper part and provided with means for drawing-off the liquid, a depending holder extending into said receptacle and having a depending pipe connecting it with the interior thereof and provided with an upwardly closing valve, a cooling chamber to the action of which said receptacle is exposed, a shoulder or fixed part within said receptacle, a spring resting on said shoulder or fixed part and engaging said holder and acting to press it upwardly, a washer or gasket removably mounted within the upper end of said receptacle and above said holder and limiting the upward movement of the latter, an inverted reservoir or bottle resting with its shoulder upon said washer or gasket and projecting downwardly into said holder and having its outlet or mouth resting on the bottom of said holder in communication with said pipe-connection.

5. A liquid-cooler comprising the combination of a liquid receptacle having an opening in its upper part and provided with means for drawing-off the liquid, a depending holder extending into said receptacle and having a depending pipe connecting it with the interior thereof, a cooling chamber to the action of which said receptacle is exposed, a spring acting upon said holder to force it upwardly, a washer or gasket removably mounted within the upper end of said receptacle and engaged by said holder to limit its upward movement, an inverted reservoir or bottle projecting downwardly into said holder and having its outlet or mouth resting on the bottom of said holder in communication with said pipe-connection.

[Claims 6 to 15 not printed in the Gazette.]

962,530. METAL-CUTTING MACHINE. WILLIAM ROSS, Montreal, Quebec, Canada. Filed May 26, 1908. Serial No. 435,131.



1. In a metal cutting machine, the combination with a base and a power driven metal cutting tool, of means for

adjusting such tool relatively to the base in a plane perpendicular to the said base means for adjusting the said tool in a plane at right angles to the plane of the first mentioned adjustment for cutting bevels in different angular planes and means for feeding the cutting tool horizontally and vertically.

2. In a metal cutting machine the combination with a base and means for clamping the same to the thing to be cut, of a carriage slidably carried by the base, a metal cutting tool, means for adjusting the said tool to different angular positions relatively to the carriage; and means for feeding the carriage along the base.

3. In a metal cutting machine the combination with a base and means for clamping the same to the thing to be cut, of a carriage slidably carried by the base, a standard pivoted to the carriage, a metal cutting tool mounted upon the standard; means for adjusting the said standard to different angular positions relatively to the carriage; and means for feeding the carriage along the base.

4. In a metal cutting machine the combination with a base and means for clamping the same to the thing to be cut, of a carriage slidably carried by the base, a standard pivoted to the carriage, a metal cutting tool mounted upon the standard; means for adjusting the said standard to different angular positions relatively to the carriage; means for feeding the tool along the standard and means for feeding the carriage along the base.

5. The combination with a saw having cutting teeth at its perimeter, of a pair of sprocket wheels supported with their lower edges below the level of the uppermost teeth of the saw, a chain looped over the sprocket wheels and engaging the teeth of the saw, and means whereby the said chain is driven.

[Claims 6 to 13 not printed in the Gazette.]

962,531. HOLDER OR FRAME FOR SAFETY-RAZORS. WILLIAM SCHMIDT, Jersey City, N. J., assignor to Mary Zinn, Martin Zinn, and Arthur Zinn, composing The Firm of Simon Zinn, New York, N. Y. Filed Aug. 23, 1907. Serial No. 389,794.

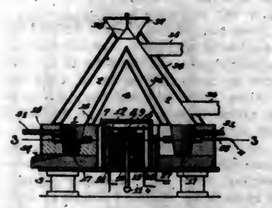


1. A safety razor comprising a casing, a blade-support therein, a guard adjacent to said blade-support, a blade, stop-lugs adjacent to said guard against which the edge of the blade is adapted to contact, a spring-pressed clamp adapted to engage the rear of the blade to force same against the stop-lugs and having an extension integral therewith and adapted to press upon the upper face of the blade and hold the same upon the blade-support, side-bars depending from said clamp adapted to embrace the ends of the razor and hold same against endwise displacement, and an operating lever attached to said clamp and located upon the casing, substantially as described.

2. A safety razor comprising a casing, a blade-support therein, a guard upon said blade-support, stop-lugs on said guard, a blade, a clamp pivotally secured to the rear of said casing, a thumb-piece attached to said clamp and depending below the pivot, a spring secured to said casing and normally engaging said thumb-piece to press the same rearwardly, a portion of said clamp being in position to engage the back of the blade and force the same forward upon the lugs, and a portion of said clamp being bent over in position to engage the top of the blade and hold the same upon the support and side-bars depending from said clamp in position to engage the ends of the razor and prevent endwise displacement, substantially as described.

3. A safety razor comprising a casing, a blade-support therein, a guard adjacent to said blade-support, a blade, stop-lugs adjacent to said guard against which the edge of the blade is adapted to contact, and a clamp having integral members adapted to pass respectively upon the back of the blade and the top of the blade and the sides of the blade to hold the blade against endwise movement, a pivotal connection between said clamp and the casing, a spring connection between said clamp and the casing, and an operating lever attached to said clamp and located upon the casing, substantially as described.

962,532. ELECTRIC FURNACE FOR METALLURGICAL PURPOSES. HEINRICH F. D. SCHWAHN, Belleville, Ill. Filed Mar. 24, 1909. Serial No. 485,503.



1. An annular electric furnace around an electric current transformer said furnace provided with electrodes consisting each of two parts one part of which is made substantially of pure carbon, while the other part being its terminal is made of carbon compounded with a suitable refractory material to give it adequate resistance to an electric current secured from said transformer, substantially as and for the purpose set forth.

2 An annular electric furnace having an alternating electric current transformer located in its center, said furnace provided with a plurality of electrodes, one number of said electrodes comprising each two parts, one of which is highly conductive for electricity while the other part is a resistance conductor being the electric terminal connecting by said highly conductive part with said transformer, while another number of said electrodes are normally good conductors for electricity and connecting with a direct current generator, as set forth.

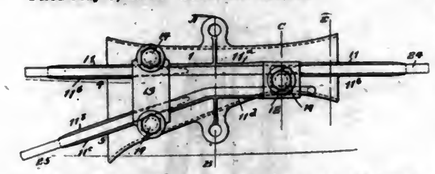
3. An annular electric furnace around an electric current transformer, said furnace provided with a plurality of electrodes, one number of said electrodes comprising each two parts, one of which is highly conductive for electricity while the other part being its terminal is a resistance conductor and extending over a major part of the hearth of said furnace, while another number of said electrodes are arranged to be conductive throughout, substantially as and for the purpose set forth.

4. An annular electric furnace upon a suitable base, said furnace comprising two working parts registering into each other, the lower part of which consists of an annular retort provided with suitable electric terminals, gas-inlets and metal and slag outlets, said annular retort inclosing an alternating electric current transformer connecting with said electric terminals, while the other and upper working part consists of an annular conical gas-chamber with a conical core in its center, said cone located over and above said transformer, said gas-chamber being provided with a suitable hopper centrally located over and above said cone for the charging of the furnace, and suitable outlets for the spent gases and metallic vapors for their recovery, as set forth.

5. An annular electric furnace comprising an upper chamber for the preparing of the material, and a lower chamber for the reduction of said material, said chambers registering into each other and inclosing an alternating electric current transformer, said lower chamber having suitable gas-inlets, suitable electric terminals, an opening near its base and an angular passage extending upwardly and outwardly from said opening as an outlet for the furnace product, said upper chamber having a suitable hopper and gas-outlets, as set forth.

[Claims 6 to 9 not printed in the Gazette.]

962,533. TROLLEY-SWITCH. FRANK L. SESSIONS, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed May 5, 1908. Serial No. 431,012.



1. A trolley switching or crossing device having a plate, a rectilineal wire seat on top of the plate, a threaded binding device engaging with the plate, and a wire clamping device between the threaded binding device and the plate, the said clamp having a side and two end depending flanges, the side flange being adapted to engage the wire along one side, and the end flanges being adapted to engage the top of the wire, substantially as set forth.

2. The combination of a rectilineal main wire, a switching device comprising a plate adapted to be secured along its top to the main wire and having an upward extending rib one part of which is parallel to the main wire and another part of which lies at an acute angle to the main wire, a branch wire engaging with the upward extending rib on the side adjacent the main wire, and a clamping device for the said branch wire to engage it at a point beyond the part of the rib which is parallel to the main wire, substantially as set forth.

3. The combination of a main wire, a switching device comprising a plate, means for securing the plate at its upper side to the main wire, an upward extending rib with its ends at an angle to each other, one of the ends extending away from the main wire at an angle thereto, a branch wire adapted to engage with the side of the said rib which is adjacent the main wire, and a clamping device to engage the branch wire at a point beyond the end of the rib, substantially as set forth.

4. The combination of a rectilineal main wire, a switching device comprising a plate, means for securing the plate at its upper side to the main wire, an upward extending rib with its ends at an angle to each other, one of the ends extending away from the main wire at an angle thereto, a branch wire adapted to engage with the said rib on the side adjacent the main wire, and clamping devices for the branch wire near each end of the rib, substantially as set forth.

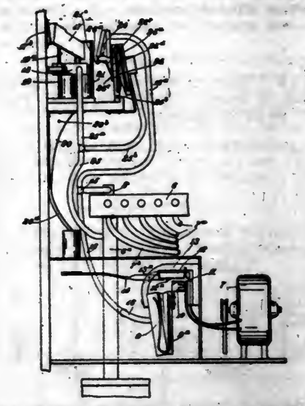
5. In a trolley crossing or switching device, a horizontal plate having upward extending ribs, one of the ribs having its ends at an angle to one another, one of the said ends extending away from the other rib at an angle thereto, two trolley wires each engaging one of the ribs on the side adjacent the other, and clamping devices adapted to hold the wires in engagement with the plate and ribs, substantially as set forth.

962,534. COIN-CONTROLLED PNEUMATICALLY-OPERATED MUSICAL INSTRUMENT. THORNTON I. SHANNON and FRED M. GARNETT, Columbus, Ohio. Filed Feb. 1, 1909. Serial No. 475,318.

1. In a coin controlled pneumatically operated musical instrument, the combination of mechanism for starting the operation of the instrument, a coin conductor to said mechanism, a coin magazine associated with said conductor, a coin guide, and means for shifting the coin guide from the coin conductor to the coin magazine.

2. In a coin controlled pneumatically operated musical instrument, the combination of mechanism for starting the operation of the instrument, a coin conductor to said mechanism, a coin magazine associated with said conductor, a coin guide, and pneumatically operated means for shifting the coin guide from the coin conductor to the coin magazine.

3. In a coin controlled pneumatically operated musical instrument, the combination with means for automatically starting the operation of the instrument by the deposit of a coin therein, a coin magazine, a coin ejector for said magazine, a pneumatic provided with a valve, said pneumatic being pneumatically operated to move the ejector in one direction, a spring to operate said ejector in the opposite direction, and a pneumatic for opening said valve to admit air to the pneumatic carrying it.

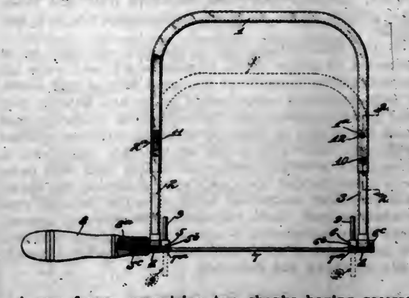


4. In a coin controlled pneumatically operated musical instrument, the combination with means for automatically starting the operation of the instrument by the deposit of a coin therein, a coin magazine, a coin ejector for said magazine, a pneumatic provided with a spring and a valve, said pneumatic being pneumatically operated to withdraw the ejector from the magazine, and a pneumatic for opening said valve to admit air to the first mentioned pneumatic to permit the spring to operate the ejector to eject a coin.

5. A device of the character described, comprising a coin chute, a releasing lever, a magazine, means for conveying a coin from the chute either to the lever or to the magazine, and means for conveying a coin from the magazine to said lever.

[Claims 6 to 11 not printed in the Gazette.]

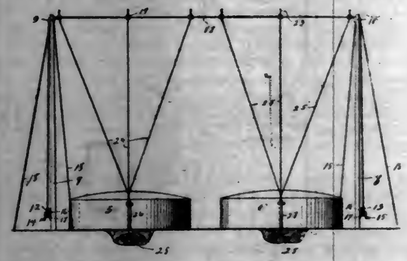
962,535. SAW. JACOB SIGOLOFF, St. Louis, Mo. Filed Feb. 24, 1908. Serial No. 417,503.



A saw frame, comprising two shanks having recesses in their upper ends, saw-bits mounted in the lower ends of said shanks, spring-stops secured to the upper ends of said shanks and overlying the recesses therein, a hollow yoke having its stems fitted upon said shanks by depressing said spring-stops into the recesses in the shanks, each of the stems of the said yoke being provided with a single opening near its end adapted to be engaged by the spring-

stop of its respective shank when adjacent thereto and to be disengaged from said spring-stops by depressing said stops into their respective recesses to permit the yoke to be slid upon said shanks, whereby the yoke may be readily adjusted upon said shanks to any point between the openings in its stems and its limit of inward movement and automatically locked against removal from the shanks when it reaches its limit of outward movement, independent means for securing the shanks and yoke at intermediate adjusted positions, and a handle secured to one of said saw-bits for adjusting the tension of said yoke.

962,536. LIGHTNING-ARRESTING APPARATUS. THOMAS M. STEVENS, Watertown, Mass. Filed Jan. 3, 1910. Serial No. 535,949.



1. A lightning arresting structure comprising a pair of spaced masts, a cable extending between said masts, a plurality of lightning arresting members secured at intervals upon said cable, an electrical conductor leading from each of said lightning arresting members, ground plates to which said electrical conductors are connected, and means for bodily raising and lowering said cable and the parts carried thereby.

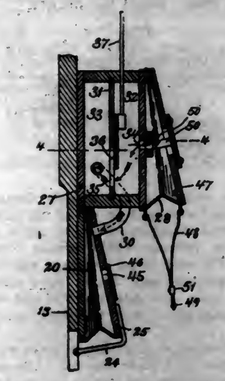
2. In a device of the character described, the combination with a pair of spaced masts, of pulleys mounted at the upper ends of said masts, a cable passing over said pulleys, windlasses upon which the ends of said cable are adapted to be wound, lightning arresting members secured at intervals upon said cable, electrical conductors leading from said members, and ground plates to which said conductors are connected.

3. A lightning arresting structure comprising a pair of spaced masts, a cable extending between said masts, a plurality of clamps secured at intervals upon said cable, a plurality of looped metallic tubes secured to said clamps, electrical conductors extending from said tubes, and ground plates to which said conductors are connected.

4. The combination with a plurality of tanks to be protected, of spaced masts between which said tanks are located, pulleys mounted at the upper ends of said masts, a cable extending between said masts and passing over said pulleys, means for tightening and loosening said cable, a plurality of lightning arresting members clamped upon said cable and spaced at intervals therealong, a plurality of electrical conductors leading from said members, a pole located upon each side of each of the tanks, said electrical conductors being arranged in sets with relation to each tank, the conductors of a set passing down the corresponding pole, and ground plates to which the lower ends of said conductors are connected, substantially as shown and described.

962,537. TEMPO-CONTROLLER FOR AUTOMATIC PIANOS. ALBERT H. STUART, Boston, Mass. Filed Apr. 5, 1909. Serial No. 488,087.

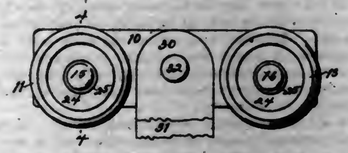
1. In an automatic piano, a pneumatic motor, an exhaust pump and conduit communicating therewith, said conduit including a port, and a valve movable endwise in and out of said port, said valve having an operative face which is oblique to its line of travel and which increases in width from its front and rear extremes toward the intermediate portion.



2. In an automatic piano, a pneumatic motor, an exhaust pump and conduit communicating therewith, said conduit including a pneumatic and a port opening into the pneumatic, and a valve mounted on the movable wall of the pneumatic so as to move endwise in and out of said port, said valve having a controlling surface inclined to the line of travel and formed of graduated width narrower toward the ends and broader between the ends.

3. In an automatic piano, a pneumatic motor, an exhaust pump and conduit communicating therewith, said conduit including a port, and a valve movable endwise in and out of said port, said valve having an operative face which is oblique to the line of travel, and of which the side edges converge toward the rear end.

962,538. DOOR-HANGER. ADAM WAGNER, Cedar Falls, Iowa. Filed May 13, 1909. Serial No. 496,291.

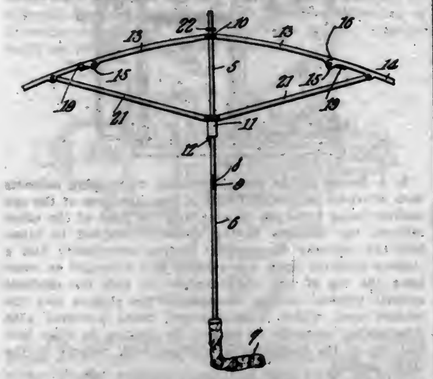


1. A door hanger, comprising a bar formed with bosses on its opposite ends and apertured through said bosses, pivots mounted in the apertures of the bar and bosses, wheels mounted on ends of said pivots, said wheels formed with recesses in their inner sides to receive said bosses, and means for suspending an object from the central portion of said bar.

2. A door hanger, comprising a bar formed with bosses near its ends and below the median line thereof and apertured through said bosses, pivots mounted in the apertures of the bar and bosses wheels mounted on end portions of said pivots, said wheels formed with recesses in their inner sides to receive said bosses and also formed with recesses in their outer sides to receive heads of said pivots and means for suspending an object from said bar.

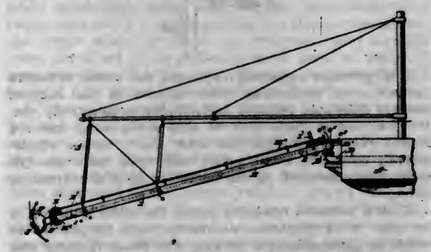
3. A door hanger, comprising a bar formed with bosses near its opposite ends and apertured through said bosses, pivots mounted through said bar and bosses, bearing rollers surrounding said pivots and extending through said bar and bosses, wheels mounted on ends of said pivots, each of said wheels formed with a cavity in its inner face to receive a boss and also formed with a cavity in its outer face, ends of the pivots upset into the cavities in the outer faces of the wheels and means for suspending an object from said bar.

962,539. FOLDING UMBRELLA. ORBIN E. WALTON, West Union, W. Va., assignor of one-half to U. Grant Summers, West Union, W. Va. Filed July 24, 1909. Serial No. 509,289.



In an umbrella, a staff, ribs pivotally connected to the staff, each rib comprising channeled sections, a pivot pin connecting the sections and extending transversely across the channels of the sections and spaced from the bottoms thereof, the bottom of the channel of one section being inclined whereby the said channel of the said section is decreased in depth in a direction from the pivoted end of the section, a slide arranged in the channel of the sections and at one end tapered to wedge shape to a degree corresponding substantially to the inclination of the bottom wall of the said channel, the said slide lying between the bottoms of the channels and the said pivot pin and being adapted to wedge between the said channel bottoms and the said pin when slid in the direction of decrease in depth of the last said channel, and an abutment upon the slide adapted to engage with the pivot pin when the slide is so wedged.

962,540. CUTTER-HEAD FOR HYDRAULIC DREDGES. WALTER T. WEAVER, Gulfport, Miss. Filed Feb. 11, 1909. Serial No. 477,857.



1. In a dredging machine, a swinging suction pipe, a cutter head casing swiveled to the lower end of said suction pipe, a cutter head in said casing, a worm wheel carried by the cutter head casing, a worm gear engaging said worm wheel, and means for locking the cutter head casing in various positions of adjustment.

2. In a dredging machine, a swinging ladder, a suction pipe carried thereby, a cutter head casing swiveled to the lower end of said suction pipe, a cutter head mounted in said casing and adjustable therewith, and means operable from the upper end of the ladder for adjusting the cutter head casing and for locking the same in various positions of adjustment.

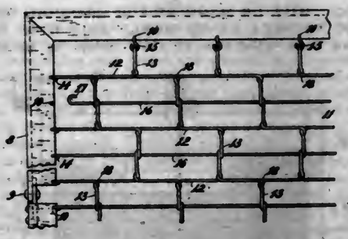
3. In a dredging machine, a swinging suction pipe, a cutter head casing pivoted to the lower end of said suction pipe, a cutter head in said casing, a worm wheel carried by the cutter head casing, a worm engaging said worm wheel, and a lock adapted to engage the worm wheel to hold the cutter head casing in various positions of adjustment.

4. In a dredging machine, a ladder, a suction pipe carried thereby, a cutter head casing pivoted to the lower end of the ladder and having a swiveled connection with the lower end of the suction pipe, a cutter head in said casing, a worm wheel carried by the cutter head casing, an operating shaft extending substantially the full length of the ladder, and a worm carried by said shaft and engaging said worm wheel.

5. In a dredging machine, a ladder, a suction pipe carried thereby and having its lower end extending inwardly, a fixed shaft carried by the lower end of the ladder and positioned in axial alinement with the inwardly extending portion of the suction pipe, a cutter head casing pivoted on said shaft and having a swiveled connection with the inwardly extending portion of the suction pipe.

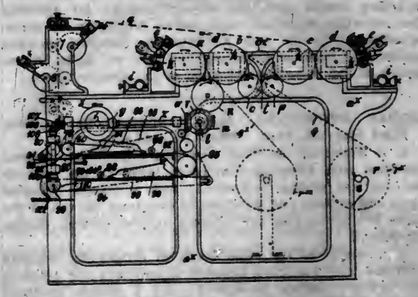
[Claims 6 to 12 not printed in the Gazette.]

962,541. WIRE FABRIC. WILLIAM F. WHITE, Kenosha, Wis., assignor to Benjamin F. Windsor, Kenosha, Wis. Filed Apr. 9, 1909. Serial No. 488,813.



A wire fabric, comprising strands of wire extending from one end of the fabric to the other in approximately straight parallel lines but having loops bent therein at intervals and extending laterally therefrom alternately in opposite directions, the bends of said looped strands at the point of junction of the loops with the straight portions thereof forming interlocking hooks to prevent the spreading of the loops, and the loops of each strand registering with loops of adjacent strands, and connecting strands of wire extending in approximately the same general direction as the looped strands and inserted through the registering loops to connect the looped strands together.

962,542. PRINTING-MACHINE. EDWARD MILTON WILDEY, Caversham, Dunedin, New Zealand. Filed Nov. 25, 1907. Serial No. 403,636.

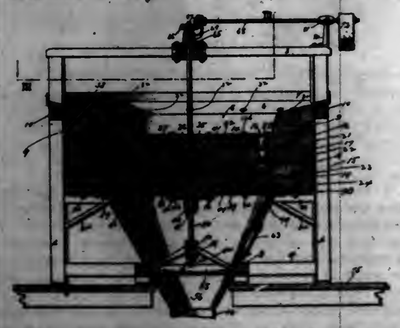


1. In a counter sales check-book machine the combination with guide means for the paper web, of two sets of printing elements for printing the paper web on both sides, means for longitudinally perforating the paper

web to form a number of leaves, a numbering mechanism comprising two sets for numbering the leaves on both sides, cutters, so arranged as to partially transversely cut the paper web at predetermined intervals, leaving the leaves connected by a continuous butt, means for periodically severing said butt, and folding devices for alternately folding the leaves in opposite directions and then transversely folding them zig-zag fashion to bring them into proper sequence.

2. In a counter sales check book machine the combination with guide means for the paper web of two sets of printing elements for printing the paper web on both sides, means for longitudinally perforating the paper web to form a number of leaves, a numbering mechanism comprising two sets for numbering the leaves on both sides, cutters, so arranged as to partially transversely cut the paper web at predetermined intervals, leaving the leaves connected by a continuous butt, means for periodically severing said butt, and folding devices for alternately folding the leaves in opposite directions and then transversely folding them zig-zag fashion to bring them into proper sequence, and means whereby the forward end of each alternate sheet, as the sheets are delivered onto a table, is engaged and guided rearwardly to a gage.

962,543. MILL OR MACHINE FOR GRINDING OR REDUCING ALFALFA TO MEAL. JOHN WYSS, Johnstown, Colo. Filed Nov. 12, 1907. Serial No. 401,881.



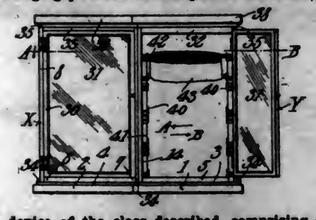
1. The coöperative members one within the other and having their faces divergent upwardly and provided with oppositely arranged teeth in sets, and tapering blanks between the sets of teeth such blanks forming auxiliary hoppers.

2. In a machine of the kind described, the combination of coöperative and correlatively movable reduction-members provided, respectively, with working-faces defining between them a downwardly tapering annular space, and co-acting means upon the respective faces for effecting the reduction specified, said means consisting of correspondingly spaced and horizontally disposed toothed blades, the teeth of each opposing pair of blades diminishing in size from top to bottom of the annular space.

962,544. SHOW-CASE. ALFRED ANDERSON, Royal, Iowa. Filed Mar. 12, 1910. Serial No. 548,835.

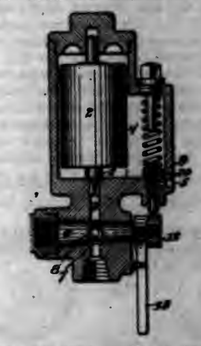
1. A device of the class described comprising cabinets provided with elements adapted to interlock the cabinets for vertical sliding movement; and a closure mounted upon one cabinet and arranged to overhang the top of the other cabinet to lock the cabinets against vertical sliding movement.

2. A device of the class described comprising cabinets provided with elements adapted to interlock the cabinets for vertical sliding movement; and a closure mounted upon one cabinet and arranged to overhang the top of the other cabinet to lock the cabinets against vertical sliding movement; the closure and the cabinet upon which it is mounted, being provided with interlocking elements to permit the closure to slide into and out of its overhanging position with respect to the other cabinet.



3. A device of the class described, comprising cabinets each of which is provided with a base, the base of the one cabinet being arranged to overhang the base of the other cabinet, the cabinets having elements adapted to interlock the cabinets for vertical sliding movement; and a closure mounted upon one cabinet and arranged to overhang the top of the other cabinet, to lock the cabinets against vertical sliding movement; the closure and the cabinet upon which it is mounted, being provided with interlocking elements to permit the closure to slide into and out of its overhanging position with respect to the other cabinet.

962,545. PRESSURE-RETAINING VALVE. HENRY F. BICKEL, New York, N. Y., assignor to New York Air Brake Company, a Corporation of New Jersey. Filed Nov. 9, 1907. Serial No. 401,410.

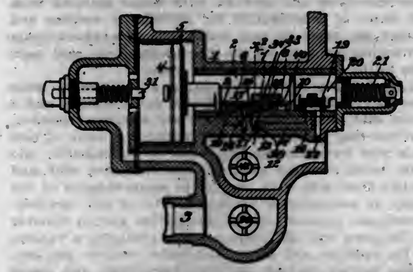


1. A pressure retaining appliance for brake cylinders comprising a controlling valve located in the exhaust passage from said cylinder and adapted to selectively control two outlet ducts, one of said ducts being open; a loaded valve controlling the other duct; and a supplemental, relatively small outlet duct from the brake cylinder also controlled by the operation of said controlling valve.

2. In a pressure retaining device for brake cylinders, a two-way valve adapted in accordance with its position to establish communication between the brake cylinder and the air, or between the brake cylinder and a supplemental duct; a loaded valve controlling said supplemental duct; a chamber beyond said valve provided with two outlets, one of which is relatively small and normally open, and the other relatively large and normally closed; a valve controlling said relatively large outlet; and means operated in conjunction with the two-way valve for opening said relatively large outlet, substantially as described.

962,546. AIR-BRAKE APPARATUS. HENRY F. BICKEL, New York, N. Y., assignor to New York Air Brake Company, a Corporation of New Jersey. Filed June 1, 1908. Serial No. 436,036.

1. In a triple valve for an automatic air brake apparatus, the combination of the main valve governing the exhaust of air from the brake cylinder, and an independently movable exhaust controlling valve and a triple valve piston adapted to actuate both the said valves whereby the exhaust may be caused to take place, through passages of different capacity dependent upon the preponderance of pressure acting upon said triple valve piston, substantially as and for the purpose described.



2. The combination of the main valve and its actuating piston of a triple valve, with an independently movable brake cylinder exhaust controlling valve; and an actuating spring therefor, said controlling valve being adapted to be actuated by the triple valve piston and said actuating spring, substantially as described.

3. In a triple valve for an automatic air brake apparatus, the combination of the main valve and its actuating piston, and an independently movable spring-actuated exhaust controlling valve; of passages communicating with the brake cylinder and controlled by said main and exhaust controlling valves, whereby exhaust passages of different capacity for discharge of air from the brake cylinder are provided, substantially as and for the purpose described.

4. In a triple valve for an automatic air brake apparatus, the combination of the main valve and its actuating piston and an independently movable exhaust controlling valve; of a brake cylinder exhaust and supply passage having port openings in the seat of said main and exhaust controlling valves, said brake cylinder passage comprising a relatively small passage constantly in communication with the port opening into the main valve seat and a relatively large passage controlled by the exhaust controlling valve, said exhaust controlling valve being actuated by a spring and by the triple valve piston, and being moved to close the relatively large passage when the triple valve piston is acted upon by sufficient preponderance of train pipe pressure to overcome the force of said spring, substantially as described.

5. In a triple valve for an automatic air brake apparatus, the combination with the main valve and its actuating piston governing communications between the train pipe, auxiliary reservoir, brake cylinder, and atmosphere; of an independent brake cylinder exhaust controlling valve controlled by said piston which provides a relatively large exhaust passage from the brake cylinder when train pipe pressure preponderates a predetermined amount above auxiliary reservoir pressure; and causes a relatively small exhaust passage only to be afforded when the train pipe pressure preponderates a greater amount, whereby in the release operation the brakes are released less promptly at the head than at the rear portion of a train.

[Claim 6 not printed in the Gazette.]

962,547. AIR-BRAKE APPARATUS. JOHN W. BINGLEY, Watertown, N. Y., assignor to New York Air Brake Company, a Corporation of New Jersey. Filed Nov. 24, 1909. Serial No. 529,726.

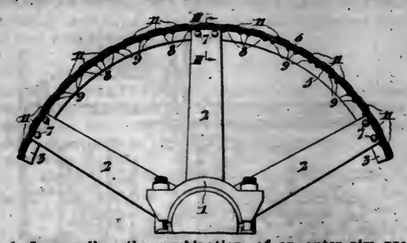
1. The combination of the brake cylinder, triple valve, and auxiliary reservoir of an automatic air brake apparatus, with a valvular appliance comprising a casing containing a chamber having an inlet communicating with the brake cylinder, and an outlet, and relief valve controlling said outlet, and adapted to be opened by predetermined pressure therein; a movable abutment between the inlet and outlet of said chamber; and a valve operated thereby for closing communication between the inlet and outlet; and a passage of relatively small capacity affording communication from one to the other side of said movable abutment, substantially as and for the purpose described.



2. A valvular appliance comprising a chamber having an inlet for fluid under pressure, and an outlet; a relief valve controlling said outlet and adapted to be opened in response to a predetermined pressure in said chamber; a movable abutment in said chamber between the inlet and outlet thereof; a valve operated thereby controlling the passage of fluid from the inlet to the outlet; and a relatively small passage affording communication from the inlet to the outlet past the said movable abutment, substantially as described.

3. A valvular appliance comprising a chamber having an inlet for fluid under pressure, and an outlet; a relief valve controlling said outlet and adapted to be opened in response to a predetermined pressure in said chamber; a movable abutment in said chamber between the inlet and outlet thereof; a valve operated thereby controlling the passage of fluid from the inlet to the outlet; a relatively small passage affording communication from the inlet to the outlet past said movable abutment, said passage being arranged to have its capacity varied by the movement of said movable abutment; and yielding means for impelling said movable abutment toward the inlet of the chamber, substantially as and for the purpose described.

962,548. PULLEY. CHARLES A. BRINLEY, Philadelphia, Pa., assignor to The American Pulley Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 9, 1910. Serial No. 554,311.

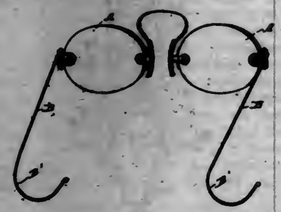


1. In a pulley, the combination, of an outer rim provided with a plurality of openings; inserts arranged in said openings; an inner rim adapted to support the lower ends of said inserts; distance pieces, arranged in proximity to the edges of said openings; and adapted to form abutments for the sides of the inserts; and means for securing the outer and inner rims in the described relation to one another, substantially as set forth.

2. In a pulley, the combination of an outer rim provided with a plurality of openings; inserts arranged in

said openings; an inner rim adapted to support the lower ends of said inserts; distance pieces arranged in proximity to the edges of said openings and adapted to embrace the sides of the insert throughout arcs of relatively considerable extent; and means for securing the outer and inner rims in the described relation to one another, substantially as set forth.

962,549. TEMPLE FOR EYEGLASSES. LEWIS H. BROOME, Jersey City, N. J. Filed Sept. 18, 1909. Serial No. 518,409.



1. A device of the character described comprising a temple having a clamping member adapted to engage the surface of a lens, and having a hook adapted to engage a hole in a lens for the purpose set forth.

2. A device of the character described comprising a temple having a hook adapted to engage a hole in a lens as set forth, a clamping member, and a pin to hold said temple and clamping member together.

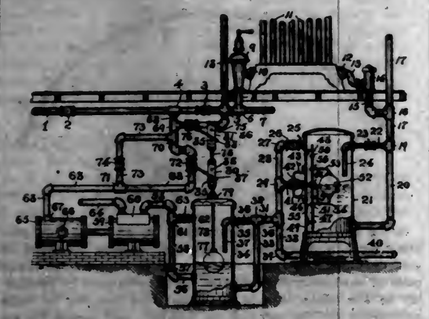
3. A device of the character described comprising a temple having a hook adapted to engage a hole in a lens as set forth, a clamping member and a pin to hold said clamping member in pivotal relation to said temple.

4. A device of the character described comprising a temple having a hook adapted to project through a hole in a lens as set forth, a clamping member presenting clamps the outer ends of which are adapted to contact and being curved to permit the edge of the lens to rest between said clamping members without contact with the face of said lens except where they end substantially as set forth.

5. A device of the character described comprising a temple with one end thereof bent at an angle to the axis of said temple and terminating in a curved hook; and a clamping member connected to said temple at the center of the radius of said hook.

[Claims 6 and 7 not printed in the Gazette.]

962,550. STEAM-HEATING SYSTEM. JOHN COLLIS, Newark, N. J. Filed May 28, 1908. Serial No. 435,466.



1. A heating system comprising a radiator, a main pipe leading to and connected with said radiator, and a pump, said pump having a steam and a suction chamber, a return-riser leading from said radiator, a valve in said main pipe for admitting live steam to the radiator, said valve being normally closed, a pipe connected with and leading from said main pipe to the steam-chamber of the pump, an automatically controlled valve in said last-mentioned pipe, pipe-connections between the suction chamber of the pump and the return-riser for producing a vacuum in the radiator, and instrumentalities located between said pipe-connections and provided with means operated from the water of condensation for periodically opening and closing the valve in said main pipe, and automatically controlling the valve in the pipe leading from said main pipe to the steam-chamber of the pump.

2. A heating system comprising a radiator, a main pipe leading to and connected with said radiator, and a pump, said pump having a steam and a suction chamber, a return-riser leading from said radiator, a valve in said main pipe for admitting live steam to the radiator, said valve being normally closed, a pipe connected with and leading from said main pipe to the steam-chamber of the pump, an automatically controlled valve in said last-mentioned pipe, pipe-connections between the suction chamber of the pump and the return-riser for producing a vacuum in the radiator, and an air and water receiver and condenser located between said pipe-connections, and means connected to said air and water-receiver and condenser and operated from the water of condensation in said receiver and condenser for periodically opening and closing the valve in said main pipe, and automatically controlling the valve in the pipe leading from said main pipe to the steam-chamber of the pump.

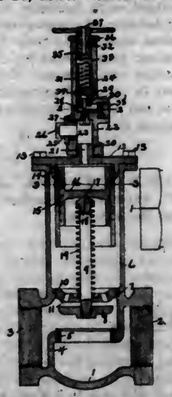
3. A heating system comprising a radiator, a main pipe leading to and connected with said radiator, a return-riser extending from said radiator, and a pump, said pump having a steam chamber and a suction chamber, a pipe between said main pipe and the steam-chamber of the pump, a valve in said pipe, said valve being only partially open so as to admit a limited quantity of steam to the steam-chamber of the pump for slowly operating the same, a by-pass pipe connected with said pipe on opposite sides of said partially closed valve, a normally closed valve in said by-pass pipe, pipe connections between the suction chamber of the pump and the return-riser for producing a vacuum in the radiator, and instrumentalities located between said pipe-connections for automatically controlling the said valve in said by-pass pipe and the operation of the pump by means of the water of condensation.

4. A heating system comprising a radiator, a main pipe leading to and connected with said radiator, a return-riser extending from said radiator and a pump, said pump having a steam chamber and a suction chamber, a pipe between said main pipe, and the steam-chamber of the pump, a valve in said pipe, said valve being only partially open so as to admit a limited quantity of steam to the steam-chamber of the pump for slowly operating the same, a by-pass pipe connected with said pipe on opposite sides of said partially closed valve, a normally closed valve in said by-pass pipe, pipe connections between the suction chamber of the pump and the return-riser for producing a vacuum in the radiator, and instrumentalities located between said pipe-connections for automatically controlling the said valve in said by-pass pipe and the operation of the pump by means of the water of condensation, and also being adapted to act as a sealing means for preventing the escape of any vapor from the return-riser.

5. A heating system comprising a radiator, a main pipe leading to and connected with said radiator, a return-riser extending from said radiator, and a pump, said pump having a steam chamber and a suction chamber, a pipe between said main pipe and the steam-chamber of the pump, a valve in said pipe, said valve being only partially open so as to admit a limited quantity of steam to the steam-chamber of the pump for slowly operating the same, a by-pass pipe connected with said pipe on opposite sides of said partially closed valve, a normally closed valve in said by-pass pipe, a closed tank for receiving water of condensation, said tank being in communication with the discharge end of the return riser and the suction chamber of the pump, a float floating upon the surface of the water of condensation in said tank, and means connected with and operated from said float for opening and closing the normally closed valve in said by-pass pipe, all arranged to exhaust the air from the radiator and withdraw the excess water of condensation from the tank.

[Claims 6 to 26 not printed in the Gazette.]

962,551. RELIEF DEVICE. RUDOLPH CONRADES, Erie, Pa. Filed Dec. 26, 1906. Serial No. 349,519.



1. In a relief device the combination of a controlling valve; a reversible valve chamber in which the valve operates; and mechanism actuated by fluid pressure controlled by said valve and acting in connection with said valve and chamber for abruptly operating said valve when the controlled fluid reaches a predeterimined pressure with the fluid passing through the chamber in one direction and for gradually operating the valve as the pressure of the controlled fluid increases with the fluid passing through the chamber in the reverse direction.

2. In a relief device the combination of a controlling valve; a reversible valve chamber in which the valve operates; and mechanism actuated by fluid pressure, acting as the fluid pressure controlled by said valve varies and acting in connection with said valve and chamber for abruptly closing and opening said valve when the controlled fluid reaches a predetermined pressure with the fluid passing through the chamber in one direction and for gradually operating the valve as the pressure of the controlled fluid increases with the fluid passing through the chamber in the reverse direction.

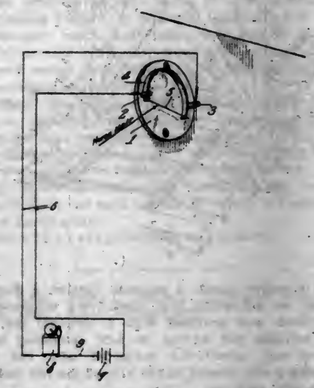
3. In a relief device the combination of a controlling valve a reversible valve chamber in which the valve operates; and mechanism actuated by fluid pressure controlled by said valve and acting in connection with said valve and chamber for abruptly operating said valve and acting in connection with said valve and chamber when the controlled fluid reaches a predetermined pressure with the fluid passing through the chamber in one direction and for gradually operating the valve as the pressure of the controlled fluid increases with the fluid passing through the chamber in the reverse direction.

4. In a relief device the combination of a valve chamber having a fluid passage therethrough and a diaphragm with a valve seat thereon; an inlet and discharge opening at opposite sides of the diaphragm; a valve for opening and closing said passage by movement from and toward said seat; and mechanism actuated by fluid controlled by the valve for operating said valve abruptly at a predetermined pressure of the controlled fluid with the inlet and discharge passages of the chamber arranged to make the direction of the movement of the fluid through the passage in the direction of the movement of the valve and for operating said valve gradually as the controlled pressure increases and the inlet and discharge openings are reversed.

5. In a relief device the combination of a valve chamber having a fluid passage therethrough and a diaphragm, with a valve seat thereon; an inlet and discharge opening at opposite sides of the diaphragm; a valve for opening and closing said passage by movement from and toward said seat; and mechanism actuated by fluid controlled by the valve for operating said valve abruptly at a predetermined pressure of the controlled fluid with the inlet and discharge passages of the chamber arranged to make the direction of the movement of the fluid through the passage in the direction of the movement of the valve and for operating said valve gradually as the controlled pressure increases and the inlet and discharge openings are reversed.

[Claims 6 to 35 not printed in the Gazette.]

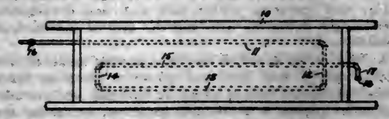
962,552. FIRE-ALARM. MARTIN V. CRAWFORD, Blaine, Wash. Filed Feb. 4, 1909. Serial No. 476,014.



1. A thermo responsive means for fire alarm systems comprising a fixed terminal and an elastic terminal, and a strand of horse hair for holding the elastic terminal away from the fixed terminal against its elastic tendency.

2. A thermo responsive means for fire alarm systems comprising a plane insulating base of refractory material, spaced conducting posts thereon, a conducting strip of elastic material carried by one post and movable by its elastic tendency into contact with the other post in a plane parallel with the face of the base, and a strand of horse hair connecting the ends of the elastic strip and holding it against its elastic tendency out of contact with the post adjacent to its free end.

962,553. APPARATUS FOR DRYING MOLDS. JAMES C. DAVIS, Hinsdale, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Sept. 9, 1907. Serial No. 391,961.



1. The combination of a mold, and a pipe embedded directly in the sand of said mold to which a heating element may be conveyed to heat and dry the sand of the mold, substantially as described.

2. The combination of a cope, a pipe embedded in its sand, a drag, and a pipe embedded in its sand, whereby a heating element may be conveyed to such pipes to heat and dry the sand of the two parts of the mold.

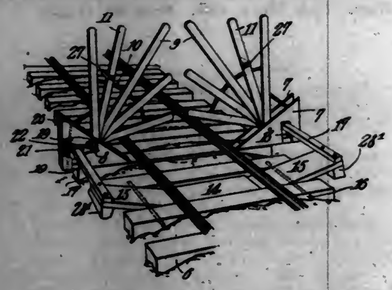
3. The combination of a cope, a pipe embedded in its sand, a drag, a pipe embedded in its sand, means to join together one end of each of said pipes whereby to form a continuous conduit, and means to convey a heating element to said united pipes to heat and dry the sand of the mold, substantially as described.

4. The combination with a mold casing, of a steam pipe carried thereby and extending through the sand therein in such manner as to secure a drying of such sand.

5. The combination with a mold casing, of a steam pipe carried thereby and extending through the sand therein in a series of coils.

[Claim 6 not printed in the Gazette.]

962,554. CATTLE-GUARD. WALLACE E. DEMENT and ALVIN C. CRAWFORD, Blaine, Wash. Filed Oct. 2, 1908. Serial No. 455,886.



1. In a cattle guard, a movable barrier, a depressible platform, an actuating arm operatively connected with the platform and provided with a terminal pin, a vertically movable rod having an arm extending laterally therefrom and operatively connected with the barrier, there being a slot formed in the arm of the rod and adapted to receive said pin.

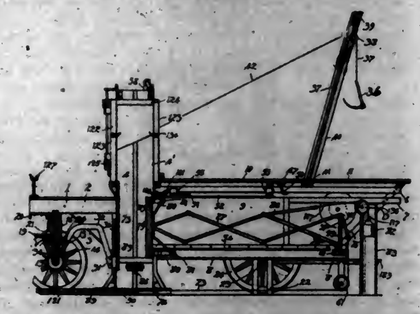
2. In a cattle guard, a casing, a movable barrier mounted within said casing, a depressible platform, an actuating arm operatively connected with the platform, guide brackets arranged within the casing, a vertically movable rod slidably mounted in said brackets and provided with a laterally extending arm having its free end operatively connected with the barrier and provided with an elongated slot, and a pin carried by the free end of the actuating arm and arranged to enter the slot in the arm of the vertically movable rod.

3. In a cattle guard, a casing, a movable barrier arranged within the casing and comprising a plurality of flexibly connected pivotally mounted blades, one of which is provided with spaced segmental plates, a depressible platform, actuating arms operatively connected with the platform, a vertically movable rod slidably mounted within the casing and provided with a laterally extending arm having a slot formed therein and opening through the free end of said arm, a pin connecting the segmental plates and operating within said slot, and a connection between the actuating arm and the arm of the vertically movable rod.

4. In a cattle guard, a casing, a barrier mounted within the casing and including pivotally mounted flexibly connected blades, one of which is provided with terminal segmental plates, a depressible platform, actuating arms operatively connected with the platform, a rod slidably mounted in the casing and having its free end operating between the segmental plates of said blade and provided with an elongated slot, a pin connecting the segmental plates and operating within the slot, there being a second slot formed in said arm in spaced relation to the first mentioned slot, and a pin carried by the actuating arm and operating in the second slot.

5. A cattle guard including spaced casings, barriers arranged within the casings and each comprising a plurality of flexibly connected pivotally united blades, one of the blades of each barrier being provided with terminal segmental plates, a depressible platform, tilting levers having their inner ends extended beneath the platform, actuating arms secured to the outer ends of the levers and having their free ends extending through suitable openings in the adjacent casings, brackets arranged within said casings and provided with alined perforations, rods slidably mounted within the perforations of the brackets and provided with laterally extending arms arranged to operate between the segmental plates of the adjacent barrier blades and having their free ends provided with elongated slots, pins extending through the arms and operating within the adjacent slots, there being a second slot formed in each rod carrying arm, and a pin secured to the free end of each actuating arm and operating within the second slot.

962,555. PORTABLE HAY-PRESS. JAMES M. DOLAN and RICHARD P. AYLWARD, Livermore, Cal. Filed Feb. 20, 1908. Serial No. 416,835.



1. In a portable hay press, the combination, with the front wheels and axle, and the bolster therefor, of the body of the press, said bolster and body being provided with means for interposing a lifting jack therebetween, and means for guiding the body in its vertical movement relative to the bolster, substantially as described.

2. In a portable hay press, the combination, with rear wheels and an axle therefor, of the body of the press, said body and axle being provided with means for interposing lifting jacks therebetween, and means for guiding the rear end of the body in its vertical movement relative to said axle, substantially as described.

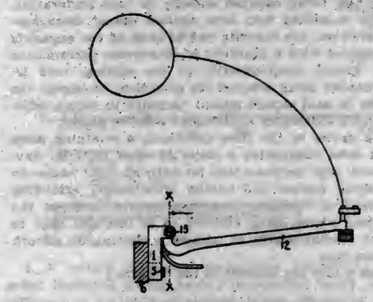
3. In a portable hay press, the combination, with the front wheels and axle and a bolster upon said axle, of the body of the press supported upon said bolster so as to be capable of being raised therefrom, vertical guide bars secured to said body, and links fixedly connected with the bolster and having their rear ends slidably connected with said guide bars, substantially as described.

4. In a portable hay press, the combination, with the front wheels and axle and a bolster upon said axle, of the body of the press supported upon said bolster so as to be capable of being raised therefrom, vertical guide bars secured to said body and links fixedly connected with the bolster and having their rear ends slidably connected with said guide bars, said links being curved upward to permit the front wheels to pass thereunder, substantially as described.

5. In a portable hay press, the combination, with the front wheels and axle, and the bolster upon the axle, of the press body, and a connection between said body and bolster permitting of vertical adjustment therebetween, but preventing horizontal movement of the body relative to the bolster, substantially as described.

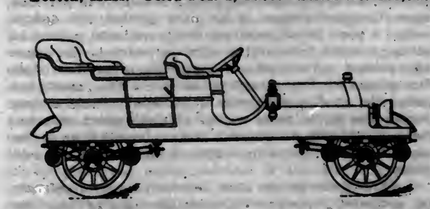
[Claims 6 to 15 not printed in the Gazette.]

962,556. TYPE-WRITING MACHINE. WILLIAM G. DUNHAM, New York, N. Y., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed Feb. 8, 1908. Serial No. 414,971.



In a typewriting machine, the combination of a bifurcated hanger having inwardly extending exteriorly tapered projections, one of said projections having a central plain cylindrical opening, and the other a cylindrical and threaded opening, each arm of the hanger having a depression connected with said opening, the depression in the arm bearing the threaded perforation being conical, a type bar having an eye comprising a central cylindrical portion and conical depressions at each end thereof which match the exterior tapers of the said projections on the hanger arms, the cylindrical portion of the eye of the type bar being of greater diameter than the inner ends of the said tapering projections, and larger in diameter than the cylindrical openings therein, a screw passing through the plain cylindrical portion of one projection and through the cylindrical portion of the type bar and engaging at its threaded end with the threaded cylindrical portion of the other projection, the head of the screw being seated in one of the depressions in one of the arms, and the threaded end of the screw projecting into the conical depression in the other of said arms, and a conical nut having a threaded cylindrical hole engaging the extended end of the said screw and fitting said last mentioned conical depression.

962,557. VEHICLE-SPRING. WILLIAM E. EASTMAN, Boston, Mass. Filed Feb. 1, 1909. Serial No. 475,500.



1. The combination of a spiral and compensating member or extension adapted to support a carriage body elastically, said spiral upheld by the vehicle and said member upheld by the axle and anchored by movable joints, said extension adapted as a lever to compensate the tension of the spiral, means to adjust said spiral to the weight imposed and means to restrict the movement of the axle.

2. The herein described mechanical devices constituting springs for vehicles comprising adjustable rods, sleeves containing said rods, bearings to support said sleeves and permit their horizontal movement, connecting rods and means securing said rods to said sleeves, and spiral springs actuated by said connecting rods to increase and decrease their tensional strength in proportion to the weight to be supported.

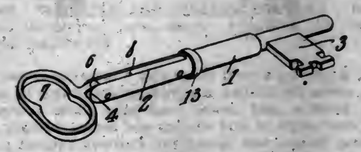
3. Springs for vehicles arranged to operate with a compensating leverage comprising saddles movably pocketing the contiguous ends of the springs, means in said saddles to control said leverage stud blocks anchoring the spiral ends of said springs, vibratory means sustaining said blocks, two-part sleeves confined to move horizontally and adapted to increase or diminish the tension of the springs, means connecting said blocks with said sleeves and means to govern the movement of the sleeves to impart a resisting quality to said springs additional to their normal capacity to uphold.

4. An elastic support for vehicles combining a vertical and a lateral sustaining power to the carriage body comprising adjusting rods having adjacent to their outer ends a reëntering slot, sleeves enveloping said rods and provided with a corresponding slot, fixed brackets supporting said sleeves and provided with co-acting means to permit the longitudinal movement of the sleeves and to restrict the rotation of said rods, in combination with springs having a spiral at one end, terminating in extensions vibratory means suspending said spirals from the vehicle, bifurcated rods connecting said springs with the sleeves and means supporting the extensions of the said springs contiguous to the axle casings.

5. Springs for carriages combining an elastic support and a compensating lever, vibratory means for their attachment to the carriage, sleeves surrounding the axles and provided with means loosely supporting said springs thereto, rods governing the tension of said springs, means to actuate said rods, and means communicating from the carriage body to the axle sleeves to reduce the motion of the axles horisontally.

[Claims 6 to 10 not printed in the Gazette.]

962,558. KEY. FRED C. ECKERT, Waukesha, Wis. Filed July 8, 1909. Serial No. 506,519.



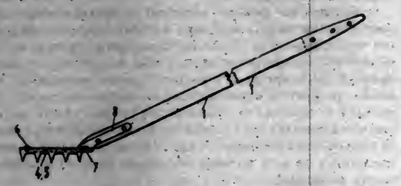
1. A key including a shank, a guard pivotally connected thereto and adapted to swing laterally therebeyond, and means pivotally connected to the shank and movable laterally there-beyond for shifting the guard into position to hold the shank against rotation within a lock, both the guard and its actuating means being movable in a plane extending longitudinally of the shank.

2. A key including a slotted shank having a ward extending therefrom, a guard strip pivotally connected to the shank and normally housed within the slot, and means pivotally connected to the shank for shifting the guard strip beyond the shank to hold said shank against rotation within a lock.

3. A key including a longitudinally slotted shank having a ward extending therefrom, a guard strip pivotally mounted within the slot and normally housed therein, an eye pivotally connected to the shank and having a stem projecting into the slot, said stem engaging the guard and constituting means for shifting the guard out of the slot to hold the shank against rotation within a lock.

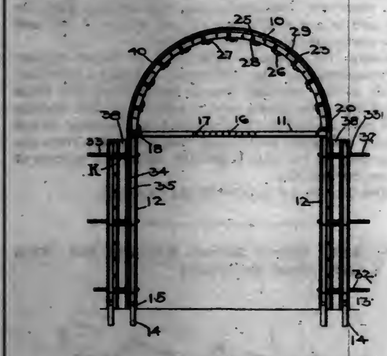
4. A key including a shank, a holding member pivotally mounted therein, said member having a tongue extending therefrom, there being a socket within the member and adjacent the tongue, and a stem pivotally connected to the shank and movably mounted upon the tongue and within the socket, said stem operating to shift the holding member into and out of the shank.

962,559. GARDEN-RAKE. AXEL EMIL ENGSTRÖM, Huskvarna, Sweden. Filed Jan. 25, 1910. Serial No. 540,038.



In a garden rake, the combination of two handles, connected together at their extremities, and a rake head, consisting of two sections hinged to each other and also each hinged to one of the handles.

962,560. SECTIONAL MOLD FOR CONCRETE CONSTRUCTION. FRANK S. FARRAR, Lyndon, Kans. Filed Sept. 14, 1908. Serial No. 453,045.



1. A side for a mold comprising a plurality of sections, and means for holding said sections detachably in operative position, said means comprising plates carried at the inner edges of said sections and having laterally projecting flanges, and spaced bar members adapted to coengage with the flanges of adjacent sections and means for clamping said bars adjustably on said flanges.

2. In an article of the class described, an arch support comprising a plurality of link members, said link members comprising a body portion longitudinally arcuate, an integral concentrically perforated ear projecting from one end thereof, spaced concentrically perforated ears projecting from the opposite end and adapted for engagement over the single ear of a like member, the end faces of the sections being beveled inwardly from the ears, and means for adjusting the relative angles of coengaged sections.

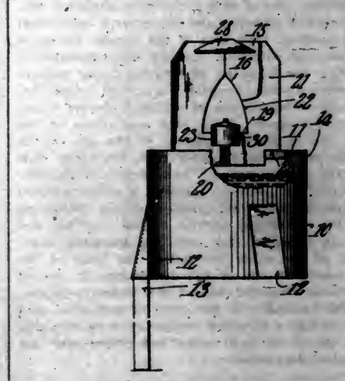
3. In an article of the class described an arch support comprising a plurality of sections, said sections each comprising a cast arcuate body portion, an integral concentrically perforated ear projecting from one end of each section, spaced concentrically perforated ears projecting from the opposite ends, and coengaged pivotally with the single ears of an adjacent section, said sections having lug portions at their ends projecting laterally in the plane of their arc and being beveled inwardly from the ears, and means coengaged between adjacent ends of the sections for adjusting their relative angles.

4. In an article of the class described an arch support comprising a plurality of sections, said sections each comprising a cast arcuate body portion, an integral concentrically perforated ear projecting from one end of each section, spaced concentrically perforated ears projecting from the opposite ends, and coengaged pivotally with the single ears, said sections having lugs at their ends projecting laterally in the plane of their arc and being beveled inwardly from the ears, each of said sections having a transverse perforation at one end outwardly of the ears, a U-shaped member provided with a long and a short arm, the long arm being engaged slidably in said perforation, means for retaining said arm against casual disengagement therefrom, the opposite end of each of the segments being provided with a plurality of transverse perforations variably spaced longitudinally of the section, said U-shaped member being adapted for movement to engage the short arm in said second named openings to secure adjacent sections adjustably at different relative angles.

5. In a device of the class described, a retaining plate for mold sides comprising a blank of sheet material having opposite edge portions bent laterally at right angles to form spacing flanges and having transversely extending ribs formed of L-shaped members secured between the flanges, said plates being adapted to be disposed edge to edge with similar plates to present a continuous smooth inner mold face.

[Claims 6 to 8 not printed in the Gazette.]

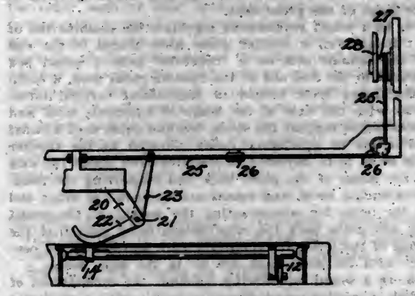
962,561. INSECT-DESTROYER. IRA P. FARRINGTON, Trinidad, Colo. Filed Apr. 6, 1910. Serial No. 553,692.



1. In a device of the class described, a container having a flange, a plate having notches engaging with the flange and formed in its upper edge with a notch and provided upon its opposite faces at its lower portion with spaced strips, a plate fitted upon the first mentioned plate and having a notch interlocking with the notch in the upper edge thereof and slotted and having the edges of its slots fitting between the spaced strips of the first mentioned plate, the said plates being thus held in intersecting planes, the plates being formed at their points of intersection each with an opening, and an illuminating device supported upon the lower edges of the openings in said plates.

2. In a device of the class described, a container having a flange, a plate having notches engaging with the flange and formed in its upper edge with a notch and provided upon its opposite faces at its lower portion with spaced strips, a plate fitted upon the first mentioned plate and having a notch interlocking with the notch in the upper edge thereof and slotted and having the edges of its slot fitting between the spaced strips of the first mentioned plate, the said plates being thus held in intersecting planes, the plates being formed at their points of intersection each with an opening, and an illuminating device supported upon the lower edges of the openings in said plates, and a cap member slotted to engage with the upper edges of the plates and hold the same properly relatively positioned.

962,562. SWITCH-OPERATING MECHANISM. GEORGE FLESSA, Rawhide, Nev. Filed Aug. 31, 1909. Serial No. 515,895.



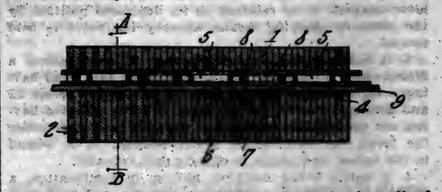
1. A switch operating mechanism comprising switch point throwing means having depressible heads arranged adjacent to the rails of a track, a car, depending hangers secured to the bottom of the car at either side thereof, arms pivotally supported by the hangers, each of said arms including a horizontal arcuate portion, the arcuate portions of said arms being normally disposed above the level of and in line with the depressible heads, a cable slidably circulated upon the car, connections between said arms and the cable to depress one or the other of the arms respectively into engagement with the adjacent head to open or close the switch upon movement of the cable in opposite directions, and means for moving the cable in either direction.

2. A switch operating mechanism comprising switch point throwing means having depressible heads arranged adjacent to the rails of a track, depending arms pivotally mounted beneath a car, said arms having a horizontally and vertically extending portion, the outer end of the horizontal portions being curved and disposed immediately above the surface of the rails, pulleys arranged in spaced relation upon the bottom of the car, a cable arranged upon said pulleys, said cable converging to the center of the car at its forward end and passing around pulleys arranged thereat, said cable extending over a cylindrical hub rotatably mounted, an operating handle connected to the hub to rotate the same and move the cable, the upper extremities of the pivoted arms being connected to the cable and adapted to be separately moved into engagement with the depressible heads to open or close the switch.

3. A switch operating mechanism comprising switch point throwing means having depressible heads arranged adjacent to the rails of a track, hangers secured to opposite sides of a car, operating arms pivoted upon a transversely disposed shaft, the ends of said shaft being positioned in the hangers, said arms extending rearwardly and horizontally from the shaft and vertically above the same, a cable connected to the upper ends of the arms said cable being disposed upon a plurality of pulleys arranged on the bottom of the car, the forward portion of the cable converging inwardly and extending around vertically positioned pulleys secured to the car, said cable extending over a cylindrical hub, an operating handle secured to the hub and movable in opposite directions to move the cable, the movement of said cable being adapted to lower one of the operating arms into engagement with the depressible head to operate the switch points.

962,563. BELT. JACKSON W. FOSTER and ALBERT A. STODDARD, Jacksonville, Fla. Filed Feb. 19, 1910. Serial No. 544,311.

1. A belt consisting of resilient blocks having alined openings defining a longitudinal chamber in the belt; a flexible member located in the chamber and constituting a means for securing the blocks together; and a packing strip located in the chamber between the flexible member and the inner area of the belt, and upon which the flexible member is adapted to rest.

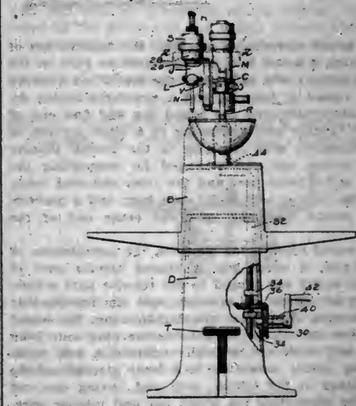


2. A belt consisting of resilient blocks having alined openings defining a longitudinal chamber in the belt; a flexible member located in the chamber and constituting a means for securing the blocks together; and a resilient strip located within the chamber and normally compressed by the flexible member to hold the flexible member against the wall of the chamber.

3. A belt consisting of a series of resilient blocks having alined openings defining a longitudinal chamber in the belt; spaced, closed links disposed within the chamber parallel to the inner area of the belt; flat strips disposed parallel to the inner area of the belt and having their ends fashioned into hooks to engage adjacent links to form a block-securing chain; and a packing strip located in the chamber between the securing chain and the inner area of the belt, and upon which the securing chain is adapted to rest.

4. A belt consisting of a series of resilient blocks having alined openings defining a longitudinal chamber in the belt; spaced, closed links disposed within the chamber parallel to the inner area of the belt; flat strips disposed parallel to the inner area of the belt and having their ends fashioned into hooks to engage adjacent links to form a block-securing chain; and a resilient strip located in the chamber and normally compressed by the hooks to hold the hooks against the wall of the chamber.

962,564. MACHINE FOR FILLING BOTTLES. BERNARD GALLAGHER, Lynn, Mass. Filed Jan. 19, 1910. Serial No. 538,886.



1. A bottle filling machine, having, in combination, a filling head, filling and snifting valves for said head, each having valve stems, a pair of levers pivoted between said valve stems and arranged to extend over the stems, and means for applying pressure to said levers independently whereby the stems are successively depressed and the valves operated.

2. A bottle filling machine, having, in combination, a filling head, a valve for supplying fluid to said head, having a valve stem, a lever fulcrumed at one side of and ex-

tending over said stem, means for applying pressure to said lever to depress the stem and open the valve, the lever adapted to be retained in its depressed position by the pressure applying means whereby the valve is held opened.

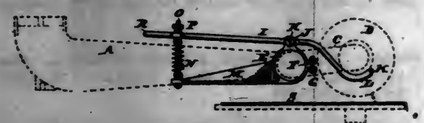
3. A bottle filling machine, having, in combination, a filling head, a valve for supplying fluid to said head having a valve stem, a pivoted lever 18 having the recess 22 and arranged to bear on the stem, a valve actuator having an anti-friction device for engaging and depressing the lever, the anti-friction device adapted to be seated in the recess, and means to operate said actuator.

4. A bottle filling machine, having, in combination, a filling head, filling and snifting valves for said head each having valve stems, a valve actuating device arranged to travel in a single plane above said stems in a curved path, a pair of levers hinged between said stems to extend thereover and curved to form a track to receive the valve actuating device, and means to operate the actuating device.

5. A bottle filling machine, having, in combination, a filling head, filling and snifting valves for said head each having valve stems, a valve actuating device arranged to travel in a single plane above said stems in a curved path, a pair of levers hinged between said stems and extending thereover in the path of movement of the device each having a recess over its respective stem and forming between them a third recess for the reception of the actuating device whereby a valve is opened when the device rests in either of the first named recesses but both valves remain closed when the device rests in the last named recesses, and means to operate the actuating device.

[Claims 6 and 7 not printed in the Gazette.]

962,565. SOUND-REPRODUCING MACHINE. LOUIS JAY GERSON, Philadelphia, Pa. Filed Nov. 20, 1908. Serial No. 463,718.



1. In a sound reproducing machine, the combination of a tubular arm, a sound box, a hinged tubular part on the end of the tubular arm to support the sound box whereby it may be raised or lowered, and a counterbalancing device for counterbalancing the sound box and free end of the hinged tubular part consisting of a lever pivoted in vertical alinement with the axis of the hinged tubular part and having one end arranged for supporting the sound box and tubular part and the other end bent laterally over the tubular arm to act as a stop, and a counterbalancing means operating upon the other end of the lever.

2. In a sound reproducing machine, the combination of a tubular arm, a sound box, a hinged tubular part to support the sound box hinged to the tubular part whereby it may be raised or lowered, and an independent counterbalancing device for counterbalancing the sound box and free end of the hinged tubular part and from which the said parts are vertically adjustable, said counterbalancing device consisting of a lever pivoted axially with the hinge of the tubular part and having one end arranged for supporting the sound box and tubular part, and a counterbalancing means operating upon the other end of the lever.

3. In a sound reproducing machine, the combination of a tubular arm having a transverse tubular end, a tubular goose neck hinged to the tubular end of the tubular arm, a sound box secured to the free end of the tubular goose neck, and counterbalancing devices carried by the tubular arm and operating to support the sound box and goose neck against the action of gravity consisting of a counterbalancing lever adjustably hinged to the transverse tubular end of the tubular arm and having a connection with the sound box and goose neck the construction being such that it is adjustable circumferentially about the axis of the hinge of the goose neck.

4. In a sound reproducing machine, the combination of a tubular arm, a tubular goose neck hinged to the end of the tubular arm on a transverse axis, a sound box secured to the free end of the tubular goose neck, a counterbalancing lever hinged in substantial vertical alinement with the axis of the hinge of the goose neck and operating to support the sound box and goose neck against the action of gravity, a collar clamped to the tubular arm so as to be adjusted circumferentially about the axis of the hinge of the goose neck and supporting the counterbalancing lever, and means acting upon the other end of the lever for counteracting the weight of the sound box and goose neck the construction being such that the hinge of the lever, the counterbalance means and the contact with the goose neck are all in the same plane.

5. In a sound reproducing machine, the combination of a disk, a tubular sound conveying part having a relatively fixed distance above the disk, a second tubular sound conveying part hinged to the first mentioned tubular part, a sound box secured to the free end of the second tubular part, and a counterbalancing device carried by the first mentioned tubular sound conveying part and acting to counterbalance the weight of the second tubular part and its sound box consisting of a lever hinged in vertical alinement with the hinge joint of the second tubular part and having one end arranged to support the sound box and said second tubular part, and counterbalancing means consisting of a spring and devices to adjust its tension carried on the first mentioned tubular part to operate the lever.

[Claim 6 not printed in the Gazette.]

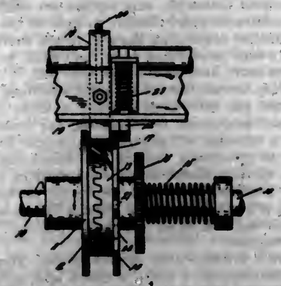
962,566. CLAMPING DEVICE. FRANK GERTH, Chicago, Ill., assignor of one-half to Peter H. Wickord, Chicago, Ill. Filed Nov. 5, 1909. Serial No. 526,363.



1. A clamping device of the character described, comprising in combination a pair of substantially semi-cylindric clamp-members hinged together at one of their respective longitudinal edges and provided at their opposite longitudinal edges with pivot lugs and abutment lugs, respectively, a plurality of links pivoted at one end to said pivot lugs, a corresponding plurality of locking levers pivoted to the other ends of said links and provided with hooked inner ends adapted to engage the outer ends of said abutment lugs to maintain the clamp in partly expanded condition and to fulcrum upon said abutment lugs to effect the closing of the clamp, a cross-bar rigidly connecting said locking levers and coöperating with said links to form a stop to limit the backward swing of said locking levers, and an operating handle rigid with said cross-bar, substantially as described.

2. A clamping device of the character described, comprising in combination a pair of substantially semi-cylindric clamp-members hinged together at one of their respective longitudinal edges and provided at their opposite longitudinal edges with pivot lugs and abutment lugs, respectively, said abutment lugs having concave outer faces, a plurality of links pivoted at one end to said pivot lugs, a corresponding plurality of locking levers pivoted to the other ends of said links, said locking levers being formed with rounded inner ends adapted to slidingly fulcrum upon the concave faces of said abutment lugs to effect the closing movement of the clamp, and with hooks adapted to engage the outer ends of said abutment lugs to maintain the clamp in a partly expanded condition, a cross-bar rigidly connecting the outer ends of said locking levers and coöperating with the outer edges of said links to form a stop to limit the backward swing of said locking levers, and an operating handle rigid with said cross-bar, substantially as described.

962,567. CLUTCH. HARRY A. HANCOCK, Indianapolis, Ind., assignor to The Brown Straw Binder Company, Indianapolis, Ind., a Corporation of Indiana. Filed Sept. 27, 1909. Serial No. 519,759.



1. The combination, with a pair of rotatable interengaging clutch members, a separating cam carried by one of said members, and an abutment movable into and out of the line of movement of said separating cam, of independent means for engaging the cam carrying clutch member and partially rotating the same at about the time of separation of the interengaging portions of the clutch members.

2. The combination, with a pair of rotatable interengaging clutch members, a separating cam carried by one of said members, and an abutment movable into and out of the line of movement of said separating cam, of a spring plunger, and a cam shoulder carried by the driven clutch member in position to be engaged by said spring plunger to partially rotate the driven clutch member.

962,568. BINDER. LOUIS E. HELLER, New York, N. Y. Filed Sept. 27, 1909. Serial No. 519,825.

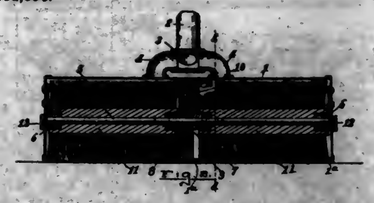


1. In a device of the class described, a casing, a locking member slidably arranged within said casing, a coiled spring interposed between one end of said locking member and a bar located near the end of said casing, a member provided with a reduced portion extending within said casing, a screw adapted to pass through the central portion of said member and engage said sliding member, the member which extends within the casing being provided with a recessed portion to accommodate a member for rotating said screw, and a plate partially covering said recessed portion.

2. In a device of the class described, a casing, a locking member slidably mounted in said casing, a bar extending transversely of said casing at a point near one end thereof, a spring interposed between said bar and said locking member, a hollow member provided with a reduced portion adapted to extend within said casing, a screw adapted to pass through the central portion of said hollow member and engage the locking member, said hollow member being provided with a cut-away portion, and a plate adapted to partially cover said cut-away portion.

3. In a device of the class described, a casing, a spring pressed locking member slidably held within said casing, a hollow member having a portion extending within said casing, means carried by said hollow member for actuating said locking member, and a key supporting device secured to said hollow member.

962,569. PNEUMATIC CLEANER. FREDERICK H. HIRTH, Grand Rapids, Mich. Filed Dec. 4, 1909. Serial No. 531,396.



1. A pneumatic cleaner comprising a cylindrical case having a longitudinal bottom opening, a rotative shaft along the axis of the case, end hangers and a middle hanger in all of which the shaft is journaled, a brush fixed on the shaft, said brush being divided and spaced apart at the middle, an internally geared driving wheel journaled on the shaft and projecting through said opening, a pinion fixed on the shaft, an idler mounted on the middle hanger and connecting the driving wheel and pinion.

2. A pneumatic cleaner comprising a cylindrical case having a longitudinal bottom opening, a rotative shaft along the axis of the case, end hangers and a middle hanger each having a laterally projecting bearing in which hangers the shaft is journaled, a brush fixed on the shaft, said brush being divided and spaced apart at the middle and extending close to the case at the ends, and also recessed at the ends and at the middle to receive the bearings and hub an internally geared driving wheel journaled on the shaft near the middle hanger and having a hub projecting oppositely to the bearing of said hanger, a pinion fixed on the shaft, an idler mounted on the middle hanger and connecting the driving wheel and pinion.

962,570. SINK-STOPPLE. MILTON S. HUFSCHMIDT, San Francisco, Cal. Filed Nov. 16, 1909. Serial No. 528,403.

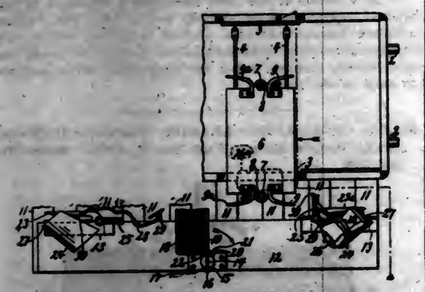


A sink-stopple comprising a rubber disk having a concentrically arranged and thin annular portion alternating with a central portion and a marginal portion of less elasticity, and a relatively thin rim united to the said marginal portion of the body by a web.

962,571. MAIL CATCHING AND DELIVERING DEVICE. ALBERT J. HUGHES, St. Paul, Minn. Filed Jan. 11, 1909. Serial No. 471,607.

1. A mail-catcher comprising a table adapted to be projected from the door opening of a mail car, a clasp pivoted to swing horizontally upon the projected end of the table, two oppositely pointing horizontal catcher arms carried by the car, two stands on the ground near the car track, on each stand a clasp pivoted to swing horizontally thereon and adjacent thereto a support for a mail bag, a horizontal catcher arm on each stand, each arm pointing in oppo-

site direction and away from the other arm, two straps, each of which is adapted to be taken around a mail bag and having at each end a ring, the ring at one end being adapted to pass through the ring at the other end, all to be operated substantially as set forth.



2. A mail-catcher comprising a table adapted to be projected from the door opening of a mail car, a clasp pivoted to swing horizontally upon the projected end of the table, two oppositely pointing horizontal catcher arms carried by the car, two stands on the ground near the car track, on each stand a clasp pivoted to swing horizontally thereon and adjacent thereto a support for a mail bag, a horizontal catcher arm on each stand, each arm pointing in opposite direction and away from the other arm, two straps, each of which is adapted to be taken around a mail bag and having at each end a ring, the ring at one end being adapted to pass through the ring at the other end, a round standard fixed intermediate of the stands, a post turning on the standard, a framed net projecting from one side of the post and means on the post for holding the net in oppositely inclined positions, all to be operated as described.

3. A mail-catcher comprising a table adapted to be projected from the door opening of a mail car, a clasp pivoted to swing horizontally upon the projected end of the table, two oppositely pointing horizontal catcher arms carried by the car, two stands on the ground near the car-track, on each stand a clasp pivoted to swing horizontally thereon and adjacent thereto a support for a mail bag, a horizontal catcher arm on each stand, each arm pointing in opposite direction and away from the other arm, two straps, each of which is adapted to be taken around a mail bag and having at each end a ring, the ring at one end being adapted to pass through the ring at the other end, said table being slidably mounted in the car and so related to the catcher arms as to cause them to project into active position beyond the side of the car when the table is projected out of the car door to support the mail bag to be delivered from the car.

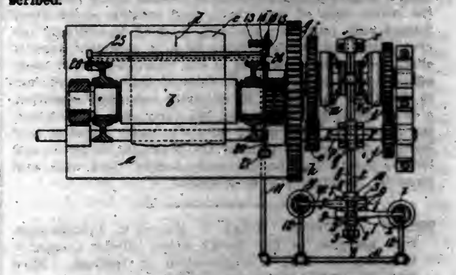
4. The combination with a mail car, of one or more tables adapted to be projected out of the open doors of the car, of rail bars fixed to the car and bearings slidable thereon and fixed to the under side of the table.

5. The combination with a mail car, of one or more tables adapted to be projected out of the open doors of the car, of rail bars fixed to the car and bearings slidable thereon and fixed to the under side of the table, the bearing on one rail being detachable from the rail when the table is retracted into the car, the bearings on the other rail serving as hinges on which to swing the table to an edgewise standing position in the car.

[Claims 6 to 8 not printed in the Gazette.]

962,572. SAFETY DEVICE FOR CALENDER-ROLLS. WILLIAM JAMESON, Chicopee Falls, Mass., assignor to The Fisk Rubber Company, Chicopee Falls, Mass., a Corporation. Filed May 8, 1909. Serial No. 494,772.

1. In a stop mechanism for calender rolls, in combination, a line-shaft, a clutch mechanism therefor, fluid pressure mechanism for operating the clutch mechanism, said fluid pressure mechanism including a cylinder, a piston therein, and a pawl and ratchet connection between the piston and said clutch mechanism, substantially as described.



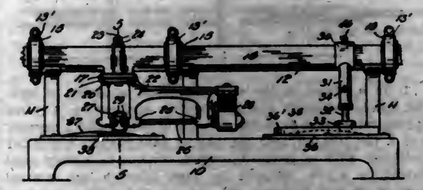
2. In a stop mechanism, a shaft, fluid pressure mechanism associated therewith, said mechanism comprising a cylinder, a piston in said cylinder, an arm on the shaft, a ratchet device for connecting the arm to the shaft, whereby the shaft may be operated from the piston, or the piston from the shaft, substantially as described.

3. In a stop mechanism for calender machines, in combination with the drive-shaft thereof, a brake device, a fluid pressure mechanism for operating the brake device, comprising a cylinder, a piston therein, a pipe connection leading to the cylinder, a valve in said connection, means, including a spring-actuated arm for maintaining the valve in a closed position, and a trip device for releasing said arm, said trip device including a lever, a lug on said lever for retaining said arm in an inoperative position, substantially as described.

4. In a fluid pressure stop mechanism for calender machines, in combination, a shaft, a clutch and brake device therefor, a shipper shaft, a collar thereon and movable therewith, an arm mounted on the collar, and ratchet devices on the arm for engaging the collar, a cylinder, a piston therein, a connection between the piston and arm, whereby when a fluid under pressure is supplied to the cylinder, the clutch and brake devices will be operated, substantially as described.

5. In a stop device for calender machines, in combination, a valve controlling bar extending across the feed side of the machine, a clutch device for stopping the machine, and an elastic fluid pressure mechanism located between the clutch device and said bar, and an operating handle connected to said bar and extending to the rear side of the machine, whereby the clutch device may be operated from either side of the machine, substantially as described.

962,573. DUPLICATE-SHAPING MACHINE. OLAUS JENSEN, Seattle, Wash. Filed Aug. 20, 1909. Serial No. 513,727.



1. In a shaper of the class described, a longitudinally movable and rotatable bar, a frame connected for rotation to the bar, a cutter carried by the frame, means supported by the frame for rotating the cutter, a pattern, and devices coöperating with the pattern for directing the movements of the bar whereby the cutter will be affected to afford a duplication of the pattern upon a blank.

2. In a shaper of the class described, the combination with the machine frame, a vertically swingable frame, supported by the machine frame, a bar carried by the second named frame and arranged for both rotary and sliding movements, a pattern secured to the machine frame, means for securing the blank work to the machine frame, a cutter, a cutter suspension means depending from the bar, means carried by the suspension means for imparting rotary motion to the cutter, and a guide carried by the bar and adapted to coact with the pattern to direct the movements of the bar and second named frame so that said cutter will partake of movements suitable to form the blank into an exact resemblance to the pattern.

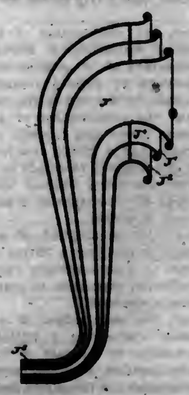
3. In a shaper of the class described, the combination of the machine frame, another frame, a bar carried by the second named frame and arranged for both rotary and longitudinal movements therein, a third frame suspended from said bar and arranged for rotation about the axis of the suspending element, an arbor journaled in the last mentioned frame, and perpendicular with respect to the axis of rotation of such frame, power devices for driving the arbor, a guide carried by said bar, a pattern and means for detachably securing a blank to the machine frame.

4. In a shaper of the class described, the combination of the machine frame, a second frame connected for oscillatory movement with the machine frame, a bar carried by the second named frame and arranged for both rotary and longitudinal movements therein, a third frame suspended from said bar and arranged for rotation about the axis of the suspending element, an arbor journaled in the last mentioned frame, and perpendicular with respect to the axis of rotation of such frame, power devices for driving the arbor, a guide carried by said bar, a pattern, and means for securing a blank to the machine frame.

5. In a shaper of the class described, the combination of the machine frame, a horizontal shaft journaled therein, a frame mounted for vertical oscillation upon the shaft, a bar carried by the second named frame and arranged for both rotary and longitudinal movements therein, a third frame suspended from said bar and arranged for rotation about the axis of the suspending element, anti-friction bearings intermediate the third frame and said bar, an arbor journaled in the last named frame and perpendicular with respect to the axis of rotation of such frame, power devices for driving the arbor, a guide carried by said bar, a pattern, and means for securing a blank to the machine frame.

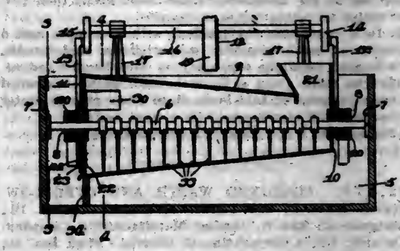
[Claims 6 to 8 not printed in the Gazette.]

962,574. SOUND-HORN. ADOLPH G. KAUFMAN, New York, N. Y., assignor to American Callaphone Company, New York, N. Y., a Corporation of Georgia. Filed Feb. 26, 1907. Serial No. 359,470.



A sound horn comprising a plurality of nested tubular elements, the wide end of the inner element projecting forward of the element surrounding it.

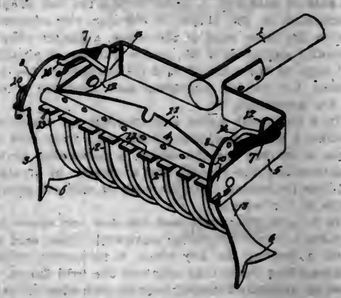
962,575. ORE SEPARATING OR CONCENTRATING MACHINE. WALTER R. LINS, Philadelphia, Pa. Filed Feb. 13, 1909. Serial No. 477,638.



1. In a machine of the character described, the combination of a support; a drum provided with side walls, a downwardly inclined bottom portion and a transverse end wall at the lower end of said bottom portion, said side walls having normally unobstructed openings therein above said bottom portion and below the top of the drum, said drum having a space extending from end to end thereof to be occupied by material resting directly on said bottom portion, and said end wall having a discharge opening therein below the first named openings; and means for rocking the drum laterally.

2. In a machine of the character described, the combination of a support; a fixed shaft; a drum mounted on said shaft and provided with side walls, a downwardly inclined bottom portion and a transverse end wall at the lower end of said bottom portion, said side walls having normally unobstructed openings therein above said bottom portion and below the top of the drum, said drum having a space extending from end to end thereof to be occupied by material resting directly on said bottom portion, and said end wall having a discharge opening therein below the first named opening; means for rocking the drum laterally; and arms projecting downwardly from said shaft within the drum to a position adjacent the bottom portion thereof.

962,576. RAKE. JOHN B. MENZL, Dayton, Ohio. Filed Jan. 14, 1910. Serial No. 538,130.



1. In a rake, the combination, with a handle, and a plurality of teeth, of a clearer, and means controlled by said handle for positively actuating said clearer.

2. In a rake, the combination, with a handle, and a plurality of teeth, of a clearer, means for retaining said clearer normally near the upper ends of said teeth, and means controlled by said handle for positively actuating said clearer.

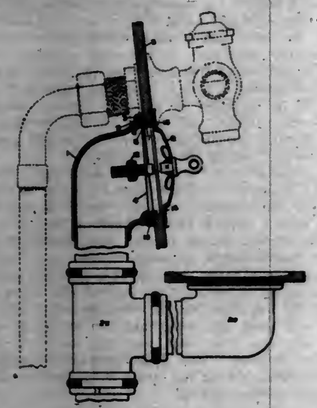
3. In a rake, the combination, with a handle and a plurality of teeth, of a clearer supported normally near the upper ends of said teeth, and means actuated by a thrust on said handle for moving said clearer along said teeth.

4. In a rake, the combination, with a handle, and a plurality of teeth pivotally supported on said handle, of a clearer arranged to move along said teeth, and means controlled by the movement of said teeth about their pivotal center for actuating said clearer.

5. In a rake, the combination, with a handle, and a plurality of teeth pivotally supported on said handle, of a clearer pivotally supported on said handle and arranged to move along said teeth, and means controlled by the movement of said teeth about their pivotal center for moving said clearer about its pivotal center.

[Claims 6 to 9 not printed in the Gazette.]

962,577. COMBINED WASTE AND OVERFLOW. HENRY MUELLER and PHILIP MUELLER, Decatur, Ill., assignors to The H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Jan. 30, 1909. Serial No. 475,155.



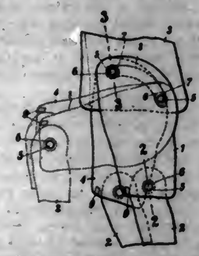
1. In a combined waste and overflow, the combination of an elbow having an intake for connecting with the outflow aperture in the tub, a flange thereon to engage the outer side of said tub, a grate within the tub adapted to be connected to the elbow, a circular rib adjacent the flange on the inner edge of the elbow, a gasket adapted to frictionally engage said rib, and a number of straight integral lugs on the edge of said rib parallel to the axis of the same for quickly engaging said aperture when the parts are assembled.

2. In a combined waste and overflow an elbow having an intake, a flange projecting outwardly from said intake to form a bearing for the elbow, a forwardly projecting rib surrounding the intake, and a number of straight integral lugs projecting from the edge of said rib parallel to the axis of the intake.

3. In a combined waste and overflow, an elbow having an intake, a flange projecting outwardly from said intake to form a bearing for the elbow, a forwardly projecting rib surrounding the intake adjacent the said flange, and a number of straight integral lugs on the edge of said rib parallel to the axis of the intake, said lugs having notches on their inner side at the junction of the lugs with the rib.

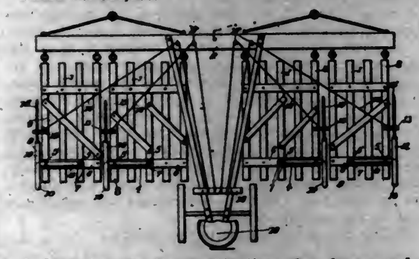
4. In a combined waste and overflow, the combination of an elbow having an intake for connecting with the outflow aperture in the tub, a flange thereon to engage the outer side of said tub, a grate within the tub adapted to be connected to the elbow, a circular rib adjacent the flange on the inner edge of the elbow, a gasket adapted to frictionally engage said rib, and a number of straight integral lugs, said lugs having notches formed on their inner faces at the junction of the lugs with said rib to permit said lugs to be broken off when necessary.

962,578. FLAT TOY FIGURE. GERHARD NOACK, Berlin, Germany, assignor to The Firm of Martin Schlesinger, Berlin, Germany, a Corporation of Germany. Filed Dec. 28, 1909. Serial No. 535,849.



A joint for flat movable figures comprising a body member and a limb member, one of which is provided with an elongated curved slot, while the other, which covers and conceals said slot in the normal position of the parts, is provided with a pivot extending through said slot and movable lengthwise thereof for the purpose of permitting the figure to assume a natural position whatever the relative position of said members may be.

962,579. CLEANING ATTACHMENT FOR HARROWS. ARVID J. OLSON, Kloten, N. D. Filed July 13, 1909. Serial No. 507,407.



1. In a harrow, the combination of a frame, and a cleaning attachment of the character described embodying a lifting arm pivotally connected at one end to the frame to rotate in a substantially vertical plane, the arm being formed in proximity to said end with an elbow for the purpose specified, and a trip device for controlling the arm.

2. In a harrow, the combination of a frame, and a cleaning attachment embodying a lifting arm doubled upon itself intermediate of its ends to form a U-shaped elbow having members of different lengths, the shorter member being pivotally connected to the frame.

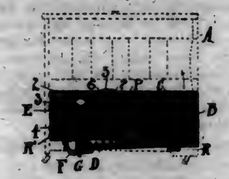
3. In a harrow, the combination of a frame, and a cleaning attachment comprising a shaft journaled transversely of the frame, and a lifting arm integral with one end of the shaft and adapted to rotate in a substantially vertical plane, the arm being doubled upon itself intermediate of its ends to constitute a U-shaped elbow, as and for the purpose specified.

4. In a harrow, the combination of a frame, and a cleaning attachment embodying a lifting arm pivoted to the frame to rotate in a substantially vertical plane, the arm being longitudinally extensible to regulate the height to which the frame is elevated.

5. In a harrow, the combination of a frame, and a cleaning attachment embodying a lifting arm doubled upon itself intermediate of its ends to form a U-shaped elbow having one member pivotally connected to the frame, the other member of the elbow being longer than the first named member and being longitudinally extensible.

[Claims 6 to 16 not printed in the Gazette.]

962,580. COMBINED COUCH AND BED. DAVID THOMAS OWEN, Cleveland, Ohio, assignor to The D. T. Owen Company, East Cleveland, Ohio, a Corporation. Filed Sept. 24, 1907. Serial No. 394,409.



1. In a combined bed and couch, a foldable bed frame and an open-work inclosing frame connected therewith within which said bed frame may be folded and unfolded and bodily transported without detaching the same, and couch frame ends having angle members on which said open-work frame is removably mounted.

2. A combined bed and couch comprising a skeleton frame and foldable bed and couch mechanism pivotally connected therewith and movably supported therein, and said frame and mechanism having fixed working relations to permit joint movability without separating the said parts, in combination with couch frame ends provided with angle members on their inside to removably seat said skeleton frame thereon.

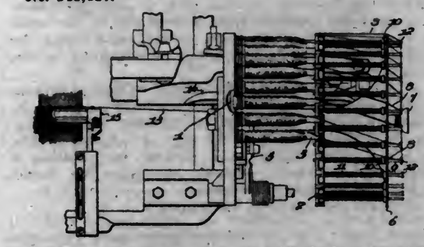
3. In a combined bed and couch, a two section foldable bed frame comprising sections provided with rigid pivotally connected arms at their ends and a foldable spring and link connection for said frames beneath said arms adapted to raise the front section, a skeleton inclosing frame having fixed pivot and supporting connections for said bed frame, and couch frame arm ends detachably connected with said skeleton frame.

4. In a combined bed and couch, a two section bed frame provided with projecting arms hinged together at their extremities, and one of said sections having pivot supports therefor, and springs and links therefor mounted altogether on said bed frame and connecting said two sections across the open joint between said hinged arms to provide an initial lift for the upper section.

5. In a combined bed and couch, a sectional bed frame and a support on which said frame is pivoted, pivotally connected arms on the meeting ends of said bed sections adapting said ends to separate and a foldable and unfoldable spring connection uniting and spanning said meeting ends between their separable portions to assist in unfolding the said sections when folded one upon the other.

[Claims 6 to 21 not printed in the Gazette.]

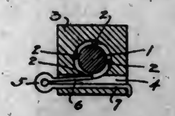
962,581. FILLING FEEDER OR MAGAZINE FOR AUTOMATIC LOOMS. SEVERIN N. PAQUETTE, Lowell, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Feb. 2, 1910. Serial No. 541,417.



1. The combination, with a rotatable feeder to contain a series of filling-carriers, a disk connected with the feeder at its outer end, and a holder for the filling-ends led from the carriers over the periphery of the disk, of a series of spring-controlled, longitudinally movable tension members to engage the filling-ends beyond said disk and normally maintain them taut but yielding when they are subjected to abnormal strain.

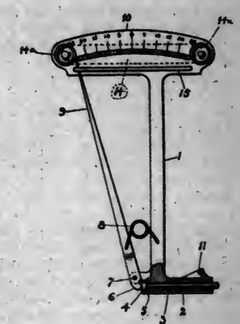
2. In filling-replenishing mechanism for looms, a rotatable feeder comprising connected plates to support the butts and tips of a plurality of bobbins, a supporting disk and a holder for the filling-ends, mounted on the feeder at its outer end, axially arranged rods slidable through said disk and notched at their outer ends to engage the filling-ends between the holder and the periphery of the disk, and tension springs acting upon said rods to normally press against and maintain taut the engaged filling-ends, the inner ends of the rods being supported by the tip-supporting plate of the feeder.

962,582. NUT-LOCK. WILLARD T. PAYNE, Tacoma, Wash. Filed June 14, 1909. Serial No. 501,910.



In a nut lock, the combination of a threaded bolt; a series of circumferential teeth formed therein, one edge of the teeth being radial and the other surface at right angles thereto; a threaded nut fitting the threaded bolt and having a tangential slot therethrough, said slot being elliptical in cross-section and intersecting the bolt hole in the nut; and a spring split pin within the slot and having one leg shorter than the other leg and adapted to be held by the longer leg which passes through the slot and is bent over and beyond the marginal edge of the nut while the shorter leg is adapted to engage the circumferential teeth of the bolt to prevent the turning of the nut thereon except to tighten it thereon.

962,583. MICROMETER ATTACHMENT FOR MACHINISTS' CALIPERS. JOHN H. PEMBER, Columbus, Ohio. Filed Nov. 15, 1909. Serial No. 528,191.

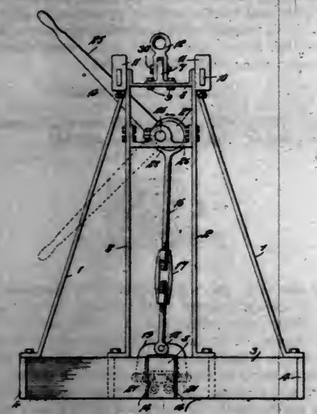


1. An attachment for a caliper consisting of a body portion having a cylindrical portion, a recess therein adapted to receive the point of one leg of the caliper in such manner as to allow rotation of said body portion about said point to aline the central axis of said cylinder with the opposite point of the caliper, a clamp to secure the body portion against rotation, a piston capable of longitudinal movement within the cylinder, a spring tending to move said piston, a head limiting said movement, and a pointer indicating on a graduated arc the movements of said piston, substantially as set forth.

2. An indicator of the spring actuated piston type having a recess adapted to receive the point of one leg of a caliper in such manner that the indicator may be ro-

tated about said point to correct the alinement of the piston with the opposite point of the caliper and a clamp to secure the indicator against rotation, substantially as set forth.

962,584. MACHINE FOR HANDLING BRICKS. RAYMOND C. PENFIELD, New York, N. Y. Filed Jan. 5, 1909. Serial No. 470,804.



1. A machine for handling bricks, comprising a vertical frame, a pair of clamping devices centrally located at the base thereof, stationary abutments between which and said clamping members the sections of the basic layer of bricks are disposed, and means for actuating said central clamping members to effect the clamping action, said means including a yoke, a link for operating it, and movable connections between the yoke and the clamps.

2. A machine for handling bricks, designed for operation in conjunction with a split basic layer, of a stack of bricks set in a prearranged order, said machine comprising a vertical frame, gripping devices located at a single point in the basic layer, stationary abutments between which and said gripping devices the sections of the basic layer are clamped, and means for actuating said gripping devices including a yoke, a vertically movable rod for operating it, and movable connections between the yoke and the gripping devices.

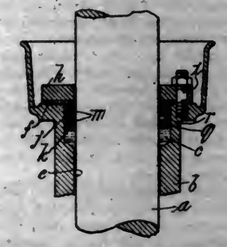
3. A machine for handling bricks, comprising a main frame, the base of which is formed with a rectangular yoke designed to embrace a stack formation of bricks and provided with parallel members at the ends of the basic layer, a lifting finger centrally disposed at the base of the frame and designed to be inserted into a space in the length of the basic layer, and clamping devices operating in conjunction with said basic layer to clamp the same together with means for actuating said clamping devices, including a yoke, a vertically movable rod for operating it, and movable connections between the yoke and the clamping devices.

4. A machine for handling bricks, comprising a vertically disposed frame, rigid abutments at the lower end thereof designed to embrace the ends of the basic layer, a central rigid lifting finger projecting into a space in the basic layer, clamping devices arranged on the opposite sides of said intermediate lifting device, crank shafts supported below said lifting device and connected to the clamping members, curved arms rigidly attached to said shafts, and means whereby said arms are actuated for the purpose of rocking the shafts and actuating the clamping members.

5. A machine for handling bricks, comprising a main vertical frame, having at the base stationary end plates adapted to serve as abutments at the ends of the lower layer of bricks and against which the ends of said layer may be clamped, a central lifting device rigidly affixed to the frame midway between the said end abutments and adapted to project into a space in the basic layer, parallel clamping plates at opposite sides of the lifting device, said plates being adapted to bind against the adjacent sections of the basic layer, and means for actuating said plates, including crank shafts, curved arms attached to said shafts, a yoke pivoted to said arm, a vertically actuating rod pivoted to said yoke, and means for vertically reciprocating said rod for the purpose of causing the plates to clamp the bricks.

[Claims 6 to 12 not printed in the Gazette.]

962,585. PLUNGER-PACKING FOR ELEVATORS. JAMES C. PHELPS, Springfield, Mass. Filed Sept. 17, 1909. Serial No. 518,165.



1. A packing for plungers comprising a ring member having a gasket portion, the lower edge of the ring member being inturned, and a series of packing-rings interposed between the gasket portion and the inturned portion of the ring member, and means for stiffening the inturned portion of the ring member substantially as described.

2. A packing ring for elevator plungers comprising a ring member proper, said ring member being provided with a gasket portion and an inturned portion, a series of packing rings located between the gasket and inturned portion, means for rendering the inturned edge rigid, and means for constricting the ring member, whereby packing rings are forced toward the plunger, substantially as described.

3. In a plunger packing for elevator plungers, a series of rings for engaging the plunger, means for retaining the series of rings in place, and means for normally imparting a constricting or hoop tensional stress to the rings, whereby a tight joint is effected between the rings and the plunger.

4. In a plunger packing, a stuffing-box provided with a recessed portion, a packing-ring having a flange member adapted to be clamped to the stuffing-box, and a depending portion entering the recessed portion, a series of rings located between the depending portion and the plunger, the recessed portion being of such dimensions that hydraulic pressure may be imparted to the outer surface of the depending ring portion, and means for stiffening said depending portion, substantially as described.

5. A flexible receptacle for receiving a series of packing rings, a plunger engaged by the rings, said receptacle including a gasket portion and an inturned edge portion, the rings being located on the edge portion, the flexible receptacle being located in a chamber for receiving a liquid under pressure, whereby the rings are forced against the plunger, as described.

[Claim 6 not printed in the Gazette.]

962,586. CAPONIZING INSTRUMENT. CHARLES J. PILLING, Philadelphia, Pa. Filed Aug. 21, 1909. Serial No. 514,041.

1. A caponizing instrument comprising an operating handle consisting of two relatively sliding members, a pair of levers pivotally mounted on opposite sides of one of said handle members, connecting actuating means between said pivoted levers and the other of said sliding members, and hook-shaped blades on each of said levers constructed and combined to operate as a grasping hook in initial position and as cutting shears when brought into closed position.



2. A caponizing instrument having an operating handle consisting of two members of unequal length, with terminal finger holds, the shorter member being mounted slidingly on the longer member, a pair of levers pivotally mounted at the terminal end and on opposite sides of said longer member, connecting actuating means between the shorter of said handle members and said levers adapted to rock the latter on their pivot bearing in opposite directions, and hook-shaped shear blades on the ends of said levers adapted to be brought into grasping and cutting coincidence successively when said levers are actuated.

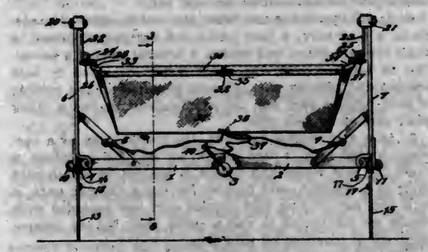
3. A caponizing instrument comprising a suitable operating handle, a pair of levers pivotally mounted thereon and adapted to be actuated thereby, said levers having integral terminal blades bent inwardly from the lever body to bring them into the same lateral plane and having hook-like ends arranged to vibrate in different horizontal planes but in shear-like coincidence.

4. A caponizing instrument comprising a suitable operating handle, with a pair of levers pivotally mounted thereon and adapted to be actuated thereby, said levers carrying integral terminal blades bent into lateral coincidence and having hook-like jaws adapted to be brought into shear-like coincidence, said jaws having outwardly curved cutting faces adapted to partially overlap when brought together.

5. A caponizing instrument comprising a handle consisting of two members of unequal length, each with terminal finger-holds, the shorter member being mounted slidingly on the longer member, in combination with a pair of grasping levers pivotally mounted on opposite sides of the longer member of the handle and having outwardly curved terminal ends, with connecting actuating means between the shorter of said handle members and the curved ends of said levers adapted to rock them on their pivot bearing in opposite directions.

[Claim 6 not printed in the Gazette.]

962,587. FOLDING CRADLE. ALFRED W. H. RAETTIG, Klingers, Mich. Filed June 14, 1909. Serial No. 501,958.



1. In a folding cradle, the combination with a jointed supporting frame collapsible endwise, of a cradle frame also collapsible endwise, a flexible cradle body suspended from the cradle frame, and a flexible connection extending between said cradle body and each of the joints of said supporting frame whereby the supporting frame may be collapsed by collapsing the cradle body.

2. In a folding cradle, the combination of a supporting frame comprising members connected together in such manner as to be collapsible in the plane of said frame, means for supporting said frame, said means being collapsible transversely of the plane of said supporting frame, and a cradle frame swingingly mounted on said supporting frame, said cradle frame being composed of jointed side members collapsible longitudinally in a plane transverse to the plane of said cradle frame and jointed end members collapsible laterally in the plane of said cradle frame.

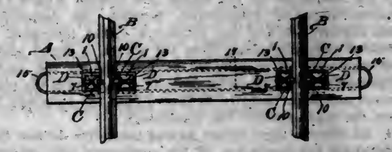
3. In a folding cradle, the combination of a supporting frame comprising members connected together in such manner as to be collapsible in the plane of said frame, means for supporting said frame, said means being collapsible transversely to the plane of said supporting frame, and a cradle frame swingingly mounted on said supporting frame, said cradle frame being comprised of jointed side members collapsible longitudinally in a plane transverse to the plane of said cradle frame, and jointed end members collapsible laterally in the plane of said cradle frame, the plane of said cradle frame being transverse to that of said supporting frame.

4. In a folding cradle the combination with a supporting frame having its members arranged in substantially the same plane and collapsible one against the other in that plane, of a cradle frame arranged in a plane transverse to the plane of said supporting frame, said cradle frame comprising members collapsible to lie one against the other in the plane of the cradle frame, and means connecting the cradle frame with the supporting frame whereby the collapsed cradle frame may be brought into close contact with the collapsed supporting frame.

5. In a folding cradle, a cradle supporting frame comprising jointed members arranged in the same plane and adapted to be folded into close contact one with the other, and means for supporting said supporting frame, said means being collapsible into approximate coincidence with the plane of said frame and pivotally mounted with said supporting frame in such manner as to adapt it to be swung in the plane of said frame to lie against the frame when folded.

[Claims 6 to 19 not printed in the Gazette.]

962,588. RAILWAY-TIE. VICTOR E. RANDALL, Battle Creek, and GEORGE A. HOELTZEL, Delton, Mich. Filed May 24, 1909. Serial No. 497,904.



1. A railway tie having twin pockets at the rail crossings, portable thimbles within each of said pockets, wooden plugs in said thimbles, means to prevent said thimbles from vertical movement within said pockets, and spikes driven within the wood of said thimbles to secure the rails to said tie.

2. A railway tie having iron pockets at the rail crossings, portable thimbles within said pockets, wooden plugs within said thimbles, means to prevent said thimbles from vertical displacement when in a normal position, wedges interposed within said pockets between said thimbles and the outer ends of said pockets to retain said thimbles within said pockets, and spikes driven within the wooden plugs of said thimbles to secure the rails to the tie.

3. A railway tie having twin pockets at the rail crossings, portable thimbles having inverted wedge shaped openings within said pockets, resilient plugs fitted within said thimbles, means to retain said thimbles from vertical movement within said pockets, and spikes driven within said resilient plugs to secure the rails to said tie.

4. A railway tie having twin pockets at the rail crossings, portable thimbles within said pockets, gains in the sides of said thimbles, means within said pockets to engage said gains and prevent vertical movement of said thimbles, wooden plugs within said thimbles, wedges interposed within said pockets between said thimbles and the outer ends of said pockets to retain said thimbles within said pockets, and spikes driven within the wooden plugs of said thimbles to secure the rails to the tie.

5. A railway tie having twin pockets at the rail crossings, portable thimbles within said pockets, gains in the sides of said thimbles, a locking strip within said tie adapted to engage said gains and prevent said thimbles from vertical displacement, wooden plugs within said thimbles, wedges interposed within said pockets between said thimbles and the outer ends of said pockets to retain said thimbles within said pockets, and spikes driven within the wooden plugs of said thimbles to secure the rails to the tie.

[Claims 6 to 16 not printed in the Gazette.]

962,589. RECEPTACLE OR SOCKET FOR ELECTRIC LAMPS. WALTER S. RYAN, New York, N. Y., assignor of three-fourths to Louis Hengerer, New York, N. Y. Filed Aug. 21, 1909. Serial No. 513,952.



1. An electric lamp socket having diagonally disposed holes adapted to receive a holding device, and means to connect and disconnect the electric conductors therewith at will without severing the conductors.

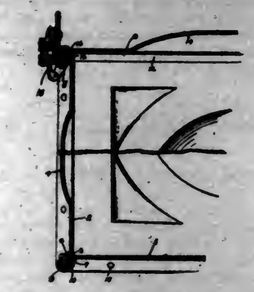
2. An electric lamp socket having diagonally disposed holes on different sides of the socket adapted to receive holding devices, the several holes being arranged at differing angles, for the purpose set forth.

3. An electric lamp socket having grooves for the reception of the conductors, blade-like devices for puncturing the insulation of the conductors located within the grooves, electrical connections between the respective blade-like devices and the respective socket terminals, a threaded stem projecting from the socket, a clamp plate provided with an opening adapted to receive the stem, projecting ribs on the clamp plate to engage with the conductors and a nut adapted to thread onto the stem and to force the plate against the conductors.

4. An electric lamp socket having blade-like devices for puncturing the insulation of the conductors the cutting edges of the blades being arranged parallel with the axis of the conductors and means to press the puncturing devices and the conductors together whereby the insulation will be punctured.

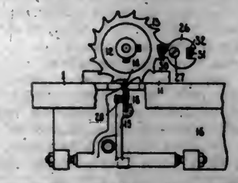
962,590. METALLIC CASE FOR COFFINS. JULIUS H. SCHLAFLY, Canton, Ohio, assignor to The Berger Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Apr. 29, 1908. Serial No. 429,848.

A metallic case for coffins comprising sides, ends, bottom and cover, the lower and end edges of the sides, the lower and side edges of the ends, and also the side and end edges of the bottom bent outwardly, forming oblique angles with the general planes of the said sides, ends and bottom respectively and adapted to be joined together to form seams, the said outwardly bent edges along each seam in the assembled case being disposed in parallel relation to each other, packing arranged between the two edges of each seam, a separate corner guard having integral spaced members arranged upon the said outwardly bent edges of each seam, the said edges with the packing between them being included between the spaced members



of said corner guard, and means, preferably rivets, for fastening said corner guard, edges and packing together.

962,591. TYPE-WRITING MACHINE. GEORGE A. SEIB, Ilion, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Apr. 22, 1910. Serial No. 556,987.



1. In a typewriting machine, the combination with a carriage, and an escapement comprising an escapement wheel, a check pawl for preventing backward rotation of said escapement wheel, and a mounting for said check pawl adjustable about the axis of the wheel.

2. In a typewriting machine, the combination with a carriage, and an escapement comprising an escapement wheel, a check pawl for preventing backward rotation of said escapement wheel, and an arm on which said check pawl is mounted, said arm being mounted on and adjustable circumferentially about the support for the escapement wheel.

3. In a typewriting machine, the combination of a carriage, a feed rack, a feed pinion, an escapement wheel, a shaft for said pinion and wheel, a bracket in which said shaft is mounted, an arm mounted on said bracket and adjustable around the bracket, and a check pawl for the escapement wheel mounted on said arm.

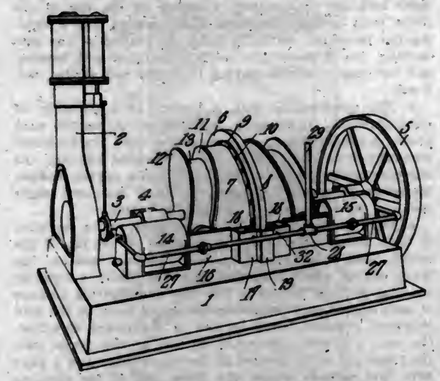
4. In a typewriting machine, the combination of a carriage, a feed rack, a feed pinion, an escapement wheel, a shaft for said wheel and pinion, a bracket having a barrel-like or tubular part, the shaft being journaled in said bracket and tubular part, an arm mounted on the outside of said tubular part and adjustable about it, and a check pawl carried by said arm.

5. In a typewriting machine, the combination of a carriage, a feed rack, a feed pinion, an escapement wheel, a shaft for said wheel and pinion, a bracket in which said shaft is journaled, said bracket having a tubular part, a split arm mounted on said tubular part and provided with means for tightening it, and a check pawl for the escapement wheel mounted on said arm.

[Claim 6 not printed in the Gazette.]

962,592. COMPRESSOR. HENRY D. SHELTON, Hughesville, Mo. Filed May 7, 1909. Serial No. 494,555.

1. In an apparatus of the class described, two spaced air compressing pumps having reciprocating pistons in alinement and means for causing the simultaneous actuation of the pump pistons comprising a rotatable member having its axis of rotation parallel with the longitudinal axis of the pumps and its periphery extending beyond the longitudinal axis of the pumps, rollers engaging opposite sides of the said member adjacent to its periphery, and drums on each side of the rotatable member and of less diameter than said rotatable member, each of said drums being provided with an actuating flange or ledge engaging a respective pump piston rod.



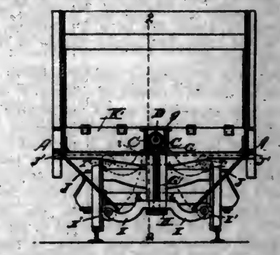
2. In an apparatus of the class described, air compressing pumps having reciprocating pistons, and means for causing the actuation of the pump pistons comprising a rotatable member having its axis of rotation parallel with the longitudinal axis of the pumps, guide rollers on opposite sides of the rotatable member, and drums on each side of the rotatable member and secured thereto and adjustable about the axis of rotation of the rotatable member, one independent of the other, each of said drums being provided with an actuating flange or ledge engaging a respective pump piston rod and having its active face in the form of endless, sinuate inclined planes.

3. In an apparatus of the class described, air compressing pumps having reciprocating pistons with the piston rods off-set from the longitudinal axis of the pumps, and means for causing actuation of the pump pistons comprising a rotatable member having its axis of rotation parallel with the longitudinal axis of the pump, guide rollers engaging the rotatable member on opposite sides thereof, drums secured to said rotatable member and adjustable independently about the axis of rotation thereof, and each provided with an actuating flange or ledge having its active surface in the form of endless, sinuate inclined planes, a roller on each piston rod engaging the actuating ledge of the respective drum, and guiding means for each pump piston rod.

962,593. DUMP CAR AND CART. JOHN BELL SHELTON, Detroit, Mich. Filed Jan. 13, 1910. Serial No. 537,927.

1. In a dumping carrier, bottom doors hinged to the frame of the carrier, a plurality of screw shafts projecting downwardly below its floor level in a single row between the side frames of the carrier, adjustable arms severally mounted upon said respective screw shafts adapted to actuate and support the doors, and means for simultaneously rotating said screw shafts whereby the doors may be raised or lowered.

2. In a dumping carrier, doors hinged to the frame of the carrier, a plurality of screw shafts arranged in a single row and suitably journaled between the side frames of the carrier, a plurality of adjustable arms severally mounted upon the respective screw shafts adapted to actuate and support the doors, a beveled gear mounted upon each of the several screw shafts, a drive shaft supported longitudinally of the carrier, a plurality of beveled gears mounted upon said shaft adapted to mesh respectively with the beveled gears carried by the screw shafts, and means for rotating said drive shaft whereby the several adjustable arms may be simultaneously actuated and the doors operated, substantially as described.



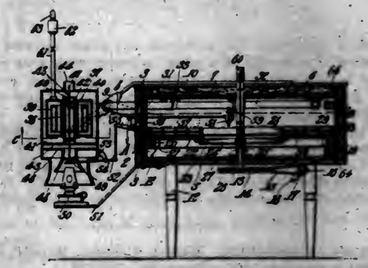
3. In a dumping car, a plurality of doors hinged in pairs, their free ends closing along the center of the car, a plurality of adjustable arms adapted to support the free ends of the doors provided with internally formed screws, a plurality of screw shafts suitably journaled severally in mesh with the screws of the adjustable arms, a bevel gear mounted on the end of each of the screw shafts, a shaft suitably journaled and provided with a plurality of beveled gears respectively meshing with the several first named bevel gears, a gear mounted on the end of said shaft, suitable gearing adapted to actuate said last named gear, and means for rotating said gearing, substantially as described.

4. In a dump car, a plurality of doors hinged to the side frames and designed to meet in pairs along the center line of the car, a plurality of adjustable arms adapted to support the free ends of said doors and provided at their outer ends with frictional rolls contacting with the underside of the doors, each arm being provided with an internal screw, screw shafts suitably journaled severally in mesh with the internal screws of the adjustable arms, a bevel gear mounted on each of the screw shafts, a shaft, a plurality of bevel gears mounted upon said shaft and severally in mesh with the first named bevel gears, and means for rotating said shaft.

5. In a dump car, a plurality of doors hinged to the frame, their free ends abutting when closed, a plurality of arms arched to provide a support for the doors near their edge and center line when closed, a plurality of screw shafts suitably journaled adapted to raise and lower said arms, and means for simultaneously operating said shafts whereby the doors may be raised or lowered.

[Claim 6 not printed in the Gazette.]

962,594. INCUBATOR. JAMES M. SHERMAN, Columbia, Mo. Filed May 8, 1909. Serial No. 494,795.



1. An incubator including a casing, an egg supporting element mounted for rotation within the casing and having a central opening, means below, and extending into

the opening, for actuating said elements, and stationary means removably mounted above said egg supporting element for holding eggs against movement with the element.

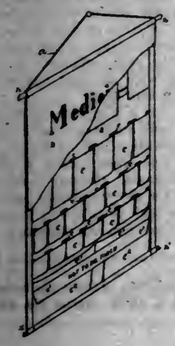
2. An incubator including a casing, an egg supporting table mounted for rotation therein and having a central opening, means below and extending into the opening for transmitting motion to the table, stationary means removably mounted above the table for holding the eggs supported by the table, and means outside of the casing for actuating the table.

3. An incubator including a casing, movable egg supporting means therein, removable normally stationary means above said supporting means for holding the eggs against movement with said supporting means, a closure hingedly mounted upon the casing, a stationary heater, a heating coil connected to the closure, and a pivotal connection between said coil and the heater, said connection being disposed along the axis of the hinges of the closure.

4. An incubator including a casing, egg supporting means therein, a heater fixedly connected to the casing, a closure hingedly connected to said casing, a heating coil connected to the closure and normally located within the casing, and a pivotal connection between the coil and the heater, the axis of said connection and of the hinges being in alinement.

5. An incubator including a casing, a stationary heater fixedly connected thereto, egg supporting means within the casing, a closure hingedly connected to the casing, a heating coil mounted upon the closure and normally located within the casing, a pivotal connection between the coil and the heater, the axis of said connection being in alinement with the axes of the heaters, a thermostat for regulating said heater and movable with the closure, and a detachable connection between said thermostat and the heater.

962,595. HANGING RECEPTACLE FOR MEDICINES AND THE LIKE. JOHNNY BRETHER SMITH, Johannesburg, Transvaal. Filed Nov. 8, 1909. Serial No. 526,916.



1. A receptacle for medicinal and other articles, consisting of a flexible back piece, provided with rods at top and bottom and means for suspension, a series of pockets on the back piece for the reception of the articles and a cover or curtain hanging over the front.

2. In a receptacle for medicinal and other articles, the combination with a flexible back piece mounted on rollers and a hanging curtain, of a series of deep pockets having plaited sides and a series of shallow pockets for the reception of small articles, substantially as herein described.

962,596. GUN-SIGHT. MORRIS S. SOARR, McLoud, Okla. Filed Aug. 30, 1909. Serial No. 515,278.

1. The combination with the barrel; of a plurality of sight members transversely mounted on top of the barrel and each having a concaved sight opening, and a sighting pin projected vertically from the bottom of the said opening, one of said pins having its upper end beveled, and the other pin having its upper end slotted vertically.

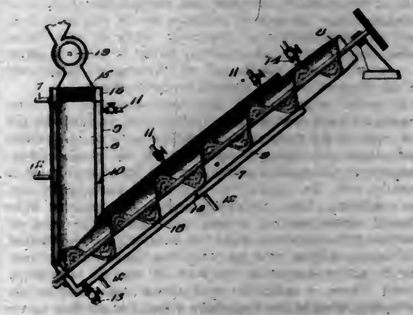


2. The combination with a barrel; of a plurality of sight members transversely mounted on the top of the barrel each having a concaved sight opening, and a sighting pin projected vertically from the bottom of the said opening, the foremost pin having its upper end beveled, and the rear most pin having its upper end slotted vertically.

3. The combination with a barrel; of a plurality of sight members transversely mounted on the barrel, each having a concaved sight opening and a sight pin projected vertically from the bottom of the concaved opening, the foremost pin having a beveled point, and a gaging member transversely mounted across the front concaved sight opening, the rear pin being vertically slotted.

4. The combination with the gun barrel and a plurality of sight members transversely mounted on the top of the barrel, each having a concaved sighting passage, the lower end of which lies flush with the barrel, a sighting pin that projects vertically into the said sighting passage of each of said sight members, the upper faces of the said concaved passages being beveled in a forward direction, the rear pin being vertically slotted at the upper end, the front pin being beveled at the upper edge and a gage wire that extends across the upper end of the sighting passage in the front sighting member.

962,597. DIFFUSION PROCESS. JOHN STEWART, Logan, Utah. Filed Nov. 26, 1909. Serial No. 530,018.

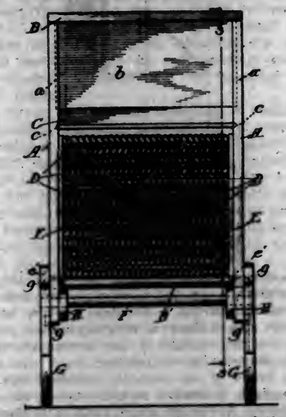


1. The diffusion process consisting in reducing the material to be treated to a fine pulp, passing said pulp in one direction through an elongated chamber heated throughout substantially its whole length to different degrees at different places, the greatest heat being applied to the pulp at the inlet of said chamber, and flowing water through said pulp in the opposite direction.

2. The diffusion process consisting in disintegrating the material to be treated, passing said material through an elongated chamber in one direction, flowing water through said material in the chamber in the opposite direction, said water being introduced at a plurality of points at different distances from the inlet end of the chamber, the water introduced nearest the said end of the chamber being at a higher temperature than that introduced elsewhere.

3. The diffusion process consisting in reducing the material to be treated to a fine pulp, passing the pulp in one direction through an elongated chamber, heating the pulp as it passes through said chamber, the degree of heat applied decreasing toward the outlet end of the chamber, and flowing water at a plurality of points into said chamber and through the pulp, the temperature of the water introduced being highest at the point nearest the inlet end of the chamber.

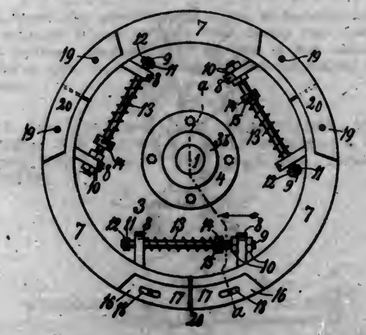
962,598. WASHBOARD. CHARLES P. ST. JOHN, Chicago, Ill., assignor of one-half to Robert J. Ehlers, New York, N. Y.; Jessie A. Mills executrix of said Charles P. St. John, deceased. Filed Sept. 3, 1907. Serial No. 391,198.



1. A washboard comprising a frame consisting of side-rails and top and bottom rails connecting the same, the latter having extensions that pass through said side-rails, a rod passing through said frame below the bottom rail, and reversible legs secured on extended ends of said rod and having recesses in the edges thereof that are adapted to seat the extensions of the bottom rail when said legs are reversed.

2. A washboard comprising a frame consisting of side-rails and top and bottom rails connecting the same, the latter having extensions that pass through said side-rails a rod passing through said frame below the bottom rail, reversible legs secured on extended ends of said rod and having recesses in the edges thereof that are adapted to seat the extensions of the bottom rail when said legs are reversed, and substantially T-shaped stops mounted on said rod between the sides of the frame and engaging the bottom rail.

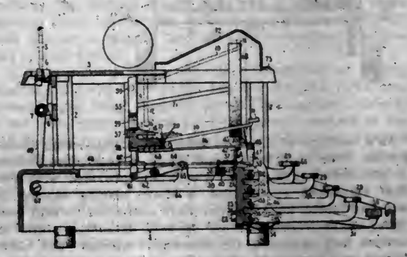
962,599. PISTON-RING. JUSTUS STODDARD, Stillwater, Minn. Filed Jan. 13, 1910. Serial No. 537,824.



1. In combination with a two-part piston for reciprocating engines, a packing ring fitting between the two members of the piston and composed of a series of segmental ring sections butting against each other with their ends, said ends having each an inwardly directed arm, a rod secured in one of said arms and sliding with its other end in the adjacent arm of the next ring section, a compressed coil spring encircling the rod, and means on the rod for compressing the spring more or less against the arm in which the rod slides, said sections having their ends recessed upon the sides facing the members of the piston; lap-plates in said recesses and means for holding the plates in the recesses, the ends of the ring sections having longitudinal play between the lap-plates.

2. In combination with a two-part piston for reciprocating engines, a packing ring fitting between the two members of the piston and composed of a series of segmental ring sections butting against each other with their ends, said ends having each an inwardly directed arm, a rod secured in one of said arms and sliding with its other end in the adjacent arm of the next ring section, a compressed coil spring encircling the rod, and means on the rod for compressing the spring more or less against the arm in which the rod slides, said sections having their ends recessed upon the sides facing the members of the piston; lap-plates in said recesses and means for holding the plates in the recesses, the ends of the ring sections having longitudinal play between the lap-plates; and means on the sliding end of the rod to prevent its accidental separation from the arm it slides in.

962,600. TYPE-WRITING MACHINE. ROBERT H. STROTHER, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 23, 1904. Serial No. 225,673.



1. In a typewriting machine, the combination of a type bar segment and a segmentally arranged series of front strike type bars mounted on said segment, each of said type bars comprising an axle and a type carrying arm on said axle substantially at one end thereof, said type bars being arranged in a right hand set and a left hand set, and the type bars in each set having their type carrying arms at the ends of their axles nearest the end of the segment.

2. In a typewriting machine, the combination of a type bar segment, a segmentally arranged series of front-strike type bars mounted on said segment and arranged in a right hand set and a left hand set, each of said type bars

comprising an axle and a type carrying arm substantially at one end of said axle, a plurality of the type bars of each set having their axles extending from their said ends downward and toward the middle of the segment.

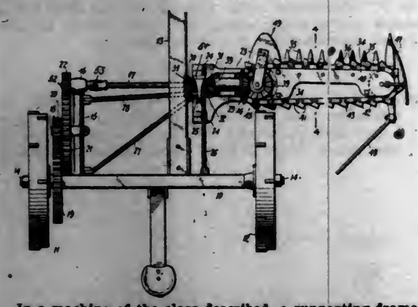
3. In a typewriting machine, the combination of a type bar segment, a segmentally arranged series of front-strike type bars disposed on the same side of said segment and arranged in a right hand set and a left hand set, each of said type bars comprising an axle and a type carrying arm substantially at one end of said axle, a plurality of the type bars of each set having their axles extending from their said ends downward and toward the middle of the segment.

4. In a typewriting machine, the combination of a type bar segment and a segmentally arranged series of front strike type bars mounted on said segment and arranged in a right hand set and a left hand set, the type bars of each set being in groups, each type bar comprising an axle and a type carrying arm substantially at one end of said axle, a plurality of the axles of each set extending from their said ends downward and toward the middle of the segment and the axles of each group standing one in front of another.

5. In a typewriting machine, the combination of a type bar segment and a segmentally arranged series of front strike type bars mounted on said segment and arranged in groups, each type bar comprising an axle and a type carrying arm substantially at one end of said axle, those type bars near the ends of the segment having their axles extending from their said ends downward and those type bars near the middle of the segment having their axles extending toward the middle of the segment, and the axles of one group extending alongside of those of an adjacent group.

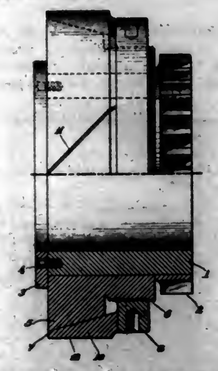
[Claims 6 to 38 not printed in the Gazette.]

962,601. GRAIN-CUTTING DEVICE. BEVERLY B. TURNER and CHARLES G. POLLOCK, Berthoud, Colo. Filed June 26, 1908. Serial No. 440,499.



In a machine of the class described, a supporting frame, ground wheels carried by said frame, a base plate located in advance of said ground wheels and provided with vertical standards at one end, a shaft bearing carried by said base plate, an extension plate connected to said base plate, chain wheels carried by said extension plate, an endless belt arranged for movement around said chain wheels and formed of alternating links and sickle knives, a shaft mounted for oscillation in said standards and provided with an intermediate transverse bearing, a shaft stepped at one end in said intermediate bearing, a shaft mounted for rotation in the bearing of said base plate, means for communicating the motion of said last mentioned shaft to the endless belt of knives, gear wheels carried respectively by said shafts, an idler gear mounted for rotation upon said standard shaft and engaging the gears of said intermediate shaft and the belt operating shaft, means for communicating the motion of said ground wheels to said intermediate shaft, a yoke frame swinging upon said standard shaft, and a plurality of braces connecting said yoke frame and said supporting frame.

962,602. EXPANSIBLE BEARING. CHARLES VAN MIDDLESWORTH, Brooklyn, N. Y., assignor to Van Dyck Gravure Company, New York, N. Y. Filed Nov. 28, 1908. Serial No. 464,094.



1. In a device of the character described, the combination of a shaft, a bearing member loosely and rotatably carried thereby having a wedging surface, and an integral split ring having a wedging surface coöperating with the wedging surface of the bearing member to increase the diameter of the bearing.

2. In a device of the character described, the combination of a shaft, a bearing member loosely and rotatably carried thereby having an outer wedging surface, and an integral split ring having an inner wedging surface coöperating with the outer wedging surface of the bearing member to increase the diameter of the bearing.

3. In a device of the character described, the combination of a shaft, a bearing member loosely carried thereby having a wedging surface, and an integral split ring having a wedging surface coöperating with the wedging surface of the bearing member to increase the diameter of the bearing, said ring being split at an angle of substantially 45° to the axis thereof.

4. In a device of the character described, the combination of a shaft, a bearing member loosely carried thereby having a wedging surface and an integral split ring having a wedging surface coöperating with the wedging surface of the bearing member to increase the diameter of the bearing member, said ring being split at an angle of substantially forty-five degrees to the axis thereof.

962,603. MEAT AND FRUIT PRESS. EDWIN WALKER, Erie, Pa. Filed May 25, 1906. Serial No. 318,672.



1. In a device of the class described, a vessel having an exit opening, an imperforate platen within said vessel

to act upon the material therein and positioned for liquid or semi liquid matter to pass upwardly and lodge upon the platen, said platen being provided with means whereby the liquid or semi liquid matter is guided toward the exit opening, and means whereby movement may be given to one of said parts relative to the other.

2. In a device of the class described, a vessel having an exit opening, a platen operatively positioned within said vessel and inclined toward the exit opening therein, said platen being spaced at its edges relative to the vessel to permit the upward flow of liquid or semi liquid matter which is expressed from the material operated upon, means on the platen for directing the liquid or semi liquid matter toward the exit opening, and means whereby relative movement may be imparted to said vessel and platen.

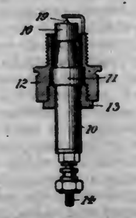
3. In a device of the class described, a vessel having an exit opening, means for supporting said vessel in an inclined position, an imperforate platen operatively positioned within said vessel to act upon the material therein, said platen being spaced relative to the vessel for liquid or semi liquid matter to flow upwardly and lodge upon the platen, means whereby the liquid or semi liquid matter is directed to flow over the platen and toward the exit opening, and means for moving one of said parts relative to the other.

4. In a device of the class described, a vessel having one end narrower than the other and provided in said narrow end with a liquid exit slot which extends upwardly from the bottom of the vessel, means for supporting the vessel in an inclined position, whereby liquid may flow by gravity toward said slot, and a platen coöperating with said vessel.

5. In a device of the class described, a vessel having a liquid exit slot extending upwardly from the bottom thereof, and a platen adapted to work in the slot of said vessel, for keeping said slot free from obstruction by solid material.

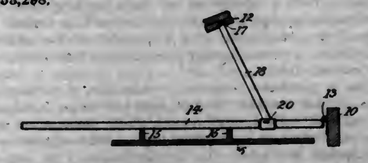
[Claims 6 to 15 not printed in the Gazette.]

962,604. SPARK-PLUG. GREGOR WALZEL, New York, N. Y. Filed Sept. 3, 1909. Serial No. 516,068.



A spark plug provided with a cap, an inclosed charge of platinum sponge, an open work keeper that confines the platinum sponge within the cap, a first electrode centered upon the keeper, and a second coöperating electrode.

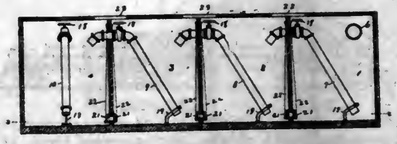
962,605. TOP-STICK FOR GRAND PIANOS. PETER WEBER, New York, N. Y., assignor to Sohmer & Company, New York, N. Y. Filed Apr. 4, 1910. Serial No. 553,298.



1. A device of the character described, comprising a prop having a longitudinal slot, means for pivoting the prop at one end to a piano, and an arm pivoted to the prop and adapted to be received within the slot and to be projected at an angle to the prop.

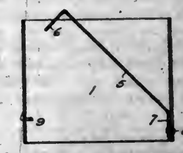
2. A device of the character described, comprising a prop having a chamfered slot, means for pivoting the prop at one end to a piano, and a chamfered arm pivoted to the prop and adapted to be received within the slot and to be projected at an angle to the prop.

962,606. SEWAGE-DISPOSAL PLANT. MARTIN J. WIEST, Govans, Md. Filed Aug. 2, 1909. Serial No. 510,760.



A sewage disposal plant comprising a plurality of intercommunicating tanks, one of which has an inlet for the sewage, a pipe in each tank extending from near the bottom up into the next adjoining tank near the top thereof, valves in the partition walls of each tank, an asceptic bed having an outlet, and a number of apertured pipes arranged on top of said bed and having communication with one of said tanks.

962,607. FOLDING BERRY-BOX. WILLIAM W. WOOD, Raymond, Wash. Filed Mar. 2, 1909. Serial No. 480,906.



1. In a folding berry box, the combination of a strip bent to form the sides of the box and adapted to be compressed from its normal rectangular shape to a flat parallelogram shape; a bottom strip secured at one end thereof to one of the sides of said box, and adapted to be bent to form the bottom of said box; and a long wire staple secured inside the box to the side opposite to which the said bottom is secured and adapted to support the free end of said bottom.

2. In a folding berry box, the combination of a strip bent to form the sides of the box and adapted to be compressed upon itself from its normal rectangular shape to a flat parallelogram shape; a bottom strip secured at one end thereof to one of the sides of said box, and adapted normally to be bent to form the bottom of said box; a down-turned hook formed on the free end of said bottom strip; and a long wire staple secured to and spaced from the inside of the box on the side opposite to which the said bottom is secured and adapted to engage and support the hook end of said bottom.

962,608. COMBINED SKATING-RINK AND MERRY-GO-ROUND. CHARLES A. ANCIL and JOHN BOLLET, Marion, Ind. Filed Oct. 5, 1908. Serial No. 456,335.

1. In a combined skating rink and merry-go-round, the combination with a merry-go-round frame and skating rink frame, of a motor, means connecting the motor and merry-go-round frame for transmitting motion to said first named frame to cause it to rotate, a shaft on the frame of the merry-go-round frame, means on the shaft for rotating the frame of the skating rink, and means on the shaft adapted to receive power from the motor whereby the skating rink frame is rotated.

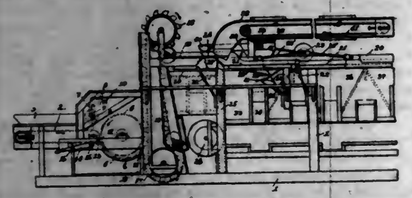
2. In a combined skating rink and merry-go-round, the combination with a skating rink frame and merry-go-round frame, of a motor, means connecting the motor and the merry-go-round frame for transmitting rotary motion thereto, a shaft mounted on the merry-go-round frame and having driving connections with the skating rink frame, means for transmitting motion to the shaft from the motor for causing the skating rink frame to rotate, and means whereby one frame can be rotated independently of the other.



3. In a combined skating rink and merry-go-round, the combination with a wheeled merry-go-round frame, of a wheeled skating rink frame, a motor, a sprocket wheel on the motor, a sprocket wheel connected to the axle of one of the wheels of the merry-go-round, a sprocket chain connecting the sprocket wheels for transmitting motion to the merry-go-round frame, a shaft mounted on the merry-go-round frame, a gear wheel thereon, a gear connected to the rink frame adapted to be engaged by the gear wheel, a sprocket wheel on the shaft adapted to engage the sprocket chain for transmitting motion to the rink frame.

4. In a combined skating rink and merry-go-round, the combination with a merry-go-round frame, of a supporting shaft, a plate connected to frame surrounding the shaft, anti-friction rollers between the shaft and plate, of wheels mounted on the frame, rock bars mounted on the frame adapted to support rocking objects, a bell crank, an arm connected to the bell crank and rock bars, and means connecting the bell crank with the axle of the wheel whereby a rocking motion is transmitted to the rock bars.

962,609. RAISIN-STEMMER. WILLIAM C. ANDERSON, San Jose, Cal. Filed Feb. 13, 1909. Serial No. 477,501.



1. In a raisin-stemmer, the combination of a stemming cylinder and an opposing stemming concave so arranged with relation to the cylinder that the stemming space between them is shallowest at its receiving end and thence gradually deepens to its delivery end, a conveyer to receive the raisins and feed them to the concave, and means to act on the raisins while on the conveyer to separate and distribute the material in advance of the cylinder and concave.

2. In a raisin-stemmer, the combination of a stemming cylinder, and an opposing stemming concave so arranged with relation to the cylinder that the stemming space between them is shallowest at its receiving end and thence gradually and continuously deepens to its delivery end.

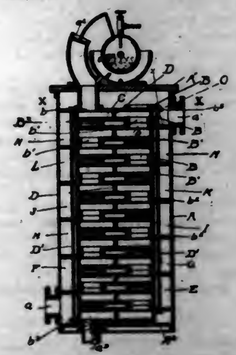
3. In a raisin-stemmer, the combination of stem detaching devices, means for presenting the raisins and stems, delivered from the stem detaching devices, to the action of a blast of air, an open-ended stem-box to receive the air-blast with its accompanying stems, and means for advancing the raisins out of the sphere of the air blast.

4. In a raisin-stemmer, the combination of stem detaching devices, a grating constructed and arranged to receive and support the raisins and stems after passing through the stem detaching devices, means for directing a blast of air upwardly through the grating supporting the raisins and detached stems, and an overlying box into which the stems are carried by the blast.

5. In a raisin-stemmer, the combination of stem detaching devices, a grating constructed and arranged to receive and support the raisins and stems after passing through the stem detaching devices, means for directing a blast of air upwardly through the grating supporting the raisins and detached stems, an overlying box into which the stems are carried by the blast, and means for advancing the raisins out of the sphere of the air blast.

[Claims 6 to 11 not printed in the Gazette.]

962,610. VAPORIZER FOR GAS-PRODUCERS. BAXTER M. ASLAKSON, Salem, Ohio. Filed Jan. 14, 1908. Serial No. 410,732.



1. A vaporizer comprising a casing, a plurality of castings of like form located therein and closely fitting the inner wall thereof and forming by their arrangement in and with said casing two separate conduits, one of which extends through said castings and the other between said castings and casing, each of said castings having a projecting portion, and rods extending through said projecting portion to hold said castings together.

2. A vaporizer comprising a casing having a plurality of castings therein, of like form and closely fitting the inner wall thereof, each of which is provided with a chamber, and forming by their arrangement a tortuous conduit between said castings and said casing which extends alternately across said casing, said chambers being in open connection with each other and forming a conduit through said castings.

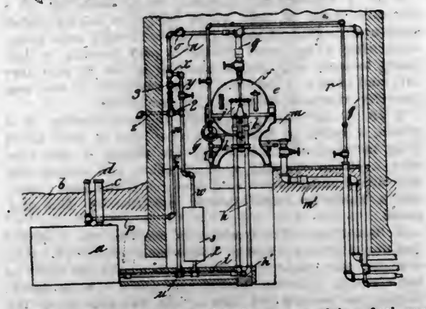
3. A vaporizer comprising a casing having a plurality of castings therein of like form superimposed one above the other and separated from each other a predetermined distance, each of said castings having the projecting portions arranged alternately on opposite sides from each other, and in contact therewith at its sides thereby forming a tortuous passage extending alternately from one side of the casing to the other, contributing with said casing to form a conduit as set forth, each of said castings having a chamber with an inlet and an outlet, the inlet of one registering with the outlet of the adjacent one, thereby forming a conduit leading through said castings, as set forth.

4. In a vaporizer, an element comprising a casting having a divided chamber therein, and having an opening in its top and bottom, each of which is surrounded by a boss, and having a supporting boss located opposite said first named boss.

5. In a vaporizer, an element comprising a casting having a chamber therein provided with an inlet on the bottom and an outlet on the top and obliquely disposed, each being surrounded by a boss as set forth, and having a projecting portion at one side thereof for the purpose described.

[Claims 6 to 15 not printed in the Gazette.]

962,611. CONSTANT-SUPPLY DEVICE FOR VAPORIZING FUEL-GAS MACHINES. JOHN F. BARKER, Jr., Boston, Mass., assignor to Gilbert & Barker Manufacturing Company, Springfield, Mass., a Corporation. Filed Aug. 6, 1908. Serial No. 447,282.

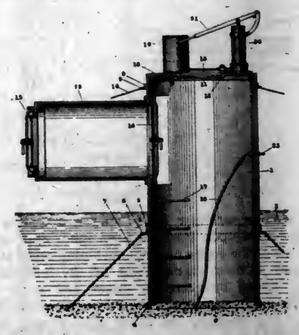


1. In a fluid feeding device for a vaporizing fuel gas machine, the combination of a gasolene supply tank, elevator-pipes, an air pressure equalizing pipe therefor, an auxiliary supply tank, a pipe connection therefrom to the elevator-pipes, a second pipe connection from said auxiliary supply tank to said equalizing pipe, a vent pipe connected to the second pipe, and valves in said vent, equalizing, and second pipes, the valve in the second pipe being located between the vent pipe and the pressure equalizing pipe, whereby when the valves in the vent-pipe and equalizing pipe are opened, the auxiliary supply tank may be filled from the supply tank, and when said valve in the equalizing pipe is closed to shut off the flow of air to the supply tank, and the valve in the second pipe is opened, the connection from the air pressure equalizing pipe to the supply tank is cut off and the gas machine may be fed from the auxiliary supply tank, and the supply tank refilled without interrupting the operation of the machine.

2. In combination with a fuel gas machine, elevator-pipes therefor, a main oil supply tank, a sub-tank for containing oil, pipe connections between the tanks and the elevator-pipes of the gas machine, a shut-off valve therein, a main air supply pipe connected to the main oil supply tank, a valve therein, a vent pipe for said tank, and to which the main air supply pipe is connected, a pipe extending from the main air supply pipe to the sub-tank, a valve therein, a vent-pipe connected to the last mentioned pipe for venting the sub tank whereby, when the valve in the vent-pipe for the sub-tank is opened, the sub-tank will fill from the main oil tank, and when said last named valve is closed, and the valve in the main air supply pipe is closed, and the valve in the pipe extending from the main air supply pipe to the sub-tank is opened, and the shut-off valve in the pipe connections between the tanks is closed, the fuel gas machine will be fed with oil from the sub-tank, as described.

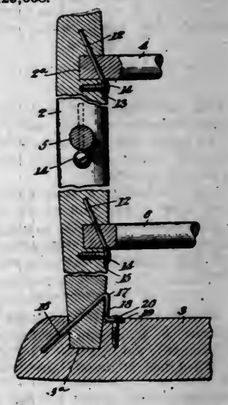
3. In a continuous liquid fuel supply apparatus for gas machines the combination of a main fuel supply tank, an auxiliary fuel supply tank, a pipe connection between the same, a shut-off valve in the connection, elevator pipes connected to the said tanks, and extending to said gas machine, a pipe for supplying air under pressure connected to the main fuel supply tank, a valve therein, a pipe connected to the air pressure pipe and the auxiliary fuel supply tank respectively, a valve therein, a vent-pipe connected to said last named pipe, a valve therein, whereby when said valves are operated as described the auxiliary supply tank may be filled from the main fuel supply tank, and whereby the communication between said tanks may be cut off and the gas machine supplied with liquid fuel from the auxiliary supply tank, as described.

962,612. MEANS FOR EXTRACTING GOLD FROM RIVER-BEDS. JOHN H. BATTEN, Jamestown, Cal. Filed Nov. 1, 1909. Serial No. 525,621.



A device of the character described comprising a drum, means admitting compressed air to said drum, a man way disposed at right angles to said drum, a door opening from said man way to the atmosphere and a door opening from said man way into said drum.

962,613. FASTENING DEVICE FOR CHAIR PARTS. MARGARET D. BELL, Topeka, Kans. Filed Apr. 28, 1908. Serial No. 429,668.



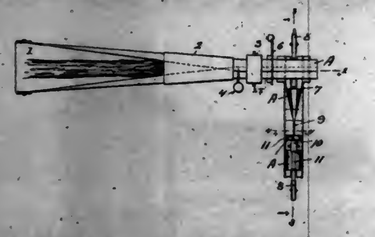
1. The combination with a part having a socket, and another part having its end fitted in said socket, of a fastening device secured to one of said parts, and having a shank portion passing through the end of the second of said parts, and embedded in said first part, adjacent the socket.

2. The combination with a part having a socket, and another part fitted within said socket, of a fastening device having a shank portion passing through the second part into said first of said parts, and provided at its ends with an eyelet through which passes a screw into one of the parts.

3. The combination with a part having a socket, and a second part fitted in said socket, of a fastening device

having a shank passing through said second part and embedded in said first part, said shank being provided with an eyelet disposed at an angle thereto, through which passes a securing means into said first part.

962,614. TUBULAR WRAPPER. HERBERT J. BLOCKI, Sheboygan, Wis. Filed June 30, 1909. Serial No. 505,136.



1. A tubular wrapper comprising a one-piece enveloping strip folded upon itself to form inner and outer walls of equal area, the edges of the enveloping strip being overlapped and secured transversely of the wrapper length, a pliable filling between the inner and outer walls, a longitudinal butt-joint between the ends of the filled enveloping strip whereby the inner wall of said enveloping strip is crinkled to form a cushion, and a strip securing the longitudinal butt-joint upon the exterior wall of the aforesaid enveloping strip.

2. A tubular wrapper comprising a closed end double walled filled pad section having open longitudinal edges, the open edges being abutted to form a longitudinal joint, and a securing strip overlapping the longitudinal joint.

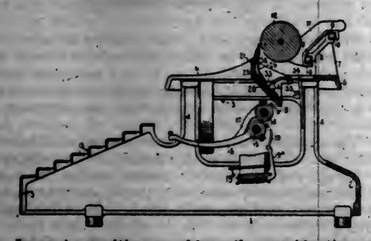
962,615. TIRE-PLUG. LEON A. BOURQUENEZ, Botsford, Conn. Filed Oct. 2, 1909. Serial No. 520,683.



1. A tire plug comprising a headed stud, a pad and shank of rubber inclosing the head and stud and a nut having upon its inner face a sleeve which is adapted to pass within the rubber shank and force it outward against the wall of a puncture.

2. A tire plug comprising a stud which is threaded and is provided with a head and at its outer end with a notch, for the purpose set forth, a pad and shank of rubber inclosing the head and stud and a nut having upon its inner face a sleeve which is adapted to pass within the shank.

962,616. TYPE-WRITING MACHINE. ARTHUR J. BRIGGS, Syracuse, N. Y., assignor to The Smith Premier Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Dec. 29, 1905. Serial No. 293,791.



1. In a typewriting machine, the combination of a platen, a segmentally arranged series of front-strike type bars pivotally mounted below said platen, and a dust guard for the pivots of said type bars consisting of a downwardly curved portion of the top plate of the machine of a conical form lying above said type bar pivots and below said platen.

2. In a typewriting machine, the combination of a platen, a segmentally arranged series of front-strike type bars pivoted below said platen, and a main frame comprising a top plate having a part forming a dust guard of conical form downwardly curved and sloping downward toward the back of the machine and lying above said type bar pivots and below said platen.

3. In a typewriting machine, the combination of a platen, a series of front-strike type bars having pivots segmentally arranged below said platen, and a main frame comprising a top plate having a part forming a dust guard between said platen and the pivots of said type bars and curved to conform to the curvature of said segmentally arranged series of type-bar pivots.

4. In a typewriting machine, the combination of a platen, a series of front-strike type bars, a dust guard lying between said platen and the pivots of said type bars, a ribbon vibrator mounted above and behind said dust guard and between said dust guard and said platen, and a guide for said vibrator, mounted on said dust guard.

5. In a front-strike typewriting machine, the combination of a platen, a series of front-strike pivoted type bars, a dust guard a part of which stands nearer the front of the machine than said platen and which extends downwardly and toward the back of the machine above the pivots of said type bars, and a ribbon vibrator and means for actuating the same mounted in part behind said dust guard.

[Claims 6 to 12 not printed in the Gazette.]

962,617. INHALER. IGNAZIO BUCCERI, Brooklyn, N. Y., assignor of one-half to Francisco Ricart, New York, N. Y. Filed Dec. 28, 1909. Serial No. 534,627.



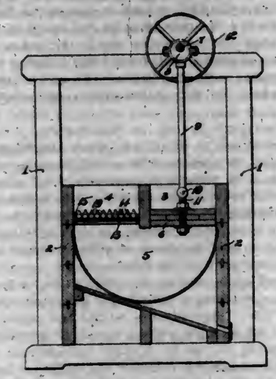
1. In an inhaler, the combination of a tube, a plurality of substantially air-tight readily perforable transverse partitions dividing the tube into substantially air-tight chemical-holding compartments, and absorbing media in two or more of said compartments impregnated with suitable volatile liquids.

2. In an inhaler, the combination of a tube, a plurality of substantially air-tight, readily perforable transverse partitions comprising a wax and a hardening and adhesive substance, for dividing the tube into substantially air-tight chemical-holding compartments, and absorbing media in said compartments impregnated with suitable volatile liquids.

962,618. JIG. FRANK L. BUCHANAN, St. Louis, Mo. Filed Jan. 17, 1910. Serial No. 538,356.

1. A jig comprising a tank having a compartment in which is fitted an ore-supporting mat, said mat comprising a multiplicity of units which are spaced uniformly apart on all sides and secured together in a body, and means for intermittently forcing a quantity of water upwardly through said mat and a mass of crushed ore thereon.

2. A jig comprising a tank having a compartment in which is secured an ore-supporting mat, said mat comprising a multiplicity of units which are spaced uniformly apart all around and secured together in a body, said units having projections on their top sides, and means for intermittently forcing a quantity of water upwardly through said mat and a mass of crushed ore thereon.



3. A jig comprising a tank having a compartment in which is secured an ore-supporting mat, said mat comprising a multiplicity of units which are spaced uniformly apart on all sides and secured together in a body, a screen secured in the compartment under said mat, and means for intermittently forcing a quantity of water upwardly through said screen, mat and a mass of crushed ore thereon.

4. A jig comprising a tank having a compartment in which is secured a horizontal screen, an ore-supporting mat secured in said compartment and resting upon said screen, said mat comprising a multiplicity of units which are spaced uniformly apart and secured in a body, said units having pointed upper sides and undercut under sides, and means for intermittently forcing a quantity of water upwardly through said screen, mat and a mass of crushed ore thereon.

5. A jig comprising a tank having a compartment in which is secured an ore-supporting mat, said mat having a multiplicity of vertical slots therethrough, a multiplicity of pointed projections extending upwardly from the top side of said mat between the several slots therein, and said mat having a multiplicity of recesses in its underside which communicate with the slots therein, a screen secured in said compartment beneath the mat, and means for intermittently forcing a quantity of water upwardly through said screen, mat and a mass of crushed ore thereon.

[Claims 6 to 14 not printed in the Gazette.]

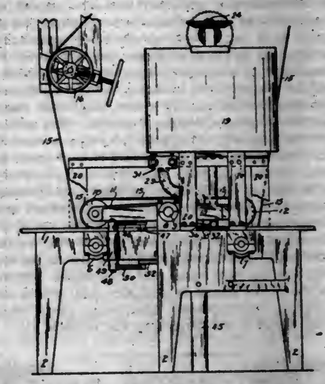
962,619. GLUING-MACHINE. JOHN BUFFELEN, Tacoma, Wash. Filed Sept. 22, 1909. Serial No. 518,960.

1. In a gluing machine, the combination with a glue tank and a surrounding hot-water tank; of a glue pipe; a surrounding hot-water pipe; a steam pipe within the hot-water pipe and wound around the glue pipe; and valves whereby the flow in said pipes is regulated.

2. In a gluing machine, the combination of a glue pipe; a surrounding hot-water pipe; a rotating wheel; a hot-water channel formed therein; a nozzle connected to said glue pipe and having its opening against the rim of the wheel; and a passage connected to said hot-water pipe and opening over said channel to conduct the water from the pipe to the channel.

3. In a gluing machine, the combination of a glue pipe; a surrounding hot-water pipe; a rotating wheel; a hot-water channel formed therein; an arm pivotally mounted on the axis of the wheel and free to turn about its pivot; a nozzle formed on the arm and connected to the glue pipe and having its opening adjacent to the rim of said wheel; and a passage formed in said arm and connected to said hot-water pipe and opening over said channel to conduct hot-water from the pipe to the channel.

4. In a gluing machine, the combination of a glue delivering nozzle having a vertically disposed narrow orifice; and a horizontally rotating wheel adjacent said nozzle and in rolling contact with the object to be glued and adapted to dole out the glue from the nozzle and to apply it to said object.



5. In a gluing machine, the combination of a glue delivering nozzle having a vertically disposed narrow orifice; a horizontally rotating wheel adjacent said nozzle and in rolling contact with the object to be glued; and vertical grooves formed in said wheel and adapted to successively pass said nozzle and to dole out the glue therefrom and to apply it to said object.

[Claims 6 to 8 not printed in the Gazette.]

962,620. ADJUSTABLE CLAMP. CLINTON C. BUTLER, Waterloo, Iowa, assignor to William Galloway Company, Waterloo, Iowa. Filed July 16, 1909. Serial No. 508,059.



1. In combination, two spaced-apart bodies, and connecting-means for adjustably securing them together, comprising a block contacting one body, another block contacting with said first-mentioned block, the first-mentioned block being adjustable along the second-mentioned block, a jaw-piece adapted to detachably grasp the other body between it and the second-mentioned block, and means for detachably connecting all of said elements rigidly together.

2. In combination, two spaced-apart bodies, and connecting-means for adjustably securing them together, and for adjustably spacing them apart, comprising a block contacting one body, another block fitted slantwise to the said first-mentioned block, the first-mentioned block being adjustable along the second-mentioned block, a jaw-piece adapted to detachably grasp the other body between it and the second-mentioned block, and means for detachably connecting all of said elements rigidly together.

3. In combination, a driving-wheel provided with spokes, a sprocket- or gear-rim, and means for adjustably connecting said wheel and rim, composed of pairs of detachable jaws grasping certain of said spokes between their members, one member of each pair of jaws having a slanting surface, a block contacting with said rim and adjacent to the jaw-member having a slanting face, the said block being beveled to fit such slanting face, and

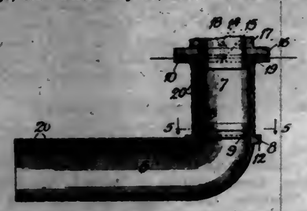
adjustable lengthwise therealong, and securing means for detachably connecting together said jaw-members, their inclosed spokes, said blocks and said rim in rigid union.

4. In combination, a driving-wheel provided with spokes, a perforated sprocket- or gear-rim, and means for adjustably connecting said wheel and rim, comprising slotted blocks contacting with said rim and placed opposite certain spokes of said wheel, a perforated jaw-member contacting with each block, another perforated jaw-member detachably clasping a spoke between itself and the first-mentioned jaw-member, and removable bolts passed through the perforations in said rim, said blocks and said jaw-members, for adjustably connecting them together.

5. In combination, a driving-wheel provided with spokes, a perforated sprocket- or gear-rim, and means for adjustably connecting said wheel and rim, comprising slotted blocks contacting with said rim and placed opposite certain spokes of said wheel, a perforated jaw-member contacting with each block, another perforated jaw-member detachably clasping a spoke between itself and the first-mentioned jaw-member, the contacting surfaces of said first-mentioned jaw-member and block being slantwise relative to said rim, and removable bolts passed through the perforations in said rim, said blocks and said jaw-members, for adjustably connecting them together.

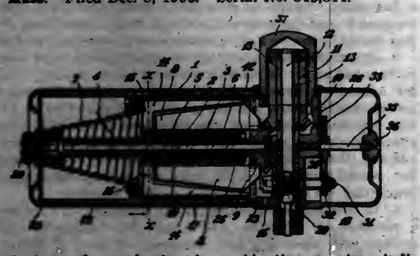
[Claims 6 and 7 not printed in the Gazette.]

962,621. CLOSET CONNECTION. FRANK W. CARLSON, Chicago, Ill. Filed May 19, 1909. Serial No. 496,991.



A closet connection consisting of a horizontal member provided at one end with fastening lugs and a seat consisting of a flat portion, a flange extending upwardly from the inner edge thereof, and having its upper outer edge chamfered off to form with an upright member a recess for the reception of cement, said upright member engaging said seat and provided at its upper end with a horizontal flange, means engaging said flange and said lugs for securing the upright and horizontal members together, a plurality of bolts extending up through said flange, and lock nuts for normally maintaining said bolts in upright position to receive a bowl adapted to be secured thereto.

962,622. SPEED-GAGE. LOUIS A. CASGRAIN, Beverly, Mass. Filed Dec. 8, 1906. Serial No. 346,844.



1. A speed gage having, in combination, a rotary indicator provided with a series of graduations to indicate a given range of speeds extending around the indicator a plurality of times, means actuated by the object of which the speed is to be indicated for exerting a rotative force on the indicator varying with the speed of the object, and a spring acting on the indicator in opposition to said rotative force, constructed and arranged to permit the indicator to make a plurality of revolutions as the speed of the object varies through the range for which the indicator is designed and coöperating with said force to bring each graduation opposite a fixed point as the object attains the speed indicated by the graduation, substantially as described.

2. A speed gage having, in combination, a cylindrical indicator arranged to rotate and move longitudinally and provided upon its surface with a helical series of graduations arranged to register successively with a fixed point, and means for rotating the indicator and means for simultaneously moving the indicator longitudinally to cause the graduations to register successively with said point as the speed of the object, the speed of which is to be indicated, varies, substantially as described.

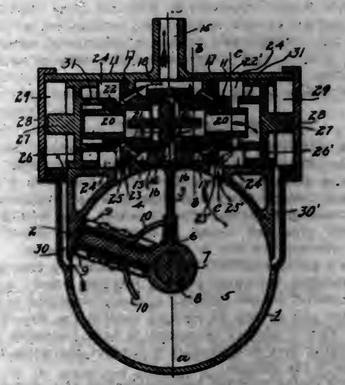
3. A speed gage having, in combination, a casing provided with a window, a cylindrical indicator arranged to rotate and move longitudinally within the casing and provided upon its surface with a series of graduations arranged helically so as to register successively with the window, and means for rotating the indicator and means for simultaneously moving the indicator longitudinally to cause the graduations to register successively with said window as the speed of the object, the speed of which is to be indicated, varies, substantially as described.

4. A speed gage, having, in combination, a cylindrical indicator, means for imparting to the indicator a force varying with the speed to be indicated, means whereby the indicator is caused to simultaneously rotate and move axially under the influence of said force and a spring connected with the indicator to resist such movement, substantially as described.

5. A speed gage, having, in combination, an indicator mounted on a screw-threaded axis so as to move longitudinally as it is rotated thereon and means actuated by the object of which the speed is to be indicated for imparting rotary movement to the indicator varying in extent with the speed of the object, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

962,623. HYDRAULIC MOTOR. PETER T. COFFIELD, Dayton, Ohio. Filed Jan. 13, 1909. Serial No. 472,016.



1. In a hydraulic motor, a cylinder, a piston within said cylinder, puppet valves for admitting and exhausting the motive fluid to and from the cylinder, and means actuated wholly by the water pressure to cause a complete reversal of the valves at each end of the piston stroke.

2. In a hydraulic motor, a cylinder, a piston within the cylinder, inlet and exhaust valves, plungers arranged to engage said valves, and ports coöperating with the valves and plungers, the piston controlling the ports leading to the plungers, the valves, plungers and ports, being constructed and arranged to operate with a liquid, and the plungers imparting the entire movement to the valves.

3. In a hydraulic motor, a cylinder, a piston movable within said cylinder, an inlet valve having tubular extensions through which the motive fluid alternately flows to opposite sides of the piston, exhaust valves, and means enabling said valves to receive their entire movement by fluid pressure.

4. In a hydraulic motor, a cylinder, a piston in said cylinder, valves controlling the admission of the motive fluid to said piston, means for actuating said valves, and means whereby the flow of live fluid to the rear of the piston is prevented until the valves have been entirely shifted.

5. In a hydraulic motor, a cylinder, a piston, valves controlling said piston, plungers operating said valves, means on said plungers coacting with said valves in controlling the motive fluid while the plungers are completely shifting said valves, and ports to conduct the live fluid to said plungers.

[Claims 6 to 20 not printed in the Gazette.]

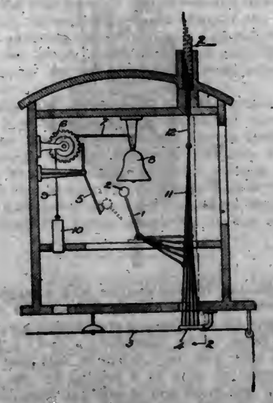
962,624. SIPHON. EGBERT C. COOK, Lakewood, N. Mex. Filed Sept. 24, 1908. Serial No. 454,517.



1. In a siphon of the class described, an influent leg having its intake end cut at an angle, and semi-bands secured at the said end of the leg and extending in advance of its said angularly cut end.

2. In a siphon of the class described, an influent leg having its intake end cut at an angle, and semi-bands secured at the said end of the leg and extending in advance of its said angularly cut end, the said bands being arranged in parallel relation with their bowed extremities terminating in a plane at an angle to the plane occupied by the said angularly cut end of the leg.

962,625. FIRE-ALARM SYSTEM. ROMAIN COUTURE, Somersworth, N. H. Filed Jan. 25, 1909. Serial No. 474,124.

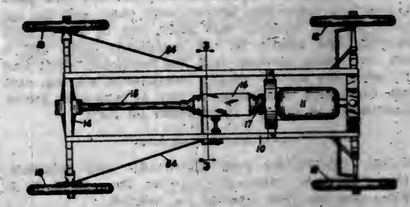


1. A series of cords normally held taut and a fixed guide ring through which they pass in bent lines, in combination with a series of weighted bell crank levers to which said cords are severally attached, each cord being arranged to hold its lever normally out of action, a pivoted pawl having a broadened tail arranged to receive the stroke of the weighted end of any one of said levers when it is freed by the burning or other severance or release of its cord, a ratchet wheel normally held out of action by said pawl, means for automatically turning said wheel and a signaling device operated by said wheel when thus turned substantially as set forth.

2. A series of cords and a guiding device through which they pass, in combination with a series of automatically acting levers, normally held out of action by said cords respectively, signaling mechanism comprising a ratchet wheel and a pawl normally engaging and detaining said wheel but arranged to be struck and released by the action of any one of said levers when the latter is freed substantially as set forth.

3. Signaling mechanism comprising a ratchet wheel, a pawl engaging said wheel to lock the same, a lever having a weighted end arranged to fall on said pawl and free the same, a cord normally holding up said weighted end but when severed permitting said end to fall with the operation set forth.

962,626. AUTOMOBILE. CLAUDE E. COX, Minneapolis, Minn. Filed Oct. 29, 1909. Serial No. 525,365.



1. In an automobile, the combination, with the main frame and its supporting wheels, of a driving axle structure, a transmission gearing drivingly connected with the movable members of the driving axle structure and movable as a whole relative to the main frame, a controlling lever mounted upon the main frame and movable thereon in two planes, a rock shaft carried by the body of the transmission gearing and movable therein both rotatively and axially, a member carried by said rock shaft and adapted to engage with either of two shifting members comprised within the transmission gearing, and intermediate flexible connections between the controlling lever and said rock shaft, compensating the relative movement between the transmission gearing body and the main frame, whereby said rock shaft may be shifted both rotatively and axially by the controlling lever on the main frame.

2. In an automobile, the combination, with the main frame and is supporting wheels, the driving axle structure, and transmission gearing connected with and partaking of the movement of the driving axle structure, said transmission gearing comprising a controlling member for alternate engagement with two gear-controlling members, of an operating member mounted upon the main frame and capable of swing in two planes, and a laterally flexible connection between said member and the controlling member of the transmission gearing.

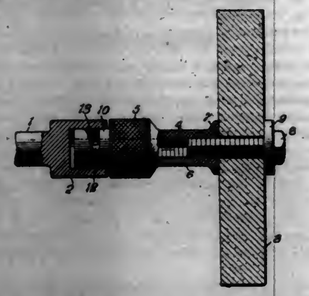
3. In an automobile, the combination, with the main frame and its supporting wheels, the driving axle structure, and transmission gearing connected with and partaking of the movement of the driving axle structure, said transmission gearing comprising a controlling member for alternate engagement with two gear-controlling members and capable of rotative and axial selective movement, of an operating member mounted upon the main frame and capable of swing in two planes, and a laterally flexible connection between said member and the controlling member of the transmission gearing.

4. In an automobile, the combination, with the main frame and its supporting wheels, the driving axle struc-

ture, and transmission gearing connected with and partaking of the movement of the driving axle structure, said transmission gearing comprising a controlling member for alternate engagement with two gear-controlling members, of an operating member mounted upon the main frame and capable of swing in two planes, a laterally flexible connection between said member and the controlling member of the transmission gearing, a shaft journaled upon the main frame and capable of both rotative and axial movement, a connection between said shaft and the last-mentioned controlling lever whereby said shaft may be moved both rotatively and axially by the controlling lever, and a shaft connection between said last-mentioned shaft and the controlling member of the transmission gearing, said shaft connection comprising a pair of universal joints, substantially as and for the purpose set forth.

5. In an automobile, the combination, with the main frame and its supporting wheels, the driving axle structure, and transmission gearing connected with and partaking of the movement of the driving axle structure, said transmission gearing comprising a controlling member for alternate engagement with two gear-controlling members and capable of rotative and axial selective movement, of an operating member mounted upon the main frame and capable of swing in two planes, a shaft journaled upon the main frame and capable of both rotative and axial movement, a connection between said shaft and the operating member whereby said shaft may be moved both rotatively and axially by the controlling lever, and a shaft connection between said last-mentioned shaft and the controlling member of the transmission gearing, said shaft connection comprising a pair of universal joints, substantially as and for the purpose set forth.

962,627. COUPLING FOR GRINDING AND POLISHING WHEELS. MICHAEL CUMMINS, Bergenfield, N. J. Filed Oct. 30, 1908. Serial No. 460,236.

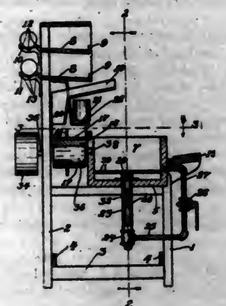


A coupling, comprising a shaft having a hollow head provided with a pin projecting inwardly therefrom, a second member adapted to be connected at one end to a wheel and having at its other end a cylindrical projection provided with a longitudinal passageway in its periphery, and circumferential slots connected with said longitudinal passageway, whereby said second member may be rotated and interlocked with the first-mentioned member, said slots each having an inclined wall.

962,628. COMBINED WASHING AND CONVEYING APPARATUS. ARTHUR L. DUNCAN, Oakland, Cal. Filed May 11, 1909. Serial No. 495,355.

1. An apparatus of the character described comprising a plurality of vats, means for supplying cans thereto, means for removing filled cans therefrom, a tray for each vat, means for feeding material to each tray, a ram for each tray, and a source of hydraulic pressure for raising said rams and also providing a circulation through each vat.

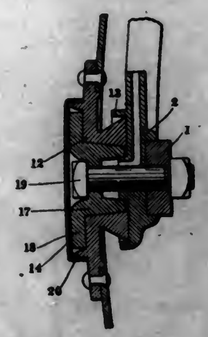
2. An apparatus of the character described comprising a plurality of vats, means for supplying empty cans thereto, means for removing filled cans therefrom, a tray for each conveyer, a conveyer provided with compartments one of which carries material to said trays and the other removes rejected material therefrom, and a source of hydraulic pressure for actuating said trays and also providing a circulation through each vat.



3. An apparatus of the character described comprising a plurality of washing vats, conveyers for delivering empty cans thereto, conveyers for removing filled cans therefrom, a tray mounted in each vat, a belt for delivering material to said vats and removing rejected material therefrom, and a source of hydraulic pressure supply for each vat for actuating the trays therein and also providing a circulation therethrough.

4. In an apparatus of the character described a plurality of washing vats, a ram slidably mounted in each vat, a perforated tray carried by one end of said ram and positioned in said vat, a source of hydraulic pressure supply for providing water for washing purposes and also to actuate the rams, and a valve for controlling said pressure supply.

962,629. BEARING. CHARLES L. FOWLE, Dowagiac, Mich., assignor to Dowagiac Manufacturing Company, Dowagiac, Mich. Filed Mar. 4, 1908. Serial No. 419,155.



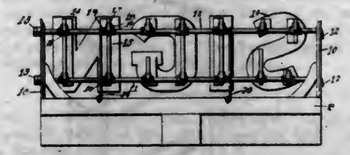
1. In a bearing, the combination with a support, having a dust guard thereon; a bearing stud on said support; a bearing sleeve for said bearing stud having an outwardly-projecting flange at its inner end; a disk; a hub flared toward its inner end, said flange on said bearing sleeve being arranged to serve as a bearing for the inner end of said hub, said flared end of said hub being arranged to project into said dust guard on said support, whereby the bearing joint is covered and the dust or dirt falling upon the hub is deflected thereby away from the inner end of the hub; a retaining washer for said hub; a retaining bolt therefor; and a cap for the outer end of said hub adapted to embrace said retaining washer and bolt.

2. In a bearing, the combination with a support, having a dust guard thereon; a bearing stud on said support; a disk; a hub flared toward its inner end, said flared end being adapted to form a thrust bearing member, said flared end being arranged to project into said dust guard on said support whereby the bearing joint at the inner end of said hub is covered and the dust or dirt falling on said hub is deflected away from the bearing joint; a thrust bearing member on said support adapted to coact with said thrust bearing member of said hub; a retaining washer for said hub; a retaining bolt therefor; and a cap for the outer end of said hub adapted to embrace said retaining washer and bolt.

3. In a bearing, the combination with a support, having a dust guard thereon; a bearing stud on said support; a disk; a hub flared toward its inner end, said flared end being arranged to project into said dust guard on said support whereby the bearing joint at the inner end of said hub is covered and the dust or dirt falling on said hub is deflected away from the bearing joint; and a retaining washer for said hub; a retaining bolt therefor; and a cap for the outer end of said hub adapted to embrace said retaining washer and bolt.

4. In a bearing, the combination with a support, having a dust guard thereon; a bearing stud on said support; a disk; a hub flared toward its inner end, said flared end being arranged to project into said dust guard on said support whereby the bearing joint at the inner end of said hub is covered and the dust or dirt falling on said hub is deflected away from the bearing joint; a retaining bolt for said hub, and a cap arranged on the outer end of said hub to embrace and inclose said retaining bolt and to close the outer end of said hub.

962,630. SIGN. JOHN M. FRANCIS, Marion, Ind. Filed Oct. 21, 1909. Serial No. 523,831.



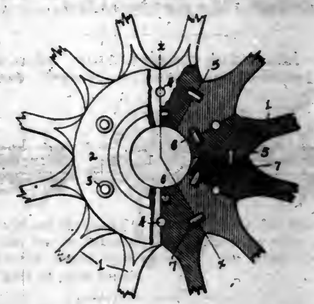
1. A sign comprising supporting rods, letters, wings secured to the rear faces of the letters and having openings receiving the supporting rods whereby the said letters may be adjusted longitudinally on said rod, and wires carried by the letters and having their ends twisted at opposite sides of the wings about the rods, substantially as described.

2. In a sign, the combination of a suspension element, a letter, wings fixed to and projecting at right angles from the rear face of the letter and having inclined slots opening through its free edge, and bendable wires carried by the wings adjacent to the slot whereby the ends of said wire may be twisted at opposite sides of the wings about said suspension element when passed through said slots to detachably secure said letter to the suspension element.

962,631. WHEEL CONSTRUCTION. CHESTER A. FRICK, Defiance, Ohio. Filed Dec. 4, 1909. Serial No. 531,814.

1. In a wheel, the combination with the abutting hub ends of spokes having registering sockets therein, of dowel-pins disposed within said sockets to lock the spokes against relative movements, said pins being arranged in staggered relation and tangentially disposed relative to circles concentric to the wheel axis.

2. In a wheel, the combination with the abutting hub ends of the spokes having registering dowel-pin sockets in their meeting faces, of dowel-pins secured within said sockets and tangentially-disposed relative to circles concentric to the wheel axis, said pins being arranged in two



radially spaced circular sets, the members of which are disposed within alternate seams between the spokes, substantially as and for the purpose described.

962,632. POST AND WIRE-FENCE CONSTRUCTION. PARMENAS F. FROST, New York, N. Y. Filed Dec. 11, 1908. Serial No. 466,947.



1. The combination with an angle-form post and a fence fabric, of means for securing the upper portion of the fabric to the post, an angle-form slide having flanges embracing the outer surfaces of the flanges of the post and equipped with inturned flanges lying adjacent to the edges of the flanges of the post, inturned flanges carried by said last-named flanges, and an angle-form wedge having flanges lying adjacent to the inner surfaces of the flanges of the post and having its edge portions received between the flanges of the post and the last-named flanges of said slide.

2. The combination with a post and fence-fabric, of a combination earth-bearing and wire-securing device comprising a member slidably connected with the lower portion of the post and equipped with fins adapted to engage the earth, and equipped also with wire-engaging means.

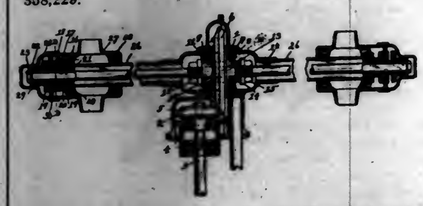
3. The combination of a post, and a member slidably connected therewith and adapted to be driven into the earth after the post has been erected, said member equipped with wire-engaging means.

4. A combination slide and bearing for posts adapted to be driven into the earth, comprising an angle-form elongated member equipped with flanges for engaging the flanges of the post, equipped also with fins for engaging the earth, and equipped also with a hook for engaging a strand-wire.

5. A slide adapted for connection with a post and to be driven into the earth to serve in the vertical tensioning

of the fence-fabric, said slide comprising an elongated member having flanges adapted to embrace the flanges of an angle-form post, one of said flanges having its outer surface equipped with a down-turned hook.

962,633. REAR-AXLE CONSTRUCTION. ROYAL H. GILBERT, Lakewood, Ohio. Filed Feb. 19, 1907. Serial No. 358,229.



1. In a motor vehicle, in combination, suitable driving wheels, an axle for operating the same, a driving member, suitable coupling devices between said axle and each of the driving wheels whereby the former may be coupled to the latter to drive the same in either direction, each of said wheels being capable of rotating independently at greater speed than the axle when driving in either direction, and means automatically operated and arranged between said driven member and said axle for bringing about the automatic operation of such of the coupling devices as will cause the wheels to be driven by the axle in the proper direction.

2. In a motor vehicle, in combination, a driven member, driving wheels, an axle for operating the driving wheels, suitable coupling devices between said axle and each of the driving wheels whereby the former may be coupled to the latter to drive the same in either direction, both of said wheels being capable of rotating independently at greater speed than the axle when operated in either direction, and means automatically operated by the driven member and arranged between such driven member and the axle for bringing about the automatic operation of such of the coupling devices as will cause the wheels to be driven by the axle in the proper direction.

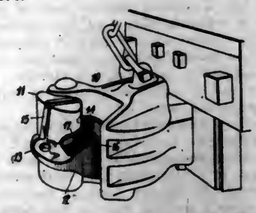
3. In a motor vehicle, in combination, a driven member, driving wheels, an axle for operating the driving wheels, suitable coupling devices between said axle and each of the driving wheels whereby the former may be coupled to the latter to drive the same in either direction, each of said wheels being capable of rotating at greater speed than the axle when operated in either direction, said coupling operation being brought about by the movement of said axle longitudinally, and means between said driven member and said axle for shifting the latter automatically by the operation of the driven member in either direction, and thereby operating such of the coupling devices as will cause the wheel to be normally driven by the axle in the proper direction.

4. In a motor vehicle, in combination a driven member, an axle, driving wheels, clutch mechanism between said wheels and said axle and arranged in a manner such that when the latter is shifted longitudinally in one direction the wheels will be coupled to the same for driving in one direction and when said axle is shifted in the opposite direction said wheels will be coupled thereto for operation in the reverse direction, and means between said driven member and said axle for shifting the former in the proper direction for driving forward and for shifting it in a reverse direction for driving to the rear.

5. In a motor vehicle, in combination, a driven member, an axle, driving wheels, clutch mechanism between said wheels and said axle and arranged in a manner such that when the latter is shifted longitudinally in one direction the wheels will be coupled to the same for driving in one direction and when said axle is shifted in the opposite direction said wheels are coupled thereto for operation in the reverse direction, and means between said driven member and said axle for automatically shifting the same to bring about the proper coupling of said clutch members according to the direction of rotation.

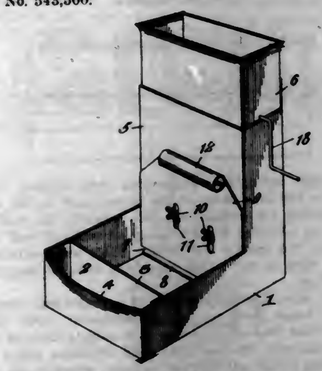
[Claims 6 to 21 not printed in the Gazette.]

962,634. AUXILIARY COUPLING-HOOK. DAVID T. GOODMAN, Altoona, Pa. Filed June 15, 1909. Serial No. 502,276.



A wrecking hook comprising a metal plate having a body portion adapted to fit horizontally in a coupler and a curved extension adapted to lie horizontally around the knuckle of a coupler, said extension being provided with an opening spaced from the end of the extension and forming a rope receiving eye, upper and lower peripheral flanges formed around the body portion and tapering vertically at their ends to merge into said extension, and an inverted U-shaped strap having unequal legs, the shorter leg joining the top of the upper flange at that portion which is adapted to lie immediately behind the knuckle and the longer leg joining the upper side of the extension between the opening and the extremity of said extension.

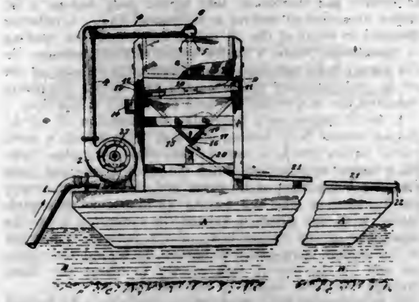
962,635. ADJUSTABLE FEED-TROUGH. FREDRICK C. GRINER, Watertown, S. D. Filed Feb. 12, 1910. Serial No. 543,500.



A device of the character set forth comprising a feed trough, an upright chute arranged at the rear thereof and having an open top, a hopper movably arranged in the top of said chute, a rotary feed cylinder arranged within the hopper for discharging the contents of its upper portion into said chute and a supporting and operating shaft for the feed cylinder having its ends extending through and rotatable in the hopper and resting on the upper edge of the chute whereby the latter is removably supported in the chute.

962,636. GOLD-SAVING APPARATUS. WILLIAM H. HACKNEY, National Soldiers Home, Cal. Filed Dec. 28, 1908. Serial No. 469,610.

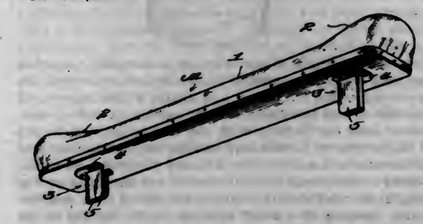
1. In apparatus of the class described, in combination, a distributing tank having a longitudinally extending outlet, means for directing a current of water carrying the gold in a direction extending longitudinally of said outlet, a baffle adapted to divide said current and affording means for guiding a portion thereof toward the remote part of said outlet, and separating means receiving the gold bearing current beyond said outlet.



2. In apparatus of the class described, in combination, a distributing tank having a baffle wall and having an outlet below the level of said wall, means for directing a current of water carrying the gold along said baffle so that said baffle divides said current and guides a portion of said current along the interior of said tank and a gold separator receiving the gold bearing current after passing said outlet, said tank having a bottom inclined transversely to said baffle.

3. In apparatus of the class described, in combination, a distributing tank having an inclined bottom, said bottom having a slot at the lower part thereof extending longitudinally of said tank, a baffle wall extending longitudinally of said tank, means for delivering a current of water carrying the gold in a direction longitudinally of said baffle wall so that said baffle wall divides said current, said baffle affording means for directing the uppermost of said currents toward the remote end of said tank, a gold separator and means for directing the current from said outlet on to said amalgamating plate.

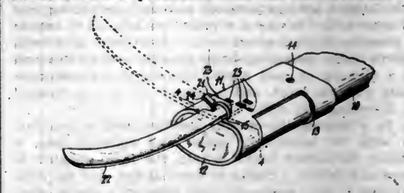
962,637. FOOT-REST FOR VEHICLES. HALLIE D. HANSFORD, Sylvester, Ga. Filed June 28, 1909. Serial No. 504,894.



A footrest adapted for superposition upon a dashboard having attached to its bottom a pair of depending clips arranged to fit over the upper corners of the dashboard, each clip comprising a pair of spaced parallel members, the outer edges of which are integrally connected together, to hold the footrest against lateral and longitudinal movement.

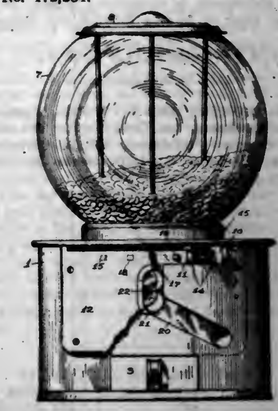
962,638. SCYTHE. VICTOR P. HERBOLD, Newton, Iowa. Filed Oct. 30, 1906. Serial No. 341,216.

The combination with a scythe blade, having a shank; of a handle, the snathe of which is provided with a flattened surface, of a perforated flat plate adapted to fit upon said flattened surface and having an oblong slot and an integral band at each end, said bands encompassing the snathe end of said scythe handle, said snathe having a socket and a perforation communicating with said oblong slot, and an eye-bolt passing through said slot and snathe perforation and one of said bands, to



secure said scythe blade to said handle in the manner set forth, the eye of said bolt being provided with a notch adjacent the shank and being of less width than the widest part of said shank.

962,639. MERCHANDISE-VENDING MACHINE. HARRY ELWOOD HUNTER, San Jose, Cal. Filed Jan. 14, 1909. Serial No. 472,234.



1. In a merchandise-vending machine, a swinging measuring device, having a handle by which it is operated, in combination with a fixed part provided with a coin-receiving groove, which said handle traverses and along the length of which it plays, and automatic locking devices in said groove, acting to hold said handle and depending for their release on the deposit of the coin, whereby the movement of the handle is controlled.

2. In a merchandise-vending machine, a swinging measuring device having a projecting handle by which it is operated, in combination with a fixed part provided with a coin-receiving groove having a length substantially equal to the length of travel of the handle, said handle traversing and playing throughout the length of the groove, and automatic locking devices in said groove, near each extremity thereof, acting to hold the handle at the limits of its movement, and depending for their release on the deposit of the coin, whereby the movement of the handle is controlled.

3. In a merchandise-vending machine, and in combination with its commodity holder and delivery base, a swinging measuring device for transferring by its movement, the commodity from the holder to the base, said measuring device having a projecting handle by which it is swung; a coin-groove in the arc of movement of the handle, automatic locking devices in said groove for holding the handle, and means for releasing said devices through the medium of a deposited coin.

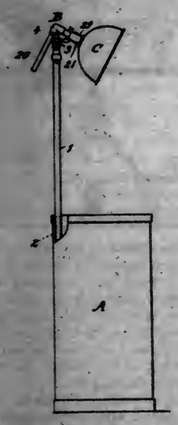
4. In a merchandise-vending machine, and in combination with its commodity holder and delivery base, a

swinging measuring device within the base, adapted by its movement to receive and deliver a charge of merchandise, and the coin-controlled locking means for said measuring device comprising a coin-groove in the front of the base, a spring-controlled lock-latch projecting into said groove, and having a beveled face adapted to receive the pressure of the inserted coin, to force said latch back, a handle of the measuring device crossing said coin groove, and a lock-lug on said handle playing in the groove to engage with the latch, and to pass it by forcing forward and following the coin.

5. In a merchandise-vending machine, and in combination with its commodity holder and delivery base, a swinging measuring device within the base, adapted to receive and deliver a charge of merchandise, and the coin-controlled locking means for said measuring device, comprising a coin groove extending across the front of the base, with a descending coin-passage at its middle, a spring-controlled lock-latch projecting into said groove near each end thereof, and having a beveled face adapted to receive the pressure of the inserted coin, to force said latch back, a handle of the measuring device crossing said coin groove, and having a coin receiving slit in line with the groove, and a pair of spaced lock-lugs on said handle playing in the groove to alternately engage the latches, and to pass them by forcing forward and following the coin.

[Claims 6 to 8 not printed in the Gazette.]

962,640. CONTRACTOR'S TORCH. ALEXANDER F. JENKINS, Baltimore, Md., assignor to The Alexander Milburn Company, Baltimore, Md., a Corporation of Maryland. Filed Dec. 23, 1908. Serial No. 468,952.



1. A contractor's torch light comprising a tank, an outlet pipe supported in upright position thereon to form a burner standard and mounted to turn on a vertical axis, a burner attached to the upper end of the standard and mounted to swing on a horizontal axis, said burner having a jet orifice, a reflector, and means for mounting the reflector on the burner with the jet orifice of the latter behind the reflector.

2. A contractor's torch light comprising a portable tank having a fixed upright pipe discharging gas, and a freely removable and freely rotatable burner attachment applied to the said pipe, said attachment consisting as a unitary structure of the following; a pipe standard slidable on and off and rotatable around the fixed pipe and receiving gas therefrom, a burner body mounted on the standard to move therewith and movable independently thereof on a horizontal axis, a burner tip secured to the said body, a reflector having an opening through which the flame is projected from the tip, and a device separate from both the reflector and burner body for securing and supporting the former on the latter.

3. A burner attachment for contractors' lights comprising a straight pipe standard open at its lower end, a burner body pivotally mounted on the upper end of the standard to swing on a horizontal axis and constructed to receive gas therefrom, said burner body having a jet orifice arranged to deliver a horizontal flame, a reflector disposed in front of the jet orifice and having an opening to receive the flame, a device supporting the reflector on the burner body and slidable longitudinally on and off the latter, and clamping means on the said device releasably engaging the burner body to hold the device in position.

4. In a contractor's light, the combination of an L-shaped burner body having one arm formed into a horizontal hollow pivot, a vertical gas conducting pipe forming a burner standard on which the pivot is mounted, said standard being open at its lower end to loosely fit over a gas discharging pipe and having its upper end communicating with the pivot, a burner tip connected with the other arm of the burner body, and a reflector supported on the burner body with the burner tip behind the reflector and at the convex side thereof to direct the flame through the focal center of the reflector.

5. In a contractor's light, the combination of a burner standard, a burner body pivotally mounted thereon and communicating therewith, a handle for adjusting the burner body, a reflector, an extension piece for supporting the reflector on the burner body, and means for admitting air to the flame from a point behind the reflector through the extension piece.

[Claims 6 to 15 not printed in the Gazette.]

962,641. RECEPTACLE FOR LIQUIDS. JOHN W. KAUFMANN, Baltimore, Md. Filed Dec. 9, 1909. Serial No. 532,203.



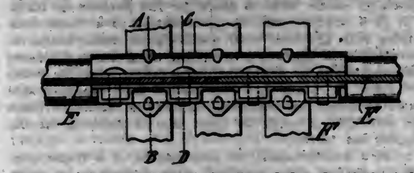
As a new article of manufacture, a drinking receptacle having a closed top integral therewith and flush with the upper end of the receptacle, and having a filler opening in one side of said top, and a smaller opening in the opposite side of said top forming with the curved edge of the top of the receptacle, a discharge opening adapted to be placed at the mouth of a person for drinking purposes, and a tube located in the receptacle adjacent to one side thereof and integral therewith and extending downward from said discharge opening to a point adjacent to the bottom of the receptacle.

962,642. NUT-LOCK. BASEL D. KEMP, Gracemont, Okla. Filed Feb. 11, 1910. Serial No. 548,252.

1. A nut lock including an elongated metal strip having a plurality of laterally extending nut receiving extensions, and tongues interposed between said extensions and extending from the lower edge of the strip.

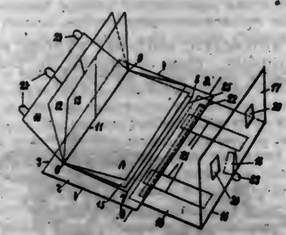
2. A nut lock including a single elongated metal strip having a series of substantially U-shaped nut receiving extensions, there being a bolt receiving opening in the intermediate portion of each extension, and tongues extending from the lower edge of the strip at points between the extensions, each tongue having a fastener receiving opening.

3. The combination with meeting rails and fish plates bolted thereto, one of said plates having wings extending from the base thereof, and beyond the sides of the rails, of nuts upon the bolts, an elongated locking strip having laterally extending nut receiving extensions, there being apertures within the intermediate portions of said exten-



sions for the reception of the threaded ends of the bolts, and tongues extending laterally from the lower edge of the strip and between the extensions, said tongues resting upon the wings, there being registering openings within the wings and tongues and combined rail fastening and strip holding devices extending through the apertures.

962,643. ALBUM. HERMANN KNOPPING, Berlin, Germany. Filed Jan. 3, 1910. Serial No. 536,215.



1. A view or picture album, comprising in combination, two covers joined together at the rear and sides, one of said covers being cut along three sides, and adapted to be folded at the fourth side of a rectangle and being provided with a stereoscopic picture, a folding stereoscope normally between said covers and adapted to be partially withdrawn therefrom and used for viewing said picture.

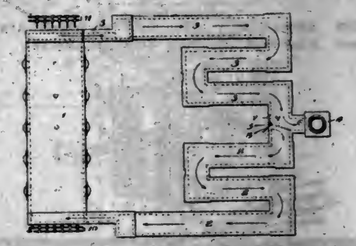
2. A view or picture album, comprising in combination, two covers joined together at the rear and sides, one of said covers being cut along three sides, and adapted to be folded at the fourth side of a rectangle and being provided with a stereoscopic picture, a plurality of leaves having stereoscopic pictures each attached at the fold of the cut cover, a folding stereoscope normally between said covers and adapted to be partially withdrawn therefrom and used for viewing said pictures.

3. A view or picture album, comprising in combination, two covers joined together at the rear and sides, one of said covers being cut along three sides, and adapted to be folded at the fourth side of a rectangle and being provided with a stereoscopic picture, a folding stereoscope normally between said covers, and means attached to one of said covers movably attaching said stereoscope thereto.

4. A view or picture album, comprising in combination, two covers joined together at the rear and sides, one of said covers being cut along three sides, and adapted to be folded at the fourth side of a rectangle and being provided with a stereoscopic picture, a plurality of leaves having stereoscopic pictures each attached at the fold of the cut cover, a slit, folding stereoscope normally between said covers and a strip of paper attached to one of said covers and threaded through the slits in said stereoscope.

962,644. REGENERATIVE REVERBERATORY FURNACE. FREDERICK A. LEAS, Oakland, Cal. Filed Oct. 5, 1908. Serial No. 456,256.

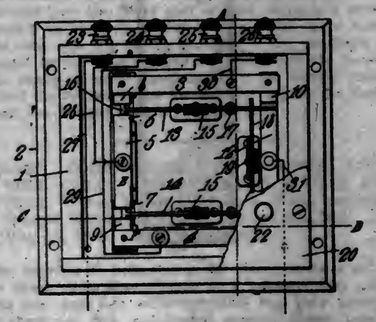
1. The combination with a reversible reverberatory copper or like furnace, of two dust settling regenerative flues directly connected to opposite ends of said furnace, a damper between said flues arranged to direct the products of combustion passing through one flue after they have traversed the same and heated the walls thereof to an outlet, and to direct air through the other flue for preheating on its way to the furnace, whereby the dust from the furnace is deposited by the products of combustion in one flue, while the air is being preheated by the other, substantially as described.



2. The combination with a reversible furnace, having two regenerative flues communicating with a common outlet and with the atmosphere, of a three winged damper for reversing the action of the furnace having its bearings located outside of the central heat of the flues, one wing of said damper controlling the exit from each of said flues to the common outlet, and the other two wings thereof each controlling the inlet of air from the atmosphere to one of said flues, substantially as described.

3. The combination with a reversible furnace having two regenerative flues communicating with a common outlet and with the atmosphere, of a damper comprising three wings, a rock shaft to which said wings are secured having its bearings in the walls of the flue opposite the common outlet at points farthest removed from the central heat of the flues, one wing of said damper controlling the exit from each of said flues to the common outlet, and the other two wings thereof each controlling the inlet of air from the atmosphere to one of said flues, substantially as described.

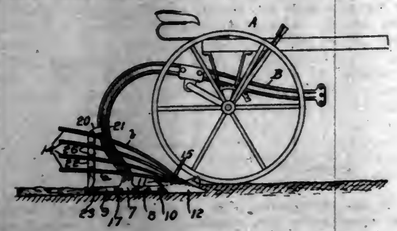
962,645. TELEPHONE SYSTEM. REASON C. LIVINGSTON, Spring Valley, Minn. Filed May 21, 1908. Serial No. 434,170.



1. In a telephone system, a suitable main having its continuity broken at each station at two points, independently operable switches each normally closing a respective one of the breaks in the main, a telephone unit normally excluded from the main, a signal mechanism normally connected to the main through both switches and excluded from the respective side of the main by the operated switch, and means individual to each switch for coupling the telephone unit to the respective side of the main.

2. In a telephone system, a main having its continuity broken at two points, a signal means connected to the main between the said breaks, separate bridging means normally closing both breaks in the circuit, a telephone unit, and circuit closing means independent of and having a common connection to the telephone unit under the individual control of the separate bridging means when either of the latter is moved to break the continuity of said main.

962,646. BREAKING-PLOW. JOHN W. MAJEK, Atwood, Kans. Filed Sept. 30, 1907. Serial No. 395,231.



In a plow, a beam, a foot thereon, a share and mold board attaching plate at the forward end of said foot, a brace for said plate, said brace being bent substantially of L-shape in plan and having its forward end attached to the share and mold board attaching plate and its rearward end to said foot, and a combined rear mold board support and brace comprising a bar having its upper end connected to the beam and its lower end to the first named brace adjacent the bend thereof.

962,647. WINDOW-SASH. EDGAR M. MATTHEWS, Chicago, Ill., assignor of one-half to W. E. Rothermel, Chicago, Ill. Filed Mar. 2, 1910. Serial No. 546,883.



1. In a window-sash, the combination of a frame comprising rails provided with window-pane seats, beads cooperating with said seats to confine the pane, and key-operated clamping-means coöperating with the beads to releasably secure them in place with the operating key extending for access through the face of the sash, for the purpose set forth.

2. In a window-sash, the combination of a frame comprising rails provided with window-pane seats, spring-pressed beads coöperating with said seats to confine the pane, and key-operated clamping-means coöperating with the beads to releasably secure them in place with the operating key extending for access through the face of the sash, for the purpose set forth.

3. In a window-sash, the combination of a frame comprising rails provided with window-pane seats, trough-shaped cushions on said seats for confining said pane about its edges, spring-pressed beads coöperating with said seats and cushions to confine the pane, and key-operated clamping-means coöperating with the beads to releasably secure them in place, for the purpose set forth.

4. In a window-sash, the combination of a frame comprising rails provided with window-pane seats, beads cooperating with said seats to confine the pane, cam-pressed clamping-means on the frame coöperating with the beads to confine the pane, and cam-headed keys engaging said clamping-means to releasably secure the beads in place and extending through the front face of the sash, for the purpose set forth.

5. In a window-sash, the combination of a frame comprising hollow rails provided with window-pane seats, hollow beads coöperating with said seats to confine the pane, clamping-blocks in the frame each having a key-bore in its stem, cams in the frame extending into and engaging the beads, and cam-headed keys extending through the beads, cam-heads and clamping-blocks to engage their heads with said blocks and to tighten said cams against the beads and thereby releasably secure the beads in place, for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

962,648. AUTOMATIC SHUT-OFF SYSTEM FOR GAS AND LIQUIDS. COSBY D. MILLER, St. Joseph, Mo. Filed Sept. 1, 1909. Serial No. 515,589.



1. In an automatic shut-off system, for gas and liquids; an exhaust pipe, having a plurality of fusible diaphragm holders, connected therewith, said holders each having an exhaust opening therein, and a fusible diaphragm secured thereon and covering said exhaust opening; in combination with a diaphragm operated shut-off valve, said shut-off valve comprising a diaphragm holder having a central aperture, a port opening and an exhaust opening through the bottom thereof, and a diaphragm chamber therein; a diaphragm covering said diaphragm chamber; a cover for covering said diaphragm, said cover having an aperture through the center thereof, and provided with securing means, whereby the edge of said cover, the edge of said diaphragm and the edge of said diaphragm holder are secured together; a valve body secured to said diaphragm holder, said body being provided with a valve chamber formed therein, and an inlet opening leading into said valve chamber; said body being further provided with a valve opening, an outlet chamber and an outlet opening leading from said valve chamber, and also with a port in the wall thereof, in register with said port opening in said diaphragm holder for placing said outlet chamber in communication with said diaphragm chamber; a valve in said valve chamber adapted to close said valve opening; a second diaphragm, for at all times closing said aperture in the bottom of said holder, said second diaphragm being adapted to form elastic packing between said valve body and said diaphragm holder; a valve stem, having its lower end formed with said valve and its upper end provided with securing means, whereby said valve stem is secured to said second diaphragm and connected to the first mentioned diaphragm; a weight, of predetermined amount, on the first mentioned diaphragm; a bolt, extending through said aperture in said diaphragm

cover, through said weight, and through said first mentioned diaphragm, the lower end portion of said bolt being secured in said valve stem securing means, for securing said weight, said first mentioned diaphragm and said valve stem together.

2. In a shut-off system, in combination; a diaphragm operated shut-off valve, having a valve body and a diaphragm holder and securing means whereby said body and holder are secured together; said valve body having an inlet opening, a valve chamber, a valve opening, an outlet chamber and an outlet opening, forming a closable continuous passage through said body; a valve in said valve chamber, adapted to close said valve opening; a diaphragm chamber in said holder; an operating diaphragm covering said diaphragm chamber, a cover for covering said diaphragm and securing means whereby the edges of said cover and diaphragm are secured on said holder; communicating means whereby said outlet chamber is communicatively connected with said diaphragm chamber, said diaphragm chamber being provided with an exhaust opening formed through said diaphragm holder, said exhaust opening being adapted to exhaust gas from said diaphragm chamber while said communicating means is open; together with an exhaust pipe connected with said exhaust opening, said exhaust pipe having a fusible diaphragm holder, connected therewith, said holder having an exhaust opening therethrough, and a fusible diaphragm thereon and covering said exhaust opening and securing means, whereby said fusible diaphragm is secured on said holder.

3. In a shut-off system, a diaphragm operated shut-off valve provided with a diaphragm holder, having a diaphragm chamber therein and a plurality of exhaust openings through the bottom thereof, adapted to exhaust gas or liquid from said diaphragm chamber, in combination with a plurality of exhaust pipes connected with said exhaust openings, each of said pipes being provided with a plurality of fusible diaphragm holders, connected therewith, each of said last mentioned holders having an exhaust opening therethrough, and fusible closing means whereby said last mentioned exhaust opening is closed.

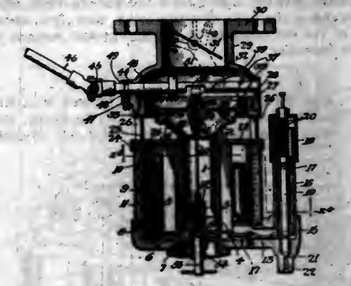
4. In an automatic shut-off system, a fusible diaphragm holder, having an exhaust opening therethrough, a fusible diaphragm, covering said exhaust opening; a cover, covering said diaphragm, said cover having openings therethrough, adapted to allow circulation of air therethrough and in contact with the outer surface of said fusible diaphragm and securing means, whereby the edges of said diaphragm and said cover are secured to said holder; an exhaust pipe connected with said holder; a shut-off valve, provided with an operating diaphragm, adapted to operate said shut-off valve; a diaphragm holder, for holding said operating diaphragm, said last mentioned holder having a diaphragm chamber therein and connecting means, whereby said last mentioned diaphragm holder is connected with said exhaust pipe, for communicatively connecting said diaphragm chamber with the exhaust opening through said fusible diaphragm holder.

5. In an automatic shut-off system, a fusible diaphragm holder, having an exhaust opening formed therethrough, said holder being adapted to be connected with an exhaust pipe; a fusible diaphragm covering said opening, a cover, covering said diaphragm said cover having openings therethrough; and securing means, whereby the edges of said diaphragm and of said cover are secured to said fusible diaphragm holder.

962,649. CARBURETER. HARRY A. MILLER, Los Angeles, Cal. Filed Nov. 16, 1909. Serial No. 528,399.

1. In a carbureter, a nozzle, means for supplying gasolene thereto, a rod slidable above the nozzle with its lower end extending into the mouth thereof, a shaft extending into the carbureter, an eccentric on the shaft adapted to limit the upward stroke of the rod, a spreader surrounding the rod, and a flange on the shaft forming a stop to limit the upward movement of the spreader.

2. In a carbureter, an annular float chamber, a mixing chamber above the float chamber, an inverted cone with a slidable support therefor enabling a vertical movement of the cone, a spreader in the mouth of the cone leaving an annular space at the edge of the cone, said cone normally closing the lower part of the mixing chamber and lifted by suction within the mixing chamber, and a nozzle directed toward the cone.

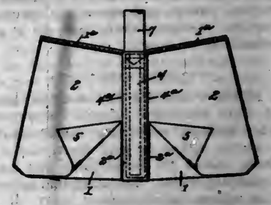


3. In a carbureter, an annular float chamber, a mixing chamber above the float chamber, an inverted cone with a slidable support therefor enabling a vertical movement of the cone, said cone normally closing the lower part of the mixing chamber and lifted by suction within the mixing chamber, said slidable support being hollow, a nozzle directed into the lower part of said support, and a rod supported by the cone and extending to the mouth of the nozzle.

4. In a carbureter, an annular float chamber, a mixing chamber above the float chamber, an inverted cone with a slidable support therefor enabling a vertical movement of the cone, said cone normally closing the lower part of the mixing chamber and lifted by suction within the mixing chamber, said slidable support being hollow, a nozzle directed into the lower part of said support, a spreader carried by the cone forming an annular space between the cone and rim of the spreader, and a rod yieldingly supported by the spreader and extending into the mouth of the nozzle.

5. In a carbureter, an annular float chamber, a mixing chamber above the float chamber, an inverted cone with a slidable support therefor enabling a vertical movement of the cone, said cone normally closing the lower part of the mixing chamber and lifted by suction within the mixing chamber, said slidable support being hollow, a nozzle directed into the lower part of said support, a spreader carried by the cone forming an annular space between the cone and rim of the spreader, a rod yieldingly supported by the spreader and extending into the mouth of the nozzle, a shaft extending into the mixing chamber above the spreader, and an eccentric ing on the shaft to limit the upward movement of the rod.

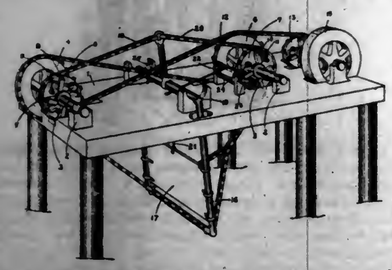
962,650. COMBINATION SHOE QUARTER, LINING, PULL-STRAP, AND EXTENSION DOUBLE BACK-STAY. JACOB MITCHELL, Detroit, Mich., assignor to Mitchell Shoe-Lining Company, Royal Oak, Mich. Filed Mar. 15, 1909. Serial No. 483,555.



The combination with two shoe-quarters carrying linings, of an outer tape-stay disposed over the meeting edges

of said quarters, and to which tape-stay said quarters with their linings are stitched, an inner tape-stay disposed over the meeting edges of said linings and stitched thereto, to the quarters, and to the outer tape-stay, said linings, from the bottom thereof, being slit parallel to the side edges of said inner tape-stay, whereby the linings, at the slit portions, may be folded back for the insertion of a counter, and a heel-tab disposed over said free lower corners of the slit portions of the linings and secured to the inner tape-stay.

962,651. SEA POWER-GENERATOR. ROBERT MAX MOBIUS, San Diego, Cal., assignor to F. K. De Borde, San Diego, Cal. Filed Mar. 24, 1910. Serial No. 551,266.



1. A device of the character described, comprising a platform mounted upon piling, bearings on the platform, a pendulum frame swinging from said bearings, a vertically adjustable panel mounted in the frame, means for securing adjustment of the panel comprising a cable, a drum over which the cable passes, a crank for winding the drum and a pawl engaging the shaft of the drum, and chains in combination with sprocket wheels and pulleys, substantially as shown.

2. A device of the character described, comprising a platform mounted upon piling, bearings upon the platform, a pendulum frame swinging from said bearings and adapted to disengage itself from said bearings, and semi-circular guides upon top of bearings for returning frame to position and chains in combination with wheels and pulleys and a power shaft, substantially as shown.

3. A device of the character described, comprising a platform mounted on piling, bearings upon the platform, a pendulum frame swinging from said bearings, chains secured to the top of the frame and passing over ratchet pulleys, to the bottom of the frame, a division of said chain into two branches which connect with the lower corners of the frame, and a panel mounted within said frame, in combination with pulleys, chains and a power shaft, substantially as shown.

4. The combination of a platform, bearings upon the platform, piles supporting the platform, a frame suspended from the bearings, a panel vertically adjustable within the frame, and made of a specific gravity sufficient to submerge the same to the proper depth in the water, chains attached to the frame and passing over pulleys, pulleys with friction pawls, shafts driven by the friction pawls, springs holding the pawls in engagement with smooth friction pulleys and means for transmitting the power from the friction driven shaft to a main power shaft substantially as shown.

962,652. FLYING-MACHINE. SAMUEL MONTGOMERY, Stockton, Cal. Filed Dec. 14, 1908. Serial No. 467,469.

1. A flying machine comprising a main shaft carrying a cage, a motive means on said shaft, and a parachute on said shaft, means for maintaining said parachute in a normal closed position, and a spring actuated means for throwing said parachute open.

2. A flying machine comprising a main shaft, air vanes disposed on said shaft, such air vanes comprising a plurality of inverted channel irons circumferentially disposed and joined at their ends, means for rotating such vanes, and a cage on said shaft, as described.



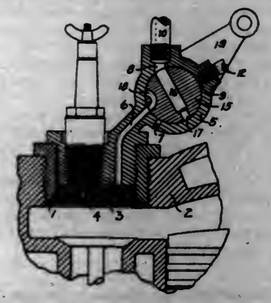
3. A flying machine comprising a main shaft, air vanes thereon, such vanes comprising a plurality of inverted channel members circumferentially disposed and joined at their ends, and spaced apart at such ends to form intermediate air spaces, means for rotating such vanes, and a cage on said shaft, as described.

4. A flying machine comprising a shaft, a cage suspended thereon leaving the shaft free to turn, motive air vanes on said shaft, such vanes being operated by an engine, such engine being secured to said cage and comprising a cylinder, a double action piston therein, a piston rod on said piston, cables on said rod, pulleys on said shaft, such cables extending around such pulleys, and friction clutches engageable with said pulleys for rotating such shaft, as described.

5. A flying machine comprising a shaft, motive vanes thereon, two pulleys spaced apart, and loosely turnable on said shaft, a friction clutch member keyed to said shaft between said pulleys, means for turning said pulleys alternately in opposite directions, and means for engaging said clutch alternately with said pulleys, and a cage adapted to be carried by said shaft.

[Claims 6 to 8 not printed in the Gazette.]

962,653. STARTING APPARATUS FOR GASOLENE-ENGINES. VAUGHAN MORRILL, Tacoma, Wash. Filed Mar. 9, 1910. Serial No. 548,147.

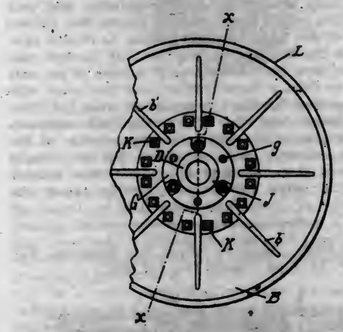


1. In an apparatus for starting gasolene engines, the combination with the engine; of a removable valve casing mounted thereon and having a passage leading to the engine cylinder and an exhaust passage; a valve in said casing and having a gasolene measuring receptacle therein and an exhaust passage therein; a gasolene supply pipe leading to the valve; a compressed air supply pipe leading to the valve; and means to operate said valve.

2. In an apparatus for starting gasolene engines, the combination with the engine; of a removable valve casing mounted thereon and having a gasolene supply passage, a compressed air supply passage, an exhaust passage leading thereinto and a passage leading therefrom to the engine cylinder; a valve within the casing and having a gasolene measuring receptacle and an exhaust passage therein, said passages in the casing and valve being arranged so that when the valve is in inoperative position the gasolene supply passage is connected to the gasolene measuring receptacle and the other passages are closed, and when it is in its intermediate position the engine passage is connected to the exhaust passage through the valve, and when it is in operative position the air supply passage and the cylinder passages are connected to the ends of the gasolene receptacle, whereby a measured quantity of gasolene is injected in vaporized condition in to the cylinder; and means to operate the valve whereby a pause is made at the intermediate position thereof.

3. In an apparatus for starting gasolene engines, the combination with the engine; of a supply of gasolene; a supply of compressed air; a valve controlling the supply of gasolene and compressed air and adapted to release the pressure in the engine cylinders and then to deliver a measured quantity of gasolene to the engine under the influence of the compressed air; a rod to operate said valve against the action of a spring; and a second spring engaging the rod and inactive during the first part of its motion whereby a pause in its motion is made to allow the pressure in the cylinders to be released.

962,654. REEL. FRANK MOSSBERG, Attleboro, Mass., assignor to Frank Mossberg Company, a Corporation of Rhode Island. Filed June 14, 1909. Serial No. 501,922.



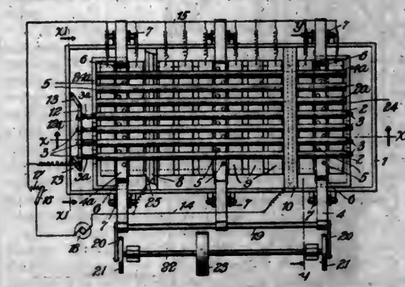
1. In a reel of the class described, the combination with the drum and heads, of hubs in the heads, external annular flanges upon the hubs in contact with the faces of the heads, an axial tube connecting the inner ends of the hubs, and bolts exterior of the tube connecting the flanges.

2. In a reel of the class described, the combination with the drum and heads, of hubs in the heads, external flanges upon the hubs resting against the heads, an axial tube connecting the inner ends of the hubs, bolts connecting the flanges through the heads, and rivets uniting the adjacent flanges and heads.

3. In a reel of the class described, the combination with the drum and heads, of hubs in the heads provided with internal shoulders, external flanges upon the hubs overlapping the heads, an axial tube having its ends within the hubs abutting against the shoulders, and means for connecting the flanges and heads.

4. In a reel of the class described, the combination with the heads provided with central circular recesses, of a drum seated in the recesses, a series of bolts adjacent the drum and connecting the heads, hubs in the heads concentric with the recesses provided with internal shoulders, integral flanges upon intermediate portions of the hubs in contact with the heads, an axial tube seated within the hubs and abutting against the shoulders, a second series of bolts within the first series connecting the opposite heads and flanges, and rivets also connecting each head with its adjacent flange.

962,655. APPARATUS FOR ELECTROPLATING PIPES, &c. DANIEL HAYES MURPHY, New Castle, Pa. Filed June 1, 1908. Serial No. 435,951.



1. As a means for electroplating rods or pipe, a tank containing a plating solution, conductors for supporting the rods or pipe in the solution, anodes in the solution, a source of electric energy, a circuit leading from such source of energy through the anodes, the solution and such rods or pipe, and means for moving the rods or pipe laterally in the tank and thereby imparting a reciprocal rotation thereto.

2. As a means for electroplating pipe, a tank containing a plating solution, means for supporting the pipe in the solution, internal anodes in the pipe in the solution, a source of electric energy, a circuit from the source through the anodes, the solution and the pipe, means for preventing longitudinal motion of the pipe in the tank, means for reciprocating the pipe laterally in the tank and thereby rotating the same, and means for moving the internal anodes longitudinally of the pipe.

3. As a means for electroplating pipe, a tank containing a plating solution, means for supporting the pipe in the solution, internal anodes in the pipe in the solution, a source of electric energy, a circuit closed from the source through the anodes, the solution and the pipe, means for preventing longitudinal motion of the pipe in the tank, means for reciprocating the pipe laterally in the tank and thereby rotating the same, and means for moving the internal anodes longitudinally of the pipe by the lateral displacement of the pipe in the tank.

4. As a means for electroplating pipe, a tank containing a plating solution, means for supporting the pipe in the solution, anodes in the solution outside of the pipe, internal anodes in the pipe in the solution, a source of current, a circuit leading from the source through the anodes, the solution and the pipe, means for moving the pipe laterally in the tank and thereby imparting a reciprocal rotation thereto, and means for moving the internal anodes longitudinally of the pipe.

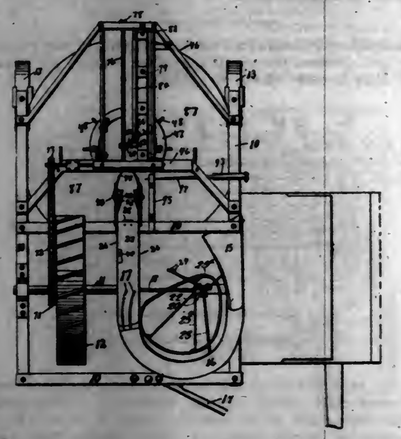
5. As a means for electroplating pipe, a tank containing a plating solution, means for supporting the pipe in the solution, anodes in the solution outside of the pipe, internal anodes in the pipe in the solution, a source of electric energy, a circuit through the source, the anodes, the solution and the pipe, means for reciprocating the pipe laterally in the tank and thereby rotating the same, and means for moving the internal anodes longitudinally of the pipe by the lateral displacement of the pipe in the tank.

[Claims 6 to 27 not printed in the Gazette.]

962,656. GRAIN-SHOCKER. JOHN MCCORMICK, Northville, S. D. Filed Jan. 29, 1906. Serial No. 296,378.

1. In a grain shocker, the combination of a bundle receiving platform, a chute adjacent to the platform and ex-

tended forwardly, laterally and then rearwardly and means actuated by the advance of the machine for forcing bundles of grain from the platform through said chute.



2. In a grain shocker, the combination of a bundle receiving platform, a chute adjacent to the platform and extended forwardly, laterally, upwardly and then rearwardly and means actuated by the advance of the machine for forcing bundles of grain from the platform through said chute.

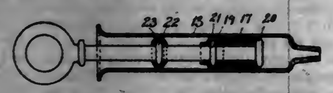
3. In a machine of the class described, the combination of a bundle receiving platform a chute extending forwardly, laterally, upwardly and rearwardly from the platform, said chute formed with slots therein, tines projected through said slots to engage bundles and means actuated by the advance of the machine for moving said tines along said slots.

4. In a machine of the class described, a frame, a traction wheel, a shaft operated by the traction wheel, a number of arms hinged thereto, tines on said arms, a stationary guide to be engaged by said arms, a bundle receiving platform a chute connecting therewith, said chute formed with slots to receive said tines and said guide holding the tines in said slots.

5. In a machine of the class described, a tilting platform, means for depositing bundles of grain on said platform, means actuated by the advance of the machine for elevating said platform, a trigger to be engaged by a bundle on the platform for releasing the mechanism for elevating the platform and spring actuated means for returning the platform.

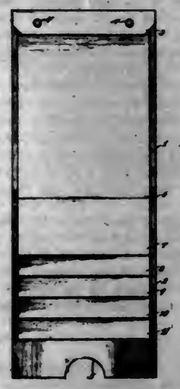
[Claims 6 to 26 not printed in the Gazette.]

962,657. SYRINGE. PATRICK J. MCELROY, Cambridge, Mass., assignor to himself, and Randall-Faichney Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 29, 1906. Serial No. 413,241.



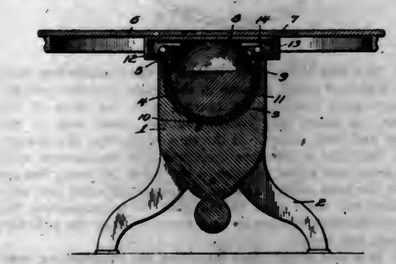
A syringe comprising a tubular barrel and a plunger having a compressible head closely fitting the interior of the barrel, said head including two separate members of substantially equal diameters possessing different degrees of elasticity and having different surface areas, one of said members consisting of an aseptic relatively antifrictional portion of material such as asbestos, and the other member being relatively smaller and consisting of a liquid-proof relatively frictional portion of material such as rubber, both portions being in contact with the barrel.

962,658. SAMPLE-HOLDER. CHARLES M. MCLEOD, Chicago, Ill., assignor to J. V. Farwell Company, Chicago, Ill., a Corporation. Filed Aug. 18, 1909. Serial No. 513,395.



A sample holder of the kind described comprising a single piece body member of bendable material, said body member having at its upper edge a return flap portion adapted to lie flat upon the body portion to receive samples between the flap portion and the body portion, said body portion being bent substantially midway of its ends upon itself to form a cover member, and the lower edge of the body portion having a recess which when the lower portion is folded upon the body portion will assume a position over the return flap at the upper edge of the body portion, whereby said return flap may be engaged by the finger at the recessed portion of the cover member to release the cover member and thereby expose the samples.

962,659. TABLE. PETER C. NIHIL, San Francisco, Cal. Filed Sept. 15, 1909. Serial No. 517,836.



1. A table comprising a pedestal, a socket member carried by the pedestal, a top having a depending spherical head mounted in the said socket member, cushioning means located in the socket member for retarding the movement of the said spherical head, a counterbalancing weight carried by the spherical head, and elastic bodies disposed between the upper end of the pedestal and the underface of the said top.

2. A table comprising a pedestal having a socket member, a movable top, a substantially spherical head mounted in the socket member and having its wall spaced from the walls of said socket member, a cushioning liquid confined in said socket member and surrounding the walls of the said head, and cushioning bodies interposed between the pedestal and the said top.

3. A table comprising a pedestal, a socket member upon the pedestal, a top, a spherical head carried by the top and mounted in the said socket member, a balancing weight carried by the head, and cushioning means between the socket member and head respectively.

4. A table comprising a pedestal having a socket member, a top, means upon the top operatively mounted in the socket member, cushioning means within the socket member and cushioning means upon the pedestal adapted to be engaged with the top upon angular movement of the pedestal.

5. A table comprising a pedestal having a hemispherical socket member, a top having a substantially spherical head operatively mounted in the socket member, anti-friction bodies between the socket member and head respectively, cushioning liquid between the socket and the said head respectively, a gasket upon the pedestal and yieldingly engaged with the said head and disposed above the level of the cushioning liquid, and cushioning bodies between the pedestal and the top respectively.

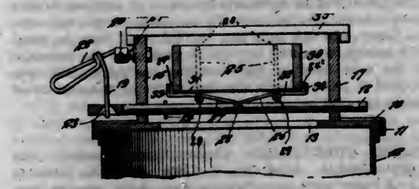
962,660. VALVE. JAMES G. NOLEN, Chicago, Ill., assignor, by mesne assignments, to Automatic Fire Protection Company, a Corporation of Maine. Filed Sept. 6, 1904. Serial No. 223,535.



1. In a valve, a casing providing a valve seat, a recess opening extending inwardly from the exterior of the casing, a valve-member, a stem-part associated with the valve, extending into said recess, and provided with a curved head arranged in said recess, a spring between said head and the bottom of the recess, a cap covering the mouth of said recess, and having an aperture therethrough surrounded with a bearing surface, a second stem part arranged to project through said aperture and seat on said bearing surface, and means connecting the valve stem-parts for rotation.

2. In a valve comprising a casing, an oscillating flap valve, a stem to which said oscillating flap valve is secured projecting through the valve casing and comprising two parts having complementary coacting curved heads, one provided with a recess and the other with a projection engaging said recess, a bearing surface on that stem part which extends to the exterior of the casing, and a seat for said surface in the casing.

962,661. ASH-SIFTER. CHRISTIAN F. NOLTE, New York, N. Y. Filed Jan. 31, 1910. Serial No. 541,124.



1. A device of the class described, comprising a base member adapted to support a receptacle, a sifter located within said receptacle and a shaft adapted to reciprocate within the receptacle, rocking means pivoted to said shaft adapted to loosely support said sifter whereby on the reciprocation of said shaft a longitudinal and a rocking motion is imparted to said sifter.

2. A device of the class described, comprising a base member adapted to support a receptacle, members pivoted to the side walls of said receptacle, a sifter loosely supported on said members within said receptacle, and means for swinging said members on their pivots and thereby imparting a longitudinal and rocking movement to said sifter.

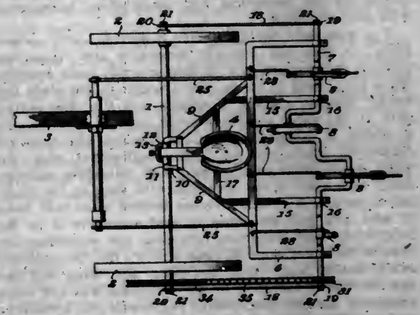
3. A device of the class described, comprising a base member, said base member being provided with a squared opening, a rectangular receptacle adapted to inclose said opening, a shaft extending through the walls of said receptacle, a sifter, rocking means pivoted to said shaft and provided with upturned end portions supporting the sifter within the receptacle, said sifter being of a size somewhat less than the space between said upturned portions, whereby on the reciprocation of the shaft a longitudinal rocking movement is imparted to said sifter, and means pivotally connected to a wall of the receptacle for reciprocating said shaft.

4. A device of the class described, comprising a base member provided with a squared opening, a rectangular frame supported by said member, a shaft adapted to reciprocate in said frame, a plurality of members pivotally secured to the inner side walls of said frame, said members being adapted to loosely support a sifter, and said shaft being adapted to move said members on their pivots and thereby impart a rocking and longitudinal movement to said sifter.

5. A device of the class described, comprising a circular base member, a receptacle located thereon, a shaft adapted to reciprocate within said receptacle, a sifter, members adapted to support said sifter pivotally connected to the side walls of said receptacle, a pin passing through the central portion of said shaft, and members formed of wire, the central portion of said members being coiled upon said pivoted members, the free ends of said members being secured to said pin, the other ends of said members terminating in a means for supporting the edge portions of the sifter.

[Claims 6 to 8 not printed in the Gazette.]

962,662. TEDDER ATTACHMENT FOR HARVESTERS. JACOB T. OLIPHANT and OLLIE RING, Farmersburg, Ind.; said Ring assignor to Claud A. Lloyd, Farmersburg, Ind. Filed June 1, 1909. Serial No. 499,532.



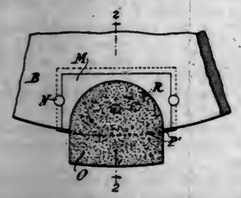
1. The combination with a harvester having an axle and a seat support mounted on the axle, of a tedder attachment having a frame, a boxing in which the forward portion of the frame is journaled, a clamp carried by the boxing and engaging the seat support, a lever carried by the harvester and rods connecting the lever and tedder frame whereby the same may be raised and lowered.

2. A tedder attachment for harvesters comprising a U-shaped frame, a crank shaft journaled in the rear of said U-shaped frame, a journal in front of the U-shaped

frame and secured thereto by bars, a boxing in which said journal is mounted, and means carried by the boxing whereby the same is adapted to be clamped to the seat support of a harvester.

3. The combination with a harvester having an axle and a seat support mounted on the axle, of a tedder attachment having a frame, a crank shaft mounted in the frame, tedder forks mounted on the crank shaft, a boxing in which the forward portion of the frame is journaled, a clamp carried by the boxing engaging the seat support, a pair of rods having an eye in each end and connecting the ends of the crank shaft with the ends of the axle, a lever carried by the harvester and rods connecting the lever and tedder frame whereby the same may be raised and lowered.

962,663. STONE-SAW. JOHN ROYDEN PEIRCE, New York, N. Y., assignor to Royden Marble Machinery Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 4, 1908. Serial No. 446,948.

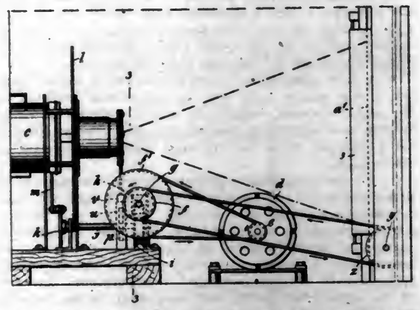


1. A saw having a blade provided with sockets along its edge and separate removable and replaceable teeth in said sockets, each of said separate teeth comprising a metal back rigidly fastened in a socket in the blade, a reduced web at the central part at the outer portion of said back and forming shoulders extending along its forward and rearward transverse edges and its inner longitudinal edge, the outer longitudinal edge of said web coinciding substantially with that of the back and with that of the blade, and a portion of carborundum molded upon both faces of said web and extending to said shoulders in a longitudinal and transverse direction and extending also beyond the outer edge of said web, the carborundum being molded with an elastic bond and being stiffened against lateral deflection by the embedded web and being supported against longitudinal and transverse strains by its transverse and longitudinal engagement with said shoulders.

2. A stone saw having a blade B provided with sockets along its edge and separate removable and replaceable teeth in said sockets each of said separate teeth comprising a metal back M fitting into a socket in the blade and rigidly fastened therein, a reduced web P at the central part of the outer portion of said back M and forming shoulders Q extending along its forward and rearward transverse edges and its inner longitudinal edge, the outer longitudinal edge of said web coinciding substantially with that of the back and with that of the blade, and a portion O of carborundum molded upon both faces of said web and extending to said shoulders Q in the longitudinal and transverse directions and extending also beyond the outer edge of said web P, the carborundum being molded with an elastic bond and being stiffened against lateral deflection by the embedded web and being supported against longitudinal and transverse strains by its transverse and longitudinal engagement with said shoulders.

962,664. PROJECTION APPARATUS. ALBERT HENRY FRANKS PEAL, London, England. Filed Jan. 15, 1910. Serial No. 538,225.

1. In a magic lantern apparatus for use in connection with advertising or entertaining, the combination with a magic lantern of a transparent mirror, a translucent screen between the mirror and the lantern for receiving the projections and exterior reflecting devices adapted to be brought into operation alternately with the projections of the magic lantern.



2. A magic lantern apparatus for use in connection with advertising or entertaining comprising a magic lantern having a rotary slide disk in combination with a box or casing, a transparent mirror at one end thereof, a screen for receiving the projections from the magic lantern, means for intermittently rotating said slide disk and changing the pictures thereon, and a plurality of interconnected exterior reflecting columns adapted to be brought into operation alternately with the projections of the lantern.

962,665. COLLAR. EDWARD J. QUIGLEY, Newark, N. J. Filed May 7, 1908. Serial No. 432,539.



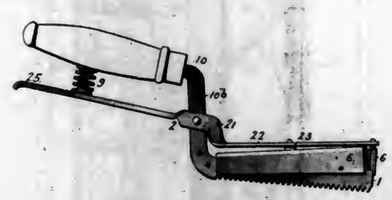
1. In a detachable collar of the character described, a neck band, an outer flap secured thereto, a pocket in the neck band, a flexible member adapted to be inserted in the pocket, invisible securing means carried by the neck band and the outer flap adapted to engage each other and retain the lower portion of the flap against the neck band in front.

2. In a detachable collar of the character described, a neck band, a flap carried thereby, a pocket in the neck band, a flexible member adapted to be inserted in said pocket, catch members carried by the upper portion of the neck band near each end thereof adapted to engage each other when the ends are overlapped in front, and catch members carried by the neck band and innerside of the outer flap adapted to engage each other and secure the lower edges of the outer flap in the front.

3. In a collar of the character described, a neck band, an outer flap carried thereby, a pocket in said neck band, a flexible stiffening member adapted to be received in said pocket, a tab secured upon the innerside of the flap near the lower edge at each end thereof, said tabs provided with button-holes, and buttons secured upon the innerside of the neck band in corresponding positions, said tabs adapted to pass beneath the lower edge of the neck band and be engaged by said buttons.

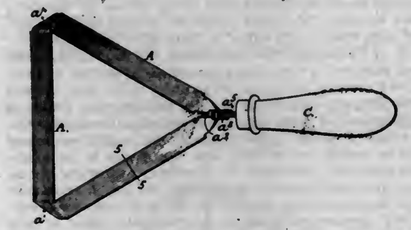
962,666. CURRYCOMB. ALBERT RAHN, Neustadt, Ontario, Canada. Filed July 21, 1909. Serial No. 508,717.

1. A curry comb comprising a strap metal member bent into triangular form and provided with toothed edges, said strap metal member having an upwardly bent handle portion and a handle section secured thereto, a plurality of U-shaped cleaning plates fitted over said triangular portions, strap metal members connecting said U-shaped plates and having a portion bent to form a second handle portion, means pivotally connecting said handle portions, and means for holding said U-shaped plates out of alinement with the serrated or toothed edge of said triangularly bent member.



2. A curry comb consisting of a member formed of a single piece of strap metal bent into triangular form and having its lower edges toothed, said strap metal member having an upwardly bent handle forming portion, a second strap metal member pivoted to said handle forming portion, a plurality of U-shaped cleaning plates fitted over said triangularly bent portions, means connecting one of said cleaning plates with said second strap metal member, a bar connecting the other cleaning plates together, and to said strap metal member, and resilient means for moving said cleaning plates out of engagement with the toothed edges of said first mentioned strap metal member.

962,667. CURRYCOMB. ALBERT RAHN, Neustadt, Ontario, Canada. Filed July 21, 1909. Serial No. 508,718.

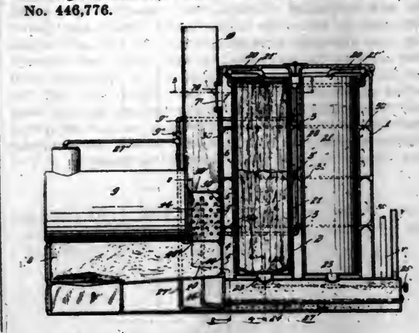


1. A curry comb consisting of a head composed of a single piece of metal bent to substantially U shape in cross section and bent to form a plurality of side and end portions, the opposing ends of the said piece terminating in tang members for receiving the handle, the said tang members having bendable ears for locking over each other.

2. As a new article, a curry comb consisting of a head formed of a single piece of sheet metal whose opposite sides are serrated and bent into a U-shape in cross section, said piece of metal having bendable portions, said metal being bent at said bendable portions to form side and end portions, the extreme ends of said metal piece being reduced to form tang members, said tang members being bent to lap one another, each of said tang members having clenching ears and a handle member that fits on the tang members.

3. A curry comb, consisting of a single piece of metal U shape in cross section and whose opposite edges are serrated the said piece of metal being bent at intervals to form a plurality of members disposed at acute angles to one another, the extreme ends of the said strip being reduced to form tang portions with clenching ears adapted to bend over the opposing tang portions, the two tang portions being bent to form a neck at right angles to the combing head, and an extension in a plane with the said head and the handle mounted on the said extension.

962,668. ART OF WOOD DISTILLATION. HEINRICH RASCHE, Seattle, Wash., assignor of one-half to Frank H. Osgood, Seattle, Wash. Filed Aug. 3, 1908. Serial No. 446,776.



1. In wood distillation, a process consisting in directing steam downwardly through wood contained in a retort and permitting steam to discharge through the lower portion of said retort with the ingredients extracted from the wood, and then applying heat externally to said retort.

2. In wood distillation, a process consisting in directing steam downwardly through wood contained in a retort for discharge through the lower portion of said retort, applying heat externally to said retort above the lower portion thereof, cutting off the steam from said retort, and then applying heat externally to the entire retort.

3. In wood distillation, a process consisting in directing steam downwardly through wood contained in a retort to extract the turpentine therefrom and permitting said steam to discharge with the extracted turpentine through the lower portion of said retort, and then applying heat externally to said retort to act conjointly with the steam.
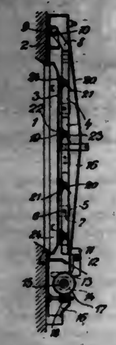
4. In wood distillation, a process consisting in directing steam through wood contained in a retort to extract turpentine therefrom, permitting the steam to discharge through the lower portion of said retort with ingredients extracted from the wood, then applying heat externally to said retort to effect with the steam the extraction of the resin from the wood, and maintaining the resin in a heated condition after it leaves said retort.

5. In wood distillation, a process consisting in directing steam through wood contained in a retort to extract turpentine therefrom, permitting the steam to discharge through the lower portion of said retort with ingredients extracted from the wood, then applying heat externally to said retort to effect with the steam the extraction of the resin from the wood, collecting the heavier ingredients flowing from said retort, and maintaining such collected ingredients in a heated condition to vaporize turpentine combined therewith.

962,669. DEVICE FOR PRESSING THE DOORS OF OVENS AGAINST THEIR SEATS. PAUL RIECKE, Dessau, Germany, assignor to Ofenbau-Gesellschaft mit beschränkter Haftung, Munich, Germany, a Corporation of Germany. Filed Dec. 11, 1909. Serial No. 532,690.

1. In a device for pressing the doors of ovens against their seats, the combination with an oven having an opening and a movable door for closing the same, of tension members extending over the door and connected to move in unison therewith as the door is opened or closed, of means for locking said tension members to the oven, of eccentrics pivoted to the door and arranged to press the door against its frame, and of slide shoes interposed between the door and said tension members.

2. The combination with a door frame and a movable door adapted to engage said frame, of a tension member connected with the door to move in unison therewith as the door is opened or closed, the connection being made with play to allow the door a limited movement toward and from the tension member, means for locking the tension member to the frame, a slide interposed between said door and the tension member and movable relatively to one of them transversely of the direction in which the door is movable relatively to the tension member, and relatively to the other in a direction in line with the closing movement of the door, and means for removing said slide to press the door against its frame.



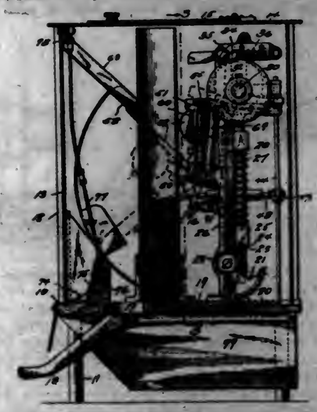
3. The combination with a door frame and a movable door adapted to engage said frame, of a tension member pivoted to the door frame and carrying the door, the connection between the door and the tension member being a loose one so as to allow the door to move toward and from the tension member to a limited extent, means for locking the tension member to the frame, a slide interposed between the door and the tension member and movable relatively to one of them transversely of the direction in which the door is movable relatively to the tension member, and relatively to the other in a direction in line with the closing movement of the door, and means for moving said slide to press the door against its frame.

4. The combination of a door frame, a tension member one end of which is pivoted to said frame, means for locking the other end of the tension member to the frame, a door adapted to engage the frame and carried by the said tension member, the connection being a loose one to allow the door to move transversely toward and from the frame to a limited extent when the tension member is locked to the frame, a slide interposed between the door and the tension member and movable transversely in relation to one of them and lengthwise relatively to the other, and means for moving said slide to press the door against its frame.

962,670. COIN-CONTROLLED APPARATUS. IRA ROBBINS, Philadelphia, Pa., assignor of one-fourth to C. L. Parker, Washington, D. C. Filed Nov. 17, 1908. Serial No. 463,068.

1. In check-controlled mechanism, the combination with an operating shaft, actuating mechanism movably mounted upon said shaft, and feed-plungers coöperating with said actuating mechanism, of coin-controlled mechanism coöperating therewith, comprising releasable locking means for said operating shaft, means for shifting said actuating mechanism, and means for releasing said last named means.

2. In check-controlled mechanism, the combination with an operating shaft, actuating mechanism longitudinally movably mounted upon said shaft, and feed plungers for coöperating with said actuating mechanism, of a coin-actuated mechanism coöperating therewith, comprising releasable locking means for said operating shaft, a rock shaft provided with means engaging said actuating mechanism, means for moving said rock shaft, weights for actuating said last named means, and means for releasing said weights.



3. In check-controlled mechanism, the combination with an operating shaft, actuating mechanism longitudinally movably mounted thereon, and feed plungers for coöperating with said actuating mechanism, of coin-actuated mechanism coöperating therewith, comprising releasable locking means for said operating shaft, mechanism engaging said actuating mechanism for longitudinally moving the same, means for moving said last named mechanism, weights provided with means to engage said last named means for moving the same, means for releasing said weights, and means connected to said feed plungers for returning said weights to their operative positions.

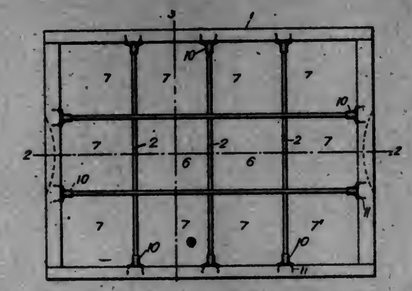
4. In check-controlled mechanism, the combination with feed-plungers, a cam device adapted to be shifted to alternately assume an operative position with each of said feed plungers, and means for rotating said cam device, of coin-controlled mechanism for coöperating therewith, comprising releasable locking means for said first named means, means for shifting said cam device to its operative positions, and means for releasing the shifting means.

5. In check-controlled mechanism, the combination with feed plungers, a cam device adapted to be shifted to alternately assume an operative position with each of said feed plungers, and means for rotating said cam device, of coin-controlled mechanism for coöperation therewith, comprising a releasable locking device for said first named means, a rock shaft provided with means engaging said cam device, fingers rigidly connected to said rock shaft, plungers adapted to engage said fingers, downwardly swinging weights provided with means for engaging said plungers, means for releasing said weights, and means associated with said plungers to return said weights to their raised positions.

[Claim 6 not printed in the Gazette.]

962,671. BOTTLE-CRATE RACK. MAURICE ROBINSON and HERBERT S. NEALE, Pittsburg, Pa. Filed May 10, 1909. Serial No. 495,087.

1. The combination of a packing case and a rack comprising a plurality of cross pieces of paper board having kerfs in their upper and lower edges, and top and bottom longitudinal strips having kerfs in one edge, said cross pieces and longitudinal strips interlocking at their points of crossing and inclosing rectangular spaces, the ends of the cross and longitudinal strips extending beyond the last crossing strip and forming with the latter and with the walls of the case rectangular spaces corresponding to those inclosed by the longitudinal and cross strips, and clips secured to the walls of the case and engaging the ends of the upper longitudinal strips at their top edges and arranged to hold the same from rising, a separate clip being used for each of the longitudinal members.



2. The combination of a packing case and a rack comprising cross pieces having kerfs in their upper and lower edges, and top and bottom longitudinal strips having kerfs in one edge and interlocking with the kerfs of the cross pieces, said cross pieces and longitudinal strips inclosing rectangular spaces and the ends thereof extending beyond the last crossing strip and forming with the latter and the walls of the case rectangular spaces corresponding to those inclosed by the cross and longitudinal strips, and clips secured to the walls of the case and engaging the ends of the upper longitudinal strips at their top edges, a separate clip being used for each longitudinal strip.

3. The combination of a packing case and a rack comprising a plurality of cross and longitudinal strips formed to interlock at their points of crossing, the ends of said strips extending beyond the last crossing strip, and clips provided with means for attachment to the walls of the box and provided with grooved portions resting on the tops of the strips and embracing the sides thereof.

962,672. EXTENSION-RIM FOR TRACTION-ENGINE WHEELS. THEODORE SCHEIB, Spy Hill, Saskatchewan, Canada. Filed Dec. 22, 1909. Serial No. 534,503.



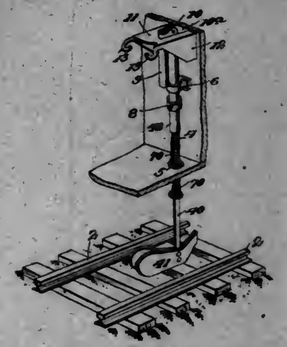
1. The combination with a traction-wheel, of an extension-rim composed of a plurality of detachable invertible curved sections, and detachable invertible means whereby said sections are attached to said traction-wheel and immovably held in place when inverted.

2. The combination with a traction-wheel, of an extension-rim composed of a plurality of detachable invertible curved-sections; a plurality of invertible curved-plates detachably secured to said traction-wheel and to each of which is detachably secured one of each of said sections so as to hold the same firmly in place when inverted, and detachable invertible-plates for securing together the adjacent sections of said extension-rim and which project beyond the perimeter of said traction-wheel when inverted.

3. The combination with a traction-wheel, of an extension-rim composed of a plurality of detachable invertible curved sections, a plurality of invertible curved plates provided with flanges at each end by means of which the abutting plates are secured together when in normal position, and by means of which the said curved plates are attached to the said wheel when inverted, and which plates hold the said sections firmly in place when inverted, and detachable invertible plates for securing together the adjacent sections of said extension-rim and which project beyond the perimeter of said traction-wheel when inverted.

4. The combination with a traction-wheel, of an extension-rim composed of a plurality of detachable invertible curved sections, and detachable means whereby said sections are attached to said traction-wheel and immovably held in place when inverted.

962,673. SWITCH-OPERATING MECHANISM. KARL SCHMITT, Jr., Lincoln, Nebr. Filed Jan. 26, 1910. Serial No. 540,262.



1. In switch operating mechanism, a vertically reciprocatory and horizontally turnable push bar provided with switch point throwing means, a handle pivoted to said bar to swing on a vertical axis, and a bracket forming the fulcrum for said handle in depressing the bar.

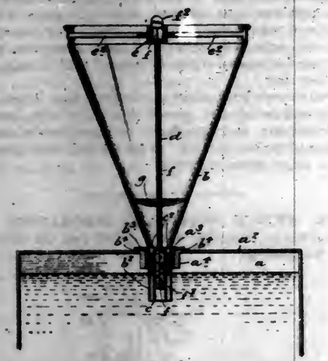
2. In switch operating mechanism, a switch point throwing shoe, means adapted to be carried by a car, for raising and lowering said shoe and for oscillating the same horizontally, a handle for depressing said means, said handle being movable horizontally to oscillate said shoe, and a bracket having holding means to be engaged by said handle for maintaining the shoe in the desired position horizontally.

3. In switch operating mechanism, a vertically movable push bar adapted to be carried by a car and provided with switch point throwing mechanism, a vertically movable handle carried by said bar, and a bracket formed to receive the upper ends of the handle and bar and forming a fulcrum for the handle in depressing the bar, and provided with opposite spaced handle holding portions to hold the handle in its different horizontal positions.

4. In switch operating mechanism, a yieldingly-upheld vertically-movable rotatable push bar adapted to be carried by a car and at its lower end provided with a laterally yieldable section stiff in the direction of the movement of the car and at its lower end having an elongated tapered switch point throwing shoe, a bar-rotating-handle lever pivoted to said bar, and a fulcrum for said lever adapted to be engaged by the lever when swung upwardly to thereby depress the bar, for purposes substantially as described.

5. In switch operating mechanism, in combination, a yieldingly upheld vertically-movable rotatable push bar adapted to be carried by a car and at its lower end provided with a laterally yieldable switch point throwing shoe, a bar rotating handle lever pivotally joined to said bar, and a fixed fulcrum for said lever adapted to engage the lever when the same is swung upwardly, whereby the push bar will be depressed, substantially as described.

962,674. INDICATOR-FUNNEL. CHARLES F. SENDALL, Brooklyn, N. Y. Filed Dec. 16, 1909. Serial No. 533,344.



1. A funnel, the discharge or smaller end of which is provided with a tubular extension, at the top of which is an annular flange, a supplemental tube placed concentrically in said tubular extension and of the same length and the upper end of which is closed, a tubular member connected with the upper end of the supplemental tube and in communication therewith and extending upwardly through the funnel, a float placed in the supplemental tube, and a rod connected with said float and passing upwardly through the said tubular member and provided at its upper end with an indicator, said supplemental tube being provided with means for limiting the upward movement of said float.

2. A funnel, the discharge or smaller end of which is provided with a tubular extension, and an annular flange in the bottom of which are radial grooves, a supplemental tube placed in said tubular extension and provided with a tubular member which passes upwardly through the funnel, a receptacle supported in the top or larger end of the funnel and with which said tubular member communicates, and a rod passing through said tubular member and provided at its lower end with a float movable in the supplemental tube and at its upper end with an indicator adapted to rest in said receptacle.

962,675. ROPE-FASTENER. LEWIS C. SIMS, Louisville, Ohio. Filed Jan. 2, 1909. Serial No. 470,544.



The herein described rope fastener formed from a single piece of wire and provided with loops adapted for the accommodation of attaching screws and a double series of loops with converging sides, wedge slots being formed between adjacent loops, the loops on the two sides of the fastener lying in planes disposed at an obtuse angle to each other.

962,676. PAPER-BAG HOLDER. HARRY L. SNYDER, Los Angeles, Cal. Filed Feb. 2, 1910. Serial No. 541,624.

A bag holder, comprising a support, elastic means for retaining a pack of bags on said support, means for engaging with the bottom of the pack to retain the same in position, said support having a bent portion coacting with said elastic means for outwardly extending the pack intermediate its length, and means for engaging the top of said pack to prevent longitudinal movement of the pack.



962,677. FURNACE. HENRY STRAND, Cleveland, Ohio. Filed Dec. 20, 1909. Serial No. 534,031.

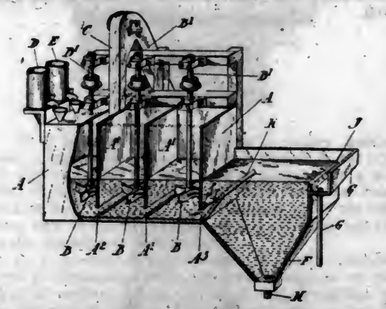


1. In a furnace, the combination of a combustion chamber, a central pipe extending upwardly therefrom, a laterally enlarged upper chamber at the top of said pipe and communicating therewith, a lower chamber around the bottom of said pipe, conduits arranged around the central pipe and spaced therefrom and from each other and connecting said chambers, inner and outer drums surrounding said pipes and forming an annular chamber communicating at its lower end with said lower chamber and provided at its upper end with an outlet flue, an outer jacket around said drums and provided with cold air supply and service pipes, and air pipes extending vertically through said upper and lower chambers and located at the spaces between said conduits.

2. In a furnace, the combination of inner and outer drums forming an annular space therebetween, a lower chamber communicating with the bottom of said space, a combustion chamber including a central vertical pipe located within said drums and conduits forming communication between the upper end of said pipe and said lower chamber, an outlet pipe at the upper end of said space, a horizontal partition extending across said space and provided with an opening, and a vertical partition across said space, between the outlet pipe and said opening.

3. In a furnace, the combination of a combustion chamber a central flue extending upwardly therefrom, an enlarged upper chamber at the top of said flue, inner and outer drums surrounding said flue and chamber and forming an annular chamber, said inner drum being spaced from said central flue, a lower chamber communicating with said annular chamber, spaced flues connecting said upper chamber and the said lower chamber, an outer jacket, and air pipes leading into and out of the space within the inner drum, and extending vertically through said upper and lower chambers at the spaces between the flues.

962,678. ORE CONCENTRATION. HENRY LIVINGSTONE SULMAN, HENRY HOWARD GREENWAY, and ARTHUR HOWARD HIGGINS, London, England. Filed Apr. 30, 1909. Serial No. 493,207.



1. The hereindescribed process of concentrating ores which consists in mixing the powdered ore with water containing in solution a small quantity of a mineral-frothing agent, agitating the mixture to form a froth and separating the froth.

2. The hereindescribed process of concentrating ores which consists in mixing the powdered ore with water containing in solution a small quantity of an organic mineral-frothing agent, agitating the mixture to form a froth and separating the froth.

3. The hereindescribed process of concentrating ores which consists in mixing the powdered ore with slightly acidified water containing in solution a small quantity of a mineral-frothing agent, agitating the mixture to form a froth and separating the froth.

4. The hereindescribed process of concentrating ores which consists in mixing the powdered ore with slightly acidified water containing in solution a small quantity of an organic mineral-frothing agent, agitating the mixture to form a froth and separating the froth.

5. The hereindescribed process of concentrating ores which consists in mixing the powdered ore with water containing in solution a small quantity of a mineral-frothing agent, agitating the mixture and beating air into it in a finely divided state so as to form froth and separating the froth.

[Claims 6 to 9 not printed in the Gazette.]

962,679. VIBRATION-INDICATOR. BERNHARD VOLKMAR, New York, N. Y., assignor to Auto Improvement Company, a Corporation of New York. Filed Sept. 4, 1908. Serial No. 451,706.



1. A vibration indicator for vehicles comprising an inertia member arranged to vibrate up and down, and resilient means opposing gravity in the inertia member substantially in vertical alinement with the center of gravity of such member and adapted to support the inertia member normally in a position substantially midway of its path of vibration.

2. A vibration indicator for vehicles comprising an inertia member pivotally mounted to vibrate up and down, and gravity-opposing means in the path of vibration of the inertia member and adapted to support the inertia member normally in a position substantially midway of its path of vibration.

3. A vibration indicator for vehicles comprising a weight, a lever mounting for the weight pivoted at one end and arranged to vibrate up and down, and gravity-opposing means engageable with the weight substantially in vertical alinement with its center of gravity and adapted to support the weight normally in a position substantially midway of its path of vibration.

4. A vibration indicator for vehicles comprising a vibrating lever pivotally mounted at one end and arranged to vibrate up and down, a weight at the free end of the lever, and a light spiral compression spring engageable with the weight substantially beneath its center of gravity and adapted to be compressed through only a part of its extent of compressibility by the vibrating member.

5. A vibration indicator for vehicles comprising a vibrating lever arranged to vibrate up and down, a weight carried by the vibrating lever, a light helical compression spring engageable with the weight substantially beneath its center of gravity and adapted to be compressed through only a part of its extent of compressibility by the vibrating member, and a casing for the spring laterally guiding the same.

[Claims 6 and 7 not printed in the Gazette.]

962,680. PROTECTIVE CASING. BERNHARD VOLKMAR, New York, N. Y., assignor to Auto Improvement Company, a Corporation of New York. Original application filed Sept. 4, 1908, Serial No. 451,706. Divided and this application filed Dec. 9, 1909. Serial No. 532,176.



1. A protective inclosing casing comprising two parts secured together by rotational engagement, means for securing the casing to a support, such means being releasable only from within one of said parts and being protected from access by the other part, and means for sealing the two parts together comprising lugs on both parts, a bar adapted to engage with such lugs to prevent disengaging rotation of the parts, and a seal for holding the bar in such engaging position.

2. A protective inclosing casing comprising two parts secured together by helical engagement, means for securing the casing to a support, such means engaging one of said parts and having a head located within the parts, and means for sealing the two parts together comprising lugs on both parts, a bar adapted to engage with such lugs to prevent disengaging rotation of the parts, and a seal for holding the bar in such engaged position.

3. A protective inclosing casing comprising two parts secured together by helical engagement, means for securing the casing to a support, such means engaging one of said parts and having a head located within the parts, and means for sealing the two parts together comprising lugs on both parts, a bar adapted to engage with such lugs to prevent disengaging rotation of the parts, and a sealing wire for holding the bar in such engaged position.

4. A protective inclosing casing comprising a front cover, a body and a back cover all secured together, means for locking together the body and back cover, a pin for locking together the front cover and body, and a steel lining within the casing abutting against the inner end of the locking pin.

962,681. NON-REFILLABLE-BOTTLE STOPPER. WILLIAM R. VOSS, San Francisco, Cal., assignor to The Commercial Non-Refillable Bottle Stopper Co., San Francisco, Cal., a Corporation. Filed Sept. 13, 1909. Serial No. 517,352.



1. A non-refillable device for the neck of a bottle, having a hollow stopper provided with apertures for outflow of the contents of the bottle through the neck, and valves adapted to prevent a return flow, said stopper being adapted to be fixed in the neck, and a cap fitted to the mouth of the bottle to close the same, and connections between the stopper and the cap, whereby the same is drawn down to a seat on the neck to close the same, and is also detachable therefrom to afford outlet for the contents of the bottle.

2. The combination with the neck of a bottle of a hollow stopper fixed therein, having valve-controlled inlet apertures for passage of the contents of the bottle through the stopper, and provided with outlet apertures for outflow of the contents through the neck—a cap adapted to close the mouth of the bottle and screw threaded connections between the cap and the stopper, whereby the cap is detachably secured to the stopper for closing the bottle.

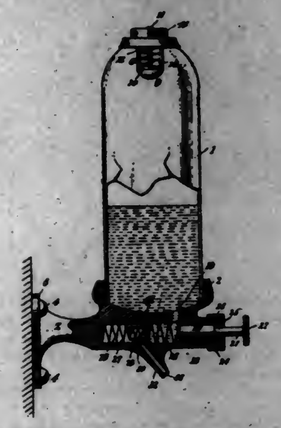
3. The combination with the neck of a bottle, of a hollow stopper adapted to be fixed thereon, having inlet apertures in the bottom, a buoyant upwardly opening valve seated on each aperture, outlet apertures in the sides of the stopper, the diameter of the stopper body at and above the said outlet apertures being less than that of the neck, affording an outlet and discharge of the contents around the stopper and means for accelerating the seating of the buoyant valves, comprising a freely movable weight in the stopper situated above the valves and a loosely fitted slidable valve guide interposed between the valves and the weight.

4. In a non-refillable device for necked receptacles, the combination of a hollow stopper adapted to be fixed in the neck below the mouth and having outlet apertures therethrough and valves controlling the inflow of liquid through the mouth, a cap adapted to close the mouth of the receptacle and removable therefrom, and connections between the said cap and the fixed stopper, operating to detachably secure the cap in position to close the mouth.

5. The combination with a hollow stopper having a top with converging sides and provided with apertures in the bottom, a buoyant valve to each aperture, a movable weight operating by gravity to accelerate the movement of the buoyant valves toward their seats in an inclined position of the receptacle in which the stopper is fixed, and a slidable valve guide interposed between the valves and the said weight.

962,682. SOAP-DISPENSER. CHARLES E. WARE, East Orange, N. J. Filed Sept. 1, 1908. Serial No. 451,167.

1. In a soap dispenser, a receptacle, a base for said receptacle having a pump bore and also a port leading from said receptacle to said bore, a plunger in said bore, means for normally forcing said plunger to its outermost position, a perforated disk having the perforation therein in substantial alinement with the axis of said plunger, a check valve normally closing said perforation, said base having a recess therein in which said valve is disposed, and a downwardly projecting nozzle opening into said recess, said plunger being movable toward said disk and the arrangement of the above recited parts being such that the initial movement of the plunger closes the port from said receptacle, the fluid in said bore being positively ejected by the continued advance of said plunger through said disk and out of said nozzle, in close proximity to the hand of the operator, the axial position of the check valve preventing gumming up of the same by the ejected fluid.

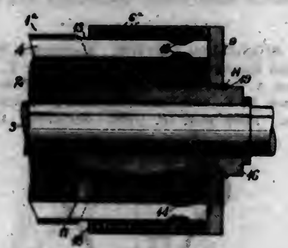


2. In a soap dispenser, a receptacle, a base therefor having a pump bore and having a passage establishing communication between said bore and said receptacle, a plunger movable in said bore and having an initial position just uncovering said passage, said plunger having a predetermined stroke and a length greater than such stroke whereby it constitutes a piston valve to close said passage, a discharge nozzle for said bore, a perforated disk at the inner end of said bore, a recessed member normally closing the perforation of said disk, and a spring maintaining said part in such relation, said spring having a reduced portion entering said part to center the latter.

3. In a soap dispenser, a receptacle, a base therefor having a pump bore and having a passage establishing communication between said bore and said receptacle, a plunger movable in said bore and having an initial position just uncovering said passage, said plunger having a predetermined stroke and a length greater than such stroke, whereby it constitutes a piston valve to close said passage, a discharge nozzle for said bore, a perforated disk at the inner end of said bore, a cup-shaped sheet metal part normally closing the perforation of said disk, and a spring maintaining said part in such relation, said spring having a reduced portion entering said part to center the latter.

4. In a soap dispenser, a dome-shaped receptacle with a check valve at its upper end, a base therefor having a horizontal pump bore and having a passage establishing communication between said bore and said receptacle, a plunger movable in said bore and constituting a piston valve to close said passage as soon as said plunger commences its inward stroke, an inclined, forwardly projecting discharge nozzle for said bore, a removable perforated disk at the inner end of said bore, a cup-shaped sheet metal part normally closing the perforation of said disk, and a spring entering said part and pressing the latter against the perforation of said disk, and means for operating said plunger disposed adjacent the orifice of said inclined nozzle.

962,683. DYNAMO-ELECTRIC MACHINE. MILES WALKER, Manchester, England, assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed June 5, 1906. Serial No. 321,772.



1. In a dynamo electric machine, a rotary member having a slotted core, bar conductors located in the core slots and projecting beyond the ends thereof, and a plurality of connecting rings of the same size and form, insulated from each other and embracing all of the projecting ends of the bar conductors and severally and collectively dynamically balanced.

2. In a dynamo electric machine, a rotating member having a laminated slotted core, bar conductors of substantially uniform length located in and projecting beyond the ends of the core slots, a plurality of side-by-side connecting rings surrounding the projecting ends of the conductors and insulated therefrom and from each other and so electrically connected to the bars as to constitute therewith a complete magnetising winding.

3. In a dynamo electric machine, the combination with a rotatable member having a slotted core, bar conductors of substantially uniform length located in the core slots and projecting beyond the ends of the same, connector rings having perforations to receive the projecting ends and insulated from each other and from the bars except at such points as will serve to connect the bars into a complete magnetising winding.

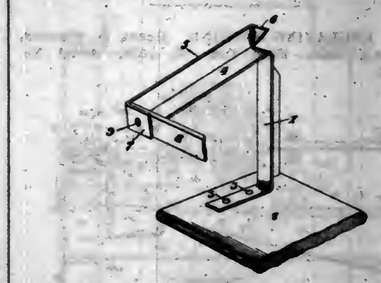
4. In a dynamo electric machine, a rotatable member having a slotted core, conductors of substantially uniform length located in and projecting beyond the core slots, a plurality of conducting rings provided with perforations to receive and fit such projecting conductor ends, means for insulating the rings from each other and from the conducting bars and means for electrically connecting the rings to the bars in such order as to provide a complete magnetising winding for the core.

5. In a dynamo electric machine, a rotatable member comprising a shaft, a slotted core mounted thereon, a sleeve supported upon the shaft adjacent to the end of said core, bar conductors of substantially uniform length located in and projecting beyond the core slots, a set of rings provided with perforations to receive the projecting ends of the bar conductors, insulation interposed between the rings and the sleeve and between the rings and the bar conductors, and means for electrically connecting the rings and the conductors in such order as to provide a complete magnetizing winding for the core.

[Claim 6 not printed in the Gazette.]

962,684. ROLL-PAPER HOLDER AND CUTTER. HENRY B. WALLACE, St. Louis, Mo., assignor to Samuel Cupples Wooden Ware Company, St. Louis, Mo., a Corporation of Missouri. Filed Oct. 18, 1909. Serial No. 523,133.

1. A roll-paper holder, including a pair of supports each formed of a right angle bar, each end of each bar being cut and the vertical side of the bar having its ends turned inwardly to extend across the horizontal part of the bar, a vertically disposed knife having its bottom edge seating on the horizontal parts and its outer side face abutting the inner faces of said inturned ends of the vertical part of the bar, being bolted thereto, and being sustained against tendency to outward movement thereby, each bar being extended downwardly to form a leg and then being extended outwardly at right angles to the leg to form a foot for attachment to a supporting surface.



2. A roll paper holder including a pair of supports each formed of a right angle bar, each right angle bar being formed of a major portion and a wing, said bar having the web thereof cut away from same at one end to form a foot for attachment to a supporting surface, said bar having a vertical part extending upwardly from said foot and having a horizontal part at approximately right angles to the vertical part, said web adjacent the points of juncture between the vertical and horizontal parts of the support being cut on the bias, the portion of the web adjacent the horizontal part of the support having its cut end turned inwardly to overlie the major portion of the horizontal part, the front end of the horizontal part of the support having the major portion of the bar of which said horizontal part is formed cut away, the web left by said cut away part of the major portion being turned to extend across the major portion of the horizontal part.

962,685. MUSIC-SPOOL. PETER WELIN, Newcastle, Ind., assignor, by mesne assignments, to The Krell Auto-Grand Piano Co. of America, Connersville, Ind., a Corporation of Indiana. Filed May 29, 1907. Serial No. 376,351.



1. A music spool consisting of a hollow barrel of paper provided with numerous perforations interspaced throughout its circumference and length at regular intervals whereby the air may pass into the perforations from within and come into contact with a large proportion of the surface thereof to shrink or expand the same uniformly with the paper music sheet.

2. A music spool comprising a spindle having a central hub provided with reduced end portions, and two movable hollow barrels fitting over said reduced end portions of the hub and supported at their outer ends from the spindle.

3. A music spool comprising a spindle having a hub thereon provided with a reduced cylindrical end, a hollow barrel fitting over said end and movable longitudinally thereon, and means at the end of the spindle for supporting the opposite end of the barrel, said means being longitudinally adjustable on the barrel.

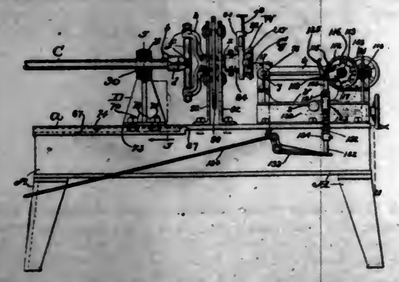
4. A music spool comprising a spindle having a central hub with reduced end portions, a pair of barrels movably mounted on said end portions and of the same diameter as the said hub, and flanges secured to the ends of the barrels and bearing on the spindle so as to be centered thereby.

5. A music spool comprising a spindle, a hub thereon, a barrel supported by the hub and free to move longitudi-

nally thereon, a flange to which the end of the barrel is secured, and a bushing for supporting and centering said flange, said bushing being adjustable along the spindle.

[Claims 6 to 8 not printed in the Gazette.]

962,686. ENGRAVING-MACHINE. HARRY F. WHEDON, Cleveland, Ohio. Filed Oct. 15, 1906. Serial No. 339,017.



1. In an engraving machine, the combination, with a graver, a work-blank-holder arranged opposite to and movable across the engraving extremity of the graver, a tracer, a pattern-holder arranged opposite to and movable across the tracing extremity of the tracer, and means whereby the work-blank-holder is actuated by and during the actuation of the pattern-holder, of a guide for the pattern-holder, which guide is movable to accommodate the shifting of the pattern-holder across the tracing extremity of the tracer.

2. In an engraving machine, the combination, with a graver, a work-blank-holder arranged opposite to and movable across the engraving extremity of the graver, a tracer, a pattern-holder arranged opposite to and movable across the tracing extremity of the tracer, and means whereby the work-blank-holder is actuated by and during the actuation of the pattern-holder, of a guide for the pattern-holder, a depressible slide carrying the guide, a pivotal connection between the guide and the slide and arranged transversely of the slide, and means whereby the guide is secured in the desired adjustment around the said pivotal connection.

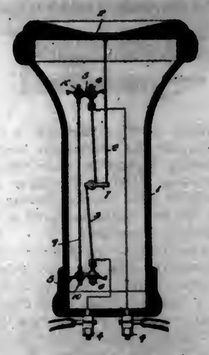
3. In an engraving machine, the combination, with a graver, a work-blank-holder arranged opposite to and movable across the engraving extremity of the graver, a tracer, a pattern-holder arranged opposite to and movable across the tracing extremity of the tracer, and means whereby the work-blank-holder is actuated by and during the actuation of the pattern-holder, of a guide for the pattern-holder, a depressible slide carrying the guide, a pivotal connection between the guide and the slide and arranged transversely of the slide, and means normally retaining the slide in its highest position, and means for securing the guide in the desired adjustment around the aforesaid pivotal connection.

4. In an engraving machine, the combination, with a graver, a work-blank-holder arranged opposite to and movable across the engraving extremity of the graver, a tracer, a pattern-holder arranged opposite to and movable across the tracing extremity of the tracer, means whereby the work-blank holder is actuated by and during the actuation of the pattern-holder, of a bar forming a guide for the pattern-holder, which bar is shiftable to accommodate the movement of the pattern-holder across the tracing extremity of the tracer.

5. In an engraving machine, the combination, with a graver, a work-blank-holder arranged opposite to and movable across the engraving extremity of the graver, a tracer, a pattern-holder arranged opposite to and movable across the tracing extremity of the tracer, means whereby the work-blank holder is actuated by and during the actuation of the pattern-holder, of a bar forming a guide for the pattern-holder, a depressible slide carrying the bar, a pivotal connection between the bar and the slide, and means whereby the said bar is secured in the desired adjustment around the said pivotal connection.

[Claims 6 to 45 not printed in the Gazette.]

962,687. SIGNALING DEVICE. MAURICE J. WOHL, New York, and HARRY HERTZBERG, Brooklyn, N. Y., assignors to Abbot A. Low, Horseshoe, N. Y., Maurice J. Wohl, New York, N. Y., and Harry Hertzberg, Brooklyn, N. Y., trustees. Filed Mar. 16, 1908. Serial No. 421,428.



1. A signaling device comprising a diaphragm, a thermal expansible conductor in the signaling circuit, and mechanical multiplying connection between said conductor and the diaphragm.

2. A signaling device comprising a diaphragm, a lever, connection between the lever and diaphragm, and a thermal expansible conductor in the signaling circuit operatively connected intermediate its ends with said lever.

3. A signaling device comprising a diaphragm, a pivoted lever, connection between said lever and said diaphragm, a thermal expansible conductor connected intermediate its length to said lever at two points at opposite sides of the pivot thereof, and supports between which said conductor is stretched.

4. A signaling device comprising a diaphragm, a pivoted lever, connection between said lever and said diaphragm, a thermal expansible conductor connected intermediate its length to said lever at two points at opposite sides of the pivot thereof, spring supports between which said conductor is stretched, and a compensating wire, substantially as described, also stretched between said supports.

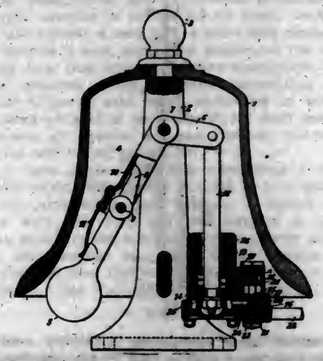
5. A signaling device comprising a diaphragm, a thermal expansible conductor in the signaling circuit, connection between said conductor and said diaphragm whereby expansion and contraction of the former due to current variation therein vibrates the diaphragm, and compensating means whereby expansion and contraction of said conductor due to variations in surrounding temperature do not affect the diaphragm.

962,688. AUTOMATIC BELL-RINGER. CHRISTIAN AALBORG, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 4, 1906. Serial No. 309,930.

1. A bell striker operating mechanism comprising a main cylinder, a piston and a fluid-pressure-opposing spring in said cylinder, an auxiliary cylinder into which the main cylinder exhausts, an exhaust valve for the auxiliary cylinder, and an inlet valve for the main cylinder that is held open by said exhaust valve when the latter is closed.

2. The combination with a bell, a striker and an operating member for said striker, of a main cylinder, a piston

located in said cylinder and connected to said operating member, a spring in said cylinder for moving said piston in one direction, an auxiliary cylinder into which air is exhausted from the main cylinder, an inlet valve for the main cylinder and an exhaust valve for the auxiliary cylinder, each of said valves being opened when the other is closed.



3. The combination with a bell and a striker therefor, of a fluid-pressure-actuated piston connected to said striker, a main cylinder for said piston, an auxiliary cylinder into which the main cylinder exhausts, an exhaust valve for the auxiliary cylinder, an inlet valve for the main cylinder that is held open by the said exhaust valve when the latter is closed, and springs tending to close said valves.

4. The combination with a bell and a striker therefor, of a fluid-pressure-actuated piston connected to said striker, a main cylinder for said piston, a spring in said cylinder acting in opposition to the fluid-pressure, an auxiliary cylinder into which the main cylinder exhausts, an exhaust valve for the auxiliary cylinder, an inlet valve for the main cylinder that is held open by the said exhaust valve when the latter is closed, and springs tending to close said valves.

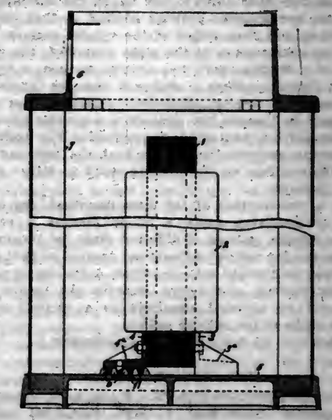
5. The combination with a bell, a striker therefor, an operating member for moving said striker into and out of engagement with the surface of the bell, a primary fluid-pressure cylinder, a piston adapted to operate therein, an auxiliary cylinder, an admission valve for said primary cylinder, a second valve which normally prevents admission of fluid-pressure to the auxiliary cylinder and which is interlocked with said admission valve, and a connecting port between the primary and the auxiliary cylinders whereby fluid-pressure may be admitted to the auxiliary cylinder when the piston which operates within the primary cylinder has reached a predetermined point in its travel, of means for automatically opening and closing the admission valve to effect an oscillatory motion of the piston which operates in the primary cylinder.

962,689. ELECTRICAL APPARATUS. CHRISTIAN AALBORG, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 8, 1909. Serial No. 506,606.

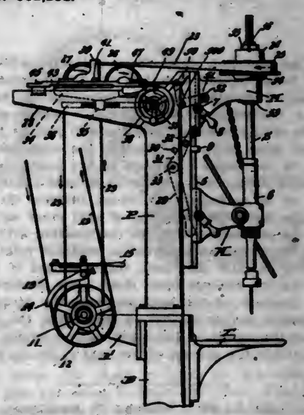
1. In electrical apparatus, the combination with a tank or casing having a base provided with upwardly projecting teeth, of a magnetizable core member the end plates of which are provided with flanges having teeth which engage the teeth on the base of the tank.

2. In a transformer, the combination with a tank or casing having a base plate provided with groups of teeth, of a magnetizable core member the end plates of which have foot flanges provided with teeth to register with the groups of base plate teeth.

3. In a transformer, the combination with a tank or casing and a transformer core having end plates provided with foot projections, of means for preventing the lateral adjustment of the foot projections after the core is placed in the tank or casing, said means being independent of the size of the transformer, within predetermined limits, for a single tank or casing.



962,690. DRIVING MECHANISM FOR DRILL-SPINDLES. HARDING ALLEN, Barre, Mass. Filed Nov. 30, 1906, Serial No. 345,660. Renewed Dec. 9, 1909. Serial No. 532,251.



1. In a construction of the class described, the combination of a driving shaft, a pulley thereon, a vertical shaft or spindle, pulleys of different sizes for turning the same, means for vertical adjustment thereof so that either pulley may be brought into operation, a quarter turn belt, two idler pulleys, and means for adjusting the position thereof so that the belt can pass to and from either of the spindle pulleys.

2. In a construction of the class described, the combination of a driving shaft, two pulleys thereon, a vertical shaft or spindle, pulleys of different sizes for turning the same, means for vertical adjustment thereof so that either pulley may be brought into operation, a quarter turn belt, two idler pulleys, and means for adjusting the position thereof so that the belt can pass to and from either of the spindle pulleys.

3. In a construction of the class described, the combination of a driving shaft, a pulley thereon, a vertical shaft or spindle, pulleys of different sizes for turning the

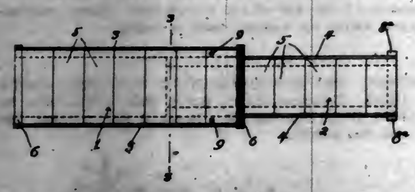
same, means for vertical adjustment thereof so that either pulley may be brought into operation, a quarter turn belt, two idler pulleys, and means for adjusting the horizontal and angular position thereof so that the belt can pass to and from either of the spindle pulleys.

4. In a construction of the class described, the combination of a driving shaft, two pulleys thereon, a vertical shaft or spindle, pulleys of different sizes for turning the same, means for vertical adjustment thereof so that either pulley may be brought into operation, a quarter turn belt, two idler pulleys, and means for adjusting the horizontal and angular position thereof, so that the belt can pass from either pulley on the driving shaft to either of the spindle pulleys.

5. In a construction of the class described, the combination of a driving shaft, a pulley thereon, a vertical shaft or spindle, pulleys of different sizes for turning the same, means for vertical adjustment thereof so that either pulley may be brought into operation, a quarter turn belt, two idler pulleys, and means whereby the return idler pulley will be adjusted angularly as a vertical adjustment is made of the spindle pulleys.

[Claims 6 to 14 not printed in the Gazette.]

962,691. EXTENSION-PLANK. CHARLES C. ANDERSEN, Chicago, Ill. Filed Sept. 7, 1909. Serial No. 516,631.



1. In an extension plank, the combination with an outer and an inner section mounted in slidable relation, each consisting of parallel side bars connected on their upper edges by transverse boards, bands or straps secured to the ends of the sections, longitudinal grooves formed in the inner faces of the side bars of the outer section, lips formed on the bands or straps of the inner section and adapted to enter said grooves to permit the said inner section to be extended, and stops passing through the grooves to limit the movement of said inner section.

2. In an extension plank, the combination with an outer and an inner section mounted in slidable relation, each embodying parallel side bars, the said bars of the outer section having grooves upon their inner surfaces, straps secured to each of the said sections, the straps of the outer section having extensions supporting the inner section, and the straps of the inner section having lips projecting within the grooves of the bars of the outer section.

962,692. ARC-LAMP. THOMAS J. ANDERSON, Houston, Tex., assignor to The Anderson-Lacy Electric Headlight Company, Houston, Tex., a Corporation of Texas. Filed Nov. 30, 1908. Serial No. 465,194.
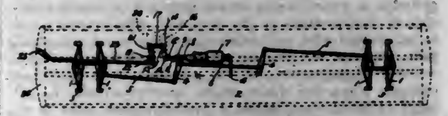
1. A carbon holder comprising a guiding tube constructed to receive a carbon, means supporting said guiding tube, said supporting means comprising a vertically disposed bar having at its upper end a shoulder adapted to receive and support said guiding tube, an arm below said shoulder, and a clamp for holding said tube against the shoulder and arm; and a clutch adapted to be automatically operated carried by said tube supporting means.

2. A carbon holder comprising a guiding tube constructed to receive a carbon, a frame supporting said guiding tube comprising a bar having at its upper end a shoulder adapted to receive and support said tube, and having its lower end formed with a ring, an arm intermediate the ring and shoulder, and a clamp for holding the tube against said shoulder and arm; a rod depending from the frame, a clutch adapted to be automatically operated and effect the feeding of the carbon, said clutch comprising a member pivotally mounted on said depending rod and normally supported by the ring of the supporting frame, a canting member carried by said rod and adapted to depress said clutch member, and a spring carried by the rod adapted to actuate the canting member.



3. A carbon holder comprising a thimble constructed to receive a carbon, a guiding tube for said thimble, means for effecting contact at all times between said thimble and tube, a frame supporting said guiding tube comprising a bar having at its upper end a shoulder adapted to receive and support said tube, and having its lower end formed with a ring, an arm intermediate the ring and shoulder, and a clamp for holding the tube against the shoulder and arm, a rod depending from the frame, a clutch adapted to be automatically operated and effect the feeding of the carbon, said clutch comprising a member pivotally mounted on the depending rod and normally supported by the ring of the frame, a canting member adapted to depress said clutch, said canting member being mounted to slide on the depending rod and having legs straddling the carbon and contacting with opposite sides of the pivoted member, and a spiral spring on the depending rod normally depressing said canting member.

962,693. HAND-BRAKE FOR RAILWAY-CARS. ROBERT T. BUADETTE, Los Angeles, Cal. Filed Jan. 10, 1910. Serial No. 537,172.



1. In combination, power actuated brake mechanism having a fixed fulcrum, a lever, a link having a pin and slot connection with said lever and connected with said brake mechanism, a hand brake spindle, a link-bar, and means for positively connecting said bar with said spindle and with said lever and enabling the said spindle to advance and return said lever.

2. In combination, a brake cylinder having a piston rod extending therefrom, a head on said rod, brake mechanism connected with said head for applying the brakes by power, a lever, a link having a pin and slot connection to said lever and connected with said head to operate said brake mechanism, a second lever connected with said first lever, having arms of unequal length, a rod forming a link and connected with the long arm of said second lever, a hand operated spindle, and an arm rigidly carried thereby and pivotally connected with said link.

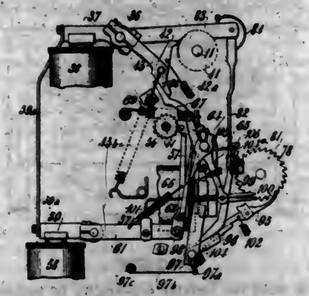
3. In combination, power operated brake mechanism, a spindle adapted to be rotated by hand, an arm rigidly attached to said spindle, a link in the form of a rod pivotally connected with said arm, means for connecting said link with said brake mechanism and including a slip device permitting the independent action of said brake mechanism, said link and said arm being arranged so that said arm is thrown beyond the dead center when the brakes have been applied through the rotation of said spindle.

4. In combination, power actuated brake mechanism, a spindle adapted to be rotated by hand, an arm rigid with said spindle, a long link, a short link connecting the same with said arm, means for connecting the inner end of said long link with said brake mechanism, said last means including a slip connection permitting the independent action of said brake mechanism by power, said arm being adapted to pass beyond the dead center when the brakes are applied by hand, whereby the tension in said link will be maintained.

5. A hand brake mechanism comprising a spindle, a member carried thereby and adapted to be rotated, a link pivotally attached to said member, a second link connected with said first link and adapted to apply the brakes, said first link being adapted to engage said spindle when said member is rotated to an extreme position whereby said first link may operate as a lever.

[Claims 6 and 7 not printed in the Gazette.]

962,694. PRINTING-TELEGRAPH RECEIVER. MARIE BURRY, New York, N. Y., executrix of JOHN BURRY, deceased, assignor to The Stock Quotation Telegraph Company, New York, N. Y., a Corporation of New York. Filed Aug. 27, 1908. Serial No. 450,579.



1. In a printing telegraph receiver having a type-carrier, the combination with type-carrier setting mechanism including an electromagnet for actuating the same, and printing mechanism including an actuating electromagnet, in circuit with the first so as to be energized simultaneously therewith; of mechanism, including an electromagnet in another circuit, for causing the first two electromagnets to actuate the respective mechanisms in the order named; as set forth.

2. In a printing telegraph receiver having a type-carrier, the combination with type-carrier setting mechanism including an electromagnet for actuating the same, and printing mechanism including an actuating electromagnet in circuit with the first so as to be energized simultaneously therewith; of locking mechanism releasably restraining the printing mechanism from operation, an electromagnet in another circuit for actuating said locking mechanism to release the printing mechanism, and means under the control of the setting electromagnet for releasably holding the said locking mechanism against release; whereby when the three electromagnets are simultaneously energized the printing mechanism will follow the type-carrier setting mechanism in operation; as set forth.

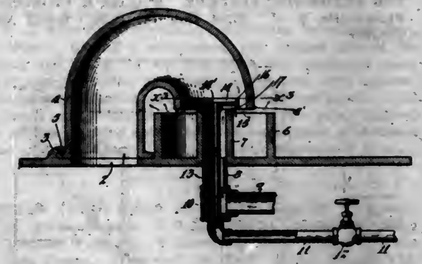
3. In a printing telegraph receiver having a type-carrier, the combination with a type-carrier setting electromagnet, and a printing electromagnet in circuit with the first so as to be energized simultaneously therewith, of an independently energizable electromagnet in another circuit, means releasable by the last named electromagnet normally restraining the printing magnet from operation, and means under the control of the type-carrier setting magnet for releasably restraining the third-named electromagnet from operation to release the printing magnet; whereby when the three magnets are simultaneously energized the setting magnet and the printing magnet will operate in the order named; as set forth.

4. In a printing telegraph receiver having a type-carrier, the combination of electromagnetic means for setting the type-carrier, locking mechanism, electromagnetic printing means normally locked by the locking mechanism, electro-magnetic means for releasing the locking mechanism, and means wholly mechanical for causing the three electromagnetic means to operate in the order named when simultaneously energized, as set forth.

5. In a printing telegraph receiver having a type-carrier, the combination of electromagnetic escapement mechanism for preliminarily adjusting the type-carrier; electromagnetic means for shifting the type-carrier to its final adjustment; electromagnetic means in circuit with and mechanically connected with the said type-carrier shifting means to predetermine the operation of the latter; electromagnetic printing mechanism in circuit with the electromagnetic means for shifting the type-carrier; electromagnetically releasable means for locking the printing mechanism, in circuit with the electromagnetic type-carrier shifting means; and mechanism actuated by the said type-carrier shifting means for normally preventing the locking means from releasing the printing mechanism; as set forth.

[Claims 6 to 15 not printed in the Gazette.]

962,695. OIL-BURNER. ROLAND C. CASAD, Covina, Cal. Filed Apr. 2, 1909. Serial No. 487,588.



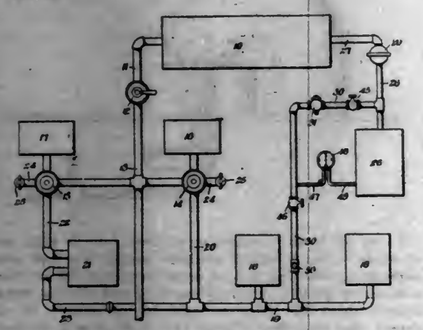
1. An oil burner comprising a plate formed with two openings, a bent tubular member having one end communicating with one of said openings to receive air from beneath the plate and having the other end directed downwardly above the plate to form an air outlet, an oil supply pipe extending through the other of said openings in the plate, a head formed with an oil cup at the upper end of said oil supply pipe and communicating therewith, said head extending within said air outlet and being of greater diameter than said oil supply pipe, and a second tubular member surrounding said oil supply pipe and extending beneath said oil cup, said second tubular member communicating with said other opening in the said plate to receive elastic fluid therethrough, whereby said elastic fluid is directed at the inside of the oil or vapor passing from the oil cup and the air from the aforesaid air outlet is directed at the outside of said vapor.

2. An oil burner comprising a plate formed with two openings, a bent tubular member having one end communicating with one of said openings to receive air from beneath the plate and having the other end directed downwardly above the plate to form an air outlet, an oil supply pipe extending through the other of said openings in the plate, a head formed with an oil cup at the upper end of said oil supply pipe and communicating therewith, said head extending within said air outlet and being of

greater diameter than said oil supply pipe, a second tubular member surrounding said oil supply pipe and extending beneath said oil cup, said second tubular member communicating with said other opening in the said plate to receive elastic fluid therethrough, whereby said elastic fluid is directed at the inside of the oil or vapor passing from the oil cup and the air from the aforesaid air outlet is directed at the outside of said vapor, and a wall extending upwardly from said plate around the aforesaid tubular member, said wall being of greater diameter than the aforesaid air outlet.

3. An oil burner comprising a plate formed with two openings, a bent tubular member having one end communicating with one of said openings to receive air from beneath the plate and having the other end directed downwardly above the plate to form an air outlet, an oil supply pipe extending through the other of said openings in the plate, a head formed with an oil cup at the upper end of said oil supply pipe and communicating therewith, said head extending within said air outlet and being of greater diameter than said oil supply pipe, a second tubular member surrounding said oil supply pipe and extending beneath said oil cup, said second tubular member communicating with said other opening in the said plate to receive elastic fluid therethrough, whereby said elastic fluid is directed at the inside of the oil or vapor passing from the oil cup and the air from the aforesaid air outlet is directed at the outside of said vapor, and means for supplying water to the aforesaid tubular member to produce steam at the outlet of said member, said oil cup having an annular recess in its bottom extending over the top of said second tubular member to form an annular discharge slot.

962,696. STRAIGHT-AIR-BRAKE ATTACHMENT FOR AUTOMATIC SYSTEMS. WILLARD R. CHANDLER, Branchville, S. C. Filed Jan. 18, 1910. Serial No. 538,680.

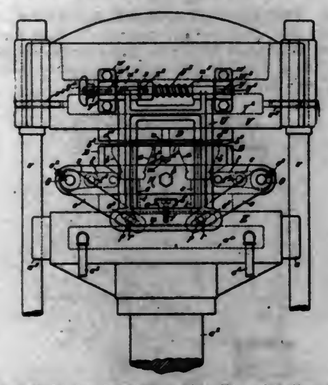


1. An attachment, for automatic brake systems having a main reservoir, train pipe, auxiliary reservoir, triple valve, brake cylinder, brake cylinder connection comprising a cut-off for the exhaust of the triple valve, a straight air reservoir connected to the main reservoir, a straight air pipe leading from said straight air reservoir and communicating with the brake cylinder and a straight air valve having ports to register its reservoir with the brake cylinder and other ports to control the air held in the brake cylinder by said triple valve cut-off.

2. An attachment, for automatic brake systems having a main reservoir, train pipe, auxiliary reservoir, triple valve, brake cylinder, brake cylinder connection comprising a cut-off for the exhaust of the triple valve, a straight air reservoir having connections to the main reservoir, a reducing valve in said connections, a straight air pipe leading from said straight air reservoir to the brake cylinder connection, a straight air valve having ports to register its reservoir with the brake cylinder connection, and other ports to control the air held in the cylinder by the triple valve cut-off, and cut-off valves in the straight air pipe upon each side of the straight air valve for the purpose specified.

3. An attachment, for automatic brake systems having a main reservoir, train pipe, auxiliary reservoir, triple valve, brake cylinder, brake cylinder connection comprising a pipe connected to the exhaust of the triple valve and having a retaining valve to hold the air in the brake cylinder, a straight air reservoir connected to the main reservoir, a straight air pipe leading from said straight air reservoir to the brake cylinder connection, a straight air valve in said straight air pipe having ports to register its reservoir with the brake cylinder connection and other ports to control the air held in the brake cylinder by said retaining valve, and a cut-off valve in the straight air pipe between said straight air valve and the brake cylinder connection whereby the attachment may be altogether cut out and the automatic system permitted to normally operate by opening the retaining valve.

962,697. MOLD FOR FORMING FOOTWEAR. MAURICE C. CLARK, Providence, R. I., assignor to Maurice C. Clark Company, Providence, R. I., a Corporation of Rhode Island. Filed June 1, 1909. Serial No. 499,575.



1. In a mold for forming a plurality of hollow articles from plastic material at one operation, the combination with a stationary mold-body, of two side mold-sections adapted to be moved into contact with the central mold-body, the central mold-body and the side mold-sections formed with opposed seats, a top mold-plate arranged to cover the several sections of the mold, work-supports having stems fitted to the seats in the mold-body and mold-sections and arranged to be held with a space between them and the top mold-plate when the latter is in position, and means to bring the sections of the mold together.

2. The combination in a mold for forming footwear of a central, stationary mold-body having a matrix on each of its two opposite sides, side mold-sections adapted to abut the sides of the central mold-body and formed with matrices registering with those of the central mold-body, and lasts shaped to conform to the hollow of the matrices, said lasts formed with means for engaging the mold-body and side mold-sections to support the lasts in a raised position between the several parts of the mold.

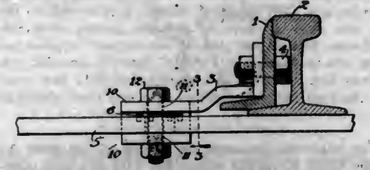
3. The combination of a central, stationary, mold-body, guide-bars extending laterally therefrom, side mold-sections adapted to slide on the guide-bars, rockable rods supported at the ends of the guide-bars, means to rock the rods, and connections between the rods and the side mold-sections to move the latter toward and away from the central mold-body when the rods are rocked.

4. The combination of a central, stationary mold-body, guide-bars extending laterally therefrom, side mold-sections adapted to slide on the guide-bars, rockable rods supported in bearings in the guide-bars, levers on said rods, links connecting the levers with the side mold-sections, and arms for rocking the rods to move the levers to slide the side mold-sections in and out of contact with the central mold-body.

5. The combination of a central, stationary mold-body, slidable side mold sections adapted to be moved toward and away from the central mold-body, two rockable rods supported in bearings adjacent the side mold sections, an arm on each rod to rock the latter, and toggle connections between the rods and the side mold sections adapted to thrust the side mold sections against the central mold-body when the rods are rocked by the arms.

[Claims 6 to 22 not printed in the Gazette.]

962,698. SWITCH-BAR-ADJUSTING DEVICE. JOHN E. CONLEY, Memphis, Tenn. Filed July 1, 1909. Serial No. 505,306.



1. The combination with a switch point of an adjustable support connected therewith, a controlling part, an adjustable piece intermediate the adjustable support and the controlling device, and a fastening device which passes through all three parts to hold them in place, said adjustable piece having a concentric connection with the controlling part, and an eccentric connection with the fastening device.

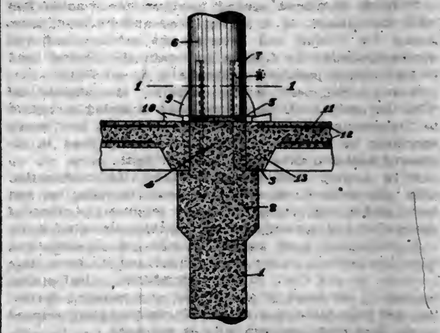
2. The combination with a switch point of an adjustable support connected therewith, a controlling part, said adjustable support provided with two separated parts between which the controlling part is received, an adjustable piece also contained between said separated parts, means for preventing the rotation of said adjustable piece, and a fastening device passing through all the parts and eccentrically connected with the adjustable piece.

3. The combination with a switch point of an adjustable support connected therewith, a controlling part, the adjustable support having a looped portion into which the controlling part is received, an adjustable piece contained within said looped portion, a fastening device which passes through all of said parts to hold them in place, said adjustable piece having a concentric connection with the controlling part and an eccentric connection with the fastening device.

962,699. CONCRETE CONSTRUCTION. JOHN E. CONZELMAN, St. Louis, Mo., assignor, by mesne assignments, to Unit Construction Company, a Corporation of Delaware. Original application filed Jan. 9, 1909, Serial No. 471,431. Divided and this application filed Apr. 29, 1909, Serial No. 492,863. Renewed Apr. 18, 1910. Serial No. 556,289.

1. A concrete construction comprising a pair of columns, one of the same being superimposed upon the other and containing grooves, a slab supported by the other column, said first-mentioned column bearing lugs, tie-rods embedded in said grooves and in said other column, said superimposed column being adapted to be adjusted vertically by said lugs to adjust said superimposed column above the other.

2. A concrete construction comprising a pair of columns, one of the same being superimposed upon the other and containing grooves, a slab supported by the other column, said first-mentioned column bearing lugs, tie-rods embedded in said grooves and in said other column, the said lugs being adapted to coöperate with a lifting means to adjust said superimposed column vertically.

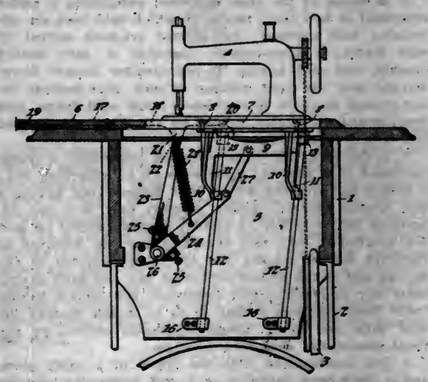


3. A concrete construction comprising a pair of columns, one of the same being superimposed upon the other and containing grooves, a slab supported by the other column, said first-mentioned column bearing lugs, tie-rods embedded in said grooves and in said other column, said lugs being adapted to coöperate with a lifting means to adjust said superimposed column above the other, there being a mortar-bed between said columns.

4. A concrete construction, comprising in combination, a column, having a surrounding cap formed around its upper end below the top thereof, a slab supported upon said cap, a column superposed above said first column, and having radial projections, and means for bonding said columns end to end, said radial projections being adapted to coöperate with a lifting means whereby to adjust said superposed column vertically.

5. A concrete construction, comprising in combination, a column, having a surrounding cap formed around its upper end below the top thereof, a slab supported upon said cap, a column superposed above said first column, and having radial projections, and means for bonding said columns end to end, said radial projections being adapted to receive a lifting means between said radial projections and said slab to vertically adjust said superposed column.

962,700. DROP-HEAD SEWING-MACHINE. STEPHEN A. DAVIS, Newark, N. J., assignor to Domestic Sewing Machine Company, Newark, N. J., a Corporation of New Jersey. Filed Oct. 19, 1907. Serial No. 398,158.



1. In a drop-head sewing machine, the combination of a base plate and sewing head, means for raising and lowering the same, and means interposed between the front of the cabinet and the base plate for pressing the same

backward toward the rear of the cabinet, substantially as set forth.

2. In a drop-head sewing machine, the combination with the cabinet, of a sewing head and its base plate, means for raising and lowering the sewing head and means operating by friction to retain the sewing head in its lowered position, substantially as set forth.

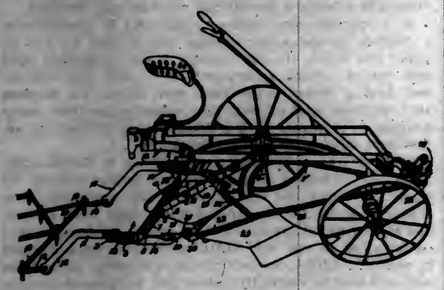
3. In a drop-head sewing machine, the combination with the cabinet, of the sewing head, a spring connected to the sewing head and tending to elevate it and means operating by friction to retain the sewing head in its lowered position, substantially as set forth.

4. In a drop head sewing machine, the combination with the cabinet, of a sewing head movable up and down and a leaf spring interposed between the front of the cabinet and the sewing head, substantially as set forth.

5. In a drop head sewing machine, the combination with the cabinet, of the sewing head and its base plate movable up and down in the said cabinet, a leaf spring secured to the front of the cabinet and pressing against the said base plate, and a metallic rubbing piece secured to the base plate, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

962,701. HARROW ATTACHMENT FOR SULKY-PLOWS. IRA SMITH DE WITT, Newdale, Manitoba, Canada. Filed Aug. 24, 1909. Serial No. 514,448.



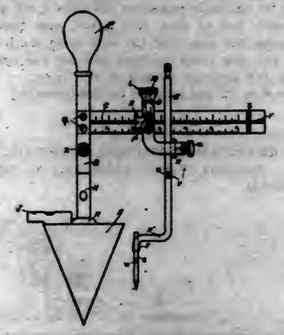
1. A device of the class described comprising a frame composed of two bars; means by which said bars are adjustably held together; two slotted brackets carried by said frame, a draw-member mounted in each slotted bracket, and draft means detachably carried by the front ends of said draw-members.

2. A device of the class described comprising a frame composed of two bars; means by which said bars are adjustably held together; two slotted brackets carried by said frame; a draw-member mounted in each slotted bracket, and each having its rear-member formed downwardly, and the front member of each draw-member being formed so as to be positioned below said frame, and draft-means detachably carried by the front members of the said draw-members.

3. A device of the class described comprising a frame composed of a first bar provided with an attaching end; a second bar provided with a bent outward end having a slot formed therein; means whereby said bars are adjustably held together; a slotted bracket carried by said first-mentioned bar; two draw-members one mounted in the said slotted bracket and the other mounted in the slotted end of the second-mentioned bar, and each having their rear members formed downward, and further having their front members formed so as to extend beneath the said bars, and draft means detachably carried by the front members of said draw-members.

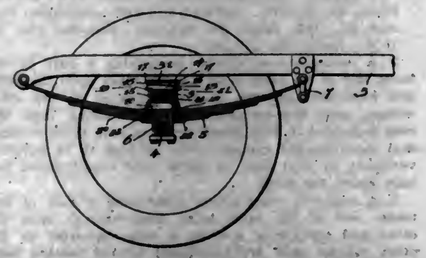
4. The combination with the frame of a sulky plow, and a draw-head therefor, of a stiff supporting element secured to said frame and projecting essentially beyond one side thereof; two horizontally-disposed draw-members movably mounted in said supporting element, and supported thereby in such a manner as to be capable of independent and unitary movement in a horizontal plane, in a direction substantially parallel to the line of draft, and draft means detachably coupling said draw-members to said draw-head.

962,702. COMPASSES. JOSEPH DIRACCA, Joliet, Ill. Filed July 15, 1909. Serial No. 507,721.



The improved compass, consisting of the cone A; the center shaft B, rigidly connected with the said cone; the graduated scale-plate C, rigidly connected at right angles with the said shaft B; the arm D, slidable on the said scale-plate C by means of the slot M', which perforates the said arm D through its longitudinal center, the length and width of the said slot corresponding to the width and thickness of the said scale-plate; the indicator N secured to the said arm D; the pointer E, slidable through the slot L' which perforates the said arm D; the thumb-screw Q for setting the said pointer E rigidly in the said slot L'; the plug R, inserted in the said slot L' and fitting into the groove V running lengthwise in said pointer E, to prevent the said pointer E from turning in the said slot L'; the marking point S secured to the arm K, the latter being the end of said pointer E turned to a right angle; the screw-bolt M which fits into the tubular end of the said arm D; the nut L screwed onto the threaded end of the said screw-bolt M; the lug G', integrally connected with the unthreaded end of the said screw-bolt M, and so positioned, that when the said arm D is slid onto the said scale-plate C, the said lug will enter the groove Y on the said scale-plate, and, consequently, the said arm D can be tightened or loosened on said scale plate by turning the said nut L forward or backward, and the said indicator, pointer and marking point can thus be held rigid at any desired points within the scope of the compass, all substantially as illustrated and set forth.

962,703. AUXILIARY SPRING FOR VEHICLES. JOHN ECKHARD, Boston, Mass. Filed Feb. 4, 1910. Serial No. 542,115.

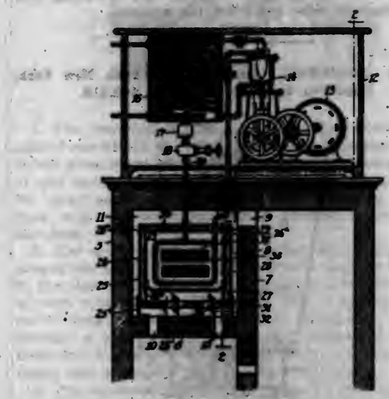


1. In a vehicle, the combination with an axle, of a vehicle body, a main spring supported by the axle and sustaining the body, an auxiliary spring device comprising a spring holder carried by the axle, two coil springs carried by said holder, one of greater strength than the other, a cap for each spring, and tie-rods secured to each cap and passing loosely through the holder one of said caps having ears thereon through which the tie-rods of the other cap pass.

2. In a vehicle, the combination with an axle, of a vehicle body, a main spring supported by the axle and sustaining the body, an auxiliary spring device comprising a spring holder carried by the axle, two coil springs carried by said holder, one of greater strength than the other, a cap for each spring, and tie-rods secured to each cap and passing loosely through the holder, the tie-rods secured to the cap for the spring of greater strength being of less length than the other tie-rods.

3. In a vehicle, the combination with an axle, of a vehicle body, a main spring supported by the axle and sustaining the body, an auxiliary spring device comprising a spring holder carried by the axle, two coil springs carried by said holder, one of greater strength than the other, a cap for each spring, tie-rods secured to each cap and passing loosely through the holder, one of said caps having ears thereon through which the tie-rods of the other cap pass, and a spring engaging each tie-rod and serving to yieldingly hold the caps against the coil springs.

962,704. REFRIGERATING APPLIANCE. RALPH W. EMERSON and FRANK BISHOP, South Bend, Ind. Filed Oct. 28, 1908. Serial No. 459,851.



1. In a refrigerating apparatus, a receptacle suitably subdivided to provide a top cooling chamber, a closable opening on one side of said cooling chamber, a brine tank within said cooling chamber spaced apart therefrom, a refrigerating coil within said tank presented end-wise to the door of the cooling chamber, tubular guides extending through said coil and open only at their ends proximate to the door of the cooling chamber, and ice pans in said guides, removable through said door.

2. In a refrigerating apparatus, a receptacle providing a cooling chamber and suitable chambers for provisions to be cooled, said cooling chamber having openings in the top and bottom thereof for passage of air therethrough, a brine tank within the cooling chamber, a coil in the brine tank, the walls of said brine tank being hollow to provide an air chamber surrounding said tank, the air chamber having top and bottom openings therein for passage of air therethrough, and said bottom openings having closures therefor operable partially or completely to prevent the passage of air through said air chamber.

3. In a refrigerating apparatus, a receptacle, a casing therein, positioned to afford air passageways around it and having an outer and an inner wall to provide between said walls an air chamber and within the inner wall a brine tank, said inner wall being of relatively high conductivity, and means for opening and closing the said air chamber to communicate with the adjacent air passages, or to constitute a dead insulating space.

4. In a refrigerating apparatus, a receptacle interiorly subdivided to provide a cooling chamber having circulation openings to the balance of the receptacle, a casing within said cooling chamber, spaced apart from the walls thereof to provide air circulation passages around the casing, said casing being divided into a brine tank and an air space, separated only by a thin metallic wall, means for opening said air space to or closing it from the air passages surrounding the casing, an axially open coil within the brine tank, tubular guides extending longitudinally through the open center of said coil forming free passages into the interior of the brine tank sealed against the ingress of brine, and ice pans longitudinally slidable into said guides.

5. For inclusion in the cooling chamber of a refrigerating apparatus, a sheet metal structure having a top and sides of two elements and an air chamber between said elements, a single sheet of metal closing the space between the inner elements of the sides near the bottom thereof and providing thereabove a brine tank, and a bottom below and spaced from said single sheet spanning the space between the outer elements of the sides and provided with apertures for circulation of air therethrough, there being apertures through the outer element of the structure near the top thereof.

962,705. MACHINE FOR FORGING METALS. JOHN FIELDING, Gloucester, England. Filed Aug. 18, 1909. Serial No. 513,475.



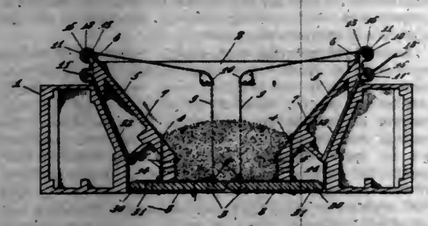
1. In a forging machine, the combination of a steam cylinder, hammer, and a hammer piston, with a hydraulic forging press cylinder and a press ram, the press ram being independent from the hammer piston and arranged above the latter to act upon the same when the machine is working as a hydraulic press, substantially as described.

2. In a forging machine, the combination of a cylinder having a hammer piston therein, and steam passages above and underneath the hammer piston, with a superimposed cylinder having a press ram independent from the hammer piston, and a steam passage underneath, and a water passage above the press ram, as and for the purpose set forth.

962,706. SCOW. CHARLES E. FOWLER, Seattle, Wash. Filed Sept. 21, 1909. Serial No. 518,867.

1. A boat having a cargo compartment, a door for said compartment arranged to swing outwardly beneath the water, and means secured to said door and projecting on

the opposite side of the point of swing thereof for applying force to move the door outwardly.



2. A float having a cargo compartment, a load retaining door for said compartment arranged to swing outwardly beneath the water, a flexible draft member connected with said door, and means projecting from the door on the opposite side of the point of swing thereof for engagement with said member to move the door outwardly.

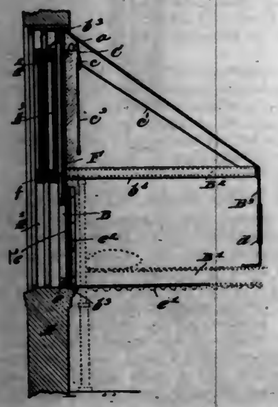
3. A float having a cargo compartment, a load retaining door for said compartment arranged to swing outwardly beneath the water, a draft member, and means secured to said door and extending on the opposite side of the point of swing thereof for engagement with said member to move the door outwardly.

4. A float having a cargo compartment, a load retaining door for said compartment arranged to swing outwardly beneath the water, an operating means mounted on said float, a flexible draft member engaged with said operating means and connected with the door, and means projecting from the base of said door on the opposite side of the point of swing thereof for engagement with said member to move the door outwardly.

5. A float provided with a cargo compartment having projecting discharge walls, doors mounted on said walls to swing outwardly, and extensions projecting from said doors on the opposite side of the points of swing thereof and beyond said walls for applying force to swing said doors outwardly.

[Claim 6 not printed in the Gazette.]

962,707. WINDOW-TENT. CLARENCE A. HERCULES, Aurora, Ill. Filed Feb. 5, 1908. Serial No. 414,330.



1. In a device of the class described, the combination of an adjustable rectangular frame work fitting inside of the window frame, a laterally extending frame pivotally secured to the sides of the aforesaid frame work approximately mediate of the length thereof, one or more aprons secured to the bottom of said rectangular frame work, a tent covering secured to the top and sides of the aforesaid frame work and covering the laterally extending frame and means secured to said tent and to the lateral frame for raising and lowering it, substantially as described.

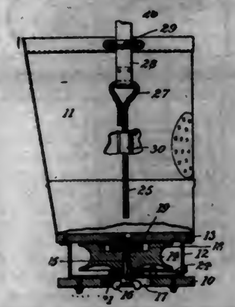
2. In a device of the class described, the combination of an adjustable frame work fitting inside of a window frame, a laterally extending frame pivotally secured to the sides of the aforesaid frame work and extending inside of the room, a tent covering secured to said frame work and covering the lateral frame, one or more aprons secured to the bottom of the adjustable frame work, and means for fastening said aprons in an upright position, substantially as described.

3. In a device of the class described, the combination of an adjustable frame work fitting inside of a window frame, a metallic plate secured to said frame, said plate being bent to form a groove, a rod fitting in said groove, and a tent covering secured by the aforesaid rod, substantially as described.

4. In a device of the class described, the combination of a rectangular frame secured inside of a window frame, a longitudinally adjustable angle plate secured to said frame, a supplemental angle plate secured to the aforesaid plate and forming a recess, a rod in said recess, and a tent covering secured to said rod, substantially as described.

5. In a device of the class described, the combination of an adjustable frame work adapted to fit inside of an ordinary window frame, a grooved metallic plate secured to said frame, a rod in said groove, a tent covering secured by said rod, pulleys secured to the top of the aforesaid frame, and cord attachments secured to the upper and lower window sashes of the window and extending over said pulleys to raise and lower the windows.

962,708. FEED-BAG. ADOLPH KAPPENBERG, New York, N. Y. Filed Feb. 5, 1910. Serial No. 542,216.

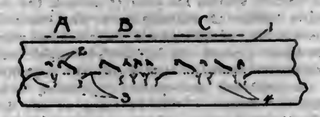


1. A feed bag provided with a double bottom, an intervening spindle, a recessed wheel rotatable on the spindle, ropes engaging the wheel, a spiral spring within the wheel-recess and secured to the spindle and to the wheel, a ratchet wheel keyed to the spindle, and a pawl engaging the ratchet wheel.

2. A feed bag provided with an apertured bottom, a frame mounted thereon, a false bottom mounted on the frame, a spindle journaled in the frame and in the false bottom, a wheel rotatable on the spindle, ropes engaging the wheel, a spiral spring secured to the spindle and to the wheel, a ratchet wheel keyed to the spindle, a pawl engaging the ratchet wheel, and a handle on the spindle located in the bottom-aperture.

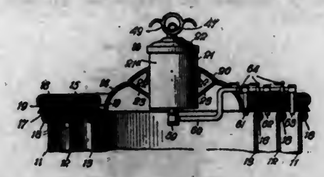
962,709. TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor of one-half to William J. Latta, Philadelphia, Pa. Filed July 9, 1906. Serial No. 325,324.

1. In a telegraphic alphabet three elements, one element symbolizing the character of the message, said element consisting of heavy lines above an imaginary zero line, a second element symbolizing the space consisting of a heavy line partially below and partially at the zero line and a third element comprising unconnected lines below an imaginary zero line.



2. A record for telegraphic messages comprising a short curve for one character of the message, a long diagonal line for the second character of the message, both above an imaginary zero line, comprising also a curve or diagonal line partially below and partially at the zero line symbolizing space and comprising unconnected short lines below the zero line symbolizing the clearing impulse.

962,710. COVER FOR RECEPTACLES. BENJAMIN J. LEVIN, South Amboy, N. J. Filed Apr. 3, 1909. Serial No. 487,663.



1. The combination with a plurality of receptacles, arranged one within the other, and having their upper edges in the same plane, of a cover serving as a closure for all of said receptacles, and provided with a sealing gasket on its under surface, and a pump for exhausting the air from said receptacles said pump forming a portion of the cover.

2. The combination with a plurality of receptacles arranged one within the other, and having their upper edges in the same plane, of a cover serving as a closure for all of said receptacles, and provided with a sealing gasket on its under surface resting on the receptacles, a pump forming a portion of the cover for exhausting the air from said receptacles, and an independent connection between said pump, and each of said receptacles.

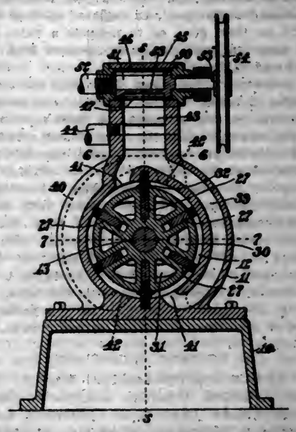
3. The combination with a plurality of receptacles arranged one within the other and having their upper edges in the same plane, of a cover serving as a closure for all of said receptacles, and provided with a sealing gasket on its under surface resting on the receptacles, a pump forming a portion of the cover for exhausting the air from said receptacles, and an independent connection between said pump and each of said receptacles, said connections extending through said gasket.

4. The combination with a plurality of receptacles arranged one within the other, and having their upper edges in the same plane, of a cover serving as a closure for all of said receptacles, and formed on its under surface with an annular groove a sealing gasket within said groove, a pump forming a part of said cover for exhausting the air from said receptacles, and valved connections between said pump and receptacles.

5. The combination with a plurality of receptacles arranged one within the other, and having their upper edges in the same plane, of a cover serving as a closure for all of said receptacles and provided with a sealing gasket resting on the upper edge of each of said receptacles, and means on the cover adapted to create a vacuum in the receptacles.

[Claims 6 to 9 not printed in the Gazette.]

962,711. MOTOR. NATHANIEL LOMBARD, Winthrop, Mass. Filed Oct. 18, 1909. Serial No. 523,348.



1. In a device of the class described, the combination of a revoluble shaft; a fluid cylinder surrounding said shaft the casing of which is provided with an inlet chamber and an outlet chamber connected by an outlet port, while said inlet chamber is also connected through two ports with two passages communicating with the interior of said fluid cylinder; an abutment extending into said cylinder between said passages; a member secured to said shaft with its periphery always in contact with said abutment and provided with radial movable blades adapted to be acted upon by the fluid passing through said cylinder to effect a revolution of said shaft; and a rotary valve in said inlet chamber provided with a peripheral groove adapted to connect said outlet passage with one of said inlet passages and having ports adapted to register with said inlet pipe and the other inlet passage or both of said inlet passages.

2. In a device of the class described, the combination of a revoluble shaft; a fluid cylinder surrounding said shaft the casing of which is provided with an inlet chamber and an outlet chamber connected by an outlet port, while said inlet chamber is also connected through two ports with two passages communicating with the interior of said fluid cylinder; an abutment extending into said cylinder between said passages; a member secured to said shaft with its periphery always in contact with said abutment and provided with radial movable blades adapted to be acted upon by the fluid passing through said cylinder to effect a revolution of said shaft; an inlet pipe communicating with the end of said inlet chamber; and a rotary tubular valve in said inlet chamber, the bore of which communicates with said inlet pipe and having ports extending from said bore to the periphery of said valve, one of which is adapted in the oscillation of said valve to register with one inlet port while the other is adapted to register with either port, said valve also being provided with a peripheral groove adapted in certain positions of said valve to serve as a means of communication between said outlet port and one of said inlet ports.

3. In a device of the class described, the combination of a revoluble shaft; a fluid cylinder surrounding said shaft the casing of which is provided with an inlet chamber and an outlet chamber connected by an outlet port, while said inlet chamber is also connected through two ports with two passages communicating with the interior of said fluid cylinder; an abutment extending into said cylinder between said passages; a member secured to said shaft with its periphery always in contact with said abutment and provided with radial movable blades adapted to be acted upon by the fluid passing through said cylinder to effect a revolution of said shaft; a rotary tube-

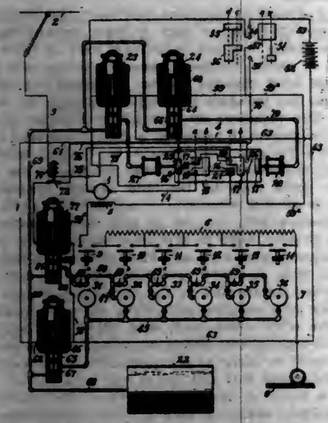
lar valve in said inlet chamber provided with a peripheral passage and two ports from its bore to its periphery; and means for oscillating said valve to close both of said inlet ports and said outlet port, to register each of said valve ports with an inlet port, or to register a valve port with an inlet port and said peripheral groove with the other inlet port and said outlet port.

4. In a device of the class described, the combination of a casing inclosing a fluid cylinder and an inlet connected thereto by two passages; an inlet pipe thereto; an outlet from said inlet chamber; a revoluble member within said fluid cylinder provided with radial movable blades the outer ends of which normally are in contact with the cylinder wall; an abutment extending into said cylinder between said passages and into contact with said revoluble member; and means within said inlet chamber for closing the outlet passage and connecting both passages to the fluid cylinder with the inlet pipe, for connecting the outlet passage with one of said passages to the fluid cylinder and the other passage with the inlet pipe, and for closing all of said passages and preventing further admission or exit from said fluid cylinder of said fluid.

962,712. LEUCO DIETHYLGALLOCYANIN. WILHELM LOMMEL, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Mar. 4, 1910. Serial No. 547,213.

The herein described new leuco compound of diethylgallocyanin, which is in the shape of its hydrochlorid a greenish powder soluble in water with a greenish-yellow color, dissolving in concentrated sulfuric acid with a reddish-gray color; the free base being separated by the addition of sodium acetate to the aqueous solution of the hydrochlorid, the free base soon turning blue in consequence of oxidation, substantially as described.

962,713. ELECTROPNEUMATICALLY-OPERATED CONTROLLER. JOSEPH N. MAHONEY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 3, 1907. Serial No. 391,238.



1. In a control system for electric motors, the combination with a series of independently operated switches, of an elastic fluid interlocking means therefor, and electro-responsive means for initiating the action of the switches.

2. In a control system for electric motors, the combination with a plurality of independently operated switches, of means for pneumatically interlocking the switches to insure their closure in a predetermined sequence, and electro-responsive means for initiating the sequential action of the switches.

3. In a control system for electric motors, the combination with a series of automatically and independently operated switches, of pneumatic interlocking means for confining their closure to a predetermined sequence, and electro-responsive means for initiating the action of the series of switches.

4. In a control system for electric motors, the combination with a series of automatically and independently operated switches, of pneumatic interlocking means for confining their closure to a predetermined sequence, electro-responsive means for initiating the sequential closure of the switches and electro-responsive means for suspending the closure of the switches at any point in the sequence.

5. In a control system for electric motors, the combination with a plurality of independently operated switches pneumatically interlocked to effect their closure in a predetermined sequence, of electro-responsive means for initiating the sequential closure of the switches and means for suspending the closure of the switches at any point in the sequence.

[Claims 6 to 15 not printed in the Gazette.]

962,714. MACHINE FOR AND PROCESS OF FORMING LININGS FOR STORAGE-BATTERY JARS. ALBERT J. MEIER, Glendale, Mo. Filed Dec. 24, 1908. Serial No. 469,097.



1. In a machine of the character described, the combination of a stationary female die, an end-closing male die therefor, and a pressing die coöperating therewith, said pressing die having a main pressing surface of less cross-sectional area than said female die, a secondary pressing area conterminus with the inside of said female die and a groove formed adjacent said secondary pressing surface.

2. In a machine of the character described, the combination of a stationary die, containing a projection and a pair of movable dies one of which is adapted to travel into contact with said projection.

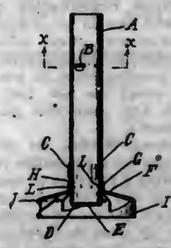
3. In a machine of the character described, the combination of a casting containing a passage, the wall of said passage having a flange forming a pair of shoulders projecting thereinto, a die adapted to travel into engagement with one of said shoulders, another die adapted to force fluid material into squeezing contact with said other shoulder, and means for actuating said movable dies.

4. In a machine of the character described, the combination of a pair of cylinders, a pair of pistons adapted to reciprocate therein, each of said cylinders having a head through which its respective piston moves, and each of said cylinders having a fluid inlet port at the opposite end thereof, there being a groove formed in each of said pistons and a tongued ring engaging each of said grooves, a die borne by each of said pistons, each die having a projection, means for binding said projection to said ring, a casting containing a coöperating female die, there being projections from said casting and from each of said cylinders and tie-rods passing through said projections on said cylinders and on said casting to bind the parts together.

5. The herein-described process of molding objects, consisting in pouring the fluid material to be molded into a suitable chamber, pressing same so as simultaneously to form part of the object and to cause the surplus material to run into a restricted passage, and, thereupon, applying further pressure to the material in said restricted passage so as, by squeezing, to project same forward, forcing in advance thereof the part already formed of the object to be molded and at the same time to form the remainder of the object.

[Claims 6 to 9 not printed in the Gazette.]

962,715. BRAIDER-SPOOL. FRANK MOSSBERG, Attleboro, Mass., assignor to Frank Mossberg Company, a Corporation of Rhode Island. Filed July 7, 1909. Serial No. 506,297.



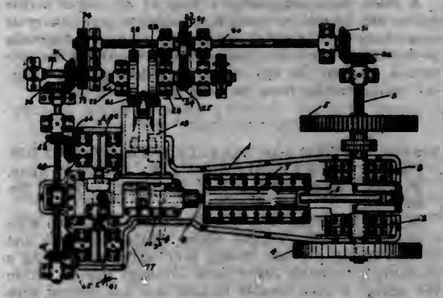
1. In a spool of the type set forth, the combination with a tube, of a head fixed to the tube provided with a smooth base, and teeth upon the head above the base.

2. In a spool of the type set forth, the combination with a tube, of a hollow head fixed to the tube, and teeth upon an intermediate portion of the head.

3. In a spool of the type set forth, the combination with a tube, of a spindle bearing upon the lower portion of the tube, a head upon the tube surrounding the bearing, and teeth upon an intermediate portion of the head.

4. In a spool of the type set forth, the combination with a tube, of a spindle bearing in the lower portion of the tube, a head comprising a top, a side, and a flange engaging the tube, and teeth formed by a series of openings in the top and side.

962,716. FUEL-PRESS. DAVID C. MCCAN, Los Angeles, Cal. Filed Sept. 22, 1909. Serial No. 519,032.



1. In a fuel press, a compression chamber formed in three sections, a plunger operating therein, means to force and compact material in the path of said plunger, intermittent gears connected with said forcing means to move two of said sections relatively to said third section, and means connected with one of said movable sections and said third section to eject the contents of said chamber therefrom.

2. In a fuel press, a main cylinder having a compression chamber formed in three sections, and a bore in communication with said compression chamber, a compressing plunger operating in said bore, a plunger disposed at right angles to and arranged to force and compact material in the path of said compressing plunger, means to hold said forcing plunger stationary during the compressive and retractive strokes of said compressing plunger, gears to operate said means, means to move two sections of said compression chamber relatively to the third section, and mutually coöperating means connected with one of said movable sections and said third section to eject the contents from said chamber.

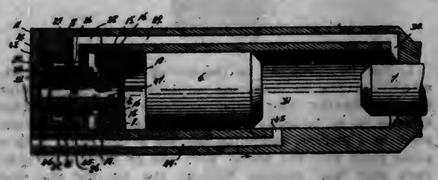
3. In a fuel press, a main cylinder having a sectional compression chamber, a plunger operating therein, a hopper, a feeding plunger beneath said hopper arranged to force and compact material in the path of said plunger, intermittent gears to operate said feeding plunger, means to operate said gears, boxings connected with the sections of said compression chamber, and means in said boxings to open and close the sections of said compression chamber.

4. In a fuel press, a cylinder having a sectional compression chamber, a compression plunger operating therein, and intermittent feeding mechanism to force and compact material in the path of said compression plunger, ejecting means operating in said compression chamber, means to move the sections of said compression chamber, and means connected with one of said sections and controllable by the movement thereof in one direction to operate said ejecting mechanism.

5. In a fuel press, a cylinder having a sectional compression chamber, a bore in communication therewith, and a lateral aperture communicating with said bore, a compression plunger operating in said bore, a hopper frame disposed at right angles to said cylinder, a feeding plunger contained in said frame and arranged to operate in the aperture of said cylinder, said feeding plunger being arranged to force and compact material in the bore of said cylinder and in the path of said compression plunger, and also to close the aperture communicating with said bore, means to periodically reciprocate said feeding plunger, and means to open and close the sections of said compression chamber.

[Claim 6 not printed in the Gazette.]

962,717. VALVE FOR HAMMER-DRILLS. VINCENT J. O'BRIEN, Denver, Colo., assignor of one-third to Romeo C. Awkerman and one-third to Thomas Punshon, Jr., Denver, Colo. Filed May 14, 1909. Serial No. 496,078.



1. The combination with a hammer cylinder and a motive fluid actuated hammer therein, of a valve chest, a hollow cylindrical valve mounted to reciprocate therein, and a hollow core passing through the valve and forming a support therefor, the said core having a centrally located exhaust passage communicating with the rear extremity of the cylinder, the forward end of the core being closed.

2. The combination with a hammer cylinder and a motive fluid actuated hammer therein, of a valve chest, a hollow, cylindrical valve, mounted to reciprocate therein, its opposite extremities being provided with differential pressure areas, and a hollow core passing through the

valve and coöperating with the valve chest, to form a support therefor, the core having a central exhaust passage and its forward extremity being closed and flush with the surrounding surface of the rear end of the hammer cylinder.

3. The combination with a hammer cylinder and a motive fluid actuated piston therein, of a hollow, cylindrical valve having differential pressure areas, one of which is constantly exposed to the live motive fluid, and the other intermittently exposed thereto, and a hollow core passing through the valve and coöperating with the valve chest to form a support therefor, whereby an extensive wearing surface is provided for the valve, the hollow of the core forming an exhaust passage while the forward extremity of the core is closed.

4. The combination with a hammer cylinder and a motive fluid actuated hammer therein, of a hollow, cylindrical valve for controlling the motive fluid supply to, and exhaust from the cylinder, the said valve being mounted to reciprocate and having differential pressure areas, the smaller of which is constantly exposed to the live motive fluid and the larger of which is intermittently exposed thereto, and a hollow core forming a support for the valve, and through which the exhaust from the rear extremity of the cylinder passes, the forward end of the said core being closed.

5. The combination with a cylinder and a motive-fluid-actuated piston therein, of a hollow cylindrical valve mounted to reciprocate for controlling the supply and exhaust of the motive fluid, the valve having a series of relatively small ducts which when the valve is shifted in one direction, introduces live motive fluid to the forward extremity of the cylinder, and another series of similar ducts which when the valve is shifted in the opposite direction, allows the motive fluid to exhaust from the forward extremity of the cylinder.

[Claims 6 to 16 not printed in the Gazette.]

962,718. PROCESS OF MAKING MULTICOLOR PRINTS. VICTOR PETERSON, Downers Grove, Ill. Filed June 4, 1908. Serial No. 436,538.



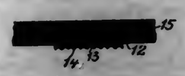
1. The improvement in the art of printing in colors, which consists in preparing a plurality of relief color tympans having their relief portions differently located thereon so as to apply the various colors on the proper place in a picture, equipping the bed of the press with a plain plate and the platen with one of said relief tympans and then running through the job for the first color impression, next removing said first relief tympan, substituting another relief tympan on the press and running through the job for the next color impression, finally removing the last used relief tympan and substituting on the press a plain tympan, removing the plain plate and substituting on the press a key plate and running through the job for the final impression to receive outlines, dividing lines or shade lines.

2. The improvement in the art of color printing, which consists in first preparing an outline printing plate for printing the color boundaries, making ready the press with said outline plate and an opposed plain tympan, printing a plurality of sheets of over-lay stock and a plurality of sheets of tympan stock, cutting from each printed over-lay stock sheet that portion to be printed in a certain color, mounting said portion in its proper place on one of the tympan sheets, and so forming a relief tympan for said color, similarly forming a relief tympan for each different color, next equipping the bed of the press with a plain printing plate and the platen with one of said relief tympans, and running through the job for the first color impression, next removing the first used relief tympan and substituting a second relief tympan on the press and running through the job for the next color impression, repeating the operation of substituting tympans and running through the job for each color impression, and finally removing the last used relief tympan and substituting on the platen a for each color impression, and finally removing the last used relief tympan and substituting on the platen a plain tympan, removing from the bed the plain printing plate and substituting thereon a key plate and running through the job for the final impression to receive outlines, dividing lines, or shade lines.

3. The improvement in the art of printing in colors which consists in building up upon different plain back sheets, relief portions corresponding to the parts of the impression which are to be printed in the several different colors, employing these relief tympans successively on the press, in opposition to and in conjunction with a plain printing plate, in printing the several color impressions, except the last, and making the last impression with a key plate and plain or non-relief tympan opposed thereto.

4. The improvement in the art of color printing which consists in preparing an outline plate of a picture to be printed, printing a plurality of tympan sheets with said plate, printing also a plurality of over-lay stock sheets with said plate, peeling off or counter-sinking portions of each over-lay sheet to leave relief portions for printing a certain color, then securing each over-lay sheet to a tympan sheet with the prints thereon in register, then removing the outline from the press and substituting a plain printing plate, then successively mounting the tympan sheets with the relief stock sheets thereon in the press, then successively applying to the printing plate the colors to be printed by the tympan sheets, and then successively printing the different colors to form the picture.

962,719. WEAR-RESISTING AND NON-SLIPPING TREAD. PHILIP WATSON PRATT, Boston, Mass. Filed Mar. 7, 1910. Serial No. 547,663.

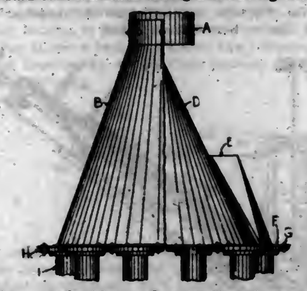


A tread piece comprising a body of frictioned textile fabric, the bottom or tread face having a multiplicity of projections each of which has a series or group of strands or threads of the fabric converging at the tip of the projection, whereby the tips of the projections possess different characteristics from the body of the tread piece.

962,720. DEVICE FOR EQUALLY DIVIDING AND DISTRIBUTING A CURRENT OF AIR. HENRY F. RAND, Tacoma, Wash. Filed Dec. 22, 1908. Serial No. 468,880.

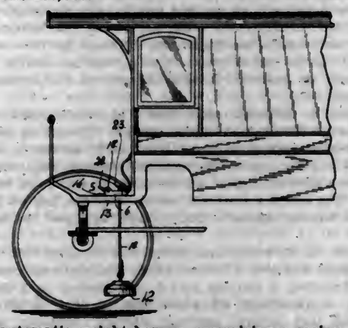
In a device of the class described, the combination with a pipe; of a hollow conical casing coaxial therewith and secured thereto; a base closing said casing and having a plurality of circular outlet holes arranged therein within the casing; a cone secured to said base and coaxial with said casing and pipe and separated therefrom and extending from the base toward the pipe and adapted to divide the cylindrical stream in the pipe into an annular stream

of increasing diameter; and a series of partitions fitting between said cone and said casing and having inclined and



gradually curved sides and extending from a mediate point on said cone to the outlet holes in said base.

962,721. AUTOMATIC WEIGHT-HANGER. GUS REDDISH, Denver, Colo., assignor of one-half to Benjamin T. Reddish, Trinidad, Colo. Filed Dec. 14, 1908. Serial No. 467,447.

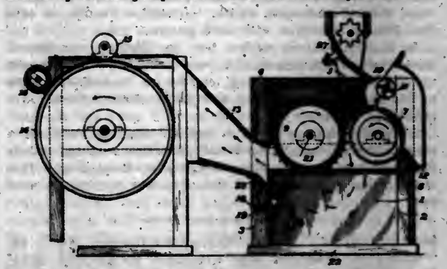


An automatic weight hanger, comprising a casing, composed of a bottom and upwardly extending parallel separated side parts and a rear end part, the said casing having an opening in its bottom, adjacent the rear end, a locking device pivotally mounted between the side walls of the casing and having its portion in the rear of the pivot of greater mass than its portion forward of the pivot, its extreme rear portion occupying a position to partly close the opening in the bottom of the casing, the bottom of the casing adjacent said opening having an upwardly projecting rib, upon which the rear part of the locking device rests, leaving a space between the locking device and the bottom of the casing forward of the rib, the forward extremity of the bottom of the casing extending beyond the side walls thereof and forming a stop to limit the movement of the locking device, when its forward extremity is depressed to release the weight.

962,722. COTTON-SEED LINTER. HUGH E. SESSIONS, Columbia, S. C. Filed Dec. 12, 1908. Serial No. 467,217.

1. In a device of the class described, the combination with a saw cylinder, of a brush cylinder adapted to brush the lint downwardly from said saw cylinder, and a mote board beneath said brush upon the side opposite the saw the said mote board being inclined downwardly at an angle of about forty-five degrees and its lower end being offset downwardly terminating approximately beneath the center line of the brush cylinder, and being widely separated therefrom.

2. In a device of the class described, the combination with a saw cylinder, of a brush cylinder adapted to discharge lint downwardly, a mote board widely separated therefrom arranged at an angle of about forty-five degrees, and a casing forming an unobstructed chamber to receive the downwardly directed lint so constructed as to admit air below said mote board but prevent side drafts up to the peripheral line of said saw cylinder.



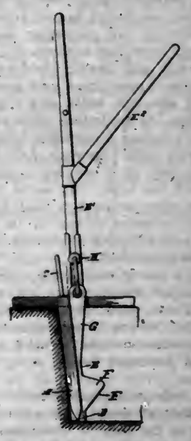
3. In a device of the class described, the combination with a saw cylinder, of a brush cylinder, a mote board widely separated therefrom arranged at an angle of about forty-five degrees and having a downwardly offset end portion.

4. In a device of the class described, the combination with a saw cylinder, of a brush cylinder mounted by the side of said saw cylinder and adapted to brush the lint downwardly from said saw cylinder, an adjustable division board extending downwardly between said cylinders from above, and a mote board extending downwardly beneath the brush cylinder, but widely separated therefrom upon the side opposite the saw cylinder.

5. In a device of the class described, the combination with a saw cylinder, of a brush cylinder mounted by the side thereof with the ends of its bristles just touching the ends of the saw teeth, and an adjustable division board over the brush cylinder on the side next to the saw whereby said board may be made to approach the ends of the bristles thus regulating the draft, and an outlet flue for the lint having a large inlet opening below and upon the opposite side of the brush cylinder.

[Claims 6 to 8 not printed in the Gazette.]

962,723. AUXILIARY TOOL FOR USE IN CONNECTION WITH SPADES. EDWIN M. SKINNER, Fort Wadsworth, N. Y. Original application filed Jan. 30, 1908, Serial No. 413,400. Divided and this application filed May 9, 1908. Serial No. 431,769.



1. In combination with a tool for digging trenches, a removable venting device adapted for insertion at the rear of said tool.

2. In combination with a tool for digging trenches, a removable back bar adapted for insertion at the rear of said tool.

3. In combination with a tool for digging trenches, a venting device provided with a groove extending lengthwise thereof and open at the top and a handle on said tool fitted out of line with said groove.

4. In combination with a tool for digging trenches, a venting device comprising a body provided with grooves on opposite sides extending lengthwise thereof and open at the top and a handle on said device fitted between said grooves.

5. In combination with a tool for digging trenches, a venting device comprising a body provided with oppositely disposed grooves extending lengthwise thereof and further having a pointed end and a handle secured to said body.

962,724. SIGN. JAY C. SMITH, Kalamazoo, Mich., assignor to American Sign Company, Kalamazoo, Mich. Original application filed Feb. 26, 1909, Serial No. 480,207. Divided and this application filed July 6, 1909. Serial No. 506,076.



1. In a sign, a casing comprising a frame, side walls secured to said frame to project beyond the same; end walls having out-turned flanges at their edges secured to said side walls; a top wall having up-turned flanges at its longitudinal edges secured to said side walls, a pair of oppositely arranged grooved supports arranged below said frame and within the projecting edges of said side wall and bottom pieces for said casing slidably arranged in said supports.

2. In a sign, a casing comprising a frame, opposed side walls secured to said frame, said side walls being arranged so that their edges project beyond the frame, end walls arranged between the projecting edges of said side walls, and having out-turned flanges at their edges lapped upon and secured to the projecting edges of said side walls, a top wall arranged between the projecting edges of said side walls and having upturned flanges on its longitudinal edges lapped upon and secured to the projecting edges of said side walls, and a bottom removably supported between the projecting edges of said side walls.

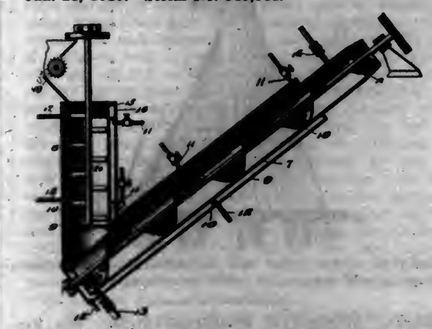
3. In a sign, a casing comprising a frame, including a pair of rectangular side members and connecting cross-pieces therefor; side walls secured to said side members to project beyond the same; end walls having out-turned flanges at their edges secured to said side walls; and a top wall having upturned flanges at its edges secured to said side walls and arranged to overlap the flanges at the upper ends of said end walls.

4. In a sign, a casing comprising a frame, including a pair of rectangular side members and connecting cross-pieces therefor; side walls secured to said side members to project beyond the same; end-walls having out-turned flanges at their edges secured to said side walls; and a top wall having up-turned flanges at its edges secured to said side walls.

5. In a sign, the combination with a pair of rectangular frames; of sheet metal walls secured thereto; cross-pieces arranged at the ends of said frames; hangers; and securing bolts therefor arranged through said cross-pieces and the end walls of the casing to engage said hangers.

[Claim 6 not printed in the Gazette.]

962,725. DIFFUSION APPARATUS. JOHN STEWART, Logan, Utah. Original application filed Nov. 26, 1909, Serial No. 530,018. Divided and this application filed Jan. 28, 1910. Serial No. 540,641.



1. In a diffusion apparatus, the combination of means for disintegrating the material to a condition of pulp, an elongated chamber into which the disintegrated material is delivered, means for forcing the material in one direction through said chamber, means for heating said chamber to different degrees at different portions of substantially its entire length, and means for flowing water through the material in said chamber in the opposite direction.

2. In a diffusion apparatus, the combination of an elongated chamber having a vertical leg and an inclined leg communicating at their lower ends, means in the inclined leg for conveying material through said chamber, an inlet pipe for heated water near the bottom of the vertical leg, another inlet for water near the top of the inclined leg, and an outlet for juice at the top of the vertical leg.

3. In a diffusion apparatus, the combination of an elongated chamber through which the material passes in one direction, a heating jacket surrounding said chamber along substantially its whole length, said jacket being divided into several sections whereby different degrees of heat may be applied to different sections of the chamber, and means for causing a flow of water through said chamber in the opposite direction.

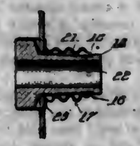
4. In a diffusion apparatus, the combination of an elongated chamber having two legs joined at the bottom and extending upwardly therefrom at an angle to each other, a conveyer in one of said legs for conveying material upwardly therein to a discharge outlet at the top of said leg, a water inlet pipe at the bottom of said chamber, near the junction of the two legs, a water inlet pipe at the top of said leg near the said outlet, and an outlet for juice at the top of the other leg.

5. In a diffusion apparatus, the combination of an elongated chamber having two legs joined at the bottom and extending upwardly therefrom at an angle to each other, one of said legs being of the same diameter throughout, a screw conveyer with a perforated blade fitting closely in said one of said legs, a steam jacket inclosing both of said legs throughout substantially their entire length, a water inlet pipe at the top of the leg having the conveyer therein, and an outlet for juice at the top of the other leg.

962,726. INSULATING-BUSHING. CHESTER H. THORDARSON, Chicago, Ill. Filed Jan. 29, 1910. Serial No. 540,756.

1. An insulating bushing for electric wiring comprising a headed, tubular, insulating body, a screw-threaded sleeve removably fitted to the body and having means for locking it from endwise and angular movement thereon, and a flanged screw-threaded locking nut engaged over said sleeve and constituting part of the means for locking said sleeve on said body.

2. An insulating bushing for electric wiring comprising a headed insulating body, a split, screw-threaded sleeve adapted to be slipped endwise over the body and having means for locking it from rotation thereon and a flanged locking nut engaged over said sleeve and coöperating with means for locking the sleeve from endwise movement on the insulating body.



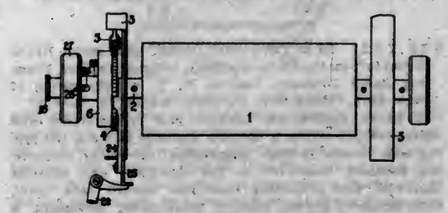
3. An insulating bushing for electric wiring comprising a tubular shank provided at one end with an enlarged head and at its other end with a narrow shoulder, a split, screw-threaded sleeve removably fitted over the shank and having means for preventing it from turning thereon, and a screw-threaded nut engaging over the screw-threaded sleeve and arranged to press the split end of the sleeve behind said shoulder to lock the sleeve from endwise movement on the shank.

4. An insulating bushing for electric wiring comprising a headed, tubular, insulating body, a split, screw-threaded sleeve removably fitted over the body and provided with a flange having interlocking engagement with the head of the body, the body provided at its end remote from the head with a narrow shoulder adapted to be engaged by the end of said sleeve, and a screw-threaded locking nut engaged over said sleeve and arranged to contract the split sleeve with its end behind said shoulder.

5. An insulating bushing for electric wiring comprising a tubular, insulating body provided at one end with an enlarged head and at its other end with a shoulder, a split, screw-threaded sleeve removably fitted over the body and provided at one end with a flange arranged to interlock with said head and adapted to be contracted at its other end behind said shoulder, and a screw-threaded locking nut engaging over the screw-threaded sleeve to so contract the sleeve.

[Claims 6 to 13 not printed in the Gazette.]

962,727. TYPE-WRITING MACHINE. RICHARD W. UHLIG, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed July 19, 1909. Serial No. 508,374.



1. The combination with a platen and an axle, of a head on the axle, a hand-wheel on the axle, a loose line-space wheel, a clutching lever pivoted on said head to swing in a plane longitudinal of the platen axle, a button sliding on the end of the platen axle at the outer side of said hand-wheel, to move longitudinally of said axle, a connection extending from said button through said hand-wheel to said lever, and a clutch device operating between said head and said line-space wheel and releasable by said lever.

2. The combination with a platen and an axle, of a head on the axle, a loose line-space wheel, a clutching lever pivoted on said head to swing in a plane longitudinal of the platen axle, a button mounted on the end of the platen axle to move longitudinally thereof, a connection between said button and said lever, a clutch device operating between said head and said line-space wheel and releasable by said lever, and a spring to render the clutching device effective; said clutching device in the form of a pair of conjoined rolls, and a bearing surface being provided on said head along which the rolls run in a direction longitudinal of the platen axle; said bearing surface being inclined relatively to an inner periphery formed or provided on the line-space wheel, to enable the rolls to wedge between said bearing surface and said inner periphery, said lever connected to said rolls between the ends of the latter.

3. The combination with a platen and an axle, of a head on the axle, a loose line-space wheel, a clutching lever pivoted on said head to swing in a plane longitudinal of the platen axle, a button mounted on the end of the platen axle to move longitudinally thereof, a connection between said button and said lever, a clutch device operating between said head and said line-space wheel and releasable by said lever, and a spring to render the clutching device effective; said clutching device in the form of a roll, and a bearing surface being provided on said head along which the roll runs in a direction longitudinal of the platen axle; said bearing surface being inclined relatively to an inner periphery formed or provided on the line-space wheel, to enable the roll to wedge between said bearing surface and said inner periphery, said lever connected to said roll between the ends of the latter, and a yielding detent to hold said lever in roll-releasing position.

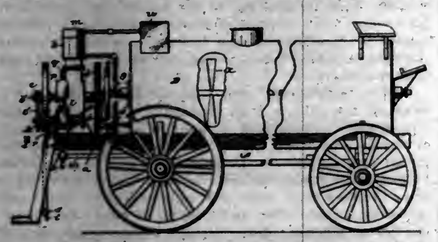
[Claims 6 to 19 not printed in the Gazette.]

962,728. APPARATUS FOR SATURATING THE GROUND WITH OIL. JOSEPH E. WARD, Longbeach, Cal. Filed June 26, 1909. Serial No. 504,618.

1. In combination with a vehicle having an oil tank thereon, a gas engine having a water jacket, a water circulating pump, a water tank located on said oil tank, said circulating pump being operated by said engine, forcing nozzles, an oil forcing pump operated by said engine, connections between said nozzles, pump, and oil tank including a valve, an agitator in said oil tank, also operated by said engine.

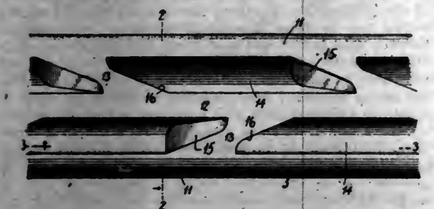
2. In combination with a vehicle, an oil tank, a rotary agitator in said tank, said agitator having a shaft journaled in the rear end of said oil tank and provided with

a belt wheel, a rotary oil forcing pump located on said vehicle, a gas engine on said vehicle, a water circulating pump, a water jacket on said engine, a water tank on said oil tank, said water circulating pump adapted to circulate water through said water jacket, means on said



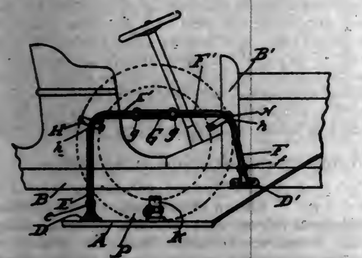
engine for simultaneously driving said oil pump, water circulating pump, and said agitator, and valved nozzles located below said vehicle and having free communication with said oil pump and adapted to force oil into the soil of the road bed and a valved communication with said oil tank.

962,729. AUTOMOBILE-TIRE. GEORGE F. ANNIS and CHARLES C. ANNIS, Freedom, Okla. Filed May 9, 1908. Serial No. 431,883.



A tire having its tread surface formed with a plurality of parallel peripherally extending continuous ribs and obliquely extending ribs connecting the intermediate peripheral rib with the outside ribs, said obliquely extending ribs forming a series of pockets each having one end beveled and the other under-cut.

962,730. TIRE-CARRIER. CHARLES F. BATT, New York, N. Y. Filed Apr. 1, 1909. Serial No. 487,154.



1. A spare tire holder comprising a frame consisting of a vertical section, a horizontal section adapted for adjustment to a vehicle on the outer side of the spare tire, a section of said frame constituting a continuation of the horizontal section and inclined in front of said spare tire toward the vehicle frame, securing means on said frame, brackets to support said vertical section and said inclined section.

2. A spare tire holder comprising a frame consisting of a standard section, a horizontal section and inclined section and extension joint in said horizontal section, a swivel joint and locking means in said standard section.

3. A spare tire holder including a bracket secured to the running-board of an automobile, a band secured to one end of said bracket and means for locking the other end of said band to a member secured at the other end of said bracket to lock a spare tire against removal at one point, in combination with a frame member extending from said running-board and passing laterally of said tire having means for securing a spare tire at two other points to hold said tire in a vertical plane substantially as and for the purpose described.

4. In a spare tire holder, a bracket adapted to secure and lock a tire comprising a flat base, a flexible metal band pivoted to one end of said base and having a plurality of holes at the other end, a spring clasp attached to the other end of said base and including a pin adapted to engage a hole in said metal band, means for locking said clasp and holding said pin in engagement with said band, other members attached to said vehicle adapted to hold the spare tire in a predetermined plane.

5. A spare tire holder comprising a frame consisting of a standard section, a horizontal section, an inclined section, adjustable joints in said sections whereby the holder may be arranged to accommodate different sizes of tires and be attached to different constructions of cars.

[Claim 6 not printed in the Gazette.]

962,731. SEWING-MACHINE ATTACHMENT. GREEN O. BEASLEY, Winona, La. Filed July 7, 1909. Serial No. 506,367.



A detachable grinding device for sewing machines consisting of a grinding wheel, and a clamp or holder for said wheel comprising a straight body portion extending diametrically of the inner face of said wheel and embedded therein and having a tapered key projecting therefrom and also embedded in the body of the grinding wheel, the opposite ends of the body being bent over to form spring jaws which are roughened on their inner faces.

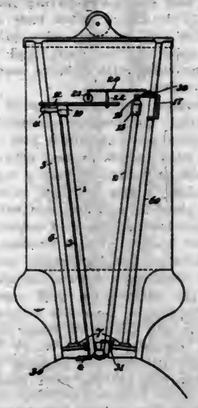
962,732. ELECTRIC-ARC LAMP. HEINRICH BECK, Frankfort-on-the-Main, Germany, assignor to Beck Flaming Lamp Company, Canton, N. Y., a Corporation of New York. Filed Nov. 15, 1906. Serial No. 343,538.

1. In an electric arc lamp, a pair of electrodes and means for preserving a uniform distance between the arcing ends thereof in their longitudinal movement, comprising members connected to the electrodes and movable therewith and projecting therefrom toward each other, said members having relative longitudinal movement, a roller carried by one of the members and having a rolling contact with the other, means carried by one of said members and engaging the other, for preventing lateral displacement thereof.

2. In an electric arc lamp, a pair of electrodes and means for preserving a uniform distance between the arcing ends thereof in their longitudinal movement, comprising members connected to the electrodes and movable therewith and projecting therefrom toward each other, said members having relative longitudinal movement, a roller carried by one of the members and having a rolling contact with the other of the members, and a yoke projecting from one member and engaging the edges of the other member and preventing lateral displacement thereof.

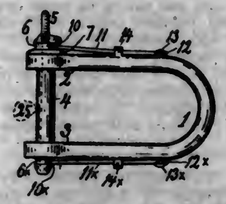
3. In an electric arc lamp, a frame, a longitudinally movable electrode, a support therefor, a guiding means

comprising a carrier having a guiding element which is slidably engaged with the frame, a second electrode, and means whereby the second electrode is carried by the first-mentioned electrode and is movable laterally relatively thereto, comprising an arm movable with the first electrode and projecting thence toward the second electrode, a holder secured to the second electrode, a guiding connec-



tion between the holder and the frame, said holder pivoted to said guiding connection, an arm movable with the second electrode, and extending over the first-mentioned arm, a rolling bearing between said arms by which the second arm is supported to roll on the first-mentioned arm, and a yoke projecting from one arm and engaging the other arm and preventing lateral displacement thereof.

962,733. COUPLING DEVICE. JOHN H. BELTZ, St. Paul, Minn., assignor of one-half to Adolph Mohr, St. Paul, Minn. Filed Jan. 13, 1910. Serial No. 537,825.

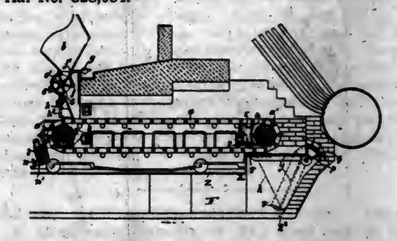


1. In a coupling device the combination with a primary member having a hole for a coupling pin adapted to engage in a secondary member and a coupling pin insertible in said hole, of a spring arm mounted on the primary member and normally directed into the path of some part of the pin, said pin having at one side a flared cavity for the spring arm to enter into and at the opposite side a notch for the spring arm to pass through during the insertion and removal of the pin.

2. In a coupling device the combination with a primary member having a hole for a coupling pin adapted to engage in a secondary member and a coupling pin insertible in said hole, of a spring arm mounted on the primary member and normally directed into the path of some part of the pin, said pin having at one side a flared cavity for the spring arm to enter into and at the opposite side a notch for the spring arm to pass through during the insertion and removal of the pin; and an annular groove about the pin from said cavity to said notch.

3. In a coupling device the combination with a primary member having a hole for a coupling pin adapted to engage in a secondary member and a coupling pin insertible in said hole, of two spring arms mounted on the primary member and normally directed partly into the path of some part of the pin, one near each end of the pin, said pin having at one side two cavities adapted for engagement with the ends of the two spring arms when the pin is inserted, and in the side diametrically opposite from said cavities a groove along the pin as a clearing for the ends of the spring arms during the insertion and removal of the pin.

962,734. CHAIN-GRATE FURNACE. ALFRED W. BENNIS, Little Hulton, England. Filed July 27, 1906. Serial No. 328,054.



1. In a furnace, a revolving chain grate; a hinged imperforate ash-chamber floor with its outer end extending under the lower straight run of the grate; and means for positively holding one edge of said floor up against the under side of said chain grate; thereby forming an ash air-seal between the floor and the under side of said chain grate.

2. In a furnace, a longitudinal chain grate; a hinged imperforate ash-chamber floor, the outer end of which projects under the under side of the lower straight run of said chain grate; and means for positively holding the outer end of said ash-chamber floor against the under side of said grate, whereby the ashes may collect upon the floor and thus provide a seal.

3. In a furnace, the combination with a chain grate built up of links formed with rounded ends; of a hinged ash-chamber floor, the outer end of which in its raised position lies under the under side of the lower run of said revolving grate; thereby forming an ash air-seal between the outer end of said ash-chamber floor and said chain grate; a transverse plate between the two runs of said revolving chain grate; and a depending hinged lip on said transverse plate, said hinged lip normally lying on the upper side of the lower run of said chain grate.

4. In a furnace, a chain grate; a hinged ash-chamber floor; a lip on the outer end of said ash-chamber floor; means for bringing said lip up against the under side of the lower run of said chain grate; a transverse plate between the two runs of said chain grate; a hinged depending lip on said transverse plate, the lower edge of which is located on the upper side of the lower run of said chain grate immediately above the lip on the ash-chamber floor; and a transverse ash-seal secured to the upper part of said transverse plate and located on the under side of the upper run of said chain grate.

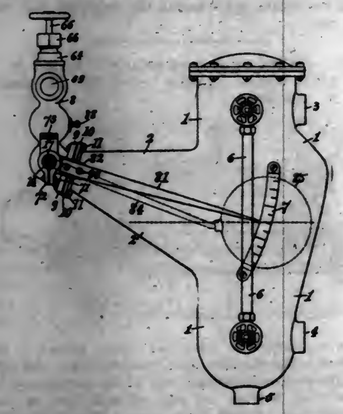
5. In a furnace, a revolving chain grate; a hinged ash-chamber floor; a lip on the outer end of said ash-chamber floor normally held against the under side of the lower run of said chain grate; flexible connections secured to said ash-chamber floor; and means for taking in and paying out said flexible connections.

[Claims 6 to 8 not printed in the Gazette.]

962,735. WATER-FEED REGULATOR. WALTER H. BICE, Maple Lodge, Ontario, Canada, assignor of one-half to Alfred Westman and one-sixth to William R. Colby, London, Canada. Filed Mar. 25, 1909. Serial No. 485,766.

1. In a device of the class described, an operating spindle, means operated by the spindle to control the flow of water to the boiler, a sleeve surrounding part of said spindle, means for operating the sleeve, a clamp se-

cured to said sleeve, an indicator secured to said clamp, an arm secured to said clamp, a worm wheel secured to said arm, in combination with a toothed segment secured to said spindle, and the teeth of said toothed segment engaging with said worm wheel, and operating means for the latter whereby said segment is shifted.



2. A device of the class described comprising a casing provided with a plurality of compartments one arranged above the other, said upper compartment formed with a partition provided with a valve seat, the lower wall of the upper compartment constituting the upper wall of the lower compartment, said lower wall provided with a pair of valve seats adjustable valves adapted to engage the valve seat in the partition and the valve seats in the lower walls whereby communication is closed between both sides of the upper chamber and between the lower and the upper chamber, a stationary and a movable valve plate mounted in the lower chamber and constituting a divisional means to divide said lower chamber into two compartments, and means for adjusting said movable plate with respect to said stationary plate for regulating the flow of water from one of the compartments in the lower chamber to the other compartment of said chamber.

962,736. PUMP-GOVERNOR. WALTER H. BICE, Maple Lodge, Ontario, Canada, assignor of one-half to Alfred Westman and one-sixth to William R. Colby, London, Canada. Filed June 18, 1909. Serial No. 503,022.



1. A pump governor comprising an upper hollow body, a lower hollow body, a flexible diaphragm interposed between said bodies, means for coupling said bodies together whereby the diaphragm is maintained in position, said lower hollow body adapted to communicate with a discharge pipe, a hollow plunger in said lower body, a sleeve extending in the direction of the length of and secured to said upper hollow body within the same, a hollow plunger arranged within said upper hollow body, a spindle extending through said sleeve and having one end connected to said plunger in the upper hollow body, a valve secured to the other end of said spindle, and a valve body mounted upon said upper hollow body and communicating therewith, and provided with a valve seat adapted to be engaged by said valve.

2. A pump governor comprising a valve body having an inlet and an outlet, and further provided with a partition having a valve seat, an upper and a lower hollow body superposed with respect to each other, a flexible diaphragm interposed between said hollow bodies, means for securing the hollow bodies together whereby said diaphragm is maintained in position, said valve body mounted upon said upper hollow body and communicating therewith, an inverted hollow plunger arranged in the lower hollow body and below the diaphragm, said lower hollow body adapted to communicate with the discharge pipe, a cup-shaped plunger mounted in said upper hollow body and above the diaphragm, a spindle arranged within said upper hollow body and having its lower end connected to said cup-shaped plunger, and a valve carried by the other end of said spindle and adapted to engage said valve seat for shutting off the inlet from the outlet of the valve body.

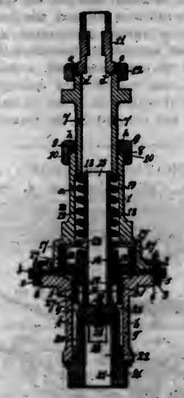
3. A pump governor comprising a valve body having an inlet and an outlet, and further provided with a partition having a valve seat, an upper and a lower hollow body superposed with respect to each other, a flexible diaphragm interposed between said hollow bodies, means for securing the hollow bodies together whereby said diaphragm is maintained in position, said valve body mounted upon said upper hollow body and communicating therewith, an inverted hollow plunger arranged in the lower hollow body and below the diaphragm, said lower hollow body adapted to communicate with the discharge pipe, a cup-shaped plunger mounted in said upper hollow body and above the diaphragm, a spindle arranged within said upper hollow body and having its lower end connected to said cup-shaped plunger, and a valve carried by the other end of said spindle and adapted to engage said valve seat for shutting off the inlet from the outlet of the valve body, each of said plungers provided with peripheral grooves, packing rings mounted in certain of the grooves of each plunger, the remaining of said grooves being clear to constitute fluid packing spaces.

962,737. AUTOMATIC PRESSURE-REDUCTION VALVE. WALTER H. BICE, Maple Lodge, Ontario, Canada, assignor of one-third to Alfred Westman and one-sixth to William R. Colby, London, Ontario, Canada. Filed Nov. 10, 1909. Serial No. 527,324.

1. An automatic pressure reduction valve, comprising a casing, a spring-pressed sliding tubular valve mounted therein, a diaphragm secured thereto and to said casing, cups arranged above and below said diaphragm, and a stationary valve seat provided with openings therein to be engaged by said sliding valve.

2. An automatic pressure reduction valve, comprising a casing formed of an upper and a lower section secured together, a sliding valve mounted therein, a diaphragm secured thereto and to said casing, cups arranged above and below said diaphragm, a stationary valve seat mounted in the lower end of said casing and to be engaged by said sliding valve, said sliding valve and valve seat provided with transverse ports.

3. An automatic pressure reduction valve, comprising a casing, a sliding tubular valve mounted therein, a stationary valve mounted in the lower end of said casing and provided with transverse openings, a diaphragm secured in said casing intermediate the ends of said tubular valve and connected thereto, cups arranged above and below said diaphragm, said diaphragm operated to be raised and lowered by the pressure in said casing.



4. An automatic pressure reduction valve comprising a casing, a tubular valve mounted therein, a stationary valve seat secured in said casing and provided with transverse openings therein, a diaphragm, cups arranged above and below said diaphragm, and a single means for securing said diaphragm and cups to said tubular valve.

962,738. WRENCH. JAMES A. BLEDSOE, Atlanta, Ga. Filed Aug. 23, 1909. Serial No. 514,265.

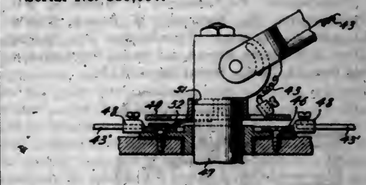


1. The combination with a main bar, fixed and movable jaws of a wrench, the movable jaw having teeth on its upper surface, of a pivotally mounted locking bar which is beveled on its upper surface at its free end and having teeth adapted to register with the teeth of the movable jaw, a yoke operating over the beveled surface of the locking bar and pivotally mounted on the main bar and provided with a stop to limit its movement away from the locking bar, the locking bar being of sufficient length that when said stop contacts with the main bar the end of the locking bar will be confined within the yoke, a spring interposed between the locking bar and the main bar to normally hold the upper surface of the locking bar against the inner side of the upper part of the yoke, said spring being located slightly in advance of the pivotal point of the yoke to cause the point of greatest frictional contact between the yoke and locking bar to be in advance of the said pivotal point.

2. A wrench comprising a main bar having a fixed jaw, a movable jaw slidably mounted on the main bar and having teeth on its upper surface, a locking bar pivoted to the fixed jaw and extending rearwardly therefrom over the movable jaw and having teeth on its under side to engage the teeth of the movable jaw, shoulders formed near the free end of the locking bar and the end of the latter beyond the shoulders being beveled on its upper surface, a yoke straddling the main bar and the end of the locking bar, a pin extending through the yoke and the main bar for pivotally mounting said yoke, a stop on the yoke which contacts with the main bar to limit the rearward movement of the yoke, a coil spring interposed between the main bar and the locking bar which normally forces the locking bar upwardly to disengage the teeth when the yoke is thrown back, said spring being positioned in advance of the line of the pivot pin, the edges of the yoke abutting against the shoulders when forced forward over the beveled surface to limit the forward movement of the yoke, the beveled end of the locking bar and the relative position of the spring and the pivot pin causing the point of greatest frictional contact between the locking bar and the yoke at a point in advance of the pivot pin.

3. A wrench comprising a main bar having a fixed jaw, a movable jaw slidably mounted on the main bar, teeth formed on the movable jaw, a locking bar pivoted to the fixed jaw and formed with teeth on its under side to engage with the teeth on the movable jaw, the free end of the locking bar being beveled on its upper surface and having shoulders in advance of the beveled end, a coil spring interposed between the locking bar and the main bar, a yoke having a finger piece and pivoted to the main bar, and having a beveled inner surface to engage with the beveled surface of the locking bar, and a pin extending across the yoke and adapted to engage the main bar to limit the rearward movement of the yoke and prevent it becoming disengaged from the end of the locking bar, the shoulders limiting the forward movement of the said yoke.

962,739. AUTOMATIC RAILWAY-SWITCH. CHARLES E. BRANDFASS, Wheeling, W. Va. Filed Jan. 20, 1910. Serial No. 539,097.



In an electric switch, the combination with a main trolley wire and an auxiliary trolley wire mounted parallel therewith, of railway tracks and a vertical support at one side thereof, a movable switch point, a casing connected to the lower side of said support and extending adjacent to said movable point, a casing near the top of said support, a tubular connection between said casings, a magnet in the upper casing, the armature of which is movable vertically, a rod within said tubular member connected to said armature, a bell crank pivoted within the lower casing and connected to said rod, jointed connections between the other arm of the bell crank extending through the extension of the lower casing and connected to the movable switch point, a trolley having a pair of wheels spaced and insulated apart adapted to operate on said main and auxiliary wires, electric conductors connecting said magnet with the main wire through said auxiliary wire, a switch adjacent to each end of the car, a wire extending down the trolley pole to an annulus 49, said annulus carrying a binding post, a circular plate carried below said annulus, and a spring connection between said annulus and circular plate, and connections between said circular plate and each of the switches, said switches supplying a means whereby the circuit may be closed from either end of the car to the trolley wheels.

962,740. RAIL AND JOINT THEREFOR. BENJAMIN BRILL, Jr., North Bay, Ontario, and ALFRED A. THOMPSON, Montreal, Quebec, Canada. Filed Sept. 7, 1909. Serial No. 516,398.

1. The combination with two meeting rails U-shaped in cross-section and having outwardly-turned flanges at the bottom, the center portion of said rails meeting on an inclined plane while the flanges are adapted to form butt joints with each other, of a supporting means extending in the central portion of the rail and connected to each rail.

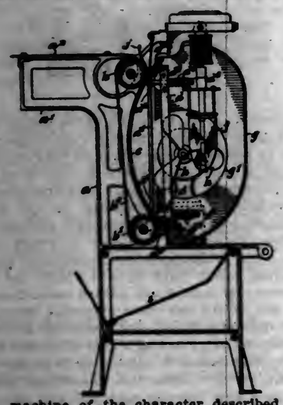
2. A rail joint comprising two rails having outwardly turned flanges along their bottoms, the center portion of

said rails meeting along an inclined plane, while the flanges are normally separated but are adapted to abut when the rails expand, and means connecting the rails on opposite sides of the line of juncture.



3. The combination with two meeting rails U-shaped in cross-section, of a supporting member filling the central space of the rails and extending over a distance on each side of the line of juncture, a bottom plate integral with the supporting member having upturned flanges at the outer extremity thereof for engaging the outer edge of the bottom of the rails the said flanges being formed with perforations through which the spikes may extend, which perforations are located in that portion of the flange which lies outwardly of the rail whereby, the spike does not extend through the rail.

962,741. BLUE-PRINTING MACHINE. NATHANIEL H. BROWN, Philadelphia, Pa., assignor to Henry S. Williams, Philadelphia, Pa., Nathaniel H. Brown, Norristown, Pa., and Morris Earle, Philadelphia, Pa., trading as The Firm of Williams, Brown and Earle, Philadelphia, Pa. Filed Oct. 13, 1909. Serial No. 522,371.



1. In a machine of the character described, a bed, a cradle therefor, an endless conveyer located on one side of the bed and in contact therewith, means to support the bed in the cradle and the latter having spring controlled means yieldingly supporting the bed against pressure exerted thereon by said conveyer.

2. In a machine of the character described, a glass bed, a cradle for receiving the bed and having insulating means in which certain portions of the bed engage and said cradle having means yieldingly supporting the bed against pressure exerted thereon.

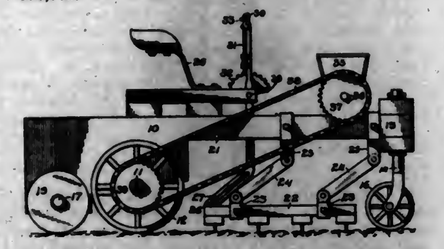
3. In a machine of the character described, a glass bed, an endless conveyer in rear of said bed and normally contacting therewith, a cradle provided with pockets to receive and support the bed and having insulating material mounted in said pockets against which the bed engages, said cradle being provided with spring controlled means to tension the bed in said cradle.

4. In a machine of the character described, a bed, a cradle for receiving and supporting the same and having tensioning means for cushioning said bed, a conveyer normally contacting with said bed and a feeding device and shield or guard located at one end of said bed and conveyer.

5. In a machine of the character described, a bed, a cradle therefor, an endless conveyer located in rear of said bed and normally bearing against the same, means connected with said cradle to support the bed in said cradle, said means having spring controlled means yieldingly supporting said bed against the pressure of an object passing between said conveyer and bed, a feeding device and shield located at one end of said conveyer and bed and a lighting means arranged in front of said bed.

[Claims 6 to 8 not printed in the Gazette.]

962,742. COMBINATION-HARROW. JOHN L. BUCKINGHAM, Laton, Cal. Filed Oct. 4, 1909. Serial No. 520,775.



1. In a combination harrow, a truck, a harrow frame, parallel supporting links pivoted upon said truck and frame, and an operating lever mounted upon said truck and having a slotted lower end extended substantially parallel to said links and slidingly connected to said frame.

2. In a combination harrow, a truck, a harrow frame, parallel supporting links pivoted upon said truck and frame, an operating lever mounted upon said truck and having a slotted lower end extended substantially parallel to said links and slidingly connected to said frame, a sector and latch for retaining said lever, and means for holding said latch out of engagement with said sector.

3. In a combination harrow, a truck, a harrow frame, parallel supporting links pivoted upon said truck and frame, an operating lever mounted upon said truck and having a slotted lower end extended substantially parallel to said links and slidingly connected to said frame, a sector and latch for retaining said lever, and a ball pivoted on said lever to embrace a member of said latch for holding the latch out of engagement with said sector.

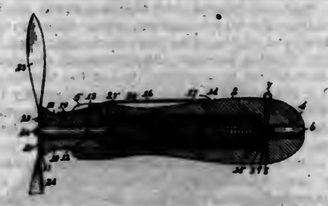
4. In a combination harrow, a truck, a harrow frame, parallel supporting links pivoted upon said truck and frame, a lever mounted upon said truck and having an angularly disposed slotted lower end substantially parallel with said links, and a ball upon said frame extended through said slot.

5. In a combination harrow, a truck having a recess beneath its front portion, depending pivoting members from said portion, rearwardly inclined parallel links pivoted to said members, a harrow frame pivoted to the lower end of said links, and an operating lever mounted upon said truck and having a rearwardly inclined slotted portion at its lower end substantially parallel with said links and slidingly connected to the rear of the harrow frame.

[Claim 6 not printed in the Gazette.]

962,743. FLYING TOY. WILLIAM C. CAPEWELL, Hotchkissville, Conn. Filed Apr. 27, 1909. Serial No. 492,548.

1. A flying toy comprising a hollow body adapted to be grasped by the hand of the user; a spindle fixed axially therein; a projectile saddle mounted to rotate on said fixed spindle, near its free end, and held against displacement longitudinally therealong, the free end of said spindle constituting a fixed, semi-neutral, centering arbor, projecting somewhat forwardly of the saddle aforenamed, and the latter, said saddle, having a commander pin arranged parallel with said arbor and removed somewhat radially therefrom; means for exerting a rotary stress in one direction on said saddle; and an aerial projectile, the latter having a central orifice for the reception of said arbor, and an additional orifice for the reception of said commander pin, when the projectile is seated on said saddle.



2. In a device of the class described, in combination, a hollow, elongated body; a spindle fixed axially therein; a projectile saddle mounted to rotate on said fixed spindle, near its free end, held against displacement longitudinally therealong, and having a lateral stop; a spiral spring encircling said spindle, within the body aforenamed, and adapted to exert, when under tension, a rotary stress in one direction on said saddle, to cause the same to sharply turn on said fixed spindle; and a controller, the latter formed wholly from spring-wire, attached to said body, and coöperating with said lateral stop for temporarily holding the saddle aforenamed against the tendency of said spring, when under tension.

3. In a device of the class herein described, in combination, a hollow, elongated body, having a longitudinal kerf at its forward end and a fulcrum at the rear end of said kerf; a spindle fixed axially within said body; a projectile saddle mounted to rotate on said fixed spindle, near its free end, held against displacement longitudinally therealong, and having a lateral, beveled stop; a spiral spring encircling said spindle, within the body aforenamed, and adapted to exert, when under tension, a rotary stress in one direction on said saddle, to cause the same to sharply turn on said fixed spindle; and a controller, the latter formed wholly from wire of suitable resiliency, attached at one of its ends to said body, projecting forwardly therealong, engaging said fulcrum, occupying and traversing said kerf, and having its free end arranged to normally intersect the path of movement of the lateral stop aforenamed.

4. In a device of the class herein described, in combination, a spindle; a projectile saddle mounted to rotate thereon, near its free end; a resilient connection between said spindle and said saddle, and whereby, when under tension, a rotary stress in one direction is exerted on said saddle; and means for temporarily holding said saddle against the tendency of said resilient connection, when under tension, the free end of said spindle constituting a fixed, semi-neutral, centering arbor, projecting somewhat forwardly of the saddle aforenamed, and the latter, said saddle, having a commander pin arranged parallel with said arbor and removed somewhat radially therefrom.

5. In a device of the class herein described, in combination, a spindle; a spring-controlled saddle, mounted to rotate on said spindle, near one end thereof; and a fixed, semi-neutral, arbor, arranged axially with respect to said spindle, and projecting somewhat forwardly of said saddle, the latter being provided with a commander pin, arranged parallel with the arbor aforenamed, and removed somewhat radially therefrom.

[Claim 6 not printed in the Gazette.]

962,744. MEASURING APPARATUS FOR BOOTMAKERS. WILLIAM CHURCH, Northampton, England. Filed Aug. 24, 1908. Serial No. 450,045.

1. A foot or last measuring apparatus, comprising in combination a base; a heel support carried thereon; an instep support slidably mounted on said base; a ball joint support slidably mounted on said base; an arm pivoted to the base; cams carried by said pivoted arm and adapted to move the instep support and the ball joint support simultaneously; and a size indicating device indicating sizes corresponding to the positions of the ball joint support.



2. A foot or last measuring apparatus, comprising in combination a base; a heel support carried thereon; an instep support slidably mounted on said base; a ball joint supporting member slidably mounted on said base; a supporting plate pivotally mounted thereon; adjustable side guides mounted upon the supporting plate; an independent sliding member mounted on the base; a tape attached to said independent member and passing through a slot in the instep support; a second independent sliding member mounted on said base; a tape attached to said second independent sliding member and passing through a slot in the ball joint support; an arm pivoted to said base; cams carried on said arm and adapted to move the instep support, the ball joint support and the two independent sliding members; and a size indicating device operatively connected to the sliding supports.

3. A foot or last measuring apparatus, comprising in combination a base; a heel support carried thereon; an instep support slidably mounted on said base; a ball joint support slidably mounted on said base; an independent sliding member mounted on the base; a measuring tape attached to said independent sliding member and passing through a slot in the instep support; a second independent sliding member mounted on the base; a measuring tape attached to said second independent sliding member and passing through a slot in the ball joint support; an arm pivoted to said base; cams carried on said arm and adapted to move the instep support, the ball joint support and the two independent sliding members; and a size indicating device operatively connected to the sliding supports.

4. A measuring apparatus for lasts and feet, comprising a base; a positioning member for the heel mounted on the base; a sliding member mounted on said base; an arm pivoted to said base and operatively connected to said sliding member; a graduated scale fixed on said base; and a pointer fixed on the arm and swinging over said graduated scale.

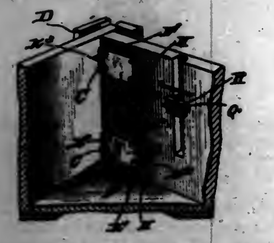
5. A ball joint measuring device for foot and last measuring apparatus, comprising a slidably mounted carriage; a supporting plate pivotally mounted on said carriage; a tape guided by said supporting plate; and side guards slidably mounted on said supporting plate.

[Claim 6 not printed in the Gazette.]

962,745. COLLAPSIBLE CRATE, BOX, &c. JOHN A. COFFEY and CLARENCE C. BOWEN, Cadillac, Mich. Filed Dec. 28, 1909. Serial No. 535,231.

1. A collapsible box or crate, comprising side walls, loops fastened to the inner face of one wall, the meeting

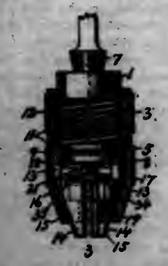
end of the adjacent wall being recessed, with a slit formed in the bottom of each recess, a plate fastened to the wall of the box having a recess, having an angled wing seated in said slit and a portion of said wing bent to form a hook positioned within the recess and adapted to engage said loop, as set forth.



2. A collapsible box or crate, comprising side walls, loops fastened to the inner face of one wall, the meeting end of the adjacent wall being recessed, with a slit formed in the bottom of each recess, a plate fastened to the wall of the box having a recess, having an angled wing seated in said slit and a portion of said wing bent to form a hook positioned within the recess and adapted to engage said loop, and a cover countersunken between the inner surfaces of the side walls of the box and cleats upon the cover resting upon the edges of said wall, as set forth.

3. A collapsible box or crate, comprising side walls, loops fastened to the inner face of one wall, the meeting end of the adjacent wall being recessed, with a slit formed in the bottom of each recess, a plate fastened to the inner face of the wall with the recess in the end, said plate being bent at right angles to form a wing which is seated within said slit, one end of said wing being bent at right angles forming a hook, and seated in said recess with its outer face flush with the end of the wall, said hook adapted to engage said loop, and a cover countersunken between the inner faces of the side walls of the box, and having overhanging cleats adapted to rest upon the marginal edges of the side walls, as set forth.

962,746. DRILL-CHUCK. ELMER E. COGSWELL, Syracuse, N. Y. Filed Mar. 11, 1910. Serial No. 548,535.



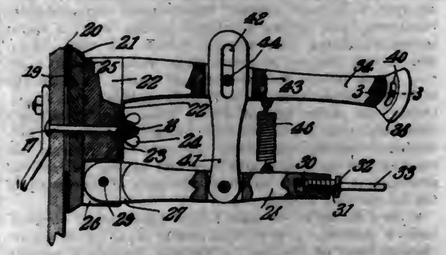
1. A drill chuck comprising a main head, a cam on the head, an auxiliary head coaxial with and rotatable relatively to the main head, a cam on the auxiliary head, roller bearings between the cams for moving the auxiliary head endwise as the latter is rotated, jaws interlocked with the auxiliary head and movable radially relatively thereto, a sleeve rotatably mounted on the main head and provided with external threads of coarse pitch, a casing having internal threads of the same pitch engaged with the threaded sleeve, said casing being provided with tapering guides engaging the jaws for moving the same radially as the casing is rotated.

2. A drill chuck comprising a main head, a cam on the head, an auxiliary head coaxial with and rotatable relatively to the main head, a cam on the auxiliary head, roller bearings between the cams for moving the auxiliary head endwise as the latter is rotated, jaws interlocked with the auxiliary head and movable radially relatively thereto, a sleeve rotatably mounted on the main head and provided with external threads of coarse pitch, a casing having internal threads of the same pitch engaged with the threaded sleeve, said casing being provided with tapering guides engaging the jaws for moving the same radially as the casing is rotated, and yielding means for frictionally holding the sleeve against undue rotation upon the main head and at the same time permitting such rotation when the friction between the threads of the casing and sleeve is sufficient to overcome that of the yielding means.

3. In a drill chuck, a main head, an externally threaded sleeve rotatable on said head but yieldingly engaging therewith, an auxiliary head rotatable relatively to and coaxial with the main head, means brought into action by the rotation of said auxiliary head for moving the auxiliary head axially, jaws engaged with the auxiliary head, an internally threaded casing engaging the threaded sleeve and jaws to move the latter radially, and means brought into action by the tightening of the jaws upon an object for frictionally locking the sleeve and casing to rotate together relatively to the main head.

4. In a drill chuck, a main head, a threaded sleeve journaled on the head, means for frictionally retarding the rotary movement of the sleeve on the head, a threaded casing screwed upon the sleeve, an auxiliary head journaled in the main head, said heads having relatively movable cam faces for moving the auxiliary head axially, jaws connected to and movable axially with the auxiliary head, and means on the casing for moving said jaws radially.

962,747. LAST-JACK. CHARLES C. COLE, Camden, N. J., assignor of one-tenth to Raymond E. Black, Camden, N. J. Filed May 1, 1909. Serial No. 493,335.

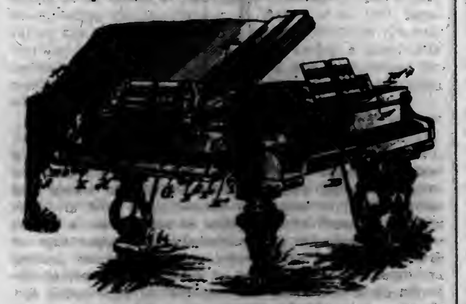


1. In a device of the class described, a base, said base having an upstanding wall, a plate disposed against the wall and formed with slots, set bolts engaged through the wall and through the slots in the plate, whereby to hold the plate in vertical adjustment upon the wall, and a last standard supporting base mounted for adjustment about a center upon the plate.

2. In a device of the class described, a base, said base having an upstanding wall, a plate disposed against the wall and formed with slots, set bolts engaged through the wall and through the slots in the plate whereby to hold the plate at adjustment vertically with respect to the wall brace rods permanently secured at their lower ends to the base rearwardly of the wall thereupon and projecting upwardly at an angle toward the plane of the wall, the said brace rods at their upper ends being slotted, set bolts engaged through the plate and through the slots at the upper ends of said brace rods and a last standard supporting base rotatably adjustably mounted upon the plate at the upper end thereof.

3. In a device of the class described, a base, said base having an upstanding wall, a plate disposed against the wall and formed with slots, set bolts engaged through the wall and through the slots in the plate whereby to hold the plate at adjustment vertically with respect to the wall, brace rods permanently secured at their lower ends to the base rearwardly of the wall thereupon and projecting upwardly at an angle toward the plane of the wall, the said brace rods at their upper ends being slotted, set bolts engaged through the plate and through the slots at the upper ends of said brace rods, a last standard supporting base rotatably adjustably mounted upon the plate at the upper end thereof, an annular wear plate secured upon the first mentioned plate at its upper end, an annular wear plate secured upon the rotatable base and bearing against the first mentioned wear plate, and lugs formed at the outer edge of one of the wear plates and engaging over the corresponding edge of the other wear plate.

962,748. PIANO. LILLIAN MAE COOK, Ligonier, Ind. Filed Sept. 29, 1909. Serial No. 520,065.



1. In combination with a piano casing having a hinged top, two complete piano instruments mounted within the casing with a partition between the instruments, one of the instruments being movable into and out from the casing, and connections between the latter and said top whereby, as the movable instrument is withdrawn, the top of the casing may be raised.

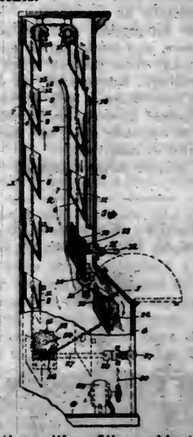
2. In combination with a piano casing having a hinged top, two complete piano instruments mounted within the casing with a partition between the instruments, one of the instruments being movable into and out from the casing, connections between the latter and said top whereby, as the movable instrument is withdrawn, the top of the casing may be raised, a latch fastened to the movable instrument and adapted to engage the piano casing to hold the movable instrument at its farthest outer limit and the hinged top at its highest limit.

3. In combination with a piano casing having a hinged top, two complete piano instruments mounted within the casing with a partition between the instruments, one of the instruments being movable into and out from the casing, an angle lever pivotally mounted upon the casing, a link pivotally connecting one arm of said lever and the hinged top, a bar pivoted to the other arm of the lever and provided with an elongated slot, a lug projecting from the movable instrument, and a pin fixed to said lug and movable within said slot.

4. In combination with a piano casing having a hinged top, two complete piano instruments mounted within the casing with a partition between the instruments, one of the instruments being movable into and out from the casing, an angle lever pivotally mounted upon the casing, a link pivotally connecting one arm of said lever and the hinged top, a bar pivoted to the other arm of the lever and provided with an elongated slot, a lug projecting from the movable instrument, a pin fixed to said lug and movable within said slot, and means for holding the top of the piano casing raised and the movable instrument at its farthest outer limit.

962,749. FILING-CABINET. HENRY JACKSON DAVIS, Birmingham, Ala. Filed Feb. 9, 1910. Serial No. 542,843.

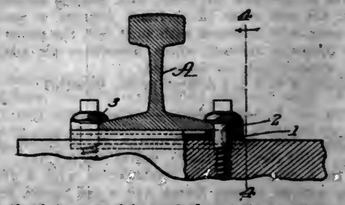
1. A filing cabinet provided with a base extending forward of the upper portion of the cabinet, and having an opening in the upper portion of the base; a door or closure for said opening, adapted to be swung outwardly therefrom; a pair of endless chains mounted in the cabinet, the chains extending forwardly during a portion of their run adjacent to the opening aforesaid; and a plurality of file boxes mounted upon the chains and movable therewith, whereby any box may be brought to position beneath said opening for the examination or removal of its contents.



2. In combination with a filing cabinet, provided with a base extending outwardly beyond the main body thereof, said base having an opening in the upper portion thereof; a plurality of endless chains mounted within the cabinet, each of the chains having a portion of its run extending forwardly beneath the opening aforesaid; a plurality of file boxes carried by the chains, each of said boxes being open at its top and provided with a downwardly and forwardly inclined bottom; and means for moving said chains.

3. In combination with a filing cabinet provided with a base extending outwardly beyond the body of the cabinet, said base having an opening in its upper portion, a pair of endless chains mounted in the cabinet, each of said chains having a portion of its run extending forwardly into the base and beneath the opening aforesaid; a plurality of file boxes pivotally secured to said chains, each of said boxes being open at the top and provided with a downwardly and forwardly inclined bottom; means mounted within the box for holding files or the like which may be placed therein in proper position within the box; means for imparting movement to said chains; and a door or closure for the opening in the base, said closure being adapted to be swung outwardly into a horizontal position and to form a shelf or desk adjacent to the opening.

962,750. TIE-PLATE. WILLIAM L. DE REMER, Chicago, Ill. Filed Aug. 26, 1909. Serial No. 514,666.



1. A tie-plate comprising a body portion, and a portion adjustable thereon in a longitudinal line toward and away from the rail when in position, said adjustable portion having a spike hole; substantially as described.

2. A tie-plate comprising a body portion, and portions adjustable thereon longitudinally toward and away from the rail when in position, said adjustable portions being arranged to interlock with the body portion; substantially as described.

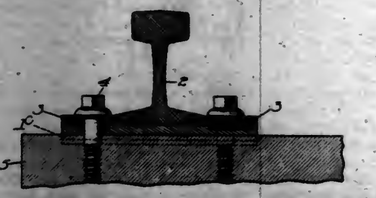
3. A tie-plate comprising a body portion, and portions adjustable thereon longitudinally toward and away from the rail when in position, said adjustable portions being arranged to interlock with both the body portion and with the rail; substantially as described.

4. A tie-plate comprising a body portion having a longitudinal groove, and blocks fitting and movable therein toward and away from the rail when in position, and having spike openings; substantially as described.

5. A tie-plate comprising a body portion having a plurality of longitudinal grooves, and a plurality of blocks fitting therein at opposite ends and having spike openings; substantially as described.

[Claim 6 not printed in the Gazette.]

962,751. TIE-PLATE. WILLIAM L. DE REMER, Chicago, Ill. Filed Aug. 26, 1909. Serial No. 514,667.



1. A tie-plate comprising a body portion or plate proper and removable strips which extend transversely thereof in the direction of the rail and on opposite sides thereof and through which the spikes are adapted to be passed; substantially as described.

2. A tie-plate comprising a body portion or plate proper and removable strips which extend transversely thereof in the direction of the rail and on opposite sides thereof and through which the spikes are adapted to be passed; said strips having inwardly directed flanges which extend beneath the rail when in position; substantially as described.

3. A tie-plate comprising a body portion or plate proper having transverse grooves near its ends and adapted to engage opposite sides of the rail, and removable strips which fit in said grooves and through which the spikes are adapted to be passed; substantially as described.

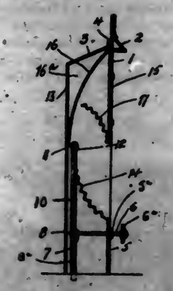
4. A tie-plate comprising a body portion or plate proper having near its ends transverse grooves and adapted to engage opposite sides of the rail, and removable strips having portions corresponding with said grooves to interlock therewith, said strips having openings through which the spikes are adapted to pass; substantially as described.

5. A tie-plate comprising a body portion or plate proper having near its ends transverse grooves, and removable strips having portions corresponding with said grooves to interlock therewith, said grooves extending beneath the rail when in position, whereby a portion of each strip will interlock with such rail, the strips having spike openings through which the spikes are adapted to pass; substantially as described.

[Claims 6 to 8 not printed in the Gazette]

962,752. GAS-STOVE. THOMAS M. DUDGEON, Avalon, Pa. Filed Nov. 11, 1909. Serial No. 527,541.

1. In a gas stove, the combination with a frame, a casing secured to said frame, and a gas burner arranged horizontally and approximately centrally of the casing and spaced from the rear wall of the latter, of a cold air inlet grating arranged at the bottom of said frame, a hot air outlet grating arranged at the top of said frame, a curved reflector connected to the upper edge of said cold air inlet grating and to said burner, a deflector connected to the rear wall of said casing adjacent to said burner and to the upper edge of said hot air outlet grating, and a curved reflector connected to the lower edge of said hot air outlet grating adapted to extend in proximity to the last mentioned deflector.



2. In a gas stove, the combination with a frame, a casing connected with said frame, and a gas burner arranged centrally and longitudinally of said casing and spaced from the rear wall thereof, of a cold air inlet grating arranged at the bottom of said frame, a curved corrugated reflector plate connecting the upper edge of said grating and said burner, a hot air outlet grating arranged in the upper part of said frame, a curved deflector plate connecting the rear wall of said casing and the upper edge of said outlet grating, and a curved corrugated reflector plate connected to the lower edge of the outlet grating and adapted to extend in proximity to the last mentioned deflector, substantially as described.

3. A gas stove comprising a frame, a casing connected with said frame, a cold air inlet grating arranged in the bottom of said frame, a corrugated curved plate connecting with the upper edge of said grating and adapted to extend upwardly into said housing to deflect cold air upwardly therein, a hot air outlet grating arranged in the upper part of said frame, a curved plate carried by said casing and having the lower edge thereof in proximity to the first mentioned plate and adapted to deflect the air from the first mentioned plate toward said hot air outlet grating, means arranged at the upper edge of the first mentioned plate for heating air deflected toward the last mentioned plate, and means carried by the lower edge of said hot air outlet grating adapted to deflect heat units in the path of the cold air adapted to pass through said housing.

4. A gas stove comprising an open front casing, a gas burner arranged horizontally thereof and adapted to communicate with a gas supply and spaced from the rear wall of said casing, means to constitute a cold air inlet arranged at the lower portion of the front of said casing, means to constitute a hot air outlet arranged at the front of said casing, a reflector having its lower end connected to the cold air inlet means and its upper end to said burner, a deflector having its lower end connected to the rear wall of said casing adjacent to said burner and having its upper end connected to the upper portion of said hot air outlet means, and a reflector connected to the lower portion of said hot air outlet means and extending toward and terminating at a point removed from said last mentioned deflector.

5. A gas stove comprising an open front casing, a horizontally-disposed burner arranged within the casing in proximity to the rear wall thereof, means to constitute a cold air inlet arranged at the lower portion of the front of said casing, means to constitute a hot air outlet arranged at the upper portion of said casing at the front thereof, a curved combined deflector and reflector secured at its lower end to said inlet means and at its upper end to said burner, a curved deflector having its lower end secured to the rear wall of said casing at the back of said burner and its upper end to the upper portion of said outlet means, and a curved reflector having its lower end secured to the lower portion of said outlet means and extending inwardly and upwardly and terminating at a point removed from the forward face of said last mentioned deflector.

[Claim 6 not printed in the Gazette.]

962,753. PROCESS OF MAKING A NEUTRAL SODIUM SALT OF LACTALBUMIN. ERNST FISCHER and PETER BRAGELL, Berlin, Germany. Filed Apr. 25, 1908. Serial No. 429,129. (Specimens.)

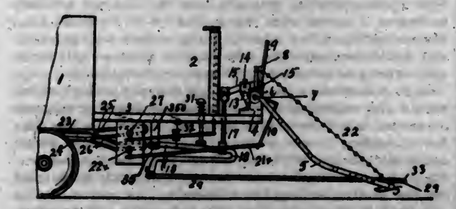
1. The process of producing a neutral alkali salt of lactalbumin consisting in dissolving dried, fat-free lactalbumin in an excess of an aqueous solution of fixed alkali, precipitating the lactalbumin by means of an acid, separating the precipitate from the liquid, dissolving the precipitate in an aqueous solution containing a chemically equivalent quantity of a fixed alkali, and evaporating the neutral solution at a low temperature whereby a neutral alkali salt of lactalbumin is obtained.

2. The process of producing a neutral alkali salt of lactalbumin consisting in dissolving dried, fat-free lactalbumin in an excess of an aqueous solution of fixed alkali, neutralizing the solution, precipitating the lactalbumin by means of an acid, separating the precipitate from the liquid, washing the precipitate with water, dissolving the precipitate in an aqueous solution containing a chemically equivalent quantity of a fixed alkali, and evaporating the neutral solution *in vacuo* whereby a neutral alkali salt of lactalbumin is obtained.

3. The process of producing a neutral sodium salt of lactalbumin consisting in dissolving dried, fat-free lactalbumin in an excess of a solution of sodium hydroxid, neutralizing the solution with hydrochloric acid, precipitating then the lactalbumin with hydrochloric acid, separating the precipitate from the liquid, dissolving the precipitate in an aqueous solution containing a chemically equivalent quantity of sodium hydroxid, and evaporating the neutral solution *in vacuo* at a low temperature whereby a neutral sodium salt of lactalbumin is obtained.

4. The process of producing a neutral sodium salt of lactalbumin consisting in mixing 10 parts of dried, fat-free lactalbumin with about 200 parts of water, gradually adding an aqueous solution of sodium hydroxid containing about 0.6 parts of same, neutralising with hydrochloric acid, precipitating the lactalbumin by hydrochloric acid, separating the precipitate from the liquid, washing the precipitate with water, dissolving while stirring the precipitate in an aqueous solution of sodium hydroxid containing 0.26 parts, and evaporating the neutral solution *in vacuo* at a low temperature whereby a neutral sodium salt of lactalbumin is obtained.

962,754. FENDER. FRED GAUTZSCH, Jr., Philadelphia, Pa. Filed Mar. 5, 1910. Serial No. 547,556.



1. The combination with a vehicle, of a fender, a shaft extending across the front of the vehicle and on which the fender is supported, a lock-member having a lug fixed on said shaft, a pawl normally engaging said lug to hold the fender up, a lever operatively connected to said pawl, a part actuated by striking an obstacle connected to said lever to disengage said pawl permitting the fender to drop, a ratchet wheel fixed on the same shaft, and a ratchet in position to engage said wheel as the fender drops to hold the fender down.

2. The combination with a vehicle, of a fender, a shaft extending across the front of the vehicle and on which the fender is supported, a lock-member having a lug fixed on said shaft, a pawl normally engaging said lug to hold the fender up, a lever of goose-neck shape pivoted at one end, an operating connection between said pawl and lever, and a part actuated by striking an obstacle connected to the other end of said lever to actuate it and to disengage said pawl.

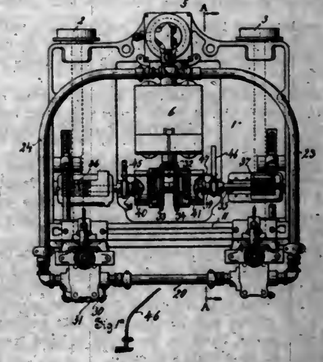
3. The combination with a vehicle, of a fender, a fender shaft, a lug fixed on said shaft, a pivoted pawl engaging said lug to hold the fender up, a goose-neck lever having two members substantially parallel with the vehicle floor, the upper member being pivotally supported from said floor, the lower return member being operatively connected to a device adapted to be pushed buckwardly upon striking an obstruction, said device, and a link connecting the pawl and lever.

4. The combination with a vehicle, of a fender, a fender-shaft extending across the vehicle, a lug fixed on the shaft, a pivoted pawl engaging the lug, a goose-neck lever pivotally supported below the vehicle floor, a device in front of the fender and adapted to be moved by striking an obstruction, and connected to the free end of the goose-neck lever, an operating connection between said lever and pawl, a ratchet wheel fixed on the same shaft, and a second pawl adapted to engage said wheel as the fender drops to hold the fender down.

5. The combination with a vehicle, of a fender, a bracket extending across the vehicle and having journal posts at its ends, and an intermediate post, a fender shaft journaled in the end posts, a pawl pivoted in the intermediate post, a lug secured to the shaft and engaged by said pawl, a trigger-frame, and devices operatively connecting said frame and pawl.

[Claim 6 not printed in the Gazette.]

962,755. ELECTROPNEUMATIC TRACK-CHANNELER. ARTHUR HENRY GIBSON, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 22, 1907. Serial No. 363,895.



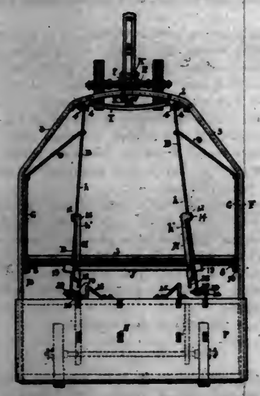
1. A double acting fluid presser, a plurality of tools, their pistons, conduits connecting opposite sides of the different tool pistons with opposite sides of the presser piston and conduits connecting opposite sides of the different tool pistons with each other whereby the tools are driven simultaneously in the same direction by the operation of the presser.

2. In a channeling machine, a movable truck, truck driving means, a double acting fluid presser mounted on the truck, tool pistons, a plurality of tools also mounted on the truck, tubes connecting opposite sides of the different tool pistons with opposite sides of the presser pis-

ton and also connecting opposite sides of the different tool pistons with each other, whereby the tools are driven simultaneously in the same direction by the operation of the presser.

3. In a channeling machine, a movable truck, truck driving means, a double acting fluid presser mounted on the truck, a plurality of tools adjustably mounted on the truck, tool pistons and flexible tubes connecting opposite sides of the different tool pistons with opposite sides of the presser piston and also opposite sides of the different tool pistons with each other whereby the tools are driven simultaneously in the same direction by the operation of the presser.

962,756. COMBINED GRADING, DIGGING, AND LEVELING MACHINE. DAVID E. GRAVES, Oberlin, Ohio. Filed May 20, 1909. Serial No. 497,145.



1. A grading and like machine having a transversely disposed scraper blade and fenders at the ends thereof, and means separably fixing said fenders and blade rigidly together.

2. A grading and like machine comprising a truck with a tongue, a frame having a bearing portion at its front and center rounded on its bottom and operatively engaged on said truck.

3. A grading and like machine having a front truck, a main frame with a bowed inside truss across its front portion and a tongue upon said truss forming a support for said frame on said truck.

4. A grading machine having a front truck and a main frame provided with a truss brace across its front inside and said truss fixed to said frame at its center and ends and constructed at its ends to support draw bars and at its center to rest said frame on said truck.

5. A grading and like machine having a main frame at its front and sides formed out of a single piece of channel steel and said frame bowed outwardly at its immediate front and provided with diverging front side portions substantially as shown and parallel rear side portions, and an inwardly bowed truss in the front of said frame and fixed thereto at its middle and ends.

[Claims 6 to 16 not printed in the Gazette.]

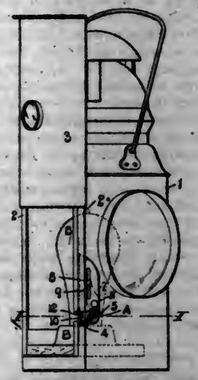
962,757. DUST-COLLECTOR. WILLIAM GYMM, Fullerton, Pa. Filed Sept. 23, 1908. Serial No. 454,866.

In a dust collector, a hopper having a dust intake pipe extending thereinto, said hopper having a flue at its upper end, a hollow conical element located in the hopper and having its apex or reduced end portion disposed immediately beneath the flue of the hopper, a sliding regulator mounted upon the dust intake pipe, means for moving the said regulator toward the said conical element, dust discharge pipes at the bottom of the hopper, and steam conveying pipes extending through the hopper and



having their lower open ends disposed immediately above the said dust outlet pipes.

962,758. SIGNAL-LANTERN. ALEXANDER H. HANDLAN, Jr., St. Louis, Mo. Filed Nov. 5, 1909. Serial No. 526,410.



1. In a lantern, a shell having a doorway and provided with a slot extending laterally from the doorway adapted to receive a burner wick raising rod or an electrical conductor leading to an electric lamp housed by the shell, and a slide supported by said shell to confine the burner wick raising rod or electrical conductor in said slot.

2. In a lantern, a shell having a doorway and provided with a slot extending laterally from the doorway adapted to receive a burner wick raising rod or an electric conductor leading to the electric lamp housed by the shell, and a slide supported by said shell and having a member adapted to span said slot to confine the burner wick raising rod or electrical conductor therein.

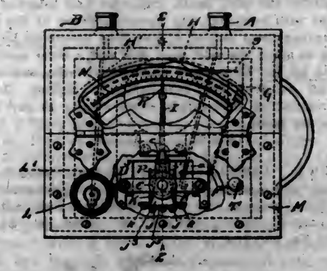
3. In a lantern, a shell having a doorway and provided with a slot extending laterally from the doorway adapted to receive a burner wick raising rod or an electrical conductor leading to an electric lamp housed by the shell, and a slide supported by said shell and having a leg at its lower end adapted to span said slot between the burner wick raising rod or electrical conductor and the open end of the slot whereby the electrical conductor is confined in said slot.

4. In a lantern, a shell having a doorway and provided with a slot extending laterally from the doorway adapted to receive a burner wick raising rod or an electrical conductor leading to an electric lamp housed by the shell, and a slide having slot and pin connection with said shell and having a member adapted to span said slot between the burner wick raising rod or electrical conductor and the open end of the slot whereby the electrical conductor is confined in said slot.

5. In a lantern, a shell having a doorway and provided with a slot extending laterally from the doorway, an insulator sleeve seated in said slot adapted to surround an electrical conductor leading to an electric lamp housed by the shell, and a slide supported by said shell and adapted to span said slot between its open end and said insulator sleeve.

[Claims 6 to 9 not printed in the Gazette.]

962,759. ELECTRIC MEASURING INSTRUMENT. ROBERT D. HICKOK, Atlanta, Ga. Filed June 4, 1909. Serial No. 500,057.



1. In an electrical measuring instrument, the combination of a current coil, a turning magnetic element located in the field of said coil for actuation thereby, the coil being pivotally mounted to enable a uniform angular relation between said coil and said element to be preserved under all conditions of current, and means connected to said element to yieldingly hold the same in zero position.

2. In an electrical measuring instrument, the combination of a frame, an actuating magnetic member the magnetic force of which may be varied, said member being pivoted in the frame, an actuated magnetic member located in the magnetic field of said member, the actuating member being manually movable to vary its position in the frame according to the variation of its magnetic force to preserve a uniform angular relation between said members, and means connected to the actuated member to yieldingly hold the same in zero position.

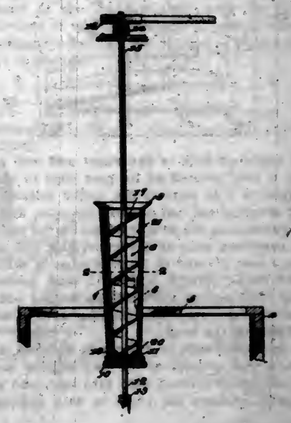
3. In an electrical measuring instrument, the combination of a frame, an actuating electro-magnetic coil pivoted in the frame and through which the current to be measured may be passed, and an actuated coil pivotally mounted in the magnetic field of said coil, the position of the actuating coil being manually variable in the frame according to the variation of the current passed therethrough to preserve a predetermined angular relation to said actuated coil, and means connected to the last mentioned coil tending to hold the same in zero position.

4. In an electrical measuring instrument, the combination of an actuating coil through which current to be measured may be passed, and an actuated coil in rectangular relation in the magnetic field of said coil, both of the coils being pivoted concentrically, whereby the actuating coil may be turned with the actuated coil to preserve said angular relation under all conditions of current, and a spring tending to return the actuated coil to zero position.

5. In a watt-meter, the combination of a frame, an actuating coil angularly movable in the frame and arranged in a circuit through which current to be measured may be passed, and a turning actuated coil in shunt to said circuit and located in the magnetic field of said coil and means to yieldingly maintain the actuated coil in rectangular relation to the actuating coil, said coil being manually movable in the frame according to the turn of the actuated coil to preserve said relation under all conditions of current.

[Claims 6 to 9 not printed in the Gazette.]

962,760. MOLD FOR POSTS. WILLIAM T. HICKS, Bloomington, Ind. Filed Sept. 4, 1909. Serial No. 516,236.



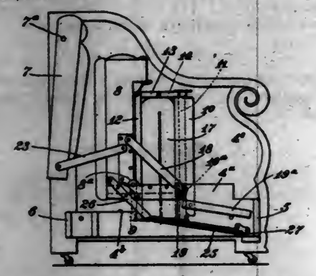
1. In a machine for molding fence posts and the like, the combination with the mold tube, of a shaft having a helical web on one end thereof, said shaft being movable longitudinally in the said tube, a disk mounted on the end of the shaft at the end of the helical web, said disk being provided with openings, wings extending up from the disk, one of said wings being located at one edge of each opening, and extending at an angle to the disk, and means for rotating the shaft.

2. In a machine for molding fence posts and the like, the combination with a table having an opening therein, journal boxes located on opposite sides of the opening, a mold tube provided with trunnions, said trunnions being mounted in the journal boxes, a shaft, a helical web on the shaft, said shaft being movable into said tube, a disk mounted on the end of the shaft at the end of the helical web, said disk being provided with openings, wings extending up from the disk, one of said wings being located at one edge of each opening, and extending at an angle to the disk, and means for rotating the shaft.

3. In a machine for molding fence posts and the like, the combination with the mold tube, of a shaft having a helical web on one end thereof, said shaft being movable longitudinally in the said tube, a disk mounted on the end of the shaft at the end of the helical web, said disk being provided with openings, wings extending up from the disk, one of said wings being located at one edge of each opening, and extending at an angle to the disk, means for rotating the shaft, a concaved ejector disk mounted in the end of the tube and having a stem projecting outside of the tube.

4. In a machine for molding fence posts and the like, the combination with the mold tube, of a shaft having a helical web on one end thereof, said shaft being movable longitudinally in the said tube, a disk mounted on the end of the shaft at the end of the helical web, said disk being provided with openings, wings extending up from the disk, one of said wings being located at one edge of each opening, and extending at an angle to the disk, and means for rotating the shaft, a portion of one side of said tube being flattened.

962,761. COMBINED DAVENPORT AND BED. JESSE G. HULSE and ADOLPH F. SCHRAMM, Columbus, Ohio, assignors to The E. M. Hulse Company, Columbus, Ohio, a Corporation of Ohio. Filed Mar. 28, 1910. Serial No. 551,946.



1. In a combined sofa or davenport and bed, a supporting frame, a seat pivoted at its rear edge in said frame, a bed hinged to fold against the under side of the seat, means for securing the bed against the seat, and a spring for counterbalancing the weight of the united seat and bed.

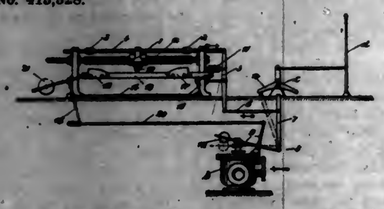
2. In a combined sofa or davenport and bed, a supporting frame, a seat pivoted at its rear edge in said frame, a folding bed frame pivoted with said seat, means for automatically latching the parts of the folding bed together and means for automatically latching the folded bed to the under side of the seat.

3. In a combined sofa or davenport and bed, a supporting frame, a seat pivoted at its rear edge in said frame, a folding bed frame pivoted with said seat, and means for automatically latching the parts of said folding bed together.

4. In a combined sofa or davenport and bed, a supporting frame, a seat pivoted at its rear edge in said frame, a folding bed frame pivoted with said seat, and means for automatically latching the folded bed to the under side of the seat.

5. In a combined sofa or davenport and bed, a supporting frame, a seat pivoted at its rear edge in said frame, a folding bed frame pivoted with said seat, means for latching the folding bed in folded condition to the under side of said seat, automatically operative props to support the united seat and bed when raised, and cleats upon which said props rest and are guided when the seat is turned down.

962,762. DEVICE FOR REGULATING THE FEEDING OF POWER IN HOISTING PLANTS. JACOB IVERSEN, Charlottenburg, Germany. Filed Feb. 12, 1908. Serial No. 415,528.



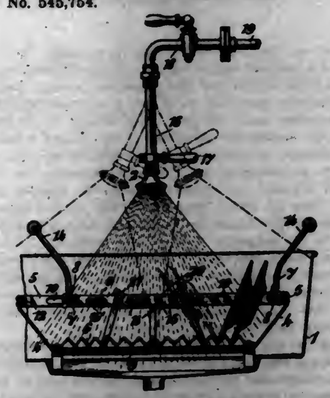
1. A device for controlling the power supply in hoisting plants comprising the combination of a depth-indicator, a power regulating device, lever mechanism adapted to act upon the said power regulating mechanism and to be reversed by the said depth-indicator, the reversing lever of the engine, and an operating lever turned by said reversing lever and adapted to control the said power regulating device by means of said lever mechanism, substantially as and for the purpose set forth.

2. A device for controlling the power supply in hoisting plants comprising the combination of a depth-indicator, a power regulating device, a push-bar adapted to operate the said power regulating mechanism, lever mechanism operated by the said depth indicator and adapted to reverse the said push bar, the reversing lever of the engine, and an operating lever moved by the said reversing lever and adapted to move the said push bar, substantially as and for the purpose set forth.

3. A device for controlling the power supply in hoisting plants comprising the combination of a depth-indicator, a power regulating device, lever mechanism adapted to act upon the said power regulating mechanism and to be reversed by the said depth indicator, the reversing lever of the engine, an operating lever turned by said reversing lever and adapted to control the said power regulating device by means of said lever mechanism, and means in connection with the said depth indicator for automatically closing the said power regulating mechanism at the end of each trip, substantially as and for the purpose set forth.

4. A device for controlling the power supply in hoisting plants comprising the combination of a depth-indicator, a power regulating device, a push bar adapted to operate the said power regulating mechanism, lever mechanism operated by the said depth indicator and adapted to reverse the said push bar, the reversing lever of the engine, an operating lever moved by the said reversing lever and adapted to move the said push bar, and a lever mechanism operated by the said depth indicator at the end of each trip and adapted for automatically closing the said power regulating mechanism, substantially as and for the purpose set forth.

962,763. DISH-CLEANER. GUSTAV JAEKLE, Basel, Switzerland, assignor to The Firm of Aktiengesellschaft für den Vertrieb von Kuchengeschirr-Spülapparaten "Triumph," Zurich, Switzerland. Filed Feb. 24, 1910. Serial No. 545,754.



1. A dish cleaning apparatus comprising a supporting ledge for the articles to be rinsed, a frame in the upper portion of the apparatus, means for adjusting and holding apart the articles to be rinsed, said supporting ledge and frame being relatively movable longitudinally of the apparatus in order to enable different positions to be given to the articles to be rinsed.

2. A dish cleaning apparatus comprising a corrugated supporting ledge for the articles to be rinsed, a frame in the upper portion of the apparatus, pins for adjusting and holding apart the articles to be rinsed, said supporting ledge and frame being relatively movable longitudinally of the apparatus in order to enable different positions to be given to the articles to be rinsed.

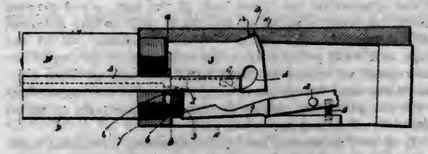
3. A dish cleaning apparatus comprising a corrugated supporting ledge in its bottom portion, a frame in the upper portion of the apparatus provided with racks and adjustable in the direction of its width, said supporting ledge and frame being relatively movable longitudinally of the apparatus.

4. A dish cleaning apparatus comprising a corrugated supporting ledge in its bottom portion, a frame in the upper portion of the apparatus provided with pins and adjustable in the direction of its width, one of the two parts, the supporting ledge and the frame, occupying a fixed position and the other being adjustable in fixed guides and provided with handles for shifting.

5. A dish cleaning apparatus comprising a corrugated supporting ledge fixed in the bottom portion of the apparatus, a frame adjustable in fixed guides in the upper portion of the apparatus and provided with racks and with handles for shifting.

[Claims 6 to 9 not printed in the Gazette.]

962,764. FIREARM. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Nov. 27, 1909. Serial No. 530,081.

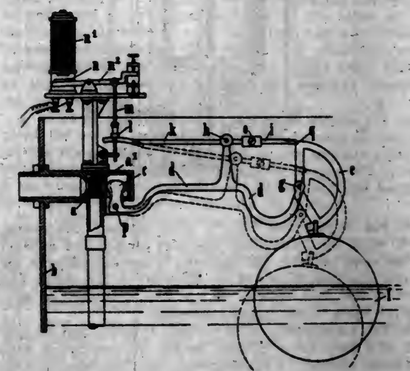


1. In a repeating firearm, the combination with a gun-frame or receiver having a solid top the under face of which is formed with a locking-notch, of a gun-barrel, a tubular magazine located below the said gun-barrel, a sliding operating-handle mounted upon the said magazine, an action-bar carried by the said handle and extending rearwardly therefrom, a breech-block provided at its upper rear corner with a recoil-taking shoulder adapted to be entered into the said notch, and connected with the rear end of the action-bar for being moved downward at its rear end to unlock, then back and forth and upward at its rear end to lock, a stop-lug having a cam-face depending from the lower face of the forward end of the breech-block, and a pivotal cartridge-carrier provided at its extreme forward end with a cam, the said lug and cam being constructed and arranged to permit a cartridge engaged therewith to move downward with respect to the front end of the carrier to allow the breech-block to be moved downward at its rear end in being unlocked, and to permit the cartridge to move upward to permit the carrier to be manually swung upward to allow the magazine to be emptied.

2. In a repeating firearm, the combination with a gun-frame having a solid top the under face of which is formed with a locking-notch, of a gun-barrel, a tubular magazine located below the barrel, a sliding operating-handle mounted upon the said magazine, an action-bar carried by the said handle and extending rearwardly therefrom, a breech-block provided at its rear upper corner with a recoil-taking shoulder adapted to be entered into the said notch, and connected with the rear end of the action-bar for being moved downward at its rear end to unlock, then back and forth and then upward at its rear end to lock, and a pivotal cartridge-carrier, the lower forward end of the block and the forward end of the carrier being respectively provided with cams located to the rear of the said tubular magazine and normally engaged by the head of a cartridge when the gun is closed, the said cams being positioned in respect to each other to permit a cartridge engaging therewith to be moved downward when the rear end of the block is moved downward to unlock, and upward when the carrier is swung upward to empty the magazine.

3. In a repeating firearm, the combination with a gun-frame having a solid top the under face of which is formed with a locking-notch, of a gun-barrel, a tubular magazine located below the said gun-barrel, a sliding operating-handle mounted upon the said magazine, an action-bar carried by the said handle and extending rearwardly therefrom, a breech-block provided at its upper rear corner with a recoil-taking shoulder adapted to be entered into the said notch, and connected with the rear end of the action-bar for being moved downward at its rear end to unlock, then back and forth and upward at its rear end to lock, and a pivotal cartridge-carrier, the forward lower corner of the breech-block and the forward end of the carrier being formed with cams which are engaged with the head of a cartridge when the gun is closed, the cam of the block being constructed to engage with the edge of the head of the cartridge, while the cam of the carrier is constructed to engage with the edge and the rear face of the head of the cartridge, whereby the cartridge is moved downward when the block is moved downward to unlock and upward when the carrier is swung upward to empty the magazine.

962,765. FLUSH-TANK. KARL KOHLER, Neustadt, Schwarzwald, Germany. Filed Sept. 11, 1909. Serial No. 517,205.



1. In a flush tank, the combination with the tank having an admission valve, a pivotally mounted two-part jointed lever for controlling said valve, and a float attached to one part of said lever, of a locking device mounted on the other part and normally engaging the former part of said lever for normally preventing said lever bending, and means for releasing said locking device.

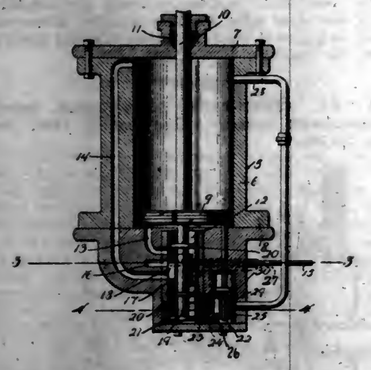
2. In a flush tank, the combination with the tank having an admission valve, a pivotally mounted two-part jointed lever for controlling said valve, one part of said lever having a notch and carrying a float, of a locking lever pivoted on the other part of said jointed lever and normally engaging in said notch, and an electromagnetic releasing device for removing said locking lever from said notch.

3. In a flush tank, the combination with the tank having an admission valve, a pivotally mounted two-part jointed lever for controlling said valve, one part of said lever having a notch and carrying a float, of a two-armed locking lever pivoted on the other part of said jointed lever and normally engaging in said notch, one arm of said locking lever carrying a weight and the end of the other arm of the locking lever having a curved portion, and a releasing device comprising an electromagnetically operated rod carrying a stop normally resting on said curved portion, the center of curvature of said curved portion coinciding with the fulcrum of said jointed lever.

4. In a flush tank, the combination with the tank having an admission valve, a pivotally mounted two-part jointed lever for controlling said valve, one part of said lever having a notch and carrying a float, of a two-armed locking lever pivoted on the other part of said

jointed lever and normally engaging in said notch, one arm of said locking lever carrying a weight and the end of the other arm of the locking lever having a curved portion, and a releasing device comprising an electromagnetically operated forked rod carrying an adjustable stop normally resting on said curved portion, the center of curvature of said curved portion coinciding with the fulcrum of said jointed lever.

962,766. VALVE. EDWARD A. LACY and FRED C. WILLIAMS, Galeton, Pa. Filed Dec. 8, 1908. Serial No. 466,575.



1. The combination with a main cylinder and piston, of a valve for controlling the fluid supply and exhaust of the main cylinder and operated in one direction by the piston, and means alternately operated by the piston and part of the fluid exhaust of the main cylinder for moving the valve in the opposite direction.

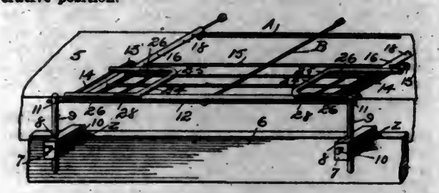
2. The combination with a main cylinder and its piston, of a main valve cylinder having communication with the main cylinder, a supplemental valve cylinder in communication with the main valve cylinder and the main cylinder, a main valve within the main valve cylinder and actuated in one direction by movement of the piston to control the fluid supply and exhaust of the main cylinder, pressure controlled means for moving the main valve in the opposite direction, and a supplemental valve within the supplemental valve cylinder and controlling the supply of fluid to said pressure controlled means.

3. The combination with a main cylinder and its piston, of a plurality of valve cylinders having communication with each other, the main cylinder and the atmosphere, valves working in said cylinders and successively operated in one direction by the piston, and fluid pressure controlled means operating said valves in the opposite direction, one of said valves controlling the supply of fluid to the fluid pressure controlled means of the other valve.

4. The combination with a main cylinder and piston, of a main valve for controlling the fluid supply and exhaust of the main cylinder and operated in one direction by the piston, and a supplemental valve alternately operated by the piston and part of the fluid exhaust of the main cylinder for moving the main valve in the opposite direction.

962,767. CRIB STRUCTURE. WILLIAM M. LAWYER and JAMES P. LAWYER, Guernsey, Ohio. Filed Oct. 18, 1909. Serial No. 523,207.

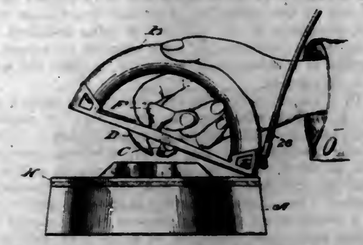
1. A crib extension for beds comprising attaching members, vertically extending members adjustably connected with the attaching members, a normally horizontal frame pivotally connected with the vertically extending members for movement to extend horizontally at either side of said vertically extending members, supports for the frame, and side and end members for the crib connected with the frame for movement into and out of operative position.



2. A crib extension for beds comprising attaching members, a normally horizontal frame pivotally connected with the attaching members, said frame including inner and outer side rods and connecting end rods, a side pivotally mounted upon the said outer side rod, legs formed integrally with the side and extending downwardly beyond the frame when the latter is in horizontal position, a rod connecting the lower ends of the legs, a rod pivoted upon the inner side rod of the frame and having a forked end removably engaged with the connecting rod of the legs, and ends pivoted upon the end rods of the frame for movement to extend at times vertically and at times horizontally, said frame being shiftable upon its connections with the attaching means to extend horizontally at either side of said attaching members.

3. A crib extension for beds comprising attaching members, rods vertically adjustable in said attaching members, a normally horizontal frame including longitudinal side rods and connecting end rods disposed with its inner side rod pivotally engaged in the vertically adjustable rods, a side pivotally mounted upon the outer side rod of the frame, integral downwardly extending legs carried by the side, said side being movable to extend at times vertically and at times horisontally, and ends pivoted upon the end rods of the frame for movement to extend at times vertically and at times horizontally, said frame with its side and ends being shiftable upon its pivotal connections with the vertically adjustable rod to extend at either side of said rod.

962,768. ELECTRIC SAD-IRON. HENRI G. LEVY, San Francisco, Cal. Filed Apr. 1, 1910. Serial No. 552,921.



1. In a device of the character described, the combination of a body portion and a removable handle therefor, said body portion having an electric-heater within it, and provided with contacts, and said handle portion having contacts adapted to establish an electrical circuit through the first-named contacts and heater coördinately with the application of the handle to the body portion.

2. In a device of the character described, the combination with a body portion, an electric-heater therein, and a separable handle, of means carried respectively by the body portion and handle and adapted to establish a circuit through the heater coördinately with the placing of the handle in working position on said body portion.

3. In an iron of the character described, the combination with a body portion, an electric-heater therein, and a separable handle, of means carried respectively by the body portion and handle and adapted to establish a circuit through the heater coördinately with the placing of the handle in working position on said body portion, said circuit being broken by the disengagement of the handle from the body portion.

4. In a sad-iron, the combination with a body portion and an electric-heater housed therein, of a handle portion and means detachably securing it to the body portion, said handle and body portion having engaging contacts adapted to establish an electric circuit through the heater coördinately with the application of the handle to the body portion of the iron.

5. A sad-iron having a body portion and a contained electric-heater, and a handle portion having means for latching it to the body portion, said handle and body portion having engaging contacts for establishing an electric circuit through the heater when the handle is applied to the body, and interrupting the circuit when the handle is removed from the body.

[Claims 6 to 12 not printed in the Gazette.]

962,769. METHOD OF MANUFACTURING CELLULOSE STRUCTURES. RUDOLPH LINKMEYER, Brussels, Belgium. Filed Aug. 26, 1908. Serial No. 450,395.

1. Method of manufacturing cellulose structures consisting in dissolving cellulose in cupric oxid ammonia, in forming the solution thus obtained into shapes corresponding to the purpose in each instance, and in coagulating the bodies thus obtained in alkaline chlorid baths containing relatively small quantities of caustic alkalies.

2. Method of manufacturing cellulose structures, consisting in dissolving cellulose in cupric oxid ammonia, in forming the solution thus obtained into shapes, and in coagulating said formed shapes in a solution comprising 100 liters of water, about 28 kilograms of sodium chlorid and about 5 kilograms of caustic alkali.

3. The method of manufacturing cellulose structures which consists in forming a cupro-ammonium cellulose solution, producing suitable shapes therefrom, and coagulating the shapes thus produced in a solution of an alkaline metal chlorid containing caustic alkali.

4. The method of manufacturing cellulose structures, which consists in forming a cupro-ammonium cellulose solution, producing suitable shapes therefrom and coagulating the shapes thus produced in a solution of a chlorid of a metal of the alkalies containing caustic alkali.

962,770. PROCESS OF PRODUCING DURABLE SOLUTIONS FOR SPINNING AND OTHER PURPOSES. RUDOLPH LINKMEYER, Bremen, Germany. Filed June 23, 1909. Serial No. 503,800.

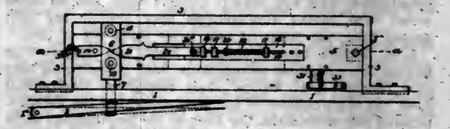
1. Process of producing solutions for spinning artificial threads that will stand a considerable amount of heat, which comprises forming a cupro-ammonium cellulose solution and adding thereto at any one of the stages of its manufacture a higher alcohol and maintaining said alcohol in the solution.

2. Process of producing solutions for forming artificial threads that will stand a considerable amount of heat, which comprises adding to a cupro-ammonium cellulose solution a higher alcohol and maintaining said alcohol in the solution.

3. Process of producing solutions for forming artificial threads that will stand a considerable amount of heat, which comprises adding to a cupro-ammonium cellulose solution a higher alcohol and a carbo-hydrate and maintaining said alcohol and carbo-hydrate in the solution.

962,771. SWITCH-POINT-THROWING MECHANISM. STANISLAUS LOCHOWICZ, Camden, N. J., assignor of one-fourth to Walter Dziatkiewicz, Camden, N. J. Filed July 26, 1909. Serial No. 509,616.

1. A switch point-throwing device in which are combined the switch point, a slide connected thereto, opposite bearings on said slide, a swinging switch finger located between said bearings, and an actuating bar interposed between said switch finger and one or the other of the bearings on the slide to move the latter.



2. A switch point-throwing device in which are combined the switch point, a slide connected thereto, opposite bearings on said slide, a swinging switch finger located between said bearings, an actuating bar interposed between said switch finger and one or the other of the bearings on the slide to move the latter, and a connection between the slide and switch finger whereby the movement of the slide is caused to swing the switch finger.

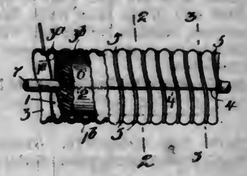
3. A switch point-throwing device in which are combined the switch point, a slide connected thereto, opposite bearings on said slide, a swinging switch finger located between said bearings, an actuating bar interposed between said switch finger and one or the other of the bearings on the slide to move the latter, and a connection between the slide and switch finger, said connection comprising a projection on the slide and a rock shaft having an arm engaging said projection and a crank engaging the switch finger.

4. A switch point-throwing device in which are combined the switch point, a connection thereto, a bar for moving the same in one direction or the other, a slide to which said bar is pivoted, and a spring pressed rod having a head bearing upon the rear end of said bar and tending to maintain the same in line with the slide.

5. A switch point-throwing device in which are combined the switch point, a sliding plate carrying mechanism for operating said switch point, a rock shaft having two arms, one for contact with an operating device on the approaching car, a lever having one arm connected to said sliding plate, and a link connecting the other arm of said lever to the second arm of the rock shaft, a swinging yoke through which said link passes, and a spring surrounding said link and interposed between a bearing thereon and said swinging yoke.

[Claims 6 and 7 not printed in the Gazette.]

962,772. FLEXIBLE CONDUIT. GEORGE A. LUTZ, Plainfield, N. J., assignor to American Circular Loom Company, Portland, Me., a Corporation of Maine. Filed June 6, 1908. Serial No. 437,116.



1. A flexible tube comprising inner and outer strips bent into tubular form around their longitudinal axes and having corrugations, the joint of one strip being out of line with the joint of the other strip.

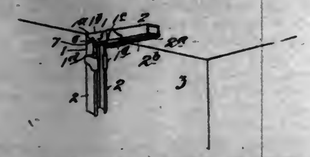
2. A flexible tube comprising inner and outer strips bent into tubular form around their longitudinal axes and having corrugations, the joint of one strip being out of line with the joint of the other strip, and a binder encircling the outer strip.

3. The combination of an insulated conductor, with a protecting covering comprising a strip bent around its longitudinal axis and surrounding the insulation and provided with corrugations extending around the strip, an outer longitudinally disposed strip provided with corrugations, the longitudinal joints of said strips being out of alinement, and means to retain said strips upon said conductor.

4. A flexible tube comprising a metal strip of greater length than width having corrugations at an angle to its longitudinal axis and bent in tubular form, and an outer metal tube having corrugations bent around the first named tube, the joints of said tubes being out of line.

5. A flexible tube comprising inner and outer strips having corresponding corrugations, said strips being bent into tubular form around their respective longitudinal axes, the corrugations of one strip matching the corrugations of the other strip, the joint at the longitudinal edges of one strip breaking joint with the longitudinal edges of the other strip.

962,773. ELBOW FOR CONDUITS. GEORGE A. LUTZ, Plainfield, N. J. Filed Aug. 3, 1908. Serial No. 446,506.



1. An elbow for conduits made in a piece of sheet metal bent into channel form having open-sided members at a right angle to each other, the open sides of said members facing each other said members being permanently maintained at a right angle to each other.

2. An elbow for conduits comprising material in channel form having members permanently maintained at a right angle to each other, the open sides of said members facing each other, and means for securing said members to conduits.

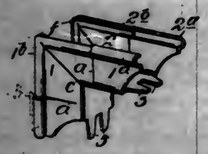
3. An elbow made in a single piece of sheet metal bent in channel form having members rigidly maintained at a right angle to each other and extending in the same plane, the bottom wall being bent and extending at a right angle, with the open sides of said members facing each other and in the same plane and means for securing said elbow to the adjacent ends of conduits.

4. An elbow in channel form having integral members permanently maintained at an angle to each other and extending in the same plane, with the open sides of said members facing each other and in the same plane, the side walls having bent portions, and conduits having bent walls engaging the bent portions of the members.

5. An elbow having open-sided members permanently maintained at a right angle to each other and extending in the same plane, with the open sides of said members facing each other and in the same plane, the side walls having bent portions, conduits having bent walls engaging the bent portions of the members, and means to close the open sides of the elbow.

[Claims 6 to 14 not printed in the Gazette.]

962,774. ELBOW FOR CONDUITS. GEORGE A. LUTZ, Plainfield, N. J. Filed Aug. 18, 1908. Serial No. 448,285.



1. An elbow for conduits having open side members at an angle to each other, the open sides of said members facing externally in different directions away from each other.

2. An elbow in channel form having members at an angle to each other and extending in the same plane, with the open sides of said members facing away from each other in different directions at right angles to each other.

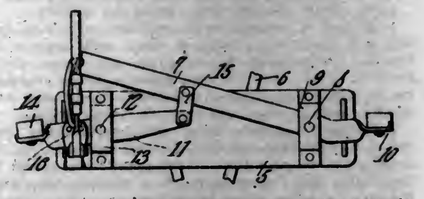
3. An elbow in channel form having members at an angle to each other and extending in the same plane, with the open sides of said members facing away from each other in directions at a right angle, the side walls of the elbow having bent portions, combined with conduits having bent walls engaging the bent portions of the members.

4. An elbow in channel form having members at an angle to each other and extending in the same plane, with the open sides of said members facing externally away from each other in different directions, the side walls of the elbow having bent portions, combined with conduits having bent walls engaging the bent portions of the members, and means to close the open sides of the elbow.

5. An elbow for conduits comprising material in channel form having members at a right angle to each other, the open sides of said members facing away from each other at right angles to each other, said walls of the members being bent to engage correspondingly shaped conduits.

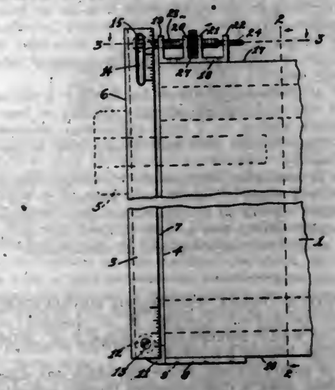
[Claims 6 to 11 not printed in the Gazette.]

962,775. WAGON-BRAKE. HENRY M. MAHAN, Clanton, Ala. Filed Nov. 29, 1909. Serial No. 530,456.



In a brake, mutually connected shoe carrying brake levers, an operating lever pivoted upon one of the brake levers, and a bowed resilient link pivotally connected to the other brake lever and to the operating lever, the pivots being so located that the points of connection between the link and the last mentioned brake lever, and, the link and operating lever, will be normally in a line above the pivot for the operating lever, and in a line below said pivot when the brake is set, movement of the lever to bring the point of connection between the link and the last mentioned brake lever, the link and the operating lever, and the pivot for the operating lever, all in alinement, being against the tension of said link and tending to straighten its bowed portion.

962,776. DRAWING-BOARD ATTACHMENT. ALBERT HARRY MARANDA, Pittsburg, Pa. Filed Jan. 12, 1910. Serial No. 537,632.



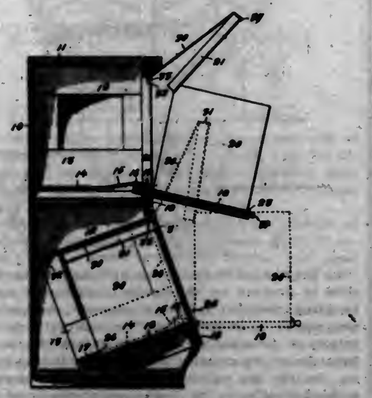
1. A drawing board comprising the combination with the body portion thereof, of an adjustable rule for setting a T-square at an angle and having a longitudinal slot at one end, means projecting from the body-portion for pivotally-connecting the other end of the rule thereto, an adjusting screw carried by the other end of said body portion, and means extending through said slot and engaging said screw for connecting the slotted end of the rule with that end of the body portion carrying the adjusting screw whereby when the latter is shifted the rule will be adjusted and the T-square set at an angle.

2. A drawing board comprising the combination with the body portion thereof, of a bracket secured to one end and provided with a series of combined supporting and retaining arms, a bracket secured to the other end of said body portion and provided with an arm projecting from one side of the body portion, an adjustable rule for setting a T-square at an angle, said rule arranged at one side of said body portion, means for pivotally-connecting one end of said rule to said outwardly-projecting arm, an adjusting screw mounted in said supporting arms, a nut mounted on said screw, and a pin and slot connection between the other end of said rule and one end of said adjusting screw.

3. A drawing board comprising the combination with the body portion thereof, of a bracket secured to one end and provided with a series of combined supporting and retaining arms, a bracket secured to the other end of said body portion and provided with an arm projecting from one side of the body portion, an adjustable rule for setting a T-square at an angle, said rule arranged at one side of said body portion, and substantially L-shaped in cross section, means for pivotally-connecting one end of said rule to said outwardly-projecting arm, an adjusting screw mounted in said supporting arms, a nut mounted on said screw, and a pin and slot connection between the other end of said rule and one end of said adjusting screw.

4. A drawing board comprising the combination with the body portion thereof, of a bracket secured to one end and provided with a series of combined supporting and retaining arms, a bracket secured to the other end of said body portion and provided with an arm projecting from one side of the body portion, an adjustable rule for setting a T-square at an angle, said rule arranged at one side of said body portion, and substantially angle-shaped in cross section, means for pivotally-connecting one end of said rule to said outwardly-projecting arm, an adjusting screw mounted in said supporting arms and having a stop at one end adapted to engage one of said arms, a nut mounted on said screw, and a pin and slot connection between the other end of said rule and one end of said adjusting screw.

962,777. SHOW-CASE. ORVIL J. MARSH and WALTER F. HEISS, Alliance, Ohio. Filed July 24, 1909. Serial No. 509,329.



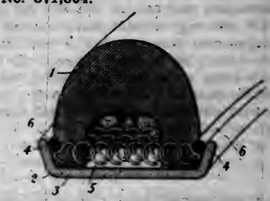
1. In a show case, a casing, a sliding shelf mounted therein, a receptacle carried by said shelf and having a pivoted cover, a lifting bar provided at one end with a portion to engage the free edge of said cover and with a free hooked inner end, and a staple mounted upon said casing to slidingly contact with said hooked inner end when the shelf is withdrawn.

2. In a show case, a casing having guide grooves upon its opposite side walls, a shelf mounted therein and provided with projections to enter said grooves, a recessed cross-bar at the front of said shelf, and a tension spring at the rear of the shelf disposed to hold a receptacle in contact with said cross-bar.

3. In a show case, a casing having its side walls provided with guide grooves enlarged at their outer ends and formed with a supporting seat at an angle to the lower wall thereof, a shelf provided with a cross-bar at its rear having projections disposed in said grooves, a receptacle having a pivoted cover and disposed upon said shelf, and a connecting bar engaging said cover and a fixed member upon said casing.

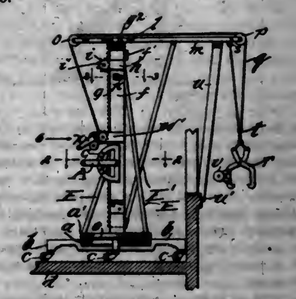
4. In a show case, a casing having its side walls provided with guide grooves enlarged at their outer ends and formed with a supporting seat at an angle to the lower wall thereof, a shelf provided with a cross-bar at its rear having projections disposed in said grooves, a receptacle having a pivoted cover and disposed upon said shelf, a connecting bar engaging said cover and a fixed member upon said casing, and means upon said shelf to prevent a vertical movement of the receptacle thereon.

962,778. WHEEL-TIRE. THOMAS MIDGLEY, Columbus, Ohio, assignor to The Hartford Rubber Works Company, a Corporation of Connecticut. Filed May 1, 1907. Serial No. 371,304.



The combination with a wheel rim of a tire comprising a resilient body presenting lateral seats for binding wires and having embedded in its base and extending unbrokenly substantially from side to side thereof a plurality of metal wire coils, the coils adjacent to the sides of the base being concaved to present seats for said binding wires, and metal binding wires adapted to engage the seats on said tire body to secure the tire to the rim.

962,779. HOISTING MECHANISM. GEORGE W. MURRAY, Chicago, Ill. Filed Nov. 16, 1908. Serial No. 462,785.



1. Hoisting mechanism including a base, standards supported upon the base, a rack bar guided by the standards

in vertical movement and located between the standards, mechanism for effecting vertical movement of the rack bar, a load-supporting beam carried by the rack bar at its upper end, a brace intervening between the beam and the rack bar, and bracing mechanism intervening between the standards and the base of the structure.

2. Hoisting mechanism including a base, standards supported upon the base, a rack bar guided by the standards in vertical movement and located between the standards, mechanism for effecting vertical movement of the rack bar, a load-supporting beam carried by the rack bar at its upper end, a brace intervening between the beam and the rack bar, bracing mechanism intervening between the standards and the base of the structure, and rope and pulley mechandsm carried by the beam.

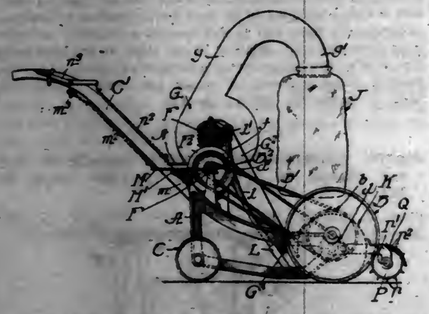
3. Hoisting mechanism including a rotatable base, standards supported upon the base, a rack bar guided by the standards in vertical movement and located between the standards, mechanism for effecting vertical movement of the rack bar, a load-supporting beam carried by the rack bar at its upper end, a brace intervening between the beam and the rack bar, and bracing mechanism intervening between the standards and the base of the structure.

4. Hoisting mechanism including a rotatable base, standards supported upon the base, a rack bar guided by the standards in vertical movement and located between the standards, mechanism for effecting vertical movement of the rack bar, a load-supporting beam carried by the rack bar at its upper end, a brace intervening between the beam and the rack bar, bracing mechanism intervening between the standards and the base of the structure, and rope and pulley mechanism carried by the beam.

5. Hoisting mechanism including a base, standards supported upon the base, a rack bar guided by the standards in vertical movement and located between the standards, mechanism for effecting vertical movement of the rack bar, a load-supporting beam carried by the rack bar at its upper end, a brace intervening between the beam and the rack bar, bracing mechanism intervening between the standards and the base of the structure, and a carrier for the base provided with casters whereby the base may be bodily shifted.

[Claims 6 to 8 not printed in the Gazette.]

962,780. LAWN-MOWER. SVEN T. NELSON, Chicago, Ill. Filed Dec. 6, 1909. Serial No. 531,497.



1. In a lawn mower, in combination with a rotary cutting member and a fixed cutting member against which said rotary member engages, a suction chamber located above the horizontal plane passing through said fixed cutting member provided with a slot opening toward said rotary cutting member, a suction pipe leading from said suction chamber, means for producing suction in said suction pipe, a delivery spout connected with said suction pipe, and a collecting member removably secured to said discharge spout.

2. In a lawn mower, in combination with a rotary cutting member and a fixed cutting member against which said rotary member engages, a suction chamber located above the horizontal plane passing through said fixed cutting member provided with a slot opening toward said rotary cutting member, an auxiliary suction chamber surrounding said rotary cutting member, said auxiliary chamber opening about the bottom of the rotary cutting member, and being connected with said first named suction chamber, a suction pipe leading from said suction chamber, means to produce suction in said pipe, a discharge spout connecting with said suction pipe, and a collecting member removably secured to the discharge spout.

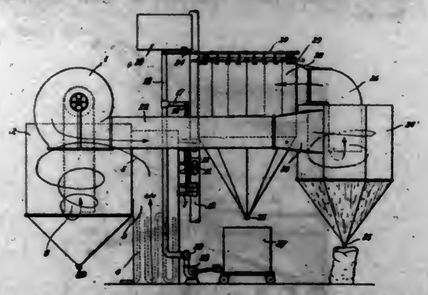
3. In a lawn mower, in combination with a rotary cutting member and a fixed cutting member against which said rotary member engages a suction chamber located above the horizontal plane passing through said fixed cutting member provided with a slot opening toward said rotary cutting member, a suction pipe leading from said suction chamber, means for producing suction in said pipe, means for heating said suction pipe and said suction chamber, a delivery spout connected with said suction pipe, and a collecting member removably secured to said discharge spout.

4. In a lawn mower, in combination with a rotary cutting member and a fixed cutting member against which said rotary member engages, a suction chamber located above the horizontal plane passing through said fixed cutting member and provided with a slot opening toward said rotary cutting member, a suction pipe leading from said suction chamber, a rotary fan and fan-casing adapted to produce suction in said suction pipe, a collector connected with said suction pipe, an explosive engine adapted to drive said fan, said motor having an exhaust, a box secured to said suction pipe, and means for connecting the exhaust of said engine with said box.

5. In a lawn mower, in combination with the rotary cutting member and a fixed cutting member against which said rotary member engages, a suction chamber located above the horizontal plane passing through said fixed cutting member and provided with a slot opening toward said rotary cutting member, a suction pipe leading from said suction chamber, an exhaust fan and casing adapted to produce suction in said suction pipe, a motor adapted to drive said exhaust fan, and means for operatively connecting the rotary cutter to said motor shaft.

[Claims 6 to 8 not printed in the Gazette.]

962,781. METHOD OF DESICCATING FLUID SUBSTANCES. WILLIAM S. OSBORNE, Hyde Park, Mass., assignor, by mesne assignments, to American Desiccating Company, a Corporation of Maine. Filed Nov. 8, 1906. Serial No. 342,547.



1. The method of disiccating fluid substances which consists in forming an air current, introducing material in atomized condition to said air current, maintaining said air current by renewing the air constantly in sufficient volume to desiccate the material, separating the material from the air, by creating a whirling motion and discharging the air, the separation and discharge being effected without clogging by the product, substantially as described.

2. The method of desiccating fluid substances which consists in introducing the material in atomized condition to a current of air, maintaining the air in motion and the material in suspension until the material is desiccated, and then introducing into the air a liquid spray to collect the material, substantially as described.

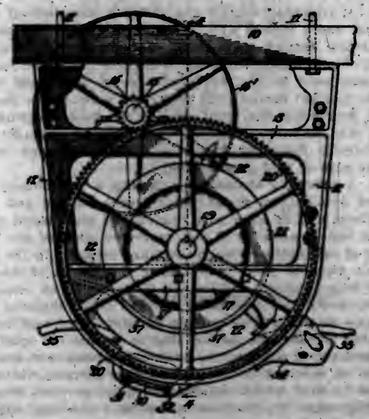
3. The method of desiccating fluid substances which consists in introducing the material into a current of air, maintaining the air in motion and the material in suspension until the material is desiccated, separating the bulk of the material from the air by a method of dry collection, and collecting the residue by introducing a liquid spray to the air, substantially as described.

4. The method of desiccating fluid substances which consists in introducing the material to a current of air, maintaining the air in motion and the material in suspension until the material is desiccated, introducing a liquid spray to the air to collect the desiccated material, collecting the liquid, and re-introducing the liquid and the material contained therein into the air current in atomized condition and again desiccating the material, substantially as described.

5. The method of desiccating fluid substances which consists in introducing the fluid material in atomized condition to a current of air, maintaining the air in motion and the fluid in suspension until the material is desiccated, introducing more of the fluid material in a spray to collect the desiccated material, collecting the sprayed material, re-introducing it in atomized form, and again desiccating it, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

962,782. ANIMAL-JAW PULLER. EDWIN B. PERRIGO, Sioux City, Iowa, assignor to Armour & Company, Chicago, Ill., a Corporation of Illinois. Filed May 2, 1910. Serial No. 558,884.



1. In a device of the class described, the combination of a wedge member adapted to receive a head with its attached jaw, and means for moving said head along said wedge member, thereby separating the jaw from the head, substantially as described.

2. In a device of the class described, the combination of a wedge member adapted to receive a head with its attached jaw, and rotatable means for moving said head along said wedge member, thereby separating the jaw from the head, substantially as described.

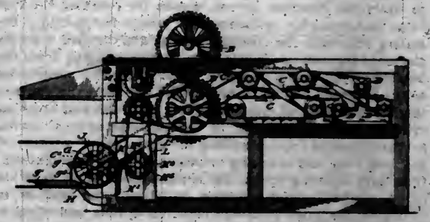
3. In a device of the class described, the combination of a wedge shaped pin for receiving a head with its attached jaw, a rotatable disk, and means mounted on said disk for moving said head along said pin, thereby separating the jaw from said head, substantially as described.

4. In a device of the class described, the combination of a wedge shaped receiving pin on which a head with its attached jaw is adapted to be placed, a rotatable disk, and a pin mounted on said disk, said pin adapted to engage said head and move the same along the receiving pin, thereby separating the jaw from the head, substantially as described.

5. In a device of the class described, the combination of a wedge member adapted to receive a head with its attached jaw, means for forcing said head along said wedge member, and guiding means for removing said jaw from said forcing means, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

962,783. BREAKING AND SCUTCHING MACHINE. JOHN W. POINDEXTER, Cynthiana, Ky., assignor to Kentucky Hemp Brake Co., Cynthiana, Ky. Filed June 17, 1907. Serial No. 379,317.



1. In a breaking and scutching machine, the combination of feed rolls and breaking cylinders normally rotating outwardly, manually actuated and controlled mechanism whereby the feed rolls and breaking cylinders are reversed to feed the material into the machine and break the stalks, cleaning aprons adapted to receive the fiber from the breaking cylinders, whipping rolls adapted to whip the fiber after it has passed the cleaning aprons, said manually actuated and controlled mechanism being adapted, when the manual actuation is removed, to automatically cause the feed rolls and breaking cylinders to resume their normal direction of rotation, expelling the material from the machine, and the material being subjected to a secondary operation when thus expelled, substantially as and for the purposes herein set forth.

2. In a breaking and scutching machine, a pair of feed rolls journaled transversely of the machine, forwardly thereof, a pair of breaking cylinders journaled parallel to the feed rolls, adjacent to and to the rear thereof, one of the feed rolls driving the other feed roll and one of the breaking cylinders driving the other breaking cylinder, the driving breaking cylinder being driven by the driving feed roll, blades on the breaking cylinders intermeshing with each other, a lower cleaning apron and an upper cleaning apron adjacent to and to the rear of the breaking cylinders, the lower cleaning apron passing around two rollers journaled parallel to the breaking cylinders and the upper cleaning apron passing around two other rollers journaled parallel to the breaking cylinders, whipping rolls journaled transversely of the machine to the rear of the cleaning aprons, a main power shaft journaled transversely of the machine, means for transmitting power from the main power shaft to the cleaning aprons and breaking cylinders and means for transmitting power from the main power shaft to the driving feed roll, means for operating said main power shaft manually to reverse the rotation of the feed rolls and breaking cylinders, the normal direction of rotation of the feed rolls and breaking cylinders being in such direction as to withdraw material from the cleaning aprons and whipping rolls, substantially as and for the purposes herein set forth.

3. In a breaking and scutching machine, feed rolls and breaking cylinders, means for manually controlling the direction of rotation thereof, whipping rolls, cleaning aprons intermediate of the breaking cylinders and the whipping rolls, the cleaning aprons being carried on rollers, and slats on the cleaning aprons extending transversely of the machine, the slats of one cleaning apron being adapted to pass adjacent to the slats of the other

cleaning apron, the feed rolls being adapted to feed material between the breaking cylinders and between the adjacent slats of the cleaning aprons, the whipping rolls being adapted to operate on the material when it emerges from between the slats of the cleaning aprons, the normal direction of rotation of the feed rolls and breaking cylinders being in the direction to withdraw material from between the slats of the cleaning aprons, said feed rolls and breaking cylinders being adapted to feed material between adjacent slats of the cleaning aprons only when reversed under the action of said means for manually controlling the direction of their rotation, substantially as and for the purposes herein set forth.

4. In a breaking and scutching machine, feed rolls, breaking cylinders and cleaning aprons, slats on the cleaning aprons extending transversely of the machine, rollers to carry the cleaning aprons, means for rotating the feed rolls and breaking cylinders and means for rotating the rollers on which the cleaning aprons are carried, whereby the slats thereon are carried longitudinally away from the breaking cylinders and move faster than the peripheries of the breaking cylinders, and means for manually controlling the direction of rotation of the feed rolls and breaking cylinders to feed material to the cleaning aprons, spring actuated means for controlling the direction of rotation of the feed rolls and breaking cylinders to withdraw material from said cleaning apron, the normal direction of rotation of the feed rolls and breaking cylinders being such as to withdraw material from the cleaning aprons and expel it from the machine, substantially as and for the purposes herein set forth.

5. In a breaking and scutching machine, feed rolls journaled transversely of the machine, breaking cylinders adjacent to and to the rear of the feed rolls, journaled parallel thereto, cleaning or scutching mechanism to the rear of the breaking cylinders, a main power shaft journaled transversely of the machine, forwardly thereof, means for transmitting power from the main power shaft to the cleaning or scutching mechanism, two transmission wheels on the main power shaft, a third transmission wheel adapted to engage with either of the two transmission wheels on the main power shaft and means for transmitting power from said third transmission wheel to the feed rolls and breaking cylinders, a bearing sleeve for the main power shaft immovable longitudinally thereof but movable laterally of the machine, whereby the main power shaft may be moved laterally of the machine to alternately bring its transmission wheels into contact with said third transmission wheel and impart direct and reverse rotation to the feed rolls and breaking cylinders, and a treadle operatively connected with the slidable bearing sleeve of the main power shaft, the treadle being adapted to be manually actuated, whereby the rotation of the feed rolls and breaking cylinders may be manually controlled to draw material into the machine and deliver it to the cleaning or scutching mechanism, said treadle being spring actuated to control the rotation of said feed rolls and breaking cylinders to expel material from the machine, the direction of rotation of the feed rolls and breaking cylinders, except when reversed by the manual actuation of the treadle, being in the direction to expel material from the machine, substantially as and for the purposes herein set forth.

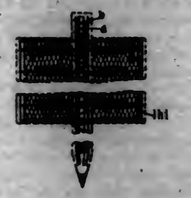
[Claim 6 not printed in the Gazette.]

962,784. SHEETING-PILE OF REINFORCED CONCRETE. SYLVAIN LOUIS RAVIER, Paris, France. Filed Sept. 15, 1909. Serial No. 517,810.

1. A single pile of reinforced or hooped concrete having an enlarged portion extending beyond both sides of the pile and constituting a monolithic sheeting, but being of ordinary cross-section at its lower or pointed end.

2. A pile of reinforced or hooped concrete having an enlarged portion constituting sheeting, said sheeting portion being independent of the pile core and being adapted to be passed on said core after the latter has been rammed, substantially as described.

3. A single pile having an enlarged portion extending beyond both sides thereof constituting a monolithic sheeting, the vertical edges of said sheeting being shaped to engage the edge of an adjacent sheeting and form an open joint therewith adapted to be filled with a suitable binder, substantially as described.



4. A pile of reinforced or hooped concrete having an enlarged portion constituting sheeting but being of ordinary cross section at its lower or pointed end, in combination with anchor plates of concrete perforated to permit the passage of said pointed end therethrough, substantially as described.

962,785. LAWN-TRIMMING SHOVEL. JOHN REICHERT, Racine, Wis. Filed Jan. 12, 1910. Serial No. 537,777.



1. A trimming shovel comprising a longitudinal mold board, and a bottom wall formed with a gage portion and a trench cutting depression, the outer-longitudinal-side wall of said depression being formed by the lower portion of said mold board, the front edge of said mold board being inclined downwardly and rearwardly to the floor of said depression, the front edge of the inner-longitudinal-side wall of said depression being inclined upwardly and rearwardly from the floor of said depression and to the front edge of said gage portion.

2. A trimming shovel blade having a horizontally disposed bottom wall formed with trench cutting and gage portions, and an outer side longitudinal mold board at its front end, in advance of the transverse plane of the front edge of said bottom wall, projecting forwardly in the form of an elevated point to overhang the sod in advance of said trench cutting portion and formed with an elongated downwardly and rearwardly inclined lower shearing edge to ride on the sod in cutting in advance of said trench cutting portion and thereby tend to elevate the front end of said shovel against the downward pressure of the material on said trench cutting and gage portions, the front edges of said trench cutting and gage portions forming cutting edges in continuation of said shearing edge of the mold board point.

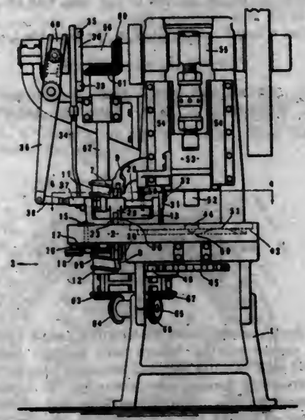
3. A trimming shovel blade composed of a longitudinal outer-side mold board projected forwardly in the form of an elevated point to overhang the sod, and a bottom wall formed with a gage portion and a longitudinal trench cutting depression having a front cutting edge, the outer longitudinal side wall of said depression being formed by the lower portion of said mold board, said point formed with a downwardly and rearwardly inclined shearing edge extending to the floor of said depression, said mold board curving rearwardly and inwardly to form a rear wall behind the gage portion and depression, substantially as described.

4. A trimming shovel blade composed of an outer side longitudinal mold board, and a bottom wall forming a longitudinal gage portion and a longitudinal trench cutting depression the outer side wall of which is formed by the intermediate lower portion of said mold board, said mold board being projected forwardly in advance of the bottom wall to form a long overhanging point having an elongated downwardly and rearwardly inclined cutting edge continued across the blade at the front edges of the gage and trench cutting portions to form the front edge of the blade as a continuous cutting edge, said mold board being curved from the point rearwardly and inwardly and extended to the inner edge of the blade to form a wall in rear of the gage and trench cutting portions, said trench cutting portion having its floor inclined upwardly and rearwardly and merging into said rear wall and gage portion.

5. A trimming shovel comprising a longitudinal rearwardly and inwardly inclined mold board and a bottom wall at the inner side thereof forming an intermediate longitudinal upwardly and rearwardly inclined trench cutting depression and an inner side gage portion, and a handle socket secured to said shovel and arranged in rear thereof and formed with a shoe arranged above the horizontal plane of the front edge of said depression and inwardly beyond the vertical plane of the front edge of said mold board so that said shoe travels in the trench cut by said shovel.

[Claim 6 not printed in the Gazette.]

962,786. MACHINE FOR PRODUCING RING-BLANKS AND APPLYING THEM TO ARTICLES. JOHN J. RIORDY, Brooklyn, N. Y. Filed May 4, 1908. Serial No. 430,732.



1. The combination of a wire feed mechanism, a wire splitting mechanism receiving the wire from the feed mechanism, means adjacent the splitting mechanism for spreading the split portions of the wire, means for severing the wire while held by the spreading means into the proper length, and operating mechanism for actuating the elements set forth.

2. The combination of means for splitting a strand of material substantially throughout its length, leaving the ends of the strand unsplit, means receiving the strand from the splitting means for spreading the split portions of the strand and shaping them, means for applying the blank produced to the edge of an article, means for conveying the blank from the spreading means to the blank-applying means and operating mechanism for actuating the elements set forth.

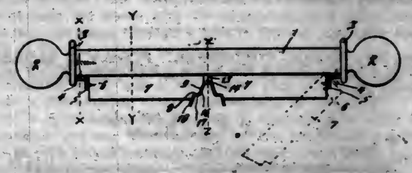
3. The combination of a wire feed mechanism, a wire splitting mechanism, means for spreading the split portions of the wire, means for severing the wire into lengths, means for applying the blank produced to the edge of an article, and operating mechanism for actuating the elements set forth.

4. The combination of a wire splitting mechanism, comprising oppositely disposed cutting members having a vertically reciprocating motion, a wire spreading and shaping mechanism comprising oppositely disposed members having a horizontally reciprocating motion, and operating mechanism for the members of the splitting and spreading mechanisms.

5. The combination of a wire splitting mechanism having a reciprocating motion, a wire spreading and shaping mechanism having a reciprocating motion, at right angles to the motion of the splitting mechanism, and operating means for effecting the reciprocating motion of the splitting and spreading mechanisms.

[Claims 6 to 29 not printed in the Gazette.]

962,787. CURTAIN-POLE. JOHN SCHOPEN, Newark, Ohio. Filed Nov. 11, 1909. Serial No. 527,494.



1. A curtain pole comprising a pole, a pair of curtain retaining arms hinged at one end to the ends of the pole and having the other end shouldered, and a shouldered spring clamp depending from the lower face of the pole and adapted to engage the shouldered ends of the curtain retaining arms for maintaining them parallel with the pole whereby a curtain is connected in position.

2. A curtain pole comprising a pole, a pair of curtain retaining arms hinged at one end to the ends of the pole, each of said arms being triangular in cross section and adapted to have the flat face thereof connecting the curtain to the pole when the arms extend in parallelism with respect to the pole, and a spring clamp depending from the pole and adapted to engage the free ends of said arms for detachably maintaining them in parallelism with respect to the pole.

3. A curtain pole comprising a pole, a pair of curtain retaining arms hinged at one end to the ends of the pole, each of said arms being triangular in cross section and adapted to have the flat face thereof connecting the curtain to the pole when the arms extend in parallelism with respect to the pole, each of said arms having its inner end beveled and shouldered, and a flanged spring clamp carried by the pole and adapted to engage the beveled portions and shoulders of the inner ends of the arms for detachably maintaining the arms in position.

4. A curtain pole comprising a pole, a pair of curtain retaining arms hinged at one end to the ends of the pole, and a spring clamp depending from the lower face of the pole and adapted to engage the free ends of the curtain retaining arms for maintaining them parallel with the pole whereby a curtain is connected in position, that face of each of the arms which opposes the pole being serrated to constitute a grip for the curtain.

5. A curtain pole comprising a pole, a pair of curtain retaining arms hinged at one end to the ends of the pole, each of said arms being triangular in cross section and adapted to have the flat face thereof connecting the curtain to the pole when the arms extend in parallelism with respect to the pole, and a spring clamp depending from the pole and adapted to engage the free ends of said arms for detachably maintaining them in parallelism with respect to the pole, that face of each of the arms which opposes the pole being serrated to constitute a grip for the curtain.

962,788. PHOTOGRAPHIC EMULSION. YORK SCHWARTZ, Hanover, Germany. Filed May 6, 1907. Serial No. 372,282.

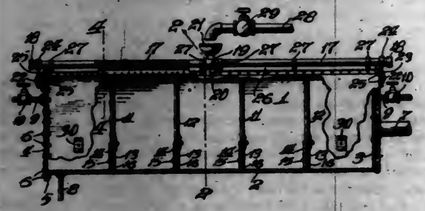
1. A photographic emulsion formed by the mixture, with a colloidal substance and silver nitrate, of a quantity of alkaline phosphate in considerable excess of that required

to decompose the whole of the silver nitrate, with an oxidising agent and a substance acting as a solvent for the phosphate without decomposing the same.

2. A photographic emulsion formed by the mixture with a colloidal substance and silver nitrate, of a quantity of alkaline phosphate approximately double that required for the decomposition of the whole of the silver nitrate, with an oxidising agent and a substance acting as a solvent for the phosphate without decomposing the same.

3. A photographic emulsion formed by the mixture with a colloidal substance and silver nitrate, of a quantity of disodium phosphate approximately double that required for the decomposition of the whole of the silver nitrate, with chlorate of potassium and citric acid, whereby an emulsion is produced having as one of its principal constituents a phospho-citrate compound.

962,789. STEAM-CONDENSER. PRESTON H. SELLERS, East St. Louis, Ill. Filed Nov. 6, 1909. Serial No. 526,636.



1. In a steam condenser of the class described, an inverted V-shaped tank having a rounded bottom, a removable head for said tank, baffle plates of unequal lengths vertically disposed at intervals within and throughout the length of the tank, the baffle plates of greatest length extending to the apex of the tank and the baffle plates of lesser length terminating some distance below said apex, a hinged door carried by each baffle plate, there being an opening in each of the doors, the openings in the doors carried by the baffle plates of greatest length being larger than the openings in the remaining doors.

2. In a steam condenser of the class described, an inverted V-shaped tank having a rounded bottom, a removable head for said tank, baffle plates arranged at intervals throughout the length of the tank, each alternate baffle plate extending to the apex of the tank, the remaining baffle plates terminating a distance below the apex, a door, having an opening therethrough, hinged to each baffle plate, means for locking the doors in planes paralleling the baffle plates, the openings in the doors being of different sizes and the doors being alternately arranged according to the sizes of the openings.

962,790. SCLEROSCOPE. ALBERT F. SHORE, New York, N. Y., assignor to Shore Instrument Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Nov. 26, 1907. Serial No. 403,981.

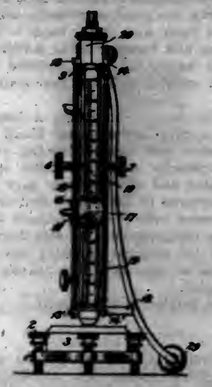
1. An apparatus for testing the hardness of solid bodies, which consists of a finely pointed superhard striker impinging said bodies, vertical guiding means for directing the course of the striker, and means for observing and registering the rebound of the same.

2. In a hardness testing device, the combination of a specially graduated tube, a very light, highly-compressed striker moving freely in said tube, means for raising the striker in the tube, and means for catching and retaining the striker at the desired point.

3. In a hardness testing device, the combination of a graduated tube provided with a shock absorber and an adjustable catch-pin, a striker moving freely in said tube, and adapted to be stopped and held by the said shock absorber and catch-pin, substantially as set forth.

4. In a hardness testing device, the combination of a graduated tube, a striker moving in said tube, and a suction-bulb for raising the striker, substantially as set forth.

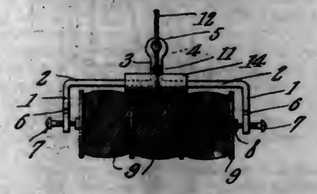
5. In a hardness testing device, the combination of a



graduated tube, a striker moving in said tube, a suction device for raising the striker in the tube, and an automatic striker-catch and retaining-pin.

[Claims 6 and 7 not printed in the Gazette.]

962,791. TWINE-HOLDER. FRED B. SHUMAN, Lowell, Ohio. Filed Mar. 12, 1910. Serial No. 548,836.



In a device of the class described, a frame consisting of spaced, spool-receiving fingers bent to form parallel portions, the said parallel portions being terminally connected by an integrally formed suspension eye; a threaded member connecting the parallel portions and constituting a means for adjusting the space between the fingers, a part of the eye being thinned to permit the spacing of the fingers; and a twine-receiving arm fulcrumed upon the threaded member.

962,792. LOCK. JOSEPH SIPOS, South Norwalk, Conn. Filed Apr. 5, 1910. Serial No. 553,572.



1. In a lock, the combination with a casing, of two operatively connected locking bolts therein, and a tumbler engaging both locking bolts and moving in a direction at right angles to the face of one of the locking bolts when disengaged from said bolts.

2. In a lock, the combination with a casing, of a main locking bolt, a secondary locking bolt, a finger upon said main locking bolt engaging said secondary bolt, a tumbler

engaging both bolts and moving in a direction at right angles to the face of said main locking bolt when disengaged from said bolts.

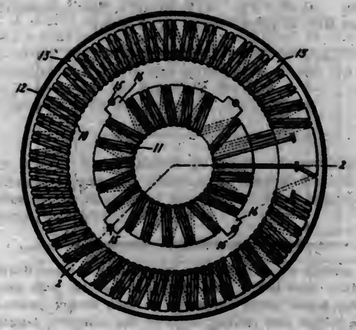
3. In a lock, the combination with a casing, of a main locking bolt, a secondary locking bolt, means for operatively connecting said bolts, whereby said secondary locking bolt is withdrawn from the keeper as said main locking bolt is being retracted, a tumbler engaging both bolts, a spring forcing said tumbler in engagement with said bolts, a key-post attached to said casing and having a hole, and a pin secured to said tumbler and fitting the hole of said key-post.

4. In a lock, the combination with a casing, of a main locking bolt, a secondary locking bolt, a finger carried by said main locking bolt and engaging said secondary bolt, whereby the latter is withdrawn from the keeper as said main locking bolt is being retracted, a tumbler engaging both bolts, a spring forcing said tumbler in engagement with said locking bolts, a key-post attached to said casing and having a hole, and a pin secured to said tumbler and fitting the hole of said key-post.

5. In a lock, the combination with a casing, of a main locking bolt, a secondary locking bolt, means for operatively connecting said bolts, whereby said secondary bolt is withdrawn from the keeper as said main locking bolt is being retracted, a tumbler engaging both bolts and adapted to move in a direction at right angles to the face of said main locking bolt, a spring forcing said tumbler in engagement with said bolts, a key-post attached to said casing and having a hole, and a pin secured to said tumbler and fitting the hole of said key-post.

[Claim 6 not printed in the Gazette.]

962,793. ELECTRIC HEATING UNIT. HERBERT M. SMITH, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Mar. 29, 1909. Serial No. 486,419.



1. An electric heater comprising a flat heating unit and a cup-shaped container therefor bent over the unit and having the metal reduced at the bend.

2. An electric heater comprising a flat heating unit, a cup-shaped container therefor and a plate covering said unit, said container being bent upon the plate and having the metal reduced at the bend.

3. An electric heater comprising a flat heating unit and a container therefor bent over the unit and having the metal reduced at the bend.

4. An electric heater comprising a flat heating unit, a circular container therefor bent over the unit and having the metal reduced at the bend.

5. An electric heater comprising a heating unit, a cup-shaped container therefor bent over the unit and having the metal reduced at the bend.

[Claims 6 to 8 not printed in the Gazette.]

962,794. RIVET. EDWIN BALL STIMPSON, New York, N. Y., assignor to Edwin B. Stimpson Company, a Corporation of New York. Filed Aug. 26, 1907. Serial No. 390,145.



1. In combination a sleeve; a shank-member projecting from the sleeve having a portion located therein confined between portions of the sleeve against motion in either direction through it, and converging in contact with the sleeve's interior toward the projecting portion of the shank-member; and a cup rounded on its bottom adapted to contain the sleeve with the shank-member's projecting portion extending through a hole in the cup and with the cup at its sides closed in on the sleeve.

2. A rivet comprising a shank and a head provided with a wearing block, and a soft metal plug in the wearing face of the wearing block, substantially as described.

3. A rivet comprising a shank, a head provided with a recess, a wearing block secured in the head, and a soft metal plug in the wearing face of the wearing block, substantially as described.

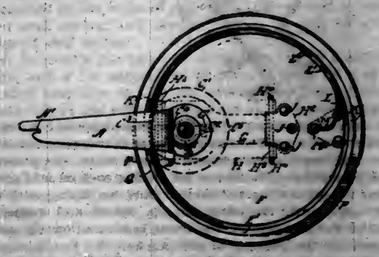
4. A rivet comprising a wearing block having a flange on its inner edge, a head cup having its rim turned in over the flange, a shank extending through the wearing block and cup and provided with a flange clamped between the wearing block and the interior of the cup, substantially as described.

962,795. INCANDESCENT ELECTRIC LAMP. ALEXANDER F. F. STODD, Paterson, N. J. Filed June 23, 1909. Serial No. 503,777.



An incandescent electric bulb lamp, the neck of which is provided with a stem which extends into the bulb and is provided with a plurality of annular enlargements through which feed and return circuit wires are passed, and which are also provided with radially and downwardly directed supports, and an incandescent filament suspended from said supports and lying in a horizontal plane below said stem.

962,796. CARRIER FOR PNEUMATIC-DESPATCH-TUBE APPARATUS. CHARLES F. STODDARD, Boston, Mass., assignor to American Pneumatic Service Company, Dover, Del., a Corporation of Delaware. Filed May 3, 1906. Serial No. 314,928.



1. In a carrier for pneumatic despatch tube apparatus, a shell, a cover, a swinging hinge-connection between said

cover and said shell, a catch on said cover in the same plane of movement as said hinge-connection actuated by the closing of the cover to engage one side of said shell, and means for locking the opposite side of said cover to the shell.

2. In a carrier for pneumatic despatch tube apparatus, a shell, a plate pivoted at one end to the interior of said shell, a cover pivoted to the other end of said plate, a catch on said cover in the plane of movement of said plate actuated by the closing of the cover to engage one side of said shell, and means for locking the opposite side of the cover to the shell.

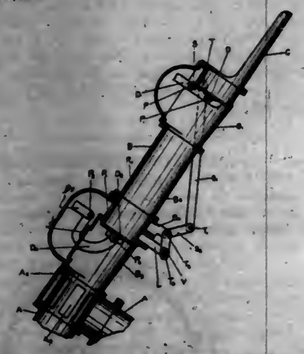
3. In a carrier for pneumatic despatch apparatus, a shell, a plate pivoted to said shell, a cover pivoted to said plate and provided with a circular flange adapted to fit into the shell of said carrier, a rigid catch attached to said cover and adapted to secure one side of said cover to said shell when said cover is in position thereon, removable pins for holding said cover pivoted to said plate, and locking mechanism adapted to secure the opposite side of said cover to said shell.

4. In a carrier for pneumatic despatch apparatus, a shell having a slot in one side, a strap pivoted at one end to the other side of said shell opposite to said slot, a lid to close the shell pivoted to the free end of said strap, and a rigid catch on said lid in the same plane of movement as the pivotal connections of the strap with the shell and lid and in a position to enter said slot in the shell when the lid is swung in a closed position.

5. In a carrier for pneumatic tube apparatus, a shell, a cover provided with a circular flange adapted to fit into said shell, a rigid catch attached to said cover and adapted to secure one side of said cover to said shell when said cover is in position thereon, locking mechanism adapted to secure the opposite side of said cover to said shell, a slotted handle for operating said locking mechanism, and a slotted spring on said cover to engage said slotted handle to hold the latter in fixed position after the locking mechanism has been operated to lock the cover to the shell of the carrier.

[Claims 6 to 8 not printed in the Gazette.]

962,797. PNEUMATIC-DESPATCH-TUBE APPARATUS. CHARLES F. STODDARD, Boston, Mass., assignor to American Pneumatic Service Company, Dover, Del., a Corporation of Delaware. Filed June 20, 1908. Serial No. 439,490.



1. In an apparatus of the character described, a transmission tube, a sender connected to said transmission tube, inner and outer gates adapted to open under the pressure of an inserted carrier, means for closing each of said gates, means for preventing the carrier from contacting with the inner gate until the outer gate is closed, and means to equalize the pressure on the inner gate to allow the same to open for the passage of the carrier.

2. In an apparatus of the character described, a transmission tube, a sender connected to said transmission tube, inner and outer gates adapted to open under the pressure of an inserted carrier, means for closing each of said gates, means connected to said outer gate and operated thereby for preventing the carrier from contacting with the inner gate until the outer gate is closed, and means to equalize the pressure on the inner gate to allow the same to open for the passage of the carrier.

3. In an apparatus of the character described, a transmission tube, a sender connected to said transmission tube and normally under atmospheric pressure, inner and outer gates adapted to open under the pressure of an inserted carrier, means for closing each of said gates, means connected to said outer gate and operated thereby for preventing the carrier from contacting with the inner gate until the outer gate is closed, and means to equalize the pressure on the inner gate to allow the same to open for the passage of the carrier.

4. In an apparatus of the character described, a transmission tube, a sender connected to said transmission tube and normally under atmospheric pressure, inner and outer gates adapted to open under the pressure of an inserted carrier, means for closing each of said gates, means connected to and operated by said outer gate for preventing the opening of the inner gate until the outer gate is closed, and a valve normally preventing communication between the transmission tube and the sender and adapted to be opened by the movement of the inner gate to connect said transmission tube and said sender to equalize the pressure on the inner gate to allow the same to open for the passage of the carrier.

5. In an apparatus of the character described, a transmission tube, a sender connected to said transmission tube and normally under atmospheric pressure, inner and outer gates normally closed and adapted to open under the pressure of an inserted carrier, means for preventing the carrier from contacting with the inner gate until the outer gate is closed, and means to equalize the pressure on the inner gate to allow the same to open for the passage of the carrier.

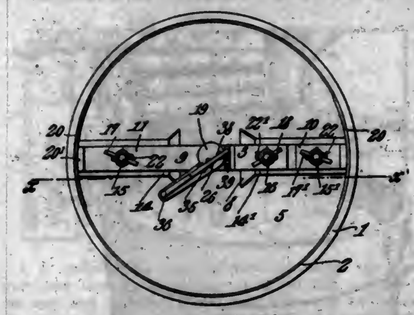
962,798. DESK-PAD. AXEL SWARIN, New London, Conn. Filed Mar. 9, 1910. Serial No. 548,267.



An article of manufacture comprising a base board, a secondary base board coöperating therewith, said secondary base board being cut away at each corner thereof to form a recess and falling short of the complete length of the main base board, thereby forming a transverse depression, and end pieces comprising a frame portion, a lip engaged by said depression, and flaps engaged by said recesses, all of said members resting flush with said secondary base board.

962,799. CREAM-FLOAT-LOCKING DEVICE. MATTHEW SIMPSON TARKINGTON, Tulare, Cal. Filed June 25, 1909, Serial No. 504,332. Renewed May 18, 1910. Serial No. 562,068.

1. A device of the class described comprising a receptacle; a float located within the receptacle; an extensible arm arranged to extend across the float and comprising movable sections arranged to engage the receptacle; a rotatable member carried by one section and arranged to engage the other section to extend the arm; and a locking device pivotally carried by the rotatable member and arranged to engage the other section; the rotatable member and the locking device being provided with extensions arranged to be grasped for simultaneous manipulation.



2. A device of the class described comprising a receptacle; a float located within the receptacle; an extensible arm carried by the float and comprising movable sections arranged to engage the receptacle; a cam carried by one section and arranged to engage the other section to extend the arm; and a locking device mounted upon the cam and arranged to engage the last-named section.

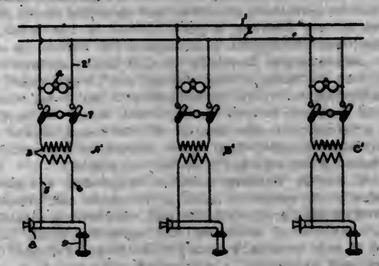
3. A device of the class described comprising a receptacle; a float located within the receptacle; an extensible arm carried by the float and comprising movable sections arranged to engage the receptacle; and a cam carried by one section and arranged to engage the other section to extend the arm.

4. A device of the class described comprising a receptacle; a float located within the receptacle; an extensible arm carried by the float and comprising movable sections arranged to engage the receptacle; a cam carried by one section and arranged to engage the other section to extend the arm; and a latch-lever mounted upon the cam and arranged to engage the last named section.

5. A device of the class described comprising a receptacle; a float located within the receptacle; an extensible arm carried by the float; resilient shoes mounted upon the extremities of the arm and arranged to engage the receptacle; and means for extending the arm.

[Claims 6 to 13 not printed in the Gazette.]

962,800. TELEPHONE SYSTEM. JOHN B. TAYLOR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 3, 1909. Serial No. 493,551.



1. The combination in a telephone system of receiving and transmitting apparatus, a transmission circuit, a switch, a transformer having one winding connected to the receiving and transmitting apparatus and a second winding connected through the switch to the transmission circuit, and a bell connected across the circuit between it and the switch.

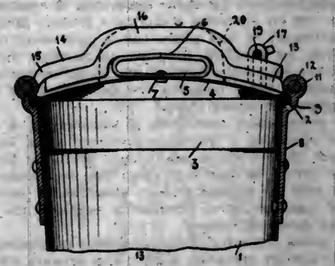
2. The combination in a telephone system of receiving and transmitting apparatus, a transmission circuit, a two-pole switch, a highly insulated transformer having one winding connected to the receiving and transmitting apparatus and the terminals of the other winding connected through the switch to the transmission circuit, and a bell connected across the circuit between the circuit and the switch.

3. The combination in a telephone system of a transformer, a transmission circuit, receiving and transmitting apparatus connected to said circuit through, and protected by, the transformer, means for connecting the transformer to and disconnecting it from the circuit, and a bell permanently connected across the circuit.

4. The combination in a telephone system of a transformer having two windings, receiving and transmitting apparatus connected to one winding, a transmission circuit, means for connecting the other winding to and disconnecting it from the circuit, and a bell permanently connected across the circuit.

5. The combination in a telephone system of a transformer having two separate windings insulated from each other by a high-voltage insulation, receiving and transmitting apparatus connected to one of the transformer windings, a transmission circuit, a two-pole switch connecting the other transformer winding to and disconnecting it from the circuit, and a bell permanently connected across the circuit.

962,801. MILK-CAN LOCK. DEXTER J. THAYER, Pittsburg, Pa. Filed Apr. 4, 1910. Serial No. 553,432.



1. In a milk can lock, a can neck, a lid adapted to fit in said neck, diametrically opposed bearings carried by said neck, a resilient element carried by the lid and overlapping locking members pivotally supported by said bearings and adapted to lock said lid in a closed position the inner of said members engaging said elements whereby said elements will be held in abutting engagement.

2. In a milk can lock, a can neck, a lid fitted in said neck, diametrically opposed bearings carried by said neck, overlapping arms pivotally supported by said bearings and adapted to retain said lid in a closed position, and means in connection with said arms and adapted to lock said arms in a closed and overlapped position.

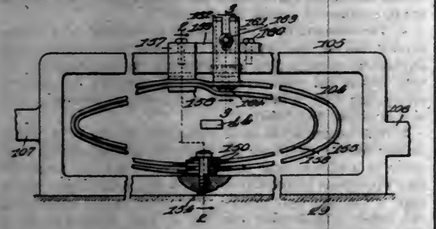
3. In a milk can lock, the combination with a milk can neck, and a lid adapted to fit in said neck, of a spring located centrally of said lid, overlapping arms pivotally supported at the sides of said neck and adapted to extend over said spring, and handles carried by said lid at the sides of said spring.

4. In a milk can lock, the combination with a milk can neck, and a lid adapted to fit in said neck, of a spring located centrally of said lid, overlapping arms pivotally supported at the sides of said neck and adapted to extend over said spring, handles carried by said lid at the sides of said spring, and means in connection with said arms and adapted to lock said arms in a closed position.

5. In a milk can lock, the combination with a milk can neck, and a lid adapted to fit therein, of a spring located centrally of said lid, oppositely disposed bearings carried by said neck, overlapping arms pivotally connected to said bearings and adapted to extend over said spring, handles carried by said lid at the sides of said spring, and means in connection with said arms and adapted to lock said

arms in a closed position, said means including a staple adjacent to the pivoted end of one of said arms and adapted to extend through the free end of the other of said arms.

962,802. PICKER-CHECK FOR LOOMS. SAKICHI TOYODA, Shimasaki-Cho, Nagoya, Japan. Original application filed Apr. 20, 1908, Serial No. 428,218. Divided and this application filed Feb. 8, 1909. Serial No. 476,680.



1. A picker check for looms comprising in combination, a picker bar for operating a shuttle, straps for limiting movement of said bar, and mountings for said straps for rigidly holding one thereof and releasably holding another thereof.

2. A picker check for looms comprising in combination, a picker bar for operating a shuttle, a primary strap limiting movement of said picker bar, a rigid mounting for said strap, an auxiliary strap for neutralising the blow of said bar on said primary strap, and a mounting for said auxiliary strap engaging the same to afford resistance against movement thereof.

3. A picker check comprising in combination, a picker bar for operating a shuttle, a primary strap limiting movement of said picker bar, a rigid mounting for said primary strap, an auxiliary strap for neutralizing the blow of said bar on said primary strap, and a mounting for said auxiliary strap frictionally engaging the same to retard movement thereof.

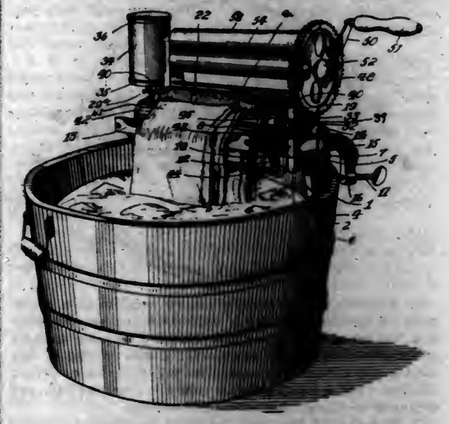
4. A picker check for looms comprising in combination, a picker bar for operating a shuttle, a primary strap in the form of a loop for limiting movement of said picker bar, a rigid mounting for said primary strap, an auxiliary strap in the form of a loop disposed within said primary strap and relatively restricted in size with respect thereto, and a mounting for said auxiliary strap engaging the same to afford resistance against movement thereof for neutralising the blow of said bar on said primary strap.

5. A picker check for looms comprising in combination, a picker bar for operating a shuttle, a primary strap in the form of a loop limiting movement of said bar, oppositely disposed means for rigidly mounting said primary strap, an auxiliary strap in the form of a loop disposed within said primary strap and relatively restricted in size with respect thereto, said auxiliary strap being rigidly secured to one of said oppositely disposed fastening means, and a support for said auxiliary strap cooperating with the other of said oppositely disposed means to frictionally grip said auxiliary strap and permit movement thereof for neutralizing the blow of said bar on said primary strap.

[Claims 6 to 8 not printed in the Gazette.]

962,803. WASHING-MACHINE. JOSEPH VIERLING, Pittsburg, Pa. Filed July 15, 1909. Serial No. 507,741.

1. A clothes washing machine comprising a housing adapted to be supported upon a receptacle, a hollow perforated rotatable scrubbing agitating and detergent-feeding brush supported in said housing, a yieldable roll maintained in engagement with said brush and adapted to be rotated thereby, a detergent reservoir supported by said housing at one side thereof, means communicating with the reservoir and with the interior of the brush for supplying a detergent to the latter, and means carried by the housing for securing it to the receptacle.



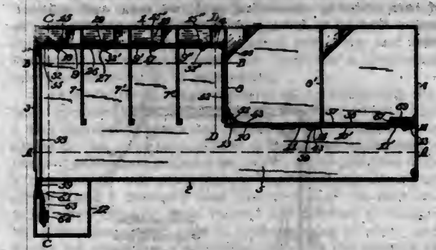
2. A clothes washing machine comprising a housing embodying a pair of side frames, a hollow perforated scrubbing and agitating brush revolubly-mounted in said frames, a spring-controlled yoke pivotally-mounted between said frames, a revoluble body journaled in and maintained in engagement with said brush by said yoke, said body rotated by said brush, a detergent reservoir supported by one of said frames, means for feeding a detergent from the reservoir to the interior of said brush, and a bar carried by said frames forwardly of said body for supporting the garmenta operated upon by the body and brush.

3. A washing machine comprising a housing, a rotary scrubbing and agitating brush supported by said housing, a yieldable corrugated roll maintained in engagement with said brush and adapted to be rotated thereby, a detergent reservoir supported by said housing, means for supplying a detergent from the reservoir to the interior of said brush, means for revolving said brush, and a bar carried by the housing forwardly of said corrugated roll for supporting garments operated upon by said brush and roll.

4. A clothes washing machine comprising a housing adapted to be supported upon a receptacle and provided with extensions projecting over said receptacle, a rotatable hollow perforated scrubbing and agitating brush journaled in said housing, a yoke pivoted to and arranged between said extensions, a corrugated roll pivoted in said yoke and arranged forwardly of said brush, springs connected to the body of the housing and to said yoke for maintaining the roll in engagement with the brush whereby the former is rotated by the latter, means for supplying a detergent to the interior of said brush, means for revolving the brush, and means carried by the body of the housing for securing it to the receptacle.

5. A clothes washing machine comprising a housing adapted to be supported upon a receptacle and provided with extensions projecting over said receptacle, a rotatable hollow perforated scrubbing and agitating brush journaled in said housing, a yoke pivoted to and arranged between said extensions, a corrugated roll pivoted in said yoke and arranged forwardly of said brush, springs connected to the body of the housing and to said yoke for maintaining the roll in engagement with the brush whereby the former is rotated by the latter, means for supplying a detergent to the interior of said brush; means for revolving the brush, means carried by the body of the housing for securing it to the receptacle, and a bar carried by said extensions for supporting garments operated upon by said roll and brush.

962,804. MULTIPLE HORSE HOLDER AND RELEASER. THEODORE CHARLES HENRY WEDGE, Indianapolis, Ind. Filed Oct. 23, 1909. Serial No. 525,096.



1. A horse-holder and releaser including two fixed apertured ears, an operating rod, a lock-bolt movable in the ears and having a shank that is secured to the rod, the lock-bolt being capable of holding a hitching device removably between the two ears, and a catch-pin movable in one of the ears and projectable to temporarily engage the hitching device, the catch-pin being retractable by the lock-bolt to release the device to be held by the lock-bolt.

2. A horse holder and releaser including an anchor-plate having a guide and two apertured ears thereon, a lock-bolt mounted movably in the ears, a ring normally hanging on the lock-bolt between the ears, an operating rod mounted in the guide and connected to the lock-bolt, and means for temporarily supporting the ring when released from the lock-bolt in position to be again engaged by the lock-bolt, said means being controlled by the lock-bolt.

3. A horse holder and releaser including an anchor-plate having two apertured ears thereon, one of the ears having a guideway therein, a spring-arm mounted on the anchor-plate and having a catch-pin thereon that is projectable thereby through the guideway, a lock-bolt mounted movably in the ears and normally projected and engaging the spring-arm to retract the catch-pin, means for moving the lock-bolt, and a ring to be engaged by the catch-pin and released therefrom and engaged by the lock-bolt.

4. A multiple horse holder and releaser including a plurality of anchor-plates having each a plurality of apertured ears and also a guide thereon, a plurality of lock-bolts, one for each anchor-plate and mounted movably in the ears thereof, each lock-bolt having an angular shank, an operating rod mounted movably in the guides and connected to all the shanks for retracting each one of the lock-bolts out of one of the plurality of ears of each anchor-plate, a plurality of rings to be hung on or released from the lock-bolts between two ears, and means for holding the rings temporarily while the lock-bolts are retracted.

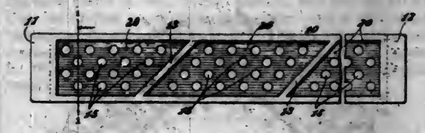
5. A multiple horse holder and releaser for a plurality of mangers, including a plurality of anchor-plates, one for each manger and secured to the top thereof and having each a movable catch device thereon, a plurality of rings each to be temporarily supported by one of the catch devices, a plurality of lock-bolts, one for each anchor-plate and mounted movably thereon to engage and hold the ring, the lock-bolt moving the catch device to release the ring following the engagement of the ring by the lock-bolt, an operating station remote from the mangers, and an operating rod connected to all the lock-bolts and extending to the operating station.

[Claim 6 not printed in the Gazette.]

962,805. GRATE-BAR. ANDERSON WILDENSTEIN, Grand Saline, Tex., assignor of one-half to David C. Barnett, Dallas, Tex. Filed Mar. 17, 1910. Serial No. 549,942.

1. A grate bar provided on its top face with marginal ribs and transverse partitions forming a plurality of individual fuel pockets adapted to retain fine fuel, said bar having ventilating holes extending through the body thereof and opening into said pockets.

2. A grate bar provided on its top face with marginal ribs and diagonal transverse partitions forming a plurality of individual fuel pockets adapted to retain fine fuel, said bar having ventilating holes extending through the body thereof and opening into said pockets.



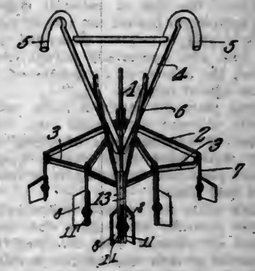
3. A grate bar provided with individual fuel pockets in its top face, separated by transverse partitions, individual air pockets on its bottom face and ventilating holes connecting said pockets.

4. A grate bar provided with individual fuel pockets in its top face, separated by transverse partitions, individual air pockets in its bottom face and upwardly tapering ventilating holes connecting said pockets.

5. A grate bar provided with individual fuel pockets in its top face, separated by transverse partitions, corresponding individual air pockets on its bottom face and ventilating holes connecting said pockets.

[Claims 6 to 12 not printed in the Gazette.]

962,806. CULTIVATOR. JOSEPHUS L. WOOLARD, Williamston, N. C. Filed Aug. 12, 1909. Serial No. 512,572.



1. The combination with a stock, of oppositely disposed shovels each including a plate having a point at each end thereof, and a flange extending along one side of the plate and at an acute angle to said plate, said flanges and stock having registering fastener receiving openings, and a fastener arranged within said openings and constituting means for securing both of the shovels in fixed relation to each other and to the stock.

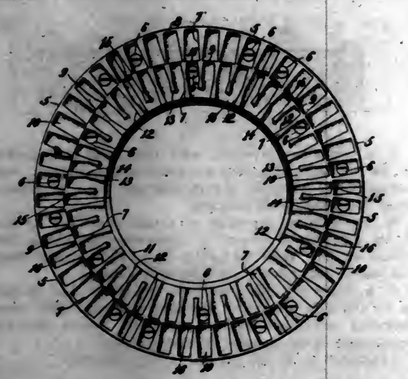
2. In a device of the class described, a shovel comprising a longitudinally bowed plate having its end edges converging to form points at one side of the shovel, and a flange extending from said side and disposed at an acute angle to the convex face of the plate, there being a fastener receiving opening within the flange.

3. The combination with a stock, of a shovel including a plate having its end edges converging toward one side, there being points formed by said edges and the other side, and a flange extending from said last mentioned side and disposed at an acute angle to the convex face of the plate, said plate being bowed from one end to the other, said stock being seated within the angle formed by the plate and the flange, there being registering fastener receiving openings within the flange and stock.

962,807. ATTRITION-MILL. EDWARD P. ALSTED, Trucedell, Wis. Filed Apr. 3, 1909. Serial No. 487,756.

1. An attrition mill, comprising opposite rotatable plates provided with material reducing ribs, the material engaging edges of ribs of opposite plates diverging toward the axis of the plates when in engagement with

each other to advance the line of material of said edges in a direction toward the axis of rotation, and segmentally curved ribs provided on said plates, the segmental curvatures of which are eccentric to the axis of rotation.



2. An attrition mill, comprising opposite rotatable plates provided with material reducing ribs, the material engaging edges of ribs of opposite plates diverging toward the axis of the plates when in engagement with each other to advance the line of material engagement of said edges in a direction toward the axis of rotation, ribs concentric to the axis of rotation connected to the outer ends of said ribs, and segmentally curved ribs provided on said plates, the segmental curvatures of which are eccentric to the axis of rotation.

3. A grinding plate for attrition mills, comprising a segmental plate provided with radial ribs, the material engaging edges of adjacent ribs diverging from each other toward their inner ends, and a transverse rib formed on said plate and extending in a line eccentric to the axis of said plate.

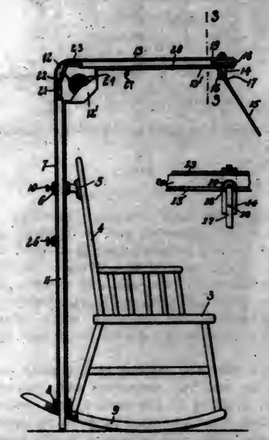
4. A grinding plate for attrition mills, comprising a segmental plate provided with radial ribs, the material reducing edges of adjacent ribs diverging from each other for a portion of their lengths then converge toward each other for a certain distance and then again converging toward each other toward their outer ends, and a rib extending transversely across the radial ribs in a line eccentric to the axis of said plate.

5. A grinding plate for attrition mills, comprising a segmental plate provided with radial ribs, the material reducing edges of adjacent ribs diverging from each other for a portion of their lengths then converging toward each other for a certain distance and then again converging toward each other toward their outer ends, a rib extending transversely across the radial ribs in a line eccentric to the axis of said plate, and an outer annular rib extending in a line concentric to the axis of said plate.

[Claims 6 and 7 not printed in the Gazette.]

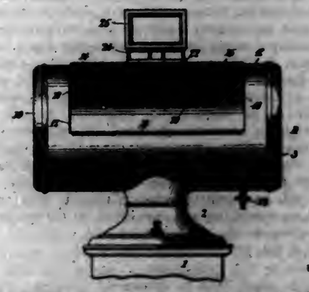
962,808. FAN ATTACHMENT FOR ROCKING-CHAIRS. DESIDER BILISITS, Jersey City, N. J. Filed Feb. 12, 1910. Serial No. 543,616.

1. The combination with a rocking chair, of a support carried by one of the side bars thereof, a bearing mounted upon one of the rockers of said chair, a substantially vertical tube mounted in said support and bearing, a casing located at the upper end of said tube, a second tube arranged substantially at right angles to said first tube upon said casing and extending to the front of said chair, an actuating rod slidably mounted in said first tube, its lower end projecting through said bearing and being adapted to engage the floor, a second rod reciprocatably arranged in said second tube and being provided with a recess, a support secured to the free end of said second tube, a fan blade carried by said support and having a stem engaging said recess, a plurality of bars pivotally connecting said two rods, and resilient means tending to force said first rod in contact with the floor.



2. The combination with a rocking chair, of a support carried by one of the side bars thereof, a bearing mounted upon one of the rockers of said chair, a substantially vertical tube mounted in said support and bearing, a casing located at the upper end of said tube, a second tube arranged substantially at right angles to said first tube upon said casing and extending to the front of said chair, an actuating rod slidably mounted in said first tube, its lower end projecting through said bearing and being adapted to engage the floor, a second rod reciprocatably arranged in said second tube and being provided with a recess, a support secured to the free end of said second tube, a fan blade carried by said support and having a stem engaging said recess, a plurality of bars pivotally connecting said two rods, and resilient means engaging said bars for forcing said first rod in contact with the floor.

962,809. STERILIZER. SOPHIA BLICKMAN, New York, N. Y. Filed Mar. 27, 1909. Serial No. 486,213.



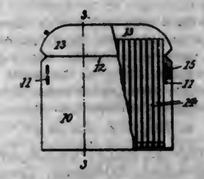
1. In a sterilizer, the combination of a horizontally disposed cylindrical casing provided with closed ends, said casing having an elongated hand-opening 12 formed in the side thereof and extending upwardly from about the center of said side on about a level with the horizontal axis of the cylinder to a point near the top thereof and extending horizontally from near one end of the cylinder to near the other end thereof thereby giving access to substantially

the entire length of the interior of the cylinder, a vertically sliding upwardly opening door 15 having a curvature conforming to that of the said cylinder, guide-ways for said door mounted upon the interior of said cylinder at the side of each end of said opening, a drum 1 and a contracted tubular part 2 connecting said drum and said horizontal casing, and means for supplying a sterilizing agent to the interior of said casing.

2. In a sterilizer, the combination of a horizontally disposed cylindrical casing provided with a hand-opening and a door therefor, a removable perforated tray adapted to be placed in the lower part of said cylinder and comprising a sheet of perforated material having its edges provided with a downwardly extending flange, longitudinally extending strips 7 and 8 arranged upon the interior of the said cylinder upon opposite sides thereof and adapted to engage the side edges of said tray to hold the same in place, and means for supplying a sterilizing agent to the interior of said casing.

3. In a sterilizer, the combination of a horizontally disposed cylindrical casing provided with closed ends, said casing having an elongated hand-opening 12 formed in the side thereof and extending upwardly from about the center of said side on about a level with the horizontal axis of the cylinder to a point near the top thereof and extending horizontally from near one end of the cylinder to near the other end thereof thereby giving access to substantially the entire length of the interior of the cylinder, a vertically sliding upwardly opening door 15 having a curvature conforming to that of the said cylinder and provided with transverse strengthening ribs, guide-ways for said door mounted upon the interior of said cylinder at the side of each end of said opening, and means for supplying a sterilizing agent to the interior of said casing.

962,810. POCKET MATCH-HOLDER. DAVID L. BLOCK, New York, N. Y. Filed Mar. 3, 1910. Serial No. 546,992.



A match holder comprising a doubled body having a pair of upper foldable wings, means below said wings for connecting the two body-sections with each other, and igniting strips formed on the inner sides of said body-sections below the wings.

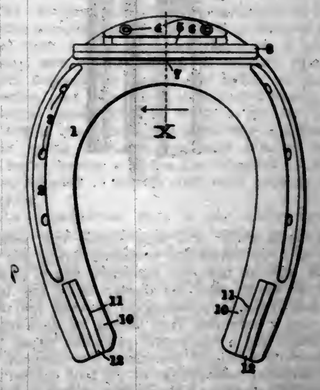
962,811. DELIVERY APPARATUS FOR BOTTLE-ANNEALING FURNACES. CARL BRAUER, Hostomitz, near Teplitz, Austria-Hungary. Filed Mar. 11, 1909. Serial No. 482,812.



1. In a delivery apparatus for bottles or similar articles to be annealed within annealing furnaces, an annealing furnace slide in combination with oscillating or swiveling supporting plates of different lengths for receiving and transferring the bottles from such slide, adjustable weights connected to such plates for holding them in their normal position and for regulating the oscillating or swiveling movement of such plates and means for rolling the bottle into the furnace, substantially as and for the purpose specified.

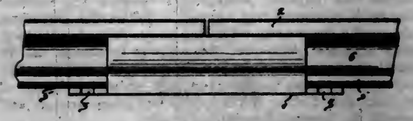
2. In a delivery apparatus for bottles or similar articles to be annealed within annealing furnaces, an annealing furnace slide in combination with oscillating or swiveling supporting plates of different lengths for receiving and transferring the bottles from such slide, means for holding such plates in their normal position and for regulating their oscillating or swiveling movement, and a stationary inclined supporting surface, on which the bottles are rolled down into the furnace with a stopping movement caused by the oscillating or swiveling plate of reduced length, substantially as and for the purpose specified.

962,812. HORSESHOE. MICHAEL D. BRILLHART, Sterling, Ohio. Filed Dec. 30, 1909. Serial No. 535,683.



The combination with a horseshoe provided in its under face with a T-shaped recess extending from one of the lateral sides thereof into the body of said shoe and constituting a socket for a calk, one of the side walls of said recess formed with an obtuse angle, of a calk comprising a bar suitably fashioned to be passed into said socket from the open end thereof, the sides of said calk formed parallel and each with an obtuse angle therein whereby it will interlock with the angularly-formed side of said socket for preventing unintentional removal.

962,813. RAIL-JOINT. RICHARD BURGUNDER, McKees Rocks, Pa., assignor of one-tenth to Clara Byerly, Pittsburg, Pa. Filed Apr. 21, 1910. Serial No. 556,721.



In a rail joint, the combination with rails adapted to have their ends in proximity to each other, of a plate rectangular in plan and adapted to support the confronting ends of said rails, said plate having the longitudinal edges thereof adjacent to the ends provided with spike notches, whereby said plate can be secured to ties, and inwardly projecting flanges carried by the longitudinal edges of said plate and disposed at an acute angle to the surface of said plate, said flanges being adapted to overhang and engage the base flanges of said rails, and said flanges having the inner under edges thereof provided with serrations or teeth, with the teeth at the ends of said flanges projecting inwardly and providing a smooth or blank portion intermediate the ends of said flanges, substantially as, and for the purpose herein described.

962,814. MEANS FOR SECURING TIRES TO VEHICLE-WHEELS. CHARLES G. CABANNE, St. Louis, Mo. Filed Sept. 30, 1908. Serial No. 455,493.



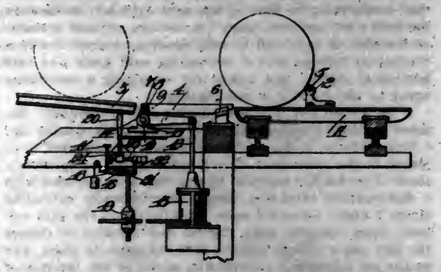
1. The combination of a felly carried rim, formed at one side with an outwardly extending flange and at its other side with an inwardly extending flange, having at intervals forwardly and rearwardly extending inclined tongues and diagonal passageways between the inclined tongues, and a retaining ring having an outwardly extending flange and a rearwardly extending flange formed with diagonally arranged peripheral fins adapted to occupy the diagonal passageways of the felly carried rim.

2. The combination of a tire receiving rim, a felly carried rim, formed at one side with an outwardly extending flange and at its other side with an inwardly extending flange, having at intervals forwardly and rearwardly extending inclined tongues, and diagonal passageways between the inclined tongues, a retaining ring having an outwardly extending flange and a rearwardly extending flange formed with diagonally arranged peripheral fins adapted to occupy the diagonal passageways of the felly carried rim, transverse blocks located between the outwardly extending flanges and fixed to the tire receiving rim and a key located between adjacent transverse blocks and in engagement with the felly carried rim.

3. The combination of a felly carried rim, formed at one side with an outwardly extending flange and at its other side with an inwardly extending flange, having at intervals forwardly and rearwardly extending inclined tongues and diagonal passageways between the inclined tongues, a retaining ring having an outwardly extending flange and a rearwardly extending flange formed with diagonally arranged peripheral fins adapted to occupy the diagonal passageways of the felly carried rim, and a spring latch arm, secured to the outwardly extending flange of the ring and having a pin projecting therethrough and through the inwardly extending flange.

4. The combination of a tire receiving rim, a felly carried rim, formed at one side with an outwardly extending flange and at its other side with an inwardly extending flange, having at intervals forwardly and rearwardly extending inclined tongues, and diagonal passageways between the inclined tongues, a retaining ring having an outwardly extending flange and a rearwardly extending flange formed with diagonally arranged peripheral fins adapted to occupy the diagonal passageways of the felly carried rim, transverse blocks located between the outwardly extending flanges and fixed to the tire receiving rim, a key located between adjacent transverse blocks and in engagement with the felly carried rim, and a spring latch arm, secured to the outwardly extending flange of the ring, and having a pin projecting therethrough and through the inwardly extending flange.

962,815. SKID. WILLIAM A. CAMPBELL, Oakland, Cal. Filed Jan. 15, 1908. Serial No. 410,962.



1. In a sawmill, a log carriage, a log-deck, lifting and advancing skids contiguous to the carriage, and means whereby said skids are resiliently supported.

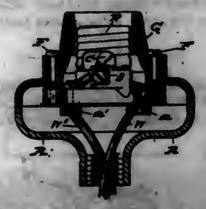
2. In a sawmill, a log-deck, a shiftable carriage, and cushioned, transversely movable, lifting skids contiguous to the carriage.

3. In a sawmill, a log-deck, a movable carriage, substantially horizontal skids adapted to receive logs from the deck, fixed inclined guides supporting the free ends of the skids, wrist-pins connected to the opposite ends of the skids, and means for actuating the wrist-pins, said means being adapted to cushion the skids when subjected to shocks.

4. In a sawmill, the combination with a log-deck and a movable carriage, of cushioned skids, inclined planes upon which the free ends are movable, and lifting arms or levers with which the opposite ends are connected, means, including an engine, for operating said levers, means controlling the admission of fluid to said engine, and means operable in conjunction with said controlling means adapted to prevent the movement of the log carriage.

5. In a saw-mill, a log deck and a movable carriage, skids adjacent to the log-deck, fixed inclined planes supporting the free ends of the skids, means positively connected to the opposite ends of the skids whereby said skids may be reciprocated, and means including a motor for operating said last mentioned means.
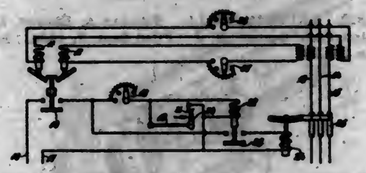
962,816. ELECTRICAL RECEPTACLE AND ROSETTE. LEGER J. CASTONGUAY, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 17, 1908. Serial No. 468,016.



1. An electrical appliance adapted for use at the flaring mouth of an electrical conduit and comprising an insulating body carrying terminals and having formed with the body a base flange by which it may be secured to said mouth piece, said insulating flange having extensions with threaded thimbles, securing screws and a cover held in place by the latter, substantially as described.

2. An electrical appliance adapted for use at the flaring mouth of an electrical conduit and comprising an insulating body carrying terminals and having formed with the body a base flange by which it may be secured to said mouth piece, said insulating flange having extensions with threaded thimbles and intermediate notches for the wires, securing screws to engage said thimbles and a cover held in place by the screws, substantially as described.

962,817. TIME-LIMIT PROTECTIVE DEVICE FOR ELECTRIC CIRCUITS. HERBERT W. CHENEY, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed May 27, 1907. Serial No. 375,830.



1. In a protective device for electric circuits, a body of matter which varies in volume as its temperature changes, means for causing the temperature of said body of matter to vary upon abnormal conditions in a circuit to be protected, an electric circuit including said body of matter and arranged to have its condition as regards opening and closing reversed when the volume of said body of matter reaches a predetermined value, and a circuit-breaker in the circuit to be protected arranged to be tripped upon such reversal.

2. In a protective device for electric circuits, a body of matter which varies in volume upon changes in temperature, an electric circuit for heating said body of matter and including the latter and arranged to be completed upon abnormal conditions in a circuit to be protected, and a circuit-breaker in said last named circuit arranged to be tripped when the volume of said body of matter reaches a predetermined value.

3. In an overload protective device for electric circuits, a magnetically operated switch arranged to close when the current in a circuit to be protected exceeds a predetermined value, a body of matter which expands when heated and is arranged to be electrically heated by the passage of current through it when said switch is closed, and a magnetically tripped circuit-breaker in the circuit to be protected, the tripping magnet of said circuit-breaker being arranged to be energized when said body of matter has expanded to a predetermined value.

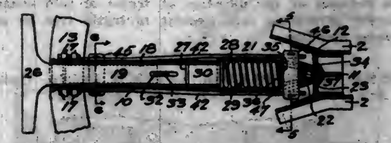
4. In combination, an electric circuit to be protected, a solenoid-operated switch arranged to be closed when more than a predetermined current flows in said circuit, a body of matter which expands on heating and which is arranged to be heated by current supplied through said switch while the latter is closed, a circuit including said body of matter and arranged to have its condition as regards opening and closing reversed when said body of matter has expanded to a predetermined volume, a solenoid arranged to be energized upon such reversal, and a circuit-breaker located in the circuit to be protected and arranged to be opened upon the energization of said last named solenoid.

5. In a protective device for electric circuits, a body of matter which varies in volume upon changes in temperature, an electric circuit for heating said body of matter and including the latter and arranged to be completed upon abnormal conditions in a circuit to be protected, a circuit-breaker in said last named circuit arranged to be tripped when the volume of said body of matter reaches a predetermined value, and means for varying the rate at which said body of matter heats.

[Claims 6 and 7 not printed in the Gazette.]

962,818. SWINGING BUFFER. ANDREW CHRISTIANSON, Butler, Pa., assignor to Standard Steel Car Company, Pittsburg, Pa., a Corporation of Pennsylvania. Original application filed Jan. 11, 1909, Serial No. 471,757. Divided and this application filed June 1, 1909. Serial No. 499,497.

1. The combination with an underframe, of a swinging casing mounted therein having a pocket for the compression gear and in front of the same a buffer bar guide-way, said casing having an enlarged intermediate guide-way between the pocket and buffer bar guide-way, compression gear mounted in said pocket having a front compression plate provided with an extension fitting within the intermediate guide-way, and a buffer having a buffer bar mounted in its guideway and adapted to engage with such front compression plate.

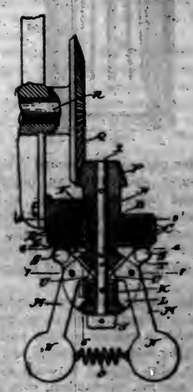


2. The combination with an underframe, of a swinging casing mounted therein having a pocket for the compression gear and in front of the same a buffer bar guide-way, said casing having an enlarged intermediate guideway between the pocket and buffer bar guide-way, compression gear mounted in said pocket having a front compression plate provided with a tubular extension fitting within the intermediate guide-way, a primary compression spring fitting within said tubular extension, and a buffer having a buffer bar mounted in its guideway and adapted to engage with such primary compression spring.

3. The combination with a car underframe, of a swinging casing mounted therein having at its rear end a bearing face inclosing the rear portion of the pivot pin, a pivot pin fitting within and against said face, and a compression gear mounted in the casing and having its rear plate provided with a rearwardly extending bearing face contacting with such pivot pin.

4. The combination with a car underframe, of a swinging casing mounted therein, having an inclosing bearing face, a pivot pin mounted in the casing and fitting within said bearing face, and a separate spring controlled plate mounted within the casing and having a bearing face bearing on said pivot.

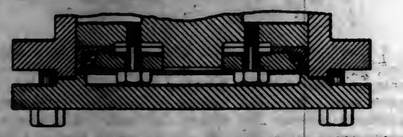
962,819. SPEED-CONTROLLER. JAMES T. COWLEY, Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed May 12, 1906. Serial No. 316,456.



1. The combination with a driven member adapted to be reversed, of a governor adapted to frictionally control and operate to regulate the speed of said driven member when rotating in one direction, and means operative upon the reversal of said driven member for locking said governor in non-operative position thereby permitting said driven member to travel free in said reverse direction.

2. In a speed governor, a member adapted to be connected with the element to be controlled, a brake adapted to act upon said member, speed actuated means connected with and driven by said member for operating said brake thereby controlling the speed of said element when traveling in one direction, and means for locking said speed actuated means in non-controlling position upon the reversal of the direction of travel of said element thereby permitting said element to travel free in said reverse direction.

962,820. PACKING-RING. CURTIS E. DROWN, Tucson, Ariz. Filed Mar. 1, 1910. Serial No. 546,755.



A piston head having a reduced end, a packing ring arranged against the end of the head and normally projecting beyond the peripheral surface thereof, a clamping ring engaging the inner edge of the packing ring and a filler consisting of a ring resting against the outer face of the packing ring, outside of the clamping ring, and provided with resilient fingers engaging the packing for the purpose set forth.

962,821. CARTON FOR PHONOGRAPH RECORD-CYLINDERS. NELSON C. DURAND, East Orange, and ABNER M. SEELEY, Newark, N. J., assignors to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed July 12, 1907. Serial No. 383,437.

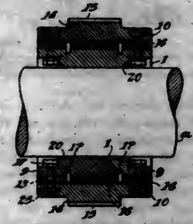


1. In a carton for phonograph record cylinders, the combination of an outer shell with an inner flange fitting therein and formed integral with an upwardly cupped bottom and a downwardly extending circular edge formed between said bottom and inner flange and constituting a bearing surface for the carton, and a lining of soft material for the outer shell above the said flange, substantially as set forth.

2. In a carton for phonograph record cylinders, the combination of an outer cylindrical shell, an upwardly cupped bottom provided with a cupped portion and having an upstanding flange fitting within said shell and a downwardly extending circular edge formed between said bottom and flange, a tapered, central, upstanding core on said bottom and, a ring of soft material surrounding the said core at the bottom thereof and secured to the said core and to the bottom of the carton, substantially as set forth.

3. In a carton for phonograph record cylinders, the combination of an outer cylindrical shell, a bottom provided with an upwardly cupped portion and with a flanged portion which fits within the shell, a core on said bottom of substantially the same form as the larger portion of a phonograph mandrel, and provided with longitudinally extending corrugations, a ring of felt surrounding the lower end of said core and secured thereto and to the bottom of the carton, and a lining of soft material for the outer shell, substantially as set forth.

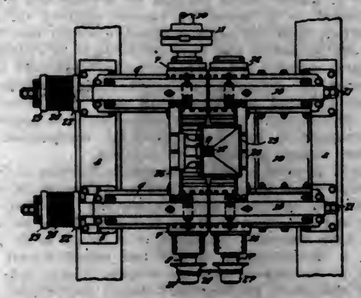
962,822. CRUSHING-ROLL. THOMAS A. EDISON, Llewellyn Park, Orange, N. J. Filed Sept. 7, 1906. Serial No. 333,607.



1. In a crushing roll, the combination of a body provided at each end with overhanging flanges, and having an exterior longitudinal keyway provided with one or more sockets or depressions, a segment having a keyway adapted to register with said first keyway, means for clamping said segment to said body by clamping means passing through said flanges, a key inserted in said keyway, and pins engaging said sockets to prevent longitudinal movement of said key, substantially as set forth.

2. In a crushing roll, the combination of a body having a series of external flat surfaces and provided at each end with overhanging flanges, each of said flat surfaces being provided with a keyway, a series of segments, each of which has a flat surface provided with a key-way, means for securing said segments to said body and a key occupying the keyways of said body and segments, and pins for securing said key to the said body, substantially as set forth.

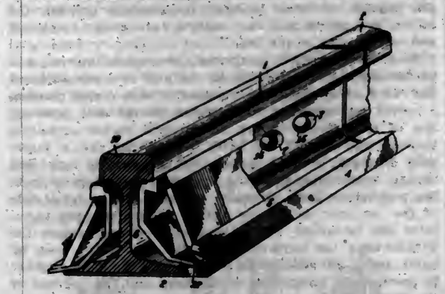
962,823. CRUSHING-ROLLS. THOMAS A. EDISON, Llewellyn Park, Orange, N. J. Filed Sept. 18, 1906. Serial No. 335,116.



1. In crushing rolls, the combination of a positive or driving roll and a negative roll driven through the materials being crushed between the rolls, and means whereby the positive roll may be temporarily connected directly to the negative roll to positively rotate the same, substantially as set forth.

2. In crushing rolls, the combination with the positive roll and means for driving the same, of a negative roll driven through the material being crushed between the rolls, and a "nigger head" on the shaft of each roll, for connection by a rope in starting the negative roll, substantially as set forth.

962,824. RAIL-JOINT. JOHN WOODS ENRIGHT and EDWARD JAMES ENRIGHT, New Orleans, La. Filed July 24, 1909. Serial No. 509,367.



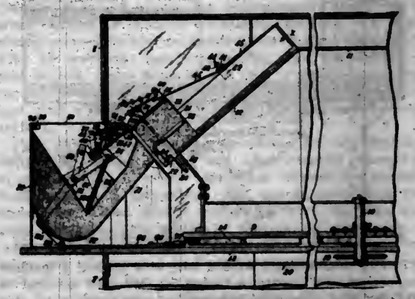
1. The combination with the abutting ends of the rails provided in their webs with openings or slots, of a socket plate in which said ends seat, said plate having at its side edges upwardly extending overlying flanges, a fish plate on each side of the rails, each plate having at its upper edge a head fitting the under side of the tread of the rail and provided with an outwardly extending shoulder and having a vertical portion seating against the web, and an outwardly inclined portion, the lower edge of which rests upon the flange of the rail and engages beneath the overlying flange of the socket plate, said plate having projections engaging the openings in the webs of the rails, and having at each end a tongue seating against the end of the socket plate, and wedge plates seated between the head of the fish plates and the flanges of the socket plate, the heads of the fish plates being tapered from one end to the other, each of said heads having on its inner upper corner a longitudinal groove for the purpose specified.

2. The combination with the abutting ends of the rails provided in their webs with openings or slots, of a socket plate in which said ends seat, said plate having at its side edges upwardly extending overlying flanges, a fish plate on each side of the rails, each plate having at its upper edge a head fitting the under side of the tread of the rail and provided with an outwardly extending shoulder and having a vertical portion seating against the web, and an outwardly inclined portion, the lower edge of which rests upon the flange of the rail and engages beneath the overlying flange of the socket plate, said plate having projections engaging the openings in the webs of the rails, and having at each end a tongue seating against the end of the socket plate, and wedge plates seated between the head of the fish plates and the flanges of the socket plate, the heads of the fish plates being tapered from one end to the other.

3. The combination with the abutting ends of the rails provided in their webs with transverse slots, of a socket plate on which the ends are seated, said plate having at each side edge a flange overlying the plate, a fish plate on each side of the rails, each of said plates having a longitudinally tapered head engaging beneath the rail tread and an outwardly inclined portion engaging beneath the flange of the socket plate and having at each end a tongue fitting against the end of the socket plate, said plates each having tongues engaging the slots, and a wedge plate fitting between the head of the web and the flange of the socket plate.

962,825. CIGAR-VENDING MACHINE. WILLIAM D. EVANS and JOHN T. MARSHALL, Eupora, Miss. Filed June 21, 1909. Serial No. 503,295.

1. A cigar vending machine comprising an inclined receptacle having a delivery section arranged to spread the articles being vended in a single layer; means for elevating the foremost of said articles over the mouth of a delivery chute; a thrust plate adapted to operate the said means; a rotary shaft provided with a crank handle extended beyond the casing of the machine, said shaft being provided with a lever arm adapted to advance said thrust plate; a latch interposed in the path of said lever arm to prevent the same impinging upon the said thrust plate; and a mechanism to remove the said latch from the path of said lever arm.



2. A cigar vending machine comprising an inclined receptacle having a delivery section arranged to spread the articles being vended in a single layer; means for elevating the foremost of said articles over the mouth of a delivery chute; a thrust plate adapted to operate the said means; a rotary shaft provided with a crank handle extended beyond the casing of the machine, said shaft being provided with a lever arm adapted to advance said thrust plate; a latch interposed in the path of said lever arm to prevent the same impinging upon the said thrust plate; a mechanism to remove the said latch from the path of said lever arm; and a latch for locking the said thrust plate in operative position until the said shaft has returned to its normal position.

3. A cigar vending machine comprising an inclined receptacle having a delivery section arranged to spread the articles being vended in a single layer; a platform normally located below the foremost of said articles; lifting rods connected with said platform; a reciprocating member adapted to lift the said rods; a rotary shaft provided with a crank handle extended beyond the casing of the machine, said shaft being provided with a lever arm adapted to advance the said reciprocating member; a latch interposed in the path of said lever arm to prevent the same impinging upon the said reciprocating member; and a mechanism to remove the said latch from the path of said reciprocating member.

4. A cigar vending machine comprising an inclined receptacle having a delivery section arranged to spread the articles being vended in a single layer; a platform normally located below the foremost of said articles; lifting rods connected with said platform; a reciprocating member adapted to lift the said rods; a rotary shaft provided with a crank handle extended beyond the casing of the machine, said shaft being provided with a lever arm adapted to advance the said reciprocating member; a latch interposed in the path of said lever arm to prevent the same impinging upon the said reciprocating member; and a mechanism to remove the said latch from the path of said reciprocating member.

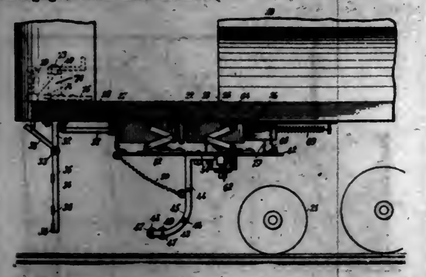
5. A cigar vending machine comprising a plurality of delivering mechanisms each embodying separating and extracting devices, a rotary conveyer to support said delivering mechanisms and adapted to be rotated at the will of the operator; and a stationary operating mechanism having a thrust member adapted to be extended to move the said separating and extracting devices of said delivering mechanisms.

[Claims 6 to 12 not printed in the Gazette.]

962,826. WHEEL-GUARD. ANTHONY FIEDLER, New York, N. Y. Filed Feb. 9, 1910. Serial No. 542,854.

1. In a device of the class described, a member adapted to be movably associated with a car, a fender carried by said member, a thrust bar adapted to be movably secured

to the car and to engage said member, a keeper for holding said member in a normal position, and means for releasing said keeper, said thrust bar being normally disengaged from said member.



2. The combination, with a car, of a fender, a member supporting said fender, a thrust-bar pivotally secured to said car and normally inoperative with respect to said member, said thrust bar when operative, being inclined downwardly and forwardly to engage said member, and a flexible connection between said member and said car.

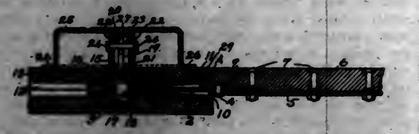
3. The combination, with a car, of a member supporting a fender, a flexible connection between said member and said car, a thrust bar pivotally secured to said car and inclined forwardly and downwardly to engage said member, a keeper for holding said member in a normal position, and a gate controlling said member.

4. The combination, with a car, of a member supporting a fender, a flexible connection between said member and said car, a thrust bar pivotally secured to said car and inclined forwardly and downwardly to engage said member, a keeper adapted to engage said member to hold said fender elevated, a swinging gate, an operative connection between said gate and said keeper, and means for raising said member.

5. The combination with a car, of a guide, a keeper slidably associated with said guide, a member adapted to be held in an elevated position by said keeper, in a predetermined position of said keeper, a fender carried by said member, and a thrust member normally tending to force said first-mentioned member toward the ground.

[Claims 6 to 21 not printed in the Gazette.]

962,827. SEAL-LOCK. CHARLES W. GILL, Syracuse, N. Y. Filed Sept. 27, 1909. Serial No. 519,837.



1. A seal lock, comprising a plate mounted on the inner wall of a car, a tubular socket formed in said plate and passing outwardly through the wall, a hasp pivotally secured to the inner side of the car door in a manner to adapt it for vertical movement into and out of operative position, the free end of the hasp having a slotted eye adapted to register with the tubular socket when the door is closed, a latch-bolt in said socket, one end of said bolt projecting outside of the car wall and having an integral finger catch, the opposite end of said bolt projecting inwardly through said plate and normally disposed in the path of the hasp, and a spring adapted to force and normally hold the latch-bolt in the eye of the hasp for automatically locking the car door in closed position.

2. A seal lock, comprising a plate mounted on the inner wall of a car, a tubular socket formed on said plate and passing through the wall, a hasp pivotally secured to the inner side of the car door and having a slotted eye adapted to coincide with the tubular socket when the door is closed, a latch-bolt in said socket, a spring adapted to force and normally hold the latch-bolt in the eye of the hasp for locking the car door when closed, and a sealing-pin capable of being inserted transversely through the socket for preventing the withdrawal of the latch-bolt and the opening of the door.

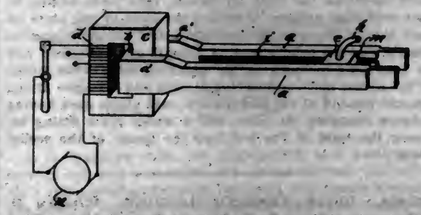
3. A car door lock, comprising two oppositely recessed plates disposed in a mortise in the wall of a car adjacent the car door opening, the recesses of said plates forming a pocket the mouth of which faces the car door opening, one of said plates having an integral socket extending through and beyond the outer wall of the car, a latch-bolt disposed in said socket and projecting into said pocket, a spring to normally hold said latch-bolt in locking position, a hasp pivotally mounted on the inner side of the car door, said hasp having an eye adapted to receive the latch-bolt when the door is closed, means for withdrawing the latch-bolt from the eye of the hasp by hand, and a pin adapted to be inserted through the socket to prevent the unlatching of the hasp and the opening of the door.

4. The combination with a car and a car door, of a hasp pivotally mounted on the inner side of the door capable of adjustment vertically, a lock comprising a pair of recessed plates disposed in the wall of the car, the said plates forming a pocket for receiving and concealing the hasp when the door is closed, one of said plates having a socket which pierces the outer wall of the car, the said socket opening into the pocket, a latch-bolt in said socket, one end of the latch-bolt extending into the pocket and adapted to pierce the eye of the hasp, the other end of the latch-bolt passing through the wall of the socket and terminating in a finger-catch, and a spring in said socket adapted to normally force and hold said latch-bolt in the eye of the hasp for locking the car door.

5. The combination with a car and a car door, of a hasp pivotally mounted on the door capable of adjustment vertically, a seal lock comprising a pair of recessed plates disposed in the wall of the car, the said plates forming a pocket for receiving the hasp when the door is closed, one of said plates having a socket which pierces the outer wall of the car, the said socket opening into the pocket, a latch-bolt in said socket, one end of the latch-bolt extending through the pocket adapted to pierce the eye of the hasp, the other end passing through the wall of the socket and terminating in a finger-catch, a spring in said socket adapted to normally force and hold said latch-bolt in the eye of the hasp for locking the car door, and a sealing-pin capable of being inserted transversely through the socket for preventing the withdrawal of the latch-bolt and the opening of the door.

[Claims 6 to 8 not printed in the Gazette.]

962,828. DEVICE FOR SINGEING TEXTILE FABRICS. GUSTAVE GIN, Paris, France. Filed Mar. 30, 1908. Serial No. 424,174.



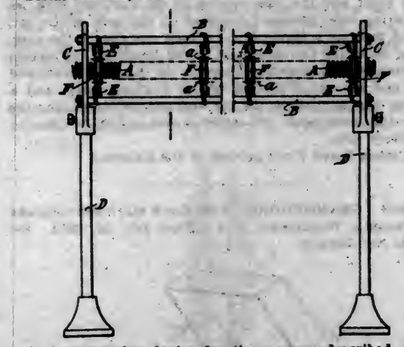
1. A way of carrying out the process of singeing textile fabrics, consisting in causing the latter to slide in contact with metallic surfaces heated to red heat by an electric current consisting in forming with the contact bars, the secondary circuit of a static transformer.

2. A way of carrying out the process as stated in claim 1 consisting in obtaining the longitudinal rectitude of the heating bars through a stretching spring, the lateral and vertical flexures being prevented by the walls of a refractory channel upon which bear the bars through the medium of stationary or rotary parts.

3. A way of carrying out the process stated in claim 1, consisting in varying the number of coils of the primary winding by means of a plug switch so as to control the incandescence temperature of the bars.

4. A way of carrying out the process stated in claim 1, consisting in forming the heating bars with one or several pairs of rollers movable about their axis and receiving the current from sliding contacts.

962,829. SUSPENSION FOR BARS ON LATHES FOR DRESSING, CUTTING, OR WORKING THE SAME. FERDINAND GIRARD, Paris, France. Filed Oct. 20, 1909. Serial No. 523,725.



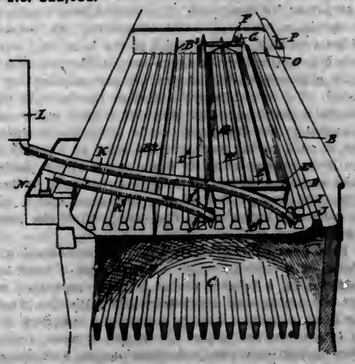
1. A suspension device for the purpose described, comprising a tube, fixed rods, and resilient means suspending said tube from said rods.

2. A suspension device for the purpose described, comprising a tube, fixed rods, and resilient means suspending said tube from said rods, and end frames carrying said rods and adapted to rest upon a floor.

3. A suspension device for the purpose described, comprising a tubular coiled spring, fixed rods, and resilient means suspending said tubular spring from said rods.

4. A suspension device for the purpose described, including a tube, a group of at least three fixed rods surrounding said tube, and resilient means supporting said tube approximately centrally of said rods.

962,830. HEATER FOR EVAPORATORS. GUSTAV HENRY GRIMM, Rutland, Vt. Filed Aug. 3, 1909. Serial No. 511,051.



1. A preliminary heating receptacle for evaporators, comprising spaced hollow legs, each approximately cruciform in cross section, a hollow connection between the legs at one end thereof, braces connecting the said hollow connection with the legs, and a brace connecting the hollow legs with each other at the other end of the legs.

2. A preliminary heating receptacle for evaporators, comprising spaced hollow legs approximately cruciform in cross section, a hollow connection between the legs, braces connecting the underside of the hollow connection with the said legs and terminating near the middle of said hollow connection, at one end, a brace connecting the hollow legs with each other at the other end of the legs, and a relief valve on top of the said hollow connection.

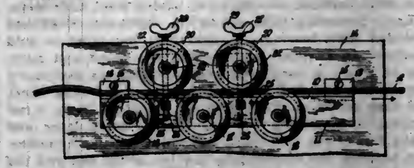
3. A preliminary heating receptacle for evaporators, comprising spaced hollow legs approximately cruciform in cross section, a hollow connection between the upright members at one end of the legs, braces connecting the underside of said hollow connection with the legs and terminating near the middle of said hollow connection, a brace connecting the hollow legs with each other at the other end of the legs, and swing couplings at the front ends of the said legs.

4. A preliminary heating receptacle for evaporators, comprising spaced hollow legs approximately cruciform in cross section, a hollow connection between the upright members at one end of the legs, braces connecting the hollow connection at its underside with said legs, the said braces having their lower edges beveled and terminating near the middle of said hollow connection, a brace connecting the hollow legs with each other at the other end of the legs, one of the legs having an inlet at the front end and the other leg having an outlet at its front end, swing couplings connected with the said inlet and the said outlet, and tubes connected with the said swing couplings.

5. A preliminary heating receptacle for evaporators, comprising spaced hollow legs each having a bottom member approximately V-shaped in cross section, a top member of inverted V-shape in cross section and side members each approximately rectangular in cross section, a hollow connection between the top members of the legs at one end thereof, and a brace connecting the hollow legs with each other at the other end of the legs.

[Claims 6 to 8 not printed in the Gazette.]

962,831. STRAIGHTENING-MACHINE. JOHN P. HAGA, Minneapolis, Minn. Filed Dec. 1, 1909. Serial No. 530,875.



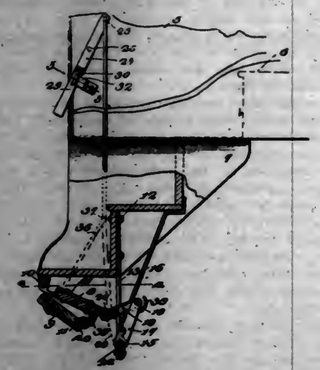
1. A machine of the class described, comprising a frame having a flange, and carrying stationary rolls, said flange having openings, adjustable carriers mounted in said openings, rolls mounted upon said carriers, means for clamping said carriers in position with respect to said frame, and means for adjusting said carriers.

2. A machine of the class described, comprising a frame having a laterally disposed part and carrying stationary rolls, carriers adjustable transversely of the length of said frame, and having rolls mounted thereon, means for clamping said carriers in position with respect to said frame, and means carried by said laterally disposed part of said frame, for adjusting said carriers.

3. A machine of the class described, comprising a frame having angularly disposed flanges, stationary rolls mounted on one of said flanges of said frame, the other of said flanges of said frame having openings, carriers slidably mounted in said openings and having rolls, means for securing said carriers with respect to said frame, and adjusting members for controlling said carriers.

4. A machine of the class described, comprising a frame having angularly disposed flanges, means for securing said frame to a support, one of said flanges carrying peripherally grooved rolls, the other of said flanges having openings, carriers slidably arranged in said openings and having at the lower end laterally disposed flanges, said carriers being provided with slots, said frame having guide and clamping bolts received in said slots, said carriers having peripherally grooved rolls, and adjusting screws carried by one of the flanges of said frame and engaging said flanges of said carriers respectively.

962,832. AUTOMATIC CAR-STEP. WILLIAM MILLARD HAMILTON, Westplains, Mo. Filed Nov. 24, 1909. Serial No. 529,793.



1. The combination with a car having stationary steps, of an auxiliary step including a tread and riser, one of which is pivotally connected with the stationary steps, a rock shaft having connection with the riser of the auxiliary step and provided with a crank arm, an operating lever, a rod forming a connection between the operating lever and crank arm, a rod forming a connection between the first mentioned rod and the tread of the auxiliary step, and means for supporting the auxiliary step in elevated position beneath the stationary steps of the car.

2. The combination with a car having stationary steps, hangers depending from one of the stationary steps and provided with bearings, a rock shaft journaled in said bearings, an auxiliary step including a tread and riser, one of which is connected with the adjacent stationary step, a pin and link connection between the rock shaft and riser of the auxiliary step, an operating lever, a rod forming a connection between the operating lever and crank arm of the rock shaft, and a link forming a connection between the intermediate portion of the rod and the tread of said auxiliary step.

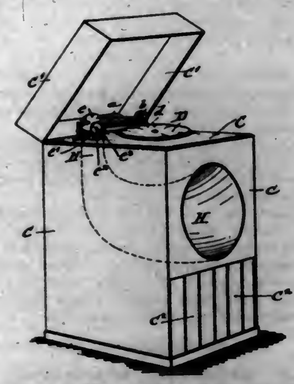
3. The combination with a car having stationary steps, of an auxiliary step including a tread and riser, one of which is pivotally connected with one of the stationary steps, a rock shaft having connection with the riser of the auxiliary step and provided with a crank arm, an operating lever, a rod forming a connection between the operating lever and crank arm, a connection between the rod and tread of the auxiliary step, said operating lever being provided with oppositely disposed seating grooves, and a socket secured to the car and provided with spring arms adapted to enter the grooves in the operating lever when the latter is actuated to elevate the auxiliary step.

4. The combination with a car having stationary steps, of an auxiliary step pivotally mounted for swinging movement on one of the stationary steps and including pivotally connected tread and riser sections, a rock shaft having connection with the riser of the auxiliary step and provided with a crank arm, an operating lever pivotally mounted on the car and operatively connected with the crank arm, said operating lever being provided with oppositely disposed longitudinal seating grooves, a connection between the lever connecting means and the tread of the auxiliary step and a socket also secured to the car and provided with spring pressed arms adapted to enter the grooves in the operating lever when the latter is actuated to move the auxiliary step to elevated position.

5. The combination with a car having stationary steps, hangers secured to one of the stationary steps and provided with terminal bearings, a rock shaft journaled in said bearings, a brace forming a connection between the rock shaft and another of said stationary steps, a crank arm secured to one end of the rock shaft, an auxiliary step depending from the stationary steps and comprising pivotally connected tread and riser sections, a pin and link connection between the intermediate portion of the rock shaft and the riser section of the auxiliary step, an operating lever pivotally mounted on the body of the car, a rod forming a connection between one end of the operating lever and the crank arm, a rod forming a connection between the intermediate portion of the last mentioned rod and the tread portion of the auxiliary step, and a spring clip secured to the car and adapted to engage the operating lever when the latter is operated to elevate the auxiliary step.

[Claims 6 and 7 not printed in the Gazette.]

962,833. GRAMOPHONE. FREDERICK HAYE and CHARLES WESSELS, Woodhaven, N. Y. Filed Jan. 24, 1910. Serial No. 539,666.



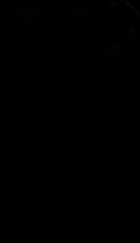
1. In a phonographic apparatus, the combination, with a casing, of a tubular tone-arm carrying a diaphragm-box and stylus at its front-end, of a curved horn supported in said casing, a universal joint connecting the rear-end of the tone-arm with the inner end of the horn, and a pair of rollers for supporting the inner end of the tone-arm.

2. In a phonographic apparatus, the combination, with a casing, of a record-carrying disk or turntable, a tubular tone-arm, a diaphragm-box provided with a stylus or needle applied to the front-end of the tone-arm, a stationary socket in said casing and provided with an annular shoulder, a horn connected at its inner end with the lower end of said socket, a universal joint between said socket and the opposite end of the tubular tone-arm, and a pair of disks rotatably mounted on the inner end of the tone-arm and bearing on said shoulder.

3. In a phonographic apparatus, the combination, with a casing, of a rotary record carrying disk, a horn located in said casing, a tubular socket member supported on the top of the casing and communicating with the inner end of the horn, a tubular tone arm having a spherical portion fitted into the upper end of the socket member, rollers rotatably supported on said spherical portion and adapted to roll on the upper edge of the socket member, an upwardly disposed horizontally extending segmental shoulder on the rear part of said spherical portion, a pair of ears at the rear of the socket member, a hook pivoted between said ears and adapted to engage said shoulder and having a downward weighted extension and a diaphragm box on said tone arm.

4. In a phonographic apparatus, the combination, with the casing, of a rotary record-carrying disk or turn-table at the upper part of said casing, a curved horn located in said casing and opening in the front-wall of the same, a stationary socket having a shouldered rim at its upper end and located in the top of the casing and connected at its lower end with the inner end of the horn, a tone-arm provided with a spherical portion fitted into the upper end of the socket, a pair of flanged disks rotatably mounted at diametrically-opposite points of the spherical portion and engaging and moving over the rim of the socket, and a diaphragm-box at the front-end of the tone-arm and provided with a needle or stylus, the lower open end of the spherical portion of the tone-arm extending to some distance into said socket.

962,834. GAS-BURNER. GEORGE HELPS, Ansley, Atherstone, England. Filed Sept. 4, 1909. Serial No. 516,257.



1. In a gas lamp, the combination of a tube which directly conveys gas from the gas supply to the burner, a valve on the tube, means for moving the tube for the purpose of operating the valve, a tubular casing surrounding said tube and supported by the part which carries the tube, and air inlet pipes radiating outwardly from said tubular casing.

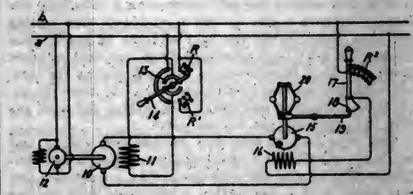
2. In a gas lamp, the combination of a tube which directly conveys gas from the gas supply to the burner, a valve on the tube, means for moving the tube for the purpose of operating the valve, a tubular casing surrounding said tube and supported by the part which carries the tube, air inlet pipes radiating outwardly from said tubular casing, and a flanged ring on said radiating pipes.

3. In a gas lamp, the combination of a tube which directly conveys gas from the gas supply to the burner, a stuffing box through which the tube passes, a valve on the tube, means for moving the tube for the purpose of operating the valve, a tubular casing surrounding said tube and supported by the part which carries the tube, air inlet pipes radiating outwardly from said tubular casing, and a flanged ring on said radiating pipes.

4. In a gas lamp, the combination of a tube which directly conveys gas from the gas supply to the burner, a valve on the tube, means for moving the tube for the purpose of operating the valve, a chamber having an inlet for air into which the tube opens, a tubular casing surrounding the chamber and supported by the part which carries the tube, air inlet pipes radiating outwardly from said tubular casing, and a flanged ring on said radiating pipes.

5. In an inverted gas lamp, the combination of a tube which directly conveys gas from the gas supply to the burner and which has a screw thread on the outside, a stuffing box through which the tube passes, a valve on the tube, a chamber having an inlet for air into which the tube opens, a valve seat at the end of the chamber, a lamp casing, and a pinion situated above the casing gearing with the screw thread on the outside of the tube for the purpose of operating the valve.

962,835. MOTOR CONTROL. HUGO HEYMANN, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 26, 1910. Serial No. 546,057.



1. The combination with a separately excited generator supplying current to a motor, of means for varying the field strength of the generator, a field regulator for the motor and means for preventing the operation of said regulator until the motor reaches a predetermined speed.

2. The combination with a separately excited generator supplying current to a motor, of means for varying the field strength of the generator, a field regulator for the motor, and means for preventing the weakening of the motor field until the motor reaches a predetermined speed.

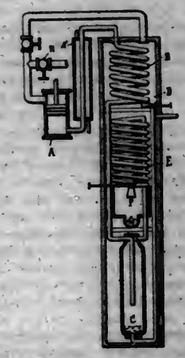
3. The combination with a separately excited generator supplying current to a motor, of means for varying the field strength of the generator, an auxiliary speed regulator for the motor and means for preventing the operation of said regulator until the motor reaches a predetermined speed.

4. The combination with a separately excited generator supplying current to a motor, of means for varying the field strength of the generator, an auxiliary speed regulator for the motor and electromagnetically controlled means for preventing the operation of said regulator until the motor reaches a predetermined speed.

5. The combination with a separately excited generator supplying current to a motor, of means for varying the field strength of the generator, an auxiliary speed regulator for the motor normally locked in full field position, and means for releasing said regulator when the motor reaches a predetermined speed.

[Claim 6 not printed in the Gazette.]

962,836. PROCESS FOR COOLING AND LIQUEFYING GASES. GOTTHOLD HILDEBRANDT, Berlin, Germany. Filed Dec. 4, 1907. Serial No. 405,124.



1. The hereinbefore described process of cooling and liquefying a gas having a relatively low boiling point, consisting in first mixing the said gas having a relatively low boiling point with another gas having a relatively high boiling point, then compressing the mixture of said gases, then removing the heat of compression from the said mixture of gases and then liquefying the said gas having the
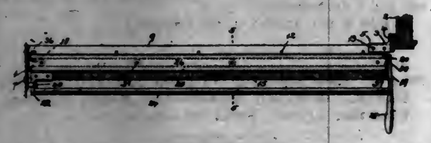
relatively high boiling point and permitting the same to expand to be utilised in other cooling processes.

2. The hereinbefore described process for cooling and liquefying a gas having a relatively low boiling point, consisting in first mixing the said gas having a relatively low boiling point with a gas having a relatively high boiling point, then compressing the said mixture of gases, then removing the heat of compression from the said mixture of gases and then liquefying the said gas having the relatively high boiling point and permitting the same to expand to be utilised in assisting in liquefying the said gas having the relatively low boiling point.

3. The hereinbefore described process for cooling and liquefying a gas having a relatively low boiling point, consisting in first mixing the said gas having a relatively low boiling point with a gas having a relatively high boiling point, then compressing the said mixture of gases, then removing the heat of compression from the said mixture of gases, then liquefying the said gas having the relatively high boiling point and permitting the same to expand to be utilised in assisting in liquefying the said gas having the relatively low boiling point, said gas having a relatively high boiling point being maintained in the cycle of the process.

4. The hereinbefore described process for cooling and liquefying gases having low boiling points, consisting in first mixing a gas having a relatively low boiling point with a gas having a relatively high boiling point, then compressing the mixture of said gases, then removing the heat of compression from the said mixture of gases and then liquefying the said gas having a relatively high boiling point and permitting the same to expand to be utilised in assisting in the liquefaction of the gas having the relatively low boiling point, the liquefaction of the said gases taking place in separate stages and the liquefaction of the gas of the relatively high boiling point occurring in such a stage of the process that the temperature thereof is sufficiently high to prevent it from freezing.

962,837. EXTENSIBLE GARMENT-SUPPORT. SOLOMON HIMMEL, Baltimore, Md. Filed Oct. 27, 1909. Serial No. 524,799.



1. In an extensible support the combination with a stationary supporting member having a continuous flange projecting outwardly from its bottom and at each side, of a movable operating member having a continuous outturned flange at each side of its top; a channel bar extending along the out-turned flanges at one side of said two members and having an upper flange to project over the bottom flange on the stationary member and a lower flange to project under the top flange of the movable member; another channel bar at the opposite side of the two members and also having a top and a bottom flange turned inwardly around said bottom and top flanges of said two members and means extending from the inner side of one channel bar between its upper and lower flanges to the inner side of the opposite channel bar between the upper and lower flanges of the latter to hold the two channel bars in alinement at opposite sides of the two members.

2. In an extensible support the combination with a stationary supporting member having horizontal bottom flanges, of a movable operating member having horizontal top flanges; a channel bar at one side of the said members having an upper horizontal flange projecting over the bottom flange at one side of the stationary member and a lower horizontal flange that projects under the top flange at one side of the movable member; another channel bar at the opposite side of said members and having its upper flange projecting over the bottom flange of one member and its lower flange extending beneath the top flange of the other member; a rod extending horizontally between the flanges of the stationary and movable members and the ends of said rod securing the two side channel plates together and antifriction devices between the flanges.

3. In an extensible support the combination with a stationary support having a central vertical wall and outturned bottom flanges, of a movable operating member also having a central vertical wall and out-turned top flanges; a movable connecting member comprising spaced-apart channel bars,—said bars having inturned upper and lower flanges which lap the out-turned flanges on the stationary and operating members; a rod connecting the spaced-apart channel bars and a revoluble device carried by said rod,—said revoluble device operating between the out-turned flanges of the stationary and operating members.

962,838. SASH-WEIGHT. TIMOTHY HOLLAND, Chicago, Ill. Filed Dec. 13, 1909. Serial No. 532,848.



1. A device of the class described comprising a body, said body consisting of two longitudinal sections, a tortuous longitudinally extending passage provided in said body formed in the adjacent surfaces of said sections, and means for fastening said sections together, substantially as described.

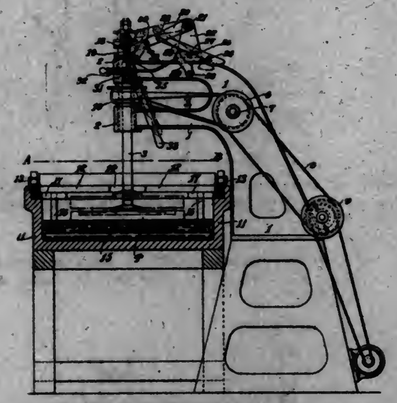
2. A sash weight comprising a body, said body consisting of similar longitudinal sections, registerable tortuous grooves formed in the contiguous surfaces of said sections, and circumferentially extending means for binding said sections together, substantially as described.

3. A sash weight consisting of a substantially cylindrical body, said body comprising two similar longitudinal sections, registerable tortuous grooves formed in the contiguous surfaces of said sections, said grooves intermediate the extremities thereof being provided with correspondingly positioned enlargements, and means encircling said body for binding said sections together, substantially as described.

4. A sash weight consisting of a substantially cylindrical body, said body comprising two similar semi-cylindrical sections, registerable tortuous grooves formed in the contiguous surfaces of said sections, said grooves intermediate their extremities being provided with correspondingly positioned enlargements, wire members encircling said body for fastening said sections together, and circumferentially extending grooves in the outer surface of said body for the reception of said fastening wires, substantially as described.

962,839. APPARATUS FOR ETCHING PRINTING-PLATES. WILLIAM JOSEPH HOLT, High Barnet, England. Filed Apr. 26, 1910. Serial No. 557,753.

1. In an apparatus for etching printing plates, a bath containing a floatable support for the plates, and provided with hinged covers with an opening between them for the passage of the shaft of the stirring device, and extending over the said device, so that, when the device is raised out of the bath, the said covers will be opened and allow the support to float up, with the plate upon it, the said support being provided with projections by which it is held down when the covers are closed.



2. In an apparatus for etching printing plates, a bath containing a floatable support for the plates and provided with hinged covers with an opening between them for the passage of the shaft of the stirring device and extending over the said device, so that, when the device is raised out of the bath, the said covers will open, and allow the support to float up with the plate upon it, the said support being provided with projections by which it is held down when the covers are closed the said projections sliding through guide pieces at the upper part of the bath and beneath the covers.

3. In apparatus for etching printing plates, the combination with a bath with covers adapted to be opened by the raising of the stirring device and to allow the table to float up with the plate upon it, of means for holding the stirring device first in a position beneath the covers above the liquid in the bath so that the liquid from the said stirring device is thrown off into the bath and thereafter to be held in a fully elevated position while the plate is being removed and replaced, or another plate put on the table; substantially as hereinbefore described.

4. In apparatus for etching printing plates, the combination with a bath with covers adapted to be opened by the raising of the stirring device and to allow the table to float up, with the plate upon it, of a hand-lever jointed to a lever engaging with a groove in a collar on the shaft of the stirring device, the said lever having jointed to it a strut adapted to engage a pin both when the stirring device is in the bath aboye the liquid and when the said stirring device is in its fully elevated position and a spring device for releasing the said strut from the said pin; substantially as hereinbefore described.

962,840. TREATMENT OF MINERAL AND VEGETABLE OILS. JOHN JAMES HOOD and ALFRED GORDON SALAMON, London, England, assignors to The Oil Refining Improvements Company, Limited, Glasgow, Scotland. Filed July 26, 1909. Serial No. 509,591.

1. The process hereindescribed of decolorizing oil which consists in filtering it through magnesia prepared by first precipitating magnesium hydrate and then rendering the magnesia anhydrous by ignition.

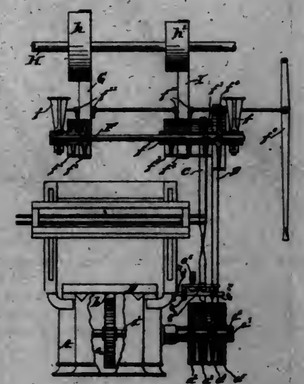
2. The process hereindescribed of decolorizing oil which consists in dissolving it in light petroleum spirit, filtering the solution through magnesia prepared by first precipitating magnesium hydrate and then rendering the magnesia anhydrous by ignition and finally distilling the filtrate.

962,841. TREATMENT OF MINERAL AND VEGETABLE OILS. JOHN JAMES HOOD and ALFRED GORDON SALAMON, London, England, assignors to The Oil Refining Improvements Company, Limited, Glasgow, Scotland. Filed July 26, 1909. Serial No. 509,592.

1. The process hereindescribed of decolorizing oil which consists in filtering it through alumina prepared by heating aluminium trihydrate and thus rendering it anhydrous.

2. The process hereindescribed of decolorizing oil which consists in dissolving it in light petroleum spirit, filtering the solution through alumina prepared by heating aluminium trihydrate to render it anhydrous and distilling the filtrate.

962,842. POWER-TRANSMITTING DEVICE. HOWARD WILSON HUNT, Pleasant Ridge, Ohio. Filed Aug. 15, 1908. Serial No. 448,700.



1. In a planer, the combination of a reciprocatory platen, devices adjustable to positions for imparting a forward movement at different speeds and a constant-speed backward movement thereto; a pivoted cam connected to control the action of both of said devices,—the forward movement connection being adjustable relatively to said cam to produce either of the speeds provided for; mechanism operated by the platen to oscillate said cam and means operated by the cam to throw the forward and backward movement devices into and out of driving connection alternately.

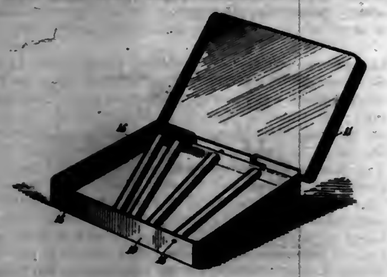
2. In a planer, the combination of a reciprocatory platen and a power transmitting mechanism embodying two tight and two loose pulleys upon the platen-operating shaft, two belts operating upon said pulleys to produce forward and backward movements of the platen, a guide mover actuated by the platen, belt guides operatively connected with said guide-mover, one of said guides being adapted to shift its belt alternately to a tight pulley and an adjacent loose pulley, and the other guide being adjustable in relation to the guide-mover and adapted when in one adjusted position to shift its belt alternately to a tight pulley and an adjacent loose pulley, and when in its other adjusted position to shift its belt to the same loose pulley and a different tight pulley.

3. The combination of a main shaft, two double-width fast pulleys of different diameters thereon; an intermediate or counter shaft; a fast and a loose pulley thereon and a shiftable belt connecting the same with the larger pulley of the main shaft; a single-width pulley and a double-width pulley, both loose, also on said counter-shaft, a shiftable belt connecting the same with the smaller

pulley of the main shaft; and two tight double-width transmitting pulleys of different diameters on said countershaft; a machine shaft; a single width tight pulley and an adjacent double-width loose pulley thereon; a shiftable belt connecting said pulleys with the smaller transmitting pulley and the double-width loose pulley of the countershaft; a second tight pulley (but of double-width) and a second loose pulley (but of single width) upon said machine shaft and a shiftable belt connecting the said pulleys with the larger transmitting pulley of the counter shaft.

4. The combination of a countershaft, a tight and a loose pulley thereon, means for driving the countershaft at a predetermined speed, means for driving the loose pulley at a speed different from that of the countershaft, a driven shaft, a pulley thereon, a belt engaging with said pulley and with the tight pulley, and means for shifting said belt onto the loose pulley.

962,843. TRICK-BOX. AARON JEDEL, New York, N. Y. Filed Oct. 7, 1909. Serial No. 521,433.



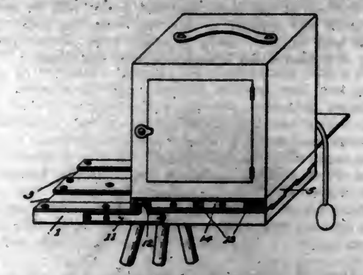
1. A trick box having a metal bottom presenting a light-reflecting inner surface, a lure within said box and only partially covering said bottom and constituting an article apparently adapted to be removed for consumption, and a sheet of colorless glass covering said lure and secured to the walls of the box, the reflection of light by the bottom of the box tending to prevent a person from noticing any reflection of light from the glass and to render the latter invisible.

2. A trick box having a metal body portion including a bottom and side walls, said bottom presenting a light-reflecting inner surface, a lure within said box and only partially covering said bottom and constituting an article apparently adapted for removal from the box for consumption, a sheet of transparent colorless glass supported by said lure and having its edges in engagement with the side walls of the box, said side walls having portions thereof bent inwardly to constitute projections or lugs for permanently retaining the glass in a position below the top of the box, and a cover for said box normally protecting said glass, said glass serving to prevent the removal of the lure from the box, and the glass being rendered inconspicuous by the light's reflection from the bottom of the box.

962,844. ATTACHMENT FOR CAMERAS. CHARLES W. KAUFMANN, New York, N. Y. Filed Dec. 3, 1907. Serial No. 404,949.

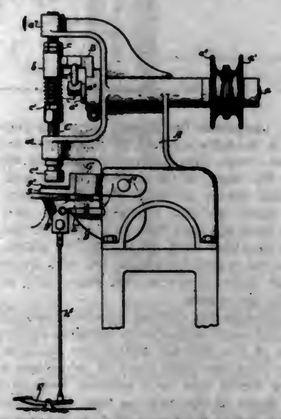
1. The combination of a tripod, a base member having means substantially centrally arranged to secure it to the head of the tripod, a member supported at successive points throughout its length on and slidably engaged with the base member, having means to secure the base of a camera flat to the upper face thereof, and means to lock the two members together, with the upper member in a position centrally over the tripod or at an equal distance to either side of a central position.

2. The combination in a camera attachment, of a base member having grooves in the upper face thereof and provided with plates each overhanging an edge of one of the grooves, forming undercut ways, and a camera-carrying member having grooves on its under face to receive the plates of the base member and having plates secured



thereto and arranged in the grooves of the base member, with the edges of the two sets of plates in sliding engagement.

962,845. INDENTING-MACHINE. WILLIAM BOTTOMLEY KEIGHLEY, Vineland, N. J. Filed Oct. 28, 1909. Serial No. 525,215.



1. The combination in an indenting machine having driving mechanism, of a hammer; an indenting wheel; with a clapper between said hammer and the wheel, said clapper being movable away from said wheel to permit of the introduction of a sole to be indented.

2. The combination in an indenting machine having driving mechanism, of a hammer; an indenting wheel; and a clapper between said hammer and wheel; with means for varying the distance between the clapper and the indenting wheel.

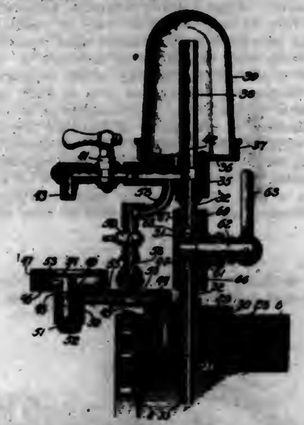
3. The combination in an indenting machine having driving mechanism, of a hammer; an indenting wheel; and a clapper between said hammer and the wheel; with means for bodily moving the indenting wheel toward the clapper.

4. The combination, in an indenting machine, of a frame; a hammer mounted thereon; means for reciprocating said hammer; a clapper pivotally mounted on the frame and placed to be struck by the hammer; with a structure having an indenting wheel placed to operate on a shoe sole edge between it and the clapper.

5. The combination, in an indenting machine, of a frame; a hammer mounted thereon; means for reciprocating said hammer; a clapper pivotally mounted on the frame and placed to be struck by the hammer; a bodily movable structure having an indenting wheel; with means for moving said structure toward and from the clapper.

[Claims 6 to 14 not printed in the Gazette.]

962,846. DRAW-OFF DEVICE FOR EXPLOSIVE LIQUIDS. LOUIS KESSLER, Chicago, Ill. Filed June 14, 1909. Serial No. 502,032.



1. In combination with a tank of the character described, a draw-off device connected therewith and comprising a pump, a suction-pipe extending into the tank and communicating with the pump, a measuring dome into which the pump discharges and a draw-off cock leading from the dome, of a can-support extending from said device and containing a passage communicating with the tank, a spring-pressed valve in said support, and a can-rest carried by the valve, whereby pressure exerted upon the can-rest will open the valve to said passage, for the purpose set forth.

2. In combination with a tank of the character described, a draw-off device connected therewith and comprising a pump, a suction-pipe extending into the tank and communicating with the pump, a measuring dome into which the pump discharges, provided with a passage leading therefrom, and a draw-off cock in said passage, a by-pass communicating with said passage and with the tank, said by-pass being closed to the atmosphere and a cock in said by-pass, for the purpose set forth.

3. In combination with a tank of the character described, a draw-off device connected therewith and comprising a pump, a suction-pipe extending into the tank and communicating with the pump, a measuring dome into which the pump discharges, provided with a passage leading therefrom, and a draw-off cock in said passage, of a can-support extending from said device and containing a passage communicating with the tank, a by-pass communicating with said first-named passage and with said second-named passage, a cock in said by-pass, a spring-pressed valve in said support, and a can-rest carried by the valve, whereby pressure exerted upon the can-rest will open the valve to said passage, for the purpose set forth.

962,847. SPRING-JACK STRUCTURE. HARRY J. KUSEL, Chicago, Ill., assignor, by mesne assignments, to Century Telephone Construction Company, Buffalo, N. Y., a Corporation of New York. Filed Nov. 20, 1905. Serial No. 288,120.



1. A spring jack structure including in its formation a frame; a thimble carried thereby at one end of the frame; contact strips; a leaf formation at the other end of the frame; a block upon the leaf formation for supporting the contact strips and provided with a recess receiving said strips; a clamping plate holding said strips from vertical displacement, screws passing through said clamping plate, said block and the leaf formation of the frame in planes substantially parallel to the planes of the contact strips; said contact strips being disposed between said screws and having shoulders which coöperate to prevent longitudinal displacement of the contact strips, and a leaf or leaves of insulating material also disposed in the recess in said block and separating the contact strips and having shoulders to prevent longitudinal displacement thereof, the block and the clamping plate serving to prevent the vertical displacement thereof.

2. A spring jack structure including in its formation a frame; a thimble carried thereby at one end of the frame; contact strips; a leaf formation at the other end of the frame; a block upon the leaf formation for supporting the contact strips and provided with a recess receiving said strips; a clamping plate holding said strips from vertical displacement; fastening mechanisms passing through said clamping plate, said block and the leaf formation of the frame substantially parallel to the planes of the contact strips; said contact strips being disposed between said fastening mechanisms and having shoulders which coöperate to prevent longitudinal displacement of the contact strips, and a leaf or leaves of insulating material also disposed in the recess in said block and separating the contact strips and having shoulders to prevent longitudinal displacement thereof, the block and the clamping plate serving to prevent the vertical displacement thereof.

3. A spring jack structure including in its formation a frame; a thimble carried thereby at one end of the frame; contact strips; a leaf formation at the other end of the frame; a block carried by the leaf formation for supporting the contact strips and provided with a recess receiving said strips; a clamping plate holding said strips from vertical displacement; and screws passing through said clamping plate, said block and the leaf formation of the frame in planes substantially parallel to the planes of the contact strips, said contact strips being disposed between said screws and having shoulders which coöperate to prevent longitudinal displacement of the contact strips.

4. A spring jack structure including in its formation a frame; a thimble carried thereby at one end of the frame; contact strips; a leaf formation at the other end of the frame; a block upon the leaf formation for supporting the contact strips and provided with a recess receiving said strips; a clamping plate holding said strips from vertical displacement; and fastening mechanisms passing through said clamping plate, said block and the leaf formation of the frame substantially parallel to the planes of the contact strips, said contact strips being disposed between said fastening mechanisms and having shoulders which coöperate to prevent longitudinal displacement of the contact strips.

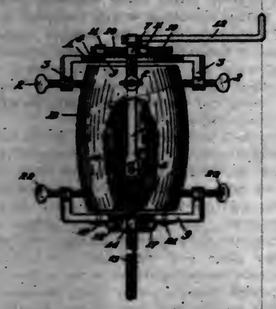
5. A spring jack structure including in its formation a frame; a thimble carried thereby at one end of the frame; contact strips; a leaf formation at the other end of the frame; a block upon the leaf formation for supporting the contact strips and provided with a recess receiving said strips; a clamping plate holding said strips from vertical displacement; and screws passing through said clamping plate, said block and the leaf formation in planes substantially parallel to the planes of the contact strips, said contact strips being disposed between said screws.

[Claim 6 not printed in the Gazette.]

962,848. TAPER-BORING MACHINE. RUDOLF R. KUSS, De Lamar, Idaho. Filed May 18, 1909. Serial No. 496,792.

1. In a taper boring machine, the combination of a feed screw, a cutting member carried by the feed screw, a feed nut, with a suitable support for the latter engaged by the feed screw, a rotatably mounted disk with a suitable

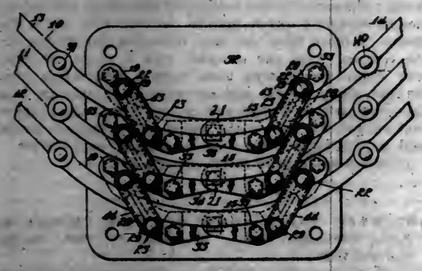
support therefor, through which disk the other end of the feed screw passes, and posts projecting from the disk, and adjustment screws mounted on the posts, said disk having a diametral slot and the upper end of the feed screw passing through said slot and being interposed between the adjustment screws whereby said feed screw may be operatively supported at different angles.



2. A taper boring machine comprising a pair of adjustable clamp members, one of which carries a polygonal tapering nut, with means for preventing the nut from turning but permitting it to rock in its support, a feed screw engaging the nut, a cutting member carried by the feed screw, the other clamping plate having a radially slotted disk rotatably supported thereon, posts projecting from the disk, adjustment screws mounted on the posts and engaging opposite sides of the upper end of the feed screw whereby said screw may be operatively supported at different angles, means for rotating the feed screw, and a guard plate below the nut and embracing the feed screw and retaining the nut in place.

3. A taper boring machine comprising a pair of adjustable clamp members, one of which carries a polygonal nut, with means for preventing the nut from turning but permitting it to rock in its support, a feed screw engaging the nut, a cutting member carried by the feed screw, the other clamping plate having a radially slotted disk rotatably supported thereon, said disk engageable with the free end of the feed screw, means for rotating the feed screw, said means for supporting the feed screw in the disk comprising opposed screw-threaded members operative in the line with the slot, and a guard plate underlying the nut and retaining the same in place, said guard plate being pivotally mounted at one end whereby it may be swung to one side to give access to the nut.

962,849. ADJUSTABLE STAND FOR DEFLECTING-BARS. EDWIN C. LARRY, Harvey, Ill. Filed Jan. 20, 1910. Serial No. 539,183.

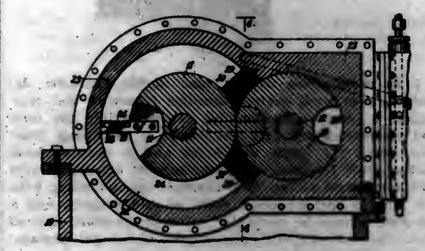


1. A deflecting bar stand comprising in combination a pair of pivotally united base members, and a pair of co-operating guide bearings for a curved deflecting bar mounted on each of the base members.

2. A stand for deflecting bars comprising in combination a plurality of like pairs of relatively adjustable base members, each of such members being of angular shape and having parallel bearing surfaces upon opposite sides for contacting with corresponding members of adjacent pairs, and a pair of coöperating guide bearings for a curved deflecting bar mounted on each of such members.

3. A stand for deflecting bars comprising in combination a plurality of like pairs of pivotally united base members, each of such members being of angular shape and having parallel bearing surfaces upon opposite sides for contacting with corresponding members of adjacent pairs, and a pair of coöperating guide bearings for a curved deflecting bar mounted on each of such members.

962,850. ROTARY ENGINE. RUSSEL CLINTON LEEDHAM, Trinidad, Colo. Filed Jan. 6, 1910. Serial No. 536,689.



1. A rotary engine having a rotary member, an inlet port and an exhaust port for the passage of motive fluid to drive said rotary member in one direction, an inlet port and an exhaust port for the passage of motive fluid to drive said rotary member in the opposite direction, valve mechanism for controlling said inlet ports, valve mechanism for controlling said exhaust ports, a member operated by the motive fluid, means for delivering motive fluid thereto, said means being controlled by said inlet valve mechanism, and means connected to said last-mentioned member for operating said exhaust valve mechanism.

2. A rotary engine having a rotary member, an inlet port and an exhaust port for the passage of motive fluid to drive said rotary member in one direction, an inlet port and an exhaust port for the passage of motive fluid to drive said rotary member in the opposite direction, valve mechanism for controlling said inlet ports, valve mechanism for controlling said exhaust ports, a member operated by the motive fluid, and means for delivering motive fluid thereto, said means being connected to said last-mentioned member for operating said exhaust valve mechanism, to open either exhaust port prior to the opening of the corresponding inlet port.

3. A rotary engine having a rotary member, an inlet port and an exhaust port, for the passage of motive fluid to drive said rotary member in one direction, an inlet port and an exhaust port for the passage of motive fluid to drive said rotary member in the opposite direction, a valve for controlling said inlet ports, an auxiliary cylinder having a piston therein, ports also controlled by said valve for the passage of motive fluid to said cylinder, valve mechanism for controlling the exhaust ports, and means connecting said piston and said exhaust valve mechanism.

4. A rotary engine having a rotary member, an inlet port and an exhaust port for the passage of motive fluid to drive said rotary member in one direction, an inlet port and an exhaust port for the passage of motive fluid to drive said rotary member in the opposite direction, valve mechanism for controlling the inlet ports, two separate valves for controlling said exhaust ports, means connecting said exhaust valves whereby the opening of one valve closes the other, and fluid-operated means controlled by said inlet valve mechanism for reversing said exhaust valves.

5. A rotary engine having a rotor provided with a piston, an abutment wheel having an annular flange provided with ports therethrough, an inlet passage leading to one side of said flange, and a port for delivering motive fluid from the opposite side of said flange to the piston of said rotor.

[Claim 6 not printed in the Gazette.]

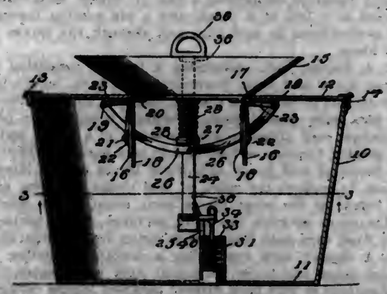
962,851. PROCESS OF MANUFACTURING BOTTOMS OR LIDS FOR BOXES. BUDD G. NICE, Ogonta, and JOHN L. MCMICHAEL, Philadelphia, Pa. Filed Mar. 3, 1910. Serial 547,083.



1. The process herein described of making bottoms or lids for boxes or other containers, said process consisting in first assembling a flat sheet of material with a metallic ring having a flat flange, simultaneously pressing the flange and the edge of the sheet of material so as to form a groove in both elements for the reception of the edge of the body portion of the container.

2. The process herein described of making bottoms or lids for boxes or other containers, said process consisting in first cutting a disk of paper to form the bottom or lid of the box, then pressing said disk on to a metallic ring having a flat flange, then turning up the flange of the ring simultaneously with the edge of the paper disk so as to make a channel in both for the reception of the end of the body portion.

962,852. NON-SPILLING CUSPIDOR. GEORGE PASTORS, Connellsville, Pa. Filed Dec. 4, 1909. Serial No. 531,409.



1. A cuspidor including a receptacle, a cover positioned upon said receptacle and having a central opening formed therethrough, a pair of hinged leaves carried by said cover for closing the opening therethrough, and means disposed between said leaves and the bottom of said receptacle for closing said leaves upon the tilting of said receptacle.

2. A cuspidor including a receptacle having an opening formed in the upper end thereof, hinged leaves carried by said receptacle for closing the opening at times, a plunger located in the bottom of said receptacle and adapted to be operated by the weight thereof, and means disposed between said plunger and said leaves for closing said leaves upon the tilting of the receptacle.

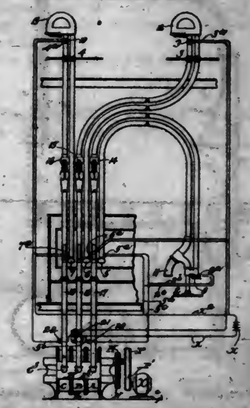
3. A cuspidor including a receptacle, a hinged cover positioned on the upper end of said receptacle, and having an opening formed therethrough, a hopper upwardly extended from the opening and carried by said cover, a pair of hinged leaves disposed on said cover to close said opening, rods rotatably disposed on said cover and connected to said leaves, a reciprocating bar mounted in said receptacle and connected to said rods for swinging the same, a spring carried by said bar and engaged against the under face of said cover for normally depressing said bar to close said leaves, and a pawl carried by the bottom of said receptacle to hold said bar in an upward position.

4. A cuspidor including a receptacle having an opening in the upper end thereof, a pair of hinged leaves mounted on said receptacle to close the opening, a plunger located in the bottom of said receptacle and adapted to be depressed by the weight of the receptacle, a bar disposed for reciprocation in said receptacle, links carried by said bar, rods mounted in said receptacle and connected at their opposite ends to said leaves and to said links respectively, and a pawl carried by said plunger for engagement with said bar to hold the same in an upward position.

5. A cuspidor including a receptacle, hinged closures mounted in said receptacle, a bar mounted in said receptacle for reciprocation therein and connected to said hinged closures, a pawl located in the lower end of said receptacle for engagement with said bar to hold said closure in an open position, and a plunger disposed in the bottom of said receptacle and connected to said pawl to trip the same at times.

[Claims 6 and 7 not printed in the Gazette.]

962,853. PNEUMATIC-DESPATCH-TUBE APPARATUS. ALBERT W. PEARSALL, Lowell, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed Mar. 9, 1908. Serial No. 419,880.



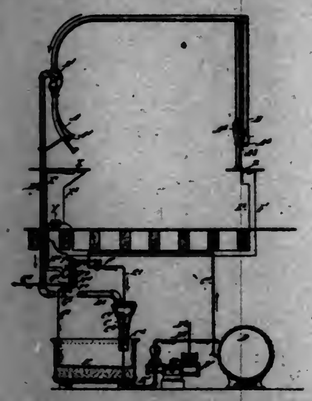
1. In a pneumatic despatch tube apparatus, a plurality of transmission tubes, a constantly operating blower or pump having a plurality of independent cylinders or compartments each connected with one of said tubes, mechanism adapted to normally maintain each of said cylinders unloaded, and electro-magnetic means adapted to be operated upon the insertion of a carrier into one of said tubes to control said mechanism to load its respective cylinder and maintain the flow of air through said tube for driving said carrier only while said carrier is in transmission.

2. In a pneumatic despatch tube apparatus, a plurality of transmission tubes, a constantly operating blower or pump having a plurality of independent cylinders or compartments each connected with one of said tubes, mechanism adapted to normally maintain each of said cylinders unloaded, and electro-magnetic means adapted to be operated to control said mechanism whereby any of said cylinders may be loaded or thrown into communication with its respective tube and create a flow of air for the transmission of carriers.

3. In a pneumatic despatch tube apparatus, a plurality of transmission tubes, a constantly operating blower or pump having a plurality of independent cylinders or compartments each connected with one of said tubes, mechanism adapted to normally maintain each of said cylinders unloaded, electro-magnetic means adapted to be operated to control said mechanism whereby any of said cylinders may be loaded or thrown into communication with its respective tube and create a flow of air for the transmission of carriers, and means for timing the loading of said cylinders to the interval necessary for the transmission and delivery of the carriers.

4. In a pneumatic despatch tube apparatus, a tube for the transmission of carriers, a blower or pump, a connection between said tube and said blower or pump whereby air is exhausted from said tube and provided with an air-inlet, a normally open valve controlling the admission of air through said inlet, means acting on said valve to maintain said air-inlet open, and electro-magnetic means arranged to be operated upon entering the carrier into the transmission tube to actuate the valve to close the air-inlet thereby causing a flow of air through the transmission tube to drive said carrier.

962,854. PNEUMATIC-DESPATCH-TUBE APPARATUS. ALBERT W. PEARSALL, Lowell, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed June 11, 1906, Serial No, 321,151. Renewed May 11, 1910. Serial No. 560,726.

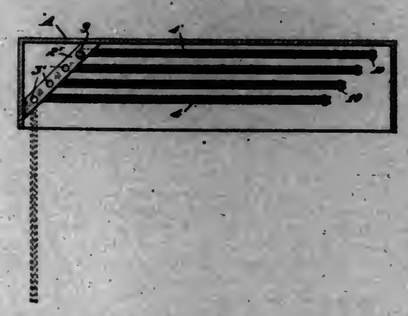


1. In a pneumatic despatch tube apparatus, an inspirator, fluid-operated means controlling the action of such inspirator, means controlling the flow of fluid to said fluid-operated means, electrically operated devices for putting in operation said controlling means, and devices operated by the fluid-operated means for actuating said controlling means to permit the escape of fluid from said fluid-operating means.

2. In a pneumatic despatch tube apparatus, an inspirator, fluid-operated means controlling the action of such inspirator, means controlling the flow of fluid to said fluid-operated means, electrically-operated devices for putting in operation said controlling means, devices operated by the fluid-operated means for actuating said controlling means to permit the escape of fluid from said fluid-operating means, and means for timing the escape of such fluid.

3. In a pneumatic despatch tube apparatus, an inspirator, fluid-operated means controlling the action of such inspirator, means controlling the flow of fluid to said fluid-operated means, electrically-operated devices for putting in operation said controlling means, devices operated by the fluid-operated means for actuating said controlling means to permit the escape of fluid from said fluid-operating means, means for timing the escape of such fluid, and means for returning the exhaust from said inspirator to the source of hydraulic pressure.

962,855. DISPLAY-HANGER FOR CURTAINS AND THE LIKE. CHARLES EDSON PERKINS, San Francisco, Cal. Filed Feb. 28, 1910. Serial No. 546,499.

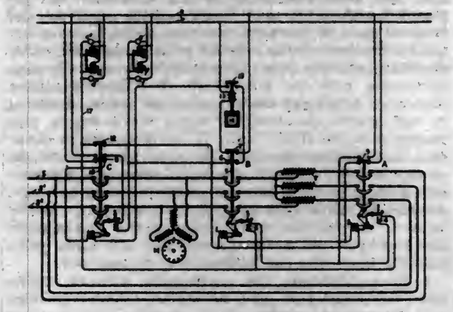


1. A display rack having in combination upper and lower horizontal fixed bars, said bars having registering perforations, display members having one end fitting between the bars, hinges for said members, each comprising separable members one secured to each bar and having top and bottom flanges between the inner surfaces of which the display members fit, the height of the hinge leaves being equal to the height of the space between the inner surfaces of the horizontally fixed bars, each of said display members comprising a pair of clamps, each clamp secured to a leaf of a hinge, and a pin passing through the perforations in said bars and through the leaves of said hinge.

2. A display rack comprising a bracket consisting of spaced upper and lower horizontal fixed bars, registering perforations in said bars, display members hinged between the bars, each of said display members comprising a pair of clamps, each clamp secured to a leaf of a hinge, and a pin passing through perforations in said bars and through the leaves of said hinge, said hinge leaves having lateral flanges to support the edges of said clamp members, and the height of the hinge leaves being equal to the height of the space between the inner surfaces of the horizontally fixed bars, said hinge leaves being readily separable.

3. A display rack comprising a bracket consisting of spaced upper and lower horizontal fixed bars, registering perforations in said bars, display members hinged between the bars, each of said display members comprising a pair of clamps, each clamp secured to a leaf of a hinge, a pin passing through perforations in said bars and through the leaves of said hinge, said hinge leaves having lateral flanges projecting outwardly and inclosing recesses for the members and to support the edges of said clamp members the hinge leaves extending down along the inner side of the clamp members and serving as spacing means therefor, said flanges supported to have a broad seat between said bars, and means for locking the pair of clamp members together.

962,856. STARTING DEVICE FOR ELECTRIC MOTORS. DAVID H. PLANK and ALFRED C. FINNEY, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed Mar. 1, 1910. Serial No. 546,619.



1. In combination with an alternating current motor, a supply circuit, a transformer, a plurality of electromagnetically operated switches for first connecting the motor to the supply circuit through the transformer and then connecting the motor directly to the supply circuit, and means whereby the motor can be connected directly to the supply circuit only within a predetermined interval after it has been connected and disconnected from the supply circuit through the transformer.

2. In combination with an alternating current motor, a supply circuit, a transformer, a plurality of electromagnetically operated starting switches for first connecting the motor to the supply circuit through the transformer, a plurality of electromagnetically operated running switches for connecting the motor directly to the supply circuit, and means whereby the running switches can be closed only within a predetermined interval after the starting switches have been closed and opened.

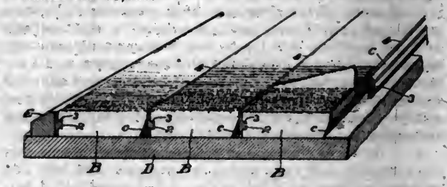
3. In combination with an alternating current motor, a supply circuit, a transformer, a plurality of electromagnetically operated starting switches for connecting the motor directly to the supply circuit through the transformer, electromagnetically operated running switches for connecting the motor to the supply circuit, manually operated switches for opening and closing said electromagnetic switches, and means whereby the running switches can be closed only within a predetermined interval after the starting switches have been closed and opened.

4. In combination with an alternating current motor, a supply circuit, a transformer, a plurality of electromagnetically operated switches for connecting the motor directly to the supply circuit through the transformer, electromagnetically operated running switches for connecting the motor to the supply circuit, a manually operated switch for controlling the closing of each group of electromagnetic switches, a second manually operated switch for controlling the opening of each group of switches, and means whereby the running switches can be closed only after the starting switches have been closed and opened.

5. In combination with an alternating current motor, a supply circuit, a transformer, a plurality of electromagnetically operated switches for connecting the motor to the supply circuit through the transformer, electromagnetically operated running switches for connecting the motor to the supply circuit, a manually operated switch for controlling the closing of each group of electromagnetic switches, a second manually operated switch for controlling the opening of each group of switches, and means whereby the running switches can be closed only within a predetermined interval after the starting switches have been closed and opened.

[Claim 6 not printed in the Gazette.]

962,857. TYPE-BAR AND TYPOGRAPHIC FORM. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of Arizona. Filed Sept. 21, 1901. Serial No. 76,033.



1. The combination with a typebar, of a locking strip at one end thereof, a support at the opposite end of the bar, and means for preventing the lengthwise movement of the bar away from the locking strip, one end of the bar engaging with the locking strip and the other end being adapted to be swung upward about its engaged end as a center.

2. The combination with a typebar having a notch at one end, of a locking strip having a rib engaging with the notch in the bar, a support for the opposite end of the bar, and means for preventing the lengthwise movement of the bar away from the locking strip, the end of the bar opposite to its said notched end being adapted to be swung upward about the locking strip as a center.

3. A typebar constructed at one end to engage with a locking strip, and at the opposite end having its corner removed.

4. A typebar having a notch in one end, and having the corner of its opposite end removed.

5. In a typographic form, the combination with a series of typebars forming a column, of a locking strip disposed at one side of the column, a support for the opposite side of the column, and means for preventing the lengthwise movement of the bars away from the locking strip, the locking strip constituting one member and the typebars another member, one of such members having a channel and the other member having a tongue or rib engaging with the channel, and the ends of the bars opposite to their engaged ends being adapted to be swung upward about the locking strip.

[Claims 6 to 25 not printed in the Gazette.]

962,858. HEAD-FORMING DEVICE. STEPHEN ROMAN, New York, N. Y. Filed Dec. 11, 1909. Serial No. 532,582.



1. A device of the class described, comprising a base, a top hinged at one end to said base, and having a spring arm, said base having a shackle adapted to engage said arm to secure said members together, and a removable form positioned between said base and said top and adapted to receive a removable fur head.

2. A device of the class described, comprising a base, a top hinged at one end to said base, said base having at the other end a pivoted shackle, said top having a nor-

mally resilient extension adapted to be received by said shackle and having a plurality of notches each adapted to engage said shackle, and a removable form positioned between said base and said top and adapted to receive a fur head temporarily, while the head is being formed.

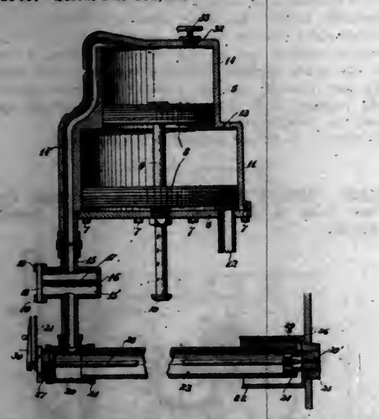
3. A device of the class described, comprising a base, a top hinged to said base, means for clamping said base and said top together, said top having a downwardly and outwardly curved part provided with edge recesses, and a removable form positioned between said base and said top and adapted to receive a fur head, said edge recesses of said part serving to receive a pin associated with said head and extending transversely of the device.

4. A device of the class described, comprising a base, a top hinged to said base, means for clamping said base and said top together, said top having a downwardly and outwardly curved and perforated part, said base having a grooved and perforated part, said base being laterally extended rearwardly of said grooved and perforated part, and a removable portion positioned between said base and said top and adapted to receive a fur head.

5. A device of the class described, comprising a base having at one end an extension, a top having a part of U cross section receiving said extension and pivotally connected therewith, said top having an outwardly and downwardly curved shield rearwardly of said part of U cross section, said top further having a rearwardly extended arm, said base having a shackle adapted removably to receive said arm, whereby said base and said top can be clamped together, and a removable form positioned between said base and said top and adapted to receive a fur head.

[Claims 6 and 7 not printed in the Gazette.]

962,859. LUBRICATING APPARATUS FOR STEAM-ENGINES. EDWARD BYAN, Clinton, Iowa. Filed Mar. 8, 1909. Serial No. 482,139.



1. In a lubricator, the combination with an engine boiler and steam pipe, of a differential cylinder provided with larger and smaller piston chambers; a differential piston comprising larger and smaller connected pistons operating in said piston chambers; a steam supply pipe leading from the engine boiler to the larger piston chamber; a conduit leading from the smaller piston chamber to the engine steam pipe and a spraying nozzle at the juncture of said conduit with the engine steam pipe, substantially as described.

2. In a lubricator, the combination with an engine boiler and steam pipe, of a differential cylinder provided with larger and smaller piston chambers; a differential piston comprising larger and smaller connected pistons operating in said piston chambers; a valved steam supply pipe leading from the engine boiler to the larger piston chamber; a conduit leading from the smaller piston chamber to the engine steam pipe; a spraying nozzle at the juncture of said conduit with the engine steam pipe; and a needle valve for controlling said spraying nozzle, substantially as described.

3. In a lubricator, the combination with an engine boiler and stand pipe, of an upright differential cylinder provided with larger and smaller piston chambers and mounted upon the rearward extremity of the engine boiler, the said cylinder being provided with an opening which places the adjacent ends of the cylinder chambers in communication with the atmosphere; a differential piston comprising larger and smaller connected pistons operating in said piston chambers; a valved steam supply pipe leading from the engine boiler to the larger piston chamber; a conduit leading from the outer extremity of the smaller piston chamber to the engine stand-pipe, a removable strainer provided in said conduit; a spraying nozzle provided at the forward extremity of the latter; a needle valve at the juncture between said conduit and said engine stand-pipe and means for operating said needle valve from the locomotive cab, substantially as described.

4. In a lubricator, the combination with an engine boiler and stand pipe, of a differential cylinder provided with larger and smaller piston chambers and mounted upon the rearward extremity of the engine boiler; a differential piston comprising larger and smaller connected pistons operating in said piston chambers; a valved conduit leading from the smaller piston chamber, extending through the engine boiler, and connecting with the engine stand-pipe; a tubular casing for said conduit in said boiler; a spraying nozzle provided at the juncture of said conduit with said stand-pipe; a needle valve for operating said nozzle; a stem for operating said needle valve and leading to the locomotive cab and means in said cab for operating said stem, substantially as described.

962,860. CARBURETER. STEPHEN P. SANDERS, Cupertino, Cal. Filed May 28, 1909. Serial No. 499,025.



1. A carbureting machine comprising a water-containing tank, a gas-conducting pipe leading therefrom, and a supplemental carbureter connecting with said pipe, said carbureter including a closed pipe having an asbestos covered tube and an interior heating tube, and means for admitting air to the heating tube.

2. In a gas machine, the combination of a water containing tank, a gas conducting pipe leading therefrom, a supplemental carbureter connecting with the lower part of said pipe, said carbureter including an inclined tube, and an interior burner tube or torch and connections between said inclined tube and the service pipe.

3. A carbureter machine having in combination a water containing tank, and a pipe connection therefrom, a supplemental carbureter connected to said pipe and comprising an inclined closed pipe having an asbestos covered tube located therein, an interior heating tube extending from one end of the inclined closed tube, a connection extending from the heating tube, and an air inlet pipe located at the opposite end of the asbestos covered tube and adapted to admit air to the heating tube.

4. In a gas machine, the combination with a carbureter and a pipe leading therefrom, of a supplemental carbureter connected to said pipe and comprising an inclined tube disposed below said pipe, an asbestos covered tube within said inclined tube, a heating tube concentrically located within the asbestos covered tube, means for admitting a heating medium from one end of the heating tube, means for admitting air from the opposite end of the asbestos covered tube, a service pipe, and a connection between the outer tube and said service pipe.

5. In a gas machine, the combination with a carbureter and a pipe leading therefrom, of a supplemental carbureter comprising an inclined tube having air openings at opposite ends, a connection between said inclined tube and the pipe leading from the main carbureter, an asbestos covered tube located within the first-named tube, a heating tube extending into the asbestos covered tube from one end of the inclined tube, means for admitting a heating medium into one end of the heating tube, an air inlet tube connecting with the opposite end of the inclined tube, a service pipe, and connections between the inclined tube and service pipe.

[Claims 6 to 8 not printed in the Gazette.]

962,861. BURNER FOR FIRE-POLISHING GLASSWARE. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Inc., Newark, Ohio, a Corporation of West Virginia. Filed June 26, 1909. Serial No. 504,548.



1. A burner for fire polishing glassware having a central projection provided with jet orifices, and beyond the same an outwardly extending apron portion.

2. The combination of a burner having a central projection provided with jet orifices extending through the same and an outwardly extending apron portion above the same, and a support for the article adapted to be held above the projection of the burner.

3. A burner for fire polishing glassware having a central projection adapted to enter within the article and having jet openings formed therein and an outwardly extending apron portion having jet openings formed therein.

4. The combination of a burner for fire polishing glass-articles having a central projection having jet orifices formed therein and an outwardly extending apron portion having jet orifices formed therein, and a hollow supporting holder for the article adapted to be raised above the base of the burner.

5. A burner for fire polishing glass articles having a series of perforations formed in the jet face thereof, said perforations being spirally arranged.

[Claim 6 not printed in the Gazette.]

962,862. BURNER FOR FIRE-POLISHING GLASSWARE. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Inc., Newark, Ohio, a Corporation of West Virginia. Filed June 26, 1909. Serial No. 504,551.



1. A burner for fire polishing glassware having a series of jet openings of slit form overlapping each other.

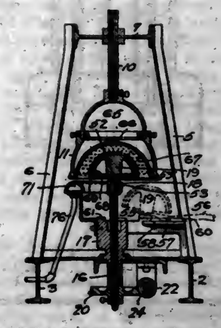
2. In apparatus for fire polishing glassware, the combination of a burner having a series of jet orifices of slit form overlapping each other, and a rotating support for the article to be polished.

3. A burner for fire polishing glassware having a concave jet face provided with jet openings and at the base thereof an annular inwardly extending lip portion.

4. The combination of a burner for fire polishing glassware having a concave jet face provided with jet openings and at the base thereof an annular inwardly extending lip portion, and a support for the article entering within the concave burner.

5. The combination of a burner for fire polishing glassware having a concave jet face provided with jet openings and at the base thereof an annular inwardly extending lip portion, and a support for the article entering within the concave burner and supporting the edge of the article above such inwardly projecting lip.

962,863. APPARATUS FOR FIRE-POLISHING GLASSWARE. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Inc., Newark, Ohio, a Corporation of West Virginia. Filed June 26, 1909. Serial No. 504,554.



1. In fire polishing apparatus, the combination of a plurality of separate burners, a vertically moving blank-supporting shaft for each burner, a blank holder carried by each burner, a common driving shaft carrying gearing connections stationary on the vertically moving shafts adapted to engage with the driving shaft as said vertical shafts are raised.

2. In fire polishing apparatus, the combination of a plurality of separate burners, a vertically moving blank-supporting shaft for each burner, a blank holder carried by each shaft, a horizontal shaft carrying worms of varying diameter, and worm-wheels stationary on the vertical shafts adapted to engage therewith, worm-wheels on the shaft of corresponding diameter, and adapted to drive said shafts at different speeds.

3. In glass polishing apparatus, the combination of a burner, a vertically moving blank supporting shaft, the treadle lever 27 and the lever 31 linked together, the lever 31 engaging with the blank supporting shaft, said lever mechanism being weighted to hold the shaft in raised position, and the stop arm 35 to hold the shaft in lowered position.

4. In glass polishing apparatus, the combination of a burner, a vertically moving blank supporting shaft, treadle lever mechanism for engaging with the said shaft for operating the same, and a stop arm carried by such treadle lever mechanism to hold the shaft in lowered position, said stop arm having a separate treadle.

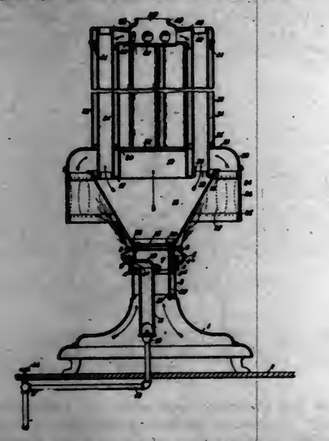
5. In glass polishing apparatus, the combination of a burner, a vertically moving blank supporting shaft, means for rotating said shaft when in raised position, and treadle lever mechanism engaging with the base of said shaft for operating the same.

[Claims 6 to 23 not printed in the Gazette.]

962,864. HEATER. CASPER C. SCHAEFER, Cambridge City, Ind. Filed June 21, 1909. Serial No. 503,352.

1. In a heater of the class described, in combination, a burner, a conical deflector for throwing the flame out-

wardly from said burner, a head seated on the deflector, a hood carried by the head and surrounding the upper portion of the deflector and spaced therefrom, said hood being adapted to receive the gases of combustion, means for directing an air current upwardly through said deflector, a plurality of air flues seated on the head and communicating with said deflector and adapted to receive the air current therefrom, said hood having openings therethrough, through which said air flues pass upwardly, gas flues connected with said hood at said openings and surrounding said air flues and spaced therefrom, and an upper head the interior whereof communicates with said gas flues, and adapted to guide the gases of combustion therefrom inwardly, said upper head having openings communicating with said air flues and permitting the upward passage of air through said upper head.



2. In a heater of the class described, in combination, a base, a burner disposed above said base and having an annular seat thereupon, a cone received upon said seat, a cone ring within said cone and in engagement therewith, and bolts mounted in said cone ring passing downwardly through said burner and secured to said base.

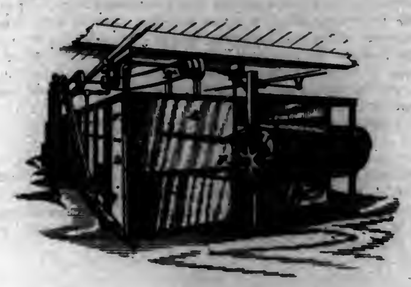
3. In a heater of the class described, in combination, a base, a burner above said base comprising a cup and a cover, said cover having a tubular body coöperating with said cup to form an air duct through said burner, a cone seating on said cover, a cone ring within said cone and in engagement therewith, and fastening devices passing down through said tubular air duct and connecting said cone ring with said base.

4. In a heater of the class described, in combination, a burner, a deflector thereabove adapted to throw the flame outwardly, a hood over said deflector adapted to receive the gases of combustion, means for directing an air current upwardly through said deflector, a plurality of air flues communicating with said deflector and adapted to pass the air upwardly, said hood having openings through which said flues pass upwardly, a plurality of gas flues seating on said hood and surrounding said air flues and spaced therefrom, and an upper head having hollow arms radiating therefrom and seating on said gas flues to receive the gases of combustion therefrom, said arms having openings in the upper sides thereof communicating with said air flues and adapted to pass the air upwardly through said upper head.

5. In a heater of the class described, in combination, a burner, a deflector disposed above said burner and through which air may pass upwardly, a head seating on the upper end of said deflector, said head having a plurality of air flues passing upwardly therefrom and having an upwardly disposed post surrounded by said flues, and a hood supported on said post and having an edge projecting beyond said deflector.

[Claims 6 and 7 not printed in the Gazette.]

962,865. DRYING-MACHINE. ANDREW M. SCHREUDER, Philadelphia, Pa., assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 26, 1909. Serial No. 514,786.



1. The combination of a drier made of metal consisting of a framework having removable standards on one side and removable panels between said standards; a longitudinal partition in the drier and an endless conveyer on one side of the partition; heating pipes on the other side of said partition in position to be removed through the opening provided by the removal of the standards and panels; with means for circulating the air through both compartments of the drier.

2. The combination in a drier of a casing made of metal consisting of longitudinal angle bars and transverse bars, a longitudinal partition dividing the interior of the casing into two compartments, a conveyer in one compartment, heating pipes in the other compartment and means for circulating the air in the drier, a series of uprights on each side of the drier, detachable panels secured between the uprights, the uprights on the side of the drier containing the steam pipes being detachable so that ready access may be had to the steam pipes on the removal of the uprights and panels.

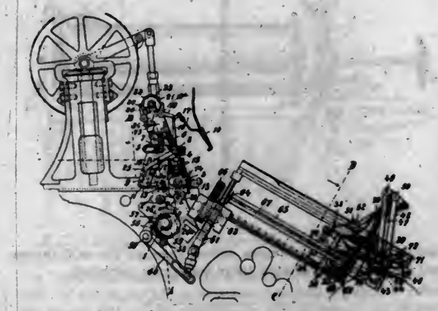
3. The combination in a drier of a casing made of metal consisting of a series of longitudinal angle bars and transverse bars firmly secured together, a series of uprights, one set of uprights being wider than the other, bearings carried by the wide uprights, a shaft mounted in the bearings, a fan mounted on the shaft for circulating the air in the drier, said drier having a longitudinal partition dividing it into two compartments, an endless conveyer in one compartment, heating means in the other compartment, a series of detachable panels between the uprights on the casing.

4. The combination in a casing made of metal consisting of a series of longitudinal angle bars connected by transverse bars, detachable side and top panels and uprights at each side, one series of uprights being wider than the other, bearings carried by the wide uprights, a fan shaft mounted in the bearings, a longitudinal partition within the casing of the drier, an endless conveyer in one compartment of the drier, a series of steam pipes in the other compartment of the drier, the steam inlet to the said pipes being through the roof of the drier and the outlet of the steam pipes being through the wide uprights so that all the panels can be removed and access may be had to all parts of the drier without touching the steam connections.

5. The combination in a drier of a casing made entirely of metal having longitudinal angle bars at the corners and transverse bars connecting the angle bars, a longitudinal partition dividing the casing into two compartments, all of the said parts being riveted or permanently secured together, a series of uprights at each side extending from the floor members and the roof members, said uprights being detachably secured in place by panels arranged to overlap the uprights and means for attaching said panels to the uprights, an endless conveyer in one compartment, a series of heating pipes in the other compartment, circulating fans mounted in openings in the partition, shafts for said fans, bearings for the shafts mounted on the outside of the uprights, the shafts passing through the uprights.

[Claims 6 to 8 not printed in the Gazette.]

962,866. SELF-FEEDER FOR PRINTING-PRESSES. LUDWIG SGAL, Chislehurst, England, and JOSEPH SCHWANDA, Vienna, Austria-Hungary, assignors to Pioneer Engineering Syndicate Limited, London, England. Filed Nov. 27, 1907. Serial No. 404,173.



1. In a self feeder for printing presses in combination means located above the paper pile for lifting the uppermost sheet, tongs fastened to said lifting means and adapted to seize the lifted sheet; and means for bringing the tongs and seized sheet into the position corresponding to the register position of the latter, whereby exact register is insured prior to the sheet being fed to the printing roller; substantially as described.

2. In a self feeder for printing presses in combination, suckers located above the paper pile; tongs fastened to said suckers and adapted to seize the lifted sheets; and means for bringing the tongs and seized sheet into the position corresponding to the register position of the latter, whereby exact register is insured prior to the sheet being fed to the printing roller; substantially as described.

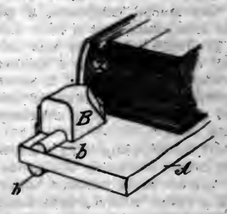
3. In a self feeder for printing presses, in combination, front and side suckers located above the paper pile, tongs, presenting arms fastened to the front and side suckers and adapted to seize the sucked sheet; rocking shafts presenting levers adjustable to the size of the sheet and the position of the form, and projecting into the path of the tong-arms and depressing the latter when the tongs are displaced, whereby all the tongs are kept properly adjusted, and exact register insured; substantially as described.

4. In a self feeder for printing presses, in combination, front and side suckers located above the paper pile, oscillating spring actuated tongs, adapted to seize the lifted sheet, fastened to the front and side suckers, the front tongs being adapted to swing freely backward and forward but being spring controlled in lateral direction, while the lateral tongs are adapted to swing forward, but are spring controlled in the direction to and from the paper; and means for bringing the tongs and seized sheet into the position corresponding to the register position of the latter, whereby exact register is insured; substantially as described.

5. In a self-feeder for printing presses, in combination, suckers of horseshoe cross-section; oscillatable tongs carried thereby and adapted to enter the gap of said horseshoe section to seize the sheet; and means for bringing the tongs and seized sheet into the position corresponding to the register position of the latter.

[Claims 6 to 11 not printed in the Gazette.]

962,867. APPLIANCE FOR BOOKBINDERS' USE. GILBERT D. STEERE, Holyoke, Mass. Filed Sept. 30, 1909. Serial No. 520,235.



1. A tool for shaping book covers comprising a pair of members, opposed to each other in a longitudinal line, having noses at their ends toward each other that recede relatively to the lengths of such members from their bases toward their backs, and means for immovably holding said members separated approximately corresponding to the length of a book to be operated upon.

2. A tool for shaping book covers, comprising a strip or bar and a pair of members, located on and at different points in the length of, the strip, having noses at their ends toward each other that recede relatively to their lengths, from their bases toward their backs.

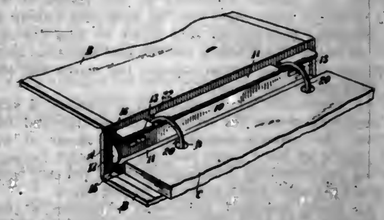
3. A tool for shaping book covers comprising a board having a rib extending along a side thereof, and a pair of members located on and at different points in the length of said strip, wider than the latter and upstanding above the same, having noses at their inwardly facing ends which recede or are beveled from their bases toward their backs.

4. A tool for shaping book covers, comprising a board having a rib extending along a side thereof, and a pair of members located on and at different points in the length of said strip, wider than the latter and upstanding above the same, having noses at their inwardly facing ends which recede or are beveled from their bases toward their backs, one of said nose-provided members being adjustable along the strip toward and away from the other member.

5. A tool for shaping book covers, comprising a board having ribs extending along opposite sides thereof at equal distances from the edge of the board and double pairs of members located on and at different points in the length of said ribs which are wider than the latter and extend transversely from the surface of the board beyond said ribs, having noses at their inwardly facing ends which recede from their bases toward their backs,—two of such members which are at opposite sides of the board having a bar which rigidly unites them, said members being adjustable longitudinally on the board and its opposite ribs, and means for confining them at required points along the length of the board.

[Claim 6 not printed in the Gazette.]

962,868. LOOSE-LEAF BINDER. WILFRED C. TRAHER, London, Ontario, Canada. Filed Aug. 19, 1909. Serial No. 513,560.



1. A loose leaf binder, comprising a member adapted to have a fixed attachment with a cover and offset therefrom, a slide under said member, and a pivoted leaf holder

carried by said member, said slide being formed to secure said leaf holder against movement in a predetermined position of said slide.

2. A loose leaf binder, comprising a member adapted to have a fixed attachment with a cover and spaced therefrom, a slide guidingly held under said member and having a plurality of positions, and a movable leaf holder, said slide having a part adapted to secure said holder against movement in a predetermined position of said slide, said part of said slide being inoperative in a second position of said slide.

3. A loose leaf binder, comprising a member having laterally disposed flanges extending beyond the plane of said member, said member being adapted to have a fixed attachment with a cover, whereby said flanges engage the cover to offset said member, a slide guidingly held under said member, a leaf holder pivotally carried by said member and having a free end, said slide having a part adapted to engage said free end in a predetermined position of said slide, whereby said holder is secured against movement.

4. A loose leaf binder, comprising a member adapted to have a fixed attachment with a cover, and having laterally disposed flanges whereby said member is offset from the cover, a slide under said member and having parts guidingly engaging said flanges, a leaf holder having a part pivotally mounted under one of said flanges and having a free end adapted to be arranged adjacent to said member, said slide having a flange adapted to engage said free end in a predetermined position of said slide, whereby said holder is secured against displacement when said free end is adjacent to said member.

5. A loose leaf binder, comprising a member having arched flanges extending laterally beyond said member, said member being adapted to have a fixed attachment with a cover, whereby said flanges offset said member from said cover, a slide movably positioned under said member and having flanges slidably engaging said flanges of said member, a leaf holder having a part pivotally mounted under one of said flanges of said member and having a free end adapted to be positioned adjacent to the other of said flanges of said member, said last-mentioned flange having a cutaway part adapted to receive said free end, one of said flanges of said slide having a cutaway part, whereby in a predetermined position of said slide said leaf holder is free to move, said last-mentioned flange of said slide serving in a second position of said slide to lock said leaf holder against movement.

[Claims 6 and 7 not printed in the Gazette.]

962,869. INSECT-DESTROYER. THOMAS RILEY WALLIS, Dyersburg, Tenn. Filed Oct. 27, 1909. Serial No. 524,834.

1. An insect destroyer comprising a cushion, a stick, and fastening means for securing the cushion and stick together, the cushion consisting of two layers of wire cloth united at their edges and the said stick having one end extending between the said layers to hold the same apart up to the united edges.

2. An insect destroyer comprising a cushion, a stick, and fastening means for securing the cushion and stick together, the cushion consisting of two layers of wire cloth united at their edges and the said stick having one end extending between the said layers to hold the same apart up to the united edges, and the said fastening means consisting of staples driven through the layers and stick and clenched at their ends.

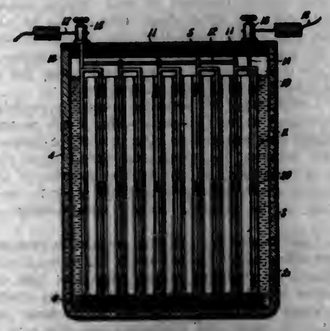
3. An insect destroyer comprising a cushion, a stick, and fastening means for securing the cushion and stick together, the cushion consisting of two layers of wire cloth united at their edges and the said stick having a tapering end extending a distance between the said layers to spread the same apart up to the united edges.

4. An insect destroyer comprising a cushion, a stick, and fastening means for securing the cushion and stick together, the cushion consisting of two layers of wire cloth, and means for uniting the edges of the layers to render the same smooth, the said stick having a tapering end extending a distance between the said layers to space the same apart up to the united edges, the said fastening



means consisting of staples driven through the said layers and the stick and having their terminals clenched.

962,870. STORAGE BATTERY. CHARLES FREDERICK WASHBURN, New London, Conn. Filed Aug. 12, 1909. Serial No. 512,528.



1. In a storage battery, a plate made of a strip of lead bent back upon itself so as to form bellows folds, and an aluminum plate bent back upon itself and extending into said folds.

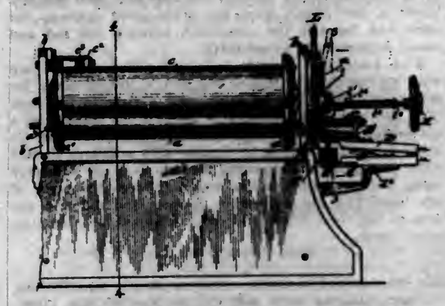
2. In a storage battery, a lead plate bent back upon itself so as to form bellows folds, and a number of aluminum plates each of substantially U-form inserted partially into said folds, and spacing members disposed intermediate said lead plate and said aluminum plate.

3. In a storage battery, the combination of a battery plate bent back upon itself so as to form a sinuous member provided with bellows folds, some of which are larger than others, and a second plate provided with portions disposed among the largest of said bellows folds, and means for insulating said portions from said folds.

4. In a battery, the combination of a metallic plate bent back upon itself so as to form bellows folds, a number of other metallic plates, each of a substantially U form, inserted partially within said folds, and means for spacing said last-mentioned plates from said first-mentioned plate.

5. In a battery, a metallic plate of one sign bent back upon itself so as to form bellows folds, a number of other metallic plates, each of a sign differing from said first-mentioned sign, inserted partially within said folds, and spacing members disposed intermediate said first-mentioned plate and said last-mentioned plates.

962,871. AUTOMATIC WINDING ATTACHMENT FOR MECHANICAL MUSICAL INSTRUMENTS. EDWIN E. WELTE, Freiburg, Germany, assignor to M. Welte & Söhne, New York, N. Y., a Firm. Filed Jan. 7, 1909. Serial No. 471,139.



1. The combination with a music-roll and a winding-up roll, of an engaging mechanism adapted to rotate either the music roll or the winding-up roll, a motor for imparting motion to the engaging mechanism, air operated means for automatically shifting the engaging mechanism from operative relation with the winding-up roll to operative relation with the music-roll when the music-roll is unwound, additional air operated means for stopping the motor when the music-sheet is unwound from the winding-up roll and manually operated means for moving the additional air operated mechanical means into inoperative position.

2. The combination with a music-roll and a winding-up roll for the music-sheet, engaging mechanism for imparting positive motion to the winding-up roll or the music-roll, electric means for imparting continuous rotary motion to said engaging mechanism, a normally open electric switch for starting or arresting the motion imparting means, releasable means for holding the electric switch in closed position, switch opening means for moving the releasable means to permit the switch to open, a lever for moving the switch-opening means into inoperative position, means for automatically moving the engaging mechanism into operative relation with the music-roll for rewinding the music-sheet after it is played, and means for automatically moving the engaging mechanism into operative relation with the winding-up roll so as to permit the automatic replaying of the same piece of music.

3. The combination with a music-roll and means for rotating the same, a winding-up roll, and means for rotating the same, of a fulcrumed change-lever provided with a pinion for engaging with either the means for rotating of the winding-up roll or the means for rotating the music-roll, driving means for rotating said pinion, a switch for starting the driving-means, a spring for yieldably holding said switch open, a lever for holding said switch in closed position, means for shifting the change-lever from a position in mesh with the driving-means of the winding-up roll to a position in mesh with the driving means of the music-roll, means for reversing the position of the change-lever, means for automatically removing the switch holding lever to release said switch, and a hand lever for moving the lever moving means out of operative engagement with the switch holding lever for automatically successively repeating the playing of the same piece of music.

4. The combination with a music-roll and winding-up roll, of a gear-wheel transmission for rotating the music-roll and a gear-wheel for rotating the winding-up roll, a fulcrumed change-lever provided with a pinion adapted to be moved into engagement with the driving gears of either the winding-up roll or music roll, means for imparting driving motion to the pinion of the change-lever, means for shifting the driving pinion into engagement with the gear-wheel of the winding-up roll or the gear-wheel of the music-roll so as to produce the winding up of the music-sheet on the winding-up roll or the rewinding of the same on the music-roll, means for returning the change-lever from engagement with the gear-wheel of the music-roll into engagement with the gear of the winding-up roll, a switch for controlling the driving means, a switch-lever for holding the switch in closed position, means for automatically releasing the switch-lever from the switch, means for placing the releasing means of the switch-lever out of operative relation with the same, a stop-lever for the winding-up roll, and means interposed between the stop-lever and the change-lever for shifting the change-lever to cause the pinion to move from the gear of the winding-up roll into mesh with the gear of the music-roll.

5. The combination with a music-roll and means for rotating the same, and a winding-up means for rotating the same, of engaging means adapted to engage the means for rotating the music-roll or the means for rotating the winding-up roll, a motor to impart motion to said engaging means, changing means for moving the engaging means from engagement with one to the other of the means for rotating the music-roll or the means for rotating the winding-up roll, automatic means for shifting said changing-means to cause said engaging means to move from engagement with the means for rotating the winding-up roll when the music-sheet is nearly unwound therefrom, into engagement with the means for rotating the music roll, automatic means for causing said changing means to move said engaging means from engagement with the means for rotating the music-roll into engagement with the means for rotating the winding-up roll when the music-sheet is nearly unwound from the winding-up roll, means for automatically stopping the motor when the music is nearly unwound from the winding-up roll, and means for moving said last named means into inoperative position.

[Claims 6 to 8 not printed in the Gazette.]

962,872. SOLUBLE PERFUME-TABLET. RUSSELL W. WHITLATCH, Brooklyn, N. Y., assignor to Raimes & Company, New York, N. Y., a Corporation of New York. Filed Feb. 28, 1908. Serial No. 418,302.



1. In a tablet the combination of a material quickly soluble and effervescent in water and an object which is changed in form when said material is dissolved.

2. In a tablet the combination of a material soluble in water and heavier than water and an object lighter than water, the tablet sinking in the water when placed therein, and the object rising to the surface when said material is dissolved.

3. In a tablet the combination of a material soluble in water, an object inclosed by said material, a binder soluble in water to maintain said object in a predetermined form, the action of the water dissolving said material and said binder to release the object from said material and change its form.

4. In a tablet the combination of a material comprising orris root, tartaric acid and bicarbonate of soda and an object connected with said material.

962,873. EYEGLASSES. CHRISTIAN ALTER, New York, N. Y. Filed Feb. 23, 1910. Serial No. 546,446.

1. Eye glasses, comprising a pair of lenses, a bow spring connecting the said lenses with each other, a block on the said bow spring, and a pair of levers fulcrumed on the said block and engaging the said bow spring on opposite sides of the said block.

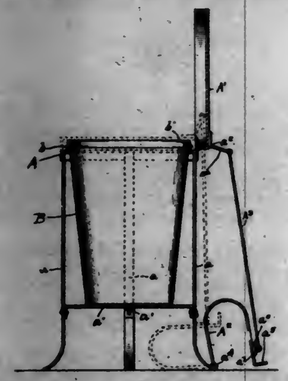
2. Eye glasses, comprising a pair of lenses, a bow spring connecting the lenses with each other, a block clamped on the said bow spring approximately at the middle thereof, and a pair of bell crank levers fulcrumed on the said block and extending in opposite directions, one arm of each of the said levers engaging the under side of the bow spring, and the other arm forming a finger piece to be taken hold of by the user.



3. An opening device for eye glasses having a pair of lenses connected with each other by a bow spring, comprising a block attached to the bow spring approximately at the middle thereof, and a pair of bell crank levers fulcrumed on the said block and extending in opposite directions, one of the arms of each bell crank lever having a transverse lug for engagement with the under side of the bow spring to one side of the said block, and the other arm of each bell crank lever forming a finger piece to be taken hold of by the user.

4. An opening device for eye glasses having a pair of lenses connected with each other by a bow spring, comprising a block formed of two grooved clamping members and a screw for fastening the members together, the said clamping members being clamped to the bow spring approximately at the middle thereof, and a pair of bell crank levers fulcrumed on the said block and extending in opposite directions, one of the arms of each bell crank lever having a transverse lug for engagement with the under side of the bow spring to one side of the said block, and the other arm of each bell crank lever forming a finger piece to be taken hold of by the user.

962,874. STAND FOR GARBAGE-CANS, &c. WILLIAM S. AMBERSON, Waynesboro, Pa. Filed Feb. 20, 1909. Serial No. 479,227.



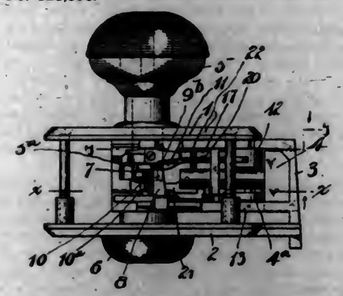
1. A garbage container comprising an open stand having a top formed with an aperture to receive the receptacle, a hinged cover for said aperture, a lever connected therewith for operating it, and a receptacle adapted to fit in said aperture under and inside of said cover and formed with a circumferential bead adapted to fit over and rest upon the inner edge of said top, substantially as set forth.

2. A stand for garbage cans, etc., comprising a ring supported upon legs, braces connecting said legs at a point to support the can, a hinged cover on said ring, an upwardly projecting arm on said cover, and a lever pivoted to one of the legs and connected to said upwardly projecting arm on said cover for operating it, substantially as set forth.

3. A stand for garbage cans, etc., comprising a top with an aperture to receive the can, legs supporting said top, a hinged cover for said top, a lever hinged to one leg, a rod connected at one end to said lever and at the other end to said cover, said lever being formed arched and adapted to turn backward when the cover is closed to bring the connection between the rod and lever slightly inside a line drawn from the hinge point between the lever and leg and the connection between the rod and cover, substantially as set forth.

4. A stand for garbage cans, etc., comprising a top with an aperture to receive the can, a hinged cover for said aperture, an arm on said cover, a lever in the form of a bow pivoted at one end to a leg of the stand, and a connecting rod connected to said lever at a point near its other end and extending to connect with said arm on said cover, the point of connection between said rod and lever being slightly behind a line drawn between the pivot of the lever and the connection between the rod and the arm on the cover when said cover is closed, substantially as set forth.

962,875. ASYLUM-LOCK. AUGUST ARENS, New Britain, Conn., assignor to P. & F. Corbin, New Britain, Conn., a Corporation of Connecticut. Filed Nov. 16, 1909. Serial No. 528,356.



1. In an asylum lock, a frame including two plates arranged to overlie the opposite sides of a door, a dead-bolt, a knob operatively connected with said bolt for advancing and retracting the same, a shank for said knob and a key-operated device for directly dogging said knob shank.

2. In an asylum lock, a frame including two plates arranged to overlie the opposite sides of a door, a dead-bolt, a knob operatively connected with said bolt for advancing and retracting the same, a shank for said knob and a key-operated device for directly dogging said knob shank whether said bolt is advanced or retracted.

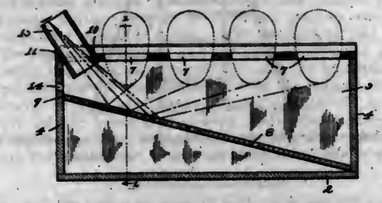
3. In an asylum lock, a frame including two plates arranged to overlie the opposite sides of a door, a dead-bolt, a knob operatively connected with said bolt for advancing and retracting the same, and a key-operated device for dogging said knob, said key-operated device comprising a key-operated spindle concentric with the knob.

4. In an asylum lock, a frame including two plates arranged to overlie the opposite sides of a door, a dead-bolt, a knob operatively connected with said bolt for advancing and retracting the same, a key-operated device for dogging said knob, said key-operated device comprising a key-operated spindle concentric with the knob and a bolt arranged to engage a part of said knob, and means of connection between said key spindle and said bolt whereby by turning said spindle independently of the knob said knob dogging bolt may be advanced or retracted.

5. In a lock of the character described, a frame arranged to be secured to a door, a dead-bolt carried by said frame, a knob on one side of said frame only, knob centering means, said knob being arranged to turn in either direction away from its centered position, a roll-back carried by said knob, and a lost motion connection between said roll-back and said knob, and connecting means between said roll-back and dead-bolt whereby when said roll-back is turned in one direction said dead-bolt will be advanced and when turned in the opposite direction said dead-bolt will be retracted.

[Claims 6 to 8 not printed in the Gazette.]

962,876. EGG-TESTER. GEORGE ARTHUR, Chicago, Ill. Filed Dec. 1, 1909. Serial No. 530,755.



In an egg tester a box-like body open at its upper end, a top for said body, said top being provided with a plurality of openings, an inclined mirror arranged in said body, said body being provided with an elongated slit just above the elevated end of said mirror, and a sighting tube arranged in the end of said body just above said slit and through which the upper surface of said mirror may be viewed, the said tube being inclined at an acute angle to said mirror, substantially as described.

962,877. CELLULOID COMPOSITION. JONAS W. AYLSWORTH, East Orange, N. J. Filed May 31, 1906. Serial No. 319,465.

1. A celluloid composition, comprising pyroxylin or other cellulose ester, combined with a halogenized fatty acid or its derivative, substantially as set forth.

2. A celluloid composition, comprising pyroxylin or other cellulose ester, combined with a chlorinated fatty acid or its derivative, substantially as set forth.

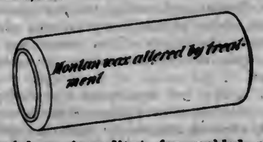
3. A celluloid composition, comprising pyroxylin or other cellulose ester, combined with halogenized stearic acid, substantially as set forth.

4. A celluloid composition, comprising pyroxylin or other cellulose ester, combined with chlorinated stearic acid, substantially as set forth.

5. A celluloid composition comprising an ester of cellulose of the acetic series of fatty acids, combined with a halogenized fatty acid or its derivative, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

962,878. COMPOSITION FOR PHONOGRAPH-RECORDS. JONAS W. AYLSWORTH, East Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Nov. 5, 1907. Serial No. 400,840.



1. A material or ingredient for molded phonograph records, comprising montan wax which has been subjected to prolonged heating at a high temperature, as set forth.

2. A material or ingredient for molded phonograph records, comprising montan wax which has been subjected to prolonged heating at a high temperature in the presence of a small percentage of sulfur, as set forth.

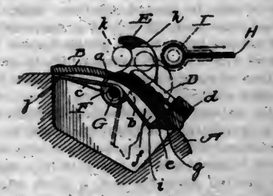
3. A material or ingredient for molded phonograph records, comprising montan wax which has been subjected to prolonged heating at a high temperature and freed from the gummy sediment produced by such treatment, as set forth.

4. A material or ingredient for molded phonograph records, comprising montan wax which has been subjected to prolonged heating at a high temperature in the presence of a small percentage of sulfur and freed from the gummy sediment produced by such treatment, as set forth.

5. A material or ingredient for molded phonograph records, comprising a mineral wax obtained from bituminous brown coal by extraction with suitable solvents, and subjected to prolonged heating at a high temperature, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

962,879. CURTAIN-FASTENER. LORENZO C. BAILEY, Chicago, Ill. Filed Apr. 4, 1910. Serial No. 553,303.



1. A curtain fastener comprising a body having an opening and also having inner lugs at opposite sides of the rear portion of the opening and an exterior lug in front of the opening and further having exterior protuberances at opposite sides of the opening; a pin fixed with respect to and extending rearwardly from the said exterior lug; a pin mounted in the interior lugs of the body; a hook pivoted on said pin and having an inner chambered arm arranged to bring up against the inner side of the forward portion of the body and also having an outer arm disposed between the exterior protuberances of the body and provided with a slot in which the said rearwardly directed pin is disposed, and a spring coiled about the second-named pin and having a forwardly directed arm arranged to bear against the inner arm of the hook and also having a rearwardly directed arm arranged to bear against the inner side of the rear portion of the body.

2. A curtain fastener comprising a body having an opening and also having exterior protuberances at opposite sides of said opening; a pin fixed with respect to the forward portion of the body and extending rearwardly outside the body; and a spring-pressed hook pivoted to the body and movable in the opening thereof and having an inner arm arranged to bring up against the body and also having an outer arm slotted and receiving in its slot the said pin.

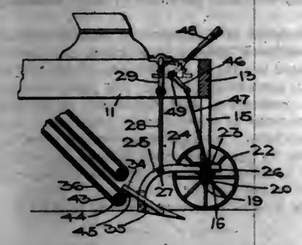
3. A curtain fastener comprising a body having an opening; a pin fixed with respect to the forward portion of the body and extending rearwardly outside the body; and a spring-pressed hook pivoted to the body and movable in the opening thereof and having an inner arm arranged to bring up against the body and also having an outer arm provided with a slot which receives the said pin.

4. A curtain fastener comprising a body having an exterior protuberance; a pin fixed with respect to the forward portion of the body and extending rearwardly; and a hook pivotally connected with the body and yieldingly held against movement in one direction and arranged parallel to said protuberance and pin.

5. A curtain fastener comprising a body having an exterior protuberance; a pin fixed with respect to the forward portion of the body and extending rearwardly; and a hook pivotally connected with the body and yieldingly held against movement in one direction and arranged alongside said protuberance and having a slot receiving the said pin.

[Claims 6 and 7 not printed in the Gazette.]

962,880. EXCAVATING MECHANISM FOR BEET-HARVESTERS. HENRY F. BARBER, Edison, Nebr. Filed Aug. 10, 1909. Serial No. 512,127.



1. In a beet excavating mechanism, the combination with a frame, of depending upright guide members carried by the frame in spaced relation, slide blocks engaged between the uprights, a rod transversely engaged in the slide blocks, plow beams pivoted upon the rod, a block engaged with the rod between the plow beams to hold the beams in spaced relation, and means for moving the beams upon the rod.

2. In a beet harvester, the combination with the frame, of depending upright guide members carried by the frame in spaced relation, slide blocks engaged between the uprights, a rod transversely engaged in the slide blocks, plow beams pivoted upon the rod, a block engaged with the rod between the plow beams to hold the beams in spaced relation, a spacing rod engaged between the plow beams rearwardly of the block, an upwardly extending link engaged with the spacing rod, and means for elevating the link to raise the rearward portions of the plow beams.

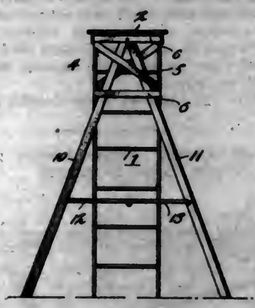
3. In a beet harvester, the combination with a frame, of depending uprights carried by the frame in spaced relation, slide blocks engaged between the uprights, a rod engaged in the slide blocks and extending transversely between the uprights, plow beams pivoted at their forward ends upon the rod, a spacing block engaged with the rod between the plow beams, and means for raising and lowering the spacing block.

4. In an excavating mechanism for harvesters, the combination with guide members, of members mounted for vertical movement between the guide members, plow beams pivotally connected with the vertically movable members, excavating members connected with the plow beams, means for moving the plow beams pivotally with respect to the vertically movable members, and means for elevating the vertically movable members.

5. In an excavating mechanism for beet harvesters, the combination with vertically movable and vertically adjustable plow beams, of plow shares carried by the lower ends of the beams, inwardly extending bars carried by the shares, said bars converging rearwardly, a rearwardly extending member connected with the beams for pivotal movement, and a conveyer pivotally connected with the rearwardly extending member and arranged to receive excavated beets from the rearwardly converging bars.

962,881. STEP-LADDER. EDDIE BENTLEY, Lincoln, Ill. Filed Aug. 25, 1908. Serial No. 450,243.

A ladder having its top provided with depending sides, a rectangular frame pivotally connected with the sides, the sides of said frame having their tops and bottoms provided with stripe upon their opposite edges and being further provided with brace members upon their opposite edges arranged at opposite angles to each other, the top connecting members of the frame provided with alining openings, a pair of cross sectional L-shaped legs having their upper extremities provided with a pivot engaging within the openings of the upper connecting members of the frame, said leg members having their offset portions arranged in opposite directions to each other so that the said leg members may be folded one upon the other, a pair of links pivoted to the leg sections, said links having their connecting portions provided with a rule joint, and a pair



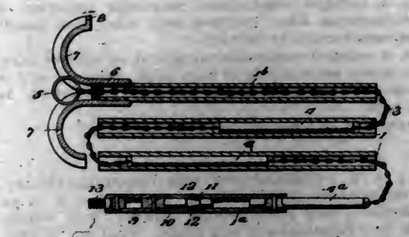
of links centrally pivoted together and connecting the sides of the frame with the legs of the ladder.

962,882. KEY-RING. ACHILL BIPPART, Newark, N. J. Filed Jan. 12, 1910. Serial No. 537,715.



A key-ring having three completely circular layers each divided at one point with the divided ends in contiguity and said layers fixedly secured together with the divisions of the several layers arranged to form a tongue upon the middle layer at one side of the joint of the key-ring and a recess between the two outer layers at the opposite side of the joint, the tongue and recess forming interlocking ends upon the layers and normally preventing lateral movement at the joint.

962,883. CLEANING-ROD FOR FIREARMS. JAMES H. BLAIR, Quebec, Quebec, Canada. Filed Nov. 2, 1909. Serial No. 525,904.



1. A collapsible rod embodying a plurality of tubular sections, a flexible connecting member passing through said sections, and a plurality of rigid core pieces disposed at intervals in the length of the connecting member and adapted to span the joints between the meeting ends of the sections.

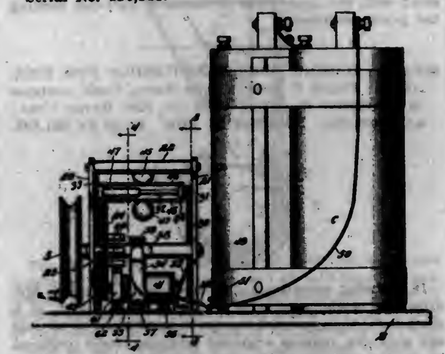
2. A collapsible rod embodying a plurality of tubular sections, a plurality of core pieces slidably mounted within the sections and adapted to span the joints between the meeting ends thereof, and flexible connections between the core pieces.

3. A collapsible rod embodying a plurality of tubular sections, a flexible connecting member passing through said sections and designed to be subjected to linear tension to maintain the said sections associated, and a plurality of core pieces disposed at intervals in the length of the connecting member and slidably mounted within the sections and arranged to span the joints between the meeting ends thereof when the connecting member is subjected to tension.

4. A collapsible rod embodying a plurality of tubular sections, a flexible connecting member passing through said sections, a plurality of core pieces incorporated at intervals in the length of the connecting member and slidably mounted within the sections, and means for holding the connecting member under tension to maintain the sections associated with the core pieces spanning the joints between the meeting ends thereof.

5. A collapsible rod embodying terminal and intermediate tubular sections, a flexible connecting member passing freely through one of the terminal sections and the intermediate sections, a core piece fastened to one end of the connecting member and arranged to span the joint between the other terminal section and the adjacent intermediate section and secured within the former, and a plurality of other core pieces disposed at intervals in the length of the connecting member and slidably mounted within the sections and adapted to span the remaining joints therebetween.

962,884. THERMO-ELECTRIC FURNACE-REGULATOR. JAMES H. BOBBITT, Harvard, Nebr. Filed Oct. 7, 1908. Serial No. 456,548.



1. In an apparatus of the class described, the combination of a thermostatically actuated circuit closer responsive to predetermined maximum and minimum temperature conditions, circuits connected with the said closer, draft regulating devices, and a motor mechanism controlled by the said circuit closer for operating the draft devices; said motor mechanism comprising a frame, a shaft mounted thereon, a wheel secured to the shaft, a weight-cord device for turning the wheel, a connecting element between the wheel and the draft devices, a contact finger mounted on the shaft to rotate therewith, spring contacts with which the contact finger is adapted to engage, a brake disk, a shaft supporting the same, a train of gears between the shafts, a governor on the second mentioned shaft, and connected with the brake disk, means for rotating the governor from the first mentioned shaft, a brake shoe arranged to engage the disk, a lever mounted to release the brake shoe, an armature connected with the lever, an electromagnet arranged opposite the armature and adapted to be connected in circuits when the circuit closer is closed and the contact finger is in engagement with either spring contact.

2. In an apparatus of the class described, the combination of a thermostatically actuated circuit closer responsive to predetermined maximum and minimum temperature conditions, circuits connected with the said closer, draft regulating devices, and a motor mechanism controlled by the said circuit closer for operating the draft devices; said motor mechanism comprising a frame, a shaft mounted on the frame, means tending to rotate the shafts, connecting means between the shaft and the draft devices for operating the latter, a wheel on the shaft, a plurality of contact members mounted on the wheel at another part, a spring contact arranged to engage said members as the wheel moves, a signal circuit opened and closed by spring contact and members for indicating the opened or closed condition of the draft, a brake device, a speed responsive means for operating the brake device, an armature for releasing the shoe of the brake device, an electromagnet opposite the armature and adapted to be connected in circuits by the circuit closer, a make and break device included in the said circuit, and a pawl on the armature bearing on the said wheel when the latter turns for holding the brake shoe released when the armature is disengaged, said wheel having means with which the pawl engages to stop the movement of the wheel when the draft devices are fully opened or closed.

3. In an apparatus of the class described, the combination of a furnace-regulating device, a motor mechanism connected therewith, a thermostatically-actuated switch, electrical means controlling the operation of the mechanism and connected in circuit by the switch, oppositely-disposed and spaced electro-magnets independently connected in circuit by the switch, a common index device actuated by the electro-magnets for indicating the draft conditions of the furnace, an audible signal, and a make and break device operated by and connected with the motor mechanism for actuating the audible signal in a predetermined manner during the opening of the draft and in a different manner during the closing of the draft.

962,885. DOVETAIL TONGUE AND GROOVE CUTTER. CHRISTIAN BODMER, New Britain, Conn., assignor to The Stanley Rule & Level Company, New Britain, Conn., a Corporation of Connecticut. Filed Nov. 26, 1909. Serial No. 529,864.



1. In a tool of the character described, a cutter carrier comprising a body portion, a relatively long narrow obliquely arranged sole, a cutter therefor, a movable guide cooperating with said cutter carrier secured to the side thereof, said guide including a sole portion arranged obliquely to the adjacent side of the cutter carrier, the outer edge of said sole having a bearing paralleling the side of the sole portion of the cutter carrier.

2. In a tool of the character described, a cutter carrier including a long narrow sole arranged obliquely to the sides of the carrier, a bearing support for a cutter, and means for securing a cutter in said carrier, a cutter, a guide including two sides arranged obliquely, means for securing one of said sides to said cutter carrier, said means permitting said parts to partake of limited independent movement.

3. In a tool of the character described, a cutter carrier comprising a body portion, a long narrow sole portion arranged obliquely to the sides of the body, with means for supporting and securing the cutter, a cutter, means for holding said cutter carrier at an angle relatively to the work, and a connection between said means and said cutter carrier to permit said parts to move one on the other.

4. In a tool of the character described, a cutter carrier comprising a body portion, a long narrow sole portion arranged obliquely to the sides of the body, with means for supporting and securing the cutter, a cutter, means for holding said cutter carrier at an angle relatively to the work, a connection between said means and said cutter carrier to permit said parts to move one on the other, and means to limit the degree of movement of said parts in one direction.

5. In a tool of the character described, a cutter carrier comprising a body portion, a long narrow sole portion arranged obliquely to the sides of the body, with means for supporting and securing the cutter, a cutter, means for holding said cutter carrier at an angle relatively to the work, a connection between said means and said cutter carrier to permit said parts to move one on the other, and means to limit the degree of movement of said parts in one direction, said means being adjustable.

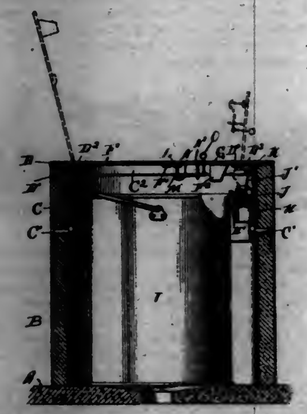
[Claims 6 to 16 not printed in the Gazette.]

962,886. ANIMAL-POISONING PRODUCT. FRANK BOLDUAN and CLAIR S. DYAS, Chicago, Ill.; said Dyas assignor to said Bolduan. Filed Oct. 20, 1908. Serial No. 458,684.



An animal poisoning product, comprising independent companion recessed cakes of a mixture of granular blood and mutton suet, the recessed cakes retaining and surrounding a poisonous tablet, and being sealed together by means of stearin, substantially as described.

962,887. GARBAGE-CAN RECEPTACLE. THOMAS P. BOLGER, Gloucester, Mass. Filed Jan. 23, 1908. Serial No. 412,345.



1. A garbage receptacle provided with a collar at its upper edge, a pair of oppositely hinged covers of different sizes connected to said collar, the larger cover being provided with a cut-away portion to receive the smaller cover, a receptacle mounted in said receptacle for holding a disinfecting liquid, a spout connected to the disinfecting receptacle adjacent its bottom, a piston mounted in said receptacle of a smaller diameter than the receptacle, a piston rod pivotally connected to said piston and a crank arm carried by the smaller cover connected to said piston rod.

2. A garbage can receptacle formed of a plastic material having an interior metal ring adjacent its upper end and a collar carried by said ring resting upon the edge of said receptacle, said collar being provided with inwardly projecting portions, of covers hinged to said portions, one of said covers being provided with a cut-away portion to receive the other cover, means for supporting the covers flush with each other, a disinfecting receptacle arranged in said first mentioned receptacle and a plunger working loosely in said disinfecting receptacle operated by one of said covers.

962,888. PRIMER FOR SMALL-ARM AMMUNITION. WILLIAM H. BUELL, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed May 23, 1910. Serial No. 563,002.



In a primer for small arms ammunition, the combination with a drawn sheet-metal cup, of a sheet-metal anvil having curved ends and adapted to be sprung into the cup in which it is retained by spring tension and having its sides cut away to provide for the escape of the flames, and struck inward at its center to form an operating apex, a primer mixture located in the cup, and an explosive binder interposed between the apex of the anvil and the body of the primer-mixture and forming a continuous film or coating over the primer-mixture and adhering at its edges to the side walls of the cup, the said film making contact with the apex of the anvil and having a smooth outer surface but having its inner surface incorporated with the upper layer or layers of particles forming the primer-mixture.

962,889. SLIDING OPERATING-HANDLE FOR FIRE-ARMS. FRANK F. BURTON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Mar. 28, 1910. Serial No. 551,865.



In a sliding operating-handle for tubular magazine fire-arms, the combination with a tubular wooden grip, of a sheet-metal shell inserted therein to and formed at its rear end with two radially arranged retaining-leaves produced by folding portions of the shell upon themselves, a sleeve entered into the rear end of the shell, and an action-bar carried by the sleeve.

962,890. HARNESS FOR CONTROLLING ANIMALS. ATVILL BYRD and CHARLES R. TREADWAY, Kansas City, Mo. Filed Oct. 6, 1908. Serial No. 456,395.

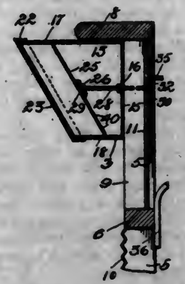


1. A harness consisting of one or more operable-ropes adapted to be arranged into running loops to engage the fetlock joints of an animal, means for holding said operable-ropes in position upon the animal, self-locking members for holding the loops under tension, and releasing members for relieving the loops of tension, said releasing members being independent of the locking members and provided with integral handles whereby they may be rotated out of engagement with the loops.

2. A harness consisting of a back-strap, a pair of releasing members carried thereby, a breast-strap attached to said releasing members, a pair of self-locking members connected to the back-strap, and a pair of operable-ropes extending through said self-locking members and attached at their rear ends to the releasing members, so that the breast-strap and the end of one of said operable-ropes may be simultaneously disconnected from the harness.

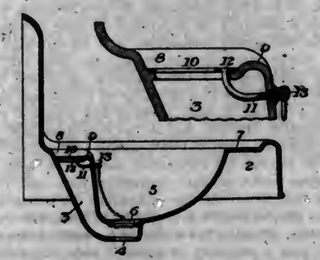
3. A harness consisting of one or more operable-ropes adapted to be arranged into running loops to engage the fetlock joints of an animal, means for holding said operable ropes in position upon the animal, self-locking members for holding the loops under tension, and releasing members for releasing the loops of tension; each of said releasing members being fulcrumed on the harness, and consisting of a hook for engaging one end of the operable rope, a bolt for holding the end of the operable-rope upon the hook, and a handle integral with the hook whereby the latter may be rotated out of engagement with the end of the operable-rope, substantially as described.

962,891. WASHBOARD ATTACHMENT. JOHN RANDOLPH CASEY, Mountain Home, Ark. Filed Oct. 18, 1909. Serial No. 523,210.



The combination with a washboard, of two lengthwise positioned cleats at the upper end of said board, a perforated receptacle having a threaded aperture within its bottom and flanges secured to said cleats, the upper edge of said receptacle being oblique to its bottom, a lid frame hinged to said receptacle, a wire net secured to said lid frame, a screw held within said aperture having a round head at one end and a square portion at the other, a follower loosely held within said receptacle having a socket to receive said rounded head, and a turn button having a perforated ear extending at right angles and secured to the square end of said screw and serving as a suspending means for said washboard.

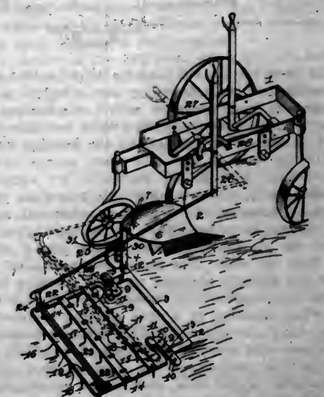
962,892. LAVATORY. JAMES H. DANVER, Beaver, Pa., assignor to United States Sanitary Manufacturing Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed July 22, 1909. Serial No. 508,988.



1. A lavatory having an overflow chamber and a recess forming an overflow passage communicating with said chamber, a strainer forming the bottom of the recess, and a bent bolt passing through the strainer with its head engaging the same, the other end of the bolt passing out through the front wall of the overflow chamber to the bowl, and having a detachable securing device, substantially as described.

2. A lavatory having an overflow chamber and a recess forming an overflow passage communicating with said chamber, a strainer forming the bottom of the recess, and a bent bolt passing through the strainer with its head engaging the same, the other end of the bolt passing out through the front wall of the overflow chamber to the bowl, and a chain stay detachably secured to the end of the bolt and forming a securing means therefor, substantially as described.

962,893. PLOW ATTACHMENT. LEO DETTRICK, Stickney, S. D. Filed Oct. 4, 1909. Serial No. 520,771.



1. A device of the character described comprising a body-portion adapted to be secured to a plow, arms formed integral with said body-portion, socket pieces adjustably secured to said arms, and a harrow pivotally mounted on said socket pieces.

2. A device of the character described comprising a body-portion terminating in an upstanding angled piece adapted to be secured to the mold-board of a plow, arms extending from said body-portion, and cross pieces adjustably mounted on said arms, said cross pieces terminating in angled portions forming sockets adapted to receive the ends of a harrow.

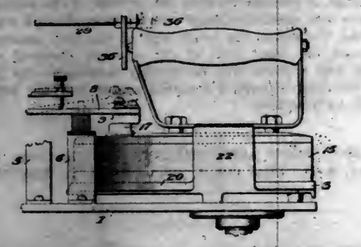
3. A device of the character described comprising a body-portion terminating in an upstanding end portion, arms extending rearwardly from said body-portion, socket pieces adjustably mounted upon said arms, an angled piece secured to said end portion, and a supporting roller mounted upon said angled piece.

4. A device of the character described comprising a body-portion, said body-portion terminating in an upstanding portion adapted to be secured to a plow, a pair of arms extending rearwardly from said body-portion, one of said arms at the outer end of said body, the other of said arms being located near said upturned portion, and socket pieces secured to said arms.

962,894. SHOE FOR PRESSING-IRON STANDS. FRANK E. EMERY, New York, N. Y. Filed Dec. 8, 1908. Serial No. 465,881.

1. The combination with an electrically heated pressing iron having contacts, of a shoe adapted to receive said pressing iron, electrical switch mechanism located adjacent the shoe and provided with movable contacts adapted to engage the contacts on the pressing iron when

the latter is fully on the shoe, said switch mechanism being provided with means positioned for actuation by the pressing iron when the latter is placed on the shoe, to cause engagement of the contacts aforesaid, said shoe having means for substantially preventing vertical movement of the pressing iron when being placed on or removed from the shoe, thus preventing accidental engagement of the movable contacts with the pressing iron.



2. The combination with an electrically heated pressing iron having contacts, of a shoe adapted to receive said pressing iron, electrical switch mechanism located adjacent the shoe and provided with movable contacts adapted to engage the contacts on the pressing iron when the latter is fully on the shoe, said switch mechanism being provided with means positioned for actuation by the pressing iron when the latter is placed on the shoe, to cause engagement of the contacts aforesaid, said shoe having means for substantially preventing lateral movement of the pressing iron when being placed on or removed from the shoe, thus preventing accidental engagement of the movable contacts with the pressing iron.

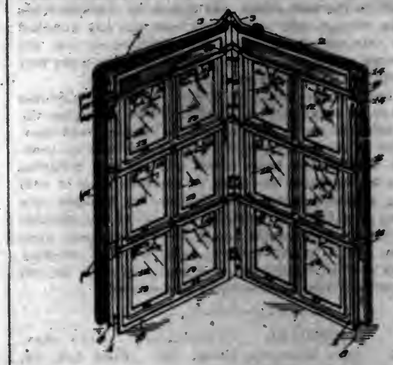
3. The combination with an electrically heated pressing iron having contacts, of a shoe adapted to receive said pressing iron, electrical switch mechanism located adjacent the shoe and provided with movable contacts adapted to engage the contacts on the pressing iron when the latter is fully on the shoe, said switch mechanism being provided with means positioned for actuation by the pressing iron when the latter is placed on the shoe, to cause engagement of the contacts aforesaid, said shoe having means for substantially preventing both vertical and lateral movements of the pressing iron when the latter is being placed on or removed from the shoe, thus preventing accidental engagement of the movable contacts with the pressing iron.

4. The combination with an electrically heated pressing iron having contacts, of a shoe adapted to receive said pressing iron, electrical switch mechanism located adjacent the shoe having movable contacts adapted to engage the contacts on the pressing iron when fully on the shoe and provided with means positioned for actuation by the pressing iron when the latter is placed on the shoe, to cause engagement of said contacts, said shoe having upright guards provided with inwardly projecting parts which overhang the pressing iron and substantially prevent both lateral and vertical movements of the pressing iron when on the shoe, thus preventing accidental engagement of the contacts with the pressing iron.

962,895. LOOSE-LEAF LEDGER. CLARENCE H. GARDNER, Santa Barbara, Cal. Filed Dec. 18, 1909. Serial No. 533,778.

1. A loose leaf system of filing accounts comprising a plurality of leaves arranged in book form, pockets carried by both surfaces of said leaves, said pockets being arranged in horizontal rows, and a resilient band for normally sealing the corresponding rows of each surface of said leaves.

2. A loose-leaf system of filing accounts comprising a plurality of leaves arranged in book form, pockets carried by both surfaces of each leaf, said pockets being arranged in horizontal rows and each having a transparent face so that their contents may be inspected, and resilient sealing means for each corresponding row of pockets on both surfaces of said leaves.



3. A loose leaf system of filing accounts comprising a plurality of leaves arranged in book form, pockets carried thereby, said pockets being arranged in corresponding rows on both surfaces of each leaf, flexible bands surrounding each leaf, said bands being arranged so that one of the same will normally seal the corresponding row of pockets of each page, and means for fastening said bands to said leaves.

4. A loose-leaf system of filing accounts comprising a plurality of leaves arranged in book form, pockets carried by both surfaces for said leaves, said pockets being arranged in longitudinal rows, and a resilient band for normally sealing each row of pockets, the band surrounding the leaves and sealing the pockets on both surfaces thereof, said bands being secured to the leaves between the pockets to permit access to be had to one pocket without unsealing the other pockets.

962,896. ADJUSTABLE IRREGULAR CURVE. ANTON GASPARICH, Oakland, Cal. Filed June 19, 1909. Serial No. 503,242.



1. An instrument of the character described comprising a bar provided with a plurality of openings, a casing mounted for rotative movement in each opening, a flexible rule, and a plurality of parallel rods each having an independent adjustable connection with one of said casings and an independent pivotal connection with said rule.

2. An instrument of the character described comprising a bar provided with a plurality of transverse openings, a casing mounted in each opening and adapted for rotative movement therein, means for retaining said casings in said openings, a flexible rule, and a plurality of parallel rods each having an adjustable connection with one of said casings and a pivotal connection with said rule.

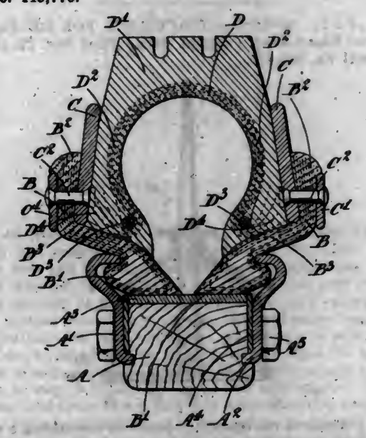
3. An instrument of the character described comprising a bar provided with a plurality of independently movable casings, gripping jaws carried by each casing, a flexible rule, and a plurality of parallel rods adjustably held within said casings by said jaws and each having an independent pivotal connection with said rule.

4. An instrument of the character described comprising a bar, a plurality of independently movable casings in said bar, a pair of spring-pressed gripping jaws carried by each casing, a rod projecting through said bar and said casing and normally held by said jaws, a flexible rule, a pivotal connection between each rod and said rule, and means carried by said casing for separating said jaws to permit longitudinal adjustments of said rods.

5. An instrument of the character described comprising a bar, a plurality of casings rotatably mounted therein, opposed spring-pressed gripping jaws carried by each casing, a plurality of parallel rods arranged one for each casing and normally held therein by said jaws, a flexible rule having an independent pivotal connection with each rod, and means carried by said casings for separating said jaws to permit longitudinal adjustments of said rods.

[Claims 6 to 14 not printed in the Gazette.]

962,897. PNEUMATIC TIRE. WILLIAM BAKER HARTRIDGE, Seaford, England. Filed Aug. 22, 1908. Serial No. 449,770.



1. A pneumatic tire of the clencher type, having rim-engaging portions, and a stiffening ring adjacent each rim-engaging portion, that portion of the tire between each rim-engaging portion and the adjacent stiffening ring being disposed to receive longitudinal stress when the tire is inflated, substantially as described.

2. In a pneumatic tire the combination with a flexible wall of two floating rings secured one to each side of the wall by local fastenings which do not extend through the tire to the other side.

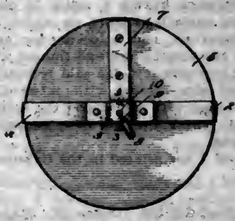
3. In a pneumatic tire the combination with a tread portion of separate walls provided with ring-supports secured one on each side of the wall by local fastenings which do not extend through the tire to the other side.

4. In a pneumatic tire the combination with a tread portion having stiffening or inextensible edges of separate flexible stiffened walls and having beaded edges substantially as described.

5. A pneumatic clencher tire, having a rim engaging portion and a stiffening ring on each side of the tire and secured to the rim engaging portions, said stiffening rings being interposed between the side walls of the tread and the respective rim engaging portions to prevent separation of the sides of the tire when inflated; substantially as described.

962,898. RECEPTACLE-COVER FASTENER. HARRY JACOBSON, Chicago, Ill. Filed Apr. 4, 1910. Serial No. 553,443.

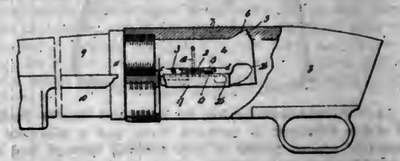
1. In a device of the character described, the combination with a receptacle, of a keeper borne by a band fastened to the receptacle and extending from side to side of its mouth, and a detachable cover for the receptacle carrying a hasp adapted to be locked to the keeper.



2. In a device of the character described, the combination with a receptacle, of a keeper borne by a band fastened to the receptacle and extending from side to side of its mouth, and a detachable cover for the receptacle carrying a hasp adapted to yieldingly engage the keeper to press the cover tightly on the receptacle.

3. In a device of the character described, the combination with a barrel, of a keeper borne by a band fastened to a hoop of the barrel and passing under another hoop thereof and extending from side to side of the open head of the barrel, and a detachable cover for the barrel having a hasp adapted to be locked to the keeper.

962,899. TAKE-DOWN GUN. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Apr. 25, 1910. Serial No. 557,357.



1. In a take-down gun, the combination with the frame thereof, of a longitudinally and vertically movable breech-block, a sliding operating-handle, an action-bar extending rearwardly from the said handle and connected with the breech-block for the operation thereof, and means positively operated by the action-bar for locking the breech-block in its elevated position at the time the gun is taken down.

2. In a take-down gun, the combination with the frame thereof, of a longitudinally and vertically movable breech-block, a sliding operating-handle, an action-bar extending rearwardly from the said handle and connected with the breech-block for the operation thereof, and a locking-dog coacting with the breech-block and gun-frame, and positively operated by the action-bar for locking the breech-block in its elevated position when the gun is taken down and for positively unlocking the breech-block when the gun is assembled.

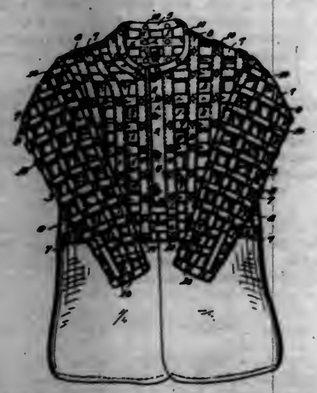
3. In a take-down gun, the combination with the frame thereof, of a longitudinally and vertically movable breech-block, a sliding operating-handle, an action-bar extending rearward from the said handle and connected with the breech-block for the operation thereof, and a locking-dog carried by the breech-block, coacting with the gun-frame for holding the breech-block in its locked position when the gun is taken down and positively operated in either direction by the action-bar.

4. In a take-down gun, the combination with the frame thereof, of a longitudinally and vertically movable breech-block, a sliding operating-handle, an action-bar extending rearwardly therefrom, and a locking-dog coacting with the breech-block and gun-frame, and formed at its respective ends with depending fingers which are directly operated upon by the action-bar for positively swinging the dog into its locking and unlocking positions.

5. In a take-down gun, the combination with a gun-frame having a locking-notch formed in the inner face of one of its side walls, of a longitudinally and vertically movable breech-block having a recess in one of its side walls, a sliding operating-handle, an action-bar extending rearwardly therefrom, and a locking-dog located in the said recess in the breech-block and formed with a locking projection for entrance into the said locking-notch in the gun-frame, and also formed with outwardly projecting fingers for coaction with cams upon the action-bar which cams positively swing the dog into its locking and unlocking positions.

[Claims 6 and 7 not printed in the Gazette.]

962,900. SWEAT-SHIRT. JOHN W. JORDAN, Jackson, Miss. Filed Sept. 22, 1909. Serial No. 518,892.



An undergarment having its body and sleeves formed of strips arranged in network form, and a plurality of regularly spaced pieces of cork passing through and extended beyond both surfaces of the material of said garment for holding the same spaced from the wearer's body and also from an outer garment.

962,901. MASSAGE APPARATUS. HENRY C. KARPENSTEIN, New York, N. Y. Filed Nov. 22, 1904. Serial No. 233,827.



1. A massage apparatus comprising a fluid-conduit, an air-conduit opening into said fluid-conduit, a valve in the air-conduit, and a massage implement connected with the air-conduit.

2. A massage apparatus comprising a fluid-conduit, an air-conduit opening into said fluid-conduit, the fluid-conduit upon the eduction side of the air-conduit being contracted, a valve in the air-conduit, and a massage implement connected with the air-conduit.

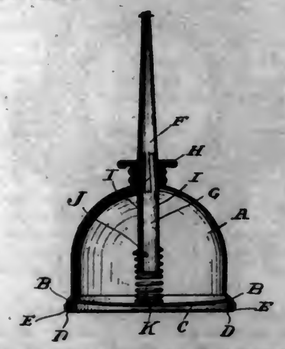
3. In a massage apparatus, a body portion through which is a passage, a lateral passage opening into the first named passage, plugs in the lateral passage through which are openings, and a valve movable between the plugs.

4. In a massage apparatus, a body portion through which is a passage, a lateral passage opening into the first named passage, plugs in the lateral passage through which are openings, the inner plug having across its outer face a slot leading from the opening, and a valve movable between the plugs.

5. A massage apparatus comprising a body portion through which is a passage, a lateral passage opening into the first named passage, a pipe leading from said first-named passage, a partition partially closing the pipe, and a massage implement connected with the lateral passage.

[Claim 6 not printed in the Gazette.]

962,902. SPRING ATTACHMENT FOR OIL-CANS. WIRT BEAAT KING, Fairfield, Iowa. Filed Nov. 22, 1909. Serial No. 529,430.



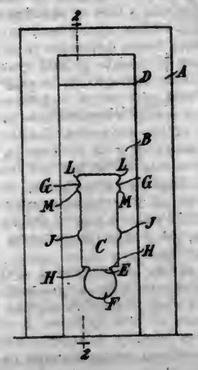
1. A device of the character described comprising a can, a discharge spout, a vertically arranged tube carried within said can, the outer end of said tube provided with longitudinal slots permitting an adjustment to the size of said spout, an aperture in the inner end of said tube, a spring coiled around the end of said tube, one end of said spring entering said aperture, and means permitting the passage of oil from the can into the tube.

2. In a device of the character described, the combination of a can, a discharge spout, a tube carried within said can, the outer end of said tube having longitudinal slots permitting an adjustment to the size of said spout, a spring encircling the inner end of said tube and having a detachable connection thereto, and oppositely arranged apertures near the outer end of said tube, permitting the passage of oil from the can into the spout.

3. An attachment for dispensing cans comprising a tube adapted to fit within the body of said can, said tube having one end slotted to permit the same to be compressed so that it may have a binding engagement within the discharge spout of said can, the body of said tube being apertured, and a spring, one end of said spring coiled about the inner end of said tube and secured thereto, the other end adapted to yieldably contact with the bottom of said can.

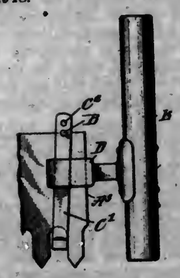
962,903. EASEL OR THE LIKE. FRANK J. KRISTOFEK, Coshocton, Ohio, assignor to The Meek Company, Coshocton, Ohio, a Corporation of New Jersey. Filed July 21, 1908. Serial No. 444,593.

1. An easel or the like having a frame, a support and a brace, the support being imperforate at its upper and lower ends and having an opening between such ends, and being fastened to said frame at its top, and said brace being fastened at its bottom to said frame, and having its body portion extending upwardly, and said brace being of substantially the same contour as the opening in said support and being adapted to fill said opening when the parts are in closed position, whereby in such position said brace tends to keep said support closed and said support tends to keep said brace closed, and said support having near its lower end a part adapted to be engaged by said brace, and said brace having near its upper end an inter-engaging part substantially as set forth.



2. An easel or the like having a frame, a support and a brace, the support being imperforate at its upper and lower ends and having an opening between such ends, and being fastened to said frame at its top, and said brace being fastened at its bottom to said frame, and having its body portion extending upwardly, and said brace being of substantially the same contour as the opening in said support and being adapted to fill said opening when the parts are in closed position, whereby in such position said brace tends to keep said support closed and said support tends to keep said brace closed, and said support having near its lower end a part adapted to be engaged by said brace, said part lying at the lower end of said opening so that said opening is above said part, and said brace having projections L L M M and intermediate notches G, said projections L L being adapted to pass through said enlarged part of said opening in said support so that said notches G receive the edges of said support below said enlarged portions.

962,904. SAW-HANDLE. WILLIAM SPENCER LOCKE, Lents, Oreg., assignor of one-half to Portland Realty & Trust Company, Portland, Oreg. Filed Sept. 28, 1909. Serial No. 519,948.



1. The combination substantially as herein described comprising a saw blade having a notch in its lower edge and provided with a notch in its upper edge, a stirrup having its base bar adapted to be engaged in the notch in the lower edge of the saw and its opposite arms separate and extending up along the opposite side of the saw, a pin connecting the arms of the stirrup and engaging in the top notch of the saw blade, the notches in the upper and lower edges of the blade being so related that the edge of the stirrup arms will be at an angle to the adjacent end edge of the saw blade, and a handle having a shank slitted to receive the saw blade and provided with recesses receiving the stirrup and adapted to engage with the stirrup to interlock the handle with the saw by a sliding movement of the shank along the stirrup, substantially as set forth.

2. The combination of a saw blade and a handle attachment comprising a bearing section applied to the saw blade and inclined relatively to the end of the blade, and a handle having a shank slidable transversely along the saw blade and longitudinally along the bearing section into and out of engagement with the end of the saw blade substantially as set forth.

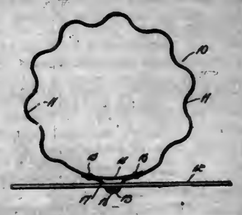
3. A saw handle attachment having in combination a stirrup adapted for application to a saw blade, and a handle having a shank bifurcated to receive the saw blade with its arms recessed in their inner faces to receive the stirrup, the shank being slidable along the stirrup, substantially as set forth.

4. A handle attachment for saw blades comprising a stirrup having arms to fit on opposite sides of a saw blade, and means adjacent the ends of the arms to engage with the upper and lower edges of a saw blade, whereby it may be suitably positioned on a blade, and a handle shank slidable longitudinally along the stirrup, substantially as set forth.

5. A handle attachment for saw blades comprising a stirrup having spaced apart arms to fit on opposite sides of the saw blade, and a pin connecting the front ends of said arms to engage the edge of a saw blade and extending at its ends for engagement by a handle shank, and a handle shank movable along the stirrup, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

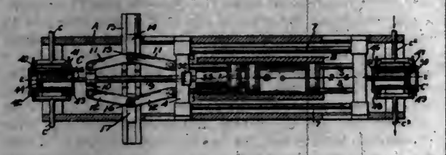
962,905. FENCE-POST. SIDNEY W. LOOMIS, Sioux Falls, S. D. Filed Sept. 9, 1909. Serial No. 516,922.



1. A fence post comprising a tubular sheet metal body formed in longitudinally extending corrugations and overlapping at the edges, and fastening means between the side edges of the corrugation which is located at one edge of the body and the opposite edge of the body, whereby a longitudinal outwardly directed rib is formed at one side of the post structure, said rib having a plurality of transverse slots spaced apart and adapted to receive the fence elements.

2. A fence post comprising a tubular sheet metal body formed in longitudinally extending corrugations and overlapping at the edges, fastening means between the side edges of the corrugation which is located at one edge of the body and the opposite edge of the body, whereby a longitudinal outwardly directed rib is formed at one side of the post structure, said rib having a plurality of transverse slots spaced apart and adapted to receive the fence elements, and a holding member inserted within said rib and adapted to support the fence elements therein.

962,906. STEAM-PUMP. JOHN MARCH, Dillon, Mont. Filed Mar. 3, 1909. Serial No. 481,162.

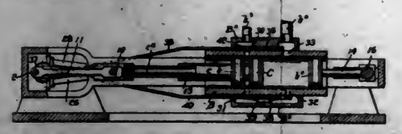


1. In a steam pump, the combination of a frame, a steam cylinder, sliding heads in the opposite ends of said cylinder, a sliding frame to which said heads are connected, a piston between said sliding heads, pumping cylinders adjacent to each end of said steam cylinder containing pistons, the piston of one being connected to the piston rod of the piston in the steam cylinder and the piston of the other connected to the sliding frame with which said sliding heads are connected, and the steam controlling mechanism, substantially as set forth.

2. In a steam pump, the combination of a frame, a steam cylinder, sliding heads therein, a sliding frame mounted in the main frame and connected to said sliding heads, a piston between said sliding heads, a piston rod extending out through one of said sliding heads with a cross-head on its outer end, toggle links connecting the sliding frame with said cross-head hinged to sliding blocks mounted in a transverse way, the pumping cylinder provided with controlling inlet and exhaust valves, pistons in said pumping cylinders one of which is connected to the piston rod of the steam cylinder piston and the other of which is connected to the sliding frame connected to the sliding heads on the steam cylinder, and the steam controlling mechanism, substantially as set forth.

3. In a steam pump, the combination of a frame, the steam cylinder, the pumping cylinders, the valves for controlling the inlet and exhaust ports of said pumping cylinders, the sliding heads in said steam cylinder connected to a sliding frame, said sliding frame, a piston between said sliding heads, a connection between said piston and the piston of one pumping cylinder, a connection between the sliding frame and the piston of the other pumping cylinder, steam inlet and exhaust ports leading into the steam cylinder on the opposite sides of the piston, sliding valves for controlling said ports, and a connection between the sliding frame and said sliding valves for shifting their position, substantially as set forth.

962,907. STEAM-ENGINE. JOHN MARCH, Dillon, Mont. Filed Mar. 3, 1909. Serial No. 481,163.



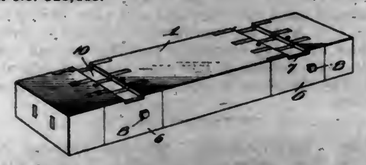
1. A steam engine comprising a frame, a compound crank-shaft having a series of cranks extending in right angular directions to each other, a plurality of cylinders each containing sliding piston heads with a piston between them, said piston heads connected to a sliding frame, said sliding frame connected by a pitman to cranks of said crank-shaft, said piston, and a piston rod connected therewith and connected to a crank of said crank-shaft extending oppositely from the cranks to which said frame is connected, the piston and piston heads of one cylinder being connected to cranks which extend at right angles to those to which the piston and piston heads of the other cylinder are connected, substantially as set forth.

2. An engine comprising a frame, a compound crank-shaft journaled in said frame with cranks extending at right angles to each other, a plurality of steam cylinders, sliding piston heads mounted in each of said steam cylinders, the piston heads of each cylinder being connected to a sliding frame, each of said frames connected by pitman-rods to cranks of said crank-shaft, the cranks to which one frame are connected extending at right angles to those to which the other frame are connected, a piston in each cylinder, a piston rod connected with each piston and connected to a crank on said crank-shaft, the crank to which one piston is thus connected extending at right angles to the crank to which the other piston is connected, the steam regulating valves and means for operating them, substantially as set forth.

3. In a steam engine, the combination of a frame, a compound crank-shaft journaled in bearings therein, a steam cylinder having a bore of uniform diameter throughout its length, a sliding piston-head in each end of said cylinder, a sliding frame connected to each of said sliding piston heads and to cranks of said crank-shaft, a piston between said sliding piston heads in said cylinder, a piston rod connected with said piston and formed for a distance of a diameter to occupy a considerable portion of and contract the area of the expansion chamber on one side of said piston as compared with the area on its opposite side, a connection from said piston rod to a crank of said crank-shaft, a steam chest, a valve therein for controlling the inlet and exhaust of the steam, another steam chest affording a by-pass from one side of the piston to the other, a valve therein, and means for operating said valves, substantially as set forth.

4. A steam engine comprising a frame, a compound crank-shaft, a steam cylinder, steam supply and regulating mechanism connected therewith, sliding piston heads in the opposite ends of said cylinder, a sliding piston between said piston heads, a cylinder connected to one side of said piston and extending through one of said piston heads of a sufficient diameter to make the chamber on one side of said piston of smaller area and therefore a high expansion chamber while the chamber on its opposite side is of a larger area and therefore becomes a low expansion chamber, a sliding frame connected with said piston heads, a connection between said sliding frame and the crank-shaft and another connection between said piston and said crank-shaft, substantially as set forth.

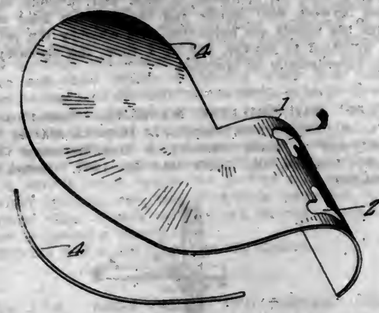
962,908. RAILWAY-TIE. JOHN B. MARTIN and EDWARD W. KATZER, Wallace, Idaho. Filed Oct. 19, 1909. Serial No. 523,443.



1. A railway tie comprising longitudinal bars having intermediate enlarged portions, the upper edges of which are provided with grooves, plates located on the opposite sides of said bars but separated therefrom and also provided with similar grooves registering with the grooves formed on said bars, and means for securing the several parts together out of contact with one another and plastic material for completing the tie as and for the purpose described.

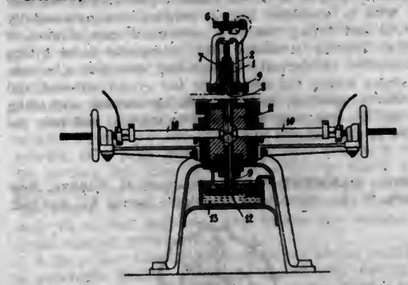
2. A railway tie comprising longitudinal bars extending the full length of said tie and having intermediate enlarged portions, the upper edges of which are provided with grooves, rods separating said bars and holding the same rigidly opposite in relation to one another, plates located on the opposite sides of the tie and having grooves formed in their upper edges registering in alinement with the grooves formed in the upper edges of the enlarged portions of the longitudinal bars, bolts passing through the bars and through the plates, and suitable means for holding the base of the rails within the grooves thus formed as and for the purpose described.

962,909. MOLDBOARD FOR CULTIVATOR-SHOVELS. WILLIAM M. MEDCALF, May, Tex., assignor of one-half to Thomas D. Snipes, May, Tex. Filed Aug. 28, 1909. Serial No. 515,068.



The combination with a stock and shovel secured to the stock, of a mold board formed in a single sheet of metal and including a laterally curved head embracing and detachably secured to the stock, there being an upwardly extending wing at one side of the head and the edge of which extends upwardly at an angle from the upper edge of the head and thence downwardly and merges into the bottom edge of the head to form an ogee curve.

962,910. APPARATUS FOR THE CONTINUOUS MANUFACTURE OF FILAMENTS. GEORGES MICHAUD and EUGÈNE DELASSON, Montreuil, Seine, France. Original application filed Oct. 30, 1907, Serial No. 399,963. Divided and this application filed Sept. 30, 1908. Serial No. 455,526.

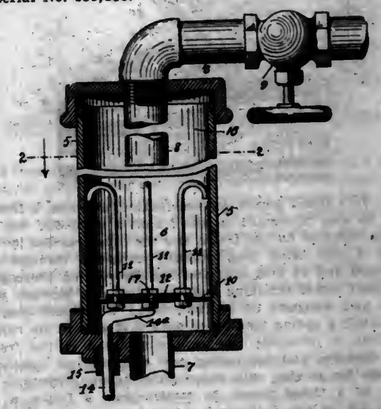


1. Apparatus for the manufacture of filaments from oxids of the rare metals, comprising a press adapted to receive agglomerated raw material, a nozzle through which the material is caused to pass by said press for forming a filament, an electric furnace having an infusible tube through which the filament passes and electric carbons for producing an arc for heating said tube, and a knife arranged at the extremity of said infusible tube for severing the filament as it leaves said tube.

2. Apparatus for the manufacture of filaments from oxids of the rare metals, comprising a press adapted to receive agglomerated raw material, a multiple nozzle through which the material is caused to pass by said press for forming a plurality of filaments arranged in parallelism, an electric furnace having an infusible tube through which the filament passes and electric carbons for producing an arc for heating said tube, and a knife arranged at the extremity of said infusible tube for severing the filament as it leaves said tube.

3. Apparatus for the manufacture of filaments from oxids of the rare metals, comprising a press adapted to receive agglomerated raw material, a multiple nozzle through which the material is caused to pass by said press for forming a plurality of filaments arranged in parallelism, a knife arranged for severing the said filaments, an electric furnace having an infusible tube through which the filament passes and electric carbons for producing an arc for heating said tube, a series of movable infusible plates for conveying the said filaments through said infusible tube, and means for actuating said infusible plates.

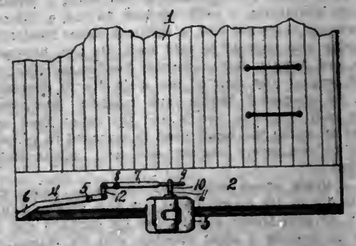
962,911. AUTOMATIC LIQUID-MEASURING DEVICE. HOMER MORRIS, Los Angeles, Cal., assignor of one-half to H. R. Gage, Oceanpark, Cal. Filed Apr. 12, 1909. Serial No. 480,465.



1. A device for measuring liquids comprising a vertical measuring chamber; an inlet pipe opening into said measuring chamber opening at the bottom thereof; a discharge pipe opening out of the top of said measuring chamber; a valve on said discharge pipe; a reduction disk having a central aperture therein in said measuring chamber; means to guide said reduction disk in its rise and fall in said chamber and retain the same in a horizontal position; and means to regulate the distance of movement of said reduction disk in said chamber.

2. A device for measuring liquids comprising a measuring chamber; an inlet pipe opening into said measuring chamber at the bottom thereof; a discharge pipe opening into and projecting a short distance into the top of said measuring chamber; a valve on said discharge pipe; a reduction disk having a central aperture therein in said measuring chamber; guides secured to said disk; and means to regulate the position in said chamber of said reduction disk.

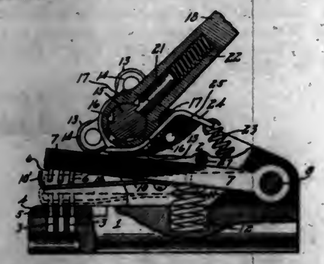
962,912. UNCOUPLING-LEVER. WALTER P. MURPHY, St. Louis, Mo. Filed Nov. 30, 1908. Serial No. 465,185.



The combination with the end sill of a car, of a hand operated lever pivotally mounted on the end face of said sill and extending in a substantially horizontal plane, a coupling pin lifting lever also pivotally mounted on said

end face but in a higher horizontal plane and extending therein substantially parallel with said hand lever, and a link connecting the inner end of the hand lever with the outer end of the pin lifting lever.

962,913. RAILWAY-TICKET PUNCH. HARRY E. PALMER, Dayton, Ohio. Filed Sept. 7, 1909. Serial No. 516,496.



1. In a ticket punch, in combination, a frame, a female die, an arm fulcrumed on the frame, a male die, one die being mounted on the frame and the other carried by the arm, a slot being longitudinally extended through the forward end of said arm and the die carried thereby, a resilient ticket retaining and stripping arm between said dies and designed to be compressed when said arm is actuated, a spring tending to hold said arm in its raised position, a revoluble cam-member mounted in the frame for engaging and depressing said arm, and an operating handle for moving said cam-member in one direction.

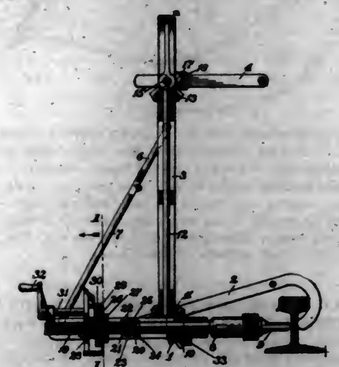
2. In a ticket punch, in combination, a frame, a female die, an arm fulcrumed on the frame, a male die, one die being mounted on the frame and the other carried by the arm, a slot being longitudinally extended through the forward end of said arm and the die carried thereby, a resilient ticket retaining and stripping arm between said dies and designed to be compressed when said arm is actuated, a spring tending to hold said arm in its raised position, a revoluble cam-member, a shaft for the latter mounted in said frame, a ratchet on said shaft, and an operating handle engaging said ratchet for moving said cam-member to depress said arm.

3. In a ticket punch, in combination, a frame, a female die, an arm fulcrumed on the frame, a male die, one die being mounted on the frame and the other carried by the arm, a resilient ticket-retaining and stripping arm between said dies and designed to be compressed when said arm is actuated, a spring tending to hold said arm in its raised position, a revoluble cam-member having rollers for engaging and depressing said arm, a ratchet carried by said cam-member, and an operating handle for engaging said ratchet to turn said cam-member to cause each roller thereof to successively engage and depress said arm.

4. In a ticket punch, a frame containing a female die, an arm containing a male die and having a fulcrum at its extreme rearward end, a resilient ticket-retaining and stripping arm secured to said male die arm between the male and female dies, rotatable head-supporting rollers which engage the arm of the male die to depress said arm, an operating handle, and ratchets interposed between said operating handle and the roller head and by means of which the roller head is actuated to cause each roller to completely depress said arm, substantially as specified.

5. A ticket punch comprising an oblong frame with a female die in its forward end, an arm substantially the length of said frame and having its forward end bifurcated to provide a sight opening, and its rearward end fulcrumed to the rearward end of said frame, a male die supported upon the bifurcated end of said arm, a resilient arm secured to the lower side of said die arm and lying between the male and female dies, said resilient arm having its forward end bifurcated and said bifurcated end lying below the bifurcated end of the die-carrying arm, a series of pressure rollers mounted upon a rotating head and adapted to apply pressure to the die-carrying arm, an operating handle, and ratchets interposed between said handle and the rotating head upon which the rollers are supported, and whereby the rollers are actuated to engage, one at a time, the die-carrying arm, substantially as specified.

962,914. RAIL-DRILLING MACHINE. FREDERICK E. PLACE, Chicago, and MERRILL L. JENKINS, Harvey, Ill., assignors to Buda Foundry & Manufacturing Company, Chicago, Ill. Filed Mar. 25, 1907. Serial No. 364,349.



The combination with a feeding member having a cylindrical end, of a driven member provided at its rear end with a shoulder and a reduced circumferentially grooved end fitting the said cylindrical end, a pair of annular bearing members with interposed balls fitting between the cylindrical end and the shoulder, a retaining sleeve fitting the exterior of the cylindrical end and the driven member, and a retaining member extending through the retaining sleeve and cylindrical end into the groove in the reduced end.

962,915. GARMENT-FORM. CHARLES H. POSNER, New York, N. Y. Filed May 28, 1909. Serial No. 498,852.



1. A garment form comprising waist and skirt sections foldably connected by a hinge at the waist line, and means for rigidly holding said sections in extended or upright relation.

2. A garment form comprising two sections foldably connected by a transverse hinge, and rigid means cooperative with the two sections for retaining them in alinement.

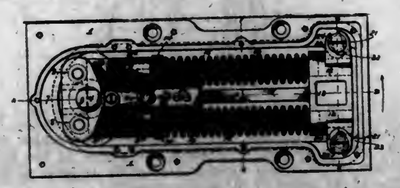
3. A garment form comprising waist and skirt sections foldably connected by a hinge at the waist line, and a bar carried by one of the sections and adapted to extend across said hinge and cooperate with the other section for retaining said sections in alinement.

4. A garment form adapted to fit within a garment and comprising waist and skirt sections composed of flat bendable material, a flexible hinge foldably connecting said sections, and means for bending both of said sections and their flexible connecting hinge and causing them to assume a convexly curved shape at their forward sides to conform to the curvature to be given the waist and skirt sections of a garment dressed thereon.

5. A garment form comprising waist and skirt sections composed of flat flexible material joined at the waist line by a flexible hinge, means for holding said sections in upright relation, and tension devices connected to the vertical edges of both sections and serving to cause the same to assume a curved form.

[Claims 6 to 9 not printed in the Gazette.]

962,916. DOOR CHECK AND CLOSER. JOSEPH CHARLES REGAN, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Dec. 14, 1909. Serial No. 533,111.



1. In a door closer, the combination with a casing and a spindle mounted to turn thereon and provided with two cranks on opposite sides of said spindle, of a yoke bearing against said cranks, two springs yieldingly holding the yoke in contact with the cranks and separate means for adjusting the tension of each spring independently of the other.

2. In a door closer, the combination with a casing and a rotatable spindle mounted therein and having two cranks located on opposite sides of the center of the spindle, of a yoke bearing against said cranks, a spring for holding the yoke in contact with the crank, and a frame carrying the spring, the said frame being pivoted to the casing in front of the spindle whereby the frame may be moved laterally, and means for locking said frame against movement.

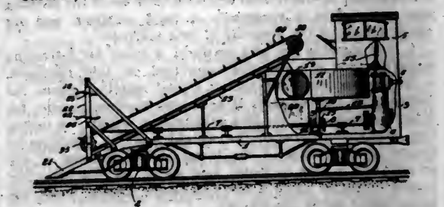
3. In a door closer, the combination with a casing and a rotatable spindle mounted therein and having two cranks, of a yoke resting against both of said cranks, yoke guides secured to said yoke and projecting forwardly therefrom, a pivoted frame in which said yoke guides are slidingly mounted and springs mounted on the guides and bearing against the pivoted frame for yieldingly holding the yoke in contact with the cranks.

4. In a door closer and check the combination with a casing and a rotatable spindle mounted therein and having double cranks for engagement with the closing mechanism and a crank for connection with the checking mechanism, of a removable and adjustable frame carrying the closing mechanism and also carrying the checking cylinder and its piston, and a screw accessible through the top of the casing for detachably connecting the checking piston to its crank, whereby the removal of the screw disconnects and permits of the removal of the operative mechanism of the check and closer.

5. The combination with a casing, and a rotatable spindle mounted therein and having double cranks for the closing mechanism and a crank for the checking mechanism, the latter being located below the closing cranks, of a frame having a pivotal connection with the casing in front of the spindle, a yoke carried by said frame and bearing against the double cranks, a spring for yieldingly holding the yoke in contact with the double crank, a cylinder carried by said pivoted frame, and movable therewith, and a piston in said cylinder and connected to the checking crank on the spindle.

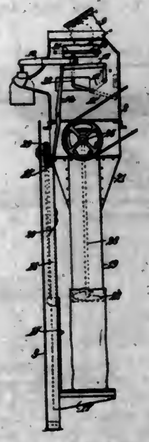
[Claims 6 to 13 not printed in the Gazette.]

962,917. SNOW-MACHINE. CHRISTOPHER REYNOLDS, Carlock, Ill. Filed Jan. 3, 1910. Serial No. 535,914.



A machine of the character described comprising a platform, a plow at one end thereof, rotary pulverizers composed of solid wings and spaced apart parallel bars that project at right angles to said solid wings, said pulverizers being vertically arranged and supported above said plow, endless conveyers supported in an inclined position above said platform, a discharge hopper communicating with the upper end of said conveyers, and means for actuating said pulverizers and said conveyers.

962,918. WEIGHING, BAGGING, AND PACKING APPARATUS. HENRY RICHARDSON, New York, N. Y. Filed Aug. 4, 1906. Serial No. 329,260.



1. The combination of a platform mounted for rising and falling motion, a spout, weighing mechanism involving a load receiver, a door for discharging the contents of the load receiver, a toggle controlling the discharging movement of said door, means for directing said contents into said spout, a continuously operable feed screw in said spout for packing the material in a receptacle on said platform, and a releasing lever cooperative with said toggle and arranged to be engaged by said platform when the latter reaches a predetermined position.

2. The combination of a platform mounted for rising and falling motion, a spout, weighing mechanism involving a load receiver, a discharge door, a toggle for locking said door, means movable with the platform for unlocking said toggle and effecting the discharge of the contents of

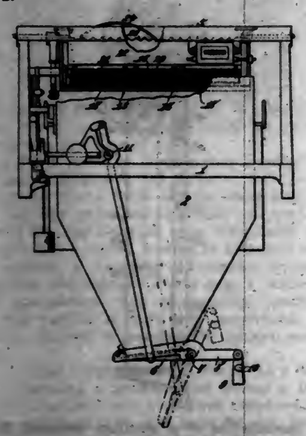
said load receiver, means for directing such contents into said spout, and a feed screw in the spout for packing the material in a receptacle supported on said platform.

3. The combination of a platform mounted for rising and falling motion, a spout, weighing mechanism involving a load receiver, a discharge door, a toggle for locking it, a releasing lever for the toggle, means movable with the platform and coöperative with said releasing lever for effecting the discharge of the contents of said load receiver, means for directing such contents into said spout, and a continuously operable feed screw in said spout for packing the material in a receptacle on said platform and for causing thereby the lowering of said platform.

4. The combination of a platform, a spout for delivering material into a receptacle supported on said platform, weighing mechanism including a load receiver, means for discharging the contents of said load receiver, means for directing such contents into said tube, a weight, an operative connection between the weight and the platform to secure the elevation of the latter on the descent of the weight, and a tube in which said weight is comparatively snugly fitted for upward and downward motion, said tube being closed below the weight.

5. The combination of a platform, a spout for delivering material into a receptacle supported on said platform, weighing mechanism including a load receiver, means for discharging the contents of said load receiver, means for directing such contents into said tube, a weight, an operative connection between the weight and the platform to secure the elevation of the latter on the descent of the weight, a tube in which said weight is comparatively snugly fitted for upward and downward motion, said tube being closed below the weight, and a continuously operable feed screw in said spout for packing material and for causing the descent of the platform.

962,919. WEIGHING-MACHINE. HENRY RICHARDSON, New York, N. Y. Filed Aug. 19, 1909. Serial No. 513,702.



1. In a weighing machine, the combination of a weigh hopper and a feed chute having an inclined front wall and a curved rear wall located below the level of and directed forwardly toward the lower edge of said front wall.

2. In a weighing machine of the class described, the combination of a weigh hopper and feed chute having a straight front wall inclined toward the chute outlet and a curved rear wall directed forwardly and located below the level of the lower edge of said front wall, and a cut-off gate mounted to move forwardly in closing.

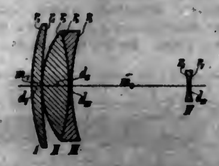
3. In a weighing machine, the combination of a weigh hopper, a feed chute having an inclined front wall and a curved rear wall, a cut-off gate coöperative with the chute, and a yieldable brush rigidly secured to the forward edge of the chute outlet and coöperative with the gate to control and cut off the flow of material from the chute and into the weigh hopper.

4. In a weighing machine, the combination of a weigh hopper, a feed chute, a gate coöperative with the chute for controlling and cutting off the flow of material from the chute into the weigh hopper, a brush interposed between the feed chute and gate and operative to control the flow of material from the chute, and means for reinforcing the said brush.

5. In a weighing machine, the combination of a weigh hopper, a feed chute, a gate for controlling and cutting off the flow of material therefrom, a brush interposed between the chute and gate and means for reinforcing said brush to sustain the pressure of the material acting thereon, different portions of said brush being independently yieldable.

[Claims 6 to 11 not printed in the Gazette.]

962,920. GALILEAN-TELESCOPE LENS SYSTEM. MORITZ VON ROHR, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed Jan. 25, 1910. Serial No. 540,034.

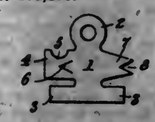


1. In the lens system of the Galilean telescope, the combination with the ocular of an objective which consists of two collective members, the power of the front surface of the hinder member amounting at least to four fifths of the power of the entire objective.

2. In the lens system of the Galilean telescope, the combination with the ocular of an objective which consists of two collective members, the front member being a single lens and the front surface of the hinder member having at least four fifths of the power of the entire objective.

3. In the lens system of the Galilean telescope, the combination with the ocular of an objective which consists of two collective members, the front member being a single lens, the hinder member being cemented of two lenses which have substantially the same refractive index, and the front surface of the hinder member having at least four fifths of the power of the entire objective.

962,921. TERMINAL FOR ELECTRIC CONDUCTORS. EBERHARD SCHNEIDER, New York, N. Y. Filed Feb. 2, 1909. Serial No. 475,695.



1. A lug or terminal for electrical conductors, comprising body portion, and a pair of wings extending laterally from said body portion on opposite sides thereof, one of said wings having a notch to receive the conductor formed in one of its side margins.

2. A lug or terminal for electrical conductors, comprising a body portion and a pair of flaps or wings extending from said body portion on opposite sides, one of said flaps or wings having a tongue formed therein near its base.

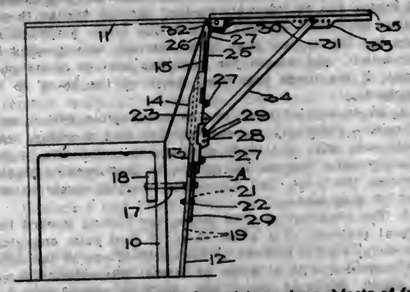
3. A lug or terminal for electrical conductors, comprising a body portion and a pair of flaps or wings extending from said body portion on opposite sides, one of said flaps or wings having a tongue formed therein near its base, and having the free portion of the tongue disposed toward the extremity of the flap or wing.

4. A lug or terminal for electrical conductors, comprising a body portion and a pair of wings or flaps extending laterally therefrom on opposite sides, one of said wings or flaps having a tongue formed therein, and the other wing or flap having its extremity notched to receive said tongue.

5. A lug or terminal for electrical conductors comprising a body portion and a pair of wings extending from said body portion on opposite sides, one of said wings having a tongue formed therein, and a notch in one of its side margins.

[Claim 6 not printed in the Gazette.]

962,922. TABLE. GEORGE SCHREYER, New York, N. Y. Continuation of application Serial No. 454,096, filed Sept. 21, 1908. This application filed Aug. 14, 1909. Serial No. 512,861.



A table adapted for attachment to various objects of furniture and comprising a support portion of adjustably variable height, said support portion comprising a floor engaging member and a vertically adjustable member carried thereby, a sleeve member coengaged around said floor engaging member and said vertically adjustable member, said sleeve member being secured to one of said last named members, a horizontal member pivoted on said vertically adjustable portion, said support portion and horizontal member carrying on adjacent sides projections and a brace link member coengaged adjustably with the projections to vary the angle of the horizontal member with respect to the support portion, and means for detachably engaging the support portion with a stationary object.

962,923. PENDENT ELECTRIC SWITCH. FRANK E. SEELEY, Bridgeport, Conn., assignor to The Perkins Electric Switch Mfg. Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Sept. 4, 1908. Serial No. 451,678.



1. A pendent electric switch, comprising an inverted cup of insulating material, a push button switch mechanism therein, embracing a push button at the bottom, a ratchet wheel and contacts, and a frame in which said mechanism is wholly mounted, said frame having a terminal plate passing through the top of the inverted cup, substantially as described.

2. A pendent electric switch, comprising an inverted cup of insulating material, a push button switch mechanism therein embracing a push button, a make and break ratchet wheel and spring contacts, a frame in which said switch mechanism is wholly mounted, the frame carrying one spring contact and having a terminal plate passing through the top of the inverted cup, in combination with another terminal plate also passing through the top of the cup and connected with another spring contact within the cup.

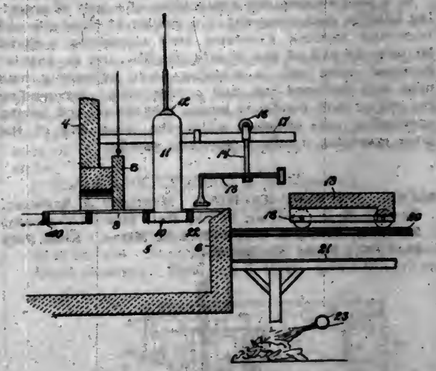
3. A pendent electric switch, comprising an inverted cup of insulating material, a push button switch mechanism therein, embracing a make and break wheel, two contacts carried by the insulation, a supporting frame also secured to the latter and having a contact for the make and break wheel, a ratchet plate on the latter, a push plate, pawl plate and return spring.

962,924. PROCESS OF CASTING ARTIFICIAL STONE. JOSEPH B. SIMPSON, Newton, Mass., assignor to Simpson Bros. Corporation, Boston, Mass., a Corporation of Massachusetts. Filed Feb. 28, 1910. Serial No. 546,490.

1. That process of casting artificial stone which consists in forming a mold of comminuted granular aggregate material and a binder, depositing in said mold a fluent molding mass composed of a cementitious material and aggregate material substantially identical with said mold aggregate material, and permitting said molding mass to set and thereby to assimilate a granular coating of said aggregate material from a face or faces of the mold walls.

2. That process of casting artificial stone which consists in forming a mold of artificially comminuted granular aggregate material and a binder, depositing in said mold a fluent molding mass composed of a cementitious material and aggregate material substantially identical with said mold aggregate material, and permitting said molding mass to set and thereby to assimilate a granular coating of said aggregate material from the faces of the mold walls.

962,925. METHOD OF AND APPARATUS FOR DRAWING GLASS. THOMAS SPILLANE, New Bethlehem, Pa. Filed Apr. 14, 1909. Serial No. 489,788.



1. The herein described method of drawing glass articles, which consists in drawing an article from a ring in a large body of glass, severing the article after it is drawn from the said body of glass and permitting the residue to drop back into the ring, and then withdrawing the ring with said residue therein laterally along the surface of the glass and out of the furnace.

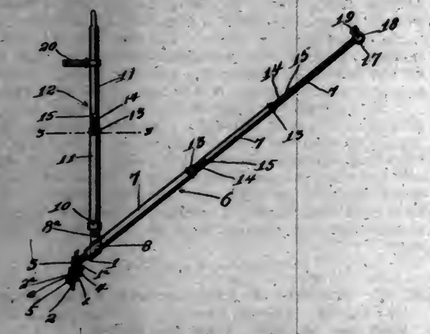
2. The herein described method of drawing glass articles, which consists in drawing an article from a ring in a large body of glass, severing the article after it is drawn from the said body of glass and permitting the residue to drop back into the ring, then withdrawing the ring with said residue therein laterally along the surface of the glass and out of the furnace, and bringing new rings carried by the glass successively into position for the drawing of other articles from the glass contained with the body.

3. An apparatus for drawing glass articles from a body of glass, comprising in combination rings from which the article is drawn, and means for removing said rings

laterally from the body of glass after the drawn articles are severed from said body of glass, said means for withdrawing the rings including a sloping outer wall.

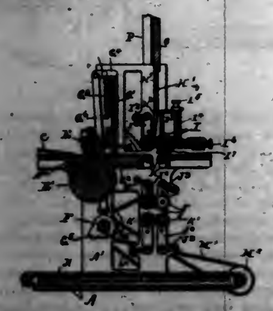
4. An apparatus for drawing glass articles from a body of glass, comprising in combination, rings from which the articles are drawn, means for removing said rings laterally from the body of glass together with the glass therein after the drawn articles are severed from said body of glass, and means whereby these rings may be returned to the body of glass at a point remote from that at which drawing occurs, substantially as described.

962,926. FLOOR-SCRAPER. FRANCIS STEPHENS, Mitchell, S. D., assignor of one-half to Joshua T. Miller, Mitchell, S. D. Filed Sept. 1, 1909. Serial No. 515,605.



In a floor scraper, the combination of a pair of operating handles, each composed of a number of telescopic and removable sections, a scraper head comprising a shank let into the end of one of said handles, and an angular flattened outer end, a scraping blade adjustably held upon said flattened end, and a band clamp surrounding the end of said handle to secure said shank, and having upstanding ears between which the inner end of the other operating handle is pivotally secured.

962,927. ENVELOP-MACHINE. MATTHEW A. STEWART, Newark, N. J., assignor to The Matt Stewart Company, Memphis, Tenn., a Corporation of Maine. Filed July 25, 1907. Serial No. 385,524.



1. In apparatus of the class described, the combination with means for folding inward the lateral portions of a stock strip and advancing the strip intermittently, of means for cutting envelop blanks from the end of the strip, a folding and pasting blade provided with lateral depending portions arranged to reciprocate across the path of the blanks, devices arranged to apply paste to one side of the blade as it approaches the blanks, and a pair of co-acting yielding rollers in position to receive the blade and blank as the former folds and pushes the latter from its initial position.

2. The combination with means for folding inward the lateral portions of a stock strip and intermittently advancing the latter, of means for cutting blanks from the end of the advanced strip, a folding and pasting blade arranged to reciprocate across the path of the blanks, a roller arranged to apply paste to the blade as it approaches the blanks, a pair of co-acting, yielding rollers in position to receive the advancing blade and blank, and a second pair of parallel rollers in position to engage the folded edge of the blank so advanced and prevent its return with the retreating blade.

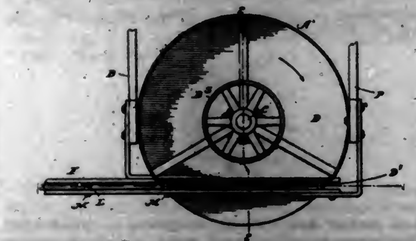
3. The combination with a suitable table having a narrow opening for the downward passage of envelop blanks, of means for at intervals feeding envelop blanks to position over said opening, a fork-like blade arranged to fold the blanks and push them through said opening in succession, and means for applying gum to those portions of the blade that meet parts of the blank to be gummed.

4. In an envelop machine, the combination with a pair of rollers yieldingly pressed together and touching near their ends only, of a blade arranged to reciprocate in the plane passing between the rollers, to push envelop blanks between the same, and means for applying paste to the face of said blade.

5. The combination with means for folding inward the lateral portions of a stock strip, of feed rolls engaging the strip, a plate rotated by the shaft of one of the rolls and provided with a series of lateral projections spaced at equal intervals about the shaft, a second parallel shaft, a rigid arm rotating with the second shaft in the plane of said projections into and out of their common path to push them successively through equal angular distances, means for cutting a blank from the strip after each advance, a folding and pasting blade, provided with lateral depending portions, arranged to reciprocate across the path of the blanks, devices arranged to apply paste to one side of the blade as it approaches the blanks, and a pair of co-acting yielding rollers in position to receive the blade and blank as the former folds and pushes the latter from its initial position.

[Claims 6 to 10 not printed in the Gazette.]

962,928. EYELET AND RIVET FEEDING DEVICE. MATTHEW A. STEWART, Newark, N. J., assignor to The Matt Stewart Company, Memphis, Tenn., a Corporation of Maine. Filed Jan. 7, 1910. Serial No. 536,869.



1. In apparatus of the class described, the combination with a rotary horizontal plate adapted to engage eyelets by friction only, of a bottomless chute in close proximity to the surface of the plate, crossing a portion of its upper surface, and provided on one side with apertures through which eyelets and the like lying on the plate may pass only when properly positioned, and means for retaining upon the plate such eyelets as fail to pass through said apertures.

2. In apparatus of the class described, the combination with a horizontal rotary plate adapted to engage eyelets by friction only, of a bottomless chute crossing a portion of the plate's upper surface, inclined downward beyond the plate's margin, and having one wall provided with apertures, above the plate, adapted to allow eyelets to pass singly when properly positioned, and means for retaining the eyelets upon the plate until they pass through said apertures.

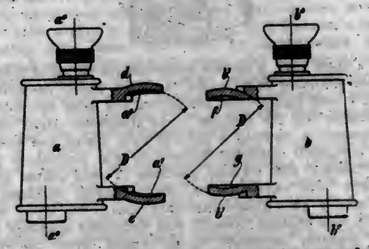
3. The combination with an eyelet chute having in one wall apertures through which eyelets may pass singly when turned into a predetermined position, and means for throwing eyelets by centrifugal force into positions whereby they may be carried against the side provided with said apertures.

4. The combination with a rotary horizontal plate adapted to engage eyelets by friction only, of a bottomless chute crossing a part of the plate's upper surface and having in that portion toward which articles upon the rotating plate move apertures adapted to allow eyelets and the like to pass when they are properly positioned, said chute being downwardly inclined from the margin of the plate, and means for supporting the advancing eyelets in the inclined portion of the chute.

5. A chute for eyelets and the like having parallel vertical walls at a distance from each other slightly greater than the diameter of the bodies of the articles to be carried and further having below a narrow longitudinal, article supporting flange provided with an upstanding rib adapted to hold such articles just below the walls which guide their bodies.

[Claims 6 and 7 not printed in the Gazette.]

962,929. HINGED DOUBLE TELESCOPE. RUDOLF STRAUBEL, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed May 12, 1908. Serial No. 432,392.



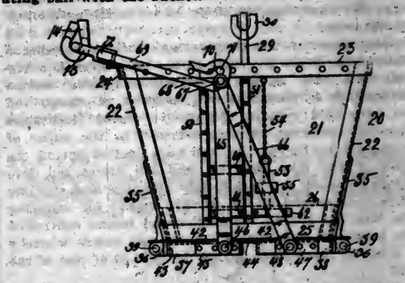
1. A hinged double telescope the two telescopes of which are rotatable about a common hinge axis by means of bored hinge arms with spherical hinge abutment surfaces, the hinge axis having a fixed position relatively to each telescope and the abutment surfaces having a common center in the said axis.

2. A hinged double telescope of the two telescopes of which each has two bored hinge arms, the arms of one telescope embracing with concave spherical hinge abutment surfaces the arms of the other telescope provided with corresponding convex abutment surfaces, these four abutment surfaces being zones of the same sphere with the center in the axis of the hinge.

3. A hinged double telescope of the two telescopes of which each has two bored hinge arms, the arms of one telescope embracing with concave spherical abutment surfaces the arms of the other telescope provided with corresponding convex abutment surfaces, these four abutment surfaces having a common center in the axis of the hinge, each arm having on the opposite side another spherical surface concentric to its abutment surface, the hinge bolt being fitted to the outer spherical surfaces of the embracing arms and adjustably secured to these arms and a bearing sleeve being fitted to the inner spherical surfaces of the embraced arms and adjustably secured to these arms.

962,930. BOTTOM-DUMPING BUCKET. GUSTAVUS L. STUEBNER, Flushing, N. Y. Filed May 18, 1909. Serial No. 496,838.

1. In a bucket the combination of a door therefor, a stationary bail connected to the bucket, an operating bail, a connecting element between the bail and the door, means to maintain the operating bail parallel to the stationary bail when actuating said door and means to lock the operating bail with the bucket.



2. In a bucket the combination of a door hinged thereto, a link with one end pinned to said door, an operating bail pinned to the other end of said link, a hook end for said bail, and a locking pin extending from the bucket located to lock with said hook end.

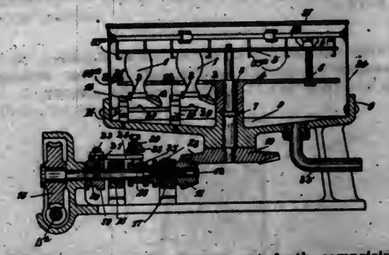
3. In a bucket the combination of a stationary bail connected thereto, a door hinged to the bucket, an operating bail, a connecting link between the door and said operating bail, and means to move the lower end of the operating bail in a plane parallel to the plane of the stationary bail.

4. In a bucket the combination of a door hinged thereto, a link pinned to said door, an operating bail pinned to said link, a hook end formed with the operating bail, means to guide the movements of said hook end in vertical directions when the door is being actuated, a locking pin extending from the bucket to lock with said hook end when the door is in its closed position, the said locking pin allowing the operating bail to take an inclined position when locked with its pin.

5. In a bucket the combination of a door hinged thereto, a link fulcrumed to said door, an operating bail fulcrumed to said link, a locking pin extending from the body of the bucket in the path of said bail and a stop in the path of the bail to regulate the inclination of the door with the body of the bucket when said door is in its lowered position.

[Claims 6 to 15 not printed in the Gazette.]

962,931. APPARATUS FOR CLEANSING MEDICAL SPITTOONS. LUDWIG THIEME and MAX GLÄSER, Adorf, Germany. Filed Jan. 8, 1909. Serial No. 471,858.



1. Apparatus for the purpose set forth comprising a closable casing, a removable and rotatable tray therein for supporting closed receptacles in inverted condition, means whereby the receptacles are opened during the rotation of the tray and the contents discharged, means for periodically stopping and re-starting the rotary movement of the tray and means for injecting liquids into the opened receptacles during periods of rest thereof.

2. Apparatus for the purpose set forth comprising a closable casing, a removable and rotatable tray therein for supporting closed receptacles in inverted condition, means whereby the receptacles are opened during the rotation of

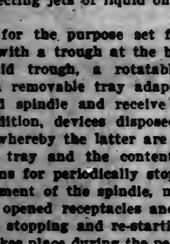
the tray and the contents discharged, means for periodically stopping and re-starting the rotary movement of the tray, means for injecting liquids into the opened receptacles during periods of rest thereof and means located above the tray for directing jets of liquid on to the exterior of the receptacles.

3. Apparatus for the purpose set forth comprising a closable casing with a trough at the base thereof, a discharge from said trough, a rotatable spindle located in the casing, a removable tray adapted to engage and rotate with said spindle and receive closed receptacles in inverted condition, devices disposed in the paths of the receptacles whereby the latter are opened during the rotation of the tray and the contents discharged into the trough, means for periodically stopping and starting the rotary movement of the spindle, means for injecting liquids into the opened receptacles and means controlled by the aforesaid stopping and re-starting means whereby such injection takes place during the periods of rest of the spindle.

4. Apparatus for the purpose set forth comprising a closable casing with a trough at the base thereof, a discharge from said trough, a rotatable spindle located in the casing, a removable tray adapted to engage and rotate with said spindle and receive closed receptacles in inverted condition, devices disposed in the paths of the receptacles whereby the latter are opened during the rotation of the tray and the contents discharged into the trough, means for periodically stopping and starting the rotary movement of the spindle, comprising a two-part driving shaft, clutch members disposed thereon, a sleeve carried by one shaft member and having a curved circumferential groove, a bar connected to one clutch member and a pin thereon engaging the said groove, means for injecting liquids into the opened receptacles and means controlled by the aforesaid stopping and re-starting means whereby such injection takes place during the periods of rest of the spindle.

5. Apparatus for the purpose set forth comprising a closable casing with a trough at the base thereof, a discharge from said trough, a rotatable spindle located in the casing, a removable tray adapted to engage and rotate with said spindle and receive closed receptacles in inverted condition, devices disposed in the paths of the receptacles whereby the latter are opened during the rotation of the tray, and the contents discharged into the trough, means for periodically stopping and starting the rotary movement of the spindle, means for injecting liquids into the opened receptacles, means controlled by the aforesaid stopping and re-starting means whereby such injection takes place during the periods of rest of the spindle, means located above the tray for directing jets of liquid onto the exterior of the receptacles and an electric contact engaged on a complete revolution of the tray aforesaid for the purposes set forth.

962,932. EASEL. WALTER E. TRUM, Brooklyn, N. Y., assignor of one-half to Emanuel J. Trum, Brooklyn, N. Y. Filed May 15, 1909. Serial No. 496,137.



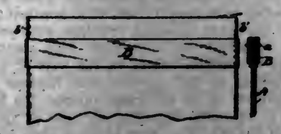
An easel comprising a face plate with a wing having right angular spaced apart plates secured to said face plate, one of the plates having a cam wing formed on its upper edge which is movable through the space between the plates, said wing being provided with a curved edge having a notch with an adjacent curved projection carried by the wing, said wing being also provided with a slot into which the notched edge of the wing brace projects by means of which the cam wing is guided and brought into bracing and locking position with the wing brace, said wing brace also having a cut-away portion arranged below the base of the cam wing to provide means for raising the wing brace so as to spring over the curved projection of the wing.

962,933. SHOW-CASE. HOWES C. WALLACE, Denver, Colo. Filed Oct. 6, 1909. Serial No. 521,242.



In a show case, a carrier comprising a series of holding devices similarly constructed, each of which consists of opposite side plates, rods connecting the same for holding and supporting the articles to be displayed, right angular extensions forming a part of said plates and having each elongated openings formed in the horizontal portions thereof, the vertical portions of said plates being provided with curved slots, bars movably attached to said carrier at suitable intervals apart, the lower ends of said bars passing through said elongated openings and being movably connected to the plates below the right angular extensions, screw-threaded lugs or studs carried adjacent to the lower ends of said bars, and passing through said curved slots, binding nuts adapted to be secured upon said screw-threaded lugs for holding the plates in a desired position, arms rigidly fixed to the bars at a suitable distance below their upper pivotal ends, and a rod connecting the opposite ends of said arms, as and for the purpose described.

962,934. SACK. CHARLES L. WEATHERWAX, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 14, 1905. Serial No. 241,149.



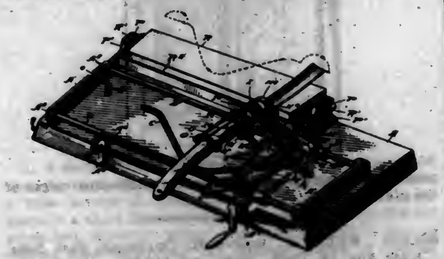
1. A closed sack comprising a paper body portion, a cloth reinforcing strip on the outside of and extending over the mouth of the bag and a line of stitching passing through said cloth reinforcing strip and the paper body portion of the sack for closing the same.

2. A closed sack comprising a paper body portion, a cloth reinforcing strip adjacent the open end of said body portion, and a line of stitching passing through said cloth strip and the paper body portion of the sack for closing the same.

3. A new article of manufacture comprising a paper bag having a strip of fabric of a different character permanently attached at its mouth end to permit of the sewing of the bag after filling, without tearing the paper.

4. A new article of manufacture, comprising a paper bag made of an un-waterproofed sheet with the side edges and ends pasted, said bag having a strip of fabric of a different character permanently attached at its mouth end to permit of the sewing of the bag after filling, without tearing the paper.

962,935. APPARATUS FOR HONING RAZORS. LEONARD ALFANO, Brooklyn, N. Y. Filed Mar. 19, 1910. Serial No. 550,355.



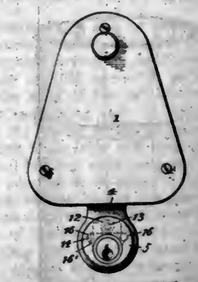
1. A honing apparatus comprising a base having a curved groove in the upper surface thereof, shafts mounted in projecting portions of the base, sleeves movable upon said shafts, a rod connecting said sleeves, a sleeve movably held upon said rod, an anti-friction roller mounted upon said movable sleeve and adapted to travel in said groove, a razor holding member carried by said arm, an endless chain, means carried by the chain and adapted to engage one of said sleeves, and means for reversing the razor holding member.

2. A honing apparatus comprising a base having a curved groove in the upper surface thereof, shafts mounted in projecting portions of the base, sleeves movable upon said shafts, a rod connecting said sleeves, a sleeve movably held upon said rod, an anti-friction roller mounted upon said movable sleeve and adapted to travel in said groove, a razor holding member carried by said arm, an endless chain, a pin carried by the endless chain, anti-friction roller upon said pin, a cross head fixed to one of said sleeves and in which said pin carrying roller is adapted to move, a stop, and means carried by said razor holding member for rocking the razor holder to reverse the blade.

3. A honing apparatus comprising a base having a curved groove in the upper surface thereof, shafts mounted in projecting portions of the base, sleeves movable upon said shafts, a rod connecting said sleeves, a sleeve movably held upon said rod, an anti-friction roller mounted upon said movable sleeve and adapted to travel in said groove, a razor holding member carried by said arm, an endless chain, a pin carried by the endless chain, anti-friction roller upon said pin, a cross head fixed to one of said sleeves and in which said pin carrying roller is adapted to move, a stop, a pivotal segment carried by said razor holding member, an anti-friction roller mounted upon one end thereof and adapted to contact with said stop, the teeth of said member engaging teeth upon a gear segment upon the razor carrier to cause the latter to make a partial rotary movement to reverse the razor.

4. A honing apparatus comprising a base having a curved groove in the upper surface thereof, shafts mounted in projecting portions of the base, sleeves movable upon said shafts, a rod connecting said sleeves, a sleeve movably held upon said rod, an anti-friction roller mounted upon said movable sleeve and adapted to travel in said groove, a razor holding member carried by said arm, an endless chain, a pin carried by the endless chain, an anti-friction roller upon said pin, a cross head fixed to one of said sleeves and in which said pin carrying roller is adapted to move, a stop, a pivotal segment carried by said razor holding member, an anti-friction roller mounted upon one end thereof and adapted to contact with said stop, the teeth of said member engaging teeth upon a gear segment upon the razor carrier to cause the latter to make a partial rotary movement to reverse the razor, a spring fastened to said cross head and against which said arm carrying the razor holding member is adapted to bear as the razor approaches the limit of its throw in opposite directions.

962,936. SWITCH-LOCK. PETER F. AUGENBRAUN, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Sept. 9, 1909. Serial No. 516,980.



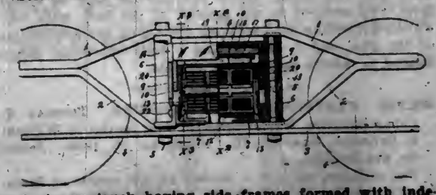
1. The combination with a switch arm and a fixed keeper, of a lock carried by the switch arm and having a bolt adapted to enter the keeper and lock the switch arm against movement.

2. The combination with a base member having contact members, a switch arm pivoted to said base member and adapted to make contact with said contact members, and a lock carried by said switch arm, of a fixed keeper adapted to be engaged by the bolt of the lock for locking the switch arm against movement.

3. The combination with a switch arm and a fixed keeper, of a lock carried by the switch arm and provided with a bolt normally projected by a spring and retracted by key mechanism, whereby the switch arm may be moved to its locking position without the use of a key.

4. The combination with a base member having contact members, a switch arm pivoted to said base member, and a pin tumbler lock carried by said switch arm, the shell of the lock forming a handle for the switch arm, of a keeper fixed to the base member and adapted to be engaged by the bolt of the lock when the latter is in its neutral position.

962,937. CAR-TRUCK. JOHN C. BARBER, Chicago, Ill., assignor to Standard Car Truck Company, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 22, 1910. Serial No. 556,013.



1. A car truck having side frames formed with independent vertically extended relatively fixed guides for a truck bolster and for roller caps.

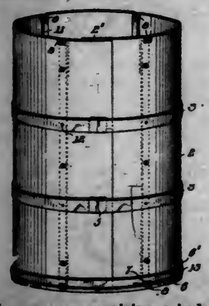
2. A car truck having side frames provided with laterally offset independent relatively fixed guides for a truck bolster and for combined spring caps and roller bases, the said two classes of guides being overlapped in a vertical direction.

3. In a car truck, the combination with truck side

frames, a truck bolster, springs carried by said side frames, combined spring caps and roller bases supported by said springs, rollers on said spring caps and roller bases, upper roller bearing plates carried by said bolster and resting on said rollers, the said bolster having deep depending flanges engageable with bolster columns of said side frames, and guides for said combined spring caps and roller bases laterally offset from the bolster columns, overlapped vertically therewith, and rigidly secured in respect to said side frames, substantially as described.

4. A car truck having independent relatively fixed bolster and spring cap guides.

962,938. KNOCKDOWN BARREL. DAVID E. BROWN and LEONARD L. KAST, Cresson, Pa. Filed Apr. 5, 1909. Serial No. 487,874.



1. A knockdown case comprising a body portion formed of a sheet of flexible material adapted to be turned from blank to case form and vice-versa with the longitudinal edges of the body overlapping when turned to case form, hoop bands secured to the body with their ends extending toward said edges and with said ends overlapping when the body is in case form, said overlapping ends being reversely slotted and adapted to interlock by deflecting the body longitudinally of its overlapping portions.

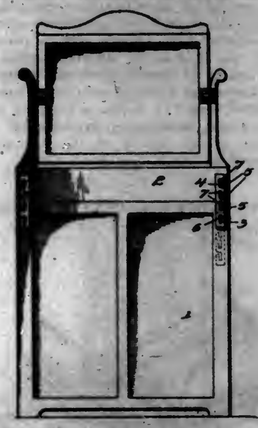
2. A knockdown barrel comprising a body portion formed of a sheet of flexible material having separable meeting edges and adapted to be turned from opened-out to barrel form and vice versa, strengthening ribs secured to the sheet and extending longitudinally thereof with their extremities constructed to secure the barrel heads, and heads formed to receive the rib extremities.

3. A knockdown barrel comprising a body portion formed of a sheet of flexible material adapted to be turned from opened-out to barrel form and vice versa, strengthening ribs secured to the sheet and extending longitudinally thereof with head-securing loops on the extremities of the ribs, and a head constructed to receive the loops.

4. A knockdown barrel comprising a body portion formed of a sheet of flexible material having separable meeting edges and adapted to be turned from opened-out to barrel form and vice versa, means holding the body in barrel form, ribs secured to the interior of the body with outwardly-projecting head-securing devices on the extremities of the ribs, and a head having a body-embracing flange formed to receive the securing devices.

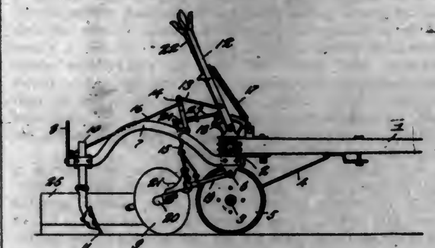
962,939. FASTENER FOR FURNITURE. THOMAS J. CALL, Danville, Ill., assignor of four-tenths to William T. Leverenz, Danville, Ill. Filed Jan. 29, 1909. Serial No. 474,905.

The combination with a dresser or like article of furniture, comprising a body and a detachable top section, of rows of headed studs upon said body and top section at opposite sides thereof, and connectors engaging said studs, each connector comprising an oblong rectangular plate of uniform width provided at one end with a closed longitudinal slot slidably and pivotally engaging one of said studs and having a series of longitudinal slots in alinement with said closed slot to engage the other studs, each of the longitudinal slots of the series being formed with a branch slot extending from one end thereof to and through one of the longitudinal edges of the plate, all of said slots



being spaced equidistantly from the longitudinal edges of the plate.

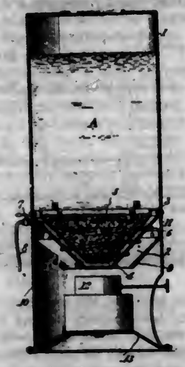
962,940. WEEDER. ROSCOE M. CHAMBERS, Earl, Nebr. Filed Aug. 18, 1909. Serial No. 513,424.



1. In combination, a pole, a transverse bar connected to said pole, a rod arranged beneath said bar and connected thereto, an axle provided with supporting wheels having connection with said bar, draft rods between said axle and pole, beams connected to said rod and provided with disk cutters, longitudinal beams having their front ends connected with said rod and upwardly arched between their ends and provided with cultivator shovels, the arched portions of the beams being in line with said disk cutters, means for raising and lowering the longitudinal beams and means for adjusting the beams provided with the disk cutters.

2. In combination a main frame comprising a transverse bar and a pole, a transverse rod connected with the main frame, an axle provided with supporting wheels, longitudinal beams provided at their rear ends with shovel blades, an arched bar connecting the rear ends of the longitudinal beams, a second set of beams connected with the transverse rod and provided with disk cutters, an arched bar connecting the second set of beams, an operating lever mounted upon the main frame, a second lever pivoted to the arched bar connecting said second set of beams, connecting means between said operating lever and said second lever, other connecting means between said second lever and the arched bar connecting the rear ends of the aforesaid longitudinal beams, a spring between the operating lever and the main frame, a second operating lever, a bar connecting the second operating lever with the arched bar connecting the second set of beams, and a spring mounted upon the last mentioned rod and confined thereon between a stop and the arched bar connecting the second set of beams.

962,941. PORTABLE WATER-HEATER. OSCAR P. CHURCHILL and MAURICE E. RISK, Shamrock, Tex. Filed Jan. 14, 1910. Serial No. 538,093.



1. A device of the character specified for heating liquid, the same comprising a receptacle having a conical bottom, a false bottom of conical form arranged within the receptacle a short distance from the conical bottom thereof, refractory material filling said false bottom, a coil of conical form encircling the conical bottom of the receptacle and in communication at its lower end with the lower end of the conical space formed between said conical bottom and the false bottom, means for regulating the outflow of liquid from the upper end of said coil, and a heater located below the conical bottom.

2. A device of the character specified for heating liquid, the same comprising a receptacle having a conical bottom, a false bottom of conical form arranged within the receptacle a short distance from the conical bottom thereof, refractory material filling said false bottom, a coil of conical form encircling the conical bottom of the receptacle and in communication at its lower end with the lower end of the conical space formed between said conical bottom and the false bottom, means for regulating the outflow of liquid from the upper end of said coil, a conical deflector arranged below the bottom of the receptacle and the conical coil and forming a space having outlets at its upper end, and a heater located below the apex of the conical bottom and opposite the space formed at the lower end of said conical deflector.

3. A portable liquid heater comprising a shell, a partition of conical form arranged within the lower portion of the shell and secured at its outer edge thereto forming a receptacle for receiving the liquid to be heated, a false bottom of conical form arranged within said receptacle above the bottom thereof to provide a conical space, refractory material filling said false bottom, a coil of conical form encircling the bottom of the receptacle and in communication at its lower end with the space formed between the bottom of the receptacle and said false bottom, said coil having its upper end extending through the shell and provided with a valve, a conical deflector arranged below the bottom of the receptacle and connected at its upper outer edge to the shell, the latter having openings in its sides opposite the conical space formed between the said deflector and bottom of the receptacle, a support secured to the lower end of the shell, and a lamp mounted upon said support.

962,942. HORSE-DETACHER. ELMER P. COPENHAVER, Sparks, W. Va. Filed May 8, 1909. Serial No. 494,765.

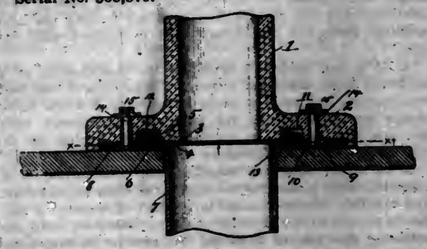
1. A shaft comprising a pair of thills and a connecting bar, a swingletree pivotally connected with the connecting bar, collars upon the swingletree, one of said collars comprising a U-shaped member having extending arms, an L-shaped latch pivotally connected between these arms, a pair of rods projecting through these collars, each of said rods being provided with a cut away portion adapted to be engaged by one arm of the L-shaped latches, a tension device between the arms adapted to normally draw the ends of said arms toward each other and a flexible member attached to the L-shaped latches, substantially as and for the purpose set forth.



2. A shaft comprising a pair of thills and a connecting bar, a swingletree pivotally secured to the connecting bar, said swingletree having its ends provided with offset members, collars secured upon the swingletree, the collars adjacent the ends of the swingletree being provided with eyes, the remaining pair of collars being spaced apart adjacent the center of the swingletree, and having L-shaped latches, a securing rod carried by each of the central and end collars, said securing rods having cut away portions adapted to be engaged by one of the arms of the L-shaped latches, means for limiting the outward movement of the securing rods, a tension device between the inner ends of the rods adapted to draw the said rods toward each other and a flexible member connected with each of the L-shaped latches, substantially as and for the purpose set forth.

3. A shaft comprising a pair of thills and a connecting bar, a swingletree pivotally secured to the connecting bar, said swingletree having its ends provided with offset members, collars secured upon the swingletree, the collars adjacent the ends of the swingletree being provided with eyes, the remaining central pair of collars being spaced apart on the swingletree, these central collars being each provided with a projecting portion having an opening alining with the eyes of the outer collars, and the said projecting portion being also bifurcated to provide an opening communicating with the transverse opening, L-shaped latches within the cut away portion provided by the bifurcation, a resilient element normally contacting the latches to force the same within the transverse opening of the extension, sliding rods positioned within the openings of each of the central collars and the end collars adjacent thereto, said rods having their inner ends provided with a slit or recess adapted to be engaged by the latches of the central collars, means for limiting the outward movement of the sliding rods, a tension device between the inner ends of the rods adapted to draw said rods toward each other and a flexible member connected with each of the L-shaped members, substantially as and for the purpose set forth.

962,943. WATER-CLOSET CONNECTION. JOSEPH J. COSGROVE, Philadelphia, Pa. Filed Jan. 18, 1910. Serial No. 538,579.



1. The combination with a water closet having an exteriorly threaded flange surrounding its outlet, an ex-

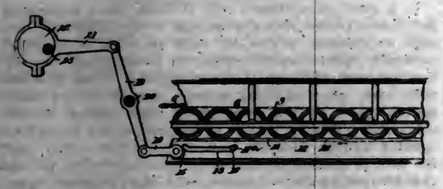
teriorly tapered collar screwed on said flange, a soil pipe extending to the floor level, a separate floor plate secured thereto above the floor line and provided with an annular flange, screw threaded on its inner surface and an externally threaded ring adjustably mounted in said floor plate flange and tapered on its inner surface to seat said tapered collar.

2. The combination with a water-closet having a tapered collar surrounding its outlet opening, of a soil pipe extending above the floor level and having a floor plate secured to the soil pipe and an adjustable, interiorly tapered ring carried by the floor plate above the floor level and adapted to receive the tapered collar.

3. The combination with a water-closet having a flanged outlet, a soil pipe extending above the floor level and a floor plate, of an intervening ring arranged above the floor plate adapted to receive the flange of the closet outlet and to be adjusted relatively to the floor plate.

4. The combination with a water-closet having a metallic ring attached thereto concentric with the outlet opening, of a soil pipe extending above the floor level, a floor plate secured to the soil pipe having a flange concentric with the soil pipe and an adjustable ring located between the closet ring and the floor plate flange.

962,944. CAN-SOLDERING MACHINE. JOHN COYLE, Baltimore, Md., assignor to Continental Can Co., Baltimore, Md., a Corporation of New Jersey. Filed May 25, 1909. Serial No. 498,155.



1. In a can soldering machine, the combination of a soldering iron on which cans may rest and be rolled, means for conveying the cans to said iron and rolling the end seam in contact therewith, and means for moving the iron endwise, while the can is rolling thereon whereby the iron has a sliding contact with the end seam.

2. In a soldering machine, the combination of a soldering iron, means for conveying the cans to said iron and rotating the end seam in contact therewith, a solder bath, means for moving the soldering iron endwise while the can is rolling thereon, whereby the can has a sliding contact with the end seam, and means for moving the soldering face of said iron into and out of said bath.

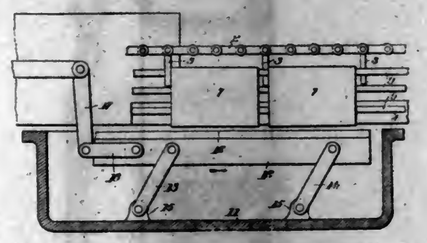
3. In a can soldering machine, the combination of a soldering iron, means for conveying the cans to said iron and for rotating the end seam in contact therewith, a solder bath, means for moving the soldering face of said iron into and out of said bath, and for moving the iron endwise while out of the bath and in contact with the can.

4. In a can soldering machine, the combination of a soldering iron, means for conveying cans to said iron and rotating the end seam in contact therewith, a solder bath, means for reciprocating the iron while in contact with the can and means for causing the iron during its reciprocation to be immersed in the solder bath.

5. In a can soldering machine, the combination of a soldering iron, means for conveying the cans to said iron, and rotating the end seam in contact therewith, a solder bath, means for moving the iron bodily so that the soldering face thereof is moved into and out of said bath.

[Claims 6 to 10 not printed in the Gazette.]

962,945. CAN-SOLDERING MACHINE. JOHN COYLE, Baltimore, Md., assignor to Continental Can Company, Baltimore, Md., a Corporation of New Jersey. Filed May 25, 1909. Serial No. 498,156.



1. In a soldering machine, the combination with a soldering iron, means for continuously feeding cans to said iron, and for moving the side seam in endwise contact therewith, a solder bath, means for supporting said soldering iron in said bath, and means for intermittently raising the soldering face of said iron out of said bath and into contact with the side seam of the can.

2. In a soldering machine, the combination of a soldering iron, means for feeding cans to said iron and for moving the side seam in contact therewith, a solder bath, means for moving said iron endwise, and means for supporting said iron whereby the endwise movement thereof causes the iron to be intermittently immersed in the solder bath.

3. In a soldering machine, the combination of a soldering iron, means for feeding cans to said iron and moving the side seam in contact therewith, a solder bath, said soldering iron being located in said solder bath, means for moving said iron endwise, and means for supporting said iron, whereby said iron as it is moved endwise is bodily moved up and down, so as to immerse the soldering face of said iron in the solder bath.

4. In a soldering machine, the combination of a soldering iron, means for feeding cans to said iron and for moving the side seams in contact therewith, a solder bath, said iron being located in said solder bath, means for moving the iron endwise, inclined links pivoted at one end to said soldering iron and at the other end to the solder bath.

5. In a soldering machine, the combination of a supporting horn including a rib for supporting the side seam of a can at the lower face of the horn, a solder bath beneath said horn, a soldering iron located in said soldering bath and contacting with said side seam, means for immersing said iron in the bath to charge the iron with solder and means for sliding the side seam along said iron.

[Claims 6 and 7 not printed in the Gazette.]

962,946. SPRAY-NOZZLE. LUCIAN WALTON CUSHMAN, Lincoln, Nebr. Filed Aug. 10, 1908. Serial No. 447,850.



1. In a spraying nozzle, a body portion having a tortuous channel and an axial passage, means removably inserted in the axial passage, and a cap upon the body having a central discharge opening.

2. In a spraying nozzle, a body portion having a tortuous channel and a threaded axial passage, a threaded plug removably screwed into the said passage, and a cap upon the body having a central discharge opening located opposite to the said axial passage.

3. In a spraying nozzle, a body portion having a tortuous channel and an axial passage, a boss projecting from the body and threaded to receive a conduit, a plug inserted in the said passage and removable through the conduit receiving opening in the boss, and a cap upon the body formed with an axial discharge opening.

4. In a nozzle, a body portion having a helical channel and a direct axial passage, a removable plug normally closing said passage, a disk arranged in front of the body portion and provided with a central opening, a packing washer between the disk and the body portion, and a cap having a threaded connection with the body and serving to hold said disk in place.

962,947. CHURN. WILLIAM A. DECKER, Crowley, Tex. Filed Mar. 17, 1910. Serial No. 549,952.



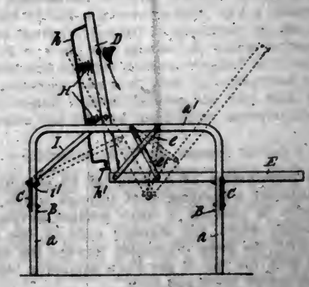
1. In a churn, a receptacle having a closure, a band surrounding the upper portion of the receptacle and provided with sockets, standards received by said sockets and provided with means extending laterally and downwardly to engage the band to afford rigidity for the standards, members carried by the lower ends of the standards to insure rigidity between the standards and the said means and the band, a crank shaft adjustably supported upon the standards, dashers movable within the receptacle, and connections between the dashers and the crank shaft.

2. In a churn, a receptacle having a closure, a band surrounding the upper portion of the receptacle and provided with sockets, standards received by said sockets and provided with integral members extending laterally and downwardly of the standards to engage the band to afford rigidity for the standards, members carried by the lower ends of the standards to insure rigidity between the standards, said integral members and the band, brackets adjustably mounted on the standards and having means to hold the brackets in adjusted positions, a crank shaft journaled in the brackets, dashers movable within the receptacle, and connections between the dashers and the crank shaft.

962,948. CONVERTIBLE COUCH. JAMES H. DYETT and CHARLES HULPIAN, Buffalo, N. Y., assignors to Hard Manufacturing Company, Buffalo, N. Y. Filed May 2, 1910. Serial No. 558,957.

1. In a convertible couch, the combination with a supporting frame, of a back which is hung on said frame to swing upwardly from a substantially horizontal position to a substantially upright position, a seat which is pivoted at one edge to the adjacent edge of the back and is adapted to swing upwardly on said pivotal connection, and a link which is pivoted to said seat and is adapted to interlock with said frame when said seat is swung upwardly and to interlock with said frame and form a fulcrum on which said seat is adapted to swing as a lever for swinging said back upwardly to its upright position, substantially as set forth.

2. In a convertible couch, the combination with a supporting frame, of a back, swinging links connecting each end of the back with said frame and permitting said back to swing upwardly from a substantially horizontal position to a substantially upright position, a seat which is movably supported on said frame and pivoted at its inner edge to the adjacent edge of the back and is adapted to swing upwardly on said pivotal connection, and a link which is pivoted to said seat and is adapted to slide on the frame when the seat is swung upwardly and to interlock with said frame and form a fulcrum on which said seat is adapted to swing as a lever for swinging said back upwardly to its upright position, substantially as set forth.



3. In a convertible couch, the combination with a supporting frame, of a back which is hung on said frame to swing upwardly from a substantially horizontal position to a substantially upright position, a seat which is pivoted at one edge to the adjacent edge of the back and is adapted to swing upwardly on said pivotal connection, and a link which is pivoted to said seat and is adapted to interlock with said frame when said seat is swung upwardly and form a fulcrum on which said seat is adapted to swing as a lever for swinging said back upwardly to its upright position, said link being adapted to lock said back in its upright position, substantially as set forth.

4. In a convertible couch, the combination with a supporting frame, of a back which is hung on said frame to swing thereon to substantially horizontal and upright positions, a seat which is pivoted at one edge to the adjacent edge of said back and is adapted to swing upwardly on said pivotal connection, and a link which is pivoted to said seat and is adapted to interlock with said frame when said seat is moved upwardly and form a fulcrum upon which said seat is adapted to be swung as a lever for swinging said back to its upright position, said link being adapted to lock said back in its upright position and being adapted to be disengaged from the frame for lowering said back to its horizontal position, substantially as set forth.

5. In a convertible couch, the combination with a supporting frame, of a back which is hung on said frame to swing upwardly from a substantially horizontal position to a substantially upright position, a seat which is pivoted at one edge to the adjacent edge of the back and is adapted to swing upwardly on said pivotal connection, and a U-shaped link pivoted to said seat and having notches at its free end which are adapted to engage said frame when said seat is swung upwardly and lock said link against endwise movement thereon, said link forming a fulcrum upon which said seat is adapted to swing as a lever for swinging said back upwardly to its upright position, substantially as set forth.

962,949. HOLDER FOR DARNING-SILK. JESSE B. EISEMAN, New York, N. Y., assignor, by mesne assignments, to Manhattan Braid Company, a Corporation of New York. Filed Apr. 7, 1910. Serial No. 553,978.

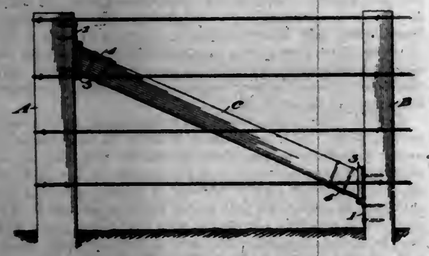
1. The combination with a skein, of a back having slots through which one end of the skein is inserted, a cover through which the other end of the skein is inserted, means securing the cover to the back with the skein in-

terposed and permit the end of the skein to extend beyond the end of the united cover and back.



2. The combination of a skein, of an elongated back having adjacent transverse slots through which one end of the skein is inserted, a cover member having spaced slots through which the opposite ends of the skein is inserted with the skein interposed between the cover and back and with the end of the skein extending beyond the end of the united cover and back.

962,950. BRACE FOR FENCE-POSTS. WILLIAM O. FREELAND, Ainsworth, Iowa. Filed Apr. 8, 1910. Serial No. 554,191.



1. An article of the character described, comprising a brace, flanged plates, and hinges connected with the plates and secured to the brace, the flanges in position to embrace the sides of the brace.

2. A device of the character described, comprising a brace having mitered ends in combination with slotted plates having outturned flanges at either side of the slots, and hinges located between the planes of the flanges and secured to the opposite edges of the brace.

962,951. METHOD OF MAKING COLLAPSIBLE AND EXPANSIBLE CORRUGATED WALLS. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Apr. 11, 1907. Serial No. 367,667.



The process of making tubular corrugated walls for collapsible and expansible vessels, which consists in circumferentially corrugating the walls of the vessel and so proportioning the depth and width of the corrugations relative to each other and to the metal itself, that the walls of the corrugations will contact within the elasticity of the metal.

962,952. EXTENSION OBSTETRICAL INSTRUMENT. LEONARD GOSHORN, Waco, Tex. Filed Feb. 16, 1910. Serial No. 544,205.



1. In an obstetrical instrument, a pair of intersecting gripping jaws having rear extensions provided with teeth, a pair of hooked or connected handles adjustably carried by the extensions having means to engage said teeth, means pivotally carried by the handles to cause said extensions to closely engage the first-named means to hold the handles in adjusted positions.

2. In an obstetrical instrument, a pair of intersecting gripping jaws having rear extensions provided with teeth, a pair of hooked or connected handles adjustably carried by the extensions having means to engage said teeth, means pivotally carried by the handles to cause said extensions to closely engage the first-named means to hold the handles in adjusted positions, said handles having lateral extensions extending toward one another to engage the sides of the handles to hold the jaws in parallel relation and provided with recesses to receive said extensions.

3. In an obstetrical instrument, a pair of intersecting gripping jaws having rear extensions provided with teeth, a pair of hooked or connected handles adjustably carried by the extensions having bores provided with teeth to engage the first-named teeth, said handles having recesses or openings, lever-operated cam holding members to engage the said extensions to cause a thorough coaction between the teeth mounted in said recesses or openings.

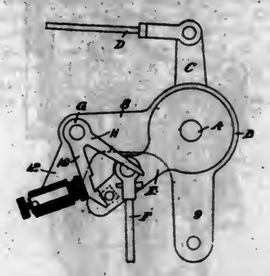
4. In an obstetrical instrument, a pair of intersecting gripping jaws having rear extensions provided with teeth, a pair of hooked or connected handles adjustably carried by the extensions having bores provided with teeth to engage the first-named teeth, said handles having recesses or openings, lever-operated cam holding members to engage the said extensions to cause a thorough coaction between the teeth mounted in said recesses or openings, and means carried by each handle to engage the opposite handle to hold the jaws and handles in parallel relation.

5. In an obstetrical instrument, a pair of intersecting jaws having adjustable handles, one of said handles having a hook, while the other handle is provided with a recess or opening having a lug extending across its mouth to receive said hook, said lug being designed to prevent displacement or disconnection of the hook with the recess or opening.

[Claim 6 not printed in the Gazette.]

962,953. SPRING-HOLDER FOR VALVE-GEAR. GEORGE GRAHAM, St. Louis, Mo. Filed Sept. 3, 1909. Serial No. 515,995.

1. In a device of the character described, a cylindrical housing open at one end, a nut longitudinally movable in the housing, an adjusting screw engaging the nut, an abutment guided for longitudinal movement relatively to the housing and the adjusting screw, and an expansion spring interposed between the nut and the abutment.

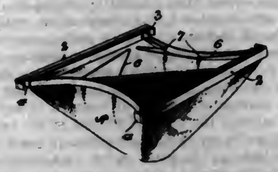


2. In a device of the character described, a housing, a nut longitudinally movable in said housing and held against rotation therein, a nut engaging adjusting screw supported for rotation relatively to the cylinder and held against longitudinal movement therein, an abutment having a sleeve engaging and guided upon the screw, and an expansion spring coiled within the housing exteriorly of the sleeve, said spring being interposed between the nut and the abutment.

3. In a device of the character described, a cylindrical housing closed at one end and having an interior longitudinal groove, a nut longitudinally slidable in the housing and having a projection engaging the groove, an adjusting screw engaging the nut and fitted for rotation in the head of the housing, said screw having an annular groove, a stop member engaging said groove, an abutment having a tubular extension or sleeve guided upon the adjusting screw, and an expansion spring within the housing, said spring being interposed between the nut and the abutment.

4. In a device of the class described, the combination with a supporting arm or bracket having a non-circular recess, of a spring containing housing having a non-circular boss engaging the recess, fastening means such as a screw engaging a threaded recess in the boss, an abutment actuated by the spring contained in the housing, and means for regulating the tension of the spring.

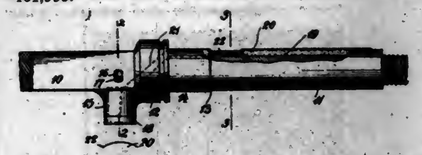
962,954. COLLAPSIBLE TUB. JOHN D. GREEN, Chillicothe, Ohio. Filed July 29, 1909. Serial No. 510,267.



1. A collapsible tub comprising a flexible waterproof body, side strips connected to the sides of the tub, clips on the ends of the side strips, means for connecting the clips to the strips, and end strips engaged by the clips for connecting the side strips and end strips together whereby the sides and ends of the tub will be held in shape.

2. A collapsible tub comprising a flexible body, side strips connected to the side walls of the tub, notches formed at the ends of the strips, brackets received in the notches and connected to the strips, and end strips received in the brackets for connecting the side strips and end strips together, said strips engaging the outer walls of the tub for holding them in position.

962,955. MEANS FOR LUBRICATING AXLES, BEARINGS, AND THE LIKE. WILLIAM J. GREENING, Middletown, N. Y. Filed Nov. 11, 1908. Serial No. 461,995.



1. The combination with an element having a bearing surface and having a groove therein, and a reservoir for lubricating material located in proximity to the bearing surface, of a wick, one portion of which is located in said groove and another portion whereof is contained in the said reservoir, the said wick including and carrying therewith means located between the two said portions for retarding the flow of lubricating material along the same.

2. The combination with an element having a bearing surface and having a groove recessed from such surface, and a reservoir for lubricating material located in proximity to the said surface, but below the level of the said groove, of a wick for conveying lubricating material from the reservoir up to the groove, and located in the groove, the upper level of the wick for a short distance at that portion of the groove where the lubricating material is first admitted being lower with respect to the bearing surface than throughout the remainder of the groove.

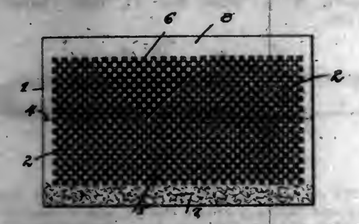
3. The combination with a wagon axle comprising a body portion, a collar, and a spindle, the said spindle being provided with a groove recessed from the bearing surface of the spindle, the said groove being of substantially uniform depth throughout except for a short distance near the collar, at which it is deeper than at the remaining portion, of a reservoir located in proximity to the groove but below the level thereof, and a wick located in part in the said reservoir and in part throughout the said groove, adapted to convey lubricating material from the reservoir up to and along the said groove, the said wick being of substantially the same thickness throughout the portion thereof in the groove, whereby the upper level thereof will be lower with respect to the surface at the deeper portion of the groove than at the remaining portion thereof.

4. The combination with a wagon axle comprising a body portion, a collar, and a spindle, the said spindle being provided with a groove recessed from the bearing surface of the spindle, the said groove being of substantially uniform depth throughout except for a short distance near the collar, at which it is deeper than at the remaining portion, of a reservoir located in proximity of the groove but below the level thereof, and a wick located in part in the said reservoir and in part throughout the said groove, adapted to convey the lubricating material from the reservoir up to and along the said groove, the said wick being of substantially the same thickness throughout the portion thereof in the groove, whereby the upper level thereof will be lower with respect to the surface at the deeper portion of the groove than at the remaining portion thereof, and the said wick being provided with means located at substantially the junction of the deeper and shallower portions of the groove, for retarding the flow of lubricating material along the same.

962,956. COIN-MAILING DEVICE. ALMON E. HALL, Williamstown, Mass. Filed Oct. 2, 1909. Serial No. 520,612.

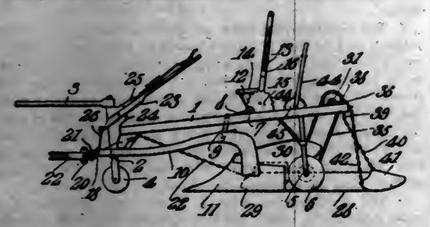
As a new article of manufacture, a coin mailing device comprising an oblong rectangular sheet of paper having a medial longitudinal weakening score, whereby it may be folded upon itself to form leaves, said sheet having the major extent of its surface perforated, forming projections upon one side of the sheet and leaving an im-

perforate longitudinal marginal portion along the outer edge of each sheet, one of said marginal portions being



gummed for attachment to the other, whereby the leaves may be secured in folded connection.

962,957. MOLE-PLOW. ALBERT G. HERMANSON, Prescott, Wis. Filed Mar. 26, 1909. Serial No. 485,911.



1. A plow comprising shares arranged to cast soil toward a center line, and a core tethered to the plow and arranged to move with the shares and located in the soil casting none of the shares.

2. A plow comprising shares arranged to cast soil toward a center line, a core tethered to the plow and arranged for movement with the shares and located in the soil casting none of the share, and a slicker arranged for movement with the core.

3. A plow comprising shares, a core arranged for movement with the shares, a slicker arranged for movement with the core, and means for moving the said slicker in an upward direction.

4. A plow comprising a wheel-supported frame, beams attached to the frame, means for raising and lowering the beams, a core tethered to the frame and located between the beams, and a slicker tethered to the frame and following the core.

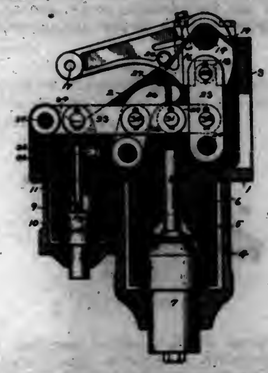
5. A plow comprising a wheel-supported frame, plows located at the opposite sides thereof, means mounted upon the frame for raising and lowering the plows, a core tethered to the frame and located between the plows, a slicker tethered to the frame and following the core.

[Claim 6 not printed in the Gazette.]

962,958. SOLENOID OPERATING MECHANISM. EDWARD M. HEWLETT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 17, 1906. Serial No. 343,790.

1. In an actuating mechanism for electric switches, the combination with a base having a lug and a movable switch actuating member connected to the switch and pivoted to said base, of an actuating toggle having one end connected to said member, and locking means for forming a rigid connection between said lug and the other end of said actuating toggle, said locking means being set in locking position by the collapse of said toggle.

2. In an actuating mechanism for electric switches, the combination with a movable switch actuating member, of an actuating toggle having one end of one link movable to inoperative position to render said actuating toggle unable to move said switch actuating member, and disengageable locking means for holding said end of said link against movement to inoperative position, said locking means being set in locking position by the collapse of said actuating toggle.



3. In an actuating mechanism for electric switches, the combination with a movable switch actuating member, of an actuating toggle having one end of one link movable to inoperative position to render the straightening of said toggle ineffective to move said member, locking means for holding said end of said link against movement to inoperative position, said locking means being set in locking position by the collapse of said toggle, and electro-responsive means for disabling said locking means upon the occurrence of abnormal current in the circuit.

4. In an actuating mechanism for electric switches, the combination with a movable switch actuating member, of an actuating toggle for moving said member having one end of one link movable to a position rendering said toggle incapable of moving said member, and disengageable locking means for holding said end of said link in position to cause said actuating toggle to move said member when straightened, said locking means being set in locking position by the collapse of the actuating toggle.

5. In an electric switch, the combination with a switch member, of an actuating toggle for moving said member to close the switch, a movable abutment for said toggle, and locking means for holding said abutment immovable in position to enable the toggle when straightened to close the switch, said locking means being set in locking position by the collapse of the actuating toggle.

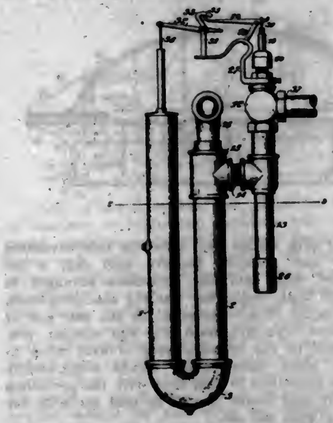
[Claims 6 to 9 not printed in the Gazette.]

962,959. GAS-REGULATOR. GEORGE A. HOUT, Crestline, Ohio. Filed Mar. 12, 1910. Serial No. 548,870.

1. In a gas regulator, the combination with a casing having a liquid therein, of a valve casing connected to the casing, a valve in the valve casing, a tripping mechanism connected to the valve, a float connected to the tripping mechanism received in the casing, means for admitting gas to the casings, which gas is adapted to act upon the liquid for causing the float to be held at an elevation for holding the valve in an open position to permit the passage of gas through the valve casing, and a float-controlled stopper received in the casing, acting as a stop to limit the action of the liquid upon the float.

2. In a gas regulator, the combination with a casing having liquid therein, a valve seat in the casing, a stopper adapted to be seated on the valve seat, of a valve casing connected to the casing, a valve in the valve casing, a tripping mechanism connected to the valve, a float in the casing connected to the tripping mechanism, and means for admitting gas to the casing, which gas is adapted to act upon the liquid for holding the float at an elevation for causing the valve in the valve casing to be held in an open position to permit the flow of gas through the valve casing, said stopper adapted to be seated upon the valve seat in the casing when the float is raised to limit the action of the liquid upon the float.

3. In a gas regulator, the combination with a U-shaped casing having liquid therein, of a float mounted in the casing, a valve casing connected to the casing, a valve in the valve casing, a tripping mechanism connected to the valve and float, means for admitting gas to the first named casing, which gas is adapted to act upon the liquid for causing the float to be held at an elevation, whereby the valve in the valve casing will be held in an open position to allow the discharge of gas through the valve casing, and a float-controlled stopper mounted in the casing for limiting the action of the liquid upon the float.



4. In a gas regulator, the combination with a casing having liquid therein, of a float mounted in the casing, means for admitting gas to the casing, which gas is adapted to act upon the liquid for causing the float to be held at an elevation, a stopper in the casing for limiting the action of the liquid upon the float, a valve casing connected to the casing, a valve in the valve casing, and means connecting the valve to the float whereby the valve is held in an open position during the discharge of gas through the valve casing.

5. In a gas regulator, the combination with a casing having liquid therein, of a float mounted in the casing, means for admitting gas to the casing, which gas is adapted to act upon the liquid for causing the float to be held at an elevation, a valve casing connected to the casing, a valve controlling the discharge of gas from the valve casing, a bracket, a lever pivotally mounted on the bracket, means connecting the lever and valve, a secondary lever engaging said lever, means connecting the float and secondary lever whereby the valve in the valve casing is held in an open position to allow the discharge of gas from the casing, and a stopper in the casing adapted to limit the action of the liquid upon the float.

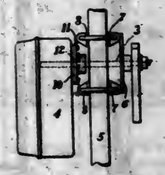
[Claim 6 not printed in the Gazette.]

962,960. SEMAPHORE MECHANISM. WINTHROP K. HOWE, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed May 19, 1909. Serial No. 497,125.

1. In combination with a round signal mast, a semaphore-support clamped around the mast and vertically and angularly adjustable thereon, and semaphore mechanism carried by said support and arranged entirely alongside the mast.

2. In combination with a round signal mast, a semaphore-support clamped around the mast and vertically and angularly adjustable thereon, a semaphore carried by said support and located at one side of the mast, and semaphore-actuating mechanism connected with the semaphore and carried by the support on the opposite side of the mast.

3. In combination with a round signal mast, a semaphore-support clamped around the mast and vertically and angularly adjustable thereon, a semaphore carried by the support and located at one side of the mast, a casing mounted on the support on the opposite side of the mast, and semaphore-actuating mechanism in the casing connected with the semaphore.

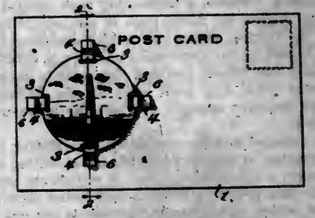


4. In combination with a round signal mast, a semaphore-support clamped around the mast and vertically and angularly adjustable thereon, a semaphore carried by the support and located at one side of the mast, a casing removably mounted on the support on the opposite side of the mast, and semaphore-actuating mechanism in the casing connected with the semaphore.

5. In combination with a signal mast, a semaphore-support mounted on the mast between the ends thereof, a shaft journaled in said support in horizontal position and close beside the mast, a semaphore mounted on one end of the shaft, semaphore-actuating mechanism connected with the other end of the shaft and located on the opposite side of the mast from the semaphore, and a casing inclosing and supporting said mechanism and removably mounted on the shaft.

[Claims 6 to 9 not printed in the Gazette.]

962,961. STATIONERY. MABEL I. HUFFY, Glendive, Mont. Filed Nov. 3, 1908. Serial No. 460,845.



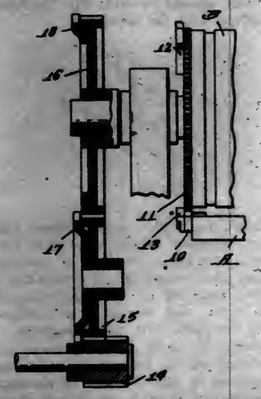
A mailing card having a plurality of tabs consisting of narrow rectangular strips, said strips being attached to the card adjacent to their end edges only, the remaining portions of said tabs being partly coated with adhesive material and initially disconnected from the face of the card, in combination with a souvenir device having slots arranged for the passage of the projecting portions of the rectangular tabs which are initially disconnected from the face of the card.

962,962. CYLINDER-DRIVING MECHANISM FOR PRINTING-PRESSES. ROBERT T. JOHNSTON, Taunton, Mass., assignor to The Campbell Printing Press & Manufacturing Company, Taunton, Mass. Filed July 27, 1905, Serial No. 271,473. Renewed Nov. 10, 1909. Serial No. 527,310.

1. In a cylinder driving mechanism for printing machines, the combination of an impression cylinder, a reciprocating bed, a registering mechanism which acts to connect the bed and cylinder on the forward stroke of the bed, a gear on the impression cylinder, a driving gear continuously and loosely meshing therewith, and a correcting mechanism for this gearing.

2. In a cylinder driving mechanism for printing presses, the combination of a vertically rising and falling impression cylinder, a reciprocating bed, a registering gear carried by the impression cylinder, a registering rack carried by the bed, which registering mechanism is put out of and into mesh by the vertical rising and falling move-

ments of the cylinder, a gear on the cylinder shaft, a driving gear continuously and loosely meshing therewith, and a correcting mechanism for this gearing.

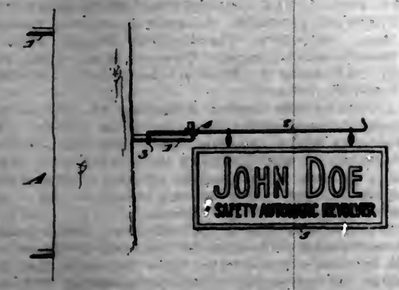


3. In a cylinder driving mechanism for printing presses, the combination of an impression cylinder, a reciprocating bed, registering gearing between the same which comes into operation on the forward or printing movement of the bed, a gear on the impression cylinder, a driving gear loosely meshing therewith, a segment on the cylinder gear, and gear teeth on the driving gear which said segment engages to start the parts properly in operation.

4. In a cylinder driving mechanism for printing presses, the combination of a vertically rising and falling impression cylinder, a reciprocating bed, a registering gear on the impression cylinder, a registering rack carried by the bed, which registering mechanism is put out of and into mesh by the vertical rising and falling movements of the cylinder, a gear on the impression cylinder, a driving gear continuously and loosely meshing therewith, a segment on the cylinder gear, and gear teeth on the driving gear which said segment engages to start the parts properly in operation.

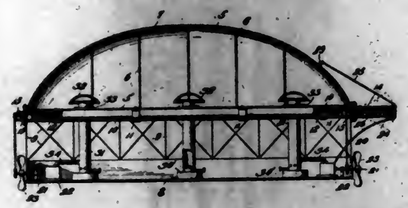
5. In a cylinder driving mechanism for printing presses, the combination of a vertically rising and falling impression cylinder, a reciprocating bed, a registering gear carried by the impression cylinder, a registering rack carried by the bed, which registering mechanism is put out of and into mesh by the vertical rising and falling movements of the cylinder, a starter segment on said cylinder, a starter rack on said bed, a gear on the cylinder shaft, a driving gear continuously and loosely meshing therewith, and a correcting mechanism for this gearing.

962,963. ATTACHMENT FOR SUPPORTING SIGNS. JOHN J. KEGLER, Maquoketa, Iowa. Filed Mar. 18, 1910. Serial No. 550,204.



An attachment for supporting signs, comprising a pole, a pin connected to the pole having an up-turned end, a rod, a hook formed at one end of the rod adapted to engage the lower surface of the pin, said rod being twisted for forming a ring which is received over the up-turned end of the pin, and a sign adapted to be supported upon the outer end of the rod.

962,964. AIRSHIP. THEODORE KORNBRODT, Chicago, Ill. Filed Oct. 28, 1909. Serial No. 525,077.



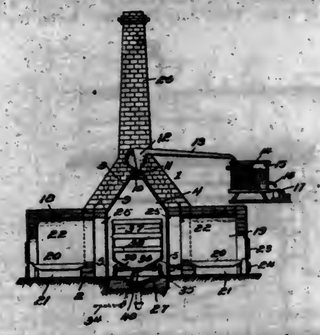
1. In an air ship, an air bag, a flexible tube extending longitudinally and centrally beneath said bag, a car body suspended from said bag, propellers arranged in the end of said body, means for rotating said propellers, a resilient steering element attached to the rear end of said tube, means connecting said tube and element, propellers arranged in the opposite ends of said tubes to direct an air blast therethrough, means coöperatively connecting the propellers in said tube with the propellers in the car body, and means carried by said car body for filling said bag with hot air.

2. In an air ship, an air bag having a plane bottom surface, and air chamber centrally and longitudinally arranged below said bag, propellers arranged in the opposite ends of said chamber, a flexible steering element secured to the rear end of said chamber, steering means adapted to direct said element, a car body suspended from said bag, propellers arranged in the opposite ends of said body, means carried by the car body for rotating said propellers, flexible connections between the propellers in said chamber and in said car body, a plurality of heat generating elements carried by said car body, and conducting tubes extending from said element into said air bag.

3. In an air ship, an air bag having a plane bottom surface, an air conducting tube extending centrally and longitudinally beneath said body and supported therefrom, a flexible steering element secured to the rear end of said tube, a car body suspended from said bag, steering means carried by said car body and connected to said element to direct the same, propellers arranged in the opposite ends of said tube and adapted to direct an air blast therethrough, propellers arranged in the opposite ends of said car body, an engine in each end of said body adapted to simultaneously rotate said propellers, a plurality of heat generating elements carried by said car body, and means for conducting heated air generated by said elements into the air bag.

4. In an air ship, an air bag of substantially semi-circular cross sectional form, an air conducting tube extending centrally and longitudinally beneath said bag and supported therefrom, a car body suspended from said bag, a flexible steering element extending rearwardly of said body and in longitudinal alinement with said tube, propellers carried by said car body, an engine located in each end of the body to rotate said propellers, means arranged in the opposite ends of said tube for creating an air blast therethrough, said engine being adapted to simultaneously actuate said means and propellers, a plurality of heat generating elements carried by said car body, tubes extending from said elements into the air bag and adapted to conduct the heated air thereto, and a connecting pipe extending from each of said engines to certain of the tubes to discharge the heated air from said engines into said tubes.

962,965. STILL. ISHAM MARTIN LEE, near Waycross, Ga. Filed Jan. 14, 1909. Serial No. 472,305.



A still of the class described, consisting of a structure of masonry or brickwork including two oppositely disposed combustion chambers having doors facing away from each other, and a central longitudinal passage between their adjacent ends and leading to a remote stack or chimney; a retort disposed in said passage and having thin metal upright walls embedded into the ground at their lower edges, the front wall closed by a door, the rear wall closed forward of said stack, and the side walls spaced from the sides of said brick work passage to form upright flues leading from the combustion chambers to the stack, a top for said retort converging to a dome, a cement bottom for the retort set within the embedded edges of its walls and having a concavity communicating with a discharge; and a truck adapted to be run into said retort through its door, for the purposes set forth.

962,966. ELECTRIC-RAILROAD BONDING SYSTEM. GEORGE H. LINDSEY, Austen, W. Va. Filed May 26, 1909. Serial No. 498,529.

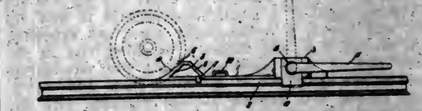


1. In a device of the class described a splice bar having a longitudinal groove extending between two bolt openings, a U-shaped bond having its connecting member fitted in said groove, the arms of said bond being partially threaded upon their inner faces, connecting bolts having grooves to receive the arms of the bond, and nuts threaded upon the bolts and bond arms.

2. In a device of the class described and including abutting rail ends and splice bars engaging the same, one of said splice bars being provided with a longitudinal groove extending between two bolt holes proximate to the rail joint, a U-shaped bond having its connecting member fitted in said groove and arms extending through the bolt holes, said arms being partially threaded upon their inner faces, bolts longitudinally grooved to engage the bond arms, and nuts threaded upon the bolts and the bond arms jointly.

962,967. CAR RETARDER OR CHOCK. ROBERT M. LINDSAY, Oliver Springs, Tenn. Filed Nov. 6, 1909. Serial No. 526,625.

1. A car chock including a base plate, a shoe carried at one end thereof, and clamping means carried at the opposing end, said means including clamping plates to embrace and underlie the tread portion of the rail, a lever, means operated in the movement of the lever to force the plates toward each other, and means carried by the base plate to force the plates from each other.



2. A car chock including a base plate, a wheel engaging shoe carried thereby, a block projected from the base plate, clamp plates mounted on the block, a spring for forcing said plates in opposite directions, a lever and cam disks operated by the lever to simultaneously move the plates in opposition to the spring.

3. A car chock including a base plate, a wheel engaging shoe carried thereby, a block projected from the base plate, clamp plates mounted on the block, a spring for forcing said plates in opposite directions, a lever and cam disks operated by the lever to simultaneously move the plates in opposition to the spring, said plates being projected below the block and curved to underlie the tread portion of the rail.

4. A car chock including a base plate, a wheel engaging shoe carried thereby, a block projected from the base plate, clamp plates mounted on the block, a spring for forcing said plates in opposite directions, a lever and cam disks operated by the lever, each of said clamp plates being formed with surfaces to coöperate with the cam disks, whereby in the movement of the lever in one direction said disks operate to force the clamp plates in a direction opposing the influence of the spring.

962,968. INK-WELL. HENRY MALICK, Belmont, W. Va., assignor, by mesne assignments, to Keystone Novelty Company, Beaver Falls, Pa., a Corporation of Delaware. Filed May 20, 1909. Serial No. 497,257.

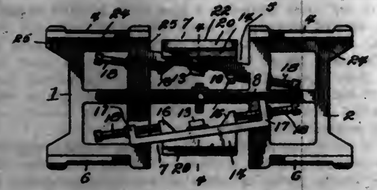


1. In combination with a receptacle, a collar removably fitted in the upper end thereof and having a flange engaging the top of the receptacle and further provided with a peripheral groove and interior threads, a gasket mounted in said groove and engaging the inner face of the receptacle, a dip well mounted on said collar and having a conical lower end extending into said receptacle, the said conical lower end being provided with an opening in its apex, said dip well at its top formed with interior and exterior threads, said exterior threads engaging with the threads of the collar and further provided with an opening in the side wall, and a mouth-piece mounted in said dip well and having a frusto-conical lower end extending into the dip well and provided on its inner face with vertically disposed ribs extending from the lower end of the mouth-piece to a point in close proximity to the upper end thereof, said mouth-piece provided at its top with exterior threads engaging with the interior threads of the dip well.

2. In combination with a receptacle, a collar fitted in the upper end thereof and having interior threads, a dip well mounted on said collar and having a conical lower

end extending into the receptacle and provided in the apex of said conical end with an opening, said dip well further provided with an opening in the side wall of said conical end and further having interior and exterior threads, said exterior threads engaging with the interior threads of the collar whereby the collar and dip well are connected together, a mouth-piece mounted in said dip well and having a frusto-conical lower end extending into the dip well, and vertically extending ribs on the inner face of said mouth-piece, said ribs terminating short of the upper end of the mouth-piece, said mouth-piece formed with exterior threads engaging with the interior threads of the dip well whereby the dip well and mouth-piece are detachably connected together.

962,969. RAKER GAGE AND JOINTER. SAMUEL C. MILES, Sandy, Oreg. Filed Oct. 19, 1909. Serial No. 523,377.



1. A device of the character described comprising a body having spaced abutment members, and a slotted raker tooth holder supported upon said body between said members and slidably adjustable in an inclined path with relation thereto.

2. A device of the character described comprising a body having spaced abutment members, a carrier supported upon said body between said members and slidably adjustable in an inclined plane relative thereto, and a slotted raker tooth holder adjustably connected with said carrier.

3. A device of the character described comprising a body having spaced abutment members and an inclined guiding portion between the same, a carrier adjustable on said inclined guiding portion, and a slotted raker tooth gage or holder adjustably connected with the carrier.

4. A device of the character described comprising a body having spaced abutment members and an inclined guiding portion between said members, a carrier slidably engaging the inclined guiding portion, means for adjusting said carrier, and a slotted raker tooth gage or holder adjustably connected with said carrier.

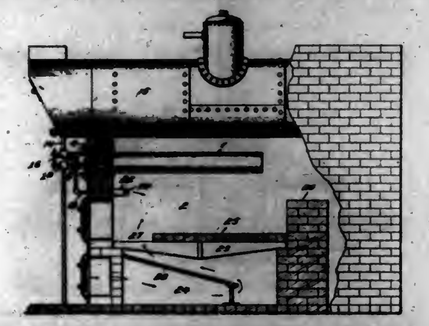
5. A device of the character described comprising a body having spaced abutment flanges, a guiding portion disposed between and inclined to the plane of said flanges, said guiding portion being provided with a slot, a carrier having an inclined face and adjustable along said slot, projections on the carrier extending through the slot, adjusting devices engaging said projections, and a slotted raker tooth holder adjustably connected with said carrier.

962,970. BATH-TUB. PEARL MUSSELMAN, Billings, Mont. Filed Mar. 12, 1909. Serial No. 483,010.



In combination, a bath tub having a portion formed with a long slant and having a base extended beneath the slanting portion to give stability to the tub, and a seat and head rest provided upon the slanting portion of the tub.

962,971. BURNER. GEORGE J. MCPHERSON, Salt Lake City, Utah, assignor, by direct and mesne assignments, to International Oil Gas Producer Company, a Corporation of Utah. Filed July 16, 1909. Serial No. 508,010.



1. An oil burner of the class described, comprising a superheating retort, a steam supply pipe extending thereinto and discharging at the inner end thereof, a gasifying retort located within the steam superheating retort, a feed pipe for liquid hydrocarbon extending into and discharging at the inner end of the gasifying retort, a mixing duct and connections between said mixing duct and said retorts to cause the superheated steam and gases to become commingled to produce a combustible mixture.

2. A furnace comprising a fire box, a hearth therefor having an opening, a draft passage discharging into the fire box through the said opening in the hearth and a burner comprising a steam superheating retort located in the fire box, a gasifying retort in the said superheating retort, means to respectively supply steam and liquid hydrocarbon to the said retorts, a mixing duct connected to the said retorts and a burner nozzle fed by said mixing duct, said burner nozzle being located also in the fire box.

3. A furnace having a fire box, an ash pit below the fire box, a hearth forming the bottom of the fire box and provided at its front side with an opening communicating with the ash pit, a baffle in the ash pit extending rearwardly from the front wall thereof and disposed below the hearth and the opening at the front side of the hearth, and a burner comprising a superheating retort located in the fire box, a gasifying retort located in the superheating retort, means to respectively supply the said retorts with steam and liquid hydrocarbon, a burner tip or nozzle discharging into the fire box and a mixing duct connected to and discharging in said burner tip or nozzle, said mixing duct being connected to the said retorts.

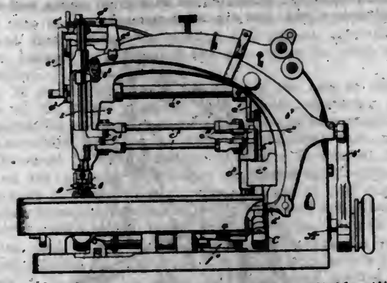
962,972. FIRE-CRACKER HOLDER. MARINUS NIELSEN, San Francisco, Cal. Filed Jan. 29, 1909, Serial No. 474,916. Renewed Mar. 19, 1910. Serial No. 550,514.



1. A fire cracker holder having a megaphone barrel provided at the inner end of its bore with a cracker holding socket, and a holding pin in said socket to enter the cracker and co-act with the socket in securing the cracker.

2. A fire cracker holder having a megaphone barrel provided at the inner end of its bore with a cylindrical cracker holding socket, and a tapered pin in said socket to enter the cracker and co-act with said socket in securing the cracker.

962,973. HEMSTITCH SEWING-MACHINE. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Sewing Machine Co., Chicago, Ill., a Corporation of Illinois. Filed Feb. 18, 1902. Serial No. 94,589.



1. In a chain stitch hemstitch machine, suitable stitch-forming mechanism including a thread-carrying needle, means for vibrating it laterally, and a thread-carrying looper coöperating with said needle, and means for vibrating said looper into and out of the needle loop, whereby a double thread chain stitch is formed, a feeding mechanism, with means for imparting to it its various movements, including mechanism to allow it to remain idle while certain stitches are being formed, said needle-vibrating means operating to vibrate said needle laterally while the feed is idle; substantially as described.

2. In a chain stitch hemstitch machine, suitable stitch-forming mechanism including a thread-carrying needle, means for vibrating it laterally, and a thread-carrying looper coöperating with said needle, a feeding mechanism, with means for imparting to it its various movements, including mechanism to allow it to remain idle while certain stitches are being formed, said needle-vibrating means operating to vibrate said needle laterally while the feed is idle, and a spreader coöperating with the looper; substantially as described.

3. In a chain stitch hemstitch machine, suitable stitch forming mechanism including a thread carrying needle, means for vibrating it laterally, a piercer coöperating therewith, a thread carrying looper coöperating with said needle, a feeding mechanism with means for imparting to it its various movements including mechanism to allow it to remain idle while certain stitches are being formed and a spreader coöperating with the looper; substantially as described.

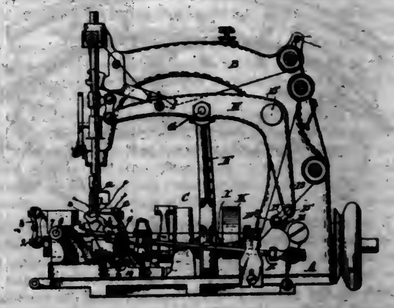
4. A hemstitch sewing machine, comprising two independent vertically and laterally movable needle bars, means for imparting independent lateral movement thereto, means for simultaneously reciprocating the needle bars vertically, and a suitable piercer coöperating with the needle of each bar, a thread-carrying looper coöperating with each needle, and spreaders coöperating with said loopers; substantially as described.

5. A hemstitch sewing machine, comprising two independent vertically and laterally movable needle bars, means for imparting independent lateral movement thereto, means for simultaneously reciprocating the needle bars vertically, a suitable piercer coöperating with the needle of each bar, a shaping instrument in rear of said piercers, and an awl in front of the piercers; substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

962,974. SEWING-MACHINE. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed July 26, 1904. Serial No. 218,192.

1. In an overseaming machine, the combination of a driving shaft, a work support, a stitch-forming mechanism, including a needle, a thread-carrying looper coöperating with the needle beneath the work support, a second thread-carrying looper entering the loop of looper thread formed by the first named thread-carrying looper, means for operating said second thread-carrying looper, including a looper-supporting frame mounted on a shaft journaled in bearings carried by the machine frame, said shaft being inclined to the work support, and connections to the driving shaft for oscillating said second thread-carrying looper diagonally across the line of feed from a position below the cloth plate up over the edge thereof, and in a plane inclined to the path of the needle, whereby said second thread-carrying looper moves up across the side face of the first named looper and into the loop of looper thread formed thereby, and above the work support, to position the loop of looper thread formed by said second named looper for the entrance of the needle.



2. In an overseaming machine, the combination with a driving shaft, of stitch forming mechanism, including a needle, a looper, a third implement coöperating with the needle beneath the work support, and carrying a loop of thread into position to be engaged by the looper, a work support, and means for operating said looper, including a looper supporting frame, mounted on a shaft journaled in bearings on the machine frame, said shaft being inclined to the work support and the line of feed, whereby said looper is oscillated diagonally across the line of feed, from a position below the cloth plate up over the edge thereof to position a loop of looper thread for the entrance of the needle, said looper supporting frame, having an arm the free end of which lies substantially in a vertical plane passing through the axis of the driving shaft, and means for oscillating said looper frame including a crank pin on the end of the driving shaft, and a link connection between the crank pin and the free end of the arm of the looper supporting frame, said link having a universal connection with the crank pin and said arm, substantially as described.

3. In an overseaming machine, the combination of a driving shaft, a work support, and stitch forming mechanism including a needle, a looper, a third implement coöperating with the needle beneath the work support and carrying a loop of thread into position to be engaged by the looper, means for operating said looper, comprising a looper supporting frame including an arm on which the looper is mounted, a shaft on which said arm is fixed, a second arm also fixed on said last named shaft, and having its free end lying substantially in a vertical plane passing through the axis of the driving shaft, an eccentric member carried by the forward end of said driving shaft, and a link connecting said last named arm and said eccentric member for oscillating said frame, said frame supporting shaft being inclined downwardly from the rear to the front of the machine, whereby the looper carried by said frame moves in a plane inclined to the work support.
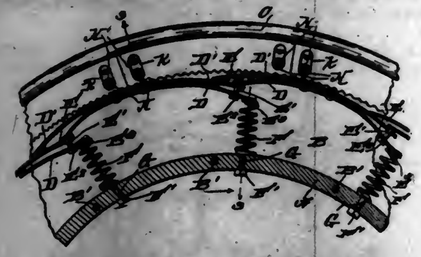
4. In a sewing machine, having stitch forming mechanism including a thread manipulating device, and a needle, and means for oscillating said thread manipulating device to cause it to coöperate with the needle, and means for adjusting the thread manipulating device bodily in the arc of a circle, the center of which arc is in line with the

needle, and means for giving it a bodily, lateral adjustment; substantially as described.

5. In a sewing machine having stitch forming mechanism including a needle, a looper, and a third implement, means for adjusting said third implement bodily with respect to the needle and separate means for adjusting it bodily with respect to the looper only; substantially as described.

[Claims 6 to 35 not printed in the Gazette.]

962,975. RESILIENT WHEEL. ALEXANDER H. PELOUBET, Newark, N. J. Filed Apr. 6, 1910. Serial No. 553,773.



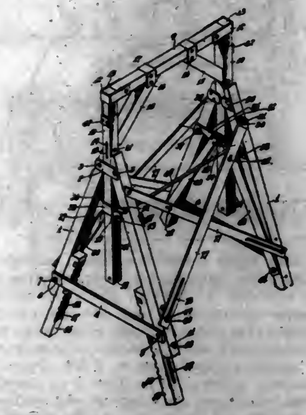
1. A resilient wheel comprising a felly, circular outlined plates fastened thereto and spaced apart, a cushion tire movable between said plates, means for fastening the tire to the latter and allowing the tire to yield and be guided by the plates, leaf springs arranged in pairs and fastened together, the ends of the pairs of springs overlapping one another, said springs provided with registering slots, a lug adjacent to corresponding ends of one leaf spring of each pair and adapted to be guided in said registering slots, and coiled springs interposed between said leaf springs and felly.

2. A resilient wheel comprising a felly, circular outlined plates fastened thereto and spaced apart, a cushion tire movable between said plates and provided with slots, open-ended tubular shells positioned one in each of said slots, bolts mounted in registering apertures in said plates and passing through said shells, leaf springs arranged in pairs and fastened together, the ends of the springs overlapping one another and provided with registering slots, a lug fastened to the corresponding ends of one leaf spring of each pair and adapted to be guided in said registering slots, and coiled springs interposed between said leaf springs and the felly.

962,976. FOLDING EXTENSIBLE HORSE. WARREN PENCE, CHARLES R. WOLF, and VIRGIL O. JARVIS, Los Angeles, Cal. Filed May 10, 1909. Serial No. 495,191.

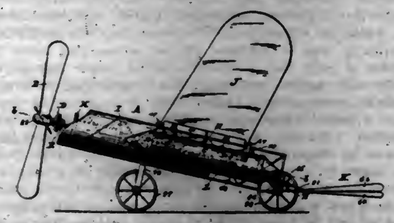
1. A folding extension horse comprising folding supports, each support formed with two legs, a connecting member at the upper end thereof, said legs being pivoted to said connecting member and having their upper ends separated to form a guide, means extending between the said legs and provided with a guide, an extension member comprising a top bar, vertical legs depending therefrom and sliding in said guides, a shaft rotatably mounted on said means extending between the legs, a rope connected to and winding on said shaft and engaging said depending legs to raise or lower the extension member, said shaft being provided with operating means and with a ratchet, and a pawl for said ratchet.

2. A folding extension horse comprising a pair of supports, each support consisting of a top member and two legs pivoted thereto, a cross bar pivoted to one of said legs and detachably connected to the other of said legs, bars pivoted to the respective legs near their lower portions and pivoted together at their upper ends forming a toggle, a cross-plate connected to the pivot of said toggle and having a hook at each side of said pivot, each of said legs having a bolt to engage said hook, a guide connected to the pivot of said toggle, a guide formed at the upper end of said legs, an extension member comprising a cross bar and two legs depending therefrom, each leg mounted to slide in the guides of the corresponding support, and operating means supported on said cross plates and connected to elevate the extension member.



3. A folding extension horse comprising folding supports, each support formed with two legs, a connecting member at the upper end thereof, said legs being pivoted to said connecting member and having their upper ends separated to form a guide, means extending between the said legs and provided with a guide, an extension member comprising a top bar, vertical legs depending therefrom and sliding in said guides, a shaft rotatably mounted on said means extending between the legs, a rope connected to and winding on said shaft and engaging said depending posts to raise or lower the extension member, said shaft being provided with operating means and with a ratchet, a pawl for said ratchet, and extension posts for each of the aforesaid leg members, said extension posts provided with longitudinal slots, and a series of transverse recesses, a bolt traversing said slot and secured to the leg member, and a plate engaged by said bolt and seated in a transverse slot of the extension leg.

962,977. AIRSHIP. AUGUST RICHARD BIEDER, Chicago, Ill. Filed Sept. 9, 1909. Serial No. 516,820.



1. An airship, comprising, in combination, a body; motors in said body; gas-containing cylinders attached to the sides of said body and adapted to be forwardly and backwardly moved to establish and maintain the equilibrium of the ship's body, said cylinders being carried in brackets and held in position by guy-rods; wings on said body; means for elevating and depressing said wings, a propeller-wheel forward of the bow of the ship's body; means for changing the axial line of rotation of said propeller-wheel; a rudder, and means for varying the position of said rudder, as, and for the object specified.

2. In an airship, means for varying the axis of rotation of the ship's propeller, said means comprising, in combination, a propeller-wheel; a main-shaft, a universal joint connecting said propeller-wheel to said main-shaft; a cage; rods pivoted to said cage with one end, a tiller to which said rods are connected with their other ends; annular guides; spiders in said annular guides; a central tube upon said main-shaft to which said spiders are affixed, said rods passing through said spiders, said tiller being adapted to be rotated and move upon its pivot, as specified.

3. In an airship, means for varying the axis of rotation of the ship's propeller, said means comprising, in combination, a propeller-wheel at the bow of said airship; a main-shaft; a universal coupling connecting said propeller-wheel to said main-shaft; a cage interposed between the propeller-wheel and the universal coupling; two rods pivoted with their forward ends to said cage; spiders, through the arms of which said rods are passed; annular guides within which said spiders are adapted to rotate, said spiders having guiding-rollers engaging said annular guides; a tiller pivoted to one of said spiders and adapted to rotate the same, said rods being pivoted to said tiller at their rear ends.

4. In an airship, the combination, with a propeller-wheel located in front of the bow of the airship and having its axis of rotation normally coinciding with the longitudinal center line of the ship's body, of means for moving the axial line of rotation of said propeller-wheel out of coincidence, said means comprising a cage within which said propeller-wheel is journaled; parallel rods pivotally connected to said cage with their forward ends; means for maintaining the parallelism of said rods, a tiller pivoted at its center and adapted to oscillate around its pivotal point, said rods being connected to said tiller at their rear ends, whereby said tiller is adapted to rotate said cage and to move the rods longitudinally to change the angularity of said propeller wheel.

5. In an airship, the combination, with a propeller-wheel located in front of the bow of the airship, and having its axis of rotation normally coinciding with the longitudinal center line of the ship's body, of a cage located in the rear of said propeller-wheel; a stud on said propeller-wheel journaled in said cage; rods, pivotally connected to said cage with their forward ends; a pair of spiders placed a predetermined distance apart, said spiders having arms through which said rods are passed; lugs on the rear face of one of said spiders; a housing, pivoted to said lugs; arms on said housing to which said rods are pivoted at their rear ends; annular guides within which said spiders are adapted to rotate; guide-rollers near the outer ends of said spider-arms adapted to engage the inner flanks of said annular guides and further guide-rollers at the ends of said spider-arms adapted to engage the inner peripheral surfaces of said annular guides.

[Claims 6 and 7 not printed in the Gazette.]

962,978. CAN-SOLDERING MACHINE. DANIEL P. ROBINSON, Baltimore, Md., assignor to Continental Can Company, Baltimore, Md., a Corporation of New Jersey. Filed June 15, 1909. Serial No. 502,208.



1. A soldering machine including in combination, a soldering iron located beneath the path of movement of the cans, means for continuously conveying the cans through the soldering machine, and means for rotating the cans while in contact with the soldering iron in a direction to cause a sliding contact between the can end and the soldering iron whereby a clean soldering contact is maintained on said soldering iron.

2. A soldering machine including in combination, soldering means located beneath the path of movement of the cans, means for conveying the cans through the soldering machine, and means for rotating the cans while in contact with the soldering means in a direction opposite to the direction of rotation of the cans in their bodily travel to the soldering means.

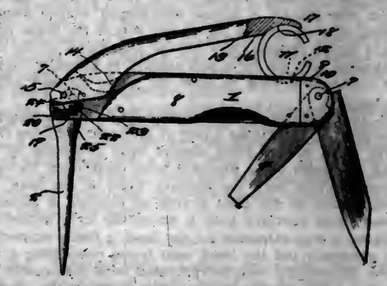
3. A soldering machine including in combination, soldering means located beneath the path of movement of the cans, means for conveying the cans through the soldering machine, and means for engaging the upper sides of the cans and rotating the same in a direction opposite to the direction of rotation of the cans in the bodily travel of said cans to the soldering means.

4. A soldering machine including in combination, soldering means located beneath the path of movement of the cans, means for conveying the cans through the soldering machine, and means located above the cans for raising and supporting the end of the can and causing the same to rotate in a direction opposite to the direction of rotation of the cans in their bodily movement to the soldering means.

5. A soldering machine including in combination a solder bath, a soldering iron, means for intermittently immersing said iron in said solder bath whereby it is charged with solder, means for conveying cans through the soldering machine, and means for rotating the cans in a direction opposite to the direction of the cans in their bodily movement to the soldering iron.

[Claims 6 to 13 not printed in the Gazette.]

962,979. COMBINATION HOG-RINGER AND TOOL. WILLIAM G. ROBINSON, Guthrie, Okla. Filed Jan. 25, 1910. Serial No. 539,924.



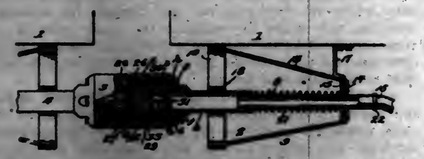
1. A ringer comprising a secondary jaw and a pivotally mounted main jaw, said secondary jaw having a cut-away portion or recess upon one face thereof near one end, said cut-away portion having a segmental recess therein disposed upon an arc using the pivot of the main jaw as a center, a segmental plate conforming to the curvature of said recess disposed therein as to be readily adjusted, and means for holding the plate in an adjusted position, whereby the main jaw may be limited in its movement.

2. A ringer comprising a secondary jaw and a pivotally mounted main jaw, said secondary jaw having a cut-away portion or recess upon one face thereof near one end, said cut-away portion having a segmental recess therein disposed upon an arc using the pivot of the main jaw as a center, a segmental plate conforming to the curvature of said recess disposed therein as to be readily adjusted, means for holding the plate in an adjusted position, whereby the main jaw may be limited in its movement, said pivoted main jaw and secondary jaw having oppositely disposed recesses to coöperate with the ring when the same is being applied to an animal's nose.

3. A ringer comprising a main jaw and a secondary jaw pivotally united, each jaw being formed with an arcuate recess to hold a ring, the secondary jaw having a cut-away portion in its rear end in which a segmental recess is

formed, a segmental plate movable in the recess, and a screw extending through the segmental plate adapted to hold the same in fixed position, said plate forming a stop for the main jaw.

962,980. AUTOMATIC AIR-BRAKE COUPLING. FORREST H. ROE, Batesville, Ohio. Filed Aug. 3, 1909. Serial No. 510,979.



1. In a coupling of the character set forth, a head provided with forwardly extending jaws arranged at an angle from their center to their ends, the sides of the head between the jaws being provided with seats, a normally closed valve within the head having an outwardly extending portion, and a support for the head provided with resilient means to compensate for the longitudinal or transverse movement of the said head.

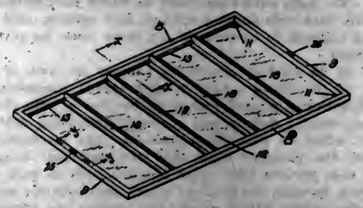
2. In a coupling for the purpose set forth, a head, a pipe extension upon the head, a support for the extension, resilient means for normally forcing the head forward of its support, resilient means for normally centering the head and extension upon the support, said head being provided with jaws having their inner faces inclined from their center to their ends, the space between the jaws, adjacent the rear portion of the head being provided with seats, a central opening within the solid portion of the head, said opening having its forward portion substantially cone-shaped, a hollow cone-shaped flexible member within this opening, a valve seat within the main opening, a spring pressed valve for the seat, and a hollow disk connected with the valve and adapted to normally contact the cone-shaped plug to force the latter forward within its opening.

3. In a coupling of the character set forth, the combination with a head having a pair of jaws inclined from their outer edges toward their centers upon two sides of the head, the head being provided with seats upon its sides communicating with the inclined walls of the jaws, the solid portion of the head having an opening, a normally closed valve provided with a projecting stem within the opening, a pipe extension for the head, a frame supporting the extension and the head, said frame comprising a forward rectangular member provided with rearwardly extending inclined arms, a connection between the inclined arms and the bottom of the car, a connection between the forward portion of the frame and the bottom of the car, an auxiliary frame loosely mounted upon the pipe extension and provided with oppositely disposed arms, resilient elements upon the arms between the collar and the sides of the frame to normally center the head upon the frame, a resilient member normally forcing the head forward of the frame, and means provided upon the pipe extension for limiting its forward movement.

4. In a pipe coupling of the character described, a revolubly headed member having a normally closed valve, a frame supporting member, and resilient elements upon the frame to provide for the longitudinal as well as the lateral movement of the member.

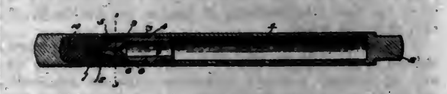
962,981. JEWELRY-TRAY. GEORGE C. RUECKERT, Providence, R. I. Filed Dec. 14, 1909. Serial No. 533,032.

1. In a tray of the type set forth, the combination with a frame having a flexible floor secured to the side and ends of the frame, of flexible guide strips upon the frame above the floor and projecting inwardly over said floor, and cross bars independent of and disconnected from said floor and having vertical longitudinally extending ribs cut away upon their ends leaving slots into which between the outer faces of the cross bars and the under faces of the cut-away portions of the ribs said guide strips engage and interlock, the horizontal portions of said cross bars forming supports for the edges of cards and the ribs serving to separate adjacent cards.



2. As an improved article of manufacture, a tray comprising a rectangular frame having side and end walls, a floor of fabric secured to the bottom of the side and end walls, thin guide strips secured to the bottom faces of said side walls above and separated from the floor within the frame, and a plurality of cross bars disconnected from and independent of the floor and having ribs, the end portions of said ribs being cut-away upon their under faces leaving spaces for the reception of the inwardly extending portions of said guide strips, the horizontal portions of said cross bars forming supports for the edges of cards and the ribs serving to separate adjacent cards.

962,982. FOUNTAIN-PEN. RADHIKA NATH SAHA, Benares, India. Filed May 7, 1908. Serial No. 431,413.



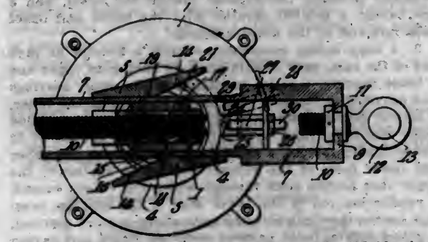
In a fountain pen, the combination with a hollow barrel and a writing section comprising a tubular body threaded on one end to engage the barrel, an annular flange arranged midway of its length adapted to limit the movement of the section in the barrel, a centrally disposed reduced extension carried by the tubular body and provided with a central longitudinal bore, a flange on the section concealing a series of inwardly extending air openings communicating with the interior of the writing section, a writing point extending through and beyond the reduced extension, a tubular cap adapted to fit over the outer end of the writing section and abut against the annular flange, and a solid elastic pad secured in one end of the cap with a socket to receive the reduced extension of the writing section and the projecting end of the writing point arranged in said cap and to abut against the concealing flange whereby a secondary closure is formed.

962,983. VISE. ROBERT J. SCHLOSSER, Warren, Pa., assignor to Marcus W. Jamieson, Warren, Pa. Filed Sept. 11, 1909. Serial No. 517,214.

1. A vise including a base, a main jaw pivotally mounted upon the base, a slide within the main jaw, a jaw carried by the slide, a slotted member mounted for rotation within the base and extending into the slide, said member having a bottom portion extending under a portion of the base, a clamping member slidably mounted within said slotted member, and a slide-adjusting device engaging the clamping member for binding the base between the two members.

2. A vise including an apertured base, a jaw-carrying member pivotally mounted on the base, a jaw-carrying slide mounted in said member, a slotted stud mounted for rotation within the aperture in the base and bearing upwardly against said base, a clamping element slidably mounted within the stud, and a slide-actuating device engaging said element to shift the element and stud and bind the base therebetween.

3. A vise including a base having an aperture, a jaw-carrying member mounted for rotation upon the base, a hollow slide within said member and carrying a jaw, a stud mounted for rotation within the aperture in the base and having a head bearing upwardly against said base, said stud having a tapered opening, a wedge slidably mounted within said opening and bearing downwardly on the base and slide-adjusting means engaging and designed to actuate the wedge.



4. A vise including a base, main and slidable jaws movably mounted on the base, means for actuating the slidable member, and means operated by said actuating means for locking the jaws against movement with relation to the base when said jaws are clamped upon an object, said means including a clamping element mounted for rotation and for minute vertical sliding movement within the base and a second clamping element slidably mounted transversely within the first-mentioned element and engaged by said actuating means, said slidable element operating to shift the revoluble element upwardly to bind upon the lower face of the base, said slidable element simultaneously binding upon the upper face of said base, the two elements coöperating to hold the jaws against rotation on the base.

5. A vise including a base, a slotted stud mounted for rotation within and extending beyond the base, said stud having a head designed to bear upwardly against the base, a jaw-carrying member movably mounted on the base, a wedge shiftable within the stud and bearing downwardly upon said base and member, a jaw-carrying slide mounted within said member and upon the stud, and a slide-shifting device engaging the wedge, said device constituting means for shifting the wedge to clamp the base between the wedge and head of the stud.

[Claims 6 to 9 not printed in the Gazette.]

962,984. ROTARY STEAM-ENGINE. JOHN SCHULLER and ANDREW NILAND, Hoquiam, Wash. Filed Nov. 16, 1909. Serial No. 528,310.



In a rotary engine, a cylinder, a rotary piston eccentrically mounted in the cylinder, and in contact with the wall thereof at one point, said cylinder having inlet ports adjacent to and on opposite sides of said point of contact, a sliding blade carried by the piston in contact at its ends with the cylinder wall, a steam chest having a cylindrical valve chamber, said steam chest having an inlet, and passages leading therefrom and entering the valve chamber on diametrically opposite sides thereof, a second valve chamber between the aforesaid valve chamber and the cylinder inlet ports, said ports leading from the second mentioned valve chamber, and said second mentioned valve chamber being in communication with the first mentioned valve chamber, a rotary valve working in the first mentioned valve chamber, said rotary valve having diametrically opposite blades alternately opening the aforesaid passages of the steam chest into the first mentioned valve chamber, and a reversing valve in the second mentioned valve chamber.

962,985. SEAMLESS PLATED TAPER AND METHOD OF MAKING SAME. RUDOLPH G. SCHUTZ, Providence, R. I. Filed Aug. 3, 1907. Serial No. 386,931.



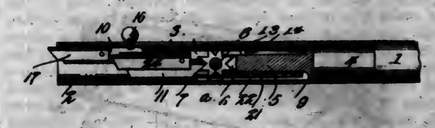
1. An article of the class described comprising a tapered base metal core and a seamless precious metal shell covering said core, said precious metal shell being thicker at the reduced portion of said taper than at the enlarged portion thereof.

2. An article of the class described comprising a round base metal core tapered at each end and a seamless precious metal shell covering said core and extending the entire length thereof, said precious metal core being thicker at the end portions than at the central portion.

3. The method of making articles of the class described which consists in forming a blank composed of a base metal core solid at one portion and hollow at another portion thereof, and covering said core with a seamless precious metal shell, and then reducing the hollow portion of said blank by a compressive action.

4. The method of making articles of the class described which consists in forming a blank composed of a tubular base metal core provided with an outer seamless precious metal shell, inserting a solid plug firmly in the central portion of said tubular core and reducing down the end portions of said blank until the tubular end portions become practically solid.

962,986. PENHOLDER. JOSEPH SCHWARTZ, New York, N. Y. Filed Aug. 7, 1908. Serial No. 447,430.



1. A pen holder comprising a tubular casing having a longitudinal slot in one side, an arm in the casing and having an enlarged portion fitting therein, said enlarged portion being provided with a socket, a stem formed with a plug at its front end inserted in said socket, said stem bearing against the end of said arm and one end of said tubular casing, a gear wheel mounted in said removable arm, a pair of semi-tubular pen holders longitudinally movable in the casing having gear elements engaging opposite sides of said gear wheel, said pen carriers being in mutual contact at their side edges, and a stud or finger piece operating in the slot of the casing attached to one of the pen carriers.

2. A pen holder comprising a tubular casing having a longitudinal slot in one side, a gear wheel disposed in said tubular casing and having a bearing, a pair of pen carriers longitudinally movable in the casing, and disposed one above the other, the upper pen carrier being semi-tubular

from end to end and the lower pen carrier having its major portion semi-tubular in form and its front portion tubular in form so that the upper side of said tubular portion of the lower carrier is disposed concentric with and within the radius of the upper pen carrier, said pen carriers having gear elements engaging opposite sides of said gear wheel, and a stud or finger piece operating in the slot of the casing and attached to one of said pen carriers.

962,987. HAT-PIN. WILLIAM N. SHIBERT, Pittsburg, Pa. Filed Mar. 10, 1909. Serial No. 482,582.



1. A hat fastener comprising a pin member, and a hat gripping member, said members being provided with a ball and socket connection between them.

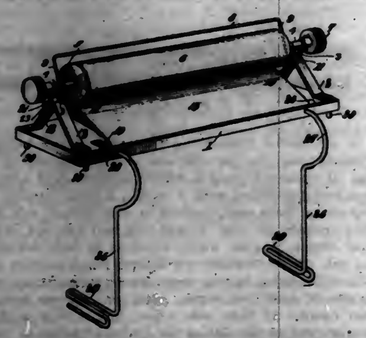
2. A hat fastener comprising a pin member, in combination with a hat gripping member provided with a socket and a perforated ball therein, through which the pin member is slidable.

3. A hat fastener comprising a hat gripping member having pointed fingers adapted to perforate the hat and joined to a socket having two oppositely disposed apertures, and a ball within said socket having a hole therethrough, in combination with a pin member slidable through said ball.

4. A hat fastener comprising a hat gripping member having pointed fingers adapted to perforate the hat, and a socket having two oppositely disposed apertures, and a hollow ball within said socket provided with oppositely disposed perforations, and with spring lips at one of said perforations, in combination with a pin member slidable through said perforations and provided with a locking enlargement adapted to be engaged by said spring lips.

5. A hat fastener comprising a hat gripping member provided with a hollow ball having perforations and with a socket surrounding said ball, in combination with a pin member slidable through said perforations.

962,988. COPY-HOLDER. SAMUEL STEINMEYER, Bonaparte, Iowa. Filed Oct. 7, 1909. Serial No. 521,495.

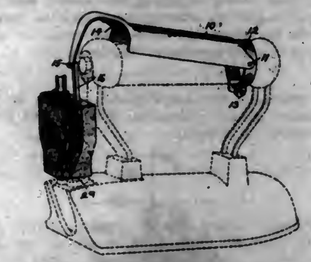


1. A copy holder comprising a base, a bracket at each end provided with upper and lower bearings, a shaft journaled in the upper bearings, knobs on the outer ends of the shaft outside the brackets, a roller on the shaft inside the brackets, a support comprising a sheet bent to form an inclined portion curved at its upper end to fit the roller, a substantially horizontal portion whose free edge engages the under face of the inclined portion, and a substantially vertical portion connecting the rear edges of the said portions, the front edge of the inclined portion being beaded, said portion having transversely alined slots adjacent to the roller, a reinforcing rod in the bead, bearings on the base in which the ends of the rod are received, a rod journaled between the inclined and horizontal portions and provided with rollers extending through the slots, springs normally pressing the support toward the roller, and a rod having a portion parallel with the roller and offset ends received in the lower bearings.

2. A copy holder comprising a base, a bracket at each end of the base, each of said brackets having an upper and a lower bearing, a roller journaled in the upper bearings and provided at its ends with knobs for turning the roller, a hollow support substantially triangular in cross section below the roller, and having its upper face shaped to fit the periphery thereof, a shaft journaled between the upper and lower faces of the support, rollers on the shaft, the upper face having slots through which the rollers extend, a reinforcing rod in the lower edge of the support, bearings on the base in which the ends of the rod are received, a guard substantially parallel with the roller and having offset ends received in the lower bearings and detachable means for detachably connecting the holder with a typewriter.

3. A copy holder comprising a base, a bracket at each end of the base, each of said brackets having an upper and a lower bearing, a roller journaled in the upper bearings and provided at its ends with knobs for turning the roller, a hollow support substantially triangular in cross section below the roller and having its upper face shaped to fit the periphery thereof, a shaft journaled between the upper and lower faces of the support, rollers on the shaft, the upper face having slots through which the rollers extend, means for connecting the support to the base, and means for detachably connecting the holder with a typewriter, said means being detachably connected with the base.

962,989. ELECTRICALLY-HEATED FLAT-IRON. GEORGE E. STEVENS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 8, 1909. Serial No. 494,880.



1. An electric flatiron comprising an electrically heated body provided with terminal pins, a switch secured to the terminal pins, a handle for the iron, and a member clamped to the handle and arranged to be engaged by the hand to operate the switch.

2. An electric flatiron comprising an electrically heated body provided with terminal pins, a switch secured to the terminal pins, a handle for the iron, and a spring-pressed member clamped to the handle of the iron and operatively connected with the switch so as to normally hold the same in open position.

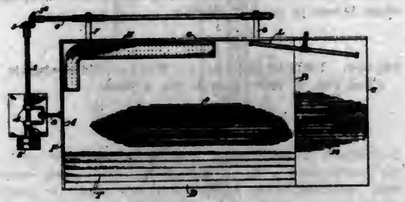
3. An attachment for electric flatirons having terminal pins comprising a switch provided with means for securing it to the terminal pins, a handle for the iron, a member arranged to be clamped to the handle, and connections between the switch and said member for operating the switch.

4. An attachment for electric flatirons having terminal pins comprising a switch provided with means for securing it to the terminal pins, a handle for the iron, and a spring member arranged to be clamped to the handle and operatively connected to said switch so as to normally hold the latter in open position.

5. An attachment for electric flatirons having terminal pins comprising a switch provided with means for securing it to the terminal pins, a handle for the iron, a pivotal member arranged to be clamped to the handle and resiliently engage the same, and operative connections between the switch and the handle whereby the switch is normally held open.

[Claim 6 not printed in the Gazette.]

962,990. ORE-CONCENTRATOR. SETH R. SWAIN, Denver, Colo., assignor to The Swain Concentrator Company, a Corporation of Colorado. Filed Feb. 6, 1907. Serial No. 356,100.



1. In a concentrating table adapted to discharge tailings transversely over one side and to convey concentrates toward one end and discharge them therefrom, a table proper, and a dam on the tailings side thereof, said dam presenting a surface the elevation of which above the table decreases transversely toward the feed side and longitudinally toward the concentrate end.

2. In a concentrating table adapted to discharge tailings transversely over one side and convey concentrates toward one end and discharge them therefrom, a table proper, and a dam on the tailings side thereof, said dam presenting a surface the elevation of which above the table decreases transversely toward the feed side and longitudinally toward the concentrate end, the upper outer edge of the dam being level.

3. In a concentrating table adapted to discharge tailings transversely over one side and convey concentrates toward one end and discharge them therefrom, a table proper, and a terraced dam on the tailings side thereof, said dam presenting a surface the elevation of which above the table decreases transversely toward the feed side and longitudinally toward the concentrate end.

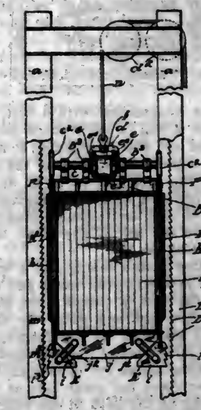
4. In a concentrating table adapted to discharge tailings transversely over one side and convey concentrates toward one end and discharge them therefrom, a table proper inclined longitudinally, and a terraced dam on the tailings side thereof, said dam presenting a surface the elevation of which above the table decreases transversely toward the feed side and longitudinally toward the concentrate end, the upper outer edge of the dam being level.

5. In a concentrating table adapted to discharge tailings transversely over one side and convey concentrates toward one end and discharge them therefrom, a table proper having a rifled surface, and a dam on the tailings side thereof, said dam presenting a surface the elevation of which above the table decreases transversely toward the feed side and longitudinally toward the concentrate end.

[Claims 6 to 14 not printed in the Gazette.]

962,991. ELEVATOR. JAMES H. TAYLOR, Brooklyn, N. Y.; Eliza W. Taylor executrix of said James H. Taylor, deceased. Filed Sept. 7, 1909. Serial No. 516,360.

1. In an apparatus of the class described, an elevator shaft, vertically arranged brake or lock bars at the opposite sides of said shaft, an elevator car movable vertically in said elevator shaft, a rotary shaft supported transversely of the top of the car, pulleys secured on the opposite ends of said shaft, a spring wound on said shaft and secured thereto and to the top framework of the car, a yoke rotatably mounted on said shaft, disks or wheels secured to said shaft and provided with pins adapted to operate in connection with the cross head of said yoke, dogs movably mounted beneath the bottom of the car and adapted to operate in connection with said brake or lock bars, and flexible devices connected with said pulleys and with said dogs.



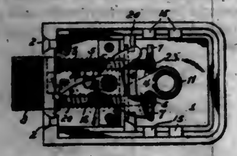
2. In an apparatus of the class described, an elevator shaft, vertically arranged brake or lock bars at the opposite sides of said shaft, an elevator car movable vertically in said elevator shaft, a rotary shaft supported transversely of the top of the car, pulleys secured on the opposite ends of said shaft, a spring wound on said shaft and secured thereto and to the top framework of the car, a yoke rotatably mounted on said shaft, disks or wheels secured to said shaft and provided with pins adapted to operate in connection with the cross head of said yoke, dogs movably mounted beneath the bottom of the car and adapted to operate in connection with said brake or lock bars, and flexible devices connected with said pulleys and with said dogs, said car being also provided with supplemental means adapted to be operated by hand for actuating said dogs.

3. In an apparatus of the class described, an elevator car, a shaft mounted transversely of the top thereof, pulleys connected with the opposite ends of said shaft, a spring wound on said shaft and secured thereto and one end of which is secured to the top framework of the car, a yoke rotatably mounted on said shaft, disks or wheels secured to said shaft and provided with pins adapted to operate in connection with the cross head of said yoke, laterally movable dogs mounted beneath the bottom of the car and cords connected with said pulleys and with said dogs.

962,992. NIGHT-LOCK. WARREN H. TAYLOR, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Nov. 18, 1908. Serial No. 463,226.

1. In a lock, the combination with a bolt, of a pivoted lever independent of the bolt actuating means adapted to be moved into a position to deadlock the bolt when projected and also for holding it in its retracted position, a finger piece operated only from the inner side of the lock for shifting the pivoted lever to a position to deadlock the bolt or to hold the latter retracted, and key mechanism operable from the outside and adapted to shift said pivoted lever to its deadlocking position, or release it if it be deadlocked, and also for retracting the bolt.

2. In a lock, the combination with a spring actuated bolt having a projecting lug, of a pivoted lever the end of which is adapted to be moved into the path of the lug for deadlocking the bolt, and provided with a shoulder adapted to engage said lug when the bolt is retracted, means for actuating said lever from the inner side of the door, and key actuated mechanism for actuating said lever to deadlock and release the bolt and also for retracting the bolt.



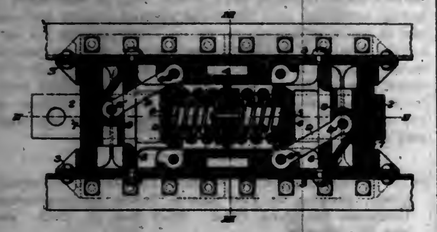
3. In a lock, the combination with a bolt, of a pivoted lever adapted to be moved into a position to deadlock the bolt when projected and also for holding it in its retracted position, a finger piece operable from the inside of the door only for shifting said pivoted lever, an inside knob for retracting the bolt and outside key mechanism adapted to shift said pivoted lever to its deadlocking position, and remove it to release the bolt if the latter be deadlocked and also for retracting the bolt.

4. The combination with a casing and a spring bolt, of a deadlocking lever pivoted to the casing and having direct engagement with the bolt, a thumb piece operable from the inner side of the door and positively engaging said lever for moving it into and out of engagement with the bolt, means on the inner side of the door and independent of the lever operating means for retracting the bolt, and mechanism actuated from the outer side of the door for moving the lever out of the path of the bolt, for retracting the bolt and for restoring said lever to its first position.

5. The combination with a spring bolt having a projecting lug, of a lever pivoted to the casing and having a shoulder near its front end adapted to engage said lug for holding the bolt retracted, means on the inner side of the door for shifting said lever, and mechanism actuated from the outside of the door for moving the lever to release the bolt, for retracting the bolt, and for restoring the lever to its first position.

[Claims 6 to 8 not printed in the Gazette.]

962,993. FRICTION DRAFT-RIGGING. CLINTON A. TOWER, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 1, 1909. Serial No. 475,312.



1. A draft rigging having a laterally movable friction plate, surfaces between which it is frictionally clamped, said surfaces extending transversely to the line of the draft rigging, and a connecting piece extending diagonally from said friction plate to a stationary portion of the draft rigging and being under compression when stress is applied to the draft rigging.

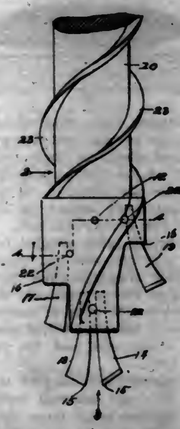
2. A draft-rigging having a friction plate, a spring, followers between which the friction plate is set, and a link connected with the friction plate, said plate extending transversely to the line of the draft-rigging, and the link extending inwardly from the friction plate and being under compression when stress is applied thereto.

3. A draft-rigging having a laterally movable friction plate, a surface against which it is pressed, and a link on the inner side of the friction plate adapted to receive compression during motion of the parts.

4. A draft rigging having a laterally movable friction plate, surfaces between which it is frictionally clamped, said surfaces extending transversely to the line of the draft rigging, and a connecting piece extending diagonally from said friction plate to a stationary portion of the draft rigging and being under compression when stress is applied to the draft rigging, said connecting piece being pivotally mounted at its ends.

5. A friction draft rigging having a laterally movable friction plate and surfaces between which it is frictionally clamped, said surfaces extending transversely to the line of the draft rigging, a case within which the draft rigging is inclosed, a diagonal link extending inwardly from the friction plate to the case and being under compression when stress is applied thereto.

962,994. DRILL. LLEWELYN WATERS, Edwardsdale, Pa. Filed Feb. 6, 1909. Serial No. 476,544.



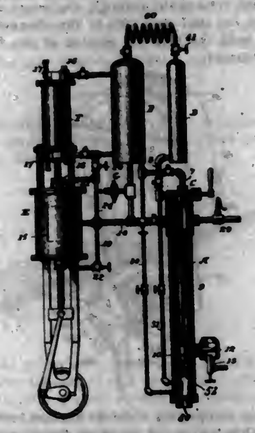
1. In a drill, the combination with a shank having a spiral fin, of a drill head having a fin proportioned as a continuation of the fin of the shank, and cutter blades carried by the head in stepped relation.

2. In a drill, a head having a spirally disposed fin extension, shoulders out of alinement formed at the sides of the head, and cutter blades secured in the shoulders unequally distant from the center of rotation of the head.

962,995. GAS-ENGINE. SAMUEL J. WEBB, Minden, La. Filed Jan. 8, 1902, Serial No. 88,916. Renewed Aug. 2, 1907. Serial No. 386,817.

1. The combination with a motor and a compressor operated therefrom, of a combustion chamber communicating with the motor, a compressed air reservoir connected to the compressor, a liquid fuel reservoir, pipe connections between said reservoirs, pipes for conveying compressed air and liquid fuel from the reservoirs to the said chamber, the supply of air and fuel being controlled by a single valve, and means for igniting the mixture of air and fuel within said combustion chamber, substantially as set forth.

2. The combination with a motor and a combustion chamber communicating therewith, of a compressed air reservoir, a liquid fuel reservoir, a single inlet valve chamber, pipe connections between said valve chamber and the respective reservoirs, and a single pipe connecting the said valve chamber with the interior of the said combustion chamber for conveying a mixture of air and liquid fuel thereto, substantially as set forth.



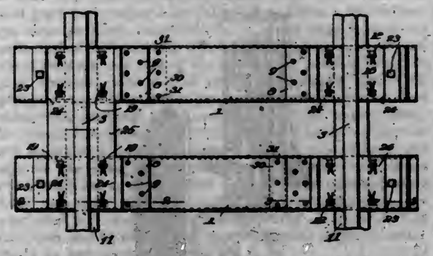
3. The combination with a motor and a combustion chamber communicating therewith, of a compressed air reservoir, a liquid fuel reservoir, a valve chamber, pipe connections between the chamber and the respective reservoirs, a single valve for controlling the flow through said pipe connections to the valve chamber, and a single pipe connecting the valve chamber with the interior of the said combustion chamber for conveying a mixture of air and liquid fuel thereto, substantially as set forth.

4. The combination with the combustion chamber and a motor, of a compressed air reservoir, and valved connections respectively between the air reservoir and the chamber, between the chamber and the motor, and between the air reservoir and the motor, substantially as set forth.

5. The combination with a motor and a combustion chamber communicating therewith, of a compressed air reservoir, a liquid fuel reservoir, a valve chamber, pipe connections between the valve chamber and the respective reservoirs, a single pipe connecting the valve chamber with the interior of the combustion chamber, independent pipes leading respectively from the air and liquid fuel reservoirs to the interior of the combustion chamber, and a valve in each of the last named pipes, substantially as set forth.

[Claims 6 to 27 not printed in the Gazette.]

962,996. METALLIC RAILROAD-TIE. SAMUEL T. WILSON and CHARLES K. MCDERMOTT, Charleston, W. Va. Filed Oct. 4, 1909. Serial No. 520,836.



1. A tie of the character specified comprising a body having side flanges, a plate secured to each end of the tie, and having a body portion offset upwardly from the tie, said body portion having at each side a rib forming a shoulder between the rib and the body portion, and with lugs at each side of the position of the rail base, said lugs having square perforations, a block of fibrous material between the plate and the body portion of the tie, and angle plates having a portion for engaging the web of the rail, and a portion resting on the body portion of the plate, said plate portion having openings for receiving the lugs, the free edge thereof engaging the adjacent shoulder, and cotter pins square in cross section engaging the openings of the lugs.

2. A tie comprised of a sheet of metal having its side edges flanged, and provided near each end with a plate of metal secured thereto, and having a body portion offset upwardly from the tie, a block of fibrous material beneath the plate, said body portion having at each side thereof a rib, angle-plates whose side edges bear against the ribs, the plate having upwardly projecting lugs at the sides of the rail base, and the plates slots through which the lugs pass, said lugs having polygonal openings, and cotter pins fitting the openings.

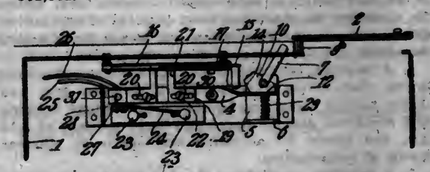
3. A tie having flanged side edges, a plate secured to the tie near each end thereof, said plate having a body portion offset upwardly from the tie, and provided at each side edge with perforated lugs, a block of fibrous material beneath each plate, the plate having a rib near each end, and angle plates having their outer edges engaging the ribs, and having openings to receive the lugs, and pins passing through the lugs.

4. In combination, a metallic tie, a plate secured to the tie near each end thereof and having a portion offset upwardly from the face of the tie and substantially parallel therewith, a block of fibrous material beneath the plate, means for securing the block in place, said plate being grooved transversely to receive the rail base, and means in connection with the plate for securing the rail in place.

5. In combination, a metallic tie, a plate secured to the tie near each of the ends, said plate having a transverse groove and struck up perforated lugs, near the sides of the groove, angle plates for engaging the rails and having slots through which the lugs pass, and pins traversing the lugs.

[Claim 6 not printed in the Gazette.]

962,997. DOOR-LOCK. ALEXANDER CARPENTER, Findlay, Ohio, assignor, by direct and mesne assignments, of one-third to Albert E. Karg and two-thirds to William H. Bede, Toledo, Ohio. Filed June 17, 1909. Serial No. 502,832.



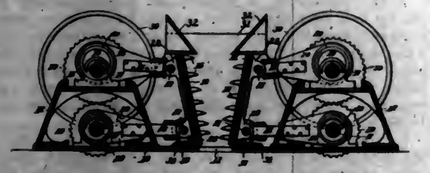
1. A device of the class described comprising a car and a slidably mounted door; an electrical conductor carried by the car; a lever carried by the car and arranged to open and to close the circuit through the conductor; a trip carried by the car and arranged to engage the lever, said trip being engageable by the door in its opening movement to open the circuit through the conductor, and being engageable by the door in its closing movement to close the circuit through the conductor.

2. A device of the class described comprising a car and a slidably mounted door; an electrical conductor carried by the car; a lever carried by the car and arranged to open and to close the circuit through the conductor; a trip carried by the car and arranged to engage the lever, said trip being provided with locking faces to hold the lever in a position to break the circuit through the conductor and to hold the lever in a position to close the circuit through the conductor, the trip being engageable by the door in its opening movement to open the circuit through the conductor, and being engageable by the door in its closing movement to close the circuit through the conductor.

3. A device of the class described comprising a car and a slidably mounted door; a pair of binding posts carried by the car; a resilient tongue secured at one end to one of said binding posts and arranged to bear normally against the other of said posts; a lever carried by the car and connected with the tongue; a trip carried by the car and arranged to engage the lever, said trip being engageable by the door in its opening movement to draw the tongue away from the last named post, and being engageable by the door in its closing movement to permit the tongue to move into contact with said post.

4. A device of the class described comprising a car and a slidably mounted door; a pair of binding posts carried by the car; a movable bar secured at one end to one of said binding posts; a lever carried by the car and connected with the bar; a trip carried by the car and arranged to engage the lever, said trip being engageable by the door in its closing movement to tilt the bar into contact with the other of said posts, and being engageable by the door in its opening movement, to draw the bar away from the last named post.

962,998. ORE, MINERAL, AND COAL BREAKER. ISAAC CHRIST, Tamaqua, and HENRY K. CHRIST, Mahanoy City, Pa. Filed July 8, 1907, Serial No. 382,735. Renewed Mar. 10, 1910. Serial No. 548,493.



1. A breaking, crushing or piercing machine comprising in its construction a reciprocatory mounted jaw, and means for actuating different portions of said jaw at different speeds of reciprocation.

2. A breaking, crushing or piercing machine comprising in its construction a reciprocatory mounted jaw, means for actuating the upper and lower portions of said jaw at different speeds of reciprocation, and means for adjusting the extent of said reciprocation.

3. A breaking, crushing or piercing machine, comprising in its construction a reciprocatory mounted jaw, means for actuating the upper and lower portions of said jaw at different speeds of reciprocation, and means for adjusting the extent and the timing of said reciprocations.

4. A breaking, crushing or piercing machine comprising in its construction a reciprocatory mounted jaw, two shafts having eccentrics, operative connections between said eccentrics and the upper and lower portions of said jaw, and means for actuating said shafts at different speeds of reciprocation.

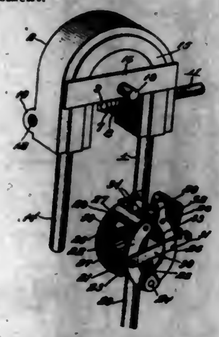
5. A breaking, crushing or piercing machine comprising in its construction a reciprocatory mounted jaw, two shafts having adjustable eccentrics, operative connections between said eccentrics and the upper and lower portions of said jaw, and means for actuating the said shafts at different speeds of reciprocation.

[Claim 6 not printed in the Gazette.]

962,999. PORTABLE FOUNTAIN-SYRINGE. ARTEMAS L. DAWSON, Devall Bluff, Ark., assignor of one-fourth to Carrie Coyle and one-fourth to Joel M. McClintock, Devall Bluff, Ark. Filed July 16, 1909. Serial No. 507,969.

1. A syringe comprising a saddle bracket having a channel opening through one side thereof, a flexible siphon tube having a looped portion extending through said channel and insertible and removable through the open side thereof, and a closure for said open side of the channel adapted to engage and hold the inclosed portion of the tube against endwise movement.

2. A syringe comprising a saddle bracket having a channel opening through one side thereof, means for clamping the bracket upon a receptacle, a flexible siphon tube having a looped portion extending through said channel and insertible and removable through the open side thereof, and a closure for said open side of the channel adapted to engage and hold the inclosed portion of the tube against endwise movement.



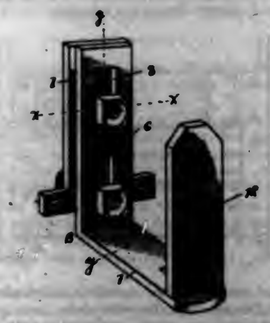
3. A syringe comprising a saddle bracket having a channel opening through one of the faces thereof and provided upon the reverse faces of its arms with lugs, a clamping screw mounted upon one of said lugs, a flexible siphon tube having a looped portion extending through said channel and insertible and removable through the open side thereof, and a closure for said open side of the channel adapted to engage and hold the inclosed portion of the tube against endwise movement.

4. A syringe comprising a supporting bracket having a U-shaped channel open at one side, a flexible siphon tube having a looped portion extending through said channel and insertible and removable through the open side thereof, and a closure for said open side of the channel adapted to engage and hold the inclosed portion of the tube against endwise movement.

5. A syringe comprising a supporting bracket having a U-shaped channel open at one side, a flexible siphon tube having a looped portion extending through said channel and insertible and removable through said open side, a U-shaped closure for the open side of the channel adapted to engage and hold the inclosed portion of the tube against endwise movement, and means for retaining said closure in position.

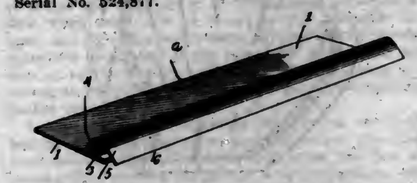
[Claims 6 to 21 not printed in the Gazette.]

963,000. ADJUSTABLE LAMP-BRACKET. REUBEN G. DEIHL, Cresson, Pa. Filed June 30, 1909. Serial No. 505,275.



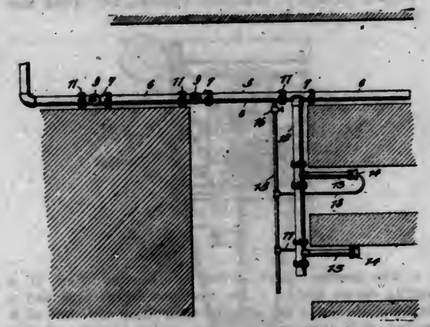
A lamp bracket comprising a supporting plate, means for connecting said plate to a support in the required adjusted position, an L-iron having longitudinal slots in its members, means for connecting the vertical member of the L-iron to the supporting plate in adjusted position, an upright having a threaded stem at its lower end arranged to pass through the longitudinal slot in the horizontal member of said L-iron, and a nut fitted to the projecting end of said stem to secure the upright to the horizontal member of the L-iron in the required adjusted position.

963,001. COMBINED RULER AND PAPER-CUTTER. FRANK A. DIBBELL, Coleman, Tex. Filed Oct. 27, 1909. Serial No. 524,877.



A combined ruler and paper cutter comprising a paper cutter member consisting of a rectangular sheet having a scale thereon, and a ruler formed by rebending a portion of one of the longitudinal side portions of the sheet and then curving the remainder of the side portion outwardly and downwardly to a point in advance of the adjacent side of the sheet and until the edge of the said curved portion is in a plane with the said rebent portion.

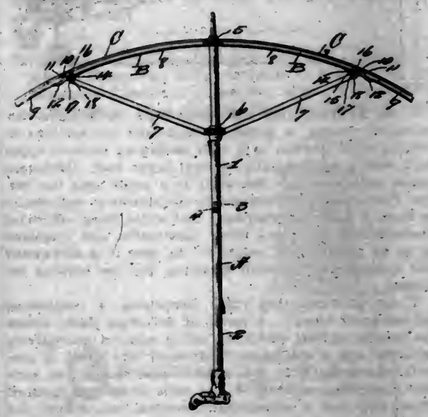
963,002. MINE-VENTILATING APPARATUS. WILLIAM DUNN, Wheatland, Pa. Filed Mar. 14, 1910. Serial No. 549,327.



1. An apparatus of the character described comprising a main line pipe adapted to receive fluid under pressure, said pipe comprising a plurality of sections and connecting pipe sections therebetween, a stand pipe secured in each of said connecting sections, an injector nozzle secured between one end of the connecting sections and the pipe sections, said nozzle extending beneath the stand pipes, a branch pipe communicating with one of said connecting sections and extending at right angles thereto, conducting pipes extending from said branch pipe into the rooms of a mine, a nozzle secured in said branch pipe and at the point of connection of the conducting pipes therewith, an auxiliary fluid supply pipe communicating with the main line pipe, and a pipe extending from the auxiliary pipe and having its discharge end disposed in the open end of one of the gas conducting pipes, substantially as and for the purpose set forth.

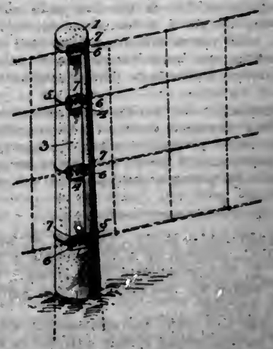
2. An apparatus of the character described comprising a main line pipe adapted to receive fluid under pressure, said pipe comprising a plurality of sections and connecting pipe sections therebetween, a stand pipe secured in each of said connecting sections, an injector nozzle arranged in said last named sections extending substantially the entire length thereof, a branch pipe communicating with one of said connecting sections, conducting pipes extending from said branch pipe into the rooms of a mine, a nozzle secured in said branch pipe at the point of connection of the conducting pipes therewith, an auxiliary fluid supply pipe communicating with the main line pipe adjacent to the branch pipe, a valve therein to control the fluid supply, a discharge pipe extending from said auxiliary pipe having its open end positioned in one of the nozzles of the branch pipe, a second pipe extending from the auxiliary pipe and having its open end disposed in the open end of one of the gas conducting pipes, substantially as and for the purpose set forth.

963,003. FOLDING UMBRELLA. HELGE HELGERSON, Soldiers Grove, Wis. Filed Jan. 2, 1909. Serial No. 470,494.



In an umbrella of the character described, a rib comprising an upper member having a lug near its outer end, and provided with a recess spaced from said lug, and a spring catch fitted in said recess; a lower rib section pivoted upon the lug; a sleeve sliding upon the upper rib section and adapted to be confined between the spring catch and the lug, and a stretcher pivoted upon the sleeve.

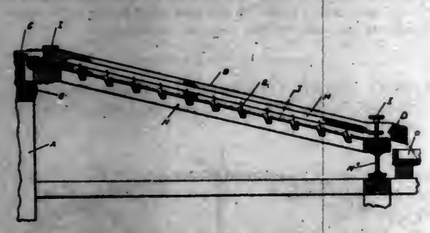
963,004. POST. WILLIAM T. HICKS, Bloomington, Ind. Filed Sept. 4, 1909. Serial No. 516,235.



A post of the character described comprising a cylindrical body portion slightly tapering between the ground

line and its apex, and provided on one side from the ground line to the apex with a narrow flattened plane surface adapted to support securing plates having means encircling the post, whereby the securing plates are prevented from longitudinal movement down the post and circumferential movement on the post.

963,005. AMALGAMATING-RIFFLE. EZRA S. HOYT, San Luis Obispo, Cal., assignor to Black Sand Mining Company, Los Angeles, Cal., a Corporation of Arizona. Filed July 22, 1905. Serial No. 270,799.



1. An amalgamating riffle comprising an inclined flat-bottomed trough, a series of separated quicksilver-containing wells therein, each well having an inclined upper wall, and a substantially vertical lower wall, stationary plates projecting into the wells to a point near the bottom thereof, and projecting into the sluiceway sufficiently to form a dam, the sluiceway and wells being otherwise unobstructed, the parts being constructed and combined so as to permit the "solution" to pass in a downward and continuously forward direction, for the purpose described.

2. An amalgamating riffle, comprising a continuous flat-bottomed trough; a series of deflecting dams across the trough, against which the entire solution successively impacts; and a well at each dam and into which it projects intermediate the side walls to near the bottom, each well containing quicksilver, the wells having an inclined upper wall and a substantially vertical lower wall, the dam forming in the well a downwardly-tapering inlet passage and an upwardly-tapering outlet passage.

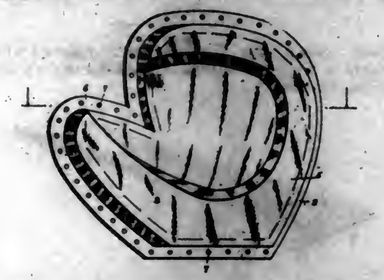
3. An amalgamating riffle, comprising an inclined flat-bottomed trough; a series of separated dams therein, arranged across the line of flow of the solution; a well at each dam into which the wall of the dam projects, each well containing quicksilver and having an inclined upper wall, a substantially vertical lower wall, and a bottom, and being divided by the dam into a downwardly-contracting inlet and an upwardly-expanding outlet passage, the dams projecting above the horizontal plane of the discharge passage of the next-above well.

4. An apparatus for saving fine gold comprising a trough having therein a series of amalgamating pockets or recesses, baffle plates extending downward into the respective pockets, and means for varying in unison the angle of inclination of the baffle plates, substantially as described.

5. An apparatus for saving fine gold comprising a trough having therein a series of amalgamating pockets or recesses, baffle plates extending downward into the respective pockets, and means for raising or lowering in unison said baffle plates in said pockets, substantially as described.

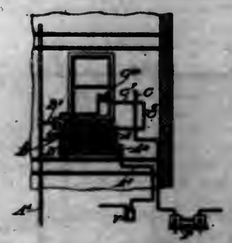
963,006. BASE-BALL MITT. CHARLES M. KING, Washington, D. C., assignor to A. G. Spalding & Bros., New York, N. Y., incorporated in New Jersey. Filed July 21, 1909, Serial No. 508,782. Renewed Apr. 27, 1910. Serial No. 558,004.

1. In a base ball mitt, the combination with a front and a back portion having eyelets adjacent to their outer edges, a detachable blank of flexible fabric conforming to the outer contour of said front and back portions carried therein, lacing eyelets secured adjacent to its outer edge adapted to register with said eyelets upon the front and back portions, flexible padding materials conforming to the shape of said blank secured upon the face thereof inside the line of said eyelets, and a lacing cord adapted to separably lace said front and back portions and blank together around their outer edges, substantially as described.



2. A flexible mitt for base ball players, comprising a front and back portion adapted to be separably united adjacent to their outer edges, a flexible padding structure carried between said front and back portions comprising a blank of flexible fabric having flexible padding material mounted thereon and means for separably uniting said blank of flexible fabric with said front and back portions outside the line of said padding material whereby a sharp tapering outer edge and flexible separable structure of the mitt is produced, substantially as described.

963,007. PROCESS OF REGULATING HEATING DEVICES. HARRY C. MALLORY, Chicago, Ill. Filed May 20, 1903. Serial No. 158,040.



1. The process of regulating the heating effect of a heating device having a low pressure escape pipe and a thermostatic valve for directly controlling the flow of a heating fluid through the device, which process consists in employing the difference between the pressure of the atmosphere and that in the escape pipe to cause a stream of a fluid temperature changing medium to flow when said valve is closed as well as when it is open, and directing said stream against the thermostatic actuating mechanism of the valve.

2. The process of regulating the heating effect of a heating device having a low pressure escape pipe and a thermostatic valve for directly controlling the flow of a heating fluid through the device, which process consists in employing the difference between the pressure of the atmosphere and that in the escape pipe to cause a stream of air to flow when said valve is closed as well as when it is open, and directing said stream against the thermostatic actuating mechanism of said valve.

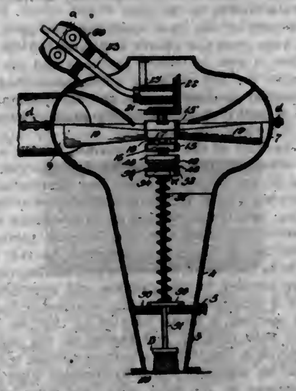
3. The process of regulating the heating effect of a heating device having a low pressure escape pipe and a thermostatic valve for directly controlling the flow of a heating fluid through the device, which process consists in employing the difference between the pressure of the atmosphere and that in the escape pipe to cause a stream of a fluid temperature changing medium to flow when said valve is closed as well as when it is open, and directing said stream against the thermostatic actuating mechanism of the valve, and varying the influence of said stream on said actuating mechanism in response to variations in the temperature of the apartment heated by said device.

4. The process of regulating the heating effect of a heating device having a low pressure escape pipe and a thermostatic valve for directly controlling the flow of a heating fluid through the device, which process consists in employing the difference between the pressure of the atmosphere and that in the escape pipe to cause a stream of air of the temperature of the external atmosphere to flow when said valve is closed as well as when it is open, and directing said stream against the thermostatic actuating mechanism of the valve, and varying the influence of said stream on said actuating mechanism in response to variations in the temperature of the apartment heated by said device.

5. The process of regulating the heating effect of a heating device having a low pressure escape pipe and a thermostatic valve for directly controlling the flow of a heating fluid through the device, which consists in creating a flow, when said valve is closed as well as when it is open, of a stream of a fluid temperature changing medium from a source of said medium under pressure exceeding that of said escape pipe, by the difference between the pressure of the fluid in said source and the pressure in said escape pipe, and directing said stream against the thermostatic actuating mechanism of the valve.

[Claims 6 to 9 not printed in the Gazette.]

963,008. PORTABLE HAND-OPERATED SUCTION CLEANER. DAVID P. MOORE, Washington, D. C., assignor of one-half to Samuel B. Pack, Washington, D. C. Filed Oct. 11, 1909. Serial No. 522,210.

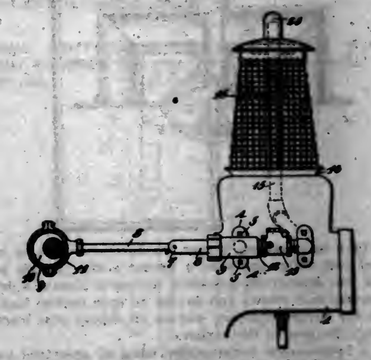


1. In a device of this character, the combination of a casing having a suction end and a mechanism holding and fan chamber, a shaft journaled in the casing, a fan carried thereby, a rod slidably mounted in the casing below and in line with the shaft, a brush carried upon the lower end of said rod, a spring mounted upon the rod for holding the lower end of the brush within the mouth of the suction end, co-acting means carried by the lower end of the shaft and the upper end of the rod for causing the rotary motion of the shaft to intermittently project the rod against the tension of the spring, thereby giving a reciprocating motion to the brush, and mechanism for rotating said shaft.

2. In a device of this character, the combination of a casing having a suction mouth and a mechanism holding and fan chamber, a shaft journaled in the casing, a fan carried thereby, a rod capable of a longitudinally reciprocating movement mounted in the casing below the shaft, a brush carried upon the lower end of said rod, co-acting means carried by the lower end of the shaft and the upper end of the rod for causing the rotary motion of the shaft to impart a reciprocating motion to the rod and brush, and mechanism for rotating said shaft.

3. In a device of this character, the combination of a casing having an elongated suction end and a mechanism holding and fan chamber, a shaft journaled in the casing, a fan carried thereby, a rod slidably mounted in the casing below and in line with the shaft, a brush carried upon the lower end of said rod, a spring mounted upon the rod for holding the lower end of the brush within the mouth of the suction end, a disk carried upon the lower end of the shaft, a disk upon the upper end of the rod, one of said disks being provided with an even number, and the other with an odd number of balls projecting into the same path, whereby as the shaft rotates, the balls intermittently engage each other to rapidly project the rod against the tension of the spring, thereby giving a reciprocating motion to the brush, and mechanism for rotating said shaft.

963,009. LIQUID-COOLING DEVICE. DELMER H. MOORE, Greenville, Mich., assignor to Moore Plow and Implement Company, Greenville, Mich., a Corporation of Michigan. Filed Aug. 25, 1909. Serial No. 514,533.



1. A liquid cooler comprising a hopper having an opening in the bottom thereof, a plurality of annular concentric screens of perforate material supported in the hopper, a cover for the screens, said cover having a central opening and depending rims to which the upper ends of the screens are secured and projecting beyond the screens, a discharge pipe extending upwardly within the screens and through the opening in the cover, said pipe having radial openings immediately below the cover, a cap closing the upper end of the pipe, and a pump receiving from the hopper and delivering to the discharge pipe.

2. A liquid cooler comprising a hopper having an opening in the bottom thereof, a plurality of annular concentric screens of perforate material supported in the hopper, a cover for the screens, said cover having a central opening and depending rims to which the upper ends of the screens are secured and projecting beyond the screens, a discharge pipe extending upwardly within the screens and through the opening in the cover, said pipe having radial openings immediately below the cover, and being closed above the cover, and a pump receiving from the hopper and delivering to the discharge pipe.

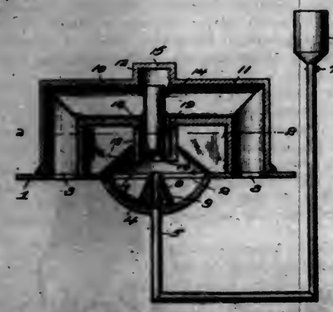
3. A liquid cooler comprising a hopper having an opening in the bottom thereof, a plurality of annular concentric screens of perforate material supported in the hopper, a cover for the screens, said cover having a central opening and depending rims to which the upper ends of the screens are secured and projecting beyond the screens, a discharge pipe extending upwardly within the screens and through the opening in the cover, said pipe having radial

openings immediately below the cover, and a pump receiving from the hopper and delivering to the discharge pipe.

4. A liquid cooler comprising a hopper having an opening in the bottom thereof, a plurality of annular concentric screens of perforate material supported in the hopper, a cover for the screens, said cover having a central opening, and depending rims to which the upper ends of the screens are secured and projecting beyond the screens, and a discharge pipe extending upwardly within the screens and through the opening in the cover, said pipe having radial openings immediately below the cover.

5. A liquid cooler comprising a hopper, a plurality of annular concentric screens supported in the hopper, a cover for the screens having a central opening and depending rims to which the upper ends of the screens are secured, the cover projecting beyond the screens, and a discharge pipe extending upwardly within the screens and through the opening in the cover, and having radial openings below the cover.

963,010. HYDROCARBON-BURNER. IRA L. OWENS, Effingham, Kans. Filed Oct. 5, 1909. Serial No. 521,059.



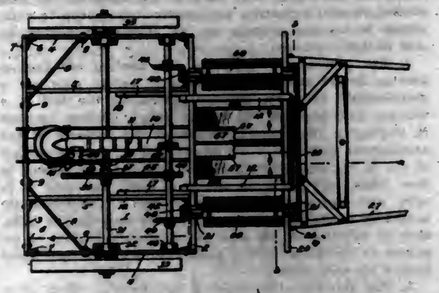
1. In a hydrocarbon burner, an apertured base, a cup-shaped pan under the base, a burner nozzle in said pan, an air flue embodying oppositely arranged elbows, a drum connecting said elbows and having an open bottom located above the burner and pan, and an oil supply pipe leading through the pan to the burner.

2. A hydrocarbon burner comprising an apertured base, a cup-shaped pan extending downward below the plane of the base and communicating with one of the openings therein, a fuel pipe leading into said pan, lateral air flues communicating with other openings in the base plate and leading to a point above the same, an outer drum supported by and connecting said air flues and provided at its lower end with a discharge orifice located above the discharge end of the oil pipe, and an inner drum within the outer drum open at both ends.

3. A hydrocarbon burner comprising a base, a centrally arranged pan disposed below the plane of the base and open at the top, a fuel pipe leading upward through the bottom of said pan, lateral air flues opening at their respective ends through the base, an outer drum supported by said air flues above the discharge end of the fuel pipe and provided at its lower end with an outlet orifice, an inner drum arranged therein and open at top and bottom, and a damper at the discharge ends of said drums for regulating the size of the discharge opening.

4. A hydrocarbon burner comprising a base provided with a centrally disposed pan, a fuel pipe leading upward through the bottom of said pan, lateral air flues communicating with openings in the base at opposite sides of said pan, a centrally arranged outer drum connecting said air flues and closed at the top and provided with a discharge orifice at the bottom over said fuel pipe, an inner drum arranged in the outer drum and open at top and bottom, and a detachable guard or deflector having a segmental cone-shaped lower portion and upstanding fender flanges, substantially as described.

963,011. POTATO-BUG EXTERMINATOR. SAMUEL W. REED, Grand Rapids, Mich. Filed May 21, 1909. Serial No. 497,491.



1. A machine of the class described having a main frame, supporting elements therefor, vertically disposed runner frames connected to the main frame and spaced apart, revoluble brushes disposed at the outer sides of said runner frames and adjustable toward and from each other, and a pan between said brushes mounted on said runner frames, said pan having an upwardly extending fender provided with overhanging wings extending toward the brushes and into the paths thereof.

2. A machine of the class described having a pair of revolving brushes spaced apart to operate on contiguous rows of plants, a pan disposed between said brushes to receive the bugs thrown by the brushes from the plants, said pan having aprons at its sides adjustable laterally to vary the width of the pan as may be required by the width of the space between the rolls, each of said aprons presenting an inwardly upwardly inclined surface and an overhang at the inner edge of said inwardly upwardly inclined surface and above the bottom of the pan.

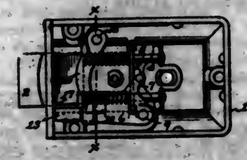
3. A machine of the class described having a fan for dislodging bugs from the plants and throwing the bugs in one direction, a pan to receive the bugs and provided at the side next the fan with an apron presenting an inwardly upwardly inclined surface and an overhang at the inner edge of said inwardly upwardly inclined surface and above the bottom of the pan.

4. In a machine of the class described having a flexible revolving brush for the purpose set forth, a pan having an opening in the bottom thereof, bug destroying means in said opening and a fender extending upwardly above said opening, said fender having an overhanging wing extending toward the brush and into the path thereof.

5. A machine of the class described having a main frame, runners connected thereto, a pan having depending side flanges secured to the runners and provided at its center with a longitudinal opening, bug-destroying means below said opening, a fender carried by the pan and disposed above such opening, and aprons on the pan at the sides thereof each comprising a bottom portion bearing on the pan, and an inwardly upwardly inclined wing presenting an overhang at its inner edge said wing extending outwardly over one of the runners.

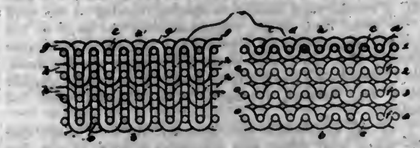
963,012. RIM-LATCH. PHILIP SHIELDS, Reading, Pa., assignor to The Chantrell Hardware & Tool Company, Reading, Pa., a Corporation of Pennsylvania. Filed Mar. 28, 1910. Serial No. 551,923.

In a rim latch a casing, a bolt, means for actuating the bolt comprising independently operated roll backs, a spring backed, pivotally mounted dead locking tumbler 6 formed with a pin at its rear end projecting at right angles to the body and adapted to engage the roll backs, said tumbler having an irregularly shaped opening in its body portion forming an offset therein; a pivotally mounted locking lever lying across and resting on the upper surface of the tumbler at the point of the irregular opening, a depending lug formed thereon adapted to engage the offset in the tumbler to hold it out of deadlocking position, and means



for releasing the engagement of the lever with the tumbler when the bolt is operated other than by the roll backs.

963,013. ASBESTOS-FACED WOVEN FABRIC. GEORGE HILTON SMITH, Easton, Pa., assignor to Philip S. Dyer, Easton, Pa. Filed May 11, 1904. Serial No. 207,416.



1. An asbestos faced belt comprising a plurality of plies, one of said plies being formed of asbestos and the others of cotton or other suitable material, the several plies being connected together by a plurality of binders, one of said binders being of asbestos and the other or others of cotton, the asbestos binder connecting the asbestos ply to the cotton plies, and the cotton binder or binders tying the cotton plies together.

2. An improved textile fabric, comprising a plurality of woven plies, one at least of said plies being of asbestos and the other or others of cotton or suitable material, the said plies being joined together in weaving in such a manner that the asbestos ply or plies may be removed without destroying the other plies.

963,014. TEXTILE FABRIC. GEORGE HILTON SMITH, Easton, Pa., assignor to Philip S. Dyer, Easton, Pa. Filed Apr. 13, 1906. Serial No. 311,414.



1. As a new article of manufacture, a textile fabric having an edge coated with graphite and glue.

2. As a new article of manufacture, a textile fabric having an edge coated with graphite and waterproof glue.

3. As a new article of manufacture, a textile fabric having a pile edge coated with graphite.

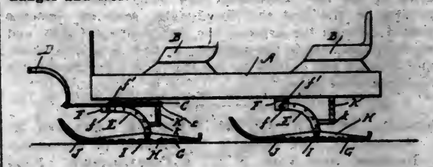
4. As a new article of manufacture, a textile fabric saturated with asphaltum, and having an edge coated with waterproof glue and graphite.

5. As a new article of manufacture, a textile fabric coated with a mixture of asphaltum and oil, and having an edge coated with graphite.

[Claim 6 not printed in the Gazette.]

963,015. SLEIGH. BARTON M. WENTWORTH, Somersworth, N. H., assignor to George A. Bodwell, Somersworth, N. H. Filed Jan. 20, 1910. Serial No. 539,136.

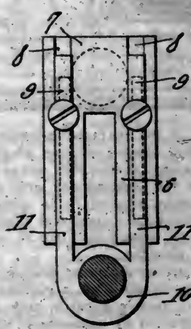
1. In a sleigh, the combination, with a support, of a standard having its upper portion connected with the said support and having a forked lower end portion, a runner T-shaped in cross-section and having its web arranged in the said forked portion, two trusses angle-shaped in cross-section and having their base-flanges secured to the base-flanges of the runner and having their vertical flanges arranged outside the said forked portion, and a pivot-pin connecting the said forked portion with the said vertical flanges and web.



2. In a sleigh, the combination, with a support, of a pair of standards each having its upper portion connected with the said support, a spring arranged between the middle part of each standard and the said support, and two runners pivoted to the lower end portions of the said standards independent of each other.

3. In a sleigh, the combination, with a support, of a pair of curved standards each having its upper end pivotally connected with the said support, two runners pivoted to the lower end portions of the said standards independent of each other, and a spring having its middle portion connected with the said support between the standards and having its free end portions pivotally connected with the said standards.

963,016. ADJUSTABLE CRANK. THOMAS S. WHITE, West Frankfort, Ill. Filed Oct. 10, 1908. Serial No. 457,165.



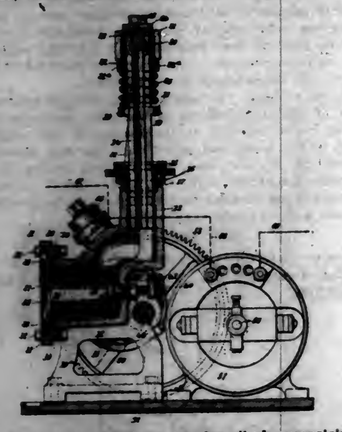
1. A crank shaft comprising a shaft section, a yoke carried by the section and having spaced parallel arms formed each with a groove and with a slot opening into the groove, a crank pin, and a yoke carried at the end of the crank pin and having spaced parallel arms seating in the grooves in the arms of the yoke upon the shaft section, and securing elements passed through the arms and the slots.

2. A crank-shaft comprising a shaft section, a yoke comprising spaced parallel arms, and a connecting portion, which connecting portion is secured to the shaft section, the arms being formed each with a longitudinally extending groove and a slot opening into the groove, a yoke having spaced parallel arms and a connecting portion, the arms of the last mentioned yoke having ribs received in the groove in the first mentioned yoke, the said arms of the last mentioned yoke having portions projecting beyond that face of the arms of the first mentioned yoke through which the groove is formed, and securing elements passed through the arms of the last mentioned yoke, and through the slots in the arms of the first mentioned yoke, said securing elements being correspondingly located upon the two arms, and a crank-pin carried by the connecting portion of the last mentioned yoke.

3. A crank shaft comprising a shaft section, a yoke comprising spaced parallel arms and a connecting portion, which connecting portion is secured to the shaft sec-

tion, the arms being formed each with a longitudinally extending groove and a slot opening into the groove, a yoke having spaced parallel arms and a connecting portion, the arms of the last mentioned yoke being received in the grooves in the first mentioned yoke, securing elements passed through the arms of the last mentioned yoke and through the slots in the arms of the first mentioned yoke, and a crank pin carried by the connecting portion of the last mentioned yoke.

963,017. BOTTLE-CAPPING MACHINE. RUDOLPH W. WITTEMANN, New York, N. Y., assignor to Wittemann Brothers, New York, N. Y., a Copartnership. Filed May 15, 1908. Serial No. 433,153.



1. A machine of the character described, comprising a support, a yielding member thereon adapted to inclose a bottle neck and a cap thereon fluid means for forcing said yielding member into engagement with said bottle neck and cap, and means adapted to be operated by engagement with a bottle acting upon said means to cause said yielding member to secure said cap to said bottle neck, substantially as specified.

2. A machine of the character described, comprising a casing adapted to contain fluid, a yielding section in said casing adapted to receive a bottle neck and cap, means adapted to be actuated by engagement with a bottle for acting upon said fluid to cause said yielding section to form a fold in said cap, and then press said produced fold over and against said cap, substantially as specified.

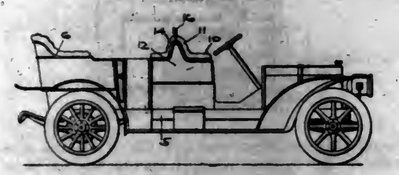
3. A machine of the character described, comprising a casing adapted to contain fluid, a yielding section in said casing adapted to receive a bottle neck and cap and closing the end of said neck, means adapted to be actuated by engagement with a bottle for acting upon said fluid to cause said yielding section to form a plurality of longitudinal folds in said cap, and then press the produced folds down and upon said cap to secure the same upon said bottle neck, substantially as specified.

4. A machine of the character described, comprising a casing adapted to contain fluid, a yielding section in said casing adapted to receive a bottle neck, means for displacing said fluid to act upon said yielding section, and means operated by a bottle for actuating said fluid displacing means, substantially as specified.

5. A machine of the character described, comprising a casing adapted to contain fluid, a yielding section in said casing adapted to receive a bottle neck, means arranged in said casing for displacing the fluid therein, means for operating said displacing means, and means adapted to be operated by engagement with a bottle for controlling the operation of said displacing means, substantially as specified.

[Claims 6 to 13 not printed in the Gazette.]

963,018. MUSICAL ATTACHMENT FOR AUTOMOBILES. DAVID J. YOUNG, Pine Bluff, Ark. Filed Jan. 23, 1909. Serial No. 473,919.

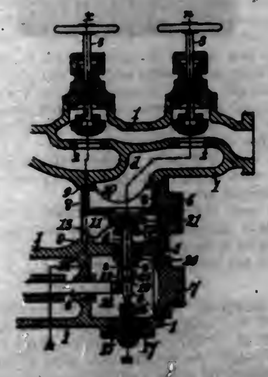


1. In an automobile the combination with front and rear seats, said front seat including a seat proper and a back, of a keyboard located rearwardly of the front seat and in position to be reached by an occupant of the rear seat, a second back located in spaced relation to the back of the front seat, horns connected with the keys of the keyboard and extending between the two backs, a closure movable into and out of position to cover the keyboard, said closure lying horizontally when in operative position and a seat cushion arranged to be disposed upon the closure.

2. In an automobile the combination with front and rear seats, said front seat including a seat proper and a back, of a keyboard located rearwardly of the front seat and in position to be reached by an occupant of the rear seat, a second back located in spaced relation to the back of the front seat, horns connected with the keys of the keyboard and extending between the two backs, a closure movable into and out of position to cover the keyboard, said closure lying horizontally when in operative position a seat cushion arranged to be disposed upon said closure, an air tank located below the keyboard, said horns communicating with the air tank and means connected with the driving mechanism of the automobile for storing air in the tank.

3. In an automobile the combination with oppositely faced seats including spaced backs of horns extending between the backs, an air supply communicating with the horns and a keyboard incorporated in the bottom of one of the seats and arranged to control the admission of air to the horns.

963,019. WATER-FEED REGULATOR. WALTER H. BICE, Maple Lodge, Ontario, Canada, assignor of one-sixth to William R. Colby and one-half to Alfred Westman, London, Canada. Filed Sept. 21, 1909. Serial No. 518,883.



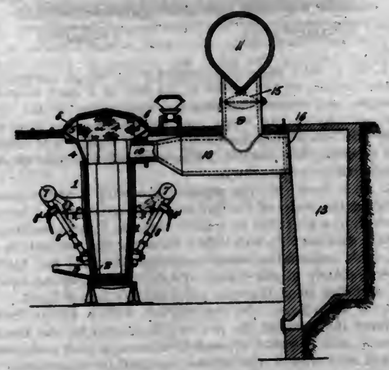
1. In a device of the class described, a removable body partly formed hollow and with the semi-annular ring portions, the inner one of which is partly cut away, and which is formed with a valve seat, in combination with a regulating valve mounted on a valve spindle, and means for supporting said removable body and said regulating valve spindle.

2. A water feed regulator comprising a casing adapted to communicate with a water supply and with a boiler formed with an upper and a lower compartment, a removable hollow cylindrical body mounted in said upper compartment and provided with an apertured partition constituting a valve seat, a valve arranged in the upper compartment and extending in said member and adapted to engage said seat for shutting off the supply of water to the boiler, a stem projecting in said lower compartment, and a spindle operatively-connected with the stem for shifting it to move the valve to and from said seat.

3. A water feed regulator comprising a casing adapted to communicate with a water supply and with a boiler formed with an upper and a lower compartment, a removable hollow cylindrical body mounted in said upper compartment and provided with an apertured partition constituting a valve seat, a valve arranged in the upper compartment and extending in said member and adapted to engage said seat for shutting off the supply of water to the boiler, a stem projecting in said lower compartment, and a spindle operatively-connected with the stem for shifting it to move the valve to and from said seat, and said cylindrical member cut-away below said partition whereby communication is established between that portion of the member above the valve seat and the chamber when the valve is unseated.

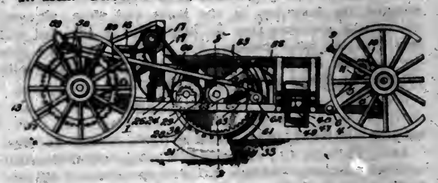
4. A water feed regulator comprising a casing adapted to communicate with a water supply and with a boiler formed with an upper and a lower compartment, a removable hollow cylindrical body mounted in said upper compartment and provided with an apertured partition constituting a valve seat, a valve arranged in the upper compartment and extending in said member and adapted to engage said seat for shutting off the supply of water to the boiler, a stem projecting in said lower compartment, a spindle operatively-connected with the stem for shifting it to move the valve to and from said seat, and a removable plug engaging with said casing for maintaining said member within the upper compartment.

963,020. METHOD OF SMELTING PYRITIC ORES. JOHN PARKE CHANNING and FREDERIC JOHN FALDING, New York, N. Y. Filed May 4, 1909. Serial No. 493,801.



In the art of smelting pyritic ores pyritically, and utilizing the gases therefrom, the improvement which consists in supplying air in sufficient quantity so as to practically completely oxidize the available sulfur and iron in the ore, and produce a matte, and also produce a gas of such composition as will enable the sulfur dioxid contained therein to be oxidized into sulfur trioxid, in a condition to be used for making sulfuric acid, substantially as described.

963,021. DITCHING-MACHINE. SAMUEL DE FORCE, deceased; Mary A. De Force, administratrix, Corry, Pa., assignor to William A. De Force, Vermejo Park, N. Mex. Filed Nov. 10, 1909. Serial No. 527,855.



1. In a ditching machine, the combination of cutting mechanism comprising transversely spaced supports, a cutter carried by said supports and spanning the space formed between them, means for rotating the cutting mechanism, and a clearer adapted to operate in the space formed between said supports.

2. In a ditching machine, the combination of cutting mechanism comprising transversely spaced supports, a cutter carried by said supports and spanning the space formed between them, means for rotating the cutting mechanism, a clearer adapted to operate in the space formed between said supports, and means for moving said clearer forwardly and backwardly.

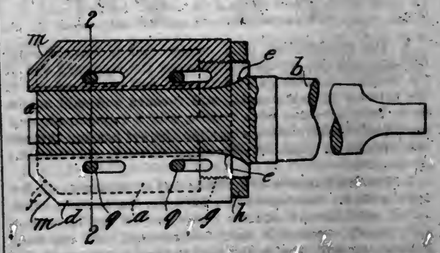
3. In a ditching machine, the combination of transversely spaced rotary supports, a cutter carried by said supports, and spanning the space formed between them, and a clearer arranged to operate between said supports and to close the inner side of the cutter and support the earth therein.

4. In a ditching machine, the combination of transversely spaced rotary supports, a shaft having said supports loosely mounted thereon, a cutter carried by said rotary supports and spanning the space formed between them, a clearer arranged between said supports and fast to said shaft to turn therewith, operating means between one of said supports and shaft to turn the latter part way in one direction to move the clearer forwardly, and other connections between the said shaft and the other support to turn the shaft in an opposite direction and return the clearer to normal position.

5. In a ditching machine, the combination of rotary cutting mechanism, a clearer, means for holding the clearer stationary during a partial rotation of the cutting mechanism, and other means actuated by the cutting mechanism to effect the release of the clearer, and to move the same forwardly, and other means actuated by the cutting mechanism to effect return of the clearer to normal position.

[Claims 6 to 10 not printed in the Gazette.]

963,022. BORING-TOOL. OSCAR B. ELDER, Chicopee Falls, Mass., assignor of one-half to George Braithwaite, Chicopee Falls, Mass. Filed Mar. 25, 1909. Serial No. 485,786.



In a boring tool, the combination with the grooved head member, a plurality of cutting members, slidably located in the grooves of said head member, means for

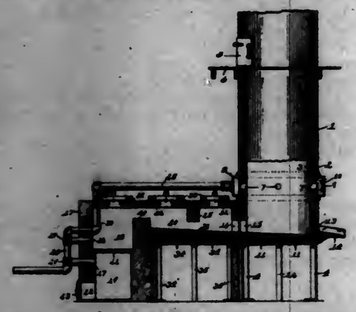
adjusting the cutting members, holes *p* transversely located in the head member, elongated slots *s* in the cutting members and adapted to register with the holes in the head member, pins *g* provided with a flattened surface *r* adapted for insertion in the holes and slots, whereby the cutting members may be longitudinally adjusted and locked in the head member, and whereby when the pins are loosened the cutting members may be longitudinally adjusted by means of the nut, as described.

963,023. METAL WEATHER-STRIP. PETER L. HEDBERG, Chicago, Ill., assignor to Chicago Metal Weather Strip Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 1, 1909. Serial No. 515,627.



The combination with a window-frame having the usual parting stops, of a piece of metal having a flange secured longitudinally in the groove in which the parting stop is fitted and provided with another flange at an angle to the first-named flange and lying longitudinally against the inner surface of the guide way for the window sash, the last-named flange having a leaf integral therewith and extended approximately back thereon toward the parting stop, and an extension on said leaf interposed between the leaf and the second-named flange and normally at an angle to the same.

963,024. COMBINATION-FURNACE. TIMOTHY HOLLAND, Chicago, Ill., assignor to Mary C. Holland, New York, N. Y. Filed Dec. 29, 1909. Serial No. 535,463.



1. The combination of a cupola and a reverberatory furnace, a direct connection between the rearward end of the melting chamber of said furnace and the lower end of the interior of said cupola, said furnace and said cupola being each provided with twyers, and a common air supply pipe for said twyers, a portion thereof passing through the fire-box of said reverberatory furnace, substantially as described.

2. The combination of a cupola and a reverberatory furnace, a direct communication between the melting chamber of said furnace and the lower end of the interior of said cupola, twyers in said furnace and said cupola, a common air supply pipe for said twyers, a portion of said pipe passing through the interior of said reverberatory furnace, and valves governing the passage from said supply pipe to said twyers, substantially as described.

3. The combination of a cupola and a reverberatory furnace, a direct communication between the rearward end of the melting chamber of said furnace and the rear end of the interior of said cupola, the bottoms of said furnace and said cupola being in substantially horisontal alinement, each being of the drop-door type, twyers for said furnace and said cupola, and a common valved supply pipe for said twyers, substantially as described.

4. The combination of a cupola and a reverberatory furnace, a direct communication between the rearward end of the melting chamber of said furnace and the lower end of the interior of said cupola, the bottoms of said furnace and said cupola being in substantially horisontal alinement, each of said bottoms being of the drop-door type, a transversely extending baffler provided in the melting chamber of said furnace depending from the top wall thereof, said top wall being provided with charging openings and a fuel supply opening, removable closures for said openings, twyers in said furnace and cupola, and a common air supply for said twyers, substantially as described.

5. The combination of a cupola and a reverberatory furnace, a direct communication between the rearward end of the melting chamber of said furnace and the melting chamber of said cupola, the bottoms of said furnace and said cupola being in horisontal alinement and in open communication with each other, each of said bottoms being of the drop-door type, a baffler provided in the melting chamber of said furnace depending from the top wall thereof intermediate its extremities, said top wall being provided with charging openings and a fuel supply opening, twyers in said furnace and said cupola, and a common air supply pipe for the twyers of said furnace and said cupola, said pipe communicating with the interior of said reverberatory furnace immediately before its connection with the twyers of said cupola, substantially as described.

[Claim 6 not printed in the Gazette.]

963,025. TANK-CAR. WILLIAM M. KRICKBAUM, Cleveland, Ohio, assignor to The Grasselli Chemical Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 23, 1907. Serial No. 394,062.



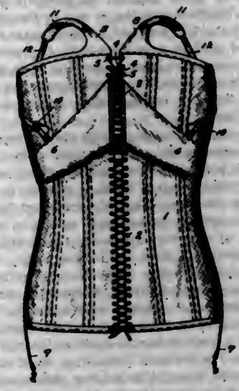
1. In a tank car, the combination with a supporting frame carried by the trucks of the car, of a tank mounted thereon, end blocks engaging the extremities of the tank and secured to the frame, connecting members securing said end blocks intermediately of the frame, and means for securing the positive adjustment of said end blocks, substantially as set forth.

2. In a tank car, the combination with a girder-frame forming the body of the car and supported by the trucks thereof, of a plurality of cradles thereon, a tank positioned within said cradles, end blocks engaging the extremities of the tank, connecting members supporting said end blocks intermediately of the frame, and positive adjusting means for securing them thereon, substantially as set forth.

3. In a tank car, the combination with a girder frame forming the body of the car and supported by the trucks thereof, of a plurality of cradles thereon, a tank positioned within said cradles, end blocks engaging the extremities of the tank, cushioning members interposed between said end blocks and tank, connecting rods extending laterally from said end blocks to points of attachment intermediate of the frame, slotted supports provided for said end blocks upon the extremities of the frame, and means for adjustably securing said end blocks to the connecting rods and extremities of the frame, substantially as set forth.

4. In a tank car, the combination with a girder frame forming the body of the car and supported by the trucks thereof, of a tank mounted upon said frame, adjustable end blocks engaging the extremities of the tank and secured directly to the frame, transverse supporting members positioned intermediately of the frame, tie rods uniting the end blocks and transverse members, and means for securing the positive adjustment of said end blocks with respect thereto, substantially as set forth.

963,026. CORSET. JOSEPH MONROE LIEBERMANN, New York, N. Y. Filed July 16, 1909. Serial No. 507,892.

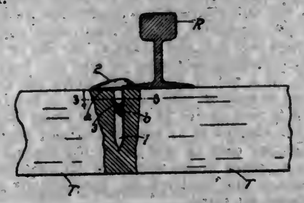


1. A one-piece corset continuous and unbroken in front and opening in the rear, having separate and independent means for drawing together the upper and lower halves, more or less, of its rear edges, the means for drawing together the upper halves of the rear edges comprising straps adapted to pass around the corset and be fastened.

2. A one-piece corset having a keeper secured thereto in front, lacing connecting and adapted to draw together the lower parts of its rear edges, and straps connected with the upper parts of the rear edges of the corset, said straps being adapted to draw such upper parts together and to pass around the corset and be secured in front, passing through the keeper.

3. A corset having separate and independent upper and lower lacings in the back, and straps connected to the upper lacing to tighten the same and adapted to pass around the corset and be secured in front.

963,027. RAIL-SPIKE. JOHN F. LIMBERG and EDWARD KOELLING, Matson, Mo. Filed Oct. 7, 1909. Serial No. 521,601.



A rail-spike comprising a stem having a driving end and an upper terminal head overhanging two opposite faces of the stem, serrated wedges forming enlargements on the faces of the stem extending from the sides of the head, the bases of the respective wedges inclining in opposite directions toward the driving end, and the edges of the wedges merging with the faces of the stem on which they are formed.

REISSUES.

13,123. METHOD OF CLEANING OLD TINNED SHEET-IRON BOXES AND OTHER TINNED ARTICLES TO RENDER THE SAME SUITABLE FOR BEING DETINNED. KARL GOLDSCHMIDT and JOSEF WEBER, Essen-on-the-Ruhr, Germany, assignors, by mesne assignments, to Goldschmidt Detinning Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 8, 1908. Serial No. 425,973. Original No. 836,028, dated Nov. 13, 1906, Serial No. 292,662.

1. The method of cleaning sheet-iron objects such as old tin boxes and the like preparatory to detinning, which consists in first saponifying the adhering filth and afterward exposing the objects to a high temperature.

2. The method of cleaning sheet-iron objects such as old tin boxes and the like preparatory to detinning which consists in first saponifying the adhering filth by means of an alkaline solution and afterward exposing the objects to a high temperature.

3. The method of cleaning sheet-iron objects such as old tin boxes and the like preparatory to detinning, which consists in first treating them with a solution of sodium hydroxid and afterward exposing them to a high temperature.

4. The method of cleaning sheet-iron objects such as old tin boxes and the like preparatory to detinning which consists in first treating them with a solution of sodium hydroxid while in a heated state and afterward exposing them to a high temperature.

5. The method of cleaning sheet-iron objects such as old tin boxes and the like preparatory to detinning, which consists in first treating them with a cleansing solution and afterward exposing them for a certain time to a temperature of not less than 400° and not more than 800° Celsius, according to the nature of the substances to be deteriorated.

6. The method of cleaning sheet-iron objects such as old tin boxes and the like preparatory to detinning, which consists in first treating them with an alkaline solution and afterward exposing them for a certain time to a temperature of not less than 400° and not more than 800° Celsius, according to the nature of the substances to be deteriorated.

7. The method of cleaning sheet-iron objects such as old tin boxes and the like, preparatory to detinning, which consists in first treating them with a solution of sodium hydroxid and afterward exposing them for a certain time to a temperature of not less than 400° and not more than 800° Celsius according to the nature of the substances to be deteriorated.

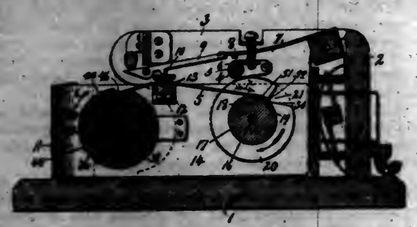
8. The method of cleaning sheet-iron objects such as old tin boxes and the like, preparatory to detinning, which consists in first treating them with a solution of sodium hydroxid while in a heated state and afterward exposing them for a certain time to a temperature of not less than 400° and not more than 800° Celsius, according to the nature of the substances to be deteriorated.

9. The method of cleaning sheet-iron objects such as old tin boxes and the like preparatory to detinning, which consists in first saponifying the adhering filth in a movable object-container, and afterward exposing the container with its saponified objects to a high temperature.

13,124. CONTROLLING MECHANISM FOR SELF-PLAYING MUSICAL INSTRUMENTS AND MUSIC-ROLLS THEREFOR. TIMOTHY B. POWERS, New York, N. Y., assignor, by mesne assignments, to The Telelectric Company, Pittsfield, Mass., a Corporation of Massachusetts. Filed Oct. 17, 1903. Serial No. 177,508. Original No. 682,272, dated Sept. 10, 1901, Serial No. 36,057.

1. In an attachment for playing pianos, organs, or other musical instruments, the combination, with a shell or casing, provided with a longitudinal opening or slot, perforated end pieces or caps, and means rotatably arranged in

said shell or casing, of a perforated music sheet or roll on said means, said music sheet having its forward end projecting from the longitudinal opening or slot in said shell or casing, and means at the forward end of said music sheet, adapted to be brought in holding engagement with a portion or portions of said shell or casing, substantially as and for the purposes set forth.



2. In an attachment for playing pianos, organs, or other musical instruments, the combination with a shell or casing, provided with a longitudinal opening or slot, perforated end pieces or caps, and a stem or spindle in said shell or casing having its ends rotatively arranged in the perforations of said end pieces or caps, of a perforated music sheet within said shell or casing, having its inner end secured to said stem or spindle, and having its forward end projecting from the longitudinal opening or slot in said shell or casing, and means at the forward end of said music sheet, adapted to be brought in holding engagement with a portion or portions of said shell or casing, substantially as and for the purposes set forth.

3. In an attachment for playing pianos, organs, or other musical instruments, the combination, with a shell or casing, provided with a longitudinal opening or slot, perforated end pieces or caps, and a stem or spindle in said shell or casing having its ends rotatively arranged in the perforations of said end pieces or caps, of a perforated music sheet within said shell or casing, having its inner end secured to said stem or spindle, and having its forward end projecting from the longitudinal opening or slot in said shell or casing, and means at the forward end of said music sheet, consisting, of a rod or bar around which the said end of the music sheet is secured, and projecting ends to said rod or bar adapted to be brought in holding engagement with portions of said shell or casing, substantially as and for the purposes set forth.

4. In an attachment for playing pianos, organs, or other musical instruments, the combination, with a shell or casing, provided with a longitudinal opening or slot, perforated end pieces or caps, and a stem or spindle in said shell or casing having its ends rotatively arranged in the perforations of said end pieces or caps, of a perforated music sheet within said shell or casing, having its inner end secured to said stem or spindle, and having its forward end projecting from the longitudinal opening or slot in said shell or casing, and means at the forward end of said music sheet, consisting, of a rod or bar around which the said end of the music sheet is secured, projecting ends on said rod or bar adapted to be brought in holding engagement with portions of said shell or casing, and a loop or finger piece on said rod or bar, substantially as and for the purposes set forth.

5. In an attachment for playing pianos, organs, or other musical instruments, the combination, with a shell or casing, provided with a longitudinal opening or slot, perforated end pieces or caps, a stem or spindle in said shell or casing having its ends rotatively arranged in the perforations of said end pieces or caps, and a cylindrical body on said stem, of a perforated music sheet within said shell or casing reeled upon said cylindrical body, the inner end of said music sheet being fixed to said cylindrical body, and said music sheet having its forward end projecting from the longitudinal opening or slot in the shell or casing, and means at the forward end of said music sheet, adapted to be brought in holding engagement with a portion or portions of said shell or casing, substantially as and for the purposes set forth.

6. In an attachment for playing pianos, organs, or other musical instruments, the combination, with a shell or casing, provided with a longitudinal opening or slot, perforated end pieces or caps, a stem or spindle in said shell or casing having its ends rotatively arranged in the perforations of said end pieces or caps, and a cylindrical body on said stem, of a perforated music sheet within said shell or casing reeled upon said cylindrical body, the inner end of said music sheet being fixed to said cylindrical body, and said music sheet having its forward end projecting from the longitudinal opening or slot in the shell or casing, and means at the forward end of said music sheet, consisting, of a rod or bar around which the said end of the music sheet is secured, and projecting ends to said rod or bar adapted to be brought in holding engagement with portions of said shell or casing, substantially as and for the purposes set forth.

7. In an attachment for playing pianos, organs, or other musical instruments, the combination, with a shell or casing, provided with a longitudinal opening or slot, perforated end pieces or caps, a stem or spindle in said shell or casing having its ends rotatively arranged in the perforations of said end pieces or caps, and a cylindrical body on said stem, of a perforated music sheet within said shell or casing reeled upon said cylindrical body, the inner end of said music sheet being fixed to said cylindrical body, and said music sheet having its forward end projecting from the longitudinal opening or slot in the shell or casing, and means at the forward end of said music sheet, consisting, of a rod or bar around which the said end of the music sheet is secured, projecting ends to said rod or bar adapted to be brought in holding engagement with portions of said shell or casing, and a loop or finger piece on said bar or rod, substantially as and for the purposes set forth.

8. The combination, with a pair of bearings having receiving sockets, and one of said bearings having a slot or opening, of a shell or casing, provided with a longitudinal opening, and end pieces or caps, a central roller in said shell or casing, a music sheet on said roller, and a stud or projection on one of said end pieces or caps extending into said slot or opening in one of said bearings, substantially as and for the purposes set forth.

9. The combination, with a pair of bearings having receiving sockets, and one of said bearings having a slot or opening, of a shell or casing, provided with a longitudinal opening, and perforated end pieces or caps, a cylindrical body in said shell or casing, provided with means for rotatively arranging said cylindrical body in the perforated end pieces or caps, a music sheet within said shell or casing, and a stud or projection on one of said end pieces or caps, extending into said slot or opening in one of said bearings, substantially as and for the purposes set forth.

10. The combination, with a receiving roll, having flanges at its ends and slots or cut away portions in said flanges, and said roll having a longitudinal groove 18, and an enlarged depression 19, of a music sheet adapted to be reeled upon said roll, and means at one end of said music sheet for attaching said sheet to said roll, consisting, essentially, of a rod or bar around which the said end of said sheet is secured, said rod and end of the sheet being arranged in said groove 18, a loop or finger piece on said rod or bar adapted to be arranged in said depression 19, and projecting ends on said rod or bar adapted to be removably arranged in the slotted or cut away portions in the flanges of said receiving roll, substantially as and for the purposes set forth.

11. In an attachment for playing pianos, organs, or other musical instruments, the combination, with a tubular shell or casing, and a cylindrical body in said shell or casing, having a longitudinal groove or slot, of a perforated music sheet in said shell or casing, a stem or rod 42 around which one end of said music sheet is secured, said stem or rod 42 being arranged in the groove or slot of said cylindrical body, substantially as and for the purposes set forth.

12. In an attachment for playing pianos, organs, or other musical instruments, the combination, with a tubular shell or casing, and a cylindrical body in said shell or casing, having a longitudinal groove or slot, of a perforated music sheet in said shell or casing, a stem or rod 42 around which one end of said music sheet is secured, said stem or rod 42 being arranged in the groove or slot in said cylindrical body, and a rod or bar around which the forward end of the music sheet is secured, and projecting ends to said rod or bar adapted to be brought in holding engagement with portions of said shell or casing, substantially as and for the purposes set forth.

13. In an attachment for playing pianos, organs, or other musical instruments, the combination, with a tubular shell or casing, and a cylindrical body in said shell or casing, having a longitudinal groove or slot, of a perforated music sheet in said shell or casing, a stem or rod 42 around which one end of said music sheet is secured, said stem or rod 42 being arranged in the groove or slot in said cylindrical body, a rod or bar around which the forward end of the music sheet is secured, projecting ends to said rod or bar adapted to be brought in holding engagement with portions of said shell or casing, and a loop or finger piece on said rod or bar, substantially as and for the purposes set forth.

14. In an attachment for playing pianos, organs, or other musical instruments, the combination, with a carriage, and contact making fingers, of bearings in said carriage, one of said bearings having a slot 27, a roller detachably arranged in said bearings, a shell or casing on said roller, having recesses 53, and a stud 50 extending into said slot 27, a perforated music sheet on said roller, said shell or casing surrounding said sheet, and projections 52 on said music sheet, arranged to engage said recesses in said shell or casing and cause the turning of said bearing provided with the slot 27, substantially as and for the purposes set forth.

15. In an attachment for playing pianos, organs, or other musical instruments, the combination, with a carriage, and contact making fingers, of bearings in said carriage, one of said bearings having a slot 27, a roller detachably arranged in said bearings, a shell or casing on said roller, having recesses 53, and a stud 50 extending into said slot 27, a perforated music sheet on said roller, said shell or casing surrounding said sheet, projections 52 on said music sheet, arranged to engage said recesses in said shell or casing and cause the turning of the said bearing provided with the slot 27, a holding catch for holding or retaining said carriage in its held and operative position, and means connected with said bearing provided with said slot 27 for releasing said catch, substantially as and for the purposes set forth.

16. The combination with a shell or casing provided with a longitudinal opening or slot and means rotatably arranged in said shell or casing, of a perforated music sheet or roll on said means, said music sheet having its forward end projecting from the longitudinal opening or slot in said shell or casing, and means at the forward end of said music sheet adapted to be brought in holding engagement with a portion or portions of said shell or casing substantially as and for the purposes set forth.

17. As a new article of manufacture, a combined music roll and holder for use in self-playing musical instruments, formed of a core or roller, a music sheet wound on the roller, and a holder in which said roller is rotatably mounted and by which the music sheet is protected when wound on the roller, the roller having one end formed to operatively engage a rewinding driving device of the instrument while the roller is mounted in the holder.

18. As a new article of manufacture, a combined music roll and holder for use in self-playing musical instruments, formed of a core or roller, a music sheet wound on the roller, and a shell or casing forming a holder in which said roller is rotatably mounted and by which the music sheet is protected when wound on the roller, the roller having one end formed to operatively engage a rewinding driving device of the instrument while the roller is mounted in the holder.

19. As a new article of manufacture, a music roll for use in self playing musical instruments comprising a shell or casing having a longitudinal opening or slot, and a music sheet rolled up within said shell or casing and adapted to be unrolled and drawn out through the longitudinal opening or slot in the shell or casing.

20. As a new article of manufacture, a music roll for use in self playing musical instruments formed of a core or roller, a perforated music sheet formed of a continuous non-covered strip of flexible sheet metal wound on the roller, and a holder in which said roller is rotatably mounted.

21. As a new article of manufacture, a music roll for use in self playing musical instruments formed of a core or roller, a music sheet wound on the roller, and a holder in which said roller is rotatably mounted, the music sheet being provided at its outer end with means adapted to engage the holder for turning the holder when the sheet has been re-wound by the rotation of the roller.

22. As a new article of manufacture, a music roll for use in self playing musical instruments formed of a core or roller, a music sheet wound on the roller, and a shell or casing within which the roller is rotatably mounted and having a longitudinal opening or slot through which the music sheet may be drawn.

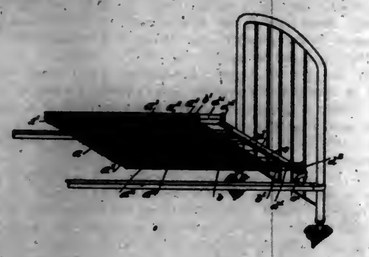
23. As a new article of manufacture, a music roll for use in self playing musical instruments formed of a core or roller, a music sheet wound on the roller, and a shell or casing within which the roller is rotatably mounted and having a longitudinal opening or slot through which the music sheet may be drawn, the music sheet being provided at its outer end with means adapted to engage the shell or casing for turning the shell or casing when the sheet has been re-wound by the rotation of the roller.

24. The combination with a series of circuit closers adapted to be controlled by a traveling music sheet, of a winding roller for the music sheet; a music roll formed of a core or roller, a music sheet wound on the core, and a holder in which said core is rotatably mounted, the music sheet being provided at its outer end with means adapted to engage the holder for turning the holder when the sheet has been rewound by the rotation of the core; and means for supporting the music roll and for rotating the core or roller of the music roll for rewinding the music sheet thereon, said means including a member adapted to turn with the holder of the music roll.

25. The combination with a series of circuit closers adapted to be controlled by a traveling music sheet, of a winding roller for the music sheet; a music roll formed of a core or roller, a music sheet wound on the core and a holder in which said core is rotatably mounted, the music sheet being provided at its outer end with means adapted to engage the holder for turning the holder when the sheet has been rewound by the rotation of the core; and bearings for the music roll, one of said bearings being connected to turn with the core or roller of the music roll, means for rotating said bearing for rewinding the music sheet, and the other of said bearings being connected with the holder of the music roll so as to be turned by the holder when the latter is turned by the music sheet.

26. The combination of a music roll formed of a core or roller, a music sheet wound on the roller, and a holder in which said roller is rotatably mounted, the music sheet being provided at its outer end with means adapted to engage the holder for turning the holder when the sheet has been rewound by the rotation of the roller; with a series of circuit closers adapted to be controlled by a traveling music sheet, a carriage in which the music roll is supported, means on the carriage through which the core or roller of the music roll is rotated for rewinding the music sheet, driving mechanism for actuating said means when the carriage is in operative position, a detent for holding the carriage in its operative position, and means controlled by the turning of the holder of the music roll for tripping the detent to release the carriage.

13,125. WIRE MATTRESS. CHARLES J. WITZEL, New York, N. Y. Filed June 12, 1909. Serial No. 501,884. Original No. 921,494, dated May 11, 1909, Serial No. 482,919.



1. A woven wire mattress provided with bent up side guards forming extensions of the body or web of the mattress, transverse end straps applied to the woven wire mattress and provided with bent up lugs to which the side guards are attached, auxiliary angular lugs attached to the angle irons at the foot and head of the mattress, coil springs between the transverse end straps and angle irons, and coil springs between the bent up lugs of the end straps and the auxiliary lugs of the angle irons.

2. In a woven wire mattress, the combination with a woven wire web having bent up extensions or guards at the sides, of longitudinal strands for reinforcing the edges of the web and bent up guards, transverse end straps having bent up lugs attached to opposite ends of the web and side guards, angle irons at the head and foot of the mattress, auxiliary lugs attached to said angle irons in line with the lugs of the transverse straps, coil springs interposed between the transverse end straps and angle pieces, and auxiliary coil springs between the bent up lugs and auxiliary lugs.

3. A woven wire mattress provided with reinforcing strands at both longitudinal sides, bent up side guards forming extensions of the wire mattress and also provided at their upper edges with reinforcing strands, and transverse end straps connected to the ends of the mattress and provided with bent up lugs to which the ends of the side guards are attached.

4. A metallic formed mattress comprising a bottom and side guards extending longitudinally of such bottom, coil springs holding such side guards under longitudinal tension, and upstanding lugs spaced apart at each end of each side guard and to which such coil springs and side guards are connected.

5. A metallic formed mattress comprising a bottom and side guards extending longitudinally of such bottom, coil springs holding such side guards under longitudinal tension, and upstanding lugs spaced apart at each end of each side guard and to which such coil springs and side guards are connected, the opposed lugs at the immediate ends of the side guards being connected by a rigid strap.

6. A metallic formed mattress comprising a bottom connected to transverse members at the head and foot of the mattress, side guards extending along the longitudinal edges of said bottom, lugs to which the side guards are attached, lugs projecting above the transverse members, and springs between the lugs of the transverse members and the lugs to which the side guards are attached for holding the side guards under longitudinal tension.

7. A metallic formed mattress comprising a bottom connected to transverse irons at the head and foot of the mattress, metallic formed side guards extending along the longitudinal edges of said bottom, and lugs projecting above the transverse irons and coil springs connected with said lugs and to which the ends of the side guards are attached for holding the side guards under longitudinal tension.

8. A metallic formed mattress comprising a bottom connected to transverse irons at the head and foot of the mattress, metallic fabric side guards extending along the longitudinal edges of said bottom and attached at their lower edges thereto, and shorter than the distance between such transverse irons, upright lugs to which the side guards are attached, lugs projecting above the transverse irons, and coil springs between the lugs of the transverse irons and the lugs to which the side guards are attached for holding the side guards under longitudinal tension.

9. A woven wire mattress comprising a bottom, coil springs connecting the bottom to transverse irons at the head and foot of the mattress, bent up side guards forming extensions of such bottom, upright lugs secured to the bottom and to which the side guards are attached, auxiliary lugs projecting above the transverse irons, and coil springs between the lugs attached to the mattress and the lugs attached to the transverse irons for holding the side guards under longitudinal tension.

10. A metallic formed mattress comprising a bottom connected to transverse irons at the ends of the mattress, side guards for preventing the spreading of a stuffed mattress and extending along the longitudinal edges of such bottom and each comprising a flexible metallic fabric, and means for supporting such side guards in an upright position, said side guards having means for holding them under lengthwise tension and effective to automatically take up the slack of such guards and hold them in their upright positions.

11. A metallic formed mattress comprising a bottom connected to transverse irons at the ends of the mattress, metallic fabric side guards extending along the longitudinal edges of said bottom and shorter than the distance between such transverse irons, and coiled springs connected to the ends of the guards for exerting a lengthwise pull thereon thereby to maintain them under a constant longitudinal tension.

12. A metallic formed mattress comprising a bottom connected to transverse irons at the head and foot of the mattress, side guards extending along the longitudinal edges of said bottom and shorter than the distance between such transverse irons, coil springs for holding such side guards under longitudinal tension, and upstanding lugs spaced apart at the end of each side guard and between which one or more coil springs are located and to one of which lugs the end of a side guard is also connected.

13. A woven wire mattress comprising a bottom and woven wire bent up side guards forming extensions of the bottom and each provided with a reinforced upper edge, and means for holding said side guards in an upright position and under longitudinal tension.

14. A woven wire mattress comprising a bottom having enlarged edges at each longitudinal side thereof, bent up woven wire side guards forming extensions of the wire mattress and each provided with an enlarged upper edge, and means for holding the side guards in an upright position and under a constant longitudinal tension.

15. A metallic formed mattress connected to transverse irons at the head and foot of the mattress and provided with side guards along its longitudinal edges, lugs to which the side guards are attached, lugs projecting above the transverse irons, and springs between the lugs of the transverse irons and the lugs to which the side guards are attached, said side guards having reinforced upper edges.

16. A metallic formed mattress connected to transverse irons at the head and foot of the mattress and provided with side guards along its longitudinal edges, lugs to which the side guards are attached, lugs projecting above the transverse irons, and springs between the lugs of the transverse irons and the lugs to which the side guards are attached, said side guards having reinforced upper edges and said mattress having reinforced edges adjacent to the lower edges of the side guards.

17. A woven wire mattress connected to transverse irons at the head and foot of the mattress, bent up side guards forming extensions of the body or web of the mattress, upright lugs secured to the mattress and to which the side guards are attached, auxiliary lugs projecting above the transverse irons, and coil springs between the lugs attached to the mattress and the lugs attached to the transverse irons, said side guards having reinforced upper edges.

18. A woven wire mattress, coil springs connecting the mattress to transverse irons at the head and foot of the mattress, bent up side guards forming extensions of the body or web of the mattress, upright lugs secured to the mattress and to which the side guards are attached, auxiliary lugs projecting above the transverse irons, and coil springs between the lugs attached to the mattress and the lugs attached to the transverse irons, said mattress having reinforced edges adjacent to the lower edges of the side guards and said side guards having reinforced upper edges.

19. A metallic mattress comprising a bottom made up of a metallic fabric and a transverse member at each end thereof to which said fabric is connected, upstanding projections secured to the bottom to project above the same, one adjacent to each corner thereof, and side guards for preventing the spreading of a stuffed mattress, each of only one thickness of flexible metallic fabric secured to said projections under lengthwise tension.

20. A metallic mattress comprising a bottom made up of a metallic fabric and a transverse member at each end thereof to which said fabric is connected, upstanding projections secured to the bottom to project above the same, one adjacent to each corner thereof, and side guards for preventing the spreading of a stuffed mattress, each of a flexible metallic fabric and of unchanneled formation secured to said projections under lengthwise tension and each of less height than the normal or standard thickness of a stuffed mattress.

21. A metallic formed mattress comprising a bottom connected to transverse irons at the ends of the mattress, side guards for preventing the spreading of a stuffed mattress, extending along the longitudinal edges of such bottom and each comprising a flexible metallic fabric, coiled springs for exerting a constant lengthwise pull on such fabric and automatically take up the slack thereof thereby to maintain such side guards under a constant lengthwise tension, and upstanding projections for maintaining such side guards in an upright position.

22. A metallic mattress comprising a bottom and flexible metallic fabric side guards for preventing the spreading of a stuffed mattress, each of only one thickness of fabric extending lengthwise of the side edges of such bottom and each provided with a free enlarged upper edge in substantially the same vertical plane as and parallel to the bottom edge of the side guard, and upstanding projections for holding said side guards stretched therebetween and in an upright position under lengthwise tension.

23. A metallic mattress comprising a bottom and woven wire side guards for preventing the spreading of a stuffed mattress, each of unchanneled formation extending lengthwise of the side edges of such bottom and having connection therewith, each comprising a single thickness of fabric provided with an enlarged upper edge of greater thickness than the thickness of the fabric of the side guard and effective to reinforce and strengthen the side guard, and upstanding projections for holding said side guards stretched therebetween and in an upright position.

24. A metallic mattress comprising a bottom made up of a metallic fabric and a transverse member at each end thereof to which said fabric is connected, upstanding projections secured to said bottom to project above the same one adjacent to each corner thereof, and side guards for preventing the spreading of a stuffed mattress, each of only one thickness of flexible metal fabric secured to said projections under lengthwise tension and not substantially higher than the plane of the stuffed mattress.

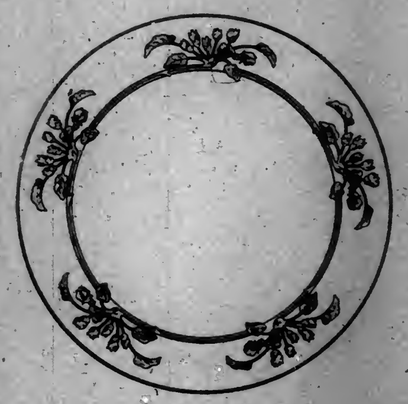
DESIGNS.

40,742. GLASS VESSEL. BENJAMIN FRANKLIN DAVIES, Union Hill, N. J., assignor to L. Straus & Sons, New York, N. Y., a Firm. Filed Apr. 20, 1910. Serial No. 556,650. Term of patent 14 years.



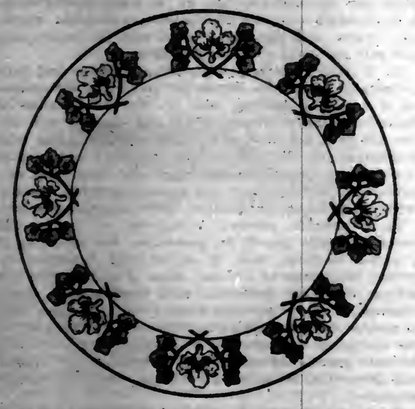
The ornamental design for a glass vessel, as shown.

40,743. PLATE OR SIMILAR ARTICLE. JULES H. VENON, New York, N. Y. Filed Apr. 5, 1910. Serial No. 553,670. Term of patent 7 years.



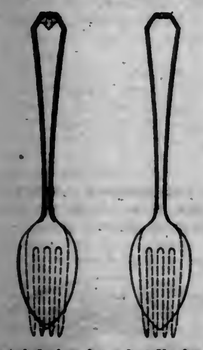
The ornamental design for a plate, or similar article, as shown and described.

40,744. PLATE OR SIMILAR ARTICLE. JULES H. VERNON, New York, N. Y. Filed Apr. 5, 1910. Serial No. 553,671. Term of patent 7 years.



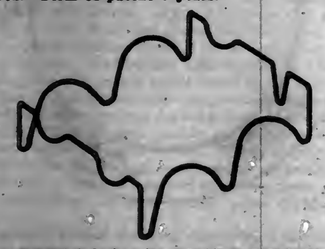
The ornamental design for a plate, or similar article, as shown and described.

40,745. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. CHARLES OSBORNE, New York, N. Y., assignor to Whiting Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Mar. 10, 1910. Serial No. 548,503. Term of patent 14 years.



The ornamental design for a handle for a spoon, fork or similar article, as shown.

40,746. KNIFE AND FORK HOLDER. CHRISTIAN MYLAND, Philadelphia, Pa. Filed May 6, 1910. Serial No. 559,862. Term of patent 7 years.



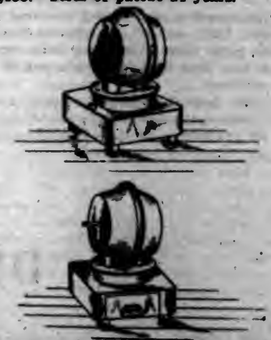
The ornamental design for a knife and fork holder, as shown.

40,747. VEHICLE-LAMP. RICHARD H. WELLES, Kenosha, Wis., assignor to The Badger Brass Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed Mar. 21, 1910. Serial No. 550,810. Term of patent 7 years.



The ornamental design for a vehicle lamp, as shown and described.

40,748. CASING FOR PORTABLE SUCTION CLEANING-MACHINES. DAVID P. MOORE and SAMUEL B. PACK, Washington, D. C. Filed Apr. 19, 1910. Serial No. 556,455. Term of patent 14 years.



The ornamental design for a casing for a portable suction cleaning machine, as shown.

40,749. PATTERN FOR DOLLS. FRANK A. HAYS, Philadelphia, Pa. Filed June 23, 1909. Serial No. 508,964. Term of patent 3½ years.



The ornamental design for a pattern for a doll as shown.

TRADE-MARKS

PUBLISHED JUNE 28, 1910.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 28,333. (CLASS 37. PAPER AND STATIONERY.) AMERICAN WRITING PAPER COMPANY, Holyoke, Mass. Filed June 24, 1907.

DEBENTURE

Particular description of goods.—Writing and Printing Paper.

Ser. No. 31,777. (CLASS 37. PAPER AND STATIONERY.) THE MONARCH TYPEWRITER COMPANY, Syracuse, N. Y. Filed Dec. 17, 1907.



Particular description of goods.—Writing and Printing Paper.

Ser. No. 34,508. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) BARCLAY & BARCLAY, New York, N. Y. Filed May 1, 1908. Used ten years.



Particular description of goods.—Soap.

Ser. No. 35,892. (CLASS 17. TOBACCO PRODUCTS.) LUCY J. MENDEZ, Brooklyn, N. Y. Filed July 1, 1908.



Particular description of goods.—Cigars.

Ser. No. 36,530. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JOHN JAMESON & SON LIMITED, Dublin, Ireland. Filed Aug. 7, 1908.



Which consists of the letters and character "J J & S" and the name "John Jameson & Son" as written by S. G. Murray, secretary, no claim being made herein to the words "John Jameson & Son Limited, Pure Old Pot Still Dublin Whiskey, Bow St. Distillery, Dublin, Ireland. Established A. D. 1780."

Particular description of goods.—Straight Irish Whisky.

Ser. No. 40,441. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) SCHWEINFURTER PRÄCISIONS-KUGEL-LAGER-WERKE FICHTEL & SACHS, Schweinfurt, Bavaria, Germany. Filed Feb. 9, 1909.



Particular description of goods.—Cycles, Free-Wheel Cycles, Motor-Driven Cycles, Automobiles, Carriages, Rail-Velocipedes, Railway-Cars, Carriages, Boats, Motor-Boats, Airships, Flying-Machines, Wheel-Hubs, Free-Wheel Hubs, Free-Wheel Gears, Coaster-Brakes, Hubs with Multiple-Speed Gears, Change and Differential Gears for Cycles and Automobiles, Sprocket-Wheels and Driving-Chains for Cycles and Automobiles, Hand, Foot, and Mechanically Actuated Brakes for Cycles and Automobiles, and Repair Parts of Such Goods.

Ser. No. 42,093. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) JACOB BEYERLE, Brooklyn, N. Y. Filed Apr. 28, 1909.



No claim being made to the words "Dr. Deimel's Linen Mesh."

Particular description of goods.—Dress-Shields.

Ser. No. 43,118. (CLASS 39. CLOTHING.) UP TO DATE CLOAK MANUFACTURING COMPANY, Kingston, N. Y. Filed June 19, 1909.



Particular description of goods.—Ladies' Cloaks, Ladies' Outer Suits, Dress-Skirts, Dress-Waists, and Furs.

Ser. No. 43,969. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) R. & J. DICK, LTD., Greenhead, Scotland. Filed Aug. 4, 1909. Used ten years.



Particular description of goods.—Machinery Driving Belts and Bands Composed of Balata and Canvas, the Former Substance Predominating.

Ser. No. 44,687. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ROGERS & THOMPSON, West New York, N. J., and New York, N. Y. Filed Sept. 14, 1909.



The picture is not a portrait of any living individual.

Particular description of goods.—Broad Silk in the Piece, Cotton Piece Goods, and Silk and Cotton Piece Goods.

Ser. No. 44,720. (CLASS 17. TOBACCO PRODUCTS.) MOORE & CALVI, New York, N. Y. Filed Sept. 16, 1909. Used ten years.



Particular description of goods.—Smoking and Chewing Tobacco.

Ser. No. 44,728. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ROGERS & THOMPSON, West New York, N. J., and New York, N. Y. Filed Sept. 16, 1909.

"Solvuge"

Particular description of goods.—Broad Silk in the Piece, Cotton Piece Goods, and Silk and Cotton Piece Goods.

Ser. No. 45,964. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JULIUS KESSLER & CO. (INC.), Chicago, Ill. Filed Nov. 18, 1909.

WANELDA

Particular description of goods.—Straight Whisky.

Ser. No. 46,415. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC COAST SEEDED RAISIN COMPANY, Fresno, Cal. Filed Dec. 10, 1909.



Particular description of goods.—Dried Fruits.

Ser. No. 46,481. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SWEDISH IRON & STEEL CORPORATION, New York, N. Y. Filed Dec. 14, 1909.

SISCO

Particular description of goods.—Anvils.

Ser. No. 46,712. (CLASS 32. FURNITURE AND UPHOLSTERY.) G. W. BENT CO., Boston, Mass. Filed Dec. 24, 1909.

DIAMOND

Particular description of goods.—Mattresses, Cushions, Pillows, and Bedsteads.

Ser. No. 47,066. (CLASS 39. CLOTHING.) NUSSBAUM-GOLDSMITH CO., New York, N. Y. Filed Jan. 11, 1910.



Consisting of a triangular figure with the letters and abbreviation "N. G. Co." and over the triangular figure a fanciful figure of a woman.

Particular description of goods.—Women's Dress-Skirts.

Ser. No. 47,148. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Jan. 17, 1910.

MORLEIGH DIAMOND

Particular description of goods.—Talcum Powder and Toilet Water.

Ser. No. 47,268. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) TH. GOLDSCHMIDT, Essen-on-the-Ruhr, Germany. Filed Jan. 20, 1910.

TEGO

Particular description of goods.—Detinned Scrap-Iron, Detinned Scrap-Steel, and Metallic Tin.

Ser. No. 47,300. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NAVE-MCCORD MERCANTILE CO., St. Joseph, Mo. Filed Jan. 22, 1910.

LOVER'S LANE

Particular description of goods.—Roasted Blended Coffee, Ground Spices, and Flavoring Extracts.

Ser. No. 47,450. (CLASS 37. PAPER AND STATIONERY.) LASHER & LATHROP INC., New York, N. Y. Filed Jan. 29, 1910. Used ten years.

SENECA MILLS

Particular description of goods.—Writing and Printing Paper.

Ser. No. 47,451. (CLASS 37. PAPER AND STATIONERY.) LASHER & LATHROP INC., New York, N. Y. Filed Jan. 29, 1910. Used ten years.

PONTIAC

Particular description of goods.—Writing and Printing Paper.

Ser. No. 47,756. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS HOLLOWAY, London, England. Filed Feb. 12, 1910. Used ten years.



Particular description of goods.—Ointment.

Ser. No. 47,757. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS HOLLOWAY, London, England. Filed Feb. 12, 1910. Used ten years.



Particular description of goods.—Ointment.

Ser. No. 47,758. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THOMAS HOLLOWAY, London, England. Filed Feb. 12, 1910. Used ten years.



Particular description of goods.—Pills.

Ser. No. 47,869. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MAX GLICK COMPANY, Cleveland, Ohio. Filed Feb. 17, 1910.



The portraits being fanciful.
Particular description of goods.—A Nut-Bar.

Ser. No. 47,888. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BIG STONE CANNING COMPANY, Big Stone, S. D. Filed Feb. 18, 1910.

Golden Bantam

Particular description of goods.—Canned Vegetables.

Ser. No. 47,913. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SHERMAN D. CLEGG, Wheeling, W. Va. Filed Feb. 18, 1910.

NOSTRIOLA

Particular description of goods.—Remedy for Catarrh, Catarrhal Deafness, Hay-Fever, Asthma, Cold in Head, Headache, Sore Throat, and Croup.

Ser. No. 48,058. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MICHAEL H. NAVIN, Boston, Mass. Filed Feb. 28, 1910.

Emens

Particular description of goods.—Pills.

Ser. No. 48,124. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HAROLD H. FRIES, New York, N. Y. Filed Mar. 2, 1910.

PEACH-O-LA

Particular description of goods.—A Non-Alcoholic Beverage Similar to Soda-Water and Having a Peach Flavor.

Ser. No. 48,204. (CLASS 48. MALT EXTRACTS AND LIQUORS.) MALT-DIASTASE COMPANY, New York, N. Y. Filed Mar. 4, 1910.



Particular description of goods.—Malt Extracts.

Ser. No. 48,327. (CLASS 39. CLOTHING.) THE PATERSON OVERALL COMPANY, Paterson, N. J. Filed Mar. 10, 1910. Used ten years.

PATERSON

Particular description of goods.—Overalls, Trousers, and Jumpers.

Ser. No. 48,359. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) TAYLOR INSTRUMENT COMPANIES, Rochester, N. Y. Filed Mar. 12, 1910.

Tycos

Particular description of goods.—Thermometers; Current-Meters; Gas-Leak Indicators; Hydrometers; Pyrometers; Thermographs; Charts for Recording Thermometers, Barometers, and Gages; Anemometers; Compasses; Draft-Gages; Gas-Pressure Gages; Levels; Rain-Gages; Sunshine-Recorders; Urinometers; Barometers; Clinometers; Flash-Test Apparatus; Hygrometers; Pedometers; Rotometers; Steam-Gages; Vacuum-Gages; Meteorological Instruments, and Sphygmomanometers.

Ser. No. 48,416. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) HIGHLAND CHEMICAL PRODUCTS COMPANY, Connellsville, Pa. Filed Mar. 15, 1910.



Particular description of goods.—Anticorrosive Paint for Metal Pipe and other Metallic Articles.

Ser. No. 48,629. (CLASS 38. PRINTS AND PUBLICATIONS.) THEOPHILUS LOWE, Seattle, Wash. Filed Mar. 23, 1910.

HOTEL TOPICS

Particular description of goods.—Monthly Magazines.

Ser. No. 48,821. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE FIRTH CARPET COMPANY, New York, N. Y. Filed Apr. 2, 1910.

EUREKA

Which consists of the word "Eureka."
Particular description of goods.—Carpets and Rugs.

Ser. No. 48,822. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE FIRTH CARPET COMPANY, New York, N. Y. Filed Apr. 2, 1910.

METROPOLITAN

Which consists of the word "Metropolitan."
Particular description of goods.—Carpets and Rugs.

Ser. No. 48,865. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) CHAPIN & HOLLISTER COMPANY, Providence, R. I. Filed Apr. 5, 1910.

PLATINIDE

Particular description of goods.—Ingots, Wire, Tubing, and Flat Stock of an Alloy in Imitation of Precious Metal for Jewelers' Use.

Ser. No. 48,875. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROETHLISBERGER & Co., New York, N. Y. Filed Apr. 6, 1910.

ALPESTRA

Particular description of goods.—Camembert-Type Cheese.

Ser. No. 48,887. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FERDINAND FREUND, New York, N. Y. Filed Apr. 7, 1910.

Compressal

Particular description of goods.—A Medicinal Lotion.

Ser. No. 49,013. (CLASS 12. CONSTRUCTION MATERIALS.) THE CINCINNATI SHEET METAL & ROOFING COMPANY, Cincinnati, Ohio. Filed Apr. 11, 1910.



Particular description of goods.—Sheet-Metal Products and Roofing Material.

Ser. No. 49,029. (CLASS 39. CLOTHING.) SPOKANE DRY GOODS COMPANY, Spokane, Wash. Filed Apr. 12, 1910.



Particular description of goods.—Men's and Boys' Overalls.

Ser. No. 49,045. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN P. COBB, Chicago, Ill. Filed Apr. 12, 1910.

CO-EDS.

Particular description of goods.—Chocolate-Covered Biscuits.

Ser. No. 49,035. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE DEERLICK OIL STONE COMPANY, Chagrin Falls, Ohio. Filed Apr. 13, 1910.



Particular description of goods.—Sharpening-Stones, Whetstones, Oilstones, Scythe-Stones, Slip-Stones, Ax-Stones, Razor-Hones, and Gouge-Stones.

Ser. No. 49,057. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE E. DOOLITTLE, Washington, D. C. Filed Apr. 13, 1910.



Dolly Madison

The portrait being that of Dolly Madison, deceased.
Particular description of goods.—Candies.

Ser. No. 49,070. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FRED. LUDEWIG & CO., New York, N. Y. Filed Apr. 13, 1910.

PRINCESS

Particular description of goods.—Hair-Nets.

Ser. No. 49,144. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CORN PRODUCTS REFINING COMPANY, Jersey City, N. J., and New York, N. Y. Filed Apr. 16, 1910.

CLIMAX

Particular description of goods.—A Compound of Corn-Syrup and Refiner's Syrup.

Ser. No. 49,171. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PURITAN SOAP COMPANY, Rochester, N. Y. Filed Apr. 18, 1910. Used ten years.

BURNHAM

Particular description of goods.—Soap.

Ser. No. 49,244. (CLASS 2. RECEPTACLES.) ISOLA GESELLSCHAFT FÜR WÄRME-UND KALTEISOLIERUNG M. B. H., Berlin, Germany. Filed Apr. 16, 1910.

Particular description of goods.—Vacuum Insulated Receptacles.

Ser. No. 49,259. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BALDWIN PERFUMERY CO., Chicago, Ill. Filed Apr. 23, 1910. Used ten years.



Particular description of goods.—Perfumery, Toilet Water, Sachet-Powders, and Face-Powders.

Ser. No. 49,260. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BALDWIN PERFUMERY CO., Chicago, Ill. Filed Apr. 23, 1910.

QUEEN BESS

Particular description of goods.—Perfumery, Sachet-Powder, Toilet Water, Face-Creams, and Face-Powders.

Ser. No. 49,269. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) WILLIAM ROSS, Troy, N. Y. Filed Apr. 23, 1910. Used ten years.

GEM

Particular description of goods.—Ice-Cream Ladles.

Ser. No. 49,270. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) WILLIAM ROSS, Troy, N. Y. Filed Apr. 23, 1910. Used ten years.

TROJAN

Particular description of goods.—Ice-Cream Ladles.

Ser. No. 49,305. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM S. LANGHORNE, Jr., Norfolk, Va. Filed Apr. 26, 1910.

KU-SIK

Particular description of goods.—A Remedy for Gonorrhea and Gleet.

Ser. No. 49,411. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) S. ELWOOD MAY, Philadelphia, Pa. Filed Apr. 30, 1910. Used ten years.

BUNGALOE

Particular description of goods.—Blended Tea.

Ser. No. 49,412. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) S. ELWOOD MAY, Philadelphia, Pa. Filed Apr. 30, 1910. Used ten years.

TIFFIN

Particular description of goods.—Blended Tea.

Ser. No. 49,418. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) S. KANN SONS & CO., Washington, D. C. Filed Apr. 30, 1910.

KKK

Particular description of goods.—Candy.

Ser. No. 49,518. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) WESTERN MECHANICAL WORKS, Los Angeles, Cal. Filed May 5, 1910.

UNIVERSAL

Particular description of goods.—Automobile Wind-Screens.

Ser. No. 49,542. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANGLO-AMERICAN PHARMACEUTICAL CO. LTD., London, England. Filed May 6, 1910.

LACTOIDS

Particular description of goods.—Tablets Prepared from the Lactic-Acid Bacilli of Bulgarian Milk.

Ser. No. 49,630. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) BINNEY & SMITH COMPANY, East Orange, N. J., and New York, N. Y. Filed May 10, 1910.

PERFLO

Particular description of goods.—Pigment for Paints.

Ser. No. 49,647. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DEMING & GOULD CO., Chicago, Ill. Filed May 11, 1910.

BOW-KNOT

Particular description of goods.—Canned Salmon.

Ser. No. 49,650. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DILLING & COMPANY, Indianapolis, Ind. Filed May 11, 1910.

Cocktail

Particular description of goods.—Chocolates.

Ser. No. 49,697. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE REPUBLIC RUBBER COMPANY, Youngstown, Ohio. Filed May 13, 1910.

LANCO

Particular description of goods.—Power-Transmitting and Conveyer Belts.

Ser. No. 49,755. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SPRINGFIELD PROVISION COMPANY, Chicopee, Mass. Filed May 16, 1910. Used ten years.

BRIGHTWOOD

Particular description of goods.—Hams, Bacon, Pork Sausage, Head-Cheese, and Frankfurt-Style Sausage.

Ser. No. 49,758. (CLASS 38. PRINTS AND PUBLICATIONS.) TERESA DEAN, New York, N. Y. Filed May 16, 1910.

The WIDOW

Particular description of goods.—Weekly Magazines.

Ser. No. 49,766. (CLASS 17. TOBACCO PRODUCTS.) ERIQUE PARADIS, Rice Lake, Wis. Filed May 17, 1910.



Particular description of goods.—Cigars.

Ser. No. 49,784. (CLASS 38. PRINTS AND PUBLICATIONS.) THE NEW YORK HERALD COMPANY, New York, N. Y. Filed May 18, 1910.

THE WIDOW WISE

Particular description of goods.—Printed Pictures and Illustrations.

Ser. No. 49,807. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HENRY J. McCOY Co., New York, N. Y. Filed May 19, 1910.

NEW MONARCH

Particular description of goods.—Pile-Drivers.

Ser. No. 49,828. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) COSMUS C. SLOTHOWER, Harrisburg, Pa. Filed May 20, 1910.



Particular description of goods.—Liniment and Cough-Syrup.

Ser. No. 49,905. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE AMERICAN BELTING COMPANY, Youngstown, Ohio. Filed May 25, 1910.

ALPHA

Particular description of goods.—Stitched Canvas Belting.

Ser. No. 49,934. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) HERMAN L. HOHLFELD, Philadelphia, Pa. Filed May 26, 1910.

Chantecler

Particular description of goods.—Hammocks.

Ser. No. 49,940. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE OAKLAND CHEMICAL COMPANY, New York, N. Y. Filed May 26, 1910.

Genodiox

Particular description of goods.—A Preparation of Hydrogen Dioxid Used as an Antiseptic and Disinfectant.

Ser. No. 49,956. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE MERSMAN BROS. BRANDTS COMPANY, Celina, Ohio. Filed May 27, 1910.



Particular description of goods.—Dining and Library Tables.

Ser. No. 49,984. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) FLORIDA CHAIR FACTORY, Jacksonville, Fla. Filed May 28, 1910.

SWEETHEART

Particular description of goods.—Swings.

Ser. No. 50,063. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ASPINWALL MANUFACTURING COMPANY, Jackson, Mich. Filed June 2, 1910. Used ten years.

ASPINWALL

Particular description of goods.—Potato-Planters, Potato-Diggers, Potato-Cutters, and Potato-Sprayers.

Ser. No. 50,064. (CLASS 39. CLOTHING.) GOORIN, SHAPIRA & COMPANY, Pittsburg, Pa. Filed June 2, 1910.

FANTANA

Particular description of goods.—Hats and Caps.

Ser. No. 50,075. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MAGNETIC CUTLERY COMPANY, Philadelphia, Pa. Filed June 2, 1910.

BLUE BIRD

Particular description of goods.—Razors.

Ser. No. 50,091. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CORN PRODUCTS REFINING COMPANY, Jersey City, N. J., and New York, N. Y. Filed June 3, 1910.

AMIDEX

Particular description of goods.—Starches and Dextrins for Sizing Purposes.

Ser. No. 50,125. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) WRIGHT & DITSON, Jersey City, N. J., and Boston, Mass. Filed June 4, 1910. Used ten years.

MORRILL'S

Particular description of goods.—Nose-Masks for Foot-Ball Players.

Ser. No. 50,170. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN WEST, Santa Anna, Tex. Filed June 7, 1910.



Particular description of goods.—Remedy for the Diseases of Cattle.

TRADE-MARKS

REGISTERED JUNE 28, 1910.

78,563. MOSELLE WINE. ACKER, MERRALL & CONDIT Co., New York, N. Y.
Filed March 11, 1910. Serial No. 48,350. PUBLISHED APRIL 26, 1910.

78,564. BEER. ACTIEN-GESELLSCHAFT HACKERBRÄU, Munich, Germany.
Filed April 12, 1909. Serial No. 41,728. PUBLISHED APRIL 26, 1910.

78,565. SHOVELS, SPADES, AND SCOOPS. THE BALDWIN FORGING & TOOL COMPANY, Columbus, Ohio.
Filed March 21, 1910. Serial No. 48,571. PUBLISHED APRIL 26, 1910.

78,566. BITUMINOUS WATERPROOF ROOFING-SHEETS. THE BARBER ASPHALT PAVING COMPANY, Philadelphia, Pa.
Filed March 18, 1910. Serial No. 48,521. PUBLISHED APRIL 26, 1910.

78,567. WIRE GARMENT-STAYS. THE BARCLEY CORSET COMPANY, Newark, N. J.
Filed February 8, 1910. Serial No. 47,644. PUBLISHED APRIL 26, 1910.

78,568. DESICCATED VEGETABLES AND MILK-POWDER. FREDERICK BEHREND, New York, N. Y.
Filed September 9, 1909. Serial No. 44,594. PUBLISHED APRIL 26, 1910.

78,569. FLY-NETS AND FLY-COVERS FOR HORSES. BEMIS BRO. BAG CO., St. Louis, Mo.; Boston, Mass., and Omaha, Nebr.
Filed January 3, 1910. Serial No. 46,892. PUBLISHED APRIL 26, 1910.

78,570. HORSE-BLANKETS AND HORSE-CLOTHING. BEMIS BRO. BAG CO., St. Louis, Mo.; Boston, Mass., and Omaha, Nebr.
Filed January 3, 1910. Serial No. 46,893. PUBLISHED APRIL 26, 1910.

78,571. ADHESIVE CEMENT AND GLUE. CHARLES H. BESLY & COMPANY, Chicago, Ill.
Filed March 8, 1910. Serial No. 48,272. PUBLISHED APRIL 26, 1910.

78,572. COTTON LAMP-WICKING. ROBERT BISHOP, Boston, Mass., trustee of the estate of Robert Bishop.
Filed June 4, 1908. Serial No. 35,135. PUBLISHED APRIL 26, 1910.

78,573. CANNED FOODS AND COFFEE. THE BITTMAN-TODD GROCER COMPANY, Leavenworth, Kans.
Filed March 16, 1910. Serial No. 48,450. PUBLISHED APRIL 26, 1910.

78,574. WHEAT-FLOUR. THE BLISH MILLING COMPANY, Seymour, Ind.
Filed December 15, 1909. Serial No. 46,540. PUBLISHED APRIL 26, 1910.

78,575. COTTON PIECE GOODS. BLISS, FABYAN & COMPANY, Boston, Mass.
Filed March 12, 1910. Serial No. 48,365. PUBLISHED APRIL 26, 1910.

78,576. REMEDY FOR CANCERS. JOHN L. BOHANNON, Oakland, Cal.
Filed December 28, 1909. Serial No. 46,751. PUBLISHED APRIL 26, 1910.

78,577. CIGARS AND LEAF-TOBACCO. FRANCISCO BOLANO, Chicago, Ill.
Filed January 25, 1910. Serial No. 47,367. PUBLISHED APRIL 26, 1910.

78,578. CONDENSED MILK. BORDEN'S CONDENSED MILK COMPANY, Jersey City, N. J., and New York, N. Y.
Filed February 24, 1910. Serial No. 47,997. PUBLISHED APRIL 26, 1910.

78,579. CONDENSED MILK. BOSTON DAIRY CO., Boston, Mass.
Filed February 4, 1910. Serial No. 47,583. PUBLISHED APRIL 26, 1910.

78,580. WRITING-PENS. MARIE BROWN, New York, N. Y.
Filed January 17, 1910. Serial No. 47,204. PUBLISHED APRIL 26, 1910.

78,581. WRITING-INKS. MARIE BROWN, New York, N. Y.
Filed March 17, 1910. Serial No. 48,500. PUBLISHED APRIL 26, 1910.

78,582. GRAPES. M. D. BUSKIRK & SON, Paw Paw, Mich.
Filed March 11, 1910. Serial No. 48,340. PUBLISHED APRIL 26, 1910.

78,583. METAL SASH AND WINDOW FRAMES. AMAND BUSSE, New York, N. Y.
Filed March 30, 1910. Serial No. 48,754. PUBLISHED APRIL 26, 1910.

78,584. ASPHALT. CALIFORNIA LIQUID ASPHALT COMPANY, Santa Barbara, Cal.
Filed February 28, 1910. Serial No. 48,085. PUBLISHED APRIL 26, 1910.

78,585. CIGARS AND CIGARETTES. FREDERIC A. CAUCHOIS, New York, N. Y.
Filed January 3, 1910. Serial No. 46,859. PUBLISHED APRIL 26, 1910.

78,586. MEN'S GARTERS. CINCINNATI GARTER MANUFACTURING COMPANY, Cincinnati, Ohio.
Filed January 10, 1910. Serial No. 47,018. PUBLISHED APRIL 26, 1910.

78,587. ADHESIVE PASTE. CLARK PAPER AND MANUFACTURING CO., Rochester, N. Y.
Filed March 14, 1910. Serial No. 48,387. PUBLISHED APRIL 26, 1910.

78,588. ARTISTIC CUT GLASSWARE. T. B. CLARK & Co., Seelyville, Pa.
Filed January 8, 1910. Serial No. 46,995. PUBLISHED APRIL 26, 1910.

78,589. REMEDY FOR CERTAIN DISEASES. PHILIP H. COVERDALE, New Orleans, La.
Filed March 4, 1910. Serial No. 48,194. PUBLISHED APRIL 26, 1910.

78,590. CANNED VEGETABLES. THE CROTHERSVILLE CANNING COMPANY, Crothersville, Ind.
Filed September 23, 1909. Serial No. 44,899. PUBLISHED MARCH 8, 1910.

78,591. MONTHLY MAGAZINES. THE CURRENT LITERATURE PUBLISHING COMPANY, New York, N. Y.
Filed March 23, 1910. Serial No. 48,614. PUBLISHED APRIL 26, 1910.

78,592. CABLE-RINGS AND CABLE-HANGERS. DIAMOND EXPANSION BOLT CO., New York, N. Y.
Filed March 4, 1910. Serial No. 48,186. PUBLISHED APRIL 26, 1910.

78,593. MEDICINE FOR CHILLS, MALARIA, COLDS, AND FEVERS. DIFFUSIBLE TONIC CO., Sturgis, Mich.
Filed May 24, 1909. Serial No. 42,647. PUBLISHED APRIL 26, 1910.

78,594. WORSTED AND WOOLEN PIECE GOODS. DOWNING, CLARK & Co., New York, N. Y.
Filed March 2, 1910. Serial No. 48,121. PUBLISHED APRIL 26, 1910.

78,595. TOOL-HANDLES. J. E. DUFFIELD & COMPANY, St. Louis, Mo.
Filed February 18, 1910. Serial No. 47,912. PUBLISHED APRIL 26, 1910.

78,596. REMEDY FOR POISON-IVY OR POISON-OAK. EBERSOLD, STEINMETZ & EBERSOLD, New York, N. Y.
Filed July 15, 1909. Serial No. 43,551. PUBLISHED APRIL 26, 1910.

78,597. LAWN-MOWERS. ELWOOD LAWN MOWER MANUFACTURING COMPANY, Elwood, Ind.
Filed February 12, 1910. Serial No. 47,772. PUBLISHED APRIL 26, 1910.

78,598. TABLETS AND CAPSULES OF MEDICAMENTS. FARBWERKE VORM. MEISTER LUCIUS & BRÜNING, Höchst-on-the-Main, Germany.
Filed January 25, 1910. Serial No. 47,355. PUBLISHED APRIL 26, 1910.

78,599. ASPHALT ROOFING. FORD MANUFACTURING COMPANY, Chicago, Ill.
Filed March 17, 1910. Serial No. 48,499. PUBLISHED APRIL 26, 1910.

78,600. ELECTRIC LAMPS. GENERAL ELECTRIC COMPANY, Schenectady, N. Y.
Filed March 14, 1910. Serial No. 48,389. PUBLISHED APRIL 26, 1910.

78,601. CLOAKS, DRESSES, AND COATS. HENRY GOLDWATER, New York, N. Y.
Filed January 29, 1910. Serial No. 47,461. PUBLISHED APRIL 26, 1910.

78,602. LEATHER SHOES. HAMBURGER BROS., St. Louis, Mo.
Filed May 20, 1909. Serial No. 42,532. PUBLISHED APRIL 26, 1910.

78,603. FRUIT LEMONADES. FRANZ HARTMANN SINALCO AKTIENGESELLSCHAFT, Detmold, Germany.
Filed January 5, 1910. Serial No. 46,918. PUBLISHED APRIL 26, 1910.

78,604. SOAP. WILLIAM F. HELMER, Burlington, Iowa.
Filed February 11, 1910. Serial No. 47,729. PUBLISHED APRIL 26, 1910.

78,605. STEEL BALLS. ERNST GUSTAV HOFFMANN, New Rochelle, N. Y.
Filed August 28, 1907. Serial No. 29,649. PUBLISHED MAY 4, 1909.

78,606. CANDY AND CHOCOLATE. HUYLER'S, New York, N. Y.
Filed February 26, 1910. Serial No. 48,052. PUBLISHED APRIL 26, 1910.

78,607. CORK. INTERNATIONAL CORK COMPANY, Brooklyn, N. Y.
Filed February 23, 1910. Serial No. 47,960. PUBLISHED APRIL 26, 1910.

78,608. HANDKERCHIEFS. MOSES ISAACS, New York, N. Y.
Filed March 14, 1910. Serial No. 48,397. PUBLISHED APRIL 26, 1910.

78,609. COFFEE-CLARIFIER. KOFFEE KLEAR CO., Terre Haute, Ind.
Filed February 18, 1910. Serial No. 47,898. PUBLISHED APRIL 26, 1910.

78,610. REMEDY FOR HOG-CHOLERA. WILLIAM KOPISCH, Deer Creek, Okla.
Filed March 5, 1909. Serial No. 40,949. PUBLISHED APRIL 26, 1910.

78,611. ARTICLES OF EARTHENWARE. KRISTAL-GLAS-EN AARDEWERK FABRIEKEN DE SPHINX VOORHEEN PETRUS REGOUT & Co., Maastricht, Netherlands.
Filed May 11, 1909. Serial No. 42,360. PUBLISHED APRIL 26, 1910.

78,612. LINIMENT. MR. AND MRS. JOSEPH KUEHNEL, Cleveland, Ohio.
Filed December 8, 1909. Serial No. 46,356. PUBLISHED APRIL 26, 1910.

78,613. TOOTH-POWDER, TOOTH-PASTE, AND TOOTH-WASH. A. LACHAISE, Angoulême, France.
Filed November 9, 1906. Serial No. 23,197. PUBLISHED APRIL 26, 1910.

78,614. SOAP. LAUTZ BROS. & Co., Buffalo, N. Y.
Filed November 29, 1909. Serial No. 46,171. PUBLISHED APRIL 19, 1910.

78,615. SAUCES AND RELISHES. MALCOLM GEORGE LENNOX, Philadelphia, Pa.
Filed January 12, 1909. Serial No. 39,846. PUBLISHED APRIL 26, 1910.

78,616. CARBONATED TONIC BEVERAGE AND SYRUP FOR MAKING THE SAME. LEONARD BROTHERS, Rockwall, Tex.
Filed January 10, 1910. Serial No. 47,025. PUBLISHED APRIL 26, 1910.

78,617. MEDICINAL PREPARATION. KARL AUGUST LINGNER, Dresden, Germany.
Filed August 24, 1909. Serial No. 44,326. PUBLISHED APRIL 26, 1910.

78,618. WHEAT-FLOUR. A. B. MCCRILLIS & SON INC., Providence, R. I.
Filed October 8, 1908. Serial No. 37,883. PUBLISHED APRIL 26, 1910.

78,619. LAWN-GRASS SEED. THE J. M. MCCULLOUGH'S SONS CO., Cincinnati, Ohio.
Filed March 14, 1910. Serial No. 48,403. PUBLISHED APRIL 26, 1910.

78,620. LAWN-GRASS SEED. THE J. M. MCCULLOUGH'S SONS CO., Cincinnati, Ohio.
Filed March 14, 1910. Serial No. 48,404. PUBLISHED APRIL 26, 1910.

78,621. WOOLEN CLOTH, LININGS, AND BLANKETS. THE MIANUS MFG. CO., Coscob, Conn.
Filed February 21, 1910. Serial No. 47,947. PUBLISHED APRIL 26, 1910.

78,622. CHEMICAL HAND FIRE-EXTINGUISHERS. MISSOURI LAMP & MFG. CO., St. Louis, Mo.
Filed March 7, 1910. Serial No. 48,235. PUBLISHED APRIL 26, 1910.

78,623. CHEMICAL HAND FIRE-EXTINGUISHERS. MISSOURI LAMP & MFG. CO., St. Louis, Mo.
Filed March 7, 1910. Serial No. 48,236. PUBLISHED APRIL 26, 1910.

78,624. CHEMICAL HAND FIRE-EXTINGUISHERS. MISSOURI LAMP & MFG. CO., St. Louis, Mo.
Filed March 7, 1910. Serial No. 48,237. PUBLISHED APRIL 26, 1910.

78,625. CORSETS AND LADIES' OUTER CLOTHING. MOOD, New York, N. Y.
Filed December 14, 1909. Serial No. 46,485. PUBLISHED APRIL 26, 1910.

78,626. TOOTH-POWDERS. WILLIAM A. MOORE, St. Paul, Minn.
Filed March 3, 1910. Serial No. 48,141. PUBLISHED APRIL 26, 1910.

78,627. BLASTING-POWDER. NATIONAL POWDER CO., Spokane, Wash.
Filed March 10, 1910. Serial No. 48,325. PUBLISHED APRIL 26, 1910.

78,628. METAL PIPES AND TUBES. NATIONAL TUBE COMPANY, Pittsburg, Pa.
Filed December 2, 1909. Serial No. 46,244. PUBLISHED APRIL 26, 1910.

78,629. CERTAIN TOOLS AND TOOL-HANDLES. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed January 17, 1910. Serial No. 47,153. PUBLISHED APRIL 26, 1910.

78,630. RED AND WHITE WINES. PESSAGNO & MONTRESOR, New York, N. Y.
Filed July 12, 1909. Serial No. 43,490. PUBLISHED MARCH 29, 1910.

78,631. SOAP. PHILO HAY SPECIALTIES CO., Newark, N. J.
Filed June 14, 1909. Serial No. 43,023. PUBLISHED APRIL 26, 1910.

78,632. PAPER AND ENVELOPS. POWERS PAPER COMPANY, ASSOCIATES, Holyoke, Mass., and New York, N. Y.
Filed November 19, 1909. Serial No. 46,007. PUBLISHED APRIL 26, 1910.

78,633. CERTAIN ELECTRICAL SUPPLIES. GEORGE L. PRENTISS, New York, N. Y., assignor to Hemming Manufacturing Company, a Corporation of New Jersey.
Filed December 29, 1909. Serial No. 46,790. PUBLISHED MARCH 8, 1910.

78,634. VISE. PRENTISS VISE COMPANY, New York, N. Y.
Filed March 16, 1910. Serial No. 48,452. PUBLISHED APRIL 26, 1910.

78,635. VISE. PRENTISS VISE COMPANY, New York, N. Y.
Filed March 16, 1910. Serial No. 48,453. PUBLISHED APRIL 26, 1910.

78,636. VISE. PRENTISS VISE COMPANY, New York, N. Y.
Filed March 16, 1910. Serial No. 48,454. PUBLISHED APRIL 26, 1910.

78,637. VISE. PRENTISS VISE COMPANY, New York, N. Y.
Filed March 16, 1910. Serial No. 48,455. PUBLISHED APRIL 26, 1910.

78,638. VISE. PRENTISS VISE COMPANY, New York, N. Y.
Filed March 16, 1910. Serial No. 48,458. PUBLISHED APRIL 26, 1910.

78,639. TEA. RIDGWAYS LIMITED, London, England.
Filed April 30, 1908. Serial No. 34,497. PUBLISHED DECEMBER 28, 1909.

78,640. MATTRESSES, PILLOWS, AND CUSHIONS. ROBINSON-RODERS CO., Newark, N. J.
Filed January 17, 1910. Serial No. 47,191. PUBLISHED APRIL 26, 1910.

78,641. WASHING-POWDER HAVING DETERGENT PROPERTIES. THE ROESSLER & HASSLACHER CHEMICAL CO., New York, N. Y.
Filed March 30, 1910. Serial No. 48,736. PUBLISHED APRIL 26, 1910.

78,642. SILVER-PLATED WARE. WM. A. ROGERS, LIMITED, New York and Niagara Falls, N. Y.
Filed June 19, 1909. Serial No. 43,114. PUBLISHED APRIL 26, 1910.

78,643. CERTAIN TOOLS AND MACHINES. RUSSELL & ERWIN MANUFACTURING COMPANY, New Britain, Conn.
Filed February 5, 1910. Serial No. 47,611. PUBLISHED APRIL 26, 1910.

78,644. LOCKS, CATCHES, AND FASTENERS. RUSSELL & ERWIN MANUFACTURING COMPANY, New Britain, Conn.
Filed February 5, 1910. Serial No. 47,612. PUBLISHED APRIL 26, 1910.

78,645. HARNESS HARDWARE. RUSSELL & ERWIN MANUFACTURING COMPANY, New Britain, Conn.
Filed February 18, 1910. Serial No. 47,903. PUBLISHED APRIL 26, 1910.

78,646. LEATHER BELTING. CHARLES A. SCHIEREN COMPANY, New York, N. Y.
Filed January 19, 1909. Serial No. 40,001. PUBLISHED APRIL 6, 1909.

78,647. SALVES AND HEALING-OILS. F. P. SCHMIDT & Co., Cramer, Ill.
Filed January 24, 1910. Serial No. 47,336. PUBLISHED APRIL 26, 1910.

78,648. COFFEES, TEAS, AND SPICES. WILLIAM S. SCULL COMPANY, Camden, N. J.
Filed February 23, 1910. Serial No. 47,967. PUBLISHED APRIL 26, 1910.

78,649. TOILET PREPARATIONS. JEAN SENEGAS, New York, N. Y.
Filed March 7, 1910. Serial No. 48,253. PUBLISHED APRIL 26, 1910.

78,650. LAWN-MOWERS. WM. SIMPSON & SONS, Philadelphia, Pa.
Filed March 1, 1910. Serial No. 48,103. PUBLISHED APRIL 26, 1910.

78,651. METALLIC GRINDING-BODIES. F. L. SMIDTH & Co., Jersey City, N. J., and New York, N. Y.
Filed January 10, 1910. Serial No. 47,044. PUBLISHED APRIL 26, 1910.

78,652. ANTISEPTIC ROOT-CANAL FILLING. WILLIAM D. SNYDER, Sidney, Ohio.
Filed January 3, 1910. Serial No. 46,856. PUBLISHED APRIL 26, 1910.

78,653. BOOK-PAPER. SOUTHWESTERN PAPER COMPANY, Dallas, Tex.
Filed November 29, 1909. Serial No. 46,176. PUBLISHED APRIL 26, 1910.

78,654. WROUGHT-STEEL BUTT-HINGES. THE STANLEY WORKS, New Britain, Conn.
Filed March 4, 1910. Serial No. 48,176. PUBLISHED APRIL 26, 1910.

78,655. WROUGHT-STEEL BUTT-HINGES. THE STANLEY WORKS, New Britain, Conn.
Filed March 4, 1910. Serial No. 48,177. PUBLISHED APRIL 26, 1910.

78,656. WROUGHT-STEEL BUTT-HINGES. THE STANLEY WORKS, New Britain, Conn.
Filed March 4, 1910. Serial No. 48,178. PUBLISHED APRIL 26, 1910.

78,657. WROUGHT-STEEL BUTT-HINGES. THE STANLEY WORKS, New Britain, Conn.
Filed March 4, 1910. Serial No. 48,180. PUBLISHED APRIL 26, 1910.

78,658. WROUGHT-STEEL BUTT-HINGES. THE STANLEY WORKS, New Britain, Conn.
Filed March 4, 1910. Serial No. 48,182. PUBLISHED APRIL 26, 1910.

78,659. TOY FIREWORKS. STARLITE MANUFACTURING COMPANY, New York, N. Y.
Filed March 16, 1910. Serial No. 48,467. PUBLISHED APRIL 26, 1910.

78,660. WHEAT-FLOUR. DAVID STOTT, Detroit, Mich.
Filed September 13, 1909. Serial No. 44,671. PUBLISHED APRIL 26, 1910.

78,661. CANDLES. SYRACUSE CANDLE COMPANY, Syracuse, N. Y.
Filed March 29, 1910. Serial No. 48,723. PUBLISHED APRIL 26, 1910.

78,662. CERTAIN PRECIOUS-METAL WARE. TAYLOR & Co. INC., Newark, N. J.
Filed February 10, 1910. Serial No. 47,712. PUBLISHED APRIL 26, 1910.

78,663. CORNETS, TRUMPETS, FRENCH HORNS, TROMBONES, AND BUGLES. THE RUDOLPH WURLITZER Co., Cincinnati, Ohio.
Filed September 3, 1908. Serial No. 37,140. PUBLISHED APRIL 26, 1910.

78,664. CERTAIN FOODS. CHRISTIAN VON ALLMEN, Louisville, Ky.
Filed November 29, 1909. Serial No. 46,174. PUBLISHED APRIL 26, 1910.

78,665. FLOURS MADE FROM WHEAT. ROY A. DAVIS, Gibbon, Nebr.
Filed February 20, 1909. Serial No. 40,704. PUBLISHED JUNE 15, 1909.

78,666. CERTAIN CLOTHING. THE GEO. DE WALD COMPANY, Fort Wayne, Ind.
Filed July 17, 1909. Serial No. 43,611. PUBLISHED NOVEMBER 30, 1909.

78,667. COFFEE, SPICES, AND FLAVORING EXTRACTS. THE R. T. FRENCH COMPANY, Rochester, N. Y.
Filed December 29, 1909. Serial No. 46,793. PUBLISHED APRIL 26, 1910.

78,668. ALCOHOLIC EXTRACT OF ALPINE HERBS. FRANK KUTSCHERA, Chicago, Ill.
Filed February 16, 1910. Serial No. 47,848. PUBLISHED APRIL 26, 1910.

LABELS

REGISTERED JUNE 28, 1910.

15,223.—*Title:* "KENNESAW BISCUIT." (For Biscuit.) FRANK E. BLOCK CO., Atlanta, Ga. Filed June 15, 1910.

15,224.—*Title:* "BLOCK MILK BISCUIT." (For Biscuit.) FRANK E. BLOCK CO., Atlanta, Ga. Filed June 15, 1910.

15,225.—*Title:* "MINT CHIPS." (For Chewing-Gum.) COLGAN GUM CO., Louisville, Ky. Filed June 15, 1910.

15,226.—*Title:* "REUTER'S SYRUP." (For a Medicinal Preparation.) BARCLAY & BARCLAY, New York, N. Y. Filed February 14, 1910.

15,227.—*Title:* "TO WA-KON." (For a Liquid Floor-Finish.) WESTCOTT, SLADE & BALCOM COMPANY, Providence, R. I. Filed April 25, 1910.

15,228.—*Title:* "T. B. DRESS LINEN." (For Dress-Linens.) TURTLE BROS., New York, N. Y. Filed March 11, 1910.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

THE GEO. B. SPRAGUE CIGAR CO. AND THE WING CIGAR CO. *v.* T. M. KILDOW CIGAR COMPANY.

Decided January 11, 1910.

1. JUDICIAL NOTICE—CENSUS REPORTS.

The United States Census Reports constitute matter of which judicial notice may properly be taken, and such judicial notice may be taken on appeal when the lower tribunals fail to do so.

2. TRADE-MARKS—"HALF SPANISH" AS APPLIED TO CIGARS DESCRIPTIVE OR DECEPTIVE.

"Spanish" or "Zimmer Spanish" being the name of a well-known variety of tobacco, *Held* that the term "Half Spanish" as applied to cigars would be either descriptive or deceptive and is therefore not registrable as a trade-mark.

3. SAME—"SPANISH"—GEOGRAPHICAL.

The word "Spanish" is geographical, and therefore the term "Half Spanish" is not registrable as a trade-mark.

APPEAL from Examiner of Interferences.

TRADE-MARK FOR STOGIES AND CIGARS.

Messrs. Finckel & Finckel for The Geo. B. Sprague Cigar Co. and The Wing Cigar Co.

Mr. H. E. Dunlap for the T. M. Kildow Cigar Company.

BILLINGS, *First Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Interferences dismissing the opposition and holding that the applicant is entitled to register the mark for which it has made application.

Opposition was filed by The Geo. B. Sprague Cigar Co., which is the owner of and does part of its business under the name of The Wing Cigar Co., against the registration by T. M. Kildow Cigar Company of the words "Half Spanish" as a trade-mark for cigars.

The declaration forming part of the application alleged ten years' exclusive use of the mark prior to the passage of the act of February 20, 1905, and the application was promptly passed for publication by the Examiner of Trade-Marks.

Testimony was filed in the opposition proceeding by both parties.

The Examiner of Interferences held that the testimony established that the applicant and its predecessor had not had sole and exclusive use of the mark during the ten years next preceding the passage of the Trade-Mark Act of 1905 and that the mark was not therefore registrable under the ten-year proviso of that act. He further held that it does not appear from the record that the mark was descriptive at the time of its adoption by applicant's predecessor or that the mark was geographical in character, but that on the contrary the testimony established that the mark as originally adopted and used by applicant's predecessor constituted at that time a valid technical trade-mark, that the use of the mark of applicant and its predecessor has been continuous, and that for these reasons applicant is entitled to register the mark.

The testimony clearly shows that the mark was used by the opposer and also by Palmer Bros., of Lima, Ohio, during a portion of the ten-year period prior to the passage of the Trade-Mark Act. It follows that there is no error in that portion of the decision of the Examiner of Interferences in which he held that applicant is not entitled to register the mark under the ten-year proviso.

It remains to consider the holding of the Examiner of Interferences that applicant is entitled to register the mark as a technical trade-mark.

Applicant contends that the mark is descriptive and geographical and was such at the time of its appropriation by applicant's predecessor and that consequently it does not constitute a valid technical trade-mark.

It clearly appears from the witnesses of both parties that a variety of tobacco is grown in Ohio commonly known as "Spanish" or "Zimmer Spanish" tobacco. Even Kildow admits (Q. 23) that there is a brand of tobacco sometimes called "Spanish" and sometimes called "Zimmer Spanish." In answer to the question (Q. 25) whether any of this tobacco was used by him in the cigars manufactured under the name "Half Spanish" he said:

> Yes, I did finally use "Zimmer Spanish," but did not originally.

Hunt, a witness for applicant, testifies that he knew of the "Zimmer Spanish" tobacco at least twenty-five years ago. Foerster, a witness for the opposer, testified that cigars were put up and sold in packages branded "Half Spanish" thirty-eight or forty years ago by Noyes Worstal and that witness finished part of his trade with the said Worstal and made cigars that were so packed and labeled.

He further testified, however, (X-Qs. 28 and 29,) that Worstal is deceased and, so far as he knows, has no successor in the business. It does not appear from the testimony how long the use of the mark by Worstal continued or whether he was using it at the time Kildow adopted the mark.

In the statement of the application it is said that the mark has been continuously used in the business of applicant's predecessor, T. M. Kildow, since January 1, 1880. In his testimony given in January, 1909, T. M. Kildow states (Q. 14) that he began to manufacture cigars under the name "Half Spanish" some twenty-seven or twenty-eight years ago. Van Fossen testifies that he began to work for Kildow in 1880, that he moved to Iowa in 1883, and that Kildow adopted the name "Half Spanish" between said dates. It thus appears that Kildow does not allege a date of adoption prior to January 1, 1880, and that the earliest date applicant can be said to have established is some two or three years later.

Concerning the testimony the Examiner of Interferences held:

The testimony on behalf of the applicant is sufficient to establish that the words "Half Spanish" as originally adopted and used by its predecessor constituted at that time a valid, technical trade-mark, neither descriptive nor deceptive of the goods to which it was applied. This conclusion could probably not be reached did the testimony of either party show that, at the time of such adoption of the mark by the applicant's predecessor, a tobacco known as "Zimmer Spanish" or "Spanish" was known to the trade. However, as the testimony stands, it appears that the tobacco now designated by these names was not known until two or three years after the stated, technical use of the mark began.

Within a month after the decision of the Examiner of Interferences opposer filed motions for a rehearing and for a reopening of the case and called attention to the fact that the United States Census Reports of 1880 contained numerous references to the Spanish variety of tobacco. These motions were denied by the Examiner of Interferences on the ground that they were not supported by sufficient showing in excuse of the failure to call attention to said census reports prior to the final hearing.

Opposer contends that this is a matter of which judicial notice should be taken.

The matter to which attention is called is the report of special agent J. B. Killedrew, published in volume 3, pages 583 to 880 (bottom paging) of the 1880 United States Census Reports. The letter of transmittal to the Superintendent of the Census accompanying the report is dated October 15, 1881, but the report states that it is based on the tobacco crop of 1879. Among the references to Spanish tobacco contained in said report are the following:

In the West it is called Spanish or sweet-scented, and in Connecticut, New York and Pennsylvania it is called Havana seed. (P. 611.)

Many years ago a variety called the Spanish was extensively grown. It is reported to have had great slickness and elasticity as a wrapper. (P. 624.)

With reference to tobacco grown in Illinois it is stated:

The Connecticut and the Pennsylvania seed-leaf, and a variety known as sweet-scented, or Spanish, are planted throughout the district. (P. 628.)

It is understood that about one-third of the tobacco of the district is sweet-scented Spanish or Cuba seed, as it is variously called, and the remainder seed-leaf. (P. 629.)

To the inquiry made as to the relative proportions of the two varieties planted, no definite answer was returned, but about one-third of the acreage is of the Spanish varieties. (P. 630.)

Concerning tobacco raised in Ohio it states:

It is again suckered just before cutting, which for the seed-leaf varieties is from two to three weeks after it is topped; but the Little Dutch and the Spanish varieties improve in flavor by standing a week longer. (P. 731.)

The Spanish varieties yield about 1,000 to 1,500 pounds. (P. 733.)

In the report Spanish tobacco is classified on page 640 under Class III. Additional references to the "Spanish" variety of tobacco are found on pages 618 and 628. This report plainly shows that at the time of Kildow's adoption of his mark "Spanish" was a well-known variety of tobacco.

That the United States Census Reports constitute matter of which judicial notice may properly be taken is well settled. (*Encyclopedia of Evidence*, vol. 7, p. 986, and cases there cited; *Cyc.*, vol. 16, p. 870, and cases cited; see also *Cain* v. *Park*, 86 O. G., 797; 14 App. D. C., 42 *Ball* v. *Flora*, 121 O. G., 2668; 26 App. D. C., 394; *Charles Denechy & Company* v. *Robertson, Sanderson & Co.*, 140 O. G., 1005; 32 App. D. C., 355; *Baker* v. *Duncombe Mfg. Co.*, 146 Fed. Rep., 744–746.) Such judicial notice may be taken on appeal where the lower tribunal fails to do so. (*Encyclopedia of Evidence*, vol. 7, p. 882, and cases cited.)

It is further noted that the Census Office in 1880 was under the Interior Department, so that this is a case not only of the Government taking cognizance of its reports, but of one department of the Government taking notice of its own records.

From the foregoing it clearly appears that cigars formed of tobacco one-half of which is of the Spanish variety would properly be described as "Half-Spanish" cigars. Although the evidence tends to show that the Kildow cigars marked "Half Spanish" were sold at a price too low to warrant making them of tobacco containing a considerable portion of the relatively high-priced Spanish tobacco, it shows that at various times Kildow put more or less Spanish tobacco in his "Half-Spanish" cigars or stogies. Whether as a matter of fact the cigars marked "Half Spanish" contain little or no Spanish tobacco is believed to be immaterial of the question of applicant's right to a monopoly of the term, since if the mark as used is not descriptive it is then deceptive.

An additional reason why applicant is not entitled to register the mark is found in the fact that the word "Spanish" is geographical, and therefore comes within the prohibition of section 5 of the Trade-Mark Act. While the evidence shows, as pointed out by the Examiner of Interferences, that applicant's cigars are made in Ohio and not in Spain, it was well known at the time Kildow adopted his mark that Spain and the Spanish colonies were noted manufacturers of cigars and that these were largely imported into the United States. Clearly applicant is not entitled to the exclusive use in this country of the term, thereby preventing dealers from properly describing the origin of the cigars thus imported.

This case is similar in many respects to that of *Canal Company* v. *Clark*, (13 Wal., 311–324,) where the United States Supreme Court said concerning the words "Lackawanna Coal" as a trade-mark:

He has no right to appropriate a sign or a symbol, which, from the nature of the fact it is used to signify, others may employ with equal truth, and therefore have an equal right to employ for the same purpose.

For the reasons stated the decision of the Examiner of Interferences is reversed.

LANGSLOW v. MALOCSAY.

Decided May 28, 1910.

1. INTERFERENCE—MOTION TO DISSOLVE—NO APPEAL FROM AFFIRMATIVE DECISION OF THE EXAMINERS-IN-CHIEF.

Appeal does not lie to the Commissioner from a decision of the Examiners-in-Chief holding, on a motion to dissolve, that certain counts of the issue are patentable.

2. SAME—MOTION TO DISSOLVE—IRREGULARLY PRESENTED.

Where in connection with an appeal, on a decision upon a motion to dissolve, another motion to dissolve is presented which is not accompanied by a motion to restore the jurisdiction of the Examiner of Interferences and gives no reason why the grounds set forth therein were not urged at the time the original motion was presented, *Held* that such motion is without standing.

APPEAL from Examiners-in-Chief.

CAR-DOOR.

Mr. William H. Cooley for Langslow.

Mr. Joseph L. Levy and *Mr. Alexander M. Bunn* for Malocsay.

TENNANT, *Assistant Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief upon a motion for dissolution.

The record shows that after the approval of the preliminary statement a motion was filed by Langslow for dissolution of the interference upon the ground that all the claims corresponding to the counts of the issue were not patentable, in view of certain references. The Examiner, in a decision rendered December 10, 1909, granted the motion for dissolution. Appeal was taken to the Examiners-in-Chief, who affirmed the decision of the Examiner as to count 1, but reversed the same as to counts 2, 3, 4, and 5.

The preamble to the appeal to the Commissioner is as follows:

I hereby appeal to you in person from the decision of the Examiners-in-Chief made April 8, 1910, affirming the action of the Primary Examiner in dissolving the above-entitled interference as to count 1 but reversing the decision of the said Examiner as to the remaining counts of the issue.

The specific grounds of error alleged, however, relate to counts 2, 3, 4, and 5 of the issue, which the Examiners-in-Chief held to be patentable.

Rule 124 provides that—

no appeal will be permitted from a decision rendered upon motion for dissolution affirming the patentability of a claim or the applicant's right to make the same or the identity of meaning of counts in the cases of different parties.

Counsel for Langslow urged at the hearing that this provision of Rule 124 had application to appeals from the decision of the Primary Examiner only and endeavored to distinguish the present case, in which appeal from a decision of the Examiner holding the claims unpatentable had been taken to the Examiners-in-Chief under the provisions of the rule, arguing that the terms of the rule did not prohibit an appeal from a favorable decision of the Examiners-in-Chief reversing the decision of the Examiner. This contention is clearly not well founded. In the case of *Sharer* v. *McHenry* (91 O. G., 1034) substantially the same question was presented, and it was held that the appeal had no standing. For reasons set forth in that decision the present appeal must be dismissed.

It is urged also that the supervisory authority of the Commissioner should be exercised to dissolve the interference. It is well settled that the supervisory authority of the Commissioner will be exercised only in cases where manifest error has been committed by a lower tribunal. In the present case no such error appears. The question of patentability is fully discussed in the decision of the Examiners-in-Chief, and I find no reason whatever to differ with the conclusions expressed therein.

There was also presented, in connection with the appeal, a motion for dissolution based upon another ground. This motion is irregularly presented in that it is not accompanied by a motion to restore the jurisdiction to the Examiner of Interferences or by a motion to transmit the same. Furthermore, no excuse is given why the grounds set forth in the present motion were not urged at the time the original motion for dissolution was presented.

Under these circumstances the motion is absolutely without standing and is dismissed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

SMITH v. PHELPS.

Decided May 26, 1910.

INTERFERENCE—PRIORITY.

Evidence considered and *Held* insufficient to show that the invention in issue originated with appellant, the junior party.

Mr. H. P. Doolittle and *Mr. L. V. Moulton* for the appellant.

Mr. C. R. Stickney and *Mr. T. K. Bryant* for the appellee.

VAN ORSDEL, *J.:*

This is an appeal from the decision of the Commissioner of Patents in an interference proceeding. All of the tribunals of the Patent Office concurred in awarding judgment of priority to appellee.

The invention in issue relates to spring constructions for use in railway-chairs or automobile-seats, wherein auxiliary springs are employed to reinforce the main springs after the latter have reached normal compression under normal load, and to aid them in resisting the effect of sudden shock or of an abnormal application of weight. It is embodied in the following count:

A spring-cushion comprising border-frames, marginal and interior upright springs supported in the frames and

spring-arms having coils intermediate their ends supported by the border-frames and having their upper portions arranged intermediate the upper and lower frames of the cushion and which are adapted to be compressed when the cushion is subjected to unusual weight.

Appellant filed his application for patent on November 16, 1907, while appellee's application was filed on August 10, 1907.

It appears from the evidence that, prior to the conception of the invention in issue, appellant and one Macey A. Phelps, appellee's husband, were both employed by the Jackson Cushion Spring Company, the former as secretary and manager and the latter as superintendent of the mechanical department. The company was then manufacturing cushions of the same general character under a patent to one Stott, in which the auxiliary springs were of cone shape and were placed within the main springs. It further appears that in February, 1907, Phelps, with the assistance of some workmen, produced in the factory a spring-seat embodying the invention in issue. It is claimed by appellant that this cushion was made under his direction and in accordance with his instructions. This is denied by Phelps, who places the responsibility for the invention in his wife. But even according to appellant's testimony its full weight, we are unable to see wherein it substantiates his claim. Appellant testified on this point as follows:

So I gave Mr. Phelps instructions to proceed to make up a device where the main coil-springs would be separate from the auxiliary spring and where the auxiliary springs could work without conflicting with the main springs, and this construction is what he produced.

On cross-examination he further testified:

X-Q. You say you instructed Mr. Phelps to build you a spring-cushion, in which the auxiliary springs did not conflict with the main spring. Did you give him any definite form by drawing or sketch of what you wanted?

A. I did not.

X-Q. Did you explain to him in any way how you thought it ought to be constructed?

A. Only so far as to state to him that the auxiliary spring would have to be spaced outside of the main spring and be different from the auxiliary spring shown in the Stott's patent.

It is manifest that this evidence fails to prove that appellant had conceived the invention prior to the date of the filing of his application. While he communicated to Phelps the result desired, he was silent as to the means by which it could be attained. Even with the aid of appellant's alleged disclosure, more than mere mechanical skill was required to produce the subject-matter of this interference.

To claim the benefit of the employee's skill and achievement, it is not sufficient that the employer had in mind a desired result, and employed one to devise means for its accomplishment. He must show that he had an idea of the means to accomplish the particular result, which he communicated to the employee in such detail as to enable the latter to embody the same in some practical form. (*Robinson* v. *McCormick*, 29 App. D. C., 98.)

Counsel for appellant vigorously attack the testimony offered on behalf of appellee. It will, however, be unnecessary to further consider this case. Appellant is the junior party, and the burden is upon him to establish his right to a patent by a preponderance of the evidence. This he has failed to do.

The decision of the Commissioner of Patents is affirmed, and the clerk is directed to certify these proceedings as by law required.

Affirmed.

U. S. Circuit Court of Appeals—Third Circuit.

AMERICAN CAR & FOUNDRY CO. *v.* MORTON TRUST CO. *et al.*

Decided January 26, 1910.

PATENTABILITY—HOPPER-BOTTOM CARS—CHANGE IN CONSTRUCTION DUE TO USE OF STEEL.

The adaptation of the old double hopper-bottom to the changed construction due to the use of pressed steel as the car material, without any change in the function of the parts or the production of any new result, is not patentable.

Mr. Paul Bakewell and *Mr. Charles J. Hardy* for the appellant.

Mr. Cyrus N. Anderson and *Mr. Charles Neave* for the appellees.

Before BUFFINGTON, *Cir. J.*, and J. B. MCPHERSON, *Dis. J.*

BUFFINGTON, *Cir. J.*:

In the court below the Pressed Steel Car Company, assignee of Patent No. 647,907, granted April 17, 1900, to C. T. Schoen for a hopper-bottom car, filed a bill which charged infringement of the first claim thereof by the American Car & Foundry Company. That claim was:

In a double hopper-bottom car, an underframe constructed without side sills and comprising bolsters, end sills, draft-rigging beams interposed between the bolsters and sills, and center sills arranged between the longitudinal center of the car and its sides and out of alinement with the draft-rigging beams and secured to the bolsters, thereby leaving a clear space in the middle of the car for the projection of the hopper-chutes through the underframe, substantially as described.

The court below found the claim valid and infringed, and entered a decree so adjudging. From such decree the American Car & Foundry Company appealed, and in its appeal challenges the validity of the patent, to which question we address ourselves.

The patent concerns metallic or pressed-steel cars provided with double hopper-bottoms. With the transition from wooden to pressed-steel cars, a readjustment and rearrangement of many parts of the car necessarily took place. These changes were caused, not only by reason of the smaller comparative thickness of the steel and wood required, but from the fact that, in order to press shapes to advantage, the parts of the car should be so rearranged that such parts could be pressed in large and simple sections. In addition, changes were permissible because greater strength could be obtained in some parts through members less both in size and number. As was to be expected, an advance along car-construction lines followed, and for coal, ore, and bulky freight the steel cars have largely supplanted the old wooden cars and are adapted to carry much heavier tonnage. Now to us the patent in suit seems simply the outgrowth of that advance, and in it we find nothing of an inventive character. In the old car art, Schoen found double hopper-bottoms, bolsters, underframes, sills, both side and end, and draft-rigging. Each of them performed a well recognized function in car-support, load-balancing, and draft purposes. He took these as he found them, and reassembled them in his patented device in a possibly desirable way when a pressed-steel car was to be built. We say possibly desirable, for his type of car covered by this patent has not gone into use or even been built by the complainant, though an extensive car-builder. But, assuming the device is useful and novel, no new or different result, either individually or collectively, resulted from the relation in which the patentee placed these well-known car parts. The underframe did what it had always done to support the car. True, the lateral sills thereof were designed by Schoen to be farther in from the side of the car than in the old wooden structure; but with its lateral sills so placed the function of the under-

frame was in no respect changed from its former action, and it neither modified or was modified by the action of any other part. A steel brace, extending to the car side from the recessed underframe, made the latter afford the same support as the old frame; and, indeed, it would seem clear that no stress was laid on this recessed sill as contributing to the inventive character of the device, for the file wrapper shows it was only introduced in the claim under stress as a limitation to avoid anticipation. In the device as a whole there was no interchange of mechanical function between the several parts, and no new result came from their contiguity. Each maintained its independent function, which, whether in isolation or companionship, remained the same. There being an absence of new functional coöperation, and the position and relation of the several parts being wholly structural, we cannot regard the construction as inventive in character.

We are therefore of opinion the patent was invalid, and the decree must be reversed, with directions to dismiss the bill.

ADJUDICATED PATENTS.

The Bundy patent, No. 671,129, for a workman's time-recorder, *Held* void for lack of invention. *International Time Recording Co.* v. *W. H. Bundy Recording Co.*, (C. C. A.,) 177 Fed. Rep., 933.

The Jacobs patent, No. 709,014, for a drill-chuck, *Held* void for lack of invention. *Jacobs Mfg. Co.* v. *T. R. Almond Mfg. Co.*, (C. C. A.,) 177 Fed. Rep., 935.

The Flynn patent, No. 736,834, for a bending-machine, *Held* valid. *Morton Trust Co.* v. *Standard Steel Car Co.*, (C. C. A.,) 177 Fed. Rep., 931.

Changes in Classification.

(ORDER No. 1,866.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 22, 1910.

The following corrections in the printed classification of patents, as revised July 1, 1908, are hereby ordered:

In Division VIII, class 65, Kitchen and Table Articles, subclass 61, Dish-covers, Stands, should read—

61. Dish stands.

In the definitions of class 235, Registers, Bulletin 3, page 2980, subclass 92, Operating devices, Electric, should read—

92. Electrically operated.

In Division XXXV, class 132, Toilet, cancel subclass 21, Hair curlers, Self-heating. This subclass was abolished April 2, 1906, Order No. 1,663, Bulletin 17, page 35.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In Division XV, class 40, Glass, modify the class definition by canceling the words "exhausting the globe," paragraph 3, line 8.

In Division XVIII, class 121, Steam Engines, establish subclass—

120. Combined engine and gearing control.

In Division XIX, class 236, Dampers, Automatic, establish subclasses—

9. Traps, thermostatic—
10. Fluid operated,
11. Pressure operated valve.

C. C. BILLINGS,
Acting Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 23, 1910.

Adelia B. De Grath, her assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Lanman & Kemp, of 135–137 Water street, New York, N. Y., for registration of a trade-mark and trade-mark registrations to the following-named parties: (1) Foster-Milburn Co., 246 Michigan street, Buffalo, N. Y.; (2) Herman C. Lemke, Chicago, Ill.; (3) A. Lepper & Co., 1000 J street, Sacramento, Cal.; (4) Adelia B. De Grath, 302 West Thirty-fourth street, New York, N. Y., and the notice of such declaration sent by registered mail to the said Adelia B. De Grath at the address given above has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said Adelia B. De Grath, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 23, 1910.

Adelia B. De Grath, her assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Lanman & Kemp, of 135–137 Water street, New York, N. Y., for registration of a trade-mark and trade-mark registrations to the following-named parties: (1) Minard's Liniment Manufacturing Company, Framingham, Mass.; (2) George H. Rundle, Piqua, Ohio; (3) Adelia B. De Grath, 302 West Thirty-fourth street, New York, N. Y.; (4) William Johnson Nelson, Bridgewater, county of Lunenberg, Province of Nova Scotia, Canada, and the notice of such declaration sent by registered mail to the said Adelia B. De Grath at the address given above has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said Adelia B. De Grath, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 23, 1910.

A. Lepper & Co., their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Lanman & Kemp, of 135–137 Water street, New York, N. Y., for registration of a trade-mark and trade-mark registrations to the following-named parties: (1) Foster-Milburn Co., 246 Michigan street, Buffalo, N. Y.; (2) Herman C. Lemke, Chicago, Ill.; (3) A. Lepper & Co., 1000 J street, Sacramento, Cal.; (4) Adelia B. De Grath, 302 West Thirty-fourth street, New York, N. Y., and the notice of such declaration sent by registered mail to the said A. Lepper & Company at the address given above has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said A. Lepper & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

C. C. BILLINGS, *Acting Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 14, 1910.

The Permanoid Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the C. A. Woolsey Paint & Color Company, of Jersey City, N. J., for registration of a trade-mark and trade-mark registrations to the following named parties, (1) M. Ewing Fox & Company, of New York, N. Y., and (2) The Permanoid Company, of New York, N. Y., and the notice of such declaration sent by registered mail to the said The Permanoid Company at its address of record, 64 Fulton street, borough of Manhattan, New York, N. Y., has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said The Permanoid Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 11, 1910.

Jane A. Shattuck, her assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Charles F. Wagner, of Hotel Savoy, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Jane A. Shattuck, of Utica, N. Y., and the notice of said declaration sent by registered mail to the said Jane A. Shattuck having been returned undelivered, notice is hereby given to the said Jane A. Shattuck, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 8, 1910.

Francis Brothers, their assigns or legal representatives, take notice:

An interference has been declared by this Office between three applications for registration of trade-marks by the following named parties: (1) Arthur Petrie, of Wanette, Okla.; (2) Charles P. Gieraltowski, of Chicago, Ill.; (3) Knoll & Company, of Oristalstrasse, Liestal, (Canton of Basel-Land,) Switzerland, and a trade-mark registration to Francis Brothers, whose address of record is corner of Main and Third streets, Uhrichsville, Ohio, and the notice of such declaration sent by registered mail to the said Francis Brothers at the address here given has been returned by the Post-Office Department as undeliverable.

Notice is therefore hereby given to the said Francis Brothers, their assigns or legal representatives, that if they or any of them desire to contest the said interference, they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 1, 1910.

W. N. Richardson & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Sharp & Dohme, of Baltimore, Md., for registration of a trade-mark and a trade-mark registered to W. N. Richardson & Company, of 66 Maiden Lane, New York, N. Y., and the notice of said declaration sent by registered mail to the said W. N. Richardson & Company having been returned undelivered, notice is hereby given to the said W. N. Richardson & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 1, 1910.

Davidson & Co., their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the American Coffee Co. of New Orleans, Ltd., of New Orleans, La., for registration of a trade-mark and a trade-mark registered to Davidson & Co., of 1436 Broadway, New York, N. Y., and the notice of said declaration sent by registered mail to the said Davidson & Co. having been returned undelivered, notice is hereby given to the said Davidson & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 21, 1910.

Hamilton & Whittin, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of John Klefritz, of St. Louis, Mo., for registration of a trade-mark and a trade-mark registration to Hamilton & Whittin, of Chicago, Ill., and the notice of such declaration sent by registered mail to the said Hamilton & Whittin at the address given above has been returned by the Post-Office Department as undeliverable.

Notice is therefore hereby given to the said Hamilton & Whittin, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 21, 1910.

Lariat Manufacturing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Fishbeck Soap Company, of San Francisco, Cal., for registration of a trade-mark and trade-mark registrations to the following-named parties: (1) Joseph R. Ford, of New York, N. Y., (2) Joseph Obern-dorfer, of Salt Lake City, Utah, (3) Clara C. Day, of St. Louis, Mo., (4) Charles C. Gerhart, of Clarksville, Tenn., and (5) Lariat Manufacturing Company, of Jersey City, N. J., and Boston, Mass., and the notice of such declaration sent by registered mail to the Lariat Manufacturing Company at Boston, Mass., has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the Lariat Manufacturing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 19, 1910.

The Kenosha Watch Case Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Philadelphia Watch Case Company, of Riverside, N. J.; an application of Hauser, Zivy & Cia., of Mexico City, Mexico, both for registration of certain trade-marks, and a trade-mark registration of The Kenosha Watch Case Company, of Kenosha, Wis., and the notice of such declaration sent by registered mail to The Kenosha Watch Case Company, at the address given above, has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said The Kenosha Watch Case Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., May 17, 1910.

Albert C. Murphy, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the patent of A. C. Murphy, of East St. Louis, Ill., and an application for patent by Edward C. Meisner, C/o Eagle Generator Co., St. Louis, Mo., and the notice of said declaration sent by registered mail to the said Murphy having been returned undelivered, notice is hereby given to the said Murphy, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

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TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND THE UNITED STATES COURTS.

JUNE, 1910.

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DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND THE UNITED STATES COURTS.

JUNE, 1910.

[Decisions of the Court of Appeals of the District of Columbia are indicated by one star (*), of the United States Circuit Court of Appeals by the letter (d), and of the Supreme Court of the United States by two stars (**).]

ABANDONMENT OF APPLICATIONS.

EXAMINATION OF APPLICATIONS.

Where the Examiner rejected certain claims a second time on a single reference and rejected other claims on an additional reference cited for the first time and applicant, within a year, canceled one of the two claims against which the new reference was cited, filed an argument as to the allowance of the other, but made no reference to the rejection of the other claims, *Held* that the application was not abandoned, since applicant having once presented his argument as to these claims it was not necessary for him to repeat it. [*Ex parte* Newbold, 553.

ACTION BY THE EXAMINER.

(See Abandonment of Applications; Division of Applications; Interference, 1; Motion to Dissolve Interference, 1, 2.)

ADMINISTRATRIX.

(See Assignments.)

AFFIDAVITS.

(See Motion to Dissolve Interference, 1.)

ALLEGATION.

(See Motion to Dissolve Interference, 1.)

ANCILLARY ACTION.

(See Jurisdiction of the Federal Courts.)

ANTICIPATION.

(See Trade-Marks, 1.)

APPEAL.

(See Census Reports; Interference, 1; Motion to Dissolve Interference, 3, 4.)

APPEAL FROM FAVORABLE DECISION.

(See Motion to Dissolve Interference, 3.)

APPEAL TO THE COMMISSIONER OF PATENTS.

(See Motion to Dissolve Interference, 3.)

APPEAL TO THE EXAMINERS-IN-CHIEF.

(See Division of Applications; Interference, 1; Motion to Dissolve Interference, 2.)

APPLICATIONS.

(See Abandonment of Applications; Assignments; Division of Applications.)

ARGUMENTS.

(See Abandonment of Applications.)

ASSIGNMENTS.

NO REQUEST THAT PATENT ISSUE TO ASSIGNEE—CONTROL OF PROSECUTION.

The administratrix of a deceased applicant *Held* to be entitled to control the prosecution of the application to the exclusion of the assignee where the assignment does not contain a request that the patent issue to the assignee, notwithstanding the fact that the petition accompanying the application contains such a request. [*In re* Wetmore and Jenner, 799.

BAR TO PATENT.

(See Public Use.)

CENSUS REPORTS.

JUDICIAL NOTICE.

The United States Census Reports constitute matter of which judicial notice may properly be taken, and such judicial notice may be taken on appeal when the lower tribunals fail to do so. [The Geo. B. Sprague Cigar Co. and The Wing Cigar Co. *v.* T. M. Kildow Cigar Company, 1041.

CERTIORARI.

(See Circuit Court of Appeals.)

CIRCUIT COURT OF APPEALS.

DECISION CAN BE REVIEWED BY THE SUPREME COURT OF THE UNITED STATES ONLY UPON CERTIORARI.

Section 18 of the Trade-Mark Act of February 20, 1905, places suits brought under that act within the scope of the act of March 3, 1891, establishing the circuit court of appeals, and a final decision of such court can be reviewed in the Supreme Court of the United States only upon certiorari.

[**Hutchinson, Pierce & Co. *v.* Loewy, 556.

CITIZENSHIP.

(See Jurisdiction of the Federal Courts.)

CLAIMS.

(See Abandonment of Applications; Interference, 1.)

CLASS OF MERCHANDISE.

(See Trade-Marks, 1.)

CONSTRUCTION OF TRADE-MARK STATUTES.

(See Circuit Court of Appeals.)

CORPORATION.

(See Jurisdiction of the Federal Courts.)

DESCRIPTIVE TERMS.

(See Trade-Marks, 3, 4.)

DISCLAIMERS.

(See Reissue.)

DIVISION OF APPLICATIONS.

NEW MATTER—AFFECTING REQUIREMENT FOR DIVISION—APPEAL TO THE EXAMINERS-IN-CHIEF.

Where a certain change in the specification held to constitute new matter is involved in a requirement for division, such question will not be reviewed on petition, but is appealable to the Examiners-in-Chief. [*Ex parte* Fadem and Berman, 553.

EXAMINATION OF APPLICATIONS.

(See Abandonment of Applications.)

EXAMINERS-IN-CHIEF.

(See Division of Applications; Interference, 1; Motion to Dissolve Interference, 2, 3.)

FIRST AND ORIGINAL INVENTOR.

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(See Trade-Marks, 5.)

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(See Assignments; Reissue.)

HEARING.

(See Motion to Dissolve Interference, 1.)

INFRINGEMENT.

(See Jurisdiction of the Federal Courts.)

INTERFERENCE.

(See Motion to Dissolve Interference; Public Use.)

1. REQUEST FOR—PATENTABILITY OF CLAIM—APPEAL.

Where an applicant copies a claim from a patent for the purpose of interference and the Examiner holds that such claim is not patentable in view of the prior art, *Held* that from this action of the Examiner appeal lies to the Examiners-in-Chief and that the question of the patentability of the claim will not be reviewed on petition. [*Ex parte* McCullough, 305.

2. PRIORITY.

Evidence considered and *Held* insufficient to show that the invention in issue originated with appellant, the junior party. [*Smith *v.* Phelps, 1043.

INTERVENING RIGHTS.

(See Reissue.)

INVENTION.

(See Particular Patents: Patentability.)

IRREGULARITY IN DECLARATION OF INTERFERENCE.

(See Motion to Dissolve Interference, 4.)

JUDGMENT.

(See Jurisdiction of the Federal Courts.)

JUDICIAL NOTICE.

(See Census Reports.)

JURISDICTION OF THE EXAMINER OF INTERFERENCES.

(See Motion to Dissolve Interference, 4.)

JURISDICTION OF THE FEDERAL COURTS.

FEDERAL QUESTION.

The action by the owner of a judgment recovered against a corporation for infringement of a patent to charge the directors of such corporation with payment of the judgment on the ground that they were joint trespassers with the corporation is not within the jurisdiction of the Federal court as a suit upon a patent nor as an action ancillary to the judgment in the former suit, and unless there is diversity of citizenship such court is without jurisdiction. [**H. C. Cook Company *v.* Beecher *et al.*, 308.

MERITS OF THE CASE.

(See Motion to Dissolve Interference, 2.)

MOTION TO DISSOLVE INTERFERENCE.

1. RIGHT TO MAKE THE CLAIMS—AFFIDAVITS.

Motions to dissolve alleging that the adverse party has no right to make the claims, which allegation is supported by or based upon affidavits, should not be transmitted, nor should affidavits in support of a motion to dissolve be considered by the Primary Examiner at the hearing of the motion. [Horton *v.* Leonard, 305.

2. RES ADJUDICATA—MERITS.

A decision of the Primary Examiner dissolving an interference on the ground that the question in issue is *res adjudicata* relates to the merits and is reviewable in the first instance by the Examiners-in-Chief. [Norris *v.* Johnson, 801.

3. NO APPEAL FROM AFFIRMATIVE DECISION OF THE EXAMINERS-IN-CHIEF.

Appeal does not lie to the Commissioner from a decision of the Examiners-in-Chief holding, on a motion to dissolve, that certain counts of the issue are patentable. [Langslow *v.* Malocsay, 1043.

4. IRREGULARLY PRESENTED.

Where in connection with an appeal, on a decision upon a motion to dissolve, another motion to dissolve is presented which is not accompanied by a motion to restore the jurisdiction of the Examiner of Interferences and gives no reason why the grounds set forth therein were not urged at the time the original motion was presented, *Held* that such motion is without standing. [Id.

NEW MATERIAL.

(See Patentability.)

NEW MATTER.

(See Division of Applications.)

NEW RESULT.

(See Patentability.)

PARTICULAR PATENTS.

1. HALL, WILLIAM A.—NO. 626,537—ENAMELING COMPOUND FOR PAPER—PATENTABILITY—PRIOR PUBLIC USE.

The Hall patent, No. 626,537, for an enameling compound for sizing paper and method of producing the same, *Held* void for prior public use of the enamel for more than two years before the application. [4 Casein Co. of America *v.* A. M. Collins Mfg. Co., 554.

2. BRADLEY, CHRISTOPHER C.—NO. 609,928—THILL-COUPLING—SAME—INVENTION.

The Bradley patent, No. 609,928, for a thill-coupling having a leather packing between the spherical knuckle and the inclosing draft-eye, *Held* void for lack of invention in view of the prior art. [4 Bradley *v.* Metal Stamping Co., 801.

PATENTABILITY.

(See Interference, 1; Motion to Dissolve Interference, 3; Particular Patents.)

HOPPER-BOTTOM CARS—CHANGE IN CONSTRUCTION DUE TO USE OF STEEL.

The adaptation of the old double hopper-bottom to the changed construction due to the use of pressed steel as the car material, without any change in the function of the parts or the production of any new result, is not patentable. [4 American Car & Foundry Co. *v.* Morton Trust Co. *et al.*, 1044.

PATENTS.

(See Particular Patents; Reissues.)

PETITION.

(See Assignments; Division of Applications; Interference, 1.)

PRIORITY OF INVENTION.

(See Interference, 2.)

PROSECUTION OF APPLICATIONS.

(See Assignments.)

PUBLIC USE.

(See Particular Patents, 1.)

INTERFERENCE—TESTIMONY.

Where the testimony taken in an interference which is relied on to establish the statutory bar of public use or sale against the issuance of a patent on the application of the successful party to such interference does not show that certain samples or test devices made by the other party were offered for sale, or that if they were shown to prospective customers more than two years prior to the filing of said application preparation had then been made to manufacture the device or place it on the market, *Held* that a *prima facie* case of public use is not made out. [*In re* Rolfe, 799.

REFERENCES.

(See Abandonment of Applications; Reissue.)

REGISTRABILITY.

(See Trade-Marks.)

REISSUE.

MATTER DISCLAIMED IN ORIGINAL SPECIFICATION—INTERVENING RIGHTS.

A disclaimer having been made for the purpose of avoiding references and securing the grant of a patent and such disclaimer having been acted upon by the public a reissue whereby the effect of such disclaimer is avoided and the patent broadened is void. [4 Casein Co. of America *v.* A. M. Collins Mfg. Co., 554.

REJECTION OF CLAIMS.

(See Abandonment of Applications.)

RES ADJUDICATA.

(See Motion to Dissolve Interference, 2.)

RIGHT TO MAKE CLAIMS.

(See Motion to Dissolve Interference, 1.)

SIMILARITY OF MARKS.

(See Trade-Marks, 1, 2.)

SPECIFICATIONS.

(See Division of Applications; Reissue.)

STATE OF THE ART.

(See Interference, 1; Particular Patents.)

SUPREME COURT OF THE UNITED STATES.

(See Circuit Court of Appeals.)

TESTIMONY.

(See Public Use.)

TRADE-MARKS.

(See Census Reports; Circuit Court of Appeals.)

1. ANTICIPATION—"PIANO-AUTO." "AUTOPIANO."

The compound word "Piano-Auto". *Held* not registrable as a trade-mark for piano-players and combination pianos and piano-players in view of the prior registration of the word "Autopiano" for the same merchandise. [*Ex parte* The Auto Grand Piano Co., 307.

2. SIMILARITY.

A mark consisting of the word "Rogers" preceded by a wreath inclosing the letter "R" and followed by the same combination with the numeral "1881" *Held* deceptively similar to a mark consisting of the word "Rogers" preceded and followed by an anchor. [*Wm. A. Rogers, Limited, *v.* International Silver Co., 554.

3. "COKETTES" NOT DESCRIPTIVE OF BRIQUETS FOR FUEL.

The word "Cokettes" *Held* registrable as a trade-mark for briquets, for although this term might serve to indicate a briquet made of coke its suggestiveness is so remote that it does not fall within the class of marks whose registration is prohibited because of their descriptive character. [*Ex parte* Carter, Jr., 800.

4. "HALF SPANISH" AS APPLIED TO CIGARS DESCRIPTIVE OR DECEPTIVE.

"Spanish" or "Zimmer Spanish" being the name of a well-known variety of tobacco, *Held* that the term "Half Spanish" as applied to cigars would be either descriptive or deceptive and is therefore not registrable as a trade-mark. [The Geo. B. Sprague Cigar Co. and The Wing Cigar Co. *v.* T. M. Kildow Cigar Company, 1041.

5. "SPANISH"—GEOGRAPHICAL.

The word "Spanish" is geographical, and therefore the term "Half Spanish" is not registrable as a trade-mark. [Id.

TRANSMISSION OF MOTIONS.

(See Motion to Dissolve Interference.)

VOID PATENTS.

(See Particular Patents; Reissue.)

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF JUNE, 1910.

[Abbreviations: "Sp."—Monthly Volume of Specifications; "Gaz."—Official Gazette.]

A. B. Dick Company. (See Dick, Albert B., assignor.)
A. G. Spalding & Bros. (See King, Charles M., assignor.)
A. H. Heisey & Co. (See Sanford, Andrew J., assignor.)
A. W. Harrington Company, The. (See Harrington, Alexander W., assignor.)
Aalborg, Christian, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Automatic bell-ringer. No. 962,688; June 28; Sp. p. 5180; Gaz. vol. 155; p. 904.
Aalborg, Christian, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrical apparatus. No. 962,689; June 28; Sp. p. 5182; Gaz. vol. 155; p. 905.
Abate, Walter L. (See Krug, Philip F., assignor.)
Abbott, Augustus, Seattle, Wash. Machine for counting and packaging coins. No. 961,473; June 14; Sp. p. 2537; Gaz. vol. 155; p. 445.
Abbott, Delon H., Vandemere, N. C. Cultivating-machine. No. 962,288; June 21; Sp. p. 4301; Gaz. vol. 155; p. 743.
Abbott, John. (See Browne, Ralph C., assignor.)
Abbott, William G., Jr., Philadelphia, Pa. Gas-engine. No. 961,059; June 7; Sp. p. 1647; Gaz. vol. 155; p. 276.
Acme-Keystone Mfg. Company. (See McCool, William A., assignor.)
Actien Gesellschaft für Anilin Fabrikation. (See Ullmann, Fritz, assignor.)
Adair, Charles E., assignor to Cyphers Incubator Company, Buffalo, N. Y. Heater for brooders and incubators. No. 961,667; June 14; Sp. p. 2946; Gaz. vol. 155; p. 509.
Adams, Edward A., Liberty, Nebr. Headlight-controller for automobiles. No. 960,763; June 7; Sp. p. 1065; Gaz. vol. 155; p. 178.
Adams, Edward S., Columbus, Ohio. Wind-shield. No. 962,406; June 28; Sp. p. 4539; Gaz. vol. 155; p. 807.
Adams, Edward T., assignor to Allis-Chalmers Company, Milwaukee, Wis. Piston. No. 961,080; June 7; Sp. p. 1702; Gaz. vol. 155; p. 283.
Adams, Henry M., Oxford, Nebr. Telephone, fence, and telegraph pole. No. 962,109; June 21; Sp. p. 3915; Gaz. vol. 155; p. 683.
Adams, Henry T., assignor to Henry T. Adams Co., Chicago, Ill. Watch-holder for motor-vehicles. No. 961,571; June 14; Sp. p. 2755; Gaz. vol. 155; p. 477.
Adams & Johnson Co. (See Burke, Anslem L., assignor.)
Adams, Robert, London, England. Lock. No. 961,996; June 21; Sp. p. 3651; Gaz. vol. 155; p. 642.
Adams & Westlake Company, The. (See Newbold, Roger M., assignor.)
Adamson, Oliver E., Sheldahl, Iowa. Attachment for cultivators. No. 960,764; June 7; Sp. p. 1067; Gaz. vol. 155; p. 179.
Addicks, Diedrich C., Stroh, assignor to Ideal Concrete Machinery Company, South Bend, Ind. Mold-press. No. 961,332; June 14; Sp. p. 2256; Gaz. vol. 155; p. 398.
Adding and Subtracting Machine Company. (See Hoch, Adam, assignor.)
Adler, Ignaz, Susine-Gjurjenovac, Austria-Hungary. Feed-water purifier for boilers. No. 961,060; June 7; Sp. p. 1653; Gaz. vol. 155; p. 276.
Adler, John W., Williamstown, Ohio. Rotary brush. No. 961,061; June 7; Sp. p. 1655; Gaz. vol. 155; p. 276.
Adrian, James, Halfway, Oreg. Advertising device. No. 961,062; June 7; Sp. p. 1657; Gaz. vol. 155; p. 277.
Ahlen, William, Duquesne, Pa. Spraying device. No. 961,195; June 14; Sp. p. 1985; Gaz. vol. 155; p. 350.
Air Cleaner Company, The. (See Squier, Arthur H., assignor.)
Aker, Joseph H., East Orange, N. J. Hair-comb. No. 960,243; June 7; Sp. p. 1; Gaz. vol. 155; p. 3.
Aktiebolaget Merkantila Ingenjörsbyrån. (See Anderberg, Anders, assignor.)
Aktiengesellschaft für den Vertrieb von Kucheneschirr-Spülapparaten "Triumph." (See Jaekle, Gustav, assignor.)
Albee, Honestus M., Nutley, N. J. Machine for carving figures in relief and intaglio. No. 960,765; June 7; Sp. p. 1069; Gaz. vol. 155; p. 179.
Albertoni, John A., Akron, Ohio. Coat-hanger. No. 961,572; June 14; Sp. p. 2757; Gaz. vol. 155; p. 478.
Albrecht, Christian A., Baltimore, Md., and L. Leidenberg, Berlin, Germany. Type-setting machine for various sizes of type. No. 961,742; June 14; Sp. p. 3097; Gaz. vol. 155; p. 535.
Alderfer, John M., Sharon Center, Ohio. Shipping-package. No. 960,766; June 7; Sp. p. 1072; Gaz. vol. 155; p. 180.
Alderson, G. Edwin. (See Franken, Robert, assignor.)
Aldridge, Thomas J., and M. A. Reilly, Rochester, N. Y. Shoe-stretcher. No. 960,477; June 7; Sp. p. 472; Gaz. vol. 155; p. 79.
Aldridge, William R., *et al.* (See Davis, William J., assignor.)
Alexander Milburn Company. (See Jenkins, Alexander F., assignor.)
Alfano, Leonard, Brooklyn, N. Y. Apparatus for honing razors. No. 962,935; June 28; Sp. p. 5058; Gaz. vol. 155; p. 991.
Allard, David R., Arleta, Oreg. Air-compressor. No. 960,478; June 7; Sp. p. 473; Gaz. vol. 155; p. 80.
Allbright, Thomas E., *et al.* (See Batchelor, Henry, assignor.)
Allbright, William B., Chicago, Ill. Cooling apparatus. No. 960,614; June 7; Sp. p. 763; Gaz. vol. 155; p. 126.
Allen, Harding, Barre, Mass. Driving mechanism for drill-spindles. No. 962,690; June 28; Sp. p. 5183; Gaz. vol. 155; p. 905.
Allen, James M., St. Louis, Mo., assignor of one-half to C. F. Schneider, Alton, Ill., and one-eighth to D. F. Dirks, St. Louis, Mo. Safe. No. 960,767; June 7; Sp. p. 1074; Gaz. vol. 155; p. 180.
Allen, John E., Vancouver, British Columbia, Canada. Life-boat. No. 960,479; June 7; Sp. p. 474; Gaz. vol. 155; p. 80.
Allen, Luther H., Gravette, Ark. Motor-cycle. No. 962,289; June 21; Sp. p. 4303; Gaz. vol. 155; p. 743.
Allen, Sherman T., Detroit, Mich. Vehicle-top-bow holder. No. 962,487; June 28; Sp. p. 4749; Gaz. vol. 155; p. 836.
Allen, Walker B. (See Keil and Allen.)
Allen, William G., assignor of one-half to I. Dimock, West Hartford, Conn. Manufacture of screws. No. 960,244; June 7; Sp. p. 2; Gaz. vol. 155; p. 3.
Allenou, Charles M. V. (See Pichon and Allenou.)
Allfree, James B., Chicago, Ill. Valve for engines. No. 960,615; June 7; Sp. p. 773; Gaz. vol. 155; p. 126.
Allfree, James B., Chicago, Ill. Valve for engines. No. 960,616; June 7; Sp. p. 777; Gaz. vol. 155; p. 127.
Allhoff, Charles G. (See Trimbach and Allhoff.)
Allin, William J., Clarendon, Ark. Hoe. No. 961,748; June 21; Sp. p. 3113; Gaz. vol. 155; p. 561.
Allis-Chalmers Company. (See Adams, Edward T., assignor.)
Allis-Chalmers Company. (See Barker, William M., assignor.)
Allis-Chalmers Company. (See Cheney, Herbert W., assignor.)
Allis-Chalmers Company *et al.* (See Cheney, Herbert W., assignor.)
Allis-Chalmers Company. (See De Wein, George F., assignor.)
Allis-Chalmers Company *et al.* (See Kwis, Arthur F., assignor.)
Allis-Chalmers Company. (See Lieber, William H., assignor.)
Allis-Chalmers Company. (See Patitz, Johann F. M., assignor.)
Allis-Chalmers Company. (See Sprado, Carl G., assignor.)
Allner, Frederick, and E. N. Boswell, Montreal, Quebec, Canada. Planer attachment. No. 960,480; June 7; Sp. p. 475; Gaz. vol. 155; p. 80.
Allom, Gilbert F., London, England. Electric-light reflector. No. 961,196; June 14; Sp. p. 1987; Gaz. vol. 155; p. 350.
Allsopp, George A., Brockton, Mass. Culinary utensil. No. 961,474; June 14; Sp. p. 2541; Gaz. vol. 155; p. 445.
Allyn, Robert S., New York, N. Y. Concrete reinforcement. No. 962,488; June 28; Sp. p. 4750; Gaz. vol. 155; p. 837.
Alsted, Edward P., Truesdell, Wis. Attrition-mill. No. 962,807; June 28; Sp. p. 5426; Gaz. vol. 155; p. 947.

Alter, Christian, New York, N. Y. Eyeglasses. No. 962,873; June 28; Sp. p. 5555; Gaz. vol. 155; p. 971.
Altham, George J., Fall River, Mass. Internal-combustion engine. No. 962,110; June 21; Sp. p. 3916; Gaz. vol. 155; p. 683.
Altheide, August F., Mount Carmel, Ill. Splicing device. No. 961,201; June 14; Sp. p. 1945; Gaz. vol. 155; p. 352.
Altman, Moise, Bagnolet, France. Apparatus for making seamless tubes. No. 961,394; June 14; Sp. p. 2366; Gaz. vol. 155; p. 418.
Alvord, Edson L., Weskan, Kans. Calf or colt weaner. No. 962,290; June 21; Sp. p. 4305; Gaz. vol. 155; p. 744.
Amberson, William S., Waynesboro, Pa. Stand for garbage-cans, &c. No. 962,874; June 28; Sp. p. 5556; Gaz. vol. 155; p. 972.
American Agricultural Chemical Company, The. (See Smyth, William L., assignor.)
American Callaphone Company. (See Kaufman, Adolph G., assignor.)
American Can Company. (See Graham, Charles W., assignor.)
American Car & Foundry Company. (See Gibbs, Frederick H., assignor.)
American Case & Register Company, The. (See Tice, Andrew J., assignor.)
American Circular Loom Company. (See Luts, George A., assignor.)
American Couch Company. (See Penney, Harold D., assignor.)
American Desiccating Company. (See Osborne, William S., assignor.)
American Fibre Matting Company. (See Harrison, James G., assignor.)
American Hoist & Derrick Co. (See Crosby, Oliver, assignor.)
American Laundry Machinery Company. (See Hagen and Cooper, assignors.)
American Locomotive Company. (See Mellin, Carl J., assignor.)
American Mahogany Company. (See Hall, William A., assignor.)
American Monorail Company. (See Tunis, Howard H., assignor.)
American Piano Player Company. (See Williams, George S., assignor.)
American Pneumatic Service Company. (See Stoddard, Charles F., assignor.)
American Pulley Company, The. (See Brinley, Charles A., assignor.)
American Salve Book Company. (See Hollingsworth, Samuel, assignor.)
American Sliding Machine Company, The. (See Faas and Dodson, assignors.)
American Sign Company. (See Smith, Jay C., assignor.)
American Steel Foundries. (See Davis, James C., assignor.)
American Steel Foundries. (See Floyd, George G., assignor.)
American Steel & Wire Company. (See Sprague, Arthur W., assignor.)
American Typographic Corporation. (See Richards, Francis H., assignor.)
American Wood Working Machinery Co. (See Perkins, Hiram A., assignor.)
Ames, Arthur N., Franklin Falls, N. H. Circular-fashioning knitting-machine. No. 962,291; June 21; Sp. p. 4306; Gaz. vol. 155; p. 744.
Ames, Arthur N., Franklin Falls, N. H. Circular-knitting machine. No. 962,292; June 21; Sp. p. 4315; Gaz. vol. 155; p. 744.
Amick, Henry J., assignor of one-third to J. A. Murphy, Runa, W. Va., Door-lock. No. 960,245; June 7; Sp. p. 4; Gaz. vol. 155; p. 3.
Amsden, George A., Lowell, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Cable-carrier apparatus. No. 960,617; June 7; Sp. p. 781; Gaz. vol. 155; p. 127.
Ancil, Charles A., and J. Bollet, Marion, Ind. Combined skating-rink and merry-go-round. No. 962,608; June 28; Sp. p. 5017; Gaz. vol. 155; p. 877.
Anderberg, Anders O., Malmö, assignor to Aktiebolaget Merkantila Ingeniörsbyrån, Stockholm, Sweden. Apparatus for purification of water. No. 961,926; June 21; Sp. p. 3507; Gaz. vol. 155; p. 620.
Anderson, Charles C., Chicago, Ill. Extension-plank. No. 962,601; June 28; Sp. p. 5186; Gaz. vol. 155; p. 906.
Anderson, Abraham A., New York, N. Y. Egg holder and cutter. No. 962,293; June 21; Sp. p. 4318; Gaz. vol. 155; p. 745.
Anderson, Alfred Royal, Iowa. Show-case. No. 962,544; June 28; Sp. p. 4875; Gaz. vol. 155; p. 856.
Anderson, Charles, Clay Center, Kans. Adjustable weather-strip. No. 961,383; June 14; Sp. p. 2349; Gaz. vol. 155; p. 415.
Anderson, Charles L. (See Rockwell, Robert R., assignor.)
Anderson, David A., assignor to Central Architectural Iron Works, Chicago, Ill. Sliding-door latch. No. 961,197; June 14; Sp. p. 1938; Gaz. vol. 155; p. 350.
Anderson, Frank E., assignor to Cutler Mail Chute Company, New York, N. Y. Mail-chute. No. 962,489; June 28; Sp. p. 4753; Gaz. vol. 155; p. 837.
Anderson, Gustaf M., Waterloo, Iowa. Centrifugal cream-separator. No. 960,705; June 7; Sp. p. 1075; Gaz. vol. 155; p. 189.
Anderson, John, assignor of one-third to F. Hardart and one-third to J. V. Horn, Philadelphia, Pa. Machine for decorating pastry. No. 961,090; June 14; Sp. p. 1723; Gaz. vol. 155; p. 313.
Anderson-Lacy Electric Headlight Company, The. (See Anderson, Thomas J., assignor.)
Anderson, Thomas J., assignor to The Anderson-Lacy Electric Headlight Company, Houston, Tex. Arc-lamp. No. 962,692; June 28; Sp. p. 5187; Gaz. vol. 155; p. 906.
Anderson, William C., San Jose, Cal. Raisin-stemmer. No. 962,609; June 28; Sp. p. 5019; Gaz. vol. 155; p. 878.
Andre, Emanuel, Marinette, Wis. Cutter-guard. No. 961,198; June 14; Sp. p. 1940; Gaz. vol. 155; p. 351.
Andrew, Cecil D., London, England, assignor to Nilles-Bement-Pond Company, Jersey City, N. J. Indicating device for machine-tools. No. 961,281; June 14; Sp. p. 2124; Gaz. vol. 155; p. 380.
Angell, John E., St. Louis, Mo. Water purifier and clarifier. No. 961,091; June 14; Sp. p. 1726; Gaz. vol. 155; p. 313.
Annis, Charles C. (See Annis, George F. and C. C.)
Annis, George F. and C. C., Freedom, Okla. Automobile-tire. No. 962,729; June 28; Sp. p. 5271; Gaz. vol. 155; p. 920.
Apel, Frederick H. (See Merkley, Apel, and Merkley.)
Arbecam Nautical Instrument Co. (See Huntington, Robert, assignor.)
Arens, August, assignor to P. & F. Corbin, New Britain, Conn. Asylum-lock. No. 962,875; June 28; Sp. p. 5558; Gaz. vol. 155; p. 972.
Arens, August, and E. L. Teich, assignors to P. & F. Corbin, New Britain, Conn. Panic-bolt. No. 961,092; June 14; Sp. p. 1729; Gaz. vol. 155; p. 314.
Armington, John R., Roanoke, Va. Water-heater. No. 962,294; June 21; Sp. p. 4316; Gaz. vol. 155; p. 745.
Armour & Company. (See Perrigo, Edwin B., assignor.)
Armstrong, Archibald, Waterville, Me. Dust-pan. No. 961,199; June 14; Sp. p. 1942; Gaz. vol. 155; p. 351.
Armstrong Brothers Tool Company, The. (See Armstrong, James, assignor.)
Armstrong, James, Maywood, assignor to The Armstrong Brothers Tool Company, Chicago, Ill. Nurling-tool. No. 960,769; June 7; Sp. p. 1078; Gaz. vol. 155; p. 160.
Arnn, Albert, Little Ferry, N. J. False work for building construction. No. 962,295; June 21; Sp. p. 4320; Gaz. vol. 155; p. 745.
Arnold, George W., Girard, Ohio. Truss-pad. No. 960,481; June 7; Sp. p. 477; Gaz. vol. 155; p. 80.
Arnott, Robert F., Montclair, N. J. Power-operated hammer. No. 961,384; June 14; Sp. p. 2350; Gaz. vol. 155; p. 415.
Arthur Colton Co. (See Colton and Scott, assignors.)
Arthur, George, Chicago, Ill. Egg-tester. No. 962,876; June 28; Sp. p. 5560; Gaz. vol. 155; p. 973.
Ash, George D. (See Perry, Charles H., assignor.)
Ashcraft, William H., Janesville, Wis. Antifreezing drinking-fountain for poultry. No. 961,831; June 21; Sp. p. 3302; Gaz. vol. 155; p. 588.
Ashcroft Manufacturing Company. (See Blanchard, Crocker, and Darling, assignors.)
Ashley, Frank M., New York, N. Y. Inkstand. No. 960,770; June 7; Sp. p. 1079; Gaz. vol. 155; p. 181.
Ashmore, Frank F., Kansas City, Mo. Automatic-alarm tire-valve. No. 960,246; June 7; Sp. p. 7; Gaz. vol. 155; p. 4.
Ashton, Francis E., Exeter, N. H., assignor to Crompton & Knowles Loom Works. Weft-replenishing loom. No. 961,668; June 14; Sp. p. 2947; Gaz. vol. 155; p. 509.
Ashton, Orrell, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Vamp-trimming machine. No. 961,200; June 14; Sp. p. 1942; Gaz. vol. 155; p. 351.
Asiakson, Baxter M., Salem, Ohio. Vaporizer for gas-producers. No. 962,610; June 28; Sp. p. 5022; Gaz. vol. 155; p. 878.
Assmann, Carl, Charlottenburg, Germany. Regulating apparatus for mixing-valves. No. 962,111; June 21; Sp. p. 3920; Gaz. vol. 155; p. 683.
Astor, John J., New York, N. Y. Securing device for chairs. No. 961,093; June 14; Sp. p. 1731; Gaz. vol. 155; p. 314.
Astruck, John H., New York, N. Y. Combined match-stand and cigar-cutter. No. 961,927; June 21; Sp. p. 3509; Gaz. vol. 155; p. 620.
Astrup, William J. O., Cleveland, Ohio. Awning-fixture. No. 960,771; June 7; Sp. p. 1080; Gaz. vol. 155; p. 181.
Atkinson, Henry A., Fitzroy, Victoria, Australia. Cot for attachment to beds. No. 961,669; June 14; Sp. p. 2949; Gaz. vol. 155; p. 510.
Atkinson, R. D., et al. (See Reed, Rufus C., assignor.)
Aubery, James M. (See Priestly and Aubery.)
Auble, James H., Cincinnati, assignor of one-third to J. H. Bromwell, Wyoming, and one-third to J. J. McDonald, Cincinnati, Ohio. Lawn-mower. No. 962,407; June 28; Sp. p. 4540; Gaz. vol. 155; p. 807.
Augenbraun, Peter F., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Switch-lock. No. 962,936; June 28; Sp. p. 5661; Gaz. vol. 155; p. 991.
Austerweil, Géza, Neuilly, near Paris, France. Regenerating and devulcanizing india-rubber or caoutchouc and extraction of caoutchouc from raw materials containing caoutchouc. No. 961,395; June 14; Sp. p. 2367; Gaz. vol. 155; p. 418.

Austin, James C., New York, N. Y. Nut-lock. No. 961,063; June 7; Sp. p. 1658; Gaz. vol. 155; p. 277
Austin-Walker Company. (See Türk, Leo, assignor.)
Auto Improvement Company. (See Volkmar, Bernhard, assignor.)
Auto-Lighter & Equipment Company. (See Bartlett, Louis G., assignor.)
Automatic Billing Company. (See Gallagher, Richard W., assignor.)
Automatic Fire Protection Company. (See Nolen, James G., assignor.)
Automatic Signal Light Company, The. (See McAloney, William H., assignor.)
Automatic Starter Company. (See Brisbois, Odilon, assignor.)
Awkerman, Romeo C., et al. (See O'Brien, Vincent J., assignor.)
Ayars, Charles H., assignor to Ayars Machine Company, Salem, N. J. Machine for soldering the cap ends of cans. No. 961,743; June 14; Sp. p. 3090; Gaz. vol. 155; p. 535.
Ayars Machine Company. (See Ayars, Charles H., assignor.)
Aylsworth, Jonas W., East Orange, N. J. Celluloid composition. No. 962,877; June 28; Sp. p. 5561; Gaz. vol. 155; p. 973.
Aylsworth, Jonas W., East Orange, N. J., assignor to E. J. Brooks & Co., New York, N. Y. Seal. No. 961,333; June 14; Sp. p. 2258; Gaz. vol. 155; p. 399.
Aylsworth, Jonas W., East Orange, assignor to New Jersey Patent Company, West Orange, N. J. Composition for phonograph-records. No. 962,878; June 28; Sp. p. 5562; Gaz. vol. 155; p. 973.
Aylward, Richard P. (See Dolan and Aylward.)
Ayres, Leander E., Jr., Newark, N. J. Coin-wrapping device. No. 961,832; June 21; Sp. p. 3303; Gaz. vol. 155; p. 589.
Baar, John, Philadelphia, Pa. Resilient tire. No. 962,297; June 21; Sp. p. 4324; Gaz. vol. 155; p. 746.
Babbitt, Elwin J., Onaway, Mich. Stovepipe-coupling. No. 962,298; June 21; Sp. p. 4326; Gaz. vol. 155; p. 746.
Babcock Box Company. (See Prahl, Frederick A., assignor.)
Babcock & Wilcox Company, The. (See Higgins, Campbell P., assignor.)
Babcock & Wilcox Company, The. (See Munoz, Signono C., assignor.)
Bacon, Levi S., Washington, D. C., assignor to The Railroad Supply Company, Chicago, Ill. Bonding-pin. No. 961,475; June 14; Sp. p. 2542; Gaz. vol. 155; p. 445.
Badeau, Harry U., assignor to The Bryant Electric Company, Bridgeport, Conn. Incandescent-lamp receptacle. No. 960,808; June 7; Sp. p. 1157; Gaz. vol. 155; p. 193.
Baden, Charles, Hackensack, N. J. Compound engine. No. 961,004; June 14; Sp. p. 1732; Gaz. vol. 155; p. 314.
Badger, Alonzo, assignor of one-half to H. Tunzat, Oceanpark, Cal. Life-preserving swimming-jacket. No. 961,282; June 14; Sp. p. 2126; Gaz. vol. 155; p. 381.
Badger Brass Mfg. Co., The. (See Welles, Richard H., assignor.)
Badische Anilin & Soda Fabrik. (See Isler and Wolff, assignors.)
Badrow, Albert W., Brooklyn, N. Y. One-piece loose-leaf binder. No. 961,064; June 7, Sp. p. 1660; Gaz. vol. 155; p. 277.
Baer, David O. (See Hayner and Baer.)
Baer, Julius, New York, N. Y. Hair-net. No. 961,476; June 14; Sp. p. 2544; Gaz. vol. 155; p. 446.
Bailey, Lawson J. (See Frampton and Bailey.)
Bailey, Lorenzo C., Chicago, Ill. Curtain-fastener. No. 962,879; June 28; Sp. p. 5564; Gaz. vol. 155; p. 973.
Bailey, Martha A., Lima, Ohio. Package-tie. No. 961,833; June 21; Sp. p. 3304; Gaz. vol. 155; p. 589.
Ballhache, Solon W., Vallejo, Cal. Electric-lamp support. No. 960,618; June 7; Sp. p. 785; Gaz. vol. 155; p. 128.
Baily, Thaddeus F., Alliance, Ohio. Apparatus for metal working. No. 960,772; June 7; Sp. p. 1083; Gaz. vol. 155; p. 181.
Baily, Thaddeus F., Alliance, Ohio. Electric furnace. No. 960,773; June 7; Sp. p. 1084; Gaz. vol. 155; p. 181.
Baird, Samuel H. (See Lewis, George W., assignor.)
Bajusz, Paul. (See Kondás and Bajusz.)
Baker, John W. (See Parker, George H., assignor.)
Baker Motor Vehicle Company, The. (See Gruenfeldt, Emil, assignor.)
Bachowsky, Dmitry, Paris, and P. Caire, Levallois-Paris, France. Speed-controlling device applicable to electric motors and generators. No. 960,774; June 7; Sp. p. 1088; Gaz. vol. 155; p. 182.
Balcom, Henry D., Belfast, N. Y. Equalizer tug attachment for harness. No. 961,573; June 14; Sp. p. 2758; Gaz. vol. 155; p. 478.
Baldwin, George, Indianapolis, Ind. Automatic water-elevating device. No. 960,775; June 7; Sp. p. 1085; Gaz. vol. 155; p. 182.
Ball Multi-Spark Plug Co., The. (See Cherry, Louis B., assignor.)
Ball, Samuel M., B. N. McNiel, and H. Pennington, Houston, Tex. Machine for compressing and rolling bats. No. 961,997; June 21; Sp. p. 3653; Gaz. vol. 155; p. 642.
Ball, Sarah E. Ritchey, Ill. Weeder. No. 960,247; June 7; Sp. p. 9; Gaz. vol. 155; p. 4.
Ball, William R., Bryan, Tex. Baling-press. No. 961,996; June 21; Sp. p. 3657; Gaz. vol. 155; p. 643.
Balliet, Herbert S., New York, assignor to General Railway Signal Company, Gates, N. Y. Electrically-operated lock. No. 960,776; June 7; Sp. p. 1090; Gaz. vol. 155; p. 182.
Baltzley, Edwin, Glen Echo, Md., assignor, by mesne assignments, to Southern Furniture Company, Washington, D. C. Type-writer cabinet. No. 961,525; June 14; Sp. p. 2652; Gaz. vol. 155; p. 462.
Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Driving or transmission mechanism for type and other machines. No. 962,408; June 28; Sp. p. 4544; Gaz. vol. 155; p. 807.
Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Driving-press for type-matrices. No. 962,409; June 28; Sp. p. 4551; Gaz. vol. 155; p. 808.
Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Low-quad type-mold. No. 962,410; June 28; Sp. p. 4563; Gaz. vol. 155; p. 808.
Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Low-quad mold for type-machines. No. 962,411; June 28; Sp. p. 4566; Gaz. vol. 155; p. 809.
Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Control mechanism for low-quad molds. No. 962,412; June 28; Sp. p. 4572; Gaz. vol. 155; p. 809.
Banks, John C., Chillicothe, Tex. Oil-burner. No. 961,386; June 14; Sp. p. 2355; Gaz. vol. 155; p. 416.
Barber-Colman Company. (See Colman, Howard D., assignor.)
Barber, Henry F., Edison, Nebr. Excavating mechanism for beet-harvesters. No. 962,860; June 28; Sp. p. 5566; Gaz. vol. 155; p. 974.
Barber, John C., assignor to Standard Car Truck Company, Chicago, Ill. Car-truck. No. 962,937; June 28; Sp. p. 5662; Gaz. vol. 155; p. 991.
Bardill, John O., Herculaneum, Mo. Twyer-receiver for smelting-furnaces. No. 962,112; June 21; Sp. p. 3922; Gaz. vol. 155; p. 684.
Barker, John F., Jr., Boston, assignor to Gilbert & Barker Manufacturing Company, Springfield, Mass. Constant-supply device for vaporizing fuel-gas machines. No. 962,611; June 28; Sp. p. 5024; Gaz. vol. 155; p. 879.
Barker, John J., Arlington, assignor to Boston Coupling Company, Boston, Mass. Coupling device. No. 961,283; June 14; Sp. p. 2127; Gaz. vol. 155; p. 381.
Barker, William M., McGill, Nev., assignor to Allis-Chalmers Company, Milwaukee, Wis. Self-heating hot-blast roasting-furnace. No. 961,081; June 7; Sp. p. 1704; Gaz. vol. 155; p. 283.
Barlett, Jacob, Bryant, Ind. Animal-guard for pipes. No. 961,834; June 21; Sp. p. 3305; Gaz. vol. 155; p. 589.
Barnard, Walter E., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 961,202; June 14; Sp. p. 1946; Gaz. vol. 155; p. 352.
Barnett, Henry C., Jefferson, Ga. Road grader and smoother. No. 962,299; June 21; Sp. p. 4327; Gaz. vol. 155; p. 747.
Barnett, Otto R. (See Walker, William A., assignor.)
Barnheisel, Frederick R., Chicago, Ill. Rotary bearing for suspended shafts. No. 961,670; June 14; Sp. p. 2952; Gaz. vol. 155; p. 510.
Barnhurst, Henry G. (See Barnhurst, Henry R., assignor.)
Barnhurst, Henry R., Allentown, assignor of one-half to H. G. Barnhurst, Catasauqua, Pa. Apparatus for burning powdered fuel. No. 961,671; June 14; Sp. p. 2954; Gaz. vol. 155; p. 510.
Barnhurst, Henry R., Allentown, assignor of one-half to H. G. Barnhurst, Catasauqua, Pa. Burning powdered fuel. No. 961,672; June 14; Sp. p. 2956; Gaz. vol. 155; p. 511.
Barnwell, James B. Valdosta, Ga. Gate-latch. No. 960,777; June 7, Sp. p. 1091; Gaz. vol. 155; p. 183.
Barr, George, La Center, Wash. Draft-gear for railway-cars. No. 960,778; June 7; Sp. p. 1092; Gaz. vol. 155; p. 183.
Barr, Henry G., Worcester, Mass. Automatic reversing mechanism for drills and the like. No. 961,334; June 14; Sp. p. 2261; Gaz. vol. 155; p. 399.
Barr, Homer A., Ashland, Pa. Vapor-burning lamp. No. 962,296; June 21; Sp. p. 4321; Gaz. vol. 155; p. 746.
Barrett, William F. (See Holland and Barrett.)
Barrows, Robert Y. (See Bohl and Barrows.)
Bartles, Nelson E., and C. O. Hawkins, Irene, Tex. Device for cleaning flues. No. 961,574; June 14; Sp. p. 2759; Gaz. vol. 155; p. 478.
Bartlett, Harry D. (See Luts and Bartlett.)
Bartlett, Louis G., Somerville, Mass. Pneumatic-despatch-tube apparatus. No. 962,072; June 21; Sp. p. 3828; Gaz. vol. 155; p. 670.
Bartlett, Louis G., Somerville, Mass. Pneumatic-despatch-tube apparatus. No. 962,073; June 21; Sp. p. 3826; Gaz. vol. 155; p. 670.
Bartlett, Louis G., Somerville, assignor to Auto-Lighter & Equipment Company, Boston, Mass. Automatic gas ignition and control. No. 962,113; June 21; Sp. p. 3924; Gaz. vol. 155; p. 684.
Basim, Harry B., Parkersburg, W. Va. Carbon-breaker. No. 960,779; June 7; Sp. p. 1094; Gaz. vol. 155; p. 183.
Basken, Isadore J., Pembina, N. D. Wrench. No. 961,673; June 14; Sp. p. 2959; Gaz. vol. 155; p. 511.

Bastian-Blessing Company, The. (See Bell, Dillwyn M., assignor.)

Batcheller, Birney C., assignor to The Batcheller Pneumatic Tube Company, Philadelphia, Pa. Pneumatic-tube system. No. 961,999; June 21; Sp. p. 3659; Gaz. vol. 155; p. 648.

Batcheller Pneumatic Tube Company, The. (See Batcheller, Birney C., assignor.)

Batchelor, Henry, assignor of one-fourth to T. E. Allbright and one-twelfth to F. E. Gilkison, Shoals, Ind. Tool-holder. No. 961,203; June 14; Sp. p. 1949; Gaz. vol. 155; p. 352.

Bate, William L., assignor to Sweet, Orr & Company, Newburgh, N. Y. Separable button. No. 960,780; June 7; Sp. p. 1094; Gaz. vol. 155; p. 184.

Bateman, William M., Philadelphia, and J. C. Levett, Chester, Pa. Anchor. No. 961,095; June 14; Sp. p. 1734; Gaz. vol. 155; p. 315.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Inseam-trimming machine. No. 960,781; June 7; Sp. p. 1096; Gaz. vol. 155; p. 184.

Batt, Charles F., New York, N. Y. Tire-carrier. No. 962,730; June 28; Sp. p. 5272; Gaz. vol. 155; p. 920.

Batten, John E., Jamestown, Cal. Means for extracting gold from river-beds. No. 962,612; June 28; Sp. p. 5026; Gaz. vol. 155; p. 879.

Batzel, Eugen P., Buffalo, N. Y. Multiple-telegraph system. No. 960,482; June 7; Sp. p. 479; Gaz. vol. 155; p. 81.

Bauer, Victor, Horton, Kans. Spring-tire. No. 961,065; June 7; Sp. p. 1660; Gaz. vol. 155; p. 278.

Bauer, Wilhelm, Vohwinkel, and A. Herre, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Vat dye. No. 961,396; June 14; Sp. p. 2367; Gaz. vol. 155; p. 419.

Bauer, Wilhelm, Vohwinkel, and A. Herre, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Vat dyestuff. No. 961,397; June 14; Sp. p. 2368; Gaz. vol. 155; p. 419.

Bauer, Wilhelm, Vohwinkel, and A. Herre, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Blue dye. No. 961,398; June 14; Sp. p. 2369; Gaz. vol. 155; p. 419.

Bauer, Wilhelm, Vohwinkel, and A. Herre, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Blue dye. No. 961,399; June 14; Sp. p. 2370; Gaz. vol. 155; p. 419.

Bauman, Henry G., Indiana Harbor, Ind. Attachment for cameras. No. 961,425; June 14; Sp. p. 2426; Gaz. vol. 155; p. 425.

Bausch & Lomb Optical Company. (See Patterson, William L., assignor.)

Baxter, Berry A., Mansfield, Ohio. Stove-leg. No. 961,928; June 21; Sp. p. 3510; Gaz. vol. 155; p. 620.

Bayer, William F., Buffalo, N. Y. Combined air-governor and expression device. No. 961,335; June 14; Sp. p. 2263; Gaz. vol. 155; p. 399.

Baylis, Everest A., Madera, Mexico. Feeder for tube-mills. No. 960,782; June 7; Sp. p. 1101; Gaz. vol. 155; p. 184.

Beach, Edward A., Altoona, Pa. Vegetable or fruit strainer. No. 960,248; June 7; Sp. p. 10; Gaz. vol. 155; p. 4.

Beach, John A., Gouverneur, N. Y. Ironing-table. No. 960,783; June 7; Sp. p. 1102; Gaz. vol. 155; p. 184.

Bealmear, Herman. (See Norman, Frederick L., assignor.)

Beard, Horace F. (See Morriss and Beard.)

Beard, Lewis J., Verna, Miss. Swingletree-hook. No. 960,784; June 7; Sp. p. 1103; Gaz. vol. 155; p. 185.

Beasley, Green O., Winona, La. Sewing-machine attachment. No. 962,731; June 28; Sp. p. 5274; Gaz. vol. 155; p. 920.

Beaudette, Telesphore J., Los Angeles, Cal. Pump-governor. No. 960,249; June 7; Sp. p. 11; Gaz. vol. 155; p. 5.

Beaudry, Alexander, East Weymouth, assignor to Beaudry & Co., Inc., Boston, Mass. Power-hammer. No. 960,785; June 7; Sp. p. 1104; Gaz. vol. 155; p. 185.

Beaudry & Co. (See Beaudry, Alexander, assignor.)

Beck Flaming Lamp Company. (See Beck, Heinrich, assignor.)

Beck, Heinrich, Frankfort-on-the-Main, Germany, assignor to Beck Flaming Lamp Company, Canton, N. Y. Electric-arc lamp. No. 962,732; June 28; Sp. p. 5275; Gaz. vol. 155; p. 920.

Becker, Grover C. (See Becker, John H. and G. C.)

Becker, John H., Mansfield, and G. C. Becker, Crestline, Ohio. Reciprocating valve. No. 960,786; June 7; Sp. p. 1108; Gaz. vol. 155; p. 185.

Becker, Louis A., assignor to L. A. Becker Company, Chicago, Ill. Swinging corner-bracket for show-cases. No. 960,488; June 7; Sp. p. 486; Gaz. vol. 155; p. 81.

Beckman, Bernard C. (See Hayes, Harley H., assignor.)

Bede, William H., et al. (See Carpenter, Alexander, assignor.)

Beehler, William, assignor to Owosso Manufacturing Company, Owosso, Mich. Crate. No. 960,484; June 7; Sp. p. 486; Gaz. vol. 155; p. 82.

Beeler, Abraham T., Kansas City, Mo., assignor of one-half to I. W. Beeler, Kansas City, Kans. Floor-scraper. No. 960,787; June 7; Sp. p. 1109; Gaz. vol. 155; p. 185.

Beeler, Isaac W. (See Beeler, Abraham T., assignor.)

Beenken, John N., Philadelphia, Pa. Nose feeding-bag. No. 960,250; June 7; Sp. p. 14; Gaz. vol. 155; p. 5.

Beenken, John N., Philadelphia, Pa. Sweat-band for hats. No. 960,251; June 7; Sp. p. 16; Gaz. vol. 155; p. 6.

Beers, Charles F., Newark, N. J. Lock-washer. No. 961,204; June 14; Sp. p. 1951; Gaz. vol. 155; p. 353.

Behler, George W., Three Oaks, Mich. Combined match-safe and cigar-cutter. No. 961,066; June 7; Sp. p. 1662; Gaz. vol. 155; p. 278.

Behrens, Ernst A., Bremen, assignor to Maschinenfabrik Sürth G. m. b. H., Sürth, near Cologne, Germany. Manufacturing carbonic acid. No. 960,788; June 7; Sp. p. 1112; Gaz. vol. 155; p. 186.

Behringer, Emil and H., Brooklyn, N. Y. Radiator. No. 962,189; June 21; Sp. p. 4096; Gaz. vol. 155; p. 711.

Behringer, Herman. (See Behringer, Emil and H.)

Beiriger, Edward C. (See Cassidy, William T., assignor.)

Belden, Charles H., Clifton Springs, N. Y. Air-pump. No. 960,789; June 7; Sp. p. 1114; Gaz. vol. 155; p. 186.

Belfield, A. Miller, et al., trustees. (See Davis, Charles L., assignor.)

Belknap, Frank D., New York, N. Y. Card-type-writing machine. No. 960,252; June 7; Sp. p. 17; Gaz. vol. 155; p. 6.

Bell, Dillwyn M., Oak Park, assignor to The Bastian-Blessing Company, Chicago, Ill. Speedometer. No. 961,835; June 21; Sp. p. 3306; Gaz. vol. 155; p. 589.

Bell, John E., Geddes, S. D. Water-motor. No. 961,749; June 21; Sp. p. 3114; Gaz. vol. 155; p. 561.

Bell, Joseph T., Leola, S. D. Horse-rake. No. 960,253; June 7; Sp. p. 19; Gaz. vol. 155; p. 7.

Bell, Margaret D., Topeka, Kans. Fastening device for chair parts. No. 962,613; June 28; Sp. p. 5027; Gaz. vol. 155; p. 879.

Bellusso, Giuseppe, Milan, Italy. Elastic-fluid turbine. No. 961,067; June 7; Sp. p. 1663; Gaz. vol. 155; p. 278.

Bellwood, E. C. (See Thurston, Thomas O., assignor.)

Beltz, John H., assignor of one-half to A. Mohr, St. Paul, Minn. Coupling device. No. 962,733; June 28; Sp. p. 5277; Gaz. vol. 155; p. 921.

Beluse, Claudius. (See Langénieux, Lucien, assignor.)

Bement, Frank, Shrewsbury, Mass. Machine for making chain-cloth. No. 960,485; June 7; Sp. p. 489; Gaz. vol. 155; p. 82.

Benedict, Charles F., Brooklyn, assignor to S. Kanner, New York, N. Y. Razor-stropping device. No. 962,190; June 21; Sp. p. 4099; Gaz. vol. 155; p. 711.

Bengert, John F., Denver, Colo. Pipe. No. 961,575; June 14; Sp. p. 2760; Gaz. vol. 155; p. 478.

Benjamin, Abner M., Dayton, Ohio. Boltless locking-body for connecting track-rail sections. No. 960,790; June 7; Sp. p. 1116; Gaz. vol. 155; p. 187.

Benjamin, George H., New York, N. Y. Soldering chains. No. 962,413; June 28; Sp. p. 4578; Gaz. vol. 155; p. 810.

Bennett, Charles A., Dover, N. J. Internal-combustion engine. No. 960,254; June 7; Sp. p. 20; Gaz. vol. 155; p. 7.

Bennett, Winchester, assignor to Winchester Repeating Arms Co., New Haven, Conn. Take-down firearm. No. 961,576; June 14; Sp. p. 2761; Gaz. vol. 155; p. 478.

Bennis, Alfred W., Little Hulton, England. Chain-grate furnace. No. 962,734; June 28; Sp. p. 5278; Gaz. vol. 155; p. 921.

Bens, Samuel J. (See Hubbard and Bens.)

Bentley, Eddie, Lincoln, Ill. Step-ladder. No. 962,881; June 28; Sp. p. 5568; Gaz. vol. 155; p. 974.

Berard, Albert J. (See Robidoux, Louis, assignor.)

Berg, Alvin and R., assignors of one-third to A. A. Johnson, Sparta, Mich. Bedstead. No. 960,486; June 7; Sp. p. 494; Gaz. vol. 155; p. 82.

Berg, Robert. (See Berg, Alvin and R.)

Bergell, Peter. (See Fischer and Bergell.)

Bergener, Charles, assignor to C. T. Ham Manufacturing Company, Rochester, N. Y. Tubular lantern. No. 962,114; June 21; Sp. p. 3929; Gaz. vol. 155; p. 684.

Berger Manufacturing Company, The. (See Schlafly, Julius H., assignor.)

Bergmark, Charles O., Chicago, Ill. Feed-water regulator. No. 961,577; June 14; Sp. p. 2762; Gaz. vol. 155; p. 479.

Berkowitz, Louis I., Boston, Mass. Hammock-support. No. 961,400; June 14; Sp. p. 2371; Gaz. vol. 155; p. 419.

Berlin-Anhaltische Maschinenbau-Actien-Gesellschaft. (See Stell, Edmund, assignor.)

Berman, Abraham, Atlanta, Ga. Straw-dispenser. No. 962,300; June 21; Sp. p. 4328; Gaz. vol. 155; p. 747.

Bernard, William A., assignor to The William Schollhorn Company, New Haven, Conn. Pliers, nippers, and similar tool. No. 962,414; June 28; Sp. p. 4583; Gaz. vol. 155; p. 810.

Bernhardt Manufacturing Company. (See Gerling, Charles H., assignor.)

Bernstein, Henry, Philadelphia, Pa. Manufacture of artificial silk. No. 960,791; June 7; Sp. p. 1118; Gaz. vol. 155; p. 187.

Bertke, Beraard, Cranberry Prairie, Ohio. Unloading apparatus. No. 961,818; June 14; Sp. p. 2264; Gaz. vol. 155; p. 400.

Best, Ezra, et al. (See Best, William N., assignor.)

Best, John H., et al. (See Best, William N., assignor.)

Best, William N., New York, N. Y., assignor to J. H. and E. Best, Quincy, Ill. Heating and melting metals. No. 961,674; June 14; Sp. p. 2961; Gaz. vol. 155; p. 512.

Bettendorf, William P., Davenport, Iowa. Draft-rigging. No. 960,255; June 7; Sp. p. 23; Gaz. vol. 155; p. 7.

Bettigole, Samel, New Haven, Conn. Curtain-bracket. No. 960,792; June 7; Sp. p. 1118; Gaz. vol. 155; p. 187.

Betts, Charles L., assignor to R. E. Dietz Company, New York, N. Y. Burner-fastening for lamps and lanterns. No. 962,115; June 21; Sp. p. 3930; Gaz. vol. 155; p. 685.

Bevans, James W., Washington, D. C. Toy book. No. 961,675; June 14; Sp. p. 2962; Gaz. vol. 155; p. 512.

Beyer, August, Buffalo, N. Y. Combination-faucet. No. 961,426; June 14; Sp. p. 2430; Gaz. vol. 155; p. 426.

Beyerle, Frank C., assignor of one-half to R. M. Mobius, San Diego, Cal. Reversible steam-turbine. No. 961,205; June 14; Sp. p. 1953; Gaz. vol. 155; p. 353.

Beymer, Adelbert S., Kansas City, Mo. Corn-planter. No. 960,457; June 7; Sp. p. 496; Gaz. vol. 155; p. 83.

Bice, Walter H., Maple Lodge, Ontario, assignor of one-half to A. Westman and one-sixth to W. R. Colby, London, Canada. Water-feed regulator. No. 962,735; June 28; Sp. p. 5280; Gaz. vol. 155; p. 921.

Bice, Walter H., Maple Lodge, Ontario, assignor of one-half to A. Westman and one-sixth to W. R. Colby, London, Canada. Pump-governor. No. 962,736; June 28; Sp. p. 5282; Gaz. vol. 155; p. 922.

Bice, Walter H., Maple Lodge, Ontario, assignor of one-third to A. Westman and one-sixth to W. R. Colby, London, Ontario, Canada. Automatic pressure-reduction valve. No. 962,737; June 28; Sp. p. 5284; Gaz. vol. 155; p. 922.

Bice, Walter H., Maple Lodge, Ontario, assignor of one-sixth to W. R. Colby and one-half to A. Westman, London, Canada. Water-feed regulator. No. 963,019; June 28; Sp. p. 5816; Gaz. vol. 155; p. 1018.

Bickel, Henry F., New York, N. Y., assignor to New York Air Brake Company. Pressure-retaining valve. No. 962,545; June 28; Sp. p. 4877; Gaz. vol. 155; p. 856.

Bickel, Henry F., New York, N. Y., assignor to New York Air Brake Company. Air-brake apparatus. No. 962,546; June 28; Sp. p. 4879; Gaz. vol. 155; p. 856.

Bierman, Edward R., Lorain, and G. H. Keast, Elyria, Ohio, assignors to National Tube Company, Pittsburg, Pa. Guiding apparatus for plate-trimming shears. No. 962,191; June 21; Sp. p. 4102; Gaz. vol. 155; p. 712.

Biggins, Henry E., Wallingford, Conn. Coffee-pot. No. 961,006; June 14; Sp. p. 1735; Gaz. vol. 155; p. 315.

Billisits, Desider, Jersey City, N. J. Fan attachment for rocking-chairs. No. 962,808; June 28; Sp. p. 5428; Gaz. vol. 155; p. 948.

Billingsly, Maud M., Beaver Falls, Pa. Drinking-cup. No. 960,619; June 7; Sp. p. 786; Gaz. vol. 155; p. 128.

Bingham, George W., Brooklyn, N. Y., assignor to The Bingham Manufacturing Company. Kinetoscope-shutter. No. 960,793; June 7; Sp. p. 1119; Gaz. vol. 155; p. 187.

Bingham, George W., Brooklyn, N. Y., assignor to The Bingham Manufacturing Company. Kinetoscope. No. 960,794; June 7; Sp. p. 1122; Gaz. vol. 155; p. 188.

Bingham Manufacturing Company, The. (See Bingham, George W., assignor.)

Bingley, John W., Watertown, N. Y., assignor to New York Air Brake Company. Air-brake apparatus. No. 962,547; June 28; Sp. p. 4884; Gaz. vol. 155; p. 857.

Bippart, Achill, Newark, N. J. Key-ring. No. 962,882; June 28; Sp. p. 5568; Gaz. vol. 155; p. 974.

Birch, Charles E. (See Birch, William M. and C. E.)

Birch, William M. and C. E., Crawfordsville, Ind. Wire-fence machine. No. 961,477; June 14; Sp. p. 2544; Gaz. vol. 155; p. 446.

Bircher, Eugene A., assignor to S. H. Kendall, Rochester, N. Y. Film-winder. No. 960,795; June 7; Sp. p. 1126; Gaz. vol. 155; p. 188.

Bishop & Co., George H. (See Wuest, Frederick A., assignor.)

Bishop, Frank. (See Emerson and Bishop.)

Bishop, William T., Mankato, Kans. Hay-baler. No. 960,796; June 7; Sp. p. 1127; Gaz. vol. 155; p. 188.

Bitting, Benjamin L., Rural Hall, N. C. Door-releasing apparatus. No. 961,578; June 14; Sp. p. 2764; Gaz. vol. 155; p. 479.

Bixel, August L., Cleveland, Ohio. Discharge-nozzle and independent cut-off valve for fire-hydrants. No. 960,620; June 7; Sp. p. 787; Gaz. vol. 155; p. 128.

Björk, Per J., New York, N. Y. Spike-puller. No. 960,621; June 7; Sp. p. 788; Gaz. vol. 155; p. 129.

Black, Raymond E. (See Cole, Charles C., assignor.)

Black, Samuel J., Meadowdale, Wash. Tree-felling device. No. 962,116; June 21; Sp. p. 3931; Gaz. vol. 155; p. 685.

Black Sand Mining Company. (See Hoyt, Ezra S., assignor.)

Blackman, Charles W., assignor to Parish & Bingham Company, Cleveland, Ohio. Gear case and housing for automobiles. No. 961,097; June 14; Sp. p. 1736; Gaz. vol. 155; p. 315.

Blackmond, William C., Tomball, and G. E. Stoy, Teague, Tex. Oil-burner. No. 962,301; June 21; Sp. p. 4329; Gaz. vol. 155; p. 747.

Blair, James H., Quebec, Quebec, Canada. Cleaning-rod for firearms. No. 962,883; June 28; Sp. p. 5570; Gaz. vol. 155; p. 974.

Blair, William E., Bay City, Mich. Engine. No. 960,797; June 7; Sp. p. 1129; Gaz. vol. 155; p. 189.

Blake, George E., Quincy, Ind. Tire-shrinker. No. 960,798; June 7; Sp. p. 1130; Gaz. vol. 155; p. 189.

Blanchard, Frederick C., E. B. Crocker, and P. G. Darling, assignors to Ashcroft Manufacturing Company, Bridgeport, Conn. Planimeter. No. 961,836; June 21; Sp. p. 3308; Gaz. vol. 155; p. 590.

Blanchard, Leon E., assignor to Reliance Speed-Meter Company, Boston, Mass. Speedometer. No. 961,676; June 14; Sp. p. 2965; Gaz. vol. 155; p. 513.

Blancke, Martin H., Merseburg, Germany. Semi-automatic turret-lathe. No. 962,000; June 21; Sp. p. 3668; Gaz. vol. 155; p. 644.

Bledsoe, James A., Atlanta, Ga. Wrench. No. 962,738; June 28; Sp. p. 5286; Gaz. vol. 155; p. 923.

Blewett, Arthur R., Spokane, Wash. Harvester. No. 960,799; June 7; Sp. p. 1132; Gaz. vol. 155; p. 189.

Blickman, Sophia, New York, N. Y. Sterilizer. No. 962,809; June 28; Sp. p. 5430; Gaz. vol. 155; p. 948.

Blixt, Frank O., Worthington, Minn. Adjustable concave. No. 962,192; June 21; Sp. p. 4105; Gaz. vol. 155; p. 712.

Block, David L., New York, N. Y. Pocket match-holder. No. 962,810; June 28; Sp. p. 5431; Gaz. vol. 155; p. 949.

Block, Louis, Mamaroneck, N. Y. Means for drying air. No. 961,710; June 14; Sp. p. 3025; Gaz. vol. 155; p. 524.

Blockl, Herbert J., Sheboygan, Wis. Tubular wrapper. No. 962,614; June 28; Sp. p. 5028; Gaz. vol. 155; p. 880.

Blower, Joseph W., Columbus, Ohio. Railway-track construction. No. 960,800; June 7; Sp. p. 1135; Gaz. vol. 155; p. 190.

Bobbitt, James H., Harvard, Nebr. Thermo-electric furnace-regulator. No. 962,884; June 28; Sp. p. 5571; Gaz. vol. 155; p. 975.

Bodmer, Christian, assignor to The Stanley Rule & Level Company, New Britain, Conn. Plane. No. 960,256; June 7; Sp. p. 26; Gaz. vol. 155; p. 8.

Bodmer, Christian, assignor to The Stanley Rule & Level Company, New Britain, Conn. Dovetail tongue and groove cutter. No. 962,885; June 28; Sp. p. 5576; Gaz. vol. 155; p. 975.

Bodwell, George A. (See Wentworth, Barton M., assignor.)

Bohl, Ernst L., and R. Y. Barrows, Rutherford, N. J. Manufacture of molds for casting metal. No. 960,257; June 7; Sp. p. 28; Gaz. vol. 155; p. 8.

Bohnengel, Andrew J., Toledo, Ohio. Attachment for cloth doubling and folding machines. No. 962,193; June 21; Sp. p. 4106; Gaz. vol. 155; p. 712.

Bolduan, Frank, and C. S. Dyas, Chicago, Ill.; said Dyas assignor to said Bolduan. Animal-poisoning product. No. 962,886; June 28; Sp. p. 5580; Gaz. vol. 155; p. 976.

Bolger, Thomas P., Gloucester, Mass. Garbage-can receptacle. No. 962,887; June 28; Sp. p. 5581; Gaz. vol. 155; p. 976.

Bollet, John. (See Ancil and Bollet.)

Bond, Albert J., London, England. Carbon-paper holder. No. 960,488; June 7; Sp. p. 501; Gaz. vol. 155; p. 83.

Bonfey, Frank E. (See Graydon, George A., assignor.)

Bonney, Charles P., Providence, R. I. Wave-operated pump. No. 961,401; June 14; Sp. p. 2373; Gaz. vol. 155; p. 420.

Bonroe, Theodore, assignor to N. O. Nelson Manufacturing Company, St. Louis, Mo. Ball-cock for water-closet cisterns. No. 960,801; June 7; Sp. p. 1137; Gaz. vol. 155; p. 190.

Boogher, John P., St. Louis, Mo. Railway-tie. No. 961,478; June 14; Sp. p. 2551; Gaz. vol. 155; p. 446.

Boone, William H., Cincinnati, Ohio. Manufacture of stencils. No. 961,579; June 14; Sp. p. 2765; Gaz. vol. 155; p. 479.

Borden, Gail. (See McPherson, William B., assignor.)

Boregard, William H., Spokane, Wash. Swimming apparatus. No. 962,415; June 28; Sp. p. 4584; Gaz. vol. 155; p. 810.

Bostock, Edwin, Stafford, England. Copying-lathe. No. 961,580; June 14; Sp. p. 2767; Gaz. vol. 155; p. 480.

Boston Coupling Company. (See Barker, John J., assignor.)

Boswell, Edmund N. (See Allner and Boswell.)

Bouchard, Everiste, Providence, R. I. Mat. No. 961,929; June 21; Sp. p. 3511; Gaz. vol. 155; p. 620.

Boudreau, Peter, assignor of one-half to A. E. Guertin, Spokane, Wash. Clamp. No. 960,258; June 7; Sp. p. 29; Gaz. vol. 155; p. 9.

Bourquenez, Leon A., Botsford, Conn. Tire-plug. No. 962,615; June 28; Sp. p. 5030; Gaz. vol. 155; p. 880.

Bowen, Clarence C. (See Coffey and Bowen.)

Bowen, Ernest S., assignor of one-half to W. L. Fay, Geneva, N. Y. Explosive-engine. No. 961,581; June 14; Sp. p. 2771; Gaz. vol. 155; p. 480.

Bowen, Philip A., Newark, N. J., assignor to The Heinn Company, Milwaukee, Wis. Sectional post-binder ball-lock. No. 962,416; June 28; Sp. p. 4585; Gaz. vol. 155; p. 811.

Bowerbank, Albert W. (See Parsons and Bowerbank.)

Bowhay, Arnold A. (See Ware, James F., assignor.)

Bowser, Sylvanus F., Fort Wayne, Ind. Massage device. No. 961,479; June 14; Sp. p. 2552; Gaz. vol. 155; p. 447.

Boyd, Frederic R. C., Lynn, Mass., assignor to General Electric Company. Emergency governing mechanism for turbines. No. 960,259; June 7; Sp. p. 30; Gaz. vol. 155; p. 9.

Boyer, Oram A., Harrisburg, Pa. Elastic-fluid turbine. No. 960,260; June 7; Sp. p. 34; Gaz. vol. 155; p. 9.

Boykin, Christopher C., assignor of two-thirds to Tidewater Specialty Company, Norfolk, Va. Roller window-screen. No. 962,302; June 21; Sp. p. 4330; Gaz. vol. 155; p. 748.

Boyle, Dad, Amarillo, Tex. Vending-wagon. No. 960,802; June 7; Sp. p. 1138; Gaz. vol. 155; p. 190.
Boyle, James M., New York, N. Y. Electrical receiving apparatus. No. 962,417; June 28; Sp. p. 4589; Gaz. vol. 155; p. 811.
Brace, Henry P., Chicago, Ill. Street-indicator. No. 960,803; June 7; Sp. p. 1141; Gaz. vol. 155; p. 191.
Braden, John E., Rowan, Iowa. Grain-loading machine. No. 962,194; June 21; Sp. p. 4106; Gaz. vol. 155; p. 713.
Bradley, John W., assignor of one-half to J. E. Zickrick, Seattle, Wash. Internal-combustion engine. No. 961,677; June 14; Sp. p. 2967; Gaz. vol. 155; p. 513.
Bradley, Joseph H., Hunwick, E. Nichol, Croxdale, and T. L. Nichol, Sunderland, England. Artificial foot. No. 961,582; June 14; Sp. p. 2773; Gaz. vol. 155; p. 481.
Bradley, William H., Chicago, Ill. Separator. No. 962,117; June 21; Sp. p. 3933; Gaz. vol. 155; p. 685.
Bradley, William H., Chicago, Ill. Drying apparatus. No. 962,118; June 21; Sp. p. 3938; Gaz. vol. 155; p. 686.
Bradley, William H., Chicago, Ill. Peat-preparing process. No. 962,119; June 21; Sp. p. 3941; Gaz. vol. 155; p. 686.
Bradley, William H., Chicago, Ill. Peat-preparing apparatus. No. 962,120; June 21; Sp. p. 3946; Gaz. vol. 155; p. 687.
Bradshaw, Samuel P., Pittsfield, Mass. Skidding device for railway-cars. No. 961,098; June 14; Sp. p. 1738; Gaz. vol. 155; p. 316.
Brady, James J., Chester, Ga. Seed and fertiliser distributer. No. 960,261; June 7; Sp. p. 36; Gaz. vol. 155; p. 10.
Bragstad Bros. Co., Inc., The. (See Bragstad, Joseph W., assignor.)
Bragstad, Joseph W., assignor to The Bragstad Bros. Co., Inc., Canton, S. D. Building-block mold. No. 962,303; June 21; Sp. p. 4234; Gaz. vol. 155; p. 748.
Braithwaite, George. (See Elder, Oscar B., assignor.)
Brand, George B., assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 960,804; June 7; Sp. p. 1144; Gaz. vol. 155; p. 191.
Brand, George P., New York, N. Y. Accentuating mechanism for pneumatic players. No. 960,262; June 7; Sp. p. 38; Gaz. vol. 155; p. 10.
Brandtman, Charles E., Wheeling, W. Va. Automatic railway-switch. No. 962,739; June 28; Sp. p. 5287; Gaz. vol. 155; p. 923.
Branth, John H., New York, N. Y. High-speed boat. No. 961,750; June 21; Sp. p. 3115; Gaz. vol. 155; p. 561.
Brauer, Carl, Hostomitz, near Teplitz, Austria-Hungary. Delivery apparatus for bottle-annealing furnaces. No. 962,811; June 28; Sp. p. 5434; Gaz. vol. 155; p. 949.
Braun, Jacob G., Chicago, Ill. Protector-plate for edges of concrete steps. No. 960,489; June 7; Sp. p. 503; Gaz. vol. 155; p. 84.
Bredeuberg, Maximilian, Neuwerder, near Radomno, Germany. Device for lacing boots. No. 961,711; June 14; Sp. p. 3029; Gaz. vol. 155; p. 524.
Breene, Harry A. (See Penovi and Breene.)
Breihan, Frederick F., Bartlett, Tex. Supplementary vehicle-seat. No. 961,480; June 14; Sp. p. 2555; Gaz. vol. 155; p. 447.
Brennan, Maurice W., Maskell, Nebr. Manure-loader. No. 960,490; June 7; Sp. p. 504; Gaz. vol. 155; p. 84.
Bretz, George E., assignor to W. S. Judy, Dayton, Ohio. Noodle-cutter. No. 961,337; June 14; Sp. p. 2268; Gaz. vol. 155; p. 400.
Brice, May C. (See Thompson and Brice.)
Briffod, Alphonse, New Orleans, La. Reinforced-concrete jacket for piling. No. 961,837; June 21; Sp. p. 3812; Gaz. vol. 155; p. 590.
Brigden, Arthur, Albertville, Ala. Spring-tooth cultivator. No. 962,001; June 21; Sp. p. 3664; Gaz. vol. 155; p. 644.
Briggs, Arthur J., assignor to The Smith Premier Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 962,616; June 28; Sp. p. 5030; Gaz. vol. 155; p. 880.
Brigham, Joseph W., Smiths Ferry, assignor of one-half to W. C. McLeod, Holyoke, Mass. Holder for interchangeable scales. No. 962,399; June 21; Sp. p. 4519; Gaz. vol. 155; p. 780.
Bright, Frederick W., Kansas City, Kans. Spreading-section for overhead conveyers. No. 961,338; June 14; Sp. p. 2270; Gaz. vol. 155; p. 400.
Bright, Robert A., Jacksonville, Fla. Oil-burner. No. 960,491; June 7; Sp. p. 500; Gaz. vol. 155; p. 84.
Brill, Benjamin, Jr., North Bay, Ontario, and A. A. Thompson, Montreal, Quebec, Canada. Rail and joint therefor. No. 962,740; June 28; Sp. p. 5289; Gaz. vol. 155; p. 923.
Brillhart, Michael D., Sterling, Ohio. Horseshoe. No. 962,812; June 28; Sp. p. 5433; Gaz. vol. 155; p. 949.
Brinley, Charles A., assignor to The American Pulley Company, Philadelphia, Pa. Pulley. No. 962,548; June 28; Sp. p. 4886; Gaz. vol. 155; p. 857.
Brinser, Eli H. G., assignor of one-tenth to C. K. Musser, Elizabethtown, Pa. Milk-dispensing vessel. No. 960,492; June 7; Sp. p. 503; Gaz. vol. 155; p. 85.
Brisbois, Odilon, assignor to Automatic Starter Company, Chicago, Ill. Starter for hydrocarbon-engines. No. 960,493; June 7; Sp. p. 509; Gaz. vol. 155; p. 85.
Bristol Brass Company, The. (See Wright, Henry C., assignor.)
Brochu, Michael, assignor to Valley City Machine Works, Grand Rapids, Mich. Dowel-machine. No. 961,930; June 21; Sp. p. 3512; Gaz. vol. 155; p. 620.
Brodegaard, Frederik W. (See Neve, William, assignor.)
Broderick, Ernest N., Detroit, Mich. Carburetor. No. 961,284; June 14; Sp. p. 2130; Gaz. vol. 155; p. 382.
Bromwell, Jacob H., *et al.* (See Auble, James H., assignor.)
Brook, Arthur S., Rutherford, N. J. Organ-pipe. No. 960,263; June 7; Sp. p. 46; Gaz. vol. 155; p. 11.
Brooks, Edward J., East Orange, N. J. Snap-seal. No. 960,805; June 7; Sp. p. 1150; Gaz. vol. 155; p. 191.
Brooks, Edward J., East Orange, N. J. Cording-seal. No. 961,931; June 21; Sp. p. 3513; Gaz. vol. 155; p. 621.
Brooks, Winfred M., East Orange, N. J., assignor to E. J. Brooks & Co., New York, N. Y. Box-strap puller, cutter, and nail-guide. No. 960,494; June 7; Sp. p. 512; Gaz. vol. 155; p. 85.
Broome, Henry, Springfield, Ohio. Cherry-seeder. No. 961,838; June 21; Sp. p. 3312; Gaz. vol. 155; p. 590.
Broome, Lewis H., Jersey City, N. J. Temple for eyeglasses. No. 962,549; June 28; Sp. p. 4887; Gaz. vol. 155; p. 858.
Brosnan, Cornelius J., assignor of one-half to A. Webster, Springfield, Mass. Pressure-regulating device for pneumatic tires. No. 961,427; June 14; Sp. p. 2433; Gaz. vol. 155; p. 429.
Brostrom, Carl F., and F. Lang, Eagle Bend, Minn. Litter-carrier. No. 961,712; June 14; Sp. p. 3030; Gaz. vol. 155; p. 524.
Broughton, Lyman D., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 962,121; June 21; Sp. p. 3960; Gaz. vol. 155; p. 687.
Brower, Abraham T. H., Chicago, Ill. Bed-and-cylinder printing-press. No. 961,206; June 14; Sp. p. 1955; Gaz. vol. 155; p. 354.
Brown, Alexander T., Syracuse, N. Y. Type-writing machine. No. 962,418; June 28; Sp. p. 4593; Gaz. vol. 155; p. 812.
Brown, Barney, *et al.* (See Opitz, Frank E., assignor.)
Brown, Charles F., trustee. (See Pierson, Robert M., assignor.)
Brown, Charles F., trustee. (See Reeve, Sidney A., assignor.)
Brown, Charles F., St. Louis, Mo. Pin-tray. No. 960,622; June 7; Sp. p. 790; Gaz. vol. 155; p. 129.
Brown, David, Spokane, Wash. Pulsator for milking-machines. No. 961,932; June 21; Sp. p. 3515; Gaz. vol. 155; p. 621.
Brown, David E., and L. L. Kast, Cresson, Pa. Knock-down barrel. No. 962,938; June 28; Sp. p. 5664; Gaz. vol. 155; p. 992.
Brown, Herman G., assignor of one-half to A. F. Moody, Salt Lake City, Utah. Brake for machinery. No. 961,099; June 14; Sp. p. 1740; Gaz. vol. 155; p. 316.
Brown, Nathaniel H., assignor to Williams, Brown and Earle, Philadelphia, Pa. Blue-printing machine. No. 962,741; June 28; Sp. p. 5290; Gaz. vol. 155; p. 924.
Brown, Robert S., assignor to The New Britain Machine Company, New Britain, Conn. Stock-drawer. No. 962,122; June 21; Sp. p. 3953; Gaz. vol. 155; p. 687.
Brown, Ross D., assignor of one-half to R. H. Rifle, Muncie, Ind. Glass-gathering machine. No. 960,264; June 7; Sp. p. 48; Gaz. vol. 155; p. 11.
Brown Straw Binder Company, The. (See Hancock, Harry A., assignor.)
Brown, Thomas H., assignor to The Buchanan Foundry Company, Lebanon, Pa. Apparatus for molding. No. 962,002; June 21; Sp. p. 3667; Gaz. vol. 155; p. 644.
Brown, William B., Pittsburg, Pa. Wrench. No. 962,304; June 21; Sp. p. 4337; Gaz. vol. 155; p. 749.
Brown, William J., Chicago, Ill. Locomotive-ash-pan-dumping device. No. 960,806; June 7; Sp. p. 1152; Gaz. vol. 155; p. 192.
Brown, William M., Johnstown, Pa., assignor to The Lorain Steel Company. Retaining device for switch-points. No. 960,265; June 7; Sp. p. 56; Gaz. vol. 155; p. 12.
Brown, William S., Enterprise, W. Va. Shipping-card holder. No. 961,678; June 14; Sp. p. 2970; Gaz. vol. 155; p. 514.
Browne, Charles A. (See Weston, Lawrence G., assignor.)
Browne, Louis L., Matteawan, N. Y. Washtray. No. 962,419; June 28; Sp. p. 4600; Gaz. vol. 155; p. 812.
Browne, Ralph C., Salem, assignor to J. Abbott, Winchester, Mass. Current-reinforcing means. No. 960,495; June 7; Sp. p. 514; Gaz. vol. 155; p. 85.
Brownson, Ralph, St. Paul, Minn. Ash-shovel. No. 960,266; June 7; Sp. p. 58; Gaz. vol. 155; p. 13.
Bruder, Albert A. and A. J., Detroit, Mich. Ventilating device for water-closets. No. 962,490; June 28; Sp. p. 4755; Gaz. vol. 155; p. 837.
Bruder, August J. (See Bruder, Albert A. and A. J.)
Brukenhaus, Robert, Haspe, near Hagen, Germany. Regulating apparatus for hot-water pipes and the like. No. 961,402; June 14; Sp. p. 2377; Gaz. vol. 155; p. 420.
Brunhoff Manufacturing Company, The. (See Walker, Edwin, assignor.)
Brunner, Hans, Spokane, Wash. Filter. No. 960,267; June 7; Sp. p. 59; Gaz. vol. 155; p. 13.
Bryant Electric Company, The. (See Badeau, Harry U., assignor.)
Bryant Electric Company, The. (See Castonguay, Leger J., assignor.)
Bryant Electric Company, The. (See Goodridge, Gilbert W., assignor.)

Bryant, Ellsworth S., Detroit, Mich. Reversible propeller. No. 961,285; June 14; Sp. p. 2132; Gaz. vol. 155; p. 382.
Bryant, William A., assignor of nine-twentieths to J. A. Lancaster and J. R. Gamble, Wetumpka, Ala. Expansion-bolt. No. 962,306; June 21; Sp. p. 4338; Gaz. vol. 155; p. 749.
Bucceri, Ignazio, Brooklyn, assignor of one-half to F. Ricart, New York, N. Y. Inhaler. No. 962,617; June 28; Sp. p. 5033; Gaz. vol. 155; p. 880.
Buchanan Foundry Company, The. (See Brown, Thomas H., assignor.)
Buchanan, Frank L., St. Louis, Mo. Jig. No. 962,618; June 28; Sp. p. 5035; Gaz. vol. 155; p. 880.
Buchanan, Judson, Chattanooga, Tenn. Plow. No. 962,195; June 21; Sp. p. 4111; Gaz. vol. 155; p. 713.
Buckingham, John L., Laton, Cal. Combination-harrow. No. 962,742; June 28; Sp. p. 5292; Gaz. vol. 155; p. 924.
Buckley, Arthur H., Cincinnati, Ohio. Manufacture of ice. No. 961,839; June 21; Sp. p. 3318; Gaz. vol. 155; p. 590.
Buckmaster, Edward J., Laurel Hill, N. Y. Boiler-tube cleaner. No. 960,496; June 7; Sp. p. 516; Gaz. vol. 155; p. 86.
Buckwalter, Tracy V., Altoona, Pa. Steering-knuckle. No. 962,491; June 28; Sp. p. 4756; Gaz. vol. 155; p. 838.
Buda Foundry & Manufacturing Company. (See Place and Jenkins, assignors.)
Buell, William H., assignor to Winchester Repeating Arms Co., New Haven, Conn. Primer for small-arm ammunition. No. 962,888; June 28; Sp. p. 5582; Gaz. vol. 155; p. 976.
Buellenbach, Joseph, New York, N. Y. Hinge for self-closing gates. No. 960,268; June 7; Sp. p. 61; Gaz. vol. 155; p. 13.
Buffelen, John, Tacoma, Wash. Gluing-machine. No. 962,619; June 28; Sp. p. 5038; Gaz. vol. 155; p. 881.
Buffum, Frederick D., H. N. Eavenson, and E. O'Toole, Gary, W. Va., assignors to United States Coal & Coke Company, Pittsburg, Pa., and Gary, W. Va. Coke-oven door. No. 962,123; June 21; Sp. p. 3956; Gaz. vol. 155; p. 688.
Bullock Electric Manufacturing Company, The. (See Cheney, Herbert W., assignor.)
Bullock Electric Manufacturing Company, The, *et al.* (See Cheney, Herbert W., assignor.)
Bullock Electric Manufacturing Company, The, *et al.* (See Kwis, Arthur F., assignor.)
Bullock Electric Manufacturing Company, The. (See Van Valkenburg, Hermon, assignor.)
Bumpus, Elmer E., Seattle, Wash. Separable hinge for screens. No. 961,751; June 21; Sp. p. 3118; Gaz. vol. 155; p. 562.
Bundy, Clifton L., and A. H. Manwaring, assignors to Philadelphia Electrical & Manufacturing Co., Philadelphia, Pa. Street-lamp socket. No. 960,807; June 7; Sp. p. 1154; Gaz. vol. 155; p. 192.
Bunker, Carey E., Oregon, Mo. Electric time-switch. No. 962,307; June 21; Sp. p. 4339; Gaz. vol. 155; p. 749.
Bunnell, Horry C., Westport, N. Y. Window-ventilator. No. 961,403; June 14; Sp. p. 2378; Gaz. vol. 155; p. 421.
Burch, Frederick W., Pueblo, Colo. Fruit-picking bag. No. 960,809; June 7; Sp. p. 1153; Gaz. vol. 155; p. 193.
Burdette, Robert T., Los Angeles, Cal. Hand-brake for railway-cars. No. 962,693; June 28; Sp. p. 5189; Gaz. vol. 155; p. 906.
Burdick, Paul C., and R. Jessop, Ogden, Utah. Portable power-saw. No. 962,008; June 21; Sp. p. 3668; Gaz. vol. 155; p. 645.
Burdick, W. A., *et al.* (See Ivers, John W., assignor.)
Burgess, John G., San Diego, Cal. Vegetable hair-tonic. No. 961,840; June 21; Sp. p. 3320; Gaz. vol. 155; p. 591.
Burgunder, Richard, McKees Rocks, assignor of one-tenth to C. Byerly, Pittsburg, Pa. Rail-joint. No. 962,813; June 28; Sp. p. 5434; Gaz. vol. 155; p. 949.
Burhorn, Edwin, Hoboken, N. J. Cooling-tower. No. 961,100; June 14; Sp. p. 1741; Gaz. vol. 155; p. 316.
Burkart, Max F., Jr., San Francisco, Cal. Tree-holder. No. 960,407; June 7; Sp. p. 517; Gaz. vol. 155; p. 86.
Burke, Anslem L., Galesburg, Ill., assignor to Adams & Johnson Co. Adjustable horse-collar. No. 960,810; June 7; Sp. p. 1159; Gaz. vol. 155; p. 193.
Burke, John, assignor of one-half to E. Mandelbaum, Cleveland, Ohio. Horn. No. 960,811; June 7; Sp. p. 1161; Gaz. vol. 155; p. 193.
Burke, William C., Scalp Level, Pa. Carpet-stretcher. No. 961,679; June 14; Sp. p. 2970; Gaz. vol. 155; p. 514.
Burlingame, Clifford R., Coe, Mich. Casing for concrete tile. No. 962,074; June 21; Sp. p. 3828; Gaz. vol. 155; p. 670.
Burnett, Archibald, Phoenix, British Columbia, Canada. Gas-engine. No. 960,498; June 7; Sp. p. 518; Gaz. vol. 155; p. 86.
Burnett, Charles E., Walworth, N. Y. Caster. No. 962,308; June 21; Sp. p. 4343; Gaz. vol. 155; p. 750.
Burnham, George A., Saugus, assignor to S. B. Condit, Jr., Boston, Mass. Shock-absorbing and cord-adjusting device for incandescent electric lamps. No. 960,269; June 7; Sp. p. 62; Gaz. vol. 155; p. 13.
Burns, Frank A., Anaconda, Mont. Reverberatory furnace. No. 960,499; June 7; Sp. p. 521; Gaz. vol. 155; p. 87.
Burr, Frank W., Monrovia, Cal. Device to prevent friction on railway-curves. No. 960,812; June 7; Sp. p. 1162; Gaz. vol. 155; p. 194.
Burridge, Lee S., New York, N. Y. Type-writing machine. No. 961,101; June 14; Sp. p. 1742; Gaz. vol. 155; p. 316.
Burroughs Adding Machine Company. (See Kreis, Oscar C., Jr., assignor.)
Burrow, Nancy I. (See Hoffman, Jesse D., assignor.)
Burry, John, deceased; M. Burry, executrix, assignor to The Stock Quotation Telegraph Company, New York, N. Y. Printing-telegraph receiver. No. 962,604; June 28; Sp. p. 5191; Gaz. vol. 155; p. 907.
Burry, Marie, executrix. (See Burry, John.)
Burt, Edwin, El Oro, Mexico. Process of filtration. No. 961,713; June 14; Sp. p. 3032; Gaz. vol. 155; p. 525.
Burtner, Jacob H., Keedysville, Md. Chain-pump bucket. No. 961,933; June 21; Sp. p. 3517; Gaz. vol. 155; p. 621.
Burton, Frank F., assignor to Winchester Repeating Arms Co., New Haven, Conn. Telescope-sight mount for firearms. No. 960,913; June 7; Sp. p. 1165; Gaz. vol. 155; p. 194.
Burton, Frank F., assignor to Winchester Repeating Arms Co., New Haven, Conn. Sliding operating-handle for firearms. No. 962,880; June 28; Sp. p. 5583; Gaz. vol. 155; p. 976.
Bussell, John N., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in the manufacture of boots and shoes. No. 961,752; June 21; Sp. p. 3119; Gaz. vol. 155; p. 562.
Buser, Joseph J., Freedom, Pa. Gem-mounting. No. 962,305; June 21; Sp. p. 4338; Gaz. vol. 155; p. 749.
Butler, Albert, Mason, Mich. Stack and shed cover. No. 960,270; June 7; Sp. p. 64; Gaz. vol. 155; p. 14.
Butler, Clinton C., assignor to William Galloway Company, Waterloo, Iowa. Adjustable clamp. No. 962,620; June 28; Sp. p. 5041; Gaz. vol. 155; p. 881.
Butler, Cora A., Chicago, Ill. Burner and support for vaporizers. No. 960,500; June 7; Sp. p. 524; Gaz. vol. 155; p. 87.
Butler, Henry, Worcester, Mass. Fishing appliance. No. 962,309; June 21; Sp. p. 4345; Gaz. vol. 155; p. 750.
Buyhers, James, Casey, Ill. Steam-boiler. No. 961,982; June 7; Sp. p. 1706; Gaz. vol. 155; p. 283.
Byerly, Clara. (See Burgunder, Richard, assignor.)
Byrd, Atvill, and C. R. Treadway, Kansas City, Mo. Harness for controlling animals. No. 962,890; June 28; Sp. p. 5584; Gaz. vol. 155; p. 976.
C. M. Hall Lamp Company. (See French, Warren, assignor.)
C. T. Ham Manufacturing Company. (See Bergener, Charles, assignor.)
Cabanne, Charles G., St. Louis, Mo. Means for securing tires to vehicle-wheels. No. 962,814; June 28; Sp. p. 5435; Gaz. vol. 155; p. 950.
Caire, Philippe. (See Balschowsky and Caire.)
California Fruit Canners Association. (See Keast, Alfred J., assignor.)
California Valve and Air Brake Company. (See Neal and Childress, assignors.)
California Valve and Air Brake Company, The. (See Sheasby and Neal, assignors.)
Call, Thomas J., assignor of four-tenths to W. T. Leverenz, Danville, Ill. Fastener for furniture. No. 962,930; June 28; Sp. p. 5665; Gaz. vol. 155; p. 992.
Callaway, George E., Jonesboro, La. Rotary engine. No. 962,310; June 21; Sp. p. 4347; Gaz. vol. 155; p. 750.
Calson, Christy, South Bend, Wash. Scaffold-chair. No. 960,501; June 7; Sp. p. 526; Gaz. vol. 155; p. 87.
Campbell, John R. (See Converse, William E., assignor.)
Campbell, Leon J., Chicago, Ill. Seal-lock. No. 960,271; June 7; Sp. p. 64; Gaz. vol. 155; p. 14.
Campbell Printing Press & Manufacturing Company, The. (See Johnston, Robert T., assignor.)
Campbell, William A., Oakland, Cal. Skid. No. 962,815; June 28; Sp. p. 5437; Gaz. vol. 155; p. 950.
Canaday, William R., assignor of one-half to G. B. Ward, Fairview, Okla. Land-roller. No. 962,311; June 21; Sp. p. 4351; Gaz. vol. 155; p. 751.
Capen, Joseph S., Stoughton, Mass. Rubber. No. 960,814; June 7; Sp. p. 1166; Gaz. vol. 155; p. 194.
Capewell, William C., Hotchkissville, Conn. Flying toy. No. 962,743; June 28; Sp. p. 5294; Gaz. vol. 155; p. 924.
Capron, Adoniram M., Bridgeport, Nebr. Hame attachment. No. 960,272; June 7; Sp. p. 65; Gaz. vol. 155; p. 14.
Card, George F., Three Rivers, Mich. Recording device. No. 962,492; June 28; Sp. p. 4757; Gaz. vol. 155; p. 838.
Cardwell, James R., Chicago, Ill. Car construction. No. 960,502; June 7; Sp. p. 527; Gaz. vol. 155; p. 88.
Carlisle, Thomas O., Monongahela, Pa. Cut-off for fans. No. 960,815; June 7; Sp. p. 1168; Gaz. vol. 155; p. 194.
Carlson, Carl J. E., Minneapolis, Minn., assignor of one-half to W. Sears, Brookline, Mass. Check-valve for sewers. No. 961,286; June 14; Sp. p. 2134; Gaz. vol. 155; p. 383.
Carlson, Frank W., Chicago, Ill. Closet connection. No. 962,621; June 28; Sp. p. 5048; Gaz. vol. 155; p. 882.
Carlson, Walter C., Milwaukee, Wis., assignor to C. W. Hobbs, Worcester, Mass. Box-covering and corner-staying machine. No. 961,841; June 21; Sp. p. 3321; Gaz. vol. 155; p. 591.
Carmak, Hugo, Paducah, Ky. Rail-joint chair. No. 962,312; June 21; Sp. p. 4352; Gaz. vol. 155; p. 751.
Caron, Wilfrid. (See Poitras and Caron.)

Carpenter, Alexander, Findlay, assignor of one-third to A. E. Karg and two-thirds to W. H. Bede, Toledo, Ohio. Door-lock. No. 962,997; June 28; Sp. p. 5777; Gaz. vol. 155; p. 1011.

Carpenter, John L. (See Crudginton, James F., assignor.)

Carr, Robert R., Oxford, Ohio. Valve-operating mechanism. No. 960,816; June 7; Sp. p. 1169; Gaz. vol. 155; p. 195.

Carrick, James T., assignor of one-half to S. Pattison, Johannesburg, Transvaal. Wet treatment of mattes. No. 961,934; June 21; Sp. p. 3519; Gaz. vol. 155; p. 622.

Carroll, Joseph E., Portsmouth, Ohio. Buggy-boot. No. 960,629; June 7; Sp. p. 802; Gaz. vol. 155; p. 131.

Carter, Byron J., assignor to Motor Car Co., Detroit, Mich. Adjustable journal-bearing. No. 962,124; June 21; Sp. p. 3957; Gaz. vol. 155; p. 688.

Carter, Charles H., Brooklyn, N. Y. Controlling device for mechanical movements. No. 961,842; June 21; Sp. p. 3322; Gaz. vol. 155; p. 591.

Carter, William C., St. Louis, Mo. Carburetor. No. 961,481; June 14; Sp. p. 2556; Gaz. vol. 155; p. 447.

Casad, Roland C., Covina, Cal. Oil-burner. No. 962,695; June 28; Sp. p. 5200; Gaz. vol. 155; p. 907.

Case, Adelbert B., Springfield, Mass. Lawn-mower. No. 960,503; June 7; Sp. p. 529; Gaz. vol. 155; p. 88.

Case, George L., Minneapolis, Minn. Sash-hanger. No. 960,817; June 7; Sp. p. 1171; Gaz. vol. 155; p. 195.

Casein Company of America. (See Dunham, Henry V., assignor.)

Casey, John R., Mountain Home, Ark. Washboard attachment. No. 962,891; June 28; Sp. p. 5586; Gaz. vol. 155; p. 977.

Casgrain, Louis A., Beverly, Mass. Speed-gage. No. 962,622; June 28; Sp. p. 5044; Gaz. vol. 155; p. 882.

Cash, Arthur W., Newark, N. J., and C. Rorabeck, New York, N. Y. Pipe-union. No. 962,075; June 21; Sp. p. 3830; Gaz. vol. 155; p. 671.

Caslow, William H., Claridge, Pa. Locking device. No. 961,753; June 21; Sp. p. 3123; Gaz. vol. 155; p. 563.

Cassella Color Company. (See Herz and Saul, assignors.)

Casselman, Lawrence, *et al.* (See Sykes, William W., assignor.)

Cassidy, George W., East Orange, N. J. Electric-lamp socket-cover and shade-holder. No. 962,076; June 21; Sp. p. 3832; Gaz. vol. 155; p. 671.

Cassidy, William T., assignor of one-half to E. C. Belriger, Chicago, Ill. Indicating-bottle. No. 962,004; June 21; Sp. p. 3670; Gaz. vol. 155; p. 645.

Casto, Frank M., assignor of one-half to C. A. Harris, Cleveland, Ohio. Acetylene-burner. No. 960,818; June 7; Sp. p. 1172; Gaz. vol. 155; p. 195.

Castonguay, Leger J., assignor to The Bryant Electric Company, Bridgeport, Conn. Electrical receptacle and rosette. No. 962,816; June 28; Sp. p. 5438; Gaz. vol. 155; p. 950.

Caswell, William M., and J. A. Schofield, Warren, Pa. Hame-fastener. No. 961,935; June 21; Sp. p. 3521; Gaz. vol. 155; p. 622.

Cates, R. F., *et al.* (See Pochyla and King, assignors.)

Cathcart, William R. (See Falding, Frederic J., assignor.)

Celli, Guiseppe, Leominster, Mass. Plate-lifter. No. 962,196; June 21; Sp. p. 4113; Gaz. vol. 155; p. 713.

Celluloid Company, The. (See Lindsay, William G., assignor.)

Central Architectural Iron Works. (See Anderson, David A., assignor.)

Central Railway Signal Company. (See Clark, Robert M. and C. J., assignors.)

Century Telephone Construction Company. (See Kusel, Harry J., assignor.)

Chaitken, Edmund D. (See McQuillan and Chaitken.)

Chambers Brothers Company. (See Chambers, Cyrus, Jr., assignor.)

Chambers, Cyrus, Jr., Overbrook, Pa., assignor to Chambers Brothers Company. Stamping-machine. No. 960,819; June 7; Sp. p. 1174; Gaz. vol. 155; p. 196.

Chambers, Roscoe M., Earl, Nebr. Weeder. No. 962,940; June 28; Sp. p. 5666; Gaz. vol. 155; p. 992.

Champlin, Henry W., Walters Park, Pa. Vaginal irrigating-syringe. No. 962,813; June 21; Sp. p. 4354; Gaz. vol. 155; p. 752.

Chandler, Willard R., Branchville, S. C. Straight-air-brake attachment for automatic systems. No. 962,696; June 28; Sp. p. 5202; Gaz. vol. 155; p. 908.

Channing, John P., and F. J. Falding, New York, N. Y. Smelting pyritic ores. No. 963,020; June 28; Sp. p. 5818; Gaz. vol. 155; p. 1019.

Channing, John P., and F. J. Falding, New York, N. Y.; said Falding assignor to said Channing. Making sulfuric acid from smelter-gases. No. 962,403; June 28; Sp. p. 4761; Gaz. vol. 155; p. 839.

Chantler, Joseph E., La Junta, Colo. Fastener for horse-collar pads. No. 962,125; June 21; Sp. p. 3958; Gaz. vol. 155; p. 688.

Chantrell Hardware & Tool Company. (See Seisler, Philip, assignor.)

Charles E. Hall Company. (See Hall and Dicks, assignors.)

Charlton, Luther W., Washington, D. C. Paper receptacle. No. 961,339; June 14; Sp. p. 2273; Gaz. vol. 155; p. 401.

Chase, Clark. (See Gardner, Chase, and Kent.)

Chase, Henry M., Holyoke, Mass. Game device. No. 961,714; June 14; Sp. p. 3034; Gaz. vol. 155; p. 525.

Chatfield, Franklin, assignor to Northwestern Knitting Co., Minneapolis, Minn. Sewing-machine. No. 961,207; June 14; Sp. p. 1961; Gaz. vol. 155; p. 354.

Chemische Fabrik von Heyden, Aktiengesellschaft. (See Seifert and Hähle, assignors.)

Cheney, Herbert W., Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company. Power-operated switch or circuit-breaker. No. 960,504; June 7; Sp. p. 531; Gaz. vol. 155; p. 88.

Cheney, Herbert W., Milwaukee, Wis., assignor to Allis-Chalmers Company. Multiple-voltage system of motor control. No. 960,505; June 7; Sp. p. 539; Gaz. vol. 155; p. 89.

Cheney, Herbert W., assignor to Allis-Chalmers Company, Milwaukee, Wis. Engineer's valve. No. 961,083; June 7; Sp. p. 1708; Gaz. vol. 155; p. 284.

Cheney, Herbert W., Norwood, Ohio, assignor to Allis-Chalmers Company and The Bullock Electric Manufacturing Company. Time-limit protective device for electric circuits. No. 962,817; June 28; Sp. p. 5439; Gaz. vol. 155; p. 951.

Cherry, Louis B., assignor to The Ball Multi-Spark Plug Co., Aberdeen, S. D. Jump-spark igniter-plug. No. 962,314; June 21; Sp. p. 4355; Gaz. vol. 155; p. 752.

Chevrette, Augustin J., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Loom. No. 960,820; June 7; Sp. p. 1176; Gaz. vol. 155; p. 196.

Chicago Metal Weather Strip Company. (See Hedberg, Peter L., assignor.)

Chicago Railway Equipment Company. (See Cornwall, Frederick R., assignor.)

Chicago Railway Equipment Company. (See Harrison, Philip B., assignor.)

Chicago Railway Equipment Company. (See Williams, Charles H., Jr., assignor.)

Childress, Joseph M. (See Neal and Childress.)

Christ, Henry K. (See Christ, Isaac and H. K.)

Christ, Isaac, Tamaqua, and H. K. Christ, Mahanoy City, Pa. Ore, mineral, and coal breaker. No. 962,998; June 28; Sp. p. 5779; Gaz. vol. 155; p. 1012.

Christensen, Erastus M., and O. H. Jensen, Shelley, Idaho. Railway-tie. No. 960,273; June 7; Sp. p. 66; Gaz. vol. 155; p. 14.

Christensen, Niels. (See Rhett, James M., assignor.)

Christianson, Axel K., Greenfield, Mass. Foot-rest chair. No. 961,715; June 14; Sp. p. 3035; Gaz. vol. 155; p. 526.

Christianson, Andrew, Butler, assignor to Standard Steel Car Company, Pittsburg, Pa. Swinging buffer. No. 962,818; June 28; Sp. p. 5441; Gaz. vol. 155; p. 951.

Church, Charles P. (See Crouch, Frank J., assignor.)

Church, Herbert B., assignor to Consolidated Safety Pin Company, Bloomfield, N. J. Machine for making safety-pins. No. 962,126; June 21; Sp. p. 3959; Gaz. vol. 155; p. 689.

Church, William, Northampton, England. Measuring apparatus for bootmakers. No. 962,744; June 28; Sp. p. 5207; Gaz. vol. 155; p. 925.

Churchill, Oscar P., and M. E. Risk, Shamrock, Tex. Portable water-heater. No. 962,941; June 28; Sp. p. 5668; Gaz. vol. 155; p. 993.

Cincinnati Milling Machine Company, The. (See De Leeuw and Einstein, assignors.)

Clapp, Ford M., assignor to The Ohio Varnish Company, Cleveland, Ohio. Graining-tool. No. 960,821; June 7; Sp. p. 1178; Gaz. vol. 155; p. 196.

Clark, Absolom F., assignor to M. D. Teal, Toledo, Ohio. Combined rear light and number-tag. No. 960,822; June 7; Sp. p. 1180; Gaz. vol. 155; p. 197.

Clark, Cadwallader J. (See Clark, Robert M. and C. J.)

Clark, Chester D., Maple, Fla. Hay-press. No. 961,102; June 14; Sp. p. 1747; Gaz. vol. 155; p. 317.

Clark, Ellsworth E. (See Rosenberg and Clark.)

Clark, Franklin E. (See Fairchild and Clark.)

Clark, Harold H., Pittsburg, Pa. Indicating and measuring device for use in mines or wherever desired to detect presence of combustible gases. No. 960,823; June 7; Sp. p. 1180; Gaz. vol. 155; p. 197.

Clark, John A., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Tufted-fabric loom. No. 960,824; June 7; Sp. p. 1183; Gaz. vol. 155; p. 197.

Clark, Maurice C., assignor to Maurice C. Clark Company, Providence, R. I. Machine for working crude rubber. No. 960,274; June 7; Sp. p. 68; Gaz. vol. 155; p. 15.

Clark, Maurice C., assignor to Maurice C. Clark Company, Providence, R. I. Mold for forming footwear. No. 962,697; June 28; Sp. p. 5203; Gaz. vol. 155; p. 908.

Clark, Omar E., Columbus, Ohio. Belt-keeper for trousers-bands. No. 962,127; June 21; Sp. p. 3965; Gaz. vol. 155; p. 689.

Clark, Robert M., Newton, and C. J. Clark, Needham, Mass., assignors to Central Railway Signal Company, Pittsburg, Pa. Tube-filling machine. No. 961,428; June 14; Sp. p. 2435; Gaz. vol. 155; p. 429.

Clark, Samuel J., Cornwall-on-the-Hudson, N. Y. Mold and disher. No. 961,429; June 14; Sp. p. 2439; Gaz. vol. 155; p. 430.

Clark, Walter G., assignor to Parker-Clark Electric Company, New York, N. Y. Electrically-heated tool. No. 961,103; June 14; Sp. p. 1748; Gaz. vol. 155; p. 317.

Claud, Clarence W., assignor of one-half to J. H. Claud, one-fourth to F. W. Claud, and one-fourth to I. A. Claud, Nashville, Tenn. Repeating attachment for graphophones. No. 962,315; June 21; Sp. p. 4358; Gaz. vol. 155; p. 752.

Claud, Felix W., *et al.* (See Claud, Clarence W., assignor.)

Claud, Innis A., *et al.* (See Claud, Clarence W., assignor.)

Claud, John H., *et al.* (See Claud, Clarence W., assignor.)

Cleaver, Fremont J., Sr., Baldwin township, assignor of one-third to J. B. Collins and one-third to S. L. H. Morris, Allegheny county, Pa. Print-machine. No. 962,128; June 21; Sp. p. 3966; Gaz. vol. 155; p. 689.

Clements, Charles J., New York, N. Y. Bolt-anchor. No. 961,583; June 14; Sp. p. 2774; Gaz. vol. 155; p. 481.

Clements, George, and J. M. Hostler, assignors to Hygenic Renovating Company, Chicago, Ill. Air-purifying apparatus. No. 961,208; June 14; Sp. p. 1964; Gaz. vol. 155; p. 354.

Clerk, William T., Washington, D. C. Puzzle. No. 960,623; June 7; Sp. p. 792; Gaz. vol. 155; p. 129.

Cleveland Railway Supply Company. (See Newhall, Walter S., assignor.)

Climax Lock and Ventilator Co. (See Rosenberg and Clark, assignors.)

Cline, Clarence C., Oakland, Cal. Fluid-jet motor. No. 961,209; June 14; Sp. p. 1966; Gaz. vol. 155; p. 356.

Clippinger, Amos B. and M. A., Kansas City, Mo. Shoveling-board. No. 961,482; June 14; Sp. p. 2563; Gaz. vol. 155; p. 448.

Clippinger, Maurice A. (See Clippinger, Amos B. and M. A.)

Cloak, Donald M., Dover, Del. Music-roll producer for self-playing pianos. No. 961,754; June 21; Sp. p. 3124; Gaz. vol. 155; p. 563.

Cobb, Elmer M., assignor to E. M. Lang, Jr., Portland Me. Can-cap dropper. No. 962,316; June 21; Sp. p. 4360; Gaz. vol. 155; p. 753.

Cochran, Chan H., Portland, Oreg. Shoe-polishing device. No. 960,506; June 7; Sp. p. 542; Gaz. vol. 155; p. 89.

Cochran, Charles H., *et al.* (See Owen, Charles L., assignor.)

Cochran, Fred R., Windsor, Nova Scotia, Canada. Nut-lock. No. 960,507; June 7; Sp. p. 543; Gaz. vol. 155; p. 89.

Coe, Emery M., Milford Center, Ohio. Reversible bridle-bit. No. 962,005; June 21; Sp. p. 3671; Gaz. vol. 155; p. 645.

Coe, Sara L. (See Werden, Henrietta, assignor.)

Coes, Zorester B. R. F. Scott, and C. H. Thumlert, assignors to Edwin Harrington, Son & Co., Incorporated, Philadelphia, Pa. Turning mechanism. No. 962,197; June 21; Sp. p. 4114; Gaz. vol. 155; p. 714.

Coffey, John A., and C. C. Bowen, Cadillac, Mich. Collapsible crate, box, &c. No. 962,745; June 28; Sp. p. 5301; Gaz. vol. 155; p. 925.

Cofield, Peter T., Dayton, Ohio. Hydraulic motor. No. 962,623; June 28; Sp. p. 5047; Gaz. vol. 155; p. 882.

Cogswell, Elmer E., Syracuse, N. Y. Drill-chuck. No. 962,746; June 28; Sp. p. 5302; Gaz. vol. 155; p. 926.

Colby, William H., *et al.* (See Blee, Walter H., assignor.)

Cole, Charles C., assignor of one-tenth to R. E. Black, Camden, N. J. Last-jack. No. 962,747; June 28; Sp. p. 5305; Gaz. vol. 155; p. 926.

Cole, Harry, Tyrrell, Ohio. Shade-roller attachment. No. 961,680; June 14; Sp. p. 2972; Gaz. vol. 155; p. 514.

Cole, Herman V., Monte Vista, Colo. Gas-lighter for automobile-lamps. No. 961,681; June 14; Sp. p. 2973; Gaz. vol. 155; p. 514.

Cole, Walter, Chicago, Ill. Manufacturing butter. No. 961,483; June 14; Sp. p. 2565; Gaz. vol. 155; p. 448.

Coleman, Albert B., Oberlin, Ohio. Heat-distributing top for burners. No. 961,755; June 21; Sp. p. 3129; Gaz. vol. 155; p. 563.

Colleoni, Giuseppe, New York, N. Y. Automatic gun. No. 960,825; June 7; Sp. p. 1185; Gaz. vol. 155; p. 198.

Collins, Albert F., Minneapolis, Minn., assignor, by mesne assignments, to W. A. McLeod and A. F. Collins. Stocking-holder for use in darning. No. 960,508; June 7; Sp. p. 544; Gaz. vol. 155; p. 90.

Collins, J. B., *et al.* (See Cleaver, Fremont J., Sr., assignor.)

Collins, Thomas T. (See Sellers and Collins.)

Collins, William F., London, England. Manufacture of fuel-briquets. No. 960,509; June 7; Sp. p. 546; Gaz. vol. 155; p. 90.

Collis, John, Newark, N. J. Steam-heating system. No. 962,550; June 28; Sp. p. 4889; Gaz. vol. 155; p. 858.

Colman, Howard D., assignor, by mesne assignments, to Barber-Colman Company, Rockford, Ill. Warp-handling apparatus. No. 962,400; June 21; Sp. p. 4521; Gaz. vol. 155; p. 780.

Colton, Arthur, and B. W. Scott, assignors to Arthur Colton Co., Detroit, Mich. Machine for making capsules. No. 961,936; June 21; Sp. p. 3522; Gaz. vol. 155; p. 622.

Commercial Motor Car and Engine Co. (See Olson, Freeman M., assignor.)

Commercial Non-Refillable Bottle Stopper Co. (See Voss, William R., assignor.)

Compression Spark Plug Company, The. (See Wooda and Maimone, assignors.)

Compton, Andrew J., Trenton, N. J. Putty-knife. No. 960,624; June 7; Sp. p. 793; Gaz. vol. 155; p. 129.

Compton, Andrew J., Trenton, N. J. Combined shovel and truck. No. 961,843; June 21; Sp. p. 3326; Gaz. vol. 155; p. 591.

Comstock, Chester, Ridgewood, N. J. Shaft-packing. No. 961,484; June 14; Sp. p. 2569; Gaz. vol. 155; p. 448.

Condict, George H., Plainfield, N. J., assignor to W. Dulles, New York, N. Y. Power-drill. No. 962,077; June 21; Sp. p. 3833; Gaz. vol. 155; p. 672.

Condit, S. B., Jr. (See Burnham, George A., assignor.)

Conley, John E., Memphis, Tenn. Switch-bar-adjusting device. No. 962,698; June 28; Sp. p. 5209; Gaz. vol. 155; p. 909.

Connell, Roger, Westport, New Zealand. Means for automatically inflating pneumatic tires. No. 961,104; June 14; Sp. p. 1749; Gaz. vol. 155; p. 318.

Connet, Frederick N., Providence, R. I. Rate-indicating device for fluids. No. 960,275; June 7; Sp. p. 70; Gaz. vol. 155; p. 15.

Connet, Frederick N., Providence, R. I. Indicating, integrating, and recording manometer. No. 962,317; June 21; Sp. p. 4364; Gaz. vol. 155; p. 753.

Connors, Kathryn, Sioux Falls, S. D. Umbrella. No. 962,318; June 21; Sp. p. 4367; Gaz. vol. 155; p. 753.

Conrader, Rudolph, Erie, Pa. Relief device. No. 962,551; June 28; Sp. p. 4900; Gaz. vol. 155; p. 859.

Consolidated Car Heating Company. (See McElroy, James F., assignor.)

Consolidated Safety Pin Company. (See Church, Herbert B., assignor.)

Consortium für Elektrochemische Industrie, Gesellschaft mit beschränkter Haftung. (See Mugdan and Herrmann, assignors.)

Continental Can Co. (See Coyle, John, assignor.)

Continental Can Company. (See Robinson, Daniel P., assignor.)

Continental Gin Company. (See Wilson, Ralph E., assignor.)

Continental Paper Bag Company. (See Gilfillan, Essington N., assignor.)

Continuous Rail & Safety Switch Co. (See Roach, Harry F., assignor.)

Converse, William E., assignor of one-fourth to J. R. Campbell, Franktown, Colo. Stubble-burner. No. 960,826; June 7; Sp. p. 1192; Gaz. vol. 155; p. 198.

Conway, James P., and G. Hofman, Arnold City, Pa. Hanger for electric conductors. No. 960,827; June 7; Sp. p. 1194; Gaz. vol. 155; p. 198.

Conselman, John E., St. Louis, Mo., assignor, by mesne assignments, to Unit Construction Company. Concrete construction. No. 961,210; June 14; Sp. p. 1968; Gaz. vol. 155; p. 355.

Conselman, John E., St. Louis, Mo., assignor, by mesne assignments, to Unit Construction Company. Concrete construction. No. 961,211; June 14; Sp. p. 1969; Gaz. vol. 155; p. 356.

Conselman, John E., St. Louis, Mo., assignor, by mesne assignments, to Unit Construction Company. Concrete construction. No. 961,682; June 14; Sp. p. 2975; Gaz. vol. 155; p. 515.

Conselman, John E., St. Louis, Mo., assignor, by mesne assignments, to Unit Construction Company. Concrete construction. No. 961,683; June 14; Sp. p. 2976; Gaz. vol. 155; p. 515.

Conselman, John E., St. Louis, Mo., assignor, by mesne assignments, to Unit Construction Company. Concrete construction. No. 962,078; June 21; Sp. p. 3834; Gaz. vol. 155; p. 672.

Conselman, John E., St. Louis, Mo., assignor, by mesne assignments, to Unit Construction Company. Concrete construction. No. 962,600; June 28; Sp. p. 5210; Gaz. vol. 155; p. 909.

Cook, Egbert C., Lakewood, N. Mex. Siphon. No. 962,624; June 28; Sp. p. 5052; Gaz. vol. 155; p. 883.

Cook, Frank B., Chicago, Ill. Bracket. No. 962,494; June 28; Sp. p. 4766; Gaz. vol. 155; p. 839.

Cook, Gustave. (See Elliott and Cook.)

Cook, Lillian M., Ligonier, Ind. Piano. No. 962,748; June 28; Sp. p. 5307; Gaz. vol. 155; p. 927.

Coomber, James J. (See Rowley and Coomber.)

Cooper, Daniel M. (See Hagen and Cooper.)

Cooper, Harry L., Albany, Oreg. Fire-escape. No. 960,510; June 17; Sp. p. 546; Gaz. vol. 155; p. 90.

Cooper, Louis E., Millsaps, Cal. Wire-stretcher. No. 960,511; June 7; Sp. p. 548; Gaz. vol. 155; p. 90.

Cooper, Walter H., *et al.* (See MacDuffee, Chester E., assignor.)

Coover, Charles W., Chicago, Ill. Window-cleaning utensil. No. 960,276; June 7; Sp. p. 74; Gaz. vol. 155; p. 16.

Copenhaver, Elmer P., Sparks, W. Va. Horse-detacher. No. 962,942; June 28; Sp. p. 5669; Gaz. vol. 155; p. 993.

Cormack, Charles F., Mill Valley, Cal. Merchandise-chute. No. 961,340; June 14; Sp. p. 2275; Gaz. vol. 155; p. 401.

Cornell, Sidney, Duquesne, Pa. Apparatus and process for preparing pulverous iron ores and the like for smelting in blast-furnaces and use in open-hearth furnaces. No. 962,006; June 21; Sp. p. 3672; Gaz. vol. 155; p. 646.

Cornwall, Frederick R., St. Louis, Mo., assignor to Chicago Railway Equipment Company, Chicago, Ill. Adjustable brake-head. No. 960,828; June 7; Sp. p. 1196; Gaz. vol. 155; p. 199.

Corporation of Chemische Fabrik Griesheim-Elektron. (See List, Georg, assignor.)

Corrigan, Michael, Notre Dame, Ind. Printer's galley. No. 961,684; June 14; Sp. p. 2977; Gaz. vol. 155; p. 515.

Corron, César. (See Mayoux and Verchère, assignors.)

Cory, Charles, *et al.* (See Wood, Frank W., assignor.)

Cory, John M., *et al.* (See Wood, Frank W., assignor.)

Cory & Son, Charles. (See Wood, Frank W., assignor.)

Cosgrove, Joseph J., Philadelphia, Pa. Water-closet connection. No. 961,685; June 14; Sp. p. 2978; Gaz. vol. 155; p. 515.

Cosgrove, Joseph J., Philadelphia, Pa. Water-closet connection. No. 962,945; June 28; Sp. p. 5671; Gaz. vol. 155; p. 993.

Côté, Henry, West Warren, and R. C. Snow, assignors to Ware Machine & Loom Company, Ware, Mass. Device for preventing rebound of shuttles. No. 962,495; June 28; Sp. p. 4767; Gaz. vol. 155; p. 840.

Cottman, L. W. (See Cumming, Millard C., assignor.)

Cousins, William J. (See Nickerson and Cousins.)

Couture, Romain, Somersworth, N. H. Fire-alarm system. No. 962,625; June 28; Sp. p. 5053; Gaz. vol. 155; p. 883.

Covert, Fred W., assignor to Covert Manufacturing Company, Watervliet, N. Y. Bolt snap-hook. No. 961,686; June 14; Sp. p. 2979; Gaz. vol. 155; p. 516.

Covert Manufacturing Company. (See Covert, Fred W., assignor.)

Cowles, Irving, Chicago, Ill. Anchor-socket. No. 960,625; June 7; Sp. p. 794; Gaz. vol. 155; p. 130.

Cowley, James T., Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Speed-controller. No. 962,819; June 28; Sp. p. 5444; Gaz. vol. 155; p. 961.

Cox, Claude E., Minneapolis, Minn. Automobile. No. 962,626; June 28; Sp. p. 5054; Gaz. vol. 155; p. 883.

Cox, Ezekiel B., Newtown, Pa. Apparatus for treating grain. No. 961,068; June 7; Sp. p. 1664; Gaz. vol. 155; p. 279.

Cox, Samuel C., Washington, D. C. Mail-box. No. 961,212; June 14; Sp. p. 1970; Gaz. vol. 155; p. 356.

Coyle, Carrie, *et al.* (See Dawson, Artemas L., assignor.)

Coyle, Clarence D., Youngstown, Ohio. Trolley for electric railways. No. 960,829; June 7; Sp. p. 1197; Gaz. vol. 155; p. 199.

Coyle, John, assignor to Continental Can Co., Baltimore, Md. Can-soldering machine. No. 962,944; June 28; Sp. p. 5672; Gaz. vol. 155; p. 994.

Coyle, John, assignor to Continental Can Company, Baltimore, Md. Can-soldering machine. No. 962,945; June 28; Sp. p. 5675; Gaz. vol. 155; p. 994.

Crabtree, Fredrick H., and A. G. McGregor, Anaconda, Mont. Machine for fastening paper and the like. No. 961,213; June 14; Sp. p. 1975; Gaz. vol. 155; p. 357.

Craig, Sanders, San Diego, Cal. Fifth-wheel. No. 961,844; June 21; Sp. p. 3327; Gaz. vol. 155; p. 592.

Cramer, Gustav. (See Wallace and Cramer.)

Cramer, Stuart W., and W. B. Hodge, Charlotte, N. C.; said Hodge assignor to said Cramer. Air-conditioning apparatus. No. 960,830; June 7; Sp. p. 1198; Gaz. vol. 155; p. 199.

Crandall, Herbert E., Bradford, Pa. Razor-stropping device. No. 961,105; June 14; Sp. p. 1751; Gaz. vol. 155; p. 318.

Crane, Frank M., South Orange, N. J. Treating ulcerated teeth. No. 961,287; June 14; Sp. p. 2135; Gaz. vol. 155; p. 383.

Crane, Louis L., New York, N. Y. Flying-machine. No. 960,831; June 7; Sp. p. 1201; Gaz. vol. 155; p. 200.

Crane, Raymond E., Cameron, W. Va. Manufacture of earthenware lavatories. No. 961,214; June 14; Sp. p. 1977; Gaz. vol. 155; p. 357.

Crawford, Alvin C. (See Dement and Crawford.)

Crawford, David A. (See Dale and Crawford.)

Crawford, Martin V., Blaine, Wash. Fire-alarm. No. 962,552; June 28; Sp. p. 4905; Gaz. vol. 155; p. 859.

Crawford, Vinyard O., Fort Smith, Ark. Ironing-table. No. 961,404; June 14; Sp. p. 2379; Gaz. vol. 155; p. 421.

Crawford, William C. (See Guyer, Clinton, assignor.)

Cree, James S., Glasgow, Scotland. Hood for motor or other vehicles. No. 960,832; June 7; Sp. p. 1202; Gaz. vol. 155; p. 200.

Cree, James S., Glasgow, Scotland. Motor-vehicle and like hood. No. 961,687; June 14; Sp. p. 2981; Gaz. vol. 155; p. 516.

Crisp, James F., *et al.* (See Louden, Arthur F. D., assignor.)

Critchlow, Edward C., Grove City, Pa. Fly-wheel. No. 960,277; June 7; Sp. p. 76; Gaz. vol. 155; p. 16.

Crocker, Ernest B. (See Blanchard, Crocker, and Darling.)

Crompton & Knowles Loom Works. (See Ashton, Francis E., assignor.)

Crompton & Knowles Loom Works. (See Chevrette, Augustin J., assignor.)

Crompton & Knowles Loom Works. (See Clark, John A., assignor.)

Crompton & Knowles Loom Works. (See Gordon, Albert A., Jr., assignor.)

Crompton & Knowles Loom Works. (See Wattle, William, assignor.)

Crosby, James K., Glendale, Wash. Artificial bait. No. 962,319; June 21; Sp. p. 4369; Gaz. vol. 155; p. 754.

Crosby, Nehemiah B., Bridgeport, Conn. Combined shade and pole bracket. No. 962,007; June 21; Sp. p. 3675; Gaz. vol. 155; p. 646.

Crosby, Oliver, assignor to American Hoist & Derrick Co., St. Paul, Minn. Forward and rear drive for car-trucks. No. 962,320; June 21; Sp. p. 4370; Gaz. vol. 155; p. 754.

Crossland, William B., De Soto, Mo. Electric switch for incandescent-lamp circuits. No. 960,626; June 7; Sp. p. 796; Gaz. vol. 155; p. 130.

Crouch, Frank J., Seattle, Wash., assignor of one-half to C. P. Church, Portland, Oreg. Traction-motor. No. 961,756; June 21; Sp. p. 3131; Gaz. vol. 155; p. 564.

Crouch, Lawrence B., Marshes, W. Va. Nut-lock. No. 962,321; June 21; Sp. p. 4372; Gaz. vol. 155; p. 754.

Crowdus, Walter A., Chicago, Ill. Electromagnetic device. No. 962,129; June 21; Sp. p. 3970; Gaz. vol. 155; p. 690.

Crowe, Paul L., Jersey City, N. J. Stoker mechanism. No. 962,322; June 21; Sp. p. 4373; Gaz. vol. 155; p. 755.

Crudginton, James F., assignor to J. L. Carpenter, Bridgeport, Conn. Seal. No. 961,069; June 7; Sp. p. 1666; Gaz. vol. 155; p. 279.

Crum, Winfield S., La Fayette, Ind. Delivery-basket. No. 960,833; June 7; Sp. p. 1203; Gaz. vol. 155; p. 200.

Crumrine, William L., Kanopolis, Kans. Cook-stove. No. 962,406; June 28; Sp. p. 4769; Gaz. vol. 155; p. 840.

Cullman, Otto, Chicago, Ill. Machine for operating runte-guides, ribbon-maps, and the like. No. 961,288; June 14; Sp. p. 2137; Gaz. vol. 155; p. 383.

Cullom, George A., St. Louis, Mo. Carton-sealing machine. No. 961,845; June 21; Sp. p. 3330; Gaz. vol. 155; p. 592.

Cumming, Millard C., assignor of one-half to L. W. Cottman, Tigerbay, Fla. Screw-jack. No. 961,106; June 14; Sp. p. 1753; Gaz. vol. 155; p. 318.

Cumming, Michael, Bergenfield, N. J. Coupling for grinding and polishing wheels. No. 962,627; June 28; Sp. p. 5056; Gaz. vol. 155; p. 884.

Cunningham, Frank R., Medford, Mass. Pipe-cleaner. No. 961,215; June 14; Sp. p. 1980; Gaz. vol. 155; p. 358.

Cunningham, Harry J., *et al.* (See Jennings, Milo C., assignor.)

Cunnius, Alfred R., Brooklyn, N. Y., assignor of one-half to L. Kaiser, East Orange, N. J. Horn for sound-reproducing machines. No. 960,834; June 7; Sp. p. 1203; Gaz. vol. 155; p. 200.

Cunnius, Calvin T., Long Branch, N. J. Tightening device. No. 961,688; June 14; Sp. p. 2983; Gaz. vol. 155; p. 516.

Curry, William J., Victoria, British Columbia, Canada. Combined mop head and wringer. No. 960,627; June 7; Sp. p. 800; Gaz. vol. 155; p. 131.

Curtis & Co. Mfg. Co. (See Steedman, George F., assignor.)

Cushman, Lucian W., Lincoln, Nebr. Spray-nozzle. No. 962,946; June 28; Sp. p. 5677; Gaz. vol. 155; p. 994.

Cutler-Hammer Mfg. Co., The. (See Ward, Samuel M., Jr., assignor.)

Cutler Mail Chute Company. (See Anderson, Frank E., assignor.)

Cutler National Electric Heater Company. (See Cutler, William F., assignor.)

Cutler, William F., assignor to Cutler National Electric Heater Company, San Francisco, Cal. Electric water-heater. No. 961,937; June 21; Sp. p. 3531; Gaz. vol. 155; p. 623.

Cutter Electrical and Manufacturing Company, The. (See Scott, William M., assignor.)

Cutter, Solomon M., Reading, Mass., assignor, by mesne assignments, to United Shoe Machinery Company. Wire-feeding mechanism for nailing-machines. No. 960,278; June 7; Sp. p. 77; Gaz. vol. 155; p. 16.

Cyphers Incubator Company. (See Adair, Charles E., assignor.)

D. T. Owen Company, The. (See Owen, David T., assignor.)

D'Orbessan, Fernand, Ozone Park, and D. V. Louvet, Brooklyn Hills, N. Y. Sifting apparatus. No. 962,090; June 21; Sp. p. 3862; Gaz. vol. 155; p. 676.

D'Urso, Vito E., New York, N. Y. Sewing-machine attachment. No. 961,942; June 21; Sp. p. 3540; Gaz. vol. 155; p. 624.

Dahl, Hans, and M. Martin, Berlin, Germany; said Martin assignor to said Dahl. Signaling device for speed-indicators. No. 961,107; June 14; Sp. p. 1754; Gaz. vol. 155; p. 318.

Dain, Joseph, Ottumwa, Iowa. Hay-loader. No. 961,757; June 21; Sp. p. 3132; Gaz. vol. 155; p. 564.

Dale, Frank B., Richland township, Clarion county, and D. A. Crawford, Emlenton, Pa. Grass-cutting machine. No. 961,485; June 14; Sp. p. 2573; Gaz. vol. 155; p. 449.

Dalley, Edward M., Larchmont, N. Y. Compressible packing-tube. No. 962,008; June 21; Sp. p. 3677; Gaz. vol. 155; p. 646.

Daniels, Harry R., Dresden, Ontario, Canada. Protector for eaves-troughs. No. 960,835; June 7; Sp. p. 1207; Gaz. vol. 155; p. 201.

Daniels, Lewis, Philadelphia, Pa. Folding desk. No. 960,836; June 7; Sp. p. 1208; Gaz. vol. 155; p. 201.

Danver, James H., Denver, assignor to United States Sanitary Manufacturing Company, Pittsburg, Pa. Lavatory. No. 962,892; June 28; Sp. p. 5587; Gaz. vol. 155; p. 971.

Darling, Philip G. (See Blanchard, Crocker, and Darling.)

Darmstädter, Georg, assignor to C. Schenck, Eisengiesserei & Maschinenfabrik, Gesellschaft mit beschränkter Haftung, Darmstadt, Germany. Steelyard. No. 960,837; June 7; Sp. p. 1210; Gaz. vol. 155; p. 201.

Darrach, Angus, Sarnia, Ontario, Canada. Back-stop for sliding doors. No. 961,758; June 21; Sp. p. 3139; Gaz. vol. 155; p. 564.

Darracq, Pierre A., assignor to Société A. Darracq & Cie. (1905) Limited, Suresnes, France. Explosion-engine. No. 961,938; June 21; Sp. p. 3534; Gaz. vol. 155; p. 623.

Darrow, William H., Traverse City, Mich. Game apparatus. No. 960,512; June 7; Sp. p. 549; Gaz. vol. 155; p. 91.

Darwin, Roy R., Lansing, Mich. Temporary binder. No. 960,279; June 7; Sp. p. 79; Gaz. vol. 155; p. 17.

Daum, Albert F., Pittsburg, Pa. Cartridge-fuse. No. 961,716; June 14; Sp. p. 2987; Gaz. vol. 155; p. 526.

Davies, John M., Plattsburg, N. Y. Horse-bonnet. No. 960,840; June 7; Sp. p. 1216; Gaz. vol. 155; p. 202.

Davis, Charles L., Detroit, Mich., assignor, by mesne assignments, to A. M. Belfield and J. P. Mentzer, trustees, Chicago, Ill. Adjustable valve for piano-player actions. No. 961,939; June 21; Sp. p. 3535; Gaz. vol. 155; p. 623.

Davis, Charles L., Detroit, Mich., assignor, by mesne assignments, to A. M. Belfield and J. P. Mentzer, trustees, Chicago, Ill. Automatic musical instrument. No. 962,130; June 21; Sp. p. 3973; Gaz. vol. 155; p. 690.

Davis, Henry J., Birmingham, Ala. Filing-cabinet. No. 962,749; June 28; Sp. p. 5309; Gaz. vol. 155; p. 927.

Davis, James C., Hinsdale, Ill., assignor to American Steel Foundries, New York, N. Y. Apparatus for drying molds. No. 962,553; June 28; Sp. p. 4906; Gaz. vol. 155; p. 859.

Davis, James R., Bartow, Fla. Plow-colter. No. 960,628; June 7; Sp. p. 801; Gaz. vol. 155; p. 131.

Davis, Stephen A., assignor to Domestic Sewing Machine Company, Newark, N. J. Drop-head sewing-machine. No. 962,700; June 28; Sp. p. 5211; Gaz. vol. 155; p. 909.

Davis, William J., assignor of three-fourths to W. B. Aldridge, O. B. McNutt, and F. L. Jones, Blue Springs, Miss. Combined fence-post and wire-stretcher. No. 961,108; June 14; Sp. p. 1756; Gaz. vol. 155; p. 319.

Davy, Orrin J., Washington, D. C., assignor, by mesne assignments, to Industrial Motor Company. Aerial electric transportation. No. 961,430; June 14; Sp. p. 2440; Gaz. vol. 155; p. 480.

Dawson, Artemas L., assignor of one-fourth to C. Coyle and one-fourth to J. M. McClintock, Devall Bluff, Ark. Portable fountain-syringe. No. 962,909; June 28; Sp. p. 5781; Gaz. vol. 155; p. 1012.

Day, Joseph L., Nashville, Okla. Vehicle-wheel. No. 960,513; June 7; Sp. p. 550; Gaz. vol. 155; p. 91.

Day, W. A., *et al.* (See Reed, Rufus C., assignor.)

Dayes, Frederick E., Brooklyn, N. Y. Internal-combustion engine. No. 962,131; June 21; Sp. p. 3974; Gaz. vol. 155; p. 690.

De Borde, F. K. (See Mobius, Robert M., assignor.)

De Force, Mary A., administratrix. (See De Force, Samuel.)

De Force, Samuel, deceased; M. A. De Force, Corry, Pa., administratrix, assignor to W. A. De Force, Vermejo Park, N. Mex. Ditching-machine. No. 963,021; June 28; Sp. p. 5821; Gaz. vol. 155; p. 1019.

De Force, William A. (See De Force, Samuel.)

De Haas, Abey H., Goodnight, Okla. Attachment for anvils. No. 961,109; June 14; Sp. p. 1757; Gaz. vol. 155; p. 319.

De Jongh, Davis S. (See Gillette, Mott G., assignor.)

De Laval Steam Turbine Company. (See Guy, Albert E., assignor.)

De Leeuw, Adolph L., Hamilton, and S. Einstein, assignors to The Cincinnati Milling Machine Company, Cincinnati, Ohio. Feed-controlling mechanism. No. 961,405; June 14; Sp. p. 2381; Gaz. vol. 155; p. 421.

De Loss, Harry H. (See Litchfield, Isaac W., assignor.)

De Moss, George G., assignor of one-half to H. S. De Moss, De Moss Springs, Oreg. Tourist's bed. No. 960,281; June 7; Sp. p. 82; Gaz. vol. 155; p. 18.

De Moss, Henry S. (See De Moss, George G., assignor.)

De Moulin, Erastus, Greenville, Ill. Initiation apparatus. No. 961,847; June 21; Sp. p. 3335; Gaz. vol. 155; p. 593.

De Nure, Delton, Gloversville, N. Y. Penholder. No. 960,282; June 7; Sp. p. 83; Gaz. vol. 155; p. 18.

De Prins, Tobie, Anvars, and D. Riga, Hoboken, Belgium, assignors to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 962,079; June 21; Sp. p. 3837; Gaz. vol. 155; p. 672.

De Remer, William L., Chicago, Ill. Anticreeper device for rails. No. 960,283; June 7; Sp. p. 84; Gaz. vol. 155; p. 18.

De Remer, William L., Chicago, Ill. Tie-plate. No. 962,750; June 28; Sp. p. 5311; Gaz. vol. 155; p. 927.

De Remer, William L., Chicago, Ill. Tie-plate. No. 962,751; June 28; Sp. p. 5312; Gaz. vol. 155; p. 928.

De Wein, George F., assignor to Allis-Chalmers Company, Milwaukee, Wis. Gyratory crusher. No. 961,084; June 7; Sp. p. 1709; Gaz. vol. 155; p. 284.

De Witt, Ira S., Newdale, Manitoba, Canada. Harrow attachment for sulky-plows. No. 962,701; June 28; Sp. p. 5218; Gaz. vol. 155; p. 910.

Dean Electric Company, The. (See Manson, Ray H., assignor.)

Deany, John A., Detroit, Mich. Valve. No. 960,280; June 7; Sp. p. 80; Gaz. vol. 155; p. 17.

Decker, Alexander C., Keokuk, Iowa. Wall tie or bond. No. 961,584; June 14; Sp. p. 2776; Gaz. vol. 155; p. 481.

Decker, Phillip J., San Francisco, Cal. Door-closing device. No. 962,198; June 21; Sp. p. 4115; Gaz. vol. 155; p. 714.

Decker, William A., Crowley, Tex. Churn. No. 962,947; June 28; Sp. p. 5678; Gaz. vol. 155; p. 995.

Deegan, Edward J., New York, N. Y. Pipe connection for fluid-heating systems. No. 961,341; June 14; Sp. p. 2276; Gaz. vol. 155; p. 401.

Deemer, Frank E., and E. W. Korff, Brooklyn, N. Y.; said Deemer assignor to said Korff. Car-fender. No. 962,328; June 21; Sp. p. 4376; Gaz. vol. 155; p. 755.

Defren, George, Brookline, Mass. Preparation of beverages. No. 960,841; June 7; Sp. p. 1218; Gaz. vol. 155; p. 203.

Degan, William B., New York, N. Y. Sanitary bottle-lip protecting device. No. 960,842; June 7; Sp. p. 1219; Gaz. vol. 155; p. 203.

Degan, William B., New York, N. Y. Sanitary bottle-lip protector. No. 960,843; June 7; Sp. p. 1220; Gaz. vol. 155; p. 203.

Degner, C. F. (See Ponarouse, George, assignor.)

Dehl, Reuben G., Cresson, Pa. Adjustable lamp-bracket. No. 963,000; June 28; Sp. p. 5786; Gaz. vol. 155; p. 1012.

Delamater, George R., Strong, Colo. Sink-and-float testing apparatus. No. 961,846; June 21; Sp. p. 3333; Gaz. vol. 155; p. 593.

Delany, Charles M., Poynette, Wis. Horseshoe-calk. No. 961,750; June 21; Sp. p. 3141; Gaz. vol. 155; p. 565.

Delasson, Eugène. (See Michaud and Delasson.)

Dement, Wallace E., and A. C. Crawford, Blaine, Wash. Cattle-guard. No. 962,554; June 28; Sp. p. 4908; Gaz. vol. 155; p. 860.

Demeter, Josef, Cleveland, Ohio. Sand-molding machine. No. 960,844; June 7; Sp. p. 1222; Gaz. vol. 155; p. 203.

Deming Apparatus Company. (See Deming, Eugene W., assignor.)

Deming, Eugene W., assignor to Deming Apparatus Company, New York, N. Y. Closed fiber-strainer. No. 962,324; June 21; Sp. p. 4376; Gaz. vol. 155; p. 755.

Dempsey, Henry J., Knoxville, Tenn. Shade and curtain hanger. No. 962,132; June 21; Sp. p. 3976; Gaz. vol. 155; p. 691.

Dempster, John T. H., Schenectady, N. Y., assignor to General Electric Company. Vapor electric apparatus. No. 962,497; June 28; Sp. p. 4770; Gaz. vol. 155; p. 840.

Denning, Patrick F., Cleveland, Ohio. Name-holder for pews. No. 961,431; June 14; Sp. p. 2444; Gaz. vol. 155; p. 481.

Dennis, Lloyd B., Norwalk, Ohio. Cigar-clipper. No. 961,110; June 14; Sp. p. 1758; Gaz. vol. 155; p. 319.

Dennis, Samuel K., Chicago, Ill., assignor to International Harvester Company. Hay-loader. No. 960,845; June 7; Sp. p. 1223; Gaz. vol. 155; p. 204.

Denton, Mike. (See Tucker, James D., assignor.)

Demsan, Morland M., London, England. Apparatus for removing foreign matter from india-rubber, gutta-percha, balata, and the like. No. 960,846; June 7; Sp. p. 1225; Gaz. vol. 155; p. 204.

Destree, Louis, Haren, Belgium. Making alkali thiosulfates. No. 961,760; June 21; Sp. p. 3142; Gaz. vol. 155; p. 565.

Detroit Can Company. (See Harbeck, Jervis R., assignor.)

Detroit Mailing Machine Company. (See Schermack, Joseph J., assignor.)

Dettrick, Leo, Stickney, S. D. Plow attachment. No. 962,893; June 28; Sp. p. 5588; Gaz. vol. 155; p. 977.

Deuther, Lorens A., Buffalo, N. Y. Composite board. No. 961,432; June 14; Sp. p. 2440; Gaz. vol. 155; p. 481.

Devore, George E., Morning Sun, Iowa. Clothes-pin. No. 960,847; June 7; Sp. p. 1227; Gaz. vol. 155; p. 205.

Dewey, Jesse S., East Chicago, Ind., assignor to Green Engineering Co., Chicago, Ill. Conveying-device. No. 961,486; June 14; Sp. p. 2575; Gaz. vol. 155; p. 449.

Dexter Folder Company. (See Dexter, Talbot C., assignor.)

Dexter, Talbot C., assignor to Dexter Folder Company, Pearl River, N. Y. Paper-feeding machine. No. 961,585; June 14; Sp. p. 2777; Gaz. vol. 155; p. 482.

Dexter, Talbot C., assignor to Dexter Folder Company, Pearl River, N. Y. Paper-feeding machine. No. 961,586; June 14; Sp. p. 2784; Gaz. vol. 155; p. 482.

Dexter, Talbot C., assignor to Dexter Folder Company, Pearl River, N. Y. Sheet-conveying machine. No. 961,587; June 14; Sp. p. 2791; Gaz. vol. 155; p. 483.

Dexter, Talbot C., assignor to Dexter Folder Company, Pearl River, N. Y. Paper-feeding machine. No. 961,744; June 14; Sp. p. 3102; Gaz. vol. 155; p. 536.

Di Marco, Ubaldo, Hawthorne, N. J. Machine for granulating magnesia. No. 961,848; June 21; Sp. p. 3338; Gaz. vol. 155; p. 593.

Dibbles, John L., Chicago, Ill. Fishing-signal. No. 962,420; June 28; Sp. p. 4602; Gaz. vol. 155; p. 812.

Dibrell, Frank A., Coleman, Tex. Combined ruler and paper-cutter. No. 963,001; June 28; Sp. p. 5787; Gaz. vol. 155; p. 1013.

Dick, Albert B., Lake Forest, assignor to A. B. Dick Company, Chicago, Ill. Sheet-feeding apparatus. No. 960,514; June 7; Sp. p. 552; Gaz. vol. 155; p. 91.

Dickey, Jonathan A., Columbus, Ind. Clutch. No. 960,515; June 7; Sp. p. 556; Gaz. vol. 155; p. 92.

Dicks, William. (See Hall and Dicks.)

Dickson, James H., Philadelphia, Pa. Sulky. No. 960,848; June 7; Sp. p. 1227; Gaz. vol. 155; p. 205.

Dickson, Stewart, Upper Montclair, N. J. Packing for acetylene-gas tanks. No. 962,199; June 21; Sp. p. 4117; Gaz. vol. 155; p. 714.

Diehl, John J., Chicago, Ill. Perforating attachment for loose-leaf binders. No. 962,421; June 28; Sp. p. 4603; Gaz. vol. 155; p. 813.

Dilg, Joseph E., assignor to Dougherty Bros. Tent & Awning Company, St. Louis, Mo. Device for attaching stay-ropes to tent-poles. No. 960,840; June 7; Sp. p. 1228; Gaz. vol. 155; p. 205.
Dille, John I. (See Tonge, John, assignor.)
Dimock, Ira. (See Allen, William G., assignor.)
Dinsmoor, James D., St. Marys, W. Va. Method and apparatus for pumping oil-wells. No. 962,009; June 21; Sp. p. 3678; Gaz. vol. 155; p. 646.
Diracca, Joseph, Joliet, Ill. Compasses. No. 962,702; June 28; Sp. p. 5215; Gaz. vol. 155; p. 910.
Dirks, D. F., et al. (See Allen, James M., assignor.)
Disbrow, Reuben B., Owatonna, Minn. Combined churn and butter-worker. No. 961,940; June 21; Sp. p. 3537; Gaz. vol. 155; p. 624.
Dixon, Albert S., Austin, Tex. Cotton-packer. No. 960,850; June 7; Sp. p. 1230; Gaz. vol. 155; p. 205.
Dixon, Robert M., East Orange, N. J., assignor to The Safety Car Heating & Lighting Company. Attachment for incandescent-lamp mantles. No. 960,851; June 7; Sp. p. 1231; Gaz. vol. 155; p. 206.
Doane, John C., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Ratchet mechanism for ribbons of type-writing machines. No. 962,133; June 21; Sp. p. 3977; Gaz. vol. 155; p. 691.
Dobbs, George F., Tiltonsville, Ohio. Nut-lock. No. 960,284; June 7; Sp. p. 86; Gaz. vol. 155; p. 18.
Dodd, Edward H., Hoylake, England. Sewing-machine. No. 960,285; June 7; Sp. p. 89; Gaz. vol. 155; p. 19.
Dodson, Harry E. (See Faas and Dodson.)
Dolan, James M., and R. P. Aylward, Livermore, Cal. Portable hay-press. No. 962,555; June 28; Sp. p. 4910; Gaz. vol. 155; p. 860.
Domestic Sewing Machine Company. (See Davis, Stephen A., assignor.)
Donaldson, William R. (See Marble, George W., assignor.)
Donnell, Harry D., Berkeley, Cal., assignor to The Safety Car Heating and Lighting Co., New York, N. Y. Gas-supply system. No. 961,745; June 14; Sp. p. 3107; Gaz. vol. 155; p. 536.
Donohoe, Thomas, Avella, Pa. Mine-car wheel. No. 960,852; June 7; Sp. p. 1234; Gaz. vol. 155; p. 206.
Dorer, Oscar H., Irvington, N. J. Two-cycle gas-engine. No. 961,111; June 14; Sp. p. 1759; Gaz. vol. 155; p. 319.
Dorr, James C., Dansville, N. Y. Making medicated tampons. No. 961,689; June 14; Sp. p. 2984; Gaz. vol. 155; p. 517.
Dorris, Bert, Bloomfield, Ind. Rotary engine. No. 960,516; June 7; Sp. p. 557; Gaz. vol. 155; p. 92.
Dougherty Bros. Tent & Awning Company. (See Dilg, Joseph B., assignor.)
Dougherty, Clifton L., Indianapolis, Ind. Balancing vehicle. No. 960,838; June 7; Sp. p. 1211; Gaz. vol. 155; p. 202.
Dougherty, Floyd B., Alexandria county, Va. Water-gas-apparatus. No. 960,839; June 7; Sp. p. 1214; Gaz. vol. 155; p. 202.
Dow Chemical Company, The. (See Dow, Herbert H., assignor.)
Dow, Herbert H., assignor to The Dow Chemical Company, Midland, Mich. Water seal. No. 961,216; June 14; Sp. p. 1952; Gaz. vol. 155; p. 358.
Dow, Lewis A., Melrose, Mass. Tire-carrier. No. 962,401; June 21; Sp. p. 4526; Gaz. vol. 155; p. 781.
Dowaglac Manufacturing Company. (See Fowle, Charles L., assignor.)
Dowman-Dekker Manufacturing Company. (See McGinnis, Claude A., assignor.)
Draper Company. (See Paquette, Severin N., assignor.)
Draper & Maynard Company, The. (See Maynard, John F., assignor.)
Drayton, William, Kachelmacher, Ohio. Kiln. No. 960,286; June 7; Sp. p. 92; Gaz. vol. 155; p. 19.
Drew, Joseph E., Bradentown, Fla. Horse-detacher. No. 961,941; June 21; Sp. p. 3538; Gaz. vol. 155; p. 624.
Driver, Wilbur B., East Orange, N. J. Alloy for electrical resistances. No. 961,217; June 14; Sp. p. 1984; Gaz. vol. 155; p. 358.
Droege, Frederick J., Covington, Ky. Heating-furnace. No. 960,517; June 7; Sp. p. 560; Gaz. vol. 155; p. 53.
Dröll, Carl F., Heidelberg, Germany. Pyrophoric igniting device for lamps of cycles, automobiles, and the like. No. 961,588; June 14; Sp. p. 2794; Gaz. vol. 155; p. 488.
Drown, Curtis E., Tucson, Ariz. Packing-ring. No. 962,820; June 28; Sp. p. 5445; Gaz. vol. 155; p. 952.
Druitt, Percy W., Shepherds Bush, London, England. Apparatus for reducing the length of cast spaces. No. 961,690; June 14; Sp. p. 2985; Gaz. vol. 155; p. 517.
Drummond, Isaac W., New York, N. Y. Insecticide. No. 960,287; June 7; Sp. p. 95; Gaz. vol. 155; p. 19.
Duchemin, Peter R., Colfax, Wash. Hose-supporter. No. 961,112; June 14; Sp. p. 1762; Gaz. vol. 155; p. 320.
Dudeck, Richard A. (See Whistler and Dudeck.)
Dudgeon, Thomas M., Avalon, Pa. Gas-stove. No. 962,752; June 28; Sp. p. 5314; Gaz. vol. 155; p. 928.
Dudley, Frank R., Fitchburg, Mass. Vehicle-wheel. No. 962,010; June 21; Sp. p. 3679; Gaz. vol. 155; p. 647.
Dudley, George W., Staunton, Va. Tabulating mechanism for type-writers. No. 960,854; June 7; Sp. p. 1239; Gaz. vol. 155; p. 207.
Dudley, George W., Staunton, Va., assignor to Numerograph Manufacturing Co., Charleston, W. Va. Adding and recording machine. No. 960,853; June 7; Sp. p. 1235; Gaz. vol. 155; p. 207.
Dula, James G. (See Graham and Dula.)
Dulles, William. (See Condict, George H., assignor.)
Duncan, Arthur L., Oakland, Cal. Combined washing and conveying apparatus. No. 962,628; June 28; Sp. p. 5058; Gaz. vol. 155; p. 884.
Duncan, William M. (See Hanes and Staples, assignors.)
Dundon, John S., et al. (See Geddes, William, assignor.)
Dunham, Henry V., Bainbridge, N. Y., assignor to Casein Company of America. Paper coating and sizing composition and process. No. 962,498; June 28; Sp. p. 4771; Gaz. vol. 155; p. 840.
Dunham, William G., New York, assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine. No. 962,556; June 28; Sp. p. 4916; Gaz. vol. 155; p. 861.
Dunmire, William A., Ruffs Dale, Pa. Hoisting device. No. 961,717; June 14; Sp. p. 3038; Gaz. vol. 155; p. 526.
Dunn Edge Tool Company. (See Dunn, Reuben W., assignor.)
Dunn, Reuben W., Waterville, assignor to Dunn Edge Tool Company, Oakland, Me. Bush-hook. No. 961,218; June 14; Sp. p. 1986; Gaz. vol. 155; p. 358.
Dunn, William, Wheatland, Pa. Mine-ventilating apparatus. No. 963,002; June 28; Sp. p. 5787; Gaz. vol. 155; p. 1013.
Dunning, Robert A., Yarmouth, Me., assignor to K. Shaffer, trustee, Boston, Mass. Sponge-sheet. No. 960,855; June 7; Sp. p. 1243; Gaz. vol. 155; p. 207.
Duplex Metals Company. (See Monnot, John F., assignor.)
Durand, Edwin R., Beverly, Mass. Shoe-form inserter. No. 960,513; June 7; Sp. p. 563; Gaz. vol. 155; p. 93.
Durand, Nelson C., East Orange, and A. M. Seeley, Newark, assignors to New Jersey Patent Company, West Orange, N. J. Carton for phonograph record-cylinders. No. 962,821; June 28; Sp. p. 5446; Gaz. vol. 155; p. 952.
Dustan, Frederick W., Clarkston, Wash. Fruit-shipping box. No. 960,288; June 7; Sp. p. 97; Gaz. vol. 155; p. 19.
Dutton, Burton M., assignor of one-half to W. H. Oxenham, Richmond, Va. Electric hammer. No. 962,499; June 28; Sp. p. 4772; Gaz. vol. 155; p. 841.
Dutton, Charles F., Jr., Cleveland, Ohio. Projection-lantern. No. 960,519; June 7; Sp. p. 564; Gaz. vol. 155; p. 93.
Dutton, Edgar F., Schenectady, N. Y., assignor to General Electric Company. Emergency governing mechanism for turbines. No. 960,289; June 7; Sp. p. 98; Gaz. vol. 155; p. 20.
Dyas, Clair S. (See Bolduan and Dyas.)
Dyer, Leonard H. (See Loewenstein and Dyer.)
Dyer, Philip S. (See Smith, George H., assignor.)
Dyett, James H., and C. Hulpian, assignors to Hard Manufacturing Company, Buffalo, N. Y. Convertible couch. No. 962,948; June 28; Sp. p. 5679; Gaz. vol. 155; p. 995.
Dymoke, Sarah, Gross, Idaho. Work-stand. No. 962,325; June 21; Sp. p. 4377; Gaz. vol. 155; p. 756.
Dysthe, Martinius, Mayville, N. D. Face-protecting mask. No. 960,520; June 7; Sp. p. 566; Gaz. vol. 155; p. 93.
Dziathiewicz, Walter. (See Lochowicz, Stanislaus, assignor.)
E. J. Brooks & Co. (See Aylsworth, Jonas W., assignor.)
E. J. Brooks & Co. (See Brooks, Winfred M., assignor.)
E. M. Hulse Company, The. (See Hulse and Schramm, assignors.)
Eagle Lock Co. (See Murphy, James J., assignor.)
Early, John, Tekonsha, Mich. Door-fastener. No. 960,521; June 7; Sp. p. 567; Gaz. vol. 155; p. 94.
Earnest, David C. (See Wilderspin, Anderson, assignor.)
Eastman, William E., Boston, Mass. Vehicle-spring. No. 962,557; June 28; Sp. p. 4917; Gaz. vol. 155; p. 861.
Eastwood, Arthur C., Cleveland, Ohio. Lifting-magnet controller. No. 961,842; June 14; Sp. p. 2277; Gaz. vol. 155; p. 402.
Eavenson, Howard N. (See Buffum, Eavenson, and O'Toole.)
Ebeling, August W., Charlottenburg, assignor to Siemens & Halske A. G., Berlin, Germany. Diplex telephone connection. No. 960,856; June 7; Sp. p. 1243; Gaz. vol. 155; p. 208.
Eberhard Faber Pencil Company. (See Schmitz, Egon L., assignor.)
Ebert, Charles W., Merrill, Wis. Grab-hook. No. 960,522; June 7; Sp. p. 568; Gaz. vol. 155; p. 94.
Eckert, Fred C., Waukesha, Wis. Key. No. 962,558; June 28; Sp. p. 4919; Gaz. vol. 155; p. 861.
Eckert, Jacob P., Valley Park, Mo. Vegetable-cutter. No. 962,500; June 28; Sp. p. 4779; Gaz. vol. 155; p. 841.
Eckhard, John, Boston, Mass. Auxiliary spring for vehicles. No. 962,703; June 28; Sp. p. 5216; Gaz. vol. 155; p. 910.
Eckstrom, Adolf P., Riverside, Cal. Saw-oiler. No. 961,289; June 14; Sp. p. 2142; Gaz. vol. 155; p. 384.
Economy Electric Company. (See Wohl and Hertzberg, assignors.)
Edde, Henri, Paris, France. Inhaler. No. 960,523; June 7; Sp. p. 569; Gaz. vol. 155; p. 94.
Edelman, Adam, Millerton, N. Y. Shoe-cleaner. No. 960,290; June 7; Sp. p. 101; Gaz. vol. 155; p. 20.
Edge Moor Iron Company. (See Sellers and Collins, assignors.)
Edison, Thomas A., Llewellyn Park, Orange, N. J. Crushing-roll. No. 962,822; June 28; Sp. p. 5448; Gaz. vol. 155; p. 952.

Edison, Thomas A., Llewellyn Park, Orange, N. J. Crushing-roll. No. 962,823; June 28; Sp. p. 5449; Gaz. vol. 155; p. 952.
Edison, Thomas A., Llewellyn Park, Orange, assignor to New Jersey Patent Company, Orange, N. J. Apparatus for recording sounds. No. 962,081; June 21; Sp. p. 3842; Gaz. vol. 155; p. 673.
Edmunds, Frank A., and N. G. Warming, St. Paul, Minn. Crank connection for multicylinder-engines. No. 962,200; June 21; Sp. p. 4118; Gaz. vol. 155; p. 714.
Edwards, Andrew A., and A. Olson, Stanwood, Wash. Rotary engine. No. 961,849; June 21; Sp. p. 3341; Gaz. vol. 155; p. 594.
Edwards, Jessie V., Clifton, Tex. Window-sash. No. 962,501; June 28; Sp. p. 4780; Gaz. vol. 155; p. 841.
Edwards, William F. (See Keilner and Edwards.)
Edwin B. Stimpson Company. (See Stimpson, Edwin B., assignor.)
Edwin Harrington, Son & Co. (See Coes, Scott, and Thumlert, assignors.)
Eggert, William H., assignor to J. P. Devine Company, Buffalo, N. Y. Discharge mechanism for vacuum-tanks. No. 960,857; June 7; Sp. p. 1245; Gaz. vol. 155; p. 208.
Egnér, Carl E., Stockholm, and R. F. Fredriksson, Gottenborg, Sweden. Aerial electric cable. No. 960,291; June 7; Sp. p. 102; Gaz. vol. 155; p. 20.
Ehlers, Robert J. (See St. John, Charles P., assignor.)
Ehrlich, M. J. (See Hopkins, William W., assignor.)
Einstein, Robert E., assignor to St. Louis Frog & Switch Company, St. Louis, Mo. Adjustable guard-rail clamp. No. 960,858; June 7; Sp. p. 1247; Gaz. vol. 155; p. 208.
Einstein, Sol. (See De Leeuw and Einstein.)
Elsenman, Jesse B., New York, N. Y., assignor, by mesne assignments, to Manhattan Braid Company. Holder for darning-silk. No. 962,949; June 28; Sp. p. 5681; Gaz. vol. 155; p. 995.
Ekelund, Nils K. H., Jönköping, Sweden. Igniting-furnace for pulverous fuel. No. 960,292; June 7; Sp. p. 103; Gaz. vol. 155; p. 20.
Elder, Oscar B., assignor of one-half to G. Braithwaite, Chicopee Falls, Mass. Boring-tool. No. 963,022; June 28; Sp. p. 5824; Gaz. vol. 155; p. 1019.
Electric Bank Protection Company. (See Williams, John P., assignor.)
Electric Bank Protection Company. (See Williams and Huhn, assignors.)
Electric Controller and Supply Company, The. (See Mots, Jacob F., assignor.)
Electric Railway Improvement Company, The. (See Neff, William A., assignor.)
Elkin, John R., Greenville, S. C. Type-writer-shipping case. No. 960,524; June 7; Sp. p. 570; Gaz. vol. 155; p. 94.
Elkins, Stephen F., assignor to The Manufacturers' Sales Co., Pittsburg, Pa. Shade-holder for inverted gas-burners. No. 960,630; June 7; Sp. p. 803; Gaz. vol. 155; p. 132.
Elliott, Charles W., New Albany, Ind. Wood-bending machine. No. 960,525; June 7; Sp. p. 579; Gaz. vol. 155; p. 95.
Elliott, Howard R., Billings, Mont. Gate-latch. No. 960,859; June 7; Sp. p. 1248; Gaz. vol. 155; p. 209.
Elliott, Howard R., Billings, Mont. Gate-latch. No. 961,891; June 14; Sp. p. 2987; Gaz. vol. 155; p. 518.
Elliott, Roderic S., Laona, and G. Cook, Gillett, Wis. Safe. No. 960,293; June 7; Sp. p. 104; Gaz. vol. 155; p. 21.
Elliott, Thomas H., assignor to Selma Fruit Company, Inc., Selma, Cal. Raisin-seeder. No. 962,201; June 21; Sp. p. 4119; Gaz. vol. 155; p. 715.
Elliott, William S., Pittsburg, Pa. Twin strainer. No. 962,202; June 21; Sp. p. 4120; Gaz. vol. 155; p. 715.
Ellis, Alexander T., Boise, Idaho. Blind for fireproof buildings. No. 962,011; June 21; Sp. p. 3680; Gaz. vol. 155; p. 647.
Elmborg, Axel, Ottumwa, Iowa. Drawer-guide. No. 962,502; June 28; Sp. p. 4782; Gaz. vol. 155; p. 842.
Elsmore, Alfred H., Eastbourne, England. Bow for stringed instruments. No. 961,589; June 14; Sp. p. 2796; Gaz. vol. 155; p. 488.
Emerson, E. O., Jr., et al. (See Smith, Russell A., assignor.)
Emerson, John L., et al. (See Smith, Russell A., assignor.)
Emerson, Ralph W., and F. Bishop, South Bend, Ind. Gas-compressor. No. 962,203; June 21; Sp. p. 4121; Gaz. vol. 155; p. 715.
Emerson, Ralph W., and F. Bishop, South Bend, Ind. Refrigerating appliance. No. 962,704; June 28; Sp. p. 5217; Gaz. vol. 155; p. 911.
Emery, Frank E., New York, N. Y. Shoe for pressing-iron stands. No. 962,894; June 28; Sp. p. 5589; Gaz. vol. 155; p. 977.
Endel, Albert, et al. (See Foster, Jackson W., assignor.)
England, Arthur E., Boston, assignor of one-half to J. A. Yantis, Malden, Mass., and one-half to F. P. Woodbury and W. D. Pulver, Salem, N. H. Valve for carburetors and other apparatus. No. 961,590; June 14; Sp. p. 2797; Gaz. vol. 155; p. 484.
England, James R., Chicago, Ill. Mail-discharging apparatus. No. 961,943; June 21; Sp. p. 3541; Gaz. vol. 155; p. 625.
Engle, Washington J., Bloomingdale, Ind. Bit. No. 962,184; June 21; Sp. p. 3978; Gaz. vol. 155; p. 691.
Engström, Axel E., Huskvarna, Sweden. Garden-rake. No. 962,559; June 28; Sp. p. 4920; Gaz. vol. 155; p. 862.
Engstrom, Erick A., Hill, Mont. Lace-hook. No. 962,826; June 21; Sp. p. 4379; Gaz. vol. 155; p. 756.
Engström, Frans W., Nybro, Sweden. Machine for molding threaded objects. No. 961,944; June 21; Sp. p. 3543; Gaz. vol. 155; p. 625.
Enright, Edward J. (See Enright, John W. and E. J.)
Enright, John W. and E. J., New Orleans, La. Rail-joint. No. 962,824; June 28; Sp. p. 5450; Gaz. vol. 155; p. 953.
Enterline, William, Big Run, Pa. Thermostat. No. 960,860; June 7; Sp. p. 1250; Gaz. vol. 155; p. 209.
Eppler, Andrew, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Tack-pulling machine. No. 960,294; June 7; Sp. p. 106; Gaz. vol. 155; p. 21.
Erb, Charles F., Rockaway Point, assignor to R. E. Dietz Company, New York, N. Y. Tubular lantern. No. 962,135; June 21; Sp. p. 3979; Gaz. vol. 155; p. 692.
Erickson, Harry W., Willow Lake, S. D. Grappling device. No. 961,761; June 21; Sp. p. 3142; Gaz. vol. 155; p. 565.
Eriksen, Hermand, Philadelphia, Pa. Compound reversible rotary engine. No. 962,204; June 21; Sp. p. 4123; Gaz. vol. 155; p. 715.
Erlandsen, Julius, New York, N. Y. Rotary cutter. No. 960,526; June 7; Sp. p. 573; Gaz. vol. 155; p. 95.
Ertel, John P., Rushville, Ind. Fender for plows. No. 961,591; June 14; Sp. p. 2801; Gaz. vol. 155; p. 484.
Essen, Harald von, Hamburg, Germany. Fly-catcher. No. 960,527; June 7; Sp. p. 576; Gaz. vol. 155; p. 95.
Estes, James W., Syracuse, N. Y. Locomotive-cab window. No. 960,861; June 7; Sp. p. 1252; Gaz. vol. 155; p. 209.
Evans, Charles H. (See Evans, Ole and C. H.)
Evans, George R., Berkeley, Cal. Fresh-air-inlet trap. No. 961,343; June 14; Sp. p. 2279; Gaz. vol. 155; p. 402.
Evans, Henry O., Detroit, Mich. Feed mechanism for spindles for machine-tools. No. 960,295; June 7; Sp. p. 108; Gaz. vol. 155; p. 22.
Evans, James A., Philadelphia, Pa. Coin-controlled mechanism. No. 961,219; June 14; Sp. p. 1987; Gaz. vol. 155; p. 359.
Evans, Jesse P., and J. B. West, Barton, Ark.; said Evans assignor to said West. Road-grader and ditcher. No. 960,296; June 7; Sp. p. 111; Gaz. vol. 155; p. 22.
Evans, John W., Belleville, Ontario, Canada. Reducing furnace. No. 960,862; June 7; Sp. p. 1255; Gaz. vol. 155; p. 210.
Evans, John W., Belleville, Ontario, Canada. Reducing refractory material. No. 960,863; June 7; Sp. p. 1257; Gaz. vol. 155; p. 210.
Evans, Ole and C. H., Steamboat Springs, Colo. Bolting-machine. No. 960,864; June 7; Sp. p. 1260; Gaz. vol. 155; p. 211.
Evans, William, Philadelphia, Pa. Machine for treating hides or skins. No. 962,205; June 21; Sp. p. 4125; Gaz. vol. 155; p. 716.
Evans, William D., and J. T. Marshall, Eupora, Miss. Cigar-vending machine. No. 962,825; June 28; Sp. p. 5452; Gaz. vol. 155; p. 953.
Evensen, William, assignor to The Goss Printing Press Company, Chicago, Ill. Printing-press. No. 960,865; June 7; Sp. p. 1261; Gaz. vol. 155; p. 211.
Evenson, Syver, Pelican Rapids, Minn. Washing-machine. No. 960,866; June 7; Sp. p. 1262; Gaz. vol. 155; p. 211.
Everson, Charles W., Brooklyn, N. Y., and G. F. D. Trask, Orange, N. J., assignors to said Trask. Valve mechanism. No. 961,220; June 14; Sp. p. 1990; Gaz. vol. 155; p. 359.
Ewer, Thomas E., Fort Des Moines, Iowa. Snap-hook for neck-yokes. No. 961,221; June 14; Sp. p. 1992; Gaz. vol. 155; p. 360.
Ewer, Thomas E., Fort Des Moines, Iowa. Trace-fastener. No. 962,422; June 28; Sp. p. 4608; Gaz. vol. 155; p. 813.
Ewing, Robert. London, Ontario, Canada. Disk harrow. No. 961,113; June 14; Sp. p. 1764; Gaz. vol. 155; p. 320.
Eynon, David L., et al. (See Eynon, William D., assignor.)
Eynon, William D., assignor of one-fourth to J. J. Fisher, Philadelphia, one-fourth to P. Harding, Narberth, Pa., and one-fourth to D. L. Eynon, Paterson, N. J. Rolling metal. No. 960,297; June 7; Sp. p. 112; Gaz. vol. 155; p. 22.
F. S. Webster Company. (See Wheeler, Arthur S., assignor.)
Faas, Henry N., and H. E. Dodson, assignors, by mesne assignments, to The American Seeding Machine Company, Springfield, Ohio. Cultivator. No. 961,762; June 21; Sp. p. 3144; Gaz. vol. 155; p. 565.
Face, Edward W. (See Hitchings and Face.)
Fahrney, William H., Chicago, Ill. Laying pavements under water. No. 961,222; June 14; Sp. p. 1994; Gaz. vol. 155; p. 360.
Fahy, James H., Goldfield, Nev. Giant-powder cap. No. 960,867; June 7; Sp. p. 1263; Gaz. vol. 155; p. 211.
Fairchild, Edwin E., Los Angeles, and F. B. Clark, Florence, Cal. Car-seal. No. 961,223; June 14; Sp. p. 1995; Gaz. vol. 155; p. 360.
Fairchild, Samuel H., Fall River, Mass. Hat-planing machine. No. 962,012; June 21; Sp. p. 3682; Gaz. vol. 155; p. 647.
Fairmount Electric and Manufacturing Company. (See Vogel, John C., assignor.)
Falding, Frederic J. (See Channing and Falding.)

Falding, Frederic J., New York, N. Y., assignor of one-half to W. E. Cathcart, Maywood, N. J. Purifying gas and recovering ammonia, &c., therefrom. No. 961,763; June 21; Sp. p. 3150; Gaz. vol. 155; p. 566.

Falding, Frederic J., New York, N. Y., assignor of one-half to W. R. Cathcart, Maywood, N. J. Utilizing by-product metallic salts and ammoniacal liquor. No. 961,764; June 21; Sp. p. 3154; Gaz. vol. 155; p. 566.

Faltus, Joseph, Fall River, Mass. Shuttle-threading mechanism. No. 962,327; June 21; Sp. p. 4380; Gaz. vol. 155; p. 756.

Falvey, John A., Detroit, Mich. Attachment for mail-bag forks. No. 961,487; June 14; Sp. p. 2579; Gaz. vol. 155; p. 449.

Farbenfabriken vorm. Friedr. Bayer & Co. (See Bauer and Herre, assignors.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Gunther and Heese, assignors.) (Reissue.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Jansen and Neelmeier, assignors.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Lommel, Wilhelm, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Ott, René, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Taub, Ludwig, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Thomaschewski, Paul, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Vagt, August, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Weindel, Anton, assignor.)

Farmer, Mortimer H., Virden, Ill. Lock. No. 960,868; June 7; Sp. p. 1264; Gaz. vol. 155; p. 212.

Farrar, Frank S., Lyndon, Kans. Sectional mold for concrete construction. No. 962,560; June 28; Sp. p. 4921; Gaz. vol. 155; p. 862.

Farrell, John, Newton, N. J. Hoisting mechanism. No. 960,298; June 7; Sp. p. 114; Gaz. vol. 155; p. 22.

Farrington, Ira P., Trinidad, Colo. Insect-destroyer. No. 962,561; June 28; Sp. p. 4926; Gaz. vol. 155; p. 862.

Fassett, Francis K., Dayton, Ohio. Door-hanger. No. 961,850; June 21; Sp. p. 3343; Gaz. vol. 155; p. 594.

Fassler, John B., Ward, Pa. Ear-muff. No. 961,765; June 21; Sp. p. 3158; Gaz. vol. 155; p. 567.

Fauet, William, Higgins, Tex. Replanting attachment for cultivators. No. 961,290; June 14; Sp. p. 2142; Gaz. vol. 155; p. 384.

Faustman, William, Brooklyn, N. Y. Watchmaker's loop. No. 961,502; June 14; Sp. p. 2603; Gaz. vol. 155; p. 484.

Fay, Walter L. (See Bowen, Ernest S., assignor.)

Fearnow, Brady G., Pittsburg, Pa. Folding umbrella. No. 962,328; June 21; Sp. p. 4383; Gaz. vol. 155; p. 757.

Federal-Huber Company. (See Graham, William S., assignor.)

Feldmann, Hirsch, Taganrog, Russia. Safety-lamp. No. 960,869; June 7; Sp. p. 1266; Gaz. vol. 155; p. 212.

Felt, Dorr E., Chicago, Ill. Calculating-machine. No. 960,528; June 7; Sp. p. 578; Gaz. vol. 155; p. 96.

Fender, Frank E., Lincoln, Nebr. Burner. No. 962,329; June 21; Sp. p. 4385; Gaz. vol. 155; p. 757.

Fenton, William A., Sioux City, Iowa. Gas-pressure regulator. No. 962,503; June 28; Sp. p. 4784; Gaz. vol. 155; p. 842.

Ferranti, Sebastian Z. de, Grindleford Bridge, near Sheffield, England. Metallurgical furnace. No. 962,013; June 21; Sp. p. 3685; Gaz. vol. 155; p. 648.

Fessenden, Reginald A., Brant Rock, Mass. Wireless signaling. No. 960,631; June 7; Sp. p. 804; Gaz. vol. 155; p. 132.

Fessenden, Reginald A., Washington, D. C. Receiver for electromagnetic waves. No. 962,016; June 21; Sp. p. 3690; Gaz. vol. 155; p. 649.

Fessenden, Reginald A., Brant Rock, Mass. Electrical apparatus. No. 962,017; June 21; Sp. p. 3691; Gaz. vol. 155; p. 649.

Fessenden, Reginald A., Brant Rock, Mass. Method of signaling. No. 962,018; June 21; Sp. p. 3694; Gaz. vol. 155; p. 649.

Fessenden, Reginald A., Washington, D. C., assignor to The National Electric Signaling Company, Pittsburg, Pa. Electric signaling. No. 962,014; June 21; Sp. p. 3686; Gaz. vol. 155; p. 648.

Fessenden, Reginald A., Washington, D. C., assignor to The National Electric Signaling Company. Receiver for electric signaling. No. 962,015; June 21; Sp. p. 3688; Gaz. vol. 155; p. 648.

Fiedler, Anthony, New York, N. Y. Wheel-guard. No. 962,826; June 28; Sp. p. 5458; Gaz. vol. 155; p. 958.

Fielding, John, Gloucester, England. Machine for forging metals. No. 962,705; June 28; Sp. p. 5219; Gaz. vol. 155; p. 911.

Fields, Jesse W., Prosser, Wash. Device for raising and lowering clothes-lines. No. 960,870; June 7; Sp. p. 1267; Gaz. vol. 155; p. 212.

Fifield, Frank, Hastings, assignor of one-half to H. E. King, Yankee Springs, Mich. Loading device. No. 960,299; June 7; Sp. p. 116; Gaz. vol. 155; p. 22.

Fillion, Fred T., North Platte, Nebr. Safety-gate for railway-cars. No. 960,871; June 7; Sp. p. 1268; Gaz. vol. 155; p. 213.

Finch, Edwin W. (See Morton, George E., assignor.)

Finkelstein, Marcus, New York, N. Y., Elbow-supporter. No. 961,598; June 14; Sp. p. 2804; Gaz. vol. 155; p. 484.

Finlay, Robert H. F., Belfast, Ireland. Manufacture of bicarbonate of soda. No. 961,945; June 21; Sp. p. 3546; Gaz. vol. 155; p. 626.

Finney, Alfred C. (See Plank and Finney.)

Fischer, Adalbert W., assignor to Schutte and Koerting Company, Philadelphia, Pa. Trip-valve. No. 960,872; June 7; Sp. p. 1270; Gaz. vol. 155; p. 213.

Fischer, Adalbert W., assignor to Schutte and Koerting Company, Philadelphia, Pa. Gate-valve. No. 961,504; June 14; Sp. p. 2805; Gaz. vol. 155; p. 485.

Fischer, Ernst, and P. Bergell, Berlin, Germany. Making a neutral sodium salt of lactalbumin. No. 962,753; June 28; Sp. p. 5316; Gaz. vol. 155; p. 929.

Fischer, George, New York, N. Y. Bottle-opener. No. 961,224; June 14; Sp. p. 1997; Gaz. vol. 155; p. 360.

Fischer, John A., Memphis, Tenn. Double-acting spring-hinge. No. 962,330; June 21; Sp. p. 4386; Gaz. vol. 155; p. 757.

Fischer, Victor, Budapest, Austria-Hungary. Wire-stitching instrument. No. 960,300; June 7; Sp. p. 118; Gaz. vol. 155; p. 23.

Fisher, Albert A. (See Fisher, Joseph E. and A. A.)

Fisher, James J., *et al.* (See Eynon, William D., assignor.)

Fisher, Joseph E. and A. A., assignors to Martin Fisher and Sons, Buffalo, N. Y. Ventilator. No. 960,873; June 7; Sp. p. 1273; Gaz. vol. 155; p. 214.

Fisher and Sons, Martin. (See Fisher, Joseph E. and A. A., assignors.)

Fisher, William C., Middletown, Conn. Making cartridge-belts. No. 962,331; June 21; Sp. p. 4390; Gaz. vol. 155; p. 758.

Fisk Rubber Company, The. (See Jameson, William, assignor.)

Fitch, Benjamin F., assignor of one-half to E. F. Fitch, Chicago, Ill. Amusement device. No. 961,595; June 14; Sp. p. 2808; Gaz. vol. 155; p. 485.

Fitch, Edwin F. (See Fitch, Benjamin F., assignor.)

Fitz, John, Jr., assignor of one-half to J. Zimmerman, Philadelphia, Pa. Photographic-printing mask. No. 960,301; June 7; Sp. p. 122; Gaz. vol. 155; p. 24.

Fitzgerald, Jeremiah C., De Kalb, assignor to Smith Manufacturing Company, Chicago, Ill. Overhead switch. No. 961,433; June 14; Sp. p. 2450; Gaz. vol. 155; p. 431.

Fitzgerald, William G. (See Flood and Fitzgerald.)

Fitzgerrell, Harry S. (See Walters and Fitzgerrell.)

Fitzsimmons, James J., Chicago, Ill. Base-ball-game device. No. 961,851; June 21; Sp. p. 3345; Gaz. vol. 155; p. 595.

Flamm, Paul R., North Chicago, Ill. Mechanic's furnace. No. 961,596; June 14; Sp. p. 2809; Gaz. vol. 155; p. 486.

Fleege, Frank H., assignor to R. J. Leacock, trustee, St. Louis, Mo. Centrifugal separator. No. 961,488; June 14; Sp. p. 2580; Gaz. vol. 155; p. 450.

Fleming, John C., Washington, D. C. Refining-machine. No. 960,529; June 7; Sp. p. 590; Gaz. vol. 155; p. 96.

Flessa, George, Rawhide, Nev. Switch-operating mechanism. No. 962,562; June 28; Sp. p. 4927; Gaz. vol. 155; p. 863.

Fletcher, Henry O., Hyde Park, Mass. Shuttle-locking device for shoe-sewing machines. No. 962,206; June 21; Sp. p. 4126; Gaz. vol. 155; p. 716.

Flood, John G., Westcliffe-on-Sea, and W. G. Fitzgerald, West Ealing, England. Diving-bell apparatus for submarine work. No. 962,019; June 21; Sp. p. 3697; Gaz. vol. 155; p. 649.

Flood, Louis I., Shelbyville, Mo. Refrigerator-pail. No. 962,504; June 28; Sp. p. 4785; Gaz. vol. 155; p. 842.

Flora, George W., Attica, Ind. Cutting apparatus. No. 960,874; June 7; Sp. p. 1278; Gaz. vol. 155; p. 214.

Floyd, George G., Granite, Ill., assignor to American Steel Foundries, New York, N. Y. Three-tie rail-support. No. 962,423; June 28; Sp. p. 4609; Gaz. vol. 155; p. 814.

Floyd, George G., Granite, Ill., assignor to American Steel Foundries, New York, N. Y. Rail-joint support. No. 962,424; June 28; Sp. p. 4609; Gaz. vol. 155; p. 814.

Fogelquist, Alexander E., Minneapolis, Minn. Ventilated receptacle for cooking utensils. No. 961,291; June 14; Sp. p. 2144; Gaz. vol. 155; p. 384.

Folger, Thomas H. E., Corral, Idaho. Wind-motor. No. 961,766; June 21; Sp. p. 3159; Gaz. vol. 155; p. 567.

Foote, Theodore M., Allston, Mass. Printing-telegraph. No. 962,062; June 21; Sp. p. 3848; Gaz. vol. 155; p. 678.

Forbes, Robert A., Anderson, Ind. Computing-scale. No. 962,332; June 21; Sp. p. 4391; Gaz. vol. 155; p. 758.

Forbes, Thomas C., assignor to Los Angeles Rotary Gas Engine Company, Los Angeles, Cal. Muffler. No. 960,530; June 7; Sp. p. 594; Gaz. vol. 155; p. 96.

Forbes, William Y., and W. H. Rothwell, Huyton, Liverpool, England. Type-writing machine. No. 961,597; June 14; Sp. p. 2811; Gaz. vol. 155; p. 486.

Forbes, William Y., and W. H. Rothwell, Huyton, Liverpool, England. Type-writing machine. No. 961,598; June 14; Sp. p. 2812; Gaz. vol. 155; p. 486.

Ford, Patrick J. (See Simmons and Ford.)

Fordyce, Edmond A., Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Pneumatic-despatch-tube apparatus. No. 960,531; June 7; Sp. p. 595; Gaz. vol. 155; p. 97.

Forster, Carl R., Evanston, Ill. Light-projecting device. No. 961,114; June 14; Sp. p. 1765; Gaz. vol. 155; p. 321.

Foster, Jackson W., assignor of one-half to A. Endel and one-fourth to W. C. Warrington, Jacksonville, Fla. Pressure-relief valve. No. 960,802; June 7; Sp. p. 124; Gaz. vol. 155; p. 24.

Foster, Jackson W., and A. A. Stoddard, Jacksonville, Fla. Belt. No. 962,563; June 28; Sp. p. 4929; Gaz. vol. 155; p. 863.

Foster, John F., Argentine, Kans. Roller-bearing. No. 962,333; June 21; Sp. p. 4392; Gaz. vol. 155; p. 758.

Fouts, William P., and F. B. Hobbs, Cleveland, Ohio. Expansion-reamer. No. 961,115; June 14; Sp. p. 1769; Gaz. vol. 155; p. 321.

Fowle, Charles L., assignor to Dowagiac Manufacturing Company, Dowagiac, Mich. Bearing. No. 962,629; June 28; Sp. p. 5059; Gaz. vol. 155; p. 884.

Fowler Automobile Railway Equipment Company. (See Fowler, James B., assignor.)

Fowler, Charles E., Seattle, Wash. Scow. No. 962,706; June 28; Sp. p. 5220; Gaz. vol. 155; p. 911.

Fowler, Edward M., Alexandria, Mo. Valve for drainage and irrigating systems. No. 961,292; June 14; Sp. p. 2147; Gaz. vol. 155; p. 385.

Fowler, James B., Columbus, Ohio, assignor to Fowler Automobile Railway Equipment Company. Railway and car and appliances therefor. No. 961,293; June 14; Sp. p. 2148; Gaz. vol. 155; p. 385.

Fowler, William E., Montreal, Quebec, Canada. Box-car. No. 962,425; June 28; Sp. p. 4611; Gaz. vol. 155; p. 814.

Frame, Robert E. (See Rohling, John M., assignor.)

Frampton, Reynolds C., assignor to Pittsburg Water Heater Company, Pittsburg, Pa. Heater. No. 961,434; June 14; Sp. p. 2453; Gaz. vol. 155; p. 432.

Frampton, Samuel S., and L. J. Bailey, Whittier, Cal. Drive-spear. No. 962,020; June 21; Sp. p. 3700; Gaz. vol. 155; p. 650.

Franchini, Alcide, New Haven, Conn. Centering device. No. 961,599; June 14; Sp. p. 2813; Gaz. vol. 155; p. 487.

Francis, John M., Marion, Ind. Sign. No. 962,630; June 28; Sp. p. 5061; Gaz. vol. 155; p. 885.

Frank Mossberg Company. (See Mossberg, Frank, assignor.)

Franke, Frederick C. (See Linde and Franke.)

Franken, Robert, Los Angeles, assignor to G. E. Alderson, Delano, Cal. Can-opener. No. 961,946; June 21; Sp. p. 3548; Gaz. vol. 155; p. 626.

Franz, August, Passaic, N. J. Truck-bearing. No. 960,532; June 7; Sp. p. 596; Gaz. vol. 155; p. 97.

Fredriksson, Reinhold F. (See Egner and Fredriksson.)

Freeland, William C., Alnsworth, Iowa. Brace for fence-posts. No. 962,950; June 28; Sp. p. 5682; Gaz. vol. 155; p. 996.

Freeman, Edgar H., Trenton, N. J. Electrical sign-receptacle. No. 961,600; June 14; Sp. p. 2814; Gaz. vol. 155; p. 487.

Freeman, Michael, Racine, Wis. Conveyer for feed-cutters. No. 961,601; June 14; Sp. p. 2815; Gaz. vol. 155; p. 487.

Freier, Anton, Boston, Mass., assignor to Holtzer-Cabot Electric Company. Brush-holder. No. 960,875; June 7; Sp. p. 1280; Gaz. vol. 155; p. 214.

French, George B., Fremont, Nebr. Hydraulic motor. No. 960,876; June 7; Sp. p. 1281; Gaz. vol. 155; p. 214.

French, Walter, assignor to Steel Roll Machine Company, Chicago, Ill. Ironing-machine. No. 961,489; June 14; Sp. p. 2583; Gaz. vol. 155; p. 450.

French, Warren, assignor, by mesne assignments, to C. M. Hall Lamp Company, Detroit, Mich. Lamp. No. 960,632; June 7; Sp. p. 807; Gaz. vol. 155; p. 132.

Frensel, William F., assignor of one-half to J. H. Weston, Indianapolis, Ind. Removable handle for fare-register rods. No. 960,877; June 7; Sp. p. 1286; Gaz. vol. 155; p. 215.

Frerichs, Gustav, Hanover, Germany. Barovacuummeter. No. 960,633; June 7; Sp. p. 809; Gaz. vol. 155; p. 133.

Frets, Samuel S., Jr. (See Hartwell, Morris H., assignor.)

Frick, Chester A., Defiance, Ohio. Wheel construction. No. 962,631; June 28; Sp. p. 5062; Gaz. vol. 155; p. 885.

Frick, Orlando A., assignor to The Turnbull Wagon Company, Defiance, Ohio. Wheel construction. No. 962,207; June 21; Sp. p. 4127; Gaz. vol. 155; p. 716.

Fried. Krupp Actiengesellschaft. (See Koch, Norbert, assignor.)

Friedman, Goste, Jamestown, N. Y. Bread-mixer. No. 960,878; June 7; Sp. p. 1287; Gaz. vol. 155; p. 215.

Friedman, Goste, Jamestown, N. Y. Floor-wiper. No. 960,879; June 7; Sp. p. 1289; Gaz. vol. 155; p. 215.

Fritsche, Lillian S. (See Fritsche, Richard C., assignor.)

Fritsche, Richard C., assignor to himself and L. S. Fritsche, Brooklyn, N. Y. Attachment for holding down vests. No. 960,303; June 7; Sp. p. 125; Gaz. vol. 155; p. 25.

Frommer, Rudolf, Budapest, Austria-Hungary. Automatic firearm. No. 960,880; June 7; Sp. p. 1291; Gaz. vol. 155; p. 216.

Frost, Parmenas F., New York, N. Y. Post and wire-fence construction. No. 962,632; June 28; Sp. p. 5063; Gaz. vol. 155; p. 885.

Fujita, Tamaki, Los Angeles, Cal. Universal photometer. No. 961,652; June 21; Sp. p. 3248; Gaz. vol. 155; p. 595.

Fuligora, Robert, F. S. and W. Murray, New York, N. Y. Amusement apparatus. No. 961,947; June 21; Sp. p. 3549; Gaz. vol. 155; p. 626.

Fulton Company, The. (See Fulton, Weston M., assignor.)

Fulton, Weston M., assignor to The Fulton Company, Knoxville, Tenn. Making collapsible and expansible corrugated walls. No. 962,961; June 28; Sp. p. 5682; Gaz. vol. 155; p. 996.

Funke, Anton and J., New York, N. Y., assignors to The Papyrus Artificial Paper Manufacturing Co., Hoboken, N. J. Craping paper. No. 962,505; June 28; Sp. p. 4786; Gaz. vol. 155; p. 843.

Funke, Josef. (See Funke, Anton and J.)

Furney, Elliott E., assignor of one-half to J. F. O'Neil, St. Louis, Mo. Propeller. No. 962,136; June 21; Sp. p. 3980; Gaz. vol. 155; p. 692.

Fynn, Valère A., London, England. Alternating-current motor. No. 960,881; June 7; Sp. p. 1292; Gaz. vol. 155; p. 216.

Fynn, Valère A., London, England. Polyphase commutator-motor. No. 960,882; June 7; Sp. p. 1294; Gaz. vol. 155; p. 216.

Fynn, Valère A., London, England. Polyphase commutator-motor. No. 960,883; June 7; Sp. p. 1296; Gaz. vol. 155; p. 217.

Fynn, Valère A., London, England. Alternate-current commutator-motor. No. 960,884; June 7; Sp. p. 1299; Gaz. vol. 155; p. 217.

Fynn, Valère A., London, England. Alternating-current motor. No. 962,334; June 21; Sp. p. 4393; Gaz. vol. 155; p. 758.

Fynn, Valère A., London, England. Alternating-current motor. No. 962,335; June 21; Sp. p. 4401; Gaz. vol. 155; p. 759.

Fynn, Valère A., London, England. Alternating-current motor. No. 962,336; June 21; Sp. p. 4404; Gaz. vol. 155; p. 759.

Fynn, Valère A., London, England. Alternating-current motor. No. 962,337; June 21; Sp. p. 4410; Gaz. vol. 155; p. 760.

Gaara, Halvor, New York, N. Y. Cylinder-machine. No. 962,208; June 21; Sp. p. 4129; Gaz. vol. 155; p. 717.

Gabel, Charles, Hawkeye, Iowa. Veterinary obstetrical instrument. No. 960,885; June 7; Sp. p. 1301; Gaz. vol. 155; p. 218.

Gabrielson, Carl, and F. C. Stanley, assignors to L. C. Smith & Bros. Typewriter Company, Syracuse, N. Y. Platen-brake for type-writing machines. No. 961,767; June 21; Sp. p. 3161; Gaz. vol. 155; p. 567.

Gage, H. K. (See Morris, Homer, assignor.)

Gailor, William H., Saratoga Springs, N. Y. Road-oiler. No. 962,209; June 21; Sp. p. 4130; Gaz. vol. 155; p. 717.

Galbraith, Robert J., Albany, Oreg. Steam-generator. No. 961,490; June 14; Sp. p. 2587; Gaz. vol. 155; p. 451.

Gallagher, Bernard, Lynn, Mass. Machine for filling bottles. No. 962,564; June 28; Sp. p. 4931; Gaz. vol. 155; p. 863.

Gallagher, Richard D., Jr., assignor to Standard Coupler Company, New York, N. Y. Buffing mechanism for passenger-cars. No. 961,948; June 21; Sp. p. 3552; Gaz. vol. 155; p. 627.

Gallagher, Richard D., Jr., assignor to Standard Coupler Company, New York, N. Y. Car construction. No. 961,949; June 21; Sp. p. 3555; Gaz. vol. 155; p. 627.

Gallagher, Richard W., assignor to Automatic Billing Company, Los Angeles, Cal. Automatic billing-machine for meters. No. 960,533; June 7; Sp. p. 598; Gaz. vol. 155; p. 97.

Gallaspy, Benjamin E., and A. H. McCarty, Fort Worth, Tex. Railway-crossing. No. 962,338; June 21; Sp. p. 4413; Gaz. vol. 155; p. 760.

Galletti, Roberto C., Rome, Italy. Wireless telegraphy. No. 960,304; June 7; Sp. p. 127; Gaz. vol. 155; p. 25.

Galli, Andrew, Peoria, Ill. Suspending holder for paper bags. No. 960,886; June 7; Sp. p. 1302; Gaz. vol. 155; p. 218.

Galt, Robert B., *et al.*, trustees. (See Smith, Arthur K., assignor.)

Gamble, John R., *et al.* (See Bryant, William A., assignor.)

Gamon, Ernest E., Newark, N. J. Water-heater. No. 961,116; June 14; Sp. p. 1770; Gaz. vol. 155; p. 321.

Gangewere, Rocky C., Selma, Ala. Apparatus for treating slag. No. 961,602; June 14; Sp. p. 2818; Gaz. vol. 155; p. 488.

Gans, Robert, Pankow, near Berlin, assignor to J. D. Riedel Aktiengesellschaft, Berlin, Germany. Softening water. No. 960,887; June 7; Sp. p. 1303; Gaz. vol. 155; p. 218.

Gardner, Clarence H., Santa Barbara, Cal. Loose-leaf ledger. No. 962,895; June 28; Sp. p. 5590; Gaz. vol. 155; p. 978.

Gardner, Clyde E. W., assignor to Pike Adding Machine Company, Orange, N. J. Perpendicular and horizontal adding machine. No. 960,634; June 7; Sp. p. 811; Gaz. vol. 155; p. 133.

Gardner, Delamere B., Chicago, Ill. Reinforcing-truss for motor-cars. No. 961,406; June 14; Sp. p. 2385; Gaz. vol. 155; p. 422.

Gardner, Sylvester C., Swansea, C. Chase, Fall River, Mass., and C. V. Kent, Bangor, Pa. Carrier. No. 960,534; June 7; Sp. p. 605; Gaz. vol. 155; p. 98.

Garnett, Fred M. (See Shannon and Garnett.)

Garnier, (alias Girrane,) Gustave, and C. Groboz, Lyon, France. Theatrical machinery. No. 960,888; June 7; Sp. p. 1305; Gaz. vol. 155; p. 212.

Garr, Samuel R., Garfield, Utah. Feeding device for reverberatory furnaces. No. 961,768; June 21; Sp. p. 3163; Gaz. vol. 155; p. 568.

Garratt, James H., and W. J. McGivern, assignors to J. G. Kaelber, Rochester, N. Y. Fire-alarm system. No. 961,853; June 21; Sp. p. 3351; Gaz. vol. 155; p. 595.

Garrett, Myers A., Chicago, Ill. Angle-cock support for air-brake systems. No. 960,889; June 7; Sp. p. 1307; Gaz. vol. 155; p. 219.

Garrett, Myers A., Chicago, Ill. Air-brake angle-cock connection and support. No. 960,890; June 7; Sp. p. 1309; Gaz. vol. 155; p. 219.

Gasche, Ferdinand G., Chicago, Ill. Steam-hammer. No. 960,891; June 7; Sp. p. 1311; Gaz. vol. 155; p. 220.

Gasparich, Anton, Oakland, Cal. Adjustable irregular curve. No. 962,896; June 28; Sp. p. 5592; Gaz. vol. 155; p. 978.

Gates, Hiram W., assignor of forty-nine and one-half one-hundredths to F. Lambe, Durham, N. C. Time-controlled gas-lighting device. No. 961,435; June 14; Sp. p. 2455; Gaz. vol. 155; p. 432.

Gates, Richard T., London, England. Field-firing or surprise target. No. 960,892; June 7; Sp. p. 1313; Gaz. vol. 155; p. 220.

Gates, William H., Norwich, Conn. Automatic firearm. No. 962,137; June 21; Sp. p. 3981; Gaz. vol. 155; p. 692.

Gathmann, Emil, New York, N. Y. Ingot-mold. No. 961,854; June 21; Sp. p. 3367; Gaz. vol. 155; p. 596.

Gautsch, Fred, Jr., Philadelphia, Pa. Fender. No. 962,754; June 28; Sp. p. 5318; Gaz. vol. 155; p. 929.

Geddes, William, Annan, Ontario, Canada, assignor of one-fourth to H. B. Wilson and one-fourth to J. S. Dundon, San Francisco, Cal. Boring or drilling bit. No. 960,635; June 7; Sp. p. 814; Gaz. vol. 155; p. 133.

Gelarie, Louis. (See Hirsch, Henry, assignor.)

General Electric Company. (See Boyd, Frederic R. C., assignor.)

General Electric Company. (See Dempster, John T. H., assignor.)

General Electric Company. (See Dutton, Edgar F., assignor.)

General Electric Company. (See Hewlett, Edward M., assignor.)

General Electric Company. (See Heymann, Hugo, assignor.)

General Electric Company. (See Kulel, Hans, assignor.)

General Electric Company. (See Loewenstein and Dyer, assignors.)

General Electric Company. (See Macloskie, George, assignor.)

General Electric Company. (See Noeggerath, Jakob E., assignor.)

General Electric Company. (See Plank and Finney, assignors.)

General Electric Company. (See Samuelson, Frederick, assignor.)

General Electric Company. (See Sargent, Howard R., assignor.)

General Electric Company. (See Smith, Herbert M., assignor.)

General Electric Company. (See Stevens, George E., assignor.)

General Electric Company. (See Taylor, John B., assignor.)

General Electric Company. (See Thomson, Elihu, assignor.)

General Electric Company. (See Underwood, Louis E., assignor.)

General Music Supply Company. (See Haskins, Caryl D., assignor.)

General Railway Signal Company. (See Balliet, Herbert B., assignor.)

General Railway Signal Company. (See Howe, Winthrop K., assignor.)

Geo. Ertel Co. (See Tuttle, Josiah S., assignor.)

George H. Frothingham Co. (See Prescott, Arthur T., assignor.)

Gerbers Co. m. b. H., Dr. N. (See Wendler, Oscar, assignor.)

Gerling, Charles H., assignor to Bernhardt Manufacturing Company, Edwardsville, Ill. Picker for potato-planters. No. 961,436; June 14; Sp. p. 2457; Gaz. vol. 155; p. 433.

Gernsback, Hugo, New York, N. Y. Detectorium. No. 961,855; June 21; Sp. p. 3368; Gaz. vol. 155; p. 596.

Gerson, Louis J., Philadelphia, Pa. Sound-reproducing machine. No. 962,565; June 28; Sp. p. 4933; Gaz. vol. 155; p. 864.

Gerth, Frank, assignor of one-half to P. H. Wickord, Chicago, Ill. Clamping device. No. 962,566; June 28; Sp. p. 4935; Gaz. vol. 155; p. 864.

Gesellschaft für Drahtlose Telegraphie m. b. H. (See Schloemilch and Pichon, assignors.)

Getchell, Frederic O., New Rockford, N. D. Cooking and heating apparatus. No. 961,437; June 14; Sp. p. 2458; Gaz. vol. 155; p. 433.

Getty, Fred I., Jennings, La., assignor to C. F. Gillmann, New York, N. Y. Master-clock. No. 961,950; June 21; Sp. p. 3558; Gaz. vol. 155; p. 628.

Getty, Fred I., Jennings, La., assignor to C. F. Gillmann, New York, N. Y. Circuit-controller. No. 961,951; June 21; Sp. p. 3563; Gaz. vol. 155; p. 628.

Getty, Fred I., Jennings, La., assignor to C. F. Gillmann, New York, N. Y. Electric clock. No. 961,952; June 21; Sp. p. 3567; Gaz. vol. 155; p. 629.

Gibbs, Frederick H., New York, N. Y., assignor to American Car & Foundry Company, St. Louis, Mo. Brake-shoe. No. 961,544; June 14; Sp. p. 2282; Gaz. vol. 155; p. 403.

Gibson, Arthur H., Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Electropneumatic track-channeler. No. 962,755; June 28; Sp. p. 5319; Gaz. vol. 155; p. 929.

Gibson, Hugh S., Cincinnati, Ohio. Machine for sealing envelops. No. 961,117; June 14; Sp. p. 1772; Gaz. vol. 155; p. 322.

Gilbert & Barker Manufacturing Company. (See Barker, John F., Jr., assignor.)

Gilbert, Royal H., Lakewood, Ohio. Rear-axle construction. No. 962,633; June 28; Sp. p. 5065; Gaz. vol. 155; p. 886.

Gilbreth, Frank B., New York, N. Y. Concrete construction. No. 960,305; June 7; Sp. p. 129; Gaz. vol. 155; p. 25.

Gilfillan, Essington N., Chicago, Ill. Pocket-scale. No. 960,535; June 7; Sp. p. 610; Gaz. vol. 155; p. 98.

Gilfillan, Essington N., Syracuse, N. Y., assignor to Continental Paper Bag Company. Carton. No. 961,491; June 14; Sp. p. 2588; Gaz. vol. 155; p. 451.

Gilfillan, Essington N., Syracuse, assignor of fifty-one one-hundredths to J. Hunter, Fulton, N. Y. Cigar-wrapper. No. 961,692; June 14; Sp. p. 2988; Gaz. vol. 155; p. 518.

Gilkison, Frank E., *et al.* (See Batchelor, Henry, assignor.)

Gill, Charles W., Syracuse, N. Y. Seal-lock. No. 962,827; June 28; Sp. p. 5462; Gaz. vol. 155; p. 954.

Gillette, Mott G., assignor to D. S. De Jongh, New York, N. Y. Cigarette-former. No. 961,118; June 14; Sp. p. 1777; Gaz. vol. 155; p. 322.

Gillinder, Edgar A., Philadelphia, Pa. Reflector for incandescent lamps. No. 960,806; June 7; Sp. p. 131; Gaz. vol. 155; p. 25.

Gillmann, Charles F. (See Getty, Fred I., assignor.)

Gilmer, John T., Florala, Ala. Sap or gum extractor. No. 961,953; June 21; Sp. p. 3571; Gaz. vol. 155; p. 629.

Gilmore, Andrew R., Mason, Ill. Planter. No. 961,769; June 21; Sp. p. 3164; Gaz. vol. 155; p. 568.

Gilmour Hogshead Machine Company. (See Gilmour, John, assignor.)

Gilmour, John, Owensboro, Ky., assignor to Gilmour Hogshead Machine Company. Machine for making casks. No. 962,210; June 21; Sp. p. 4132; Gaz. vol. 155; p. 717.

Gilpin, Elijah B., Philadelphia, Pa. Offal-bag for horses and the like. No. 962,211; June 21; Sp. p. 4133; Gaz. vol. 155; p. 717.

Gilson, John E., assignor to Gilson Manufacturing Company, Port Washington, Wis. Internal-combustion engine. No. 960,536; June 7; Sp. p. 613; Gaz. vol. 155; p. 99.

Gilson Manufacturing Company. (See Gilson, John E., assignor.)

Gin, Gustave, Paris, France. Device for singeing textile fabrics. No. 962,828; June 28; Sp. p. 5465; Gaz. vol. 155; p. 954.

Girard, Ferdinand, Paris, France. Suspension for bars on lathes for dressing, cutting, or working the same. No. 962,829; June 28; Sp. p. 5466; Gaz. vol. 155; p. 955.

Gist, William V., Sparta, Tenn. Bolt-holder. No. 960,307; June 7; Sp. p. 133; Gaz. vol. 155; p. 26.

Gläser, Max. (See Thieme and Gläser.)

Glass Enameled Package Co., The. (See Shields, George, assignor.)

Glass, Perley R. (See Welsh, Morris, assignor.)

Gleason, Michael, Hamilton, Ohio. Crate-machine. No. 961,954; June 21; Sp. p. 3573; Gaz. vol. 155; p. 629.

Glover, Charles, New Britain, Conn. Coaster-brake. No. 961,225; June 14; Sp. p. 1998; Gaz. vol. 155; p. 361.

Godek, Boleslas A., Paris, France. Elastic tire for vehicle-wheels. No. 961,955; June 21; Sp. p. 3574; Gaz. vol. 155; p. 630.

Godman, Emory J. and W. H. Niemeyer, Baltimore, Md., assignors to H. F. Griffith, Philadelphia, Pa. Machine for sealing bottles. No. 961,603; June 14; Sp. p. 2819; Gaz. vol. 155; p. 488.

Godward, Frank, Berghoiz, Ohio. Railway-tie. No. 961,294; June 14; Sp. p. 2157; Gaz. vol. 155; p. 385.

Goetz, Edward C. (See Keller and Goetz.)

Goetz, Leon E., Monroe, Wis. Submarine boat. No. 960,537; June 7; Sp. p. 615; Gaz. vol. 155; p. 99.

Goff, Samuel B., Camden, N. J. Snow-melter. No. 961,604; June 14; Sp. p. 2823; Gaz. vol. 155; p. 488.

Going, William J., Amsterdam, N. Y. Forming blanks. No. 961,119; June 14; Sp. p. 1779; Gaz. vol. 155; p. 322.

Goldman, Albert P., Chillicothe, Ill. Car-coupling. No. 960,538; June 7; Sp. p. 617; Gaz. vol. 155; p. 100.

Goldsborough, John B., Croton, assignor to The Underpinning Company, New York, N. Y. Method and apparatus for construction of supports of buildings and other structures. No. 961,438; June 14; Sp. p. 2459; Gaz. vol. 155; p. 433.

Goldsborough, John B., Croton, assignor to The Underpinning Company, New York, N. Y. Constructing piles. No. 961,492; June 14; Sp. p. 2590; Gaz. vol. 155; p. 451.

Goldschmidt Detinning Company. (See Goldschmidt and Weber, assignors.) (Reissue.)

Goldschmidt, Karl, and J. Weber, Essen-on-the-Ruhr, Germany, assignors, by mesne assignments, to Goldschmidt Detinning Company, Jersey City, N. J. Cleaning old tinned sheet-iron boxes and other tinned articles to render the same suitable for being detinned. (Reissue.) No. 13,123; June 28; Sp. p. 5635; Gaz. vol. 155; p. 1021.

Goldstein, Isidore, Chicago, Ill. Armor for pneumatic tires. No. 960,308; June 7; Sp. p. 133; Gaz. vol. 155; p. 26.

Goliasch, Karl, Berlin, Germany. Accordion. No. 961,120; June 14; Sp. p. 1782; Gaz. vol. 155; p. 323.

Goltra, Edward F., St. Louis, Mo. Cleaning iron ores. No. 961,121; June 14; Sp. p. 1783; Gaz. vol. 155; p. 323.

Gonin, Paul. (See Marseille and Gonin.)

Good, Ezra E., Waterloo, Iowa. Pulsating device for milking apparatus. No. 960,636; June 7; Sp. p. 845; Gaz. vol. 155; p. 134.

Goodall, John N., Portsmouth, N. H., and F. S. Head, Stoneham, Mass. Combined pipe-coupling and valve. No. 960,309; June 7; Sp. p. 135; Gaz. vol. 155; p. 26.

Goodenow, Albert L., Utica, N. Y. Furnace-regulator. No. 961,226; June 14; Sp. p. 2000; Gaz. vol. 155; p. 361.

Goodman, David T., Altoona, Pa. Auxiliary coupling-hook. No. 962,634; June 28; Sp. p. 5069; Gaz. vol. 155; p. 886.

Goodman Manufacturing Company. (See Levin, Nils D., assignor.)

Goodridge, Gilbert W., assignor to The Bryant Electric Company, Bridgeport, Conn. Electric-lamp socket. No. 961,605; June 14; Sp. p. 2824; Gaz. vol. 155; p. 489.

Gordon, Albert A., Jr., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Thread-cutting temple for weft-replenishing looms. No. 961,439; June 14; Sp. p. 2465; Gaz. vol. 155; p. 434.

Gordon, John L., *et al.* (See MacDuffee, Chester E., assignor.)

Gore, Arvin J., Denver, Colo. Pulverizing-mill. No. 960,893; June 7; Sp. p. 1315; Gaz. vol. 155; p. 220.

Goshorn, Leonard, Waco, Tex. Extension obstetrical instrument. No. 962,952; June 28; Sp. p. 5685; Gaz. vol. 155; p. 996.

Goss Printing Press Co. (See Pickering, Edward, assignor.)

Goss Printing Press Company. (See Evensen, William, assignor.)

Gould Coupler Company. (See Turbayne, William A., assignor.)

Graham, Charles W., Rome, assignor, by mesne assignments, to American Can Company, New York, N. Y. Soldering-machine. No. 960,810; June 7; Sp. p. 138; Gaz. vol. 155; p. 27.

Graham, George, St. Louis, Mo. Spring-holder for valve-gear. No. 962,958; June 28; Sp. p. 5687; Gaz. vol. 155; p. 996.

Graham, Isaac N., and J. G. Dula, Deerfield, Va. Gate. No. 961,606; June 14; Sp. p. 2826; Gaz. vol. 155; p. 489.

Graham, William S., assignor to Federal-Huber Company, Chicago, Ill. Basin-cock. No. 962,083; June 21; Sp. p. 3851; Gaz. vol. 155; p. 673.

Graham, William S., assignor to Federal-Huber Company, Chicago, Ill. Faucet. No. 962,084; June 21; Sp. p. 3853; Gaz. vol. 155; p. 674.

Grandperrin, Paul M., Sag Harbor, N. Y. Wood-cutter or countersink. No. 961,770; June 21; Sp. p. 3165; Gaz. vol. 155; p. 568.

Granger, Amédée, New Orleans, La. X-Ray apparatus. No. 961,607; June 14; Sp. p. 2827; Gaz. vol. 155; p. 489.

Grant, Harry C., Bayonne, N. J. Electric switch. No. 961,693; June 14; Sp. p. 2989; Gaz. vol. 155; p. 518.

Grasselli Chemical Company, The. (See Krickbaum, William M., assignor.)

Graves, David E., Oberlin, Ohio. Combined grading, digging, and leveling machine. No. 962,756; June 28; Sp. p. 5321; Gaz. vol. 155; p. 930.

Gravity Conveyor Company. (See Schwab, Martin C., assignor.)

Gray, Wiltshire S., assignor of one-half to G. W. Snyder, Indianapolis, Ind. Bottle-dam. No. 960,894; June 7; Sp. p. 1319; Gaz. vol. 155; p. 221.

Graydon, George A., assignor of one-half to F. E. Bonfey, Gloversville, N. Y. Sewing-machine attachment. No. 962,021; June 21; Sp. p. 3703; Gaz. vol. 155; p. 650.

Grayson, Pauline, Jersey City, N. J. Artificial fuel. No. 961,608; June 14; Sp. p. 2830; Gaz. vol. 155; p. 490.

Green Engineering Co. (See Dewey, Jesse S., assignor.)

Green, Henry R., Spokane, Wash. Oil-burner. No. 962,212; June 21; Sp. p. 4134; Gaz. vol. 155; p. 718.

Green, John D., Chillicothe, Ohio. Collapsible tub. No. 962,954; June 28; Sp. p. 5688; Gaz. vol. 155; p. 997.

Green, Robert E., New York, N. Y. Airship. No. 960,539; June 7; Sp. p. 620; Gaz. vol. 155; p. 100.

Green, Warren C., Concordia, Kans. Tray-attaching device. No. 961,771; June 21; Sp. p. 3166; Gaz. vol. 155; p. 568.

Greenberg, Jacob, assignor to Neostyle Envelope Company, New York, N. Y. Wrapper. No. 960,811; June 7; Sp. p. 143; Gaz. vol. 155; p. 27.

Greening, William J., Middletown, N. Y. Means for lubricating axles, bearings, and the like. No. 962,955; June 28; Sp. p. 5689; Gaz. vol. 155; p. 997.

Greenlaw, Arthur L. (See Jewett and Greenlaw.)

Greenlaw Manufacturing Co., The. (See Jewett and Greenlaw, assignors.)

Greenstran, Oscar, Granada, Minn. Jack. No. 962,506; June 28; Sp. p. 4787; Gaz. vol. 155; p. 843.

Greenway, Henry H. (See Sulman, Greenway, and Higgins.)

Gregory, George H., Mount Carmel, Ill. Furnace-door-operating mechanism. No. 962,339; June 21; Sp. p. 4416; Gaz. vol. 155; p. 761.

Grimm, John V., Toungoo, Burma, India. Bottle-seal. No. 962,022; June 21; Sp. p. 3705; Gaz. vol. 155; p. 651.

Grimm, Patrick, Saron, Tex. Sewing-machine attachment. No. 960,895; June 7; Sp. p. 1320; Gaz. vol. 155; p. 221.

Griffith, Horace F. (See Godman and Niemeyer, assignors.)

Griffiths, Gomer T., *et al.* (See Russell, Robert C., assignor.)

Grimberg, Frederich H. (See Leimbach and Grimberg.)

Grimm, Gustav H., Rutland, Vt. Heater for evaporators. No. 962,830; June 28; Sp. p. 5467; Gaz. vol. 155; p. 955.

Griner, Fredrick C., Watertown, S. D. Adjustable feed-trough. No. 962,635; June 28; Sp. p. 5070; Gaz. vol. 155; p. 886.

Griseri, Lorenzo, New York, N. Y. Automatic piano. No. 961,122; June 14; Sp. p. 1785; Gaz. vol. 155; p. 323.

Grobon, César. (See Garnier (alias Girrane) and Grobon.)

Grove, Jacob R., Phillipsburg, Pa. Gage-pin for tympans of printing-presses. No. 960,312; June 7; Sp. p. 144; Gaz. vol. 155; p. 27.

Gruenfeldt, Emil, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio. Controller for electric motors. No. 960,896; June 7; Sp. p. 1322; Gaz. vol. 155; p. 222.

Gruenfeldt, Emil, assignor to The Baker Motor Vehicle Company, Cleveland, Ohio. Running-gear construction. No. 960,897; June 7; Sp. p. 1324; Gaz. vol. 155; p. 222.

Guarantee Trust & Safe Deposit Co. *et al.*, executors. (See Schutte, Louis.)

Guertin, Alfred E. (See Bourdreau, Peter, assignor.)

Guest, Isaac D., Telles, N. Mex. Pruning implement. No. 960,540; June 7; Sp. p. 623; Gaz. vol. 155; p. 100.

Guffin, John W., Duke, Okla. Animal-poke. No. 962,507; June 28; Sp. p. 4788; Gaz. vol. 155; p. 843.

Guiberson, W. R., *et al.* (See Longtine, Robert V., assignor.)

Gullong, Jacob, Holyoke, Mass. Oil-can. No. 960,898; June 7; Sp. p. 1325; Gaz. vol. 155; p. 222.

Günther, Oscar, and L. Hesse, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Azo dye. (Reissue.) No. 13,121; June 14; Sp. p. 3110; Gaz. vol. 155; p. 537.

Günther, Oscar, and L. Hesse, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Azo dye. (Reissue.) No. 13,122; June 14; Sp. p. 3111; Gaz. vol. 155; p. 537.

Gutenkunst, William, Milwaukee, Wis. Single-lever lock and trip mechanism for litter-carriers. No. 961,493; June 14; Sp. p. 2595; Gaz. vol. 155; p. 452.

Guthrie, Asa, Chicago, Ill. Stay-bolt header. No. 960,313; June 7; Sp. p. 146; Gaz. vol. 155; p. 28.

Guttman, Harry J., Chicago, Ill. Table. No. 960,314; June 7; Sp. p. 149; Gaz. vol. 155; p. 28.

Guy, Albert E., Trenton, N. J., assignor to De Laval Steam Turbine Company, New York, N. Y. Centrifugal pump. No. 962,023; June 21; Sp. p. 3706; Gaz. vol. 155; p. 651.

Guyer, Clinton, assignor of one-half to W. C. Crawford, Muncy, Pa. Pipe-coupling. No. 960,899; June 7; Sp. p. 1326; Gaz. vol. 155; p. 223.

Gyer, William, Fullerton, Pa. Dust-collector. No. 962,757; June 28; Sp. p. 5324; Gaz. vol. 155; p. 930.

H. Krantz Manufacturing Company. (See Krantz, Hubert, assignor.)

H. Lange Wagon Co. (See Lange, Elias, assignor.)

H. Mueller Manufacturing Company, The. (See Mueller, Philip, assignor.)

H. Mueller Manufacturing Company, The. (See Mueller, Henry and P., assignors.)

H. S. Judd Manufacturing Company. (See Judd, Henry S., assignor.)

Hackett, Charles H., and T. W. Morgan, assignors to W. W. Marsh, Waterloo, Iowa. Elastic collar-bearing for centrifugal machines. No. 961,345; June 14; Sp. p. 2284; Gaz. vol. 155; p. 403.

Hackney, William H., National Soldiers Home, Cal. Gold-saving apparatus. No. 962,636; June 28; Sp. p. 5072; Gaz. vol. 155; p. 886.

Hadaway, John B., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating on welts. No. 962,138; June 21; Sp. p. 3987; Gaz. vol. 155; p. 692.

Hadaway, John B., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Stitch separating and indenting tool. No. 962,139; June 21; Sp. p. 3991; Gaz. vol. 155; p. 693.

Hadjich, George, assignor of one-fourth to C. B. Shaffner, Chicago, Ill. Rubber heel. No. 961,346; June 14; Sp. p. 2285; Gaz. vol. 155; p. 403.

Hadnagy, Peter, Dayton, Ohio. Gearing. No. 960,900; June 7; Sp. p. 1327; Gaz. vol. 155; p. 223.

Hagn, John P., Minneapolis, Minn. Straightening-machine. No. 962,831; June 28; Sp. p. 5469; Gaz. vol. 155; p. 955.

Hagen, Arthur T., and D. M. Cooper, Rochester, N. Y., assignors, by mesne assignments, to American Laundry Machinery Company, Cincinnati, Ohio. Cuff-pressing machine. No. 962,213; June 21; Sp. p. 4135; Gaz. vol. 155; p. 718.

Hähle, Hermann. (See Seifert and Hähle.)

Hahn, Frank, Doland, S. D. Traction-wheel. No. 960,541; June 7; Sp. p. 624; Gaz. vol. 155; p. 101.

Haines, Thomas, St. Louis, Mo. Fire-alarm box. No. 961,440; June 14; Sp. p. 2468; Gaz. vol. 155; p. 434.

Hale, George C., Kansas City, Mo. Concrete post. No. 962,340; June 21; Sp. p. 4417; Gaz. vol. 155; p. 761.

Hales, William E., assignor of two-thirds to A. Porter and W. J. Weaver, Detroit, Mich. Vending-machine. No. 961,694; June 14; Sp. p. 2990; Gaz. vol. 155; p. 518.

Hall, Almon E., Williamstown, Mass. Coin-mailing device. No. 962,956; June 28; Sp. p. 5692; Gaz. vol. 155; p. 997.

Hall, Charles E., and W. Dicks, assignors to Charles E. Hall Company, Buffalo, N. Y. Carbureter. No. 962,140; June 21; Sp. p. 3992; Gaz. vol. 155; p. 693.

Hall, George R., assignor of one-half to C. L. Rice, Denver, Colo. Metal railway-tie. No. 961,070; June 7; Sp. p. 1668; Gaz. vol. 155; p. 279.

Hall, George E., Denver, Colo., assignor of one-half to C. L. Rice. Rail-cushion metal railway-tie. No. 961,071; June 7; Sp. p. 1670; Gaz. vol. 155; p. 280.

Hall, Harvey, Paonia, Colo. Cross-line buckle. No. 961,347; June 14; Sp. p. 2286; Gaz. vol. 155; p. 404.

Hall, James E., Greenville, Ill., Lawn-swing fan. No. 962,341; June 21; Sp. p. 4418; Gaz. vol. 155; p. 761.

Hall, Thomas H., Worcester, Mass. Trap for kitchen-sinks. No. 960,901; June 7; Sp. p. 1329; Gaz. vol. 155; p. 223.

Hall, Walter S. (See Proelss and Hall.)

Hall, William A., New York, N. Y., assignor to American Mahogany Company. Coloring and fireproofing wood. No. 961,123; June 14; Sp. p. 1786; Gaz. vol. 155; p. 323.

Hamilton, Elwood E., Alfred, N. Y. Check-book. No. 961,956; June 21; Sp. p. 3576; Gaz. vol. 155; p. 630.

Hamilton, William M., Westplains, Mo. Automatic car-step. No. 962,832; June 28; Sp. p. 5470; Gaz. vol. 155; p. 956.

Hamlin, Pulaski M., Pittston, Pa., assignor of one-half to C. H. Unverzagt, New York, N. Y. Means for recovering by-products. No. 960,542; June 7; Sp. p. 626; Gaz. vol. 155; p. 101.

Hammond, Charles P., Americus, Ga. Fastening device for securing rails to metal ties. No. 960,543; June 7; Sp. p. 629; Gaz. vol. 155; p. 102.

Hammond, Egbert F. (See Maxfield, Charles E., assignor.)

Hamper, Harry D., and T. R. McKnight, assignors to Western Wheeled Scraper Company, Aurora, Ill. Dump-car. No. 961,772; June 21; Sp. p. 3167; Gaz. vol. 155; p. 569.

Hance, Anthony M., assignor to Hance Brothers & White, Philadelphia, Pa. Tablet-machine. No. 960,902; June 7; Sp. p. 1331; Gaz. vol. 155; p. 223.

Hance, Anthony M., assignor to Hance Brothers & White, Philadelphia, Pa. Multiple-plunger case. No. 960,903; June 7; Sp. p. 1334; Gaz. vol. 155; p. 224.

Hance Brothers & White. (See Hance, Anthony M., assignor.)

Hancock, Abram O., Richmond, Va. Stove. No. 960,904; June 7; Sp. p. 1335; Gaz. vol. 155; p. 224.

Hancock, Harry A., assignor to The Brown Straw Binder Company, Indianapolis, Ind. Clutch. No. 962,567; June 28; Sp. p. 4937; Gaz. vol. 155; p. 865.

Handlan, Alexander H., Jr., St. Louis, Mo. Signal-lantern. No. 962,758; June 28; Sp. p. 5325; Gaz. vol. 155; p. 930.

Hanes, Frederick A., and W. Staples, assignors to W. M. Duncan, Huntsville, Canada. Adjustable box-bit. No. 960,315; June 7; Sp. p. 151; Gaz. vol. 155; p. 28.

Hanlon, George W., New York, assignor of one-third to E. Morange, Mount Vernon, and one-third to F. R. Kalck, New York, N. Y. Advertising device. No. 960,316; June 7; Sp. p. 152; Gaz. vol. 155; p. 29.

Hannell, Robert B., Baltimore, Md. Clock and watch. No. 961,957; June 21; Sp. p. 3577; Gaz. vol. 155; p. 630.

Hansen, Heber K., assignor of one-half to R. Lafount, Logan, Utah. Spring door-hinge. No. 962,426; June 28; Sp. p. 4614; Gaz. vol. 155; p. 815.

Hansen, John M., assignor to Standard Steel Car Company, Pittsburg, Pa. Box-car. No. 961,773; June 21; Sp. p. 3169; Gaz. vol. 155; p. 569.

Hansen, Nells M., assignor to Toledo Computing Scale Company, Toledo, Ohio. Weighing-scale. No. 960,905; June 7; Sp. p. 1337; Gaz. vol. 155; p. 225.

Hansford, Hallie D., Sylvester, Ga. Foot-rest for vehicles. No. 962,637; June 28; Sp. p. 5073; Gaz. vol. 155; p. 887.

Harbeck, Jervis R., assignor, by mesne assignments, to Detroit Can Company, Detroit, Mich. Can-top. No. 960,637; June 7; Sp. p. 817; Gaz. vol. 155; p. 134.

Harbridge, Herbert C., Margo, Saskatchewan, Canada. Measure. No. 960,906; June 7; Sp. p. 1338; Gaz. vol. 155; p. 225.

Hard Manufacturing Company. (See Dyett and Hulpian, assignors.)

Hardart, Frank, *et al.* (See Anderson, John, assignor.)

Harden, George M., Philadelphia, Pa., assignor to The Philadelphia Pipe Bending Company. Condenser. No. 962,427; June 28; Sp. p. 4615; Gaz. vol. 155; p. 815.

Hardie, William M., *et al.* (See Utley, John H., assignor.)

Harding, Charles K., Chicago, Ill. Inverted incandescent mantle. No. 960,638; June 7; Sp. p. 818; Gaz. vol. 155; p. 134.

Harding, Elmon D., Montevideo, Minn. Truck-brake. No. 961,494; June 14; Sp. p. 2596; Gaz. vol. 155; p. 452.

Harding, Henry M., New York, N. Y. Overhead monorail trackway system. No. 961,348; June 14; Sp. p. 2287; Gaz. vol. 155; p. 404.

Harding, Pelham, *et al.* (See Eynon, William D., assignor.)

Hardy, Edward K., Akron, Ohio. Steering-wheel for automobiles. No. 960,907; June 7; Sp. p. 1339; Gaz. vol. 155; p. 225.

Hare, Donald W., Los Angeles, Cal. Timer. No. 961,407; June 14; Sp. p. 2386; Gaz. vol. 155; p. 422.

Harmon, Frank L., Beverly, Mass. Stringed musical instrument. No. 960,317; June 7; Sp. p. 153; Gaz. vol. 155; p. 29.

Harrell, Joab B., Chappel, Tex. Attachment for riding breaking-plows. No. 962,342; June 21; Sp. p. 4420; Gaz. vol. 155; p. 762.

Harrigan, Patrick J. (See Henvis, Maurice P., assignor.)

Harrington, Alexander W., Brooklyn, N. Y. Composition for treating paper. No. 960,319; June 7; Sp. p. 154; Gaz. vol. 155; p. 29.

Harrington, Alexander W., Brooklyn, N. Y., assignor, by mesne assignments, to The A. W. Harrington Company. Size for paper-makers. No. 960,318; June 7; Sp. p. 154; Gaz. vol. 155; p. 29.

Harrington, Norman T., Lansing, Mich. Valve-control mechanism for explosion-engines. No. 962,214; June 21; Sp. p. 4130; Gaz. vol. 155; p. 718.

Harris, Agnes, Oakland, Cal. Abdominal adjuster, reducer, supporter, and retainer. No. 960,908; June 7; Sp. p. 1340; Gaz. vol. 155; p. 225.

Harris Automatic Press Company, The. (See Minnick, William F., assignor.)

Harris, Caroline A. (See Casto, Frank M., assignor.)

Harris, Charles F., Altoona, Pa. Smoke-consumer. No. 961,072; June 7; Sp. p. 1672; Gaz. vol. 155; p. 280.

Harris, Charles G., Louisville, Ky. Checking device. No. 960,544; June 7; Sp. p. 630; Gaz. vol. 155; p. 102.

Harris, John M., Callao, Mo. Wheelbarrow. No. 961,609; June 14; Sp. p. 2831; Gaz. vol. 155; p. 490.

Harris, Varian M., Chicago, Ill., assignor, by mesne assignments, to The United States Phonograph Company, Cleveland, Ohio. Manufacture of phonograph-record blanks. No. 960,320; June 7; Sp. p. 153; Gaz. vol. 155; p. 30.

Harris, William H., Gladstone, N. Mex. Shoe-fastening device. No. 960,545; June 7; Sp. p. 631; Gaz. vol. 155; p. 102.

Harris, William T., Sr., Harrodsburg, Ky. Concrete-mold. No. 960,909; June 7; Sp. p. 1341; Gaz. vol. 155; p. 225.

Harrison, Charles H. (See Hughes, Raymond E., assignor.)

Harrison, James G., assignor to American Fibre Matting Company, Lawrence, Mass. Yarn and making same. No. 961,441; June 14; Sp. p. 2470; Gaz. vol. 155; p. 434.

Harrison, Philip B., assignor to Chicago Railway Equipment Company, Chicago, Ill. Trussed structure. No. 960,639; June 7; Sp. p. 819; Gaz. vol. 155; p. 134.

Harrold, Lawn, Ellwood City, and W. J. Thamsen, Hazeldell, Pa. Overshoe-retainer. No. 962,428; June 28; Sp. p. 4617; Gaz. vol. 155; p. 815.

Hart, Frederick A., assignor to New York Adding Typewriter Company, Orange, N. J. Adding type-writer. No. 961,073; June 7; Sp. p. 1678; Gaz. vol. 155; p. 281.

Hart, Joseph L., Chickasha, Okla. Cotton huller and cleaner. No. 962,343; June 21; Sp. p. 4421; Gaz. vol. 155; p. 762.

Hart, Louis F., assignor to The Hart Manufacturing Company, Cleveland, Ohio. Screw-cutting device. No. 962,924; June 21; Sp. p. 3709; Gaz. vol. 155; p. 652.

Hart Manufacturing Company, The. (See Hart, Louis F., assignor.)

Hart, Samuel R., Andalusia, Ala. Stump-puller. No. 961,074; June 7; Sp. p. 1093; Gaz. vol. 155; p. 281.

Hartford Rubber Works Company, The. (See Midgley, Thomas, assignor.)

Hartley, Charles J., Decatur, Ill. Grain-conveyer. No. 961,958; June 21; Sp. p. 3578; Gaz. vol. 155; p. 631.

Hartmann, Frederick W., and W. C. Hartmann, Milwaukee, Wis., assignors to The Milwaukee Separator Company. Cream-separator. No. 962,141; June 21; Sp. p. 3995; Gaz. vol. 155; p. 693.

Hartmann, William C. (See Hartmann, Frederick W. and W. C.)

Hartmann, William C., Milwaukee, Wis., assignor to The Milwaukee Separator Company. Cream-separator. No. 961,349; June 14; Sp. p. 2291; Gaz. vol. 155; p. 404.

Hartridge, William B., Seaford, England. Pneumatic tire. No. 962,897; June 28; Sp. p. 5594; Gaz. vol. 155; p. 979.

Hartzell, Forest H., Dayton, Ohio. Pedal-mounting. No. 961,442; June 14; Sp. p. 2471; Gaz. vol. 155; p. 484.

Hartzell, Morris H., assignor to S. S. Fretz, Jr., Philadelphia, Pa. Umbrella stretcher and rib-joint. No. 962,215; June 21; Sp. p. 4141; Gaz. vol. 155; p. 719.

Harvey, Charles A., assignor to Producer Gas Utilities Co., Chicago, Ill. Feeding device for producers. No. 962,216; June 21; Sp. p. 4142; Gaz. vol. 155; p. 719.

Haskins, Caryl D., Schenectady, N. Y., assignor to General Music Supply Company. Attachment for self-playing musical instruments. No. 961,295; June 14; Sp. p. 2158; Gaz. vol. 155; p. 385.

Hatfield, Henry, assignor to Schott & Gen., Jena, Germany. Electrolytic apparatus with annular anode. No. 961,124; June 14; Sp. p. 1788; Gaz. vol. 155; p. 324.

Hatfield, Henry, assignor to Schott & Gen., Jena, Germany. Electrolytic apparatus. No. 961,125; June 14; Sp. p. 1789; Gaz. vol. 155; p. 324.

Hattersley, George A., Norwood, assignor to The Victor Safe & Lock Co., Cincinnati, Ohio. Vault and strong-room door. No. 961,227; June 14; Sp. p. 2002; Gaz. vol. 155; p. 361.

Haughawout, W. Roscoe, *et al.* (See Pickering, Abel W., assignor.)

Haus, Henry, Pope Valley, Cal. Shearing-machine. No. 961,495; June 14; Sp. p. 2597; Gaz. vol. 155; p. 453.

Häusser, Friedrich, Kaiserslautern, Germany. Making nitric acid. No. 961,350; June 14; Sp. p. 2292; Gaz. vol. 155; p. 405.

Hawkins, Charles O. (See Bartles and Hawkins.)

Hawthorne & Sheble Manufacturing Company. (See Kraemer, Thomas, assignor.)

Hay, Lewis, Pittsburg, Pa. Curtain-pole. No. 962,344; June 21; Sp. p. 4423; Gaz. vol. 155; p. 762.

Haye, Frederick, and C. Wessels, Woodhaven, N. Y. Gramophone. No. 962,833; June 28; Sp. p. 5473; Gaz. vol. 155; p. 956.

Hayes, Charles, Jr., Utica, N. Y. Grinding-machine. No. 961,774; June 21; Sp. p. 3171; Gaz. vol. 155; p. 569.

Hayes, Harley H., St. Paul, Minn., assignor of one-half to B. C. Beckman, Naperville, Ill. Rope-measuring mechanism. No. 960,321; June 7; Sp. p. 158; Gaz. vol. 155; p. 30.

Hayner, Frank H., and D. O. Baer, Boise, Idaho. Water-wheel. No. 962,345; June 21; Sp. p. 4424; Gaz. vol. 155; p. 762.

Haya, Harold M., New York, N. Y. Collapsible tray. No. 961,228; June 14; Sp. p. 2004; Gaz. vol. 155; p. 362.

Hazen, Levi, P., Cincinnati, Ohio. Metal-bending tool. No. 960,910; June 7; Sp. p. 1343; Gaz. vol. 155; p. 226.

Head, Frank S. (See Goodall and Head.)

Headland, Henry W., Leyton, and F. Plutte, London, England. Electric-arc lamp. No. 960,911; June 7; Sp. p. 1345; Gaz. vol. 155; p. 226.

Heany Fire-Proof Wire Company. (See Heany, John A., assignor.)

Heany, John A., York, Pa., assignor to The Heany Lamp Company, New York, N. Y. Piston-valve. No. 960,912; June 7; Sp. p. 1348; Gaz. vol. 155; p. 226.

Heany, John A., York, Pa., assignor to Heany Fire-Proof Wire Company, New York, N. Y. Winding-reel. No. 960,913; June 7; Sp. p. 1349; Gaz. vol. 155; p. 227.

Heany Lamp Company, The. (See Heany, John A., assignor.)

Heaton, Elias M., assignor of one-half to J. E. Wilson, Clarksburg, W. Va. Hospital-bed. No. 960,322; June 7; Sp. p. 160; Gaz. vol. 155; p. 30.

Hebrank, William F., Highland, Ill. Can-filling machine. No. 961,408; June 14; Sp. p. 2388; Gaz. vol. 155; p. 423.

Heckman, George E., Brice, Tex. Air-gun. No. 962,217; June 21; Sp. p. 4144; Gaz. vol. 155; p. 719.

Heckman, Jesse M., Alpha, Saskatchewan, Canada. Transport. No. 961,856; June 21; Sp. p. 3370; Gaz. vol. 155; p. 597.

Hedberg, Peter L., assignor to Chicago Metal Weather Strip Company, Chicago, Ill. Metal weather-strip. No. 963,023; June 28; Sp. p. 5825; Gaz. vol. 155; p. 1020.

Hedden, Fred F., Chicago, Ill. Collapsible shell or lift-van. No. 962,429; June 28; Sp. p. 4619; Gaz. vol. 155; p. 816.

Heggie, David, Lorain, Ohio, assignor to National Tube Company, Pittsburg, Pa. Apparatus for sawing pipes and similar annular bodies. No. 960,640; June 7; Sp. p. 822; Gaz. vol. 155; p. 135.

Heimbach, Alton B., Duluth, Minn. Rubber heel. No. 961,126; June 14; Sp. p. 1790; Gaz. vol. 155; p. 324.

Heinemann, Arthur, London, England. Pills for the treatment of diabetes mellitus. No. 960,914; June 7; Sp. p. 1351; Gaz. vol. 155; p. 227.

Heinz Company, The. (See Bowen, Philip A., assignor.)

Heinzinger, Christian, New York, N. Y. Medicinal preparation. No. 960,915; June 7; Sp. p. 1353; Gaz. vol. 155; p. 227.

Heiser, Edgar W., Chicago, Ill. Folding bench. No. 960,916; June 7; Sp. p. 1353; Gaz. vol. 155; p. 227.

Heiss, Walter F. (See Marsh and Heiss.)

Heitz-Boyer, Maurice G., Paris, France. Aseptic needle-thread holder for surgical use. No. 962,218; June 21; Sp. p. 4145; Gaz. vol. 155; p. 720.

Helgerson, Helge, Soldiers Grove, Wis. Folding umbrella. No. 963,003; June 28; Sp. p. 5789; Gaz. vol. 155; p. 1013.

Heller, Edgar W., Newark, N. J. Filter-press. No. 962,346; June 21; Sp. p. 4426; Gaz. vol. 155; p. 763.

Heller, Louis E., New York, N. Y. Binder. No. 962,568; June 28; Sp. p. 4938; Gaz. vol. 155; p. 865.

Helm, Edith G., New York, N. Y. Brush for hair-tinting. No. 961,127; June 14; Sp. p. 1791; Gaz. vol. 155; p. 324.

Helps, George, Ansley, Atherstone, England. Gas-burner. No. 962,534; June 28; Sp. p. 5475; Gaz. vol. 155; p. 957.

Hemsteger, Edward A., assignor to Weisell Nut Lock Company, Chicago, Ill. Nut-lock. No. 962,347; June 21; Sp. p. 4428; Gaz. vol. 155; p. 763.

Henderson, Clinton F., Seattle, Wash. Ventilator. No. 960,917; June 7; Sp. p. 1355; Gaz. vol. 155; p. 227.

Hendryx, Wilbur A., Denver, Colo. Dewatering device. No. 960,546; June 7; Sp. p. 632; Gaz. vol. 155; p. 103.

Hendryx, Wilbur A., Denver, Colo. Separating solids from liquids. No. 960,547; June 7; Sp. p. 635; Gaz. vol. 155; p. 103.

Hengerer, Louis. (See Ryan, Walter S., assignor.)

Hennessey, James W., *et al.* (See Smith, George A., assignor.)

Henricks, Henry, Valley Park, Mo. Wrench. No. 961,296; June 14; Sp. p. 2160; Gaz. vol. 155; p. 386.

Henry R. Worthington. (See Schwanhauser, William, assignor.)

Henry T. Adams Co. (See Adams, Henry T., assignor.)

Henry, William K., assignor to P. & F. Corbin, New Britain, Conn. Door-check. No. 960,641; June 7; Sp. p. 825; Gaz. vol. 155; p. 135.

Henry, William K., assignor to P. & F. Corbin, New Britain, Conn. Door-closer mechanism. No. 962,142; June 21; Sp. p. 3997; Gaz. vol. 155; p. 694.

Henry, William K., assignor to P. & F. Corbin, New Britain, Conn. Door-controlling mechanism. No. 962,143; June 21; Sp. p. 3999; Gaz. vol. 155; p. 694.

Henry, William K., assignor to P. & F. Corbin, New Britain, Conn. Door-closer. No. 962,144; June 21; Sp. p. 4002; Gaz. vol. 155; p. 695.

Hensey, Thomas B., Adrian, Mich. Stop and waste cock. No. 960,323; June 7; Sp. p. 161; Gaz. vol. 155; p. 31.

Henvis, Maurice P., Norfolk, Va., assignor to P. J. Harrigan, McKeesport, Pa. Railway dumping-car. No. 962,348; June 21; Sp. p. 4429; Gaz. vol. 155; p. 763.

Herb, Charles W., Columbus, Ohio. Sand-pulverizing machine. No. 961,409; June 14; Sp. p. 2392; Gaz. vol. 155; p. 423.

Herbold, Victor P., Newton, Iowa. Scythe. No. 962,638; June 28; Sp. p. 5074; Gaz. vol. 155; p. 887.

Hercules, Clarence A., Aurora, Ill. Window-tent. No. 962,707; June 28; Sp. p. 5221; Gaz. vol. 155; p. 912.

Herfurth, Ursula K., Philadelphia, Pa. Attachment for gas-fixtures. No. 961,959; June 21; Sp. p. 3580; Gaz. vol. 155; p. 631.

Herman, Reinhold, Crafton, Pa. Tire. No. 961,443; June 14; Sp. p. 2472; Gaz. vol. 155; p. 435.

Hermanson, Albert G., Prescott, Wis. Mole-plow. No. 962,957; June 28; Sp. p. 5692; Gaz. vol. 155; p. 998.

Herr, Shirl, Crawfordsville, Ind. Threshing-machine. No. 961,775; June 21; Sp. p. 3173; Gaz. vol. 155; p. 569.

Herre, Alfred. (See Bauer and Herre.)

Herrick, William J. (See La Batt, Homer C., assignor.)

Herring-Hall-Marvin Safe Company. (See Sibley, Augustus W., assignor.)

Herrmann, Willy. (See Mugdan and Herrmann.)

Hertzberg, Harry. (See Wohl and Hertzberg.)

Hertzberg, Harry, *et al.*, trustees. (See Wohl and Hertzberg, assignors.)

Hervey, Charles A., Lansing, Mich. Bottle and attachment therefor. No. 960,918; June 7; Sp. p. 1356; Gaz. vol. 155; p. 228.

Herwig, Harry W., Portsmouth, N. H. Bell system. No. 961,351; June 14; Sp. p. 2294; Gaz. vol. 155; p. 405.

Herz, Richard, and E. Saul, Frankfort-on-the-Main, Germany, assignors to Cassella Color Company, New York, N. Y. Blue sulfid colors and making same. No. 960,919; June 7; Sp. p. 1356; Gaz. vol. 155; p. 228.

Heseltine, Philip, Detroit, Mich. Peat-machine. No. 962,349; June 21; Sp. p. 4431; Gaz. vol. 155; p. 764.

Heskett, Thomas J. (See Moore and Heskett.)

Hess, Edward B., New York, N. Y. Subway construction. No. 962,145; June 21; Sp. p. 4005; Gaz. vol. 155; p. 696.

Hesse, Leopold. (See Gunther and Hesse.) (Reissue.)

Heuermann, William, Sedalia, Mo. Heating-stove. No. 962,430; June 28; Sp. p. 4621; Gaz. vol. 155; p. 816.

Heupel, Frederick K., and I. B. Nordlinger, Washington, D. C. Combined sash-lock and burglar-alarm. No. 961,220; June 14; Sp. p. 2004; Gaz. vol. 155; p. 362.

Hewitt, Richard, Brandon, Manitoba, assignor of two-thirds to H. C. McMartin, Winnipeg, Canada. Register. No. 960,548; June 7; Sp. p. 637; Gaz. vol. 155; p. 103.

Hewlett, Edward M., Schenectady, N. Y., assignor to General Electric Company. Electric switch. No. 960,324; June 7; Sp. p. 162; Gaz. vol. 155; p. 31.

Hewlett, Edward M., Schenectady, N. Y., assignor to General Electric Company. Solenoid operating mechanism. No. 962,958; June 28; Sp. p. 5695; Gaz. vol. 155; p. 998.

Heymann, Hugo, Berlin, Germany, assignor to General Electric Company. Motor control. No. 962,835; June 28; Sp. p. 5476; Gaz. vol. 155; p. 957.

Hibschle, Herman J., Victor, assignor to The MacCormick Drill and Manufacturing Company, Incorporated, Denver, Colo. Rock-drill. No. 962,350; June 21; Sp. p. 4432; Gaz. vol. 155; p. 764.

Hickok, Robert D., Atlanta, Ga. Electric measuring instrument. No. 962,759; June 28; Sp. p. 5327; Gaz. vol. 155; p. 931.

Hicks, Frank J., Belding, Mich. Pass-book. No. 961,857; June 21; Sp. p. 3372; Gaz. vol. 155; p. 597.

Hicks, George C., Jr., assignor to The P. H. & F. M. Roots Company, Connersville, Ind. Shaft-bearing. No. 961,496; June 14; Sp. p. 2599; Gaz. vol. 155; p. 453.

Hicks, Milton A., Weathersfield, assignor to Vermont Farm Machine Company, Bellows Falls, Vt. Milking-machine. No. 961,960; June 21; Sp. p. 3582; Gaz. vol. 155; p. 631.

Hicks, William T., Bloomington, Ind. Mold for posts. No. 962,760; June 28; Sp. p. 5330; Gaz. vol. 155; p. 931.

Hicks, William T., Bloomington, Ind. Post. No. 963,004; June 28; Sp. p. 5790; Gaz. vol. 155; p. 1013.

Hiers, Charles C. (See McFadden and Hiers.)

Hiett, James W., Bono, Ark. Colter-fastening. No. 962,508; June 28; Sp. p. 4789; Gaz. vol. 155; p. 843.

Higgin, Henry, assignor to The Higgin Manufacturing Company, Newport, Ky. Type-holder. No. 962,146; June 21; Sp. p. 4010; Gaz. vol. 155; p. 696.

Higgin Manufacturing Company, The. (See Higgin, Henry, assignor.)

Higgins, Arthur H. (See Sniman, Greenway, and Higgins.)

Higgins, Campbell P., Roselle, assignor to The Babcock & Wilcox Company, Bayonne, N. J. Machine for forming seamless tubes. No. 961,128; June 14; Sp. p. 1792; Gaz. vol. 155; p. 324.

Higgins, Campbell P., Roselle, assignor to The Babcock & Wilcox Company, Bayonne, N. J. Machine for forming seamless tubes. No. 961,129; June 14; Sp. p. 1793; Gaz. vol. 155; p. 325.

Higgins, Campbell P., Roselle, assignor to The Babcock & Wilcox Company, Bayonne, N. J. Machine for forming seamless tubes. No. 961,130; June 14; Sp. p. 1795; Gaz. vol. 155; p. 325.

Higgins, Campbell P., Roselle, assignor to The Babcock & Wilcox Company, Bayonne, N. J. Machine for forming seamless tubes. No. 961,131; June 14; Sp. p. 1796; Gaz. vol. 15o; p. 325.

Higgins, Campbell P., Roselle, assignor to The Babcock & Wilcox Company, Bayonne, N. J. Machine for forming seamless tubes. No. 961,132; June 14; Sp. p. 1797; Gaz. vol. 155; p. 326.

Higgins, Campbell P., Roselle, assignor to The Babcock & Wilcox Company, Bayonne, N. J. Machine for forming seamless tubes. No. 961,133; June 14; Sp. p. 1798; Gaz. vol. 155; p. 326.

High Frequency Ignition Coil Company. (See Seeley, James E., assignor.)

Hildebrandt, Gotthold. Berlin, Germany. Cooling and liquefying gases. No. 962,836; June 28; Sp. p. 5477; Gaz. vol. 155; p. 957.

Hill, Charles D., Clifton Springs, N. Y. Pressure-gage alarm. No. 960,920; June 7; Sp. p. 1357; Gaz. vol. 155; p. 228.

Hill, David, Washington, N. C. Ventilating apparatus. No. 960,921; June 7; Sp. p. 1359; Gaz. vol. 155; p. 228.

Hill, Edward F., Peekskill, N. Y. Combined stove and gas hot-plate. No. 962,402; June 21; Sp. p. 4527; Gaz. vol. 155; p. 781.

Hill, Joseph P., Worcester, Mass. Clothes-drier. No. 962,147; June 21; Sp. p. 4012; Gaz. vol. 155; p. 696.

Hilo Gum Company. (See Linde and Franke, assignors.)

Hiltz, George S., Brooklyn, assignor to The Stock Quotation Telegraph Company, New York, N. Y. Type-carriage-propelling mechanism for printing-telegraph receivers. No. 962,431; June 28; Sp. p. 4622; Gaz. vol. 155; p. 816.

Himmel, Solomon, Baltimore, Md. Extensible garment-support. No. 962,837; June 28; Sp. p. 5479; Gaz. vol. 155; p. 958.

Hiner, Charles N., Staunton, Va. Window-shade hanger. No. 961,230; June 14; Sp. p. 2006; Gaz. vol. 155; p. 362.

Hinsdale, Nehemiah C., assignor to Hinsdale Pneumatic Cushion and Mattress Company, Marion, Ind. Air mattress, seat, and the like. No. 961,231; June 14; Sp. p. 2010; Gaz. vol. 155; p. 363.

Hinsdale Pneumatic Cushion and Mattress Company. (See Hinsdale, Nehemiah C., assignor.)

Hirsch, Henry, New York, N. Y., assignor of one-half to L. Gelarie. Ticket-holder. No. 961,075; June 7; Sp. p. 1694; Gaz. vol. 155; p. 281.

Hirschwitz, Aaron, and H. Mauderer, New Orleans, La. Toy bale. No. 960,922; June 7; Sp. p. 1361; Gaz. vol. 155; p. 229.

Hirst, John C., Reynoldsville, Pa. Truck for mining-machines. No. 960,923; June 7; Sp. p. 1362; Gaz. vol. 155; p. 229.

Hirth, Frederick H., Grand Rapids, Mich. Pneumatic cleaner. No. 962,569; June 28; Sp. p. 4940; Gaz. vol. 155; p. 865.

Hitchings, Vernon D., and E. W. Face, Norfolk, Va. Ticket-case. No. 961,610; June 14; Sp. p. 2832; Gaz. vol. 155; p. 490.

Hitzert, Jacob, Onaway, Mich. Clevis. No. 961,232; June 14; Sp. p. 2011; Gaz. vol. 155; p. 363.

Hobbs, Clarence W. (See Carlson, Walter C., assignor.)

Hobbs, Frank B. (See Fouts and Hobbs.)

Hobson & Company. (See Hobson, Joseph W., assignor.)

Hobson, Joseph W., Bayonne, N. J., assignor to Hobson & Company. Baling-press. No. 962,432; June 28; Sp. p. 4625; Gaz. vol. 155; p. 817.

Hoch, Adam, Providence, R. I., assignor to Adding and Subtracting Machine Company. Calculating-machine. No. 961,961; June 21; Sp. p. 3587; Gaz. vol. 155; p. 632.

Hodge, William B. (See Cramer and Hodge.)

Hoeltzel, George A. (See Randall and Hoeltzel.)

Hoffman, Charles A., Minneapolis, Minn. Eyeglass-mounting. No. 960,642; June 7; Sp. p. 826; Gaz. vol. 155; p. 135.

Hoffman, Charles A., Minneapolis, Minn. Eyeglass-mounting. No. 960,924; June 7; Sp. p. 1363; Gaz. vol. 155; p. 229.

Hoffman, Charles S. (See Leuckert, William, assignor.)

Hoffman, George. (See Conway and Hoffman.)

Hoffman, Jesse D., assignor of one-half to N. L. Burrow, Duke, Okla. Protective device. No. 961,962; June 21; Sp. p. 3594; Gaz. vol. 155; p. 632.

Hoffman, Maurice A., Portage la Prairie, Manitoba, Canada. Skirt and trousers hanger. No. 960,549; June 7; Sp. p. 639; Gaz. vol. 155; p. 104.

Hofmann, Georg, Kaufbeuren, Germany. Hose-cleaning apparatus. No. 961,858; June 21; Sp. p. 3373; Gaz. vol. 155; p. 597.

Hoglund, Gustav E., assignor to W. N. Selig, Chicago, Ill. Combined synchronizing and telephone system. No. 960,925; June 7; Sp. p. 1365; Gaz. vol. 155; p. 230.

Holbrook, George C. (See Rose and Holbrook.)

Holden, Charles R., Chicago, Ill. Railway-road-bed construction. No. 961,233; June 14; Sp. p. 2012; Gaz. vol. 155; p. 363.

Holden, Hiram, Manchester, N. H. Wire-holder. No. 961,611; June 14; Sp. p. 2833; Gaz. vol. 155; p. 490.

Holden, Walter A., Ansonia, assignor to The Robert N. Bassett Company, Shelton, Conn. Buckle. No. 960,325; June 7; Sp. p. 170; Gaz. vol. 155; p. 31.

Holland, Guesie A., and W. P. Barrett, Woodlawn, Ala. Car-coupling. No. 960,550; June 7; Sp. p. 641; Gaz. vol. 155; p. 104.

Holland, Mary C. (See Holland, Timothy, assignor.)

Holland, Timothy, Chicago, Ill. Sash-weight. No. 962,838; June 28; Sp. p. 5481; Gaz. vol. 155; p. 958.

Holland, Timothy, Chicago, Ill., assignor to M. C. Holland, New York, N. Y. Combination-furnace. No. 963,024; June 28; Sp. p. 5827; Gaz. vol. 155; p. 1020.

Hollingsworth, Samuel, Plainfield, N. J., assignor to American Sales Book Company, Elmira, N. Y. Numbering-machine. No. 961,444; June 14; Sp. p. 2474; Gaz. vol. 155; p. 435.

Hollis, Venning P., Minneapolis, Minn. Mower. No. 960,551; June 7; Sp. p. 642; Gaz. vol. 155; p. 104.

Holloway, Chester L., Passaic, N. J. Carrier for cans. No. 962,025; June 21; Sp. p. 3713; Gaz. vol. 155; p. 652.

Holmes, John F., Waterbury, Conn. Electrical means for operating clock-pendulums. No. 961,776; June 21; Sp. p. 3175; Gaz. vol. 155; p. 570.

Holt, William J., High Barnet, England. Apparatus for etching printing-plates. No. 962,839; June 28; Sp. p. 5482; Gaz. vol. 155; p. 958.

Holtzer-Cabot Electric Company. (See Freier, Anton, assignor.)

Holtzer-Cabot Electric Company. (See Taylor, Walter F., assignor.)

Hood, John J., and A. G. Salamon, London, England, assignors to The Oil Refining Improvements Company, Limited, Glasgow, Scotland. Treatment of mineral and vegetable oils. No. 962,840; June 28; Sp. p. 5484; Gaz. vol. 155; p. 959.

Hood, John J., and A. G. Salamon, London, England, assignors to The Oil Refining Improvements Company, Limited, Glasgow, Scotland. Treatment of mineral and vegetable oils. No. 962,841; June 28; Sp. p. 5485; Gaz. vol. 155; p. 959.

Hooker Electrochemical Company. (See Sperry, Elmer A., assignor.)

Hooker, Joseph R., Carthage, Mo. Bed-spring. No. 962,352; June 21; Sp. p. 4436; Gaz. vol. 155; p. 765.

Hooppaw, Oscar W., assignor to Monarch Metal Weather Strip Company, St. Louis, Mo. Weather-strip. No. 962,351; June 21; Sp. p. 4434; Gaz. vol. 155; p. 764.

Hoops, Thomas, Jr., assignor to Wilcox, Crittenden and Company, Middletown, Conn. Light-securing means. No. 960,926; June 7; Sp. p. 1368; Gaz. vol. 155; p. 230.

Hoover, Claude V., North Birmingham, Ala. Hose-nozzle support. No. 961,234; June 14; Sp. p. 2018; Gaz. vol. 155; p. 364.

Hopkins, Annie, Lewistown, Mont. Dressmaker's scissors. No. 961,235; June 14; Sp. p. 2019; Gaz. vol. 155; p. 364.

Hopkins, William W., assignor of one-half to M. J. Ehrlich, St. Louis, Mo. Davenport. No. 961,445; June 14; Sp. p. 2478; Gaz. vol. 155; p. 435.

Hopper, John S., assignor of one-half to G. W. Howe, Cincinnati, Ohio. Window-sash. No. 960,552; June 7; Sp. p. 645; Gaz. vol. 155; p. 105.

Horlick, Edward T. (See Horlick, Robert T., assignor.)

Horlick, Robert T., assignor of one-half to E. T. Horlick, Chicago, Ill. Oiling device. No. 961,497; June 14; Sp. p. 2599; Gaz. vol. 155; p. 453.

Horn, Jeremiah M. (See Horn, John C. and J. M.)

Horn, John C. and J. M., Arba, Ind. Buggy-top clip. No. 960,326; June 7; Sp. p. 173; Gaz. vol. 155; p. 32.

Horn, Joseph V., *et al.* (See Anderson, John, assignor.)

Horne, Lewis W., Denver, Colo. Nechtie-holder. No. 961,695; June 14; Sp. p. 2993; Gaz. vol. 155; p. 519.

Horst, Ludwig, Altona, Germany. Carbonic-acid motor. No. 961,859; June 21; Sp. p. 3375; Gaz. vol. 155; p. 598.

Hosea, Lewis M., Cincinnati, Ohio. Universal joint. No. 960,327; June 7; Sp. p. 174; Gaz. vol. 155; p. 32.

Hostler, James M. (See Clements and Hostler.)

Hout, George A., Crestline, Ohio. Gas-regulator. No. 962,959; June 28; Sp. p. 5699; Gaz. vol. 155; p. 998.

Howard, Frank H., Reading, Pa. Lining journal-bearings. No. 960,328; June 7; Sp. p. 175; Gaz. vol. 155; p. 32.

Howard, Henry, Boston, Mass. Making formic acid. No. 960,927; June 7; Sp. p. 1368; Gaz. vol. 155; p. 230.

Howard, Lemuel F., Edgewood Park, assignor to The Union Switch and Signal Company, Swissvale, Pa. Alternating-current-translating device. No. 960,553; June 7; Sp. p. 646; Gaz. vol. 155; p. 105.

Howatt, David E., Willoughby, Ohio. Milking device. No. 961,446; June 14; Sp. p. 2480; Gaz. vol. 155; p. 436.

Howe, Arthur C., Waterville, Wash. Wrench. No. 961,447; June 14; Sp. p. 2482; Gaz. vol. 155; p. 436.

Howe, Charles E., Summit, N. J., assignor to Sweet, Orr & Company, Newburgh, N. Y. Overalls-suspenders loop. No. 961,715; June 14; Sp. p. 3039; Gaz. vol. 155; p. 527.

Howe, George W. (See Hopper, John S., assignor.)

Howe, Winthrop K., Rochester, assignor to General Railway Signal Company, Geteo, N. Y. Polarized relay. No. 960,928; June 7; Sp. p. 1370; Gaz. vol. 155; p. 231.

Howe, Winthrop K., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Semaphore mechanism. No. 962,960; June 28; Sp. p. 5701; Gaz. vol. 155; p. 999.

Hoyer, N. O., *et al.* (See Waterman, Charlie H., assignor.)

Hoyt, Ezra S., San Luis Obispo, assignor to Black Sand Mining Company, Los Angeles, Cal. Amalgamating-riffle. No. 963,005; June 28; Sp. p. 5791; Gaz. vol. 155; p. 1014.

Hubbard, Albert B., Fruitvale, and S. J. Bens, Berkeley, Cal. Toilet-paper holder. No. 960,929; June 7; Sp. p. 1371; Gaz. vol. 155; p. 231.

Hubbard, Arthur O., Minneapolis, Minn. Wheelbarrow. No. 961,719; June 14; Sp. p. 3041; Gaz. vol. 155; p. 527.

Hubbell, Harvey, Bridgeport, Conn. Self-closing flush-receptacle plate. No. 961,720; June 14; Sp. p. 3042; Gaz. vol. 155; p. 527.

Huber, Tony. (See Peugeot, Huber, and Lostalot.)

Huckstra, George, Shadeland, Ind. Game apparatus. No. 960,930; June 7; Sp. p. 1373; Gaz. vol. 155; p. 231.

Hudnall, Charles F., Richmond, Va. Manifolding account-keeping apparatus. No. 960,931; June 7; Sp. p. 1374; Gaz. vol. 155; p. 232.

Hudson, Alexander M., New York, N. Y. Speed-indicator. No. 960,329; June 7; Sp. p. 176; Gaz. vol. 155; p. 32.

Hudson, Francis, Holyoke, Mass. Trolley-wheel-turning machine. No. 960,932; June 7; Sp. p. 1377; Gaz. vol. 155; p. 232.

Hufey, Mabel I., Glendive, Mont. Stationery. No. 962,961; June 28; Sp. p. 5703; Gaz. vol. 155; p. 999.

Huff Electrostatic Separator Company. (See Wentworth, Henry A., assignor.)

Huff, Russell, assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Foot-rest for motor-vehicles. No. 961,860; June 21; Sp. p. 3377; Gaz. vol. 155; p. 598.

Huff, Russell, assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Motor-vehicle-lubricating means. No. 962,509; June 28; Sp. p. 4700; Gaz. vol. 155; p. 844.

Huffman, Willard M. (See Long, Thomas, assignor.)

Hufschmidt, Milton S., San Francisco, Cal. Sink-stopple. No. 962,570; June 28; Sp. p. 4941; Gaz. vol. 155; p. 865.

Hughes, Albert J., St. Paul, Minn. Mail catching and delivering device. No. 962,571; June 28; Sp. p. 4943; Gaz. vol. 155; p. 865.

Hughes, J. H. (See McLeran, Alvord M., assignor.)

Hughes, Raymond E., assignor of one-third to C. H. Harrison, Holbrook, Ontario, Canada. Percolator. No. 961,963; June 21; Sp. p. 3595; Gaz. vol. 155; p. 632.

Hughes, William B., Cleveland, Ohio. Number-plate support for vehicles. No. 962,219; June 21; Sp. p. 4147; Gaz. vol. 155; p. 720.

Hughes, William B., Cleveland, Ohio. Number-plate support for vehicles. No. 962,220; June 21; Sp. p. 4148; Gaz. vol. 155; p. 720.

Hughes, William B., Cleveland, Ohio. Number-plate support for vehicles. No. 962,221; June 21; Sp. p. 4150; Gaz. vol. 155; p. 721.

Huhn, Hermann. (See Williams and Huhn.)

Hulpian, Paul, Breslau, Germany. Manufacture of soles. No. 961,696; June 14; Sp. p. 2994; Gaz. vol. 155; p. 519.

Hulkenberg, Jacob, Columbus, and B. J. Mattes, Crooksville, Ohio. Washing-machine. No. 960,330; June 7; Sp. p. 178; Gaz. vol. 155; p. 33.

Hulpian, Charles. (See Dyett and Hulpian.)

Hulse, Jesse G., and A. F. Schramm, assignors to The E. M. Hulse Company, Columbus, Ohio. Combined davenport and bed. No. 962,761; June 28; Sp. p. 5331; Gaz. vol. 155; p. 932.

Humes, William W., Youngstown, Ohio. Non-refillable bottle. No. 961,184; June 14; Sp. p. 1800; Gaz. vol. 155; p. 326.

Humphrey, Ernest N., assignor to Traut & Hine Manufacturing Company, New Britain, Conn. Garment-supporter. No. 961,448; June 14; Sp. p. 2483; Gaz. vol. 155; p. 436.

Humphrey, Harry B., assignor to Humphrey & Sons, Joliet, Ill. Wire-drawing block. No. 961,449; June 14; Sp. p. 2484; Gaz. vol. 155; p. 437.

Humphrey, Herbert S., Kalamazoo, Mich. Water-heater. No. 960,933; June 7; Sp. p. 1382; Gaz. vol. 155; p. 232.

Humphrey & Sons. (See Humphrey, Harry B., assignor.)

Hunnewell, Frederick N., Mamaroneck, N. Y., assignor to H. W. Merwin, Jr. Hair-drier. No. 961,498; June 14; Sp. p. 2602; Gaz. vol. 155; p. 454.

Hunt, Howard W., Pleasant Ridge, Ohio. Power-transmitting device. No. 962,842; June 28; Sp. p. 5486; Gaz. vol. 155; p. 959.

Hunt, William H., New York, N. Y. Dumping-truck. No. 961,861; June 21; Sp. p. 3377; Gaz. vol. 155; p. 598.

Hunter, David E., Cambridge, assignor to Library Bureau, Boston, Mass. Joint construction. No. 960,934; June 7; Sp. p. 1384; Gaz. vol. 155; p. 233.

Hunter, Harry E., San Jose, Cal. Merchandise-vending machine. No. 962,639; June 28; Sp. p. 5075; Gaz. vol. 155; p. 887.

Hunter, James W., Foster, W. Va. Combination-lock. No. 961,236; June 14; Sp. p. 2021; Gaz. vol. 155; p. 364.

Hunter, John. (See Glinlan, Essington N., assignor.)

Huntington, Robert, Medford, assignor, by mesne assignments, of one-half to Arbecam Nautical Instrument Co., Boston, Mass. Bearing-finder. No. 961,862; June 21; Sp. p. 3379; Gaz. vol. 155; p. 598.

Huntoon, Charles F., assignor to H. D. Laughlin, Chicago, Ill. Brake-beam. No. 960,935; June 7; Sp. p. 1386; Gaz. vol. 155; p. 233.

Hurtt, Frank L. (See Parker and Hurtt.)

Huse, Byron, Palermo, assignor of one-half to G. M. Sparks, Oroville, Cal. Mechanical movement. No. 960,936; June 7; Sp. p. 1388; Gaz. vol. 155; p. 234.

Hutchinson, Malcolm, Muskegon, Mich. Knockdown cigar-box. No. 961,964; June 21; Sp. p. 3596; Gaz. vol. 155; p. 632.

Huther, Angus E., *et al.* (See Sears, George H., assignor.)

Huther, Warren B., *et al.* (See Sears, George H., assignor.)

Huwart, Edouard, Liege, Belgium. Apparatus for the preparation of formaldehyde. No. 961,721; June 14; Sp. p. 3043; Gaz. vol. 155; p. 527.

Hyatt Roller Bearing Company. (See Lockwood, Charles S., assignor.)

Hyatt Roller Bearing Company. (See Shirley, Cephas I., assignor.)

Hygenic Renovating Company. (See Clements and Hostler, assignors.)

I. E. Palmer Company, The. (See Palmer, Isaac E., assignor.)

Ideal Concrete Machinery Company. (See Addicks, Diedrich C., assignor.)

Illinois Show Case Works. (See Servatius and Meinel, assignors.)

Imboden, Isaac C., Cleona, Pa. Brace-chuck. No. 961,777; June 21; Sp. p. 3176; Gaz. vol. 155; p. 570.

Imbrie, Augustus F., San Francisco, Cal. Glove-reversing device. No. 960,937; June 7; Sp. p. 1389; Gaz. vol. 155; p. 234.

Imperial Stopper Company. (See Kirkegaard, Georg, assignor.)

Indahl, Mauritz C. (See Bancroft and Indahl.)

Indiana Manufacturing Company, The. (See Walsh, James A., assignor.)

Industrial Motor Company. (See Davy, Orrin J., assignor.)

Ingels, Ray B., Caple, Okla. Bolt. No. 960,938; June 7; Sp. p. 1391; Gaz. vol. 155; p. 235.

Ingersoll-Rand Company. (See Gibson, Arthur H., assignor.)

Ingham, Charles R., assignor to Metal Plated Car & Lumber Company, Mahwah, N. J. Weather-strip. No. 960,331; June 7; Sp. p. 180; Gaz. vol. 155; p. 33.

Ingram, Hezekiah, Wabbaseka, Ark. Whip-socket. No. 962,353; June 21; Sp. p. 4438; Gaz. vol. 155; p. 765.

International Harvester Company. (See Dennis, Samuel K., assignor.)

International Oil Gas Producer Company. (See McPherson, George J., assignor.)

International Text Book Company, The. (See Mitchell, William N., assignor.)

Interstate Sanitation Company, The. (See Rooch, Edward, assignor.)

Isler, Max H., Mannheim, and H. Wolff, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the Rhine, Germany. Anthracene compound and making it. No. 961,612; June 14; Sp. p. 2834; Gaz. vol. 155; p. 491.

Ivers, John W., assignor of one-third to W. A. Burdick, Oklahoma, and one-third to John T. Marshall, Perry, Okla. Dust-pan. No. 961,965; June 21; Sp. p. 3598; Gaz. vol. 155; p. 633.

Iversen, Jacob, Charlottenburg, Germany. Device for regulating the feeding of power in hoisting plants. No. 962,762; June 28; Sp. p. 5333; Gaz. vol. 155; p. 932.

Ives, Frederic E., Weehawken, N. J. Colored photographic print and making same. No. 960,939; June 7; Sp. p. 1392; Gaz. vol. 155; p. 235.

J. D. Riedel Aktiengesellschaft. (See Gans, Robert, assignor.)

J. G. Brill Company, The. (See Kohler, George B., assignor.)

J. P. Devine Company. (See Eggert, William H., assignor.)

J. Y. Farwell Company. (See McLeod, Charles M., assignor.)

J. W. Moore Machine Company, The. (See Moore, Joseph W., assignor.)

Jackson, Dugald C., assignor to D. C. and W. B. Jackson, Madison, Wis. Electricity-meter. No. 962,222; June 21; Sp. p. 4152; Gaz. vol. 155; p. 721.

Jackson, Dugald C., assignor to D. C. and W. B. Jackson, Madison, Wis. Power-driven machinery. No. 961,358; June 14; Sp. p. 2297; Gaz. vol. 155; p. 406.

Jackson, George W., Chicago, Ill. Constructing concrete and like walls in the earth. No. 960,941; June 7; Sp. p. 1398; Gaz. vol. 155; p. 235.

Jackson, George W., Chicago, Ill. Constructing tunnels in the earth. No. 960,940; June 7; Sp. p. 1394; Gaz. vol. 155; p. 235.

Jackson, Lafayette J., East St. Louis, Ill. Reinforced-concrete railway cross-tie. No. 961,607; June 14; Sp. p. 2995; Gaz. vol. 155; p. 519.

Jackson, Samuel J., Pleasanton, Cal. Automatic pump. No. 960,942; June 7; Sp. p. 1402; Gaz. vol. 155; p. 238.

Jackson, Uriah S., Ossipee, N. H. Float tide-mill. No. 961,410; June 14; Sp. p. 2393; Gaz. vol. 155; p. 424.

Jackson, William B., *et al.* (See Jackson, Dugald C., assignor.)

Jackson, William M., Middlebury, Vt. Safety portable rubbish-burner. No. 962,148; June 21; Sp. p. 4014; Gaz. vol. 155; p. 697.

Jacob, Frederick, Newark, N. J., assignor to The Singer Manufacturing Company. Sewing-machine. No. 961,135; June 14; Sp. p. 1801; Gaz. vol. 155; p. 327.

Jacobie, Charles W. (See Jacobie, Walter L., assignor.)

Jacobie, Walter L., assignor, by mesne assignments, to C. W. Jacobie, Glens Falls, N. Y. Backing-strip-supplying machine. No. 960,332; June 7; Sp. p. 181; Gaz. vol. 155; p. 33.

Jacobs, Henry C., Glasco, Kans. Wire stretcher and splicer. No. 961,237; June 14; Sp. p. 2024; Gaz. vol. 155; p. 365.

Jacobson, Harry, Chicago, Ill. Receptacle-cover fastener. No. 962,898; June 28; Sp. p. 5505; Gaz. vol. 155; p. 979.

Jaeger, Gebhard. (See Keny, William L., assignor.)

Jaeger, John, Denver, Colo. Holder for garden-hose. No. 961,297; June 14; Sp. p. 2161; Gaz. vol. 155; p. 386.

Jaekle, Gustav, Basel, assignor to Aktiengesellschaft für den Vertrieb von Kuchengeschirr-Spühlapparaten "Triumph," Zurich, Switzerland. Dish-cleaner. No. 962,763; June 28; Sp. p. 5385; Gaz. vol. 155; p. 932.

Jahnke, Albert A., Oakland, Cal. Explosive-driven engine. No. 961,966; June 21; Sp. p. 3509; Gaz. vol. 155; p. 633.

Jake, Robert, Rockyridge, Ohio. Spark-plug. No. 961,136; June 14; Sp. p. 1804; Gaz. vol. 155; p. 328.

Jameson, William, assignor to The Fisk Rubber Company, Chicopee Falls, Mass. Safety device for calender-rolls. No. 962,572; June 28; Sp. p. 4945; Gaz. vol. 155; p. 866.

Jamieson, Marcus W. (See Schlosser, Robert J., assignor.)

Jansen, Johannes, and W. Neelmeier, Leverkusen, near Cologne, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Green azo dye. No. 961,354; June 14; Sp. p. 2301; Gaz. vol. 155; p. 406.

Jansen, Johannes, and W. Neelmeier, Leverkusen, near Cologne, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Red azo dye. No. 961,355; June 14; Sp. p. 2302; Gaz. vol. 155; p. 406.

Jarvis, Virgil O. (See Pence, Wolf, and Jarvis.)

Jedel, Aaron, New York, N. Y. Trick-box. No. 962,843; June 28; Sp. p. 5488; Gaz. vol. 155; p. 960.

Jeffery, Charles T., *et al.*, executors. (See Purdy, Frederick, assignor.)

Jeffery, Harold W., *et al.*, executors. (See Purdy, Frederick, assignor.)

Jeffery, Kate E., *et al.*, executrix. (See Purdy, Frederick, assignor.)

Jeffery, Richard E., Piedmont, Cal. Firearm. No. 962,223; June 21; Sp. p. 4153; Gaz. vol. 155; p. 721.

Jeffrey Manufacturing Company, The. (See Norris, George B., assignor.)

Jeffrey Manufacturing Company, The. (See Sessions, Frank L., assignor.)

Jeffrey Manufacturing Company, The. (See Willson, Freeman R., Jr., assignor.)

Jendrusik, Aurelijusz, Strzemieszyce, Russia. Slide-valve gear for steam-locomotives. No. 961,613; June 14; Sp. p. 2837; Gaz. vol. 155; p. 491.

Jenkins, Alexander F., assignor to Alexander Milburn Company, Baltimore, Md. Portable acetylene generator and torch. No. 960,643; June 7; Sp. p. 828; Gaz. vol. 155; p. 136.

Jenkins, Alexander F., assignor to The Alexander Milburn Company, Baltimore, Md. Contractor's torch. No. 962,640; June 28; Sp. p. 5078; Gaz. vol. 155; p. 888.

Jenkins, James L., Garden City, S. D. Rail-chair. No. 960,644; June 7; Sp. p. 830; Gaz. vol. 155; p. 136.

Jenkins, Merrill L. (See Place and Jenkins.)

Jenkinson, Herbert J. (See Lockhart and Jenkinson.)

Jennings, Archer B., Wallingford, Conn. Square. No. 962,149; June 21; Sp. p. 4015; Gaz. vol. 155; p. 697.

Jennings, Archer B., assignor to The Jennings-Hall-Sperry Co., Wallingford, Conn. Slicing-machine. No. 960,334; June 7; Sp. p. 197; Gaz. vol. 155; p. 34.

Jennings, Charles D., St. Joseph, Mich. Lining or back plaster for buildings. No. 960,554; June 7; Sp. p. 849; Gaz. vol. 155; p. 106.

Jennings-Hall-Sperry Co., The. (See Jennings, Archer B., assignor.)

Jennings, Milo C., assignor of one-fifth to D. McMillen, one-fifth to K. E. Walsh, and one-fifth to H. J. Cunningham, Chicago, Ill. Rope-fastener. No. 960,333; June 7; Sp. p. 196; Gaz. vol. 155; p. 34.

Jennison, Harry G., Toledo, Ohio. Pavement. No. 962,150; June 21; Sp. p. 4016; Gaz. vol. 155; p. 697.

Jensen, Hans H., Milwaukee, Wis. Machine for cutting metal bars. No. 962,085; June 21; Sp. p. 3856; Gaz. vol. 155; p. 674.

Jensen, Olaus, Seattle, Wash. Duplicate-shaping machine. No. 962,573; June 28; Sp. p. 4947; Gaz. vol. 155; p. 866.

Jensen, Ole H. (See Christensen and Jensen.)

Jensen, William S., Minneapolis, Minn. Wall-bed. No. 960,943; June 7; Sp. p. 1403; Gaz. vol. 155; p. 326.

Jerauld, Henry E., Pensacola, Fla. Fastening means for walls. No. 961,698; June 14; Sp. p. 2996; Gaz. vol. 155; p. 519.

Jessop, Richard. (See Burdick and Jessop.)

Jetter, Julius, assignor to Victor Talking Machine Company, Camden, N. J. Talking-machine. No. 960,645; June 7; Sp. p. 831; Gaz. vol. 155; p. 136.

Jewell, Dell W., Kalamazoo, Mich. Prospector's needle. No. 961,298; June 14; Sp. p. 2162; Gaz. vol. 155; p. 386.

Jewett, Parley J., Butler, Mo. Road-grading machine. No. 962,854; June 21; Sp. p. 4438; Gaz. vol. 155; p. 765.

Jewett, Robert A., Boston, and A. L. Greenlaw, Malden, assignors to The Greenlaw Manufacturing Co., Boston, Mass. Train-pipe coupling. No. 961,609; June 14; Sp. p. 2997; Gaz. vol. 155; p. 520.

Joachim, Benjamin, Newark, N. J. Fastening device for buttons. No. 962,151; June 21; Sp. p. 4018; Gaz. vol. 155; p. 698.

Joerissen, Carl A., Washington, D. C., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 961,238; June 14; Sp. p. 2026; Gaz. vol. 155; p. 365.

Johansen, Harald, Chicago, Ill. Horseshoe. No. 961,499; June 14; Sp. p. 2603; Gaz. vol. 155; p. 454.

John, Alexander, New York, N. Y. Window-fastener. No. 961,778; June 21; Sp. p. 3177; Gaz. vol. 155; p. 570.

Johnson, August A. (See Berg, Alvin and R., assignors.)

Johnson, Carl E., Quincy, Mass. Picture-frame support. No. 961,614; June 14; Sp. p. 2841; Gaz. vol. 155; p. 491.

Johnson, Carl F., Milwaukee, Wis. Damper or draft controlling device. No. 961,615; June 14; Sp. p. 2842; Gaz. vol. 155; p. 491.

Johnson, Carl W., Brockwayville, and C. M. Rathke, Pittsburg, Pa. Water-gage. No. 960,944; June 7; Sp. p. 1404; Gaz. vol. 155; p. 237.

Johnson, Charles B., and P. Van Vlaanderen, assignors to The Johnson Van Vlaanderen Machine Co., Paterson, N. J. Moire-machine. No. 961,863; June 21; Sp. p. 3382; Gaz. vol. 155; p. 599.

Johnson, Charles J., Chicago, Ill. Show-case. No. 961,137; June 14; Sp. p. 1806; Gaz. vol. 155; p. 328.

Johnson, Charles J., Denver, Colo. Attachment for harness. No. 961,967; June 21; Sp. p. 3601; Gaz. vol. 155; p. 633.

Johnson, Charles S., Chicago, Ill., assignor, by mesne assignments, to The Westinghouse Electric and Manufacturing Company, Pittsburg, Pa. Voltage-regulator. No. 961,411; June 14; Sp. p. 2395; Gaz. vol. 155; p. 424.

Johnson, Chris P., Newcastle, Cal. Gearing. No. 960,945; June 7; Sp. p. 1407; Gaz. vol. 155; p. 237.

Johnson, Daniel R., Dayton, Ohio. Revolving upholsterer's brush. No. 962,433; June 28; Sp. p. 4628; Gaz. vol. 155; p. 817.

Johnson, Gunnar, New York, N. Y. Picture-hanger. No. 961,616; June 14; Sp. p. 2843; Gaz. vol. 155; p. 492.

Johnson, Hans, South Boston, Mass. Fire-escape. No. 961,299; June 14; Sp. p. 2163; Gaz. vol. 155; p. 387.

Johnson, Joseph, New Orleans, La. Basket. No. 960,555; June 7; Sp. p. 850; Gaz. vol. 155; p. 106.

Johnson, Raymond D., Albany, N. Y. Means for cushioning hydraulic pressure in feed-pipes. No. 962,355; June 21; Sp. p. 4440; Gaz. vol. 155; p. 765.

Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Repeating firearm. No. 960,646; June 7; Sp. p. 835; Gaz. vol. 155; p. 137.

Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Tubular-magazine gun. No. 961,412; June 14; Sp. p. 2396; Gaz. vol. 155; p. 424.

Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Firearm. No. 962,764; June 28; Sp. p. 5337; Gaz. vol. 155; p. 933.

Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Take-down gun. No. 962,899; June 28; Sp. p. 5596; Gaz. vol. 155; p. 979.

Johnson Van Vlaanderen Machine Co., The. (See Johnson and Van Vlaanderen, assignors.)

Johnston, Robert T., assignor to The Campbell Printing Press & Manufacturing Company, Taunton, Mass. Cylinder-driving mechanism for printing-presses. No. 962,962; June 28; Sp. p. 5708; Gaz. vol. 155; p. 999.

Jones, Cabell, Spray, N. C. Price-computing attachment for measuring-faucets. No. 960,946; June 7; Sp. p. 1409; Gaz. vol. 155; p. 237.

Jones, Francis L., *et al.* (See Davis, William J., assignor.)

Jones, Marion S., Baltimore, Md. Separator. No. 960,947; June 7; Sp. p. 1410; Gaz. vol. 155; p. 238.

Jones, Pearl N., Pittsburg, Pa. Passenger-car. No. 962,224; June 21; Sp. p. 4159; Gaz. vol. 155; p. 722.

Jones, Pearl N., Pittsburg, Pa. Passenger-car. No. 962,225; June 21; Sp. p. 4160; Gaz. vol. 155; p. 722.

Jones, William M., and H. Stewart, San Francisco, Cal. Fastening for loops and the like. No. 962,096; June 21; Sp. p. 3857; Gaz. vol. 155; p. 675.

Jordan, John W., Jackson, Miss. Sweat-shirt. No. 962,900; June 28; Sp. p. 5598; Gaz. vol. 155; p. 980.

Jordon, Henry E., and D. A. Sullivan, New York, N. Y. Tool. No. 961,617; June 14; Sp. p. 2849; Gaz. vol. 155; p. 492.

Joselin, Frank E., Toronto, Ontario, Canada. Combined bed and davenport. No. 961,138; June 14; Sp. p. 1807; Gaz. vol. 155; p. 328.

Joy, Charles L., New Haven, Conn. Cutlery-grinding machine. No. 961,864; June 21; Sp. p. 3388; Gaz. vol. 155; p. 599.

Judd, Henry S., assignor to H. S. Judd Manufacturing Company, Chicago, Ill. Washing-machine. No. 962,510; June 28; Sp. p. 4791; Gaz. vol. 155; p. 844.

Judy, W. S. (See Breta, George B., assignor.)

Kaelber, J. Geo. (See Garratt and McGivern, assignors.)

Kahl, George A., Plainsberg, Cal. Building-block. No. 960,948; June 7; Sp. p. 1412; Gaz. vol. 155; p. 238.

Kahn, Edgar E., New York, N. Y. Means for securing jewels or ornaments to studs. No. 960,647; June 7; Sp. p. 838; Gaz. vol. 155; p. 137.

Kahn, Frank G. (See Macintosh, Richard E., assignor.)

Kahn, Julius, assignor to Trussed Concrete Steel Company, Detroit, Mich. Floor construction. No. 961,722; June 14; Sp. p. 3044; Gaz. vol. 155; p. 528.

Kahn, Nathan E., Woodbine, N. J. Device for waxing yarn. No. 960,335; June 7; Sp. p. 199; Gaz. vol. 155; p. 34.

Kaiser, Lipman. (See Cunnius, Alfred R., assignor.)

Kalck, Frederick R., *et al.* (See Hanlon, George W., assignor.)

Kamm, Paul, Chicago, Ill. Sign. No. 960,336; June 7; Sp. p. 201; Gaz. vol. 155; p. 34.

Kanabay, Joseph, Elkhart, Ind. Folding perambulator. No. 960,337; June 7; Sp. p. 202; Gaz. vol. 155; p. 35.

Kane, Patrick H., Buffalo, N. Y. Blowing-engine. No. 960,556; June 7; Sp. p. 850; Gaz. vol. 155; p. 106.

Kanner, Samuel. (See Benedict, Charles F., assignor.)

Kappenberg, Adolph, New York, N. Y. Feed-bag. No. 962,706; June 28; Sp. p. 5224; Gaz. vol. 155; p. 912.

Karg, Albert E., *et al.* (See Carpenter, Alexander, assignor.)

Karhu, John, Calumet, Mich. Automatic dump-car. No. 962,356; June 21; Sp. p. 4442; Gaz. vol. 155; p. 766.

Karpenstein, Henry C., New York, N. Y. Massage apparatus. No. 962,901; June 28; Sp. p. 5599; Gaz. vol. 155; p. 980.

Kast, Leonard L. (See Brown and Kast.)

Katt, Diedrich, Oaklawn, Ill. Cultivator-shovel. No. 962,434; June 28; Sp. p. 4630; Gaz. vol. 155; p. 818.

Katzer, Edward W. (See Martin and Katzer.)

Kaufman, Adolph G., assignor to American Callaphone Company, New York, N. Y. Sound-horn. No. 962,574; June 28; Sp. p. 4950; Gaz. vol. 155; p. 867.

Kaufman, Christian W., Shenandoah, Pa. Automatic switch. No. 961,413; June 14; Sp. p. 2399; Gaz. vol. 155; p. 424.

Kaufmann, Charles W., New York, N. Y. Attachment for cameras. No. 962,844; June 28; Sp. p. 5489; Gaz. vol. 155; p. 960.

Kaufmann, John W., Baltimore, Md. Receptacle for liquids. No. 962,641; June 28; Sp. p. 5080; Gaz. vol. 155; p. 888.

Kawasaki, Yasuke, Vancouver, British Columbia, Canada. Incandescent-lamp system. No. 962,435; June 28; Sp. p. 4630; Gaz. vol. 155; p. 818.

Keast, Alfred J., San Jose, assignor to California Fruit Canners Association, San Francisco, Cal. Can-syruping machine. No. 962,026; June 21; Sp. p. 3714; Gaz. vol. 155; p. 662.

Keast, George H. (See Bierman and Keast.)

Keech, Ulysses W., Enumclaw, Wash. Dumping-car. No. 960,949; June 7; Sp. p. 1413; Gaz. vol. 155; p. 239.

Keeler, Isaac H., *et al.* (See Kusterer, Carl C., assignor.)

Keeler, Miner S., *et al.* (See Kusterer, Carl C., assignor.)

Keeser, Leonhard, Simmelsdorf, near Schnaittach, Germany. Hay-turning machine of the drum type. No. 960,950; June 7; Sp. p. 1415; Gaz. vol. 155; p. 239.

Kegler, John J., Maquoketa, Iowa. Attachment for supporting signs. No. 962,963; June 28; Sp. p. 5705; Gaz. vol. 155; p. 1000.

Kehoe, William J., Washington, D. C. Stenographic machine. No. 960,951; June 7; Sp. p. 1419; Gaz. vol. 155; p. 239.

Keighley, William B., Vineland, N. J. Inseam-trimming machine. No. 960,952; June 7; Sp. p. 1423; Gaz. vol. 155; p. 240.

Keighley, William B., Vineland, N. J. Indenting-machine. No. 962,845; June 28; Sp. p. 5491; Gaz. vol. 155; p. 960.

Keil, John C., and W. B. Allen, St. Louis, Mo. Collapsible hood or canopy for vehicles. No. 960,338; June 7; Sp. p. 205; Gaz. vol. 155; p. 35.

Keith, James, and C. Tuson, London, England. Ventilator. No. 962,357; June 21; Sp. p. 4446; Gaz. vol. 155; p. 766.

Keller, Charles A., Paris, France. Electrical conductor. No. 961,139; June 14; Sp. p. 1809; Gaz. vol. 155; p. 328.

Keller, George W., and E. C. Goetz, Portsmouth, Ohio. Rotary pump. No. 960,339; June 17; Sp. p. 206; Gaz. vol. 155; p. 36.

Keller, Michael, Eureka, Utah. Oscillating-piston pump. No. 961,618; June 14; Sp. p. 2851; Gaz. vol. 155; p. 492.

Kellner, Edgar J., and W. F. Edwards, New York, N. Y. Illuminated sign. No. 962,436; June 28; Sp. p. 4632; Gaz. vol. 155; p. 818.

Kellum, Frank W., Peabody, Kans. Stock-feeder. No. 961,779; June 21; Sp. p. 3179; Gaz. vol. 155; p. 571.

Kelly Motor Truck Company, The. (See Miller, William J., assignor.)

Kelly, Patrick B., Petersburg, Ill. Gymnastic apparatus. No. 961,450; June 14; Sp. p. 2487; Gaz. vol. 155; p. 457.

Kemmerling, Grant, Douglas Island, Alaska. Front head for drilling-machines. No. 960,557; June 7; Sp. p. 853; Gaz. vol. 155; p. 106.

Kemp, Basel D., Gracemont, Okla. Nut-lock. No. 962,642; June 28; Sp. p. 5081; Gaz. vol. 155; p. 888.

Kendall, Stephen H. (See Bircher, Eugene A., assignor.)

Kenly, George T., Baltimore, Md., assignor to The Plumbing Specialty Company. Shower-valve for bath apparatus. No. 961,725; June 14; Sp. p. 3045; Gaz. vol. 155; p. 528.

Kennedy, Albert E., Leyton, England. Toy figure. No. 961,968; June 21; Sp. p. 3602; Gaz. vol. 155; p. 633.

Kennedy, Guy L., assignor to National Carbonated Liquid Co., San Francisco, Cal. Filler for siphon-bottles. No. 962,027; June 21; Sp. p. 3717; Gaz. vol. 155; p. 653.

Kennedy, J. W., *et al.* (See Richey, Albert C., assignor.)

Kennedy, Thomas J., Pittsburg, Pa. Folding umbrella. No. 961,700; June 14; Sp. p. 2999; Gaz. vol. 155; p. 520.

Kent, Charles V. (See Gardner, Chase, and Kent.)

Kent, Henry W. (See Smith and Kent.)

Kent Ore Reduction Company. (See Smith and Kent, assignors.)

Kentucky Hemp Brake Co. (See Poindexter, John W., assignor.)

Keny, William L., Marion, assignor of one-half to G. Jaeger, Columbus, Ohio. Hydraulic cement-block-making machine. No. 960,953; June 7; Sp. p. 1425; Gaz. vol. 155; p. 240.

Kenyeres, Samuel, assignor of one-half to J. V. Takacs, Glassport, Pa. Rail-joint. No. 962,028; June 21; Sp. p. 3718; Gaz. vol. 155; p. 653.

Kenyon, Clayton L., Tama, Iowa. Pump-handle. No. 960,954; June 7; Sp. p. 1428; Gaz. vol. 155; p. 240.

Kern, Michael, Chicago, Ill. Amusement device. No. 961,239; June 14; Sp. p. 2027; Gaz. vol. 155; p. 365.

Kessler, Louis, Chicago, Ill. Draw-off device for explosive liquids. No. 962,846; June 28; Sp. p. 5493; Gaz. vol. 155; p. 961.

Ketchum, Ernest C., Boston, Mass. Thrust-bearing. No. 961,140; June 14; Sp. p. 1811; Gaz. vol. 155; p. 329.

Ketelsen, Andrew J., Saginaw, Mich. Sanitary automatic faucet. No. 961,356; June 14; Sp. p. 2303; Gaz. vol. 155; p. 407.

Ketelsen, Andrew J., Saginaw, Mich. Step-ladder. No. 961,357; June 14; Sp. p. 2304; Gaz. vol. 155; p. 407.

Keystone Novelty Company. (See Malick, Henry, assignor.)

Kiesel, William F., Jr., Altoona, Pa. Steam-regulating valve. No. 961,300; June 14; Sp. p. 2165; Gaz. vol. 155; p. 387.

Kiesel, William F., Jr., Altoona, Pa. Car-roof. No. 961,301; June 14; Sp. p. 2167; Gaz. vol. 155; p. 387.

Kilgore, Frederick O., Minneapolis, Minn. Gas-engine. No. 962,437; June 28; Sp. p. 4633; Gaz. vol. 155; p. 819.

Kimball, Charles H., Chicago, Ill. Joint-fastener. No. 960,340; June 7; Sp. p. 208; Gaz. vol. 155; p. 36.

Kincaid, John, Vancouver, British Columbia, Canada. Fluid-pressure impact-engine. No. 962,511; June 28; Sp. p. 4794; Gaz. vol. 155; p. 844.

Kincaid, Thomas G., Connellsville, Pa. Lubricating device. No. 960,341; June 7; Sp. p. 209; Gaz. vol. 155; p. 36.

King, Charles M., Washington, D. C., assignor to A. G. Spalding & Bros., New York, N. Y. Base-ball glove. No. 962,438; June 28; Sp. p. 4636; Gaz. vol. 155; p. 819.

King, Charles M., Washington, D. C., assignor to A. G. Spalding & Bros., New York, N. Y. Base-ball mitt. No. 963,006; June 28; Sp. p. 5793; Gaz. vol. 155; p. 1014.

King, Elmer E. (See Fifield, Frank, assignor.)

King, Ezra L., Buchanan, Tenn. Churn. No. 960,955; June 7; Sp. p. 1429; Gaz. vol. 155; p. 240.

King, Henry A. (See Pochyla and King.)

King, Wirt B., Fairfield, Iowa. Spring attachment for oil-cans. No. 962,902; June 28; Sp. p. 5601; Gaz. vol. 155; p. 980.

Kingsbury, George P., Scranton, Pa. Holder for erasing material. No. 961,141; June 14; Sp. p. 1812; Gaz. vol. 155; p. 329.

Kinney, Frank F., assignor to Minerallac Electric Company, Chicago, Ill. Register mechanism for indicating instruments. No. 961,358; June 14; Sp. p. 2305; Gaz. vol. 155; p. 407.

Kinsey, Coroden K., Bucyrus, Ohio. Sieve-cloth cleaner. No. 961,414; June 14; Sp. p. 2404; Gaz. vol. 155; p. 425.

Kirk, Robert H., assignor to The "Long-Arm" System Company, Cleveland, Ohio. Engraving-machine. No. 962,439; June 28; Sp. p. 4637; Gaz. vol. 155; p. 819.

Kirk, William I., Buffalo, N. Y. Voting-machine. No. 960,956; June 7; Sp. p. 1430; Gaz. vol. 155; p. 241.

Kirkegaard, Georg, New York, N. Y., assignor to Imperial Stopper Company. Bottle-capping machine. No. 962,029; June 21; Sp. p. 3720; Gaz. vol. 155; p. 653.

Kirkegaard, Georg, New York, N. Y., assignor to Imperial Stopper Company. Feeding mechanism for bottle-capping machines. No. 962,030; June 21; Sp. p. 3722; Gaz. vol. 155; p. 654.

Kitsee, Isidor, assignor of one-half to W. J. Latta, Philadelphia, Pa. Telegraphy. No. 962,709; June 28; Sp. p. 5224; Gaz. vol. 155; p. 912.

Klaus, William, New Haven, Conn. Sleigh-runner. No. 961,415; June 14; Sp. p. 2405; Gaz. vol. 155; p. 425.

Kleckner, Clinton J., Minneapolis, Minn. Hat display and stock cabinet. No. 960,342; June 7; Sp. p. 211; Gaz. vol. 155; p. 36.

Kleinhan, John W., Alexander, N. D. Speed-ranger for governors. No. 961,865; June 21; Sp. p. 3392; Gaz. vol. 155; p. 600.

Kletti, Johann, III, Sandhausen, Germany. Cigar-maker's rolling-board. No. 960,957; June 7; Sp. p. 1436; Gaz. vol. 155; p. 241.

Kline, Charles R., Beechwood, Pa. Furnace attachment. No. 962,152; June 21; Sp. p. 4018; Gaz. vol. 155; p. 698.

Klingloff, Andrew R., Roslindale, Mass. Device for grinding elevator-plungers. No. 961,909; June 21; Sp. p. 3603; Gaz. vol. 155; p. 634.

Knaust, Fredrick, Jersey City, N. J. Gambrel. No. 962,358; June 21; Sp. p. 4440; Gaz. vol. 155; p. 766.

Knepper, George M., New York, N. Y. Filter. No. 962,031; June 21; Sp. p. 3726; Gaz. vol. 155; p. 654.

Knickerbocker, Harvey O., and C. G. Watson, Detroit, Mich. Clothes-line support. No. 961,240; June 14; Sp. p. 2029; Gaz. vol. 155; p. 366.

Knight, James H., Westtown, Pa. Reinforced concrete construction. No. 961,619; June 14; Sp. p. 2853; Gaz. vol. 155; p. 498.

Knoevenagel, Emil, Heidelberg, Germany. Dyeing acetyl cellulose. No. 961,241; June 14; Sp. p. 2030; Gaz. vol. 155; p. 366.

Knopping, Hermann, Berlin, Germany. Album. No. 962,643; June 28; Sp. p. 5083; Gaz. vol. 155; p. 889.

Koch, Norbert, assignor to Fried. Krupp Actiengesellschaft, Essen-on-the-Ruhr, Germany. Spade for portable recoil-guns. No. 962,032; June 21; Sp. p. 3727; Gaz. vol. 155; p. 654.

Koelling, Edward. (See Limberg and Koelling.)

Koepp & Co., Rudolph. (See Weise and Rieche, assignors.)

Koerber, James L., Houston, Tex. Combined battery-receptacle and bell-support. No. 962,033; June 21; Sp. p. 3720; Gaz. vol. 155; p. 655.

Kohler, George B., assignor to The J. G. Brill Company, Philadelphia, Pa. Fare-box. No. 961,076; June 7; Sp. p. 1695; Gaz. vol. 155; p. 281.

Kohler, Karl, Neustadt, Schwarswald, Germany. Flush-tank. No. 962,765; June 28; Sp. p. 5339; Gaz. vol. 155; p. 933.

Kohne, Anthony H., Coupeville, Wash. Device for removing obstacles from the throats of cattle. No. 961,500; June 14; Sp. p. 2604; Gaz. vol. 155; p. 454.

Koken, Ernest E., deceased, St. Louis, Mo.; W. F. Koken, executor. Two-way faucet. No. 960,558; June 7; Sp. p. 655; Gaz. vol. 155; p. 107.

Koken, Walter F., executor. (See Koken, Ernest E.)

Kolin, James, assignor of one-half to W. E. Smith, Chicago, Ill. Trolley for electrically-propelled vehicles. No. 960,559; June 7; Sp. p. 661; Gaz. vol. 155; p. 108.

Kolstrom, John, Ryder, N. D. Twyer-iron. No. 961,451; June 14; Sp. p. 2488; Gaz. vol. 155; p. 437.

Kondas, Alexandar, and P. Bajusz, Woodriver, Ill. Pipe-wrench. No. 962,359; June 21; Sp. p. 4447; Gaz. vol. 155; p. 767.

Koppel, Mihkel, Philadelphia, Pa. Eye-cover or blinker for beldies. No. 960,648; June 7; Sp. p. 839; Gaz. vol. 155; p. 137.

Kops, Daniel, New York, N. Y. Hose-supporter belt. No. 961,501; June 14; Sp. p. 2605; Gaz. vol. 155; p. 454.

Korff, Edward W. (See Deemer and Korff.)

Kornbrodt, Theodore, Chicago, Ill. Airship. No. 962,964; June 28; Sp. p. 5705; Gaz. vol. 155; p. 1000.

Koros, George, Philadelphia, Pa. Car-fender. No. 962,226; June 21; Sp. p. 4162; Gaz. vol. 155; p. 722.

Kovatch, Lotta, Oliveburg, Pa. Coal-mining machine. No. 960,958; June 7; Sp. p. 1436; Gaz. vol. 155; p. 241.

Koyl, Charles H., New York, N. Y. Apparatus for the continuous purification of water. No. 960,959; June 7; Sp. p. 1438; Gaz. vol. 155; p. 242.

Kraemer, Thomas, assignor to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa. Talking-machine. No. 960,560; June 7; Sp. p. 663; Gaz. vol. 155; p. 109.

Kral, Frank, Vermillion, Kans. Grain elevator and dump. No. 961,970; June 21; Sp. p. 3605; Gaz. vol. 155; p. 634.

Krantz, Hubert, assignor to H. Krantz Manufacturing Company, New York, N. Y. Meter-panel. No. 961,142; June 14; Sp. p. 1816; Gaz. vol. 155; p. 330.

Kratky, Gustav, Freudenthal, Austria-Hungary. Loom for manufacturing terry fabrics. No. 961,866; June 21; Sp. p. 3393; Gaz. vol. 155; p. 600.

Krause, Ernst, Steglitz, near Berlin, Germany. Singeing-comb. No. 961,620; June 14; Sp. p. 2855; Gaz. vol. 155; p. 493.

Krawchenko, Samuel N., Wilmington, Del. Liquid-measure. No. 961,452; June 14; Sp. p. 2489; Gaz. vol. 155; p. 438.

Krawchenko, Samuel N., Wilmington, Del. Sawing-machine. No. 961,453; June 14; Sp. p. 2491; Gaz. vol. 155; p. 438.

Kreis, Oscar C., Jr., assignor to Burroughs Adding Machine Company, Detroit, Mich. Power-drive for adding-machines. No. 960,343; June 7; Sp. p. 212; Gaz. vol. 155; p. 37.

Krell Auto-Grand Piano Co. of America, The. (See Welin, Peter, assignor.)

Krentler-Arnold Hinge Last Company. (See Peckham, Albert E., assignor.)

Krickbaum, William M., assignor to The Grasselli Chemical Company, Cleveland, Ohio. Tank-car. No. 963,025; June 28; Sp. p. 5830; Gaz. vol. 155; p. 1020.

Kripa, William K., and G. W. Wright, Philadelphia, Pa. Aerial-cable support. No. 960,344; June 7; Sp. p. 214; Gaz. vol. 155; p. 37.

Kristofek, Frank J., assignor to The Meek Company, Coshocton, Ohio. Easel or the like. No. 962,903; June 28; Sp. p. 5602; Gaz. vol. 155; p. 980.

Kroder, John, New York, N. Y. Bracket. No. 961,502; June 14; Sp. p. 2606; Gaz. vol. 155; p. 455.

Krom, Chester P., St. Petersburg, Fla. Display-cabinet. No. 960,561; June 7; Sp. p. 665; Gaz. vol. 155; p. 109.

Krug, Louis, assignor to Metropolitan Sewing Machine Company, Nyack, N. Y. Attachment-holder for sewing-machines. No. 960,345; June 17; Sp. p. 215; Gaz. vol. 155; p. 37.

Krug, Philip F., assignor to W. L. Abate, New York, N. Y. Chuck. No. 961,867; June 21; Sp. p. 3394; Gaz. vol. 155; p. 600.

Krummel, Louis C., Clinton, Conn., and J. C. Taliaferro, Baltimore, Md. Bottle-capping head. No. 960,960; June 7; Sp. p. 1440; Gaz. vol. 155; p. 242.

Kucyński, Jochan, assignor of one-half to M. J. Pociask, Chicago, Ill. Padlock. No. 962,087; June 21; Sp. p. 3858; Gaz. vol. 155; p. 675.

Kuehner, Charles, Cranston, assignor to O. Kuehner, Providence, R. I. Pin. No. 962,360; June 21; Sp. p. 4448; Gaz. vol. 155; p. 767.

Kuehner, Ottilie. (See Kuehner, Charles, assignor.)

Kuersten, Hugo R., Chicago, Ill. Garment-rack. No. 962,227; June 21; Sp. p. 4163; Gaz. vol. 155; p. 723.

Kuersten, Hugo R., Chicago, Ill. Cabinet-door. No. 962,228; June 21; Sp. p. 4165; Gaz. vol. 155; p. 723.

Kuhl, Burchard, Orlando, Fla., assignor of one-half to Smith & Hemenway Company, New York, N. Y. Ice-cream freezer. No. 960,346; June 7; Sp. p. 220; Gaz. vol. 155; p. 38.

Kuhl, Carl L., Wilmington, N. C. Curtain-pole. No. 962,361; June 21; Sp. p. 4450; Gaz. vol. 155; p. 767.

Kullander, Frank O., Kensington, Minn. Harvester butting attachment. No. 961,868; June 21; Sp. p. 3396; Gaz. vol. 155; p. 600.

Kusel, Harry J., Chicago, Ill., assignor, by mesne assignments, to Century Telephone Construction Company, Buffalo, N. Y. Spring-jack structure. No. 962,847; June 28; Sp. p. 5495; Gaz. vol. 155; p. 961.

Kuss, Rudolf R., De Lamar, Idaho. Taper-boring machine. No. 962,848; June 28; Sp. p. 5497; Gaz. vol. 155; p. 961.

Kusterer, Carl C., assignor to I. H. and M. S. Keeler, Grand Rapids, Mich. Fastener for securing doors. No. 960,961; June 7; Sp. p. 1443; Gaz. vol. 155; p. 242.

Kušel, Hans, Baden, near Vienna, Austria-Hungary, assignor to General Electric Company. Metallic-filament electric glow-lamp. No. 960,962; June 7; Sp. p. 1444; Gaz. vol. 155; p. 243.

Kwis, Arthur F., Norwood, Ohio, assignor to Allis-Chalmers Company and The Bullock Electric Manufacturing Company. Belt-tightener. No. 960,347; June 7; Sp. p. 221; Gaz. vol. 155; p. 38.

Kyle, James G., Riverside, Cal. Pruning-shears. No. 960,963; June 7; Sp. p. 1445; Gaz. vol. 155; p. 243.

L. A. Becker Company. (See Becker, Louis A., assignor.)

L. C. Smith & Bros. Typewriter Company. (See Gabrielson and Stanley, assignors.)

La Batt, Homer C., assignor to W. J. Herrick, Chicago, Ill. Controller for paper-handling machines. No. 962,440; June 28; Sp. p. 4642; Gaz. vol. 155; p. 820.

La Motte, John, *et al.* (See Richey, Albert C., assignor.)

Labombarde, Elie W., Nashua, N. H. Box-making machine. No. 960,348; June 7; Sp. p. 224; Gaz. vol. 155; p. 38.

Lackie, William J. (See Littman and Lackie.)

Lacy, Edward A., and F. C. Williams, Galeton, Pa. Valve. No. 962,766; June 28; Sp. p. 5342; Gaz. vol. 155; p. 934.

Laden, Patrick, Mattoon, assignor to Railway Specialty & Supply Company, Chicago, Ill. Tie-plate. No. 960,964; June 7; Sp. p. 1447; Gaz. vol. 155; p. 243.

Lafount, Robert. (See Hansen, Heber K., assignor.)

Lafferty, Erastus S., Galesburg, Ill. Torpedo-shell. No. 961,143; June 14; Sp. p. 1819; Gaz. vol. 155; p. 330.

Lafferty, John E., Foyil, Okla. Vegetable-storehouse. No. 961,454; June 14; Sp. p. 2495; Gaz. vol. 155; p. 439.

Lafleur, Jean S., Opelousas, La. Nut-lock. No. 960,349; June 7; Sp. p. 232; Gaz. vol. 155; p. 39.

Lagye, Benoni. (See Vandatte and Lagye.)

Lakosky, Charles, Cooks Mills, Mich. Door-hanger. No. 960,350; June 7; Sp. p. 233; Gaz. vol. 155; p. 39.

Lambe, Floyd. (See Gates, Hiram W., assignor.)

Lamson Consolidated Store Service Company. (See Amsden, George A., assignor.)

Lamson Consolidated Store Service Company. (See Cowley, James T., assignor.)

Lamson Consolidated Store Service Company. (See Fordyce, Edmond A., assignor.)

Lamson Consolidated Store Service Company. (See Maclaren, James G., assignor.)

Lamson Consolidated Store Service Company. (See Pearsall, Albert W., assignor.)

Lancaster, John A., *et al.* (See Bryant, William A., assignor.)

Landis Machine Company. (See Pedersen, Christian, assignor.)

Lang, Edward M., Jr. (See Cobb, Elmer M., assignor.)

Lang, Frank. (See Brostrom and Lang.)

Lang, Josiah W., Floris, Iowa. Egg-lifter. No. 962,362; June 21; Sp. p. 4451; Gaz. vol. 155; p. 767.

Lang, Robert, *et al.* (See Ward, Lloyd W., assignor.)

Lange, Elias, assignor to H. Lange Wagon Co., Pittsburg, Pa. Vehicle. No. 962,229; June 21; Sp. p. 4168; Gaz. vol. 155; p. 724.

Langénieux, Lucien, assignor of one-half to C. Beluze, Roanne, France. Weft-replenishing apparatus for weaving-looms. No. 960,965; June 7; Sp. p. 1448; Gaz. vol. 155; p. 243.

Lanning, Edward C., St. Charles, Ill. Cement block. No. 960,562; June 7; Sp. p. 666; Gaz. vol. 155; p. 109.

Lanston Monotype Machine Company. (See Bancroft and Indahl, assignors.)

Lanston Monotype Machine Company. (See Pierpont, Frank H., assignor.)

Larocque, Nacter, Fairview, Mass. Chimney-cap. No. 961,410; June 14; Sp. p. 2406; Gaz. vol. 155; p. 426.

Larry, Edwin C., Harvey, Ill. Adjustable stand for deflecting-bars. No. 962,849; June 28; Sp. p. 5499; Gaz. vol. 155; p. 962.

Larsen, Louis, New York, N. Y. Electric switch. No. 961,242; June 14; Sp. p. 2031; Gaz. vol. 155; p. 366.

Larson, Caleb M., Minneapolis, Minn. Saw-set. No. 961,503; June 14; Sp. p. 2608; Gaz. vol. 155; p. 455.

Latil, Julius A. J., Baton Rouge, La. Crude-oil burner. No. 960,563; June 7; Sp. p. 667; Gaz. vol. 155; p. 109.

Latta, William J. (See Kitsee, Isidor, assignor.)

Lattier, George F., Baltimore, Md. Device for reproducing an object on a scale. No. 961,359; June 14; Sp. p. 2308; Gaz. vol. 155; p. 408.

Laubscher, August, assignor to United States Envelope Company, Springfield, Mass. Gum-roll governor for envelop-machines. No. 962,153; June 21; Sp. p. 4020; Gaz. vol. 155; p. 608.

Laughlin, Elmyr A., Chicago, Ill. Pneumatic cleaner. No. 960,564; June 7; Sp. p. 668; Gaz. vol. 155; p. 110.

Laughlin, Henry D. (See Huntoon, Charles P., assignor.)

Lauson, Calvin A., Grand Rapids, Mich. Box-cover fastener. No. 961,780; June 21; Sp. p. 3180; Gaz. vol. 155; p. 571.

Lavery, Francis E., Worcester, Mass. Ice-harvester. No. 961,781; June 21; Sp. p. 3181; Gaz. vol. 155; p. 572.

Lavery, John, Waubra, Victoria, Australia. Disk plow and cultivator. No. 960,966; June 7; Sp. p. 1450; Gaz. vol. 155; p. 244.

Law, William A., St. Paul, Minn. Gate. No. 960,351; June 7; Sp. p. 233; Gaz. vol. 155; p. 39.

Lawson, Alexander, East Barre, and E. S. and B. Wildbur, Websterville, Vt. Automatic rocking-chair fan. No. 960,967; June 7; Sp. p. 1452; Gaz. vol. 155; p. 244.

Lawyer, James P. (See Lawyer, William M. and J. P.)

Lawyer, William M. and J. P., Guernsey, Ohio. Crib structure. No. 962,767; June 28; Sp. p. 5343; Gaz. vol. 155; p. 934.

Layton, Thomas E., assignor to National Blank Book Company, Holyoke, Mass. Making scrap-books and the like. No. 960,352; June 7; Sp. p. 234; Gaz. vol. 155; p. 40.

Leacock, Robert J., trustee. (See Fleege, Frank H., assignor.)

Leamon, John B., Atlanta, Ga. Machine for molding plastic materials. No. 960,968; June 7; Sp. p. 1454; Gaz. vol. 155; p. 245.

Leas, Frederick A., Oakland, Cal. Regenerative reverberatory furnace. No. 962,644; June 28; Sp. p. 5084; Gaz. vol. 155; p. 889.

Leask, Henry N., Egremont, England. Furnace. No. 960,969; June 7; Sp. p. 1458; Gaz. vol. 155; p. 245.

Lecoutre, August J., Worcester, Mass., assignor to Royal Worcester Corset Company. Corset. No. 962,363; June 21; Sp. p. 4453; Gaz. vol. 155; p. 768.

Lee, Isham M., near Waycross, Ga. Still. No. 962,965; June 28; Sp. p. 5708; Gaz. vol. 155; p. 1001.

Lee, Thomas B., Charlotte, N. C. Water-turbine. No. 962,364; June 21; Sp. p. 4454; Gaz. vol. 155; p. 768.

Leedham, Russel C., Trinidad, Colo. Rotary engine. No. 962,850; June 28; Sp. p. 5500; Gaz. vol. 155; p. 962.

Ledley, George A., West View, Pa. Trolley. No. 962,365; June 21; Sp. p. 4458; Gaz. vol. 155; p. 768.

Leidecker, Frank W., Marietta, assignor of one-eighth to C. Mount, Carmen, Ohio. Gage-cock. No. 961,971; June 21; Sp. p. 3607; Gaz. vol. 155; p. 634.

Leidenberg, Leopold. (See Albrecht and Leidenberg.)

Leimbach, William C., Jr., and F. H. Grimberg, Hammond, Ind. Coffee or tea pot. No. 960,353; June 7; Sp. p. 236; Gaz. vol. 155; p. 40.

Lemay, Joseph, New York, N. Y. Garment-clasp. No. 961,701; June 14; Sp. p. 3001; Gaz. vol. 155; p. 520.

Lemon, Don M., Boston, Mass., assignor of one-half to E. V. Page, Boston, Mass. Toy. No. 962,154; June 21; Sp. p. 4026; Gaz. vol. 155; p. 609.

Leonard, Harry W., Bronxville, N. Y. Automatic circuit-breaker. No. 960,970; June 7; Sp. p. 1460; Gaz. vol. 155; p. 245.

Leonard, Harry W., Bronxville, N. Y. Means for automatically controlling electric motors. No. 960,971; June 7; Sp. p. 1463; Gaz. vol. 155; p. 246.

Lerner, Harry L., Chicago, Ill. Calculator. No. 962,441; June 28; Sp. p. 4647; Gaz. vol. 155; p. 820.

Lesher, Emanuel G. (See Reinhart and Lesher.)

Lette, Arthur, *et al.* (See Smith, George A., assignor.)

Leuckert, William, assignor of one-half to C. S. Hoffman, New York, N. Y. Light-regulator for automobiles. No. 961,621; June 14; Sp. p. 2856; Gaz. vol. 155; p. 494.

Leuthesser, Fred W., Chicago, Ill. Steam, air, and water trap valve. No. 960,972; June 7; Sp. p. 1467; Gaz. vol. 155; p. 246.

Levander, Charles W., Stromsburg, Nebr. Adjustable and reversible roof and ladder scaffolding-bracket. No. 960,565; June 7; Sp. p. 671; Gaz. vol. 155; p. 110.

Leverens, William T. (See Call, Thomas J., assignor.)

Levering, Albert M., Philadelphia, Pa. Self-lubricating bearing for trolley-wheels. No. 960,354; June 7; Sp. p. 237; Gaz. vol. 155; p. 40.

Levett, Jay C. (See Bateman and Levett.)

Levin, Benjamin J., South Amboy, N. J. Cover for receptacles. No. 962,710; June 28; Sp. p. 5225; Gaz. vol. 155; p. 913.

Levin, Nils D., assignor to Goodman Manufacturing Company, Chicago, Ill. Rack-rail-braking car. No. 960,355; June 7; Sp. p. 238; Gaz. vol. 155; p. 41.

Levy, Henri G., San Francisco, Cal. Electric sad-iron. No. 962,768; June 28; Sp. p. 5345; Gaz. vol. 155; p. 934.

Levy, Jacob, New York, N. Y. Pipe-strainer. No. 960,649; June 7; Sp. p. 841; Gaz. vol. 155; p. 138.

Lewis, Charles H., White Earth, N. D. Neck-yoke holder for wagon-tongues. No. 960,566; June 7; Sp. p. 673; Gaz. vol. 155; p. 110.

Lewis, George W., Scranton, Pa., assignor to S. H. Baird, New York, N. Y. Making cores of sand. No. 960,973; June 7; Sp. p. 1472; Gaz. vol. 155; p. 247.

Lewis J. Miller Company. (See Miller, Lewis J., assignor.)

Lewis, John H., Joplin, Mo. Composition of matter for repair of pneumatic tires. No. 961,144; June 14; Sp. p. 1820; Gaz. vol. 155; p. 330.

Lewis, Wilfred, assignor to The Tabor Manufacturing Company, Philadelphia, Pa. Molding-machine. No. 961,702; June 14; Sp. p. 3001; Gaz. vol. 155; p. 520.

Lewis, Wilfred, and J. T. Ramsden, Philadelphia, Pa., assignors to The Tabor Manufacturing Company, Camden, N. J. Molding-machine. No. 960,974; June 7; Sp. p. 1473; Gaz. vol. 155; p. 247.

Library Bureau. (See Hunter, David E., assignor.)

Lichtenstein, Ludwig, Königinhof-on-the-Elbe, Austria-Hungary. Fixing sulfid colors. No. 960,076; June 7; Sp. p. 1475; Gaz. vol. 155; p. 248.

Lichter, John J., St. Louis, Mo. Door for runway-openings. No. 961,622; June 14; Sp. p. 2858; Gaz. vol. 155; p. 494.

Lieber, William H., assignor to Allis-Chalmers Company, Milwaukee, Wis. Motor-compressor. No. 961,085; June 7; Sp. p. 1712; Gaz. vol. 155; p. 284.

Liebermann, Joseph M., New York, N. Y. Corset. No. 963,026; June 28; Sp. p. 5831; Gaz. vol. 155; p. 1021.

Lightning Valve and Dredge Company. (See Shade, Theodore, assignor.)

Lilljeros, Carl O., Clifton, N. J. Knockdown elevator. No. 961,782; June 21; Sp. p. 3185; Gaz. vol. 155; p. 572.

Limberg, John F., and E. Koelling, Matson, Mo. Rail-spike. No. 963,027; June 28; Sp. p. 5832; Gaz. vol. 155; p. 1021.

Lind, Charles W., McKeesport, Pa. Salt-shaker. No. 960,650; June 7; Sp. p. 843; Gaz. vol. 155; p. 138.

Lindberg, August, Melvin, Iowa. Wagon-tongue. No. 962,366; June 21; Sp. p. 4459; Gaz. vol. 155; p. 769.

Linde, Charles M., Fullersburg, and F. C. Franke, assignors to Hillo Gum Company, Chicago, Ill. Coin-controlled delivery mechanism for vending-machines. No. 960,356; June 7; Sp. p. 240; Gaz. vol. 155; p. 41.

Lindenberger, Hermann, Berlin, Germany. Apparatus for smoking salmon. No. 961,869; June 21; Sp. p. 3398; Gaz. vol. 155; p. 601.

Lindkvist, Erik E., Stockholm, Sweden. Propelling device. No. 962,155; June 21; Sp. p. 4029; Gaz. vol. 155; p. 699.

Lindsay, Robert M., Oliver Springs, Tenn. Car retarder or chock. No. 962,967; June 28; Sp. p. 5710; Gaz. vol. 155; p. 1001.

Lindsay, William G., New York, N. Y., assignor to The Celluloid Company. Pyroxylin compound. No. 961,360; June 14; Sp. p. 2310; Gaz. vol. 155; p. 408.

Lindsey, Daniel W., Poplar Branch, N. C. Vine-cutter for sweet potatoes. No. 962,367; June 21; Sp. p. 4461; Gaz. vol. 155; p. 769.

Lindsey, George H., Austen, W. Va. Electric-railway bonding system. No. 962,966; June 28; Sp. p. 5710; Gaz. vol. 155; p. 1001.

Lindsley, Thomas B., assignor of one-half to S. A. Snyder, Huntington, W. Va. Antispreading device for railway-rails. No. 961,623; June 14; Sp. p. 2861; Gaz. vol. 155; p. 494.

Linkmeyer, Rudolph, Brussels, Belgium. Manufacturing cellulose structures. No. 962,769; June 28; Sp. p. 5349; Gaz. vol. 155; p. 935.

Linkmeyer, Rudolph, Bremen, Germany. Producing durable solutions for spinning and other purposes. No. 962,770; June 28; Sp. p. 5350; Gaz. vol. 155; p. 935.

Lins, Walter R., Philadelphia, Pa. Ore separating or concentrating machine. No. 962,575; June 28; Sp. p. 4051; Gaz. vol. 155; p. 867.

Linton, Curtis D., Paint Bank, Va. Wagon-brake. No. 962,442; June 28; Sp. p. 4649; Gaz. vol. 155; p. 820.

Linville, Robert W., San Francisco, assignor of forty-nine one-hundredths to J. F. Snyder, Richmond, Cal. Adjustable trowel. No. 961,302; June 14; Sp. p. 2160; Gaz. vol. 155; p. 388.

Lipkey, Joseph, Chicago, Ill. Attachment for garment-pockets. No. 960,651; June 7; Sp. p. 844; Gaz. vol. 155; p. 138.

Lipps, Evrah C., assignor to The Peerless Electric Company, Warren, Ohio. Oscillating fan. No. 961,703; June 14; Sp. p. 3010; Gaz. vol. 155; p. 521.

List, Georg, Offenbach-on-the-Main, assignor to Corporation of Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany. Brown sulfur dye and making same. No. 960,652; June 7; Sp. p. 846; Gaz. vol. 155; p. 139.

Litchfield, Isaac W., Boston, Mass., assignor of one-half to H. H. De Lose, Bridgeport, Conn. Belt-shifter. No. 961,417; June 14; Sp. p. 2409; Gaz. vol. 155; p. 426.

Litle, Thomas J., Jr., Woodbury, assignor to Welsbach Light Company, Gloucester City, N. J. Globe or shade for gas-lamps. No. 961,504; June 14; Sp. p. 2609; Gaz. vol. 155; p. 455.

Littig, Victor L., Davenport, Iowa. Ink-well. No. 961,972; June 21; Sp. p. 3608; Gaz. vol. 155; p. 635.

Little, George G., Guilford, Miss. Valve. No. 961,505; June 14; Sp. p. 2611; Gaz. vol. 155; p. 456.

Little, Jesse, Bethany, Mo. Corn-harvester. No. 961,455; June 14; Sp. p. 2496; Gaz. vol. 155; p. 439.

Littman, Albert, and W. J. Lackie, assignors of one-third to N. T. Merck, Cleveland, Ohio. Fender. No. 960,976; June 7; Sp. p. 1477; Gaz. vol. 155; p. 248.

Livingston, Reason C., Spring Valley, Minn. Telephone system. No. 962,645; June 28; Sp. p. 5086; Gaz. vol. 155; p. 889.

Ljunggren, Carl J., Providence, R. I. Chalice. No. 960,977; June 7; Sp. p. 1478; Gaz. vol. 155; p. 248.

Ljungström, Birger, Stockholm, Sweden. Turbine. No. 962,088; June 21; Sp. p. 3850; Gaz. vol. 155; p. 675.

Lloyd, Claud A. (See Oliphant and Ring, assignors.)

Lloyd, George W., New York, N. Y. Station or street indicator. No. 961,243; June 14; Sp. p. 2032; Gaz. vol. 155; p. 366.

Lloyd, Herbert D., Cheshire, Conn. Hat-tree. No. 961,418; June 14; Sp. p. 2413; Gaz. vol. 155; p. 426.

Lochowicz, Stanislaus, assignor of one-fourth to W. Dziatkiewicz, Camden, N. J. Switch-point-throwing mechanism. No. 962,771; June 28; Sp. p. 5350; Gaz. vol. 155; p. 935.

Locke, William S., Lents, assignor of one-half to Portland Realty & Trust Company, Portland, Oreg. Saw-handle. No. 962,904; June 28; Sp. p. 5603; Gaz. vol. 155; p. 981.

Lockhart, Joseph M., and H. J. Jenkinson, Manchester, England. Apparatus for boning or laying drain-pipes. No. 961,244; June 14; Sp. p. 2035; Gaz. vol. 155; p. 367.

Lockwood, Charles S., Newark, assignor to Hyatt Roller Bearing Company, Harrison, N. J. Antifriction-cage for roller-bearing rolls. No. 961,303; June 14; Sp. p. 2170; Gaz. vol. 155; p. 388.

Lockwood, David D., Bridgeport, Conn. Adjustable shade for electric lights. No. 961,973; June 21; Sp. p. 3600; Gaz. vol. 155; p. 635.

Loewenstein, Louis C., Lynn, Mass., and L. H. Dyer, Greenwich, Conn., assignors to General Electric Company. Elastic-fluid turbine. No. 960,357; June 7; Sp. p. 242; Gaz. vol. 155; p. 42.

Lokey, Robert E., Sparks, Okla. Manure-distributer. No. 961,506; June 14; Sp. p. 2611; Gaz. vol. 155; p. 456.

Lombard, Nathaniel, Winthrop, Mass. Governor. No. 960,858; June 7; Sp. p. 244; Gaz. vol. 155; p. 42.

Lombard, Nathaniel, Winthrop, Mass. Motor. No. 962,711; June 28; Sp. p. 5231; Gaz. vol. 155; p. 913.

Lommel, Wilhelm, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Leuco derivative of diethylgallocyanin. No. 961,361; June 14; Sp. p. 2311; Gaz. vol. 155; p. 408.

Lommel, Wilhelm, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Gallocyanin dye. No. 961,362; June 14; Sp. p. 2312; Gaz. vol. 155; p. 408.

Lommel, Wilhelm, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Leuco diethylgallocyanin. No. 962,712; June 28; Sp. p. 5234; Gaz. vol. 155; p. 914.

London, Philip, New York, N. Y. Embroidery-backing. No. 961,974; June 21; Sp. p. 3610; Gaz. vol. 155; p. 635.

"Long-Arm" System Company, The. (See Kirk, Robert H., assignor.)

Long, Henry H., La Crosse, Wis. Folding camp-stove. No. 961,975; June 21; Sp. p. 3611; Gaz. vol. 155; p. 635.

Long, Thomas P., assignor of one-half to W. M. Huffman, Barberton, Ohio. Valve. No. 962,368; June 21; Sp. p. 4463; Gaz. vol. 155; p. 769.

Longstreet, John H., Germantown, Pa. Portable sawing-machine. No. 961,870; June 21; Sp. p. 3399; Gaz. vol. 155; p. 601.

Longtine, Robert V., Los Angeles, Cal., assignor of one-half to F. E. Windsor, Warren, Pa., and one-half to W. R. Guiberson, Coalinga, Cal. Device for controlling engines. No. 960,653; June 7; Sp. p. 846; Gaz. vol. 155; p. 139.

Loomis, Sidney W., Sioux Falls, S. D. Fence-post. No. 962,905; June 28; Sp. p. 5604; Gaz. vol. 155; p. 981.

Lorain Steel Company, The. (See Brown, William M., assignor.)

Lord, Hugh C., assignor to The Tribune Trap & Target Company, Erie, Pa. Target. No. 960,359; June 7; Sp. p. 253; Gaz. vol. 155; p. 42.

Los Angeles Rotary Gas Engine Company. (See Forbes, Thomas C., assignor.)

Lostalot, Henri de. (See Peugeot, Huber, and Lostalot.)

Loudon, Arthur F. D., assignor of one-third to V. S. Soblick and one-third to J. F. Crisp, Fargo, N. D. Excavating-machine. No. 962,156; June 21; Sp. p. 4030; Gaz. vol. 155; p. 699.

Loudenclos, Edward, Pasadena, Cal. Motor-cycle shock-absorber. No. 962,443; June 28; Sp. p. 4652; Gaz. vol. 155; p. 821.

Louvet, Destre V. (See D'Orbessan and Louvet.)

Lovejoy, Dimnitt R., Irvington, assignor to U. S. E. M. Co., New York, N. Y. Push-button. No. 960,654; June 7; Sp. p. 847; Gaz. vol. 155; p. 139.

Low, Abbot, A., et al., trustees. (See Wohl and Hertzberg, assignors.)

Lowdermilk, John E. and V. J., Scottsburg, Ind. Pocket match-box. No. 961,783; June 21; Sp. p. 3187; Gaz. vol. 155; p. 572.

Lowdermilk, Vallie J. (See Lowdermilk, John E. and V. J.)

Lowrie, Wilhelmina. (See Marinsky, Davis, assignor.)

Lowry, William D. P., and F. J. Walling, Minneapolis, Minn. Hitching attachment for wheeled vehicles. No. 961,976; June 21; Sp. p. 3612; Gaz. vol. 155; p. 636.

Ludwig, John H. (See Mater, Louis H., assignor.)

Ludwig, John S., Bushnell, Ill. Cultivator. No. 961,304; June 14; Sp. p. 2171; Gaz. vol. 155; p. 388.

Luehrs, Daniel M., assignor to McCreery Engineering Company, Toledo, Ohio. Spray-head. No. 962,512; June 28; Sp. p. 4795; Gaz. vol. 155; p. 845.

Lufkin, Richard H., Medford, Mass. Leather-folding machine. No. 962,034; June 21; Sp. p. 3731; Gaz. vol. 155; p. 655.

Lumpkin, Edgar, Dallas, Tex. Cotton-gin. No. 961,624; June 14; Sp. p. 2803; Gaz. vol. 155; p. 495.

Lundgren, Charles A., assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 961,871; June 21; Sp. p. 3401; Gaz. vol. 155; p. 601.

Lundstrom, Albert, Omaha, Nebr. Stand for motor-cycles. No. 962,369; June 21; Sp. p. 4464; Gaz. vol. 155; p. 770.

Lurie, William A., Chicago, Ill. Pneumatic tire. No. 962,230; June 21; Sp. p. 4169; Gaz. vol. 155; p. 724.

Lutz, George A., Plainfield, N. J. Elbow for conduits. No. 962,773; June 28; Sp. p. 5354; Gaz. vol. 155; p. 936.

Lutz, George A., Plainfield, N. J. Elbow for conduits. No. 962,774; June 28; Sp. p. 5357; Gaz. vol. 155; p. 936.

Lutz, George A., Plainfield, N. J., assignor to American Circular Loom Company, Portland, Me. Flexible conduit. No. 962,772; June 28; Sp. p. 5353; Gaz. vol. 155; p. 935.

Lutz, John A., St. Petersburg, Fla. Calculating-machine. No. 961,977; June 21; Sp. p. 3613; Gaz. vol. 155; p. 636.

Lutz, William F. J., and H. D. Bartlett, Chicago, Ill. Packing. No. 961,872; June 21; Sp. p. 3404; Gaz. vol. 155; p. 602.

Lynch, Gertrude F., New York, N. Y. Collapsible receptacle. No. 960,360; June 7; Sp. p. 254; Gaz. vol. 155; p. 43.

Lyng, Hilmen C., Fort Benton, Mont. Lamp-burner attachment. No. 961,245; June 14; Sp. p. 2037; Gaz. vol. 155; p. 367.

Lyon, David W., Alameda, Cal. Gas-engine. No. 960,978; June 7; Sp. p. 1479; Gaz. vol. 155; p. 248.

Lyons, Robert L., Waltham, Mass. Button-sewing machine. No. 961,507; June 14; Sp. p. 2618; Gaz. vol. 155; p. 456.

Lyons, Robert L., Waltham, Mass. Button-sewing machine. No. 961,508; June 14; Sp. p. 2617; Gaz. vol. 155; p. 456.

Lyons, Robert L., Boston, Mass. Thread-cutting device for sewing-machines. No. 961,509; June 14; Sp. p. 2619; Gaz. vol. 155; p. 457.

Lyster, Benton R. and M. J., Whitefield, N. H. Seed-potato-cutting machine. No. 961,363; June 14; Sp. p. 2312; Gaz. vol. 155; p. 408.

Lyster, Morton J. (See Lyster, Benton R. and M. J.)

Mabey, Charles W., Indianapolis, Ind. Adjustable brush-handle. No. 960,655; June 7; Sp. p. 849; Gaz. vol. 155; p. 140.

MacCormick Drill and Manufacturing Company, The. (See Hibschle, Herman J., assignor.)

MacGuyer, Woodford R., Waterbury, assignor to The New Departure Manufacturing Company, Bristol, Conn. Feeding means for explosion-motors. No. 962,371; June 21; Sp. p. 4468; Gaz. vol. 155; p. 771.

Macduffee, Chester E., assignor to himself and W. H. Cooper, New York, N. Y., J. L. Gordon, West Hoboken, N. J., and J. P. Read, New York, N. Y. Boot or shoe heel. No. 961,625; June 14; Sp. p. 2865; Gaz. vol. 155; p. 495.

Machlet, Adolph W., Elizabeth, N. J. Annealing apparatus. No. 961,305; June 14; Sp. p. 2173; Gaz. vol. 155; p. 389.

Macintosh, Richard E., assignor of one-half to F. G. Kahn, Los Angeles, Cal. Coat-hanger. No. 962,513; June 28; Sp. p. 4798; Gaz. vol. 155; p. 845.

Mack, Gorden W., Peeda, Va. Pulley-rope gage. No. 961,510; June 14; Sp. p. 2620; Gaz. vol. 155; p. 457.

Mack, William E., Fort Plain, N. Y. Thermo-electric regulator. No. 961,145; June 14; Sp. p. 1821; Gaz. vol. 155; p. 330.

Macking, Nicholas, assignor of one-half to E. S. Wilcox, Wilkes-Barre, Pa. Portable telephone and testing instrument. No. 961,146; June 14; Sp. p. 1825; Gaz. vol. 155; p. 331.

Mackey, Edgar S., Milford, Tex. Tillage-rod. No. 962,035; June 21; Sp. p. 3736; Gaz. vol. 155; p. 656.

Maclaren, James G., Weehawken, assignor to Lamson Consolidated Store Service Company, Newark, N. J. Pneumatic-despatch-tube apparatus. No. 960,656; June 7; Sp. p. 850; Gaz. vol. 155; p. 140.

Maclaren, James G., Weehawken, assignor to Lamson Consolidated Store Service Company, Newark, N. J. Blower-unloading device. No. 961,364; June 14; Sp. p. 2313; Gaz. vol. 155; p. 409.

Macloskie, George, Schenectady, N. Y., assignor to General Electric Company, New York, N. Y. Electropneumatic air-brake system. No. 960,861; June 7; Sp. p. 257; Gaz. vol. 155; p. 43.

Macy, Henry E., Chapman township, Clay county, Kans. Wagon-box fastener. No. 962,231; June 21; Sp. p. 4171; Gaz. vol. 155; p. 724.

Maendler, Peter, St. Paul, Minn. Brush. No. 960,362; June 7; Sp. p. 259; Gaz. vol. 155; p. 43.

Mafera, Guy, Boston, Mass. Spring bed-bottom. No. 961,147; June 14; Sp. p. 1828; Gaz. vol. 155; p. 331.

Magee, Frank, et al. (See Moudy, Willard A., assignor.)

Magic Curler Company. (See Martin, James F., assignor.)

Mahan, Henry M., Clanton, Ala. Wagon-brake. No. 962,775; June 28; Sp. p. 5358; Gaz. vol. 155; p. 936.

Mahoney, Joseph N., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electropneumatically-operated controller. No. 962,713; June 28; Sp. p. 5234; Gaz. vol. 155; p. 914.

Maier, Louis H., assignor to J. H. Ludwig, New York, N. Y. Self-playing musical instrument. No. 961,724; June 14; Sp. p. 3046; Gaz. vol. 155; p. 528.

Maimone, John S. (See Woods and Maimone.)

Maitland, John, Swampscott, Mass. Holder for headwear and clothing. No. 961,626; June 14; Sp. p. 2866; Gaz. vol. 155; p. 495.

Majek, John W., Atwood, Kans. Breaking-plow. No. 962,646; June 28; Sp. p. 5088; Gaz. vol. 155; p. 890.

Malick, Henry, Belmont, W. Va. Cuspidor-cleaner. No. 962,370; June 21; Sp. p. 4466; Gaz. vol. 155; p. 770.

Malick, Henry, Belmont, W. Va., assignor, by mesne assignments, to Keystone Novelty Company, Beaver Falls, Pa. Ink-well. No. 962,068; June 28; Sp. p. 5712; Gaz. vol 155; p. 1001.

Mallory, Harry C., Chicago, Ill. Regulating heating devices. No. 963,007; June 28; Sp. p. 5794; Gaz. vol. 155; p. 1014.

Mallory, James L., Evanston, Ill. Fastening device for windows. No. 961,627; June 14; Sp. p. 2868; Gaz. vol. 155; p. 496.

Mandelbaum, Emanuel. (See Burke, John, assignor.)

Mander, John. (See Roberts and Mander.)

Manhattan Braid Company. (See Elseman, Jesse B., assignor.)

Mann, Henry N., Chicago, Ill. Merchandise-package. No. 961,873; June 21; Sp. p. 3406; Gaz. vol. 155; p. 602.

Mans, Albert, Dieghem, Belgium. Solid tire for vehicle-wheels. No. 962,444; June 28; Sp. p. 4653; Gaz. vol. 155; p. 821.

Manson, Ray H., assignor to The Dean Electric Company, Elyria, Ohio. Electrical condenser. No. 961,978; June 21; Sp. p. 3615; Gaz. vol. 155; p. 636.

Manthey, George, assignor of one-half to J. N. Waller, Seattle, Wash. Carpet-sweeper. No. 962,372; June 21; Sp. p. 4469; Gaz. vol. 155; p. 771.

Manufacturers' Sales Co., The. (See Elkins, Stephen F., assignor.)

Manwaring, Albert H. (See Bundy and Manwaring.)

Maranda, Albert H., Pittsburg, Pa. Drawing-board attachment. No. 962,776; June 28; Sp. p. 5360; Gaz. vol. 155; p. 936.

Marble, George W., assignor of one-half to W. R. Donaldson, Chicago, Ill. Filler or junk plate for the crank-cases of explosive-engines. No. 962,445; June 28; Sp. p. 4654; Gaz. vol. 155; p. 822.

Marble, Webster L., Gladstone, Mich. Folding stock for firearms. No. 961,511; June 14; Sp. p. 2621; Gaz. vol. 155; p. 457.

March, John, Dillon, Mont. Steam-pump. No. 962,906; June 28; Sp. p. 5605; Gaz. vol. 155; p. 982.

March, John, Dillon, Mont. Steam-engine. No. 962,907; June 28; Sp. p. 5607; Gaz. vol. 155; p. 982.

Marden, Chester G., Brooks, Me. Potato-cutter. No. 962,378; June 21; Sp. p. 4471; Gaz. vol. 155; p. 771.

Marinsky, Davis, assignor to W. Lowrie, New York, N. Y. Reinforcing and supporting device for flexible collars. No. 962,514; June 28; Sp. p. 4799; Gaz. vol. 155; p. 845.

Mark, Charlie E., Chicago, Ill. Suspended tent. No. 961,704; June 14; Sp. p. 3011; Gaz. vol. 155; p. 521.

Markham, Charles M., Chicago, Ill. Support for concrete forms. No. 960,657; June 7; Sp. p. 852; Gaz. vol. 155; p. 140.

Markle, Hyman E., Nashville, Tenn. Multiplex graphophone. No. 962,446; June 28; Sp. p. 4655; Gaz. vol. 155; p. 822.

Marks, Edward I. (See Van Court and Marks.)

Markwith, Daniel A., San Francisco, Cal. Detachable saw-handle. No. 961,246; June 14; Sp. p. 2039; Gaz. vol. 155; p. 368.

Marousek, Joseph F., Chicago, Ill. Indicator. No. 960,658; June 7; Sp. p. 855; Gaz. vol. 155; p. 141.

Marseille, Léon, Paris, and P. Gouin, Levallois-Perret, France. Electric accumulator. No. 960,567; June 7; Sp. p. 674; Gaz. vol. 155; p. 111.

Marsh, Orvil J., and W. F. Heiss, Alliance, Ohio. Show-case. No. 962,777; June 28; Sp. p. 5361; Gaz. vol. 155; p. 937.

Marsh, Wilbur W. (See Hackett and Morgan, assignors.)

Marshall, Charles P., Centralia, Ill. Paper-holder. No. 960,363; June 7; Sp. p. 259; Gaz. vol. 155; p. 44.

Marshall, James T., Leeds, England. Valve-gear for fluid-pressure engines. No. 962,374; June 21; Sp. p. 4472; Gaz. vol. 155; p. 771.

Marshall, John T. (See Evans and Marshall.)

Marshall, John T., et al. (See Ivers, John W., assignor.)

Marston, Thomas O., Claflin, Kans. Elevator-hood for harvester-headers. No. 962,232; June 21; Sp. p. 4171; Gaz. vol. 155; p. 724.

Martel, Achille, Fall River, Mass. Ash-sifter. No. 961,148; June 14; Sp. p. 1829; Gaz. vol. 155; p. 332.

Martell, Herbert C., Flint, Mich. Vehicle-top. No. 960,979; June 7; Sp. p. 1481; Gaz. vol. 155; p. 249.

Martin, James F., Philadelphia, Pa., assignor, by mesne assignments, to Magic Curler Company. Hair curler and waver. No. 961,725; June 14; Sp. p. 3052; Gaz. vol. 155; p. 520.

Martin, John B., and E. W. Katzer, Wallace, Idaho. Railway-tie. No. 962,908; June 28; Sp. p. 5610; Gaz. vol. 155; p. 982.

Martin, Johns B., and W. B. Milliner, Reidsville, N. C. Measurer. No. 961,628; June 14; Sp. p. 2871; Gaz. vol. 155; p. 496.

Martin, Max. (See Dahl and Martin.)

Martini, Carl, Berlin, Germany. Storing inflammable solutions. No. 962,036; June 21; Sp. p. 3733; Gaz. vol. 155; p. 656.

Martinson, Fred, Bingham Canyon, Utah. Folding chair. No. 960,659; June 7; Sp. p. 859; Gaz. vol. 155; p. 142.

Marts, George J., Chicago, Ill. Fountain-pen. No. 960,660; June 7; Sp. p. 861; Gaz. vol. 155; p. 142.

Marx, Arthur M., Frankfort-on-the-Main, Germany. Device for boarding leather. No. 962,157; June 21; Sp. p. 4032; Gaz. vol. 155; p. 699.

Maschinenfabrik Sürth G. m. b. H. (See Behrens, Ernst A., assignor.)

Mason, George N., assignor to Reading Hardware Company, Reading, Pa. Lock-stop protector. No. 961,979; June 21; Sp. p. 3617; Gaz. vol. 155; p. 637.

Mason, Sumner H., Worcester, Mass. Registering-indicator for barber-shops. No. 960,661; June 7; Sp. p. 862; Gaz. vol. 155; p. 142.

Mastin, James G., Chicago, Ill. Spraying-machine. No. 961,456; June 14; Sp. p. 2499; Gaz. vol. 155; p. 440.

Matheson, Richard T., assignor to W. E. Wolff, New York, N. Y. Coat-collar. No. 962,403; June 21; Sp. p. 4529; Gaz. vol. 155; p. 781.

Matt Stewart Company, The. (See Stewart, Matthew A., assignor.)

Mattes, Balthasar J. (See Hulkenberg and Mattes.)

Matthews, Edgar M., assignor of one-half to W. E. Rothermel, Chicago, Ill. Window-sash. No. 962,647; June 28; Sp. p. 5089; Gaz. vol. 155; p. 890.

Matthews, Lee C., San Francisco, Cal. Windmill. No. 961,705; June 14; Sp. p. 3015; Gaz. vol. 155; p. 522.

Matthews, Stephen C., St. John, New Brunswick, Canada. Device for melting and applying sealing-wax. No. 962,375; June 21; Sp. p. 4476; Gaz. vol. 155; p. 772.

Matthews, Walter S., Gulfport, Miss. Paper box and fastener. No. 961,784; June 21; Sp. p. 3188; Gaz. vol. 155; p. 572.

Mauderer, Henry. (See Hirschwitz and Mauderer.)

Maurice C. Clark Company. (See Clark, Maurice C., assignor.)

Maxfield, Charles E., assignor of two-fifths to E. F. Hammond, Cleveland, Ohio. Nipple and clamp for pipes. No. 961,247; June 14; Sp. p. 2040; Gaz. vol. 155; p. 368.

Mayhall, Charles R., Arroyo Grande, Cal. Apparatus for the propulsion of ships. No. 961,306; June 14; Sp. p. 2176; Gaz. vol. 155; p. 389.

Maynard, John F., assignor to The Draper & Mayhard Company, Plymouth, N. H. Punching-bag mitt. No. 961,149; June 14; Sp. p. 1830; Gaz. vol. 155; p. 332.

Maynard, Richard F., New York, N. Y. Artist's sketch-box. No. 961,629; June 14; Sp. p. 2872; Gaz. vol. 155; p. 496.

Mayo, Benjamin F., Salem, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-pressing machine. No. 960,980; June 7; Sp. p. 1482; Gaz. vol. 155; p. 249.

Mayoux, Barthelemy, and C. Verchère, Izieux, assignors to C. Corron, St. Chamond, France. Apparatus for charging dye-vats. No. 960,662; June 7; Sp. p. 864; Gaz. vol. 155; p. 142.

Mayr, Johann, Dressling, Post Seefeld, Germany. Double-sliding-sash window. No. 961,726; June 14; Sp. p. 3053; Gaz. vol. 155; p. 529.

McAloney, William H., Denver, assignor to The Automatic Signal Light Company, Colorado Springs, Colo. Means for illuminating car-steps. No. 961,887; June 21; Sp. p. 3433; Gaz. vol. 155; p. 607.

McCague, James J., et al. (See Stawartz, John J., assignor.)

McCall, Thomas A., and C. M. Siebert, Jr., assignors to The Siebert-Welch Company, Columbus, Ohio. Handle for massage apparatus. No. 961,365; June 14; Sp. p. 2315; Gaz. vol. 155; p. 409.

McCan, David C., Los Angeles, Cal. Fuel-press. No. 962,716; June 28; Sp. p. 5241; Gaz. vol. 155; p. 915.

McCanlon, Martin H. (See Phillips and McCanlon.)

McCarty, Alexander H. (See Gallaspy and McCarty.)

McClary Manufacturing Company. (See Ward, Albert, assignor.)

McClintock, Joel M., et al. (See Dawson, Artemas L., assignor.)

McComb, Samuel B., Zenith, Kans. Feeder for grain-bearing straw. No. 962,238; June 21; Sp. p. 4179; Gaz. vol. 155; p. 726.
McCool, William A., Beaver Falls, Pa., assignor to Acme-Keystone Mfg. Company. Blindstitch sewing-machine. No. 960,570; June 7; Sp. p. 681; Gaz. vol. 155; p. 112.
McConway, William, Pittsburg, Pa. Car-wheel. No. 962,456; June 28; Sp. p. 4977; Gaz. vol. 155; p. 826.
McCormack, William H., West Allis, Wis. Protecting pad or shield. No. 961,309; June 14; Sp. p. 2181; Gaz. vol. 155; p. 390.
McCormick, John, Northville, S. D. Grain-shocker. No. 962,656; June 28; Sp. p. 5110; Gaz. vol. 155; p. 893.
McCormick, John H., assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 960,376; June 7; Sp. p. 280; Gaz. vol. 155; p. 48.
McCreery Engineering Company. (See Luehrs, Daniel M., assignor.)
McCulloch, Robert H. (See Welch, William W., assignor.)
McDermott, Charles H. (See Roberts, Henry P., assignor.)
McDermott, Charles K. (See Wilson and McDermott.)
McDermott, John T., Baltimore, Md. Safety gas-cock. No. 962,378; June 21; Sp. p. 4479; Gaz. vol. 155; p. 773.
McDonald, Donald, Louisville, Ky. Combined counting, integrating, and tally device. No. 962,162; June 21; Sp. p. 4041; Gaz. vol. 155; p. 702.
McDonald, James J., *et al.* (See Auble, James H., assignor.)
McDonnell, Alexander R., Patten, Me. Snap-hook. No. 960,676; June 7; Sp. p. 892; Gaz. vol. 155; p. 148.
McDougall, Andrew H., assignor to Whiting Foundry Equipment Company, Harvey, Ill. Weighing mechanism for traveling cranes. No. 961,888; June 21; Sp. p. 3434; Gaz. vol. 155; p. 607.
McElroy, James F., Albany, N. Y., assignor to Consolidated Car Heating Company. Air-brake. No. 962,517; June 28; Sp. p. 4908; Gaz. vol. 155; p. 847.
McElroy, Patrick J., Cambridge, assignor to himself, and Randall-Faichney Company, Boston, Mass. Syringe. No. 962,657; June 28; Sp. p. 5117; Gaz. vol. 155; p. 894.
McFadden, Michael J., and C. C. Hiers, St. Paul, Minn. Nut-shaving machine. No. 962,239; June 21; Sp. p. 4183; Gaz. vol. 155; p. 727.
McFarland, Eldon J., Seattle, Wash. Puzzle. No. 962,039; June 21; Sp. p. 3746; Gaz. vol. 155; p. 657.
McFarlane, Hugh, Scotstoun, near Glasgow, Scotland, assignor to The Singer Manufacturing Company. Bobbin-winding device for sewing-machines. No. 961,154; June 14; Sp. p. 1841; Gaz. vol. 155; p. 334.
McGann, John A., Attleboro, Mass. Pin. No. 961,366; June 14; Sp. p. 2317; Gaz. vol. 155; p. 410.
McGann, Thomas F., Somerville, assignor to The T. F. McGann & Sons Company, Boston, Mass. Sash-bar. No. 960,677; June 7; Sp. p. 893; Gaz. vol. 155; p. 148.
McGinnis, Claude A., assignor to Dowman-Dozier Manufacturing Company, Atlanta, Ga. Glazing-bar. No. 961,728; June 14; Sp. p. 3054; Gaz. vol. 155; p. 529.
McGinnis, Claude A., assignor to Bowman-Dozier Manufacturing Company, Atlanta, Ga. Fireproof window-frame. No. 961,729; June 14; Sp. p. 3056; Gaz. vol. 155; p. 530.
McGinnis, Claude A., assignor to Dowman-Dozier Manufacturing Company, Atlanta, Ga. Metal window-sash. No. 961,730; June 14; Sp. p. 3058; Gaz. vol. 155; p. 530.
McGinnis, Claude A., assignor to Dowman-Dozier Manufacturing Company, Atlanta, Ga. Sheet-metal sash. No. 961,731; June 14; Sp. p. 3059; Gaz. vol. 155; p. 530.
McGivern, William J. (See Garratt and McGivern.)
McGrath, Redmond J., assignor of one-half to D. W. Murphy, Chicago, Ill. Combination shaft-hanger and belt-tightener. No. 960,571; June 7; Sp. p. 683; Gaz. vol. 155; p. 112.
McGregor, Alexander G. (See Crabtree and McGregor.)
McGuirk, Ambrose P., Davenport, Iowa. Stovepipe and thimble. No. 961,519; June 14; Sp. p. 2634; Gaz. vol. 155; p. 460.
McIntyre, William J., Hartford, Conn. Lathe-center. No. 960,678; June 7; Sp. p. 895; Gaz. vol. 155; p. 148.
McKibben, Frank S., Memphis, Nebr. Burner for liquid fuel. No. 962,457; June 28; Sp. p. 4879; Gaz. vol. 155; p. 826.
McKibben, Frank S., Memphis, Nebr. Construction of motive-fluid generators. No. 962,458; June 28; Sp. p. 4880; Gaz. vol. 155; p. 826.
McKiearnan, Charles A., Carthage, Mo. Transmission-gearing. No. 960,572; June 7; Sp. p. 684; Gaz. vol. 155; p. 112.
McKiearnan, Charles A., Carthage, Mo. Transmission-gear mechanism for motor-vehicles and the like. No. 960,573; June 7; Sp. p. 687; Gaz. vol. 155; p. 113.
McKinney, Claborn P., Skiatook, Okla. Cattle-guard for railways. No. 962,379; June 21; Sp. p. 4481; Gaz. vol. 155; p. 773.
McKnight, Thomas R. (See Hamper and McKnight.)
McLaughlin, William P., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 960,679; June 7; Sp. p. 896; Gaz. vol. 155; p. 149.
McLean, Andrew, Detroit, Mich. Insulation-joint. No. 960,377; June 7; Sp. p. 287; Gaz. vol. 155; p. 43.
McLeod, Charles M., assignor to J. V. Farwell Company, Chicago, Ill. Sample-holder. No. 962,658; June 28; Sp. p. 5118; Gaz. vol. 155; p. 894.
McLeod, William A., *et al.* (See Collins, Albert F., assignor.)
McLeod, William C. (See Brigham, Joseph W., assignor.)
McLeran, Alvord M., assignor of one-twelfth to J. H. Hughes, Kansas City, Mo. Grinding device. No. 960,378; June 7; Sp. p. 289; Gaz. vol. 155; p. 48.
McMahon, Eddie E., Denver, Colo. Surgical attachment for cots or beds. No. 962,380; June 21; Sp. p. 4483; Gaz. vol. 155; p. 774.
McMahon, William A., Philadelphia, Pa. Incubator-heater. No. 961,520; June 14; Sp. p. 2636; Gaz. vol. 155; p. 460.
McMartin, Hector C. (See Hewitt, Richard, assignor.)
McMichael, John L. (See Nice and McMichael.)
McMillan, Jairus B., North Vernon, Ind. Base for poles. No. 961,521; June 14; Sp. p. 2637; Gaz. vol. 155; p. 460.
McMillen, Dugald, *et al.* (See Jennings, Milo C., assignor.)
McNiel, Benjamin N. (See Ball, McNiel, and Pennington.)
McNutt, Oliver B., *et al.* (See Davis, William J., assignor.)
McPherson, George J., Salt Lake City, Utah, assignor to International Oil Gas Producer Company. Burner. No. 962,971; June 28; Sp. p. 5716; Gaz. vol. 155; p. 1002.
McPherson, William B., assignor of one-half to G. Borden, Los Angeles, Cal. Apparatus for electrical treatment of ores. No. 962,040; June 21; Sp. p. 3748; Gaz. vol. 155; p. 657.
McQuillan, Owen, and E. D. Chaitken, Philadelphia, Pa. Car-fender. No. 962,041; June 21; Sp. p. 3749; Gaz. vol. 155; p. 658.
McStay, James, and E. F. Stevens, Cygnet, Ohio. Clutch-pulley. No. 960,599; June 7; Sp. p. 732; Gaz. vol. 155; p. 121.
McWane, James R., Birmingham, Ala. Pipe-molding flask. No. 961,367; June 14; Sp. p. 2319; Gaz. vol. 155; p. 410.
McWane, Robert C., Ridgewood, N. J. Culvert-pipe. No. 960,379; June 7; Sp. p. 290; Gaz. vol. 155; p. 48.
Meckelburg, Eduard, Charlottenburg, assignor to Siemens-Schuckert-Werke G. M. B. H., Berlin, Germany. Towing apparatus. No. 960,663; June 7; Sp. p. 865; Gaz. vol. 155; p. 143.
Medcalf, William M., assignor of one-half to T. D. Snipes, May, Tex. Moldboard for cultivator-shovels. No. 962,509; June 28; Sp. p. 5611; Gaz. vol. 155; p. 983.
Meech, Alfred H., Chatham, N. Y. Safety device for elevators. No. 962,037; June 21; Sp. p. 3739; Gaz. vol. 155; p. 656.
Meek Company, The. (See Kristofek, Frank J., assignor.)
Meek, Don, Paonia, Colo. Wagon-brake. No. 961,248; June 14; Sp. p. 2041; Gaz. vol. 155; p. 368.
Meek, George E., New York, N. Y. Portable-reel gas-oven. No. 961,512; June 14; Sp. p. 2622; Gaz. vol. 155; p. 457.
Meeker Grip Nut Company. (See Meeker, Samuel G., assignor.)
Meeker, Samuel G., New York, N. Y., assignor to Meeker Grip Nut Company. Lock-nut. No. 961,249; June 14; Sp. p. 2042; Gaz. vol. 155; p. 368.
Meier, Albert J., Glendale, Mo., assignor to Unit Construction Company, Wilmington, Del. Concrete construction. No. 961,630; June 14; Sp. p. 2873; Gaz. vol. 155; p. 497.
Meier, Albert J., Glendale, Mo. Machine for and process of forming linings for storage-battery jars. No. 962,714; June 28; Sp. p. 5235; Gaz. vol. 155; p. 914.
Meilicke, Carl A., Hanley, Saskatchewan, Canada. Calculating-machine. No. 961,631; June 14; Sp. p. 2875; Gaz. vol. 155; p. 497.
Mellink, Charles F., assignor to The Mellink Manufacturing Company, Toledo, Ohio. Wall-safe. No. 960,981; June 7; Sp. p. 1485; Gaz. vol. 155; p. 250.
Mellink, Charles F., and W. H. Reynolds, assignors to The Mellink Manufacturing Company, Toledo, Ohio. Wall-safe. No. 960,982; June 7; Sp. p. 1486; Gaz. vol. 155; p. 250.
Mellink Manufacturing Company, The. (See Mellink, Charles F., assignor.)
Mellink Manufacturing Company, The. (See Mellink and Reynolds, assignors.)
Mellink Manufacturing Company, The. (See Reynolds, William H., assignor.)
Meinel, Frederick E. (See Servatius and Meinel.)
Mell, Tod J., assignor to The Republic Rubber Company, Youngstown, Ohio. Separable rim for vehicle-wheels. No. 960,983; June 7; Sp. p. 1488; Gaz. vol. 155; p. 250.
Mellin, Carl J., Schenectady, N. Y., assignor to American Locomotive Company, New York, N. Y. Feed-water-heating appliance. No. 960,364; June 7; Sp. p. 260; Gaz. vol. 155; p. 44.
Melville, Joseph H., New York, N. Y. Disinfectant-distributer. No. 960,984; June 7; Sp. p. 1489; Gaz. vol. 155; p. 250.
Mengis, Joseph I., Vicksburg, Miss. Adjustable journal-box for rock-shafts. No. 962,447; June 28; Sp. p. 4660; Gaz. vol. 155; p. 822.
Mentzer, John P., *et al.*, trustees. (See Davis, Charles L., assignor.)

Mensl, John B., Dayton, Ohio. Bake. No. 962,576; June 28; Sp. p. 4953; Gaz. vol. 155; p. 867.
Merchant, Isaac T., Adams, Nebr. Poultry-roost. No. 961,874; June 21; Sp. p. 3407; Gaz. vol. 155; p. 602.
Merck, Niels T. (See Littman and Lackie, assignors.)
Mergenthaler Linotype Company. (See Rogers, John R., assignor.)
Merkley, Stanley A., Buffalo, F. H. Apel, Athol Springs, and W. A. Merkley, Buffalo, N. Y. Hen's nest. No. 960,985; June 7; Sp. p. 1491; Gaz. vol. 155; p. 251.
Merkley, Wilburn A. (See Merkley, Apel, and Merkley.)
Mermod, Marc K., New York, N. Y. Fluid-distributing apparatus. No. 961,785; June 21; Sp. p. 3190; Gaz. vol. 155; p. 573.
Merrill, Carl E., Lowell, Mass. Device for polishing brass. No. 961,875; June 21; Sp. p. 3408; Gaz. vol. 155; p. 602.
Merriman, Grove R., and W. C. Stevens, Akron, Ohio, assignors to Pittsburg Spiral Wire Hoop Company, Pittsburg, Pa. Hoop-setting machine. No. 960,365; June 7; Sp. p. 262; Gaz. vol. 155; p. 44.
Merritt, Joseph, Hartford, Conn., assignor to Union Paper Bag Company, Philadelphia, Pa. Paper-bag machine. No. 960,684; June 7; Sp. p. 869; Gaz. vol. 155; p. 148.
Merwin, Horace W., Jr. (See Hunnewell, Frederick N., assignor.)
Messer, William F., Chicago, Ill. Phonogram-reproducing apparatus. No. 961,980; June 21; Sp. p. 3618; Gaz. vol. 155; p. 637.
Metal Plated Car & Lumber Company. (See Ingham, Charles R., assignor.)
Metropolitan Sewing Machine Company. (See Krug, Louis, assignor.)
Metropolitan Sewing Machine Company. (See Weis, John F., assignor.)
Metz, John J., and A. Mosley, St. Louis, Mo. Convertible car. No. 961,876; June 21; Sp. p. 3409; Gaz. vol. 155; p. 603.
Metzger, Joseph, Cambridge, Mass. Piano attachment for giving mandolin effects. No. 960,665; June 7; Sp. p. 874; Gaz. vol. 155; p. 144.
Meves, Gustav N., Davenport, Iowa. Operating mechanism for washing-machines. No. 961,877; June 21; Sp. p. 3412; Gaz. vol. 155; p. 603.
Meves, Gustav N., Davenport, Iowa. Operating mechanism for washing-machines. No. 961,878; June 21; Sp. p. 3417; Gaz. vol. 155; p. 604.
Meves, Gustav N., Davenport, Iowa. Operating mechanism for washing-machines. No. 961,879; June 21; Sp. p. 3421; Gaz. vol. 155; p. 604.
Meves, Gustav N., Davenport, Iowa. Operating mechanism for washing-machines. No. 962,158; June 21; Sp. p. 4034; Gaz. vol. 155; p. 700.
Meyer, Gustave M. (See Stocker, Fred, assignor.)
Michaud, Georges, and E. Delasson Montreuil, Seine, France. Apparatus for the continuous manufacture of filaments. No. 962,910; June 28; Sp. p. 5612; Gaz. vol. 155; p. 983.
Middeldorf, Robert, Solingen, Germany. Case for safety-razors. No. 961,727; June 14; Sp. p. 3054; Gaz. vol. 155; p. 529.
Midgley, Thomas, Columbus, Ohio, assignor to The Hartford Rubber Works Company. Wheel-tire. No. 962,778; June 28; Sp. p. 5363; Gaz. vol. 155; p. 937.
Midland Chemical Company, The. (See Quayle, William O., assignor.)
Miffonis, Louis F. H. de, Aylmer, Quebec, Canada. Reinforced-concrete tower. No. 960,666; June 7; Sp. p. 876; Gaz. vol. 155; p. 144.
Miles, Samuel C., Sandy, Oreg. Raker gage and jointer. No. 962,969; June 28; Sp. p. 5713; Gaz. vol. 155; p. 1002.
Millar, Preston S. (See Sharp and Millar.)
Millard, Leo F., Whitewater, Wis. Hydrocarbon-gas burner. No. 960,866; June 7; Sp. p. 265; Gaz. vol. 155; p. 45.
Miller, Albert F., Kansas City, Kans. Pipe or rod connector. No. 961,981; June 21; Sp. p. 3621; Gaz. vol. 155; p. 637.
Miller, Albert F., Kansas City, Kans. Pipe or rod connector. No. 961,982; June 21; Sp. p. 3623; Gaz. vol. 155; p. 638.
Miller, Benjamin F., Dixon, Ill. Feed-trough. No. 960,367; June 7; Sp. p. 266; Gaz. vol. 155; p. 45.
Miller, Cosby D., St. Joseph, Mo. Automatic shut-off system for gas and liquids. No. 962,648; June 28; Sp. p. 5002; Gaz. vol. 155; p. 890.
Miller, Ezra J. D., Barlow, N. D. Draft-equaliser. No. 961,513; June 14; Sp. p. 2624; Gaz. vol. 155; p. 458.
Miller, Frank J., Cleveland, Ohio. Valve-controlling mechanism for internal-combustion engines. No. 962,159; June 21; Sp. p. 4036; Gaz. vol. 155; p. 701.
Miller, Frank J., Cleveland, Ohio. Compression-release for internal-combustion engines. No. 962,160; June 21; Sp. p. 4038; Gaz. vol. 155; p. 701.
Miller, Franklin, Onaga, Kans. Door-holder. No. 962,376; June 21; Sp. p. 4477; Gaz. vol. 155; p. 772.
Miller, Franklin C., Easton, Pa. Automobile-controller lever-lock. No. 962,448; June 28; Sp. p. 4663; Gaz. vol. 155; p. 823.
Miller, Gustaf E., Stratton, Nebr. Wrench. No. 961,682; June 14; Sp. p. 2879; Gaz. vol. 155; p. 495.
Miller, Harry A., Los Angeles, Cal. Carbureter. No. 962,649; June 28; Sp. p. 5005; Gaz. vol. 155; p. 891.
Miller, Harry M., Champaign, Ill. Door-securer. No. 961,880; June 21; Sp. p. 3424; Gaz. vol. 155; p. 605.
Miller, Henry L., St. Louis, Mo. Trolley-wheel guard. No. 961,786; June 21; Sp. p. 3193; Gaz. vol. 155; p. 573.
Miller, Herman G., Foxlake, Wis. Tank-heater cover. No. 962,440; June 28; Sp. p. 4666; Gaz. vol. 155; p. 823.
Miller, Joshua T. (See Stephens, Francis, assignor.)
Miller, Lawrence, Pittsburg, Pa. Pipe-coupling. No. 960,667; June 7; Sp. p. 878; Gaz. vol. 155; p. 145.
Miller, Lewis J., assignor to Lewis J. Miller Company, Bergen, N. Y. Can-capping machine. No. 962,038; June 21; Sp. p. 3742; Gaz. vol. 155; p. 656.
Miller, William J., assignor, by mesne assignments, to The Kelly Motor Truck Company, Springfield, Ohio. Air-cooled engine. No. 962,233; June 21; Sp. p. 4173; Gaz. vol. 155; p. 725.
Milliner, Wallace B. (See Martin and Milliner.)
Mills, Frederick A., New York, N. Y. Pressing device. No. 961,150; June 14; Sp. p. 1831; Gaz. vol. 155; p. 332.
Mills, Jessie A., executrix. (See St. John, Charles P.)
Milwaukee Separator Company, The. (See Hartmann, Frederick W. and W. C., assignors.)
Milwaukee Separator Company, The. (See Hartmann, William C., assignor.)
Minerallac Electric Company. (See Kinney, Frank F., assignor.)
Minnick, William F., assignor to The Harris Automatic Press Company, Niles, Ohio. Gage for feed-tables. No. 961,457; June 14; Sp. p. 2501; Gaz. vol. 155; p. 440.
Miseland, Joseph A., Bayonne, N. J. Suspension for train-lighting dynamos. No. 960,368; June 7; Sp. p. 268; Gaz. vol. 155; p. 45.
Mitchell, Harry R., North Yakima, Wash. Bench-hook. No. 960,369; June 7; Sp. p. 269; Gaz. vol. 155; p. 46.
Mitchell, Jacob, Detroit, assignor to Mitchell Shoe-Lining Company, Royal Oak, Mich. Combination shoe quarter-lining, pull-strap, and extension double backstay. No. 962,650; June 28; Sp. p. 5097; Gaz. vol. 155; p. 891.
Mitchell Shoe-Lining Company. (See Mitchell, Jacob, assignor.)
Mitchell, William, Fairmount, N. D. Four-horse equalizer. No. 962,234; June 21; Sp. p. 4174; Gaz. vol. 155; p. 725.
Mitchell, William N., Chicago, Ill., assignor to The International Text Book Company, Scranton, Pa. Speed indicator and recorder. No. 960,568; June 7; Sp. p. 675; Gaz. vol. 155; p. 111.
Mobius, R. M. (See Beyerle, Frank C., assignor.)
Mobius, Robert M., assignor to F. K. De Borde, San Diego, Cal. Sea power-generator. No. 962,651; June 28; Sp. p. 5098; Gaz. vol. 155; p. 892.
Moderwell, Robert. (See Savage, William W., assignor.)
Moffett, Thomas S., Spokane, Wash. Clevis. No. 961,881; June 21; Sp. p. 3425; Gaz. vol. 155; p. 605.
Mohr, Adolph. (See Belts, John H., assignor.)
Mojana, Guido, Milan, Italy. Treating sinkiferous substances. No. 961,514; June 14; Sp. p. 2625; Gaz. vol. 155; p. 458.
Molander, Oscar, Gilbert, Minn. Dynamite-heater. No. 960,370; June 7; Sp. p. 271; Gaz. vol. 155; p. 46.
Monahan, William, Duluth, Minn. Mop-wringer. No. 960,371; June 7; Sp. p. 272; Gaz. vol. 155; p. 46.
Monarch Metal Weather Strip Company. (See Hooppaw, Oscar W., assignor.)
Monarch Typewriter Company. (See Brand, George B., assignor.)
Monarch Typewriter Company, The. (See De Prins and Riga, assignors.)
Monarch Typewriter Company, The. (See Seib, George A., assignor.)
Monarch Typewriter Company, The. (See Sholes, Frank L., assignor.)
Monarch Typewriter Company, The. (See Steele, Herbert H., assignor.)
Moneuse, Elie J. (See Tottingham, Fred M., assignor.)
Monnot, John F., assignor to Duplex Metals Company, New York, N. Y. Compound metal object. No. 960,372; June 7; Sp. p. 274; Gaz. vol. 155; p. 47.
Montgomery, Robert A., Indiana, Pa. Wrench. No. 961,515; June 14; Sp. p. 2628; Gaz. vol. 155; p. 458.
Montgomery, Samuel, Stockton, Cal. Flying-machine. No. 962,652; June 28; Sp. p. 5099; Gaz. vol. 155; p. 892.
Moody, Augustus F. (See Brown, Herman G., assignor.)
Moon, Oscar C., Pittsburg, Pa. Automatic alarm and gas-pressure cut-off device. No. 960,569; June 7; Sp. p. 677; Gaz. vol. 155; p. 111.
Mooney, Thomas A., *et al.* (See Pickering, Abel W., assignor.)
Mooney, John D., St. Paul, Minn. Shaft-reversing mechanism. No. 962,450; June 28; Sp. p. 4668; Gaz. vol. 155; p. 824.
Moore, Clarence S. and J. W., Lexington, Ky. Device for mixing air and gas. No. 961,787; June 21; Sp. p. 3194; Gaz. vol. 155; p. 573.
Moore, Daniel M., Newark, N. J., assignor to Moore Electrical Company, New York, N. Y. Mechanical joint for vacuum-tubes. No. 961,151; June 14; Sp. p. 1835; Gaz. vol. 155; p. 333.
Moore, David P., assignor of one-half to S. B. Pack, Washington, D. C. Portable hand-operated suction-cleaner. No. 963,008; June 28; Sp. p. 5797; Gaz. vol. 155; p. 1015.
Moore, Delmer H., assignor to Moore Plow and Implement Company, Greenville, Mich. Liquid-cooling device. No. 963,009; June 28; Sp. p. 5800; Gaz. vol. 155; p. 1015.
Moore, Edward J., Cleveland, Ohio, assignor to S. F. Bowser & Company, Inc., Fort Wayne, Ind. Air-controlled feed system for liquids. No. 960,986; June 7; Sp. p. 1496; Gaz. vol. 155; p. 251.

Moore Electrical Company. (See Moore, Daniel M., assignor.)

Moore, George D., Worcester, Mass. Wheel and tire therefor. No. 961,882; June 21; Sp. p. 3426; Gaz. vol. 155; p. 605.

Moore-Irvine, George M. L., Newry, Ireland. Steam-generator. No. 961,516; June 14; Sp. p. 2629; Gaz. vol. 155; p. 459.

Moore, John W. (See Moore, Clarence S. and J. W.)

Moore, Joseph W., Newton Highlands, assignor to The J. W. Moore Machine Company, Boston, Mass. Machine for printing on rubber footwear. No. 962,515; June 28; Sp. p. 4801; Gaz. vol. 155; p. 846.

Moore, Montague, Melbourne, and T. J. Heskett, Brunswick, Victoria, Australia. Metallurgical process. No. 960,987; June 7; Sp. p. 1497; Gaz. vol. 155; p. 251.

Moore, Montague, Melbourne, and T. J. Heskett, Brunswick, Victoria, Australia. Metallurgical apparatus. No. 960,988; June 7; Sp. p. 1499; Gaz. vol. 155; p. 252.

Moore Plow and Implement Company. (See Moore, Delmer H., assignor.)

Moore, Reuben H., Jeffersonville, Ind. Pneumatic spindle. No. 961,307; June 14; Sp. p. 2177; Gaz. vol. 155; p. 389.

Moore, Samuel T., Lima, Mont. Grinding apparatus. No. 961,633; June 14; Sp. p. 2880; Gaz. vol. 155; p. 498.

Moore, Walter B., Seattle, Wash. Magnetic separator. No. 960,668; June 7; Sp. p. 879; Gaz. vol. 155; p. 145.

Moorhead, Samuel C., Cleveland, Ohio. Universal joint. No. 961,634; June 14; Sp. p. 2882; Gaz. vol. 155; p. 498.

Moran, Daniel E., Mendham, N. J. Sinking shafts or the like. No. 961,788; June 21; Sp. p. 3197; Gaz. vol. 155; p. 574.

Morange, Edward, *et al.* (See Hanlon, George W., assignor.)

Morgan, Frederick J., Maidenhead, England. Flushing-tank. No. 961,458; June 14; Sp. p. 2502; Gaz. vol. 155; p. 440.

Morgan, George H., Belleville, Kans. Signaling device. No. 960,669; June 7; Sp. p. 881; Gaz. vol. 155; p. 145.

Morgan, Thomas W. (See Hackett and Morgan.)

Morrill, Vaughan, Tacoma, Wash. Starting apparatus for gasolene-engines. No. 962,653; June 28; Sp. p. 5103; Gaz. vol. 155; p. 892.

Morris, Carrie C., Philadelphia, Pa. Collar-supporter. No. 960,989; June 7; Sp. p. 1502; Gaz. vol. 155; p. 252.

Morris, Homer, Los Angeles, assignor of one-half to H. B. Gage, Ocean Park, Cal. Automatic liquid-measuring device. No. 962,911; June 28; Sp. p. 5614; Gaz. vol. 155; p. 983.

Morris, John O., Washington, D. C. Tobacco-stemming machine. No. 961,635; June 14; Sp. p. 2884; Gaz. vol. 155; p. 499.

Morris, John O., Washington, D. C., assignor, by mesne assignments, to National Tobacco Stemming Machine Company, Baltimore, Md. Stemming tobacco-leaves. No. 961,746; June 14; Sp. p. 3108; Gaz. vol. 155; p. 536.

Morris, Pinkney L., Grand Ridge, Fla. Stringed musical instrument. No. 961,883; June 21; Sp. p. 3428; Gaz. vol. 155; p. 606.

Morris, Samuel L. H., *et al.* (See Cleaver, Fremont J., Sr., assignor.)

Morrison, Andrew, Pittsburg, Pa. Railway-tie plate. No. 961,517; June 14; Sp. p. 2630; Gaz. vol. 155; p. 459.

Morriss, Garnett E., and H. F. Beard, Mounds, Okla.; said Morriss assignor to said Beard. Band-cutter and feeder. No. 962,235; June 21; Sp. p. 4175; Gaz. vol. 155; p. 725.

Morse, Anell B., North Freedom, Wis. Door-supporting clamp. No. 961,983; June 21; Sp. p. 3625; Gaz. vol. 155; p. 638.

Morse, William W., Newark, N. J. Internal-combustion engine. No. 961,152; June 14; Sp. p. 1837; Gaz. vol. 155; p. 333.

Morton, George E., Chicago, Ill., assignor of one-half to E. W. Finck, St. Paul, Minn. Manifolding order-slip. No. 962,451; June 28; Sp. p. 4670; Gaz. vol. 155; p. 824.

Moser, Frank W. (See Rearwin, Wilber D., assignor.)

Mosler, Moses, New York, N. Y. Attachment for combination-dials on safes, vaults, &c. No. 961,884; June 21; Sp. p. 3429; Gaz. vol. 155; p. 606.

Mosley, Arthur. (See Metz and Mosley.)

Mossberg, Frank, Attleboro, Mass., assignor to Frank Mossberg Company. Reel. No. 962,452; June 28; Sp. p. 4670; Gaz. vol. 155; p. 824.

Mossberg, Frank, Attleboro, Mass., assignor to Frank Mossberg Company. Reel. No. 962,453; June 28; Sp. p. 4671; Gaz. vol. 155; p. 824.

Mossberg, Frank, Attleboro, Mass., assignor to Frank Mossberg Company. Reel. No. 962,654; June 28; Sp. p. 5105; Gaz. vol. 155; p. 893.

Mossberg, Frank, Attleboro, Mass., assignor to Frank Mossberg Company. Braider-spool. No. 962,715; June 28; Sp. p. 5240; Gaz. vol. 155; p. 915.

Motor Car Co. (See Carter, Byron J., assignor.)

Motsinger, Newell H., Greensburg, Pa. Rotary engine. No. 960,990; June 7; Sp. p. 1503; Gaz. vol. 155; p. 254.

Motsinger, Newell H., Greensburg, Pa. Rotary engine. No. 960,991; June 7; Sp. p. 1510; Gaz. vol. 155; p. 253.

Motsinger, Newell H., Greensburg, Pa. Rotary engine. No. 960,992; June 7; Sp. p. 1514; Gaz. vol. 155; p. 253.

Motsinger, Newell H., Greensburg, Pa. Rotary engine. No. 960,993; June 7; Sp. p. 1517; Gaz. vol. 155; p. 254.

Motsinger, Newell H., Greensburg, Pa. Rotary engine. No. 960,994; June 7; Sp. p. 1521; Gaz. vol. 155; p. 254.

Mots, Jacob F., Pittsburg, Pa., assignor to The Electric Controller and Supply Company, Cleveland, Ohio. Lifting-magnet controller. No. 960,995; June 7; Sp. p. 1526; Gaz. vol. 155; p. 255.

Moudy, Willard A., assignor of one-third to W. Thorn, and one-third to F. Magee, Port Huron, Mich. Receptacle. No. 960,996; June 7; Sp. p. 1528; Gaz. vol. 155; p. 255.

Mount, Charles. (See Leidecker, Frank W., assignor.)

Mowcomber, Thomas, Elkland, Pa. Burner attachment. No. 962,161; June 21; Sp. p. 4040; Gaz. vol. 155; p. 702.

Moyer, Abraham, Moyers, Okla. Wagon-bed hoist. No. 960,670; June 7; Sp. p. 883; Gaz. vol. 155; p. 146.

Moyer, Oscar E., Elgin, Ill. Penholder. No. 960,373; June 7; Sp. p. 277; Gaz. vol. 155; p. 47.

Muchka, Josef, Vienna, Austria-Hungary. Separator. No. 960,374; June 7; Sp. p. 278; Gaz. vol. 155; p. 47.

Muchka, Josef, Vienna, Austria-Hungary. Testing device. No. 961,419; June 14; Sp. p. 2414; Gaz. vol. 155; p. 426.

Mudd, William S., Bloomfield, Iowa. Hip-strap supporter. No. 960,375; June 7; Sp. p. 280; Gaz. vol. 155; p. 47.

Mueller, Henry and P., assignors to The H. Mueller Manufacturing Company, Decatur, Ill. Combined waste and overflow. No. 962,577; June 28; Sp. p. 4954; Gaz. vol. 155; p. 868.

Mueller, Philip. (See Mueller, Henry and P.)

Mueller, Philip, assignor to The H. Mueller Manufacturing Company, Decatur, Ill. Compression stop and waste. No. 962,516; June 28; Sp. p. 4804; Gaz. vol. 155; p. 846.

Mueller, Reinhold, Stuttgart, Germany. Fur-beating machine. No. 962,236; June 21; Sp. p. 4177; Gaz. vol. 155; p. 726.

Mugdan, Martin, and W. Herrmann, assignors to Consortium für Elektrochemische Industrie, Gesellschaft mit beschränkter Haftung, Nuremberg, Germany. Making indoxyl, &c. No. 960,671; June 7; Sp. p. 884; Gaz. vol. 155; p. 146.

Müller, Adelbert O., Presho, S. D. Fire-escape. No. 961,518; June 14; Sp. p. 2632; Gaz. vol. 155; p. 459.

Munoz, Signono C., Montclair, N. J., assignor to The Babcock & Wilcox Company, New York, N. Y. Water-tube boiler. No. 962,454; June 28; Sp. p. 4672; Gaz. vol. 155; p. 825.

Murphy, Arthur L., Sr., Independence, Mo. Loose-leaf book. No. 960,672; June 7; Sp. p. 885; Gaz. vol. 155; p. 146.

Murphy, Arthur L., Sr., Independence, Mo. Loose-leaf book. No. 960,673; June 7; Sp. p. 886; Gaz. vol. 155; p. 146.

Murphy, Arthur L., Sr., Independence, Mo. Loose-leaf binder. No. 960,674; June 7; Sp. p. 888; Gaz. vol. 155; p. 147.

Murphy, Daniel H., New Castle, Pa. Apparatus for electroplating pipes, &c. No. 962,655; June 28; Sp. p. 5106; Gaz. vol. 155; p. 893.

Murphy, Daniel W. (See McGrath, Redmond J., assignor.)

Murphy, Edward E., Winchester, Mass., assignor to Puffer Manufacturing Company. Dispensing-faucet. No. 960,675; June 7; Sp. p. 890; Gaz. vol. 155; p. 147.

Murphy, James A. (See Amick, Henry J., assignor.)

Murphy, James J., assignor to Eagle Lock Co., Terryville, Conn. Roll-top-desk lock. No. 962,377; June 21; Sp. p. 4478; Gaz. vol. 155; p. 772.

Murphy, John L., Covington, Va. Type-writer attachment. No. 960,997; June 7; Sp. p. 1529; Gaz. vol. 155; p. 256.

Murphy, Walter P., St. Louis, Mo. Uncoupling-lever. No. 962,012; June 28; Sp. p. 5615; Gaz. vol. 155; p. 983.

Murray, Frederick S. (See Fulgora and Murray.)

Murray, George W., Chicago, Ill. Hoisting mechanism. No. 962,779; June 28; Sp. p. 5364; Gaz. vol. 155; p. 937.

Murray, Thomas E., New York, N. Y. Electric cut-out. No. 961,308; June 14; Sp. p. 2180; Gaz. vol. 155; p. 390.

Murray, Thomas E., New York, N. Y. Service cut-out and metering apparatus. No. 962,455; June 28; Sp. p. 4674; Gaz. vol. 155; p. 825.

Murray, Walter. (See Fulgora and Murray.)

Murry, William, Auburn, Me. Artificial bait. No. 962,237; June 21; Sp. p. 4179; Gaz. vol. 155; p. 726.

Musselman, Pearl, Billings, Mont. Bath-tub. No. 962,070; June 28; Sp. p. 5715; Gaz. vol. 155; p. 1002.

Musser, Charles K. (See Brinser, Eli H. G., assignor.)

Mussey, William H., Richmond Hill, N. Y. Tube for dissolving soda-ash. No. 961,780; June 21; Sp. p. 3190; Gaz. vol. 155; p. 574.

Myers, Charles S., Columbia, Pa. Tire-pump. No. 961,153; June 14; Sp. p. 1840; Gaz. vol. 155; p. 333.

Myers, Henry R., New York, N. Y. Container for bottles or receptacles. No. 961,885; June 21; Sp. p. 3431; Gaz. vol. 155; p. 606.

Myers, James H., Troy, N. Y. Coffee-percolator. No. 961,886; June 21; Sp. p. 3432; Gaz. vol. 155; p. 606.

N. O. Nelson Manufacturing Company. (See Bonroe, Theodore, assignor.)

Nagle, Peter J., Rochester, N. Y. Egg-carrier. No. 961,889; June 21; Sp. p. 3436; Gaz. vol. 155; p. 607.

Nahm, Harry, St. Louis, Mo. Billiard-cue powderer. No. 960,574; June 7; Sp. p. 600; Gaz. vol. 155; p. 113.

Nall, James N., Hornbeck, La. Automatic churn. No. 960,680; June 7; Sp. p. 897; Gaz. vol. 155; p. 149.

National Blank Book Company. (See Layton, Thomas E., assignor.)

National Carbonated Liquid Co. (See Kennedy, Guy L., assignor.)

National Cash Register Company, The. (See Lundgren, Charles A., assignor.)

National Cash Register Company, The. (See McCormick, John H., assignor.)

National Electric Signaling Company, The. (See Fessenden, Reginald A., assignor.)

National Electric Works. (See Sohm, Alfred L., assignor.)

National Malleable Castings Company, The. (See Tower, Clinton A., assignor.)

National Safety Snap Company, The. (See Simpson, Robert D., assignor.)

National Tobacco Stemming Machine Company. (See Morris, John O., assignor.)

National Tube Company. (See Bierman and Keast, assignors.)

National Tube Company. (See Heggie, David, assignor.)

National Waterproof Film Company. (See Thompson, Fredrick B., assignor.)

Naughtin, James E., Chicago, Ill. Pump. No. 962,518; June 28; Sp. p. 4815; Gaz. vol. 155; p. 847.

Neal, Joseph H., Baltimore, Md. Bath-tub. No. 962,240; June 21; Sp. p. 4184; Gaz. vol. 155; p. 727.

Neal, Spencer G. (See Sheasby and Neal.)

Neal, Spencer G., and J. M. Childress, Los Angeles, assignors to The California Valve and Air Brake Company, Palms, Cal. Means for operating railway-brakes. No. 961,310; June 14; Sp. p. 2182; Gaz. vol. 155; p. 391.

Neal, Thomas C. (See Smith, Benjamin W., assignor.)

Neale, Herbert S. (See Robinson and Neale.)

Neblett, Charles, Bellevue, Ky. Boiler-brace. No. 961,522; June 14; Sp. p. 2639; Gaz. vol. 155; p. 461.

Neelmeier, Wilhelm. (See Jansen and Neelmeier.)

Neff, William A., assignor to The Electric Railway Improvement Company, Cleveland, Ohio. Electrode for welding, &c. No. 960,681; June 7; Sp. p. 890; Gaz. vol. 155; p. 149.

Neff, William A., assignor to The Electric Railway Improvement Company, Cleveland, Ohio. Apparatus for bonding rails. No. 961,984; June 21; Sp. p. 3626; Gaz. vol. 155; p. 638.

Negley, Frank, Alameda, Cal. Pump. No. 960,575; June 7; Sp. p. 602; Gaz. vol. 155; p. 114.

Nelson, Carl J., North Milwaukee, Wis. Disk seeder. No. 960,576; June 7; Sp. p. 603; Gaz. vol. 155; p. 114.

Nelson, Charles J. (See Young, William T., assignor.)

Nelson, Knute, Chicago, Ill. Molding-machine. No. 960,380; June 7; Sp. p. 292; Gaz. vol. 155; p. 49.

Nelson, Oscar G., Alliance, Ohio. Child's adjustable chair. No. 961,311; June 14; Sp. p. 2198; Gaz. vol. 155; p. 391.

Nelson, Sven T., Chicago, Ill. Lawn-mower. No. 962,780; June 28; Sp. p. 5367; Gaz. vol. 155; p. 938.

Neostyle Envelope Company. (See Greenberg, Jacob, assignor.)

Néple, Joseph, Lyon, France. Electric-lamp support. No. 960,998; June 7; Sp. p. 1532; Gaz. vol. 155; p. 256.

Netahla, Benjamin, Jr., Milligan, Nebr. Rail-straightener. No. 960,682; June 7; Sp. p. 901; Gaz. vol. 155; p. 149.

Neuenschwander, Adam, Berne, Ind. Door-latch. No. 960,381; June 7; Sp. p. 294; Gaz. vol. 155; p. 49.

Neve, William, assignor of one-half to F. W. Brodegaard, Omaha, Nebr. Tobacco-pipe. No. 961,790; June 21; Sp. p. 3199; Gaz. vol. 155; p. 574.

New Britain Machine Company, The. (See Brown, Robert S., assignor.)

New Departure Manufacturing Company, The. (See MacGuyer, Woodford R., assignor.)

New Departure Manufacturing Company, The. (See Rockwell, Albert F., assignor.)

New Haven Upholstering Co., The. (See Ward, Orlo P., assignor.)

New Jersey Patent Company. (See Aylsworth, Jonas W., assignor.)

New Jersey Patent Company. (See Durand and Seeley, assignors.)

New Jersey Patent Company. (See Edison, Thomas A., assignor.)

New Jersey Patent Company. (See Weber, Peter, assignor.) (Reissue.)

New York Adding Typewriter Company. (See Hart, Frederick A., assignor.)

New York Air Brake Company. (See Bickel, Henry F., assignor.)

New York Air Brake Company. (See Bingley, John W., assignor.)

New York Flatiron Company, The. (See Shaffer, Frederick R., assignor.)

Newbold, Roger M., Chicago, Ill., assignor to The Adams & Westlake Company. System for the generation and distribution of electric currents. No. 960,683; June 7; Sp. p. 903; Gaz. vol. 155; p. 150.

Newcomer, B. H. (See Scott, Jasper, assignor.)

Newhall, Walter S., assignor to The Cleveland Railway Supply Company, Cleveland, Ohio. Rail-brace. No. 961,636; June 14; Sp. p. 2886; Gaz. vol. 155; p. 499.

Newton, Emma M., New Brighton, N. Y. Stocking. No. 962,089; June 21; Sp. p. 3861; Gaz. vol. 155; p. 676.

Newton, John V., Los Angeles, Cal. Spool-holder. No. 961,637; June 14; Sp. p. 2889; Gaz. vol. 155; p. 499.

Newton, Ralph E., Milwaukee, Wis. Reinforcement for concrete structures. No. 960,382; June 7; Sp. p. 295; Gaz. vol. 155; p. 49.

Nice, Budd G., Ogontz, and J. L. McMichael, Philadelphia, Pa. Manufacturing bottoms or lids for boxes. No. 962,851; June 28; Sp. p. 5503; Gaz. vol. 155; p. 963.

Nichol, Edward. (See Bradley and Nichol.)

Nichol, Thomas L. (See Bradley and Nichol.)

Nicholas, William, New York, N. Y., assignor to United States Graphotype Company. Making matrix-plates for monotype-machines. No. 960,684; June 7; Sp. p. 905; Gaz. vol. 155; p. 150.

Nicholas, William H. (See Wilson, Alonzo T., assignor.)

Nicholls, William T., Wellsburg, W. Va. Apparatus for manufacturing tiles. No. 962,519; June 28; Sp. p. 4819; Gaz. vol. 155; p. 848.

Nichols, Frank L., assignor to Nichols Quadruple-Traction Vehicle and Power Company, Stamford, Conn. Governor. No. 962,163; June 21; Sp. p. 4044; Gaz. vol. 155; p. 702.

Nichols, Harvey, Jackson, Mich. Seed-extracting machine. No. 960,577; June 7; Sp. p. 603; Gaz. vol. 155; p. 114.

Nichols, Henry B., Philadelphia, Pa. Grinding and surfacing. No. 961,523; June 14; Sp. p. 2639; Gaz. vol. 155; p. 461.

Nichols Quadruple-Traction Vehicle and Power Company. (See Nichols, Frank L., assignor.)

Nicholson, John F., Somerset, Pa. Nut-lock. No. 960,999; June 7; Sp. p. 1533; Gaz. vol. 155; p. 256.

Nickerson, Hugh N., and W. J. Cousins, Pontiac, Mich. Film-mending device. No. 962,381; June 21; Sp. p. 4484; Gaz. vol. 155; p. 774.

Nickum, Emma, Philadelphia, Pa. Fly-paper holder. No. 961,890; June 21; Sp. p. 3436; Gaz. vol. 155; p. 608.

Nickum, George S., Los Angeles, Cal. Keyhole-lock. No. 961,250; June 14; Sp. p. 2044; Gaz. vol. 155; p. 360.

Nielsen, Marinus, San Francisco, Cal. Fire-cracker holder. No. 962,972; June 28; Sp. p. 5718; Gaz. vol. 155; p. 1002.

Nielsen, Waldemar F., Junction City, Oreg. Cultivator. No. 962,520; June 28; Sp. p. 4820; Gaz. vol. 155; p. 848.

Niemeyer, William H. (See Godman and Niemeyer.)

Nihill, Peter C., San Francisco, Cal. Table. No. 962,650; June 28; Sp. p. 5110; Gaz. vol. 155; p. 894.

Niklis, Joe. (See Taylor, Robert T., assignor.)

Niland, Andrew. (See Schuller and Niland.)

Niles-Bement-Pond Company. (See Andrew, Cecil D., assignor.)

Niles-Bement-Pond Company. (See Wood, Augustus, assignor.)

Noack, Gerhard, assignor to The Firm of M. Schlesinger, Berlin, Germany. Flat toy figure. No. 962,578; June 28; Sp. p. 4956; Gaz. vol. 155; p. 868.

Noeggerath, Jakob E., Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine. No. 960,383; June 7; Sp. p. 297; Gaz. vol. 155; p. 50.

Nolan, James L. (See Rowell and Nolan.)

Nolen, James G., Chicago, Ill., assignor, by mesne assignments, to Automatic Fire Protection Company. Valve. No. 962,660; June 28; Sp. p. 5121; Gaz. vol. 155; p. 895.

Nolen, James G., and J. Shepherd; said Nolen assignor to J. E. Shepherd, Chicago, Ill. Resilient connection device for relatively movable parts. No. 961,312; June 14; Sp. p. 2200; Gaz. vol. 155; p. 391.

Nolte, Christian F., New York, N. Y. Ash-sifter. No. 962,661; June 28; Sp. p. 5122; Gaz. vol. 155; p. 895.

Norddeutsche Affinerie. (See Wohlwill, Heinrich, assignor.)

Nordlinger, Isaac B. (See Heupel and Nordlinger.)

Noris Manufacturing Company. (See Ziron, Paul, assignor.)

Norlund, Olof A., Williamsport, Pa. Creeper. No. 962,042; June 21; Sp. p. 3751; Gaz. vol. 155; p. 658.

Norman, Frederick L., assignor of one-half to H. Bealmear, Baltimore, Md. Envelop. No. 960,384; June 7; Sp. p. 298; Gaz. vol. 155; p. 50.

Norris, Almon E., Cambridge, Mass. Apparatus for delivering materials. No. 961,732; June 14; Sp. p. 3060; Gaz. vol. 155; p. 531.

Norris, George B., Columbus, Ohio, assignor to The Jeffrey Manufacturing Company. Wheeled truck. No. 960,686; June 7; Sp. p. 909; Gaz. vol. 155; p. 151.

Northwestern Knitting Co. (See Chatfield, Franklin, assignor.)

Norton Company. (See Saunders, Lewis E., assignor.)

Norton, Fred E., Youngstown, Ohio. Gas-engine cylinder. No. 960,385; June 7; Sp. p. 299; Gaz. vol. 155; p. 50.

Noyes, La Verne W., Chicago, Ill. Chain shield for pneumatic tires. No. 961,791; June 21; Sp. p. 3200; Gaz. vol. 155; p. 574.

Numerograph Manufacturing Co. (See Dudley, George W., assignor.)

O'Brien, Vincent J., assignor of one-third to R. C. Awkerman and one-third to T. Punshon, Jr., Denver, Colo. Valve for hammer-drills. No. 962,717; June 28; Sp. p. 5244; Gaz. vol. 155; p. 915.

O'Malley, Ira J., Chicago, Ill. Water-heater. No. 960,387; June 7; Sp. p. 304; Gaz. vol. 155; p. 51.

O'Neil, John F. (See Furney, Elliott E., assignor.)

O'Neill, Edward E., Sheffield, Ala. Molding-machine. No. 961,524; June 14; Sp. p. 2643; Gaz. vol. 155; p. 461.

O'Toole, Edward. (See Buffum, Evenson, and O'Toole.)

Oakes, George W., assignor of one-fifth to J. W. Thomas, Alva, Okla. Apparatus for hoisting tubing. No. 961,420; June 14; Sp. p. 2415; Gaz. vol. 155; p. 427.

Obermann, August W., Johnstown, Pa. Cleansing apparatus for metallic ware. No. 961,792; June 21; Sp. p. 3202; Gaz. vol. 155; p. 575.
Obert, Casin W., New York, N. Y. Locking-bolt. No. 960,388; June 7; Sp. p. 302; Gaz. vol. 155; p. 51.
Oddie, Philip F., London, England. Air-pump for use with condensers and the like. No. 961,000; June 7; Sp. p. 1534; Gaz. vol. 155; p. 257.
Ofenbau-Gesellschaft mit beschränkter Haftung. (See Riecke, Paul, assignor.)
Ogden, Edward, administrator. (See Ogden, Fredric D.)
Ogden, Fredric D., deceased, Bayonne, N. J.; E. Ogden, administrator. Door and means for operating the same. No. 962,404; June 21; Sp. p. 4531; Gaz. vol. 155; p. 782.
Ogg, E. C., administrator. (See White, Virgil A.)
Ohio Varnish Company, The. (See Clapp, Ford M., assignor.)
Oil Refining Improvements Company, The. (See Hood and Salamon, assignors.)
Oldenbusch, Ernest, New York, N. Y. Combined match-box holder and cigar-cutter. No. 961,001; June 7; Sp. p. 1536; Gaz. vol. 155; p. 257.
Oldham, David J. T., New York, N. Y. Dust-collector. No. 960,686; June 7; Sp. p. 912; Gaz. vol. 155; p. 151.
Oling, John J., Harvey, Ill. Extension car-step. No. 961,002; June 7; Sp. p. 1537; Gaz. vol. 155; p. 257.
Oliphant, Jacob T., and O. Ring; said Ring assignor to C. A. Lloyd, Farmersburg, Ind. Tedder attachment for harvesters. No. 962,662; June 28; Sp. p. 5124; Gaz. vol. 155; p. 895.
Olsen, Albert B., Stearns, Mont. Draft-equalizer. No. 960,687; June 7; Sp. p. 914; Gaz. vol. 155; p. 152.
Olson, Adna. (See Edwards and Olson.)
Olson, Arvid J., Kloten, N. D. Cleaning attachment for harrows. No. 962,579; June 28; Sp. p. 4958; Gaz. vol. 155; p. 868.
Olson, Freeman M., assignor to Commercial Motor Car and Engine Co., Chicago, Ill. Driving mechanism for motor-vehicles. No. 960,688; June 7; Sp. p. 915; Gaz. vol. 155; p. 152.
Onderdonk, Lansing, New York, N. Y., assignor to Union Special Sewing Machine Co., Chicago, Ill. Hemstitch sewing-machine. No. 962,973; June 28; Sp. p. 5718; Gaz. vol. 155; p. 1003.
Onderdonk, Lansing, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Sewing-machine. No. 962,974; June 28; Sp. p. 5723; Gaz. vol. 155; p. 1003.
Opitz, Frank E., Longbeach, assignor to B. Brown and E. H. Sparling, Los Angeles, Cal. Lawn-sprinkler. No. 961,251; June 14; Sp. p. 2045; Gaz. vol. 155; p. 369.
Oppenheimer, James, Omaha, Nebr. Comb-cleaner. No. 961,252; June 14; Sp. p. 2047; Gaz. vol. 155; p. 369.
Orelli, Agostino J., Longbeach, Cal. Rechargeable electric fuse. No. 961,891; June 21; Sp. p. 3437; Gaz. vol. 155; p. 606.
Osborn, Lemon L., Portland, Oreg. Hydraulic water-motor. No. 962,382; June 21; Sp. p. 4486; Gaz. vol. 155; p. 774.
Osborne, William S., Hyde Park, Mass., assignor, by mesne assignments, to American Desiccating Company. Desiccating fluid substances. No. 962,781; June 28; Sp. p. 5370; Gaz. vol. 155; p. 938.
Osgood, Frank H. (See Rasche, Heinrich, assignor.)
Oshkosh Grass Matting Company. (See Perrigo, Orville L., assignor.)
Oswell, George G., Atkinson, Minn. Stovepipe-fastener. No. 961,985; June 21; Sp. p. 3635; Gaz. vol. 155; p. 639.
Otis Elevator Company. (See Scott, Campbell, assignor.)
Otis Elevator Company. (See Sundh, August, assignor.)
Ott, René, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Dyeing and product thereof. No. 961,368; June 14; Sp. p. 2322; Gaz. vol. 155; p. 410.
Oucsek, Josef. (See Rochotsch, Reinhold, assignor.)
Owen, Charles L., Avalon, assignor of fifty-one one-hundredths to W. H. Shinn, Carnegie, and twenty-four and one-half one-hundredths to C. H. Cochran, Avalon, Pa. Journal-box. No. 961,793; June 21; Sp. p. 3205; Gaz. vol. 155; p. 575.
Owen, David T., Cleveland, assignor to The D. T. Owen Company, East Cleveland, Ohio. Combined couch and bed. No. 962,580; June 28; Sp. p. 4960; Gaz. vol. 155; p. 869.
Owens, Ira L., Effingham, Kans. Hydrocarbon-burner. No. 963,010; June 28; Sp. p. 5801; Gaz. vol. 155; p. 1016.
Owens, William H., et al. (See Sykes, William W., assignor.)
Owosso Manufacturing Company. (See Beehler, William, assignor.)
Oxenham, William H. (See Dutton, Burton M., assignor.)
P. & F. Corbin. (See Arens, August, assignor.)
P. & F. Corbin. (See Arens and Teich, assignors.)
P. & F. Corbin. (See Henry, William K., assignor.)
P. H. & F. M. Roots Company. (See Hicks, George C., Jr., assignor.)
Pack, Samuel B. (See Moore, David P., assignor.)
Packard Motor Car Company. (See Huff, Russell, assignor.)
Paddison, Alice E., Salt Lake City, Utah. Window-screen. No. 960,388; June 7; Sp. p. 308; Gaz. vol. 155; p. 52.
Padernacht, Anna. (See Padernacht, William, assignor.)
Padernacht, William, assignor to A. Padernacht, New York, N. Y. Maternity-skirt. No. 960,689; June 7; Sp. p. 920; Gaz. vol. 155; p. 152.
Padrick, Benjamin F., Portland, Oreg. Saw-clamp. No. 960,389; June 7; Sp. p. 310; Gaz. vol. 155; p. 52.
Pagan, Oliver E., Washington, D. C. Shaving-soap receptacle. No. 962,091; June 21; Sp. p. 3863; Gaz. vol. 155; p. 676.
Page, Ernest V. (See Lemon, Don M., assignor.)
Pageisen, Edward N., Detroit, Mich. Starting device for explosion-engines. No. 960,690; June 7; Sp. p. 923; Gaz. vol. 155; p. 153.
Paige, Frederick G. W., Oakland, Cal. Piano-panel protector. No. 962,043; June 21; Sp. p. 3754; Gaz. vol. 155; p. 658.
Painton, Richard B., Williamsport, Pa. Steam and air pipe coupling for cars. No. 961,638; June 14; Sp. p. 2891; Gaz. vol. 155; p. 500.
Paisley, Carlton A., Winfield, Iowa. Lifting-jack. No. 961,986; June 21; Sp. p. 3636; Gaz. vol. 155; p. 639.
Palmenberg, Emil T., New York, N. Y. Garment-form. No. 961,003; June 7; Sp. p. 1539; Gaz. vol. 155; p. 258.
Palmer, Granville E., Boston, Mass. System of electrical distribution. No. 961,313; June 14; Sp. p. 2202; Gaz. vol. 155; p. 391.
Palmer, Harry E., Dayton, Ohio. Railway-ticket punch. No. 962,913; June 28; Sp. p. 5616; Gaz. vol. 155; p. 984.
Palmer, Isaac E., assignor to The I. E. Palmer Co., Middletown, Conn. Seating for couch-hammocks or other structures. No. 961,004; June 7; Sp. p. 1540; Gaz. vol. 155; p. 258.
Palmer, Isaac E., Middletown, Conn. Yarn or thread guide for spinning or twisting machines. No. 961,421; June 14; Sp. p. 2416; Gaz. vol. 155; p. 427.
Palmer, Isaac E., assignor to The I. E. Palmer Company, Middletown, Conn. Baby-hammock. No. 962,092; June 21; Sp. p. 3866; Gaz. vol. 155; p. 676.
Palmer, Isaac E., assignor to The I. E. Palmer Co., Middletown, Conn. Hammock-support. No. 962,521; June 28; Sp. p. 4822; Gaz. vol. 155; p. 848.
Palmer, John M., assignor to Universal Tool Company, Chicago, Ill. Lathe-dog. No. 961,155; June 14; Sp. p. 1844; Gaz. vol. 155; p. 334.
Panner, Louis, Canandaigua, N. Y. Wrench. No. 960,691; June 7; Sp. p. 925; Gaz. vol. 155; p. 153.
Papyrus Artificial Paper Manufacturing Co., The. (See Funke, Anton and J., assignors.)
Paquette, Severin N., Lowell, assignor to Draper Company, Hopedale, Mass. Filling feeder or magazine for automatic looms. No. 962,581; June 28; Sp. p. 4963; Gaz. vol. 155; p. 869.
Paramount Knitting Company. (See Pope and Rogginger, assignors.)
Parish & Bingham Company. (See Blackman, Charles W., assignor.)
Parker, C. L. (See Robbins, Ira, assignor.)
Parker-Clark Electric Company. (See Clark, Walter G., assignor.)
Parker, George H., Newark, N. J., assignor to J. W. Baker, Stamford, Conn. Bulletin-board. No. 962,164; June 21; Sp. p. 4046; Gaz. vol. 155; p. 703.
Parker, James W., and F. L. Hurtt, Peoria, Ill.; said Hurtt assignor to said Parker. Apparatus for raising temperature of water. No. 962,405; June 21; Sp. p. 4534; Gaz. vol. 155; p. 782.
Parker, William H., North Birmingham, Ala. Combined nest and brooder. No. 962,459; June 28; Sp. p. 4685; Gaz. vol. 155; p. 827.
Parkinson, Benoni, East Greenwich, R. I. Feeding device for tentering-machines. No. 961,526; June 14; Sp. p. 2057; Gaz. vol. 155; p. 462.
Parks, Edward F., and S. W. Wardwell, Providence, R. I. Carrier for braiding-machines. No. 962,522; June 28; Sp. p. 4824; Gaz. vol. 155; p. 848.
Parnell, Elizabeth B., Carshalton, England. Treating ores. No. 962,383; June 21; Sp. p. 4488; Gaz. vol. 155; p. 775.
Parsons, Charles A., and A. W. Bowerbank, Newcastle-upon-Tyne, England; said Bowerbank assignor to said Parsons. Controlling-valve for motors. No. 962,044; June 21; Sp. p. 3756; Gaz. vol. 155; p. 659.
Pastors, George, Connellsville, Pa. Non-spilling cuspidor. No. 962,852; June 28; Sp. p. 5504; Gaz. vol. 155; p. 963.
Pastre, John P., Steubenville, Ohio. Car-wheel. No. 961,639; June 14; Sp. p. 2892; Gaz. vol. 155; p. 500.
Patitz, Johann F. M., assignor to Allis-Chalmers Company, Milwaukee, Wis. Low-pressure steam-turbine. No. 961,086; June 7; Sp. p. 1715; Gaz. vol. 155; p. 285.
Patitz, Johann F. M., assignor to Allis-Chalmers Company, Milwaukee, Wis. Reaction-turbine. No. 961,087; June 7; Sp. p. 1716; Gaz. vol. 155; p. 285.
Patterson, John, Kenton, Ohio. Temporary binder. No. 962,460; June 28; Sp. p. 4687; Gaz. vol. 155; p. 827.
Patterson, William L., assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Projection apparatus. No. 961,253; June 14; Sp. p. 2043; Gaz. vol. 155; p. 369.
Pattison, Stuart. (See Carrick, James T., assignor.)
Patton, John B. (See Tucker, Benjamin W., assignor.)
Paulson, Peter, Marshfield, Wis. Governing mechanism for explosive-engines. No. 961,156; June 14; Sp. p. 1845; Gaz. vol. 155; p. 335.
Payne, Willard T., Tacoma, Wash. Nut-lock. No. 962,582; June 28; Sp. p. 4964; Gaz. vol. 155; p. 869.

Peacock, William, Chicago, Ill. Machine for making horse-shoes. No. 960,390; June 7; Sp. p. 314; Gaz. vol. 155; p. 52.
Pearsall, Albert W., Lowell, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Carrier for pneumatic-despatch tubes. No. 962,045; June 21; Sp. p. 3759; Gaz. vol. 155; p. 659.
Pearsall, Albert W., Lowell, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Pneumatic-despatch-tube apparatus. No. 962,853; June 28; Sp. p. 5506; Gaz. vol. 155; p. 963.
Pearsall, Albert W., Lowell, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Pneumatic-despatch-tube apparatus. No. 962,854; June 28; Sp. p. 5508; Gaz. vol. 155; p. 964.
Pease, Charles, Salem, Mass., assignor to United-Xpedite Finishing Company, Berwick, Me. Bottom-finishing machine. No. 960,391; June 7; Sp. p. 316; Gaz. vol. 155; p. 53.
Peck, Edward M., deceased; N. E. Peck, executrix, New York, N. Y. Puzzle. No. 961,802; June 21; Sp. p. 3439; Gaz. vol. 155; p. 608.
Peck, Frank H., Galveston, Tex. Telephone-transmitter disinfector. No. 961,369; June 14; Sp. p. 2323; Gaz. vol. 155; p. 410.
Peck, Nellie E., executrix. (See Peck, Edward M.)
Peckham, Albert E., Grand Rapids, assignor, by mesne assignments, to Krentler-Arnold Hinge Last Company, Detroit, Mich. Locking hinged last. No. 960,578; June 7; Sp. p. 696; Gaz. vol. 155; p. 115.
Pedersen, Christian, Skörring Pr. Galten, Jutland, Denmark, assignor to Landis Machine Company, St. Louis, Mo. Awl-feed for sewing-machines. No. 960,692; June 7; Sp. p. 927; Gaz. vol. 155; p. 153.
Pedersen, Christian, Skörring pr. Galten, Denmark, assignor to Landis Machine Company, St. Louis, Mo. Tension device for sewing-machines. No. 961,893; June 21; Sp. p. 3440; Gaz. vol. 155; p. 608.
Peerless Electric Company, The. (See Lipps, Evrah C., assignor.)
Peirce, Hiram H., Indianapolis, Ind. Horseshoe. No. 962,165; June 21; Sp. p. 4050; Gaz. vol. 155; p. 703.
Peirce, John R., assignor to Royden Marble Machinery Company, New York, N. Y. Stone-saw. No. 962,663; June 28; Sp. p. 5125; Gaz. vol. 155; p. 896.
Peloubet, Alexander H., Newark, N. J. Resilient wheel. No. 962,975; June 28; Sp. p. 5732; Gaz. vol. 155; p. 1004.
Pember, John H., Columbus, Ohio. Micrometer attachment for machinists' calipers. No. 962,583; June 28; Sp. p. 4965; Gaz. vol. 155; p. 869.
Penberthy Injector Company. (See Sweeney, Peter J., assignor.)
Pence, Warren, C. R. Wolf, and V. O. Jarvis, Los Angeles, Cal. Folding extensible horse. No. 962,976; June 28; Sp. p. 5734; Gaz. vol. 155; p. 1004.
Pendarvis, Fredrick A., Villisca, Iowa. Cultivator-shovel. No. 961,640; June 14; Sp. p. 2893; Gaz. vol. 155; p. 500.
Penfield, Raymond C., New York, N. Y. Handling brick and delivering the same for use or storage. No. 961,314; June 14; Sp. p. 2206; Gaz. vol. 155; p. 392.
Penfield, Raymond C., New York, N. Y. Machine for handling bricks. No. 962,584; June 28; Sp. p. 4966; Gaz. vol. 155; p. 870.
Penney, Harold D., assignor to American Couch Company, New York, N. Y. Caster-holder. No. 962,461; June 28; Sp. p. 4689; Gaz. vol. 155; p. 828.
Pennington, Harry. (See Ball, McNiel, and Pennington.)
Pennington, John S., New Washington, Ohio. Photographer's stand. No. 961,641; June 14; Sp. p. 2895; Gaz. vol. 155; p. 501.
Penovi, Alfred, and H. A. Breene, Port Chester, N. Y. Washboard. No. 962,046; June 21; Sp. p. 3760; Gaz. vol. 155; p. 660.
Perkins, Charles E., San Francisco, Cal. Display-hanger for curtains and the like. No. 962,855; June 28; Sp. p. 5510; Gaz. vol. 155; p. 964.
Perkins Electric Switch Mfg. Company, The. (See Seeley, Frank E., assignor.)
Perkins, Hiram A., assignor to American Wood Working Machinery Co., Rochester, N. Y. Belt-tightener. No. 961,005; June 7; Sp. p. 1542; Gaz. vol. 155; p. 258.
Perkins, Louis J., Lewiston, Idaho. Pneumatic vehicle-gear. No. 960,579; June 7; Sp. p. 698; Gaz. vol. 155; p. 115.
Perl, Albert H. F., London, England. Projection apparatus. No. 962,664; June 28; Sp. p. 5127; Gaz. vol. 155; p. 896.
Perlee, Ralph N., Long Island City, N. Y. Rosin-purifying apparatus. No. 961,254; June 14; Sp. p. 2054; Gaz. vol. 155; p. 370.
Perrigo, Edwin B., Sioux City, Iowa, assignor to Armour & Company, Chicago, Ill. Animal-jaw puller. No. 962,782; June 28; Sp. p. 5373; Gaz. vol. 155; p. 930.
Perrigo, Orville L., assignor of one-half to Oshkosh Grass Matting Company, Oshkosh, Wis. Harvester. No. 960,392; June 7; Sp. p. 321; Gaz. vol. 155; p. 53.
Perrine, John B., Valparaiso, Ind., assignor, by mesne assignments, to Workman Manufacturing Company, Chicago, Ill. Self-indexing book. No. 960,693; June 7; Sp. p. 928; Gaz. vol. 155; p. 154.
Perry, Charles H., Miami, Fla., assignor of one-half to G. D. Ash, Lansing, Mich. Spraying-nozzle. No. 961,006; June 7; Sp. p. 1544; Gaz. vol. 155; p. 258.
Perry, George E. (See Perry, Henry S., assignor.)
Perry, Henry S., assignor of one-half to G. E. Perry, Plattsmouth, Nebr. Fence-post. No. 962,523; June 28; Sp. p. 4828; Gaz. vol. 155; p. 849.
Perry, James A., Bidwell, Iowa. Telephone attachment. No. 961,157; June 14; Sp. p. 1847; Gaz. vol. 155; p. 335.
Perry, John E., assignor to Perry Pipe Company, Chicago, Ill. Tobacco-pipe. No. 961,255; June 14; Sp. p. 2056; Gaz. vol. 155; p. 370.
Perry Pipe Company. (See Perry, John E., assignor.)
Petecsola, George, Oakview, Colo. Spike. No. 960,694; June 7; Sp. p. 931; Gaz. vol. 155; p. 154.
Peters, Francis T., assignor of one-half to D. T. Whitesell, Terre Haute, Ind. Adjustable ladder-bracket. No. 960,580; June 7; Sp. p. 699; Gaz. vol. 155; p. 115.
Peters, Robert H., Buffalo, N. Y. Wrench. No. 961,804; June 21; Sp. p. 3441; Gaz. vol. 155; p. 609.
Peters, Ulrich A., Pittsburg, Pa. Sprinkler. No. 960,393; June 7; Sp. p. 323; Gaz. vol. 155; p. 53.
Peters, William, Congress, Ariz. Wire-cutter. No. 961,794; June 21; Sp. p. 3207; Gaz. vol. 155; p. 576.
Petersen, Herluf A. F., assignor to J. H. W. Petersen, Chicago, Ill. Removing scale from pipe. No. 962,462; June 28; Sp. p. 4694; Gaz. vol. 155; p. 828.
Petersen, J. H. W. (See Petersen, Herluf A. F., assignor.)
Peterson, Carl O., Jamestown, N. Y. Planer-knife sharpener. No. 962,047; June 21; Sp. p. 3762; Gaz. vol. 155; p. 660.
Peterson, Hans, Mora, Minn. Potato-grader. No. 962,048; June 21; Sp. p. 3764; Gaz. vol. 155; p. 660.
Peterson, Victor, Downers Grove, Ill. Making multicolor prints. No. 962,718; June 28; Sp. p. 5240; Gaz. vol. 155; p. 916.
Petro, John A., Lorain, Ohio. Faucet. No. 960,695; June 7; Sp. p. 932; Gaz. vol. 155; p. 154.
Peugeot, Armand, T. Huber, and H. de Lostalot, Billancourt, France. Two-stroke cycle-motor. No. 961,315; June 14; Sp. p. 2212; Gaz. vol. 155; p. 392.
Pfeifer, Willis, Simpson, Kans. Automatic lubricator. No. 960,696; June 7; Sp. p. 933; Gaz. vol. 155; p. 155.
Pfeil, Grace, Chicago, Ill. Stove-board. No. 962,093; June 21; Sp. p. 3868; Gaz. vol. 155; p. 677.
Pfeil, Grace, Chicago, Ill. Stove-board. No. 962,093; June 21; Sp. p. 3868; Gaz. vol. 155; p. 677.
Phelps, James C., Springfield, Mass. Plunger-packing for elevators. No. 962,585; June 28; Sp. p. 4970; Gaz. vol. 155; p. 870.
Philadelphia Electrical & Manufacturing Co. (See Bundy and Manwaring, assignors.)
Philadelphia Pipe Bending Company, The. (See Harden, George M., assignor.)
Philadelphia Textile Machinery Company. (See Schreuder, Andrew M., assignor.)
Phillips, Lee, Ceioron, N. Y. Building-block. No. 962,463; June 28; Sp. p. 4695; Gaz. vol. 155; p. 828.
Phillips, Orlando F., and M. H. McCanlon, Butlerville, Ind. Road drag and grader. No. 961,007; June 7; Sp. p. 1547; Gaz. vol. 155; p. 259.
Phoenix, Stephen P., Islip, N. Y. Roof-bracket. No. 961,642; June 14; Sp. p. 2896; Gaz. vol. 155; p. 501.
Pichon, Louis A., Paris, and C. M. V. Allenou, Ville d'Avray, France. Collar-stud or similar fastening. No. 960,581; June 7; Sp. p. 701; Gaz. vol. 155; p. 115.
Pichon, Paul F. (See Schloemilch and Pichon.)
Pickering, Abel W., assignor of one-sixth to A. A. Russell, one-sixth to T. A. Moon, and one-sixth to W. R. Haughawout, Joplin, Mo. Wind-motor. No. 960,394; June 7; Sp. p. 325; Gaz. vol. 155; p. 54.
Pickering, Edward, Pasadena, Cal., assignor to Goss Printing Press Co., Chicago, Ill. Printing-press. No. 961,256; June 14; Sp. p. 2057; Gaz. vol. 155; p. 370.
Pierce, Alfred J., Conshohocken, Pa. Strip-cutter. No. 961,643; June 14; Sp. p. 2897; Gaz. vol. 155; p. 501.
Pierce, Edwin F., Milwaukee, Wis. Shade-holder coupling. No. 962,524; June 28; Sp. p. 4828; Gaz. vol. 155; p. 849.
Pierce, Stephen D., Ocean City, N. J. House mail-receptacle. No. 961,527; June 14; Sp. p. 2059; Gaz. vol. 155; p. 462.
Pierpont, Frank H., Horley, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Automatic drilling-machine. No. 962,464; June 28; Sp. p. 4697; Gaz. vol. 155; p. 828.
Pierson, Robert M., Bronxville, N. Y., assignor to C. F. Brown, trustee, Reading, Mass. Signal for motor-vehicles. No. 961,158; June 14; Sp. p. 1848; Gaz. vol. 155; p. 335.
Pike Adding Machine Company. (See Gardner, Clyde E. W., assignor.)
Pilcher, Herbert H., Mullins, Tenn. Compound steam-engine. No. 961,795; June 21; Sp. p. 3208; Gaz. vol. 155; p. 576.
Pilling, Charles J., Philadelphia, Pa. Caponizing instrument. No. 962,586; June 28; Sp. p. 4972; Gaz. vol. 155; p. 870.
Pinkard, J. D., et al. (See Pochyla and King, assignors.)
Pinkley, Charles F., Wadsworth, Ohio. Scaffold-bracket. No. 961,422; June 14; Sp. p. 2418; Gaz. vol. 155; p. 427.
Pioneer Engineering Syndicate Limited. (See Sgal and Schwanda, assignors.)
Piper, James C., Indianapolis, Ind. Arc-lamp. No. 961,733; June 14; Sp. p. 3071; Gaz. vol. 155; p. 532.

Piper, William T., North Andover, Mass., Steam-boiler gage. No. 961,008; June 7; Sp. p. 1548; Gaz. vol. 155; p. 259.
Pittenger, Orlo S., Crab Orchard, Nebr. Trace-carrier. No. 961,009; June 7; Sp. p. 1552; Gaz. vol. 155; p. 260.
Pittsburg Spiral Wire Hoop Company. (See Merriman and Stevens, assignors.)
Pittsburg Water Heater Company. (See Frampton, Reynolds C., assignor.)
Place, Frederick E., Chicago, and M. L. Jenkins, Harvey, assignors to Buda Foundry & Manufacturing Company, Chicago, Ill. Rail-drilling machine. No. 962,014; June 28; Sp. p. 5618; Gaz. vol. 155; p. 984.
Plank, David H., and A. C. Finney, Schenectady, N. Y., assignors to General Electric Company. Starting device for electric motors. No. 962,856; June 28; Sp. p. 5511; Gaz. vol. 155; p. 965.
Plein, Louis, Chicago, Ill. Carbureter. No. 960,697; June 7; Sp. p. 935; Gaz. vol. 155; p. 155.
Plimpton, Harry C., assignor to Single Service Package Corporation of America, New York, N. Y. Container for incandescent mantles. No. 962,384; June 21; Sp. p. 4491; Gaz. vol. 155; p. 778.
Plogmann, William, Davenport, Iowa. End-gate for wagons. No. 962,385; June 21; Sp. p. 4492; Gaz. vol. 155; p. 778.
Plough, Moses. (See Stricklin, Walter L., assignor.)
Plumbing Specialty Company, The. (See Kenly, George T., assignor.)
Plutte, Frederick. (See Headland and Plutte.)
Pochyla, Adolph A., Bartlett, and H. A. King, West, Tex., assignors of one-third to J. D. Pinkard and R. F. Cates, Bartlett, Tex. Vehicle-spring. No. 960,395; June 7; Sp. p. 327; Gaz. vol. 155; p. 54.
Pocicak, Martin J. (See Kucsyński, Jochan, assignor.)
Poindexter, John W., assignor to Kentucky Hemp Brake Co., Cynthiana, Ky. Breaking and scutching machine. No. 962,783; June 28; Sp. p. 5375; Gaz. vol. 155; p. 939.
Poitras, Pierre J., and W. Caron, Rumford, Me. Grinding-machine. No. 961,010; June 7; Sp. p. 1553; Gaz. vol. 155; p. 260.
Pollock, Charles G. (See Turner and Pollock.)
Ponarouse, George, San Francisco, assignor, by mesne assignments, to C. F. Degner, Los Angeles, Cal. Rotary locking collar-button. No. 960,696; June 7; Sp. p. 936; Gaz. vol. 155; p. 155.
Pope, Frank, and J. Roggінger, Kankakee; said Roggінger assignor to Paramount Knitting Company, Chicago, Ill. Hosiery-drying frame. No. 961,644; June 14; Sp. p. 2900; Gaz. vol. 155; p. 502.
Poppenhusen, Herman A., Evanston, Ill. Furnace-grate. No. 961,528; June 14; Sp. p. 2660; Gaz. vol. 155; p. 463.
Porter, Arza, *et al.* (See Hales, William E., assignor.)
Porter, William E., and O. B. Thomas, Bisbee, Ariz.; said Porter assignor to said Thomas. Faucet. No. 961,011; June 7; Sp. p. 1554; Gaz. vol. 155; p. 260.
Portland Realty & Trust Company. (See Locke, William S., assignor.)
Posey, James A., Waxahachie, Tex. Nut-lock. No. 961,371; June 14; Sp. p. 2329; Gaz. vol. 155; p. 411.
Posner, Charles H., New York, N. Y. Garment-form. No. 962,015; June 28; Sp. p. 5620; Gaz. vol. 155; p. 984.
Potter, Washington M., Freedom, Pa. Pipe-wrench. No. 960,699; June 7; Sp. p. 937; Gaz. vol. 155; p. 156.
Poulsen, Valdemar, Copenhagen, Denmark. Receiver for wireless transmission of signals. No. 961,645; June 14; Sp. p. 2903; Gaz. vol. 155; p. 502.
Powers, Clarence E., Baltimore, Md., assignor to Schroeder Headlight Company, Evansville, Ind. Headlight-burner. No. 961,012; June 7; Sp. p. 1556; Gaz. vol. 155; p. 260.
Powers, Donald J., New York, N. Y. Automatically-regulated heating system. No. 961,734; June 14; Sp. p. 3072; Gaz. vol. 155; p. 532.
Powers, Timothy B., New York, N. Y., assignor, by mesne assignments, to The Telelectric Company, Pittsfield, Mass. Controlling mechanism for self-playing musical instruments and music-rolls therefor. (Reissue.) No. 13,124; June 28; Sp. p. 5836; Gaz. vol. 155; p. 1021.
Prahl, Frederick A., New York, N. Y., assignor to Babcock Box Company. Knockdown bilge-barrel and constructing same. No. 961,159; June 14; Sp. p. 1850; Gaz. vol. 155; p. 335.
Prahl, Frederick A., New York, N. Y., assignor to Babcock Box Company. Knockdown bilge-barrel. No. 961,160; June 14; Sp. p. 1854; Gaz. vol. 155; p. 336.
Prahl, Frederick A., New York, N. Y., assignor to Babcock Box Company. Knockdown bilge-barrel. No. 961,161; June 14; Sp. p. 1857; Gaz. vol. 155; p. 336.
Pratt, Philip W., Boston, Mass. Crutch-tip. No. 960,700; June 7; Sp. p. 938; Gaz. vol. 155; p. 156.
Pratt, Philip W., Boston, Mass. Wear-resisting and non-slipping tread. No. 962,719; June 28; Sp. p. 5251; Gaz. vol. 155; p. 916.
Prescott, Arthur T., East Orange, N. J., assignor to George H. Frothingham Co. Elevating machinery. No. 960,701; June 7; Sp. p. 940; Gaz. vol. 155; p. 156.
Price Cereal Food Company, The. (See Wood, Fred G., assignor.)
Price, Harry, Boston, Mass. Ironing-machine. No. 962,525; June 28; Sp. p. 4830; Gaz. vol. 155; p. 849.
Price, Roscoe R., Tallahassee, Fla. Plow. No. 961,895; June 21; Sp. p. 3442; Gaz. vol. 155; p. 609.
Price, William G., New Castle, Pa. Separator for elliptic springs. No. 960,396; June 7; Sp. p. 328; Gaz. vol. 155; p. 55.
Priestly, Frank C., and J. M. Aubery, Los Angeles, Cal. Differential axle device. No. 962,049; June 21; Sp. p. 3765; Gaz. vol. 155; p. 661.
Probst, Edward, Indianapolis, Ind. Laundry washing-machine. No. 962,526; June 28; Sp. p. 4831; Gaz. vol. 155; p. 850.
Producer Gas Utilities Co. (See Harvey, Charles A., assignor.)
Proelss, Otto, Kansas City, Mo., and W. S. Hall, Argentine, Kans. Apparatus for concentrating sulfuric acid. No. 960,702; June 7; Sp. p. 944; Gaz. vol. 155; p. 157.
Prosser, William C., Ashley, Ind. Foot-guard for rail-frogs. No. 960,397; June 7; Sp. p. 329; Gaz. vol. 155; p. 55.
Puckett, Lawrence P., Midville, Ga. Tie-spacing jack. No. 960,398; June 7; Sp. p. 331; Gaz. vol. 155; p. 55.
Puffer Manufacturing Company. (See Murphy, Edward E., assignor.)
Pulver, Willis D., *et al.* (See England, Arthur E., assignor.)
Punshon, Thomas, Jr., *et al.* (See O'Brien, Vincent J., assignor.)
Purdy, Frederick, assignor to T. B. Jeffery, deceased, Kenosha, Wis.; K. E., C. T., and H. W. Jeffery, executors. Means for facilitating the starting of internal-combustion engines. No. 961,077; June 7; Sp. p. 1607; Gaz. vol. 155; p. 282.
Pursehouse, Joe, Streater, Ill. Polishing-machine. No. 961,520; June 14; Sp. p. 2664; Gaz. vol. 155; p. 463.
Pushee, George D., Weston, Mass. Brush. No. 960,582; June 7; Sp. p. 703; Gaz. vol. 155; p. 116.
Pycatt, Samuel T., Canehill, Ark. Car-axle. No. 960,399; June 7; Sp. p. 332; Gaz. vol. 155; p. 55.
Quayle, William O., Wilmington, Del., assignor to The Midland Chemical Company, Midland, Mich. Making sulfur chlorid. No. 961,530; June 14; Sp. p. 2665; Gaz. vol. 155; p. 463.
Quiggin, Daniel A., Liverpool, England. Apparatus for condensing steam. No. 962,095; June 21; Sp. p. 3869; Gaz. vol. 155; p. 677.
Quigley, Edward J., Newark, N. J. Garment. No. 961,013; June 7; Sp. p. 1557; Gaz. vol. 155; p. 261.
Quigley, Edward J., Newark, N. J. Collar. No. 962,065; June 28; Sp. p. 5128; Gaz. vol. 155; p. 896.
Quinn, John B., assignor to Shnable & Quinn, Chicago, Ill. Concrete-car. No. 962,465; June 28; Sp. p. 4704; Gaz. vol. 155; p. 829.
R. E. Dietz Company. (See Betts, Charles L., assignor.)
R. E. Dietz Company. (See Erb, Charles F., assignor.)
Raettig, Alfred W. H., Klingers, Mich. Folding cradle. No. 962,587; June 28; Sp. p. 4974; Gaz. vol. 155; p. 871.
Rahn, Albert, Neustadt, Ontario, Canada. Currycomb. No. 962,666; June 28; Sp. p. 5130; Gaz. vol. 155; p. 896.
Rahn, Albert, Neustadt, Ontario, Canada. Currycomb. No. 962,667; June 28; Sp. p. 5131; Gaz. vol. 155; p. 897.
Rail Laying Machine Company. (See Reinehr, John, assignor.)
Railroad Supply Company, The. (See Bacon, Levi S., assignor.)
Railway Specialty & Supply Company. (See Laden, Patrick, assignor.)
Raimes & Company. (See Whitlatch, Russell W., assignor.)
Ramassot, Marius, Lyon, France. Thermostat. No. 961,014; June 7; Sp. p. 1558; Gaz. vol. 155; p. 261.
Ramsden, Frederick E., Fort Dodge, Iowa. School-desk. No. 960,703; June 7; Sp. p. 946; Gaz. vol. 155; p. 157.
Ramsden, John T. (See Lewis and Ramsden.)
Rand, Amos W., Mondovi, Wis. Apple corer and slicer. No. 961,015; June 7; Sp. p. 1559; Gaz. vol. 155; p. 262.
Rand, Henry F., Tacoma, Wash. Device for equally dividing and distributing a current of air. No. 962,720; June 28; Sp. p. 5252; Gaz. vol. 155; p. 916.
Randall-Faichney Company. (See McElroy, Patrick J., assignor.)
Randall, Victor E., Battle Creek, Mich. Reversing-gear. No. 961,316; June 14; Sp. p. 2218; Gaz. vol. 155; p. 392.
Randall, Victor E., Battle Creek, and G. A. Boeltzel, Delton, Mich. Railway-tie. No. 962,588; June 28; Sp. p. 4978; Gaz. vol. 155; p. 871.
Ransom, Willard G., Davenport, Iowa. Brake-power-limiting apparatus. No. 961,257; June 14; Sp. p. 2059; Gaz. vol. 155; p. 371.
Rasche, Heinrich, assignor of one-half to F. H. Osgood, Seattle, Wash. Wood distillation. No. 962,068; June 28; Sp. p. 5132; Gaz. vol. 155; p. 897.
Rateau, Auguste C. E., Paris, France, assignor to Rateau Turbine Company, Chicago, Ill. High-pressure compressor or other power-absorbing machine. No. 961,317; June 14; Sp. p. 2216; Gaz. vol. 155; p. 393.
Rateau Turbine Company. (See Rateau, Auguste C. E., assignor.)
Rathke, Charles M. (See Johnson and Rathke.)
Ravier, Sylvain L., Paris, France. Sheeting-pile of reinforced concrete. No. 962,784; June 28; Sp. p. 5382; Gaz. vol. 155; p. 940.
Ray, Thomas H., Somerville, Mass. Ice-making machine. No. 962,241; June 21; Sp. p. 4186; Gaz. vol. 155; p. 727.
Ray, William S., assignor to W. S. Ray Manufacturing Co., San Francisco, Cal. Life-raft. No. 961,459; June 14; Sp. p. 2503; Gaz. vol. 155; p. 440.

Rayburn, John S., Grand Junction, Colo. Amalgamating-machine. No. 962,466; June 28; Sp. p. 4707; Gaz. vol. 155; p. 829.
Read, James P., *et al.* (See Macduffee, Chester E., assignor.)
Reading Hardware Company. (See Mason, George H., assignor.)
Rearwin, Wilber D., assignor to F. W. Moser, Chicago, Ill. Emery-wheel dresser. No. 961,460; June 14; Sp. p. 2505; Gaz. vol. 155; p. 441.
Reaves, Allen A., Delight, Ark. Window or door. No. 961,896; June 21; Sp. p. 3443; Gaz. vol. 155; p. 609.
Reckard, Henry L., Hartford, Conn. Process of engraving. No. 962,096; June 21; Sp. p. 3871; Gaz. vol. 155; p. 677.
Reckard, Henry L., Hartford, Conn. Photomechanical process of engraving. No. 962,097; June 21; Sp. p. 3876; Gaz. vol. 155; p. 678.
Reckard, Henry L., Hartford, Conn. Photomechanical process of engraving. No. 962,098; June 21; Sp. p. 3880; Gaz. vol. 155; p. 679.
Rector, Alcorn, assignor to Rector Gas Lamp Company, New York, N. Y. Gas-heater. No. 960,400; June 7; Sp. p. 334; Gaz. vol. 155; p. 56.
Rector Gas Lamp Company. (See Rector, Alcorn, assignor.)
Reddish, Benjamin T. (See Reddish, Gus, assignor.)
Reddish, Gus, Denver, assignor of one-half to B. T. Reddish, Trinidad, Colo. Automatic weight-hanger. No. 962,721; June 28; Sp. p. 5253; Gaz. vol. 155; p. 917.
Reece, George D. S., St. Louis, Mo. Airship. No. 962,886; June 21; Sp. p. 4494; Gaz. vol. 155; p. 776.
Reed, Harry, assignor of one-eighth to F. A. Sargent and one-eighth to G. C. Rutledge, Tenino, Wash. Pulley. No. 961,796; June 21; Sp. p. 3209; Gaz. vol. 155; p. 576.
Reed, Rufus C., assignor of one-half to W. A. Day, M. W. Totty, and R. D. Atkinson, Jacksonville, Tex. Crude-oil burner. No. 961,797; June 21; Sp. p. 3210; Gaz. vol. 155; p. 576.
Reed, Samuel W., Grand Rapids, Mich. Potato-bug exterminator. No. 963,011; June 28; Sp. p. 5803; Gaz. vol. 155; p. 1016.
Reeside, Alexander A., Wichita, Kans. Garment and collar fastener. No. 962,242; June 21; Sp. p. 4190; Gaz. vol. 155; p. 728.
Reeve, Sidney A., Worcester, assignor to C. F. Brown, trustee, Reading, Mass. Feed heating and superheating boiler. No. 960,704; June 7; Sp. p. 949; Gaz. vol. 155; p. 157.
Reeves, George H., New York, N. Y. Washpail. No. 961,531; June 14; Sp. p. 2667; Gaz. vol. 155; p. 464.
Regan, Joseph C., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Door check and closer. No. 962,916; June 28; Sp. p. 5623; Gaz. vol 155; p. 985.
Reichert, John, Racine, Wis. Lawn-trimming shovel. No. 962,785; June 28; Sp. p. 5385; Gaz. vol. 155; p. 940.
Reilly, Edward J., Eganville, Ontario, Canada. Sash-balance. No. 962,387; June 21; Sp. p. 4497; Gaz. vol. 155; p. 776.
Reilly, Matthew A. (See Aldridge and Reilly.)
Reinehr, John, Savanna, Ill., assignor to Rail Laying Machine Company. Vehicle. No. 961,532; June 14; Sp. p. 2668; Gaz. vol. 155; p. 464.
Reinhart, Heister H. and I., Moselem, and E. G. Lesher, Reading, Pa. Clothes-line reel. No. 962,099; June 21; Sp. p. 3882; Gaz. vol. 155; p. 679.
Reinhart, Irvin. (See Reinhart and Lesher.)
Reiter, Heinrich M., Asheville, N. C. Hitching device. No. 962,243; June 21; Sp. p. 4190; Gaz. vol. 155; p. 728.
Reither, Peter, Bennettville, Minn. Baling-tie. No. 961,258; June 14; Sp. p. 2062; Gaz. vol. 155; p. 371.
Reither, Peter, Bennettville, Minn. Fish-hook. No. 961,259; June 14; Sp. p. 2064; Gaz. vol. 155; p. 371.
Reitz, Charles E., Reitz, Pa. Automatic ventilator. No. 961,016; June 7; Sp. p. 1560; Gaz. vol. 155; p. 262.
Reliance Speed-Meter Company. (See Blanchard, Leon E., assignor.)
Renfrew Manufacturing Company. (See Thomson, Charles R., assignor.)
Republic Rubber Company, The. (See Mell, Tod J., assignor.)
Reusch, William L., Yorkton, Saskatchewan, Canada. Insulator. No. 961,646; June 14; Sp. p. 2904; Gaz. vol. 155; p. 502.
Reynolds, Christopher, Carlock, Ill. Snow-machine. No. 962,917; June 28; Sp. p. 5626; Gaz. vol. 155; p. 985.
Reynolds, Clifford W., Omaha, Nebr. Storage-receptacle for frozen confections. No. 962,527; June 28; Sp. p. 4833; Gaz. vol. 155; p. 850.
Reynolds, Herman M., Oneida, N. Y. Reinforced lathe-chuck. No. 960,705; June 7; Sp. p. 950; Gaz. vol. 155; p. 158.
Reynolds, Posey, Level Run, Va. Mail-box. No. 960,583; June 7; Sp. p. 704; Gaz. vol. 155; p. 116.
Reynolds, Reuben M., South Bend, Ind. Feed-water controller for boilers. No. 962,050; June 21; Sp. p. 3767; Gaz. vol. 155; p. 661.
Reynolds, William H. (See Mellink and Reynolds.)
Reynolds, William H., assignor to The Mellink Manufacturing Company, Toledo, Ohio. Locking device for safes, &c. No. 961,088; June 7; Sp. p. 1718; Gaz. vol. 155; p. 285.
Rhett, James M., assignor of one-third to N. Christensen, Beaufort, S. C. Automatic switch. No. 962,388; June 21; Sp. p. 4498; Gaz. vol. 155; p. 776.
Rhodes, George A., New York, N. Y. Universal leveling device. No. 962,467; June 28; Sp. p. 4708; Gaz. vol. 155; p. 829.
Ribbeck, Emile F., New Iberia, La. Crate. No. 960,401; June 7; Sp. p. 335; Gaz. vol. 155; p. 56.
Ricart, Francisco. (See Buccerl, Ignazio, assignor.)
Rice, George B., Ocean Springs, Miss. Means for operating elevator safety devices. No. 961,260; June 14; Sp. p. 2065; Gaz. vol. 155; p. 372.
Rice, George L. (See Hall, George E., assignor.)
Richards, Francis H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Type-bar and typographic form. No. 962,857; June 28; Sp. p. 5514; Gaz. vol. 155; p. 965.
Richards, George M., Erie, Pa. Pressure-governor. No. 962,100; June 21; Sp. p. 3883; Gaz. vol. 155; p. 679.
Richards, Hubert P., assignor to The Stanley Rule & Level Company, New Britain, Conn. Bit-brace chuck. No. 960,402; June 7; Sp. p. 336; Gaz. vol. 155; p. 56.
Richardson, Henry, New York, N. Y. Weighing, bagging, and packing apparatus. No. 962,918; June 28; Sp. p. 5627; Gaz. vol. 155; p. 985.
Richardson, Henry, New York, N. Y. Weighing-machine. No. 962,919; June 28; Sp. p. 5631; Gaz. vol. 155; p. 986.
Richardson, Theodore S., Chicago, Ill. Window-seat. No. 962,468; June 28; Sp. p. 4709; Gaz. vol. 155; p. 830.
Richey, Albert C., assignor of one-third to J. W. Kennedy and one-third to J. La Motte, Pueblo, Colo. Railway-rail joint. No. 961,461; June 14; Sp. p. 2507; Gaz. vol. 155; p. 441.
Richter, Edward A., Pittsburg, Pa. Propeller. No. 960,403; June 7; Sp. p. 338; Gaz. vol. 155; p. 56.
Richter, Rudolf, Charlottenburg, assignor to Siemens-Schuckertwerke G. m. b. H., Berlin, Germany. Alternate-current commutator-motor. No. 962,101; June 21; Sp. p. 3887; Gaz. vol. 155; p. 680.
Ridd, Ambrose, Newport, Ky. Treating metal sheetz. No. 961,462; June 14; Sp. p. 2508; Gaz. vol. 155; p. 441.
Rieche, Friedrich. (See Weise and Rieche.)
Riecke, Paul, Dessau, assignor to Ofenbau-Gesellschaft mit beschränkter Haftung, Munich, Germany. Device for pressing the doors of ovens against their seats. No. 962,669; June 28; Sp. p. 5134; Gaz. vol. 155; p. 897.
Rieger, August R., Chicago, Ill. Airship. No. 962,977; June 28; Sp. p. 5736; Gaz. vol. 155; p. 1004.
Rieha, Edward L., Milwaukee, Wis. Gas-retort furnace. No. 962,051; June 21; Sp. p. 3769; Gaz. vol. 155; p. 662.
Ries, William P., Akron, Ohio. Bottle-holder. No. 961,647; June 14; Sp. p. 2905; Gaz. vol. 155; p. 502.
Riffe, Robert H. (See Brown, Ross D., assignor.)
Riga, Dieudonné. (See De Prins and Riga.)
Rigby, John J., Brooklyn, N. Y. Machine for producing ring-blanks and applying them to articles. No. 962,786; June 28; Sp. p. 5387; Gaz. vol. 155; p. 941.
Rigby, Nicholas L., assignor to A. Slaughter, Los Angeles, Cal. Support for nozzles of fountain-syringes. No. 960,404; June 7; Sp. p. 340; Gaz. vol. 155; p. 57.
Riggs, George R., Allegheny, Pa. Rotary motor. No. 961,017; June 7; Sp. p. 1562; Gaz. vol. 155; p. 262.
Ring, Ollie. (See Oliphant and Ring.)
Risk, Maurice E. (See Churchill and Risk.)
Ritter, William V. (See Thomas and Ritter.)
Roach, Harry F., assignor to Continuous Rail & Safety Switch Co., St. Louis, Mo. Switch-frog. No. 961,533; June 14; Sp. p. 2660; Gaz. vol. 155; p. 464.
Roach, Harry F., assignor to Continuous Rail & Safety Switch Co., St. Louis, Mo. Switch-frog. No. 961,534; June 14; Sp. p. 2672; Gaz. vol. 155; p. 465.
Roach, Harry F., assignor to Continuous Rail & Safety Switch Co., St. Louis, Mo. Adjustable head-rod. No. 961,535; June 14; Sp. p. 2674; Gaz. vol. 155; p. 465.
Robb, George, Pittsburg, Pa. Rigging or scaffold support. No. 961,018; June 7; Sp. p. 1567; Gaz. vol. 155; p. 263.
Robbins, Ira, Philadelphia, Pa., assignor of one-fourth to C. L. Parker, Washington, D. C. Coin-controlled apparatus. No. 962,670; June 28; Sp. p. 5136; Gaz. vol. 155; p. 898.
Robert N. Basset Company, The. (See Holden, Walter A., assignor.)
Robert Stock Manufacturing Co. (See Stock, Augusta M., assignor.)
Roberts, Clarence V., and J. Mander, assignors to Roberts & Mander Stove Company, Philadelphia, Pa. Combined gas and coal range. No. 962,244; June 21; Sp. p. 4193; Gaz. vol. 155; p. 728.
Roberts, Fred H., Sterling Colo. Continuous centrifugal machine. No. 962,052; June 21; Sp. p. 3774; Gaz. vol. 155; p. 665.
Roberts, George P., Dallas, Tex. Gin-saw cleaner. No. 961,162; June 14; Sp. p. 1859; Gaz. vol. 155; p. 337.
Roberts, Henry P., Boston, assignor to C. H. McDermott, Revere, Mass. Apparatus for deribering meats. No. 961,019; June 7; Sp. p. 1569; Gaz. vol. 155; p. 263.
Roberts & Mander Stove Company. (See Roberts and Mander, assignors.)
Robertson, Charles H., Springfield, Ill. Sander. No. 960,584; June 7; Sp. p. 705; Gaz. vol. 155; p. 116.
Robidoux, Louis, assignor of one-half to A. J. Berard, Providence, R. I. Hook attachment for harness and heddle-frames. No. 961,463; June 14; Sp. p. 2510; Gaz. vol. 155; p. 442.

Robinson, Daniel P., assignor to Continental Can Company, Baltimore, Md. Can-soldering machine. No. 962,978; June 28; Sp. p. 5739; Gaz. vol. 155; p. 1005.
Robinson, Earl A., Emporia, Kans. Tennis-court marker. No. 961,020; June 7; Sp. p. 1570; Gaz. vol. 155; p. 263.
Robinson, Edwin N., Hot Springs, S. D. Pole-tip. No. 961,818; June 14; Sp. p. 2219; Gaz. vol. 155; p. 393.
Robinson, Harry A., Chicago, Ill. Metering panel-board. No. 961,464; June 14; Sp. p. 2512; Gaz. vol. 155; p. 442.
Robinson, Maurice, and H. S. Neale, Pittsburg, Pa. Bottle-crate rack. No. 962,671; June 28; Sp. p. 5139; Gaz. vol. 155; p. 898.
Robinson, Ralph C., Boise, Idaho. Go-cart. No. 961,163; June 14; Sp. p. 1861; Gaz. vol. 155; p. 337.
Robinson, Samuel T., Walbridge, Ohio. Switch-chair. No. 961,261; June 14; Sp. p. 2066; Gaz. vol. 155; p. 372.
Robinson, William G., Guthrie, Okla. Combination hop-ringer and tool. No. 962,979; June 28; Sp. p. 5743; Gaz. vol. 155; p. 1005.
Rochotsch, Reinhold, assignor of one-half to J. Oucsek, Pittsburg, Pa. Railway automatic signal. No. 960,706; June 7; Sp. p. 952; Gaz. vol. 155; p. 158.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Motor-vehicle. No. 961,372; June 14; Sp. p. 2330; Gaz. vol. 155; p. 411.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Variable-speed coasting and braking hub. No. 962,245; June 21; Sp. p. 4195; Gaz. vol. 155; p. 729.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Pneumatic spring. No. 962,246; June 21; Sp. p. 4196; Gaz. vol. 155; p. 729.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Connection for vehicle-wheels. No. 962,247; June 21; Sp. p. 4201; Gaz. vol. 155; p. 730.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Mechanism for feeding fuel. No. 962,248; June 21; Sp. p. 4203; Gaz. vol. 155; p. 730.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Cooling means for motors. No. 962,249; June 21; Sp. p. 4205; Gaz. vol. 155; p. 730.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Cooling means for motors. No. 962,250; June 21; Sp. p. 4209; Gaz. vol. 155; p. 731.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Pump. No. 962,251; June 21; Sp. p. 4211; Gaz. vol. 155; p. 731.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Equalising device. No. 962,252; June 21; Sp. p. 4212; Gaz. vol. 155; p. 731.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Controller. No. 962,253; June 21; Sp. p. 4214; Gaz. vol. 155; p. 731.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Motor. No. 962,254; June 21; Sp. p. 4221; Gaz. vol. 155; p. 732.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Sparking apparatus. No. 962,255; June 21; Sp. p. 4229; Gaz. vol. 155; p. 733.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Vehicle-body support. No. 962,256; June 21; Sp. p. 4231; Gaz. vol. 155; p. 733.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Steering device. No. 962,257; June 21; Sp. p. 4233; Gaz. vol. 155; p. 733.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Vehicle. No. 962,258; June 21; Sp. p. 4237; Gaz. vol. 155; p. 733.
Rockwell, Albert F., assignor to The New Departure Manufacturing Company, Bristol, Conn. Support for vehicle-bodies. No. 962,259; June 21; Sp. p. 4239; Gaz. vol. 155; p. 734.
Rockwell, Robert R., Evanston, assignor of one-half to C. L. Anderson, Chicago, Ill. Corner-fastening. No. 962,528; June 28; Sp. p. 4835; Gaz. vol. 155; p. 850.
Roe, Forrest H., Batesville, Ohio. Automatic air-brake coupling. No. 962,960; June 28; Sp. p. 5744; Gaz. vol. 155; p. 1006.
Roebuck, Alvah C., Chicago, Ill. Film-reeling mechanism. No. 961,536; June 14; Sp. p. 2678; Gaz. vol. 155; p. 465.
Roesner, Siegmund, Chicago, Ill. Flash-light attachment for cameras. No. 961,021; June 7; Sp. p. 1572; Gaz. vol. 155; p. 263.
Rogers, John R., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, Line-casting machine. No. 961,798; June 21; Sp. p. 3212; Gaz. vol. 155; p. 577.
Rogers, John R., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, Line-casting machine. No. 961,799; June 21; Sp. p. 3215; Gaz. vol. 155; p. 577.
Rogers, Nathaniel J., Tuscaloosa, Ala. Nut-lock. No. 960,406; June 7; Sp. p. 841; Gaz. vol. 155; p. 57.
Rogers, Thomas W., Lamont, Iowa. Poultry-marking punch. No. 961,800; June 21; Sp. p. 3219; Gaz. vol. 155; p. 578.
Bogginger, John. (See Pope and Bogginger.)
Rohling, John M., assignor of one-half to R. E. Frame, St. Louis, Mo. Journal-box brass. No. 962,166; June 21; Sp. p. 4051; Gaz. vol. 155; p. 703.
Rohn, Samuel W. (See Sheldon, Rufus N., assignor.)
Rohr, Moritz von, assignor to Firm of C. Zeiss, Jena, Germany. Galilean-telescope lens system. No. 962,920; June 28; Sp. p. 5634; Gaz. vol. 155; p. 986.
Rollins, Jarrot L., Colfax, Cal. Thread-coating machine. No. 962,260; June 21; Sp. p. 4241; Gaz. vol. 155; p. 734.
Roman, Stephen, New York, N. Y. Head-forming device. No. 962,856; June 28; Sp. p. 5517; Gaz. vol. 155; p. 965.
Rooch, Edward, Norwood, assignor to The Interstate Sanitation Company, Cincinnati, Ohio. Disinfecting and deodorising apparatus. No. 960,406; June 7; Sp. p. 343; Gaz. vol. 155; p. 57.
Rooy, Antonius L. de, Haarlem, Netherlands. Transferring printed and other pictures to stones and the like. No. 960,707; June 7; Sp. p. 953; Gaz. vol. 155; p. 158.
Rorabeck, Claude. (See Cash and Rorabeck.)
Rose, Alonzo N., New York, N. Y. Water-cooler. No. 962,529; June 28; Sp. p. 4837; Gaz. vol. 155; p. 851.
Rose, Robert A., and G. C. Holbrook, Santa Rosa, Cal. Electrical piano. No. 962,261; June 21; Sp. p. 4245; Gaz. vol. 155; p. 734.
Rosenberg, Adolph, and E. E. Clark, assignors to Climax Lock and Ventilator Co., Buffalo, N. Y. Mail-box. No. 961,897; June 21; Sp. p. 3444; Gaz. vol. 155; p. 609.
Rosenberg, Adolph, Buffalo, N. Y. Sash-lock. No. 960,585; June 7; Sp. p. 707; Gaz. vol. 155; p. 117.
Rosenfeld, Edward, Columbus, Ohio. Truck. No. 960,407; June 7; Sp. p. 345; Gaz. vol. 155; p. 58.
Ross, Charles E., Columbus, Ohio. Piston-packing. No. 961,373; June 14; Sp. p. 2332; Gaz. vol. 155; p. 412.
Ross, David E., Brookston, assignor to Ross Gear and Tool Company, La Fayette, Ind. Machine for cutting internal flutes. No. 961,537; June 14; Sp. p. 2084; Gaz. vol. 155; p. 466.
Ross Gear and Tool Company. (See Ross, David E., assignor.)
Ross, Mark A., Chicago, Ill. Locomotive-headlight. No. 962,469; June 28; Sp. p. 4711; Gaz. vol. 155; p. 830.
Ross, William, Montreal, Quebec, Canada. Metal-cutting machine. No. 962,630; June 26; Sp. p. 4842; Gaz. vol. 155; p. 851.
Rossetter, James R., assignor to The Wm. J. Oliver Manufacturing Company, Knoxville, Tenn. Reversible plow. No. 962,389; June 21; Sp. p. 4502; Gaz. vol. 155; p. 777.
Rothermel, W. E. (See Matthews, Edgar M., assignor.)
Rothwell, Ernest, Manchester, assignor to Rothwell's Patents Syndicate, Bury, England. Circuit-controller. No. 961,164; June 14; Sp. p. 1863; Gaz. vol. 155; p. 338.
Rothwell, William H. (See Forbes and Rothwell.)
Rothwell's Patents Syndicate. (See Rothwell, Ernest, assignor.)
Rottenburg, Otto von, Frankfort-on-the-Main, Germany. Fountain-pen attachment. No. 962,053; June 21; Sp. p. 3778; Gaz. vol. 155; p. 663.
Rottger, Henry J. P., New York, N. Y. Heel for shoes. No. 960,708; June 7; Sp. p. 954; Gaz. vol. 155; p. 158.
Rouse, William H., Grand Rapids, Mich. Card-holder. No. 961,801; June 21; Sp. p. 3220; Gaz. vol. 155; p. 578.
Rowell, Frank C. Ilion, and J. L. Nolan, Mohawk, N. Y. Abrading-machine. No. 960,408; June 7; Sp. p. 846; Gaz. vol. 155; p. 58.
Rowley, James F., Chicago, Ill. Artificial-limb suspender and back-check. No. 961,165; June 14; Sp. p. 1867; Gaz. vol. 155; p. 339.
Rowley, Robert, New York, N. Y., and J. J. Coomber, Jersey City, N. J., assignors, by mesne assignments, to Rubber Company of America. Making shoes for automobile and other vehicle tires. No. 962,054; June 21; Sp. p. 3779; Gaz. vol. 155; p. 663.
Rowley, Robert, New York, N. Y., and J. J. Coomber, Jersey City, N. J., assignors, by mesne assignments, to Rubber Company of America. Compression apparatus for tire-shoe wrappings. No. 962,102; June 21; Sp. p. 3889; Gaz. vol. 155; p. 690.
Royal Worcester Corset Company. (See Lecoutre, August J., assignor.)
Royce, James C., Toronto, Ontario, Canada. Electric heater. No. 960,409; June 7; Sp. p. 351; Gaz. vol. 155; p. 59.
Royden Marble Machinery Company. (See Peirce, John R., assignor.)
Rubber Company of America. (See Rowley and Coomber, assignors.)
Rueckert, George C., Providence, R. I. Jewelry-tray. No. 962,981; June 28; Sp. p. 5747; Gaz. vol. 155; p. 1006.
Rugh, Harry O., assignor to Sandwich Electric Company, Sandwich, Ill. Signaling system. No. 960,586; June 7; Sp. p. 700; Gaz. vol. 155; p. 117.
Rush, George F., Chicago, Ill. Electric fixture. No. 962,055; June 21; Sp. p. 3783; Gaz. vol. 155; p. 664.
Russell, Alva A., *et al.* (See Pickering, Abel W., assignor.)
Russell & Erwin Manufacturing Company. (See Voight, Henry G., assignor.)
Russell, John R., Sterling, Ill. Quilting device. No. 960,709; June 7; Sp. p. 956; Gaz. vol. 155; p. 159.
Russell, Robert C., Arthur, Ontario, Canada, assignor of fifteen one-hundredths to G. T. Griffiths, Columbus, and thirty-five one-hundredths to C. F. Warner, New Philadelphia, Ohio. Churn. No. 961,802; June 21; Sp. p. 3221; Gaz. vol. 155; p. 578.

Rust, Robert R., New York, N. Y. Pipe-coupling. No. 961,987; June 21; Sp. p. 3636; Gaz. vol. 155; p. 639.
Rutledge, G. C., *et al.* (See Reed, Harry, assignor.)
Ryan, Edmund, Lawrenceville, Ill. Metallic receptacle. No. 962,470; June 28; Sp. p. 4712; Gaz. vol. 155; p. 830.
Ryan, Edward, Clinton, Iowa. Lubricating apparatus for steam-engines. No. 962,859; June 28; Sp. p. 5520; Gaz. vol. 155; p. 966.
Ryan, Joseph H., Pittsburg, Pa. Bituminous mixing machine. No. 960,410; June 7; Sp. p. 353; Gaz. vol. 155; p. 59.
Ryan, Walter S., assignor of three-fourths to L. Hengerer, New York, N. Y. Receptacle or socket for electric lamps. No. 962,589; June 28; Sp. p. 4981; Gaz. vol. 155; p. 872.
S. F. Bowser & Company, (See Moore, Edward J., assignor.)
Sachs, Ernst, Schweinfurt, Germany. Free-wheel-cycle hub with brake mechanism. No. 960,710; June 7; Sp. p. 957; Gaz. vol. 155; p. 159.
Saegmuller, George N., Rochester, N. Y. Indicator-operating means. No. 961,808; June 21; Sp. p. 3445; Gaz. vol. 155; p. 610.
Safety Car Heating & Lighting Company, The. (See Dixon, Robert M., assignor.)
Safety Car Heating and Lighting Co. (See Donnell, Harry D., assignor.)
Safety Car Heating & Lighting Company, The. (See Thomson, William I., assignor.)
Sagax Wood Company, The. (See Siegmann, William G. F., assignor.)
Saha, Radhika N., Banares, India. Fountain-pen. No. 962,082; June 28; Sp. p. 5748; Gaz. vol. 155; p. 1006.
Sahlin, Rose, Chicago, Ill. Garment hanger and protector. No. 961,803; June 21; Sp. p. 3223; Gaz. vol. 155; p. 579.
Salamon, Alfred G. (See Hood and Salamon.)
Samuel Cupples Wooden Ware Company. (See Wallace, Henry B., assignor.)
Samuelson, Frederick, Rugby, England, assignor to General Electric Company. Emergency-governor. No. 960,411; June 7; Sp. p. 354; Gaz. vol. 155; p. 59.
Sandblom, Gustav, New York, N. Y. Metallic stair. No. 960,412; June 7; Sp. p. 357; Gaz. vol. 155; p. 60.
Sanders, Lee, Belcherville, Tex. Stalk-cutter. No. 961,988; June 21; Sp. p. 3637; Gaz. vol. 155; p. 639.
Sanders, Stephen P., Cupertino, Cal. Carburetor. No. 962,860; June 28; Sp. p. 5522; Gaz. vol. 155; p. 966.
Sandwich Electric Company. (See Rugh, Harry O., assignor.)
Sandy, James A., Minneapolis, Minn. Fire-box door with draft device. No. 960,711; June 7; Sp. p. 960; Gaz. vol. 155; p. 159.
Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Fire-polishing glassware. No. 960,587; June 7; Sp. p. 711; Gaz. vol. 155; p. 117.
Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Burner for fire-polishing glassware. No. 962,861; June 28; Sp. p. 5525; Gaz. vol. 155; p. 967.
Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Burner for fire-polishing glassware. No. 962,862; June 28; Sp. p. 5527; Gaz. vol. 155; p. 967.
Sanford, Andrew J., assignor to A. H. Heisey & Co., Newark, Ohio. Apparatus for fire-polishing glassware. No. 962,863; June 28; Sp. p. 5528; Gaz. vol. 155; p. 967.
Sanford, Hugh W., Knoxville, Tenn. Spring-link. No. 961,022; June 7; Sp. p. 1573; Gaz. vol. 155; p. 264.
Sanford, William W., Newark, N. J. Reservoir-pen. No. 960,413; June 7; Sp. p. 358; Gaz. vol. 155; p. 60.
Sangster, Andrew J., Chicago, Ill. Non-slippable attachment for horseshoes. No. 962,471; June 28; Sp. p. 4714; Gaz. vol. 155; p. 831.
Sargent, Charles E., assignor to Wisconsin Engine Company, Corliss, Wis. Ignition magneto mechanism for air-started internal-combustion engines. No. 961,648; June 14; Sp. p. 2906; Gaz. vol. 155; p. 503.
Sargent, Eaton D., Winchendon, Mass. Freezer. No. 962,390; June 21; Sp. p. 4504; Gaz. vol. 155; p. 777.
Sargent, F. A., *et al.* (See Reed, Harry, assignor.)
Sargent, Frederick G., Graniteville, Mass. Wool-washing machine and the like. No. 961,023; June 7; Sp. p. 1575; Gaz. vol. 155; p. 264.
Sargent, Howard R., Schenectady, N. Y., assignor to General Electric Company. Twin lamp-socket. No. 960,414; June 7; Sp. p. 359; Gaz. vol. 155; p. 60.
Saul, Erich. (See Herz and Saul.)
Saunders, Isaac H., Washington, D. C. Car-platform closure. No. 961,024; June 7; Sp. p. 1577; Gaz. vol. 155; p. 264.
Saunders, Lewis E., Niagara Falls, N. Y., assignor to Norton Company, Worcester, Mass. Purifying aluminous materials. No. 960,712; June 7; Sp. p. 962; Gaz. vol. 155; p. 160.
Savage, William W., assignor of one-half to B. Moderwell, Buffalo, N. Y. Elevator-annunciator. No. 961,025; June 7; Sp. p. 1579; Gaz. vol. 155; p. 265.
Sawyer Manufacturing Co. (See Winant, Gilbert S., assignor.)
Savole, Anatole J., Glencoe, La. Rotary engine. No. 961,026; June 7; Sp. p. 1583; Gaz. vol. 155; p. 265.
Sawdey, Howard L., Bingham Canyon, Utah. Rail. No. 960,713; June 7; Sp. p. 964; Gaz. vol. 155; p. 160.
Sawyer, Henry W., Huron, S. D. Rail-joint. No. 961,027; June 7; Sp. p. 1584; Gaz. vol. 155; p. 265.
Schaefer, Casper C., Cambridge City, Ind. Heater. No. 962,864; June 28; Sp. p. 5533; Gaz. vol. 155; p. 967.
Schalkle, Frank O., Redfield, S. D. Adjustable bench-tool. No. 960,415; June 7; Sp. p. 361; Gaz. vol. 155; p. 61.
Schantz, M. P., trustee. (See Traylor, Samuel W., assignor.)
Schaub, Henry A., Kearney, Nebr. Draft-equalizer. No. 961,649; June 14; Sp. p. 2008; Gaz. vol. 155; p. 503.
Schele, Thorger, Spy Hill, Saskatchewan, Canada. Extension-rim for traction-engine wheels. No. 962,672; June 28; Sp. p. 5141; Gaz. vol. 155; p. 899.
Schellenberg, Harry L., Detroit, Mich. Disinfector. No. 961,650; June 14; Sp. p. 2010; Gaz. vol. 155; p. 503.
Schenck, Eisengiesserei & Maschinenfabrik, Gesellschaft mit beschränkter Haftung, Carl. (See Darmstädter, Georg, assignor.)
Schermack, Joseph J., Chicago, Ill., assignor to Detroit Mailing Machine Company. Envelop sealing and stamping machine. No. 961,465; June 14; Sp. p. 2514; Gaz. vol. 155; p. 442.
Schickerling, Conrad, East Orange, N. J. Non-refillable bottle. No. 960,416; June 7; Sp. p. 362; Gaz. vol. 155; p. 61.
Schiff, Sigmund, New York, N. Y. Check-perforator. No. 962,167; June 21; Sp. p. 4053; Gaz. vol. 155; p. 704.
Schlaty, Julius H., assignor to The Berger Manufacturing Company, Canton, Ohio. Metallic case for coffins. No. 962,590; June 28; Sp. p. 4983; Gaz. vol. 155; p. 872.
Schleicher, John C., Mount Vernon, N. Y. Tire for vehicles. No. 961,374; June 14; Sp. p. 2333; Gaz. vol. 155; p. 412.
Schlesinger, Firm of Martin. (See Noack, Gerhard, assignor.)
Schloemilch, Wilhelm, Berlin, and P. F. Pichon, Südende, near Berlin, assignors to Gesellschaft für Drahtlose Telegraphie m. b. H., Berlin, Germany. Wave-detector for wireless telegraphy. No. 962,262; June 21; Sp. p. 4247; Gaz. vol. 155; p. 735.
Schlossberg, Israel, Charlottenburg, Germany. Producing acid and fire proof bodies. No. 961,651; June 14; Sp. p. 2913; Gaz. vol. 155; p. 504.
Schlosser, Robert J., assignor to M. W. Jamieson, Warren, Pa. Vise. No. 962,983; June 28; Sp. p. 5749; Gaz. vol. 155; p. 1006.
Schluter, William, Parkersburg, Iowa. Draft-equalizer. No. 962,056; June 21; Sp. p. 3785; Gaz. vol. 155; p. 664.
Schmeykal, Walter A., Goshen, Ind. Automatic faucet. No. 961,538; June 14; Sp. p. 2690; Gaz. vol. 155; p. 466.
Schmidt, Alvin A., Chicago, Ill. Making resilient molds. No. 960,714; June 7; Sp. p. 966; Gaz. vol. 155; p. 160.
Schmidt, William, Jersey City, N. J., assignor to The Firm of Simon Zinn, New York, N. Y. Holder or frame for safety-razors. No. 962,531; June 28; Sp. p. 4846; Gaz. vol. 155; p. 852.
Schmidt, William C., Baltimore, Md. Detachable fastener. No. 961,089; June 7; Sp. p. 1719; Gaz. vol. 155; p. 286.
Schmitt, Karl, Jr., Lincoln, Nebr. Switch-operating mechanism. No. 962,678; June 28; Sp. p. 5142; Gaz. vol. 155; p. 899.
Schmitz, Egon L., New York, assignor to Eberhard Faber Pencil Company, Brooklyn, N. Y. Pencil. No. 960,588; June 7; Sp. p. 715; Gaz. vol. 155; p. 118.
Schneible, Joseph, Weehawken, N. J. Brewing. No. 961,539; June 14; Sp. p. 2692; Gaz. vol. 155; p. 467.
Schneider, Charles J., New York, N. Y. Toy. No. 960,715; June 7; Sp. p. 968; Gaz. vol. 155; p. 161.
Schneider, Christian F., *et al.* (See Allen, James M., assignor.)
Schneider, Clarence. (See Schneider, Henry and C.)
Schneider, Eberhard, New York, N. Y. Terminal for electric conductors. No. 962,921; June 28; Sp. p. 5635; Gaz. vol. 155; p. 986.
Schneider, Henry and C., Lima, Ohio. Gaseous-fuel burner. No. 962,472; June 28; Sp. p. 4715; Gaz. vol. 155; p. 831.
Schofield, Joseph A. (See Caswell and Schofield.)
Scholl, Peter L., assignor to O. M. Weand, Reading, Pa. Rotary screen mechanism. No. 962,168; June 21; Sp. p. 4056; Gaz. vol. 155; p. 704.
Scholle, Albert H., New York, N. Y. Multiple lifting-jack. No. 961,899; June 21; Sp. p. 3449; Gaz. vol. 155; p. 610.
Schopen, John, Newark, Ohio. Curtain-pole. No. 962,787; June 28; Sp. p. 5392; Gaz. vol. 155; p. 941.
Schorik, Frank, Chicago, Ill. Coin-detector. No. 960,716; June 7; Sp. p. 969; Gaz. vol. 155; p. 161.
Schott & Gen. (See Hatfield, Henry, assignor.)
Schrag, Roland A., Toronto, Ontario, Canada. Hollow tool. No. 961,540; June 14; Sp. p. 2693; Gaz. vol. 155; p. 467.
Schramm, Adolph F. (See Hulse and Schramm.)
Schreiber, Hugo P., London, England. Secondary battery. No. 962,263; June 21; Sp. p. 4249; Gaz. vol. 155; p. 735.
Schreuder, Andrew M., assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa. Drying-machine. No. 962,865; June 28; Sp. p. 5536; Gaz. vol. 155; p. 968.
Schroeder Headlight Company. (See Powers, Clarence E., assignor.)
Schryver, George, New York, N. Y. Table. No. 962,922; June 28; Sp. p. 5636; Gaz. vol. 155; p. 987.
Schtabe, Ferdinand, New York, N. Y. Level attachment for drills. No. 960,718; June 7; Sp. p. 972; Gaz. vol. 155; p. 161.

Schuiler, John, and A. Niland, Hoquiam, Wash. Rotary steam-engine. No. 962,984; June 28; Sp. p. 5752; Gaz. vol. 155; p. 1007.

Schuite-Uechting, Elisabeth, Bonn, Germany. Abdominal supporter. No. 961,166; June 14; Sp. p. 1869; Gaz. vol. 155; p. 339.

Schuis, Frederick A. J., Bronxville, N. Y. Elevator-brake. No. 961,541; June 14; Sp. p. 2694; Gaz. vol. 155; p. 467.

Schumann, Albert, Berlin, Germany. Racing apparatus. No. 962,057; June 21; Sp. p. 3787; Gaz. vol. 155; p. 664.

Schutte and Koerting Company. (See Fischer, Adalbert W., assignor.)

Schutte and Koerting Company. (See Schutte, Louis, assignor.)

Schutte, Louis, deceased; Guarantee Trust & Safe Deposit Co. and Mary D. Schutte, executors, assignors to Schutte and Koerting Company, Philadelphia, Pa. Safety-valve. No. 961,735; June 14; Sp. p. 3078; Gaz. vol. 155; p. 532.

Schutte, Mary D., *et al.*, executors. (See Schutte, Louis.)

Schutz, Rudolph G., Providence, R. I. Seamless plated taper and making same. No. 962,985; June 28; Sp. p. 5753; Gaz. vol. 155; p. 1007.

Schwab, John, Winnipeg, Manitoba, Canada. Combined heating system for a plurality of boilers. No. 961,900; June 21; Sp. p. 3451; Gaz. vol. 155; p. 610.

Schwab, Martin C., Chicago, Ill., assignor to Gravity Conveyor Company. Multiple gravity conveyer. No. 961,904; June 21; Sp. p. 3224; Gaz. vol. 155; p. 579.

Schwahn, Heinrich F. D., Belleville, Ill. Electric furnace for metallurgical purposes. No. 962,532; June 28; Sp. p. 4847; Gaz. vol. 155; p. 852.

Schwanda, Joseph. (See Sgal and Schwanda.)

Schwanhauser, William, assignor to Henry R. Worthington, New York, N. Y. Condenser. No. 960,417; June 7; Sp. p. 363; Gaz. vol. 155; p. 61.

Schwartz, Charles M. B., Brooklyn, N. Y. Transfer-ticket. No. 961,028; June 7; Sp. p. 1585; Gaz. vol. 155; p. 266.

Schwartz, Joseph, New York, N. Y. Penholder. No. 962,986; June 28; Sp. p. 5755; Gaz. vol. 155; p. 1007.

Schwartz, York, Hanover, Germany. Photographic emulsion. No. 962,788; June 28; Sp. p. 5393; Gaz. vol. 155; p. 941.

Schweibold, Jacob. (See Schweibold, Martin and J.)

Schweibold, Martin and J., Philadelphia, Pa. Music-leaf turner. No. 960,719; June 7; Sp. p. 973; Gaz. vol. 155; p. 162.

Schwieger, Arnold, Berlin, Germany. Manufacture of plates of sheet metal and bands. No. 962,058; June 21; Sp. p. 3789; Gaz. vol. 155; p. 665.

Scollard, Thomas F., Warsaw, Ind. Rotary steam-valve. No. 960,717; June 7; Sp. p. 971; Gaz. vol. 155; p. 161.

Scott, Barton W. (See Colton and Scott.)

Scott, Campbell, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Electromagnet. No. 961,805; June 21; Sp. p. 3226; Gaz. vol. 155; p. 579.

Scott, Hellen Y., Quincy, assignor to W. A. Scott, Apalachicola, Fla. Collar. No. 960,720; June 7; Sp. p. 978; Gaz. vol. 155; p. 163.

Scott, Jacob R., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Leather-skiving machine. No. 961,736; June 14; Sp. p. 3080; Gaz. vol. 155; p. 533.

Scott, Jasper, Arbutus, assignor of one-half to B. H. Newcomer, Spring Hill, W. Va. Self-dumping apparatus. No. 961,652; June 14; Sp. p. 2914; Gaz. vol. 155; p. 504.

Scott, Robert F. (See Coes, Scott, and Thumlert.)

Scott, William A. (See Scott, Hellen Y., assignor.)

Scott, William A., Omaha, Nebr. Bracket. No. 961,319; June 14; Sp. p. 2219; Gaz. vol. 155; p. 393.

Scott, William M., Philadelphia, Pa., assignor to The Cutter Electrical and Manufacturing Company. Switchboard construction. No. 962,473; June 28; Sp. p. 4717; Gaz. vol. 155; p. 831.

Scott, Wilson A., Murray, Nebr. Fur-stretcher. No. 962,391; June 21; Sp. p. 4507; Gaz. vol. 155; p. 778.

Seabrook, Bagster E., Los Angeles, Cal. Separating axle-couplings. No. 961,375; June 14; Sp. p. 2334; Gaz. vol. 155; p. 412.

Seabrook, Norman B., Los Angeles, Cal. Differential axle. No. 961,376; June 14; Sp. p. 2335; Gaz. vol. 155; p. 413.

Seagrave, Frederic S., Detroit, Mich. Hydrant and hose cut-off valve. No. 961,901; June 21; Sp. p. 3453; Gaz. vol. 155; p. 611.

Sears, George H., assignor of three-fourths to A. E. Huther and W. B. Huther, Rochester, N. Y. Calculating-machine. No. 961,806; June 21; Sp. p. 3228; Gaz. vol. 155; p. 579.

Sears, William. (See Carlson, Carl J. E., assignor.)

Seeley, Abner M. (See Durand and Seeley.)

Seeley, Frank E., assignor to The Perkins Electric Switch Mfg. Company, Bridgeport, Conn. Pendent electric switch. No. 962,923; June 28; Sp. p. 5638; Gaz. vol. 155; p. 987.

Seeley, James B., assignor to High Frequency Ignition Coil Company, Los Angeles, Cal. Circuit-interrupter for electric sparking devices. No. 961,902; June 21; Sp. p. 3454; Gaz. vol. 155; p. 611.

Segale, Carlo, San Francisco, Cal. Cheese-cutting device. No. 960,580; June 7; Sp. p. 717; Gaz. vol. 155; p. 118.

Seib, George A., Ilion, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 962,891; June 28; Sp. p. 4984; Gaz. vol. 155; p. 872.

Seibert, Bennett F., Mansfield, Ohio. Truck. No. 961,807; June 21; Sp. p. 3248; Gaz. vol. 155; p. 580.

Seibert, William N., Pittsburg, Pa. Hat-pin. No. 962,987; June 28; Sp. p. 5756; Gaz. vol. 155; p. 1008.

Seifert, Bruno E., and H. Hähle, assignors to Chemische Fabrik von Heyden, Aktiengesellschaft, Radebeul, near Dresden, Germany. Making pure ortho- and paraguaiacol sulfonic salts. No. 962,103; June 21; Sp. p. 3891; Gaz. vol. 155; p. 680.

Seisler, Philip, assignor to The Chantrell Hardware & Tool Company, Reading, Pa. Rim-latch. No. 963,012; June 28; Sp. p. 5806; Gaz. vol. 155; p. 1016.

Seitz, John, Chicago, Ill. Apparatus for treating liquors. No. 961,167; June 14; Sp. p. 1870; Gaz. vol. 155; p. 339.

Selg Brewery Apparatus Company, The. (See Selg, Otto, assignor.)

Selg, Otto, New York, N. Y. Percolator. No. 960,419; June 7; Sp. p. 366; Gaz. vol. 155; p. 62.

Selg, Otto, assignor to The Selg Brewery Apparatus Company, New York, N. Y. Nozzle for filters and similar devices. No. 960,418; June 7; Sp. p. 365; Gaz. vol. 155; p. 62.

Selig Polyscope Company, The. (See Sperberg, Edward H., assignor.)

Selig, William N. (See Hoglund, Gustav E., assignor.)

Sellers, Coleman, Jr. (See Sellers and Collins.)

Sellers, Preston H., East St. Louis, Ill. Steam-condenser. No. 962,789; June 28; Sp. p. 5394; Gaz. vol. 155; p. 942.

Sellers, William F., Wilmington, Del., C. Sellers, Jr., Philadelphia, and T. T. Collins, Enfield, Pa., assignors to Edge Moor Iron Company, Edge Moor, Del. Boring and facing machine for boiler-headers. No. 961,542; June 14; Sp. p. 2699; Gaz. vol. 155; p. 468.

Selma Fruit Company. (See Elliott, Thomas H., assignor.)

Sendall, Charles F., Brooklyn, N. Y. Indicator-funnel. No. 962,674; June 28; Sp. p. 5144; Gaz. vol. 155; p. 900.

Servatius, Joseph H., and F. E. Meinel, assignors to Illinois Show Case Works, Chicago, Ill. Display-rack for show-cases. No. 961,029; June 7; Sp. p. 1588; Gaz. vol. 155; p. 266.

Sessions, Frank L., assignor to The Jeffrey Manufacturing Company. Columbus, Ohio. Trolley-switch. No. 962,533; June 28; Sp. p. 4851; Gaz. vol. 155; p. 853.

Sessions, Hugh E., Columbia, S. C. Cotton-seed linter. No. 962,722; June 28; Sp. p. 5255; Gaz. vol. 155; p. 917.

Setter, Antone J., Cattaraugus, N. Y. Punching apparatus. No. 961,653; June 14; Sp. p. 2916; Gaz. vol. 155; p. 505.

Sgal, Ludwig, Chislehurst, England, and J. Schwanda, Vienna, Austria-Hungary, assignors to Pioneer Engineering Syndicate Limited, London, England. Self-feeder for printing-presses. No. 962,866; June 28; Sp. p. 5539; Gaz. vol. 155; p. 960.

Shade, Theodore, Sacramento, assignor to Lightning Valve and Dredge Company, Stockton, Cal. Valve. No. 961,466; June 14; Sp. p. 2524; Gaz. vol. 155; p. 445.

Shaeffer, Charles, Paris, Tex. Crude-oil burner. No. 961,030; June 7; Sp. p. 1590; Gaz. vol. 155; p. 266.

Shaffer, Frederick R., New York, N. Y., assignor to The New York Flatiron Company. Self-heating sad-iron. No. 961,377; June 14; Sp. p. 2338; Gaz. vol. 155; p. 413.

Shaffer, Frederick R., New York, N. Y., assignor to New York Flatiron Company. Sad-iron. No. 961,378; June 14; Sp. p. 2340; Gaz. vol. 155; p. 413.

Shaffer, Knuland, trustee. (See Dunning, Robert A., assignor.)

Shaffer, Philip J., Springfield, Ill. Composition of matter for cleaning and shining wood. No. 961,903; June 21; Sp. p. 3457; Gaz. vol. 155; p. 612.

Shaffner, Clarence B. (See Hadjich, George, assignor.)

Shank, Orey D., Philadelphia, Pa. Horse-checking device. No. 961,168; June 14; Sp. p. 1872; Gaz. vol. 155; p. 340.

Shannon, Thornton I., and F. M. Garnett, Columbus, Ohio. Coin-controlled pneumatically-operated musical instrument. No. 962,534; June 28; Sp. p. 4852; Gaz. vol. 155; p. 853.

Sharp, Clayton H., White Plains, and P. S. Millar, Brooklyn, N. Y. Photometer. No. 960,420; June 7; Sp. p. 366; Gaz. vol. 155; p. 62.

Sharp & Smith. (See Sheppard, Osborne H., assignor.)

Shear, William G., Grand Rapids, Mich. Convertible chair. No. 961,169; June 14; Sp. p. 1875; Gaz. vol. 155; p. 340.

Sheasby, William H., and S. G. Neal, assignors to The California Valve and Air-Brake Company, Los Angeles, Cal. Air-braking apparatus for railways. No. 961,320; June 14; Sp. p. 2221; Gaz. vol. 155; p. 394.

Sheer, Henry M., Quincy, Ill. Thermostatic regulator for incubators. No. 961,654; June 14; Sp. p. 2918; Gaz. vol. 155; p. 505.

Sheldon, Angus, Kenton, Ohio. Garden-hoe. No. 962,392; June 21; Sp. p. 4508; Gaz. vol. 155; p. 778.

Sheldon, Jesse, Vineland, N. J. Attachment for the sounding-boards of stringed instruments. No. 962,393; June 21; Sp. p. 4509; Gaz. vol. 155; p. 778.

Sheldon, Rufus N., assignor of one-half to S. W. Rohn, Norwalk, Ohio. Apparatus for the distribution of liquid soap in lavatories. No. 962,394; June 21; Sp. p. 4510; Gaz. vol. 155; p. 778.

Shelton, Henry D., Hughesville, Mo. Compressor. No. 962,592; June 28; Sp. p. 4986; Gaz. vol. 155; p. 872.

Shelton, John B., Detroit, Mich. Dump car and cart. No. 962,593; June 28; Sp. p. 4986; Gaz. vol. 155; p. 873.

Shepherd, John. (See Nolen and Shepherd.)

Shepherd, John E. (See Nolen and Shepherd, assignors.)

Sheppard, Osborne H., assignor to Sharp & Smith, Chicago, Ill. Pessary. No. 960,721; June 7; Sp. p. 980; Gaz. vol. 155; p. 163.

Sherman, James M., Columbia, Mo. Incubator. No. 962,594; June 28; Sp. p. 4991; Gaz. vol. 155; p. 873.

Sherman, Louis A., Detroit, Mich. Hydrocarbon-burner. No. 960,722; June 7; Sp. p. 981; Gaz. vol. 155; p. 163.

Sherod, John T., Kansas City, Kans. Combined drill-press and boring-machine. No. 962,474; June 28; Sp. p. 4720; Gaz. vol. 155; p. 832.

Sherwood, Oliver, New York, N. Y. Film spreader and holder. No. 961,808; June 21; Sp. p. 3250; Gaz. vol. 155; p. 580.

Sherwood, William M., Alexandria, Minn. Traveling platform. No. 961,809; June 21; Sp. p. 3253; Gaz. vol. 155; p. 580.

Shields, George, Brooklyn, assignor, by mesne assignments, to The Glass Enameled Package Co., Westchester county, N. Y. Barrel. No. 961,737; June 14; Sp. p. 3087; Gaz. vol. 155; p. 533.

Shinn, William H., *et al.* (See Owen, Charles L., assignor.)

Shipman, Edwin S., Braddock, Pa. Splice-bar lock. No. 961,031; June 7; Sp. p. 1591; Gaz. vol. 155; p. 266.

Shirley, Cephas I., Newark, assignor to Hyatt Roller Bearing Company, Harrison, N. J. Adjustable sleeve for journal-bearings. No. 962,059; June 21; Sp. p. 3789; Gaz. vol. 155; p. 665.

Shmonsky, Frank, Ridgway, Pa. Combined gas and smoke consuming attachment. No. 961,810; June 21; Sp. p. 3254; Gaz. vol. 155; p. 581.

Shnable & Quinn. (See Quinn, John B., assignor.)

Sholes, Frank L., Chicago, Ill., assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 962,169; June 21; Sp. p. 4058; Gaz. vol. 155; p. 704.

Shook, Lowell B., Riverside, Cal., assignor of one-fourth to S. E. Shook, Cuyahoga Falls, Ohio. Twine-holder. No. 961,032; June 7; Sp. p. 1593; Gaz. vol. 155; p. 267.

Shook, Solomon E. (See Shook, Lowell B., assignor.)

Shore, Albert F., assignor to Shore Instrument Manufacturing Company, New York, N. Y. Scleroscope. No. 962,790; June 28; Sp. p. 5396; Gaz. vol. 155; p. 942.

Shore Instrument Manufacturing Company. (See Shore, Albert F., assignor.)

Shotwell, James, Watsonville, Cal. Swivel hose-coupling. No. 961,170; June 14; Sp. p. 1876; Gaz. vol. 155; p. 340.

Shreckengast, Ernest R., Millheim, Pa. Collapsible umbrella. No. 961,811; June 21; Sp. p. 3256; Gaz. vol. 155; p. 581.

Shumaker, Charles J. (See Tanner, Daniel N., assignor.)

Shuman, Fred B., Lowell, Ohio. Twine-holder. No. 962,791; June 28; Sp. p. 5399; Gaz. vol. 155; p. 942.

Sibley, Augustus W., assignor to Herring-Hall-Marvin Safe Company, Hamilton, Ohio. Interchangeable-key lock. No. 960,421; June 7; Sp. p. 371; Gaz. vol. 155; p. 62.

Sidegreaves, Henry W., New York, N. Y. Flat-iron-handle cooler. No. 961,543; June 14; Sp. p. 2701; Gaz. vol. 155; p. 468.

Siebert, Charles M., Jr. (See McCall and Siebert.)

Siebert, Charles M., Jr. (See Siebert, Louis A. and C. M., Jr.)

Siebert, Charles M., Jr., assignor to The Siebert-Welch Company, Columbus, Ohio. Cup or head for massage devices. No. 961,033; June 7; Sp. p. 1594; Gaz. vol. 155; p. 267.

Siebert, Charles M., Jr., assignor to The Siebert-Welch Company, Columbus, Ohio. Valve-operated mechanism for handles of vibratory apparatus. No. 961,379; June 14; Sp. p. 2342; Gaz. vol. 155; p. 414.

Siebert, Louis A. and C. M., Jr., assignors to The Siebert-Welch Company, Columbus, Ohio. Massage apparatus. No. 961,034; June 7; Sp. p. 1595; Gaz. vol. 155; p. 267.

Siebert-Welch Company, The. (See McCall and Siebert, assignors.)

Siebert-Welch Company, The. (See Siebert, Charles M., Jr., assignor.)

Siebert-Welch Company, The. (See Siebert, Louis A. and C. M., Jr., assignors.)

Siegel, Siegmund M., New York, N. Y. Figure toy. No. 961,812; June 21; Sp. p. 3257; Gaz. vol. 155; p. 581.

Siegfried, William A., Lehighton, Pa. Car-door lock. No. 962,395; June 21; Sp. p. 4512; Gaz. vol. 155; p. 779.

Siegmann, William C. F., assignor to The Sagax Wood Company, Baltimore, Md. Composition of matter. No. 960,422; June 7; Sp. p. 374; Gaz. vol. 155; p. 63.

Siemens & Halske, A. G. (See Ebeling, August W., assignor.)

Siemens-Schuckert-Werke G. M. B. H. (See Meckelburg, Eduard, assignor.)

Siemens-Schuckertwerke G. m. b. H. (See Richter, Rudolf, assignor.)

Sigoloff, Jacob, St. Louis, Mo. Saw. No. 962,535; June 28; Sp. p. 4854; Gaz. vol. 155; p. 853.

Simisky, Joseph A., Worcester, Mass. Ink-holder for pens. No. 961,171; June 14; Sp. p. 1878; Gaz. vol. 155; p. 341.

Simmons, Joel R., and P. J. Ford, Augusta, Ga. Operating mechanism for roundabouts. No. 960,448; June 7; Sp. p. 416; Gaz. vol. 155; p. 70.

Simmons Manufacturing Company, The. (See Wilson, John C., assignor.)

Simon, Frank, Minnar, Transvaal. Rope-jockey. No. 962,475; June 28; Sp. p. 4722; Gaz. vol. 155; p. 832.

Simons, Frank, St. Louis, Mo. Bell-ringer. No. 961,544; June 14; Sp. p. 2702; Gaz. vol. 155; p. 469.

Simpson Bros. Corporation. (See Simpson, Joseph B., assignor.)

Simpson, Joseph B., Newton, assignor to Simpson Bros. Corporation, Boston, Mass. Casting artificial stone. No. 962,924; June 28; Sp. p. 5639; Gaz. vol. 155; p. 987.

Simpson, Robert D., Columbus, assignor to The National Safety Snap Company, Wilmington, Ohio. Hame-fastener. No. 960,423; June 7; Sp. p. 375; Gaz. vol. 155; p. 63.

Sims, Lewis C., Louisville, Ohio. Rope-fastener. No. 962,675; June 28; Sp. p. 5145; Gaz. vol. 155; p. 900.

Simson, Frederick W., Winthrop, Mass. Car-ventilator. No. 962,476; June 28; Sp. p. 4723; Gaz. vol. 155; p. 833.

Sinclair, Robert, Chicago, Ill. Ditching-machine. No. 961,321; June 14; Sp. p. 2236; Gaz. vol. 155; p. 394.

Sinding-Larsen, Alf, Christiania, Norway. Making silicon nitrid. No. 962,170; June 21; Sp. p. 4061; Gaz. vol. 155; p. 705.

Singer Manufacturing Company, The. (See Jacob, Frederick, assignor.)

Singer Manufacturing Company, The. (See McFarlane, Hugh, assignor.)

Single Service Package Corporation of America. (See Plimpton, Harry C., assignor.)

Sipos, Joseph, South Norwalk, Conn. Lock. No. 962,792; June 28; Sp. p. 5400; Gaz. vol. 155; p. 942.

Skidmore, John C., Grapeland, Tex. Plow-fender. No. 962,264; June 21; Sp. p. 4251; Gaz. vol. 155; p. 736.

Skillcorn, John H., Pittsburg, Pa. Automatic gas cut-off. No. 961,904; June 21; Sp. p. 3458; Gaz. vol. 155; p. 612.

Skinner, Edwin M., Fort Wadsworth, N. Y. Auxiliary tool for use in connection with spades. No. 962,723; June 28; Sp. p. 5258; Gaz. vol. 155; p. 917.

Skinner, William I., Richfield, N. Y. Potato-digger. No. 961,545; June 14; Sp. p. 2705; Gaz. vol. 155; p. 469.

Skopinski, Adolf, Jack Wade, Alaska. Means for automatically dumping excavating-scrapers. No. 960,590; June 7; Sp. p. 718; Gaz. vol. 155; p. 118.

Slaughter, Alice. (See Rigby, Nicholas L., assignor.)

Sloper, Thomas, Devizes, England. Mechanism for manufacturing pneumatic tires. No. 961,172; June 14; Sp. p. 1879; Gaz. vol. 155; p. 341.

Slorach, John, Cleveland, Johannesburg, Transvaal. Valve device. No. 961,173; June 14; Sp. p. 1883; Gaz. vol. 155; p. 342.

Slotta, Ernst J. F., Coswig, near Dresden, Germany. Template or gage. No. 962,171; June 21; Sp. p. 4062; Gaz. vol. 155; p. 705.

Slough, Max R., Covina, Cal. Dental advertising device. No. 961,262; June 14; Sp. p. 2068; Gaz. vol. 155; p. 372.

Smart, Walter J., assignor to Firm of Simon Zinn, New York, N. Y. Cutting-blade for razors. No. 960,424; June 7; Sp. p. 376; Gaz. vol. 155; p. 63.

Smith, Adolph J., Montreal, Quebec, Canada. Automatic ash-sifter. No. 960,591; June 7; Sp. p. 720; Gaz. vol. 155; p. 119.

Smith, Alfred M., Hagerstown, Md. Arch-support. No. 961,174; June 14; Sp. p. 1885; Gaz. vol. 155; p. 342.

Smith, Alice J., and H. W. Kent, Milwaukee, Wis., assignors to Kent Ore Reduction Company, Chicago, Ill. Amalgamator. No. 961,905; June 21; Sp. p. 3460; Gaz. vol. 155; p. 612.

Smith, Anthony J., assignor of one-third to W. J. Smith, New York, N. Y. Electric fuse. No. 961,175; June 14; Sp. p. 1886; Gaz. vol. 155; p. 342.

Smith, Arthur K., assignor to R. B. Gait and A. O. Woerner, trustees, St. Louis, Mo. Mail-chute. No. 961,813; June 21; Sp. p. 3258; Gaz. vol. 155; p. 582.

Smith, Benjamin W., assignor of one-half to T. C. Neal, Montpelier, Ind. Rail-tie fastening. No. 961,078; June 7; Sp. p. 1690; Gaz. vol. 155; p. 282.

Smith, Charles B., Dunedin, New Zealand. Numbering-machine. No. 961,035; June 7; Sp. p. 1596; Gaz. vol. 155; p. 268.

Smith, Edward W., Philadelphia, assignor of one-third to E. G. Steinmetz, Jenkintown, Pa. Toy aeroplane. No. 962,172; June 21; Sp. p. 4063; Gaz. vol. 155; p. 705.

Smith, Fred R. (See Turner, Albert O., assignor.)

Smith, George, Jr., Thorndike, Mass. Hat-hanger. No. 960,592; June 7; Sp. p. 721; Gaz. vol. 155; p. 119.

Smith, George A., New York, assignor of sixteen one-hundred-and-fourths to J. W. Hennessey, Richmond, N. Y.; forty-six one-hundred-and-fourths to A. Letts, Los Angeles, Cal., and twenty-one one-hundred-and-fourths to F. H. Ward, Brooklyn, N. Y. Back-spacing device for type-writers. No. 961,546; June 14; Sp. p. 2708; Gaz. vol. 155; p. 470.

Smith, George A., New York, assignor of sixteen one-hundred-and-fourths to J. W. Hennessey, Richmond, N. Y.; forty-six one-hundred-and-fourths to A. Letts, Los Angeles, Cal., and twenty-one one-hundred-and-fourths to F. H. Ward, Brooklyn, N. Y. Marginal-stop device for type-writers. No. 961,547; June 14; Sp. p. 2709; Gaz. vol. 155; p. 470.

Smith, George H., assignor to P. S. Dyer, Easton, Pa. Asbestos-faced woven fabric. No. 963,013; June 28; Sp. p. 5807; Gaz. vol. 155; p. 1017.

Smith, George H., assignor to P. S. Dyer, Easton, Pa. Textile fabric. No. 963,014; June 28; Sp. p. 5808; Gaz. vol. 155; p. 1017.

Smith & Hemenway Company. (See Kuhl, Burchard, assignor.)
Smith, Henry A., Elgin, assignor to Star Manufacturing Company, Carpentersville, Ill. Rake-tooth point. No. 962,060; June 21; Sp. p. 3791; Gaz. vol. 155; p. 665.
Smith, Herbert M., Pittsfield, Mass., assignor to General Electric Company, Electric heating unit. No. 962,793; June 28; Sp. p. 5402; Gaz. vol. 155; p. 943.
Smith, Jay C., assignor to American Sign Company, Kalamazoo, Mich. Sign. No. 962,724; June 28; Sp. p. 5259; Gaz. vol. 155; p. 918.
Smith, John F., Little Rock, Ark. Sprinkling device. No. 961,906; June 21; Sp. p. 3464; Gaz. vol. 155; p. 613.
Smith, Johnny B., Johannesburg, Transvaal. Hanging receptacle for medicines and the like. No. 962,595; June 28; Sp. p. 4993; Gaz. vol. 155; p. 874.
Smith, Joseph E., Hot Springs, Ark. Buckle. No. 960,593; June 7; Sp. p. 723; Gaz. vol. 155; p. 119.
Smith Manufacturing Company. (See Fitzgerald, Jeremiah C., assignor.)
Smith, Marcus E., Watertown, Mass. Apparatus for making cement building-blocks. No. 962,104; June 21; Sp. p. 3892; Gaz. vol. 155; p. 680.
Smith Premier Typewriter Company, The. (See Briggs, Arthur J., assignor.)
Smith, Russell A., assignor of one-fourth to J. L. Emerson and one-fourth to E. O. Emerson, Jr., Titusville, Pa. Cleaning molding-sand. No. 962,265; June 21; Sp. p. 4252; Gaz. vol. 155; p. 736.
Smith, Theodore, Chicago, Ill. Adjustable bracket. No. 960,723; June 7; Sp. p. 982; Gaz. vol. 155; p. 163.
Smith, Willard A., Melrose, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J. Fastening-machine. No. 962,105; June 21; Sp. p. 3895; Gaz. vol. 155; p. 681.
Smith, William E. (See Kolin, James, assignor.)
Smith, William J. (See Smith, Anthony J., assignor.)
Smith, William S., St. Paul, Minn. Brake. No. 960,425; June 7; Sp. p. 878; Gaz. vol. 155; p. 63.
Snell, Charles H., Los Angeles, Cal. Pliers. No. 960,724; June 7; Sp. p. 984; Gaz. vol. 155; p. 164.
Snipes, Thomas D. (See Medcalf, William M., assignor.)
Snow, Renceler C. (See Côté and Snow.)
Snyder, George W. (See Gray, Wiltshire S., assignor.)
Snyder, Harry L., Los Angeles, Cal. Paper-bag holder. No. 962,676; June 28; Sp. p. 5147; Gaz. vol. 155; p. 900.
Snyder, John F. (See Linville, Robert W., assignor.)
Snyder, Samuel A. (See Lindsley, Thomas B., assignor.)
Snyder, Simon, assignor to Sprout, Waldron & Co., Muncy, Pa. Gyrating sieve-bolter. No. 961,814; June 21; Sp. p. 3260; Gaz. vol. 155; p. 582.
Snyder, William A., Los Angeles, Cal. Cabinet-table. No. 960,594; June 7; Sp. p. 724; Gaz. vol. 155; p. 119.
Snyder, William L., Detroit, Mich., assignor to The American Agricultural Chemical Company, New York, N. Y. Separator. No. 960,726; June 7; Sp. p. 986; Gaz. vol. 155; p. 164.
Sober, Morris S., McLoud, Okla. Gun-sight. No. 962,596; June 28; Sp. p. 4994; Gaz. vol. 155; p. 874.
Sobieck, Valentine S., *et al.* (See Louden, Arthur F. D., assignor.)
Société A. Darracq & Cie. (1905) Limited. (See Darracq, Pierre A., assignor.)
Sohm, Alfred L., assignor to National Electric Works, Whittier, Cal. Electric signal-sounding apparatus. No. 961,036; June 7; Sp. p. 1599; Gaz. vol. 155; p. 268.
Sohmer & Company. (See Weber, Peter, assignor.)
Solomon, Alexander P. (See White, Joseph P., assignor.)
Solomon, John I., New York, N. Y. Apparatus for examining matter or objects in quantities. No. 961,322; June 14; Sp. p. 2239; Gaz. vol. 155; p. 394.
Somerville, William J., Cleveland, Ohio. Ink-well. No. 960,726; June 7; Sp. p. 987; Gaz. vol. 155; p. 164.
Somsen, Henry S., Raymond, Idaho. Combined low-wheeled wagon and sled. No. 962,266; June 21; Sp. p. 4254; Gaz. vol. 155; p. 736.
Southern Furniture Company. (See Baltzley, Edwin, assignor.)
Southgate, Louis W., Worcester, Mass. Telephone relay or repeater. No. 961,815; June 21; Sp. p. 3267; Gaz. vol. 155; p. 583.
Southworth, Edward, Portland, Me. Clutch mechanism for punching-machines. No. 961,382; June 14; Sp. p. 2347; Gaz. vol. 155; p. 415.
Southworth, Edward, and F. A. Spaulding, Portland, Me. Punching-machine. No. 961,381; June 14; Sp. p. 2345; Gaz. vol. 155; p. 414.
Southworth, Gertrude V. D., Syracuse, N. Y. Book-cover. No. 961,548; June 14; Sp. p. 2711; Gaz. vol. 155; p. 470.
Sparks, George M. (See Huse, Byron, assignor.)
Sparling, Edith H., *et al.* (See Opitz, Frank E., assignor.)
Spaulding, Eugene A. (See Southworth and Spaulding.)
Spencer, Frederick H., Minneapolis, Minn. Manifolding-sales-book cover. No. 960,727; June 7; Sp. p. 990; Gaz. vol. 155; p. 165.
Spencer, Henry W., London, England. Steam-separator. No. 961,037; June 7; Sp. p. 1605; Gaz. vol. 155; p. 268.
Sperberg, Edward E., assignor to The Selig Polyscope Company, Chicago, Ill. Moving-picture machine. No. 961,655; June 14; Sp. p. 2919; Gaz. vol. 155; p. 505.
Sperry, Albert O., Thayer, Kans. Penholder. No. 960,595; June 7; Sp. p. 725; Gaz. vol. 155; p. 120.
Sperry, Elmer A., Brooklyn, assignor to Hooker Electrochemical Company, New York, N. Y. Cathode. No. 961,549; June 14; Sp. p. 2713; Gaz. vol. 155; p. 470.
Spillane, Thomas, New Bethlehem, Pa. Method of and apparatus for drawing glass. No. 962,925; June 28; Sp. p. 5640; Gaz. vol. 155; p. 987.
Spinner, Andrew E., Morgan City, La. Make-up cabinet for theatrical use. No. 960,596; June 7; Sp. p. 726; Gaz. vol. 155; p. 120.
Sprado, Carl G., assignor to Allis-Chalmers Company, Milwaukee, Wis. Gas-engine. No. 961,079; June 7; Sp. p. 1701; Gaz. vol. 155; p. 282.
Sprague, Arthur W., La Grange, assignor to American Steel & Wire Company, Chicago, Ill. Fence-post. No. 960,597; June 7; Sp. p. 727; Gaz. vol. 155; p. 120.
Spreen, Ernest, Minocqua, Wis. Supporting-base for anvils. No. 962,477; June 28; Sp. p. 4726; Gaz. vol. 155; p. 833.
Spreen, Ernest, Minocqua, Wis. Attachment for anvils. No. 962,478; June 28; Sp. p. 4727; Gaz. vol. 155; p. 833.
Springer, Frank W., Minneapolis, Minn. Igniting system for explosive-engines. No. 960,598; June 7; Sp. p. 727; Gaz. vol. 155; p. 120.
Sprout, Waldron & Co. (See Snyder, Simon, assignor.)
Squier, Arthur H., Philadelphia, Pa., assignor of eleven-fifteenths to The Air Cleaner Company. Cleaning apparatus. No. 961,816; June 21; Sp. p. 3270; Gaz. vol. 155; p. 583.
St. John, Charles P., deceased, Chicago, Ill., assignor of one-half to R. J. Ehlers, New York, N. Y., J. A. Mills, executrix. Washboard. No. 962,598; June 28; Sp. p. 4998; Gaz. vol. 155; p. 875.
St. Louis Frog & Switch Company. (See Einstein, Robert E., assignor.)
Stacy, Ely A., New York, N. Y. Hair-roll with comb-band attachment. No. 961,823; June 14; Sp. p. 2241; Gaz. vol. 155; p. 395.
Stancliff, George W., assignor to Stancliff Well Screen and Mfg. Company, Houston, Tex. Notching attachment for wire-winding machines. No. 961,038; June 7; Sp. p. 1606; Gaz. vol. 155; p. 269.
Stancliff Well Screen and Mfg. Company. (See Stancliff, George W., assignor.)
Standard Car Truck Company. (See Barber, John C., assignor.)
Standard Coupler Company. (See Gallagher, Richard D., Jr., assignor.)
Standard Steel Car Company. (See Christianson, Andrew, assignor.)
Standard Steel Car Company. (See Hansen, John M., assignor.)
Stanley, Frank C. (See Gabrielson and Stanley.)
Stanley, Nathan M., Dayton, Ohio. Attaching metallic characters to leather and the like. No. 961,550; June 14; Sp. p. 2714; Gaz. vol. 155; p. 471.
Stanley Rule & Level Company, The. (See Bodmer, Christian, assignor.)
Stanley Rule & Level Company, The. (See Richards, Hubert P., assignor.)
Stanwood, Frank H., Baldwinsville, Mass. Step or tread. No. 961,176; June 14; Sp. p. 1887; Gaz. vol. 155; p. 343.
Staples, William. (See Hanes and Staples.)
Star Manufacturing Company. (See Smith, Henry A., assignor.)
Stark, Emil G., Chemnitz, Germany. Treating brittle vegetable fibers. No. 962,173; June 21; Sp. p. 4066; Gaz. vol. 155; p. 706.
Starr, George A., Falls City, Oreg. Pump. No. 961,039; June 7; Sp. p. 1610; Gaz. vol. 155; p. 269.
Staude, Edwin G., Minneapolis, Minn. Stacking and counting mechanism for flexible box-blanks. No. 961,263; June 14; Sp. p. 2070; Gaz. vol. 155; p. 373.
Stauffer, Samuel D., Lancaster, Pa. Radiator. No. 962,061; June 21; Sp. p. 3793; Gaz. vol. 155; p. 666.
Stawartz, John J., assignor of one-third to J. J. McCague and one-third to J. Uhrin, Homestead, Pa. Automobile-brake. No. 960,426; June 7; Sp. p. 879; Gaz. vol. 155; p. 64.
Stebbings, Eugene, Macon, Mo. Gate. No. 961,551; June 14; Sp. p. 2715; Gaz. vol. 155; p. 471.
Steedman, George F., assignor to Curtis & Co., Mfg. Co., St. Louis, Mo. Trolley. No. 960,728; June 7; Sp. p. 991; Gaz. vol. 155; p. 165.
Steel Roll Machine Company. (See French, Walter, assignor.)
Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 960,427; June 7; Sp. p. 880; Gaz. vol. 155; p. 64.
Steere, Gilbert D., Holyoke, Mass. Appliance for bookbinders' use. No. 962,867; June 28; Sp. p. 5543; Gaz. vol. 155; p. 969.
Steere, Merrill O., Pawtucket, R. I. Shuttle. No. 961,817; June 21; Sp. p. 3272; Gaz. vol. 155; p. 583.
Stell, Edmund, assignor to Berlin-Anhaltische Maschinenbau-Actien-Gesellschaft, Abteilung XII, Berlin, Germany. Inverted gas-burner. No. 961,040; June 7; Sp. p. 1613; Gaz. vol. 155; p. 270.
Steinmetz, Edward G. (See Smith, Edward W., assignor.)
Steinmeyer, Samuel, Bonaparte, Iowa. Copy-holder. No. 962,988; June 28; Sp. p. 5758; Gaz. vol. 155; p. 1008.
Stephens, Francis, assignor of one-half to J. T. Miller, Mitchell, S. D. Floor-scraper. No. 962,926; June 28; Sp. p. 5642; Gaz. vol. 155; p. 988.
Stephens, Sterling, Bushnell, Fla. Railway-joint. No. 960,428; June 7; Sp. p. 885; Gaz. vol. 155; p. 64.

Stephens, William A., Little Rock, Ark. Subsoiler attachment for plows. No. 960,600; June 7; Sp. p. 735; Gaz. vol. 155; p. 121.
Sterling Novelty Company, The. (See Toohey, Patrick W., assignor.)
Stevens, Edward F. (See McStay and Stevens.)
Steveps, George A., Centralia, Ill. Gun-stock. No. 961,041; June 7; Sp. p. 1615; Gaz. vol. 155; p. 270.
Stevens, George E., Lynn, Mass., assignor to General Electric Company. Electrically-heated flat-iron. No. 962,989; June 28; Sp. p. 5759; Gaz. vol. 155; p. 1008.
Stevens, Josiah P., Atlanta, Ga. Engraving-machine. No. 962,062; June 21; Sp. p. 3794; Gaz. vol. 155; p. 666.
Stevens, Thomas M., Watertown, Mass. Lightning-arresting apparatus. No. 962,536; June 28; Sp. p. 4856; Gaz. vol. 155; p. 854.
Stevens, William C. (See Merriman and Stevens.)
Stevenson, Samuel P., Chester, Pa. Door and doorway for refrigerating-apartments and similar structures. No. 962,174; June 21; Sp. p. 4066; Gaz. vol. 155; p. 706.
Steward, John W., Paterson, N. J. Tobacco-pipe. No. 960,429; June 7; Sp. p. 886; Gaz. vol. 155; p. 64.
Stewart, Alfred C., Los Angeles, Cal. Carbureter. No. 960,601; June 7; Sp. p. 736; Gaz. vol. 155; p. 121.
Stewart, Harland. (See Jones and Stewart.)
Stewart, John, Logan, Utah. Diffusion process. No. 962,597; June 28; Sp. p. 4995; Gaz. vol. 155; p. 874.
Stewart, John, Logan, Utah. Diffusion apparatus. No. 962,725; June 28; Sp. p. 5260; Gaz. vol. 155; p. 918.
Stewart, Matthew A., Newark, N. J., assignor to The Matt Stewart Company, Memphis, Tenn. Envelop-machine. No. 962,927; June 28; Sp. p. 5643; Gaz. vol. 155; p. 988.
Stewart, Matthew A., Newark, N. J., assignor to The Matt Stewart Company, Memphis, Tenn. Eyelet and rivet feeding device. No. 962,928; June 28; Sp. p. 5645; Gaz. vol. 155; p. 988.
Stickel, John H., Handy Harrisville Station, Pa. Combined check and gate valve. No. 961,738; June 14; Sp. p. 3088; Gaz. vol. 155; p. 533.
Stickney, Allison M., assignor to Wellman Company, Medford, Mass. Machine for cutting irregular forms. No. 961,907; June 21; Sp. p. 3464; Gaz. vol. 155; p. 613.
Stimpson, Edwin B., New York, N. Y., assignor to Edwin B. Stimpson Company. Rivet. No. 962,794; June 28; Sp. p. 5403; Gaz. vol. 155; p. 943.
Stock, Augusta M., assignor to Robert Stock Manufacturing Co., Buffalo, N. Y. Barrel-tapping device. No. 961,739; June 14; Sp. p. 3090; Gaz. vol. 155; p. 534.
Stock Quotation Telegraph Company, The. (See Burry, John, assignor.)
Stock Quotation Telegraph Company, The. (See Hiltz, George S., assignor.)
Stocker, Fred, assignor of one-half to G. M. Meyer, Saginaw, Mich. Cigar-lighter. No. 961,264; June 14; Sp. p. 2074; Gaz. vol. 155; p. 373.
Stodd, Alexander F. F., Paterson, N. J. Incandescent electric lamp. No. 962,795; June 28; Sp. p. 5404; Gaz. vol. 155; p. 943.
Stoddard, Albert A. (See Foster and Stoddard.)
Stoddard, Charles F., Boston, Mass., assignor to American Pneumatic Service Company, Dover, Del. Carrier for pneumatic-despatch-tube apparatus. No. 962,796; June 28; Sp. p. 5405; Gaz. vol. 155; p. 943.
Stoddard, Charles F., Boston, Mass., assignor to American Pneumatic Service Company, Dover, Del. Pneumatic-despatch-tube apparatus. No. 962,797; June 28; Sp. p. 5408; Gaz. vol. 155; p. 944.
Stoddard, Justen, Stillwater, Minn. Piston-ring. No. 962,590; June 28; Sp. p. 4999; Gaz. vol. 155; p. 875.
Stone, Charles R. (See Wise, William D., assignor.)
Stone, John S., Boston, Mass. Apparatus for determining the direction of space-telegraph signals. No. 961,265; June 14; Sp. p. 2075; Gaz. vol. 155; p. 373.
Stone, Spencer A., Chillicothe, Mo. Road-grader. No. 962,267; June 21; Sp. p. 4256; Gaz. vol. 155; p. 736.
Storms, George W., Louisville, Ky. Culvert-head. No. 961,908; June 21; Sp. p. 3466; Gaz. vol. 155; p. 613.
Storrs, William H., New York, N. Y. Pipe. No. 961,042; June 7; Sp. p. 1616; Gaz. vol. 155; p. 270.
Stouffer, Benjamin W., Pittsburg, Pa. Lock for swing-joints. No. 961,552; June 14; Sp. p. 2716; Gaz. vol. 155; p. 471.
Stoup, George G., Latrobe, Pa. Spark-arrester. No. 960,430; June 7; Sp. p. 887; Gaz. vol. 155; p. 65.
Stowell, John E. (See Stowell, Marion R. and J. E.)
Stowell, Marion R. and J. E., Pillager, Minn. Single-delivery match-receptacle and cigar-cutter. No. 960,431; June 7; Sp. p. 889; Gaz. vol. 155; p. 65.
Stoy, Guy E. (See Blackmond and Stoy.)
Straud, Henry, Cleveland, Ohio. Furnace. No. 962,677; June 28; Sp. p. 5148; Gaz. vol. 155; p. 900.
Straubel, Rudolf, assignor to Firm of C. Zeiss, Jena, Germany. Testing appliance. No. 962,175; June 21; Sp. p. 4070; Gaz. vol. 155; p. 706.
Straubel, Rudolf, assignor to firm of C. Zeiss, Jena, Germany. Hinged double telescope. No. 962,929; June 28; Sp. p. 5647; Gaz. vol. 155; p. 989.
Strickiin, Walter L., assignor of one-half to M. Plough, Memphis, Tenn. Post-hole digger. No. 961,656; June 14; Sp. p. 2921; Gaz. vol. 155; p. 506.
Strong, Carlisle & Hammond Co., The. (See Weintz, Jacob, assignor.)
Strother, Robert H., New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 962,600; June 28; Sp. p. 5000; Gaz. vol. 155; p. 875.
Stryker, James M., Chicago, Ill. Bag-tie. No. 960,432; June 7; Sp. p. 891; Gaz. vol. 155; p. 65.
Stuart, Albert H., Boston, Mass. Tempo-controller for automatic pianos. No. 962,537; June 28; Sp. p. 4857; Gaz. vol. 155; p. 854.
Stuebner, Gustavus L., Flushing, N. Y. Bottom-dumping bucket. No. 962,930; June 28; Sp. p. 5649; Gaz. vol. 155; p. 989.
Sturtevant Mill Company. (See Sturtevant, Thomas L. and T. J., assignors.)
Sturtevant, Thomas J. (See Sturtevant, Thomas L. and T. J.)
Sturtevant, Thomas L., Quincy, and T. J. Sturtevant, Wellesley, Mass., assignors to Sturtevant Mill Company. Carbureter. No. 961,423; June 14; Sp. p. 2420; Gaz. vol. 155; p. 427.
Sturtevant, Thomas L., Quincy, and T. J. Sturtevant, Wellesley, Mass., assignors to Sturtevant Mill Company. Vibrating screen or separator. No. 961,467; June 14; Sp. p. 2526; Gaz. vol. 155; p. 443.
Stütting, Heinrich, Witten, Germany. Tube-rolling mill. No. 961,818; June 21; Sp. p. 3275; Gaz. vol. 155; p. 584.
Stuts, Edward, Paterson, N. J. Shuttle-race for looms. No. 960,433; June 7; Sp. p. 892; Gaz. vol. 155; p. 65.
Suddoth, Frank E., and W. T. S. Weaver, Omaha, Nebr. Clutch mechanism. No. 961,043; June 7; Sp. p. 1617; Gaz. vol. 155; p. 270.
Sullivan, Daniel A. (See Jordan and Sullivan.)
Sulman, Henry L., H. H. Greenway, and A. H. Higgins, London, England. Ore concentration. No. 962,678; June 28; Sp. p. 5150; Gaz. vol. 155; p. 901.
Summerfield, Oliver, Hot Springs, Ark. Meat-tenderer. No. 961,657; June 14; Sp. p. 2924; Gaz. vol. 155; p. 506.
Summers, U. Grant. (See Walton, Orrin E., assignor.)
Sundh, August, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Chain-gear steering apparatus. No. 962,268; June 21; Sp. p. 4257; Gaz. vol. 155; p. 736.
Suthergreen, Frederic S., Manchester, Mass. Tire-holder and trunk. No. 961,553; June 14; Sp. p. 2717; Gaz. vol. 155; p. 471.
Sutton, James A., Packwood, Iowa. Plow attachment for cultivators. No. 961,044; June 7; Sp. p. 1619; Gaz. vol. 155; p. 271.
Swain Concentrator Company, The. (See Swain, Seth R., assignor.)
Swain, Seth R., Denver, Colo., assignor to The Swain Concentrator Company. Ore-concentrator. No. 962,990; June 28; Sp. p. 5760; Gaz. vol. 155; p. 1009.
Swan, Frederick A., Cliftondale, Mass. Strain-relief for lamp-sockets. No. 962,063; June 21; Sp. p. 3805; Gaz. vol. 155; p. 666.
Swanson, John A., Canton, S. D. Windmill. No. 961,658; June 14; Sp. p. 2925; Gaz. vol. 155; p. 507.
Swanson, Matt F., Reading, Ill. Kiln. No. 961,266; June 14; Sp. p. 2078; Gaz. vol. 155; p. 374.
Swarin, Axel, New London, Conn. Desk-pad. No. 962,798; June 28; Sp. p. 5409; Gaz. vol. 155; p. 944.
Sweeney, Peter J., Windsor, Ontario, Canada, assignor to Penberthy Injector Company, Detroit, Mich. Lubricator. No. 960,730; June 7; Sp. p. 997; Gaz. vol. 155; p. 167.
Sweeny, James K., Pueblo, Colo. Compound liquid-piston air compressing and pumping apparatus. No. 960,729; June 7; Sp. p. 992; Gaz. vol. 155; p. 165.
Sweet, Homer E., Portland, Oreg. Cutlery-grinder. No. 961,554; June 14; Sp. p. 2719; Gaz. vol. 155; p. 472.
Sweet, Orr & Company. (See Bate, William L., assignor.)
Sweet, Orr & Company. (See Howe, Charles E., assignor.)
Swenson, Luther L., Ottumwa, Iowa. Nut-lock. No. 961,819; June 21; Sp. p. 3277; Gaz. vol. 155; p. 584.
Swift, George W., Jr., Bordentown, N. J. Gripping, pasting, and folding mechanism. No. 961,324; June 14; Sp. p. 2242; Gaz. vol. 155; p. 395.
Swindell, James D., Pittsburg, Pa. Annealing-furnace. No. 960,434; June 7; Sp. p. 893; Gaz. vol. 155; p. 65.
Sykes, William W., assignor of one-third to W. H. Owens, Manchester, and one-third to L. Casselman, Richmond, Va. Locomotive ash-pan. No. 962,269; June 21; Sp. p. 4262; Gaz. vol. 155; p. 737.
T. F. McGann & Sons Company, The. (See McGann, Thomas F., assignor.)
Tabor Manufacturing Company, The. (See Lewis and Ramsden, assignors.)
Tabor Manufacturing Company, The. (See Lewis, Wilfred, assignor.)
Tait, James J., Meota, Saskatchewan, Canada. Gage-lever mechanism for plows. No. 960,435; June 7; Sp. p. 894; Gaz. vol. 155; p. 66.
Takacs, Julius V. (See Kenyeres, Samuel, assignor.)
Taliaferro, John C. (See Krummel and Taliaferro.)
Tanner, Daniel N., assignor of one-half to C. J. Shumaker, Tupelo, Miss. Blacksmith's pliers. No. 961,989; June 21; Sp. p. 3638; Gaz. vol. 155; p. 640.
Tarkington, Matthew S., Tulare, Cal. Cream-float-locking device. No. 962,799; June 28; Sp. p. 5410; Gaz. vol. 155; p. 944.

Taub, Ludwig, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Amid of beta-beta-methylpropylpropionic acid. No. 961,385; June 14; Sp. p. 2355; Gaz. vol. 155; p. 416.

Taylor, Eliza W., executrix. (See Taylor, James H.)

Taylor, Hollis E. (See Weaver and Taylor.)

Taylor, James H., deceased, Brooklyn, N. Y.; E. W. Taylor, executrix. Elevator. No. 962,901; June 28; Sp. p. 5765; Gaz. vol. 155; p. 1009.

Taylor, James I., Rock Rapids, Iowa. Cement-block-molding apparatus. No. 961,659; June 14; Sp. p. 2027; Gaz. vol. 155; p. 507.

Taylor, John B., Schenectady, N. Y., assignor to General Electric Company. Telephone system. No. 962,800; June 28; Sp. p. 5412; Gaz. vol. 155; p. 945.

Taylor, Leon E., Chicago, Ill. Cornet-mouthpiece. No. 962,479; June 28; Sp. p. 4729; Gaz. vol. 155; p. 834.

Taylor, Robert T., assignor of one-half to J. Niklis, Gastonville, Pa. Bottle closure and seal. No. 962,396; June 21; Sp. p. 4514; Gaz. vol. 155; p. 779.

Taylor, Walter F., Brookline, Mass., assignor to Holtzer-Cabot Electric Company. Telephone-receiver. No. 960,731; June 7; Sp. p. 998; Gaz. vol. 155; p. 167.

Taylor, Warren H., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Night-lock. No. 962,992; June 28; Sp. p. 5767; Gaz. vol. 155; p. 1009.

Taylor, William G., Waterbury, Conn. Distributing device. No. 960,732; June 7; Sp. p. 999; Gaz. vol. 155; p. 167.

Teal, Morton D. (See Clark, Absolom F., assignor.)

Tedesco, Thomas G., Olyphant, Pa. Plug device. No. 961,555; June 14; Sp. p. 2720; Gaz. vol. 155; p. 472.

Teich, Ernest L. (See Arens and Teich.)

Telelectric Company, The. (See Powers, Timothy B., assignor.) (Reissue.)

Templeton, Walter B., Chicago, Ill. Jack. No. 961,909; June 21; Sp. p. 3468; Gaz. vol. 155; p. 614.

Templeton, Walter B., Chicago, Ill. Jack. No. 961,910; June 21; Sp. p. 3471; Gaz. vol. 155; p. 614.

Templeton, William G., Colorado Springs, Colo. Awning. No. 962,176; June 21; Sp. p. 4071; Gaz. vol. 155; p. 707.

Templeton, William G., Colorado Springs, Colo. Window-shade fixture. No. 962,270; June 21; Sp. p. 4263; Gaz. vol. 155; p. 737.

Thamsen, William J. (See Harrold and Thamsen.)

Tharraldson, Knute, Bloomingdale, Cal. Rein-holder. No. 960,436; June 7; Sp. p. 395; Gaz. vol. 155; p. 66.

Thayer, Dexter J., Pittsburg, Pa. Milk-can lock. No. 962,801; June 28; Sp. p. 5414; Gaz. vol. 155; p. 945.

Theilsiefje, Adolph W., Ridgefield, Wash. Passenger device for equalising ship motion. No. 961,911; June 21; Sp. p. 3473; Gaz. vol. 155; p. 615.

Thieme, Ludwig, and M. Gilser, Adorf, Germany. Apparatus for cleansing medical spittoons. No. 962,931; June 28; Sp. p. 5651; Gaz. vol. 155; p. 989.

Thomas, Elmer A., and W. V. Ritter, St. Louis, Mo. Rotary explosive-engine. No. 962,064; June 21; Sp. p. 3807; Gaz. vol. 155; p. 667.

Thomas, John P., Chicago, Ill. Dust-guard for car-journals. No. 962,480; June 28; Sp. p. 4731; Gaz. vol. 155; p. 834.

Thomas, John W. (See Oakes, George W., assignor.)

Thomas, Joseph L., Chicago, Ill. Wedge. No. 961,325; June 14; Sp. p. 2246; Gaz. vol. 155; p. 396.

Thomas, Otis B. (See Porter and Thomas.)

Thomaschewski, Paul, Vohwinkel, near Elberfeld, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. New vat dye. No. 961,387; June 14; Sp. p. 2357; Gaz. vol. 155; p. 416.

Thomaschewski, Paul, Vohwinkel, near Elberfeld, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Vat dye. No. 961,388; June 14; Sp. p. 2357; Gaz. vol. 155; p. 417.

Thompson, Alfred A. (See Brill and Thompson.)

Thompson, Ernest L., and M. C. Brice, Bluffton, Ind. Post-brace. No. 962,271; June 21; Sp. p. 4265; Gaz. vol. 155; p. 737.

Thompson, Frank E., Lake City, Fla. Collapsible drum. No. 961,556; June 14; Sp. p. 2721; Gaz. vol. 155; p. 472.

Thompson, Fredrick B., Chicago, Ill., assignor to National Waterproof Film Company. Method and apparatus for coating perforated webs. No. 960,437; June 7; Sp. p. 397; Gaz. vol. 155; p. 67.

Thompson, Herbert L., Elgin, Ill. Steam-engine. No. 960,438; June 7; Sp. p. 399; Gaz. vol. 155; p. 67.

Thompson, John J., Lancaster, Pa. License-tag holder. No. 961,267; June 14; Sp. p. 2080; Gaz. vol. 155; p. 374.

Thompson, John R., Peoria, Ill. Darning device. No. 961,557; June 14; Sp. p. 2722; Gaz. vol. 155; p. 473.

Thompson, Mary N., Rockville, Md. Eyeglass-holder. No. 962,065; June 21; Sp. p. 3811; Gaz. vol. 155; p. 667.

Thomsen, Herman E., Houston, Tex. Cash-fare-slip holder. No. 960,733; June 7; Sp. p. 1001; Gaz. vol. 155; p. 168.

Thomson, Charles R., Adams, Mass., assignor to Renfrew Manufacturing Company. Selvage-printing mechanism. No. 960,439; June 7; Sp. p. 400; Gaz. vol. 155; p. 67.

Thomson, Elihu, Swampscott, Mass., assignor to General Electric Company. Compensator. No. 960,440; June 7; Sp. p. 403; Gaz. vol. 155; p. 68.

Thomson, Elihu, Swampscott, Mass., assignor to General Electric Company. Production of fine-metal tungsten. No. 960,441; June 7; Sp. p. 405; Gaz. vol. 155; p. 68.

Thomson, George A., Somerville, N. J. Arc-lamp electrode. No. 961,268; June 14; Sp. p. 2081; Gaz. vol. 155; p. 374.

Thomson, George A., Somerville, N. J. Arc-lamp electrode. No. 961,269; June 14; Sp. p. 2081; Gaz. vol. 155; p. 374.

Thomson, William I., Newark, N. J., assignor to The Safety Car Heating & Lighting Company. Voltage-regulator. No. 960,734; June 7; Sp. p. 1003; Gaz. vol. 155; p. 168.

Thordarson, Chester H., Chicago, Ill. Insulating-bushing. No. 962,726; June 28; Sp. p. 5263; Gaz. vol. 155; p. 918.

Thorn, Walter, *et al.* (See Moody, Willard A., assignor.)

Thumlert, Charles H. (See Coes, Scott, and Thumlert.)

Thurlby, Arthur A., Chicago, Ill. Identifying-tag. No. 960,442; June 7; Sp. p. 406; Gaz. vol. 155; p. 68.

Thurston, Thomas O., assignor of one-half to E. C. Bellwood, Manchester, Va. Corn-harvester. No. 961,660; June 14; Sp. p. 2928; Gaz. vol. 155; p. 507.

Tice, Andrew J., assignor to The American Case & Register Company, Salem, Ohio. Credit-cabinet. No. 962,177; June 21; Sp. p. 4073; Gaz. vol. 155; p. 707.

Tidewater Specialty Company. (See Boykin, Christopher C., assignor.)

Tilly, Charles A., Brooklyn, N. Y. Rail-chair. No. 960,443; June 7; Sp. p. 408; Gaz. vol. 155; p. 69.

Toledo Computing Scale Company. (See Hansen, Niels M., assignor.)

Tompkins, Edward D., Pelham, N. Y. Pile-driving machine. No. 962,080; June 21; Sp. p. 3840; Gaz. vol. 155; p. 673.

Tompkins, Franklin, New Dorp, N. Y. Vehicle-wheel. No. 962,066; June 21; Sp. p. 3812; Gaz. vol. 155; p. 667.

Toue, Frank J., Niagara Falls, N. Y. Heating carbon. No. 961,912; June 21; Sp. p. 3475; Gaz. vol. 155; p. 615.

Tone, Frank J., Niagara Falls, N. Y. Reduction of refractory compounds. No. 961,913; June 21; Sp. p. 3477; Gaz. vol. 155; p. 615.

Tonge, John, assignor of one-half to J. I. Dille, Minneapolis, Minn. Throttle-valve. No. 960,735; June 7; Sp. p. 1005; Gaz. vol. 155; p. 169.

Tonnar, John B., Clayton, Wash. Electrical block train-control system. No. 961,177; June 14; Sp. p. 1888; Gaz. vol. 155; p. 343.

Toohey, Patrick W., assignor to The Sterling Novelty Company, Colorado Springs, Colo. Coaster-brake. No. 960,736; June 7; Sp. p. 1006; Gaz. vol. 155; p. 169.

Tottingham, Fred M., New York, assignor of one-half to E. J. Moneuse, Sheepshead Bay Station, Brooklyn, N. Y. Time-controlled electric switch. No. 961,558; June 14; Sp. p. 2723; Gaz. vol. 155; p. 473.

Totty, M. W., *et al.* (See Reed, Rufus C., assignor.)

Tower, Clinton A., assignor to The National Malleable Castings Company, Cleveland, Ohio. Friction draft-rigging. No. 962,993; June 28; Sp. p. 5769; Gaz. vol. 155; p. 1010.

Toyoda, Sakichi, Shimasaki-Cho, Nagoya, Japan. Picker-check for looms. No. 962,802; June 28; Sp. p. 5416; Gaz. vol. 155; p. 946.

Trafford, Wesley, New York, N. Y. Speed-indicator. No. 961,559; June 14; Sp. p. 2727; Gaz. vol. 155; p. 473.

Traher, Wilfred C., London, Ontario, Canada. Loose-leaf binder. No. 962,868; June 28; Sp. p. 5545; Gaz. vol. 155; p. 969.

Trask, George F. D. (See Everson and Trask.)

Traut & Hine Manufacturing Company. (See Humphrey, Ernest N., assignor.)

Trautvetter, William G., Paterson, N. J. Tile-trimming machine. No. 961,560; June 14; Sp. p. 2735; Gaz. vol. 155; p. 474.

Traylor, Samuel W., Allentown, Pa., assignor to M. P. Schantz, trustee. Stay or support for water-jackets. No. 960,737; June 7; Sp. p. 1009; Gaz. vol. 155; p. 169.

Treadway, Charles R. (See Byrd and Treadway.)

Tribune Trap & Target Company, The. (See Lord, Hugh C., assignor.)

Trigwell, James R., Mitcham Lane, England. Gearing. No. 961,561; June 14; Sp. p. 2738; Gaz. vol. 155; p. 474.

Trimbach, Joseph C., and C. G. Allhoff, Dayton, Ohio. Job-printing press. No. 961,562; June 14; Sp. p. 2740; Gaz. vol. 155; p. 475.

Troutman, Percival H., Canon City, Colo. Orchard-heating device. No. 961,662; June 14; Sp. p. 2931; Gaz. vol. 155; p. 508.

Trum, Emanuel J. (See Trum, Walter E., assignor.)

Trum, Walter E., assignor of one-half to E. J. Trum, Brooklyn, N. Y. Easel. No. 962,932; June 28; Sp. p. 5654; Gaz. vol. 155; p. 990.

Trussed Concrete Steel Company. (See Kahn, Julius, assignor.)

Tubbs, Oscar J., Waterville, Me. Auto-sleigh. No. 962,272; June 21; Sp. p. 4266; Gaz. vol. 155; p. 738.

Tucker, Benjamin W., South Orange, N. J. Machine for applying labels and the like to cans and other articles. No. 961,270; June 14; Sp. p. 2082; Gaz. vol. 155; p. 375.

Tucker, Benjamin W., Newark, N. J., assignor to J. B. Patton, Kent, Ohio. Machine for making window-shades. No. 962,178; June 21; Sp. p. 4075; Gaz. vol. 155; p. 707.

Tucker, James D., assignor of one-half to M. Denton, Grubbs, Ark. Churn. No. 961,045; June 7; Sp. p. 1621; Gaz. vol. 155; p. 271.

Tucker, James T., Moultrie, Ga. Marking attachment for plows. No. 960,444; June 7; Sp. p. 409; Gaz. vol. 155; p. 69.

Tukis, Benedict, Cambridge, Mass. Box-cover fastener. No. 961,990; June 21; Sp. p. 3639; Gaz. vol. 155; p. 640.

Tunis, Howard H., Baltimore county, Md., assignor to American Monorail Company. Elastic overhead truck for railways. No. 962,179; June 21; Sp. p. 4079; Gaz. vol. 155; p. 708.

Tunzat, Henretta. (See Badger, Alonzo, assignor.)

Tupper, Russell E., Sandwich, Mass. Screen-door fastener. No. 960,445; June 7; Sp. p. 410; Gaz. vol. 155; p. 69.

Turbayne, William A., Lancaster, assignor to Gould Coupler Company, New York, N. Y. Electrical system of distribution. No. 962,106; June 21; Sp. p. 3907; Gaz. vol. 155; p. 681.

Türk, Leo, New York, N. Y., assignor, by mesne assignments, to Austin-Walker Company, Boston, Mass. Adjustable stiletto for embroidery and art crafting. No. 960,738; June 7; Sp. p. 1009; Gaz. vol. 155; p. 170.

Turley, Leslie C., Portsmouth, Ohio. Fluid-expansion press. No. 961,046; June 7; Sp. p. 1622; Gaz. vol. 155; p. 272.

Turnbull Wagon Company, The. (See Frick, Orlando A., assignor.)

Turnbull, William, Wellington, New Zealand. Flusher for water-closets and the like. No. 960,602; June 7; Sp. p. 740; Gaz. vol. 155; p. 122.

Turner, Albert O., assignor of one-fourth to F. R. Smith, Manhattan, Kans. Saw-set. No. 960,446; June 7; Sp. p. 412; Gaz. vol. 155; p. 69.

Turner, Beverly B., and C. G. Pollock, Berthoud, Colo. Grain-cutting device. No. 962,601; June 28; Sp. p. 5008; Gaz. vol. 155; p. 876.

Turner, Charles A., Norfolk, Va. Receptacle for powder and the like. No. 961,661; June 14; Sp. p. 2930; Gaz. vol. 155; p. 508.

Turner, Thomas G., New York, N. Y. Incandescent-lamp base. No. 961,326; June 14; Sp. p. 2246; Gaz. vol. 155; p. 396.

Tuson, Charles. (See Keith and Tuson.)

Tustin, Edward B., Jr., Bloomsburg, Pa. Wireless lighting system. No. 961,914; June 21; Sp. p. 3478; Gaz. vol. 155; p. 616.

Tuttle, Josiah S., Kansas City, Mo., assignor of one-half to Geo. Ertel Co., Quincy, Ill. Wiring mechanism for baling-presses. No. 962,273; June 21; Sp. p. 4268; Gaz. vol. 155; p. 738.

Tyden, Emil, Hastings, Mich. Table-edge-sanding machine. No. 960,447; June 7; Sp. p. 413; Gaz. vol. 155; p. 70.

Tyler, Aaron J., Rochester, N. Y. Curb-box. No. 961,178; June 14; Sp. p. 1891; Gaz. vol. 155; p. 343.

Tyler, Claiborn, Boley, Okla. Sight for firearms. No. 960,739; June 7; Sp. p. 1011; Gaz. vol. 155; p. 170.

U. S. E. M. Co. (See Lovejoy, Dimmitt R., assignor.)

Uehlinger, Herman, New York, N. Y. Blotting device. No. 960,603; June 7; Sp. p. 741; Gaz. vol. 155; p. 122.

Uhlig, Richard W., Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 962,727; June 28; Sp. p. 5266; Gaz. vol. 155; p. 910.

Uhrin, John, *et al.* (See Stawaritz, John J., assignor.)

Ullmann, Fritz, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Anthraquinone Acridones. No. 961,047; June 7; Sp. p. 1625; Gaz. vol. 155; p. 272.

Ullmann, Fritz, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Anthraquinone-di-acridones. No. 961,048; June 7; Sp. p. 1026; Gaz. vol. 155; p. 272.

Ullrich, Emil H. W., Chicago, Ill. Dredge for powder-cans. No. 961,991; June 21; Sp. p. 3641; Gaz. vol. 155; p. 640.

Underpinning Company, The. (See Goldsborough, John B., assignor.)

Underwood, Horace A., Kewanee, Ill. Dowel. No. 961,992; June 21; Sp. p. 3644; Gaz. vol. 155; p. 641.

Underwood, Louis E., Lynn, Mass., assignor to General Electric Company. Dynamo-electric machine. No. 960,449; June 7; Sp. p. 415; Gaz. vol. 155; p. 70.

Underwood Typewriter Company. (See Barnard, Walter E., assignor.)

Underwood Typewriter Company. (See Broughton, Lyman D., assignor.)

Underwood Typewriter Company. (See Doane, John C., assignor.)

Underwood Typewriter Company. (See Joerissen, Carl A., assignor.)

Underwood Typewriter Company. (See McLaughlin, William P., assignor.)

Underwood Typewriter Company. (See Uhlig, Richard W., assignor.)

Underwood Typewriter Company. (See Young, Frank A., assignor.)

Unge, Wilhelm T., Stockholm, Sweden. Self-propelling projectile. No. 961,179; June 14; Sp. p. 1895; Gaz. vol. 155; p. 344.

Union Paper Bag Company. (See Merritt, Joseph, assignor.)

Union Special Machine Company. (See Weatherwax, Charles L., assignor.)

Union Special Sewing Machine Co. (See Onderdonk, Lansing, assignor.)

Union Switch and Signal Company, The. (See Howard, Lemuel F., assignor.)

Union Typewriter Company. (See Strother, Robert H., assignor.)

Unit Construction Company. (See Conzelman, John E., assignor.)

Unit Construction Company. (See Meier, Albert J., assignor.)

United Shoe Machinery Company. (See Ashton, Orrell, assignor.)

United Shoe Machinery Company. (See Bates, Arthur, assignor.)

United Shoe Machinery Company. (See Busell, John N., assignor.)

United Shoe Machinery Company. (See Cutter, Solomon M., assignor.)

United Shoe Machinery Company. (See Eppler, Andrew, assignor.)

United Shoe Machinery Company. (See Hadaway, John B., assignor.)

United Shoe Machinery Company. (See Mayo, Benjamin F., assignor.)

United Shoe Machinery Company. (See Scott, Jacob R., assignor.)

United Shoe Machinery Company. (See Smith, Willard A., assignor.)

United States Coal & Coke Company. (See Buffum, Eavenson and O'Toole, assignors.)

United States Envelope Company. (See Laubscher, August, assignor.)

United States Graphotype Company. (See Nicholas, William, assignor.)

United States Phonograph Company, The. (See Harris, Varian M., assignor.)

United States Sanitary Manufacturing Company. (See Danver, James H., assignor.)

United-Xpedite Finishing Company. (See Pease, Charles, assignor.)

Universal Tool Company. (See Palmer, John M., assignor.)

Unverzagt, Charles H. (See Hamlin, Pulaski M., assignor.)

Utley, John H., assignor of one-third to H. J. Webster, Camden, N. J., and one-third to W. M. Hardie, Pittsburg, Pa. Bone-black filter for clarifying gelatin liquors and the like. No. 961,180; June 14; Sp. p. 1897; Gaz. vol. 155; p. 344.

Vagt, August, Mülheim-on-the-Rhine, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Reduction products of commercial nitrobenzaldehyde. No. 961,915; June 21; Sp. p. 3479; Gaz. vol. 155; p. 616.

Valk, James, Topeka, Kans. Centrifugal pump. No. 961,993; June 21; Sp. p. 3645; Gaz. vol. 155; p. 641.

Valle, Bert S., Colibran, Colo. Nut-lock. No. 961,049; June 7; Sp. p. 1627; Gaz. vol. 155; p. 272.

Valley City Machine Works. (See Brochu, Michael, assignor.)

Van Aken, John C., Ridgway, Pa. Flower-holding and grave-covering device. No. 961,994; June 21; Sp. p. 3648; Gaz. vol. 155; p. 642.

Van Court, George H., and E. I. Marks, Chicago, Ill.; said Marks assignor to said Van Court. Machine for vending slugs. No. 961,916; June 21; Sp. p. 3480; Gaz. vol. 155; p. 616.

Van Dyck Gravure Company. (See Van Middlesworth, Charles, assignor.)

Van Epe, Fred F., North Plainfield, N. J. Gem grinder and polisher. No. 962,274; June 21; Sp. p. 4276; Gaz. vol. 155; p. 739.

Van Middlesworth, Charles, Brooklyn, assignor to Van Dyck Gravure Company, New York, N. Y. Expansible bearing. No. 962,602; June 28; Sp. p. 5010; Gaz. vol. 155; p. 876.

Van Valkenburg, Hermon L., Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company. Switch construction. No. 960,450; June 7; Sp. p. 417; Gaz. vol. 155; p. 71.

Van Vlaanderen, Peter. (See Johnson and Van Vlaanderen.)

Vandatte, Robert, and B. Lagye, Antwerp, Belgium. Apparatus for removing the grease and yolk from wool. No. 961,468; June 14; Sp. p. 2530; Gaz. vol. 155; p. 443.

Vanderman, William, Willimantic, Conn. Lead joint-runner. No. 960,604; June 7; Sp. p. 742; Gaz. vol. 155; p. 122.

Vaughan, Jay W., Chicago, Ill. Floor and ceiling beam. No. 960,740; June 7; Sp. p. 1012; Gaz. vol. 155; p. 170.

Vaughn, Thomas E., Chicago, Ill. Rail-support. No. 961,917; June 21; Sp. p. 3484; Gaz. vol. 155; p. 617.

Verchère, Charles. (See Mayoux and Verchère.)

Vermont Farm Machine Company. (See Hicks, Milton A., assignor.)

Veyron, Louis, Paris, France. Embroidery attachment for weaving-looms. No. 960,741; June 7; Sp. p. 1013; Gaz. vol. 155; p. 171.

Vicary, Edsel C., Caron, Saskatchewan, Canada. Bag-holder. No. 960,451; June 7; Sp. p. 418; Gaz. vol. 155; p. 71.

Vickers, John J., Leesburg, Tex. Cotton-chopper. No. 961,181; June 14; Sp. p. 1900; Gaz. vol. 155; p. 345.

Victor Safe & Lock Co., The. (See Hattersley, George A., assignor.)

Victor Talking Machine Company. (See Jetter, Julius, assignor.)

Vierling, Joseph, Pittsburg, Pa. Washing-machine. No. 962,803; June 28; Sp. p. 5418; Gaz. vol. 155; p. 946.

Vining, George H., Kansas City, Mo. Casting apparatus. No. 961,182; June 14; Sp. p. 1901; Gaz. vol. 155; p. 345.
Viessering, Harry, Chicago, Ill. Alarm-valve. No. 960,742; June 7; Sp. p. 1016; Gaz. vol. 155; p. 171.
Voegele, John, Faribault, Minn. Plow. No. 960,743; June 7; Sp. p. 1018; Gaz. vol. 155; p. 172.
Vogel, John C., assignor, by mesne assignments, to Fairmount Electric and Manufacturing Company, Philadelphia, Pa. Electric-conduit fitting. No. 960,744; June 7; Sp. p. 1019; Gaz. vol. 155; p. 172.
Vogelmann, Joseph A., Brooklyn, N. Y. Self-filling fountain-pen. No. 961,663; June 14; Sp. p. 2933; Gaz. vol. 155; p. 508.
Vogt, Lillian F. and W. G., Pinegrove, Mont. Curtain-fixture. No. 962,275; June 21; Sp. p. 4278; Gaz. vol. 155; p. 739.
Vogt, William G. (See Vogt, Lillian F. and W. G.)
Voight, Henry G., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn. Casement-window-adjusting device and lock. No. 960,452; June 7; Sp. p. 420; Gaz. vol. 155; p. 71.
Voight, Henry G., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn. Panic-bolt with adjustment between toggle and bolt. No. 961,327; June 14; Sp. p. 2248; Gaz. vol. 155; p. 396.
Voight, Henry G., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn. Lock. No. 962,276; June 21; Sp. p. 4279; Gaz. vol. 155; p. 739.
Volckening, Charles K., New York, N. Y. Brush for bottle-washing machines. No. 961,563; June 14; Sp. p. 2741; Gaz. vol. 155; p. 475.
Vold, Alfred M., Chicago, Ill. Windmill. No. 961,271; June 14; Sp. p. 2097; Gaz. vol. 155; p. 375.
Volkmar, Bernhard, New York, N. Y., assignor to Auto Improvement Company. Vibration-indicator. No. 962,679; June 28; Sp. p. 5152; Gaz. vol. 155; p. 901.
Volkmar, Bernhard, New York, N. Y., assignor to Auto Improvement Company. Protective casing. No. 962,680; June 28; Sp. p. 5155; Gaz. vol. 155; p. 901.
Voss, William R., assignor to The Commercial Non-Refillable Bottle Stopper Co., San Francisco, Cal. Non-refillable-bottle stopper. No. 962,681; June 28; Sp. p. 5157; Gaz. vol. 155; p. 902.
W. S. Ray Manufacturing Co. (See Ray, William S., assignor.)
Waddell, Jenkinson W., Belmont, Ohio. Rail-joint. No. 960,453; June 7; Sp. p. 420; Gaz. vol. 155; p. 71.
Wade, Charles E., East Orange, N. J. Soap-dispenser. No. 962,682; June 28; Sp. p. 5159; Gaz. vol. 155; p. 902.
Wagner, Adam, Cedar Falls, Iowa. Door-hanger. No. 962,538; June 28; Sp. p. 4859; Gaz. vol. 155; p. 854.
Wait, Henry H., Chicago, Ill. Turbine-blade. No. 961,328; June 14; Sp. p. 2250; Gaz. vol. 155; p. 397.
Wait, Henry H., Chicago, Ill. Turbine-blade. No. 961,329; June 14; Sp. p. 2253; Gaz. vol. 155; p. 397.
Waitt, George L., Buffalo, N. Y. Chaplet for molding. No. 961,183; June 14; Sp. p. 1904; Gaz. vol. 155; p. 346.
Waitz, Charles A., Rouseville, Pa. Pump. No. 961,820; June 21; Sp. p. 3278; Gaz. vol. 155; p. 584.
Wakefield, Ernest H., Vermilion, Ohio. Hanger for lighting-fixtures. No. 961,050; June 7; Sp. p. 1628; Gaz. vol. 155; p. 273.
Waldstein, Charles, Cambridge, England. Receptacle having apparatus for projecting disinfecting material, &c., into it. No. 962,067; June 21; Sp. p. 3814; Gaz. vol. 155; p. 668.
Walker, Charles, Knoxville, Tenn. Valve. No. 961,821; June 21; Sp. p. 3280; Gaz. vol. 155; p. 585.
Walker, Charles F., Stockton, Cal. Invalid-chair. No. 961,389; June 14; Sp. p. 2358; Gaz. vol. 155; p. 417.
Walker, Edwin, Erie, Pa. Screw-driver. No. 961,184; June 14; Sp. p. 1905; Gaz. vol. 155; p. 346.
Walker, Edwin, Erie, Pa., assignor to The Brunhoff Manufacturing Company, Cincinnati, Ohio. Cigar-cutter. No. 962,481; June 28; Sp. p. 4732; Gaz. vol. 155; p. 835.
Walker, Edwin, Erie, Pa. Meat and fruit press. No. 962,603; June 28; Sp. p. 5011; Gaz. vol. 155; p. 876.
Walker, Miles, Manchester, England, assignor to Westinghouse Electric & Manufacturing Company. Dynamo-electric machine. No. 962,683; June 28; Sp. p. 5161; Gaz. vol. 155; p. 903.
Walker, William A., Racine, Wis., assignor to O. R. Barnett, Chicago, Ill. Rail-anchor. No. 961,918; June 21; Sp. p. 3485; Gaz. vol. 155; p. 617.
Walker, William B., Gustine, Cal. Attachment for horse-collars. No. 962,180; June 21; Sp. p. 4082; Gaz. vol. 155; p. 708.
Wallace, Henry B., assignor to Samuel Cupples Wooden Ware Company, St. Louis, Mo. Roll-paper holder and cutter. No. 962,684; June 28; Sp. p. 5163; Gaz. vol. 155; p. 903.
Wallace, Howes C., Denver, Colo. Show-case. No. 962,933; June 28; Sp. p. 5655; Gaz. vol. 155; p. 990.
Wallace, James P., Colorado Springs, Colo. Combined leveler, marker, and border reacher. No. 960,454; June 7; Sp. p. 421; Gaz. vol. 155; p. 71.
Wallace, Robert J., and G. Cramer, St. Louis, Mo. Photographic color-filter. No. 961,424; June 14; Sp. p. 2423; Gaz. vol. 155; p. 423.
Wallace, William A., Seymour, Tex. Gas-generator. No. 960,745; June 7; Sp. p. 1022; Gaz. vol. 155; p. 172.
Waller, John N. (See Manthey, George, assignor.)
Walling, Frederick J. (See Lowry and Walling.)
Wallis, Thomas R., Dyersburg, Tenn. Insect-destroyer. No. 962,860; June 28; Sp. p. 5547; Gaz. vol. 155; p. 970.
Walpole, William, Oxenden, Ontario, Canada. Sleigh. No. 961,469; June 14; Sp. p. 2532; Gaz. vol. 155; p. 444.
Walsh, James A., assignor to The Indiana Manufacturing Company, Indianapolis, Ind. Pneumatic stacker. No. 962,068; June 21; Sp. p. 3815; Gaz. vol. 155; p. 668.
Walsh, Kenneth E., *et al.* (See Jennings, Milo C., assignor.)
Walstrom, Peter F., Birmingham, Ala. Molding-machine. No. 960,455; June 7; Sp. p. 423; Gaz. vol. 155; p. 72.
Walters, Arthur B., Abilene, Kans. Means for locking the steering mechanism of motor-vehicles. No. 961,390; June 14; Sp. p. 2359; Gaz. vol. 155; p. 417.
Walters, James M., Los Angeles, Cal. Display-stand. No. 962,277; June 21; Sp. p. 4281; Gaz. vol. 155; p. 740.
Walters, Warren E., and H. S. Fitzgerrell, Los Angeles, Cal. Advertising device. No. 962,060; June 21; Sp. p. 3816; Gaz. vol. 155; p. 669.
Walters, William H., St. Louis, Mo. Curtain-rod. No. 961,352; June 14; Sp. p. 2296; Gaz. vol. 155; p. 405.
Walther, Mathias J., Cleveland, Ohio. Vending-machine. No. 961,051; June 7; Sp. p. 1630; Gaz. vol. 155; p. 273.
Walton, Orrin E., assignor of one-half to U. G. Summers, West Union, W. Va. Folding umbrella. No. 962,539; June 28; Sp. p. 4861; Gaz. vol. 155; p. 855.
Walzel, Gregor, New York, N. Y. Spark-plug. No. 962,604; June 28; Sp. p. 5014; Gaz. vol. 155; p. 877.
Ward, Albert, assignor to McClary Manufacturing Company, London, Canada. Side-wall register. No. 960,456; June 7; Sp. p. 425; Gaz. vol. 155; p. 72.
Ward, Frederick H., *et al.* (See Smith, George A., assignor.)
Ward, George B. (See Canaday, William R., assignor.)
Ward, James N., Havelock, Nebr. Egg-beater. No. 961,272; June 14; Sp. p. 2099; Gaz. vol. 155; p. 376.
Ward, Joseph E., Longbeach, Cal. Apparatus for saturating the ground with oil. No. 962,728; June 28; Sp. p. 5270; Gaz. vol. 155; p. 919.
Ward, Lloyd W., assignor of one-third to C. E. White and one-third to R. Lang, Buckhannon, W. Va. Invalid-bed. No. 961,273; June 14; Sp. p. 2101; Gaz. vol. 155; p. 377.
Ward, Orlo P., assignor to The New Haven Upholstering Co., New Haven, Conn. Hammock-support. No. 962,181; June 21; Sp. p. 4083; Gaz. vol. 155; p. 709.
Ward, Samuel M., Jr., Washington, D. C., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Controller-switch for electric motors. No. 961,185; June 14; Sp. p. 1907; Gaz. vol. 155; p. 346.
Wardwell, Simon W. (See Parks and Wardwell.)
Ware, James F., assignor of one-half to A. A. Bowhay, Denver, Colo. Variable-time-operating oil-controlled valve. No. 961,274; June 14; Sp. p. 2105; Gaz. vol. 155; p. 377.
Ware Machine & Loom Company. (See Côté and Snow, assignors.)
Warming, Niels G. (See Edmunds and Warming.)
Warner, Clarence F., *et al.* (See Russell, Robert C., assignor.)
Warren, Alva S., Batavia, N. Y. Metallic railway-tie. No. 961,052; June 7; Sp. p. 1632; Gaz. vol. 155; p. 273.
Warren, Frederic A., Canon City, Colo. Centrifugal oiling-bearing. No. 962,182; June 21; Sp. p. 4084; Gaz. vol. 155; p. 709.
Warren, Governor D., Denver, Colo. Means for cooling cylinders. No. 960,457; June 7; Sp. p. 426; Gaz. vol. 155; p. 73.
Warren, Hiram C., Clearfield, Pa. Cracker-jar. No. 961,470; June 14; Sp. p. 2533; Gaz. vol. 155; p. 444.
Warren, Marion, Rochester, N. Y. Valve. No. 960,605; June 7; Sp. p. 743; Gaz. vol. 155; p. 123.
Warrington, Walter C., *et al.* (See Foster, Jackson W., assignor.)
Warrington, William H., Chicago, Ill. Cap for sheet-piling. No. 960,746; June 7; Sp. p. 1023; Gaz. vol. 155; p. 173.
Warth, Nathaniel G., Columbus, Ohio. Telephone-repeater. No. 960,458; June 7; Sp. p. 428; Gaz. vol. 155; p. 73.
Washburn, Charles F., New London, Conn. Storage battery. No. 962,870; June 28; Sp. p. 5548; Gaz. vol. 155; p. 970.
Wastel, Andrew L., Shawano, Wis. Milk-cooler. No. 961,275; June 14; Sp. p. 2108; Gaz. vol. 155; p. 378.
Waterman, Charlie H., assignor of one-third to D. E. Waterman and one-third to N. O. Hoyer, Newport, Wash. Well-drilling machine. No. 960,459; June 7; Sp. p. 435; Gaz. vol. 155; p. 74.
Waterman, Dennis E., *et al.* (See Waterman, Charlie H., assignor.)
Waters, Llewelyn, Edwardsdale, Pa. Drill. No. 962,994; June 28; Sp. p. 5770; Gaz. vol. 155; p. 1010.
Watson, Charles G. (See Knickerbocker and Watson.)
Watson, Leslie J., Upton Works, Mich. Pressure-gage. No. 962,107; June 21; Sp. p. 3911; Gaz. vol. 155; p. 682.
Watson, William T., Vancouver, British Columbia, Canada. Car-fender. No. 962,278; June 21; Sp. p. 4282; Gaz. vol. 155; p. 740.
Watters, John H., Augusta, Ga. Vehicle-wheel. No. 960,460; June 7; Sp. p. 436; Gaz. vol. 155; p. 74.
Watterson, Claude E., Nashville, Tenn. Newspaper file or binder. No. 960,461; June 7; Sp. p. 437; Gaz. vol. 155; p. 74.
Wattle, William, Worcester, Mass., assignor to Crompton & Knowles Loom Works. Lay for narrow-ware looms. No. 962,183; June 21; Sp. p. 4088; Gaz. vol. 155; p. 709.

Way, Walter M., Denver, Colo. Non-refillable bottle. No. 961,822; June 21; Sp. p. 3282; Gaz. vol. 155; p. 585.
Weand, Oliver M. (See Scholl, Peter L., assignor.)
Weatherwax, Charles L., assignor to Union Special Machine Company, Chicago, Ill. Sack. No. 962,934; June 28; Sp. p. 5557; Gaz. vol. 155; p. 990.
Weaver, Albert M., and H. E. Taylor, Alligator, Miss. Barrel-cover. No. 960,606; June 7; Sp. p. 746; Gaz. vol. 155; p. 123.
Weaver, Henry W., Hutchinson, Kans. Steam-engine. No. 961,186; June 14; Sp. p. 1910; Gaz. vol. 155; p. 346.
Weaver, Walter T., Gulfport, Miss. Cutter-head for hydraulic dredges. No. 962,540; June 28; Sp. p. 4862; Gaz. vol. 155; p. 855.
Weaver, William J., *et al.* (See Hales, William E., assignor.)
Weaver, William T. S. (See Suddoth and Weaver.)
Webb, Samuel J., Minden, La. Gas-engine. No. 962,995; June 28; Sp. p. 5771; Gaz. vol. 155; p. 1010.
Weber, Josef. (See Goldschmidt and Weber.) (Reissue.)
Weber, Peter, Orange, assignor to New Jersey Patent Company, West Orange, N. J. Phonograph-reproducer. (Reissue.) No. 13,120; June 7; Sp. p. 1721; Gaz. vol. 155; p. 286.
Weber, Peter, assignor to Sohmer & Company, New York, N. Y. Top-stick for grand pianos. No. 962,605; June 28; Sp. p. 5014; Gaz. vol. 155; p. 877.
Weber, Vittorio V., Milan, Italy. Machine for reeling cocoons. No. 962,279; June 21; Sp. p. 4286; Gaz. vol. 155; p. 740.
Webster, Allen. (See Broenan, Cornelius J., assignor.)
Webster, Henry J., *et al.* (See Utley, John H., assignor.)
Webster, Ralph D., Elmira, N. Y. Back-pedaling coaster-brake. No. 961,187; June 14; Sp. p. 1912; Gaz. vol. 155; p. 347.
Wedge, Theodore C. H., Indianapolis, Ind. Multiple horse holder and releaser. No. 962,804; June 28; Sp. p. 5421; Gaz. vol. 155; p. 947.
Wegner, William F., assignor to S. T. Williams, New York, N. Y. Turbine. No. 960,747; June 7; Sp. p. 1025; Gaz. vol. 155; p. 173.
Weill, Philippe, New York, N. Y. Hair-net. No. 961,471; June 14; Sp. p. 2534; Gaz. vol. 155; p. 444.
Weimer, Henry, Tampa, Fla. Retouching-desk. No. 960,462; June 7; Sp. p. 438; Gaz. vol. 155; p. 74.
Weindel, Anton, Mülheim-on-the-Rhine, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Hydrosulfite compound and making same. No. 961,391; June 14; Sp. p. 2361; Gaz. vol. 155; p. 417.
Weints, Jacob, assignor to The Strong, Carlisle & Hammond Co., Cleveland, Ohio. Furnace. No. 960,463; June 7; Sp. p. 440; Gaz. vol. 155; p. 75.
Wels, John P., assignor to Metropolitan Sewing Machine Company, Nyack, N. Y. Feeding mechanism for sewing-machines. No. 960,464; June 7; Sp. p. 442; Gaz. vol. 155; p. 75.
Welse, Julius, and F. Rieche, assignors to Rudolph Koepp & Co., Oestrich-on-the-Rhine, Germany. Process and apparatus for utilizing the energy of waste gases. No. 962,108; June 21; Sp. p. 3913; Gaz. vol. 155; p. 682.
Weisell Nut Lock Company. (See Hemsteger, Edward A., assignor.)
Weiss, Albert T., assignor to Yawman & Erbe Manufacturing Co., Rochester, N. Y. Locking device for sectional cabinets. No. 960,465; June 7; Sp. p. 445; Gaz. vol. 155; p. 75.
Weissmann, Gustave, Paris, France. Illuminating-body. No. 960,466; June 7; Sp. p. 447; Gaz. vol. 155; p. 76.
Welch, William J., Hornsey, London, England. Mounting of saddles upon bicycles. No. 960,467; June 7; Sp. p. 449; Gaz. vol. 155; p. 76.
Welch, William W., Jackson, Miss., assignor of one-half to R. H. McCulloch, Beebe, Ark. Trace-buckle. No. 961,823; June 21; Sp. p. 3283; Gaz. vol. 155; p. 585.
Welin, Peter, Newcastle, assignor, by mesne assignments, to The Krell Auto-Grand Piano Co. of America, Connersville, Ind. Pedal mechanism for musical instruments. No. 961,824; June 21; Sp. p. 3284; Gaz. vol. 155; p. 586.
Welin, Peter, Newcastle, assignor, by mesne assignments, to The Krell Auto-Grand Piano Co. of America, Connersville, Ind. Music-spool. No. 962,685; June 28; Sp. p. 5164; Gaz. vol. 155; p. 903.
Weller, Frank D., Toledo, Ohio. Paper-hanger's board. No. 960,468; June 7; Sp. p. 449; Gaz. vol. 155; p. 76.
Weller, Frank D., Toledo, Ohio. Paper-hanger's board or the like. No. 960,469; June 7; Sp. p. 451; Gaz. vol. 155; p. 77.
Welles, Richard H., assignor to The Badger Brass Mfg. Co., Kenosha, Wis. Locking mechanism for lamps and analogous structures. No. 961,706; June 14; Sp. p. 3018; Gaz. vol. 155; p. 522.
Wellman Company. (See Stickney, Allison M., assignor.)
Wells, Arthur, New York, N. Y. Device for removing the kernels of corn. No. 961,825; June 21; Sp. p. 3286; Gaz. vol. 155; p. 586.
Wells, Frederic E., Greenfield, Mass. Die-stock. No. 962,184; June 21; Sp. p. 4090; Gaz. vol. 155; p. 710.
Wells, George E., National Military Home, Ohio. Projectile. No. 962,482; June 28; Sp. p. 4736; Gaz. vol. 155; p. 835.
Wells, Joseph F., Pinkstaff, Ill. Gas cut-off. No. 962,280; June 21; Sp. p. 4289; Gaz. vol. 155; p. 741.
Welsbach Light Company. (See Litle, Thomas J., Jr., assignor.)
Welsh, Morris, Quincy, assignor of one-half to P. R. Glass, Boston, Mass. Time-limit annunciator. No. 961,276; June 14; Sp. p. 2110; Gaz. vol. 155; p. 378.
Welte, Edwin E., Freiburg, Germany, assignor to M. Welte & Söhne, New York, N. Y. Automatic winding attachment for mechanical musical instruments. No. 962,871; June 28; Sp. p. 5549; Gaz. vol. 155; p. 971.
Welte & Söhne, M. (See Welte, Edwin E., assignor.)
Wendler, Oscar, assignor to Dr. N. Gerbers Co. M. B. H., Leipzig, Germany. Process for the determination of fat in milk and other dairy products. No. 961,564; June 14; Sp. p. 2743; Gaz. vol. 155; p. 475.
Wentworth, Barton M., assignor to G. A. Bodwell, Somersworth, N. H. Sleigh. No. 963,015; June 28; Sp. p. 5809; Gaz. vol. 155; p. 1017.
Wentworth, Henry A., Newton, assignor to Huff Electrostatic Separator Company, Boston, Mass. Apparatus for electrical separation. No. 960,470; June 7; Sp. p. 452; Gaz. vol. 155; p. 77.
Werden, Henrietta, Mount Vernon, assignor of one-half to S. L. Coe, New York, N. Y. Vending-machine. No. 961,277; June 14; Sp. p. 2115; Gaz. vol. 155; p. 379.
Wersel, Frank B., Jr., Mount Lookout, Ohio. Automatic reclining-chair back. No. 960,607; June 7; Sp. p. 746; Gaz. vol. 155; p. 123.
Wessels, Charles. (See Haye and Wessels.)
Wesson, Joseph H., Springfield, Mass. Safety device for revolvers. No. 961,188; June 14; Sp. p. 1913; Gaz. vol. 155; p. 347.
Wesson, Joseph H., Springfield, Mass. Safety device for revolvers. No. 961,189; June 14; Sp. p. 1914; Gaz. vol. 155; p. 347.
West, Junius B. (See Evans and West.)
West, Mansfield M., Cleveland, Ohio. Footwear. No. 960,748; June 7; Sp. p. 1028; Gaz. vol. 155; p. 173.
Westelin, Gottfrid, Lincoln, Nebr. Mail-box. No. 962,281; June 21; Sp. p. 4291; Gaz. vol. 155; p. 741.
Westerbeck, Frederick, St. Louis, Mo. Spring-wheel. No. 960,749; June 7; Sp. p. 1030; Gaz. vol. 155; p. 173.
Western Wheeled Scraper Company. (See Hamper and McKnight, assignors.)
Westinghouse Electric & Manufacturing Company. (See Aalborg, Christian, assignor.)
Westinghouse Electric and Manufacturing Company, The. (See Johnson, Charles S., assignor.)
Westinghouse Electric and Manufacturing Company. (See Mahoney, Joseph N., assignor.)
Westinghouse Electric & Manufacturing Company. (See Walker, Miles, assignor.)
Westman, Alfred, *et al.* (See Bice, Walter H., assignor.)
Weston, John H. (See Frenzel, William F., assignor.)
Weston, Lawrence G., assignor to C. A. Browne, Brockton, Mass. Machine for joining leather pieces edgewise and otherwise operating upon the edges of material in sheet form. No. 960,471; June 7; Sp. p. 456; Gaz. vol. 155; p. 77.
Wetherell, Anson B., Pittsburg, Pa. Bowling-alley. No. 960,750; June 7; Sp. p. 1031; Gaz. vol. 155; p. 174.
Wharton, Bloomfield F., Lima, Ohio. Calk for horse-shoes. No. 962,282; June 21; Sp. p. 4292; Gaz. vol. 155; p. 742.
Whedon, Harry F., Cleveland, Ohio. Engraving-machine. No. 962,686; June 28; Sp. p. 5165; Gaz. vol. 155; p. 904.
Wheeler, Arthur S., assignor to F. S. Webster Company, Boston, Mass. Pencil-sharpening machine. No. 961,392; June 14; Sp. p. 2361; Gaz. vol. 155; p. 417.
Wheeler, Joel N., Geneva, Ill. Child's speed-car. No. 961,370; June 14; Sp. p. 2325; Gaz. vol. 155; p. 411.
Whisler, John, Gibson, Iowa. Nut-splitting and bolt-nipping tool. No. 962,483; June 28; Sp. p. 4738; Gaz. vol. 155; p. 835.
Whistler, John, and R. A. Dudeck, St. Louis, Mo. Vending apparatus. No. 962,283; June 21; Sp. p. 4293; Gaz. vol. 155; p. 742.
White, Alexander P., Caldwell, N. J. Lathing. No. 960,751; June 7; Sp. p. 1033; Gaz. vol. 155; p. 174.
White, C. E., *et al.* (See Ward, Lloyd W., assignor.)
White, Frick F., Ligonier, Pa. Folding umbrella. No. 961,707; June 14; Sp. p. 3020; Gaz. vol. 155; p. 523.
White, John E., Grand Rapids, Mich. Display-rack. No. 962,185; June 21; Sp. p. 4091; Gaz. vol. 155; p. 710.
White, Joseph P., assignor of one-half to A. P. Solomon, Savannah, Ga. Spark-plug for explosive-engines. No. 960,752; June 7; Sp. p. 1035; Gaz. vol. 155; p. 174.
White, Sarah J. (See White, Virgil A., assignor.)
White, Thomas S., West Frankfort, Ill. Adjustable crank. No. 963,016; June 28; Sp. p. 5810; Gaz. vol. 155; p. 1017.
White, Virgil A., deceased, E. C. Ogg, administrator, assignor to S. J. White, Newton, Iowa. Gearing. No. 961,740; June 14; Sp. p. 3093; Gaz. vol. 155; p. 534.
White, William F., assignor to B. F. Windsor, Kenosha, Wis. Wire fabric. No. 962,541; June 28; Sp. p. 4865; Gaz. vol. 155; p. 855.
Whiteaker, George L., Steuben, Wis. Window-sash. No. 961,919; June 21; Sp. p. 3488; Gaz. vol. 155; p. 617.
Whitesell, David T. (See Peters, Francis T., assignor.)
Whiting Foundry Equipment Company. (See McDougall, Andrew H., assignor.)
Whitlatch, Russell W., Brooklyn, assignor to Raimes & Company, New York, N. Y. Soluble perfume-tablet. No. 962,872; June 28; Sp. p. 5554; Gaz. vol. 155; p. 971.
Whitmore, Charles M., Meriden, Conn. Card and photo holder. No. 962,897; June 21; Sp. p. 4516; Gaz. vol. 155; p. 779.

Whiton, Lucius E., New London, Conn. Scroll-chuck. No. 962,070; June 21; Sp. p. 3318; Gaz. vol. 155; p. 669.
Wicker, Nathaniel O., Las Animas, Colo. Combined paper-weight and pen-extractor. No. 960,753; June 7; Sp. p. 1037; Gaz. vol. 155; p. 175.
Wickord, Peter H. (See Gerth, Frank, assignor.)
Widmann, Rudolf, Munich, Germany. Preparing photographic pictures. No. 962,484; June 28; Sp. p. 4740; Gaz. vol. 155; p. 835.
Wiest, Martin J., Govans, Md. Sewage-disposal plant. No. 962,606; June 28; Sp. p. 5015; Gaz. vol. 155; p. 877.
Wilbur, Burt, Syracuse, N. Y. Horseshoe. No. 960,754; June 7; Sp. p. 1039; Gaz. vol. 155; p. 175.
Wilcox, Crittenden and Company. (See Hoops, Thomas, Jr., assignor.)
Wilcox, Elmer S. (See Macking, Nicholas, assignor.)
Wildbur, Bernice. (See Lawson and Wildbur.)
Wildbur, Robert S. (See Lawson and Wildbur.)
Wilderspin, Anderson, Grand Saline, assignor of one-half to D. C. Earnest, Dallas, Tex. Grate-bar. No. 962,805; June 28; Sp. p. 5424; Gaz. vol. 155; p. 947.
Wildey, Edward M., Caversham, Dunedin, New Zealand. Printing-machine. No. 962,542; June 28; Sp. p. 4866; Gaz. vol. 155; p. 855.
Wildman, Frank B., Norristown, Pa. Fabric-cutting device for knitting-machines. No. 960,755; June 7; Sp. p. 1041; Gaz. vol. 155; p. 175.
Wilkin, William M., Erie, Pa. Gang-saw mill. No. 960,472; June 7; Sp. p. 462; Gaz. vol. 155; p. 78.
Wilkins, George L., Chicago, Ill. Casement-window adjuster. No. 961,565; June 14; Sp. p. 2746; Gaz. vol. 155; p. 475.
William Galloway Company. (See Butler, Clinton C., assignor.)
William Schollhorn Company, The. (See Bernard, William A., assignor.)
Williams, Albert E., Jersey City, N. J. Purification of liquids. No. 960,608; June 7; Sp. p. 747; Gaz. vol. 155; p. 123.
Williams, Brown, and Earle. (See Brown, Nathaniel H., assignor.)
Williams, Charles H., Jr., assignor to Chicago Railway Equipment Company, Chicago, Ill. Brake-beam. No. 961,920; June 21; Sp. p. 3490; Gaz. vol. 155; p. 618.
Williams, Charles H., Jr., assignor to Chicago Railway Equipment Company, Chicago, Ill. Adjustable brake-head. No. 961,921; June 21; Sp. p. 3492; Gaz. vol. 155; p. 618.
Williams, Fred C. (See Lacy and Williams.)
Williams, George H., Los Angeles, Cal. Spring-wheel. No. 961,278; June 14; Sp. p. 2116; Gaz. vol. 155; p. 378.
Williams, George S., assignor to American Piano Player Company, Norfolk, Va. Vacuum-pump. No. 960,609; June 7; Sp. p. 749; Gaz. vol. 155; p. 124.
Williams, George S., assignor to American Piano Player Company, Norfolk, Va. Power-pneumatic. No. 960,610; June 7; Sp. p. 754; Gaz. vol. 155; p. 125.
Williams, John B., Houston, Tex. Metal-frame screen. No. 961,053; June 7; Sp. p. 1635; Gaz. vol. 155; p. 274.
Williams, John E., New York, N. Y., assignor to Electric Bank Protection Company. Electrically-protected plate and lining for vaults, safes, &c. No. 961,826; June 21; Sp. p. 3287; Gaz. vol. 155; p. 586.
Williams, John P., New York, N. Y., assignor to Electric Bank Protection Company. Electric cable for burglar-alarm systems. No. 961,827; June 21; Sp. p. 3291; Gaz. vol. 155; p. 587.
Williams, John P., and H. Huhn, New York, N. Y., assignors to Electric Bank Protection Company. Time-controller for electric time-locks or burglar-alarm systems. No. 961,922; June 21; Sp. p. 3494; Gaz. vol. 155; p. 618.
Williams, Owen J., Buffalo, N. Y. Disappearing hook. No. 961,566; June 14; Sp. p. 2748; Gaz. vol. 155; p. 476.
Williams, Stephen T. (See Wegner, William F., assignor.)
Willis, Samuel B., New York, N. Y. Guide-rack for fire-hose. No. 961,054; June 7; Sp. p. 1635; Gaz. vol. 155; p. 274.
Willson, Freeman R., Jr., Worthington, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company. Sprocket-wheel. No. 960,756; June 7; Sp. p. 1042; Gaz. vol. 155; p. 176.
Willy, John, Chicago, Ill. Loose-leaf holder. No. 961,923; June 21; Sp. p. 3501; Gaz. vol. 155; p. 619.
Wilson, Alonzo T., assignor of one-half to W. H. Nicholas, Des Moines, Iowa. Electric valve-controller. No. 960,757; June 7; Sp. p. 1044; Gaz. vol. 155; p. 176.
Wilson, Charles F., Ottawa, Ill. Construction of sewers and similar structures. No. 961,380; June 14; Sp. p. 2343; Gaz. vol. 155; p. 414.
Wilson, H. B., *et al.* (See Geddes, William, assignor.)
Wilson, James A., Mahomet, Tex. Weight-motor. No. 961,279; June 14; Sp. p. 2119; Gaz. vol. 155; p. 379.
Wilson, James E. (See Heaton, Elias M., assignor.)
Wilson, John C., assignor to The Simmons Manufacturing Company, Kenosha, Wis. Bed pillar or post. No. 960,611; June 7; Sp. p. 756; Gaz. vol. 155; p. 125.
Wilson, Ralph E., Dallas, Tex., assignor to Continental Gin Company, Birmingham, Ala. Cotton-ginning machinery. No. 961,393; June 14; Sp. p. 2363; Gaz. vol. 155; p. 418.
Wilson, Robert G., Alaska, W. Va. Air-cooling apparatus. No. 962,284; June 21; Sp. p. 4295; Gaz. vol. 155; p. 742.
Wilson, Samuel T., and C. K. McDermott, Charleston, W. Va. Metallic railway-tie. No. 962,996; June 28; Sp. p. 5775; Gaz. vol. 155; p. 1011.
Wilson, Stephen G., Philadelphia, Pa. Broom-holder. No. 961,472; June 14; Sp. p. 2535; Gaz. vol. 155; p. 444.
Winant, Gilbert S., Rochester, assignor to Sever Manufacturing Co., New York, N. Y. Washing-machine. No. 960,473; June 7; Sp. p. 464; Gaz. vol. 155; p. 78.
Winchester, George, Black Bear, Idaho. Folding candlestick. No. 961,190; June 14; Sp. p. 1916; Gaz. vol. 155; p. 348.
Winchester Repeating Arms Co. (See Bennett, Winchester, assignor.)
Winchester Repeating Arms Co. (See Buell, William H., assignor.)
Winchester Repeating Arms Co. (See Burton, Frank F., assignor.)
Winchester Repeating Arms Co. (See Johnson, Thomas C., assignor.)
Windsor, Benjamin F. (See White, William F., assignor.)
Windsor, Fred E., *et al.* (See Longtine, Robert V., assignor.)
Winkley, Erastus E., Lynn, Mass. Jack for shoe-machines. No. 961,747; June 14; Sp. p. 3109; Gaz. vol. 155; p. 537.
Winlack, Thomas, Niles, Mich. Printing-press. No. 961,567; June 14; Sp. p. 2750; Gaz. vol. 155; p. 476.
Wisconsin Engine Company. (See Sargent, Charles E., assignor.)
Wise, William D., Detroit, Minn., assignor of one-half to C. B. Stone, Fargo, N. D. Automatic cement-block machine. No. 961,664; June 14; Sp. p. 2934; Gaz. vol. 155; p. 508.
Wise, William D., Detroit, Minn., assignor of one-half to C. B. Stone, Fargo, N. D. Compression cement-block mold. No. 961,828; June 21; Sp. p. 3296; Gaz. vol. 155; p. 587.
Withrow, Clarence B., Denver, Colo. Pneumatic annunciator and indicator. No. 961,055; June 7; Sp. p. 1637; Gaz. vol. 155; p. 274.
Witt, George E., San Francisco, Cal. Reducing-valve. No. 960,758; June 7; Sp. p. 1046; Gaz. vol. 155; p. 176.
Witt, John A., Chicago, Ill. Thread-cabinet. No. 962,285; June 21; Sp. p. 4296; Gaz. vol. 155; p. 742.
Wittmann Brothers. (See Wittemann, Rudolph W., assignor.)
Wittemann, Rudolph W., assignor to Wittemann Brothers, New York, N. Y. Bottle-capping machine. No. 963,017; June 28; Sp. p. 5811; Gaz. vol. 155; p. 1018.
Witzel, Charles J., New York, N. Y. Wire mattress. (Reissue.) No. 13,125; June 28; Sp. p. 5842; Gaz. vol. 155; p. 1024.
Witzenmann, Emil, Pforsheim, Germany. Winding-head for armoring cables and the like. No. 962,186; June 21; Sp. p. 4092; Gaz. vol. 155; p. 710.
Wm. J. Oliver Manufacturing Company, The. (See Rossetter, James R., assignor.)
Woerner, Alfred O., *et al.*, trustees. (See Smith, Arthur K., assignor.)
Wohl, Maurice J., *et al.*, trustees. (See Wohl and Hertzberg, assignors.)
Wohl, Maurice J., and H. Hertzberg, New York, assignors to Economy Electric Company, Brooklyn, N. Y. Electrical connection. No. 962,071; June 21; Sp. p. 3320; Gaz. vol. 155; p. 669.
Wohl, Maurice J., New York, and H. Hertzberg, Brooklyn, assignors to A. A. Low, Horseshoe, N. Y.; M. J. Wohl and H. Hertzberg, trustees. Signaling device. No. 962,087; June 28; Sp. p. 5179; Gaz. vol. 155; p. 904.
Wohlwill, Heinrich, assignor to Norddeutsche Affinerie, Hamburg, Germany. Refining gold. No. 961,924; June 21; Sp. p. 3502; Gaz. vol. 155; p. 619.
Wolf, Charles R. (See Pence, Wolf, and Jarvis.)
Wolff, Charles H., Pittsburg, Pa. Cash-register. No. 960,759; June 7; Sp. p. 1047; Gaz. vol. 155; p. 177.
Wolff, Hugo. (See Isler and Wolff.)
Wolff, William E. (See Matheson, Richard T., assignor.)
Wolle, Rudolph, Leipsig, Germany. Ferroconcrete pile. No. 961,191; June 14; Sp. p. 1918; Gaz. vol. 155; p. 348.
Wollensak, Andrew, assignor to Wollensak Optical Company, Rochester, N. Y. Photographic shutter. No. 961,192; June 14; Sp. p. 1919; Gaz. vol. 155; p. 348.
Wollensak Optical Company. (See Wollensak, Andrew, assignor.)
Wood, Alfred V., Brunswick, Ga. Domestic garbage-furnace. No. 960,760; June 7; Sp. p. 1053; Gaz. vol. 155; p. 177.
Wood, Augustus, Hamilton, Ohio, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Lathe-head clamp. No. 961,330; June 14; Sp. p. 2254; Gaz. vol. 155; p. 397.
Wood, Frank W., Newport News, Va., assignor to C. and J. M. Cory, New York, N. Y. Time-controlled and electrically-operated signaling system. No. 960,761; June 7; Sp. p. 1055; Gaz. vol. 155; p. 177.
Wood, Frank W., Newport News, Va., assignor to Charles Cory & Son, New York, N. Y. Speed-indicator. No. 960,762; June 7; Sp. p. 1062; Gaz. vol. 155; p. 178.
Wood, Fred G., Yorkville, Mich., assignor to The Price Cereal Food Company, Chicago, Ill. Endless conveyer. No. 961,193; June 14; Sp. p. 1927; Gaz. vol. 155; p. 349.
Wood, William W., Raymond, Wash. Folding berry-box. No. 962,607; June 28; Sp. p. 5016; Gaz. vol. 155; p. 877.
Woodard, George F., Kalamazoo, Mich. Hay-press. No. 960,612; June 7; Sp. p. 757; Gaz. vol. 155; p. 125.

Woodbury, Frank P., *et al.* See England, Arthur E., assignor.)
Woods, Joseph M., and J. S. Maimone, assignors to The Compression Spark Plug Company, Denver, Colo. Spark-plug. No. 961,056; June 7; Sp. p. 1639; Gaz. vol. 155; p. 274.
Woods, Joseph M., and J. S. Maimone, Denver, Colo. Spark-plug. No. 961,057; June 7; Sp. p. 1641; Gaz. vol. 155; p. 275.
Woodward, Oscar, Montclair, N. J., assignor to Yost Writing Machine Company, Ilion, N. Y. Type-writing machine. No. 961,194; June 14; Sp. p. 1930; Gaz. vol. 155; p. 349.
Woodworth, Robert B., Pittsburg, Pa. Portable derrick. No. 960,474; June 7; Sp. p. 465; Gaz. vol. 155; p. 79.
Woolard, Josephus L., Williamston, N. C. Cultivator. No. 962,806; June 28; Sp. p. 5425; Gaz. vol. 155; p. 947.
Wooldridge, William J., Schenectady, N. Y. Private mailing-card. No. 961,829; June 21; Sp. p. 3300; Gaz. vol. 155; p. 588.
Workman Manufacturing Company. (See Perrine, John B., assignor.)
Workman, Noah W. (See Workman, Robert J., assignor.)
Workman, Robert J., assignor of one-third to N. W. Workman, San Francisco, Cal. Measuring and filling machine. No. 961,741; June 14; Sp. p. 3094; Gaz. vol. 155; p. 535.
Wright, George W. (See Krips and Wright.)
Wright, Henry C., assignor to The Bristol Brass Company, Bristol, Conn. Vapor-lamp. No. 960,475; June 7; Sp. p. 466; Gaz. vol. 155; p. 79.
Wuerth, Frederick W., Cincinnati, Ohio. Attachment for aeroplanes. No. 961,925; June 21; Sp. p. 3506; Gaz. vol. 155; p. 619.
Wuest, Frederick A., assignor to G. H. Bishop & Co., Lawrenceburg, Ind. Saw-clamp. No. 961,665; June 14; Sp. p. 2943; Gaz. vol. 155; p. 509.
Wunder, Otto, Ellicott City, Md. Raking mechanism for dams or other water-channels. No. 960,613; June 7; Sp. p. 759; Gaz. vol. 155; p. 126.
Wyckoff, Seamans & Benedict. (See Dunham, William G., assignor.)
Wyss, John, Johnstown, Colo. Mill or machine for grinding or reducing alfalfa to meal. No. 962,543; June 28; Sp. p. 4872; Gaz. vol. 155; p. 856.
Yale & Towne Manufacturing Company, The. (See Augenbraun, Peter P., assignor.)
Yale & Towne Manufacturing Company, The. (See Regan, Joseph, assignor.)
Yale & Towne Manufacturing Company, The. (See Taylor, Warren H., assignor.)
Yantis, James A., *et al.* (See England, Arthur E., assignor.)
Yawman & Erbe Manufacturing Co. (See Weiss, Albert T., assignor.)
Yocum, John W., Lovelock, Nev. Ditch-mower. No. 961,995; June 21; Sp. p. 3650; Gaz. vol. 155; p. 642.
York, James E., New York, N. Y., assignor to York Rolling Process Company. Manufacture of tie-plates or the like. No. 961,666; June 14; Sp. p. 2944; Gaz. vol. 155; p. 509.
York Rolling Process Company. (See York, James E., assignor.)
Yost Writing Machine Company. (See Woodward, Oscar, assignor.)
Young, David J., Pine Bluff, Ark. Musical attachment for automobiles. No. 963,018; June 28; Sp. p. 5815; Gaz. vol. 155; p. 1018.
Young, Frank A., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 961,280; June 14; Sp. p. 2121; Gaz. vol. 155; p. 380.
Young, Henry A., Providence, R. I. Toy handkerchief-box. No. 961,331; June 14; Sp. p. 2256; Gaz. vol. 155; p. 398.
Young, Leonard A., Detroit, Mich. Device for removing cream from milk-bottles. No. 962,187; June 21; Sp. p. 4093; Gaz. vol. 155; p. 710.
Young, Robert, Fitchburg, Mass. Reservoir-pen. No. 962,485; June 28; Sp. p. 4741; Gaz. vol. 155; p. 836.
Young, William T., assignor of one-half to C. J. Nelson, Denver, Colo. Axle construction for car-trucks. No. 962,898; June 21; Sp. p. 4516; Gaz. vol. 155; p. 779.
Younie, William A., Chelsea, Mass. Tumbler-holder. No. 961,568; June 14; Sp. p. 2751; Gaz. vol. 155; p. 476.
Zahn, Robert, Plauen, Germany. Motion-transmitting mechanism. No. 961,830; June 21; Sp. p. 3301; Gaz. vol. 155; p. 588.
Zeiss, Firm of Carl. (See Rohr, Moritz von, assignor.)
Zeiss, Firm of Carl. (See Straubel, Rudolf, assignor.)
Zeller, Paul W., Buffalo, N. Y. Spring-support for wagon-shafts. No. 961,708; June 14; Sp. p. 3021; Gaz. vol. 155; p. 523.
Zickrick, Jacob E. (See Bradley, John W., assignor.)
Zimmerlee, John M., Bethany, Mo. Broom. No. 962,188; June 21; Sp. p. 4095; Gaz. vol. 155; p. 711.
Zimmerman, Charles M., Cincinnati, Ohio. Converting glue. No. 961,058; June 7; Sp. p. 1648; Gaz. vol. 155; p. 275.
Zimmerman, Charles M., Cincinnati, Ohio. Glue-converter. No. 961,569; June 14; Sp. p. 2751; Gaz. vol. 155; p. 476.
Zimmerman, Charles M., Cincinnati, Ohio. Glue-melting apparatus. No. 961,570; June 14; Sp. p. 2753; Gaz. vol. 155; p. 477.
Zimmerman, George W. R., Lime Kiln, Md. Incubator. No. 960,476; June 7; Sp. p. 469; Gaz. vol. 155; p. 79.
Zimmerman, Harry, Fremont, Ohio. Bundling-machine. No. 961,709; June 14; Sp. p. 3023; Gaz. vol. 155; p. 523.
Zimmerman, Jacob. (See Fitz John, Jr., assignor.)
Zimmermann, George, Philadelphia, Pa. Loom for weaving double-pile fabrics. No. 962,286; June 21; Sp. p. 4297; Gaz. vol. 155; p. 742.
Zinn, Firm of Simon. (See Schmidt, William, assignor.)
Zinn, Firm of Simon. (See Smart, Walter J., assignor.)
Zinninger, Edward D., Portland, Oreg. Door-lock. No. 962,287; June 21; Sp. p. 4298; Gaz. vol. 155; p. 743.
Ziron, Paul, New York, N. Y., assignor to Noris Manufacturing Company. Lock. No. 962,486; June 28; Sp. p. 4742; Gaz. vol. 155; p. 836.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

Allen, Francis K., assignor to The Springfield Metallic Casket Company, Springfield, Ohio. Handle-plate for caskets. No. 40,729; June 14; Gaz. vol. 155; p. 538.

Allen, Francis K., assignor to The Springfield Metallic Casket Company, Springfield, Ohio. Name-plate for caskets. No. 40,730; June 14; Gaz. vol. 155; p. 538.

Badger Brass Manufacturing Company, The. (See Welles, Richard H., assignor.)

Belleville Stove & Range Company. (See Bertram, William L., assignor.)

Bertram, William L., Detroit, Mich., assignor to Belleville Stove & Range Company, Belleville, Ill. Stove. Nos. 40,732–3; June 14; Gaz. vol. 155; p. 539.

Creange, Henry, New York, N. Y. Tureen or similar article. No. 40,725; June 14; Gaz. vol. 155; p. 537.

Creange, Henry, New York, N. Y. Dish or similar article. No. 40,726; June 14; Gaz. vol. 155; p. 538.

Davies, Benjamin F., Union Hill, N. J., assignor to L. Straus & Sons, New York, N. Y. Glass vessel. No. 40,742; June 28; Gaz. vol. 155; p. 1025.

Dean, John R., New Britain, assignor to International Silver Co., Meriden, Conn. Spoon, fork, or similar article. No. 40,735; June 21; Gaz. vol. 155; p. 783.

Dietz, Alanson F., Altamont, N. Y. Checkrein-holder. No. 40,741; June 21; Gaz. vol. 155; p. 784.

Gill and Company. (See Kappler, Jacob, assignor.)

Goodwin, John E., Stoke-upon-Trent, assignor to Josiah Wedgwood & Sons Ld., Etruria, England. Plate or similar article. No. 40,736; June 21; Gaz. vol. 155; p. 783.

Gudeman, Leo, New York, N. Y. Illuminated rosette. No. 40,740; June 21; Gaz. vol. 155; p. 784.

Handel, Philip J., Meriden, Conn. Lamp-shade. No. 40,721; June 7; Gaz. vol. 155; p. 287.

Haskins, Virginia R., Philadelphia, Pa. Wall-paper or similar fabric. No. 40,723; June 7; Gaz. vol. 155; p. 287.

Hays, Frank A., Philadelphia, Pa. Pattern for a doll. No. 40,749; June 28; Gaz. vol. 155; p. 1026.

Hibschman, Jacob S., Strasburg, Pa. Whiffletree-ring screw. No. 40,731; June 14; Gaz. vol. 155; p. 538.

Hirschfeld, Leo, New York, N. Y., assignor to Saalberg Company, Carton. No. 40,728; June 14; Gaz. vol. 155; p. 538.

International Silver Co. (See Dean, John R., assignor.)

Josiah Wedgwood & Sons. (See Goodwin, John E., assignor.)

Kappler, Jacob, assignor to Gill and Company, Philadelphia, Pa. Lamp shade or reflector. No. 40,727; June 14; Gaz. vol. 155; p. 538.

L. Straus & Sons. (See Davies, Benjamin F., assignor.)

Moore, David P., and S. B. Pack, Washington, D. C. Casing for portable suction cleaning-machines. No. 40,748; June 28; Gaz. vol. 155; p. 1026.

Munhall, Burton D., Cleveland, assignor to The Union Metal Manufacturing Company, Canton, Ohio. Street-lamp. No. 40,737; June 21; Gaz. vol. 155; p. 784.

Myland, Christian, Philadelphia, Pa. Knife and fork holder. No. 40,746; June 28; Gaz. vol. 155; p. 1026.

Osborne, Charles, assignor to Whiting Manufacturing Company, New York, N. Y. Handle for a spoon, fork, or similar article. No. 40,745; June 28; Gaz. vol. 155; p. 1026.

Pack, Samuel B. (See Moore and Pack.)

Rea, Benedetto, Boston, Mass. Ice-cream cornucopia. No. 40,739; June 21; Gaz. vol. 155; p. 784.

Richardson, Frank C. A., Springfield, Mass. Doll. No. 40,722; June 7; Gaz. vol. 155; p. 287.

Saalberg Company. (See Hirschfeld, Leo, assignor.)

Springfield Metallic Casket Company, The. (See Allen, Francis K., assignor.)

Thompson, Ralph C., Attleboro, Mass. Badge. No. 40,720; June 7; Gaz. vol. 155; p. 287.

Union Metal Manufacturing Company, The. (See Munhall, Burton D., assignor.)

Venon, Jules H., New York, N. Y. Plate or similar article. Nos. 40,743–4; June 28; Gaz. vol. 155; pp. 1025–6.

Welles, Richard H., assignor to The Badger Brass Manufacturing Company, Kenosha, Wis. Vehicle-lamp. No. 40,747; June 28; Gaz. vol. 155; p. 1026.

Westgard, Anthony L., New York, N. Y. Emblem. No. 40,734; June 21; Gaz. vol. 155; p. 783.

Whiting Manufacturing Company. (See Osborne, Charles, assignor.)

Wray, Park Q., Chicago, Ill. Lamp. No. 40,738; June 21; Gaz. vol. 155; p. 784.

Wright, Spencer D., Philadelphia, Pa. Gimp. No. 40,724; June 7; Gaz. vol. 155; p. 287.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. Stein & Company, Chicago, Ill. Hose-supporters. No. 78,561; June 7; Gaz. vol. 155; p. 803.

A. Weiskittel & Son Company, Baltimore, Md. Stoves and ranges. No. 78,560; June 21; Gaz. vol. 155; p. 797.

A. B. McCrillis & Son Inc., Providence, R. I. Wheat-flour. No. 78,618; June 28; Gaz. vol. 155; p. 1038.

Acker, Merrall & Condit Co., New York, N. Y. Moselle wine. No. 78,563; June 28; Gaz. vol. 155; p. 1037.

Actien-Gesellschaft Hackerbräu, Munich, Germany. Beer. No. 78,564; June 28; Gaz. vol. 155; p. 1037.

Aetna Doll and Toy Company, New York, N. Y. Dolls. No. 78,390; June 14; Gaz. vol. 155; p. 549.

Alden S. Swan and Co., New York, N. Y. Lubricating greases and oils. No. 78,550; June 21; Gaz. vol. 155; p. 797.

Allison Manufacturing Company, Attleboro, Mass. Jewelry. No. 78,295; June 7; Gaz. vol. 155; p. 301.

Allmen, Christian von, Louisville, Ky. Certain foods. No. 78,664; June 28; Gaz. vol. 155; p. 1039.

Alma Manufacturing Company of Baltimore City, Baltimore, Md. Buckles for clothing. No. 78,478; June 21; Gaz. vol. 155; p. 795.

Amendt Milling Company, Monroe, Mich. Wheat-flour. No. 78,479; June 21; Gaz. vol. 155; p. 795.

American Bank Note Company, New York, N. Y. Playing-cards. Nos. 78,296–7; June 7; Gaz. vol. 155; p. 301.

American Steel & Wire Company of New Jersey, Cleveland, Ohio; Chicago, Ill.; Pittsburg, Pa.; New York, N. Y., and Worcester, Mass. Barbed wire. No. 78,480; June 21; Gaz. vol. 155; p. 795.

American Writing Paper Company, Holyoke, Mass. Writing and printing paper. Nos. 78,298–9; June 7; Gaz. vol. 155; p. 301.

American Writing Paper Company, Holyoke, Mass. Writing and printing paper. No. 78,874; June 7; Gaz. vol. 155; p. 303.

Anderson, Robert A., Fort Worth, Tex. Toilet powder. No. 78,301; June 14; Gaz. vol. 155; p. 549.

Andrew J. Morse & Son, Inc., Boston, Mass. Fire-hose nozzle. No. 78,338; June 7; Gaz. vol. 155; p. 302.

Aquino, Giovanni, New York, N. Y. White wine. No. 78,481; June 21; Gaz. vol. 155; p. 795.

Archinard, Edward J., Chicago, Ill. Polishing-cloths. No. 78,375; June 7; Gaz. vol. 155; p. 303.

Autolite Manufacturing Company, Newark, N. J. Cigarettes. No. 78,392; June 14; Gaz. vol. 155; p. 549.

Baker & Bennett Co., New York, N. Y. Dolls. No. 78,300. June 7; Gaz. vol. 155; p. 301.

Baker Manufacturing Co., Knoxville, Tenn. Medicines. No. 78,482; June 21; Gaz. vol. 155; p. 795.

Baldwin Forging & Tool Company, The, Columbus, Ohio. Shovels, spades, and scoops. No. 78,565; June 28; Gaz. vol. 155; p. 1037.

Baltimore Brush Co., The, Baltimore, Md. Brushes. No. 78,393; June 14; Gaz. vol. 155; p. 549.

Barber Asphalt Paving Company, The, Philadelphia, Pa. Bituminous roofing-sheets. No. 78,566; June 28; Gaz. vol. 155; p. 1037.

Barcley Corset Company, The, Newark, N. J. Wire garment-stays. No. 78,567; June 28; Gaz. vol. 155; p. 1037.

Barnes, Earle H., Parkers, N. Y. Remedy for affections of the throat and lungs. No. 78,483; June 21; Gaz. vol. 155; p. 795.

Behning Piano Co., New York, N. Y. Pianos and player-pianos. No. 78,484; June 21; Gaz. vol. 155; p. 795.

Behrend, Frederick, New York, N. Y. Desiccated vegetables and milk-powder. No. 78,568; June 28; Gaz. vol. 155; p. 1037.

Bemis Bro. Bag Co., St. Louis, Mo.; Boston, Mass., and Omaha, Nebr. Fly-nets and fly-covers for horses. No. 78,569; June 28; Gaz. vol. 155; p. 1037.

Bemis Bro. Bag Co., St. Louis, Mo.; Boston, Mass., and Omaha, Nebr. Horse-blankets and horse-clothing. No. 78,570; June 28; Gaz. vol. 155; p. 1037.

Ben-Hur Metal Polish Co., Crawfordsville, Ind. Polishes. No. 78,485; June 21; Gaz. vol. 155; p. 795.

Beyerle, Jacob, New York, N. Y. Dress-shields. No. 78,487; June 21; Gaz. vol. 155; p. 795.

Bigelow Carpet Company, Clinton, Lowell, and Boston, Mass. Rugs. Nos. 78,301–2; June 7; Gaz. vol. 155; p. 301.

Bigelow Carpet Company, Clinton, Lowell, and Boston, Mass. Carpets. No. 78,303; June 7; Gaz. vol. 155; p. 301.

Bigelow Carpet Company, Clinton, Lowell, and Boston, Mass. Rugs. No. 78,488; June 21; Gaz. vol. 155; p. 795.

Biomedic Company, The, New York, N. Y. Preparation of malt extract with other ingredients. No. 78,395; June 14; Gaz. vol. 155; p. 549.

Bishop & Babcock Co., The, Cleveland, Ohio. Nails. No. 78,489; June 21; Gaz. vol. 155; p. 795.

Bishop, Robert, trustee, Boston, Mass. Cotton lamp-wicking. No. 78,572; June 28; Gaz. vol. 155; p. 1037.

Bittman-Todd Grocer Company, The, Leavenworth, Kans. Canned foods and coffee. No. 78,573; June 28; Gaz. vol. 155; p. 1037.

Biell Champagne Kunath Co., Detroit, Mich. Tobacco. No. 78,490; June 21; Gaz. vol. 155; p. 795.

Blish Milling Company, The, Seymour, Ind. Wheat-flour. No. 78,574; June 28; Gaz. vol. 155; p. 1037.

Bliss, Fabyan & Company, Boston, Mass. Cotton piece goods. No. 78,575; June 28; Gaz. vol. 155; p. 1037.

Bohannon, John L., Oakland, Cal. Remedy for cancers. No. 78,576; June 28; Gaz. vol. 155; p. 1037.

Bolano, Francisco, Chicago, Ill. Cigars and leaf-tobacco. No. 78,577; June 28; Gaz. vol. 155; p. 1037.

Bonwit, Harris & Co., New York, N. Y. Certain clothing. No. 78,305; June 7; Gaz. vol. 155; p. 301.

Borden's Condensed Milk Company, Jersey City, N. J., and New York, N. Y. Condensed milk. No. 78,578; June 28; Gaz. vol. 155; p. 1037.

Boston Dairy Co., Boston, Mass. Condensed milk. No. 78,579; June 28; Gaz. vol. 155; p. 1037.

Bourne-Fuller Company, The, Cleveland, Ohio. Rivets. Nos. 78,306–7; June 7; Gaz. vol. 155; p. 301.

Bowman, T. B., Boone, Nebr. Remedy for blood-poisoning in colts. No. 78,397; June 14; Gaz. vol. 155; p. 549.

Bradley, Francis W., San Diego, Cal. Whisky. No. 78,398; June 14; Gaz. vol. 155; p. 549.

Breese Brothers Company, The, Cincinnati, Ohio. Rubber roofing. No. 78,308; June 7; Gaz. vol. 155; p. 301.

Brennaaun, Edward K., St. Louis, Mo. Sweeping compound. No. 78,491; June 21; Gaz. vol. 155; p. 795.

Brown, Marie, New York, N. Y. Writing-pens. Nos. 78,580–1; June 28; Gaz. vol. 155; p. 1037.

Bryant, George H., Chicago, Ill. Golf-clubs. No. 78,492; June 21; Gaz. vol. 155; p. 795.

Buskirk & Son, M. D., Paw Paw, Mich. Grapes. No. 78,582; June 28; Gaz. vol. 155; p. 1037.

Busse, Amand, New York, N. Y. Metal sash and window frames. No. 78,583; June 28; Gaz. vol. 155; p. 1037.

C. A. Woolsey Paint & Color Company, Jersey City, N. J. Copper paint. No. 78,476; June 14; Gaz. vol. 155; p. 551.

C. F. Streit Mfg. Co., The, Cincinnati, Ohio. Chairs, davenports, and davenport-beds. No. 78,387; June 7; Gaz. vol. 155; p. 303.

California Liquid Asphalt Company, Santa Barbara, Cal. Asphalt. No. 78,584; June 28; Gaz. vol. 155; p. 1037.

Canton City Bottling Company, The, Canton, Ohio. Ginger-ale, birch and root beer, and lemon-sour. No. 78,309; June 7; Gaz. vol. 155; p. 301.

Cardinet Fountain Brush Co., Oakland, Cal. Fountain-brushes. No. 78,399; June 14; Gaz. vol. 155; p. 549.

Cargill Elevator Co., Minneapolis, Minn. Seed-grains, grass and garden seeds. Nos. 78,376–7; June 7; Gaz. vol. 155; p. 303.

Cauchois, Frederic A., New York, N. Y. Cigars and cigarettes. No. 78,585; June 28; Gaz. vol. 155; p. 1037.

Champion Safety Lock Company, The, Geneva, Ohio. Certain hardware. No. 78,310; June 7; Gaz. vol. 155; p. 301.

Charles A. Schieren Company, New York, N. Y. Leather belting. No. 78,646; June 28; Gaz. vol. 155; p. 1039.

Charles H. Besly & Company, Chicago, Ill. Grinding-machines. No. 78,486; June 21; Gaz. vol. 155; p. 795.

Charles H. Besly & Company, Chicago, Ill. Adhesive cement and glue. No. 78,571; June 28; Gaz. vol. 155; p. 1037.

Charles P. Limbert Company, Holland, Mich. Certain furniture. No. 78,531; June 21; Gaz. vol. 155; p. 796.

Chas. W. Shaw Company, Baltimore, Md. Malt-flour. No. 78,469; June 14; Gaz. vol. 155; p. 551.

Chicago Fertilizer Works, (Not Incorporated), Chicago, Ill. Fertilizers. No. 78,493; June 21; Gaz. vol. 155; p. 795.

Cincinnati Garter Manufacturing Company, Cincinnati, Ohio. Men's garters. No. 78,586; June 28; Gaz. vol. 155; p. 1037.

Clark & Co., W. G., North Attleboro, Mass. Certain precious or plated metal articles. No. 78,400; June 14; Gaz. vol. 155; p. 549.

Clark Paper and Manufacturing Co., Rochester, N. Y. Adhesive paste. No. 78,587; June 28; Gaz. vol. 155; p. 1037.

Closset & Devers, Portland, Oreg. Tea. No. 78,311; June 7; Gaz. vol. 155; p. 301.

Closset & Devers, Portland, Oreg. Baking-powder, ammonia, soda, &c. No. 78,401; June 14; Gaz. vol. 155; p. 549.

Cone Export and Commission Company, New York, N. Y., and Greensboro, N. C. Cotton shirtings. No. 78,402; June 14; Gaz. vol. 155; p. 549.

Conneaut Company, The, Conneaut, Ohio. Incandescent-electric-light fixtures. Nos. 78,312–13; June 7; Gaz. vol. 155; p. 301.
Conneaut Company, The, Conneaut, Ohio. Electric-light fixtures. No. 78,495; June 21; Gaz. vol. 155; p. 795.
Corn Products Refining Company, Jersey City, N. J., and New York, N. Y. Compound of corn and sorghum syrup. No. 78,403; June 14; Gaz. vol. 155; p. 549.
Corset H Company, Worcester, Mass. Corsets. No. 78,314; June 7; Gaz. vol. 155; p. 301.
Coverdale, Philip H., New Orleans, La. Remedy for certain diseases. No. 78,589; June 28; Gaz. vol. 155; p. 1037.
Crothersville Canning Company, The, Crothersville, Ind. Canned vegetables. No. 78,590; June 28; Gaz. vol. 155; p. 1037.
Crown-Columbia Pulp and Paper Co., San Francisco, Cal. Paper bags. Nos. 78,378–80; June 7; Gaz. vol. 155; p. 303.
Crown Overall Manufacturing Co., Cincinnati, Ohio. Overalls. No. 78,315; June 7; Gaz. vol. 155; p. 301.
Crown Overall Manufacturing Co., Cincinnati, Ohio. Shirts. No. 78,496; June 21; Gaz. vol. 155; p. 795.
Current Literature Publishing Company, The, New York, N. Y. Monthly magazines. No. 78,591; June 28; Gaz. vol. 155; p. 1037.
Davis Chemical Company, The, Denver, Colo. Brushes. No. 78,404; June 14; Gaz. vol. 155; p. 549.
Davis, Roy A., Gibbon, Nebr. Wheat-flour. No. 78,665; June 28; Gaz. vol. 155; p. 1039.
De Long Seaman Co., Boston, Mass. Canned sardines. No. 78,405; June 14; Gaz. vol. 155; p. 549.
Dean Electric Company, The, Elyria, Ohio. Electric insulating materials. No. 78,498; June 21; Gaz. vol. 155; p. 795.
Diamond Expansion Bolt Co., New York, N. Y. Cable rings and hangers. No. 78,592; June 28; Gaz. vol. 155; p. 1037.
Diffusible Tonic Co., Sturgis, Mich. Medicine for chills, malaria, &c. No. 78,593; June 28; Gaz. vol. 155; p. 1037.
Downing, Clark & Co., New York, N. Y. Worsted and woolen piece goods. No. 78,594; June 28; Gaz. vol. 155; p. 1037.
Dubied & Co., Edouard, Couvet and Aux Isles, Couvet, Switzerland. Certain valves and hardware. No. 78,499; June 21; Gaz. vol. 155; p. 795.
Dunn, Katie E., Washington, D. C. Toilet preparations. No. 78,316; June 7; Gaz. vol. 155; p. 301.
Eagle Pencil Company, New York, N. Y. Lead-pencils. No. 78,317; June 7; Gaz. vol. 155; p. 301.
Ebersold, Steinmets & Ebersold, New York, N. Y. Remedy for poison-ivy or poison-oak. No. 78,596; June 28; Gaz. vol. 155; p. 1038.
Eclipse White Lead and Color Company, Brooklyn, N. Y. White lead. No. 78,406; June 14; Gaz. vol. 155; p. 549.
Edwin J. Gillies & Co. of Kentucky, Louisville, Ky., and New York, N. Y. Blended roasted coffee. No. 78,413; June 14; Gaz. vol. 155; p. 549.
Ehret Magnesia Manufacturing Company, Philadelphia, Pa. Heat-non-conducting coverings. No. 78,500; June 21; Gaz. vol. 155; p. 795.
Ellen's New Discovery Company, Newburgh, N. Y. Medicinal veterinary remedy. No. 78,318; June 7; Gaz. vol. 155; p. 301.
Elwood Lawn Mower Manufacturing Company, Elwood, Ind. Lawn-mowers. No. 78,597; June 28; Gaz. vol. 155; p. 1038.
Emil Weisbrod & Sons, Inc., Greenfield, Mass. Wallets. No. 78,366; June 7; Gaz. vol. 155; p. 303.
Enterprise Enamel Company, The, Bellaire, Ohio. Enamel metal ware. No. 78,407; June 14; Gaz. vol. 155; p. 549.
Ertel, Anthony, Hempstead, N. Y. Remedy for certain diseases. No. 78,408; June 14; Gaz. vol. 155; p. 549.
Estabrook & Eaton, Boston, Mass. Cigarettes. No. 78,501; June 21; Gaz. vol. 155; p. 795.
F. L. Smidth & Co., Jersey City, N. J., and New York, N. Y. Metallic grinding-bodies. No. 78,651; June 28; Gaz. vol. 155; p. 1039.
Faber, A. W., Stein, near Nuremberg, and Berlin, Germany. Pencils. Nos. 78,319–20; June 7; Gaz. vol. 155; p. 301.
Fabrique Internationale de conserves alimentaires Le Soleil, à Malines. (Société anonyme), Mechlin, Belgium. Preserved vegetables and fruits. No. 78,502; June 21; Gaz. vol. 155; p. 795.
Faire Bros. & Co., Limited, Leicester, England. Garters, belts, shoulder-braces, and garment-supporters. No. 78,409; June 14; Gaz. vol. 155; p. 549.
Fanner Mfg. Co., The, Cleveland, Ohio. Stove-pokers, lid-lifters, and shakers. No. 78,503; June 21; Gaz. vol. 155; p. 795.
Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Tablets and capsules of medicaments. No. 78,598; June 28; Gaz. vol. 155; p. 1038.
Feuerstein, Henry, Malden, Mass. Coat-sweaters. No. 78,321; June 7; Gaz. vol. 155; p. 301.
Ford Manufacturing Co., Chicago, Ill. Asphalt roofing. No. 78,410; June 14; Gaz. vol. 155; p. 549.
Ford Manufacturing Company, Chicago, Ill. Asphalt roofing. No. 78,599; June 28; Gaz. vol. 155; p. 1038.
Fort Wayne Drug Company, Fort Wayne, Ind. Whisky. No. 78,331; June 7; Gaz. vol. 155; p. 303.
Foster Deck Co., Council Bluffs, Iowa, and Chicago, Ill. Ointment. No. 78,497; June 21; Gaz. vol. 155; p. 795.
Frankel Bros., New York, N. Y. Men's overcoats and coats. No. 78,322; June 7; Gaz. vol. 155; p. 301.
Franklin Manufacturing Co., Baltimore, Md. Cotton piece goods. No. 78,411; June 14; Gaz. vol. 155; p. 549.
Franz Hartmann Sinalco Aktiengesellschaft, Detmold, Germany. Fruit lemonades. No. 78,603; June 28; Gaz. vol. 155; p. 1038.
Freeman & Cobb Co., Boston, Mass. Smoked shore-haddock. No. 78,505; June 21; Gaz. vol. 155; p. 795.
G. W. Bent Co., Boston, Mass. Mattresses and cushions. No. 78,394; June 14; Gaz. vol. 155; p. 549.
Garey, Hellen, Salt Lake City, Utah. Remedy for certain diseases. No. 78,323; June 7; Gaz. vol. 155; p. 301.
General Electric Company, Schenectady, N. Y. Electric lamps. No. 78,600; June 28; Gaz. vol. 155; p. 1038.
Geo. De Wald Company, The, Fort Wayne, Ind. Certain clothing. No. 78,666; June 28; Gaz. vol. 155; p. 1039.
Gerhard Mennen Chemical Co., Newark, N. J. Talcum powder. No. 78,506; June 21; Gaz. vol. 155; p. 795.
Gernsback, Hugo, New York, N. Y. Monthly magazine. No. 78,507; June 21; Gaz. vol. 155; p. 795.
Gibson Canning Company, The, Gibson, Ill. Canned pork and beans, lye-hominy, and sauer-kraut. No. 78,412; June 14; Gaz. vol. 155; p. 549.
Gildden, Hyde & Co., Boston, Mass. Hosiery. Nos. 78,508–9; June 21; Gaz. vol. 155; pp. 795–6.
Goggin, John, New York, N. Y. Cotton-seed oil. No. 78,414; June 14; Gaz. vol. 155; p. 549.
Goldwater, Henry, New York, N. Y. Cloaks, dresses, and coats. No. 78,601; June 28; Gaz. vol. 155; p. 1038.
Gordon Bitters Co., Jersey City, N. J. Dry gin. No. 78,415; June 14; Gaz. vol. 155; p. 549.
Gottschalk, George A., Louisville, Ky. Liver-pills. No. 78,416; June 14; Gaz. vol. 155; p. 549.
Grendel Mills, Greenwood, S. C. Cotton sheeting. No. 78,433; June 14; Gaz. vol. 155; p. 550.
Grinberg Brothers, New York, N. Y. Gas, oil, alcohol, and coal stoves. No. 78,510; June 21; Gaz. vol. 155; p. 796.
Guillaume, Jules A., New York, N. Y. Certain clothing. No. 78,324; June 7; Gaz. vol. 155; p. 301.
Gustav A. Moebs & Co., Detroit, Mich. Cigars. No. 78,435; June 14; Gaz. vol. 155; p. 550.
Guttknecht, J. W., Stein-Nuremberg, Germany. Certain stationery. No. 78,511; June 21; Gaz. vol. 155; p. 796.
Gwinn Milling Company, The, Columbus, Ohio. Wheat-flour. Nos. 78,417–18; June 14; Gaz. vol. 155; pp. 549–50.
Hamburger Bros., St. Louis, Mo. Leather shoes. No. 78,602; June 28; Gaz. vol. 155; p. 1038.
Hamilton Manufacturing Co., Lowell and Boston, Mass. Cotton crape. No. 78,512; June 21; Gaz. vol. 155; p. 796.
Hanna Paint Manufacturing Company, The, Columbus, Ohio. Liquid paint. No. 78,513; June 21; Gaz. vol. 155; p. 796.
Hardwick & Magee Co., Philadelphia, Pa. Carpet and rugs. No. 78,325; June 7; Gaz. vol. 155; p. 301.
Harris Grape Juice Co., Harrisburg, Pa. Grape-juice. No. 78,419; June 14; Gaz. vol. 155; p. 550.
Harris, Sam H., New York, N. Y. Cigars, cheroots, and little cigars. No. 78,514; June 21; Gaz. vol. 155; p. 796.
Hastings Canning Company, Hastings, Nebr. Canned vegetables. No. 78,382; June 7; Gaz. vol. 155; p. 303.
Hayden & Collins, Haverhill, Mass. Boots and shoes. No. 78,515; June 21; Gaz. vol. 155; p. 796.
Hayman, Abe, Philadelphia, Pa. Shirts. No. 78,516; June 21; Gaz. vol. 155; p. 796.
Helmer, William F., Burlington, Iowa. Soap. No. 78,604; June 28; Gaz. vol. 155; p. 1038.
Hemming Manufacturing Company. (See Prentiss, George L.)
Hesslein & Co., Neuss, New York, N. Y. Certain textiles. No. 78,326; June 7; Gaz. vol. 155; p. 302.
Hoffmann, Ernst G., New Rochelle, N. Y. Steel balls. No. 78,605; June 28; Gaz. vol. 155; p. 1038.
Hoffmann-La Roche Chemical Works, The, New York, N. Y. Potassium guiacol sulfonate. No. 78,327; June 7; Gaz. vol. 155; p. 302.
Hollander & Son, A., Newark, N. J. Skins and furs. No. 78,518; June 21; Gaz. vol. 155; p. 796.
Holmes, Samuel L., Detroit, Mich. Pharmaceutical preparations. No. 78,328; June 7; Gaz. vol. 155; p. 302.
Hopkins & Allen Arms Company, The, Norwich, Conn. Revolvers. No. 78,383; June 7; Gaz. vol. 155; p. 303.
Huyler's, New York, N. Y. Candy and chocolate. No. 78,606; June 28; Gaz. vol. 155; p. 1038.
Ideal Coffee and Tea Company, St. Louis, Mo. Baking powder and soda. No. 78,422; June 14; Gaz. vol. 155; p. 550.
Independent Baking Co., Davenport, Iowa. Biscuit. No. 78,329; June 7; Gaz. vol. 155; p. 302.
Inter-State Grocer Company, The, Joplin, Mo. Certain foods. No. 78,520; June 21; Gaz. vol. 155; p. 796.
International Acheson Graphite Company, Niagara Falls, N. Y. Lubricants. No. 78,519; June 21; Gaz. vol. 155; p. 796.
International Cork Company, Brooklyn, N. Y. Cork. No. 78,607; June 28; Gaz. vol. 155; p. 1038.
Isaacs, Moses, New York, N. Y. Handkerchiefs. No. 78,608; June 28; Gaz. vol. 155; p. 1038.
J. A. Ruhl Clothing Company, St. Louis, Mo. Certain clothing. No. 78,449; June 14; Gaz. vol. 155; p. 550.
J. B. Williams Company, The, Glastonbury, Conn. Soap. No. 78,475; June 14; Gaz. vol. 155; p. 551.

J. C. Blair Company, Huntingdon, Pa. Paper and blank books. No. 78,304; June 7; Gaz. vol. 155; p. 301.
J. D. Riedel Aktiengesellschaft, Berlin, Germany, and New York, N. Y. Cholagogue. No. 78,352; June 7; Gaz. vol. 155; p. 302.
J. E. Duffield & Company, St. Louis, Mo. Tool-handles. No. 78,595; June 28; Gaz. vol. 155; p. 1038.
J. M. McCullough's Sons Co., The, Cincinnati, Ohio. Lawn-grass seed. Nos. 78,619–20; June 28; Gaz. vol. 155; p. 1038.
James Clark Leather Company, St. Louis, Mo. Leather boots and shoes. No. 78,494; June 21; Gaz. vol. 155; p. 795.
Jenkins, Isiah W., Youngstown, Ohio. Remedies for certain diseases. No. 78,330; June 7; Gaz. vol. 155; p. 302.
John Blaul's Sons Company, Burlington, Iowa. Rolled oats, corn-starch, beans, and rice. No. 78,396; June 14; Gaz. vol. 155; p. 549.
Johnson, Mary E., trustee, Fitchburg, Mass. Bicycles. No. 78,331; June 7; Gaz. vol. 155; p. 302.
Johnson, Mary E., trustee, Fitchburg, Mass. Rifles, shot-guns, pistols, and revolvers. Nos. 78,423–4; June 14; Gaz. vol. 155; p. 550.
Kinnell Manufacturing Company, The, Pittsfield, Mass. Overshoes, sole-pads, &c., for animals. No. 78,521; June 21; Gaz. vol. 155; p. 796.
Koffee Klear Co., Terre Haute, Ind. Coffee-clarifier. No. 78,609; June 28; Gaz. vol. 155; p. 1038.
Kopisch, William, Deer Creek, Okla. Remedy for hog-cholera. No. 78,610; June 28; Gaz. vol. 155; p. 1038.
Kristal-Glas-En Aardewerk Fabrieken De Sphinx Voorheen Petrus Regout & Co., Maastricht, Netherlands. Articles of earthenware. No. 78,611; June 28; Gaz. vol. 155; p. 1038.
Kruger, Darsie & Co., Liverpool, England. Wheat-flour. No. 78,522; June 21; Gaz. vol. 155; p. 796.
Kuehnel, Mr. and Mrs. Joseph, Cleveland, Ohio. Liniment. No. 78,612; June 28; Gaz. vol. 155; p. 1038.
Kutschera, Frank, Chicago, Ill. Alcoholic extract of Alpine herbs. No. 78,668; June 28; Gaz. vol. 155; p. 1039.
Lachaise, A., Angoulême, France. Tooth powder, paste, and wash. No. 78,613; June 28; Gaz. vol. 155; p. 1038.
Lauts Bros. & Co., Buffalo, N. Y. Soap. No. 78,384; June 7; Gaz. vol. 155; p. 303.
Lauts Bros. & Co., Buffalo, N. Y. Soap. Nos. 78,523–7; June 21; Gaz. vol. 155; p. 796.
Lauts Bros. & Co., Buffalo, N. Y. Soap. No. 78,614; June 28; Gaz. vol. 155; p. 1038.
Lefebvre, Joseph R., Lawrence, Mass. Remedy for rheumatism. No. 78,528; June 21; Gaz. vol. 155; p. 796.
Lennox, Malcolm G., Philadelphia, Pa. Sauces and relishes. No. 78,615; June 28; Gaz. vol. 155; p. 1038.
Leonard Brothers, Rockwall, Tex. Carbonated tonic beverage and syrup for making the same. No. 78,616; June 28; Gaz. vol. 155; p. 1038.
Levavasseur, Leon M. J. C., Puteaux, France. Explosion-motors and accessories. No. 78,529; June 21; Gaz. vol. 155; p. 796.
Lever Brothers Company, Portland, Me., and Cambridge, Mass. Preparation of oxygen. No. 78,425; June 14; Gaz. vol. 155; p. 550.
Levy & Son, S. J., New York, N. Y. Certain clothing. No. 78,426; June 14; Gaz. vol. 155; p. 550.
Lexington Brewing Company, Lexington, Ky. Beer. No. 78,427; June 14; Gaz. vol. 155; p. 550.
Liebstadter Millinery Co., Kansas City, Mo. Ladies' hats. No. 78,332; June 7; Gaz. vol. 155; p. 302.
Limberg & Co., W., Gifhorn, Germany. Glass chimneys for miners' lamps. No. 78,530; June 21; Gaz. vol. 155; p. 796.
Lindsay Thompson & Co., Limited, Belfast, Ireland. Linen thread. No. 78,470; June 14; Gaz. vol. 155; p. 551.
Lingner, Karl A., Dresden, Germany. Medicinal preparation. No. 78,617; June 28; Gaz. vol. 155; p. 1038.
MacMahon, Percy A., London, England. Toys and puzzles. No. 78,428; June 14; Gaz. vol. 155; p. 550.
Macy & Co., R. H., New York, N. Y. Certain clothing. No. 78,333; June 7; Gaz. vol. 155; p. 302.
Maddaloni, Donato, New York, N. Y. Olive-oil. No. 78,532; June 21; Gaz. vol. 155; p. 796.
Markt & Hammacher Company, New York, N. Y. Cigars, cigarettes, and tobacco. Nos. 78,533–4; June 21; Gaz. vol. 155; p. 796.
Maryland Biscuit Co., Baltimore, Md. Sugar wafers. No. 78,430; June 14; Gaz. vol. 155; p. 550.
Mason, Frederic S., New York, N. Y. Perfumes. No. 78,535; June 21; Gaz. vol. 155; p. 796.
Mathy, Joseph, Washington, D. C. Baking-pans. No. 78,334; June 7; Gaz. vol. 155; p. 302.
McBrayer Canning Co., The, McBrayer, Ky. Canned tomatoes. No. 78,336; June 7; Gaz. vol. 155; p. 302.
McCleary, Wallin & Crouse, Amsterdam, N. Y. Rugs, matts, and carpets. No. 78,336; June 7; Gaz. vol. 155; p. 302.
McNish & Co., Robert, Glasgow, Scotland. Whisky. No. 78,431; June 14; Gaz. vol. 155; p. 550.
Merck & Co., New York, N. Y. Coffee. No. 78,536; June 21; Gaz. vol. 155; p. 796.
Mianus Mfg. Co., The, Cocob, Conn. Woolen cloth, linings, and blankets. No. 78,621; June 28; Gaz. vol. 155; p. 1038.
Miller & Sons Co., Philadelphia, Pa. Hosiery. No. 78,432; June 14; Gaz. vol. 155; p. 550.
Minneapolis Knitting Works, Minneapolis, Minn. Knit union suits and infants' shirts and slips. No. 78,434; June 14; Gaz. vol. 155; p. 550.
Missouri Lamp & Mfg. Co., St. Louis, Mo. Chemical hand fire-extinguishers. Nos. 78,537–8; June 21; Gaz. vol. 155; p. 796.
Missouri Lamp & Mfg. Co., St. Louis, Mo. Chemical hand fire-extinguishers. Nos. 78,622–4; June 28; Gaz. vol. 155; p. 1038.
Montebello & Co., Alfred de, Mareuil-sur-Ay, Marne, France. Champagne-wine. No. 78,436; June 14; Gaz. vol. 155; p. 550.
Mood, New York, N. Y. Corsets and ladies' outer clothing. No. 78,625; June 28; Gaz. vol. 155; p. 1038.
Moore, William A., St. Paul, Minn. Tooth-powders. No. 78,626; June 28; Gaz. vol. 155; p. 1038.
Murias y Cia., C. O., Habana, Cuba. Cigars. No. 78,539; June 21; Gaz. vol. 155; p. 796.
National Metal Edge Box Company, Philadelphia, Pa. Boxes, cartons, and blanks therefor. No. 78,339; June 7; Gaz. vol. 155; p. 302.
National Metal Edge Box Company, Philadelphia, Pa. Jute-board. No. 78,438; June 14; Gaz. vol. 155; p. 550.
National Powder Co., Spokane, Wash. Blasting-powder. No. 78,627; June 28; Gaz. vol. 155; p. 1038.
National Tube Company, Pittsburg, Pa. Metal pipes and tubes. No. 78,628; June 28; Gaz. vol. 155; p. 1038.
National Wafer Company, Boston, Mass. Confectionery, wafers, lozenges, and tablets. No. 78,340; June 7; Gaz. vol. 155; p. 302.
New Orleans Manufacturers Agency Co. Ltd., New Orleans, La. Sardines. No. 78,341; June 7; Gaz. vol. 155; p. 302.
Northern Shoe Co., Duluth, Minn. Rubber boots and shoes. No. 78,342; June 7; Gaz. vol. 155; p. 302.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Certain equipments. No. 78,343; June 7; Gaz. vol. 155; p. 302.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Certain laundry appliances. No. 78,344; June 7; Gaz. vol. 155; p. 302.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Fruit-jar rubbers. No. 78,437; June 14; Gaz. vol. 155; p. 550.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Seine-twine. No. 78,540; June 21; Gaz. vol. 155; p. 796.
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Certain tools and tool-handles. No. 78,629; June 28; Gaz. vol. 155; p. 1038.
Oswald Publishing Company, New York, N. Y. Monthly periodical. No. 78,439; June 14; Gaz. vol. 155; p. 550.
Pacific Noveity Company, New York, N. Y. Celluloid hair-pins and combs. No. 78,440; June 14; Gaz. vol. 155; p. 550.
Page Woven Wire Fence Co., Monessen, Pa. Spring-wire. Nos. 78,345–7; June 7; Gaz. vol. 155; p. 302.
Pantograph Corporation, Yonkers, N. Y. Moving-picture films. No. 78,441; June 14; Gaz. vol. 155; p. 550.
Pasteur Vaccine Company Limited, The, London, England. Vermin-destroying virus. No. 78,442; June 14; Gaz. vol. 155; p. 550.
Peerless Spool Silk Co., New York, N. Y. Spool-silk and mercerized thread. No. 78,541; June 21; Gaz. vol. 155; p. 796.
Pessagno & Montresor, New York, N. Y. Red and white wines. No. 78,630; June 28; Gaz. vol. 155; p. 1038.
Pfaffmann Egg Noodle Co., Cleveland, Ohio. Macaroni. No. 78,348; June 7; Gaz. vol. 155; p. 302.
Philip H. Postel Milling Company, Mascoutah, Ill. Wheat-flour. No. 78,349; June 7; Gaz. vol. 155; p. 302.
Philo Hay Specialties Co., Newark, N. J. Soap. No. 78,631; June 28; Gaz. vol. 155; p. 1039.
Powers Paper Company, Associates, Holyoke, Mass., and New York, N. Y. Paper and envelops. No. 78,632; June 28; Gaz. vol. 155; p. 1039.
Pratt Engineering & Machine Co., Atlanta, Ga. Certain machinery. No. 78,350; June 7; Gaz. vol. 155; p. 302.
Prentiss, George L., New York, N. Y., assignor to Hemming Manufacturing Company. Certain electrical supplies. No. 78,633; June 28; Gaz. vol. 155; p. 1039.
Prentiss Vise Company, New York, N. Y. Vise. Nos. 78,634–8; June 28; Gaz. vol. 155; p. 1039.
Prieur, René, New York, N. Y. Moving-picture films. No. 78,351; June 7; Gaz. vol. 155; p. 302.
R. T. French Company, The, Rochester, N. Y. Coffee, spices, and flavoring extracts. No. 78,667; June 28; Gaz. vol. 155; p. 1039.
Raven Red Ash Coal Co. Inc., Red Ash, Va. Coal. No. 78,443; June 14; Gaz. vol. 155; p. 550.
Reichardt, F. Alfred, Elisabeth, N. J., and New York, N. Y. Instruments for sharpening razors. No. 78,336; June 7; Gaz. vol. 155; p. 303.
Reinhart & Newton Company, The, Cincinnati, Ohio. Candy. No. 78,353; June 7; Gaz. vol. 155; p. 302.
Reynolds & Co., Wm. T., Poughkeepsie, N. Y. Canned fruits and vegetables. No. 78,444; June 14; Gaz. vol. 155; p. 550.
Reymond, John P., Kansas City, Mo. Photographic intensifiers and reducers. No. 78,354; June 7; Gaz. vol. 155; p. 302.
Rhine & Co., New York, N. Y. Certain textile fabrics. No. 78,445; June 14; Gaz. vol. 155; p. 550.

Rice-Stix Dry Goods Company, St. Louis, Mo. Cotton piece goods. No. 78,355; June 7; Gaz. vol. 155; p. 302.
Richmond Hosiery Mills, Chattanooga, Tenn., and Rossville, Ga. Hosiery. No. 78,446; June 14; Gaz. vol. 155; p. 550.
Rickard-Gregory Shoe Co., The, Lynn, Mass. Leather boots and shoes. No. 78,447; June 14; Gaz. vol. 155; p. 550.
Ridgways Limited, London, England. Tea. No. 78,639; June 28; Gaz. vol. 155; p. 1039.
Robinson-Roders Co., Newark, N. J. Mattresses, pillows, and cushions. No. 78,640; June 28; Gaz. vol. 155; p. 1039.
Roessler-Hasslacher Chemical Co., The, New York, N. Y. Washing-powder. No. 78,641; June 28; Gaz. vol. 155; p. 1039.
Rubber Company of America, Dover, Del.; New York, N. Y., and Jersey City, N. J. Rubber tires and tire-shoes. No. 78,448; June 14; Gaz. vol. 155; p. 550.
Rudolph Wurlitzer Co., The, Cincinnati, Ohio. Guitar capo tastos. Nos. 78,369–71; June 7; Gaz. vol. 155; p. 303.
Rudolph Wurlitzer Co., The, Cincinnati, Ohio. Music-stands. No. 78,372; June 7; Gaz. vol. 155; p. 303.
Rudolph Wurlitzer Co., The, Cincinnati, Ohio. Accordions. No. 78,389; June 7; Gaz. vol. 155; p. 303.
Rudolph Wurlitzer Co., The, Cincinnati, Ohio. Cornets, trumpets, French horns, &c. No. 78,663; June 28; Gaz. vol. 155; p. 1039.
Russell & Erwin Manufacturing Company, New Britain, Conn. Certain tools and machines. No. 78,643; June 28; Gaz. vol. 155; p. 1039.
Russell & Erwin Manufacturing Company, New Britain, Conn. Locks, catches, and fasteners. No. 78,644; June 28; Gaz. vol. 155; p. 1039.
Russell & Erwin Manufacturing Company, New Britain, Conn. Harness hardware. No. 78,645; June 28; Gaz. vol. 155; p. 1039.
S. B. Foot & Co., Red Wing, Minn. Side leathers. No. 78,504; June 21; Gaz. vol. 155; p. 795.
Sales Company of America, Milwaukee, Wis. Trading-stamps. No. 78,450; June 14; Gaz. vol. 155; p. 550.
Samels Bros. & White Canning Co., Chaska, Minn. Canned corn. No. 78,356; June 7; Gaz. vol. 155; p. 302.
Sand Toy Company, Pittsburg, Pa. Sand toys. No. 78,451; June 14; Gaz. vol. 155; p. 550.
Sarg, C. F. A., Vienna, Austria-Hungary. Certain chemicals, toilet preparations, and medicines. No. 78,452; June 14; Gaz. vol. 155; p. 550.
Schlesinger, Harry L., Atlanta, Ga. Candy. No. 78,542; June 21; Gaz. vol. 155; p. 796.
Schmidt & Co., P. P., Cramer, Ill. Salves and healing-oils. No. 78,647; June 28; Gaz. vol. 155; p. 1039.
Schoolcraft, Elmer E., Kendall, Mich. Medicinal powder. No. 78,453; June 14; Gaz. vol. 155; p. 550.
Scioto Canning Company, The, Circleville, Ohio. Canned vegetables. Nos. 78,454–6; June 14; Gaz. vol. 155; p. 551.
Selden Motor Vehicle Co., Rochester, N. Y. Automobiles. No. 78,457; June 14; Gaz. vol. 155; p. 551.
Seminole Chemical Company, St. Louis, Mo. Flavoring extract. No. 78,458; June 14; Gaz. vol. 155; p. 551.
Sénégas, Jean, New York, N. Y. Toilet preparations. No. 78,649; June 28; Gaz. vol. 155; p. 1039.
Sherman & Sons Co., New York, N. Y. Laces. No. 78,357; June 7; Gaz. vol. 155; p. 302.
Shipman, Benjamin M., New York, N. Y. Canned sardines. No. 78,460; June 14; Gaz. vol. 155; p. 551.
Shreve & Company, San Francisco, Cal. Certain precious-metal ware. No. 78,358; June 7; Gaz. vol. 155; p. 302.
Simpson & Sons, Wm., Philadelphia, Pa. Lawn-mowers. No. 78,650; June 28; Gaz. vol. 155; p. 1039.
Smith, Kline & French Co., Philadelphia, Pa. Egg emulsion of cod-liver oil. No. 78,359; June 7; Gaz. vol. 155; p. 302.
Snyder, William D., Sidney, Ohio. Antiseptic root-canal filling. No. 78,652; June 28; Gaz. vol. 155; p. 1039.
Southern Belting Company of New Orleans, New Orleans, La. Leather belting. No. 78,543; June 21; Gaz. vol. 155; p. 796.
Southwestern Paper Company, Dallas, Tex. Book-paper. No. 78,653; June 28; Gaz. vol. 155; p. 1039.
Spiegel Brothers, Chicago, Ill. Prepared ostrich-plumes, &c. No. 78,544; June 21; Gaz. vol. 155; p. 796.
Standard Oil Co. of New York, New York, N. Y. Refined petroleum. No. 78,545; June 21; Gaz. vol. 155; p. 796.
Stanley Rule & Level Co., New Britain, Conn. Screw-drivers. No. 78,360; June 7; Gaz. vol. 155; p. 302.
Stanley Works, New Britain, Conn. Steel hinges. No. 78,461; June 14; Gaz. vol. 155; p. 551.
Stanley Works, The, New Britain, Conn. Wrought-steel butt-hinges. Nos. 78,654–8; June 28; Gaz. vol. 155; p. 1039.
Stark Distillery Co., St. Louis, Mo. Distilled peppermint cordial. No. 78,546; June 21; Gaz. vol. 155; p. 797.
Starlite Manufacturing Company, New York, N. Y. Toy fireworks. No. 78,659; June 28; Gaz. vol. 155; p. 1039.
Sterling Pin Co., The, Derby, Conn. Hooks and eyes for garments. No. 78,362; June 7; Gaz. vol. 155; p. 303.
Sterling Pin Co., The, Derby, Conn. Hooks and eyes. No. 78,547; June 21; Gaz. vol. 155; p. 797.
Stock & Krause, New York, N. Y. Medicines. No. 78,548; June 21; Gaz. vol. 155; p. 797.
Stokely Bros. & Co., Newport, Tenn. Canned lye-hominy. No. 78,462; June 14; Gaz. vol. 155; p. 551.
Stott, David, Detroit, Mich. Wheat-flour. No. 78,660; June 28; Gaz. vol. 155; p. 1039.
Strauss & Co., London, England. Holland gin. No. 78,549; June 21; Gaz. vol. 155; p. 797.
Strauss & Co., Wm. L., New York, N. Y. Baby-pacifiers. No. 78,463; June 14; Gaz. vol. 155; p. 551.
Strawsons & Company, London, England. Insect-banding for trees. No. 78,464; June 14; Gaz. vol. 155; p. 551.
Stuart, William J., Peru, Ind. Poultry insect-destroyer. No. 78,465; June 14; Gaz. vol. 155; p. 551.
Sunlit Fruit Company, West Berkeley, Cal. Jams, jellies, marmalades, and mince-meat. No. 78,466; June 14; Gaz. vol. 155; p. 551.
Susquehanna Silk Mills, New York, N. Y. Certain furnishings. No. 78,363; June 7; Gaz. vol. 155; p. 303.
Susquehanna Silk Mills, New York, N. Y. Certain clothing. No. 78,467; June 14; Gaz. vol. 155; p. 551.
Swedish Iron & Steel Corporation, New York, N. Y. Barsteel. No. 78,551; June 21; Gaz. vol. 155; p. 797.
Syracuse Candle Company, Syracuse, N. Y. Candles. No. 78,661; June 28; Gaz. vol. 155; p. 1039.
T. B. Clark & Co., Seelyville, Pa. Artistic cut glassware. No. 78,588; June 28; Gaz. vol. 155; p. 1037.
Tarshis, Belle, Brooklyn, N. Y. Remedy for female complaints. No. 78,364; June 7; Gaz. vol. 155; p. 303.
Taylor & Co. Inc., Newark, N. J. Certain precious-metal ware. No. 78,662; June 28; Gaz. vol. 155; p. 1039.
Thermo-Chemicals Company, New York, N. Y. Anhydrous hyperthermic poultice. No. 78,468; June 14; Gaz. vol. 155; p. 551.
Thomas Madden Son and Company, Indianapolis, Ind. Davenports. No. 78,429; June 14; Gaz. vol. 155; p. 550.
Thompson, Fred A., Trenton, N. J. Certain composition. No. 78,469; June 14; Gaz. vol. 155; p. 551.
Trenton Iron Company, The, Trenton, N. J., and New York, N. Y. Wire rope. No. 78,365; June 7; Gaz. vol. 155; p. 303.
Troy Chemical Co., Binghamton, N. Y. Ointment. No. 78,471; June 14; Gaz. vol. 155; p. 551.
Turner Brothers, Limited, Rochdale, England. Balata belting. No. 78,552; June 21; Gaz. vol. 155; p. 797.
Union Carbide Company, New York, N. Y. Calcium carbid. No. 78,367; June 7; Gaz. vol. 155; p. 303.
Union Fishermen's Co-op. Packing Co., Astoria, Oreg. Canned salmon. No. 78,388; June 7; Gaz. vol. 155; p. 303.
Union Metal Works, Chelsea, Mass. Ball-cocks. No. 78,554; June 21; Gaz. vol. 155; p. 797.
United Roofing and Manufacturing Company, Philadelphia, Pa. Floor-covering. No. 78,472; June 14; Gaz. vol. 155; p. 551.
Viking Refrigerator & Mfg. Co., Kansas City, Kans. Refrigerators. No. 78,555; June 21; Gaz. vol. 155; p. 797.
W. H. McElwain Company, Boston, Mass. Artificial sole-leather. No. 78,385; June 7; Gaz. vol. 155; p. 303.
W. S. Tyler Company, The, Cleveland, Ohio. Woven-wire fabrics for screens. No. 78,553; June 21; Gaz. vol. 155; p. 797.
Walker & Sons, Limited, John, Kilmarnock, Scotland, and London, England. Whisky. No. 78,556; June 21; Gaz. vol. 155; p. 797.
Wallace & Thomson, New York, N. Y. Certain foods. No. 78,557; June 21; Gaz. vol. 155; p. 797.
Warner-Godfrey Co., New York, N. Y. Cotton piece goods. No. 78,558; June 21; Gaz. vol. 155; p. 797.
Warren Brothers Company, Boston, Mass. Pavements and paving material. No. 78,559; June 21; Gaz. vol. 155; p. 797.
Waters Pierce Oil Company, St. Louis, Mo. Gasolene. No. 78,473; June 14; Gaz. vol. 155; p. 551.
Western Clock Mfg. Co., The, Peru, Ill. Clocks and watches. No. 78,474; June 14; Gaz. vol. 155; p. 551.
Western Clock Mfg. Co., The, Peru, Ill. Clocks and watches. No. 78,561; June 21; Gaz. vol. 155; p. 797.
William S. Hill Company, Boston, Mass. Wheat-flour. No. 78,517; June 21; Gaz. vol. 155; p. 796.
William S. Scull Company, Camden, N. J. Coffees, teas, and spices. No. 78,648; June 28; Gaz. vol. 155; p. 1039.
Wisconsin Lime and Cement Company, Chicago, Ill. Bricks. No. 78,368; June 7; Gaz. vol. 155; p. 303.
Wm. A. Rogers, Limited, New York and Niagara Falls, N. Y. Silver-plated ware. No. 78,642; June 28; Gaz. vol. 155; p. 1039.
Worden Meeker Varnish Co., Oakland, Cal. Varnishes, japans, oil-stains, &c. No. 78,337; June 7; Gaz. vol. 155; p. 302.
Wunsch, Julius E., Jersey City, N. J., and New York, N. Y. Gloves. No. 78,477; June 14; Gaz. vol. 155; p. 551.
Yeiser Hook and Eye Company, The, Philadelphia, Pa. Hooks and eyes. No. 78,562; June 21; Gaz. vol. 155; p. 797.
Yes Bay Canning Co., Yes Bay, Alaska, and Portland, Oreg. Canned salmon. No. 78,373; June 7; Gaz. vol. 155; p. 303.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

Barclay & Barclay, New York, N. Y. "Reuter's Syrup." (For a Medicinal Preparation.) No. 15,226; June 28; Gaz. vol. 155; p. 1040.
Block Co., Frank E., Atlanta, Ga. "Kenesaw Biscuit." (For Biscuit.) No. 15,223; June 28; Gaz. vol. 155; p. 1040.
Block Co., Frank E., Atlanta, Ga. "Block Milk Biscuit." (For Biscuit.) No. 15,224; June 28; Gaz. vol. 155; p. 1040.
Bridgeton Condensed Milk Co., Bridgeton, N. J. "Sharp's Sterilized Evaporated Milk." (For Evaporated Milk.) No. 15,208; June 14; Gaz. vol. 155; p. 552.
Colgan Gum Co., Louisville, Ky. "Mint Chips." (For Chewing-Gum.) No. 15,225; June 28; Gaz. vol. 155; p. 1040.
Cornell & Ward, New York, N. Y. "Japanese Toilet Tissue." (For Toilet-Paper.) No. 15,211; June 14; Gaz. vol. 155; p. 552.
Couch, J. A., Richmond, Va. "7 and 11." (For Blended Corn Whisky.) No. 15,213; June 21; Gaz. vol. 155; p. 798.
Danove, D. C., New Orleans, La. "The Only Original Sweet Pepper Catsup." (For Pepper Catsup.) No. 15,202; June 7; Gaz. vol. 155; p. 304.
Darhol Co., The, Detroit, Mich. "Peroxo." (For Tooth-picks.) Nos. 15,206–10; June 14; Gaz. vol. 155; p. 552.
Di Salapartis, Enrico A. D., New York, N. Y. "Corvo Casteldaccia." (For Wine.) No. 15,207; June 14; Gaz. vol. 155; p. 552.
Kamenstein, Myer, New York, N. Y. "The Home Wash Boiler." (For Washboilers.) No. 15,221; June 21; Gaz. vol. 155; p. 798.
Lloyd Manufacturing Co., New York, N. Y. "Buster Brown Ruby Brand Sparklers." (For Fireworks.) No. 15,222; June 21; Gaz. vol. 155; p. 798.
McGuirk, Michael, Minneapolis, Minn. "Gov. Johnson." (For Cigars.) No. 15,212; June 21; Gaz. vol. 155; p. 798.
Moehle Lithographic Co., The, New York, N. Y. "High Ranger." (For Cigars.) No. 15,206; June 14; Gaz. vol. 155; p. 552.
Osborn Paper Company, Marion, Ind. "The Double Q Composition Book." (For Blank Books.) No. 15,214; June 21; Gaz. vol. 155; p. 798.
Osborn Paper Company, Marion, Ind. "Klondike Tablet." (For Writing-Tablets.) No. 15,215; June 21; Gaz. vol. 155; p. 798.
Rosenberg & Sons, A., Chicago, Ill. "The Highland." (For Bloomer-Dresses.) No. 15,220; June 21; Gaz. vol. 155; p. 798.
Sattler, Gustav, New York, N. Y. "Restorina." (For Hair-Dye.) No. 15,203; June 7; Gaz. vol. 155; p. 304.
Sears, Roebuck and Co., Chicago, Ill. "Pansy Kid Dolls." (For Dolls.) No. 15,216; June 21; Gaz. vol. 155; p. 798.
Sears, Roebuck and Co., Chicago, Ill. "Violet Kid Dolls." (For Dolls.) No. 15,217; June 21; Gaz. vol. 155; p. 798.
Sears, Roebuck and Co., Chicago, Ill. "American Beauty Kid Dolls." (For Dolls.) No. 15,218; June 21; Gaz. vol. 155; p. 798.
Sears, Roebuck and Co., Chicago, Ill. "Sunshine Kid Dolls." (For Dolls.) No. 15,219; June 21; Gaz. vol. 155; p. 798.
Turtle Bros., New York, N. Y. "T. B. Dress Linen." (For Dress-Linen.) No. 15,228; June 28; Gaz. vol. 155; p. 1040.
United States Gypsum Company, The, Jersey City, N. J., and Chicago, Ill. "Adamant the Perfection of Exterior Plaster." (For Exterior Plaster.) No. 15,204; June 7; Gaz. vol. 155; p. 304.
United States Gypsum Company, The, Jersey City, N. J., and Chicago, Ill. "Adamant the Perfection of Wall Plaster." (For Wall-Plaster.) No. 15,205; June 7; Gaz. vol. 155; p. 304.
Westcott, Slade & Balcom Company, Providence, R. I. "To Wa-Kon." (For a Liquid Floor-Finish.) No. 15,227; June 28; Gaz. vol. 155; p. 1040.

PRINTS.

Blair Camera Division Eastman Kodak Co., Rochester, N. Y. "Hawk-Eye Cameras." (For Cameras.) No. 2,601; June 7; Gaz. vol. 155; p. 304.
Braham, Lewis, Chicago, Ill. "Something New! The Brahams Phantographs." (For Phantographs.) No. 2,603; June 14; Gaz. vol. 155; p. 552.
Burnet and Temple Limited, London, England. "The Outlook Human Hair Net." (For Hair-Nets.) No. 2,605; June 21; Gaz. vol. 155; p. 798.
James A. Blanchard Co., The, New York, N. Y. "Lion Brand Agricultural Sprays." (For Spraying Materials.) No. 2,607; June 21; Gaz. vol. 155; p. 798.
Main, Willard F., Iowa City, Iowa. "Piano Evolution." (For Pianos.) No. 2,608; June 21; Gaz. vol. 155; p. 798.
Mendelsohn, Felix, Chicago, Ill. "Mendelsohn's Newspaper Cut Service for Brewers and Bottlers." (For Beer.) No. 2,602; June 14; Gaz. vol. 155; p. 552.
Muto Sales Co., Rochester, N. Y. "Muto Convertible." (For Collars for Garments.) No. 2,606; June 21; Gaz. vol. 155; p. 798.
O. J. Gude Co., The, New York, N. Y. "One of the Sights of The Great White Way." (For Champagne.) No. 2,598; June 7; Gaz. vol. 155; p. 304.
Washburn Crosby Company, Minneapolis, Minn. "Best for Biscuits Also." (For Flour.) No. 2,599; June 7; Gaz. vol. 155; p. 304.
Washburn Crosby Company, Minneapolis, Minn. "Washburn-Crosby Mills." (For Flour.) No. 2,600; June 7; Gaz. vol. 155; p. 304.
Washburn Crosby Company, Minneapolis, Minn. "In Justice to the Cook." (For Flour.) No. 2,604; June 21; Gaz. vol. 155; p. 798.

DISCLAIMERS.

Allsop, Thomas, and Walter W. Sibson, Philadelphia, Pa.; disclaimer filed by assignee, The Philadelphia Drving Machinery Company. Singeing-machine. No. 919,999; disclaimer filed June 10, 1910; Gaz. vol. 155; p. 803.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF JUNE, 1910.

[Abbreviations: "Sp."—Monthly Volume of Specifications; "Gaz."—Official Gazette.]

Abdominal adjuster, reducer, supporter, and retainer. A. Harris. No. 960,908; June 7; Sp. p. 1340; Gaz. vol. 155; p. 225.

Abdominal supporter. E. Schulte-Uechting. No. 961,166; June 14; Sp. p. 1869; Gaz. vol. 155; p. 339.

Abrading-machine. F. C. Rowell and J. L. Nolan. No. 960,408; June 7; Sp. p. 346; Gaz. vol. 155; p. 58.

Accordion. K. Gollasch. No. 961,120; June 14; Sp. p. 1782; Gaz. vol. 155; p. 323.

Account-keeping apparatus, Manifolding. C. F. Hudnall. No. 960,931; June 7; Sp. p. 1374; Gaz. vol. 155; p. 232.

Acetylene-burner. F. M. Casto. No. 960,818; June 7; Sp. p. 1172; Gaz. vol. 155; p. 195.

Acetylene generator and torch, Portable. A. F. Jenkins. No. 960,643; June 7; Sp. p. 828; Gaz. vol. 155; p. 136.

Acid, Amid of beta-beta-methylipropylpropionic. L. Taub. No. 961,385; June 14; Sp. p. 2355; Gaz. vol. 155; p. 416.

Acid and fire proof bodies, Producing. I. Schlossberg. No. 961,651; June 14; Sp. p. 2913; Gaz. vol. 155; p. 504.

Acid, Apparatus for concentrating sulfuric. O. Proelss and W. S. Hall. No. 960,702; June 7; Sp. p. 944; Gaz. vol. 155; p. 157.

Acid from smelter-gases, Making sulfuric. J. P. Channing and F. J. Falding. No. 962,493; June 28; Sp. p. 4761; Gaz. vol. 155; p. 839.

Acid, Making formic. H. Howard. No. 960,927; June 7; Sp. p. 1368; Gaz. vol. 155; p. 230.

Acid, Making nitric. F. Hüsser. No. 961,350; June 14; Sp. p. 2292; Gaz. vol. 155; p. 405.

Acid, Manufacturing carbonic. E. A. Behrens. No. 960,788; June 7; Sp. p. 1112; Gaz. vol. 155; p. 186.

Acid motor, Carbonic. L. Horst. No. 961,859; June 21; Sp. p. 3375; Gaz. vol. 155; p. 598.

Adding and recording machine. G. W. Dudley. No. 960,853; June 7; Sp. p. 1235; Gaz. vol. 155; p. 207.

Adding-machine, Perpendicular and horizontal. C. E. W. Gardner. No. 960,634; June 7; Sp. p. 811; Gaz. vol. 155; p. 133.

Adding-machines, Power-drive for. O. C. Kreis, Jr. No. 960,343; June 7; Sp. p. 212; Gaz. vol. 155; p. 37.

Adjustable bracket. T. Smith. No. 960,723; June 7; Sp. p. 982; Gaz. vol. 155; p. 163.

Adjustable chair, Child's. O. G. Nelson. No. 961,311; June 14; Sp. p. 2198; Gaz. vol. 155; p. 391.

Adjustable clamp. C. C. Butler. No. 962,620; June 28; Sp. p. 5041; Gaz. vol. 155; p. 881.

Advertising device. G. W. Hanlon. No. 960,816; June 7; Sp. p. 152; Gaz. vol. 155; p. 29.

Advertising device. J. Adrian. No. 961,062; June 7; Sp. p. 1657; Gaz. vol. 155; p. 277.

Advertising device. W. E. Walters and H. S. Fitzgerrell. No. 962,069; June 21; Sp. p. 3816; Gaz. vol. 155; p. 669.

Advertising device, Dental. M. R. Slough. No. 961,262; June 14; Sp. p. 2068; Gaz. vol. 155; p. 372.

Aeroplane attachment. F. W. Wuerth. No. 961,925; June 21; Sp. p. 3505; Gaz. vol. 155; p. 619.

Air and gas mixing device. C. S. and J. W. Moore. No. 961,787; June 21; Sp. p. 3194; Gaz. vol. 155; p. 573.

Air-brake. J. F. McElroy. No. 962,517; June 28; Sp. p. 4806; Gaz. vol. 155; p. 847.

Air-brake angle-cock connection and support. M. A. Garrett. No. 960,890; June 7; Sp. p. 1309; Gaz. vol. 155; p. 219.

Air-brake apparatus. H. F. Bickel. No. 962,546; June 28; Sp. p. 4879; Gaz. vol. 155; p. 856.

Air-brake apparatus. J. W. Bingley. No. 962,547; June 28; Sp. p. 4884; Gaz. vol. 155; p. 857.

Air-brake attachment for automatic systems, Straight-. W. R. Chandler. No. 962,696; June 28; Sp. p. 5202; Gaz. vol. 155; p. 906.

Air-brake coupling, Automatic. F. H. Roe. No. 962,980; June 28; Sp. p. 5744; Gaz. vol. 155; p. 1006.

Air-brake system, Electropneumatic. G. Macloskie. No. 960,861; June 7; Sp. p. 257; Gaz. vol. 155; p. 43.

Air-brake systems, Angle-cock support for. M. A. Garrett. No. 960,889; June 7; Sp. p. 1307; Gaz. vol. 155; p. 219.

Air-braking apparatus for railways. W. H. Sheasby and S. G. Neal. No. 961,320; June 14; Sp. p. 2221; Gaz. vol. 155; p. 394.

Air compressing and pumping apparatus, Compound liquid-piston. J. K. Sweeny. No. 960,729; June 7; Sp. p. 992; Gaz. vol. 155; p. 165.

Air-compressor. D. E. Allard. No. 960,478; June 7; Sp. p. 473; Gaz. vol. 155; p. 80.

Air-conditioning apparatus. S. W. Cramer and W. B. Hodge. No. 960,850; June 7; Sp. p. 1198; Gaz. vol. 155; p. 199.

Air-cooled engine. W. J. Miller. No. 962,283.; June 21; Sp. p. 4173; Gaz. vol. 155; p. 725.

Air-cooling apparatus. R. G. Wilson. No. 962,284; June 21; Sp. p. 4295; Gaz. vol. 155; p. 742.

Air, Device for equally dividing and distributing a current of. H. F. Rand. No. 962,720; June 28; Sp. p. 5252; Gaz. vol. 155; p. 916.

Air-drying means. L. Block. No. 961,710; June 14; Sp. p. 3025; Gaz. vol. 155; p. 524.

Air-governor and expression device, Combined. W. F. Bayer. No. 961,335; June 14; Sp. p. 2263; Gaz. vol. 155; p. 399.

Air-inlet trap, Fresh-. G. R. Evans. No. 961,343; June 14; Sp. p. 2279; Gaz. vol. 155; p. 402.

Air-purifying apparatus. G. Clements and J. M. Hostler. No. 961,208; June 14; Sp. p. 1964; Gaz. vol. 155; p. 354.

Airship. R. E. Green. No. 960,539; June 7; Sp. p. 620; Gaz. vol. 155; p. 100.

Airship. G. D. S. Reece. No. 962,386; June 21; Sp. p. 4494; Gaz. vol. 155; p. 776.

Airship. T. Kornbrodt. No. 962,964; June 28; Sp. p. 5705; Gaz. vol. 155; p. 1000.

Airship. A. R. Rieger. No. 962,977; June 28; Sp. p. 5736; Gaz. vol. 155; p. 1004.

Alarm; *See* Fire-alarm; Pressure-gage alarm; Sash-lock and burglar-alarm.

Album. H. Knopping. No. 962,648; June 28; Sp. p. 5063; Gaz. vol. 155; p. 889.

Alkali thiosulfates, Making. L. Destree. No. 961,760; June 21; Sp. p. 3142; Gaz. vol. 155; p. 565.

Alloy for electrical resistances. W. B. Drivor. No. 961,217; June 14; Sp. p. 1984; Gaz. vol. 155; p. 358.

Aluminous material, Purifying. L. E. Saunders. No. 960,712; June 7; Sp. p. 962; Gaz. vol. 155; p. 160.

Amalgamating-machine. J. S. Rayburn. No. 962,466; June 28; Sp. p. 4707; Gaz. vol. 155; p. 829.

Amalgamating-rifle. E. S. Hoyt. No. 963,005; June 28; Sp. p. 5791; Gaz. vol. 155; p. 1014.

Amalgamator. A. J. Smith and H. W. Kent. No. 961,905; June 21; Sp. p. 3460; Gaz. vol. 155; p. 612.

Ammunition, Primer for small-arm. W. H. Buell. No. 962,888; June 28; Sp. p. 5582; Gaz. vol. 155; p. 976.

Amusement apparatus. R. Fulgora, F. S. and W. Murray. No. 961,947; June 21; Sp. p. 3549; Gaz. vol. 155; p. 628.

Amusement device. M. Kern. No. 961,289; June 14; Sp. p. 2027; Gaz. vol. 155; p. 365.

Amusement device. B. F. Fitch. No. 961,595; June 14; Sp. p. 2803; Gaz. vol. 155; p. 485.

Anchor. W. M. Bateman and J. C. Levett. No. 961,095; June 14; Sp. p. 1734; Gaz. vol. 155; p. 315.

Anchor-socket. I. Cowles. No. 960,625; June 7; Sp. p. 794; Gaz. vol. 155; p. 130.

Animal-jaw puller. E. B. Perrigo. No. 962,782; June 28; Sp. p. 5373; Gaz. vol. 155; p. 939.

Annealing apparatus. A. W. Machlet. No. 961,305; June 14; Sp. p. 2173; Gaz. vol. 155; p. 389.

Annealing-furnace. J. D. Swindell. No. 960,484; June 7; Sp. p. 393; Gaz. vol. 155; p. 65.

Annealing furnaces, Delivery apparatus for bottle-. C. Brauer, No. 962,811; June 28; Sp. p. 5432; Gaz. vol. 155; p. 949.

Annunciator and indicator, Pneumatic. C. B. Withrow. No. 961,055; June 7; Sp. p. 1637; Gaz. vol. 155; p. 274.

Annunciator, Elevator-. W. W. Savage. No. 961,025; June 7; Sp. p. 1579; Gaz. vol. 155; p. 265.

Annunciator, Time-limit. M. Welsh. No. 961,276; June 14; Sp. p. 2110; Gaz. vol. 155; p. 378.

Anthracene compound and making it. M. H. Isler and H. Wolff. No. 961,612; June 14; Sp. p. 2384; Gaz. vol. 155; p. 491.

Anthraquinone acridones. F. Ullmann. No. 961,047; June 7; Sp. p. 1625; Gaz. vol. 155; p. 272.

Anthraquinone-di-acridones. F. Ullmann. No. 961,048; June 7; Sp. p. 1626; Gaz. vol. 155; p. 272.
Anvil attachment. A. H. De Haas. No. 961,109; June 14; Sp. p. 1757; Gaz. vol. 155; p. 319.
Anvil attachment. E. Spreen. No. 962,478; June 28; Sp. p. 4727; Gaz. vol. 155; p. 883.
Anvil-supporting base. E. Spreen. No. 962,477; June 28; Sp. p. 4726; Gaz. vol. 155; p. 883.
Arch-support. A. M. Smith. No. 961,174; June 14; Sp. p. 1885; Gaz. vol. 155; p. 342.
Artist's sketch-box. R. F. Maynard. No. 961,629; June 14; Sp. p. 2372; Gaz. vol. 155; p. 496.
Ash-shovel. R. Brownson. No. 960,266; June 7; Sp. p. 58; Gaz. vol. 155; p. 13.
Asylum-lock. A. Arena. No. 962,875; June 28; Sp. p. 5558; Gaz. vol. 155; p. 972.
Attrition-mill. E. P. Alsted. No. 962,807; June 28; Sp. p. 5426; Gaz. vol. 155; p. 947.
Automatic alarm and gas-pressure cut-off device. O. C. Moon. No. 960,560; June 7; Sp. p. 677; Gaz. vol. 155; p. 111.
Automatic lubricator. W. Pfeifer. No. 960,696; June 7; Sp. p. 933; Gaz. vol. 155; p. 155.
Automatic switch. C. W. Kaufman. No. 961,413; June 14; Sp. p. 2390; Gaz. vol. 155; p. 424.
Automatic switch. J. M. Rhett. No. 962,388; June 21; Sp. p. 4498; Gaz. vol. 155; p. 776.
Automatic ventilator. C. E. Reits. No. 961,016; June 7; Sp. p. 1560; Gaz. vol. 155; p. 262.
Automobile. C. E. Cox. No. 962,626; June 28; Sp. p. 5064; Gaz. vol. 155; p. 883.
Automobile-brake. J. J. Stawartz. No. 960,426; June 7; Sp. p. 379; Gaz. vol. 155; p. 64.
Automobile-controller lever-lock. F. C. Miller. No. 962,448; June 28; Sp. p. 4663; Gaz. vol. 155; p. 823.
Automobile gear case and housing. C. W. Blackman. No. 961,097; June 14; Sp. p. 1736; Gaz. vol. 155; p. 315.
Automobile-headlight controller. E. A. Adams. No. 960,763; June 7; Sp. p. 1065; Gaz. vol. 155; p. 178.
Automobile steering-wheel. E. K. Hardy. No. 960,907; June 7; Sp. p. 1339; Gaz. vol. 155; p. 225.
Automobiles. Light-regulator for. W. Leuckert. No. 961,621; June 14; Sp. p. 2356; Gaz. vol. 155; p. 494.
Automobiles, Musical attachment for. D. J. Young. No. 963,018; June 28; Sp. p. 5615; Gaz. vol. 155; p. 1018.
Awning. W. G. Templeton. No. 962,176; June 21; Sp. p. 4071; Gaz. vol. 155; p. 707.
Awning-fixture. W. J. O. Astrup. No. 960,771; June 7; Sp. p. 1080; Gaz. vol. 155; p. 181.
Axle, Car-. S. T. Pyeatt. No. 960,399; June 7; Sp. p. 332; Gaz. vol. 155; p. 55.
Axle construction for car-trucks. W. T. Young. No. 962,398; June 21; Sp. p. 4516; Gaz. vol. 155; p. 779.
Axle construction, Rear-. R. H. Gilbert. No. 962,633; June 28; Sp. p. 5065; Gaz. vol. 155; p. 886.
Axle-couplings, Separating. B. R. Seabrook. No. 961,375; June 14; Sp. p. 2334; Gaz. vol. 155; p. 412.
Axle device, Differential. F. C. Priestly and J. M. Aubery. No. 962,040; June 21; Sp. p. 3765; Gaz. vol. 155; p. 661.
Axle, Differential-. N. B. Seabrook. No. 961,376; June 14; Sp. p. 2335; Gaz. vol. 155; p. 413.
Backing-strip-applying machine. W. L. Jacobie. No. 960,832; June 7; Sp. p. 181; Gaz. vol. 155; p. 33.
Bag: *See* Feed-bag; Feeding-bag; Fruit-picking bag; Offal-bag.
Bag-holder. E. C. Vicary. No. 960,451; June 7; Sp. p. 413; Gaz. vol. 155; p. 71.
Bag-tie. J. M. Stryker. No. 960,432; June 7; Sp. p. 391; Gaz. vol. 155; p. 65.
Bait, Artificial. W. Murry. No. 962,237; June 21; Sp. p. 4179; Gaz. vol. 155; p. 726.
Bait, Artificial. J. E. Crosby. No. 962,319; June 21; Sp. p. 4369; Gaz. vol. 155; p. 754.
Baler, Hay-. W. T. Bishop. No. 960,796; June 7; Sp. p. 1127; Gaz. vol. 155; p. 185.
Baling-press. W. R. Ball. No. 961,998; June 21; Sp. p. 3657; Gaz. vol. 155; p. 643.
Baling-press. J. W. Hobson. No. 962,432; June 28; Sp. p. 4625; Gaz. vol. 155; p. 817.
Baling-presses, Wiring mechanism for. J. S. Tuttle. No. 962,273; June 21; Sp. p. 4268; Gaz. vol. 155; p. 738.
Baling-tie. P. Beither. No. 961,258; June 14; Sp. p. 2062; Gaz. vol. 155; p. 371.
Band-cutter and feeder. G. E. Morriss and H. F. Beard. No. 962,235; June 21; Sp. p. 4175; Gaz. vol. 155; p. 725.
Bar: *See* Glazing-bar; Grate-bar; Sash-bar.
Bars on lathes for dressing, cutting, or working the same, Suspension for. P. Girard. No. 962,829; June 28; Sp. p. 5466; Gaz. vol. 155; p. 955.
Barber-shops, Registering-indicator for. S. H. Mason. No. 960,661; June 7; Sp. p. 862; Gaz. vol. 155; p. 142.
Barovacuummeter. G. Frerichs. No. 960,633; June 7; Sp. p. 809; Gaz. vol. 155; p. 133.
Barrel. G. Shields. No. 961,737; June 14; Sp. p. 3087; Gaz. vol. 155; p. 533.
Barrel and constructing same, Knockdown bilge-. F. Prahl. No. 961,159; June 14; Sp. p. 1850; Gaz. vol. 155; p. 335.
Barrel-cover. A. M. Weaver and H. E. Taylor. No. 960,606; June 7; Sp. p. 746; Gaz. vol. 155; p. 123.
Barrel, Knockdown. D. E. Brown and L. L. Kast. No. 962,938; June 28; Sp. p. 5664; Gaz. vol. 155; p. 992.
Barrel, Knockdown bilge-. F. A. Prahl. No. 961,160; June 14; Sp. p. 1854; Gaz. vol. 155; p. 336.
Barrel, Knockdown bilge-. F. A. Prahl. No. 961,161; June 14; Sp. p. 1857; Gaz. vol. 155; p. 336.
Basket. J. Johnson. No. 960,555; June 7; Sp. p. 650; Gaz. vol. 155; p. 106.
Basket, Delivery-. W. S. Crum. No. 960,833; June 7; Sp. p. 1203; Gaz. vol. 155; p. 200.
Bath apparatus, Shower-valve for. G. T. Kenly. No. 961,723; June 14; Sp. p. 3045; Gaz. vol. 155; p. 528.
Bath-tub. J. H. Neal. No. 962,240; June 21; Sp. p. 4184; Gaz. vol. 155; p. 727.
Bath-tub. P. Musselman. No. 962,970; June 28; Sp. p. 5715; Gaz. vol. 155; p. 1002.
Bats, Machine for compressing and rolling. S. M. Ball, B. N. McNiel, and H. Pennington. No. 961,997; June 21; Sp. p. 3653; Gaz. vol. 155; p. 642.
Battery: *See* Secondary battery; Storage battery.
Battery jars, Machine for and process of forming linings for storage-. A. J. Meier. No. 962,714; June 28; Sp. p. 5238; Gaz. vol. 155; p. 914.
Battery-receptacle and bail-support, Combined. J. L. Koerber. No. 962,033; June 21; Sp. p. 3729; Gaz. vol. 155; p. 655.
Beam, Floor and ceiling. J. W. Vaughan. No. 960,740; June 7; Sp. p. 1012; Gaz. vol. 155; p. 170.
Bearing. C. L. Fowle. No. 962,629; June 28; Sp. p. 5059; Gaz. vol. 155; p. 884.
Bearing, Centrifugal oiling-. F. A. Warren. No. 962,182; June 21; Sp. p. 4084; Gaz. vol. 155; p. 709.
Bearing, Expansible. C. Van Middlesworth. No. 962,602; June 28; Sp. p. 5010; Gaz. vol. 155; p. 876.
Bearing-finder. R. Huntington. No. 961,862; June 21; Sp. p. 3379; Gaz. vol. 155; p. 598.
Bearing for centrifugal machines, Elastic collar-. C. H. Hackett and T. W. Morgan. No. 961,245; June 14; Sp. p. 2284; Gaz. vol. 155; p. 403.
Bearing for suspended shafts, Rotary. F. R. Barnheisel. No. 961,670; June 14; Sp. p. 2952; Gaz. vol. 155; p. 510.
Bearing for trolley-wheels, Self-lubricating. A. M. Levering. No. 960,354; June 7; Sp. p. 237; Gaz. vol. 155; p. 40.
Bearing, Roller-. J. F. Foster. No. 962,333; June 21; Sp. p. 4392; Gaz. vol. 155; p. 758.
Bearing rolls, Antifriction-cage for roller-. C. S. Lockwood. No. 961,303; June 14; Sp. p. 2170; Gaz. vol. 155; p. 388.
Bearing, Shaft-. G. C. Hicks, Jr. No. 961,496; June 14; Sp. p. 2599; Gaz. vol. 155; p. 453.
Bearing, Thrust-. E. C. Ketchum. No. 961,140; June 14; Sp. p. 1811; Gaz. vol. 155; p. 329.
Bearing, Truck-. A. Franz. No. 960,532; June 7; Sp. p. 596; Gaz. vol. 155; p. 97.
Bed and davenport, Combined. F. E. Joselin. No. 961,138; June 14; Sp. p. 1807; Gaz. vol. 155; p. 328.
Bed-bottom, Spring. G. Mafera. No. 961,147; June 14; Sp. p. 1828; Gaz. vol. 155; p. 331.
Bed, Hospital-. E. M. Heaton. No. 960,322; June 7; Sp. p. 160; Gaz. vol. 155; p. 30.
Bed, Invalid-. L. W. Ward. No. 961,273; June 14; Sp. p. 2101; Gaz. vol. 155; p. 377.
Bed pillar or post. J. C. Wilson. No. 960,611; June 7; Sp. p. 756; Gaz. vol. 155; p. 125.
Bed-spring. J. R. Hooker. No. 962,352; June 21; Sp. p. 4436; Gaz. vol. 155; p. 765.
Bed, Tourist's. G. G. De Moss. No. 960,281; June 7; Sp. p. 82; Gaz. vol. 155; p. 18.
Bed, Wall-. W. S. Jensen. No. 960,943; June 7; Sp. p. 1403; Gaz. vol. 155; p. 236.
Bedstead. A. and R. Berg. No. 960,486; June 7; Sp. p. 494; Gaz. vol. 155; p. 82.
Bell-ringer. F. Simons. No. 961,544; June 14; Sp. p. 2702; Gaz. vol. 155; p. 469.
Bell-ringer, Automatic. C. Aalborg. No. 962,688; June 28; Sp. p. 5130; Gaz. vol. 155; p. 904.
Bell system. H. W. Herwig. No. 961,351; June 14; Sp. p. 2294; Gaz. vol. 155; p. 401.
Belt. J. W. Foster and A. A. Stoddard. No. 962,563; June 28; Sp. p. 4929; Gaz. vol. 155; p. 863.
Belt-shifter. I. W. Litchfield. No. 961,417; June 14; Sp. p. 2409; Gaz. vol. 155; p. 426.
Belt-tightener. A. F. Kwis. No. 960,347; June 7; Sp. p. 221; Gaz. vol. 155; p. 38.
Belt-tightener. H. A. Perkins. No. 961,005; June 7; Sp. p. 1542; Gaz. vol. 155; p. 258.
Bench: *See* Folding bench.
Bench-hook. H. R. Mitchell. No. 960,369; June 7; Sp. p. 269; Gaz. vol. 155; p. 46.
Bench-tool, Adjustable. F. O. Schalkie. No. 960,415; June 7; Sp. p. 361; Gaz. vol. 155; p. 61.
Berry-box, Folding. W. W. Wood. No. 962,607; June 28; Sp. p. 5010; Gaz. vol. 155; p. 877.
Beverages, Preparation of. G. Defren. No. 960,841; June 7; Sp. p. 1218; Gaz. vol. 155; p. 203.
Bicycles, Mounting of saddles upon. W. J. Welch. No. 960,467; June 7; Sp. p. 449; Gaz. vol. 155; p. 76.
Billard-cue powderer. H. Nahm. No. 960,574; June 7; Sp. p. 690; Gaz. vol. 155; p. 113.
Binder. L. E. Holler. No. 962,568; June 28; Sp. p. 4938; Gaz. vol. 155; p. 865.
Binder ball-lock, Sectional post-. P. A. Bowen. No. 962,416; June 28; Sp. p. 4585; Gaz. vol. 155; p. 811.
Binder, Loose-leaf. A. L. Murphy, Sr. No. 960,674; June 7; Sp. p. 888; Gaz. vol. 155; p. 147.
Binder, Loose-leaf. W. C. Traber. No. 962,868; June 28; Sp. p. 5545; Gaz. vol. 155; p. 969.

Binder, One-piece loose-leaf. A. W. Badrow. No. 961,064; June 7; Sp. p. 1660; Gaz. vol. 155; p. 277.
Binder, Temporary. R. R. Darwin. No. 960,279; June 7; Sp. p. 79; Gaz. vol. 155; p. 17.
Binder, Temporary. J. Patterson. No. 962,460; June 28; Sp. p. 4687; Gaz. vol. 155; p. 827.
Binders, Perforating attachment for loose-leaf. J. J. Diehl. No. 962,421; June 28; Sp. p. 4603; Gaz. vol. 155; p. 818.
Bit: *See* Boring or drilling bit; Box-bit; Bridle-bit.
Bit, Awl. J. Engle. No. 962,134; June 21; Sp. p. 3978; Gaz. vol. 155; p. 691.
Bituminous mixing machine. J. H. Ryan. No. 960,410; June 7; Sp. p. 353; Gaz. vol. 155; p. 59.
Blanks, Forming. W. J. Going. No. 961,119; June 14; Sp. p. 1778; Gaz. vol. 155; p. 322.
Blind for fireproof buildings. A. T. Ellis. No. 962,011; June 21; Sp. p. 3680; Gaz. vol. 155; p. 647.
Block: *See* Building-block; Cement block; Wire-drawing block.
Blotting device. H. Uehlinger. No. 960,603; June 7; Sp. p. 741; Gaz. vol. 155; p. 122.
Blower-unloading device. J. G. Maclaren. No. 961,364; June 14; Sp. p. 2313; Gaz. vol. 155; p. 409.
Blowing-engine. P. H. Kane. No. 960,556; June 7; Sp. p. 650; Gaz. vol. 155; p. 106.
Board: *See* Bulletin-board; Cigar-maker's rolling-board; Composite board; Metering panel-board; Paper-hanger's board; Shoveling-board; Stove-board.
Boat, High-speed. J. H. Branth. No. 961,750; June 21; Sp. p. 3116; Gaz. vol. 155; p. 561.
Boat, Life-. J. E. Allen. No. 960,479; June 7; Sp. p. 474; Gaz. vol. 155; p. 80.
Boat, Submarine. L. E. Goetz. No. 960,537; June 7; Sp. p. 615; Gaz. vol. 155; p. 99.
Boiler: *See* Steam-boiler; Water-tube boiler.
Boiler-brace. C. Neblett. No. 961,522; June 14; Sp. p. 2639; Gaz. vol. 155; p. 461.
Boiler gage, Steam-. W. T. Piper. No. 961,008; June 7; Sp. p. 1548; Gaz. vol. 155; p. 259.
Boiler-headers, Boring and facing machine for. W. F. and C. Sellers, Jr., and T. T. Collins. No. 961,542; June 14; Sp. p. 2699; Gaz. vol. 155; p. 468.
Boiler-tube cleaner. E. J. Buckmaster. No. 960,496; June 7; Sp. p. 516; Gaz. vol. 155; p. 86.
Boilers, Combined heating system for a plurality of. J. Schwab. No. 961,900; June 21; Sp. p. 3451; Gaz. vol. 155; p. 610.
Bolt: *See* Expansion-bolt; Locking-bolt; Panic-bolt.
Bolt. R. B. Ingels. No. 960,938; June 7; Sp. p. 1391; Gaz. vol. 155; p. 235.
Bolt-anchor. C. J. Clements. No. 961,583; June 14; Sp. p. 2774; Gaz. vol. 155; p. 481.
Bolt-holder. W. V. Gist. No. 960,307; June 7; Sp. p. 133; Gaz. vol. 155; p. 26.
Bolting-machine. O. and C. H. Evans. No. 960,864; June 7; Sp. p. 1260; Gaz. vol. 155; p. 211.
Bonding-pin. L. S. Bacon. No. 961,475; June 14; Sp. p. 2542; Gaz. vol. 155; p. 445.
Book, Check-. E. E. Hamilton. No. 961,956; June 21; Sp. p. 3576; Gaz. vol. 155; p. 630.
Book-cover. G. V. D. Southworth. No. 961,548; June 14; Sp. p. 2711; Gaz. vol. 155; p. 470.
Book cover, Manifolding-sales-. F. H. Spencer. No. 960,727; June 7; Sp. p. 990; Gaz. vol. 155; p. 165.
Book, Loose-leaf. A. L. Murphy, Sr. No. 960,672; June 7; Sp. p. 885; Gaz. vol. 155; p. 146.
Book, Loose-leaf. A. L. Murphy, Sr. No. 960,673; June 7; Sp. p. 886; Gaz. vol. 155; p. 146.
Book, Pass-. F. J. Hicks. No. 961,857; June 21; Sp. p. 3372; Gaz. vol. 155; p. 597.
Book, Self-indexing. J. B. Perrine. No. 960,693; June 7; Sp. p. 928; Gaz. vol. 155; p. 154.
Books and the like, Making scrap-. T. E. Layton. No. 960,852; June 7; Sp. p. 234; Gaz. vol. 155; p. 40.
Bookbinders' appliance. G. D. Steere. No. 962,867; June 28; Sp. p. 5543; Gaz. vol. 155; p. 969.
Boots and shoes, Machine for the manufacture of. J. N. Bussell. No. 961,752; June 21; Sp. p. 3119; Gaz. vol. 155; p. 562.
Boring machine, Taper-. R. R. Kuss. No. 962,848; June 28; Sp. p. 5497; Gaz. vol. 155; p. 961.
Boring or drilling bit. W. Geddes. No. 960,635; June 7; Sp. p. 814; Gaz. vol. 155; p. 133.
Boring-tool. O. B. Elder. No. 963,022; June 28; Sp. p. 5824; Gaz. vol. 155; p. 1019.
Bottle and attachment therefor. C. A. Hervey. No. 960,918; June 7; Sp. p. 1350; Gaz. vol. 155; p. 228.
Bottle-capping machine. L. C. Krummel and J. C. Tallaferro. No. 960,960; June 7; Sp. p. 1440; Gaz. vol. 155; p. 242.
Bottle-capping machine. G. Kirkegaard. No. 962,029; June 21; Sp. p. 3720; Gaz. vol. 155; p. 653.
Bottle-capping machine. R. W. Wittemann. No. 963,017; June 28; Sp. p. 5811; Gaz. vol. 155; p. 1013.
Bottle-capping-machine feeding mechanism. G. Kirkegaard. No. 962,030; June 21; Sp. p. 3722; Gaz. vol. 155; p. 654.
Bottle closure and seal. R. T. Taylor. No. 962,396; June 21; Sp. p. 4514; Gaz. vol. 155; p. 779.
Bottle-dam. W. H. Gray. No. 960,804; June 7; Sp. p. 1319; Gaz. vol. 155; p. 221.
Bottle filler, Siphon-. G. L. Kennedy. No. 962,027; June 21; Sp. p. 3717; Gaz. vol. 155; p. 653.
Bottle-filling machine. B. Gallagher. No. 962,564; June 28; Sp. p. 4931; Gaz. vol. 155; p. 863.
Bottle-holder. W. P. Rice. No. 961,647; June 14; Sp. p. 2905; Gaz. vol. 155; p. 502.
Bottle, Indicating-. W. T. Cassidy. No. 962,004; June 21; Sp. p. 3670; Gaz. vol. 155; p. 645.
Bottle-lip-protecting device, Sanitary. W. B. Degan. No. 960,842; June 7; Sp. p. 1219; Gaz. vol. 155; p. 203.
Bottle-lip protector, Sanitary. W. B. Degan. No. 960,843; June 7; Sp. p. 1220; Gaz. vol. 155; p. 203.
Bottle, Non-refillable. C. Schickerling. No. 960,416; June 7; Sp. p. 362; Gaz. vol. 155; p. 61.
Bottle, Non-refillable. W. W. Humes. No. 961,134; June 14; Sp. p. 1800; Gaz. vol. 155; p. 326.
Bottle, Non-refillable. W. M. Way. No. 961,822; June 21; Sp. p. 3282; Gaz. vol. 155; p. 585.
Bottle-opener. G. Fischer. No. 961,224; June 14; Sp. p. 1997; Gaz. vol. 155; p. 360.
Bottle stopper, Non-refillable-. W. R. Voss. No. 962,681; June 28; Sp. p. 5157; Gaz. vol. 155; p. 902.
Bottles or receptacles, Container for. H. R. Myers. No. 961,885; June 21; Sp. p. 3431; Gaz. vol. 155; p. 606.
Bottom-finishing machine. C. C. Pease. No. 960,391; June 7; Sp. p. 316; Gaz. vol. 155; p. 53.
Bow for stringed instruments. A. H. Elsmore. No. 961,589; June 14; Sp. p. 2796; Gaz. vol. 155; p. 483.
Bowling-alley. A. B. Wetherell. No. 960,750; June 7; Sp. p. 1031; Gaz. vol. 155; p. 174.
Box: *See* Artist's sketch-box; Berry-box; Cigar-box; Curb-box; Fare-box; Fire-alarm box; Mail-box; Match-box; Paper box; Shipping-box; Toy handkerchief-box.
Box-bit, Adjustable. F. A. Hanes and W. Staples. No. 960,315; June 7; Sp. p. 151; Gaz. vol. 155; p. 28.
Box-blanks, Stacking and counting mechanism for flexible. E. G. Staude. No. 961,263; June 14; Sp. p. 2070; Gaz. vol. 155; p. 373.
Box bottoms or lids, Manufacturing. B. G. Nice and J. L. McMichael. No. 962,851; June 28; Sp. p. 5503; Gaz. vol. 155; p. 963.
Box-cover fastener. C. A. Lauson. No. 961,780; June 21; Sp. p. 3180; Gaz. vol. 155; p. 571.
Box-cover fastener. B. Tukis. No. 961,990; June 21; Sp. p. 3639; Gaz. vol. 155; p. 640.
Box-covering and corner-staying machine. W. C. Carlson. No. 961,841; June 21; Sp. p. 3321; Gaz. vol. 155; p. 591.
Box-making machine. E. W. Labombarde. No. 960,348; June 7; Sp. p. 224; Gaz. vol. 155; p. 38.
Box-strap puller, cutter, and nail-guide. W. M. Brooks. No. 960,494; June 7; Sp. p. 512; Gaz. vol. 155; p. 85.
Brace: *See* Boiler-brace; Fence-post brace; Post-brace; Rail-brace.
Bracket: *See* Adjustable bracket; Corner-bracket; Curtain-bracket; Ladder-bracket; Lamp-bracket; Roof-bracket; Scaffold-bracket; Scaffolding-bracket; Shade and pole bracket.
Bracket. W. A. Scott. No. 961,319; June 14; Sp. p. 2219; Gaz. vol. 155; p. 393.
Bracket. J. Kroder. No. 961,502; June 14; Sp. p. 2606; Gaz. vol. 155; p. 455.
Bracket. F. B. Cook. No. 962,494; June 28; Sp. p. 4766; Gaz. vol. 155; p. 839.
Braider-spool. F. Mossberg. No. 962,715; June 28; Sp. p. 5240; Gaz. vol. 155; p. 915.
Braiding-machine carrier. E. F. Parks and S. W. Wardwell. No. 962,522; June 28; Sp. p. 4824; Gaz. vol. 155; p. 848.
Brake: *See* Air-brake; Automobile-brake; Car hand-brake; Coaster-brake; Elevator-brake; Machinery-brake; Truck-brake; Wagon-brake.
Brake. W. J. Smith. No. 960,425; June 7; Sp. p. 378; Gaz. vol. 155; p. 63.
Brake-beam. C. F. Huntoon. No. 960,935; June 7; Sp. p. 1386; Gaz. vol. 155; p. 233.
Brake-beam. C. H. Williams, Jr. No. 961,920; June 21; Sp. p. 3490; Gaz. vol. 155; p. 618.
Brake-head, Adjustable. F. H. Cornwall. No. 960,828; June 7; Sp. p. 1196; Gaz. vol. 155; p. 199.
Brake-head, Adjustable. C. H. Williams, Jr. No. 961,921; June 21; Sp. p. 3492; Gaz. vol. 155; p. 618.
Brake-power-limiting apparatus. W. G. Ransom. No. 961,257; June 14; Sp. p. 2059; Gaz. vol. 155; p. 371.
Brake-shoe. F. H. Gibbs. No. 961,344; June 14; Sp. p. 2282; Gaz. vol. 155; p. 403.
Brass-polishing device. C. E. Merrill. No. 961,875; June 21; Sp. p. 3408; Gaz. vol. 155; p. 602.
Bread-mixer. G. Friedman. No. 960,878; June 7; Sp. p. 1287; Gaz. vol. 155; p. 215.
Breaking and scutching machine. J. W. Poindexter. No. 962,783; June 28; Sp. p. 5375; Gaz. vol. 155; p. 939.
Brewing. J. Schneible. No. 961,539; June 14; Sp. p. 2692; Gaz. vol. 155; p. 467.
Brick and delivering the same for use or storage, Handling. R. C. Penfield. No. 961,314; June 14; Sp. p. 2205; Gaz. vol. 155; p. 392.
Brick-handling machine. R. C. Penfield. No. 962,584; June 28; Sp. p. 4966; Gaz. vol. 155; p. 870.
Bridle-bit, Reversible. E. M. Coe. No. 962,005; June 21; Sp. p. 3671; Gaz. vol. 155; p. 645.
Bridle eye-cover or blinker. M. Koppel. No. 960,648; June 7; Sp. p. 839; Gaz. vol. 155; p. 137.
Brooder and incubator heater. C. E. Adair. No. 961,667; June 14; Sp. p. 2946; Gaz. vol. 155; p. 509.
Broom. J. M. Zimmerlee. No. 962,188; June 21; Sp. p. 4095; Gaz. vol. 155; p. 711.

Broom-holder. S. G. Wilson. No. 961,472; June 14; Sp. p. 2535; Gaz. vol. 155; p. 444.
Brush. P. Maendler. No. 960,362; June 7; Sp. p. 259; Gaz. vol. 155; p. 42.
Brush. G. D. Pushee. No. 960,582; June 7; Sp. p. 703; Gaz. vol. 155; p. 116.
Brush for bottle-washing machines. C. K. Voickening. No. 961,562; June 14; Sp. p. 2741; Gaz. vol. 155; p. 475.
Brush for hair-tinting. E. G. Helm. No. 961,127; June 14; Sp. p. 1791; Gaz. vol. 155; p. 324.
Brush-handle, Adjustable. C. W. Mabey. No. 960,655; June 7; Sp. p. 849; Gaz. vol. 155; p. 140.
Brush-holder. A. Freier. No. 960,875; June 7; Sp. p. 1280; Gaz. vol. 155; p. 214.
Brush, Revolving upholsterer's. D. R. Johnson. No. 962,433; June 28; Sp. p. 4628; Gaz. vol. 155; p. 817.
Brush, Rotary. J. W. Adler. No. 961,061; June 7; Sp. p. 1665; Gaz. vol. 155; p. 276.
Bucket, Bottom-dumping. G. L. Stuebner. No. 962,930; June 28; Sp. p. 5649; Gaz. vol. 155; p. 989.
Buckle. W. A. Holden. No. 960,325; June 7; Sp. p. 170; Gaz. vol. 155; p. 31.
Buckle. J. E. Smith. No. 960,593; June 7; Sp. p. 728; Gaz. vol. 155; p. 119.
Buckle, Cross-line. H. Hall. No. 961,347; June 14; Sp. p. 2286; Gaz. vol. 155; p. 404.
Buckle, Trace-. W. W. Welch. No. 961,823; June 21; Sp. p. 3283; Gaz. vol. 155; p. 585.
Buffer, Swinging. A. Christianson. No. 962,818; June 28; Sp. p. 5441; Gaz. vol. 155; p. 951.
Buggy-boot. J. E. Carroll. No. 960,629; June 7; Sp. p. 802; Gaz. vol. 155; p. 131.
Buggy-top clip. J. C. and J. M. Horn. No. 960,326; June 7; Sp. p. 173; Gaz. vol. 155; p. 32.
Building-block. L. Phillips. No. 962,463; June 28; Sp. p. 4695; Gaz. vol. 155; p. 828.
Building-block mold. J. W. Bragstad. No. 962,303; June 21; Sp. p. 4234; Gaz. vol. 155; p. 748.
Building-blocks. G. A. Kahl. No. 960,948; June 7; Sp. p. 1412; Gaz. vol. 155; p. 238.
Building construction, False work for. A. Arnn. No. 962,295; June 21; Sp. p. 4220; Gaz. vol. 155; p. 745.
Buildings and other structures, Method and apparatus for construction of supports of. J. B. Goldsborough. No. 961,438; June 14; Sp. p. 2459; Gaz. vol. 155; p. 433.
Buildings, Lining or back plaster for. C. D. Jennings. No. 960,554; June 7; Sp. p. 649; Gaz. vol. 155; p. 106.
Bulletin-board. G. H. Parker. No. 962,164; June 21; Sp. p. 4040; Gaz. vol. 155; p. 703.
Bundling-machine. H. Zimmerman. No. 961,709; June 14; Sp. p. 3023; Gaz. vol. 155; p. 523.
Burglar-alarm systems, Electric cable for. J. P. Williams. No. 961,827; June 21; Sp. p. 3291; Gaz. vol. 155; p. 587.
Burner: *See* Acetylene-burner; Gas-burner; Gaseous-fuel burner; Headlight-burner; Hydrocarbon-burner; Liquid-fuel burner; Oil-burner; Rubbish-burner; Stubble-burner.
Burner. F. H. Fender. No. 962,329; June 21; Sp. p. 4335; Gaz. vol. 155; p. 757.
Burner. G. J. McPherson. No. 962,971; June 28; Sp. p. 5716; Gaz. vol. 155; p. 1002.
Burner and support for vaporizers. C. A. Butler. No. 960,500; June 7; Sp. p. 524; Gaz. vol. 155; p. 87.
Burner attachment. T. Mowcomber. No. 962,161; June 21; Sp. p. 4040; Gaz. vol. 155; p. 702.
Burners, Heat-distributing top for. A. B. Coleman. No. 961,755; June 21; Sp. p. 3129; Gaz. vol. 155; p. 563.
Bush-hook. E. W. Dunn. No. 961,218; June 14; Sp. p. 1956; Gaz. vol. 155; p. 358.
Butter, Manufacturing. W. Cole. No. 961,483; June 14; Sp. p. 2565; Gaz. vol. 155; p. 448.
Button-fastening device. B. Joachim. No. 962,151; June 21; Sp. p. 4018; Gaz. vol. 155; p. 698.
Button, Rotary locking collar-. G. Ponarouse. No. 960,696; June 7; Sp. p. 936; Gaz. vol. 155; p. 155.
Button, Separable. W. L. Bate. No. 960,780; June 7; Sp. p. 1094; Gaz. vol. 155; p. 184.
By-products, Means for recovering. P. M. Hamlin. No. 960,542; June 7; Sp. p. 626; Gaz. vol. 155; p. 101.
Cabinet, Credit-. A. J. Tice. No. 962,177; June 21; Sp. p. 4073; Gaz. vol. 155; p. 707.
Cabinet for theatrical use, Make-up. A. E. Spinner. No. 960,596; June 7; Sp. p. 726; Gaz. vol. 155; p. 120.
Cabinet locking device, Sectional-. A. T. Weiss. No. 960,465; June 7; Sp. p. 445; Gaz. vol. 155; p. 75.
Cabinet-table. W. A. Snyder. No. 960,594; June 7; Sp. p. 724; Gaz. vol. 155; p. 119.
Cabinet, Thread-. J. A. Witt. No. 962,285; June 21; Sp. p. 4296; Gaz. vol. 155; p. 742.
Cable-carrier apparatus. G. A. Amsden. No. 960,617; June 7; Sp. p. 781; Gaz. vol. 155; p. 127.
Cable support, Aerial-. W. K. Kripe and G. W. Wright. No. 960,344; June 7; Sp. p. 214; Gaz. vol. 155; p. 37.
Cables and the like, Winding-head for armoring. E. Witsenmann. No. 962,186; June 21; Sp. p. 4092; Gaz. vol. 155; p. 710.
Calculating-machine. D. E. Felt. No. 960,528; June 7; Sp. p. 575; Gaz. vol. 155; p. 96.
Calculating-machine. C. A. Mellicke. No. 961,631; June 14; Sp. p. 2875; Gaz. vol. 155; p. 497.
Calculating-machine. G. H. Sears. No. 961,806; June 21; Sp. p. 3228; Gaz. vol. 155; p. 579.
Calculating-machine. A. Hoch. No. 961,961; June 21; Sp. p. 3587; Gaz. vol. 155; p. 632.
Calculating-machine. J. A. Lutz. No. 961,977; June 21; Sp. p. 3613; Gaz. vol. 155; p. 636.
Calculator. H. L. Lerner. No. 962,441; June 28; Sp. p. 4647; Gaz. vol. 155; p. 820.
Calender-rolls, Safety device for. W. Jameson. No. 962,572; June 28; Sp. p. 4945; Gaz. vol. 155; p. 866.
Calipers, Micrometer attachment for machinists'. J. H. Pember. No. 962,583; June 28; Sp. p. 4965; Gaz. vol. 155; p. 869.
Camera attachment. H. G. Bauman. No. 961,425; June 14; Sp. p. 2426; Gaz. vol. 155; p. 428.
Camera attachment. C. W. Kaufmann. No. 962,844; June 28; Sp. p. 5489; Gaz. vol. 155; p. 960.
Camera flash-light attachment. S. Roesner. No. 961,021; June 7; Sp. p. 1572; Gaz. vol. 155; p. 263.
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Can-cap dropper. E. M. Cobb. No. 962,816; June 21; Sp. p. 4360; Gaz. vol. 155; p. 753.
Can-capping machine. L. J. Miller. No. 962,038; June 21; Sp. p. 3742; Gaz. vol. 155; p. 656.
Can-carrier. C. L. Holloway. No. 962,025; June 21; Sp. p. 3713; Gaz. vol. 155; p. 652.
Can-filling machine. W. F. Hebrank. No. 961,408; June 14; Sp. p. 2388; Gaz. vol. 155; p. 423.
Can lock, Milk-. D. J. Thayer. No. 962,801; June 28; Sp. p. 5414; Gaz. vol. 155; p. 945.
Can-opener. R. Franken. No. 961,946; June 21; Sp. p. 3548; Gaz. vol. 155; p. 626.
Can receptacle, Garbage-. T. P. Bolger. No. 962,887; June 28; Sp. p. 5581; Gaz. vol. 155; p. 976.
Can-syruping machine. A. J. Keast. No. 962,026; June 21; Sp. p. 3714; Gaz. vol. 155; p. 652.
Can-top. J. R. Harbeck. No. 960,637; June 7; Sp. p. 817; Gaz. vol. 155; p. 134.
Cans, Dredge for powder-. E. H. W. Ullrich. No. 961,991; June 21; Sp. p. 3641; Gaz. vol. 155; p. 640.
Cans, Spring attachment for oil-. W. B. King. No. 962,902; June 28; Sp. p. 5601; Gaz. vol. 155; p. 980.
Candlestick, Folding. G. Winchester. No. 961,190; June 14; Sp. p. 1916; Gaz. vol. 155; p. 348.
Cap, Giant-powder. J. H. Fahy. No. 960,867; June 7; Sp. p. 1283; Gaz. vol. 155; p. 211.
Caponizing instrument. C. J. Filling. No. 962,586; June 28; Sp. p. 4972; Gaz. vol. 155; p. 870.
Capsule-making machine. A. Colton and B. W. Scott. No. 961,936; June 21; Sp. p. 3522; Gaz. vol. 155; p. 622.
Car and cart, Dump. J. B. Shelton. No. 962,593; June 28; Sp. p. 4988; Gaz. vol. 155; p. 873.
Car, Automatic dump-. J. Karhu. No. 962,356; June 21; Sp. p. 4442; Gaz. vol. 155; p. 766.
Car, Box-. J. M. Hansen. No. 961,773; June 21; Sp. p. 3169; Gaz. vol. 155; p. 569.
Car, Box-. W. E. Fowler. No. 962,425; June 28; Sp. p. 4011; Gaz. vol. 155; p. 814.
Car-buffing mechanism, Passenger-. R. D. Gallagher, Jr. No. 961,948; June 21; Sp. p. 3552; Gaz. vol. 155; p. 627.
Car, Child's speed-. J. M. Wheeler. No. 961,870; June 7; Sp. p. 2325; Gaz. vol. 155; p. 411.
Car, Concrete. J. B. Quinn. No. 962,465; June 28; Sp. p. 4704; Gaz. vol. 155; p. 829.
Car construction. J. R. Cardwell. No. 960,502; June 7; Sp. p. 527; Gaz. vol. 155; p. 88.
Car construction. R. D. Gallagher, Jr. No. 961,949; June 21; Sp. p. 3555; Gaz. vol. 155; p. 627.
Car, Convertible. J. J. Metz and A. Mosley. No. 961,876; June 21; Sp. p. 3409; Gaz. vol. 155; p. 603.
Car-coupling. A. P. Goldman. No. 960,538; June 7; Sp. p. 617; Gaz. vol. 155; p. 100.
Car-coupling. G. A. Holland and W. F. Barrett. No. 960,550; June 7; Sp. p. 641; Gaz. vol. 155; p. 104.
Car-door lock. W. A. Siegfried. No. 962,395; June 21; Sp. p. 4512; Gaz. vol. 155; p. 779.
Car draft-gear, Railway-. G. Barr. No. 960,778; June 7; Sp. p. 1092; Gaz. vol. 155; p. 183.
Car, Dump-. H. D. Hamper and T. R. McKnight. No. 961,772; June 21; Sp. p. 3167; Gaz. vol. 155; p. 569.
Car, Dumping-. U. W. Keech. No. 960,949; June 7; Sp. p. 1419; Gaz. vol. 155; p. 239.
Car-fender. C. McQuillan and E. D. Chaitken. No. 962,041; June 21; Sp. p. 3749; Gaz. vol. 155; p. 658.
Car-fender. G. Koroe. No. 962,226; June 21; Sp. p. 4162; Gaz. vol. 155; p. 722.
Car-fender. W. T. Watson. No. 962,278; June 21; Sp. p. 4282; Gaz. vol. 155; p. 740.
Car-fender. F. E. Deemer and E. W. Korff. No. 962,328; June 21; Sp. p. 4376; Gaz. vol. 155; p. 755.
Car hand-brake, Railway-. R. T. Burdette. No. 962,698; June 28; Sp. p. 5189; Gaz. vol. 155; p. 906.
Car-journal dust-guard. J. P. Thomas. No. 962,480; June 28; Sp. p. 4751; Gaz. vol. 155; p. 834.
Car, Passenger-. P. N. Jones. No. 962,224; June 21; Sp. p. 4159; Gaz. vol. 155; p. 722.
Car, Passenger-. P. N. Jones. No. 962,225; June 21; Sp. p. 4160; Gaz. vol. 155; p. 722.
Car-platform closure. I. H. Saunders. No. 961,024; June 7; Sp. p. 1577; Gaz. vol. 155; p. 264.
Car, Rack-rail-braking. N. D. Levin. No. 960,355; June 7; Sp. p. 238; Gaz. vol. 155; p. 41.
Car, Railway dumping-. M. P. Henvis. No. 962,348; June 21; Sp. p. 4429; Gaz. vol. 155; p. 763.
Car retarder or chock. R. M. Lindsay. No. 962,967; June 28; Sp. p. 5710; Gaz. vol. 155; p. 1001.
Car-roof. W. F. Kiesel, Jr. No. 961,301; June 14; Sp. p. 2167; Gaz. vol. 155; p. 387.

Car safety-gate, Railway-. F. T. Fillion. No. 960,871; June 7; Sp. p. 1268; Gaz. vol. 155; p. 213.
Car-step, Automatic. W. M. Hamilton. No. 962,832; June 28; Sp. p. 5470; Gaz. vol. 155; p. 956.
Car-step, Extension. J. J. Oling. No. 961,002; June 7; Sp. p. 1537; Gaz. vol. 155; p. 257.
Car-steps, Means for illuminating. W. H. McAloney. No. 961,587; June 21; Sp. p. 3433; Gaz. vol. 155; p. 607.
Car, Tank-. W. M. Erickbaum. No. 963,025; June 28; Sp. p. 5830; Gaz. vol. 155; p. 1020.
Car-ventilator. F. W. Simson. No. 962,476; June 28; Sp. p. 4723; Gaz. vol. 155; p. 833.
Car-wheel. J. P. Pastre. No. 961,639; June 14; Sp. p. 2892; Gaz. vol. 155; p. 500.
Car-wheel. W. McConway. No. 962,456; June 28; Sp. p. 4677; Gaz. vol. 155; p. 826.
Car wheel, Mine-. T. Donohoe. No. 960,852; June 7; Sp. p. 1234; Gaz. vol. 155; p. 206.
Cars, Reinforcing-truss for motor-. D. B. Gardner. No. 961,406; June 14; Sp. p. 2385; Gaz. vol. 155; p. 422.
Cars, Skidding device for railway-. S. P. Bradshaw. No. 961,098; June 14; Sp. p. 1738; Gaz. vol. 155; p. 316.
Carbon-breaker. H. B. Basim. No. 960,779; June 7; Sp. p. 1094; Gaz. vol. 155; p. 183.
Carbon, Heating. F. J. Tone. No. 961,912; June 21; Sp. p. 3475; Gaz. vol. 155; p. 615.
Carbureter. A. C. Stewart. No. 960,601; June 7; Sp. p. 736; Gaz. vol. 155; p. 121.
Carbureter. L. Plein. No. 960,697; June 7; Sp. p. 935; Gaz. vol. 155; p. 155.
Carbureter. E. N. Broderick. No. 961,284; June 14; Sp. p. 2130; Gaz. vol. 155; p. 382.
Carbureter. T. L. and T. J. Sturtevant. No. 961,423; June 14; Sp. p. 2420; Gaz. vol. 155; p. 427.
Carbureter. W. C. Carter. No. 961,481; June 14; Sp. p. 2556; Gaz. vol. 155; p. 447.
Carbureter. C. E. Hall and W. Dicks. No. 962,140; June 21; Sp. p. 3992; Gaz. vol. 155; p. 693.
Carbureter. H. A. Miller. No. 962,649; June 28; Sp. p. 5095; Gaz. vol. 155; p. 891.
Carbureter. S. P. Sanders. No. 962,860; June 28; Sp. p. 5522; Gaz. vol. 155; p. 966.
Card and photo holder. C. M. Whitmore. No. 962,397; June 21; Sp. p. 4515; Gaz. vol. 155; p. 779.
Card-holder. W. H. Rouse. No. 961,801; June 21; Sp. p. 3220; Gaz. vol. 155; p. 578.
Card holder, Shipping-. W. S. Brown. No. 961,678; June 14; Sp. p. 2970; Gaz. vol. 155; p. 514.
Carpet-stretcher. W. C. Burke. No. 961,679; June 14; Sp. p. 2970; Gaz. vol. 155; p. 514.
Carpet-sweeper. G. Manthey. No. 962,872; June 21; Sp. p. 4469; Gaz. vol. 155; p. 771.
Carrier: *See* Can-carrier; Egg-carrier; Litter-carrier; Pneumatic-despatch-tube-apparatus carrier; Pneumatic-despatch-tube carrier; Tire-carrier; Trace-carrier.
Carrier. S. C. Gardner, C. Chase, and C. V. Kent. No. 960,534; June 7; Sp. p. 605; Gaz. vol. 155; p. 98.
Carton. E. N. Gilfillan. No. 961,491; June 14; Sp. p. 2588; Gaz. vol. 155; p. 451.
Cartridge-belts, Making. W. C. Fisher. No. 962,331; June 21; Sp. p. 4390; Gaz. vol. 155; p. 758.
Cartridge-fuse. A. F. Daum. No. 961,716; June 14; Sp. p. 3037; Gaz. vol. 155; p. 526.
Carving figures in relief and intaglio, Machine for. H. M. Albee. No. 960,765; June 7; Sp. p. 1069; Gaz. vol. 155; p. 179.
Case: *See* Plunger-case; Razor-case; Show-case; Ticket-case.
Cash-register. J. H. McCormick. No. 960,376; June 7; Sp. p. 280; Gaz. vol. 155; p. 48.
Cash-register. G. H. Wolff. No. 960,759; June 7; Sp. p. 1047; Gaz. vol. 155; p. 177.
Cash-register. C. A. Lundgren. No. 961,871; June 21; Sp. p. 3401; Gaz. vol. 155; p. 601.
Casing, Protective. B. Volkmar. No. 962,680; June 28; Sp. p. 5155; Gaz. vol. 155; p. 901.
Cask-making machine. J. Gilmour. No. 962,210; June 21; Sp. p. 4132; Gaz. vol. 155; p. 717.
Cast spacer, Apparatus for reducing the length of. P. W. Druitt. No. 961,690; June 14; Sp. p. 2985; Gaz. vol. 155; p. 517.
Caster. C. E. Burnett. No. 962,308; June 21; Sp. p. 4348; Gaz. vol. 155; p. 750.
Caster-holder. H. D. Penney. No. 962,461; June 28; Sp. p. 4689; Gaz. vol. 155; p. 828.
Casting apparatus. G. H. Vining. No. 961,182; June 14; Sp. p. 1901; Gaz. vol. 155; p. 345.
Casting metal, Manufacture of molds for. E. L. Bohl and R. Y. Barrows. No. 960,257; June 7; Sp. p. 28; Gaz. vol. 155; p. 8.
Cathode. E. A. Sperry. No. 961,549; June 14; Sp. p. 2713; Gaz. vol. 155; p. 470.
Cattle, Device for removing obstacles from the throats of. A. H. Kohne. No. 961,500; June 14; Sp. p. 2604; Gaz. vol. 155; p. 454.
Cattle-guard. W. E. Dement and A. C. Crawford. No. 962,554; June 28; Sp. p. 4908; Gaz. vol. 155; p. 860.
Celluloid composition. J. W. Aylsworth. No. 962,877; June 28; Sp. p. 5561; Gaz. vol. 155; p. 973.
Cellulose structures, Manufacturing. R. Linkmeyer. No. 962,769; June 28; Sp. p. 5349; Gaz. vol. 155; p. 935.
Cement block. E. C. Lanning. No. 960,562; June 7; Sp. p. 666; Gaz. vol. 155; p. 109.
Cement-block machine, Automatic. W. D. Wise. No. 961,664; June 14; Sp. p. 2934; Gaz. vol. 155; p. 508.
Cement-block-making machine, Hydraulic. W. L. Keay. No. 960,958; June 7; Sp. p. 1425; Gaz. vol. 155; p. 240.
Cement-block mold, Compression. W. D. Wise. No. 961,828; June 21; Sp. p. 3296; Gaz. vol. 155; p. 587.
Cement-block-molding apparatus. J. I. Taylor. No. 961,659; June 14; Sp. p. 2927; Gaz. vol. 155; p. 507.
Cement building-blocks, Apparatus for making. M. H. Smith. No. 962,104; June 21; Sp. p. 3892; Gaz. vol. 155; p. 680.
Centering device. A. Franchini. No. 961,599; June 14; Sp. p. 2813; Gaz. vol. 155; p. 487.
Centrifugal machine, Continuous. F. H. Roberts. No. 962,052; June 21; Sp. p. 3774; Gaz. vol. 155; p. 662.
Centrifugal separator. F. H. Fleega. No. 961,488; June 14; Sp. p. 2580; Gaz. vol. 155; p. 450.
Chain-cloth, Machine for making. F. Bement. No. 960,485; June 7; Sp. p. 489; Gaz. vol. 155; p. 82.
Chain-grate furnace. A. W. Bennis. No. 962,734; June 28; Sp. p. 5278; Gaz. vol. 155; p. 921.
Chair: *See* Adjustable chair; Convertible chair; Folding chair; Foot-rest chair; Invalid-chair; Rail-chair; Rail-joint chair; Scaffold-chair; Switch-chair.
Chair back, Automatic reclining-. F. B. Wersel, Jr. No. 960,607; June 7; Sp. p. 746; Gaz. vol. 155; p. 122.
Chair fan attachment, Rocking-. D. Billsits. No. 962,808; June 28; Sp. p. 5428; Gaz. vol. 155; p. 948.
Chair parts, Fastening device for. M. D. Bell. No. 962,613; June 28; Sp. p. 5027; Gaz. vol. 155; p. 879.
Chair-securing device. J. J. Astor. No. 961,093; June 14; Sp. p. 1731; Gaz. vol. 155; p. 314.
Chalice. C. J. Ljunggren. No. 960,977; June 7; Sp. p. 1478; Gaz. vol. 155; p. 248.
Checking device. C. G. Harris. No. 960,544; June 7; Sp. p. 630; Gaz. vol. 155; p. 102.
Cheese-cutting device. C. Segale. No. 960,589; June 7; Sp. p. 717; Gaz. vol. 155; p. 118.
Cherry-seeder. H. Broome. No. 961,838; June 21; Sp. p. 3312; Gaz. vol. 155; p. 590.
Chimney-cap. N. Larocque. No. 961,416; June 14; Sp. p. 2406; Gaz. vol. 155; p. 425.
Chopper: *See* Cotton-chopper.
Chuck. P. F. Krug. No. 961,867; June 21; Sp. p. 3394; Gaz. vol. 155; p. 600.
Chuck, Bit-brace. H. P. Richards. No. 960,402; June 7; Sp. p. 336; Gaz. vol. 155; p. 56.
Chuck, Brace-. I. C. Imboden. No. 961,777; June 21; Sp. p. 3176; Gaz. vol. 155; p. 570.
Chuck, Drill. E. E. Cogswell. No. 962,746; June 28; Sp. p. 5302; Gaz. vol. 155; p. 926.
Chuck, Reinforced lathe-. H. M. Reynolds. No. 960,705; June 7; Sp. p. 950; Gaz. vol. 155; p. 158.
Chuck, Scroll-. L. E. Whiton. No. 962,070; June 21; Sp. p. 3818; Gaz. vol. 155; p. 669.
Churn. E. L. King. No. 960,955; June 7; Sp. p. 1429; Gaz. vol. 155; p. 240.
Churn. J. D. Tucker. No. 961,045; June 7; Sp. p. 1621; Gaz. vol. 155; p. 271.
Churn. B. C. Russell. No. 961,802; June 21; Sp. p. 3221; Gaz. vol. 155; p. 578.
Churn. W. A. Decker. No. 962,947; June 28; Sp. p. 5678; Gaz. vol. 155; p. 995.
Churn and butter-worker, Combined. R. B. Disbrow. No. 961,940; June 21; Sp. p. 3537; Gaz. vol. 155; p. 624.
Churn, Automatic. J. N. Nall. No. 960,680; June 7; Sp. p. 897; Gaz. vol. 155; p. 149.
Chute, Merchandise. C. F. Cormack. No. 961,840; June 14; Sp. p. 2275; Gaz. vol. 155; p. 401.
Cigar-box, Knockdown. M. Hutchinson. No. 961,964; June 21; Sp. p. 3596; Gaz. vol. 155; p. 632.
Cigar-clipper. L. B. Dennis. No. 961,110; June 14; Sp. p. 1758; Gaz. vol. 155; p. 319.
Cigar-cutter. E. Walker. No. 962,481; June 28; Sp. p. 4732; Gaz. vol. 155; p. 835.
Cigar-lighter. F. Stocker. No. 961,264; June 14; Sp. p. 2074; Gaz. vol. 155; p. 373.
Cigar-maker's rolling-board. J. Kletti, III. No. 960,957; June 7; Sp. p. 1436; Gaz. vol. 155; p. 241.
Cigar-wrapper. E. N. Gilfillan. No. 961,692; June 14; Sp. p. 2988; Gaz. vol. 155; p. 518.
Cigarette-former. M. G. Gillette. No. 961,118; June 14; Sp. p. 1777; Gaz. vol. 155; p. 322.
Circuit-breaker, Automatic. H. W. Leonard. No. 960,970; June 7; Sp. p. 1460; Gaz. vol. 155; p. 245.
Circuit-controller. E. Rothwell. No. 961,164; June 14; Sp. p. 1863; Gaz. vol. 155; p. 338.
Circuit-controller. F. I. Getty. No. 961,951; June 21; Sp. p. 3563; Gaz. vol. 155; p. 628.
Clamp: *See* Adjustable clamp; Door-supporting clamp; Lathe-head clamp; Rail-clamp; Saw-clamp.
Clamp. P. Bondreau. No. 960,258; June 7; Sp. p. 29; Gaz. vol. 155; p. 9.
Clamping device. F. Gerth. No. 962,566; June 28; Sp. p. 4935; Gaz. vol. 155; p. 864.
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Cleaner: *See* Boiler-tube cleaner; Comb-cleaner; Cuspidor-cleaner; Dish-cleaner; Gin-saw cleaner; Pipe-cleaner; Pneumatic cleaner; Shoe-cleaner; Sleeve-cloth cleaner; Suction cleaner.
Cleaning apparatus. A. H. Squier. No. 961,816; June 21; Sp. p. 3270; Gaz. vol. 155; p. 583.
Clevis. J. Kitsert. No. 961,232; June 14; Sp. p. 2011; Gaz. vol. 155; p. 363.

Clevis. T. S. Moffett. No. 961,881; June 21; Sp. p. 3425; Gaz. vol. 155; p. 605.
Clip: *See* Buggy-top clip.
Clock and watch. R. B. Hansell. No. 961,957; June 21; Sp. p. 3577; Gaz. vol. 155; p. 630.
Clock, Electric. F. I. Getty. No. 961,952; June 21; Sp. p. 3567; Gaz. vol. 155; p. 629.
Clock, Master-. F. I. Getty. No. 961,950; June 21; Sp. p. 3558; Gaz. vol. 155; p. 628.
Clock-pendulums, Electrical means for operating. J. F. Holmes. No. 961,776; June 21; Sp. p. 3175; Gaz. vol. 155; p. 570.
Closet connection. F. W. Carlson. No. 962,621; June 28; Sp. p. 5043; Gaz. vol. 155; p. 832.
Cloth doubling and folding machine attachment. A. J. Bohnengel. No. 962,193; June 21; Sp. p. 4106; Gaz. vol. 155; p. 712.
Clothes-drier. J. P. Hill. No. 962,147; June 21; Sp. p. 4012; Gaz. vol. 155; p. 696.
Clothes-line raising and lowering device. J. W. Fields. No. 960,870; June 7; Sp. p. 1267; Gaz. vol. 155; p. 212.
Clothes-line reel. H. H. and I. Reinhart and E. G. Lesher. No. 962,099; June 21; Sp. p. 3882; Gaz. vol. 155; p. 679.
Clothes-line support. H. O. Knickerbocker and C. G. Watson. No. 961,240; June 14; Sp. p. 2029; Gaz. vol. 155; p. 366.
Clothes-pin. G. E. Devore. No. 960,847; June 7; Sp. p. 1227; Gaz. vol. 155; p. 205.
Clutch. J. A. Dickey. No. 960,515; June 7; Sp. p. 556; Gaz. vol. 155; p. 92.
Clutch. H. A. Hancock. No. 962,567; June 28; Sp. p. 4937; Gaz. vol. 155; p. 865.
Clutch mechanism. F. E. Suddoth and W. T. S. Weaver. No. 961,043; June 7; Sp. p. 1617; Gaz. vol. 155; p. 270.
Coaster-brake. P. W. Toohey. No. 960,736; June 7; Sp. p. 1006; Gaz. vol. 155; p. 169.
Coaster-brake. C. Glover. No. 961,225; June 14; Sp. p. 1960; Gaz. vol. 155; p. 361.
Coaster-brake, Back-pedaling. R. D. Webster. No. 961,187; June 14; Sp. p. 1912; Gaz. vol. 155; p. 347.
Coat-hanger. J. A. Albertoni. No. 961,572; June 14; Sp. p. 2757; Gaz. vol. 155; p. 478.
Coat-hanger. R. E. Macintosh. No. 962,513; June 28; Sp. p. 4798; Gaz. vol. 155; p. 845.
Coating perforated webs, Method and apparatus for. F. B. Thompson. No. 960,487; June 7; Sp. p. 397; Gaz. vol. 155; p. 67.
Cock, Basin-. W. S. Graham. No. 962,083; June 21; Sp. p. 3851; Gaz. vol. 155; p. 673.
Cock for water-closet cisterns, Ball-. T. Bonroe. No. 960,801; June 7; Sp. p. 1137; Gaz. vol. 155; p. 190.
Cock, Gage-. F. W. Leidecker. No. 961,971; June 21; Sp. p. 3607; Gaz. vol. 155; p. 634.
Cock, Safety gas-. J. T. McDermott. No. 962,378; June 21; Sp. p. 4479; Gaz. vol. 155; p. 773.
Cock, Stop and waste. T. B. Hensey. No. 960,323; June 7; Sp. p. 161; Gaz. vol. 155; p. 31.
Coffee or tea pot. W. C. Leimbach, Jr., and F. H. Grimberg. No. 960,353; June 7; Sp. p. 236; Gaz. vol. 155; p. 40.
Coffee-pot. H. B. Biggins. No. 961,096; June 14; Sp. p. 1735; Gaz. vol. 155; p. 315.
Coin-case, Metallic. J. H. Schlafly. No. 962,590; June 28; Sp. p. 4983; Gaz. vol. 155; p. 872.
Coin-controlled apparatus. I. Robbins. No. 962,670; June 28; Sp. p. 5126; Gaz. vol. 155; p. 898.
Coin-controlled mechanism. J. A. Evans. No. 961,219; June 14; Sp. p. 1987; Gaz. vol. 155; p. 359.
Coin-detector. F. Schorik. No. 960,716; June 7; Sp. p. 969; Gaz. vol. 155; p. 161.
Coin-wrapping device. L. E. Ayres, Jr. No. 961,832; June 21; Sp. p. 3308; Gaz. vol. 155; p. 589.
Coins, Machine for counting and packaging. A. Abbott. No. 961,473; June 14; Sp. p. 2537; Gaz. vol. 155; p. 445.
Coke-oven door. F. D. Buffum, H. N. Eavenson, and E. O'Toole. No. 962,123; June 21; Sp. p. 3956; Gaz. vol. 155; p. 683.
Collapsible tub. J. D. Green. No. 962,954; June 28; Sp. p. 5688; Gaz. vol. 155; p. 997.
Collar. H. Y. Scott. No. 960,720; June 7; Sp. p. 978; Gaz. vol. 155; p. 163.
Collar. E. J. Quigley. No. 962,665; June 28; Sp. p. 5128; Gaz. vol. 155; p. 896.
Collar, Adjustable horse-. A. L. Burke. No. 960,810; June 7; Sp. p. 1159; Gaz. vol. 155; p. 193.
Collar attachment, Horse-. W. B. Walker. No. 962,180; June 21; Sp. p. 4062; Gaz. vol. 155; p. 706.
Collar, Coat-. E. T. Matheson. No. 962,403; June 21; Sp. p. 4529; Gaz. vol. 155; p. 781.
Collar-pad fastener, Horse-. J. E. Chantler. No. 962,125; June 21; Sp. p. 3958; Gaz. vol. 155; p. 683.
Collar-supporter. C. C. Morris. No. 960,989; June 7; Sp. p. 1502; Gaz. vol. 155; p. 252.
Collars, Reinforcing and supporting device for flexible. D. Marinsky. No. 962,514; June 28; Sp. p. 4799; Gaz. vol. 155; p. 845.
Colors and making same, Blue sulfid. R. Hers and E. Saul. No. 960,919; June 7; Sp. p. 1356; Gaz. vol. 155; p. 228.
Colors, Fixing sulfid. L. Lichtenstein. No. 960,975; June 7; Sp. p. 1475; Gaz. vol. 155; p. 248.
Colter-fastening. J. W. Hiett. No. 962,508; June 28; Sp. p. 4789; Gaz. vol. 155; p. 843.
Colter, Plow-. J. R. Davis. No. 960,628; June 7; Sp. p. 801; Gaz. vol. 155; p. 131.
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Comb-cleaner. J. Oppenheimer. No. 961,252; June 14; Sp. p. 2047; Gaz. vol. 155; p. 369.
Combination-furnace. T. Holland. No. 963,024; June 28; Sp. p. 5827; Gaz. vol. 155; p. 1020.
Combination-lock. J. W. Hunter. No. 961,236; June 14; Sp. p. 2021; Gaz. vol. 155; p. 364.
Commutator-motor, Alternate-current. V. A. Fynn. No. 960,884; June 7; Sp. p. 1299; Gaz. vol. 155; p. 217.
Commutator-motor, Polyphase. V. A. Fynn. No. 960,882; June 7; Sp. p. 1294; Gaz. vol. 155; p. 216.
Commutator-motor, Polyphase. V. A. Fynn. No. 960,883; June 7; Sp. p. 1296; Gaz. vol. 155; p. 217.
Compasses. J. Diracca. No. 962,702; June 28; Sp. p. 5215; Gaz. vol. 155; p. 910.
Compensator. E. Thomson. No. 960,440; June 7; Sp. p. 403; Gaz. vol. 155; p. 68.
Composite board. L. A. Deuther. No. 961,432; June 14; Sp. p. 2449; Gaz. vol. 155; p. 431.
Composition of matter. W. G. F. Siegmann. No. 960,422; June 7; Sp. p. 374; Gaz. vol. 155; p. 63.
Compound engine. C. Baden. No. 961,004; June 14; Sp. p. 1732; Gaz. vol. 155; p. 314.
Compressor. H. D. Shelton. No. 962,592; June 28; Sp. p. 4986; Gaz. vol. 155; p. 872.
Compressor or other power-absorbing machine, High-pressure. A. C. E. Rateau. No. 961,317; June 14; Sp. p. 2216; Gaz. vol. 155; p. 393.
Concave, Adjustable. F. O. Blixt. No. 962,192; June 21; Sp. p. 4105; Gaz. vol. 155; p. 712.
Concrete and like walls in the earth, Constructing. G. W. Jackson. No. 960,941; June 7; Sp. p. 1398; Gaz. vol. 155; p. 235.
Concrete construction. F. B. Gilbreth. No. 960,305; June 7; Sp. p. 129; Gaz. vol. 155; p. 25.
Concrete construction. J. E. Conselman. No. 961,210; June 14; Sp. p. 1968; Gaz. vol. 155; p. 355.
Concrete construction. J. E. Conselman. No. 961,211; June 14; Sp. p. 1969; Gaz. vol. 155; p. 356.
Concrete construction. A. J. Meier. No. 961,630; June 14; Sp. p. 2873; Gaz. vol. 155; p. 497.
Concrete construction. J. E. Conselman. No. 961,682; June 14; Sp. p. 2975; Gaz. vol. 155; p. 515.
Concrete construction. J. E. Conselman. No. 961,683; June 14; Sp. p. 2976; Gaz. vol. 155; p. 515.
Concrete construction. J. E. Conselman. No. 962,078; June 21; Sp. p. 3834; Gaz. vol. 155; p. 672.
Concrete construction. J. E. Conselman. No. 962,699; June 28; Sp. p. 5210; Gaz. vol. 155; p. 909.
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Concrete construction, Sectional mold for. F. S. Farrar. No. 962,560; June 28; Sp. p. 4921; Gaz. vol. 155; p. 862.
Concrete forms, Support for. C. M. Markham. No. 960,657; June 7; Sp. p. 852; Gaz. vol. 155; p. 140.
Concrete jacket for piling, Reinforced-. A. Briffod. No. 961,837; June 21; Sp. p. 3312; Gaz. vol. 155; p. 590.
Concrete-mold. W. T. Harris, Sr. No. 960,909; June 7; Sp. p. 1341; Gaz. vol. 155; p. 225.
Concrete post. G. C. Hale. No. 962,340; June 21; Sp. p. 4417; Gaz. vol. 155; p. 761.
Concrete railway cross-tie, Reinforced-. L. J. Jackson. No. 961,697; June 14; Sp. p. 2995; Gaz. vol. 155; p. 519.
Concrete reinforcement. R. S. Allyn. No. 962,488; June 28; Sp. p. 4750; Gaz. vol. 155; p. 837.
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Concrete structures, Reinforcement for. R. E. Newton. No. 960,382; June 7; Sp. p. 295; Gaz. vol. 155; p. 49.
Concrete-tile casing. C. R. Burlingame. No. 962,074; June 21; Sp. p. 3828; Gaz. vol. 155; p. 670.
Concrete tower, Reinforced-. L. F. H. de Mitonis. No. 960,666; June 7; Sp. p. 876; Gaz. vol. 155; p. 144.
Condenser. W. Schwanhausser. No. 960,417; June 7; Sp. p. 363; Gaz. vol. 155; p. 61.
Condenser. G. M. Harden. No. 962,427; June 28; Sp. p. 4615; Gaz. vol. 155; p. 815.
Condenser, Electrical. R. H. Manson. No. 961,978; June 21; Sp. p. 3615; Gaz. vol. 155; p. 636.
Condenser, Steam-. P. H. Sellers. No. 962,789; June 28; Sp. p. 5394; Gaz. vol. 155; p. 942.
Condensing apparatus, Steam-. D. A. Quiggin. No. 962,095; June 21; Sp. p. 3869; Gaz. vol. 155; p. 677.
Conduit, Flexible. G. A. Lutz. No. 962,772; June 28; Sp. p. 5353; Gaz. vol. 155; p. 935.
Conduits, Elbow for. G. A. Lutz. No. 962,773; June 28; Sp. p. 5354; Gaz. vol. 155; p. 936.
Conduits, Elbow for. G. A. Lutz. No. 962,774; June 28; Sp. p. 5357; Gaz. vol. 155; p. 936.
Confections, Storage-receptacle for frozen. C. W. Reynolds. No. 962,527; June 28; Sp. p. 4833; Gaz. vol. 155; p. 850.
Controller. A. F. Rockwell. No. 962,253; June 21; Sp. p. 4214; Gaz. vol. 155; p. 731.
Controller, Electropneumatically-operated. J. Mahoney. No. 962,713; June 28; Sp. p. 5234; Gaz. vol. 155; p. 914.
Convertible chair. W. G. Shear. No. 961,169; June 14; Sp. p. 1875; Gaz. vol. 155; p. 340.
Conveyer, Endless. F. G. Wood. No. 961,198; June 14; Sp. p. 1927; Gaz. vol. 155; p. 349.

Conveyer, Multiple gravity. M. C. Schwab. No. 961,804; June 21; Sp. p. 3224; Gaz. vol. 155; p. 579.
Conveyers, Spreading-section for overhead. F. W. Bright. No. 961,338; June 14; Sp. p. 2270; Gaz. vol. 155; p. 400.
Conveying device. J. S. Dewey. No. 961,486; June 14; Sp. p. 2575; Gaz. vol. 155; p. 449.
Cooking and heating apparatus. F. O. Getchell. No. 961,437; June 14; Sp. p. 2458; Gaz. vol. 155; p. 433.
Cooking utensils, Ventilated receptacle for. A. E. Fogelquist. No. 961,291; June 14; Sp. p. 2144; Gaz. vol. 155; p. 384.
Cooler: *See* Flat-iron-handle cooler; Milk-cooler; Water-cooler.
Cooling apparatus. W. B. Allbright. No. 960,614; June 7; Sp. p. 763; Gaz. vol. 155; p. 126.
Cooling-tower. E. Burhorn. No. 961,100; June 14; Sp. p. 1741; Gaz. vol. 155; p. 316.
Copy-holder. S. Steinmeyer. No. 962,988; June 28; Sp. p. 5758; Gaz. vol. 155; p. 1008.
Corer and slicer, Apple. A. W. Rand. No. 961,015; June 7; Sp. p. 1559; Gaz. vol. 155; p. 262.
Cores of sand, Making. G. W. Lewis. No. 960,973; June 7; Sp. p. 1472; Gaz. vol. 155; p. 247.
Corn-kernels. Device for removing. A. Wells. No. 961,825; June 21; Sp. p. 3286; Gaz. vol. 155; p. 586.
Corner-bracket for show-cases, Swinging. L. A. Becker. No. 960,468; June 7; Sp. p. 486; Gaz. vol. 155; p. 81.
Corner-fastening. R. E. Rockwell. No. 962,528; June 28; Sp. p. 4835; Gaz. vol. 155; p. 850.
Cornet-mouthpiece. L. E. Taylor. No. 962,479; June 28; Sp. p. 4729; Gaz. vol. 155; p. 834.
Corset. A. J. Lecoutre. No. 962,863; June 21; Sp. p. 4453; Gaz. vol. 155; p. 768.
Corset. J. M. Liebermann. No. 963,026; June 28; Sp. p. 5831; Gaz. vol. 155; p. 1021.
Cot for attachment to beds. H. A. Atkinson. No. 961,669; June 14; Sp. p. 2949; Gaz. vol. 155; p. 510.
Cotton-chopper. J. J. Vickers. No. 961,181; June 14; Sp. p. 1900; Gaz. vol. 155; p. 345.
Cotton-gin. E. Lumpkin. No. 961,624; June 14; Sp. p. 2863; Gaz. vol. 155; p. 495.
Cotton-ginning machinery. R. E. Wilson. No. 961,393; June 14; Sp. p. 2363; Gaz. vol. 155; p. 418.
Cotton huller and cleaner. J. L. Hart. No. 962,343; June 21; Sp. p. 4421; Gaz. vol. 155; p. 762.
Cotton-packer. A. S. Dixon. No. 960,850; June 7; Sp. p. 1230; Gaz. vol. 155; p. 205.
Couch and bed, Combined. D. T. Owen. No. 962,580; June 28; Sp. p. 4900; Gaz. vol. 155; p. 869.
Couch, Convertible. J. H. Dyett and C. Hulpian. No. 962,948; June 28; Sp. p. 5679; Gaz. vol. 155; p. 995.
Counting, integrating, and tally device, Combined. D. McDonald. No. 962,162; June 21; Sp. p. 4041; Gaz. vol. 155; p. 702.
Coupling: *See* Air-brake coupling; Car-coupling; Hose-coupling; Pipe-coupling; Shade-holder coupling; Stove-pipe-coupling; Wheel-coupling.
Coupling device. J. J. Barker. No. 961,283; June 14; Sp. p. 2127; Gaz. vol. 155; p. 381.
Coupling device. J. H. Belts. No. 962,733; June 28; Sp. p. 5277; Gaz. vol. 155; p. 921.
Coupling-hook, Auxiliary. D. T. Goodman. No. 962,634; June 28; Sp. p. 5069; Gaz. vol. 155; p. 886.
Cover fastener, Receptacle-. H. Jacobson. No. 962,898; June 28; Sp. p. 5595; Gaz. vol. 155; p. 979.
Cover, Receptacle-. B. J. Levin. No. 962,710; June 28; Sp. p. 5225; Gaz. vol. 155; p. 918.
Cracker-jar. H. C. Warren. No. 961,470; June 14; Sp. p. 2533; Gaz. vol. 155; p. 444.
Cradle, Folding. A. W. H. Raettig. No. 962,587; June 28; Sp. p. 4974; Gaz. vol. 155; p. 871.
Crank, Adjustable. T. S. White. No. 963,016; June 28; Sp. p. 5810; Gaz. vol. 155; p. 1017.
Crate. E. F. Ribbeck. No. 960,401; June 7; Sp. p. 335; Gaz. vol. 155; p. 56.
Crate. W. Beehler. No. 960,484; June 7; Sp. p. 488; Gaz. vol. 155; p. 82.
Crate, box, &c., Collapsible. J. A. Coffey and C. C. Bowen. No. 962,745; June 28; Sp. p. 5301; Gaz. vol. 155; p. 923.
Crate-machine. M. Gleason. No. 961,954; June 21; Sp. p. 3573; Gaz. vol. 155; p. 629.
Crate rack, Bottle-. M. Robinson and H. S. Neale. No. 962,671; June 28; Sp. p. 5139; Gaz. vol. 155; p. 898.
Cream-float-locking device. M. S. Tarkington. No. 962,799; June 28; Sp. p. 5410; Gaz. vol. 155; p. 944.
Cream from milk-bottles, Device for removing. L. A. Young. No. 962,187; June 21; Sp. p. 4093; Gaz. vol. 155; p. 710.
Cream-separator. W. C. Hartmann. No. 961,349; June 14; Sp. p. 2291; Gaz. vol. 155; p. 404.
Cream-separator. F. W. and W. C. Hartmann. No. 962,141; June 21; Sp. p. 3995; Gaz. vol. 155; p. 693.
Cream-separator, Centrifugal. G. M. Anderson. No. 960,768; June 7; Sp. p. 1075; Gaz. vol. 155; p. 180.
Creeper. O. A. Norlund. No. 962,042; June 21; Sp. p. 3751; Gaz. vol. 155; p. 658.
Crib structure. W. M. and J. P. Lawyer. No. 962,767; June 28; Sp. p. 5343; Gaz. vol. 155; p. 934.
Crusher: *See* Gyratory crusher.
Crushing-roll. T. A. Edison. No. 962,822; June 28; Sp. p. 5448; Gaz. vol. 155; p. 952.
Crushing-rolls. T. A. Edison. No. 962,823; June 28; Sp. p. 5449; Gaz. vol. 155; p. 952.
Crutch-tip. P. W. Pratt. No. 960,700; June 7; Sp. p. 938; Gaz. vol. 155; p. 156.
Cuff-pressing machine. A. T. Hagen and D. M. Cooper. No. 962,213; June 21; Sp. p. 4135; Gaz. vol. 155; p. 718.
Culinary utensil. G. A. Allsopp. No. 961,474; June 14; Sp. p. 2541; Gaz. vol. 155; p. 445.
Cultivating-machine. D. H. Abbott. No. 962,288; June 21; Sp. p. 4301; Gaz. vol. 155; p. 743.
Cultivator. J. S. Ludwig. No. 961,304; June 14; Sp. p. 2171; Gaz. vol. 155; p. 388.
Cultivator. H. N. Faas and H. E. Dodson. No. 961,762; June 21; Sp. p. 3144; Gaz. vol. 155; p. 565.
Cultivator. W. F. Nielsen. No. 962,520; June 28; Sp. p. 4820; Gaz. vol. 155; p. 848.
Cultivator. J. L. Woolard. No. 962,806; June 28; Sp. p. 5425; Gaz. vol. 155; p. 947.
Cultivator attachment. O. E. Adamson. No. 960,764; June 7; Sp. p. 1067; Gaz. vol. 155; p. 179.
Cultivator plow attachment. J. A. Sutton. No. 961,044; June 7; Sp. p. 1619; Gaz. vol. 155; p. 271.
Cultivator replanting attachment. W. Faust. No. 961,290; June 14; Sp. p. 2142; Gaz. vol. 155; p. 384.
Cultivator-shovel. F. A. Pendarvis. No. 961,640; June 14; Sp. p. 2893; Gaz. vol. 155; p. 500.
Cultivator-shovel. D. Katt. No. 962,434; June 28; Sp. p. 4630; Gaz. vol. 155; p. 818.
Cultivator-shovel moldboard. W. M. Medcalf. No. 962,909; June 28; Sp. p. 5611; Gaz. vol. 155; p. 983.
Cultivator, Spring-tooth. A. Brigden. No. 962,001; June 21; Sp. p. 3664; Gaz. vol. 155; p. 644.
Culvert-head. G. W. Storms. No. 961,908; June 21; Sp. p. 3466; Gaz. vol. 155; p. 615.
Culvert-pipe. R. C. McWane. No. 960,879; June 7; Sp. p. 290; Gaz. vol. 155; p. 48.
Cup: *See* Drinking-cup.
Curb-box. A. J. Tyler. No. 961,178; June 14; Sp. p. 1891; Gaz. vol. 155; p. 343.
Current commutator-motor, Alternate-. R. Richter. No. 962,101; June 21; Sp. p. 3887; Gaz. vol. 155; p. 680.
Current motor, Alternating-. V. A. Fynn. No. 960,881; June 7; Sp. p. 1292; Gaz. vol. 155; p. 216.
Current motor, Alternating-. V. A. Fynn. No. 962,334; June 21; Sp. p. 4393; Gaz. vol. 155; p. 758.
Current motor, Alternating-. V. A. Fynn. No. 962,335; June 21; Sp. p. 4401; Gaz. vol. 155; p. 759.
Current motor, Alternating-. V. A. Fynn. No. 962,336; June 21; Sp. p. 4404; Gaz. vol. 155; p. 759.
Current motor, Alternating-. V. A. Fynn. No. 962,337; June 21; Sp. p. 4410; Gaz. vol. 155; p. 760.
Current-reinforcing means. R. C. Browne. No. 960,495; June 7; Sp. p. 514; Gaz. vol. 155; p. 85.
Current-translating device, Alternating-. L. F. Howard. No. 960,553; June 7; Sp. p. 646; Gaz. vol. 155; p. 105.
Currycomb. A. Rahn. No. 962,666; June 28; Sp. p. 5130; Gaz. vol. 155; p. 896.
Currycomb. A. Rahn. No. 962,667; June 28; Sp. p. 5131; Gaz. vol. 155; p. 897.
Curtain-bracket. S. Bettigole. No. 960,792; June 7; Sp. p. 1118; Gaz. vol. 155; p. 187.
Curtain-fastener. L. C. Bailey. No. 962,879; June 28; Sp. p. 5564; Gaz. vol. 155; p. 978.
Curtain-fixture. L. F. and W. G. Vogt. No. 962,275; June 21; Sp. p. 4278; Gaz. vol. 155; p. 739.
Curtain-pole. L. Hay. No. 962,344; June 21; Sp. p. 4423; Gaz. vol. 155; p. 762.
Curtain-pole. C. L. Kuhl. No. 962,361; June 21; Sp. p. 4450; Gaz. vol. 155; p. 767.
Curtain-pole. J. Schopen. No. 962,787; June 28; Sp. p. 5392; Gaz. vol. 155; p. 941.
Curtain-rod. W. H. Walters. No. 961,352; June 14; Sp. p. 2296; Gaz. vol. 155; p. 405.
Curve, Adjustable irregular. A. Gasparich. No. 962,806; June 28; Sp. p. 5592; Gaz. vol. 155; p. 978.
Cuspidor-cleaner. H. Malick. No. 962,870; June 21; Sp. p. 4466; Gaz. vol. 155; p. 770.
Cuspidor, Non-spilling. G. Pastora. No. 962,852; June 28; Sp. p. 5504; Gaz. vol. 155; p. 963.
Cut-out and metering apparatus, Service. T. E. Murray. No. 962,455; June 28; Sp. p. 4674; Gaz. vol. 155; p. 825.
Cutter: *See* Band-cutter; Cigar-cutter; Noodle-cutter; Potato-cutter; Potato-vine cutter; Rotary cutter; Stalk-cutter; Strip-cutter; Tongue and groove cutter; Vegetable-cutter; Wire-cutter; Wood-cutter.
Cutter-guard. E. Andre. No. 961,198; June 14; Sp. p. 1940; Gaz. vol. 155; p. 351.
Cutting apparatus. G. W. Flora. No. 960,874; June 7; Sp. p. 1278; Gaz. vol. 155; p. 214.
Cutting internal flutes, Machine for. D. E. Ross. No. 961,537; June 14; Sp. p. 2684; Gaz. vol. 155; p. 486.
Cutting irregular forms, Machine for. A. M. Stickney. No. 961,907; June 21; Sp. p. 3464; Gaz. vol. 155; p. 615.
Cycle hub with brake mechanism, Free-wheel. E. Sachs. No. 960,710; June 7; Sp. p. 957; Gaz. vol. 155; p. 159.
Cycle, Motor-. L. H. Allen. No. 962,289; June 21; Sp. p. 4363; Gaz. vol. 155; p. 743.
Cycle-motor, Two-stroke. A. Peugeot, T. Huber, and H. de Lostalot. No. 961,815; June 14; Sp. p. 2212; Gaz. vol. 155; p. 392.
Cycle shock-absorber, Motor-. E. Loudenclos. No. 962,443; June 28; Sp. p. 4652; Gaz. vol. 155; p. 821.
Cycle stand, Motor-. A. Lundstrom. No. 962,369; June 21; Sp. p. 4464; Gaz. vol. 155; p. 770.
Cylinder-cooling means. G. D. Warren. No. 960,457; June 7; Sp. p. 426; Gaz. vol. 155; p. 73.

Cylinder-machine. H. Gaara. No. 962,208; June 21; Sp. p. 4129; Gaz. vol. 155; p. 717.
Damper or draft controlling device. C. F. Johnson. No. 961,615; June 14; Sp. p. 2842; Gaz. vol. 155; p. 491.
Dams, &c., Raking mechanism for. O. Wunder. No. 960,613; June 7; Sp. p. 759; Gaz. vol. 155; p. 126.
Darning device. J. R. Thompson. No. 961,557; June 14; Sp. p. 2722; Gaz. vol. 155; p. 473.
Darning, Stocking-holder for use in. A. F. Collins. No. 960,508; June 7; Sp. p. 544; Gaz. vol. 155; p. 90.
Davenport. W. W. Hopkins. No. 961,445; June 14; Sp. p. 2478; Gaz. vol. 155; p. 435.
Davenport and bed, Combined. J. G. Hulse and A. F. Schramm. No. 962,761; June 28; Sp. p. 5331; Gaz. vol. 155; p. 982.
Deflecting-bars, Adjustable stand for. E. C. Larry. No. 962,849; June 28; Sp. p. 5499; Gaz. vol. 155; p. 962.
Delivering materials, Apparatus for. A. E. Norris. No. 961,732; June 14; Sp. p. 3060; Gaz. vol. 155; p. 531.
Derrick, Portable. R. B. Woodworth. No. 960,474; June 7; Sp. p. 465; Gaz. vol. 155; p. 79.
Desk, Folding. L. Daniels. No. 960,836; June 7; Sp. p. 1206; Gaz. vol. 155; p. 201.
Desk lock, Roll-top-. J. J. Murphy. No. 962,377; June 21; Sp. p. 4478; Gaz. vol. 155; p. 772.
Desk-pad. A. Swarin. No. 962,798; June 28; Sp. p. 5409; Gaz. vol. 155; p. 944.
Desk, Retouching-. H. Weimer. No. 960,462; June 7; Sp. p. 438; Gaz. vol. 155; p. 74.
Desk School-. F. E. Ramsden. No. 960,703; June 7; Sp. p. 946; Gaz. vol. 155; p. 157.
Detectorium. H. Gernsback. No. 961,855; June 21; Sp. p. 3368; Gaz. vol. 155; p. 596.
Dewatering device. W. A. Hendryx. No. 960,546; June 7; Sp. p. 632; Gaz. vol. 155; p. 103.
Die-stock. F. E. Wells. No. 962,184; June 21; Sp. p. 4090; Gaz. vol. 155; p. 710.
Diffusion apparatus. J. Stewart. No. 962,725; June 28; Sp. p. 5260; Gaz. vol. 155; p. 918.
Diffusion process. J. Stewart. No. 962,597; June 28; Sp. p. 4995; Gaz. vol. 155; p. 874.
Digger: *See* Post-hole digger; Potato-digger.
Disappearing book. O. J. Williams. No. 961,566; June 14; Sp. p. 2748; Gaz. vol. 155; p. 476.
Dish-cleaner. G. Jaekle. No. 962,763; June 28; Sp. p. 5335; Gaz. vol. 155; p. 932.
Disinfectant-distributer. J. H. Melville. No. 960,984; June 7; Sp. p. 1489; Gaz. vol. 155; p. 250.
Disinfecting and deodorising apparatus. E. Rooch. No. 960,406; June 7; Sp. p. 343; Gaz. vol. 155; p. 57.
Disinfector. H. L. Schellenberg. No. 961,650; June 14; Sp. p. 2910; Gaz. vol. 155; p. 503.
Disinfector, Telephone-transmitter. F. H. Peck. No. 961,369; June 14; Sp. p. 2323; Gaz. vol. 155; p. 410.
Display and stock cabinet. Hat. C. J. Kleckner. No. 960,342; June 7; Sp. p. 211; Gaz. vol. 155; p. 36.
Display-cabinet. C. F. Krom. No. 960,561; June 7; Sp. p. 665; Gaz. vol. 155; p. 109.
Display-hanger for curtains, &c. C. E. Perkins. No. 962,855; June 28; Sp. p. 5510; Gaz. vol. 155; p. 964.
Display-rack. J. B. White. No. 962,185; June 21; Sp. p. 4091; Gaz. vol. 155; p. 710.
Display-rack for show-cases. J. H. Servatius and F. E. Meinel. No. 961,029; June 7; Sp. p. 1588; Gaz. vol. 155; p. 266.
Display-stand. J. M. Walters. No. 962,277; June 21; Sp. p. 4281; Gaz. vol. 155; p. 740.
Distillation, Wood. H. Rasche. No. 962,668; June 28; Sp. p. 5132; Gaz. vol. 155; p. 897.
Distributing device. W. G. Taylor. No. 960,782; June 7; Sp. p. 999; Gaz. vol. 155; p. 167.
Ditching-machine. R. Sinclair. No. 961,321; June 14; Sp. p. 2236; Gaz. vol. 155; p. 394.
Ditching-machine. S. De Force. No. 963,021; June 28; Sp. p. 5821; Gaz. vol. 155; p. 1019.
Diving-bell apparatus for submarine work. J. G. Flood and W. G. Fitzgerald. No. 962,019; June 21; Sp. p. 3697; Gaz. vol. 155; p. 649.
Door and means for operating the same. F. D. Ogden. No. 962,404; June 21; Sp. p. 4531; Gaz. vol. 155; p. 782.
Door, Cabinet-. H. E. Kuersten. No. 962,228; June 21; Sp. p. 4165; Gaz. vol. 155; p. 723.
Door-check. W. K. Henry. No. 960,641; June 7; Sp. p. 825; Gaz. vol. 155; p. 135.
Door check and closer. J. C. Regan. No. 962,916; June 28; Sp. p. 5623; Gaz. vol. 155; p. 985.
Door-closer. W. K. Henry. No. 962,144; June 21; Sp. p. 4002; Gaz. vol. 155; p. 695.
Door-closer mechanism. W. K. Henry. No. 962,142; June 21; Sp. p. 3997; Gaz. vol. 155; p. 694.
Door-closing device. F. J. Decker. No. 962,198; June 21; Sp. p. 4115; Gaz. vol. 155; p. 714.
Door-controlling mechanism. W. K. Henry. No. 962,143; June 21; Sp. p. 3999; Gaz. vol. 155; p. 694.
Door-fastener. J. Early. No. 960,521; June 7; Sp. p. 567; Gaz. vol. 155; p. 94.
Door-fastener. C. C. Kusterer. No. 960,961; June 7; Sp. p. 1443; Gaz. vol. 155; p. 242.
Door fastener, Screen-. R. E. Tupper. No. 960,445; June 7; Sp. p. 410; Gaz. vol. 155; p. 69.
Door for runway-openings. J. J. Lichter. No. 961,622; June 14; Sp. p. 3858; Gaz. vol. 155; p. 494.
Door-hanger. C. Latocsky. No. 960,350; June 7; Sp. p. 283; Gaz. vol. 155; p. 39.
Door-hanger. F. K. Fassett. No. 961,850; June 21; Sp. p. 3343; Gaz. vol. 155; p. 594.
Door-hanger. A. Wagner. No. 962,538; June 28; Sp. p. 4859; Gaz. vol. 155; p. 854.
Door-holder. F. Miller. No. 962,876; June 21; Sp. p. 4477; Gaz. vol. 155; p. 772.
Door-lock. H. J. Amick. No. 960,245; June 7; Sp. p. 4; Gaz. vol. 155; p. 3.
Door-lock. E. D. Zinninger. No. 962,287; June 21; Sp. p. 4298; Gaz. vol. 155; p. 743.
Door-lock. A. Carpenter. No. 962,997; June 28; Sp. p. 5777; Gaz. vol. 155; p. 1011.
Door-releasing apparatus. B. L. Bitting. No. 961,578; June 14; Sp. p. 2764; Gaz. vol. 155; p. 479.
Door-securer. H. M. Miller. No. 961,880; June 21; Sp. p. 3424; Gaz. vol. 155; p. 605.
Door-supporting clamp. A. B. Morse. No. 961,983; June 21; Sp. p. 3625; Gaz. vol. 155; p. 638.
Door, Vault and strong-room. G. A. Hatteraley. No. 961,227; June 14; Sp. p. 2002; Gaz. vol. 155; p. 361.
Doors, Back-stop for sliding. A. Darrach. No. 961,758; June 21; Sp. p. 3139; Gaz. vol. 155; p. 564.
Dowel. H. A. Underwood. No. 961,902; June 21; Sp. p. 3644; Gaz. vol. 155; p. 641.
Dowel-machine. M. Brochu. No. 961,930; June 21; Sp. p. 3512; Gaz. vol. 155; p. 620.
Draft-equalizer. A. B. Olsen. No. 960,687; June 7; Sp. p. 914; Gaz. vol. 155; p. 152.
Draft-equalizer. E. J. D. Miller. No. 961,513; June 14; Sp. p. 2624; Gaz. vol. 155; p. 458.
Draft-equalizer. H. A. Schaub. No. 961,649; June 14; Sp. p. 2908; Gaz. vol. 155; p. 503.
Draft-equalizer. W. Schluter. No. 962,056; June 21; Sp. p. 3785; Gaz. vol. 155; p. 664.
Draft-rigging. W. P. Bettendorf. No. 960,255; June 7; Sp. p. 23; Gaz. vol. 155; p. 7.
Draft-rigging, Friction. C. A. Tower. No. 962,993; June 28; Sp. p. 5769; Gaz. vol. 155; p. 1010.
Drag and grader, Road. O. F. Phillips and M. H. McCanlon. No. 961,007; June 7; Sp. p. 1547; Gaz. vol. 155; p. 259.
Drawer-guide. A. Elmborg. No. 962,502; June 28; Sp. p. 4782; Gaz. vol. 155; p. 842.
Drawing-board attachment. A. H. Maranda. No. 962,776; June 28; Sp. p. 5360; Gaz. vol. 155; p. 936.
Dredge cutter-head, Hydraulic-. W. T. Weaver. No. 962,540; June 28; Sp. p. 4862; Gaz. vol. 155; p. 855.
Drier: *See* Clothes-drier.
Drying apparatus. W. H. Bradley. No. 962,118; June 21; Sp. p. 3938; Gaz. vol. 155; p. 686.
Drying frame, Hosiery-. F. Pope and J. Rogginger. No. 961,644; June 14; Sp. p. 2900; Gaz. vol. 155; p. 502.
Drying-machine. A. M. Schreuder. No. 962,865; June 28; Sp. p. 5536; Gaz. vol. 155; p. 968.
Drill: *See* Power-drill; Rock-drill.
Drill. L. Waters. No. 962,994; June 28; Sp. p. 5770; Gaz. vol. 155; p. 1010.
Drill-press and boring-machine, Combined. J. T. Sherod. No. 962,474; June 28; Sp. p. 4720; Gaz. vol. 155; p. 832.
Drill-spindle driving mechanism. H. Allen. No. 962,690; June 28; Sp. p. 5163; Gaz. vol. 155; p. 905.
Drills and the like, Automatic reversing mechanism for. H. G. Barr. No. 961,834; June 14; Sp. p. 2261; Gaz. vol. 155; p. 399.
Drilling-machine, Automatic. F. H. Pierpont. No. 962,464; June 28; Sp. p. 4697; Gaz. vol. 155; p. 828.
Drilling-machine front head. G. Kemmerling. No. 960,557; June 7; Sp. p. 653; Gaz. vol. 155; p. 106.
Drinking-cup. M. M. Billingsly. No. 960,619; June 7; Sp. p. 786; Gaz. vol. 155; p. 128.
Dropper: *See* Can-cap dropper.
Drum, Collapsible. F. E. Thompson. No. 961,556; June 14; Sp. p. 2721; Gaz. vol. 155; p. 472.
Dust-collector. D. J. T. Oldham. No. 960,686; June 7; Sp. p. 912; Gaz. vol. 154; p. 151.
Dust-collector. W. Gyer. No. 962,757; June 28; Sp. p. 5324; Gaz. vol. 155; p. 930.
Dust-pan. A. Armstrong. No. 961,199; June 14; Sp. p. 1942; Gaz. vol. 155; p. 351.
Dust-pan. J. W. Ivers. No. 961,965; June 21; Sp. p. 3598; Gaz. vol. 155; p. 633.
Dye and making same, Brown sulfur. G. List. No. 960,652; June 7; Sp. p. 845; Gaz. vol. 155; p. 139.
Dye, Azo. O. Günther and L. Hesse. (Reissue.) No. 13,121; June 14; Sp. p. 3110; Gaz. vol. 155; p. 537.
Dye, Azo. O. Günther and L. Hesse. (Reissue.) No. 13,122; June 14; Sp. p. 3111; Gaz. vol. 155; p. 537.
Dye, Blue. W. Bauer and A. Herre. No. 961,398; June 14; Sp. p. 2369; Gaz. vol. 155; p. 419.
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Dye, New vat. P. Thomaschewski. No. 961,387; June 14; Sp. p. 2357; Gaz. vol. 155; p. 416.
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Dye, Vat. W. Bauer and A. Herre. No. 961,396; June 14; Sp. p. 2367; Gaz. vol. 155; p. 419.
Dye-vat-charging apparatus. B. Mayoux and C. Verchère. No. 960,662; June 7; Sp. p. 864; Gaz. vol. 155; p. 142.

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Dyeing and product thereof. R. Ott. No. 961,368; June 14; Sp. p. 2322; Gaz. vol. 155; p. 410.
Dyestuff, Vat. W. Bauer and A. Herre. No. 961,397; June 14; Sp. p. 2368; Gaz. vol. 155; p. 419.
Dynamite-heater. O. Molander. No. 960,370; June 7; Sp. p. 271; Gaz. vol. 155; p. 46.
Dynamos, Suspension for train-lighting. J. A. Mieland. No. 960,368; June 7; Sp. p. 268; Gaz. vol. 155; p. 45.
Ear-muff. J. B. Fassler. No. 961,765; June 21; Sp. p. 3158; Gaz. vol. 155; p. 567.
Easel. W. E. Trum. No. 962,932; June 28; Sp. p. 5654; Gaz. vol. 155; p. 990.
Easel or the like. F. J. Kristofek. No. 962,903; June 28; Sp. p. 5602; Gaz. vol. 155; p. 980.
Eaves-trough protector. H. R. Daniels. No. 960,835; June 7; Sp. p. 1207; Gaz. vol. 155; p. 201.
Egg-beater. J. N. Ward. No. 961,272; June 14; Sp. p. 2099; Gaz. vol. 155; p. 376.
Egg-carrier. P. J. Nagle. No. 961,889; June 21; Sp. p. 3436; Gaz. vol. 155; p. 607.
Egg holder and cutter. A. A. Anderson. No. 962,293; June 21; Sp. p. 4318; Gaz. vol. 155; p. 745.
Egg-lifter. J. W. Lang. No. 962,362; June 21; Sp. p. 4451; Gaz. vol. 155; p. 767.
Egg-tester. G. Arthur. No. 962,876; June 28; Sp. p. 5560; Gaz. vol. 155; p. 978.
Electric accumulator. L. Marseille and P. Gouin. No. 960,567; June 7; Sp. p. 674; Gaz. vol. 155; p. 111.
Electric apparatus, Vapor. J. T. H. Dempster. No. 962,497; June 28; Sp. p. 4770; Gaz. vol. 155; p. 840.
Electric cable, Aerial. C. E. Egner and R. F. Fredriksson. No. 960,291; June 7; Sp. p. 102; Gaz. vol. 155; p. 20.
Electric circuits, Time-limit protective device for. H. W. Cheney. No. 962,817; June 28; Sp. p. 5439; Gaz. vol. 155; p. 951.
Electric-conductor hanger. J. P. Conway and G. Hoffman. No. 960,827; June 7; Sp. p. 1194; Gaz. vol. 155; p. 198.
Electric-conductor terminal. E. Schneider. No. 962,921; June 28; Sp. p. 5635; Gaz. vol. 155; p. 986.
Electric-conduit fitting. J. C. Vogel. No. 960,744; June 7; Sp. p. 1019; Gaz. vol. 155; p. 172.
Electric currents, System for the generation and distribution of. R. M. Newbold. No. 960,683; June 7; Sp. p. 903; Gaz. vol. 155; p. 150.
Electric cut-out. T. E. Murray. No. 961,808; June 14; Sp. p. 2180; Gaz. vol. 155; p. 390.
Electric fixture. G. F. Rush. No. 962,055; June 21; Sp. p. 3783; Gaz. vol. 155; p. 664.
Electric furnace. T. F. Baily. No. 960,773; June 7; Sp. p. 1084; Gaz. vol. 155; p. 181.
Electric furnace. J. W. Evans. No. 960,862; June 7; Sp. p. 1255; Gaz. vol. 155; p. 210.
Electric furnace for metallurgical purposes. H. F. D. Schwahn. No. 962,532; June 28; Sp. p. 4847; Gaz. vol. 155; p. 852.
Electric heater. J. C. Royce. No. 960,409; June 7; Sp. p. 351; Gaz. vol. 155; p. 59.
Electric-light shade, Adjustable. D. D. Lockwood. No. 961,973; June 21; Sp. p. 3609; Gaz. vol. 155; p. 635.
Electric machine, Dynamo-. J. E. Noeggerath. No. 960,383; June 7; Sp. p. 297; Gaz. vol. 155; p. 50.
Electric machine, Dynamo-. L. E. Underwood. No. 960,449; June 7; Sp. p. 415; Gaz. vol. 155; p. 70.
Electric machine, Dynamo-. M. Walker. No. 962,683; June 28; Sp. p. 5161; Gaz. vol. 155; p. 903.
Electric sparking devices, Circuit-interrupter for. J. E. Seeley. No. 961,902; June 21; Sp. p. 3454; Gaz. vol. 155; p. 611.
Electric switch. E. M. Hewlett. No. 960,324; June 7; Sp. p. 162; Gaz. vol. 155; p. 31.
Electric switch. L. Larsen. No. 961,242; June 14; Sp. p. 2031; Gaz. vol. 155; p. 366.
Electric switch. H. C. Grant. No. 961,693; June 14; Sp. p. 2989; Gaz. vol. 155; p. 518.
Electric switch, Pendent. F. E. Seeley. No. 962,923; June 28; Sp. p. 5638; Gaz. vol. 155; p. 987.
Electric switch, Time-controlled. F. M. Tottingham. No. 961,558; June 14; Sp. p. 2723; Gaz. vol. 155; p. 473.
Electric time-switch. C. E. Bunker. No. 962,307; June 21; Sp. p. 4339; Gaz. vol. 155; p. 749.
Electric transportation, Aerial. O. J. Davy. No. 961,430; June 14; Sp. p. 2440; Gaz. vol. 155; p. 430.
Electrical apparatus. R. A. Fessenden. No. 962,017; June 21; Sp. p. 3691; Gaz. vol. 155; p. 649.
Electrical apparatus. C. Aalborg. No. 962,689; June 28; Sp. p. 5182; Gaz. vol. 155; p. 905.
Electrical conductor. C. A. Keller. No. 961,139; June 14; Sp. p. 1809; Gaz. vol. 155; p. 328.
Electrical connection. M. J. Wohl and H. Hertzberg. No. 962,071; June 21; Sp. p. 3820; Gaz. vol. 155; p. 669.
Electrical distribution system. G. E. Palmer. No. 961,813; June 14; Sp. p. 2202; Gaz. vol. 155; p. 391.
Electrical distribution system. W. A. Turbayne. No. 962,106; June 21; Sp. p. 3907; Gaz. vol. 155; p. 681.
Electrical receiving apparatus. J. M. Boyle. No. 962,417; June 28; Sp. p. 4589; Gaz. vol. 155; p. 811.
Electrical receptacle and rosette. L. J. Castonguay. No. 962,816; June 28; Sp. p. 5438; Gaz. vol. 155; p. 950.
Electrical-separation apparatus. H. A. Wentworth. No. 960,470; June 7; Sp. p. 452; Gaz. vol. 155; p. 77.
Electrically-operated lock. H. S. Balliet. No. 960,776; June 7; Sp. p. 1090; Gaz. vol. 155; p. 182.
Electricity-meter. D. C. Jackson. No. 962,222; June 21; Sp. p. 4152; Gaz. vol. 155; p. 721.
Electrode, Arc-lamp. G. A. Thomson. No. 961,268; June 14; Sp. p. 2081; Gaz. vol. 155; p. 374.
Electrode, Arc-lamp. G. A. Thomson. No. 961,269; June 14; Sp. p. 2081; Gaz. vol. 155; p. 374.
Electrode for welding, &c. W. A. Neff. No. 960,681; June 7; Sp. p. 899; Gaz. vol. 155; p. 149.
Electrolytic apparatus. H. Hatfield. No. 961,125; June 14; Sp. p. 1789; Gaz. vol. 155; p. 324.
Electrolytic apparatus with annular anode. H. Hatfield. No. 961,124; June 14; Sp. p. 1788; Gaz. vol. 155; p. 324.
Electromagnet. C. Scott. No. 961,805; June 21; Sp. p. 3226; Gaz. vol. 155; p. 579.
Electromagnetic device. W. A. Crowdus. No. 962,129; June 21; Sp. p. 3970; Gaz. vol. 155; p. 690.
Electromagnetic waves, Receiver for. R. A. Fessenden. No. 962,016; June 21; Sp. p. 3690; Gaz. vol. 155; p. 649.
Electroplating pipes, &c., Apparatus for. D. H. Murphy. No. 962,655; June 28; Sp. p. 5106; Gaz. vol. 155; p. 893.
Elevating machinery. A. T. Prescott. No. 960,701; June 7; Sp. p. 940; Gaz. vol. 155; p. 156.
Elevator: *See* Grain-elevator; Knockdown elevator.
Elevator. J. H. Taylor. No. 962,091; June 28; Sp. p. 5765; Gaz. vol. 155; p. 1009.
Elevator-brake. F. A. J. Schulz. No. 961,541; June 14; Sp. p. 2694; Gaz. vol. 155; p. 467.
Elevator-plungers, Device for grinding. A. R. Klingloff. No. 961,969; June 21; Sp. p. 3603; Gaz. vol. 155; p. 634.
Elevator safety device. A. H. Meach. No. 962,037; June 21; Sp. p. 3739; Gaz. vol. 155; p. 656.
Elevator safety devices, Means for operating. G. B. Rice. No. 961,260; June 14; Sp. p. 2065; Gaz. vol. 155; p. 372.
Embroidery-backing. P. London. No. 961,974; June 21; Sp. p. 3610; Gaz. vol. 155; p. 635.
Emery-wheel dresser. W. D. Rearwin. No. 961,460; June 14; Sp. p. 2505; Gaz. vol. 155; p. 441.
End-gate, Wagon. W. Plogmann. No. 962,385; June 21; Sp. p. 4492; Gaz. vol. 155; p. 775.
Engine: *See* Air-cooled engine; Blowing-engine; Compound engine; Explosion-engine; Explosive-engine; Explosive-driven engine; Fluid-pressure impact-engine; Gas-engine; Internal-combustion engine; Rotary engine; Rotary explosive-engine; Rotary steam-engine; Steam-engine.
Engine. W. E. Blair. No. 960,797; June 7; Sp. p. 1129; Gaz. vol. 155; p. 189.
Engine-controlling device. R. V. Longtine. No. 960,653; June 7; Sp. p. 846; Gaz. vol. 155; p. 139.
Engine cylinder, Gas-. F. E. Norton. No. 960,385; June 7; Sp. p. 299; Gaz. vol. 155; p. 50.
Engine igniting system, Explosive-. F. W. Springer. No. 960,598; June 7; Sp. p. 727; Gaz. vol. 155; p. 120.
Engine-lubricating apparatus, Steam-. E. Ryan. No. 962,859; June 28; Sp. p. 5520; Gaz. vol. 155; p. 966.
Engine spark-plug, Explosive-. J. P. White. No. 960,742; June 7; Sp. p. 1035; Gaz. vol. 155; p. 174.
Engine starter, Hydrocarbon-. C. Brisbois. No. 960,493; June 7; Sp. p. 509; Gaz. vol. 155; p. 85.
Engine-starting apparatus, Gasolene-. V. Morrill. No. 962,653; June 28; Sp. p. 5103; Gaz. vol. 155; p. 892.
Engine-starting device, Explosion-. E. N. Pagelsen. No. 960,690; June 7; Sp. p. 923; Gaz. vol. 155; p. 153.
Engine wheels, Extension-rim for traction-. T. Schele. No. 962,672; June 28; Sp. p. 5141; Gaz. vol. 155; p. 899.
Engines, Compression-release for internal-combustion. F. J. Miller. No. 962,160; June 21; Sp. p. 4038; Gaz. vol. 155; p. 701.
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Engines, Means for facilitating the starting of internal-combustion. F. Purdy. No. 961,077; June 7; Sp. p. 1697; Gaz. vol. 155; p. 282.
Engraving-machine. J. P. Stevens. No. 962,062; June 21; Sp. p. 3794; Gaz. vol. 155; p. 666.
Engraving-machine. R. H. Kirk. No. 962,430; June 28; Sp. p. 4637; Gaz. vol. 155; p. 819.
Engraving-machine. H. F. Whedon. No. 962,686; June 28; Sp. p. 5165; Gaz. vol. 155; p. 904.
Engraving, Photomechanical process of. H. L. Beckard. No. 962,097; June 21; Sp. p. 3876; Gaz. vol. 155; p. 678.
Engraving, Photomechanical process of. H. L. Beckard. No. 962,098; June 21; Sp. p. 3880; Gaz. vol. 155; p. 679.
Engraving, Process of. H. L. Beckard. No. 962,096; June 21; Sp. p. 3871; Gaz. vol. 155; p. 677.
Envelop. F. L. Norman. No. 960,384; June 7; Sp. p. 298; Gaz. vol. 155; p. 50.
Envelop-machine. M. A. Stewart. No. 962,927; June 28; Sp. p. 5643; Gaz. vol. 155; p. 988.
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Equalizer, Four-horse. W. Mitchell. No. 962,234; June 21; Sp. p. 4174; Gaz. vol. 155; p. 725.
Equalizing device. A. F. Rockwell. No. 962,252; June 21; Sp. p. 4212; Gaz. vol. 155; p. 731.
Erasing-material holder. G. P. Kingsbury. No. 961,141; June 14; Sp. p. 1812; Gaz. vol. 155; p. 329.

Etching printing-plates, Apparatus for. W. J. Holt. No. 962,835; June 28; Sp. p. 5482; Gaz. vol. 155; p. 958.
Evaporator-heater. G. H. Grimm. No. 962,830; June 28; Sp. p. 5467; Gaz. vol. 155; p. 955.
Examining matter or objects in quantities, Apparatus for. J. I. Solomon. No. 961,322; June 14; Sp. p. 2239; Gaz. vol. 155; p. 394.
Excavating-machine. A. F. D. Louden. No. 962,156; June 21; Sp. p. 4030; Gaz. vol. 155; p. 699.
Expansion-bolt. W. A. Bryant. No. 962,806; June 21; Sp. p. 4338; Gaz. vol. 155; p. 749.
Explosion-engine. P. A. Darracq. No. 961,938; June 21; Sp. p. 3534; Gaz. vol. 155; p. 623.
Explosive-driven engine. A. A. Jahnke. No. 961,966; June 21; Sp. p. 3590; Gaz. vol. 155; p. 633.
Explosive-engine. E. S. Bowen. No. 961,581; June 14; Sp. p. 2771; Gaz. vol. 155; p. 480.
Explosive liquids, Draw-off device for. L. Kessler. No. 962,845; June 28; Sp. p. 5493; Gaz. vol. 155; p. 961.
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Eyeglass-holder. M. N. Thompson. No. 962,065; June 21; Sp. p. 3811; Gaz. vol. 155; p. 667.
Eyeglass-mounting. C. A. Hoffman. No. 960,642; June 7; Sp. p. 826; Gaz. vol. 155; p. 135.
Eyeglass-mounting. C. A. Hoffman. No. 960,924; June 7; Sp. p. 1363; Gaz. vol. 155; p. 229.
Eyeglass-temple. L. H. Broome. No. 962,549; June 28; Sp. p. 4887; Gaz. vol. 155; p. 858.
Eyeglasses. C. Alter. No. 962,873; June 28; Sp. p. 5535; Gaz. vol. 155; p. 971.
Eyelet and rivet feeding device. M. A. Stewart. No. 962,926; June 28; Sp. p. 5645; Gaz. vol. 155; p. 988.
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Fan, Automatic rocking-chair. A. Lawson, R. S. and B. Wildbur. No. 960,967; June 7; Sp. p. 1452; Gaz. vol. 155; p. 244.
Fan, Lawn-swing. J. R. Hall. No. 962,341; June 21; Sp. p. 4418; Gaz. vol. 155; p. 761.
Fan, Oscillating. E. C. Lipps. No. 961,703; June 14; Sp. p. 3010; Gaz. vol. 155; p. 521.
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Fare-box. G. B. Kohler. No. 961,076; June 7; Sp. p. 1695; Gaz. vol. 155; p. 281.
Fare-register rods, Removable handle for. W. F. Frensel. No. 960,877; June 7; Sp. p. 1286; Gaz. vol. 155; p. 215.
Fare-slip holder, Cash-. H. E. Thomsen. No. 960,733; June 7; Sp. p. 1001; Gaz. vol. 155; p. 168.
Fastener, Detachable. W. C. Schmidt. No. 961,089; June 7; Sp. p. 1719; Gaz. vol. 155; p. 286.
Fastening for loops and the like. W. M. Jones and H. Stewart. No. 962,086; June 21; Sp. p. 3857; Gaz. vol. 155; p. 675.
Fastening-machine. W. A. Smith. No. 962,105; June 21; Sp. p. 3895; Gaz. vol. 155; p. 681.
Fat in milk and other dairy products, Process for the determination of. O. Wendler. No. 961,564; June 14; Sp. p. 2743; Gaz. vol. 155; p. 475.
Faucet. J. A. Petro. No. 960,695; June 7; Sp. p. 932; Gaz. vol. 155; p. 154.
Faucet. W. E. Porter and O. B. Thomas. No. 961,011; June 7; Sp. p. 1554; Gaz. vol. 155; p. 260.
Faucet. W. S. Graham. No. 962,084; June 21; Sp. p. 3863; Gaz. vol. 155; p. 674.
Faucet, Automatic. W. A. Schmeykal. No. 961,538; June 14; Sp. p. 2690; Gaz. vol. 155; p. 466.
Faucet, Combination-. A. Beyer. No. 961,426; June 14; Sp. p. 2430; Gaz. vol. 155; p. 428.
Faucet, Dispensing-. E. E. Murphy. No. 960,675; June 7; Sp. p. 890; Gaz. vol. 155; p. 147.
Faucet, Sanitary automatic. A. J. Ketelsen. No. 961,856; June 14; Sp. p. 2303; Gaz. vol. 155; p. 407.
Faucet, Two-way. E. E. Koken. No. 960,558; June 7; Sp. p. 655; Gaz. vol. 155; p. 107.
Faucets, Price-computing attachment for measuring-. C. Jones. No. 960,946; June 7; Sp. p. 1409; Gaz. vol. 155; p. 237.
Feed-bag. A. Kappenberg. No. 962,708; June 28; Sp. p. 5224; Gaz. vol. 155; p. 912.
Feed-controlling mechanism. A. L. De Leeuw and S. Einstein. No. 961,405; June 14; Sp. p. 2381; Gaz. vol. 155; p. 421.
Feed-cutters. Conveyer for. M. Freeman. No. 961,601; June 14; Sp. p. 2815; Gaz. vol. 155; p. 487.
Feed heating and superheating boiler. S. A. Reeve. No. 960,704; June 7; Sp. p. 949; Gaz. vol. 155; p. 157.
Feed regulator, Water-. W. H. Bice. No. 962,735; June 28; Sp. p. 5280; Gaz. vol. 155; p. 921.
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Feed-table gage. W. F. Minnick. No. 961,457; June 14; Sp. p. 2501; Gaz. vol. 155; p. 440.
Feed-trough. R. F. Miller. No. 960,367; June 7; Sp. p. 206; Gaz. vol. 155; p. 45.
Feed-trough, Adjustable. F. C. Griner. No. 962,635; June 28; Sp. p. 5070; Gaz. vol. 155; p. 886.
Feed-water controller for boilers. R. M. Reynolds. No. 962,050; June 21; Sp. p. 3767; Gaz. vol. 155; p. 661.
Feed-water-heating appliance. C. J. Mellin. No. 960,364; June 7; Sp. p. 200; Gaz. vol. 155; p. 44.
Feed-water purifier, Boiler. I. Adler. No. 961,060; June 7; Sp. p. 1653; Gaz. vol. 155; p. 276.
Feed-water regulator. C. O. Berrmark. No. 961,577; June 14; Sp. p. 2762; Gaz. vol. 155; p. 479.
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Feeding-bag, Nose. J. N. Beenken. No. 960,250; June 7; Sp. p. 14; Gaz. vol. 155; p. 5.
Feeding device for producers. C. A. Harvey. No. 962,216; June 21; Sp. p. 4142; Gaz. vol. 155; p. 719.
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Fence machine, Wire-. W. M. and C. E. Birch. No. 961,477; June 14; Sp. p. 2544; Gaz. vol. 155; p. 446.
Fence-post. A. W. Sprague. No. 960,597; June 7; Sp. p. 727; Gaz. vol. 155; p. 120.
Fence-post. H. S. Perry. No. 962,523; June 28; Sp. p. 4828; Gaz. vol. 155; p. 849.
Fence-post. S. W. Loomis. No. 962,905; June 28; Sp. p. 5604; Gaz. vol. 155; p. 981.
Fence-post and wire-stretcher, Combined. W. J. Davis. No. 961,108; June 14; Sp. p. 1756; Gaz. vol. 155; p. 319.
Fence-post brace. W. O. Freeland. No. 962,950; June 28; Sp. p. 5682; Gaz. vol. 155; p. 996.
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Fender. A. Littman and W. J. Lackie. No. 960,976; June 7; Sp. p. 1477; Gaz. vol. 155; p. 248.
Fender. F. Gantzsch, Jr. No. 962,754; June 28; Sp. p. 5318; Gaz. vol. 155; p. 929.
Fibers, Treating brittle vegetable. E. G. Stark. No. 962,173; June 21; Sp. p. 4066; Gaz. vol. 155; p. 706.
Fifth-wheel. S. Craig. No. 961,844; June 21; Sp. p. 3327; Gaz. vol. 155; p. 592.
Filaments, Apparatus for the continuous manufacture of. G. Michaud and E. Deiasson. No. 962,910; June 28; Sp. p. 5612; Gaz. vol. 155; p. 983.
File or binder, Newspaper. C. E. Watterson. No. 960,401; June 7; Sp. p. 437; Gaz. vol. 155; p. 74.
Filing-cabinet. H. J. Davis. No. 962,749; June 28; Sp. p. 5309; Gaz. vol. 155; p. 927.
Film-mending device. H. N. Nickerson and W. J. Cousins. No. 962,381; June 21; Sp. p. 4484; Gaz. vol. 155; p. 774.
Film-reeling mechanism. A. C. Roebuck. No. 961,536; June 14; Sp. p. 2678; Gaz. vol. 155; p. 465.
Film spreader and holder. O. Sherwood. No. 961,808; June 21; Sp. p. 3250; Gaz. vol. 155; p. 580.
Film-winder. E. A. Bircher. No. 960,795; June 7; Sp. p. 1126; Gaz. vol. 155; p. 188.
Filter. H. Brunner. No. 960,267; June 7; Sp. p. 59; Gaz. vol. 155; p. 13.
Filter. G. M. Kneuper. No. 962,081; June 21; Sp. p. 3726; Gaz. vol. 155; p. 654.
Filter for clarifying gelatin liquors and the like, Bone-black. J. H. Utley. No. 961,180; June 14; Sp. p. 1897; Gaz. vol. 155; p. 344.
Filter-press. E. W. Heller. No. 962,346; June 21; Sp. p. 4426; Gaz. vol. 155; p. 763.
Filtration. E. Burt. No. 961,713; June 14; Sp. p. 3032; Gaz. vol. 155; p. 525.
Fire-alarm. M. V. Crawford. No. 962,552; June 28; Sp. p. 4905; Gaz. vol. 155; p. 859.
Fire-alarm box. T. Haines. No. 961,440; June 14; Sp. p. 2468; Gaz. vol. 155; p. 434.
Fire-alarm system. J. H. Garratt and W. J. McGivern. No. 961,853; June 21; Sp. p. 3351; Gaz. vol. 155; p. 595.
Fire-alarm system. R. Conture. No. 962,625; June 28; Sp. p. 5053; Gaz. vol. 155; p. 883.
Fire-box door with draft device. J. A. Sandy. No. 960,711; June 7; Sp. p. 960; Gaz. vol. 155; p. 159.
Fire-cracker holder. M. Nielsen. No. 962,972; June 28; Sp. p. 5718; Gaz. vol. 155; p. 1002.
Fire-escape. H. L. Cooper. No. 960,510; June 7; Sp. p. 546; Gaz. vol. 155; p. 90.
Fire-escape. H. Johnson. No. 961,299; June 14; Sp. p. 2163; Gaz. vol. 155; p. 387.
Fire-escape. A. O. Müller. No. 961,518; June 14; Sp. p. 2632; Gaz. vol. 155; p. 459.
Fire-hose guide-rack. S. B. Willis. No. 961,054; June 7; Sp. p. 1635; Gaz. vol. 155; p. 274.
Fire-hydrants, Discharge-nozzle and independent cut-off valve for. A. L. Bixel. No. 960,620; June 7; Sp. p. 787; Gaz. vol. 155; p. 128.
Firearm. R. E. Jeffery. No. 962,223; June 21; Sp. p. 4153; Gaz. vol. 155; p. 721.
Firearm. T. C. Johnson. No. 962,764; June 28; Sp. p. 5337; Gaz. vol. 155; p. 933.
Firearm, Automatic. R. Frommer. No. 960,880; June 7; Sp. p. 1291; Gaz. vol. 155; p. 216.
Firearm, Automatic. W. H. Gates. No. 962,137; June 21; Sp. p. 3981; Gaz. vol. 155; p. 692.
Firearm cleaning-rod. J. H. Blair. No. 962,883; June 28; Sp. p. 5570; Gaz. vol. 155; p. 974.
Firearm, Repeating. T. C. Johnson. No. 960,646; June 7; Sp. p. 835; Gaz. vol. 155; p. 137.
Firearm-sight. C. Tyler. No. 960,739; June 7; Sp. p. 1011; Gaz. vol. 155; p. 170.
Firearm, Take-down. W. Bennett. No. 961,576; June 14; Sp. p. 2761; Gaz. vol. 155; p. 478.
Firearms, Folding stock for. W. L. Marble. No. 961,511; June 14; Sp. p. 2621; Gaz. vol. 155; p. 457.
Firearms, Sliding operating-handle for. F. F. Burton. No. 962,889; June 28; Sp. p. 5583; Gaz. vol. 155; p. 976.
Firearms, Telescope-sight mount for. F. F. Burton. No. 960,813; June 7; Sp. p. 1165; Gaz. vol. 155; p. 194.
Fireproof window-frame. C. A. McGinnis. No. 961,729; June 14; Sp. p. 3056; Gaz. vol. 155; p. 530.
Fish-hook. P. Beither. No. 961,259; June 14; Sp. p. 2064; Gaz. vol. 155; p. 371.

Fishing appliance. H. Butler. No. 962,309; June 21; Sp. p. 4345; Gaz. vol. 155; p. 750.
Fishing-signal. J. L. Dibbles. No. 962,420; June 28; Sp. p. 4602; Gaz. vol. 155; p. 812.
Flask; *See* Pipe-molding flask.
Flat-iron, Electrically-heated. G. E. Stevens. No. 962,989; June 28; Sp. p. 5750; Gaz. vol. 155; p. 1008.
Flat-iron-handle cooler. H. W. Sidgreaves. No. 961,543; June 14; Sp. p. 2701; Gaz. vol. 155; p. 468.
Float tide-mill. U. S. Jackson. No. 961,410; June 14; Sp. p. 2393; Gaz. vol. 155; p. 423.
Floor construction. J. Kahn. No. 961,722; June 14; Sp. p. 3044; Gaz. vol. 155; p. 528.
Floor-scraper. A. T. Beeler. No. 960,787; June 7; Sp. p. 1109; Gaz. vol. 155; p. 185.
Floor-scraper. F. Stephens. No. 962,926; June 28; Sp. p. 5642; Gaz. vol. 155; p. 988.
Floor-wiper. G. Friedman. No. 960,879; June 7; Sp. p. 1289; Gaz. vol. 155; p. 215.
Flower-holding and grave-covering device. J. C. Van Aken. No. 961,994; June 21; Sp. p. 3648; Gaz. vol. 155; p. 642.
Flue-cleaning device. N. E. Bartles and C. O. Hawkins. No. 961,574; June 14; Sp. p. 2759; Gaz. vol. 155; p. 478.
Fluid-distributing apparatus. M. K. Mermod. No. 961,785; June 21; Sp. p. 3190; Gaz. vol. 155; p. 573.
Fluid-expansion press. L. C. Turley. No. 961,046; June 7; Sp. p. 1622; Gaz. vol. 155; p. 272.
Fluid generators, Construction of motive-. F. S. McKibben. No. 962,458; June 28; Sp. p. 4680; Gaz. vol. 155; p. 826.
Fluid-jet motor. C. C. Cline. No. 961,209; June 14; Sp. p. 1966; Gaz. vol. 155; p. 355.
Fluid-pressure impact-engine. J. Kincaid. No. 962,511; June 28; Sp. p. 4794; Gaz. vol. 155; p. 844.
Fluid substances, Desiccating. W. S. Osborne. No. 962,781; June 28; Sp. p. 5370; Gaz. vol. 155; p. 938.
Fluids, Rate-indicating device for. F. N. Connet. No. 960,275; June 7; Sp. p. 70; Gaz. vol. 155; p. 15.
Flush-receptacle plate, Self-closing. H. Hubbell. No. 961,720; June 14; Sp. p. 3042; Gaz. vol. 155; p. 527.
Flush-tank. K. Kohler. No. 962,765; June 28; Sp. p. 5339; Gaz. vol. 155; p. 933.
Flusher for water-closets, &c. W. Turnbull. No. 960,602; June 7; Sp. p. 740; Gaz. vol. 155; p. 122.
Flushing-tank. F. J. Morgan. No. 961,458; June 14; Sp. p. 2502; Gaz. vol. 155; p. 440.
Fly-catcher. H. von Essen. No. 960,527; June 7; Sp. p. 576; Gaz. vol. 155; p. 95.
Fly-paper holder. E. Nickum. No. 961,890; June 21; Sp. p. 3436; Gaz. vol. 155; p. 608.
Fly-wheel. E. C. Critchlow. No. 960,277; June 7; Sp. p. 76; Gaz. vol. 155; p. 16.
Flying-machine. L. L. Crane. No. 960,831; June 7; Sp. p. 1201; Gaz. vol. 155; p. 200.
Flying-machine. S. Montgomery. No. 962,652; June 28; Sp. p. 5099; Gaz. vol. 155; p. 892.
Folding bench. E. W. Heiser. No. 960,916; June 7; Sp. p. 1353; Gaz. vol. 155; p. 227.
Folding chair. F. Martinson. No. 960,659; June 7; Sp. p. 859; Gaz. vol. 155; p. 142.
Foot, Artificial. J. H. Bradley, E. and T. L. Nichol. No. 961,582; June 14; Sp. p. 2773; Gaz. vol. 155; p. 481.
Foot-rest chair. A. K. Christiansen. No. 961,715; June 14; Sp. p. 3035; Gaz. vol. 155; p. 526.
Footwear. M. M. West. No. 960,748; June 7; Sp. p. 1028; Gaz. vol. 155; p. 173.
Footwear-mold. M. C. Clark. No. 962,697; June 28; Sp. p. 5203; Gaz. vol. 155; p. 908.
Forging machine, Metal-. J. Fielding. No. 962,705; June 28; Sp. p. 5210; Gaz. vol. 155; p. 911.
Form, Garment-. E. T. Palmenberg. No. 961,008; June 7; Sp. p. 1539; Gaz. vol. 155; p. 258.
Form, Garment-. C. H. Posner. No. 962,915; June 28; Sp. p. 5620; Gaz. vol. 155; p. 984.
Formaldehyde, Apparatus for preparation of. E. Huwart. No. 961,721; June 14; Sp. p. 3043; Gaz. vol. 155; p. 527.
Fountain; *See* Poultry drinking-fountain.
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Freezer. E. D. Sargent. No. 962,390; June 21; Sp. p. 4504; Gaz. vol. 155; p. 777.
Fruit-picking bag. F. W. Burch. No. 960,809; June 7; Sp. p. 1168; Gaz. vol. 155; p. 193.
Fuel, Apparatus for burning powdered. H. R. Barnhurst. No. 961,671; June 14; Sp. p. 2954; Gaz. vol. 155; p. 510.
Fuel, Artificial. P. Grayson. No. 961,608; June 14; Sp. p. 2830; Gaz. vol. 155; p. 490.
Fuel-briquets, Manufacture of. W. F. Collins. No. 960,509; June 7; Sp. p. 546; Gaz. vol. 155; p. 90.
Fuel, Burning powdered. H. R. Barnhurst. No. 961,672; June 14; Sp. p. 2956; Gaz. vol. 155; p. 511.
Fuel, Mechanism for feeding. A. F. Rockwell. No. 962,248; June 21; Sp. p. 4203; Gaz. vol. 155; p. 730.
Fuel-press. D. C. McCan. No. 962,716; June 28; Sp. p. 5241; Gaz. vol. 155; p. 915.
Funnel, Indicator-. C. F. Sendall. No. 962,674; June 28; Sp. p. 5144; Gaz. vol. 155; p. 900.
Fur-beating machine. R. Mueller. No. 962,236; June 21; Sp. p. 4177; Gaz. vol. 155; p. 726.
Fur-stretcher. W. A. Scott. No. 962,391; June 21; Sp. p. 4507; Gaz. vol. 155; p. 778.
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Furnace. J. Weints. No. 960,463; June 7; Sp. p. 440; Gaz. vol. 155; p. 75.
Furnace. H. N. Leask. No. 960,969; June 7; Sp. p. 1458; Gaz. vol. 155; p. 245.
Furnace. H. Strand. No. 962,677; June 28; Sp. p. 5148; Gaz. vol. 155; p. 900.
Furnace attachment. C. R. Kline. No. 962,152; June 21; Sp. p. 4018; Gaz. vol. 155; p. 698.
Furnace-door-operating mechanism. G. H. Gregory. No. 962,330; June 21; Sp. p. 4416; Gaz. vol. 155; p. 761.
Furnace-grate. H. A. Poppenhusen. No. 961,528; June 14; Sp. p. 2660; Gaz. vol. 155; p. 463.
Furnace-regulator. A. L. Goodenow. No. 961,226; June 14; Sp. p. 2000; Gaz. vol. 155; p. 361.
Furnace-regulator, Thermo-electric. J. H. Bobbitt. No. 962,884; June 28; Sp. p. 5571; Gaz. vol. 155; p. 975.
Furnaces, Feeding device for reverberatory. S. R. Garr. No. 961,768; June 21; Sp. p. 3163; Gaz. vol. 155; p. 568.
Furniture-fastener. T. J. Call. No. 962,989; June 28; Sp. p. 5685; Gaz. vol. 155; p. 992.
Fuse, Electric. A. J. Smith. No. 961,175; June 14; Sp. p. 1886; Gaz. vol. 155; p. 342.
Fuse, Rechargeable electric. A. J. Orelli. No. 961,891; June 21; Sp. p. 3437; Gaz. vol. 155; p. 608.
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Gambrel. F. Knaust. No. 962,358; June 21; Sp. p. 4446; Gaz. vol. 155; p. 766.
Game apparatus. W. H. Darrow. No. 960,512; June 7; Sp. p. 549; Gaz. vol. 155; p. 91.
Game apparatus. G. Huckstra. No. 960,930; June 7; Sp. p. 1373; Gaz. vol. 155; p. 231.
Game device. H. M. Chase. No. 961,714; June 14; Sp. p. 3034; Gaz. vol. 155; p. 525.
Game device, Base-ball-. J. J. Fitzsimmons. No. 961,851; June 21; Sp. p. 3345; Gaz. vol. 155; p. 595.
Garbage-cans, &c. Stand for. W. S. Amberson. No. 962,874; June 28; Sp. p. 5556; Gaz. vol. 155; p. 972.
Garbage-furnace, Domestic. A. V. Wood. No. 960,760; June 7; Sp. p. 1053; Gaz. vol. 155; p. 177.
Garden-rake. A. E. Engström. No. 962,559; June 28; Sp. p. 4920; Gaz. vol. 155; p. 862.
Garment. E. J. Quigley. No. 961,013; June 7; Sp. p. 1557; Gaz. vol. 155; p. 261.
Garment and collar fastener. A. A. Beeside. No. 962,242; June 21; Sp. p. 4190; Gaz. vol. 155; p. 728.
Garment-clasp. J. Lemay. No. 961,701; June 14; Sp. p. 3001; Gaz. vol. 155; p. 520.
Garment hanger and protector. R. Sahlin. No. 961,803; June 21; Sp. p. 3223; Gaz. vol. 155; p. 570.
Garment-rack. H. R. Kuersten. No. 962,227; June 21; Sp. p. 4163; Gaz. vol. 155; p. 723.
Garment-support, Extensible. S. Himmel. No. 962,837; June 28; Sp. p. 5479; Gaz. vol. 155; p. 958.
Garment-supporter. E. N. Humphrey. No. 961,448; June 14; Sp. p. 2483; Gaz. vol. 155; p. 436.
Gas and liquids, Automatic shut-off system for. C. D. Miller. No. 962,648; June 28; Sp. p. 5092; Gaz. vol. 155; p. 890.
Gas and recovering ammonia, &c., therefrom, Purifying. F. J. Falding. No. 961,763; June 21; Sp. p. 3150; Gaz. vol. 155; p. 566.
Gas and smoke consuming attachment, Combined. F. Shmonsky. No. 961,810; June 21; Sp. p. 3254; Gaz. vol. 155; p. 581.
Gas apparatus, Water-. F. B. Dougherty. No. 960,839; June 7; Sp. p. 1214; Gaz. vol. 155; p. 202.
Gas-burner. G. Helps. No. 962,834; June 28; Sp. p. 5475; Gaz. vol. 155; p. 957.
Gas burner, Hydrocarbon-. L. F. Millard. No. 960,366; June 7; Sp. p. 265; Gaz. vol. 155; p. 45.
Gas-burner, Inverted. E. Stell. No. 961,040; June 7; Sp. p. 1613; Gaz. vol. 155; p. 270.
Gas-burners, Shade-holder for inverted. S. F. Elkins. No. 960,630; June 7; Sp. p. 803; Gaz. vol. 155; p. 132.
Gas-compressor. R. W. Emerson and F. Bishop. No. 962,208; June 21; Sp. p. 4121; Gaz. vol. 155; p. 715.
Gas cut-off. J. F. Wells. No. 962,280; June 21; Sp. p. 4289; Gaz. vol. 155; p. 741.
Gas cut-off, Automatic. J. H. Skillcorn. No. 961,904; June 21; Sp. p. 3458; Gaz. vol. 155; p. 612.
Gas-engine. A. Burnett. No. 960,498; June 7; Sp. p. 518; Gaz. vol. 155; p. 86.
Gas-engine. D. W. Lyon. No. 960,978; June 7; Sp. p. 1479; Gaz. vol. 155; p. 248.
Gas-engine. W. G. Abbott, Jr. No. 961,059; June 7; Sp. p. 1647; Gaz. vol. 155; p. 276.
Gas-engine. C. G. Sprado. No. 961,079; June 7; Sp. p. 1701; Gaz. vol. 155; p. 282.
Gas-engine. F. O. Kilgore. No. 962,437; June 28; Sp. p. 4633; Gaz. vol. 155; p. 819.
Gas-engine. S. J. Webb. No. 962,995; June 28; Sp. p. 5771; Gaz. vol. 155; p. 1010.
Gas-engine, Two-cycle. O. H. Dorer. No. 961,111; June 14; Sp. p. 1750; Gaz. vol. 155; p. 319.
Gas-fixture attachment. U. K. Herfurth. No. 961,959; June 21; Sp. p. 3580; Gaz. vol. 155; p. 631.

Gas-generator. W. A. Wallace. No. 960,745; June 7; Sp. p. 1022; Gaz. vol. 155; p. 172.
Gas-heater. A. Rector. No. 960,400; June 7; Sp. p. 334; Gaz. vol. 155; p. 56.
Gas ignition and control, Automatic. L. G. Bartlett. No. 962,113; June 21; Sp. p. 3924; Gaz. vol. 155; p. 684.
Gas-lighting device, Time-controlled. H. W. Gates. No. 961,435; June 14; Sp. p. 2455; Gaz. vol. 155; p. 432.
Gas machines, Constant-supply device for vaporizing fuel-. J. F. Barker, Jr. No. 962,611; June 28; Sp. p. 5024; Gaz. vol. 155; p. 879.
Gas-pressure regulator. W. A. Fenton. No. 962,503; June 28; Sp. p. 4784; Gaz. vol. 155; p. 842.
Gas-producers, Vaporizer for. B. M. Aslakson. No. 962,610; June 28; Sp. p. 5022; Gaz. vol. 155; p. 878.
Gas-regulator. G. A. Hout. No. 962,959; June 28; Sp. p. 5899; Gaz. vol. 155; p. 998.
Gas-retort furnace. E. L. Richa. No. 962,051; June 21; Sp. p. 3769; Gaz. vol. 155; p. 662.
Gas-supply system. H. D. Donnell. No. 961,745; June 14; Sp. p. 3107; Gaz. vol. 155; p. 536.
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Gate. W. A. Law. No. 960,351; June 7; Sp. p. 233; Gaz. vol. 155; p. 39.
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Gate. I. N. Graham and J. G. Dula. No. 961,606; June 14; Sp. p. 2826; Gaz. vol. 155; p. 489.
Gear, Reversing-. V. E. Randall. No. 961,316; June 14; Sp. p. 2213; Gaz. vol. 155; p. 392.
Gearing. P. Hadnagy. No. 960,900; June 7; Sp. p. 1327; Gaz. vol. 155; p. 223.
Gearing. C. P. Johnson. No. 960,945; June 7; Sp. p. 1407; Gaz. vol. 155; p. 237.
Gearing. J. R. Trigwell. No. 961,561; June 14; Sp. p. 2738; Gaz. vol. 155; p. 474.
Gearing. V. A. White. No. 961,740; June 14; Sp. p. 3093; Gaz. vol. 155; p. 534.
Gearing, Transmission-. C. A. McKiernan. No. 960,572; June 7; Sp. p. 684; Gaz. vol. 155; p. 112.
Gem grinder and polisher. F. F. Van Epa. No. 962,274; June 21; Sp. p. 4276; Gaz. vol. 155; p. 739.
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Glue-saw cleaner. G. P. Roberts. No. 961,162; June 14; Sp. p. 1859; Gaz. vol. 155; p. 337.
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Glassware fire-polishing apparatus. A. J. Sanford. No. 962,863; June 28; Sp. p. 5525; Gaz. vol. 155; p. 967.
Glassware fire-polishing burner. A. J. Sanford. No. 962,861; June 28; Sp. p. 5525; Gaz. vol. 155; p. 967.
Glassware fire-polishing burner. A. J. Sanford. No. 962,862; June 28; Sp. p. 5527; Gaz. vol. 155; p. 967.
Glazing-bar. C. A. McGinnis. No. 961,728; June 14; Sp. p. 3054; Gaz. vol. 155; p. 529.
Glove, Base-ball. C. M. King. No. 962,438; June 28; Sp. p. 4626; Gaz. vol. 155; p. 819.
Glove-reversing device. A. F. Imbrie. No. 960,937; June 7; Sp. p. 1389; Gaz. vol. 155; p. 234.
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Glue-melting apparatus. C. M. Zimmerman. No. 961,570; June 14; Sp. p. 2753; Gaz. vol. 155; p. 477.
Gluing-machine. J. Buffelen. No. 962,619; June 28; Sp. p. 5038; Gaz. vol. 155; p. 881.
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Gold from river-beds, Means for extracting. J. H. Batten. No. 962,612; June 28; Sp. p. 5026; Gaz. vol. 155; p. 879.
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Grader and smoother, Road. H. C. Barnett. No. 962,290; June 21; Sp. p. 4827; Gaz. vol. 155; p. 747.
Grader, Road-. S. A. Stone. No. 962,267; June 21; Sp. p. 4256; Gaz. vol. 155; p. 736.
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Grain-bearing straw, Feeder for. S. B. McComb. No. 962,238; June 21; Sp. p. 4179; Gaz. vol. 155; p. 726.
Grain-conveyer. C. J. Hartley. No. 961,958; June 21; Sp. p. 3578; Gaz. vol. 155; p. 631.
Grain-cutting device. B. B. Turner and C. G. Pollock. No. 962,601; June 28; Sp. p. 5008; Gaz. vol. 155; p. 876.
Grain elevator and dump. F. Kral. No. 961,970; June 21; Sp. p. 3605; Gaz. vol. 155; p. 634.
Grain-loading machine. J. R. Braden. No. 962,194; June 21; Sp. p. 4108; Gaz. vol. 155; p. 713.
Grain-shocker. J. McCormick. No. 962,656; June 28; Sp. p. 5110; Gaz. vol. 155; p. 893.
Grain-treating apparatus. E. B. Cox. No. 961,068; June 7; Sp. p. 1664; Gaz. vol. 155; p. 279.
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Gramophone. F. Haye and C. Wessels. No. 962,833; June 28; Sp. p. 5473; Gaz. vol. 155; p. 956.
Graphophone, Multiplex. H. E. Markle. No. 962,446; June 28; Sp. p. 4655; Gaz. vol. 155; p. 822.
Graphophone repeating attachment. C. W. Claud. No. 962,315; June 21; Sp. p. 4359; Gaz. vol. 155; p. 752.
Grappling device. H. W. Erickson. No. 961,761; June 21; Sp. p. 3142; Gaz. vol. 155; p. 565.
Grass-cutting machine. F. B. Dale and D. A. Crawford. No. 961,485; June 14; Sp. p. 2573; Gaz. vol. 155; p. 449.
Grate-bar. A. Wilderspin. No. 962,905; June 28; Sp. p. 5424; Gaz. vol. 155; p. 947.
Grinder, Cutlery-. H. E. Sweet. No. 961,554; June 14; Sp. p. 2719; Gaz. vol. 155; p. 472.
Grinding and surfacing. H. B. Nichols. No. 961,523; June 14; Sp. p. 2639; Gaz. vol. 155; p. 461.
Grinding apparatus. S. T. Moore. No. 961,633; June 14; Sp. p. 2860; Gaz. vol. 155; p. 498.
Grinding device. A. M. McLeran. No. 960,378; June 7; Sp. p. 289; Gaz. vol. 155; p. 48.
Grinding-machine. P. J. Poltras and W. Caron. No. 961,010; June 7; Sp. p. 1553; Gaz. vol. 155; p. 260.
Grinding-machine. C. Hayes, Jr. No. 961,774; June 21; Sp. p. 3171; Gaz. vol. 155; p. 569.
Grinding machine, Cutlery-. C. L. Joy. No. 961,864; June 21; Sp. p. 3388; Gaz. vol. 155; p. 599.
Grinding or reducing alfalfa to meal, Mill or machine for. J. Wyss. No. 962,543; June 28; Sp. p. 4872; Gaz. vol. 155; p. 856.
Gripping, pasting, and folding mechanism. G. W. Swift, Jr. No. 961,824; June 14; Sp. p. 2242; Gaz. vol. 155; p. 395.
Gun, Air-. G. E. Heckman. No. 962,217; June 21; Sp. p. 4144; Gaz. vol. 155; p. 719.
Gun, Automatic. G. Colleoni. No. 960,825; June 7; Sp. p. 1185; Gaz. vol. 155; p. 198.
Gun-sight. N. S. Sober. No. 962,596; June 28; Sp. p. 4994; Gaz. vol. 155; p. 874.
Gun-stock. G. A. Stevens. No. 961,041; June 7; Sp. p. 1615; Gaz. vol. 155; p. 270.
Gun, Take-down. T. C. Johnson. No. 962,899; June 28; Sp. p. 5396; Gaz. vol. 155; p. 979.
Gun, Tubular-magazine. T. C. Johnson. No. 961,412; June 14; Sp. p. 2396; Gaz. vol. 155; p. 424.
Guns, Spade for portable recoil-. N. Koch. No. 962,032; June 21; Sp. p. 3727; Gaz. vol. 155; p. 654.
Gymnastic apparatus. P. E. Kelly. No. 961,450; June 14; Sp. p. 2487; Gaz. vol. 155; p. 437.
Gyratory crusher. G. F. De Wein. No. 961,084; June 7; Sp. p. 1709; Gaz. vol. 155; p. 284.
Hair-comb. J. H. Aker. No. 960,242; June 7; Sp. p. 1; Gaz. vol. 155; p. 3.
Hair curler and waver. J. F. Martin. No. 961,725; June 14; Sp. p. 3052; Gaz. vol. 155; p. 529.
Hair-drier. F. N. Hunnewell. No. 961,498; June 14; Sp. p. 2602; Gaz. vol. 155; p. 454.
Hair-roll with comb-band attachment. E. A. Stacy. No. 961,328; June 14; Sp. p. 2241; Gaz. vol. 155; p. 395.
Hair-tonic, Vegetable. J. G. Burgess. No. 961,840; June 21; Sp. p. 3320; Gaz. vol. 155; p. 591.
Hame attachment. A. M. Capron. No. 960,272; June 7; Sp. p. 65; Gaz. vol. 155; p. 14.
Hame-fastener. R. D. Simpson. No. 960,423; June 7; Sp. p. 375; Gaz. vol. 155; p. 63.
Hame-fastener. W. M. Caswell and J. A. Schofield. No. 961,935; June 21; Sp. p. 3521; Gaz. vol. 155; p. 622.
Hammer-drills, Valve for. V. J. O'Brien. No. 962,717; June 28; Sp. p. 5244; Gaz. vol. 155; p. 915.
Hammer, Electric. B. M. Dutton. No. 962,499; June 28; Sp. p. 4772; Gaz. vol. 155; p. 841.
Hammer, Power-. A. Beandry. No. 960,785; June 7; Sp. p. 1104; Gaz. vol. 155; p. 185.

Hammer, Power-operated. R. F. Arnott. No. 961,384; June 14; Sp. p. 2350; Gaz. vol. 155; p. 415.
Hammer, Steam-. F. G. Gasche. No. 960,891; June 7; Sp. p. 1311; Gaz. vol. 155; p. 220.
Hammock, Baby-. I. E. Palmer. No. 962,092; June 21; Sp. p. 3866; Gaz. vol. 155; p. 676.
Hammock-support. L. I. Berkowitz. No. 961,400; June 14; Sp. p. 2371; Gaz. vol. 155; p. 419.
Hammock-support. O. F. Ward. No. 962,181; June 21; Sp. p. 4083; Gaz. vol. 155; p. 709.
Hammock-support. I. E. Palmer. No. 962,521; June 28; Sp. p. 4822; Gaz. vol. 155; p. 848.
Hammocks or other structures, Seating for couch-. I. E. Palmer. No. 961,004; June 7; Sp. p. 1540; Gaz. vol. 155; p. 258.
Handle: *See* Brush-handle; Massage-apparatus handle; Pump-handle; Saw-handle.
Hanger: *See* Coat-hanger; Door-hanger; Electric-conductor hanger; Garment-hanger; Hat-hanger; Lighting-fixture hanger; Picture-hanger; Sash-hanger; Shade-hanger; Shade and curtain hanger; Shaft-hanger; Skirt and trousers hanger; Weight-hanger.
Harness and heddle-frames, Hook attachment for. L. Robidoux. No. 961,463; June 14; Sp. p. 2510; Gaz. vol. 155; p. 442.
Harness attachment. C. J. Johnson. No. 961,967; June 21; Sp. p. 3601; Gaz. vol. 155; p. 633.
Harness for controlling animals. A. Byrd and C. R. Treadway. No. 962,890; June 28; Sp. p. 5584; Gaz. vol. 155; p. 976.
Harrow-cleaning attachment. A. J. Olson. No. 962,579; June 28; Sp. p. 4958; Gaz. vol. 155; p. 868.
Harrow, Combination-. J. L. Buckingham. No. 962,742; June 28; Sp. p. 5292; Gaz. vol. 155; p. 924.
Harrow, Disk. E. Ewing. No. 961,113; June 14; Sp. p. 1764; Gaz. vol. 155; p. 320.
Harvester. O. L. Perrigo. No. 960,392; June 7; Sp. p. 321; Gaz. vol. 155; p. 53.
Harvester. A. R. Blewett. No. 960,799; June 7; Sp. p. 1132; Gaz. vol. 155; p. 189.
Harvester butting attachment. F. O. Kullander. No. 961,868; June 21; Sp. p. 3396; Gaz. vol. 155; p. 600.
Harvester, Corn-. J. Little. No. 961,455; June 14; Sp. p. 2496; Gaz. vol. 155; p. 439.
Harvester, Corn-. T. O. Thurston. No. 961,660; June 14; Sp. p. 2928; Gaz. vol. 155; p. 507.
Harvester-headers, Elevator-hood for. T. O. Marston. No. 962,232; June 21; Sp. p. 4171; Gaz. vol. 155; p. 724.
Harvester-tedder attachment. J. T. Oliphant and O. Ring. No. 962,662; June 28; Sp. p. 5124; Gaz. vol. 155; p. 895.
Harvesters, Excavating mechanism for beet-. H. F. Barber. No. 962,880; June 28; Sp. p. 5566; Gaz. vol. 155; p. 974.
Hat-hanger. G. Smith, Jr. No. 960,592; June 7; Sp. p. 721; Gaz. vol. 155; p. 119.
Hat-pin. W. N. Seibert. No. 962,987; June 28; Sp. p. 5756; Gaz. vol. 155; p. 1008.
Hat-planing machine. S. H. Fairchild. No. 962,012; June 21; Sp. p. 3682; Gaz. vol. 155; p. 647.
Hat sweat-band. J. N. Bentken. No. 960,251; June 7; Sp. p. 16; Gaz. vol. 155; p. 6.
Hat-tree. H. D. Lloyd. No. 961,418; June 14; Sp. p. 2412; Gaz. vol. 155; p. 426.
Hay-loader. S. K. Dennis. No. 960,845; June 7; Sp. p. 1228; Gaz. vol. 155; p. 204.
Hay-loader. J. Dain. No. 961,757; June 21; Sp. p. 3132; Gaz. vol. 155; p. 564.
Hay-press. G. F. Woodard. No. 960,612; June 7; Sp. p. 757; Gaz. vol. 155; p. 125.
Hay-press. C. D. Clark. No. 961,102; June 14; Sp. p. 1747; Gaz. vol. 155; p. 317.
Hay-press, Portable. J. M. Dolan and R. P. Aylward. No. 962,555; June 28; Sp. p. 4910; Gaz. vol. 155; p. 860.
Hay-turning machine of the drum type. L. Keeser. No. 960,950; June 7; Sp. p. 1415; Gaz. vol. 155; p. 239.
Head-forming device. S. Roman. No. 962,858; June 28; Sp. p. 5517; Gaz. vol. 155; p. 965.
Head-rod, Adjustable. H. F. Roach. No. 961,535; June 14; Sp. p. 2674; Gaz. vol. 155; p. 465.
Headlight-burner. C. R. Powers. No. 961,012; June 7; Sp. p. 1556; Gaz. vol. 155; p. 260.
Headlight, Locomotive-. M. A. Ross. No. 962,469; June 28; Sp. p. 4711; Gaz. vol. 155; p. 830.
Headwear and clothing holder. J. Maitland. No. 961,626; June 14; Sp. p. 2866; Gaz. vol. 155; p. 495.
Heater: *See* Dynamite-heater; Electric heater; Evaporator-heater; Gas-heater; Incubator-heater; Water-heater.
Heater. R. C. Frampton. No. 961,434; June 14; Sp. p. 2453; Gaz. vol. 155; p. 432.
Heater. C. C. Schaefer. No. 962,864; June 28; Sp. p. 5533; Gaz. vol. 155; p. 967.
Heating devices, Regulating. H. C. Mallory. No. 963,007; June 28; Sp. p. 5794; Gaz. vol. 155; p. 1014.
Heating-furnace. F. J. Droege. No. 960,517; June 7; Sp. p. 560; Gaz. vol. 155; p. 93.
Heating system, Automatically-regulated. D. J. Powers. No. 961,734; June 14; Sp. p. 3072; Gaz. vol. 155; p. 532.
Heating system, Steam-. J. Collis. No. 962,550; June 28; Sp. p. 4889; Gaz. vol. 155; p. 858.
Heating systems, Pipe connection for fluid-. E. J. Deegan. No. 961,341; June 14; Sp. p. 2276; Gaz. vol. 155; p. 401.
Heating unit, Electric. H. M. Smith. No. 962,793; June 28; Sp. p. 5402; Gaz. vol. 155; p. 943.
Heel, Boot or shoe. C. E. Macduffee. No. 961,625; June 14; Sp. p. 2865; Gaz. vol. 155; p. 495.
Heel, Shoe-. H. J. P. Rottger. No. 960,708; June 7; Sp. p. 954; Gaz. vol. 155; p. 158.
Hides or skins, Machine for treating. W. Evans. No. 962,208; June 21; Sp. p. 4125; Gaz. vol. 155; p. 716.
Hinge, Double-acting spring-. J. A. Fischer. No. 962,330; June 21; Sp. p. 4386; Gaz. vol. 155; p. 757.
Hinge for screens, Separable. E. E. Bumpus. No. 961,751; June 21; Sp. p. 3118; Gaz. vol. 155; p. 562.
Hinge for self-closing gates. J. Buellesbach. No. 960,268; June 7; Sp. p. 61; Gaz. vol. 155; p. 13.
Hinge, Spring door-. H. K. Hansen. No. 962,426; June 28; Sp. p. 4614; Gaz. vol. 155; p. 815.
Hitching attachment, Wheeled-vehicle. W. D. P. Lowry and F. J. Walling. No. 961,976; June 21; Sp. p. 3612; Gaz. vol. 155; p. 636.
Hitching device. H. M. Reiter. No. 962,248; June 21; Sp. p. 4190; Gaz. vol. 155; p. 728.
Hoe. W. J. Allin. No. 961,748; June 21; Sp. p. 3113; Gaz. vol. 155; p. 561.
Hoe, Garden-. A. Sheldon. No. 962,392; June 21; Sp. p. 4508; Gaz. vol. 155; p. 778.
Hog-ringer and tool, Combination. W. G. Robinson. No. 962,979; June 28; Sp. p. 5743; Gaz. vol. 155; p. 1005.
Hoisting device. W. A. Dunmire. No. 961,717; June 14; Sp. p. 3033; Gaz. vol. 155; p. 526.
Hoisting mechanism. J. Farrell. No. 960,298; June 7; Sp. p. 114; Gaz. vol. 155; p. 22.
Hoisting mechanism. G. W. Murray. No. 962,779; June 28; Sp. p. 5364; Gaz. vol. 155; p. 937.
Hoisting plants, Device for regulating the feeding of power in. J. Iversen. No. 962,762; June 28; Sp. p. 5333; Gaz. vol. 155; p. 932.
Hook: *See* Bench-hook; Brush-hook; Coupling-hook; Disappearing hook; Fish-hook; Grab-hook; Lace-hook; Snap-hook; Swingletree-hook.
Hoop-setting machine. G. R. Merriman and W. C. Stevens. No. 960,365; June 7; Sp. p. 262; Gaz. vol. 155; p. 44.
Horn. J. Burke. No. 960,811; June 7; Sp. p. 1162; Gaz. vol. 155; p. 193.
Horn, Sound-. A. G. Kaufman. No. 962,574; June 28; Sp. p. 4950; Gaz. vol. 155; p. 867.
Horse-bonnet. J. M. Davies. No. 960,840; June 7; Sp. p. 1216; Gaz. vol. 155; p. 202.
Horse-checking device. O. D. Shank. No. 961,168; June 14; Sp. p. 1872; Gaz. vol. 155; p. 340.
Horse-detacher. J. E. Drew. No. 961,941; June 21; Sp. p. 3538; Gaz. vol. 155; p. 624.
Horse-detacher. E. P. Copenhaver. No. 962,942; June 28; Sp. p. 5669; Gaz. vol. 155; p. 993.
Horse, Folding extensible. W. Pence, C. R. Wolf, and V. O. Jarvis. No. 962,976; June 28; Sp. p. 5734; Gaz. vol. 155; p. 1004.
Horse holder and releaser, Multiple. T. C. H. Wedge. No. 962,804; June 28; Sp. p. 5421; Gaz. vol. 155; p. 947.
Horse-rake. J. T. Bell. No. 960,253; June 7; Sp. p. 19; Gaz. vol. 155; p. 7.
Horseshoe. B. Wilbur. No. 960,754; June 7; Sp. p. 1089; Gaz. vol. 155; p. 175.
Horseshoe. H. Johansen. No. 961,499; June 14; Sp. p. 2603; Gaz. vol. 155; p. 454.
Horseshoe. H. H. Peirce. No. 962,165; June 21; Sp. p. 4050; Gaz. vol. 155; p. 703.
Horseshoe. M. D. Brilhart. No. 962,812; June 28; Sp. p. 5423; Gaz. vol. 155; p. 949.
Horseshoe-calk. C. M. Delany. No. 961,759; June 21; Sp. p. 3141; Gaz. vol. 155; p. 565.
Horseshoe-calk. B. F. Wharton. No. 962,282; June 21; Sp. p. 4292; Gaz. vol. 155; p. 742.
Horseshoe-making machine. W. Peacock. No. 960,890; June 7; Sp. p. 314; Gaz. vol. 155; p. 52.
Horseshoes, Non-slippable attachment for. A. J. Sangster. No. 962,471; June 28; Sp. p. 4714; Gaz. vol. 155; p. 831.
Hose-cleaning apparatus. G. Hofmann. No. 961,858; June 21; Sp. p. 3373; Gaz. vol. 155; p. 597.
Hose-coupling, Swivel. J. Shotwell. No. 961,170; June 14; Sp. p. 1876; Gaz. vol. 155; p. 340.
Hose holder, Garden-. J. Jaeger. No. 961,297; June 14; Sp. p. 2161; Gaz. vol. 155; p. 386.
Hose-nozzle support. C. V. Hoover. No. 961,234; June 14; Sp. p. 2018; Gaz. vol. 155; p. 364.
Hose-supporter. P. R. Duchemin. No. 961,112; June 14; Sp. p. 1762; Gaz. vol. 155; p. 320.
Hose-supporter. M. Finkelstein. No. 961,593; June 14; Sp. p. 2804; Gaz. vol. 155; p. 484.
Hose-supporter belt. D. Kops. No. 961,501; June 14; Sp. p. 2605; Gaz. vol. 155; p. 454.
Hub, Variable-speed coasting and braking. A. F. Rockwell. No. 962,245; June 21; Sp. p. 4195; Gaz. vol. 155; p. 729.
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Hydrant and hose cut-off valve. F. S. Seagrave. No. 961,901; June 21; Sp. p. 3453; Gaz. vol. 155; p. 611.
Hydraulic motor. G. B. French. No. 960,876; June 7; Sp. p. 1261; Gaz. vol. 155; p. 214.
Hydraulic motor. P. T. Cofield. No. 962,623; June 28; Sp. p. 5047; Gaz. vol. 155; p. 882.
Hydrocarbon-burner. L. A. Sherman. No. 960,722; June 7; Sp. p. 981; Gaz. vol. 155; p. 163.
Hydrocarbon-burner. I. L. Owens. No. 963,010; June 28; Sp. p. 5801; Gaz. vol. 155; p. 1016.

Hydrosilicate compound and making same. A. Weindel. No. 961,891; June 14; Sp. p. 2361; Gaz. vol. 155; p. 417.
Ice-cream freezer. B. Kuhl. No. 960,346; June 7; Sp. p. 220; Gaz. vol. 155; p. 38.
Ice-harvester. F. E. Laverty. No. 961,781; June 21; Sp. p. 3181; Gaz. vol. 155; p. 572.
Ice-making machine. T. H. Ray. No. 962,241; June 21; Sp. p. 4196; Gaz. vol. 155; p. 727.
Ice, Manufacture of. A. H. Buckley. No. 961,839; June 21; Sp. p. 3318; Gaz. vol. 155; p. 590.
Igniting-furnace for pulverous fuel. N. K. H. Ekelund. No. 960,292; June 7; Sp. p. 103; Gaz. vol. 155; p. 20.
Illuminating-body. G. Weissmann. No. 960,466; June 7; Sp. p. 447; Gaz. vol. 155; p. 76.
Incandescent mantle, Inverted. C. K. Harding. No. 960,638; June 7; Sp. p. 518; Gaz. vol. 155; p. 134.
Incandescent mantles, Container for. H. C. Plimpton. No. 962,384; June 21; Sp. p. 4491; Gaz. vol. 155; p. 775.
Incubator. G. W. R. Zimmerman. No. 960,476; June 7; Sp. p. 469; Gaz. vol. 155; p. 79.
Incubator. J. M. Sherman. No. 962,594; June 28; Sp. p. 4991; Gaz. vol. 155; p. 873.
Incubator-heater. W. A. McMahon. No. 961,520; June 14; Sp. p. 2636; Gaz. vol. 155; p. 460.
Incubators, Thermostatic regulator for. H. M. Sheer. No. 961,654; June 14; Sp. p. 2918; Gaz. vol. 155; p. 505.
Indenting-machine. W. B. Keighley. No. 962,845; June 28; Sp. p. 5491; Gaz. vol. 155; p. 960.
India-rubber or caoutchouc and extraction of caoutchouc from raw materials containing caoutchouc, Regenerating and devulcanising. G. Austerwell. No. 961,395; June 14; Sp. p. 2367; Gaz. vol. 155; p. 418.
Indicating instruments, Register mechanism for. F. F. Kinney. No. 961,358; June 14; Sp. p. 2305; Gaz. vol. 155; p. 407.
Indicator: *See* Speed-indicator; Station or street indicator; Street-indicator; Vibration-indicator.
Indicator. J. F. Marousek. No. 960,658; June 7; Sp. p. 535; Gaz. vol. 155; p. 141.
Indicator-operating means. G. N. Saegmuller. No. 961,898; June 21; Sp. p. 3445; Gaz. vol. 155; p. 610.
Indoxyl, &c., Making. M. Mugdan and W. Herrmann. No. 960,671; June 7; Sp. p. 884; Gaz. vol. 155; p. 146.
Inflammable solutions, Storing. C. Martini. No. 962,036; June 21; Sp. p. 3738; Gaz. vol. 155; p. 656.
Ingot-mold. E. Gathmann. No. 961,854; June 21; Sp. p. 3367; Gaz. vol. 155; p. 596.
Inhaler. H. Edde. No. 960,523; June 7; Sp. p. 569; Gaz. vol. 155; p. 94.
Inhaler. I. Buccori. No. 962,617; June 28; Sp. p. 5033; Gaz. vol. 155; p. 880.
Initiation apparatus. E. De Moulin. No. 961,847; June 21; Sp. p. 3335; Gaz. vol. 155; p. 593.
Ink-well. W. J. Somerville. No. 960,726; June 7; Sp. p. 987; Gaz. vol. 155; p. 164.
Ink-well. V. L. Littig. No. 961,972; June 21; Sp. p. 3608; Gaz. vol. 155; p. 635.
Ink-well. H. Malick. No. 962,968; June 28; Sp. p. 5712; Gaz. vol. 155; p. 1001.
Inkstand. F. M. Ashley. No. 960,770; June 7; Sp. p. 1079; Gaz. vol. 155; p. 181.
Inseam-trimming machine. A. Bates. No. 960,781; June 7; Sp. p. 1096; Gaz. vol. 155; p. 184.
Inseam-trimming machine. W. B. Keighley. No. 960,952; June 7; Sp. p. 1423; Gaz. vol. 155; p. 240.
Insect-destroyer. L. P. Farrington. No. 962,561; June 28; Sp. p. 4926; Gaz. vol. 155; p. 862.
Insect-destroyer. T. R. Wallis. No. 962,860; June 28; Sp. p. 5547; Gaz. vol. 155; p. 970.
Insecticide. I. W. Drummond. No. 960,287; June 7; Sp. p. 95; Gaz. vol. 155; p. 19.
Insulating-bushing. C. H. Thordarson. No. 962,726; June 28; Sp. p. 5263; Gaz. vol. 155; p. 918.
Insulation-joint. A. McLean. No. 960,377; June 7; Sp. p. 287; Gaz. vol. 155; p. 48.
Insulator. W. L. Rausch. No. 961,646; June 14; Sp. p. 2904; Gaz. vol. 155; p. 502.
Internal-combustion engine. C. A. Bennett. No. 960,254; June 7; Sp. p. 20; Gaz. vol. 155; p. 7.
Integral-combustion engine. J. E. Gilson. No. 960,536; June 7; Sp. p. 613; Gaz. vol. 155; p. 99.
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Internal-combustion engine. F. E. Dayes. No. 962,131; June 21; Sp. p. 3974; Gaz. vol. 155; p. 690.
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Iron ores, Cleaning. E. F. Goltra. No. 961,121; June 14; Sp. p. 1783; Gaz. vol. 155; p. 323.
Ironing-machine. W. French. No. 961,489; June 14; Sp. p. 2583; Gaz. vol. 155; p. 450.
Ironing-machine. H. Price. No. 962,525; June 28; Sp. p. 4830; Gaz. vol. 155; p. 849.
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Jack. W. B. Templeton. No. 961,909; June 21; Sp. p. 3468; Gaz. vol. 155; p. 614.
Jack. W. B. Templeton. No. 961,910; June 21; Sp. p. 3471; Gaz. vol. 155; p. 614.
Jack. O. Greenstran. No. 962,506; June 28; Sp. p. 4787; Gaz. vol. 155; p. 843.
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Jewels or ornaments to studs, Means for securing. E. E. Kahn. No. 960,647; June 7; Sp. p. 638; Gaz. vol. 155; p. 137.
Jig. F. L. Buchanan. No. 962,618; June 28; Sp. p. 5035; Gaz. vol. 155; p. 880.
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Joint construction. D. E. Hunter. No. 960,934; June 7; Sp. p. 1384; Gaz. vol. 155; p. 233.
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Journal-bearing, Adjustable. B. J. Carter. No. 962,124; June 21; Sp. p. 3957; Gaz. vol. 155; p. 688.
Journal-bearings, Adjustable sleeve for. C. I. Shirley. No. 962,059; June 21; Sp. p. 3789; Gaz. vol. 155; p. 665.
Journal-bearings, Lining. F. H. Howard. No. 960,828; June 7; Sp. p. 175; Gaz. vol. 155; p. 32.
Journal-box. C. L. Owen. No. 961,793; June 21; Sp. p. 3205; Gaz. vol. 155; p. 575.
Journal-box brass. J. M. Rohling. No. 962,166; June 21; Sp. p. 4051; Gaz. vol. 155; p. 703.
Journal-box for rock-shafts, Adjustable. J. I. Mengis. No. 962,447; June 28; Sp. p. 4680; Gaz. vol. 155; p. 822.
Key. F. C. Eckert. No. 962,558; June 28; Sp. p. 4919; Gaz. vol. 155; p. 861.
Key lock, Interchangeable-. A. W. Sibley. No. 960,421; June 7; Sp. p. 371; Gaz. vol. 155; p. 62.
Key-ring. A. Bippart. No. 962,882; June 28; Sp. p. 5568; Gaz. vol. 155; p. 974.
Keyhole-lock. G. S. Nickum. No. 961,250; June 14; Sp. p. 2044; Gaz. vol. 155; p. 369.
Kiln. W. Drayton. No. 960,286; June 7; Sp. p. 92; Gaz. vol. 155; p. 19.
Kiln. M. F. Swanson. No. 961,266; June 14; Sp. p. 2078; Gaz. vol. 155; p. 374.
Kinetoscope. G. W. Bingham. No. 960,794; June 7; Sp. p. 1122; Gaz. vol. 155; p. 188.
Kinetoscope-shutter. G. W. Bingham. No. 960,793; June 7; Sp. p. 1119; Gaz. vol. 155; p. 187.
Knife: *See* Putty-knife.
Knitting machine, Circular-. A. N. Ames. No. 962,292; June 21; Sp. p. 4315; Gaz. vol. 155; p. 744.
Knitting-machine, Circular-fashioning. A. N. Ames. No. 962,291; June 21; Sp. p. 4306; Gaz. vol. 155; p. 744.
Knitting-machines, Fabric-cutting device for. F. B. Wildman. No. 960,755; June 7; Sp. p. 1041; Gaz. vol. 155; p. 175.
Knockdown elevator. C. O. Liljeros. No. 961,782; June 21; Sp. p. 3185; Gaz. vol. 155; p. 572.
Labels and the like to cans and other articles, Machine for applying. B. W. Tucker. No. 961,270; June 14; Sp. p. 2082; Gaz. vol. 155; p. 375.
Lace-hook. E. A. Engstrom. No. 962,326; June 21; Sp. p. 4379; Gaz. vol. 155; p. 756.
Lacing boots, Device for. M. Bredenberg. No. 961,711; June 14; Sp. p. 3029; Gaz. vol. 155; p. 524.
Lactalbumin, Making a neutral sodium salt of. E. Fischer and P. Bergell. No. 962,753; June 28; Sp. p. 5316; Gaz. vol. 155; p. 929.
Ladder-bracket, Adjustable. F. T. Peters. No. 960,580; June 7; Sp. p. 609; Gaz. vol. 155; p. 115.
Ladder, Step-. A. J. Ketelsen. No. 961,357; June 14; Sp. p. 2304; Gaz. vol. 155; p. 407.
Ladder, Step-. E. Bentley. No. 962,881; June 28; Sp. p. 5568; Gaz. vol. 155; p. 974.
Lamp. W. French. No. 960,632; June 7; Sp. p. 807; Gaz. vol. 155; p. 132.
Lamp, Arc-. J. C. Piper. No. 961,733; June 14; Sp. p. 3071; Gaz. vol. 155; p. 532.
Lamp, Arc-. T. J. Anderson. No. 962,692; June 28; Sp. p. 5137; Gaz. vol. 155; p. 906.
Lamp base, Incandescent-. T. G. Turner. No. 961,326; June 14; Sp. p. 2246; Gaz. vol. 155; p. 396.
Lamp-bracket, Adjustable. R. G. Deihl. No. 963,000; June 28; Sp. p. 5786; Gaz. vol. 155; p. 1012.
Lamp-burner attachment. H. C. Lyng. No. 961,245; June 14; Sp. p. 2037; Gaz. vol. 155; p. 367.
Lamp circuits, Electric switch for incandescent-. W. B. Crossland. No. 960,626; June 7; Sp. p. 796; Gaz. vol. 155; p. 130.
Lamp, Electric-arc. H. W. Headland and F. Piutte. No. 960,911; June 7; Sp. p. 1345; Gaz. vol. 155; p. 226.
Lamp, Electric-arc. H. Beck. No. 962,732; June 28; Sp. p. 5275; Gaz. vol. 155; p. 920.
Lamp globe or shade, Gas-. T. J. Litle, Jr. No. 961,504; June 14; Sp. p. 2609; Gaz. vol. 155; p. 455.
Lamp, Incandescent electric. A. F. F. Stodd. No. 962,795; June 28; Sp. p. 5404; Gaz. vol. 155; p. 942.
Lamp mantles, Attachment for incandescent-. R. M. Dixon. No. 960,851; June 7; Sp. p. 1231; Gaz. vol. 155; p. 206.

Lamp, Metallic-filament electric glow-. H. Kusel. No. 960,962; June 7; Sp. p. 1444; Gaz. vol. 155; p. 243.
Lamp receptacle, Incandescent-. H. U. Badeau. No. 960,808; June 7; Sp. p. 1157; Gaz. vol. 155; p. 193.
Lamp receptacle or socket, Electric-. W. S. Ryan. No. 962,589; June 28; Sp. p. 4981; Gaz. vol. 155; p. 872.
Lamp, Safety-. H. Feldmann. No. 960,869; June 7; Sp. p. 1266; Gaz. vol. 155; p. 212.
Lamp socket-cover and shade-holder, Electric-. G. W. Cassidy. No. 962,076; June 21; Sp. p. 3832; Gaz. vol. 155; p. 671.
Lamp socket, Electric-. G. W. Goodridge. No. 961,605; June 14; Sp. p. 2824; Gaz. vol. 155; p. 489.
Lamp socket, Street-. C. L. Bundy and A. H. Manwaring. No. 960,807; June 7; Sp. p. 1154; Gaz. vol. 155; p. 192.
Lamp-socket, Twin. H. R. Sargent. No. 960,414; June 7; Sp. p. 359; Gaz. vol. 155; p. 60.
Lamp-sockets, Strain-relief for. F. A. Swan. No. 962,063; June 21; Sp. p. 3805; Gaz. vol. 155; p. 666.
Lamp support, Electric-. S. W. Ballbache. No. 960,618; June 7; Sp. p. 785; Gaz. vol. 155; p. 128.
Lamp support, Electric-. J. Néple. No. 960,908; June 7; Sp. p. 1532; Gaz. vol. 155; p. 256.
Lamp system, Incandescent-. Y. Kawasaki. No. 962,435; June 28; Sp. p. 4630; Gaz. vol. 155; p. 818.
Lamp, Vapor-. H. C. Wright. No. 960,475; June 7; Sp. p. 466; Gaz. vol. 155; p. 79.
Lamp, Vapor-burning. H. A. Barr. No. 962,296; June 21; Sp. p. 4321; Gaz. vol. 155; p. 746.
Lamps and analogous structures, Locking mechanism for. R. H. Welles. No. 961,706; June 14; Sp. p. 3018; Gaz. vol. 155; p. 522.
Lamps and lanterns, Burner-fastening for. C. L. Betts. No. 962,115; June 21; Sp. p. 3930; Gaz. vol. 155; p. 685.
Lamps, Gas-lighter for automobile-. H. V. Cole. No. 961,681; June 14; Sp. p. 2973; Gaz. vol. 155; p. 514.
Lamps of cycles, automobiles, &c., Pyrophoric igniting device for. C. F. Drüll. No. 961,588; June 14; Sp. p. 2794; Gaz. vol. 155; p. 483.
Lamps, Shock-absorbing and cord-adjusting device for incandescent electric. G. A. Burnham. No. 960,269; June 7; Sp. p. 62; Gaz. vol. 155; p. 13.
Land-roller. W. R. Canaday. No. 962,311; June 21; Sp. p. 4351; Gaz. vol. 155; p. 751.
Lantern, Projection-. C. F. Dutton, Jr. No. 960,519; June 7; Sp. p. 564; Gaz. vol. 155; p. 93.
Lantern, Signal-. A. H. Handian, Jr. No. 962,758; June 28; Sp. p. 5325; Gaz. vol. 155; p. 930.
Lantern, Tubular. C. Bergener. No. 962,114; June 21; Sp. p. 3929; Gaz. vol. 155; p. 684.
Lantern, Tubular. C. F. Erb. No. 962,135; June 21; Sp. p. 3979; Gaz. vol. 155; p. 692.
Last-jack. C. C. Cole. No. 962,747; June 28; Sp. p. 5305; Gaz. vol. 155; p. 926.
Last, Locking hinged. A. E. Peckham. No. 960,578; June 7; Sp. p. 696; Gaz. vol. 155; p. 115.
Latch, Door-. A. Neuenschwander. No. 960,381; June 7; Sp. p. 294; Gaz. vol. 155; p. 49.
Latch, Gate-. J. B. Barnwell. No. 960,777; June 7; Sp. p. 1091; Gaz. vol. 155; p. 183.
Latch, Gate-. H. R. Elliott. No. 960,859; June 7; Sp. p. 1248; Gaz. vol. 155; p. 209.
Latch, Gate-. H. R. Elliott. No. 961,691; June 14; Sp. p. 2987; Gaz. vol. 155; p. 518.
Latch, Rim-. P. Seisler. No. 963,012; June 28; Sp. p. 5805; Gaz. vol. 155; p. 1016.
Latch, Sliding-door. D. A. Anderson. No. 961,197; June 14; Sp. p. 1938; Gaz. vol. 155; p. 350.
Lathe-center. W. J. McIntyre. No. 960,678; June 7; Sp. p. 895; Gaz. vol. 155; p. 148.
Lathe, Copying-. E. Bostock. No. 961,580; June 14; Sp. p. 2707; Gaz. vol. 155; p. 480.
Lathe-dog. J. M. Palmer. No. 961,155; June 14; Sp. p. 1844; Gaz. vol. 155; p. 334.
Lathe-head clamp. A. Wood. No. 961,880; June 14; Sp. p. 2254; Gaz. vol. 155; p. 397.
Lathe, Semi-automatic turret-. M. H. Blancke. No. 962,000; June 21; Sp. p. 3663; Gaz. vol. 155; p. 644.
Lathing. A. P. White. No. 960,761; June 7; Sp. p. 1033; Gaz. vol. 155; p. 174.
Lavatories, Manufacture of earthenware. R. E. Crane. No. 961,214; June 14; Sp. p. 1977; Gaz. vol. 155; p. 357.
Lavatory. J. H. Danver. No. 962,892; June 28; Sp. p. 5587; Gaz. vol. 155; p. 977.
Lawn-sprinkler. F. E. Opitz. No. 961,251; June 14; Sp. p. 2045; Gaz. vol. 155; p. 369.
Lawn-trimming shovel. J. Reichert. No. 962,785; June 28; Sp. p. 5385; Gaz. vol. 155; p. 940.
Lead joint-runner. W. Vanderman. No. 960,604; June 7; Sp. p. 742; Gaz. vol. 155; p. 122.
Leaf holder, Loose-. J. Willy. No. 961,923; June 21; Sp. p. 3501; Gaz. vol. 155; p. 619.
Leather-boarding device. A. M. Marx. No. 962,157; June 21; Sp. p. 4032; Gaz. vol. 155; p. 699.
Leather-folding machine. R. H. Lufkin. No. 962,034; June 21; Sp. p. 3731; Gaz. vol. 155; p. 655.
Leather pieces edgewise and otherwise operating upon the edges of material in sheet form, Machine for joining. L. G. Weston. No. 960,471; June 7; Sp. p. 456; Gaz. vol. 155; p. 77.
Leather-shiving machine. J. R. Scott. No. 961,736; June 14; Sp. p. 3060; Gaz. vol. 155; p. 533.
Ledger, Loose-leaf. C. H. Gardner. No. 962,895; June 28; Sp. p. 5590; Gaz. vol. 155; p. 978.
Leuco derivative of diethylgallocyanin. W. Lommel. No. 961,361; June 14; Sp. p. 2311; Gaz. vol. 155; p. 406.
Leuco diethylgallocyanin. W. Lommel. No. 962,712; June 28; Sp. p. 5234; Gaz. vol. 155; p. 914.
Level attachment for drills. F. Schtabe. No. 960,718; June 7; Sp. p. 972; Gaz. vol. 155; p. 161.
Leveler, marker, and border machine, Combined. J. P. Wallace. No. 960,454; June 7; Sp. p. 421; Gaz. vol. 155; p. 71.
Leveling device, Universal. G. A. Rhodes. No. 962,467; June 28; Sp. p. 4708; Gaz. vol. 155; p. 829.
Lever, Uncoupling-. W. P. Murphy. No. 962,912; June 28; Sp. p. 5615; Gaz. vol. 155; p. 983.
Life-preserving swimming jacket. A. Badger. No. 961,282; June 14; Sp. p. 2126; Gaz. vol. 155; p. 381.
Life-raft. W. S. Ray. No. 961,459; June 14; Sp. p. 2503; Gaz. vol. 155; p. 440.
Lifter: *See* Egg-lifter; Plate-lifter.
Lifting-jack. C. A. Paisley. No. 961,986; June 21; Sp. p. 3636; Gaz. vol. 155; p. 639.
Lifting-jack, Multiple. A. H. Scholle. No. 961,899; June 21; Sp. p. 3449; Gaz. vol. 155; p. 610.
Light: *See* Rear light.
Light-projecting device. C. R. Forster. No. 961,114; June 14; Sp. p. 1765; Gaz. vol. 155; p. 321.
Light-securing means. T. Hoops, Jr. No. 960,026; June 7; Sp. p. 1368; Gaz. vol. 155; p. 230.
Lighting-fixture hanger. E. H. Wakefield. No. 961,050; June 7; Sp. p. 1628; Gaz. vol. 155; p. 273.
Lighting system, Wireless. E. B. Tustin, Jr. No. 961,914; June 21; Sp. p. 3478; Gaz. vol. 155; p. 616.
Lightning-arresting apparatus. T. M. Stevens. No. 962,536; June 28; Sp. p. 4856; Gaz. vol. 155; p. 854.
Limb suspender and back-check, Artificial-. J. F. Bowley. No. 961,165; June 14; Sp. p. 1867; Gaz. vol. 155; p. 339.
Line-casting machine. J. R. Rogers. No. 961,798; June 21; Sp. p. 3212; Gaz. vol. 155; p. 577.
Line-casting machine. J. R. Rogers. No. 961,799; June 21; Sp. p. 3215; Gaz. vol. 155; p. 577.
Link, Spring-. H. W. Sanford. No. 961,022; June 7; Sp. p. 1573; Gaz. vol. 155; p. 264.
Liquid-cooling device. D. H. Moore. No. 963,009; June 28; Sp. p. 5800; Gaz. vol. 155; p. 1015.
Liquid-fuel burner. F. S. McKibben. No. 962,457; June 28; Sp. p. 4679; Gaz. vol. 155; p. 826.
Liquids, Air-controlled feed system for. E. J. Moore. No. 960,986; June 7; Sp. p. 1496; Gaz. vol. 155; p. 251.
Liquids, Purification of. A. E. Williams. No. 960,608; June 7; Sp. p. 747; Gaz. vol. 155; p. 123.
Liquor-treating apparatus. J. Seitz. No. 961,167; June 14; Sp. p. 1870; Gaz. vol. 155; p. 339.
Litter-carrier. C. F. Brostrom and F. Lang. No. 961,712; June 14; Sp. p. 3030; Gaz. vol. 155; p. 524.
Litter-carriers, Single-lever lock and trip mechanism for. W. Gutenkunst. No. 961,493; June 14; Sp. p. 2595; Gaz. vol. 155; p. 452.
Loading device. F. Fifield. No. 960,299; June 7; Sp. p. 116; Gaz. vol. 155; p. 23.
Lock: *See* Asylum-lock; Automobile-controller lever-lock; Binder ball-lock; Can-lock; Car-door lock; Combination-lock; Desk-lock; Door-lock; Electrically-operated lock; Joint-lock; Key-lock; Keyhole-lock; Night-lock; Nut-lock; Padlock; Sash-lock; Seal-lock; Splice-bar lock; Switch-lock.
Lock. M. H. Farmer. No. 960,868; June 7; Sp. p. 1264; Gaz. vol. 155; p. 212.
Lock. R. Adams. No. 961,996; June 21; Sp. p. 3651; Gaz. vol. 155; p. 642.
Lock. H. G. Voight. No. 962,276; June 21; Sp. p. 4279; Gaz. vol. 155; p. 739.
Lock. P. Ziron. No. 962,486; June 28; Sp. p. 4742; Gaz. vol. 155; p. 836.
Lock. J. Sipos. No. 962,792; June 28; Sp. p. 5400; Gaz. vol. 155; p. 942.
Lock-stop protector. G. N. Mason. No. 961,979; June 21; Sp. p. 3617; Gaz. vol. 155; p. 637.
Lock-washer. C. F. Beers. No. 961,204; June 14; Sp. p. 1951; Gaz. vol. 155; p. 353.
Locks or burglar-alarm systems, Time-controller for electric time-. J. P. Williams and H. Huhn. No. 961,922; June 21; Sp. p. 3494; Gaz. vol. 155; p. 618.
Locking-bolt. C. W. Obert. No. 960,886; June 7; Sp. p. 802; Gaz. vol. 155; p. 51.
Locking device. W. H. Caslow. No. 961,753; June 21; Sp. p. 3123; Gaz. vol. 155; p. 563.
Locomotive ash-pan. W. W. Sykes. No. 962,269; June 21; Sp. p. 4262; Gaz. vol. 155; p. 737.
Locomotive-ash-pan-dumping device. W. J. Brown. No. 960,806; June 7; Sp. p. 1152; Gaz. vol. 155; p. 192.
Locomotive-cab window. J. W. Estes. No. 960,861; June 7; Sp. p. 1252; Gaz. vol. 155; p. 209.
Loom. A. J. Chevrette. No. 960,820; June 7; Sp. p. 1176; Gaz. vol. 155; p. 196.
Loom embroidery attachment, Weaving-. L. Veyron. No. 960,741; June 7; Sp. p. 1013; Gaz. vol. 155; p. 171.
Loom for manufacturing terry fabrics. G. Kratky. No. 961,866; June 21; Sp. p. 3393; Gaz. vol. 155; p. 600.
Loom for weaving double-pile fabrics. G. Zimmermann. No. 962,286; June 21; Sp. p. 4297; Gaz. vol. 155; p. 742.
Loom picker-check. S. Toyoda. No. 962,802; June 28; Sp. p. 5416; Gaz. vol. 155; p. 946.

Loom shuttle-race. E. Stutz. No. 960,433; June 7; Sp. p. 892; Gaz. vol. 155; p. 65.
Loom, Tufted-fabric. J. A. Clark. No. 960,824; June 7; Sp. p. 1163; Gaz. vol. 155; p. 197.
Loom, Weft-replenishing. F. E. Ashton. No. 961,668; June 14; Sp. p. 2947; Gaz. vol. 155; p. 509.
Looms, Filling feeder or magazine for automatic. S. N. Paquette. No. 962,581; June 28; Sp. p. 4963; Gaz. vol. 155; p. 869.
Looms, Lay for narrow-ware. W. Wattie. No. 962,183; June 21; Sp. p. 4088; Gaz. vol. 155; p. 709.
Looms, Thread-cutting temple for weft-replenishing. A. A. Gordon, Jr. No. 961,439; June 14; Sp. p. 2465; Gaz. vol. 155; p. 434.
Looms, Weft-replenishing apparatus for weaving-. L. Langelaeux. No. 960,965; June 7; Sp. p. 1448; Gaz. vol. 155; p. 243.
Low-quad molds, Control mechanism for. J. S. Bancroft and M. C. Indahl. No. 962,412; June 28; Sp. p. 4572; Gaz. vol. 155; p. 809.
Lubricating device. T. G. Kincaid. No. 960,341; June 7; Sp. p. 209; Gaz. vol. 155; p. 36.
Lubricating means for axles, bearings, and the like. W. J. Greening. No. 962,955; June 28; Sp. p. 5689; Gaz. vol. 155; p. 997.
Lubricator: *See* Automatic lubricator.
Lubricator. P. J. Sweeney. No. 960,730; June 7; Sp. p. 997; Gaz. vol. 155; p. 167.
Machine-tools, Feed mechanism for spindles for. H. O. Evans. No. 960,295; June 7; Sp. p. 108; Gaz. vol. 155; p. 22.
Machine-tools, Indicating device for. C. D. Andrew. No. 961,281; June 14; Sp. p. 2124; Gaz. vol. 155; p. 380.
Machinery-brake. H. G. Brown. No. 961,099; June 14; Sp. p. 1740; Gaz. vol. 155; p. 316.
Magnesia-granulating machine. U. Di Marco. No. 961,848; June 21; Sp. p. 3338; Gaz. vol. 155; p. 598.
Magnet controller, Lifting-. J. F. Mots. No. 960,995; June 7; Sp. p. 1526; Gaz. vol. 155; p. 255.
Magnet controller, Lifting-. A. C. Eastwood. No. 961,342; June 14; Sp. p. 3277; Gaz. vol. 155; p. 402.
Magnetic separator. W. B. Moore. No. 960,668; June 7; Sp. p. 879; Gaz. vol. 155; p. 145.
Mail-bag-fork attachment. J. A. Falvey. No. 961,487; June 14; Sp. p. 2579; Gaz. vol. 155; p. 449.
Mail-box. P. Reynolds. No. 960,583; June 7; Sp. p. 704; Gaz. vol. 155; p. 116.
Mail-box. S. C. Cox. No. 961,212; June 14; Sp. p. 1970; Gaz. vol. 155; p. 356.
Mail-box. A. Rosenberg and E. E. Clark. No. 961,897; June 21; Sp. p. 3444; Gaz. vol. 155; p. 609.
Mail-box. G. Westelin. No. 962,281; June 21; Sp. p. 4291; Gaz. vol. 155; p. 741.
Mail catching and delivering device. A. J. Hughes. No. 962,571; June 28; Sp. p. 4943; Gaz. vol. 155; p. 865.
Mail-chute. A. K. Smith. No. 961,813; June 21; Sp. p. 3258; Gaz. vol. 155; p. 582.
Mail-chute. F. E. Anderson. No. 962,489; June 28; Sp. p. 4752; Gaz. vol. 155; p. 837.
Mail-discharging apparatus. J. R. England. No. 961,943; June 21; Sp. p. 3541; Gaz. vol. 155; p. 625.
Mail-receptacle, House. S. D. Pierce. No. 961,527; June 14; Sp. p. 2659; Gaz. vol. 155; p. 462.
Mailing-card, Private. W. J. Wooldridge. No. 961,829; June 21; Sp. p. 3300; Gaz. vol. 155; p. 585.
Mailing device, Coin-. A. E. Hall. No. 962,956; June 28; Sp. p. 5692; Gaz. vol. 155; p. 997.
Manometer, Indicating, integrating, and recording. F. N. Connet. No. 962,817; June 21; Sp. p. 4364; Gaz. vol. 155; p. 753.
Manure-distributer. R. R. Lokey. No. 961,506; June 14; Sp. p. 2611; Gaz. vol. 155; p. 456.
Manure-loader. M. W. Brennan. No. 960,490; June 7; Sp. p. 504; Gaz. vol. 155; p. 84.
Mask, Face-protecting. M. Dysthe. No. 960,520; June 7; Sp. p. 566; Gaz. vol. 155; p. 93.
Massage apparatus. L. A. and C. M. Siebert, Jr. No. 961,034; June 7; Sp. p. 1595; Gaz. vol. 155; p. 267.
Massage apparatus. H. C. Karpenstein. No. 962,901; June 28; Sp. p. 5599; Gaz. vol. 155; p. 980.
Massage-apparatus handle. T. A. McCall and C. M. Siebert, Jr. No. 961,365; June 14; Sp. p. 2315; Gaz. vol. 155; p. 409.
Massage device. S. F. Bowser. No. 961,479; June 14; Sp. p. 2552; Gaz. vol. 155; p. 447.
Massage devices, Cup or head for. C. M. Siebert, Jr. No. 961,033; June 7; Sp. p. 1594; Gaz. vol. 155; p. 267.
Mat. E. Bouchard. No. 961,929; June 21; Sp. p. 3511; Gaz. vol. 155; p. 620.
Match-box holder and cigar-cutter, Combined. E. Oldenbeach. No. 961,001; June 7; Sp. p. 1536; Gaz. vol. 155; p. 257.
Match-box, Pocket. J. E. and V. J. Lowdermilk. No. 961,783; June 21; Sp. p. 3187; Gaz. vol. 155; p. 572.
Match-holder, Pocket. D. L. Block. No. 962,810; June 28; Sp. p. 5431; Gaz. vol. 155; p. 949.
Match-receptacle and cigar-cutter, Single-delivery. M. R. and J. M. Stowell. No. 960,431; June 7; Sp. p. 389; Gaz. vol. 155; p. 65.
Match-safe and cigar-cutter, Combined. G. W. Behler. No. 961,066; June 7; Sp. p. 1662; Gaz. vol. 155; p. 278.
Match-stand and cigar-cutter, Combined. J. H. Astruck. No. 961,927; June 21; Sp. p. 3509; Gaz. vol. 155; p. 620.
Mattes, Wet treatment of. J. T. Carrick. No. 961,934; June 21; Sp. p. 3519; Gaz. vol. 155; p. 622.
Mattress, seat, and the like, Air. N. C. Hinsdale. No. 961,231; June 14; Sp. p. 2010; Gaz. vol. 155; p. 363.
Mattress, Wire. C. J. Witsel. (Reissue.) No. 13,125; June 28; Sp. p. 5842; Gaz. vol. 155; p. 1024.
Measure. H. C. Harbridge. No. 960,906; June 7; Sp. p. 1338; Gaz. vol. 155; p. 225.
Measure, Liquid-. S. N. Krawchenko. No. 961,452; June 14; Sp. p. 2489; Gaz. vol. 155; p. 438.
Measurer. J. B. Martin and W. B. Milliner. No. 961,628; June 14; Sp. p. 2871; Gaz. vol. 155; p. 496.
Measuring and filling machine. R. J. Workman. No. 961,741; June 14; Sp. p. 3004; Gaz. vol. 155; p. 535.
Measuring apparatus, Bootmakers'. W. Church. No. 962,744; June 28; Sp. p. 5297; Gaz. vol. 155; p. 925.
Measuring device, Automatic liquid-. H. Morris. No. 962,917; June 28; Sp. p. 5614; Gaz. vol. 155; p. 983.
Measuring instrument, Electric. E. D. Hickok. No. 962,759; June 28; Sp. p. 5327; Gaz. vol. 155; p. 931.
Measuring mechanism, Rope-. H. H. Hayes. No. 960,321; June 7; Sp. p. 158; Gaz. vol. 155; p. 30.
Meat and fruit press. E. Walker. No. 962,608; June 28; Sp. p. 5011; Gaz. vol. 155; p. 876.
Meat-dethering apparatus. H. P. Roberts. No. 961,019; June 7; Sp. p. 1569; Gaz. vol. 155; p. 263.
Meat-tenderer. O. Summerfield. No. 961,657; June 14; Sp. p. 2924; Gaz. vol. 155; p. 506.
Mechanical movement. B. Huse. No. 960,936; June 7; Sp. p. 1388; Gaz. vol. 155; p. 234.
Mechanical movements, Controlling device for. C. H. Carter. No. 961,842; June 21; Sp. p. 3322; Gaz. vol. 155; p. 591.
Mechanic's furnace. P. R. Flamm. No. 961,596; June 14; Sp. p. 2809; Gaz. vol. 155; p. 486.
Medicated tampons. J. C. Dorr. No. 961,689; June 14; Sp. p. 2984; Gaz. vol. 155; p. 517.
Medicinal preparation. C. Heinzinger. No. 960,915; June 7; Sp. p. 1353; Gaz. vol. 155; p. 227.
Metal bars, Machine for cutting. H. H. Jensen. No. 962,065; June 21; Sp. p. 3856; Gaz. vol. 155; p. 674.
Metal-bending tool. L. P. Hasen. No. 960,910; June 7; Sp. p. 1343; Gaz. vol. 155; p. 226.
Metal-cutting machine. W. Ross. No. 962,530; June 28; Sp. p. 4842; Gaz. vol. 155; p. 851.
Metal-frame screen. J. B. Williams. No. 961,053; June 7; Sp. p. 1635; Gaz. vol. 155; p. 274.
Metal object, Compound. J. F. Monnot. No. 960,372; June 7; Sp. p. 274; Gaz. vol. 155; p. 47.
Metal sheets, Treating. A. Ridd. No. 961,462; June 14; Sp. p. 2508; Gaz. vol. 155; p. 441.
Metal-working apparatus. T. F. Bally. No. 960,772; June 7; Sp. p. 1083; Gaz. vol. 155; p. 131.
Metals, Heating and melting. W. N. Best. No. 961,674; June 14; Sp. p. 2961; Gaz. vol. 155; p. 512.
Metallic characters to leather and the like, Attaching. N. M. Stanley. No. 961,550; June 14; Sp. p. 2714; Gaz. vol. 155; p. 471.
Metallurgical apparatus. M. Moore and T. J. Heskett. No. 960,988; June 7; Sp. p. 1499; Gaz. vol. 155; p. 252.
Metallurgical furnace. S. Z. de Ferranti. No. 962,013; June 21; Sp. p. 3685; Gaz. vol. 155; p. 648.
Metallurgical process. M. Moore and T. J. Heskett. No. 960,987; June 7; Sp. p. 1497; Gaz. vol. 155; p. 251.
Meter: *See* Electricity-meter; Water-meter.
Meter-panel. H. Krantz. No. 961,142; June 14; Sp. p. 1816; Gaz. vol. 155; p. 330.
Meters, Automatic billing-machine for. R. W. Gallagher. No. 960,533; June 7; Sp. p. 598; Gaz. vol. 155; p. 97.
Metering panel-board. H. A. Robinson. No. 961,464; June 14; Sp. p. 2512; Gaz. vol. 155; p. 442.
Milk-cooler. A. L. Wastel. No. 961,275; June 14; Sp. p. 2108; Gaz. vol. 155; p. 378.
Milk-dispensing vessel. E. H. G. Brinser. No. 960,492; June 7; Sp. p. 508; Gaz. vol. 155; p. 85.
Milking-apparatus pulsating device. H. E. Good. No. 960,636; June 7; Sp. p. 815; Gaz. vol. 155; p. 134.
Milking device. D. E. Howatt. No. 961,446; June 14; Sp. p. 2480; Gaz. vol. 155; p. 436.
Milking-machine. M. A. Hicks. No. 961,960; June 21; Sp. p. 3562; Gaz. vol. 155; p. 631.
Milking-machine pulsator. D. Brown. No. 961,932; June 21; Sp. p. 3515; Gaz. vol. 155; p. 621.
Mill: *See* Attrition-mill; Float tide-mill; Pulverising-mill; Rolling-mill; Sawmill; Windmill.
Mine-ventilating apparatus. W. Dunn. No. 963,002; June 28; Sp. p. 5787; Gaz. vol. 155; p. 1013.
Mining machine, Coal-. L. Kovatch. No. 960,958; June 7; Sp. p. 1436; Gaz. vol. 155; p. 241.
Mitt, Base-ball. C. M. King. No. 963,006; June 28; Sp. p. 5793; Gaz. vol. 155; p. 1014.
Mitt, Punching-bag. J. F. Maynard. No. 961,149; June 14; Sp. p. 1830; Gaz. vol. 155; p. 332.
Mixer: *See* bread-mixer.
Moire-machine. C. B. Johnson and P. Van Vlaanderen. No. 961,863; June 21; Sp. p. 3382; Gaz. vol. 155; p. 599.
Mold: *See* Building-block mold; Cement-block mold; Concrete mold; Footwear-mold; Ingot-mold; Post-mold.
Mold and disher. S. J. Clark. No. 961,429; June 14; Sp. p. 2439; Gaz. vol. 155; p. 430.
Mold-drying apparatus. J. C. Davis. No. 962,558; June 28; Sp. p. 4906; Gaz. vol. 155; p. 859.

Mold-press. D. C. Addicks. No. 961,332; June 14; Sp. p. 2256; Gaz. vol. 155; p. 396.
Molds, Making resilient. A. A. Schmidt. No. 960,714; June 7; Sp. p. 966; Gaz. vol. 155; p. 160.
Molding apparatus. T. H. Brown. No. 962,002; June 21; Sp. p. 3667; Gaz. vol. 155; p. 644.
Molding-chaplet. G. L. Waitt. No. 961,183; June 14; Sp. p. 1904; Gaz. vol. 155; p. 346.
Molding-machine. K. Nelson. No. 960,380; June 7; Sp. p. 292; Gaz. vol. 155; p. 40.
Molding-machine. P. F. Walstrom. No. 960,455; June 7; Sp. p. 422; Gaz. vol. 155; p. 72.
Molding-machine. W. Lewis and J. T. Ramsden. No. 960,974; June 7; Sp. p. 1473; Gaz. vol. 155; p. 247.
Molding-machine. E. E. O'Neill. No. 961,524; June 14; Sp. p. 2643; Gaz. vol. 155; p. 461.
Molding-machine. W. Lewis. No. 961,702; June 14; Sp. p. 3001; Gaz. vol. 155; p. 520.
Molding machine, Sand-. J. Demeter. No. 960,844; June 7; Sp. p. 1222; Gaz. vol. 155; p. 203.
Molding plastic materials, Machine for. J. B. Leamon. No. 960,968; June 7; Sp. p. 1454; Gaz. vol. 155; p. 245.
Molding threaded objects, Machine for. F. W. Engström. No. 961,944; June 21; Sp. p. 3543; Gaz. vol. 155; p. 625.
Monorail trackway system. Overhead. H. M. Harding. No. 961,848; June 14; Sp. p. 2287; Gaz. vol. 155; p. 404.
Monotype-machines, Making matrix-plates for. W. Nicholas. No. 960,654; June 7; Sp. p. 905; Gaz. vol. 155; p. 150.
Mop head and wringer, Combined. W. J. Curry. No. 960,627; June 7; Sp. p. 800; Gaz. vol. 155; p. 131.
Mop-wringer. W. Monahan. No. 960,871; June 7; Sp. p. 272; Gaz. vol. 155; p. 46.
Motion-transmitting mechanism. R. Zahn. No. 961,830; June 21; Sp. p. 3301; Gaz. vol. 155; p. 588.
Motor: *See* Acid-motor; Commutator-motor; Current-motor; Current commutator-motor; Cycle-motor; Fluid-jet motor; Hydraulic motor; Rotary motor; Traction-motor; Water-motor; Weight-motor; Wind-motor.
Motor. A. F. Rockwell. No. 962,254; June 21; Sp. p. 4221; Gaz. vol. 155; p. 732.
Motor. N. Lombard. No. 962,711; June 28; Sp. p. 5231; Gaz. vol. 155; p. 913.
Motor-compressor. W. H. Lyser. No. 961,085; June 7; Sp. p. 1712; Gaz. vol. 155; p. 284.
Motor control. H. Heymann. No. 962,835; June 28; Sp. p. 5476; Gaz. vol. 155; p. 957.
Motor control, Multiple-voltage system of. H. W. Cheney. No. 960,505; June 7; Sp. p. 539; Gaz. vol. 155; p. 89.
Motor controller, Electric-. E. Gruenfeldt. No. 960,896; June 7; Sp. p. 1322; Gaz. vol. 155; p. 222.
Motor controller-switch, Electric-. S. M. Ward, Jr. No. 961,185; June 14; Sp. p. 1907; Gaz. vol. 155; p. 346.
Motor-cooling means. A. F. Rockwell. No. 962,249; June 21; Sp. p. 4205; Gaz. vol. 155; p. 730.
Motor-cooling means. A. F. Rockwell. No. 962,250; June 21; Sp. p. 4209; Gaz. vol. 155; p. 731.
Motor starting device, Electric-. D. H. Plank and A. C. Finney. No. 962,856; June 28; Sp. p. 5511; Gaz. vol. 155; p. 965.
Motors, Feeding means for explosion-. W. R. MacGuyer. No. 962,871; June 21; Sp. p. 4466; Gaz. vol. 155; p. 771.
Motors, Means for automatically controlling electric. H. W. Leonard. No. 960,971; June 7; Sp. p. 1463; Gaz. vol. 155; p. 246.
Mower. V. P. Hollis. No. 960,551; June 7; Sp. p. 642; Gaz. vol. 155; p. 104.
Mower, Ditch-. J. W. Yocum. No. 961,995; June 21; Sp. p. 3650; Gaz. vol. 155; p. 642.
Mower, Lawn-. A. B. Case. No. 960,503; June 7; Sp. p. 529; Gaz. vol. 155; p. 85.
Mower, Lawn-. J. H. Auble. No. 962,407; June 28; Sp. p. 4540; Gaz. vol. 155; p. 807.
Mower, Lawn-. S. T. Nelson. No. 962,780; June 28; Sp. p. 5367; Gaz. vol. 155; p. 938.
Muffler. T. C. Forbes. No. 960,530; June 7; Sp. p. 594; Gaz. vol. 155; p. 96.
Music-leaf turner. M. and J. Schweibold. No. 960,719; June 7; Sp. p. 973; Gaz. vol. 155; p. 162.
Music-spool. P. Welin. No. 962,685; June 28; Sp. p. 5164; Gaz. vol. 155; p. 903.
Musical-instrument attachment, Self-playing-. C. D. Haskins. No. 961,296; June 14; Sp. p. 2158; Gaz. vol. 155; p. 385.
Musical instrument, Automatic. C. L. Davis. No. 962,130; June 21; Sp. p. 3973; Gaz. vol. 155; p. 690.
Musical instrument, Coin-controlled pneumatically-operated. T. I. Shannon and F. M. Garnett. No. 962,534; June 28; Sp. p. 4852; Gaz. vol. 155; p. 853.
Musical-instrument pedal mechanism. P. Welin. No. 961,824; June 21; Sp. p. 3284; Gaz. vol. 155; p. 586.
Musical instrument, Self-playing. L. H. Maier. No. 961,724; June 14; Sp. p. 3046; Gaz. vol. 155; p. 528.
Musical instrument, Stringed. F. L. Harmon. No. 960,817; June 7; Sp. p. 153; Gaz. vol. 155; p. 29.
Musical instrument, Stringed. P. L. Morris. No. 961,883; June 21; Sp. p. 3428; Gaz. vol. 155; p. 606.
Musical instruments and music-rolls therefor, Controlling mechanism for self-playing. T. B. Powers. (Reissue.) No. 13,124; June 28; Sp. p. 5836; Gaz. vol. 155; p. 1021.
Musical instruments, Automatic winding attachment for mechanical. E. E. Welte. No. 962,871; June 28; Sp. p. 5549; Gaz. vol. 155; p. 971.
Nailing-machines, Wire-feeding mechanism for. S. M. Cutter. No. 960,278; June 7; Sp. p. 77; Gaz. vol. 155; p. 16.
Name-holder for pews. P. F. Denning. No. 961,431; June 14; Sp. p. 2444; Gaz. vol. 155; p. 431.
Necktie-holder. L. W. Horne. No. 961,695; June 14; Sp. p. 2993; Gaz. vol. 155; p. 519.
Needle, Prospector's. D. W. Jewell. No. 961,298; June 14; Sp. p. 2162; Gaz. vol. 155; p. 396.
Nest and brooder, Combined. W. H. Parker. No. 962,459; June 28; Sp. p. 4685; Gaz. vol. 155; p. 827.
Nest, Hen's. S. A. Merkley, F. H. Apel, and W. A. Merkley. No. 960,985; June 7; Sp. p. 1491; Gaz. vol. 155; p. 251.
Net, Hair-. P. Weill. No. 961,471; June 14; Sp. p. 2534; Gaz. vol. 155; p. 444.
Net, Hair-. J. Baer. No. 961,476; June 14; Sp. p. 2544; Gaz. vol. 155; p. 446.
Night-lock. W. H. Taylor. No. 962,992; June 28; Sp. p. 5767; Gaz. vol. 155; p. 1009.
Nitrobenzaldehyde, Reduction products of commercial. A. Vagt. No. 961,915; June 21; Sp. p. 3479; Gaz. vol. 155; p. 616.
Noodle-cutter. G. B. Bretz. No. 961,837; June 14; Sp. p. 2268; Gaz. vol. 155; p. 400.
Nozzle for filters and similar devices. O. Selg. No. 960,418; June 7; Sp. p. 385; Gaz. vol. 155; p. 62.
Nozzle, Spray-. L. W. Cushman. No. 962,946; June 28; Sp. p. 5677; Gaz. vol. 155; p. 994.
Nozzle, Spraying-. C. H. Perry. No. 961,006; June 7; Sp. p. 1544; Gaz. vol. 155; p. 258.
Number-plate support for vehicles. W. B. Hughes. No. 962,219; June 21; Sp. p. 4147; Gaz. vol. 155; p. 720.
Number-plate support for vehicles. W. B. Hughes. No. 962,220; June 21; Sp. p. 4148; Gaz. vol. 155; p. 720.
Number-plate support for vehicles. W. B. Hughes. No. 962,221; June 21; Sp. p. 4150; Gaz. vol. 155; p. 721.
Numbering-machine. C. B. Smith. No. 961,035; June 7; Sp. p. 1596; Gaz. vol. 155; p. 268.
Numbering-machine. S. Hollingsworth. No. 961,444; June 14; Sp. p. 2474; Gaz. vol. 155; p. 435.
Nurling-tool. J. Armstrong. No. 960,769; June 7; Sp. p. 1078; Gaz. vol. 155; p. 130.
Nut-lock. G. F. Dobbs. No. 960,284; June 7; Sp. p. 38; Gaz. vol. 155; p. 18.
Nut-lock. J. S. Lafleur. No. 960,349; June 7; Sp. p. 232; Gaz. vol. 155; p. 39.
Nut-lock. N. J. Rogers. No. 960,405; June 7; Sp. p. 341; Gaz. vol. 155; p. 57.
Nut-lock. F. R. Cochran. No. 960,507; June 7; Sp. p. 548; Gaz. vol. 155; p. 89.
Nut-lock. J. F. Nicholson. No. 960,999; June 7; Sp. p. 1533; Gaz. vol. 155; p. 256.
Nut-lock. B. S. Valle. No. 961,049; June 7; Sp. p. 1627; Gaz. vol. 155; p. 272.
Nut-lock. J. C. Austin. No. 961,063; June 7; Sp. p. 1658; Gaz. vol. 155; p. 277.
Nut-lock. J. A. Posey. No. 961,871; June 14; Sp. p. 2329; Gaz. vol. 155; p. 411.
Nut-lock. L. L. Swenson. No. 961,819; June 21; Sp. p. 3277; Gaz. vol. 155; p. 584.
Nut-lock. L. R. Crouch. No. 962,321; June 21; Sp. p. 4372; Gaz. vol. 155; p. 754.
Nut-lock. E. A. Hemsteger. No. 962,847; June 21; Sp. p. 4428; Gaz. vol. 155; p. 763.
Nut-lock. W. T. Payne. No. 962,582; June 28; Sp. p. 4964; Gaz. vol. 155; p. 860.
Nut-lock. B. D. Kemp. No. 962,642; June 28; Sp. p. 5081; Gaz. vol. 155; p. 888.
Nut, Lock-. S. G. Meeker. No. 961,249; June 14; Sp. p. 2042; Gaz. vol. 155; p. 368.
Nut-shaving machine. M. J. McFadden and C. C. Hiers. No. 962,239; June 21; Sp. p. 4183; Gaz. vol. 155; p. 727.
Nut-splitting and bolt-nipping tool. J. Whisler. No. 962,485; June 28; Sp. p. 4758; Gaz. vol. 155; p. 835.
Obstetrical instrument, Extension. L. Goshorn. No. 962,952; June 28; Sp. p. 5685; Gaz. vol. 155; p. 996.
Offal-bag for horses and the like. E. R. Gilpin. No. 962,211; June 21; Sp. p. 4133; Gaz. vol. 155; p. 717.
Oil, Apparatus for saturating the ground with. J. M. Ward. No. 962,728; June 28; Sp. p. 5270; Gaz. vol. 155; p. 919.
Oil-burner. R. A. Bright. No. 960,491; June 7; Sp. p. 606; Gaz. vol. 155; p. 84.
Oil-burner. J. C. Banks. No. 961,386; June 14; Sp. p. 2355; Gaz. vol. 155; p. 416.
Oil-burner. H. R. Green. No. 962,212; June 21; Sp. p. 4134; Gaz. vol. 155; p. 718.
Oil-burner. W. C. Blackmond and G. E. Stoy. No. 962,361; June 21; Sp. p. 4329; Gaz. vol. 155; p. 747.
Oil-burner. E. C. Casad. No. 962,695; June 28; Sp. p. 5200; Gaz. vol. 155; p. 907.
Oil burner, Crude-. J. A. J. Latil. No. 960,563; June 7; Sp. p. 667; Gaz. vol. 155; p. 109.
Oil burner, Crude-. C. Shaefer. No. 961,030; June 7; Sp. p. 1590; Gaz. vol. 155; p. 266.
Oil burner, Crude-. E. C. Reed. No. 961,797; June 21; Sp. p. 3210; Gaz. vol. 155; p. 576.
Oil-can. J. Gullong. No. 960,398; June 7; Sp. p. 1325; Gaz. vol. 155; p. 222.
Oils, Treatment of mineral and vegetable. J. J. Hood and A. G. Salamon. No. 962,840; June 28; Sp. p. 5484; Gaz. vol. 155; p. 959.

Oils, Treatment of mineral and vegetable. J. J. Hood and A. G. Salamon. No. 962,841; June 28; Sp. p. 5485; Gaz. vol. 155; p. 959.
Oiler, Road-. W. H. Gallor. No. 962,209; June 21; Sp. p. 4130; Gaz. vol. 155; p. 717.
Oiler, Saw-. A. P. Eckstrom. No. 961,289; June 14; Sp. p. 2142; Gaz. vol. 155; p. 384.
Oiling device. R. T. Horlick. No. 961,497; June 14; Sp. p. 2599; Gaz. vol. 155; p. 453.
Orchard-heating device. P. H. Troutman. No. 961,602; June 14; Sp. p. 2931; Gaz. vol. 155; p. 508.
Order-slip, Manifolding. G. E. Morton. No. 962,451; June 28; Sp. p. 4670; Gaz. vol. 155; p. 824.
Ore concentration. H. L. Sulman, H. H. Greenway, and A. H. Higgins. No. 962,678; June 28; Sp. p. 5150; Gaz. vol. 155; p. 901.
Ore-concentrator. S. R. Swain. No. 962,990; June 28; Sp. p. 5760; Gaz. vol. 155; p. 1009.
Ore, mineral, and coal breaker. I. and H. K. Christ. No. 962,998; June 28; Sp. p. 5779; Gaz. vol. 155; p. 1012.
Ore separating or concentrating machine. W. R. Lins. No. 962,575; June 28; Sp. p. 4951; Gaz. vol. 155; p. 867.
Ores, Apparatus for electrical treatment of. W. B. McPherson. No. 962,040; June 21; Sp. p. 3748; Gaz. vol. 155; p. 657.
Ores, Treating. E. B. Parnell. No. 962,383; June 21; Sp. p. 4488; Gaz. vol. 155; p. 775.
Organ-pipe. A. S. Brook. No. 960,263; June 7; Sp. p. 46; Gaz. vol. 155; p. 11.
Oven-doors against their seats, Device for pressing. P. Riecke. No. 962,669; June 28; Sp. p. 5134; Gaz. vol. 155; p. 897.
Oven, Portable-reel gas-. G. B. Meek. No. 961,512; June 14; Sp. p. 2622; Gaz. vol. 155; p. 457.
Overhead switch. J. C. Fitzgerald. No. 961,433; June 14; Sp. p. 2450; Gaz. vol. 155; p. 431.
Overshoe-retainer. L. Harrold and W. J. Thamsen. No. 962,428; June 28; Sp. p. 4617; Gaz. vol. 155; p. 815.
Package, Merchandise-. H. N. Mann. No. 961,873; June 21; Sp. p. 3406; Gaz. vol. 155; p. 602.
Package, Shipping-. J. M. Alderfer. No. 960,766; June 7; Sp. p. 1072; Gaz. vol. 155; p. 180.
Package-tie. M. A. Bailey. No. 961,833; June 21; Sp. p. 3304; Gaz. vol. 155; p. 589.
Packing. W. F. J. Lutz and H. D. Bartlett. No. 961,872; June 21; Sp. p. 3404; Gaz. vol. 155; p. 602.
Packing for elevators, Plunger-. J. C. Phelps. No. 962,585; June 28; Sp. p. 4970; Gaz. vol. 155; p. 870.
Packing, Piston-. C. E. Ross. No. 961,873; June 14; Sp. p. 2832; Gaz. vol. 155; p. 412.
Packing-ring. C. E. Drown. No. 962,820; June 28; Sp. p. 5445; Gaz. vol. 155; p. 952.
Packing, Shaft-. C. Comstock. No. 961,484; June 14; Sp. p. 2560; Gaz. vol. 155; p. 448.
Packing-tube, Compressible. E. M. Dalley. No. 962,008; June 21; Sp. p. 3677; Gaz. vol. 155; p. 646.
Pad: *See* Desk-pad; Truss-pad.
Padlock. J. Kuczyński. No. 962,087; June 21; Sp. p. 3858; Gaz. vol. 155; p. 675.
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Panic-bolt. A. Arens and E. L. Teich. No. 961,092; June 14; Sp. p. 1728; Gaz. vol. 155; p. 314.
Panic-bolt with adjustment between toggle and bolt. H. G. Voight. No. 961,327; June 14; Sp. p. 2248; Gaz. vol. 155; p. 396.
Paper and the like, Machine for fastening. F. H. Crabtree and A. G. McGregor. No. 961,213; June 14; Sp. p. 1975; Gaz. vol. 155; p. 357.
Paper-bag holder. H. L. Snyder. No. 962,676; June 28; Sp. p. 5147; Gaz. vol. 155; p. 900.
Paper-bag machine. J. Merritt. No. 960,664; June 7; Sp. p. 869; Gaz. vol. 155; p. 143.
Paper bags, Suspending holder for. A. Galli. No. 960,886; June 7; Sp. p. 1302; Gaz. vol. 155; p. 218.
Paper box and fastener. W. S. Matthews. No. 961,784; June 21; Sp. p. 3139; Gaz. vol. 155; p. 572.
Paper coating and sizing composition and process. H. V. Dunham. No. 962,498; June 28; Sp. p. 4771; Gaz. vol. 155; p. 840.
Paper, Craping. A. and J. Funke. No. 962,505; June 28; Sp. p. 4786; Gaz. vol. 155; p. 843.
Paper-feeding machine. T. C. Dexter. No. 961,585; June 14; Sp. p. 2777; Gaz. vol. 155; p. 482.
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Paper-handling-machine controller. H. C. La Batt. No. 962,440; June 28; Sp. p. 4642; Gaz. vol. 155; p. 820.
Paper-hanger's board. F. D. Weller. No. 960,468; June 7; Sp. p. 449; Gaz. vol. 155; p. 76.
Paper-hanger's board or the like. F. D. Weller. No. 960,469; June 7; Sp. p. 451; Gaz. vol. 155; p. 77.
Paper-holder. C. P. Marshall. No. 960,363; June 7; Sp. p. 259; Gaz. vol. 155; p. 44.
Paper holder and cutter, Roll-. H. B. Wallace. No. 962,684; June 28; Sp. p. 5163; Gaz. vol. 155; p. 903.
Paper holder, Carbon-. A. J. Bond. No. 960,488; June 7; Sp. p. 501; Gaz. vol. 155; p. 83.
Paper holder, Toilet-. A. B. Hubbard and S. J. Bens. No. 960,929; June 7; Sp. p. 1371; Gaz. vol. 155; p. 231.
Paper-makers, Size for. A. W. Harrington. No. 960,318; June 7; Sp. p. 154; Gaz. vol. 155; p. 29.
Paper receptacle. L. W. Charlton. No. 961,839; June 14; Sp. p. 2273; Gaz. vol. 155; p. 401.
Paper-treating composition. A. W. Harrington. No. 960,319; June 7; Sp. p. 154; Gaz. vol. 155; p. 29.
Paper-weight and pen-extractor, Combined. N. O. Wicker. No. 960,753; June 7; Sp. p. 1037; Gaz. vol. 155; p. 175.
Pastry-decorating machine. J. Anderson. No. 961,090; June 14; Sp. p. 1723; Gaz. vol. 155; p. 313.
Pavement. H. G. Jennison. No. 962,150; June 21; Sp. p. 4016; Gaz. vol. 155; p. 697.
Pavements under water, Laying. W. H. Fabrney. No. 961,222; June 14; Sp. p. 1994; Gaz. vol. 155; p. 360.
Peat-machine. P. Heseltine. No. 962,349; June 21; Sp. p. 4431; Gaz. vol. 155; p. 764.
Peat, Preparing. W. H. Bradley. No. 962,119; June 21; Sp. p. 3941; Gaz. vol. 155; p. 686.
Peat-preparing apparatus. W. H. Bradley. No. 962,120; June 21; Sp. p. 3946; Gaz. vol. 155; p. 687.
Pedal-mounting. F. H. Hartnell. No. 961,442; June 14; Sp. p. 2471; Gaz. vol. 155; p. 434.
Pen attachment, Fountain-. O. von Bottenburg. No. 962,053; June 21; Sp. p. 3778; Gaz. vol. 155; p. 663.
Pen, Fountain-. G. J. Marts. No. 960,660; June 7; Sp. p. 861; Gaz. vol. 155; p. 142.
Pen, Fountain-. R. N. Saha. No. 962,982; June 28; Sp. p. 5748; Gaz. vol. 155; p. 1006.
Pen, Reservoir-. W. W. Sanford. No. 960,413; June 7; Sp. p. 358; Gaz. vol. 155; p. 60.
Pen, Reservoir-. R. Young. No. 962,485; June 28; Sp. p. 4741; Gaz. vol. 155; p. 836.
Pen, Self-filling fountain-. J. A. Vogelmann. No. 961,663; June 14; Sp. p. 2983; Gaz. vol. 155; p. 508.
Pens, Ink-holder for. J. A. Simisky. No. 961,171; June 14; Sp. p. 1878; Gaz. vol. 155; p. 341.
Penholder. D. De Nure. No. 960,282; June 7; Sp. p. 83; Gaz. vol. 155; p. 18.
Penholder. O. E. Moyer. No. 960,373; June 7; Sp. p. 277; Gaz. vol. 155; p. 47.
Penholder. A. O. Sperry. No. 960,595; June 7; Sp. p. 725; Gaz. vol. 155; p. 120.
Penholder. J. Schwartz. No. 962,986; June 28; Sp. p. 5755; Gaz. vol. 155; p. 1007.
Pencil. E. L. Schmitz. No. 960,588; June 7; Sp. p. 715; Gaz. vol. 155; p. 118.
Pencil-sharpening machine. A. S. Wheeler. No. 961,392; June 14; Sp. p. 2361; Gaz. vol. 155; p. 417.
Perambulator, Folding. J. Kanabay. No. 960,337; June 7; Sp. p. 202; Gaz. vol. 155; p. 35.
Percolator. O. Selg. No. 960,419; June 7; Sp. p. 366; Gaz. vol. 155; p. 62.
Percolator. R. E. Hughes. No. 961,963; June 21; Sp. p. 3595; Gaz. vol. 155; p. 632.
Percolator, Coffee-. J. H. Myers. No. 961,886; June 21; Sp. p. 3432; Gaz. vol. 155; p. 606.
Perforator, Check-. S. Schiff. No. 962,167; June 21; Sp. p. 4053; Gaz. vol. 155; p. 704.
Perfume-tablet, Soluble. R. W. Whitlatch. No. 962,872; June 28; Sp. p. 5554; Gaz. vol. 155; p. 971.
Pessary. O. H. Sheppard. No. 960,721; June 7; Sp. p. 980; Gaz. vol. 155; p. 163.
Phonogram-reproducing apparatus. W. F. Messer. No. 961,980; June 21; Sp. p. 3618; Gaz. vol. 155; p. 637.
Phonograph-record blanks, Manufacture of. V. M. Harris. No. 960,320; June 7; Sp. p. 155; Gaz. vol. 155; p. 30.
Phonograph-record cylinders, Carton for. N. C. Durand and A. M. Seeley. No. 962,821; June 28; Sp. p. 5446; Gaz. vol. 155; p. 952.
Phonograph-records, Composition for. J. W. Aylsworth. No. 962,878; June 28; Sp. p. 5562; Gaz. vol. 155; p. 972.
Phonograph-reproducer. P. Weber. (Reissue.) No. 13,120; June 7; Sp. p. 1721; Gaz. vol. 155; p. 286.
Photographer's stand. J. S. Pennington. No. 961,641; June 14; Sp. p. 2895; Gaz. vol. 155; p. 501.
Photographic color-filter. R. J. Wallace and G. Cramer. No. 961,424; June 14; Sp. p. 2423; Gaz. vol. 155; p. 428.
Photographic emulsion. Y. Schwartz. No. 962,788; June 28; Sp. p. 5393; Gaz. vol. 155; p. 941.
Photographic pictures, Preparing. R. Widmann. No. 962,484; June 28; Sp. p. 4740; Gaz. vol. 155; p. 835.
Photographic print and making same, Colored. F. E. Ives. No. 960,939; June 7; Sp. p. 1392; Gaz. vol. 155; p. 235.
Photographic-printing mask. J. Fitz, Jr. No. 960,301; June 7; Sp. p. 122; Gaz. vol. 155; p. 24.
Photographic shutter. A. Wollensak. No. 961,192; June 14; Sp. p. 1919; Gaz. vol. 155; p. 348.
Photometer. C. H. Sharp and P. S. Millar. No. 960,420; June 7; Sp. p. 366; Gaz. vol. 155; p. 62.
Photometer, Universal. T. Fujita. No. 961,852; June 21; Sp. p. 3348; Gaz. vol. 155; p. 595.
Piano. L. M. Cook. No. 962,748; June 28; Sp. p. 5307; Gaz. vol. 155; p. 927.
Piano attachment for giving mandolin effects. J. Metzger. No. 960,665; June 7; Sp. p. 874; Gaz. vol. 155; p. 144.
Piano, Automatic. L. Griseri. No. 961,122; June 14; Sp. p. 1785; Gaz. vol. 155; p. 323.
Piano, Electrical. R. A. Rose and G. C. Holbrook. No. 962,261; June 21; Sp. p. 4245; Gaz. vol. 155; p. 734.
Piano-panel protector. F. G. W. Paige. No. 962,043; June 21; Sp. p. 3754; Gaz. vol. 155; p. 658.
Piano-player actions, Adjustable valve for. C. L. Davis. No. 961,939; June 21; Sp. p. 3583; Gaz. vol. 155; p. 623.
Pianos, Music-roll producer for self-playing. D. M. Cloak. No. 961,754; June 21; Sp. p. 3124; Gaz. vol. 155; p. 563.
Pianos, Tempo-controller for automatic. A. H. Stuart. No. 962,537; June 28; Sp. p. 4857; Gaz. vol. 155; p. 854.

Pianos, Top-stick for grand. P. Weber. No. 962,605; June 28; Sp. p. 5014; Gaz. vol. 155; p. 877.
Picture-frame support. C. E. Johnson. No. 961,614; June 14; Sp. p. 2841; Gaz. vol. 155; p. 491.
Picture-hanger. G. Johnson. No. 961,616; June 14; Sp. p. 2848; Gaz. vol. 155; p. 492.
Picture machine, Moving-. E. H. Sperberg. No. 961,655; June 14; Sp. p. 2919; Gaz. vol. 155; p. 505.
Pictures to stones and the like, Transferring printed and other. A. L. de Rooy. No. 960,707; June 7; Sp. p. 953; Gaz. vol. 155; p. 158.
Pile-driving machine. E. D. Tompkins. No. 962,080; June 21; Sp. p. 3840; Gaz. vol. 155; p. 673.
Pile, Ferroconcrete. R. Wolle. No. 961,191; June 14; Sp. p. 1918; Gaz. vol. 155; p. 348.
Piles, Constructing. J. B. Goldsborough. No. 961,492; June 14; Sp. p. 2590; Gaz. vol. 155; p. 451.
Piling cap, Sheet-. W. H. Warrington. No. 960,746; June 7; Sp. p. 1023; Gaz. vol. 155; p. 173.
Pills for the treatment of diabetes mellitus. A. Heinemann. No. 960,914; June 7; Sp. p. 1351; Gaz. vol. 155; p. 227.
Pin: *See* Bonding-pin; Clothes-pin; Hat-pin.
Pin. J. A. McGann. No. 961,366; June 14; Sp. p. 2317; Gaz. vol. 155; p. 410.
Pin. C. Kuehner. No. 962,360; June 21; Sp. p. 4448; Gaz. vol. 155; p. 767.
Pin-tray. C. F. Brown. No. 960,622; June 7; Sp. p. 790; Gaz. vol. 155; p. 129.
Pipe: *See* Culvert-pipe; Organ-pipe; Stovepipe; Tobacco-pipe.
Pipe. W. H. Storrs. No. 961,042; June 7; Sp. p. 1616; Gaz. vol. 155; p. 270.
Pipe. J. F. Bengert. No. 961,575; June 14; Sp. p. 2760; Gaz. vol. 155; p. 478.
Pipe-cleaner. F. R. Cunningham. No. 961,215; June 14; Sp. p. 1960; Gaz. vol. 155; p. 358.
Pipe-coupling. L. Miller. No. 960,667; June 7; Sp. p. 878; Gaz. vol. 155; p. 145.
Pipe-coupling. C. Guyer. No. 960,809; June 7; Sp. p. 1326; Gaz. vol. 155; p. 223.
Pipe-coupling. R. R. Rust. No. 961,987; June 21; Sp. p. 3636; Gaz. vol. 155; p. 639.
Pipe-coupling and valve, Combined. J. N. Goodall and F. S. Head. No. 960,300; June 7; Sp. p. 135; Gaz. vol. 155; p. 26.
Pipe coupling for cars, Steam and air. R. B. Painton. No. 961,638; June 14; Sp. p. 2891; Gaz. vol. 155; p. 500.
Pipe coupling, Train-. R. A. Jewett and A. L. Greenlaw. No. 961,690; June 14; Sp. p. 2997; Gaz. vol. 155; p. 520.
Pipe-molding flask. J. R. McWane. No. 961,367; June 14; Sp. p. 2319; Gaz. vol. 155; p. 410.
Pipe nipple and clamp. C. E. Maxfield. No. 961,247; June 14; Sp. p. 2221; Gaz. vol. 155; p. 368.
Pipe or rod connector. A. F. Miller. No. 961,981; June 21; Sp. p. 3621; Gaz. vol. 155; p. 637.
Pipe or rod connector. A. F. Miller. No. 961,982; June 21; Sp. p. 3623; Gaz. vol. 155; p. 638.
Pipe, Removing scale from. H. A. F. Petersen. No. 962,462; June 28; Sp. p. 4694; Gaz. vol. 155; p. 828.
Pipe-union. A. W. Cash and C. Borsbeck. No. 962,075; June 21; Sp. p. 3830; Gaz. vol. 155; p. 671.
Pipe-wrench. W. M. Potter. No. 960,699; June 7; Sp. p. 937; Gaz. vol. 155; p. 156.
Pipe-wrench. A. Kondás and P. Bajusz. No. 962,359; June 21; Sp. p. 4447; Gaz. vol. 155; p. 767.
Pipes and the like, Regulating apparatus for hot-water. R. Brukenhaus. No. 961,402; June 14; Sp. p. 2377; Gaz. vol. 155; p. 420.
Pipes, Animal-guard for. J. Bartlett. No. 961,834; June 21; Sp. p. 3305; Gaz. vol. 155; p. 589.
Pipes, Apparatus for boning or laying drain-. J. M. Lockhart and H. J. Jenkinson. No. 961,244; June 14; Sp. p. 2035; Gaz. vol. 155; p. 367.
Pipes, Means for cushioning hydraulic pressure in feed-. R. D. Johnson. No. 962,355; June 21; Sp. p. 4440; Gaz. vol. 155; p. 765.
Piston. E. T. Adams. No. 961,080; June 7; Sp. p. 1702; Gaz. vol. 155; p. 283.
Piston-ring. J. Stoddard. No. 962,599; June 28; Sp. p. 4999; Gaz. vol. 155; p. 875.
Plane. C. Bodmer. No. 960,256; June 7; Sp. p. 26; Gaz. vol. 155; p. 8.
Planer attachment. F. Allner and E. N. Boswell. No. 960,480; June 7; Sp. p. 475; Gaz. vol. 155; p. 80.
Planimeter. F. C. Blanchard, E. B. Crocker, and P. G. Darling. No. 961,836; June 21; Sp. p. 3308; Gaz. vol. 155; p. 590.
Plank, Extension-. C. C. Andersen. No. 962,691; June 28; Sp. p. 5186; Gaz. vol. 155; p. 906.
Planter. A. R. Gilmore. No. 961,769; June 21; Sp. p. 3164; Gaz. vol. 155; p. 568.
Planter, Corn-. A. S. Beymer. No. 960,487; June 7; Sp. p. 498; Gaz. vol. 155; p. 88.
Planters, Picker for potato-. C. H. Gerling. No. 961,436; June 14; Sp. p. 2457; Gaz. vol. 155; p. 433.
Plate-lifter. G. Celli. No. 962,196; June 21; Sp. p. 4113; Gaz. vol. 155; p. 713.
Plate-trimming shears, Guiding apparatus for. E. R. Bierman and G. H. Keast. No. 962,191; June 21; Sp. p. 4102; Gaz. vol. 155; p. 712.
Platform, Traveling. W. M. Sherwood. No. 961,809; June 21; Sp. p. 3253; Gaz. vol. 155; p. 580.
Pliers. C. H. Snell. No. 960,724; June 7; Sp. p. 984; Gaz. vol. 155; p. 164.
Pliers, Blacksmith's. D. N. Tanner. No. 961,989; June 21; Sp. p. 3638; Gaz. vol. 155; p. 640.
Pliers, nippers, and similar tool. W. A. Bernard. No. 962,414; June 28; Sp. p. 4583; Gaz. vol. 155; p. 810.
Plow. J. Voegele. No. 960,743; June 7; Sp. p. 1018; Gaz. vol. 155; p. 172.
Plow. R. R. Price. No. 961,895; June 21; Sp. p. 3442; Gaz. vol. 155; p. 609.
Plow. J. Buchanan. No. 962,195; June 21; Sp. p. 4111; Gaz. vol. 155; p. 713.
Plow and cultivator, Disk. J. Lavery. No. 960,966; June 7; Sp. p. 1450; Gaz. vol. 155; p. 244.
Plow attachment. L. Dettrick. No. 962,893; June 28; Sp. p. 5588; Gaz. vol. 155; p. 977.
Plow, Breaking-. J. W. Majek. No. 962,646; June 28; Sp. p. 5088; Gaz. vol. 155; p. 890.
Plow-fender. J. P. Ertel. No. 961,591; June 14; Sp. p. 2801; Gaz. vol. 155; p. 484.
Plow-fender. J. C. Skidmore. No. 962,264; June 21; Sp. p. 4251; Gaz. vol. 155; p. 736.
Plow harrow attachment, Sulky-. I. S. De Witt. No. 962,701; June 28; Sp. p. 5213; Gaz. vol. 155; p. 910.
Plow marking attachment. J. T. Tucker. No. 960,444; June 7; Sp. p. 409; Gaz. vol. 155; p. 69.
Plow, Mole-. A. G. Hermanson. No. 962,057; June 28; Sp. p. 5602; Gaz. vol. 155; p. 998.
Plow, Reversible. J. R. Rossetter. No. 962,339; June 21; Sp. p. 4502; Gaz. vol. 155; p. 777.
Plow subsoiler attachment. W. A. Stephens. No. 960,600; June 7; Sp. p. 735; Gaz. vol. 155; p. 121.
Plows, Attachment for riding breaking-. J. B. Harrell. No. 962,842; June 21; Sp. p. 4420; Gaz. vol. 155; p. 762.
Plows, Gage-lever mechanism for. J. J. Tait. No. 960,435; June 7; Sp. p. 394; Gaz. vol. 155; p. 66.
Plug device. T. G. Tedesco. No. 961,555; June 14; Sp. p. 2720; Gaz. vol. 155; p. 472.
Plunger case, Multiple-. A. M. Hance. No. 960,903; June 7; Sp. p. 1334; Gaz. vol. 155; p. 224.
Pneumatic cleaner. E. A. Laughlin. No. 960,564; June 7; Sp. p. 668; Gaz. vol. 155; p. 110.
Pneumatic cleaner. F. H. Hirth. No. 962,569; June 28; Sp. p. 4940; Gaz. vol. 155; p. 865.
Pneumatic-despatch tube. J. G. Maciaren. No. 960,656; June 7; Sp. p. 850; Gaz. vol. 155; p. 140.
Pneumatic-despatch-tube apparatus. E. A. Fordyce. No. 960,531; June 7; Sp. p. 595; Gaz. vol. 155; p. 97.
Pneumatic-despatch-tube apparatus. L. G. Bartlett. No. 962,072; June 21; Sp. p. 3823; Gaz. vol. 155; p. 670.
Pneumatic-despatch-tube apparatus. L. G. Bartlett. No. 962,073; June 21; Sp. p. 3826; Gaz. vol. 155; p. 670.
Pneumatic-despatch-tube apparatus. C. F. Stoddard. No. 962,797; June 28; Sp. p. 5408; Gaz. vol. 155; p. 944.
Pneumatic-despatch-tube apparatus. A. W. Pearsall. No. 962,853; June 28; Sp. p. 5506; Gaz. vol. 155; p. 963.
Pneumatic-despatch-tube apparatus. A. W. Pearsall. No. 962,854; June 28; Sp. p. 5508; Gaz. vol. 155; p. 964.
Pneumatic-despatch-tube apparatus carrier. C. F. Stoddard. No. 962,796; June 28; Sp. p. 5405; Gaz. vol. 155; p. 943.
Pneumatic-despatch-tube carrier. A. W. Pearsall. No. 962,045; June 21; Sp. p. 3759; Gaz. vol. 155; p. 659.
Pneumatic players, Accentuating mechanism for. G. P. Brand. No. 960,262; June 7; Sp. p. 88; Gaz. vol. 155; p. 10.
Pneumatic spring. A. F. Rockwell. No. 962,246; June 21; Sp. p. 4198; Gaz. vol. 155; p. 720.
Pneumatic-tube system. B. C. Batcheller. No. 961,990; June 21; Sp. p. 3659; Gaz. vol. 155; p. 643.
Pocket attachment, Garment-. J. Lipkey. No. 960,651; June 7; Sp. p. 844; Gaz. vol. 155; p. 138.
Poisoning product, Animal-. F. Bolduan and C. S. Dyas. No. 962,886; June 28; Sp. p. 5580; Gaz. vol. 155; p. 976.
Poke, Animal-. J. W. Gunn. No. 962,507; June 28; Sp. p. 4788; Gaz. vol. 155; p. 843.
Pole-base. J. B. McMillan. No. 961,521; June 14; Sp. p. 2637; Gaz. vol. 155; p. 460.
Pole-tip. E. N. Robinson. No. 961,318; June 14; Sp. p. 2219; Gaz. vol. 155; p. 393.
Polishing-machine. J. Pursehouse. No. 961,529; June 14; Sp. p. 2664; Gaz. vol. 155; p. 463.
Post: *See* Concrete post; Fence-post.
Post. W. T. Hicks. No. 963,004; June 28; Sp. p. 5790; Gaz. vol. 155; p. 1013.
Post-brace. E. L. Thompson and M. C. Brice. No. 962,271; June 21; Sp. p. 4265; Gaz. vol. 155; p. 737.
Post-hole digger. W. L. Stricklin. No. 961,656; June 14; Sp. p. 2921; Gaz. vol. 155; p. 506.
Post-mold. W. T. Hicks. No. 962,760; June 28; Sp. p. 5330; Gaz. vol. 155; p. 931.
Pot: *See* Coffee-pot; Coffee or tea pot.
Potato-bug exterminator. S. W. Reed. No. 963,011; June 28; Sp. p. 5803; Gaz. vol. 155; p. 1016.
Potato-cutter. C. G. Marden. No. 962,373; June 21; Sp. p. 4471; Gaz. vol. 155; p. 771.
Potato-cutting machine, Seed-. B. R. and M. J. Lyster. No. 961,363; June 14; Sp. p. 2312; Gaz. vol. 155; p. 408.
Potato-digger. W. I. Skinner. No. 961,646; June 14; Sp. p. 2705; Gaz. vol. 155; p. 469.
Potato-grader. H. Peterson. No. 962,048; June 21; Sp. p. 3764; Gaz. vol. 155; p. 660.
Potato-vine cutter, Sweet-. D. W. Lindsey. No. 962,367; June 21; Sp. p. 4461; Gaz. vol. 155; p. 769.
Poultry drinking-fountain, Antifreezing. W. H. Ashcraft. No. 961,831; June 21; Sp. p. 3302; Gaz. vol. 155; p. 588.

Power-drill. G. H. Condict. No. 962,077; June 21; Sp. p. 3633; Gaz. vol. 155; p. 672.
Power-driven machinery. D. C. Jackson. No. 961,353; June 14; Sp. p. 2297; Gaz. vol. 155; p. 406.
Power-operated switch or circuit-breaker. H. W. Cheney. No. 960,504; June 7; Sp. p. 531; Gaz. vol. 155; p. 88.
Power-pneumatic. G. S. Williams. No. 960,610; June 7; Sp. p. 754; Gaz. vol. 155; p. 125.
Power-transmitting device. H. W. Hunt. No. 962,842; June 28; Sp. p. 5486; Gaz. vol. 155; p. 959.
Press: *See* Baling-press; Filter-press; Fluid-expansion press; Fuel-press; Hay-press; Meat and fruit press; Mold-press; Printing-press.
Pressing device. F. A. Mills. No. 961,150; June 14; Sp. p. 1881; Gaz. vol. 155; p. 332.
Pressing-iron stands, Shoe for. F. E. Emery. No. 962,894; June 28; Sp. p. 5589; Gaz. vol. 155; p. 977.
Pressure-gage. L. J. Watson. No. 962,107; June 21; Sp. p. 3911; Gaz. vol. 155; p. 682.
Pressure-gage alarm. C. D. Hill. No. 960,920; June 7; Sp. p. 1357; Gaz. vol. 155; p. 228.
Pressure-governor. G. M. Richards. No. 962,100; June 21; Sp. p. 3833; Gaz. vol. 155; p. 679.
Print-machine. F. J. Cleaver, Sr. No. 962,128; June 21; Sp. p. 3966; Gaz. vol. 155; p. 689.
Prints, Making multicolor. V. Peterson. No. 962,718; June 28; Sp. p. 5249; Gaz. vol. 155; p. 916.
Printer's galley. M. Corrigan. No. 961,684; June 14; Sp. p. 2977; Gaz. vol. 155; p. 515.
Printing-machine. E. M. Wildey. No. 962,542; June 28; Sp. p. 4866; Gaz. vol. 155; p. 855.
Printing machine, Blue-. N. H. Brown. No. 962,741; June 28; Sp. p. 5290; Gaz. vol. 155; p. 924.
Printing mechanism, Selvage-. C. R. Thomson. No. 960,490; June 7; Sp. p. 400; Gaz. vol. 155; p. 67.
Printing on rubber footwear, Machine for. J. W. Moore. No. 962,515; June 28; Sp. p. 4801; Gaz. vol. 155; p. 846.
Printing-press. W. Evensen. No. 960,865; June 7; Sp. p. 1261; Gaz. vol. 155; p. 211.
Printing-press. E. Pickering. No. 961,256; June 14; Sp. p. 2037; Gaz. vol. 155; p. 370.
Printing-press. T. Winlack. No. 961,567; June 14; Sp. p. 2753; Gaz. vol. 155; p. 476.
Printing-press, Bed-and-cylinder. A. T. H. Brower. No. 961,206; June 14; Sp. p. 1955; Gaz. vol. 155; p. 354.
Printing press, Job-. J. C. Trimbach and C. G. Allhoff. No. 961,562; June 14; Sp. p. 2740; Gaz. vol. 155; p. 475.
Printing-press self-feeder. L. Sgal and J. Schwanda. No. 962,866; June 28; Sp. p. 5539; Gaz. vol. 155; p. 969.
Printing-presses, Cylinder-driving mechanism for. R. T. Johnston. No. 962,962; June 28; Sp. p. 5703; Gaz. vol. 155; p. 999.
Printing-presses, Gage-pin for tympans of. J. R. Grove. No. 960,312; June 7; Sp. p. 144; Gaz. vol. 155; p. 27.
Projectile. G. E. Wells. No. 962,482; June 28; Sp. p. 4736; Gaz. vol. 155; p. 835.
Projectile, Self-propelling. W. T. Unge. No. 961,179; June 14; Sp. p. 1895; Gaz. vol. 155; p. 344.
Projection apparatus. W. L. Patterson. No. 961,253; June 14; Sp. p. 2048; Gaz. vol. 155; p. 369.
Projection apparatus. A. H. F. Perl. No. 962,664; June 28; Sp. p. 5127; Gaz. vol. 155; p. 896.
Propeller. E. A. Richter. No. 960,403; June 7; Sp. p. 253; Gaz. vol. 155; p. 56.
Propeller. E. E. Furney. No. 962,136; June 21; Sp. p. 3980; Gaz. vol. 155; p. 692.
Propeller, Reversible. E. S. Bryant. No. 961,285; June 14; Sp. p. 2132; Gaz. vol. 155; p. 382.
Propelling device. B. E. Lindkvist. No. 962,155; June 21; Sp. p. 4029; Gaz. vol. 155; p. 699.
Propulsion apparatus, Ship's. C. R. Mayhall. No. 961,806; June 14; Sp. p. 2176; Gaz. vol. 155; p. 389.
Protecting pad or shield. W. H. McCormack. No. 961,309; June 14; Sp. p. 2131; Gaz. vol. 155; p. 390.
Protective device. J. D. Hoffman. No. 961,962; June 21; Sp. p. 3594; Gaz. vol. 155; p. 632.
Pruning implement. I. D. Guest. No. 960,540; June 7; Sp. p. 623; Gaz. vol. 155; p. 100.
Pruning-shears. J. G. Kyle. No. 960,963; June 7; Sp. p. 1445; Gaz. vol. 155; p. 243.
Puller: *See* Animal-jaw puller; Spike-puller; Stump-puller.
Pulley. H. Reed. No. 961,796; June 21; Sp. p. 3209; Gaz. vol. 155; p. 576.
Pulley. C. A. Brinley. No. 962,548; June 28; Sp. p. 4856; Gaz. vol. 155; p. 857.
Pulley, Clutch-. J. McStay and E. F. Stevens. No. 960,599; June 7; Sp. p. 752; Gaz. vol. 155; p. 121.
Pulley-rope gage. G. W. Mack. No. 961,510; June 14; Sp. p. 2620; Gaz. vol. 155; p. 457.
Pulverizing machine, Sand-. C. W. Herb. No. 961,409; June 14; Sp. p. 2392; Gaz. vol. 155; p. 423.
Pulverizing-mill. A. J. Gore. No. 960,893; June 7; Sp. p. 1315; Gaz. vol. 155; p. 220.
Pump. F. Negley. No. 960,575; June 7; Sp. p. 692; Gaz. vol. 155; p. 114.
Pump. G. A. Starr. No. 961,039; June 7; Sp. p. 1610; Gaz. vol. 155; p. 269.
Pump. C. A. Waits. No. 961,820; June 21; Sp. p. 3278; Gaz. vol. 155; p. 584.
Pump. A. F. Rockwell. No. 962,251; June 21; Sp. p. 4211; Gaz. vol. 155; p. 731.
Pump. J. B. Naughtin. No. 962,518; June 28; Sp. p. 4815; Gaz. vol. 155; p. 847.
Pump, Air-. C. H. Belden. No. 960,789; June 7; Sp. p. 1114; Gaz. vol. 155; p. 186.
Pump, Automatic. S. J. Jackson. No. 960,942; June 7; Sp. p. 1402; Gaz. vol. 155; p. 236.
Pump bucket, Chain-. J. H. Burtner. No. 961,933; June 21; Sp. p. 3517; Gaz. vol. 155; p. 621.
Pump, Centrifugal. J. Valk. No. 961,993; June 21; Sp. p. 3645; Gaz. vol. 155; p. 641.
Pump, Centrifugal. A. E. Guy. No. 962,023; June 21; Sp. p. 3706; Gaz. vol. 155; p. 651.
Pump for use with condensers and the like, Air-. P. F. Oddie. No. 961,000; June 7; Sp. p. 1534; Gaz. vol. 155; p. 257.
Pump-governor. T. J. Beaudette. No. 960,249; June 7; Sp. p. 11; Gaz. vol. 155; p. 5.
Pump-governor. W. H. Bice. No. 962,736; June 28; Sp. p. 5282; Gaz. vol. 155; p. 922.
Pump-handle. C. L. Kenyon. No. 960,954; June 7; Sp. p. 1428; Gaz. vol. 155; p. 240.
Pump, Oscillating-piston. M. Keller. No. 961,618; June 14; Sp. p. 2851; Gaz. vol. 155; p. 493.
Pump, Rotary. G. W. Keller and E. C. Goetz. No. 960,339; June 7; Sp. p. 206; Gaz. vol. 155; p. 36.
Pump, Steam-. J. March. No. 962,906; June 28; Sp. p. 5605; Gaz. vol. 155; p. 982.
Pump, Tire-. C. S. Myers. No. 961,153; June 14; Sp. p. 1840; Gaz. vol. 155; p. 333.
Pump, Vacuum-. G. S. Williams. No. 960,609; June 7; Sp. p. 749; Gaz. vol. 155; p. 124.
Pump, Wave-operated. C. P. Bonney. No. 961,401; June 14; Sp. p. 2373; Gaz. vol. 155; p. 420.
Pumping oil-wells, Method and apparatus for. J. D. Dinsmoor. No. 962,009; June 21; Sp. p. 3678; Gaz. vol. 155; p. 646.
Punch, Poultry-marking. T. W. Rogers. No. 961,800; June 21; Sp. p. 3219; Gaz. vol. 155; p. 573.
Punch, Railway-ticket. H. E. Palmer. No. 962,918; June 28; Sp. p. 5616; Gaz. vol. 155; p. 984.
Punching apparatus. A. J. Setter. No. 961,653; June 14; Sp. p. 2916; Gaz. vol. 155; p. 505.
Punching-machine. E. Southworth and E. A. Spaulding. No. 961,381; June 14; Sp. p. 2345; Gaz. vol. 155; p. 414.
Punching-machines, Clutch mechanism for. E. Southworth. No. 961,382; June 14; Sp. p. 2347; Gaz. vol. 155; p. 415.
Push-button. D. R. Lovejoy. No. 960,654; June 7; Sp. p. 847; Gaz. vol. 155; p. 139.
Putty-knife. A. J. Compton. No. 960,624; June 7; Sp. p. 793; Gaz. vol. 155; p. 129.
Puzzle. W. T. Clerk. No. 960,623; June 7; Sp. p. 792; Gaz. vol. 155; p. 129.
Puzzle. E. E. Peck. No. 961,892; June 21; Sp. p. 3439; Gaz. vol. 155; p. 608.
Puzzle. E. J. McFarland. No. 962,039; June 21; Sp. p. 3746; Gaz. vol. 155; p. 657.
Pyroxylin compound. W. G. Lindsay. No. 961,860; June 14; Sp. p. 2310; Gaz. vol. 155; p. 406.
Quilting device. J. R. Russell. No. 960,709; June 7; Sp. p. 956; Gaz. vol. 155; p. 159.
Racing apparatus. A. Schumann. No. 962,057; June 21; Sp. p. 3787; Gaz. vol. 155; p. 664.
Rack: *See* Crate-rack; Display-rack; Garment-rack.
Radiator. S. D. Stauffer. No. 962,061; June 21; Sp. p. 3793; Gaz. vol. 155; p. 666.
Radiator. E. and H. Bebringer. No. 962,189; June 21; Sp. p. 4006; Gaz. vol. 155; p. 711.
Rail. H. L. Sawdey. No. 960,713; June 7; Sp. p. 964; Gaz. vol. 155; p. 160.
Rail-anchor. W. A. Walker. No. 961,918; June 21; Sp. p. 3485; Gaz. vol. 155; p. 617.
Rail and joint therefor. E. Brill, Jr., and A. A. Thompson. No. 962,740; June 28; Sp. p. 5289; Gaz. vol. 155; p. 923.
Rail-bonding apparatus. W. A. Neff. No. 961,984; June 21; Sp. p. 3626; Gaz. vol. 155; p. 638.
Rail-brace. W. S. Newhall. No. 961,636; June 14; Sp. p. 2886; Gaz. vol. 155; p. 499.
Rail-chair. C. A. Tilly. No. 960,443; June 7; Sp. p. 408; Gaz. vol. 155; p. 69.
Rail-chair. J. L. Jenkins. No. 960,644; June 7; Sp. p. 830; Gaz. vol. 155; p. 136.
Rail clamp, Adjustable guard-. R. E. Einstein. No. 960,858; June 7; Sp. p. 1247; Gaz. vol. 155; p. 208.
Rail-drilling machine. F. E. Place and M. L. Jenkins. No. 962,914; June 28; Sp. p. 5613; Gaz. vol. 155; p. 984.
Rail-frogs, Foot-guard for. W. C. Prosser. No. 960,397; June 7; Sp. p. 329; Gaz. vol. 155; p. 55.
Rail-joint. J. W. Waddell. No. 960,463; June 7; Sp. p. 420; Gaz. vol. 155; p. 71.
Rail-joint. H. W. Sawyer. No. 961,027; June 7; Sp. p. 1584; Gaz. vol. 155; p. 265.
Rail-joint. S. Kenyeres. No. 962,028; June 21; Sp. p. 3718; Gaz. vol. 155; p. 653.
Rail-joint. R. Burgunder. No. 962,813; June 28; Sp. p. 5454; Gaz. vol. 155; p. 949.
Rail-joint. J. W. and E. J. Enright. No. 962,824; June 28; Sp. p. 5450; Gaz. vol. 155; p. 953.
Rail-joint chair. H. Carmak. No. 962,312; June 21; Sp. p. 4352; Gaz. vol. 155; p. 751.
Rail-joint support. G. G. Floyd. No. 962,424; June 28; Sp. p. 4609; Gaz. vol. 155; p. 814.
Rail sections, Boltless locking-body for connecting track-. A. M. Benjamin. No. 960,790; June 7; Sp. p. 1116; Gaz. vol. 155; p. 187.

Rail-spike. J. F. Limberg and R. Koelling. No. 963,027; June 28; Sp. p. 5832; Gaz. vol. 155; p. 1021.
Rail-straightener. B. Netahlie, Jr. No. 960,682; June 7; Sp. p. 901; Gaz. vol. 155; p. 149.
Rail-support. T. E. Vaughn. No. 961,917; June 21; Sp. p. 3484; Gaz. vol. 155; p. 617.
Rail-support, Three-tie. G. G. Floyd. No. 962,423; June 28; Sp. p. 4608; Gaz. vol. 155; p. 814.
Rail-tie fastening. R. W. Smith. No. 961,078; June 7; Sp. p. 1699; Gaz. vol. 155; p. 282.
Rails, Anticreeper device for. W. L. De Remer. No. 960,283; June 7; Sp. p. 84; Gaz. vol. 155; p. 18.
Rails to metal ties, Fastening device for securing. C. P. Hammond. No. 960,543; June 7; Sp. p. 629; Gaz. vol. 155; p. 102.
Railway and car and appliances therefor. J. B. Fowler. No. 961,293; June 14; Sp. p. 2148; Gaz. vol. 155; p. 385.
Railway automatic signal. R. Reichotsch. No. 960,706; June 7; Sp. p. 952; Gaz. vol. 155; p. 158.
Railway bonding system, Electric-. G. H. Lindsey. No. 962,996; June 28; Sp. p. 5710; Gaz. vol. 155; p. 1001.
Railway-brakes, Means for operating. S. G. Neal and J. M. Childress. No. 961,310; June 14; Sp. p. 2182; Gaz. vol. 155; p. 391.
Railway cattle-guard. C. P. McKinney. No. 962,379; June 21; Sp. p. 4481; Gaz. vol. 155; p. 778.
Railway-crossing. B. M. Gallaspy and A. H. McCarty. No. 962,338; June 21; Sp. p. 4413; Gaz. vol. 155; p. 760.
Railway-curves, Device to prevent friction on. P. W. Burr. No. 960,512; June 7; Sp. p. 1162; Gaz. vol. 155; p. 194.
Railway-joint. S. Stephens. No. 960,428; June 7; Sp. p. 385; Gaz. vol. 155; p. 64.
Railway-rail antispreading device. T. B. Lindsley. No. 961,623; June 14; Sp. p. 2861; Gaz. vol. 155; p. 494.
Railway-rail joint. A. C. Richey. No. 961,461; June 14; Sp. p. 2507; Gaz. vol. 155; p. 441.
Railway-road-bed construction. C. R. Holden. No. 961,233; June 14; Sp. p. 2012; Gaz. vol. 155; p. 363.
Railway-switch, Automatic. C. E. Brandfass. No. 962,739; June 28; Sp. p. 5287; Gaz. vol. 155; p. 923.
Railway-tie. E. M. Christensen and O. H. Jensen. No. 960,273; June 7; Sp. p. 66; Gaz. vol. 155; p. 14.
Railway-tie. F. Godward. No. 961,294; June 14; Sp. p. 2157; Gaz. vol. 155; p. 385.
Railway-tie. J. P. Boogher. No. 961,478; June 14; Sp. p. 2551; Gaz. vol. 155; p. 446.
Railway-tie. V. E. Randall and G. A. Hoeltzel. No. 962,588; June 28; Sp. p. 4978; Gaz. vol. 155; p. 871.
Railway-tie. J. B. Martin and E. W. Kaiser. No. 962,908; June 28; Sp. p. 5610; Gaz. vol. 155; p. 982.
Railway-tie, Metal. C. E. Hall. No. 961,070; June 7; Sp. p. 1668; Gaz. vol. 155; p. 279.
Railway-tie, Metallic. A. S. Warren. No. 961,052; June 7; Sp. p. 1632; Gaz. vol. 155; p. 273.
Railway-tie, Metallic. S. T. Wilson and C. K. McDermott. No. 962,996; June 28; Sp. p. 5775; Gaz. vol. 155; p. 1011.
Railway-tie plate. A. Morrison. No. 961,517; June 14; Sp. p. 2630; Gaz. vol. 155; p. 459.
Railway-tie, Rail-cushion metal. G. E. Hall. No. 961,071; June 7; Sp. p. 1670; Gaz. vol. 155; p. 280.
Railway-track construction. J. W. Blower. No. 960,800; June 7; Sp. p. 1135; Gaz. vol. 155; p. 190.
Raisin-seeder. T. H. Elliott. No. 962,201; June 21; Sp. p. 4119; Gaz. vol. 155; p. 715.
Raisin-stemmer. W. C. Anderson. No. 962,609; June 28; Sp. p. 5019; Gaz. vol. 155; p. 878.
Rake: *See* Garden-rake; Horse-rake.
Rake. J. B. Mensl. No. 962,576; June 28; Sp. p. 4953; Gaz. vol. 155; p. 867.
Rake-tooth point. H. A. Smith. No. 962,060; June 21; Sp. p. 3791; Gaz. vol. 155; p. 665.
Raker gage and jointer. S. C. Miles. No. 962,969; June 28; Sp. p. 5718; Gaz. vol. 155; p. 1002.
Range, Combined gas and coal. C. V. Roberts and J. Mander. No. 962,244; June 21; Sp. p. 4193; Gaz. vol. 155; p. 728.
Razor-blade. W. J. Smart. No. 960,424; June 7; Sp. p. 376; Gaz. vol. 155; p. 63.
Razor case, Safety-. E. Middeldorf. No. 961,727; June 14; Sp. p. 3054; Gaz. vol. 155; p. 529.
Razor holder or frame, Safety-. W. Schmidt. No. 962,531; June 28; Sp. p. 4846; Gaz. vol. 155; p. 852.
Razor-honing apparatus. L. Alfano. No. 962,935; June 28; Sp. p. 5668; Gaz. vol. 155; p. 991.
Razor-stropping device. H. E. Crandall. No. 961,105; June 14; Sp. p. 1751; Gaz. vol. 155; p. 318.
Razor-stropping device. C. F. Benedict. No. 962,190; June 21; Sp. p. 4099; Gaz. vol. 155; p. 711.
Reamer, Expansion-. W. P. Fouts and F. B. Hobbs. No. 961,115; June 14; Sp. p. 1769; Gaz. vol. 155; p. 321.
Rear light and number-tag, Combined. A. F. Clark. No. 960,822; June 7; Sp. p. 1180; Gaz. vol. 155; p. 197.
Receptacle. W. A. Moudy. No. 960,996; June 7; Sp. p. 1528; Gaz. vol. 155; p. 255.
Receptacle, Collapsible. G. F. Lynch. No. 960,360; June 7; Sp. p. 254; Gaz. vol. 155; p. 43.
Receptacle for liquids. J. W. Kaufmann. No. 962,641; June 28; Sp. p. 5060; Gaz. vol. 155; p. 888.
Receptacle for medicines and the like, Hanging. J. B. Smith. No. 962,595; June 28; Sp. p. 4993; Gaz. vol. 155; p. 874.
Receptacle for powder and the like. C. A. Turner. No. 961,661; June 14; Sp. p. 2930; Gaz. vol. 155; p. 506.
Receptacle having apparatus for projecting disinfecting material, &c., into it. C. Waldstein. No. 962,067; June 21; Sp. p. 3814; Gaz. vol. 155; p. 668.
Receptacle, Metallic. E. Ryan. No. 962,470; June 28; Sp. p. 4712; Gaz. vol. 155; p. 830.
Recording device. G. F. Card. No. 962,492; June 28; Sp. p. 4757; Gaz. vol. 155; p. 838.
Reel: *See* Clothes-line reel; Winding-reel.
Reel. F. Moesberg. No. 962,452; June 28; Sp. p. 4670; Gaz. vol. 155; p. 824.
Reel. F. Moesberg. No. 962,453; June 28; Sp. p. 4671; Gaz. vol. 155; p. 824.
Reel. F. Moesberg. No. 962,654; June 28; Sp. p. 5105; Gaz. vol. 155; p. 893.
Reeling machine, Cocoon-. V. V. Weber. No. 962,279; June 21; Sp. p. 4286; Gaz. vol. 155; p. 740.
Refining-machine. J. C. Fleming. No. 960,529; June 7; Sp. p. 590; Gaz. vol. 155; p. 96.
Reflector, Electric-light. G. F. Allom. No. 961,196; June 14; Sp. p. 1937; Gaz. vol. 155; p. 350.
Reflector for incandescent lamps. E. A. Gillinder. No. 960,306; June 7; Sp. p. 131; Gaz. vol. 155; p. 25.
Refractory compounds, Reduction of. F. J. Tone. No. 961,913; June 21; Sp. p. 3477; Gaz. vol. 155; p. 615.
Refractory material, Reducing. J. W. Evans. No. 960,863; June 7; Sp. p. 1257; Gaz. vol. 155; p. 210.
Refrigerating-apartments and similar structures, Door and doorway for. S. P. Stevenson. No. 962,174; June 21; Sp. p. 4066; Gaz. vol. 155; p. 706.
Refrigerating appliance. R. W. Emerson and F. Bishop. No. 962,704; June 28; Sp. p. 5217; Gaz. vol. 155; p. 911.
Refrigerator-pail. L. I. Flood. No. 962,504; June 28; Sp. p. 4785; Gaz. vol. 155; p. 842.
Regenerative reverberatory furnace. F. A. Leas. No. 962,644; June 28; Sp. p. 5084; Gaz. vol. 155; p. 889.
Register: *See* Cash-register; Sidewall-register.
Register. R. Hewitt. No. 960,548; June 7; Sp. p. 637; Gaz. vol. 155; p. 103.
Regulator: *See* Feed-water regulator; Furnace-regulator; Gas-regulator; Gas-pressure regulator; Thermo-electric regulator; Voltage-regulator; Water-feed regulator.
Rein-holder. K. Tharraldson. No. 960,486; June 7; Sp. p. 395; Gaz. vol. 155; p. 66.
Relay, Polarized. W. K. Howe. No. 960,928; June 7; Sp. p. 1370; Gaz. vol. 155; p. 231.
Relief device. R. Conrader. No. 962,551; June 28; Sp. p. 4900; Gaz. vol. 155; p. 859.
Resilient connection device for relatively movable parts. J. G. Nolen and J. Shepherd. No. 961,312; June 14; Sp. p. 2200; Gaz. vol. 155; p. 391.
Resilient wheel. A. H. Peloubet. No. 962,975; June 28; Sp. p. 5732; Gaz. vol. 155; p. 1004.
Reverberatory furnace. F. A. Burns. No. 960,499; June 7; Sp. p. 521; Gaz. vol. 155; p. 87.
Revolver safety device. J. H. Wesson. No. 961,188; June 14; Sp. p. 1913; Gaz. vol. 155; p. 347.
Revolver safety device. J. H. Wesson. No. 961,189; June 14; Sp. p. 1914; Gaz. vol. 155; p. 347.
Rigging or scaffold support. G. Robb. No. 961,018; June 7; Sp. p. 1567; Gaz. vol. 155; p. 263.
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Ring-blanks and applying them to articles, Machine for producing. J. Rigby. No. 962,786; June 28; Sp. p. 5387; Gaz. vol. 155; p. 941.
Rivet. E. B. Stimpson. No. 962,794; June 28; Sp. p. 5403; Gaz. vol. 155; p. 943.
Roasting-furnace, Self-heating hot-blast. W. M. Barker. No. 961,081; June 7; Sp. p. 1704; Gaz. vol. 155; p. 283.
Rock-drill. H. J. Hibschle. No. 962,850; June 21; Sp. p. 4432; Gaz. vol. 155; p. 764.
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Roller: *See* Land-roller.
Rolling metal. W. D. Hynon. No. 960,297; June 7; Sp. p. 112; Gaz. vol. 155; p. 22.
Rolling mill, Tube-. H. Stilting. No. 961,818; June 21; Sp. p. 3275; Gaz. vol. 155; p. 584.
Roof-bracket. S. P. Phoenix. No. 961,642; June 14; Sp. p. 2896; Gaz. vol. 155; p. 501.
Roost, Poultry-. I. T. Merchant. No. 961,874; June 21; Sp. p. 3407; Gaz. vol. 155; p. 602.
Rope-fastener. M. C. Jennings. No. 960,833; June 7; Sp. p. 196; Gaz. vol. 155; p. 34.
Rope-fastener. L. C. Sims. No. 962,675; June 28; Sp. p. 5145; Gaz. vol. 155; p. 900.
Rope-jockey. F. Simon. No. 962,475; June 28; Sp. p. 4722; Gaz. vol. 155; p. 832.
Rosin-purifying apparatus. E. N. Perlee. No. 961,254; June 14; Sp. p. 2054; Gaz. vol. 155; p. 370.
Rotary cutter. J. Erlandsen. No. 960,526; June 7; Sp. p. 573; Gaz. vol. 155; p. 95.
Rotary engine. B. Dorris. No. 960,516; June 7; Sp. p. 557; Gaz. vol. 155; p. 92.
Rotary engine. N. H. Motsinger. No. 960,990; June 7; Sp. p. 1503; Gaz. vol. 155; p. 252.
Rotary engine. N. H. Motsinger. No. 960,991; June 7; Sp. p. 1510; Gaz. vol. 155; p. 253.
Rotary engine. N. H. Motsinger. No. 960,992; June 7; Sp. p. 1514; Gaz. vol. 155; p. 253.
Rotary engine. N. H. Motsinger. No. 960,993; June 7; Sp. p. 1517; Gaz. vol. 155; p. 254.
Rotary engine. N. H. Motsinger. No. 960,994; June 7; Sp. p. 1521; Gaz. vol. 155; p. 254.
Rotary engine. A. J. Savoie. No. 961,026; June 7; Sp. p. 1583; Gaz. vol. 155; p. 265.

Rotary engine. A. A. Edwards and A. Olson. No. 961,849; June 21; Sp. p. 3341; Gaz. vol. 155; p. 594.
Rotary engine. G. B. Callaway. No. 962,310; June 21; Sp. p. 4347; Gaz. vol. 155; p. 750.
Rotary engine. R. C. Leedham. No. 962,850; June 28; Sp. p. 5500; Gaz. vol. 155; p. 962.
Rotary engine, Compound reversible. H. Eriksen. No. 962,204; June 21; Sp. p. 4123; Gaz. vol. 155; p. 715.
Rotary explosive-engine. E. A. Thomas and W. V. Ritter. No. 962,064; June 21; Sp. p. 3807; Gaz. vol. 155; p. 667.
Rotary motor. G. R. Riggs. No. 961,017; June 7; Sp. p. 1562; Gaz. vol. 155; p. 262.
Rotary steam-engine. J. Schuller and A. Niland. No. 962,984; June 28; Sp. p. 5752; Gaz. vol. 155; p. 1007.
Roundabout-operating mechanism. J. R. Simmons and P. J. Ford. No. 960,448; June 7; Sp. p. 415; Gaz. vol. 155; p. 70.
Route-guides, ribbon-maps, and the like, Machine for operating. O. Cullman. No. 961,288; June 14; Sp. p. 2137; Gaz. vol. 155; p. 383.
Rubber. J. S. Capen. No. 960,814; June 7; Sp. p. 1166; Gaz. vol. 155; p. 194.
Rubber, gutta-percha, balata, &c., Apparatus for removing foreign matter from India-. M. M. Dessau. No. 960,846; June 7; Sp. p. 1225; Gaz. vol. 155; p. 204.
Rubber heel. A. B. Helmbach. No. 961,126; June 14; Sp. p. 1790; Gaz. vol. 155; p. 324.
Rubber heel. G. Hadjich. No. 961,346; June 14; Sp. p. 2285; Gaz. vol. 155; p. 403.
Rubber, Machine for working crude. M. C. Clark. No. 960,274; June 7; Sp. p. 68; Gaz. vol. 155; p. 15.
Rubbish-burner, Safety portable. W. M. Jackson. No. 962,148; June 21; Sp. p. 4014; Gaz. vol. 155; p. 697.
Ruler and paper-cutter, Combined. F. A. Dibrell. No. 963,001; June 28; Sp. p. 5787; Gaz. vol. 155; p. 1013.
Running-gear construction. E. Gruenfeldt. No. 960,897; June 7; Sp. p. 1324; Gaz. vol. 155; p. 222.
Sack. C. L. Weatherwax. No. 962,934; June 28; Sp. p. 5657; Gaz. vol. 155; p. 990.
Sad-iron. F. E. Shaffer. No. 961,878; June 14; Sp. p. 2340; Gaz. vol. 155; p. 413.
Sad-iron, Electric. H. G. Levy. No. 962,768; June 28; Sp. p. 5345; Gaz. vol. 155; p. 934.
Sad-iron, Self-heating. F. E. Shaffer. No. 961,877; June 14; Sp. p. 2338; Gaz. vol. 155; p. 413.
Safe. E. S. Elliott and G. Cook. No. 960,293; June 7; Sp. p. 104; Gaz. vol. 155; p. 21.
Safe. J. M. Allen. No. 960,767; June 7; Sp. p. 1074; Gaz. vol. 155; p. 180.
Safe, Wall-. C. F. Meilink. No. 960,981; June 7; Sp. p. 1485; Gaz. vol. 155; p. 250.
Safe, Wall-. C. F. Meilink and W. H. Reynolds. No. 960,982; June 7; Sp. p. 1486; Gaz. vol. 155; p. 250.
Safes, &c., Locking device for. W. H. Reynolds. No. 961,088; June 7; Sp. p. 1718; Gaz. vol. 155; p. 285.
Safes, vaults, &c., Attachment for combination-dials on. M. Mosler. No. 961,884; June 21; Sp. p. 3429; Gaz. vol. 155; p. 606.
Safety-pin-making machine. H. B. Church. No. 962,126; June 21; Sp. p. 3959; Gaz. vol. 155; p. 689.
Salmon-smoking apparatus. H. Lindenberger. No. 961,869; June 21; Sp. p. 3398; Gaz. vol. 155; p. 601.
Salt-shaker. C. W. Lind. No. 960,650; June 7; Sp. p. 843; Gaz. vol. 155; p. 138.
Salts and ammoniacal liquor, Utilizing by-product metallic. F. J. Falding. No. 961,764; June 21; Sp. p. 3154; Gaz. vol. 155; p. 586.
Salts, Making pure ortho- and para-guaiacol sulfonic. B. R. Seifert and H. Hibbe. No. 962,103; June 21; Sp. p. 3891; Gaz. vol. 155; p. 680.
Sample-holder. C. M. McLeod. No. 962,658; June 28; Sp. p. 5115; Gaz. vol. 155; p. 894.
Sand, Cleaning molding-. E. A. Smith. No. 962,265; June 21; Sp. p. 4252; Gaz. vol. 155; p. 736.
Sander. C. H. Robertson. No. 960,584; June 7; Sp. p. 705; Gaz. vol. 155; p. 116.
Sap or gum extractor. J. T. Gilmer. No. 961,953; June 21; Sp. p. 3571; Gaz. vol. 155; p. 629.
Sash-balance. E. J. Reilly. No. 962,387; June 21; Sp. p. 4497; Gaz. vol. 155; p. 776.
Sash-bar. T. F. McGann. No. 960,677; June 7; Sp. p. 863; Gaz. vol. 155; p. 148.
Sash-hanger. G. L. Case. No. 960,817; June 7; Sp. p. 1171; Gaz. vol. 155; p. 195.
Sash-lock. A. Rosenberg. No. 960,585; June 7; Sp. p. 707; Gaz. vol. 155; p. 117.
Sash-lock and burglar-alarm, Combined. F. K. Heupel and I. B. Nordlinger. No. 961,229; June 14; Sp. p. 2004; Gaz. vol. 155; p. 362.
Sash, Metal window-. C. A. McGinnis. No. 961,730; June 14; Sp. p. 3058; Gaz. vol. 155; p. 530.
Sash, Sheet-metal. C. A. McGinnis. No. 961,731; June 14; Sp. p. 3059; Gaz. vol. 155; p. 530.
Sash-weight. T. Holland. No. 962,838; June 28; Sp. p. 5481; Gaz. vol. 155; p. 958.
Sash, Window-. J. S. Hopper. No. 960,552; June 7; Sp. p. 645; Gaz. vol. 155; p. 106.
Sash, Window-. G. L. Whitesaker. No. 961,919; June 21; Sp. p. 3483; Gaz. vol. 155; p. 617.
Sash, Window-. J. V. Edwards. No. 962,501; June 28; Sp. p. 4780; Gaz. vol. 155; p. 841.
Sash, Window-. E. M. Matthews. No. 962,647; June 28; Sp. p. 5089; Gaz. vol. 155; p. 890.
Saw. J. Sigoloff. No. 962,535; June 28; Sp. p. 4854; Gaz. vol. 155; p. 853.
Saw-clamp. B. F. Padrick. No. 960,389; June 7; Sp. p. 310; Gaz. vol. 155; p. 52.
Saw-clamp. F. A. Wuest. No. 961,665; June 14; Sp. p. 2943; Gaz. vol. 155; p. 509.
Saw-handle. W. S. Locke. No. 962,904; June 28; Sp. p. 5603; Gaz. vol. 155; p. 981.
Saw-handle, Detachable. D. A. Markwith. No. 961,246; June 14; Sp. p. 2039; Gaz. vol. 155; p. 368.
Saw mill, Gang-. W. M. Wilkin. No. 960,472; June 7; Sp. p. 462; Gaz. vol. 155; p. 78.
Saw, Portable power-. P. C. Burdick and R. Jessop. No. 962,003; June 21; Sp. p. 3668; Gaz. vol. 155; p. 645.
Saw-set. A. O. Turner. No. 960,446; June 7; Sp. p. 412; Gaz. vol. 155; p. 60.
Saw-set. C. M. Larson. No. 961,503; June 14; Sp. p. 2608; Gaz. vol. 155; p. 455.
Sawing-machine. S. N. Krawchenko. No. 961,453; June 14; Sp. p. 2491; Gaz. vol. 155; p. 436.
Sawing-machine, Portable. J. H. Longstreet. No. 961,870; June 21; Sp. p. 3399; Gaz. vol. 155; p. 601.
Sawing pipes, &c., Apparatus for. D. Heggie. No. 960,640; June 7; Sp. p. 822; Gaz. vol. 155; p. 135.
Scaffold-bracket. C. F. Pinkley. No. 961,422; June 14; Sp. p. 2418; Gaz. vol. 155; p. 427.
Scaffold-chair. C. Calson. No. 960,501; June 7; Sp. p. 526; Gaz. vol. 155; p. 87.
Scaffolding-bracket, Adjustable and reversible roof and ladder. C. W. Levander. No. 960,565; June 7; Sp. p. 671; Gaz. vol. 155; p. 110.
Scale, Computing-. R. A. Forbes. No. 962,332; June 21; Sp. p. 4391; Gaz. vol. 155; p. 758.
Scale, Device for reproducing an object on a. G. F. Lattier. No. 961,359; June 14; Sp. p. 2308; Gaz. vol. 155; p. 408.
Scale, Pocket-. E. N. Glifillan. No. 960,535; June 7; Sp. p. 610; Gaz. vol. 155; p. 98.
Scale, Weighing-. N. M. Hansen. No. 960,905; June 7; Sp. p. 1337; Gaz. vol. 155; p. 225.
Scales, Holder for Interchangeable. J. W. Brigham. No. 962,399; June 21; Sp. p. 4519; Gaz. vol. 155; p. 780.
Scissors, Dressmaker's. A. Hopkins. No. 961,235; June 14; Sp. p. 2019; Gaz. vol. 155; p. 364.
Scleroscope. A. F. Shore. No. 962,790; June 28; Sp. p. 5396; Gaz. vol. 155; p. 942.
Scow. C. E. Fowler. No. 962,706; June 28; Sp. p. 5220; Gaz. vol. 155; p. 911.
Scrapers, Means for automatically dumping excavating-. A. Skopinski. No. 960,590; June 7; Sp. p. 718; Gaz. vol. 155; p. 118.
Screen: *See* Metal-frame screen; Vibratory screen; Window-screen.
Screen mechanism, Rotary. P. L. Scholl. No. 962,168; June 21; Sp. p. 4056; Gaz. vol. 155; p. 704.
Screw-cutting device. L. F. Hart. No. 962,024; June 21; Sp. p. 3709; Gaz. vol. 155; p. 652.
Screw-driver. E. Walker. No. 961,184; June 14; Sp. p. 1905; Gaz. vol. 155; p. 346.
Screw-jack. M. C. Cumming. No. 961,106; June 14; Sp. p. 1753; Gaz. vol. 155; p. 318.
Screws, Manufacture of. W. G. Allen. No. 960,244; June 7; Sp. p. 2; Gaz. vol. 155; p. 3.
Scythe. V. P. Herbold. No. 962,638; June 28; Sp. p. 5074; Gaz. vol. 155; p. 887.
Sea power-generator. R. M. Mobius. No. 962,651; June 28; Sp. p. 5098; Gaz. vol. 155; p. 892.
Seal. J. F. Crudginton. No. 961,069; June 7; Sp. p. 1666; Gaz. vol. 155; p. 279.
Seal. J. W. Aylsworth. No. 961,333; June 14; Sp. p. 2258; Gaz. vol. 155; p. 399.
Seal, Bottle-. J. V. Griffin. No. 962,022; June 21; Sp. p. 3705; Gaz. vol. 155; p. 651.
Seal, Car-. E. E. Fairchild and F. E. Clark. No. 961,223; June 14; Sp. p. 1995; Gaz. vol. 155; p. 360.
Seal, Cording-. E. J. Brooks. No. 961,931; June 21; Sp. p. 3513; Gaz. vol. 155; p. 621.
Seal-lock. L. J. Campbell. No. 960,271; June 7; Sp. p. 64; Gaz. vol. 155; p. 14.
Seal-lock. C. W. Gill. No. 962,827; June 28; Sp. p. 5462; Gaz. vol. 155; p. 954.
Seal, Snap-. E. J. Brooks. No. 960,805; June 7; Sp. p. 1150; Gaz. vol. 155; p. 191.
Seal, Water. H. H. Dow. No. 961,216; June 14; Sp. p. 1982; Gaz. vol. 155; p. 358.
Sealing and stamping machine, Envelop. J. J. Schermack. No. 961,465; June 14; Sp. p. 2514; Gaz. vol. 155; p. 442.
Sealing machine, Bottle-. E. J. Godman and W. H. Niemeyer. No. 961,603; June 14; Sp. p. 2819; Gaz. vol. 155; p. 488.
Sealing machine, Carton-. G. A. Cullom. No. 961,845; June 21; Sp. p. 3330; Gaz. vol. 155; p. 592.
Sealing machine, Envelop-. H. S. Gibson. No. 961,117; June 14; Sp. p. 1772; Gaz. vol. 155; p. 322.
Seat: *See* Vehicle-seat; Window-seat.
Secondary battery. H. P. Schreiber. No. 962,263; June 21; Sp. p. 4240; Gaz. vol. 155; p. 735.
Seed and fertiliser distributer. J. J. Brady. No. 960,261; June 7; Sp. p. 36; Gaz. vol. 155; p. 10.
Seed-extracting machine. H. Nichols. No. 960,577; June 7; Sp. p. 693; Gaz. vol. 155; p. 114.
Seed linter, Cotton-. H. E. Sessions. No. 962,722; June 28; Sp. p. 5255; Gaz. vol. 155; p. 917.

Seeder, Disk. C. J. Nelson. No. 960,576; June 7; Sp. p. 693; Gaz. vol. 155; p. 114.
Self-dumping apparatus. J. Scott. No. 961,652; June 14; Sp. p. 2914; Gaz. vol. 155; p. 504.
Semaphore mechanism. W. K. Howe. No. 962,960; June 28; Sp. p. 5701; Gaz. vol. 155; p. 999.
Separator: *See* Centrifugal separator; Cream-separator; Magnetic separator; Steam-separator.
Separator. J. Muchka. No. 960,374; June 7; Sp. p. 278; Gaz. vol. 155; p. 47.
Separator. W. L. Snyder. No. 960,725; June 7; Sp. p. 886; Gaz. vol. 155; p. 164.
Separator. M. S. Jones. No. 960,947; June 7; Sp. p. 1410; Gaz. vol. 155; p. 238.
Separator. W. H. Bradley. No. 962,117; June 21; Sp. p. 3933; Gaz. vol. 155; p. 685.
Sewage-disposal plant. M. J. Wiest. No. 962,806; June 28; Sp. p. 5015; Gaz. vol. 155; p. 877.
Sewers and similar structures, Construction of. C. F. Wilson. No. 961,380; June 14; Sp. p. 2343; Gaz. vol. 155; p. 414.
Sewing-machine. E. H. Dodd. No. 960,285; June 7; Sp. p. 89; Gaz. vol. 155; p. 19.
Sewing-machine. F. Jacob. No. 961,135; June 14; Sp. p. 1801; Gaz. vol. 155; p. 327.
Sewing-machine. F. Chatfield. No. 961,207; June 14; Sp. p. 1961; Gaz. vol. 155; p. 354.
Sewing-machine. L. Onderdonk. No. 962,974; June 28; Sp. p. 5723; Gaz. vol. 155; p. 1003.
Sewing-machine attachment. P. Griffin. No. 960,895; June 7; Sp. p. 1320; Gaz. vol. 155; p. 221.
Sewing-machine attachment. V. E. D'Urso. No. 961,942; June 21; Sp. p. 3540; Gaz. vol. 155; p. 624.
Sewing-machine attachment. G. A. Graydon. No. 962,021; June 21; Sp. p. 3703; Gaz. vol. 155; p. 650.
Sewing-machine attachment. G. O. Beasley. No. 962,731; June 28; Sp. p. 5274; Gaz. vol. 155; p. 920.
Sewing-machine attachment-holder. L. Krug. No. 960,345; June 7; Sp. p. 215; Gaz. vol. 155; p. 37.
Sewing-machine, Blindstitch. W. A. McCool. No. 960,570; June 7; Sp. p. 681; Gaz. vol. 155; p. 112.
Sewing-machine bobbin-winding device. H. McFarlane. No. 961,154; June 14; Sp. p. 1841; Gaz. vol. 155; p. 334.
Sewing machine, Button-. R. L. Lyons. No. 961,507; June 14; Sp. p. 2613; Gaz. vol. 155; p. 456.
Sewing machine, Button-. R. L. Lyons. No. 961,508; June 14; Sp. p. 2617; Gaz. vol. 155; p. 456.
Sewing-machine, Drop-head. S. A. Davis. No. 962,700; June 28; Sp. p. 5211; Gaz. vol. 155; p. 909.
Sewing-machine feeding mechanism. J. P. Weis. No. 960,494; June 7; Sp. p. 442; Gaz. vol. 155; p. 75.
Sewing-machine, Hemstitch. L. Onderdonk. No. 962,973; June 28; Sp. p. 5718; Gaz. vol. 155; p. 1003.
Sewing-machine tension device. C. Pedersen. No. 961,893; June 21; Sp. p. 3440; Gaz. vol. 155; p. 608.
Sewing-machine thread-cutting device. R. L. Lyons. No. 961,509; June 14; Sp. p. 2619; Gaz. vol. 155; p. 457.
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Sewing machines, Shuttle-locking device for shoe-. H. O. Fletcher. No. 962,206; June 21; Sp. p. 4126; Gaz. vol. 155; p. 716.
Shade and curtain hanger. H. J. Dempsey. No. 962,132; June 21; Sp. p. 3976; Gaz. vol. 155; p. 691.
Shade and pole bracket, Combined. N. B. Crosby. No. 962,007; June 21; Sp. p. 3675; Gaz. vol. 155; p. 646.
Shade fixture, Window-. W. G. Templeton. No. 962,270; June 21; Sp. p. 4263; Gaz. vol. 155; p. 737.
Shade hanger, Window-. C. N. Hiner. No. 961,230; June 14; Sp. p. 2006; Gaz. vol. 155; p. 362.
Shade-holder coupling. E. F. Pierce. No. 962,524; June 28; Sp. p. 4828; Gaz. vol. 155; p. 849.
Shade-roller attachment. H. Cole. No. 961,680; June 14; Sp. p. 2972; Gaz. vol. 155; p. 514.
Shades, Machine for making window-. B. W. Tucker. No. 962,178; June 21; Sp. p. 4075; Gaz. vol. 155; p. 707.
Shaft-hanger and belt-tightener, Combination. E. J. McGrath. No. 960,571; June 7; Sp. p. 683; Gaz. vol. 155; p. 112.
Shaft-reversing mechanism. J. D. Mooney. No. 962,450; June 28; Sp. p. 4668; Gaz. vol. 155; p. 824.
Shaft spring-support, Wagon-. P. W. Zeller. No. 961,708; June 14; Sp. p. 3021; Gaz. vol. 155; p. 523.
Shafts or the like, Sinking. D. E. Moran. No. 961,788; June 21; Sp. p. 3197; Gaz. vol. 155; p. 574.
Shaping machine, Duplicate-. O. Jensen. No. 962,573; June 28; Sp. p. 4947; Gaz. vol. 155; p. 866.
Sharpener, Planer-knife. C. O. Peterson. No. 962,047; June 21; Sp. p. 3762; Gaz. vol. 155; p. 660.
Shearing-machine. H. Haus. No. 961,495; June 14; Sp. p. 2597; Gaz. vol. 155; p. 453.
Shears: *See* Pruning-shears; Trimming-shears.
Sheet-conveying machine. T. C. Dexter. No. 961,587; June 14; Sp. p. 2791; Gaz. vol. 155; p. 483.
Sheet-feeding apparatus. A. B. Dick. No. 960,514; June 7; Sp. p. 552; Gaz. vol. 155; p. 91.
Sheet-iron boxes and other tinned articles to render the same suitable for being detinned, Cleaning old tinned. K. Goldschmidt and J. Weber. (Reissue.) No. 13,123; June 28; Sp. p. 5833; Gaz. vol. 155; p. 1021.
Sheet-metal plates and bands, Manufacture of. A. Schwieger. No. 962,058; June 21; Sp. p. 3789; Gaz. vol. 155; p. 665.
Shell or lift-van, Collapsible. F. F. Hedden. No. 962,429; June 28; Sp. p. 4619; Gaz. vol. 155; p. 816.
Ship motion, Passenger device for equalising. A. W. Theilsiefje. No. 961,911; June 21; Sp. p. 3473; Gaz. vol. 155; p. 615.
Shipping box, Fruit-. F. W. Dustan. No. 960,288; June 7; Sp. p. 97; Gaz. vol. 155; p. 19.
Shirt, Sweat-. J. W. Jordan. No. 962,900; June 28; Sp. p. 5598; Gaz. vol. 155; p. 980.
Shoe-cleaner. A. Edelman. No. 960,290; June 7; Sp. p. 101; Gaz. vol. 155; p. 20.
Shoe-fastening device. W. H. Harris. No. 960,545; June 7; Sp. p. 631; Gaz. vol. 155; p. 102.
Shoe-form inserter. E. E. Durand. No. 960,518; June 7; Sp. p. 563; Gaz. vol. 155; p. 93.
Shoe-machine jack. E. E. Winkley. No. 961,747; June 14; Sp. p. 3109; Gaz. vol. 155; p. 537.
Shoe-polishing device. C. H. Cochran. No. 960,506; June 7; Sp. p. 542; Gaz. vol. 155; p. 89.
Shoe quarter, lining, pull-strap, and extension double back-stay, Combination. J. Mitchell. No. 962,650; June 28; Sp. p. 5097; Gaz. vol. 155; p. 891.
Shoe-stretcher. T. J. Aldridge and M. A. Reilly. No. 960,477; June 7; Sp. p. 472; Gaz. vol. 155; p. 79.
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Shovel and truck, Combined. A. J. Compton. No. 961,843; June 21; Sp. p. 3326; Gaz. vol. 155; p. 591.
Shoveling-board. A. B. and M. A. Clippinger. No. 961,482; June 14; Sp. p. 2563; Gaz. vol. 155; p. 448.
Show-case. C. J. Johnson. No. 961,137; June 14; Sp. p. 1806; Gaz. vol. 155; p. 328.
Show-case. A. Anderson. No. 962,544; June 28; Sp. p. 4875; Gaz. vol. 155; p. 856.
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Show-case. H. C. Wallace. No. 962,933; June 28; Sp. p. 5635; Gaz. vol. 155; p. 990.
Shuttle. M. O. Steere. No. 961,817; June 21; Sp. p. 3272; Gaz. vol. 155; p. 583.
Shuttle-threading machine. J. Faltus. No. 962,327; June 21; Sp. p. 4380; Gaz. vol. 155; p. 756.
Shuttles, Device for preventing rebound of. H. Côté and R. C. Snow. No. 962,495; June 28; Sp. p. 4767; Gaz. vol. 155; p. 840.
Side-wall register. A. Ward. No. 960,456; June 7; Sp. p. 425; Gaz. vol. 155; p. 72.
Sieve-bolter, Gyrating. S. Snyder. No. 961,814; June 21; Sp. p. 3260; Gaz. vol. 155; p. 582.
Sieve-cloth cleaner. C. K. Kinsey. No. 961,414; June 14; Sp. p. 2404; Gaz. vol. 155; p. 425.
Sifter, Ash-. A. Martel. No. 961,148; June 14; Sp. p. 1829; Gaz. vol. 155; p. 332.
Sifter, Ash-. C. F. Nolte. No. 962,661; June 28; Sp. p. 5122; Gaz. vol. 155; p. 895.
Sifter, Automatic ash-. A. J. Smith. No. 960,591; June 7; Sp. p. 720; Gaz. vol. 155; p. 119.
Sifting apparatus. F. d'Orbessan and D. V. Louvet. No. 962,090; June 21; Sp. p. 3862; Gaz. vol. 155; p. 676.
Sign. P. Kamm. No. 960,336; June 7; Sp. p. 201; Gaz. vol. 155; p. 34.
Sign. J. M. Francis. No. 962,630; June 28; Sp. p. 5061; Gaz. vol. 155; p. 885.
Sign. J. C. Smith. No. 962,724; June 28; Sp. p. 5259; Gaz. vol. 155; p. 918.
Sign, Illuminated. E. J. Kellner and W. F. Edwards. No. 962,436; June 28; Sp. p. 4632; Gaz. vol. 155; p. 818.
Sign-receptacle, Electrical. E. H. Freeman. No. 961,600; June 14; Sp. p. 2614; Gaz. vol. 155; p. 487.
Sign-supporting attachment. J. J. Kegler. No. 962,963; June 28; Sp. p. 5705; Gaz. vol. 155; p. 1000.
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Signal-sounding apparatus, Electric. A. L. Sohm. No. 961,036; June 7; Sp. p. 1599; Gaz. vol. 155; p. 268.
Signals, Receiver for wireless transmission of. V. Poulsen. No. 961,645; June 14; Sp. p. 2903; Gaz. vol. 155; p. 502.
Signaling device. G. H. Morgan. No. 960,669; June 7; Sp. p. 881; Gaz. vol. 155; p. 145.
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Signaling. R. A. Fessenden. No. 962,018; June 21; Sp. p. 3694; Gaz. vol. 155; p. 649.
Signaling, Receiver for electric. R. A. Fessenden. No. 962,015; June 21; Sp. p. 3688; Gaz. vol. 155; p. 648.
Signaling system. H. O. Rugh. No. 960,586; June 7; Sp. p. 709; Gaz. vol. 155; p. 117.
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Signaling, Wireless. R. A. Fessenden. No. 960,631; June 7; Sp. p. 804; Gaz. vol. 155; p. 132.
Silicon nitrid, Making. A. Sluding-Larsen. No. 962,170; June 21; Sp. p. 4061; Gaz. vol. 155; p. 705.
Silk holder, Darning-. J. B. Eiseman. No. 962,949; June 28; Sp. p. 5681; Gaz. vol. 155; p. 995.
Silk, Manufacture of artificial. H. Bernstein. No. 960,791; June 7; Sp. p. 1118; Gaz. vol. 155; p. 187.
Singeing-comb. E. Krause. No. 961,620; June 14; Sp. p. 2855; Gaz. vol. 155; p. 493.
Singeing textile fabrics, Device for. G. Gin. No. 962,828; June 28; Sp. p. 5465; Gaz. vol. 155; p. 954.

Sink-and-float testing apparatus. G. R. Delamater. No. 961,846; June 21; Sp. p. 3323; Gaz. vol. 155; p. 593.
Sink-stopple. M. S. Hufschmidt. No. 962,570; June 28; Sp. p. 4941; Gaz. vol. 155; p. 865.
Sink trap, Kitchen-. T. H. Hall. No. 960,901; June 7; Sp. p. 1329; Gaz. vol. 155; p. 223.
Siphon. E. C. Cook. No. 962,624; June 28; Sp. p. 5052; Gaz. vol. 155; p. 883.
Skating-rink and merry-go-round, Combined. C. A. Ancil and J. Bollet. No. 962,006; June 28; Sp. p. 5017; Gaz. vol. 155; p. 877.
Skid. W. A. Campbell. No. 962,815; June 28; Sp. p. 5487; Gaz. vol. 155; p. 950.
Skirt and trousers hanger. M. A. Hoffman. No. 960,549; June 7; Sp. p. 639; Gaz. vol. 155; p. 104.
Skirt, Maternity-. W. Padernacht. No. 960,689; June 7; Sp. p. 920; Gaz. vol. 155; p. 152.
Slag-treating apparatus. R. C. Gangewere. No. 961,602; June 14; Sp. p. 2818; Gaz. vol. 155; p. 488.
Sleigh. W. Walpole. No. 961,469; June 14; Sp. p. 2532; Gaz. vol. 155; p. 444.
Sleigh. B. M. Wentworth. No. 963,015; June 28; Sp. p. 5809; Gaz. vol. 155; p. 1017.
Sleigh, Auto-. O. Tubbs. No. 962,272; June 21; Sp. p. 4266; Gaz. vol. 155; p. 738.
Sleigh-runner. W. Klaus. No. 961,415; June 14; Sp. p. 2405; Gaz. vol. 155; p. 425.
Slicing-machine. A. B. Jennings. No. 960,334; June 7; Sp. p. 197; Gaz. vol. 155; p. 34.
Smelting-furnaces, Twyer-receiver for. J. O. Bardill. No. 962,112; June 21; Sp. p. 3922; Gaz. vol. 155; p. 684.
Smelting pyritic ores. J. P. Channing and F. J. Falding. No. 963,020; June 28; Sp. p. 5818; Gaz. vol. 155; p. 1019.
Smoke-consumer. C. F. Harris. No. 961,072; June 7; Sp. p. 1672; Gaz. vol. 155; p. 280.
Snap-hook. A. R. McDonnell. No. 960,676; June 7; Sp. p. 982; Gaz. vol. 155; p. 148.
Snap-hook, Bolt. F. W. Covert. No. 961,686; June 14; Sp. p. 2979; Gaz. vol. 155; p. 516.
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Snow-machine. C. Reynolds. No. 962,917; June 28; Sp. p. 5626; Gaz. vol. 155; p. 985.
Snow-melter. S. B. Goff. No. 961,604; June 14; Sp. p. 2823; Gaz. vol. 155; p. 488.
Soap-dispenser. C. E. Wade. No. 962,682; June 28; Sp. p. 5159; Gaz. vol. 155; p. 902.
Soap in lavatories, Apparatus for the distribution of liquid. R. N. Sheldon. No. 962,394; June 21; Sp. p. 4510; Gaz. vol. 155; p. 778.
Soap receptacle, Shaving-. O. E. Pagan. No. 962,091; June 21; Sp. p. 3863; Gaz. vol. 155; p. 676.
Soda-ash, Tube for dissolving-. W. H. Mussey. No. 961,789; June 21; Sp. p. 3196; Gaz. vol. 155; p. 574.
Soda, Manufacture of bicarbonate of. E. H. F. Finlay. No. 961,945; June 21; Sp. p. 3546; Gaz. vol. 155; p. 626.
Soldering chains. G. H. Benjamin. No. 962,418; June 28; Sp. p. 4578; Gaz. vol. 155; p. 810.
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Soldering machine, Can-. D. P. Robinson. No. 962,978; June 28; Sp. p. 5739; Gaz. vol. 155; p. 1005.
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Soles, Manufacture of. P. Hühn. No. 961,696; June 14; Sp. p. 2994; Gaz. vol. 155; p. 519.
Solenoid operating mechanism. E. M. Hewlett. No. 962,958; June 28; Sp. p. 5695; Gaz. vol. 155; p. 998.
Solids from liquids, Separating. W. A. Hendryx. No. 960,547; June 7; Sp. p. 635; Gaz. vol. 155; p. 103.
Sound-recording apparatus. T. A. Edison. No. 962,081; June 21; Sp. p. 3842; Gaz. vol. 155; p. 673.
Sound-reproducing machine. L. J. Gerson. No. 962,565; June 28; Sp. p. 4933; Gaz. vol. 155; p. 864.
Sound-reproducing machines, Horn for. A. R. Cunnius. No. 960,834; June 7; Sp. p. 1203; Gaz. vol. 155; p. 200.
Sounding-boards of stringed instruments, Attachment for the. J. Sheldon. No. 962,393; June 21; Sp. p. 4509; Gaz. vol. 155; p. 778.
Spades, Auxiliary tool for use in connection with. E. M. Skinner. No. 962,723; June 28; Sp. p. 5253; Gaz. vol. 155; p. 917.
Spark-arrester. G. G. Stoup. No. 960,430; June 7; Sp. p. 387; Gaz. vol. 155; p. 65.
Spark igniter-plug, Jump-. L. B. Cherry. No. 962,314; June 21; Sp. p. 4355; Gaz. vol. 155; p. 752.
Spark-plug. J. M. Woods and J. S. Maimone. No. 961,056; June 7; Sp. p. 1639; Gaz. vol. 155; p. 274.
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Sparking apparatus. A. F. Rockwell. No. 962,255; June 21; Sp. p. 4229; Gaz. vol. 155; p. 733.
Spear, Drive-. S. S. Frampton and L. J. Bailey. No. 962,020; June 21; Sp. p. 3700; Gaz. vol. 155; p. 650.
Speed-controller. J. T. Cowley. No. 962,819; June 28; Sp. p. 5444; Gaz. vol. 155; p. 961.
Speed-controlling device applicable to electric motors and generators. D. Balachowsky and P. Caire. No. 960,774; June 7; Sp. p. 1088; Gaz. vol. 155; p. 182.
Speed-gage. L. A. Casgrain. No. 962,622; June 28; Sp. p. 5044; Gaz. vol. 155; p. 882.
Speed-indicator. A. M. Hudson. No. 960,329; June 7; Sp. p. 176; Gaz. vol. 155; p. 32.
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Speed indicator and recorder. W. N. Mitchell. No. 960,568; June 7; Sp. p. 675; Gaz. vol. 155; p. 111.
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Speedometer. L. E. Blanchard. No. 961,676; June 14; Sp. p. 2965; Gaz. vol. 155; p. 513.
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Spike. G. Petecsoia. No. 960,694; June 7; Sp. p. 931; Gaz. vol. 155; p. 154.
Spike-puller. P. J. Björk. No. 960,621; June 7; Sp. p. 738; Gaz. vol. 155; p. 129.
Spindle, Pneumatic. R. H. Moore. No. 961,307; June 14; Sp. p. 2177; Gaz. vol. 155; p. 389.
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Splice-bar lock. E. S. Shipman. No. 961,031; June 7; Sp. p. 1501; Gaz. vol. 155; p. 266.
Splicing device. A. F. Altheide. No. 961,201; June 14; Sp. p. 1945; Gaz. vol. 155; p. 352.
Sponge-sheet. R. A. Dunning. No. 960,855; June 7; Sp. p. 1243; Gaz. vol. 155; p. 207.
Spool-holder. J. V. Newton. No. 961,637; June 14; Sp. p. 2889; Gaz. vol. 155; p. 499.
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Spraying device. W. Ahlen. No. 961,195; June 14; Sp. p. 1935; Gaz. vol. 155; p. 350.
Spraying-machine. J. G. Mastin. No. 961,456; June 14; Sp. p. 2499; Gaz. vol. 155; p. 440.
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Spring-jack structure. H. J. Kusel. No. 962,847; June 28; Sp. p. 5495; Gaz. vol. 155; p. 961.
Spring-wheel. F. Westerbeck. No. 960,749; June 7; Sp. p. 1030; Gaz. vol. 155; p. 173.
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Square. A. B. Jennings. No. 962,149; June 21; Sp. p. 4015; Gaz. vol. 155; p. 697.
Stack and shed cover. A. Butler. No. 960,270; June 7; Sp. p. 64; Gaz. vol. 155; p. 14.
Stacker, Pneumatic. J. A. Walsh. No. 962,068; June 21; Sp. p. 3815; Gaz. vol. 155; p. 668.
Stairs, Metallic. G. Sandblom. No. 960,412; June 7; Sp. p. 357; Gaz. vol. 155; p. 60.
Stalk-cutter. L. Sanders. No. 961,988; June 21; Sp. p. 3637; Gaz. vol. 155; p. 639.
Stamping-machine. C. Chambers, Jr. No. 960,819; June 7; Sp. p. 1174; Gaz. vol. 155; p. 196.
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Station or street indicator. G. W. Lloyd. No. 961,243; June 14; Sp. p. 2032; Gaz. vol. 155; p. 366.
Stationery. M. I. Hufey. No. 962,961; June 28; Sp. p. 5703; Gaz. vol. 155; p. 999.
Stay-bolt header. A. Guthrie. No. 960,313; June 7; Sp. p. 146; Gaz. vol. 155; p. 28.
Steam-boiler. J. Buyhers. No. 961,062; June 7; Sp. p. 1706; Gaz. vol. 155; p. 288.
Steam-engine. H. L. Thompson. No. 960,433; June 7; Sp. p. 399; Gaz. vol. 155; p. 67.
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Steam-engine. J. March. No. 962,947; June 28; Sp. p. 5607; Gaz. vol. 155; p. 994.
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Steam-generator. R. J. Galbraith. No. 961,490; June 14; Sp. p. 2587; Gaz. vol. 155; p. 451.

Steam-generator. G. M. L. Moore-Irvine. No. 961,516; June 14; Sp. p. 2629; Gaz. vol. 155; p. 459.
Steam-separator. H. W. Spencer. No. 961,037; June 7; Sp. p. 1505; Gaz. vol. 155; p. 268.
Steelyard. G. Darmstädter. No. 960,837; June 7; Sp. p. 1210; Gaz. vol. 155; p. 201.
Steering apparatus, Chain-gear. A. Sundh. No. 962,268; June 21; Sp. p. 4257; Gaz. vol. 155; p. 736.
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Steering-knuckle. T. V. Buckwalter. No. 962,491; June 28; Sp. p. 4756; Gaz. vol. 155; p. 838.
Stencils, Manufacture of. W. H. Boone. No. 961,579; June 14; Sp. p. 2765; Gaz. vol. 155; p. 479.
Stenographic machine. W. J. Kehoe. No. 960,951; June 7; Sp. p. 1419; Gaz. vol. 155; p. 239.
Step or tread. F. H. Stanwood. No. 961,176; June 14; Sp. p. 1887; Gaz. vol. 155; p. 343.
Sterilizer. S. Blickman. No. 962,809; June 28; Sp. p. 5430; Gaz. vol. 155; p. 948.
Stiletto for embroidery and art crafting, Adjustable. L. Türk. No. 960,738; June 7; Sp. p. 1009; Gaz. vol. 155; p. 170.
Still. I. M. Lee. No. 962,965; June 28; Sp. p. 5708; Gaz. vol. 155; p. 1001.
Stitch separating and indenting tool. J. B. Hadaway. No. 962,139; June 21; Sp. p. 3991; Gaz. vol. 155; p. 693.
Stitching instrument, Wire-. V. Fischer. No. 960,300; June 7; Sp. p. 118; Gaz. vol. 155; p. 23.
Stock-drawer. R. S. Brown. No. 962,122; June 21; Sp. p. 3953; Gaz. vol. 155; p. 687.
Stocking. E. M. Newton. No. 962,080; June 21; Sp. p. 3861; Gaz. vol. 155; p. 676.
Stoker mechanism. P. L. Crowe. No. 962,322; June 21; Sp. p. 4373; Gaz. vol. 155; p. 755.
Stone, Casting artificial. J. B. Simpson. No. 962,924; June 28; Sp. p. 5630; Gaz. vol. 155; p. 967.
Stone-saw. J. L. Peirce. No. 962,663; June 28; Sp. p. 5125; Gaz. vol. 155; p. 896.
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Storage battery. C. F. Washburn. No. 962,870; June 28; Sp. p. 5548; Gaz. vol. 155; p. 970.
Storehouse, Vegetable-. J. E. Lafferty. No. 961,454; June 14; Sp. p. 2495; Gaz. vol. 155; p. 439.
Stove. A. O. Hancock. No. 960,904; June 7; Sp. p. 1335; Gaz. vol. 155; p. 224.
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Stove-board. G. Pfeil. No. 962,094; June 21; Sp. p. 3868; Gaz. vol. 155; p. 677.
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Stove-leg. B. A. Baxter. No. 961,928; June 21; Sp. p. 3510; Gaz. vol. 155; p. 620.
Stovepipe and thimble. A. P. McGuirk. No. 961,519; June 14; Sp. p. 2634; Gaz. vol. 155; p. 460.
Stovepipe-coupling. E. J. Babbitt. No. 962,298; June 21; Sp. p. 4326; Gaz. vol. 155; p. 746.
Stovepipe-fastener. G. G. Oswell. No. 961,985; June 21; Sp. p. 3635; Gaz. vol. 155; p. 639.
Straightening-machine. J. P. Haga. No. 962,831; June 28; Sp. p. 5469; Gaz. vol. 155; p. 955.
Strainer, Closed fiber-. E. W. Deming. No. 962,824; June 21; Sp. p. 4376; Gaz. vol. 155; p. 755.
Strainer, Pipe-. J. Levy. No. 960,649; June 7; Sp. p. 841; Gaz. vol. 155; p. 128.
Strainer, Twin. W. S. Elliott. No. 962,202; June 21; Sp. p. 4120; Gaz. vol. 155; p. 715.
Strainer, Vegetable or fruit. E. A. Beach. No. 960,248; June 7; Sp. p. 10; Gaz. vol. 155; p. 4.
Strap supporter, Hip-. W. S. Mudd. No. 960,375; June 7; Sp. p. 280; Gaz. vol. 155; p. 47.
Straw-dispenser. A. Berman. No. 962,300; June 21; Sp. p. 4328; Gaz. vol. 155; p. 747.
Street-indicator. H. P. Brace. No. 960,803; June 7; Sp. p. 1141; Gaz. vol. 155; p. 191.
Strip-cutter. A. J. Pierce. No. 961,643; June 14; Sp. p. 2897; Gaz. vol. 155; p. 501.
Structure, Trussed. P. B. Harrison. No. 960,639; June 7; Sp. p. 819; Gaz. vol. 155; p. 134.
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Stump-puller. S. R. Hart. No. 961,074; June 7; Sp. p. 1693; Gaz. vol. 155; p. 281.
Subway construction. E. B. Hess. No. 962,145; June 21; Sp. p. 4005; Gaz. vol. 155; p. 696.
Suction-cleaner, Portable hand-operated. D. P. Moore. No. 963,008; June 28; Sp. p. 5797; Gaz. vol. 155; p. 1015.
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Telescope lens system, Galilean-. M. von Rohr. No. 962,920; June 28; Sp. p. 5634; Gaz. vol. 155; p. 986.
Templet or gage. E. J. P. Slotta. No. 962,171; June 21; Sp. p. 4062; Gaz. vol. 155; p. 705.
Tennis-court marker. E. A. Robinson. No. 961,020; June 7; Sp. p. 1570; Gaz. vol. 155; p. 263.
Tent-poles, Device for attaching stay-ropes to. J. E. Dilg. No. 960,849; June 7; Sp. p. 1228; Gaz. vol. 155; p. 205.
Tent, Suspended. C. E. Mark. No. 961,704; June 14; Sp. p. 3011; Gaz. vol. 155; p. 521.
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Testing appliance. E. Straubel. No. 962,175; June 21; Sp. p. 4070; Gaz. vol. 155; p. 706.
Testing device. J. Muchka. No. 961,419; June 14; Sp. p. 2414; Gaz. vol. 155; p. 426.
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Theatrical machinery. G. Garnier and C. Grobon. No. 960,886; June 7; Sp. p. 1305; Gaz. vol. 155; p. 219.
Thermo-electric regulator. W. E. Mack. No. 961,145; June 14; Sp. p. 1821; Gaz. vol. 155; p. 330.
Thermostat. W. Easterline. No. 960,860; June 7; Sp. p. 1250; Gaz. vol. 155; p. 209.
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Thread-coating machine. J. L. Rollins. No. 962,260; June 21; Sp. p. 4241; Gaz. vol. 155; p. 734.
Threshing-machine. E. Herr. No. 961,775; June 21; Sp. p. 3173; Gaz. vol. 155; p. 569.
Ticket-case. V. D. Hitchings and E. W. Face. No. 961,610; June 14; Sp. p. 2832; Gaz. vol. 155; p. 490.
Ticket-holder. H. Hirsch. No. 961,075; June 7; Sp. p. 1694; Gaz. vol. 155; p. 281.
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Tie: *See* Bag-tie; Baling-tie; Package-tie; Railway-tie; Wall-tie.
Tie-plate. P. Laden. No. 960,964; June 7; Sp. p. 1447; Gaz. vol. 155; p. 243.
Tie-plate. W. L. De Remer. No. 962,750; June 28; Sp. p. 5311; Gaz. vol. 155; p. 927.
Tie-plate. W. L. De Remer. No. 962,751; June 28; Sp. p. 5312; Gaz. vol. 155; p. 928.
Tie-plates or the like, Manufacture of. J. E. York. No. 961,066; June 14; Sp. p. 2044; Gaz. vol. 155; p. 509.
Tie-spacing jack. L. P. Puckett. No. 960,398; June 7; Sp. p. 331; Gaz. vol. 155; p. 55.
Tightening device. C. T. Cunnius. No. 961,688; June 14; Sp. p. 2983; Gaz. vol. 155; p. 516.
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Timer. D. W. Hare. No. 961,407; June 14; Sp. p. 2386; Gaz. vol. 155; p. 422.
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Tire armor, Pneumatic-. I. Goldstein. No. 960,308; June 7; Sp. p. 133; Gaz. vol. 155; p. 26.
Tire, Automobile-. G. F. and C. C. Annis. No. 962,729; June 28; Sp. p. 5271; Gaz. vol. 155; p. 920.
Tire-carrier. L. A. Dow. No. 962,401; June 21; Sp. p. 4526; Gaz. vol. 155; p. 781.
Tire-carrier. C. F. Batt. No. 962,730; June 28; Sp. p. 5272; Gaz. vol. 155; p. 920.
Tire for vehicle-wheels, Elastic. B. A. Godek. No. 961,955; June 21; Sp. p. 3574; Gaz. vol. 155; p. 630.
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Tire-holder and trunk. F. S. Suthergreen. No. 961,553; June 14; Sp. p. 2717; Gaz. vol. 155; p. 471.
Tire-plug. L. A. Bourquenes. No. 962,615; June 28; Sp. p. 5030; Gaz. vol. 155; p. 880.
Tire, Pneumatic. W. A. Lurie. No. 962,230; June 21; Sp. p. 4169; Gaz. vol. 155; p. 724.
Tire, Pneumatic. W. B. Hartridge. No. 962,897; June 28; Sp. p. 5594; Gaz. vol. 155; p. 979.
Tire, Resilient. J. Baar. No. 962,297; June 21; Sp. p. 4324; Gaz. vol. 155; p. 746.
Tire-shoe wrappings, Compression apparatus for. R. Rowley and J. J. Coomber. No. 962,102; June 21; Sp. p. 3889; Gaz. vol. 155; p. 680.
Tire-shrinker. G. E. Blake. No. 960,798; June 7; Sp. p. 1130; Gaz. vol. 155; p. 189.
Tire, Spring-. V. Bauer. No. 961,065; June 7; Sp. p. 1660; Gaz. vol. 155; p. 278.
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Tire, Vehicle-. J. C. Schleicher. No. 961,874; June 14; Sp. p. 2333; Gaz. vol. 155; p. 412.
Tire, Wheel-. P. Midgley. No. 962,778; June 28; Sp. p. 5363; Gaz. vol. 155; p. 937.
Tires, Chain shield for pneumatic. L. W. Noyes. No. 961,791; June 21; Sp. p. 3200; Gaz. vol. 155; p. 574.
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Tires, Making shoes for automobile and other vehicle. R. Rowley and J. J. Coomber. No. 962,064; June 21; Sp. p. 3779; Gaz. vol. 155; p. 663.
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Tobacco-leaves, Stemming. J. O. Morris. No. 961,746; June 14; Sp. p. 3108; Gaz. vol. 155; p. 536.
Tobacco-pipe. J. W. Steward. No. 960,429; June 7; Sp. p. 386; Gaz. vol. 155; p. 64.
Tobacco-pipe. J. R. Perry. No. 961,255; June 14; Sp. p. 2056; Gaz. vol. 155; p. 370.
Tobacco-pipe. W. Neve. No. 961,790; June 21; Sp. p. 3199; Gaz. vol. 155; p. 574.
Tobacco-stemming machine. J. O. Morris. No. 961,635; June 14; Sp. p. 2884; Gaz. vol. 155; p. 499.
Tongue and groove cutter, Dovetail. C. Bodmer. No. 962,895; June 28; Sp. p. 5576; Gaz. vol. 155; p. 975.
Tongue, Wagon-. A. Lindberg. No. 962,866; June 21; Sp. p. 4450; Gaz. vol. 155; p. 769.
Tongues, Neck-yoke holder for wagon-. C. H. Lewis. No. 960,566; June 7; Sp. p. 673; Gaz. vol. 155; p. 110.
Tool. H. E. Jordon and D. A. Sullivan. No. 961,617; June 14; Sp. p. 2849; Gaz. vol. 155; p. 492.
Tool, Electrically-heated. W. G. Clark. No. 961,103; June 14; Sp. p. 1748; Gaz. vol. 155; p. 317.
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Torch, Contractor's. A. F. Jenkins. No. 962,640; June 28; Sp. p. 5078; Gaz. vol. 155; p. 888.
Torpedo-shell. E. S. Lafferty. No. 961,148; June 14; Sp. p. 1819; Gaz. vol. 155; p. 330.
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Toy. C. J. Schneider. No. 960,715; June 7; Sp. p. 988; Gaz. vol. 155; p. 161.
Toy. D. M. Lemon. No. 962,154; June 21; Sp. p. 4026; Gaz. vol. 155; p. 699.
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Toy, Figure. S. M. Siegel. No. 961,812; June 21; Sp. p. 3257; Gaz. vol. 155; p. 581.
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Toy, Flying. W. C. Capewell. No. 962,743; June 28; Sp. p. 5294; Gaz. vol. 155; p. 924.
Toy handkerchief-box. H. A. Young. No. 961,831; June 14; Sp. p. 2256; Gaz. vol. 155; p. 398.
Trace-carrier. O. S. Pittenger. No. 961,009; June 7; Sp. p. 1552; Gaz. vol. 155; p. 260.
Trace-fastener. T. E. Ewer. No. 962,422; June 28; Sp. p. 4606; Gaz. vol. 155; p. 813.
Track-channeler, Electropneumatic. A. H. Gibson. No. 962,755; June 28; Sp. p. 5310; Gaz. vol. 155; p. 929.
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Tray-attaching device. W. C. Green. No. 961,771; June 21; Sp. p. 3166; Gaz. vol. 155; p. 568.
Tray, Collapsible. H. M. Hays. No. 961,228; June 14; Sp. p. 2004; Gaz. vol. 155; p. 362.
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Tree-felling device. S. J. Black. No. 962,116; June 21; Sp. p. 3931; Gaz. vol. 155; p. 686.
Tree-holder. M. F. Burkart, Jr. No. 960,497; June 7; Sp. p. 517; Gaz. vol. 155; p. 90.
Trick-box. A. Jedel. No. 962,843; June 28; Sp. p. 5488; Gaz. vol. 155; p. 960.
Trolley. G. F. Steedman. No. 960,728; June 7; Sp. p. 991; Gaz. vol. 155; p. 165.
Trolley. G. A. Ledey. No. 962,365; June 21; Sp. p. 4458; Gaz. vol. 155; p. 768.
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Trolley for electrically-propelled vehicles. J. Kolin. No. 960,559; June 7; Sp. p. 661; Gaz. vol. 155; p. 108.
Trolley-switch. F. L. Seaman. No. 962,533; June 28; Sp. p. 4851; Gaz. vol. 155; p. 853.
Trolley-wheel guard. H. L. Miller. No. 961,786; June 21; Sp. p. 3193; Gaz. vol. 155; p. 573.
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Trowel, Adjustable. H. W. Linville. No. 961,802; June 14; Sp. p. 2100; Gaz. vol. 155; p. 383.
Truck. B. Rosenfeld. No. 960,407; June 7; Sp. p. 345; Gaz. vol. 155; p. 58.
Truck. B. F. Seibert. No. 961,807; June 21; Sp. p. 3248; Gaz. vol. 155; p. 580.
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Truck for railways, Elastic overhead. H. H. Tunis. No. 962,179; June 21; Sp. p. 4079; Gaz. vol. 155; p. 706.
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Tumbler-holder. W. A. Younie. No. 961,568; June 14; Sp. p. 2751; Gaz. vol. 155; p. 476.
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Type-writer cabinet. E. Baltzley. No. 961,525; June 14; Sp. p. 2652; Gaz. vol. 155; p. 462.
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Umbrella, Folding. O. E. Walton. No. 962,530; June 28; Sp. p. 4861; Gaz. vol. 155; p. 855.
Umbrella, Folding. H. Helgerson. No. 963,008; June 28; Sp. p. 5789; Gaz. vol. 155; p. 1013.

Umbrella stretcher and rib-joint. M. H. Hartsell. No. 962,218; June 21; Sp. p. 4141; Gaz. vol. 155; p. 719.
Universal joint. L. H. Hoose. No. 960,827; June 7; Sp. p. 174; Gaz. vol. 155; p. 32.
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Unloading apparatus. B. Bertke. No. 961,336; June 14; Sp. p. 2264; Gaz. vol. 155; p. 400.
Valve. J. A. Deasy. No. 960,280; June 7; Sp. p. 80; Gaz. vol. 155; p. 17.
Valve. M. Warren. No. 960,605; June 7; Sp. p. 743; Gaz. vol. 155; p. 128.
Valve. T. Shade. No. 961,466; June 14; Sp. p. 2524; Gaz. vol. 155; p. 443.
Valve. G. G. Little. No. 961,505; June 14; Sp. p. 2611; Gaz. vol. 155; p. 456.
Valve. C. Walker. No. 961,821; June 21; Sp. p. 3280; Gaz. vol. 155; p. 585.
Valve. T. P. Long. No. 962,368; June 21; Sp. p. 4463; Gaz. vol. 155; p. 769.
Valve. J. G. Nolen. No. 962,660; June 28; Sp. p. 5121; Gaz. vol. 155; p. 895.
Valve. E. A. Lacy and F. C. Williams. No. 962,766; June 28; Sp. p. 5342; Gaz. vol. 155; p. 934.
Valve, Alarm-. H. Vissering. No. 960,742; June 7; Sp. p. 1016; Gaz. vol. 155; p. 171.
Valve, Automatic pressure-reduction. W. H. Bice. No. 962,737; June 28; Sp. p. 5284; Gaz. vol. 155; p. 922.
Valve, Combined check and gate. J. H. Stickel. No. 961,738; June 14; Sp. p. 3088; Gaz. vol. 155; p. 533.
Valve-control mechanism, Explosion-engine. N. T. Harrington. No. 962,214; June 21; Sp. p. 4139; Gaz. vol. 155; p. 718.
Valve-controller, Electric. A. T. Wilson. No. 960,757; June 7; Sp. p. 1044; Gaz. vol. 155; p. 176.
Valve-controlling mechanism, Internal-combustion-engine. F. J. Miller. No. 962,159; June 21; Sp. p. 4036; Gaz. vol. 155; p. 701.
Valve device. J. Siorach. No. 961,173; June 14; Sp. p. 1883; Gaz. vol. 155; p. 342.
Valve, Engine-. J. B. Allfree. No. 960,615; June 7; Sp. p. 773; Gaz. vol. 155; p. 126.
Valve, Engine-. J. B. Allfree. No. 960,616; June 7; Sp. p. 777; Gaz. vol. 155; p. 127.
Valve, Engineer's. H. W. Cheney. No. 961,083; June 7; Sp. p. 1708; Gaz. vol. 155; p. 284.
Valve for carbureters and other apparatus. A. E. England. No. 961,590; June 14; Sp. p. 2797; Gaz. vol. 155; p. 484.
Valve for drainage and irrigating systems. E. M. Fowler. No. 961,292; June 14; Sp. p. 2147; Gaz. vol. 155; p. 385.
Valve for motors, Controlling-. C. A. Parsons and A. W. Bowerbank. No. 962,044; June 21; Sp. p. 3756; Gaz. vol. 155; p. 659.
Valve for sewers, Check-. C. J. E. Carlson. No. 961,286; June 14; Sp. p. 2134; Gaz. vol. 155; p. 383.
Valve, Gate-. A. W. Fischer. No. 961,594; June 14; Sp. p. 2805; Gaz. vol. 155; p. 485.
Valve-gear, Fluid-pressure-engine. J. T. Marshall. No. 962,374; June 21; Sp. p. 4472; Gaz. vol. 155; p. 771.
Valve gear for steam-locomotives, Slide-. A. Jendrusik. No. 961,615; June 14; Sp. p. 2837; Gaz. vol. 155; p. 491.
Valve-gear, Spring-bolster for. G. Graham. No. 962,963; June 28; Sp. p. 5687; Gaz. vol. 155; p. 993.
Valve mechanism. C. W. Everson and G. F. D. Trask. No. 961,220; June 14; Sp. p. 1990; Gaz. vol. 155; p. 359.
Valve-operating mechanism. R. S. Carr. No. 960,816; June 7; Sp. p. 1169; Gaz. vol. 155; p. 195.
Valve, Piston-. J. A. Heany. No. 960,912; June 7; Sp. p. 1348; Gaz. vol. 155; p. 226.
Valve, Pressure-relief. J. W. Foster. No. 960,302; June 7; Sp. p. 124; Gaz. vol. 155; p. 24.
Valve, Pressure-retaining. H. F. Bickel. No. 962,545; June 28; Sp. p. 4877; Gaz. vol. 155; p. 856.
Valve, Reciprocating. J. H. and G. C. Becker. No. 960,786; June 7; Sp. p. 1108; Gaz. vol. 155; p. 185.
Valve, Reducing-. G. E. Witt. No. 960,758; June 7; Sp. p. 1046; Gaz. vol. 155; p. 176.
Valve, Rotary steam-. T. F. Scollard. No. 960,717; June 7; Sp. p. 971; Gaz. vol. 155; p. 161.
Valve, Safety-. L. Schutte. No. 961,735; June 14; Sp. p. 3078; Gaz. vol. 155; p. 532.
Valve, Steam, air, and water trap. F. W. Leutheuser. No. 960,972; June 7; Sp. p. 1467; Gaz. vol. 155; p. 246.
Valve, Steam-regulating. W. F. Kiesel, Jr. No. 961,300; June 14; Sp. p. 2166; Gaz. vol. 155; p. 387.
Valve, Throttle-. J. Tonge. No. 960,735; June 7; Sp. p. 1005; Gaz. vol. 155; p. 169.
Valve, Trip-. A. W. Fischer. No. 960,872; June 7; Sp. p. 1270; Gaz. vol. 155; p. 213.
Valve, Variable-time-operating oil-controlled. J. F. Ware. No. 961,274; June 14; Sp. p. 2105; Gaz. vol. 155; p. 377.
Valves, Regulating apparatus for mixing-. C. Assmann. No. 962,111; June 21; Sp. p. 3920; Gaz. vol. 155; p. 683.
Vamp-trimming machine. O. Ashton. No. 961,200; June 14; Sp. p. 1942; Gaz. vol. 155; p. 351.
Vaults, safes, &c., Electrically-protected plate and lining for. J. P. Williams. No. 961,526; June 21; Sp. p. 3287; Gaz. vol. 155; p. 596.
Vegetable-cutter. J. P. Eckert. No. 962,500; June 28; Sp. p. 4779; Gaz. vol. 155; p. 841.
Vehicle. J. Reinehr. No. 961,532; June 14; Sp. p. 2668; Gaz. vol. 155; p. 464.
Vehicle. E. Lange. No. 962,229; June 21; Sp. p. 4168; Gaz. vol. 155; p. 724.
Vehicle. A. F. Rockwell. No. 962,258; June 21; Sp. p. 4237; Gaz. vol. 155; p. 733.
Vehicle and like hood, Motor-. J. S. Cree. No. 961,687; June 14; Sp. p. 2961; Gaz. vol. 155; p. 516.
Vehicle auxiliary spring. J. Eckhard. No. 962,703; June 28; Sp. p. 5216; Gaz. vol. 155; p. 910.
Vehicle, Balancing. C. L. Dougherty. No. 960,838; June 7; Sp. p. 1211; Gaz. vol. 155; p. 202.
Vehicle-body support. A. F. Rockwell. No. 962,256; June 21; Sp. p. 4231; Gaz. vol. 155; p. 732.
Vehicle-body support. A. F. Rockwell. No. 962,259; June 21; Sp. p. 4239; Gaz. vol. 155; p. 734.
Vehicle collapsible hood or canopy. J. C. Keil and W. B. Allen. No. 960,338; June 7; Sp. p. 205; Gaz. vol. 155; p. 35.
Vehicle driving mechanism, Motor-. F. M. Olson. No. 960,688; June 7; Sp. p. 915; Gaz. vol. 155; p. 152.
Vehicle foot-rest. H. D. Hansford. No. 962,637; June 28; Sp. p. 5078; Gaz. vol. 155; p. 887.
Vehicle foot-rest, Motor-. R. Huff. No. 961,860; June 21; Sp. p. 3277; Gaz. vol. 155; p. 598.
Vehicle-gear, Pneumatic. L. J. Perkins. No. 960,579; June 7; Sp. p. 698; Gaz. vol. 155; p. 115.
Vehicle-lubricating means, Motor-. E. Huff. No. 962,509; June 28; Sp. p. 4790; Gaz. vol. 155; p. 844.
Vehicle, Motor-. A. F. Rockwell. No. 961,372; June 14; Sp. p. 2330; Gaz. vol. 155; p. 411.
Vehicle-seat, Supplementary. F. F. Breithan. No. 961,480; June 14; Sp. p. 2555; Gaz. vol. 155; p. 447.
Vehicle signal, Motor-. E. M. Pierson. No. 961,158; June 14; Sp. p. 1848; Gaz. vol. 155; p. 335.
Vehicle-spring. A. A. Poehlyn and H. A. King. No. 960,395; June 7; Sp. p. 327; Gaz. vol. 155; p. 54.
Vehicle-spring. W. E. Eastman. No. 962,557; June 28; Sp. p. 4917; Gaz. vol. 155; p. 861.
Vehicle-top. H. C. Martell. No. 960,979; June 7; Sp. p. 1481; Gaz. vol. 155; p. 249.
Vehicle-top-bow holder. S. T. Allen. No. 962,487; June 28; Sp. p. 4749; Gaz. vol. 155; p. 836.
Vehicle-wheel. J. H. Watters. No. 960,460; June 7; Sp. p. 436; Gaz. vol. 155; p. 74.
Vehicle-wheel. J. L. Day. No. 960,513; June 7; Sp. p. 550; Gaz. vol. 155; p. 91.
Vehicle-wheel. F. R. Dudley. No. 962,010; June 21; Sp. p. 3679; Gaz. vol. 155; p. 647.
Vehicle-wheel. F. Tompkins. No. 962,066; June 21; Sp. p. 3812; Gaz. vol. 155; p. 667.
Vehicles and the like, Transmission-gear mechanism for motor-. C. A. McKiearnan. No. 960,573; June 7; Sp. p. 687; Gaz. vol. 155; p. 113.
Vehicles, Hood for motor or other. J. S. Cree. No. 960,832; June 7; Sp. p. 1202; Gaz. vol. 155; p. 200.
Vehicles, Means for locking the steering mechanism of motor-. A. B. Walters. No. 961,300; June 14; Sp. p. 2359; Gaz. vol. 155; p. 417.
Vending apparatus. J. Whistler and R. A. Dudeck. No. 962,283; June 21; Sp. p. 4293; Gaz. vol. 155; p. 742.
Vending-machine. M. J. Walther. No. 961,051; June 7; Sp. p. 1630; Gaz. vol. 155; p. 273.
Vending-machine. H. Werden. No. 961,277; June 14; Sp. p. 2115; Gaz. vol. 155; p. 379.
Vending-machine. W. E. Hales. No. 961,694; June 14; Sp. p. 2990; Gaz. vol. 155; p. 518.
Vending machine, Cigar-. W. D. Evans and J. T. Marshall. No. 962,825; June 28; Sp. p. 5452; Gaz. vol. 155; p. 963.
Vending-machine coin-controlled delivery mechanism. C. M. Linde and F. C. Franke. No. 960,356; June 7; Sp. p. 240; Gaz. vol. 155; p. 41.
Vending machine, Merchandise-. H. B. Hunter. No. 962,639; June 28; Sp. p. 5075; Gaz. vol. 155; p. 887.
Vending slugs, Machine for. G. H. Van Court and E. I. Marks. No. 961,916; June 21; Sp. p. 3480; Gaz. vol. 155; p. 616.
Ventilating apparatus. D. Hill. No. 960,921; June 7; Sp. p. 1359; Gaz. vol. 155; p. 228.
Ventilator: *See* Automatic ventilator; Car-ventilator; Window-ventilator.
Ventilator. J. E. and A. A. Fisher. No. 960,873; June 7; Sp. p. 1273; Gaz. vol. 155; p. 214.
Ventilator. C. F. Henderson. No. 960,917; June 7; Sp. p. 1355; Gaz. vol. 155; p. 227.
Ventilator. J. Keith and C. Tuson. No. 962,357; June 21; Sp. p. 4446; Gaz. vol. 155; p. 766.
Vests, Attachment for holding down. E. C. Fritsche. No. 960,303; June 7; Sp. p. 125; Gaz. vol. 155; p. 25.
Veterinary obstetrical instrument. C. Gebel. No. 960,885; June 7; Sp. p. 1301; Gaz. vol. 155; p. 216.
Vibrating screen or separator. T. L. and T. J. Sturtevant. No. 961,467; June 14; Sp. p. 2526; Gaz. vol. 155; p. 443.
Vibration-indicator. B. Volkmar. No. 962,679; June 28; Sp. p. 5152; Gaz. vol. 155; p. 901.
Vibratory apparatus, Valve-operated mechanism for handles of. C. M. Siebert, Jr. No. 961,379; June 14; Sp. p. 2342; Gaz. vol. 155; p. 414.
Vise. R. J. Schlosser. No. 962,983; June 28; Sp. p. 5749; Gaz. vol. 155; p. 1003.
Voltage-regulator. W. L. Thomson. No. 960,734; June 7; Sp. p. 1003; Gaz. vol. 155; p. 168.
Voltage-regulator. C. B. Johnson. No. 961,411; June 14; Sp. p. 2395; Gaz. vol. 155; p. 424.
Voting-machine. W. I. Kirk. No. 960,956; June 7; Sp. p. 1430; Gaz. vol. 155; p. 241.

Wagon and sled, Combined low-wheeled. H. S. Somsen. No. 962,266; June 21; Sp. p. 4254; Gaz. vol. 155; p. 736.
Wagon-bed hoist. A. Moyer. No. 960,670; June 7; Sp. p. 883; Gaz. vol. 155; p. 146.
Wagon-box fastener. H. E. Macy. No. 962,231; June 21; Sp. p. 4171; Gaz. vol. 155; p. 724.
Wagon-brake. D. Meek. No. 961,348; June 14; Sp. p. 2041; Gaz. vol. 155; p. 368.
Wagon-brake. C. D. Linton. No. 962,442; June 28; Sp. p. 4649; Gaz. vol. 155; p. 820.
Wagon-brake. H. M. Mahan. No. 962,775; June 28; Sp. p. 5358; Gaz. vol. 155; p. 936.
Wagon, Vending-. D. Boyle. No. 960,802; June 7; Sp. p. 1138; Gaz. vol. 155; p. 190.
Wall tie or bond. A. C. Decker. No. 961,584; June 14; Sp. p. 2770; Gaz. vol. 155; p. 481.
Walls, Fastening means for. H. E. Jerauld. No. 961,698; June 14; Sp. p. 2996; Gaz. vol. 155; p. 519.
Walls, Making collapsible and expansible corrugated. W. M. Fulton. No. 962,061; June 28; Sp. p. 5682; Gaz. vol. 155; p. 996.
Ware, Cleansing apparatus for metallic. A. W. Obermann. No. 961,792; June 21; Sp. p. 3202; Gaz. vol. 155; p. 575.
Warp-handling apparatus. H. D. Colman. No. 962,400; June 21; Sp. p. 4521; Gaz. vol. 155; p. 780.
Washboard. A. Penovi and H. A. Breese. No. 962,046; June 21; Sp. p. 3760; Gaz. vol. 155; p. 660.
Washboard. C. P. St. John. No. 962,598; June 28; Sp. p. 4998; Gaz. vol. 155; p. 875.
Washboard attachment. J. R. Casey. No. 962,891; June 28; Sp. p. 5536; Gaz. vol. 155; p. 977.
Washer: *See* Lock-washer.
Washing and conveying apparatus, Combined. A. L. Duncan. No. 962,628; June 28; Sp. p. 5058; Gaz. vol. 155; p. 884.
Washing-machine. J. Hulkenberg and B. J. Mattes. No. 960,330; June 7; Sp. p. 178; Gaz. vol. 155; p. 33.
Washing-machine. G. S. Winant. No. 960,478; June 7; Sp. p. 464; Gaz. vol. 155; p. 78.
Washing-machine. S. Evenson. No. 960,866; June 7; Sp. p. 1262; Gaz. vol. 155; p. 211.
Washing-machine. H. S. Judd. No. 962,510; June 28; Sp. p. 4791; Gaz. vol. 155; p. 844.
Washing-machine. J. Wierling. No. 962,803; June 28; Sp. p. 5418; Gaz. vol. 155; p. 946.
Washing-machine, Laundry. E. Probst. No. 962,526; June 28; Sp. p. 4831; Gaz. vol. 155; p. 850.
Washing-machine-operating mechanism. G. N. Meves. No. 961,877; June 21; Sp. p. 3412; Gaz. vol. 155; p. 603.
Washing-machine-operating mechanism. G. N. Meves. No. 961,878; June 21; Sp. p. 3417; Gaz. vol. 155; p. 604.
Washing-machine-operating mechanism. G. N. Meves. No. 961,879; June 21; Sp. p. 3421; Gaz. vol. 155; p. 604.
Washing-machine-operating mechanism. G. N. Meves. No. 962,158; June 21; Sp. p. 4034; Gaz. vol. 155; p. 700.
Washpail. G. H. Reeves. No. 961,631; June 14; Sp. p. 2667; Gaz. vol. 155; p. 464.
Waste and overflow, Combined. H. and P. Mueller. No. 962,577; June 28; Sp. p. 4954; Gaz. vol. 155; p. 868.
Watch-holder for motor-vehicles. H. T. Adams. No. 961,571; June 14; Sp. p. 2755; Gaz. vol. 155; p. 477.
Watchmaker's loop. W. Faustman. No. 961,592; June 14; Sp. p. 2803; Gaz. vol. 155; p. 484.
Water, Apparatus for purification of. A. O. Anderberg. No. 961,926; June 21; Sp. p. 3507; Gaz. vol. 155; p. 620.
Water, Apparatus for raising temperature of. J. W. Parker and F. L. Hurtt. No. 962,405; June 21; Sp. p. 4534; Gaz. vol. 155; p. 782.
Water, Apparatus for the continuous purification of. C. H. Koyl. No. 960,959; June 7; Sp. p. 1438; Gaz. vol. 155; p. 242.
Water-closet connection. J. J. Cosgrove. No. 961,685; June 14; Sp. p. 2978; Gaz. vol. 155; p. 515.
Water-closet connection. J. J. Cosgrove. No. 962,943; June 28; Sp. p. 5671; Gaz. vol. 155; p. 993.
Water-closet-ventilating device. A. A. and A. J. Bruder. No. 962,490; June 28; Sp. p. 4755; Gaz. vol. 155; p. 837.
Water-cooler. A. N. Rose. No. 962,529; June 28; Sp. p. 4837; Gaz. vol. 155; p. 851.
Water-elevating device, Automatic. G. Baldwin. No. 960,775; June 7; Sp. p. 1088; Gaz. vol. 155; p. 182.
Water-gage. C. W. Johnson and C. M. Rathke. No. 960,944; June 7; Sp. p. 1404; Gaz. vol. 155; p. 237.
Water-heater. I. J. O'Malley. No. 960,887; June 7; Sp. p. 304; Gaz. vol. 155; p. 51.
Water-heater. H. S. Humphrey. No. 960,933; June 7; Sp. p. 1382; Gaz. vol. 155; p. 232.
Water-heater. J. R. Armington. No. 962,294; June 21; Sp. p. 4318; Gaz. vol. 155; p. 745.
Water-heater, Electric. W. F. Cutler. No. 961,937; June 21; Sp. p. 3531; Gaz. vol. 155; p. 623.
Water-heater, Portable. O. P. Churchill and M. E. Risk. No. 962,941; June 28; Sp. p. 5668; Gaz. vol. 155; p. 993.
Water-jacket stay or support. S. W. Traylor. No. 960,737; June 7; Sp. p. 1009; Gaz. vol. 155; p. 169.
Water-meter. E. E. Gamon. No. 961,116; June 14; Sp. p. 1770; Gaz. vol. 155; p. 321.
Water-motor. J. E. Bell. No. 961,749; June 21; Sp. p. 3114; Gaz. vol. 155; p. 561.
Water-motor, Hydraulic. L. L. Osborn. No. 962,382; June 21; Sp. p. 4436; Gaz. vol. 155; p. 774.
Water purifier and clarifier. J. E. Angell. No. 961,091; June 14; Sp. p. 1726; Gaz. vol. 155; p. 313.
Water, Softening. R. Gans. No. 960,887; June 7; Sp. p. 1303; Gaz. vol. 155; p. 218.
Water-tube boiler. S. C. Munoz. No. 962,454; June 28; Sp. p. 4672; Gaz. vol. 155; p. 825.
Water-wheel. F. H. Hayner and D. O. Baer. No. 962,845; June 21; Sp. p. 4424; Gaz. vol. 155; p. 762.
Wax melting and applying device, Sealing-. S. C. Mathews. No. 962,375; June 21; Sp. p. 4476; Gaz. vol. 155; p. 772.
Weaner, Calf or colt. E. L. Alvord. No. 962,290; June 21; Sp. p. 4305; Gaz. vol. 155; p. 744.
Weather-strip. C. R. Ingham. No. 960,831; June 7; Sp. p. 180; Gaz. vol. 155; p. 33.
Weather-strip. O. W. Hooppaw. No. 962,351; June 21; Sp. p. 4434; Gaz. vol. 155; p. 764.
Weather-strip, Adjustable. C. Anderson. No. 961,883; June 14; Sp. p. 2849; Gaz. vol. 155; p. 415.
Weather-strip, Metal. P. L. Hedberg. No. 963,028; June 28; Sp. p. 5825; Gaz. vol. 155; p. 1020.
Wedge. J. L. Thomas. No. 961,325; June 14; Sp. p. 2246; Gaz. vol. 155; p. 396.
Weeder. S. E. Ball. No. 960,247; June 7; Sp. p. 9; Gaz. vol. 155; p. 4.
Weeder. R. M. Chambers. No. 962,940; June 28; Sp. p. 5666; Gaz. vol. 155; p. 992.
Weighing, bagging, and packing apparatus. H. Richardson. No. 962,918; June 28; Sp. p. 5627; Gaz. vol. 155; p. 985.
Weighing-machine. H. Richardson. No. 962,919; June 28; Sp. p. 5631; Gaz. vol. 155; p. 986.
Weighing mechanism for traveling cranes. A. H. McDougall. No. 961,888; June 21; Sp. p. 3434; Gaz. vol. 155; p. 607.
Weight-hanger, Automatic. G. Reddish. No. 962,721; June 28; Sp. p. 5253; Gaz. vol. 155; p. 917.
Weight-motor. J. A. Wilson. No. 961,279; June 14; Sp. p. 2119; Gaz. vol. 155; p. 379.
Well-drilling machine. C. H. Waterman. No. 960,459; June 7; Sp. p. 435; Gaz. vol. 155; p. 74.
Welts, Machine for operating on. J. B. Hadaway. No. 962,138; June 21; Sp. p. 3987; Gaz. vol. 155; p. 692.
Wheel: *See* Automobile steering-wheel; Car-wheel; Fifth-wheel; Fly-wheel; Resilient wheel; Spring-wheel; Sprocket-wheel; Traction-wheel; Vehicle-wheel; Water-wheel.
Wheel and tire therefor. G. D. Moore. No. 961,882; June 21; Sp. p. 3426; Gaz. vol. 155; p. 605.
Wheel connection, Vehicle-. A. F. Rockwell. No. 962,247; June 21; Sp. p. 4201; Gaz. vol. 155; p. 730.
Wheel construction. O. A. Frick. No. 962,207; June 21; Sp. p. 4127; Gaz. vol. 155; p. 716.
Wheel construction. C. A. Frick. No. 962,631; June 28; Sp. p. 5062; Gaz. vol. 155; p. 885.
Wheel coupling, Grinding and polishing. M. Cummins. No. 962,627; June 28; Sp. p. 5056; Gaz. vol. 155; p. 884.
Wheel-guard. A. Fiedler. No. 962,826; June 28; Sp. p. 5458; Gaz. vol. 155; p. 953.
Wheels, Separable rim for vehicle-. T. J. Mell. No. 960,983; June 7; Sp. p. 1488; Gaz. vol. 155; p. 250.
Wheelbarrow. J. M. Harris. No. 961,609; June 14; Sp. p. 2831; Gaz. vol. 155; p. 490.
Wheelbarrow. A. O. Hubbard. No. 961,719; June 14; Sp. p. 3041; Gaz. vol. 155; p. 527.
Whip-socket. H. Ingram. No. 962,853; June 21; Sp. p. 4438; Gaz. vol. 155; p. 765.
Wind-motor. A. W. Pickering. No. 960,894; June 7; Sp. p. 325; Gaz. vol. 155; p. 54.
Wind-motor. T. H. E. Folger. No. 961,766; June 21; Sp. p. 3159; Gaz. vol. 155; p. 567.
Wind-shield. E. S. Adams. No. 962,406; June 28; Sp. p. 4539; Gaz. vol. 155; p. 807.
Windmill. A. M. Void. No. 961,271; June 14; Sp. p. 2097; Gaz. vol. 155; p. 375.
Windmill. J. A. Swanson. No. 961,658; June 14; Sp. p. 2925; Gaz. vol. 155; p. 507.
Windmill. L. C. Matthews. No. 961,705; June 14; Sp. p. 3015; Gaz. vol. 155; p. 522.
Winding-reel. J. A. Heany. No. 960,913; June 7; Sp. p. 1349; Gaz. vol. 155; p. 227.
Window adjuster, Casement-. G. L. Wilkins. No. 961,565; June 14; Sp. p. 2746; Gaz. vol. 155; p. 475.
Window adjusting device and lock, Casement-. H. G. Voight. No. 960,452; June 7; Sp. p. 420; Gaz. vol. 155; p. 71.
Window-cleaning utensil. C. W. Coover. No. 960,276; June 7; Sp. p. 74; Gaz. vol. 155; p. 16.
Window, Double-sliding-sash. J. Mayr. No. 961,726; June 14; Sp. p. 3053; Gaz. vol. 155; p. 529.
Window-fastener. A. John. No. 961,778; June 21; Sp. p. 3177; Gaz. vol. 155; p. 570.
Window-fastening device. J. L. Mallory. No. 961,627; June 14; Sp. p. 2868; Gaz. vol. 155; p. 496.
Window or door. A. A. Reaves. No. 961,896; June 21; Sp. p. 3443; Gaz. vol. 155; p. 609.
Window-screen. A. E. Paddison. No. 960,888; June 7; Sp. p. 308; Gaz. vol. 155; p. 52.
Window-screen, Roller. C. C. Boykin. No. 962,202; June 21; Sp. p. 4330; Gaz. vol. 155; p. 748.
Window-seat. T. S. Richardson. No. 962,468; June 28; Sp. p. 4709; Gaz. vol. 155; p. 830.
Window-tent. C. A. Hercules. No. 962,707; June 28; Sp. p. 5221; Gaz. vol. 155; p. 912.
Window-ventilator. H. C. Bunnell. No. 961,403; June 14; Sp. p. 2378; Gaz. vol. 155; p. 421.

Wire-cutter. W. Peters. No. 961,794; June 21; Sp. p. 5207; Gaz. vol. 155; p. 576.
Wire-drawing block. H. B. Humphrey. No. 961,449; June 14; Sp. p. 2484; Gaz. vol. 155; p. 437.
Wire fabric. W. F. White. No. 962,541; June 28; Sp. p. 4866; Gaz. vol. 155; p. 855.
Wire-holder. H. Holden. No. 961,611; June 14; Sp. p. 2633; Gaz. vol. 155; p. 490.
Wire-stretcher. L. E. Cooper. No. 960,511; June 7; Sp. p. 648; Gaz. vol. 155; p. 90.
Wire stretcher and splicer. H. C. Jacobs. No. 961,237; June 14; Sp. p. 2024; Gaz. vol. 155; p. 388.
Wire-winding machines, Notching attachment for. G. W. Stanclift. No. 961,038; June 7; Sp. p. 1606; Gaz. vol. 155; p. 269.
Wood-bending machine. C. W. Elliott. No. 960,525; June 7; Sp. p. 571; Gaz. vol. 155; p. 95.
Wood, Coloring and fireproofing. W. A. Hall. No. 961,123; June 14; Sp. p. 1786; Gaz. vol. 155; p. 323.
Wood, Composition of matter for cleaning and shining. P. J. Shafer. No. 961,903; June 21; Sp. p. 3457; Gaz. vol. 155; p. 612.
Wood-cutter or countersink. P. M. Grandperrin. No. 961,770; June 21; Sp. p. 3165; Gaz. vol. 155; p. 565.
Wool, Apparatus for removing the grease and yolk from. R. Vandatte and B. Lagye. No. 961,498; June 14; Sp. p. 2590; Gaz. vol. 155; p. 443.
Wool-washing machine and the like. F. G. Sargent. No. 961,023; June 7; Sp. p. 1575; Gaz. vol. 155; p. 264.
Work-stand. S. Dymoke. No. 962,825; June 21; Sp. p. 4577; Gaz. vol. 155; p. 756.
Woven fabric, Asbestos-faced. G. H. Smith. No. 963,013; June 28; Sp. p. 5807; Gaz. vol. 155; p. 1017.
Wrapper. J. Greenberg. No. 960,811; June 7; Sp. p. 143; Gaz. vol. 155; p. 27.
Wrapper, Tubular. H. J. Blecki. No. 962,614; June 28; Sp. p. 5023; Gaz. vol. 155; p. 880.
Wrench: *See* Pipe-wrench.
Wrench. L. Panser. No. 960,691; June 7; Sp. p. 925; Gaz. vol. 155; p. 152.
Wrench. H. Hemricks. No. 961,296; June 14; Sp. p. 2160; Gaz. vol. 155; p. 386.
Wrench. A. C. Howe. No. 961,447; June 14; Sp. p. 2482; Gaz. vol. 155; p. 436.
Wrench. R. A. Montgomery. No. 961,515; June 14; Sp. p. 2628; Gaz. vol. 155; p. 458.
Wrench. G. E. Miller. No. 961,632; June 14; Sp. p. 2879; Gaz. vol. 155; p. 494.
Wrench. I. J. Beahen. No. 961,673; June 14; Sp. p. 2959; Gaz. vol. 155; p. 511.
Wrench. R. H. Peters. No. 961,894; June 21; Sp. p. 3441; Gaz. vol. 155; p. 609.
Wrench. W. B. Brown. No. 962,304; June 21; Sp. p. 4337; Gaz. vol. 155; p. 749.
Wrench. J. A. Bledsoe. No. 962,738; June 28; Sp. p. 5286; Gaz. vol. 155; p. 922.
Wringer: *See* Mop-wringer.
X-ray apparatus. A. Granger. No. 961,607; June 14; Sp. p. 2627; Gaz. vol. 155; p. 489.
Yarn and making same. J. G. Harrison. No. 961,441; June 14; Sp. p. 2470; Gaz. vol. 155; p. 434.
Yarn-waxing device. N. E. Kahn. No. 960,335; June 7; Sp. p. 199; Gaz. vol. 155; p. 34.
Zinkiferous substances, Treating. G. Mojana. No. 961,514; June 14; Sp. p. 2625; Gaz. vol. 155; p. 458.

ALPHABETICAL LIST OF DESIGNS.

Badge. R. C. Thompson. No. 40,720; June 7; Gaz. vol. 155; p. 287.
Carton. L. Hirschfeld. No. 40,728; June 14; Gaz. vol. 155; p. 538.
Casket handle-plate. F. K. Allen. No. 40,729; June 14; Gaz. vol. 155; p. 538.
Casket name-plate. F. K. Allen. No. 40,730; June 14; Gaz. vol. 155; p. 538.
Checkrein-holder. A. F. Dietz. No. 40,741; June 21; Gaz. vol. 155; p. 784.
Dish or similar article. H. Creange. No. 40,726; June 14; Gaz. vol. 155; p. 538.
Doll. F. C. A. Richardson. No. 40,722; June 7; Gaz. vol. 155; p. 287.
Doll-pattern. F. A. Hays. No. 40,749; June 28; Gaz. vol. 155; p. 1026.
Emblem. A. L. Westgard. No. 40,734; June 21; Gaz. vol. 155; p. 783.
Gimp. S. D. Wright. No. 40,724; June 7; Gaz. vol. 155; p. 287.
Glass vessel. B. F. Davies. No. 40,742; June 28; Gaz. vol. 155; p. 1025.
Ice-cream cornucopia. B. Rea. No. 40,739; June 21; Gaz. vol. 155; p. 784.
Knife and fork holder. C. Myland. No. 40,746; June 28; Gaz. vol. 155; p. 1026.
Lamp. P. Q. Wray. No. 40,738; June 21; Gaz. vol. 155; p. 784.
Lamp-shade. P. J. Handel. No. 40,721; June 7; Gaz. vol. 155; p. 287.
Lamp shade or reflector. J. Kappler. No. 40,727; June 14; Gaz. vol. 155; p. 538.
Lamp, Street. B. D. Munhall. No. 40,737; June 21; Gaz. vol. 155; p. 764.
Lamp, Vehicle. R. H. Welles. No. 40,747; June 28; Gaz. vol. 155; p. 1026.
Paper or similar fabric, Wall. V. R. Haskins. No. 40,723; June 7; Gaz. vol. 155; p. 287.
Plate or similar article. J. E. Goodwin. No. 40,736; June 21; Gaz. vol. 155; p. 783.
Plate or similar article. J. H. Venon. Nos. 40,743–4; June 28; Gaz. vol. 155; pp. 1025–6.
Rosette, Illuminated. L. Gudeman. No. 40,740; June 21; Gaz. vol. 155; p. 784.
Spoon, fork, or similar article. J. R. Dean. No. 40,735; June 21; Gaz. vol. 155; p. 783.
Spoons, forks, or similar articles, Handle for. C. Osborne. No. 40,745; June 28; Gaz. vol. 155; p. 1026.
Stove. W. L. Bertram. Nos. 40,732–3; June 14; Gaz. vol. 155; p. 539.
Suction cleaning-machines, Casing for portable. D. P. Moore and S. B. Pack. No. 40,748; June 28; Gaz. vol. 155; p. 1026.
Tureen or similar article. H. Creange. No. 40,725; June 14; Gaz. vol. 155; p. 537.
Whiffletree-ring screw. J. S. Hibschman. No. 40,731; June 14; Gaz. vol. 155; p. 538.

ALPHABETICAL LIST OF TRADE-MARKS.

Accordions. Rudolph Wurlitzer Co. No. 78,389; June 7; Gaz. vol. 155; p. 303.
Adhesive cement and glue. Charles H. Besly & Company. No. 78,671; June 28; Gaz. vol. 155; p. 1037.
Adhesive paste. Clark Paper and Manufacturing Co. No. 78,587; June 28; Gaz. vol. 155; p. 1037.
Antiseptic root-canal filling. W. D. Snyder. No. 78,652; June 28; Gaz. vol. 155; p. 1039.
Asphalt. California Liquid Asphalt Company. No. 78,584; June 28; Gaz. vol. 155; p. 1037.
Automobiles. Selden Motor Vehicle Co. No. 78,457; June 14; Gaz. vol. 155; p. 551.
Baby-pacifiers. W. L. Strauss & Co. No. 78,463; June 14; Gaz. vol. 155; p. 551.
Baking-pans. J. Mathy. No. 78,334; June 7; Gaz. vol. 155; p. 302.
Baking-powder, ammonia, soda, &c. Clossett & Devers. No. 78,401; June 14; Gaz. vol. 155; p. 549.
Baking-powder and baking-soda. Ideal Coffee and Tea Company. No. 78,422; June 14; Gaz. vol. 155; p. 550.
Beer. Lexington Brewing Company. No. 78,427; June 14; Gaz. vol. 155; p. 550.
Beer. Actien-Gesellschaft Hackerbräu. No. 78,564; June 28; Gaz. vol. 155; p. 1037.
Belting, Balata. Turner Brothers. No. 78,552; June 21; Gaz. vol. 155; p. 797.
Belting, Leather. Southern Belting Company of New Orleans. No. 78,543; June 21; Gaz. vol. 155; p. 796.
Belting, Leather. Charles A. Schieren Company. No. 78,646; June 28; Gaz. vol. 155; p. 1039.
Beverages, Certain. The Canton City Bottling Company. No. 78,309; June 7; Gaz. vol. 155; p. 301.
Bicycles. M. B. Johnson, trustee. No. 78,331; June 7; Gaz. vol. 155; p. 302.
Biscuit. Independent Baking Co. No. 78,329; June 7; Gaz. vol. 155; p. 302.
Boots and shoes. Hayden & Collins. No. 78,515; June 21; Gaz. vol. 155; p. 796.
Boots and shoes, Leather. The Rickard-Gregory Shoe Co. No. 78,447; June 14; Gaz. vol. 155; p. 550.
Boots and shoes, Leather. James Clark Leather Company. No. 78,494; June 21; Gaz. vol. 155; p. 796.
Boxes, cartons, and blanks therefor. National Metal Edge Box Company. No. 78,390; June 7; Gaz. vol. 155; p. 302.
Bricks. Wisconsin Lime and Cement Company. No. 78,368; June 7; Gaz. vol. 155; p. 303.
Brushes. The Davis Chemical Company. No. 78,404; June 14; Gaz. vol. 155; p. 549.
Brushes, Fountain. Cardinet Fountain Brush Co. No. 78,399; June 14; Gaz. vol. 155; p. 549.
Brushes of all kinds. The Baltimore Brush Co. No. 78,393; June 14; Gaz. vol. 155; p. 549.
Buckles for clothing. Alma Manufacturing Company of Baltimore City. No. 78,478; June 21; Gaz. vol. 155; p. 796.
Cable rings and hangers. Diamond Expansion Bolt Co. No. 78,502; June 28; Gaz. vol. 155; p. 1037.
Calcium carbid. Union Carbide Company. No. 78,367; June 7; Gaz. vol. 155; p. 303.
Candles. Syracuse Candle Company. No. 78,661; June 28; Gaz. vol. 155; p. 1039.
Candy. The Reinhart & Newton Company. No. 78,353; June 7; Gaz. vol. 155; p. 302.
Candy. H. L. Schlesinger. No. 78,542; June 21; Gaz. vol. 155; p. 796.
Candy and chocolate. Huyler's. No. 78,606; June 28; Gaz. vol. 155; p. 1038.
Canned corn. Samels Bros. & White Canning Co. No. 78,356; June 7; Gaz. vol. 155; p. 302.
Canned foods and coffee. The Bittman-Todd Grocer Company. No. 78,678; June 28; Gaz. vol. 155; p. 1037.
Canned fruits. Hunt Brothers Company. No. 78,421; June 14; Gaz. vol. 155; p. 550.
Canned fruits and vegetables. W. T. Reynolds & Co. No. 78,444; June 14; Gaz. vol. 155; p. 550.
Canned lye-hominy. Stokely Bros. & Co. No. 78,462; June 14; Gaz. vol. 155; p. 551.
Canned pork and beans, lye-hominy, and sauer-kraut. The Gibson Canning Company. No. 78,412; June 14; Gaz. vol. 155; p. 549.
Canned salmon. Yes Bay Canning Co. No. 78,373; June 7; Gaz. vol. 155; p. 303.
Canned salmon. Union Fishermen's Co-op. Packing Co. No. 78,388; June 7; Gaz. vol. 155; p. 303.
Canned sardines. De Long Seaman Co. No. 78,405; June 14; Gaz. vol. 155; p. 549.
Canned sardines. B. M. Shipman. No. 78,460; June 14; Gaz. vol. 155; p. 551.
Canned tomatoes. The McBrayer Canning Company. No. 78,335; June 7; Gaz. vol. 155; p. 302.
Canned vegetables. The Hastings Canning Company. No. 78,382; June 7; Gaz. vol. 155; p. 303.
Canned vegetables. The Scioto Canning Company. Nos. 78,454–6; June 14; Gaz. vol. 155; p. 551.
Canned vegetables. The Crothersville Canning Company. No. 78,590; June 28; Gaz. vol. 155; p. 1037.
Cards, Playing. American Bank Note Company. Nos. 78,296–7; June 7; Gaz. vol. 155; p. 301.
Carpet and rugs. Hardwick & Magee Co. No. 78,325; June 7; Gaz. vol. 155; p. 301.
Carpets. Bigelow Carpet Company. No. 78,308; June 7; Gaz. vol. 155; p. 301.
Chairs, davenports, and davenport-beds. C. F. Streit Mfg. Co. No. 78,387; June 7; Gaz. vol. 155; p. 303.
Chemicals, toilet preparations, and medicines, Certain. C. F. A. Sarg. No. 78,452; June 14; Gaz. vol. 155; p. 550.
Cholagogue. J. D. Riedel Aktiengesellschaft. No. 78,352; June 7; Gaz. vol. 155; p. 302.
Cigarettes. Antolite Manufacturing Company. No. 78,392; June 14; Gaz. vol. 155; p. 549.
Cigarettes. Estabrook & Eaton. No. 78,501; June 21; Gaz. vol. 155; p. 795.
Cigars. Gustav A. Moebs & Co. No. 78,436; June 14; Gaz. vol. 155; p. 550.
Cigars. C. O. Murias y Cia. No. 78,539; June 21; Gaz. vol. 155; p. 796.
Cigars and cigarettes. F. A. Cauchois. No. 78,585; June 28; Gaz. vol. 155; p. 1037.
Cigars and leaf-tobacco. F. Bolano. No. 78,577; June 28; Gaz. vol. 155; p. 1037.
Cigars, cheroots, and little cigars. S. H. Harris. No. 78,514; June 21; Gaz. vol. 155; p. 796.
Cigars, cigarettes, and tobacco. Markt & Hammacher Company. Nos. 78,533–4; June 21; Gaz. vol. 155; p. 796.
Cloaks, dresses, and coats. H. Goldwater. No. 78,601; June 28; Gaz. vol. 155; p. 1038.
Clocks and watches. The Western Clock Mfg. Co. No. 78,474; June 14; Gaz. vol. 155; p. 551.
Clocks and watches. The Western Clock Mfg. Co. No. 78,561; June 21; Gaz. vol. 155; p. 797.
Clothing, Certain. Bonwit, Harris & Co. No. 78,305; June 7; Gaz. vol. 155; p. 301.
Clothing, Certain. J. A. Guillaume. No. 78,324; June 7; Gaz. vol. 155; p. 301.
Clothing, Certain. R. H. Macy & Co. No. 78,333; June 7; Gaz. vol. 155; p. 302.
Clothing, Certain. S. J. Levy & Son. No. 78,426; June 14; Gaz. vol. 155; p. 550.
Clothing, Certain. J. A. Ruhl Clothing Company. No. 78,449; June 14; Gaz. vol. 155; p. 550.
Clothing, Certain. Susquehanna Silk Mills. No. 78,467; June 14; Gaz. vol. 155; p. 551.
Clothing, Certain. The Geo. De Wald Company. No. 78,666; June 28; Gaz. vol. 155; p. 1039.
Coal. Raven Red Ash Coal Co. No. 78,443; June 14; Gaz. vol. 155; p. 550.
Cocks, Ball-. Union Metal Works. No. 78,554; June 21; Gaz. vol. 155; p. 797.
Coffee, Blended roasted. Edwin J. Gillies & Co. of Kentucky. No. 78,415; June 14; Gaz. vol. 155; p. 549.
Coffee-clarifier. Koffee Klear Co. No. 78,609; June 28; Gaz. vol. 155; p. 1038.
Coffee partially freed from caffein. Merck & Co. No. 78,536; June 21; Gaz. vol. 155; p. 796.
Coffee, spices, and flavoring extracts. The R. T. French Company. No. 78,667; June 28; Gaz. vol. 155; p. 1039.
Coffees, teas, and spices. William S. Scull Company. No. 78,648; June 28; Gaz. vol. 155; p. 1039.
Composition, Certain. P. A. Thompson. No. 78,469; June 14; Gaz. vol. 155; p. 551.
Confectionery, wafers, lozenges, and tablets. National Wafer Company. No. 78,340; June 7; Gaz. vol. 155; p. 302.
Cordial, Distilled peppermint. Stark Distillery Co. No. 78,546; June 21; Gaz. vol. 155; p. 797.
Cork. International Cork Company. No. 78,607; June 28; Gaz. vol. 155; p. 1038.
Cornets, trumpets, French horns, &c. The Rudolph Wurlitzer Co. No. 78,663; June 28; Gaz. vol. 155; p. 1039.
Corsets. Corset H Company. No. 78,314; June 7; Gaz. vol. 155; p. 301.
Corsets and ladies' outer clothing. Mood. No. 78,625; June 28; Gaz. vol. 155; p. 1038.
Cotton crape. Hamilton Manufacturing Co. No. 78,512; June 21; Gaz. vol. 155; p. 796.
Cotton piece goods. Rice-Stix Dry Goods Company. No. 78,355; June 7; Gaz. vol. 155; p. 302.
Cotton piece goods. Franklin Manufacturing Co. No. 78,411; June 14; Gaz. vol. 155; p. 549.

Cotton piece goods. Warner-Godfrey Co. No. 78,558; June 21; Gaz. vol. 155; p. 797.
Cotton piece goods. Bliss, Fabyan & Company. No. 78,575; June 28; Gaz. vol. 155; p. 1037.
Cotton shirtings. Cone Export and Commission Company. No. 78,402; June 14; Gaz. vol. 155; p. 549.
Davenports. Thomas Madden Son and Company. No. 78,429; June 14; Gaz. vol. 155; p. 550.
Dolls. Baker & Bennett Co. No. 78,300; June 7; Gaz. vol. 155; p. 301.
Dolls. Aetna Doll and Toy Company. No. 78,390; June 14; Gaz. vol. 155; p. 549.
Dress-shields. J. Beyerle. No. 78,487; June 21; Gaz. vol. 155; p. 795.
Earthenware articles. Kristal-Glas-En Aardewerk Fabrieken De Sphinx Voorheen Petrus Regout & Co. No. 78,611; June 28; Gaz. vol. 155; p. 1038.
Electric-light fixtures. The Conneaut Company. No. 78,495; June 21; Gaz. vol. 155; p. 795.
Electric-light fixtures, Incandescent. The Conneaut Company. Nos. 78,312–13; June 7; Gaz. vol. 155; p. 301.
Electrical supplies, Certain. G. L. Prentiss. No. 78,633; June 28; Gaz. vol. 155; p. 1039.
Emulsion of cod-liver oil, Egg. Smith, Kline & French Co. No. 78,559; June 7; Gaz. vol. 155; p. 302.
Enamel metal ware. The Enterprise Enamel Company. No. 78,407; June 14; Gaz. vol. 155; p. 549.
Equipments, Certain. Norvell-Shapleigh Hardware Company. No. 78,343; June 7; Gaz. vol. 155; p. 302.
Fertilizers. Chicago Fertilizer Works. No. 78,493; June 21; Gaz. vol. 155; p. 795.
Fire-extinguishers, Chemical hand. Missouri Lamp & Mfg. Co. Nos. 78,537–8; June 21; Gaz. vol. 155; p. 796.
Fire-extinguishers, Chemical hand. Missouri Lamp & Mfg. Co. Nos. 78,622–4; June 28; Gaz. vol. 155; p. 1038.
Fire-hose nozzle. Andrew J. Morse & Son. No. 78,338; June 7; Gaz. vol. 155; p. 302.
Fireworks, Toy. Starlite Manufacturing Company. No. 78,659; June 28; Gaz. vol. 155; p. 1039.
Flavoring extract. Seminole Chemical Company. No. 78,458; June 14; Gaz. vol. 155; p. 551.
Floor-covering. United Roofing and Manufacturing Company. No. 78,472; June 14; Gaz. vol. 155; p. 551.
Flour, Malt-. Chas. W. Shaw Company. No. 78,459; June 14; Gaz. vol. 155; p. 551.
Flour, Wheat-. Philip H. Postel Milling Company. No. 78,249; June 7; Gaz. vol. 155; p. 302.
Flour, Wheat-. The Gwinn Milling Company. Nos. 78,417–18; June 14; Gaz. vol. 155; pp. 549–50.
Flour, Wheat-. Amendt Milling Company. No. 78,479; June 21; Gaz. vol. 155; p. 795.
Flour, Wheat-. William S. Hills Company. No. 78,517; June 21; Gaz. vol. 155; p. 796.
Flour, Wheat-. Kruger, Darsie & Co. No. 78,522; June 21; Gaz. vol. 155; p. 796.
Flour, Wheat-. The Bush Milling Company. No. 78,574; June 28; Gaz. vol. 155; p. 1037.
Flour, Wheat-. A. B. McCrillis & Son. No. 78,618; June 28; Gaz. vol. 155; p. 1038.
Flour, Wheat-. D. Stott. No. 78,660; June 28; Gaz. vol. 155; p. 1039.
Flour, Wheat-. R. A. Davis. No. 78,665; June 28; Gaz. vol. 155; p. 1039.
Foods, Certain. The Inter-State Grocer Company. No. 78,520; June 21; Gaz. vol. 155; p. 796.
Foods, Certain. Wallace & Thomson. No. 78,557; June 21; Gaz. vol. 155; p. 797.
Foods, Certain. C. von Alimen. No. 78,664; June 28; Gaz. vol. 155; p. 1039.
Furnishings, Certain. Susquehanna Silk Mills. No. 78,363; June 7; Gaz. vol. 155; p. 303.
Furniture, Certain. Charles P. Limbert Company. No. 78,531; June 21; Gaz. vol. 155; p. 796.
Garment-stays. Wire. Barclay Corset Company. No. 78,567; June 28; Gaz. vol. 155; p. 1037.
Garters, belts, shoulder-braces, and garment-supporters. Faire Bros. & Co. No. 78,409; June 14; Gaz. vol. 155; p. 549.
Garters, Men's. Cincinnati Garter Manufacturing Company. No. 78,536; June 28; Gaz. vol. 155; p. 1037.
Gasolene. Waters Pierce Oil Company. No. 78,473; June 14; Gaz. vol. 155; p. 551.
Gin, Dry. Gordon Bitters Co. No. 78,415; June 14; Gaz. vol. 155; p. 549.
Gin, Holland. Strauss & Co. No. 78,549; June 21; Gaz. vol. 155; p. 797.
Glassware, Cut. T. B. Clark & Co. No. 78,588; June 28; Gaz. vol. 155; p. 1037.
Gloves. J. E. Wensch. No. 78,477; June 14; Gaz. vol. 155; p. 551.
Golf-clubs. G. H. Bryant. No. 78,492; June 21; Gaz. vol. 155; p. 795.
Grape-juice. Harris Grape Juice Co. No. 78,419; June 14; Gaz. vol. 155; p. 550.
Grapes. M. D. Buskirk & Son. No. 78,582; June 28; Gaz. vol. 155; p. 1037.
Greases and oils, Lubricating. Alden S. Swan & Co. No. 78,550; June 21; Gaz. vol. 155; p. 797.
Grinding-bodies, Metallic. F. L. Smidth & Co. No. 78,651; June 28; Gaz. vol. 155; p. 1039.
Grinding-machines. Charles H. Besly & Company. No. 78,486; June 21; Gaz. vol. 155; p. 795.
Guitar capo tastos. The Rudolph Wurlitzer Co. Nos. 78,369–71; June 7; Gaz. vol. 155; p. 303.

Haddock, Smoked shore-. Freeman & Cobb Co. No. 78,505; June 21; Gaz. vol. 155; p. 795.
Hair-pins and combs, Celluloid. Pacific Novelty Company. No. 78,440; June 14; Gaz. vol. 155; p. 550.
Handkerchiefs. M. Isaacs. No. 78,608; June 28; Gaz. vol. 155; p. 1038.
Hardware, Certain. The Champion Safety Lock Company. No. 78,310; June 7; Gaz. vol. 155; p. 301.
Harness hardware. Russell & Erwin Manufacturing Company. No. 78,645; June 28; Gaz. vol. 155; p. 1039.
Hats, Ladies'. Liebstadter Millinery Co. No. 78,332; June 7; Gaz. vol. 155; p. 302.
Heat-non-conducting coverings. Sheet Magnesia Manufacturing Company. No. 78,500; June 21; Gaz. vol. 155; p. 795.
Herbs, Alcoholic extract of Alpine. F. Kutschera. No. 78,668; June 28; Gaz. vol. 155; p. 1039.
Hinges, Steel. The Stanley Works. No. 78,461; June 14; Gaz. vol. 155; p. 551.
Hinges, Wrought-steel butt-. The Stanley Works. Nos. 78,654–8; June 28; Gaz. vol. 155; p. 1039.
Hooks and eyes. The Sterling Pin Co. No. 78,547; June 21; Gaz. vol. 155; p. 797.
Hooks and eyes. The Veiser Hook and Eye Company. No. 78,562; June 21; Gaz. vol. 155; p. 797.
Hooks and eyes for garments. The Sterling Pin Co. No. 78,362; June 7; Gaz. vol. 155; p. 303.
Horse blankets and clothing. Bemis Bro. Bag Co. No. 78,570; June 28; Gaz. vol. 155; p. 1037.
Horse fly nets and covers. Bemis Bro. Bag Co. No. 78,569; June 28; Gaz. vol. 155; p. 1037.
Hose-supporters. A. Stein & Company. No. 78,361; June 7; Gaz. vol. 155; p. 303.
Hosiery. Miller & Sons Co. No. 78,432; June 14; Gaz. vol. 155; p. 550.
Hosiery. Richmond Hosiery Mills. No. 78,446; June 14; Gaz. vol. 155; p. 550.
Hosiery. Glidden, Hyde & Co. Nos. 78,508–9; June 21; Gaz. vol. 155; pp. 795–6.
Inks, Writing-. M. Brown. No. 78,581; June 28; Gaz. vol. 155; p. 1037.
Insect-banding for fruit-trees. Strawsons & Company. No. 78,464; June 14; Gaz. vol. 155; p. 551.
Insect-destroyer, Poultry. W. J. Stuart. No. 78,465; June 14; Gaz. vol. 155; p. 551.
Insulating materials, Electric. The Dean Electric Company. No. 78,496; June 21; Gaz. vol. 155; p. 795.
Jams, jellies, marmalades, and mince-meat. Sunlit Fruit Company. No. 78,466; June 14; Gaz. vol. 155; p. 551.
Jewelry. Allison Manufacturing Company. No. 78,295; June 7; Gaz. vol. 155; p. 301.
Jute-board. National Metal Edge Box Company. No. 78,438; June 14; Gaz. vol. 155; p. 550.
Knit garments, Certain. Minneapolis Knitting Works. No. 78,434; June 14; Gaz. vol. 155; p. 550.
Laces. Sherman & Sons Co. No. 78,357; June 7; Gaz. vol. 155; p. 302.
Lamp-chimneys, Miners' glass. W. Limberg & Co. No. 78,530; June 21; Gaz. vol. 155; p. 796.
Lamp-wicking, Cotton. R. Bishop, trustee. No. 78,572; June 28; Gaz. vol. 155; p. 1037.
Lamps, Electric. General Electric Company. No. 78,600; June 28; Gaz. vol. 155; p. 1038.
Laundry appliances, Certain. Norvell-Shapleigh Hardware Company. No. 78,344; June 7; Gaz. vol. 155; p. 302.
Lead, White. Eclipse White Lead and Color Company. No. 78,406; June 14; Gaz. vol. 155; p. 549.
Leather, Artificial sole-. W. H. McElwain Company. No. 78,385; June 7; Gaz. vol. 155; p. 303.
Leathers, Side. S. B. Foot & Co. No. 78,504; June 21; Gaz. vol. 155; p. 795.
Lemonades, Fruit. Franz Hartmann Sinalco Aktiengesellschaft. No. 78,603; June 28; Gaz. vol. 155; p. 1038.
Liniment. Mr. and Mrs. J. Kuehnel. No. 78,612; June 28; Gaz. vol. 155; p. 1038.
Locks, catches, and fasteners. Russell & Erwin Manufacturing Company. No. 78,644; June 28; Gaz. vol. 155; p. 1039.
Lubricants. International Acheson Graphite Company. No. 78,519; June 21; Gaz. vol. 155; p. 796.
Macaroni. The Pfaffmann Egg Noodle Co. No. 78,348; June 7; Gaz. vol. 155; p. 302.
Machinery, Certain. Pratt Engineering & Machinery Co. No. 78,350; June 7; Gaz. vol. 155; p. 302.
Magazine, Monthly. H. Gernsback. No. 78,507; June 21; Gaz. vol. 155; p. 795.
Magazines, Monthly. The Current Literature Publishing Company. No. 78,591; June 28; Gaz. vol. 155; p. 1037.
Malt extract with iron, &c., Preparation of. The Biomedic Company. No. 78,395; June 14; Gaz. vol. 155; p. 549.
Mattresses and cushions. G. W. Bent Co. No. 78,394; June 14; Gaz. vol. 155; p. 549.
Mattresses, pillows, and cushions. Robinson-Roders Co. No. 78,640; June 28; Gaz. vol. 155; p. 1039.
Medicaments, Tablets and capsules of. Farbwerke vorm. Meister Lucius & Brüning. No. 78,596; June 28; Gaz. vol. 155; p. 1038.
Medicinal powder. E. H. Schoolcraft. No. 78,453; June 14; Gaz. vol. 155; p. 550.
Medicinal preparation. K. A. Lingner. No. 78,617; June 28; Gaz. vol. 155; p. 1038.
Medicine for chills, malaria, &c. Diffusible Tonic Co. No. 78,593; June 28; Gaz. vol. 155; p. 1037.

Medicines. Baker Manufacturing Co. No. 78,482; June 21; Gaz. vol. 155; p. 795.
Medicines. Stock & Krause. No. 78,548; June 21; Gaz. vol. 155; p. 797.
Milk, Condensed. Borden's Condensed Milk Company. No. 78,578; June 28; Gaz. vol. 155; p. 1037.
Milk, Condensed. Boston Dairy Co. No. 78,579; June 28; Gaz. vol. 155; p. 1037.
Motors and accessories, Explosion-. L. M. J. C. Levavasseur. No. 78,520; June 21; Gaz. vol. 155; p. 796.
Mowers, Lawn-. Elwood Lawn Mower Manufacturing Company. No. 78,597; June 28; Gaz. vol. 155; p. 1038.
Mowers, Lawn-. W. Simpson & Sons. No. 78,650; June 28; Gaz. vol. 155; p. 1039.
Music-stands. Rudolph Wurlitzer Co. No. 78,372; June 7; Gaz. vol. 155; p. 303.
Nails. The Bishop & Babcock Co. No. 78,489; June 21; Gaz. vol. 155; p. 795.
Oil, Cotton-seed. J. Goggin. No. 78,414; June 14; Gaz. vol. 155; p. 549.
Oil, Olive-. D. Maddaloni. No. 78,532; June 21; Gaz. vol. 155; p. 796.
Ointment. Troy Chemical Co. No. 78,471; June 14; Gaz. vol. 155; p. 551.
Ointment. Foster Dack Co. No. 78,497; June 21; Gaz. vol. 155; p. 795.
Overalls. Crown Overall Manufacturing Co. No. 78,315; June 7; Gaz. vol. 155; p. 301.
Overcoats and coats, Men's. Frankel Bros. No. 78,322; June 7; Gaz. vol. 155; p. 301.
Overshoes, boots, sole-pads, &c., Animal. Kinnell Manufacturing Company. No. 78,521; June 21; Gaz. vol. 155; p. 796.
Oxygen, Preparation of. Lever Brothers Company. No. 78,426; June 14; Gaz. vol. 155; p. 550.
Paint, Copper. C. A. Woolsey Paint & Color Company. No. 78,476; June 14; Gaz. vol. 155; p. 551.
Paint, Liquid. The Hanna Paint Manufacturing Company. No. 78,513; June 21; Gaz. vol. 155; p. 796.
Paper and envelops. Powers Paper Company. No. 78,623; June 28; Gaz. vol. 155; p. 1039.
Paper bags. Crown-Columbia Pulp and Paper Co. Nos. 78,378–80; June 7; Gaz. vol. 155; p. 303.
Paper, Book-. Southwestern Paper Company. No. 78,653; June 28; Gaz. vol. 155; p. 1039.
Paper, envelops, tablets, and blank books. J. C. Blair Company. No. 78,304; June 7; Gaz. vol. 155; p. 301.
Paper, Writing and printing. American Writing Paper Company. Nos. 78,298–9; June 7; Gaz. vol. 155; p. 301.
Paper, Writing and printing. American Writing Paper Company. No. 78,374; June 7; Gaz. vol. 155; p. 303.
Pavements and paving material. Warren Brothers Company. No. 78,559; June 21; Gaz. vol. 155; p. 797.
Pencils. A. W. Faber. No. 78,320; June 7; Gaz. vol. 155; p. 301.
Pencils, Lead-. Eagle Pencil Company. No. 78,317; June 7; Gaz. vol. 155; p. 301.
Pencils, Lead and ink. A. W. Faber. No. 78,319; June 7; Gaz. vol. 155; p. 301.
Pens, Writing-. M. Brown. No. 78,580; June 28; Gaz. vol. 155; p. 1037.
Perfumes. F. S. Mason. No. 78,535; June 21; Gaz. vol. 155; p. 796.
Periodical, Monthly. Oswald Publishing Company. No. 78,439; June 14; Gaz. vol. 155; p. 550.
Petroleum, Refined. Standard Oil Co. of New York. No. 78,545; June 21; Gaz. vol. 155; p. 796.
Pharmaceutical preparations. S. L. Holmes. No. 78,328; June 7; Gaz. vol. 155; p. 302.
Photographic intensifiers and reducers. J. P. Reymond. No. 78,354; June 7; Gaz. vol. 155; p. 302.
Pianos and player-pianos. Behning Piano Co. No. 78,484; June 21; Gaz. vol. 155; p. 795.
Picture films, Moving-. R. Prieur. No. 78,351; June 7; Gaz. vol. 155; p. 302.
Picture films, Moving-. Pantograph Corporation. No. 78,441; June 14; Gaz. vol. 155; p. 550.
Pills, Liver-. G. A. Gottschalk. No. 78,416; June 14; Gaz. vol. 155; p. 549.
Pipes and tubes, Metal. National Tube Company. No. 78,628; June 28; Gaz. vol. 155; p. 1038.
Plumes, feather fans, &c., Prepared ostrich. Spiegel Brothers. No. 78,544; June 21; Gaz. vol. 155; p. 796.
Pokers, lid lifters, and shakers, Stove. Fanner Mfg. Co. No. 78,503; June 21; Gaz. vol. 155; p. 795.
Polishes. Ben-Hur Metal Polish Co. No. 78,485; June 21; Gaz. vol. 155; p. 795.
Polishing-cloths. E. J. Archinard. No. 78,375; June 7; Gaz. vol. 155; p. 303.
Potassium guiacol sulfonate. The Hoffmann-La Roche Chemical Works. No. 78,327; June 7; Gaz. vol. 155; p. 302.
Poultice, Anhydrous hyperthermic. Thermo-Chemicals Company. No. 78,468; June 14; Gaz. vol. 155; p. 551.
Powder, Blasting-. National Powder Co. No. 78,627; June 28; Gaz. vol. 155; p. 1038.
Powder, paste, and wash, Tooth. A. Lachaise. No. 78,613; June 28; Gaz. vol. 155; p. 1038.
Powder, Talcum. Gerhard Mennen Chemical Co. No. 78,506; June 21; Gaz. vol. 155; p. 795.
Powder, Toilet. R. A. Anderson. No. 78,391; June 14; Gaz. vol. 155; p. 549.
Powders, Tooth-. W. A. Moore. No. 78,626; June 28; Gaz. vol. 155; p. 1038.

Precious-metal ware, Certain. Shreve & Company. No. 78,358; June 7; Gaz. vol. 155; p. 302.
Precious-metal ware, Certain. Tayler & Co. No. 78,662; June 28; Gaz. vol. 155; p. 1039.
Precious or plated metal articles, Certain. W. G. Clark & Co. No. 78,400; June 14; Gaz. vol. 155; p. 549.
Preserved vegetables and fruits. Fabrique Internationale de conserves alimentaires *Le Soleil*, à Malines. (Société Anonyme.) No. 78,502; June 21; Gaz. vol. 155; p. 795.
Razor-sharpening instruments. F. A. Reichardt. No. 78,296; June 7; Gaz. vol. 155; p. 303.
Refrigerators. Viking Refrigerator & Mfg. Co. No. 78,655; June 21; Gaz. vol. 155; p. 797.
Remedy for affections of the throat and lungs. E. H. Barnes. No. 78,483; June 21; Gaz. vol. 155; p. 795.
Remedy for blood-poisoning in colts. T. B. Bowman. No. 78,397; June 14; Gaz. vol. 155; p. 549.
Remedy for cancers. J. L. Bohannon. No. 78,576; June 28; Gaz. vol. 155; p. 1037.
Remedy for certain diseases. H. Garey. No. 78,323; June 7; Gaz. vol. 155; p. 301.
Remedy for certain diseases. I. W. Jenkins. No. 78,330; June 7; Gaz. vol. 155; p. 302.
Remedy for certain diseases. A. Ertel. No. 78,408; June 14; Gaz. vol. 155; p. 549.
Remedy for certain diseases. P. H. Coverdale. No. 78,589; June 28; Gaz. vol. 155; p. 1037.
Remedy for female complaints. B. Tarshis. No. 78,364; June 7; Gaz. vol. 155; p. 303.
Remedy for hog-cholera. W. Kopisch. No. 78,610; June 28; Gaz. vol. 155; p. 1038.
Remedy for poison-ivy or poison-oak. Ebersold, Steinmets & Ebersold. No. 78,596; June 28; Gaz. vol. 155; p. 1038.
Remedy for rheumatism. J. R. Lefebvre. No. 78,528; June 21; Gaz. vol. 155; p. 796.
Remedy, Veterinary. Ellen's New Discovery Company. No. 78,316; June 7; Gaz. vol. 155; p. 301.
Revolvers. Hopkins & Allen Arms Company. No. 78,385; June 7; Gaz. vol. 155; p. 303.
Rifles, shotguns, pistols, and revolvers. M. E. Johnson, trustee. Nos. 78,422–4; June 14; Gaz. vol. 155; p. 550.
Rivets. The Bourne-Fuller Company. Nos. 78,306–7; June 7; Gaz. vol. 155; p. 301.
Rolled oats, corn-starch, beans, and rice. John Blaul's Sons Company. No. 78,396; June 14; Gaz. vol. 155; p. 549.
Roofing, Asphalt. Ford Manufacturing Co. No. 78,410; June 14; Gaz. vol. 155; p. 549.
Roofing, Asphalt. Ford Manufacturing Company. No. 78,509; June 28; Gaz. vol. 155; p. 1038.
Roofing-sheets, Bituminous. The Barber Asphalt Paving Company. No. 78,566; June 28; Gaz. vol. 155; p. 1037.
Rubber boots and shoes. Northern Shoe Co. No. 78,342; June 7; Gaz. vol. 155; p. 302.
Rubber roofing. The Breese Brothers Company. No. 78,308; June 7; Gaz. vol. 155; p. 301.
Rubbers, Fruit-jar. Norvell-Shapleigh Hardware Company. No. 78,437; June 14; Gaz. vol. 155; p. 550.
Rugs. Bigelow Carpet Company. Nos. 78,291–2; June 7; Gaz. vol. 155; p. 301.
Rugs. Bigelow Carpet Company. No. 78,468; June 21; Gaz. vol. 155; p. 795.
Rugs, mats, and carpets. McCleary, Wallin & Crouse. No. 78,336; June 7; Gaz. vol. 155; p. 302.
Salves and healing-oils. F. P. Schmidt & Co. No. 78,647; June 28; Gaz. vol. 155; p. 1039.
Sardines. New Orleans Manufacturers Agency Co. No. 78,341; June 7; Gaz. vol. 155; p. 302.
Sash and window frames, Metal. A. Busse. No. 78,583; June 28; Gaz. vol. 155; p. 1037.
Sauces and relishes. M. G. Lennox. No. 78,615; June 28; Gaz. vol. 155; p. 1038.
Screw-drivers. Stanley Rule & Level Co. No. 78,360; June 7; Gaz. vol. 155; p. 302.
Seed-grains, grass and garden seeds. Cargill Elevator Co. Nos. 78,376–7; June 7; Gaz. vol. 155; p. 303.
Seed, Lawn grass-. The J. M. McCullough's Sons Co. Nos. 78,619–20; June 28; Gaz. vol. 155; p. 1038.
Sheeting, Cotton. Grendel Mills. No. 78,433; June 14; Gaz. vol. 155; p. 550.
Shirts. Crown Overall Manufacturing Co. No. 78,496; June 21; Gaz. vol. 155; p. 795.
Shirts. A. Hayman. No. 78,516; June 21; Gaz. vol. 155; p. 796.
Shoes, Leather. Hamburger Bros. No. 78,602; June 28; Gaz. vol. 155; p. 1038.
Shovels, spades, and scoops. Baldwin Forging & Tool Company. No. 78,585; June 28; Gaz. vol. 155; p. 1037.
Silver-plated ware. Wm. A. Rogers, Limited. No. 78,642; June 28; Gaz. vol. 155; p. 1039.
Skins and furs. A. Hollander & Son. No. 78,518; June 21; Gaz. vol. 155; p. 796.
Soap. Lautz Bros. & Co. No. 78,334; June 7; Gaz. vol. 155; p. 303.
Soap. The J. B. Williams Company. No. 78,475; June 14; Gaz. vol. 155; p. 551.
Soap. Lautz Bros. & Co. Nos. 78,522–7; June 21; Gaz. vol. 155; p. 796.
Soap. W. F. Helmer. No. 78,604; June 28; Gaz. vol. 155; p. 1038.
Soap. Lautz Bros. & Co. No. 78,614; June 28; Gaz. vol. 155; p. 1038.

Soap. Philo Hay Specialties Co. No. 78,631; June 28; Gaz. vol. 155; p. 1039.
Spool-silk and mercerized thread. Peerless Spool Silk Co. No. 78,541; June 21; Gaz. vol. 155; p. 798.
Stamp Trading. Sales Company of America. No. 78,450; June 14; Gaz. vol. 155; p. 550.
Stationery, Certain. J. W. Guttknecht. No. 78,511; June 21; Gaz. vol. 155; p. 798.
Steel balls. E. G. Hoffmann. No. 78,605; June 28; Gaz. vol. 155; p. 1038.
Steel, Bar. Swedish Iron & Steel Corporation. No. 78,561; June 21; Gaz. vol. 155; p. 797.
Stoves and ranges. A. Welskittel & Son Company. No. 78,560; June 21; Gaz. vol. 155; p. 797.
Stoves, Gas, oil, alcohol, and coal. Grinberg Brothers. No. 78,510; June 21; Gaz. vol. 155; p. 794.
Sugar wafers. Maryland Biscuit Co. No. 78,430; June 14; Gaz. vol. 155; p. 550.
Sweaters, Coat. H. Feuerstein. No. 78,321; June 7; Gaz. vol. 155; p. 301.
Sweeping compound. E. K. Brennaaun. No. 78,491; June 21; Gaz. vol. 155; p. 795.
Syrups, Compound of corn and sorghum. Corn Products Refining Company. No. 78,403; June 14; Gaz. vol. 155; p. 549.
Tea. Closset & Devers. No. 78,311; June 7; Gaz. vol. 155; p. 301.
Tea. Ridgways Limited. No. 78,639; June 28; Gaz. vol. 155; p. 1039.
Textile fabrics, Certain. Rhine & Co. No. 78,445; June 14; Gaz. vol. 155; p. 550.
Textiles, Certain. Neuss Hesslein & Co. No. 78,326; June 7; Gaz. vol. 155; p. 302.
Thread, Linen. Lindsay Thompson & Co. No. 78,470; June 14; Gaz. vol. 155; p. 551.
Tires and tire-shoes, Rubber. Rubber Company of America. No. 78,448; June 14; Gaz. vol. 155; p. 550.
Tobacco. Biel Champagne Kunath Co. No. 78,490; June 21; Gaz. vol. 155; p. 795.
Toilet preparations. K. E. Dunn. No. 78,316; June 7; Gaz. vol. 155; p. 301.
Toilet preparations. J. Senegas. No. 78,649; June 28; Gaz. vol. 155; p. 1039.
Tonic beverage and syrup for the same. Leonard Brothers. No. 78,616; June 28; Gaz. vol. 155; p. 1038.
Tool-handles. J. E. Dunfield & Company. No. 78,595; June 28; Gaz. vol. 155; p. 1038.
Tools and machines, Certain. Russell & Erwin Manufacturing Company. No. 78,643; June 28; Gaz. vol. 155; p. 1039.
Tools and tool-handles, Certain. Norvell-Shapleigh Hardware Company. No. 78,629; June 28; Gaz. vol. 155; p. 1038.
Toys and puzzles. P. A. MacMahon. No. 78,428; June 14; Gaz. vol. 155; p. 550.
Toys, Sand. Sand Toy Company. No. 78,451; June 14; Gaz. vol. 155; p. 550.
Twine, Seine. Norvell-Shapleigh Hardware Company. No. 78,540; June 21; Gaz. vol. 155; p. 796.
Valves and hardware, Certain. H. Dubied & Co. No. 78,499; June 21; Gaz. vol. 155; p. 795.
Varnishes, Japans, oil-stains, &c. Worden Mosher Varnish Co. No. 78,357; June 7; Gaz. vol. 155; p. 302.
Vegetables and milk-powder, Desiccated. F. Behrend. No. 78,568; June 28; Gaz. vol. 155; p. 1037.
Vermin-destroying virus. Pasteur Vaccine Company. No. 78,442; June 14; Gaz. vol. 155; p. 550.
Vise. Prentiss Vise Company. Nos. 78,634–8; June 28; Gaz. vol. 155; p. 1039.
Wallets. Emil Weissbrod & Sons. No. 78,306; June 7; Gaz. vol. 155; p. 303.
Washing-powder. The Roessler & Hasslacher Chemical Co. No. 78,641; June 28; Gaz. vol. 155; p. 1039.
Whiskies, Blend of straight Scotch. R. McNish & Co. No. 78,481; June 14; Gaz. vol. 155; p. 550.
Whiskies, Blend of straight Scotch. J. Walker & Sons. No. 78,556; June 21; Gaz. vol. 155; p. 797.
Whisky. Fort Wayne Drug Company. No. 78,381; June 7; Gaz. vol. 155; p. 303.
Whisky, Blended. F. W. Bradley. No. 78,396; June 14; Gaz. vol. 155; p. 549.
Wine, Champagne. A. de Montebello & Co. No. 78,436; June 14; Gaz. vol. 155; p. 550.
Wine, Mosselle. Acker, Merrall & Condit Co. No. 78,563; June 28; Gaz. vol. 155; p. 1037.
Wine, White. G. Aquino. No. 78,481; June 21; Gaz. vol. 155; p. 795.
Wines, Red and white. Pessagno & Montresor. No. 78,630; June 28; Gaz. vol. 155; p. 1038.
Wire, Barbed. American Steel & Wire Company of New Jersey. No. 78,480; June 21; Gaz. vol. 155; p. 795.
Wire fabrics for screens. The W. S. Tyler Company. No. 78,553; June 21; Gaz. vol. 155; p. 797.
Wire rope. The Trenton Iron Company. No. 78,365; June 7; Gaz. vol. 155; p. 303.
Wire, Spring. Page Woven Wire Fence Co. Nos. 78,345–7; June 7; Gaz. vol. 155; p. 302.
Woolen piece goods, linings, and blankets. The Mianus Mfg. Co. No. 78,621; June 28; Gaz. vol. 155; p. 1038.
Worsted and woolen piece goods. Downing, Clark & Co. No. 78,594; June 28; Gaz. vol. 155; p. 1037.

ALPHABETICAL LIST OF LABELS.

"Adamant the Perfection of Exterior Plaster." (For Exterior Plaster.) The United States Gypsum Company. No. 15,204; June 7; Gaz. vol. 155; p. 304.
"Adamant the Perfection of Wall Plaster." (For Wall-Plaster.) The United States Gypsum Company. No. 15,205; June 7; Gaz. vol. 155; p. 304.
"American Beauty Kid Dolls." (For Dolls.) Sears, Roebuck and Co. No. 15,218; June 21; Gaz. vol. 155; p. 798.
"Block Milk Biscuit." (For Biscuit.) F. E. Block Co. No. 15,224; June 28; Gaz. vol. 155; p. 1040.
"Buster Brown Ruby Brand Sparklers." (For Fireworks.) Lloyd Manufacturing Co. No. 15,222; June 21; Gaz. vol. 155; p. 798.
"Corvo Castelcaccia." (For Wine.) E. A. D. Di Salaparuta. No. 15,207; June 14; Gaz. vol. 155; p. 552.
"Gov. Johnson." (For Cigars.) M. McGuirk. No. 15,212; June 21; Gaz. vol. 155; p. 798.
"High Ranger." (For Cigars.) The Moehle Lithographic Co. No. 15,206; June 14; Gaz. vol. 155; p. 552.
"Japanese Toilet Tissue." (For Toilet-Paper.) Cornell & Ward. No. 15,211; June 14; Gaz. vol. 155; p. 552.
"Kennesaw Biscuit." (For Biscuit.) F. E. Block Co. No. 15,223; June 28; Gaz. vol. 155; p. 1040.
"Klondike Tablet." (For Writing-Tablets.) Osborn Paper Company. No. 15,215; June 21; Gaz. vol. 155; p. 798.
"Mint Chips." (For Chewing-Gum.) Colgan Gum Co. No. 15,225; June 28; Gaz. vol. 155; p. 1040.
"Pansy Kid Dolls." (For Dolls.) Sears, Roebuck and Co. No. 15,216; June 21; Gaz. vol. 155; p. 798.
"Peroxo." (For Toothpicks.) The Darbol Co. Nos. 15,209–10; June 14; Gaz. vol. 155; p. 552.
"Restorina." (For Hair-Dye.) G. Sattler. No. 15,203; June 7; Gaz. vol. 155; p. 304.
"Reuter's Syrup." (For a Medicinal Preparation.) Barclay & Barclay. No. 15,226; June 28; Gaz. vol. 155; p. 1040.
"7 and 11." (For Blended Corn Whisky.) J. A. Couch. No. 15,213; June 21; Gaz. vol. 155; p. 798.
"Sharp's Sterilised Evaporated Milk." (For Evaporated Milk.) Bridgeton Condensed Milk Co. No. 15,208; June 14; Gaz. vol. 155; p. 552.
"Sunshine Kid Dolls." (For Dolls.) Sears, Roebuck and Co. No. 15,219; June 21; Gaz. vol. 155; p. 798.
"T. B. Dress Linen." (For Dress-Linens.) Turtle Bros. No. 15,228; June 28; Gaz. vol. 155; p. 1040.
"The Double O Composition Book." (For Blank Books.) Osborn Paper Company. No. 15,214; June 21; Gaz. vol. 155; p. 798.
"The Highland." (For Bloomer-Dresses.) A. Rosenberg & Sons. No. 15,220; June 21; Gaz. vol. 155; p. 798.
"The Home Wash Boiler." (For Washboilers.) M. Kamenstein. No. 15,221; June 21; Gaz. vol. 155; p. 798.
"The Only Original Sweet Pepper Catsup." (For Pepper Catsup.) D. C. Danove. No. 15,202; June 7; Gaz. vol. 155; p. 304.
"To Wa-Kon." (For a Liquid Floor-Finish.) Westcott, Slade & Balcom Company. No. 15,227; June 28; Gaz. vol. 155; p. 1040.
"Violet Kid Dolls." (For Dolls.) Sears, Roebuck and Co. No. 15,217; June 21; Gaz. vol. 155; p. 798.

PRINTS.

"Best for Biscuits Also." (For Flour.) Washburn Crosby Company. No. 2,599; June 7; Gaz. vol. 155; p. 304.
"Hawk-Eye Cameras." (For Cameras.) Blair Camera Division Eastman Kodak Co. No. 2,601; June 7; Gaz. vol. 155; p. 304.
"In Justice to the Cook." (For Flour.) Washburn Crosby Company. No. 2,604; June 21; Gaz. vol. 155; p. 798.
"Lion Brand Agricultural Sprays." (For Spraying Materials.) The James A. Blanchard Co. No. 2,607; June 21; Gaz. vol. 155; p. 798.
"Mendelsohn's Newspaper Cut Service for Brewers and Bottlers." (For Beer.) F. Mendelsohn. No. 2,602; June 14; Gaz. vol. 155; p. 552.
"Muto Convertible." (For Collars for Garments.) Muto Sales Co. No. 2,606; June 21; Gaz. vol. 155; p. 798.
"One of the Sights of 'The Great White Way.'" (For Champagne.) The O. J. Gude Co. No. 2,598; June 7; Gaz. vol. 155; p. 304.
"Piano Evolution." (For Pianos.) W. F. Main. No. 2,608; June 21; Gaz. vol. 155; p. 798.
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